TECHNICAL MANUAL

AVIATION UNIT
MAINTENANCE MANAUL

FOR

ARMY MODEL
AH-64A HELICOPTER
(NSN 1520-01-106-9519) (EIC: RHA)

MULTIPLEX READ CODES

HEADQUARTERS, DEPARTMENT OF THE ARMY
30 April 1992

CHANGE

NO.   7   }

AVIATION UNIT
MAINTENANCE MANUAL

FOR

ARMY MODEL
AH-64A HELICOPTER
NSN: (1520-01-106-9519) EIC:(RHA)

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DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.

OZONE DEPLETING CHEMICAL INFORMATION:
This document has been reviewed for the presence of Class I Ozone depleting chemicals. As of Change 6 dated 19 December 1997, all references to Class I Ozone depleting chemicals have been removed from this document by substitution with chemicals that do not cause atmospheric Ozone depletion.

HAZARDOUS MATERIAL INFORMATION:
This document has been reviewed for the presence of solvents containing hazardous materials as defined by EPCRA 302 and 313 lists by the Engineering, Environment, and Logistics Oversight Office. As of base through Change 6, dated 19 December 1997, all references to solvents containing hazardous materials have been removed from this document with non–hazardous or less hazardous materials where possible.

TM 1–1520–238–T–3, 30 April 1992, is changed as follows:

1.   Remove and insert pages as indicated below. New or changed text material is indicated by a vertical bar in the margin. An illustration change is indicated by a miniature pointing hand.
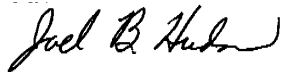
Remove pages	Insert pages
_ _ _ _	A through C/(D blank)
i and ii	i and ii
6-1 and 6-2	6-1 and 6-2
_____	6-2.1 / (6-2.2 blank)

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By Order of the Secretary of the Army:

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General, United States Army
Chief of Staff

JOEL B. HUDSON
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CHANGE
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NO.   6

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WASHINGTON, D.C., 19 December 1997

AVIATION UNIT
MAINTENANCE MANUAL
FOR
ARMY MODEL
AH-64A HELICOPTER
NSN: (1520-01-106-9519) EIC:(RHA)
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Remove pages	Insert pages
i and ii	i and ii
1-1 and 1-2	1-1 and 1-2

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CHANGE }

NO.   5

<div align="center">

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 30 September 1996

AVIATION UNIT
MAINTENANCE MANUAL
FOR
ARMY MODEL
AH-64A HELICOPTER
NSN: (1520-01-106-9519) EIC:(RHA)
MULTIPLEX READ CODES

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1.   Remove and insert pages as indicated below. New or changed text material is indicated by a vertical bar in the margin. An illustration change is indicated by a miniature pointing hand.

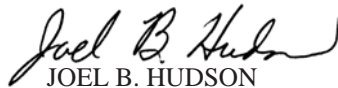| Remove pages	Insert pages
i and ii	i and ii
vii/(viii blank)	vii/(viii blank)
1–1 through 1–4	1–1 through 1–4
– – – –	1–4.1/(1–4.2 blank)
1–9 and 1–10	1–9 and 1–10
2–1 and 2–2	2–1 and 2–2
3–1 and 3–2	3–1 and 3–2
4–1 and 4–2	4–1 and 4–2
5–1 and 5–2	5–1 and 5–2
6–1 and 6–2	6–1 and 6–2
7–1 and 7–2	7–1 and 7–2
8–9 and 8–10	8–9 and 8–10
9–1 and 9–2	9–1 and 9–2
10–1 and 10–2	10–1 and 10–2
11–1 through 11–4	11–1 through 11–4
12–1 and 12–2	12–1 and 12–2
13–1 and 13–2	13–1 and 13–2
14–3 and 14–4	14–3 and 14–4
15–3 and 15–4	15–3 and 15–4
16–1 and 16–2	16–1 and 16–2
17–1 and 17–2	17–1 and 17–2
18–1 and 18–2	18–1 and 18–2
19–1 and 19–2	19–1 and 19–2
20–1 and 20–2	20–1 and 20–2
21–1 and 21–2	21–1 and 21–2
22–1 and 22–2	22–1 and 22–2
23–1 and 23–2	23–1 and 23–2
24–1 and 24–2	24–1 and 24–2
25–1 and 25–2	25–1 and 25–2

Remove pages	Insert pages
26–1 and 26–2	26–1 and 26–2
– – – –	27–1 through 27–11/(27–12 blank)
– – – –	28–1 through 28–5/(28–6 blank)
– – – –	29–1 and 29–2
– – – –	30–1 through 30–7/(30–8 blank)
Glossary 1 through Glossary 7/(Glossary 8 blank)	Glossary 1 through Glossary 8

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By Order of the Secretary of the Army:

                                                          DENNIS J. REIMER
                                                    General, United States Army
Official: *Chief of Staff*

JOEL B. HUDSON
Administrative Assistant to the
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CHANGE   }

NO.   4

<div align="center">

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 1 February 1996

AVIATION UNIT
MAINTENANCE MANUAL

FOR

ARMY MODEL
AH–64A HELICOPTER
NSN: (1520–01–106–9519) EIC: (RHA)

MULTIPLEX READ CODES

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    1.   Remove and insert pages as indicated below. New or changed text material is indicated by a vertical bar in the margin. An illustration change is indicated by a miniature pointing hand.

Remove pages	Insert pages
vii/(viii blank)	vii/(viii blank)
1–1 and 1–2	1–1 and 1–2
2–1 through 2–4	2–1 through 2–4
3–1 through 3–30	3–1 through 3–30
4–1 through 4–7/(4–8 blank)	4–1 through 4–7/(4–8 blank)
5–1 through 5–14	5–1 through 5–14
6–1 through 6–14	6–1 through 6–14
7–1 and 7–2	7–1 and 7–2
7–7 through 7–17/(7–18 blank)	7–7 through 7–18
8–11 through 8–34	8–11 through 8–34
8–41 through 8–48	8–41 through 8–48
8–55 through 8–64	8–55 through 8–64
8–71 through 8–78	8–71 through 8–78
8–85 through 8–100	8–85 through 8–100
8–107 through 8–114	8–107 through 8–114
8–121 through 8–130	8–121 through 8–130
8–137 through 8–144	8–137 through 8–144
8–151 through 8–166	8–151 through 8–166
8–173 through 8–180	8–173 through 8–180
8–187 through 8–196	8–187 through 8–196
8–203 through 8–210	8–203 through 8–210

Remove pages	Insert pages
8–217 through 8–232	8–217 through 8–232
8–239 through 8–246	8–239 through 8–246
8–253 through 8–262	8–253 through 8–262
8–269 through 8–276	8–269 through 8–276
8–283 through 8–292	8–283 through 8–292
8–297 through 8–315/(316 blank)	8–297 through 8–315/(316 blank)
9–1 and 9–2	9–1 and 9–2
9–19/(9–20 blank)	9–19 and 9–20
10–1 through 10–8	10–1 through 10–8
10–11 through 10–13/(10–14 blank)	10–11 through 10–13/(10–14 blank)
11–1 through 11–11/(11–12 blank)	11–1 through 11–11/(11–12 blank)
12–5 through 12–10	12–5 through 12–10
12–13 through 12–18	12–13 through 12–18
13–1 through 13–4	13–1 through 13–4
14–3 and 14–4	14–3 and 14–4
14–13 through 14–18	14–13 through 14–18
14–23 through 14–26	14–23 through 14–26
14–33 and 14–34	14–33 and 14–34
14–51/(14–52 blank)	14–51/(14–52 blank)
15–1 and 15–2	15–1 and 15–2
15–5 through 15–18	15–5 through 15–18
15–27 through 15–55/(15–56 blank)	15–27 through 15–55/(15–56 blank)
16–3 through 16–6	16–3 through 16–6
16–9 through 16–13/(16–14 blank)	16–9 through 16–13/(16–14 blank)
17–3/(17–4 blank)	17–3/(17–4 blank)
18–3 and 18–4	18–3 and 18–4
21–1 through 21–6	21–1 through 21–6
22–1 and 22–2	22–1 and 22–2
23–1 through 23–3/(23–4 blank)	23–1 through 23–3/(23–4 blank)
24–1 and 24–2	24–1 and 24–2
25–1 through 25–6	25–1 through 25–6
26–1 through 26–3/(26–4 blank)	26–1 through 26–3/(26–4 blank)
Glossary 1 through Glossary 6	Glossary 1 through Glossary 6
____	Glossary 7/(Glossary 8 blank)

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CHANGE }
NO.   3 }

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 28 December 1994

AVIATION UNIT
MAINTENANCE MANUAL

FOR

ARMY AH–64A HELICOPTER
NSN (1520–01–106–9519) EIC: (RHA)

MULTIPLEX READ CODES

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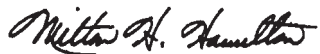TM 1–1520–238–T–3, 30 April 1992, is changed as follows:

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Remove pages	Insert pages
1–9 and 1–10	1–9 and 1–10
6–1 and 6–2	6–1 and 6–2
7–1 through 7–6	7–1 through 7–6
13–1 and 13–2	13–1 and 13–2
15–3 and 15–4	15–3 and 15–4
15–17 and 15–18	15–17 and 15–18
15–27 and 15–28	15–27 and 15–28

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NO.   2   WASHINGTON, D.C., 30 DECEMBER 1993

AVIATION UNIT
MAINTENANCE MANUAL

FOR

ARMY MODEL
AH–64A HELICOPTER
(NSN 1520–01–106–9519) EIC: (RHA)

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Remove pages	Insert pages
i and ii	i and ii
————	vii/(viii blank)
7–1 and 7–2	7–1 and 7–2
7–7 through 7–10	7–7 through 7–10
7–13 and 7–14	7–13 and 7–14
7–17/(7–18 blank)	7–17/(7–18 blank)
10–1 and 10–2	10–1 and 10–2
10–7 and 10–8	10–7 and 10–8
10–11 and 10–12	10–11 and 10–12

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CHANGE

NO.   1 }

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DEPARTMENT OF THE ARMY
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AVIATION UNIT
MAINTENANCE MANUAL

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AH–64A HELICOPTER
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Remove pages	Insert pages
1–3 and 1–4	1–3 and 1–4

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LIST OF EFFECTIVE PAGES

NOTE: The portion of the text affected by the changes is indicated by a vertical line in the outer margins of the page. Changes to illustrations are indicated by miniature pointing hands. Changes to wiring diagrams are indicated by shaded areas.

Date of issue for original and change pages are:

Original . . . . 0 . . . . 30 April 1992
Change . . . . 1 . . . 30 December 1992
Change . . . . 2 . . . 30 December 1993
Change . . . . 3 . . . 28 December 1994
Change . . . . 4 . . . . . . 1 February 1996
Change . . . . 5 . . . 30 September 1996
Change . . . . 6 . . . . 19 December 1997
Change . . . . 7 . . . . 15 March 2002

TOTAL NUMBER OF PAGES IN THIS PUBLICATION IS 808, CONSISTING OF THE FOLLOWING:

Page No.	*Change No.	Page No.	*Change No.
Cover	0	8-14	0
Blank	0	8-15 – 8-18	4
A – C Added	7	8-19	0
D Blank Added	7	8-20 – 8-21	4
i	7	8-22	0
ii	7	8-23 – 8-31	4
iii – vi	0	8-32	0
vii	5	8-33	4
viii Blank	5	8-34 – 8-40	0
1-1	0	8-41 – 8-46	4
1-2	6	8-47	0
1-3 – 1-4	5	8-48	4
1-4.1	5	8-49 – 8-55	0
1-4.2 Blank	5	8-56 – 8-61	4
1-5 – 1-8	0	8-62	0
1-9 – 1-10	5	8-63	4
2-1 – 2-2	5	8-64 – 8-70	0
2-3 – 2-4	4	8-71 – 8-76	4
3-1	0	8-77	0
3-2	5	8-78	4
3-3 – 3-30	4	8-79 – 8-85	0
4-1	5	8-86 – 8-97	4
4-2	0	8-98	0
4-3 – 4-7	4	8-99	4
4-8 Blank	4	8-100 – 8-106	0
5-1	4	8-107 – 8-112	4
5-2	5	8-113	0
5-3	0	8-114	4
5-4 – 5-14	4	8-115 – 8-121	0
6-1	7	8-122 – 8-127	4
6-2	7	8-128	0
6-2.1	7	8-129	4
6-2.2 Blank	7	8-130 – 8-136	0
6-3 – 6-14	4	8-137 – 8-142	4
7-1	4	8-143	0
7-2	5	8-144	4
7-3	0	8-145 – 8-151	0
7-4 – 7-5	3	8-152 – 8-163	4
7-6 – 7-7	0	8-164	0
7-8 – 7-18	4	8-165	4
8-1 – 8-9	0	8-166 – 8-172	0
8-10	5	8-173 – 8-178	4
8-11 – 8-13	4	8-179	0

*Zero in this column indicates an original page.

INSERT LATEST CHANGED PAGES: DESTROY SUPERSEDED PAGES.

LIST OF EFFECTIVE PAGES

Page No.	*Change No.	Page No.	*Change No.
8-180	4	11-5 – 11-8	4
8-181 – 8-187	0	11-9	0
8-188 – 8-193	4	11-10 – 11-11	4
8-194	0	11-12 Blank	4
8-195	4	12-1	0
8-196 – 8-202	0	12-2	5
8-203 – 8-208	4	12-3 – 12-4	0
8-209	0	12-5 – 12-9	4
8-210	4	12-10 – 12-12	0
8-211 – 8-217	0	12-13 – 12-18	4
8-218 – 8-229	4	13-1	5
8-230	0	13-2 – 13-4	4
8-231	4	14-1 – 14-2	0
8-232 – 8-238	0	14-3	5
8-239 – 8-244	4	14-4 – 14-12	0
8-245	0	14-13 – 14-18	4
8-246	4	14-19 – 14-23	0
8-247 – 8-253	0	14-24 – 14-26	4
8-254 – 8-259	4	14-27 – 14-32	0
8-260	0	14-33	4
8-261	4	14-34 – 14-50	0
8-262 – 8-268	0	14-51	4
8-269 – 8-274	4	14-52 Blank	4
8-275	0	15-1	0
8-276	4	15-2	4
8-277 – 8-283	0	15-3	5
8-284 – 8-292	4	15-4	3
8-293 – 8-296	0	15-5 – 15-9	4
8-297	4	15-10	0
8-298	0	15-11 – 15-18	4
8-299 – 8-301	4	15-19 – 15-26	0
8-302	0	15-27 – 15-55	4
8-303	4	15-56 Blank	4
8-304 – 8-305	0	16-1	0
8-306	4	16-2	5
8-307	0	16-3	0
8-308 – 8-309	4	16-4 – 16-6	4
8-310 – 8-311	0	16-7 – 16-8	0
8-312 – 8-315	4	16-9 – 16-11	4
8-316 Blank	4	16-12	0
9-1	5	16-13	4
9-2 – 9-18	0	16-14 Blank	4
9-19 – 9-20	4	17-1 – 17-2	5
10-1	5	17-3	4
10-2	2	17-4 Blank	4
10-3 – 10-8	4	18-1	5
10-9 – 10-11	0	18-2 – 18-3	0
10-12 – 10-13	4	18-4	4
10-14 Blank	4	19-1	5
11-1 – 11-2	5	19-2	0
11-3	0	20-1	0
11-4	5	20-2	5

*Zero in this column indicates an original page.

LIST OF EFFECTIVE PAGES

Page No.	*Change No.	Page No.	*Change No.
20-3 – 20-30	0	25-6	0
21-1	5	26-1	5
21-2 – 21-6	4	26-2 – 26-3	4
22-1	5	26-4 Blank	4
22-2	4	27-1 – 27-11	5
23-1	5	27-12 Blank	4
23-2 – 23-3	4	28-1 – 28-5	5
23-4 Blank	4	28-6 Blank	5
24-1	5	29-1 – 29-2	5
24-2	4	30-1 – 30-7	5
25-1	5	30-8 Blank	5
25-2 – 25-3	4	A-1 – A-2	0
25-4	0	Glossary 1 – Glossary 8	5
25-5	4		

*Zero in this column indicates an original page.

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 30 April 1992

AVIATION UNIT
MAINTENANCE MANUAL

FOR

ARMY
AH–64A HELICOPTER
(NSN 1520–01–106–9519) (EIC: RHA)

MULTIPLEX READ CODES

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes, or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028–2 located in the back of this manual directly to: Commander, U.S. Army Aviation and Missile Command, ATTN: AMSAM–MMC–MA–NP, Redstone Arsenal, AL 35898–5230. A reply will be furnished directly to you.

You may also submit your recommended changes by E–mail directly to 2028@redstone.army.mil or by fax 205–842–6546/DSN 788–6546. Instructions for sending an electronic 2028 may be found at the end of this manual immediately preceding the hard copy 2028.

OZONE DEPLETING CHEMICAL INFORMATION:
This document has been reviewed for the presence of Class I Ozone depleting chemicals. As of Change 6 dated 19 December 1997, all references to Class I Ozone depleting chemicals have been removed from this document by substitution with chemicals that do not cause atmospheric Ozone depletion.

HAZARDOUS MATERIAL INFORMATION:
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<u>**DISTRIBUTION STATEMENT A:**</u> Approved for public release; distribution is unlimited.

TABLE OF CONTENTS

* <u>SUPERSEDURE NOTICE</u>: This manual supersedes TM 1-1520-238-T-3, dated 10 October 1990, including all changes.

TABLE OF CONTENTS (cont)

HOW TO USE THIS VOLUME

OVERVIEW

This multiplex read code volume (TM 1–1520–238–T–3) is to be used by maintenance personnel with a skill level identifier of –20 or higher. It is designed to be used concurrently with an appropriate system maintenance operational check (MOC) as determined by the fault identified in either the MOC or TM 1–1520–238–T–2.

During the system MOC, reference is made to an appropriate fault isolation procedure (FIP) by paragraph number and title.

Use this volume to aid in troubleshooting by locating the applicable system chapter. Use the failure symptom index at the beginning of the chapter to locate the failure symptom bearing the same title as the FIP referenced in the system MOC or TM 1–1520–238–T–2.

Identify the appropriate paragraph dealing with the fault under investigation. enter the associated six-digit memory location code of the system being tested into the copilot/gunner (CPG) data entry keyboard (DEK). Examine the six-digit response code appearing on the CPG heads out display (HOD). The information in the failure symptom paragraph allows determination of whether or not a fault actually exists but also the appropriate troubleshooting activity to be taken to rapidly locate the defective LRU/wiring.

The troubleshooting activity to be taken consists of references to: another chapter and paragraph in this volume, removal and replacement, and troubleshooting in the applicable system technical manual or volume.

Once the fault has been repaired, the MOC that was in progress at the time the failure symptom was detected must be repeated until the aircraft system is returned to an operating condition.

M53–001A
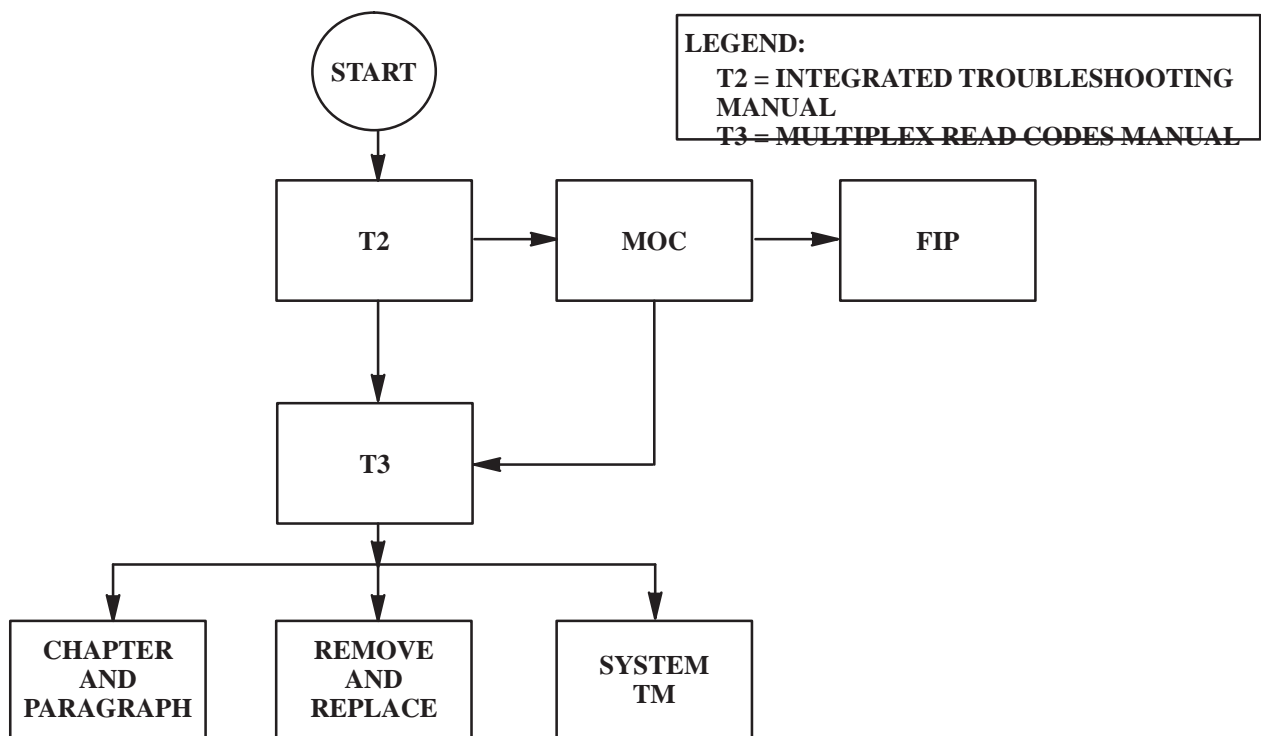
GENERAL

If you can't find information, you can't do the job. Learn how to use this volume. Check how the volume is put together. Look at the examples. Before you use this volume, learn and understand how this volume works.

This volume is made up of chapters. The chapters are made up of paragraphs, and all are numbered. Every job and the information you need has a number.

   Example: Task Paragraph Number: 2–4

CHAPTERS

Each chapter contains paragraphs. Chapter 1 contains general information. Chapters 2 through 26 contain multiplex system information. USE THE TABLE OF CONTENTS TO FIND THE CHAPTER YOU NEED.

PARAGRAPHS

Paragraphs make up chapters. It is the paragraphs that have the information you need for any job.

PARAGRAPH NUMBERING

Paragraphs are in two parts. The first is the chapter number. The second is the paragraph number. Each number is separated by a dash as shown in the example:

2 – 4
Paragraph
Chapter
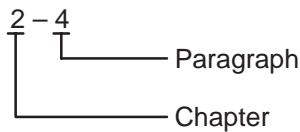
PAGE NUMBERING

All page numbering is by chapters. Paragraph numerals are not included in the page numbers. The first number is the number of the chapter; the second number is the number of the page in that chapter. The numbers are separated by a dash as shown in the example:

2 – 1
Page
Chapter
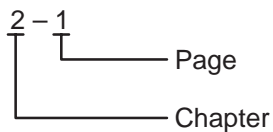
   NOTE: Page numbers are not used to find information. Use Chapter numbers.

APPENDIX

This volume has Appendix A. This appendix contains reference information which you will need to know. It contains a list of all official publications referenced in this volume.

GLOSSARY

The glossary in this manual is a list of abbreviations and acronyms. Abbreviations are shortened terms for words. Acronyms are shortened terms for several words and use only the first letter of each of the words. Abbreviations and acronyms are defined where they are used. The list in the glossary, however, provides a good place to check if there is any doubt. It is always a good idea to look over the glossary and become familiar with abbreviations and acronyms.

FAILURE SYMPTOM INDEX

Each chapter is headed by a Failure Symptom Index.

Included in this index are the names of symptoms most likely to be encountered during a related Maintenance Operational Check (MOC) or a Fault Detection/Location System (FD/LS) check. In many instances, the names of the symptoms are identical to the names associated with the Fault Isolation Procedures (FIP's) referenced from the MOC's.

Symptom names not identical to MOC names are additional areas that may be fault isolated to provide a more comprehensive troubleshooting capability.

Associated with each symptom name is one or more paragraph numbers representing the start point in a troubleshooting sequence. Should any one symptom require more than one troubleshooting sequence to arrive at the most likely area of investigation, the additional start point paragraph numbers are presented.

As the troubleshooting activity progresses through to the conclusion of a particular sequence, a reference is made to the next logical troubleshooting sequence by paragraph number or by referencing to the Failure Symptom Index to locate the next failure symptom paragraph. This type of activity continues until successful fault isolation is achieved.

FAILURE SYMPTOM INDEX EXAMPLE

FAILURE SYMPTOM INDEX

Symptom	Refer to paragraph
PNVS SHROUD NO-GO	4–1, 4–13
ANTI-ICE INOPERATIVE	4–1, 4–14
CANOPY ANTI-ICE IS INOPERATIVE	4–3
ENGINE ANTI-ICE IS INOPERATIVE	4–6
MAIN ROTOR ANTI-ICE IS INOPERATIVE	4–9, 4–10

INITIAL SETUP

Each task is headed by an initial setup. This setup outlines what is needed as well as certain conditions which must be met before starting the task. DON'T START A TASK UNTIL:

- You understand the task.
- You understand what you are to do.
- You understand what is needed to do the work.
- You have the things you need.

An example of initial setup is shown in the example below. The following subparagraphs (a through c) explain each part of the initial setup.

a. **Personnel Required:** This heading lists the number of people required to perform the task. Maintenance personnel must possess at least a –20 level skill identifier code and be qualified or certified to perform power applications, Fault Detection/Location System FD/LS checks, operational checks, and to use multiplex read codes.

b. **References:** This lists other technical manuals (TMs) and volumes you will need to complete the task. The steps in the task will tell you when to refer to another TM. Paragraphs contained within the manual being used are not shown in the list of references.

c. **Equipment Conditions:** This lists things that must be done before starting the task.

INITIAL SETUP EXAMPLE

Personnel Required:

(2)

References:

TM 1–1520–238–T–8
TM 9–1230–476–20–2
TM 9–1230–476–20–1
TM 1–5855–265–T

Equipment Conditions:

Ref	Condition
TM 1–1520–238–T–8	Applicable OPERATIONAL CHECK in progress

FAILURE SYMPTOM PARAGRAPH

Each chapter contains failure symptom paragraphs which are referenced from the Failure Symptom Index.

Failure symptom paragraphs are in troubleshooting sequence and present six-digit **MEMORY LOCATION** numbers where multiplex read codes are stored. When these **MEMORY LOCATION** numbers are entered from the CPG DEK, a six-digit multiplex read codes response indication appears on the HOD which is to be used for troubleshooting evaluation.

The failure symptom paragraphs provide multiplex read codes response indication interpretations to aid in the location of faults and refer to the appropriate manual or to the chapter and paragraph within this multiplex read codes volume where necessary for fault isolation or repair.

FAILURE SYMPTOM PARAGRAPH EXAMPLE

902–1   **SIGNAL NAME:**   PLT ANTI-ICE SW
          MEMORY LOCATION: 001117
          MEMORY DATA BIT(S):   16   (BINARY)
          CONDITION: (None)
          SIGNAL FUNCTION: Monitors position of pilot **ANTI ICE** panel **TADS/PNVS** switch.
          REMARKS: From pilot **ANTI ICE** panel **TADS/PNVS** switch through left-hand (LH) forward avionics
               bay (FAB) MRTU Type I to FCC. Enables or disables anti-ice functions for TADS/PNVS.
          PASS: If second digit on HOD is 1, 3, 5, or 7, go to failure symptom index and next failure symptom
             paragraph.
          FAIL: Location of fault: pilot **ANTI ICE** panel **TADS/PNVS** switch, wiring from pilot **ANTI ICE** panel
             TADS/PNVS switch to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to
             isolate fault (TM 1–1520–238–T–8).

USING AH-64A HELICOPTER EFFECTIVITY CODES

Helicopter effectivity codes designate differences between helicopters by helicopter serial numbers. These codes consist of three letters that represent various helicopter serial number blocks.

The codes are used to designate serial number block differences as follows:

When used within narrative text and fault isolation procedures, effectivity codes appear within parenthesis.

     Example: Narrative text and fault isolation procedures (AAA)

When used inside interconnect diagrams and major component locations, effectivity codes appear within triangular borders and are placed on the line which represents that particular helicopter's configuration.

     Example: Wiring interconnect diagrams   △AAA

This volumes uses these effectivity codes and corresponding helicopter serial numbers for reference.

To use the helicopter effectivity codes, note the helicopter serial number on the left side of the fuselage directly below the CPG window. Use this serial number to determine which procedure to use or which path in an interconnection diagram or fault isolation procedure to use.

The effectivity codes and helicopter serial number blocks applicable to this volume are as follows:

Effectivity Code	Helicopter Serial No.
AAD	85-25424 and subsequent
ACY	82–23355 thru 92–0485 (Before MWO 9–1230–476–50–1)
ACZ	82–23355 thru 92–0485 (After MWO 9–1230–476–50–1) 94–0328 and subsequent
ADC	Before MWO 1–1520–238–50–49
ADD	After MWO 1–1520–238–50–49

CHAPTER 1

INTRODUCTION

CHAPTER OVERVIEW

Chapter 1 contains general information and examples of how to interpret multiplex read codes used in this troubleshooting volume.

Section I.   GENERAL INFORMATION

1–1   SCOPE.

This manual is an Aviation Unit Maintenance (AVUM) manual. Its purpose is to provide the means of interpreting Fire Control Computer (FCC) read codes for on-line analysis of all aircraft systems that communicate with the FCC. The read codes listed in this manual are valid only for Fire Control Computers (Part No. 7–319200005–5) programmed with product Software Part No. 7–MD9200001–45 (ACY), (Part No. 7–319200005–9A) programmed with product Software Part No. 7–MD9200001–49A (ACZ) and (part No. 7–319200005–11) programmed with product software Part No. 7–MD9200001–51 (ADD). **DO NOT** attempt to use this manual with any other FCC part number installed on the aircraft. Use of this manual with another FCC part number will result in erroneous or false failure indications.

1–2   MAINTENANCE FORMS, RECORDS, AND REPORTS.

Department of Army forms and procedures used for equipment maintenance will be those described by DA PAM 738–751, The Army Maintenance Management System – Aircraft (TAMMS–A).

1–3   DESTRUCTION OF ARMY MATERIAL TO PREVENT ENEMY USE.

Destruction procedures you need to know are found in TM 750–244–1–5, Procedures For The Destruction Of Aircraft And Associated Equipment To Prevent Enemy Use.

1–4   QUALITY ASSURANCE/QUALITY CONTROL.

Quality assurance information you are required to use is explained in FM 1–511, Army Aircraft Quality Control and Technical Inspection.

1–5   DEFICIENCY REPORTING.

If your equipment needs correction or improvement, let us know. Send us a Deficiency Report (DR). You, the user, are the only one who can tell us what you don't like about your equipment. Let us know what you don't like about the design. Put it on SF 368 (Quality Deficiency Report). Mail it to Commander, U.S. Army Aviation and Missile Command, Attn: AMSAM-MMC-LS-P, Redstone Arsenal, AL 35898-5230. A reply will be furnished directly to you.

Section II.   MULTIPLEX READ CODE INTERPRETATIONS

NOTE

Multiplex read codes are observed on the HOD (ADC) or
CDU (ADD).

1–6   FAILURE SYMPTOM PARAGRAPH.

Multiplex read codes are interpreted through the use of failure symptom paragraphs. (See Example.) Failure symptom paragraphs provide information which can be used in locating failures with multiplex read codes during a Maintenance Operational Check (MOC). Failure symptom paragraphs specify a known or expected aircraft MOC **CONDITION** and the corresponding **SIGNAL NAME, MEMORY LOCATION** to be examined and **MEMORY DATA BITS** being examined in the **MEMORY LOCATION**. Comparing the aircraft **CONDITION** with the displayed multiplex read code response allows fault isolation through the use of information presented under **SIGNAL FUNCTIONS, REMARKS, PASS** and **FAIL**.

EXAMPLE:

17–2   SIGNAL NAME: DEK SWITCH
MEMORY LOCATION: 000444
MEMORY DATA BIT(S):   8–11   (HEX)
CONDITION: If fourth digit displayed on HOD is 0=STBY.
If fourth digit displayed on HOD is 1=RANGE.
If fourth digit displayed on HOD is 2=FD/LS.
If fourth digit displayed on HOD is 3=(NOT USED).
If fourth digit displayed on HOD is 4=TGT.
If fourth digit displayed on HOD is 5=CODE.
If fourth digit displayed on HOD is 6=SP1.
If fourth digit displayed on HOD is 7=OFF.
SIGNAL FUNCTION: Monitors position of DEK **DATA ENTRY** switch.
REMARKS: From DEK through CPG MRTU Type III to FCC. Selects operating mode for fire control system.
PASS: If **CONDITION** corresponds to proper mode for switch selected, go to paragraph 17–3.
FAIL: Location of fault: DEK, wiring from DEK to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault TM 9–1230–476–20–2.

1–7   SIGNAL NAME.

The **SIGNAL NAME** is the common or abbreviated name for an input or output.

EXAMPLE:

17–22   SIGNAL NAME: DEK SWITCH

Abbreviations and acronyms can be found in the List of Abbreviations located in the Glossary.

1–8   MEMORY LOCATION.

The **MEMORY LOCATION** is the octal address of the signal name data you are going to inspect.

EXAMPLE:

MEMORY LOCATION: 000444

1–9   MEMORY DATA BITS.

a.   Memory data indicates the bit(s) to be examined in a 16-bit word. These bits are used by the fire control computer (FCC) to determine the status of system/Line Replaceable Units (LRU). The numbers to the right of the memory location on the HOD are memory data octal representations. **Multiplex read code responses are read from right to left.** See Figure 1–1 (ADC) and Figure 1–1.1 (ADD).

MEMORY LOCATION

HOD

MEMORY DATA

R002100   062475

FLTR SEL SWITCH FOR
OPTICALLY IMPROVED TADS
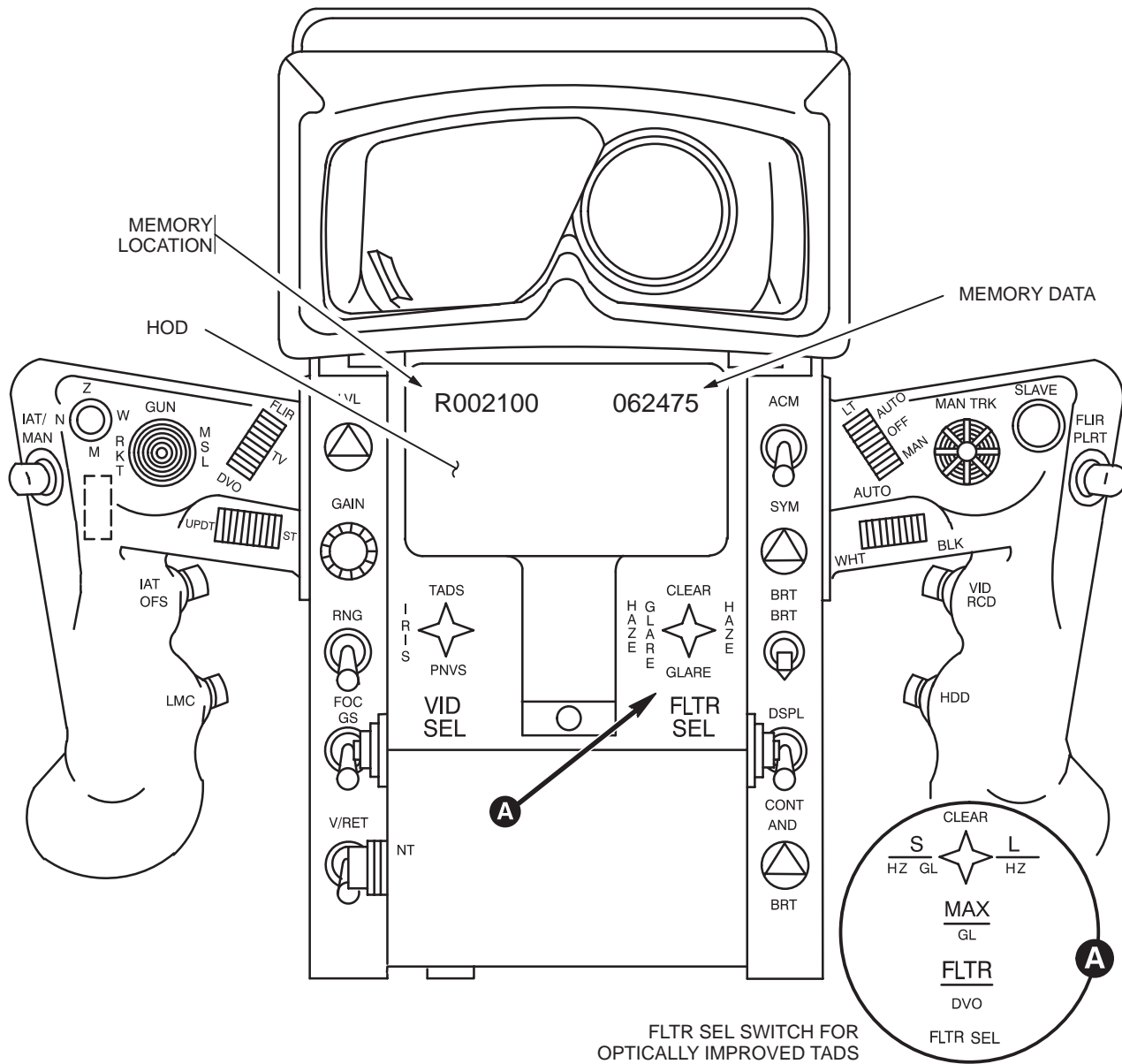
M53–002A

Figure 1–1.   TADS Optical Relay Tube (ORT) (ADC)

b.   Memory data octal representations are the binary, octal, hexadecimal and ASCII conversions to octal. These conversions allow direct multiplex read codes to be displayed on the HOD (fig. 1–1) (ADC) or CDU (fig. 1–1.1) (ADD). The sixth digit (sign digit) indicates the polarity. A **1** displayed indicates a **negative** number or indication; a **0** indicates a **positive** number or indication (see example).

EXAMPLE:	0 **6th digit**			6 5th digit			2 4th digit			4 3rd digit			7 2nd digit			5 1st digit		
bit	X	X	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
status			0	1	1	0	0	1	0	1	0	0	1	1	1	1	0	1

M53–004

Figure 1–1.1. Control Display Unit (CDU) (ADD)

1. Octal conversion is the transformation of direct octal read digits and examination of selected bit(s) **CONDITION**(s). Octal conversion is used when (OCTAL) appears after **MEMORY DATA BIT(S)** in the respective paragraph. Octal conversion is not required in this manual. Conversions are referenced under **CONDITION**.

EXAMPLE:

16–28	**CONDITION:**	0=H
		1=G
		2=F
		3=E
		4=D
		5=C
		6=B
		7=A

2. Bit conversion is the transformation of the octal number and examination of bit(s) **CONDITION**(s). Bit conversion is used when (BINARY) appears after **MEMORY DATA BIT(S)** in the respective paragraph.

EXAMPLE:

3–63 **SIGNAL NAME:** HARS INPUT NOT CHANGING
MEMORY LOCATION: 002103
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates HARS data is valid.
REMARKS: From DASEC to FCC.
PASS: If first digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 3–64.
FAIL: Location of fault: refer to Chapter 6, paragraph 6–14.

3. To convert from octal, first transform the octal numbers into binary numbers and then note the **CONDITION** of the bit(s) specified.

Assume 062475 is displayed on HOD.

		0		6			2			4			7			5		
EXAMPLE:		6th digit		5th digit			4th digit			3rd digit			2nd digit			1st digit		
bit	X	X	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
status			0	1	1	0	0	1	0	1	0	0	1	1	1	1	0	1

Bit 17 **CONDITION** is a one; therefore a **HARS NO GO** exists.

4. Hexadecimal conversion is the interpretation of four bits of binary data. Hexadecimal conversion is used when (HEX) appears after **MEMORY DATA BIT(S)** in the respective paragraph. Hexadecimal conversion is used for ASCII code conversions.

Assume 062465 is displayed on HOD.

		0		6			2			4			6			5		
BITS	X	X	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
STATUS	0	0	0	1	1	0	0	1	0	1	0	0	1	1	0	1	0	1

ASCII	3	5

HEXADECIMAL

5. The hexadecimal number to bit relationship is provided for ease of conversion.

HEXADECIMAL NUMBERS	BITS
0	0000
1	0001
2	0010
3	0011
4	0100
5	0101
6	0110
7	0111
8	1000
9	1001
A	1010
B	1011
C	1100
D	1101
E	1110
F	1111

6. ASCII conversion is interpreting more than four bits using hexadecimal conversion. The appropriate system chapters provide an ASCII code table for character conversion. ASCII conversion is used when ASCII appears after **MEMORY DATA BIT(S)** in the respective paragraph.

EXAMPLE:

17–5 **SIGNAL NAME:** DEK DATA
MEMORY LOCATION: 000444
MEMORY DATA BIT(S): 12–19 (ASCII)
CONDITION: Refer to Table 17–1 for ASCII code conversions.
SIGNAL FUNCTION: Provides DEK characters in 8-bit ASCII word format to FCC.
REMARKS: From DEK through CPG MRTU Type III to FCC.
PASS: If ASCII conversion corresponds to the key pressed on DEK, go to paragraph 17–6.
FAIL: Location of fault: DEK, wiring from DEK to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

7. To convert a hexadecimal, transform the required octal to into binary and then change to hexadecimal.

8. The ASCII result of 35 from Table 17–1 is a 5.

TABLE 17–1. ASCII CODE CONVERSIONS
(BITS 12–19)

41 = A	49 = I	51 = Q	59 = Y	30 = 0	38 = 8
42 = B	4A = J	52 = R	5A = X	31 = 1	39 = 9
43 = C	4B = K	53 = S	20 = SP	32 = 2	06 = EN
44 = D	4C = L	54 = T	28 = (	33 = 3	08 = BK
45 = E	4D = M	55 = U	29 =)	34 = 4	0D = CR
46 = F	4E = N	56 = V	2A = *	35 = 5	7F = CL
47 = G	4F = O	57 = W	2B = +	36 = 6	
48 = H	50 = P	58 = X	2D = –	37 = 7	

9. Scalar conversions are used to interpret analog to digital and digital to analog signals. Some examples of these signals are degrees, meters, kilometers per hour, and signal strength. The important requirements to note on **scalar conversions** are the **sixth digit** (sign digit) and whether an increase or decrease is occurring on the HOD while the operation is being performed. A **1** displayed in the sixth digit indicates a **negative** number or response, a **0** indicates a **positive** number or response. For example, increasing ORT brightness should show an increasing reading on the HOD, while decreasing brightness should show a decreasing reading (toward zero) on the HOD. Scalar conversions are used when (SCALAR) appears after **MEMORY DATA BIT(S)** in the respective paragraph.

EXAMPLE:

22–2 SIGNAL NAME: ENG 2 TORQUE
MEMORY LOCATION: 000120
MEMORY DATA BIT(S): 4–19 (SCALAR)
CONDITION: Monitor HOD while turning up engines; memory location response digits should increase and display will limit at 120.
SIGNAL FUNCTION: Monitors engine 2 torque.
REMARKS: From engine 2 torque sensor to engine 2 ECU through DASEC to FCC.
PASS: If **CONDITION** is met, go to Chapter 14, paragraph 14–135.
FAIL: Location of fault: engine 2 torque sensor, wiring from engine 2 torque sensor to ECU, ECU, wiring from ECU to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–4).

10. Specialized system conversions are presented in the applicable system chapter.

1–10 CONDITION.

CONDITION is a requirement prerequisite or selection which specifies information that enables interpretation of digits displayed on the HOD. **CONDITION** allows comparison of known or expected system configurations, and physical aircraft conditions, with the digits displayed on the HOD. Included under **CONDITION** are: switch settings, heading, gun, rocket, missile and pylon responses, and reference to ASCII code conversions. (None) indicates that there are no special conditions required and that activities are controlled by the MOC that is in progress.

EXAMPLE:

CONDITION: If fourth digit displayed on HOD is 0 = STBY.
If fourth digit displayed on HOD is 1 = RANGE.
If fourth digit displayed on HOD is 2 = FD/LS.
If fourth digit displayed on HOD is 3 = (NOT USED).
If fourth digit displayed on HOD is 4 = TGT.
If fourth digit displayed on HOD is 5 = CODE.
If fourth digit displayed on HOD is 6 = SP1.
If fourth digit displayed on HOD is 7 = OFF.

1–11 SIGNAL FUNCTION.

SIGNAL FUNCTION indicates the purpose or relationship of a **SIGNAL NAME** to a system or systems. Some of these relationships are monitoring, indicating, enabling, commanding, selecting and initiating a system function.

EXAMPLE:

SIGNAL FUNCTION: Monitors position of DEK rotary switch.

1–12 REMARKS.

REMARKS provide signal path information which is useful in determining possible fault locations during troubleshooting.

EXAMPLE:

> **REMARKS:** From DEK through CPG MRTU Type III to FCC. Selects operating mode for fire control system.

1–13 PASS.

PASS provides fault isolation and troubleshooting actions to be performed, references to other failure symptom paragraphs within TM 1–1520–238–T–3, references directing you to return to the respective chapter failure symptom index within TM 1–1520–238–T–3 and to perform the next sequential failure symptom paragraph, and references to technical manuals if the required **CONDITION** is met. Direct read codes are presented when possible to reduce conversion time. Numbers not identified indicate a failure.

EXAMPLE:

> **PASS:** If **CONDITION** corresponds to proper mode for switch selected, go to paragraph 17–3.

1–14 FAIL.

FAIL provides location of fault and troubleshooting actions to be performed, references to other failure symptom paragraphs, references to the failure symptom index and next failure symptom paragraph, references to other chapters and paragraphs, and references to technical manuals if the required **CONDITION** is not met. Faults are listed in the most probable failure sequences. **ALWAYS** troubleshoot wiring to isolate fault first, then replace LRU in the order given, unless a direct replacement is indicated.

EXAMPLE:

> **FAIL:** Location of fault: DEK, wiring from DEK to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

1–15 MULTIPLEX READ CODES INTERPRETATION PROCEDURE.

a.   Check entry from log book failure symptom; **RANGE DATA CANNOT BE DISPLAYED**.

b.   Go to TM 1–1520–238–T–2 (Integrated Troubleshooting Master Failure Symptom Index) for appropriate MOC.

c.   Perform MOC.

d.   Go to TM 1–1520–238–T–3, Chapter 17.

e.   Go to **FAILURE SYMPTOM INDEX** in Chapter 17.

<center>**FAILURE SYMPTOM INDEX**</center>

Symptom	Refer to paragraph
DATA ENTRY KEYBOARD NO-GO CPG COMPARTMENT	17–1
KEYBOARD FAILED DISPLAYED ON ORT	17–1
RANGE DATA CANNOT BE DISPLAYED	17–2

f.   Go to failure symptom paragraph 17–2 referenced in **FAILURE SYMPTOM INDEX**, as an aid in locating fault.

EXAMPLE:

17–2 **SIGNAL NAME:** DEK SWITCH
MEMORY LOCATION: 000444
MEMORY DATA BIT(S): 8–11 (HEX)
CONDITION: If fourth digit displayed on HOD is 0=STBY.
If fourth digit displayed on HOD is 1=RANGE.
If fourth digit displayed on HOD is 2=FD/LS.
If fourth digit displayed on HOD is 3=(NOT USED).
If fourth digit displayed on HOD is 4=TGT.
If fourth digit displayed on HOD is 5=CODE.
If fourth digit displayed on HOD is 6=SP1.
If fourth digit displayed on HOD is 7=OFF.
SIGNAL FUNCTION: Monitors position of DEK **DATA ENTRY** switch.
REMARKS: From DEK through CPG MRTU Type III to FCC. Selects operating mode for fire control system.
PASS: If **CONDITION** corresponds to proper mode for switch selected, go to paragraph 17–3.
FAIL: Location of fault: DEK, wiring from DEK to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault TM 9–1230–476–20–2.

g. On the data entry keyboard (DEK), set **DATA ENTRY** switch to **SP1** (Fig. 1–2) (ADC). On CDU depress Fixed Action Button (FAB) **PGM**, then depress Variable Action Button (VAB) **READ** (ADD).

h. Press and release the **R SHIFT** key (ADC).

i. Press and release the **PQR/6** key (ADC).
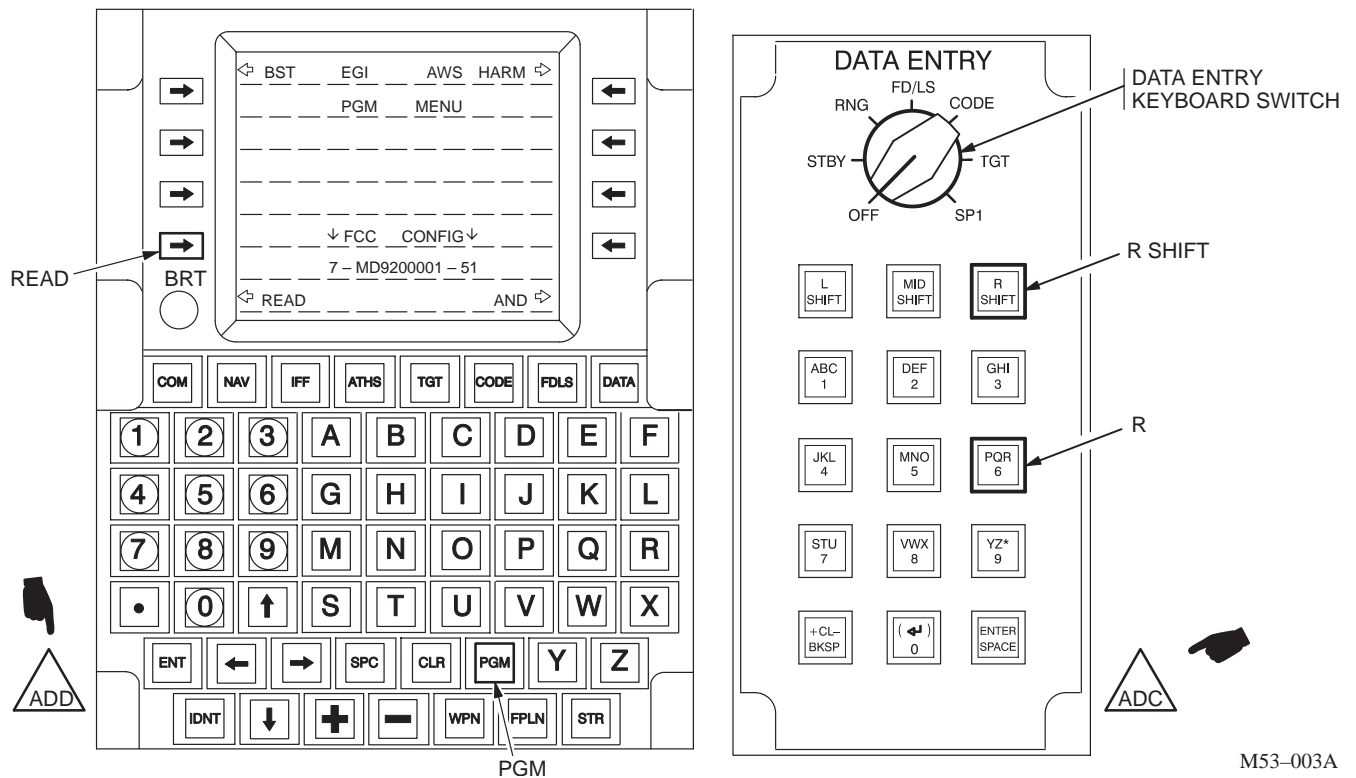
Figure 1–2. CPG Data Entry Keyboard (ADC) and CDU (ADD)

M53–003A

j.   Enter all six digits of the memory location via the DEK (ADC) or CDU (ADD) keyboard.

EXAMPLE:

MEMORY LOCATION: 000444

Press and release the following keys: **(↵)/0**, **(↵)/0**, **(↵)/0**, **JKL/4**, **JKL/4**, and **JKL/4** (ADC)

Press and release the following keys: **0**, **0**, **0**, **4**, **4**, and **4** (ADD)

k.   When all six digits have been entered, the number will appear on the heads out display (HOD) (Fig. 1–1) (ADC).

l.   When all six digits have been entered, depress VAB 1. The number will appear on the CDU (Fig. 1–1.1). Up to four memory locations can be examined at one time by using VABs 1 through 4. Depressing VAB 5 (**HEX**) will convert octal to hexadecimal (ADD).

m.   Assume 026042 appears on HOD (ADC) or CDU (ADD). The fourth digit displayed on HOD (ADC) or CDU (ADD) is 6, which indicates a **PASS** condition, go to paragraph 17–3.

EXAMPLE:

17–3   **SIGNAL NAME:**   DEK DATA VALID
MEMORY LOCATION: 000444
MEMORY DATA BIT(S):   7   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates whether keyboard entry is valid and to be read by FCC
or keyboard entry is invalid and to be ignored.
REMARKS: From DEK through CPG MRTU Type III to FCC. This bit identifies
erroneous DEK data words.
PASS: If fifth digit on HOD is 1, 3, 5, or 7, go to paragraph 17–4.
FAIL: Location of fault: DEK, wiring from DEK to CPG MRTU Type III, CPG MRTU Type
III. Troubleshoot wiring to isolate fault TM 9–1230–476–20–2.

n.   The fifth digit on HOD (ADC) or CDU (ADD) is 2, which indicates a **FAIL** condition. Troubleshoot wiring by using **FAIL** information in paragraph 17–3.

CHAPTER 2

AIR DATA SYSTEM (ADS) MULTIPLEX READ CODES

FAILURE SYMPTOM INDEX

Symptom	Refer to paragraph
ADS INDICATOR ON CAUTION/WARNING PANEL LIT	2–1
AIR DATA PROCESSOR NO–GO AFT AVIONICS BAY	2–1
OMNI DIR AIRSPEED SENSOR NO–GO MAIN ROTOR MAST	2–3
ERRATIC AIRSPEED INDICATION ON HOD	2–5
ERRATIC STABILATOR OPERATION	2–10
ERRATIC SIDESLIP INDICATION	2–11

Personnel Required:

(2)

References:

TM 9–1230–476–20–2

Equipment Conditions:

Ref	Condition
TM 9–1230–476–20–2	AIR DATA SUBSYSTEM – MAINTENANCE OPERATIONAL CHECK in progress

NOTE

- All multiplex read code responses are read from right to left.

- Multiplex read codes must be used in conjunction with applicable Maintenance Operational Check (MOC) in progress.

- Multiplex read codes are observed on the HOD (ADC) or CDU (ADD).

MULTIPLEX READ CODE INTERPRETATIONS

2–1 **SIGNAL NAME:** ADS TEST STATUS
MEMORY LOCATION: 002106
MEMORY DATA BIT(S): 7 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Interprets air data system (ADS) status.
REMARKS: From omnidirectional airspeed sensor (OAS) through air data processor (ADP) and digital automatic stabilization equipment computer (DASEC) multiplex remote terminal unit (MRTU) to fire control computer (FCC).
PASS: If fifth digit displayed on heads out display (HOD) is 0, 2, 4, or 6, go to paragraph 2–2.
FAIL: Location of fault: go to paragraph 2–3.

2–2   **SIGNAL NAME:** CPG ADS LIGHT
       MEMORY LOCATION: 000565
       MEMORY DATA BIT(S): 14 (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Monitors ADS.
       REMARKS: From FCC through copilot/gunner (CPG) MRTU Type III to CPG and pilot
                caution/warning panels.
       PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 2–3.
       FAIL: Location of fault: CPG MRTU Type III, wiring from CPG MRTU Type III to pilot caution/warning
                panel, pilot caution/warning panel, wiring from CPG MRTU Type III to CPG caution/warning
                panel, CPG caution/warning panel, wiring between pilot caution/warning panel and CPG
                caution/warning panel. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

2–3   **SIGNAL NAME:** OAS STATUS
       MEMORY LOCATION: 002130
       MEMORY DATA BIT(S): 9 (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Monitors OAS status
       REMARKS: **NAV AIR DATA AC** circuit breaker, wiring from **NAV AIR DATA AC** circuit breaker to
                ADP, ADP, wiring from ADP to OAS, OAS, wiring from OAS to ADP, wiring from ADP to
                DASEC, DASEC to FCC.
       PASS: If fourth digit displayed on HOD is 2, 3, 6, or 7, go to paragraph 2–4.
       FAIL: Location of fault: **NAV AIR DATA AC** circuit breaker, wiring from **NAV AIR DATA AC** circuit
                breaker to ADP, ADP, wiring from ADP to OAS, OAS, wiring from ADP to DASEC, DASEC.
                Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

2–4   **SIGNAL NAME:** ADP STATUS
       MEMORY LOCATION: 002130
       MEMORY DATA BIT(S): 11 (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Monitors ADP status.
       REMARKS: **NAV AIR DATA DC** circuit breaker, wiring from **NAV AIR DATA DC** circuit breaker to
                ADP, ADP, wiring from ADP to OAS, OAS, wiring from OAS to ADP, wiring from ADP to
                DASEC, DASEC to FCC.
       PASS: If third digit displayed on HOD is 4, 5, 6, or 7, go to paragraph 2–5.
       FAIL: Location of fault: **NAV AIR DATA DC** circuit breaker, wiring from **NAV AIR DATA DC** circuit
                breaker to ADP, ADP, wiring from ADP to OAS, OAS, wiring from ADP to DASEC, DASEC.
                Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

2–5   **SIGNAL NAME:** ADS TOTAL VEL
       MEMORY LOCATION: 002135
       MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
       CONDITION: Monitor HOD; zero velocity should be indicated on the ground.
       SIGNAL FUNCTION: Sends ADS total velocity data to FCC.
       REMARKS: From ADS through DASEC to FCC.
       PASS: If CONDITION corresponds to proper velocity indication, go to paragraph 2–6.
       FAIL: Location of fault: ADP, wiring from ADP to DASEC, DASEC. Troubleshoot wiring to isolate fault
                (TM 9–1230–476–20–2).

2–6 SIGNAL NAME: ADS AIR DENSITY RATIO
MEMORY LOCATION: 002136
MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: Monitor HOD; a positive reading should be indicated.
SIGNAL FUNCTION: Sends ADS air density ratio data to FCC.
REMARKS: From ADP through DASEC to FCC.
PASS: If CONDITION corresponds to proper air density indication, go to paragraph 2–7.
FAIL: Location of fault: ADP, wiring from ADP to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

2–7 SIGNAL NAME: ADS LAT VEL
MEMORY LOCATION: 002141
MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: Monitor HOD; zero velocity should be indicated on the ground.
SIGNAL FUNCTION: Sends lateral velocity data to FCC.
REMARKS: From ADP through DASEC to FCC.
PASS: If CONDITION corresponds to proper velocity indication, go to paragraph 2–8.
FAIL: Location of fault: ADP, wiring from ADP to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

2–8 SIGNAL NAME: ADS AMBIENT TEMP
MEMORY LOCATION: 002144
MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: Monitor HOD; if outside air temperature is above zero degrees centigrade a positive number will appear on HOD, if outside air temperature is below zero degrees centigrade a negative number will appear on HOD.
SIGNAL FUNCTION: Sends outside ambient temperature data to FCC.
REMARKS: From OAS through ADP and DASEC to FCC.
PASS: If CONDITION corresponds to proper temperature indication, go to paragraph 2–9.
FAIL: Location of fault: OAS, wiring from OAS to ADP, ADP, wiring from ADP to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

2–9 SIGNAL NAME: ADS AMBIENT PRESSURE (ACY) STATIC PRESSURE (ACZ)
MEMORY LOCATION: 002145
MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: Monitor HOD; a positive reading will result if the barometric altimeter indicates above field level, a negative reading will result if the barometric altimeter indicates below field level.
SIGNAL FUNCTION: Sends outside air pressure data to FCC.
REMARKS: From OAS through ADP and DASEC to FCC.
PASS: If CONDITION corresponds to proper air pressure indication, go to paragraph 2–10.
FAIL: Location of fault: OAS, wiring from OAS to ADP, ADP, wiring from ADP to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

2–10 **SIGNAL NAME:**   ADS LONG VEL
MEMORY LOCATION: 002140
MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: Monitor HOD; zero velocity should be indicated on the ground.
SIGNAL FUNCTION: Sends longitudinal velocity data to FCC and stabilator control units (SCUs).
REMARKS: From ADP through DASEC to FCC and SCUs.
PASS: If CONDITION corresponds to proper velocity indication, go to paragraph 2–11.
FAIL: Location of fault: ADP, wiring from ADP to aft avionics module, aft avionics module, wiring to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

2–11 **SIGNAL NAME:**   OAS SIDESLIP ANGLE
MEMORY LOCATION: 002137
MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: Monitor HOD; zero velocity should be indicated on the ground.
SIGNAL FUNCTION: Sends ADS sideslip angle data to FCC.
REMARKS: From ADP through DASEC to FCC.
PASS: If CONDITION corresponds to proper sideslip indication, refer to TM 9–1230–476–20–2.
FAIL: Location of fault: ADP, wiring from ADP to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

CHAPTER 3

DIGITAL AUTOMATIC STABILIZATION EQUIPMENT (DASE)

MULTIPLEX READ CODES

FAILURE SYMPTOM INDEX

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HARS ELECTRONIC UNIT NO–GO AFT AVIONICS BAY	3–56
26 VAC EXCITATION XFMR (NO 1 OR NO 2) NO–GO AFT AVIONICS BAY	3–57
AIR DATA PROCESSOR NO–GO AFT AVIONICS BAY	3–62
LONG ACTUATOR NO–GO RH XMSN BAY	3–92
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DASE ENGAGE PANEL NO–GO PLT COMPARTMENT	3–96
28 VDC BUS NO–GO	3–99
BUCS TRACER NO–GO	3–100
PILOT LONG LVDT NO–GO PLT COMPARTMENT	3–101
PILOT LAT LVDT NO–GO PLT COMPARTMENT	3–102
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CPG LONG 1 DCPLR NO–GO CPG COMPARTMENT	3–120
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CPG DIR 1 DCPLR NO–GO CPG COMPARTMENT	3–124

FAILURE SYMPTOM INDEX (cont)

Personnel Required:

(2)

References:

TM 1–1520–238–23
TM 1–1520–238–T–7

Equipment Conditions:

Ref	Condition
TM 1–1520–238–T–7	DIGITAL AUTOMATIC STABILIZATION EQUIPMENT (DASE) – MAINTENANCE OPERATIONAL CHECK in progress

NOTE

- All multiplex read code responses are read from right to left.

- Multiplex read codes must be used in conjunction with applicable Maintenance Operational Check (MOC) in progress.

- Multiplex read codes are observed on the HOD (ADC) or CDU (ADD).

MULTIPLEX READ CODE INTERPRETATIONS

3–1 **SIGNAL NAME:** DASEC STATUS WORD TERMINAL FLAG
MEMORY LOCATION: 002077
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of bits 16, 15, or 13.
REMARKS: From digital automatic stabilization equipment computer (DASEC) to fire control computer (FCC).
PASS: If first digit on heads out display (HOD) is 0, 2, 4, or 6, go to paragraph 3–2.
FAIL: Location of fault: go to paragraph 3–4.

3–2 **SIGNAL NAME:** DASEC STATUS WORD BIT PROCESSOR (ACY) CPU BIT STATUS (ACZ)
MEMORY LOCATION: 002077
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates ability of word bit processor to work properly.
REMARKS: From DASEC to FCC.
PASS: If first digit displayed on HOD is 2 or 6, go to paragraph 3–3.
FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–3 **SIGNAL NAME:** DASEC STATUS WORD OUTPUT CLEAR
MEMORY LOCATION: 002077
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of power up clear latch.
REMARKS: From DASEC to FCC.
PASS: If first digit displayed on HOD is 6, go to paragraph 3–4.
FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–4 **SIGNAL NAME:** DASEC STATUS WORD DISCRETE OUTPUT BIT (ACY) DO BIT (ACZ) ∎
MEMORY LOCATION: 002077
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of 5 VDC and 28 VDC discretes.
REMARKS: From DASEC to FCC.
PASS: If second digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 3–5.
FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–5 **SIGNAL NAME:** DASEC STATUS WORD DC ANALOG OUTPUT BIT (ACY) DCO BIT (ACZ) ∎
MEMORY LOCATION: 002077
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of DC analog circuits.
REMARKS: From DASEC to FCC.
PASS: If second digit displayed on HOD is 3 or 7, go to paragraph 3–6.
FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–6 **SIGNAL NAME:** DASEC STATUS WORD AD/DA BIT (ACY) ADA BIT (ACZ) ∎
MEMORY LOCATION: 002077
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of analog–to–digital and digital–to–analog circuits.
REMARKS: From DASEC to FCC.
PASS: If third digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 3–7.
FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–7 **SIGNAL NAME:** DASEC STATUS WORD FD/LS TEST
MEMORY LOCATION: 002077
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates fault detection and location system (FD/LS) ground test is being run.
REMARKS: From DASEC to FCC.
PASS: If third digit displayed on HOD is 1 or 5, go to paragraph 3–8.
FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–8 SIGNAL NAME: DASEC STATUS WORD ASE BIT (ACY) DASE BIT STATUS (ACZ)
MEMORY LOCATION: 002077
MEMORY DATA BIT(S):   11   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates last FD/LS test ASE bit status.
REMARKS: From DASEC to FCC.
PASS: If third digit displayed on HOD is 1, go to paragraph 3–9.
FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–9 SIGNAL NAME: DASEC STATUS WORD SERIAL DIGITAL ERROR (ACY) S/D ERROR (ACZ)
MEMORY LOCATION: 002077
MEMORY DATA BIT(S):   10   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of heading attitude reference system (HARS) ability to acknowledge whether an error has been flagged.
REMARKS: From DASEC to FCC.
PASS: If fourth digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 3–10.
FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–10 SIGNAL NAME: DASEC STATUS WORD TERMINAL FLAG
MEMORY LOCATION: 002113
MEMORY DATA BIT(S):   19   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of bits 16, 15, or 13.
REMARKS: From DASEC to FCC.
PASS: If first digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 3–11.
FAIL: Location of fault: go to paragraph 3–13.

3–11 SIGNAL NAME: DASEC STATUS WORD BIT PROCESSOR (ACY) CPU BIT STATUS (ACZ)
MEMORY LOCATION: 002113
MEMORY DATA BIT(S):   18   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates ability of word bit processor to work properly.
REMARKS: From DASEC to FCC.
PASS: If first digit displayed on HOD is 2 or 6, go to paragraph 3–12.
FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–12 SIGNAL NAME: DASEC STATUS WORD OUTPUT CLEAR
MEMORY LOCATION: 002113
MEMORY DATA BIT(S):   17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of power up latch.
REMARKS: From DASEC to FCC.
PASS: If first digit displayed on HOD is 6, go to paragraph 3–13.
FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–13 SIGNAL NAME: DASEC STATUS WORD DISCRETE OUTPUT BIT (ACY) DO BIT (ACZ)
MEMORY LOCATION: 002113
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of 5 VDC and 28 VDC discretes.
REMARKS: From DASEC to FCC.
PASS: If second digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 3–14.
FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–14 SIGNAL NAME: DASEC STATUS WORD DC ANALOG OUTPUT BIT (ACY) DCO BIT (ACZ)
MEMORY LOCATION: 002113
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of DC analog circuits.
REMARKS: From DASEC to FCC.
PASS: If second digit displayed on HOD is 3 or 7, go to paragraph 3–15.
FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–15 SIGNAL NAME: DASEC STATUS WORD AD/DA BIT (ACY) ADA BIT (ACZ)
MEMORY LOCATION: 002113
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of analog–to–digital and digital–to–analog circuits.
REMARKS: From DASEC to FCC.
PASS: If third digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 3–16.
FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–16 SIGNAL NAME: DASEC STATUS WORD FD/LS TEST
MEMORY LOCATION: 002113
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates FD/LS ground test is being run.
REMARKS: From DASEC to FCC.
PASS: If third digit displayed on HOD is 1 or 5, go to paragraph 3–17.
FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–17 SIGNAL NAME: DASEC STATUS WORD ASE BIT (ACY) DASE BIT STATUS (ACZ)
MEMORY LOCATION: 002113
MEMORY DATA BIT(S): 11 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates last FD/LS test ASE bit status.
REMARKS: From DASEC to FCC.
PASS: If third digit displayed on HOD is 1, go to paragraph 3–18.
FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

■ **3–18 SIGNAL NAME:** DASEC STATUS WORD SERIAL DIGITAL ERROR (ACY) S/D ERROR (ACZ)
MEMORY LOCATION: 002113
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates heading attitude reference system (HARS) ability to acknowledge whether an error has been flagged.
REMARKS: From DASEC to FCC.
PASS: If fourth digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 3–19.
FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

■ **3–19 SIGNAL NAME:** DASEC STATUS WORD TERMINAL FLAG (ACY) MESSAGE ERROR (ACZ)
MEMORY LOCATION: 002150
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of bits 16, 15, or 13.
REMARKS: From DASEC to FCC.
PASS: If first digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 3–20.
FAIL: Location of fault: go to paragraph 3–22.

■ **3–20 SIGNAL NAME:** DASEC STATUS WORD BIT PROCESSOR (ACY) CPU BIT STATUS (ACZ)
MEMORY LOCATION: 002150
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates ability of word bit processor to work properly.
REMARKS: From DASEC to FCC.
PASS: If first digit displayed on HOD is 2 or 6, go to paragraph 3–21.
FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–21 SIGNAL NAME: DASEC STATUS WORD OUTPUT CLEAR
MEMORY LOCATION: 002150
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of power up latch.
REMARKS: From DASEC to FCC.
PASS: If first digit displayed on HOD is 6, go to paragraph 3–22.
FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

■ **3–22 SIGNAL NAME:** DASEC STATUS WORD DISCRETE OUTPUT BIT (ACY) DO BIT (ACZ)
MEMORY LOCATION: 002150
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of 5 VDC and 28 VDC discretes.
REMARKS: From DASEC to FCC.
PASS: If second digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 3–23.
FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–23 SIGNAL NAME: DASEC STATUS WORD DC ANALOG OUTPUT BIT (ACY) DCO BIT (ACZ) ▪
 MEMORY LOCATION: 002150
 MEMORY DATA BIT(S): 15 (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Indicates status of DC analog circuits.
 REMARKS: From DASEC to FCC.
 PASS: If second digit displayed on HOD is 3 or 7, go to paragraph 3–24.
 FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–24 SIGNAL NAME: DASEC STATUS WORD AD/DA BIT (ACY) ADA BIT (ACZ) ▪
 MEMORY LOCATION: 002150
 MEMORY DATA BIT(S): 13 (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Indicates status of analog–to–digital and digital–to–analog circuits.
 REMARKS: From DASEC to FCC.
 PASS: If third digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 3–25.
 FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–25 SIGNAL NAME: DASEC STATUS WORD FD/LS TEST
 MEMORY LOCATION: 002150
 MEMORY DATA BIT(S): 12 (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Indicates FD/LS ground test is being run.
 REMARKS: From DASEC to FCC.
 PASS: If third digit displayed on HOD is 1 or 5, go to paragraph 3–26.
 FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–26 SIGNAL NAME: DASEC STATUS WORD ASE BIT (ACY) DASE BIT STATUS (ACZ) ▪
 MEMORY LOCATION: 002150
 MEMORY DATA BIT(S): 11 (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Indicates last FD/LS test ASE bit status.
 REMARKS: From DASEC to FCC.
 PASS: If third digit displayed on HOD is 1, go to paragraph 3–27.
 FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–27 SIGNAL NAME: DASEC STATUS WORD SERIAL DIGITAL ERROR (ACY) S/D ERROR (ACZ) ▪
 MEMORY LOCATION: 002150
 MEMORY DATA BIT(S): 10 (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Indicates HARS ability to acknowledge whether an error has been flagged.
 REMARKS: From DASEC to FCC.
 PASS: If fourth digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 3–28.
 FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–28 SIGNAL NAME: DASEC STATUS WORD TERMINAL FLAG
 MEMORY LOCATION: 002207
 MEMORY DATA BIT(S):   19   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Indicates status of bits 16, 15, or 13.
 REMARKS: From FCC to DASEC.
 PASS: If first digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 3–29.
 FAIL: Location of fault: go to paragraph 3–31.

3–29 SIGNAL NAME: DASEC STATUS WORD BIT PROCESSOR (ACY) CPU BIT STATUS (ACZ)
 MEMORY LOCATION: 002207
 MEMORY DATA BIT(S):   18   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Indicates ability of word bit processor to work properly.
 REMARKS: From FCC to DASEC.
 PASS: If first digit displayed on HOD is 2 or 6, go to paragraph 3–30.
 FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–30 SIGNAL NAME: DASEC STATUS WORD OUTPUT CLEAR
 MEMORY LOCATION: 002207
 MEMORY DATA BIT(S):   17   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Indicates status of power up latch.
 REMARKS: From FCC to DASEC.
 PASS: If first digit displayed on HOD is 6, go to paragraph 3–31.
 FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–31 SIGNAL NAME: DASEC STATUS WORD DISCRETE OUTPUT BIT (ACY) DO BIT (ACZ)
 MEMORY LOCATION: 002207
 MEMORY DATA BIT(S):   16   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Indicates status of 5 VDC and 28 VDC discretes.
 REMARKS: From FCC to DASEC.
 PASS: If second digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 3–32.
 FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–32 SIGNAL NAME: DASEC STATUS WORD DC ANALOG OUTPUT BIT (ACY) DCO BIT (ACZ)
 MEMORY LOCATION: 002207
 MEMORY DATA BIT(S):   15   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Indicates status of DC analog circuits.
 REMARKS: From FCC to DASEC.
 PASS: If second digit displayed on HOD is 3 or 7, go to paragraph 3–33.
 FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–33 SIGNAL NAME: DASEC STATUS WORD AD/DA BIT (ACY) ADA BIT (ACZ)
MEMORY LOCATION: 002207
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of analog–to–digital and digital–to–analog circuits.
REMARKS: From FCC to DASEC.
PASS: If third digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 3–34.
FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–34 SIGNAL NAME: DASEC STATUS WORD FD/LS TEST
MEMORY LOCATION: 002207
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates FD/LS ground test is being run.
REMARKS: From FCC to DASEC.
PASS: If third digit displayed on HOD is 1 or 5, go to paragraph 3–35.
FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–35 SIGNAL NAME: DASEC STATUS WORD ASE BIT (ACY) DASE BIT STATUS (ACZ)
MEMORY LOCATION: 002207
MEMORY DATA BIT(S): 11 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates last FD/LS test ASE bit status.
REMARKS: From FCC to DASEC.
PASS: If third digit displayed on HOD is 1, go to paragraph 3–36.
FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–36 SIGNAL NAME: DASEC STATUS WORD SERIAL DIGITAL ERROR (ACY) S/D ERROR (ACZ)
MEMORY LOCATION: 002207
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates HARS ability to acknowledge whether an error has been flagged.
REMARKS: From FCC to DASEC.
PASS: If fourth digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 3–37.
FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–37 SIGNAL NAME: DASEC STATUS WORD TERMINAL FLAG
MEMORY LOCATION: 002222
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of bits 16, 15, or 13.
REMARKS: From FCC to DASEC.
PASS: If first digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 3–40.
FAIL: Location of fault: go to paragraph 3–38.

3–38 **SIGNAL NAME:** DASEC STATUS WORD BIT PROCESSOR (ACY) CPU BIT STATUS (ACZ)
MEMORY LOCATION: 002222
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates ability of word bit processor to work properly.
REMARKS: From FCC to DASEC.
PASS: If first digit displayed on HOD is 2 or 6, go to paragraph 3–39.
FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–39 **SIGNAL NAME:** DASEC STATUS WORD OUTPUT CLEAR
MEMORY LOCATION: 002222
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of power up latch.
REMARKS: From FCC to DASEC.
PASS: If first digit displayed on HOD is 6, go to paragraph 3–40.
FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–40 **SIGNAL NAME:** DASEC STATUS WORD DISCRETE OUTPUT BIT (ACY) DO BIT (ACZ)
MEMORY LOCATION: 002222
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of 5 VDC and 28 VDC discretes.
REMARKS: From FCC to DASEC.
PASS: If second digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 3–41.
FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–41 **SIGNAL NAME:** DASEC STATUS WORD DC ANALOG OUTPUT BIT (ACY) DCO BIT (ACZ)
MEMORY LOCATION: 002222
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of DC analog circuits.
REMARKS: From FCC to DASEC.
PASS: If second digit displayed on HOD is 3 or 7, go to paragraph 3–42.
FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–42 **SIGNAL NAME:** DASEC STATUS WORD AD/DA BIT (ACY) ADA BIT (ACZ)
MEMORY LOCATION: 002222
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of analog–to–digital and digital–to–analog circuits.
REMARKS: From FCC to DASEC.
PASS: If third digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 3–43.
FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–43 SIGNAL NAME: DASEC STATUS WORD FD/LS TEST
   MEMORY LOCATION: 002222
   MEMORY DATA BIT(S): 12 (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Indicates FD/LS ground test is being run.
   REMARKS: From FCC to DASEC.
   PASS: If third digit displayed on HOD is 1 or 5, go to paragraph 3–44.
   FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–44 SIGNAL NAME: DASEC STATUS WORD ASE BIT (ACY) DASE BIT STATUS (ACZ)
   MEMORY LOCATION: 002222
   MEMORY DATA BIT(S): 11 (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Indicates last FD/LS test ASE bit status.
   REMARKS: From FCC to DASEC.
   PASS: If third digit displayed on HOD is 1, go to paragraph 3–45.
   FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–45 SIGNAL NAME: DASEC STATUS WORD SERIAL DIGITAL ERROR (ACY) S/D ERROR (ACZ)
   MEMORY LOCATION: 002222
   MEMORY DATA BIT(S): 10 (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Indicates HARS ability to acknowledge whether an error has been flagged.
   REMARKS: From FCC to DASEC.
   PASS: If fourth digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 3–46.
   FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–46 SIGNAL NAME: DASEC STATUS WORD TERMINAL FLAG
   MEMORY LOCATION: 002240
   MEMORY DATA BIT(S): 19 (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Indicates status of bits 16, 15, or 13.
   REMARKS: From FCC to DASEC.
   PASS: If first digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 3–47.
   FAIL: Location of fault: go to paragraph 3–49.

3–47 SIGNAL NAME: DASEC STATUS WORD BIT PROCESSOR (ACY) CPU BIT STATUS (ACZ)
   MEMORY LOCATION: 002240
   MEMORY DATA BIT(S): 18 (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Indicates ability of word bit processor to work properly.
   REMARKS: From FCC to DASEC.
   PASS: If first digit displayed on HOD is 2 or 6, go to paragraph 3–48.
   FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–48 SIGNAL NAME: DASEC STATUS WORD OUTPUT CLEAR
      MEMORY LOCATION: 002240
      MEMORY DATA BIT(S):   17   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates status of power up latch.
      REMARKS: From FCC to DASEC.
      PASS: If first digit displayed on HOD is 6, go to paragraph 3–49.
      FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–49 SIGNAL NAME: DASEC STATUS WORD DISCRETE OUTPUT BIT (ACY) DO BIT (ACZ)
      MEMORY LOCATION: 002240
      MEMORY DATA BIT(S):   16   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates status of 5 VDC and 28 VDC discretes.
      REMARKS: From FCC to DASEC.
      PASS: If second digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 3–50.
      FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–50 SIGNAL NAME: DASEC STATUS WORD DC ANALOG OUTPUT BIT (ACY) DCO BIT (ACZ)
      MEMORY LOCATION: 002240
      MEMORY DATA BIT(S):   15   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates status of DC analog circuits.
      REMARKS: From FCC to DASEC.
      PASS: If second digit displayed on HOD is 3 or 7, go to paragraph 3–51.
      FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–51 SIGNAL NAME: DASEC STATUS WORD AD/DA BIT (ACY) ADA BIT (ACZ)
      MEMORY LOCATION: 002240
      MEMORY DATA BIT(S):   13   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates status of analog–to–digital and digital–to–analog circuits.
      REMARKS: From FCC to DASEC.
      PASS: If third digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 3–52.
      FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–52 SIGNAL NAME: DASEC STATUS WORD FD/LS TEST
      MEMORY LOCATION: 002240
      MEMORY DATA BIT(S):   12   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates FD/LS ground test is being run.
      REMARKS: From FCC to DASEC.
      PASS: If third digit displayed on HOD is 1 or 5, go to paragraph 3–53.
      FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–53 SIGNAL NAME: DASEC STATUS WORD ASE BIT (ACY) DASE BIT STATUS (ACZ)   ■
   MEMORY LOCATION: 002240
   MEMORY DATA BIT(S):   11   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Indicates last FD/LS test ASE bit status.
   REMARKS: From FCC to DASEC.
   PASS: If third digit displayed on HOD is 1, go to paragraph 3–54.
   FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–54 SIGNAL NAME: DASEC STATUS WORD SERIAL DIGITAL ERROR (ACY) S/D ERROR (ACZ)   ■
   MEMORY LOCATION: 002240
   MEMORY DATA BIT(S):   10   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Indicates HARS ability to acknowledge whether an error has been flagged.
   REMARKS: From FCC to DASEC.
   PASS: If fourth digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 3–55.
   FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–55 SIGNAL NAME: HARS SUBSYSTEM (ACY) HARS READY IND (ACZ)   ■
   MEMORY LOCATION: 002103
   MEMORY DATA BIT(S):   5   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Indicates status of HARS.
   REMARKS: From DASEC to FCC.
   PASS: If fifth digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 3–56.
   FAIL: Location of fault: refer to Chapter 6, paragraph 6–8.

3–56 SIGNAL NAME: ROM CHECKSUM
   MEMORY LOCATION: 002103
   MEMORY DATA BIT(S):   6   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Indicates status of DASEC read only memory (ROM) check.
   REMARKS: From DASEC to FCC.
   PASS: If fifth digit displayed on HOD is 0 or 1, go to paragraph 3–57.
   FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–57 SIGNAL NAME: 26 VAC REF A & B (ACY) 26VAC STAT (ACZ)   ■
   MEMORY LOCATION: 002103
   MEMORY DATA BIT(S):   7   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Indicates status of 26 VAC output from T1 and T2.
   REMARKS: From DASEC to FCC.
   PASS: If fifth digit displayed on HOD is 0, go to paragraph 3–58.
   FAIL: Location of fault: go to paragraph 3–97.

3–58 SIGNAL NAME: COLL SAS SOL DISC INVALID (ACY) CLTV SAS SOL STAT (ACZ)
      MEMORY LOCATION: 002103
      MEMORY DATA BIT(S): 8 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates status of collective stability augmentation system (SAS) solenoid.
      REMARKS: From collective (vertical) servoactuator through DASEC to FCC.
      PASS: If fourth digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 3–59.
      FAIL: Location of fault: collective (vertical) servoactuator, wiring from collective (vertical)
            servoactuator to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

3–59 SIGNAL NAME: YAW SAS SOL DISC INVALID (ACY) YAW SAS SOL STAT (ACZ)
      MEMORY LOCATION: 002103
      MEMORY DATA BIT(S): 9 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates status of directional SAS solenoid.
      REMARKS: From directional (yaw) servoactuator through DASEC to FCC.
      PASS: If fourth digit displayed on HOD is 0 or 1, go to paragraph 3–60.
      FAIL: Location of fault: directional (yaw) servoactuator, wiring from directional (yaw) servoactuator to
            DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

3–60 SIGNAL NAME: ROLL SAS SOL DISC INVALID (ACY) ROLL SAS SOL STAT (ACZ)
      MEMORY LOCATION: 002103
      MEMORY DATA BIT(S): 10 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates status of roll SAS solenoid.
      REMARKS: From lateral (roll) servoactuator through DASEC to FCC.
      PASS: If fourth digit displayed on HOD is 0, go to paragraph 3–61.
      FAIL: Location of fault: lateral (roll) servoactuator, wiring from lateral (roll) servoactuator to DASEC,
            DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

3–61 SIGNAL NAME: PITCH SAS SOL DISC INVALID (ACY) PITCH SAS SOL STAT (ACZ)
      MEMORY LOCATION: 002103
      MEMORY DATA BIT(S): 11 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates status of pitch SAS solenoid.
      REMARKS: From longitudinal (pitch) servoactuator through DASEC to FCC.
      PASS: If third digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 3–62.
      FAIL: Location of fault: longitudinal (pitch) servoactuator, wiring from longitudinal (pitch) servoactuator
            to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

3–62 **SIGNAL NAME:** AD REF VOLTAGE FAIL (ACY) ADA REF STAT (ACZ)
      MEMORY LOCATION: 002103
      MEMORY DATA BIT(S): 16 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates status of one of analog–to–digital converters during a DASEC internal wraparound test.
      REMARKS: From DASEC to FCC.
      PASS: If second digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 3–63.
      FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–63 **SIGNAL NAME:** HARS INPUT NOT CHANGING (ACY) HARS DATA STAT (ACZ)
      MEMORY LOCATION: 002103
      MEMORY DATA BIT(S): 17 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates status of HARS input data.
      REMARKS: From DASEC to FCC.
      PASS: If first digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 3–64.
      FAIL: Location of fault: refer to Chapter 6, paragraph 6–14.

3–64 **SIGNAL NAME:** COLL WRAPAROUND DISCRETE (ACY) COLL WRAP STAT (ACZ)
      MEMORY LOCATION: 002103
      MEMORY DATA BIT(S): 18 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates status of DASEC collective (vertical) servoactuator drive digital interface signal.
      REMARKS: From DASEC to FCC.
      PASS: If first digit displayed on HOD is 0 or 1, go to paragraph 3–65.
      FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–65 **SIGNAL NAME:** YAW WRAPAROUND DISCRETE (ACY) YAW WRAP STAT (ACZ)
      MEMORY LOCATION: 002103
      MEMORY DATA BIT(S): 19 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates status of DASEC tail rotor actuator drive digital interface signal.
      REMARKS: From DASEC to FCC.
      PASS: If first digit displayed on HOD is 0, go to paragraph 3–66.
      FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–66 **SIGNAL NAME:** ROLL WRAPAROUND DISC INVALID (ACY) ROLL WRAP STAT (ACZ)
      MEMORY LOCATION: 002104
      MEMORY DATA BIT(S): 4 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates status of DASEC lateral (roll) servoactuator drive digital interface signal.
      REMARKS: From DASEC to FCC.
      PASS: If sixth digit displayed on HOD is 0, go to paragraph 3–67.
      FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–67 **SIGNAL NAME:** PITCH WRAPAROUND DISC INVALID (ACY) PITCH WRAP STAT (ACZ)
MEMORY LOCATION: 002104
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of DASEC longitudinal (pitch) servoactuator drive digital interface signal.
REMARKS: From DASEC to FCC.
PASS: If fifth digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 3–68.
FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–68 **SIGNAL NAME:** TICKET CHECK FAIL (ACY) REAL TIME CALC (ACZ)
MEMORY LOCATION: 002104
MEMORY DATA BIT(S): 6 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates the current capability of DASEC to complete all internal software tests necessary to assure DASEC processor and signal path operability.
REMARKS: From DASEC to FCC.
PASS: If fifth digit displayed on HOD is 0 or 1, go to paragraph 3–69.
FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–69 **SIGNAL NAME:** BUCS WRAPAROUND DISCRETE INVALID (ACY) BUCS WRP STAT (ACZ)
MEMORY LOCATION: 002104
MEMORY DATA BIT(S): 7 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of DASEC back up control system (BUCS) solenoid drive circuitry.
REMARKS: From DASEC to FCC.
PASS: If fifth digit displayed on HOD is 0, go to paragraph 3–70.
FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–70 **SIGNAL NAME:** COLL MISTRACK (ACY) CLTV STICK MISTRK (ACZ)
MEMORY LOCATION: 002104
MEMORY DATA BIT(S): 8 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates capability of pilot and CPG collective stick linear variable differential transducer (LVDT) positions to agree.
REMARKS: From DASEC to FCC.
PASS: If fourth digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 3–71.
FAIL: Location of fault: pilot and CPG collective (vertical) LVDT, wiring from DASEC to collective (vertical) LVDT. Null collective (vertical) LVDTs. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

3–71 **SIGNAL NAME:** YAW MISTRACK (ACY) YAW STICK MISTRK (ACZ)
MEMORY LOCATION: 002104
MEMORY DATA BIT(S): 9 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates capability of pilot and CPG pedal LVDT positions to agree.
REMARKS: From DASEC to FCC.
PASS: If fourth digit displayed on HOD is 0 or 1, go to paragraph 3–72.
FAIL: Location of fault: pilot or CPG pedal LVDT, wiring from DASEC to pedal LVDTs. Null pedal LVDTs. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

3–72 SIGNAL NAME: ROLL MISTRACK (ACY) ROLL STICK MISTRK (ACZ)   ■
  MEMORY LOCATION: 002104
  MEMORY DATA BIT(S):   10   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates capability of pilot and CPG lateral (roll) LVDT positions to agree.
  REMARKS: From DASEC to FCC.
  PASS: If fourth digit displayed on HOD is 0, go to paragraph 3–73.
  FAIL: Location of fault: pilot or CPG lateral (roll) LVDT, wiring from DASEC to LVDTs. Null pilot and
       CPG lateral (roll) LVDTs. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

3–73 SIGNAL NAME: PITCH MISTRACK (ACY) PITCH STICK MISTRK (ACZ)   ■
  MEMORY LOCATION: 002104
  MEMORY DATA BIT(S):   11   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates capability of pilot and CPG longitudinal cyclic LVDT positions to
                agree.
  REMARKS: From DASEC to FCC.
  PASS: If third digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 3–74.
  FAIL: Location of fault: pilot or CPG longitudinal (pitch) LVDT, wiring from DASEC to LVDTs. Null pilot
       and CPG longitudinal (pitch) LVDTs. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

3–74 SIGNAL NAME: PITCH WRAPAROUND SUM INVALID (ACY) PITCH SUMWRAP STAT (ACZ)   ■
  MEMORY LOCATION: 002104
  MEMORY DATA BIT(S):   16   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates status of DASEC longitudinal (pitch) servoactuator drive circuitry.
  REMARKS: From DASEC to FCC.
  PASS: If second digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 3–75.
  FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–75 SIGNAL NAME: ROLL WRAPAROUND SUM INVALID (ACY) ROLL SUMWRAP STAT (ACZ)   ■
  MEMORY LOCATION: 002104
  MEMORY DATA BIT(S):   17   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates status of DASEC lateral (roll) servoactuator drive circuitry.
  REMARKS: From DASEC to FCC.
  PASS: If first digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 3–76.
  FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–76 SIGNAL NAME: YAW WRAPAROUND SUM INVALID (ACY) YAW SUMWRAP STAT (ACZ)   ■
  MEMORY LOCATION: 002104
  MEMORY DATA BIT(S):   18   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates status of DASEC tail rotor actuator drive circuitry.
  REMARKS: From DASEC to FCC.
  PASS: If first digit displayed on HOD is 0 or 1, go to paragraph 3–77.
  FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

■ **3–77 SIGNAL NAME:** COLL WRAPAROUND SUM INVALID (ACY) CLTV SUMWRAP STAT (ACZ)
MEMORY LOCATION: 002104
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of DASEC collective (vertical) servoactuator drive circuitry.
REMARKS: From DASEC to FCC.
PASS: If first digit displayed on HOD is 0, go to paragraph 3–78.
FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

■ **3–78 SIGNAL NAME:** YAW MODEL MISTRACK (ACY) YAW MODEL MISTRK (ACZ)
MEMORY LOCATION: 002105
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates capability of tail rotor actuator to respond properly to DASEC commands.
REMARKS: From DASEC to FCC.
PASS: If sixth digit displayed on HOD is 0, go to paragraph 3–79.
FAIL: Location of fault: tail rotor actuator, wiring from DASEC to tail rotor actuator. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

■ **3–79 SIGNAL NAME:** ROLL MODEL MISTRACK (ACY) ROLL MODEL MISTRK (ACZ)
MEMORY LOCATION: 002105
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates capability of lateral (roll) servoactuator to respond properly to DASEC commands.
REMARKS: From DASEC to FCC.
PASS: If fifth digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 3–80.
FAIL: Location of fault: lateral (roll) servoactuator, wiring from DASEC to lateral (roll) servoactuator. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

■ **3–80 SIGNAL NAME:** PITCH MODEL MISTRACK (ACY) PITCH MODEL MISTRK (ACZ)
MEMORY LOCATION: 002105
MEMORY DATA BIT(S): 6 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates capability of longitudinal (pitch) servoactuator to respond properly to DASEC commands.
REMARKS: From DASEC to FCC.
PASS: If fifth digit displayed on HOD is 0 or 1, go to paragraph 3–81.
FAIL: Location of fault: longitudinal (pitch) servoactuator, wiring from DASEC to longitudinal (pitch) servoactuator. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

3–81 SIGNAL NAME: COLL VALVE CMD MONITOR (ACY) CLTV VLV MON STAT (ACZ)   ■
MEMORY LOCATION: 002105
MEMORY DATA BIT(S): 7   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates capability of the collective stability augmentation system (SAS)
sleeve to return to center position after a BUCS self test or a ground FD/LS has
been performed or the presence of an electromagnetic interference (EMI) on
the electro–hydraulic valve (EHV) lines which induced a voltage greater than 2
VAC on the collective EHV lines (associated with a particular coordinate axis
when BUCS is not engaged in that axis) during a DASE test.
REMARKS: From DASEC to FCC.
PASS: If fifth digit displayed on HOD is 0, go to paragraph 3–82.
FAIL: Location of fault: collective (vertical) servoactuator, wiring from DASEC to collective (vertical)
servoactuator electro–hydraulic valve. Troubleshoot wiring to isolate fault
(TM 1–1520–238–T–7).

3–82 SIGNAL NAME: COLL A–B MISTRACK (ACY) CLTV ACTR STAT (ACZ)   ■
MEMORY LOCATION: 002105
MEMORY DATA BIT(S): 8   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates that the collective A and B actuators are tracking each other within a
tolerance of 9% to 19%.
REMARKS: From DASEC to FCC.
PASS: If fourth digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 3–83.
FAIL: Location of fault: collective (vertical) servoactuator LVDTs, wiring from DASEC to collective
(vertical) servoactuator LVDTs. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

3–83 SIGNAL NAME: YAW A–B MISTRACK (ACY) YAW ACTR MISTRK (ACZ)   ■
MEMORY LOCATION: 002105
MEMORY DATA BIT(S): 9   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates that the yaw A and B actuators are tracking each other within a
tolerance of 9% to 19%.
REMARKS: From DASEC to FCC.
PASS: If fourth digit displayed on HOD is 0 or 1, go to paragraph 3–84.
FAIL: Location of fault: tail rotor servoactuator LVDTs, wiring from DASEC to tail rotor servoactuator
LVDTs. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

3–84 SIGNAL NAME: ROLL A–B MISTRACK (ACY) ROLL ACTR MISTRK (ACZ)   ■
MEMORY LOCATION: 002105
MEMORY DATA BIT(S): 10   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates that the roll A and B actuators are tracking each other within a
tolerance of 9% to 19%.
REMARKS: From DASEC to FCC.
PASS: If fourth digit displayed on HOD is 0, go to paragraph 3–85.
FAIL: Location of fault: lateral (roll) servoactuator LVDTs, wiring from DASEC to lateral (roll)
servoactuator LVDTs. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

3–85 SIGNAL NAME: PITCH A–B MISTRACK (ACY) PITCH ACTR MISTRK (ACZ)
MEMORY LOCATION: 002105
MEMORY DATA BIT(S): 11 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates that the yaw A and B actuators are tracking each other within a tolerance of 9% to 19%.
REMARKS: From DASEC to FCC.
PASS: If third digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 3–86.
FAIL: Location of fault: longitudinal (pitch) servoactuator LVDTs, wiring from DASEC to longitudinal (pitch) servoactuator LVDTs. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

3–86 SIGNAL NAME: A/S DISCRETES INVALID (ACY) AIR DATA STAT (ACZ)
MEMORY DATA BIT(S): 002105
MEMORY LOCATION: 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of ADS data.
REMARKS: From DASEC to FCC.
PASS: If third digit displayed on HOD is 0 or 2, go to paragraph 3–87.
FAIL: Location of fault: refer to Chapter 2, paragraph 2–1.

3–87 SIGNAL NAME: PROCESSOR FAIL (ACY) ASE CMPTR (ACZ)
MEMORY LOCATION: 002105
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates capability of DASEC processor to execute each type of instruction.
REMARKS: From DASEC to FCC.
PASS: If first digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 3–88.
FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–88 SIGNAL NAME: DASE SUBSYSTEM FAIL (ACY) ASE SYSTEM STAT (ACZ)
MEMORY LOCATION: 002106
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of DASE subsystem.
REMARKS: From DASEC to FCC.
PASS: If sixth digit displayed on HOD is 0, go to paragraph 3–89.
FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–89 SIGNAL NAME: DASEC FAIL (ACY) DASE CMPTR STAT (ACZ)
MEMORY LOCATION: 002106
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates capability of DASEC to pass all internal processor and input/output wraparound tests.
REMARKS: From DASEC to FCC.
PASS: If fifth digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 3–90.
FAIL: Location of fault: replace DASEC (TM 1–1520–238–23).

3–90 **SIGNAL NAME:** HARS FAIL (ACY) HARS TEST STAT (ACZ)
 MEMORY LOCATION: 002106
 MEMORY DATA BIT(S): 6 (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Indicates capability of HARS to supply data to DASEC.
 REMARKS: From DASEC to FCC.
 PASS: If fifth digit displayed on HOD is 0 or 1, go to paragraph 3–91.
 FAIL: Location of fault: refer to Chapter 6, paragraph 6–9.

3–91 **SIGNAL NAME:** AIR DATA FAIL (ACY) ADS TEST STAT (ACZ)
 MEMORY LOCATION: 002106
 MEMORY DATA BIT(S): 7 (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Indicates capability of air data system (ADS) to function properly and to supply data to DASEC.
 REMARKS: From DASEC to FCC.
 PASS: If fifth digit displayed on HOD is 0, go to paragraph 3–92.
 FAIL: Location of fault: refer to Chapter 2, paragraph 2–3.

3–92 **SIGNAL NAME:** LONG ACT FAIL (ACY) LONG ACTR STAT (ACZ)
 MEMORY LOCATION: 002106
 MEMORY DATA BIT(S): 10 (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Indicates capability of longitudinal (pitch) servoactuator to respond correctly to DASEC commands.
 REMARKS: From DASEC to FCC.
 PASS: If fourth digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 3–93.
 FAIL: Location of fault: longitudinal (pitch) servoactuator, wiring from longitudinal (pitch) servoactuator to DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

3–93 **SIGNAL NAME:** LAT ACT FAIL (ACY) LAT ACTR STAT (ACZ)
 MEMORY LOCATION: 002106
 MEMORY DATA BIT(S): 11 (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Indicates capability of lateral (roll) servoactuator to respond correctly to DASEC commands.
 REMARKS: From DASEC to FCC.
 PASS: If third digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 3–94.
 FAIL: Location of fault: lateral (roll) servoactuator, wiring from lateral (roll) servoactuator to DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

3–94 **SIGNAL NAME:** DIR ACT FAIL (ACY) DIR ACTR STAT (ACZ)
 MEMORY DATA BIT(S): 002106
 MEMORY LOCATION: 12 (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Indicates capability of tail rotor actuator to respond correctly to DASEC commands.
 REMARKS: From DASEC to FCC.
 PASS: If third digit displayed on HOD is 0 or 1, go to paragraph 3–95.
 FAIL: Location of fault: tail rotor actuator, wiring from tail rotor actuator to DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

3–95 SIGNAL NAME: COLL ACT FAIL (ACY) CLTV ACTR STAT (ACZ)
  MEMORY LOCATION: 002106
  MEMORY DATA BIT(S):   13   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates capability of collective (vertical) servoactuator to respond correctly to
                DASEC commands.
  REMARKS: From DASEC to FCC.
  PASS: If third digit displayed on HOD is 0, go to paragraph 3–96.
  FAIL: Location of fault: collective (vertical) servoactuator, wiring from collective (vertical)
          servoactuator to DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

3–96 SIGNAL NAME: ASE CONTROL PANEL FAIL (ACY) ASE CONT PNL STAT (ACZ)
  MEMORY LOCATION: 002106
  MEMORY DATA BIT(S):   14   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates capability of all control panel switches to function properly.
  REMARKS: From DASEC to FCC.
  PASS: If second digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 3–97.
  FAIL: Location of fault: ASE control panel, wiring from ASE control panel to DASEC. Troubleshoot
          wiring to isolate fault (TM 1–1520–238–T–7).

3–97 SIGNAL NAME: 26 VAC A FAIL (ACY) 26VAC XFMR1 STAT (ACZ)
  MEMORY LOCATION: 002106
  MEMORY DATA BIT(S):   16   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates status of 26 VAC A output from transformer T1.
  REMARKS: From DASEC to FCC.
  PASS: If second digit displayed on HOD is 0 or 2, go to paragraph 3–98.
  FAIL: Location of fault: Transformer 1 (T1) or, on aircraft serial effectivity numbers 88–0199 and
          subsequent, replace transformer/filter assembly (TM 1–1520–238–23).

3–98 SIGNAL NAME: 26 VAC B FAIL (ACY) 26VAC XFMR2 STAT (ACZ)
  MEMORY LOCATION: 002106
  MEMORY DATA BIT(S):   17   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates status of 26 VAC B output from transformer T2.
  REMARKS: From DASEC to FCC.
  PASS: If second digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 3–99.
  FAIL: Location of fault: Transformer 2 (T2) or, on aircraft serial effectivity numbers 88–0199 and
          subsequent, replace transformer/filter assembly (TM 1–1520–238–23).

3–99 SIGNAL NAME: 28 VDC BUCS FAIL (ACY) 26VDC BUCS STAT (ACZ)
  MEMORY LOCATION: 002106
  MEMORY DATA BIT(S):   18   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates status of 28 VDC BUCS power.
  REMARKS: From DASEC to FCC.
  PASS: If first digit displayed on HOD is 0 or 1, go to paragraph 3–100.
  FAIL: Location of fault: BUCS circuit breaker, wiring from circuit breaker to DASEC, DASEC.
          Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

3–100 SIGNAL NAME: BUCS TRACER FAIL (ACY) BUCS TRACER STAT (ACZ)
MEMORY LOCATION: 002106
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of BUCS tracer wires.
REMARKS: From DASEC to FCC.
PASS: If first digit displayed on HOD is 0, go to paragraph 3–101.
FAIL: Location of fault: BUCS circuit breaker, wiring from circuit breaker to DASEC, DASEC.
Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

3–101 SIGNAL NAME: PLT LVDT LONG (ACY) P LONG LVDT STAT (ACZ)
MEMORY LOCATION: 002107
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of pilot longitudinal (pitch) linear variable differential transducer
(LVDT).
REMARKS: From pilot longitudinal (pitch) LVDT through DASEC to FCC.
PASS: If sixth digit displayed on HOD is 0, go to paragraph 3–102.
FAIL: Location of fault: pilot longitudinal (pitch) LVDT, wiring from pilot longitudinal (pitch) LVDT to
DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

3–102 SIGNAL NAME: PLT LVDT LAT (ACY) P LAT LVDT STAT (ACZ)
MEMORY LOCATION: 002107
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of pilot lateral (roll) LVDT.
REMARKS: From pilot lateral (roll) LVDT through DASEC to FCC.
PASS: If fifth digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 3–103.
FAIL: Location of fault: pilot lateral (roll) LVDT, wiring from LVDT to DASEC, DASEC. Troubleshoot
wiring to isolate fault (TM 1–1520–238–T–7).

3–103 SIGNAL NAME: PLT LVDT DIR (ACY) P DIR LVDT STAT (ACZ)
MEMORY LOCATION: 002107
MEMORY DATA BIT(S): 6 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of pilot directional (yaw) LVDT.
REMARKS: From pilot directional (yaw) LVDT through DASEC to FCC.
PASS: If fifth digit displayed on HOD is 0 or 1, go to paragraph 3–104.
FAIL: Location of fault: pilot directional (yaw) LVDT, wiring from LVDT to DASEC, DASEC.
Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

3–104 SIGNAL NAME: PLT LVDT COLL (ACY) P CLTV LVDT STAT (ACZ)
MEMORY LOCATION: 002107
MEMORY DATA BIT(S): 7 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of pilot collective (vertical) LVDT.
REMARKS: From pilot collective (vertical) LVDT through DASEC to FCC.
PASS: If fifth digit displayed on HOD is 0, go to paragraph 3–105.
FAIL: Location of fault: pilot collective (vertical) LVDT, wiring from LVDT to DASEC, DASEC.
Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

■ **3–105 SIGNAL NAME:**   PLT DECOUPLER LONG 1 (ACY) P LONG DCPL1 STAT (ACZ)
MEMORY LOCATION: 002107
MEMORY DATA BIT(S): 8   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of pilot decoupler longitudinal (pitch) 1 switch.
REMARKS: From pilot decoupler longitudinal (pitch) 1 switch through DASEC to FCC.
PASS: If fourth digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 3–106.
FAIL: Location of fault: pilot decoupler longitudinal (pitch) 1 switch,wiring from pilot decoupler
longitudinal (pitch) 1 switch to DASEC, DASEC. Troubleshoot wiring to isolate fault
(TM 1–1520–238–T–7).

■ **3–106 SIGNAL NAME:**   PLT DECOUPLER LONG 2 (ACY) P LONG DCPL2 STAT (ACZ)
MEMORY LOCATION: 002107
MEMORY DATA BIT(S): 9   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of pilot decoupler longitudinal (pitch) 2 switch.
REMARKS: From pilot decoupler longitudinal (pitch) 2 switch through DASEC to FCC.
PASS: If fourth digit displayed on HOD is 0 or 1, go to paragraph 3–107.
FAIL: Location of fault: pilot decoupler longitudinal (pitch) 2 switch,wiring from pilot decoupler
longitudinal (pitch) 2 switch to DASEC, DASEC. Troubleshoot wiring to isolate fault
(TM 1–1520–238–T–7).

■ **3–107 SIGNAL NAME:**   PLT DECOUPLER LAT 1 (ACY) P LAT DCPL1 STAT (ACZ)
MEMORY LOCATION: 002107
MEMORY DATA BIT(S): 10   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of pilot decoupler lateral (roll) 1 switch.
REMARKS: From pilot decoupler lateral (roll) 1 switch through DASEC to FCC.
PASS: If fourth digit displayed on HOD is 0, go to paragraph 3–108.
FAIL: Location of fault: pilot decoupler lateral (roll) 1 switch, wiring from pilot decoupler lateral (roll) 1
switch to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

■ **3–108 SIGNAL NAME:**   PLT DECOUPLER LAT 2 (ACY) P LAT DCPL2 STAT (ACZ)
MEMORY LOCATION: 002107
MEMORY DATA BIT(S): 11   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of pilot decoupler lateral (roll) 2 switch.
REMARKS: From pilot decoupler lateral (roll) 2 switch through DASEC to FCC.
PASS: If third digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 3–109.
FAIL: Location of fault: pilot decoupler lateral (roll) 2 switch, wiring from pilot decoupler lateral (roll) 2
switch to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

3–109 SIGNAL NAME: PLT DECOUPLER DIR 1 (ACY) P DIR DCPL1 STAT (ACZ)
    MEMORY LOCATION: 002107
    MEMORY DATA BIT(S):   12   (BINARY)
    CONDITION: (None)
    SIGNAL FUNCTION: Indicates status of pilot decoupler directional (yaw) 1 switch.
    REMARKS: From pilot decoupler directional (yaw) 1 switch through DASEC to FCC.
    PASS: If third digit displayed on HOD is 0 or 1, go to paragraph 3–110.
    FAIL: Location of fault: pilot decoupler directional (yaw) 1 switch, wiring from pilot decoupler
        directional (yaw) 1 switch to DASEC, DASEC. Troubleshoot wiring to isolate fault
        (TM 1–1520–238–T–7).

3–110 SIGNAL NAME: PLT DECOUPLER DIR 2 (ACY) P DIR DCPL2 STAT (ACZ)
    MEMORY LOCATION: 002107
    MEMORY DATA BIT(S):   13   (BINARY)
    CONDITION: (None)
    SIGNAL FUNCTION: Indicates status of pilot decoupler directional (yaw) 2 switch.
    REMARKS: From pilot decoupler directional (yaw) 2 through DASEC to FCC.
    PASS: If third digit displayed on HOD is 0, go to paragraph 3–111.
    FAIL: Location of fault: pilot decoupler directional (yaw) 2 switch, wiring from pilot decoupler
        directional (yaw) 2 to DASEC, DASEC. Troubleshoot wiring to isolate fault
        (TM 1–1520–238–T–7).

3–111 SIGNAL NAME: PLT DECOUPLER COLL 1 (ACY) P CLTV DCPL1 STAT (ACZ)
    MEMORY LOCATION: 002107
    MEMORY DATA BIT(S):   14   (BINARY)
    CONDITION: (None)
    SIGNAL FUNCTION: Indicates status of pilot decoupler collective (vertical) 1 switch.
    REMARKS: From pilot decoupler collective (vertical) 1 switch through DASEC to FCC.
    PASS: If second digit displayed on HOD 0, 1, 2, or 3, go to paragraph 3–112.
    FAIL: Location of fault: pilot decoupler collective (vertical) 1 switch, wiring from pilot decoupler
        collective (vertical) 1 switch to DASEC, DASEC. Troubleshoot wiring to isolate fault
        (TM 1–1520–238–T–7).

3–112 SIGNAL NAME: PLT DECOUPLER COLL 2 (ACY) P CLTV DCPL2 STAT (ACZ)
    MEMORY LOCATION: 002107
    MEMORY DATA BIT(S):   15   (BINARY)
    CONDITION: (None)
    SIGNAL FUNCTION: Indicates status of pilot decoupler collective (vertical) 2 switch.
    REMARKS: From pilot decoupler collective (vertical) 2 through DASEC to FCC.
    PASS: If second digit displayed on HOD is 0 or 1, go to paragraph 3–113.
    FAIL: Location of fault: pilot decoupler collective (vertical) 2 switch, wiring from pilot decoupler
        collective (vertical) 2 switch to DASEC, DASEC. Troubleshoot wiring to isolate fault
        (TM 1–1520–238–T–7).

3–113 SIGNAL NAME: PLT CYCLIC GRIP FAIL (ACY) PLT CYC GRIP STAT (ACZ)
   MEMORY LOCATION: 002107
   MEMORY DATA BIT(S):   16   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Indicates capability of force trim and ASE release buttons to function properly.
   REMARKS: From DASEC to FCC.
   PASS: If second digit displayed on HOD is 0, go to paragraph 3–114.
   FAIL: Location of fault: pilot cyclic grip, wiring from pilot cyclic grip to DASEC. Troubleshoot wiring to
      isolate fault (TM 1–1520–238–T–7).

3–114 SIGNAL NAME: SQUAT SWITCH FAIL (ACY) SQUAT SWITCH STAT (ACZ)
   MEMORY LOCATION: 002107
   MEMORY DATA BIT(S):   17   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Indicates position of squat switch.
   REMARKS: From squat switch through squat relay and DASEC to FCC.
   PASS: If first digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 3–115.
   FAIL: Location of fault: squat switch, wiring from squat switch to squat relay, squat relay, wiring from
      squat relay to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

3–115 SIGNAL NAME: ROTOR BRAKE FAIL (ACY) ROTOR BRAKE STAT (ACZ)
   MEMORY LOCATION: 002107
   MEMORY DATA BIT(S):   18   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Indicates capability of rotor brake switch to function properly.
   REMARKS: From DASEC to FCC. This failure message will occur with other failure messages.
   PASS: If first digit displayed on HOD is 0 or 1, refer to failure symptom index and next failure
      symptom paragraph.
   FAIL: Location of fault: rotor brake switch, wiring from rotor brake switch to DASEC. Troubleshoot
      wiring to isolate fault (TM 1–1520–238–T–7).

3–116 SIGNAL NAME: CPG LVDT LONG (ACY) C LONG LVDT STAT (ACZ)
   MEMORY LOCATION: 002110
   MEMORY DATA BIT(S):   4   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Indicates status of CPG longitudinal (pitch) LVDT.
   REMARKS: From CPG longitudinal (pitch) LVDT through DASEC to FCC.
   PASS: If sixth digit displayed on HOD is 0, go to paragraph 3–117.
   FAIL: Location of fault: CPG longitudinal (pitch) LVDT, wiring from LVDT to DASEC, DASEC.
      Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

3–117 SIGNAL NAME: CPG LVDT LAT (ACY) C LAT LVDT STAT (ACZ)
      MEMORY LOCATION: 002110
      MEMORY DATA BIT(S): 5 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates status of CPG lateral (roll) LVDT.
      REMARKS: From CPG lateral (roll) LVDT through DASEC to FCC.
      PASS: If fifth digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 3–118.
      FAIL: Location of fault: CPG lateral (roll) LVDT, wiring from LVDT to DASEC, DASEC. Troubleshoot
         wiring to isolate fault (TM 1–1520–238–T–7).

3–118 SIGNAL NAME: CPG LVDT DIR (ACY) C DIR LVDT STAT (ACZ)
      MEMORY LOCATION: 002110
      MEMORY DATA BIT(S): 6 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates status of CPG directional (yaw) LVDT.
      REMARKS: From CPG directional (yaw) LVDT through DASEC to FCC.
      PASS: If fifth digit displayed on HOD is 0 or 1, go to paragraph 3–119.
      FAIL: Location of fault: CPG directional (yaw) LVDT, wiring from CPG directional (yaw) LVDT to
         DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

3–119 SIGNAL NAME: CPG LVDT COLL (ACY) C CLTV LVDT STAT (ACZ)
      MEMORY LOCATION: 002110
      MEMORY DATA BIT(S): 7 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates status of CPG collective (vertical) LVDT.
      REMARKS: From CPG collective (vertical) LVDT through DASEC to FCC.
      PASS: If fifth digit displayed on HOD is 0, go to paragraph 3–120.
      FAIL: Location of fault: CPG collective (vertical) LVDT, wiring from CPG collective (vertical) LVDT to
         DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

3–120 SIGNAL NAME: CPG DECOUPLER LONG 1 (ACY) C LONG DCPL1 STAT (ACZ)
      MEMORY LOCATION: 002110
      MEMORY DATA BIT(S): 8 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates status of CPG decoupler longitudinal (pitch) 1 switch.
      REMARKS: From CPG decoupler longitudinal (pitch) 1 switch through DASEC to FCC.
      PASS: If fourth digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 3–121.
      FAIL: Location of fault: CPG decoupler longitudinal (pitch) 1 switch, wiring from CPG decoupler
         longitudinal (pitch) 1 switch DASEC, DASEC. Troubleshoot wiring to isolate fault
         (TM 1–1520–238–T–7).

3–121 SIGNAL NAME: CPG DECOUPLER LONG 2 (ACY) C LONG DCPL2 STAT (ACZ)
      MEMORY LOCATION: 002110
      MEMORY DATA BIT(S): 9 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates status of CPG decoupler longitudinal (pitch) 2 switch.
      REMARKS: From CPG decoupler longitudinal (pitch) 2 switch through DASEC to FCC.
      PASS: If fourth digit displayed on HOD is 0 or 1, go to paragraph 3–122.
      FAIL: Location of fault: CPG decoupler longitudinal (pitch) 2 switch, wiring from CPG decoupler
         longitudinal (pitch) 2 switch to DASEC, DASEC. Troubleshoot wiring to isolate fault
         (TM 1–1520–238–T–7).

3–122 SIGNAL NAME: CPG DECOUPLER LAT 1 (ACY) C LAT DCPL1 STAT (ACZ)
MEMORY LOCATION: 002110
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of CPG decoupler lateral (roll) 1 switch.
REMARKS: From CPG decoupler lateral (roll) 1 switch through DASEC to FCC.
PASS: If fourth digit displayed on HOD is 0, go to paragraph 3–123.
FAIL: Location of fault: CPG decoupler lateral (roll) 1 switch, wiring from CPG decoupler lateral (roll) 1 switch to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

3–123 SIGNAL NAME: CPG DECOUPLER LAT 2 (ACY) C LAT DCPL2 STAT (ACZ)
MEMORY LOCATION: 002110
MEMORY DATA BIT(S): 11 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of CPG decoupler lateral (roll) 2 switch.
REMARKS: From CPG decoupler lateral (roll) 2 switch through DASEC to FCC.
PASS: If third digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 3–124.
FAIL: Location of fault: CPG decoupler lateral (roll) 2 switch, wiring from CPG decoupler lateral (roll) 2 switch to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

3–124 SIGNAL NAME: CPG DECOUPLER DIR 1 (ACY) C DIR DCPL1 STAT (ACZ)
MEMORY LOCATION: 002110
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of CPG decoupler directional (yaw) 1 switch.
REMARKS: From CPG decoupler directional (yaw) 1 switch through DASEC to FCC.
PASS: If third digit displayed on HOD is 0 or 1, go to paragraph 3–125.
FAIL: Location of fault: CPG decoupler directional (yaw) 1 switch, wiring from CPG decoupler directional (yaw) 1 switch to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

3–125 SIGNAL NAME: CPG DECOUPLER DIR 2 (ACY) C DIR DCPL2 STAT (ACZ)
MEMORY LOCATION: 002110
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of CPG decoupler directional (yaw) 2 switch.
REMARKS: From CPG decoupler directional (yaw) 2 switch through DASEC to FCC.
PASS: If third digit displayed on HOD is 0, go to paragraph 3–126.
FAIL: Location of fault: CPG decoupler directional (yaw) 2 switch, wiring from CPG decoupler directional (yaw) 2 switch to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

3–126 SIGNAL NAME: CPG DECOUPLER COLL 1 (ACY) C CLTV DCPL1 STAT (ACZ) ■
MEMORY LOCATION: 002110
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of CPG decoupler collective (vertical) 1 switch.
REMARKS: From CPG decoupler collective (vertical) 1 switch through DASEC to FCC.
PASS: If second digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 3–127.
FAIL: Location of fault: CPG decoupler collective (vertical) 1 switch, wiring from CPG decoupler collective (vertical) 1 switch to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

3–127 SIGNAL NAME: CPG DECOUPLER COLL 2 (ACY) C CLTV DCPL2 STAT (ACZ) ■
MEMORY LOCATION: 002110
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of CPG decoupler collective (vertical) 2 switch.
REMARKS: From CPG decoupler collective (vertical) 2 switch through DASEC to FCC.
PASS: If second digit displayed on HOD is 0 or 1, go to paragraph 3–128.
FAIL: Location of fault: CPG decoupler collective (vertical) 2 switch, wiring from CPG decoupler collective (vertical) 2 switch to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

3–128 SIGNAL NAME: CPG CYCLIC GRIP FAIL (ACY) CPG CYC GRIP STAT (ACZ) ■
MEMORY LOCATION: 002110
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates capability of force trim and ASE release buttons to function properly.
REMARKS: From DASEC to FCC.
PASS: If second digit displayed on HOD is 0, go to paragraph 3–129.
FAIL: Location of fault: CPG cyclic grip, wiring from CPG cyclic grip to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

3–129 SIGNAL NAME: CPG BUCS SELECT (ACY) CPG BUCS SW STAT (ACZ) ■
MEMORY LOCATION: 002110
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates position of CPG **BUCS** trigger switch.
REMARKS: From CPG **BUCS** trigger switch through DASEC to FCC.
PASS: If first digit displayed on HOD is 0 or 2, go to paragraph 3–130.
FAIL: Location of fault: CPG **BUCS** trigger switch, wiring from CPG **BUCS** trigger switch to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

3–130 SIGNAL NAME: TURN RATE FAIL (ACY) TURNRATE IND STAT (ACZ)
MEMORY LOCATION: 002110
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates turn rate indicator is properly controlled by DASEC.
REMARKS: From DASEC to FCC.
PASS: If first digit displayed on HOD is 0 and HARS malfunctions exist refer to Chapter 6, paragraph 6–13. If no HARS malfunctions have been identified, replace DASEC (TM 1–1520–238–23).
FAIL: Location of fault: video display unit (VDU), wiring from VDU to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

CHAPTER 4

DE–ICE/ANTI–ICE SYSTEM MULTIPLEX READ CODES

FAILURE SYMPTOM INDEX

Symptom	Refer to paragraph
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PNVS SHROUD WINDOW HEATER DOES NOT HEAT	4–2
CANOPY WINDSHIELD HEATERS DO NOT HEAT	4–3
CANOPY TEMP CONTROLLER NO–GO CPG COMPARTMENT APPEARS ON HOD	4–5
ICE DETECTOR SENSOR NO–GO ENG INLET LH SIDE (ACY) OR ICE DETECTOR SENSOR NO–GO DOGHOUSE FAIRING (ACZ) APPEARS ON HOD	4–6
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RTR BLADE PWR CONTROLLER NO–GO RH XMSN BAY (ACY) APPEARS ON HOD OR RTR BLADE PWR CONT NO–GO RH XMSN BAY (ACZ) APPEARS ON HOD	4–9
MAIN ROTOR HEATER NO–GO MAIN ROTOR APPEARS ON HOD	4–10
RTR BLADE DISTR DE–ICE NO–GO MAIN ROTOR MAST APPEARS ON HOD	4–11
TAIL ROTOR HEATER NO–GO TAIL ROTOR APPEARS ON HOD	4–12

Personnel Required:

(2)

References:

TM 1–1270–476–T
TM 1–1520–238–T–8
TM 1–5855–265–T

Equipment Conditions:

Ref	Condition
TM 1–1270–476–T	Applicable
TM 1–1520–238–T–8	MAINTENANCE
TM 1–5855–265–T	OPERATIONAL CHECK in progress

NOTE

- All multiplex read code responses are read from right to left.

- Multiplex read codes must be used in conjunction with applicable Maintenance Operational Check (MOC) in progress.

- Multiplex read codes are observed on the HOD (ADC) or CDU (ADD).

MULTIPLEX READ CODE INTERPRETATIONS

4–1   **SIGNAL NAME:**   CPG ANTI–ICE SW
   MEMORY LOCATION: 000437
   MEMORY DATA BIT(S):   19   (BINARY)
   CONDITION: CPG ANTI–ICE SW to GND
   SIGNAL FUNCTION: Monitors position of copilot/gunner (CPG) **AUX/ANTI ICE** panel **TADS/PNVS**
                 switch.
   REMARKS: From CPG **AUX/ANTI ICE** panel **TADS/PNVS** switch through CPG multiplex remote
                 terminal unit (MRTU) Type III to fire control computer (FCC). Enables or disables anti–ice
                 functions for target acquisition designation sight (TADS)/pilot night vision sensor (PNVS).
   PASS: If first digit on heads out display (HOD) is 1, 3, 5, or 7, go to paragraph 4–2.
   FAIL: Location of fault: CPG **AUX/ANTI ICE** panel **TADS/PNVS** switch, wiring from CPG **AUX/ANTI
             ICE** panel **TADS/PNVS** switch to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot
             wiring to isolate fault (TM 1–1520–238–T–8).

4–2   **SIGNAL NAME:**   PLT ANTI–ICE SW
   MEMORY LOCATION: 001117
   MEMORY DATA BIT(S):   16   (BINARY)
   CONDITION: Pilot ANTI–ICE PANEL SW to GND
   SIGNAL FUNCTION: Monitors position of pilot **ANTI ICE** panel **TADS/PNVS** switch.
   REMARKS: From pilot **ANTI ICE** panel **TADS/PNVS** switch through left–hand (LH) forward avionics
                 bay (FAB) MRTU Type I to FCC. Enables or disables anti–ice functions for TADS/PNVS.
   PASS: If second digit on HOD is 1, 3, 5, or 7, go to failure symptom index and next failure symptom
             paragraph.
   FAIL: Location of fault: pilot **ANTI ICE** panel **TADS/PNVS** switch, wiring from pilot **ANTI ICE** panel
             TADS/PNVS switch to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to
             isolate fault (TM 1–1520–238–T–8).

4–3   **SIGNAL NAME:**   WICE POWER STATUS
   MEMORY LOCATION: 001117
   MEMORY DATA BIT(S):   15   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Monitors windshield de–ice power status.
   REMARKS: From pilot **ANTI ICE** panel **CANOPY HTR** switch through LH FAB MRTU Type I to FCC.
                 Enables or disables windshield de–icing.
   PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 4–4.
   FAIL: Location of fault: pilot **ANTI ICE** panel **CANOPY HTR** switch, wiring from pilot **ANTI ICE** panel
             CANOPY HTR switch to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to
             isolate fault (TM 1–1520–238–T–8).

4–4 SIGNAL NAME: WICE CONTROLLER (ACY) WICE CMPTER STAT (ACZ)
  MEMORY LOCATION: 001117
  MEMORY DATA BIT(S): 14 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates windshield de–ice controller status.
  REMARKS: From temperature controller through LH FAB MRTU Type I to FCC. Generates fault detection and location system (FD/LS) message **CANOPY TEMP CONTROLLER NO–GO CPG COMPARTMENT**.
  PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 4–5.
  FAIL: Location of fault: canopy temperature controller, wiring from canopy temperature controller to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–8).

4–5 SIGNAL NAME: WICE SENSOR STATUS
  MEMORY LOCATION: 001117
  MEMORY DATA BIT(S): 13 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates windshield de–ice sensor status.
  REMARKS: From pilot **ANTI ICE** panel through LH FAB MRTU Type I to FCC. Generates FD/LS message **CANOPY TEMP SENSOR NO–GO CPG FR WINDSHIELD**.
  PASS: Location of fault if third digit on HOD is 1, 3, 5, or 7: **ECS CANOPY ANTI–ICE CONTR** circuit breaker, wiring from **ECS CANOPY ANTI–ICE CONTR** circuit breaker to pilot **ANTI–ICE** panel **CANOPY HTR** switch , pilot **ANTI–ICE** panel **CANOPY HTR** switch, pilot **ANTI–ICE** panel **CANOPY HTR** switch wiring to canopy temperature controller,and **ECS CANOPY ANTI–ICE** circuit breaker to canopy temperature controller, canopy temperature controller. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–8).
  FAIL: Location of fault: windshield de–ice sensor, wiring from windshield de–ice sensor to canopy temperature controller, canopy temperature controller, wiring from canopy temperature controller to pilot **ANTI ICE** panel **CANOPY HTR** switch, wiring from pilot **ANTI ICE** panel **CANOPY HTR** switch to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–8).

4–6 SIGNAL NAME: EICE TST CMD
  MEMORY LOCATION: 001220
  MEMORY DATA BIT(S): 4 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates engine ice test–in–progress.
  REMARKS: From FCC through LH FAB MRTU Type I to ice detector signal processor.
  PASS: If sixth digit on HOD is 0, go to paragraph 4–7.
  FAIL: Location of fault: ice detector signal processor, wiring from ice detector signal processor to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–8).

4–7 SIGNAL NAME: ENGINE ANTI–ICE LRU FAULT ID (ACY) EICE FAULT ID (ACZ)
MEMORY LOCATION: 002131
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: If first digit displayed on HOD is 0, 1, 4 or 5=ICE DETECTOR SIGNAL PROCESSOR
  If first digit displayed on HOD is 2, 3, 6 or 7=SENSOR
SIGNAL FUNCTION: Identifies LRU failure.
REMARKS: From ice detector sensor through ice detector signal processor through digital automatic stabilization equipment computer (DASEC) MRTU to FCC. Generates FD/LS message **ICE DETECTOR SENSOR NO–GO ENG INLET LH SIDE** (ACY), **ICE DETECTOR SENSOR NO–GO DOGHOUSE FAIRING** (ACZ), or **ICE DETECTOR CONTROLLER NO–GO FIREWALL LH SIDE.**
PASS: If first digit on HOD is 1, 2, or 3, go to paragraph 4–8.
FAIL: Location of fault: ice detector sensor, wiring from ice detector sensor to ice detector signal processor, ice detector signal processor, wiring from ice detector signal processor to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–8).

4–8 SIGNAL NAME: ENGINE ANTI–ICE STATUS (ACY) EICE STAT (ACZ)
MEMORY LOCATION: 002131
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates engine anti–ice system status.
REMARKS: From ice detector signal processor through DASEC to FCC.
PASS: Location of fault if first digit on HOD is 1, 4, or 5: **ECS R NOSE GRBX HTR**, **ECS L NOSE GRBX HTR**, and **ECS ENGINE ANTI–ICE** circuit breakers, wiring from **ECS R NOSE GRBX HTR**, **ECS L NOSE GRBX HTR**, and **ECS ENGINE ANTI–ICE** circuit breakers to ice detector signal processor, ice detector signal processor, wiring from ice detector signal processor to pilot caution/warning panel, pilot caution warning panel. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–8).
FAIL: Location of fault: ice detector signal processor, wiring from ice detector signal processor to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–8).

4–9 SIGNAL NAME: RICE CONT STATUS (ACY) RICE CMPTR STAT (ACZ)
MEMORY LOCATION: 002131
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates rotor anti–ice controller status.
REMARKS: From rotor blade de–ice controller through DASEC to FCC. Generates FD/LS message **RTR BLADE PWR CONTROLLER NO–GO RH XMSN BAY** (ACY) or **RTR BLADE PWR CONT NO–GO RH XMSN BAY** (ACZ).
PASS: If first digit on HOD is 1, 3, 5, or 7, go to failure symptom index and next failure symptom paragraph.
FAIL: Location of fault: rotor blade de–ice controller, main rotor and tail rotor slip ring assemblies, main rotor and tail rotor blades, wiring from rotor blade de–ice controller to main rotor and tail rotor slip ring assemblies, wiring from main rotor and tail rotor slip ring assemblies to main rotor and tail blades, wiring from rotor blade de–ice controller to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–8).

4–10 SIGNAL NAME: MAIN HEATER STATUS
MEMORY LOCATION: 002131
MEMORY DATA BIT(S): 5   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates main rotor heater status.
REMARKS: From rotor blade de–ice controller through DASEC to FCC. Generates FD/LS message
MAIN ROTOR HEATER NO–GO MAIN ROTOR.
PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 4–11.
FAIL: Location of fault: rotor blade de–ice controller, slip ring assembly, main rotor blades, wiring from
rotor blade de–ice controller to slip ring assembly, from slip ring assembly to main rotor blades,
from rotor blade de–ice controller to DASEC, DASEC. Troubleshoot wiring to isolate fault
(TM 1–1520–238–T–8).

4–11 SIGNAL NAME: ROTOR ICE DISTR STATUS (ACY) RICE DIST STAT (ACZ)
MEMORY LOCATION: 002131
MEMORY DATA BIT(S): 6   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates power distribution status.
REMARKS: From rotor blade de–ice controller through DASEC to FCC. Generates FD/LS message
RTR BLADE DISTR DE–ICE NO–GO MAIN ROTOR MAST.
PASS: Location of fault if fifth digit on HOD is 2, 3, 6, or 7: **ECS ICE DET** circuit breaker, wiring from
ECS ICE DET circuit breaker to ice detector signal processor, **ECS BLADE DE–ICE** circuit
breaker, wiring from **ECS BLADE DE–ICE** circuit breaker to **BLADE DE–ICE REMOTE
CONTROL** circuit breaker, **BLADE DE–ICE REMOTE CONTROL** circuit breaker, wiring from
BLADE DE–ICE REMOTE CONTROL circuit breaker to rotor blade de–ice controller, **ECS
BLADE DE–ICE CONTR** circuit breaker, wiring from **ECS BLADE DE–ICE CONTR** to pilot
ANTI–ICE panel, pilot **ANTI–ICE** panel, wiring from pilot **ANTI–ICE** panel to rotor blade
de–ice controller, rotor blade de–ice controller, wiring from rotor blade de–ice controller to
blade de–ice relay, blade de–ice relay. Troubleshoot wiring to isolate fault
(TM 1–1520–238–T–8).
FAIL: Location of fault: rotor blade de–ice controller, wiring from rotor blade de–ice controller to
DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–8).

4–12 SIGNAL NAME: TAIL HEATER STATUS
MEMORY LOCATION: 002131
MEMORY DATA BIT(S): 4   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates tail rotor heater status.
REMARKS: From rotor blade de–ice controller through DASEC to FCC. Generates FD/LS message **TAIL ROTOR HEATER NO–GO TAIL ROTOR**.
PASS: Location of fault if sixth digit on HOD is 1: **ECS ICE DET** circuit breaker, wiring from **ECS ICE DET** circuit breaker to ice detector signal processor, ice detector signal processor, **BLADE DE–ICE** circuit breaker, wiring from **BLADE DE–ICE** circuit breaker to **BLADE DE–ICE REMOTE CONTROL** circuit breaker, **BLADE DE–ICE REMOTE CONTROL** circuit breaker, wiring from **BLADE DE–ICE REMOTE CONTROL** circuit breaker to rotor blade de–ice controller, **ECS BLADE DE–ICE CONTR** circuit breaker, wiring from **ECS BLADE DE–ICE CONTR** circuit breaker to pilot **ANTI–ICE** panel, pilot **ANTI–ICE** panel, wiring from pilot **ANTI–ICE** panel to rotor blade de–ice controller, rotor blade de–ice controller, wiring from rotor blade de–ice controller to blade de–ice relay, blade de–ice relay, wiring from rotor rotor blade de–ice controller to tail rotor slip ring assembly, tail rotor slip ring assembly, wiring from tail rotor slip ring assembly to tail rotor blade, tail rotor blade. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–8).
FAIL: Location of fault: rotor blade de–ice controller, wiring from rotor blade de–ice controller to slip ring assembly, slip ring assembly, ,wiring from slip ring assembly to tail rotor blades, tail rotor blades,wiring from rotor blade de–ice controller to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–8).

■ **4–13 SIGNAL NAME:**   PNVS ANTI–ICE TO PEU (ACY) PNVS ANTIICE CMD (ACZ)
MEMORY LOCATION: 001632
MEMORY DATA BIT(S): 6   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates PNVS anti–ice selection.
REMARKS: From FCC through right–hand (RH) FAB MRTU Type I to PNVS electronic unit (PEU).
PASS: Location of fault if second digit on HOD is 2, 3, 6, or 7: wiring between PEU and TADS PNVS turret assembly, and wiring between PEU and TEU. Troubleshoot wiring to isolate fault (TM 1–5855–265–T).
FAIL: Location of fault: RH FAB MRTU Type I, wiring from RH FAB MRTU Type I to PEU, PEU. Troubleshoot wiring to isolate fault (TM 1–5855–265–T).

■ **4–14 SIGNAL NAME:**   TADS ANTI–ICE TO TPS (ACY) TADS ANTIICE CMD (ACZ)
MEMORY LOCATION: 001220
MEMORY DATA BIT(S): 14   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates TADS anti–ice selection.
REMARKS: From FCC through LH FAB MRTU Type I to TADS power supply (TPS).
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 4–15.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TPS, TPS, FCC. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

4–15 **SIGNAL NAME:** TADS ANTI–ICE TO TEU (ACY) TADS ANTIICE CMD (ACZ)
MEMORY LOCATION: 001244
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates TADS anti–ice selection.
REMARKS: From FCC through LH FAB MRTU Type I to TADS electronic unit (TEU)
PASS: Location of fault if third digit on HOD is 2, 3, 6, or 7: wiring between TADS power supply and TADS/PNVS turret assembly.
FAIL: Location of fault: FCC, LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

CHAPTER 5

AREA WEAPON SYSTEM (AWS) MULTIPLEX READ CODES

FAILURE SYMPTOM INDEX

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GUN INDICATOR ON CAUTION/WARNING PANELS LIGHT OR GUN FAIL APPEARS ON HOD	5–3
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Personnel Required:	**Equipment Conditions:**

Personnel Required:

(2)

References:

TM 1–1270–476–T
TM 1–1520–238–T–6
TM 1–5855–265–T
TM 9–1090–208–23–2
TM 9–1230–476–20–2
TM 9–1270–221–23

Equipment Conditions:

Ref	Condition
TM 9–1090–208–23–2	GUN AND CONTROL SUBSYSTEM – MAINTENANCE OPERATIONAL CHECK in progress

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NOTE

- All multiplex read code responses are read from right to left.

- Multiplex read codes must be used in conjunction with applicable Maintenance Operational Check (MOC) in progress.

- Multiplex read codes are observed on the HOD (ADC) or CDU (ADD).

MULTIPLEX READ CODE INTERPRETATIONS

5–1 **SIGNAL NAME:** PLT SAFE/ARM SW
MEMORY LOCATION: 001120
MEMORY DATA BIT(S): 12–13 (BINARY)
CONDITION: If the third digit displayed on heads out display (HOD) is 0 or 4=**OFF**
If the third digit displayed on HOD is 2 or 6=**SAFE**
If the third digit displayed on HOD is 3 or 7=**ARM**
SIGNAL FUNCTION: Selects weapon system status.
REMARKS: From pilot fire control panel (FCP) through left–hand (LH) forward avionics bay (FAB) multiplex remote terminal unit (MRTU) Type I to fire control computer (FCC).
PASS: If CONDITION displayed on HOD corresponds to the setting of pilot FCP **SAFE/ARM** switch, go to paragraph 5–2.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

5–2 **SIGNAL NAME:** CPG SAFE/ARM SW
MEMORY LOCATION: 001075
MEMORY DATA BIT(S): 12–13 (BINARY)
CONDITION: If the third digit displayed on HOD is 0 or 4=**OFF**
If the third digit displayed on HOD is 2 or 6=**SAFE**
If the third digit displayed on HOD is 3 or 7=**ARM**
SIGNAL FUNCTION: Selects weapon system status.
REMARKS: From copilot/gunner (CPG) fire control panel (FCP) through CPG MRTU Type III to FCC.
PASS: If CONDITION displayed on HOD corresponds to the setting of CPG FCP **SAFE/ARM** switch, go to paragraph 5–3.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

5–3 SIGNAL NAME: SQUAT SW
MEMORY LOCATION: 001075
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Detects weight on wheels condition.
REMARKS: From CPG FCP through LH FAB MRTU Type I to FCC.
PASS: If second digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 5–4.
FAIL: Location of fault: squat switch, wiring from squat switch to squat switch relay, squat switch relay, wiring from squat switch relay to CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–6).

5–4 SIGNAL NAME: PLT GND OVRD SW
MEMORY LOCATION: 001555
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: If the third digit displayed on HOD is 0, 2, 4, or 6=OFF
　　　　　　　　If the third digit displayed on HOD is 1, 3, 5, or 7=ON
SIGNAL FUNCTION: Indicates pilot/ground override (**PLT/GND OVRD**) switch position.
REMARKS: From CPG FCP through LH MRTU Type I to FCC.
PASS: If CONDITION displayed on HOD corresponds to selected switch position, go to paragraph 5–5.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

5–5 SIGNAL NAME: GUN BIT CMD
MEMORY LOCATION: 001627
MEMORY DATA BIT(S): 8 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates gun turret control box (GTCB) self–test request.
REMARKS: From FCC through right–hand (RH) FAB MRTU Type I to GTCB.
PASS: If fourth digit displayed on HOD is 4, 5, 6, or 7, go to paragraph 5–6.
FAIL: Location of fault: RH FAB MRTU Type I, wiring from RH FAB MRTU Type I to GTCB, GTCB. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

5–6 SIGNAL NAME: GUN TEST IN PROGRESS
MEMORY LOCATION: 001530
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates GTCB self–test in progress.
REMARKS: From GTCB through RH FAB MRTU Type I to FCC.
PASS: If first digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 5–7.
FAIL: Location of fault: GTCB, wiring from GTCB to RH FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

5–7 **SIGNAL NAME:** GTCB STATUS
     MEMORY LOCATION: 001530
     MEMORY DATA BIT(S): 16 (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Indicates status of GTCB.
     REMARKS: From GTCB through RH FAB MRTU Type I to FCC.
     PASS: If second digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 5–8.
     FAIL: Location of fault: GTCB, wiring from GTCB to RH FAB MRTU Type I, RH FAB MRTU Type I.
     Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

5–8 **SIGNAL NAME:** RNDS CNTR STATUS
     MEMORY LOCATION: 001540
     MEMORY DATA BIT(S): 4–19 (SCALAR)
     CONDITION: (None)
     SIGNAL FUNCTION: Indicates rounds counter status.
     REMARKS: From rounds counter through RH FAB MRTU Type I to FCC.
     PASS: If the sixth digit displayed on HOD is 0, go to paragraph 5–9.
     FAIL: Location of fault: AWS DC and AWS AMMO circuit breakers, wiring from AWS DC and AWS
     AMMO circuit breakers to rounds counter/magazine controller, rounds counter/magazine
     controller, wiring from rounds counter/magazine controller to RH FAB MRTU Type I, RH FAB
     MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

5–9 **SIGNAL NAME:** GUN TRS STATUS
     MEMORY LOCATION: 001530
     MEMORY DATA BIT(S): 7 (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Indicates train rate sensor status.
     REMARKS: From GTCB through RH FAB MRTU Type I to FCC.
     PASS: If fifth digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 5–10.
     FAIL: Location of fault: Gun turret rate gyro, wiring from gun turret rate gyro to GTCB, GTCB, wiring
     from GTCB to RH FAB MRTU Type I. Troubleshoot wiring to isolate fault
     (TM 9–1090–208–23–2).

5–10 **SIGNAL NAME:** GCB STATUS
      MEMORY LOCATION: 001530
      MEMORY DATA BIT(S): 17 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates gun control box (GCB) status.
      REMARKS: From GCB through GTCB and RH FAB MRTU Type I to FCC.
      PASS: If first digit displayed on HOD is 4, 5, 6, or 7, go to paragraph 5–11 (ACY) or 5–11A (ACZ).
      FAIL: Location of fault: GCB, wiring from GCB to GTCB, wiring from GTCB to RH FAB MRTU Type I,
      RH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

5–11 SIGNAL NAME: ROUNDS REMAINING (ACY)
MEMORY LOCATION: 001165
MEMORY DATA BIT(S): 4–19 (HEX)
CONDITION: (None)
SIGNAL FUNCTION: Displays rounds remaining (unfired) aboard the aircraft.
REMARKS: From rounds counter through LH FAB MRTU Type I to FCC.
PASS: If HOD display corresponds to rounds counter display, go to paragraph 5–12.
FAIL: Location of fault: rounds counter/magazine controller, wiring from rounds counter/magazine controller to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

5–11A SIGNAL NAME: ROUNDS COUNT 1000'S (ACZ)
MEMORY LOCATION: 001165
MEMORY DATA BIT(S): 4–7 (HEX)
CONDITION: (None)
SIGNAL FUNCTION: Displays rounds remaining, 0 through 9 (unfired) aboard the aircraft.
REMARKS: From rounds counter through LH FAB MRTU Type I to FCC.
PASS: If HOD display corresponds to rounds counter display, go to paragraph 5–11B.
FAIL: Location of fault: rounds counter/magazine controller, wiring from rounds counter/magazine controller to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

5–11B SIGNAL NAME: ROUNDS COUNT 100'S (ACZ)
MEMORY LOCATION: 001165
MEMORY DATA BIT(S): 8–11 (HEX)
CONDITION: (None)
SIGNAL FUNCTION: Displays rounds remaining , 0 through 9 (unfired) aboard the aircraft.
REMARKS: From rounds counter through LH FAB MRTU Type I to FCC.
PASS: If HOD display corresponds to rounds counter display, go to paragraph 5–11C.
FAIL: Location of fault: rounds counter/magazine controller, wiring from rounds counter/magazine controller to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

5–11C SIGNAL NAME: ROUNDS COUNT 10'S (ACZ)
MEMORY LOCATION: 001165
MEMORY DATA BIT(S): 12–15 (HEX)
CONDITION: (None)
SIGNAL FUNCTION: Displays rounds remaining , 0 through 9 (unfired) aboard the aircraft.
REMARKS: From rounds counter through LH FAB MRTU Type I to FCC.
PASS: If HOD display corresponds to rounds counter display, go to paragraph 5–11D.
FAIL: Location of fault: rounds counter/magazine controller, wiring from rounds counter/magazine controller to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

5–11D SIGNAL NAME: ROUNDS COUNT 1'S (ACZ)
MEMORY LOCATION: 001165
MEMORY DATA BIT(S): 16–19 (HEX)
CONDITION: (None)
SIGNAL FUNCTION: Displays rounds remaining, 0 through 9 (unfired) aboard the aircraft.
REMARKS: From rounds counter through LH FAB MRTU Type I to FCC.
PASS: If HOD display corresponds to rounds counter display, go to paragraph 5–12.
FAIL: Location of fault: rounds counter/magazine controller, wiring from rounds counter/magazine controller to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

5–12   SIGNAL NAME: CPG HAS GUN
  MEMORY LOCATION: 001530
  MEMORY DATA BIT(S):   14   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates whether CPG has control of gun.
  REMARKS: From GTCB through RH FAB MRTU Type I to FCC.
  PASS: If second digit displayed on HOD is 4, 5, 6, or 7, go to paragraph 5–13.
  FAIL: Location of fault: CPG FCP, wiring from CPG FCP to GTCB, GTCB, wiring from GTCB to RH
    FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault
    (TM 9–1090–208–23–2).

5–13   SIGNAL NAME: CPG SIGHT SELECT SW
  MEMORY LOCATION: 001074
  MEMORY DATA BIT(S):   4–6   (OCTAL)
  CONDITION: If the fifth digit displayed on HOD is 0 or 1=**HMD/TADS** (Chapter 15, paragraph 15–5)
    If the fifth digit displayed on HOD is 2 or 3=**TADS** (Chapter 15, paragraph 15–5)
    If the sixth digit displayed on HOD is 1=**NVS** (Chapter 10, paragraph 10–6)
    If the sixth digit displayed on HOD is 1 and the fifth digit displayed on HOD is 2 or 3
    =**HMD** (Chapter 7, paragraph 7–56)
  SIGNAL FUNCTION: Indicates position of CPG **SIGHT SEL** switch.
  REMARKS: From CPG FCP through LH FAB MRTU Type I to FCC.
  PASS: If CONDITION displayed on HOD corresponds to CPG **SIGHT SEL** switch position, refer to
    appropriate chapter and paragraph as listed under CONDITION.
  FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU
    Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

5–14   SIGNAL NAME: CPG ACQ SELECT SW
  MEMORY LOCATION: 001074
  MEMORY DATA BIT(S):   7–9   (OCTAL)
  CONDITION: If the fourth digit displayed on HOD is 0 or 1=**PHS**
    (Chapter 7, paragraph 7–38)
    If the fourth digit displayed on HOD is2 or 3=**FXD**
    (Chapter 10, paragraph 10–30)
    If the fourth digit displayed on HOD is 4 or 5=**TGT**
    (Chapter 16, paragraph 16–23)
    If the fourth digit displayed on HOD is 6 or 7=**NAV**
    (Chapter 20, paragraph 20–37)
    If the fifth digit displayed on HOD is 1, 3, 5, or 7=**GHS**
    (Chapter 7, paragraph 7–30)
    If the fifth digit displayed on HOD is 1, 3, 5, or 7 and the fourth digit displayed on HOD
    is 2 or 3=**MSL SKR** (Chapter 8, paragraph 8–10)
    If the fifth digit displayed on HOD is 1, 3, 5, or 7 and the fourth digit displayed on HOD
    is 4 or 5=**TADS** (Chapter 15, paragraph 15–6)
  SIGNAL FUNCTION: Enables cueing or slaving to selected CPG line of sight (LOS).
  REMARKS: From CPG FCP through LH FAB MRTU Type I to FCC.
  PASS: If CONDITION displayed on HOD corresponds to selected CPG ACQ SEL switch position, go
    to appropriate chapter and paragraph as listed under CONDITION.
  FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU
    Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

5–15 **SIGNAL NAME:** CPG GUN ACTION
MEMORY LOCATION: 001075
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates whether CPG has actioned gun.
REMARKS: From CPG cyclic stick through CPG FCP and LH FAB MRTU Type I to FCC.
PASS: If second digit displayed on HOD is 4, 5, 6, or 7, go to paragraph 5–16.
FAIL: Location of fault: CPG cyclic stick, wiring from CPG cyclic stick to CPG FCP, CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

5–16 **SIGNAL NAME:** CPG GUN FXD SW
MEMORY LOCATION: 000437
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Enables gun fixed mode of operation.
REMARKS: From pilot FCP, through CPG FCP, through CPG MRTU Type III to FCC.
PASS: If third digit displayed on HOD is 2, 3, 6, or 7, go to paragraph 5–17.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to CPG FCP, CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

5–17 **SIGNAL NAME:** CPG GUN NORM SW
MEMORY LOCATION: 000437
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Enables FCC control of gun.
REMARKS: From pilot FCP, through CPG FCP, through CPG MRTU Type III to FCC.
PASS: If first digit displayed on HOD is 4, 5, 6, or 7, go to paragraph 5–38.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to CPG FCP, CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

5–18 **SIGNAL NAME:** CPG GUN TRIG
MEMORY LOCATION: 001554
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates whether CPG has pulled the optical relay tube (ORT) weapon trigger or cyclic stick trigger, with gun actioned.
REMARKS: From CPG FCP through RH FAB MRTU Type I to FCC.
PASS: If first digit on HOD is 1, 3, 5, or 7, go to paragraph 5–19.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to RH FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

5–19 **SIGNAL NAME:** CPG WPN TRIG 1ST DETENT (ACY) CPG TRIG 1ST DTT (ACZ) ■
MEMORY LOCATION: 000436
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates CPG has pulled cyclic stick weapon trigger to first detent.
REMARKS: From CPG cyclic stick through CPG FCP and CPG MRTU Type III to FCC.
PASS: If third digit displayed on HOD is 2, 3, 6, or 7, go to paragraph 5–20.
FAIL: Location of fault: CPG cyclic stick, wiring from CPG cyclic stick to CPG FCP, CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

5–20   SIGNAL NAME: CPG WPN TRIG 2ND DETENT (ACY) CPG TRIG 2ND DTT (ACZ)
 MEMORY LOCATION: 000436
 MEMORY DATA BIT(S):   18   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Indicates CPG has pulled weapon trigger to second detent.
 REMARKS: From CPG cyclic stick through CPG FCP and CPG MRTU Type III to FCC.
 PASS: If first digit displayed on HOD is 2, 3, 6, or 7, go to paragraph 5–36.
 FAIL: Location of fault: CPG cyclic stick, wiring from CPG cyclic stick to CPG FCP, CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

5–21   SIGNAL NAME: ORT GUN TRIG TO TEU (ACY) ORT GUN TRIG TST (ACZ)
 MEMORY LOCATION: 001252
 MEMORY DATA BIT(S):   9   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Indicates gun active (inhibit to other systems). This test performed during TADS FD/LS maintenance test, on ground only, to allow TADS electronic unit (TEU) to test ORT switches.
 REMARKS: From FCC through LH FAB MRTU Type I to TEU.
 PASS: If fourth digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 5–22.
 FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

5–22   SIGNAL NAME: ORT WPN TRIG 1ST DETENT (ACY) ORT TRIG 1ST DTT (ACZ)
 MEMORY LOCATION: 000414
 MEMORY DATA BIT(S):   15   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Indicates CPG has pulled ORT weapon trigger to first detent.
 REMARKS: From ORT left grip through CPG FCP and CPG MRTU Type III to FCC.
 PASS: If second digit displayed on HOD is 2, 3, 6, or 7, go to paragraph 5–23.
 FAIL: Location of fault: ORT, wiring from ORT to CPG FCP, CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

5–23   SIGNAL NAME: ORT WPN TRIG 2ND DETENT (ACY) ORT TRIG 2ND DTT (ACZ)
 MEMORY LOCATION: 000414
 MEMORY DATA BIT(S):   16   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Indicates CPG has pulled ORT weapon trigger to second detent.
 REMARKS: From ORT left grip through CPG FCP and CPG MRTU Type III to FCC.
 PASS: If second digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 5–24.
 FAIL: Location of fault: ORT, wiring from ORT to CPG FCP, CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

5–24 SIGNAL NAME: ORT WPN TRIG DET 1 TO TEU (ACY) ORT TRIG 1ST TST (ACZ) ■
      MEMORY LOCATION: 001252
      MEMORY DATA BIT(S): 15   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates CPG has pulled ORT weapon trigger to first detent. This test performed during TADS FD/LS maintenance test, on ground only, to allow TEU to test ORT switches.
      REMARKS: From FCC through LH FAB MRTU Type I to TEU.
      PASS: If second digit displayed on HOD is 0, 1, 2 or 3, go to paragraph 5–25.
      FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

5–25 SIGNAL NAME: ORT WPN TRIG DET 2 TO TEU (ACY) ORT TRIG 1ST TST (ACZ) ■
      MEMORY LOCATION: 001252
      MEMORY DATA BIT(S): 14   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates CPG has pulled ORT weapon trigger to second detent. This test performed during TADS FD/LS maintenance test, on ground only, to allow TEU to test ORT switches.
      REMARKS: From FCC through LH FAB MRTU Type I to TEU.
      PASS: If second digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 5–26.
      FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

5–26 SIGNAL NAME: ORT GUN WAS TO TEU (ACY) ORT GUN WAS TST (ACZ) ■
      MEMORY LOCATION: 001252
      MEMORY DATA BIT(S): 18   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Issues ORT gun weapon action switch (WAS) signal to TEU. This test performed during TADS FD/LS maintenance test, on ground only, to allow TEU to test ORT switches.
      REMARKS: From FCC through LH FAB MRTU Type I to TEU.
      PASS: If first digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 5–27.
      FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

5–27 SIGNAL NAME: PLT HAS GUN
      MEMORY LOCATION: 001530
      MEMORY DATA BIT(S): 15   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates pilot has control of gun.
      REMARKS: From GTCB through RH FAB MRTU Type I to FCC.
      PASS: If second digit displayed on HOD is 2, 3, 6, or 7, go to paragraph 5–28.
      FAIL: Location of fault: CPG FCP, wiring from CPG FCP to GTCB, GTCB, wiring from GTCB to RH FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

5–28 **SIGNAL NAME:** PLT SIGHT SELECT SW
MEMORY LOCATION: 001122
MEMORY DATA BIT(S): 4–7 (HEX)
CONDITION: If the sixth digit displayed on HOD is 1 and the fifth digit is 3=**HMD**
(Chapter 7 paragraph 7–38)
If the sixth digit displayed on HOD is 1 and the fifth digit is 5=**PNVS**
(Chapter 10 paragraph 10–4)
If the sixth digit displayed on HOD is 1 and the fifth digit is 6=**TADS**
(Chapter 15 paragraph 15–5)
SIGNAL FUNCTION: Indicates pilot selected sight sensor.
REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
PASS: If CONDITION displayed on HOD corresponds to the pilot FCP sight select switch position,
refer to the appropriate chapter and paragraph as listed under CONDITION.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type
I. Troubleshoot wiring to isolate fault: TM 9–1270–221–23 for integrated helmet and display
sight system related discrepancies, TM 1–5855–265–T for pilot night vision sensor related
discrepancies, or TM 1–1270–476–T for target acquisition designation sight related
discrepancies.

■ **5–29** **SIGNAL NAME:** PLT CPG ACQ SW (ACY) PLT ACQ SEL SW (ACZ)
MEMORY LOCATION: 001122
MEMORY DATA BIT(S): 8–9 (BINARY)
CONDITION: If the fourth digit displayed on HOD is 2 or 3=**CPG**
(Chapter 15, paragraph 15–127)
If the fourth digit displayed on HOD is 4 or 5=**NVS FXD**
(Chapter 10, paragraph 10–30)
If the fourth digit displayed on HOD is 6 or 7=**OFF**
SIGNAL FUNCTION: Selects cueing symbology or NVS to fixed forward.
REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
PASS: If fourth digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 5–30.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type
I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

5–30 **SIGNAL NAME:** PLT GUN ACTION
MEMORY LOCATION: 001075
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates pilot has actioned gun.
REMARKS: From pilot cyclic stick through pilot FCP to LH FAB MRTU Type I to FCC.
PASS: If second digit displayed on HOD is 2, 3, 6, or 7, go to paragraph 5–31.
FAIL: Location of fault: pilot cyclic stick, wiring from pilot cyclic stick to CPG FCP, wiring from CPG
FCP to pilot FCP, pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU
Type I. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

5–31 **SIGNAL NAME:** PLT GUN FIXED SW
MEMORY LOCATION: 001120
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Enables gun fixed mode of operation.
REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
PASS: If first digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 5–32.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type
I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

5–32 SIGNAL NAME: PLT GUN NORMAL SW
  MEMORY LOCATION: 001120
  MEMORY DATA BIT(S):   18   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Enables FCC control of gun.
  REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
  PASS: If first digit displayed on HOD is 2, 3, 6, or 7, go to paragraph 5–38.
  FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

5–33 SIGNAL NAME: PLT GUN TRIG
  MEMORY LOCATION: 001554
  MEMORY DATA BIT(S):   14   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates whether pilot has pulled cyclic stick trigger.
  REMARKS: From pilot FCP through RH FAB MRTU Type I to FCC.
  PASS: If second digit displayed on HOD is 4, 5, 6, or 7, go to paragraph 5–34.
  FAIL: Location of fault: pilot FCP, wiring from pilot FCP to RH FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

5–34 SIGNAL NAME: PLT TRIG 1ST DETENT (ACY) PLT TRIG 1ST DTT (ACZ)   ■
  MEMORY LOCATION: 001554
  MEMORY DATA BIT(S):   15   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates pilot has pulled weapon trigger to first detent.
  REMARKS: From pilot cyclic stick through pilot FCP and RH FAB MRTU Type I to FCC.
  PASS: If second digit displayed on HOD is 2, 3, 6, or 7, go to paragraph 5–35.
  FAIL: Location of fault: pilot cyclic stick, wiring from pilot cyclic stick to pilot FCP, pilot FCP, wiring from pilot FCP to CPG FCP, CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

5–35 SIGNAL NAME: PLT TRIG 2ND DETENT (ACY) PLT TRIG 1ST DTT (ACZ)   ■
  MEMORY LOCATION: 001554
  MEMORY DATA BIT(S):   16   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates pilot has pulled weapon trigger to second detent.
  REMARKS: From pilot cyclic stick through pilot FCP and RH FAB MRTU Type I to FCC.
  PASS: If second digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 5–36.
  FAIL: Location of fault: pilot cyclic stick, wiring from pilot cyclic stick to pilot FCP, pilot FCP, wiring from pilot FCP to CPG FCP, CPG FCP wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

5–36 SIGNAL NAME: GUN FIRE INHIBIT CMD (ACY) GUN FIRE ENABLE (ACZ)   ■
  MEMORY LOCATION: 001627
  MEMORY DATA BIT(S):   6   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Issues FCC command issued to inhibit gun firing.
  REMARKS: From FCC through RH FAB MRTU Type I to GTCB.
  PASS: If fifth digit displayed on HOD is 2, 3, 6, or 7, go to paragraph 5–37.
  FAIL: Location of fault: RH FAB MRTU Type I, wiring from RH FAB MRTU Type I to GTCB, GTCB. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

5–37 SIGNAL NAME: GUN FIRE INHIBITED (ACY) NO OOC/BURSTLIMIT (ACZ)
      MEMORY LOCATION: 001530
      MEMORY DATA BIT(S): 18 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates gun fire inhibited signal to FCC.
      REMARKS: From GTCB through RH FAB MRTU Type I to FCC.
      PASS: If first digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 5–38.
      FAIL: Location of fault: GTCB, wiring from GTCB to RH FAB MRTU Type I. Troubleshoot wiring to
               isolate fault (TM 9–1090–208–23–2).

5–38 SIGNAL NAME: AZ LEAD TO GUN (ACY) GUN AZ LEAD CMD (ACZ)
      MEMORY LOCATION: 001603
      MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
      CONDITION: Monitor HOD while slewing gun: memory location response should indicate a negative
               (sixth digit on the HOD is 1) when the azimuth lead angle error is to the left and a
               positive (sixth digit on HOD is 0) when azimuth lead angle error is to the right.
      SIGNAL FUNCTION: Issues azimuth lead angle error signal (– left/+ right) to GTCB.
      REMARKS: From FCC through RH FAB MRTU Type I to GTCB.
      PASS: If CONDITION corresponds to gun position, go to paragraph 5–39.
      FAIL: Location of fault: refer to sight selected LOS (TADS, PNVS or HMD).

5–39 SIGNAL NAME: GUN OUT OF COINCIDENCE
      MEMORY LOCATION: 001530
      MEMORY DATA BIT(S): 13 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates gun is not at command position.
      REMARKS: From GTCB through RH FAB MRTU Type I to FCC.
      PASS: If third digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 5–40.
      FAIL: Location of fault: refer to sight selected LOS (TADS, PNVS or HMD).

5–40 SIGNAL NAME: GUN AZ ERROR
      MEMORY LOCATION: 001541
      MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
      CONDITION: Monitor HOD while slewing gun: memory location response should indicate a negative
               (sixth digit on the HOD is 1) when the gun azimuth error is to the left and a positive
               (sixth digit on HOD is 0) when gun lead angle error is to the right.
      SIGNAL FUNCTION: Issues azimuth error signal (– left/+ right) to FCC.
      REMARKS: From GTCB through RH FAB MRTU Type I to FCC.
      PASS: If CONDITION corresponds to gun position, go to paragraph 5–41.
      FAIL: Location of fault: refer to sight selected LOS (TADS, PNVS or HMD).

5–41 SIGNAL NAME: SINE AZ TO GUN (ACY) GUN SINE AZ CMD (ACZ)   ■
   MEMORY LOCATION: 001645
   MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)   ■
   CONDITION: Monitor HOD while slewing gun: memory location response should indicate a negative (sixth digit on the HOD is 1) when the sine azimuth is to the left and a positive (sixth digit on HOD is 0) when sine azimuth is to the right.
   SIGNAL FUNCTION: Issues LOS azimuth signal (– left/+ right) to gun.
   REMARKS: From FCC through RH FAB MRTU Type I to GTCB.
   PASS: If polarity of scalar conversion corresponds to gun position, go to paragraph 5–42.
   FAIL: Location of fault: refer to sight selected LOS (TADS, PNVS or HMD).

5–42 SIGNAL NAME: COSINE AZ TO GUN (ACY) GUN COS AZ CMD (ACZ)   ■
   MEMORY LOCATION: 001646
   MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)   ■
   CONDITION: Monitor HOD while slewing gun: memory location response should indicate a negative (sixth digit on the HOD is 1) when the cosine azimuth is to the left and a positive (sixth digit on HOD is 0) when cosine azimuth is to the right.
   SIGNAL FUNCTION: Issues LOS azimuth signal (– left/+ right) to gun.
   REMARKS: From FCC through RH FAB MRTU Type I to GTCB.
   PASS: If CONDITION corresponds to gun position, go to paragraph 5–43.
   FAIL: Location of fault: refer to sight selected LOS (TADS, PNVS or HMD).

5–43 SIGNAL NAME: EL LEAD TO GUN (ACY) GUN EL LEAD CMD (ACZ)   ■
   MEMORY LOCATION: 001602
   MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)   ■
   CONDITION: Monitor HOD while slewing gun: memory location response should indicate a negative (sixth digit on the HOD is 1) when the elevation lead angle error is down and a positive (sixth digit on HOD is 0) when elevation lead angle error is up.
   SIGNAL FUNCTION: Issues elevation lead angle error signal (– down/+ up) to GTCB.
   REMARKS: From FCC through RH FAB MRTU Type I to GTCB.
   PASS: If CONDITION corresponds to gun position, go to paragraph 5–44.
   FAIL: Location of fault: refer to sight selected LOS (TADS, PNVS or HMD).

5–44 SIGNAL NAME: GUN EL ERROR
   MEMORY LOCATION: 001542
   MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)   ■
   CONDITION: Monitor HOD while slewing gun: memory location response should indicate a negative (sixth digit on the HOD is 1) when the elevation lead angle error is down and a positive (sixth digit on HOD is 0) when elevation lead angle error is up.
   SIGNAL FUNCTION: Issues elevation error signal (– down/+ up) to FCC.
   REMARKS: From GTCB through RH FAB MRTU Type I to FCC.
   PASS: If CONDITION corresponds to gun position, go to paragraph 5–45.
   FAIL: Location of fault: refer to sight selected LOS (TADS, PNVS or HMD).

5–45 SIGNAL NAME: SINE EL TO GUN (ACY) GUN SINE EL CMD (ACD & ACZ)
MEMORY LOCATION: 001647
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACD & ACZ) (SCALAR)
CONDITION: Monitor HOD while slewing gun: memory location response should indicate a negative (sixth digit on HOD is 1) when the sine elevation is down and a positive (sixth digit on HOD is 0) when sine elevation is up.
SIGNAL FUNCTION: Issues LOS elevation signal (– down/+ up) to gun.
REMARKS: From FCC through RH FAB MRTU Type I to GTCB.
PASS: If CONDITION corresponds to gun position, go to paragraph 5–46.
FAIL: Location of fault: refer to sight selected LOS (TADS, PNVS or HMD).

5–46 SIGNAL NAME: COS EL TO GUN (ACY) GUN COS EL CMD (ACD & ACZ)
MEMORY LOCATION: 001650
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACD & ACZ) (SCALAR)
CONDITION: Monitor HOD while slewing gun: memory location response should indicate a negative (sixth digit on the HOD is 1) when the cosine elevation is down and a positive (sixth digit on HOD is 0) when cosine elevation is up.
SIGNAL FUNCTION: Issues LOS elevation signal (– down/+ up) to gun.
REMARKS: From FCC through RH FAB MRTU Type I to GTCB.
PASS: If CONDITION corresponds to gun position, go to paragraph 5–47.
FAIL: Location of fault: refer to sight selected LOS (TADS, PNVS or HMD).

5–47 SIGNAL NAME: GUN BRSIT MODE CMD
MEMORY LOCATION: 001627
MEMORY DATA BIT(S): 7 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Enables gun boresight alignment procedures.
REMARKS: From FCC through RH FAB MRTU Type I to GTCB.
PASS: Location of fault if fifth digit displayed on HOD is 0, 2, 4, or 6: GTCB, wiring from GTCB to RH FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).
FAIL: Location of fault: RH FAB MRTU Type I, wiring from RH FAB MRTU Type I to GTCB, GTCB. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

CHAPTER 6
HEADING ATTITUDE REFERENCE SYSTEM (HARS)
MULTIPLEX READ CODES

FAILURE SYMPTOM INDEX

Personnel Required:

(2)

References:

TM 1–1520–238–T–6
TM 9–1230–476–20–2
TM 11–1520–238–23–2

Equipment Conditions:

Ref	Condition
TM 11–1520–238–23–2	HARS –MAINTENANCE OPERATIONAL CHECK in progress
TM 9–1230–476–20–2	MULTIPLEX SUBSYSTEM – POWER UP completed
TM 11–1520–238–23–2	DOPPLER – POWER UP completed

NOTE

- All multiplex read code responses are read from right to left.

- Multiplex read codes must be used in conjunction with applicable Maintenance Operational Check (MOC) in progress.

- Multiplex read codes are observed on the HOD (ADC) or CDU (ADD).

MULTIPLEX READ CODE INTERPRETATIONS

6–1 **SIGNAL NAME:** HARS MISSION DATA MEMORY
MEMORY LOCATION: 002204
MEMORY DATA BIT(S): 4–19(ACY)4–15(ACY)(SCALAR)
CONDITION: Access read code after HARS has been energized at least 90 Seconds.
SIGNAL FUNCTION: HARS mission data memory.
REMARKS: From HARS through DASEC to FCC.
PASS: If code reads 000000, mission data memory is clear, go to paragraph 6–1.1.
FAIL: If one or more digit(s) reads 7, mission data memory is saturated, go to
TM 11–1520–238–23–2, to clear memory.

6–1.1 **SIGNAL NAME:** HARS MODE
MEMORY LOCATION: 002154
MEMORY DATA BIT(S): 6, 7 (BINARY)
CONDITION: If fifth digit displayed on heads out display (HOD) is 0 or 4=**NORM**
If fifth digit displayed on HOD is 1 or 5=**FAST**
If fifth digit displayed on HOD is 2 or 6=**INFLT** (not used)
If fifth digit displayed on HOD is 3 or 7=**OPR**
SIGNAL FUNCTION: Monitors HARS mode switch.
REMARKS: From heading and attitude reference system (HARS) through digital automatic
stabilization equipment computer (DASEC) to fire control computer (FCC).
PASS: If CONDITION corresponds to selected switch mode, go to paragraph 6–2.
FAIL: Location of fault: HARS, HARS panel, wiring from HARS panel to DASEC, DASEC.
Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

6–2 **SIGNAL NAME:** HARS SQUAT SWITCH
MEMORY LOCATION: 002235
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Squat switch indicates aircraft is on ground to HARS.
REMARKS: From FCC through DASEC to HARS.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 6–3.
FAIL: Location of fault: squat switch, squat switch relay. Troubleshoot wiring to isolate fault
(TM 1–1520–238–T–6).

6–3 **SIGNAL NAME:** HARS INT TEST CMD (ACY) HARS INTLTEST CMD (ACZ)
MEMORY LOCATION: 002235
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates HARS is not directed to perform internal test.
REMARKS: From FCC through DASEC to HARS.
PASS: If first digit on HOD is 0, 1, 4, or 5, go to paragraph 6–4.
FAIL: Location of fault: HARS, wiring from HARS to DASEC, DASEC. Troubleshoot wiring to isolate
fault (TM 11–1520–238–23–2).

6–4 SIGNAL NAME: HARS INTERNAL TEST REPLY (ACY) HARS TEST PERF (ACZ)
MEMORY LOCATION: 002154
MEMORY DATA BIT(S): 19   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates HARS completed internal test.
REMARKS: From HARS through DASEC to FCC.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 6–5.
FAIL: Location of fault: HARS, wiring from HARS to DASEC, DASEC. Troubleshoot wiring to isolate
fault (TM 11–1520–238–23–2).

6–5 SIGNAL NAME: HARS TEST STATUS
MEMORY LOCATION: 002106
MEMORY DATA BIT(S): 6 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates DASE is not commanding HARS to perform internal test.
REMARKS: From FCC through DASEC to HARS.
PASS: If fifth digit on HOD is 1, 3, 5, or 7, go to paragraph 6–6.
FAIL: Location of fault: go to Chapter 3, paragraph 3–90.

6–6 SIGNAL NAME: DASE LOOP TEST CMD
MEMORY LOCATION: 002235
MEMORY DATA BIT(S): 9 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates DASE is not commanding HARS to perform internal test.
REMARKS: From FCC through DASEC to HARS.
PASS: If fourth digit on HOD is 0, 1, 4, or 5, go to paragraph 6–7.
FAIL: Location of fault: go to Chapter 3, paragraph 3–90.

6–7 SIGNAL NAME: HARS ALIGN STATUS (ACY) HARS ALIGN IND (ACZ)
MEMORY LOCATION: 002154
MEMORY DATA BIT(S): 10–13 (BINARY)
CONDITION: Bits changing indicates align status.
SIGNAL FUNCTION: Monitors alignment.
REMARKS: From HARS through DASEC to FCC.
PASS: If third and fourth digits on HOD are changing, go to paragraph 6–8.
FAIL: Location of fault: HARS, wiring from HARS to DASEC, DASEC. Troubleshoot wiring to isolate
fault (TM 11–1520–238–23–2).

6–8 SIGNAL NAME: HARS READY VALID
MEMORY LOCATION: 002131
MEMORY DATA BIT(S): 7 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates HARS alignment is complete and data is valid.
REMARKS: From HARS through DASEC to FCC.
PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 6–9.
FAIL: Location of fault: HARS, wiring from HARS to DASEC, DASEC. Troubleshoot wiring to isolate
fault (TM 11–1520–238–23–2).

6–9 SIGNAL NAME: HARS STATUS
MEMORY LOCATION: 002130
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates HARS status is GO.
REMARKS: From HARS through DASEC to FCC.
PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 6–10.
FAIL: Location of fault: HARS, wiring from HARS to DASEC, DASEC. Troubleshoot wiring to isolate
fault (TM 11–1520–238–23–2).

6–10 **SIGNAL NAME:** HARS SD STATUS (ACY) HARS COM STAT (ACZ)
MEMORY LOCATION: 002154
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of HARS serial data is GO.
REMARKS: From HARS through DASEC to FCC.
PASS: If sixth digit on HOD is 0, go to paragraph 6–11.
FAIL: Location of fault: HARS, wiring from HARS to DASEC, DASEC. Troubleshoot wiring to isolate
fault (TM 11–1520–238–23–2).

6–11 **SIGNAL NAME:** SUSPEND ALIGN CMD
MEMORY LOCATION: 002235
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates FCC has not directed the HARS to stop alignment.
REMARKS: From FCC through DASEC to HARS.
PASS: If fifth digit on HOD is 0, 1, 2, or 3, go to paragraph 6–13.
FAIL: Location of fault: go to paragraph 6–12.

6–12 **SIGNAL NAME:** HARS RATES EXCESSIVE (ACY) HARS PRE HI RATES (ACZ)
MEMORY LOCATION: 002154
MEMORY DATA BIT(S): 8 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates a problem in HARS ability to control gyro outputs.
REMARKS: From HARS through DASEC to FCC.
PASS: If fourth digit on HOD is 0, 1, 2, or 3, go to paragraph 6–13.
FAIL: Location of fault: HARS, wiring from HARS to DASEC, DASEC. Troubleshoot wiring to isolate
fault (TM 11–1520–238–23–2).

6–13 **SIGNAL NAME:** HARS RATE STATUS (ACY) HARS FLTCTRL STAT (ACZ)
MEMORY LOCATION: 002154
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Used by DASEC as a valid rate input signal for DASEC control processing.
REMARKS: From HARS through DASEC to FCC.
PASS: If second digit on HOD is 0, 1, 4, or 5, go to paragraph 6–14.
FAIL: Location of fault: HARS, wiring from HARS to DASEC, DASEC. Troubleshoot wiring to isolate
fault (TM 11–1520–238–23–2).

6–14 **SIGNAL NAME:** HARS DATA VALID
MEMORY LOCATION: 002154
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates HARS outputs are valid.
REMARKS: From HARS through DASEC to FCC.
PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 6–15.
FAIL: Location of fault: HARS, wiring from HARS to DASEC, DASEC. Troubleshoot wiring to isolate
fault (TM 11–1520–238–23–2).

6–15 SIGNAL NAME: HARS MAGHDG
　　　　MEMORY LOCATION: 002162
　　　　MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)　　　　　　　　■
　　　　CONDITION: Monitor HOD while moving aircraft or HARS; 0 degrees=000000,
　　　　　　　　　　180.000 degrees=100000, 359.999 degrees=177777.
　　　　SIGNAL FUNCTION: Monitors HARS magnetic heading.
　　　　REMARKS: From HARS through DASEC to FCC.
　　　　PASS: Location of fault if conditions are met: wiring between HARS and aft avionics matrix module.
　　　　　　　　Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).
　　　　FAIL: Location of fault: HARS, wiring from HARS to DASEC, DASEC, wiring from HARS to pilot
　　　　　　　　horizontal situation indicator (HSI), wiring from HARS to CPG radio magnetic indicator (RMI),
　　　　　　　　wiring from HARS to signal data converter (SDC), SDC. Troubleshoot wiring to isolate fault
　　　　　　　　(TM 11–1520–238–23–2).

6–16 SIGNAL NAME: HARS PITCH
　　　　MEMORY LOCATION: 002201
　　　　MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)　　　　　　　　■
　　　　CONDITION: Monitor HOD while moving HARS up and down along pitch axis; positive number
　　　　　　　　　　relates to upward pitch angle and negative number relates to downward pitch angle.
　　　　SIGNAL FUNCTION: Monitors HARS pitch angle.
　　　　REMARKS: From HARS through DASEC to FCC.
　　　　PASS: If conditions are met go to paragraph 6–17.
　　　　FAIL: Location of fault: HARS, wiring from HARS to DASEC, DASEC, SDC, wiring from SDC to
　　　　　　　　HARS. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

6–17 SIGNAL NAME: HARS PITCH RATE
　　　　MEMORY LOCATION: 002163
　　　　MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)　　　　　　　　■
　　　　CONDITION: Monitor HOD while moving HARS up and down along pitch axis; positive number
　　　　　　　　　　relates to upward acceleration and negative number relates to downward acceleration.
　　　　SIGNAL FUNCTION: Monitors HARS pitch rate.
　　　　REMARKS: From HARS through DASEC to FCC.
　　　　PASS: Location of fault if conditions are met: wiring between aft avionics module and remote attitude
　　　　　　　　indicator (RAI). Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).
　　　　FAIL: Location of fault: HARS, wiring from HARS to DASEC, DASEC. Troubleshoot wiring to isolate
　　　　　　　　fault (TM 11–1520–238–23–2).

6–18 SIGNAL NAME: HARS ROLL
　　　　MEMORY LOCATION: 002157
　　　　MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)　　　　　　　　■
　　　　CONDITION: Monitor HOD while banking HARS side to side along roll axis; positive number relates
　　　　　　　　　　to right roll angle and negative number relates to left roll angle.
　　　　SIGNAL FUNCTION: Monitors HARS roll.
　　　　REMARKS: From HARS through DASEC to FCC.
　　　　PASS: If conditions are met, go to paragraph 6–19.
　　　　FAIL: Location of fault: HARS, wiring from HARS to DASEC, DASEC, SDC, wiring from SDC to
　　　　　　　　HARS, wiring from CPG RAI to HARS. Troubleshoot wiring to isolate fault
　　　　　　　　(TM 11–1520–238–23–2).

6–19 SIGNAL NAME: HARS ROLL RATE
MEMORY LOCATION: 002164
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: Monitor HOD while banking HARS side to side along roll axis; positive number relates to right acceleration and negative number relates to left acceleration.
SIGNAL FUNCTION: Monitors HARS roll rate.
REMARKS: From HARS through DASEC to FCC.
PASS: Location of fault if conditions are met: wiring from aft avionics module to signal data converter, SDC, wiring from SDC to RAI. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).
FAIL: Location of fault: HARS, wiring from HARS to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

6–20 SIGNAL NAME: HARS YAW RATE
MEMORY LOCATION: 002165
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: Monitor HOD while holding HARS level, swing HARS side to side along yaw axis; positive number relates to right acceleration and negative number relates to left acceleration.
SIGNAL FUNCTION: Monitors HARS yaw rate.
REMARKS: From HARS through DASEC to FCC.
PASS: Location of fault if conditions are met: wiring from aft avionics module to SDC, SDC, wiring from SDC to RAI. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).
FAIL: Location of fault: HARS, wiring from HARS to DASEC, DASEC, SDC, wiring from SDC to HARS, wiring from CPG RMI to HARS, wiring from CPG HSI to HARS. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

6–21 SIGNAL NAME: USE MAGVAR CTL (ACY) MAGVAR AID VALID (ACZ)
MEMORY LOCATION: 002235
MEMORY DATA BIT(S): 8   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: HARS is directed to update its MAGVAR value with value being sent by FCC.
REMARKS: From FCC through DASEC to HARS.
PASS: If fourth digit on HOD is 4, 5, 6, or 7, go to paragraph 6–22.
FAIL: Location of fault: DEK, wiring from DEK to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

6–22 SIGNAL NAME: DEK DATA VALID
MEMORY LOCATION: 000444
MEMORY DATA BIT(S): 7   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates whether keyboard entry is valid and to be read by FCC or keyboard entry is invalid and to be ignored.
REMARKS: From DEK through CPG MRTU Type III to FCC. This bit identifies erroneous DEK data words.
PASS: If fifth digit on HOD is 1, 3, 5, or 7, go to paragraph 6–23.
FAIL: Location of fault: DEK, wiring from DEK to CPG MRTU Type III, CPG MRTU Type III, DASEC, wiring from DASEC to HARS. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

6–23 SIGNAL NAME: HARS NORTH
MEMORY LOCATION: 002202
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: When in bob–up mode, HARS integraters are reset. HARS begins to indicate drift in +
(North) and – (South) based on velocity computed from integrating accelerometer
outputs.
SIGNAL FUNCTION: Indicates north movement when in bob–up mode.
REMARKS: From HARS through DASEC to FCC.
PASS: If conditions are met go to paragraph 6–24.
FAIL: Location of fault: DEK, wiring from DEK to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

6–24 SIGNAL NAME: HARS EAST
MEMORY LOCATION: 002203
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: When in bob–up mode, HARS integraters are reset. HARS begins to indicate drift in
+(East) and – (West) based on velocity computed from integrating accelerometer
outputs.
SIGNAL FUNCTION: Indicates east movement when in bob–up mode.
REMARKS: From HARS through DASEC to FCC.
PASS: If conditions are met go to paragraph 6–25.
FAIL: Location of fault: DEK, wiring from DEK to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

6–25 SIGNAL NAME: MAGVAR TO HARS (ACY) MAGVAR AID (ACZ)
MEMORY LOCATION: 002232
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: Monitor HOD; MAGVAR positive equals 0 to 180 DEG and MAGVAR negative equals
180 to 360 DEG.
SIGNAL FUNCTION: Determines position of magnetic variation.
REMARKS: From FCC through DASEC to HARS.
PASS: If conditions are met go to paragraph 6–26.
FAIL: Location of fault: DEK, wiring from DEK to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

6–26 SIGNAL NAME: USE MAGHDG CTL (ACY) MAGVAR AID VALID (ACZ)
MEMORY LOCATION: 002235
MEMORY DATA BIT(S): 6   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Instructs HARS to use the MAGHDG input when in the inflight align mode.
REMARKS: From FCC through DASEC to HARS.
PASS: If fifth digit on HOD is 2, 3, 6, or 7, go to paragraph 6–27.
FAIL: Location of fault: DEK, wiring from DEK to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

6–27   **SIGNAL NAME:**   MAGHDG TO HARS (ACY) MAGHDG AID (ACZ)
        MEMORY LOCATION: 002234
        MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
        CONDITION: Monitor HOD; MAGHDG positive equals 0 to 180 DEG and MAGHDG negative equals 180 to 360 DEG.
        SIGNAL FUNCTION: Delivers magnetic heading to HARS.
        REMARKS: From FCC through DASEC.
        PASS: If conditions are met go to paragraph 6–28.
        FAIL: Location of fault: DEK, wiring from DEK to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

6–28   **SIGNAL NAME:**   LAT TO HARS (ACY) LAT AID (ACZ)
        MEMORY LOCATION: 002233
        MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
        CONDITION: Monitor HOD; LAT TO HARS positive equals an increasing latitude (LAT TO HARS negative equals a decreasing latitude).
        SIGNAL FUNCTION: Delivers latitude to HARS.
        REMARKS: From FCC through DASEC to HARS.
        PASS: Location of fault if conditions are met: HARS, wiring from HARS to DASEC, DASEC Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).
        FAIL: Location of fault: DEK, wiring from DEK to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

6–29   **SIGNAL NAME:**   HARS FREE INERTIAL IND (ACY) HARS FREE IND (ACZ)
        MEMORY LOCATION: 002154
        MEMORY DATA BIT(S):   14   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Indicates HARS is in free inertial mode (not caged to velocity inputs).
        REMARKS: From HARS through DASEC to FCC.
        PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 6–30.
        FAIL: Location of fault: go to Chapter 20, paragraph 20–57.

6–30   **SIGNAL NAME:**   HARS SIN MAGHDG
        MEMORY LOCATION: 002160
        MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
        CONDITION: Monitor HOD; HARS SIN MAGHDG positive increases from West to East (HARS SIN MAGHDG negative decreases from East to West).
        SIGNAL FUNCTION: Monitors HARS sine of magnetic heading.
        REMARKS: From HARS through DASEC to FCC.
        PASS: Location of fault if conditions are met, go to paragraph 6–31.
        FAIL: Location of fault: HARS, wiring from HARS to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

6–31 SIGNAL NAME: HARS COS MAGHDG
  MEMORY LOCATION: 002161
  MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR) ■
  CONDITION: Monitor HOD; HARS COS MAGHDG positive increases from West to East (HARS SIN MAGHDG negative decreases from East to West).
  SIGNAL FUNCTION: Monitors HARS cosine of magnetic heading with respect to the navigational heading.
  REMARKS: From HARS through DASEC to FCC.
  PASS: Location of fault if conditions are met, go to Chapter 20, paragraph 20–80.
  FAIL: Location of fault: HARS, wiring from HARS to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

6–32 SIGNAL NAME: HARS LAT
  MEMORY LOCATION: 002151
  MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR) ■
  CONDITION: Monitor HOD; HARS LAT positive equals left movement (HARS LAT negative equals right movement).
  SIGNAL FUNCTION: Most significant 16 bits of HARS latitude estimate.
  REMARKS: From HARS through DASEC to FCC.
  PASS: If conditions are met, go to paragraph 6–33.
  FAIL: Location of fault: HARS, wiring from HARS to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

6–33 SIGNAL NAME: HARS LAT L (ACY) HARS LAT LSB'S (ACZ) ■
  MEMORY LOCATION: 002153
  MEMORY DATA BIT(S): 4–11   (SCALAR)
  CONDITION: Monitor HOD; HARS LAT L positive equals left movement (HARS LAT L negative equals right movement).
  SIGNAL FUNCTION: Least significant 8 bits of HARS latitude estimate.
  REMARKS: From HARS through DASEC to FCC.
  PASS: If conditions are met, go to paragraph 6–34.
  FAIL: Location of fault: HARS, wiring from HARS to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

6–34 SIGNAL NAME: HARS LONG
  MEMORY LOCATION: 002152
  MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR) ■
  CONDITION: Monitor HOD; HARS LONG positive equals forward movement (HARS LONG negative equals aft movement).
  SIGNAL FUNCTION: Most significant 16 bits of HARS longitude estimate.
  REMARKS: From HARS through DASEC to FCC.
  PASS: If conditions are met, go to paragraph 6–35.
  FAIL: Location of fault: HARS, wiring from HARS to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

6–35 **SIGNAL NAME:** HARS LONG L (ACY) HARS LONG LSB'S (ACZ)
MEMORY LOCATION: 002153
MEMORY DATA BIT(S): 12–19 (SCALAR)
CONDITION: Monitor HOD; HARS LONG L positive equals forward movement (HARS LONG L
negative equals aft movement).
SIGNAL FUNCTION: Least significant 8 bits of HARS longitude estimate.
REMARKS: From HARS through DASEC to FCC.
PASS: If conditions are met, go to Chapter 20, paragraph 20–80.
FAIL: Location of fault: HARS, wiring from HARS to DASEC, DASEC. Troubleshoot wiring to isolate
fault (TM 11–1520–238–23–2).

6–36 **SIGNAL NAME:** HARS SIN PITCH
MEMORY LOCATION: 002177
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD; HARS SIN PITCH positive indicates noseup (HARS SIN PITCH negative
indicates nosedown).
SIGNAL FUNCTION: Monitors HARS sine of pitch.
REMARKS: From HARS through DASEC to FCC.
PASS: If conditions are met, go to paragraph 6–37.
FAIL: Location of fault: CPG RAI, wiring from CPG RAI to HARS, HARS, wiring from HARS to
DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

6–37 **SIGNAL NAME:** HARS COS PITCH
MEMORY LOCATION: 002200
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD; HARS COS PITCH positive indicates 0 to 180 degrees (HARS COS
PITCH negative equals 180 to 360 degrees).
SIGNAL FUNCTION: Monitors HARS cosine of pitch.
REMARKS: From HARS through DASEC to FCC.
PASS: If conditions are met, go to paragraph 6–38.
FAIL: Location of fault: HARS, wiring from HARS to DASEC, DASEC. Troubleshoot wiring to isolate
fault (TM 11–1520–238–23–2).

6–38 **SIGNAL NAME:** HARS PITCH ACC
MEMORY LOCATION: 002171
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD; HARS PITCH ACC positive indicates noseup movement (HARS PITCH
ACC negative indicates nosedown movement).
SIGNAL FUNCTION: Monitors HARS pitch acceleration.
REMARKS: From HARS through DASEC to FCC.
PASS: If conditions are met, go to Chapter 20, paragraph 20–80.
FAIL: Location of fault: HARS, wiring from HARS to DASEC, DASEC. Troubleshoot wiring to isolate
fault (TM 11–1520–238–23–2).

6–39 SIGNAL NAME: HARS SIN ROLL
　　　MEMORY LOCATION: 002155
　　　MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)　　　■
　　　CONDITION: Monitor HOD; HARS SIN ROLL positive indicates left roll (HARS SIN ROLL negative indicates right roll).
　　　SIGNAL FUNCTION: Monitors HARS sine of roll.
　　　REMARKS: From HARS through DASEC to FCC.
　　　PASS: If conditions are met, go to paragraph 6–40.
　　　FAIL: Location of fault: CPG RAI, wiring from CPG RAI to HARS, HARS, wiring from HARS to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

6–40 SIGNAL NAME: HARS COS ROLL
　　　MEMORY LOCATION: 002156
　　　MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)　　　■
　　　CONDITION: Monitor HOD; HARS COS ROLL positive indicates 0 to 180 degrees (HARS COS ROLL negative indicates 180 to 360 degrees).
　　　SIGNAL FUNCTION: Monitors HARS cosine of roll.
　　　REMARKS: From HARS through DASEC to FCC.
　　　PASS: If conditions are met, go to paragraph 6–41.
　　　FAIL: Location of fault: HARS, wiring from HARS to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

6–41 SIGNAL NAME: HARS ROLL ACC
　　　MEMORY LOCATION: 002172
　　　MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)　　　■
　　　CONDITION: Monitor HOD; HARS ROLL ACC positive indicates roll left movement (HARS ROLL ACC negative indicates roll right movement).
　　　SIGNAL FUNCTION: Monitors HARS roll acceleration.
　　　REMARKS: From HARS through DASEC to FCC.
　　　PASS: If conditions are met, go to Chapter 20, paragraph 20–80.
　　　FAIL: Location of fault: HARS, wiring from HARS to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

6–42 SIGNAL NAME: HARS YAW ACC
　　　MEMORY LOCATION: 002173
　　　MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)　　　■
　　　CONDITION: Monitor HOD; HARS YAW ACC positive indicates yaw left movement (HARS YAW ACC negative indicates yaw right movement).
　　　SIGNAL FUNCTION: Monitors HARS yaw acceleration.
　　　REMARKS: From HARS through DASEC to FCC.
　　　PASS: Location of fault if conditions are met: wiring from aft avionics module to signal data converter SDC, wiring from SDC to RMI. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).
　　　FAIL: Location of fault: HARS, wiring from HARS to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

6–43 SIGNAL NAME: LOCAL NAV & VEL CAL CMD
     MEMORY LOCATION: 002235
     MEMORY DATA BIT(S):   4   (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Monitors local navigation bob–up or velocity calibration command.
     REMARKS: From FCC through DASEC to HARS.
     PASS: If sixth digit on HOD is 0, go to paragraph 6–44.
     FAIL: Location of fault: go to Chapter 20, paragraph 20–77.

6–44 SIGNAL NAME: HARS VELOCITY CAL ENABLE
     MEMORY LOCATION: 002235
     MEMORY DATA BIT(S):   17 (ACY) 10 (ACZ)   (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Monitors HARS velocity calibration enable.
     REMARKS: From FCC through DASEC to HARS.
     PASS: If first digit on HOD is 0, 1, 2, or 3, go to paragraph 6–45.
     FAIL: Location of fault: go to Chapter 20, paragraph 20–77.

6–45 SIGNAL NAME: VEL STATUS TO HARS (ACY) VEL AID VALID (ACZ)
     MEMORY LOCATION: 002224
     MEMORY DATA BIT(S):   5   (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Indication of velocity input status to HARS.
     REMARKS: From FCC through DASEC to HARS.
     PASS: If fifth digit on HOD is 0, 1, 2, or 3, go to paragraph 6–46.
     FAIL: Location of fault: go to paragraph 6–49.

6–46 SIGNAL NAME: HARS LONG VEL
     MEMORY LOCATION: 002166
     MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
     CONDITION: Monitor HOD; HARS LONG VEL positive indicates forward movement (HARS LONG
                VEL negative indicates aft movement). Small changes on second digit indicate fail.
     SIGNAL FUNCTION: Monitors HARS longitude velocity.
     REMARKS: From HARS through DASEC to FCC.
     PASS: If conditions are met, go to paragraph 6–47.
     FAIL: Location of fault: HARS, wiring from HARS to DASEC, DASEC. Troubleshoot wiring to isolate
          fault (TM 11–1520–238–23–2).

6–47 SIGNAL NAME: HARS LONG ACC
     MEMORY LOCATION: 002174
     MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
     CONDITION: Monitor HOD; HARS LONG ACC positive indicates forward movement (HARS LONG
                ACC negative indicates aft movement).
     SIGNAL FUNCTION: Monitors HARS longitude acceleration.
     REMARKS: From HARS through DASEC to FCC.
     PASS: If conditions are met, go to paragraph 6–48.
     FAIL: Location of fault: HARS, wiring from HARS to DASEC, DASEC. Troubleshoot wiring to isolate
          fault (TM 11–1520–238–23–2).

6–48 SIGNAL NAME: LONG VEL TO HARS (ACY) LONG VEL AID (ACZ)
MEMORY LOCATION: 002225
MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: Monitor HOD; LONG VEL TO HARS positive indicates forward movement (LONG VEL TO HARS negative indicates aft movement). Small changes on second digit indicate fail.
SIGNAL FUNCTION: Velocity input to HARS.
REMARKS: From FCC through DASEC to HARS.
PASS: If conditions are met, go to paragraph 6–49.
FAIL: Location of fault: go to Chapter 2, paragraph 2–10.

6–49 SIGNAL NAME: HARS LAT VEL
MEMORY LOCATION: 002167
MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: Monitor HOD; HARS LAT VEL positive indicates left movement (HARS LAT VEL negative indicates right movement).
SIGNAL FUNCTION: Monitors HARS latitude velocity.
REMARKS: From HARS through DASEC to FCC.
PASS: If conditions are met, go to paragraph 6–50.
FAIL: Location of fault: HARS, wiring from HARS to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

6–50 SIGNAL NAME: HARS LAT ACC
MEMORY LOCATION: 002175
MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: Monitor HOD; HARS LAT ACC positive indicates left movement (HARS LAT ACC negative indicates right movement).
SIGNAL FUNCTION: Monitors HARS latitude acceleration.
REMARKS: From HARS through DASEC to FCC.
PASS: If conditions are met, go to paragraph 6–51.
FAIL: Location of fault: HARS, wiring from HARS to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

6–51 SIGNAL NAME: LAT VEL TO HARS (ACY) LAT VEL AID (ACZ)
MEMORY LOCATION: 002226
MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: Monitor HOD; LAT VEL TO HARS positive indicates left movement (LAT VEL TO HARS negative indicates right movement).
SIGNAL FUNCTION: Velocity input to HARS.
REMARKS: From FCC through DASEC to HARS.
PASS: If conditions are met, go to paragraph 6–52.
FAIL: Location of fault: go to Chapter 2, paragraph 2–7.

6–52 SIGNAL NAME: HARS NORM VEL
MEMORY LOCATION: 002170
MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: Monitor HOD; HARS NORM VEL positive indicates increased velocity (HARS NORM VEL negative indicates decreased velocity).
SIGNAL FUNCTION: Monitors HARS normal velocity.
REMARKS: From HARS through DASEC to FCC.
PASS: If conditions are met, go to paragraph 6–53.
FAIL: Location of fault: HARS, wiring from HARS to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

6–53 SIGNAL NAME: HARS NORMAL ACC
MEMORY LOCATION: 002176
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: Monitor HOD; HARS NORMAL ACC positive indicates increased acceleration (HARS NORMAL ACC negative indicates decreased acceleration).
SIGNAL FUNCTION: Monitors HARS normal acceleration.
REMARKS: From HARS through DASEC to FCC.
PASS: If conditions are met, go to paragraph 6–54.
FAIL: Location of fault: HARS, wiring from HARS to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

6–54 SIGNAL NAME: NORM VEL TO HARS (ACY) LONG VEL AID (ACZ)
MEMORY LOCATION: 002227
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: Monitor HOD; NORM VEL TO HARS positive indicates increased velocity (NORM VEL TO HARS negative indicates decreased velocity).
SIGNAL FUNCTION: Velocity input to HARS.
REMARKS: From FCC through DASEC to HARS.
PASS: If conditions are met, go to Chapter 2, paragraph 2–5.
FAIL: Location of fault: go to paragraph 6–22.

CHAPTER 7

INTEGRATED HELMET AND DISPLAY SIGHT SYSTEM (IHADSS)

MULTIPLEX READ CODES

FAILURE SYMPTOM INDEX

Personnel Required:		**Equipment Conditions:**	
(2)		<u>Ref</u>	<u>Condition</u>
References:		TM 9–1270–221–23	IHADSS –
TM 9–1230–476–20–2			MAINTENANCE
TM 9–1270–221–23			OPERATIONAL CHECK in
TM 1–1270–476–T			progress

NOTE

- All multiplex read code responses are read from right to left.

- Multiplex read codes must be used in conjunction with applicable Maintenance Operational Check (MOC) in progress.

- Multiplex read codes are observed on the HOD (ADC) or CDU (ADD).

MULTIPLEX READ CODE INTERPRETATIONS

7–1 **SIGNAL NAME:** IHADSS PWR SWITCH
MEMORY LOCATION: 000436
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors integrated helmet and display sight system (IHADSS) POWER switch.
REMARKS: From copilot/gunner (CPG) fire control panel (FCP) through CPG multiplex remote terminal unit (MRTU) Type III to fire control computer (FCC).
PASS: If first digit on heads out display (HOD) is 4, 5, 6, or 7, go to paragraph 7–2.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

7–2 **SIGNAL NAME:** IHADSS PWR SWITCH 2
MEMORY LOCATION: 000436
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors IHADSS POWER switch.
REMARKS: From CPG FCP through CPG MRTU Type III to FCC.
PASS: If first digit on HOD is 1, 3, 5, or 7, go to paragraph 7–3.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

7–3 SIGNAL NAME: IHADSS SYSTEM STATUS
MEMORY LOCATION: 001530
MEMORY DATA BIT(S): 9 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors IHADSS system.
REMARKS: From sight electronics unit (SEU) through right–hand (RH) forward avionics bay (FAB)
MRTU Type I to FCC.
PASS: If fourth digit on HOD is 0, 1, 4, or 5, go to paragraph 7–4.
FAIL: Location of fault: SEU, wiring from SEU to RH FAB MRTU Type I, RH FAB MRTU Type I.
Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–4 SIGNAL NAME: IHADSS TIME DELAY 1
MEMORY LOCATION: 001562
MEMORY DATA BIT(S): 4–19 (SCALAR)
CONDITION: HOD displays all zeros.
SIGNAL FUNCTION: Monitors IHADSS response time delay.
REMARKS: From SEU through RH FAB MRTU Type I to FCC.
PASS: If condition is met, go to paragraph 7–5.
FAIL: Location of fault: SEU, wiring from SEU to RH FAB MRTU Type I, RH FAB MRTU Type I.
Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–5 SIGNAL NAME: IHADSS TIME DELAY 2
MEMORY LOCATION: 001563
MEMORY DATA BIT(S): 4–19 (SCALAR)
CONDITION: HOD displays all zeros.
SIGNAL FUNCTION: Monitors IHADSS response time delay.
REMARKS: From SEU through RH FAB MRTU Type I to FCC.
PASS: If condition is met, go to paragraph 7–6.
FAIL: Location of fault: SEU, wiring from SEU to RH FAB MRTU Type I, RH FAB MRTU Type I.
Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–6 SIGNAL NAME: IHADSS TIME DELAY 3
MEMORY LOCATION: 001564
MEMORY DATA BIT(S): 4–19 (SCALAR)
CONDITION: HOD displays all zeros.
SIGNAL FUNCTION: Monitors IHADSS response time delay.
REMARKS: From SEU through RH FAB MRTU Type I to FCC.
PASS: If condition is met, go to paragraph 7–7.
FAIL: Location of fault: SEU, wiring from SEU to RH FAB MRTU Type I, RH FAB MRTU Type I.
Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–7 SIGNAL NAME: IHADSS TIME DELAY 4
MEMORY LOCATION: 001565
MEMORY DATA BIT(S): 4–19 (SCALAR)
CONDITION: HOD displays all zeros.
SIGNAL FUNCTION: Monitors IHADSS response time delay.
REMARKS: From SEU through RH FAB MRTU Type I to FCC.
PASS: If condition is met, go to paragraph 7–8.
FAIL: Location of fault: SEU, wiring from SEU to RH FAB MRTU Type I, RH FAB MRTU Type I.
Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–8   **SIGNAL NAME:**   IHADSS TIME DELAY 5
      MEMORY LOCATION: 001566
      MEMORY DATA BIT(S):   4–19   (SCALAR)
      CONDITION: HOD displays all zeros.
      SIGNAL FUNCTION: Monitors IHADSS response time delay.
      REMARKS: From SEU through RH FAB MRTU Type I to FCC.
      PASS: If condition is met, go to paragraph 7–9.
      FAIL: Location of fault: SEU, wiring from SEU to RH FAB MRTU Type I, RH FAB MRTU Type I.
            Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–9   **SIGNAL NAME:**   IHADSS TIME DELAY 6
      MEMORY LOCATION: 001567
      MEMORY DATA BIT(S):   4–19   (SCALAR)
      CONDITION: HOD displays all zeros.
      SIGNAL FUNCTION: Monitors IHADSS response time delay.
      REMARKS: From SEU through RH FAB MRTU Type I to FCC.
      PASS: If condition is met, go to paragraph 7–10.
      FAIL: Location of fault: SEU, wiring from SEU to RH FAB MRTU Type I, RH FAB MRTU Type I.
            Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–10   **SIGNAL NAME:**   PILOT SEU STATUS
      MEMORY LOCATION: 001571
      MEMORY DATA BIT(S):   7   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Monitors SEU.
      REMARKS: From pilot SEU to SEU through RH FAB MRTU Type I to FCC.
      PASS: If fifth digit on HOD is 0, 2, 4, or 6, go to paragraph 7–11.
      FAIL: Location of fault: SEU, wiring from SEU to RH FAB MRTU Type I, RH FAB MRTU Type I.
            Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–11   **SIGNAL NAME:**   CPG SEU STATUS
      MEMORY LOCATION: 001571
      MEMORY DATA BIT(S):   15   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Monitors SEU.
      REMARKS: From SEU through RH FAB MRTU Type I to FCC.
      PASS: If second digit on HOD is 0, 1, 4, or 5, go to paragraph 7–12.
      FAIL: Location of fault: SEU, wiring from SEU to RH FAB MRTU Type I, RH FAB MRTU Type I.
            Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–12   **SIGNAL NAME:**   CPG TEST COMPLETE
      MEMORY LOCATION: 001571
      MEMORY DATA BIT(S):   16   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Monitors SEU test.
      REMARKS: From SEU through RH FAB MRTU Type I to FCC.
      PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 7–13.
      FAIL: Location of fault: SEU, wiring from SEU to RH FAB MRTU Type I, RH FAB MRTU Type I.
            Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–13 SIGNAL NAME: PILOT TEST COMPLETE
　　　MEMORY LOCATION: 001571
　　　MEMORY DATA BIT(S): 8   (BINARY)
　　　CONDITION: (None)
　　　SIGNAL FUNCTION: Monitors SEU test.
　　　REMARKS: From pilot SEU to SEU through RH FAB MRTU Type I to FCC.
　　　PASS: If fourth digit on HOD is 4, 5, 6, or 7, go to paragraph 7–14.
　　　FAIL: Location of fault: SEU, wiring from SEU to RH FAB MRTU Type I, RH FAB MRTU Type I.
　　　　　Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–14 SIGNAL NAME: PLT IHADSS OPERATE CMD
　　　MEMORY LOCATION: 001636
　　　MEMORY DATA BIT(S): 4   (BINARY)
　　　CONDITION: (None)
　　　SIGNAL FUNCTION: Activates pilot IHADSS processing.
　　　REMARKS: From SEU through RH FAB MRTU Type I to FCC.
　　　PASS: If sixth digit on HOD is 1, go to paragraph 7–15.
　　　FAIL: Location of fault: SEU, wiring from SEU to RH FAB MRTU Type I, RH FAB MRTU Type I.
　　　　　Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–15 SIGNAL NAME: PLT IHADSS MODE CMD
　　　MEMORY LOCATION: 001636
　　　MEMORY DATA BIT(S): 9–11   (OCTAL)
　　　CONDITION: If fourth digit displayed on HOD is 0 and third digit is 2 =FILT A
　　　　　　　　　If fourth digit displayed on HOD is 0 and third digit is 6 =FILT B
　　　　　　　　　If fourth digit displayed on HOD is 1 and third digit is 2 =FILT C
　　　　　　　　　If fourth digit displayed on HOD is 1 and third digit is 6 =BRSIT
　　　　　　　　　If fourth digit displayed on HOD is 2 and third digit is 2 =BRSITSTORE.
　　　　　　　　　If fourth digit displayed on HOD is 2 and third digit is 6=TEST
　　　　　　　　　If fourth digit displayed on HOD is 3 and third digit is 2 =DIAGNOSTICS
　　　SIGNAL FUNCTION: Monitors pilot IHADSS mode.
　　　REMARKS: From SEU through RH FAB MRTU Type I to FCC.
　　　PASS: If **CONDITION** corresponds to observed system status, go to paragraph 7–16.
　　　FAIL: Location of fault: SEU, wiring from SEU to RH FAB MRTU Type I, RH FAB MRTU Type I.
　　　　　Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–16 SIGNAL NAME: CPG IHADSS OPERATE CMD
　　　MEMORY LOCATION: 001636
　　　MEMORY DATA BIT(S): 12   (BINARY)
　　　CONDITION: (None)
　　　SIGNAL FUNCTION: Activates CPG IHADSS processing.
　　　REMARKS: From SEU through RH FAB MRTU Type I to FCC.
　　　PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 7–17.
　　　FAIL: Location of fault: SEU, wiring from SEU to RH FAB MRTU Type I, RH FAB MRTU Type I.
　　　　　Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–17 SIGNAL NAME: CPG IHADSS MODE CMD
 MEMORY LOCATION: 001636
 MEMORY DATA BIT(S): 17–19 (OCTAL)
 CONDITION: If first digit displayed on HOD is 0=FILT A
 If first digit displayed on HOD is 1=FILT B
 If first digit displayed on HOD is 2=FILT C
 If first digit displayed on HOD is 3=BRSIT
 If first digit displayed on HOD is 4=BRSIT STORE
 If first digit displayed on HOD is 5=TEST
 If first digit displayed on HOD is 6=DIAGNOSTICS
 SIGNAL FUNCTION: Monitors CPG IHADSS mode.
 REMARKS: From SEU through RH FAB MRTU Type I to FCC.
 PASS: If CONDITION corresponds to observed system status, go to paragraph 7–18.
 FAIL: Location of fault: SEU, wiring from SEU to RH FAB MRTU Type I, RH FAB MRTU Type I, **IHADSS** circuit breaker, wiring from **IHADSS** circuit breaker to DEU, DEU. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–18 SIGNAL NAME: IHADSS TEST WORD CMD
 MEMORY LOCATION: 001635
 MEMORY DATA BIT(S): 4–19 (SCALAR)
 CONDITION: 125252 displayed on HOD
 SIGNAL FUNCTION: IHADSS wraparound test command.
 REMARKS: From SEU through RH FAB MRTU Type I to FCC.
 PASS: Location of fault if condition is met: wiring between pilot SEU and IHU, wiring between CPG SEU and IHU. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).
 FAIL: Location of fault: SEU, wiring from SEU to RH FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–19 SIGNAL NAME: DEU STATUS
 MEMORY LOCATION: 001530
 MEMORY DATA BIT(S): 6 (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Monitors display electronics unit (DEU) status.
 REMARKS: From DEU through RH FAB MRTU Type I to FCC.
 PASS: Location of fault if fifth digit on HOD is 2, 3, 6, or 7: wiring between pilot DAP and DEU, wiring between CPG DAP and DEU. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).
 FAIL: Location of fault: go to paragraph 7–20.

7–20 SIGNAL NAME: CPG DEU TEST CMD
 MEMORY LOCATION: 001626
 MEMORY DATA BIT(S): 5 (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Monitors DEU test CMD.
 REMARKS: From DEU through RH FAB MRTU Type I to FCC.
 PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 7–21.
 FAIL: Location of fault: **MISSION IHADSS** circuit breaker, wiring from **MISSION IHADSS** circuit breaker to DEU, DEU, wiring from DEU to RH FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–21 **SIGNAL NAME:** PLT DEU TEST CMD
MEMORY LOCATION: 001626
MEMORY DATA BIT(S): 7 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors DEU test CMD.
REMARKS: From DEU through RH FAB MRTU Type I to FCC.
PASS: Location of fault if fifth digit on HOD is 1, 3, 5, or 7: wiring between pilot DAP and DEU. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).
FAIL: Location of fault: DEU, wiring from DEU to RH FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–22 **SIGNAL NAME:** PLT DAP STATUS
MEMORY LOCATION: 001530
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors display adjust panel (DAP) bit status.
REMARKS: From DAP through RH FAB MRTU Type I to FCC.
PASS: Location of fault if sixth digit on HOD is 1, 3, 5, or 7: wiring between DEU and pilot DAP. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).
FAIL: Location of fault: pilot DAP, wiring from pilot DAP to RH FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–23 **SIGNAL NAME:** PILOT RIGHT SSU STATUS
MEMORY LOCATION: 001571
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors pilot right sensor surveying unit (SSU).
REMARKS: From pilot right SSU to SEU through RH FAB MRTU Type I to FCC.
PASS: Location of fault if fifth digit on HOD is 0, 1, 2, or 3: wiring from pilot IHU to SEU. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).
FAIL: Location of fault: pilot right SSU, wiring from right SSU to SEU, SEU,wiring from SEU to RH FAB MRTU Type 1, RH FAB MRTU Type 1. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–24 **SIGNAL NAME:** PILOT LEFT SSU STATUS
MEMORY LOCATION: 001571
MEMORY DATA BIT(S): 6 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors pilot left SSU.
REMARKS: From pilot left SSU to SEU through RH FAB MRTU Type I to FCC.
PASS: Location of fault if fifth digit on HOD is 0, 1, 4, or 5: wiring from pilot IHU to SEU. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).
FAIL: Location of fault: pilot left SSU, wiring from left SSU to SEU, SEU,wiring from SEU to RH FAB MRTU Type 1, RH FAB MRTU Type 1. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–25 **SIGNAL NAME:** PILOT IHU STATUS
MEMORY LOCATION: 001571
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors pilot IHU.
REMARKS: From pilot IHU to SEU through RH FAB MRTU Type I to FCC.
PASS: Location of fault if sixth digit on HOD is 0: wiring from SEU to pilot IHU. Troubleshoot wiring to
    isolate fault (TM 9–1270–221–23).
FAIL: Location of fault: pilot IHU, wiring from pilot IHU to SEU, SEU, wiring from SEU to RH FAB
    MRTU Type 1, RH FAB MRTU Type 1. Troubleshoot wiring to isolate fault
    (TM 9–1270–221–23).

7–26 DELETED

7–27 **SIGNAL NAME:** ORT IHADSS BRT ADJ (ACY) CPG BRT ADJ (ACZ)
MEMORY LOCATION: 000431
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD while adjusting ORT IHAD brightness from minimum (–) to maximum (+) .
SIGNAL FUNCTION: Controls IHADSS brightness.
REMARKS: From ORT through CPG MRTU Type III to FCC.
PASS: If condition is met go to paragraph 7–28.
FAIL: Location of fault: ORT, wiring from ORT to CPG MRTU Type III, CPG MRTU Type III.
    Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–28 **SIGNAL NAME:** ORT IHADSS BRT TO TEU (ACY) CPG BRT ADJ TST (ACZ)
MEMORY LOCATION: 001260
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD while adjusting ORT IHAD brightness from minimum (–) to maximum (+).
SIGNAL FUNCTION: Indication of ORT control outputs to TEU.
REMARKS: From FCC to TEU.
PASS: If condition is met go to paragraph 7–29.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
    Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

7–29 SIGNAL NAME: BRT TO PLT DAP (ACY) PLT IHAD BRT CMD (ACZ)
MEMORY LOCATION: 001606
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD while adjusting pilot DAP brightness from minimum (–) to maximum (+).
SIGNAL FUNCTION: Controls IHADSS brightness.
REMARKS: From FCC through RH FAB MRTU Type I to pilot DAP.
PASS: If condition is met go to paragraph 7–30.
FAIL: Location of fault: RH FAB MRTU Type I, wiring from RH FAB MRTU Type I to pilot DAP, pilot DAP. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–30 SIGNAL NAME: ORT SYMBOLOGY BRIGHT ADJ (ACY) CPG SYM BRT ADJ (ACZ)
MEMORY LOCATION: 000433
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor ORT symbol generator display as brightness level is adjusted from minimum (–) to maximum (+).
SIGNAL FUNCTION: Controls optical relay tube (ORT) symbol generator brightness.
REMARKS: From ORT through CPG MRTU Type III to FCC.
PASS: If condition is met refer to failure symptom index and next failure symptom paragraph.
FAIL: Location of fault: ORT, wiring from ORT to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–31 SIGNAL NAME: ORT IHADSS CONTRAST ADJ (ACY) CPG CTRS ADJ (ACZ)
MEMORY LOCATION: 000432
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor ORT IHAD display as contrast level is adjusted from minimum (–) to maximum (+).
SIGNAL FUNCTION: Controls IHADSS contrast.
REMARKS: From ORT through CPG MRTU Type III to FCC.
PASS: If condition is met go to paragraph 7–32.
FAIL: Location of fault: ORT, wiring from ORT to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–32 SIGNAL NAME: ORT IHADSS CONTRAST TO TEU (ACY) CPG CTRS ADJ TST (ACZ)
MEMORY LOCATION: 001257
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor ORT IHAD contrast signal level to TEU as level is adjusted from minimum (–) to maximum (+).
SIGNAL FUNCTION: Provides indication of ORT control outputs to TEU.
REMARKS: From FCC to TEU.
PASS: If condition is met go to paragraph 7–33.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

7–33 **SIGNAL NAME:** CONTRAST TO PLT DAP (ACY) PLT IHAD CTRS CMD (ACZ)
MEMORY LOCATION: 001607
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor ORT IHAD display contrast signal level to pilot DAP as contrast is adjusted from minimum (–) to maximum (+).
SIGNAL FUNCTION: Controls IHADSS contrast.
REMARKS: From FCC through RH FAB MRTU Type I to pilot DAP.
PASS: If condition is met refer to failure symptom index and next failure symptom paragraph.
FAIL: Location of fault: RH FAB MRTU Type I, wiring from RH FAB MRTU Type I to pilot DAP, pilot DAP. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–34 **SIGNAL NAME:** PLT BRSIT HMD SW
MEMORY LOCATION: 001122
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors pilot boresight (BRSIT) helmet mounted display (HMD) switch.
REMARKS: From pilot collective through LH FAB MRTU Type I to FCC.
PASS: If the fourth digit is 0, 2, 4, or 6 go to paragraph 7–35.
FAIL: Location of fault: pilot collective, wiring from pilot collective to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–35 **SIGNAL NAME:** PLT FCP IHADSS BRSIT SW (ACY) PLT IHAD BST SW1 (ACZ)
MEMORY LOCATION: 001117
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors pilot boresight switch.
REMARKS: From pilot fire control panel (FCP) through LH FAB MRTU Type I to FCC.
PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 7–35A.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–35A **SIGNAL NAME:** PLT FCP IHADSS BRSIT NOT SW (ACY) PLT IHAD BST SW2 (ACZ)
MEMORY LOCATION: 001117
MEMORY DATA BIT(S): 11 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors pilot boresight switch.
REMARKS: From pilot fire control panel (FCP) through LH FAB MRTU Type I to FCC.
PASS: If third digit on HOD is 4 or 5, go to paragraph 7–36.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–36 **SIGNAL NAME:** PILOT BRSIT MODE
MEMORY LOCATION: 001571
MEMORY DATA BIT(S): 9 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors boresight mode.
REMARKS: From SEU through RH FAB MRTU Type I to FCC.
PASS: If fourth digit on HOD is 2, 3, 6, or 7, go to paragraph 7–37.
FAIL: Location of fault: SEU, wiring from SEU to RH FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–37 **SIGNAL NAME:** PILOT BRSIT REQD
MEMORY LOCATION: 001571
MEMORY DATA BIT(S): 11 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Provides indication that pilot IHADSS BRSIT is required.
REMARKS: From SEU through RH FAB MRTU Type I to FCC.
PASS: Location of fault if third digit on HOD is 4, 5, 6, or 7: wiring between pilot FCP and RH FAB
MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).
FAIL: Location of fault: go to paragraph 7–40.

7–38 **SIGNAL NAME:** PLT SIGHT SEL SW
MEMORY LOCATION: 001122
MEMORY DATA BIT(S): 4–7 (HEX)
CONDITION: If sixth digit displayed on HOD is 1 and fifth digit is 3=**HMD**
If sixth digit displayed on HOD is 1 and fifth digit is 5=**PNVS**
If sixth digit displayed on HOD is 1 and fifth digit is 6=**TADS**
If sixth digit displayed on HOD is 1 and fifth digit is7=**STBY**
SIGNAL FUNCTION: Selects pilot sight reference.
REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
PASS: If CONDITION displayed on HOD corresponds to selected PLT **SIGHT SEL** switch position,
go to paragraph 7–39 (ACY) or 7–39A (ACZ).
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type
I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

7–39 **SIGNAL NAME:** PLT/CPG ACQ SW (ACY)
MEMORY LOCATION: 001122
MEMORY DATA BIT(S): 8 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Selects slaving and cueing to CPG line of sight (LOS).
REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
PASS: If fourth digit on HOD is 0, 1, 2, or 3, go to paragraph 7–30.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type
I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

7–39A **SIGNAL NAME:** PLT ACQ SEL SW (ACZ)
MEMORY LOCATION: 001122
MEMORY DATA BIT(S): 8–9 (BINARY)
CONDITION: If fourth digit on HOD is 3=**CPG**
If fourth digit on HOD is 5=**NVS FIXED**
If fourth digit on HOD is 7=**OFF**
SIGNAL FUNCTION: Selects slaving and cueing to CPG line of sight (LOS).
REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
PASS: If CONDITION displayed on HOD corresponds to selected PLT **ACQ SEL** switch, go to
paragraph 7–30.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type
I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

7–40 SIGNAL NAME: PLT LOS STATUS (ACY) PLT LOS INVALID (ACZ)
  MEMORY LOCATION: 001571
  MEMORY DATA BIT(S):   11   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Monitors pilot LOS status.
  REMARKS: From SEU through RH FAB MRTU Type I to FCC.
  PASS: If third digit on HOD is 0, 1, 2, or 3, go to Chapter 10, paragraph 10–36.
  FAIL: Location of fault: go to paragraph 7–41.

7–41 SIGNAL NAME: PLT I DIRCOS
  MEMORY LOCATION: 001572
  MEMORY DATA BIT(S):   4–19 ACY) 4–15 (ACZ)   ((SCALAR)
  CONDITION: Monitor pilot I direction cosine signal polarity on HOD as TADS is moved left (–) or right
            (+) of TADS fixed forward position (0).
  SIGNAL FUNCTION: Generates pilot I direction cosine.
  REMARKS: From SEU through RH FAB MRTU Type I to FCC.
  PASS: If condition is met go to paragraph 7–42.
  FAIL: Location of fault: SSU, wiring from SSU to SEU, SEU, wiring from SEU to RH FAB MRTU Type
        I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–42 SIGNAL NAME: PLT J DIRCOS
  MEMORY LOCATION: 001573
  MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
  CONDITION: Monitor pilot J direction cosine signal polarity on HOD as TADS is moved up (+) or
            down (–) from TADS fixed forward position (0).
  SIGNAL FUNCTION: Generates pilot J direction cosine.
  REMARKS: From SEU through RH FAB MRTU Type I to FCC.
  PASS: If condition is met go to paragraph 7–43.
  FAIL: Location of fault: SSU, wiring from SSU to SEU, SEU, wiring from SEU to RH FAB MRTU Type
        I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–43 SIGNAL NAME: PLT K DIRCOS
  MEMORY LOCATION: 001574
  MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
  CONDITION: Monitor pilot K direction cosine signal polarity on HOD as TADS lens assembly is
            moved forward (–) or backward (+) relative to TADS focal plane (0).
  SIGNAL FUNCTION: Generates pilot K direction cosine.
  REMARKS: From SEU through RH FAB MRTU Type I to FCC.
  PASS: Location of fault if condition is met: wiring between DEU and MRTU Type I. Troubleshoot
          wiring to isolate fault (TM 9–1270–221–23).
  FAIL: Location of fault: SSU, wiring from SSU to SEU, SEU, wiring from SEU to RH FAB MRTU Type
        I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–44 SIGNAL NAME: IHADSS COMMON VIDEO SELECT
  MEMORY LOCATION: 001626
  MEMORY DATA BIT(S):   4   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Instructs DEU to select common video input.
  REMARKS: From FCC through RH FAB MRTU Type I to DEU.
  PASS: Location of fault if sixth digit on HOD is 1: wiring between DEU and MRTU Type I.
          Troubleshoot wiring to isolate fault (TM 9–1270–221–23).
  FAIL: Location of fault: DEU, wiring from DEU to RH FAB MRTU Type I, RH FAB MRTU Type I.
        Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–45 SIGNAL NAME: CPG DAP STATUS
MEMORY LOCATION: 001530
MEMORY DATA BIT(S): 5   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors CPG DAP bit.
REMARKS: From CPG DAP through RH FAB MRTU Type I to FCC.
PASS: Location of fault if fifth digit on HOD is 4, 5, 6, or 7: wiring between DEU and CPG DAP.
　　　　Troubleshoot wiring to isolate fault (TM 9–1270–221–23).
FAIL: Location of fault: CPG DAP, wiring from CPG DAP to RH FAB MRTU Type I, RH FAB MRTU
　　　　Type I. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–46 SIGNAL NAME: CPG RIGHT SSU STATUS (ACY) CPG RT SSU STAT (ACZ)   ∎
MEMORY LOCATION: 001571
MEMORY DATA BIT(S): 13   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors CPG right SSU.
REMARKS: From CPG right SSU to SEU through RH FAB MRTU Type I to FCC.
PASS: Location of fault if third digit on HOD is 0, 2, 4, or 6: IHU, CPG right SSU to CPG left SSU,
　　　　CPG left SSU, SEU. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).
FAIL: Location of fault: CPG right SSU, wiring from right SSU to SEU, SEU,wiring from SEU to RH
　　　　FAB MRTU Type 1, RH FAB MRTU Type 1. Troubleshoot wiring to isolate fault
　　　　(TM 9–1270–221–23).

7–47 SIGNAL NAME: CPG LEFT SSU STATUS (ACY) CPG LT SSU STAT (ACZ)   ∎
MEMORY LOCATION: 001571
MEMORY DATA BIT(S): 14   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors CPG left SSU.
REMARKS: From CPG left SSU to SEU through RH FAB MRTU Type I to FCC.
PASS: Location of fault if second digit on HOD is 0, 1, 2, or 3: IHU, CPG left SSU to CPG right SSU,
　　　　CPG right SSU, SEU. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).
FAIL: Location of fault: CPG right SSU, wiring from right SSU to SEU, SEU,wiring from SEU to RH
　　　　FAB MRTU Type 1, RH FAB MRTU Type 1. Troubleshoot wiring to isolate fault
　　　　(TM 9–1270–221–23).

7–48 SIGNAL NAME: CPG IHU STATUS
MEMORY LOCATION: 001571
MEMORY DATA BIT(S): 12   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors CPG integrated helmet unit (IHU).
REMARKS: From CPG IHU to SEU through RH FAB MRTU Type I to FCC.
PASS: Location of fault if third digit on HOD is 0, 1, 4, or 5: wiring from SEU to CPG IHU.
　　　　Troubleshoot wiring to isolate fault (TM 9–1270–221–23).
FAIL: Location of fault: CPG IHU, wiring from CPG IHU to SEU, SEU, wiring from SEU to RH FAB
　　　　MRTU Type 1, RH FAB MRTU Type 1. Troubleshoot wiring to isolate fault
　　　　(TM 9–1270–221–23).

7–49 SIGNAL NAME: BRT TO CPG DAP (ACY) CPG IHAD BRT CMD (ACZ)
   MEMORY LOCATION: 001610
   MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
   CONDITION: Monitor brightness signal level to CPG display adjust panel (DAP) as brightness is
        adjusted from minimum (–) to maximum (+).
   SIGNAL FUNCTION: Controls CPG IHADSS brightness.
   REMARKS: From FCC through RH FAB MRTU Type I to CPG DAP.
   PASS: Location of fault if condition is met: CPG DAP, wiring from CPG DAP to RH FAB MRTU Type I,
        RH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).
   FAIL: Location of fault: RH FAB MRTU Type I, wiring from RH FAB MRTU Type I to CPG DAP, CPG
        DAP. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–50 SIGNAL NAME: CONTRAST TO CPG DAP (ACY) CPG IHAD CTRS CMD (ACZ)
   MEMORY LOCATION: 001611
   MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
   CONDITION: Monitor ORT IHAD display contrast signal level to CPG DAP as contrast is adjusted
        from minimum (–) to maximum (+).
   SIGNAL FUNCTION: Controls CPG IHADSS contrast.
   REMARKS: From FCC through RH FAB MRTU Type I to CPG DAP.
   PASS: Location of fault if condition is met: CPG DAP, wiring from CPG DAP to RH FAB MRTU Type I,
        RH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).
   FAIL: Location of fault: RH FAB MRTU Type I, wiring from RH FAB MRTU Type I to CPG DAP, CPG
        DAP. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–51 SIGNAL NAME: CPG BRSIT HMD SW
   MEMORY LOCATION: 000414
   MEMORY DATA BIT(S): 10   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Monitors CPG boresight helmet display (**BRSIT HMD**) switch.
   REMARKS: From CPG collective through CPG MRTU Type III to FCC.
   PASS: If fourth digit on HOD is 0, 2, 4, or 6, go to paragraph 7–52.
   FAIL: Location of fault: CPG **BRSIT HMD** switch, CPG collective,wiring from CPG collective to CPG
        MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–52 SIGNAL NAME: IHADSS BRSIT SW (ACY) CPG IHAD BST SW (ACZ)
   MEMORY LOCATION: 000441
   MEMORY DATA BIT(S): 7   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Monitors CPG **IHADSS BRSIT** switch.
   REMARKS: From CPG FCP through CPG MRTU Type III to FCC.
   PASS: If fifth digit on HOD is 0, 2, 4, or 6, go to paragraph 7–53.
   FAIL: Location of fault: CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III,
        wiring from CPG FCP to pilot FCP, pilot FCP. Troubleshoot wiring to isolate fault
        (TM 9–1270–221–23).

7–53 SIGNAL NAME: CPG BRSIT MODE
 MEMORY LOCATION: 001571
 MEMORY DATA BIT(S):   17   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Monitors CPG boresight mode.
 REMARKS: From SEU through RH FAB MRTU Type I to FCC.
 PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 7–54.
 FAIL: Location of fault: SEU, wiring from SEU to RH FAB MRTU Type I, RH FAB MRTU Type I.
    Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–54 SIGNAL NAME: CPG BRSIT REQD
 MEMORY LOCATION: 001571
 MEMORY DATA BIT(S):   18   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Indicates CPG IHADSS BRSIT is required.
 REMARKS: From SEU through RH FAB MRTU Type I to FCC.
 PASS: Location of fault if first digit on HOD is 2, 3, 6, or 7: wiring between CPG FCP and MRTU Type
    III, CPG collective stick, and MRTU Type III. Troubleshoot wiring to isolate fault
    (TM 9–1270–221–23).
 FAIL: Location of fault: go to paragraph 7–57.

7–55 SIGNAL NAME: CPG SIGHT SEL SW
 MEMORY LOCATION: 001074
 MEMORY DATA BIT(S):   4–6   (OCTAL)
 CONDITION: If the fifth digit displayed on HOD is 0 or 1=**HMD/TADS**
     (Chapter 15, paragraph 15–5)
     If the fifth digit displayed on HOD is 2 or 3=**TADS**
     (Chapter 15, paragraph 15–5)
     If the sixth digit displayed on HOD is 1=**NVS** (Chapter 10, paragraph 10–6)
     If the sixth digit displayed on HOD is 1 and the fifth digit displayed on HOD is 2 or 3
     =**HMD** (Chapter 7, paragraph 7–56)
 SIGNAL FUNCTION: Indicates position of CPG **SIGHT SEL** switch.
 REMARKS: From CPG FCP through LH FAB MRTU Type I to FCC.
 PASS: If CONDITION displayed on HOD corresponds to CPG **SIGHT SEL** switch position, refer to
    appropriate chapter and paragraph as listed under CONDITION.
 FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU
    Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

7–56 SIGNAL NAME: CPG ACQ SEL SW
MEMORY LOCATION: 001074
MEMORY DATA BIT(S): 7–9 (OCTAL)
CONDITION: If the fourth digit displayed on HOD is 0 or 1=**PHS**
(Chapter 7, paragraph 7–38)
If the fourth digit displayed on HOD is2 or 3=**FXD**
(Chapter 10, paragraph 10–30)
If the fourth digit displayed on HOD is 4 or 5=**TGT**
(Chapter 16, paragraph 16–23)
If the fourth digit displayed on HOD is 6 or 7=**NAV**
(Chapter 20, paragraph 20–37)
If the fifth digit displayed on HOD is 1, 3, 5, or 7=**GHS**
(Chapter 7, paragraph 7–56)
If the fifth digit displayed on HOD is 1, 3, 5, or 7 and the fourth digit displayed on HOD
is 2 or 3=**MSL SKR** (Chapter 8, paragraph 8–10)
If the fifth digit displayed on HOD is 1, 3, 5, or 7 and the fourth digit displayed on HOD
is 4 or 5=**TADS** (Chapter 15, paragraph 15–6)
SIGNAL FUNCTION: Indicates position of **ACQ SEL** switch.
REMARKS: From CPG FCP through LH FAB MRTU Type I to FCC.
PASS: If CONDITION displayed on HOD corresponds to CPG **ACQ SEL** switch position, refer to
appropriate chapter and paragraph as listed under CONDITION.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU
Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

7–57 SIGNAL NAME: CPG LOS STATUS (ACY) CPG LOS INVALID (ACZ)
MEMORY LOCATION: 001571
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors CPG LOS status.
REMARKS: From SEU through RH FAB MRTU Type I to FCC.
PASS: If first digit on HOD is 1, 3, 5, or 7, go to paragraph 7–43.
FAIL: Location of fault: go to paragraph 7–58.

7–58 SIGNAL NAME: CPG I DIR COS
MEMORY LOCATION: 001575
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor CPG I direction cosine signal polarity on HOD as TADS is moved left (–) or
right (+) relative to TADS fixed forward position (0).
SIGNAL FUNCTION: Generates CPG IHADSS I direction cosine.
REMARKS: From SEU through RH FAB MRTU Type I to FCC.
PASS: If condition is met go to paragraph 7–59.
FAIL: Location of fault: SSU, wiring from SSU to SEU, SEU, wiring from SEU to RH FAB MRTU Type
I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–59 **SIGNAL NAME:** CPG J DIR COS
MEMORY LOCATION: 001576
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor CPG J direction cosine signal polarity on HOD as TADS is moved up (+) or down (–) relative to TADS fixed forward position (0).
SIGNAL FUNCTION: Generates CPG IHADSS J direction cosine.
REMARKS: From SEU through RH FAB MRTU Type I to FCC.
PASS: If condition is met go to paragraph 7–60.
FAIL: Location of fault: SSU, wiring from SSU to SEU, SEU, wiring from SEU to RH FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–60 **SIGNAL NAME:** CPG K DIR COS
MEMORY LOCATION: 001577
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor CPG K direction cosine signal polarity on HOD as TADS lens assembly is moved forward (–) or backwards (+) relative to TADS focal plane (0).
SIGNAL FUNCTION: Generates CPG IHADSS K direction cosine.
REMARKS: From SEU through RH FAB MRTU Type I to FCC.
PASS: Location of fault if condition is met: wiring between DEU and MRTU Type I RH FAB. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).
FAIL: Location of fault: SSU, wiring from SSU to SEU, SEU, wiring from SEU to RH FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–61 **SIGNAL NAME:** PLT GRAY SCALE SW (ACY)
MEMORY LOCATION: 001120
MEMORY DATA BIT(S): 9 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Selects grey scale for helmet mounted display (**HMD**) calibration.
REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
PASS: If fourth digit on HOD is 0, 1, 4, or 5, go to 7–62.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–62 **SIGNAL NAME:** PLT CPG VIDEO SW (ACY)
MEMORY LOCATION: 001120
MEMORY DATA BIT(S): 8 (BINARY)
CONDITION: If fourth digit on HOD is 2 or 3=**CPG**
If fourth digit on HOD is 6 or 7=**PILOT**
SIGNAL FUNCTION: Selects pilot or CPG video.
REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
PASS: If fourth digit on HOD is 0, 1, 4, or 5, go to Chapter 15, paragraph 15–63.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

7–63 **SIGNAL NAME:** PLT VIDEO SEL SW (ACZ)
MEMORY LOCATION: 001120
MEMORY DATA BIT(S): 8 (BINARY)
CONDITION: If fourth digit on HOD is 2 or 3=**CPG**
If fourth digit on HOD is 4 or 5=**GR SCALE**
If fourth digit on HOD is 6 or 7=**PILOT**
SIGNAL FUNCTION: Selects grey scale for helmet mounted display (**HMD**) calibration.
REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
PASS: If fourth digit on HOD is 0, 1, 4, 5, 6 or 7, go to Chapter 15, paragraph 15–63.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1270–221–23).

CHAPTER 8

HELLFIRE MISSILE SYSTEM (HME) MULTIPLEX READ CODES

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MISSILE 2 LT OUTBD WILL NOT LAUNCH	8–139, 8–195, 8–1173
MISSILE 3 LT OUTBD WILL NOT LAUNCH	8–198, 8–254, 8–1173
MISSILE 4 LT OUTBD WILL NOT LAUNCH	8–257, 8–313, 8–1173
MISSILE 1 LT INBD WILL NOT LAUNCH	8–337, 8–393, 8–1173
MISSILE 2 LT INBD WILL NOT LAUNCH	8–396, 8–452, 8–1173
MISSILE 3 LT INBD WILL NOT LAUNCH	8–455, 8–511, 8–1173
MISSILE 4 LT INBD WILL NOT LAUNCH	8–514, 8–570, 8–1173
MISSILE 1 RT INBD WILL NOT LAUNCH	8–594, 8–650, 8–1173
MISSILE 2 RT INBD WILL NOT LAUNCH	8–653, 8–709, 8–1173
MISSILE 3 RT INBD WILL NOT LAUNCH	8–712, 8–768, 8–1173
MISSILE 4 RT INBD WILL NOT LAUNCH	8–771, 8–827, 8–1173
MISSILE 1 RT OUTBD WILL NOT LAUNCH	8–851, 8–907, 8–1173
MISSILE 2 RT OUTBD WILL NOT LAUNCH	8–910, 8–966, 8–1173
MISSILE 3 RT OUTBD WILL NOT LAUNCH	8–969, 8–1025, 8–1173
MISSILE 4 RT OUTBD WILL NOT LAUNCH	8–1028, 8–1084, 8–1173
CANNOT JETTISON LAUNCHERS	8–1183, 8–1206

Personnel Required:

(2)

References:

TM 9–1230–476–20–1
TM 9–1230–476–20–2
TM 9–1425–475–30–2
TM 9–1427–475–20

Equipment Conditions:

Ref	Condition
TM 9–1427–475–20	HME – MAINTENANCE OPERATIONAL CHECK in progress

NOTE

- All multiplex read code responses are read from right to left.

- Multiplex read codes must be used in conjunction with applicable Maintenance Operational Check (MOC) in progress.

- Multiplex read codes are observed on the HOD (ADC) or CDU (ADD).

MULTIPLEX READ CODE INTERPRETATIONS

8–1 **SIGNAL NAME:**   CPG SAFE/ARM SW
MEMORY LOCATION: 001075
MEMORY DATA BIT(S):   12–13   (BINARY)
CONDITION: If the third digit displayed on heads out display (HOD) is 0 or 4=**OFF**
If the third digit displayed on HOD is 2 or 6=**SAFE**
If the third digit displayed on HOD is 3 or 7=**ARM**
SIGNAL FUNCTION: Selects weapon system status.
REMARKS: From copilot/gunner (CPG) fire control panel (FCP) through left–hand (LH) forward avionics bay (FAB) multiplex remote terminal unit (MRTU) Type I to fire control computer (FCC).
PASS: If CONDITION corresponds to selected switch mode, go to paragraph 8–2.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

8–2 **SIGNAL NAME:**   PLT SAFE/ARM SW
MEMORY LOCATION: 001120
MEMORY DATA BIT(S):   12–13   (BINARY)
CONDITION: If the third digit displayed on heads out display (HOD) is 0 or 4=**OFF**
If the third digit displayed on HOD is 2 or 6=**SAFE**
If the third digit displayed on HOD is 3 or 7=**ARM**
SIGNAL FUNCTION: Selects weapon system status.
REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
PASS: If CONDITION corresponds to selected switch mode, go to paragraph 8–3.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

8–3 SIGNAL NAME: PLT GND OVRD SW
     MEMORY LOCATION: 001555
     MEMORY DATA BIT(S): 13 (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Indicates pilot ground/override switch position.
     REMARKS: From CPG FCP through right–hand (RH) FAB MRTU Type I to FCC.
     PASS: If third digit displayed on heads out display (HOD) is 1, 3, 5, or 7, go to paragraph 8–4.
     FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU
          Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

8–4 SIGNAL NAME: SQUAT SW
     MEMORY LOCATION: 001075
     MEMORY DATA BIT(S): 16 (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Detects weight on wheels condition.
     REMARKS: From CPG FCP through LH FAB MRTU Type I to FCC.
     PASS: If second digit on HOD is 0, 2, 4, or 6, go to paragraph 8–5.
     FAIL: Location of fault: squat switch, wiring from squat switch to squat switch relay, squat switch
          relay, wiring from squat switch relay to CPG FCP, CPG FCP, wiring from CPG FCP to LH FAB
          MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–5 SIGNAL NAME: SQUAT SW (ACY) RHE SQUAT SW CMD (ACZ)
     MEMORY LOCATION: 001440
     MEMORY DATA BIT(S): 11 (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Detects weight on wheels condition.
     REMARKS: From FCC to remote HELLFIRE electronics (RHE).
     PASS: If third digit on HOD is 0, 1, 2, or 3, go to paragraph 8–6.
     FAIL: Location of fault: squat switch, wiring from squat switch to RHE, RHE. Troubleshoot wiring to
          isolate fault (TM 9–1427–475–20).

8–6 SIGNAL NAME: CPG MISSILE ENABLE
     MEMORY LOCATION: 001555
     MEMORY DATA BIT(S): 15 (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Enables safe and arming of missiles.
     REMARKS: From CPG FCP to launcher.
     PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–7.
     FAIL: Location of fault: CPG FCP, wiring from CPG FCP to launchers, launchers. Troubleshoot wiring
          to isolate fault (TM 9–1427–475–20).

8–7 SIGNAL NAME: PLT MISSILE ENABLE
     MEMORY LOCATION: 001120
     MEMORY DATA BIT(S): 17 (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Enables safe and arming of missiles.
     REMARKS: From pilot FCP through CPG FCP to launcher.
     PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–8.
     FAIL: Location of fault: pilot FCP, wiring from pilot FCP to CPG FCP, wiring from CPG FCP to
          launcher, launchers. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–8 **SIGNAL NAME:** PILOT MISSILE ARMED
MEMORY LOCATION: 001120
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Arms missiles.
REMARKS: From pilot FCP through CPG FCP to launcher.
PASS: If second digit on HOD is 1, 3, 5, or 7, refer to failure symptom index and next failure symptom paragraph.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to CPG FCP, wiring from CPG FCP to launcher, launchers. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–9 **SIGNAL NAME:** CPG SIGHT SEL SW
MEMORY LOCATION: 001074
MEMORY DATA BIT(S): 4–6 (OCTAL)
CONDITION: If the fifth digit displayed on HOD is 2 or 3=**TADS**
SIGNAL FUNCTION: Selects CPG sight sensor.
REMARKS: From CPG FCP through LH FAB MRTU Type I to FCC.
PASS: If CONDITION displayed on HOD corresponds to TADS, refer to failure symptom index and next failure symptom paragraph.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I,LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

8–10 **SIGNAL NAME:** MSL INVENTORY COMMAND
MEMORY LOCATION: 001440
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands RHE to perform missile inventory.
REMARKS: From FCC to RHE.
PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 8–11.
FAIL: Location of fault: RHE, wiring from RHE to Electronic Command Signal Processor (ECSP), ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–11 **SIGNAL NAME:** MSL BIT COMMAND
MEMORY LOCATION: 001440
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands RHE to initiate missile built–in–test (BIT) test.
REMARKS: From FCC to RHE.
PASS: If second digit on HOD is 0, 2, 4, or 6, go to paragraph 8–12.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–12 **SIGNAL NAME:** RHE ELECT BIT COMMAND (ACY) ELEX BITE CMD (ACZ)
MEMORY LOCATION: 001440
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands RHE to initiate electronics BIT test.
REMARKS: From FCC to RHE.
PASS: If first digit on HOD is 0, 1, 2, or 3, go to paragraph 8–13.
FAIL: Location of fault: RHE, FCC. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–13 SIGNAL NAME: BIT OVERIDE COMMAND
MEMORY LOCATION: 001440
MEMORY DATA BIT(S): 18   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands RHE to terminate BIT test and provide FCC with results of any BIT performed.
REMARKS: From FCC to RHE.
PASS: If first digit on HOD is 0, 1, 4, or 5, go to paragraph 8–14.
FAIL: Location of fault: RHE, FCC. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–14 SIGNAL NAME: BIT IN PROGRESS
MEMORY LOCATION: 001342
MEMORY DATA BIT(S): 5   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates HME is performing BIT.
REMARKS: From RHE to FCC.
PASS: If fifth digit on HOD is 0, 1, 2, or 3, go to paragraph 8–15.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–15 SIGNAL NAME: INVALID COMMAND
MEMORY LOCATION: 001342
MEMORY DATA BIT(S): 7   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to operator that RHE has determined that present command cannot be followed due to hardware configuration.
REMARKS: From RHE to FCC.
PASS: If fifth digit on HOD is 0, 2, 4, or 6, go to paragraph 8–16.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–16 SIGNAL NAME: RHE BIT PERFORMED
MEMORY LOCATION: 001347
MEMORY DATA BIT(S): 4   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to FCC that RHE BIT has been performed.
REMARKS: From RHE to FCC.
PASS: If sixth digit on HOD is 1, go to paragraph 8–17.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–17 SIGNAL NAME: RHE STATUS WORD TERMINAL FLAG (ACY) RHE RECEIVE MSG (ACZ)   ▮
MEMORY LOCATION: 001270
MEMORY DATA BIT(S): 19   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates an error has been detected by RHE direct memory access (DMA) controller.
REMARKS: From RHE to FCC.
PASS: If first digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 8–25.
FAIL: Location of fault: go to paragraph 8–18.

8–18 SIGNAL NAME: RHE STATUS WORD CHECKSUM ERROR
MEMORY LOCATION: 001270
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of RHE programmable read only memory (PROM).
REMARKS: From RHE to FCC.
PASS: If first digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 8–19.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–19 SIGNAL NAME: RHE STATUS WORD SUBSYSTEM BUSY
MEMORY LOCATION: 001270
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: BUSY indicates a full 25 hertz (HZ) processing frame has not been completed.
REMARKS: From RHE to FCC.
PASS: If second digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 8–20.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–20 SIGNAL NAME: RHE STATUS MESSAGE SEQUENCE ERROR
MEMORY LOCATION: 001270
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates that all transmit and receive messages are not transferred within any 25 HZ processing frame.
REMARKS: From RHE to FCC.
PASS: If second digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 8–21.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–21 SIGNAL NAME: RHE STATUS FIRE INTERLOCK
MEMORY LOCATION: 001270
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates a fire interlock hangup is detected.
REMARKS: From RHE to FCC.
PASS: If second digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 8–22.
FAIL: Location of fault: go to paragraph 8–1.

8–22 SIGNAL NAME: RHE STATUS MESSAGE SOFTWARE FAIL
MEMORY LOCATION: 001270
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates an RHE software failure when watchdog timer (250 milliseconds) has timed out.
REMARKS: From RHE to FCC.
PASS: If third digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 8–23.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–23 SIGNAL NAME: RHE STATUS WORD TIMEOUT ERROR
 MEMORY LOCATION: 001270
 MEMORY DATA BIT(S):   12   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: FAIL indicates that 100 milliseconds have elapsed without a proper message from FCC.
 REMARKS: From RHE to FCC.
 PASS: If third digit displayed on HOD is 0, 1, 4, or 5 go to paragraph 8–24.
 FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–24 SIGNAL NAME: RHE STATUS WORD RHE FAIL (ACY) HARDWARE FAIL (ACZ)
 MEMORY LOCATION: 001270
 MEMORY DATA BIT(S):   10   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: FAIL indicates that RHE has failed.
 REMARKS: From RHE to FCC.
 PASS: Location of fault if fourth digit displayed is 0: wiring between CPG FCP and RHE.
       Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).
 FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–25 SIGNAL NAME: RHE STATUS WORD TERMINAL FLAG (ACY) RHE RECEIVE MSG (ACZ)
 MEMORY LOCATION: 001314
 MEMORY DATA BIT(S):   19   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Indicates an error has been detected by RHE DMA controller.
 REMARKS: From RHE to FCC.
 PASS: If first digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 8–33.
 FAIL: Location of fault: go to paragraph 8–27.

8–26 SIGNAL NAME: RHE STATUS WORD CHECKSUM ERROR
 MEMORY LOCATION: 001314
 MEMORY DATA BIT(S):   17   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Indicates status of RHE PROM.
 REMARKS: From RHE to FCC.
 PASS: If first digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 8–27.
 FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–27 SIGNAL NAME: RHE STATUS WORD SUBSYSTEM BUSY
 MEMORY LOCATION: 001314
 MEMORY DATA BIT(S):   16   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: BUSY indicates a full 25 HZ processing frame has not been completed.
 REMARKS: From RHE to FCC.
 PASS: If second digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 8–28.
 FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–28   SIGNAL NAME: RHE STATUS MESSAGE SEQUENCE ERROR
MEMORY LOCATION: 001314
MEMORY DATA BIT(S):   15   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates that all transmit and receive messages are not transferred within any 25 HZ processing frame.
REMARKS: From RHE to FCC.
PASS: If second digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 8–29.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–29   SIGNAL NAME: RHE STATUS FIRE INTERLOCK
MEMORY LOCATION: 001314
MEMORY DATA BIT(S):   14   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates a fire interlock hangup is detected.
REMARKS: From RHE to FCC.
PASS: If second digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 8–30.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–30   SIGNAL NAME: RHE STATUS MESSAGE SOFTWARE FAIL
MEMORY LOCATION: 001314
MEMORY DATA BIT(S):   13   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates an RHE software failure when watchdog timer (250 milliseconds) has timed out.
REMARKS: From RHE to FCC.
PASS: If third digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 8–31.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–31   SIGNAL NAME: RHE STATUS WORD TIMEOUT ERROR
MEMORY LOCATION: 001314
MEMORY DATA BIT(S):   12   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: FAIL indicates that 100 milliseconds have elapsed without a proper message from FCC.
REMARKS: From RHE to FCC.
PASS: If third digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 8–32.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–32   SIGNAL NAME: RHE STATUS WORD RHE FAIL (ACY) HARDWARE FAIL (ACZ)
MEMORY LOCATION: 001314
MEMORY DATA BIT(S):   10   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: FAIL indicates that RHE has failed.
REMARKS: From RHE to FCC.
PASS: Location of fault if fourth digit displayed is 0: wiring between CPG FCP and RHE. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–33   **SIGNAL NAME:**   RHE STATUS WORD TERMINAL FLAG (ACY) RHE RECEIVE MSG (ACZ)
        MEMORY LOCATION: 001340
        MEMORY DATA BIT(S):   19   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Indicates an error has been detected by RHE DMA controller.
        REMARKS: From RHE to FCC.
        PASS: If first digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 8–41.
        FAIL: Location of fault: go to paragraph 8–34.

8–34   **SIGNAL NAME:**   RHE STATUS WORD CHECKSUM ERROR
        MEMORY LOCATION: 001340
        MEMORY DATA BIT(S):   17   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Indicates status of RHE PROM.
        REMARKS: From RHE to FCC.
        PASS: If first digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 8–35.
        FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–35   **SIGNAL NAME:**   RHE STATUS WORD SUBSYSTEM BUSY
        MEMORY LOCATION: 001340
        MEMORY DATA BIT(S):   16   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Busy indicates a full 25 HZ processing frame has not been completed.
        REMARKS: From RHE to FCC.
        PASS: If second digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 8–36.
        FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–36   **SIGNAL NAME:**   RHE STATUS MESSAGE SEQUENCE ERROR
        MEMORY LOCATION: 001340
        MEMORY DATA BIT(S):   15   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Indicates that all transmit and receive messages are not transferred within any
                           25 HZ processing frame.
        REMARKS: From RHE to FCC.
        PASS: If second digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 8–37.
        FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–37   **SIGNAL NAME:**   RHE STATUS FIRE INTERLOCK
        MEMORY LOCATION: 001340
        MEMORY DATA BIT(S):   14   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Indicates a fire interlock hangup is detected.
        REMARKS: From RHE to FCC.
        PASS: If second digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 8–38.
        FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–38 **SIGNAL NAME:** RHE STATUS MESSAGE SOFTWARE FAIL
MEMORY LOCATION: 001340
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates an RHE software failure when watchdog timer (250 milliseconds) has timed out.
REMARKS: From RHE to FCC.
PASS: If third digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 8–39.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–39 **SIGNAL NAME:** RHE STATUS WORD TIMEOUT ERROR
MEMORY LOCATION: 001340
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: FAIL indicates that 100 milliseconds have elapsed without a proper message from FCC.
REMARKS: From RHE to FCC.
PASS: If third digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 8–40.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–40 **SIGNAL NAME:** RHE STATUS WORD RHE FAIL (ACY) HARDWARE FAIL (ACZ)
MEMORY LOCATION: 001340
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: FAIL indicates that RHE has failed.
REMARKS: From RHE to FCC.
PASS: Location of fault if fourth digit displayed is 0: wiring between CPG FCP and RHE. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–41 **SIGNAL NAME:** RHE STATUS WORD TERMINAL FLAG (ACY) RHE RECEIVE MSG (ACZ)
MEMORY LOCATION: 001372
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates an error has been detected by RHE DMA controller.
REMARKS: From RHE to FCC.
PASS: If first digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 8–49.
FAIL: Location of fault: go to paragraph 8–43.

8–42 **SIGNAL NAME:** RHE STATUS WORD CHECKSUM ERROR
MEMORY LOCATION: 001372
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of RHE PROM.
REMARKS: From RHE to FCC.
PASS: If first digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 8–43.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–43 **SIGNAL NAME:** RHE STATUS WORD SUBSYSTEM BUSY
MEMORY LOCATION: 001372
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: BUSY indicates a full 25 HZ processing frame has not been completed.
REMARKS: From RHE to FCC.
PASS: If second digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 8–44.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–44 **SIGNAL NAME:** RHE STATUS MESSAGE SEQUENCE ERROR
MEMORY LOCATION: 001372
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates that all transmit and receive messages are not transferred within any 25 HZ processing frame.
REMARKS: From RHE to FCC.
PASS: If second digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 8–45.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–45 **SIGNAL NAME:** RHE STATUS FIRE INTERLOCK
MEMORY LOCATION: 001372
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates a fire interlock hangup is detected.
REMARKS: From RHE to FCC.
PASS: If second digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 8–46.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–46 **SIGNAL NAME:** RHE STATUS MESSAGE SOFTWARE FAIL
MEMORY LOCATION: 001372
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates an RHE software failure when watchdog timer (250 milliseconds) has timed out.
REMARKS: From RHE to FCC.
PASS: If third digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 8–47.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–47 **SIGNAL NAME:** RHE STATUS WORD TIMEOUT ERROR
MEMORY LOCATION: 001372
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: FAIL indicates that 100 milliseconds have elapsed without a proper message from FCC.
REMARKS: From RHE to FCC.
PASS: If third digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 8–48.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

■ **8–48** **SIGNAL NAME:** RHE STATUS WORD RHE FAIL (ACY) HARDWARE FAIL (ACZ)
MEMORY LOCATION: 001372
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: FAIL indicates that RHE has failed.
REMARKS: From RHE to FCC.
PASS: Location of fault if fourth digit displayed is 0: wiring between CPG FCP and RHE.
Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

■ **8–49** **SIGNAL NAME:** RHE STATUS WORD TERMINAL FLAG (ACY) RHE RECEIVE MSG (ACZ)
MEMORY LOCATION: 001435
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates an error has been detected by RHE DMA controller.
REMARKS: From FCC to RHE.
PASS: If first digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 8–57.
FAIL: Location of fault: go to paragraph 8–50.

8–50 **SIGNAL NAME:** RHE STATUS WORD CHECKSUM ERROR
MEMORY LOCATION: 001435
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of RHE PROM.
REMARKS: From FCC to RHE.
PASS: If first digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 8–51.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–51 **SIGNAL NAME:** RHE STATUS WORD SUBSYSTEM BUSY
MEMORY LOCATION: 001435
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: BUSY indicates a full 25 HZ processing frame has not been completed.
REMARKS: From FCC to RHE.
PASS: If second digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 8–52.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–52 **SIGNAL NAME:** RHE STATUS MESSAGE SEQUENCE ERROR
MEMORY LOCATION: 001435
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates that all transmit and receive messages are not transferred within any
25 HZ processing frame.
REMARKS: From FCC to RHE.
PASS: If second digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 8–53.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–53 SIGNAL NAME: RHE STATUS FIRE INTERLOCK
MEMORY LOCATION: 001435
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates a fire interlock hang–up is detected.
REMARKS: From FCC to RHE.
PASS: If second digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 8–54.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–54 SIGNAL NAME: RHE STATUS MESSAGE SOFTWARE FAIL
MEMORY LOCATION: 001435
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates an RHE software failure when watchdog timer (250 milliseconds) has
                timed out.
REMARKS: From FCC to RHE.
PASS: If third digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 8–55.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–55 SIGNAL NAME: RHE STATUS WORD TIMEOUT ERROR
MEMORY LOCATION: 001435
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: FAIL indicates that 100 milliseconds have elapsed without a proper message
                from FCC.
REMARKS: From FCC to RHE.
PASS: If third digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 8–56
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–56 SIGNAL NAME: RHE STATUS WORD RHE FAIL (ACY) HARDWARE FAIL (ACZ) ■
MEMORY LOCATION: 001435
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: FAIL indicates that RHE has failed.
REMARKS: From FCC to RHE.
PASS: Location of fault if fourth digit displayed is 0: wiring between CPG FCP and RHE.
          Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–57 SIGNAL NAME: RHE STATUS WORD TERMINAL FLAG (ACY) RHE RECEIVE MSG (ACZ) ■
MEMORY LOCATION: 001455
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates an error has been detected by RHE DMA controller.
REMARKS: From FCC to RHE.
PASS: If first digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 8–65.
FAIL: Location of fault: go to paragraph 8–58.

8–58 **SIGNAL NAME:** RHE STATUS WORD CHECKSUM ERROR
MEMORY LOCATION: 001455
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of RHE PROM.
REMARKS: From FCC to RHE.
PASS: If first digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 8–59.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–59 **SIGNAL NAME:** RHE STATUS WORD SUBSYSTEM BUSY
MEMORY LOCATION: 001455
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: BUSY indicates a full 25 HZ processing frame has not been completed.
REMARKS: From FCC to RHE.
PASS: If second digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 8–60.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–60 **SIGNAL NAME:** RHE STATUS MESSAGE SEQUENCE ERROR
MEMORY LOCATION: 001455
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates that all transmit and receive messages are not transferred within any 25 HZ processing frame.
REMARKS: From FCC to RHE.
PASS: If second digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 8–61.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–61 **SIGNAL NAME:** RHE STATUS FIRE INTERLOCK
MEMORY LOCATION: 001455
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates a fire interlock hangup is detected.
REMARKS: From FCC to RHE.
PASS: If second digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 8–62.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–62 **SIGNAL NAME:** RHE STATUS MESSAGE SOFTWARE FAIL
MEMORY LOCATION: 001455
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates an RHE software failure when watchdog timer (250 milliseconds) has timed out.
REMARKS: From FCC to RHE.
PASS: If third digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 8–63.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–63 SIGNAL NAME: RHE STATUS WORD TIMEOUT ERROR
MEMORY LOCATION: 001455
MEMORY DATA BIT(S):   12   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: FAIL indicates that 100 milliseconds have elapsed without a proper message from FCC.
REMARKS: From FCC to RHE.
PASS: If third digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 8–64.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–64 SIGNAL NAME: RHE STATUS WORD RHE FAIL (ACY) HARDWARE FAIL (ACZ)
MEMORY LOCATION: 001455
MEMORY DATA BIT(S):   10   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: FAIL indicates that RHE has failed.
REMARKS: From FCC to RHE.
PASS: Location of fault if fourth digit displayed on HOD is 0: wiring between CPG FCP and RHE. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–65 SIGNAL NAME: RHE STATUS WORD TERMINAL FLAG (ACY) RHE RECEIVE MSG (ACZ)
MEMORY LOCATION: 001515
MEMORY DATA BIT(S):   19   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates an error has been detected by RHE DMA controller.
REMARKS: From FCC to RHE.
PASS: If first digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 8–73.
FAIL: Location of fault: go to paragraph 8–67.

8–66 SIGNAL NAME: RHE STATUS WORD CHECKSUM ERROR
MEMORY LOCATION: 001515
MEMORY DATA BIT(S):   17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of RHE PROM.
REMARKS: From FCC to RHE.
PASS: If first digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 8–67.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–67 SIGNAL NAME: RHE STATUS WORD SUBSYSTEM BUSY
MEMORY LOCATION: 001515
MEMORY DATA BIT(S):   16   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: BUSY indicates a full 25 HZ processing frame has not been completed.
REMARKS: From FCC to RHE.
PASS: If second digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 8–68.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–68 **SIGNAL NAME:** RHE STATUS MESSAGE SEQUENCE ERROR
      MEMORY LOCATION: 001515
      MEMORY DATA BIT(S): 15 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates that all transmit and receive messages are not transferred within any 25 HZ processing frame.
      REMARKS: From FCC to RHE.
      PASS: If second digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 8–69.
      FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–69 **SIGNAL NAME:** RHE STATUS FIRE INTERLOCK
      MEMORY LOCATION: 001515
      MEMORY DATA BIT(S): 14 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates a fire interlock hangup is detected.
      REMARKS: From FCC to RHE.
      PASS: If second digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 8–70.
      FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–70 **SIGNAL NAME:** RHE STATUS MESSAGE SOFTWARE FAIL
      MEMORY LOCATION: 001515
      MEMORY DATA BIT(S): 13 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates an RHE software failure when watchdog timer (250 milliseconds) has timed out.
      REMARKS: From FCC to RHE.
      PASS: If third digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 8–71.
      FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–71 **SIGNAL NAME:** RHE STATUS WORD TIMEOUT ERROR
      MEMORY LOCATION: 001515
      MEMORY DATA BIT(S): 12 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: FAIL indicates that 100 milliseconds have elapsed without a proper message from FCC.
      REMARKS: From FCC to RHE.
      PASS: If third digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 8–72.
      FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–72 **SIGNAL NAME:** RHE STATUS WORD RHE FAIL (ACY) HARDWARE FAIL (ACZ)
      MEMORY LOCATION: 001515
      MEMORY DATA BIT(S): 10 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: FAIL indicates that RHE has failed.
      REMARKS: From FCC to RHE.
      PASS: Troubleshoot wiring between CPG FCP and RHE to isolate fault (TM 9–1230–476–20–2).
      FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–73 SIGNAL NAME: LAUNCHER POWER COMMAND (ACY) LCHR PWR IND (ACZ)
MEMORY LOCATION: 001440
MEMORY DATA BIT(S): 7 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates presence or absence of power to launcher.
REMARKS: From RHE to FCC.
PASS: If fifth digit on HOD is 1, 3, 5, or 7, refer to failure symptom index and next failure symptom paragraph.
FAIL: Location of fault: **L INBD LCHR DC** circuit breaker, wiring from **L INBD LCHR DC** circuit breaker to **L OUTBD LCHR DC** circuit breaker, **L OUTBD LCHR DC** circuit breaker,wiring from **L OUTBD LCHR DC** circuit breaker to **ARM DC** circuit breaker, **ARM DC** circuit breaker, wiring from **ARM DC** circuit breaker to **ARM PWR ENA** Relay K1–5, **ARM PWR ENA** Relay K1–5, wiring from **ARM PWR ENA** Relay K1–5 to remote control circuit breaker (RCCB) CB3, remote control circuit breaker (RCCB) CB3, wiring from CPG FCP to **LCHR DC PWR ENABLE** Relay K2–5/6, **LCHR DC PWR ENABLE** Relay K2–5/6, wiring from CPG FCP to **LCHR AC PWR ENABLE** Relay K3–5/6, **LCHR AC PWR ENABLE** Relay K3–5/6,wiring from **LCHR AC PWR ENABLE** Relay K3–5/6 to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–74 SIGNAL NAME: P1 LAUNCHER PRESENT (ACY) L1 PRESENT (ACZ)
MEMORY LOCATION: 001344
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates presence, or absence of launcher.
REMARKS: From RHE to FCC.
PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–75.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–75 SIGNAL NAME: P1 LAUNCHER SAFE (ACY) L1 SAFE (ACZ)
MEMORY LOCATION: 001344
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to operator when a remote safe condition exists at launcher
REMARKS: From RHE to FCC.
PASS: If first digit on HOD is 0, go to paragraph 8–76.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–76 SIGNAL NAME: P1 LAUNCHER BIT PERFORMED (ACY) L1 BITE PERFORMED (ACZ)
MEMORY LOCATION: 001347
MEMORY DATA BIT(S): 11 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to FCC that BIT has been performed.
REMARKS: From RHE to FCC.
PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 8–77.
FAIL: Location of fault: L INBD LCHR DC circuit breaker, wiring from **L INBD LCHR DC** circuit breaker to **L OUTBD LCHR DC** circuit breaker, **L OUTBD LCHR DC** circuit breaker, wiring from **L OUTBD LCHR DC** circuit breaker to **ARM DC** circuit breaker, **ARM DC** circuit breaker, wiring from **ARM DC** circuit breaker to **ARM PWR ENA** Relay K1–5, **ARM PWR ENA** Relay K1–5, wiring from **ARM PWR ENA** Relay K1–5 to remote control circuit breaker (RCCB) CB3, remote control circuit breaker (RCCB) CB3, wiring from CPG FCP to **LCHR DC PWR ENABLE** Relay K2–5/6, **LCHR DC PWR ENABLE** Relay K2–5/6, wiring from CPG FCP to **LCHR AC PWR ENABLE** Relay K3–5/6, **LCHR AC PWR ENABLE** Relay K3–5/6,wiring from **LCHR AC PWR ENABLE** Relay K3–5/6 to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–77 SIGNAL NAME: P1 LAUNCHER BIT STATUS (ACY) L1 BITE STATUS (ACZ)
MEMORY LOCATION: 001347
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates launcher BIT status to FCC.
REMARKS: From RHE to FCC.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–78.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–78 SIGNAL NAME: P1 COM STATUS
MEMORY LOCATION: 001434
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to RHE that FCC has determined upon receipt of digital data from launcher, that an acknowledge error was present (no data received or all data words contain parity error).
REMARKS: From FCC to RHE.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–315.
FAIL: Location of fault: ECSP, wiring from ECSP to MRTU Type II, MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–79 SIGNAL NAME: P1M1 BIT PERFORMED
MEMORY LOCATION: 001350
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to FCC that BIT has been performed.
REMARKS: From RHE to FCC.
PASS: If first digit on HOD is 1, 3, 5, or 7, go to paragraph 8–80.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–80 SIGNAL NAME: P1M1 BIT STATUS (ACY) P1M1 DISPLAY STATUS (ACZ)
MEMORY LOCATION: 001351
MEMORY DATA BIT(S): 12–15 (HEX)
CONDITION: If third digit displayed on HOD is 0 and second digit displayed
on HOD is 0=NO MSL
If third digit displayed on HOD is 0 or 4 and second digit displayed
on HOD is 2 or 3=SELECTED
If third digit displayed on HOD is 0 or 4 and second digit displayed
on HOD is 4 or 5=READY
If third digit displayed on HOD is 0 or 4 and second digit displayed
on HOD is 6 or 7=TRACKING
If third digit displayed on HOD is 3 or 7 and second digit displayed
on HOD is 0=CODED
If third digit displayed on HOD is 3 or 7 and second digit displayed
on HOD is 6=CAGED
If third digit displayed on HOD is 5 or 1 and second digit displayed
on HOD is 0=BIT NO GO
If third digit displayed on HOD is 5 or 1 and second digit displayed
on HOD is 2=FAILED
If third digit displayed on HOD is 5 or 1 and second digit displayed
on HOD is 6=BATTERY NO GO
If third digit displayed on HOD is 6 or 2 and second digit displayed
on HOD is 0=UNLATCHED
If third digit displayed on HOD is 6 or 2 and second digit displayed
on HOD is 2=MRTU NO GO
If third digit displayed on HOD is 6 or 2 and second digit displayed
on HOD is 4=RAIL NO GO
SIGNAL FUNCTION: Provides missile status display for operator.
REMARKS: From RHE to FCC for display.
PASS: If CONDITION corresponds to selected message, go to failure symptom index and next failure
symptom paragraph.
FAIL: Location of fault: RHE, wiring from RHE to launchers, launcher. Troubleshoot wiring to isolate
fault (TM 9–1427–475–20).

8–81 SIGNAL NAME: P1M1 UNLATCH INDICATE
MEMORY LOCATION: 001414
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to RHE missile is unlatched.
REMARKS: From launcher to RHE.
PASS: If first digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 8–82.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to RHE, RHE.
Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–82 SIGNAL NAME: P1M1 UNLATCH INDICATE
MEMORY LOCATION: 001672
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to operator when a missile is unlatched.
REMARKS: From launcher through left outboard MRTU Type II to FCC for display.
PASS: If first digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 8–83.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–83   **SIGNAL NAME:**   P1M1 UNLATCH INDICATE
        MEMORY LOCATION: 001715
        MEMORY DATA BIT(S):   18   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Indicates to operator when a missile is unlatched.
        REMARKS: From FCC through left outboard MRTU Type II to launcher.
        PASS: If first digit displayed on HOD is 0, 1, 4, or 5, refer to failure symptom index and next failure
            symptom paragraph.
        FAIL: Location of fault: left outboard MRTU Type II, FCC. Troubleshoot left outboard MRTU Type II
            (TM 9–1230–476–20–2).

8–84   **SIGNAL NAME:**   P1M1 UPPER LOWER DISPLAY STATUS (ACY) P1M1 PRIORITY IND (ACZ)
        MEMORY LOCATION: 001351
        MEMORY DATA BIT(S):   16   (BINARY)
        CONDITION: If the second digit displayed on HOD is 0, 2, 4, or 6=UPPER
                    If the second digit displayed on HOD is 1, 3, 5, or 7=LOWER
        SIGNAL FUNCTION: Indicates to operator when a selected missile has been assigned to upper or
                    lower channel.
        REMARKS: From RHE to FCC for display.
        PASS: If CONDITION corresponds to selected channel, go to paragraph 8–85.
        FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–85   **SIGNAL NAME:**   P1M1 TYPE STATUS DISPLAY (ACY) P1M1 TYPE (ACZ)
        MEMORY LOCATION: 001351
        MEMORY DATA BIT(S):   17–19   (OCTAL)
        CONDITION: If the first digit displayed on HOD is 0=NONE
                    If the first digit displayed on HOD is 1=TACTICAL LASER
                    If the first digit displayed on HOD is 4=UNIDENTIFIED
                    If the first digit displayed on HOD is 5=TRAINING LASER
        SIGNAL FUNCTION: Provides type of missile data for display to operator.
        REMARKS: From RHE to FCC for display.
        PASS: If first digit on HOD corresponds to installed type of missiles, go to paragraph 8–86.
        FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
            (TM 9–1427–475–20).

8–86   **SIGNAL NAME:**   P1M1 TYPE (ACY) P1M1 MSL TYPE (ACZ)
        MEMORY LOCATION: 001413
        MEMORY DATA BIT(S):   7–8   (BINARY)
        CONDITION: If fifth digit displayed on HOD is 0, and fourth digit displayed on HOD is 0, 1, 2, or
                    3=TRAINING
                    If fifth digit displayed on HOD is 1, and fourth digit displayed on HOD is 0, 1, 2, or
                    3=TACTICAL
                    If fifth digit displayed on HOD is 1, and fourth digit displayed on HOD is 4, 5, 6, or
                    7=NONE
        SIGNAL FUNCTION: Indicates a tactical, training or no missile at location.
        REMARKS: From ECSP to RHE.
        PASS: If CONDITION corresponds to installed type of missiles, go to paragraph 8–87.
        FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
            (TM 9–1427–475–20).

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8–87 SIGNAL NAME: P1M1 TYPE (ACY) P1M1 MSL TYPE (ACZ)
MEMORY LOCATION: 001671
MEMORY DATA BIT(S): 7–8 (BINARY)
CONDITION: If fourth digit displayed on HOD is 0, 1, 2, or 3=TRAINING
If fifth digit displayed on HOD 1, 3, 5, or 7=TACTICAL
If fifth digit displayed on HOD 1, 3, 5, or 7 and fourth digit displayed on HOD is 0, 1, 2, or 3=NONE
SIGNAL FUNCTION: Indicates a tactical, training or no missile at location.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If CONDITION corresponds to installed type of missiles, go to failure symptom index and next failure symptom paragraph.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–88 SIGNAL NAME: P1M1 MSL DEICE #1 CMD
MEMORY LOCATION: 001274
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Sends command to launcher ECSP to arm deicing squib.
REMARKS: From RHE to ECSP.
PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–89.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–89 SIGNAL NAME: P1M1 MSL DEICE #1 CMD
MEMORY LOCATION: 001710
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Sends command to launcher ECSP to arm deicing squib.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–120.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–90 **SIGNAL NAME:** P1M1 MSL SKR INPUT SLAVE (ACY) P1M1 SKR SLV SEL (ACZ)
MEMORY LOCATION: 001274
MEMORY DATA BIT(S): 6–8 (OCTAL)
CONDITION: If the fifth digit is 0 or 4 and the fourth digit
is 0 or 2=ZERO EL ZERO AZ
If the fifth digit is 0 or 4 and the fourth digit
is 4 or 6=REMEL REMAZ
If the fifth digit is 1 or 5 and the fourth digit
is 0 or 2=AUTOEL AUTOAZ
If the fifth digit is 1 or 5 and the fourth digit
is 4 or 6=REMEL REMAZ + BIAS/2
If the fifth digit is 2 or 6 and the fourth digit
is 0 or 2=REMEL REMAZ + BIAS
If the fifth digit is 2 or 6 and the fourth digit
is 4 or 6=REMEL REMAZ – BIAS/2
If the fifth digit is 3 or 7 and the fourth digit
is 0 or 2=REMEL REMAZ – BIAS
If the fifth digit is 3 or 7 and the fourth digit
is 4 or 6=AUTOEL ZERO AZ
SIGNAL FUNCTION: Selects pitch and yaw slave commands to be applied to missile.
REMARKS: From RHE to ECSP.
PASS: If CONDITION corresponds to selected seeker input, go to paragraph 8–91.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–91 **SIGNAL NAME:** P1M1 MSL SKR INPUT SLAVE (ACY) P1M1 SKR SLV SEL (ACZ)
MEMORY LOCATION: 001710
MEMORY DATA BIT(S): 6–8 (OCTAL)
CONDITION: If the fifth digit is 0 or 4 and the fourth digit
is 0 or 2=ZERO EL ZERO AZ
If the fifth digit is 0 or 4 and the fourth digit
is 4 or 6=REMEL REMAZ
If the fifth digit is 1 or 5 and the fourth digit
is 0 or 2=AUTOEL AUTOAZ
If the fifth digit is 1 or 5 and the fourth digit
is 4 or 6=REMEL REMAZ + BIAS/2
If the fifth digit is 2 or 6 and the fourth digit
is 0 or 2=REMEL REMAZ + BIAS
If the fifth digit is 2 or 6 and the fourth digit
is 4 or 6=REMEL REMAZ – BIAS/2
If the fifth digit is 3 or 7 and the fourth digit
is 0 or 2=REMEL REMAZ – BIAS
If the fifth digit is 3 or 7 and the fourth digit
is 4 or 6=AUTOEL ZERO AZ
SIGNAL FUNCTION: Selects pitch and yaw slave commands to be applied to missile.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If CONDITION corresponds to selected seeker input, refer to failure symptom index and next
failure symptom paragraph.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–92 **SIGNAL NAME:** P1M1 MSL AUTO PILOT POWER CONTROL (ACY)
P1M1 AUTOPLT PWR (ACZ)
MEMORY LOCATION: 001274
MEMORY DATA BIT(S): 9 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of auto pilot power to missile.
REMARKS: From RHE to ECSP.
PASS: If fourth digit on HOD is 2, 3, 6, or 7, go to paragraph 8–93.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–93 **SIGNAL NAME:** P1M1 MSL AUTO PILOT POWER CONTROL (ACY)
P1M1 AUTOPLT PWR (ACZ)
MEMORY LOCATION: 001710
MEMORY DATA BIT(S): 9 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of auto pilot power to missile.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If fourth digit on HOD is 2, 3, 6, or 7, go to paragraph 8–94.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–94 **SIGNAL NAME:** P1M1 MSL AUTO PILOT POWER (ACY) P1M1 A/P PWR OK (ACZ)
MEMORY LOCATION: 001413
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Specifies auto pilot power is above minimum value (+18 VDC).
REMARKS: From ECSP to RHE.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–95
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–95 **SIGNAL NAME:** P1M1 MSL AUTO PILOT POWER (ACY) P1M1 A/P PWR OK (ACZ)
MEMORY LOCATION: 001671
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Specifies auto pilot power is above minimum value (+18 VDC).
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to failure symptom index and next failure symptom
paragraph.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–96 SIGNAL NAME: P1M1 MSL TGT POLARITY CONTROL
   MEMORY LOCATION: 001274
   MEMORY DATA BIT(S): 10–11 (BINARY)
   CONDITION: If the fourth digit is 0, 2, 4, or 6 and the third digit is 0, 1, 2, 3=BLACK
            If the fourth digit is 0, 2, 4, or 6 and the third digit is 4, 5, 6, 7=AUTO
            If the fourth digit is 1, 3, 5, or 7 and the third digit is 0, 1, 2, 3=WHITE
   SIGNAL FUNCTION: Directs missile seeker to track a black target on a white background, a white
            target on a black background or automatic contrast.
   REMARKS: From RHE to ECSP.
   PASS: If third digit on HOD corresponds to proper polarity, go to paragraph 8–97.
   FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
         (TM 9–1427–475–20).

8–97 SIGNAL NAME: P1M1 MSL TGT POLARITY CONTROL
   MEMORY LOCATION: 001710
   MEMORY DATA BIT(S): 10–11 (BINARY)
   CONDITION: If the fourth digit is 0, 2, 4, or 6 and the third digit is 0, 1, 2, 3=BLACK
            If the fourth digit is 0, 2, 4, or 6 and the third digit is 4, 5, 6, 7=AUTO
            If the fourth digit is 1, 3, 5, or 7 and the third digit is 0, 1, 2, 3=WHITE
   SIGNAL FUNCTION: Directs missile seeker to track a black target on a white background, a white
            target on a black background or automatic contrast.
   REMARKS: From launcher through left outboard MRTU Type II to FCC.
   PASS: If third digit on HOD corresponds to proper polarity, go to failure symptom and next failure
         symptom paragraph.
   FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
         MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
         (TM 9–1427–475–20).

8–98 SIGNAL NAME: P1M1 MSL BIT CMD
   MEMORY LOCATION: 001274
   MEMORY DATA BIT(S): 12 (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Controls launcher BIT.
   REMARKS: From RHE to ECSP.
   PASS: If third digit on HOD is 0, 1, 4, or 5, go to paragraph 8–99.
   FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
         (TM 9–1427–475–20).

8–99 SIGNAL NAME: P1M1 MSL BIT CMD
   MEMORY LOCATION: 001710
   MEMORY DATA BIT(S): 12 (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Controls launcher BIT.
   REMARKS: From launcher through left outboard MRTU Type II to FCC.
   PASS: If third digit on HOD is 0, 1, 4, or 5, go to paragraph 8–100.
   FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
         MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
         (TM 9–1427–475–20).

8–100 **SIGNAL NAME:** P1M1 MSL SKR POWER CONTROL (ACY) P1M1 SKR PWR OK (ACZ)
MEMORY LOCATION: 001274
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of seeker power.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–101.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–101 **SIGNAL NAME:** P1M1 MSL SKR POWER CONTROL (ACY) P1M1 SKR PWR OK (ACZ)
MEMORY LOCATION: 001710
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of seeker power.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–102.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–102 **SIGNAL NAME:** P1M1 MSL SKR POWER
MEMORY LOCATION: 001413
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of seeker power (+28 VDC).
REMARKS: From ECSP to RHE.
PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 8–103.
FAIL: Location of fault: RHE, wiring from RHE to left outboard launcher, left outboard launcher.
Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–103 **SIGNAL NAME:** P1M1 MSL SEEKER POWER (ACY) P1M1 SKR PWR OK (ACZ)
MEMORY LOCATION: 001671
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of seeker power (+28 VDC).
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 8–106.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–104 **SIGNAL NAME:** P1M1 CCM ACTIVATE CMD
MEMORY LOCATION: 001274
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to enter counter countermeasure (CCM) mode.
REMARKS: From RHE to ECSP.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–107.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–105   **SIGNAL NAME:**   P1M1 CCM ACTIVATE CMD
       MEMORY LOCATION: 001710
       MEMORY DATA BIT(S):   14   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Commands missile seeker to enter CCM mode.
       REMARKS: From launcher through left outboard MRTU Type II to FCC.
       PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1123.
       FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
       MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
       (TM 9–1427–475–20).

8–106   **SIGNAL NAME:**   P1M1 MSL SCAN SEARCH CMD
       MEMORY LOCATION: 001274
       MEMORY DATA BIT(S):   16   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Commands laser seeker to enter target acquisition mode and to enter lock–on
                when target is acquired.
       REMARKS: From RHE to ECSP.
       PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–107.
       FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
       (TM 9–1427–475–20).

8–107   **SIGNAL NAME:**   P1M1 MSL SCAN SEARCH CMD
       MEMORY LOCATION: 001710
       MEMORY DATA BIT(S):   16   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Commands laser seeker to enter target acquisition mode and to enter lock–on
                when target is acquired.
       REMARKS: From launcher through left outboard MRTU Type II to FCC.
       PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–110.
       FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
       MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
       (TM 9–1427–475–20).

8–108   **SIGNAL NAME:**   P1M1 MSL SEEKER SLAVE CMD
       MEMORY LOCATION: 001274
       MEMORY DATA BIT(S):   17   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Commands laser seeker to enter slave mode.
       REMARKS: From RHE to ECSP.
       PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–111.
       FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
       (TM 9–1427–475–20).

8–109   SIGNAL NAME: P1M1 MSL SEEKER SLAVE CMD
MEMORY LOCATION: 001710
MEMORY DATA BIT(S):   17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter slave mode.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–117
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–110   SIGNAL NAME: P1M1 MSL STARE TRACK CMD
MEMORY LOCATION: 001274
MEMORY DATA BIT(S):   18   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter stare mode. If proper laser code is detected
in seeker field of view (FOV), seeker will enter track mode.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–111.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–111   SIGNAL NAME: P1M1 MSL STARE TRACK CMD
MEMORY LOCATION: 001710
MEMORY DATA BIT(S):   18   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter stare mode. If proper laser code is detected
in seeker FOV, seeker will enter track mode.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 2, 3, 6, or 7, refer to failure symptom index and next failure symptom
paragraph.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–112   SIGNAL NAME: P1M1 MSL CORRELATE
MEMORY LOCATION: 001413
MEMORY DATA BIT(S):   16   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates laser has detected a laser beam whose laser code agrees with
internal stored code.
REMARKS: From ECSP to RHE.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–113.
FAIL: Location of fault: replace left outboard launcher (TM 9–1425–475–30–2).

8–113 **SIGNAL NAME:** P1M1 MSL CORRELATE
      MEMORY LOCATION: 001671
      MEMORY DATA BIT(S): 16 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates laser has detected a laser beam whose laser code agrees with internal stored code.
      REMARKS: From launcher through left outboard MRTU Type II to FCC.
      PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–114.
      FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–114 **SIGNAL NAME:** P1M1 MSL TRACK
      MEMORY LOCATION: 001413
      MEMORY DATA BIT(S): 15 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates seeker has entered track mode. The laser seeker can enter track mode whenever a proper laser beam is detected in seeker FOV for any mode except cage.
      REMARKS: From ECSP to RHE.
      PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–115.
      FAIL: Location of fault: replace left outboard launcher (TM 9–1425–475–30–2).

8–115 **SIGNAL NAME:** P1M1 MSL TRACK
      MEMORY LOCATION: 001671
      MEMORY DATA BIT(S): 15 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates seeker has entered track mode. The laser seeker can enter track mode whenever a proper laser beam is detected in seeker FOV for any mode except cage.
      REMARKS: From launcher through left outboard MRTU Type II to FCC.
      PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1153.
      FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–116 **SIGNAL NAME:** P1M1 MSL SKR CAGE CMD
      MEMORY LOCATION: 001274
      MEMORY DATA BIT(S): 19 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Commands missile to enter cage mode.
      REMARKS: From RHE to ECSP.
      PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–117.
      FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–117 SIGNAL NAME: P1M1 MSL SKR CAGE CMD
MEMORY LOCATION: 001710
MEMORY DATA BIT(S):   19   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile to enter cage mode.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–118.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
      MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
      (TM 9–1427–475–20).

8–118 SIGNAL NAME: P1M1 MSL SKR CAGE
MEMORY LOCATION: 001413
MEMORY DATA BIT(S):   13   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker is in cage mode. The seeker cannot track in cage position.
REMARKS: From ECSP to RHE.
PASS: If third digit on HOD is 0, 2, 4, or 6, go to paragraph 8–119.
FAIL: Location of fault: replace left outboard launcher (TM 9–1425–475–30–2).

8–119 SIGNAL NAME: P1M1 MSL SKR CAGE
MEMORY LOCATION: 001671
MEMORY DATA BIT(S):   13   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker is in cage mode. The seeker cannot track in cage position.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If third digit on HOD is 0, 2, 4, or 6, go to paragraph 8–122.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
      MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
      (TM 9–1427–475–20).

8–120 SIGNAL NAME: P1M1 MSL DEICE #2 CMD
MEMORY LOCATION: 001300
MEMORY DATA BIT(S):   4   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Issues deicing squib fire command to selected missile.
REMARKS: From RHE to ECSP.
PASS: If sixth digit on HOD is 1, go to paragraph 8–122.
FAIL: Location of fault: CPG missile control panel, wiring from CPG missile control panel to CPG
      MRTU Type III, CPG MRTU Type III, RHE, wiring from RHE to ECSP, ECSP. Troubleshoot
      wiring to isolate fault (TM 9–1427–475–20).

8–121   **SIGNAL NAME:**   P1M1 MSL DEICE #2 CMD
        MEMORY LOCATION: 001714
        MEMORY DATA BIT(S):   4   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Issues deicing squib fire command to selected missile.
        REMARKS: From launcher through left outboard MRTU Type II to FCC.
        PASS: If sixth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1118.
        FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
                MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
                (TM 9–1427–475–20).

8–122   **SIGNAL NAME:**   P1M1 MSL BIT CONTROL
        MEMORY LOCATION: 001300
        MEMORY DATA BIT(S):   6–9   (HEX)
        CONDITION: (None)
        SIGNAL FUNCTION: Commands BIT on autopilot.
        REMARKS: From RHE to ECSP.
        PASS: If fifth digit displayed on HOD is 0, 1, or 2, and the fourth digit displayed on HOD is 2, 3, 4, 5,
                6, or 7 go to paragraph 8–123.
        FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
                (TM 9–1427–475–20).

8–123   **SIGNAL NAME:**   P1M1 MSL BIT CONTROL
        MEMORY LOCATION: 001714
        MEMORY DATA BIT(S):   6–9   (HEX)
        CONDITION: (None)
        SIGNAL FUNCTION: Commands BIT on autopilot.
        REMARKS: From launcher through left outboard MRTU Type II to FCC.
        PASS: Location of fault if fifth digit displayed on HOD is 0, 1, or 2, and the fourth digit displayed on
                HOD is 2, 3, 4, 5, 6, or 7: Replace left outboard launcher missile 1 (TM 9–1427–475–20).
        FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
                MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
                (TM 9–1427–475–20).

8–124   **SIGNAL NAME:**   P1M1 MSL INDIRECT FIRE LO
        MEMORY LOCATION: 001300
        MEMORY DATA BIT(S):   10   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Commands low flight profile for lock–on after launch (LOAL) operation.
        REMARKS: From RHE to ECSP.
        PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–125.
        FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
                (TM 9–1427–475–20).

8–125 SIGNAL NAME: P1M1 MSL INDIRECT FIRE LO
MEMORY LOCATION: 001714
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands low flight profile for LOAL operation.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1108.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–126 SIGNAL NAME: P1M1 MSL INDIRECT FIRE HI
MEMORY LOCATION: 001300
MEMORY DATA BIT(S): 11 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands high flight profile for LOAL operation.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 8–127.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–127 SIGNAL NAME: P1M1 MSL INDIRECT FIRE HI
MEMORY LOCATION: 001714
MEMORY DATA BIT(S): 11 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands high flight profile for LOAL operation.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1108.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–128 SIGNAL NAME: P1M1 MSL RF CODE ACCEPT COMMAND
MEMORY LOCATION: 001300
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to accept RF code data from analog command lines 3 and 4. Commands ECSP to hook up analog commands 3 and 4 to selected missile.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–129.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–129 **SIGNAL NAME:**   P1M1 MSL RF CODE ACCEPT COMMAND
 MEMORY LOCATION: 001714
 MEMORY DATA BIT(S):   13   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Commands missile seeker to accept RF code data from analog command lines 3 and 4. Commands ECSP to hook up analog commands 3 and 4 to selected missile.
 REMARKS: From launcher through left outboard MRTU Type II to FCC.
 PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–130.
 FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–130 **SIGNAL NAME:**   P1M1 MSL LASER CODE ACCEPT COMMAND
 MEMORY LOCATION: 001300
 MEMORY DATA BIT(S):   14   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Commands laser code information received from RHE by launcher on coax A and B to be relayed to identified missile.
 REMARKS: From RHE to ECSP.
 PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–131.
 FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–131 **SIGNAL NAME:**   P1M1 MSL LASER CODE ACCEPT COMMAND
 MEMORY LOCATION: 001714
 MEMORY DATA BIT(S):   14   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Commands laser code information received from RHE by launcher on coax A and B to be relayed to identified missile.
 REMARKS: From launcher through left outboard MRTU Type II to FCC.
 PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1106.
 FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–132 **SIGNAL NAME:**   P1M1 MSL COAX B CONNECT
 MEMORY LOCATION: 001300
 MEMORY DATA BIT(S):   17   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Commands launcher to connect coax B to indicated missile.
 REMARKS: From RHE to ECSP.
 PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–133.
 FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–133 SIGNAL NAME: P1M1 MSL COAX B CONNECT
MEMORY LOCATION: 001714
MEMORY DATA BIT(S): 17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax B to indicated missile.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–134.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–134 SIGNAL NAME: P1M1 MSL COAX A CONNECT
MEMORY LOCATION: 001300
MEMORY DATA BIT(S): 18   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax A to indicated missile.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–135.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–135 SIGNAL NAME: P1M1 MSL COAX A CONNECT
MEMORY LOCATION: 001714
MEMORY DATA BIT(S): 18   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax A to indicated missile.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 2, 3, 6, or 7, replace RHE (TM 9–1427–475–20).
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–136 SIGNAL NAME: P1M1 MSL SKR LAUNCH PREPARE COMMAND (ACY)
P1M1 SKR LNCH CMD (ACZ)
MEMORY LOCATION: 001300
MEMORY DATA BIT(S): 19   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Prepares missile for free flight operation.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–137.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–137 SIGNAL NAME: P1M1 MSL SKR LAUNCH PREPARE COMMAND (ACY)
P1M1 SKR LNCH CMD (ACZ)
MEMORY LOCATION: 001714
MEMORY DATA BIT(S): 19   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Prepares missile for free flight operation.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–1126.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–138   SIGNAL NAME: P1M2 BIT PERFORMED
       MEMORY LOCATION: 001350
       MEMORY DATA BIT(S):   18   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Indicates to FCC that BIT has been performed.
       REMARKS: From RHE to FCC.
       PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–139.
       FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
              (TM 9–1427–475–20).

8–139   SIGNAL NAME: P1M2 BIT STATUS (ACY) P1M2 DISPLAY STAT (ACZ)
       MEMORY LOCATION: 001351
       MEMORY DATA BIT(S):   4–7   (HEX)
       CONDITION: If sixth digit displayed on HOD is 0 and fifth digit displayed
                     on HOD is 0=NO MSL
                     If sixth digit displayed on HOD is 0 and fifth digit displayed
                     on HOD is 1=SELECTED
                     If sixth digit displayed on HOD is 0 and fifth digit displayed
                     on HOD is 2=READY
                     If sixth digit displayed on HOD is 0 and fifth digit displayed
                     on HOD is 3=TRACKING
                     If sixth digit displayed on HOD is 0 and fifth digit displayed
                     on HOD is 4=BIT NO GO
                     If sixth digit displayed on HOD is 0 and fifth digit displayed
                     on HOD is 5=FAILED
                     If sixth digit displayed on HOD is 0 and fifth digit displayed
                     on HOD is 7=BATTERY NO GO
                     If sixth digit displayed on HOD is 1 and fifth digit displayed
                     on HOD is 0=UNLATCHED
                     If sixth digit displayed on HOD is 1 and fifth digit displayed
                     on HOD is 1=MRTU NO GO
                     If sixth digit displayed on HOD is 1 and fifth digit displayed
                     on HOD is 4=CODED
                     If sixth digit displayed on HOD is 1 and fifth digit displayed
                     on HOD is 7=CAGED
       SIGNAL FUNCTION: Provides missile status display for operator.
       REMARKS: From RHE to FCC for display.
       PASS: If CONDITION corresponds to selected message, go to failure symptom index and next failure
              symptom paragraph.
       FAIL: Location of fault: RHE, wiring from RHE to launchers, launcher. Troubleshoot wiring to isolate
              fault (TM 9–1427–475–20).

8–140   SIGNAL NAME: P1M2 UNLATCH INDICATE
       MEMORY LOCATION: 001414
       MEMORY DATA BIT(S):   17   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Indicates to RHE missile is unlatched.
       REMARKS: From launcher to RHE.
       PASS: If first digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 8–141.
       FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to RHE, RHE.
              Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–141 SIGNAL NAME: P1M2 UNLATCH INDICATE
  MEMORY LOCATION: 001672
  MEMORY DATA BIT(S): 17   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates to operator when a missile is unlatched.
  REMARKS: From launcher through left outboard MRTU Type II to FCC for display.
  PASS: If first digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 8–142.
  FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
       MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
       (TM 9–1427–475–20).

8–142 SIGNAL NAME: P1M2 UNLATCH INDICATE
  MEMORY LOCATION: 001715
  MEMORY DATA BIT(S): 17   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates to operator when a missile is unlatched.
  REMARKS: From FCC through left outboard MRTU Type II to launcher.
  PASS: If first digit displayed on HOD is 0, 1, 2, or 3, refer to failure symptom index and next failure
       symptom paragraph.
  FAIL: Location of fault: left outboard MRTU Type II, FCC. Troubleshoot left outboard MRTU Type II
       (TM 9–1230–476–20–2).

8–143 SIGNAL NAME: P1M2 UPPER LOWER DISPLAY STATUS (ACY) P1M2 PRIORITY IND (ACZ)   ∎
  MEMORY LOCATION: 001351
  MEMORY DATA BIT(S): 8   (BINARY)
  CONDITION: If the second digit displayed on HOD is 0, 2, 4, or 6=UPPER
              If the second digit displayed on HOD is 1, 3, 5, or 7=LOWER
  SIGNAL FUNCTION: Indicates to operator when a selected missile has been assigned to upper or
              lower channel.
  REMARKS: From RHE to FCC for display.
  PASS: If CONDITION corresponds to selected channel, go to paragraph 8–144.
  FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–144 SIGNAL NAME: P1M2 TYPE STATUS DISPLAY (ACY) P1M2 TYPE (ACZ)   ∎
  MEMORY LOCATION: 001351
  MEMORY DATA BIT(S): 9–11   (OCTAL)
  CONDITION: If the first digit displayed on HOD is 0=NONE
              If the first digit displayed on HOD is 1=TACTICAL LASER
              If the first digit displayed on HOD is 4=UNIDENTIFIED
              If the first digit displayed on HOD is 5=TRAINING LASER
  SIGNAL FUNCTION: Provides type of missile data for display to operator.
  REMARKS: From RHE to FCC for display.
  PASS: If CONDITION corresponds to installed type of missiles, go to paragraph 8–145.
  FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
       (TM 9–1427–475–20).

■ **8–145 SIGNAL NAME:** P1M2 TYPE (ACY) P1M2 MSL TYPE (ACZ)
MEMORY LOCATION: 001412
MEMORY DATA BIT(S): 7–8 (BINARY)
CONDITION: If fifth digit displayed on HOD is 0, and fourth digit displayed on HOD is 0, 1, 2, or 3=TRAINING
If fifth digit displayed on HOD is 1, and fourth digit displayed on HOD is 0, 1, 2, or 3=TACTICAL
If fifth digit displayed on HOD is 1, and fourth digit displayed on HOD is 4, 5, 6, or 7=NONE
SIGNAL FUNCTION: Indicates a tactical, training or no missile at location.
REMARKS: From ECSP to RHE.
PASS: If CONDITION corresponds to installed type of missiles, go to paragraph 8–146.
FAIL: Location of fault: replace left outboard launcher (TM 9–1425–475–30–2).

■ **8–146 SIGNAL NAME:** P1M2 TYPE (ACY) P1M2 MSL TYPE (ACZ)
MEMORY LOCATION: 001670
MEMORY DATA BIT(S): 7–8 (BINARY)
CONDITION: If fourth digit displayed on HOD is 0, 1, 2, or 3=TRAINING
If fifth digit displayed on HOD 1, 3, 5, or 7=TACTICAL
If fifth digit displayed on HOD 1, 3, 5, or 7 and fourth digit displayed on HOD is 0, 1, 2, or 3=NONE
SIGNAL FUNCTION: Indicates a tactical, training or no missile at location.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If CONDITION corresponds to installed type of missiles, refer to failure symptom index and next failure symptom paragraph.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–147 SIGNAL NAME: P1M2 MSL DEICE #1 CMD
MEMORY LOCATION: 001273
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Sends command to launcher ECSP to arm deicing squib.
REMARKS: From RHE to ECSP.
PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–148.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–148 SIGNAL NAME: P1M2 MSL DEICE #1 CMD
MEMORY LOCATION: 001707
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Sends command to launcher ECSP to arm deicing squib.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–179.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–149 **SIGNAL NAME:** P1M2 MSL SKR INPUT SLAVE (ACY) P1M2 MSL SKR SLV SEL (ACZ) ■

MEMORY LOCATION: 001273

MEMORY DATA BIT(S): 6–8 (OCTAL)

CONDITION: If the fifth digit is 0 or 4 and the fourth digit
is 0 or 2=ZERO EL ZERO AZ
If the fifth digit is 0 or 4 and the fourth digit
is 4 or 6=REMEL REMAZ
If the fifth digit is 1 or 5 and the fourth digit
is 0 or 2=AUTOEL AUTOAZ
If the fifth digit is 1 or 5 and the fourth digit
is 4 or 6=REMEL REMAZ +BIAS/2
If the fifth digit is 2 or 6 and the fourth digit
is 0 or 2=REMEL REMAZ +BIAS
If the fifth digit is 2 or 6 and the fourth digit
is 4 or 6=REMEL REMAZ – BIAS/2
If the fifth digit is 3 or 7 and the fourth digit
is 0 or 2=REMEL REMAZ – BIAS
If the fifth digit is 3 or 7 and the fourth digit
is 4 or 6=AUTOEL ZERO AZ

SIGNAL FUNCTION: Selects pitch and yaw slave commands to be applied to missile.

REMARKS: From RHE to ECSP.

PASS: If CONDITION corresponds to selected seeker input, go to paragraph 8–150.

FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–150 **SIGNAL NAME:** P1M2 MSL SKR INPUT SLAVE (ACY) P1M2 MSL SKR SLV SEL (ACZ) ■

MEMORY LOCATION: 001707

MEMORY DATA BIT(S): 6–8 (OCTAL)

CONDITION: If the fifth digit is 0 or 4 and the fourth digit
is 0 or 2=ZERO EL ZERO AZ
If the fifth digit is 0 or 4 and the fourth digit
is 4 or 6=REMEL REMAZ
If the fifth digit is 1 or 5 and the fourth digit
is 0 or 2=AUTOEL AUTOAZ
If the fifth digit is 1 or 5 and the fourth digit
is 4 or 6=REMEL REMAZ +BIAS/2
If the fifth digit is 2 or 6 and the fourth digit
is 0 or 2=REMEL REMAZ +BIAS
If the fifth digit is 2 or 6 and the fourth digit
is 4 or 6=REMEL REMAZ – BIAS/2
If the fifth digit is 3 or 7 and the fourth digit
is 0 or 2=REMEL REMAZ – BIAS
If the fifth digit is 3 or 7 and the fourth digit
is 4 or 6=AUTOEL ZERO AZ

SIGNAL FUNCTION: Selects pitch and yaw slave commands to be applied to missile.

REMARKS: From launcher through left outboard MRTU Type II to FCC.

PASS: If CONDITION corresponds to selected seeker input, refer to failure symptom index and next
failure symptom paragraph.

FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–151 SIGNAL NAME: P1M2 MSL AUTO PILOT POWER CONTROL (ACY)
                                    P1M2 AUTOPLT PWR (ACZ)
     MEMORY LOCATION: 001273
     MEMORY DATA BIT(S):   9   (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Controls application of auto pilot power to missile.
     REMARKS: From RHE to ECSP.
     PASS: If fourth digit on HOD is 2, 3, 6, or 7, go to paragraph 8–152.
     FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
            (TM 9–1427–475–20).

8–152 SIGNAL NAME: P1M2 MSL AUTO PILOT POWER CONTROL (ACY)
                                    P1M2 AUTOPLT PWR (ACZ)
     MEMORY LOCATION: 001707
     MEMORY DATA BIT(S):   9   (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Controls application of auto pilot power to missile.
     REMARKS: From launcher through left outboard MRTU Type II to FCC.
     PASS: If fourth digit on HOD is 2, 3, 6, or 7, go to paragraph 8–153.
     FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
            MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
            (TM 9–1427–475–20).

8–153 SIGNAL NAME: P1M2 MSL AUTO PILOT POWER (ACY) P1M2 A/P PWR OK (ACZ)
     MEMORY LOCATION: 001412
     MEMORY DATA BIT(S):   17   (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Specifies auto pilot power is above minimum value (+18 VDC).
     REMARKS: From ECSP to RHE.
     PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–154.
     FAIL: Location of fault: replace left outboard launcher (TM 9–1425–475–30–2).

8–154 SIGNAL NAME: P1M2 MSL AUTO PILOT POWER (ACY) P1M2 A/P PWR OK (ACZ)
     MEMORY LOCATION: 001670
     MEMORY DATA BIT(S):   17   (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Specifies auto pilot power is above minimum value (+18 VDC).
     REMARKS: From launcher through left outboard MRTU Type II to FCC.
     PASS: If first digit on HOD is 4, 5, 6, or 7, refer to failure symptom index and next failure symptom
             paragraph.
     FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
            MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
            (TM 9–1427–475–20).

8–155 SIGNAL NAME: P1M2 MSL TGT POLARITY CONTROL
   MEMORY LOCATION: 001273
   MEMORY DATA BIT(S): 10–11   (BINARY)
   CONDITION: If the fourth digit is 0, 2, 4, or 6 and the third digit is 0, 1, 2, 3=BLACK
           If the fourth digit is 0, 2, 4, or 6 and the third digit is 4, 5, 6, 7=AUTO
           If the fourth digit is 1, 3, 5, or 7 and the third digit is 0, 1, 2, 3=WHITE
   SIGNAL FUNCTION: Directs missile seeker to track a black target on a white background, a white
           target on a black background or automatic contrast.
   REMARKS: From RHE to ECSP.
   PASS: If third digit on HOD corresponds to proper polarity go to paragraph 8–170.
   FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
       (TM 9–1427–475–20).

8–156 SIGNAL NAME: P1M2 MSL TGT POLARITY CONTROL
   MEMORY LOCATION: 001707
   MEMORY DATA BIT(S): 10–11   (BINARY)
   CONDITION: If the fourth digit is 0, 2, 4, or 6 and the third digit is 0, 1, 2, 3=BLACK
           If the fourth digit is 0, 2, 4, or 6 and the third digit is 4, 5, 6, 7=AUTO
           If the fourth digit is 1, 3, 5, or 7 and the third digit is 0, 1, 2, 3=WHITE
   SIGNAL FUNCTION: Directs missile seeker to track a black target on a white background, a white
           target on a black background or automatic contrast.
   REMARKS: From launcher through left outboard MRTU Type II to FCC.
   PASS: If third digit on HOD corresponds to proper polarity, refer to failure symptom index and next
       failure symptom paragraph.
   FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
       MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
       (TM 9–1427–475–20).

8–157 SIGNAL NAME: P1M2 MSL BIT CMD
   MEMORY LOCATION: 001273
   MEMORY DATA BIT(S): 12   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Controls launcher BIT.
   REMARKS: From RHE to ECSP.
   PASS: If third digit on HOD is 0, 1, 4, or 5, go to paragraph 8–158.
   FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
       (TM 9–1427–475–20).

8–158 SIGNAL NAME: P1M2 MSL BIT CMD
   MEMORY LOCATION: 001707
   MEMORY DATA BIT(S): 12   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Controls launcher BIT.
   REMARKS: From launcher through left outboard MRTU Type II to FCC.
   PASS: If third digit on HOD is 0, 1, 4, or 5, go to paragraph 8–159.
   FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
       MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
       (TM 9–1427–475–20).

8–159 **SIGNAL NAME:** P1M2 MSL SKR POWER CONTROL (ACY) P1M2 SKR PWR OK (ACZ)
MEMORY LOCATION: 001273
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of seeker power.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–160.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–160 **SIGNAL NAME:** P1M2 MSL SKR POWER CONTROL (ACY) P1M2 SKR PWR OK (ACZ)
MEMORY LOCATION: 001707
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of seeker power.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–161.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–161 **SIGNAL NAME:** P1M2 MSL SKR POWER
MEMORY LOCATION: 001412
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of seeker power (+28 VDC).
REMARKS: From ECSP to RHE.
PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 8–162.
FAIL: Location of fault: replace left outboard launcher (TM 9–1425–475–30–2).

8–162 **SIGNAL NAME:** P1M2 MSL SEEKER POWER (ACY) P1M2 SKR PWR OK (ACZ)
MEMORY LOCATION: 001670
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of seeker power (+28 VDC).
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 8–165.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–163 **SIGNAL NAME:** P1M2 CCM ACTIVATE CMD
MEMORY LOCATION: 001273
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to enter CCM mode.
REMARKS: From RHE to ECSP.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–164.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–164 SIGNAL NAME: P1M2 CCM ACTIVATE CMD
MEMORY LOCATION: 001707
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to enter CCM mode.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1123.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–165 SIGNAL NAME: P1M2 MSL SCAN SEARCH CMD
MEMORY LOCATION: 001273
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter target acquisition mode and to enter lock–on
when target is acquired.
REMARKS: From RHE to ECSP.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–166.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–166 SIGNAL NAME: P1M2 MSL SCAN SEARCH CMD
MEMORY LOCATION: 001707
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter target acquisition mode and to enter lock–on
when target is acquired.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–169.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–167 SIGNAL NAME: P1M2 MSL SEEKER SLAVE CMD
MEMORY LOCATION: 001273
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter slave mode.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–168.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–168   **SIGNAL NAME:**   P1M2 MSL SEEKER SLAVE CMD
      MEMORY LOCATION: 001707
      MEMORY DATA BIT(S):   17   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Commands laser seeker to enter slave mode.
      REMARKS: From launcher through left outboard MRTU Type II to FCC.
      PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–175.
      FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
          MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–169   **SIGNAL NAME:**   P1M2 MSL STARE TRACK CMD
      MEMORY LOCATION: 001273
      MEMORY DATA BIT(S):   18   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Commands laser seeker to enter stare mode. If proper laser code is detected
               in seeker FOV, seeker will enter track mode.
      REMARKS: From RHE to ECSP.
      PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–170.
      FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–170   **SIGNAL NAME:**   P1M2 MSL STARE TRACK CMD
      MEMORY LOCATION: 001707
      MEMORY DATA BIT(S):   18   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Commands laser seeker to enter stare mode. If proper laser code is detected
               in seeker FOV, seeker will enter track mode.
      REMARKS: From launcher through left outboard MRTU Type II to FCC.
      PASS: If first digit on HOD is 2, 3, 6, or 7, refer to failure symptom index and next failure symptom
          paragraph.
      FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
          MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–171   **SIGNAL NAME:**   P1M2 MSL CORRELATE
      MEMORY LOCATION: 001412
      MEMORY DATA BIT(S):   16   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates laser has detected a laser beam whose laser code agrees with
               internal stored code.
      REMARKS: From ECSP to RHE.
      PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–172.
      FAIL: Location of fault: replace left outboard launcher (TM 9–1425–475–30–2).

8–172 **SIGNAL NAME:**   P1M2 MSL CORRELATE
     MEMORY LOCATION: 001670
     MEMORY DATA BIT(S):   16   (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Indicates laser has detected a laser beam whose laser code agrees with
               internal stored code.
     REMARKS: From launcher through left outboard MRTU Type II to FCC.
     PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–173.
     FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
          MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–173 **SIGNAL NAME:**   P1M2 MSL TRACK
     MEMORY LOCATION: 001412
     MEMORY DATA BIT(S):   15   (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Indicates seeker has entered track mode. The laser seeker can enter track
               mode whenever a proper laser beam is detected in seeker FOV for any mode
               except cage.
     REMARKS: From ECSP to RHE.
     PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–174.
     FAIL: Location of fault: replace left outboard launcher (TM 9–1425–475–30–2).

8–174 **SIGNAL NAME:**   P1M2 MSL TRACK
     MEMORY LOCATION: 001670
     MEMORY DATA BIT(S):   15   (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Indicates seeker has entered track mode. The laser seeker can enter track
               mode whenever a proper laser beam is detected in seeker FOV for any mode
               except cage.
     REMARKS: From launcher through left outboard MRTU Type II to FCC.
     PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1153.
     FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
          MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–175 **SIGNAL NAME:**   P1M2 MSL SKR CAGE CMD
     MEMORY LOCATION: 001273
     MEMORY DATA BIT(S):   19   (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Commands missile to enter cage mode.
     REMARKS: From RHE to ECSP.
     PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–176.
     FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–176 SIGNAL NAME: P1M2 MSL SKR CAGE CMD
MEMORY LOCATION: 001707
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile to enter cage mode.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–177.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–177 SIGNAL NAME: P1M2 MSL SKR CAGE
MEMORY LOCATION: 001412
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker is in cage mode. The seeker cannot track in cage position.
REMARKS: From ECSP to RHE.
PASS: If third digit on HOD is 0, 2, 4, or 6, go to paragraph 8–1781
FAIL: Location of fault: replace left outboard launcher (TM 9–1425–475–30–2).

8–178 SIGNAL NAME: P1M2 MSL SKR CAGE
MEMORY LOCATION: 001670
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker is in cage mode. The seeker cannot track in cage position.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If third digit on HOD is 0, 2, 4, or 6, go to paragraph 8–182.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–179 SIGNAL NAME: P1M2 MSL DEICE #2 CMD
MEMORY LOCATION: 001277
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Issues deicing squib fire command to selected missile.
REMARKS: From RHE to ECSP.
PASS: If sixth digit on HOD is 1, go to paragraph 8–180.
FAIL: Location of fault: CPG missile control panel, wiring from CPG missile control panel to CPG
MRTU Type III, CPG MRTU Type III, RHE, wiring from RHE to ECSP, ECSP. Troubleshoot
wiring to isolate fault (TM 9–1427–475–20).

8–180 SIGNAL NAME: P1M2 MSL DEICE #2 CMD
  MEMORY LOCATION: 001713
  MEMORY DATA BIT(S): 4 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Issues deicing squib fire command to selected missile.
  REMARKS: From launcher through left outboard MRTU Type II to FCC.
  PASS: If sixth digit on HOD is 1, go to paragraph 8–1118.
  FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
      MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
      (TM 9–1427–475–20).

8–181 SIGNAL NAME: P1M2 MSL BIT CONTROL
  MEMORY LOCATION: 001277
  MEMORY DATA BIT(S): 6–9 (HEX)
  CONDITION: (None)
  SIGNAL FUNCTION: Commands BIT on autopilot.
  REMARKS: From RHE to ECSP.
  PASS: If fifth digit displayed on HOD is 0, 1, or 2, and the fourth digit displayed on HOD is 2, 3, 4, 5,
      6, or 7 go to paragraph 8–182.
  FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
      (TM 9–1427–475–20).

8–182 SIGNAL NAME: P1M2 MSL BIT CONTROL
  MEMORY LOCATION: 001713
  MEMORY DATA BIT(S): 6–9 (HEX)
  CONDITION: (None)
  SIGNAL FUNCTION: Commands BIT on autopilot.
  REMARKS: From launcher through left outboard MRTU Type II to FCC.
  PASS: Location of fault if fifth digit displayed on HOD is 0, 1, or 2, and the fourth digit displayed on
      HOD is 2, 3, 4, 5, 6, or 7: Replace left outboard launcher missile 2 (TM 9–1427–475–20).
  FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
      MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
      (TM 9–1427–475–20).

8–183 SIGNAL NAME: P1M2 MSL INDIRECT FIRE LO
  MEMORY LOCATION: 001277
  MEMORY DATA BIT(S): 10 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Commands low flight profile for LOAL operation.
  REMARKS: From RHE to ECSP.
  PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–184.
  FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
      (TM 9–1427–475–20).

8–184 **SIGNAL NAME:** P1M2 MSL INDIRECT FIRE LO
MEMORY LOCATION: 001713
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands low flight profile for LOAL operation.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1108.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–185 **SIGNAL NAME:** P1M2 MSL INDIRECT FIRE HI
MEMORY LOCATION: 001277
MEMORY DATA BIT(S): 11 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands high flight profile for LOAL operation.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 8–186.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–186 **SIGNAL NAME:** P1M2 MSL INDIRECT FIRE HI
MEMORY LOCATION: 001713
MEMORY DATA BIT(S): 11 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands high flight profile for LOAL operation.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1108.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–187 **SIGNAL NAME:** P1M2 MSL RF CODE ACCEPT COMMAND
MEMORY LOCATION: 001277
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to accept radio frequency (RF) code data from analog command lines 3 and 4. Commands ECSP to hook up analog commands 3 and 4 to selected missile.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–188.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–188 **SIGNAL NAME:** P1M2 MSL RF CODE ACCEPT COMMAND
MEMORY LOCATION: 001713
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to accept RF code data from analog command lines 3 and 4. Commands ECSP to hook up analog commands 3 and 4 to selected missile.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–189.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–189 **SIGNAL NAME:** P1M2 MSL LASER CODE ACCEPT COMMAND
MEMORY LOCATION: 001277
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser code information received from RHE by launcher on coax A and B to be relayed to identified missile.
REMARKS: From RHE to ECSP.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–190.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–190 **SIGNAL NAME:** P1M2 MSL LASER CODE ACCEPT COMMAND
MEMORY LOCATION: 001713
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser code information received from RHE by launcher on coax A and B to be relayed to identified missile.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1106.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–191 **SIGNAL NAME:** P1M2 MSL COAX B CONNECT
MEMORY LOCATION: 001277
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax B to indicated missile.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–192.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–192 **SIGNAL NAME:** P1M2 MSL COAX B CONNECT
MEMORY LOCATION: 001713
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax B to indicated missile.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–193.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–193 **SIGNAL NAME:** P1M2 MSL COAX A CONNECT
MEMORY LOCATION: 001277
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax A to indicated missile.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–194.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–194 **SIGNAL NAME:** P1M2 MSL COAX A CONNECT
MEMORY LOCATION: 001713
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax A to indicated missile.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1106.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–195 **SIGNAL NAME:** P1M2 MSL SKR LAUNCH PREPARE COMMAND (ACY)
P1M2 SKR LNCH CMD (ACZ)
MEMORY LOCATION: 001277
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Prepares missile for free flight operation.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–196.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–196 **SIGNAL NAME:** P1M2 MSL SKR LAUNCH PREPARE COMMAND (ACY)
P1M2 SKR LNCH CMD (ACZ)
MEMORY LOCATION: 001713
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Prepares missile for free flight operation.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–1126.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–197 SIGNAL NAME: P1M3 BIT PERFORMED
MEMORY LOCATION: 001350
MEMORY DATA BIT(S):   17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to FCC that BIT has been performed.
REMARKS: From RHE to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–198.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–198 SIGNAL NAME: P1M3 BIT STATUS (ACY) P1M3 DISPLAY STAT (ACZ)
MEMORY LOCATION: 001352
MEMORY DATA BIT(S):   12–15   (HEX)
CONDITION: If third digit displayed on HOD is 0 and second digit displayed
on HOD is 0=NO MSL
If third digit displayed on HOD is 0 or 4 and second digit displayed
on HOD is 2 or 3=SELECTED
If third digit displayed on HOD is 0 or 4 and second digit displayed
on HOD is 4 or 5=READY
If third digit displayed on HOD is 0 or 4 and second digit displayed
on HOD is 6 or 7=TRACKING
If third digit displayed on HOD is 3 or 7 and second digit displayed
on HOD is 0=CODED
If third digit displayed on HOD is 3 or 7 and second digit displayed
on HOD is 6=CAGED
If third digit displayed on HOD is 5 or 1 and second digit displayed
on HOD is 0=BIT NO GO
If third digit displayed on HOD is 5 or 1 and second digit displayed
on HOD is 2=FAILED
If third digit displayed on HOD is 5 or 1 and second digit displayed
on HOD is 6=BATTERY NO GO
If third digit displayed on HOD is 6 or 2 and second digit displayed
on HOD is 0=UNLATCHED
If third digit displayed on HOD is 6 or 2 and second digit displayed
on HOD is 2=MRTU NO GO
If third digit displayed on HOD is 6 or 2 and second digit displayed
on HOD is 4=RAIL NO GO
SIGNAL FUNCTION: Provides missile status display for operator.
REMARKS: From RHE to FCC for display.
PASS: If CONDITION corresponds to selected message, go to failure symptom index and next failure
symptom paragraph.
FAIL: Location of fault: RHE, wiring from RHE to left outboard launcher, left outboard launcher.
Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–199 SIGNAL NAME: P1M3 UNLATCH INDICATE
MEMORY LOCATION: 001414
MEMORY DATA BIT(S):   16   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to RHE missile is unlatched.
REMARKS: From launcher to RHE.
PASS: If second digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 8–200.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to RHE, RHE.
Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–200 SIGNAL NAME: P1M3 UNLATCH INDICATE
MEMORY LOCATION: 001672
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to operator when a missile is unlatched.
REMARKS: From launcher through left outboard MRTU Type II to FCC for display.
PASS: If second digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 8–201.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–201 SIGNAL NAME: P1M3 UNLATCH INDICATE
MEMORY LOCATION: 001715
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to operator when a missile is unlatched.
REMARKS: From FCC through left outboard MRTU Type II to launcher.
PASS: If second digit on displayed on HOD is 0, 2, 4, or 6, refer to failure symptom index and next
failure symptom.
FAIL: Location of fault: left outboard MRTU Type II, FCC. Troubleshoot FCC (TM 9–1230–476–20–2).

8–202 SIGNAL NAME: P1M3 UPPER LOWER DISPLAY STATUS (ACY) P1M3 PRIORITY IND (ACZ)
MEMORY LOCATION: 001352
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: If the second digit displayed on HOD is 0, 2, 4, or 6=UPPER
If the second digit displayed on HOD is 1, 3, 5, or 7=LOWER
SIGNAL FUNCTION: Indicates to operator when a selected missile has been assigned to upper or
lower channel.
REMARKS: From RHE to FCC for display.
PASS: If CONDITION corresponds to selected channel, go to paragraph 8–203.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–203 SIGNAL NAME: P1M3 TYPE STATUS DISPLAY (ACY) P1M3 TYPE (ACZ)
MEMORY LOCATION: 001352
MEMORY DATA BIT(S): 17–19 (OCTAL)
CONDITION: If the first digit displayed on HOD is 0=NONE
If the first digit displayed on HOD is 1=TACTICAL LASER
If the first digit displayed on HOD is 4=UNIDENTIFIED
If the first digit displayed on HOD is 5=TRAINING LASER
SIGNAL FUNCTION: Provides type of missile data for display to operator.
REMARKS: From RHE to FCC for display.
PASS: If CONDITION on HOD corresponds to installed type of missiles, go to paragraph 8–204.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

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8–204 **SIGNAL NAME:** P1M3 TYPE (ACY) P1M3 MSL TYPE (ACZ)
MEMORY LOCATION: 001411
MEMORY DATA BIT(S): 7–8 (BINARY)
CONDITION: If fifth digit displayed on HOD is 0, and fourth digit displayed on HOD is 0, 1, 2, or 3=TRAINING
If fifth digit displayed on HOD is 1, and fourth digit displayed on HOD is 0, 1, 2, or 3=TACTICAL
If fifth digit displayed on HOD is 1, and fourth digit displayed on HOD is 4, 5, 6, or 7=NONE
SIGNAL FUNCTION: Indicates a tactical, training or no missile at location.
REMARKS: From ECSP to RHE.
PASS: If CONDITION corresponds to installed type of missiles, go to paragraph 8–205.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

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8–205 **SIGNAL NAME:** P1M3 TYPE (ACY) P1M3 MSL TYPE (ACZ)
MEMORY LOCATION: 001667
MEMORY DATA BIT(S): 7–8 (BINARY)
CONDITION: If fourth digit displayed on HOD is 0, 1, 2, or 3=TRAINING
If fifth digit displayed on HOD 1, 3, 5, or 7=TACTICAL
If fifth digit displayed on HOD 1, 3, 5, or 7 and fourth digit displayed on HOD is 0, 1, 2, or 3=NONE
SIGNAL FUNCTION: Indicates a tactical, training or no missile at location.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If CONDITION corresponds to installed type of missiles, refer to failure symptom index and next failure symptom paragraph.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–206 **SIGNAL NAME:** P1M3 MSL DEICE #1 CMD
MEMORY LOCATION: 001272
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Sends command to launcher ECSP to arm deicing squib.
REMARKS: From RHE to ECSP.
PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–207.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–207 **SIGNAL NAME:** P1M3 MSL DEICE #1 CMD
MEMORY LOCATION: 001706
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Sends command to launcher ECSP to arm deicing squib.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–238.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–208   SIGNAL NAME: P1M3 MSL SKR INPUT SLAVE (ACY) P1M3 MSL SKR SLV SEL (ACZ)
MEMORY LOCATION: 001272
MEMORY DATA BIT(S):   6–8   (OCTAL)
CONDITION: If the fifth digit is 0 or 4 and the fourth digit
is 0 or 2=ZERO EL ZERO AZ
If the fifth digit is 0 or 4 and the fourth digit
is 4 or 6=REMEL REMAZ
If the fifth digit is 1 or 5 and the fourth digit
is 0 or 2=AUTOEL AUTOAZ
If the fifth digit is 1 or 5 and the fourth digit
is 4 or 6=REMEL REMAZ +BIAS/2
If the fifth digit is 2 or 6 and the fourth digit
is 0 or 2=REMEL REMAZ +BIAS
If the fifth digit is 2 or 6 and the fourth digit
is 4 or 6=REMEL REMAZ – BIAS/2
If the fifth digit is 3 or 7 and the fourth digit
is 0 or 2=REMEL REMAZ – BIAS
If the fifth digit is 3 or 7 and the fourth digit
is 4 or 6=AUTOEL ZERO AZ
SIGNAL FUNCTION: Selects pitch and yaw slave commands to be applied to missile.
REMARKS: From RHE to ECSP.
PASS: If CONDITION corresponds to selected seeker input, go to paragraph 8–209.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–209   SIGNAL NAME: P1M3 MSL SKR INPUT SLAVE (ACY) P1M3 MSL SKR SLV SEL (ACZ)
MEMORY LOCATION: 001706
MEMORY DATA BIT(S):   6–8   (OCTAL)
CONDITION: If the fifth digit is 0 or 4 and the fourth digit
is 0 or 2=ZERO EL ZERO AZ
If the fifth digit is 0 or 4 and the fourth digit
is 4 or 6=REMEL REMAZ
If the fifth digit is 1 or 5 and the fourth digit
is 0 or 2=AUTOEL AUTOAZ
If the fifth digit is 1 or 5 and the fourth digit
is 4 or 6=REMEL REMAZ +BIAS/2
If the fifth digit is 2 or 6 and the fourth digit
is 0 or 2=REMEL REMAZ +BIAS
If the fifth digit is 2 or 6 and the fourth digit
is 4 or 6=REMEL REMAZ – BIAS/2
If the fifth digit is 3 or 7 and the fourth digit
is 0or 2=REMEL REMAZ – BIAS
If the fifth digit is 3 or 7 and the fourth digit
is 4 or 6=AUTOEL ZERO AZ
SIGNAL FUNCTION: Selects pitch and yaw slave commands to be applied to missile.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If CONDITION corresponds to selected seeker input, refer to failure symptom index and next
failure symptom paragraph.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–210 SIGNAL NAME: P1M3 MSL AUTO PILOT POWER CONTROL (ACY)
P1M3 AUTOPLT PWR (ACZ)
MEMORY LOCATION: 001272
MEMORY DATA BIT(S):   9   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of auto pilot power to missile.
REMARKS: From RHE to ECSP.
PASS: If fourth digit on HOD is 2, 3, 6, or 7, go to paragraph 8–211.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–211 SIGNAL NAME: P1M3 MSL AUTO PILOT POWER CONTROL (ACY)
P1M3 AUTOPLT PWR (ACZ)
MEMORY LOCATION: 001706
MEMORY DATA BIT(S):   9   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of auto pilot power to missile.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If fourth digit on HOD is 2, 3, 6, or 7, go to paragraph 8–212.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–212 SIGNAL NAME: P1M3 MSL AUTO PILOT POWER (ACY) P1M3 A/P PWR OK (ACZ)
MEMORY LOCATION: 001411
MEMORY DATA BIT(S):   17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Specifies auto pilot power is above minimum value (+18 VDC).
REMARKS: From ECSP to RHE.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–213.
FAIL: Location of fault: replace left outboard launcher (TM 9–1425–475–30–2).

8–213 SIGNAL NAME: P1M3 MSL AUTO PILOT POWER (ACY) P1M3 A/P PWR OK (ACZ)
MEMORY LOCATION: 001667
MEMORY DATA BIT(S):   17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Specifies auto pilot power is above minimum value (+18 VDC).
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, refer to failure symptom index and next failure symptom
paragraph.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–214 SIGNAL NAME: P1M3 MSL TGT POLARITY CONTROL
MEMORY LOCATION: 001272
MEMORY DATA BIT(S): 10–11 (BINARY)
CONDITION: If the fourth digit is 0, 2, 4, or 6 and the third digit is 0, 1, 2, 3=BLACK
If the fourth digit is 0, 2, 4, or 6 and the third digit is 4, 5, 6, 7=AUTO
If the fourth digit is 1, 3, 5, or 7 and the third digit is 0, 1, 2, 3=WHITE
SIGNAL FUNCTION: Directs missile seeker to track a black target on a white background, a white target on a black background or automatic contrast.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD corresponds to proper polarity, go to paragraph 8–215.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–215 SIGNAL NAME: P1M3 MSL TGT POLARITY CONTROL
MEMORY LOCATION: 001706
MEMORY DATA BIT(S): 10–11 (BINARY)
CONDITION: If the fourth digit is 0, 2, 4, or 6 and the third digit is 0, 1, 2, 3=BLACK
If the fourth digit is 0, 2, 4, or 6 and the third digit is 4, 5, 6, 7=AUTO
If the fourth digit is 1, 3, 5, or 7 and the third digit is 0, 1, 2, 3=WHITE
SIGNAL FUNCTION: Directs missile seeker to track a black target on a white background, a white target on a black background or automatic contrast.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If third digit on HOD corresponds to proper polarity, refer to failure symptom index and next failure symptom paragraph.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–216 SIGNAL NAME: P1M3 MSL BIT CMD
MEMORY LOCATION: 001272
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls launcher BIT.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 0, 1, 4, or 5, go to paragraph 8–217.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–217 SIGNAL NAME: P1M3 MSL BIT CMD
MEMORY LOCATION: 001706
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls launcher BIT.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If third digit on HOD is 0, 1, 4, or 5, go to paragraph 8–218.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–218 SIGNAL NAME: P1M3 MSL SKR POWER CONTROL (ACY) P1M3 SKR PWR OK (ACZ) ∎
MEMORY LOCATION: 001272
MEMORY DATA BIT(S):   13   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of seeker power.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–219.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–219 SIGNAL NAME: P1M3 MSL SKR POWER CONTROL (ACY) P1M3 SKR PWR OK (ACZ) ∎
MEMORY LOCATION: 001706
MEMORY DATA BIT(S):   13   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of seeker power.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–220.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–220 SIGNAL NAME: P1M3 MSL SKR POWER
MEMORY LOCATION: 001411
MEMORY DATA BIT(S):   12   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of seeker power (+28 VDC).
REMARKS: From ECSP to RHE.
PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 8–221.
FAIL: Location of fault: replace left outboard launcher (TM 9–1425–475–30–2).

8–221 SIGNAL NAME: P1M3 MSL SEEKER POWER (ACY) P1M3 SKR PWR OK (ACZ) ∎
MEMORY LOCATION: 001667
MEMORY DATA BIT(S):   12   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of seeker power (+28 VDC).
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 8–224.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–222 SIGNAL NAME: P1M3 CCM ACTIVATE CMD
MEMORY LOCATION: 001272
MEMORY DATA BIT(S):   14   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to enter CCM mode.
REMARKS: From RHE to ECSP.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–223.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–223   **SIGNAL NAME:**   P1M3 CCM ACTIVATE CMD
       MEMORY LOCATION: 001706
       MEMORY DATA BIT(S):   14   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Commands missile seeker to enter CCM mode.
       REMARKS: From launcher through left outboard MRTU Type II to FCC.
       PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1123.
       FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
       MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
       (TM 9–1427–475–20).

8–224   **SIGNAL NAME:**   P1M3 MSL SCAN SEARCH CMD
       MEMORY LOCATION: 001272
       MEMORY DATA BIT(S):   16   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Commands laser seeker to enter target acquisition mode and to enter lock–on
               when target is acquired.
       REMARKS: From RHE to ECSP.
       PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–225.
       FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
       (TM 9–1427–475–20).

8–225   **SIGNAL NAME:**   P1M3 MSL SCAN SEARCH CMD
       MEMORY LOCATION: 001706
       MEMORY DATA BIT(S):   16   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Commands laser seeker to enter target acquisition mode and to enter lock–on
               when target is acquired.
       REMARKS: From launcher through left outboard MRTU Type II to FCC.
       PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–228.
       FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
       MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
       (TM 9–1427–475–20).

8–226   **SIGNAL NAME:**   P1M3 MSL SEEKER SLAVE CMD
       MEMORY LOCATION: 001272
       MEMORY DATA BIT(S):   17   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Commands laser seeker to enter slave mode.
       REMARKS: From RHE to ECSP.
       PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–227.
       FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
       (TM 9–1427–475–20).

8–227 SIGNAL NAME: P1M3 MSL SEEKER SLAVE CMD
MEMORY LOCATION: 001706
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter slave mode.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–234.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20)

8–228 SIGNAL NAME: P1M3 MSL STARE TRACK CMD
MEMORY LOCATION: 001272
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter stare mode. If proper laser code is detected
in seeker FOV, seeker will enter track mode.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–229.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–229 SIGNAL NAME: P1M3 MSL STARE TRACK CMD
MEMORY LOCATION: 001706
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter stare mode. If proper laser code is detected
in seeker FOV, seeker will enter track mode.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 2, 3, 6, or 7, refer to failure symptom index and next failure symptom
paragraph.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–230 SIGNAL NAME: P1M3 MSL CORRELATE
MEMORY LOCATION: 001411
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates laser has detected a laser beam whose laser code agrees with
internal stored code.
REMARKS: From ECSP to RHE.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–231.
FAIL: Location of fault: replace left outboard launcher (TM 9–1425–475–30–2).

8–231 **SIGNAL NAME:** P1M3 MSL CORRELATE
MEMORY LOCATION: 001667
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates laser has detected a laser beam whose laser code agrees with internal stored code.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–232.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–232 **SIGNAL NAME:** P1M3 MSL TRACK
MEMORY LOCATION: 001411
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker has entered track mode. The laser seeker can enter track mode whenever a proper laser beam is detected in seeker FOV for any mode except cage.
REMARKS: From ECSP to RHE.
PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–233.
FAIL: Location of fault: replace left outboard launcher (TM 9–1425–475–30–2).

8–233 **SIGNAL NAME:** P1M3 MSL TRACK
MEMORY LOCATION: 001667
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker has entered track mode. The laser seeker can enter track mode whenever a proper laser beam is detected in seeker FOV for any mode except cage.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1153.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–234 **SIGNAL NAME:** P1M3 MSL SKR CAGE CMD
MEMORY LOCATION: 001272
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile to enter cage mode.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–235.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–235 SIGNAL NAME: P1M3 MSL SKR CAGE CMD
MEMORY LOCATION: 001706
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile to enter cage mode.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–236.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–236 SIGNAL NAME: P1M3 MSL SKR CAGE
MEMORY LOCATION: 001411
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker is in cage mode. The seeker cannot track in cage position.
REMARKS: From ECSP to RHE.
PASS: If third digit on HOD is 0, 2, 4, or 6, go to paragraph 8–237.
FAIL: Location of fault: replace left outboard launcher (TM 9–1425–475–30–2).

8–237 SIGNAL NAME: P1M3 MSL SKR CAGE
MEMORY LOCATION: 001667
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker is in cage mode. The seeker cannot track in cage position.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If third digit on HOD is 0, 2, 4, or 6, go to paragraph 8–240.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–238 SIGNAL NAME: P1M3 MSL DEICE #2 CMD
MEMORY LOCATION: 001276
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Issues deicing squib fire command to selected missile.
REMARKS: From RHE to ECSP.
PASS: If sixth digit on HOD is 1, go to paragraph 8–241.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–239 **SIGNAL NAME:** P1M3 MSL DEICE #2 CMD
MEMORY LOCATION: 001712
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Issues deicing squib fire command to selected missile.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If sixth digit on HOD is 1, go to paragraph 8–1118.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–240 **SIGNAL NAME:** P1M3 MSL BIT CONTROL
MEMORY LOCATION: 001276
MEMORY DATA BIT(S): 6–9 (HEX)
CONDITION: (None)
SIGNAL FUNCTION: Commands BIT on autopilot.
REMARKS: From RHE to ECSP.
PASS: If fifth digit displayed on HOD is 0, 1, or 2, and the fourth digit displayed on HOD is 2, 3, 4, 5,
6, or 7, go to paragraph 8–241.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–241 **SIGNAL NAME:** P1M3 MSL BIT CONTROL
MEMORY LOCATION: 001712
MEMORY DATA BIT(S): 6–9 (HEX)
CONDITION: (None)
SIGNAL FUNCTION: Commands BIT on autopilot.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: Location of fault if fifth digit displayed on HOD is 0, 1, or 2, and the fourth digit displayed on
HOD is 2, 3, 4, 5, 6, or 7: Replace left outboard launcher missile 3 (TM 9–1427–475–20).
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–242 **SIGNAL NAME:** P1M3 MSL INDIRECT FIRE LO
MEMORY LOCATION: 001276
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands low flight profile for LOAL operation.
REMARKS: From RHE to ECSP.
PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–243.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–243 SIGNAL NAME: P1M3 MSL INDIRECT FIRE LO
MEMORY LOCATION: 001712
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands low flight profile for LOAL operation.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1108.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–244 SIGNAL NAME: P1M3 MSL INDIRECT FIRE HI
MEMORY LOCATION: 001276
MEMORY DATA BIT(S): 11 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands high flight profile for LOAL operation.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 8–245.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–245 SIGNAL NAME: P1M3 MSL INDIRECT FIRE HI
MEMORY LOCATION: 001712
MEMORY DATA BIT(S): 11 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands high flight profile for LOAL operation.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1108.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–246 SIGNAL NAME: P1M3 MSL RF CODE ACCEPT COMMAND
MEMORY LOCATION: 001276
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to accept RF code data from analog command lines 3 and 4. Commands ECSP to hook up analog commands 3 and 4 to selected missile.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–247.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–247   **SIGNAL NAME:**   P1M3 MSL RF CODE ACCEPT COMMAND
      MEMORY LOCATION: 001712
      MEMORY DATA BIT(S):   13   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Commands missile seeker to accept RF code data from analog command lines 3 and 4. Commands ECSP to hook up analog commands 3 and 4 to selected missile.
      REMARKS: From launcher through left outboard MRTU Type II to FCC.
      PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–248.
      FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–248   **SIGNAL NAME:**   P1M3 MSL LASER CODE ACCEPT COMMAND
      MEMORY LOCATION: 001276
      MEMORY DATA BIT(S):   14   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Commands laser code information received from RHE by launcher on coax A and B to be relayed to identified missile.
      REMARKS: From RHE to ECSP.
      PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–249.
      FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–249   **SIGNAL NAME:**   P1M3 MSL LASER CODE ACCEPT COMMAND
      MEMORY LOCATION: 001712
      MEMORY DATA BIT(S):   14   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Commands laser code information received from RHE by launcher on coax A and B to be relayed to identified missile.
      REMARKS: From launcher through left outboard MRTU Type II to FCC.
      PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1106.
      FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–250   **SIGNAL NAME:**   P1M3 MSL COAX B CONNECT
      MEMORY LOCATION: 001276
      MEMORY DATA BIT(S):   17   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Commands launcher to connect coax B to indicated missile.
      REMARKS: From RHE to ECSP.
      PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–251.
      FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–251 SIGNAL NAME: P1M3 MSL COAX B CONNECT
 MEMORY LOCATION: 001712
 MEMORY DATA BIT(S):   17   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Commands launcher to connect coax B to indicated missile.
 REMARKS: From launcher through left outboard MRTU Type II to FCC.
 PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–252.
 FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–252 SIGNAL NAME: P1M3 MSL COAX A CONNECT
 MEMORY LOCATION: 001276
 MEMORY DATA BIT(S):   18   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Commands launcher to connect coax A to indicated missile.
 REMARKS: From RHE to ECSP.
 PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–253.
 FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–253 SIGNAL NAME: P1M3 MSL COAX A CONNECT
 MEMORY LOCATION: 001712
 MEMORY DATA BIT(S):   18   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Commands launcher to connect coax A to indicated missile.
 REMARKS: From launcher through left outboard MRTU Type II to FCC.
 PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1106.
 FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–254 SIGNAL NAME: P1M3 MSL SKR LAUNCH PREPARE COMMAND (ACY)
             P1M3 SKR LNCH CMD (ACZ)
 MEMORY LOCATION: 001276
 MEMORY DATA BIT(S):   19   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Prepares missile for free flight operation.
 REMARKS: From RHE to ECSP.
 PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–255.
 FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–255 SIGNAL NAME: P1M3 MSL SKR LAUNCH PREPARE COMMAND (ACY)
             P1M3 SKR LNCH CMD (ACZ)
 MEMORY LOCATION: 001712
 MEMORY DATA BIT(S):   19   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Prepares missile for free flight operation.
 REMARKS: From launcher through left outboard MRTU Type II to FCC.
 PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–1126.
 FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–256 SIGNAL NAME: P1M4 BIT PERFORMED
  MEMORY LOCATION: 001350
  MEMORY DATA BIT(S):   16   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates to FCC that BIT has been performed.
  REMARKS: From RHE to FCC.
  PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–257.
  FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–257 SIGNAL NAME: P1M4 BIT STATUS (ACY) P1M4 DISPLAY STAT (ACZ)
  MEMORY LOCATION: 001352
  MEMORY DATA BIT(S):   4–7   (HEX)
  CONDITION: If sixth digit displayed on HOD is 0 and fifth digit displayed
          on HOD is 0=NO MSL
          If sixth digit displayed on HOD is 0 and fifth digit displayed
          on HOD is 1=SELECTED
          If sixth digit displayed on HOD is 0 and fifth digit displayed
          on HOD is 2=READY
          If sixth digit displayed on HOD is 0 and fifth digit displayed
          on HOD is 3=TRACKING
          If sixth digit displayed on HOD is 0 and fifth digit displayed
          on HOD is 4=BIT NO GO
          If sixth digit displayed on HOD is 0 and fifth digit displayed
          on HOD is 5=FAILED
          If sixth digit displayed on HOD is 0 and fifth digit displayed
          on HOD is 7=BATTERY NO GO
          If sixth digit displayed on HOD is 1 and fifth digit displayed
          on HOD is 0=UNLATCHED
          If sixth digit displayed on HOD is 1 and fifth digit displayed
          on HOD is 1=MRTU NO GO
          If sixth digit displayed on HOD is 1 and fifth digit displayed
          on HOD is 4=CODED
          If sixth digit displayed on HOD is 1 and fifth digit displayed
          on HOD is 7=CAGED
  SIGNAL FUNCTION: Provides missile status display for operator.
  REMARKS: From RHE to FCC for display.
  PASS: If CONDITION corresponds to selected message, go to failure symptom index and next failure
          symptom paragraph.
  FAIL: Location of fault: RHE, wiring from RHE to left outboard launcher, left outboard launcher.
          Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–258 SIGNAL NAME: P1M4 UNLATCH INDICATE
  MEMORY LOCATION: 001414
  MEMORY DATA BIT(S):   15   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates to RHE missile is unlatched.
  REMARKS: From launcher to RHE.
  PASS: If second digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 8–259.
  FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to RHE, RHE.
          Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–259 SIGNAL NAME: P1M4 UNLATCH INDICATE
MEMORY LOCATION: 001672
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to operator when a missile is unlatched.
REMARKS: From launcher through left outboard MRTU Type II to FCC for display.
PASS: If second digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 8–260.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–260 SIGNAL NAME: P1M4 UNLATCH INDICATE
MEMORY LOCATION: 001715
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to operator when a missile is unlatched.
REMARKS: From FCC through left outboard MRTU Type II to launcher.
PASS: If second digit on HOD is 0, 1, 4, or 5, refer to failure symptom index and next failure symptom
paragraph.
FAIL: Location of fault: left outboard MRTU Type II, wiring from left outboard MRTU Type II to FCC,
FCC. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

8–261 SIGNAL NAME: P1M4 UPPER LOWER DISPLAY STATUS (ACY) P1M4 PRIORITY IND (ACZ) ∎
MEMORY LOCATION: 001352
MEMORY DATA BIT(S): 8 (BINARY)
CONDITION: If the second digit displayed on HOD is 0, 2, 4, or 6=UPPER
If the second digit displayed on HOD is 1, 3, 5, or 7=LOWER
SIGNAL FUNCTION: Indicates to operator when a selected missile has been assigned to upper or
lower channel.
REMARKS: From RHE to FCC for display.
PASS: If CONDITION corresponds to selected channel, go to paragraph 8–262.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–262 SIGNAL NAME: P1M4 TYPE STATUS DISPLAY (ACY) P1M4 TYPE (ACZ) ∎
MEMORY LOCATION: 001352
MEMORY DATA BIT(S): 17–19 (OCTAL)
CONDITION: If the first digit displayed on HOD is 0=NONE
If the first digit displayed on HOD is 1=TACTICAL LASER
If the first digit displayed on HOD is 4=UNIDENTIFIED
If the first digit displayed on HOD is 5=TRAINING LASER
SIGNAL FUNCTION: Provides type of missile data for display to operator.
REMARKS: From RHE to FCC for display.
PASS: If CONDITION on HOD corresponds to installed type of missiles, go to paragraph 8–263.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–263 SIGNAL NAME: P1M4 TYPE (ACY) P1M4 MSL TYPE (ACZ)
  MEMORY LOCATION: 001410
  MEMORY DATA BIT(S): 7–8   (BINARY)
  CONDITION: If fifth digit displayed on HOD is 0, and fourth digit displayed on HOD is 0, 1, 2, or 3=TRAINING
    If fifth digit displayed on HOD is 1, and fourth digit displayed on HOD is 0, 1, 2, or 3=TACTICAL
    If fifth digit displayed on HOD is 1, and fourth digit displayed on HOD is 4, 5, 6, or 7=NONE
  SIGNAL FUNCTION: Indicates a tactical, training or no missile at location.
  REMARKS: From ECSP to RHE.
  PASS: If CONDITION corresponds to installed type of missiles, go to paragraph 8–264.
  FAIL: Location of fault: replace left outboard launcher (TM 9–1425–475–30–2).

8–264 SIGNAL NAME: P1M4 TYPE (ACY) P1M4 MSL TYPE (ACZ)
  MEMORY LOCATION: 001666
  MEMORY DATA BIT(S): 7–8   (BINARY)
  CONDITION: If fifth digit displayed on HOD is 0, and fourth digit displayed on HOD is 0, 1, 2, or 3=TRAINING
    If fifth digit displayed on HOD is 1, and fourth digit displayed on HOD is 0, 1, 2, or 3=TACTICAL
    If fifth digit displayed on HOD is 1, and fourth digit displayed on HOD is 4, 5, 6, or 7=NONE
  SIGNAL FUNCTION: Indicates a tactical, training or no missile at location.
  REMARKS: From launcher through left outboard MRTU Type II to FCC.
  PASS: If CONDITION corresponds to installed type of missiles, refer to failure symptom index and next failure symptom paragraph.
  FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left inboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–265 SIGNAL NAME: P1M4 MSL DEICE #1 CMD
  MEMORY LOCATION: 001271
  MEMORY DATA BIT(S): 5   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Sends command to launcher ECSP to arm deicing squib.
  REMARKS: From RHE to ECSP.
  PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–266.
  FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–266 SIGNAL NAME: P1M4 MSL DEICE #1 CMD
  MEMORY LOCATION: 001705
  MEMORY DATA BIT(S): 5   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Sends command to launcher ECSP to arm deicing squib.
  REMARKS: From launcher through left outboard MRTU Type II to FCC.
  PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–297.
  FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–267   **SIGNAL NAME:**   P1M4 MSL SKR INPUT SLAVE (ACY) P1M4 MSL SKR SLV SEL (ACZ) ◼

MEMORY LOCATION: 001271

MEMORY DATA BIT(S):   6–8   (OCTAL)

CONDITION: If the fifth digit is 0 or 4 and the fourth digit
is 0 or 2=ZERO EL ZERO AZ
If the fifth digit is 0 or 4 and the fourth digit
is 4 or 6=REMEL REMAZ
If the fifth digit is 1 or 5 and the fourth digit
is 0 or 2=AUTOEL AUTOAZ
If the fifth digit is 1 or 5 and the fourth digit
is 4 or 6=REMEL REMAZ +BIAS/2
If the fifth digit is 2 or 6 and the fourth digit
is 0 or 2=REMEL REMAZ +BIAS
If the fifth digit is 2 or 6 and the fourth digit
is 4 or 6=REMEL REMAZ – BIAS/2
If the fifth digit is 3 or 7 and the fourth digit
is 0 or 2=REMEL REMAZ – BIAS
If the fifth digit is 3 or 7 and the fourth digit
is 4 or 6=AUTOEL ZERO AZ

SIGNAL FUNCTION: Selects pitch and yaw slave commands to be applied to missile.

REMARKS: From RHE to ECSP.

PASS: If CONDITION corresponds to selected seeker input, go to paragraph 8–268.

FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–268   **SIGNAL NAME:**   P1M4 MSL SKR INPUT SLAVE (ACY) P1M4 MSL SKR SLV SEL (ACZ) ◼

MEMORY LOCATION: 001705

MEMORY DATA BIT(S):   6–8   (OCTAL)

CONDITION: If the fifth digit is 0 or 4 and the fourth digit
is 0 or 2=ZERO EL ZERO AZ
If the fifth digit is 0 or 4 and the fourth digit
is 4 or 6=REMEL REMAZ
If the fifth digit is 1 or 5 and the fourth digit
is 0 or 2=AUTOEL AUTOAZ
If the fifth digit is 1 or 5 and the fourth digit
is 4 or 6=REMEL REMAZ +BIAS/2
If the fifth digit is 2 or 6 and the fourth digit
is 0 or 2=REMEL REMAZ +BIAS
If the fifth digit is 2 or 6 and the fourth digit
is 4 or 6=REMEL REMAZ – BIAS/2
If the fifth digit is 3 or 7 and the fourth digit
is 0 or 2=REMEL REMAZ – BIAS
If the fifth digit is 3 or 7 and the fourth digit
is 4 or 6=AUTOEL ZERO AZ

SIGNAL FUNCTION: Selects pitch and yaw slave commands to be applied to missile.

REMARKS: From launcher through left outboard MRTU Type II to FCC.

PASS: If CONDITION corresponds to selected seeker input, refer to failure symptom index and next
failure symptom paragraph.

FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–269   SIGNAL NAME: P1M4 MSL AUTO PILOT POWER CONTROL (ACY)
                             P1M4 AUTOPLT PWR (ACZ)
   MEMORY LOCATION: 001271
   MEMORY DATA BIT(S):   9   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Controls application of auto pilot power to missile.
   REMARKS: From RHE to ECSP.
   PASS: If fourth digit on HOD is 2, 3, 6, or 7, go to paragraph 8–270.
   FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
            (TM 9–1427–475–20).

8–270   SIGNAL NAME: P1M4 MSL AUTO PILOT POWER CONTROL (ACY)
                             P1M4 AUTOPLT PWR (ACZ)
   MEMORY LOCATION: 001705
   MEMORY DATA BIT(S):   9   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Controls application of auto pilot power to missile.
   REMARKS: From launcher through left outboard MRTU Type II to FCC.
   PASS: If fourth digit on HOD is 2, 3, 6, or 7, go to paragraph 8–271.
   FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
            MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
            (TM 9–1427–475–20).

8–271   SIGNAL NAME: P1M4 MSL AUTO PILOT POWER (ACY) P1M4 A/P PWR OK (ACZ)
   MEMORY LOCATION: 001410
   MEMORY DATA BIT(S):   17   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Specifies auto pilot power is above minimum value (+18 VDC).
   REMARKS: From ECSP to RHE.
   PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–272
   FAIL: Location of fault: replace left outboard launcher (TM 9–1425–475–30–2).

8–272   SIGNAL NAME: P1M4 MSL AUTO PILOT POWER (ACY) P1M4 A/P PWR OK (ACZ)
   MEMORY LOCATION: 001666
   MEMORY DATA BIT(S):   17   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Specifies auto pilot power is above minimum value (+18 VDC).
   REMARKS: From launcher through left outboard MRTU Type II to FCC.
   PASS: If first digit on HOD is 4, 5, 6, or 7, refer to failure symptom index and next failure symptom
             paragraph.
   FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
            MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
            (TM 9–1427–475–20).

8–273 SIGNAL NAME: P1M4 MSL TGT POLARITY CONTROL
MEMORY LOCATION: 001271
MEMORY DATA BIT(S):   10–11   (BINARY)
CONDITION: If the fourth digit is 0, 2, 4, or 6 and the third digit is 0, 1, 2, 3=BLACK
If the fourth digit is 0, 2, 4, or 6 and the third digit is 4, 5, 6, 7=AUTO
If the fourth digit is 1, 3, 5, or 7 and the third digit is 0, 1, 2, 3=WHITE
SIGNAL FUNCTION: Directs missile seeker to track a black target on a white background, a white target on a black background or automatic contrast.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD corresponds to proper polarity, go to paragraph 8–274.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–274 SIGNAL NAME: P1M4 MSL TGT POLARITY CONTROL
MEMORY LOCATION: 001705
MEMORY DATA BIT(S):   10–11   (BINARY)
CONDITION: If the fourth digit is 0, 2, 4, or 6 and the third digit is 0, 1, 2, 3=BLACK
If the fourth digit is 0, 2, 4, or 6 and the third digit is 4, 5, 6, 7=AUTO
If the fourth digit is 1, 3, 5, or 7 and the third digit is 0, 1, 2, 3=WHITE
SIGNAL FUNCTION: Directs missile seeker to track a black target on a white background, a white target on a black background or automatic contrast.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If third digit on HOD corresponds to proper polarity, refer to failure symptom index and next failure symptom paragraph.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–275 SIGNAL NAME: P1M4 MSL BIT CMD
MEMORY LOCATION: 001271
MEMORY DATA BIT(S):   12   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls launcher BIT.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 0, 1, 4, or 5, go to paragraph 8–276.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–276 SIGNAL NAME: P1M4 MSL BIT CMD
MEMORY LOCATION: 001705
MEMORY DATA BIT(S):   12   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls launcher BIT.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If third digit on HOD is 0, 1, 4, or 5, go to paragraph 8–277.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

■ **8–277** **SIGNAL NAME:** P1M4 MSL SKR POWER CONTROL (ACY) P1M4 SKR PWR OK (ACZ)
MEMORY LOCATION: 001271
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of seeker power.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–278.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

■ **8–278** **SIGNAL NAME:** P1M4 MSL SKR POWER CONTROL (ACY) P1M4 SKR PWR OK (ACZ)
MEMORY LOCATION: 001705
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of seeker power.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–279.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–279 **SIGNAL NAME:** P1M4 MSL SKR POWER
MEMORY LOCATION: 001410
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of seeker power (+28 VDC).
REMARKS: From ECSP to RHE.
PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 8–280.
FAIL: Location of fault: replace left outboard launcher (TM 9–1425–475–30–2).

■ **8–280** **SIGNAL NAME:** P1M4 MSL SEEKER POWER (ACY) P1M4 SKR PWR OK (ACZ)
MEMORY LOCATION: 001666
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of seeker power (+28 VDC).
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 8–283.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–281 **SIGNAL NAME:** P1M4 CCM ACTIVATE CMD
MEMORY LOCATION: 001271
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to enter CCM mode.
REMARKS: From RHE to ECSP.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–282
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–282 **SIGNAL NAME:** P1M4 CCM ACTIVATE CMD
MEMORY LOCATION: 001705
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to enter CCM mode.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1123.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–283 **SIGNAL NAME:** P1M4 MSL SCAN SEARCH CMD
MEMORY LOCATION: 001271
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter target acquisition mode and to enter lock–on
when target is acquired.
REMARKS: From RHE to ECSP.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–284.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–284 **SIGNAL NAME:** P1M4 MSL SCAN SEARCH CMD
MEMORY LOCATION: 001705
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter target acquisition mode and to enter lock–on
when target is acquired.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–287.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–285 **SIGNAL NAME:** P1M4 MSL SEEKER SLAVE CMD
MEMORY LOCATION: 001271
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter slave mode.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–286.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–286 **SIGNAL NAME:** P1M4 MSL SEEKER SLAVE CMD
MEMORY LOCATION: 001705
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter slave mode.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–287.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–287 **SIGNAL NAME:** P1M4 MSL STARE TRACK CMD
MEMORY LOCATION: 001271
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter stare mode. If proper laser code is detected in seeker FOV, seeker will enter track mode.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–288.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–288 **SIGNAL NAME:** P1M4 MSL STARE TRACK CMD
MEMORY LOCATION: 001705
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter stare mode. If proper laser code is detected in seeker FOV, seeker will enter track mode.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 2, 3, 6, or 7, refer to failure symptom index and next failure symptom paragraph.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–289 **SIGNAL NAME:** P1M4 MSL CORRELATE
MEMORY LOCATION: 001410
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates laser has detected a laser beam whose laser code agrees with internal stored code.
REMARKS: From ECSP to RHE.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–290.
FAIL: Location of fault: replace left outboard launcher (TM 9–1425–475–30–2).

8–290 **SIGNAL NAME:** P1M4 MSL CORRELATE
MEMORY LOCATION: 001666
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates laser has detected a laser beam whose laser code agrees with internal stored code.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–291.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–291 **SIGNAL NAME:** P1M4 MSL TRACK
MEMORY LOCATION: 001410
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker has entered track mode. The laser seeker can enter track mode whenever a proper laser beam is detected in seeker FOV for any mode except cage.
REMARKS: From ECSP to RHE.
PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–292.
FAIL: Location of fault: replace left outboard launcher (TM 9–1425–475–30–2).

8–292 **SIGNAL NAME:** P1M1 MSL TRACK
MEMORY LOCATION: 001666
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker has entered track mode. The laser seeker can enter track mode whenever a proper laser beam is detected in seeker FOV for any mode except cage.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1153.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–293 **SIGNAL NAME:** P1M4 MSL SKR CAGE CMD
MEMORY LOCATION: 001271
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile to enter cage mode.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–294.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–294 **SIGNAL NAME:** P1M4 MSL SKR CAGE CMD
MEMORY LOCATION: 001705
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile to enter cage mode.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–295.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–295 **SIGNAL NAME:** P1M4 MSL SKR CAGE
MEMORY LOCATION: 001410
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker is in cage mode. The seeker cannot track in cage position.
REMARKS: From ECSP to RHE.
PASS: If third digit on HOD is 0, 2, 4, or 6, go to paragraph 8–296.
FAIL: Location of fault: replace left outboard launcher (TM 9–1425–475–30–2).

8–296 **SIGNAL NAME:** P1M4 MSL SKR CAGE
MEMORY LOCATION: 001666
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker is in cage mode. The seeker cannot track in cage position.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If third digit on HOD is 0, 2, 4, or 6, go to paragraph 8–299.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–297 **SIGNAL NAME:** P1M4 MSL DEICE #2 CMD
MEMORY LOCATION: 001275
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Issues deicing squib fire command to selected missile.
REMARKS: From RHE to ECSP.
PASS: If sixth digit on HOD is 1, go to paragraph 8–298.
FAIL: Location of fault: CPG missile control panel, wiring from CPG missile control panel to CPG MRTU Type III, CPG MRTU Type III, RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–298 SIGNAL NAME: P1M4 MSL DEICE #2 CMD
MEMORY LOCATION: 001711
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Issues deicing squib fire command to selected missile.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If sixth digit on HOD is 1, go to paragraph 8–1118.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–299 SIGNAL NAME: P1M4 MSL BIT CONTROL
MEMORY LOCATION: 001275
MEMORY DATA BIT(S): 6–9 (HEX)
CONDITION: (None)
SIGNAL FUNCTION: Commands BIT on autopilot.
REMARKS: From RHE to ECSP.
PASS: If fifth digit displayed on HOD is 0, 1, or 2, and the fourth digit displayed on HOD is 2, 3, 4, 5,
6, or 7 go to paragraph 8–300.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–300 SIGNAL NAME: P1M4 MSL BIT CONTROL
MEMORY LOCATION: 001711
MEMORY DATA BIT(S): 6–9 (HEX)
CONDITION: (None)
SIGNAL FUNCTION: Commands BIT on autopilot.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: Location of fault if fifth digit displayed on HOD is 0, 1, or 2, and the fourth digit displayed on
HOD is 2, 3, 4, 5, 6, or 7: Replace left outboard launcher missile 4 (TM 9–1427–475–20).
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–301 SIGNAL NAME: P1M4 MSL INDIRECT FIRE LO
MEMORY LOCATION: 001275
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands low flight profile for LOAL operation.
REMARKS: From RHE to ECSP.
PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–302.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–302   **SIGNAL NAME:**   P1M4 MSL INDIRECT FIRE LO
　　　　MEMORY LOCATION: 001711
　　　　MEMORY DATA BIT(S):   10   (BINARY)
　　　　CONDITION: (None)
　　　　SIGNAL FUNCTION: Commands low flight profile for LOAL operation.
　　　　REMARKS: From launcher through left outboard MRTU Type II to FCC.
　　　　PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1108.
　　　　FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
　　　　　　MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
　　　　　　(TM 9–1427–475–20).

8–303   **SIGNAL NAME:**   P1M4 MSL INDIRECT FIRE HI
　　　　MEMORY LOCATION: 001275
　　　　MEMORY DATA BIT(S):   11   (BINARY)
　　　　CONDITION: (None)
　　　　SIGNAL FUNCTION: Commands high flight profile for LOAL operation.
　　　　REMARKS: From RHE to ECSP.
　　　　PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 8–304.
　　　　FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
　　　　　　(TM 9–1427–475–20).

8–304   **SIGNAL NAME:**   P1M4 MSL INDIRECT FIRE HI
　　　　MEMORY LOCATION: 001711
　　　　MEMORY DATA BIT(S):   11   (BINARY)
　　　　CONDITION: (None)
　　　　SIGNAL FUNCTION: Commands high flight profile for LOAL operation.
　　　　REMARKS: From launcher through left outboard MRTU Type II to FCC.
　　　　PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1108.
　　　　FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
　　　　　　MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault
　　　　　　(TM 9–1427–475–20).

8–305   **SIGNAL NAME:**   P1M4 MSL RF CODE ACCEPT COMMAND
　　　　MEMORY LOCATION: 001275
　　　　MEMORY DATA BIT(S):   13   (BINARY)
　　　　CONDITION: (None)
　　　　SIGNAL FUNCTION: Commands missile seeker to accept RF code data from analog command lines
　　　　　　　　3 and 4. Commands ECSP to hook up analog commands 3 and 4 to selected
　　　　　　　　missile.
　　　　REMARKS: From RHE to ECSP.
　　　　PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–306.
　　　　FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
　　　　　　(TM 9–1427–475–20).

8–306 **SIGNAL NAME:** P1M4 MSL RF CODE ACCEPT COMMAND
MEMORY LOCATION: 001711
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to accept RF code data from analog command lines 3 and 4. Commands ECSP to hook up analog commands 3 and 4 to selected missile.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–307.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–307 **SIGNAL NAME:** P1M4 MSL LASER CODE ACCEPT COMMAND
MEMORY LOCATION: 001275
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser code information received from RHE by launcher on coax A and B to be relayed to identified missile.
REMARKS: From RHE to ECSP.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–308.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–308 **SIGNAL NAME:** P1M4 MSL LASER CODE ACCEPT COMMAND
MEMORY LOCATION: 001711
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser code information received from RHE by launcher on coax A and B to be relayed to identified missile.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1106.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–309 **SIGNAL NAME:** P1M4 MSL COAX B CONNECT
MEMORY LOCATION: 001275
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax B to indicated missile.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–310.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–310   **SIGNAL NAME:**   P1M4 MSL COAX B CONNECT
       MEMORY LOCATION: 001711
       MEMORY DATA BIT(S):   17   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Commands launcher to connect coax B to indicated missile.
       REMARKS: From launcher through left outboard MRTU Type II to FCC.
       PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–311.
       FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–311   **SIGNAL NAME:**   P1M4 MSL COAX A CONNECT
       MEMORY LOCATION: 001275
       MEMORY DATA BIT(S):   18   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Commands launcher to connect coax A to indicated missile.
       REMARKS: From RHE to ECSP.
       PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–312.
       FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–312   **SIGNAL NAME:**   P1M4 MSL COAX A CONNECT
       MEMORY LOCATION: 001711
       MEMORY DATA BIT(S):   18   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Commands launcher to connect coax A to indicated missile.
       REMARKS: From launcher through left outboard MRTU Type II to FCC.
       PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1106.
       FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–313   **SIGNAL NAME:**   P1M4 MSL SKR LAUNCH PREPARE COMMAND (ACY)
                         P1M4 SKR LNCH CMD (ACZ)
       MEMORY LOCATION: 001275
       MEMORY DATA BIT(S):   19   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Prepares missile for free flight operation.
       REMARKS: From RHE to ECSP.
       PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–314.
       FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–314   **SIGNAL NAME:**   P1M4 MSL SKR LAUNCH PREPARE COMMAND (ACY)
                         P1M4 SKR LNCH CMD (ACZ)
       MEMORY LOCATION: 001711
       MEMORY DATA BIT(S):   19   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Prepares missile for free flight operation.
       REMARKS: From launcher through left outboard MRTU Type II to FCC.
       PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–1126.
       FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–315 **SIGNAL NAME:** LCHR1 CONTROL MSL AUTO AZ SIGNAL SELECT (ACY)
P1 AUTO AZSIG (ACZ)
MEMORY LOCATION: 001301
MEMORY DATA BIT(S): 6–9 (HEX)
CONDITION: If the fourth digit displayed on HOD is 0=M1AZ
If the fourth digit displayed on HOD is 1=M2AZ
If the fourth digit displayed on HOD is 2=M3AZ
If the fourth digit displayed on HOD is 3=M4AZ
If the fourth digit displayed on HOD is 4=M1BIT4
If the fourth digit displayed on HOD is 5=M2BIT4
If the fourth digit displayed on HOD is 6=M3BIT4
If the fourth digit displayed on HOD is 7=M4BIT4
If the fifth digit displayed on HOD is 1, 3, 5, or 7 and the fourth digit
displayed on HOD is 0=M1ID
If the fifth digit displayed on HOD is 1, 3, 5, or 7 and the fourth digit
displayed on HOD is 1=M2ID
If the fifth digit displayed on HOD is 1, 3, 5, or 7 and the fourth digit
displayed on HOD is 2=M3ID
If the fifth digit displayed on HOD is 1, 3, 5, or 7 and the fourth digit
displayed on HOD is 3=M4ID
SIGNAL FUNCTION: Selects one of four missiles to be monitored for yaw gimbal angle (AZ), BIT 4
or missile identification on analog reply number four.
REMARKS: From RHE to ECSP to missile.
PASS: If CONDITION corresponds to selected missile go to paragraph 8–316.
FAIL: Location of fault: replace RHE, wiring from RHE to ECSP, ECSP, wiring from ECSP to missile,
missile. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–316 **SIGNAL NAME:** LCHR1 AUTO SEEKER AZ (ACY) P1 2ND TRKG MSLAZ (ACZ)
MEMORY LOCATION: 001477
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit=1) when
the seeker is left and positive (sixth digit=0) when seeker is right.
SIGNAL FUNCTION: Provides selected analog signal to RHE.
REMARKS: From launcher to RHE.
PASS: If CONDITION corresponds to correct response, go to paragraph 8–317.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to RHE, RHE.
Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–317 **SIGNAL NAME:** LCHR1 AUTO SEEKER AZ (ACY) P1 2ND TRKG MSLAZ (ACZ)
MEMORY LOCATION: 001660
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit=1) when
the seeker is left and positive (sixth digit=0) when seeker is right.
SIGNAL FUNCTION: Provides selected analog signal to FCC.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If CONDITION corresponds to correct response, go to paragraph 8–318.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard
MRTU Type II to FCC. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–318 **SIGNAL NAME:** LCHR1 AUTO SEEKER AZ (ACY) P1 RMT SKREL CMD (ACZ)
  MEMORY LOCATION: 001701
  MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
  CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when the seeker is left and positive (sixth digit=0) when seeker is right.
  SIGNAL FUNCTION: Selected missile analog signal from FCC.
  REMARKS: From FCC through left outboard MRTU Type II to launcher.
  PASS: If CONDITION corresponds to correct response, go to paragraph 8–319.
  FAIL: Location of fault: left outboard MRTU Type II, wiring from left outboard MRTU Type II to FCC, FCC. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

8–319 **SIGNAL NAME:** LCHR1 CONTROL MSL AUTO EL SIGNAL SELECT (ACY)
                   P1 2ND TRKG MSLEL (ACZ)
  MEMORY LOCATION: 001301
  MEMORY DATA BIT(S): 10–13   (HEX)
  CONDITION: If third digit displayed on HOD is 0=M1EL
          If third digit displayed on HOD is 1=M2EL
          If third digit displayed on HOD is 2=M3EL
          If third digit displayed on HOD is 3=M4EL
          If third digit displayed on HOD is 4=M1BIT3
          If third digit displayed on HOD is 5=M2BIT3
          If third digit displayed on HOD is 6=M3BIT3
          If third digit displayed on HOD is 7=M4BIT3
          If fourth digit displayed on HOD is 1, 3, 5, or 7 and third digit
          displayed is 4=M1GCBIT
          If fourth digit displayed on HOD is 1, 3, 5, or 7 and third digit
          displayed is 5=M2GCBIT
          If fourth digit displayed on HOD is 1, 3, 5, or 7 and third digit
          displayed is 6=M3GCBIT
          If fourth digit displayed on HOD is 1, 3, 5, or 7 and third digit
          displayed is 7=M4GCBIT
  SIGNAL FUNCTION: Selects one of four missiles to be monitored for pitch gimbal angle (EL), BIT 3 or missile BIT 3 response on analog reply number three.
  REMARKS: From RHE to ECSP to missile.
  PASS: If CONDITION corresponds to selected missile, go to paragraph 8–320.
  FAIL: Location of fault: replace RHE, wiring from RHE to ECSP, ECSP, wiring from ECSP to missile, missile. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–320 **SIGNAL NAME:** LCHR1 AUTO SEEKER EL (ACY) P1 2ND TRKG MSLAZ (ACZ)
  MEMORY LOCATION: 001476
  MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
  CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when the seeker is down and positive (sixth digit=0) when seeker is up.
  SIGNAL FUNCTION: Provides selected analog signal to RHE.
  REMARKS: From launcher to RHE.
  PASS: If CONDITION corresponds to correct response, go to paragraph 8–321.
  FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to RHE, RHE. Troubleshoot wiring to isolate (TM 9–1427–475–20).

8–321 **SIGNAL NAME:** LCHR1 AUTO SEEKER EL (ACY) P1 2ND TRKG MSLEL (ACZ)
MEMORY LOCATION: 001661
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when the seeker is down and positive (sixth digit=0) when seeker is up.
SIGNAL FUNCTION: Provides selected analog signal to FCC.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If CONDITION corresponds to correct response, go to paragraph 8–322.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–322 **SIGNAL NAME:** LCHR1 AUTO SEEKER EL (ACY) P1 AUTO SKREL CMD (ACZ)
MEMORY LOCATION: 001675
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when the seeker is down and positive (sixth digit=0) when seeker is up.
SIGNAL FUNCTION: Provides selected missile analog signal to launcher from FCC.
REMARKS: From FCC through left outboard MRTU Type II to launcher.
PASS: If CONDITION corresponds to correct response, go to paragraph 8–323.
FAIL: Location of fault: left outboard MRTU Type II, wiring from left outboard MRTU Type II to FCC. Troubleshoot wiring to isolate fault (TM 9–1425–475–30–2).

8–323 **SIGNAL NAME:** LCHR1 CONTROL MSL REMOTE AZ SIGNAL SELECT (ACY)
P1 RMT AZSIG CMD (ACZ)
MEMORY LOCATION: 001301
MEMORY DATA BIT(S): 14–16 (OCTAL)
CONDITION: If the second digit displayed on HOD is 0=M1AZ
If the second digit displayed on HOD is 1=M2AZ
If the second digit displayed on HOD is 2=M3AZ
If the second digit displayed on HOD is 3=M4AZ
If the second digit displayed on HOD is 4=M1BIT2
If the second digit displayed on HOD is 5=M2BIT2
If the second digit displayed on HOD is 6=M3BIT2
If the second digit displayed on HOD is 7=M4BIT2
SIGNAL FUNCTION: Selects one of four missiles to be monitored for yaw gimbal angle or BIT 2 response on analog reply number two.
REMARKS: From RHE to ECSP to missile.
PASS: If CONDITION corresponds to selected missile go to paragraph 8–324.
FAIL: Location of fault: replace RHE, wiring from RHE to ECSP, ECSP, wiring from ECSP to missile, missile. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–324 **SIGNAL NAME:** LCHR1 REMOTE SEEKER AZ (ACY)
P1 1ST TRKG MSLEL (ACZ)
MEMORY LOCATION: 001475
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when the seeker is left and positive (sixth digit=0) when seeker is right.
SIGNAL FUNCTION: Provides selected analog signal to RHE.
REMARKS: From launcher to RHE.
PASS: If CONDITION corresponds to correct response, go to paragraph 8–325.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to RHE, RHE. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–325 SIGNAL NAME: LCHR1 REMOTE SEEKER AZ (ACY) P1 1ST TRKG MSLEL (ACZ)
MEMORY LOCATION: 001662
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when the seeker is left and positive (sixth digit=0) when seeker is right.
SIGNAL FUNCTION: Provides selected analog signal to FCC.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If CONDITION corresponds to correct response, go to paragraph 8–326.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–326 SIGNAL NAME: LCHR1 REMOTE SEEKER AZ (ACY) P1 RMT SKRAZ CMD (ACZ)
MEMORY LOCATION: 001700
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when the seeker is left and positive (sixth digit=0) when seeker is right.
SIGNAL FUNCTION: Provides selected missile analog signal to launcher from FCC.
REMARKS: From FCC through left outboard MRTU Type II to launcher.
PASS: If CONDITION corresponds to correct response, go to paragraph 8–327.
FAIL: Location of fault: left outboard MRTU Type II, wiring from left outboard MRTU Type II to FCC. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

8–327 SIGNAL NAME: LCHR1 CONTROL MSL REMOTE EL SIGNAL SELECT (ACY)
P1 RMT ELSIG CMD (ACZ)
MEMORY LOCATION: 001301
MEMORY DATA BIT(S): 17–19 (OCTAL)
CONDITION: If the first digit displayed on HOD is 0=M1AZ
If the first digit displayed on HOD is 1=M2AZ
If the first digit displayed on HOD is 2=M3AZ
If the first digit displayed on HOD is 3=M4AZ
If the first digit displayed on HOD is 4=M1BIT2
If the first digit displayed on HOD is 5=M2BIT2
If the first digit displayed on HOD is 6=M3BIT2
If the first digit displayed on HOD is 7=M4BIT2
SIGNAL FUNCTION: Selects one of four missiles to be monitored for pitch gimbal angle or BIT 1 response on analog reply number one.
REMARKS: From RHE to ECSP to missile.
PASS: If first digit on HOD corresponds to selected missile, go to paragraph 8–328.
FAIL: Location of fault: replace RHE, wiring from RHE to ECSP, ECSP, wiring from ECSP to missile, missile. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–328 SIGNAL NAME: LCHR1 REMOTE SEEKER EL (ACY) P1 MSL TRKG EL CMD (ACZ)
MEMORY LOCATION: 001474
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when the seeker is down and positive (sixth digit=0) when seeker is up.
SIGNAL FUNCTION: Provides selected analog signal to RHE.
REMARKS: From launcher to RHE.
PASS: If CONDITION corresponds to correct response, go to paragraph 8–329.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to RHE, RHE. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–329 SIGNAL NAME: LCHR1 REMOTE SEEKER EL (ACY) P1 1ST TRKG MSLEL (ACZ) ∎
MEMORY LOCATION: 001663
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR) ∎
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when the seeker is down and positive (sixth digit=0) when seeker is up.
SIGNAL FUNCTION: Provides selected analog signal to FCC.
REMARKS: From launcher through left outboard MRTU Type II to FCC.
PASS: If CONDITION corresponds to correct response, go to paragraph 8–330.
FAIL: Location of fault: left outboard launcher, wiring from left outboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–330 SIGNAL NAME: LCHR1 REMOTE SEEKER EL (ACY) P1 RMT SKREL CMD (ACZ) ∎
MEMORY LOCATION: 001701
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR) ∎
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when seeker is down and positive (sixth digit=0) when seeker is up.
SIGNAL FUNCTION: Provides selected missile analog signal to launcher from FCC.
REMARKS: From FCC through left outboard MRTU Type II to launcher.
PASS: Troubleshoot wiring from remote controlled circuit breaker (RCCB) to ECSP, ECSP to isolate fault (TM 9–1427–475–20).
FAIL: Location of fault: left outboard MRTU Type II, wiring from left outboard MRTU Type II to FCC. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

8–331 SIGNAL NAME: P2 LAUNCHER PRESENT (ACY) L2 PRESENT (ACZ) ∎
MEMORY LOCATION: 001344
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates presence or absence of launcher.
REMARKS: From RHE to FCC.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–332.
FAIL: Location of fault: RHE, wiring from RHE to FCC. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–332 SIGNAL NAME: P2 LAUNCHER SAFE (ACY) L2 SAFE (ACZ) ∎
MEMORY LOCATION: 001344
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to operator when a remote safe condition exists at launcher.
REMARKS: From RHE to FCC.
PASS: If first digit on HOD is 0, go to paragraph 8–333.
FAIL: Location of fault: RHE, wiring from RHE to FCC. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–333 SIGNAL NAME: P2 LAUNCHER BIT PERFORMED (ACY) L2 BIT PERF (ACZ)
MEMORY LOCATION: 001347
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to FCC that BIT has been performed.
REMARKS: From RHE to FCC.
PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–334.
FAIL: Location of fault: L INBD LCHR DC circuit breaker, wiring from L INBD LCHR DC circuit breaker to LCHR DC PWR ENABLE Relay K2–5/6, LCHR DC PWR ENABLE Relay K2–5/6, wiring from LCHR DC PWR ENABLE Relay K2–5/6 to RCCB CB202, RCCB CB202, wiring from RCCB CB202 to ECSP, wiring from R OUTBD LCHR AC circuit breaker to R INBD LCHR AC circuit breaker, wiring from R INBD LCHR AC circuit breaker to L INBD LCHR AC circuit breaker, L INBD LCHR AC circuit breaker, wiring from L INBD LCHR AC circuit breaker to LCHR AC PWR ENABLE relay K3–5/6, LCHR AC PWR ENABLE Relay K3–5/6, wiring from LCHR AC PWR ENABLE Relay K3–5/6 to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–334 SIGNAL NAME: P2 LAUNCHER BIT STATUS (ACY) L2 BIT STATUS (ACZ)
MEMORY LOCATION: 001347
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates launcher BIT status to FCC.
REMARKS: From RHE to FCC.
PASS: If first digit on HOD is 0, 1, 4, or 5, go to paragraph 8–335.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–335 SIGNAL NAME: P2 COM STATUS
MEMORY LOCATION: 001434
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to RHE that FCC has determined upon receipt of digital data from launcher, that an acknowledge error was present (no data received or all data words contain parity error).
REMARKS: From FCC to RHE.
PASS: If first digit on HOD is 0, 1, 4, or 5, go to paragraph 8–572.
FAIL: Location of fault: ECSP, wiring from ECSP to MRTU Type II, MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–336 SIGNAL NAME: P2M1 BIT PERFORMED
MEMORY LOCATION: 001350
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to FCC that BIT has been performed.
REMARKS: From RHE to FCC.
PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–337.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–337　**SIGNAL NAME:**　P2M1 BIT STATUS (ACY) P2M1 DISPLAY STATUS (ACZ)
　　　　MEMORY LOCATION:　001353
　　　　MEMORY DATA BIT(S):　12–15　(HEX)
　　　　CONDITION:　If third digit displayed on HOD is 0 and second digit displayed
　　　　　　　　　　　on HOD is 0=NO MSL
　　　　　　　　　　　If third digit displayed on HOD is 0 or 4 and second digit displayed
　　　　　　　　　　　on HOD is 2 or 3=SELECTED
　　　　　　　　　　　If third digit displayed on HOD is 0 or 4 and second digit displayed
　　　　　　　　　　　on HOD is 4 or 5=READY
　　　　　　　　　　　If third digit displayed on HOD is 0 or 4 and second digit displayed
　　　　　　　　　　　on HOD is 6 or 7=TRACKING
　　　　　　　　　　　If third digit displayed on HOD is 3 or 7 and second digit displayed
　　　　　　　　　　　on HOD is 0=CODED
　　　　　　　　　　　If third digit displayed on HOD is 3 or 7 and second digit displayed
　　　　　　　　　　　on HOD is6=CAGED
　　　　　　　　　　　If third digit displayed on HOD is 5 or 1 and second digit displayed
　　　　　　　　　　　on HOD is 0=BIT NO GO
　　　　　　　　　　　If third digit displayed on HOD is 5 or 1 and second digit displayed
　　　　　　　　　　　on HOD is 2=FAILED
　　　　　　　　　　　If third digit displayed on HOD is 5 or 1 and second digit displayed
　　　　　　　　　　　on HOD is 6=BATTERY NO GO
　　　　　　　　　　　If third digit displayed on HOD is 6 or 2 and second digit displayed
　　　　　　　　　　　on HOD is 0=UNLATCHED
　　　　　　　　　　　If third digit displayed on HOD is 6 or 2 and second digit displayed
　　　　　　　　　　　on HOD is 2=MRTU NO GO
　　　　　　　　　　　If third digit displayed on HOD is 6 or 2 and second digit displayed
　　　　　　　　　　　on HOD is 4=RAIL NO GO
　　　　SIGNAL FUNCTION:　Provides missile status display for operator.
　　　　REMARKS:　From RHE to FCC for display.
　　　　PASS:　If CONDITION corresponds to selected message, go to failure symptom index and next failure
　　　　　　　symptom paragraph.
　　　　FAIL:　Location of fault: RHE, wiring from RHE to left inboard launcher, left inboard launcher.
　　　　　　　Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–338　**SIGNAL NAME:**　P2M1 UNLATCH INDICATE
　　　　MEMORY LOCATION:　001421
　　　　MEMORY DATA BIT(S):　18　(BINARY)
　　　　CONDITION:　(None)
　　　　SIGNAL FUNCTION:　Indicates to RHE missile is unlatched.
　　　　REMARKS:　From launcher to RHE.
　　　　PASS:　If first digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 8–339.
　　　　FAIL:　Location of fault: left inboard launcher, wiring from left inboard launcher to RHE, RHE.
　　　　　　　Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–339　**SIGNAL NAME:**　P2M1 UNLATCH INDICATE
　　　　MEMORY LOCATION:　001737
　　　　MEMORY DATA BIT(S):　18　(BINARY)
　　　　CONDITION:　(None)
　　　　SIGNAL FUNCTION:　Indicates to operator when a missile is unlatched.
　　　　REMARKS:　From launcher through left inboard MRTU Type II to FCC for display.
　　　　PASS:　If first digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 8–340.
　　　　FAIL:　Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
　　　　　　　Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–340 SIGNAL NAME: P2M1 UNLATCH INDICATE
MEMORY LOCATION: 001762
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to operator when a missile is unlatched.
REMARKS: From FCC through left inboard MRTU Type II to launcher.
PASS: If first digit displayed on HOD is 0, 1, 4, or 5, refer to failure symptom index and next failure symptom paragraph.
FAIL: Location of fault: left inboard MRTU Type II, wiring from left inboard MRTU Type II to FCC, FCC. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

8–341 SIGNAL NAME: P2M1 UPPER LOWER DISPLAY STATUS (ACY) P2M1 PRIORITY IND (ACZ)
MEMORY LOCATION: 001353
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: If the second digit displayed on HOD is 0, 2, 4, or 6=UPPER
If the second digit displayed on HOD is 1, 3, 5, or 7=LOWER
SIGNAL FUNCTION: Indicates to operator when a selected missile has been assigned to upper or lower channel.
REMARKS: From RHE to FCC for display.
PASS: If CONDITION corresponds to selected channel, go to paragraph 8–342.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–342 SIGNAL NAME: P2M1 TYPE STATUS DISPLAY (ACY) P2M1 TYPE (ACZ)
MEMORY LOCATION: 001353
MEMORY DATA BIT(S): 17–19 (OCTAL)
CONDITION: If the first digit displayed on HOD is 0=NONE
If the first digit displayed on HOD is 1=TACTICAL LASER
If the first digit displayed on HOD is 4=UNIDENTIFIED
If the first digit displayed on HOD is 5=TRAINING LASER
SIGNAL FUNCTION: Provides type of missile data for display to operator.
REMARKS: From RHE to FCC for display.
PASS: If CONDITION on HOD corresponds to installed type of missiles, go to paragraph 8–343.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–343 SIGNAL NAME: P2M1 TYPE (ACY) P2M1 MSL TYPE (ACZ)
MEMORY LOCATION: 001420
MEMORY DATA BIT(S): 7–8 (BINARY)
CONDITION: If fifth digit displayed on HOD is 0, and fourth digit displayed on HOD is 0, 1, 2, or 3=TRAINING
If fifth digit displayed on HOD is 1, and fourth digit displayed on HOD is 0, 1, 2, or 3=TACTICAL
If fifth digit displayed on HOD is 1, and fourth digit displayed on HOD is 4, 5, 6, or 7=NONE
SIGNAL FUNCTION: Indicates a tactical, training or no missile at location.
REMARKS: From ECSP to RHE.
PASS: If CONDITION corresponds to installed type of missiles, go to paragraph 8–344.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–344 SIGNAL NAME: P2M1 TYPE (ACY) P2M1 MSL TYPE (ACZ)
MEMORY LOCATION: 001736
MEMORY DATA BIT(S): 7–8 (BINARY)
CONDITION: If fourth digit displayed on HOD is 0, 1, 2, or 3=TRAINING
If fifth digit displayed on HOD 1, 3, 5, or 7=TACTICAL
If fifth digit displayed on HOD 1, 3, 5, or 7 and fourth digit displayed on HOD is 0, 1, 2, or 3=NONE
SIGNAL FUNCTION: Indicates a tactical, training or no missile at location.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If CONDITION corresponds to installed type of missiles, refer to failure symptom index and next failure symptom paragraph.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–345 SIGNAL NAME: P2M1 MSL DEICE #1 CMD
MEMORY LOCATION: 001320
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Sends command to launcher ECSP to arm deicing squib.
REMARKS: From RHE to ECSP.
PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–346.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–346 SIGNAL NAME: P2M1 MSL DEICE #1 CMD
MEMORY LOCATION: 001755
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Sends command to launcher ECSP to arm deicing squib.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–377.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–347 **SIGNAL NAME:** P2M1 MSL SKR INPUT SLAVE (ACY) P2M1 SKR SLV SEL (ACZ)
MEMORY LOCATION: 001320
MEMORY DATA BIT(S): 6–8 (OCTAL)
CONDITION: If the fifth digit is 0 or 4 and the fourth digit
is 0 or 2=ZERO EL ZERO AZ
If the fifth digit is 0 or 4 and the fourth digit
is 4 or 6=REMEL REMAZ
If the fifth digit is 1 or 5 and the fourth digit
is 0 or 2=AUTOEL AUTOAZ
If the fifth digit is 1 or 5 and the fourth digit
is 4 or 6=REMEL REMAZ +BIAS/2
If the fifth digit is 2 or 6 and the fourth digit
is 0 or 2=REMEL REMAZ +BIAS
If the fifth digit is 2 or 6 and the fourth digit
is 4 or 6=REMEL REMAZ – BIAS/2
If the fifth digit is 3 or 7 and the fourth digit
is 0 or 2=REMEL REMAZ – BIAS
If the fifth digit is 3 or 7 and the fourth digit
is 4 or 6=AUTOEL ZERO AZ
SIGNAL FUNCTION: Selects pitch and yaw slave commands to be applied to missile.
REMARKS: From RHE to ECSP.
PASS: If CONDITION corresponds to selected seeker input, go to paragraph 8–348.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–348 **SIGNAL NAME:** P2M1 MSL SKR INPUT SLAVE (ACY) P2M1 SKR SLV SEL (ACZ)
MEMORY LOCATION: 001755
MEMORY DATA BIT(S): 6–8 (OCTAL)
CONDITION: If the fifth digit is 0 or 4 and the fourth digit
is 0 or 2=ZERO EL ZERO AZ
If the fifth digit is 0 or 4 and the fourth digit
is 4 or 6=REMEL REMAZ
If the fifth digit is 1 or 5 and the fourth digit
is 0 or 2=AUTOEL AUTOAZ
If the fifth digit is 1 or 5 and the fourth digit
is 4 or 6=REMEL REMAZ +BIAS/2
If the fifth digit is 2 or 6 and the fourth digit
is 0 or 2=REMEL REMAZ +BIAS
If the fifth digit is 2 or 6 and the fourth digit
is 4 or 6=REMEL REMAZ – BIAS/2
If the fifth digit is 3 or 7 and the fourth digit
is 0 or 2=REMEL REMAZ – BIAS
If the fifth digit is 3 or 7 and the fourth digit
is 4 or 6=AUTOEL ZERO AZ
SIGNAL FUNCTION: Selects pitch and yaw slave commands to be applied to missile.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If CONDITION corresponds to selected seeker input, refer to failure symptom index and next
failure symptom paragraph.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–349 SIGNAL NAME: P2M1 MSL AUTO PILOT POWER CONTROL (ACY)
                   P2M1 AUTOPLT PWR (ACZ)
MEMORY LOCATION: 001320
MEMORY DATA BIT(S): 9   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of auto pilot power to missile.
REMARKS: From RHE to ECSP.
PASS: If fourth digit on HOD is 2, 3, 6, or 7, go to paragraph 8–350.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
         (TM 9–1427–475–20).

8–350 SIGNAL NAME: P2M1 MSL AUTO PILOT POWER CONTROL (ACY)
                   P2M1 AUTOPLT PWR (ACZ)
MEMORY LOCATION: 001705
MEMORY DATA BIT(S): 9   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of auto pilot power to missile.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If fourth digit on HOD is 2, 3, 6, or 7, go to paragraph 8–351.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
         Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–351 SIGNAL NAME: P2M1 MSL AUTO PILOT POWER (ACY) P2M1 A/P PWR OK (ACZ)
MEMORY LOCATION: 001420
MEMORY DATA BIT(S): 17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Specifies auto pilot power is above minimum value (+18 VDC).
REMARKS: From ECSP to RHE.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–352.
FAIL: Location of fault: replace left inboard launcher (TM 9–1425–475–30–2).

8–352 SIGNAL NAME: P2M1 MSL AUTO PILOT POWER (ACY) P2M1 A/P PWR OK (ACZ)
MEMORY LOCATION: 001736
MEMORY DATA BIT(S): 17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Specifies auto pilot power is above minimum value (+18 VDC).
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, refer to failure symptom index and next failure symptom
          paragraph.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
         Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–353   SIGNAL NAME: P2M1 MSL TGT POLARITY CONTROL
   MEMORY LOCATION: 001320
   MEMORY DATA BIT(S):   10–11   (BINARY)
   CONDITION: If the fourth digit is 0, 2, 4, or 6 and the third digit is 0, 1, 2, 3=BLACK
                  If the fourth digit is 0, 2, 4, or 6 and the third digit is 4, 5, 6, 7=AUTO
                  If the fourth digit is 1, 3, 5, or 7 and the third digit is 0, 1, 2, 3=WHITE
   SIGNAL FUNCTION: Directs missile seeker to track a black target on a white background, a white
                  target on a black background or automatic contrast.
   REMARKS: From RHE to ECSP.
   PASS: If third digit on HOD corresponds to proper polarity, go to paragraph 8–354.
   FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–354   SIGNAL NAME: P2M1 MSL TGT POLARITY CONTROL
   MEMORY LOCATION: 001755
   MEMORY DATA BIT(S):   10–11   (BINARY)
   CONDITION: If the fourth digit is 0, 2, 4, or 6 and the third digit is 0, 1, 2, 3=BLACK
                  If the fourth digit is 0, 2, 4, or 6 and the third digit is 4, 5, 6, 7=AUTO
                  If the fourth digit is 1, 3, 5, or 7 and the third digit is 0, 1, 2, 3=WHITE
   SIGNAL FUNCTION: Directs missile seeker to track a black target on a white background, a white
                  target on a black background or automatic contrast.
   REMARKS: From launcher through left inboard MRTU Type II to FCC.
   PASS: If third digit on HOD corresponds to proper polarity, refer to failure symptom index and next
          failure symptom paragraph.
   FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
          Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–355   SIGNAL NAME: P2M1 MSL BIT CMD
   MEMORY LOCATION: 001320
   MEMORY DATA BIT(S):   12   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Controls launcher BIT.
   REMARKS: From RHE to ECSP.
   PASS: If third digit on HOD is 0, 1, 4, or 5, go to paragraph 8–356.
   FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–356   SIGNAL NAME: P2M1 MSL BIT CMD
   MEMORY LOCATION: 001755
   MEMORY DATA BIT(S):   12   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Controls launcher BIT.
   REMARKS: From launcher through left inboard MRTU Type II to FCC.
   PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 8–357.
   FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
          Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–357 SIGNAL NAME: P2M1 MSL SKR POWER CONTROL (ACY) P2M1 SKR PWR OK (ACZ)
MEMORY LOCATION: 001320
MEMORY DATA BIT(S):   13   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of seeker power.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 0, 1, 4, or 5, go to paragraph 8–358.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–358 SIGNAL NAME: P2M1 MSL SKR POWER CONTROL (ACY) P2M1 SKR PWR OK (ACZ)
MEMORY LOCATION: 001755
MEMORY DATA BIT(S):   13   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of seeker power.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–359.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–359 SIGNAL NAME: P2M1 MSL SKR POWER
MEMORY LOCATION: 001420
MEMORY DATA BIT(S):   12   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of seeker power (+28 VDC).
REMARKS: From ECSP to RHE.
PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 8–360.
FAIL: Location of fault: replace left inboard launcher (TM 9–1425–475–30–2).

8–360 SIGNAL NAME: P2M1 MSL SEEKER POWER (ACY) P2M1 SKR PWR OK (ACZ)
MEMORY LOCATION: 001736
MEMORY DATA BIT(S):   12   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of seeker power (+28 VDC).
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 8–363.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–361 SIGNAL NAME: P2M1 CCM ACTIVATE CMD
MEMORY LOCATION: 001320
MEMORY DATA BIT(S):   14   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to enter CCM mode.
REMARKS: From RHE to ECSP.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–362.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–362 SIGNAL NAME: P2M1 CCM ACTIVATE CMD
MEMORY LOCATION: 001755
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to enter CCM mode.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1123.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–363 SIGNAL NAME: P2M1 MSL SCAN SEARCH CMD
MEMORY LOCATION: 001320
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter target acquisition mode and to enter lock–on when target is acquired.
REMARKS: From RHE to ECSP.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–364.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–364 SIGNAL NAME: P2M1 MSL SCAN SEARCH CMD
MEMORY LOCATION: 001755
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter target acquisition mode and to enter lock–on when target is acquired.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–367.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–365 SIGNAL NAME: P2M1 MSL SEEKER SLAVE CMD
MEMORY LOCATION: 001320
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter slave mode.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–366.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–366 SIGNAL NAME: P2M1 MSL SEEKER SLAVE CMD
   MEMORY LOCATION: 001755
   MEMORY DATA BIT(S):   17   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Commands laser seeker to enter slave mode.
   REMARKS: From launcher through left inboard MRTU Type II to FCC.
   PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–373.
   FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
         Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–367 SIGNAL NAME: P2M1 MSL STARE TRACK CMD
   MEMORY LOCATION: 001320
   MEMORY DATA BIT(S):   18   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Commands laser seeker to enter stare mode. If proper laser code is detected
                  in seeker FOV, seeker will enter track mode.
   REMARKS: From RHE to ECSP.
   PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–368.
   FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
         (TM 9–1427–475–20).

8–368 SIGNAL NAME: P2M1 MSL STARE TRACK CMD
   MEMORY LOCATION: 001755
   MEMORY DATA BIT(S):   18   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Commands laser seeker to enter stare mode. If proper laser code is detected
                  in seeker FOV, seeker will enter track mode.
   REMARKS: From launcher through left inboard MRTU Type II to FCC.
   PASS: If first digit on HOD is 2, 3, 6, or 7, refer to failure symptom index and next failure symptom
         paragraph.
   FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
         Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–369 SIGNAL NAME: P2M1 MSL CORRELATE
   MEMORY LOCATION: 001420
   MEMORY DATA BIT(S):   16   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Indicates laser has detected a laser beam whose laser code agrees with
                  internal stored code.
   REMARKS: From ECSP to RHE.
   PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–370.
   FAIL: Location of fault: replace left inboard launcher (TM 9–1425–475–30–2).

8–370 **SIGNAL NAME:** P2M1 MSL CORRELATE
  MEMORY LOCATION: 001736
  MEMORY DATA BIT(S): 16 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates laser has detected a laser beam whose laser code agrees with internal stored code.
  REMARKS: From launcher through left inboard MRTU Type II to FCC.
  PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–371.
  FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–371 **SIGNAL NAME:** P2M1 MSL TRACK
  MEMORY LOCATION: 001420
  MEMORY DATA BIT(S): 15 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates seeker has entered track mode. The laser seeker can enter track mode whenever a proper laser beam is detected in seeker FOV for any mode except cage.
  REMARKS: From ECSP to RHE.
  PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–372.
  FAIL: Location of fault: replace left inboard launcher (TM 9–1425–475–30–2).

8–372 **SIGNAL NAME:** P2M1 MSL TRACK
  MEMORY LOCATION: 001736
  MEMORY DATA BIT(S): 15 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates seeker has entered track mode. The laser seeker can enter track mode whenever a proper laser beam is detected in seeker FOV for any mode except cage.
  REMARKS: From launcher through left inboard MRTU Type II to FCC.
  PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1153.
  FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–373 **SIGNAL NAME:** P2M1 MSL SKR CAGE CMD
  MEMORY LOCATION: 001320
  MEMORY DATA BIT(S): 19 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Commands missile to enter cage mode.
  REMARKS: From RHE to ECSP.
  PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–374.
  FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–374 **SIGNAL NAME:** P2M1 MSL SKR CAGE CMD
MEMORY LOCATION: 001755
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile to enter cage mode.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–375.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–375 **SIGNAL NAME:** P2M1 MSL SKR CAGE
MEMORY LOCATION: 001420
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker is in cage mode. The seeker cannot track in cage position.
REMARKS: From ECSP to RHE.
PASS: If third digit on HOD is 0, 2, 4, or 6, go to paragraph 8–376.
FAIL: Location of fault: replace left inboard launcher (TM 9–1425–475–30–2).

8–376 **SIGNAL NAME:** P2M1 MSL SKR CAGE
MEMORY LOCATION: 001736
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker is in cage mode. The seeker cannot track in cage position.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If third digit on HOD is 0, 2, 4, or 6, go to paragraph 8–379.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–377 **SIGNAL NAME:** P2M1 MSL DEICE #2 CMD
MEMORY LOCATION: 001324
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Issues deicing squib fire command to selected missile.
REMARKS: From RHE to ECSP.
PASS: If sixth digit on HOD is 1, go to paragraph 8–378.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–378 SIGNAL NAME: P2M1 MSL DEICE #2 CMD
   MEMORY LOCATION: 001761
   MEMORY DATA BIT(S): 4 (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Issues deicing squib fire command to selected missile.
   REMARKS: From launcher through left inboard MRTU Type II to FCC.
   PASS: If sixth digit on HOD is 1, go to paragraph 8–1118.
   FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–379 SIGNAL NAME: P2M1 MSL BIT CONTROL
   MEMORY LOCATION: 001324
   MEMORY DATA BIT(S): 6–9 (HEX)
   CONDITION: (None)
   SIGNAL FUNCTION: Commands BIT on autopilot.
   REMARKS: From RHE to ECSP.
   PASS: If fifth digit displayed on HOD is 0, 1, or 2, and the fourth digit displayed on HOD is 2, 3, 4, 5, 6, or 7 go to paragraph 8–380.
   FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–380 SIGNAL NAME: P2M1 MSL BIT CONTROL
   MEMORY LOCATION: 001761
   MEMORY DATA BIT(S): 6–9 (HEX)
   CONDITION: (None)
   SIGNAL FUNCTION: Commands BIT on autopilot.
   REMARKS: From launcher through left inboard MRTU Type II to FCC.
   PASS: Location of fault if fifth digit displayed on HOD is 0, 1, or 2, and the fourth digit displayed on HOD is 2, 3, 4, 5, 6, or 7: Replace left inboard launcher missile 1 (TM 9–1427–475–20).
   FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–381 SIGNAL NAME: P2M1 MSL INDIRECT FIRE LO
   MEMORY LOCATION: 001324
   MEMORY DATA BIT(S): 10 (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Commands low flight profile for LOAL operation.
   REMARKS: From RHE to ECSP.
   PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–382.
   FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–382 **SIGNAL NAME:** P2M1 MSL INDIRECT FIRE LO
   MEMORY LOCATION: 001761
   MEMORY DATA BIT(S): 10 (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Commands low flight profile for LOAL operation.
   REMARKS: From launcher through left inboard MRTU Type II to FCC.
   PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1108.
   FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
      Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–383 **SIGNAL NAME:** P2M1 MSL INDIRECT FIRE HI
   MEMORY LOCATION: 001324
   MEMORY DATA BIT(S): 11 (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Commands high flight profile for LOAL operation.
   REMARKS: From RHE to ECSP.
   PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 8–384.
   FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
      (TM 9–1427–475–20).

8–384 **SIGNAL NAME:** P2M1 MSL INDIRECT FIRE HI
   MEMORY LOCATION: 001761
   MEMORY DATA BIT(S): 11 (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Commands high flight profile for LOAL operation.
   REMARKS: From launcher through left inboard MRTU Type II to FCC.
   PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1108.
   FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
      Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–385 **SIGNAL NAME:** P2M1 MSL RF CODE ACCEPT COMMAND
   MEMORY LOCATION: 001324
   MEMORY DATA BIT(S): 13 (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Commands missile seeker to accept RF code data from analog command lines
               3 and 4. Commands ECSP to hook up analog commands 3 and 4 to selected
               missile.
   REMARKS: From RHE to ECSP.
   PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–386.
   FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
      (TM 9–1427–475–20).

8–386   **SIGNAL NAME:**   P2M1 MSL RF CODE ACCEPT COMMAND
        MEMORY LOCATION: 001761
        MEMORY DATA BIT(S):   13   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Commands missile seeker to accept RF code data from analog command lines 3 and 4. Commands ECSP to hook up analog commands 3 and 4 to selected missile.
        REMARKS: From launcher through left inboard MRTU Type II to FCC.
        PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–387.
        FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–387   **SIGNAL NAME:**   P2M1 MSL LASER CODE ACCEPT COMMAND
        MEMORY LOCATION: 001324
        MEMORY DATA BIT(S):   14   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Commands laser code information received from RHE by launcher on coax A and B to be relayed to identified missile.
        REMARKS: From RHE to ECSP.
        PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–388.
        FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–388   **SIGNAL NAME:**   P2M1 MSL LASER CODE ACCEPT COMMAND
        MEMORY LOCATION: 001761
        MEMORY DATA BIT(S):   14   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Commands laser code information received from RHE by launcher on coax A and B to be relayed to identified missile.
        REMARKS: From launcher through left inboard MRTU Type II to FCC.
        PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1106.
        FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–389   **SIGNAL NAME:**   P2M1 MSL COAX B CONNECT
        MEMORY LOCATION: 001324
        MEMORY DATA BIT(S):   17   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Commands launcher to connect coax B to indicated missile.
        REMARKS: From RHE to ECSP.
        PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–390.
        FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–390 SIGNAL NAME: P2M1 MSL COAX B CONNECT
MEMORY LOCATION: 001761
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax B to indicated missile.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–391.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–391 SIGNAL NAME: P2M1 MSL COAX A CONNECT
MEMORY LOCATION: 001324
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax A to indicated missile.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–392.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–392 SIGNAL NAME: P2M1 MSL COAX A CONNECT
MEMORY LOCATION: 001761
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax A to indicated missile.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1106.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–393 SIGNAL NAME: P2M1 MSL SKR LAUNCH PREPARE COMMAND (ACY)
　　　　　　　　　　　P2M1 SKR LNCH CMD (ACZ)
MEMORY LOCATION: 001324
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Prepares missile for free flight operation.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–394.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–394 SIGNAL NAME: P2M1 MSL SKR LAUNCH PREPARE COMMAND (ACY)
　　　　　　　　　　　P2M1 SKR LNCH CMD (ACZ)
MEMORY LOCATION: 001761
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Prepares missile for free flight operation.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–1125.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–395 SIGNAL NAME: P2M2 BIT PERFORMED
        MEMORY LOCATION: 001350
        MEMORY DATA BIT(S): 14 (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Indicates to FCC that BIT has been performed.
        REMARKS: From RHE to FCC.
        PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–396.
        FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–396 SIGNAL NAME: P2M2 BIT STATUS (ACY) P2M2 DISPLAY STATUS (ACZ)
        MEMORY LOCATION: 001353
        MEMORY DATA BIT(S): 4–7   (HEX)
        CONDITION: If sixth digit displayed on HOD is 0 and fifth digit displayed
                on HOD is 0=NO MSL
                If sixth digit displayed on HOD is 0 and fifth digit displayed
                on HOD is 1=SELECTED
                If sixth digit displayed on HOD is 0 and fifth digit displayed
                on HOD is 2=READY
                If sixth digit displayed on HOD is 0 and fifth digit displayed
                on HOD is 3=TRACKING
                If sixth digit displayed on HOD is 0 and fifth digit displayed
                on HOD is 4=BIT NO GO
                If sixth digit displayed on HOD is 0 and fifth digit displayed
                on HOD is 5=FAILED
                If sixth digit displayed on HOD is 0 and fifth digit displayed
                on HOD is 7=BATTERY NO GO
                If sixth digit displayed on HOD is 1 and fifth digit displayed
                on HOD is 0=UNLATCHED
                If sixth digit displayed on HOD is 1 and fifth digit displayed
                on HOD is 1=MRTU NO GO
                If sixth digit displayed on HOD is 1 and fifth digit displayed
                on HOD is 4=CODED
                If sixth digit displayed on HOD is 1 and fifth digit displayed
                on HOD is 7=CAGED
        SIGNAL FUNCTION: Provides missile status display for operator.
        REMARKS: From RHE to FCC for display.
        PASS: If CONDITION corresponds to selected message, refer to failure symptom index and next
                failure symptom paragraph.
        FAIL: Location of fault: RHE, wiring from RHE to left inboard launcher, left inboard launcher.
                Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–397 SIGNAL NAME: P2M2 UNLATCH INDICATE
        MEMORY LOCATION: 001421
        MEMORY DATA BIT(S): 17   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Indicates to RHE missile is unlatched.
        REMARKS: From launcher to RHE.
        PASS: If first digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 8–398.
        FAIL: Location of fault: left inboard launcher, RHE. Troubleshoot wiring to isolate fault
                (TM 9–1427–475–20).

8–398 SIGNAL NAME: P2M2 UNLATCH INDICATE
MEMORY LOCATION: 001737
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to operator when a missile is unlatched.
REMARKS: From launcher through left inboard MRTU Type II to FCC for display.
PASS: If first digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 8–399.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–399 SIGNAL NAME: P2M2 UNLATCH INDICATE
MEMORY LOCATION: 001762
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to operator when a missile is unlatched.
REMARKS: From FCC through left inboard MRTU Type II to launcher.
PASS: If first digit displayed on HOD is 0, 1, 2, or 3, refer to failure symptom index and next failure symptom paragraph.
FAIL: Location of fault: left inboard MRTU Type II, wiring from left inboard MRTU Type II to FCC, FCC. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

8–400 SIGNAL NAME: P2M2 UPPER LOWER DISPLAY STATUS (ACY) P2M2 PRIORITY IND (ACZ) ▮
MEMORY LOCATION: 001353
MEMORY DATA BIT(S): 8 (BINARY)
CONDITION: If the second digit displayed on HOD is 0, 2, 4, or 6=UPPER
If the second digit displayed on HOD is 1, 3, 5, or 7=LOWER
SIGNAL FUNCTION: Indicates to operator when a selected missile has been assigned to upper or lower channel.
REMARKS: From RHE to FCC for display.
PASS: If CONDITION corresponds to selected channel, go to paragraph 8–401.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–401 SIGNAL NAME: P2M2 TYPE STATUS DISPLAY (ACY) P2M2 TYPE (ACZ) ▮
MEMORY LOCATION: 001353
MEMORY DATA BIT(S): 17–19 (OCTAL)
CONDITION: If the first digit displayed on HOD is 0=NONE
If the first digit displayed on HOD is 1=TACTICAL LASER
If the first digit displayed on HOD is 4=UNIDENTIFIED
If the first digit displayed on HOD is 5=TRAINING LASER
SIGNAL FUNCTION: Provides type of missile data for display to operator.
REMARKS: From RHE to FCC for display.
PASS: If CONDITION on HOD corresponds to installed type of missiles, go to paragraph 8–402.
FAIL: Location of fault: replace: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–402 SIGNAL NAME: P2M2 TYPE (ACY) P2M2 MSL TYPE (ACZ)
  MEMORY LOCATION: 001417
  MEMORY DATA BIT(S):   7–8   (BINARY)
  CONDITION: If fifth digit displayed on HOD is 0, and fourth digit displayed on HOD is 0, 1, 2, or 3=TRAINING
  If fifth digit displayed on HOD is 1, and fourth digit displayed on HOD is 0, 1, 2, or 3=TACTICAL
  If fifth digit displayed on HOD is 1, and fourth digit displayed on HOD is 4, 5, 6, or 7=NONE
  SIGNAL FUNCTION: Indicates a tactical, training or no missile at location.
  REMARKS: From ECSP to RHE.
  PASS: If CONDITION corresponds to installed type of missiles, go to paragraph 8–403.
  FAIL: Location of fault: replace left inboard launcher ((TM 9–1425–475–30–2).

8–403 SIGNAL NAME: P2M2 TYPE (ACY) P2M2 MSL TYPE (ACZ)
  MEMORY LOCATION: 001735
  MEMORY DATA BIT(S):   7–8   (BINARY)
  CONDITION: If fourth digit displayed on HOD is 0, 1, 2, or 3=TRAINING
  If fifth digit displayed on HOD 1, 3, 5, or 7=TACTICAL
  If fifth digit displayed on HOD 1, 3, 5, or 7 and fourth digit displayed on HOD is 0, 1, 2, or 3=NONE
  SIGNAL FUNCTION: Indicates a tactical, training or no missile at location.
  REMARKS: From launcher through left inboard MRTU Type II to FCC.
  PASS: If CONDITION corresponds to installed type of missiles, refer to failure symptom index and next failure symptom paragraph.
  FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–404 SIGNAL NAME: P2M2 MSL DEICE #1 CMD
  MEMORY LOCATION: 001317
  MEMORY DATA BIT(S):   5   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Sends command to launcher ECSP to arm deicing squib.
  REMARKS: From RHE to ECSP.
  PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–405.
  FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–405 SIGNAL NAME: P2M2 MSL DEICE #1 CMD
  MEMORY LOCATION: 001754
  MEMORY DATA BIT(S):   5   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Sends command to launcher ECSP to arm deicing squib.
  REMARKS: From launcher through left inboard MRTU Type II to FCC.
  PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–436.
  FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

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8–406 SIGNAL NAME: P2M2 MSL SKR INPUT SLAVE (ACY) P2M2 SKR SLV SEL (ACZ)
  MEMORY LOCATION: 001317
  MEMORY DATA BIT(S): 6–8 (OCTAL)
  CONDITION: If the fifth digit is 0 or 4 and the fourth digit
              is 0 or 2=ZERO EL ZERO AZ
              If the fifth digit is 0 or 4 and the fourth digit
              is 4 or 6=REMEL REMAZ
              If the fifth digit is 1 or 5 and the fourth digit
              is 0 or 2=AUTOEL AUTOAZ
              If the fifth digit is 1 or 5 and the fourth digit
              is 4 or 6=REMEL REMAZ +BIAS/2
              If the fifth digit is 2 or 6 and the fourth digit
              is 0 or 2=REMEL REMAZ +BIAS
              If the fifth digit is 2 or 6 and the fourth digit
              is 4 or 6=REMEL REMAZ – BIAS/2
              If the fifth digit is 3 or 7 and the fourth digit
              is 0 or 2=REMEL REMAZ – BIAS
              If the fifth digit is 3 or 7 and the fourth digit
              is 4 or 6=AUTOEL ZERO AZ
  SIGNAL FUNCTION: Selects pitch and yaw slave commands to be applied to missile.
  REMARKS: From RHE to ECSP.
  PASS: If CONDITION corresponds to selected seeker input, go to paragraph 8–407.
  FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
        (TM 9–1427–475–20).

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8–407 SIGNAL NAME: P2M2 MSL SKR INPUT SLAVE (ACY) P2M2 SKR SLV SEL (ACZ)
  MEMORY LOCATION: 001754
  MEMORY DATA BIT(S): 6–8 (OCTAL)
  CONDITION: If the fifth digit is 0 or 4 and the fourth digit
              is 0 or 2=ZERO EL ZERO AZ
              If the fifth digit is 0 or 4 and the fourth digit
              is 4 or 6=REMEL REMAZ
              If the fifth digit is 1 or 5 and the fourth digit
              is 0 or 2=AUTOEL AUTOAZ
              If the fifth digit is 1 or 5 and the fourth digit
              is 4 or 6=REMEL REMAZ +BIAS/2
              If the fifth digit is 2 or 6 and the fourth digit
              is 0 or 2=REMEL REMAZ +BIAS
              If the fifth digit is 2 or 6 and the fourth digit
              is 4 or 6=REMEL REMAZ – BIAS/2
              If the fifth digit is 3 or 7 and the fourth digit
              is 0 or 2=REMEL REMAZ – BIAS
              If the fifth digit is 3 or 7 and the fourth digit
              is 4 or 6=AUTOEL ZERO AZ
  SIGNAL FUNCTION: Selects pitch and yaw slave commands to be applied to missile.
  REMARKS: From launcher through left inboard MRTU Type II to FCC.
  PASS: If CONDITION corresponds to selected seeker input, refer to failure symptom index and next
        failure symptom paragraph.
  FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
        Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–408 **SIGNAL NAME:** P2M2 MSL AUTO PILOT POWER CONTROL (ACY)

P2M2 AUTOPLT PWR (ACZ)

MEMORY LOCATION: 001317

MEMORY DATA BIT(S): 9 (BINARY)

CONDITION: (None)

SIGNAL FUNCTION: Controls application of auto pilot power to missile.

REMARKS: From RHE to ECSP.

PASS: If fourth digit on HOD is 2, 3, 6, or 7, go to paragraph 8–409.

FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–409 **SIGNAL NAME:** P2M2 MSL AUTO PILOT POWER CONTROL (ACY)

P2M2 AUTOPLT PWR (ACZ)

MEMORY LOCATION: 001754

MEMORY DATA BIT(S): 9 (BINARY)

CONDITION: (None)

SIGNAL FUNCTION: Controls application of auto pilot power to missile.

REMARKS: From launcher through left inboard MRTU Type II to FCC.

PASS: If fourth digit on HOD is 2, 3, 6, or 7, go to paragraph 8–410.

FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–410 **SIGNAL NAME:** P2M2 MSL AUTO PILOT POWER (ACY) P2M2 A/P PWR OK (ACZ)

MEMORY LOCATION: 001417

MEMORY DATA BIT(S): 17 (BINARY)

CONDITION: (None)

SIGNAL FUNCTION: Specifies auto pilot power is above minimum value (+18 VDC).

REMARKS: From ECSP to RHE.

PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–411.

FAIL: Location of fault: replace left inboard launcher (TM 9–1425–475–30–2).

8–411 **SIGNAL NAME:** P2M2 MSL AUTO PILOT POWER (ACY) P2M2 A/P PWR OK (ACZ)

MEMORY LOCATION: 001735

MEMORY DATA BIT(S): 17 (BINARY)

CONDITION: (None)

SIGNAL FUNCTION: Specifies auto pilot power is above minimum value (+18 VDC).

REMARKS: From launcher through left inboard MRTU Type II to FCC.

PASS: If first digit on HOD is 4, 5, 6, or 7, refer to failure symptom index and next failure symptom paragraph.

FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–412 SIGNAL NAME: P2M2 MSL TGT POLARITY CONTROL
 MEMORY LOCATION: 001317
 MEMORY DATA BIT(S):   10–11   (BINARY)
 CONDITION: If the fourth digit is 0, 2, 4, or 6 and the third digit is 0, 1, 2, 3=BLACK
                 If the fourth digit is 0, 2, 4, or 6 and the third digit is 4, 5, 6, 7=AUTO
                 If the fourth digit is 1, 3, 5, or 7 and the third digit is 0, 1, 2, 3=WHITE
 SIGNAL FUNCTION: Directs missile seeker to track a black target on a white background, a white
                 target on a black background or automatic contrast.
 REMARKS: From RHE to ECSP.
 PASS: If third digit on HOD corresponds to proper polarity, go to paragraph 8–413.
 FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
         (TM 9–1427–475–20).

8–413 SIGNAL NAME: P2M2 MSL TGT POLARITY CONTROL
 MEMORY LOCATION: 001754
 MEMORY DATA BIT(S):   10–11   (BINARY)
 CONDITION: If the fourth digit is 0, 2, 4, or 6 and the third digit is 0, 1, 2, 3=BLACK
                 If the fourth digit is 0, 2, 4, or 6 and the third digit is 4, 5, 6, 7=AUTO
                 If the fourth digit is 1, 3, 5, or 7 and the third digit is 0, 1, 2, 3=WHITE
 SIGNAL FUNCTION: Directs missile seeker to track a black target on a white background, a white
                 target on a black background or automatic contrast.
 REMARKS: From launcher through left inboard MRTU Type II to FCC.
 PASS: If third digit on HOD corresponds to proper polarity, refer to failure symptom index and next
          failure symptom paragraph.
 FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
         Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–414 SIGNAL NAME: P2M2 MSL BIT CMD
 MEMORY LOCATION: 001317
 MEMORY DATA BIT(S):   12   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Controls launcher BIT.
 REMARKS: From RHE to ECSP.
 PASS: If third digit on HOD is 0, 1, 4, or 5, go to paragraph 8–415.
 FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
         (TM 9–1427–475–20).

8–415 SIGNAL NAME: P2M2 MSL BIT CMD
 MEMORY LOCATION: 001754
 MEMORY DATA BIT(S):   12   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Controls launcher BIT.
 REMARKS: From launcher through left inboard MRTU Type II to FCC.
 PASS: If third digit on HOD is 0, 1, 4, or 5, go to paragraph 8–416.
 FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
         Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–416 SIGNAL NAME: P2M2 MSL SKR POWER CONTROL (ACY) P2M2 SKR PWR OK (ACZ)
    MEMORY LOCATION: 001317
    MEMORY DATA BIT(S):   13   (BINARY)
    CONDITION: (None)
    SIGNAL FUNCTION: Controls application of seeker power.
    REMARKS: From RHE to ECSP.
    PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–417.
    FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
        (TM 9–1427–475–20).

8–417 SIGNAL NAME: P2M2 MSL SKR POWER CONTROL (ACY) P2M2 SKR PWR OK (ACZ)
    MEMORY LOCATION: 001754
    MEMORY DATA BIT(S):   13   (BINARY)
    CONDITION: (None)
    SIGNAL FUNCTION: Controls application of seeker power.
    REMARKS: From launcher through left inboard MRTU Type II to FCC.
    PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–418.
    FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
        Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–418 SIGNAL NAME: P2M2 MSL SKR POWER
    MEMORY LOCATION: 001417
    MEMORY DATA BIT(S):   12   (BINARY)
    CONDITION: (None)
    SIGNAL FUNCTION: Indicates status of seeker power (+28 VDC).
    REMARKS: From ECSP to RHE.
    PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 8–419.
    FAIL: Location of fault: replace left inboard launcher (TM 9–1425–475–30–2).

8–419 SIGNAL NAME: P2M2 MSL SEEKER POWER (ACY) P2M2 SKR PWR OK (ACZ)
    MEMORY LOCATION: 001735
    MEMORY DATA BIT(S):   12   (BINARY)
    CONDITION: (None)
    SIGNAL FUNCTION: Indicates status of seeker power (+28 VDC).
    REMARKS: From launcher through left inboard MRTU Type II to FCC.
    PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 8–422.
    FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
        Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–420 SIGNAL NAME: P2M2 CCM ACTIVATE CMD
    MEMORY LOCATION: 001317
    MEMORY DATA BIT(S):   14   (BINARY)
    CONDITION: (None)
    SIGNAL FUNCTION: Commands missile seeker to enter CCM mode.
    REMARKS: From RHE to ECSP.
    PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–421.
    FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
        (TM 9–1427–475–20).

8–421 SIGNAL NAME: P2M2 CCM ACTIVATE CMD
MEMORY LOCATION: 001754
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to enter CCM mode.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1123.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–422 SIGNAL NAME: P2M2 MSL SCAN SEARCH CMD
MEMORY LOCATION: 001317
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter target acquisition mode and to enter lock–on when target is acquired.
REMARKS: From RHE to ECSP.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–423.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–423 SIGNAL NAME: P2M2 MSL SCAN SEARCH CMD
MEMORY LOCATION: 001754
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter target acquisition mode and to enter lock–on when target is acquired.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–426.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–424 SIGNAL NAME: P2M2 MSL SEEKER SLAVE CMD
MEMORY LOCATION: 001317
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter slave mode.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–425.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–425 **SIGNAL NAME:** P2M2 MSL SEEKER SLAVE CMD
MEMORY LOCATION: 001754
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter slave mode.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–432.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–426 **SIGNAL NAME:** P2M2 MSL STARE TRACK CMD
MEMORY LOCATION: 001317
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter stare mode. If proper laser code is detected in seeker FOV, seeker will enter track mode.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–427.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–427 **SIGNAL NAME:** P2M2 MSL STARE TRACK CMD
MEMORY LOCATION: 001754
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter stare mode. If proper laser code is detected in seeker FOV, seeker will enter track mode.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If first digit on HOD is 2, 3, 6, or 7, refer to failure symptom index and next failure symptom paragraph.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–428 **SIGNAL NAME:** P2M2 MSL CORRELATE
MEMORY LOCATION: 001417
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates laser has detected a laser beam whose laser code agrees with internal stored code.
REMARKS: From ECSP to RHE.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–429.
FAIL: Location of fault: replace left inboard launcher (TM 9–1425–475–30–2).

8–429 SIGNAL NAME: P2M2 MSL CORRELATE
MEMORY LOCATION: 001735
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates laser has detected a laser beam whose laser code agrees with internal stored code.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–430.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–430 SIGNAL NAME: P2M2 MSL TRACK
MEMORY LOCATION: 001417
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker has entered track mode. The laser seeker can enter track mode whenever a proper laser beam is detected in seeker FOV for any mode except cage.
REMARKS: From ECSP to RHE.
PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–431.
FAIL: Location of fault: replace left inboard launcher (TM 9–1425–475–30–2).

8–431 SIGNAL NAME: P2M2 MSL TRACK
MEMORY LOCATION: 001735
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker has entered track mode. The laser seeker can enter track mode whenever a proper laser beam is detected in seeker FOV for any mode except cage.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1153.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–432 SIGNAL NAME: P2M2 MSL SKR CAGE CMD
MEMORY LOCATION: 001317
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile to enter cage mode.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–433.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–433 **SIGNAL NAME:**   P2M2 MSL SKR CAGE CMD
      MEMORY LOCATION: 001754
      MEMORY DATA BIT(S):   19   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Commands missile to enter cage mode.
      REMARKS: From launcher through left inboard MRTU Type II to FCC.
      PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–434.
      FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
            Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–434 **SIGNAL NAME:**   P2M2 MSL SKR CAGE
      MEMORY LOCATION: 001417
      MEMORY DATA BIT(S):   13   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates seeker is in cage mode. The seeker cannot track in cage position.
      REMARKS: From ECSP to RHE.
      PASS: If third digit on HOD is 0, 2, 4, or 6, go to paragraph 8–435.
      FAIL: Location of fault: replace left inboard launcher (TM 9–1425–475–30–2).

8–435 **SIGNAL NAME:**   P2M2 MSL SKR CAGE
      MEMORY LOCATION: 001735
      MEMORY DATA BIT(S):   13   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates seeker is in cage mode. The seeker cannot track in cage position.
      REMARKS: From launcher through left inboard MRTU Type II to FCC.
      PASS: If third digit on HOD is 0, 2, 4, or 6, go to paragraph 8–438.
      FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
            Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–436 **SIGNAL NAME:**   P2M2 MSL DEICE #2 CMD
      MEMORY LOCATION: 001323
      MEMORY DATA BIT(S):   4   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Issues deicing squib fire command to selected missile.
      REMARKS: From RHE to ECSP.
      PASS: If sixth digit on HOD is 1, go to paragraph 8–437.
      FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
            (TM 9–1427–475–20).

8–437 **SIGNAL NAME:** P2M2 MSL DEICE #2 CMD
 MEMORY LOCATION: 001760
 MEMORY DATA BIT(S): 4 (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Issues deicing squib fire command to selected missile.
 REMARKS: From launcher through left inboard MRTU Type II to FCC.
 PASS: If sixth digit on HOD is 1, go to paragraph 8–1118.
 FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–438 **SIGNAL NAME:** P2M2 MSL BIT CONTROL
 MEMORY LOCATION: 001323
 MEMORY DATA BIT(S): 6–9 (HEX)
 CONDITION: (None)
 SIGNAL FUNCTION: Commands BIT on autopilot.
 REMARKS: From RHE to ECSP.
 PASS: If fifth digit displayed on HOD is 0, 1, or 2, and the fourth digit displayed on HOD is 2, 3, 4, 5, 6, or 7 go to paragraph 8–439.
 FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–439 **SIGNAL NAME:** P2M2 MSL BIT CONTROL
 MEMORY LOCATION: 001760
 MEMORY DATA BIT(S): 6–9 (HEX)
 CONDITION: (None)
 SIGNAL FUNCTION: Commands BIT on autopilot.
 REMARKS: From launcher through left inboard MRTU Type II to FCC.
 PASS: Location of fault if fifth digit displayed on HOD is 0, 1, or 2, and the fourth digit displayed on HOD is 2, 3, 4, 5, 6, or 7: Replace left inboard launcher missile 2 (TM 9–1427–475–20).
 FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–440 **SIGNAL NAME:** P2M2 MSL INDIRECT FIRE LO
 MEMORY LOCATION: 001323
 MEMORY DATA BIT(S): 10 (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Commands low flight profile for LOAL operation.
 REMARKS: From RHE to ECSP.
 PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–441.
 FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–441 SIGNAL NAME: P2M2 MSL INDIRECT FIRE LO
        MEMORY LOCATION: 001760
        MEMORY DATA BIT(S):   10   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Commands low flight profile for LOAL operation.
        REMARKS: From launcher through left inboard MRTU Type II to FCC.
        PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1108.
        FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
        Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–442 SIGNAL NAME: P2M2 MSL INDIRECT FIRE HI
        MEMORY LOCATION: 001323
        MEMORY DATA BIT(S):   11   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Commands high flight profile for LOAL operation.
        REMARKS: From RHE to ECSP.
        PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 8–443.
        FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
        (TM 9–1427–475–20).

8–443 SIGNAL NAME: P2M2 MSL INDIRECT FIRE HI
        MEMORY LOCATION: 001760
        MEMORY DATA BIT(S):   11   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Commands high flight profile for LOAL operation.
        REMARKS: From launcher through left inboard MRTU Type II to FCC.
        PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1108.
        FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
        Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–444 SIGNAL NAME: P2M2 MSL RF CODE ACCEPT COMMAND
        MEMORY LOCATION: 001323
        MEMORY DATA BIT(S):   13   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Commands missile seeker to accept RF code data from analog command lines
                        3 and 4. Commands ECSP to hook up analog commands 3 and 4 to selected
                        missile.
        REMARKS: From RHE to ECSP.
        PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–445.
        FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
        (TM 9–1427–475–20).

8–445 SIGNAL NAME: P2M2 MSL RF CODE ACCEPT COMMAND
MEMORY LOCATION: 001760
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to accept RF code data from analog command lines 3 and 4. Commands ECSP to hook up analog commands 3 and 4 to selected missile.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–446.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–446 SIGNAL NAME: P2M2 MSL LASER CODE ACCEPT COMMAND
MEMORY LOCATION: 001323
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser code information received from RHE by launcher on coax A and B to be relayed to identified missile.
REMARKS: From RHE to ECSP.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–447.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–447 SIGNAL NAME: P2M2 MSL LASER CODE ACCEPT COMMAND
MEMORY LOCATION: 001760
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser code information received from RHE by launcher on coax A and B to be relayed to identified missile.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1106.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–448 SIGNAL NAME: P2M2 MSL COAX B CONNECT
MEMORY LOCATION: 001323
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax B to indicated missile.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–449.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–449 SIGNAL NAME: P2M2 MSL COAX B CONNECT
MEMORY LOCATION: 001760
MEMORY DATA BIT(S):   17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax B to indicated missile.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–450.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–450 SIGNAL NAME: P2M2 MSL COAX A CONNECT
MEMORY LOCATION: 001323
MEMORY DATA BIT(S):   18   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax A to indicated missile.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–451.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–451 SIGNAL NAME: P2M2 MSL COAX A CONNECT
MEMORY LOCATION: 001760
MEMORY DATA BIT(S):   18   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax A to indicated missile.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1106.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–452 SIGNAL NAME: P2M2 MSL SKR LAUNCH PREPARE COMMAND (ACY)
            P2M2 SKR LNCH CMD (ACZ)
MEMORY LOCATION: 001323
MEMORY DATA BIT(S):   19   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Prepares missile for free flight operation.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–453.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–453 SIGNAL NAME: P2M2 MSL SKR LAUNCH PREPARE COMMAND (ACY)
            P2M2 SKR LNCH CMD (ACZ)
MEMORY LOCATION: 001760
MEMORY DATA BIT(S):   19   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Prepares missile for free flight operation.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–1126.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–454 SIGNAL NAME: P2M3 BIT PERFORMED
MEMORY LOCATION: 001350
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to FCC that BIT has been performed.
REMARKS: From RHE to FCC.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–455.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–455 SIGNAL NAME: P2M3 BIT STATUS (ACY) P2M3 DISPLAY STATUS (ACZ)
MEMORY LOCATION: 001354
MEMORY DATA BIT(S): 12–15 (HEX)
CONDITION: If third digit displayed on HOD is 0 and second digit displayed
on HOD is 0=NO MSL
If third digit displayed on HOD is 0 or 4 and second digit displayed
on HOD is 2 or 3=SELECTED
If third digit displayed on HOD is 0 or 4 and second digit displayed
on HOD is 4 or 5=READY
If third digit displayed on HOD is 0 or 4 and second digit displayed
on HOD is 6 or 7=TRACKING
If third digit displayed on HOD is 3 or 7 and second digit displayed
on HOD is 0=CODED
If third digit displayed on HOD is 3 or 7 and second digit displayed
on HOD is 6=CAGED
If third digit displayed on HOD is 5 or 1 and second digit displayed
on HOD is 0=BIT NO GO
If third digit displayed on HOD is 5 or 1 and second digit displayed
on HOD is 2=FAILED
If third digit displayed on HOD is 5 or 1 and second digit displayed
on HOD is 6=BATTERY NO GO
If third digit displayed on HOD is 6 or 2 and second digit displayed
on HOD is 0=UNLATCHED
If third digit displayed on HOD is 6 or 2 and second digit displayed
on HOD is 2=MRTU NO GO
If third digit displayed on HOD is 6 or 2 and second digit displayed
on HOD is 4=RAIL NO GO
SIGNAL FUNCTION: Provides missile status display for operator.
REMARKS: From RHE to FCC for display.
PASS: If CONDITION corresponds to selected message, refer to failure symptom index and next
failure symptom paragraph.
FAIL: Location of fault: RHE, wiring from RHE to left inboard launcher, left inboard launcher.
Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–456 SIGNAL NAME: P2M3 UNLATCH INDICATE
MEMORY LOCATION: 001421
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to RHE missile is unlatched.
REMARKS: From launcher to RHE.
PASS: If second digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 8–457.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to RHE, RHE.
Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–457   **SIGNAL NAME:**   P2M3 UNLATCH INDICATE
        MEMORY LOCATION: 001737
        MEMORY DATA BIT(S):   16   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Indicates to operator when a missile is unlatched.
        REMARKS: From launcher through left inboard MRTU Type II to FCC for display.
        PASS: If second digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 8–458.
        FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
            Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–458   **SIGNAL NAME:**   P2M3 UNLATCH INDICATE
        MEMORY LOCATION: 001762
        MEMORY DATA BIT(S):   16   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Indicates to operator when a missile is unlatched.
        REMARKS: From FCC through left inboard MRTU Type II to launcher.
        PASS: If second digit displayed on HOD is 0, 2, 4, or 6, refer to failure symptom index and next
            failure symptom paragraph.
        FAIL: Location of fault: left inboard MRTU Type II, wiring from left inboard MRTU Type II to FCC,
            FCC. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

8–459   **SIGNAL NAME:**   P2M3 UPPER LOWER DISPLAY STATUS (ACY) P2M3 PRIORITY IND (ACZ)
        MEMORY LOCATION: 001354
        MEMORY DATA BIT(S):   16   (BINARY)
        CONDITION: If the second digit displayed on HOD is 0, 2, 4, or 6=UPPER
                      If the second digit displayed on HOD is 1, 3, 5, or 7=LOWER
        SIGNAL FUNCTION: Indicates to operator when a selected missile has been assigned to upper or
                  lower channel.
        REMARKS: From RHE to FCC for display.
        PASS: If CONDITION corresponds to selected channel, go to paragraph 8–460.
        FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–460   **SIGNAL NAME:**   P2M3 TYPE STATUS DISPLAY (ACY) P2M3 TYPE (ACZ)
        MEMORY LOCATION: 001354
        MEMORY DATA BIT(S):   17–19   (OCTAL)
        CONDITION: If the first digit displayed on HOD is 0=NONE
                      If the first digit displayed on HOD is 1=TACTICAL LASER
                      If the first digit displayed on HOD is 4=UNIDENTIFIED
                      If the first digit displayed on HOD is 5=TRAINING LASER
        SIGNAL FUNCTION: Provides type of missile data for display to operator.
        REMARKS: From RHE to FCC for display.
        PASS: If CONDITION on HOD corresponds to installed type of missiles, go to paragraph 8–461.
        FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
            (TM 9–1427–475–20).

8–461 SIGNAL NAME: P2M3 TYPE (ACY) P2M3 MSL TYPE (ACZ)   ◼
MEMORY LOCATION: 001416
MEMORY DATA BIT(S):   7–8   (BINARY)
CONDITION: If fifth digit displayed on HOD is 0, and fourth digit displayed on HOD is 0, 1, 2, or 3=TRAINING
If fifth digit displayed on HOD is 1, and fourth digit displayed on HOD is 0, 1, 2, or 3=TACTICAL
If fifth digit displayed on HOD is 1, and fourth digit displayed on HOD is 4, 5, 6, or 7=NONE
SIGNAL FUNCTION: Indicates a tactical, training or no missile at location.
REMARKS: From ECSP to RHE.
PASS: If CONDITION corresponds to installed type of missiles, go to paragraph 8–462.
FAIL: Location of fault: replace left inboard launcher (TM 9–1425–475–30–2).

8–462 SIGNAL NAME: P2M3 TYPE (ACY) P2M3 MSL TYPE (ACZ)   ◼
MEMORY LOCATION: 001734
MEMORY DATA BIT(S):   7–8   (BINARY)
CONDITION: If fourth digit displayed on HOD is 0, 1, 2, or 3=TRAINING
If fifth digit displayed on HOD 1, 3, 5, or 7=TACTICAL
If fifth digit displayed on HOD 1, 3, 5, or 7 and fourth digit displayed on HOD is 0, 1, 2, or 3=NONE
SIGNAL FUNCTION: Indicates a tactical, training or no missile at location.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If CONDITION corresponds to installed type of missiles, refer to failure symptom index and next failure symptom paragraph.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–463 SIGNAL NAME: P2M3 MSL DEICE #1 CMD
MEMORY LOCATION: 001316
MEMORY DATA BIT(S):   5   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Sends command to launcher ECSP to arm deicing squib.
REMARKS: From RHE to ECSP.
PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–464.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–464 SIGNAL NAME: P2M3 MSL DEICE #1 CMD
MEMORY LOCATION: 001753
MEMORY DATA BIT(S):   5   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Sends command to launcher ECSP to arm deicing squib.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–495.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–465 **SIGNAL NAME:** P2M3 MSL SKR INPUT SLAVE (ACY) P2M3 SKR SLV SEL (ACZ)
MEMORY LOCATION: 001316
MEMORY DATA BIT(S): 6–8 (OCTAL)
CONDITION: If the fifth digit is 0 or 4 and the fourth digit
is 0 or 2=ZERO EL ZERO AZ
If the fifth digit is 0 or 4 and the fourth digit
is 4 or 6=REMEL REMAZ
If the fifth digit is 1 or 5 and the fourth digit
is 0 or 2=AUTOEL AUTOAZ
If the fifth digit is 1 or 5 and the fourth digit
is 4 or 6=REMEL REMAZ +BIAS/2
If the fifth digit is 2 or 6 and the fourth digit
is 0 or 2=REMEL REMAZ +BIAS
If the fifth digit is 2 or 6 and the fourth digit
is 4 or 6=REMEL REMAZ – BIAS/2
If the fifth digit is 3 or 7 and the fourth digit
is 0 or 2=REMEL REMAZ – BIAS
If the fifth digit is 3 or 7 and the fourth digit
is 4 or 6=AUTOEL ZERO AZ
SIGNAL FUNCTION: Selects pitch and yaw slave commands to be applied to missile.
REMARKS: From RHE to ECSP.
PASS: If CONDITION corresponds to selected seeker input, go to paragraph 8–466.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–466 **SIGNAL NAME:** P2M3 MSL SKR INPUT SLAVE (ACY) P2M3 SKR SLV SEL (ACZ)
MEMORY LOCATION: 001753
MEMORY DATA BIT(S): 6–8 (OCTAL)
CONDITION: If the fifth digit is 0 or 4 and the fourth digit
is 0 or 2=ZERO EL ZERO AZ
If the fifth digit is 0 or 4 and the fourth digit
is 4 or 6=REMEL REMAZ
If the fifth digit is 1 or 5 and the fourth digit
is 0 or 2=AUTOEL AUTOAZ
If the fifth digit is 1 or 5 and the fourth digit
is 4 or 6=REMEL REMAZ +BIAS/2
If the fifth digit is 2 or 6 and the fourth digit
is 0 or 2=REMEL REMAZ +BIAS
If the fifth digit is 2 or 6 and the fourth digit
is 4 or 6=REMEL REMAZ – BIAS/2
If the fifth digit is 3 or 7 and the fourth digit
is 0 or 2=REMEL REMAZ – BIAS
If the fifth digit is 3 or 7 and the fourth digit
is 4 or 6=AUTOEL ZERO AZ
SIGNAL FUNCTION: Selects pitch and yaw slave commands to be applied to missile.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If CONDITION corresponds to selected seeker input, refer to failure symptom index and next
failure symptom paragraph.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–467 SIGNAL NAME: P2M3 MSL AUTO PILOT POWER CONTROL (ACY)
P2M3 AUTOPLT PWR (ACZ)
MEMORY LOCATION: 001316
MEMORY DATA BIT(S): 9 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of auto pilot power to missile.
REMARKS: From RHE to ECSP.
PASS: If fourth digit on HOD is 2, 3, 6, or 7, go to paragraph 8–468.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–468 SIGNAL NAME: P2M3 MSL AUTO PILOT POWER CONTROL (ACY)
P2M3 AUTOPLT PWR (ACZ)
MEMORY LOCATION: 001753
MEMORY DATA BIT(S): 9 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of auto pilot power to missile.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If fourth digit on HOD is 2, 3, 6, or 7, go to paragraph 8–469.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–469 SIGNAL NAME: P2M3 MSL AUTO PILOT POWER (ACY) P2M3 A/P PWR OK (ACZ)
MEMORY LOCATION: 001416
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Specifies auto pilot power is above minimum value (+18 VDC).
REMARKS: From ECSP to RHE.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–470.
FAIL: Location of fault: replace left inboard launcher ((TM 9–1425–475–30–2).

8–470 SIGNAL NAME: P2M3 MSL AUTO PILOT POWER (ACY) P2M3 A/P PWR OK (ACZ)
MEMORY LOCATION: 001734
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Specifies auto pilot power is above minimum value (+18 VDC).
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, refer to failure symptom index and next failure symptom
paragraph.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–471 **SIGNAL NAME:** P2M3 MSL TGT POLARITY CONTROL
MEMORY LOCATION: 001316
MEMORY DATA BIT(S): 10–11 (BINARY)
CONDITION: If the fourth digit is 0, 2, 4, or 6 and the third digit is 0, 1, 2, 3=BLACK
If the fourth digit is 0, 2, 4, or 6 and the third digit is 4, 5, 6, 7=AUTO
If the fourth digit is 1, 3, 5, or 7 and the third digit is 0, 1, 2, 3=WHITE
SIGNAL FUNCTION: Directs missile seeker to track a black target on a white background, a white target on a black background or automatic contrast.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD corresponds to proper polarity, go to paragraph 8–472.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–472 **SIGNAL NAME:** P2M3 MSL TGT POLARITY CONTROL
MEMORY LOCATION: 001753
MEMORY DATA BIT(S): 10–11 (BINARY)
CONDITION: If the fourth digit is 0, 2, 4, or 6 and the third digit is 0, 1, 2, 3=BLACK
If the fourth digit is 0, 2, 4, or 6 and the third digit is 4, 5, 6, 7=AUTO
If the fourth digit is 1, 3, 5, or 7 and the third digit is 0, 1, 2, 3=WHITE
SIGNAL FUNCTION: Directs missile seeker to track a black target on a white background, a white target on a black background or automatic contrast.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If third digit on HOD corresponds to proper polarity, refer to failure symptom index and next failure symptom paragraph.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–473 **SIGNAL NAME:** P2M3 MSL BIT CMD
MEMORY LOCATION: 001316
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls launcher BIT.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 0, 1, 4, or 5, go to paragraph 8–474.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–474 **SIGNAL NAME:** P2M3 MSL BIT CMD
MEMORY LOCATION: 001753
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls launcher BIT.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If third digit on HOD is 0, 1, 4, or 5, go to paragraph 8–475.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–475 SIGNAL NAME: P2M3 MSL SKR POWER CONTROL (ACY) P2M3 SKR PWR OK (ACZ)
MEMORY LOCATION: 001316
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of seeker power.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–476.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–476 SIGNAL NAME: P2M3 MSL SKR POWER CONTROL (ACY) P2M3 SKR PWR OK (ACZ)
MEMORY LOCATION: 001753
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of seeker power.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–477.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–477 SIGNAL NAME: P2M3 MSL SKR POWER
MEMORY LOCATION: 001416
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of seeker power (+28 VDC).
REMARKS: From ECSP to RHE.
PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 8–478.
FAIL: Location of fault: replace left inboard launcher (TM 9–1425–475–30–2).

8–478 SIGNAL NAME: P2M3 MSL SEEKER POWER (ACY) P2M3 SKR PWR OK (ACZ)
MEMORY LOCATION: 001734
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of seeker power (+28 VDC).
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 8–481.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–479 SIGNAL NAME: P2M3 CCM ACTIVATE CMD
MEMORY LOCATION: 001316
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to enter CCM mode.
REMARKS: From RHE to ECSP.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–480.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–480 SIGNAL NAME: P2M3 CCM ACTIVATE CMD
     MEMORY LOCATION: 001753
     MEMORY DATA BIT(S):   14   (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Commands missile seeker to enter CCM mode.
     REMARKS: From launcher through left inboard MRTU Type II to FCC.
     PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1123.
     FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
          Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–481 SIGNAL NAME: P2M3 MSL SCAN SEARCH CMD
     MEMORY LOCATION: 001316
     MEMORY DATA BIT(S):   16   (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Commands laser seeker to enter target acquisition mode and to enter lock–on
                    when target is acquired.
     REMARKS: From RHE to ECSP.
     PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–482.
     FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–482 SIGNAL NAME: P2M3 MSL SCAN SEARCH CMD
     MEMORY LOCATION: 001753
     MEMORY DATA BIT(S):   16   (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Commands laser seeker to enter target acquisition mode and to enter lock–on
                    when target is acquired.
     REMARKS: From launcher through left inboard MRTU Type II to FCC.
     PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–485.
     FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
          Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–483 SIGNAL NAME: P2M3 MSL SEEKER SLAVE CMD
     MEMORY LOCATION: 001316
     MEMORY DATA BIT(S):   17   (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Commands laser seeker to enter slave mode.
     REMARKS: From RHE to ECSP.
     PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–484.
     FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–484 SIGNAL NAME: P2M3 MSL SEEKER SLAVE CMD
MEMORY LOCATION: 001753
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter slave mode.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–491.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–485 SIGNAL NAME: P2M3 MSL STARE TRACK CMD
MEMORY LOCATION: 001316
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter stare mode. If proper laser code is detected in seeker FOV, seeker will enter track mode.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–486.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–486 SIGNAL NAME: P2M3 MSL STARE TRACK CMD
MEMORY LOCATION: 001753
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter stare mode. If proper laser code is detected in seeker FOV, seeker will enter track mode.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If first digit on HOD is 2, 3, 6, or 7, refer to failure symptom index and next failure symptom paragraph.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–487 SIGNAL NAME: P2M3 MSL CORRELATE
MEMORY LOCATION: 001416
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates laser has detected a laser beam whose laser code agrees with internal stored code.
REMARKS: From ECSP to RHE.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–488.
FAIL: Location of fault: replace left inboard launcher (TM 9–1425–475–30–2).

8–488 **SIGNAL NAME:** P2M3 MSL CORRELATE
MEMORY LOCATION: 001734
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates laser has detected a laser beam whose laser code agrees with internal stored code.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–489.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–489 **SIGNAL NAME:** P2M3 MSL TRACK
MEMORY LOCATION: 001416
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker has entered track mode. The laser seeker can enter track mode whenever a proper laser beam is detected in seeker FOV for any mode except cage.
REMARKS: From ECSP to RHE.
PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–490.
FAIL: Location of fault: replace left inboard launcher (TM 9–1425–475–30–2).

8–490 **SIGNAL NAME:** P2M3 MSL TRACK
MEMORY LOCATION: 001734
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker has entered track mode. The laser seeker can enter track mode whenever a proper laser beam is detected in seeker FOV for any mode except cage.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1153.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–491 **SIGNAL NAME:** P2M3 MSL SKR CAGE CMD
MEMORY LOCATION: 001316
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile to enter cage mode.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–492.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–492 SIGNAL NAME: P2M3 MSL SKR CAGE CMD
   MEMORY LOCATION: 001753
   MEMORY DATA BIT(S):   19   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Commands missile to enter cage mode.
   REMARKS: From launcher through left inboard MRTU Type II to FCC.
   PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–493.
   FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–493 SIGNAL NAME: P2M3 MSL SKR CAGE
   MEMORY LOCATION: 001416
   MEMORY DATA BIT(S):   13   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Indicates seeker is in cage mode. The seeker cannot track in cage position.
   REMARKS: From ECSP to RHE.
   PASS: If third digit on HOD is 0, 2, 4, or 6, go to paragraph 8–494.
   FAIL: Location of fault: replace left inboard launcher (TM 9–1425–475–30–2).

8–494 SIGNAL NAME: P2M3 MSL SKR CAGE
   MEMORY LOCATION: 001734
   MEMORY DATA BIT(S):   13   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Indicates seeker is in cage mode. The seeker cannot track in cage position.
   REMARKS: From launcher through left inboard MRTU Type II to FCC.
   PASS: If third digit on HOD is 0, 2, 4, or 6, go to paragraph 8–497.
   FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–495 SIGNAL NAME: P2M3 MSL DEICE #2 CMD
   MEMORY LOCATION: 001322
   MEMORY DATA BIT(S):   4   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Issues deicing squib fire command to selected missile.
   REMARKS: From RHE to ECSP.
   PASS: If sixth digit on HOD is 1, go to paragraph 8–496.
   FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–496 **SIGNAL NAME:** P2M3 MSL DEICE #2 CMD
MEMORY LOCATION: 001757
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Issues deicing squib fire command to selected missile.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If sixth digit on HOD is 1, go to paragraph 8–1118.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–497 **SIGNAL NAME:** P2M3 MSL BIT CONTROL
MEMORY LOCATION: 001322
MEMORY DATA BIT(S): 6–9 (HEX)
CONDITION: (None)
SIGNAL FUNCTION: Commands BIT on autopilot.
REMARKS: From RHE to ECSP.
PASS: If fifth digit displayed on HOD is 0, 1, or 2, and the fourth digit displayed on HOD is 2, 3, 4, 5, 6, or 7 go to paragraph 8–498.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–498 **SIGNAL NAME:** P2M3 MSL BIT CONTROL
MEMORY LOCATION: 001757
MEMORY DATA BIT(S): 6–9 (HEX)
CONDITION: (None)
SIGNAL FUNCTION: Commands BIT on autopilot.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: Location of fault if fifth digit displayed on HOD is 0, 1, or 2, and the fourth digit displayed on HOD is 2, 3, 4, 5, 6, or 7: Replace left inboard launcher missile 3 (TM 9–1427–475–20).
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–499 **SIGNAL NAME:** P2M3 MSL INDIRECT FIRE LO
MEMORY LOCATION: 001322
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands low flight profile for LOAL operation.
REMARKS: From RHE to ECSP.
PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–500.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–500 SIGNAL NAME: P2M3 MSL INDIRECT FIRE LO
MEMORY LOCATION: 001757
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands low flight profile for LOAL operation.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1108.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–501 SIGNAL NAME: P2M3 MSL INDIRECT FIRE HI
MEMORY LOCATION: 001322
MEMORY DATA BIT(S): 11 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands high flight profile for LOAL operation.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 8–502.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–502 SIGNAL NAME: P2M3 MSL INDIRECT FIRE HI
MEMORY LOCATION: 001757
MEMORY DATA BIT(S): 11 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands high flight profile for LOAL operation.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1108.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–503 SIGNAL NAME: P2M3 MSL RF CODE ACCEPT COMMAND
MEMORY LOCATION: 001322
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to accept RF code data from analog command lines
3 and 4. Commands ECSP to hook up analog commands 3 and 4 to selected
missile.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–504.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–504 **SIGNAL NAME:** P2M3 MSL RF CODE ACCEPT COMMAND
MEMORY LOCATION: 001757
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to accept RF code data from analog command lines 3 and 4. Commands ECSP to hook up analog commands 3 and 4 to selected missile.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–505.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–505 **SIGNAL NAME:** P2M3 MSL LASER CODE ACCEPT COMMAND
MEMORY LOCATION: 001322
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser code information received from RHE by launcher on coax A and B to be relayed to identified missile.
REMARKS: From RHE to ECSP.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–506.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–506 **SIGNAL NAME:** P2M3 MSL LASER CODE ACCEPT COMMAND
MEMORY LOCATION: 001757
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser code information received from RHE by launcher on coax A and B to be relayed to identified missile.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1106.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–507 **SIGNAL NAME:** P2M3 MSL COAX B CONNECT
MEMORY LOCATION: 001322
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax B to indicated missile.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–508.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–508 SIGNAL NAME: P2M3 MSL COAX B CONNECT
 MEMORY LOCATION: 001757
 MEMORY DATA BIT(S):   17   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Commands launcher to connect coax B to indicated missile.
 REMARKS: From launcher through left inboard MRTU Type II to FCC.
 PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–509.
 FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
  Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–509 SIGNAL NAME: P2M3 MSL COAX A CONNECT
 MEMORY LOCATION: 001322
 MEMORY DATA BIT(S):   18   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Commands launcher to connect coax A to indicated missile.
 REMARKS: From RHE to ECSP.
 PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–510.
 FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
  (TM 9–1427–475–20).

8–510 SIGNAL NAME: P2M3 MSL COAX A CONNECT
 MEMORY LOCATION: 001757
 MEMORY DATA BIT(S):   18   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Commands launcher to connect coax A to indicated missile.
 REMARKS: From launcher through left inboard MRTU Type II to FCC.
 PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1106.
 FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
  Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–511 SIGNAL NAME: P2M3 MSL SKR LAUNCH PREPARE COMMAND (ACY)
   P2M3 SKR LNCH CMD (ACZ)
 MEMORY LOCATION: 001322
 MEMORY DATA BIT(S):   19   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Prepares missile for free flight operation.
 REMARKS: From RHE to ECSP.
 PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–512.
 FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
  (TM 9–1427–475–20).

8–512 SIGNAL NAME: P2M3 MSL SKR LAUNCH PREPARE COMMAND (ACY)
   P2M3 SKR LNCH CMD (ACZ)
 MEMORY LOCATION: 001757
 MEMORY DATA BIT(S):   19   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Prepares missile for free flight operation.
 REMARKS: From launcher through left inboard MRTU Type II to FCC.
 PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–1126.
 FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
  Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–513 **SIGNAL NAME:** P2M4 BIT PERFORMED
MEMORY LOCATION: 001350
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to FCC that BIT has been performed.
REMARKS: From RHE to FCC.
PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 8–514.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–514 **SIGNAL NAME:** P2M4 BIT STATUS (ACY) P2M4 DISPLAY STATUS (ACZ)
MEMORY LOCATION: 001354
MEMORY DATA BIT(S): 4–7 (HEX)
CONDITION: If sixth digit displayed on HOD is 0 and fifth digit displayed
on HOD is 0=NO MSL
If sixth digit displayed on HOD is 0 and fifth digit displayed
on HOD is 1=SELECTED
If sixth digit displayed on HOD is 0 and fifth digit displayed
on HOD is 2=READY
If sixth digit displayed on HOD is 0 and fifth digit displayed
on HOD is 3=TRACKING
If sixth digit displayed on HOD is 0 and fifth digit displayed
on HOD is 4=BIT NO GO
If sixth digit displayed on HOD is 0 and fifth digit displayed
on HOD is 5=FAILED
If sixth digit displayed on HOD is 0 and fifth digit displayed
on HOD is 7=BATTERY NO GO
If sixth digit displayed on HOD is 1 and fifth digit displayed
on HOD is 0=UNLATCHED
If sixth digit displayed on HOD is 1 and fifth digit displayed
on HOD is 1=MRTU NO GO
If sixth digit displayed on HOD is 1 and fifth digit displayed
on HOD is 4=CODED
If sixth digit displayed on HOD is 1 and fifth digit displayed
on HOD is 7=CAGED
SIGNAL FUNCTION: Provides missile status display for operator.
REMARKS: From RHE to FCC for display.
PASS: If CONDITION corresponds to selected message, refer to failure symptom index and next
failure symptom paragraph.
FAIL: Location of fault: RHE, wiring from RHE to left inboard launcher, left inboard launcher.
Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–515 **SIGNAL NAME:** P2M4 UNLATCH INDICATE
MEMORY LOCATION: 001421
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to RHE missile is unlatched.
REMARKS: From launcher to RHE.
PASS: If second digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 8–516.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to RHE, RHE.
Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–516 SIGNAL NAME: P2M4 UNLATCH INDICATE
      MEMORY LOCATION: 001737
      MEMORY DATA BIT(S): 15   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates to operator when a missile is unlatched.
      REMARKS: From launcher through left inboard MRTU Type II to FCC for display.
      PASS: If second digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 8–517.
      FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
         Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–517 SIGNAL NAME: P2M4 UNLATCH INDICATE
      MEMORY LOCATION: 001762
      MEMORY DATA BIT(S): 15   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates to operator when a missile is unlatched.
      REMARKS: From FCC through left inboard MRTU Type II to launcher.
      PASS: If second digit displayed on HOD is 0, 1, 4, or 5, refer to failure symptom index and next
         failure symptom paragraph.
      FAIL: Location of fault: left inboard MRTU Type II, wiring from left inboard MRTU Type II to FCC,
         FCC. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

8–518 SIGNAL NAME: P2M4 UPPER LOWER DISPLAY STATUS (ACY) P2M4 PRIORITY IND (ACZ)   ∎
      MEMORY LOCATION: 001354
      MEMORY DATA BIT(S): 8   (BINARY)
      CONDITION: If the second digit displayed on HOD is 0, 2, 4, or 6=UPPER
                 If the second digit displayed on HOD is 1, 3, 5, or 7=LOWER
      SIGNAL FUNCTION: Indicates to operator when a selected missile has been assigned to upper or
                 lower channel.
      REMARKS: From RHE to FCC for display.
      PASS: If CONDITION corresponds to selected channel, go to paragraph 8–519.
      FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–519 SIGNAL NAME: P2M4 TYPE STATUS DISPLAY (ACY) P2M4 TYPE (ACZ)   ∎
      MEMORY LOCATION: 001354
      MEMORY DATA BIT(S): 17–19   (OCTAL)
      CONDITION: If the first digit displayed on HOD is 0=NONE
                 If the first digit displayed on HOD is 1=TACTICAL LASER
                 If the first digit displayed on HOD is 4=UNIDENTIFIED
                 If the first digit displayed on HOD is 5=TRAINING LASER
      SIGNAL FUNCTION: Provides type of missile data for display to operator.
      REMARKS: From RHE to FCC for display.
      PASS: If CONDITION on HOD corresponds to installed type of missiles, go to paragraph 8–520.
      FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
         (TM 9–1427–475–20).

8–520 SIGNAL NAME: P2M4 TYPE (ACY) P2M4 MSL TYPE (ACZ)
MEMORY LOCATION: 001415
MEMORY DATA BIT(S): 7–8 (BINARY)
CONDITION: If fifth digit displayed on HOD is 0, and fourth digit displayed on HOD is 0, 1, 2, or 3=TRAINING
If fifth digit displayed on HOD is 1, and fourth digit displayed on HOD is 0, 1, 2, or 3=TACTICAL
If fifth digit displayed on HOD is 1, and fourth digit displayed on HOD is 4, 5, 6, or 7=NONE
SIGNAL FUNCTION: Indicates a tactical, training or no missile at location.
REMARKS: From ECSP to RHE.
PASS: If CONDITION corresponds to installed type of missiles, go to paragraph 8–521.
FAIL: Location of fault: replace left inboard launcher (TM 9–1425–475–30–2).

8–521 SIGNAL NAME: P2M4 TYPE (ACY) P2M4 MSL TYPE (ACZ)
MEMORY LOCATION: 001733
MEMORY DATA BIT(S): 7–8 (BINARY)
CONDITION: If fourth digit displayed on HOD is 0, 1, 2, or 3=TRAINING
If fifth digit displayed on HOD 1, 3, 5, or 7=TACTICAL
If fifth digit displayed on HOD 1, 3, 5, or 7 and fourth digit displayed on HOD is 0, 1, 2, or 3=NONE
SIGNAL FUNCTION: Indicates a tactical, training or no missile at location.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If CONDITION corresponds to installed type of missiles, refer to failure symptom index and next failure symptom paragraph.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–522 SIGNAL NAME: P2M4 MSL DEICE #1 CMD
MEMORY LOCATION: 001315
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Sends command to launcher ECSP to arm deicing squib.
REMARKS: From RHE to ECSP.
PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–523.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–523 SIGNAL NAME: P2M4 MSL DEICE #1 CMD
MEMORY LOCATION: 001752
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Sends command to launcher ECSP to arm deicing squib.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–554.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

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8–524 SIGNAL NAME: P2M4 MSL SKR INPUT SLAVE (ACY) P2M4 SKR SLV SEL (ACZ)
  MEMORY LOCATION: 001315
  MEMORY DATA BIT(S): 6–8 (OCTAL)
  CONDITION: If the fifth digit is 0 or 4 and the fourth digit
      is 0 or 2=ZERO EL ZERO AZ
      If the fifth digit is 0 or 4 and the fourth digit
      is 4 or 6=REMEL REMAZ
      If the fifth digit is 1 or 5 and the fourth digit
      is 0 or 2=AUTOEL AUTOAZ
      If the fifth digit is 1 or 5 and the fourth digit
      is 4 or 6=REMEL REMAZ +BIAS/2
      If the fifth digit is 2 or 6 and the fourth digit
      is 0 or 2=REMEL REMAZ +BIAS
      If the fifth digit is 2 or 6 and the fourth digit
      is 4 or 6=REMEL REMAZ – BIAS/2
      If the fifth digit is 3 or 7 and the fourth digit
      is 0 or 2=REMEL REMAZ – BIAS
      If the fifth digit is 3 or 7 and the fourth digit
      is 4 or 6=AUTOEL ZERO AZ
  SIGNAL FUNCTION: Selects pitch and yaw slave commands to be applied to missile.
  REMARKS: From RHE to ECSP.
  PASS: If CONDITION corresponds to selected seeker input, go to paragraph 8–525.
  FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
      (TM 9–1427–475–20).

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8–525 SIGNAL NAME: P2M4 MSL SKR INPUT SLAVE (ACY) P2M4 SKR SLV SEL (ACZ)
  MEMORY LOCATION: 001752
  MEMORY DATA BIT(S): 6–8 (OCTAL)
  CONDITION: If the fifth digit is 0 or 4 and the fourth digit
      is 0 or 2=ZERO EL ZERO AZ
      If the fifth digit is 0 or 4 and the fourth digit
      is 4 or 6=REMEL REMAZ
      If the fifth digit is 1 or 5 and the fourth digit
      is 0 or 2=AUTOEL AUTOAZ
      If the fifth digit is 1 or 5 and the fourth digit
      is 4 or 6=REMEL REMAZ +BIAS/2
      If the fifth digit is 2 or 6 and the fourth digit
      is 0 or 2=REMEL REMAZ +BIAS
      If the fifth digit is 2 or 6 and the fourth digit
      is 4 or 6=REMEL REMAZ – BIAS/2
      If the fifth digit is 3 or 7 and the fourth digit
      is 0 or 2=REMEL REMAZ – BIAS
      If the fifth digit is 3 or 7 and the fourth digit
      is 4 or 6=AUTOEL ZERO AZ
  SIGNAL FUNCTION: Selects pitch and yaw slave commands to be applied to missile.
  REMARKS: From launcher through left inboard MRTU Type II to FCC.
  PASS: If CONDITION corresponds to selected seeker input, refer to failure symptom index and next
      failure symptom paragraph.
  FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
      Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–526   SIGNAL NAME: P2M4 MSL AUTO PILOT POWER CONTROL (ACY)
                           P2M4 AUTOPLT PWR (ACZ)
MEMORY LOCATION: 001315
MEMORY DATA BIT(S):   9   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of auto pilot power to missile.
REMARKS: From RHE to ECSP.
PASS: If fourth digit on HOD is 2, 3, 6, or 7, go to paragraph 8–527.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–527   SIGNAL NAME: P2M4 MSL AUTO PILOT POWER CONTROL (ACY)
                           P2M4 AUTOPLT PWR (ACZ)
MEMORY LOCATION: 001752
MEMORY DATA BIT(S):   9   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of auto pilot power to missile.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If fourth digit on HOD is 2, 3, 6, or 7, go to paragraph 8–528.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
          Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–528   SIGNAL NAME: P2M4 MSL AUTO PILOT POWER (ACY) P2M4 A/P PWR OK (ACZ)
MEMORY LOCATION: 001415
MEMORY DATA BIT(S):   17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Specifies auto pilot power is above minimum value (+18 VDC).
REMARKS: From ECSP to RHE.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–529.
FAIL: Location of fault: replace left inboard launcher (TM 9–1425–475–30–2).

8–529   SIGNAL NAME: P2M4 MSL AUTO PILOT POWER (ACY) P2M4 A/P PWR OK (ACZ)
MEMORY LOCATION: 001733
MEMORY DATA BIT(S):   17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Specifies auto pilot power is above minimum value (+18 VDC).
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, refer to failure symptom index and next failure symptom
          paragraph.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
          Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–530 SIGNAL NAME: P2M4 MSL TGT POLARITY CONTROL
MEMORY LOCATION: 001315
MEMORY DATA BIT(S): 10–11 (BINARY)
CONDITION: If the fourth digit is 0, 2, 4, or 6 and the third digit is 0, 1, 2, 3=BLACK
If the fourth digit is 0, 2, 4, or 6 and the third digit is 4, 5, 6, 7=AUTO
If the fourth digit is 1, 3, 5, or 7 and the third digit is 0, 1, 2, 3=WHITE
SIGNAL FUNCTION: Directs missile seeker to track a black target on a white background, a white target on a black background or automatic contrast.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD corresponds to proper polarity, go to paragraph 8–531.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–531 SIGNAL NAME: P2M4 MSL TGT POLARITY CONTROL
MEMORY LOCATION: 001752
MEMORY DATA BIT(S): 10–11 (BINARY)
CONDITION: If the fourth digit is 0, 2, 4, or 6 and the third digit is 0, 1, 2, 3=BLACK
If the fourth digit is 0, 2, 4, or 6 and the third digit is 4, 5, 6, 7=AUTO
If the fourth digit is 1, 3, 5, or 7 and the third digit is 0, 1, 2, 3=WHITE
SIGNAL FUNCTION: Directs missile seeker to track a black target on a white background, a white target on a black background or automatic contrast.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If third digit on HOD corresponds to proper polarity, refer to failure symptom index and next failure symptom paragraph.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–532 SIGNAL NAME: P2M4 MSL BIT CMD
MEMORY LOCATION: 001315
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls launcher BIT.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 0, 1, 4, or 5, go to paragraph 8–533.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–533 SIGNAL NAME: P2M4 MSL BIT CMD
MEMORY LOCATION: 001752
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls launcher BIT.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If third digit on HOD is 0, 1, 4, or 5, go to paragraph 8–534.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

■ **8–534** **SIGNAL NAME:**   P2M4 MSL SKR POWER CONTROL (ACY) P2M4 SKR PWR OK (ACZ)
  MEMORY LOCATION: 001315
  MEMORY DATA BIT(S):   13   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Controls application of seeker power.
  REMARKS: From RHE to ECSP.
  PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–535.
  FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
        (TM 9–1427–475–20).

■ **8–535** **SIGNAL NAME:**   P2M4 MSL SKR POWER CONTROL (ACY) P2M4 SKR PWR OK (ACZ)
  MEMORY LOCATION: 001752
  MEMORY DATA BIT(S):   13   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Controls application of seeker power.
  REMARKS: From launcher through left inboard MRTU Type II to FCC.
  PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–536.
  FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
        Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–536 **SIGNAL NAME:**   P2M4 MSL SKR POWER
  MEMORY LOCATION: 001415
  MEMORY DATA BIT(S):   12   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates status of seeker power (+28 VDC).
  REMARKS: From ECSP to RHE.
  PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 8–537.
  FAIL: Location of fault: replace left inboard launcher (TM 9–1425–475–30–2).

■ **8–537** **SIGNAL NAME:**   P2M4 MSL SEEKER POWER (ACY) P2M4 SKR PWR OK (ACZ)
  MEMORY LOCATION: 001733
  MEMORY DATA BIT(S):   12   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates status of seeker power (+28 VDC).
  REMARKS: From launcher through left inboard MRTU Type II to FCC.
  PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 8–540.
  FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
        Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–538 **SIGNAL NAME:**   P2M4 CCM ACTIVATE CMD
  MEMORY LOCATION: 001315
  MEMORY DATA BIT(S):   14   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Commands missile seeker to enter CCM mode.
  REMARKS: From RHE to ECSP.
  PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–539.
  FAIL: Location of fault:RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
        (TM 9–1427–475–20).

8–539 SIGNAL NAME: P2M4 CCM ACTIVATE CMD
 MEMORY LOCATION: 001752
 MEMORY DATA BIT(S): 14 (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Commands missile seeker to enter CCM mode.
 REMARKS: From launcher through left inboard MRTU Type II to FCC.
 PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1123.
 FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–540 SIGNAL NAME: P2M4 MSL SCAN SEARCH CMD
 MEMORY LOCATION: 001315
 MEMORY DATA BIT(S): 16 (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Commands laser seeker to enter target acquisition mode and to enter lock–on when target is acquired.
 REMARKS: From RHE to ECSP.
 PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–541.
 FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–541 SIGNAL NAME: P2M4 MSL SCAN SEARCH CMD
 MEMORY LOCATION: 001752
 MEMORY DATA BIT(S): 16 (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Commands laser seeker to enter target acquisition mode and to enter lock–on when target is acquired.
 REMARKS: From launcher through left inboard MRTU Type II to FCC.
 PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–542.
 FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–542 SIGNAL NAME: P2M4 MSL SEEKER SLAVE CMD
 MEMORY LOCATION: 001315
 MEMORY DATA BIT(S): 17 (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Commands laser seeker to enter slave mode.
 REMARKS: From RHE to ECSP.
 PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–543.
 FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–543 **SIGNAL NAME:** P2M4 MSL SEEKER SLAVE CMD
MEMORY LOCATION: 001752
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter slave mode.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–550.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–544 **SIGNAL NAME:** P2M4 MSL STARE TRACK CMD
MEMORY LOCATION: 001315
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter stare mode. If proper laser code is detected in seeker FOV, seeker will enter track mode.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–545.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–545 **SIGNAL NAME:** P2M4 MSL STARE TRACK CMD
MEMORY LOCATION: 001752
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter stare mode. If proper laser code is detected in seeker FOV, seeker will enter track mode.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If first digit on HOD is 2, 3, 6, or 7, refer to failure symptom index and next failure symptom paragraph.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–546 **SIGNAL NAME:** P2M4 MSL CORRELATE
MEMORY LOCATION: 001415
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates laser has detected a laser beam whose laser code agrees with internal stored code.
REMARKS: From ECSP to RHE.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–547.
FAIL: Location of fault: replace left inboard launcher (TM 9–1425–475–30–2).

8–547 **SIGNAL NAME:** P2M4 MSL CORRELATE
MEMORY LOCATION: 001733
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates laser has detected a laser beam whose laser code agrees with internal stored code.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–548.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–548 **SIGNAL NAME:** P2M4 MSL TRACK
MEMORY LOCATION: 001415
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker has entered track mode. The laser seeker can enter track mode whenever a proper laser beam is detected in seeker FOV for any mode except cage.
REMARKS: From ECSP to RHE.
PASS: If second digit on HOD is 2, 3, 6 or 7, go to paragraph 8–549.
FAIL: Location of fault: replace left inboard launcher (TM 9–1425–475–30–2).

8–549 **SIGNAL NAME:** P2M4 MSL TRACK
MEMORY LOCATION: 001733
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker has entered track mode. The laser seeker can enter track mode whenever a proper laser beam is detected in seeker FOV for any mode except cage.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1153.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–550 **SIGNAL NAME:** P2M4 MSL SKR CAGE CMD
MEMORY LOCATION: 001315
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile to enter cage mode.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–551.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–551 **SIGNAL NAME:** P2M4 MSL SKR CAGE CMD
MEMORY LOCATION: 001752
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile to enter cage mode.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–552.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left outboard MRTU Type II, left outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–552 **SIGNAL NAME:** P2M4 MSL SKR CAGE
MEMORY LOCATION: 001415
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker is in cage mode. The seeker cannot track in cage position.
REMARKS: From ECSP to RHE.
PASS: If third digit on HOD is 0, 2, 4, or 6, go to paragraph 8–553.
FAIL: Location of fault: replace left inboard launcher (TM 9–1425–475–30–2).

8–553 **SIGNAL NAME:** P2M4 MSL SKR CAGE
MEMORY LOCATION: 001733
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker is in cage mode. The seeker cannot track in cage position.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If third digit on HOD is 0, 2, 4, or 6, go to paragraph 8–556.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–554 **SIGNAL NAME:** P2M4 MSL DEICE #2 CMD
MEMORY LOCATION: 001321
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Issues deicing squib fire command to selected missile.
REMARKS: From RHE to ECSP.
PASS: If sixth digit on HOD is 1, go to paragraph 8–555.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–555 **SIGNAL NAME:** P2M4 MSL DEICE #2 CMD
MEMORY LOCATION: 001756
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Issues deicing squib fire command to selected missile.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If sixth digit on HOD is 1, go to paragraph 8–1118.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–556 **SIGNAL NAME:** P2M4 MSL BIT CONTROL
MEMORY LOCATION: 001321
MEMORY DATA BIT(S): 6–9 (HEX)
CONDITION: (None)
SIGNAL FUNCTION: Commands BIT on autopilot.
REMARKS: From RHE to ECSP.
PASS: If fifth digit displayed on HOD is 0, 1, or 2, and the fourth digit displayed on HOD is 2, 3, 4, 5, 6, or 7 go to paragraph 8–557.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–557 **SIGNAL NAME:** P2M4 MSL BIT CONTROL
MEMORY LOCATION: 001756
MEMORY DATA BIT(S): 6–9 (HEX)
CONDITION: (None)
SIGNAL FUNCTION: Commands BIT on autopilot.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: Location of fault if fifth digit displayed on HOD is 0, 1, or 2, and the fourth digit displayed on HOD is 2, 3, 4, 5, 6, or 7: Replace left inboard launcher missile 4 (TM 9–1427–475–20).
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–558 **SIGNAL NAME:** P2M4 MSL INDIRECT FIRE LO
MEMORY LOCATION: 001321
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands low flight profile for LOAL operation.
REMARKS: From RHE to ECSP.
PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–559.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–559 **SIGNAL NAME:** P2M4 MSL INDIRECT FIRE LO
MEMORY LOCATION: 001756
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands low flight profile for LOAL operation.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1108.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–560 **SIGNAL NAME:** P2M4 MSL INDIRECT FIRE HI
MEMORY LOCATION: 001321
MEMORY DATA BIT(S): 11 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands high flight profile for LOAL operation.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 8–561.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–561 **SIGNAL NAME:** P2M4 MSL INDIRECT FIRE HI
MEMORY LOCATION: 001756
MEMORY DATA BIT(S): 11 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands high flight profile for LOAL operation.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1108.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–562 **SIGNAL NAME:** P2M4 MSL RF CODE ACCEPT COMMAND
MEMORY LOCATION: 001321
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to accept RF code data from analog command lines
3 and 4. Commands ECSP to hook up analog commands 3 and 4 to selected
missile.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–563.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–563 SIGNAL NAME: P2M4 MSL RF CODE ACCEPT COMMAND
          MEMORY LOCATION: 001756
          MEMORY DATA BIT(S): 13   (BINARY)
          CONDITION: (None)
          SIGNAL FUNCTION: Commands missile seeker to accept RF code data from analog command lines 3 and 4. Commands ECSP to hook up analog commands 3 and 4 to selected missile.
          REMARKS: From launcher through left inboard MRTU Type II to FCC.
          PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–564.
          FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–564 SIGNAL NAME: P2M4 MSL LASER CODE ACCEPT COMMAND
          MEMORY LOCATION: 001321
          MEMORY DATA BIT(S): 14   (BINARY)
          CONDITION: (None)
          SIGNAL FUNCTION: Commands laser code information received from RHE by launcher on coax A and B to be relayed to identified missile.
          REMARKS: From RHE to ECSP.
          PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–565.
          FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–565 SIGNAL NAME: P2M4 MSL LASER CODE ACCEPT COMMAND
          MEMORY LOCATION: 001756
          MEMORY DATA BIT(S): 14   (BINARY)
          CONDITION: (None)
          SIGNAL FUNCTION: Commands laser code information received from RHE by launcher on coax A and B to be relayed to identified missile.
          REMARKS: From launcher through left inboard MRTU Type II to FCC.
          PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1106.
          FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–566 SIGNAL NAME: P2M4 MSL COAX B CONNECT
          MEMORY LOCATION: 001321
          MEMORY DATA BIT(S): 17   (BINARY)
          CONDITION: (None)
          SIGNAL FUNCTION: Commands launcher to connect coax B to indicated missile.
          REMARKS: From RHE to ECSP.
          PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–567.
          FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–567 **SIGNAL NAME:** P2M4 MSL COAX B CONNECT
MEMORY LOCATION: 001756
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax B to indicated missile.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–568.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–568 **SIGNAL NAME:** P2M4 MSL COAX A CONNECT
MEMORY LOCATION: 001321
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax A to indicated missile.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–569.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–569 **SIGNAL NAME:** P2M4 MSL COAX A CONNECT
MEMORY LOCATION: 001756
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax A to indicated missile.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1106.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–570 **SIGNAL NAME:** P2M4 MSL SKR LAUNCH PREPARE COMMAND (ACY)
               P2M4 SKR LNCH CMD (ACZ)
MEMORY LOCATION: 001321
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Prepares missile for free flight operation.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–571.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–571 **SIGNAL NAME:** P2M4 MSL SKR LAUNCH PREPARE COMMAND (ACY)
               P2M4 SKR LNCH CMD (ACZ)
MEMORY LOCATION: 001756
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Prepares missile for free flight operation.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–1126.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–572 SIGNAL NAME: LCHR2 CONTROL MSL AUTO AZ SIGNAL SELECT (ACY)
P2 AUTO AZSIG (ACZ)
MEMORY LOCATION: 001325
MEMORY DATA BIT(S): 6–9 (HEX)
CONDITION: If the fourth digit displayed on HOD is 0=M1AZ
If the fourth digit displayed on HOD is 1=M2AZ
If the fourth digit displayed on HOD is 2=M3AZ
If the fourth digit displayed on HOD is 3=M4AZ
If the fourth digit displayed on HOD is 4=M1BIT4
If the fourth digit displayed on HOD is 5=M2BIT4
If the fourth digit displayed on HOD is 6=M3BIT4
If the fourth digit displayed on HOD is 7=M4BIT4
If the fifth digit displayed on HOD is 1, 3, 5, or 7 and the fourth digit displayed on HOD is 0=M1ID
If the fifth digit displayed on HOD is 1, 3, 5, or 7 and the fourth digit displayed on HOD is 1=M2ID
If the fifth digit displayed on HOD is 1, 3, 5, or 7 and the fourth digit displayed on HOD is 2=M3ID
If the fifth digit displayed on HOD is 1, 3, 5, or 7 and the fourth digit displayed on HOD is 3=M4ID
SIGNAL FUNCTION: Selects one of four missiles to be monitored for yaw gimbal angle (AZ), BIT 4 or missile identification on analog reply number four.
REMARKS: From RHE to ECSP to missile.
PASS: If CONDITION corresponds to selected missile go to paragraph 8–573.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP, wiring from ECSP to missile, missile. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–573 SIGNAL NAME: LCHR2 AUTO SEEKER AZ (ACY) P2 2ND TRKG MSLAZ (ACZ)
MEMORY LOCATION: 001503
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when the seeker is left and positive (sixth digit=0) when seeker is right.
SIGNAL FUNCTION: Provides selected analog signal to RHE.
REMARKS: From launcher to RHE.
PASS: If CONDITION corresponds to correct response, go to paragraph 8–574.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to RHE, RHE. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–574 SIGNAL NAME: LCHR2 AUTO SEEKER AZ (ACY) P2 2ND TRKG MSLAZ (ACZ)
MEMORY LOCATION: 001725
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when the seeker is left and positive (sixth digit=0) when seeker is right.
SIGNAL FUNCTION: Provides selected analog signal to FCC.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If CONDITION corresponds to correct response, go to paragraph 8–575.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–575 **SIGNAL NAME:** LCHR2 AUTO SEEKER AZ (ACY) P2 RMT SKREL CMD (ACZ)
MEMORY LOCATION: 001741
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when the seeker is left and positive (sixth digit=0) when seeker is right.
SIGNAL FUNCTION: Provides selected missile analog signal to launcher from FCC.
REMARKS: From FCC through left inboard MRTU Type II to launcher.
PASS: If CONDITION corresponds to correct response, go to paragraph 8–576.
FAIL: Location of fault: left inboard MRTU Type II, wiring from left inboard MRTU Type II to FCC. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

8–576 **SIGNAL NAME:** LCHR2 CONTROL MSL AUTO EL SIGNAL SELECT (ACY)
                      P2 2ND TRKG MSLEL (ACZ)
MEMORY LOCATION: 001325
MEMORY DATA BIT(S): 10–13   (HEX)
CONDITION: If third digit displayed on HOD is 0=M1EL
                      If third digit displayed on HOD is 1=M2EL
                      If third digit displayed on HOD is 2=M3EL
                      If third digit displayed on HOD is 3=M4EL
                      If third digit displayed on HOD is 4=M1BIT3
                      If third digit displayed on HOD is 5=M2BIT3
                      If third digit displayed on HOD is 6=M3BIT3
                      If third digit displayed on HOD is 7=M4BIT3
                      If fourth digit displayed on HOD is 1, 3, 5, or 7 and third digit
                      displayed is 4=M1GCBIT
                      If fourth digit displayed on HOD is 1, 3, 5, or 7 and third digit
                      displayed is 5=M2GCBIT
                      If fourth digit displayed on HOD is 1, 3, 5, or 7 and third digit
                      displayed is 6=M3GCBIT
                      If fourth digit displayed on HOD is 1, 3, 5, or 7 and third digit
                      displayed is 7=M4GCBIT
SIGNAL FUNCTION: Selects one of four missiles to be monitored for pitch gimbal angle (EL), BIT 3 or missile BIT 3 response on analog reply number three.
REMARKS: From RHE to ECSP to missile.
PASS: If CONDITION corresponds to selected missile, go to paragraph 8–577.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP, wiring from ECSP to missile, missile. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–577 **SIGNAL NAME:** LCHR2 AUTO SEEKER EL (ACY) P2 2ND TRKG MSLAZ (ACZ)
MEMORY LOCATION: 001502
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when the seeker is down and positive (sixth digit=0) when seeker is up.
SIGNAL FUNCTION: Provides selected analog signal to RHE.
REMARKS: From launcher to RHE.
PASS: If CONDITION corresponds to correct response, go to paragraph 8–578.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to RHE, RHE. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–578 SIGNAL NAME: LCHR2 AUTO SEEKER EL (ACY) P2 2ND TRKG MSLEL (ACZ)
 MEMORY LOCATION: 001726
 MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
 CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when the seeker is down and positive (sixth digit=0) when seeker is up.
 SIGNAL FUNCTION: Provides selected analog signal to FCC.
 REMARKS: From launcher through left inboard MRTU Type II to FCC.
 PASS: If CONDITION corresponds to correct response, go to paragraph 8–579.
 FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–579 SIGNAL NAME: LCHR2 AUTO SEEKER EL (ACY) P2 AUTO SKREL CMD (ACZ)
 MEMORY LOCATION: 001742
 MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
 CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when the seeker is down and positive (sixth digit=0) when seeker is up.
 SIGNAL FUNCTION: Provides selected missile analog signal to launcher from FCC.
 REMARKS: From FCC through left inboard MRTU Type II to launcher.
 PASS: If CONDITION corresponds to correct response, go to paragraph 8–580.
 FAIL: Location of fault: left inboard MRTU Type II, wiring from left inboard MRTU Type II to FCC. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

8–580 SIGNAL NAME: LCHR2 CONTROL MSL REMOTE AZ SIGNAL SELECT (ACY)
                 P2 RMT AZSIG CMD (ACZ)
 MEMORY LOCATION: 001325
 MEMORY DATA BIT(S): 14–16   (OCTAL)
 CONDITION: If the second digit displayed on HOD is 0=M1AZ
              If the second digit displayed on HOD is 1=M2AZ
              If the second digit displayed on HOD is 2=M3AZ
              If the second digit displayed on HOD is 3=M4AZ
              If the second digit displayed on HOD is 4=M1BIT2
              If the second digit displayed on HOD is 5=M2BIT2
              If the second digit displayed on HOD is 6=M3BIT2
              If the second digit displayed on HOD is 7=M4BIT2
 SIGNAL FUNCTION: Selects one of four missiles to be monitored for yaw gimbal angle or BIT 2 response on analog reply number two.
 REMARKS: From RHE to ECSP to missile.
 PASS: If second digit on HOD corresponds to selected missile, go to paragraph 8–581.
 FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP, wiring from ECSP to missile, missile. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–581 SIGNAL NAME: LCHR2 REMOTE SEEKER AZ (ACY) P2 1ST TRKG MSLEL (ACZ)
 MEMORY LOCATION: 001501
 MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
 CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when the seeker is left and positive (sixth digit=0) when seeker is right.
 SIGNAL FUNCTION: Provides selected analog signal to RHE.
 REMARKS: From launcher to RHE.
 PASS: If CONDITION corresponds to correct response, go to paragraph 8–582.
 FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to RHE, RHE. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–582 SIGNAL NAME: LCHR2 REMOTE SEEKER AZ (ACY) P2 1ST TRKG MSLEL (ACZ)
   MEMORY LOCATION: 001727
   MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
   CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when
      the seeker is left and positive (sixth digit=0) when seeker is right.
   SIGNAL FUNCTION: Provides selected analog signal to FCC.
   REMARKS: From launcher through left inboard MRTU Type II to FCC.
   PASS: If CONDITION corresponds to correct response, go to paragraph 8–583.
   FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU
      Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–583 SIGNAL NAME: LCHR2 REMOTE SEEKER AZ (ACY) P2 RMT SKRAZ CMD (ACZ)
   MEMORY LOCATION: 001745
   MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
   CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when
      the seeker is left and positive (sixth digit=0) when seeker is right.
   SIGNAL FUNCTION: Provides selected missile analog signal to launcher from FCC.
   REMARKS: From FCC through left inboard MRTU Type II to launcher.
   PASS: If CONDITION corresponds to correct response, go to paragraph 8–584.
   FAIL: Location of fault: left inboard MRTU Type II, wiring from left inboard MRTU Type II to FCC.
      Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

8–584 SIGNAL NAME: LCHR2 CONTROL MSL REMOTE EL SIGNAL SELECT (ACY)
                  P2 RMT ELSIG CMD (ACZ)
   MEMORY LOCATION: 001325
   MEMORY DATA BIT(S):   17–19   (OCTAL)
   CONDITION: If the first digit displayed on HOD is 0=M1EL
            If the first digit displayed on HOD is 1=M2EL
            If the first digit displayed on HOD is 2=M3EL
            If the first digit displayed on HOD is 3=M4EL
            If the first digit displayed on HOD is 4=M1BIT1
            If the first digit displayed on HOD is 5=M2BIT1
            If the first digit displayed on HOD is 6=M3BIT1
            If the first digit displayed on HOD is 7=M4BIT1
   SIGNAL FUNCTION: Selects one of four missiles to be monitored for pitch gimbal angle or BIT 1
                  response on analog reply number one.
   REMARKS: From RHE to ECSP to missile.
   PASS: If first digit on HOD corresponds to selected missile, go to paragraph 8–585.
   FAIL: Location of fault: RHE, wiring from RHE to ECSP, wiring from ECSP to missile, missile.
      Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–585 SIGNAL NAME: LCHR2 REMOTE SEEKER EL (ACY) P2 MSL TRKG EL CMD (ACZ)
   MEMORY LOCATION: 001500
   MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
   CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when
      the seeker is down and positive (sixth digit=0) when seeker is up.
   SIGNAL FUNCTION: Provides selected analog signal to RHE.
   REMARKS: From launcher to RHE.
   PASS: If CONDITION corresponds to correct response, go to paragraph 8–586.
   FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to RHE, RHE.
      Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–586 **SIGNAL NAME:** LCHR2 REMOTE SEEKER EL (ACY) P2 1ST TRKG MSLEL (ACZ)
MEMORY LOCATION: 001730
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when the seeker is down and positive (sixth digit=0) when seeker is up.
SIGNAL FUNCTION: Provides selected analog signal to FCC.
REMARKS: From launcher through left inboard MRTU Type II to FCC.
PASS: If CONDITION corresponds to correct response, go to paragraph 8–587.
FAIL: Location of fault: left inboard launcher, wiring from left inboard launcher to left inboard MRTU Type II, left inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–587 **SIGNAL NAME:** LCHR2 REMOTE SEEKER EL (ACY) P2 RMT SKREL CMD (ACZ)
MEMORY LOCATION: 001746
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when the seeker is down and positive (sixth digit=0) when seeker is up.
SIGNAL FUNCTION: Selected missile analog signal from FCC.
REMARKS: From FCC through left inboard MRTU Type II to launcher.
PASS: Troubleshoot wiring from remote controlled circuit breaker (RCCB) to ECSP, ECSP to isolate fault (TM 9–1427–475–20).
FAIL: Location of fault: left inboard MRTU Type II, wiring from left inboard MRTU Type II to FCC. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

8–588 **SIGNAL NAME:** P3 LAUNCHER PRESENT (ACY) L3 PRESENT (ACZ)
MEMORY LOCATION: 001344
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates presence or absence of launcher.
REMARKS: From RHE to FCC.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–589.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–589 **SIGNAL NAME:** P3 LAUNCHER SAFE (ACY) L3 SAFE (ACZ)
MEMORY LOCATION: 001344
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to operator when a remote safe condition exists at launcher.
REMARKS: From RHE to FCC.
PASS: If first digit on HOD is 0, go to paragraph 8–590.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

■ **8–590 SIGNAL NAME:** P3 LAUNCHER BIT PERFORMED (ACY) L3 BITE PERF (ACZ)
  MEMORY LOCATION: 001347
  MEMORY DATA BIT(S): 9 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates to FCC that BIT has been performed.
  REMARKS: From RHE to FCC.
  PASS: If fourth digit on HOD is 2, 3, 6, or 7, go to paragraph 8–591.
  FAIL: Location of fault: wiring from L INBD LCHR DC circuit breaker to L OUTBD LCHR DC circuit
    breaker, wiring from L OUTBD LCHR DC circuit breaker to ARM DC circuit breaker, wiring from
    ARM DC circuit breaker to R INBD LCHR DC circuit breaker, R INBD LCHR DC circuit breaker,
    wiring from R INBD LCHR DC circuit breaker to LCHR DC PWR ENABLE Relay K2–5/6, LCHR
    DC PWR ENABLE Relay K2–5/6, wiring from LCHR DC PWR ENABLE Relay K2–5/6 to RCCB
    CB203, RCCB CB203, wiring from RCCB CB203 to ECSP, wiring from R OUTBD LCHR AC
    circuit breaker to R INBD LCHR A circuit breaker, R INBD LCHR AC circuit breaker, wiring from
    R INBD LCHR AC circuit breaker to LCHR AC PWR ENABLE relay K3–5/6, LCHR AC PWR
    ENABLE Relay K3–5/6, wiring from LCHR AC PWR ENABLE Relay K3–5/6 to ECSP, ECSP.
    Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

■ **8–591 SIGNAL NAME:** P3 LAUNCHER BIT STATUS (ACY) L3 BITE STATUS (ACZ)
  MEMORY LOCATION: 001347
  MEMORY DATA BIT(S): 17 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates to FCC launcher BIT status.
  REMARKS: From RHE to FCC.
  PASS: If first digit on HOD is 0, 1, 2, or 3, go to paragraph 8–592.
  FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–592 SIGNAL NAME: P3 COM STATUS
  MEMORY LOCATION: 001434
  MEMORY DATA BIT(S): 17 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates to RHE that FCC has determined upon receipt of digital data from
    launcher, that an acknowledge error was present (no data received or all data
    words contain parity error).
  REMARKS: From FCC to RHE.
  PASS: If first digit is 0, 1, 2, or 3, go to paragraph 8–829.
  FAIL: Location of fault: ECSP, wiring from ECSP to MRTU Type II, MRTU Type II. Troubleshoot wiring
    to isolate fault (TM 9–1427–475–20).

8–593 SIGNAL NAME: P3M1 BIT PERFORMED
  MEMORY LOCATION: 001350
  MEMORY DATA BIT(S): 11 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates to FCC that BIT has been performed.
  REMARKS: From RHE to FCC.
  PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 8–594.
  FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–594 **SIGNAL NAME:** P3M1 BIT STATUS (ACY) P3M1 DISPLAY STATUS (ACZ)
       MEMORY LOCATION: 001355
       MEMORY DATA BIT(S): 12–15 (HEX)
       CONDITION: If third digit displayed on HOD is 0 and second digit displayed
                  on HOD is 0=NO MSL
                  If third digit displayed on HOD is 0 or 4 and second digit displayed
                  on HOD is 2 or 3=SELECTED
                  If third digit displayed on HOD is 0 or 4 and second digit displayed
                  on HOD is 4 or 5=READY
                  If third digit displayed on HOD is 0 or 4 and second digit displayed
                  on HOD is 6 or 7=TRACKING
                  If third digit displayed on HOD is 3 or 7 and second digit displayed
                  on HOD is 0=CODED
                  If third digit displayed on HOD is 3 or 7 and second digit displayed
                  on HOD is 6=CAGED
                  If third digit displayed on HOD is 5 or 1 and second digit displayed
                  on HOD is 0=BIT NO GO
                  If third digit displayed on HOD is 5 or 1 and second digit displayed
                  on HOD is 2=FAILED
                  If third digit displayed on HOD is 5 or 1 and second digit displayed
                  on HOD is 6=BATTERY NO GO
                  If third digit displayed on HOD is 6 or 2 and second digit displayed
                  on HOD is 0=UNLATCHED
                  If third digit displayed on HOD is 6 or 2 and second digit displayed
                  on HOD is 2=MRTU NO GO
                  If third digit displayed on HOD is 6 or 2 and second digit displayed
                  on HOD is 4=RAIL NO GO
     SIGNAL FUNCTION: Provides missile status display for operator.
     REMARKS: From RHE to FCC for display.
     PASS: If CONDITION corresponds to selected message, go to failure symptom index and next failure
         symptom paragraph.
     FAIL: Location of fault: RHE, wiring from RHE to right inboard launcher, right inboard launcher.
         Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–595 **SIGNAL NAME:** P3M1 UNLATCH INDICATE
       MEMORY LOCATION: 001426
       MEMORY DATA BIT(S): 18 (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Indicates to RHE missile is unlatched.
       REMARKS: From launcher to RHE.
       PASS: If first digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 8–596.
       FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to RHE, RHE.
          Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–596 **SIGNAL NAME:** P3M1 UNLATCH INDICATE
       MEMORY LOCATION: 002004
       MEMORY DATA BIT(S): 18 (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Indicates to operator when a missile is unlatched.
       REMARKS: From launcher through right inboard MRTU Type II to FCC for display.
       PASS: If first digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 8–598.
       FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
          MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–597 SIGNAL NAME: P3M1 UNLATCH INDICATE
  MEMORY LOCATION: 002027
  MEMORY DATA BIT(S): 18 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates to operator when a missile is unlatched.
  REMARKS: From FCC through right inboard MRTU Type II to launcher.
  PASS: If first digit displayed on HOD is 0, 1, 4, or 5, refer to failure symptom index and next failure symptom paragraph.
  FAIL: Location of fault: right inboard MRTU Type II, wiring from right inboard MRTU Type II to FCC, FCC. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

8–598 SIGNAL NAME: P3M1 UPPER LOWER DISPLAY STATUS (ACY) P3M1 PRIORITY IND (ACZ)
  MEMORY LOCATION: 001355
  MEMORY DATA BIT(S): 16 (BINARY)
  CONDITION: If the second digit displayed on HOD is 0, 2, 4, or 6=UPPER
    If the second digit displayed on HOD is 1, 3, 5, or 7=LOWER
  SIGNAL FUNCTION: Indicates to operator when a selected missile has been assigned to upper or lower channel.
  REMARKS: From RHE to FCC for display.
  PASS: If CONDITION corresponds to selected channel, go to paragraph 8–599.
  FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–599 SIGNAL NAME: P3M1 TYPE STATUS DISPLAY (ACY) P3M1 TYPE (ACZ)
  MEMORY LOCATION: 001355
  MEMORY DATA BIT(S): 17–19 (OCTAL)
  CONDITION: If the first digit displayed on HOD is 0=NONE
    If the first digit displayed on HOD is 1=TACTICAL LASER
    If the first digit displayed on HOD is 4=UNIDENTIFIED
    If the first digit displayed on HOD is 5=TRAINING LASER
  SIGNAL FUNCTION: Provides type of missile data for display to operator.
  REMARKS: From RHE to FCC for display.
  PASS: If CONDITION on HOD corresponds to installed type of missiles, go to paragraph 8–600.
  FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–600 SIGNAL NAME: P3M1 TYPE (ACY) P3M1 MSL TYPE (ACZ)
  MEMORY LOCATION: 001425
  MEMORY DATA BIT(S): 7–8 (BINARY)
  CONDITION: If fifth digit displayed on HOD is 0, and fourth digit displayed on HOD is 0, 1, 2, or 3=TRAINING
    If fifth digit displayed on HOD is 1, and fourth digit displayed on HOD is 0, 1, 2, or 3=TACTICAL
    If fifth digit displayed on HOD is 1, and fourth digit displayed on HOD is 4, 5, 6, or 7=NONE
  SIGNAL FUNCTION: Indicates a tactical, training or no missile at location.
  REMARKS: From ECSP to RHE.
  PASS: If CONDITION corresponds to installed type of missiles, go to paragraph 8–601.
  FAIL: Location of fault: replace right inboard launcher (TM 9–1425–475–30–2).

8–601 **SIGNAL NAME:**   P3M1 TYPE (ACY) P3M1 MSL TYPE (ACZ)
　　　　MEMORY LOCATION: 002003
　　　　MEMORY DATA BIT(S): 7–8   (BINARY)
　　　　CONDITION: If fourth digit displayed on HOD is 0, 1, 2, or 3=TRAINING
　　　　　　　　　　If fifth digit displayed on HOD 1, 3, 5, or 7=TACTICAL
　　　　　　　　　　If fifth digit displayed on HOD 1, 3, 5, or 7 and fourth digit displayed on HOD is 0, 1, 2,
　　　　　　　　　　or 3=NONE
　　　　SIGNAL FUNCTION: Indicates a tactical, training or no missile at location.
　　　　REMARKS: From launcher through right inboard MRTU Type II to FCC.
　　　　PASS: If CONDITION corresponds to installed type of missiles, refer to failure symptom index and
　　　　　　　next failure symptom paragraph.
　　　　FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
　　　　　　　MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
　　　　　　　(TM 9–1427–475–20).

8–602 **SIGNAL NAME:**   P3M1 MSL DEICE #1 CMD
　　　　MEMORY LOCATION: 001331
　　　　MEMORY DATA BIT(S): 5   (BINARY)
　　　　CONDITION: (None)
　　　　SIGNAL FUNCTION: Sends command to launcher ECSP to arm deicing squib.
　　　　REMARKS: From RHE to ECSP.
　　　　PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–603.
　　　　FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
　　　　　　　(TM 9–1427–475–20).

8–603 **SIGNAL NAME:**   P3M1 MSL DEICE #1 CMD
　　　　MEMORY LOCATION: 002022
　　　　MEMORY DATA BIT(S): 5   (BINARY)
　　　　CONDITION: (None)
　　　　SIGNAL FUNCTION: Sends command to launcher ECSP to arm deicing squib.
　　　　REMARKS: From launcher through right inboard MRTU Type II to FCC.
　　　　PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–634.
　　　　FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
　　　　　　　MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
　　　　　　　(TM 9–1427–475–20).

8–604 SIGNAL NAME: P3M1 MSL SKR INPUT SLAVE (ACY) P3M1 SKR SLV SEL (ACZ)
MEMORY LOCATION: 001331
MEMORY DATA BIT(S): 6–8 (OCTAL)
CONDITION: If the fifth digit is 0 or 4 and the fourth digit
is 0 or 2=ZERO EL ZERO AZ
If the fifth digit is 0 or 4 and the fourth digit
is 4 or 6=REMEL REMAZ
If the fifth digit is 1 or 5 and the fourth digit
is 0 or 2=AUTOEL AUTOAZ
If the fifth digit is 1 or 5 and the fourth digit
is 4 or 6=REMEL REMAZ +BIAS/2
If the fifth digit is 2 or 6 and the fourth digit
is 0 or 2=REMEL REMAZ +BIAS
If the fifth digit is 2 or 6 and the fourth digit
is 4 or 6=REMEL REMAZ – BIAS/2
If the fifth digit is 3 or 7 and the fourth digit
is 0 or 2=REMEL REMAZ – BIAS
If the fifth digit is 3 or 7 and the fourth digit
is 4 or 6=AUTOEL ZERO AZ
SIGNAL FUNCTION: Selects pitch and yaw slave commands to be applied to missile.
REMARKS: From RHE to ECSP.
PASS: If CONDITION corresponds to selected seeker input, go to paragraph 8–605.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–605 SIGNAL NAME: P3M1 MSL SKR INPUT SLAVE (ACY) P3M1 SKR SLV SEL (ACZ)
MEMORY LOCATION: 002022
MEMORY DATA BIT(S): 6–8 (OCTAL)
CONDITION: If the fifth digit is 0 or 4 and the fourth digit
is 0 or 2=ZERO EL ZERO AZ
If the fifth digit is 0 or 4 and the fourth digit
is 4 or 6=REMEL REMAZ
If the fifth digit is 1 or 5 and the fourth digit
is 0 or 2=AUTOEL AUTOAZ
If the fifth digit is 1 or 5 and the fourth digit
is 4 or 6=REMEL REMAZ +BIAS/2
If the fifth digit is 2 or 6 and the fourth digit
is 0 or 2=REMEL REMAZ +BIAS
If the fifth digit is 2 or 6 and the fourth digit
is 4 or 6=REMEL REMAZ – BIAS/2
If the fifth digit is 3 or 7 and the fourth digit
is 0 or 2=REMEL REMAZ – BIAS
If the fifth digit is 3 or 7 and the fourth digit
is 4 or 6=AUTOEL ZERO AZ
SIGNAL FUNCTION: Selects pitch and yaw slave commands to be applied to missile.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If CONDITION corresponds to selected seeker input, refer to failure symptom index and next
failure symptom paragraph.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–606 SIGNAL NAME: P3M1 MSL AUTO PILOT POWER CONTROL (ACY)
P3M1 AUTOPLT PWR (ACZ)
MEMORY LOCATION: 001331
MEMORY DATA BIT(S):   9   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of auto pilot power to missile.
REMARKS: From RHE to ECSP.
PASS: If fourth digit on HOD is 2, 3, 6, or 7, go to paragraph 8–607.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–607 SIGNAL NAME: P3M1 MSL AUTO PILOT POWER CONTROL (ACY)
P3M1 AUTOPLT PWR (ACZ)
MEMORY LOCATION: 002022
MEMORY DATA BIT(S):   9   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of auto pilot power to missile.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If fourth digit on HOD is 2, 3, 6, or 7, go to paragraph 8–608.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–608 SIGNAL NAME: P3M1 MSL AUTO PILOT POWER (ACY) P3M1 A/P PWR OK (ACZ)
MEMORY LOCATION: 001425
MEMORY DATA BIT(S):   17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Specifies auto pilot power is above minimum value (+18 VDC).
REMARKS: From ECSP to RHE.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–609.
FAIL: Location of fault: replace right inboard launcher (TM 9–1425–475–30–2).

8–609 SIGNAL NAME: P3M1 MSL AUTO PILOT POWER (ACY) P3M1 A/P PWR OK (ACZ)
MEMORY LOCATION: 002022
MEMORY DATA BIT(S):   17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Specifies auto pilot power is above minimum value (+18 VDC).
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, refer to failure symptom index and next failure symptom
paragraph.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–610 **SIGNAL NAME:** P3M1 MSL TGT POLARITY CONTROL
MEMORY LOCATION: 001331
MEMORY DATA BIT(S): 10–11 (BINARY)
CONDITION: If the fourth digit is 0, 2, 4, or 6 and the third digit is 0, 1, 2, 3=BLACK
If the fourth digit is 0, 2, 4, or 6 and the third digit is 4, 5, 6, 7=AUTO
If the fourth digit is 1, 3, 5, or 7 and the third digit is 0, 1, 2, 3=WHITE
SIGNAL FUNCTION: Directs missile seeker to track a black target on a white background, a white target on a black background or automatic contrast.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD corresponds to proper polarity, go to paragraph 8–611
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–611 **SIGNAL NAME:** P3M1 MSL TGT POLARITY CONTROL
MEMORY LOCATION: 002022
MEMORY DATA BIT(S): 10–11 (BINARY)
CONDITION: If the fourth digit is 0, 2, 4, or 6 and the third digit is 0, 1, 2, 3=BLACK
If the fourth digit is 0, 2, 4, or 6 and the third digit is 4, 5, 6, 7=AUTO
If the fourth digit is 1, 3, 5, or 7 and the third digit is 0, 1, 2, 3=WHITE
SIGNAL FUNCTION: Directs missile seeker to track a black target on a white background, a white target on a black background or automatic contrast.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If third digit on HOD corresponds to proper polarity, refer to failure symptom index and next failure symptom paragraph.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–612 **SIGNAL NAME:** P3M1 MSL BIT CMD
MEMORY LOCATION: 001331
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls launcher BIT.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 0, 1, 4, or 5, go to paragraph 8–613.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–613 **SIGNAL NAME:** P3M1 MSL BIT CMD
MEMORY LOCATION: 002022
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls launcher BIT.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If third digit on HOD is 0, 1, 4, or 5, go to paragraph 8–614.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–614 SIGNAL NAME: P3M1 MSL SKR POWER CONTROL (ACY) P3M1 SKR PWR OK (ACZ)   ■
  MEMORY LOCATION: 001331
  MEMORY DATA BIT(S):   13   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Controls application of seeker power.
  REMARKS: From RHE to ECSP.
  PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–615.
  FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
      (TM 9–1427–475–20).

8–615 SIGNAL NAME: P3M1 MSL SKR POWER CONTROL (ACY) P3M1 SKR PWR OK (ACZ)   ■
  MEMORY LOCATION: 002022
  MEMORY DATA BIT(S):   13   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Controls application of seeker power.
  REMARKS: From launcher through right inboard MRTU Type II to FCC.
  PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–616.
  FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
      MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
      (TM 9–1427–475–20).

8–616 SIGNAL NAME: P3M1 MSL SKR POWER
  MEMORY LOCATION: 001425
  MEMORY DATA BIT(S):   12   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates status of seeker power (+28 VDC).
  REMARKS: From ECSP to RHE.
  PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 8–617.
  FAIL: Location of fault: replace right inboard launcher (TM 9–1425–475–30–2).

8–617 SIGNAL NAME: P3M1 MSL SEEKER POWER (ACY) P3M1 SKR PWR OK (ACZ)   ■
  MEMORY LOCATION: 002003
  MEMORY DATA BIT(S):   12   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates status of seeker power (+28 VDC).
  REMARKS: From launcher through right inboard MRTU Type II to FCC.
  PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 8–620.
  FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
      MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
      (TM 9–1427–475–20).

8–618 SIGNAL NAME: P3M1 CCM ACTIVATE CMD
  MEMORY LOCATION: 001331
  MEMORY DATA BIT(S):   14   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Commands missile seeker to enter CCM mode.
  REMARKS: From RHE to ECSP.
  PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–619.
  FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
      (TM 9–1427–475–20).

8–619   **SIGNAL NAME:**   P3M1 CCM ACTIVATE CMD
       MEMORY LOCATION: 002022
       MEMORY DATA BIT(S):   14   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Commands missile seeker to enter CCM mode.
       REMARKS: From launcher through right inboard MRTU Type II to FCC.
       PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1123.
       FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
       MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
       (TM 9–1427–475–20).

8–620   **SIGNAL NAME:**   P3M1 MSL SCAN SEARCH CMD
       MEMORY LOCATION: 001331
       MEMORY DATA BIT(S):   16   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Commands laser seeker to enter target acquisition mode and to enter lock–on
              when target is acquired.
       REMARKS: From RHE to ECSP.
       PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–621.
       FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
       (TM 9–1427–475–20).

8–621   **SIGNAL NAME:**   P3M1 MSL SCAN SEARCH CMD
       MEMORY LOCATION: 002022
       MEMORY DATA BIT(S):   16   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Commands laser seeker to enter target acquisition mode and to enter lock–on
              when target is acquired.
       REMARKS: From launcher through right inboard MRTU Type II to FCC.
       PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–624.
       FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
       MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
       (TM 9–1427–475–20).

8–622   **SIGNAL NAME:**   P3M1 MSL SEEKER SLAVE CMD
       MEMORY LOCATION: 001331
       MEMORY DATA BIT(S):   17   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Commands laser seeker to enter slave mode.
       REMARKS: From RHE to ECSP.
       PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–623.
       FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
       (TM 9–1427–475–20).

8–623 SIGNAL NAME: P3M1 MSL SEEKER SLAVE CMD
MEMORY LOCATION: 002022
MEMORY DATA BIT(S): 17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter slave mode.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–630.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–624 SIGNAL NAME: P3M1 MSL STARE TRACK CMD
MEMORY LOCATION: 001331
MEMORY DATA BIT(S): 18   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter stare mode. If proper laser code is detected
in seeker FOV, seeker will enter track mode.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–625.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–625 SIGNAL NAME: P3M1 MSL STARE TRACK CMD
MEMORY LOCATION: 002022
MEMORY DATA BIT(S): 18   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter stare mode. If proper laser code is detected
in seeker FOV, seeker will enter track mode.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If first digit on HOD is 2, 3, 6, or 7, refer to failure symptom index and next failure symptom
paragraph.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–626 SIGNAL NAME: P3M1 MSL CORRELATE
MEMORY LOCATION: 001425
MEMORY DATA BIT(S): 16   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates laser has detected a laser beam whose laser code agrees with
internal stored code.
REMARKS: From ECSP to RHE.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–627.
FAIL: Location of fault: replace right inboard launcher (TM 9–1425–475–30–2).

8–627 **SIGNAL NAME:** P3M1 MSL CORRELATE
    MEMORY LOCATION: 002003
    MEMORY DATA BIT(S): 16 (BINARY)
    CONDITION: (None)
    SIGNAL FUNCTION: Indicates laser has detected a laser beam whose laser code agrees with internal stored code.
    REMARKS: From launcher through right inboard MRTU Type II to FCC.
    PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–628.
    FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–628 **SIGNAL NAME:** P3M1 MSL TRACK
    MEMORY LOCATION: 001425
    MEMORY DATA BIT(S): 15 (BINARY)
    CONDITION: (None)
    SIGNAL FUNCTION: Indicates seeker has entered track mode. The laser seeker can enter track mode whenever a proper laser beam is detected in seeker FOV for any mode except cage.
    REMARKS: From ECSP to RHE.
    PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–629.
    FAIL: Location of fault: replace right inboard launcher (TM 9–1425–475–30–2).

8–629 **SIGNAL NAME:** P3M1 MSL TRACK
    MEMORY LOCATION: 002003
    MEMORY DATA BIT(S): 15 (BINARY)
    CONDITION: (None)
    SIGNAL FUNCTION: Indicates seeker has entered track mode. The laser seeker can enter track mode whenever a proper laser beam is detected in seeker FOV for any mode except cage.
    REMARKS: From launcher through right inboard MRTU Type II to FCC.
    PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1153.
    FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–630 **SIGNAL NAME:** P3M1 MSL SKR CAGE CMD
    MEMORY LOCATION: 001331
    MEMORY DATA BIT(S): 19 (BINARY)
    CONDITION: (None)
    SIGNAL FUNCTION: Commands missile to enter cage mode.
    REMARKS: From RHE to ECSP.
    PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–631.
    FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–631 SIGNAL NAME: P3M1 MSL SKR CAGE CMD
MEMORY LOCATION: 002022
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile to enter cage mode.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–632.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–632 SIGNAL NAME: P3M1 MSL SKR CAGE
MEMORY LOCATION: 001425
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker is in cage mode. The seeker cannot track in cage position.
REMARKS: From ECSP to RHE.
PASS: If third digit on HOD is 0, 2, 4, or 6, go to paragraph 8–633.
FAIL: Location of fault: replace right inboard launcher (TM 9–1425–475–30–2).

8–633 SIGNAL NAME: P3M1 MSL SKR CAGE
MEMORY LOCATION: 002003
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker is in cage mode. The seeker cannot track in cage position.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If third digit on HOD is 0, 2, 4, or 6, go to paragraph 8–636.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–634 SIGNAL NAME: P3M1 MSL DEICE #2 CMD
MEMORY LOCATION: 001335
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Issues deicing squib fire command to selected missile.
REMARKS: From RHE to ECSP.
PASS: If sixth digit on HOD is 1, go to paragraph 8–635.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–635   SIGNAL NAME: P3M1 MSL DEICE #2 CMD
MEMORY LOCATION: 002026
MEMORY DATA BIT(S):   4   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Issues deicing squib fire command to selected missile.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If sixth digit on HOD is 1, go to paragraph 8–1118.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–636   SIGNAL NAME: P3M1 MSL BIT CONTROL
MEMORY LOCATION: 001335
MEMORY DATA BIT(S):   6–9   (HEX)
CONDITION: (None)
SIGNAL FUNCTION: Commands BIT on autopilot.
REMARKS: From RHE to ECSP.
PASS: If fifth digit displayed on HOD is 0, 1, or 2, and the fourth digit displayed on HOD is 2, 3, 4, 5, 6, or 7 go to paragraph 8–637.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–637   SIGNAL NAME: P3M1 MSL BIT CONTROL
MEMORY LOCATION: 002026
MEMORY DATA BIT(S):   6–9   (HEX)
CONDITION: (None)
SIGNAL FUNCTION: Commands BIT on autopilot.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: Location of fault if fifth digit displayed on HOD is 0, 1, or 2, and the fourth digit displayed on HOD is 2, 3, 4, 5, 6, or 7: Replace right inboard launcher missile 1 (TM 9–1427–475–20).
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–638   SIGNAL NAME: P3M1 MSL INDIRECT FIRE LO
MEMORY LOCATION: 001335
MEMORY DATA BIT(S):   10   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands low flight profile for LOAL operation.
REMARKS: From RHE to ECSP.
PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–639.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–639 SIGNAL NAME: P3M1 MSL INDIRECT FIRE LO
MEMORY LOCATION: 002026
MEMORY DATA BIT(S): 10   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands low flight profile for LOAL operation.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1108.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–640 SIGNAL NAME: P3M1 MSL INDIRECT FIRE HI
MEMORY LOCATION: 001335
MEMORY DATA BIT(S): 11   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands high flight profile for LOAL operation.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 8–641.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–641 SIGNAL NAME: P3M1 MSL INDIRECT FIRE HI
MEMORY LOCATION: 002026
MEMORY DATA BIT(S): 11   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands high flight profile for LOAL operation.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1108.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–642 SIGNAL NAME: P3M1 MSL RF CODE ACCEPT COMMAND
MEMORY LOCATION: 001335
MEMORY DATA BIT(S): 13   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to accept RF code data from analog command lines
3 and 4. Commands ECSP to hook up analog commands 3 and 4 to selected
missile.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–643.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–643   **SIGNAL NAME:**   P3M1 MSL RF CODE ACCEPT COMMAND
MEMORY LOCATION: 002026
MEMORY DATA BIT(S):   13   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to accept RF code data from analog command lines 3 and 4. Commands ECSP to hook up analog commands 3 and 4 to selected missile.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–644.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–644   **SIGNAL NAME:**   P3M1 MSL LASER CODE ACCEPT COMMAND
MEMORY LOCATION: 001335
MEMORY DATA BIT(S):   14   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser code information received from RHE by launcher on coax A and B to be relayed to identified missile.
REMARKS: From RHE to ECSP.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–645.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–645   **SIGNAL NAME:**   P3M1 MSL LASER CODE ACCEPT COMMAND
MEMORY LOCATION: 002026
MEMORY DATA BIT(S):   14   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser code information received from RHE by launcher on coax A and B to be relayed to identified missile.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1106.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–646   **SIGNAL NAME:**   P3M1 MSL COAX B CONNECT
MEMORY LOCATION: 001335
MEMORY DATA BIT(S):   17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax B to indicated missile.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–647.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–647   SIGNAL NAME: P3M1 MSL COAX B CONNECT
   MEMORY LOCATION: 002026
   MEMORY DATA BIT(S):   17   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Commands launcher to connect coax B to indicated missile.
   REMARKS: From launcher through right inboard MRTU Type II to FCC.
   PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–648.
   FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
         MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
         (TM 9–1427–475–20).

8–648   SIGNAL NAME: P3M1 MSL COAX A CONNECT
   MEMORY LOCATION: 001335
   MEMORY DATA BIT(S):   18   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Commands launcher to connect coax A to indicated missile.
   REMARKS: From RHE to ECSP.
   PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–649.
   FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
         (TM 9–1427–475–20).

8–649   SIGNAL NAME: P3M1 MSL COAX A CONNECT
   MEMORY LOCATION: 002026
   MEMORY DATA BIT(S):   18   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Commands launcher to connect coax A to indicated missile.
   REMARKS: From launcher through right inboard MRTU Type II to FCC.
   PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1106.
   FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
         MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
         (TM 9–1427–475–20).

8–650   SIGNAL NAME: 4P3M1 MSL SKR LAUNCH PREPARE COMMAND (ACY)
               P3M1 SKR LNCH CMD (ACZ)
   MEMORY LOCATION: 001335
   MEMORY DATA BIT(S):   19   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Prepares missile for free flight operation.
   REMARKS: From RHE to ECSP.
   PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–651.
   FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
         (TM 9–1427–475–20).

8–651   SIGNAL NAME: P3M1 MSL SKR LAUNCH PREPARE COMMAND (ACY)
               P3M1 SKR LNCH CMD (ACZ)
   MEMORY LOCATION: 002026
   MEMORY DATA BIT(S):   19   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Prepares missile for free flight operation.
   REMARKS: From launcher through right inboard MRTU Type II to FCC.
   PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–1126.
   FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
         MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
         (TM 9–1427–475–20).

8–652 **SIGNAL NAME:** P3M2 BIT PERFORMED
MEMORY LOCATION: 001350
MEMORY DATA BIT(S): 10   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to FCC that BIT has been performed.
REMARKS: From RHE to FCC.
PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–653.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–653 **SIGNAL NAME:** P3M2 BIT STATUS (ACY) P3M2 DISPLAY STATUS (ACZ)
MEMORY LOCATION: 001355
MEMORY DATA BIT(S): 4–7   (HEX)
CONDITION: If sixth digit displayed on HOD is 0 and fifth digit displayed
on HOD is 0=NO MSL
If sixth digit displayed on HOD is 0 and fifth digit displayed
on HOD is 1=SELECTED
If sixth digit displayed on HOD is 0 and fifth digit displayed
on HOD is 2=READY
If sixth digit displayed on HOD is 0 and fifth digit displayed
on HOD is 3=TRACKING
If sixth digit displayed on HOD is 0 and fifth digit displayed
on HOD is 4=BIT NO GO
If sixth digit displayed on HOD is 0 and fifth digit displayed
on HOD is 5=FAILED
If sixth digit displayed on HOD is 0 and fifth digit displayed
on HOD is 7=BATTERY NO GO
If sixth digit displayed on HOD is 1 and fifth digit displayed
on HOD is 0=UNLATCHED
If sixth digit displayed on HOD is 1 and fifth digit displayed
on HOD is 1=MRTU NO GO
If sixth digit displayed on HOD is 1 and fifth digit displayed
on HOD is 4=CODED
If sixth digit displayed on HOD is 1 and fifth digit displayed
on HOD is 7=CAGED
SIGNAL FUNCTION: Provides missile status display for operator.
REMARKS: From RHE to FCC for display.
PASS: If CONDITION corresponds to selected message, refer to failure symptom index and next
failure symptom paragraph.
FAIL: Location of fault: RHE, wiring from RHE to right inboard launcher, right inboard launcher.
Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–654 **SIGNAL NAME:** P3M2 UNLATCH INDICATE
MEMORY LOCATION: 001426
MEMORY DATA BIT(S): 17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to RHE missile is unlatched.
REMARKS: From launcher to RHE.
PASS: If first digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 8–655.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to RHE, RHE.
Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–655 **SIGNAL NAME:** P3M2 UNLATCH INDICATE
MEMORY LOCATION: 002004
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to operator when a missile is unlatched.
REMARKS: From launcher through right inboard MRTU Type II to FCC for display.
PASS: If first digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 8–656.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–656 **SIGNAL NAME:** P3M2 UNLATCH INDICATE
MEMORY LOCATION: 002027
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to operator when a missile is unlatched.
REMARKS: From FCC through right inboard MRTU Type II to launcher.
PASS: If first digit displayed on HOD is 0, 1, 2, or 3, refer to failure symptom index and next failure
symptom paragraph.
FAIL: Location of fault: right inboard MRTU Type II, wiring from right inboard MRTU Type II to FCC,
FCC. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

8–657 **SIGNAL NAME:** P3M2 UPPER LOWER DISPLAY STATUS (ACY) P3M2 PRIORITY IND (ACZ)   ∎
MEMORY LOCATION: 001355
MEMORY DATA BIT(S): 8 (BINARY)
CONDITION: If the second digit displayed on HOD is 0, 2, 4, or 6=UPPER
If the second digit displayed on HOD is 1, 3, 5, or 7=LOWER
SIGNAL FUNCTION: Indicates to operator when a selected missile has been assigned to upper or
lower channel.
REMARKS: From RHE to FCC for display.
PASS: If CONDITION corresponds to selected channel, go to paragraph 8–658.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–658 **SIGNAL NAME:** P3M2 TYPE STATUS DISPLAY (ACY) P3M2 TYPE (ACZ)   ∎
MEMORY LOCATION: 001355
MEMORY DATA BIT(S): 9–11 (OCTAL)
CONDITION: If the first digit displayed on HOD is 0=NONE
If the first digit displayed on HOD is 1=TACTICAL LASER
If the first digit displayed on HOD is 4=UNIDENTIFIED
If the first digit displayed on HOD is 5=TRAINING LASER
SIGNAL FUNCTION: Provides type of missile data for display to operator.
REMARKS: From RHE to FCC for display.
PASS: If CONDITION on HOD corresponds to installed type of missiles, go to paragraph 8–659.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–659   **SIGNAL NAME:**   P3M2 TYPE (ACY) P3M2 MSL TYPE (ACZ)
          MEMORY LOCATION: 001424
          MEMORY DATA BIT(S):   7–8   (BINARY)
          CONDITION: If fifth digit displayed on HOD is 0, and fourth digit displayed on HOD is 0, 1, 2, or 3=TRAINING
                    If fifth digit displayed on HOD is 1, and fourth digit displayed on HOD is 0, 1, 2, or 3=TACTICAL
                    If fifth digit displayed on HOD is 1, and fourth digit displayed on HOD is 4, 5, 6, or 7=NONE
          SIGNAL FUNCTION: Indicates a tactical, training or no missile at location.
          REMARKS: From ECSP to RHE.
          PASS: If CONDITION corresponds to installed type of missiles, go to paragraph 8–660.
          FAIL: Location of fault: replace right inboard launcher (TM 9–1425–475–30–2).

8–660   **SIGNAL NAME:**   P3M2 TYPE (ACY) P3M2 MSL TYPE (ACZ)
          MEMORY LOCATION: 002002
          MEMORY DATA BIT(S):   7–8   (BINARY)
          CONDITION: If fourth digit displayed on HOD is 0, 1, 2, or 3=TRAINING
                    If fifth digit displayed on HOD 1, 3, 5, or 7=TACTICAL
                    If fifth digit displayed on HOD 1, 3, 5, or 7 and fourth digit displayed on HOD is 0, 1, 2, or 3=NONE
          SIGNAL FUNCTION: Indicates a tactical, training or no missile at location.
          REMARKS: From launcher through right inboard MRTU Type II to FCC.
          PASS: If CONDITION corresponds to installed type of missiles, refer to failure symptom index and next failure symptom paragraph.
          FAIL: Location of fault: right inboard right inboard launcher, wiring from right inboard right inboard launcher to right inboard MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–661   **SIGNAL NAME:**   P3M2 MSL DEICE #1 CMD
          MEMORY LOCATION: 001330
          MEMORY DATA BIT(S):   5   (BINARY)
          CONDITION: (None)
          SIGNAL FUNCTION: Sends command to launcher ECSP to arm deicing squib.
          REMARKS: From RHE to ECSP.
          PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–662.
          FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–662   **SIGNAL NAME:**   P3M2 MSL DEICE #1 CMD
          MEMORY LOCATION: 002021
          MEMORY DATA BIT(S):   5   (BINARY)
          CONDITION: (None)
          SIGNAL FUNCTION: Sends command to launcher ECSP to arm deicing squib.
          REMARKS: From launcher through right inboard MRTU Type II to FCC.
          PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–693.
          FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–663 **SIGNAL NAME:** P3M2 MSL SKR INPUT SLAVE (ACY) P3M2 SKR SLV SEL (ACZ) ∎
MEMORY LOCATION: 001330
MEMORY DATA BIT(S): 6–8 (OCTAL)
CONDITION: If the fifth digit is 0 or 4 and the fourth digit
is 0 or 2=ZERO EL ZERO AZ
If the fifth digit is 0 or 4 and the fourth digit
is 4 or 6=REMEL REMAZ
If the fifth digit is 1 or 5 and the fourth digit
is 0 or 2=AUTOEL AUTOAZ
If the fifth digit is 1 or 5 and the fourth digit
is 4 or 6=REMEL REMAZ +BIAS/2
If the fifth digit is 2 or 6 and the fourth digit
is 0 or 2=REMEL REMAZ +BIAS
If the fifth digit is 2 or 6 and the fourth digit
is 4 or 6=REMEL REMAZ – BIAS/2
If the fifth digit is 3 or 7 and the fourth digit
is 0 or 2=REMEL REMAZ – BIAS
If the fifth digit is 3 or 7 and the fourth digit
is 4 or 6=AUTOEL ZERO AZ
SIGNAL FUNCTION: Selects pitch and yaw slave commands to be applied to missile.
REMARKS: From RHE to ECSP.
PASS: If CONDITION corresponds to selected seeker input, go to paragraph 8–664.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–664 **SIGNAL NAME:** P3M2 MSL SKR INPUT SLAVE (ACY) P3M2 SKR SLV SEL (ACZ) ∎
MEMORY LOCATION: 002021
MEMORY DATA BIT(S): 6–8 (OCTAL)
CONDITION: If the fifth digit is 0 or 4 and the fourth digit
is 0 or 2=ZERO EL ZERO AZ
If the fifth digit is 0 or 4 and the fourth digit
is 4 or 6=REMEL REMAZ
If the fifth digit is 1 or 5 and the fourth digit
is 0 or 2=AUTOEL AUTOAZ
If the fifth digit is 1 or 5 and the fourth digit
is 4 or 6=REMEL REMAZ +BIAS/2
If the fifth digit is 2 or 6 and the fourth digit
is 0 or 2=REMEL REMAZ +BIAS
If the fifth digit is 2 or 6 and the fourth digit
is 4 or 6=REMEL REMAZ – BIAS/2
If the fifth digit is 3 or 7 and the fourth digit
is 0 or 2=REMEL REMAZ – BIAS
If the fifth digit is 3 or 7 and the fourth digit
is 4 or 6=AUTOEL ZERO AZ
SIGNAL FUNCTION: Selects pitch and yaw slave commands to be applied to missile.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If CONDITION corresponds to selected seeker input, refer to failure symptom index and next
failure symptom paragraph.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–665 **SIGNAL NAME:**   P3M2 MSL AUTO PILOT POWER CONTROL (ACY)
P3M2 AUTOPLT PWR (ACZ)
MEMORY LOCATION: 001330
MEMORY DATA BIT(S):   9   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of auto pilot power to missile.
REMARKS: From RHE to ECSP.
PASS: If fourth digit on HOD is 2, 3, 6, or 7, go to paragraph 8–666.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–666 **SIGNAL NAME:**   P3M2 MSL AUTO PILOT POWER CONTROL (ACY)
P3M2 AUTOPLT PWR (ACZ)
MEMORY LOCATION: 002021
MEMORY DATA BIT(S):   9   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of auto pilot power to missile.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If fourth digit on HOD is 2, 3, 6, or 7, go to paragraph 8–667.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–667 **SIGNAL NAME:**   P3M2 MSL AUTO PILOT POWER (ACY) P3M2 A/P PWR OK (ACZ)
MEMORY LOCATION: 001424
MEMORY DATA BIT(S):   17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Specifies auto pilot power is above minimum value (+18 VDC).
REMARKS: From ECSP to RHE.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–668.
FAIL: Location of fault: replace right inboard launcher (TM 9–1425–475–30–2).

8–668 **SIGNAL NAME:**   P3M2 MSL AUTO PILOT POWER (ACY) P3M2 A/P PWR OK (ACZ)
MEMORY LOCATION: 002021
MEMORY DATA BIT(S):   17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Specifies auto pilot power is above minimum value (+18 VDC).
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, refer to failure symptom index and next failure symptom
paragraph.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–669 **SIGNAL NAME:** P3M2 MSL TGT POLARITY CONTROL
MEMORY LOCATION: 001330
MEMORY DATA BIT(S): 10–11 (BINARY)
CONDITION: If the fourth digit is 0, 2, 4, or 6 and the third digit is 0, 1, 2, 3=BLACK
If the fourth digit is 0, 2, 4, or 6 and the third digit is 4, 5, 6, 7=AUTO
If the fourth digit is 1, 3, 5, or 7 and the third digit is 0, 1, 2, 3=WHITE
SIGNAL FUNCTION: Directs missile seeker to track a black target on a white background, a white target on a black background or automatic contrast.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD corresponds to proper polarity, go to paragraph 8–670.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–670 **SIGNAL NAME:** P3M2 MSL TGT POLARITY CONTROL
MEMORY LOCATION: 002021
MEMORY DATA BIT(S): 10–11 (BINARY)
CONDITION: If the fourth digit is 0, 2, 4, or 6 and the third digit is 0, 1, 2, 3=BLACK
If the fourth digit is 0, 2, 4, or 6 and the third digit is 4, 5, 6, 7=AUTO
If the fourth digit is 1, 3, 5, or 7 and the third digit is 0, 1, 2, 3=WHITE
SIGNAL FUNCTION: Directs missile seeker to track a black target on a white background, a white target on a black background or automatic contrast.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If third digit on HOD corresponds to proper polarity, refer to failure symptom index and next failure symptom paragraph.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–671 **SIGNAL NAME:** P3M2 MSL BIT CMD
MEMORY LOCATION: 001330
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls launcher BIT.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 0, 1, 4, or 5, go to paragraph 8–672.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–672 **SIGNAL NAME:** P3M2 MSL BIT CMD
MEMORY LOCATION: 002021
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls launcher BIT.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If third digit on HOD is 0, 1, 4, or 5, go to paragraph 8–673.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

■ **8–673** **SIGNAL NAME:** P3M2 MSL SKR POWER CONTROL (ACY) P3M2 SKR PWR OK (ACZ)
MEMORY LOCATION: 001330
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of seeker power.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–674.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

■ **8–674** **SIGNAL NAME:** P3M2 MSL SKR POWER CONTROL (ACY) P3M2 SKR PWR OK (ACZ)
MEMORY LOCATION: 002021
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of seeker power.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–675.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–675 **SIGNAL NAME:** P3M2 MSL SKR POWER
MEMORY LOCATION: 001424
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of seeker power (+28 VDC).
REMARKS: From ECSP to RHE.
PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 8–676.
FAIL: Location of fault: replace right inboard launcher (TM 9–1425–475–30–2).

■ **8–676** **SIGNAL NAME:** P3M2 MSL SEEKER POWER (ACY) P3M2 SKR PWR OK (ACZ)
MEMORY LOCATION: 002002
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of seeker power (+28 VDC).
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 8–679.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–677 **SIGNAL NAME:** P3M2 CCM ACTIVATE CMD
MEMORY LOCATION: 001330
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to enter CCM mode.
REMARKS: From RHE to ECSP.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–678.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–678 **SIGNAL NAME:** P3M2 CCM ACTIVATE CMD
MEMORY LOCATION: 002021
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to enter CCM mode.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1123.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–679 **SIGNAL NAME:** P3M2 MSL SCAN SEARCH CMD
MEMORY LOCATION: 001330
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter target acquisition mode and to enter lock–on
when target is acquired.
REMARKS: From RHE to ECSP.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–680.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–680 **SIGNAL NAME:** P3M2 MSL SCAN SEARCH CMD
MEMORY LOCATION: 002021
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter target acquisition mode and to enter lock–on
when target is acquired.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–683.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–681 **SIGNAL NAME:** P3M2 MSL SEEKER SLAVE CMD
MEMORY LOCATION: 001330
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter slave mode.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–682.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–682 **SIGNAL NAME:** P3M2 MSL SEEKER SLAVE CMD
        MEMORY LOCATION: 002021
        MEMORY DATA BIT(S): 17 (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Commands laser seeker to enter slave mode.
        REMARKS: From launcher through right inboard MRTU Type II to FCC.
        PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–689.
        FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
                MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
                (TM 9–1427–475–20).

8–683 **SIGNAL NAME:** P3M2 MSL STARE TRACK CMD
        MEMORY LOCATION: 001330
        MEMORY DATA BIT(S): 18 (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Commands laser seeker to enter stare mode. If proper laser code is detected
                        in seeker FOV, seeker will enter track mode.
        REMARKS: From RHE to ECSP.
        PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–684.
        FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
                (TM 9–1427–475–20).

8–684 **SIGNAL NAME:** P3M2 MSL STARE TRACK CMD
        MEMORY LOCATION: 002021
        MEMORY DATA BIT(S): 18 (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Commands laser seeker to enter stare mode. If proper laser code is detected
                        in seeker FOV, seeker will enter track mode.
        REMARKS: From launcher through right inboard MRTU Type II to FCC.
        PASS: If first digit on HOD is 2, 3, 6, or 7, refer to failure symptom index and next failure symptom
                paragraph.
        FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
                MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
                (TM 9–1427–475–20).

8–685 **SIGNAL NAME:** P3M2 MSL CORRELATE
        MEMORY LOCATION: 001424
        MEMORY DATA BIT(S): 16 (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Indicates laser has detected a laser beam whose laser code agrees with
                        internal stored code.
        REMARKS: From ECSP to RHE.
        PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–686.
        FAIL: Location of fault: replace right inboard launcher (TM 9–1425–475–30–2).

8–686 SIGNAL NAME: P3M2 MSL CORRELATE
MEMORY LOCATION: 002002
MEMORY DATA BIT(S):   16   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates laser has detected a laser beam whose laser code agrees with
internal stored code.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–687.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–687 SIGNAL NAME: P3M2 MSL TRACK
MEMORY LOCATION: 001424
MEMORY DATA BIT(S):   15   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker has entered track mode. The laser seeker can enter track
mode whenever a proper laser beam is detected in seeker FOV for any mode
except cage.
REMARKS: From ECSP to RHE.
PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–688.
FAIL: Location of fault: replace right inboard launcher (TM 9–1425–475–30–2).

8–688 SIGNAL NAME: P3M2 MSL TRACK
MEMORY LOCATION: 002002
MEMORY DATA BIT(S):   15   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker has entered track mode. The laser seeker can enter track
mode whenever a proper laser beam is detected in seeker FOV for any mode
except cage.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1153.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–689 SIGNAL NAME: P3M2 MSL SKR CAGE CMD
MEMORY LOCATION: 001330
MEMORY DATA BIT(S):   19   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile to enter cage mode.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–690.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–690   **SIGNAL NAME:**   P3M2 MSL SKR CAGE CMD
        MEMORY LOCATION: 002021
        MEMORY DATA BIT(S):   19   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Commands missile to enter cage mode.
        REMARKS: From launcher through right inboard MRTU Type II to FCC.
        PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–691.
        FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
                MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
                (TM 9–1427–475–20).

8–691   **SIGNAL NAME:**   P3M2 MSL SKR CAGE
        MEMORY LOCATION: 001424
        MEMORY DATA BIT(S):   13   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Indicates seeker is in cage mode. The seeker cannot track in cage position.
        REMARKS: From ECSP to RHE.
        PASS: If third digit on HOD is 0, 2, 4, or 6, go to paragraph 8–692.
        FAIL: Location of fault: replace right inboard launcher (TM 9–1425–475–30–2).

8–692   **SIGNAL NAME:**   P3M2 MSL SKR CAGE
        MEMORY LOCATION: 002002
        MEMORY DATA BIT(S):   13   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Indicates seeker is in cage mode. The seeker cannot track in cage position.
        REMARKS: From launcher through right inboard MRTU Type II to FCC.
        PASS: If third digit on HOD is 0, 2, 4, or 6, go to paragraph 8–695.
        FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
                MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
                (TM 9–1427–475–20).

8–693   **SIGNAL NAME:**   P3M2 MSL DEICE #2 CMD
        MEMORY LOCATION: 001334
        MEMORY DATA BIT(S):   4   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Issues deicing squib fire command to selected missile.
        REMARKS: From RHE to ECSP.
        PASS: If sixth digit on HOD is 1, go to paragraph 8–694.
        FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
                (TM 9–1427–475–20).

8–694 **SIGNAL NAME:** P3M2 MSL DEICE #2 CMD
MEMORY LOCATION: 002025
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Issues deicing squib fire command to selected missile.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If sixth digit on HOD is 1, go to paragraph 8–1118.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–695 **SIGNAL NAME:** P3M2 MSL BIT CONTROL
MEMORY LOCATION: 001334
MEMORY DATA BIT(S): 6–9 (HEX)
CONDITION: (None)
SIGNAL FUNCTION: Commands BIT on autopilot.
REMARKS: From RHE to ECSP.
PASS: If fifth digit displayed on HOD is 0, 1, or 2, and the fourth digit displayed on HOD is 2, 3, 4, 5,
6, or 7 go to paragraph 8–696.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–696 **SIGNAL NAME:** P3M2 MSL BIT CONTROL
MEMORY LOCATION: 002025
MEMORY DATA BIT(S): 6–9 (HEX)
CONDITION: (None)
SIGNAL FUNCTION: Commands BIT on autopilot.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: Location of fault if fifth digit displayed on HOD is 0, 1, or 2, and the fourth digit displayed on
HOD is 2, 3, 4, 5, 6, or 7: Replace right inboard launcher missile 2 (TM 9–1427–475–20).
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–697 **SIGNAL NAME:** P3M2 MSL INDIRECT FIRE LO
MEMORY LOCATION: 001334
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands low flight profile for LOAL operation.
REMARKS: From RHE to ECSP.
PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–698.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–698 **SIGNAL NAME:**   P3M2 MSL INDIRECT FIRE LO
      MEMORY LOCATION: 002025
      MEMORY DATA BIT(S):   10   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Commands low flight profile for LOAL operation.
      REMARKS: From launcher through right inboard MRTU Type II to FCC.
      PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1108.
      FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
           MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
           (TM 9–1427–475–20).

8–699 **SIGNAL NAME:**   P3M2 MSL INDIRECT FIRE HI
      MEMORY LOCATION: 001334
      MEMORY DATA BIT(S):   11   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Commands high flight profile for LOAL operation.
      REMARKS: From RHE to ECSP.
      PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 8–700.
      FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
           (TM 9–1427–475–20).

8–700 **SIGNAL NAME:**   P3M2 MSL INDIRECT FIRE HI
      MEMORY LOCATION: 002025
      MEMORY DATA BIT(S):   11   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Commands high flight profile for LOAL operation.
      REMARKS: From launcher through right inboard MRTU Type II to FCC.
      PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1108.
      FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
           MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
           (TM 9–1427–475–20).

8–701 **SIGNAL NAME:**   P3M2 MSL RF CODE ACCEPT COMMAND
      MEMORY LOCATION: 001334
      MEMORY DATA BIT(S):   13   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Commands missile seeker to accept RF code data from analog command lines
           3 and 4. Commands ECSP to hook up analog commands 3 and 4 to selected
           missile.
      REMARKS: From RHE to ECSP.
      PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–702.
      FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
           (TM 9–1427–475–20).

8–702 **SIGNAL NAME:** P3M2 MSL RF CODE ACCEPT COMMAND
MEMORY LOCATION: 002025
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to accept RF code data from analog command lines 3 and 4. Commands ECSP to hook up analog commands 3 and 4 to selected missile.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–703.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–703 **SIGNAL NAME:** P3M2 MSL LASER CODE ACCEPT COMMAND
MEMORY LOCATION: 001334
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser code information received from RHE by launcher on coax A and B to be relayed to identified missile.
REMARKS: From RHE to ECSP.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–704.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–704 **SIGNAL NAME:** P3M2 MSL LASER CODE ACCEPT COMMAND
MEMORY LOCATION: 002025
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser code information received from RHE by launcher on coax A and B to be relayed to identified missile.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1106.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–705 **SIGNAL NAME:** P3M2 MSL COAX B CONNECT
MEMORY LOCATION: 001334
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax B to indicated missile.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–706.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–706 **SIGNAL NAME:** P3M2 MSL COAX B CONNECT
MEMORY LOCATION: 002025
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax B to indicated missile.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–707.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–707 **SIGNAL NAME:** P3M2 MSL COAX A CONNECT
MEMORY LOCATION: 001334
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax A to indicated missile.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–708.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–708 **SIGNAL NAME:** P3M2 MSL COAX A CONNECT
MEMORY LOCATION: 002025
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax A to indicated missile.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1106.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–709 **SIGNAL NAME:** P3M2 MSL SKR LAUNCH PREPARE COMMAND (ACY)
P3M2 SKR LNCH CMD (ACZ)
MEMORY LOCATION: 001334
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Prepares missile for free flight operation.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–710.
FAIL: Location of fault, RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–710 **SIGNAL NAME:** P3M2 MSL SKR LAUNCH PREPARE COMMAND (ACY)
P3M2 SKR LNCH CMD (ACZ)
MEMORY LOCATION: 002025
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Prepares missile for free flight operation.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–1126.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–711 SIGNAL NAME: P3M3 BIT PERFORMED
　　　　　MEMORY LOCATION: 001350
　　　　　MEMORY DATA BIT(S): 9 (BINARY)
　　　　　CONDITION: (None)
　　　　　SIGNAL FUNCTION: Indicates to FCC that BIT has been performed.
　　　　　REMARKS: From RHE to FCC.
　　　　　PASS: If fourth digit on HOD is 2, 3, 6, or 7, go to paragraph 8–712.
　　　　　FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–712 SIGNAL NAME: P3M3 BIT STATUS (ACY) P3M3 DISPLAY STATUS (ACZ)　　　　　　　■
　　　　　MEMORY LOCATION: 001356
　　　　　MEMORY DATA BIT(S): 12–15 (HEX)
　　　　　CONDITION: If third digit displayed on HOD is 0 and second digit displayed
　　　　　　　　　　on HOD is 0=NO MSL
　　　　　　　　　　If third digit displayed on HOD is 0 or 4 and second digit displayed
　　　　　　　　　　on HOD is 2 or 3=SELECTED
　　　　　　　　　　If third digit displayed on HOD is 0 or 4 and second digit displayed
　　　　　　　　　　on HOD is 4 or 5=READY
　　　　　　　　　　If third digit displayed on HOD is 0 or 4 and second digit displayed
　　　　　　　　　　on HOD is 6 or 7=TRACKING
　　　　　　　　　　If third digit displayed on HOD is 3 or 7 and second digit displayed
　　　　　　　　　　on HOD is 0=CODED
　　　　　　　　　　If third digit displayed on HOD is 3 or 7 and second digit displayed
　　　　　　　　　　on HOD is 6=CAGED
　　　　　　　　　　If third digit displayed on HOD is 5 or 1 and second digit displayed
　　　　　　　　　　on HOD is 0=BIT NO GO
　　　　　　　　　　If third digit displayed on HOD is 5 or 1 and second digit displayed
　　　　　　　　　　on HOD is 2=FAILED
　　　　　　　　　　If third digit displayed on HOD is 5 or 1 and second digit displayed
　　　　　　　　　　on HOD is 6=BATTERY NO GO
　　　　　　　　　　If third digit displayed on HOD is 6 or 2 and second digit displayed
　　　　　　　　　　on HOD is 0=UNLATCHED
　　　　　　　　　　If third digit displayed on HOD is 6 or 2 and second digit displayed
　　　　　　　　　　on HOD is 2=MRTU NO GO
　　　　　　　　　　If third digit displayed on HOD is 6 or 2 and second digit displayed
　　　　　　　　　　on HOD is 4=RAIL NO GO
　　　　　SIGNAL FUNCTION: Provides missile status display for operator.
　　　　　REMARKS: From RHE to FCC for display.
　　　　　PASS: If CONDITION corresponds to selected message, go to failure symptom index and next failure
　　　　　　　symptom paragraph.
　　　　　FAIL: Location of fault: RHE, wiring from RHE to right inboard launcher, right inboard launcher.
　　　　　　　Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–713 SIGNAL NAME: P3M3 UNLATCH INDICATE
　　　　　MEMORY LOCATION: 001426
　　　　　MEMORY DATA BIT(S): 16 (BINARY)
　　　　　CONDITION: (None)
　　　　　SIGNAL FUNCTION: Indicates to RHE missile is unlatched.
　　　　　REMARKS: From launcher to RHE.
　　　　　PASS: If second digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 8–714.
　　　　　FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to RHE, RHE.
　　　　　　　Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–714   **SIGNAL NAME:**   P3M3 UNLATCH INDICATE
        MEMORY LOCATION: 002004
        MEMORY DATA BIT(S):   16   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Indicates to operator when a missile is unlatched.
        REMARKS: From launcher through right inboard MRTU Type II to FCC for display.
        PASS: If second digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 8–715.
        FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
                MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
                (TM 9–1427–475–20).

8–715   **SIGNAL NAME:**   P3M3 UNLATCH INDICATE
        MEMORY LOCATION: 002027
        MEMORY DATA BIT(S):   16   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Indicates to operator when a missile is unlatched.
        REMARKS: From FCC through right inboard MRTU Type II to launcher.
        PASS: If second digit displayed on HOD is 0, 2, 4, or 6, refer to failure symptom index and next
                failure symptom paragraph.
        FAIL: Location of fault: right inboard MRTU Type II, wiring from right inboard MRTU Type II to FCC,
                FCC. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

8–716   **SIGNAL NAME:**   P3M3 UPPER LOWER DISPLAY STATUS (ACY) P3M3 PRIORITY IND (ACZ)
        MEMORY LOCATION: 001356
        MEMORY DATA BIT(S):   16   (BINARY)
        CONDITION: If the second digit displayed on HOD is 0, 2, 4, or 6=UPPER
                    If the second digit displayed on HOD is 1, 3, 5, or 7=LOWER
        SIGNAL FUNCTION: Indicates to operator when a selected missile has been assigned to upper or
                    lower channel.
        REMARKS: From RHE to FCC for display.
        PASS: If CONDITION corresponds to selected channel, go to paragraph 8–717.
        FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–717   **SIGNAL NAME:**   P3M3 TYPE STATUS DISPLAY (ACY) P3M3 TYPE (ACZ)
        MEMORY LOCATION: 001356
        MEMORY DATA BIT(S):   17–19   (OCTAL)
        CONDITION: If the first digit displayed on HOD is 0=NONE
                    If the first digit displayed on HOD is 1=TACTICAL LASER
                    If the first digit displayed on HOD is 4=UNIDENTIFIED
                    If the first digit displayed on HOD is 5=TRAINING LASER
        SIGNAL FUNCTION: Provides type of missile data for display to operator.
        REMARKS: From RHE to FCC for display.
        PASS: If CONDITION on HOD corresponds to installed type of missiles, go to paragraph 8–718.
        FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
                (TM 9–1427–475–20).

8–718 SIGNAL NAME: P3M3 TYPE (ACY) P3M3 MSL TYPE (ACZ)
   MEMORY LOCATION: 001423
   MEMORY DATA BIT(S): 7–8 (BINARY)
   CONDITION: If fifth digit displayed on HOD is 0, and fourth digit displayed on HOD is 0, 1, 2, or
      3=TRAINING
      If fifth digit displayed on HOD is 1, and fourth digit displayed on HOD is 0, 1, 2, or
      3=TACTICAL
      If fifth digit displayed on HOD is 1, and fourth digit displayed on HOD is 4, 5, 6, or
      7=NONE
   SIGNAL FUNCTION: Indicates a tactical, training or no missile at location.
   REMARKS: From ECSP to RHE.
   PASS: If CONDITION corresponds to installed type of missiles, go to paragraph 8–719.
   FAIL: Location of fault: replace right inboard launcher (TM 9–1425–475–30–2).

8–719 SIGNAL NAME: P3M3 TYPE (ACY) P3M3 MSL TYPE (ACZ)
   MEMORY LOCATION: 002001
   MEMORY DATA BIT(S): 7–8 (BINARY)
   CONDITION: If fourth digit displayed on HOD is 0, 1, 2, or 3=TRAINING
      If fifth digit displayed on HOD 1, 3, 5, or 7=TACTICAL
      If fifth digit displayed on HOD 1, 3, 5, or 7 and fourth digit displayed on HOD is 0, 1, 2,
      or 3=NONE
   SIGNAL FUNCTION: Indicates a tactical, training or no missile at location.
   REMARKS: From launcher through right inboard MRTU Type II to FCC.
   PASS: If CONDITION corresponds to installed type of missiles, refer to failure symptom index and
     next failure symptom paragraph.
   FAIL: Location of fault: right inboard , wiring from right inboard launcher to right inboard MRTU Type
     II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–720 SIGNAL NAME: P3M3 MSL DEICE #1 CMD
   MEMORY LOCATION: 001327
   MEMORY DATA BIT(S): 5 (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Sends command to launcher ECSP to arm deicing squib.
   REMARKS: From RHE to ECSP.
   PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–721.
   FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
     (TM 9–1427–475–20).

8–721 SIGNAL NAME: P3M3 MSL DEICE #1 CMD
   MEMORY LOCATION: 002020
   MEMORY DATA BIT(S): 5 (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Sends command to launcher ECSP to arm deicing squib.
   REMARKS: From launcher through right inboard MRTU Type II to FCC.
   PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–752.
   FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
     MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
     (TM 9–1427–475–20).

■ **8–722 SIGNAL NAME:** P3M3 MSL SKR INPUT SLAVE (ACY) P3M3 SKR SLV SEL (ACZ)
MEMORY LOCATION: 001327
MEMORY DATA BIT(S): 6–8 (OCTAL)
CONDITION: If the fifth digit is 0 or 4 and the fourth digit
                 is 0 or 2=ZERO EL ZERO AZ
                 If the fifth digit is 0 or 4 and the fourth digit
                 is 4 or 6=REMEL REMAZ
                 If the fifth digit is 1 or 5 and the fourth digit
                 is 0 or 2=AUTOEL AUTOAZ
                 If the fifth digit is 1 or 5 and the fourth digit
                 is 4 or 6=REMEL REMAZ +BIAS/2
                 If the fifth digit is 2 or 6 and the fourth digit
                 is 0 or 2=REMEL REMAZ +BIAS
                 If the fifth digit is 2 or 6 and the fourth digit
                 is 4 or 6=REMEL REMAZ – BIAS/2
                 If the fifth digit is 3 or 7 and the fourth digit
                 is 0 or 2=REMEL REMAZ – BIAS
                 If the fifth digit is 3 or 7 and the fourth digit
                 is 4 or 6=AUTOEL ZERO AZ
SIGNAL FUNCTION: Selects pitch and yaw slave commands to be applied to missile.
REMARKS: From RHE to ECSP.
PASS: If CONDITION corresponds to selected seeker input, go to paragraph 8–723.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
        (TM 9–1427–475–20).

■ **8–723 SIGNAL NAME:** P3M3 MSL SKR INPUT SLAVE (ACY) P3M3 SKR SLV SEL (ACZ)
MEMORY LOCATION: 002020
MEMORY DATA BIT(S): 6–8 (OCTAL)
CONDITION: If the fifth digit is 0 or 4 and the fourth digit
                 is 0 or 2=ZERO EL ZERO AZ
                 If the fifth digit is 0 or 4 and the fourth digit
                 is 4 or 6=REMEL REMAZ
                 If the fifth digit is 1 or 5 and the fourth digit
                 is 0 or 2=AUTOEL AUTOAZ
                 If the fifth digit is 1 or 5 and the fourth digit
                 is 4 or 6=REMEL REMAZ +BIAS/2
                 If the fifth digit is 2 or 6 and the fourth digit
                 is 0 or 2=REMEL REMAZ +BIAS
                 If the fifth digit is 2 or 6 and the fourth digit
                 is 4 or 6=REMEL REMAZ – BIAS/2
                 If the fifth digit is 3 or 7 and the fourth digit
                 is 0 or 2=REMEL REMAZ – BIAS
                 If the fifth digit is 3 or 7 and the fourth digit
                 is 4 or 6=AUTOEL ZERO AZ
SIGNAL FUNCTION: Selects pitch and yaw slave commands to be applied to missile.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If CONDITION corresponds to selected seeker input, refer to failure symptom index and next
        failure symptom paragraph.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
        MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
        (TM 9–1427–475–20).

8–724 SIGNAL NAME: P3M3 MSL AUTO PILOT POWER CONTROL (ACY)
P3M3 AUTOPLT PWR (ACZ)
MEMORY LOCATION: 001327
MEMORY DATA BIT(S):   9   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of auto pilot power to missile.
REMARKS: From RHE to ECSP.
PASS: If fourth digit on HOD is 2, 3, 6, or 7, go to paragraph 8–725.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–725 SIGNAL NAME: P3M3 MSL AUTO PILOT POWER CONTROL (ACY)
P3M3 AUTOPLT PWR (ACZ)
MEMORY LOCATION: 002020
MEMORY DATA BIT(S):   9   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of auto pilot power to missile.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If fourth digit on HOD is 2, 3, 6, or 7, go to paragraph 8–726.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–726 SIGNAL NAME: P3M3 MSL AUTO PILOT POWER (ACY) P3M3 A/P PWR OK (ACZ)
MEMORY LOCATION: 001423
MEMORY DATA BIT(S):   17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Specifies auto pilot power is above minimum value (+18 VDC).
REMARKS: From ECSP to RHE.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–727.
FAIL: Location of fault: replace right inboard launcher (TM 9–1425–475–30–2).

8–727 SIGNAL NAME: P3M3 MSL AUTO PILOT POWER (ACY) P3M3 A/P PWR OK (ACZ)
MEMORY LOCATION: 002020
MEMORY DATA BIT(S):   17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Specifies auto pilot power is above minimum value (+18 VDC).
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, refer to failure symptom index and next failure symptom
paragraph.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–728 **SIGNAL NAME:**   P3M3 MSL TGT POLARITY CONTROL
MEMORY LOCATION: 001327
MEMORY DATA BIT(S):   10–11   (BINARY)
CONDITION: If the fourth digit is 0, 2, 4, or 6 and the third digit is 0, 1, 2, 3=BLACK
If the fourth digit is 0, 2, 4, or 6 and the third digit is 4, 5, 6, 7=AUTO
If the fourth digit is 1, 3, 5, or 7 and the third digit is 0, 1, 2, 3=WHITE
SIGNAL FUNCTION: Directs missile seeker to track a black target on a white background, a white target on a black background or automatic contrast.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD corresponds to proper polarity, go to paragraph 8–729.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–729 **SIGNAL NAME:**   P3M3 MSL TGT POLARITY CONTROL
MEMORY LOCATION: 002020
MEMORY DATA BIT(S):   10–11   (BINARY)
CONDITION: If the fourth digit is 0, 2, 4, or 6 and the third digit is 0, 1, 2, 3=BLACK
If the fourth digit is 0, 2, 4, or 6 and the third digit is 4, 5, 6, 7=AUTO
If the fourth digit is 1, 3, 5, or 7 and the third digit is 0, 1, 2, 3=WHITE
SIGNAL FUNCTION: Directs missile seeker to track a black target on a white background, a white target on a black background or automatic contrast.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If third digit on HOD corresponds to proper polarity, refer to failure symptom index and next failure symptom paragraph.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–730 **SIGNAL NAME:**   P3M3 MSL BIT CMD
MEMORY LOCATION: 001327
MEMORY DATA BIT(S):   12   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls launcher BIT.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 0, 1, 4, or 5, go to paragraph 8–731.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–731 **SIGNAL NAME:**   P3M3 MSL BIT CMD
MEMORY LOCATION: 002020
MEMORY DATA BIT(S):   12   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls launcher BIT.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If third digit on HOD is 0, 1, 4, or 5, go to paragraph 8–732.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–732 SIGNAL NAME: P3M3 MSL SKR POWER CONTROL (ACY) P3M3 SKR PWR OK (ACZ)   ■
      MEMORY LOCATION: 001327
      MEMORY DATA BIT(S): 13   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Controls application of seeker power.
      REMARKS: From RHE to ECSP.
      PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–733.
      FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
            (TM 9–1427–475–20).

8–733 SIGNAL NAME: P3M3 MSL SKR POWER CONTROL (ACY) P3M3 SKR PWR OK (ACZ)   ■
      MEMORY LOCATION: 002020
      MEMORY DATA BIT(S): 13   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Controls application of seeker power.
      REMARKS: From launcher through right inboard MRTU Type II to FCC.
      PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–734.
      FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
            MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
            (TM 9–1427–475–20).

8–734 SIGNAL NAME: P3M3 MSL SKR POWER
      MEMORY LOCATION: 001423
      MEMORY DATA BIT(S): 12   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates status of seeker power (+28 VDC).
      REMARKS: From ECSP to RHE.
      PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 8–735.
      FAIL: Location of fault: replace launcher (TM 9–1425–475–30–2).

8–735 SIGNAL NAME: P3M3 MSL SEEKER POWER (ACY) P3M3 SKR PWR OK (ACZ)   ■
      MEMORY LOCATION: 002001
      MEMORY DATA BIT(S): 12   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates status of seeker power (+28 VDC).
      REMARKS: From launcher through right inboard MRTU Type II to FCC.
      PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 8–738.
      FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
            MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
            (TM 9–1427–475–20).

8–736 SIGNAL NAME: P3M3 CCM ACTIVATE CMD
      MEMORY LOCATION: 001327
      MEMORY DATA BIT(S): 14   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Commands missile seeker to enter CCM mode.
      REMARKS: From RHE to ECSP.
      PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–737.
      FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
            (TM 9–1427–475–20).

8–737 **SIGNAL NAME:** P3M3 CCM ACTIVATE CMD
MEMORY LOCATION: 002020
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to enter CCM mode.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1123.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–738 **SIGNAL NAME:** P3M3 MSL SCAN SEARCH CMD
MEMORY LOCATION: 001327
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter target acquisition mode and to enter lock–on
when target is acquired.
REMARKS: From RHE to ECSP.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–739.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–739 **SIGNAL NAME:** P3M3 MSL SCAN SEARCH CMD
MEMORY LOCATION: 002020
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter target acquisition mode and to enter lock–on
when target is acquired.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–742.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–740 **SIGNAL NAME:** P3M3 MSL SEEKER SLAVE CMD
MEMORY LOCATION: 001327
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter slave mode.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–741.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–741 SIGNAL NAME: P3M3 MSL SEEKER SLAVE CMD
MEMORY LOCATION: 002020
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter slave mode.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–748.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–742 SIGNAL NAME: P3M3 MSL STARE TRACK CMD
MEMORY LOCATION: 001327
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter stare mode. If proper laser code is detected
in seeker FOV, seeker will enter track mode.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–743.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–743 SIGNAL NAME: P3M3 MSL STARE TRACK CMD
MEMORY LOCATION: 002020
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter stare mode. If proper laser code is detected
in seeker FOV, seeker will enter track mode.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If first digit on HOD is 2, 3, 6, or 7, refer to failure symptom index and next failure symptom
paragraph.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–744 SIGNAL NAME: P3M3 MSL CORRELATE
MEMORY LOCATION: 001423
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates laser has detected a laser beam whose laser code agrees with
internal stored code.
REMARKS: From ECSP to RHE.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–745.
FAIL: Location of fault: right inboard launcher (TM 9–1425–475–30–2).

8–745 **SIGNAL NAME:** P3M3 MSL CORRELATE
    MEMORY LOCATION: 002001
    MEMORY DATA BIT(S): 16 (BINARY)
    CONDITION: (None)
    SIGNAL FUNCTION: Indicates laser has detected a laser beam whose laser code agrees with internal stored code.
    REMARKS: From launcher through right inboard MRTU Type II to FCC.
    PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–746.
    FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–746 **SIGNAL NAME:** P3M3 MSL TRACK
    MEMORY LOCATION: 001423
    MEMORY DATA BIT(S): 15 (BINARY)
    CONDITION: (None)
    SIGNAL FUNCTION: Indicates seeker has entered track mode. The laser seeker can enter track mode whenever a proper laser beam is detected in seeker FOV for any mode except cage.
    REMARKS: From ECSP to RHE.
    PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–747.
    FAIL: Location of fault: replace right inboard launcher (TM 9–1425–475–30–2).

8–747 **SIGNAL NAME:** P3M3 MSL TRACK
    MEMORY LOCATION: 002001
    MEMORY DATA BIT(S): 15 (BINARY)
    CONDITION: (None)
    SIGNAL FUNCTION: Indicates seeker has entered track mode. The laser seeker can enter track mode whenever a proper laser beam is detected in seeker FOV for any mode except cage.
    REMARKS: From launcher through right inboard MRTU Type II to FCC.
    PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1153.
    FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–748 **SIGNAL NAME:** P3M3 MSL SKR CAGE CMD
    MEMORY LOCATION: 001327
    MEMORY DATA BIT(S): 19 (BINARY)
    CONDITION: (None)
    SIGNAL FUNCTION: Commands missile to enter cage mode.
    REMARKS: From RHE to ECSP.
    PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–749.
    FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–749 SIGNAL NAME: P3M3 MSL SKR CAGE CMD
        MEMORY LOCATION: 002020
        MEMORY DATA BIT(S):   19   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Commands missile to enter cage mode.
        REMARKS: From launcher through right inboard MRTU Type II to FCC.
        PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–750.
        FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
            MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
            (TM 9–1427–475–20).

8–750 SIGNAL NAME: P3M3 MSL SKR CAGE
        MEMORY LOCATION: 001423
        MEMORY DATA BIT(S):   13   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Indicates seeker is in cage mode. The seeker cannot track in cage position.
        REMARKS: From ECSP to RHE.
        PASS: If third digit on HOD is 0, 2, 4, or 6, go to paragraph 8–751.
        FAIL: Location of fault: replace right inboard launcher (TM 9–1425–475–30–2).

8–751 SIGNAL NAME: P3M3 MSL SKR CAGE
        MEMORY LOCATION: 002001
        MEMORY DATA BIT(S):   13   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Indicates seeker is in cage mode. The seeker cannot track in cage position.
        REMARKS: From launcher through right inboard MRTU Type II to FCC.
        PASS: If third digit on HOD is 0, 2, 4, or 6, go to paragraph 8–754.
        FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
            MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
            (TM 9–1427–475–20).

8–752 SIGNAL NAME: P3M3 MSL DEICE #2 CMD
        MEMORY LOCATION: 001333
        MEMORY DATA BIT(S):   4   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Issues deicing squib fire command to selected missile.
        REMARKS: From RHE to ECSP.
        PASS: If sixth digit on HOD is 1, go to paragraph 8–753.
        FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
            (TM 9–1427–475–20).

8–753   **SIGNAL NAME:**   P3M3 MSL DEICE #2 CMD
      MEMORY LOCATION: 002024
      MEMORY DATA BIT(S):   4   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Issues deicing squib fire command to selected missile.
      REMARKS: From launcher through right inboard MRTU Type II to FCC.
      PASS: If sixth digit on HOD is 1, go to paragraph 8–1118.
      FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
          MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–754   **SIGNAL NAME:**   P3M3 MSL BIT CONTROL
      MEMORY LOCATION: 001333
      MEMORY DATA BIT(S):   6–9   (HEX)
      CONDITION: (None)
      SIGNAL FUNCTION: Commands BIT on autopilot.
      REMARKS: From RHE to ECSP.
      PASS: If fifth digit displayed on HOD is 0, 1, or 2, and the fourth digit displayed on HOD is 2, 3, 4, 5,
          6, or 7 go to paragraph 8–755.
      FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–755   **SIGNAL NAME:**   P3M3 MSL BIT CONTROL
      MEMORY LOCATION: 002024
      MEMORY DATA BIT(S):   6–9   (HEX)
      CONDITION: (None)
      SIGNAL FUNCTION: Commands BIT on autopilot.
      REMARKS: From launcher through right inboard MRTU Type II to FCC.
      PASS: Location of fault if fifth digit displayed on HOD is 0, 1, or 2, and the fourth digit displayed on
          HOD is 2, 3, 4, 5, 6, or 7: Replace right inboard launcher missile 3 (TM 9–1427–475–20).
      FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
          MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–756   **SIGNAL NAME:**   P3M3 MSL INDIRECT FIRE LO
      MEMORY LOCATION: 001333
      MEMORY DATA BIT(S):   10   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Commands low flight profile for LOAL operation.
      REMARKS: From RHE to ECSP.
      PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–757.
      FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–757 **SIGNAL NAME:** P3M3 MSL INDIRECT FIRE LO
MEMORY LOCATION: 002024
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands low flight profile for LOAL operation.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1108.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–758 **SIGNAL NAME:** P3M3 MSL INDIRECT FIRE HI
MEMORY LOCATION: 001333
MEMORY DATA BIT(S): 11 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands high flight profile for LOAL operation.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 8–759.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–759 **SIGNAL NAME:** P3M3 MSL INDIRECT FIRE HI
MEMORY LOCATION: 002024
MEMORY DATA BIT(S): 11 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands high flight profile for LOAL operation.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1108.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–760 **SIGNAL NAME:** P3M3 MSL RF CODE ACCEPT COMMAND
MEMORY LOCATION: 001333
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to accept RF code data from analog command lines
3 and 4. Commands ECSP to hook up analog commands 3 and 4 to selected
missile.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–761.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–761   **SIGNAL NAME:**   P3M3 MSL RF CODE ACCEPT COMMAND
       MEMORY LOCATION: 002024
       MEMORY DATA BIT(S):   13   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Commands missile seeker to accept RF code data from analog command lines 3 and 4. Commands ECSP to hook up analog commands 3 and 4 to selected missile.
       REMARKS: From launcher through right inboard MRTU Type II to FCC.
       PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–762.
       FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–762   **SIGNAL NAME:**   P3M3 MSL LASER CODE ACCEPT COMMAND
       MEMORY LOCATION: 001333
       MEMORY DATA BIT(S):   14   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Commands laser code information received from RHE by launcher on coax A and B to be relayed to identified missile.
       REMARKS: From RHE to ECSP.
       PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–763.
       FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–763   **SIGNAL NAME:**   P3M3 MSL LASER CODE ACCEPT COMMAND
       MEMORY LOCATION: 002024
       MEMORY DATA BIT(S):   14   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Commands laser code information received from RHE by launcher on coax A and B to be relayed to identified missile.
       REMARKS: From launcher through right inboard MRTU Type II to FCC.
       PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1106.
       FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–764   **SIGNAL NAME:**   P3M3 MSL COAX B CONNECT
       MEMORY LOCATION: 001333
       MEMORY DATA BIT(S):   17   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Commands launcher to connect coax B to indicated missile.
       REMARKS: From RHE to ECSP.
       PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–765.
       FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–765 **SIGNAL NAME:** P3M3 MSL COAX B CONNECT
MEMORY LOCATION: 002024
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax B to indicated missile.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–766.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–766 **SIGNAL NAME:** P3M3 MSL COAX A CONNECT
MEMORY LOCATION: 001333
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax A to indicated missile.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–767.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–767 **SIGNAL NAME:** P3M3 MSL COAX A CONNECT
MEMORY LOCATION: 002024
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax A to indicated missile.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1106.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–768 **SIGNAL NAME:** P3M3 MSL SKR LAUNCH PREPARE COMMAND (ACY)
P3M3 SKR LNCH CMD (ACZ)
MEMORY LOCATION: 001333
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Prepares missile for free flight operation.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–769.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–769 **SIGNAL NAME:** P3M3 MSL SKR LAUNCH PREPARE COMMAND (ACY)
P3M3 SKR LNCH CMD (ACZ)
MEMORY LOCATION: 002024
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Prepares missile for free flight operation.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–1126.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–770 **SIGNAL NAME:** P3M4 BIT PERFORMED
MEMORY LOCATION: 001350
MEMORY DATA BIT(S): 8 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to FCC that BIT has been performed.
REMARKS: From RHE to FCC.
PASS: If fourth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–771.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–771 **SIGNAL NAME:** P3M4 BIT STATUS (ACY) P3M4 DISPLAY STATUS (ACZ)
MEMORY LOCATION: 001356
MEMORY DATA BIT(S): 4–7 (HEX)
CONDITION: If sixth digit displayed on HOD is 0 and fifth digit displayed
on HOD is 0=NO MSL
If sixth digit displayed on HOD is 0 and fifth digit displayed
on HOD is 1=SELECTED
If sixth digit displayed on HOD is 0 and fifth digit displayed
on HOD is 2=READY
If sixth digit displayed on HOD is 0 and fifth digit displayed
on HOD is 3=TRACKING
If sixth digit displayed on HOD is 0 and fifth digit displayed
on HOD is 4=BIT NO GO
If sixth digit displayed on HOD is 0 and fifth digit displayed
on HOD is 5=FAILED
If sixth digit displayed on HOD is 0 and fifth digit displayed
on HOD is 7=BATTERY NO GO
If sixth digit displayed on HOD is 1 and fifth digit displayed
on HOD is 0=UNLATCHED
If sixth digit displayed on HOD is 1 and fifth digit displayed
on HOD is 1=MRTU NO GO
If sixth digit displayed on HOD is 1 and fifth digit displayed
on HOD is 4=CODED
If sixth digit displayed on HOD is 1 and fifth digit displayed
on HOD is 7=CAGED
SIGNAL FUNCTION: Provides missile status display for operator.
REMARKS: From RHE to FCC for display.
PASS: If CONDITION corresponds to selected message, go to failure symptom index and next failure
symptom paragraph.
FAIL: Location of fault: RHE, wiring from RHE to right inboard launcher, right inboard launcher.
Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–772 **SIGNAL NAME:** P3M4 UNLATCH INDICATE
MEMORY LOCATION: 001426
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to RHE missile is unlatched.
REMARKS: From launcher to RHE.
PASS: If second digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 8–773.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to RHE, RHE.
Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–773 **SIGNAL NAME:** P3M4 UNLATCH INDICATE
MEMORY LOCATION: 002004
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to operator when a missile is unlatched.
REMARKS: From launcher through right inboard MRTU Type II to FCC for display.
PASS: If second digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 8–774.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–774 **SIGNAL NAME:** P3M4 UNLATCH INDICATE
MEMORY LOCATION: 002027
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to operator when a missile is unlatched.
REMARKS: From FCC through right inboard MRTU Type II to launcher.
PASS: If second digit displayed on HOD is 0, 1, 4, or 5, refer to failure symptom index and next
failure symptom paragraph.
FAIL: Location of fault: right inboard MRTU Type II, wiring from right inboard MRTU Type II to FCC,
FCC. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

8–775 **SIGNAL NAME:** P3M4 UPPER LOWER DISPLAY STATUS (ACY) P3M4 PRIORITY IND (ACZ) ∎
MEMORY LOCATION: 001356
MEMORY DATA BIT(S): 8 (BINARY)
CONDITION: If the second digit displayed on HOD is 0, 2, 4, or 6=UPPER
If the second digit displayed on HOD is 1, 3, 5, or 7=LOWER
SIGNAL FUNCTION: Indicates to operator when a selected missile has been assigned to upper or
lower channel.
REMARKS: From RHE to FCC for display.
PASS: If CONDITION corresponds to selected channel, go to paragraph 8–776.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–776 **SIGNAL NAME:** P3M4 TYPE STATUS DISPLAY (ACY) P3M4 TYPE (ACZ) ∎
MEMORY LOCATION: 001356
MEMORY DATA BIT(S): 17–19 (OCTAL)
CONDITION: If the first digit displayed on HOD is 0=NONE
If the first digit displayed on HOD is 1=TACTICAL LASER
If the first digit displayed on HOD is 4=UNIDENTIFIED
If the first digit displayed on HOD is 5=TRAINING LASER
SIGNAL FUNCTION: Provides type of missile data for display to operator.
REMARKS: From RHE to FCC for display.
PASS: If CONDITION on HOD corresponds to installed type of missiles, go to paragraph 8–777.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

■ **8–777** **SIGNAL NAME:** P3M4 TYPE (ACY) P3M4 MSL TYPE (ACZ)
MEMORY LOCATION: 001422
MEMORY DATA BIT(S): 7–8 (BINARY)
CONDITION: If fifth digit displayed on HOD is 0, and fourth digit displayed on HOD is 0, 1, 2, or 3=TRAINING
If fifth digit displayed on HOD is 1, and fourth digit displayed on HOD is 0, 1, 2, or 3=TACTICAL
If fifth digit displayed on HOD is 1, and fourth digit displayed on HOD is 4, 5, 6, or 7=NONE
SIGNAL FUNCTION: Indicates a tactical, training or no missile at location.
REMARKS: From ECSP to RHE.
PASS: If CONDITION corresponds to installed type of missiles, go to paragraph 8–778.
FAIL: Location of fault: right inboard launcher (TM 9–1425–475–30–2).

■ **8–778** **SIGNAL NAME:** P3M4 TYPE (ACY) P3M4 MSL TYPE (ACZ)
MEMORY LOCATION: 002000
MEMORY DATA BIT(S): 7–8 (BINARY)
CONDITION: If fourth digit displayed on HOD is 0, 1, 2, or 3=TRAINING
If fifth digit displayed on HOD 1, 3, 5, or 7=TACTICAL
If fifth digit displayed on HOD 1, 3, 5, or 7 and fourth digit displayed on HOD is 0, 1, 2, or 3=NONE
SIGNAL FUNCTION: Indicates a tactical, training or no missile at location.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If CONDITION corresponds to installed type of missiles, refer to failure symptom index and next failure symptom paragraph.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–779 **SIGNAL NAME:** P3M4 MSL DEICE #1 CMD
MEMORY LOCATION: 001326
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Sends command to launcher ECSP to arm deicing squib.
REMARKS: From RHE to ECSP.
PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–780.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–780 **SIGNAL NAME:** P3M4 MSL DEICE #1 CMD
MEMORY LOCATION: 002017
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Sends command to launcher ECSP to arm deicing squib.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–811.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–781 SIGNAL NAME: P3M4 MSL SKR INPUT SLAVE (ACY) P3M4 SKR SLV SEL (ACZ)
　　　MEMORY LOCATION: 001326
　　　MEMORY DATA BIT(S):   6–8   (OCTAL)
　　　CONDITION: If the fifth digit is 0 or 4 and the fourth digit
　　　　　　　　　is 0 or 2=ZERO EL ZERO AZ
　　　　　　　　　If the fifth digit is 0 or 4 and the fourth digit
　　　　　　　　　is 4 or 6=REMEL REMAZ
　　　　　　　　　If the fifth digit is 1 or 5 and the fourth digit
　　　　　　　　　is 0 or 2=AUTOEL AUTOAZ
　　　　　　　　　If the fifth digit is 1 or 5 and the fourth digit
　　　　　　　　　is 4 or 6=REMEL REMAZ +BIAS/2
　　　　　　　　　If the fifth digit is 2 or 6 and the fourth digit
　　　　　　　　　is 0 or 2=REMEL REMAZ +BIAS
　　　　　　　　　If the fifth digit is 2 or 6 and the fourth digit
　　　　　　　　　is 4 or 6=REMEL REMAZ – BIAS/2
　　　　　　　　　If the fifth digit is 3 or 7 and the fourth digit
　　　　　　　　　is 0 or 2=REMEL REMAZ – BIAS
　　　　　　　　　If the fifth digit is 3 or 7 and the fourth digit
　　　　　　　　　is 4 or 6=AUTOEL ZERO AZ
　　SIGNAL FUNCTION: Selects pitch and yaw slave commands to be applied to missile.
　　REMARKS: From RHE to ECSP.
　　PASS: If CONDITION corresponds to selected seeker input, go to paragraph 8–782.
　　FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
　　　　(TM 9–1427–475–20).

8–782 SIGNAL NAME: P3M4 MSL SKR INPUT SLAVE (ACY) P3M4 SKR SLV SEL (ACZ)
　　　MEMORY LOCATION: 002017
　　　MEMORY DATA BIT(S):   6–8   (OCTAL)
　　　CONDITION: If the fifth digit is 0 or 4 and the fourth digit
　　　　　　　　　is 0 or 2=ZERO EL ZERO AZ
　　　　　　　　　If the fifth digit is 0 or 4 and the fourth digit
　　　　　　　　　is 4 or 6=REMEL REMAZ
　　　　　　　　　If the fifth digit is 1 or 5 and the fourth digit
　　　　　　　　　is 0 or 2=AUTOEL AUTOAZ
　　　　　　　　　If the fifth digit is 1 or 5 and the fourth digit
　　　　　　　　　is 4 or 6=REMEL REMAZ +BIAS/2
　　　　　　　　　If the fifth digit is 2 or 6 and the fourth digit
　　　　　　　　　is 0 or 2=REMEL REMAZ +BIAS
　　　　　　　　　If the fifth digit is 2 or 6 and the fourth digit
　　　　　　　　　is 4 or 6=REMEL REMAZ – BIAS/2
　　　　　　　　　If the fifth digit is 3 or 7 and the fourth digit
　　　　　　　　　is 0 or 2=REMEL REMAZ – BIAS
　　　　　　　　　If the fifth digit is 3 or 7 and the fourth digit
　　　　　　　　　is 4 or 6=AUTOEL ZERO AZ
　　SIGNAL FUNCTION: Selects pitch and yaw slave commands to be applied to missile.
　　REMARKS: From launcher through right inboard MRTU Type II to FCC.
　　PASS: If CONDITION corresponds to selected seeker input, refer to failure symptom index and next
　　　　failure symptom paragraph.
　　FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
　　　　MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
　　　　(TM 9–1427–475–20).

8–783 **SIGNAL NAME:** P3M4 MSL AUTO PILOT POWER CONTROL (ACY)
P3M4 AUTOPLT PWR (ACZ)
MEMORY LOCATION: 001326
MEMORY DATA BIT(S): 9 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of auto pilot power to missile.
REMARKS: From RHE to ECSP.
PASS: If fourth digit on HOD is 2, 3, 6, or 7, go to paragraph 8–784.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–784 **SIGNAL NAME:** P3M4 MSL AUTO PILOT POWER CONTROL (ACY)
P3M4 AUTOPLT PWR (ACZ)
MEMORY LOCATION: 002017
MEMORY DATA BIT(S): 9 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of auto pilot power to missile.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If fourth digit on HOD is 2, 3, 6, or 7, go to paragraph 8–785.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–785 **SIGNAL NAME:** P3M4 MSL AUTO PILOT POWER (ACY) P3M4 A/P PWR OK (ACZ)
MEMORY LOCATION: 001422
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Specifies auto pilot power is above minimum value (+18 VDC).
REMARKS: From ECSP to RHE.
PASS: If first digit on HOD is 4, 5, or 7, go to paragraph 8–786.
FAIL: Location of fault: replace right inboard launcher (TM 9–1425–475–30–2).

8–786 **SIGNAL NAME:** P3M4 MSL AUTO PILOT POWER (ACY) P3M4 A/P PWR OK (ACZ)
MEMORY LOCATION: 002017
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Specifies auto pilot power is above minimum value (+18 VDC).
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, refer to failure symptom index and next failure symptom
paragraph.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–787 SIGNAL NAME: P3M4 MSL TGT POLARITY CONTROL
MEMORY LOCATION: 001326
MEMORY DATA BIT(S):   10–11   (BINARY)
CONDITION: If the fourth digit is 0, 2, 4, or 6 and the third digit is 0, 1, 2, 3=BLACK
If the fourth digit is 0, 2, 4, or 6 and the third digit is 4, 5, 6, 7=AUTO
If the fourth digit is 1, 3, 5, or 7 and the third digit is 0, 1, 2, 3=WHITE
SIGNAL FUNCTION: Directs missile seeker to track a black target on a white background, a white target on a black background or automatic contrast.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD corresponds to proper polarity, go to paragraph 8–788.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–788 SIGNAL NAME: P3M4 MSL TGT POLARITY CONTROL
MEMORY LOCATION: 002017
MEMORY DATA BIT(S):   10–11   (BINARY)
CONDITION: If the fourth digit is 0, 2, 4, or 6 and the third digit is 0, 1, 2, 3=BLACK
If the fourth digit is 0, 2, 4, or 6 and the third digit is 4, 5, 6, 7=AUTO
If the fourth digit is 1, 3, 5, or 7 and the third digit is 0, 1, 2, 3=WHITE
SIGNAL FUNCTION: Directs missile seeker to track a black target on a white background, a white target on a black background or automatic contrast.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If third digit on HOD corresponds to proper polarity, refer to failure symptom index and next failure symptom paragraph.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–789 SIGNAL NAME: P3M4 MSL BIT CMD
MEMORY LOCATION: 001326
MEMORY DATA BIT(S):   12   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls launcher BIT.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 0, 1, 4, or 5, go to paragraph 8–790.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–790 SIGNAL NAME: P3M4 MSL BIT CMD
MEMORY LOCATION: 002017
MEMORY DATA BIT(S):   12   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls launcher BIT.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If third digit on HOD is 0, 1, 4, or 5, go to paragraph 8–791.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–791   **SIGNAL NAME:**   P3M4 MSL SKR POWER CONTROL (ACY) P3M4 SKR PWR OK (ACZ)
           MEMORY LOCATION: 001326
           MEMORY DATA BIT(S):   13   (BINARY)
           CONDITION: (None)
           SIGNAL FUNCTION: Controls application of seeker power.
           REMARKS: From RHE to ECSP.
           PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–792.
           FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
              (TM 9–1427–475–20).

8–792   **SIGNAL NAME:**   P3M4 MSL SKR POWER CONTROL (ACY) P3M4 SKR PWR OK (ACZ)
           MEMORY LOCATION: 002017
           MEMORY DATA BIT(S):   13   (BINARY)
           CONDITION: (None)
           SIGNAL FUNCTION: Controls application of seeker power.
           REMARKS: From launcher through right inboard MRTU Type II to FCC.
           PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–793.
           FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
              MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
              (TM 9–1427–475–20).

8–793   **SIGNAL NAME:**   P3M4 MSL SKR POWER
           MEMORY LOCATION: 001422
           MEMORY DATA BIT(S):   12   (BINARY)
           CONDITION: (None)
           SIGNAL FUNCTION: Indicates status of seeker power (+28 VDC).
           REMARKS: From ECSP to RHE.
           PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 8–794.
           FAIL: Location of fault: replace right inboard launcher (TM 9–1425–475–30–2).

8–794   **SIGNAL NAME:**   P3M4 MSL SEEKER POWER (ACY) P3M4 SKR PWR OK (ACZ)
           MEMORY LOCATION: 002000
           MEMORY DATA BIT(S):   12   (BINARY)
           CONDITION: (None)
           SIGNAL FUNCTION: Indicates status of seeker power (+28 VDC).
           REMARKS: From launcher through right inboard MRTU Type II to FCC.
           PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 8–797.
           FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
               MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
              (TM 9–1427–475–20).

8–795   **SIGNAL NAME:**   P3M4 CCM ACTIVATE CMD
           MEMORY LOCATION: 001326
           MEMORY DATA BIT(S):   14   (BINARY)
           CONDITION: (None)
           SIGNAL FUNCTION: Commands missile seeker to enter CCM mode.
           REMARKS: From RHE to ECSP.
           PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–796.
           FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
              (TM 9–1427–475–20).

8–796 SIGNAL NAME: P3M4 CCM ACTIVATE CMD
MEMORY LOCATION: 002017
MEMORY DATA BIT(S):   14   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to enter CCM mode.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1123.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–797 SIGNAL NAME: P3M4 MSL SCAN SEARCH CMD
MEMORY LOCATION: 001326
MEMORY DATA BIT(S):   16   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter target acquisition mode and to enter lock–on
when target is acquired.
REMARKS: From RHE to ECSP.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–798.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–798 SIGNAL NAME: P3M4 MSL SCAN SEARCH CMD
MEMORY LOCATION: 002017
MEMORY DATA BIT(S):   16   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter target acquisition mode and to enter lock–on
when target is acquired.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–801.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–799 SIGNAL NAME: P3M4 MSL SEEKER SLAVE CMD
MEMORY LOCATION: 001326
MEMORY DATA BIT(S):   17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter slave mode.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–800.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–800   **SIGNAL NAME:**   P3M4 MSL SEEKER SLAVE CMD
　　　　 MEMORY LOCATION: 002017
　　　　 MEMORY DATA BIT(S):   17   (BINARY)
　　　　 CONDITION: (None)
　　　　 SIGNAL FUNCTION: Commands laser seeker to enter slave mode.
　　　　 REMARKS: From launcher through right inboard MRTU Type II to FCC.
　　　　 PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–807.
　　　　 FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
　　　　　　　　 MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
　　　　　　　　 (TM 9–1427–475–20).

8–801   **SIGNAL NAME:**   P3M4 MSL STARE TRACK CMD
　　　　 MEMORY LOCATION: 001326
　　　　 MEMORY DATA BIT(S):   18   (BINARY)
　　　　 CONDITION: (None)
　　　　 SIGNAL FUNCTION: Commands laser seeker to enter stare mode. If proper laser code is detected
　　　　　　　　　　　　　　 in seeker FOV, seeker will enter track mode.
　　　　 REMARKS: From RHE to ECSP.
　　　　 PASS: If first digit on HOD is 2, 3, 6, go to paragraph 8–802.
　　　　 FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
　　　　　　　　 (TM 9–1427–475–20).

8–802   **SIGNAL NAME:**   P3M4 MSL STARE TRACK CMD
　　　　 MEMORY LOCATION: 002017
　　　　 MEMORY DATA BIT(S):   18   (BINARY)
　　　　 CONDITION: (None)
　　　　 SIGNAL FUNCTION: Commands laser seeker to enter stare mode. If proper laser code is detected
　　　　　　　　　　　　　　 in seeker FOV, seeker will enter track mode.
　　　　 REMARKS: From launcher through right inboard MRTU Type II to FCC.
　　　　 PASS: If first digit on HOD is 2, 3, 6, or 7, refer to failure symptom index and next failure symptom
　　　　　　　　 paragraph.
　　　　 FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
　　　　　　　　 MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
　　　　　　　　 (TM 9–1427–475–20).

8–803   **SIGNAL NAME:**   P3M4 MSL CORRELATE
　　　　 MEMORY LOCATION: 001422
　　　　 MEMORY DATA BIT(S):   16   (BINARY)
　　　　 CONDITION: (None)
　　　　 SIGNAL FUNCTION: Indicates laser has detected a laser beam whose laser code agrees with
　　　　　　　　　　　　　　 internal stored code.
　　　　 REMARKS: From ECSP to RHE.
　　　　 PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–804.
　　　　 FAIL: Location of fault: replace right inboard launcher (TM 9–1425–475–30–2).

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8–804 **SIGNAL NAME:** P3M4 MSL CORRELATE
MEMORY LOCATION: 002000
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates laser has detected a laser beam whose laser code agrees with internal stored code.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–805.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–805 **SIGNAL NAME:** P3M4 MSL TRACK
MEMORY LOCATION: 001422
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker has entered track mode. The laser seeker can enter track mode whenever a proper laser beam is detected in seeker FOV for any mode except cage.
REMARKS: From ECSP to RHE.
PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–806.
FAIL: Location of fault: replace right inboard launcher (TM 9–1425–475–30–2).

8–806 **SIGNAL NAME:** P3M4 MSL TRACK
MEMORY LOCATION: 002000
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker has entered track mode. The laser seeker can enter track mode whenever a proper laser beam is detected in seeker FOV for any mode except cage.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1153.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–807 **SIGNAL NAME:** P3M4 MSL SKR CAGE CMD
MEMORY LOCATION: 001326
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile to enter cage mode.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–808.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–808 **SIGNAL NAME:** P3M4 MSL SKR CAGE CMD
          MEMORY LOCATION: 002017
          MEMORY DATA BIT(S): 19 (BINARY)
          CONDITION: (None)
          SIGNAL FUNCTION: Commands missile to enter cage mode.
          REMARKS: From launcher through right inboard MRTU Type II to FCC.
          PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–809.
          FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
                    MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
                    (TM 9–1427–475–20).

8–809 **SIGNAL NAME:** P3M4 MSL SKR CAGE
          MEMORY LOCATION: 001422
          MEMORY DATA BIT(S): 13 (BINARY)
          CONDITION: (None)
          SIGNAL FUNCTION: Indicates seeker is in cage mode. The seeker cannot track in cage position.
          REMARKS: From ECSP to RHE.
          PASS: If third digit on HOD is 0, 2, 4, or 6, go to paragraph 8–810.
          FAIL: Location of fault: replace right inboard launcher (TM 9–1425–475–30–2).

8–810 **SIGNAL NAME:** P3M4 MSL SKR CAGE
          MEMORY LOCATION: 002000
          MEMORY DATA BIT(S): 13 (BINARY)
          CONDITION: (None)
          SIGNAL FUNCTION: Indicates seeker is in cage mode. The seeker cannot track in cage position.
          REMARKS: From launcher through right inboard MRTU Type II to FCC.
          PASS: If third digit on HOD is 0, 2, 4, or 6, go to paragraph 8–813.
          FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
                    MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
                    (TM 9–1427–475–20).

8–811 **SIGNAL NAME:** P3M4 MSL DEICE #2 CMD
          MEMORY LOCATION: 001332
          MEMORY DATA BIT(S): 4 (BINARY)
          CONDITION: (None)
          SIGNAL FUNCTION: Issues deicing squib fire command to selected missile.
          REMARKS: From RHE to ECSP.
          PASS: If sixth digit on HOD is 1, go to paragraph 8–812.
          FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
                    (TM 9–1427–475–20).

8–812 **SIGNAL NAME:** P3M4 MSL DEICE #2 CMD
MEMORY LOCATION: 002023
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Issues deicing squib fire command to selected missile.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If sixth digit on HOD is 1, go to paragraph 8–1118.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–813 **SIGNAL NAME:** P3M4 MSL BIT CONTROL
MEMORY LOCATION: 001332
MEMORY DATA BIT(S): 6–9 (HEX)
CONDITION: (None)
SIGNAL FUNCTION: Commands BIT on autopilot.
REMARKS: From RHE to ECSP.
PASS: If fifth digit displayed on HOD is 0, 1, or 2, and the fourth digit displayed on HOD is 2, 3, 4, 5,
6, or 7, go to paragraph 8–814.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–814 **SIGNAL NAME:** P3M4 MSL BIT CONTROL
MEMORY LOCATION: 002023
MEMORY DATA BIT(S): 6–9 (HEX)
CONDITION: (None)
SIGNAL FUNCTION: Commands BIT on autopilot.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: Location of fault if fifth digit displayed on HOD is 0, 1, or 2, and the fourth digit displayed on
HOD is 2, 3, 4, 5, 6, or 7: Replace right inboard launcher missile 4 (TM 9–1427–475–20).
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–815 **SIGNAL NAME:** P3M4 MSL INDIRECT FIRE LO
MEMORY LOCATION: 001332
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands low flight profile for LOAL operation.
REMARKS: From RHE to ECSP.
PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–816.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–816   **SIGNAL NAME:**   P3M4 MSL INDIRECT FIRE LO
      MEMORY LOCATION: 002023
      MEMORY DATA BIT(S):   10   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Commands low flight profile for LOAL operation.
      REMARKS: From launcher through right inboard MRTU Type II to FCC.
      PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1108.
      FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
         MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
         (TM 9–1427–475–20).

8–817   **SIGNAL NAME:**   P3M4 MSL INDIRECT FIRE HI
      MEMORY LOCATION: 001332
      MEMORY DATA BIT(S):   11   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Commands high flight profile for LOAL operation.
      REMARKS: From RHE to ECSP.
      PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 8–818.
      FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
         (TM 9–1427–475–20).

8–818   **SIGNAL NAME:**   P3M4 MSL INDIRECT FIRE HI
      MEMORY LOCATION: 002023
      MEMORY DATA BIT(S):   11   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Commands high flight profile for LOAL operation.
      REMARKS: From launcher through right inboard MRTU Type II to FCC.
      PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1108.
      FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
         MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
         (TM 9–1427–475–20).

8–819   **SIGNAL NAME:**   P3M4 MSL RF CODE ACCEPT COMMAND
      MEMORY LOCATION: 001332
      MEMORY DATA BIT(S):   13   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Commands missile seeker to accept RF code data from analog command lines
               3 and 4. Commands ECSP to hook up analog commands 3 and 4 to selected
               missile.
      REMARKS: From RHE to ECSP.
      PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–820.
      FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
         (TM 9–1427–475–20).

8–820 **SIGNAL NAME:** P3M4 MSL RF CODE ACCEPT COMMAND
MEMORY LOCATION: 002023
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to accept RF code data from analog command lines 3 and 4. Commands ECSP to hook up analog commands 3 and 4 to selected missile.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–821.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–821 **SIGNAL NAME:** P3M4 MSL LASER CODE ACCEPT COMMAND
MEMORY LOCATION: 001332
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser code information received from RHE by launcher on coax A and B to be relayed to identified missile.
REMARKS: From RHE to ECSP.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–822.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–822 **SIGNAL NAME:** P3M4 MSL LASER CODE ACCEPT COMMAND
MEMORY LOCATION: 002023
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser code information received from RHE by launcher on coax A and B to be relayed to identified missile.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1106.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–823 **SIGNAL NAME:** P3M4 MSL COAX B CONNECT
MEMORY LOCATION: 001332
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax B to indicated missile.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–824.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–824   **SIGNAL NAME:**   P3M4 MSL COAX B CONNECT
       MEMORY LOCATION: 002023
       MEMORY DATA BIT(S):   17   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Commands launcher to connect coax B to indicated missile.
       REMARKS: From launcher through right inboard MRTU Type II to FCC.
       PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–825.
       FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
           MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
           (TM 9–1427–475–20).

8–825   **SIGNAL NAME:**   P3M4 MSL COAX A CONNECT
       MEMORY LOCATION: 001332
       MEMORY DATA BIT(S):   18   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Commands launcher to connect coax A to indicated missile.
       REMARKS: From RHE to ECSP.
       PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–826.
       FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
           (TM 9–1427–475–20).

8–826   **SIGNAL NAME:**   P3M4 MSL COAX A CONNECT
       MEMORY LOCATION: 002023
       MEMORY DATA BIT(S):   18   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Commands launcher to connect coax A to indicated missile.
       REMARKS: From launcher through right inboard MRTU Type II to FCC.
       PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1106.
       FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
           MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
           (TM 9–1427–475–20).

8–827   **SIGNAL NAME:**   P3M4 MSL SKR LAUNCH PREPARE COMMAND (ACY)
                           P3M4 SKR LNCH CMD (ACZ)
       MEMORY LOCATION: 001332
       MEMORY DATA BIT(S):   19   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Prepares missile for free flight operation.
       REMARKS: From RHE to ECSP.
       PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–828.
       FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
           (TM 9–1427–475–20).

8–828   **SIGNAL NAME:**   P3M4 MSL SKR LAUNCH PREPARE COMMAND (ACY)
                           P3M4 SKR LNCH CMD (ACZ)
       MEMORY LOCATION: 002023
       MEMORY DATA BIT(S):   19   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Prepares missile for free flight operation.
       REMARKS: From launcher through right inboard MRTU Type II to FCC.
       PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–1126.
       FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
           MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
           (TM 9–1427–475–20).

8–829 SIGNAL NAME: LCHR3 CONTROL MSL AUTO AZ SIGNAL SELECT (ACY)
                              P3 AUTO AZSIG (ACZ)
MEMORY LOCATION: 001336
MEMORY DATA BIT(S):   6–9   (HEX)
CONDITION: If the fourth digit displayed on HOD is 0=M1AZ
                 If the fourth digit displayed on HOD is 1=M2AZ
                 If the fourth digit displayed on HOD is 2=M3AZ
                 If the fourth digit displayed on HOD is 3=M4AZ
                 If the fourth digit displayed on HOD is 4=M1BIT4
                 If the fourth digit displayed on HOD is 5=M2BIT4
                 If the fourth digit displayed on HOD is 6=M3BIT4
                 If the fourth digit displayed on HOD is 7=M4BIT4
                 If the fifth digit displayed on HOD is 1, 3, 5, or 7 and the fourth digit displayed on HOD
                 is 0=M1ID
                 If the fifth digit displayed on HOD is 1, 3, 5, or 7 and the fourth digit displayed on HOD
                 is 1=M2ID
                 If the fifth digit displayed on HOD is 1, 3, 5, or 7 and the fourth digit displayed on HOD
                 is 2=M3ID
                 If the fifth digit displayed on HOD is 1, 3, 5, or 7 and the fourth digit displayed on HOD
                 is 3=M4ID
SIGNAL FUNCTION: Selects one of four missiles to be monitored for yaw gimbal angle (AZ), BIT 4
                        or missile identification on analog reply number four.
REMARKS: From RHE to ECSP to missile.
PASS: If CONDITION corresponds to selected missile, go to paragraph 8–830.
FAIL: Location of fault: replace RHE, wiring from RHE to ECSP, ECSP, wiring from ECSP to missile,
         missile. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–830 SIGNAL NAME: LCHR3 AUTO SEEKER AZ (ACY) P3 2ND TRKG MSLAZ (ACZ)
MEMORY LOCATION: 001507
MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when
                 the seeker is left and positive (sixth digit=0) when seeker is right.
SIGNAL FUNCTION: Provides selected analog signal to RHE.
REMARKS: From launcher to RHE.
PASS: If CONDITION corresponds to correct response, go to paragraph 8–831.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to RHE, RHE.
         Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–831 SIGNAL NAME: LCHR3 AUTO SEEKER AZ (ACY) P3 2ND TRKG MSLAZ (ACZ)
MEMORY LOCATION: 001772
MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when
                 the seeker is left and positive (sixth digit=0) when seeker is right.
SIGNAL FUNCTION: Provides selected analog signal to FCC.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If CONDITION corresponds to correct response, go to paragraph 8–832.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
         MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
         (TM 9–1427–475–20).

8–832 SIGNAL NAME: LCHR3 AUTO SEEKER AZ (ACY) P3 RMT SKREL CMD (ACZ)
       MEMORY LOCATION: 002006
       MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
       CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when
              the seeker is left and positive (sixth digit=0) when seeker is right.
       SIGNAL FUNCTION: Selected missile analog signal from FCC.
       REMARKS: From FCC through right inboard MRTU Type II to launcher.
       PASS: If CONDITION corresponds to correct response, go to paragraph 8–833.
       FAIL: Location of fault: right inboard MRTU Type II, wiring from right inboard MRTU Type II to FCC,
              FCC. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

8–833 SIGNAL NAME: LCHR3 CONTROL MSL AUTO EL SIGNAL SELECT (ACY)
                    P3 2ND TRKG MSLEL (ACZ)
       MEMORY LOCATION: 001336
       MEMORY DATA BIT(S): 10–13   (HEX)
       CONDITION: If third digit displayed on HOD is 0=M1EL
              If third digit displayed on HOD is 1=M2EL
              If third digit displayed on HOD is 2=M3EL
              If third digit displayed on HOD is 3=M4EL
              If third digit displayed on HOD is 4=M1BIT3
              If third digit displayed on HOD is 5=M2BIT3
              If third digit displayed on HOD is 6=M3BIT3
              If third digit displayed on HOD is 7=M4BIT3
              If fourth digit displayed on HOD is 1, 3, 5, or 7 and third digit
              displayed is 4=M1GCBIT
              If fourth digit displayed on HOD is 1, 3, 5, or 7 and third digit
              displayed is 5=M2GCBIT
              If fourth digit displayed on HOD is 1, 3, 5, or 7 and third digit
              displayed is 6=M3GCBIT
              If fourth digit displayed on HOD is 1, 3, 5, or 7 and third digit
              displayed is 7=M4GCBIT
       SIGNAL FUNCTION: Selects one of four missiles to be monitored for pitch gimbal angle (EL), BIT 3
              or missile BIT 3 response on analog reply number three.
       REMARKS: From RHE to ECSP to missile.
       PASS: If CONDITION corresponds to selected missile, go to paragraph 8–834.
       FAIL: Location of fault: replace RHE, wiring from RHE to ECSP, ECSP, wiring from ECSP to missile,
              missile. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–834 SIGNAL NAME: LCHR3 AUTO SEEKER EL (ACY) P3 2ND TRKG MSLAZ (ACZ)
       MEMORY LOCATION: 001504
       MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
       CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when
              the seeker is down and positive (sixth digit=0) when seeker is up.
       SIGNAL FUNCTION: Provides selected analog signal to RHE.
       REMARKS: From launcher to RHE.
       PASS: If CONDITION corresponds to correct response, go to paragraph 8–835.
       FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to RHE, RHE.
              Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–835 SIGNAL NAME: LCHR3 AUTO SEEKER EL (ACY) P3 2ND TRKG MSLEL (ACZ)
      MEMORY LOCATION: 001733
      MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
      CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when
                  the seeker is down and positive (sixth digit=0) when seeker is up.
      SIGNAL FUNCTION: Provides selected analog signal to FCC.
      REMARKS: From launcher through right inboard MRTU Type II to FCC.
      PASS: If CONDITION corresponds to correct response, go to paragraph 8–836.
      FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard
          MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–836 SIGNAL NAME: LCHR3 AUTO SEEKER EL (ACY) P3 AUTO SKREL CMD (ACZ)
      MEMORY LOCATION: 002007
      MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
      CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when
                  the seeker is down and positive (sixth digit=0) when seeker is up.
      SIGNAL FUNCTION: Selected missile analog signal from FCC.
      REMARKS: From FCC through right inboard MRTU Type II to launcher.
      PASS: If CONDITION corresponds to correct response, go to paragraph 8–837.
      FAIL: Location of fault: right inboard MRTU Type II, wiring from right inboard MRTU Type II to FCC,
          FCC. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

8–837 SIGNAL NAME: LCHR3 CONTROL MSL REMOTE AZ SIGNAL SELECT (ACY)
                      P3 RMT AZSIG CMD (ACZ)
      MEMORY LOCATION: 001336
      MEMORY DATA BIT(S): 14–16   (OCTAL)
      CONDITION: If the second digit displayed on HOD is 0=M1AZ
                  If the second digit displayed on HOD is 1=M2AZ
                  If the second digit displayed on HOD is 2=M3AZ
                  If the second digit displayed on HOD is 3=M4AZ
                  If the second digit displayed on HOD is 4=M1BIT2
                  If the second digit displayed on HOD is 5=M2BIT2
                  If the second digit displayed on HOD is 6=M3BIT2
                  If the second digit displayed on HOD is 7=M4BIT2
      SIGNAL FUNCTION: Selects one of four missiles to be monitored for yaw gimbal angle or BIT 2
                  response on analog reply number two.
      REMARKS: From RHE to ECSP to missile.
      PASS: If second digit on HOD corresponds to selected missile, go to paragraph 8–838.
      FAIL: Location of fault: replace RHE, wiring from RHE to ECSP, ECSP, wiring from ECSP to missile,
          missile. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–838 SIGNAL NAME: LCHR3 REMOTE SEEKER AZ (ACY) P3 1ST TRKG MSLEL (ACZ)
      MEMORY LOCATION: 002041
      MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
      CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when
                  the seeker is left and positive (sixth digit=0) when seeker is right.
      SIGNAL FUNCTION: Provides selected analog signal to FCC.
      REMARKS: From launcher through right outboard MRTU Type II to FCC.
      PASS: If CONDITION corresponds to correct response, go to paragraph 8–839.
      FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right outboard
          MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–839 SIGNAL NAME: LCHR3 REMOTE SEEKER AZ (ACY) P3 1ST TRKG MSLEL (ACZ)
MEMORY LOCATION: 001505
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when the seeker is left and positive (sixth digit=0) when seeker is right.
SIGNAL FUNCTION: Provides selected analog signal to RHE.
REMARKS: From launcher to RHE.
PASS: If CONDITION corresponds to correct response, go to paragraph 8–840.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to RHE, RHE. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–840 SIGNAL NAME: LCHR3 REMOTE SEEKER AZ (ACY) P3 RMT SKRAZ CMD (ACZ)
MEMORY LOCATION: 002012
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when the seeker is left and positive (sixth digit=0) when seeker is right.
SIGNAL FUNCTION: Selected missile analog signal from FCC.
REMARKS: From FCC through right inboard MRTU Type II to launcher.
PASS: If CONDITION corresponds to correct response, go to paragraph 8–841.
FAIL: Location of fault: right inboard MRTU Type II, wiring from right inboard MRTU Type II to FCC. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

8–841 SIGNAL NAME: LCHR3 CONTROL MSL REMOTE EL SIGNAL SELECT (ACY)
P3 RMT ELSIG CMD (ACZ)
MEMORY LOCATION: 001336
MEMORY DATA BIT(S): 17–19 (OCTAL)
CONDITION: If the first digit displayed on HOD is 0=M1EL
If the first digit displayed on HOD is 1=M2EL
If the first digit displayed on HOD is 2=M3EL
If the first digit displayed on HOD is 3=M4EL
If the first digit displayed on HOD is 4=M1BIT1
If the first digit displayed on HOD is 5=M2BIT1
If the first digit displayed on HOD is 6=M3BIT1
If the first digit displayed on HOD is 7=M4BIT1
SIGNAL FUNCTION: Selects one of four missiles to be monitored for pitch gimbal angle or BIT 1 response on analog reply number one.
REMARKS: From RHE to ECSP to missile.
PASS: If first digit on HOD corresponds to selected missile, go to paragraph 8–842.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP, wiring from ECSP to missile, missile. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–842 SIGNAL NAME: LCHR3 REMOTE SEEKER EL (ACY) P3 MSL TRKG EL CMD (ACZ)
MEMORY LOCATION: 001506
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when the seeker is down and positive (sixth digit=0) when seeker is up.
SIGNAL FUNCTION: Provides selected analog signal to RHE.
REMARKS: From launcher to RHE.
PASS: If CONDITION corresponds to correct response, go to paragraph 8–843.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to RHE, RHE. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–843 SIGNAL NAME: LCHR3 REMOTE SEEKER EL (ACY) P3 1ST TRKG MSLEL (ACZ) ■
MEMORY LOCATION: 001775 ■
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when the seeker is down and positive (sixth digit=0) when seeker is up.
SIGNAL FUNCTION: Provides selected analog signal to FCC.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If CONDITION corresponds to correct response, go to paragraph 8–844.
FAIL: Location of fault: right inboard launcher, wiring from right inboard launcher to right inboard MRTU Type II, right inboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–844 SIGNAL NAME: LCHR3 REMOTE SEEKER EL (ACY) P3 RMT SKREL CMD (ACZ) ■
MEMORY LOCATION: 002013 ■
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when the seeker is down and positive (sixth digit=0) when seeker is up.
SIGNAL FUNCTION: Selected missile analog signal from FCC.
REMARKS: From FCC through right inboard MRTU Type II to launcher.
PASS: Troubleshoot wiring from remote controlled circuit breaker (RCCB) to ECSP, ECSP to isolate fault (TM 9–1427–475–20).
FAIL: Location of fault: right inboard MRTU Type II, wiring from right inboard MRTU Type II to FCC, FCC. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

8–845 SIGNAL NAME: P4 LAUNCHER PRESENT (ACY) L4 PRESENT (ACZ) ■
MEMORY LOCATION: 001344
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates presence or absence of launcher.
REMARKS: From RHE to FCC.
PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 8–846.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–846 SIGNAL NAME: P4 LAUNCHER SAFE (ACY) L4 SAFE (ACZ) ■
MEMORY LOCATION: 001344
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to operator when a remote safe condition exists at launcher.
REMARKS: From RHE to FCC.
PASS: If second digit on HOD is 0, go to paragraph 8–847.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–847 SIGNAL NAME: P4 LAUNCHER BIT PERFORMED (ACY) L4 BITE PERF (ACZ)
     MEMORY LOCATION: 001347
     MEMORY DATA BIT(S):   8   (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Indicates to FCC that BIT has been performed.
     REMARKS: From RHE to FCC.
     PASS: If fourth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–848.
     FAIL: Location of fault: wiring from L INBD LCHR DC circuit breaker to L OUTBD LCHR DC circuit breaker, wiring from L OUTBD LCHR DC circuit breaker to ARM DC circuit breaker, wiring from ARM DC circuit breaker to R OUTBD LCHR DC circuit breaker, R OUTBD LCHR DC circuit breaker,wiring from R OUTBD LCHR DC circuit breaker to LCHR DC PWR ENABLE Relay K2–5/6, LCHR DC PWR ENABLE Relay K2–5/6, wiring from LCHR DC PWR ENABLE Relay K2–5/6 to RCCB CB204, RCCB CB204, wiring from RCCB CB204 to ECSP, R OUTBD LCHR AC circuit breaker, wiring from R OUTBD LCHR AC circuit breaker to LCHR AC PWR ENABLE relay K3–5/6, LCHR AC PWR ENABLE Relay K3–5/6, wiring from LCHR AC PWR ENABLE Relay K3–5/6 to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–848 SIGNAL NAME: P4 LAUNCHER BIT STATUS (ACY) L4 BITE STATUS (ACZ)
     MEMORY LOCATION: 001347
     MEMORY DATA BIT(S):   16   (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Indicates to FCC launcher BIT status.
     REMARKS: From RHE to FCC.
     PASS: If second digit on HOD is 0, 2, 4, or 6, go to paragraph 8–849.
     FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–849 SIGNAL NAME: P4 COM STATUS
     MEMORY LOCATION: 001434
     MEMORY DATA BIT(S):   16   (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Indicates to RHE that FCC has determined upon receipt of digital data from launcher, that an acknowledge error was present (no data received or all data words contain parity error).
     REMARKS: From FCC to RHE.
     PASS: If second digit on HOD is 0, 2, 4, or 6, go to paragraph 8–1086.
     FAIL: Location of fault: ECSP, wiring from ECSP to MRTU Type II, MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–850 SIGNAL NAME: P4M1 BIT PERFORMED
     MEMORY LOCATION: 001350
     MEMORY DATA BIT(S):   7   (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Indicates to FFC that BIT has been performed.
     REMARKS: From RHE to FCC.
     PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–851.
     FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–851   SIGNAL NAME: P4M1 BIT STATUS (ACY) P4M1 DISPLAY STATUS (ACZ)
   MEMORY LOCATION: 001357
   MEMORY DATA BIT(S):   12–15   (HEX)
   CONDITION: If third digit displayed on HOD is 0 and second digit displayed
           on HOD is 0=NO MSL
           If third digit displayed on HOD is 0 or 4 and second digit displayed
           on HOD is 2 or 3=SELECTED
           If third digit displayed on HOD is 0 or 4 and second digit displayed
           on HOD is 4 or 5=READY
           If third digit displayed on HOD is 0 or 4 and second digit displayed
           on HOD is 6 or 7=TRACKING
           If third digit displayed on HOD is 3 or 7 and second digit displayed
           on HOD is 0=CODED
           If third digit displayed on HOD is 3 or 7 and second digit displayed
           on HOD is 6=CAGED
           If third digit displayed on HOD is 5 or 1 and second digit displayed
           on HOD is 0=BIT NO GO
           If third digit displayed on HOD is 5 or 1 and second digit displayed
           on HOD is 2=FAILED
           If third digit displayed on HOD is 5 or 1 and second digit displayed
           on HOD is 6=BATTERY NO GO
           If third digit displayed on HOD is 6 or 2 and second digit displayed
           on HOD is 0=UNLATCHED
           If third digit displayed on HOD is 6 or 2 and second digit displayed
           on HOD is 2=MRTU NO GO
           If third digit displayed on HOD is 6 or 2 and second digit displayed
           on HOD is 4=RAIL NO GO
   SIGNAL FUNCTION: Provides missile status display for operator.
   REMARKS: From RHE to FCC for display.
   PASS: If CONDITION corresponds to selected message, go to failure symptom index and next failure
        symptom paragraph.
   FAIL: Location of fault: RHE, wiring from RHE to right outboard launcher, right outboard launcher.
        Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–852   SIGNAL NAME: P4M1 UNLATCH INDICATE
   MEMORY LOCATION: 001433
   MEMORY DATA BIT(S):   18   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Indicates to RHE missile is unlatched.
   REMARKS: From launcher to RHE.
   PASS: If first digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 8–853.
   FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to RHE, RHE.
        Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–853   SIGNAL NAME: P4M1 UNLATCH INDICATE
   MEMORY LOCATION: 002051
   MEMORY DATA BIT(S):   18   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Indicates to operator when a missile is unlatched.
   REMARKS: From launcher through right outboard MRTU Type II to FCC for display.
   PASS: If first digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 8–854.
   FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
        MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
        (TM 9–1427–475–20).

8–854   **SIGNAL NAME:**   P4M1 UNLATCH INDICATE
           MEMORY LOCATION: 002074
           MEMORY DATA BIT(S):   18   (BINARY)
           CONDITION: (None)
           SIGNAL FUNCTION: Indicates to operator when a missile is unlatched.
           REMARKS: From FCC through right outboard MRTU Type II to launcher.
           PASS: If first digit displayed on HOD is 0, 1, 4, or 5, refer to failure symptom index and next failure
                 symptom paragraph.
           FAIL: Location of fault: right outboard MRTU Type II, wiring from right outboard MRTU Type II to FCC,
                 FCC. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

8–855   **SIGNAL NAME:**   P4M1 UPPER LOWER DISPLAY STATUS (ACY) P4M1 PRIORITY IND (ACZ)
           MEMORY LOCATION: 001357
           MEMORY DATA BIT(S):   16   (BINARY)
           CONDITION: If the second digit displayed on HOD is 0, 2, 4, or 6=UPPER
                       If the second digit displayed on HOD is 1, 3, 5, or 7=LOWER
           SIGNAL FUNCTION: Indicates to operator when a selected missile has been assigned to upper or
                       lower channel.
           REMARKS: From RHE to FCC for display.
           PASS: If CONDITION corresponds to selected channel, go to paragraph 8–856.
           FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–856   **SIGNAL NAME:**   P4M1 TYPE STATUS DISPLAY (ACY) P4M1 TYPE (ACZ)
           MEMORY LOCATION: 001357
           MEMORY DATA BIT(S):   17–19   (OCTAL)
           CONDITION: If the first digit displayed on HOD is 0=NONE
                       If the first digit displayed on HOD is 1=TACTICAL LASER
                       If the first digit displayed on HOD is 4=UNIDENTIFIED
                       If the first digit displayed on HOD is 5=TRAINING LASER
           SIGNAL FUNCTION: Provides type of missile data for display to operator.
           REMARKS: From RHE to FCC for display.
           PASS: If CONDITION on HOD corresponds to installed type of missiles, go to paragraph 8–857.
           FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
                 (TM 9–1427–475–20).

8–857   **SIGNAL NAME:**   P4M1 TYPE (ACY) P4M1 MSL TYPE (ACZ)
           MEMORY LOCATION: 001432
           MEMORY DATA BIT(S):   7–8   (BINARY)
           CONDITION: If fifth digit displayed on HOD is 0, and fourth digit displayed on HOD is 0, 1, 2, or
                       3=TRAINING
                       If fifth digit displayed on HOD is 1, and fourth digit displayed on HOD is 0, 1, 2, or
                       3=TACTICAL
                       If fifth digit displayed on HOD is 1, and fourth digit displayed on HOD is 4, 5, 6, or
                       7=NONE
           SIGNAL FUNCTION: Indicates a tactical, training or no missile at location.
           REMARKS: From ECSP to RHE.
           PASS: If CONDITION corresponds to installed type of missiles, go to paragraph 8–858.
           FAIL: Location of fault: replace right outboard launcher (TM 9–1425–475–30–2).

8–858 SIGNAL NAME: P4M1 TYPE (ACY) P4M1 MSL TYPE (ACZ)
          MEMORY LOCATION: 002050
          MEMORY DATA BIT(S):   7–8   (BINARY)
          CONDITION: If fourth digit displayed on HOD is 0, 1, 2, or 3=TRAINING
                       If fifth digit displayed on HOD 1, 3, 5, or 7=TACTICAL
                       If fifth digit displayed on HOD 1, 3, 5, or 7 and fourth digit displayed on HOD is 0, 1, 2,
                       or 3=NONE
          SIGNAL FUNCTION: Indicates a tactical, training or no missile at location.
          REMARKS: From launcher through right outboard MRTU Type II to FCC.
          PASS: If CONDITION corresponds to installed type of missiles, refer to failure symptom index and
                    next failure symptom paragraph.
          FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
                    MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
                    (TM 9–1427–475–20).

8–859 SIGNAL NAME: P4M1 MSL DEICE #1 CMD
          MEMORY LOCATION: 001305
          MEMORY DATA BIT(S):   5   (BINARY)
          CONDITION: (None)
          SIGNAL FUNCTION: Sends command to launcher ECSP to arm deicing squib.
          REMARKS: From RHE to ECSP.
          PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–860.
          FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
                    (TM 9–1427–475–20).

8–860 SIGNAL NAME: P4M1 MSL DEICE #1 CMD
          MEMORY LOCATION: 002067
          MEMORY DATA BIT(S):   5   (BINARY)
          CONDITION: (None)
          SIGNAL FUNCTION: Sends command to launcher ECSP to arm deicing squib.
          REMARKS: From launcher through right outboard MRTU Type II to FCC.
          PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–891.
          FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
                    MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
                    (TM 9–1427–475–20).

8–861 SIGNAL NAME: P4M1 MSL SKR INPUT SLAVE (ACY) P4M1 SKR SLV SEL (ACZ)
MEMORY LOCATION: 001305
MEMORY DATA BIT(S):   6–8   (OCTAL)
CONDITION: If the fifth digit is 0 or 4 and the fourth digit
is 0 or 2=ZERO EL ZERO AZ
If the fifth digit is 0 or 4 and the fourth digit
is 4 or 6=REMEL REMAZ
If the fifth digit is 1 or 5 and the fourth digit
is 0 or 2=AUTOEL AUTOAZ
If the fifth digit is 1 or 5 and the fourth digit
is 4 or 6=REMEL REMAZ +BIAS/2
If the fifth digit is 2 or 6 and the fourth digit
is 0 or 2=REMEL REMAZ +BIAS
If the fifth digit is 2 or 6 and the fourth digit
is 4 or 6=REMEL REMAZ – BIAS/2
If the fifth digit is 3 or 7 and the fourth digit
is 0 or 2=REMEL REMAZ – BIAS
If the fifth digit is 3 or 7 and the fourth digit
is 4 or 6=AUTOEL ZERO AZ
SIGNAL FUNCTION: Selects pitch and yaw slave commands to be applied to missile.
REMARKS: From RHE to ECSP.
PASS: If CONDITION corresponds to selected seeker input, go to paragraph 8–862.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–862 SIGNAL NAME: P4M1 MSL SKR INPUT SLAVE (ACY) P4M1 SKR SLV SEL (ACZ)
MEMORY LOCATION: 002067
MEMORY DATA BIT(S):   6–8   (OCTAL)
CONDITION: If the fifth digit is 0 or 4 and the fourth digit
is 0 or 2=ZERO EL ZERO AZ
If the fifth digit is 0 or 4 and the fourth digit
is 4 or 6=REMEL REMAZ
If the fifth digit is 1 or 5 and the fourth digit
is 0 or 2=AUTOEL AUTOAZ
If the fifth digit is 1 or 5 and the fourth digit
is 4 or 6=REMEL REMAZ +BIAS/2
If the fifth digit is 2 or 6 and the fourth digit
is 0 or 2=REMEL REMAZ +BIAS
If the fifth digit is 2 or 6 and the fourth digit
is 4 or 6=REMEL REMAZ – BIAS/2
If the fifth digit is 3 or 7 and the fourth digit
is 0 or 2=REMEL REMAZ – BIAS
If the fifth digit is 3 or 7 and the fourth digit
is 4 or 6=AUTOEL ZERO AZ
SIGNAL FUNCTION: Selects pitch and yaw slave commands to be applied to missile.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If CONDITION corresponds to selected seeker input, refer to failure symptom index and next
failure symptom paragraph.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–863 SIGNAL NAME: P4M1 MSL AUTO PILOT POWER CONTROL (ACY)
P4M1 AUTOPLT PWR (ACZ)
MEMORY LOCATION: 001305
MEMORY DATA BIT(S): 9   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of auto pilot power to missile.
REMARKS: From RHE to ECSP.
PASS: If fourth digit on HOD is 2, 3, 6, or 7, go to paragraph 8–864.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–864 SIGNAL NAME: P4M1 MSL AUTO PILOT POWER CONTROL (ACY)
P4M1 AUTOPLT PWR (ACZ)
MEMORY LOCATION: 002067
MEMORY DATA BIT(S): 9   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of auto pilot power to missile.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If fourth digit on HOD is 2, 3, 6, or 7, go to paragraph 8–865.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–865 SIGNAL NAME: P4M1 MSL AUTO PILOT POWER (ACY) P4M1 A/P PWR OK (ACZ)
MEMORY LOCATION: 001432
MEMORY DATA BIT(S): 17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Specifies auto pilot power is above minimum value (+18 VDC).
REMARKS: From ECSP to RHE.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–866.
FAIL: Location of fault: replace right outboard launcher (TM 9–1425–475–30–2).

8–866 SIGNAL NAME: P4M1 MSL AUTO PILOT POWER (ACY) P4M1 A/P PWR OK (ACZ)
MEMORY LOCATION: 002067
MEMORY DATA BIT(S): 17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Specifies auto pilot power is above minimum value (+18 VDC).
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, refer to failure symptom index and next failure symptom
paragraph.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–867 **SIGNAL NAME:**   P4M1 MSL TGT POLARITY CONTROL
MEMORY LOCATION: 001305
MEMORY DATA BIT(S):   10–11   (BINARY)
CONDITION: If the fourth digit is 0, 2, 4, or 6 and the third digit is 0, 1, 2, 3=BLACK
If the fourth digit is 0, 2, 4, or 6 and the third digit is 4, 5, 6, 7=AUTO
If the fourth digit is 1, 3, 5, or 7 and the third digit is 0, 1, 2, 3=WHITE
SIGNAL FUNCTION: Directs missile seeker to track a black target on a white background, a white target on a black background or automatic contrast.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD corresponds to proper polarity, go to paragraph 8–868.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–868 **SIGNAL NAME:**   P4M1 MSL TGT POLARITY CONTROL
MEMORY LOCATION: 002067
MEMORY DATA BIT(S):   10–11   (BINARY)
CONDITION: If the fourth digit is 0, 2, 4, or 6 and the third digit is 0, 1, 2, 3=BLACK
If the fourth digit is 0, 2, 4, or 6 and the third digit is 4, 5, 6, 7=AUTO
If the fourth digit is 1, 3, 5, or 7 and the third digit is 0, 1, 2, 3=WHITE
Directs missile seeker to track a black target on a white background, a white target on a black background or automatic contrast.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If third digit on HOD corresponds to proper polarity, refer to failure symptom index and next failure symptom paragraph.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–869 **SIGNAL NAME:**   P4M1 MSL BIT CMD
MEMORY LOCATION: 001305
MEMORY DATA BIT(S):   12   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls launcher BIT.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 0, 1, 4, or 5, go to paragraph 8–870.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–870 **SIGNAL NAME:**   P4M1 MSL BIT CMD
MEMORY LOCATION: 002067
MEMORY DATA BIT(S):   12   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls launcher BIT.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If third digit on HOD is 0, 1, 4, or 5, go to paragraph 8–871.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–871 SIGNAL NAME: P4M1 MSL SKR POWER CONTROL (ACY) P4M1 SKR PWR OK (ACZ)
MEMORY LOCATION: 001305
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of seeker power.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–872.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–872 SIGNAL NAME: P4M1 MSL SKR POWER CONTROL (ACY) P4M1 SKR PWR OK (ACZ)
MEMORY LOCATION: 002067
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of seeker power.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–873.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–873 SIGNAL NAME: P4M1 MSL SKR POWER
MEMORY LOCATION: 001432
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of seeker power (+28 VDC).
REMARKS: From ECSP to RHE.
PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 8–874.
FAIL: Location of fault: replace right outboard launcher (TM 9–1425–475–30–2).

8–874 SIGNAL NAME: P4M1 MSL SEEKER POWER (ACY) P4M1 SKR PWR OK (ACZ)
MEMORY LOCATION: 002050
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of seeker power (+28 VDC).
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 8–877.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–875 SIGNAL NAME: P4M1 CCM ACTIVATE CMD
MEMORY LOCATION: 001305
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to enter CCM mode.
REMARKS: From RHE to ECSP.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–876.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–876   **SIGNAL NAME:**   P4M1 CCM ACTIVATE CMD
  MEMORY LOCATION: 002067
  MEMORY DATA BIT(S):   14   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Commands missile seeker to enter CCM mode.
  REMARKS: From launcher through right outboard MRTU Type II to FCC.
  PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1123.
  FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
      MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
      (TM 9–1427–475–20).

8–877   **SIGNAL NAME:**   P4M1 MSL SCAN SEARCH CMD
  MEMORY LOCATION: 001305
  MEMORY DATA BIT(S):   16   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Commands laser seeker to enter target acquisition mode and to enter lock–on
          when target is acquired.
  REMARKS: From RHE to ECSP.
  PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–878.
  FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
      (TM 9–1427–475–20).

8–878   **SIGNAL NAME:**   P4M1 MSL SCAN SEARCH CMD
  MEMORY LOCATION: 002067
  MEMORY DATA BIT(S):   16   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Commands laser seeker to enter target acquisition mode and to enter lock–on
          when target is acquired.
  REMARKS: From launcher through right outboard MRTU Type II to FCC.
  PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–881.
  FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
      MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
      (TM 9–1427–475–20).

8–879   **SIGNAL NAME:**   P4M1 MSL SEEKER SLAVE CMD
  MEMORY LOCATION: 001305
  MEMORY DATA BIT(S):   17   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Commands laser seeker to enter slave mode.
  REMARKS: From RHE to ECSP.
  PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–880.
  FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
      (TM 9–1427–475–20).

8–880 **SIGNAL NAME:** P4M1 MSL SEEKER SLAVE CMD
MEMORY LOCATION: 002067
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter slave mode.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–887.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–881 **SIGNAL NAME:** P4M1 MSL STARE TRACK CMD
MEMORY LOCATION: 001305
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter stare mode. If proper laser code is detected in seeker FOV, seeker will enter track mode.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–882.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–882 **SIGNAL NAME:** P1M4 MSL STARE TRACK CMD
MEMORY LOCATION: 001705
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter stare mode. If proper laser code is detected in seeker FOV, seeker will enter track mode.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 2, 3, 6, or 7, refer to failure symptom index and next failure symptom paragraph.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–883 **SIGNAL NAME:** P4M1 MSL CORRELATE
MEMORY LOCATION: 001432
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates laser has detected a laser beam whose laser code agrees with internal stored code.
REMARKS: From ECSP to RHE.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–884.
FAIL: Location of fault: replace right outboard launcher (TM 9–1425–475–30–2).

8–884 **SIGNAL NAME:** P4M1 MSL CORRELATE
MEMORY LOCATION: 002050
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates laser has detected a laser beam whose laser code agrees with internal stored code.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–885.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–885 **SIGNAL NAME:** P4M1 MSL TRACK
MEMORY LOCATION: 001432
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker has entered track mode. The laser seeker can enter track mode whenever a proper laser beam is detected in seeker FOV for any mode except cage.
REMARKS: From ECSP to RHE.
PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–886.
FAIL: Location of fault: replace right outboard launcher (TM 9–1425–475–30–2).

8–886 **SIGNAL NAME:** P4M1 MSL TRACK
MEMORY LOCATION: 002050
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker has entered track mode. The laser seeker can enter track mode whenever a proper laser beam is detected in seeker FOV for any mode except cage.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1153.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–887 **SIGNAL NAME:** P4M1 MSL SKR CAGE CMD
MEMORY LOCATION: 001305
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile to enter cage mode.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–888.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–888 SIGNAL NAME: P4M1 MSL SKR CAGE CMD
  MEMORY LOCATION: 002067
  MEMORY DATA BIT(S): 19 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Commands missile to enter cage mode.
  REMARKS: From launcher through right outboard MRTU Type II to FCC.
  PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–889.
  FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
    MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
    (TM 9–1427–475–20).

8–889 SIGNAL NAME: P4M1 MSL SKR CAGE
  MEMORY LOCATION: 001432
  MEMORY DATA BIT(S): 13 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates seeker is in cage mode. The seeker cannot track in cage position.
  REMARKS: From ECSP to RHE.
  PASS: If third digit on HOD is 0, 2, 4, or 6, go to paragraph 8–890.
  FAIL: Location of fault: replace right outboard launcher (TM 9–1425–475–30–2).

8–890 SIGNAL NAME: P4M1 MSL SKR CAGE
  MEMORY LOCATION: 002050
  MEMORY DATA BIT(S): 13 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates seeker is in cage mode. The seeker cannot track in cage position.
  REMARKS: From launcher through right outboard MRTU Type II to FCC.
  PASS: If third digit on HOD is 0, 2, 4, or 6, go to paragraph 8–893.
  FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
    MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
    (TM 9–1427–475–20).

8–891 SIGNAL NAME: P4M1 MSL DEICE #2 CMD
  MEMORY LOCATION: 001311
  MEMORY DATA BIT(S): 4 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Issues deicing squib fire command to selected missile.
  REMARKS: From RHE to ECSP.
  PASS: If sixth digit on HOD is 1, go to paragraph 8–892.
  FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
    (TM 9–1427–475–20).

8–892   **SIGNAL NAME:**   P4M1 MSL DEICE #2 CMD
        MEMORY LOCATION: 002073
        MEMORY DATA BIT(S):   4   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Issues deicing squib fire command to selected missile.
        REMARKS: From launcher through right outboard MRTU Type II to FCC.
        PASS: If sixth digit on HOD is 1, go to paragraph 8–1118.
        FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
                MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
                (TM 9–1427–475–20).

8–893   **SIGNAL NAME:**   P4M1 MSL BIT CONTROL
        MEMORY LOCATION: 001311
        MEMORY DATA BIT(S):   6–9   (HEX)
        CONDITION: (None)
        SIGNAL FUNCTION: Commands BIT on autopilot.
        REMARKS: From RHE to ECSP.
        PASS: If fifth digit displayed on HOD is 0, 1, or 2, and the fourth digit displayed on HOD is 2, 3, 4, 5,
                6, or 7 go to paragraph 8–894.
        FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
                MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
                (TM 9–1427–475–20).

8–894   **SIGNAL NAME:**   P4M1 MSL BIT CONTROL
        MEMORY LOCATION: 002073
        MEMORY DATA BIT(S):   6–9   (HEX)
        CONDITION: (None)
        SIGNAL FUNCTION: Commands BIT on autopilot.
        REMARKS: From launcher through right inboard MRTU Type II to FCC.
        PASS: Location of fault if fifth digit displayed on HOD is 0, 1, or 2, and the fourth digit displayed on
                HOD is 2, 3, 4, 5, 6, or 7: Replace right outboard launcher missile 1 (TM 9–1427–475–20).
        FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
                MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
                (TM 9–1427–475–20).

8–895   **SIGNAL NAME:**   P4M1 MSL INDIRECT FIRE LO
        MEMORY LOCATION: 001311
        MEMORY DATA BIT(S):   10   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Commands low flight profile for LOAL operation.
        REMARKS: From RHE to ECSP.
        PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–896.
        FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
                (TM 9–1427–475–20).

8–896 SIGNAL NAME: P4M1 MSL INDIRECT FIRE LO
MEMORY LOCATION: 002073
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands low flight profile for LOAL operation.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1108.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–897 SIGNAL NAME: P4M1 MSL INDIRECT FIRE HI
MEMORY LOCATION: 001311
MEMORY DATA BIT(S): 11 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands high flight profile for LOAL operation.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 8–898.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–898 SIGNAL NAME: P4M1 MSL INDIRECT FIRE HI
MEMORY LOCATION: 002073
MEMORY DATA BIT(S): 11 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands high flight profile for LOAL operation.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1108.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–899 SIGNAL NAME: P4M1 MSL RF CODE ACCEPT COMMAND
MEMORY LOCATION: 001311
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to accept RF code data from analog command lines
3 and 4. Commands ECSP to hook up analog commands 3 and 4 to selected
missile.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–900.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–900 **SIGNAL NAME:** P4M1 MSL RF CODE ACCEPT COMMAND
MEMORY LOCATION: 002073
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to accept RF code data from analog command lines 3 and 4. Commands ECSP to hook up analog commands 3 and 4 to selected missile.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–901.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–901 **SIGNAL NAME:** P4M1 MSL LASER CODE ACCEPT COMMAND
MEMORY LOCATION: 001311
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser code information received from RHE by launcher on coax A and B to be relayed to identified missile.
REMARKS: From RHE to ECSP.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–902.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–902 **SIGNAL NAME:** P4M1 MSL LASER CODE ACCEPT COMMAND
MEMORY LOCATION: 002073
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser code information received from RHE by launcher on coax A and B to be relayed to identified missile.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1106.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–903 **SIGNAL NAME:** P4M1 MSL COAX B CONNECT
MEMORY LOCATION: 001311
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax B to indicated missile.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–904.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–904   SIGNAL NAME: P4M1 MSL COAX B CONNECT
MEMORY LOCATION: 002073
MEMORY DATA BIT(S):   17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax B to indicated missile.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–905.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
     MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
     (TM 9–1427–475–20).

8–905   SIGNAL NAME: P4M1 MSL COAX A CONNECT
MEMORY LOCATION: 001311
MEMORY DATA BIT(S):   18   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax A to indicated missile.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–903.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
     (TM 9–1427–475–20).

8–906   SIGNAL NAME: P4M1 MSL COAX A CONNECT
MEMORY LOCATION: 002073
MEMORY DATA BIT(S):   18   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax A to indicated missile.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1106.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
     MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
     (TM 9–1427–475–20).

8–907   SIGNAL NAME: P4M1 MSL SKR LAUNCH PREPARE COMMAND (ACY)
               P4M1 LNCH CMD (ACZ)
MEMORY LOCATION: 001311
MEMORY DATA BIT(S):   19   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Prepares missile for free flight operation.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–908.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
     (TM 9–1427–475–20).

8–908   SIGNAL NAME: P4M1 MSL SKR LAUNCH PREPARE COMMAND (ACY)
               P4M1 LNCH CMD (ACZ)
MEMORY LOCATION: 002073
MEMORY DATA BIT(S):   19   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Prepares missile for free flight operation.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 0, 2, 4, go to paragraph 8–1126.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
     MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
     (TM 9–1427–475–20).

8–909 **SIGNAL NAME:**   P4M2 BIT PERFORMED
  MEMORY LOCATION: 001350
  MEMORY DATA BIT(S): 6   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates to FCC that BIT has been performed.
  REMARKS: From RHE to FCC.
  PASS: If fifth digit on HOD is 2, 3, 6, or 7, go to paragraph 8–910.
  FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–910 **SIGNAL NAME:**   P4M2 BIT STATUS (ACY) P4M2 DISPLAY STATUS (ACZ)
  MEMORY LOCATION: 001357
  MEMORY DATA BIT(S): 4–7   (HEX)
  CONDITION: If sixth digit displayed on HOD is 0 and fifth digit displayed
        on HOD is 0=NO MSL
        If sixth digit displayed on HOD is 0 and fifth digit displayed
        on HOD is 1=SELECTED
        If sixth digit displayed on HOD is 0 and fifth digit displayed
        on HOD is 2=READY
        If sixth digit displayed on HOD is 0 and fifth digit displayed
        on HOD is 3=TRACKING
        If sixth digit displayed on HOD is 0 and fifth digit displayed
        on HOD is 4=BIT NO GO
        If sixth digit displayed on HOD is 0 and fifth digit displayed
        on HOD is 5=FAILED
        If sixth digit displayed on HOD is 0 and fifth digit displayed
        on HOD is 7=BATTERY NO GO
        If sixth digit displayed on HOD is 1 and fifth digit displayed
        on HOD is 0=UNLATCHED
        If sixth digit displayed on HOD is 1 and fifth digit displayed
        on HOD is 1=MRTU NO GO
        If sixth digit displayed on HOD is 1 and fifth digit displayed
        on HOD is 4=CODED
        If sixth digit displayed on HOD is 1 and fifth digit displayed
        on HOD is 7=CAGED
  SIGNAL FUNCTION: Provides missile status display for operator.
  REMARKS: From RHE to FCC for display.
  PASS: If CONDITION corresponds to selected message, go to failure symptom index and next failure
        symptom paragraph.
  FAIL: Location of fault: RHE, wiring from RHE to right outboard launcher, right outboard launcher.
        Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–911 **SIGNAL NAME:**   P4M2 UNLATCH INDICATE
  MEMORY LOCATION: 001433
  MEMORY DATA BIT(S): 17   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates to RHE missile is unlatched.
  REMARKS: From launcher to RHE.
  PASS: If first digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 8–912.
  FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to RHE, RHE.
        Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–912 SIGNAL NAME: P4M2 UNLATCH INDICATE
    MEMORY LOCATION: 002051
    MEMORY DATA BIT(S): 17   (BINARY)
    CONDITION: (None)
    SIGNAL FUNCTION: Indicates to operator when a missile is unlatched.
    REMARKS: From launcher through right outboard MRTU Type II to FCC for display.
    PASS: If first digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 8–913.
    FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
        MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
        (TM 9–1427–475–20).

8–913 SIGNAL NAME: P4M2 UNLATCH INDICATE
    MEMORY LOCATION: 002074
    MEMORY DATA BIT(S): 17   (BINARY)
    CONDITION: (None)
    SIGNAL FUNCTION: Indicates to operator when a missile is unlatched.
    REMARKS: From FCC through right outboard MRTU Type II to launcher.
    PASS: If first digit displayed on HOD is 0, 1, 2, or 3, refer to failure symptom index and next failure
        symptom paragraph.
    FAIL: Location of fault: right outboard MRTU Type II, wiring from right outboard MRTU Type II to FCC,
        FCC. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

8–914 SIGNAL NAME: P4M2 UPPER LOWER DISPLAY STATUS (ACY) P4M2 PRIORITY IND (ACZ)   ▌
    MEMORY LOCATION: 001357
    MEMORY DATA BIT(S): 8   (BINARY)
    CONDITION: If the second digit displayed on HOD is 0, 2, 4, or 6=UPPER
                If the second digit displayed on HOD is 1, 3, 5, or 7=LOWER
    SIGNAL FUNCTION: Indicates to operator when a selected missile has been assigned to upper or
                lower channel.
    REMARKS: From RHE to FCC for display.
    PASS: If CONDITION corresponds to selected channel, go to paragraph 8–915.
    FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–915 SIGNAL NAME: P4M2 TYPE STATUS DISPLAY (ACY) P4M2 TYPE (ACZ)   ▌
    MEMORY LOCATION: 001357
    MEMORY DATA BIT(S): 9–11   (OCTAL)
    CONDITION: If the first digit displayed on HOD is 0=NONE
                If the first digit displayed on HOD is 1=TACTICAL LASER
                If the first digit displayed on HOD is 4=UNIDENTIFIED
                If the first digit displayed on HOD is 5=TRAINING LASER
    SIGNAL FUNCTION: Provides type of missile data for display to operator.
    REMARKS: From RHE to FCC for display.
    PASS: If CONDITION corresponds to installed type of missiles, go to paragraph 8–916.
    FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
        (TM 9–1427–475–20).

8–916 **SIGNAL NAME:** P4M2 TYPE (ACY) P4M2 MSL TYPE (ACZ)
MEMORY LOCATION: 001431
MEMORY DATA BIT(S): 7–8 (BINARY)
CONDITION: If fifth digit displayed on HOD is 0, and fourth digit displayed on HOD is 0, 1, 2, or 3=TRAINING
If fifth digit displayed on HOD is 1, and fourth digit displayed on HOD is 0, 1, 2, or 3=TACTICAL
If fifth digit displayed on HOD is 1, and fourth digit displayed on HOD is 4, 5, 6, or 7=NONE
SIGNAL FUNCTION: Indicates a tactical, training or no missile at location.
REMARKS: From ECSP to RHE.
PASS: If CONDITION corresponds to installed type of missiles, go to paragraph 8–917.
FAIL: Location of fault: replace right outboard launcher (TM 9–1425–475–30–2).

8–917 **SIGNAL NAME:** P4M2 TYPE (ACY) P4M2 MSL TYPE (ACZ)
MEMORY LOCATION: 002047
MEMORY DATA BIT(S): 7–8 (BINARY)
CONDITION: If fourth digit displayed on HOD is 0, 1, 2, or 3=TRAINING
If fifth digit displayed on HOD 1, 3, 5, or 7=TACTICAL
If fifth digit displayed on HOD 1, 3, 5, or 7 and fourth digit displayed on HOD is 0, 1, 2, or 3=NONE
SIGNAL FUNCTION: Indicates a tactical, training or no missile at location.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If CONDITION corresponds to installed type of missiles, refer to failure symptom index and next failure symptom paragraph.
FAIL: Location of fault: right outboard right outboard launcher, wiring from right outboard right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–918 **SIGNAL NAME:** P4M2 MSL DEICE #1 CMD
MEMORY LOCATION: 001304
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Sends command to launcher ECSP to arm deicing squib.
REMARKS: From RHE to ECSP.
PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–919.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–919 **SIGNAL NAME:** P4M2 MSL DEICE #1 CMD
MEMORY LOCATION: 002066
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Sends command to launcher ECSP to arm deicing squib.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–950.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–920 SIGNAL NAME: P4M2 MSL SKR INPUT SLAVE (ACY) P4M2 SKR SLV SEL (ACZ)
MEMORY LOCATION: 001304
MEMORY DATA BIT(S):   6–8   (OCTAL)
CONDITION: If the fifth digit is 0 or 4 and the fourth digit
is 0 or 2=ZERO EL ZERO AZ
If the fifth digit is 0 or 4 and the fourth digit
is 4 or 6=REMEL REMAZ
If the fifth digit is 1 or 5 and the fourth digit
is 0 or 2=AUTOEL AUTOAZ
If the fifth digit is 1 or 5 and the fourth digit
is 4 or 6=REMEL REMAZ +BIAS/2
If the fifth digit is 2 or 6 and the fourth digit
is 0 or 2=REMEL REMAZ +BIAS
If the fifth digit is 2 or 6 and the fourth digit
is 4 or 6=REMEL REMAZ – BIAS/2
If the fifth digit is 3 or 7 and the fourth digit
is 0 or 2=REMEL REMAZ – BIAS
If the fifth digit is 3 or 7 and the fourth digit
is 4 or 6=AUTOEL ZERO AZ
SIGNAL FUNCTION: Selects pitch and yaw slave commands to be applied to missile.
REMARKS: From RHE to ECSP.
PASS: If CONDITION corresponds to selected seeker input, go to paragraph 8–921.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–921 SIGNAL NAME: P4M2 MSL SKR INPUT SLAVE (ACY) P4M2 SKR SLV SEL (ACZ)
MEMORY LOCATION: 002066
MEMORY DATA BIT(S):   6–8   (OCTAL)
CONDITION: If the fifth digit is 0 or 4 and the fourth digit
is 0 or 2=ZERO EL ZERO AZ
If the fifth digit is 0 or 4 and the fourth digit
is 4 or 6=REMEL REMAZ
If the fifth digit is 1 or 5 and the fourth digit
is 0 or 2=AUTOEL AUTOAZ
If the fifth digit is 1 or 5 and the fourth digit
is 4 or 6=REMEL REMAZ +BIAS/2
If the fifth digit is 2 or 6 and the fourth digit
is 0 or 2=REMEL REMAZ +BIAS
If the fifth digit is 2 or 6 and the fourth digit
is 4 or 6=REMEL REMAZ – BIAS/2
If the fifth digit is 3 or 7 and the fourth digit
is 0 or 2=REMEL REMAZ – BIAS
If the fifth digit is 3 or 7 and the fourth digit
is 4 or 6=AUTOEL ZERO AZ
SIGNAL FUNCTION: Selects pitch and yaw slave commands to be applied to missile.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If CONDITION corresponds to selected seeker input, refer to failure symptom index and next
failure symptom paragraph.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–922   SIGNAL NAME: P4M2 MSL AUTO PILOT POWER CONTROL (ACY)
P4M2 AUTOPLT PWR (ACZ)
MEMORY LOCATION: 001304
MEMORY DATA BIT(S):   9   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of auto pilot power to missile.
REMARKS: From RHE to ECSP.
PASS: If fourth digit on HOD is 2, 3, 6, or 7, go to paragraph 8–923.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–923   SIGNAL NAME: P4M2 MSL AUTO PILOT POWER CONTROL (ACY)
P4M2 AUTOPLT PWR (ACZ)
MEMORY LOCATION: 002066
MEMORY DATA BIT(S):   9   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of auto pilot power to missile.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If fourth digit on HOD is 2, 3, 6, or 7, go to paragraph 8–924.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–924   SIGNAL NAME: P4M2 MSL AUTO PILOT POWER (ACY) P4M2 A/P PWR OK (ACZ)
MEMORY LOCATION: 001431
MEMORY DATA BIT(S):   17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Specifies auto pilot power is above minimum value (+18 VDC).
REMARKS: From ECSP to RHE.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–925.
FAIL: Location of fault: right outboard launcher (TM 9–1425–475–30–2).

8–925   SIGNAL NAME: P4M2 MSL AUTO PILOT POWER (ACY) P4M2 A/P PWR OK (ACZ)
MEMORY LOCATION: 002066
MEMORY DATA BIT(S):   17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Specifies auto pilot power is above minimum value (+18 VDC).
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, refer to failure symptom index and next failure symptom
paragraph.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–926 SIGNAL NAME: P4M2 MSL TGT POLARITY CONTROL
MEMORY LOCATION: 001304
MEMORY DATA BIT(S): 10–11 (BINARY)
CONDITION: If the fourth digit is 0, 2, 4, or 6 and the third digit is 0, 1, 2, 3=BLACK
If the fourth digit is 0, 2, 4, or 6 and the third digit is 4, 5, 6, 7=AUTO
If the fourth digit is 1, 3, 5, or 7 and the third digit is 0, 1, 2, 3=WHITE
SIGNAL FUNCTION: Directs missile seeker to track a black target on a white background, a white target on a black background or automatic contrast.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD corresponds to proper polarity, go to paragraph 8–927.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–927 SIGNAL NAME: P4M2 MSL TGT POLARITY CONTROL
MEMORY LOCATION: 002066
MEMORY DATA BIT(S): 10–11 (BINARY)
CONDITION: If the fourth digit is 0, 2, 4, or 6 and the third digit is 0, 1, 2, 3=BLACK
If the fourth digit is 0, 2, 4, or 6 and the third digit is 4, 5, 6, 7=AUTO
If the fourth digit is 1, 3, 5, or 7 and the third digit is 0, 1, 2, 3=WHITE
SIGNAL FUNCTION: Directs missile seeker to track a black target on a white background, a white target on a black background or automatic contrast.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If third digit on HOD corresponds to proper polarity, refer to failure symptom index and next failure symptom paragraph.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–928 SIGNAL NAME: P4M2 MSL BIT CMD
MEMORY LOCATION: 001304
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls launcher BIT.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 0, 1, 4, or 5, go to paragraph 8–929.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–929 SIGNAL NAME: P4M2 MSL BIT CMD
MEMORY LOCATION: 002066
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls launcher BIT.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If third digit on HOD is 0, 1, 4, or 5, go to paragraph 8–930.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–930 **SIGNAL NAME:** P4M2 MSL SKR POWER CONTROL (ACY) P4M2 SKR PWR OK (ACZ)
MEMORY LOCATION: 001304
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of seeker power.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–931.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–931 **SIGNAL NAME:** P4M2 MSL SKR POWER CONTROL (ACY) P4M2 SKR PWR OK (ACZ)
MEMORY LOCATION: 002066
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of seeker power.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–932.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–932 **SIGNAL NAME:** P4M2 MSL SKR POWER
MEMORY LOCATION: 001431
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of seeker power (+28 VDC).
REMARKS: From ECSP to RHE.
PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 8–933.
FAIL: Location of fault: replace right outboard launcher (TM 9–1425–475–30–2).

8–933 **SIGNAL NAME:** P4M2 MSL SEEKER POWER (ACY) P4M2 SKR PWR OK (ACZ)
MEMORY LOCATION: 002047
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of seeker power (+28 VDC).
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 8–936.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–934 **SIGNAL NAME:** P4M2 CCM ACTIVATE CMD
MEMORY LOCATION: 001304
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to enter CCM mode.
REMARKS: From RHE to ECSP.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–935.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–935 SIGNAL NAME: P4M2 CCM ACTIVATE CMD
　　　　MEMORY LOCATION: 002066
　　　　MEMORY DATA BIT(S):   14   (BINARY)
　　　　CONDITION: (None)
　　　　SIGNAL FUNCTION: Commands missile seeker to enter CCM mode.
　　　　REMARKS: From launcher through right outboard MRTU Type II to FCC.
　　　　PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1123.
　　　　FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
　　　　　　MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
　　　　　　(TM 9–1427–475–20).

8–936 SIGNAL NAME: P4M2 MSL SCAN SEARCH CMD
　　　　MEMORY LOCATION: 001304
　　　　MEMORY DATA BIT(S):   16   (BINARY)
　　　　CONDITION: (None)
　　　　SIGNAL FUNCTION: Commands laser seeker to enter target acquisition mode and to enter lock–on
　　　　　　　　　　when target is acquired.
　　　　REMARKS: From RHE to ECSP.
　　　　PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–937.
　　　　FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
　　　　　　(TM 9–1427–475–20).

8–937 SIGNAL NAME: P4M2 MSL SCAN SEARCH CMD
　　　　MEMORY LOCATION: 002066
　　　　MEMORY DATA BIT(S):   16   (BINARY)
　　　　CONDITION: (None)
　　　　SIGNAL FUNCTION: Commands laser seeker to enter target acquisition mode and to enter lock–on
　　　　　　　　　　when target is acquired.
　　　　REMARKS: From launcher through right outboard MRTU Type II to FCC.
　　　　PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–940.
　　　　FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
　　　　　　MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
　　　　　　(TM 9–1427–475–20).

8–938 SIGNAL NAME: P4M2 MSL SEEKER SLAVE CMD
　　　　MEMORY LOCATION: 001304
　　　　MEMORY DATA BIT(S):   17   (BINARY)
　　　　CONDITION: (None)
　　　　SIGNAL FUNCTION: Commands laser seeker to enter slave mode.
　　　　REMARKS: From RHE to ECSP.
　　　　PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–941.
　　　　FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
　　　　　　(TM 9–1427–475–20).

8–939   SIGNAL NAME: P4M2 MSL SEEKER SLAVE CMD
　　　　MEMORY LOCATION: 002066
　　　　MEMORY DATA BIT(S):   17   (BINARY)
　　　　CONDITION: (None)
　　　　SIGNAL FUNCTION: Commands laser seeker to enter slave mode.
　　　　REMARKS: From launcher through right outboard MRTU Type II to FCC.
　　　　PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–946.
　　　　FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
　　　　　　MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
　　　　　　(TM 9–1427–475–20).

8–940   SIGNAL NAME: P4M2 MSL STARE TRACK CMD
　　　　MEMORY LOCATION: 001304
　　　　MEMORY DATA BIT(S):   18   (BINARY)
　　　　CONDITION: (None)
　　　　SIGNAL FUNCTION: Commands laser seeker to enter stare mode. If proper laser code is detected
　　　　　　　　　in seeker FOV, seeker will enter track mode.
　　　　REMARKS: From RHE to ECSP.
　　　　PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–941.
　　　　FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
　　　　　　(TM 9–1427–475–20).

8–941   SIGNAL NAME: P4M2 MSL STARE TRACK CMD
　　　　MEMORY LOCATION: 002066
　　　　MEMORY DATA BIT(S):   18   (BINARY)
　　　　CONDITION: (None)
　　　　SIGNAL FUNCTION: Commands laser seeker to enter stare mode. If proper laser code is detected
　　　　　　　　　in seeker FOV, seeker will enter track mode.
　　　　REMARKS: From launcher through right outboard MRTU Type II to FCC.
　　　　PASS: If first digit on HOD is 2, 3, 6, or 7, refer to failure symptom index and next failure symptom
　　　　　　paragraph.
　　　　FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
　　　　　　MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
　　　　　　(TM 9–1427–475–20).

8–942   SIGNAL NAME: P4M2 MSL CORRELATE
　　　　MEMORY LOCATION: 001431
　　　　MEMORY DATA BIT(S):   16   (BINARY)
　　　　CONDITION: (None)
　　　　SIGNAL FUNCTION: Indicates laser has detected a laser beam whose laser code agrees with
　　　　　　　　　internal stored code.
　　　　REMARKS: From ECSP to RHE.
　　　　PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–943.
　　　　FAIL: Location of fault: replace right outboard launcher (TM 9–1425–475–30–2).

8–943 SIGNAL NAME: P4M2 MSL CORRELATE
MEMORY LOCATION: 002047
MEMORY DATA BIT(S):   16   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates laser has detected a laser beam whose laser code agrees with internal stored code.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–944.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–944 SIGNAL NAME: P4M2 MSL TRACK
MEMORY LOCATION: 001431
MEMORY DATA BIT(S):   15   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker has entered track mode. The laser seeker can enter track mode whenever a proper laser beam is detected in seeker FOV for any mode except cage.
REMARKS: From ECSP to RHE.
PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–945.
FAIL: Location of fault: replace right outboard launcher (TM 9–1425–475–30–2).

8–945 SIGNAL NAME: P4M2 MSL TRACK
MEMORY LOCATION: 002047
MEMORY DATA BIT(S):   15   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker has entered track mode. The laser seeker can enter track mode whenever a proper laser beam is detected in seeker FOV for any mode except cage.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1153.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–946 SIGNAL NAME: P4M2 MSL SKR CAGE CMD
MEMORY LOCATION: 001304
MEMORY DATA BIT(S):   19   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile to enter cage mode.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–947.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–947   **SIGNAL NAME:**   P4M2 MSL SKR CAGE CMD
         MEMORY LOCATION: 002066
         MEMORY DATA BIT(S):   19   (BINARY)
         CONDITION: (None)
         SIGNAL FUNCTION: Commands missile to enter cage mode.
         REMARKS: From launcher through right outboard MRTU Type II to FCC.
         PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–948.
         FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
             MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
             (TM 9–1427–475–20).

8–948   **SIGNAL NAME:**   P4M2 MSL SKR CAGE
         MEMORY LOCATION: 001431
         MEMORY DATA BIT(S):   13   (BINARY)
         CONDITION: (None)
         SIGNAL FUNCTION: Indicates seeker is in cage mode. The seeker cannot track in cage position.
         REMARKS: From ECSP to RHE.
         PASS: If third digit on HOD is 0, 2, 4, or 6, go to paragraph 8–949.
         FAIL: Location of fault: replace right outboard launcher (TM 9–1425–475–30–2).

8–949   **SIGNAL NAME:**   P4M2 MSL SKR CAGE
         MEMORY LOCATION: 002047
         MEMORY DATA BIT(S):   13   (BINARY)
         CONDITION: (None)
         SIGNAL FUNCTION: Indicates seeker is in cage mode. The seeker cannot track in cage position.
         REMARKS: From launcher through right outboard MRTU Type II to FCC.
         PASS: If third digit on HOD is 0, 2, 4, or 6, go to paragraph 8–952.
         FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
             MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
             (TM 9–1427–475–20).

8–950   **SIGNAL NAME:**   P4M2 MSL DEICE #2 CMD
         MEMORY LOCATION: 001310
         MEMORY DATA BIT(S):   4   (BINARY)
         CONDITION: (None)
         SIGNAL FUNCTION: Issues deicing squib fire command to selected missile.
         REMARKS: From RHE to ECSP.
         PASS: If sixth digit on HOD is 1, go to paragraph 8–951.
         FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
             (TM 9–1427–475–20).

8–951 SIGNAL NAME: P4M2 MSL DEICE #2 CMD
MEMORY LOCATION: 002072
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Issues deicing squib fire command to selected missile.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If sixth digit on HOD is 1, go to paragraph 8–1118.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–952 SIGNAL NAME: P4M2 MSL BIT CONTROL
MEMORY LOCATION: 001310
MEMORY DATA BIT(S): 6–9 (HEX)
CONDITION: (None)
SIGNAL FUNCTION: Commands BIT on autopilot.
REMARKS: From RHE to ECSP.
PASS: If fifth digit displayed on HOD is 0, 1, or 2, and the fourth digit displayed on HOD is 2, 3, 4, 5,
6, or 7 go to paragraph 8–953.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–953 SIGNAL NAME: P4M2 MSL BIT CONTROL
MEMORY LOCATION: 002072
MEMORY DATA BIT(S): 6–9 (HEX)
CONDITION: (None)
SIGNAL FUNCTION: Commands BIT on autopilot.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: Location of fault if fifth digit displayed on HOD is 0, 1, or 2, and the fourth digit displayed on
HOD is 2, 3, 4, 5, 6, or 7: Replace right outboard launcher missile 2.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–954 SIGNAL NAME: P4M2 MSL INDIRECT FIRE LO
MEMORY LOCATION: 001310
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands low flight profile for LOAL operation.
REMARKS: From RHE to ECSP.
PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–955.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–955 **SIGNAL NAME:** P4M2 MSL INDIRECT FIRE LO
MEMORY LOCATION: 002072
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands low flight profile for LOAL operation.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1108.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–956 **SIGNAL NAME:** P4M2 MSL INDIRECT FIRE HI
MEMORY LOCATION: 001310
MEMORY DATA BIT(S): 11 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands high flight profile for LOAL operation.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 8–957.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–957 **SIGNAL NAME:** P4M2 MSL INDIRECT FIRE HI
MEMORY LOCATION: 002072
MEMORY DATA BIT(S): 11 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands high flight profile for LOAL operation.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1108.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–958 **SIGNAL NAME:** P4M2 MSL RF CODE ACCEPT COMMAND
MEMORY LOCATION: 001310
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to accept RF code data from analog command lines 3 and 4. Commands ECSP to hook up analog commands 3 and 4 to selected missile.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–959.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–959 SIGNAL NAME: P4M2 MSL RF CODE ACCEPT COMMAND
MEMORY LOCATION: 002072
MEMORY DATA BIT(S): 13   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to accept RF code data from analog command lines 3 and 4. Commands ECSP to hook up analog commands 3 and 4 to selected missile.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–960.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–960 SIGNAL NAME: P4M2 MSL LASER CODE ACCEPT COMMAND
MEMORY LOCATION: 001310
MEMORY DATA BIT(S): 14   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser code information received from RHE by launcher on coax A and B to be relayed to identified missile.
REMARKS: From RHE to ECSP.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–961.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–961 SIGNAL NAME: P4M2 MSL LASER CODE ACCEPT COMMAND
MEMORY LOCATION: 002072
MEMORY DATA BIT(S): 14   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser code information received from RHE by launcher on coax A and B to be relayed to identified missile.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1106.
FAIL: Location of fault: launcher, wiring from launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–962 SIGNAL NAME: P4M2 MSL COAX B CONNECT
MEMORY LOCATION: 001312
MEMORY DATA BIT(S): 17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax B to indicated missile.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–963.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–963   **SIGNAL NAME:**   P4M2 MSL COAX B CONNECT
   MEMORY LOCATION: 002072
   MEMORY DATA BIT(S):   17   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Commands launcher to connect coax B to indicated missile.
   REMARKS: From launcher through right outboard MRTU Type II to FCC.
   PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–964.
   FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
          MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–964   **SIGNAL NAME:**   P4M2 MSL COAX A CONNECT
   MEMORY LOCATION: 001310
   MEMORY DATA BIT(S):   18   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Commands launcher to connect coax A to indicated missile.
   REMARKS: From RHE to ECSP.
   PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–965.
   FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–965   **SIGNAL NAME:**   P4M2 MSL COAX A CONNECT
   MEMORY LOCATION: 002072
   MEMORY DATA BIT(S):   18   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Commands launcher to connect coax A to indicated missile.
   REMARKS: From launcher through right outboard MRTU Type II to FCC.
   PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1106.
   FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
          MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–966   **SIGNAL NAME:**   P4M2 MSL SKR LAUNCH PREPARE COMMAND (ACY)
                     P4M2 SKR LNCH CMD (ACZ)
   MEMORY LOCATION: 001310
   MEMORY DATA BIT(S):   19   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Prepares missile for free flight operation.
   REMARKS: From RHE to ECSP.
   PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–967.
   FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–967   **SIGNAL NAME:**   P4M2 MSL SKR LAUNCH PREPARE COMMAND (ACY)
                     P4M2 SKR LNCH CMD (ACZ)
   MEMORY LOCATION: 002072
   MEMORY DATA BIT(S):   19   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Prepares missile for free flight operation.
   REMARKS: From launcher through right outboard MRTU Type II to FCC.
   PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–1126.
   FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
          MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–968 SIGNAL NAME: P4M3 BIT PERFORMED
MEMORY LOCATION: 001350
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to FFC that BIT has been performed.
REMARKS: From RHE to FCC.
PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–967.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–969 SIGNAL NAME: P4M3 BIT STATUS (ACY) P4M3 DISPLAY STATUS (ACZ)
MEMORY LOCATION: 001360
MEMORY DATA BIT(S): 12–15 (HEX)
CONDITION: If third digit displayed on HOD is 0 and second digit displayed
    on HOD is 0=NO MSL
    If third digit displayed on HOD is 0 or 4 and second digit displayed
    on HOD is 2 or 3=SELECTED
    If third digit displayed on HOD is 0 or 4 and second digit displayed
    on HOD is 4 or 5=READY
    If third digit displayed on HOD is 0 or 4 and second digit displayed
    on HOD is 6 or 7=TRACKING
    If third digit displayed on HOD is 3 or 7 and second digit displayed
    on HOD is 0=CODED
    If third digit displayed on HOD is 3 or 7 and second digit displayed
    on HOD is 6=CAGED
    If third digit displayed on HOD is 5 or 1 and second digit displayed
    on HOD is 0=BIT NO GO
    If third digit displayed on HOD is 5 or 1 and second digit displayed
    on HOD is 2=FAILED
    If third digit displayed on HOD is 5 or 1 and second digit displayed
    on HOD is 6=BATTERY NO GO
    If third digit displayed on HOD is 6 or 2 and second digit displayed
    on HOD is 0=UNLATCHED
    If third digit displayed on HOD is 6 or 2 and second digit displayed
    on HOD is 2=MRTU NO GO
    If third digit displayed on HOD is 6 or 2 and second digit displayed
    on HOD is 4=RAIL NO GO
SIGNAL FUNCTION: Provides missile status display for operator.
REMARKS: From RHE to FCC for display.
PASS: If CONDITION corresponds to selected message, go to failure symptom index and next failure
    symptom paragraph.
FAIL: Location of fault: RHE, wiring from RHE to right outboard launcher, right outboard launcher.
    Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–970 SIGNAL NAME: P4M3 UNLATCH INDICATE
MEMORY LOCATION: 001433
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to RHE missile is unlatched.
REMARKS: From launcher to RHE.
PASS: If second digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 8–971.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to RHE, RHE.
    Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–971 **SIGNAL NAME:** P4M3 UNLATCH INDICATE
      MEMORY LOCATION: 002051
      MEMORY DATA BIT(S): 16 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates to operator when a missile is unlatched.
      REMARKS: From launcher through right outboard MRTU Type II to FCC for display.
      PASS: If second digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 8–972.
      FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
          MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–972 **SIGNAL NAME:** P4M3 UNLATCH INDICATE
      MEMORY LOCATION: 002074
      MEMORY DATA BIT(S): 16 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates to operator when a missile is unlatched.
      REMARKS: From FCC through right outboard MRTU Type II to launcher.
      PASS: If second digit displayed on HOD is 0, 2, 4, or 6, refer to failure symptom index and next
          failure symptom paragraph.
      FAIL: Location of fault: right outboard MRTU Type II, wiring from right outboard MRTU Type II to FCC.
          Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

8–973 **SIGNAL NAME:** P4M3 UPPER LOWER DISPLAY STATUS (ACY) P4M3 PRIORITY IND (ACZ)
      MEMORY LOCATION: 001360
      MEMORY DATA BIT(S): 16 (BINARY)
      CONDITION: If the second digit displayed on HOD is 0, 2, 4, or 6=UPPER
                  If the second digit displayed on HOD is 1, 3, 5, or 7=LOWER
      SIGNAL FUNCTION: Indicates to operator when a selected missile has been assigned to upper or
                   lower channel.
      REMARKS: From RHE to FCC for display.
      PASS: If CONDITION corresponds to selected channel, go to paragraph 8–974.
      FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–974 **SIGNAL NAME:** P4M3 TYPE STATUS DISPLAY (ACY) P4M3 TYPE (ACZ)
      MEMORY LOCATION: 001360
      MEMORY DATA BIT(S): 17–19 (OCTAL)
      CONDITION: If the first digit displayed on HOD is 0=NONE
                  If the first digit displayed on HOD is 1=TACTICAL LASER
                  If the first digit displayed on HOD is 4=UNIDENTIFIED
                  If the first digit displayed on HOD is 5=TRAINING LASER
      SIGNAL FUNCTION: Provides type of missile data for display to operator.
      REMARKS: From RHE to FCC for display.
      PASS: If CONDITION on HOD corresponds to installed type of missiles, go to paragraph 8–975.
      FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–975 SIGNAL NAME: P4M3 TYPE (ACY) P4M3 MSL TYPE (ACZ)
 MEMORY LOCATION: 001430
 MEMORY DATA BIT(S): 7–8 (BINARY)
 CONDITION: If fifth digit displayed on HOD is 0, and fourth digit displayed on HOD is 0, 1, 2, or 3=TRAINING
 If fifth digit displayed on HOD is 1, and fourth digit displayed on HOD is 0, 1, 2, or 3=TACTICAL
 If fifth digit displayed on HOD is 1, and fourth digit displayed on HOD is 4, 5, 6, or 7=NONE
 SIGNAL FUNCTION: Indicates a tactical, training or no missile at location.
 REMARKS: From ECSP to RHE.
 PASS: If CONDITION corresponds to installed type of missiles, go to paragraph 8–976.
 FAIL: Location of fault: replace right outboard launcher (TM 9–1425–475–30–2).

8–976 SIGNAL NAME: P4M3 TYPE (ACY) P4M3 MSL TYPE (ACZ)
 MEMORY LOCATION: 002046
 MEMORY DATA BIT(S): 7–8 (BINARY)
 CONDITION: If fourth digit displayed on HOD is 0, 1, 2, or 3=TRAINING
 If fifth digit displayed on HOD 1, 3, 5, or 7=TACTICAL
 If fifth digit displayed on HOD 1, 3, 5, or 7 and fourth digit displayed on HOD is 0, 1, 2, or 3=NONE
 SIGNAL FUNCTION: Indicates a tactical, training or no missile at location.
 REMARKS: From launcher through right outboard MRTU Type II to FCC.
 PASS: If CONDITION corresponds to installed type of missiles, refer to failure symptom index and next failure symptom paragraph.
 FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–977 SIGNAL NAME: P4M3 MSL DEICE #1 CMD
 MEMORY LOCATION: 001303
 MEMORY DATA BIT(S): 5 (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Sends command to launcher ECSP to arm deicing squib.
 REMARKS: From RHE to ECSP.
 PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–978.
 FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–978 SIGNAL NAME: P4M3 MSL DEICE #1 CMD
 MEMORY LOCATION: 002065
 MEMORY DATA BIT(S): 5 (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Sends command to launcher ECSP to arm deicing squib.
 REMARKS: From launcher through right outboard MRTU Type II to FCC.
 PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1009.
 FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–979   SIGNAL NAME: P4M3 MSL SKR INPUT SLAVE (ACY) P4M3 SKR SLV SEL (ACZ)
　　　　　MEMORY LOCATION: 001303
　　　　　MEMORY DATA BIT(S):   6–8   (OCTAL)
　　　　　CONDITION: If the fifth digit is 0 or 4 and the fourth digit
　　　　　　　　　　　　　　　is 0 or 2=ZERO EL ZERO AZ
　　　　　　　　　　　　　　　If the fifth digit is 0 or 4 and the fourth digit
　　　　　　　　　　　　　　　is 4 or 6=REMEL REMAZ
　　　　　　　　　　　　　　　If the fifth digit is 1 or 5 and the fourth digit
　　　　　　　　　　　　　　　is 0 or 2=AUTOEL AUTOAZ
　　　　　　　　　　　　　　　If the fifth digit is 1 or 5 and the fourth digit
　　　　　　　　　　　　　　　is 4 or 6= REMEL REMAZ +BIAS/2
　　　　　　　　　　　　　　　If the fifth digit is 2 or 6 and the fourth digit
　　　　　　　　　　　　　　　is 0 or 2=REMEL REMAZ +BIAS
　　　　　　　　　　　　　　　If the fifth digit is 2 or 6 and the fourth digit
　　　　　　　　　　　　　　　is 4 or 6=REMEL REMAZ – BIAS/2
　　　　　　　　　　　　　　　If the fifth digit is 3 or 7 and the fourth digit
　　　　　　　　　　　　　　　is 0 or 2=REMEL REMAZ – BIAS
　　　　　　　　　　　　　　　If the fifth digit is 3 or 7 and the fourth digit
　　　　　　　　　　　　　　　is 4 or 6=AUTOEL ZERO AZ
　　　　　SIGNAL FUNCTION: Selects pitch and yaw slave commands to be applied to missile.
　　　　　REMARKS: From RHE to ECSP.
　　　　　PASS: If CONDITION corresponds to selected seeker input, go to paragraph 8–980.
　　　　　FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
　　　　　　　　　(TM 9–1427–475–20).

8–980   SIGNAL NAME: P4M3 MSL SKR INPUT SLAVE (ACY) P4M3 SKR SLV SEL (ACZ)
　　　　　MEMORY LOCATION: 002065
　　　　　MEMORY DATA BIT(S):   6–8   (OCTAL)
　　　　　CONDITION: If the fifth digit is 0 or 4 and the fourth digit
　　　　　　　　　　　　　　　is 0 or 2=ZERO EL ZERO AZ
　　　　　　　　　　　　　　　If the fifth digit is 0 or 4 and the fourth digit
　　　　　　　　　　　　　　　is 4 or 6=REMEL REMAZ
　　　　　　　　　　　　　　　If the fifth digit is 1 or 5 and the fourth digit
　　　　　　　　　　　　　　　is 0 or 2=AUTOEL AUTOAZ
　　　　　　　　　　　　　　　If the fifth digit is 1 or 5 and the fourth digit
　　　　　　　　　　　　　　　is 4 or 6=REMEL REMAZ +BIAS/2
　　　　　　　　　　　　　　　If the fifth digit is 2 or 6 and the fourth digit
　　　　　　　　　　　　　　　is 0 or 2=REMEL REMAZ +BIAS
　　　　　　　　　　　　　　　If the fifth digit is 2 or 6 and the fourth digit
　　　　　　　　　　　　　　　is 4 or 6=REMEL REMAZ – BIAS/2
　　　　　　　　　　　　　　　If the fifth digit is 3 or 7 and the fourth digit
　　　　　　　　　　　　　　　is 0 or 2=REMEL REMAZ – BIAS
　　　　　　　　　　　　　　　If the fifth digit is 3 or 7 and the fourth digit
　　　　　　　　　　　　　　　is 4 or 6=AUTOEL ZERO AZ
　　　　　SIGNAL FUNCTION: Selects pitch and yaw slave commands to be applied to missile.
　　　　　REMARKS: From launcher through right outboard MRTU Type II to FCC.
　　　　　PASS: If CONDITION corresponds to selected seeker input, refer to failure symptom index and next
　　　　　　　　failure symptom paragraph.
　　　　　FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
　　　　　　　　MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
　　　　　　　　(TM 9–1427–475–20).

8–981 SIGNAL NAME: P4M3 MSL AUTO PILOT POWER CONTROL (ACY)
                          P4M3 AUTOPLT PWR (ACZ)
MEMORY LOCATION: 001303
MEMORY DATA BIT(S): 9   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of auto pilot power to missile.
REMARKS: From RHE to ECSP.
PASS: If fourth digit on HOD is 2, 3, 6, or 7, go to paragraph 8–982.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–982 SIGNAL NAME: P4M3 MSL AUTO PILOT POWER CONTROL (ACY)
                          P4M3 AUTOPLT PWR (ACZ)
MEMORY LOCATION: 002065
MEMORY DATA BIT(S): 9   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of auto pilot power to missile.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If fourth digit on HOD is 2, 3, 6, or 7, go to paragraph 8–983.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
          MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–983 SIGNAL NAME: P4M3 MSL AUTO PILOT POWER (ACY) P4M3 A/P PWR OK (ACZ)
MEMORY LOCATION: 001430
MEMORY DATA BIT(S): 17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Specifies auto pilot power is above minimum value (+18 VDC).
REMARKS: From ECSP to RHE.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–984.
FAIL: Location of fault: replace right outboard launcher (TM 9–1425–475–30–2).

8–984 SIGNAL NAME: P4M3 MSL AUTO PILOT POWER (ACY) P4M3 A/P PWR OK (ACZ)
MEMORY LOCATION: 002065
MEMORY DATA BIT(S): 17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Specifies auto pilot power is above minimum value (+18 VDC).
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, refer to failure symptom index and next failure symptom
            paragraph.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
          MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–985 SIGNAL NAME: P4M3 MSL TGT POLARITY CONTROL
MEMORY LOCATION: 001303
MEMORY DATA BIT(S): 10–11 (BINARY)
CONDITION: If the fourth digit is 0, 2, 4, or 6 and the third digit is 0, 1, 2, 3=BLACK
If the fourth digit is 0, 2, 4, or 6 and the third digit is 4, 5, 6, 7=AUTO
If the fourth digit is 1, 3, 5, or 7 and the third digit is 0, 1, 2, 3=WHITE
SIGNAL FUNCTION: Directs missile seeker to track a black target on a white background, a white target on a black background or automatic contrast.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD corresponds to proper polarity, go to paragraph 8–986.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–986 SIGNAL NAME: P4M3 MSL TGT POLARITY CONTROL
MEMORY LOCATION: 002065
MEMORY DATA BIT(S): 10–11 (BINARY)
CONDITION: If the fourth digit is 0, 2, 4, or 6 and the third digit is 0, 1, 2, 3=BLACK
If the fourth digit is 0, 2, 4, or 6 and the third digit is 4, 5, 6, 7=AUTO
If the fourth digit is 1, 3, 5, or 7 and the third digit is 0, 1, 2, 3=WHITE
SIGNAL FUNCTION: Directs missile seeker to track a black target on a white background, a white target on a black background or automatic contrast.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If third digit on HOD corresponds to proper polarity, refer to failure symptom index and next failure symptom paragraph.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–987 SIGNAL NAME: P4M3 MSL BIT CMD
MEMORY LOCATION: 001303
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls launcher BIT.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 0, 1, 4, or 5, go to paragraph 8–988.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–988 SIGNAL NAME: P4M3 MSL BIT CMD
MEMORY LOCATION: 002065
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls launcher BIT.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If third digit on HOD is 0, 1, 4, or 5, go to paragraph 8–989.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–989 SIGNAL NAME: P4M3 MSL SKR POWER CONTROL (ACY) P4M3 SKR PWR OK (ACZ)
MEMORY LOCATION: 001303
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of seeker power.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–990.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–990 SIGNAL NAME: P4M3 MSL SKR POWER CONTROL (ACY) P4M3 SKR PWR OK (ACZ)
MEMORY LOCATION: 002065
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of seeker power.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–991.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–991 SIGNAL NAME: P4M3 MSL SKR POWER
MEMORY LOCATION: 001430
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of seeker power (+28 VDC).
REMARKS: From ECSP to RHE.
PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 8–992.
FAIL: Location of fault: replace right outboard launcher (TM 9–1425–475–30–2).

8–992 SIGNAL NAME: P4M3 MSL SEEKER POWER (ACY) P4M3 SKR PWR OK (ACZ)
MEMORY LOCATION: 002046
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of seeker power (+28 VDC).
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 8–993.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–993 SIGNAL NAME: P4M3 CCM ACTIVATE CMD
MEMORY LOCATION: 001303
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to enter CCM mode.
REMARKS: From RHE to ECSP.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–994.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–994 **SIGNAL NAME:** P4M3 CCM ACTIVATE CMD
      MEMORY LOCATION: 002065
      MEMORY DATA BIT(S): 14 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Commands missile seeker to enter CCM mode.
      REMARKS: From launcher through right outboard MRTU Type II to FCC.
      PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1123.
      FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–995 **SIGNAL NAME:** P4M3 MSL SCAN SEARCH CMD
      MEMORY LOCATION: 001303
      MEMORY DATA BIT(S): 16 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Commands laser seeker to enter target acquisition mode and to enter lock–on when target is acquired.
      REMARKS: From RHE to ECSP.
      PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–996.
      FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–996 **SIGNAL NAME:** P4M3 MSL SCAN SEARCH CMD
      MEMORY LOCATION: 002065
      MEMORY DATA BIT(S): 16 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Commands laser seeker to enter target acquisition mode and to enter lock–on when target is acquired.
      REMARKS: From launcher through right outboard MRTU Type II to FCC.
      PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–999.
      FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–997 **SIGNAL NAME:** P4M3 MSL SEEKER SLAVE CMD
      MEMORY LOCATION: 001303
      MEMORY DATA BIT(S): 17 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Commands laser seeker to enter slave mode.
      REMARKS: From RHE to ECSP.
      PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–998.
      FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–998 **SIGNAL NAME:** P4M3 MSL SEEKER SLAVE CMD
MEMORY LOCATION: 002065
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter slave mode.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1005.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–999 **SIGNAL NAME:** P4M3 MSL STARE TRACK CMD
MEMORY LOCATION: 001303
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter stare mode. If proper laser code is detected in seeker FOV, seeker will enter track mode.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1000.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1000 **SIGNAL NAME:** P4M3 MSL STARE TRACK CMD
MEMORY LOCATION: 002065
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter stare mode. If proper laser code is detected in seeker FOV, seeker will enter track mode.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 2, 3, 6, or 7, refer to failure symptom index and next failure symptom paragraph.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1001 **SIGNAL NAME:** P4M3 MSL CORRELATE
MEMORY LOCATION: 001430
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates laser has detected a laser beam whose laser code agrees with internal stored code.
REMARKS: From ECSP to RHE.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1002.
FAIL: Location of fault: replace right outboard launcher (TM 9–1425–475–30–2).

8–1002 **SIGNAL NAME:** P4M3 MSL CORRELATE
MEMORY LOCATION: 002046
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates laser has detected a laser beam whose laser code agrees with internal stored code.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1003.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1003 **SIGNAL NAME:** P4M3 MSL TRACK
MEMORY LOCATION: 001430
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker has entered track mode. The laser seeker can enter track mode whenever a proper laser beam is detected in seeker FOV for any mode except cage.
REMARKS: From ECSP to RHE.
PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1004.
FAIL: Location of fault: replace right outboard launcher (TM 9–1425–475–30–2).

8–1004 **SIGNAL NAME:** P4M3 MSL TRACK
MEMORY LOCATION: 002046
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker has entered track mode. The laser seeker can enter track mode whenever a proper laser beam is detected in seeker FOV for any mode except cage.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1153.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1005 **SIGNAL NAME:** P4M3 MSL SKR CAGE CMD
MEMORY LOCATION: 001303
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile to enter cage mode.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–1006.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1006 **SIGNAL NAME:** P4M3 MSL SKR CAGE CMD
MEMORY LOCATION: 002065
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile to enter cage mode.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–1007.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–1007 **SIGNAL NAME:** P4M3 MSL SKR CAGE
MEMORY LOCATION: 001430
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker is in cage mode. The seeker cannot track in cage position.
REMARKS: From ECSP to RHE.
PASS: If third digit on HOD is 0, 2, 4, or 6, go to paragraph 8–1008.
FAIL: Location of fault: replace right outboard launcher (TM 9–1425–475–30–2).

8–1008 **SIGNAL NAME:** P4M3 MSL SKR CAGE
MEMORY LOCATION: 002046
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker is in cage mode. The seeker cannot track in cage position.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If third digit on HOD is 0, 2, 4, or 6, go to paragraph 8–1011.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–1009 **SIGNAL NAME:** P4M3 MSL DEICE #2 CMD
MEMORY LOCATION: 001307
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Issues deicing squib fire command to selected missile.
REMARKS: From RHE to ECSP.
PASS: If sixth digit on HOD is 1, go to paragraph 8–1010.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–1010 SIGNAL NAME: P4M3 MSL DEICE #2 CMD
　　　　MEMORY LOCATION: 002071
　　　　MEMORY DATA BIT(S):   4   (BINARY)
　　　　CONDITION: (None)
　　　　SIGNAL FUNCTION: Issues deicing squib fire command to selected missile.
　　　　REMARKS: From launcher through right outboard MRTU Type II to FCC.
　　　　PASS: If sixth digit on HOD is 1, go to paragraph 8–1118.
　　　　FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1011 SIGNAL NAME: P4M3 MSL BIT CONTROL
　　　　MEMORY LOCATION: 001307
　　　　MEMORY DATA BIT(S):   6–9   (HEX)
　　　　CONDITION: (None)
　　　　SIGNAL FUNCTION: Commands BIT on autopilot.
　　　　REMARKS: From RHE to ECSP.
　　　　PASS: If fifth digit displayed on HOD is 0, 1, or 2, and the fourth digit displayed on HOD is 2, 3, 4, 5, 6, or 7 go to paragraph 8–1012
　　　　FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1012 SIGNAL NAME: P4M3 MSL BIT CONTROL
　　　　MEMORY LOCATION: 002071
　　　　MEMORY DATA BIT(S):   6–9   (HEX)
　　　　CONDITION: (None)
　　　　SIGNAL FUNCTION: Commands BIT on autopilot.
　　　　REMARKS: From launcher through right inboard MRTU Type II to FCC.
　　　　PASS: Location of fault if fifth digit displayed on HOD is 0, 1, or 2, and the fourth digit displayed on HOD is 2, 3, 4, 5, 6, or 7: Replace right outboard launcher missile 3 (TM 9–1427–475–20).
　　　　FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1013 SIGNAL NAME: P4M3 MSL INDIRECT FIRE LO
　　　　MEMORY LOCATION: 001307
　　　　MEMORY DATA BIT(S):   10   (BINARY)
　　　　CONDITION: (None)
　　　　SIGNAL FUNCTION: Commands low flight profile for LOAL operation.
　　　　REMARKS: From RHE to ECSP.
　　　　PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1014.
　　　　FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1014 SIGNAL NAME: P4M3 MSL INDIRECT FIRE LO
MEMORY LOCATION: 002071
MEMORY DATA BIT(S): 10   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands low flight profile for LOAL operation.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1108.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
    MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
    (TM 9–1427–475–20).

8–1015 SIGNAL NAME: P4M3 MSL INDIRECT FIRE HI
MEMORY LOCATION: 001307
MEMORY DATA BIT(S): 11   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands high flight profile for LOAL operation.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1016.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
    (TM 9–1427–475–20).

8–1016 SIGNAL NAME: P4M3 MSL INDIRECT FIRE HI
MEMORY LOCATION: 002071
MEMORY DATA BIT(S): 11   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands high flight profile for LOAL operation.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1108.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
    MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
    (TM 9–1427–475–20).

8–1017 SIGNAL NAME: P4M3 MSL RF CODE ACCEPT COMMAND
MEMORY LOCATION: 001307
MEMORY DATA BIT(S): 13   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to accept RF code data from analog command lines
        3 and 4. Commands ECSP to hook up analog commands 3 and 4 to selected
        missile.
REMARKS: From RHE to ECSP.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1018.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
    (TM 9–1427–475–20).

8–1018 **SIGNAL NAME:** P4M3 MSL RF CODE ACCEPT COMMAND
 MEMORY LOCATION: 002071
 MEMORY DATA BIT(S): 13 (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Commands missile seeker to accept RF code data from analog command lines 3 and 4. Commands ECSP to hook up analog commands 3 and 4 to selected missile.
 REMARKS: From launcher through right outboard MRTU Type II to FCC.
 PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1019.
 FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1019 **SIGNAL NAME:** P4M3 MSL LASER CODE ACCEPT COMMAND
 MEMORY LOCATION: 001307
 MEMORY DATA BIT(S): 14 (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Commands laser code information received from RHE by launcher on coax A and B to be relayed to identified missile.
 REMARKS: From RHE to ECSP.
 PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1020.
 FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1020 **SIGNAL NAME:** P4M3 MSL LASER CODE ACCEPT COMMAND
 MEMORY LOCATION: 002071
 MEMORY DATA BIT(S): 14 (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Commands laser code information received from RHE by launcher on coax A and B to be relayed to identified missile.
 REMARKS: From launcher through right outboard MRTU Type II to FCC.
 PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1106.
 FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1021 **SIGNAL NAME:** P4M3 MSL COAX B CONNECT
 MEMORY LOCATION: 001311
 MEMORY DATA BIT(S): 17 (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Commands launcher to connect coax B to indicated missile.
 REMARKS: From RHE to ECSP.
 PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1022.
 FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1022 SIGNAL NAME: P4M3 MSL COAX B CONNECT
MEMORY LOCATION: 002071
MEMORY DATA BIT(S):   17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax B to indicated missile.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1023.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1023 SIGNAL NAME: P4M3 MSL COAX A CONNECT
MEMORY LOCATION: 001307
MEMORY DATA BIT(S):   18   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax A to indicated missile.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1024.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1024 SIGNAL NAME: P4M3 MSL COAX A CONNECT
MEMORY LOCATION: 002071
MEMORY DATA BIT(S):   18   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax A to indicated missile.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1106.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1025 SIGNAL NAME: 4P4M3 MSL SKR LAUNCH PREPARE COMMAND (ACY)
            P4M3 SKR LNCH CMD (ACZ)
MEMORY LOCATION: 001307
MEMORY DATA BIT(S):   19   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Prepares missile for free flight operation.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–1026.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1026 SIGNAL NAME: P4M3 MSL SKR LAUNCH PREPARE COMMAND (ACY)
            P4M3 SKR LNCH CMD (ACZ)
MEMORY LOCATION: 002071
MEMORY DATA BIT(S):   19   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Prepares missile for free flight operation.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–1126.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1027   SIGNAL NAME: P4M4 BIT PERFORMED
MEMORY LOCATION: 001350
MEMORY DATA BIT(S):   4   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to FCC that BIT has been performed.
REMARKS: From RHE to FCC.
PASS: If sixth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1028.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–1028   SIGNAL NAME: P4M4 BIT STATUS (ACY) P4M4 DISPLAY STATUS (ACZ)
MEMORY LOCATION: 001360
MEMORY DATA BIT(S):   4–7   (HEX)
CONDITION: If sixth digit displayed on HOD is 0 and fifth digit displayed
                        on HOD is 0=NO MSL
                        If sixth digit displayed on HOD is 0 and fifth digit displayed
                        on HOD is 1=SELECTED
                        If sixth digit displayed on HOD is 0 and fifth digit displayed
                        on HOD is 2=READY
                        If sixth digit displayed on HOD is 0 and fifth digit displayed
                        on HOD is 3=TRACKING
                        If sixth digit displayed on HOD is 0 and fifth digit displayed
                        on HOD is 4=BIT NO GO
                        If sixth digit displayed on HOD is 0 and fifth digit displayed
                        on HOD is 5=FAILED
                        If sixth digit displayed on HOD is 0 and fifth digit displayed
                        on HOD is 7=BATTERY NO GO
                        If sixth digit displayed on HOD is 1 and fifth digit displayed
                        on HOD is 0=UNLATCHED
                        If sixth digit displayed on HOD is 1 and fifth digit displayed
                        on HOD is 1=MRTU NO GO
                        If sixth digit displayed on HOD is 1 and fifth digit displayed
                        on HOD is 4=CODED
                        If sixth digit displayed on HOD is 1 and fifth digit displayed
                        on HOD is 7=CAGED
SIGNAL FUNCTION: Provides missile status display for operator.
REMARKS: From RHE to FCC for display.
PASS: If CONDITION corresponds to selected message, go to failure symptom index and next failure
                symptom paragraph.
FAIL: Location of fault: RHE, wiring from RHE to right outboard launcher, right outboard launcher.
                Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1029   SIGNAL NAME: P4M4 UNLATCH INDICATE
MEMORY LOCATION: 001433
MEMORY DATA BIT(S):   15   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to RHE missile is unlatched.
REMARKS: From launcher to RHE.
PASS: If second digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 8–1030.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to RHE, RHE.
                Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1030 SIGNAL NAME: P4M4 UNLATCH INDICATE
MEMORY LOCATION: 002051
MEMORY DATA BIT(S): 15   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to operator when a missile is unlatched.
REMARKS: From launcher through right outboard MRTU Type II to FCC for display.
PASS: If second digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 8–1031.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–1031 SIGNAL NAME: P4M4 UNLATCH INDICATE
MEMORY LOCATION: 002074
MEMORY DATA BIT(S): 15   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to operator when a missile is unlatched.
REMARKS: From FCC through right outboard MRTU Type II to launcher.
PASS: If second digit displayed on HOD is 0, 1, 4, or 5, refer to failure symptom index next failure
symptom.
FAIL: Location of fault: right outboard MRTU Type II, wiring from right outboard MRTU Type II to FCC,
FCC. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

8–1032 SIGNAL NAME: P4M4 UPPER LOWER DISPLAY STATUS (ACY) P4M4 PRIORITY IND (ACZ)   ▌
MEMORY LOCATION: 001360
MEMORY DATA BIT(S): 8   (BINARY)
CONDITION: If the second digit displayed on HOD is 0, 2, 4, or 6=UPPER
If the second digit displayed on HOD is 1, 3, 5, or 7=LOWER
SIGNAL FUNCTION: Indicates to operator when a selected missile has been assigned to upper or
lower channel.
REMARKS: From RHE to FCC for display.
PASS: If CONDITION corresponds to selected channel, go to paragraph 8–1033.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–1033 SIGNAL NAME: P4M4 TYPE STATUS DISPLAY (ACY) P4M4 TYPE (ACZ)   ▌
MEMORY LOCATION: 001360
MEMORY DATA BIT(S): 17–19   (OCTAL)
CONDITION: If the first digit displayed on HOD is 0=NONE
If the first digit displayed on HOD is 1=TACTICAL LASER
If the first digit displayed on HOD is 4=UNIDENTIFIED
If the first digit displayed on HOD is 5=TRAINING LASER
SIGNAL FUNCTION: Provides type of missile data for display to operator.
REMARKS: From RHE to FCC for display.
PASS: If CONDITION on HOD corresponds to installed type of missiles, go to paragraph 8–1034.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

■ **8–1034 SIGNAL NAME:** P4M4 TYPE (ACY) P4M4 MSL TYPE (ACZ)
MEMORY LOCATION: 001427
MEMORY DATA BIT(S): 7–8 (BINARY)
CONDITION: If fifth digit displayed on HOD is 0, and fourth digit displayed on HOD is 0, 1, 2, or 3=TRAINING
If fifth digit displayed on HOD is 1, and fourth digit displayed on HOD is 0, 1, 2, or 3=TACTICAL
If fifth digit displayed on HOD is 1, and fourth digit displayed on HOD is 4, 5, 6, or 7=NONE
SIGNAL FUNCTION: Indicates a tactical, training or no missile at location.
REMARKS: From ECSP to RHE.
PASS: If CONDITION corresponds to installed type of missiles, go to paragraph 8–1035.
FAIL: Location of fault: replace right outboard launcher (TM 9–1425–475–30–2).

■ **8–1035 SIGNAL NAME:** P4M4 TYPE (ACY) P4M4 MSL TYPE (ACZ)
MEMORY LOCATION: 002045
MEMORY DATA BIT(S): 7–8 (BINARY)
CONDITION: If fourth digit displayed on HOD is 0, 1, 2, or 3=TRAINING
If fifth digit displayed on HOD 1, 3, 5, or 7=TACTICAL
If fifth digit displayed on HOD 1, 3, 5, or 7 and fourth digit displayed on HOD is 0, 1, 2, or 3=NONE
SIGNAL FUNCTION: Indicates a tactical, training or no missile at location.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If CONDITION corresponds to installed type of missiles, refer to failure symptom index and next failure symptom paragraph.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1036 SIGNAL NAME: P4M4 MSL DEICE #1 CMD
MEMORY LOCATION: 001302
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Sends command to launcher ECSP to arm deicing squib.
REMARKS: From RHE to ECSP.
PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1037.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1037 SIGNAL NAME: P4M4 MSL DEICE #1 CMD
MEMORY LOCATION: 002064
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Sends command to launcher ECSP to arm deicing squib.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1068.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1038 **SIGNAL NAME:** P4M4 MSL SKR INPUT SLAVE (ACY) P4M4 SKR SLV SEL (ACZ)
MEMORY LOCATION: 001302
MEMORY DATA BIT(S): 6–8 (OCTAL)
CONDITION: If the fifth digit is 0 or 4 and the fourth digit
is 0 or 2=ZERO EL ZERO AZ
If the fifth digit is 0 or 4 and the fourth digit
is 4 or 6=REMEL REMAZ
If the fifth digit is 1 or 5 and the fourth digit
is 0 or 2=AUTOEL AUTOAZ
If the fifth digit is 1 or 5 and the fourth digit
is 4 or 6=REMEL REMAZ +BIAS/2
If the fifth digit is 2 or 6 and the fourth digit
is 0 or 2=REMEL REMAZ +BIAS
If the fifth digit is 2 or 6 and the fourth digit
is 4 or 6=REMEL REMAZ – BIAS/2
If the fifth digit is 3 or 7 and the fourth digit
is 0 or 2=REMEL REMAZ – BIAS
If the fifth digit is 3 or 7 and the fourth digit
is 4 or 6=AUTOEL ZERO AZ
SIGNAL FUNCTION: Selects pitch and yaw slave commands to be applied to missile.
REMARKS: From RHE to ECSP.
PASS: If CONDITION corresponds to selected seeker input, go to paragraph 8–1039.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–1039 **SIGNAL NAME:** P4M4 MSL SKR INPUT SLAVE (ACY) P4M4 SKR SLV SEL (ACZ)
MEMORY LOCATION: 002064
MEMORY DATA BIT(S): 6–8 (OCTAL)
CONDITION: If the fifth digit is 0 or 4 and the fourth digit
is 0 or 2=ZERO EL ZERO AZ
If the fifth digit is 0 or 4 and the fourth digit
is 4 or 6=REMEL REMAZ
If the fifth digit is 1 or 5 and the fourth digit
is 0 or 2=AUTOEL AUTOAZ
If the fifth digit is 1 or 5 and the fourth digit
is 4 or 6=REMEL REMAZ +BIAS/2
If the fifth digit is 2 or 6 and the fourth digit
is 0 or 2=REMEL REMAZ +BIAS
If the fifth digit is 2 or 6 and the fourth digit
is 4 or 6=REMEL REMAZ – BIAS/2
If the fifth digit is 3 or 7 and the fourth digit
is 0 or 2=REMEL REMAZ – BIAS
If the fifth digit is 3 or 7 and the fourth digit
is 4 or 6=AUTOEL ZERO AZ
SIGNAL FUNCTION: Selects pitch and yaw slave commands to be applied to missile.
REMARKS: From right outboard launcher through right outboard MRTU Type II to FCC.
PASS: If CONDITION corresponds to selected seeker input, refer to failure symptom index and next
failure symptom paragraph.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–1040 **SIGNAL NAME:** P4M4 MSL AUTO PILOT POWER CONTROL (ACY)
P4M4 AUTOPLT PWR (ACZ)
MEMORY LOCATION: 001302
MEMORY DATA BIT(S): 9 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of auto pilot power to missile.
REMARKS: From RHE to ECSP.
PASS: If fourth digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1041.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–1041 **SIGNAL NAME:** P4M4 MSL AUTO PILOT POWER CONTROL (ACY)
P4M4 AUTOPLT PWR (ACZ)
MEMORY LOCATION: 002064
MEMORY DATA BIT(S): 9 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls application of auto pilot power to missile.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If fourth digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1042.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–1042 **SIGNAL NAME:** P4M4 MSL AUTO PILOT POWER (ACY) P4M4 A/P PWR OK (ACZ)
MEMORY LOCATION: 001427
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Specifies auto pilot power is above minimum value (+18 VDC).
REMARKS: From ECSP to RHE.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1043.
FAIL: Location of fault: replace right outboard launcher (TM 9–1425–475–30–2).

8–1043 **SIGNAL NAME:** P4M4 MSL AUTO PILOT POWER (ACY) P4M4 A/P PWR OK (ACZ)
MEMORY LOCATION: 002064
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Specifies auto pilot power is above minimum value (+18 VDC).
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, refer to failure symptom index and next failure symptom
paragraph.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–1044 SIGNAL NAME: P4M4 MSL TGT POLARITY CONTROL
      MEMORY LOCATION: 001302
      MEMORY DATA BIT(S): 10–11 (BINARY)
      CONDITION: If the fourth digit is 0, 2, 4, or 6 and the third digit is 0, 1, 2, 3=BLACK
            If the fourth digit is 0, 2, 4, or 6 and the third digit is 4, 5, 6, 7=AUTO
            If the fourth digit is 1, 3, 5, or 7 and the third digit is 0, 1, 2, 3=WHITE
      SIGNAL FUNCTION: Directs missile seeker to track a black target on a white background, a white
            target on a black background or automatic contrast.
      REMARKS: From RHE to ECSP.
      PASS: If third digit on HOD corresponds to proper polarity, go to paragraph 8–1045.
      FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–1045 SIGNAL NAME: P4M4 MSL TGT POLARITY CONTROL
      MEMORY LOCATION: 002064
      MEMORY DATA BIT(S): 10–11 (BINARY)
      CONDITION: If the fourth digit is 0, 2, 4, or 6 and the third digit is 0, 1, 2, 3=BLACK
            If the fourth digit is 0, 2, 4, or 6 and the third digit is 4, 5, 6, 7=AUTO
            If the fourth digit is 1, 3, 5, or 7 and the third digit is 0, 1, 2, 3=WHITE
      SIGNAL FUNCTION: Directs missile seeker to track a black target on a white background, a white
            target on a black background or automatic contrast.
      REMARKS: From launcher through right outboard MRTU Type II to FCC.
      PASS: If third digit on HOD corresponds to proper polarity, refer to failure symptom index and next
           failure symptom paragraph.
      FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
          MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–1046 SIGNAL NAME: P4M4 MSL BIT CMD
      MEMORY LOCATION: 001302
      MEMORY DATA BIT(S): 12 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Controls launcher BIT.
      REMARKS: From RHE to ECSP.
      PASS: If third digit on HOD is 0, 1, 4, or 5, go to paragraph 8–1047.
      FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–1047 SIGNAL NAME: P4M4 MSL BIT CMD
      MEMORY LOCATION: 002064
      MEMORY DATA BIT(S): 12 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Controls launcher BIT.
      REMARKS: From launcher through right outboard MRTU Type II to FCC.
      PASS: If third digit on HOD is 0, 1, 4, or 5, go to paragraph 8–1048.
      FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
          MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–1048   SIGNAL NAME: P4M4 MSL SKR POWER CONTROL (ACY) P4M4 SKR PWR OK (ACZ)
          MEMORY LOCATION: 001302
          MEMORY DATA BIT(S):   13   (BINARY)
          CONDITION: (None)
          SIGNAL FUNCTION: Controls application of seeker power.
          REMARKS: From RHE to ECSP.
          PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1049.
          FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–1049   SIGNAL NAME: P4M4 MSL SKR POWER CONTROL (ACY) P4M4 SKR PWR OK (ACZ)
          MEMORY LOCATION: 002064
          MEMORY DATA BIT(S):   13   (BINARY)
          CONDITION: (None)
          SIGNAL FUNCTION: Controls application of seeker power.
          REMARKS: From launcher through right outboard MRTU Type II to FCC.
          PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1050.
          FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
          MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–1050   SIGNAL NAME: P4M4 MSL SKR POWER
          MEMORY LOCATION: 001427
          MEMORY DATA BIT(S):   12   (BINARY)
          CONDITION: (None)
          SIGNAL FUNCTION: Indicates status of seeker power (+28 VDC).
          REMARKS: From ECSP to RHE.
          PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1051.
          FAIL: Location of fault: replace right outboard launcher (TM 9–1425–475–30–2).

8–1051   SIGNAL NAME: P4M4 MSL SEEKER POWER (ACY) P4M4 SKR PWR OK (ACZ)
          MEMORY LOCATION: 002045
          MEMORY DATA BIT(S):   12   (BINARY)
          CONDITION: (None)
          SIGNAL FUNCTION: Indicates status of seeker power (+28 VDC).
          REMARKS: From launcher through right outboard MRTU Type II to FCC.
          PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1054.
          FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
          MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–1052   SIGNAL NAME: P4M4 CCM ACTIVATE CMD
          MEMORY LOCATION: 001302
          MEMORY DATA BIT(S):   14   (BINARY)
          CONDITION: (None)
          SIGNAL FUNCTION: Commands missile seeker to enter CCM mode.
          REMARKS: From RHE to ECSP.
          PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1053.
          FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–1053 **SIGNAL NAME:** P4M4 CCM ACTIVATE CMD
MEMORY LOCATION: 002064
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to enter CCM mode.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1123.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1054 **SIGNAL NAME:** P4M4 MSL SCAN SEARCH CMD
MEMORY LOCATION: 001302
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter target acquisition mode and to enter lock–on when target is acquired.
REMARKS: From RHE to ECSP.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1055.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1055 **SIGNAL NAME:** P4M4 MSL SCAN SEARCH CMD
MEMORY LOCATION: 002064
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter target acquisition mode and to enter lock–on when target is acquired.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1058.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1056 **SIGNAL NAME:** P4M4 MSL SEEKER SLAVE CMD
MEMORY LOCATION: 001302
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter slave mode.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1057.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1057   SIGNAL NAME: P4M4 MSL SEEKER SLAVE CMD
MEMORY LOCATION: 002064
MEMORY DATA BIT(S):   17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter slave mode.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1064.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1058   SIGNAL NAME: P4M4 MSL STARE TRACK CMD
MEMORY LOCATION: 001302
MEMORY DATA BIT(S):   18   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter stare mode. If proper laser code is detected in seeker FOV, seeker will enter track mode.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1059.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1059   SIGNAL NAME: P4M4 MSL STARE TRACK CMD
MEMORY LOCATION: 002064
MEMORY DATA BIT(S):   18   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser seeker to enter stare mode. If proper laser code is detected in seeker FOV, seeker will enter track mode.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 2, 3, 6, or 7, refer to failure symptom index and next failure symptom paragraph.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1060   SIGNAL NAME: P4M4 MSL CORRELATE
MEMORY LOCATION: 001427
MEMORY DATA BIT(S):   16   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates laser has detected a laser beam whose laser code agrees with internal stored code.
REMARKS: From ECSP to RHE.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1061.
FAIL: Location of fault: replace right outboard launcher (TM 9–1425–475–30–2).

8–1061 SIGNAL NAME: P4M4 MSL CORRELATE
 MEMORY LOCATION: 002045
 MEMORY DATA BIT(S): 16   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Indicates laser has detected a laser beam whose laser code agrees with internal stored code.
 REMARKS: From launcher through right outboard MRTU Type II to FCC.
 PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1062.
 FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1062 SIGNAL NAME: P4M4 MSL TRACK
 MEMORY LOCATION: 001427
 MEMORY DATA BIT(S): 15   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Indicates seeker has entered track mode. The laser seeker can enter track mode whenever a proper laser beam is detected in seeker FOV for any mode except cage.
 REMARKS: From ECSP to RHE.
 PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1063.
 FAIL: Location of fault: replace right outboard launcher (TM 9–1425–475–30–2).

8–1063 SIGNAL NAME: P4M4 MSL TRACK
 MEMORY LOCATION: 002045
 MEMORY DATA BIT(S): 15   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Indicates seeker has entered track mode. The laser seeker can enter track mode whenever a proper laser beam is detected in seeker FOV for any mode except cage.
 REMARKS: From launcher through right outboard MRTU Type II to FCC.
 PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1153.
 FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1064 SIGNAL NAME: P4M4 MSL SKR CAGE CMD
 MEMORY LOCATION: 001302
 MEMORY DATA BIT(S): 19   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Commands missile to enter cage mode.
 REMARKS: From RHE to ECSP.
 PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–1065.
 FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1065 **SIGNAL NAME:** P4M4 MSL SKR CAGE CMD
MEMORY LOCATION: 002064
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile to enter cage mode.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–1066.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1066 **SIGNAL NAME:** P4M4 MSL SKR CAGE
MEMORY LOCATION: 001427
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker is in cage mode. The seeker cannot track in cage position.
REMARKS: From ECSP to RHE.
PASS: If third digit on HOD is 0, 2, 4, or 6, go to paragraph 8–1067.
FAIL: Location of fault: replace right outboard launcher (TM 9–1425–475–30–2).

8–1067 **SIGNAL NAME:** P4M4 MSL SKR CAGE
MEMORY LOCATION: 002045
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates seeker is in cage mode. The seeker cannot track in cage position.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If third digit on HOD is 0, 2, 4, or 6, go to paragraph 8–1070.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1068 **SIGNAL NAME:** P4M4 MSL DEICE #2 CMD
MEMORY LOCATION: 001306
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Issues deicing squib fire command to selected missile.
REMARKS: From RHE to ECSP.
PASS: If sixth digit on HOD is 1, go to paragraph 8–1069.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1069 SIGNAL NAME: P4M4 MSL DEICE #2 CMD
MEMORY LOCATION: 002070
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Issues deicing squib fire command to selected missile.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If sixth digit on HOD is 1, go to paragraph 8–1118.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1070 SIGNAL NAME: P4M4 MSL BIT CONTROL
MEMORY LOCATION: 001306
MEMORY DATA BIT(S): 6–9 (HEX)
CONDITION: (None)
SIGNAL FUNCTION: Commands BIT on autopilot.
REMARKS: From RHE to ECSP.
PASS: If fifth digit displayed on HOD is 0, 1, or 2, and the fourth digit displayed on HOD is 2, 3, 4, 5, 6, or 7 go to paragraph 8–1071.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1071 SIGNAL NAME: P4M4 MSL BIT CONTROL
MEMORY LOCATION: 002070
MEMORY DATA BIT(S): 6–9 (HEX)
CONDITION: (None)
SIGNAL FUNCTION: Commands BIT on autopilot.
REMARKS: From launcher through right inboard MRTU Type II to FCC.
PASS: Location of fault if fifth digit displayed on HOD is 0, 1, or 2, and the fourth digit displayed on HOD is 2, 3, 4, 5, 6, or 7: Replace right outboard launcher missile 4 (TM 9–1427–475–20).
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1072 SIGNAL NAME: P4M4 MSL INDIRECT FIRE LO
MEMORY LOCATION: 001306
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands low flight profile for LOAL operation.
REMARKS: From RHE to ECSP.
PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1073.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1073 **SIGNAL NAME:** P4M4 MSL INDIRECT FIRE LO
      MEMORY LOCATION: 002070
      MEMORY DATA BIT(S): 10 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Commands low flight profile for LOAL operation.
      REMARKS: From launcher through right outboard MRTU Type II to FCC.
      PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1108.
      FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
          MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–1074 **SIGNAL NAME:** P4M4 MSL INDIRECT FIRE HI
      MEMORY LOCATION: 001306
      MEMORY DATA BIT(S): 11 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Commands high flight profile for LOAL operation.
      REMARKS: From RHE to ECSP.
      PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1075.
      FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–1075 **SIGNAL NAME:** P4M4 MSL INDIRECT FIRE HI
      MEMORY LOCATION: 002070
      MEMORY DATA BIT(S): 11 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Commands high flight profile for LOAL operation.
      REMARKS: From launcher through right inboard MRTU Type II to FCC.
      PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1108.
      FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
          MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–1076 **SIGNAL NAME:** P4M4 MSL RF CODE ACCEPT COMMAND
      MEMORY LOCATION: 001306
      MEMORY DATA BIT(S): 13 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Commands missile seeker to accept RF code data from analog command lines
          3 and 4. Commands ECSP to hook up analog commands 3 and 4 to selected
          missile.
      REMARKS: From RHE to ECSP.
      PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1077.
      FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
          (TM 9–1427–475–20).

8–1077 **SIGNAL NAME:** P4M4 MSL RF CODE ACCEPT COMMAND
MEMORY LOCATION: 002070
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands missile seeker to accept RF code data from analog command lines 3 and 4. Commands ECSP to hook up analog commands 3 and 4 to selected missile.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1078.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1078 **SIGNAL NAME:** P4M4 MSL LASER CODE ACCEPT COMMAND
MEMORY LOCATION: 001306
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser code information received from RHE by launcher on coax A and B to be relayed to identified missile.
REMARKS: From RHE to ECSP.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1079.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1079 **SIGNAL NAME:** P4M4 MSL LASER CODE ACCEPT COMMAND
MEMORY LOCATION: 002070
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands laser code information received from RHE by launcher on coax A and B to be relayed to identified missile.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1106.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1080 **SIGNAL NAME:** P4M4 MSL COAX B CONNECT
MEMORY LOCATION: 001310
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax B to indicated missile.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1081.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1081   SIGNAL NAME: P4M4 MSL COAX B CONNECT
MEMORY LOCATION: 002070
MEMORY DATA BIT(S):   17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax B to indicated missile.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1082.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–1082   SIGNAL NAME: P4M4 MSL COAX A CONNECT
MEMORY LOCATION: 001306
MEMORY DATA BIT(S):   18   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax A to indicated missile.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1083.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–1083   SIGNAL NAME: P4M4 MSL COAX A CONNECT
MEMORY LOCATION: 002070
MEMORY DATA BIT(S):   18   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands launcher to connect coax A to indicated missile.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1106.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–1084   SIGNAL NAME: 4P4M4 MSL SKR LAUNCH PREPARE COMMAND (ACY)
                                        P4M4 SKR LNCH CMD (ACZ)
MEMORY LOCATION: 001306
MEMORY DATA BIT(S):   19   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Prepares missile for free flight operation.
REMARKS: From RHE to ECSP.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–1085.
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–1085   SIGNAL NAME: P4M4 MSL SKR LAUNCH PREPARE COMMAND (ACY)
                                        P4M4 SKR LNCH CMD (ACZ)
MEMORY LOCATION: 002070
MEMORY DATA BIT(S):   19   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Prepares missile for free flight operation.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 8–1126.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–1086   SIGNAL NAME: LCHR4 CONTROL MSL AUTO AZ SIGNAL SELECT (ACY)
                            P4 AUTO AZSIG (ACZ)
MEMORY LOCATION: 001312
MEMORY DATA BIT(S): 6–9   (HEX)
CONDITION: If the fourth digit displayed on HOD is 0=M1AZ
                 If the fourth digit displayed on HOD is 1=M2AZ
                 If the fourth digit displayed on HOD is 2=M3AZ
                 If the fourth digit displayed on HOD is 3=M4AZ
                 If the fourth digit displayed on HOD is 4=M1BIT4
                 If the fourth digit displayed on HOD is 5=M2BIT4
                 If the fourth digit displayed on HOD is 6=M3BIT4
                 If the fourth digit displayed on HOD is 7=M4BIT4
                 If the fifth digit displayed on HOD is 1, 3, 5, or 7 and the fourth digit displayed on HOD
                 is 0=M1ID
                 If the fifth digit displayed on HOD is 1, 3, 5, or 7 and the fourth digit displayed on HOD
                 is 1=M2ID
                 If the fifth digit displayed on HOD is 1, 3, 5, or 7 and the fourth digit displayed on HOD
                 is 2=M3ID
                 If the fifth digit displayed on HOD is 1, 3, 5, or 7 and the fourth digit displayed on HOD
                 is 3=M4ID
SIGNAL FUNCTION: Selects one of four missiles to be monitored for yaw gimbal angle (AZ), BIT 4
                       or missile identification on analog reply number four.
REMARKS: From RHE to ECSP to missile.
PASS: If CONDITION corresponds to selected missile, go to paragraph 8–1087.
FAIL: Location of fault: replace RHE, wiring from RHE to ECSP, ECSP, wiring from ECSP to missile,
            missile. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1087   SIGNAL NAME: LCHR4 AUTO SEEKER AZ (ACY) P4 2ND TRKG MSLAZ (ACZ)
MEMORY LOCATION: 001513
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when
                 the seeker is left and positive (sixth digit=0) when seeker is right.
SIGNAL FUNCTION: Provides selected analog signal to RHE.
REMARKS: From launcher to RHE.
PASS: If CONDITION corresponds to correct response, go to paragraph 8–1088.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to RHE, RHE.
            Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1088   SIGNAL NAME: LCHR4 AUTO SEEKER AZ (ACY) P4 2ND TRKG MSLAZ (ACZ)
MEMORY LOCATION: 002037
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when
                 the seeker is left and positive (sixth digit=0) when seeker is right.
SIGNAL FUNCTION: Provides selected analog signal to FCC.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If CONDITION corresponds to correct response, go to paragraph 8–1089.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
            MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
            (TM 9–1427–475–20).

8–1089 SIGNAL NAME: LCHR4 AUTO SEEKER AZ (ACY) P4 RMT SKREL CMD (ACZ)
MEMORY LOCATION: 002053
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when the seeker is left and positive (sixth digit=0) when seeker is right.
SIGNAL FUNCTION: Selected missile analog signal from FCC.
REMARKS: From FCC through right outboard MRTU Type II to launcher.
PASS: If CONDITION corresponds to correct response, go to paragraph 8–1090.
FAIL: Location of fault: right outboard MRTU Type II, wiring from right outboard MRTU Type II to FCC. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

8–1090 SIGNAL NAME: LCHR4 CONTROL MSL AUTO EL SIGNAL SELECT (ACY)
                             P4 2ND TRKG MSLEL (ACZ)
MEMORY LOCATION: 001312
MEMORY DATA BIT(S): 10–13   (HEX)
CONDITION: If third digit displayed on HOD is 0=M1EL
                     If third digit displayed on HOD is 1=M2EL
                     If third digit displayed on HOD is 2=M3EL
                     If third digit displayed on HOD is 3=M4EL
                     If third digit displayed on HOD is 4=M1BIT3
                     If third digit displayed on HOD is 5=M2BIT3
                     If third digit displayed on HOD is 6=M3BIT3
                     If third digit displayed on HOD is 7=M4BIT3
                     If fourth digit displayed on HOD is 1, 3, 5, or 7 and third digit
                     displayed is 4=M1GCBIT
                     If fourth digit displayed on HOD is 1, 3, 5, or 7 and third digit
                     displayed is 5=M2GCBIT
                     If fourth digit displayed on HOD is 1, 3, 5, or 7 and third digit
                     displayed is 6=M3GCBIT
                     If fourth digit displayed on HOD is 1, 3, 5, or 7 and third digit
                     displayed is 7=M4GCBIT
SIGNAL FUNCTION: Selects one of four missiles to be monitored for pitch gimbal angle(EL), BIT 3 or missile BIT 3 response on analog reply number three.
REMARKS: From RHE to ECSP to missile.
PASS: If CONDITION corresponds to selected missile, go to paragraph 8–1091.
FAIL: Location of fault: replace RHE, wiring from RHE to ECSP, ECSP, wiring from ECSP to missile, missile. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1091 SIGNAL NAME: LCHR4 AUTO SEEKER EL (ACY) P4 2ND TRKG MSLAZ (ACZ)
MEMORY LOCATION: 001512
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when the seeker is down and positive (sixth digit=0) when seeker is up.
SIGNAL FUNCTION: Provides selected analog signal to RHE.
REMARKS: From launcher to RHE.
PASS: If CONDITION corresponds to correct response, go to paragraph 8–1092.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to RHE, RHE. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1092 SIGNAL NAME: LCHR4 AUTO SEEKER EL (ACY) P4 2ND TRKG MSLEL (ACZ)
MEMORY LOCATION: 002040
MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when
the seeker is down and positive (sixth digit=0) when seeker is up.
SIGNAL FUNCTION: Provides selected analog signal to FCC.
REMARKS: From launcher through right outboard MRTU Type II to FCC.
PASS: If CONDITION corresponds to correct response, go to paragraph 8–1093.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard
MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

8–1093 SIGNAL NAME: LCHR4 AUTO SEEKER EL (ACY) P4 AUTO SKREL CMD (ACZ)
MEMORY LOCATION: 002054
MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when
the seeker is down and positive (sixth digit=0) when seeker is up.
SIGNAL FUNCTION: Provides selected missile analog signal to launcher from FCC.
REMARKS: From FCC through right outboard MRTU Type II to launcher.
PASS: If CONDITION corresponds to correct response, go to paragraph 8–1094.
FAIL: Location of fault: right outboard MRTU Type II, wiring from right outboard MRTU Type II to FCC,
FCC. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

8–1094 SIGNAL NAME: LCHR4 CONTROL MSL REMOTE AZ SIGNAL SELECT (ACY)
                                    P4 RMT AZSIG CMD (ACZ)
MEMORY LOCATION: 001312
MEMORY DATA BIT(S):   14–16   (OCTAL)
CONDITION: If the second digit displayed on HOD is 0=M1AZ
                     If the second digit displayed on HOD is 1=M2AZ
                     If the second digit displayed on HOD is 2=M3AZ
                     If the second digit displayed on HOD is 3=M4AZ
                     If the second digit displayed on HOD is 4=M1BIT2
                     If the second digit displayed on HOD is 5=M2BIT2
                     If the second digit displayed on HOD is 6=M3BIT2
                     If the second digit displayed on HOD is 7=M4BIT2
SIGNAL FUNCTION: Selects one of four missiles to be monitored for yaw gimbal angle or BIT 2
                     response on analog reply number two.
REMARKS: From RHE to ECSP to missile.
PASS: If second digit on HOD corresponds to selected missile, go to paragraph 8–1095.
FAIL: Location of fault: replace RHE, wiring from RHE to ECSP, ECSP, wiring from ECSP to missile,
missile. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1095 SIGNAL NAME: LCHR4 REMOTE SEEKER AZ (ACY) P4 1ST TRKG MSLEL (ACZ)
MEMORY LOCATION: 001511
MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when
the seeker is left and positive (sixth digit=0) when seeker is right.
SIGNAL FUNCTION: Provides selected analog signal to RHE.
REMARKS: From launcher to RHE.
PASS: If CONDITION corresponds to correct response, go to paragraph 8–1096.
FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to RHE, RHE.
Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1096 SIGNAL NAME: LCHR4 REMOTE SEEKER AZ (ACY) P4 1ST TRKG MSLEL (ACZ)
 MEMORY LOCATION: 002041
 MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
 CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when the seeker is left and positive (sixth digit=0) when seeker is right.
 SIGNAL FUNCTION: Provides selected analog signal to FCC.
 REMARKS: From launcher through right outboard MRTU Type II to FCC.
 PASS: If CONDITION corresponds to correct response, go to paragraph 8–1097.
 FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1097 SIGNAL NAME: LCHR4 REMOTE SEEKER AZ (ACY) P4 RMT SKRAZ CMD (ACZ)
 MEMORY LOCATION: 002057
 MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
 CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when the seeker is left and positive (sixth digit=0) when seeker is right.
 SIGNAL FUNCTION: Provides selected missile analog signal to launcher from FCC.
 REMARKS: From FCC through right outboard MRTU Type II to launcher.
 PASS: If CONDITION corresponds to correct response, go to paragraph 8–1098.
 FAIL: Location of fault: right outboard MRTU Type II, wiring from right outboard MRTU Type II to FCC. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

8–1098 SIGNAL NAME: LCHR4 CONTROL MSL REMOTE EL SIGNAL SELECT (ACY)
                       P4 RMT ELSIG CMD (ACZ)
 MEMORY LOCATION: 001312
 MEMORY DATA BIT(S): 17–19   (OCTAL)
 CONDITION: If the first digit displayed on HOD is 0=M1EL
                 If the first digit displayed on HOD is 1=M2EL
                 If the first digit displayed on HOD is 2=M3EL
                 If the first digit displayed on HOD is 3=M4EL
                 If the first digit displayed on HOD is 4=M1BIT1
                 If the first digit displayed on HOD is 5=M2BIT1
                 If the first digit displayed on HOD is 6=M3BIT1
                 If the first digit displayed on HOD is 7=M4BIT1
 SIGNAL FUNCTION: Selects one of four missiles to be monitored for pitch gimbal angle or BIT 1 response on analog reply number one.
 REMARKS: From RHE to ECSP to missile.
 PASS: If first digit on HOD corresponds to selected missile, go to paragraph 8–1099.
 FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1099 SIGNAL NAME: LCHR4 REMOTE SEEKER EL (ACY) P4 MSL TRKG EL CMD (ACZ)
 MEMORY LOCATION: 001510
 MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
 CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when the seeker is down and positive (sixth digit=0) when seeker is up.
 SIGNAL FUNCTION: Provides selected analog signal to RHE
 REMARKS: From launcher to RHE.
 PASS: If CONDITION corresponds to correct response, go to paragraph 8–1100.
 FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to RHE, RHE. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1100 SIGNAL NAME: LCHR4 REMOTE SEEKER EL (ACY) P4 1ST TRKG MSLEL (ACZ) ■
       MEMORY LOCATION: 002042
       MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR) ■
       CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when the seeker is down and positive (sixth digit=0) when seeker is up.
       SIGNAL FUNCTION: Provides selected analog signal to FCC.
       REMARKS: From launcher through right outboard MRTU Type II to FCC.
       PASS: If CONDITION corresponds to correct response, go to paragraph 8–1101.
       FAIL: Location of fault: right outboard launcher, wiring from right outboard launcher to right outboard MRTU Type II, right outboard MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1101 SIGNAL NAME: LCHR4 REMOTE SEEKER EL (ACY) P4 RMT SKREL (ACZ) ■
       MEMORY LOCATION: 002060
       MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR) ■
       CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when the seeker is down and positive (sixth digit=0) when seeker is up.
       SIGNAL FUNCTION: Provides selected missile analog signal to launcher from FCC.
       REMARKS: From FCC through right outboard MRTU Type II to launcher.
       PASS: Location of fault if CONDITION is met: wiring from remote controlled circuit breaker (RCCB) to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).
       FAIL: Location of fault: right outboard MRTU Type II, wiring from right outboard MRTU Type II to FCC. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

8–1102 SIGNAL NAME: CPG MSL ARM
       MEMORY LOCATION: 001075
       MEMORY DATA BIT(S): 19   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Selects missile arming.
       REMARKS: From CPG FCP to RHE.
       PASS: If first digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 8–1103.
       FAIL: Location of fault: CPG FCP, wiring from CPG FCP to RHE. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1103 SIGNAL NAME: PILOT MSL ARM
       MEMORY LOCATION: 001120
       MEMORY DATA BIT(S): 16   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Selects missile arming.
       REMARKS: From pilot FCP to RHE.
       PASS: If second digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 8–1104.
       FAIL: Location of fault: pilot FCP, wiring from pilot FCP to RHE. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1104 SIGNAL NAME: MSL LAUNCHER ARM COMMAND (ACY) LCHR ARM IND (ACZ) ■
       MEMORY LOCATION: 001440
       MEMORY DATA BIT(S): 6   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Indicates to RHE when launchers are armed.
       REMARKS: From FCC to RHE.
       PASS: If fifth digit displayed on HOD is 2, 3, 6, or 7, go to paragraph 8–1105.
       FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–1105 SIGNAL NAME: MSL LAUNCHER POWER COMMAND (ACY) LCHR PWR IND (ACZ)
MEMORY LOCATION: 001440
MEMORY DATA BIT(S): 7 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to RHE launcher power status.
REMARKS: From FCC to RHE.
PASS: If fifth digit displayed on HOD is 1, 3, 5, or 7, replace FCC and test (TM 9–1427–475–20).
FAIL: Location of fault: RHE, wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1106 SIGNAL NAME: PRIORITY MSL INDICATE VALID
MEMORY LOCATION: 001341
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates correct selection of next missile to be fired.
REMARKS: From RHE to FCC.
PASS: If fifth digit displayed on HOD is 4, 5, 6, or 7, go to paragraph 8–1107.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–1107 SIGNAL NAME: PRIORITY MSL INDICATE
MEMORY LOCATION: 001341
MEMORY DATA BIT(S): 6–9 (HEX)
CONDITION: If the fourth digit displayed on HOD is 0=P1M1
If the fourth digit displayed on HOD is 1=P1M2
If the fourth digit displayed on HOD is 2=P1M3
If the fourth digit displayed on HOD is 3=P1M4
If the fourth digit displayed on HOD is 4=P2M1
If the fourth digit displayed on HOD is 5=P2M2
If the fourth digit displayed on HOD is 6=P2M3
If the fourth digit displayed on HOD is 7=P2M4
If the fifth digit displayed on HOD is 1 and fourth digit displayed on HOD is 0=P3M1
If the fifth digit displayed on HOD is 1 and fourth digit displayed on HOD is 1=P3M2
If the fifth digit displayed on HOD is 1 and fourth digit displayed on HOD is 2=P3M3
If the fifth digit displayed on HOD is 1 and fourth digit displayed on HOD is 3=P3M4
If the fifth digit displayed on HOD is 1 and fourth digit displayed on HOD is 4=P4M1
If the fifth digit displayed on HOD is 1 and fourth digit displayed on HOD is 5=P4M2
If the fifth digit displayed on HOD is 1 and fourth digit displayed on HOD is 6=P4M3
If the fifth digit displayed on HOD is 1 and fourth digit displayed on HOD is 7=P4M4
SIGNAL FUNCTION: Indicates selection of next missile to be fired.
REMARKS: From RHE to FCC.
PASS: If CONDITION corresponds to selected missile, go to paragraph 8–1108.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–1108 SIGNAL NAME: CPG LOAL SW
MEMORY LOCATION: 000413
MEMORY DATA BIT(S): 6–7   (BINARY)
CONDITION: If the fifth digit displayed on HOD is 4 or 0=LO
          If the fifth digit displayed on HOD is 5 or 1=DIRECT
          If the fifth digit displayed on HOD is 6 or 2=HI
          If the fifth digit displayed on HOD is 7 or 3=OFF (LOBL)
SIGNAL FUNCTION: Selects RHE LOAL mode.
REMARKS: From CPG missile control panel through CPG MRTU Type III to FCC.
PASS: If CONDITION corresponds to selected mode, go to paragraph 8–1109.
FAIL: Location of fault: CPG missile control panel, wiring from CPG missile control panel to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1109 SIGNAL NAME: PILOT LOAL SW
MEMORY LOCATION: 001120
MEMORY DATA BIT(S): 6–7   (BINARY)
CONDITION: If the fifth digit displayed on HOD is 4 or 0=LO
          If the fifth digit displayed on HOD is 5 or 1=DIRECT
          If the fifth digit displayed on HOD is 6 or 2=HI
          If the fifth digit displayed on HOD is 7 or 3=OFF (LOBL)
SIGNAL FUNCTION: Selects RHE LOAL mode.
REMARKS: From pilot missile control panel through LH FAB MRTU Type I to RHE.
PASS: If CONDITION corresponds to selected mode, go to paragraph 8–1110.
FAIL: Location of fault: pilot missile control panel, wiring from pilot missile control panel to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1110 SIGNAL NAME: LOAL MODE SEL COMMAND (ACY) CPG LOAL SW CMD (ACZ)
MEMORY LOCATION: 001437
MEMORY DATA BIT(S): 8–9   (BINARY)
CONDITION: If the fourth digit displayed on HOD is 4 or 0=LOBL
          If the fourth digit displayed on HOD is 5 or 1=DIRECT
          If the fourth digit displayed on HOD is 6 or 2=HI
          If the fourth digit displayed on HOD is 7 or 3=LO
SIGNAL FUNCTION: Monitors CPG LOAL switch position. CPG must be in control for signal to be recognized.
REMARKS: From CPG missile panel to RHE.
PASS: If CONDITION corresponds to selected mode, go to paragraph 8–1111.
FAIL: Location of fault: CPG missile panel, wiring from CPG missile to RHE, RHE. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1111   **SIGNAL NAME:**   LOAL MODE ACTUAL
   MEMORY LOCATION: 001341
   MEMORY DATA BIT(S):   10–11   (BINARY)
   CONDITION: If fourth digit displayed on HOD is 0, 2, 4, or 6 and third digit is 0, 1, 2, or 3
         =LOBL
         If fourth digit displayed on HOD is 0, 2, 4, or 6 and third digit is 4, 5, 6, or 7 =DIRECT
         If fourth digit displayed on HOD is 1, 3, 5, or 7 and third digit is 0, 1, 2, or 3
         =HI
         If fourth digit displayed on HOD is 1, 3, 5, or 7 and third digit is 4, 5, 6, or 7
         =LO
   SIGNAL FUNCTION: Indicates RHE LOAL mode.
   REMARKS: From RHE to FCC.
   PASS: If CONDITION corresponds to selected mode, go to paragraph 8–1112.
   FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–1112   **SIGNAL NAME:**   LOAL MODE STATUS (ACY) LOAL MODE CMD REQ (ACZ)
   MEMORY LOCATION: 001341
   MEMORY DATA BIT(S):   12–13   (BINARY)
   CONDITION: If the third digit displayed on HOD is 4 or 0=LOBL
         If the third digit displayed on HOD is 5 or 1=DIRECT
         If the third digit displayed on HOD is 6 or 2=HI
         If the third digit displayed on HOD is 7 or 3=LO
   SIGNAL FUNCTION: Indicates operators selected LOAL mode.
   REMARKS: From RHE to FCC.
   PASS: If CONDITION corresponds to selected mode, go to next failure symptom paragraph.
   FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–1113   **SIGNAL NAME:**   CPG MSL MODE SW
   MEMORY LOCATION: 000413
   MEMORY DATA BIT(S):   8–9   (BINARY)
   CONDITION: If the fourth digit displayed on HOD is 4 or 0=RIPPLE
         If the fourth digit displayed on HOD is 5 or 1=NORM
         If the fourth digit displayed on HOD is 6 or 2=MANUAL
         If the fourth digit displayed on HOD is 7 or 3=STBY
   SIGNAL FUNCTION: Selects RHE mode.
   REMARKS: From CPG missile control panel through CPG MRTU Type III to FCC.
   PASS: If CONDITION corresponds to selected mode, go to paragraph 8–1114.
   FAIL: Location of fault: CPG missile control panel, wiring from CPG missile control panel to CPG
         MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1114 **SIGNAL NAME:** MSL MODE SEL COMMAND
MEMORY LOCATION: 001437
MEMORY DATA BIT(S): 15–16 (BINARY)
CONDITION: If the second digit displayed on HOD is 4 or 0=STBY
If the second digit displayed on HOD is 5 or 1=NORM
If the second digit displayed on HOD is 6 or 2=MANUAL
If the second digit displayed on HOD is 7 or 3=RIPPLE
SIGNAL FUNCTION: Monitors CPG missile mode selection. CPG must be in control for signal to be
recognized.
REMARKS: From CPG missile panel to RHE.
PASS: If CONDITION corresponds to selected mode, go to paragraph 8–1115.
FAIL: Location of fault: CPG missile panel, wiring from CPG missile panel to RHE, RHE.
Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1115 **SIGNAL NAME:** MSL MODE
MEMORY LOCATION: 001341
MEMORY DATA BIT(S): 14–16 (BINARY)
CONDITION: If the second digit displayed on HOD is 0=STBY
If the second digit displayed on HOD is 1=NORM
If the second digit displayed on HOD is 2=MANUAL
If the second digit displayed on HOD is 3=RIPPLE
SIGNAL FUNCTION: Indicates RHE mode.
REMARKS: From RHE to FCC.
PASS: If CONDITION corresponds to selected mode, go to paragraph 8–1116.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–1116 **SIGNAL NAME:** CPG MSL TYPE COMMAND
MEMORY LOCATION: 001437
MEMORY DATA BIT(S): 17–19 (BINARY)
CONDITION: If first digit displayed on HOD is 1=LASER
SIGNAL FUNCTION: Indicates type of missile selected by CPG.
REMARKS: From CPG missile control panel to RHE.
PASS: If CONDITION corresponds to selected missile, go to paragraph 8–1117.
FAIL: Location of fault: CPG missile control panel, wiring from CPG missile control panel to RHE,
RHE. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1117 **SIGNAL NAME:** CPG MSL TYPE SW
MEMORY LOCATION: 000413
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: If the fifth digit displayed on HOD is 4, 5, 6, or 7=LASER
SIGNAL FUNCTION: Indicates type of missile.
REMARKS: From CPG missile control panel through CPG MRTU Type III to FCC.
PASS: If CONDITION corresponds to selected missile, go to paragraph 8–1121.
FAIL: Location of fault: CPG missile control panel, wiring from CPG missile control panel to CPG
MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1118 **SIGNAL NAME:** CPG MANUAL ADVANCE SW
MEMORY LOCATION: 001440
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands RHE to deselect present missile and select another missile of same type.
REMARKS: From CPG missile control panel to RHE.
PASS: If CONDITION corresponds to selected mode, go to paragraph 8–1119.
FAIL: Location of fault: CPG missile control panel, wiring from CPG missile control panel to RHE, RHE. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1119 **SIGNAL NAME:** CPG MSL MANUAL ADVANCE SW
MEMORY LOCATION: 000413
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Advances selection of missiles individually in manual mode. In any other mode, signal initiates DEICE command to launcher.
REMARKS: From CPG missile control panel through CPG MRTU Type III to FCC.
PASS: If CONDITION corresponds to selected mode, go to paragraph 8–1120.
FAIL: Location of fault: CPG missile control panel, wiring from CPG missile control panel to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1120 **SIGNAL NAME:** MSL DEICE COMMAND
MEMORY LOCATION: 001440
MEMORY DATA BIT(S): 9 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands RHE to issue deice command to initiate firing of one or more missile frangible domes depending on mode selected.
REMARKS: From FCC to RHE.
PASS: If fourth digit displayed on HOD is 1, 3, 5, or 7, replace FCC (TM 9–1230–476–20–2).
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–1121 **SIGNAL NAME:** MSL TYPE
MEMORY LOCATION: 001341
MEMORY DATA BIT(S): 17–19 (OCTAL)
CONDITION: If the first digit displayed on HOD is 0=NONE
SIGNAL FUNCTION: Indicates type of missile.
REMARKS: From RHE to FCC.
PASS: If CONDITION corresponds to missile type, go to paragraph 8–1122.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–1122 **SIGNAL NAME:** MSL MIX
MEMORY LOCATION: 001342
MEMORY DATA BIT(S): 8 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates a mix of tactical and training missiles.
REMARKS: From RHE to FCC.
PASS: If fourth digit on HOD is 0, 1, 2, or 3, go to paragraph 8–1123.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–1123   SIGNAL NAME: MSL CCM COMMAND
MEMORY LOCATION: 001443
MEMORY DATA BIT(S):   6   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands RHE CCM on.
REMARKS: From CPG FCP to RHE.
PASS: If fifth digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1124.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1124   SIGNAL NAME: MSL CCM SW
MEMORY LOCATION: 000437
MEMORY DATA BIT(S):   7   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates RHE CCM is on.
REMARKS: From CPG FCP through CPG MRTU Type III to FCC.
PASS: If fifth digit on HOD is 0, 2, 4, or 6, go to paragraph 8–1125.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1125   SIGNAL NAME: LASER MSL CCM ON
MEMORY LOCATION: 001342
MEMORY DATA BIT(S):   9   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates RHE CCM is on.
REMARKS: From RHE to FCC.
PASS: If fourth digit on HOD is 0, 1, 4, or 5, replace missile (TM 9–1427–475–20).
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–1126   SIGNAL NAME: MSL TACTICAL FIRE MODE COMMAND
MEMORY LOCATION: 001440
MEMORY DATA BIT(S):   14   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands RHE to select and launch only tactical missiles.
REMARKS: From RHE to FCC.
PASS: If second digit displayed on HOD is 4, 5, 6, or 7, go to paragraph 8–1127.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–1127   SIGNAL NAME: MSL FIRE IN PROGRESS
MEMORY LOCATION: 001342
MEMORY DATA BIT(S):   12   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates launch is in progress.
REMARKS: From RHE to FCC.
PASS: If third digit displayed on HOD is 2, 3, 6, or 7, go to paragraph 8–1130.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–1128 **SIGNAL NAME:** MSL SIMULATED FIRE MODE COMMAND
MEMORY LOCATION: 001440
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands RHE to select and launch only training missiles.
REMARKS: From RHE to FCC.
PASS: If second digit displayed on HOD is 2, 3, 6, or 7, go to paragraph 8–1129.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–1129 **SIGNAL NAME:** SIM FIRE
MEMORY LOCATION: 001342
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates RHE is in simulated launch mode.
REMARKS: From RHE to FCC.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1130.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–1130 **SIGNAL NAME:** MSL FIRE WAIT
MEMORY LOCATION: 001342
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to operator to defer launch of missile to allow for proper spacing between launches. Duration is eight seconds.
REMARKS: From RHE to FCC.
PASS: If second digit on HOD is 0, 1, 4, or 5, go to paragraph 8–1131.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–1131 **SIGNAL NAME:** MSL MOTOR FIRE
MEMORY LOCATION: 001342
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates that a missile motor squib fire discrete has been issued.
REMARKS: From RHE to FCC.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1132.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–1132 **SIGNAL NAME:** MSL GIMBAL LIMIT
MEMORY LOCATION: 001342
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates when seeker gimbal angle launch constraint is within limits.
REMARKS: From RHE to FCC.
PASS: If first digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1173.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–1133 **SIGNAL NAME:** UPPER LOWER PRIORITY (ACY) PRI CHAN IND (ACZ)
MEMORY LOCATION: 001342
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: If the sixth digit displayed on HOD is 0=LOWER
            If the sixth digit displayed on HOD is 1=UPPER
SIGNAL FUNCTION: Indicates to operator which channel has priority.
REMARKS: From RHE to FCC.
PASS: If CONDITION corresponds to selected mode, go to paragraph 8–1134.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–1134 **SIGNAL NAME:** CPG UPPER CHANNEL SEL COMMAND (ACY) CPG UPPER PRI CMD (ACZ)
MEMORY LOCATION: 001437
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Sets priority of upper channel and commands RHE to store current switch
            positions of missile laser code and quantity switches on CPG FCP and TYPE
            and MSL MODE switches on CPG missile panel.
REMARKS: From CPG FCP to RHE.
PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1135.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to RHE, RHE. Troubleshoot wiring to isolate
            fault (TM 9–1427–475–20).

8–1135 **SIGNAL NAME:** CPG UPPER CHANNEL SW
MEMORY LOCATION: 000437
MEMORY DATA BIT(S): 9 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates CPG has selected upper channel to code.
REMARKS: From CPG FCP through CPG MRTU Type III to FCC.
PASS: If fourth digit on HOD is 0, 1, 4, or 5, go to paragraph 8–1136.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III.
            Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1136 **SIGNAL NAME:** PILOT UPPER CHANNEL SW
MEMORY LOCATION: 001120
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates pilot has selected upper channel to code.
REMARKS: From pilot missile control panel through LH FAB MRTU Type I to RHE.
PASS: If sixth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1137.
FAIL: Location of fault: pilot missile control panel, wiring from pilot missile control panel to LH FAB
            MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1137 **SIGNAL NAME:** MSL UPPER QUANTITY COMMAND
MEMORY LOCATION: 001441
MEMORY DATA BIT(S): 5–7 (BINARY)
CONDITION: If the fifth digit displayed on HOD is 0=0
If the fifth digit displayed on HOD is 1=1
If the fifth digit displayed on HOD is 2=2
If the fifth digit displayed on HOD is 3=3
SIGNAL FUNCTION: Indicates upper missile quantity selection of upper pushbutton index switches.
REMARKS: From CPG FCP to RHE.
PASS: If CONDITION corresponds to selected quantity, go to paragraph 8–1138.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to RHE, RHE. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1138 **SIGNAL NAME:** MSL UPPER QUANTITY SW
MEMORY LOCATION: 001075
MEMORY DATA BIT(S): 10–11 (BINARY)
CONDITION: If fourth digit displayed on HOD is 0, 2, 4, or 6 and third
digit is 0, 1, 2, or 3=3
If fourth digit displayed on HOD is 0, 2, 4, or 6 and third
digit is 4, 5, 6, or 7=2
If fourth digit displayed on HOD is 1, 3, 5, or 7 and third
digit is 0, 1, 2, or 3=1
If fourth digit displayed on HOD is 1, 3, 5, or 7 and third
digit is 4, 5, 6, or 7=0
SIGNAL FUNCTION: Indicates upper missile quantity selected.
REMARKS: From CPG FCP through LH FAB MRTU TYPE I to RHE.
PASS: If CONDITION corresponds to selected quantity, go to paragraph 8–1139.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1139 **SIGNAL NAME:** MSL UPPER CHANNEL QUANTITY READY
MEMORY LOCATION: 001343
MEMORY DATA BIT(S): 6–7 (BINARY)
CONDITION: If the fifth digit displayed on HOD is 4 or 0=0
If the fifth digit displayed on HOD is 5 or 1=1
If the fifth digit displayed on HOD is 6 or 2=2
If the fifth digit displayed on HOD is 7 or 3=3
SIGNAL FUNCTION: Indicates how many missiles are ready and scanning on upper laser code.
REMARKS: From RHE to FCC.
PASS: If CONDITION corresponds to selected quantity, go to paragraph 8–1140.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–1140   SIGNAL NAME: MSL UPPER CHANNEL LASER CODE COMMAND
         MEMORY LOCATION: 001441
         MEMORY DATA BIT(S):   9–11   (OCTAL)
         CONDITION: If the fourth digit displayed on HOD is 4 or 0 and the
                  third digit is 0, 1, 2, or 3=H
                  If the fourth digit displayed on HOD is 4 or 0 and the
                  third digit is 4, 5, 6, or 7=G
                  If the fourth digit displayed on HOD is 5 or 1 and the
                  third digit is 0, 1, 2, or 3=F
                  If the fourth digit displayed on HOD is 5 or 1 and the
                  third digit is 4, 5, 6 or 7=E
                  If the fourth digit displayed on HOD is 6, or 2 and the
                  third digit is 0, 1, 2, or 3=D
                  If the fourth digit displayed on HOD is 6 or 2 and the
                  third digit is 4, 5, 6, or 7=C
                  If the fourth digit displayed on HOD is 7 or 3 and the
                  third digit is 0, 1, 2, or 3=B
                  If the fourth digit displayed on HOD is 7 or 3 and the
                  third digit is 4, 5, 6, or 7=A
         SIGNAL FUNCTION: Indicates which of eight laser codes of the day is selected in upper pushbutton
                  index select switches.
         REMARKS: From CPG FCP to RHE.
         PASS: If CONDITION corresponds to selected code, go to paragraph 8–1141.
         FAIL: Location of fault: CPG FCP, wiring from CPG FCP to RHE, RHE. Troubleshoot wiring to isolate
                  fault (TM 9–1427–475–20).

8–1141   SIGNAL NAME: MSL UPPER CHANNEL CODE SW
         MEMORY LOCATION: 001074
         MEMORY DATA BIT(S):   14–16   (OCTAL)
         CONDITION: If second digit displayed on HOD 0=H
                  If second digit displayed on HOD 1=G
                  If second digit displayed on HOD 2=F
                  If second digit displayed on HOD 3=E
                  If second digit displayed on HOD 4=D
                  If second digit displayed on HOD 5=C
                  If second digit displayed on HOD 6=B
                  If second digit displayed on HOD 7=A
         SIGNAL FUNCTION: Indicates upper laser code selection.
         REMARKS: From CPG FCP through LH FAB MRTU TYPE I to RHE.
         PASS: If second digit on HOD corresponds to selected code, go to paragraph 8–1142.
         FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU
                  Type I. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1142   SIGNAL NAME: CPG LOWER CHANNEL SEL COMMAND (ACY)
                  CPG LOWER PRI CMD (ACZ)
         MEMORY LOCATION: 001437
         MEMORY DATA BIT(S):   11   (BINARY)
         CONDITION: (None)
         SIGNAL FUNCTION: Sets priority of lower channel and commands RHE to store current switch
                  positions of missile laser code and quantity switches on CPG FCP and TYPE
                  and MSL MODE switches on CPG missile panel.
         REMARKS: From CPG FCP to RHE.
         PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1143.
         FAIL: Location of fault: CPG FCP, wiring from CPG FCP to RHE, RHE. Troubleshoot wiring to isolate
                  fault (TM 9–1427–475–20).

8–1143 **SIGNAL NAME:** MSL LOWER CHANNEL QUANTITY SW (ACY) LWR CHAN QTY CMD (ACZ)
   MEMORY LOCATION: 001441
   MEMORY DATA BIT(S): 13–15 (BINARY)
   CONDITION: If second digit displayed on HOD 0=0
          If second digit displayed on HOD 1=1
          If second digit displayed on HOD 2=2
          If second digit displayed on HOD 3=3
   SIGNAL FUNCTION: Indicates missile lower quantity selected in the lower pushbutton index switch.
   REMARKS: From CPG FCP to RHE.
   PASS: If CONDITION corresponds to selected quantity, go to paragraph 8–1144.
   FAIL: Location of fault: CPG FCP, wiring from CPG FCP to RHE, RHE. Troubleshoot wiring to isolate
          fault (TM 9–1427–475–20).

8–1144 **SIGNAL NAME:** MSL LOWER CHANNEL QUANTITY SW
   MEMORY LOCATION: 001075
   MEMORY DATA BIT(S): 4–5 (BINARY)
   CONDITION: If the sixth digit displayed on HOD is 0 and the fifth digit is 0, 1, 2, or 3=3
          If the sixth digit displayed on HOD is 0 and the fifth digit is 4, 5, 6, or 7=2
          If the sixth digit displayed on HOD is 1 and the fifth digit is 0, 1, 2, or 3=1
          If the sixth digit displayed on HOD is 1 and the fifth digit is 4, 5, 6, or 7=0
   SIGNAL FUNCTION: Indicates missile lower quantity selected.
   REMARKS: From CPG FCP through LH FAB MRTU TYPE I to RHE.
   PASS: If CONDITION corresponds to selected quantity, go to paragraph 8–1145.
   FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU
          Type I. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1145 **SIGNAL NAME:** MSL UPPER CHANNEL CODE
   MEMORY LOCATION: 001343
   MEMORY DATA BIT(S): 9–11 (OCTAL)
   CONDITION: If the fourth digit displayed on HOD is 4 or 0 and the
          third digit is 0, 1, 2, or 3=H
          If the fourth digit displayed on HOD is 4 or 0 and the
          third digit is 4, 5, 6, or 7=G
          If the fourth digit displayed on HOD is 5 or 1 and the
          third digit is 0, 1, 2, or 3=F
          If the fourth digit displayed on HOD is 5 or 1 and the
          third digit is 4, 5, 6 or 7=E
          If the fourth digit displayed on HOD is 6, or 2 and the
          third digit is 0, 1, 2, or 3=D
          If the fourth digit displayed on HOD is 6 or 2 and the
          third digit is 4, 5, 6, or 7=C
          If the fourth digit displayed on HOD is 7 or 3 and the
          third digit is 0, 1, 2, or 3=B
          If the fourth digit displayed on HOD is 7 or 3 and the
          third digit is 4, 5, 6, or 7=A
   SIGNAL FUNCTION: From RHE to FCC.
   REMARKS: If CONDITION corresponds to selected upper channel code, go to paragraph 8–1146.
   PASS: Location of fault: replace RHE (TM 9–1427–475–20).

8–1146 **SIGNAL NAME:** CPG LOWER QUANTITY SW (ACY) CPG LOWER CHAN SW (ACZ)
MEMORY LOCATION: 000437
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates CPG has selected lower channel to code.
REMARKS: From CPG FCP through CPG MRTU Type III to RHE.
PASS: If fourth digit on HOD is 0, 1, 2, or 3, go to paragraph 8–1147.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1147 **SIGNAL NAME:** MSL UPPER CHANNEL CODE SW
MEMORY LOCATION: 001074
MEMORY DATA BIT(S): 14–16 (OCTAL)
CONDITION: If the first digit displayed on HOD is 0=H
If the first digit displayed on HOD is 1=G
If the first digit displayed on HOD is 2=F
If the first digit displayed on HOD is 3=E
If the first digit displayed on HOD is 4=D
If the first digit displayed on HOD is 5=C
If the first digit displayed on HOD is 6=B
If the first digit displayed on HOD is 7=A
SIGNAL FUNCTION: Indicates laser code selection.
REMARKS: From CPG FCP through LH FAB MRTU TYPE I to RHE.
PASS: If first digit on HOD corresponds to selected code, go to paragraph 8–1148.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1148 **SIGNAL NAME:** MSL LOWER CHANNEL QUANTITY READY
MEMORY LOCATION: 001343
MEMORY DATA BIT(S): 14–15 (BINARY)
CONDITION: If second digit displayed on HOD 0 or 4=0
If second digit displayed on HOD 1 or 5=1
If second digit displayed on HOD 2 or 6=2
If second digit displayed on HOD 3 or 7=3
SIGNAL FUNCTION: Indicates how many missiles are ready and scanning on lower laser code.
REMARKS: From RHE to FCC.
PASS: If CONDITION corresponds to selected missiles, go to paragraph 8–1149.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–1149 **SIGNAL NAME:** PILOT LOWER CHANNEL SW
MEMORY LOCATION: 001120
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: (None)
REMARKS: Indicates pilot has selected lower channel to code.
SIGNAL FUNCTION: From pilot missile control panel through LH FAB MRTU Type I to RHE.
PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1150.
FAIL: Location of fault: pilot missile control panel, wiring from pilot missile control panel to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1150 SIGNAL NAME: MSL LOWER CHANNEL CODE COMMAND
　　　　　MEMORY LOCATION: 001441
　　　　　MEMORY DATA BIT(S):   17–19   (OCTAL)
　　　　　CONDITION: If the first digit displayed on HOD is 0=H
　　　　　　　　　　　　　If the first digit displayed on HOD is 1=G
　　　　　　　　　　　　　If the first digit displayed on HOD is 2=F
　　　　　　　　　　　　　If the first digit displayed on HOD is 3=E
　　　　　　　　　　　　　If the first digit displayed on HOD is 4=D
　　　　　　　　　　　　　If the first digit displayed on HOD is 5=C
　　　　　　　　　　　　　If the first digit displayed on HOD is 6=B
　　　　　　　　　　　　　If the first digit displayed on HOD is 7=A
　　　　　SIGNAL FUNCTION: Indicates which of eight laser codes of the day is selected in the lower
　　　　　　　　　　　　　　　　pushbutton index select switch.
　　　　　REMARKS: From CPG FCP to RHE.
　　　　　PASS: If first digit on HOD corresponds to selected code, go to paragraph 8–1151.
　　　　　FAIL: Location of fault: CPG FCP, wiring from CPG FCP to RHE, RHE. Troubleshoot wiring to isolate
　　　　　　　　　　fault (TM 9–1427–475–20).

8–1151 SIGNAL NAME: MSL LOWER CHANNEL CODE SW
　　　　　MEMORY LOCATION: 000437
　　　　　MEMORY DATA BIT(S):   4–6   (OCTAL)
　　　　　CONDITION: If the sixth digit displayed on HOD is 0 and the fifth digit is 0 or1=H
　　　　　　　　　　　　　If the sixth digit displayed on HOD is 0 and the fifth digit is 2 or 3=G
　　　　　　　　　　　　　If the sixth digit displayed on HOD is 0 and the fifth digit is 4 or 5=F
　　　　　　　　　　　　　If the sixth digit displayed on HOD is 0 and the fifth digit is 6 or 7=E
　　　　　　　　　　　　　If the sixth digit displayed on HOD is 1 and the fifth digit is 0 or 1=D
　　　　　　　　　　　　　If the sixth digit displayed on HOD is 1 and the fifth digit is 2 or 3=C
　　　　　　　　　　　　　If the sixth digit displayed on HOD is 1 and the fifth digit is 4 or 5=B
　　　　　　　　　　　　　If the sixth digit displayed on HOD is 1 and the fifth digit is 6 or 7=A
　　　　　SIGNAL FUNCTION: Indicates CPG has selected lower laser coding.
　　　　　REMARKS: From CPG FCP through CPG MRTU Type III to RHE.
　　　　　PASS: If CONDITION corresponds to selected code, go to paragraph 8–1152.
　　　　　FAIL: Location of fault: CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III.
　　　　　　　　　　Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1152 SIGNAL NAME: MSL LOWER CHANNEL CODE
　　　　　MEMORY LOCATION: 001343
　　　　　MEMORY DATA BIT(S):   17–19   (OCTAL)
　　　　　CONDITION: If the first digit displayed on HOD is 0=H
　　　　　　　　　　　　　If the first digit displayed on HOD is 1=G
　　　　　　　　　　　　　If the first digit displayed on HOD is 2=F
　　　　　　　　　　　　　If the first digit displayed on HOD is 3=E
　　　　　　　　　　　　　If the first digit displayed on HOD is 4=D
　　　　　　　　　　　　　If the first digit displayed on HOD is 5=C
　　　　　　　　　　　　　If the first digit displayed on HOD is 6=B
　　　　　　　　　　　　　If the first digit displayed on HOD is 7=A
　　　　　SIGNAL FUNCTION: Indicates lower laser code being used by RHE.
　　　　　REMARKS: From RHE to FCC.
　　　　　PASS: If first digit on HOD corresponds to selected code, go to paragraph 8–1155.
　　　　　FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–1153 SIGNAL NAME: ACQUAID SLAVE COMMAND (ACY) ACQ AID MODE CMD (ACZ)
        MEMORY LOCATION: 001444
        MEMORY DATA BIT(S):   12–13   (BINARY)
        CONDITION: If the third digit displayed on HOD is 4 or 0=NONE
                If the third digit displayed on HOD is 5 or 1=AUTONOMOUS (LOS SLAVE)
                If the third digit displayed on HOD is 6 or 7=REMOTE (LOS SLAVE + BOX
                SCAN + OFFSET)
        SIGNAL FUNCTION: Slaves ready missiles to LOS acquisition aid (TADS, IHADSS). When TADS is
                acquisition aid, only missiles with same laser code will be slaved.
        REMARKS: From acquisition aid to RHE.
        PASS: If CONDITION corresponds to selected acquisition aid, go to paragraph 8–1154.
        FAIL: Location of fault: acquisition aid, wiring from acquisition aid to RHE, RHE. Troubleshoot wiring
            to isolate fault (TM 9–1427–475–20).

8–1154 SIGNAL NAME: ACQUAID MODE
        MEMORY LOCATION: 001346
        MEMORY DATA BIT(S):   12–13   (BINARY)
        CONDITION: If the third digit displayed on HOD is 4 or 0=NONE
                If the third digit displayed on HOD is 6 or 7=REMOTE (LOS SLAVE + BOX
                SCAN + OFFSET)
        SIGNAL FUNCTION: Indicates ready missiles are slaved to an acquisition aid (TADS, IHADSS,
                PNVS).
        REMARKS: From RHE to FCC.
        PASS: If third digit on HOD is 3, go to paragraph 8–1164.
        FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–1155 SIGNAL NAME: LASER CODE TO RHE
        MEMORY LOCATION: 001444
        MEMORY DATA BIT(S):   16–18   (OCTAL)
        CONDITION: If the second digit displayed on HOD is 0, 2, 4, or 6 and first digit displayed on
                HOD is 0 or 1=H
                If the second digit displayed on HOD is 0, 2, 4, or 6 and first digit displayed on
                HOD is 2 or 3=G
                If the second digit displayed on HOD is 0, 2, 4, or 6 and first digit displayed on
                HOD is 4 or 5=F
                If the second digit displayed on HOD is 0, 2, 4, or 6 and first digit displayed on
                HOD is 6 or 7=E
                If the second digit displayed on HOD is 1, 3, 5, or 7 and first digit displayed on
                HOD is 0 or 1=D
                If the second digit displayed on HOD is 1, 3, 5, or 7 first digit displayed on
                HOD is 2 or 3=C
                If the second digit displayed on HOD is 1, 3, 5, or 7 first digit displayed on
                HOD is 4 or 5=B
                If the second digit displayed on HOD is 1, 3, 5, or 7 first digit displayed on
                HOD is 6 or 7=A
        SIGNAL FUNCTION: Identifies by code letter TADS designator laser code for autonomous operation.
        REMARKS: From TEU to RHE.
        PASS: If CONDITION corresponds to selected code, go to paragraph 8–1156.
        FAIL: Location of fault: TEU, wiring from TEU to RHE, RHE. Troubleshoot wiring to isolate fault
            (TM 9–1427–475–20).

8–1156 **SIGNAL NAME:**   CODE H TO RHE
       MEMORY LOCATION: 001445
       MEMORY DATA BIT(S):   4–19   (BINARY)
       CONDITION: Refer to tri–service encoding description
       SIGNAL FUNCTION: Laser code storage in RHE at appropriate address. Codes are entered on data
                   entry keyboard (DEK).
       REMARKS: From DEK to RHE.
       PASS: If code is correct, go to paragraph 8–1157.
       FAIL: Location of fault: DEK, wiring from DEK to RHE, RHE. Troubleshoot wiring to isolate fault
         (TM 9–1427–475–20).

8–1157 **SIGNAL NAME:**   CODE G TO RHE
       MEMORY LOCATION: 001446
       MEMORY DATA BIT(S):   4–19   (BINARY)
       CONDITION: Refer to tri–service encoding description
       SIGNAL FUNCTION: Laser code storage in RHE at appropriate address. Codes are entered on
                   DEK.
       REMARKS: From DEK to RHE.
       PASS: If code is correct, go to paragraph 8–1158.
       FAIL: Location of fault: DEK, wiring from DEK to RHE, RHE. Troubleshoot wiring to isolate fault
         (TM 9–1427–475–20).

8–1158 **SIGNAL NAME:**   CODE F TO RHE
       MEMORY LOCATION: 001447
       MEMORY DATA BIT(S):   4–19   (BINARY)
       CONDITION: Refer to tri–service encoding description
       SIGNAL FUNCTION: Laser code storage in RHE at appropriate address. Codes are entered on
                   DEK.
       REMARKS: From DEK to RHE.
       PASS: If code is correct, go to paragraph 8–1159.
       FAIL: Location of fault: DEK, wiring from DEK to RHE, RHE. Troubleshoot wiring to isolate fault
         (TM 9–1427–475–20).

8–1159 **SIGNAL NAME:**   CODE E TO RHE
       MEMORY LOCATION: 001450
       MEMORY DATA BIT(S):   4–19   (BINARY)
       CONDITION: Refer to tri–service encoding description
       SIGNAL FUNCTION: Laser code storage in RHE at appropriate address. Codes are entered on
                   DEK.
       REMARKS: From DEK to RHE.
       PASS: If code is correct, go to paragraph 8–1160.
       FAIL: Location of fault: DEK, wiring from DEK to RHE, RHE. Troubleshoot wiring to isolate fault
         (TM 9–1427–475–20).

8–1160 **SIGNAL NAME:** CODE D TO RHE
MEMORY LOCATION: 001451
MEMORY DATA BIT(S): 4–19 (BINARY)
CONDITION: Refer to tri–service encoding description
SIGNAL FUNCTION: Laser code storage in RHE at appropriate address. Codes are entered on DEK.
REMARKS: From DEK to RHE.
PASS: If code is correct, go to paragraph 8–1161.
FAIL: Location of fault: DEK, wiring from DEK to RHE, RHE. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1161 **SIGNAL NAME:** CODE C TO RHE
MEMORY LOCATION: 001452
MEMORY DATA BIT(S): 4–19 (BINARY)
CONDITION: Refer to tri–service encoding description
SIGNAL FUNCTION: Laser code storage in RHE at appropriate address. Codes are entered on DEK.
REMARKS: From DEK to RHE.
PASS: If code is correct, go to paragraph 8–1162.
FAIL: Location of fault: DEK, wiring from DEK to RHE, RHE. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1162 **SIGNAL NAME:** CODE B TO RHE
MEMORY LOCATION: 001453
MEMORY DATA BIT(S): 4–19 (BINARY)
CONDITION: Refer to tri–service encoding description
SIGNAL FUNCTION: Laser code storage in RHE at appropriate address. Codes are entered on DEK.
REMARKS: From DEK to RHE.
PASS: If code is correct, go to paragraph 8–1163.
FAIL: Location of fault: DEK, wiring from DEK to RHE, RHE. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1163 **SIGNAL NAME:** CODE A TO RHE
MEMORY LOCATION: 001454
MEMORY DATA BIT(S): 4–19 (BINARY)
CONDITION: Refer to tri–service encoding description
SIGNAL FUNCTION: Laser code storage in RHE at appropriate address. Codes are entered on DEK.
REMARKS: From DEK to RHE.
PASS: Location of fault if code is correct: RHE, laser code wiring from RHE to ECSP, ECSP. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).
FAIL: Location of fault: DEK, wiring from DEK to RHE, RHE. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1164 **SIGNAL NAME:** PITCH TO RHE (ACY) PITCH AID (ACZ)
MEMORY LOCATION: 001457
MEMORY DATA BIT(S): 4–19 (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when pitch is downward and positive (sixth digit=0) when pitch is upward.
SIGNAL FUNCTION: Provides aircraft gyro pitch to RHE.
REMARKS: From HARS through FCC to RHE.
PASS: If CONDITION corresponds to correct pitch, go to paragraph 8–1165.
FAIL: Location of fault: go to Chapter 6, paragraph 6–13.

8–1165 **SIGNAL NAME:** MSL ACQAID EL TO RHE (ACY) ACQAID EL CMD (ACZ)
MEMORY LOCATION: 001461
MEMORY DATA BIT(S): 4–19 (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when elevation angle is down and positive (sixth digit=0) when elevation angle is up.
SIGNAL FUNCTION: Provides pylon corrected acquisition aid elevation angle to RHE.
REMARKS: Acquisition aid from FCC to RHE.
PASS: If CONDITION corresponds to correct elevation, go to paragraph 8–1166.
FAIL: Location of fault: if TADS is selected go to Chapter 15, paragraph 15–221, if IHADSS is selected go to Chapter 7, paragraph 7–58.

8–1166 **SIGNAL NAME:** MSL ACQAID AZ TO RHE (ACY) ACQAID AZ CMD (ACZ)
MEMORY LOCATION: 001462
MEMORY DATA BIT(S): 4–19 (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when azimuth angle is left and positive (sixth digit=0) when azimuth angle is right.
SIGNAL FUNCTION: Provides pylon corrected acquisition aid azimuth angle to RHE.
REMARKS: Acquisition aid from FCC to RHE.
PASS: If CONDITION corresponds to correct elevation, go to paragraph 8–1167.
FAIL: Location of fault: if TADS is selected go to Chapter 15, paragraph 15–222, if IHADSS is selected go to Chapter 7, paragraph 7–59.

8–1167 **SIGNAL NAME:** PYLON POSITION TO RHE (ACY) PYLON POS AID (ACZ)
MEMORY LOCATION: 001465
MEMORY DATA BIT(S): 4–19 (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when pylons are in ground stow and positive (sixth digit=0) when pylons are in flight stow.
SIGNAL FUNCTION: Provides pylon position to RHE.
REMARKS: From FCC to RHE.
PASS: If CONDITION corresponds to correct elevation, go to paragraph 8–1168.
FAIL: Location of fault: go to Chapter 11, paragraph 11–8.

8–1168 SIGNAL NAME: PRIORITY MISSILE TRACK
MEMORY LOCATION: 001346
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates missile is in track.
REMARKS: From RHE to FCC.
PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1169.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–1169 SIGNAL NAME: UPPER CHANNEL MSL TRACK
MEMORY LOCATION: 001346
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Provides an indication to operator when there is a missile on upper laser code in track.
REMARKS: From RHE to FCC.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1170.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–1170 SIGNAL NAME: LOWER CHANNEL MSL TRACK
MEMORY LOCATION: 001346
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Provides an indication to operator when there is a missile on lower laser code in track.
REMARKS: From RHE to FCC.
PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1185.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–1171 SIGNAL NAME: CPG MSL ACTION
MEMORY LOCATION: 000415
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates CPG has actioned missiles.
REMARKS: From CPG cyclic to CPG FCP through CPG MRTU Type III to FCC.
PASS: If sixth digit on HOD is 0, 2, 4, or 6, go to paragraph 8–1172.
FAIL: Location of fault: CPG cyclic, wiring from CPG cyclic to CPG FCP, CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1172 SIGNAL NAME: PLT MSL ACTION
MEMORY LOCATION: 000415
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates pilot has actioned missiles.
REMARKS: From pilot cyclic to CPG FCP through CPG MRTU Type III to FCC.
PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 8–1196.
FAIL: Location of fault: pilot cyclic, wiring from CPG cyclic to CPG FCP, CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1173 SIGNAL NAME: ORT WEAPON TRIGGER 1ST DETENT
  MEMORY LOCATION: 000414
  MEMORY DATA BIT(S): 15 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates CPG has actioned ORT trigger to first detent.
  REMARKS: From ORT to CPG FCP through CPG MRTU Type III to FCC.
  PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1174.
  FAIL: Location of fault: ORT, wiring from ORT to CPG FCP, CPG FCP, wiring from CPG FCP to CPG
      MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1174 SIGNAL NAME: MSL FIRE OVERRIDE COMMAND
  MEMORY LOCATION: 001440
  MEMORY DATA BIT(S): 5 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Commands RHE to launch without regards to seeker gimbal angle constraints.
  REMARKS: From second detent to RHE.
  PASS: If fifth digit on HOD is 0, 1, 2, or 3, go to paragraph 8–1175.
  FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–1175 SIGNAL NAME: MSL FIRE INHIBIT COMMAND
  MEMORY LOCATION: 001440
  MEMORY DATA BIT(S): 4 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Commands RHE to inhibit launch under any circumstances (safety
          constraints).
  REMARKS: From FCC to RHE.
  PASS: If sixth digit on HOD is 0, 2, 4, or 6, go to paragraph 8–1176.
  FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–1176 SIGNAL NAME: ORT WEAPON TRIGGER 2ND DETENT
  MEMORY LOCATION: 000414
  MEMORY DATA BIT(S): 16 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates CPG has actioned ORT trigger to second detent.
  REMARKS: From ORT to CPG FCP through CPG MRTU Type III to FCC.
  PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1177.
  FAIL: Location of fault: ORT, wiring from ORT to CPG FCP, CPG FCP, wiring from CPG FCP to CPG
      MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1177 SIGNAL NAME: CPG TRIGGER 1ST DETENT
  MEMORY LOCATION: 000436
  MEMORY DATA BIT(S): 12 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates CPG has actioned trigger to first detent.
  REMARKS: From CPG cyclic to CPG FCP through CPG MRTU Type III to FCC.
  PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1178.
  FAIL: Location of fault: CPG cyclic, wiring from CPG cyclic to CPG FCP, CPG FCP, wiring from CPG
      FCP to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault
      (TM 9–1427–475–20).

8–1178 SIGNAL NAME: CPG TRIGGER SECOND DETENT
  MEMORY LOCATION: 000436
  MEMORY DATA BIT(S): 18 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates CPG has actioned trigger to second detent.
  REMARKS: From CPG cyclic to CPG FCP through CPG MRTU Type III to FCC.
  PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1179.
  FAIL: Location of fault: CPG cyclic, wiring from CPG cyclic to CPG FCP, CPG FCP, wiring from CPG
      FCP to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault
      (TM 9–1427–475–20).

8–1179 SIGNAL NAME: PILOT TRIGGER 1ST DETENT
  MEMORY LOCATION: 001554
  MEMORY DATA BIT(S): 15 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates pilot has actioned trigger to first detent.
  REMARKS: From pilot cyclic to pilot FCP through RH FAB MRTU Type I to FCC.
  PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1180.
  FAIL: Location of fault: pilot cyclic, wiring from pilot cyclic to pilot FCP, pilot FCP, wiring from pilot FCP
      to RH FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault
      (TM 9–1427–475–20).

8–1180 SIGNAL NAME: PILOT TRIGGER SECOND DETENT
  MEMORY LOCATION: 001554
  MEMORY DATA BIT(S): 16 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates pilot has actioned trigger to second detent.
  REMARKS: From pilot cyclic to pilot FCP through RH FAB MRTU Type I to FCC.
  PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1181.
  FAIL: Location of fault: pilot cyclic, wiring from pilot cyclic to pilot FCP, pilot FCP, wiring from pilot FCP
      to RH FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault
      (TM 9–1427–475–20).

8–1181 SIGNAL NAME: MSL TRIGGER 1ST DETENT
  MEMORY LOCATION: 000415
  MEMORY DATA BIT(S): 6 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates MSL selected and trigger actioned to first detent.
  REMARKS: From CPG FCP through CPG MRTU Type III to FCC.
  PASS: If fifth digit on HOD is 2, 3, 6, or 7, go to paragraph 8–1182.
  FAIL: Location of fault: CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III.
      Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1182 SIGNAL NAME: MSL TRIGGER 2ND DETENT
  MEMORY LOCATION: 000415
  MEMORY DATA BIT(S): 7 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates MSL selected and trigger actioned to second detent.
  REMARKS: From CPG FCP through CPG MRTU Type III to FCC.
  PASS: If fifth digit on HOD is 1, 3, 5, or 7, go to paragraph 8–1194.
  FAIL: Location of fault: CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III.
      Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1183   **SIGNAL NAME:**   EMERGENCY STORES JETTISON SW
    MEMORY LOCATION: 001532
    MEMORY DATA BIT(S):   12   (BINARY)
    CONDITION: (None)
    SIGNAL FUNCTION: Indicates emergency stores jettison has been actioned.
    REMARKS: From emergency stores jettison panel through RH FAB MRTU Type I to FCC.
    PASS: If third digit on HOD is 2, 3, 6, or 7, troubleshoot pilot C/B, wiring from C/B panel to electrical
        power distribution center, electrical power distribution center to pylon resistor assemblies,
        pylon resistor assemblies (TM 1–1520–238–T–8).
    FAIL: Location of fault: emergency stores jettison panel, wiring from emergency jettison to RH FAB
        MRTU Type I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1184   **SIGNAL NAME:**   CPG MSL BOX CTL
    MEMORY LOCATION: 000667
    MEMORY DATA BIT(S):   19   (BINARY)
    CONDITION: If the first digit displayed on HOD is 0, 2, 4, or 6=DASHED
            If the first digit displayed on HOD is 1, 3, 5, or 7=SOLID
    SIGNAL FUNCTION: Activates missile display box.
    REMARKS: From FCC to symbol generator.
    PASS: If CONDITION agrees with constraints box, go to Chapter 14, paragraph 14–71.
    FAIL: Location of fault: go to paragraph 8–1186.

8–1185   **SIGNAL NAME:**   CPG MSL BOX AZ
    MEMORY LOCATION: 000667
    MEMORY DATA BIT(S):   4–14   (SCALAR)
    CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when
            box is left and positive (sixth digit=0) when box is right.
    SIGNAL FUNCTION: Represents missile azimuth LOS reference for TADS reticle.
    REMARKS: From FCC to symbol generator.
    PASS: If box agrees with **CONDITION,** go to paragraph 8–1188.
    FAIL: Location of fault: go to Chapter 15, paragraph 15–220.

8–1186   **SIGNAL NAME:**   CPG MSL BOX SIZE
    MEMORY LOCATION: 000667
    MEMORY DATA BIT(S):   16–17   (BINARY)
    CONDITION: If the first digit displayed on HOD is 4, 5, 6, or 7=SMALL
            If the second digit displayed on HOD is 1, 3, 5, or 7=LARGE
    SIGNAL FUNCTION: Selects LOAL (small) or LOBL (large).
    REMARKS: From FCC to symbol generator.
    PASS: If CONDITION of bits 16 and 17 represents selected launch mode, go to paragraph 8–1187.
    FAIL: Location of fault: go to Chapter 14, paragraph 14–71.

8–1187 **SIGNAL NAME:**   CPG MSL BOX LINE TYPE
MEMORY LOCATION: 000667
MEMORY DATA BIT(S):   18   (BINARY)
CONDITION: If the first digit displayed on HOD is 0, 1, 3, or 3=DASHED
            If the first digit displayed on HOD is 2, 3, 6, or 7=SOLID
SIGNAL FUNCTION: Indicates when missiles are within constraints (solid).
REMARKS: From FCC to symbol generator.
PASS: If condition is met, go to Chapter 14, paragraph 14–71.
FAIL: Location of fault: go to paragraph 8–1189.

8–1188 **SIGNAL NAME:**   CPG MSL BOX EL
MEMORY LOCATION: 000670
MEMORY DATA BIT(S):   4–14   (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when
            box is down and positive (sixth digit=0) when box is up.
SIGNAL FUNCTION: Issues elevation reference to TADS reticle.
REMARKS: From FCC to symbol generator.
PASS: If box agrees with CONDITION, go to paragraph 8–1190.
FAIL: Location of fault: go to Chapter 15, paragraph 15–220.

8–1189 **SIGNAL NAME:**   PLT MSL BOX CTL
MEMORY LOCATION: 000726
MEMORY DATA BIT(S):   19   (BINARY)
CONDITION: If the first digit displayed on HOD is 0, 2, 4, or 6=DASHED
            If the first digit displayed on HOD is 1, 3, 5, or 7=SOLID
SIGNAL FUNCTION: Activates missile display box.
REMARKS: From FCC to symbol generator.
PASS: If the first digit displayed on HOD is 1, 3, 5, or 7, go to Chapter 14, paragraph 14–71.
FAIL: Location of fault: go to paragraph 8–1191.

8–1190 **SIGNAL NAME:**   PLT MSL BOX AZ
MEMORY LOCATION: 000726
MEMORY DATA BIT(S):   4–14   (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when
            box is left and positive (sixth digit=0) when box is right.
SIGNAL FUNCTION: Issues azimuth reference to TADS reticle.
REMARKS: From FCC to symbol generator.
PASS: If box agrees with CONDITION, go to paragraph 8–1193.
FAIL: Location of fault: go to Chapter 15, paragraph 15–220.

8–1191 **SIGNAL NAME:**   PLT MSL BOX SIZE
MEMORY LOCATION: 000726
MEMORY DATA BIT(S):   16–17   (BINARY)
CONDITION: If the first digit displayed on HOD is 4, 5, 6, or 7=SMALL
            If the second digit displayed on HOD is 1, 3, 5, or 7=LARGE
SIGNAL FUNCTION: Selects LOAL (small) or LOBL (large).
REMARKS: From FCC to symbol generator.
PASS: If CONDITION of bits 16 and 17 represents selected launch mode, go to paragraph 8–1192.
FAIL: Location of fault: go to Chapter 14, paragraph 14–71.

8–1192 **SIGNAL NAME:**   PLT MSL BOX LINE TYPE
     MEMORY LOCATION: 000726
     MEMORY DATA BIT(S):   18   (BINARY)
     CONDITION: If the first digit displayed on HOD is 0, 1, 3, or 3=DASHED
                   If the first digit displayed on HOD is 2, 3, 6, or 7=SOLID
     SIGNAL FUNCTION: Indicates when missiles are within constraints (solid).
     REMARKS: From FCC to symbol generator.
     PASS: If CONDITION corresponds to correct response, go to paragraph 8–1196.
     FAIL: Location of fault: go to Chapter 14, paragraph 14–146.

8–1193 **SIGNAL NAME:**   PLT MSL BOX EL
     MEMORY LOCATION: 000727
     MEMORY DATA BIT(S):   4–14   (SCALAR)
     CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when
                   box is down and positive (sixth digit=0) when box is up.
     SIGNAL FUNCTION: Issues elevation reference to TADS reticle.
     REMARKS: From FCC to symbol generator.
     PASS: If box agrees with CONDITION, go to paragraph 8–1199.
     FAIL: Location of fault: go to Chapter 15, paragraph 15–220.

■ 8–1194 **SIGNAL NAME:**   MSL LAUNCH TO TEU (ACY) MSL LAUNCH IND (ACZ)
     MEMORY LOCATION: 001244
     MEMORY DATA BIT(S):   16   (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Indicates to TADS that a missile has been commanded to launch.
     REMARKS: From FCC through LH FAB MRTU Type I to TEU.
     PASS: If second digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 8–1195.
     FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU, FCC.
                   Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

■ 8–1195 **SIGNAL NAME:**   MISSILE AWAY TO TEU (ACY) MSL AWAY IND (ACZ)
     MEMORY LOCATION: 001244
     MEMORY DATA BIT(S):   17   (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Indicates to TADS that a missile has left a launcher.
     REMARKS: From FCC through LH FAB MRTU Type I to TEU.
     PASS: If first digit displayed on HOD is 4 or 5, go to paragraph 8–1197.
     FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU, FCC.
                   Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1196 **SIGNAL NAME:**   ORT MISSILE WAS SW TO TEU
     MEMORY LOCATION: 001252
     MEMORY DATA BIT(S):   16   (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Indicates that missiles have been actioned.
     REMARKS: From FCC through LH FAB MRTU Type I to TEU.
     PASS: If second digit displayed on HOD is 1, 3, 5, or 7, replace TEU (TM 9–1230–476–20–2).
     FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU, FCC.
                   Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1197 SIGNAL NAME: ORT WEAPON TRIGGER DETENT 1 TO TEU (ACY)
ORT TRIG 1ST TST (ACZ)
MEMORY LOCATION: 001252
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates that ORT trigger has been actioned to first detent.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If second digit displayed on HOD is 2, 3, 6, or 7, go to paragraph 8–1198.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU, FCC.
Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1198 SIGNAL NAME: ORT WEAPON TRIGGER DETENT 2 TO TEU (ACY)
ORT TRIG 2ND TST (ACZ)
MEMORY LOCATION: 001252
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates that ORT trigger has been actioned to second detent.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If second digit displayed on HOD is 4, 5, 6, or 7, go to paragraph 8–1205.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU, FCC.
Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1199 SIGNAL NAME: MISSILE SEEKER ELEVATION (ACY) PRI MSL SKREL (ACZ)
MEMORY LOCATION: 001373
MEMORY DATA BIT(S): 4–19 (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when
the seeker is down and positive (sixth digit=0) when seeker is up.
SIGNAL FUNCTION: Provides seeker elevation angle of prime missile to FCC for display.
REMARKS: From RHE to FCC.
PASS: If CONDITION agrees with seeker elevation, go to paragraph 8–1200.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–1200 SIGNAL NAME: MISSILE SEEKER AZIMUTH (ACY) PRI MSL SKRAZ (ACZ)
MEMORY LOCATION: 001374
MEMORY DATA BIT(S): 4–19 (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when
the seeker is left and positive (sixth digit=0) when seeker is right.
SIGNAL FUNCTION: Provides seeker azimuth angle of prime missile to FCC for display.
REMARKS: From RHE to FCC.
PASS: If CONDITION agrees with seeker azimuth, go to paragraph 8–1201.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

8–1201 SIGNAL NAME: REMOTE SEEKER ELEVATION (ACY) REMOTE SKREL (ACZ)
MEMORY LOCATION: 001403
MEMORY DATA BIT(S): 4–19 (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when
seeker is down and positive (sixth digit=0) when seeker is up.
SIGNAL FUNCTION: Analog command 1. Provides pitch gimbal commands to selected seekers or
BIT drive commands.
REMARKS: From RHE to launchers.
PASS: If CONDITION agrees with seeker elevation, go to paragraph 8–1202.
FAIL: Location of fault: RHE, wiring from RHE to launchers, launcher. Troubleshoot wiring to isolate
fault (TM 9–1427–475–20).

8–1202   SIGNAL NAME: REMOTE SEEKER AZIMUTH (ACY) REMOTE SKRAZ (ACZ)
MEMORY LOCATION: 001404
MEMORY DATA BIT(S):   4–19   (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when the seeker is left and positive (sixth digit=0) when seeker is right.
SIGNAL FUNCTION: Analog command 2. Provides yaw gimbal commands to selected seekers or BIT drive commands.
REMARKS: From RHE to launchers.
PASS: If CONDITION agrees with seeker azimuth, go to paragraph 8–1203.
FAIL: Location of fault: RHE, wiring from RHE to launchers, launcher. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1203   SIGNAL NAME: AUTO SEEKER ELEVATION (ACY) AUTO SKREL CMD (ACZ)
MEMORY LOCATION: 001405
MEMORY DATA BIT(S):   4–19   (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when the seeker is down and positive (sixth digit=0) when seeker is up.
SIGNAL FUNCTION: Analog command 3. Provides yaw gimbal commands to selected seekers, BIT drive commands or pitch reference commands.
REMARKS: From RHE to launchers.
PASS: If CONDITION agrees with seeker elevation, go to paragraph 8–1204.
FAIL: Location of fault: RHE, wiring from RHE to launchers, launcher. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1204   SIGNAL NAME: AUTO SEEKER AZIMUTH (ACY) AUTO SKREL CMD (ACZ)
MEMORY LOCATION: 001406
MEMORY DATA BIT(S):   4–19   (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate negative (sixth digit =1) when the seeker is left and positive (sixth digit=0) when seeker is right.
SIGNAL FUNCTION: Analog command 4. Provides yaw gimbal commands to selected seekers or BIT drive commands.
REMARKS: From RHE to launchers.
PASS: If CONDITION is met, go to Chapter 15, paragraph 15–220.
FAIL: Location of fault: RHE, wiring from RHE to launchers, launcher. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1205   SIGNAL NAME: LASER ARMED COMMAND (ACY) LRFD ARM IND (ACZ)
MEMORY LOCATION: 001444
MEMORY DATA BIT(S):   15   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to RHE that TADS laser is armed.
REMARKS: From TADS to RHE.
PASS: If second digit displayed on HOD is 0 or 1, go to paragraph 8–1206.
FAIL: Location of fault: TADS, wiring from TADS to RHE, RHE. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

8–1206 SIGNAL NAME: LASER FIRING COMMAND (ACY) LRFD FIRING IND (ACZ)
MEMORY LOCATION: 001444
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to RHE that TADS laser is firing.
REMARKS: From TADS to RHE.
PASS: Location of fault if first digit displayed on HOD is 0, 2, 4, or 6: Replace RHE
(TM 9–1230–476–20–1).
FAIL: Location of fault: TADS, wiring from TADS to RHE, RHE. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

CHAPTER 9
MULTIPLEX REMOTE TERMINAL UNIT (MRTU) SYSTEM
MULTIPLEX READ CODES

FAILURE SYMPTOM INDEX

Symptom	Refer to paragraph
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TYPE I MRTU NO–GO RH FAB	9–29
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GUN BORESIGHT NO–GO	9–85 (ACY) 9–87 (ACZ)
GUN BORESIGHT NO–GO RAM CHECKSUM	9–85 (ACY) 9–87 (ACZ)
PNVS BORESIGHT NO–GO	9–85 (ACY) 9–87 (ACZ)
PNVS BORESIGHT NO–GO RAM CHECKSUM	9–85 (ACY) 9–87 (ACZ)
PYLON BORESIGHT NO–GO	9–85 (ACY) 9–87 (ACZ)
PYLON BORESIGHT NO–GO RAM CHECKSUM	9–85 (ACY) 9–87 (ACZ)
TADS BORESIGHT NO–GO	9–85 (ACY) 9–87 (ACZ)
TADS BORESIGHT NO–GO RAM CHECKSUM	9–85 (ACY) 9–87 (ACZ)

Personnel Required:

(2)

References:

TM 9–1230–476–20–1
TM 9–1230–476–20–2

Equipment Conditions:

Ref	Condition
TM 9–1230–476–20–2	MULTIPLEX SUBSYSTEM – MAINTENANCE OPERATIONAL CHECK in progress

NOTE

- All multiplex read code responses are read from right to left.

- Multiplex read codes must be used in conjunction with applicable Maintenance Operational Check (MOC) in progress.

- Multiplex read codes are observed on the HOD (ADC) or CDU (ADD).

MULTIPLEX READ CODE INTERPRETATIONS

9–1 **SIGNAL NAME:**   CPG MRTU TYPE III STATUS WORD TERMINAL FLAG
MEMORY LOCATION: 000566
MEMORY DATA BIT(S):   19   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates PASS or FAIL status of multiplex remote terminal unit (MRTU) internal self–tests.
REMARKS: From copilot/gunner (CPG) MRTU Type III to fire control computer (FCC).
PASS: If first digit on heads out display (HOD) is 0, 2, 4, or 6, go to paragraph 9–9.
FAIL: Location of fault: go to paragraph 9–2.

9–2 **SIGNAL NAME:**   CPG MRTU TYPE III STATUS WORD BBC STATUS BIT
MEMORY LOCATION: 000566
MEMORY DATA BIT(S):   18   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates self–test status of the back–up bus controller (BBC).
REMARKS: From CPG MRTU TYPE III to FCC.
PASS: If first digit on HOD is 2 or 6, go to paragraph 9–3.
FAIL: Location of fault: **MUX CPG** circuit breaker, wiring from **MUX CPG** circuit breaker to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

9–3 **SIGNAL NAME:**   CPG MRTU TYPE III STATUS WORD OUTPUT CLEAR
MEMORY LOCATION: 000566
MEMORY DATA BIT(S):   17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates all MRTU outputs are cleared.
REMARKS: From CPG MRTU Type III to FCC.
PASS: If first digit on HOD is 6, go to paragraph 9–4.
FAIL: Location of fault: **MUX CPG** circuit breaker, wiring from **MUX CPG** circuit breaker to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

9–4 **SIGNAL NAME:**   CPG MRTU TYPE III STATUS DISCRETE OUTPUT BIT
MEMORY LOCATION: 000566
MEMORY DATA BIT(S):   16   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates self–test status of 5 Volt (V) direct current (DC) discrete outputs.
REMARKS: From CPG MRTU Type III to FCC.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 9–5.
FAIL: Location of fault: **MUX CPG** circuit breaker, wiring from **MUX CPG** circuit breaker to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

9–5 **SIGNAL NAME:** CPG MRTU TYPE III STATUS DC ANALOG OUTPUT BIT
MEMORY LOCATION: 000566
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of output DC analog circuits.
REMARKS: From CPG MRTU Type III to FCC.
PASS: If second digit on HOD is 3 or 7, go to paragraph 9–6.
FAIL: Location of fault: **MUX CPG** circuit breaker, wiring from **MUX CPG** circuit breaker to CPG
MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault
(TM 9–1230–476–20–2).

9–6 **SIGNAL NAME:** CPG MRTU TYPE III INPUT BIT STATUS
MEMORY LOCATION: 000566
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of turn–on test of input circuitry.
REMARKS: From CPG MRTU Type III to FCC.
PASS: If second digit on HOD is 7, go to paragraph 9–7.
FAIL: Location of fault: **MUX CPG** circuit breaker, wiring from **MUX CPG** circuit breaker to CPG
MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault
(TM 9–1230–476–20–2).

9–7 **SIGNAL NAME:** CPG MRTU TYPE III AD BIT STATUS
MEMORY LOCATION: 000566
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates self–test status of analog to digital converter.
REMARKS: From CPG MRTU Type III to FCC.
PASS: If third digit on HOD is 1, go to paragraph 9–8.
FAIL: Location of fault: **MUX CPG** circuit breaker, wiring from **MUX CPG** circuit breaker to CPG
MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault
(TM 9–1230–476–20–2).

9–8 **SIGNAL NAME:** CPG MRTU TYPE III SERIAL DIGITAL ERROR
MEMORY LOCATION: 000566
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors data entry keyboard (DEK) and alphanumeric display (AND).
REMARKS: From CPG MRTU Type III to FCC.
PASS: If fourth digit on HOD is 0, go to paragraph 9–9.
FAIL: Location of fault: go to Chapter 17, paragraph 17–3.

9–9 **SIGNAL NAME:** CPG MRTU TYPE III SERIAL DIGITAL ERROR
MEMORY LOCATION: 000620
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors AND.
REMARKS: From CPG MRTU Type III to FCC.
PASS: If fourth digit on HOD is 0, go to paragraph 9–10.
FAIL: Location of fault: go to Chapter 15, paragraph 15–27.

9–10 **SIGNAL NAME:** CPG MRTU TYPE III SERIAL DIGITAL ERROR
MEMORY LOCATION: 000652
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors AND.
REMARKS: From CPG MRTU Type III to FCC.
PASS: If fourth digit on HOD is 0, 2, 4, or 6, go to paragraph 9–11.
FAIL: Location of fault: go to Chapter 15, paragraph 15–27.

9–11 **SIGNAL NAME:** CPG MRTU TYPE III SERIAL DIGITAL ERROR
MEMORY LOCATION: 000401
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors AND and DEK.
REMARKS: From CPG MRTU Type III to FCC.
PASS: If fourth digit on HOD is 0, go to paragraph 9–12.
FAIL: Location of fault: go to Chapter 17, paragraph 17–3.

9–12 **SIGNAL NAME:** CPG MRTU TYPE III SERIAL DIGITAL ERROR
MEMORY LOCATION: 000443
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors AND
REMARKS: From CPG MRTU Type III to FCC.
PASS: If fourth digit on HOD is 0, go to paragraph 9–13.
FAIL: Location of fault: go to Chapter 15, paragraph 15–27.

9–13 **SIGNAL NAME:** CPG MRTU TYPE III SERIAL DIGITAL ERROR
MEMORY LOCATION: 000446
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors AND
REMARKS: From CPG MRTU Type III to FCC.
PASS: If fourth digit on HOD is 0, replace FCC (TM 9–1230–476–20–1).
FAIL: Location of fault: go to Chapter 15, paragraph 15–27.

9–14 **SIGNAL NAME:** CPG MRTU TYPE III SERIAL DIGITAL ERROR
MEMORY LOCATION: 000510
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors AND
REMARKS: From CPG MRTU Type III to FCC.
PASS: If fourth digit on HOD is 0, replace FCC (TM 9–1230–476–20–1).
FAIL: Location of fault: go to Chapter 15, paragraph 15–27.

9–15 **SIGNAL NAME:** LH FAB MRTU TYPE I STATUS WORD TERMINAL FLAG
MEMORY LOCATION: 001062
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates PASS or FAIL status of MRTU internal self–tests.
REMARKS: From LH FAB MRTU Type I to FCC.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 9–23.
FAIL: Location of fault: go to paragraph 9–16.

9–16 **SIGNAL NAME:** LH FAB MRTU TYPE I STATUS WORD BBC STATUS BIT
MEMORY LOCATION: 001062
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates self–test status of BBC.
REMARKS: From LH FAB MRTU Type I to FCC.
PASS: If first digit on HOD is 2 or 6, go to paragraph 9–17.
FAIL: Location of fault: **MUX FAB L** circuit breaker, wiring from **MUX FAB L** circuit breaker to LH FAB
      MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault
      (TM 9–1230–476–20–2).

9–17 **SIGNAL NAME:** LH FAB MRTU TYPE I STATUS WORD OUTPUT CLEAR
MEMORY LOCATION: 001062
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates all MRTU outputs are cleared.
REMARKS: From LH FAB MRTU Type I to FCC.
PASS: If first digit on HOD is 6, go to paragraph 9–18.
FAIL: Location of fault: **MUX FAB L** circuit breaker, wiring from **MUX FAB L** circuit breaker to LH FAB
      MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault
      (TM 9–1230–476–20–2).

9–18 **SIGNAL NAME:** LH FAB MRTU TYPE I STATUS DISCRETE OUTPUT BIT
MEMORY LOCATION: 001062
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates self–test status of 5 VDC discrete outputs.
REMARKS: From LH FAB MRTU Type I to FCC.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 9–19.
FAIL: Location of fault: **MUX FAB L** circuit breaker, wiring from **MUX FAB L** circuit breaker to LH FAB
      MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault
      (TM 9–1230–476–20–2).

9–19 **SIGNAL NAME:** LH FAB MRTU TYPE I STATUS DC ANALOG OUTPUT BIT
MEMORY LOCATION: 001062
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates state of output DC analog circuits.
REMARKS: From LH FAB MRTU Type I to FCC.
PASS: If second digit on HOD is 3 or 7, go to paragraph 9–20.
FAIL: Location of fault: **MUX FAB L** circuit breaker, wiring from **MUX FAB L** circuit breaker to LH FAB
      MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault
      (TM 9–1230–476–20–2).

9–20 **SIGNAL NAME:** LH FAB MRTU TYPE I INPUT BIT STATUS
MEMORY LOCATION: 001062
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of turn–on test of input circuitry.
REMARKS: From LH FAB MRTU Type I to FCC.
PASS: If second digit on HOD is 7, go to paragraph 9–21.
FAIL: Location of fault: **MUX FAB L** circuit breaker, wiring from **MUX FAB L** circuit breaker to LH FAB
MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault
(TM 9–1230–476–20–2).

9–21 **SIGNAL NAME:** LH FAB MRTU TYPE I AD BIT STATUS
MEMORY LOCATION: 001062
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates self–test status of analog to digital converter.
REMARKS: From LH FAB MRTU Type I to FCC.
PASS: If third digit on HOD is 1, go to paragraph 9–22.
FAIL: Location of fault: **MUX FAB L** circuit breaker, wiring from **MUX FAB L** circuit breaker to LH FAB
MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault
(TM 9–1230–476–20–2).

9–22 **SIGNAL NAME:** LH FAB MRTU TYPE I SERIAL DIGITAL ERROR
MEMORY LOCATION: 001062
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors target acquisition designation sight (TADS).
REMARKS: From LH FAB MRTU Type I to FCC.
PASS: Location of fault if fourth digit on HOD is 0: replace FCC (TM 9–1230–476–20–1).
FAIL: Location of fault: go to Chapter 15, paragraph 15–27.

9–23 **SIGNAL NAME:** LH FAB MRTU TYPE I SERIAL DIGITAL ERROR
MEMORY LOCATION: 001124
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors rounds counter controller.
REMARKS: From LH FAB MRTU Type I to FCC.
PASS: If fourth digit on HOD is 0, go to paragraph 9–24.
FAIL: Location of fault: go to Chapter 5, paragraph 5–8.

9–24 **SIGNAL NAME:** LH FAB MRTU TYPE I SERIAL DIGITAL ERROR
MEMORY LOCATION: 001157
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors rounds counter controller.
REMARKS: From LH FAB MRTU Type I to FCC.
PASS: If fourth digit on HOD is 0, go to paragraph 9–25.
FAIL: Location of fault: go to Chapter 5, paragraph 5–8.

9–25 **SIGNAL NAME:** LH FAB MRTU TYPE I SERIAL DIGITAL ERROR
MEMORY LOCATION: 001164
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors rocket control panel.
REMARKS: From LH FAB MRTU Type I to FCC.
PASS: If fourth digit on HOD is 0, go to paragraph 9–26.
FAIL: Location of fault: go to Chapter 12, paragraph 12–10.

9–26 **SIGNAL NAME:** LH FAB MRTU TYPE I SERIAL DIGITAL ERROR
MEMORY LOCATION: 001221
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors rocket control panel.
REMARKS: From LH FAB MRTU Type I to FCC.
PASS: If fourth digit on HOD is 0, go to paragraph 9–27.
FAIL: Location of fault: go to Chapter 12, paragraph 12–10.

9–27 **SIGNAL NAME:** LH FAB MRTU TYPE I SERIAL DIGITAL ERROR
MEMORY LOCATION: 001261
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors TADS.
REMARKS: From LH FAB MRTU Type I to FCC.
PASS: If fourth digit on HOD is 0, go to paragraph 9–28.
FAIL: Location of fault: go to Chapter 15, paragraph 15–27.

9–28 **SIGNAL NAME:** LH FAB MRTU TYPE I SERIAL DIGITAL ERROR
MEMORY LOCATION: 001266
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors TADS.
REMARKS: From LH FAB MRTU Type I to FCC.
PASS: If fourth digit on HOD is 0, go to paragraph 9–29.
FAIL: Location of fault: go to Chapter 15, paragraph 15–27.

9–29 **SIGNAL NAME:** RH FAB MRTU TYPE I STATUS WORD TERMINAL FLAG
MEMORY LOCATION: 001517
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates PASS or FAIL status of MRTU internal self–tests.
REMARKS: From RH FAB MRTU Type I to FCC.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 9–37.
FAIL: Location of fault: go to paragraph 9–30.

9–30 SIGNAL NAME: RH FAB MRTU TYPE I STATUS WORD BBC STATUS BIT
MEMORY LOCATION: 001517
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates self–test status of the BBC.
REMARKS: From RH FAB MRTU Type I to FCC.
PASS: If first digit on HOD is 2 or 6, go to paragraph 9–31.
FAIL: Location of fault: **MUX FAB R** circuit breaker, wiring from **MUX FAB R** circuit breaker to RH
FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault
(TM 9–1230–476–20–2).

9–31 SIGNAL NAME: RH FAB MRTU TYPE I STATUS WORD OUTPUT CLEAR
MEMORY LOCATION: 001517
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates all MRTU outputs are cleared.
REMARKS: From RH FAB MRTU Type I to FCC.
PASS: If first digit on HOD is 6, go to paragraph 9–32.
FAIL: Location of fault: **MUX FAB R** circuit breaker, wiring from **MUX FAB R** circuit breaker to RH
FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault
(TM 9–1230–476–20–2).

9–32 SIGNAL NAME: RH FAB MRTU TYPE I STATUS DISCRETE OUTPUT BIT
MEMORY LOCATION: 001517
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates self–test status of 5 VDC discrete outputs.
REMARKS: From RH FAB MRTU Type I to FCC.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 9–33.
FAIL: Location of fault: **MUX FAB R** circuit breaker, wiring from **MUX FAB R** circuit breaker to RH
FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault
(TM 9–1230–476–20–2).

9–33 SIGNAL NAME: RH FAB MRTU TYPE I STATUS DC ANALOG OUTPUT BIT
MEMORY LOCATION: 001517
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates state of output DC analog circuits.
REMARKS: From RH FAB MRTU Type I to FCC.
PASS: If second digit on HOD is 3 or 7, go to paragraph 9–34.
FAIL: Location of fault: **MUX FAB R** circuit breaker, wiring from **MUX FAB R** circuit breaker to RH
FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault
(TM 9–1230–476–20–2).

9–34 **SIGNAL NAME:** RH FAB MRTU TYPE I INPUT BIT STATUS
MEMORY LOCATION: 001517
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of turn–on test of input circuitry.
REMARKS: From RH FAB MRTU Type I to FCC.
PASS: If second digit on HOD is 7, go to paragraph 9–35.
FAIL: Location of fault: **MUX FAB R** circuit breaker, wiring from **MUX FAB R** circuit breaker to RH
FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault
(TM 9–1230–476–20–2).

9–35 **SIGNAL NAME:** RH FAB MRTU TYPE I A/D BIT STATUS
MEMORY LOCATION: 001517
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates self–test status of analog to digital converter.
REMARKS: From RH FAB MRTU Type I to FCC.
PASS: If third digit on HOD is 1, go to paragraph 9–36.
FAIL: Location of fault: **MUX FAB R** circuit breaker, wiring from **MUX FAB R** circuit breaker to RH
FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault
(TM 9–1230–476–20–2).

9–36 **SIGNAL NAME:** RH FAB MRTU TYPE I SERIAL DIGITAL ERROR
MEMORY LOCATION: 001517
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors integrated helmet and display sight system (IHADSS).
REMARKS: From RH FAB MRTU Type I to FCC.
PASS: If fourth digit on HOD is 0, go to paragraph 9–37.
FAIL: Location of fault: go to Chapter 7, paragraph 7–3.

9–37 **SIGNAL NAME:** RH FAB MRTU TYPE I SERIAL DIGITAL ERROR
MEMORY LOCATION: 001561
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors IHADSS.
REMARKS: From RH FAB MRTU Type I to FCC.
PASS: If fourth digit on HOD is 0, go to paragraph 9–38.
FAIL: Location of fault: go to Chapter 7, paragraph 7–3.

9–38 **SIGNAL NAME:** RH FAB MRTU TYPE I SERIAL DIGITAL ERROR
MEMORY LOCATION: 001633
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors IHADSS.
REMARKS: From RH FAB MRTU Type I to FCC.
PASS: If fourth digit on HOD is 0, go to paragraph 9–39.
FAIL: Location of fault: go to Chapter 7, paragraph 7–3.

9–39 **SIGNAL NAME:** RH FAB MRTU TYPE I SERIAL DIGITAL ERROR
MEMORY LOCATION: 001637
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors IHADSS.
REMARKS: From RH FAB MRTU Type I to FCC.
PASS: If fourth digit on HOD is 0, go to paragraph 9–40.
FAIL: Location of fault: go to Chapter 7, paragraph 7–3.

9–40 **SIGNAL NAME:** RH FAB MRTU TYPE I SERIAL DIGITAL ERROR
MEMORY LOCATION: 001651
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors IHADSS.
REMARKS: From RH FAB MRTU Type I to FCC.
PASS: If fourth digit on HOD is 0, go to paragraph 9–41.
FAIL: Location of fault: go to Chapter 7, paragraph 7–3.

9–41 **SIGNAL NAME:** PYLON 1 MRTU TYPE II STATUS WORD TERMINAL FLAG
MEMORY LOCATION: 001653
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates PASS or FAIL status of MRTU internal self–tests.
REMARKS: From PYLON 1 MRTU Type II to FCC.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 9–49.
FAIL: Location of fault: go to paragraph 9–42.

9–42 **SIGNAL NAME:** PYLON 1 MRTU TYPE II STATUS WORD BBC STATUS BIT
MEMORY LOCATION: 001653
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates self–test status of the BBC.
REMARKS: From PYLON 1 MRTU Type II to FCC.
PASS: If first digit on HOD is 2 or 6, go to paragraph 9–43.
FAIL: Location of fault: **MUX L PYL OUTBD** circuit breaker, wiring from **MUX L PYL OUTBD** circuit breaker to PYLON 1 MRTU, PYLON 1 MRTU. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

9–43 **SIGNAL NAME:** PYLON 1 MRTU TYPE II STATUS WORD OUTPUT CLEAR
MEMORY LOCATION: 001653
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates all MRTU outputs are cleared.
REMARKS: From PYLON 1 MRTU Type II to FCC.
PASS: If first digit on HOD is 6, go to paragraph 9–44.
FAIL: Location of fault: **MUX L PYL OUTBD** circuit breaker, wiring from **MUX L PYL OUTBD** circuit breaker to PYLON 1 MRTU, PYLON 1 MRTU. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

9–44 **SIGNAL NAME:** PYLON 1 MRTU TYPE II STATUS DISCRETE OUTPUT BIT
MEMORY LOCATION: 001653
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates self–test status of 5 VDC discrete outputs.
REMARKS: From PYLON 1 MRTU Type II to FCC.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 9–45.
FAIL: Location of fault: **MUX L PYL OUTBD** circuit breaker, wiring from **MUX L PYL OUTBD** circuit
breaker to PYLON 1 MRTU, PYLON 1 MRTU. Troubleshoot wiring to isolate fault
(TM 9–1230–476–20–2).

9–45 **SIGNAL NAME:** PYLON 1 MRTU TYPE II STATUS DC ANALOG OUTPUT BIT
MEMORY LOCATION: 001653
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates state of output DC analog circuits.
REMARKS: From PYLON 1 MRTU Type II to FCC.
PASS: If second digit on HOD is 3 or 7, go to paragraph 9–46.
FAIL: Location of fault: **MUX L PYL OUTBD** circuit breaker, wiring from **MUX L PYL OUTBD** circuit
breaker to PYLON 1 MRTU, PYLON 1 MRTU. Troubleshoot wiring to isolate fault
(TM 9–1230–476–20–2).

9–46 **SIGNAL NAME:** PYLON 1 MRTU TYPE II INPUT BIT STATUS
MEMORY LOCATION: 001653
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of turn–on test of input circuitry.
REMARKS: From PYLON 1 MRTU Type II to FCC.
PASS: If second digit on HOD is 7, go to paragraph 9–47.
FAIL: Location of fault: **MUX L PYL OUTBD** circuit breaker, wiring from **MUX L PYL OUTBD** circuit
breaker to PYLON 1 MRTU, PYLON 1 MRTU. Troubleshoot wiring to isolate fault
(TM 9–1230–476–20–2).

9–47 **SIGNAL NAME:** PYLON 1 MRTU TYPE II A/D BIT STATUS
MEMORY LOCATION: 001653
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates self–test status of analog to digital converter.
REMARKS: From PYLON 1 MRTU Type II to FCC.
PASS: If third digit on HOD is 1, go to paragraph 9–48.
FAIL: Location of fault: **MUX L PYL OUTB**D circuit breaker, wiring from **MUX L PYL OUTBD** circuit
breaker to PYLON 1 MRTU, PYLON1 MRTU. Troubleshoot wiring to isolate fault
(TM 9–1230–476–20–2).

9–48 **SIGNAL NAME:** PYLON 1 MRTU TYPE II SERIAL DIGITAL ERROR
MEMORY LOCATION: 001653
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors left outboard missile launcher.
REMARKS: From PYLON 1 MRTU Type II to FCC.
PASS: If fourth digit on HOD is 0, go to paragraph 9–49.
FAIL: Location of fault: go to Chapter 8, paragraph 8–75.

9–49 **SIGNAL NAME:**   PYLON 1 MRTU TYPE II SERIAL DIGITAL ERROR
MEMORY LOCATION: 001665
MEMORY DATA BIT(S):   10   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors left outboard missile launcher.
REMARKS: From PYLON 1 MRTU Type II to FCC.
PASS: If fourth digit on HOD is 0, go to paragraph 9–50.
FAIL: Location of fault: go to Chapter 8, paragraph 8–75.

9–50 **SIGNAL NAME:**   PYLON 1 MRTU TYPE II SERIAL DIGITAL ERROR
MEMORY LOCATION: 001703
MEMORY DATA BIT(S):   10   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors left outboard missile launcher.
REMARKS: From PYLON 1 MRTU Type II to FCC.
PASS: If fourth digit on HOD is 0, go to paragraph 9–51.
FAIL: Location of fault: go to Chapter 8, paragraph 8–75.

9–51 **SIGNAL NAME:**   PYLON 1 MRTU TYPE II SERIAL DIGITAL ERROR
MEMORY LOCATION: 001716
MEMORY DATA BIT(S):   10   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors left outboard missile launcher.
REMARKS: From PYLON 1 MRTU Type II to FCC.
PASS: If fourth digit on HOD is 0, replace FCC (TM 9–1230–476–20–1).
FAIL: Location of fault: go to Chapter 8, paragraph 8–75.

9–52 **SIGNAL NAME:**   PYLON 2 MRTU TYPE II STATUS WORD TERMINAL FLAG
MEMORY LOCATION: 001717
MEMORY DATA BIT(S):   19   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates PASS or FAIL status of MRTU internal self–tests.
REMARKS: From PYLON 2 MRTU Type II to FCC.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 9–60.
FAIL: Location of fault: go to paragraph 9–53.

9–53 **SIGNAL NAME:**   PYLON 2 MRTU TYPE II STATUS WORD BBC STATUS BIT
MEMORY LOCATION: 001717
MEMORY DATA BIT(S):   18   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates self–test status of the BBC.
REMARKS: From PYLON 2 MRTU Type II to FCC.
PASS: If first digit on HOD is 2 or 6, go to paragraph 9–54.
FAIL: Location of fault: **MUX L PYL INBD** circuit breaker, wiring from **MUX L PYL INBD** circuit
         breaker to PYLON 2 MRTU, PYLON 2 MRTU. Troubleshoot wiring to isolate fault
         (TM 9–1230–476–20–2).

9–54 **SIGNAL NAME:** PYLON 2 MRTU TYPE II STATUS WORD OUTPUT CLEAR
MEMORY LOCATION: 001717
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates all MRTU outputs are cleared.
REMARKS: From PYLON 2 MRTU Type II to FCC.
PASS: If first digit on HOD is 6, go to paragraph 9–55.
FAIL: Location of fault: **MUX L PYL INBD** circuit breaker, wiring from **MUX L PYL INBD** circuit breaker to PYLON 2 MRTU, PYLON 2 MRTU. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

9–55 **SIGNAL NAME:** PYLON 2 MRTU TYPE II STATUS DISCRETE OUTPUT BIT
MEMORY LOCATION: 001717
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates self–test status of 5 VDC discrete outputs.
REMARKS: From PYLON 2 MRTU Type II to FCC.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 9–56.
FAIL: Location of fault: **MUX L PYL INBD** circuit breaker, wiring from **MUX L PYL INBD** circuit breaker to PYLON 2 MRTU, PYLON 2 MRTU. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

9–56 **SIGNAL NAME:** PYLON 2 MRTU TYPE II STATUS DC ANALOG OUTPUT BIT
MEMORY LOCATION: 001717
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates state of output DC analog circuits.
REMARKS: From PYLON 2 MRTU Type II to FCC.
PASS: If second digit on HOD is 3 or 7, go to paragraph 9–57.
FAIL: Location of fault: **MUX L PYL INBD** circuit breaker, wiring from **MUX L PYL INBD** circuit breaker to PYLON 2 MRTU, PYLON 2 MRTU. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

9–57 **SIGNAL NAME:** PYLON 2 MRTU TYPE II INPUT BIT STATUS
MEMORY LOCATION: 001717
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of turn–on test of input circuitry.
REMARKS: From PYLON 2 MRTU Type II to FCC.
PASS: If second digit on HOD is 7, go to paragraph 9–58.
FAIL: Location of fault: **MUX L PYL INBD** circuit breaker, wiring from **MUX L PYL INBD** circuit breaker to PYLON 2 MRTU, PYLON 2 MRTU. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

9–58 **SIGNAL NAME:** PYLON 2 MRTU TYPE II A/D BIT STATUS
MEMORY LOCATION: 001717
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates self–test status of analog to digital converter.
REMARKS: From PYLON 2 MRTU Type II to FCC.
PASS: If third digit on HOD is 1, go to paragraph 9–59.
FAIL: Location of fault: **MUX L PYL INBD** circuit breaker, wiring from **MUX L PYL INBD** circuit breaker to PYLON 2 MRTU, PYLON 2 MRTU. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

9–59 **SIGNAL NAME:** PYLON 2 MRTU TYPE II SERIAL DIGITAL ERROR
MEMORY LOCATION: 001717
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors left inboard missile launcher.
REMARKS: From PYLON 2 MRTU Type II to FCC.
PASS: If fourth digit on HOD is 0, go to paragraph 9–60.
FAIL: Location of fault: go to Chapter 8, paragraph 8–332.

9–60 **SIGNAL NAME:** PYLON 2 MRTU TYPE II SERIAL DIGITAL ERROR
MEMORY LOCATION: 001732
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors left inboard missile launcher.
REMARKS: From PYLON 2 MRTU Type II to FCC.
PASS: If fourth digit on HOD is 0, go to paragraph 9–61.
FAIL: Location of fault: go to Chapter 8, paragraph 8–332.

9–61 **SIGNAL NAME:** PYLON 2 MRTU TYPE II SERIAL DIGITAL ERROR
MEMORY LOCATION: 001750
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors left inboard missile launcher.
REMARKS: From PYLON 2 MRTU Type II to FCC.
PASS: If fourth digit on HOD is 0, go to paragraph 9–62.
FAIL: Location of fault: go to Chapter 8, paragraph 8–332.

9–62 **SIGNAL NAME:** PYLON 2 MRTU TYPE II SERIAL DIGITAL ERROR
MEMORY LOCATION: 001763
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors left inboard missile launcher.
REMARKS: From PYLON 2 MRTU Type II to FCC.
PASS: If fourth digit on HOD is 0, replace FCC (TM 9–1230–476–20–1).
FAIL: Location of fault: go to Chapter 8, paragraph 8–332.

9–63   **SIGNAL NAME:**   PYLON 3 MRTU TYPE II STATUS WORD TERMINAL FLAG
       MEMORY LOCATION: 001765
       MEMORY DATA BIT(S):   19   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Indicates PASS or FAIL status of MRTU internal self–tests.
       REMARKS: From PYLON 3 MRTU Type II to FCC.
       PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 9–71.
       FAIL: Location of fault: go to paragraph 9–64.

9–64   **SIGNAL NAME:**   PYLON 3 MRTU TYPE II STATUS WORD BBC STATUS BIT
       MEMORY LOCATION: 001765
       MEMORY DATA BIT(S):   18   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Indicates self–test status of the BBC.
       REMARKS: From PYLON 3 MRTU Type II to FCC.
       PASS: If first digit on HOD is 2 or 6, go to paragraph 9–65.
       FAIL: Location of fault: **MUX R PYL INBD** circuit breaker, wiring from **MUX R PYL INBD** circuit
               breaker to PYLON 3 MRTU, PYLON 3 MRTU. Troubleshoot wiring to isolate fault
               (TM 9–1230–476–20–2).

9–65   **SIGNAL NAME:**   PYLON 3 MRTU TYPE II STATUS WORD OUTPUT CLEAR
       MEMORY LOCATION: 001765
       MEMORY DATA BIT(S):   17   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Indicates all MRTU outputs are cleared.
       REMARKS: From PYLON 3 MRTU Type II to FCC.
       PASS: If first digit on HOD is 6, go to paragraph 9–66.
       FAIL: Location of fault: **MUX R PYL INBD** circuit breaker, wiring from **MUX R PYL INBD** circuit
               breaker to PYLON 3 MRTU, PYLON 3 MRTU. Troubleshoot wiring to isolate fault
               (TM 9–1230–476–20–2).

9–66   **SIGNAL NAME:**   PYLON 3 MRTU TYPE II STATUS DISCRETE OUTPUT BIT
       MEMORY LOCATION: 001765
       MEMORY DATA BIT(S):   16   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Indicates self–test status of 5 VDC discrete outputs.
       REMARKS: From PYLON 2 MRTU Type II to FCC.
       PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 9–67.
       FAIL: Location of fault: **MUX R PYL INBD** circuit breaker, wiring from **MUX R PYL INBD** circuit
               breaker to PYLON 3 MRTU, PYLON 3 MRTU. Troubleshoot wiring to isolate fault
               (TM 9–1230–476–20–2).

9–67   **SIGNAL NAME:**   PYLON 3 MRTU TYPE II STATUS DC ANALOG OUTPUT BIT
       MEMORY LOCATION: 001765
       MEMORY DATA BIT(S):   15   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Indicates state of output DC analog circuits.
       REMARKS: From PYLON 3 MRTU Type II to FCC.
       PASS: If second digit on HOD is 3 or 7, go to paragraph 9–68.
       FAIL: Location of fault: **MUX R PYL INBD** circuit breaker, wiring from **MUX R PYL INBD** circuit
               breaker to PYLON 3 MRTU, PYLON 3 MRTU. Troubleshoot wiring to isolate fault
               (TM 9–1230–476–20–2).

9–68 **SIGNAL NAME:** PYLON 3 MRTU TYPE II INPUT BIT STATUS
   MEMORY LOCATION: 001765
   MEMORY DATA BIT(S): 14 (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Indicates status of turn–on test of input circuitry.
   REMARKS: From PYLON 3 MRTU Type II to FCC.
   PASS: If second digit on HOD is 7, go to paragraph 9–69.
   FAIL: Location of fault: **MUX R PYL INBD** circuit breaker, wiring from **MUX R PYL INBD** circuit
      breaker to PYLON 3 MRTU, PYLON 3 MRTU. Troubleshoot wiring to isolate fault
      (TM 9–1230–476–20–2).

9–69 **SIGNAL NAME:** PYLON 3 MRTU TYPE II A/D BIT STATUS
   MEMORY LOCATION: 001765
   MEMORY DATA BIT(S): 13 (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Indicates self–test status of analog to digital converter.
   REMARKS: From PYLON 3 MRTU Type II to FCC.
   PASS: If third digit on HOD is 1, go to paragraph 9–70.
   FAIL: Location of fault: **MUX R PYL INBD** circuit breaker, wiring from **MUX R PYL INBD** circuit
      breaker to PYLON 3 MRTU, PYLON 3 MRTU. Troubleshoot wiring to isolate fault
      (TM 9–1230–476–20–2).

9–70 **SIGNAL NAME:** PYLON 3 MRTU TYPE II SERIAL DIGITAL ERROR
   MEMORY LOCATION: 001765
   MEMORY DATA BIT(S): 10 (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Monitors right inboard missile launcher.
   REMARKS: From PYLON 3 MRTU Type II to FCC.
   PASS: If fourth digit on HOD is 0, go to paragraph 9–71.
   FAIL: Location of fault: go to Chapter 8, paragraph 8–589.

9–71 **SIGNAL NAME:** PYLON 3 MRTU TYPE II SERIAL DIGITAL ERROR
   MEMORY LOCATION: 001777
   MEMORY DATA BIT(S): 10 (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Monitors right inboard missile launcher.
   REMARKS: From PYLON 3 MRTU Type II to FCC.
   PASS: If fourth digit on HOD is 0, go to paragraph 9–72.
   FAIL: Location of fault: go to Chapter 8, paragraph 8–589.

9–72 **SIGNAL NAME:** PYLON 3 MRTU TYPE II SERIAL DIGITAL ERROR
   MEMORY LOCATION: 002015
   MEMORY DATA BIT(S): 10 (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Monitors right inboard missile launcher.
   REMARKS: From PYLON 3 MRTU Type II to FCC.
   PASS: If fourth digit on HOD is 0, go to paragraph 9–73.
   FAIL: Location of fault: go to Chapter 8, paragraph 8–589.

9–73 **SIGNAL NAME:**   PYLON 3 MRTU TYPE II SERIAL DIGITAL ERROR
MEMORY LOCATION: 002030
MEMORY DATA BIT(S):   10   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors right inboard missile launcher.
REMARKS: From PYLON 3 MRTU Type II to FCC.
PASS: If fourth digit on HOD is 0, replace FCC (TM 9–1230–476–20–1).
FAIL: Location of fault: go to Chapter 8, paragraph 8–589.

9–74 **SIGNAL NAME:**   PYLON 4 MRTU TYPE II STATUS WORD TERMINAL FLAG
MEMORY LOCATION: 002032
MEMORY DATA BIT(S):   19   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates PASS or FAIL status of MRTU internal self–tests.
REMARKS: From PYLON 4 MRTU Type II to FCC.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 9–82.
FAIL: Location of fault: go to paragraph 9–75.

9–75 **SIGNAL NAME:**   PYLON 4 MRTU TYPE II STATUS WORD BBC STATUS BIT
MEMORY LOCATION: 002032
MEMORY DATA BIT(S):   18   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates self–test status of the BBC.
REMARKS: From PYLON 4 MRTU Type II to FCC.
PASS: If first digit on HOD is 2 or 6, go to paragraph 9–76.
FAIL: Location of fault: **MUX R PYL OUTBD** circuit breaker, wiring from **MUX R PYL OUTBD** circuit
        breaker to PYLON 4 MRTU, PYLON 4 MRTU. Troubleshoot wiring to isolate fault
        (TM 9–1230–476–20–2).

9–76 **SIGNAL NAME:**   PYLON 4 MRTU TYPE II STATUS WORD OUTPUT CLEAR
MEMORY LOCATION: 002032
MEMORY DATA BIT(S):   17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates all MRTU outputs are cleared.
REMARKS: From PYLON 4 MRTU Type II to FCC.
PASS: If first digit on HOD is 6, go to paragraph 9–77.
FAIL: Location of fault: **MUX R PYL OUTBD** circuit breaker, wiring from **MUX R PYL OUTBD** circuit
        breaker to PYLON 4 MRTU, PYLON 4 MRTU. Troubleshoot wiring to isolate fault
        (TM 9–1230–476–20–2).

9–77 **SIGNAL NAME:**   PYLON 4 MRTU TYPE II STATUS DISCRETE OUTPUT BIT
MEMORY LOCATION: 002032
MEMORY DATA BIT(S):   16   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates self–test status of 5 VDC discrete outputs.
REMARKS: From PYLON 4 MRTU Type II to FCC.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 9–78.
FAIL: Location of fault: **MUX R PYL OUTBD** circuit breaker, wiring from **MUX R PYL OUTBD** circuit
        breaker to PYLON 4 MRTU, PYLON 4 MRTU. Troubleshoot wiring to isolate fault
        (TM 9–1230–476–20–2).

9–78   **SIGNAL NAME:**   PYLON 4 MRTU TYPE II STATUS DC ANALOG OUTPUT BIT
       MEMORY LOCATION: 002032
       MEMORY DATA BIT(S):   15   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Indicates state of output DC analog circuits.
       REMARKS: From PYLON 4 MRTU Type II to FCC.
       PASS: If second digit on HOD is 3 or 7, go to paragraph 9–79.
       FAIL: Location of fault: **MUX R PYL OUTBD** circuit breaker, wiring from **MUX R PYL OUTBD** circuit
               breaker to PYLON 4 MRTU, PYLON 4 MRTU. Troubleshoot wiring to isolate fault
               (TM 9–1230–476–20–2).

9–79   **SIGNAL NAME:**   PYLON 4 MRTU TYPE II INPUT BIT STATUS
       MEMORY LOCATION: 002032
       MEMORY DATA BIT(S):   14   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Indicates status of turn–on test of input circuitry.
       REMARKS: From PYLON 4 MRTU Type II to FCC.
       PASS: If second digit on HOD is 7, go to paragraph 9–80.
       FAIL: Location of fault: **MUX R PYL OUTBD** circuit breaker, wiring from **MUX R PYL OUTBD** circuit
               breaker to PYLON 4 MRTU, PYLON 4 MRTU. Troubleshoot wiring to isolate fault
               (TM 9–1230–476–20–2).

9–80   **SIGNAL NAME:**   PYLON 4 MRTU TYPE II A/D BIT STATUS
       MEMORY LOCATION: 002032
       MEMORY DATA BIT(S):   13   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Indicates self–test status of analog to digital converter.
       REMARKS: From PYLON 3 MRTU Type II to FCC.
       PASS: If third digit on HOD is 1, go to paragraph 9–81.
       FAIL: Location of fault: **MUX R PYL OUTBD** circuit breaker, wiring from **MUX R PYL OUTBD** circuit
               breaker to PYLON 4 MRTU, PYLON 4 MRTU. Troubleshoot wiring to isolate fault
               (TM 9–1230–476–20–2).

9–81   **SIGNAL NAME:**   PYLON 4 MRTU TYPE II SERIAL DIGITAL ERROR
       MEMORY LOCATION: 002030
       MEMORY DATA BIT(S):   10   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Monitors right inboard missile launcher.
       REMARKS: From PYLON 4 MRTU Type II to FCC.
       PASS: If fourth digit on HOD is 0, go to paragraph 9–82.
       FAIL: Location of fault: go to Chapter 8, paragraph 8–846.

9–82   **SIGNAL NAME:**   PYLON 4 MRTU TYPE II SERIAL DIGITAL ERROR
       MEMORY LOCATION: 002044
       MEMORY DATA BIT(S):   10   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Monitors right outboard missile launcher.
       REMARKS: From PYLON 4 MRTU Type II to FCC.
       PASS: If fourth digit on HOD is 0, go to paragraph 9–83.
       FAIL: Location of fault: go to Chapter 8, paragraph 8–846.

9–83 SIGNAL NAME: PYLON 4 MRTU TYPE II SERIAL DIGITAL ERROR
     MEMORY LOCATION: 002062
     MEMORY DATA BIT(S): 10 (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Monitors right outboard missile launcher.
     REMARKS: From PYLON 4 MRTU Type II to FCC.
     PASS: If fourth digit on HOD is 0, go to paragraph 9–84.
     FAIL: Location of fault: go to Chapter 8, paragraph 8–846.

9–84 SIGNAL NAME: PYLON 4 MRTU TYPE II SERIAL DIGITAL ERROR
     MEMORY LOCATION: 002075
     MEMORY DATA BIT(S): 10 (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Monitors right outboard missile launcher.
     REMARKS: From PYLON 4 MRTU Type II to FCC.
     PASS: If fourth digit on HOD is 0, replace FCC (TM 9–1230–476–20–1).
     FAIL: Location of fault: go to Chapter 8, paragraph 8–846.

9–85 SIGNAL NAME: FAIL HIS (ACY)
     MEMORY LOCATION: 000220
     MEMORY DATA BIT(S): 4–19 (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Self–test failure flag (history 1).
     REMARKS: Internal FCC self–test.
     PASS: If all digits on HOD are zero, go to paragraph 9–86.
     FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

9–86 SIGNAL NAME: FAIL HIS 2 (ACY)
     MEMORY LOCATION: 000221
     MEMORY DATA BIT(S): 4–19 (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Self test failure flag (history 2).
     REMARKS: Internal FCC self–test.
     PASS: If all digits on HOD are zero, refer to TM 9–1230–476–20–2.
     FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

9–87 SIGNAL NAME: FAIL HIS (ACZ)
     MEMORY LOCATION: 000223
     MEMORY DATA BIT(S): 4–19 (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Self–test failure flag (history 1).
     REMARKS: Internal FCC self–test.
     PASS: If all digits on HOD are zero, go to paragraph 9–88.
     FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

9–88 **SIGNAL NAME:** FAIL HIS 2 (ACZ)
MEMORY LOCATION: 000224
MEMORY DATA BIT(S): 4–19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Self test failure flag (history 2).
REMARKS: Internal FCC self–test.
PASS: If all digits on HOD are zero, refer to TM 9–1230–476–20–2.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

CHAPTER 10

PILOT NIGHT VISION SENSOR (PNVS) SYSTEM

MULTIPLEX READ CODES

FAILURE SYMPTOM INDEX

Symptom	Refer to paragraph
PNVS CAUTION AND WARNING INDICATOR FLASHING	10–1
PNVS NO–GO	10–9
PNVS WILL NOT RUN BIT	10–10
PNVS SERVO MODULE NO–GO	10–11
PNVS VIDEO NO–GO	10–12
PNVS NOT COOLED	10–13
NO PNVS VIDEO	10–14
ACM INOPERATIVE	10–24
POLARITY INOPERATIVE	10–27
PNVS TURRET DOES NOT GO TO FIXED FORWARD	10–30
LIMITS MESSAGE DOES NOT APPEAR WHEN LIMITS ARE EXCEEDED ..	10–31
DIRECT DOES NOT APPEAR WHEN TEU FAILS	10–33
TURRET DOES NOT MOVE OR IS INACCURATE IN PNVS DIRECT	10–34
TURRET DOES NOT MOVE OR IS INACCURATE	10–36
CANNOT SELECT CUE MODE	10–42
PNVS ANTI ICE INOPERATIVE	10–43
PNVS BORESIGHT NO–GO	10–45 (ACY) 10–47 (ACZ)
PNVS BORESIGHT NO–GO RAM CHECKSUM	10–45 (ACY) 10–47 (ACZ)

Personnel Required:

(2)

References:

TM 1–1270–476–T
TM 1–1520–238–T–1
TM 1–1520–238–T–7
TM 1–1520–238–T–8
TM 1–5855–265–T
TM 9–1230–476–20–2

Equipment Conditions:

Ref	Condition
TM 1–5855–265–T	PILOT NIGHT VISION SENSOR – MAINTENANCE OPERATIONAL CHECK in progress

NOTE

- All multiplex read code responses are read from right to left.
- Multiplex read codes must be used in conjunction with applicable Maintenance Operational Check (MOC) in progress.
- Multiplex read codes are observed on the HOD (ADC) or CDU (ADD).

MULTIPLEX READ CODE INTERPRETATIONS

10–1 **SIGNAL NAME:**   PILOT PNVS LIGHT
MEMORY LOCATION: 001632
MEMORY DATA BIT(S):   17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors PNVS pilot caution/warning panel light.
REMARKS: From FCC through right–hand (RH) forward avionics bay (FAB) multiplex remote terminal
unit (MRTU) Type I to pilot caution/warning panel.
PASS: Location of fault if first digit on heads out display (HOD) is 0, 1, 2,or 3: pilot caution/warning
panel, wiring from pilot caution/warning panel to RH FAB MRTU Type I, RH FAB MRTU Type
I. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–8).
FAIL: Location of fault: go to paragraph 10–2.

10–2 **SIGNAL NAME:**   PNVS PWR SW (AAD)
MEMORY LOCATION: 001555
MEMORY DATA BIT(S):   19   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors PNVS power switch on/off condition.
REMARKS: From pilot fire control panel (FCP) through RH FAB MRTU Type I to FCC.
PASS: If first digit on HOD is 1, 3, 5, or 7, go to paragraph 10–3.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to RH FAB MRTU Type I, RH FAB MRTU
Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

10–3 **SIGNAL NAME:**   PNVS STBY TO PEU
MEMORY LOCATION: 001632
MEMORY DATA BIT(S):   4   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors PNVS switch on/off condition.
REMARKS: From FCC through RH FAB MRTU Type I to PNVS electronic unit (PEU).
PASS: If sixth digit on HOD is 1, go to paragraph 10–4.
FAIL: Location of fault: RH FAB MRTU Type I, wiring from RH FAB MRTU Type I to PEU, PEU.
Troubleshoot wiring to isolate fault (TM 1–5855–265–T).

10–4 **SIGNAL NAME:**   PLT SIGHT SEL SW
MEMORY LOCATION: 001122
MEMORY DATA BIT(S):   4–7   (HEX)
CONDITION: If sixth digit displayed on HOD is 1 and fifth digit is 3=HMD
If sixth digit displayed on HOD is 1 and fifth digit is 5=PNVS
If sixth digit displayed on HOD is 1 and fifth digit is 6=TADS
If sixth digit displayed on HOD is 1 and fifth digit is 7=STBY
SIGNAL FUNCTION: Indicates pilot selected sight sensor.
REMARKS: From pilot FCP through left–hand (LH) FAB MRTU Type I to FCC.
PASS: If CONDITION corresponds to selected switch mode, go to paragraph 10–5.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type
I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

10–5 SIGNAL NAME: CPG SIGHT SEL SW
　　　MEMORY LOCATION: 001074
　　　MEMORY DATA BIT(S): 4–6   (OCTAL)
　　　CONDITION: If the fifth digit displayed on HOD is 0 or 1=HMD/TADS (Chapter 15, paragraph 15–5)
　　　　　　　　If the fifth digit displayed on HOD is 2 or 3=TADS (Chapter 15, paragraph 15–5)
　　　　　　　　If the sixth digit displayed on HOD is 1=NVS (Chapter 10, paragraph 10–6)
　　　　　　　　If the sixth digit displayed on HOD is 1 and the fifth digit displayed on HOD is 2 or 3
　　　　　　　　=HMD (Chapter 7, paragraph 7–56)
　　　SIGNAL FUNCTION: Selects copilot/gunner (CPG) sight sensor.
　　　REMARKS: From CPG FCP through LH FAB MRTU Type I to FCC.
　　　PASS: If CONDITION displayed on HOD corresponds to CPG SIGHT SEL switch position, refer to
　　　　　　appropriate chapter and paragraph as listed under CONDITION.
　　　FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU
　　　　　　Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

10–6 SIGNAL NAME: PNVS OPERATE TO PEU
　　　MEMORY LOCATION: 001632
　　　MEMORY DATA BIT(S): 5   (BINARY)
　　　CONDITION: (None)
　　　SIGNAL FUNCTION: Selects PNVS as line of sight (LOS) sensor.
　　　REMARKS: From FCC through RH FAB MRTU Type I to PEU.
　　　PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 10–7.
　　　FAIL: Location of fault: RH FAB MRTU Type I, wiring from RH FAB MRTU Type I to PEU, PEU.
　　　　　　Troubleshoot wiring to isolate fault (TM 1–5855–265–T).

10–7 SIGNAL NAME: PNVS STBY TPS (ACY) PNVS STBY CMD (ACZ)　　　　　　　■
　　　MEMORY LOCATION: 001220
　　　MEMORY DATA BIT(S): 17   (BINARY)
　　　CONDITION: (None)
　　　SIGNAL FUNCTION: Indicates pilot has turned on PNVS.
　　　REMARKS: From FCC through LH FAB MRTU Type I to TADS power supply (TPS).
　　　PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 10–8.
　　　FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TPS, TPS.
　　　　　　Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

10–8 SIGNAL NAME: PNVS OPERATE TO TPS (ACY) PNVS OPERATE CMD (ACZ)　　　■
　　　MEMORY LOCATION: 001220
　　　MEMORY DATA BIT(S): 13   (BINARY)
　　　CONDITION: (None)
　　　SIGNAL FUNCTION: Indicates that either CPG or pilot has selected PNVS as sight sensor.
　　　REMARKS: From FCC through LH FAB MRTU Type I to TPS.
　　　PASS: Location of fault if third digit on HOD is 1, 3, 5, or 7: TPS, wiring from TPS to TEU, TEU, wiring
　　　　　　from TEU to PEU, PEU. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).
　　　FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TPS, TPS.
　　　　　　Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

10–9 **SIGNAL NAME:** PNVS SYSTEM STATUS
MEMORY LOCATION: 001136
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates some part of PNVS system has failed.
REMARKS: From TEU through LH FAB MRTU Type I to FCC.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 10–14.
FAIL: Location of fault: set DEK to FD/LS and go to next failure symptom message paragraph; if no FD/LS message appears, perform maintenance FD/LS (TM 1–1520–238–T–1) and refer to next failure symptom message paragraph.

10–10 **SIGNAL NAME:** BIT ID TO TEU (ACY) BIT ID CMD (ACZ)
MEMORY LOCATION: 001246
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: If fifth digit displayed on HOD is 0, 1, 2, or 3=TADS
If fifth digit displayed on HOD is 4, 5, 6, or 7=PNVS
SIGNAL FUNCTION: Indicates either TADS or PNVS built–in–test (BIT).
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 10–14.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU. Troubleshoot wiring to isolate fault (TM 1–5855–265–T).

10–11 **SIGNAL NAME:** PNVS SERVO STATUS
MEMORY LOCATION: 001136
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates servo subsystem has failed.
REMARKS: From TEU through LH FAB MRTU Type I to FCC.
PASS: Location of fault if first digit on HOD is 4, 5, 6, or 7: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).
FAIL: Location of fault: servo amplifier, wiring from servo amplifier to TEU,TEU, wiring from TEU to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 1–5855–265–T).

10–12 **SIGNAL NAME:** PNVS VIDEO STATUS
MEMORY LOCATION: 001136
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates PNVS video has failed.
REMARKS: From TEU through LH FAB MRTU Type I to FCC.
PASS: Location of fault if first digit on HOD is 2, 3, 6, or 7: FCC, symbol generator, wiring from symbol generator to VDU. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).
FAIL: Location of fault: PEU, wiring from PEU to TEU, TEU, wiring from TEU to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

10–13 **SIGNAL NAME:** PNVS COOLED
 MEMORY LOCATION: 000411
 MEMORY DATA BIT(S): 4–19 (SCALAR)
 CONDITION: Monitor HOD; memory location response is positive when not cooled and negative when cooled.
 SIGNAL FUNCTION: Monitors cooler/dewar.
 REMARKS: From PNVS through CPG MRTU Type III to FCC.
 PASS: If CONDITION corresponds to proper memory location response, go to Chapter 15, paragraph 15–115.
 FAIL: Location of fault: cooler dewar assembly, PNVS, wiring from PNVS to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 1–5855–265–T).

10–14 **SIGNAL NAME:** PNVS VIDEO SW
 MEMORY LOCATION: 000412
 MEMORY DATA BIT(S): 12 (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Indicates PNVS CPG selection.
 REMARKS: From ORT through CPG MRTU Type III to FCC.
 PASS: If third digit on HOD is 0, 1, 4, or 5, go to paragraph 10–15.
 FAIL: Location of fault: ORT, wiring from ORT to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

10–15 **SIGNAL NAME:** CPG COLLECTIVE TADS/PNVS SELECT 1 (ACY) TADS PNVS SW1 (ACZ)
 MEMORY LOCATION: 000414
 MEMORY DATA BIT(S): 7 (BINARY)
 CONDITION: If fifth digit displayed on HOD is 0, 2, 4, or 6=TADS
   If fifth digit displayed on HOD is 1, 3, 5, or 7=PNVS
 SIGNAL FUNCTION: Indicates TADS/PNVS video selection.
 REMARKS: From CPG collective through CPG MRTU Type III to FCC.
 PASS: If CONDITION corresponds to selected switch position, go to paragraph 10–16.
 FAIL: Location of fault: CPG collective, wiring from CPG collective to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

10–16 **SIGNAL NAME:** CPG COLLECTIVE TADS/PNVS SELECT 2 (ACY) TADS PNVS SW2 (ACZ)
 MEMORY LOCATION: 000414
 MEMORY DATA BIT(S): 8 (BINARY)
 CONDITION: If fifth digit displayed on HOD is 0, 2, 4, or 6=PNVS
   If fifth digit displayed on HOD is 1, 3, 5, or 7=TADS
 SIGNAL FUNCTION: Indicates PNVS/TADS selection.
 REMARKS: From CPG collective through CPG MRTU Type III to FCC.
 PASS: If CONDITION corresponds to selected switch position, go to paragraph 10–17.
 FAIL: Location of fault: CPG collective, wiring from CPG collective to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

10–17 **SIGNAL NAME:** ORT PNVS VIDEO SELECT (ACY) PNVS VIDEO SW TST (ACZ)
MEMORY LOCATION: 001252
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates CPG has selected PNVS video.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If sixth digit on HOD is 1, go to paragraph 10–18.
FAIL: Location of fault: ORT, wiring from ORT to FCC, LH FAB MRTU Type I,wiring from LH FAB
MRTU Type I to TEU, TEU. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

10–18 **SIGNAL NAME:** PLT FCP LEVEL ADJ
MEMORY LOCATION: 001077
MEMORY DATA BIT(S): 4–19 (SCALAR)
CONDITION: Monitor HOD while increasing level; memory location response should increase when
level is increased and decrease when level is decreased.
SIGNAL FUNCTION: Adjusts forward looking infrared radar (FLIR) video.
REMARKS: From pilot fire control panel (FCP) through LH FAB MRTU Type I to FCC.
PASS: If CONDITION has been met, go to paragraph 10–19.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type
I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

10–19 **SIGNAL NAME:** PLT FCP GAIN ADJ
MEMORY LOCATION: 001100
MEMORY DATA BIT(S): 4–19 (SCALAR)
CONDITION: Monitor HOD while increasing gain; memory location response should increase when
gain is increased and decrease when gain is decreased.
SIGNAL FUNCTION: Adjusts FLIR gain.
REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
PASS: If CONDITION has been met, go to paragraph 10–20.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type
I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

10–20 **SIGNAL NAME:** PLT FCP BRIGHT ADJ
MEMORY LOCATION: 001103
MEMORY DATA BIT(S): 4–19 (SCALAR)
CONDITION: Monitor HOD while increasing brightness; memory location response should increase
when brightness is increased and decrease when when brightness is decreased.
SIGNAL FUNCTION: Adjusts video.
REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
PASS: If CONDITION has been met, go to paragraph 10–21.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type
I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

10–21 **SIGNAL NAME:** PLT FCP CONTRAST ADJ
MEMORY LOCATION: 001104
MEMORY DATA BIT(S): 4–19 (SCALAR)
CONDITION: Monitor HOD while increasing contrast; memory location response should increase when contrast is increased and decrease when when contrast is decreased.
SIGNAL FUNCTION: Adjusts contrast.
REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
PASS: If CONDITION has been met, go to paragraph 10–22.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

10–22 **SIGNAL NAME:** GAIN TO PNVS (AAD) PNVS GAIN CMD (ACZ) ▮
MEMORY LOCATION: 001624
MEMORY DATA BIT(S): 4–19 (SCALAR)
CONDITION: Monitor HOD while increasing gain; memory location response should increase when gain is increased and decrease when when gain is decreased.
SIGNAL FUNCTION: Controls gain of FLIR.
REMARKS: From FCC through RH FAB MRTU Type I to TADS/PNVS turret assembly.
PASS: If CONDITION has been met, go to paragraph 10–23.
FAIL: Location of fault: RH FAB MRTU Type I, wiring from RH FAB MRTU Type I through RH FAB crossover to TADS/PNVS turret assembly. Troubleshoot wiring to isolate fault (TM 1–5855–265–T).

10–23 **SIGNAL NAME:** LEVEL TO PNVS (AAD) PNVS LEVEL CMD (ACZ) ▮
MEMORY LOCATION: 001625
MEMORY DATA BIT(S): 4–19 (SCALAR)
CONDITION: Monitor HOD while increasing level; memory location response should increase when level is increased and decrease when level is decreased.
SIGNAL FUNCTION: Controls brightness of FLIR.
REMARKS: From FCC through RH FAB MRTU Type I to TADS/PNVS turret assembly.
PASS: If CONDITION has been met , replace PEU (TM 11–5855–265–20–1).
FAIL: Location of fault: RH FAB MRTU Type I, wiring from RH FAB MRTU Type I through RH FAB crossover to TADS/PNVS turret assembly. Troubleshoot wiring to isolate fault (TM 1–5855–265–T).

10–24 **SIGNAL NAME:** PLT FCP ACM SW
MEMORY LOCATION: 001117
MEMORY DATA BIT(S): 9 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Selects optimum gain of night vision sensor.
REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
PASS: If fourth digit on HOD is 0, 1, 4, or 5, go to paragraph 10–25.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

10–25 **SIGNAL NAME:**   ORT ACM SWITCH (ACY) CPG ACM SW (ACZ)
   MEMORY LOCATION: 000414
   MEMORY DATA BIT(S):   5   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Selects optimum gain of night vision sensor.
   REMARKS: From ORT through CPG MRTU Type III to FCC.
   PASS: If fifth digit on HOD is 0, 1, 2, or 3, go to paragraph 10–26.
   FAIL: Location of fault: ORT, wiring from ORT to CPG MRTU Type III, CPG MRTU Type III.
      Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

10–26 **SIGNAL NAME:**   PNVS ACM CONTROL (AAD) PNVS ACM CMD (ACZ)
   MEMORY LOCATION: 001627
   MEMORY DATA BIT(S):   10   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Indicates selection of automatic control module (ACM) mode.
   REMARKS: From FCC through RH FAB MRTU Type I to TADS/PNVS turret assembly.
   PASS: If fourth digit on HOD is 1, 3, 5, or 7, replace PEU (TM 1–5855–265–T).
   FAIL: Location of fault: RH FAB MRTU Type I, wiring from RH FAB MRTU Type I through RH FAB
      crossover to TADS/PNVS turret assembly. Troubleshoot wiring to isolate fault
      (TM 1–5855–265–T).

10–27 **SIGNAL NAME:**   CPG PLRT SWITCH (ACY) ORT PLRT SW (ACZ)
   MEMORY LOCATION: 000414
   MEMORY DATA BIT(S):   11   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Selects polarity mode.
   REMARKS: From CPG collective through CPG MRTU Type III to FCC.
   PASS: If third digit on HOD is 0, 1, 2, or 3, go to paragraph 10–28.
   FAIL: Location of fault: CPG collective, wiring from CPG collective to CPG MRTU Type III, CPG
      MRTU Type III. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

10–28 **SIGNAL NAME:**   PILOT PLRT SWITCH
   MEMORY LOCATION: 001120
   MEMORY DATA BIT(S):   10   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Selects polarity mode.
   REMARKS: From pilot collective through LH FAB MRTU Type I to FCC.
   PASS: If fourth digit on HOD is 0, 2, 4, or 6, go to paragraph 10–29.
   FAIL: Location of fault: pilot collective, wiring from pilot collective to LH FAB MRTU Type I, LH FAB
      MRTU Type I. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

10–29 **SIGNAL NAME:**   PNVS POLARITY CONTROL (AAD) PNVS PLRT CMD (ACZ)
   MEMORY LOCATION: 001627
   MEMORY DATA BIT(S):   9   (BINARY)
   CONDITION: If fourth digit displayed on HOD is 0, 1, 4, or 5=BLACK
         If fourth digit displayed on HOD is 2, 3, 6, or 7=WHITE
   SIGNAL FUNCTION: Selects polarity.
   REMARKS: From FCC through RH FAB MRTU Type I to TADS/PNVS turret assembly.
   PASS: If CONDITION corresponds to correct polarity, troubleshoot PEU (TM 1–5855–265–T).
   FAIL: Location of fault: RH FAB MRTU Type I, wiring from RH FAB MRTU Type I through RH FAB
      crossover to TADS/PNVS turret assembly. Troubleshoot wiring to isolate fault
      (TM 1–5855–265–T).

10–30 **SIGNAL NAME:** PNVS FXD SW
MEMORY LOCATION: 001122
MEMORY DATA BIT(S): 9 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates PNVS is set to fixed forward.
REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
PASS: Location of fault if fourth digit on HOD is 0, 1, 4, or 5: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to pilot FCP, pilot FCP, turret assembly. Troubleshoot wiring to isolate fault (TM 1–5855–265–T).
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

10–31 **SIGNAL NAME:** PNVS ELEVATION LIMIT
MEMORY LOCATION: 001135
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates PNVS turret has been driven to upper or lower limits.
REMARKS: From TEU through LH FAB MRTU Type I to FCC.
PASS: If first digit on HOD is 0, 1, 4, or 5, go to paragraph 10–33.
FAIL: Location of fault: PNVS turret, TEU, wiring from TEU to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 1–5855–265–T).

10–32 **SIGNAL NAME:** PNVS AZIMUTH LIMIT
MEMORY LOCATION: 001135
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates PNVS has been driven to left or right limits.
REMARKS: From TEU through LH FAB MRTU Type I to FCC.
PASS: Location of fault if first digit on HOD is 1, 3, 5, or 7: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU. Troubleshoot wiring to isolate fault (TM 1–5855–265–T).
FAIL: Location of fault: PNVS turret, TEU, wiring from TEU to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 1–5855–265–T).

10–33 **SIGNAL NAME:** PNVS DIRECT COMMAND
MEMORY LOCATION: 001627
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Disengages TEU (emergency operation).
REMARKS: From FCC through RH FAB MRTU Type I to PEU.
PASS: Location of fault if sixth digit on HOD is 0: TEU, PEU, wiring from PEU to RH FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).
FAIL: Location of fault: PEU, RH FAB MRTU Type I, wiring from RH FAB MRTU Type I to PEU, PEU. Troubleshoot wiring to isolate fault (TM 1–5855–265–T).

10–34 **SIGNAL NAME:**   NEG SIN ELEVATION
MEMORY LOCATION: 001620
MEMORY DATA BIT(S):   4–19   (SCALAR)
CONDITION: Monitor HOD; memory location responses should indicate a negative downward and a positive upward.
SIGNAL FUNCTION: Used by PNVS in direct mode.
REMARKS: From FCC through RH FAB MRTU Type I to PEU.
PASS: If CONDITION corresponds to correct memory location responses, go to paragraph 10–36.
FAIL: Location of fault: RH FAB MRTU Type I, wiring from RH FAB MRTU Type I to PEU, PEU. Troubleshoot wiring to isolate fault (TM 1–5855–265–T).

10–35 **SIGNAL NAME:**   SINE AZIMUTH
MEMORY LOCATION: 001621
MEMORY DATA BIT(S):   4–19   (SCALAR)
CONDITION: Monitor HOD; memory location responses should indicate a negative response to the left and a positive response to the right.
SIGNAL FUNCTION: Used by PNVS in direct mode.
REMARKS: From FCC through RH FAB MRTU Type I to PEU.
PASS: Location of fault if CONDITION corresponds to correct memory location responses: turret assembly, PEU, wiring from PEU to RH FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 1–5855–265–T).
FAIL: Location of fault: RH FAB MRTU Type I, wiring from RH FAB MRTU Type I to PEU, PEU. Troubleshoot wiring to isolate fault (TM 1–5855–265–T).

10–36 **SIGNAL NAME:**   PNVS I DIR COS
MEMORY LOCATION: 001132
MEMORY DATA BIT(S):   4–19   (SCALAR)
CONDITION: Monitor PNVS I direction cosine signal polarity on HOD; memory response should increase and decrease with roll movement relative to PNVS fixed forward position (0).
SIGNAL FUNCTION: Contains roll LOS information.
REMARKS: From TEU through LH FAB MRTU Type I to FCC.
PASS: If CONDITION corresponds to correct memory location responses, go to paragraph 10–38.
FAIL: Location of fault: TEU, wiring from TEU to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

10–37 **SIGNAL NAME:**   PNVS J DIR COS
MEMORY LOCATION: 001133
MEMORY DATA BIT(S):   4–19   (SCALAR)
CONDITION: Monitor PNVS J direction cosine signal polarity on HOD as PNVS is moved up (+) or down (–) relative to PNVS fixed forward position (0).
SIGNAL FUNCTION: Contains azimuth LOS information.
REMARKS: From TEU through LH FAB MRTU Type I to FCC.
PASS: If CONDITION corresponds to correct memory location responses, go to paragraph 10–39.
FAIL: Location of fault: TEU, wiring from TEU to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

10–38 SIGNAL NAME: PNVS K DIR COS
MEMORY LOCATION: 001134
MEMORY DATA BIT(S): 4–19 (SCALAR)
CONDITION: Monitor PNVS K direction cosine signal polarity on HOD as PNVS lens assembly is moved forward (–) or backward (+) relative to PNVS focal plane (0).
SIGNAL FUNCTION: Contains pitch LOS information.
REMARKS: From TEU through LH FAB MRTU Type I to FCC.
PASS: If CONDITION corresponds to correct memory location response, go to paragraph 10–40.
FAIL: Location of fault: TEU, wiring from TEU to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

10–39 SIGNAL NAME: PNVS I DIR COS TO TEU
MEMORY LOCATION: 001233
MEMORY DATA BIT(S): 4–19 (SCALAR)
CONDITION: Monitor PNVS I direction cosine signal polarity on HOD; memory response should increase and decrease with roll movement relative to PNVS fixed forward position (0).
SIGNAL FUNCTION: Contains roll LOS information.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If CONDITION corresponds to correct memory location responses, go to paragraph 10–41.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU. Troubleshoot wiring to isolate fault (TM 1–5855–265–T).

10–40 SIGNAL NAME: PNVS J DIR COS TO TEU
MEMORY LOCATION: 001234
MEMORY DATA BIT(S): 4–19 (SCALAR)
CONDITION: Monitor PNVS J direction cosine signal polarity on HOD as PNVS is moved up (+) or down (–) relative to PNVS fixed forward position (0).
SIGNAL FUNCTION: Contains azimuth LOS information.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If CONDITION corresponds to correct memory location responses, go to paragraph 10–42.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to PEU, PEU. Troubleshoot wiring to isolate fault (TM 1–5855–265–T).

10–41 SIGNAL NAME: PNVS K DIR COS TO TEU
MEMORY LOCATION: 001235
MEMORY DATA BIT(S): 4–19 (SCALAR)
CONDITION: Monitor PNVS K direction cosine signal polarity on HOD as PNVS lens assembly is moved forward (–) or backward (+) relative to PNVS focal plane (0).
SIGNAL FUNCTION: Contains pitch LOS information.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If condition corresponds to correct memory location response, go to Chapter 15, paragraph 15–222.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to PEU, PEU. Troubleshoot wiring to isolate fault (TM 1–5855–265–T).

10–42 SIGNAL NAME: PNVS SLAVED TO TEU (ACY) PNVS SLAVED CMD (ACZ)
        MEMORY LOCATION: 001245
        MEMORY DATA BIT(S):   5   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Indicates HMD/PNVS cue mode selection.
        REMARKS: From FCC through LH FAB MRTU Type I to TEU.
        PASS: Location of fault if fifth digit on HOD is 4, 5, 6, or 7: TEU, wiring from TEU to LH FAB MRTU
            Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 1–1270–476–T)
        FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type
            I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

10–43 SIGNAL NAME: PLT ANTI–ICE SW
        MEMORY LOCATION: 001117
        MEMORY DATA BIT(S):   16   (BINARY)
        CONDITION: Pilot ANTI–ICE PANEL SW to GND
        SIGNAL FUNCTION: Monitors position of pilot **ANTI ICE** panel **TADS/PNVS** switch.
        REMARKS: From pilot **ANTI ICE** panel through left–hand (LH) forward avionics bay (FAB) MRTU
            Type I to FCC. Enables or disables anti–ice functions for TADS/PNVS.
        PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 10–44.
        FAIL: Location of fault: pilot **ANTI ICE** panel, wiring from pilot **ANTI ICE** panel to LH FAB MRTU Type
            I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–8).

10–44 SIGNAL NAME: PNVS ANTI–ICE TO PEU (ACY) PNVS ANTIICE CMD (ACZ)
        MEMORY LOCATION: 001632
        MEMORY DATA BIT(S):   6   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Energizes relay to provide power for anti–ice.
        REMARKS: From FCC through RH FAB MRTU Type I to PEU.
        PASS: Location of fault if fifth digit on HOD is 2, 3, 6, or 7: PNVS shroud, PEU, wiring from PEU to
            RH FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault
            (TM 1–5855–265–T).
        FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

10–45 SIGNAL NAME: FAIL HIS (ACY)
        MEMORY LOCATION: 000220
        MEMORY DATA BIT(S):   4–19   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Self–test failure flag (history 1).
        REMARKS: Internal FCC self–test.
        PASS: If all digits on HOD are zero, go to paragraph 10–46.
        FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

10–46 SIGNAL NAME: FAIL HIS 2 (ACY)
MEMORY LOCATION: 000221
MEMORY DATA BIT(S):   4–19   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Self–test failure flag (history 2).
REMARKS: Internal FCC self–test.
PASS: If all digits on HOD are zero, refer to TM 1–5855–265–20.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

10–47 SIGNAL NAME: FAIL HIS (ACZ)
MEMORY LOCATION: 000223
MEMORY DATA BIT(S):   4–19   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Self–test failure flag (history 1).
REMARKS: Internal FCC self–test.
PASS: If all digits on HOD are zero, go to paragraph 10–48.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

10–48 SIGNAL NAME: FAIL HIS 2 (ACZ)
MEMORY LOCATION: 000224
MEMORY DATA BIT(S):   4–19   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Self–test failure flag (history 2).
REMARKS: Internal FCC self–test.
PASS: If all digits on HOD are zero, refer to TM 1–5855–265–20.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

CHAPTER 11

PYLONS MULTIPLEX READ CODES

FAILURE SYMPTOM INDEX

FAILURE SYMPTOM INDEX (cont)

Symptom	Refer to paragraph
PILOT OR CPG CANNOT JETTISON EXTERNAL STORES	11–34
PYLON BORESIGHT NO–GO	11–35 (ACY) 11–37 (ACZ)
PYLON BORESIGHT NO–GO RAM CHECKSUM	11–35 (ACY) 11–37 (ACZ)

Personnel Required:

(2)

References:

TM 1–1520–238–T–8
TM 9–1090–208–23–1
TM 9–1090–208–23–2
TM 9–1230–476–20–2
TM 9–1427–475–20

Equipment Conditions:

Ref	Condition
TM 1–1520–238–T–8	Applicable –
TM 9–1090–208–23–2	MAINTENANCE
TM 9–1427–475–20	OPERATIONAL CHECK in
	progress

NOTE

- All multiplex read code responses are read from right to left.

- Multiplex read codes must be used in conjunction with applicable Maintenance Operational Check (MOC) in progress.

- Multiplex read codes are observed on the HOD (ADC) or CDU (ADD).

MULTIPLEX READ CODE INTERPRETATIONS

11–1 **SIGNAL NAME:** PLT SAFE/ARM
MEMORY LOCATION: 001120
MEMORY DATA BIT(S): 12–13 (BINARY)
CONDITION: If the third digit displayed on heads out display (HOD) is 0 or 4=OFF
If the third digit displayed on HOD is 2 or 6=SAFE
If the third digit displayed on HOD is 3 or 7=ARM
SIGNAL FUNCTION: Indicates pilot fire control panel (FCP) **ARM/SAFE** switch position.
REMARKS: From pilot FCP **ARM/SAFE** switch through left–hand (LH) forward avionics bay (FAB) multiplex remote terminal unit (MRTU) Type I to fire control computer (FCC).
PASS: If CONDITION corresponds to proper mode for switch position selected, go to paragraph 11–2.
FAIL: Location of fault: **MISSION FC DC** circuit breaker, wiring from **MISSION FC DC** circuit breaker to external stores controller, pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

11–2 **SIGNAL NAME:** CPG SAFE/ARM
MEMORY LOCATION: 001075
MEMORY DATA BIT(S): 12–13 (BINARY)
CONDITION: If the third digit displayed on HOD is 0 or 4=OFF
If the third digit displayed on HOD is 2 or 6=SAFE
If the third digit displayed on HOD is 3 or 7=ARM
SIGNAL FUNCTION: Indicates FCP copilot/gunner (CPG) **ARM/SAFE** switch position.
REMARKS: From CPG FCP **ARM/SAFE** switch through LH FAB MRTU Type I to FCC. Enables
SAFE/ARM weapons system functions.
PASS: If CONDITION corresponds to proper mode for switch position selected, go to
paragraph 11–3.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU
Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

11–3 **SIGNAL NAME:** PLT/GND OVRD
MEMORY LOCATION: 001555
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates CPG FCP **PLT/GND ORIDE** switch position.
REMARKS: From CPG FCP through right–hand (RH) FAB MRTU Type I to FCC. Overrides pilot
control of weapons systems. Enables weapons systems on ground.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 11–4.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to RH FAB MRTU Type I, RH FAB MRTU
Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

11–4 **SIGNAL NAME:** SQUAT SWITCH
MEMORY LOCATION: 001075
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates squat switch position.
REMARKS: From squat switch through squat switch relay and LH FAB MRTU Type I to FCC.
Indicates to aircraft systems that aircraft is on ground.
PASS: If second digit on HOD is 0, 2, 4, or 6, go to paragraph 11–5.
FAIL: Location of fault: squat switch, squat switch relay, wiring from squat switch to pilot and CPG fire
control panels. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

11–5 **SIGNAL NAME:** RHE SQUAT SW
MEMORY LOCATION: 001440
MEMORY DATA BIT(S): 11 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates squat switch position to remote HELLFIRE electronics (RHE).
REMARKS: From FCC to RHE.
PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 11–6.
FAIL: Location of fault: wiring from external stores controller to pilot circuit breaker panel, RHE.
Troubleshoot wiring to isolate fault (TM 1–1520–238–T–8).

■ **11–6 SIGNAL NAME:** PYLN FLT STOW (ADC)
MEMORY LOCATION: 001214
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Selects pylon flight stow. If problem exists only in flight, go to Chapter 2, paragraph 2–5.
REMARKS: From FCC through LH FAB MRTU Type I to external stores controller. Selects pylon flight stow position.
PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 11–7.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to external stores controller, external stores controller, **MISSION EL DC** circuit breaker, wiring from **MISSION EL DC** circuit breaker to external stores controller, wiring from external stores controller to pylon actuator controller. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–8).

11–7 SIGNAL NAME: EXST STAT
MEMORY LOCATION: 001121
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of external stores controller.
REMARKS: From external stores controller through LH FAB MRTU Type I to FCC. Indicates status of external stores to FCC.
PASS: If sixth digit on HOD is 1, go to paragraph 11–8.
FAIL: Location of fault: external stores controller, wiring from external stores controller to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–8).

11–8 SIGNAL NAME: PYLN EL (ACY) PYLON POS CMD (ACZ)
MEMORY LOCATION: 001175
MEMORY DATA BIT(S): 4–19 (SCALAR)
CONDITION: Monitor HOD while using the **PYLON ACTG SW**; memory location response should increase when up (flight stow) is selected and decrease, then go negative when down (ground stow) is selected.
SIGNAL FUNCTION: Contains elevation positioning data.
REMARKS: From FCC through LH FAB MRTU Type I to external stores controller.
PASS: If CONDITION has been met, go to paragraph 11–9.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to external stores controller, external stores controller. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–8).

11–9 SIGNAL NAME: PYLN EL RATE (ACY) PYLON RATE CMD (ACZ)
MEMORY LOCATION: 001176
MEMORY DATA BIT(S): 4–19 (SCALAR)
CONDITION: Monitor HOD while using the **PYLON ACTG SW**; memory location response should increase when up (flight stow) is selected and decrease, then go negative when down (ground stow) is selected.
SIGNAL FUNCTION: Determines elevation rate. The rate (speed) at which pylons change.
REMARKS: From FCC through LH FAB MRTU Type I to external stores controller.
PASS: If CONDITION has been met, go to paragraph 11–10.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to external stores controller, external stores controller, FCC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–8).

11–10 SIGNAL NAME: PYLON POS (ACY) PYLON POS AID (ACZ)
MEMORY LOCATION: 001465
MEMORY DATA BIT(S):   4–19   (SCALAR)
CONDITION: Monitor HOD while using the **PYLON ACTG SW**; memory location response should increase when up (flight stow) is selected and decrease, then go negative when down (ground stow) is selected.
SIGNAL FUNCTION: Indicates pylon position to RHE.
REMARKS: From FCC to RHE. Pylon elevation positioning data.
PASS: If CONDITION has been met, go to paragraph 11–11.
FAIL: Location of fault: wiring from external stores elevation controller to pylon actuator controller. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

11–11 SIGNAL NAME: PYLN 1 POS (ACY) P1 POSITION (ACZ)
MEMORY LOCATION: 001655
MEMORY DATA BIT(S):   4–19   (SCALAR)
CONDITION: Monitor HOD while using the **PYLON ACTG SW**; memory location response should increase when up (flight stow) is selected and decrease, then go negative when down (ground stow) is selected.
SIGNAL FUNCTION: Indicates pylon 1 position.
REMARKS: From pylon actuator controller (PAC) 1 through LH outboard (OUTBD) MRTU Type II to FCC. Pylon 1 elevation positioning data.
PASS: If CONDITION has been met, go to paragraph 11–12.
FAIL: Location of fault: external stores elevation controller, wiring from external stores controller to pylon actuator controller 1, pylon actuator controller 1, wiring from pylon actuator controller 1 to LH OUTBD MRTU Type II, LH OUTBD MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

11–12 SIGNAL NAME: PAC 1 STAT
MEMORY LOCATION: 001654
MEMORY DATA BIT(S):   4–19   (SCALAR)
CONDITION: (None)
SIGNAL FUNCTION: Generates **PYLN ACTUATOR CONTROLLER NO–GO LT OUTBD** FD/LS message.
REMARKS: From PAC through LH OUTBD MRTU Type II to FCC.
PASS: If sixth digit on HOD is 0, go to paragraph 11–13.
FAIL: Location of fault: pylon actuator controller 1, pylon actuator controller 1, wiring from pylon actuator controller 1 to LH OUTBD MRTU Type II, LH OUTBD MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

11–13 SIGNAL NAME: PYLN 1 STAT (ACY) P1 COM STAT (ACZ)
MEMORY LOCATION: 001434
MEMORY DATA BIT(S):   19   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Generates **PYLON NO GO** FD/LS message.
REMARKS: From FCC to RHE. Pylon 1 status to RHE.
PASS: If first digit on HOD is 0, 2, 4, or 6, go to paragraph 11–27.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

11–14 SIGNAL NAME: PYLN 2 POS (ACY) P2 POSITION (ACZ)
MEMORY LOCATION: 001722
MEMORY DATA BIT(S): 4–19 (SCALAR)
CONDITION: Monitor HOD while using the **PYLON ACTG SW**; memory location response should increase when up (flight stow) is selected and decrease, then go negative when down (ground stow) is selected.
SIGNAL FUNCTION: Indicates pylon 2 position.
REMARKS: From PAC 2 through LH inboard (INBD) MRTU Type II to FCC. Pylon 2 elevation positioning data.
PASS: If CONDITION has been met, go to paragraph 11–15.
FAIL: Location of fault: external stores elevation controller, wiring from external stores controller to pylon actuator controller 2, pylon actuator controller 2, wiring from pylon actuator controller 2 to LH OUTBD MRTU Type II, LH OUTBD MRTU Type II. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–8).

11–15 SIGNAL NAME: PAC 2 STAT
MEMORY LOCATION: 001721
MEMORY DATA BIT(S): 4–19 (SCALAR)
CONDITION: (None)
SIGNAL FUNCTION: Generates **PYLN ACTUATOR CONTROLLER NO GO LT INBD** FD/LS message.
REMARKS: From PAC 2 through LH INBD MRTU Type II to FCC.
PASS: If the sixth digit on HOD is 0, go to paragraph 11–16.
FAIL: Location of fault: pylon actuator controller 2, wiring from pylon actuator controller 2 to LH INBD MRTU Type II, LH INBD MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

11–16 SIGNAL NAME: PYLN 2 STAT (ACY) P1 COM STAT (ACZ)
MEMORY LOCATION: 001434
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Generates **PYLON NO GO** FD/LS Message.
REMARKS: From FCC to RHE.
PASS: If first digit on HOD is 0, 1, 4, or 5, go to paragraph 11–27.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

11–17 SIGNAL NAME: PYLN 3 POS (ACY) P3 POSITION (ACZ)
MEMORY LOCATION: 001767
MEMORY DATA BIT(S): 4–19 (SCALAR)
CONDITION: Monitor HOD while using the **PYLON ACTG SW**; memory location response should increase when up (flight stow) is selected and decrease, then go negative when down (ground stow) is selected.
SIGNAL FUNCTION: Indicates pylon 3 position.
REMARKS: From PAC through RH INBD MRTU Type II to FCC. Pylon elevation positioning data.
PASS: If CONDITION has been met, go to paragraph 11–18.
FAIL: Location of fault: external stores elevation controller, wiring from external stores elevation controller to pylon actuator controller 3, pylon actuator controller 3, wiring from pylon actuator controller 3 to RH INBD MRTU Type II, RH INBD MRTU Type II. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–8).

11–18 SIGNAL NAME: PAC 3 STAT
MEMORY LOCATION: 001766
MEMORY DATA BIT(S):   4–19   (SCALAR)
CONDITION: (None)
SIGNAL FUNCTION: Generates **PYLN ACTUATOR CONTROLLER NO GO RT INBD** FD/LS
message.
REMARKS: From PAC through RH INBD MRTU Type II to FCC.
PASS: If sixth digit on HOD is 0, go to paragraph 11–19.
FAIL: Location of fault: pylon actuator controller 3, wiring from pylon actuator controller 3 to RH INBD
MRTU Type II, RH INBD MRTU Type II. Troubleshoot wiring to isolate fault
(TM 9–1090–208–23–2).

11–19 SIGNAL NAME: PYLN 3 STAT (ACY) P1 COM STAT (ACZ)   ■
MEMORY LOCATION: 001434
MEMORY DATA BIT(S):   17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Generates **PYLON NO GO** FD/LS message.
REMARKS: From FCC to RHE.
PASS: If first digit on HOD is 0, 1, 2, or 3, go to paragraph 11–27.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

11–20 SIGNAL NAME: PYLN 4 POS (ACY) P4 POSITION (ACZ)   ■
MEMORY LOCATION: 002034
MEMORY DATA BIT(S):   4–19   (SCALAR)
CONDITION: Monitor HOD while using the **PYLON ACTG SW**; memory location response should
increase when up (flight stow) is selected and decrease, then go negative when down
(ground stow) is selected.
SIGNAL FUNCTION: Indicates pylon 4 position.
REMARKS: From PAC through RH OUTBD MRTU Type II to FCC. Pylon elevation positioning data.
PASS: If CONDITION has been met, go to paragraph 11–21.
FAIL: Location of fault: external stores elevation controller, wiring from external stores elevation
controller to pylon actuator controller 4, pylon actuator controller 4, wiring from pylon actuator
controller 4 to RH OUTBD MRTU Type II, RH OUTBD MRTU Type II. Troubleshoot wiring to
isolate fault (TM 1–1520–238–T–8).

11–21 SIGNAL NAME: PAC 4 STAT
MEMORY LOCATION: 002033
MEMORY DATA BIT(S):   4–19   (SCALAR)
CONDITION: (None)
SIGNAL FUNCTION: Generates **PYLN ACTUATOR CONTROLLER NO GO RT OUTBD** FD/LS
message.
REMARKS: From PAC through RH OUTBD MRTU Type II to FCC.
PASS: If the sixth digit displayed on HOD is 0, go to paragraph 11–22.
FAIL: Location of fault: pylon actuator controller 4, pylon actuator controller 4, wiring from pylon
actuator controller 4 to RH OUTBD MRTU Type II, RH OUTBD MRTU Type II. Troubleshoot
wiring to isolate fault (TM 9–1090–208–23–2).

11–22 **SIGNAL NAME:** PYLN 4 STAT (ACY) P1 COM STAT (ACZ)
MEMORY LOCATION: 001434
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Generates **PYLON NO GO** FD/LS message.
REMARKS: From FCC to RHE.
PASS: If second digit on HOD is 0, 2, 4, or 6, go to paragraph 11–27.
FAIL: Location of fault: replace RHE (TM 9–1427–475–20).

11–23 **SIGNAL NAME:** CPG RKT NORM
MEMORY LOCATION: 000437
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates CPG **ROCKET** switch is set to **NORMAL** position.
REMARKS: From CPG FCP through CPG MRTU Type III to FCC.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 11–24.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

11–24 **SIGNAL NAME:** TADS RKT ACT (ACY) ORT RKT ACT (ACZ)
MEMORY LOCATION: 001555
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates rocket action from optical relay tube (ORT) left handgrip.
REMARKS: From ORT left handgrip through RH FAB MRTU Type I to FCC.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 11–25.
FAIL: Location of fault: ORT left handgrip, wiring from ORT to CPG FCP, wiring from CPG FCP to RH
FAB MRTU Type I, RH FAB MRTU Type I, wiring from external stores elevation controller to
CPG FCP. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

11–25 **SIGNAL NAME:** CPG RKT ACT
MEMORY LOCATION: 000437
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates CPG rocket action.
REMARKS: From CPG FCP through CPG MRTU Type III to FCC.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 11–26.
FAIL: Location of fault: CPG cyclic stick weapons action switch, wiring from CPG cyclic stick weapons
action switch to CPG FCP, CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG
MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

11–26 **SIGNAL NAME:** CPG RKT GRND STOW
MEMORY LOCATION: 000437
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates CPG **ROCKET** switch is set to **GROUND STOW** position.
REMARKS: From CPG FCP through CPG MRTU Type III to FCC.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 11–29.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

11–27 SIGNAL NAME: CPG MSL ACT
MEMORY LOCATION: 000415
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates CPG missile action.
REMARKS: From CPG FCP through CPG MRTU Type III to FCC.
PASS: If sixth digit on HOD is 1, go to paragraph 11–28.
FAIL: Location of fault: CPG cyclic stick weapons action switch, wiring from CPG cyclic stick weapons
action switch to CPG FCP, CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG
MRTU Type III, external stores elevation controller. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

11–28 SIGNAL NAME: CPG MSL ENABLE
MEMORY LOCATION: 001555
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates missiles are enabled.
REMARKS: From CPG FCP through RH FAB MRTU Type I to FCC.
PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 11–32.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to RH FAB MRTU Type I and external stores
elevation controller, external stores elevation controller, RH FAB MRTU Type I. Troubleshoot
wiring to isolate fault (TM 9–1427–475–20).

11–29 SIGNAL NAME: PLT RKT NORM
MEMORY LOCATION: 001120
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates pilot **ROCKET** switch is set to **NORMAL** position.
REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 11–30.
FAIL: Location of fault: pilot FCP, wiring from external stores controller to FCP, pilot cyclic stick
weapons action switch, wiring from pilot cyclic stick weapons action switch to FCP, wiring to LH
FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault
(TM 9–1090–208–23–2).

11–30 SIGNAL NAME: PLT RKT ACT
MEMORY LOCATION: 001555
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates PLT ROCKET action.
REMARKS: From pilot FCP through RH FAB MRTU Type I to FCC.
PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 11–31.
FAIL: Location of fault: pilot cyclic stick weapons action switch, wiring from pilot cyclic stick weapons
action switch to CPG FCP, wiring from CPG FCP to RH FAB MRTU Type I, RH FAB MRTU
Type I, wiring from external stores controller to CPG FCP (TM 1–1520–238–T–8). Troubleshoot
wiring to isolate fault (TM 9–1090–208–23–2).

11–31 **SIGNAL NAME:** PLT RKT GRD STOW
        MEMORY LOCATION: 001120
        MEMORY DATA BIT(S): 15 (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Indicates PILOT **ROCKET** switch is set to **GROUND STOW** position.
        REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
        PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 11–32.
        FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I and external stores
        elevation controller, wiring from external stores controller to FCP, wiring from pilot cyclic stick
        weapons action switch to pilot FCP, pilot cyclic stick weapons action switch, external stores
        elevation controller LH FAB MRTU Type I. Troubleshoot wiring to isolate fault
        (TM 9–1090–208–23–2).

11–32 **SIGNAL NAME:** PLT MSL ACT
        MEMORY LOCATION: 000415
        MEMORY DATA BIT(S): 05 (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Indicates pilot missile action.
        REMARKS: From pilot FCP through CPG MRTU Type III to FCC.
        PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 11–33.
        FAIL: Location of fault: pilot cyclic stick weapons action switch, wiring from pilot cyclic stick weapons
        action switch to pilot FCP, wiring from pilot FCP to CPG MRTU Type III, CPG MRTU Type III,
        wiring from external stores controller to CPG FCP. Troubleshoot wiring to isolate fault
        (TM 9–1427–475–20).

11–33 **SIGNAL NAME:** PILOT MSL ENABLE
        MEMORY LOCATION: 001120
        MEMORY DATA BIT(S): 17 (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Indicates missiles are enabled.
        REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
        PASS: If first digit on HOD is 4, 5, 6, or 7, refer to system interconnect (TM 9–1427–475–20).
        FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I and external stores
        elevation controller, LH FAB MRTU Type I, external stores elevation controller. Troubleshoot
        wiring to isolate fault (TM 9–1427–475–20).

■ 11–34 **SIGNAL NAME:** EMERG STORES JETT SW (ACY) STORES JTSN SW (ACZ)
        MEMORY LOCATION: 001532
        MEMORY DATA BIT(S): 12 (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Jettisons external stores on pylons.
        REMARKS: From pilot or CPG collective stick weapons action switch through RH FAB MRTU Type I
                to FCC.
        PASS: If the third digit on HOD is 2, 3, 6, or 7, troubleshoot external stores wiring
                (TM 1–1520–238–T–8).
        FAIL: Location of fault: pilot collective stick weapons action switch, CPG collective stick weapons
        action switch, wiring from collective sticks weapons action switch to RH FAB MRTU Type I, RH
        FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–8).

11–35 SIGNAL NAME: FAIL HIS (ACY)
  MEMORY LOCATION: 000220
  MEMORY DATA BIT(S):   4–19   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: FCC self–test failure flag (history 1).
  REMARKS: Internal FCC self–test.
  PASS: If all digits on HOD are zero, go to paragraph 11–36.
  FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

11–36 SIGNAL NAME: FAIL HIS 2 (ACY)
  MEMORY LOCATION: 000221
  MEMORY DATA BIT(S):   4–19   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: FCC self–test failure flag (history 2).
  REMARKS: Internal FCC self–test.
  PASS: If all digits on HOD are zero, refer to TM 1–1520–238–T–8.
  FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

11–37 SIGNAL NAME: FAIL HIS (ACZ)
  MEMORY LOCATION: 000223
  MEMORY DATA BIT(S):   4–19   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: FCC self–test failure flag (history 1).
  REMARKS: Internal FCC self–test.
  PASS: If all digits on HOD are zero, go to paragraph 11–38.
  FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

11–38 SIGNAL NAME: FAIL HIS 2 (ACZ)
  MEMORY LOCATION: 000224
  MEMORY DATA BIT(S):   4–19   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: FCC self–test failure flag (history 2).
  REMARKS: Internal FCC self–test.
  PASS: If all digits on HOD are zero, refer to TM 1–1520–238–T–8.
  FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

CHAPTER 12

AERIAL ROCKET CONTROL SYSTEM (ARCS) MULTIPLEX READ CODES

FAILURE SYMPTOM INDEX

FAILURE SYMPTOM INDEX (cont)

Symptom	Refer to paragraph
INCORRECT NUMBER OF ROCKETS REMAINING IN EACH ZONE OF P4	12–47
CANNOT SELECT ROCKET TYPE	12–49
CANNOT EMERGENCY JETTISON EXTERNAL STORES	12–54

Personnel Required:

(2)

References:

TM 1–1270–476–T
TM 1–5855–265–T
TM 9–1090–208–23–2
TM 9–1230–476–20–2
TM 9–1270–221–23
TM 9–1427–475–20
TM 11–1520–238–23–2

Equipment Conditions:

Ref	Condition
TM 9–1090–208–23–2	AERIAL ROCKET CONTROL SYSTEM – MAINTENANCE OPERATIONAL CHECK in progress

NOTE

- All multiplex read code responses are read from right to left.

- Multiplex read codes must be used in conjunction with applicable Maintenance Operational Check (MOC) in progress.

- Multiplex read codes are observed on the HOD (ADC) or CDU (ADD).

MULTIPLEX READ CODE INTERPRETATIONS

12–1   **SIGNAL NAME:**   PLT SAFE/ARM SW
MEMORY LOCATION: 001120
MEMORY DATA BIT(S):   12–13   (BINARY)
CONDITION: If the third digit displayed on HOD is 0 or 4=OFF
          If the third digit displayed on HOD is 2 or 6=SAFE
          If the third digit displayed on HOD is 3 or 7=ARM
SIGNAL FUNCTION: Selects weapon system status.
REMARKS: From pilot fire control panel (FCP) through left–hand (LH) forward avionics bay (FAB) multiplex remote terminal unit (MRTU) Type I to fire control computer (FCC).
PASS: If third digit displayed on heads out display (HOD) corresponds to the setting of pilot FCP **SAFE/OFF/ARM** switch, go to paragraph 12–2.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

12–2 SIGNAL NAME: CPG SAFE/ARM SW
MEMORY LOCATION: 001075
MEMORY DATA BIT(S): 12–13 (BINARY)
CONDITION: If the third digit displayed on HOD is 0 or 4=OFF
If the third digit displayed on HOD is 2 or 6=SAFE
If the third digit displayed on HOD is 3 or 7=ARM
SIGNAL FUNCTION: Selects weapon system status.
REMARKS: From copilot/gunner (CPG) FCP through CPG MRTU Type III to FCC.
PASS: If third digit displayed on HOD corresponds to the setting of CPG FCP **SAFE/OFF/ARM**
switch, go to paragraph 12–3.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU
Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

12–3 SIGNAL NAME: SQUAT SW
MEMORY LOCATION: 001075
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Detects weight on wheels condition.
REMARKS: From CPG FCP through LH FAB MRTU Type I to FCC.
PASS: If second digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 12–4.
FAIL: Location of fault: squat switch, wiring from squat switch to squat switch relay, squat switch
relay, wiring from squat switch relay to CPG FCP, CPG FCP, wiring from CPG FCP to LH FAB
MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

12–4 SIGNAL NAME: PLT GND OVRD SW
MEMORY LOCATION: 001555
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates pilot/ground override (PLT/GND OVRD) switch position.
REMARKS: From pilot FCP through CPG FCP through LH MRTU Type I to FCC.
PASS: If third digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 12–5.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU
Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

12–5 SIGNAL NAME: CPG RKT NORM SW
MEMORY LOCATION: 000437
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Enables or disables arm/safe power to launchers.
REMARKS: From CPG FCP through CPG MRTU Type III to FCC.
PASS: If second digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 12–6.
FAIL: Location of fault: **MUX FAB R** circuit breaker, wiring from **MUX FAB R** circuit breaker to RH
FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault
(TM 9–1230–476–20–2).

12–6 **SIGNAL NAME:** CPG RKT GND STOW SW
MEMORY LOCATION: 000437
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Drives all launchers to ground stow position.
REMARKS: From CPG FCP through CPG MRTU Type III to FCC.
PASS: If third digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 12–7.
FAIL: Location of fault: **MUX L PYL INBD** circuit breaker, wiring from **MUX L PYL INBD** circuit
breaker to PYLON 2 MRTU, PYLON 2 MRTU. Troubleshoot wiring to isolate fault
(TM 9–1230–476–20–2).

12–7 **SIGNAL NAME:** PLT RKT NORM SW
MEMORY LOCATION: 001120
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Enables or disables arm/safe power to launchers.
REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
PASS: If second digit displayed on HOD is 4, 5, 6, or 7, go to paragraph 12–8.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type
I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

12–8 **SIGNAL NAME:** PLT RKT GND STOW SW
MEMORY LOCATION: 001120
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Drives all launchers to ground stow position.
REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
PASS: If second digit displayed on HOD is 2, 3, 6, or 7, go to paragraph 12–9.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type
I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

12–9 **SIGNAL NAME:** RCP DIAGNOSTICS
MEMORY LOCATION: 001160
MEMORY DATA BIT(S): 11–19 (SCALAR)
CONDITION: All 8's displayed on rocket control panel (RCP) during power up (initial bit).
SIGNAL FUNCTION: Transmits failure diagnostic error codes.
REMARKS: From rocket control panel (RCP) through LH FAB MRTU Type I to FCC.
PASS: If all 8's are displayed on RCP during power up, go to paragraph 12–10.
FAIL: Location of fault: **RKT ELEX** circuit breaker, wiring from **RKT ELEX** circuit breaker to CPG FCP,
wiring from CPG FCP to RCP, RCP, wiring from RCP to LH FAB MRTU Type I, LH FAB MRTU
Type I. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

12–10 **SIGNAL NAME:** RCP STATUS
MEMORY LOCATION: 001160
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of RCP.
REMARKS: From RCP through LH FAB MRTU Type I to FCC.
PASS: If fifth digit displayed on HOD is 4, 5, 6, or 7, go to paragraph 12–11.
FAIL: Location of fault: RCP, wiring from RCP to LH FAB MRTU Type I, LH FAB MRTU Type I.
Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

12–11   SIGNAL NAME: CPG RKT ACTION
MEMORY LOCATION: 000437
MEMORY DATA BIT(S):   14   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates whether CPG has actioned rockets.
REMARKS: From weapon action switch (ORT or cyclic) through CPG FCP and CPG MRTU Type III
to FCC.
PASS: If second digit displayed on HOD is 4, 5, 6, or 7, go to paragraph 12–12.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

12–12   SIGNAL NAME: TADS RKT ACTION (ACY) ORT RKT ACTION (ACZ)
MEMORY LOCATION: 001555
MEMORY DATA BIT(S):   14   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates ORT weapon action switch (WAS) is set to RKT.
REMARKS: From ORT left handgrip through RH FAB MRTU Type I to FCC.
PASS: If second digit displayed on HOD is 4, 5, 6, or 7, go to paragraph 12–13.
FAIL: Location of fault: ORT left handgrip, wiring from ORT to RH FAB MRTU Type I, RH FAB MRTU
Type I. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

12–13   SIGNAL NAME: ORT RKT TRIG
MEMORY LOCATION: 000414
MEMORY DATA BIT(S):   14   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates whether CPG has pulled ORT left handgrip weapon trigger switch.
REMARKS: From ORT left handgrip through CPG FCP and CPG MRTU Type III to FCC.
PASS: If second digit displayed on HOD is 4, 5, 6, or 7, go to paragraph 12–14.
FAIL: Location of fault: ORT left handgrip, wiring from ORT left handgrip to CPG FCP, wiring from
CPG FCP to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault
(TM 1–1270–476–T).

12–14   SIGNAL NAME: CPG RKT TRIG
MEMORY LOCATION: 000414
MEMORY DATA BIT(S):   13   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates whether CPG has pulled cyclic stick trigger switch.
REMARKS: From CPG cyclic stick trigger switch through CPG FCP through CPG MRTU Type III to
FCC.
PASS: If third digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 12–15.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

■ **12–15 SIGNAL NAME:** ORT WPN TRIG 1ST DET (ACY) ORT TRIG 1ST DTT (ACZ)
      MEMORY LOCATION: 000414
      MEMORY DATA BIT(S): 15 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates CPG has pulled ORT left handgrip weapon trigger to 1st detent.
      REMARKS: From ORT left handgrip through CPG FCP and CPG MRTU Type III to FCC.
      PASS: If second digit displayed on HOD is 2, 3, 6, or 7, go to paragraph 12–16.
      FAIL: Location of fault: ORT left handgrip, wiring from ORT left handgrip to CPG FCP, CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

■ **12–16 SIGNAL NAME:** ORT WPN TRIG 2ND DET (ACY) ORT TRIG 2ND DTT (ACZ)
      MEMORY LOCATION: 000414
      MEMORY DATA BIT(S): 16 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates CPG has pulled ORT left handgrip weapon trigger switch to 2nd detent.
      REMARKS: From ORT left handgrip through CPG FCP and CPG MRTU Type III to FCC.
      PASS: If second digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 12–17.
      FAIL: Location of fault: ORT left handgrip, wiring from ORT left handgrip to CPG FCP, CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

■ **12–17 SIGNAL NAME:** CPG TRIG 1ST DETENT (ACY) CPG TRIG 1ST DTT (ACZ)
      MEMORY LOCATION: 000436
      MEMORY DATA BIT(S): 12 (BINARY)
      SIGNAL FUNCTION: Indicates CPG has pulled cyclic stick trigger switch to 1st detent.
      REMARKS: From CPG cyclic stick through CPG FCP and CPG MRTU Type III to FCC.
      PASS: If third digit displayed on HOD is 2, 3, 6, or 7, go to paragraph 12–18.
      FAIL: Location of fault: CPG cyclic stick trigger switch, wiring from CPG cyclic stick trigger switch to CPG FCP, CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

■ **12–18 SIGNAL NAME:** CPG TRIG 2ND DETENT (ACY) CPG TRIG 2ND DTT (ACZ)
      MEMORY LOCATION: 000436
      MEMORY DATA BIT(S): 18 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates CPG has pulled cyclic stick trigger to 2nd detent.
      REMARKS: From CPG cyclic stick trigger switch through CPG FCP and CPG MRTU Type III to FCC.
      PASS: If first digit displayed on HOD is 2, 3, 6, or 7, go to paragraph 12–19.
      FAIL: Location of fault: CPG cyclic stick trigger switch, wiring from CPG cyclic stick trigger switch to CPG FCP, CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

12–19 SIGNAL NAME: ORT RKT WAS TO TEU (ACY) ORT RKT WAS TST (ACZ)   ■
      MEMORY LOCATION: 001252
      MEMORY DATA BIT(S):   17   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates ORT RKT WAS signal to TEU.
      REMARKS: From FCC through LH FAB MRTU Type I to TEU.
      PASS: If first digit displayed on HOD is 4, 5, 6, or 7, go to paragraph 12–20.
      FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TADS electronic
           unit (TEU), TEU. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

12–20 SIGNAL NAME: ORT RKT TRIG TO TEU (ACY) ORT RKT TRIG TST (ACZ)   ■
      MEMORY LOCATION: 001252
      MEMORY DATA BIT(S):   8   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates CPG has pulled ORT left handgrip weapon trigger switch.
      REMARKS: From FCC through LH FAB MRTU Type I to TEU.
      PASS: If fourth digit displayed on HOD is 4, 5, 6, or 7, go to paragraph 12–21.
      FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
           Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

12–21 SIGNAL NAME: ORT WPN TRIG DET 1 TO TEU (ACY) ORT TRIG 1ST TST (ACZ)   ■
      MEMORY LOCATION: 001252
      MEMORY DATA BIT(S):   15   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates CPG has pulled ORT left handgrip weapon trigger switch to 1st
                   detent.
      REMARKS: From FCC through LH FAB MRTU Type I to TEU.
      PASS: If second digit displayed on HOD is 2, 3, 6, or 7, go to paragraph 12–22.
      FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
           Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

12–22 SIGNAL NAME: ORT WPN TRIG DET 2 TO TEU (ACY) ORT TRIG 2ND TST (ACZ)   ■
      MEMORY LOCATION: 001252
      MEMORY DATA BIT(S):   14   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates CPG has pulled ORT left handgrip weapon trigger switch to 2nd
                   detent.
      REMARKS: From FCC through LH FAB MRTU Type I to TEU.
      PASS: If second digit displayed on HOD is 4, 5, 6, or 7, go to failure symptom index and next failure
           symptom paragraph.
      FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
           Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

12–23 SIGNAL NAME: PLT RKT ACTION
MEMORY LOCATION: 001555
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates pilot has actioned rockets.
REMARKS: From pilot cyclic stick WEAPONS ACTION SWITCH through pilot FCP, CPG FCP and RH FAB MRTU Type I to FCC.
PASS: If third digit displayed on HOD is 2, 3, 6, or 7, go to paragraph 12–24.
FAIL: Location of fault: pilot cyclic stick weapons action switch, wiring from pilot cyclic stick weapons action switch to pilot FCP, pilot FCP, wiring from pilot FCP to CPG FCP, CPG FCP, wiring from CPG FCP to right–hand (RH) FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

12–24 SIGNAL NAME: PLT RKT TRIG
MEMORY LOCATION: 001554
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates whether pilot has pulled cyclic stick trigger.
REMARKS: From pilot cyclic stick weapons action switch through pilot FCP and RH FAB MRTU Type I to FCC.
PASS: If third digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 12–25.
FAIL: Location of fault: pilot cyclic stick weapons action switch, wiring from pilot cyclic stick weapons action switch to pilot FCP, wiring from pilot FCP to CPG FCP, CPG FCP, wiring from CPG FCP to RH FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

12–25 SIGNAL NAME: PLT TRIG 1ST DET (ACY) PLT TRIG 1ST DTT (ACZ)
MEMORY LOCATION: 001554
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates pilot has pulled cyclic stick trigger to 1st detent.
REMARKS: From pilot cyclic stick weapons action switch through pilot FCP, CPG FCP, RH FAB MRTU Type I to FCC.
PASS: If second digit displayed on HOD is 2, 3, 6, or 7, go to paragraph 12–26.
FAIL: Location of fault: pilot cyclic stick weapons action switch, wiring from pilot cyclic stick weapons action switch to pilot FCP, pilot FCP,wiring from pilot FCP to CPG FCP, CPG FCP, wiring from CPG FCP to RH FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

12–26 SIGNAL NAME: PLT TRIG 2ND DET (ACY) PLT TRIG 1ST DTT (ACZ)
MEMORY LOCATION: 001554
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates pilot has pulled cyclic stick weapons action switch trigger to 2nd detent.
REMARKS: From pilot cyclic stick weapons action switch through pilot FCP and RH FAB MRTU Type I to FCC.
PASS: If second digit displayed on HOD is 1, 3, 5, or 7, go to failure symptom index and next failure symptom paragraph.
FAIL: Location of fault: pilot cyclic stick weapons action switch, wiring from pilot cyclic stick weapons action switch to pilot FCP, pilot FCP, wiring from pilot FCP to RH FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

12–27 SIGNAL NAME: CPG I BEAM TYPE
MEMORY LOCATION: 000664
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: If the first digit is 0, 1, 4, or 5=SOLID
If the first digit is 2, 3, 6, or 7=OPEN
SIGNAL FUNCTION: Selects solid or open I beam.
REMARKS: From FCC to symbol generator.
PASS: If first digit displayed on HOD corresponds to selected I BEAM, go to paragraph 12–28.
FAIL: Location of fault: wiring from DEU to RH FAB MRTU Type I, RH FAB MRTU Type I, for IHADSS related discrepancies; TADS/PNVS Turret Assembly, wiring from TADS/PNVS Turret Assembly to TEU, TEU, wiring from TEU to CPG MRTU Type III, CPG MRTU Type III, for TADS related discrepancies; TADS/PNVS Turret Assembly, wiring from TADS/PNVS Turret Assembly to TEU, TEU, wiring from TEU to LH FAB MRTU Type I, LH FAB MRTU Type I, wiring from TADS/PNVS Turret Assembly to PEU, for PNVS related discrepancies. Troubleshoot wiring to isolate fault. Refer to TM 9–1270–221–23 for integrated helmet and display sight system (IHADSS), TM 1–5855–265–T for pilot night vision sensor (PNVS), or TM 1–1270–476–T for target acquisition designation sight (TADS) related discrepancies.

12–28 SIGNAL NAME: CPG I BEAM CTL
MEMORY LOCATION: 000664
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls I beam symbol displayed on HOD.
REMARKS: From FCC to symbol generator.
PASS: If first digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 12–29.
FAIL: Location of fault: wiring from DEU to RH FAB MRTU Type I, RH FAB MRTU Type I, for IHADSS related discrepancies; TADS/PNVS Turret Assembly, wiring from TADS/PNVS Turret Assembly to TEU, TEU, wiring from TEU to CPG MRTU Type III, CPG MRTU Type III, for TADS related discrepancies; TADS/PNVS Turret Assembly, wiring from TADS/PNVS Turret Assembly to TEU, TEU, wiring from TEU to LH FAB MRTU Type I, LH FAB MRTU Type I, wiring from TADS/PNVS Turret Assembly to PEU, for PNVS related discrepancies. Troubleshoot wiring to isolate fault. Refer to TM 9–1270–221–23 for integrated helmet and display sight system (IHADSS), TM 1–5855–265–T for pilot night vision sensor (PNVS), or TM 1–1270–476–T for target acquisition designation sight (TADS) related discrepancies.

12–29 **SIGNAL NAME:** CPG I BEAM AZ
MEMORY LOCATION: 000664
MEMORY DATA BIT(S): 4–15 (SCALAR)
CONDITION: Monitor HOD; movement of the I BEAM to the left should show a decreasing negative number (1 in the sixth digit) and movement of the I BEAM to the right of the aircraft should show a positive increasing number (0 in the sixth digit)
SIGNAL FUNCTION: Indicates I beam azimuth (pylon angle) position relative to aircraft.
REMARKS: From FCC to symbol generator.
PASS: If display on HOD corresponds to selected LOS position, go to paragraph 12–30.
FAIL: Location of fault: wiring from DEU to RH FAB MRTU Type I, RH FAB MRTU Type I, for IHADSS related discrepancies; TADS/PNVS Turret Assembly, wiring from TADS/PNVS Turret Assembly to TEU, TEU, wiring from TEU to CPG MRTU Type III, CPG MRTU Type III, for TADS related discrepancies; TADS/PNVS Turret Assembly, wiring from TADS/PNVS Turret Assembly to TEU, TEU, wiring from TEU to LH FAB MRTU Type I, LH FAB MRTU Type I, wiring from TADS/PNVS Turret Assembly to PEU, for PNVS related discrepancies. Troubleshoot wiring to isolate fault. Refer to TM 9–1270–221–23 for integrated helmet and display sight system (IHADSS), TM 1–5855–265–T for pilot night vision sensor (PNVS), or TM 1–1270–476–T for target acquisition designation sight (TADS) related discrepancies.

12–30 **SIGNAL NAME:** CPG I BEAM EL
MEMORY LOCATION: 000665
MEMORY DATA BIT(S): 4–15 (SCALAR)
CONDITION: Monitor HOD; movement of the I BEAM down should show a decreasing negative number (1 in the sixth digit) and movement of the I BEAM up of the aircraft should show a positive increasing number (0 in the sixth digit)
SIGNAL FUNCTION: Indicates I beam elevation (pylon angle) position relative to aircraft.
REMARKS: From FCC to symbol generator.
PASS: If display on HOD corresponds to selected LOS position, replace symbol generator (TM 11–1520–238–23–2).
FAIL: Location of fault: wiring from DEU to RH FAB MRTU Type I, RH FAB MRTU Type I, for IHADSS related discrepancies; TADS/PNVS Turret Assembly, wiring from TADS/PNVS Turret Assembly to TEU, TEU, wiring from TEU to CPG MRTU Type III, CPG MRTU Type III, for TADS related discrepancies; TADS/PNVS Turret Assembly, wiring from TADS/PNVS Turret Assembly to TEU, TEU, wiring from TEU to LH FAB MRTU Type I, LH FAB MRTU Type I, wiring from TADS/PNVS Turret Assembly to PEU, for PNVS related discrepancies. Troubleshoot wiring to isolate fault. Refer to TM 9–1270–221–23 for integrated helmet and display sight system (IHADSS), TM 1–5855–265–T for pilot night vision sensor (PNVS), or TM 1–1270–476–T for target acquisition designation sight (TADS) related discrepancies.

12–31 **SIGNAL NAME:**   PLT I BEAM AZ
MEMORY LOCATION: 000715
MEMORY DATA BIT(S):   4–15   (SCALAR)
CONDITION: Monitor HOD; movement of the I BEAM to the left should show a decreasing negative number (1 in the sixth digit) and movement of the I BEAM to the right of the aircraft should show a positive increasing number (0 in the sixth digit)
SIGNAL FUNCTION: Indicates I BEAM azimuth (pylon angle) position relative to aircraft.
REMARKS: From FCC to symbol generator.
PASS: If display on HOD corresponds to selected LOS position, go to paragraph 12–32.
FAIL: Location of fault: wiring from DEU to RH FAB MRTU Type I, RH FAB MRTU Type I, for IHADSS related discrepancies; TADS/PNVS Turret Assembly, wiring from TADS/PNVS Turret Assembly to TEU, TEU, wiring from TEU to CPG MRTU Type III, CPG MRTU Type III, for TADS related discrepancies; TADS/PNVS Turret Assembly, wiring from TADS/PNVS Turret Assembly to TEU, TEU, wiring from TEU to LH FAB MRTU Type I, LH FAB MRTU Type I, wiring from TADS/PNVS Turret Assembly to PEU, for PNVS related discrepancies. Troubleshoot wiring to isolate fault. Refer to TM 9–1270–221–23 for integrated helmet and display sight system (IHADSS), TM 1–5855–265–T for pilot night vision sensor (PNVS), or TM 1–1270–476–T for target acquisition designation sight (TADS) related discrepancies.

12–32 **SIGNAL NAME:**   PLT I BEAM TYPE
MEMORY LOCATION: 000715
MEMORY DATA BIT(S):   18   (BINARY)
CONDITION: If the first digit is 0, 1, 4, or 5=SOLID
                  If the first digit is 2, 3, 6, or 7=OPEN
SIGNAL FUNCTION: Selects solid or open I beam.
REMARKS: From FCC to symbol generator.
PASS: If first digit displayed on HOD corresponds to selected I BEAM, go to paragraph 12–33.
FAIL: Location of fault: wiring from DEU to RH FAB MRTU Type I, RH FAB MRTU Type I, for IHADSS related discrepancies; TADS/PNVS Turret Assembly, wiring from TADS/PNVS Turret Assembly to TEU, TEU, wiring from TEU to CPG MRTU Type III, CPG MRTU Type III, for TADS related discrepancies; TADS/PNVS Turret Assembly, wiring from TADS/PNVS Turret Assembly to TEU, TEU, wiring from TEU to LH FAB MRTU Type I, LH FAB MRTU Type I, wiring from TADS/PNVS Turret Assembly to PEU, for PNVS related discrepancies. Troubleshoot wiring to isolate fault. Refer to TM 9–1270–221–23 for integrated helmet and display sight system (IHADSS), TM 1–5855–265–T for pilot night vision sensor (PNVS), or TM 1–1270–476–T for target acquisition designation sight (TADS) related discrepancies.

12–33 **SIGNAL NAME:** PLT I BEAM CTL
MEMORY LOCATION: 000715
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Controls I beam symbol displayed on HOD.
REMARKS: From FCC to symbol generator.
PASS: If first digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 12–34.
FAIL: Location of fault: wiring from DEU to RH FAB MRTU Type I, RH FAB MRTU Type I, for IHADSS related discrepancies; TADS/PNVS Turret Assembly,wiring from TADS/PNVS Turret Assembly to TEU, TEU, wiring from TEU to CPG MRTU Type III, CPG MRTU Type III, for TADS related discrepancies; TADS/PNVS Turret Assembly, wiring from TADS/PNVS Turret Assembly to TEU, TEU, wiring from TEU to LH FAB MRTU Type I, LH FAB MRTU Type I, wiring from TADS/PNVS Turret Assembly to PEU, for PNVS related discrepancies. Troubleshoot wiring to isolate fault. Refer to TM 9–1270–221–23 for integrated helmet and display sight system (IHADSS), TM 1–5855–265–T for pilot night vision sensor (PNVS), or TM 1–1270–476–T for target acquisition designation sight (TADS) related discrepancies.

12–34 **SIGNAL NAME:** PLT I BEAM EL
MEMORY LOCATION: 000716
MEMORY DATA BIT(S): 4–15 (SCALAR)
CONDITION: Monitor HOD; movement of the I BEAM down should show a decreasing negative number (1 in the sixth digit) and movement of the I BEAM up should show a positive increasing number (0 in the sixth digit).
SIGNAL FUNCTION: Indicates I beam elevation (pylon angle) position relative to aircraft.
REMARKS: From FCC to symbol generator.
PASS: If display on HOD corresponds to selected LOS position, replace symbol generator (TM 11–1520–238–23–2).
FAIL: Location of fault: wiring from DEU to RH FAB MRTU Type I, RH FAB MRTU Type I, for IHADSS related discrepancies; TADS/PNVS Turret Assembly, wiring from TADS/PNVS Turret Assembly to TEU, TEU, wiring from TEU to CPG MRTU Type III, CPG MRTU Type III, for TADS related discrepancies; TADS/PNVS Turret Assembly, wiring from TADS/PNVS Turret Assembly to TEU, TEU, wiring from TEU to LH FAB MRTU Type I, LH FAB MRTU Type I,wiring from TADS/PNVS Turret Assembly to PEU, for PNVS related discrepancies. Troubleshoot wiring to isolate fault. Refer to TM 9–1270–221–23 for integrated helmet and display sight system (IHADSS), TM 1–5855–265–T for pilot night vision sensor (PNVS), or TM 1–1270–476–T for target acquisition designation sight (TADS) related discrepancies.

12–35 **SIGNAL NAME:** STA DIR 1 STATUS
MEMORY LOCATION: 001160
MEMORY DATA BIT(S): 6 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of station director 1 (pylon 1).
REMARKS: From station director 1 through RCP through LH FAB MRTU Type I to FCC.
PASS: If fifth digit displayed on HOD is 2, 3, 6, or 7, go to paragraph 12–36.
FAIL: Location of fault: station director 1, wiring from station director 1 to rocket control panel (RCP), RCP, wiring from RCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

12–36 SIGNAL NAME: P1 POLLED AND RKT PRESENT (ACY) STD1 RESP ECHO (ACZ) ∎
MEMORY LOCATION: 001263
MEMORY DATA BIT(S):   5   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Displays (on HOD) number of rockets remaining in each zone.
REMARKS: From FCC through LH FAB MRTU Type I to RCP.
PASS: If the fifth digit displayed on HOD is 4, 5, 6, or 7, go to paragraph 12–37.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to RCP, RCP.
Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

12–37 SIGNAL NAME: STA DIR 1 RKT POLL (ACY) STD1 RESPONSE (ACZ) ∎
MEMORY LOCATION: 001656
MEMORY DATA BIT(S):   4–19   (SCALAR)
CONDITION: Monitor HOD; movement of the pylons down should show a decreasing negative
number (1 in the sixth digit) and movement of the pylons up should show a positive
increasing number (0 in the sixth digit)
SIGNAL FUNCTION: Monitors pylon 1 position.
REMARKS: From station director 1 through LH outboard (OUTBD) MRTU Type II to FCC.
PASS: Location of fault if condition is met: pylon actuator controller, wiring from pylon actuator
controller to pylon actuator, pylon actuator. Troubleshoot wiring to isolate fault
(TM 9–1090–208–23–2).
FAIL: Location of fault: station director 1, wiring from station director 1to LH OUTBD MRTU Type II,
LH OUTBD MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2)

12–38 SIGNAL NAME: STA DIR 2 STATUS
MEMORY LOCATION: 001160
MEMORY DATA BIT(S):   7   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates status of station director 2 (pylon 2).
REMARKS: From station director 2 through RCP through LH FAB MRTU Type I to FCC.
PASS: If fifth digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 12–39.
FAIL: Location of fault: station director 2, wiring from station director 2 to RCP, RCP, wiring from RCP
to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault
(TM 9–1090–208–23–2).

12–39 SIGNAL NAME: P2 POLLED AND RKT PRESENT (ACY) STD2 RESP ECHO (ACZ) ∎
MEMORY LOCATION: 001263
MEMORY DATA BIT(S):   6   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Displays (on HOD) number of rockets remaining in each zone.
REMARKS: From FCC through LH FAB MRTU Type I to RCP.
PASS: If the fifth digit displayed on HOD is 2, 3, 6, or 7, go to paragraph 12–40.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to RCP, RCP.
Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

■ **12–40 SIGNAL NAME:** STA DIR 2 RKT POLL (ACY) STD2 RESPONSE (ACZ)
      MEMORY LOCATION: 001723
      MEMORY DATA BIT(S): 4–19   (SCALAR)
      CONDITION: Monitor HOD; movement of the pylons down should show a decreasing negative
            number (1 in the sixth digit) and movement of the pylons up should show a positive
            increasing number (0 in the sixth digit).
      SIGNAL FUNCTION: Monitors pylon 2 position.
      REMARKS: From station director through LH inboard (INBD) MRTU Type II to FCC.
      PASS: Location of fault if condition is met: pylon actuator controller, wiring from pylon actuator
            controller to pylon actuator, pylon actuator. Troubleshoot wiring to isolate fault
            (TM 9–1090–208–23–2).
      FAIL: Location of fault: station director 2, wiring from station director 2 to LH INBD MRTU Type II, LH
            INBD MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

12–41 SIGNAL NAME: STA DIR 3 STATUS
      MEMORY LOCATION: 001160
      MEMORY DATA BIT(S): 8   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates status of station director 3 (pylon 3).
      REMARKS: From station director 3 through RCP and LH FAB MRTU Type I to FCC.
      PASS: If fourth digit displayed on HOD is 4, 5, 6, or 7, go to paragraph 12–42.
      FAIL: Location of fault: station director 3, wiring from station director 3 to RCP, RCP, wiring from RCP
            to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault
            (TM 9–1090–208–23–2).

■ **12–42 SIGNAL NAME:** P3 POLLED AND RKT PRESENT (ACY) STD3 RESP ECHO (ACZ)
      MEMORY LOCATION: 001263
      MEMORY DATA BIT(S): 7   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Displays number of rockets remaining in each zone.
      REMARKS: From FCC through LH FAB MRTU Type I to RCP.
      PASS: If the fifth digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 12–43.
      FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to RCP, RCP.
            Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

■ **12–43 SIGNAL NAME:** STA DIR 3 RKT POLL (ACY) STD3 RESPONSE (ACZ)
      MEMORY LOCATION: 001770
      MEMORY DATA BIT(S): 4–19   (SCALAR)
      CONDITION: Monitor HOD; movement of the pylons down should show a decreasing negative
            number (1 in the sixth digit) and movement of the pylons up should show a positive
            increasing number (0 in the sixth digit).
      SIGNAL FUNCTION: Monitors pylon 3 position.
      REMARKS: From station director through RH INBD MRTU Type II to RCP.
      PASS: Location of fault if condition is met: pylon actuator controller, wiring from pylon actuator
            controller to pylon actuator, pylon actuator. Troubleshoot wiring to isolate fault
            (TM 9–1090–208–23–2).
      FAIL: Location of fault: station director 3, wiring from station director 3 to RH INBD MRTU Type II, RH
            INBD MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

12–44 SIGNAL NAME: STA DIR 4 STATUS
       MEMORY LOCATION: 001160
       MEMORY DATA BIT(S):   9   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Indicates status of station director 4 (pylon 4).
       REMARKS: From station director 4 through RCP through LH FAB MRTU Type I to FCC.
       PASS: If fourth digit displayed on HOD is 2, 3, 6, or 7, go to paragraph 12–45.
       FAIL: Location of fault: station director 4, wiring from station director 4 to RCP, RCP, wiring from RCP
           to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault
           (TM 9–1090–208–23–2).

12–45 SIGNAL NAME: P4 POLLED AND ROCKET PRESENT (ACY) STD4 RESP ECHO (ACZ)
       MEMORY LOCATION: 001263
       MEMORY DATA BIT(S):   8   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Displays number of rockets remaining in each zone.
       REMARKS: From FCC through LH FAB MRTU Type I to RCP.
       PASS: If the fourth digit displayed on HOD is 4, 5, 6, or 7, go to paragraph 12–46.
       FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to RCP, RCP.
           Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

12–46 SIGNAL NAME: STA DIR 4 RKT POLL (ACY) STD3 RESPONSE (ACZ)
       MEMORY LOCATION: 002035
       MEMORY DATA BIT(S):   4–19   (SCALAR)
       CONDITION: Monitor HOD; movement of the pylons down should show a decreasing negative
           number (1 in the sixth digit) and movement of the pylons up should show a positive
           increasing number (0 in the sixth digit)
       SIGNAL FUNCTION: Monitors pylon 4 position.
       REMARKS: From station director through RH OUTBD MRTU Type II to RCP.
       PASS: Location of fault if condition is met: pylon actuator controller, wiring from pylon actuator
           controller to pylon actuator, pylon actuator. Troubleshoot wiring to isolate fault
           (TM 9–1090–208–23–2).
       FAIL: Location of fault: station director 4, wiring from station director 4 to RH OUTBD MRTU Type II,
           RH OUTBD MRTU Type II. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

12–47 SIGNAL NAME: RKT ZONE ID
       MEMORY LOCATION: 001162
       MEMORY DATA BIT(S):   5–7   (OCTAL)
       CONDITION: If the fifth digit displayed on HOD is 1=A
                 If the fifth digit displayed on HOD is 2=B
                 If the fifth digit displayed on HOD is 3=C
                 If the fifth digit displayed on HOD is 4=D
                 If the fifth digit displayed on HOD is 5=E
       SIGNAL FUNCTION: Strobed signals displayed on HOD to identify specific rocket groups, by zone,
               in each pod.
       REMARKS: From RCP through LH FAB MRTU Type I to FCC.
       PASS: If CONDITION corresponds to specific zone, go to paragraph 12–48.
       FAIL: Location of fault: RCP, wiring from RCP to LH FAB MRTU Type I, LH FAB MRTU Type I.
           Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

12–48 **SIGNAL NAME:** RKT COUNT FOR EACH ZONE (ACY) RKT ZONE COUNT (ACZ)
MEMORY LOCATION: 001162
MEMORY DATA BIT(S): 12–16 (BINARY)
CONDITION: If the second digit displayed on HOD is 1=1
If the second digit displayed on HOD is 2=2
If the second digit displayed on HOD is 3=3
If the second digit displayed on HOD is 4=4
If the second digit displayed on HOD is 5=5
If the second digit displayed on HOD is 6=6
If the second digit displayed on HOD is 7=7
If the third digit displayed on HOD is 1 and the second digit is 0=8
If the third digit displayed on HOD is 1 and the second digit is 1=9
If the third digit displayed on HOD is 1 and the second digit is 2=10
If the third digit displayed on HOD is 1 and the second digit is 3=11
If the third digit displayed on HOD is 1 and the second digit is 4=12
If the third digit displayed on HOD is 1 and the second digit is 5=13
If the third digit displayed on HOD is 1 and the second digit is 6=14
If the third digit displayed on HOD is 1 and the second digit is 7=15
If the third digit displayed on HOD is 2 and the second digit is 0=16
If the third digit displayed on HOD is 2 and the second digit is 1=17
If the third digit displayed on HOD is 2 and the second digit is 2=18
If the third digit displayed on HOD is 2 and the second digit is 3=19
If the third digit displayed on HOD is 2 and the second digit is 4=20
If the third digit displayed on HOD is 2 and the second digit is 5=21
If the third digit displayed on HOD is 2 and the second digit is 6=22
If the third digit displayed on HOD is 2 and the second digit is 7=23
If the third digit displayed on HOD is 3 and the second digit is 0=24
SIGNAL FUNCTION: Strobed signal identifies number of rockets remaining in each zone.
REMARKS: From RCP through LH FAB MRTU Type I to FCC.
PASS: If CONDITION agrees with number of rockets, go to paragraph 12–49.
FAIL: Location of fault: RCP, wiring from RCP to LH FAB MRTU Type I, LH FAB MRTU Type I.
Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

12–49 **SIGNAL NAME:** RKT TYPE SEL (ACY) RCP ZONE TYPE (ACZ)
MEMORY LOCATION: 001161
MEMORY DATA BIT(S): 4–7 (HEX)
CONDITION: If the fifth digit displayed on HOD is 0=HPD40
If the fifth digit displayed on HOD is 1=HRC40
If the fifth digit displayed on HOD is 2=HDP40
If the fifth digit displayed on HOD is 3=WP40
If the fifth digit displayed on HOD is 4=ILM40
If the fifth digit displayed on HOD is 5=SMK40
If the fifth digit displayed on HOD is 6=HDP66
If the fifth digit displayed on HOD is 7=HRC66
If the sixth digit displayed on HOD is 1 and the fifth digit is 0=ILM66
If the sixth digit displayed on HOD is 1 and the fifth digit is 1=SMK66
If the sixth digit displayed on HOD is 1 and the fifth digit is 2=MPS66
If the sixth digit displayed on HOD is 1 and the fifth digit is 3=NONE
SIGNAL FUNCTION: Reports rocket type ready for firing.
REMARKS: From RCP through LH FAB MRTU Type I to FCC.
PASS: If CONDITION agrees with selection, go to paragraph 12–50.
FAIL: Location of fault: RCP, wiring from RCP to LH FAB MRTU Type I, LH FAB MRTU Type I.
Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

12–50 **SIGNAL NAME:**   RKT TYPE FOR EACH ZONE (ACY) RKT ZONE TYPE (ACZ) ■
MEMORY LOCATION: 001162
MEMORY DATA BIT(S):   8–11   (HEX)
CONDITION: If the third digit displayed on HOD is 0, 1, 2, or 3=HPD40
If the third digit displayed on HOD is 4, 5, 6, or 7=HRC40
If the fourth digit displayed on HOD is 1 and the third digit
is 0, 1, 2, or 3=HDP40
If the fourth digit displayed on HOD is 1 and the third digit
is 4, 5, 6, or 7=WP40
If the fourth digit displayed on HOD is 2 and the third digit
is 0, 1, 2, or 3=ILM40
If the fourth digit displayed on HOD is 2 and the third digit
is 4, 5, 6, or 7=SMK40
If the fourth digit displayed on HOD is 3 and the third digit
is 0, 1, 2, or 3=HDP66
If the fourth digit displayed on HOD is 3 and the third digit
is 4, 5, 6, or 7=HRC66
If the fourth digit displayed on HOD is 4 and the third digit
is 0, 1, 2, or 3=ILM66
If the fourth digit displayed on HOD is 4 and the third digit
is 0, 1, 2, or 3=SMK66
If the fourth digit displayed on HOD is 5 and the third digit
is 4, 5, 6, or 7=MPS66
If the fourth digit displayed on HOD is 5 and the third digit
is 0, 1, 2, or 3=NONE
SIGNAL FUNCTION: Strobed signal displays on HOD the type of rockets remaining in each zone.
REMARKS: From RCP through LH FAB MRTU Type I to FCC.
PASS: If CONDITION corresponds to rocket type, go to paragraph 12–51.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to RCP, RCP.
Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

12–51 **SIGNAL NAME:**   PENETRATION SETTING (ACY) RCP FUSE SELECT (ACZ) ■
MEMORY LOCATION: 001161
MEMORY DATA BIT(S):   8–11   (HEX)
CONDITION: If the third digit displayed on HOD is 0, 1, 2, or 3=SPQ
If the third digit displayed on HOD is 4, 5, 6, or 7=10M
If the fourth digit displayed on HOD is 1 and the third digit
is 0, 1, 2, or 3=15M
If the fourth digit displayed on HOD is 1 and the third digit
is 4, 5, 6, or 7=20M
If the fourth digit displayed on HOD is 2 and the third digit
is 0, 1, 2, or 3=25M
If the fourth digit displayed on HOD is 2 and the third digit
is 4, 5, 6, or 7=30M
If the fourth digit displayed on HOD is 3 and the third digit
is 0, 1, 2, or 3=35M
If the fourth digit displayed on HOD is 3 and the third digit
is 4, 5, 6, or 7=40M
If the fourth digit displayed on HOD is 4 and the third digit
is 0, 1, 2, or 3=45M
If the fourth digit displayed on HOD is 4 and the third digit
is 4, 5, 6, or 7=BUNKER
SIGNAL FUNCTION: Reports selected rocket penetration setting to FCC.
REMARKS: From RCP through LH FAB MRTU Type I to FCC.
PASS: If CONDITION agrees with selected setting, go to paragraph 12–52 (ACY) or 12–51A (ACZ).
FAIL: Location of fault: RCP, wiring from RCP to LH FAB MRTU Type I, LH FAB MRTU Type I.
Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

12–51A SIGNAL NAME: RCP RANGE SELECT (ACZ)
   MEMORY LOCATION: 001161
   MEMORY DATA BIT(S):   12–19   (HEX)
   CONDITION: (None)
   SIGNAL FUNCTION: 0.0 to 9.9 kilometers.
   REMARKS: From RCP to FCC.
   PASS: If range agrees with selected setting, go to paragraph 12–52.
   FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to RCP, RCP.
      Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

12–52 SIGNAL NAME: RKT FIRE IN PROGRESS
   MEMORY LOCATION: 001160
   MEMORY DATA BIT(S):   10   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Is true when time of flight is displayed on HOD.
   REMARKS: From RCP to FCC.
   PASS: If fourth digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 12–53.
   FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to RCP, RCP.
      Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

12–53 SIGNAL NAME: RKT FIRE INHIBIT CMD (ACY) RKT FIRE ENABLE (ACZ)
   MEMORY LOCATION: 001214
   MEMORY DATA BIT(S):   4   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Inhibits rocket firing (ACY). Enables rocket firing (ACZ).
   REMARKS: From FCC through LH FAB MRTU Type I to RCP.
   PASS: Location of fault if the sixth digit displayed on HOD is 0: station director, wiring from station
      director to rocket launcher, rocket launcher. Troubleshoot wiring to isolate fault
      (TM 9–1090–208–23–2) (ACY).
      Location of fault if the sixth digit displayed on HOD is 1: station director, wiring from station
      director to rocket launcher, rocket launcher. Troubleshoot wiring to isolate fault
      (TM 9–1090–208–23–2) (ACZ).
   FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to RCP, RCP.
      Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

12–54 SIGNAL NAME: EMER STORES JETT SW
   MEMORY LOCATION: 001532
   MEMORY DATA BIT(S):   12   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Jettisons external stores on pylons.
   REMARKS: Hardwired from pilot and CPG collective sticks, through emergency Stores Jettison Panel
         to pylons.
   PASS: Location of fault if the third digit displayed on HOD is 0, 1, 4, or 5: MISSION JETT circuit
      breaker, wiring from MISSION JETT circuit breaker to pilot STORES JETT panel, pilot
      STORES JETT panel. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).
   FAIL: Location of fault: pilot and/or CPG collective stick, wiring from collective stick to Stores Jettison
      Panel, Stores Jettison Panel, wiring from Stores Jettison Panel to pylons. Troubleshoot wiring
      to isolate fault (TM 9–1090–208–23–2).

CHAPTER 13

STABILATOR SYSTEM (STAB) MULTIPLEX READ CODES

FAILURE SYMPTOM INDEX

Symptom	Refer to paragraph
RATE GYRO 2 FD/LS NO–GO	13–1
STAB CONTROL UNIT 1 FD/LS NO–GO	13–9
STAB CONTROL UNIT 2 FD/LS NO–GO	13–1
MAN STAB INDICATORS LIGHT	13–1
STABILATOR IS NOT COORDINATED IN TURNS	13–1
AIRSPEED TRANSDUCER 2 FD/LS NO–GO	13–2
STABILATOR DOES NOT GO TO 25 +/–2 DEGREES WHEN RESET BUTTON IS DEPRESSED	13–2
BOT STAB ACTUATOR STOW FD/LS NO–GO	13–3
RATE GYRO 1 FD/LS NO–GO	13–6
AIRSPEED TRANSDUCER 1 FD/LS NO–GO	13–2
TOP STAB ACTUATOR 1 FD/LS NO–GO	13–3

Personnel Required:

(2)

References:

TM 1–1520–238–T–7

Equipment Conditions:

Ref	Condition
TM 1–1520–238–T–7	STABILATOR – MAINTENANCE OPERATIONAL CHECK in progress

NOTE

- All multiplex read code responses are read from right to left.

- Multiplex read codes must be used in conjunction with applicable Maintenance Operational Check (MOC) in progress.

- Multiplex read codes are observed on the HOD (ADC) or CDU (ADD).

- EOW C/B must be pushed in for auto mode.

MULTIPLEX READ CODE INTERPRETATIONS

13–1 **SIGNAL NAME:**   STAB RATE GYRO 2 (ACY) STAB RATEGYRO RT (ACZ)
MEMORY LOCATION: 002125
MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: Monitor the heads out display (HOD) while gyro is spinning up; memory location response digits should decrease. Note reading.
SIGNAL FUNCTION: Indicates axis position.
REMARKS: From rate gyro 2 to stabilator control unit 2 (SCU), SCU 2 through DASEC to FCC.
PASS: If CONDITION corresponds to memory location response, record reading, go to paragraph 13–2.
FAIL: Location of fault: rate gyro 2, wiring from rate gyro 2 to SCU 2, SCU 2, wiring from SCU 2 to digital automatic stabilization equipment computer (DASEC), DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

13–2 **SIGNAL NAME:**   STAB AIRSPEED TRANSDUCER 2 (ACY) STAB AIRSPEED RT (ACZ)
MEMORY LOCATION: 002122
MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: Reading on HOD should be 016760 or greater. Note reading.
SIGNAL FUNCTION: Indicates 30, 60, 80 knot (KT) transition levels.
REMARKS: From stab airspeed transducer 2 to SCU 2, SCU 2 through DASEC to fire control computer (FCC).
PASS: If CONDITION corresponds to memory location response, record reading, go to paragraph 13–3.
FAIL: Location of fault: airspeed transducer 2, wiring from airspeed transducer 2 to SCU 2, SCU 2, wiring from SCU 2 to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

13–3 **SIGNAL NAME:**   BOTTOM STAB ACTUATOR POSITION
MEMORY LOCATION: 002115
MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: For an actuator failure in extended position, memory response is 077760.
For an actuator failure in retracted position, memory response is 100000.
Slew stabilator. If actuator moves in either direction, record the reading and go to 13–8.
If memory location does not show increase or decrease, a failure exists.
SIGNAL FUNCTION: Indicates bottom stabilator actuator position.
REMARKS: From bottom actuator to SCU 2, SCU 2 through DASEC to FCC.
PASS: If actuator moves in either direction, go to paragraph 13–4.
FAIL: Location of fault: bottom actuator, wiring from bottom actuator to SCU 2, SCU 2, wiring from SCU 2 to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

13–4 SIGNAL NAME: SCU 2 BITE VALID (ACY) FWD SCU BIT OK (ACZ)
 MEMORY LOCATION: 002130
 MEMORY DATA BIT(S):   8   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Indicates if SCU 2 has failed.
 REMARKS: From SCU 2 through DASEC to FCC.
 PASS: If fourth digit on HOD is 4, 5, 6, or 7, go to paragraph 13–5.
 FAIL: Location of fault: SCU 2, wiring from SCU 2 to DASEC, DASEC. Troubleshoot wiring to isolate
    fault (TM 1–1520–238–T–7).

13–5 SIGNAL NAME: SCU 2 STATUS (ACY) FWD SCU STAT (ACZ)
 MEMORY LOCATION: 002130
 MEMORY DATA BIT(S):   7   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Generates NO–GO message.
 REMARKS: From SCU 2 through DASEC to FCC.
 PASS: If fifth digit on HOD is 1, 3, 5, or 7, go to paragraph 13–6 (ACY) or 13–5A (ACZ).
 FAIL: Location of fault: SCU 2, wiring from SCU 2 to DASEC, DASEC. Troubleshoot wiring to isolate
    fault (TM 1–1520–238–T–7).

13–5A SIGNAL NAME: FWD SCU GND REF (ACZ)
 MEMORY LOCATION: 002130
 MEMORY DATA BIT(S):   12   (BINARY)
 CONDITION: Should always be zero
 SIGNAL FUNCTION: Generates NO–GO message.
 REMARKS: From SCU 2 through DASEC to FCC.
 PASS: If third digit on HOD is 0 or 4, go to paragraph 13–6.
 FAIL: Location of fault: SCU 2, wiring from SCU 2 to DASEC, DASEC. Troubleshoot wiring to isolate
    fault (TM 1–1520–238–T–7).

13–6 SIGNAL NAME: STAB RATE GYRO 1 (ACY) STAB RATEGYRO LT (ACZ)
 MEMORY LOCATION: 002124
 MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
 CONDITION: Monitor HOD while gyro is spinning up; memory location response digits should
    decrease. Note reading.
 SIGNAL FUNCTION: Indicates axis position.
 REMARKS: From rate gyro 1 to SCU 1, SCU 1 through DASEC to FCC.
 PASS: If the sixth digit displayed on the HOD is 0, compare reading from 13–1; if reading is equal, go
    to paragraph 13–7.
 FAIL: Location of fault: rate gyro 1, wiring from rate gyro 1 to SCU 1, SCU 1, wiring from SCU 1 to
    DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

13–7 SIGNAL NAME: STAB AIRSPEED TRANSDUCER 1 (ACY) STAB AIRSPEED RT (ACZ)
 MEMORY LOCATION: 002123
 MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
 CONDITION: Reading on HOD should be 0154200 or greater. Note reading.
 SIGNAL FUNCTION: Indicates 30, 60, 80 KT transition levels.
 REMARKS: From airspeed transducer 1 to SCU 1, SCU 1 through DASEC to FCC.
 PASS: If the CONDITION corresponds to the memory location response, compare reading from
    13–2; if reading is equal, go to paragraph 13–8.
 FAIL: Location of fault: airspeed transducer 1, wiring from airspeed transducer 1 to SCU 1, SCU 1,
    wiring from SCU 1 to DASEC, DASEC. Troubleshoot wiring to isolate fault
    (TM 1–1520–238–T–7).

13–8 **SIGNAL NAME:** TOP STAB ACTUATOR POSITION
MEMORY LOCATION: 002114
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: For an actuator failure in extended position, memory response is 077160.
For an actuator failure in retracted position, memory response is 100000.
Slew stabilator. If actuator moves in either direction, record reading. If memory location
does not show increase or decrease, a failure exists.
SIGNAL FUNCTION: Indicates top stabilator actuator position.
REMARKS: From top actuator to SCU 1, SCU 1 through DASEC to FCC.
PASS: If actuator moves in either direction, go to paragraph 13–9.
FAIL: Location of fault: top actuator, wiring from top actuator to SCU 1, SCU 1, wiring from SCU 1 to
DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

13–9 **SIGNAL NAME:** SCU 1 BITE VALID (ACY) AFT SCU BIT OK (ACZ)
MEMORY LOCATION: 002130
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates if SCU 1 has failed.
REMARKS: From SCU 1 through DASEC to FCC.
PASS: If fifth digit on HOD is 4 or 5, go to paragraph 13–10 (ACY) or 13–9A (ACZ).
FAIL: Location of fault: SCU 1, wiring from SCU 1 to DASEC, DASEC. Troubleshoot wiring to isolate
fault (TM 1–1520–238–T–7).

13–9A **SIGNAL NAME:** FWD SCU GND REF (ACZ)
MEMORY LOCATION: 002130
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: Should always be zero
SIGNAL FUNCTION: Generates NO–GO message.
REMARKS: From SCU 1 through DASEC to FCC.
PASS: If fifth digit on HOD is 4 or 5, go to paragraph 13–10.
FAIL: Location of fault: SCU 1, wiring from SCU 1 to DASEC, DASEC. Troubleshoot wiring to isolate
fault (TM 1–1520–238–T–7).

13–10 **SIGNAL NAME:** SCU 1 STATUS (ACY) AFT SCU STAT (ACZ)
MEMORY LOCATION: 002130
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Generates NO GO message.
REMARKS: From SCU 1 through DASEC to FCC.
PASS: If the sixth digit on HOD is 0, troubleshoot wiring between SCU 1 and SCU 2
(TM 1–1520–238–T–7).
FAIL: Location of fault: SCU 1, wiring from SCU 1 to SCU 2, wiring from SCU 1 to DASEC, DASEC.
Troubleshoot wiring to isolate fault (TM 1–1520–238–T–7).

CHAPTER 14

SYMBOL GENERATOR (SYM GEN) MULTIPLEX READ CODES

FAILURE SYMPTOM INDEX

FAILURE SYMPTOM INDEX (cont)

TABLE 14–1. ASCII CODE CONVERSIONS
(BITS 5–10 OR BITS 13–18)

00 = |	0B = K	16 = V	21 = !	2C = ,	37 = 7
01 = A	0C = L	17 = W	22 = ”	2D = –	38 = 8
02 = B	0D = M	18 = X	23 = #	2E = .	39 = 9
03 = C	0E = N	19 = Y	24 = $	2F = /	3A = :
04 = D	0F = O	1A = Z	25 = %	30 = 0	3B = ;
05 = E	10 = P	1B = (	26 = &	31 = 1	3C = [
06 = F	11 = Q	1C = \	27 = ’	32 = 2	3D = =
07 = G	12 = R	1D =)	28 = <	33 = 3	3E =]
08 = H	13 = S	1E = ^	29 = >	34 = 4	3F = ?
09 = I	14 = T	1F = _	2A = *	35 = 5	
0A = J	15 = U	20 =	2B = +	36 = 6	

Personnel Required:

(2)

References:

TM 1–1270–476–T
TM 9–1230–476–20–1
TM 9–1230–476–20–2
TM 11–1520–238–23–2

Equipment Conditions:

Ref	Condition
TM 9–1230–476–20–2	Applicable MAINTENANCE OPERATIONAL CHECK in progress

NOTE

- All multiplex read code responses are read from right to left.

- Multiplex read codes must be used in conjunction with applicable Maintenance Operational Check (MOC) in progress.

- Multiplex read codes are observed on the HOD (ADC) or CDU (ADD).

MULTIPLEX READ CODE INTERPRETATIONS

14–1 **SIGNAL NAME:** SYM GEN PWR SW (ACY) SYMG PWR SW (ACZ)
MEMORY LOCATION: 001075
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors **FC SYM GEN** switch.
REMARKS: From copilot/gunner (CPG) fire control panel (FCP) through left–hand (LH) forward avionics bay (FAB) multiplex remote terminal unit (MRTU) Type I to fire control computer (FCC).
PASS: If first digit displayed on heads out display (HOD) is 4, 5, 6, or 7, go to paragraph 14–2.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

14–2   SIGNAL NAME: SYM GEN STATUS WORD TERMINAL FLAG
MEMORY LOCATION: 000675
MEMORY DATA BIT(S):   19   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: FAIL indicates a failed state of bits 12 through 18.
REMARKS: From symbol generator to 1553 bus.
PASS: If first digit displayed on HOD is 0, 2, 4 or 6, go to paragraph 14–11.
FAIL: Location of fault: if first digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 14–3.

14–3   SIGNAL NAME: SYM GEN STATUS WORD PROM FAIL
MEMORY LOCATION: 000675
MEMORY DATA BIT(S):   18   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: FAIL indicates a failed state of 256 words of programmable read only memory (PROM) contained on memory cards A5 and A12.
REMARKS: From symbol generator to 1553 bus.
PASS: If first digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 14–4.
FAIL: Location of fault: replace symbol generator (TM 11–1520–238–23–2).

14–4   SIGNAL NAME: SYM GEN STATUS WORD PROCESSOR FAIL
MEMORY LOCATION: 000675
MEMORY DATA BIT(S):   17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: FAIL indicates a failed state of processor card A11.
REMARKS: From symbol generator to 1553 bus.
PASS: If first digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 14–5.
FAIL: Location of fault: replace symbol generator (TM 11–1520–238–23–2).

14–5   SIGNAL NAME: SYM GEN STATUS WORD AUTO STBY
MEMORY LOCATION: 000675
MEMORY DATA BIT(S):   16   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Standby (STBY) indicates symbol generator has gone into standby due to no valid message for 0.5 seconds.
REMARKS: From symbol generator to 1553 bus.
PASS: If second digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 14–6.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–6   SIGNAL NAME: SYM GEN STATUS WORD RAM FAIL
MEMORY LOCATION: 000675
MEMORY DATA BIT(S):   15   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates random access memory (RAM) status on A2, A3, and A4 cards.
REMARKS: From symbol generator to 1553 bus.
PASS: If second digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 14–7.
FAIL: Location of fault: replace symbol generator (TM 11–1520–238–23–2).

14–7 **SIGNAL NAME:**   SYM GEN STATUS WORD RAM FAIL
MEMORY LOCATION: 000675
MEMORY DATA BIT(S):   14   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates RAM status on A12 card.
REMARKS: From symbol generator to 1553 bus.
PASS: If second digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 14–8.
FAIL: Location of fault: replace symbol generator (TM 11–1520–238–23–2).

14–8 **SIGNAL NAME:**   SYM GEN STATUS WORD INTERNAL SYNC
MEMORY LOCATION: 000675
MEMORY DATA BIT(S):   12   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates either target acquisition designation sight (TADS) or pilot night vision sensor (PNVS) forward looking infrared radar (FLIR) is not present.
REMARKS: From symbol generator to 1553 bus.
PASS: If third digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 14–9.
FAIL: Location of fault: replace symbol generator (TM 11–1520–238–23–2).

14–9 **SIGNAL NAME:**   SYM GEN STATUS WORD PROCESSOR TIME OUT
MEMORY LOCATION: 000675
MEMORY DATA BIT(S):   11   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates state of time out flip–flop which is reset at beginning of each frame.
REMARKS: From symbol generator to 1553 bus.
PASS: If third digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 14–10.
FAIL: Location of fault: replace symbol generator (TM 11–1520–238–23–2).

14–10 **SIGNAL NAME:**   SYM GEN STATUS WORD OVERVOLTAGE
MEMORY LOCATION: 000675
MEMORY DATA BIT(S):   10   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates when +5 VDC is exceeded.
REMARKS: From symbol generator to 1553 bus.
PASS: If fourth digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 14–11.
FAIL: Location of fault: replace symbol generator (TM 11–1520–238–23–2).

14–11 **SIGNAL NAME:**   SYM GEN STATUS WORD TERMINAL FLAG
MEMORY LOCATION: 000732
MEMORY DATA BIT(S):   19   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: FAIL indicates a failed state of bits 12 through 18.
REMARKS: From symbol generator to 1553 bus.
PASS: If first digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 14–20.
FAIL: Location of fault: if first digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 14–12.

14–12 **SIGNAL NAME:** SYM GEN STATUS WORD PROM FAIL
　　　　MEMORY LOCATION: 000732
　　　　MEMORY DATA BIT(S): 18 (BINARY)
　　　　CONDITION: (None)
　　　　SIGNAL FUNCTION: FAIL indicates a failed state of 256 words of PROM contained on memory
　　　　　　　　　　　cards A5 and A12.
　　　　REMARKS: From symbol generator to 1553 bus.
　　　　PASS: If first digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 14–13.
　　　　FAIL: Location of fault: replace symbol generator (TM 11–1520–238–23–2).

14–13 **SIGNAL NAME:** SYM GEN STATUS WORD PROCESSOR FAIL
　　　　MEMORY LOCATION: 000732
　　　　MEMORY DATA BIT(S): 17 (BINARY)
　　　　CONDITION: (None)
　　　　SIGNAL FUNCTION: Fail indicates a failed state of processor card A11.
　　　　REMARKS: From symbol generator to 1553 bus.
　　　　PASS: If first digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 14–14.
　　　　FAIL: Location of fault: replace symbol generator (TM 11–1520–238–23–2).

14–14 **SIGNAL NAME:** SYM GEN STATUS WORD AUTO STBY
　　　　MEMORY LOCATION: 000732
　　　　MEMORY DATA BIT(S): 16 (BINARY)
　　　　CONDITION: (None)
　　　　SIGNAL FUNCTION: STBY indicates symbol generator has gone into standby due to no valid
　　　　　　　　　　　message for 0.5 seconds.
　　　　REMARKS: From symbol generator to 1553 bus.
　　　　PASS: If second digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 14–15.
　　　　FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–15 **SIGNAL NAME:** SYM GEN STATUS WORD RAM FAIL
　　　　MEMORY LOCATION: 000732
　　　　MEMORY DATA BIT(S): 15 (BINARY)
　　　　CONDITION: (None)
　　　　SIGNAL FUNCTION: Indicates RAM status on A2, A3, and A4 cards.
　　　　REMARKS: From symbol generator to 1553 bus.
　　　　PASS: If fifth digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 14–16.
　　　　FAIL: Location of fault: replace symbol generator (TM 11–1520–238–23–2).

14–16 **SIGNAL NAME:** SYM GEN STATUS WORD RAM FAIL
　　　　MEMORY LOCATION: 000732
　　　　MEMORY DATA BIT(S): 14 (BINARY)
　　　　CONDITION: (None)
　　　　SIGNAL FUNCTION: Indicates RAM status on A12 card.
　　　　REMARKS: From symbol generator to 1553 bus.
　　　　PASS: If second digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 14–17.
　　　　FAIL: Location of fault: replace symbol generator (TM 11–1520–238–23–2).

14–17   SIGNAL NAME: SYM GEN STATUS WORD INTERNAL SYNC
  MEMORY LOCATION: 000732
  MEMORY DATA BIT(S):   12   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates either TADS or PNVS FLIR is not present.
  REMARKS: From symbol generator to 1553 bus.
  PASS: If third digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 14–18.
  FAIL: Location of fault: replace symbol generator (TM 11–1520–238–23–2).

14–18   SIGNAL NAME: SYM GEN STATUS WORD PROCESSOR TIME OUT
  MEMORY LOCATION: 000732
  MEMORY DATA BIT(S):   11   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates state of time out flip–flop which is reset at beginning of each frame.
  REMARKS: From symbol generator to 1553 bus.
  PASS: If third digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 14–19.
  FAIL: Location of fault: replace symbol generator (TM 11–1520–238–23–2).

14–19   SIGNAL NAME: SYM GEN STATUS WORD OVERVOLTAGE
  MEMORY LOCATION: 000732
  MEMORY DATA BIT(S):   10   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates when +5 VDC is exceeded.
  REMARKS: From symbol generator to 1553 bus.
  PASS: If fourth digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 14–20.
  FAIL: Location of fault: replace symbol generator (TM 11–1520–238–23–2).

14–20   SIGNAL NAME: SYM GEN STATUS WORD TERMINAL FLAG
  MEMORY LOCATION: 000774
  MEMORY DATA BIT(S):   19   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: FAIL indicates a failed state of bits 12 through 18.
  REMARKS: From symbol generator to 1553 bus.
  PASS: If first digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 14–29.
  FAIL: Location of fault: if first digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 14–21.

14–21   SIGNAL NAME: SYM GEN STATUS WORD PROM FAIL
  MEMORY LOCATION: 000774
  MEMORY DATA BIT(S):   18   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: FAIL indicates a failed state of 256 words of PROM contained on memory
                    cards A5 and A12.
  REMARKS: From symbol generator to 1553 bus.
  PASS: If first digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 14–22.
  FAIL: Location of fault: replace symbol generator (TM 11–1520–238–23–2).

14–22 **SIGNAL NAME:** SYM GEN STATUS WORD PROCESSOR FAIL
MEMORY LOCATION: 000774
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: FAIL indicates a failed state of processor card A11.
REMARKS: From symbol generator to 1553 bus.
PASS: If first digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 14–23.
FAIL: Location of fault: replace symbol generator (TM 11–1520–238–23–2).

14–23 **SIGNAL NAME:** SYM GEN STATUS WORD AUTO STBY
MEMORY LOCATION: 000774
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: STBY indicates symbol generator has gone into standby due to no valid message for 0.5 seconds.
REMARKS: From symbol generator to 1553 bus.
PASS: If second digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 14–24.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–24 **SIGNAL NAME:** SYM GEN STATUS WORD RAM FAIL
MEMORY LOCATION: 000774
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates RAM status on A2, A3, and A4 cards.
REMARKS: From symbol generator to 1553 bus.
PASS: If fifth digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 14–25.
FAIL: Location of fault: replace symbol generator (TM 11–1520–238–23–2).

14–25 **SIGNAL NAME:** SYM GEN STATUS WORD RAM FAIL
MEMORY LOCATION: 000774
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates RAM status on A12 card.
REMARKS: From symbol generator to 1553 bus.
PASS: If second digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 14–26.
FAIL: Location of fault: replace symbol generator (TM 11–1520–238–23–2).

14–26 **SIGNAL NAME:** SYM GEN STATUS WORD INTERNAL SYNC
MEMORY LOCATION: 000774
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates either TADS or PNVS FLIR is not present.
REMARKS: From symbol generator to 1553 bus.
PASS: If third digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 14–27.
FAIL: Location of fault: replace symbol generator (TM 11–1520–238–23–2).

14–27 **SIGNAL NAME:** SYM GEN STATUS WORD PROCESSOR TIME OUT
MEMORY LOCATION: 000774
MEMORY DATA BIT(S): 11 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates state of time out flip–flop which is reset at beginning of each frame.
REMARKS: From symbol generator to 1553 bus.
PASS: If third digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 14–28.
FAIL: Location of fault: replace symbol generator (TM 11–1520–238–23–2).

14–28 **SIGNAL NAME:** SYM GEN STATUS WORD OVERVOLTAGE
MEMORY LOCATION: 000774
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates when +5 VDC is exceeded.
REMARKS: From symbol generator to 1553 bus.
PASS: If fourth digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 14–29.
FAIL: Location of fault: replace symbol generator (TM 11–1520–238–23–2).

14–29 **SIGNAL NAME:** SYM GEN STATUS WORD TERMINAL FLAG
MEMORY LOCATION: 001026
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: FAIL indicates a failed state of bits 12 through 18.
REMARKS: From symbol generator to 1553 bus.
PASS: If first digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 14–28.
FAIL: Location of fault: if first digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 14–30.

14–30 **SIGNAL NAME:** SYM GEN STATUS WORD PROM FAIL
MEMORY LOCATION: 001026
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: FAIL indicates a failed state of 256 words of PROM contained on memory
cards A5 and A12.
REMARKS: From symbol generator to 1553 bus.
PASS: If first digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 14–31.
FAIL: Location of fault: replace symbol generator (TM 11–1520–238–23–2).

14–31 **SIGNAL NAME:** SYM GEN STATUS WORD PROCESSOR FAIL
MEMORY LOCATION: 001026
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: FAIL indicates a failed state of processor card A11.
REMARKS: From symbol generator to 1553 bus.
PASS: If first digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 14–32.
FAIL: Location of fault: replace symbol generator (TM 11–1520–238–23–2).

14–32 **SIGNAL NAME:** SYM GEN STATUS WORD AUTO STBY
MEMORY LOCATION: 001026
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: STBY indicates symbol generator has gone into standby due to no valid
message for 0.5 seconds.
REMARKS: From symbol generator to 1553 bus.
PASS: If second digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 14–33.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–33 **SIGNAL NAME:** SYM GEN STATUS WORD RAM FAIL
MEMORY LOCATION: 001026
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates RAM status on A2, A3, and A4 cards.
REMARKS: From symbol generator to 1553 bus.
PASS: If fifth digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 14–34.
FAIL: Location of fault: replace symbol generator (TM 11–1520–238–23–2).

14–34 **SIGNAL NAME:** SYM GEN STATUS WORD RAM FAIL
MEMORY LOCATION: 001026
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates RAM status on A12 card.
REMARKS: From symbol generator to 1553 bus.
PASS: If second digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 14–35.
FAIL: Location of fault: replace symbol generator (TM 11–1520–238–23–2).

14–35 **SIGNAL NAME:** SYM GEN STATUS WORD INTERNAL SYNC
MEMORY LOCATION: 001026
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates either TADS or PNVS FLIR is not present.
REMARKS: From symbol generator to 1553 bus.
PASS: If third digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 14–36.
FAIL: Location of fault: replace symbol generator (TM 11–1520–238–23–2).

14–36 **SIGNAL NAME:** SYM GEN STATUS WORD PROCESSOR TIME OUT
MEMORY LOCATION: 001026
MEMORY DATA BIT(S): 11 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates state of time out flip–flop which is reset at beginning of each frame.
REMARKS: From symbol generator to 1553 bus.
PASS: If third digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 14–37.
FAIL: Location of fault: replace symbol generator (TM 11–1520–238–23–2).

14–37 SIGNAL NAME: SYM GEN STATUS WORD OVERVOLTAGE
MEMORY LOCATION: 001026
MEMORY DATA BIT(S):   10   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates when +5 VDC is exceeded.
REMARKS: From symbol generator to 1553 bus.
PASS: If fourth digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 14–38.
FAIL: Location of fault: replace symbol generator (TM 11–1520–238–23–2).

14–38 SIGNAL NAME: SYM GEN STATUS WORD TERMINAL FLAG
MEMORY LOCATION: 001060
MEMORY DATA BIT(S):   19   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: FAIL indicates a failed state of bits 12 through 18.
REMARKS: From symbol generator to 1553 bus.
PASS: If first digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 14–47.
FAIL: Location of fault: if first digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 14–39.

14–39 SIGNAL NAME: SYM GEN STATUS WORD PROM FAIL
MEMORY LOCATION: 001060
MEMORY DATA BIT(S):   18   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: FAIL indicates a failed state of 256 words of PROM contained on memory
                    cards A5 and A12.
REMARKS: From symbol generator to 1553 bus.
PASS: If first digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 14–40.
FAIL: Location of fault: replace symbol generator (TM 11–1520–238–23–2).

14–40 SIGNAL NAME: SYM GEN STATUS WORD PROCESSOR FAIL
MEMORY LOCATION: 001060
MEMORY DATA BIT(S):   17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: FAIL indicates a failed state of processor card A11.
REMARKS: From symbol generator to 1553 bus.
PASS: If first digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 14–41.
FAIL: Location of fault: replace symbol generator (TM 11–1520–238–23–2).

14–41 SIGNAL NAME: SYM GEN STATUS WORD AUTO STBY
MEMORY LOCATION: 001060
MEMORY DATA BIT(S):   16   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: **STBY** indicates symbol generator has gone into standby due to no valid
                    message for 0.5 seconds.
REMARKS: From symbol generator to 1553 bus.
PASS: If second digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 14–42.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–42 **SIGNAL NAME:** SYM GEN STATUS WORD RAM FAIL
MEMORY LOCATION: 001060
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates RAM status on A2, A3, and A4 cards.
REMARKS: From symbol generator to 1553 bus.
PASS: If fifth digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 14–43.
FAIL: Location of fault: replace symbol generator (TM 11–1520–238–23–2).

14–43 **SIGNAL NAME:** SYM GEN STATUS WORD RAM FAIL
MEMORY LOCATION: 001060
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates RAM status on A12 card.
REMARKS: From symbol generator to 1553 bus.
PASS: If second digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 14–44.
FAIL: Location of fault: replace symbol generator (TM 11–1520–238–23–2).

14–44 **SIGNAL NAME:** SYM GEN STATUS WORD INTERNAL SYNC
MEMORY LOCATION: 001060
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates either TADS or PNVS FLIR is not present.
REMARKS: From symbol generator to 1553 bus.
PASS: If third digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 14–45.
FAIL: Location of fault: replace symbol generator (TM 11–1520–238–23–2).

14–45 **SIGNAL NAME:** SYM GEN STATUS WORD PROCESSOR TIME OUT
MEMORY LOCATION: 001060
MEMORY DATA BIT(S): 11 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates state of the time out flip–flop which is reset at the beginning of each frame.
REMARKS: From symbol generator to 1553 bus.
PASS: If third digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 14–46.
FAIL: Location of fault: replace symbol generator (TM 11–1520–238–23–2).

14–46 **SIGNAL NAME:** SYM GEN STATUS WORD OVERVOLTAGE
MEMORY LOCATION: 001026
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates when +5 VDC is exceeded.
REMARKS: From symbol generator to 1553 bus.
PASS: If fourth digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 14–47.
FAIL: Location of fault: replace symbol generator (TM 11–1520–238–23–2).

14–47 SIGNAL NAME: PLT SYM MODE
MEMORY LOCATION: 000654
MEMORY DATA BIT(S):   4–7   (HEX)
CONDITION: If the sixth digit displayed on HOD is 0 and fifth digit displayed
              on HOD is 1=NONE
              If the sixth digit displayed on HOD is 0 and fifth digit displayed
              on HOD is 2=PLT
              If the sixth digit displayed on HOD is 0 and fifth digit displayed
              on HOD is 3=CPG
              If the sixth digit displayed on HOD is 0 and fifth digit displayed
              on HOD is 4=STATUS
SIGNAL FUNCTION: Selects pilot symbology display.
REMARKS: From FCC to symbol generator.
PASS: Location of fault if CONDITION corresponds to selected symbology mode: replace symbol
          generator (TM 11–1520–238–23–2).
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–48 SIGNAL NAME: PLT VIDEO MODE
MEMORY LOCATION: 000654
MEMORY DATA BIT(S):   8–11   (HEX)
CONDITION: If fourth digit displayed on HOD is 0 and third digit displayed
              on HOD is 4 or 5 =TV
              If fourth digit displayed on HOD is 1 and third digit displayed
              on HOD is 0 or 1 =FLIR
              If fourth digit displayed on HOD is 1 and third digit displayed
              on HOD is 4 or 5=PNVS
              If fourth digit displayed on HOD is 2 and third digit displayed
              on HOD is 0 or 1 =REC
              If fourth digit displayed on HOD is 2 and third digit displayed
              on HOD is 4 or 5 =NOT SELECTED
SIGNAL FUNCTION: Selects video symbology display inputs.
REMARKS: From FCC to symbol generator.
PASS: Location of fault if CONDITION corresponds to selected symbology mode: replace symbol
          generator (TM 11–1520–238–23–2).
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–49 SIGNAL NAME: RECORD CHANNEL SELECT (ACY) RECORD SEL CTL (ACZ)
MEMORY LOCATION: 000654
MEMORY DATA BIT(S):   13   (BINARY)
CONDITION: If the fourth digit displayed on HOD is 0, 2, 4, or 6=CPG
              If the fourth digit displayed on HOD is 1, 3, 5, or 7=PLT
SIGNAL FUNCTION: Selects video channel to be recorded.
REMARKS: From FCC to symbol generator.
PASS: Location of fault if CONDITION corresponds to selected record channel: replace symbol
          generator (TM 11–1520–238–23–2).
FAIL: Location of fault: refer to Chapter 21, paragraph 21–2.

14–50 SIGNAL NAME: VIDEO SYNC SELECT (ACY) SYNC SEL CTL (ACZ)
MEMORY LOCATION: 000654
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: If second digit displayed on HOD is 0, 1, 2, or 3 =PNVS
If second digit displayed on HOD is 4, 5, 6, or 7 =TADS
SIGNAL FUNCTION: Selects sync for symbol generator.
REMARKS: From FCC to symbol generator.
PASS: Location of fault if CONDITION corresponds to selected sync pulse: replace symbol generator
(TM 11–1520–238–23–2).
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–51 SIGNAL NAME: INTERNAL BIT CMD
MEMORY LOCATION: 000654
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Commands symbol generator to perform built–in–test (BIT).
REMARKS: From FCC to symbol generator.
PASS: Location of fault if first digit displayed on HOD is 0, 2, 4, or 6: replace symbol generator
(TM 11–1520–238–23–2).
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–52 SIGNAL NAME: CPG SYM MODE
MEMORY LOCATION: 000655
MEMORY DATA BIT(S): 4–7 (HEX)
CONDITION: If fifth digit displayed on HOD is 1=NONE
If fifth digit displayed on HOD is 2=PLT
If fifth digit displayed on HOD is 3=CPG
If fifth digit displayed on HOD is 4=STATUS
SIGNAL FUNCTION: Selects CPG symbology display.
REMARKS: From FCC to symbol generator.
PASS: If CONDITION corresponds to selected symbology mode go to paragraph 14–232.
FAIL: Location of fault: refer to Chapter 25, paragraph 25–18.

14–53 SIGNAL NAME: CPG VIDEO MODE
MEMORY LOCATION: 000655
MEMORY DATA BIT(S): 8–11 (HEX)
CONDITION: If fourth digit displayed on HOD is 0 and third digit displayed
on HOD is 4 or 5 =TV
If fourth digit displayed on HOD is 1 and third digit displayed
on HOD is 0 or 1 =FLIR
If fourth digit displayed on HOD is 1 and third digit displayed
on HOD is 4 or 5=PNVS
If fourth digit displayed on HOD is 2 and third digit displayed
on HOD is 0 or 1 =REC
If fourth digit displayed on HOD is 2 and third digit displayed
on HOD is 4 or 5 =NOT SELECTED
SIGNAL FUNCTION: Selects CPG video symbology display inputs.
REMARKS: From FCC to symbol generator.
PASS: Location of fault if CONDITION corresponds to selected symbology mode: replace symbol
generator (TM 11–1520–238–23–2).
FAIL: Location of fault: refer to Chapter 25, paragraph 25–8.

14–54 SIGNAL NAME: CPG LOSRET CONT
  MEMORY LOCATION: 000657
  MEMORY DATA BIT(S): 18   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Activates CPG line of sight (LOS) reticle.
  REMARKS: From FCC to symbol generator.
  PASS: If first digit displayed on HOD is 2, 3, 6, or 7, go to 14–55.
  FAIL: Location of fault: then replace FCC (TM 9–1230–476–20–1).

14–55 SIGNAL NAME: CPG LOSRET AZ
  MEMORY LOCATION: 000656
  MEMORY DATA BIT(S): 4–11   (HEX)
  CONDITION: Displays LOSRET azimuth reference when TADS is selected. Monitor HOD; memory
        location should indicate negative for left and positive for right.
  SIGNAL FUNCTION: Displays TADS azimuth reference (crosshair) for all symbols.
  REMARKS: From FCC to symbol generator.
  PASS: If CONDITION is met, go to 14–56.
  FAIL: Location of fault: troubleshoot TADS (TM 1–1270–476–T).

14–56 SIGNAL NAME: CPG LOSRET EL
  MEMORY LOCATION: 000656
  MEMORY DATA BIT(S): 12–19   (HEX)
  CONDITION: Displays LOSRET elevation reference when TADS is selected. Monitor HOD; memory
        location should indicate negative for down and positive for up.
  SIGNAL FUNCTION: Displays TADS elevation reference (crosshair) for all symbols.
  REMARKS: From FCC to symbol generator.
  PASS: Location of fault if elevation cross hairs are not displayed: replace symbol generator
        (TM 11–1520–238–23–2).
  FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–57 SIGNAL NAME: CPG VIDEO INFO CMD (ACY) CPG INFO SELECT (ACZ)
  MEMORY LOCATION: 000657
  MEMORY DATA BIT(S): 12–14   (OCTAL)
  CONDITION: If third digit displayed on HOD is 0 or 4, and second digit displayed
        on HOD is 4 =FLIR
        If third digit displayed on HOD is 1 or 5, and second digit displayed
        on HOD is 0 =TV
        If third digit displayed on HOD is 1 or 5, and second digit displayed
        on HOD is 4 =DVO
        If third digit displayed on HOD is 2 or 6, and second digit displayed
        on HOD is 0 =FD/LS
  SIGNAL FUNCTION: Selects CPG video readout.
  REMARKS: From FCC to symbol generator.
  PASS: If **CONDITION** corresponds to selected video, go to paragraph 14–58.
  FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

■ **14–58** **SIGNAL NAME:** CPG VIDEO INFO CONT (ACY) CPG INFO CTL (ACZ)
  MEMORY LOCATION: 000657
  MEMORY DATA BIT(S): 17 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Activates CPG video information command.
  REMARKS: From FCC to symbol generator.
  PASS: Location of fault if first digit displayed on HOD is 0, 1, 2, or 3: replace symbol generator
      (TM 11–1520–238–23–2).
  FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

■ **14–59** **SIGNAL NAME:** CPG FOV BRACKET SIZE CONT (ACY) CPG FOV SYM CTL (ACZ)
  MEMORY LOCATION: 000657
  MEMORY DATA BIT(S): 19 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Activates FOV bracket size.
  REMARKS: From FCC to symbol generator.
  PASS: If first digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 14–60.
  FAIL: Location of fault: wiring from TADS to FCC. Troubleshoot wiring to isolate fault
      (TM 9–1230–476–20–1).

■ **14–60** **SIGNAL NAME:** CPG FOV BRACKET SIZE (ACY) CPG FOV SYM SIZE (ACZ)
  MEMORY LOCATION: 000657
  MEMORY DATA BIT(S): 4–11 (BINARY)
  CONDITION: HOD displays TADS FOV limits at all times.
  SIGNAL FUNCTION: Displays four corner markers that define TADS field of view (FOV) limits.
  REMARKS: From FCC to symbol generator.
  PASS: Location of fault if conditions are met: wiring from TADS to FCC. Troubleshoot wiring to isolate
      fault (TM 9–1230–476–20–1).
  FAIL: Location of fault: wiring from FCC to symbol generator, symbol generator. Troubleshoot wiring
      to isolate fault (TM 9–1230–476–20–1).

  14–61 **SIGNAL NAME:** CPG HDG CONT
  MEMORY LOCATION: 000660
  MEMORY DATA BIT(S): 19 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Activates CPG heading.
  REMARKS: From FCC to symbol generator.
  PASS: If the first digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 14–62.
  FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

  14–62 **SIGNAL NAME:** CPG HDG
  MEMORY LOCATION: 000660
  MEMORY DATA BIT(S): 4–15 (SCALAR)
  CONDITION: Displays CPG heading on HOD. Monitor HOD; memory location should indicate
      negative for 180 to 360 degrees and positive for 000 to 180 degrees. Indicates CPG
      heading on HOD.
  SIGNAL FUNCTION: Indicates aircraft magnetic heading.
  REMARKS: From FCC to symbol generator.
  PASS: Location of fault if CONDITION is met: replace symbol generator (TM 11–1520–238–23–2).
  FAIL: Location of fault: refer to Chapter 6, paragraph 6–15.

14–63 SIGNAL NAME: CPG OPEN HDG CUE CONT (ACY) CPG HDGCUE1 CTL (ACZ)   ■
MEMORY LOCATION: 000661
MEMORY DATA BIT(S): 19   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Activates CPG open heading cue.
REMARKS: From FCC to symbol generator.
PASS: If the first digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 14–64.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–64 SIGNAL NAME: CPG OPEN HDG CUE (ACY) CPG HDGCUE1 (ACZ)   ■
MEMORY LOCATION: 000661
MEMORY DATA BIT(S): 4–15   (SCALAR)
CONDITION: Displays pilot heading cue on HOD. Monitor HOD; memory location should indicate
negative for 180 to 360 degrees and positive for 000 to 180 degrees.
SIGNAL FUNCTION: Indicates pilot desired heading.
REMARKS: From FCC to symbol generator.
PASS: Location of fault if CONDITION is met: replace symbol generator (TM 11–1520–238–23–2).
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–65 SIGNAL NAME: CPG I BEAM CONT
MEMORY LOCATION: 000664
MEMORY DATA BIT(S): 19   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Activates I beam when rockets are selected.
REMARKS: From FCC to symbol generator.
PASS: If the first digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 14–66.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–66 SIGNAL NAME: CPG I BEAM TYPE
MEMORY DATA BIT(S): 000664
MEMORY LOCATION: 18   (BINARY)
CONDITION: If the first digit displayed on HOD is 0, 1, 4, or 5=SOLID
If the first digit displayed on HOD is 2, 3, 6, or 7=OPEN
SIGNAL FUNCTION: Indicates when I beam is within constraints.
REMARKS: From FCC to symbol generator.
PASS: If CONDITION corresponds to I beam, go to paragraph 14–67
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–67 SIGNAL NAME: CPG I BEAM AZ
MEMORY LOCATION: 000664
MEMORY DATA BIT(S): 4–15   (SCALAR)
CONDITION: Displays CPG I beam azimuth on HOD when rockets are selected on HOD. Monitor
HOD; memory location should indicate negative for left and positive for right.
SIGNAL FUNCTION: Displays azimuth I beam reference for rockets.
REMARKS: From FCC to symbol generator.
PASS: If CONDITION is met, go to paragraph 14–68.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–68 **SIGNAL NAME:** CPG I BEAM EL
MEMORY LOCATION: 000665
MEMORY DATA BIT(S): 4–15 (SCALAR)
CONDITION: Displays CPG I beam azimuth on HOD when rockets are selected on HOD. Monitor HOD; memory location should indicate negative for down and positive for up. Displays rocket I beam elevation when rockets are selected.
SIGNAL FUNCTION: Elevation I beam reference.
REMARKS: From FCC to symbol generator.
PASS: If CONDITION is met, go to paragraph 14–69.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–69 **SIGNAL NAME:** CPG SOLID HDG CUE CTL (ACY) CPG HDGCUE2 CTL (ACZ)
MEMORY LOCATION: 000666
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Activates CPG heading cue when PNVS or integrated helmet and display sight system (IHADSS) is the selected pilot LOS.
REMARKS: From FCC to symbol generator.
PASS: If the first digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 14–70.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–70 **SIGNAL NAME:** CPG SOLID HDG CUE (ACY) CPG HDGCUE1 (ACZ)
MEMORY LOCATION: 000666
MEMORY DATA BIT(S): 4–15 (SCALAR)
CONDITION: Displays CPG heading sensor on HOD. Monitor HOD; memory location should indicate negative for 180 to 360 degrees and positive for 000 to 180 degrees.
SIGNAL FUNCTION: Indicates magnetic direction pilot's sensor is pointing.
REMARKS: From FCC to symbol generator.
PASS: Location of fault if CONDITION is met: replace symbol generator (TM 11–1520–238–23–2).
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–71 **SIGNAL NAME:** CPG MSL BOX CTL
MEMORY LOCATION: 000667
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Activates CPG missile box.
REMARKS: From FCC to symbol generator.
PASS: If the first digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 14–72.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–72 **SIGNAL NAME:** CPG MSL BOX LINE TYPE
MEMORY LOCATION: 000667
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: If the second digit displayed on HOD is 0, 1, 2, or 3 and first digit is 4, 5, 6, or 7=DASHED
If the second digit displayed on HOD is 0, 3, 5, or 7 and first digit is 0, 1, 2, or 3=SOLID
SIGNAL FUNCTION: Indicates when missiles are within constraints.
REMARKS: From FCC to symbol generator.
PASS: If CONDITION corresponds to correct box line type, go to paragraph 14–73.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–73 **SIGNAL NAME:**   CPG MSL BOX SIZE
MEMORY LOCATION: 000667
MEMORY DATA BIT(S):   16–17   (BINARY)
CONDITION: If first digit displayed on HOD is 0, 1, 4, or 5=SMALL
                      If the first digit displayed on HOD is 2, 3, 6, or 7=LARGE
SIGNAL FUNCTION: Selects lock–on after launch (LOAL) (small) or lock–on before launch (LOBL)
                      (large).
REMARKS: From FCC to symbol generator.
PASS: If CONDITION corresponds to selected box size go to paragraph 14–74.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–74 **SIGNAL NAME:**   CPG MSL BOX AZ
MEMORY LOCATION: 000667
MEMORY DATA BIT(S):   4–14   (SCALAR)
CONDITION: Displays missile box azimuth reference when missiles are selected. Monitor HOD;
                      memory location should indicate negative for left and positive for right.
SIGNAL FUNCTION: Displays azimuth reference to TADS reticle.
REMARKS: From FCC to symbol generator.
PASS: If azimuth I beam is displayed, go to paragraph 14–75.
FAIL: Location of fault: wiring from TADS to FCC. Troubleshoot wiring to isolate fault
          (TM 1–1270–476–T).

14–75 **SIGNAL NAME:**   CPG MSL BOX EL
MEMORY LOCATION: 000667
MEMORY DATA BIT(S):   4–14   (SCALAR)
CONDITION: Displays missile box elevation reference elevation when missiles are selected. Monitor
                      HOD; memory location should indicate negative for up and positive for down.
SIGNAL FUNCTION: Displays elevation reference to TADS reticle.
REMARKS: From FCC to symbol generator.
PASS: Location of fault if missile box elevation is not displayed: replace symbol generator
          (TM 11–1520–238–23–2).
FAIL: Location of fault: wiring from TADS to FCC. Troubleshoot wiring to isolate fault
          (TM 1–1270–476–T).

14–76 **SIGNAL NAME:**   CPG TOP CUE DOT CONT
MEMORY LOCATION: 000670
MEMORY DATA BIT(S):   16   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Activates upper cue dot information for CPG.
REMARKS: From FCC to symbol generator.
PASS: Location of fault if the fifth digit is 1, 3, 5, or 7: replace symbol generator
          (TM 11–1520–238–23–2).
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–77   **SIGNAL NAME:**   CPG RT CUE DOT CONT
       MEMORY LOCATION: 000670
       MEMORY DATA BIT(S):   17   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Activates right cue dot information for CPG.
       REMARKS: From FCC to symbol generator.
       PASS: Location of fault if the first digit is 4, 5, 6, or 7: replace symbol generator
           (TM 11–1520–238–23–2).
       FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–78   **SIGNAL NAME:**   CPG BOT CUE DOT CONT
       MEMORY LOCATION: 000670
       MEMORY DATA BIT(S):   18   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Activates lower cue dot information for CPG.
       REMARKS: From FCC to symbol generator.
       PASS: Location of fault if the first digit is 2, 3, 6, or 7: replace, symbol generator
           (TM 11–1520–238–23–2).
       FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–79   **SIGNAL NAME:**   CPG LT CUE DOT CONT
       MEMORY LOCATION: 000670
       MEMORY DATA BIT(S):   19   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Actives left cue dot information for CPG.
       REMARKS: From FCC to symbol generator.
       PASS: Location of fault if the first digit is 1, 3, 5, or 7: replace symbol generator
           (TM 11–1520–238–23–2).
       FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–80   **SIGNAL NAME:**   CPG FOV DOT CONT
       MEMORY LOCATION: 000671
       MEMORY DATA BIT(S):   19   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Activates coarse cued LOS symbol in IHADSS FOV.
       REMARKS: From FCC to symbol generator.
       PASS: If the first digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 14–81.
       FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–81   **SIGNAL NAME:**   CPG FOV DOT AZ
       MEMORY LOCATION: 000671
       MEMORY DATA BIT(S):   4–10   (SCALAR)
       CONDITION: Displays FOV dot azimuth reference. Monitor HOD; memory location should indicate
              negative for left and positive for right.
       SIGNAL FUNCTION: Displays coarse cued LOS symbol in IHADSS FOV azimuth reference.
       REMARKS: From FCC to symbol generator.
       PASS: If CONDITION is met, go to paragraph 14–82.
       FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–82 **SIGNAL NAME:**   CPG FOV DOT EL
   MEMORY LOCATION: 000671
   MEMORY DATA BIT(S):   11–16   (SCALAR)
   CONDITION: Displays FOV dot azimuth reference. Monitor HOD; memory location should indicate
        negative for down and positive for up.
   SIGNAL FUNCTION: Displays coarse cued LOS symbol in IHADSS FOV elevation reference.
   REMARKS: From FCC to symbol generator.
   PASS: If CONDITION is met, go to paragraph 14–83.
   FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–83 **SIGNAL NAME:**   CPG FOV BOX CONT
   MEMORY LOCATION: 000672
   MEMORY DATA BIT(S):   19   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Activates TADS/PNVS FOV box.
   REMARKS: From FCC to symbol generator.
   PASS: If the first digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 14–84.
   FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–84 **SIGNAL NAME:**   CPG FOV BOX SIZE
   MEMORY LOCATION: 000671
   MEMORY DATA BIT(S):   18   (BINARY)
   CONDITION: If the first digit displayed on HOD is 0, 1, 4, or 5=LARGE
        If the first digit displayed on HOD is 2, 3, 6, or 7=SMALL
   SIGNAL FUNCTION: Selects TADS (large)/PNVS (small) IHADSS FOV box sizes.
   REMARKS: From FCC to symbol generator.
   PASS: If CONDITION corresponds to FOV box size, go to paragraph 14–85.
   FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–85 **SIGNAL NAME:**   CPG FOV BOX AZ
   MEMORY LOCATION: 000672
   MEMORY DATA BIT(S):   4–10   (SCALAR)
   CONDITION: Displays FOV box azimuth reference. Monitor HOD; memory location should indicate
        negative for left and positive for right.
   SIGNAL FUNCTION: Displays CPG TADS/PNVS FOV box azimuth reference.
   REMARKS: From FCC to symbol generator.
   PASS: If CONDITION is met, go to paragraph 14–86.
   FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–86 **SIGNAL NAME:**   CPG FOV BOX EL
   MEMORY LOCATION: 000672
   MEMORY DATA BIT(S):   11–16   (SCALAR)
   CONDITION: Displays missile box azimuth reference when missiles are selected. Monitor HOD;
        memory location should indicate negative for down and positive for up.
   SIGNAL FUNCTION: Displays CPG TADS/PNVS FOV box elevation reference.
   REMARKS: From FCC to symbol generator.
   PASS: Location of fault if CONDITION is met: replace symbol generator (TM 11–1520–238–23–2).
   FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–87 **SIGNAL NAME:** CPG AIRSPEED CONT
MEMORY LOCATION: 000673
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Activates CPG airspeed display.
REMARKS: From FCC to symbol generator.
PASS: If the first digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 14–88.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–88 **SIGNAL NAME:** CPG AIRSPEED
MEMORY LOCATION: 000673
MEMORY DATA BIT(S): 4–12 (SCALAR)
CONDITION: Displays CPG airspeed on HOD. Monitor HOD; memory location should indicate
              0 on ground and increasing positive with increasing airspeed.
SIGNAL FUNCTION: Displays airspeed from air data sensor.
REMARKS: From FCC to symbol generator.
PASS: Location of fault if CONDITION is met: replace symbol generator (TM 11–1520–238–23–2).
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–89 **SIGNAL NAME:** CPG RADALT CONT
MEMORY LOCATION: 000674
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Activates CPG radar altitude display.
REMARKS: From FCC to symbol generator.
PASS: If the first digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 14–90.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–90 **SIGNAL NAME:** CPG RADALT
MEMORY LOCATION: 000674
MEMORY DATA BIT(S): 4–17 (SCALAR)
CONDITION: Displays radar altitude on HOD. Monitor HOD; memory location should indicate
              0 on the ground and increase positive for an increase in altitude.
SIGNAL FUNCTION: Displays radar altitude from RADALT.
REMARKS: From FCC to symbol generator.
PASS: Location of fault if CONDITION is met: replace symbol generator (TM 11–1520–238–23–2).
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–91 **SIGNAL NAME:** PLT RADALT CONT
MEMORY LOCATION: 000677
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Activates pilot radar altitude display.
REMARKS: From FCC to symbol generator.
PASS: If the first digit displayed on HOD is 1, go to paragraph 14–92.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–92 **SIGNAL NAME:**   PLT RADALT
       MEMORY LOCATION: 000677
       MEMORY DATA BIT(S):   4–17   (SCALAR)
       CONDITION: Displays radar altitude on VDU. Monitor HOD; memory location should indicate
                 0 on the ground and increase positive for an increase in altitude.
       SIGNAL FUNCTION: Displays radar altitude from RADALT.
       REMARKS: From FCC to symbol generator.
       PASS: If CONDITION is met, go to paragraph 14–93.
       FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–93 **SIGNAL NAME:**   PLT LO CONT
       MEMORY LOCATION: 000701
       MEMORY DATA BIT(S):   18   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Displays **LO** in hover mode when altitude is lower than preset RADALT.
       REMARKS: From FCC to symbol generator.
       PASS: If the first digit displayed on HOD is 3, go to paragraph 14–94.
       FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–94 **SIGNAL NAME:**   PLT HI CONT
       MEMORY LOCATION: 000701
       MEMORY DATA BIT(S):   17   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Displays **HI** in hover mode when altitude is higher than preset RADALT.
       REMARKS: From FCC to symbol generator.
       PASS: Location of fault if the first digit displayed on HOD is 7: replace symbol generator
                 (TM 11–1520–238–23–2).
       FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–95 **SIGNAL NAME:**   PLT AIRSPEED CONT
       MEMORY LOCATION: 000700
       MEMORY DATA BIT(S):   19   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Activates pilot airspeed display.
       REMARKS: From FCC to symbol generator.
       PASS: If the first digit displayed on HOD is 0, go to paragraph 14–96.
       FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–96 **SIGNAL NAME:**   PLT AIRSPEED
       MEMORY LOCATION: 000700
       MEMORY DATA BIT(S):   4–12   (SCALAR)
       CONDITION: Displays airspeed on VDU. Monitor HOD; memory location should indicate
                 0 on the ground and increase positive for an increasing airspeed.
       SIGNAL FUNCTION: Displays pilot airspeed from air data sensor.
       REMARKS: From FCC to symbol generator.
       PASS: Location of fault if CONDITION is met: replace symbol generator (TM 11–1520–238–23–2).
       FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–97   **SIGNAL NAME:**   PLT VSI CONT
      MEMORY LOCATION: 000701
      MEMORY DATA BIT(S):   19   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Activates rate of climb and **HI/LO** displays.
      REMARKS: From FCC to symbol generator.
      PASS: If the first digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 14–98.
      FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–98   **SIGNAL NAME:**   PLT VSI
      MEMORY LOCATION: 000701
      MEMORY DATA BIT(S):   4–11   (SCALAR)
      CONDITION: Displays pilot VSI on VDU. Monitor HOD; memory location should indicate negative for down and positive for up.
      SIGNAL FUNCTION: Displays rate of climb (vertical velocity) for heading and attitude reference set (HARS) and Doppler.
      REMARKS: From FCC to symbol generator.
      PASS: Location of fault if CONDITION is met: replace symbol generator (TM 11–1520–238–23–2).
      FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–99   **SIGNAL NAME:**   PLT HDG CONT
      MEMORY LOCATION: 000702
      MEMORY DATA BIT(S):   19   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Activates pilot heading.
      REMARKS: From FCC to symbol generator.
      PASS: If the first digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 14–100.
      FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–100   **SIGNAL NAME:**   PLT HDG
      MEMORY LOCATION: 000702
      MEMORY DATA BIT(S):   4–15   (SCALAR)
      CONDITION: Displays pilot heading on VDU. Monitor HOD; memory location should indicate negative from 180 to 360 degrees and positive from 000 to 180 degrees.
      SIGNAL FUNCTION: Indicates aircraft magnetic heading.
      REMARKS: From FCC to symbol generator.
      PASS: Location of fault if CONDITION is met: replace symbol generator (TM 11–1520–238–23–2).
      FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–101   **SIGNAL NAME:**   PLT OPEN HDG CONT (ACY) PLT HDGCUE1 CTL (ACZ)
      MEMORY LOCATION: 000703
      MEMORY DATA BIT(S):   19   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Activates pilot open heading cue.
      REMARKS: From FCC to symbol generator.
      PASS: If the first digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 14–102.
      FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–102 **SIGNAL NAME:**   PLT OPEN HDG CUE (ACY) PLT HDGCUE1 (ACZ)
MEMORY LOCATION: 000703
MEMORY DATA BIT(S): 4–15   (SCALAR)
CONDITION: Displays pilot open heading on VDU. Monitor HOD; memory location should indicate
negative from 180 to 360 degrees and positive from 000 to 180 degrees.
SIGNAL FUNCTION: Indicates pilot desired heading.
REMARKS: From FCC to symbol generator.
PASS: Location of fault if CONDITION is met: replace symbol generator (TM 11–1520–238–23–2).
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–103 **SIGNAL NAME:**   PLT LOSRET CONT
MEMORY LOCATION: 000705
MEMORY DATA BIT(S): 18   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Activates pilot LOS reticle.
REMARKS: From FCC to symbol generator.
PASS: If the first digit is 2, 3, 6, or 7, go to paragraph 14–104.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–104 **SIGNAL NAME:**   PLT LOSRET AZ
MEMORY LOCATION: 000704
MEMORY DATA BIT(S): 4–11   (SCALAR)
CONDITION: Displays pilot LOS reticle on VDU. Monitor HOD; memory location should indicate
negative for left and positive for right.
SIGNAL FUNCTION: Displays PNVS azimuth reference (crosshair) for all symbols.
REMARKS: From FCC to symbol generator.
PASS: If CONDITION is met, go to paragraph 14–105.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–105 **SIGNAL NAME:**   PLT LOSRET EL
MEMORY LOCATION: 000704
MEMORY DATA BIT(S): 12–19   (HEX)
CONDITION: Displays pilot LOS reticle on VDU. Monitor HOD; memory location should indicate
negative for down and positive for up.
SIGNAL FUNCTION: Displays PNVS elevation reference (crosshair) for all symbols.
REMARKS: From FCC to symbol generator.
PASS: Location of fault if CONDITION is met: replace symbol generator (TM 11–1520–238–23–2).
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–106 **SIGNAL NAME:**   PLT POS BOX CONT
MEMORY LOCATION: 000705
MEMORY DATA BIT(S): 19   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Activates pilot hover box.
REMARKS: From FCC to symbol generator.
PASS: If the first digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 14–107.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–107 SIGNAL NAME: PLT HOVER POS AZ BOX (ACY) PLT POSBOX AZ (ACZ)
MEMORY LOCATION: 000705
MEMORY DATA BIT(S): 4–12 (SCALAR)
CONDITION: Displays pilot hover box azimuth position. Monitor HOD; memory location should indicate negative for left and positive for right.
SIGNAL FUNCTION: Displays azimuth reference for hover box. 48 FT equals main rotor diameter.
REMARKS: From FCC to symbol generator.
PASS: If CONDITION is met, go to paragraph 14–108.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–108 SIGNAL NAME: PLT HOVER POS EL BOX (ACY) PLT POSBOX EL (ACZ)
MEMORY LOCATION: 000706
MEMORY DATA BIT(S): 4–12 (SCALAR)
CONDITION: Displays pilot hover box elevation position. Monitor HOD; memory location should indicate negative for down and positive for up.
SIGNAL FUNCTION: Displays elevation reference for hover box. 48 FT equals rotor diameter.
REMARKS: From FCC to symbol generator.
PASS: Location of fault if CONDITION is met: replace symbol generator (TM 11–1520–238–23–2).
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–109 SIGNAL NAME: PLT TOP CUE DOT CONT
MEMORY LOCATION: 000706
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Presents up cueing information for pilot.
REMARKS: From FCC to symbol generator.
PASS: Location of fault if the second digit displayed on HOD is 1, 3, 5, or 7: replace symbol generator (TM 11–1520–238–23–2).
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–110 SIGNAL NAME: PLT RT CUE DOT CONT
MEMORY LOCATION: 000705
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Presents right cueing information for pilot.
REMARKS: From FCC to symbol generator.
PASS: Location of fault if the first digit displayed on HOD is 4,5, 6, or 7: replace symbol generator (TM 11–1520–238–23–2).
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–111 SIGNAL NAME: PLT BOT CUE DOT CONT
MEMORY LOCATION: 00706
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Presents down cueing information for pilot.
REMARKS: From FCC to symbol generator.
PASS: Location of fault if the first digit displayed on HOD is 2, 3, 6, or 7: replace symbol generator (TM 11–1520–238–23–2).
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–112 **SIGNAL NAME:** PLT LT CUE DOT CONT
MEMORY LOCATION: 000706
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Presents left cueing information for pilot.
REMARKS: From FCC to symbol generator.
PASS: Location of fault if the first digit displayed on HOD is 1,3, 5, or 7: replace symbol generator (TM 11–1520–238–23–2).
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–113 **SIGNAL NAME:** PLT DASHED RET CONT
MEMORY LOCATION: 000707
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Activates pilot cued LOS.
REMARKS: From FCC to symbol generator.
PASS: If the first digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 14–114.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–114 **SIGNAL NAME:** PLT DASHED RET AZ
MEMORY LOCATION: 000707
MEMORY DATA BIT(S): 4–13 (SCALAR)
CONDITION: Displays LOS crosshair azimuth on VDU. Monitor HOD; memory location should indicate negative for left and positive for right.
SIGNAL FUNCTION: Displays pilot cued LOS azimuth crosshair.
REMARKS: From FCC to symbol generator.
PASS: If CONDITION is met, go to paragraph 14–115.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–115 **SIGNAL NAME:** PLT DASHED RET EL
MEMORY LOCATION: 000710
MEMORY DATA BIT(S): 4–13 (SCALAR)
CONDITION: Displays LOS elevation on VDU. Monitor HOD; memory location should indicate negative for down and positive for up.
SIGNAL FUNCTION: Displays pilot cued LOS elevation crosshair.
REMARKS: From FCC to symbol generator.
PASS: Location of fault if CONDITION is met: replace symbol generator (TM 11–1520–238–23–2).
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–116 **SIGNAL NAME:** PLT DIAMOND CONT
MEMORY LOCATION: 000711
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Activates pilot diamond.
REMARKS: From FCC to symbol generator.
PASS: If the first digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 14–117.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–117 SIGNAL NAME: PLT DIAMOND AZ
MEMORY LOCATION: 000711
MEMORY DATA BIT(S): 4–12 (SCALAR)
CONDITION: Displays azimuth aircraft position relative to PNVS LOS on VDU. Monitor HOD;
memory location should indicate negative for left and positive for right.
SIGNAL FUNCTION: Displays azimuth aircraft position angle relative to PNVS LOS.
REMARKS: From FCC to symbol generator.
PASS: If CONDITION is met, go to paragraph 14–118.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–118 SIGNAL NAME: PLT DIAMOND EL
MEMORY LOCATION: 000712
MEMORY DATA BIT(S): 4–12 (SCALAR)
CONDITION: Displays elevation aircraft position relative to PNVS LOS on VDU. Monitor HOD;
memory location should indicate negative for down and positive for up.
REMARKS: Displays elevation aircraft position angle relative to PNVS LOS.
From FCC to symbol generator.
PASS: Location of fault if CONDITION is met: replace symbol generator (TM 11–1520–238–23–2).
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–119 SIGNAL NAME: PLT HORIZ CONT
MEMORY LOCATION: 000713
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Activates pilot horizon line.
REMARKS: From FCC to symbol generator.
PASS: If the first digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 14–120.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–120 SIGNAL NAME: PLT HORIZ ROLL
MEMORY LOCATION: 000713
MEMORY DATA BIT(S): 4–15 (SCALAR)
CONDITION: Displays aircraft horizontal roll on VDU. Monitor HOD; memory location should indicate
negative for left and positive for right.
SIGNAL FUNCTION: Displays aircraft roll relative to PNVS LOS.
REMARKS: From FCC to symbol generator.
PASS: If CONDITION is met, go to paragraph 14–121.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–121 SIGNAL NAME: PLT HORIZ PITCH
MEMORY LOCATION: 000714
MEMORY DATA BIT(S): 4–12 (SCALAR)
CONDITION: Displays aircraft pitch on VDU. Monitor HOD; memory location should indicate negative
for down and positive for up.
SIGNAL FUNCTION: Displays aircraft pitch relative to PNVS LOS.
REMARKS: From FCC to symbol generator.
PASS: Location of fault if CONDITION is met: replace symbol generator (TM 11–1520–238–23–2).
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–122 **SIGNAL NAME:**   PLT I BEAM CONT
          MEMORY LOCATION: 000715
          MEMORY DATA BIT(S):   19   (BINARY)
          CONDITION: (None)
          SIGNAL FUNCTION: Activates pilot I beam.
          REMARKS: From FCC to symbol generator.
          PASS: If the first digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 14–123.
          FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–123 **SIGNAL NAME:**   PLT I BEAM TYPE
          MEMORY LOCATION: 000715
          MEMORY DATA BIT(S):   18   (BINARY)
          CONDITION: If first digit displayed on HOD is 0, 1, 4, or 5=SOLID
                      If first digit displayed on HOD is 2, 3, 6, or 7=OPEN
          SIGNAL FUNCTION: Indicates when I beam is within constraints.
          REMARKS: From FCC to symbol generator.
          PASS: If CONDITION corresponds to selected I beam, go to paragraph 14–124.
          FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–124 **SIGNAL NAME:**   PLT I BEAM EL
          MEMORY LOCATION: 000716
          MEMORY DATA BIT(S):   4–15   (SCALAR)
          CONDITION: Displays I beam elevation reference when rockets are selected. Monitor HOD; memory
                      location should indicate negative for down and positive for up.
          SIGNAL FUNCTION: Displays elevation I beam reference for rockets.
          REMARKS: From FCC to symbol generator.
          PASS: If CONDITION is met, go to paragraph 14–125.
          FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–125 **SIGNAL NAME:**   PLT I BEAM AZ
          MEMORY LOCATION: 000715
          MEMORY DATA BIT(S):   4–15   (SCALAR)
          CONDITION: Displays I beam azimuth reference when rockets are selected. Monitor HOD; memory
                      location should indicate negative for left and positive for right.
          SIGNAL FUNCTION: Displays azimuth I beam reference for rockets.
          REMARKS: From FCC to symbol generator.
          PASS: Location of fault if CONDITION is met: replace symbol generator (TM 11–1520–238–23–2).
          FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–126 **SIGNAL NAME:**   PLT FOV DOT CONT
          MEMORY LOCATION: 000717
          MEMORY DATA BIT(S):   19   (BINARY)
          CONDITION: (None)
          SIGNAL FUNCTION: Activates pilot coarse LOS symbol in IHADSS FOV.
          REMARKS: From FCC to symbol generator.
          PASS: If the first digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 14–127.
          FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–127   **SIGNAL NAME:**   PLT FOV DOT AZ
         MEMORY LOCATION: 000717
         MEMORY DATA BIT(S):   4–10   (SCALAR)
         CONDITION: Displays IHADSS azimuth reference. Monitor HOD; memory location should indicate
                     negative for left and positive for right.
         SIGNAL FUNCTION: Displays coarse cued LOS symbol in IHADSS FOV azimuth reference.
         REMARKS: From FCC to symbol generator.
         PASS: If CONDITION is met, go to paragraph 14–128.
         FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–128   **SIGNAL NAME:**   PLT FOV DOT EL
         MEMORY LOCATION: 000717
         MEMORY DATA BIT(S):   11–16   (SCALAR)
         CONDITION: Displays IHADSS elevation reference. Monitor HOD; memory location should indicate
                     negative for down and positive for up.
         SIGNAL FUNCTION: Displays coarse cued LOS symbol in IHADSS FOV elevation reference.
         REMARKS: From FCC to symbol generator.
         PASS: Location of fault if CONDITION is met: replace symbol generator (TM 11–1520–238–23–2).
         FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–129   **SIGNAL NAME:**   PLT FOV BOX CONT
         MEMORY LOCATION: 000720
         MEMORY DATA BIT(S):   19   (BINARY)
         CONDITION: (None)
         SIGNAL FUNCTION: Activates pilot coarse LOS symbol in IHADSS FOV.
         REMARKS: From FCC to symbol generator.
         PASS: If the first digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 14–130.
         FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–130   **SIGNAL NAME:**   PLT FOV BOX SIZE
         MEMORY LOCATION: 000717
         MEMORY DATA BIT(S):   18   (BINARY)
         CONDITION: If the first digit displayed on HOD is 0, 1, 4, or 5=LARGE
                     If the first digit displayed on HOD is 2, 3, 6, or 7=SMALL
         SIGNAL FUNCTION: Selects TADS (large)/PNVS (small) and IHADSS box sizes.
         REMARKS: From FCC to symbol generator.
         PASS: If CONDITION corresponds to selected box size is met, go to paragraph 14–131.
         FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–131   **SIGNAL NAME:**   PLT FOV BOX AZ
         MEMORY LOCATION: 000720
         MEMORY DATA BIT(S):   4–10   (SCALAR)
         CONDITION: Displays TADS/PNVS FOV box azimuth reference on VDU. Monitor HOD; memory
                     location should indicate negative for left and positive for right.
         SIGNAL FUNCTION: Displays pilot's TADS/PNVS FOV box azimuth reference.
         REMARKS: From FCC to symbol generator.
         PASS: If CONDITION is met, go to paragraph 14–132.
         FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–132 SIGNAL NAME: PLT FOV BOX EL
MEMORY LOCATION: 000720
MEMORY DATA BIT(S): 11–16 (SCALAR)
CONDITION: Displays TADS/PNVS FOV box elevation reference. Monitor HOD; memory location should indicate negative for down and positive for up.
SIGNAL FUNCTION: Displays pilot's TADS/PNVS FOV box elevation reference.
REMARKS: From FCC to symbol generator.
PASS: If CONDITION is met, go to paragraph 14–133.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–133 SIGNAL NAME: PLT SIDESLIP CONT
MEMORY LOCATION: 000721
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates amount of aircraft skid or slip. Referenced to HARS.
REMARKS: From FCC to symbol generator.
PASS: If the first digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 14–134.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–134 SIGNAL NAME: PLT SIDESLIP
MEMORY LOCATION: 000721
MEMORY DATA BIT(S): 4–11 (SCALAR)
CONDITION: Displays pilot sideslip on VDU. Monitor HOD; memory location should indicate negative for left and positive for right.
SIGNAL FUNCTION: Indicates amount of aircraft skid or slip, referenced to HARS.
REMARKS: From FCC to symbol generator.
PASS: Location of fault if CONDITION is met: replace symbol generator (TM 11–1520–238–23–2).
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–135 SIGNAL NAME: PLT TORQUE CONT
MEMORY LOCATION: 000722
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Activates pilot torque display.
REMARKS: From FCC to symbol generator.
PASS: If the first digit displayed on HOD is 4, 5, 6, or 7, go to paragraph 14–136.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–136 SIGNAL NAME: PLT TORQUE
MEMORY LOCATION: 000722
MEMORY DATA BIT(S): 4–12 (SCALAR)
CONDITION: Displays pilot torque on VDU. Monitor HOD; memory location should increase as torque increases.
SIGNAL FUNCTION: Compares engine torques and displays higher value.
REMARKS: From FCC to symbol generator.
PASS: Location of fault if CONDITION is met: replace symbol generator (TM 11–1520–238–23–2).
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–137 SIGNAL NAME: PLT TORQUE FLASHBOX CONT
MEMORY LOCATION: 000722
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Flashes torque box when torque=98.
REMARKS: From FCC to symbol generator.
PASS: Location of fault if the second digit displayed on HOD is 1,3, 5, or 7: replace symbol generator
(TM 11–1520–238–23–2).
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–138 SIGNAL NAME: PLT VEL VECTOR CONT
MEMORY LOCATION: 000722
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Activates pilot velocity vector.
REMARKS: From FCC to symbol generator.
PASS: If the first digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 14–139.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–139 SIGNAL NAME: PLT VEL VECTOR AZ
MEMORY LOCATION: 000723
MEMORY DATA BIT(S): 4–10 (SCALAR)
CONDITION: Displays velocity vector azimuth on VDU. Monitor HOD; memory location should
indicate negative for decrease and positive for increase.
SIGNAL FUNCTION: Displays velocity vector azimuth reference from PNVS LOS proportional to
aircraft velocity.
REMARKS: From FCC to symbol generator.
PASS: If CONDITION is met, go to paragraph 14–140.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–140 SIGNAL NAME: PLT VEL VECTOR EL
MEMORY LOCATION: 000723
MEMORY DATA BIT(S): 11–17 (SCALAR)
CONDITION: Displays velocity vector elevation on VDU. Monitor HOD; memory location should
indicate negative for decrease and positive for increase.
SIGNAL FUNCTION: Displays velocity vector elevation reference from PNVS LOS proportional to
aircraft velocity.
REMARKS: From FCC to symbol generator.
PASS: If CONDITION is met, go to paragraph 14–141.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–141 SIGNAL NAME: PLT ACCEL CUE CONT
MEMORY LOCATION: 000722
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Activates pilot acceleration cue.
REMARKS: From FCC to symbol generator.
PASS: If the first digit displayed on HOD is 2, 3, 6, or 7, go to paragraph 14–142.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–142 **SIGNAL NAME:** PLT ACCEL CUE AZ
MEMORY LOCATION: 000724
MEMORY DATA BIT(S): 4–11 (SCALAR)
CONDITION: Displays azimuth reference for acceleration circle. Monitor HOD; memory location should indicate negative for left and positive for right.
SIGNAL FUNCTION: Displays azimuth reference for acceleration circle relative to velocity vector.
REMARKS: From FCC to symbol generator.
PASS: If CONDITION is met, go to paragraph 14–143.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–143 **SIGNAL NAME:** PLT ACCEL CUE EL
MEMORY LOCATION: 000724
MEMORY DATA BIT(S): 12–19 (SCALAR)
CONDITION: Displays elevation reference for acceleration circle. Monitor HOD; memory location should indicate negative for down and positive for up.
SIGNAL FUNCTION: Displays elevation reference for acceleration circle relative to velocity vector.
REMARKS: From FCC to symbol generator.
PASS: Location of fault if CONDITION is met: replace symbol generator (TM 11–1520–238–23–2).
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–144 **SIGNAL NAME:** PLT SOLID HDG CUE CTL (ACY) PLT HDGCUE 2 CTL (ACZ) ∎
MEMORY LOCATION: 000725
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Activates pilot solid heading cue when TADS or IHADSS is selected CPG LOS.
REMARKS: From FCC to symbol generator.
PASS: If the first digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 14–145.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–145 **SIGNAL NAME:** PLT SOLID HDG CUE (ACY) PLT HDGCUE 2 (ACZ) ∎
MEMORY LOCATION: 000725
MEMORY DATA BIT(S): 4–15 (SCALAR)
CONDITION: Displays magnetic heading on VDU. Monitor HOD; memory location should indicate negative for 180 to 360 degrees and positive for 000 to 180 degrees.
SIGNAL FUNCTION: Indicates magnetic direction CPG sensor is pointing.
REMARKS: From FCC to symbol generator.
PASS: Location of fault if CONDITION is met: replace symbol generator (TM 11–1520–238–23–2).
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–146 **SIGNAL NAME:** PLT MSL BOX CTL
MEMORY LOCATION: 000726
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Activates pilot missile box.
REMARKS: From FCC to symbol generator.
PASS: If the first digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 14–147.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–147 **SIGNAL NAME:**   PLT MSL BOX LINE TYPE
MEMORY LOCATION: 000726
MEMORY DATA BIT(S):   18   (BINARY)
CONDITION: If the first digit displayed on HOD is 0, 1, 4, or 5=DASHED
　　　　　　　　　 If the first digit displayed on HOD is 2, 3, 6, or 7=SOLID
SIGNAL FUNCTION: Changes missile box to solid when missile system is within constraints.
REMARKS: From FCC to symbol generator.
PASS: If CONDITION is met, go to paragraph 14–148.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–148 **SIGNAL NAME:**   PLT MSL BOX SIZE
MEMORY LOCATION: 000726
MEMORY DATA BIT(S):   16–17   (BINARY)
CONDITION: If the fifth digit displayed on HOD is 1, 3, 5, or 7=SMALL
　　　　　　　　　 If the fifth digit displayed on HOD is 2, 3, 6, or 7=LARGE
SIGNAL FUNCTION: Select LOAL (small) or LOBL (large) box size.
REMARKS: From FCC to symbol generator.
PASS: If CONDITION corresponds to selected box go to 14–149.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–149 **SIGNAL NAME:**   PLT MSL BOX AZ
MEMORY LOCATION: 000726
MEMORY DATA BIT(S):   4–14   (SCALAR)
CONDITION: Displays missile box azimuth reference when missiles are selected. Monitor HOD;
　　　　　　　　　 memory location should indicate negative for left and positive for right.
SIGNAL FUNCTION: Displays azimuth reference to TADS reticle.
REMARKS: From FCC to symbol generator.
PASS: If CONDITION is met, go to paragraph 14–150.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–150 **SIGNAL NAME:**   PLT MSL BOX EL
MEMORY LOCATION: 000727
MEMORY DATA BIT(S):   4–14   (SCALAR)
CONDITION: Displays missile box elevation reference when missiles are selected. Monitor HOD;
　　　　　　　　　 memory location should indicate negative for down and positive for up.
SIGNAL FUNCTION: Displays elevation reference to TADS reticle.
REMARKS: From FCC to symbol generator.
PASS: Location of fault if CONDITION is met: replace symbol generator (TM 11–1520–238–23–2).
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–151 **SIGNAL NAME:**   CPG HI ACTION MSG CONT
MEMORY LOCATION: 000734
MEMORY DATA BIT(S):   11   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Enables CPG characters.
REMARKS: From FCC to symbol generator.
PASS: If the first digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 14–152.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–152 SIGNAL NAME: CPG CHAR 1, 2
MEMORY LOCATION: 000734
MEMORY DATA BIT(S): 4–19   (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays CPG character 1 and 2.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–153.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–153 SIGNAL NAME: CPG CHAR 3, 4
MEMORY LOCATION: 000735
MEMORY DATA BIT(S): 4–19   (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays CPG characters 3 and 4.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–154.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–154 SIGNAL NAME: CPG CHAR 5, 6
MEMORY LOCATION: 000736
MEMORY DATA BIT(S): 4–19   (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays CPG characters 5 and 6.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–155.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–155 SIGNAL NAME: CPG CHAR 7, 8
MEMORY LOCATION: 000737
MEMORY DATA BIT(S): 4–19   (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays CPG characters 7 and 8.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–156.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–156 SIGNAL NAME: CPG CHAR 9, 10
MEMORY LOCATION: 000740
MEMORY DATA BIT(S): 4–19   (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays CPG characteristics 9 and 10.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–157.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–157   SIGNAL NAME: CPG CHAR 11, 12
     MEMORY LOCATION: 000741
     MEMORY DATA BIT(S):   4–19   (ASCII)
     CONDITION: Refer to Table 14–1 for ASCII code conversions.
     SIGNAL FUNCTION: Displays CPG characteristics 11 and 12.
     REMARKS: From FCC to symbol generator.
     PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–158.
     FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–158   SIGNAL NAME: CPG CHAR 13, 14
     MEMORY LOCATION: 000742
     MEMORY DATA BIT(S):   4–19   (ASCII)
     CONDITION: Refer to Table 14–1 for ASCII code conversions.
     SIGNAL FUNCTION: Displays CPG characters 13 and 14.
     REMARKS: From FCC to symbol generator.
     PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–159.
     FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–159   SIGNAL NAME: CPG CHAR 15, 16
     MEMORY LOCATION: 000743
     MEMORY DATA BIT(S):   4–19   (ASCII)
     CONDITION: Refer to Table 14–1 for ASCII code conversions.
     SIGNAL FUNCTION: Displays CPG characters 15 and 16.
     REMARKS: From FCC to symbol generator.
     PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–160.
     FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–160   SIGNAL NAME: CPG CHAR 17, 18
     MEMORY LOCATION: 000744
     MEMORY DATA BIT(S):   4–19   (ASCII)
     CONDITION: Refer to Table 14–1 for ASCII code conversions.
     SIGNAL FUNCTION: Displays CPG characters 17 and 18.
     REMARKS: From FCC to symbol generator.
     PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–161.
     FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–161   SIGNAL NAME: CPG CHAR 19, 20
     MEMORY LOCATION: 000745
     MEMORY DATA BIT(S):   4–19   (ASCII)
     CONDITION: Refer to Table 14–1 for ASCII code conversions.
     SIGNAL FUNCTION: Displays CPG characters 19 and 20.
     REMARKS: From FCC to symbol generator.
     PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–162.
     FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–162 **SIGNAL NAME:** CPG CHAR 21, 22
MEMORY LOCATION: 000746
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays CPG characters 21 and 22.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–163.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–163 **SIGNAL NAME:** CPG CHAR 23, 24
MEMORY LOCATION: 000747
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays CPG characters 23 and 24.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–164.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–164 **SIGNAL NAME:** CPG CHAR 25, 26
MEMORY LOCATION: 000747
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays CPG characters 25 and 26.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–165.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–165 **SIGNAL NAME:** CPG CHAR 27, 28
MEMORY LOCATION: 000751
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays CPG characters 27 and 28.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–166.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–166 **SIGNAL NAME:** CPG CHAR 29, 30
MEMORY LOCATION: 000752
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays CPG characters 29 and 30.
REMARKS: From FCC to symbol generator.
PASS: Location of fault if CONDITION is met: replace symbol generator (TM 11–1520–238–23–1).
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–167 SIGNAL NAME: PLT HI ACTION MSG CTL
MEMORY LOCATION: 000754
MEMORY DATA BIT(S): 11 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Enables pilot characters.
REMARKS: From FCC to symbol generator.
PASS: If the third digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 14–168.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–168 SIGNAL NAME: PLT CHAR 1, 2
MEMORY LOCATION: 000754
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays pilot character 1 and 2.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–169.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–169 SIGNAL NAME: PLT CHAR 3, 4
MEMORY LOCATION: 000755
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays pilot characters 3 and 4.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–170.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–170 SIGNAL NAME: CPG CHAR 5, 6
MEMORY LOCATION: 000756
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays pilot characters 5 and 6.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–171.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–171 SIGNAL NAME: PLT CHAR 7, 8
MEMORY LOCATION: 000757
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays pilot characters 7 and 8.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–172.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–172 SIGNAL NAME: PLT CHAR 9, 10
 MEMORY LOCATION: 000760
 MEMORY DATA BIT(S):   4–19   (ASCII)
 CONDITION: Refer to Table 14–1 for ASCII code conversions.
 SIGNAL FUNCTION: Displays pilot characters 9 and 10.
 REMARKS: From FCC to symbol generator.
 PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–173.
 FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–173 SIGNAL NAME: PLT CHAR 11, 12
 MEMORY LOCATION: 000761
 MEMORY DATA BIT(S):   4–19   (ASCII)
 CONDITION: Refer to Table 14–1 for ASCII code conversions.
 SIGNAL FUNCTION: Displays pilot characters 11 and 12.
 REMARKS: From FCC to symbol generator.
 PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–174.
 FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–174 SIGNAL NAME: PLT CHAR 13, 14
 MEMORY LOCATION: 000762
 MEMORY DATA BIT(S):   4–19   (ASCII)
 CONDITION: Refer to Table 14–1 for ASCII code conversions.
 SIGNAL FUNCTION: Displays pilot characters 13 and 14.
 REMARKS: From FCC to symbol generator.
 PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–175.
 FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–175 SIGNAL NAME: PLT CHAR 15, 16
 MEMORY LOCATION: 000763
 MEMORY DATA BIT(S):   4–19   (ASCII)
 CONDITION: Refer to Table 14–1 for ASCII code conversions.
 SIGNAL FUNCTION: Displays pilot characters 15 and 16.
 REMARKS: From FCC to symbol generator.
 PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–176.
 FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–176 SIGNAL NAME: PLT CHAR 17, 18
 MEMORY LOCATION: 000764
 MEMORY DATA BIT(S):   4–19   (ASCII)
 CONDITION: Refer to Table 14–1 for ASCII code conversions.
 SIGNAL FUNCTION: Displays pilot characters 17 and 18.
 REMARKS: From FCC to symbol generator.
 PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–177.
 FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–177   **SIGNAL NAME:**   PLT CHAR 19, 20
      MEMORY LOCATION: 000765
      MEMORY DATA BIT(S):   4–19   (ASCII)
      CONDITION: Refer to Table 14–1 for ASCII Code conversions.
      SIGNAL FUNCTION: Displays pilot characters 19 and 20.
      REMARKS: From FCC to symbol generator.
      PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–178.
      FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–178   **SIGNAL NAME:**   PLT CHAR 21, 22
      MEMORY LOCATION: 000766
      MEMORY DATA BIT(S):   4–19   (ASCII)
      CONDITION: Refer to ASCII code conversions.
      SIGNAL FUNCTION: Displays pilot characters 21 and 22.
      REMARKS: From FCC to symbol generator.
      PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–179.
      FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–179   **SIGNAL NAME:**   PLT CHAR 23, 24
      MEMORY LOCATION: 000767
      MEMORY DATA BIT(S):   4–19   (ASCII)
      CONDITION: Refer to Table 14–1 for ASCII code conversions.
      SIGNAL FUNCTION: Displays pilot characters 23 and 24.
      REMARKS: From FCC to symbol generator.
      PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–180.
      FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–180   **SIGNAL NAME:**   PLT CHAR 25, 26
      MEMORY LOCATION: 000770
      MEMORY DATA BIT(S):   4–19   (ASCII)
      CONDITION: Refer to Table 14–1 for ASCII code conversions.
      SIGNAL FUNCTION: Displays pilot characters 25 and 26.
      REMARKS: From FCC to symbol generator.
      PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–181.
      FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–181   **SIGNAL NAME:**   PLT CHAR 27, 28
      MEMORY LOCATION: 000771
      MEMORY DATA BIT(S):   4–19   (ASCII)
      CONDITION: Refer to Table 14–1 for ASCII code conversions.
      SIGNAL FUNCTION: Displays pilot characters 27 and 28.
      REMARKS: From FCC to symbol generator.
      PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–182.
      FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–182 SIGNAL NAME: PLT CHAR 29, 30
  MEMORY LOCATION: 000772
  MEMORY DATA BIT(S):   4–19   (ASCII)
  CONDITION: Refer to Table 14–1 for ASCII code conversions.
  SIGNAL FUNCTION: Displays pilot characters 29 and 30.
  REMARKS: From FCC to symbol generator.
  PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–183.
  FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–183 SIGNAL NAME: STATUS DISPLAY MSG CONT
  MEMORY LOCATION: 000776
  MEMORY DATA BIT(S):   11   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Enables status lines and characters.
  REMARKS: From FCC to symbol generator.
  PASS: If the third digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 14–184.
  FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–184 SIGNAL NAME: STATUS L1 CHAR 1, 2
  MEMORY LOCATION: 000776
  MEMORY DATA BIT(S):   4–19   (ASCII)
  CONDITION: Refer to Table 14–1 for ASCII code conversions.
  SIGNAL FUNCTION: Displays status line 1 characters 1 and 2.
  REMARKS: From FCC to symbol generator.
  PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–185.
  FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–185 SIGNAL NAME: STATUS L1 CHAR 3, 4
  MEMORY LOCATION: 000777
  MEMORY DATA BIT(S):   4–19   (ASCII)
  CONDITION: Refer to Table 14–1 for ASCII code conversions.
  SIGNAL FUNCTION: Displays status line 1 characters 3 and 4.
  REMARKS: From FCC to symbol generator.
  PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–186.
  FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–186 SIGNAL NAME: STATUS L1 CHAR 5, 6
  MEMORY LOCATION: 001000
  MEMORY DATA BIT(S):   4–19   (ASCII)
  CONDITION: Refer to Table 14–1 for ASCII code conversions.
  SIGNAL FUNCTION: Displays status line 1 characters 5 and 6.
  REMARKS: From FCC to symbol generator.
  PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–187.
  FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–187 SIGNAL NAME: STATUS L1 CHAR 7, 8
 MEMORY LOCATION: 001001
 MEMORY DATA BIT(S):   4–19   (ASCII)
 CONDITION: Refer to Table 14–1 for ASCII code conversions.
 SIGNAL FUNCTION: Displays status line 1 characters 7 and 8.
 REMARKS: From FCC to symbol generator.
 PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–188.
 FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–188 SIGNAL NAME: STATUS L1 CHAR 9, 10
 MEMORY LOCATION: 001002
 MEMORY DATA BIT(S):   4–19   (ASCII)
 CONDITION: Refer to Table 14–1 for ASCII code conversions.
 SIGNAL FUNCTION: Displays status line 1 characters 9 and 10.
 REMARKS: From FCC to symbol generator.
 PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–189.
 FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–189 SIGNAL NAME: STATUS L1 CHAR 11, 12
 MEMORY LOCATION: 001003
 MEMORY DATA BIT(S):   4–19   (ASCII)
 CONDITION: Refer to Table 14–1 for ASCII code conversions.
 SIGNAL FUNCTION: Displays status line 1 characters 11 and 12.
 REMARKS: From FCC to symbol generator.
 PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–190.
 FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–190 SIGNAL NAME: STATUS L1 CHAR 13, 14
 MEMORY LOCATION: 001004
 MEMORY DATA BIT(S):   4–19   (ASCII)
 CONDITION: Refer to Table 14–1 for ASCII code conversions.
 SIGNAL FUNCTION: Displays status line 1 characters 13 and 14.
 REMARKS: From FCC to symbol generator.
 PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–191.
 FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–191 SIGNAL NAME: STATUS L1 CHAR 15, 16
 MEMORY LOCATION: 001005
 MEMORY DATA BIT(S):   4–19   (ASCII)
 CONDITION: Refer to Table 14–1 for ASCII code conversions.
 SIGNAL FUNCTION: Displays status line 1 characters 15 and 16.
 REMARKS: From FCC to symbol generator.
 PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–192.
 FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–192 SIGNAL NAME: STATUS L1 CHAR 17, 18
MEMORY LOCATION: 001006
MEMORY DATA BIT(S):   4–19   (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays status line 1 characters 17 and 18.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–193.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–193 SIGNAL NAME: STATUS L1 CHAR 19–20
MEMORY LOCATION: 001007
MEMORY DATA BIT(S):   4–19   (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays status line 1 characters 19 and 20.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–194.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–194 SIGNAL NAME: STATUS L1 CHAR 21, 22
MEMORY LOCATION: 001010
MEMORY DATA BIT(S):   4–19   (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays status line 1 characters 21 and 22.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–195.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–195 SIGNAL NAME: STATUS L1 CHAR 23, 24
MEMORY LOCATION: 001011
MEMORY DATA BIT(S):   4–19   (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays status line 1 characters 23 and 24.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–196.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–196 SIGNAL NAME: STATUS L2 CHAR 1, 2
MEMORY LOCATION: 001012
MEMORY DATA BIT(S):   4–19   (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays status line 2 characters 1 and 2.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–197.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–197 SIGNAL NAME: STATUS L2 CHAR 3, 4
      MEMORY LOCATION: 001013
      MEMORY DATA BIT(S):   4–19   (ASCII)
      CONDITION: Refer to Table 14–1 for ASCII code conversions.
      SIGNAL FUNCTION: Displays status line 2 characters 3 and 4.
      REMARKS: From FCC to symbol generator.
      PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–198.
      FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–198 SIGNAL NAME: STATUS L2 CHAR 5, 6
      MEMORY LOCATION: 001014
      MEMORY DATA BIT(S):   4–19   (ASCII)
      CONDITION: Refer to Table 14–1 for ASCII code conversions.
      SIGNAL FUNCTION: Displays status line 2 characters 5 and 6.
      REMARKS: From FCC to symbol generator.
      PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–199.
      FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–199 SIGNAL NAME: STATUS L2 CHAR 7, 8
      MEMORY LOCATION: 001015
      MEMORY DATA BIT(S):   4–19   (ASCII)
      CONDITION: Refer to Table 14–1 for ASCII code conversions.
      SIGNAL FUNCTION: Displays status line 2 characters 7 and 8.
      REMARKS: From FCC to symbol generator.
      PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–200.
      FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–200 SIGNAL NAME: STATUS L2 CHAR 9, 10
      MEMORY LOCATION: 001016
      MEMORY DATA BIT(S):   4–19   (ASCII)
      CONDITION: Refer to Table 14–1 for ASCII code conversions.
      SIGNAL FUNCTION: Displays status line 2 characters 9 and 10.
      REMARKS: From FCC to symbol generator.
      PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–201.
      FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–201 SIGNAL NAME: STATUS L2 CHAR 11,12
      MEMORY LOCATION: 001017
      MEMORY DATA BIT(S):   4–19   (ASCII)
      CONDITION: Refer to Table 14–1 for ASCII code conversions.
      SIGNAL FUNCTION: Displays status line 2 characters 11 and 12.
      REMARKS: From FCC to symbol generator.
      PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–202.
      FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–202 **SIGNAL NAME:** STATUS L2 CHAR 13, 14
MEMORY LOCATION: 001020
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays status line 2 characters 13 and 14.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–203.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–203 **SIGNAL NAME:** STATUS L2 CHAR 15, 16
MEMORY LOCATION: 001021
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays status line 2 characters 15 and 16.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–204.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–204 **SIGNAL NAME:** STATUS L2 CHAR 17, 18
MEMORY LOCATION: 001022
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays status line 2 characters 17 and 18.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–205.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–205 **SIGNAL NAME:** STATUS L2 CHAR 19, 20
MEMORY LOCATION: 001023
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays status line 2 characters 19 and 20.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–206.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–206 **SIGNAL NAME:** STATUS L2 CHAR 21, 22
MEMORY LOCATION: 001024
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays status line 2 characters 21 and 22.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–207.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–207   SIGNAL NAME: STATUS L2 CHAR 23, 24
      MEMORY LOCATION: 001025
      MEMORY DATA BIT(S):   4–19   (ASCII)
      CONDITION: Refer to Table 14–1 for ASCII code conversions.
      SIGNAL FUNCTION: Displays status line 2 characters 23 and 24.
      REMARKS: From FCC to symbol generator.
      PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–208.
      FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–208   SIGNAL NAME: STATUS L3 CHAR 1, 2
      MEMORY LOCATION: 001030
      MEMORY DATA BIT(S):   4–19   (ASCII)
      CONDITION: Refer to Table 14–1 for ASCII code conversions.
      SIGNAL FUNCTION: Displays status line 3 characters 1 and 2.
      REMARKS: From FCC to symbol generator.
      PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–209.
      FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–209   SIGNAL NAME: STATUS L3 CHAR 3, 4
      MEMORY LOCATION: 001031
      MEMORY DATA BIT(S):   4–19   (ASCII)
      CONDITION: Refer to Table 14–1 for ASCII code conversions.
      SIGNAL FUNCTION: Displays status line 3 characters 3 and 4.
      REMARKS: From FCC to symbol generator.
      PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–210.
      FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–210   SIGNAL NAME: STATUS L3 CHAR 5, 6
      MEMORY LOCATION: 001032
      MEMORY DATA BIT(S):   4–19   (ASCII)
      CONDITION: Refer to Table 14–1 for ASCII code conversions.
      SIGNAL FUNCTION: Displays status line 3 characters 5 and 6.
      REMARKS: From FCC to symbol generator.
      PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–211.
      FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–211   SIGNAL NAME: STATUS L3 CHAR 7, 8
      MEMORY LOCATION: 001033
      MEMORY DATA BIT(S):   4–19   (ASCII)
      CONDITION: Refer to Table 14–1 for ASCII code conversions.
      SIGNAL FUNCTION: Displays status line 3 characters 7 and 8.
      REMARKS: From FCC to symbol generator.
      PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–212.
      FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–212 SIGNAL NAME: STATUS L3 CHAR 9, 10
MEMORY LOCATION: 001034
MEMORY DATA BIT(S):   4–19   (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays status line 3 characters 9 and 10.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–213.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–213 SIGNAL NAME: STATUS L3 CHAR 11, 12
MEMORY LOCATION: 001035
MEMORY DATA BIT(S):   4–19   (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays status line 3 characters 11 and 12.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–214.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–214 SIGNAL NAME: STATUS L3 CHAR 13, 14
MEMORY LOCATION: 001036
MEMORY DATA BIT(S):   4–19   (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays status line 3 characters 13 and 14.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–215.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–215 SIGNAL NAME: STATUS L3 CHAR 15, 16
MEMORY LOCATION: 001037
MEMORY DATA BIT(S):   4–19   (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays status line 3 characters 15 and 16.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–216.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–216 SIGNAL NAME: STATUS L3 CHAR 17, 18
MEMORY LOCATION: 001040
MEMORY DATA BIT(S):   4–19   (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays status line 3 characters 17 and 18.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–217.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–217 SIGNAL NAME: STATUS L3 CHAR 19, 20
MEMORY LOCATION: 001041
MEMORY DATA BIT(S):   4–19   (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays status line 3 characters 19 and 20.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–218.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–218 SIGNAL NAME: STATUS L3 CHAR 21, 22
MEMORY LOCATION: 001042
MEMORY DATA BIT(S):   4–19   (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays status line 3 characters 21 and 22.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–219.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–219 SIGNAL NAME: STATUS L3 CHAR 23, 24
MEMORY LOCATION: 001043
MEMORY DATA BIT(S):   4–19   (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays status line 3 characters 23 and 24.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–220.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–220 SIGNAL NAME: STATUS L4 CHAR 1, 2
MEMORY LOCATION: 001044
MEMORY DATA BIT(S):   4–19   (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays status line 4 characters 1 and 2.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–221.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–221 SIGNAL NAME: STATUS L4 CHAR 3, 4
MEMORY LOCATION: 001045
MEMORY DATA BIT(S):   4–19   (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays status line 4 characters 3 and 4.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–222.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–222 **SIGNAL NAME:** STATUS L4 CHAR 5, 6
MEMORY LOCATION: 001046
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays status line 4 characters 5 and 6.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–223.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–223 **SIGNAL NAME:** STATUS L4 CHAR 7, 8
MEMORY LOCATION: 001047
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays status line 4 characters 7 and 8.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–224.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–224 **SIGNAL NAME:** STATUS L4 CHAR 9, 10
MEMORY LOCATION: 001050
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays status line 4 characters 9 and 10.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–225.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–225 **SIGNAL NAME:** STATUS L4 CHAR 11, 12
MEMORY LOCATION: 001051
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays status line 4 characters 11 and 12.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–226.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–226 **SIGNAL NAME:** STATUS L4 CHAR 13, 14
MEMORY LOCATION: 001052
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 14–1 for ASCII code conversions.
SIGNAL FUNCTION: Displays status line 4 characters 13 and 14.
REMARKS: From FCC to symbol generator.
PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–227.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–227   **SIGNAL NAME:**   STATUS L4 CHAR 15, 16
     MEMORY LOCATION: 001053
     MEMORY DATA BIT(S):   4–19   (ASCII)
     CONDITION: Refer to Table 14–1 for ASCII code conversions.
     SIGNAL FUNCTION: Displays status line 4 characters 15 and 16.
     REMARKS: From FCC to symbol generator.
     PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–228.
     FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–228   **SIGNAL NAME:**   STATUS L4 CHAR 17, 18
     MEMORY LOCATION: 001054
     MEMORY DATA BIT(S):   4–19   (ASCII)
     CONDITION: Refer to Table 14–1 for ASCII code conversions.
     SIGNAL FUNCTION: Displays status line 4 characters 17 and 18.
     REMARKS: From FCC to symbol generator.
     PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–229.
     FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–229   **SIGNAL NAME:**   STATUS L4 CHAR 19, 20
     MEMORY LOCATION: 001055
     MEMORY DATA BIT(S):   4–19   (ASCII)
     CONDITION: Refer to Table 14–1 for ASCII code conversions.
     SIGNAL FUNCTION: Displays status line 4 characters 19 and 20.
     REMARKS: From FCC to symbol generator.
     PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–230.
     FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–230   **SIGNAL NAME:**   STATUS L4 CHAR 21, 22
     MEMORY LOCATION: 001056
     MEMORY DATA BIT(S):   4–19   (ASCII)
     CONDITION: Refer to Table 14–1 for ASCII code conversions.
     SIGNAL FUNCTION: Displays status line 4 characters 21 and 22.
     REMARKS: From FCC to symbol generator.
     PASS: If ASCII code conversions correspond to selected character, go to paragraph 14–231.
     FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–231   **SIGNAL NAME:**   STATUS L4 CHAR 23, 24
     MEMORY LOCATION: 001057
     MEMORY DATA BIT(S):   4–19   (ASCII)
     CONDITION: Refer to Table 14–1 for ASCII code conversions.
     SIGNAL FUNCTION: Displays status line 4 characters 23 and 24.
     REMARKS: From FCC to symbol generator.
     PASS: Location of fault if CONDITION is met: replace symbol generator (TM 11–1520–238–23–2).
     FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

14–232 **SIGNAL NAME:** ORT SYM BRT (ACY) SYM CPG SYM BRT (ACZ) ∎
      MEMORY LOCATION: 001172
      MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR) ∎
      CONDITION: Monitor HOD while increasing brightness, memory location response should increase when brightness is increased and decrease when brightness is decreased.
      SIGNAL FUNCTION: Controls ORT signal brightness.
      REMARKS: From FCC to symbol generator.
      PASS: If CONDITION is met: go to paragraph 14–233.
      FAIL: Location of fault: MRTU Type I, wiring from MRTU Type I to ORT, ORT. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

14–233 **SIGNAL NAME:** CPG COLLECTIVE TADS PNVS SEL 1 (ACY) TADS PNVS SW1 (ACZ) ∎
      MEMORY LOCATION: 000414
      MEMORY DATA BIT(S): 7 (BINARY)
      CONDITION: If the fifth digit displayed on HOD is 0, 2, 4, or 6 = TADS
                      If the fifth digit displayed on HOD is 1, 3, 5, or 7 = PNVS
      SIGNAL FUNCTION: Indicates CPG LOS selection.
      REMARKS: From CPG collective through CPG MRTU Type III to FCC.
      PASS: If fifth digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 14–234.
      FAIL: Location of fault: CPG collective, wiring from CPG collective to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

14–234 **SIGNAL NAME:** CPG COLLECTIVE TADS PNVS SEL 2 (ACY) TADS PNVS SW2 (ACZ) ∎
      MEMORY LOCATION: 000414
      MEMORY DATA BIT(S): 8 (BINARY)
      CONDITION: If the fourth digit displayed on HOD is 0, or 1 = PNVS
                      If the fourth digit displayed on HOD is 4, or 5 = TADS
      SIGNAL FUNCTION: Indicates CPG LOS selection.
      REMARKS: From CPG collective through CPG MRTU Type III to FCC.
      PASS: Location of fault if fourth digit displayed on HOD is 4 or 5: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TPS, TPS, RH FAB MRTU Type I, wiring from RH FAB MRTU Type I to PEU, PEU. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).
      FAIL: Location of fault: CPG collective **NVS** switch, wiring from CPG collective **NVS** switch to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

CHAPTER 15
TARGET ACQUISITION DESIGNATION SIGHT (TADS) SYSTEM
MULTIPLEX READ CODES

FAILURE SYMPTOM INDEX

FAILURE SYMPTOM INDEX (cont)

Symptom	Refer to paragraph
LASER TRACKER WILL NOT LOCK ON OR NOT CODED	15–191
LINEAR MOTION COMPENSATION INOPERATIVE	15–202
CANNOT SELECT **W** FOV	15–204
CANNOT SELECT **M** FOV	15–206
CANNOT SELECT **N** FOV	15–208
CANNOT SELECT **Z** (ZOOM)	15–210
CANNOT SELECT STORE TARGET	15–214
CANNOT UPDATE TARGET	15–216
CANNOT RECORD VIDEO	15–218
TADS DOES NOT SLAVE OR ERRATIC OPERATION TO CPG LOS	15–220
CANNOT CORRECT AZIMUTH SERVO DRIFT	15–228
CANNOT CORRECT ELEVATION SERVO DRIFT	15–228
DTV FOV WILL NOT CHANGE; HOWEVER, FLIR FOV CHANGES PROPERLY	15–230
NO DTV VIDEO	15–230
TADS FLIR SHROUD NO–GO NSA	15–232
TADS TV SHROUD NO–GO DSA	15–232
TADS TURRET AZIMUTH LIMITS NOT DISPLAYED	15–224
TADS TURRET ELEVATION LIMITS NOT DISPLAYED	15–223
TADS TURRET DOES NOT MOVE IN ELEVATION	15–221
TADS TURRET DOES NOT MOVE IN AZIMUTH	15–222
TADS TURRET DOES NOT MOVE IN DEPRESSION	15–221
GUN TURRET DOES NOT FOLLOW TADS TURRET	15–220
TADS TURRET DOES NOT FOLLOW HEAD MOVEMENTS (LOS)	15–220
CODE DESIGNATORS A THRU H DO NOT APPEAR ALONG WITH FOUR NUMBERED CODE DATA	15–192
TADS DOES NOT TRACK IN MANUAL MODE	15–195
TADS BORESIGHT NO–GO	15–238 (ACY) 15–240 (ACZ)
TADS BORESIGHT NO–GO RAM CHECKSUM	15–238 (ACY) 15–240 (ACZ)

TABLE 15–1. ASCII CODE CONVERSIONS
(BITS 6–11 OR BITS 14–19)

00 = @	0B = K	16 = V	21 = !	2C = ,	37 = 7
01 = A	0C = L	17 = W	22 = "	2D = –	38 = 8
02 = B	0D = M	18 = X	23 = #	2E = .	39 = 9
03 = C	0E = N	19 = Y	24 = $	2F = /	3A = :
04 = D	0F = O	1A = Z	25 = %	30 = 0	3B = ;
05 = E	10 = P	1B = [	26 = &	31 = 1	3C = <
06 = F	11 = Q	1C = \	27 = '	32 = 2	3D = =
07 = G	12 = R	1D =]	28 = (	33 = 3	3E = >
08 = H	13 = S	1E = ^	29 =)	34 = 4	3F = ?
09 = I	14 = T	1F = _	2A = *	35 = 5	
0A = J	15 = U	20 =	2B = +	36 = 6	

Personnel Required:

(2)

References:

TM 1–1270–476–20
TM 1–1270–476–T
TM 1–1520–238–T–7
TM 1–1520–238–T–8
TM 9–1230–476–20–1
TM 9–1230–476–20–2

Equipment Conditions:

Ref	Condition
TM 1–1270–476–T	TADS – MAINTENANCE OPERATIONAL CHECK in progress

NOTE

- All multiplex read code responses are read from right to left.

- Multiplex read codes must be used in conjunction with applicable Maintenance Operational Check (MOC) in progress.

- Multiplex read codes are observed on the HOD (ADC) or CDU (ADD).

MULTIPLEX READ CODE INTERPRETATIONS

15–1 **SIGNAL NAME:** PLT GND OVRD SW
MEMORY LOCATION: 001555
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates **PLT/GND OVRD** switch position.
REMARKS: From copilot/gunner (CPG) fire control panel (FCP) through left–hand (LH) forward avionics bay (FAB) multiplex remote terminal unit (MRTU) Type I to fire control computer (FCC).
PASS: If third digit on heads out display (HOD) is 1, 3, 5, or 7, go to paragraph 15–2.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

15–2 **SIGNAL NAME:** CPG SAFE/ARM SW
MEMORY LOCATION: 001075
MEMORY DATA BIT(S): 12–13 (BINARY)
CONDITION: If third digit displayed on HOD is 0 or 4=OFF
If third digit displayed on HOD is 2 or 6=SAFE
If third digit displayed on HOD is 3 or 7=ARM
SIGNAL FUNCTION: Selects weapons system status.
REMARKS: From CPG FCP through LH FAB MRTU Type I to FCC.
PASS: If CONDITION corresponds to selected switch position, go to paragraph 15–3.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

15–3 **SIGNAL NAME:** TADS POWER SWITCH
MEMORY LOCATION: 000436
MEMORY DATA BIT(S): 14–15 (BINARY)
CONDITION: If second digit displayed on HOD is 0 or 1=OFF
If second digit displayed on HOD is 4 or 5=FLIR OFF
If second digit displayed on HOD is 6 or 7=TADS
SIGNAL FUNCTION: Applies power to TADS.
REMARKS: From CPG FCP through CPG MRTU Type III to FCC.
PASS: If CONDITION corresponds to selected switch position, go to paragraph 15–4.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

15–4 **SIGNAL NAME:** CPG SIGHT SEL SW
MEMORY LOCATION: 001074
MEMORY DATA BIT(S): 4–6 (OCTAL)
CONDITION: If the fifth digit displayed on HOD is 0 or 1=HMD/TADS (Chapter 15, paragraph 15–5)
If the fifth digit displayed on HOD is 2 or 3=TADS (Chapter 15, paragraph 15–5)
If the sixth digit displayed on HOD is 1=NVS (Chapter 10, paragraph 10–6)
If the sixth digit displayed on HOD is 1 and the fifth digit displayed on HOD is 2 or 3=HMD (Chapter 7, paragraph 7–56)
SIGNAL FUNCTION: Indicates CPG selected sight sensor.
REMARKS: From CPG FCP through LH FAB MRTU Type I to FCC.
PASS: If CONDITION displayed on HOD corresponds to CPG SIGHT SEL switch position, refer to appropriate chapter and paragraph as listed under CONDITION.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

15–5 SIGNAL NAME: CPG ACQ SEL SW
    MEMORY LOCATION: 001074
    MEMORY DATA BIT(S): 7–9 (OCTAL)
    CONDITION: If the fourth digit displayed on HOD is 0 or 1=PHS
        (Chapter 7, paragraph 7–38)
        If the fourth digit displayed on HOD is 2 or 3=FXD
        (Chapter 10, paragraph 10–30)
        If the fourth digit displayed on HOD is 4 or 5=TGT
        (Chapter 16, paragraph 16–23)
        If the fourth digit displayed on HOD is 6 or 7=NAV.
        (Chapter 20, paragraph 20–37)
        If the fifth digit displayed on HOD is 1, 3, 5, or 7=GHS
        (Chapter 7, paragraph 7–56)
        If the fifth digit displayed on HOD is 1, 3, 5, or 7 and the fourth digit displayed on HOD is 2 or 3=MSL SKR (Chapter 8, paragraph 8–10)
        If the fifth digit displayed on HOD is 1, 3, 5, or 7 and the fourth digit displayed on HOD is 4 or 5=TADS (Chapter 15 paragraph 15–6)
    SIGNAL FUNCTION: Enables cueing or slaving to selected CPG line of sight (LOS).
    REMARKS: From CPG FCP through LH FAB MRTU Type I to FCC.
    PASS: If CONDITION displayed on HOD corresponds to CPG SIGHT SEL switch position, refer to appropriate chapter and paragraph as listed under CONDITION.
    FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

15–6 SIGNAL NAME: TADS FIXED FWD TO TEU (ACY) TADS FIXED FWD CMD (ACZ)
    MEMORY LOCATION: 001245
    MEMORY DATA BIT(S): 6 (BINARY)
    CONDITION: (None)
    SIGNAL FUNCTION: Indicates fixed forward is selected.
    REMARKS: From FCC through LH FAB MRTU Type I to TADS electronic unit (TEU).
    PASS: If fifth digit on HOD is 2, 3, 6, or 7, go to paragraph 15–7.
    FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–7 SIGNAL NAME: TADS FLIR STBY TO TPS (ACY) TADS FLIR STBY CMD (ACZ)
    MEMORY LOCATION: 001220
    MEMORY DATA BIT(S): 15 (BINARY)
    CONDITION: (None)
    SIGNAL FUNCTION: Indicates TADS has been selected.
    REMARKS: From FCC through LH FAB MRTU Type I to TADS power supply (TPS).
    PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 15–8.
    FAIL: Location of fault: TPS, wiring from TPS to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

15–8 SIGNAL NAME: TADS STBY TO TPS (ACY) TADS STBY CMD (ACZ)
    MEMORY LOCATION: 001220
    MEMORY DATA BIT(S): 16 (BINARY)
    CONDITION: (None)
    SIGNAL FUNCTION: Indicates TADS has been turned on.
    REMARKS: From FCC through LH FAB MRTU Type I to TPS.
    PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 15–9.
    FAIL: Location of fault: TPS, wiring from TPS to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

■ **15–9 SIGNAL NAME:** PNVS OPERATE TO TPS (ACY) PNVS OPERATE CMD (ACZ)
MEMORY LOCATION: 001220
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates either CPG or pilot has selected pilot night vision sensor (PNVS).
REMARKS: From FCC through LH FAB MRTU Type I to TPS.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 15–10.
FAIL: Location of fault: TPS, wiring from TPS to LH FAB MRTU Type I, LH FAB MRTU Type I.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

■ **15–10 SIGNAL NAME:** TADS OPERATE TO TPS (ACY) TADS OPERATE CMD (ACZ)
MEMORY LOCATION: 001220
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates CPG has selected TADS as LOS.
REMARKS: From FCC through LH FAB MRTU Type I to TPS.
PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 15–11.
FAIL: Location of fault: TPS, wiring from TPS to LH FAB MRTU Type I, LH FAB MRTU Type I.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

■ **15–11 SIGNAL NAME:** TADS OPERATE TO TEU (ACY) TADS OPERATE CMD (ACZ)
MEMORY LOCATION: 001244
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates CPG selection of TADS.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If first digit on HOD is 1, 3, 5, or 7, go to paragraph 15–12.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

■ **15–12 SIGNAL NAME:** FLIR STBY TO TEU (ACY) FLIR STBY CMD (ACZ)
MEMORY LOCATION: 001245
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates CPG has selected TADS.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 15–13.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–13 SIGNAL NAME: TADS SERVO STATUS
MEMORY LOCATION: 001136
MEMORY DATA BIT(S): 11 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates fault detection and location system (FD/LS) servo failure.
REMARKS: From TADS electronics unit (TEU) through LH FAB MRTU Type I to FCC.
PASS: Location of fault if third digit on HOD is 4, 5, 6, or 7: wiring between FCC and TEU.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).
FAIL: Location of fault: TEU, wiring from TEU to LH FAB MRTU Type I, LH FAB MRTU Type I.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–14 **SIGNAL NAME:** BIT INITIATE TO TEU (ACY) BIT INT CMD (ACZ)
MEMORY LOCATION: 001246
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Initiates or aborts built–in–test (BIT).
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If sixth digit on HOD is 0, go to paragraph 15–15.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU, FCC.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–15 **SIGNAL NAME:** BIT CLASS TO TEU (ACY) BITE CLASS CMD (ACZ)
MEMORY LOCATION: 001246
MEMORY DATA BIT(S): 6 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates class A (inflight) or B (ground) test after BIT.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If fifth digit on HOD is 2, 4, 6, or 7, go to paragraph 15–16.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–16 **SIGNAL NAME:** BIT ID TO TEU (ACY) BITE ID CMD (ACZ)
MEMORY LOCATION: 001246
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: If fifth digit displayed on HOD is 0, 1, 2, or 3=TADS
If fifth digit displayed on HOD is 4, 5, 6, or 7=PNVS
SIGNAL FUNCTION: Indicates either TADS or PNVS BIT initiation.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If fifth digit on HOD is 0, 1, 2, or 3, go to paragraph 15–17.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU, FCC.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–17 **SIGNAL NAME:** TADS CRITICAL BIT
MEMORY LOCATION: 001076
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates TPS failure.
REMARKS: From TPS through LH FAB MRTU Type I to FCC.
PASS: If sixth digit on HOD is 1, go to paragraph 15–18.
FAIL: Location of fault: replace TPS (TM 1–1270–476–20).

15–18 **SIGNAL NAME:** TADS CRITICAL PWR
MEMORY LOCATION: 001076
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors 5 VDC critical bus.
REMARKS: From TPS through LH FAB MRTU Type I to FCC.
PASS: If fifth digit on HOD is 4, 5, 6, or 7, refer to failure symptom index and next failure symptom
paragraph.
FAIL: Location of fault: replace TPS (TM 1–1270–476–20).

15–19 **SIGNAL NAME:** PITCH TO TEU (ACY) PITCH AID (ACZ)
MEMORY LOCATION: 001250
MEMORY DATA BIT(S): 4–16 (SCALAR)
CONDITION: Monitor HOD; memory location response digits should indicate a positive number for nose up pitch and negative number for nose down pitch.
SIGNAL FUNCTION: Indicates aircraft pitch angle.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If CONDITION 16 corresponds to proper angle, go to paragraph 15–20.
FAIL: Location of fault: go to Chapter 6, paragraph 6–16.

15–20 **SIGNAL NAME:** PITCH VALID TO TEU (ACY) PITCH AID VALID (ACZ)
MEMORY LOCATION: 001250
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates pitch angle valid.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If first digit on HOD is 1, 3, 5, or 7, go to paragraph 15–21.
FAIL: Location of fault: go to Chapter 6, paragraph 6–16.

15–21 **SIGNAL NAME:** TADS YAW RATE
MEMORY LOCATION: 000406
MEMORY DATA BIT(S): 4–19 (SCALAR)
CONDITION: Monitor HOD; memory location response digits should indicate a positive number for right yaw and negative number for left yaw.
SIGNAL FUNCTION: Indicates yaw position.
REMARKS: From TADS through CPG MRTU Type III to FCC.
PASS: If CONDITION corresponds to proper angle, go to paragraph 15–22.
FAIL: Location of fault: replace TEU (TM 1–1270–476–20).

15–22 **SIGNAL NAME:** TADS PITCH RATE
MEMORY LOCATION: 000407
MEMORY DATA BIT(S): 4–19 (SCALAR)
CONDITION: Monitor HOD; memory location response digits should indicate a positive number for nose up pitch and negative number for nose down pitch.
SIGNAL FUNCTION: Indicates pitch position.
REMARKS: From TADS through CPG MRTU Type III to FCC.
PASS: If CONDITION corresponds to proper angle, go to paragraph 15–23.
FAIL: Location of fault: replace TEU (TM 1–1270–476–20).

15–23 **SIGNAL NAME:** TADS ROLL RATE
MEMORY LOCATION: 000410
MEMORY DATA BIT(S): 4–19 (SCALAR)
CONDITION: Monitor HOD; memory location response digits should indicate a positive number for right roll and negative number for left roll.
SIGNAL FUNCTION: Indicates roll position.
REMARKS: From TADS through CPG MRTU Type III to FCC.
PASS: If CONDITION 19 corresponds to proper angle, go to paragraph 15–24.
FAIL: Location of fault: replace TEU (TM 1–1270–476–20).

15–24 SIGNAL NAME: ROLL TO TEU (ACY) ROLL AID (ACZ)
   MEMORY LOCATION: 001247
   MEMORY DATA BIT(S): 4–16 (SCALAR)
   CONDITION: Monitor HOD; memory location response digits should indicate a positive number for right roll and negative number for left roll.
   SIGNAL FUNCTION: Indicates roll angle from vertical gyro.
   REMARKS: From FCC through LH FAB MRTU Type I to TEU.
   PASS: If CONDITION corresponds to proper angle, go to paragraph 15–25.
   FAIL: Location of fault: go to Chapter 6, paragraph 6–18.

15–25 SIGNAL NAME: ROLL VALID TO TEU (ACY) PITCH AID VALID (ACZ)
   MEMORY LOCATION: 001247
   MEMORY DATA BIT(S): 19 (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Indicates valid roll angle data.
   REMARKS: From FCC through LH FAB MRTU Type I to TEU.
   PASS: If first digit on HOD is 1, 3, 5, or 7, go to paragraph 15–26.
   FAIL: Location of fault: go to Chapter 6, paragraph 6–18.

15–26 SIGNAL NAME: TADS SYSTEM STATUS (ACY) TADS CMPTR STAT (ACZ)
   MEMORY LOCATION: 001136
   MEMORY DATA BIT(S): 4 (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Lights TADS indicator on caution/warning panel.
   REMARKS: From TEU through LH FAB MRTU Type I to FCC.
   PASS: If sixth digit on HOD is 1, go to Chapter 26, paragraph 26–2.
   FAIL: Go to paragraph 15–27.

15–27 SIGNAL NAME: STATUS WORD
   MEMORY LOCATION: 001062
   MEMORY DATA BIT(S): 10 (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Monitors TADS.
   REMARKS: From TADS to LH FAB MRTU Type I.
   PASS: If fourth digit on HOD is 0, 2, 4, or 6, go to paragraph 15–28.
   FAIL: Location of fault: go to paragraph 15–32.

15–28 SIGNAL NAME: STATUS WORD
   MEMORY LOCATION: 001261
   MEMORY DATA BIT(S): 10 (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Monitors TADS.
   REMARKS: From TADS to LH FAB MRTU Type I.
   PASS: If fourth digit on HOD is 0, 2, 4, or 6, go to paragraph 15–29.
   FAIL: Location of fault: go to paragraph 15–32.

15–29 **SIGNAL NAME:**   STATUS WORD
MEMORY LOCATION: 001157
MEMORY DATA BIT(S):   10   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors TADS.
REMARKS: From TADS to LH FAB MRTU Type I.
PASS: If fourth digit on HOD is 0, 2, 4, or 6, go to paragraph 15–30.
FAIL: Location of fault: go to paragraph 15–32.

15–30 **SIGNAL NAME:**   STATUS WORD
MEMORY LOCATION: 000620
MEMORY DATA BIT(S):   10   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors lines 1 and 2 of alphanumeric display (AND).
REMARKS: From AND to CPG MRTU Type III.
PASS: If fourth digit on HOD is 0, 2, 4, or 6, go to paragraph 15–64.
FAIL: Location of fault: replace AND (TM 1–1270–476–20).

15–31 **SIGNAL NAME:**   STATUS WORD
MEMORY LOCATION: 000652
MEMORY DATA BIT(S):   10   (BINARY)
SIGNAL FUNCTION: Monitors lines 3 and 4 of AND.
REMARKS: From AND to CPG MRTU Type III.
PASS: If fourth digit on HOD is 0, 2, 4, or 6, go to paragraph 15–88.
FAIL: Location of fault: replace AND (TM 1–1270–476–20).

15–32 **SIGNAL NAME:**   ECS SYSTEM STATUS
MEMORY LOCATION: 001136
MEMORY DATA BIT(S):   5   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors TADS environmental control system (ECS) assembly.
REMARKS: From TEU through LH FAB MRTU Type I to FCC.
PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 15–33.
FAIL: Location of fault: TADS ECS, ECS, ECS assembly vacuum hose, wiring from ECS to aircraft
    interface adapter (AIA) interface. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–33 **SIGNAL NAME:**   TEU HANDSHAKE
MEMORY LOCATION: 001141
MEMORY DATA BIT(S):   4   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors serial input line.
REMARKS: From TEU through LH FAB MRTU Type I to FCC.
PASS: If sixth digit on HOD is 0, go to paragraph 15–34.
FAIL: Location of fault: replace TEU (TM 1–1270–476–20).

15–34 SIGNAL NAME: MRTU PARITY STATUS
MEMORY LOCATION: 001141
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors serial data link.
REMARKS: From TEU through LH FAB MRTU Type I to FCC.
PASS: If fifth digit on HOD is 0, 1, 2, or 3, go to paragraph 15–35.
FAIL: Location of fault: TEU, wiring from TEU to LH FAB MRTU Type I, LH FAB MRTU Type I.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–35 SIGNAL NAME: MANCHESTER ERROR STATUS (ACY) MANCHESTER STAT (ACZ) ■
MEMORY LOCATION: 001141
MEMORY DATA BIT(S): 6 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates received data failure.
REMARKS: From TEU through LH FAB MRTU Type I to FCC.
PASS: If fifth digit on HOD is 0, 1, 4, or 5, go to paragraph 15–36.
FAIL: Location of fault: TEU, wiring from TEU to LH FAB MRTU Type I, LH FAB MRTU Type I.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–36 SIGNAL NAME: TADS COMPUTER STATUS (ACY) TADS CMPTR STAT (ACZ) ■
MEMORY LOCATION: 001136
MEMORY DATA BIT(S): 6 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates FD/LS TADS computer failure.
REMARKS: From TEU through LH FAB MRTU Type I to FCC.
PASS: If fifth digit on HOD is 2, 3, 6, or 7, go to paragraph 15–235.
FAIL: Location of fault: TEU, wiring from TEU to LH FAB MRTU Type I, LH FAB MRTU Type I.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–37 SIGNAL NAME: LASER STATUS (ACY) LRFD STAT (ACZ) ■
MEMORY LOCATION: 001136
MEMORY DATA BIT(S): 9 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates FD/LS laser rangefinder/designator (LRF/D) failure.
REMARKS: From TEU through LH FAB MRTU Type I to FCC.
PASS: If fourth digit on HOD is 2, 3, 6, or 7, go to paragraph 15–38.
FAIL: Location of fault: TEU, wiring from TEU to laser electronic unit (LEU), LEU, wiring from LEU to
laser transceiver unit (LTU). Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–38 SIGNAL NAME: LASER ON TO TPS (ACY) LRFD CMD (ACZ) ■
MEMORY LOCATION: 001220
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates CPG has turned TADS laser on.
REMARKS: From FCC through LH FAB MRTU Type I to TPS.
PASS: If sixth digit on HOD is 1, 3, 5, or 7, go to paragraph 15–39.
FAIL: Location of fault: go to Chapter 16, paragraph 16–35.

15–39 **SIGNAL NAME:** LT STATUS (ACY) LST CMD (ACZ)
MEMORY LOCATION: 001136
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates FD/LS laser tracker (LT) failure.
REMARKS: From TEU through LH FAB MRTU Type I to FCC.
PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 15–40.
FAIL: Location of fault: replace laser tracker receiver unit (LTRU) (TM 1–1270–476–20).

15–40 **SIGNAL NAME:** TV STATUS
MEMORY LOCATION: 001136
MEMORY DATA BIT(S): 7 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates FD/LS day television (TV) video failure.
REMARKS: From TEU through LH FAB MRTU Type I to FCC.
PASS: If fifth digit on HOD is 1, 3, 5, or 7, go to paragraph 15–41.
FAIL: Location of fault: replace day TV (DTV) (TM 1–1270–476–20).

15–41 **SIGNAL NAME:** FLIR STATUS
MEMORY LOCATION: 001136
MEMORY DATA BIT(S): 8 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates FD/LS night sensor video failure.
REMARKS: From TEU through LH FAB MRTU Type I to FCC.
PASS: If fourth digit on HOD is 4, 5, 6, or 7, go to paragraph 15–131.
FAIL: Location of fault: replace night vision sensor (NVS) (TM 1–1270–476–20).

15–42 **SIGNAL NAME:** TADS IAT STATUS
MEMORY LOCATION: 001136
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates FD/LS TADS image autotrack (IAT) subsystem failure.
REMARKS: From TEU through LH FAB MRTU Type I to FCC.
PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 15–134.
FAIL: Location of fault: replace TEU (TM 1–1270–476–20).

15–43 **SIGNAL NAME:** IHADSS SELECT (ACY) HMD BRT/CTRS SEL (ACZ)
MEMORY LOCATION: 000561
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Adjusts integrated helmet and display sight system (IHADSS) bright and contrast controls that are being used to control IHADSS.
REMARKS: From FCC through CPG MRTU Type III to optical relay tube (ORT).
PASS: If sixth digit on HOD is 0, go to paragraph 15–44.
FAIL: Location of fault: CPG MRTU Type III, wiring from CPG MRTU Type III to ORT, ORT. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–44 **SIGNAL NAME:**   ORT IHADSS BRT ADJ (ACY) CPG BRT ADJ (ACZ)
       MEMORY LOCATION: 000431
       MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
       CONDITION: Monitor HOD while increasing brightness; memory location response should increase when brightness is increased and decrease when brightness is decreased.
       SIGNAL FUNCTION: Adjusts IHADSS brightness.
       REMARKS: From ORT through CPG MRTU Type III to FCC.
       PASS: If CONDITION is met, go to paragraph 15–45.
       FAIL: Location of fault: ORT, wiring from ORT to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–45 **SIGNAL NAME:**   ORT SYM BRT ADJ (ACY) CPG SYM BRT ADJ (ACZ)
       MEMORY LOCATION: 000433
       MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
       CONDITION: Monitor HOD while increasing ORT symbology brightness; memory location response should increase when brightness is increased and decrease when brightness is decreased.
       SIGNAL FUNCTION: Adjusts output of **SYM BRT** control.
       REMARKS: From ORT through CPG MRTU Type III to FCC.
       PASS: If CONDITION is met, go to paragraph 15–46.
       FAIL: Location of fault: ORT, wiring from ORT to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–46 **SIGNAL NAME:**   ORT GAIN ADJ (ACY) CPG GAIN ADJ (ACZ)
       MEMORY LOCATION: 000435
       MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
       CONDITION: Monitor HOD while increasing **GAIN**; memory location response should increase when gain is increased and decrease when gain is decreased.
       SIGNAL FUNCTION: Adjusts output of FLIR **GAIN** control.
       REMARKS: From ORT through CPG MRTU Type III to FCC.
       PASS: If CONDITION is met, go to paragraph 15–47.
       FAIL: Location of fault: ORT, wiring from ORT to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–47 **SIGNAL NAME:**   ORT GAIN ADJ TO TEU (ACY) CPG GAIN ADJ TST (ACZ)
       MEMORY LOCATION: 001254
       MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
       CONDITION: Monitor HOD while increasing gain; memory location response should increase when gain is increased and decrease when gain is decreased.
       SIGNAL FUNCTION: Used during FD/LS.
       REMARKS: From FCC through LH FAB MRTU Type I to TEU.
       PASS: If CONDITION is met, go to paragraph 15–48.
       FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–48 **SIGNAL NAME:** CPG SYMBOL BRT TO SYMBOL GEN (ACY) SYMG CPG SYM BRT (ACZ)
MEMORY LOCATION: 001172
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD while increasing symbol brightness; memory location response should increase when brightness is increased and decrease when brightness is decreased.
SIGNAL FUNCTION: Controls ORT **SYM GEN** brightness.
REMARKS: From FCC through LH FAB MRTU Type I to symbol generator.
PASS: If CONDITION is met, go to paragraph 15–49.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to symbol generator, symbol generator to FCC. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

15–49 **SIGNAL NAME:** CPG SYMBOL BRT TO TEU (ACY) TEU CPG SYM BRT (ACZ)
MEMORY LOCATION: 001174
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD while increasing symbol brightness; memory location response should increase when brightness is increased and decrease when brightness is decreased.
SIGNAL FUNCTION: Controls CPG **SYM** brightness.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If CONDITION is met, go to paragraph 15–50.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–50 **SIGNAL NAME:** ORT SYM BRT ADJ TO TEU (ACY) CPG SYMBR ADJ TST (ACZ)
MEMORY LOCATION: 001256
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD while increasing symbol brightness; memory location response should increase when brightness is increased and decrease when brightness is decreased.
SIGNAL FUNCTION: Used during FD/LS.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If CONDITION is met, go to paragraph 15–51.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–51 **SIGNAL NAME:** ORT IHADSS BRT TO TEU (ACY) CPG BRT ADJ TST (ACZ)
MEMORY LOCATION: 001260
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD while increasing brightness; memory location response should increase when brightness is increased and decrease when brightness is decreased.
SIGNAL FUNCTION: Used during FD/LS.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If CONDITION is met, go to paragraph 15–52.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–52 **SIGNAL NAME:** ORT LEVEL ADJ (ACY) CPG LEVEL ADJ (ACZ) ∎
MEMORY LOCATION: 000434 ∎
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD while increasing level; memory location response should increase when level is increased and decrease when level is decreased.
SIGNAL FUNCTION: Adjusts forward looking infared radar (FLIR) level control.
REMARKS: From ORT through CPG MRTU Type III to FCC.
PASS: If CONDITION is met, go to paragraph 15–53.
FAIL: Location of fault: ORT, wiring from ORT to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–53 **SIGNAL NAME:** ORT LEVEL ADJ TO TEU (ACY) CPG LEVEL ADJ TST (ACZ) ∎
MEMORY LOCATION: 001253 ∎
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD while increasing level; memory location response should increase when level is increased and decrease when level is decreased.
SIGNAL FUNCTION: Used during FD/LS.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If CONDITION is met, go to paragraph 15–54.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–54 **SIGNAL NAME:** GAIN TO FLIR (ACY) FLIR GAIN CMD (ACZ) ∎
MEMORY LOCATION: 000545 ∎
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD while increasing gain; memory location response should increase when gain is increased and decrease when gain is decreased.
SIGNAL FUNCTION: Used during FD/LS.
REMARKS: From FCC through CPG MRTU Type III to TEU.
PASS: If CONDITION is met, go to paragraph 15–55.
FAIL: Location of fault: CPG MRTU Type III, wiring from CPG MRTU Type III to TADS turret, TADS turret. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–55 **SIGNAL NAME:** LEVEL TO FLIR (ACY) FLIR LEVEL CMD (ACZ) ∎
MEMORY LOCATION: 000546 ∎
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD while increasing level; memory location response should increase when level is increased and decrease when level is decreased.
SIGNAL FUNCTION: Adjusts FLIR level.
REMARKS: From FCC through CPG MRTU Type III to TADS turret.
PASS: Location of fault if CONDITION is met: troubleshoot ORT (TM 1–1270–476–T).
FAIL: Location of fault: CPG MRTU Type III, wiring from CPG MRTU Type III to TADS turret assembly, TADS turret assembly. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–56 **SIGNAL NAME:** ORT RNG FOCUS ADJ (ACY) CPG FOCUS ADJ (ACZ)
MEMORY LOCATION: 000426
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: Monitor HOD while increasing range focus; memory location response should increase when range focus is increased and decrease when range focus is decreased.
SIGNAL FUNCTION: Adjusts output of range focus.
REMARKS: From ORT through CPG MRTU Type III to FCC.
PASS: If CONDITION is met, go to paragraph 15–57.
FAIL: Location of fault: ORT, wiring from ORT to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–57 **SIGNAL NAME:** ORT RNG FOCUS ADJ TO TEU (ACY) RNG FOCUS ADJ TST (ACZ)
MEMORY LOCATION: 001255
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: Monitor HOD while increasing level; memory location response should increase when level is increased and decrease when level is decreased.
SIGNAL FUNCTION: Used during FD/LS.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: Location of fault if CONDITION is met: troubleshoot ORT (TM 1–1270–476–T).
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–58 **SIGNAL NAME:** RNG FOCUS TO TV (ACY) TV FOCUS CMD (ACZ)
MEMORY LOCATION: 000547
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: Monitor HOD while increasing range focus; memory location response should increase when range focus is increased and decrease when range focus is decreased.
SIGNAL FUNCTION: Adjusts focus of TV from infinity to 1.5 kilometers (KM).
REMARKS: From FCC through CPG MRTU Type III to TADS turret.
PASS: If CONDITION is met, go to paragraph 15–59.
FAIL: Location of fault: CPG MRTU Type III, wiring from CPG MRTU Type III to TADS turret. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–59 **SIGNAL NAME:** RNG FOCUS TO FLIR (ACY) TV FOCUS CMD (ACZ)
MEMORY LOCATION: 000554
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: Monitor HOD while increasing range focus; memory location response should increase when range focus is increased and decrease when range focus is decreased.
SIGNAL FUNCTION: Controls focus of TADS FLIR from infinity to 0.5 KM.
REMARKS: From FCC through CPG MRTU Type III to TADS turret.
PASS: Location of fault if CONDITION is met: troubleshoot TADS night sensor (TM 1–1270–476–T).
FAIL: Location of fault: CPG MRTU, wiring from CPG MRTU to TADS turret, TADS turret. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–60 SIGNAL NAME: ORT IHADSS CONTRAST TO TEU (ACY) CPG CTRS ADJ TST (ACZ) ▮
       MEMORY LOCATION: 001257
       MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR) ▮
       CONDITION: Monitor HOD while increasing contrast; memory location response should increase when contrast is increased and decrease when contrast is decreased.
       SIGNAL FUNCTION: Controls IHADSS contrast.
       REMARKS: From FCC through LH FAB MRTU Type I to TEU.
       PASS: If CONDITION is met, go to paragraph 15–61.
       FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–61 SIGNAL NAME: ORT IHADSS BRT ADJ CTRS (ACY) CPG CTRS ADJ (ACZ) ▮
       MEMORY LOCATION: 000432
       MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR) ▮
       CONDITION: Monitor HOD while increasing contrast; memory location response should increase when contrast is increased and decrease when contrast is decreased.
       SIGNAL FUNCTION: Adjusts IHADSS contrast.
       REMARKS: From ORT through CPG MRTU Type III to FCC.
       PASS: Location of fault if CONDITION is met: troubleshoot ORT (TM 1–1270–476–T).
       FAIL: Location of fault: ORT, wiring from ORT to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 1–1270–476–20).

15–62 SIGNAL NAME: GRAY SCALE
       MEMORY LOCATION: 000412
       MEMORY DATA BIT(S):   14   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Indicates CPG has selected gray scale.
       REMARKS: From ORT through CPG MRTU Type III to FCC.
       PASS: If second digit on HOD is 1, 2, or 3, go to paragraph 15–63.
       FAIL: Location of fault: ORT, wiring from ORT to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–63 SIGNAL NAME: ORT GRAY SCALE SW TO TEU (ACY) GRAY SCALE SW TST (ACZ) ▮
       MEMORY LOCATION: 001252
       MEMORY DATA BIT(S):   7   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Indicates CPG has selected gray scale.
       REMARKS: From FCC through LH FAB MRTU Type I to TEU.
       PASS: If fifth digit is 1 or 5: replace TEU (TM 1–1270–476–20). ▮
       FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–64 SIGNAL NAME: TADS SOFTWARE I.D.
       MEMORY LOCATION: 001126
       MEMORY DATA BIT(S):   12–19   (BINARY)
       CONDITION: Any 8 bit value
       SIGNAL FUNCTION: Provides TEU software version.
       REMARKS: From TEU through LH FAB MRTU Type I to FCC.
       PASS: If the first digit, second digit, or the third digit is equal to or greater than 1, go to paragraph 15–65.
       FAIL: Location of fault: TEU, wiring from TEU to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

■ **15–65** **SIGNAL NAME:** TADS SYMBOL CONT TO TEU (ACY) TADS SYMBOL CTL (ACZ)
MEMORY LOCATION: 001245
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Inhibits TADS symbology.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If sixth digit on HOD is 0, 2, 4, or 6, go to paragraph 15–66.
FAIL: Location of fault: TEU, wiring from TEU to LH FAB MRTU Type I, LH FAB MRTU Type I.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–66 **SIGNAL NAME:** AND L1 CHAR 2 1
MEMORY LOCATION: 000617
MEMORY DATA BIT(S): 6–19 (ASCII)
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 1 and 2 on line 1.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–67.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–67 **SIGNAL NAME:** AND L1 CHAR 4 3
MEMORY LOCATION: 000616
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 3 and 4 on line 1.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–68.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–68 **SIGNAL NAME:** AND L1 CHAR 6 5
MEMORY LOCATION: 000615 (ASCII)
MEMORY DATA BIT(S): 4–19
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 5 and 6 on line 1.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–69.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–69 **SIGNAL NAME:** AND L1 CHAR 8 7
MEMORY LOCATION: 000614
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 7 and 8 on line 1.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–70.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–70   SIGNAL NAME: AND L1 CHAR 10 9
MEMORY LOCATION: 000613
MEMORY DATA BIT(S):   4–19   (ASCII)
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 9 and 10 on line 1.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–71.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–71   SIGNAL NAME: AND L1 CHAR 12 11
MEMORY LOCATION: 000612
MEMORY DATA BIT(S):   4–19   (ASCII)
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 11 and 12 on line 1.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–72.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–72   SIGNAL NAME: AND L1 CHAR 14 13
MEMORY LOCATION: 000611
MEMORY DATA BIT(S):   4–19   (ASCII)
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 13 and 14 on line 1.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–73.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–73   SIGNAL NAME: AND L1 CHAR 16 15
MEMORY LOCATION: 000610
MEMORY DATA BIT(S):   4–19   (ASCII)
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 15 and 16 on line 1.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–74.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–74   SIGNAL NAME: AND L1 CHAR 18 17
MEMORY LOCATION: 000607
MEMORY DATA BIT(S):   4–19   (ASCII)
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 17 and 18 on line 1.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–75.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–75 SIGNAL NAME: AND L1 CHAR 20 19
MEMORY LOCATION: 000606
MEMORY DATA BIT(S): 4–19   (ASCII)
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 19 and 20 on line 1.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–76.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–76 SIGNAL NAME: AND L1 CHAR 22 21
MEMORY LOCATION: 000605
MEMORY DATA BIT(S): 4–19   (ASCII)
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 21 and 22 on line 1.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–77.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–77 SIGNAL NAME: AND L1 CHAR 24 23
MEMORY LOCATION: 000604
MEMORY DATA BIT(S): 4–19   (ASCII)
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 23 and 24 on line 1.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–78.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–78 SIGNAL NAME: AND L2 CHAR 2 1
MEMORY LOCATION: 000603
MEMORY DATA BIT(S): 4–19   (ASCII)
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 1 and 2 on line 2.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–79.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–79 SIGNAL NAME: AND L2 CHAR 4 3
MEMORY LOCATION: 000602
MEMORY DATA BIT(S): 4–19   (ASCII)
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 3 and 4 on line 2.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–80.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–80 **SIGNAL NAME:** AND L2 CHAR 6 5
MEMORY LOCATION: 000601
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 5 and 6 on line 2.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–81.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–81 **SIGNAL NAME:** AND L2 CHAR 8 7
MEMORY LOCATION: 000600
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 7 and 8 on line 2.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–82.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–82 **SIGNAL NAME:** AND L2 CHAR 10 9
MEMORY LOCATION: 000577
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 9 and 10 on line 2.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–83.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–83 **SIGNAL NAME:** AND L2 CHAR 12 11
MEMORY LOCATION: 000576
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 11 and 12 on line 2.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–84.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–84 **SIGNAL NAME:** AND L2 CHAR 14 13
MEMORY LOCATION: 000575
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 13 and 14 on line 2.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–85.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–85 SIGNAL NAME: AND L2 CHAR 16 15
   MEMORY LOCATION: 000574
   MEMORY DATA BIT(S): 4–19 (ASCII)
   CONDITION: Refer to Table 15–1 for ASCII code conversions.
   SIGNAL FUNCTION: Converts 16–bit word to characters 15 and 16 on line 2.
   REMARKS: From FCC through CPG MRTU Type III to AND.
   PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–86.
   FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
      Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–86 SIGNAL NAME: AND L2 CHAR 18 17
   MEMORY LOCATION: 000573
   MEMORY DATA BIT(S): 4–19 (ASCII)
   CONDITION: Refer to Table 15–1 for ASCII code conversions.
   SIGNAL FUNCTION: Converts 16–bit word to characters 17 and 18 on line 2.
   REMARKS: From FCC through CPG MRTU Type III to AND.
   PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–87.
   FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
      Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–87 SIGNAL NAME: AND L2 CHAR 20 19
   MEMORY LOCATION: 000572
   MEMORY DATA BIT(S): 4–19 (ASCII)
   CONDITION: Refer to Table 15–1 for ASCII code conversions.
   SIGNAL FUNCTION: Converts 16–bit word to characters 19 and 20 in line 2.
   REMARKS: From FCC through CPG MRTU Type III to AND.
   PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–88.
   FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
      Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–88 SIGNAL NAME: AND L2 CHAR 22 21
   MEMORY LOCATION: 000571
   MEMORY DATA BIT(S): 4–19 (ASCII)
   CONDITION: Refer to Table 15–1 for ASCII code conversions.
   SIGNAL FUNCTION: Converts 16–bit word to characters 21 and 22 on line 2.
   REMARKS: From FCC through CPG MRTU Type III to AND.
   PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–89.
   FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
      Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–89 SIGNAL NAME: AND L2 CHAR 24 23
   MEMORY LOCATION: 000570
   MEMORY DATA BIT(S): 4–19 (ASCII)
   CONDITION: Refer to Table 15–1 for ASCII code conversions.
   SIGNAL FUNCTION: Converts 16–bit word to characters 23 and 24 on line 2.
   REMARKS: From FCC through CPG MRTU Type III to AND.
   PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–90.
   FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
      Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–90 **SIGNAL NAME:** AND L3 CHAR 2 1
MEMORY LOCATION: 000651
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 1 and 2 on line 3.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–91.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–91 **SIGNAL NAME:** AND L3 CHAR 4 3
MEMORY LOCATION: 000650
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 3 and 4 on line 3.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–92.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–92 **SIGNAL NAME:** AND L3 CHAR 6 5
MEMORY LOCATION: 000647
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 5 and 6 on line 3.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–93.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–93 **SIGNAL NAME:** AND L3 CHAR 8 7
MEMORY LOCATION: 000646
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 7 and 8 on line 3.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–94.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–94 **SIGNAL NAME:** AND L3 CHAR 10 9
MEMORY LOCATION: 000645
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 9 and 10 on line 3.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–95.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–95 **SIGNAL NAME:** AND L3 CHAR 12 11
MEMORY LOCATION: 000644
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 11 and 12 on line 3.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–96.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–96 **SIGNAL NAME:** AND L3 CHAR 14 13
MEMORY LOCATION: 000643
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 13 and 14 on line 3.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–97.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–97 **SIGNAL NAME:** AND L3 CHAR 16 15
MEMORY LOCATION: 000642
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 15 and 16 on line 3.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–98.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–98 **SIGNAL NAME:** AND L3 CHAR 18 17
MEMORY LOCATION: 000641
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 17 and 18 on line 3.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–99.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–99 **SIGNAL NAME:** AND L3 CHAR 20 19
MEMORY LOCATION: 000640
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 19 and 20 on line 3.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–100.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–100 **SIGNAL NAME:** AND L3 CHAR 22 21
MEMORY LOCATION: 000637
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 21 and 22 on line 3.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–101.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–101 **SIGNAL NAME:** AND L3 CHAR 24 23
MEMORY LOCATION: 000636
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 23 and 24 on line 3.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–102.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–102 **SIGNAL NAME:** AND L4 CHAR 2 1
MEMORY LOCATION: 000635
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 1 and 2 on line 4.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–103.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–103 **SIGNAL NAME:** AND L4 CHAR 4 3
MEMORY LOCATION: 000634
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 3 and 4 on line 4.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–104.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–104 **SIGNAL NAME:** AND L4 CHAR 6 5
MEMORY LOCATION: 000633
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 5 and 6 on line 4.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–105.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–105 SIGNAL NAME: AND L4 CHAR 8 7
      MEMORY LOCATION: 000632
      MEMORY DATA BIT(S):   4–19   (ASCII)
      CONDITION: Refer to Table 15–1 for ASCII code conversions.
      SIGNAL FUNCTION: Converts 16–bit word to characters 7 and 8 on line 4.
      REMARKS: From FCC through CPG MRTU Type III to AND.
      PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–106.
      FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
           Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–106 SIGNAL NAME: AND L4 CHAR 10 9
      MEMORY LOCATION: 000631
      MEMORY DATA BIT(S):   4–19   (ASCII)
      CONDITION: Refer to Table 15–1 for ASCII code conversions.
      SIGNAL FUNCTION: Converts 16–bit word to characters 9 and 10 on line 4.
      REMARKS: From FCC through CPG MRTU Type III to AND.
      PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–107.
      FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
           Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–107 SIGNAL NAME: AND L4 CHAR 12 11
      MEMORY LOCATION: 000630
      MEMORY DATA BIT(S):   4–19   (ASCII)
      CONDITION: Refer to Table 15–1 for ASCII code conversions.
      SIGNAL FUNCTION: Converts 16–bit word to characters 11 and 12 on line 4.
      REMARKS: From FCC through CPG MRTU Type III to AND.
      PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–108.
      FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
           Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–108 SIGNAL NAME: AND L4 CHAR 14 13
      MEMORY LOCATION: 000627
      MEMORY DATA BIT(S):   4–19   (ASCII)
      CONDITION: Refer to Table 15–1 for ASCII code conversions.
      SIGNAL FUNCTION: Converts 16–bit word to characters 13 and 14 on line 4.
      REMARKS: From FCC through CPG MRTU Type III to AND.
      PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–109.
      FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
           Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–109 SIGNAL NAME: AND L4 CHAR 16 15
      MEMORY LOCATION: 000626
      MEMORY DATA BIT(S):   4–19   (ASCII)
      CONDITION: Refer to Table 15–1 for ASCII code conversions.
      SIGNAL FUNCTION: Converts 16–bit word to characters 15 and 16 on line 4.
      REMARKS: From FCC through CPG MRTU Type III to AND.
      PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–110.
      FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
           Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–110 SIGNAL NAME: AND L4 CHAR 18 17
MEMORY LOCATION: 000625
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 17 and 18 on line 4.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–111.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–111 SIGNAL NAME: AND L4 CHAR 20 19
MEMORY LOCATION: 000624
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 19 and 20 on line 4.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–112.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–112 SIGNAL NAME: AND L4 CHAR 22 21
MEMORY LOCATION: 000623
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 21 and 22 on line 4.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–113.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III, ORT LH
grip, wiring from ORT to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to
isolate fault (TM 1–1270–476–T).

15–113 SIGNAL NAME: AND L4 CHAR 24 23
MEMORY LOCATION: 000622
MEMORY DATA BIT(S): 4–19 (ASCII)
CONDITION: Refer to Table 15–1 for ASCII code conversions.
SIGNAL FUNCTION: Converts 16–bit word to characters 23 and 24 on line 4.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If ASCII conversion results correspond to display on HOD, go to paragraph 15–114.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–114 SIGNAL NAME: AND LAST WORD INDICATE (ACY) L1 L2 INDICATE (ACZ) ▋
MEMORY LOCATION: 000617
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates last word.
REMARKS: From FCC through CPG MRTU Type III to AND.
PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to Chapter 14, paragraph 14–124.
FAIL: Location of fault: AND, wiring from AND to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–115   **SIGNAL NAME:**   FLIR COOLED
                MEMORY LOCATION: 000402
                MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
                CONDITION: Monitor HOD; memory location response is positive when not cooled and negative when cooled
                SIGNAL FUNCTION: Monitors detector/dewar assembly.
                REMARKS: From TADS through CPG MRTU Type III to FCC.
                PASS: If CONDITION is met, go to paragraph 15–116.
                FAIL: Location of fault: dewar detector, automatic control module (ACM), post amplifier, night sensor assembly (NSA), bulkhead connector, wiring from bulkhead connector to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–116   **SIGNAL NAME:**   TURRET TEMP COLD
                MEMORY LOCATION: 000412
                MEMORY DATA BIT(S): 17   (BINARY)
                CONDITION: (None)
                SIGNAL FUNCTION: FALSE indicates TADS turret is at operating temperature (45 ±5 °F).
                REMARKS: From TADS through CPG MRTU Type III to FCC.
                PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 15–117.
                FAIL: Location of fault: switch thermal assembly, day sensor assembly DSA, bulkhead connector, ECS, wiring from bulkhead to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–117   **SIGNAL NAME:**   TURRET OVERTEMP
                MEMORY LOCATION: 001135
                MEMORY DATA BIT(S): 10   (BINARY)
                CONDITION: (None)
                SIGNAL FUNCTION: Indicates TADS turret operating temperature is above normal.
                REMARKS: From TADS turret through LH FAB MRTU Type I to FCC.
                PASS: If fourth digit is 1: troubleshoot TADS turret NSA (TM 1–1270–476–T).
                FAIL: Location of fault: DSA, NSA, bulkhead connector, wiring from bulkhead to TEU, TEU, wiring from TEU to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–118   **SIGNAL NAME:**   LASER COOLANT LOW IN (ACY) LRFD LOW COOL IND (ACZ)
                MEMORY LOCATION: 001076
                MEMORY DATA BIT(S): 15   (BINARY)
                CONDITION: (None)
                SIGNAL FUNCTION: Indicates laser cavity coolant low.
                REMARKS: From TADS LEU through LH FAB MRTU Type I to FCC.
                PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 15–119.
                FAIL: Location of fault: reservoir assembly, laser cooling unit assembly, wiring from LTU to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–119 SIGNAL NAME: LASER OVERTEMP IND (ACY) LRFD OVERTEMP IND (ACZ)
MEMORY LOCATION: 001076
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates laser cavity overheated.
REMARKS: From TADS LEU through LH FAB MRTU Type I to FCC.
PASS: Location of fault if third digit on HOD is 1, 3, 5, or 7: troubleshoot LTU (TM 1–1270–476–T).
FAIL: Location of fault: cavity cooling box unit, wiring from LTU to LH FAB MRTU Type I, LH FAB
MRTU Type I. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–120 SIGNAL NAME: LASER LOW PWR IN (ACY) LRFD LOW PWR IND (ACZ)
MEMORY LOCATION: 001076
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates laser peak power is less than 70 percent of nominal.
REMARKS: From TADS LEU through LH FAB MRTU Type I to FCC.
PASS: Location of fault if second digit on HOD is 4, 5, 6, or 7: troubleshoot TPS (TM 1–1270–476–T).
FAIL: Location of fault: LEU, wiring from LEU to LH FAB MRTU Type I, LH FAB MRTU Type I.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–121 SIGNAL NAME: DVO SENSOR SEL (ACY) DVO SEL SW (ACZ)
MEMORY LOCATION: 000412
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates to TEU that CPG has selected direct view optics (DVO).
REMARKS: From ORT through CPG MRTU Type III to FCC.
PASS: If fourth digit on HOD is 2, 4, or 6, go to paragraph 15–122.
FAIL: Location of fault: ORT LH grip, ORT, wiring from ORT to CPG MRTU Type III, CPG MRTU Type
III. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–122 SIGNAL NAME: RTCL ILL TO DVO (ACY) DVO RTCL ILL CMD (ACZ)
MEMORY LOCATION: 000552
MEMORY DATA BIT(S): 4–19 (SCALAR)
CONDITION: Monitor HOD while increasing brightness; memory location response should increase
when brightness is increased and decrease when brightness is decreased.
SIGNAL FUNCTION: Controls brightness of DVO reticle.
REMARKS: From FCC through CPG MRTU Type III to TADS turret. The DVO/HDD display itself does
not visibly change.
PASS: If CONDITION is met, go to paragraph 15–123.
FAIL: Location of fault: CPG MRTU Type III, wiring from CPG MRTU Type III to TADS turret, TADS
turret. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–123 **SIGNAL NAME:** DVO SEL TO TEU
MEMORY LOCATION: 001245
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates DVO selected.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 15–231.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–124 **SIGNAL NAME:** TADS VIDEO SW
MEMORY LOCATION: 000412
MEMORY DATA BIT(S): 11 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates CPG has selected TADS video.
REMARKS: From ORT through CPG MRTU Type III to FCC.
PASS: If third digit on HOD is 1, 2, or 3, go to paragraph 15–125.
FAIL: Location of fault: ORT, wiring from ORT to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–125 **SIGNAL NAME:** CPG COLLECTIVE TADS PNVS SEL 1 (ACY) TADS PNVS SW1 (ACZ)
MEMORY LOCATION: 000414
MEMORY DATA BIT(S): 7 (BINARY)
CONDITION: If the fifth digit displayed on HOD is 0, 2, 4, or 6=TADS
If the fifth digit displayed on HOD is 1, 3, 5, or 7=PNVS
SIGNAL FUNCTION: Indicates CPG LOS selection.
REMARKS: From CPG collective **NVS** switch through CPG MRTU Type III to FCC.
PASS: If fifth digit on HOD is 2, 4, or 6, go to paragraph 15–126.
FAIL: Location of fault: CPG collective **NVS** switch, wiring from CPG collective **NVS** switch to CPG
MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault
(TM 1–1520–238–T–7).

15–126 **SIGNAL NAME:** CPG COLLECTIVE TADS PNVS SEL 2 (ACY) TADS PNVS SW2 (ACZ)
MEMORY LOCATION: 000414
MEMORY DATA BIT(S): 8 (BINARY)
CONDITION: If fourth digit displayed on HOD is 0, 1, 2, or 3=PNVS
If fourth digit displayed on HOD is 4, 5, 6, or 7=TADS
SIGNAL FUNCTION: Indicates CPG LOS selection.
REMARKS: From CPG collective **NVS** switch through CPG MRTU Type III to FCC.
PASS: If fourth digit on HOD is 4, 5, 6, or 7, go to paragraph 15–127.
FAIL: Location of fault: CPG collective **NVS** switch, wiring from CPG collective **NVS** switch to CPG
MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault
(TM 1–1520–238–T–7).

15–127 SIGNAL NAME: TADS PILOT TAKEOVER TO TEU (ACY) TADS PRISLAVE CMD (ACZ)
  MEMORY LOCATION: 001245
  MEMORY DATA BIT(S): 8 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates pilot has selected TADS (PNVS backup).
  REMARKS: From FCC through LH FAB MRTU Type I to TEU.
  PASS: If fourth digit on HOD is 4, 5, 6, or 7, go to paragraph 15–128.
  FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
    Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–128 SIGNAL NAME: TADS SLAVED TO TEU (ACY) TADS SLAVE CMD (ACZ)
  MEMORY LOCATION: 001245
  MEMORY DATA BIT(S): 7 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates TADS is slaved to CPG LOS.
  REMARKS: From FCC through LH FAB MRTU Type I to TEU.
  PASS: If fifth digit on HOD is 1, 3, 5, or 7, go to paragraph 15–129.
  FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
    Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–129 SIGNAL NAME: TADS VIDEO SELECT TO TEU (ACY) TADS VIDEO CMD (ACZ)
  MEMORY LOCATION: 001245
  MEMORY DATA BIT(S): 11 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates CPG has selected TADS video.
  REMARKS: From FCC through LH FAB MRTU Type I to TEU.
  PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 15–130.
  FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
    Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–130 SIGNAL NAME: ORT PNVS VIDEO SEL TO TEU (ACY) PNVS VIDEO SW TST (ACZ)
  MEMORY LOCATION: 001252
  MEMORY DATA BIT(S): 4 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates CPG has selected PNVS video.
  REMARKS: From FCC through LH FAB MRTU Type I to TEU.
  PASS: Location of fault if sixth digit on HOD is 0: replace ORT (TM 1–1270–476–20).
  FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
    Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–131 SIGNAL NAME: FLIR SENSOR SEL (ACY) FLIR SELECT SW (ACZ)
  MEMORY LOCATION: 000412
  MEMORY DATA BIT(S): 15 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Selects FLIR sensor.
  REMARKS: From ORT lefthand grip through CPG MRTU Type III to FCC.
  PASS: If second digit on HOD is 1, 4, or 5, go to paragraph 15–132 .
  FAIL: Location of fault: ORT lefthand grip, wiring from ORT to CPG MRTU Type III, CPG MRTU Type
    III. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

■ **15–132 SIGNAL NAME:**   FLIR SEL TO TEU (ACY) FLIR SELECT CMD (ACZ)
       MEMORY LOCATION: 001245
       MEMORY DATA BIT(S):   17   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Indicates night sensor selected.
       REMARKS: From FCC through LH FAB MRTU Type I to TEU.
       PASS: Location of fault if first digit on HOD is 4, 5, 6, or 7: troubleshoot TADS night sensor
              (TM 1–1270–476–T).
       FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
              Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

 15–133 SIGNAL NAME: HDD SELECT
       MEMORY LOCATION: 000412
       MEMORY DATA BIT(S):   18   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Selects HDD.
       REMARKS: From ORT righthand grip through CPG MRTU Type III to FCC.
       PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 15–134.
       FAIL: Location of fault: ORT righthand grip, wiring from ORT to CPG MRTU Type III, CPG MRTU
              Type III. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

■ **15–134 SIGNAL NAME:**   ORT HDD SW TO TEU (ACY) HDD SW TST (ACZ)
       MEMORY LOCATION: 001252
       MEMORY DATA BIT(S):   12   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Indicates CPG has selected HDD.
       REMARKS: From FCC through LH FAB MRTU Type I to TEU.
       PASS: Location of fault if third digit on HOD is 2, 4, 6, or 7: troubleshoot ORT (TM 1–1270–476–T).
       FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU, FCC.
              Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

 15–135 SIGNAL NAME: IAT SWITCH
       MEMORY LOCATION: 000413
       MEMORY DATA BIT(S):   15   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Indicates CPG has selected IAT.
       REMARKS: From ORT through CPG MRTU Type III to FCC.
       PASS: If second digit on HOD is 1, 4, or 5, go to paragraph 15–136.
       FAIL: Location of fault: ORT LH grip, wiring from ORT to CPG MRTU Type III, CPG MRTU Type III.
              Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

 15–136 SIGNAL NAME: IAT OFFSET SWITCH
       MEMORY LOCATION: 000413
       MEMORY DATA BIT(S):   17   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Indicates CPG has selected IAT OFFSET.
       REMARKS: From ORT lefthand grip through CPG MRTU Type III to FCC.
       PASS: If first digit on HOD is 1, 2, or 3, go to paragraph 15–137.
       FAIL: Location of fault: ORT LH grip, ORT, wiring from ORT to CPG MRTU Type III, CPG MRTU Type
              III. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–137 SIGNAL NAME: IMPEND IAT BREAK LOCK
MEMORY LOCATION: 001135
MEMORY DATA BIT(S):   5   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates target is about to break lock–on.
REMARKS: From TEU through LH FAB MRTU Type I to FCC.
PASS: If fifth digit on HOD is 1, 2, or 3, go to paragraph 15–138.
FAIL: Location of fault: TEU, wiring from TEU to LH FAB MRTU Type I, LH FAB MRTU Type I.
   Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–138 SIGNAL NAME: IAT BREAK LOCK
MEMORY LOCATION: 001135
MEMORY DATA BIT(S):   4   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates target has broken lock–on.
REMARKS: From TEU through LH FAB MRTU Type I to FCC.
PASS: If sixth digit on HOD is 0, go to paragraph 15–139.
FAIL: Location of fault: TEU, wiring from TEU to LH FAB MRTU Type I, LH FAB MRTU Type I.
   Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–139 SIGNAL NAME: IAT OFFSET TO TEU (ACY) IAT OFFSET CMD (ACZ)
MEMORY LOCATION: 001244
MEMORY DATA BIT(S):   6   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates IAT OFFSET mode selected.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If fifth digit on HOD is 2, 3, 6, or 7, go to paragraph 15–140.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
   Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–140 SIGNAL NAME: IAT BLK/WHT AUTO SWITCH
MEMORY LOCATION: 000413
MEMORY DATA BIT(S):   18–19   (BINARY)
CONDITION: If first digit displayed on HOD is 1 or 5=BLACK
     If first digit displayed on HOD is 2 or 6=WHITE
     If first digit displayed on HOD is 3 or 7=AUTO
SIGNAL FUNCTION: Selects polarity.
REMARKS: From ORT righthand grip through CPG MRTU Type III to FCC.
PASS: If CONDITION corresponds to selected switch mode, go to paragraph 15–141.
FAIL: Location of fault: ORT RH grip, ORT, wiring from ORT to CPG MRTU Type III, CPG MRTU
   Type III. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–141 **SIGNAL NAME:** IAT CONTRAST SEL TO TEU
MEMORY LOCATION: 001244
MEMORY DATA BIT(S): 8–9 (BINARY)
CONDITION: If fourth digit displayed on HOD is 0 or 1=AUTO
If fourth digit displayed on HOD is 2 or 3=BLK
If fourth digit displayed on HOD is 6 or 7=WHT
SIGNAL FUNCTION: Indicates target color on IAT polarity.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If CONDITION corresponds to selected switch mode, go to paragraph 15–142.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–142 **SIGNAL NAME:** ORT FLIR PLRT SWITCH (ACY) ORT PLRT SW (ACZ)
MEMORY LOCATION: 000414
MEMORY DATA BIT(S): 6 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates CPG has selected FLIR polarity.
REMARKS: From ORT righthand grip through CPG MRTU Type III to FCC.
PASS: If fifth digit on HOD is 1, 4, or 5, go to paragraph 15–143.
FAIL: Location of fault: ORT RH grip, wiring from ORT to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–143 **SIGNAL NAME:** FLIR POLARITY CONTROL (ACY) FLIR PLRT CMD (ACZ)
MEMORY LOCATION: 000562
MEMORY DATA BIT(S): 9 (BINARY)
CONDITION: If fourth digit displayed on HOD is 0, 2, 4, or 6=BLK
If fourth digit displayed on HOD is 1, 3, 5, or 7=WHT
SIGNAL FUNCTION: Selects FLIR polarity; determines whether hot is displayed black or white.
REMARKS: From FCC through CPG MRTU Type III to TEU.
PASS: If CONDITION corresponds to selected switch mode, go to paragraph 15–144.
FAIL: Location of fault: CPG MRTU Type III, wiring from CPG MRTU Type III to TEU, TEU.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–144 **SIGNAL NAME:** IAT AUTO TRACK TO TEU (ACY) IAT AUTO TRACK CMD (ACZ)
MEMORY LOCATION: 001244
MEMORY DATA BIT(S): 7 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates IAT mode selected.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If fifth digit on HOD is a 1, 3, 5, or 7, go to paragraph 15–145.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–145 SIGNAL NAME: FLIR POLARITY SEL TO TEU (ACY) FLIR PLRT CMD (ACZ)   ■
  MEMORY LOCATION: 001245
  MEMORY DATA BIT(S): 19 (BINARY)
  CONDITION: If first digit displayed on HOD is 0, 2, 4, or 6=BLK
               If first digit displayed on HOD is 1, 3, 5, or 7=WHT
  SIGNAL FUNCTION: Indicates polarity selected.
  REMARKS: From FCC through LH FAB MRTU Type I to TEU.
  PASS: If CONDITION corresponds to selected switch mode, replace TEU (TM 1–1270–476–20).
  FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU, FCC.
        Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–146 SIGNAL NAME: ORT ACM SWITCH (ACY) CPG ACM SW (ACZ)   ■
  MEMORY LOCATION: 000414
  MEMORY DATA BIT(S): 5 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Enables ACM mode.
  REMARKS: From ORT righthand grip through CPG MRTU Type III to FCC.
  PASS: If fifth digit on HOD is 1, 2, or 3, go to paragraph 15–147.
  FAIL: Location of fault: ORT RH grip, ORT, wiring from ORT to CPG MRTU Type III, CPG MRTU
        Type III. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–147 SIGNAL NAME: FLIR ACM CONTROL (ACY) FLIR ACM CMD (ACZ)   ■
  MEMORY LOCATION: 000562
  MEMORY DATA BIT(S): 10 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates automatic control module (ACM) selected.
  REMARKS: From FCC through CPG MRTU Type III to TADS.
  PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 15–148.
  FAIL: Location of fault: CPG MRTU Type III, wiring from CPG MRTU Type III to TADS turret, wiring
        from TADS turret to NSA, NSA, ACM. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–148 SIGNAL NAME: ORT ACM ON TO TEU (ACY) CPG ACM SW TST (ACZ)   ■
  MEMORY LOCATION: 001252
  MEMORY DATA BIT(S): 5 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates CPG has selected ACM.
  REMARKS: From FCC through LH FAB MRTU Type I to TEU.
  PASS: If fifth digit on HOD is 4, 5, 6, or 7, troubleshoot ACM (TM 1–1270–476–T).
  FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH MRTU Type I to TEU, TEU.
        Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–149 SIGNAL NAME: DEK DATA VALID TO TEU (ACY) DEK DATA VALID CMD (ACZ)   ■
  MEMORY LOCATION: 001223
  MEMORY DATA BIT(S): 4 (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Indicates valid keyboard entry.
  REMARKS: From FCC through LH FAB MRTU Type I to TEU.
  PASS: If sixth digit on HOD is 1, go to paragraph 15–150.
  FAIL: Location of fault: go to Chapter 17, paragraph 17–3.

15–150 **SIGNAL NAME:**   DEK DATA TO TEU (ACY) DEK DATA (ACZ)
MEMORY LOCATION: 001223
MEMORY DATA BIT(S):   5–11   (ASCII)
CONDITION: Refer to Table 17–1 for ASCII code conversions.
SIGNAL FUNCTION: Transfers keyboard entry information.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If ASCII conversion results correspond to the key pressed on DEK, go to paragraph 15–151.
FAIL: Location of fault: go to Chapter 17, paragraph 17–4.

15–151 **SIGNAL NAME:**   HANDSHAKE TO TEU (ACY) TEU HANDSHAKE CMD (ACZ)
MEMORY LOCATION: 001223
MEMORY DATA BIT(S):   12–19   (HEX)
CONDITION: Normally B2
SIGNAL FUNCTION: Reads MRTU and performs pattern check.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If hexadecimal conversion for bits 12 through 19 corresponds to normal bit patterns, go to
        paragraph 15–152.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
        Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–152 **SIGNAL NAME:**   LASER RANGE VALID (ACY) LRFD RANGE VALID (ACZ)
MEMORY LOCATION: 001125
MEMORY DATA BIT(S):   6   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates range obtained from LEU is valid.
REMARKS: From TEU through LH FAB MRTU Type I to FCC.
PASS: If fifth digit on HOD is 2, 3, 6, or 7, go to paragraph 15–153.
FAIL: Location of fault: LEU, wiring from LEU to TEU, TEU, wiring from TEU to LH FAB MRTU Type I,
        LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–153 **SIGNAL NAME:**   LASER RANGE OVERFLOW (ACY) LRFD NO RETURN (ACZ)
MEMORY LOCATION: 001125
MEMORY DATA BIT(S):   4   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates laser has used range that is greater than maximum.
REMARKS: From TEU through LH FAB MRTU Type I to FCC.
PASS: If sixth digit on HOD is 0, go to paragraph 15–154.
FAIL: Location of fault: laser tracker (LT), wiring from LT to TEU, TEU, wiring from TEU to LH FAB
        MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–154 **SIGNAL NAME:**   LASER MULTI–TARGET IND (ACY) LRFD MULTI RETURN (ACZ)
MEMORY LOCATION: 001125
MEMORY DATA BIT(S):   5   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates rangefinder has picked up targets at different distances.
REMARKS: From TEU through LH FAB MRTU Type I to FCC.
PASS: If fifth digit on HOD is 1, 2, or 3, go to paragraph 15–155.
FAIL: Location of fault: TEU, wiring from TEU to LH FAB MRTU Type I, LH FAB MRTU Type I.
        Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–155 SIGNAL NAME: LASER CCM SW TO TEU (ACY) LRFD CCM CMD (ACZ) ■
MEMORY LOCATION: 001215
MEMORY DATA BIT(S):   4   (BINARY)
CONDITION: 0=A target
                   1=B target
SIGNAL FUNCTION: Commands range computation of target.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If sixth digit on HOD is 0, go to paragraph 15–156.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
      Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–156 SIGNAL NAME: LASER RANGE (ACY) LRFD RANGE (ACZ) ■
MEMORY LOCATION: 001125
MEMORY DATA BIT(S):   7–19   (SCALAR)
CONDITION: Monitor HOD while range increases; memory location response should increase when
          range increases and decrease when range decreases.
SIGNAL FUNCTION: Indicates range in meters to target being lased.
REMARKS: From TEU through LH FAB MRTU Type I to FCC.
PASS: If CONDITION corresponds to correct range data, go to paragraph 15–157.
FAIL: Location of fault: TEU, wiring from TEU to LH FAB MRTU Type I, LH FAB MRTU Type I.
      Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–157 SIGNAL NAME: RANGE TEU (ACY) RANGE AID (ACZ) ■
MEMORY LOCATION: 001227
MEMORY DATA BIT(S):   4–15   (SCALAR)
CONDITION: Monitor HOD while range increases; memory location response should increase when
          range increases and decrease when range decreases.
SIGNAL FUNCTION: Indicates range in meters to target being lased.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: Location of fault if CONDITION is met: replace TEU (TM 1–1270–476–20).
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
      Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–158 SIGNAL NAME: LASER ON TO TEU (ACY) LRFD ON CMD (ACZ) ■
MEMORY LOCATION: 001244
MEMORY DATA BIT(S):   13   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates CPG has turned laser on.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 15–159.
FAIL: Location of fault: go to Chapter 16, paragraph 16–35.

15–159 SIGNAL NAME: LASER TRIG 1ST DETENT (ACY) LRFD TRIG 1ST DTT (ACZ) ■
MEMORY LOCATION: 000414
MEMORY DATA BIT(S):   17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates CPG has pulled laser trigger to first or second detent.
REMARKS: From ORT lefthand grip through CPG MRTU Type III to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to paragraph 15–160.
FAIL: Location of fault: ORT lefthand grip, wiring from ORT to CPG MRTU Type III, CPG MRTU Type
      III. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–160 SIGNAL NAME: LASER TRIG 1ST DETENT TO TEU (ACY) LRFD TRIG 1ST CMD (ACZ)
MEMORY LOCATION: 001244
MEMORY DATA BIT(S):   14   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates firing of laser in 3–pulse burst mode.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 15–161.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–161 SIGNAL NAME: LASER TRIG 2ND DETENTT (ACY) LRFD TRIG 2ND DTT (ACZ)
MEMORY LOCATION: 000414
MEMORY DATA BIT(S):   18   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates CPG has pulled laser trigger to second detent.
REMARKS: From ORT through CPG MRTU Type III to FCC.
PASS: If first digit on HOD is 2, 3, 6, or 7, go to paragraph 15–162.
FAIL: Location of fault: ORT, wiring from ORT to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–162 SIGNAL NAME: LASER TRIG 2ND DETENT TO TEU (ACY) LRFD TRIG 2ND CMD (ACZ)
MEMORY LOCATION: 001244
MEMORY DATA BIT(S):   15   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates firing of laser in designated mode.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If second digit on HOD is 2, 3, 6, or 7, go to paragraph 15–163.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–163 SIGNAL NAME: IMPEND LASER INHIBIT (ACY) IMPEND LRFD INHB (ACZ)
MEMORY LOCATION: 001135
MEMORY DATA BIT(S):   8   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates TADS is approaching line of sight (LOS) inhibits.
REMARKS: From TEU through LH FAB MRTU Type I to FCC.
PASS: If fourth digit on HOD is 1, 2, or 3, go to paragraph 15–165.
FAIL: Location of fault: go to paragraph 15–164.

15–164 SIGNAL NAME: LASER INHIBIT (ACY) LRFD INHIBIT (ACZ)
MEMORY LOCATION: 001135
MEMORY DATA BIT(S):   7   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates LOS constraints are inhibiting TADS from firing.
REMARKS: From TEU through LH FAB MRTU Type I to FCC.
PASS: If fifth digit on HOD is 2, 4, or 6, go to paragraph 15–165.
FAIL: Location of fault: troubleshoot laser transceiver (TM 1–1270–476–T).

15–165 SIGNAL NAME: ORT ROCKET TRIGGER (ACY) CPG RKT TRIG (ACZ)
MEMORY LOCATION: 000414
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates CPG has actioned ORT rocket trigger.
REMARKS: From ORT lefthand grip through CPG MRTU Type III to FCC.
PASS: If second digit on HOD is 1, 2, or 3, go to paragraph 15–166.
FAIL: Location of fault: ORT lefthand grip, wiring from ORT to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–166 SIGNAL NAME: ORT RKT TRIG TO TEU (ACY) ORT RKT TRIG TST (ACZ)
MEMORY LOCATION: 001252
MEMORY DATA BIT(S): 8 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates rocket inhibit.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If fourth digit on HOD is 0, 1, 2, or 3, go to paragraph 15–167.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–167 SIGNAL NAME: ORT RKT WAS TO TEU (ACY) ORT WAS TST (ACZ)
MEMORY LOCATION: 001252
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates weapons inhibit.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If first digit on HOD is 0, 1, 2, or 3, go to paragraph 15–168.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–168 SIGNAL NAME: ORT WPN TRIG 1ST DETENT (ACY) ORT TRIG 1ST DTT (ACZ)
MEMORY LOCATION: 000414
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates CPG has pulled trigger to first or second detent.
REMARKS: From ORT lefthand grip through CPG MRTU Type III to FCC.
PASS: If second digit on HOD is 0, 1, 4, or 5, go to paragraph 15–169.
FAIL: Location of fault: ORT lefthand grip, wiring from ORT to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–169 SIGNAL NAME: ORT WPN TRIG 2ND DETENT (ACY) ORT TRIG 2ND DTT (ACZ)
MEMORY LOCATION: 000414
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates CPG has pulled trigger to second detent.
REMARKS: From ORT lefthand grip through CPG MRTU Type III to FCC.
PASS: If second digit on HOD is 0, 2, 4, or 6, go to paragraph 15–170.
FAIL: Location of fault: ORT lefthand grip, wiring from ORT to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–170 **SIGNAL NAME:**   ORT WEAPON TRIGGER DETENT 1 TO TEU (ACY)
ORT TRIG 1ST TST (ACZ)
MEMORY LOCATION: 001252
MEMORY DATA BIT(S):   15   (BINARY)
CONDITION: (None)=ACTIVE
SIGNAL FUNCTION: Indicates inhibit.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If second digit on HOD is 0, 1, 4, or 5, go to paragraph 15–171.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–171 **SIGNAL NAME:**   ORT WEAPON TRIGGER DETENT 2 TO TEU (ACY)
ORT TRIG 2ND TST (ACZ)
MEMORY LOCATION: 001252
MEMORY DATA BIT(S):   14   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates inhibit.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If second digit on HOD is 0, 1, 2, or 3, go to paragraph 15–172.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–172 **SIGNAL NAME:**   ORT MSL WAS TO TEU (ACY) ORT MSL WAS TST (ACZ)
MEMORY LOCATION: 001252
MEMORY DATA BIT(S):   16   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates weapons inhibit.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to paragraph 15–173.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–173 **SIGNAL NAME:**   MSL LAUNCH TO TEU (ACY) MSL LAUNCH IND (ACZ)
MEMORY LOCATION: 001244
MEMORY DATA BIT(S):   16   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Initiates launch command to remote HELLFIRE electronics (RHE) (inhibit).
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If second digit on HOD is 0, 2, 4, or 6, go to paragraph 15–174.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–174 **SIGNAL NAME:**   MSL AWAY TO TEU (ACY) MSL AWAY IND (ACZ)
MEMORY LOCATION: 001244
MEMORY DATA BIT(S):   17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates missile has left rail.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If first digit on HOD is 0, 1, 2, or 3, go to paragraph 15–175.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–175 SIGNAL NAME: ORT GUN WAS TO TEU (ACY) ORT GUN WAS TST (ACZ)   ■
   MEMORY LOCATION: 001252
   MEMORY DATA BIT(S):   18   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Indicates weapons inhibit.
   REMARKS: From FCC through LH FAB MRTU Type I to TEU.
   PASS: If first digit on HOD is 0, 1, 4, or 5, go to paragraph 15–176.
   FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
      Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–176 SIGNAL NAME: ORT GUN TRIG TO TEU (ACY) ORT GUN TRIG TST (ACZ)   ■
   MEMORY LOCATION: 001252
   MEMORY DATA BIT(S):   9   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Indicates gun inhibit.
   REMARKS: From FCC through LH FAB MRTU Type I to TEU.
   PASS: If fourth digit on HOD is 0, 1, 4, or 5, troubleshoot laser transceiver (TM 1–1270–476–T).
   FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
      Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–177 SIGNAL NAME: ORT BRSIT ENABLE
   MEMORY LOCATION: 000441
   MEMORY DATA BIT(S):   5   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Indicates CPG has selected elevation and azimuth adjustments.
   REMARKS: From ORT through CPG MRTU Type III to FCC.
   PASS: If fifth digit on HOD is 1, 2, or 3, go to paragraph 15–178.
   FAIL: Location of fault: ORT, wiring from ORT to CPG MRTU Type III, CPG MRTU Type III.
      Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–178 SIGNAL NAME: BRSIT SW ERROR
   MEMORY LOCATION: 001135
   MEMORY DATA BIT(S):   9   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Indicates input switch positions are generating inhibit.
   REMARKS: From TEU through LH FAB MRTU Type I to FCC.
   PASS: If fourth digit on HOD is 1, 4, or 5, go to paragraph 15–179.
   FAIL: Location of fault: TEU, wiring from TEU to LH FAB MRTU Type I, LH FAB MRTU Type I.
      Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–179 SIGNAL NAME: ORT THUMB ELEVATION RATE (ACY) ORT MAN EL RATE (ACZ)   ■
   MEMORY LOCATION: 000424
   MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)   ■
   CONDITION: Monitor HOD while increasing elevation; memory location response should increase
      when elevation increases and decrease when elevation decreases.
   SIGNAL FUNCTION: Determines elevation slew rate.
   REMARKS: From ORT through CPG MRTU Type III to FCC.
   PASS: If CONDITION corresponds to selected elevation, go to paragraph 15–180.
   FAIL: Location of fault: ORT, wiring from ORT to CPG MRTU Type III, CPG MRTU Type III.
      Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–180   SIGNAL NAME: THUMB ELEVATION RATE TO TEU (ACY) ORT MAN EL CMD (ACZ)
          MEMORY LOCATION: 001240
          MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
          CONDITION: Monitor HOD while increasing azimuth; memory location response should increase
                    when azimuth increases and decrease when azimuth decreases.
          SIGNAL FUNCTION: Contains elevation slew rate information.
          REMARKS: From FCC through LH FAB MRTU Type I to TEU.
          PASS: If CONDITION corresponds to selected elevation, go to paragraph 15–181.
          FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
                    Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–181   SIGNAL NAME: ORT ADJ A
          MEMORY LOCATION: 000427
          MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
          CONDITION: Monitor HOD while increasing elevation; memory location response should increase
                    when elevation increases and decrease when elevation decreases.
          SIGNAL FUNCTION: Indicates elevation (EL) setting for out–front boresighting.
          REMARKS: From ORT through CPG MRTU Type III to FCC.
          PASS: If CONDITION corresponds to selected elevation, go to paragraph 15–182.
          FAIL: Location of fault: ORT, wiring from ORT to CPG MRTU Type III, CPG MRTU Type III.
                    Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–182   SIGNAL NAME: ADJ A TO TEU (ACY) A ADJ CMD (ACZ)
          MEMORY LOCATION: 001243
          MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
          CONDITION: Monitor HOD while increasing elevation; memory location response should increase
                    when elevation increases and decrease when elevation decreases.
          SIGNAL FUNCTION: Indicates elevation setting for out–front boresighting.
          REMARKS: From FCC through LH FAB MRTU Type I to TEU.
          PASS: If the CONDITION corresponds to selected elevation, go to paragraph 15–183.
          FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
                    Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–183   SIGNAL NAME: ORT THUMB AZIMUTH RATE (ACY) ORT MAN AZ RATE (ACZ)
          MEMORY LOCATION: 000423
          MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
          CONDITION: Monitor HOD while increasing azimuth; memory location response should increase
                    when azimuth increases and decrease when azimuth decreases.
          SIGNAL FUNCTION: Contains azimuth slew rate information.
          REMARKS: From ORT through CPG MRTU Type III to FCC.
          PASS: If CONDITION corresponds to correct azimuth data, go to paragraph 15–184.
          FAIL: Location of fault: ORT, wiring from ORT to CPG MRTU Type III, CPG MRTU Type III.
                    Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–184 SIGNAL NAME: THUMB AZIMUTH RATE TO TEU (ACY) ORT MAN AZ CMD (ACZ)
 MEMORY LOCATION: 001241
 MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
 CONDITION: Monitor HOD while increasing azimuth; memory location response should increase when azimuth increases and decrease when azimuth decreases.
 SIGNAL FUNCTION: Contains azimuth slew rate information.
 REMARKS: From FCC through LH FAB MRTU Type I to TEU.
 PASS: If CONDITION corresponds to correct azimuth data, go to paragraph 15–185.
 FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–185 SIGNAL NAME: ORT ADJ B
 MEMORY LOCATION: 000430
 MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
 CONDITION: Monitor HOD while increasing azimuth; memory location response should increase when azimuth increases and decrease when azimuth decreases.
 SIGNAL FUNCTION: Indicates azimuth (AZ) setting for out–front boresighting.
 REMARKS: From ORT through CPG MRTU Type III to FCC.
 PASS: If CONDITION corresponds to correct azimuth data, go to paragraph 15–186.
 FAIL: Location of fault: ORT, wiring from ORT to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–186 SIGNAL NAME: ADJ B TO TEU (ACY) B ADJ CMD (ACZ)
 MEMORY LOCATION: 001242
 MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
 CONDITION: Monitor HOD while increasing azimuth; memory location response should increase when azimuth increases and decrease when azimuth decreases.
 SIGNAL FUNCTION: Indicates azimuth setting for out–front boresighting.
 REMARKS: From FCC through LH FAB MRTU Type I to TEU.
 PASS: If CONDITION corresponds to correct azimuth data, go to paragraph 15–187.
 FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–187 SIGNAL NAME: BRSIT ENABLE TO TEU (ACY) BST ENABLE CMD (ACZ)
 MEMORY LOCATION: 001244
 MEMORY DATA BIT(S): 11   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Indicates CPG has selected boresight mode.
 REMARKS: From FCC through LH FAB MRTU Type I to TEU.
 PASS: If third digit on HOD is 4, 5, 6, or 7, go to paragraph 15–188.
 FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–188 SIGNAL NAME: TADS BRSIT TO TEU (ACY) TADS BST CMD (ACZ)
 MEMORY LOCATION: 001245
 MEMORY DATA BIT(S): 10   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Indicates CPG has selected boresight mode.
 REMARKS: From FCC through LH FAB MRTU Type I to TEU.
 PASS: If fourth digit on HOD is 1, 3, 5, or 7, go to paragraph 15–189.
 FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–189 **SIGNAL NAME:** DTV BRSIT COMPL (ACY) TV BST COMPLETE (ACZ)
MEMORY LOCATION: 001135
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates day television (DTV) auto boresight is complete.
REMARKS: From TEU through LH FAB MRTU Type I to FCC.
PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 15–190.
FAIL: Location of fault: TEU, wiring from TEU to LH FAB MRTU Type I, LH FAB MRTU Type I.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–190 **SIGNAL NAME:** FLIR BRSIT COMPL
MEMORY LOCATION: 001135
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates FLIR (night sensor) boresight is complete.
REMARKS: From TEU through LH FAB MRTU Type I to FCC.
PASS: Location of fault if third digit on HOD is 1, 3, 5, or 7: replace boresight module
(TM 1–1270–476–20).
FAIL: Location of fault: TEU, wiring from TEU to LH FAB MRTU Type I, LH FAB MRTU Type I.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–191 **SIGNAL NAME:** LASER NOT CODED (ACY) LRFD NOT CODED (ACZ)
MEMORY LOCATION: 001135
MEMORY DATA BIT(S): 11 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates laser trigger has been pulled but no laser code conversions have
been entered.
REMARKS: From TEU through LH FAB MRTU Type I to FCC.
PASS: If third digit is 4, 5, 6, or 7, go to paragraph 15–192.
FAIL: Location of fault: TEU, wiring from TEU to LH FAB MRTU Type I, LH FAB MRTU Type I.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–192 **SIGNAL NAME:** LT NOT CODED (ACY) LST NOT CODED (ACZ)
MEMORY LOCATION: 001135
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates laser tracker code conversions have not been entered.
REMARKS: From TEU through LH FAB MRTU Type I to FCC.
PASS: If second digit on HOD is 1, 2, or 3, go to paragraph 15–193.
FAIL: Location of fault: TEU, wiring from TEU to LH FAB MRTU Type I, LH FAB MRTU Type I.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–193 **SIGNAL NAME:** LT CODE TO TEU (ACY) LST CODE CMD (ACZ)
MEMORY LOCATION: 001236
MEMORY DATA BIT(S): 4–19 (HEX)
CONDITION: Refer to TRI–SERVICE encoding manual
SIGNAL FUNCTION: Contains laser tracker information.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If hexadecimal corresponds to laser code conversions selected, go to paragraph 15–194.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–194 SIGNAL NAME: LASER CODE TO TEU (ACY) LRFD CODE CMD (ACZ)
       MEMORY LOCATION: 001237
       MEMORY DATA BIT(S): 4–19 (HEX)
       CONDITION: Refer to TRI–SERVICE encoding manual
       SIGNAL FUNCTION: Contains laser code conversions information.
       REMARKS: From FCC through LH FAB MRTU Type I to TEU.
       PASS: If hexadecimal corresponds to laser code conversions selected, go to paragraph 15–195.
       FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
          Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–195 SIGNAL NAME: LT AUTO MAN OFF SWITCH (ACY) LST SW (ACZ)
       MEMORY LOCATION: 000436
       MEMORY DATA BIT(S): 4–5 (BINARY)
       CONDITION: If fifth digit displayed on HOD is 4, 5, 6, or 7= AUTO
                     If sixth digit displayed on HOD is 1= MANUAL
                     If sixth digit displayed on HOD is 1 and fifth digit displayed is 4, 5, 6, or 3= OFF
       SIGNAL FUNCTION: Indicates laser tracker auto search mode.
       REMARKS: From ORT through CPG MRTU Type III to FCC.
       PASS: If CONDITION corresponds to selected switch mode, go to paragraph 15–196.
       FAIL: Location of fault: ORT RH grip, ORT, wiring from ORT to CPG MRTU Type III, CPG MRTU
          Type III. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–196 SIGNAL NAME: LT MAN SEARCH TO TEU (ACY) LST MAN CMD (ACZ)
       MEMORY LOCATION: 001244
       MEMORY DATA BIT(S): 4 (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Indicates manual search selected.
       REMARKS: From FCC through LH FAB MRTU Type I to TEU.
       PASS: If sixth digit on HOD is 1, go to paragraph 15–197.
       FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
          Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–197 SIGNAL NAME: LT TRACK (ACY) LST TRACK (ACZ)
       MEMORY LOCATION: 001135
       MEMORY DATA BIT(S): 6 (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Indicates laser tracker has locked on to target and now drives turret.
       REMARKS: From TEU through LH FAB MRTU Type I to FCC.
       PASS: If fifth digit on HOD is 2, 3, 6, or 7, go to paragraph 15–198.
       FAIL: Location of fault: TEU, wiring from TEU to LH FAB MRTU Type I, LH FAB MRTU Type I.
          Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–198 SIGNAL NAME: LONG VEL TO TEU (ACY) LONG VEL AID (ACZ)
MEMORY LOCATION: 001224
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD; memory location response should increase with an increase of velocity and decrease with a decrease in velocity.
SIGNAL FUNCTION: Contains tracking computations information.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If CONDITION corresponds to correct indication, go to paragraph 15–199.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–199 SIGNAL NAME: LAT VEL TO TEU (ACY) LAT VEL AID (ACZ)
MEMORY LOCATION: 001225
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD; memory location response should increase with an increase of velocity and decrease with a decrease in velocity.
SIGNAL FUNCTION: Contains tracking computations information.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If CONDITION corresponds to correct indication, go to paragraph 15–200.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–200 SIGNAL NAME: NORM VEL TO TEU (ACY) NORM VEL AID (ACZ)
MEMORY LOCATION: 001226
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD; memory location response should increase with an increase of velocity and decrease with a decrease in velocity.
SIGNAL FUNCTION: Contains tracking computations information.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If CONDITION corresponds to correct indication, go to paragraph 15–201.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–201 SIGNAL NAME: LT AUTO SEARCH TO TEU (ACY) LST AUTO CMD (ACZ)
MEMORY LOCATION: 001244
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates auto search selected.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: Location of fault if fifth digit on HOD is 4, 5, 6, or 7: replace TEU (TM 1–1270–476–20).
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–202 SIGNAL NAME: LMC SWITCH
MEMORY LOCATION: 000441
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates linear motion compensation selected.
REMARKS: From ORT lefthand grip through CPG MRTU Type III to FCC.
PASS: If sixth digit on HOD is 0, go to paragraph 15–203.
FAIL: Location of fault: ORT LH grip, ORT, wiring from ORT to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–203 SIGNAL NAME: LMC ON TO TEU (ACY) LMC ON CMD (ACZ)
MEMORY LOCATION: 001244
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates linear motion compensation selected.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: Location of fault if fourth digit on HOD is 1, 3, 5, or 7: troubleshoot TADS boresight assembly (TM 1–1270–476–T).
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–204 SIGNAL NAME: WFOV SWITCH
MEMORY LOCATION: 000436
MEMORY DATA BIT(S): 6 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Selects wide field of view (WFOV).
REMARKS: From ORT lefthand grip through CPG MRTU Type III to FCC.
PASS: If fifth digit on HOD is 1, 4, or 5, go to paragraph 15–205.
FAIL: Location of fault: ORT lefthand grip, wiring from ORT to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–205 SIGNAL NAME: WFOV TO TEU (ACY) WFOV CMD (ACZ)
MEMORY LOCATION: 001245
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates WFOV selected.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: Location of fault if third digit on HOD is 2, 3, 6, or 7: troubleshoot TADS NSA (TM 1–1270–476–T).
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–206 SIGNAL NAME: MFOV SWITCH
MEMORY LOCATION: 000436
MEMORY DATA BIT(S): 7 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Selects medium field of view (MFOV).
REMARKS: From ORT lefthand grip through CPG MRTU Type III to FCC.
PASS: If fifth digit on HOD is 2, 4, or 6, go to paragraph 15–207.
FAIL: Location of fault: ORT lefthand grip, wiring from ORT to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–207 **SIGNAL NAME:** MFOV TO TEU (ACY) MFOV CMD (ACZ)
MEMORY LOCATION: 001245
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates MFOV selected.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: Location of fault if third digit on HOD is 1, 3, 5, or 7: troubleshoot TADS NSA
      (TM 1–1270–476–T).
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
      Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–208 **SIGNAL NAME:** NFOV SWITCH
MEMORY LOCATION: 000436
MEMORY DATA BIT(S): 8 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Selects narrow field of view (NFOV).
REMARKS: From ORT lefthand grip through CPG MRTU Type III to FCC.
PASS: If fourth digit on HOD is 1, 2, or 3, go to paragraph 15–209.
FAIL: Location of fault: ORT lefthand grip, wiring from ORT to CPG MRTU Type III, CPG MRTU Type
      III. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–209 **SIGNAL NAME:** NFOV TO TEU (ACY) NFOV CMD (ACZ)
MEMORY LOCATION: 001245
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates NFOV selected.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: Location of fault if second digit on HOD is 4, 5, 6, or 7: troubleshoot TADS NSA
      (TM 1–1270–476–T).
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
      Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–210 **SIGNAL NAME:** ZFOV SWITCH
MEMORY LOCATION: 000436
MEMORY DATA BIT(S): 11 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates zoom field of view (ZFOV) selected.
REMARKS: From ORT lefthand grip through CPG MRTU Type III to FCC.
PASS: If third digit on HOD is 1, 2, or 3, go to 15–211.
FAIL: Location of fault: ORT lefthand grip, wiring from ORT to CPG MRTU Type III, CPG MRTU Type
      III. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–211 **SIGNAL NAME:** DTV ZOOM CONTROL (ACY) TV ZOOM CMD (ACZ)
MEMORY LOCATION: 000562
MEMORY DATA BIT(S): 11 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates DTV ZFOV switch setting.
REMARKS: From FCC through CPG MRTU Type III to TADS turret.
PASS: If third digit on HOD is 1, 2, or 3, go to paragraph 15–212.
FAIL: Location of fault: CPG MRTU Type III, wiring from CPG MRTU Type III to TADS turret, wiring
      from TADS turret to DTV. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–212 SIGNAL NAME: FLIR ZOOM (ACY) FLIR ZOOM CMD (ACZ)   ■
 MEMORY LOCATION: 000562
 MEMORY DATA BIT(S):   12   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Indicates selection of FLIR zoom.
 REMARKS: From FCC through CPG MRTU Type III to TADS turret.
 PASS: If third digit on HOD is 0, 1, 4, or 5, go to paragraph 15–213.
 FAIL: Location of fault: CPG MRTU Type III, wiring from CPG MRTU to TADS turret, wiring from
   TADS turret to night sensor. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–213 SIGNAL NAME: ZFOV TO TEU (ACY) NFOV CMD (ACZ)   ■
 MEMORY LOCATION: 001245
 MEMORY DATA BIT(S):   15   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Indicates ZFOV is selected.
 REMARKS: From FCC through LH FAB MRTU Type I to TEU.
 PASS: Location of fault if second digit on HOD is 2, 3, 6, or 7: troubleshoot DSA
   (TM 1–1270–476–T).
 FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
   Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–214 SIGNAL NAME: ST SWITCH (ACY) STORE SW (ACZ)   ■
 MEMORY LOCATION: 000436
 MEMORY DATA BIT(S):   9   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Indicates CPG has pressed store target (ST) switch.
 REMARKS: From ORT through CPG MRTU Type III to FCC.
 PASS: If fourth digit on HOD is 1, 4, or 5, go to paragraph 15–215.
 FAIL: Location of fault: ORT, wiring from ORT to CPG MRTU Type III, CPG MRTU Type III.
   Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–215 SIGNAL NAME: ORT ST SW TO TEU (ACY) STORE SW TST (ACZ)   ■
 MEMORY LOCATION: 001252
 MEMORY DATA BIT(S):   11   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Indicates ST switch has been pressed.
 REMARKS: From FCC through LH FAB MRTU Type I to TEU.
 PASS: Location of fault if third digit on HOD is 4, 5, 6, or 7: troubleshoot TEU (TM 1–1270–476–T).
 FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
   Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–216 SIGNAL NAME: UPDT SWITCH (ACY) UPDATE SW (ACZ)   ■
 MEMORY LOCATION: 000436
 MEMORY DATA BIT(S):   10   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Indicates CPG has pressed target **UPDT** switch.
 REMARKS: From ORT through CPG MRTU Type III to FCC.
 PASS: If fourth digit on HOD is 2, 4, or 6, go to paragraph 15–217.
 FAIL: Location of fault: ORT, wiring from ORT to CPG MRTU Type III, CPG MRTU Type III.
   Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–217   SIGNAL NAME: ORT UPDATE TO TEU (ACY) UPDATE SW TST (ACZ)
        MEMORY LOCATION: 001252
        MEMORY DATA BIT(S):   10   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Indicates navigation **UPDT** switch is pressed.
        REMARKS: From FCC through LH FAB MRTU Type I to TEU.
        PASS: Location of fault if fourth digit on HOD is 1, 3, 5, or 7: troubleshoot TEU (TM 1–1270–476–T).
        FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
               Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–218   SIGNAL NAME: ORT VIDEO REC SWITCH (ACY) RECORD SW (ACZ)
        MEMORY LOCATION: 000441
        MEMORY DATA BIT(S):   6   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Allows CPG to turn video recorder on and off.
        REMARKS: From ORT righthand grip through CPG MRTU Type III to FCC.
        PASS: If fifth digit on HOD is 1, 4, or 5, go to paragraph 15–219.
        FAIL: Location of fault: ORT righthand grip, wiring from ORT to CPG MRTU Type III, CPG MRTU
               Type III. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–219   SIGNAL NAME: ORT VIDEO REC SW TO TEU (ACY) RCD SW TST (ACZ)
        MEMORY LOCATION: 001252
        MEMORY DATA BIT(S):   13   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Turns video recorder on and OFF.
        REMARKS: From FCC through LH FAB MRTU Type I to TEU.
        PASS: If third digit on HOD is 1, 3, 5, or 7, go to Chapter 21, paragraph 21–1.
        FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
               Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–220   SIGNAL NAME: TADS I DIR COS
        MEMORY LOCATION: 001127
        MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
        CONDITION: Monitor HOD while in LOS operation; memory location response should increase and
                     decrease with LOS roll movement.
        SIGNAL FUNCTION: Contains roll LOS information.
        REMARKS: From TEU through LH FAB MRTU Type I to FCC.
        PASS: If the CONDITION corresponds to correct roll component of LOS data, go to
                paragraph 15–221.
        FAIL: Location of fault: TEU, wiring from TEU to LH FAB MRTU Type I, LH FAB MRTU Type I.
                Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–221 **SIGNAL NAME:** TADS J DIR COS
MEMORY LOCATION: 001130
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD while in LOS operation; memory location response should increase and decrease with LOS pitch movement.
SIGNAL FUNCTION: Contains pitch LOS information.
REMARKS: From TEU through LH FAB MRTU Type I to FCC.
PASS: If CONDITION corresponds to correct pitch component of LOS data, go to paragraph 15–222.
FAIL: Location of fault: TEU, wiring from TEU to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–222 **SIGNAL NAME:** TADS K DIR COS
MEMORY LOCATION: 001131
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD while in LOS operation; memory location response should increase and decrease with LOS azimuth movement.
SIGNAL FUNCTION: Contains azimuth LOS information.
REMARKS: From TEU through LH FAB MRTU Type I to FCC.
PASS: If CONDITION corresponds to correct azimuth component of LOS data, go to paragraph 15–223.
FAIL: Location of fault: TEU, wiring from TEU to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–223 **SIGNAL NAME:** TADS ELEVATION LIMIT
MEMORY LOCATION: 001135
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates TADS has been driven to upper or lower gimbal limit.
REMARKS: From TEU through LH FAB MRTU Type I to FCC.
PASS: If second digit on HOD is 2, 4, or 6, go to paragraph 15–224.
FAIL: Location of fault: azimuth gimbal assembly, wiring from azimuth gimbal assembly to TEU, TEU, wiring from TEU to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–224 **SIGNAL NAME:** TADS AZIMUTH LIMIT
MEMORY LOCATION: 001135
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates TADS has been driven to left or right gimbal limit.
REMARKS: From TEU through LH FAB MRTU Type I to FCC.
PASS: If first digit on HOD is 1, 2, or 3, go to paragraph 15–225.
FAIL: Location of fault: azimuth gimbal assembly, wiring from azimuth gimbal assembly to TEU, TEU, wiring from TEU to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–225 SIGNAL NAME: TADS I DIR COS TO TEU (ACY) TADS I DIRCOS CMD (ACZ)
MEMORY LOCATION: 001230
MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD while in LOS operation; memory location response should increase and decrease with LOS roll movement.
SIGNAL FUNCTION: Contains roll LOS information.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If CONDITION corresponds to correct roll angle, go to paragraph 15–226.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–226 SIGNAL NAME: TADS J DIR COS TO TEU (ACY) TADS J DIRCOS CMD (ACZ)
MEMORY LOCATION: 001231
MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: Monitor HOD while in LOS operation; memory location response should increase and decrease with LOS pitch movement.
SIGNAL FUNCTION: Contains pitch LOS information.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If CONDITION corresponds to correct pitch angle, go to paragraph 15–227.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–227 SIGNAL NAME: TADS K DIR COS TO TEU (ACY) TADS K DIRCOS CMD (ACZ)
MEMORY LOCATION: 001232
MEMORY DATA BIT(S):   4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: Monitor HOD while in LOS operation; memory location response should increase and decrease with LOS azimuth movement.
SIGNAL FUNCTION: Contains azimuth LOS information.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If CONDITION corresponds to correct azimuth angle, go to Chapter 7, paragraph 7–57.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–228 SIGNAL NAME: AUTO GYRO ALIGN TO TEU (ACY) AG ALIGN CMD (ACZ)
MEMORY LOCATION: 001246
MEMORY DATA BIT(S): 7   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates auto gyro align mode from DEK entry.
REMARKS: From FCC through LH FAB MRTU Type I to TEU.
PASS: If fifth digit on HOD is 1, 3, 5, or 7, go to paragraph 15–229.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU, CPG MRTU, wiring from CPG MRTU to ORT. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–229 SIGNAL NAME: AUTO GYRO ALIGN COMPLETE
        MEMORY LOCATION: 001135
        MEMORY DATA BIT(S):   15   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Indicates TADS auto gyro alignment is complete.
        REMARKS: From TEU through LH FAB MRTU Type I to FCC.
        PASS: Location of fault if second digit on HOD is 2, 3, 6, or 7; troubleshoot TEU
                (TM 1–1270–476–T).
        FAIL: Location of fault: TEU, wiring from TEU to LH FAB MRTU Type I, LH FAB MRTU Type I.
                Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–230 SIGNAL NAME: ORT TV TO TEU (ACY) TV SELECT SW TST (ACZ)
        MEMORY LOCATION: 001252
        MEMORY DATA BIT(S):   19   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Indicates CPG has selected day TV (DTV).
        REMARKS: From FCC through LH FAB MRTU Type I to TEU.
        PASS: If first digit on HOD is 1, 3, 5, or 7, go to paragraph 15–231.
        FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
                Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–231 SIGNAL NAME: TV SENSOR SELECT (ACY) TV SELECT SW (ACZ)
        MEMORY LOCATION: 000412
        MEMORY DATA BIT(S):   16   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Selects DTV.
        REMARKS: From ORT lefthand grip through CPG MRTU Type III to FCC.
        PASS: Location of fault second digit on HOD is 1, 3, 5, or 7: replace DSA (TM 1–1270–476–20).
        FAIL: Location of fault: ORT LH grip, ORT, wiring from ORT to CPG MRTU Type III, CPG MRTU Type
                III. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–232 SIGNAL NAME: CPG ANTI–ICE SW
        MEMORY LOCATION: 000437
        MEMORY DATA BIT(S):   19   (BINARY)
        CONDITION: CPG ANTI–ICE SW to GND
        SIGNAL FUNCTION: Monitors position of CPG **AUX/ANTI ICE** panel **TADS/PNVS** switch.
        REMARKS: From CPG **AUX/ANTI ICE** panel through CPG MRTU Type III to FCC. Enables or
                disables anti–ice functions for TADS/ PNVS.
        PASS: If first digit on heads out display (HOD) is 1, 3, 5, or 7, go to paragraph 15–233.
        FAIL: Location of fault: CPG **AUX/ANTI ICE** panel, wiring from CPG **AUX/ANTI ICE** panel to CPG
                MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault
                (TM 1–1520–238–T–8).

15–233 SIGNAL NAME: TADS ANTI–ICE TO TPS (ACY) TADS ANTIICE CMD (ACZ)
MEMORY LOCATION: 001220
MEMORY DATA BIT(S):   14   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates TADS anti–ice selection.
REMARKS: From FCC through LH FAB MRTU Type I to TADS power supply (TPS).
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 15–234.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TPS, TPS.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–234 SIGNAL NAME: TADS ANTI–ICE TO TEU (ACY) TADS ANTIICE CMD (ACZ)
MEMORY LOCATION: 001244
MEMORY DATA BIT(S):   12   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates TADS anti–ice selection.
REMARKS: From FCC through LH FAB MRTU Type I to TADS electronic unit (TEU)
PASS: Location of fault if third digit on HOD is 2, 3, 6, or 7: troubleshoot wiring between TADS power
supply and TADS NSA (TM 1–1270–476–T).
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU.
Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

15–235 SIGNAL NAME: TEU TEST IN PROGRESS
MEMORY LOCATION: 001141
MEMORY DATA BIT(S):   7   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates FD/LS test in progress.
REMARKS: From TEU through LH FAB MRTU Type I to FCC.
PASS: If fifth digit on HOD is 0, 2, 4, or 6, go to paragraph 15–236.
FAIL: Location of fault: replace TEU (TM 1–1270–476–T).

15–236 SIGNAL NAME: TEU STATUS
MEMORY LOCATION: 001137
MEMORY DATA BIT(S):   7   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates FD/LS TEU failure.
REMARKS: From TEU through LH FAB MRTU Type I to FCC.
PASS: Location of fault if fifth digit on HOD is 1, 3, 5, or 7: wiring between TEU and TADS power
supply. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).
FAIL: Location of fault: replace TEU (TM 1–1270–476–T).

15–237 SIGNAL NAME: TPS STATUS
MEMORY LOCATION: 001137
MEMORY DATA BIT(S):   6   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates FD/LS TPS failure.
REMARKS: From TEU through LH FAB MRTU Type I to FCC.
PASS: If fifth digit on HOD is 2, 3, 6, or 7, go to paragraph 15–26.
FAIL: Location of fault: wiring from TPS to TEU. Troubleshoot wiring to isolate fault
(TM 1–1270–476–T).

15–238 **SIGNAL NAME:** FAIL HIS (ACY)
MEMORY LOCATION: 000220
MEMORY DATA BIT(S): 4–19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: FCC self–test failure flag (history 1).
REMARKS: Internal FCC self–test.
PASS: If all digits on HOD are zero, go to paragraph 15–239.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

15–239 **SIGNAL NAME:** FAIL HIS 2 (ACY)
MEMORY LOCATION: 000221
MEMORY DATA BIT(S): 4–19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: FCC self–test failure flag (history 2).
REMARKS: Internal FCC self–test.
PASS: If all digits on HOD are zero, refer to TM 1–1270–476–20.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

15–240 **SIGNAL NAME:** FAIL HIS (ACZ)
MEMORY LOCATION: 000223
MEMORY DATA BIT(S): 4–19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: FCC self–test failure flag (history 1).
REMARKS: Internal FCC self–test.
PASS: If all digits on HOD are zero, go to paragraph 15–241.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

15–241 **SIGNAL NAME:** FAIL HIS 2 (ACZ)
MEMORY LOCATION: 000224
MEMORY DATA BIT(S): 4–19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: FCC self–test failure flag (history 2).
REMARKS: Internal FCC self–test.
PASS: If all digits on HOD are zero, refer to TM 1–1270–476–20.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

CHAPTER 16

COPILOT/GUNNER (CPG) FIRE CONTROL PANEL (FCP)

MULTIPLEX READ CODES

FAILURE SYMPTOM INDEX

Symptom	Refer to paragraph
CPG FIRE CONTROL PANEL NO–GO	16–1
CPG CANNOT FIRE ROCKETS	16–2, 16–37
CPG CANNOT ACTION MISSILES	16–4, 16–42
CPG CANNOT FIRE MISSILES	16–6, 16–33
TADS IS INOPERATIVE	16–8
IHADSS IS INOPERATIVE	16–9
CPG CANNOT CODE MISSILE ON LOWER CHANNEL	16–10
MISSILES HAVE ERRATIC LOCK ON	16–11
ERRATIC RANGE DATA	16–12
CPG CANNOT CODE MISSILE ON UPPER CHANNEL	16–13
GUN DOES NOT GO TO FIXED FORWARD	16–15
ROCKETS DO NOT GO TO GROUND STOW	16–16
CPG CANNOT ACTION ROCKETS	16–17
PYLON ACTUATORS DO NOT GO TO FIRING POSITION	16–17
GUN DOES NOT FOLLOW LOS	16–19
CPG CANNOT BORESIGHT IHADSS	16–20
CPG CANNOT SELECT HELMET DISPLAY	16–21
CPG CANNOT SELECT TADS DISPLAY	16–21
CPG CANNOT SELECT PNVS DISPLAY	16–21
CPG CANNOT CUE OR SLAVE TO SELECTED LOS	16–22
TGT/NAV WAYPOINTS DO NOT AUTOMATICALLY CHANGE	16–22
CPG CANNOT SELECT LOWER MISSILE QUANTITY	16–26
CPG CANNOT BORESIGHT TADS	16–27
CPG CANNOT CHANGE CODE OF LASER OUTPUT	16–28
CPG CANNOT SELECT UPPER MISSILE QUANTITY	16–29
CPG CANNOT ACTION GUN	16–31
CPG CANNOT FIRE GUN	16–33, 16–38
DISPLAY SYMBOLOGY DOES NOT APPEAR ON HOD	16–34
LASER IS INOPERATIVE	16–35
PILOT/CPG ARM/SAFE INDICATORS DO NOT LIGHT	16–30

Personnel Required:		Equipment Conditions:	
(2)		Ref	Condition
References:		TM 9–1230–476–20–2	MULTIPLEX SUBSYSTEM
TM 9–1230–476–20–2			– MAINTENANCE
TM 9–1090–208–23–2			OPERATIONAL CHECK in
TM 9–1427–475–20			progress

NOTE

- All multiplex read code responses are read from right to left.

- Multiplex read codes must be used in conjunction with applicable Maintenance Operational Check (MOC) in progress.

- Multiplex read codes are observed on the HOD (ADC) or CDU (ADD).

MULTIPLEX READ CODE INTERPRETATIONS

16–1   **SIGNAL NAME:** FD/LS STATUS
MEMORY LOCATION: 000415
MEMORY DATA BIT(S): 8   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Generates fault detection and location system (FD/LS) no go.
REMARKS: From copilot/gunner (CPG) fire control panel (FCP) through CPG multiplex remote terminal unit (MRTU) Type III to fire control computer (FCC).
PASS: Location of fault if fourth digit on heads out display (HOD) is 0, 1, 2, or 3: CPG MRTU Type III, wiring from CPG MRTU Type III to CPG FCP, CPG FCP. CPG transformer rectifier, wiring from CPG transformer rectifier to **MISSION FC AC** circuit breaker, **MISSION FC AC** circuit breaker. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).
FAIL: Location of fault: CPG transformer rectifier, wiring from CPG transformer rectifier to **MISSION FC AC** circuit breaker, **MISSION FC AC** circuit breaker. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

16–2   **SIGNAL NAME:** CPG RKT TRIG
MEMORY LOCATION: 000414
MEMORY DATA BIT(S): 13   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Initiates rocket firing sequence.
REMARKS: From CPG FCP through CPG MRTU Type III to FCC.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to paragraph 16–3.
FAIL: Location of fault: go to Chapter 12, paragraph 12–6.

16–3 **SIGNAL NAME:** ORT RKT TRIG
MEMORY LOCATION: 000414
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Initiates rocket firing sequence.
REMARKS: From CPG FCP through CPG MRTU Type III to FCC.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 16–33.
FAIL: Location of fault: go to Chapter 12, paragraph 12–16.

16–4 **SIGNAL NAME:** CPG MSL ACTION
MEMORY LOCATION: 000415
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates CPG missile action.
REMARKS: From CPG FCP through CPG MRTU Type III to FCC.
PASS: If sixth digit on HOD is 1, go to paragraph 16–40.
FAIL: Location of fault: CPG cyclic, wiring from CPG cyclic to CPG FCP, CPG FCP, wiring from CPG
FCP to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

16–5 **SIGNAL NAME:** PLT MSL ACTION
MEMORY LOCATION: 000415
MEMORY DATA BIT(S): 5 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates pilot missile action.
REMARKS: From CPG FCP through CPG MRTU Type III to FCC.
PASS: If fifth digit on HOD is 4, 5, 6, or 7, go to paragraph 16–6.
FAIL: Location of fault: pilot cyclic, wiring from CPG cyclic to CPG FCP, CPG FCP, wiring from CPG
FCP to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault
(TM 9–1427–475–20).

16–6 **SIGNAL NAME:** MSL TRIG 1ST DETENT
MEMORY LOCATION: 000415
MEMORY DATA BIT(S): 6 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates missile firing sequence.
REMARKS: From CPG FCP through CPG MRTU Type III to FCC.
PASS: If fifth digit on HOD is 2, 3, 6, or 7, go to paragraph 16–7.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

16–7 **SIGNAL NAME:** MSL TRIG 2ND DETENT
MEMORY LOCATION: 000415
MEMORY DATA BIT(S): 7 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates missile firing sequence.
REMARKS: From CPG FCP through CPG MRTU Type III to FCC.
PASS: If fifth digit on HOD is 1, 3, 5, or 7, go to Chapter 8, paragraph 8–1179.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

16–8 **SIGNAL NAME:**   TADS POWER SWITCH
MEMORY LOCATION: 000436
MEMORY DATA BIT(S):   14, 15   (BINARY)
CONDITION: If second digit displayed on HOD is 0 or 1=**OFF**
    If second digit displayed on HOD is 4 or 5=**FLIR OFF**
    If second digit displayed on HOD is 6 or 7=**TADS**
SIGNAL FUNCTION: Applies power to target acquisition designation sight (TADS).
REMARKS: From CPG FCP through CPG MRTU Type III to FCC.
PASS: If CONDITION corresponds to selected switch mode, go to Chapter 15, paragraph 15–4.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III.
    Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

■   **16–9** **SIGNAL NAME:**   IHADSS POWER SWITCH (ACY) IHAD PWR SW 1 (ACZ)
MEMORY LOCATION: 000436
MEMORY DATA BIT(S):   17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Applies power to integrated helmet and display sight system (IHADSS).
REMARKS: From CPG FCP through CPG MRTU Type III to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to Chapter 7, paragraph 7–2.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III.
    Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

16–10 **SIGNAL NAME:**   MSL LOWER CHANNEL CODE SW
MEMORY LOCATION: 000437
MEMORY DATA BIT(S):   4–6   (OCTAL)
CONDITION: If the fifth digit displayed on HOD is 0 or 1=**H**
    If the fifth digit displayed on HOD is 2 or 3=**G**
    If the fifth digit displayed on HOD is 4 or 5=**F**
    If the fifth digit displayed on HOD is 6 or 7=**E**
    If the sixth digit displayed on HOD is 1=**D**
    If the sixth digit displayed on HOD is 1 and the fifth digit
    displayed on HOD is 0 or 1=**C**
    If the sixth digit displayed on HOD is 1 and the fifth digit
    displayed on HOD is 2 or 3=**B**
    If the sixth digit displayed on HOD is 1 and the fifth digit
    displayed on HOD is 6 or 7=**A**
SIGNAL FUNCTION: Selects missile code of lower channel.
REMARKS: From CPG FCP through CPG MRTU Type III to FCC.
PASS: If CONDITION corresponds to the selected code mode, go to paragraph 16–14.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III.
    Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

■   **16–11** **SIGNAL NAME:**   LASER MSL CCM SW (ACY) MSL CCM SW (ACZ)
MEMORY LOCATION: 000437
MEMORY DATA BIT(S):   7   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Prevents erratic missile operation due to jamming.
REMARKS: From CPG FCP through CPG MRTU Type III to FCC.
PASS: If fifth digit on HOD is 0, 2, 4, or 5, go to Chapter 8, paragraph 8–1124.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III.
    Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

16–12 SIGNAL NAME: LASER CCM SW (ACY) LRFD CCM SW (ACZ)
MEMORY LOCATION: 000437
MEMORY DATA BIT(S): 8 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Prevents erratic range data due to jamming.
REMARKS: From CPG FCP through CPG MRTU Type III to FCC.
PASS: If fourth digit on HOD is 0, 1, 2, or 3, go to Chapter 8, paragraph 8–105.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III.
    Troubleshoot wiring to isolate fault (TM 9–1427–475–20).

16–13 SIGNAL NAME: CPG UPPER CHANNEL SW
MEMORY LOCATION: 000437
MEMORY DATA BIT(S): 9 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Selects missile upper channel.
REMARKS: From CPG FCP through CPG MRTU Type III to FCC.
PASS: If fourth digit on HOD is 0, 1, 4, or 5, go to paragraph 16–24.
FAIL: Location of fault: go to Chapter 8, paragraph 8–1137.

16–14 SIGNAL NAME: CPG LOWER CHANNEL SW
MEMORY LOCATION: 000437
MEMORY DATA BIT(S): 10 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Selects missile lower channel.
REMARKS: From CPG FCP through CPG MRTU Type III to FCC.
PASS: If fourth digit on HOD is 0, 2, 4, 6, go to paragraph 16–25.
FAIL: Location of fault: go to Chapter 8, paragraph 8–1148.

16–15 SIGNAL NAME: GUN FIXED SW
MEMORY LOCATION: 000437
MEMORY DATA BIT(S): 12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Drives gun to fixed forward position.
REMARKS: From CPG FCP through CPG MRTU Type III to FCC.
PASS: If third digit on HOD is 2, 3, 6, or 7, go to Chapter 5, paragraph 5–17.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III,
    wiring from CPG FCP to turret control box, turret control box. Troubleshoot wiring to isolate fault
    (TM 9–1230–476–20–2).

16–16 SIGNAL NAME: CPG RKT GND STOW
MEMORY LOCATION: 000437
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Selects pylon positions.
REMARKS: From CPG FCP through CPG MRTU Type III to FCC.
PASS: If third digit on HOD is 1, 3, 5, or 7, go Chapter 12, paragraph 12–5.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III,
    wiring from CPG FCP to external stores elevation controller, external stores elevation controller.
    Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

16–17 **SIGNAL NAME:** CPG RKT ACTION
MEMORY LOCATION: 000437
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates CPG has actioned rockets.
REMARKS: From CPG FCP through CPG MRTU Type III to FCC.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 16–18.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III,
wiring from CPG FCP to external stores elevation controller, external stores elevation controller.
Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2)

16–18 **SIGNAL NAME:** CPG RKT NORM SW
MEMORY LOCATION: 000437
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Enables or disables arm safe power to rockets.
REMARKS: From CPG FCP through CPG MRTU Type III to FCC.
PASS: If second digit on HOD is 1, 3, 5, or 7, go to Chapter 12, paragraph 12–6
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

16–19 **SIGNAL NAME:** CPG GUN NORM SW
MEMORY LOCATION: 000437
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Enables or disables arm safe power to gun.
REMARKS: From pilot FCP, through CPG FCP, through CPG MRTU Type III to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, go to Chapter 5, paragraph 5–18.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to CPG FCP, CPG FCP, wiring from CPG FCP
to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault
(TM 9–1230–476–20–2).

■ 16–20 **SIGNAL NAME:** IHADSS BRSIT SW (ACY) CPG IHAD BST SW (ACZ)
MEMORY LOCATION: 000441
MEMORY DATA BIT(S): 7 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Enables IHADSS boresighting.
REMARKS: From CPG FCP through CPG MRTU Type III to FCC.
PASS: If fifth digit on HOD is 0, 2, 4, or 5, go to Chapter 7, paragraph 7–52.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to CPG MRTU Type III, CPG MRTU Type III,
wiring from CPG FCP to pilot FCP, pilot FCP. Troubleshoot wiring to isolate fault
(TM 9–1230–476–20–2).

16–21 SIGNAL NAME: CPG SIGHT SELECT SW
MEMORY LOCATION: 001074
MEMORY DATA BIT(S): 4–6 (OCTAL)
CONDITION: If the fifth digit displayed on HOD is 0 or 1=**HMD/TADS** (Chapter 15, paragraph 15–5)
If the fifth digit displayed on HOD is 2 or 3=**TADS** (Chapter 15, paragraph 15–5)
If the sixth digit displayed on HOD is 1=**NVS** (Chapter 10, paragraph 10–6)
If the sixth digit displayed on HOD is 1 and the fifth digit displayed on HOD is
2 or 3 =**HMD** (Chapter 7, paragraph 7–56)
SIGNAL FUNCTION: Indicates CPG selected sight sensor.
REMARKS: From CPG flight control panel through left–hand (LH) forward avionics bay (FAB) MRTU
Type I to FCC.
PASS: If CONDITION displayed on HOD corresponds to CPG **SIGHT SEL** switch position, refer to
appropriate chapter and paragraph as listed under CONDITION.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU
Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

16–22 SIGNAL NAME: CPG ACQ SEL SW
MEMORY LOCATION: 001074
MEMORY DATA BIT(S): 7–9 (OCTAL)
CONDITION: If the fourth digit displayed on HOD is 0 or 1=**PHS**
(Chapter 7, paragraph 7–38)
If the fourth digit displayed on HOD is 2 or 3=**FXD**
(Chapter 10, paragraph 10–30)
If the fourth digit displayed on HOD is 4 or 5=**TGT**
(Chapter 16, paragraph 16–23)
If the fourth digit displayed on HOD is 6 or 7=**NAV**
(Chapter 20, paragraph 20–37)
If the fifth digit displayed on HOD is 1, 3, 5, or 7=**GHS**
(Chapter 7, paragraph 7–56)
If the fifth digit displayed on HOD is 1, 3, 5, or 7 and the fourth digit displayed on HOD
is 2 or 3=**MSL SKR** (Chapter 8, paragraph 8–10)
If the fifth digit displayed on HOD is 1, 3, 5, or 7 and the fourth digit displayed on HOD
is 4 or 5=**TADS** (Chapter 15 paragraph 15–6)
SIGNAL FUNCTION: Enables cueing or slaving to selected CPG line of sight (LOS).
REMARKS: From CPG FCP through LH FAB MRTU Type I to FCC.
PASS: If CONDITION displayed on HOD corresponds to CPG **SIGHT SEL** switch position, refer to
appropriate chapter and paragraph as listed under CONDITION.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU
Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

16–23 **SIGNAL NAME:** TGT INDEX SW
MEMORY LOCATION: 001074
MEMORY DATA BIT(S): 10–13 (HEX)
CONDITION: If the fourth digit displayed on HOD is 6=**9**
If the fourth digit displayed on HOD is 7=**8**
If the fifth digit displayed on HOD is 1, 3, 5, or 7 and the fourth digit displayed is 0=**7**
If the fifth digit displayed on HOD is 1, 3, 5, or 7 and the fourth digit displayed is 1=**6**
If the fifth digit displayed on HOD is 1, 3, 5, or 7 and the fourth digit displayed is 2=**5**
If the fifth digit displayed on HOD is 1, 3, 5, or 7and the fourth digit displayed is 3=**4**
If the fifth digit displayed on HOD is 1, 3, 5, or 7 and the fourth digit displayed is 4=**3**
If the fifth digit displayed on HOD is 1, 3, 5, or 7 and the fourth digit displayed is 5=**2**
If the fifth digit displayed on HOD is 1, 3, 5, or 7 and the fourth digit displayed is 6=**1**
If the fifth digit displayed on HOD is 1, 3, 5, or 7and the fourth digit displayed is 7=**0**
SIGNAL FUNCTION: Specifies storage location of waypoint/targeting coordinate data.
REMARKS: From CPG FCP through LH FAB MRTU Type I to FCC.
PASS: If CONDITION displayed on HOD corresponds to selected **TGT INDEX** switch position, replace FCC (TM 9–1230–476–20–2).
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

16–24 **SIGNAL NAME:** MSL UPPER CODE SW
MEMORY LOCATION: 001074
MEMORY DATA BIT(S): 14–16 (OCTAL)
CONDITION: If the second digit displayed on HOD is 0=**H**
If the second digit displayed on HOD is 1=**G**
If the second digit displayed on HOD is 2=**F**
If the second digit displayed on HOD is 3=**E**
If the second digit displayed on HOD is 4=**D**
If the second digit displayed on HOD is 5=**C**
If the second digit displayed on HOD is 6=**B**
If the second digit displayed on HOD is 7=**A**
SIGNAL FUNCTION: Selects missile code of upper channel.
REMARKS: From CPG FCP through LH FAB MRTU Type I to FCC.
PASS: If CONDITION displayed on HOD corresponds to selected **MSL UPPER CODE** switch position, go to paragraph 16–25.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

16–25 SIGNAL NAME: LASER CODE SW (ACY) LRFD CODE SW (ACZ) ▮
       MEMORY LOCATION: 001074
       MEMORY DATA BIT(S):   17–19   (OCTAL)
       CONDITION: If first digit displayed on HOD is 0=**H**
                      If first digit displayed on HOD is 1=**G**
                      If first digit displayed on HOD is 2=**F**
                      If first digit displayed on HOD is 3=**E**
                      If first digit displayed on HOD is 4=**D**
                      If first digit displayed on HOD is 5=**C**
                      If first digit displayed on HOD is 6=**B**
                      If first digit displayed on HOD is 7=**A**
       SIGNAL FUNCTION: Specifies alphabetical index code designator.
       REMARKS: From CPG FCP through LH FAB MRTU Type I to FCC.
       PASS: If CONDITION displayed on HOD corresponds to selected **LASER CODE** switch position, go
            to Chapter 8, 8–1150.
       FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU
            Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

16–26 SIGNAL NAME: MSL LOWER QTY SW
       MEMORY LOCATION: 001075
       MEMORY DATA BIT(S):   4, 5   (BINARY)
       CONDITION: If the fifth digit displayed on HOD is 0, 1, 2, or 3=**3**
                      If the fifth digit displayed on HOD is 4, 5, 6, or 7=**2**
                      If the sixth digit displayed on HOD is 1 and the fifth digit displayed on HOD is
                      0, 1, 2, or 3=**1**
                      If the sixth digit displayed on HOD is 1 and the fifth digit displayed on HOD is
                      4, 5, 6, or7=**0**
       SIGNAL FUNCTION: Selects quantity of missiles coded on lower channel.
       REMARKS: From CPG FCP through LH FAB MRTU Type I to FCC.
       PASS: If CONDITION corresponds to selected switch position, go to Chapter 8, 8–1147.
       FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU
            Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

16–27 SIGNAL NAME: TADS BRSIT SW (ACY) TADS BST SW (ACZ) ▮
       MEMORY LOCATION: 001075
       MEMORY DATA BIT(S):   6   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Enables TADS internal boresighting mode.
       REMARKS: From CPG FCP through LH FAB MRTU Type I to FCC.
       PASS: If fifth digit on HOD is 0, 1, 4, or 5, go to Chapter 15, 15–197.
       FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU
            Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

16–28 **SIGNAL NAME:** LT CODE SW (ACY) LST CODE SW (ACZ)
        MEMORY LOCATION: 001075
        MEMORY DATA BIT(S): 7–9 (OCTAL)
        CONDITION: If the fourth digit displayed is 0 or 1=**H**
                    If the fourth digit displayed is 2 or 3=**G**
                    If the fourth digit displayed is 4 or 5=**F**
                    If the fourth digit displayed is 6 or 7=**E**
                    If the fifth digit displayed on HOD is 1, 3, 5,or 7 and the fourth digit
                    displayed is 0 or 1=**D**
                    If the fifth digit displayed on HOD is 1, 3, 5, or 7 and the fourth digit
                    displayed is 2 or 3=**C**
                    If the fifth digit displayed on HOD is 1, 3, 5, or 7 and the fourth digit
                    displayed is 4 or 5=**B**
                    If the fifth digit displayed on HOD is 1, 3, 5, or 7 and the fourth digit
                    displayed is 6 or 7=**A**
        SIGNAL FUNCTION: Selects alphabetical laser code for laser spot tracker.
        REMARKS: From CPG FCP through LH FAB MRTU Type I to FCC.
        PASS: If CONDITION corresponds to selected **LT CODE** switch position, go to
           Chapter 15, 15–191.
        FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU
           Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2.

16–29 **SIGNAL NAME:** MSL UPPER QTY SW
        MEMORY LOCATION: 001075
        MEMORY DATA BIT(S): 10, 11 (BINARY)
        CONDITION: If the third digit displayed on HOD is 0, 1, 2, or 3=**3**
                    If the third digit displayed on HOD is 4, 5, 6, or 7=**2**
                    If the fourth digit displayed on HOD is 1, 3, 5, or 7 and the third digit
                    displayed on HOD is 0, 1, 2, or 3=**1**
                    If the fourth digit displayed on HOD is 1, 3, 5, or 7 and the third digit
                    displayed on HOD is 4, 5, 6, or 7=**0**
        SIGNAL FUNCTION: Selects quantity of missiles coded on upper channel.
        REMARKS: From CPG FCP through LH FAB MRTU Type I to FCC.
        PASS: If CONDITION corresponds to selected switch quantity, go to Chapter 8, 8–1141.
        FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU
           Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

16–30 **SIGNAL NAME:** CPG SAFE/ARM SW
        MEMORY LOCATION: 001075
        MEMORY DATA BIT(S): 12, 13 (BINARY)
        CONDITION: If the third digit displayed on HOD is 0 or 4=**OFF**
                    If the third digit displayed on HOD is 2 or 6=**SAFE**
                    If the third digit displayed on HOD is 3 or 7=**ARM**
        SIGNAL FUNCTION: Selects weapon system status.
        REMARKS: From CPG FCP through LH FAB MRTU Type I to FCC.
        PASS: If CONDITION corresponds to selected switch position, go to 16–36.
        FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU
           Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

16–31 SIGNAL NAME: CPG GUN ACTION
MEMORY LOCATION: 001075
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates CPG has actioned gun.
REMARKS: From CPG FCP through LH FAB MRTU Type I to FCC.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to Chapter 5, 5–16.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

16–32 SIGNAL NAME: PLT GUN ACTION
MEMORY LOCATION: 001075
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates pilot has actioned gun.
REMARKS: From CPG FCP through LH FAB MRTU Type I to FCC.
PASS: If second digit on HOD is 2, 3, 6, or 7, go to Chapter 5, 5–31.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

16–33 SIGNAL NAME: SQUAT SWITCH
MEMORY LOCATION: 001075
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates squat switch position.
REMARKS: From CPG FCP through LH FAB MRTU Type I to FCC.
PASS: If second digit on HOD is 0, 2, 4, or 6 (indicates ground), go to failure symptom index and next failure symptom.
FAIL: Location of fault: squat switch, wiring from squat switch to CPG FCP, CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1090–208–23–2).

16–34 SIGNAL NAME: SYM GEN PWR SW
MEMORY LOCATION: 001075
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Applies power to symbol generator.
REMARKS: From CPG FCP through LH FAB MRTU Type I to FCC.
PASS: If first digit on HOD is 4, 5, 6, or 7, refer to TM 11–1520–238–23.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

16–35 SIGNAL NAME: LASER PWR SW (ACY) LRFD SW (ACZ)
MEMORY LOCATION: 001075
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Applies power to laser.
REMARKS: From CPG FCP through LH FAB MRTU Type I to FCC.
PASS: If first digit on HOD is 2, 3, 6, or 7, go to Chapter 15, 15–158.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

16–36 **SIGNAL NAME:** CPG MSL ARM
MEMORY LOCATION: 001075
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Selects missile arming.
REMARKS: From CPG FCP through LH FAB MRTU Type I to FCC.
PASS: If first digit on HOD is 1, 3, 5, or 7, go to Chapter 8, 8–1104.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU
Type I (TM 9–1230–476–20–2).

16–37 **SIGNAL NAME:** PLT RKT TRIG
MEMORY LOCATION: 001554
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates rocket firing sequence.
REMARKS: From CPG FCP through LH FAB MRTU Type I to FCC.
PASS: If third digit on HOD is 1, 3, 5, or 7, go to 16–41.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU
Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

16–38 **SIGNAL NAME:** PLT GUN TRIG
MEMORY LOCATION: 001554
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates gun firing sequence.
REMARKS: From CPG FCP through LH FAB MRTU Type I to FCC.
PASS: If second digit on HOD is 4, 5, 6, or 7, go to paragraph 16–39.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU
Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

16–39 **SIGNAL NAME:** CPG GUN TRIG
MEMORY LOCATION: 001554
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates gun firing sequence.
REMARKS: From CPG FCP through LH FAB MRTU Type I to FCC.
PASS: If first digit on HOD is 1, 3, 5, or 7, go to Chapter 5, 5–16.
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU
Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

16–40 **SIGNAL NAME:** PLT GND OVRD SW
MEMORY LOCATION: 001555
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates pilot/ground override (**PLT/ GND OVRD**) switch position.
REMARKS: From CPG FCP through LH FAB MRTU Type I to FCC.
PASS: If third digit on HOD is 1, 3, 5, or 7 (indicates on), go to failure symptom index and next failure
symptom .
FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU
Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

16–41 **SIGNAL NAME:**   TADS RKT ACT (ACY) ORT RKT ACT (ACZ)
 MEMORY LOCATION: 001555
 MEMORY DATA BIT(S):   14   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Indicates rocket actioned from optical relay tube (ORT) LH grip.
 REMARKS: From CPG FCP through LH FAB MRTU Type I to FCC.
 PASS: If first digit on HOD is 4, 5, 6, or 7, go to Chapter 12, 12–26
 FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU
       Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

16–42 **SIGNAL NAME:**   CPG MSL ENA
 MEMORY LOCATION: 001555
 MEMORY DATA BIT(S):   15   (BINARY)
 CONDITION: (None)
 SIGNAL FUNCTION: Indicates CPG missile action.
 REMARKS: From CPG FCP through LH FAB MRTU Type I to FCC.
 PASS: If second digit on HOD is 2, 3, 6, or 7, go to Chapter 8, paragraph 8–1173.
 FAIL: Location of fault: CPG FCP, wiring from CPG FCP to LH FAB MRTU Type I, LH FAB MRTU
       Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

CHAPTER 17

DATA ENTRY KEYBOARD (DEK) MULTIPLEX READ CODES (ADC)

FAILURE SYMPTOM INDEX

Symptom	Refer to paragraph
DATA ENTRY KEYBOARD NO–GO CPG COMPARTMENT	17–1
KEYBOARD FAILED DISPLAYED ON ORT	17–1
MANUAL 1000 MTRS AND RANGE DO NOT APPEAR	17–2
RANGE DATA IS NOT DISPLAYED	17–2
WAYPOINT TARGET COORDINATE DATA IS NOT DISPLAYED ON HOD ..	17–2
CODE DESIGNATORS A THROUGH H DO NOT APPEAR ON HOD	17–2
CANNOT DISPLAY OR ACCESS FAULT DETECTION/LOCATION SYSTEM (FD/LS)	17–2
BORESIGHT MENU DOES NOT APPEAR ON HOD	17–2
FLIGHT DATA DOES NOT APPEAR ON HOD	17–2
TADS CORRECTORS –MR DOES NOT APPEAR ON HOD	17–3
INCORRECT OR MISSING CHARACTERS APPEAR ON HOD	17–5

TABLE 17–1. ASCII CODE CONVERSIONS
(BITS 12 – 19)

41 = A	49 = I	51 = Q	59 = Y	30 = 0	38 = 8
42 = B	4A = J	52 = R	5A = X	31 = 1	39 = 9
43 = C	4B = K	53 = S	20 = SP	32 = 2	06 = EN
44 = D	4C = L	54 = T	28 = (	33 = 3	08 = BK
45 = E	4D = M	55 = U	29 =)	34 = 4	0D = CR
46 = F	4E = N	56 = V	2A = *	35 = 5	7F = CL
47 = G	4F = O	57 = W	2B = +	36 = 6	
48 = H	50 = P	58 = X	2D = –	37 = 7	

Personnel Required:	**Equipment Conditions:**	
(2)	Ref	Condition
	TM 9–1230–476–20–2	MULTIPLEX SUBSYSTEM – MAINTENANCE OPERATIONAL CHECK in progress
References:		
TM 9–1230–476–20–2		

NOTE

- All multiplex read code responses are read from right to left.

- Multiplex read codes must be used in conjunction with applicable Maintenance Operational Check (MOC) in progress.

- Multiplex read codes are observed on the HOD (ADC) or CDU (ADD).

MULTIPLEX READ CODE INTERPRETATIONS

17–1 **SIGNAL NAME:** DEK TOGGLE BIT
MEMORY LOCATION: 000444
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates DEK processor is operating.
REMARKS: From DEK through copilot/gunner (CPG) multiplex remote terminal unit (MRTU) Type III to fire control computer (FCC). Monitors DEK processor.
PASS: If sixth digit on heads out display (HOD) changes state from 1 to 0, 0 to 1 every 25 HZ, go to paragraph 17–2.
FAIL: Location of fault: freezes at one state (1 or 0) for more than two 25 HZ frames. CPG transformer, wiring from CPG transformer to DEK, DEK,wiring from DEK to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

17–2 **SIGNAL NAME:** DEK SWITCH
MEMORY LOCATION: 000444
MEMORY DATA BIT(S): 8–11 (HEX)
CONDITION: If fourth digit displayed on HOD is 0=**STBY**
If fourth digit displayed on HOD is 1=**RANGE**
If fourth digit displayed on HOD is 2=**FD/LS**
If fourth digit displayed on HOD is 3=(NOT USED)
If fourth digit displayed on HOD is 4=**TGT**
If fourth digit displayed on HOD is 5=**CODE**
If fourth digit displayed on HOD is 6=**SP1**
If fourth digit displayed on HOD is 7=**OFF**
SIGNAL FUNCTION: Monitors position of DEK **DATA ENTRY** switch.
REMARKS: From DEK through CPG MRTU Type III to FCC. Selects operating mode for fire control system.
PASS: If CONDITION corresponds to proper mode for switch position selected, go to paragraph 17–3.
FAIL: Location of fault: DEK, wiring from DEK to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

17–3 **SIGNAL NAME:** DEK DATA VALID
MEMORY LOCATION: 000444
MEMORY DATA BIT(S): 7 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates whether keyboard entry is valid and to be read by FCC or keyboard entry is invalid and to be ignored.
REMARKS: From DEK through CPG MRTU Type III to FCC. This bit identifies erroneous DEK data words.
PASS: If fifth digit on HOD is 1, 3, 5, or 7, go to paragraph 17–4.
FAIL: Location of fault: DEK, wiring from DEK to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

17–4 **SIGNAL NAME:** DEK DATA VALID TO TEU (ACY) DEK DATA VALID CMD (ACZ)
MEMORY LOCATION: 001223
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates whether keyboard entry is valid and to be read by target acquisition designation sight (TADS) electronic unit (TEU) or the keyboard entry is invalid and to be ignored.
REMARKS: From FCC through left–hand forward avionics bay (LH FAB) MRTU Type I to TEU. This bit identifies erroneous DEK data words. Check for **TYPE I MRTU NO–GO LH FAB** FD/LS message.
PASS: If sixth digit on HOD is 1, go to paragraph 17–5.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU, FCC. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

17–5 **SIGNAL NAME:** DEK DATA
MEMORY LOCATION: 000444
MEMORY DATA BIT(S): 12–19 (ASCII)
CONDITION: Refer to Table 17–1 for ASCII code conversions.
SIGNAL FUNCTION: Provides DEK characters in 8–bit ASCII word format to FCC.
REMARKS: From DEK through CPG MRTU Type III to FCC.
PASS: If ASCII conversion results correspond to the key pressed on DEK, go to paragraph 17–6.
FAIL: Location of fault: DEK, wiring from DEK to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

17–6 **SIGNAL NAME:** DEK DATA TO TEU (ACY) DEK DATA (ACZ)
MEMORY LOCATION: 001223
MEMORY DATA BIT(S): 5–11 (ASCII)
CONDITION: Refer to Table 17–1 for ASCII code conversions.
SIGNAL FUNCTION: Provides DEK characters in 8–bit ASCII word format to TEU.
REMARKS: From FCC through LH FAB MRTU Type I to TEU. The ASCII conversion for memory data bits 5–11 is the same as for memory data bits 12–19, paragraph 17–5. Check for **TYPE I MRTU NO–GO LH FAB** FD/LS message.
PASS: If ASCII conversion is identical to results in paragraph 17–5, go to Chapter 15, paragraph 15–151.
FAIL: Location of fault: LH FAB MRTU Type I, wiring from LH FAB MRTU Type I to TEU, TEU, FCC. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

CHAPTER 18

AUXILIARY POWER UNIT (APU) MULTIPLEX READ CODES

FAILURE SYMPTOM INDEX

Symptom	Refer to paragraph
APU DOES NOT RUN; DISPLAYS FD/LS APU NO–GO OVERTEMP	18–1, 18–11
APU DOES NOT RUN; DISPLAYS FD/LS APU NO–GO OVERCURRENT	18–1
APU RUNS; DISPLAYS FD/LS APU NO–GO UNDERSPEED	18–1, 18–10
APU RUNS; DISPLAYS FD/LS APU NO–GO OVERSPEED	18–1, 18–10
APU RUNS; PTO CLUTCH DOES NOT ENGAGE	18–1, 18–10
APU DOES NOT RUN; DISPLAYS FD/LS APU NO–GO LOW OIL PRESSURE	18–1
APU DOES NOT RUN; DISPLAYS FD/LS APU NO–GO IGNITION NOT OFF	18–12
APU DOES NOT RUN; DISPLAYS FD/LS APU NO–GO UNDERSPEED	18–1, 18–10
APU START SEQUENCE – DOES NOT BEGIN AND APU FAIL LIGHT ON CAUTION/WARNING PANEL LIGHTS	18–1, 18–10

Personnel Required:

(2)

References:

TM 1–1520–238–T–8

Equipment Conditions:

Ref	Condition
TM 1–1520–238–T–8	AUXILIARY POWER UNIT – MAINTENANCE OPERATIONAL CHECK in progress

NOTE

- All multiplex read code responses are read from right to left.

- Multiplex read codes must be used in conjunction with applicable Maintenance Operational Check (MOC) in progress.

- Multiplex read codes are observed on the HOD (ADC) or CDU (ADD).

MULTIPLEX READ CODE INTERPRETATIONS

18–1   **SIGNAL NAME:**   APU START SW
  MEMORY LOCATION: 002131
  MEMORY DATA BIT(S):   16   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Monitors auxiliary power unit (APU) **START/RUN/OFF** switch.
  REMARKS: From APU/Fire test panel through digital automatic stabilization computer (DASEC)
               multiplex remote terminal unit (MRTU) to fire control computer (FCC).
  PASS: If second digit on heads out display (HOD) is 1, 3, 5, or 7, go to paragraph 18–2.
  FAIL: Location of fault: APU/Fire test panel, wiring from APU/Fire test panel to APU speed electronic
           control unit, wiring from APU speed electronic control unit to DASEC. Troubleshoot wiring to
           isolate fault (TM 1–1520–238–T–8).

18–2   **SIGNAL NAME:**   APU OIL PRESSURE LOW
  MEMORY LOCATION: 002131
  MEMORY DATA BIT(S):   15   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Monitors APU oil pressure.
  REMARKS: From low oil pressure sensor through APU speed electronic control unit and DASEC to
               FCC.
  PASS: If second digit on the HOD is 2, 3, 6, or 7, go to paragraph 18–3.
  FAIL: Location of fault: low oil pressure sensor, wiring from low oil pressure sensor to APU speed
           electronic control unit, wiring from APU speed electronic control unit to DASEC. Troubleshoot
           wiring to isolate fault (TM 1–1520–238–T–8).

18–3   **SIGNAL NAME:**   APU OVERSPEED IND
  MEMORY LOCATION: 002131
  MEMORY DATA BIT(S):   14   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Monitors APU speed sensor.
  REMARKS: From APU speed sensor through APU speed electronic control unit and DASEC to FCC.
  PASS: If second digit on the HOD is 4, 5, 6, or 7, go to paragraph 18–4.
  FAIL: Location of fault: APU speed sensor, wiring from APU speed sensor to APU speed electronic
           control unit, wiring from APU speed electronic control unit to DASEC. Troubleshoot wiring to
           isolate fault (TM 1–1520–238–T–8).

18–4   **SIGNAL NAME:**   APU IGNITION
  MEMORY LOCATION: 002131
  MEMORY DATA BIT(S):   13   (BINARY)
  CONDITION: (None)
  SIGNAL FUNCTION: Monitors APU ignition unit.
  REMARKS: From APU ignition unit through APU speed electronic control unit and DASEC to FCC.
  PASS: If third digit on the HOD is 1, 3, 5, or 7, go to paragraph 18–5.
  FAIL: Location of fault: APU ignition unit, wiring from APU ignition unit to APU speed electronic
           control unit, wiring from APU speed electronic control unit to DASEC. Troubleshoot wiring to
           isolate fault (TM 1–1520–238–T–8).

18–5 SIGNAL NAME: APU FUEL SHUTOFF
     MEMORY LOCATION: 002131
     MEMORY DATA BIT(S): 12 (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Monitors APU fuel shutoff valve.
     REMARKS: From fuel shutoff solenoid through APU speed electronic control unit and DASEC to
           FCC.
     PASS: If third digit on HOD is 2, 3, 6, or 7, go to paragraph 18–6.
     FAIL: Location of fault: fuel shutoff solenoid, wiring from fuel shutoff solenoid to APU speed electronic
           control unit, wiring from APU speed electronic control unit to DASEC. Troubleshoot wiring to
           isolate fault (TM 1–1520–238–T–8).

18–6 SIGNAL NAME: APU START RELAY ENERGIZED
     MEMORY LOCATION: 002131
     MEMORY DATA BIT(S): 11 (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Monitors APU start relay.
     REMARKS: From APU speed electronic control unit to APU start solenoid and through DASEC to
           FCC.
     PASS: If third digit on the HOD is 4, 5, 6, or 7, go to paragraph 18–7.
     FAIL: Location of fault: APU speed electronic unit, wiring from APU speed electronic unit to APU start
           solenoid, wiring from APU speed electronic unit to DASEC to FCC (TM 1–1520–238–T–8).

18–7 SIGNAL NAME: APU OVERCURRENT IND
     MEMORY LOCATION: 002131
     MEMORY DATA BIT(S): 10 (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Monitors APU fuel shutoff solenoid current, power takeoff (PTO) clutch
                solenoid, APU start solenoid, and ignition.
     REMARKS: From APU speed electronic control unit through DASEC to FCC.
     PASS: If fourth digit on the HOD is 1, 3, 5, or 7, go to paragraph 18–8.
     FAIL: Location of fault: APU speed electronic control unit, wiring from APU speed electronic control
           unit to DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–8).

18–8 SIGNAL NAME: APU PTO CLUTCH ENGAGED
     MEMORY LOCATION: 002131
     MEMORY DATA BIT(S): 9 (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Monitors APU PTO clutch engagement.
     REMARKS: From APU PTO clutch solenoid through APU speed electronic control unit and DASEC to
           FCC.
     PASS: If fourth digit on the HOD is 2, 3, 6, or 7, go to paragraph 18–9.
     FAIL: Location of fault: APU PTO clutch solenoid, wiring from APU PTO clutch solenoid to APU
           speed electronic control unit, wiring from APU speed electronic control unit to DASEC.
           Troubleshoot wiring to isolate fault (TM 1–1520–238–T–8).

18–9 SIGNAL NAME: APU OVERTEMP IND
MEMORY LOCATION: 002131
MEMORY DATA BIT(S): 8 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors APU engine gas turbine (EGT) temperature.
REMARKS: From APU thermocouple through APU speed electronic control unit and DASEC TO FCC.
PASS: If fourth digit on the HOD is 4, 5, 6, or 7, go to failure symptom index and next failure symptom paragraph.
FAIL: Location of fault: APU thermocouple, wiring from APU thermocouple to APU speed electronic control unit, wiring from APU speed electronic control unit to DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–8).

18–10 SIGNAL NAME: APU RPM
MEMORY LOCATION: 002134
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD while APU is spooling up; memory location response digits should increase as APU revolutions per minute (RPM) increase.
SIGNAL FUNCTION: Monitors APU RPM.
REMARKS: From APU speed sensor through APU speed electronic control unit and DASEC to FCC.
PASS: Location of fault if CONDITION has been met: replace FCC (TM 9–1230–476–20–1).
FAIL: Location of fault: APU speed sensor, wiring from APU speed sensor to APU speed electronic control unit, wiring from APU speed electronic control unit to DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–8).

18–11 SIGNAL NAME: APU EXHAUST TEMP
MEMORY LOCATION: 002133
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD with APU running; memory location response digits should increase as temperature increases.
SIGNAL FUNCTION: Monitors APU EGT temperature.
REMARKS: From APU thermocouple through APU speed electronic control unit and DASEC to FCC.
PASS: Location of fault if CONDITION has been met: replace FCC (TM 9–1230–476–20–1).
FAIL: Location of fault: APU thermocouple, wiring from APU thermocouple to APU speed electronic control unit, wiring from APU speed electronic control unit to DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–8).

18–12 SIGNAL NAME: APU IGNITION
MEMORY LOCATION: 002131
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors APU ignition unit.
REMARKS: From APU speed electronic control unit to DASEC.
PASS: Location of fault if third digit on the HOD is 0, 2, 4, or 6: replace APU speed electronic control unit (TM 1–1520–238–T–8).
FAIL: Location of fault: APU speed electronic control unit, wiring from APU speed electronic control unit to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–8).

CHAPTER 19

GENERATOR MULTIPLEX READ CODES

FAILURE SYMPTOM INDEX

Symptom	Refer to paragraph
GEN 1 INDICATOR IS LIT	19–1
GEN 2 INDICATOR IS LIT	19–3

Personnel Required:

(2)

References:

TM 1–1520–238–T–6

Equipment Conditions:

Ref	Condition
TM 1–1520–238–T–6	AC ELECTRICAL POWER GENERATION – MAINTENANCE OPERATIONAL CHECK in progress

NOTE

- All multiplex read code responses are read from right to left.

- Multiplex read codes must be used in conjunction with applicable Maintenance Operational Check (MOC) in progress.

- Multiplex read codes are observed on the HOD (ADC) or CDU (ADD).

MULTIPLEX READ CODE INTERPRETATIONS

19–1 **SIGNAL NAME:** GEN 1 STATUS
MEMORY LOCATION: 001532
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: Valid only during generator test.
SIGNAL FUNCTION: Monitors field excitation.
REMARKS: From generator 1 through power distribution box to right–hand (RH) forward avionics bay (FAB) multiplex remote terminal unit (MRTU) Type I.
PASS: If second digit displayed on heads out display (HOD) is 4, 5, 6, or 7, go to paragraph 19–2.
FAIL: Location of fault: generator 1, wiring from generator to RH FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–6).

19–2 **SIGNAL NAME:** GEN 1 CONT STATUS
MEMORY LOCATION: 001532
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: Valid only during generator test.
SIGNAL FUNCTION: Monitors generator control unit (GCU) switching logic.
REMARKS: From generator control unit 1 through power distribution box to RH FAB MRTU Type I.
PASS: Location of fault if second digit displayed on HOD is 2, 3, 6, or 7: wiring from **GEN 1** switch to generator control unit 1. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–6).
FAIL: Location of fault: GCU 1, wiring from GCU to RH FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–6).

19–3 **SIGNAL NAME:** GEN 2 STATUS
MEMORY LOCATION: 001532
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: Valid only during generator test.
SIGNAL FUNCTION: Monitors field excitation.
REMARKS: From generator 2 through power distribution box to RH FAB MRTU Type I.
PASS: If first digit displayed on HOD is 2, 3, 6, or 7, go to paragraph 19–4.
FAIL: Location of fault: generator 2, wiring from generator to RH FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–6).

19–4 **SIGNAL NAME:** GEN 2 CONT STATUS
MEMORY LOCATION: 001532
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: Valid only during generator test.
SIGNAL FUNCTION: Monitors GCU switching logic.
REMARKS: From generator control unit 2 through power distribution box to RH FAB MRTU Type I.
PASS: Location of fault if second digit displayed on HOD is 2, 3, 6, or 7: wiring from **GEN 2** switch to generator control unit 2. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–6).
FAIL: Location of fault: GCU 2, wiring from GCU to RH FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–6).

CHAPTER 20

DOPPLER MULTIPLEX READ CODES

Doppler uses two words to provide data. The Doppler words are read with bit 19 being the most significant bit and bit 4 being the least significant bit. The analog MEMORY LOCATION will have both memory inspection locations listed.

19	18	17	16	15	14	13	12	11	10	9	8	7	6	6	4
MSB															LSB
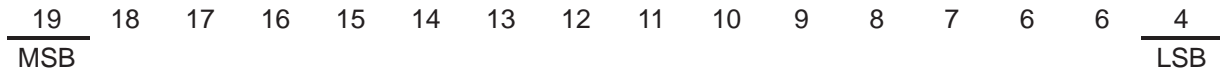
EXAMPLE:

20–7 **SIGNAL NAME:** DOP DRIFT VEL 1
MEMORY LOCATION: 000451 AND 000452
MEMORY DATA BIT(S): 16–4 AND 19–18 (SCALAR)
CONDITION: Monitor HOD digits 6, 5, 4, 3, and 2 should read 0
SIGNAL FUNCTION: Indicated doppler drift velocity.
REMARKS: From doppler through copilot/gunner (CPG) multiplex remote terminal unit (MRTU) Type III to fire control computer (FCC).
PASS: If CONDITION agrees with drift go to paragraph 20–8.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

FAILURE SYMPTOM INDEX

Symptom	Refer to paragraph
CDU DOES NOT DISPLAY CDU/DNS GO AND CURRENT VALUES	20–1
INACCURATE DRIFT (ASN–137 SDCC A/D FAIL)	20–1
INACCURATE PITCH (ASN–137 PITCH/ROLL FAIL)	20–21
NO TRACK ANGLE ERROR OR GROUNDSPEED	20–28
INACCURATE ROLL	20–33
INACCURATE DESIRED TRACK	20–35
INACCURATE CROSS TRACK DEVIATION	20–42
INACCURATE DISTANCE TO GO	20–49
INACCURATE BEARING TO DESTINATION	20–55
INACCURATE 100 KM SQUARE IDENTIFICATION	20–55
INACCURATE HEADING	20–55
INACCURATE VELOCITY	20–55
HDG OR A.C. REF FAIL	20–80

TABLE 20–1. ASCII CODE CONVERSIONS
(BITS 17–11 OR BITS 10–04)

40 = @	4B = K	56 = V	21 = !	2C = ,	37 = 7
41 = A	4C = L	57 = W	22 = "	2D = –	38 = 8
42 = B	4D = M	58 = X	23 = #	2E = .	39 = 9
43 = C	4E = N	59 = Y	24 = $	2F = /	3A = :
44 = D	4F = O	5A = Z	25 = %	30 = 0	3B = ;
45 = E	50 = P	5B = [	26 = &	31 = 1	3C = <
46 = F	51 = Q	5C = \	27 = '	32 = 2	3D = =
47 = G	52 = R	5D =]	28 = (	33 = 3	3E = >
48 = H	53 = S	5E = ^	29 =)	34 = 4	3F = ?
49 = I	54 = T	5F = _	2A = *	35 = 5	
4A = J	55 = U	20 =	2B = +	36 = 6	

Personnel Required:

(2)

References:

TM 9–1230–476–20–1
TM 11–1520–238–23–2

Equipment Conditions:

Ref	Condition
TM 11–1520–238–23–2	DOPPLER NAVIGATION SYSTEM (DNS) AN/ASN–128 or AN/ASN–137 – MAINTENANCE OPERATIONAL CHECK in progress

NOTE

- All multiplex read code responses are read from right to left.

- Multiplex read codes must be used in conjunction with applicable Maintenance Operational Check (MOC) in progress.

- Multiplex read codes are observed on the HOD (ADC) or CDU (ADD).

MULTIPLEX READ CODE INTERPRETATIONS

20–1 **SIGNAL NAME:** DOP DRIFT VEL BCD 1 –999.9/ +999.9 KM/HR (–200/ +200)
MEMORY LOCATION: 000447
MEMORY DATA BIT(S): 19–18 (BINARY)
CONDITION: If sixth digit displayed on HOD is 0, and fifth digit is 0, 1, 2, or 3=plus, north, west, up,
If sixth digit displayed on HOD is 0, and fifth digit is 4, 5, 6, or 7=failure warning
If sixth digit displayed on HOD is 1, and fifth digit is 0, 1, 2, or 3=no computed data and no failure detected
If sixth digit displayed on HOD is 1, and fifth digit is 4, 5, 6, or 7=minus, south, east, down, from
SIGNAL FUNCTION: Indicates sign/status of Doppler.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with Doppler drift, go to paragraph 20–2.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–2 **SIGNAL NAME:** DOP DRIFT VEL BCD 1
MEMORY LOCATION: 000447
MEMORY DATA BIT(S): 15–12 (HEX)
CONDITION: If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 0=0
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 0=1
If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 1=2
SIGNAL FUNCTION: Indicates hundreds field.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with drift velocity, go to paragraph 20–3.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–3 **SIGNAL NAME:** DOP DRIFT VEL BCD 1
MEMORY LOCATION: 000447
MEMORY DATA BIT(S): 11–8 (HEX)
CONDITION: If second digit displayed on HOD is 0 or 1, and third digit is 0 or 4=0
If second digit displayed on HOD is 2 or 3, and third digit is 0 or 4=1
If second digit displayed on HOD is 4 or 5, and third digit is 0 or 4=2
If second digit displayed on HOD is 6 or 7, and third digit is 0 or 4=3
If second digit displayed on HOD is 0 or 1, and third digit is 1 or 5=4
If second digit displayed on HOD is 2 or 3, and third digit is 1 or 5=5
If second digit displayed on HOD is 4 or 5, and third digit is 1 or 5=6
If second digit displayed on HOD is 6 or 7, and third digit is 1 or 5=7
If second digit displayed on HOD is 0 or 1, and third digit is 2 or 6=8
If second digit displayed on HOD is 2 or 3, and third digit is 2 or 6=9
SIGNAL FUNCTION: Indicates tens field.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with drift velocity, go to paragraph 20–4.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–4 **SIGNAL NAME:** DOP DRIFT VEL BCD 1
MEMORY LOCATION: 000447
MEMORY DATA BIT(S): 7–4 (HEX)
CONDITION: If first digit displayed on HOD is 0, and second digit is 0, 2, 4, or 6=0
If first digit displayed on HOD is 1, and second digit is 0, 2, 4, or 6=1
If first digit displayed on HOD is 2, and second digit is 0, 2, 4, or 6=2
If first digit displayed on HOD is 3, and second digit is 0. 2. 4, or 6=3
If first digit displayed on HOD is 4, and second digit is 0, 2, 4, or 6=4
If first digit displayed on HOD is 5, and second digit is 0, 2, 4, or 6=5
If first digit displayed on HOD is 6, and second digit is 0, 2, 4, or 6=6
If first digit displayed on HOD is 7, and second digit is 0, 2, 4, or 6=7
If first digit displayed on HOD is 0, and second digit is 1, 3, 5, or 7=8
If first digit displayed on HOD is 1, and second digit is 1, 3, 5, or 7=9
SIGNAL FUNCTION: Indicates ones field.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with drift velocity, go to paragraph 20–5.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–5 **SIGNAL NAME:** DOP DRIFT VEL BCD 2
MEMORY LOCATION: 000450
MEMORY DATA BIT(S): 19–16 (HEX)
CONDITION: If fifth digit displayed on HOD is 0, and sixth digit is 0=0
If fifth digit displayed on HOD is 1, and sixth digit is 0=1
If fifth digit displayed on HOD is 2, and sixth digit is 0=2
If fifth digit displayed on HOD is 3, and sixth digit is 0=3
If fifth digit displayed on HOD is 4, and sixth digit is 0=4
If fifth digit displayed on HOD is 5, and sixth digit is 0=5
If fifth digit displayed on HOD is 6, and sixth digit is 0=6
If fifth digit displayed on HOD is 7, and sixth digit is 0=7
If fifth digit displayed on HOD is 0, and sixth digit is 1=8
If fifth digit displayed on HOD is 1, and sixth digit is 1=9
SIGNAL FUNCTION: Indicates tenths field.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with drift velocity, go to paragraph 20–6.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–6 **SIGNAL NAME:** DOP DRIFT VEL 1
MEMORY LOCATION: 000451
MEMORY DATA BIT(S): 18–17 (BINARY)
CONDITION: If fifth digit displayed on HOD is 0 or 1=plus, north, west, up,
If fifth digit displayed on HOD is 2 or 3=failure warning
If fifth digit displayed on HOD is 4 or 5=no computed data and no failure detected
If fifth digit displayed on HOD is 6 or 7=minus, south, east, down, from
SIGNAL FUNCTION: Indicates sign/status of Doppler.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with drift, go to paragraph 20–7.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–7 **SIGNAL NAME:** DOP DRIFT VEL 2
MEMORY LOCATION: 000451 AND 000452
MEMORY DATA BIT(S): 16–4 AND 19–18 (SCALAR)
CONDITION: Monitor HOD, digits 6, 5, 4, 3 and 2 should read 0
SIGNAL FUNCTION: Indicates Doppler drift velocity.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with drift go to paragraph 20–8.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–8 **SIGNAL NAME:** DOP EASTING –99.99/+99.99 KM (0/+99.99)
MEMORY LOCATION: 000453
MEMORY DATA BIT(S): 19–18 (BINARY)
CONDITION: If sixth digit displayed on HOD is 0, and fifth digit is 0, 1, 2, or 3=plus, north, west, up, to
If sixth digit displayed on HOD is 0, and fifth digit is 4, 5, 6, or 7=failure warning
If sixth digit displayed on HOD is 1, and fifth digit is 0, 1, 2, or 3=no computed data and no failure detected
If sixth digit displayed on HOD is 1, and fifth digit displayed is 4, 5, 6, or 7=minus, south, east, down, from
SIGNAL FUNCTION: Indicates sign/status of Doppler.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with heading, go to paragraph 20–9.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–9 **SIGNAL NAME:** DOP EASTING
MEMORY LOCATION: 000453
MEMORY DATA BIT(S): 15–12 (HEX)
CONDITION: If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 0=0
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 0=1
If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 1=2
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 1=3
If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 2=4
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 2=5
If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 3=6
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 3=7
If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 4=8
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 4=9
SIGNAL FUNCTION: Indicates tens field.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with heading, go to paragraph 20–10.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–10 **SIGNAL NAME:**   DOP EASTING
MEMORY LOCATION: 000453
MEMORY DATA BIT(S):   11–8   (HEX)
CONDITION: If second digit displayed on HOD is 0 or 1, and third digit is 0 or 4=0
If second digit displayed on HOD is 2 or 3, and third digit is 0 or 4=1
If second digit displayed on HOD is 4 or 5, and third digit is 0 or 4=2
If second digit displayed on HOD is 6 or 7, and third digit is 0 or 4=3
If second digit displayed on HOD is 0 or 1, and third digit is 2 or 5=4
If second digit displayed on HOD is 2 or 3, and third digit is 1 or 5=5
If second digit displayed on HOD is 4 or 5, and third digit is 1 or 5=6
If second digit displayed on HOD is 6 or 7, and third digit is 1 or 5=7
If second digit displayed on HOD is 0 or 1, and third digit is 2 or 6=8
If second digit displayed on HOD is 2 or 3, and third digit is 2 or 6=9
SIGNAL FUNCTION: Indicates ones field.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with heading, go to paragraph 20–11.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
   Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–11 **SIGNAL NAME:**   DOP EASTING
MEMORY LOCATION: 000453
MEMORY DATA BIT(S):   7–4   (HEX)
CONDITION: If first digit displayed on HOD is 0, and second digit is 0, 2, 4, or 6=0
If first digit displayed on HOD is 1, and second digit is 0, 2, 4, or 6=1
If first digit displayed on HOD is 2, and second digit is 0, 2, 4, or 6=2
If first digit displayed on HOD is 3, and second digit is 0. 2. 4, or 6=3
If first digit displayed on HOD is 4, and second digit is 0, 2, 4, or 6=4
If first digit displayed on HOD is 5, and second digit is 0, 2, 4, or 6=5
If first digit displayed on HOD is 6, and second digit is 0, 2, 4, or 6=6
If first digit displayed on HOD is 7, and second digit is 0, 2, 4, or 6=7
If first digit displayed on HOD is 0, and second digit is 1, 3, 5, or 7=8
If first digit displayed on HOD is 1, and second digit is 1, 3, 5, or 7=9
SIGNAL FUNCTION: Indicates tenths field.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with heading, go to paragraph 20–12.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
   Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–12 **SIGNAL NAME:**   DOP EASTING
MEMORY LOCATION: 000454
MEMORY DATA BIT(S):   19–16   (HEX)
CONDITION: If fifth digit displayed on HOD is 0, and sixth digit is 0=0
If fifth digit displayed on HOD is 1, and sixth digit is 0=1
If fifth digit displayed on HOD is 2, and sixth digit is 0=2
If fifth digit displayed on HOD is 3, and sixth digit is 0=3
If fifth digit displayed on HOD is 4, and sixth digit is 0=4
If fifth digit displayed on HOD is 5, and sixth digit is 0=5
If fifth digit displayed on HOD is 6, and sixth digit is 0=6
If fifth digit displayed on HOD is 7, and sixth digit is 0=7
If fifth digit displayed on HOD is 0, and sixth digit is 1=8
If fifth digit displayed on HOD is 1, and sixth digit is 1=9
SIGNAL FUNCTION: Indicates hundredths field.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with heading, go to paragraph 20–15.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–13 **SIGNAL NAME:**   DOP HEADING VEL
MEMORY LOCATION: 000455
MEMORY DATA BIT(S):   18–17   (BINARY)
CONDITION: If fifth digit displayed on HOD is 0 or 1=plus, north, west, up, to
If fifth digit displayed on HOD is 2 or 3=failure warning
If fifth digit displayed on HOD is 4 or 5=no computed data and no failure detected
If fifth displayed on HOD is 6 or 7=minus, south, east, down, from
SIGNAL FUNCTION: Indicates sign/status of Doppler.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with heading velocity, go to paragraph 20–14.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–14 **SIGNAL NAME:**   DOP HEADING VEL
MEMORY LOCATION: 000455 AND 000456
MEMORY DATA BIT(S):   16–4 AND 19–18   (SCALAR)
CONDITION: Monitor HOD, digits 6, 5, 4, 3 and 2 should read 0
SIGNAL FUNCTION: Indicates Doppler heading.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with heading, go to paragraph 20–61.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–15 **SIGNAL NAME:** DOP NORTHING –99.99/+99.99 KM
MEMORY LOCATION: 000457
MEMORY DATA BIT(S): 19–18   (BINARY)
CONDITION: If sixth digit displayed on HOD is 0, and fifth digit is 0, 1, 2, or 3=plus, north, west, up, to
If sixth digit displayed on HOD is 0, and fifth digit displayed is 4, 5, 6, or 7=failure warning
If sixth digit displayed on HOD is 1, and fifth digit is 0, 1, 2, or 3=no computed data and no failure detected
If sixth digit displayed on HOD is 1, and fifth digit is 4, 5, 6, or 7=minus, south, east, down, from
SIGNAL FUNCTION: Indicates sign/status of Doppler.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with heading, go to paragraph 20–16.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–16 **SIGNAL NAME:** DOP NORTHING
MEMORY LOCATION: 000457
MEMORY DATA BIT(S): 15–12   (HEX)
CONDITION: If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 0=0
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 0=1
If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 1=2
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 1=3
If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 2=4
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 2=5
If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 3=6
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 3=7
If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 4=8
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 4=9
SIGNAL FUNCTION: Indicates tens field.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with heading, go to paragraph 20–17.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–17 **SIGNAL NAME:** DOP NORTHING
MEMORY LOCATION: 000457
MEMORY DATA BIT(S): 11–8   (HEX)
CONDITION: If second digit displayed on HOD is 0 or 1, and third digit is 0 or 4=0
If second digit displayed on HOD is 2 or 3, and third digit is 0 or 4=1
If second digit displayed on HOD is 4 or 5, and third digit is 0 or 4=2
If second digit displayed on HOD is 6 or 7, and third digit is 0 or 4=3
If second digit displayed on HOD is 0 or 1, and third digit is 2 or 5=4
If second digit displayed on HOD is 2 or 3, and third digit is 1 or 5=5
If second digit displayed on HOD is 4 or 5, and third digit is 1 or 5=6
If second digit displayed on HOD is 6 or 7, and third digit is 1 or 5=7
If second digit displayed on HOD is 0 or 1, and third digit is 2 or 6=8
If second digit displayed on HOD is 2 or 3, and third digit is 2 or 6=9
SIGNAL FUNCTION: Indicates ones field.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with heading, go to paragraph 20–18.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–18 **SIGNAL NAME:**   DOP NORTHING
      MEMORY LOCATION: 000457
      MEMORY DATA BIT(S):   7–4   (HEX)
      CONDITION: If first digit displayed on HOD is 0, and second digit is 0, 2, 4, or 6=0
                       If first digit displayed on HOD is 1, and second digit is 0, 2, 4, or 6=1
                       If first digit displayed on HOD is 2, and second digit is 0, 2, 4, or 6=2
                       If first digit displayed on HOD is 3, and second digit is 0. 2. 4, or 6=3
                       If first digit displayed on HOD is 4, and second digit is 0, 2, 4, or 6=4
                       If first digit displayed on HOD is 5, and second digit is 0, 2, 4, or 6=5
                       If first digit displayed on HOD is 6, and second digit is 0, 2, 4, or 6=6
                       If first digit displayed on HOD is 7, and second digit is 0, 2, 4, or 6=7
                       If first digit displayed on HOD is 0, and second digit is 1, 3, 5, or 7=8
                       If first digit displayed on HOD is 1, and second digit is 1, 3, 5, or 7=9
      SIGNAL FUNCTION: Indicates tenths field.
      REMARKS: From Doppler through CPG MRTU Type III to FCC.
      PASS: If CONDITION agrees with heading, go to paragraph 20–19.
      FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
         Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–19 **SIGNAL NAME:**   DOP NORTHING
      MEMORY LOCATION: 000460
      MEMORY DATA BIT(S):   19–16   (HEX)
      CONDITION: If fifth digit displayed on HOD is 0, and sixth digit is 0=0
                       If fifth digit displayed on HOD is 1, and sixth digit is 0=1
                       If fifth digit displayed on HOD is 2, and sixth digit is 0=2
                       If fifth digit displayed on HOD is 3, and sixth digit is 0=3
                       If fifth digit displayed on HOD is 4, and sixth digit is 0=4
                       If fifth digit displayed on HOD is 5, and sixth digit is 0=5
                       If fifth digit displayed on HOD is 6, and sixth digit is 0=6
                       If fifth digit displayed on HOD is 7, and sixth digit is 0=7
                       If fifth digit displayed on HOD is 0, and sixth digit is 1=8
                       If fifth digit displayed on HOD is 1, and sixth digit is 1=9
      SIGNAL FUNCTION: Indicates hundredths field.
      REMARKS: From Doppler through CPG MRTU Type III to FCC.
      PASS: If CONDITION agrees with heading, go to paragraph 20–20.
      FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
         Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–20 **SIGNAL NAME:**   DOP COS PITCH
      MEMORY LOCATION: 000461
      MEMORY DATA BIT(S):   18–17   (BINARY)
      CONDITION: If fifth digit displayed on HOD is 0 or 1=plus, north, west, up, to
                       If fifth digit displayed on HOD is 2 or 3=failure warning
                       If fifth digit displayed on HOD is 4 or 5=no computed data and no failure detected
                       If fifth digit displayed on HOD is 6 or 7=minus, south, east, down, from
      SIGNAL FUNCTION: Indicates sign/status of Doppler.
      REMARKS: From Doppler through CPG MRTU Type III to FCC.
      PASS: If CONDITION agrees with heading, go to paragraph 20–21.
      FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
         Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–21 **SIGNAL NAME:** DOP COS PITCH
MEMORY LOCATION: 000461 AND 000462
MEMORY DATA BIT(S): 16–4 AND 19–18 (SCALAR)
CONDITION: Monitor HOD: memory location response should indicate a positive if aircraft is in nose
up attitude or negative if aircraft is in nose down attitude.
SIGNAL FUNCTION: Indicates Doppler cosine pitch.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION has been met, go to paragraph 20–26.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–22 **SIGNAL NAME:** DOP GROUND SPEED –999/+999 KM/HR (0/+500)
MEMORY LOCATION: 000463
MEMORY DATA BIT(S): 19–18 (BINARY)
CONDITION: If sixth digit displayed on HOD is 0, and fifth digit is 0, 1, 2, or 3=plus, north,
west, up
If sixth digit displayed on HOD is 0, and fifth digit is 4, 5, 6, or 7=failure warning
If sixth digit displayed on HOD is 1, and fifth digit is 0, 1, 2, or 3=no computed data and
no failure detected
If sixth digit displayed on HOD is 1, and fifth digit is 4, 5, 6, or 7=minus, south, east,
down, from
SIGNAL FUNCTION: Indicates sign/status of Doppler.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION areas with ground speed go to paragraph 20–23.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–23 **SIGNAL NAME:** DOP GROUND SPEED
MEMORY LOCATION: 000463
MEMORY DATA BIT(S): 15–12 (HEX)
CONDITION: If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 0=0
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 0=1
If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 1=2
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 1=3
If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 2=4
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 2=5
If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 3=6
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 3=7
If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 4=8
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 4=9
SIGNAL FUNCTION: Indicates hundreds field.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with ground speed, go to paragraph 20–24.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–24 **SIGNAL NAME:** DOP GROUND SPEED
MEMORY LOCATION: 000463
MEMORY DATA BIT(S): 11–8 (HEX)
CONDITION: If second digit displayed on HOD is 0 or 1, and third digit is 0 or 4=0
If second digit displayed on HOD is 2 or 3, and third digit is 0 or 4=1
If second digit displayed on HOD is 4 or 5, and third digit is 0 or 4=2
If second digit displayed on HOD is 6 or 7, and third digit is 0 or 4=3
If second digit displayed on HOD is 0 or 1, and third digit is 2 or 5=4
If second digit displayed on HOD is 2 or 3, and third digit is 1 or 5=5
If second digit displayed on HOD is 4 or 5, and third digit is 1 or 5=6
If second digit displayed on HOD is 6 or 7, and third digit is 1 or 5=7
If second digit displayed on HOD is 0 or 1, and third digit is 2 or 6=8
If second digit displayed on HOD is 2 or 3, and third digit is 2 or 6=9
SIGNAL FUNCTION: Indicates tens field.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: IF CONDITION agrees with ground speed, go to paragraph 20–25.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III,CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–25 **SIGNAL NAME:** DOP GROUND SPEED
MEMORY LOCATION: 000463
MEMORY DATA BIT(S): 7–4 (HEX)
CONDITION: If first digit displayed on HOD is 0, and second digit is 0, 2, 4, or 6=0
If first digit displayed on HOD is 1, and second digit is 0, 2, 4, or 6=1
If first digit displayed on HOD is 2, and second digit is 0, 2, 4, or 6=2
If first digit displayed on HOD is 3, and second digit is 0. 2. 4, or 6=3
If first digit displayed on HOD is 4, and second digit is 0, 2, 4, or 6=4
If first digit displayed on HOD is 5, and second digit is 0, 2, 4, or 6=5
If first digit displayed on HOD is 6, and second digit is 0, 2, 4, or 6=6
If first digit displayed on HOD is 7, and second digit is 0, 2, 4, or 6=7
If first digit displayed on HOD is 0, and second digit is 4, 5, 6, or 7=8
If first digit displayed on HOD is 1, and second digit is 1, 3, 5, or 7=9
SIGNAL FUNCTION: Indicates ones field.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: Location of fault if CONDITION agrees with ground speed: CPG MRTU Type III, wiring from
CPG MRTU Type III to Doppler, and Doppler. Troubleshoot wiring to isolate fault
(TM 9–1230–476–20–1).
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–26 **SIGNAL NAME:** DOP SINE PITCH
MEMORY LOCATION: 000465
MEMORY DATA BIT(S): 18–17 (BINARY))
CONDITION: If fifth digit displayed on HOD is 0 or 1=plus, north, west, up
If fifth digit displayed on HOD is 2 or 3=failure warning
If fifth digit displayed on HOD is 4 or 5=no computed data and no failure detected If fifth
digit displayed on HOD is 6 or 7=minus, south, east, down, from
SIGNAL FUNCTION: Indicates sine/status of Doppler.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with heading, go to paragraph 20–27.
FAIL: Location of fault: RTA, wiring from RTA to Doppler, Doppler. Troubleshoot wiring to isolate fault
(TM 11–1520–238–23–2).

20–27 **SIGNAL NAME:** DOP SINE PITCH
MEMORY LOCATION: 000465 AND 000466
MEMORY DATA BIT(S): 16–4 AND 19–18 (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate a positive if aircraft is in nose up attitude or a negative if aircraft is in nose down attitude.
SIGNAL FUNCTION: Indicates Doppler sine pitch.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION has been met go to paragraph 20–33.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III,CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–28 **SIGNAL NAME:** DOP TRACK ANGLE ERROR (–180/+180 DEGREES)
MEMORY LOCATION: 000467
MEMORY DATA BIT(S): 19–18 (BINARY)
CONDITION: If sixth digit displayed on HOD is 0, and fifth digit is 0, 1, 2, or 3=plus, north west, up
If sixth digit displayed on HOD is 0, and fifth digit is 4, 5, 6, or 7=failure warning
If sixth digit displayed on HOD is 1, and fifth digit is 0, 1, 2, or 3=no computed data and no failure detected
If sixth digit displayed on HOD is 1, and fifth digit is 4, 5, 6, of 7=minus, south, east, down, from
SIGNAL FUNCTION: Indicates sine/status of Doppler.
REMARKS: From RTA to Doppler. From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with track angle, go to paragraph 20–29.
FAIL: Location of fault: RTA, wiring from RTA to Doppler, Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–29 **SIGNAL NAME:** DOP TRACK ANGLE ERROR
MEMORY LOCATION: 000467
MEMORY DATA BIT(S): 17–16 (BINARY)
CONDITION: 0 through 3 displayed
SIGNAL FUNCTION: Indicates hundreds field.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with track angle, go to paragraph 20–30.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–30 SIGNAL NAME: DOP TRACK ANGLE ERROR
  MEMORY LOCATION: 000467
  MEMORY DATA BIT(S):   15–12   (HEX)
  CONDITION: If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 0=0
    If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 0=1
    If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 1=2
    If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 1=3
    If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 2=4
    If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 2=5
    If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 3=6
    If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 3=7
    If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 4=8
    If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 4=9
  SIGNAL FUNCTION: Indicates tens field.
  REMARKS: From Doppler through CPG MRTU Type III to FCC.
  PASS: If CONDITION agrees with track angle, go to paragraph 20–31.
  FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
    Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–31 SIGNAL NAME: DOP TRACK ANGLE ERROR
  MEMORY LOCATION: 000467
  MEMORY DATA BIT(S):   11–8   (HEX)
  CONDITION: If second digit displayed on HOD is 0 or 1, and third digit is 0 or 4=0
    If second digit displayed on HOD is 2 or 3, and third digit is 0 or 4=1
    If second digit displayed on HOD is 4 or 5, and third digit is 0 or 4=2
    If second digit displayed on HOD is 6 or 7, and third digit is 0 or 4=3
    If second digit displayed on HOD is 0 or 1, and third digit is 2 or 5=4
    If second digit displayed on HOD is 2 or 3, and third digit is 1 or 5=5
    If second digit displayed on HOD is 4 or 5, and third digit is 1 or 5=6
    If second digit displayed on HOD is 6 or 7, and third digit is 1 or 5=7
    If second digit displayed on HOD is 0 or 1, and third digit is 2 or 6=8
    If second digit displayed on HOD is 2 or 3, and third digit is 2 or 6=9
  SIGNAL FUNCTION: Indicates ones field.
  REMARKS: From Doppler through CPG MRTU Type III to FCC.
  PASS: If CONDITION agrees with track angle, go to paragraph 20–32.
  FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
    Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–32 **SIGNAL NAME:** DOP TRACK ANGLE ERROR
   MEMORY LOCATION: 000467
   MEMORY DATA BIT(S): 7–4 (HEX)
   CONDITION: If first digit displayed on HOD is 0, and second digit is 0, 2, 4, or 6=0
         If first digit displayed on HOD is 1, and second digit is 0, 2, 4, or 6=1
         If first digit displayed on HOD is 2, and second digit is 0, 2, 4, or 6=2
         If first digit displayed on HOD is 3, and second digit is 0. 2. 4, or 6=3
         If first digit displayed on HOD is 4, and second digit is 0, 2, 4, or 6=4
         If first digit displayed on HOD is 5, and second digit is 0, 2, 4, or 6=5
         If first digit displayed on HOD is 6, and second digit is 0, 2, 4, or 6=6
         If first digit displayed on HOD is 7, and second digit is 0, 2, 4, or 6=7
         If first digit displayed on HOD is 0, and second digit is 4, 5, 6, or 7=8
         If first digit displayed on HOD is 1, and second digit is 1, 3, 5, or 7=9
   SIGNAL FUNCTION: Indicates tenths field.
   REMARKS: From Doppler through CPG MRTU Type III to FCC.
   PASS: If CONDITION agrees with track angle, go to paragraph 20–47.
   FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
      Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–33 **SIGNAL NAME:** DOP COSINE ROLL
   MEMORY LOCATION: 000471
   MEMORY DATA BIT(S): 18–17 (BINARY)
   CONDITION: If fifth digit displayed on HOD is 0 or 1=plus, north, west, up, to
         If fifth digit displayed on HOD is 2 or 3=failure warning
         If fifth digit displayed on HOD is 4 or 5=no computed data and no failure detected
         If fifth digit displayed is 6 or 7=minus, south, east , down, from
   SIGNAL FUNCTION: Indicates sine/status of Doppler.
   REMARKS: From Doppler through CPG MRTU Type III to FCC.
   PASS: If CONDITION agrees with attitude, go to paragraph 20–34.
   FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
      Troubleshoot wiring to isolate fault. (TM 11–1520–238–23–2).

20–34 **SIGNAL NAME:** DOP COSINE ROLL
   MEMORY LOCATION: 000471 AND 000472
   MEMORY DATA BIT(S): 16–4 AND 19–18 (SCALAR)
   CONDITION: Monitor HOD; memory location response should indicate a positive if aircraft is in right
         roll or negative if aircraft is in left roll.
   SIGNAL FUNCTION: Indicates Doppler cosine roll.
   REMARKS: From Doppler through CPG MRTU Type III to FCC.
   PASS: If CONDITION agrees with attitude, go to paragraph 20–35.
   FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
      Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–35 **SIGNAL NAME:** DOP DESIRED TRACK (–180/+180 DEGREES)
MEMORY LOCATION: 000473
MEMORY DATA BIT(S): 19–18 (BINARY)
CONDITION: If sixth digit displayed on HOD is 0, and fifth digit is 0, 1, 2, or 3=plus, north, west, up, to
If sixth digit displayed on HOD is 0, and fifth digit is 4, 5, 6, or 7=failure warning
If sixth digit displayed on HOD is 1, and fifth digit is 0, 1, 2, or 3=no computed data and no failure detected
If sixth digit displayed on HOD is 1, and fifth digit is 4, 5, 6, or 7=minus, south, east, down, and from
SIGNAL FUNCTION: Indicates sine/status of Doppler.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with track, go to paragraph 20–36.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–36 **SIGNAL NAME:** DOP DESIRED TRACK
MEMORY LOCATION: 000473
MEMORY DATA BIT(S): 17–16 (BINARY)
CONDITION: If fifth digit displayed on HOD is 0 or 4=0
If fifth digit displayed on HOD is 1 or 5=1
If fifth digit displayed on HOD is 2 or 6=2
If fifth digit displayed on HOD is 3 or 7=3
SIGNAL FUNCTION: Indicates hundreds field.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with track, go to paragraph 20–37.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–37 **SIGNAL NAME:** DOP DESIRED TRACK
MEMORY LOCATION: 000473
MEMORY DATA BIT(S): 15–12 (HEX)
CONDITION: If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 0=0
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 0=1
If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 1=2
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 1=3
If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 2=4
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 2=5
If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 3=6
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 3=7
If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 4=8
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 4=9
SIGNAL FUNCTION: Indicates tens field.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with track, go to paragraph 20–38.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–38 **SIGNAL NAME:** DOP DESIRED TRACK
 MEMORY LOCATION: 000473
 MEMORY DATA BIT(S): 11–8 (HEX)
 CONDITION: If second digit displayed on HOD is 0 or 1, and third digit is 0 or 4=0
 If second digit displayed on HOD is 2 or 3, and third digit is 0 or 4=1
 If second digit displayed on HOD is 4 or 5, and third digit is 0 or 4=2
 If second digit displayed on HOD is 6 or 7, and third digit is 0 or 4=3
 If second digit displayed on HOD is 0 or 1, and third digit is 2 or 5=4
 If second digit displayed on HOD is 2 or 3, and third digit is 1 or 5=5
 If second digit displayed on HOD is 4 or 5, and third digit is 1 or 5=6
 If second digit displayed on HOD is 6 or 7, and third digit is 1 or 5=7
 If second digit displayed on HOD is 0 or 1, and third digit is 2 or 6=8
 If second digit displayed on HOD is 2 or 3, and third digit is 2 or 6=9
 SIGNAL FUNCTION: Indicates ones field.
 REMARKS: From Doppler through CPG MRTU Type III to FCC.
 PASS: If CONDITION agrees with track, go to paragraph 20–39.
 FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
 Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–39 **SIGNAL NAME:** DOP DESIRED TRACK
 MEMORY LOCATION: 000473
 MEMORY DATA BIT(S): 7–4 (HEX)
 CONDITION: If first digit displayed on HOD is 0, and second digit is 0, 2, 4, or 6=0
 If first digit displayed on HOD is 1, and second digit is 0, 2, 4, or 6=1
 If first digit displayed on HOD is 2, and second digit is 0, 2, 4, or 6=2
 If first digit displayed on HOD is 3, and second digit is 0. 2. 4, or 6=3
 If first digit displayed on HOD is 4, and second digit is 0, 2, 4, or 6=4
 If first digit displayed on HOD is 5, and second digit is 0, 2, 4, or 6=5
 If first digit displayed on HOD is 6, and second digit is 0, 2, 4, or 6=6
 If first digit displayed on HOD is 7, and second digit is 0, 2, 4, or 6=7
 If first digit displayed on HOD is 0, and second digit is 4, 5, 6, or 7=8
 If first digit displayed on HOD is 1, and second digit is 1, 3, 5, or 7=9
 SIGNAL FUNCTION: Indicates tenths field.
 REMARKS: From Doppler through CPG MRTU Type III to FCC.
 PASS: If CONDITION agrees with track, go to paragraph 20–47.
 FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
 Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–40 **SIGNAL NAME:** DOP SINE ROLL
 MEMORY LOCATION: 000475
 MEMORY DATA BIT(S): 18–17 (BINARY)
 CONDITION: If sixth digit displayed on HOD is 0 or 1=plus, north, west, up, to
 If sixth digit displayed on HOD is 2 or 3=failure warning
 If sixth digit displayed on HOD is 4 or 5=no computed data and no failure detected
 If sixth digit displayed on HOD is 6 or 7=minus, south, east, down, from
 SIGNAL FUNCTION: Indicates sine/status of Doppler.
 REMARKS: From Doppler through CPG MRTU Type III to FCC.
 PASS: If CONDITION agrees with heading, go to paragraph 20–34.
 FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
 Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–41 SIGNAL NAME: DOP SINE ROLL
MEMORY LOCATION: 000475 AND 000476
MEMORY DATA BIT(S):   16–4 AND 19–18   (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate a positive if aircraft is in right roll or a negative if aircraft is in left roll.
SIGNAL FUNCTION: Indicates Doppler sine roll.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION has been met go to paragraph 20–42.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–42 SIGNAL NAME: DOP CROSSTRACK DEVIATION (–399.9/+399.9 KM)
MEMORY LOCATION: 000477
MEMORY DATA BIT(S):   19–18   (BINARY)
CONDITION: If sixth digit displayed on HOD is 0, and fifth digit is 0, 1, 2, or 3=plus, north, west, up, to
If sixth digit displayed on HOD is 0, and fifth digit is 4, 5, 6, or 7=failure warning
If sixth digit displayed on HOD is 1, and fifth digit is 0, 1, 2, or 3=no computed data and no failure detected
If sixth digit displayed on HOD is 1, and fifth digit is 4, 5, 6, or 7=minus, south, east, down, from
SIGNAL FUNCTION: Indicates sine/status of Doppler.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with crosstrack deviation, go to paragraph 20–43.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–43 SIGNAL NAME: DOP CROSSTRACK DEVIATION
MEMORY LOCATION: 000477
MEMORY DATA BIT(S):   17–16   (BINARY)
CONDITION: If fifth digit displayed on HOD is 0 or 4=0
If fifth digit displayed on HOD is 1 or 5=1
If fifth digit displayed on HOD is 2 or 6=2
If fifth digit displayed on HOD is 3 or 7=3
SIGNAL FUNCTION: Indicates hundreds field.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with crosstrack deviation, go to paragraph 20–44.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–44   SIGNAL NAME: DOP CROSSTRACK DEVIATION
MEMORY LOCATION: 000477
MEMORY DATA BIT(S):   15–12   (HEX)
CONDITION: If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 0=0
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 0=1
If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 1=2
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 1=3
If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 2=4
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 2=5
If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 3=6
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 3=7
If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 4=8
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 4=9
SIGNAL FUNCTION: Indicates tens field.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with crosstrack deviation, go to paragraph 20–45.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III,CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–45   SIGNAL NAME: DOP CROSSTRACK DEVIATION
MEMORY LOCATION: 000477
MEMORY DATA BIT(S):   11–8   (HEX)
CONDITION: If second digit displayed on HOD is 0 or 1, and third digit is 0 or 4=0
If second digit displayed on HOD is 2 or 3, and third digit is 0 or 4=1
If second digit displayed on HOD is 4 or 5, and third digit is 0 or 4=2
If second digit displayed on HOD is 6 or 7, and third digit is 0 or 4=3
If second digit displayed on HOD is 0 or 1, and third digit is 2 or 5=4
If second digit displayed on HOD is 2 or 3, and third digit is 1 or 5=5
If second digit displayed on HOD is 4 or 5, and third digit is 1 or 5=6
If second digit displayed on HOD is 6 or 7, and third digit is 1 or 5=7
If second digit displayed on HOD is 0 or 1, and third digit is 2 or 6=8
If second digit displayed on HOD is 2 or 3, and third digit is 2 or 6=9
SIGNAL FUNCTION: Indicates ones field.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with crosstrack deviation, go to paragraph 20–46.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–46 SIGNAL NAME: DOP CROSSTRACK DEVIATION
MEMORY LOCATION: 000477
MEMORY DATA BIT(S): 7–4   (HEX)
CONDITION: If first digit displayed on HOD is 0, and second digit is 0, 2, 4, or 6=0
              If first digit displayed on HOD is 1, and second digit is 0, 2, 4, or 6=1
              If first digit displayed on HOD is 2, and second digit is 0, 2, 4, or 6=2
              If first digit displayed on HOD is 3, and second digit is 0. 2. 4, or 6=3
              If first digit displayed on HOD is 4, and second digit is 0, 2, 4, or 6=4
              If first digit displayed on HOD is 5, and second digit is 0, 2, 4, or 6=5
              If first digit displayed on HOD is 6, and second digit is 0, 2, 4, or 6=6
              If first digit displayed on HOD is 7, and second digit is 0, 2, 4, or 6=7
              If first digit displayed on HOD is 0, and second digit is 1, 3, 5, or 7=8
              If first digit displayed on HOD is 1, and second digit is 1, 3, 5, or 7=9
SIGNAL FUNCTION: Indicates tenths field.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: Location of fault if CONDITION agrees with crosstrack deviation: CPG MRTU Type III, wiring
       from CPG MRTU Type III to Doppler, Doppler. Troubleshoot wiring to isolate fault
       (TM 9–1230–476–20–1).
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
       Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–47 SIGNAL NAME: DOP COSINE TRUE HEADING
MEMORY LOCATION: 000501
MEMORY DATA BIT(S): 18–17   (BINARY)
CONDITION: If fifth digit displayed on HOD is 0 or 1=plus, north, west, up, to
              If fifth digit displayed on HOD is 2 or 3=failure warning
              If fifth digit displayed on HOD is 4 or 5=no computed data and no failure detected
              If fifth digit displayed on HOD is 6 or 7=minus, south, east, down, from
SIGNAL FUNCTION: Indicates sine/status of Doppler.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with heading, go to paragraph 20–48.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
       Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–48 SIGNAL NAME: DOP COSINE TRUE HEADING
MEMORY LOCATION: 000501 AND 000502
MEMORY DATA BIT(S): 16–4 AND 19–18   (SCALAR)
CONDITION: Monitor HOD; memory location response should indicate a positive from 0 to
              180 degrees or a negative from 181 to 359 degrees.
SIGNAL FUNCTION: Indicates Doppler cosine true heading.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with heading, go to paragraph 20–49.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
       Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–49 **SIGNAL NAME:** DOP DISTANCE TO GO (–999.99/+999.99 KM).
MEMORY LOCATION: 000503
MEMORY DATA BIT(S): 19–18 (BINARY)
CONDITION: If sixth digit displayed on HOD is 0, and fifth digit is 0, 1, 2, or 3=plus, north, west, up, to
If sixth digit displayed on HOD is 0, and fifth digit is 4, 5, 6, or 7=failure warning
If sixth digit displayed on HOD is 1, and fifth digit is 0, 1, 2, or 3=no computed data and no failure detected
If sixth digit displayed on HOD is 1, and fifth digit is 4, 5, 6, or 7=minus, south, east, down, from
SIGNAL FUNCTION: Indicates sine/status of Doppler.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with distance to go, go to paragraph 20–50.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–50 **SIGNAL NAME:** DOP DISTANCE TO GO
MEMORY LOCATION: 000503
MEMORY DATA BIT(S): 15–12 (HEX)
CONDITION: If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 0=0
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 0=1
If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 1=2
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 1=3
If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 2=4
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 2=5
If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 3=6
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 3=7
If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 4=8
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 4=9
SIGNAL FUNCTION: Indicates hundreds field.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with distance to go, go to paragraph 20–51.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–51 **SIGNAL NAME:** DOP DISTANCE TO GO
MEMORY LOCATION: 000503
MEMORY DATA BIT(S): 11–8 (HEX)
CONDITION: If second digit displayed on HOD is 0 or 1, and third digit is 0 or 4=0
If second digit displayed on HOD is 2 or 3, and third digit is 0 or 4=1
If second digit displayed on HOD is 4 or 5, and third digit is 0 or 4=2
If second digit displayed on HOD is 6 or 7, and third digit is 0 or 1=3
If second digit displayed on HOD is 0 or 1, and third digit is 2 or 3=4
If second digit displayed on HOD is 2 or 3, and third digit is 1 or 5=5
If second digit displayed on HOD is 4 or 5, and third digit is 1 or 5=6
If second digit displayed on HOD is 6 or 7, and third digit is 1 or 5=7
If second digit displayed on HOD is 0 or 1, and third digit is 2 or 6=8
If second digit displayed on HOD is 2 or 3, and third digit is 2 or 6=9
SIGNAL FUNCTION: Indicates tens field.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with distance to go, go to paragraph 20–52.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–52 **SIGNAL NAME:**   DOP DISTANCE TO GO
MEMORY LOCATION: 000503
MEMORY DATA BIT(S):   7–4   (HEX)
CONDITION: If first digit displayed on HOD is 0, and second digit is 0, 2, 4, or 6=0
If first digit displayed on HOD is 1, and second digit is 0, 2, 4, or 6=1
If first digit displayed on HOD is 2, and second digit is 0, 2, 4, or 6=2
If first digit displayed on HOD is 3, and second digit is 0. 2. 4, or 6=3
If first digit displayed on HOD is 4, and second digit is 0, 2, 4, or 6=4
If first digit displayed on HOD is 5, and second digit is 0, 2, 4, or 6=5
If first digit displayed on HOD is 6, and second digit is 0, 2, 4, or 6=6
If first digit displayed on HOD is 7, and second digit is 0, 2, 4, or 6=7
If first digit displayed on HOD is 0, and second digit is 1, 3, 5, or 7=8
If first digit displayed on HOD is 1, and second digit is 1, 3, 5, or 7=9
SIGNAL FUNCTION: Indicates ones field.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with distance to go, go to paragraph 20–53.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–53 **SIGNAL NAME:**   DOP DISTANCE TO GO
MEMORY LOCATION: 000504
MEMORY DATA BIT(S):   19–16   (HEX)
CONDITION: Fifth digit displayed on HOD is 0, and sixth digit is 0=0
Fifth digit displayed on HOD is 1, and sixth digit is 0=1
Fifth digit displayed on HOD is 2, and sixth digit is 0=2
Fifth digit displayed on HOD is 5, and sixth digit is 0=3
Fifth digit displayed on HOD is 4, and sixth digit is 0=4
Fifth digit displayed on HOD is 5, and sixth digit is 0=5
Fifth digit displayed on HOD is 6, and sixth digit is 0=6
Fifth digit displayed on HOD is 7, and sixth digit is 0=7
Fifth digit displayed on HOD is 0, and sixth digit is 1=8
Fifth digit displayed on HOD is 1, and sixth digit is 1=9
SIGNAL FUNCTION: Indicates tenths field.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with distance to go, go to paragraph 20–54.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–54 **SIGNAL NAME:** DOP DISTANCE TO GO
 MEMORY LOCATION: 000504
 MEMORY DATA BIT(S): 15–12 (HEX)
 CONDITION: If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 0=0
   If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 0=1
   If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 1=2
   If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 1=3
   If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 2=4
   If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 2=5
   If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 3=6
   If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 3=7
   If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 4=8
   If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 4=9
 SIGNAL FUNCTION: Indicates hundredths field.
 REMARKS: From Doppler through CPG MRTU Type III to FCC.
 PASS: Location of fault if CONDITION agrees with distance to go: CPG MRTU Type III, wiring from
   CPG MRTU Type III to Doppler, and Doppler. Troubleshoot wiring to isolate fault
   (TM 9–1230–476–20–1).
 FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
   Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–55 **SIGNAL NAME:** DOP SINE TRUE HEADING
 MEMORY LOCATION: 000505
 MEMORY DATA BIT(S): 18–17 (BINARY)
 CONDITION: If fifth digit displayed on HOD is 2 or 3=failure warning
   If fifth digit displayed on HOD is 4 or 5=no computed data and no failure detected
   If fifth digit displayed on HOD is 6 or 7=minus, south, east, down, and from
 SIGNAL FUNCTION: Indicates sine/status of Doppler.
 REMARKS: From Doppler through CPG MRTU Type III to FCC.
 PASS: If CONDITION agrees with heading, go to paragraph 20–56.
 FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
   Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–56 **SIGNAL NAME:** DOP SINE TRUE HEADING
 MEMORY LOCATION: 000505 AND 000506
 MEMORY DATA BIT(S): 16–4 AND 19–18 (SCALAR)
 CONDITION: Monitor HOD; memory location response should indicate a positive from 0 to
   180 degrees or a negative from 181 to 359 degrees.
 SIGNAL FUNCTION: Indicates Doppler sine true heading.
 REMARKS: From Doppler through CPG MRTU Type III to FCC.
 PASS: If CONDITION agrees with heading, go to paragraph 20–57.
 FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
   Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–57 SIGNAL NAME: DOP BITE 1
MEMORY LOCATION: 000511
MEMORY DATA BIT(S): 19–4 (HEX)
CONDITION: 125252 should be displayed on HOD.
SIGNAL FUNCTION: Monitors Doppler.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION has been met, go to paragraph 20–58.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
　　　Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–58 SIGNAL NAME: DOP BITE 2
MEMORY LOCATION: 000512
MEMORY DATA BIT(S): 19–4 (HEX)
CONDITION: 146314 should be displayed on HOD.
SIGNAL FUNCTION: Monitors Doppler.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION has been met, go to paragraph 20–59.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
　　　Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–59 SIGNAL NAME: DOP BEARING TO DESTINATION
MEMORY LOCATION: 000513
MEMORY DATA BIT(S): 18–17 (BINARY)
CONDITION: If fifth digit displayed on HOD is 2 or 3=failure warning
　　　　　If fifth digit displayed on HOD is 4 or 5=no computed data and no failure detected
　　　　　If fifth digit displayed on HOD is 6 or 7=minus, south, east, down, from
SIGNAL FUNCTION: Indicates sine/status of Doppler.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with bearing, go to paragraph 20–60.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
　　　Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–60 SIGNAL NAME: DOP BEARING TO DESTINATION
MEMORY LOCATION: 000513 AND 000514
MEMORY DATA BIT(S): 16–4 AND 19–18 (SCALAR)
CONDITION: (–180/+180 degrees)
SIGNAL FUNCTION: Indicates bearing to destination
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: Location of fault if CONDITION agrees with bearing, go to paragraph 20–61.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
　　　Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–61 **SIGNAL NAME:** DOP NORMAL VELOCITY
MEMORY LOCATION: 000515
MEMORY DATA BIT(S): 18–17 (BINARY)
CONDITION: If fifth digit displayed on HOD is 2 or 3=failure warning
If fifth digit displayed on HOD is 4 or 5=no computed data and no failure detected
If fifth digit displayed on HOD is 6 or 7=minus, south, east, down, from
SIGNAL FUNCTION: Indicates sine/status of Doppler.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with velocity, go to paragraph 20–62.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–62 **SIGNAL NAME:** DOP NORMAL VELOCITY
MEMORY LOCATION: 000515 AND 000516
MEMORY DATA BIT(S): 16–4 AND 19–18 (SCALAR)
CONDITION: Monitor HOD; digits 6, 5, 4, 3 and 2 should read 0.
SIGNAL FUNCTION: Indicates velocity.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with normal velocity, go to paragraph 20–63.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–63 **SIGNAL NAME:** DOP HEADING VEL BCD –999.9/+999.9 KM/HR (–200/+500)
MEMORY LOCATION: 000517
MEMORY DATA BIT(S): 19–18 (BINARY)
CONDITION: If sixth digit displayed on HOD is 0, and fifth digit is 0, 1, 2, or 3=plus, north, west, up, to
If sixth digit displayed on HOD is 0, and fifth digit is 4, 5, 6, or 7=failure warning
If sixth digit displayed on HOD is 1, and fifth digit is 0, 1, 2, 1,2, or 3=no computed data and no failure detected
If sixth digit displayed on HOD is 1, and fifth digit is 4, 5, 6, or 7=minus, south, east, down, from
SIGNAL FUNCTION: Indicates sine/status of Doppler.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with heading velocity, go to paragraph 20–64.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–64 **SIGNAL NAME:** DOP HEADING VEL BCD
MEMORY LOCATION: 000517
MEMORY DATA BIT(S): 15–12 (HEX)
CONDITION: If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 0=0
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 0=1
If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 1=2
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 1=3
If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 2=4
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 2=5
If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 3=6
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 3=7
If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 4=8
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 4=9
SIGNAL FUNCTION: Indicates hundreds field.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with heading velocity, go to paragraph 20–65.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–65 **SIGNAL NAME:** DOP HEADING VEL BCD
MEMORY LOCATION: 000517
MEMORY DATA BIT(S): 11–8 (HEX)
CONDITION: If second digit displayed on HOD is 0 or 1, and third digit is 0 or 4=0
If second digit displayed on HOD is 2 or 3, and third digit is 0 or 4=1
If second digit displayed on HOD is 4 or 5, and third digit is 0 or 4=2
If second digit displayed on HOD is 6 or 7, and third digit is 0 or 4=3
If second digit displayed on HOD is 0 or 1, and third digit is 2 or 5=4
If second digit displayed on HOD is 2 or 3, and third digit is 1 or 5=5
If second digit displayed on HOD is 4 or 5, and third digit is 1 or 5=6
If second digit displayed on HOD is 6 or 7, and third digit is 1 or 5=7
If second digit displayed on HOD is 0 or 1, and third digit is 2 or 6=8
If second digit displayed on HOD is 2 or 3, and third digit is 2 or 6=9
SIGNAL FUNCTION: Indicates tens field.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with heading velocity, go to paragraph 20–66.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–66 SIGNAL NAME: DOP HEADING VEL BCD
MEMORY LOCATION: 000517
MEMORY DATA BIT(S): 7–4 (HEX)
CONDITION: If first digit displayed on HOD is 0, and second digit is 0, 2, 4, or 6=0
If first digit displayed on HOD is 1, and second digit is 0, 2, 4, or 6=1
If first digit displayed on HOD is 2, and second digit is 0, 2, 4, or 6=2
If first digit displayed on HOD is 3, and second digit is 0, 2, 4, or 6=3
If first digit displayed on HOD is 4, and second digit is 0, 2, 4, or 6=4
If first digit displayed on HOD is 5, and second digit is 0, 2, 4, or 6=5
If first digit displayed on HOD is 6, and second digit is 0, 2, 4, or 6=6
If first digit displayed on HOD is 7, and second digit is 0, 2, 4, or 6=7
If first digit displayed on HOD is 0, and second digit is 1, 3, 5, or 7=8
If first digit displayed on HOD is 1, and second digit is 1, 3, 5, or 7=9
SIGNAL FUNCTION: Indicates ones field.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with heading velocity, go to paragraph 20–67.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–67 SIGNAL NAME: DOP HEADING VEL BCD
MEMORY LOCATION: 000520
MEMORY DATA BIT(S): 19–16 (HEX)
CONDITION: If fifth digit displayed on HOD is 0, and sixth digit is 0=0
If fifth digit displayed on HOD is 1, and sixth digit is 0=1
If fifth digit displayed on HOD is 2, and sixth digit is 0=2
If fifth digit displayed on HOD is 5, and sixth digit is 0=3
If fifth digit displayed on HOD is 4, and sixth digit is 0=4
If fifth digit displayed on HOD is 5, and sixth digit is 0=5
If fifth digit displayed on HOD is 6, and sixth digit is 0=6
If fifth digit displayed on HOD is 7, and sixth digit is 0=7
If fifth digit displayed on HOD is 0, and sixth digit is 1=8
If fifth digit displayed on HOD is 1, and sixth digit is 1=9
SIGNAL FUNCTION: Indicates tenths field.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with heading velocity, go to paragraph 20–68.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–68 SIGNAL NAME: DOP LATITUDE VEL
MEMORY LOCATION: 000521
MEMORY DATA BIT(S): 18–17 (BINARY)
CONDITION: If fifth digit displayed on HOD is 2 or 3=failure warning
If fifth digit displayed on HOD is 4 or 5=no computed data and no failure detected
If fifth digit displayed on HOD is 6 or 7=minus,south, east, down, from
SIGNAL FUNCTION: Indicates sine/status of Doppler.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with latitude velocity, go to paragraph 20–69.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–69 **SIGNAL NAME:** DOP LATITUDE VEL
MEMORY LOCATION: 000521 AND 00522
MEMORY DATA BIT(S): 16–4 AND 19–18 (SCALAR)
CONDITION: Monitor HOD; digits 6, 5, 4, 3 and 2 should read 0.
SIGNAL FUNCTION: Indicates Doppler latitude velocity.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with latitude velocity go to paragraph 20–70.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–70 **SIGNAL NAME:** DOP 100 KM SQUARE
MEMORY LOCATION: 000523
MEMORY DATA BIT(S): 17–11 AND 10–4 (ASCII)
CONDITION: Refer to Table 20–1 for ASCII code conversions.
SIGNAL FUNCTION: Indicates Doppler 100 km square
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: Location of fault if condition is met: go to paragraph 20–71.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–71 **SIGNAL NAME:** DOP LONGITUDE VEL
MEMORY LOCATION: 000525
MEMORY DATA BIT(S): 18–17 (BINARY)
CONDITION: If fifth digit displayed on HOD is 2 or 3=failure warning
If fifth digit displayed on HOD is 4 or 5=no computed data and no failure detected
If fifth digit displayed on HOD is 6 or 7=minus, south, east, down, from
SIGNAL FUNCTION: Indicates sine/status of Doppler.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with longitude velocity, go to paragraph 20–72.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–72 **SIGNAL NAME:** DOP LONGITUDE VEL
MEMORY LOCATION: 000525 AND 000526
MEMORY DATA BIT(S): 16–4 AND 19–18 (SCALAR)
CONDITION: Monitor HOD, digits 6, 5, 4, 3 and 2 should read 0
SIGNAL FUNCTION: Indicates Doppler longitude velocity.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with longitude velocity, go to paragraph 20–73.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–73 **SIGNAL NAME:** DOP VERTICAL VEL BCD –999.9/+999.9 KM/HR (–55/+55)
MEMORY LOCATION: 000527
MEMORY DATA BIT(S): 19–18 (BINARY)
CONDITION: If sixth digit displayed on HOD is 0, and fifth digit
is 0, 1, 2, or 3=plus, north, west, up, to
If sixth digit displayed on HOD is 0, and fifth digit
is 4, 5, 6, or 7=failure warning
If sixth digit displayed on HOD is 1, and fifth digit
is 0, 1, 2, or 3=no computed data and no failure detected
If sixth digit displayed on HOD is 1, and fifth digit
is 4, 5, 6, or 7=minus, south, east, down, from
SIGNAL FUNCTION: Indicates sine/status of Doppler.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with vertical velocity, go to paragraph 20–74.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–74 **SIGNAL NAME:** DOP VERTICAL VEL BCD
MEMORY LOCATION: 000527
MEMORY DATA BIT(S): 15–12 (HEX)
CONDITION: If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 0=0
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 0=1
If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 1=2
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 1=3
If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 2=4
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 2=5
If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 3=6
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 3=7
If third digit displayed on HOD is 0, 1, 2, or 3, and fourth digit is 4=8
If third digit displayed on HOD is 4, 5, 6, or 7, and fourth digit is 4=9
SIGNAL FUNCTION: Indicates hundreds field.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with vertical velocity, go to paragraph 20–75.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–75 **SIGNAL NAME:** DOP VERTICAL VEL BCD
MEMORY LOCATION: 000527
MEMORY DATA BIT(S): 11–8 (HEX
CONDITION: If second digit displayed on HOD is 0 or 1, and third digit is 0 or 4=0
If second digit displayed on HOD is 2 or 3, and third digit is 0 or 4=1
If second digit displayed on HOD is 4 or 5, and third digit is0 or 4=2
If second digit displayed on HOD is 6 or 7, and third digit is 0 or 4=3
If second digit displayed on HOD is 0 or 1, and third digit is 2 or 5=4
If second digit displayed on HOD is 2 or 3, and third digit is 1 or 5=5
If second digit displayed on HOD is 4 or 5, and third digit is 1 or 5=6
If second digit displayed on HOD is 6 or 7, and third digit is 1 or 5=7
If second digit displayed on HOD is 0 or 1, and third digit is 2 or 6=8
If second digit displayed on HOD is 2 or 3, and third digit is 2 or 6=9
SIGNAL FUNCTION: Indicates tens field.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with vertical velocity, go to paragraph 20–76.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–76 SIGNAL NAME: DOP VERTICAL VEL BCD
MEMORY LOCATION: 000527
MEMORY DATA BIT(S): 7–4 (HEX)
CONDITION: If first digit displayed on HOD is 0, and second digit is 0, 2, 4, or 6=0
If first digit displayed on HOD is 1, and second digit is 0, 2, 4, or 6=1
If first digit displayed on HOD is 2, and second digit is 0, 2, 4, or 6=2
If first digit displayed on HOD is 3, and second digit is 0. 2. 4, or 6=3
If first digit displayed on HOD is 4, and second digit is 0, 2, 4, or 6=4
If first digit displayed on HOD is 5, and second digit is 0, 2, 4, or 6=5
If first digit displayed on HOD is 6, and second digit is 0, 2, 4, or 6=6
If first digit displayed on HOD is 7, and second digit is 0, 2, 4, or 6=7
If first digit displayed on HOD is 0, and second digit is 1, 3, 5, or 7=8
If first digit displayed on HOD is 1, and second digit is 1, 3, 5, or 7=9
SIGNAL FUNCTION: Indicates ones field.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with vertical velocity, go to paragraph 20–77.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–77 SIGNAL NAME: DOP VERTICAL VEL BCD
MEMORY LOCATION: 000530
MEMORY DATA BIT(S): 19–16 (HEX)
CONDITION: If fifth digit displayed on HOD is 0, and sixth digit is 0=0
If fifth digit displayed on HOD is 1, and sixth digit is 0=1
If fifth digit displayed on HOD is 2, and sixth digit is 0=2
If fifth digit displayed on HOD is 3, and sixth digit is 0=3
If fifth digit displayed on HOD is 4, and sixth digit is 0=4
If fifth digit displayed on HOD is 5, and sixth digit is 0=5
If fifth digit displayed on HOD is 6, and sixth digit is 0=6
If fifth digit displayed on HOD is 7, and sixth digit is 0=7
If fifth digit displayed on HOD is 0, and sixth digit is 1=8
If fifth digit displayed on HOD is 1, and sixth digit is 1=9
SIGNAL FUNCTION: Indicates tenths field.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with vertical velocity, go to paragraph 20–78.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–78 SIGNAL NAME: DOP VERTICAL VEL
MEMORY LOCATION: 000531
MEMORY DATA BIT(S): 18–17 (BINARY)
CONDITION: If fifth digit displayed on HOD is 2 or 3=failure warning
If fifth digit displayed on HOD is 4 or 5=no computed data and no failure detected
If fifth digit displayed on HOD is 6 or 7=minus, south, east, down, from
SIGNAL FUNCTION: Indicates sine/status of Doppler.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with vertical velocity go to paragraph 20–79.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–79 **SIGNAL NAME:** DOP VERTICAL VEL
MEMORY LOCATION: 000531 AND 000532
MEMORY DATA BIT(S): 16–4 AND 19–18 (SCALAR)
CONDITION: Monitor HOD, digits 6, 5, 4, 3 and 2 should read 0
SIGNAL FUNCTION: Indicates Doppler vertical velocity.
REMARKS: From Doppler through CPG MRTU Type III to FCC.
PASS: If CONDITION agrees with vertical velocity, go to paragraph 20–80.
FAIL: Location of fault: Doppler, wiring from Doppler to CPG MRTU Type III, CPG MRTU Type III.
Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

20–80 **SIGNAL NAME:** HARS MAGHDG
MEMORY LOCATION: 002162
MEMORY DATA BIT(S): 4–19 (SCALAR)
CONDITION: Monitor HOD while moving aircraft or HARS; 0 DEG=000000, 180.000 DEG=100000,
359.999 DEG=177777
SIGNAL FUNCTION: Monitors HARS magnetic heading.
REMARKS: From HARS through DASEC to FCC.
PASS: Location of fault if condition is met: wiring between HARS and aft avionics matrix module, aft
avionics matrix module to SDC. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).
FAIL: Location of fault: HARS, wiring from HARS to DASEC, DASEC. Troubleshoot wiring to isolate
fault (TM 11–1520–238–23–2).

CHAPTER 21

VIDEO RECORDER MULTIPLEX READ CODES

FAILURE SYMPTOM INDEX

Symptom	Refer to paragraph
FORWARD REMAINS ON HOD AFTER VID RCD SWITCH IS PRESSED	21–1, 21–7
PILOT VIDEO CAN NOT BE PLAYED BACK	21–2, 21–11
CPG VIDEO CAN NOT BE PLAYED BACK	21–3, 21–12
RECORDER CAN NOT BE CONTROLLED BY RECORDER PANEL	21–3
RECORDER EOT MESSAGE DOES NOT APPEAR ON HOD	21–3, 21–7
RCDR FAIL MESSAGE APPEARS ON HOD	21–3, 21–7
VIDEO RECORDER DOES NOT STOP	21–3, 21–5
VIDEO RECORDER DOES NOT PLAY FAST FORWARD	21–3
VIDEO RECORDER DOES NOT PLAY REVERSE	21–3
VIDEO RECORDER DOES NOT PLAY FAST REVERSE	21–3
VIDEO RECORDER DOES NOT GO TO RECORD STBY	21–3
VIDEO DISPLAY IS NOT STILL	21–3, 21–13
EOT DOES NOT APPEAR ON HOD	21–14
BOT DOES NOT APPEAR ON HOD	21–3, 21–12

Personnel Required:

(2)

References:

TM 1–1270–476–T
TM 9–1230–476–20–1
TM 11–1520–238–23–1
TM 11–1520–238–23–2

Equipment Conditions:

Ref	Condition
TM 11–1520–238–23–2	VIDEO RECORDER – MAINTENANCE OPERATIONAL CHECK in progress

NOTE

- All multiplex read code responses are read from right to left.

- Multiplex read codes must be used in conjunction with applicable Maintenance Operational Check (MOC) in progress.

- Multiplex read codes are observed on the HOD (ADC) or CDU (ADD).

MULTIPLEX READ CODE INTERPRETATIONS

21–1 **SIGNAL NAME:** ORT VIDEO RECORD SWITCH (ACY) RECORD SW (ACZ)
MEMORY LOCATION: 000441
MEMORY DATA BIT(S): 6 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Enables video recording.
REMARKS: From optical relay tube (ORT) through CPG MRTU Type III to FCC.
PASS: If fifth digit displayed on HOD is 0, 1, 4, or 5, go to paragraph 21–2.
FAIL: Location of fault: ORT righthand grip, wiring from ORT righthand grip to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 1–1270–476–T).

21–2 **SIGNAL NAME:** VIDEO RECORDER CONTROL PANEL ON/ OFF (ACY)
VCR ON OFF IND (ACZ)
MEMORY LOCATION: 000440
MEMORY DATA BIT(S): 9 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors power to video recorder.
REMARKS: From video recorder control panel through CPG MRTU Type III to FCC.
PASS: If fourth digit displayed on heads out display (HOD) is 2, 3, 5, or 7, go to paragraph 21–3.
FAIL: Location of fault: **FC RCDR** circuit breaker, wiring from **FC RCDR** circuit breaker to video recorder, wiring from video recorder to video recorder control panel, CPG transformer rectifier, wiring from CPG transformer rectifier to video recorder control panel, video recorder control panel. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

21–3 SIGNAL NAME: VIDEO RECORDER CONTROL PANEL MODE TO VIDEO RECORDER (ACY)
VCR MODE CMD (ACZ)
MEMORY LOCATION: 000440
MEMORY DATA BIT(S): 4–7 (HEX)
CONDITION: If the sixth digit displayed on HOD is 0 and the fifth digit is 0=STANDBY
If the sixth digit displayed on HOD is 0 and the fifth digit is 1=PLAY FAST FORWARD
If the sixth digit displayed on HOD is 0 and the fifth digit is 2=RECORD
If the sixth digit displayed on HOD is 0 and the fifth digit is 3=RECORD EVENT
MARKER
If the sixth digit displayed on HOD is 0 and the fifth digit is 4=REWIND
If the sixth digit displayed on HOD is 0 and the fifth digit is 6=PLAY REVERSE
If the sixth digit displayed on HOD is 1 and the fifth digit is 1=PLAY REVERSE FAST
If the sixth digit displayed on HOD is 1 and the fifth digit is 2=RECORD STANDBY
If the sixth digit displayed on HOD is 1 and the fifth digit is 4=PLAY FORWARD
If the sixth digit displayed on HOD is 1 and the fifth digit is 6=PLAY STILL
SIGNAL FUNCTION: Selects video recorder mode.
REMARKS: From video recorder control panel through CPG MRTU Type III to FCC.
PASS: If CONDITION corresponds to selected mode, go to paragraph 21–4.
FAIL: Location of fault: video recorder control panel, wiring from video recorder control panel to CPG
MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault
(TM 11–1520–238–23–2).

21–4 SIGNAL NAME: VIDEO RECORDER MODE (ACY) VCR MODE CMD1 (ACZ)
MEMORY LOCATION: 002215
MEMORY DATA BIT(S): 12–15 (HEX)
CONDITION: If third digit is 0 and the second digit is 1=STANDBY
If third digit is 0 and the second digit is 3=PLAY FAST FORWARD
If third digit is 0 and the second digit is 5=RECORD
If third digit is 0 and the second digit is 7=RECORD EVENT MARKER
If third digit is 1 and the second digit is 1=REWIND
If third digit is 1 and the second digit is 5=PLAY REVERSE
If third digit is 2 and the second digit is 2=PLAY REVERSE FAST
If third digit is 2 and the second digit is 4=RECORD STANDBY
If third digit is 3 and the second digit is 0=PLAY FORWARD
If third digit is 3 and the second digit is 4=PLAY STILL
SIGNAL FUNCTION: Identifies video recorder mode.
REMARKS: From FCC through digital automatic stabilization equipment computer (DASEC) MRTU to
video recorder.
PASS: If CONDITION corresponds to selected mode, go to failure symptom index and next failure
paragraph.
FAIL: Location of fault: DASEC, wiring from DASEC to video recorder, video recorder. Troubleshoot
wiring to isolate fault (TM 11–1520–238–23–2).

21–5 **SIGNAL NAME:** VIDEO RECORDER IS STOPPED (ACY) VCR STOPPED (ACZ)
MEMORY LOCATION: 002132
MEMORY DATA BIT(S): 6 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates video recorder is stopped and beginning of tape (**BOT**) is displayed on HOD.
REMARKS: From video recorder through DASEC to FCC.
PASS: If fifth digit on HOD is 0, 1, 4, or 5, go to paragraph 21–6.
FAIL: Location of fault: video recorder control panel, wiring from video recorder control panel to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

21–6 **SIGNAL NAME:** VIDEO RECORDER IS STOPPED (ACY) VCR STOP CMD (ACZ)
MEMORY LOCATION: 000562
MEMORY DATA BIT(S): 13 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates video recorder is stopped as directed by video recorder control panel.
REMARKS: From FCC through CPG MRTU Type III to video recorder control panel.
PASS: If third digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 21–9.
FAIL: Location of fault: CPG MRTU Type III, wiring from CPG MRTU Type III to video recorder control panel, video recorder control panel, video recorder. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

21–7 **SIGNAL NAME:** VIDEO RECORDER CONTROL PANEL RECORD MODE (ACY)
VCR RECORD IND (ACZ)
MEMORY LOCATION: 000440
MEMORY DATA BIT(S): 8 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates video control panel record mode is selected.
REMARKS: From video recorder control panel through CPG MRTU Type III to FCC.
PASS: If fourth digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 21–8.
FAIL: Location of fault: video recorder control panel, wiring from video recorder control panel to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

21–8 **SIGNAL NAME:** VIDEO RECORDER IS RECORDING (ACY) VCR RECORD CMD (ACZ)
MEMORY LOCATION: 000562
MEMORY DATA BIT(S): 14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates video recorder is recording as directed by video recorder control panel.
REMARKS: From FCC through CPG MRTU Type III to video recorder control panel.
PASS: Location of fault if second digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 21–9.
FAIL: Location of fault: CPG MRTU Type III, wiring from CPG MRTU Type III to video recorder control panel, video recorder. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

21–9 **SIGNAL NAME:**   VIDEO RECORDER IS RECORDING (ACY) VCR RECORDING (ACZ) ▉
       MEMORY LOCATION: 002132
       MEMORY DATA BIT(S): 5   (BINARY)
       CONDITION: (None)
       SIGNAL FUNCTION: Indicates video is being recorded.
       REMARKS: From video recorder through DASEC to FCC. **RECORDER** is displayed on HOD. If video
             recorder fails to record after four seconds, **RCDR FAIL** appears on HOD.
       PASS: If fifth digit displayed on HOD is 0, 1, 2, or 3, go to paragraph 21–10.
       FAIL: Location of fault: video recorder, wiring from video recorder to DASEC, DASEC. Troubleshoot
             wiring to isolate fault (TM 11–1520–238–23–2).

21–10 **SIGNAL NAME:**   RECORD CHANNEL SELECTED (ACY) RECORD SEL CTL (ACZ) ▉
        MEMORY LOCATION: 000654
        MEMORY DATA BIT(S): 13   (BINARY)
        CONDITION: If the third digit displayed on HOD is 0, 2, 4, or 6=CPG
                   If the third digit displayed on HOD is 1, 3, 5, or 7=PILOT
        SIGNAL FUNCTION: Records symbol generator selected video.
        REMARKS: From FCC to symbol generator.
        PASS: Location of fault if CONDITION corresponds to selected record channel: replace symbol
              generator (TM 11–1520–238–23–1).
        FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

21–11 **SIGNAL NAME:**   PILOT VIDEO MODE
        MEMORY LOCATION: 000654
        MEMORY DATA BIT(S): 8–11   (HEX)
        CONDITION: If the fourth digit displayed on HOD is 1, 3, 5, or 7=PLAY
        SIGNAL FUNCTION: Directs symbol generator to play pilot's video.
        REMARKS: From FCC to symbol generator.
        PASS: Location of fault if CONDITION corresponds to play: replace symbol generator
              (TM 11–1520–238–23–2).
        FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

21–12 **SIGNAL NAME:**   CPG VIDEO MODE
        MEMORY LOCATION: 000655
        MEMORY DATA BIT(S): 8–11   (HEX)
        CONDITION: If the fourth digit is displayed on HOD is 1, 3, 5, or 7=PLAY
        SIGNAL FUNCTION: Directs symbol generator to play CPG video.
        REMARKS: From FCC to symbol generator.
        PASS: If CONDITION corresponds to play: replace symbol generator (TM 11–1520–238–23–2).
        FAIL: Location of fault: replace FCC (TM 9–1230–476–20–1).

21–13 **SIGNAL NAME:** VIDEO RECORDER EVENT DETECT (ACY) VCR EVENT MARK (ACZ)
MEMORY LOCATION: 002132
MEMORY DATA BIT(S): 7 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates video recorder has stopped at an event marker.
REMARKS: From video recorder through DASEC to FCC. An audio tone is generated.
PASS: Location of fault if fifth digit displayed on HOD is 0, 2, 4, or 6: video recorder, wiring from video recorder to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).
FAIL: Location of fault: video recorder control panel, wiring from video recorder control panel to CPG MRTU Type III, CPG MRTU Type III. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

21–14 **SIGNAL NAME:** VIDEO RECORDER END OF TAPE (ACY) VCR EOT (ACZ)
MEMORY LOCATION: 002132
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (NONE)
SIGNAL FUNCTION: Indicates that video recorder is at end of tape (**EOT**).
REMARKS: From video recorder through DASEC to FCC. **EOT** is displayed on HOD from symbol generator.
PASS: Location of fault if sixth digit displayed on HOD is 0: replace symbol generator (TM 11–1520–238–23–2).
FAIL: Location of fault: video recorder, video recorder control panel, wiring from video recorder control panel to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

CHAPTER 22

POWER PLANTS MULTIPLEX READ CODES

FAILURE SYMPTOM INDEX

Symptom	Refer to paragraph
ENGINE NO. 1 TORQUE INDICATION IS LOWER THAN ENGINE NO. 2 TORQUE INDICATION	22–1
ENGINE NO. 2 TORQUE INDICATION IS LOWER THAN ENGINE NO. 1 TORQUE INDICATION	22–2

Personnel Required:

(2)

References:

TM 1–1520–238–T–4

Equipment Conditions:

Ref	Condition
TM 1–1520–238–T–4	TORQUE SHARING SYSTEM – MAINTENANCE OPERATIONAL CHECK in progress

NOTE

- All multiplex read code responses are read from right to left.

- Multiplex read codes must be used in conjunction with applicable Maintenance Operational Check (MOC) in progress.

- Multiplex read codes are observed on the HOD (ADC) or CDU (ADD).

MULTIPLEX READ CODE INTERPRETATIONS

22–1 SIGNAL NAME: ENG 1 TORQUE
MEMORY LOCATION: 002120
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: Monitor HOD while turning up engines; memory location response digits should increase and display will limit at 120.
SIGNAL FUNCTION: Monitors engine 1 torque.
REMARKS: From engine 1 torque sensor to engine 1 electronic control unit (ECU) or digital electronic control unit (DECU) through digital automatic stabilization equipment computer (DASEC) to fire control computer (FCC).
PASS: If CONDITION is met, go to Chapter 14, paragraph 14–135.
FAIL: Location of fault: engine 1 torque sensor, wiring from engine 1 torque sensor to ECU or DECU, ECU or DECU, wiring from ECU or DECU to DASEC, DASEC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–4).

22–2 **SIGNAL NAME:** ENG 2 TORQUE
MEMORY LOCATION: 002120
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD while turning up engines; memory location response digits should
increase and display will limit at 120.
SIGNAL FUNCTION: Monitors engine 2 torque.
REMARKS: From engine 2 torque sensor to engine 2 ECU or DECU through DASEC to FCC.
PASS: If CONDITION is met, go to Chapter 14, paragraph 14–135.
FAIL: Location of fault: engine 2 torque sensor, wiring from engine 2 torque sensor to ECU or DECU,
ECU or DECU, wiring from ECU or DECU to DASEC, DASEC. Troubleshoot wiring to isolate
fault (TM 1–1520–238–T–4).

CHAPTER 23

RADAR ALTIMETER (RADALT) MULTIPLEX READ CODES

FAILURE SYMPTOM INDEX

Symptom	Refer to paragraph
OFF FLAG IS VISIBLE AND RHI DOES NOT INDICATE 0 (–5/ +5) FEET . . .	23–1
VDU DISPLAY ALTITUDE LO WARNING IS NOT DISPLAYED	23–3
VDU DOES NOT DISPLAY 1000 (–100/ +100) FEET	23–5
VDU DISPLAY ALTITUDE HI WARNING IS NOT DISPLAYED	23–7

Personnel Required:

(2)

References:

TM 9–1230–476–20–1
TM 11–1520–238–23–2
TM 11–1520–238–23–1

Equipment Conditions:

Ref	Condition
TM 11–1520–238–23–2	RADAR ALTIMETER – MAINTENANCE OPERATIONAL CHECK in progress

NOTE

- All multiplex read code responses are read from right to left.

- Multiplex read codes must be used in conjunction with applicable Maintenance Operational Check (MOC) in progress.

- Multiplex read codes are observed on the HOD (ADC) or CDU (ADD).

MULTIPLEX READ CODE INTERPRETATIONS

23–1 SIGNAL NAME: PILOT RADALT CONT
MEMORY LOCATION: 000677
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors radar altimeter (RADALT) ON/OFF status.
REMARKS: From FCC to receiver–transmitter.
PASS: If first digit displayed on the HOD is 0, 2, 4, or 6, go to paragraph 23–2.
FAIL: Location of fault: remote height indicator (RHI), wiring from remote height indicator to receiver–transmitter, receiver–transmitter. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

■ **23–2** **SIGNAL NAME:** RADALT VALID IDENT (ACY) RADAR ALT VALID (ACZ)
MEMORY LOCATION: 001530
MEMORY DATA BIT(S): 11 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates correct address for RADALT.
REMARKS: From RADALT through RH FAB MRTU Type I to FCC.
PASS: If third digit displayed on HOD is 4, 5, 6, or 7, replace FCC (TM 9–1230–476–20–1).
FAIL: Location of fault: receiver–transmitter, wiring from receiver–transmitter to remote height indicator, remote height indicator, wiring from remote height indicator to right hand (RH) forward avionics bay (FAB) multiplex remote terminal unit (MRTU) Type I, RH FAB MRTU Type I. Troubleshoot reliability wiring to isolate fault (TM 11–1520–238–23–2).

23–3 **SIGNAL NAME:** RADAR LO ALT WARNING
MEMORY LOCATION: 001555
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: Press the **PUSH TO TEST** knob on RHI while observing HOD.
SIGNAL FUNCTION: Indicates **LO** on video display unit (VDU).
REMARKS: From RADALT through right–hand (RH) forward avionics bay (FAB) multiplex remote terminal unit (MRTU) Type I to fire control computer (FCC).
PASS: If the first digit displayed on heads out display (HOD) is 0 or 1, go to paragraph 23–4.
FAIL: Location of fault: receiver–transmitter, wiring from receiver–transmitter to remote height indicator, remote height indicator, wiring from remote height indicator to pilot matrix module,wiring from pilot matrix module to RH FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot push–to–test wiring and LO WARN wiring to isolate fault (TM 11–1520–238–23–2).

23–4 **SIGNAL NAME:** PILOT LO CONT
MEMORY LOCATION: 000701
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: Press the **PUSH TO TEST** knob on RHI while observing HOD.
SIGNAL FUNCTION: Displays **LO** on VDU when RHI is below **LO SET** altitude.
REMARKS: From FCC to symbol generator.
PASS: If first digit displayed on HOD is 2 or 3, go to Chapter 14, paragraph 14–92.
FAIL: Location of fault: receiver–transmitter, wiring from receiver–transmitter to remote height indicator, remote height indicator, wiring from remote height indicator to pilot matrix module, wiring from pilot matrix module to RH FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

23–5 **SIGNAL NAME:** PILOT RADALT
MEMORY LOCATION: 000677
MEMORY DATA BIT(S): 4–17 (SCALAR)
CONDITION: Press the **PUSH TO TEST** knob on RHI while observing for 1000 (±100) feet on HOD.
SIGNAL FUNCTION: Pilot's altitude display in feet.
REMARKS: From FCC to symbol generator.
PASS: Location of fault if CONDITION is met: replace symbol generator (TM 11–1520–238–23–1).
FAIL: Location of fault: go to paragraph 23–6.

23–6 **SIGNAL NAME:**   NEG RADAR ALTITUDE (ACY) NEG RADALT (ACZ)
     MEMORY LOCATION: 001544
     MEMORY DATA BIT(S):   4–19   (SCALAR)
     CONDITION: Press the **PUSH TO TEST** knob on RHI while observing 1000 (±100) feet on HOD.
     SIGNAL FUNCTION: Indicates RADALT altitude.
     REMARKS: From RADALT through RH FAB MRTU Type I to FCC.
     PASS: If CONDITION is observed, go to Chapter 14, paragraph 14–94.
     FAIL: Location of fault: receiver–transmitter, wiring from receiver–transmitter to remote height indicator, remote height indicator, wiring from remote height indicator to RH FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot analog wiring to isolate fault (TM 11–1520–238–23–2).

23–7 **SIGNAL NAME:**   RADAR HI ALTITUDE WARNING
     MEMORY LOCATION: 001555
     MEMORY DATA BIT(S):   16   (BINARY)
     CONDITION: Press the **PUSH TO TEST** knob on RHI while observing HOD.
     SIGNAL FUNCTION: Indicates **HI** on VDU.
     REMARKS: From RADALT through RH FAB MRTU Type I to FCC.
     PASS: If second digit displayed on HOD is 0, 2, 4, or 6, go to paragraph 23–8.
     FAIL: Location of fault: receiver–transmitter, wiring from receiver–transmitter to remote height indicator, remote height indicator, wiring from remote height indicator to pilot matrix module, wiring from pilot matrix module to RH FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot push–to–test wiring and HI WARN wiring to isolate fault (TM 11–1520–238–23–2).

23–8 **SIGNAL NAME:**   PILOT HI CONT
     MEMORY LOCATION: 000701
     MEMORY DATA BIT(S):   17   (BINARY)
     CONDITION: Set **HI SET** index to 1200 feet and press the **PUSH TO TEST** knob on RHI while observing HOD.
     SIGNAL FUNCTION: Displays **HI** on VDU when RHI is above **HI SET** altitude.
     REMARKS: From FCC to symbol generator.
     PASS: If first digit displayed on HOD is 4 or 5, go to Chapter 14, paragraph 14–93.
     FAIL: Location of fault: receiver–transmitter, wiring from receiver–transmitter to remote height indicator, remote height indicator, wiring from remote height indicator to pilot matrix module, wiring from pilot matrix module to RH FAB MRTU Type I, RH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

CHAPTER 24

COPILOT/GUNNER (CPG) CAUTION WARNING PANEL

MULTIPLEX READ CODES

FAILURE SYMPTOM INDEX

Symptom	Refer to paragraph
ADS INDICATOR REMAINS LIT	24–1
MISSILE INDICATOR REMAINS LIT	24–2
TADS INDICATOR REMAINS LIT	24–3
GUN INDICATOR REMAINS LIT	24–4
ROCKET INDICATOR REMAINS LIT	24–5

Personnel Required:

(2)

References:

TM 1–1520–238–T–6
TM 55–1520–238–23

Equipment Conditions:

Ref	Condition
TM 1–1520–238–T–6	Applicable MAINTENANCE OPERATIONAL CHECK in progress

NOTE

- All multiplex read code responses are read from right to left.

- Multiplex read codes must be used in conjunction with applicable Maintenance Operational Check (MOC) in progress.

- Multiplex read codes are observed on the HOD (ADC) or CDU (ADD).

MULTIPLEX READ CODE INTERPRETATIONS

24–1   **SIGNAL NAME:**   CPG ADS INDICATOR (ACY) CPG ADS LIGHT (ACZ)
MEMORY LOCATION: 000565
MEMORY DATA BIT(S):   14   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors air data system (ADS).
REMARKS: From fire control computer (FCC) through copilot/gunner (CPG) multiplex remote terminal unit (MRTU) Type III to CPG caution/warning panel.
PASS: If second digit displayed on heads out display (HOD) is 4, 5, 6, or 7, go to Chapter 2, paragraph 2–3.
FAIL: Location of fault: go to paragraph 24–6.

24–2 SIGNAL NAME: CPG MISSILE INDICATOR (ACY) CPG MSL LIGHT (ACZ)
        MEMORY LOCATION: 000565
        MEMORY DATA BIT(S): 16 (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Monitors missile system.
        REMARKS: From FCC through CPG MRTU Type III to CPG caution/warning panel.
        PASS: If second digit displayed on HOD is 1, 3, 5, or 7, go to Chapter 8, paragraph 8–1.
        FAIL: Location of fault: CPG MRTU Type III, wiring from CPG MRTU Type III to CPG caution/warning panel, CPG caution/warning panel. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–6).

24–3 SIGNAL NAME: CPG TADS INDICATOR (ACY) CPG TADS LIGHT (ACZ)
        MEMORY LOCATION: 000565
        MEMORY DATA BIT(S): 17 (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Monitors TADS system.
        REMARKS: From FCC through CPG MRTU Type III to CPG caution/warning panel.
        PASS: If first digit displayed on HOD is 4, 5, 6, or 7, go to Chapter 15, paragraph 15–26.
        FAIL: Location of fault: CPG MRTU Type III, wiring from CPG MRTU Type III to CPG caution/warning panel, CPG caution/warning panel. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–6).

24–4 SIGNAL NAME: CPG GUN INDICATOR (ACY) CPG GUN LIGHT (ACZ)
        MEMORY LOCATION: 000565
        MEMORY DATA BIT(S): 18 (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Monitors gun system.
        REMARKS: From FCC through CPG MRTU Type III to CPG caution/warning panel.
        PASS: If first digit displayed on HOD is 2, 3, 6, or 7, go to Chapter 5, paragraph 5–3.
        FAIL: Location of fault: CPG MRTU Type III, wiring from CPG MRTU Type III to CPG caution/warning panel, CPG caution/warning panel. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–6).

24–5 SIGNAL NAME: CPG ROCKET INDICATOR (ACY) CPG RKT LIGHT (ACZ)
        MEMORY LOCATION: 000565
        MEMORY DATA BIT(S): 19 (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Monitors rocket system.
        REMARKS: From FCC through CPG MRTU Type III to CPG caution/warning panel.
        PASS: If first digit displayed on HOD is 1, 3, 5, or 7, go to Chapter 12, paragraph 12–6.
        FAIL: Location of fault: CPG MRTU Type III, wiring from CPG MRTU Type III to CPG caution/warning panel, CPG caution/warning panel. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–6).

24–6 SIGNAL NAME: ADS TEST STATUS
   MEMORY LOCATION: 002106
   MEMORY DATA BIT(S):   7   (BINARY)
   CONDITION: (None)
   SIGNAL FUNCTION: Monitors ADS system.
   REMARKS: From FCC through CPG MRTU Type III to CPG caution/warning panel.
   PASS: Location of fault if fifth digit displayed on HOD is 1, 3, 5, or 7: replace CPG caution/warning
            panel (TM 1–1520–238–23).
   FAIL: Location of fault: go to Chapter 2, paragraph 2–3.

CHAPTER 25

PILOT FIRE CONTROL PANEL (FCP) MULTIPLEX READ CODES

FAILURE SYMPTOM INDEX

Symptom	Refer to paragraph
PILOT CANNOT ADJUST IHADSS FLIR VIDEO LEVEL	25–1
PILOT CANNOT ADJUST IHADSS FLIR GAIN LEVEL	25–2
PILOT CANNOT ADJUST IHADSS FLIR BRIGHTNESS LEVEL	25–3
PILOT CANNOT ADJUST IHADSS FLIR CONTRAST LEVEL	25–4
PILOT CANNOT SELECT OPTIMUM GAIN AND LEVEL OF NIGHT VISION SENSORS (ACM)	25–5
PILOT CANNOT BORESIGHT IHADSS	25–6
PILOT CANNOT SELECT CPG VIDEO	25–7
PILOT CANNOT SELECT GRAY SCALE	25–8
PILOT CANNOT ARM ROCKETS	25–9, 25–10
PILOT CANNOT ARM MISSILES	25–9, 25–12
PILOT CANNOT SELECT GUN	25–14
GUN DOES NOT GO TO FIXED FORWARD	25–15
PILOT CANNOT SELECT HMD	25–16
PILOT CANNOT SELECT PNVS	25–16
PILOT CANNOT SELECT TADS	25–16
PILOT CANNOT SELECT CUEING SYMBOLOGY OR NVS DOES NOT GO TO FIXED FORWARD	25–17

Personnel Required:

(2)

References:

TM 9–1230–476–20–2

Equipment Conditions:

Ref	Condition
TM 9–1230–476–20–2	MULTIPLEX SUBSYSTEM – MAINTENANCE OPERATIONAL CHECK in progress

NOTE

- All multiplex read code responses are read from right to left.

- Multiplex read codes must be used in conjunction with applicable Maintenance Operational Check (MOC) in progress.

- Multiplex read codes are observed on the HOD (ADC) or CDU (ADD).

MULTIPLEX READ CODE INTERPRETATIONS

25–1 **SIGNAL NAME:** LEVEL ADJ
MEMORY LOCATION: 001077
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD while increasing **LEVEL**; memory location response should increase when **LEVEL** is increased and decrease when **LEVEL** is decreased.
SIGNAL FUNCTION: Adjusts integrated helmet and display sight system (IHADSS) forward looking infrared (FLIR) video.
REMARKS: From pilot fire control panel (FCP) through left–hand (LH) forward avionics bay (FAB) multiplex remote terminal unit (MRTU) Type I to fire control computer (FCC).
PASS: If CONDITION has been met, go to Chapter 7, paragraph 7–29.
FAIL: Location of fault: pilot FCP, wiring to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

25–2 **SIGNAL NAME:** GAIN ADJ
MEMORY LOCATION: 001100
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD while increasing **GAIN**; memory location response should increase when **GAIN** is increased and decrease when **GAIN** is decreased.
SIGNAL FUNCTION: Adjusts IHADSS FLIR **GAIN**.
REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
PASS: If CONDITION has been met, go to Chapter 7, paragraph 7–33.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

25–3 **SIGNAL NAME:** BRIGHT ADJ
MEMORY LOCATION: 001103
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ) (SCALAR)
CONDITION: Monitor HOD while increasing **SYM BRT**; memory location response should increase when **SYM BRT** is increased and decrease when **SYM BRT** is decreased.
SIGNAL FUNCTION: Adjusts IHADSS video.
REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
PASS: If CONDITION has been met, go to Chapter 7, paragraph 7–29.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

25–4 **SIGNAL NAME:** CONTRAST ADJ
MEMORY LOCATION: 001104
MEMORY DATA BIT(S): 4–19 (ACY) 4–15 (ACZ)   (SCALAR)
CONDITION: Monitor HOD while increasing **CONTRAST**; memory location response should increase
when **CONTRAST** is increased and decrease when **CONTRAST** is decreased.
SIGNAL FUNCTION: Adjusts IHADSS contrast.
REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
PASS: If CONDITION has been met, go to Chapter 7, paragraph 7–33.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type
I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

25–5 **SIGNAL NAME:** ACM SW
MEMORY LOCATION: 001117
MEMORY DATA BIT(S): 9   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Selects optimum gain and level of night vision sensors.
REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
PASS: If fourth digit displayed on HOD is 0, 1, 4, or 5, go to Chapter 10, paragraph 10–25.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type
I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

25–6 **SIGNAL NAME:**   IHADSS BRSIT SW (ACY) PLT IHAD BST SW1 (ACZ)
MEMORY LOCATION: 001117
MEMORY DATA BIT(S): 10   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Enables IHADSS boresighting.
REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
PASS: If fourth digit displayed on HOD is 1, 3, 5, or 7, go to Chapter 7, paragraph 7–36.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type
I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

25–7 **SIGNAL NAME:**   PLT/CPG VIDEO SW (ACY) PLT VIDEO SEL SW (ACZ)
MEMORY LOCATION: 001120
MEMORY DATA BIT(S): 8   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Selects pilot or CPG video.
REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
PASS: If second digit displayed on HOD is 4, 5, 6, or 7, go to Chapter 7, paragraph 7–44.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type
I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

25–8 **SIGNAL NAME:** PLT GRAY SCALE SW
MEMORY LOCATION: 001120
MEMORY DATA BIT(S): 9   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Selects gray scale for helmet mounted display (HMD) calibration.
REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
PASS: If fourth digit displayed on HOD is 0, 1, 4, or 5, go to Chapter 15, paragraph 15–63.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type
I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

25–9 **SIGNAL NAME:**   PLT SAFE/ARM SW
MEMORY LOCATION: 001120
MEMORY DATA BIT(S): 12–13   (BINARY)
CONDITION: If the third digit displayed on HOD is 0 or 4=**OFF**
            If the third digit displayed on HOD is 2 or 6=**SAFE**
            If the third digit displayed on HOD is 3 or 7=**ARM**
SIGNAL FUNCTION: Selects weapon system status.
REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
PASS: If CONDITION corresponds to selected switch mode, go to failure symptom index and next
         failure paragraph.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type
         I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

25–10 **SIGNAL NAME:**   PLT RKT NORM SW
MEMORY LOCATION: 001120
MEMORY DATA BIT(S): 14   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Enables or disables arm/safe power to rockets.
REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
PASS: If second digit displayed on HOD is 4, 5, 6, or 7, go to paragraph 25–11.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type
         I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

25–11 **SIGNAL NAME:**   PLT RKT GND STOW SW
MEMORY LOCATION: 001120
MEMORY DATA BIT(S): 15   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Selects pylon position.
REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
PASS: If second digit displayed on HOD is 2, 3, 6, or 7, go to Chapter 12, paragraph 12–9.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type
         I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

25–12 **SIGNAL NAME:**   PLT MSL ARMED
MEMORY LOCATION: 001120
MEMORY DATA BIT(S): 16   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Selects missile arming.
REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
PASS: If second digit displayed on HOD is 1, 3, 5, or 7, go to paragraph 25–13.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type
         I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

25–13 **SIGNAL NAME:**   PLT MSL ENABLE
MEMORY LOCATION: 001120
MEMORY DATA BIT(S): 17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates missile was enabled.
REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
PASS: If first digit displayed on HOD is 4, 5, 6, or 7, go to Chapter 8, paragraph 8–7.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type
         I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

25–14 SIGNAL NAME: PLT GUN NORMAL SW
MEMORY LOCATION: 001120
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Selects gun off or on.
REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
PASS: If first digit displayed on HOD is 2, 3, 6, or 7, go to Chapter 5, paragraph 5–38.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

25–15 SIGNAL NAME: PLT GUN FIXED SW
MEMORY LOCATION: 001120
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Drives gun to fixed forward position.
REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
PASS: If first digit displayed on HOD is 1, 3, 5, or 7, Chapter 5, paragraph 5–32.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

25–16 SIGNAL NAME: PLT SIGHT SEL
MEMORY LOCATION: 001122
MEMORY DATA BIT(S): 4–7 (HEX)
CONDITION: If the sixth digit displayed on HOD is 1 and the fifth digit is 3=**HMD**, (Chapter 7, paragraph 7–55)
If the sixth digit displayed on HOD is 1 and the fifth digit is 5=**PNVS**, (Chapter 10, paragraph 10–5)
If the sixth digit displayed on HOD is 1 and the fifth digit is 6=**TADS**, (Chapter 15, paragraph 15–5)
SIGNAL FUNCTION: Indicates pilot selected sight sensor.
REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
PASS: If display on HOD corresponds to selected pilot FCP switch position, go to paragraph 25–17.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

25–17 SIGNAL NAME: PLT CPG ACQ SW (ACY) PLT ACQ SEL SW (ACZ) ▮
MEMORY LOCATION: 001122
MEMORY DATA BIT(S): 8–9 (BINARY)
CONDITION: If the fourth digit displayed on HOD is 2 or 3=**CPG** (Chapter 15, paragraph 15–127)
If the fourth digit displayed on HOD is 4 or 5=**NVS FXD** (Chapter 10, paragraph 10–30)
If the fourth digit displayed on HOD is 6 or 7=**OFF**
SIGNAL FUNCTION: Selects cueing symbology or NVS to fixed forward.
REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
PASS: If fourth digit displayed on HOD corresponds to selected switch position, go to paragraph 25–18.
FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

25–18 **SIGNAL NAME:**   PNVS PWR SW
　　　　MEMORY LOCATION: 001555
　　　　MEMORY DATA BIT(S):   19   (BINARY)
　　　　CONDITION: (None)
　　　　SIGNAL FUNCTION: Sets pilot night vision sensor (PNVS) to ON.
　　　　REMARKS: From pilot FCP through LH FAB MRTU Type I to FCC.
　　　　PASS: If first digit displayed on HOD is 0, 2, 4, or 6, go to Chapter 10, paragraph 10–2.
　　　　FAIL: Location of fault: pilot FCP, wiring from pilot FCP to LH FAB MRTU Type I, LH FAB MRTU Type
　　　　　　　I. Troubleshoot wiring to isolate fault (TM 9–1230–476–20–2).

CHAPTER 26

PILOT CAUTION WARNING PANEL MULTIPLEX READ CODES

FAILURE SYMPTOM INDEX

Symptom	Refer to paragraph
MISSILE INDICATOR REMAINS LIT	26–1
TADS INDICATOR REMAINS LIT	26–2
PNVS INDICATOR REMAINS LIT	26–3
GUN INDICATOR REMAINS LIT	26–4
ROCKET INDICATOR REMAINS LIT	26–5
ADS INDICATOR REMAINS LIT	26–6

Personnel Required:

(2)

References:

TM 1–1520–238–23
TM 1–1520–238–T–6

Equipment Conditions:

Ref	Condition
TM 1–1520–238–T–6	Applicable MAINTENANCE OPERATIONAL CHECK in progress

NOTE

- All multiplex read code responses are read from right to left.

- Multiplex read codes must be used in conjunction with applicable Maintenance Operational Check (MOC) in progress.

- Multiplex read codes are observed on the HOD (ADC) or CDU (ADD).

MULTIPLEX READ CODE INTERPRETATIONS

26–1 SIGNAL NAME: PILOT MISSILE INDICATOR (ACY) PILOT MSL LIGHT (ACZ)
MEMORY LOCATION: 001632
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors missile system.
REMARKS: From fire control computer (FCC) through right–hand (RH) forward avionics bay (FAB) multiplex remote terminal unit (MRTU) Type I to pilot caution/warning panel.
PASS: If second digit displayed on heads out display (HOD) is 2, 3, 6, or 7, go to Chapter 8, paragraph 8–1.
FAIL: Location of fault: RH FAB MRTU Type I, wiring from RH FAB MRTU Type I to caution/warning panel, caution/warning panel, FCC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–6).

26–2 SIGNAL NAME: PILOT TADS INDICATOR (ACY) PILOT TADS LIGHT (ACZ)
MEMORY LOCATION: 001632
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors target acquisition designation sight (TADS) system.
REMARKS: From FCC through RH FAB MRTU Type I to pilot caution/warning panel.
PASS: If second digit displayed on HOD is 1, 3, 5, or 7, go to Chapter 15, paragraph 15–26.
FAIL: Location of fault: RH FAB MRTU Type I, wiring from RH FAB MRTU Type I to caution/warning panel, caution/warning panel, FCC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–6).

26–3 SIGNAL NAME: PILOT PNVS INDICATOR (ACY) PILOT PNVS LIGHT (ACZ)
MEMORY LOCATION: 001632
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors pilot night vision sensor (PNVS) system.
REMARKS: From FCC through RH FAB MRTU Type I to pilot caution/warning panel.
PASS: If first digit displayed on HOD is 4, 5, 6, or 7, go to Chapter 10, paragraph 10–1.
FAIL: Location of fault: RH FAB MRTU Type I, wiring from RH FAB MRTU Type I to caution/warning panel, caution/warning panel, FCC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–6).

26–4 SIGNAL NAME: PILOT GUN INDICATOR (ACY) PILOT GUN LIGHT (ACZ)
MEMORY LOCATION: 001632
MEMORY DATA BIT(S): 18 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors gun system.
REMARKS: From FCC through RH FAB MRTU Type I to pilot caution/warning panels.
PASS: If first digit displayed on HOD is 2, 3, 6, or 7, go to Chapter 5, paragraph 5–3.
FAIL: Location of fault: RH FAB MRTU Type I, wiring from RH FAB MRTU Type I to caution/warning panel, caution/warning panel, FCC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–6).

26–5 SIGNAL NAME: PILOT ROCKET INDICATOR (ACY) PILOT RKT LIGHT (ACZ)
MEMORY LOCATION: 001632
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors rocket system.
REMARKS: From FCC through RH FAB MRTU Type I to pilot caution/warning panels.
PASS: If first digit displayed on HOD is 1, 3, 5, or 7, go to Chapter 12, paragraph 12–6.
FAIL: Location of fault: RH FAB MRTU Type I, wiring from RH FAB MRTU Type I to caution/warning panel, caution/warning panel, FCC. Troubleshoot wiring to isolate fault (TM 1–1520–238–T–6).

26–6 SIGNAL NAME: ADS TEST STATUS
MEMORY LOCATION: 002106
MEMORY DATA BIT(S): 7 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Monitors air data system (ADS).
REMARKS: From FCC through copilot/gunner (CPG) MRTU Type III to CPG and pilot caution/warning panels.
PASS: If fifth digit displayed on HOD is 1, 3, 5, or 7, replace pilot caution/warning panel (TM 1–1520–238–23).
FAIL: Location of fault: go to Chapter 2, paragraph 2–3.

CHAPTER 27

EMBEDDED GPS–INERTIAL (EGI) (ADD)

MULTIPLEX READ CODES

FAILURE SYMPTOM INDEX

Symptom	Refer to paragraph
EGI UNIT NO–GO RFAB TAILCONE MESSAGE DISPLAYED	27–1
GPS NO–GO MESSAGE DISPLAYED	27–30
INS ATT? MESSAGE DISPLAYED	27–18
INS HDG? MESSAGE DISPLAYED	27–19
INS NO–GO MESSAGE DISPLAYED	27–23
INS VEL? MESSAGE DISPLAYED	27–17

Personnel Required:

(2)

References:

TM 9–1230–476–20–2
TM 11–1520–238–23–1
TM 11–1520–238–23–2

Equipment Conditions:

Ref	Condition
TM 11–1520–238–23–2	EGI – MAINTENANCE OPERATIONAL CHECK in progress
TM 9–1230–476–20–2	MULTIPLEX SUBSYSTEM – POWER UP completed

NOTE

- All multiplex read code responses are read from right to left.

- Multiplex read codes must be used in conjunction with applicable Maintenance Operational Check (MOC) in progress.

MULTIPLEX READ CODE INTERPRETATIONS

27–1 SIGNAL NAME: MESSAGE ERROR
MEMORY LOCATION: 002641
MEMORY DATA BIT(S): 9   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates message error.
REMARKS: From EGI to FCC.
PASS: If fourth digit displayed on CDU is 0, go to paragraph 27–2.
FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–2 SIGNAL NAME: RESERVED
     MEMORY LOCATION: 002641
     MEMORY DATA BIT(S): 14–12 (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Indicates serial digital error.
     REMARKS: From EGI to FCC.
     PASS: If second and third digits displayed on CDU are 0, go to paragraph 27–3.
     FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–3 SIGNAL NAME: SUBSYSTEM FLAG
     MEMORY LOCATION: 002641
     MEMORY DATA BIT(S): 17 (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Indicates subsystem fault.
     REMARKS: From EGI to FCC.
     PASS: If second digit displayed on CDU is 0, go to paragraph 27–4.
     FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–4 SIGNAL NAME: TERMINAL FLAG
     MEMORY LOCATION: 002641
     MEMORY DATA BIT(S): 19 (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Indicates terminal fault.
     REMARKS: From EGI to FCC.
     PASS: If first digit displayed on CDU is 0, go to paragraph 27–5.
     FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–5 SIGNAL NAME: MESSAGE ERROR
     MEMORY LOCATION: 002677
     MEMORY DATA BIT(S): 9 (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Indicates message error.
     REMARKS: From EGI to FCC.
     PASS: If fourth digit displayed on CDU is 0, go to paragraph 27–6.
     FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–6 SIGNAL NAME: RESERVED
     MEMORY LOCATION: 002677
     MEMORY DATA BIT(S): 14–12 (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Indicates serial digital error.
     REMARKS: From EGI to FCC.
     PASS: If second and third digits displayed on CDU are 0, go to paragraph 27–7.
     FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–7 SIGNAL NAME: SUBSYSTEM FLAG
     MEMORY LOCATION: 002677
     MEMORY DATA BIT(S): 17 (BINARY)
     CONDITION: (None)
     SIGNAL FUNCTION: Indicates subsystem fault.
     REMARKS: From EGI to FCC.
     PASS: If first digit displayed on CDU is 0, go to paragraph 27–8.
     FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–8 SIGNAL NAME: TERMINAL FLAG
MEMORY LOCATION: 002677
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates terminal fault.
REMARKS: From EGI to FCC.
PASS: If first digit displayed on CDU is 0, go to paragraph 27–9.
FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–9 SIGNAL NAME: MESSAGE ERROR
MEMORY LOCATION: 002755
MEMORY DATA BIT(S): 9 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates message error.
REMARKS: From FCC to EGI.
PASS: If fourth digit displayed on CDU is 0, go to paragraph 27–10.
FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–10 SIGNAL NAME: RESERVED
MEMORY LOCATION: 002755
MEMORY DATA BIT(S): 14–12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates serial digital error.
REMARKS: From FCC to EGI.
PASS: If second and third digits displayed on CDU are 0, go to paragraph 27–11.
FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–11 SIGNAL NAME: SUBSYSTEM FLAG
MEMORY LOCATION: 002755
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates subsystem fault.
REMARKS: From FCC to EGI.
PASS: If first digit displayed on CDU is 0, go to paragraph 27–12.
FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–12 SIGNAL NAME: TERMINAL FLAG
MEMORY LOCATION: 002755
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates terminal fault.
REMARKS: From FCC to EGI.
PASS: If first digit displayed on CDU is 0, go to paragraph 27–13.
FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–13 SIGNAL NAME: MESSAGE ERROR
MEMORY LOCATION: 003003
MEMORY DATA BIT(S): 9 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates message error.
REMARKS: From FCC to EGI.
PASS: If fourth digit displayed on CDU is 0, go to paragraph 27–14.
FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–14 SIGNAL NAME: RESERVED
      MEMORY LOCATION: 003003
      MEMORY DATA BIT(S):   14–12   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates serial digital error.
      REMARKS: From FCC to EGI.
      PASS: If second and third digits displayed on CDU are 0, go to paragraph 27–15.
      FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–15 SIGNAL NAME: SUBSYSTEM FLAG
      MEMORY LOCATION: 003003
      MEMORY DATA BIT(S):   17   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates subsystem fault.
      REMARKS: From FCC to EGI.
      PASS: If first digit displayed on CDU is 0, go to paragraph 27–16.
      FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–16 SIGNAL NAME: TERMINAL FLAG
      MEMORY LOCATION: 003003
      MEMORY DATA BIT(S):   19   (BINARY)
      CONDITION: (None).
      SIGNAL FUNCTION: Indicates terminal fault.
      REMARKS: From FCC to EGI.
      PASS: If fourth digit displayed on CDU is 0, go to paragraph 27–17.
      FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–17 SIGNAL NAME: INS UVW VEL VALID
      MEMORY LOCATION: 002643
      MEMORY DATA BIT(S):   4   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates INS velocity is valid.
      REMARKS: From EGI to FCC.
      PASS: If sixth digit displayed on CDU is 1, go to paragraph 27–18.
      FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–18 SIGNAL NAME: INS ATTITUDE VALID
      MEMORY LOCATION: 002643
      MEMORY DATA BIT(S):   5   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates INS attitude is valid.
      REMARKS: From EGI to FCC.
      PASS: If fifth digit displayed on CDU is 4, 5, 6 or 7, go to paragraph 27–19.
      FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–19 SIGNAL NAME: INS HEADING VALID
      MEMORY LOCATION: 002643
      MEMORY DATA BIT(S):   6   (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates INS heading is valid.
      REMARKS: From EGI to FCC.
      PASS: If fifth digit displayed on CDU is 6 or 7, go to paragraph 27–20.
      FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–20 SIGNAL NAME: INS ALTITUDE VALID
MEMORY LOCATION: 002643
MEMORY DATA BIT(S): 7   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates INS attitude is valid.
REMARKS: From EGI to FCC.
PASS: If fifth digit displayed on CDU is 6 or 7, go to paragraph 27–21.
FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–22 SIGNAL NAME: INS DATA VALID
MEMORY LOCATION: 002643
MEMORY DATA BIT(S): 9   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates INS data is valid.
REMARKS: From EGI to FCC.
PASS: If fourth digit displayed on CDU is 6 or 7, go to paragraph 27–23.
FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–23 SIGNAL NAME: INS FAILED
MEMORY LOCATION: 002737
MEMORY DATA BIT(S): 4   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates INS failure.
REMARKS: From EGI to FCC.
PASS: If sixth digit displayed on CDU is 0, go to paragraph 27–24.
FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–24 SIGNAL NAME: INS NOT READY
MEMORY LOCATION: 002737
MEMORY DATA BIT(S): 5   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates INS not ready.
REMARKS: From EGI to FCC.
PASS: If fifth digit displayed on CDU is 0, 1, 2 or 3, go to paragraph 27–25.
FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–25 SIGNAL NAME: INS SBIT COMPLETE
MEMORY LOCATION: 002737
MEMORY DATA BIT(S): 7   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates INS start up BIT is complete.
REMARKS: From EGI to FCC.
PASS: If fifth digit displayed on CDU is 1, 3, 5 or 7, go to paragraph 27–26.
FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–26 SIGNAL NAME: INS SBIT STATUS
MEMORY LOCATION: 002737
MEMORY DATA BIT(S): 8   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates INS start up bit GO or NOGO.
REMARKS: From EGI to FCC.
PASS: If fourth digit displayed on CDU is 4 or 5, go to paragraph 27–27.
FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–27 **SIGNAL NAME:**   INS PBIT STATUS
MEMORY LOCATION: 002737
MEMORY DATA BIT(S):   10   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates INS periodic bit GO or NOGO.
REMARKS: From EGI to FCC.
PASS: If fourth digit displayed on CDU is 5, go to paragraph 27–28.
FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–28 **SIGNAL NAME:**   INS IBIT IN PROGRESS
MEMORY LOCATION: 11   (BINARY)
MEMORY DATA BIT(S):   002737
CONDITION: (None)
SIGNAL FUNCTION: Indicates INS initiated BIT in progress.
REMARKS: From EGI to FCC.
PASS: If third digit displayed on CDU is 0 or 2, go to paragraph 27–29.
FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–29 **SIGNAL NAME:**   INS IBIT STATUS
MEMORY LOCATION: 12   (BINARY)
MEMORY DATA BIT(S):   002737
CONDITION: (None)
SIGNAL FUNCTION: Indicates INS initiated BIT GO or NOGO.
REMARKS: From EGI to FCC.
PASS: If third digit displayed on CDU is 2, go to paragraph 27–30.
FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–30 **SIGNAL NAME:**   EGR PBIT STATUS
MEMORY LOCATION: 002700
MEMORY DATA BIT(S):   15   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates EGR periodic bit GO or NOGO.
REMARKS: From EGI to FCC.
PASS: If second digit displayed on CDU is 2, 3, 6 or 7, go to paragraph 27–31.
FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–31 **SIGNAL NAME:**   EGR IBIT STATUS
MEMORY LOCATION: 002700
MEMORY DATA BIT(S):   17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates EGR initiated bit GO or NOGO.
REMARKS: From EGI to FCC.
PASS: If first digit displayed on CDU is 4, 5 or 6, go to paragraph 27–32.
FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–32 **SIGNAL NAME:**   EGR FAILED
MEMORY LOCATION: 002737
MEMORY DATA BIT(S):   19   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates EGR has failed.
REMARKS: From EGI to FCC.
PASS: If first digit displayed on CDU is 0 or 4, go to paragraph 27–33.
FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–33 SIGNAL NAME: CHANNEL FAULT
        MEMORY LOCATION: 002732
        MEMORY DATA BIT(S): 4   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Indicates receiver channel 1 status.
        REMARKS: From EGI to FCC.
        PASS: If sixth digit displayed on CDU is 0, go to paragraph 27–34.
        FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–34 SIGNAL NAME: FREQ TRACKED
        MEMORY LOCATION: 002732
        MEMORY DATA BIT(S): 6   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Indicates frequency being tracked.
        REMARKS: From EGI to FCC.
        PASS: If fifth digit displayed on CDU is 0, 1, 4 or 5, frequency is L1.
              If fifth digit is 2, 3, 6 or 7, frequency is L2. Go to paragraph 27–35.
        FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–35 SIGNAL NAME: CHANNEL STATE
        MEMORY LOCATION: 002732
        MEMORY DATA BIT(S): 10–8   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Indicates channel tracking state.
        REMARKS: From EGI to FCC.
        PASS: If fourth digit displayed on CDU is 1, 2, 3, 4, 5, 6 or 7, go to paragraph 27–36.
        FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–36 SIGNAL NAME: HARDWARE CHANNEL
        MEMORY LOCATION: 002732
        MEMORY DATA BIT(S): 14–12   (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Indicates receiver physical channel.
        REMARKS: From EGI to FCC.
        PASS: If second digit displayed on CDU is 4, 5, 6 or 7, or if third digit is 1 or 2, go to paragraph
              27–37.
        FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–37 SIGNAL NAME: CHANNEL FAULT
        MEMORY LOCATION: 002733
        MEMORY DATA BIT(S): 4 (BINARY)
        CONDITION: (None)
        SIGNAL FUNCTION: Indicates receiver channel 2 status.
        REMARKS: From EGI to FCC.
        PASS: If sixth digit displayed on CDU is 0, go to paragraph 27–38.
        FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–38 SIGNAL NAME: FREQ TRACKED
      MEMORY LOCATION: 002733
      MEMORY DATA BIT(S): 6 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates frequency being tracked.
      REMARKS: From EGI to FCC.
      PASS: If fifth digit displayed on CDU is 0, 1, 4 or 5, frequency is L1.
            If fifth digit is 2, 3, 6 or 7, frequency is L2. Go to paragraph 27–39.
      FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–39 SIGNAL NAME: CHANNEL STATE
      MEMORY LOCATION: 002733
      MEMORY DATA BIT(S): 10–8 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates channel tracking state.
      REMARKS: From EGI to FCC.
      PASS: If fourth digit displayed on CDU is 1, 2, 3, 4, 5, 6 or 7, go to paragraph 27–40.
      FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–40 SIGNAL NAME: HARDWARE CHANNEL
      MEMORY LOCATION: 002733
      MEMORY DATA BIT(S): 14–12 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates receiver physical channel.
      REMARKS: From EGI to FCC.
      PASS: If second digit displayed on CDU is 4, 5, 6 or 7, or if third digit is 1 or 2, go to paragraph
            27–41.
      FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–41 SIGNAL NAME: CHANNEL FAULT
      MEMORY LOCATION: 002734
      MEMORY DATA BIT(S): 4 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates receiver channel 3 status.
      REMARKS: From EGI to FCC.
      PASS: If sixth digit displayed on CDU is 0, go to paragraph 27–42.
      FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–42 SIGNAL NAME: FREQ TRACKED
      MEMORY LOCATION: 002734
      MEMORY DATA BIT(S): 6 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates frequency being tracked.
      REMARKS: From EGI to FCC.
      PASS: If fifth digit displayed on CDU is 0, 1, 4 or 5, frequency is L1.
            If fifth digit is 2, 3, 6 or 7, frequency is L2. Go to paragraph 27–43.
      FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–43 SIGNAL NAME: CHANNEL STATE
MEMORY LOCATION: 002734
MEMORY DATA BIT(S): 10–8 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates channel tracking state.
REMARKS: From EGI to FCC.
PASS: If fourth digit displayed on CDU is 1, 2, 3, 4, 5, 6 or 7, go to paragraph 27–44.
FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–44 SIGNAL NAME: HARDWARE CHANNEL
MEMORY LOCATION: 002734
MEMORY DATA BIT(S): 14–12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates receiver physical channel.
REMARKS: From EGI to FCC.
PASS: If second digit displayed on CDU is 4, 5, 6 or 7, or if third digit is 1 or 2, go to paragraph
27–45.
FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–45 SIGNAL NAME: CHANNEL FAULT
MEMORY LOCATION: 002735
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates receiver channel 4 status.
REMARKS: From EGI to FCC.
PASS: If sixth digit displayed on CDU is 0, go to paragraph 27–46.
FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–46 SIGNAL NAME: FREQ TRACKED
MEMORY LOCATION: 002735
MEMORY DATA BIT(S): 6 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates frequency being tracked.
REMARKS: From EGI to FCC.
PASS: If fifth digit displayed on CDU is 0, 1, 4 or 5, frequency is L1.
If fifth digit is 2, 3, 6 or 7, frequency is L2. Go to paragraph 27–47.
FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–47 SIGNAL NAME: CHANNEL STATE
MEMORY LOCATION: 002735
MEMORY DATA BIT(S): 10–8 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates channel tracking state.
REMARKS: From EGI to FCC.
PASS: If fourth digit displayed on CDU is 1, 2, 3, 4, 5, 6 or 7, go to paragraph 27–48.
FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–48 SIGNAL NAME: HARDWARE CHANNEL
MEMORY LOCATION: 002735
MEMORY DATA BIT(S): 14–12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates receiver physical channel.
REMARKS: From EGI to FCC.
PASS: If second digit displayed on CDU is 4, 5, 6 or 7, or if third digit is 1 or 2, go to paragraph
     27–49.
FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–49 SIGNAL NAME: CHANNEL FAULT
MEMORY LOCATION: 002736
MEMORY DATA BIT(S): 4 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates receiver channel 5 status.
REMARKS: From EGI to FCC.
PASS: If sixth digit displayed on CDU is 0, go to paragraph 27–50.
FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–50 SIGNAL NAME: FREQ TRACKED
MEMORY LOCATION: 002736
MEMORY DATA BIT(S): 6 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates frequency being tracked.
REMARKS: From EGI to FCC.
PASS: If fifth digit displayed on CDU is 0, 1, 4 or 5, frequency is L1.
     If fifth digit is 2, 3, 6 or 7, frequency is L2. Go to paragraph 27–51.
FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–51 SIGNAL NAME: CHANNEL STATE
MEMORY LOCATION: 002736
MEMORY DATA BIT(S): 10–8 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates channel tracking state.
REMARKS: From EGI to FCC.
PASS: If fourth digit displayed on CDU is 1, 2, 3, 4, 5, 6 or 7, go to paragraph 27–52.
FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–52 SIGNAL NAME: HARDWARE CHANNEL
MEMORY LOCATION: 002736
MEMORY DATA BIT(S): 14–12 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates receiver physical channel.
REMARKS: From EGI to FCC.
PASS: If second digit displayed on CDU is 4, 5, 6 or 7, or if third digit is 1 or 2, go to paragraph
     27–53.
FAIL: Location of fault: Replace EGI (TM 11–1520–238–23–1).

27–53 SIGNAL NAME: MESSAGE ERROR
   MEMORY LOCATION: 003003
   MEMORY DATA BIT(S):   9
   CONDITION: (None)
   SIGNAL FUNCTION: Indicates message error.
   REMARKS: From FCC to EGI.
   PASS: If fourth digit displayed on CDU is 0, replace EGI (TM 11–1520–238–23–1).
   FAIL: Location of fault: replace FCC (TM 9–1230–476–20–2).

CHAPTER 28

DATA TRANSFER UNIT (DTU) (ADD)

MULTIPLEX READ CODES

FAILURE SYMPTOM INDEX

Personnel Required:

(2)

References:

TM 11–1520–238–23–1
TM 11–1520–238–23–2

Equipment Conditions:

Ref	Condition
TM 11–1520–238–23–2	DTU – MAINTENANCE OPERATIONAL CHECK in progress
TM 9–1230–476–20–2	MULTIPLEX SUBSYSTEM – POWER UP completed

NOTE

- All multiplex read code responses are read from right to left.

- Multiplex read codes must be used in conjunction with applicable Maintenance Operational Check (MOC) in progress.

MULTIPLEX READ CODE INTERPRETATIONS

28–1 **SIGNAL NAME:** TERMINAL FLAG
MEMORY LOCATION: 002522
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (NONE)
SIGNAL FUNCTION: Indicates terminal fault.
REMARKS: From DTU to FCC.
PASS: If first digit on CDU is 4 or 0, go to paragraph 28–2.
FAIL: Location of fault: From DTU circuit breaker to DTR. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

28–2   SIGNAL NAME: MESSAGE ERROR
    MEMORY LOCATION: 002522
    MEMORY DATA BIT(S): 9   (BINARY)
    CONDITION: (None)
    SIGNAL FUNCTION: Indicate a message error.
    REMARKS: From DTU to FCC.
    PASS: If fourth digit on CDU is 0, go to paragraph 28–9.
    FAIL: Location of fault: Replace DTR (TM 11–1520–238–23–1).

28–3   SIGNAL NAME: SUBSYSTEM FLAG
    MEMORY LOCATION: 002522
    MEMORY DATA BIT(S): 17   (BINARY)
    CONDITION: (None)
    SIGNAL FUNCTION: Indicates DTC battery low.
    REMARKS: From DTU to FCC.
    PASS: If first digit on CDU is 0, go to paragraph 28–11.
    FAIL: Location of fault: Replace DTC (TM 11–1520–238–23–1).

28–4   SIGNAL NAME: DTC ON BOARD
    MEMORY LOCATION: 002523
    MEMORY DATA BIT(S): 19   (BINARY)
    CONDITION: (None)
    SIGNAL FUNCTION: Indicates the DTC has been installed.
    REMARKS: From DTU to FCC.
    PASS: If first digit on CDU is 2, 4 or 6, go to paragraph 28–5.
    FAIL: Location of fault: Replace DTC (TM 11–1520–238–23–1).

28–5   SIGNAL NAME: DTC READY
    MEMORY LOCATION: 002523
    MEMORY DATA BIT(S): 18   (BINARY)
    CONDITION: (None)
    SIGNAL FUNCTION: Indicates the DTC installed and loaded. Awaiting operator action.
    REMARKS: From DTU to FCC.
    PASS: If first digit on CDU is 0 or 4, go to paragraph 28–6.
    FAIL: Location of fault: Replace DTR (TM 11–1520–238–23–1).

28–6   SIGNAL NAME: ADDR PTR VALID
    MEMORY LOCATION: 002523
    MEMORY DATA BIT(S): 17   (BINARY)
    CONDITION: (None)
    SIGNAL FUNCTION: Indicates the DTR address pointer is valid.
    REMARKS: From DTU to FCC.
    PASS: If first digit on CDU is 0, go to paragraph 28–9.
    FAIL: Location of fault: Replace DTR (TM 11–1520–238–23–1).

28–7 **SIGNAL NAME:** ZEROIZE IN PROGRESS
MEMORY LOCATION: 002523
MEMORY DATA BIT(S): 16 (BINARY)
CONDITION: ZEROIZE selected on CDU.
SIGNAL FUNCTION: Indicates zeroing of DTC in progress.
REMARKS: From DTU to FCC.
PASS: If the second digit on the CDU is 1, go to paragraph 28–8.
FAIL: Location of fault: CDU, wiring from CDU to zeroize relay, zeroize relay, wiring from zeroize relay to DTR, DTR. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

28–8 **SIGNAL NAME:** ZEROIZE SUCCESFUL
MEMORY LOCATION: 002523
MEMORY DATA BIT(S): 15 (BINARY)
CONDITION: ZEROIZE selected on CDU.
SIGNAL FUNCTION: Indicates DTC is zeroized.
REMARKS: From DTU to FCC.
PASS: If the second digit on the CDU is 2, replace DTC (TM 11–1520–238–23–1).
FAIL: Location of fault: Replace DTR (TM 11–1520–238–23–1).

28–9 **SIGNAL NAME:** TERMINAL FLAG
MEMORY LOCATION: 002525
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates terminal fault.
REMARKS: From DTU to FCC.
PASS: If first digit on CDU is 4 or 0, go to paragraph 28–10.
FAIL: Location of fault: From DTU circuit breaker to DTR. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

28–10 **SIGNAL NAME:** MESSAGE ERROR
MEMORY LOCATION: 002525
MEMORY DATA BIT(S): 9 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicate a message error.
REMARKS: From DTU to FCC.
PASS: If fourth digit on CDU is 0, go to paragraph 28–12.
FAIL: Location of fault: Replace DTR (TM 11–1520–238–23–1).

28–11 **SIGNAL NAME:** SUBSYSTEM FLAG
MEMORY LOCATION: 002525
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates DTC battery low.
REMARKS: From DTU to FCC.
PASS: If first digit on CDU is 0, go to paragraph 28–14.
FAIL: Location of fault: Replace DTC (TM 11–1520–238–23–1).

28–12 SIGNAL NAME: TERMINAL FLAG
MEMORY LOCATION: 002531
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates terminal fault.
REMARKS: From DTU to FCC.
PASS: If first digit on CDU is 4 or 0, go to paragraph 28–13.
FAIL: Location of fault: From DTU circuit breaker to DTR. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

28–13 SIGNAL NAME: MESSAGE ERROR
MEMORY LOCATION: 002531
MEMORY DATA BIT(S): 9 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicate a message error.
REMARKS: From DTU to FCC.
PASS: If fourth digit on CDU is 0, go to paragraph 28–15.
FAIL: Location of fault: Replace DTR (TM 11–1520–238–23–1).

28–14 SIGNAL NAME: SUBSYSTEM FLAG
MEMORY LOCATION: 002531
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates DTC battery low.
REMARKS: From DTU to FCC.
PASS: If first digit on CDU is 0, go to paragraph 28–17.
FAIL: Location of fault: Replace DTC (TM 11–1520–238–23–1).

28–15 SIGNAL NAME: TERMINAL FLAG
MEMORY LOCATION: 002575
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates terminal fault.
REMARKS: From FCC to DTU.
PASS: If first digit on CDU is 4 or 0, go to paragraph 28–16.
FAIL: Location of fault: From DTU circuit breaker to DTR. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

28–16 SIGNAL NAME: MESSAGE ERROR
MEMORY LOCATION: 002575
MEMORY DATA BIT(S): 9 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicate a message error.
REMARKS: From DTU to FCC.
PASS: If fourth digit on CDU is 0, go to paragraph 28–18.
FAIL: Location of fault: Replace DTR (TM 11–1520–238–23–1).

28–17 SIGNAL NAME: SUBSYSTEM FLAG
MEMORY LOCATION: 002575
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates DTC battery low.
REMARKS: From DTU to FCC.
PASS: If first digit on CDU is 0, 1, 2, or 3, go to paragraph 28–19.
FAIL: Location of fault: Replace DTC (TM 11–1520–238–23–1).

28–18 SIGNAL NAME: MESSAGE ERROR
MEMORY LOCATION: 002600
MEMORY DATA BIT(S): 9 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicate a message error.
REMARKS: From FCC to DTU.
PASS: If fourth digit on CDU is 0, go to paragraph 28–22.
FAIL: Location of fault: Replace DTR (TM 11–1520–238–23–1).

28–19 SIGNAL NAME: SUBSYSTEM FLAG
MEMORY LOCATION: 002600
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates DTC battery low.
REMARKS: From FCC to DTU.
PASS: If first digit on CDU is 0, replace DTR TM 11–1520–238–23–1).
FAIL: Location of fault: Replace DTC TM 11–1520–238–23–1).

28–20 SIGNAL NAME: TERMINAL FLAG
MEMORY LOCATION: 002600
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates terminal fault.
REMARKS: From FCC to DTU.
PASS: If first digit on CDU is 4 or 0, replace DTR TM 11–1520–238–23–1).
FAIL: Location of fault: From DTU circuit breaker to DTR. Troubleshoot wiring to isolate fault (TM 11–1520–238–23–2).

CHAPTER 29

COMPUTER DISPLAY UNIT (CDU) (ADD)

MULTIPLEX READ CODES

FAILURE SYMPTOM INDEX

Symptom	Refer to paragraph
CDU NO–GO MESSAGE DISPLAYED	29–1

Personnel Required:

(2)

References:

TM 9–1230–476–20–2
TM 11–1520–238–23–1
TM 11–1520–238–23–2

Equipment Conditions:

Ref	Condition
TM 11–1520–238–23–2	Doppler – (ADD) MAINTENANCE OPERATIONAL CHECK in progress
TM 9–1230–476–20–2	MULTIPLEX SUBSYSTEM – POWER UP completed

NOTE

- All multiplex read code responses are read from right to left.

- Multiplex read codes must be used in conjunction with applicable Maintenance Operational Check (MOC) in progress.

MULTIPLEX READ CODE INTERPRETATIONS

29–1 SIGNAL NAME: MESSAGE ERROR
MEMORY LOCATION: 002254
MEMORY DATA BIT(S): 9 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates message error.
REMARKS: From CDU to FCC.
PASS: If fourth digit displayed on CDU is 0, 1, 4, or 5, go to paragraph 29–2.
FAIL: Location of fault: replace CDU (TM 11–1520–238–23–1).

29–2 SIGNAL NAME: RESERVED
MEMORY LOCATION: 002254
MEMORY DATA BIT(S): 12-14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates serial digital error.
REMARKS: From CDU to FCC.
PASS: If second and third digits displayed on CDU are 0, go to paragraph 29–3.
FAIL: Location of fault: replace CDU (TM 11–1520–238–23–1).

29–3 SIGNAL NAME: SUBSYSTEM FLAG
MEMORY LOCATION: 002254
MEMORY DATA BIT(S):   17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates subsystem fault.
REMARKS: From CDU to FCC.
PASS: If first digit displayed on CDU is 0 or 1, go to paragraph 29–4.
FAIL: Location of fault: replace CDU (TM 11–1520–238–23–1).

29–4 SIGNAL NAME: TERMINAL FLAG
MEMORY LOCATION: 002254
MEMORY DATA BIT(S):   19   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates terminal fault.
REMARKS: From CDU to FCC.
PASS: If first digit displayed on CDU is 0, go to paragraph 29–5.
FAIL: Location of fault: replace CDU (TM 11–1520–238–23–1).

29–5 SIGNAL NAME: MESSAGE ERROR
MEMORY LOCATION: 002347
MEMORY DATA BIT(S):   9   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates message error.
REMARKS: From FCC to CDU.
PASS: If fourth digit displayed on CDU is 0, 1, 4, or 5, go to paragraph 29–6.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–2).

29–6 SIGNAL NAME: RESERVED
MEMORY LOCATION: 002347
MEMORY DATA BIT(S):   12-14   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates serial digital error.
REMARKS: From FCC to CDU.
PASS: If second and third digits displayed on CDU are 0, go to paragraph 29–7.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–2).

29–7 SIGNAL NAME: SUBSYSTEM FLAG
MEMORY LOCATION: 002347
MEMORY DATA BIT(S):   17   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates subsystem fault.
REMARKS: From FCC to CDU.
PASS: If first digit displayed on CDU is 0 or 1, go to paragraph 29–8.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–2).

29–8 SIGNAL NAME: TERMINAL FLAG
MEMORY LOCATION: 002347
MEMORY DATA BIT(S):   19   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates terminal fault.
REMARKS: From FCC to CDU.
PASS: Location of fault: replace CDU (TM 11–1520–238–23–1).
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–2).

CHAPTER 30

DOPPLER (ADD) MULTIPLEX READ CODES

FAILURE SYMPTOM INDEX

Symptom	Refer to paragraph
ARINC OUTPUT SIGNAL NO–GO MESSAGE DISPLAYED (AN/ASN–137) (ADD)	30–8
ATT–HDG INPUT SIGNALS NO–GO SDCC–HARS WIRING MESSAGE DISPLAYED (AN/ASN–137) (ADD)	30–16
DNS NO–GO MESSAGE DISPLAYED	30–1

TABLE 30–1. ASCII CODE CONVERSIONS
(BITS 17-11 OR BITS 10-04)

40 =	N/A	51 =	Q	22 =	N/A	33 =	3	95 =	VAB6	A5 =	CODE
41 =	A	52 =	R	23 =	N/A	34 =	4	94 =	VAB5	A4 =	TGT
42 =	B	53 =	S	24 =	N/A	35 =	5	93 =	VAB4	A3 =	ATHS
43 =	C	54 =	T	25 =	N/A	36 =	6	92 =	VAB3	A2 =	IFF
44 =	D	55 =	U	26 =	N/A	37 =	7	91 =	VAB2	A1 =	NAV
45 =	E	56 =	V	27 =	N/A	38 =	8	90 =	VAB1	A0 =	COM
46 =	F	57 =	W	28 =	(	39 =	9	84 =	→		
47 =	G	58 =	X	29 =	)	3A =	N/A	83 =			
48 =	H	59 =	Y	2A =	*	3B =	N/A	82 =	CLR		
49 =	I	5A =	Z	2B =	+	3C =	N/A	AD =	STR		
4A =	J	5B =	N/A	2C =	N/A	3D =	N/A	AC =	FPLN		
4B =	K	5C =	N/A	2D =	-	3E =	N/A	AB =	WPN		
4C =	L	5D =	N/A	2E =	.	3F =	N/A	AA =	IDNT		
4D =	M	5E =	N/A	2F =	/	99 =	DN↓	A9 =	PGM		
4E =	N	5F =	N/A	30 =	0	98 =	UP↑	A8 =	ENT		
4F =	O	20 =	SP	31 =	1	97 =	VAB8	A7 =	DATA		
50 =	P	21 =	N/A	32 =	2	96 =	VAB7	A6 =	FDLS		

Personnel Required:		**Equipment Conditions:**	
(2)		Ref	Condition
		TM 11–1520–238–23–2	Doppler (ADD) MAINTENANCE OPERATIONAL CHECK in progress
References:			
TM 11–1520–238–23–1		TM 9–1230–476–20–2	MULTIPLEX SUBSYSTEM – POWER UP completed
TM 11–1520–238–23–2			

NOTE

- All multiplex read code responses are read from right to left.

- Multiplex read codes must be used in conjunction with applicable Maintenance Operational Check (MOC) in progress.

MULTIPLEX READ CODE INTERPRETATIONS

30–1 **SIGNAL NAME:** MESSAGE ERROR
MEMORY LOCATION: 003005
MEMORY DATA BIT(S): 9 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates message error.
REMARKS: From SDCC to FCC.
PASS: If fourth digit displayed on CDU is 0, go to paragraph 30–2.
FAIL: Location of fault: input correct datum (TM 1–1520–238–10). If fault remains, replace FCC (TM 9–1230–476–20–2).

30–2 **SIGNAL NAME:** SUBSYSTEM FLAG
MEMORY LOCATION: 003005
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates subsystem fault.
REMARKS: From SDCC to FCC.
PASS: If first digit displayed on CDU is 0 or 1, go to paragraph 30–3.
FAIL: Location of fault: replace SDCC (TM 11–1520–238–23–1).

30–3 **SIGNAL NAME:** TERMINAL FLAG
MEMORY LOCATION: 003005
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates terminal fault.
REMARKS: From SDCC to FCC.
PASS: If first digit displayed on CDU is 0, go to paragraph 30–4.
FAIL: Location of fault: replace SDCC (TM 11–1520–238–23–1).

30–4 SIGNAL NAME: MESSAGE ERROR
MEMORY LOCATION: 003021
MEMORY DATA BIT(S): 9 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates message error.
REMARKS: From SDCC to FCC.
PASS: If fourth digit displayed on CDU is 0, go to paragraph 30–5.
FAIL: Location of fault: replace SDCC (TM 11–1520–238–23–1).

30–5 SIGNAL NAME: RESERVED
MEMORY LOCATION: 003021
MEMORY DATA BIT(S): 12–14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates serial digital error.
REMARKS: From SDCC to FCC.
PASS: If second and third digits displayed on CDU are 0, go to paragraph 30–6.
FAIL: Location of fault: replace SDCC (TM 11–1520–238–23–1).

30–6 SIGNAL NAME: SUBSYSTEM FLAG
MEMORY LOCATION: 003021
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates subsystem fault.
REMARKS: From SDCC to FCC.
PASS: If first digit displayed on CDU is 0 or 1, go to paragraph 30–7.
FAIL: Location of fault: replace SDCC (TM 11–1520–238–23–1).

30–7 SIGNAL NAME: TERMINAL FLAG
MEMORY LOCATION: 003021
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates terminal fault.
REMARKS: From SDCC to FCC.
PASS: If first digit displayed on CDU is 0, go to paragraph 30–8.
FAIL: Location of fault: replace SDCC (TM 11–1520–238–23–1).

30–8 SIGNAL NAME: MESSAGE ERROR
MEMORY LOCATION: 003036
MEMORY DATA BIT(S): 9 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates message error.
REMARKS: From SDCC to FCC.
PASS: If fourth digit displayed on CDU is 0, go to paragraph 30–9.
FAIL: Location of fault: replace SDCC (TM 11–1520–238–23–1).

30–9 SIGNAL NAME: RESERVED
MEMORY LOCATION: 003036
MEMORY DATA BIT(S): 12–14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates serial digital error.
REMARKS: From SDCC to FCC.
PASS: If second and third digits displayed on CDU are 0, go to paragraph 30–10.
FAIL: Location of fault: replace SDCC (TM 11–1520–238–23–1).

30–10 **SIGNAL NAME:** SUBSYSTEM FLAG
      MEMORY LOCATION: 003036
      MEMORY DATA BIT(S): 17 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates subsystem fault.
      REMARKS: From SDCC to FCC.
      PASS: If first digit displayed on CDU is 0 or 1, go to paragraph 30–11.
      FAIL: Location of fault: replace SDCC (TM 11–1520–238–23–1).

30–11 **SIGNAL NAME:** TERMINAL FLAG
      MEMORY LOCATION: 003036
      MEMORY DATA BIT(S): 19 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates terminal fault.
      REMARKS: From SDCC to FCC.
      PASS: If first digit displayed on CDU is 0, go to paragraph 30–12.
      FAIL: Location of fault: replace SDCC (TM 11–1520–238–23–1).

30–12 **SIGNAL NAME:** TEST STATUS CODE
      MEMORY LOCATION: 003037
      MEMORY DATA BIT(S): 4–5 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Monitors DNS test status.
      REMARKS: From SDCC to FCC.
      PASS: If fifth and sixth digits displayed on CDU are 0=no test in progress.
            If fifth digit is 4 and sixth digit is 0=DNS test in progress.
            If fifth digit is 0 and sixth digit is 1=test complete.
            For failure code after test, go to paragraph 30–13.
      FAIL: Location of fault: if condition does not agree with test status, replace SDCC
            (TM 11–1520–238–23–1).

30–13 **SIGNAL NAME:** FAILURE CODE
      MEMORY LOCATION: 003040
      MEMORY DATA BIT(S): 5–11; 13–19 (ASCII)
      CONDITION: Refer to table 30–1 for ASCII code conversions.
      SIGNAL FUNCTION: Indicates DNS failure codes after test.
      REMARKS: From SDCC to FCC.
      PASS: Valid combinations of ASCII code conversions are as follows:
            GO=DNS is operational. Go to paragraph 30–15.
      FAIL: BU=System should be switched to back–up mode.
            MN=Only manual operation is possible.
            NG=DNS is not operational.
            For failure code, go to paragraph 30–14.

30–14 SIGNAL NAME: FAILURE CODE
MEMORY LOCATION: 003041
MEMORY DATA BIT(S): 5–11   (ASCII)
CONDITION: Refer to table 30–1 for ASCII code conversions.
SIGNAL FUNCTION: Indicates DNS failure codes after test.
REMARKS: From SDCC to FCC.
PASS: Blank=undefined malfunction. Go to paragraph 30–15.
FAIL: Location of fault:
   T=TAS failure. Go to chapter 2, Air Data System Multiplex Read Codes.
   H=Heading failure. Go to chapter 27, Embedded GPS–Inertial Multiplex Read Codes.
   P=Pitch and/or roll failure. Go to chapter 27, Embedded GPS–Inertial Multiplex Read Codes.
   M=MDS failure. Go to chapter 29, CDU Multiplex Read Codes.
   S=SDCC failure. Replace SDCC (TM 11–1520–238–23–1).
   R=RTA failure. Replace RTA (TM 11–1520–238–23–1).

30–15 SIGNAL NAME: FAILURE CODE
MEMORY LOCATION: 003042
MEMORY DATA BIT(S): 13–19   (ASCII)
CONDITION: Refer to table 30–1 for ASCII code conversions.
SIGNAL FUNCTION: Indicates DNS failure codes after test.
REMARKS: From SDCC to FCC.
PASS: Blank=undefined malfunction. Replace SDCC (TM 11–1520–238–23–1).
FAIL: Location of fault:
   P=Pitch/roll failure.
   T=TAS failure.
   M=MDS failure.
   A=Aux output failure.
   Replace SDCC (TM 11–1520–238–23–1).

30–16 SIGNAL NAME: MESSAGE ERROR
MEMORY LOCATION: 003054
MEMORY DATA BIT(S): 9   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: indicates message error.
REMARKS: From FCC to SDCC.
PASS: If fourth digit displayed on CDU is 0, 1, 4, or 5, go to paragraph 30–17.
FAIL: Location of fault: input correct datum (TM 1–1520–238–10). If fault remains, replace FCC
   (TM 9–1230–476–20–2).

30–17 SIGNAL NAME: RESERVED
MEMORY LOCATION: 003054
MEMORY DATA BIT(S): 12–14   (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates serial digital error.
REMARKS: From FCC to SDCC.
PASS: If second digit displayed on CDU is 0, 1, 2, or 3 and third digit is 0 or 4, go to paragraph
   30–18.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–2).

30–18 SIGNAL NAME: SUBSYSTEM FLAG
      MEMORY LOCATION: 003054
      MEMORY DATA BIT(S): 17 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates subsystem fault.
      REMARKS: From FCC to SDCC.
      PASS: If first digit displayed on CDU is 0 or 1, go to paragraph 30–19.
      FAIL: Location of fault: replace FCC (TM 9–1230–476–20–2).

30–19 SIGNAL NAME: TERMINAL FLAG
      MEMORY LOCATION: 003054
      MEMORY DATA BIT(S): 19 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates terminal fault.
      REMARKS: From FCC to SDCC.
      PASS: If first digit displayed on CDU is 0, go to paragraph 30–20.
      FAIL: Location of fault: replace FCC (TM 9–1230–476–20–2).

30–20 SIGNAL NAME: MESSAGE ERROR
      MEMORY LOCATION: 003065
      MEMORY DATA BIT(S): 9 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: indicates message error.
      REMARKS: From FCC to SDCC.
      PASS: If fourth digit displayed on CDU is 0, go to paragraph 30–21.
      FAIL: Location of fault: replace FCC (TM 9–1230–476–20–2).

30–21 SIGNAL NAME: RESERVED
      MEMORY LOCATION: 003065
      MEMORY DATA BIT(S): 12–14 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates serial digital error.
      REMARKS: From FCC to SDCC.
      PASS: If second and third digits displayed on CDU are 0, go to paragraph 30–22.
      FAIL: Location of fault: replace FCC (TM 9–1230–476–20–2).

30–22 SIGNAL NAME: SUBSYSTEM FLAG
      MEMORY LOCATION: 003065
      MEMORY DATA BIT(S): 17 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates subsystem fault.
      REMARKS: From FCC to SDCC.
      PASS: If first digit displayed on CDU is 0 or 1, go to paragraph 30–23.
      FAIL: Location of fault: replace FCC (TM 9–1230–476–20–2).

30–23 SIGNAL NAME: TERMINAL FLAG
      MEMORY LOCATION: 003065
      MEMORY DATA BIT(S): 19 (BINARY)
      CONDITION: (None)
      SIGNAL FUNCTION: Indicates terminal fault.
      REMARKS: From FCC to SDCC.
      PASS: If first digit displayed on CDU is 0, go to paragraph 30–24.
      FAIL: Location of fault: replace FCC (TM 9–1230–476–20–2).

30–24 SIGNAL NAME: MESSAGE ERROR
MEMORY LOCATION: 003071
MEMORY DATA BIT(S): 9 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: indicates message error.
REMARKS: From FCC to SDCC.
PASS: If fourth digit displayed on CDU is 0, go to paragraph 30–25.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–2).

30–25 SIGNAL NAME: RESERVED
MEMORY LOCATION: 003071
MEMORY DATA BIT(S): 12–14 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates serial digital error.
REMARKS: From FCC to SDCC.
PASS: If second and third digits displayed on CDU are 0, go to paragraph 30–26.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–2).

30–26 SIGNAL NAME: SUBSYSTEM FLAG
MEMORY LOCATION: 003071
MEMORY DATA BIT(S): 17 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates subsystem fault.
REMARKS: From FCC to SDCC.
PASS: If first digit displayed on CDU is 0 or 1, go to paragraph 30–27.
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–2).

30–27 SIGNAL NAME: TERMINAL FLAG
MEMORY LOCATION: 003071
MEMORY DATA BIT(S): 19 (BINARY)
CONDITION: (None)
SIGNAL FUNCTION: Indicates terminal fault.
REMARKS: From FCC to SDCC.
PASS: If first digit displayed on CDU is 0, Replace SDCC (TM 11–1520–238–23–1).
FAIL: Location of fault: replace FCC (TM 9–1230–476–20–2).

APPENDIX A

REFERENCES

A–1 GENERAL.

This appendix contains a list of all official publications referenced in this technical manual.

A–2 REFERENCES.

TECHNICAL MANUALS

DA PAM 738–751	The Army Maintenance Management System – Aircraft (TAMMS–A)
FM 1–511	Army Aircraft Quality Control and Technical Inspection
TM 1–1270–476–20	Aviation Unit Maintenance Manual, Target Acquisition Designation Sight (TADS) Assembly AN/ASQ–170 AH–64A Attack Helicopter
TM 1–1270–476–T	Aviation Unit Maintenance Manual, Target Acquisition Designation Sight (TADS) Assembly AN/ASQ–170 AH–64A Attack Helicopter
TM 1–1520–238–T–1	Aviation Unit Maintenance Manual for Army AH–64A Helicopter Fault Detection/Location System
TM 1–1520–238–T–2	Aviation Unit Maintenance Manual for Army AH–64A Helicopter Integrated troubleshooting Manual
TM 1–1520–238–T–4	AVUM/AVIM Troubleshooting; Introduction; Airframe; Landing Gear; Power Plants; Rotor; Drive System
TM 1–1520–238–T–5	AVUM/AVIM Troubleshooting; Hydraulic and Pneumatic Systems; Instruments
TM 1–1520–238–T–6	AVUM/AVIM Troubleshooting; Electrical
TM 1–1520–238–T–7	AVUM/AVIM Troubleshooting; Fuel Systems; Flight Controls
TM 1–1520–238–T–8	AVUM/AVIM Troubleshooting; Utilities System; Environmental System; Hoists and Winches; Auxiliary Power Unit; Mission Equipment
TM 1–5855–265–20	Aviation Unit Maintenance Manual, Pilot Night Vision Sensor (PNVS) Assembly AN/AAQ–11
TM 1–5855–265–T	Aviation Unit Maintenance Manual, Pilot Night Vision Sensor (PNVS) Assembly AN/AAQ–11
TM 9–1090–208–23–1	Aviation Unit and Intermediate Maintenance Manual for Armament Subsystem, Helicopter: M139 Gun, Automatic, 30–Millimeter: M230 Rocket Management Subsystem, Inventory – Deployment: M140
TM 9–1090–208–23–2	Aviation Unit and Intermediate Troubleshooting Manual for Armament Subsystem, Helicopter: M139 Gun, Automatic, 30–Millimeter: M230 Rocket Management Subsystem, Inventory – Deployment: M140
TM 9–1230–476–20–1	Aviation Unit Maintenance Manual for Army AH–64A Helicopter Fire Control System
TM 9–1230–476–20–2	Aviation Unit Troubleshooting Manual for Army AH–64A Helicopter Fire Control System
TM 9–1270–221–23	Aviation Unit and Intermediate Maintenance Manual for Fire Control Subsystem, Helmet Directed: M142 (Used with M139 Helicopter Armament Subsystem)
TM 9–1425–475–20	Maintenance Instructions, Aviation Unit Maintenance; Launcher, Guided Missile, Aircraft, M272 Part No. 13009444; Guided Missile, Surface Attack, AGM–114A Part No. 13007352, HELLFIRE Modular Missile System

TECHNICAL MANUALS (cont)

GLOSSARY

ABBREVIATIONS AND ACRONYMS

AC . . . . Alternating Current
ACC . . . . Acceleration
ACCEL . . . . Acceleration
ACM . . . . Automatic Control Module
ACQ . . . . Acquisition
ACT . . . . Actuator
ACTG . . . . Actuating
ACTR . . . . Actuator
A/D . . . . Analog /Digital
AD . . . . Analog to Digital
ADA . . . . Analog to Digital to Analog
AD/DA . . . . Analog to Digital to Analog
ADDR . . . . Address
ADJ . . . . Adjustment
ADP . . . . Air Data Processor
ADS . . . . Air Data System
AIA . . . . Aircraft Interface Adapter
AMP . . . . Amplifier
AND . . . . Alphanumeric Display
APU . . . . Auxiliary Power Unit
ARCS . . . . Aerial Rocket Control System
ASE . . . . Automatic Stabilization Equipment
A/S . . . . Airspeed
ASSY . . . . Assembly
ATHS . . . . Automatic Target Handoff System
ATT . . . . Attitude
A/P . . . . Autopilot
AUTO . . . . Automatic
AUTOPLT . . . . Autopilot
ATTD . . . . Attitude
AVIM . . . . Aviation Intermediate Maintenance
AVUM . . . . Aviation Unit Maintenance
AWS . . . . Area Weapon System
AZ . . . . Azimuth
AZSIG . . . . Azimuth Signal
BATT . . . . Battery
BBC . . . . Back–up Bus Controller
BCD . . . . Binary Coded Decimal
BIT . . . . Built–In Test
BOT . . . . Bottom

BRK . . . . Brake
BRSIT . . . . Boresight
BRT . . . . Bright
BST . . . . Boost, Boresight
BU . . . . Back Up
BUCS . . . . Back–Up Control System
C . . . . Celsius, CPG
C/B . . . . Circuit Breaker
CAL . . . . Calibration
CALC . . . . Calculation
CB . . . . Circuit Breaker
CCM . . . . Counter Counter Measure
CDU . . . . Computer Display Unit
CHAN . . . . Channel
CHAR . . . . Character
CLTV . . . . Collective
CMD . . . . Command
CMPTR . . . . Computer
COLL . . . . Collective
COM . . . . Communication
COMM . . . . Command
COMPL . . . . Complete
CONT . . . . Control
COS . . . . Cosine
CPG . . . . Copilot/Gunner
CPU . . . . Central Processing Unit
CTL . . . . Control
CTRS . . . . Contrast
CYC . . . . Cyclic
DA . . . . Department of the Army
DAP . . . . Display Adjust Panel
DASE . . . . Digital Automatic Stabilization Equipment
DASEC . . . . DASE Computer
DC . . . . Direct Current
DCO . . . . DC Analog Output
DCPLR . . . . Decoupler
DEG . . . . Degrees
DEK . . . . Data Entry Keyboard
DEU . . . . Display electronics Unit
DET . . . . Detent
DICE . . . . De–Ice
DIR . . . . Directional
DIR COS . . . . Direct Cosine
DISC . . . . Discrete
DISP . . . . Display
DISTR . . . . Distribution
DISTRB . . . . Distribution
DIST . . . . Distribution

DLTU . . . . Data Link Terminal Unit
DMA . . . . Direct Memory Access
DNS . . . . Doppler Navigation System
DO . . . . Discrete Output
DOD . . . . Department of Defense
DOP . . . . Doppler
DSA . . . . Day Sensor Assembly
DTC . . . . Data Transfer Cartridge
DTR . . . . Data Transfer Receptacle
DTT . . . . Detent
DTU . . . . Data Transfer Unit
DTV . . . . Day TV
DVO . . . . Direct View Optics
ECA . . . . Electronic Control Amplifier
ECS . . . . Environmental Control System
ECSP . . . . Electronic Command Signal Processor
EED . . . . Electro–Explosive Devices
EGI . . . . Embedded GPS–Inertial
EGR . . . . Embedded GPS–Inertial Receiver
EICE . . . . Engine Anti–ice
EGT . . . . Engine Gas Temperature
EHV . . . . Electro–Hydraulic Valve
EL . . . . Elevation
ELEC . . . . Electronic
ELEX . . . . Electronic
ELSIG . . . . Elevation Signal
EMERG . . . . Emergency
EMI . . . . Electromagnetic Induction
ENA . . . . Enable
ENT . . . . Enter
ENG . . . . Engine
EOW . . . . Engine Out Warning
EXST . . . . External Stores
F . . . . Fahrenheit
FAB . . . . Forward Avionics Bay
FC . . . . Fire Control
FCC . . . . Fire Control Computer
FCP . . . . Fire Control Panel
FD/LS . . . . Fault Detection and Location System
FLIR . . . . Forward Looking Infrared
FLT . . . . Flight
FOV . . . . Field of View
FPLN . . . . Flight Plan
FREQ . . . . Frequency
FXD . . . . Fixed
GEN . . . . Generator
GCB . . . . Gun Control Box

GCU . . . . Generator Control Unit
GHS . . . . Gunner Helmet Sight
GND . . . . Ground
GPS . . . . Global Postioning System
GTCB . . . . Gun Turret Control Box
HARS . . . . Heading Attitude Reference System
HDD . . . . Heads Down Display
HDG . . . . Heading
HDU . . . . Helmet Display Unit
HI . . . . High
HIS . . . . History
HMD . . . . Helmet Mounted Display
HME . . . . Hellfire Missile Equipment
HOD . . . . Heads Out Display
HSI . . . . Horizontal Situation Indicator
HYD . . . . Hydraulic
HZ . . . . Hertz
I . . . . Input
IAT . . . . Image Auto Track
IBIT . . . . Initiated Built In Test
ID . . . . Identification
IDNT . . . . Identification
IFF . . . . Identification Friend or Foe
IGN . . . . Ignition
IHAD . . . . Integrated Helmet and Display
IHADSS . . . . Integrated Helmet and Display Sight System
IHU . . . . Integrated Helmet Unit
INBD . . . . Inboard
IND . . . . Indicate, Indication, Indicator
INFO . . . . Information
INS . . . . Inertial Navigation System
INST . . . . Instrument
IVD . . . . Indirect View Display
JETT . . . . Jettison
JTSN . . . . Jettison
KTS . . . . Knots
L . . . . Left, Launcher
LAT . . . . Lateral
LCHR . . . . Launcher
LEU . . . . Laser Electronics Unit
LH . . . . Left–Hand
LMC . . . . Linear Motion Compensation
LO . . . . Low
LOC . . . . Location
LOAL . . . . Lock–On After Launch
LOBL . . . . Lock–On Before Launch
LONG . . . . Longitude

LOS	Line of Sight
LOSRET	Line of Sight Reticle
LRFD	Laser Range Finder and Designation
LRU	Laser Receiver Unit
LSB	Least Significant Bit
LST	Laser Spot Tracker
LT	Laser Tracker, Left
LTRU	Laser Tracker Receiver Unit
LTU	Laser Transceiver Unit
LVDT	Linear Variable Differential Transformer
LWR	Lower
M	Missile
MA	Missile Abort
MAG	Magazine
MAGHDG	Magnetic Heading
MAGVAR	Magnetic Variation
MAN	Manual
MF	Missile Fail
MFOV	Medium Field of View
MH	Missile Hangfire
MISTRK	Mistrack
MN	Manual
MOC	Maintenance Operational Check
MON	Monitor
MRTU	Multiplex Remote Terminal Unit
MSB	Most Significant Bit
MSG	Message
MSL	Missile
MSLAZ	Missile Azimuth
MSLEL	Missile Elevation
MU	Missile Unlatched
MUX	Multiplex
NA	None Available
NAV	Navigation
NEG	Negative
ND	Nose Down
NFOV	Narrow Field of View
NG	No Go
NGB	Nose Gearbox
NORM	Normal
NSA	Night Sensor Assembly
NU	Nose Up
NVS	Night Vision System
NVS FXD	Night Vision Sensor Fixed
OAS	Omnidirectional Airspeed Sensor
ORT	Optical Relay Tube
OUTBD	Outboard
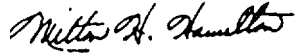
OVERTEMP	....	Over Temperature
OVRD	....	Override
PAC	....	Pylon Actuator Controller
PAM	....	Pamphlet
PBIT	....	Periodic Built In Test
PERF	....	Performed
PEU	....	PNVS Electronic Unit
PGM	....	Program
PLRT	....	Polarity
PLT	....	Pilot
PNL	....	Panel
PNVS	....	Pilot Night Vision Sensor
POS	....	Position
PRI	....	Primary
PROM	....	Programmable Read Only Memory
PSIG	....	Pounds per Square Inch of Gravity
PTO	....	Power Takeoff
PTR	....	Pointer
PWR	....	Power
PYLN	....	Pylon
QTY	....	Quantity
R	....	Right
RADALT	....	Radar Altimeter
RAI	....	Remote Attitude Indicator
RAM	....	Random Access Memory
RCCB	....	Remote Control Circuit Breaker
RCP	....	Rocket Control Panel
REC	....	Record
REMEL	....	Remember Elevation
RESP	....	Response
RET	....	Reticle
RF	....	Radio Frequency
RFAB	....	Right–Hand Forward Avionics Bay
RH	....	Right–Hand
RHE	....	Remote Hellfire Electronics
RICE	....	Rotor Anti–ice
RIPL	....	Ripple
RKT	....	Rocket
RMI	....	Radio Magnetic Indicator
RMT	....	Remote
RNDS CNTR MAG	....	Rounds Counter Magazine
RNG	....	Range
RT	....	Right
RTA	....	Receiver Transmitter Antenna
ROM	....	Read Only Memory
RTCL	....	Reticle
SAS	....	Stability Augmentation System

SBIT . . . . Start–up Built In Test
SCU . . . . Stabilization Control Unit
S/D . . . . Serial/Digital
SD . . . . Signal Discrete
SDC . . . . Signal Data Converter
SDCC . . . . Signal Data Converter Computer
SEC . . . . Seconds
SEL . . . . Select
SEU . . . . Sight Electronics Unit
SF . . . . Station Fail
SIM . . . . Simulated
SIN . . . . Sine
SKR . . . . Seeker
SKREL . . . . Seeker Elevation
SLV . . . . Slave
SOL . . . . Solenoid
SPAD . . . . Shear Pin Activated Decoupler
SSU . . . . Sight Surveying Unit
ST . . . . Store Target
STA . . . . Station
STA DIR . . . . Station Director
STAB . . . . Stabilator
STAT . . . . Status
STBY . . . . Standby
STR . . . . Store
SW . . . . Switch
SYM . . . . Symbol
SYMG . . . . Symbol Generator
SYMGEN . . . . Symbol Generator
TADS . . . . Target Acquisition Designation Sight
TAS . . . . True Airspeed
TEMP . . . . Temperature
TEU . . . . TADS Electronics Unit
TF . . . . Transmission Fail
TGT . . . . Turbine Gas Temperature, Target
TOF . . . . Time Of Flight
TPS . . . . TADS Power Supply
TRS . . . . Train Rate Sensor
TRAN . . . . Transmission
TRANS . . . . Transfer
TRIG . . . . Trigger
TRKG . . . . Tracking
TST . . . . Test
TV . . . . Television
TWHL . . . . Tail Wheel
UPDT . . . . Update
VAB . . . . Variable Action Button
VAC . . . . Volts Alternating Current

VCR . . . . Video Recorder
VDC . . . . Volts Direct Current
VDU . . . . Video Display Unit
VEL . . . . Velocity
VLV . . . . Valve
VSI . . . . Vertical Speed Indicator
WAS . . . . Weapon Action Switch
WARN . . . . Warning
WFOV . . . . Wide Field Of View
WHT . . . . White
WICE . . . . Windshield Anti–ice
WPN . . . . Weapon
WRP . . . . Wraparound
XDCR . . . . Transducer
XFEED . . . . Crossfeed
XFMR . . . . Transformer
XMSN . . . . Transmission
ZFOV . . . . Zoom Field Of View

By Order of the Secretary of the Army:

GORDON R. SULLIVAN
General, United States *Army*
Chief of Staff

Official:

MILTON H. HAMILTON
Administrative *Assistant to the*
Secretary of the Army
01674

DISTRIBUTION:
   To be distributed in accordance with DA Form 12-31-E, block no. 2920, AVUM and AVIM maintenance requirements for TM 1-1520-238-T-3.

These are the instructions for sending an electronic 2028

The following format must be used if submitting an electronic 2028. The subject line must be exactly the same and all fields must be included; however, only the following fields are mandatory: 1, 3, 4, 5, 6, 7, 8, 9, 10, 13, 15, 16, 17, and 27.

From: "Whomever" whomever@avma27.army.mil
To: 2028@redstone.army.mil
Subject   DA Form 2028

1. ***From:*** Joe Smith
2. *Unit:* home
3. ***Address:*** 4300 Park
4. ***City:*** Hometown
5. ***St:*** MO
6. ***Zip:*** 77777
7. ***Date Sent:*** 19-OCT-93
8. ***Pub no:*** 55-2840-229-23
9. ***Pub Title:*** TM
10. ***Publication Date:*** 04-JUL-85
11. *Change Number:* 7
12. *Submitter Rank:* MSG
13. ***Submitter FName:*** Joe
14. *Submitter MName:* T
15. ***Submitter LName:*** Smith
16. ***Submitter Phone:*** 123-123-1234
17. ***Problem:*** **1**
18. *Page:* 2
19. *Paragraph:* 3
20. *Line:* 4
21. *NSN:* 5
22. *Reference:* 6
23. *Figure:* 7
24. *Table:* 8
25. *Item:* 9
26. *Total:* 123
27. ***Text:***
This is the text for the problem below line 27.

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS

SOMETHING WRONG WITH THIS PUBLICATION?

THEN . .JOT DOWN THE DOPE ABOUT IT ON THIS FORM, CAREFULLY TEAR IT OUT, FOLD IT AND DROP IT IN THE MAIL!

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)
PFC John DOE
CO A 3rd Engineer Bn
Ft. Leonardwood, MO 63108

DATE SENT
10 January 1999

PUBLICATION NUMBER	PUBLICATION DATE	PUBLICATION TITLE
TM 1–1520–238-T-3	30 December 1998	Troubleshooting Procedures for AH64 Helicopter

BE EXACT   PIN–POINT WHERE IT IS

IN THIS SPACE, TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

PAGE NO	PARA-GRAPH	FIGURE NO	TABLE NO	
6	2-1 a			In line 6 of paragraph 2−1a the manual states the engine has 6 cylinders. The engine on my set only has 4 cylinders. Change the manual to show 4 cylinders.
B1		4-3		Callout 16 on figure 4−3 is pointed at a bolt. In key to figure 4−3, item 16 is calle a shim. Please correct one or the other

EXAMPLE

PRINTED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER
JOHN DOE, PFC (268) 317-7111

SIGN HERE
John Doe
JOHN DOE

DA FORM 2028–2 1 JUL 79

PREVIOUS EDITIONS ARE OBSOLETE.

DRSTS-M verprint2, 1 Nov 80

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PAGE NO	PARA-GRAPH	FIGURE NO	TABLE NO

PRINTED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER | **SIGN HERE**

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OFFICIAL BUSINESS

COMMANDER
U.S. ARMY AVIATION AND MISSILE COMMAND
ATTN: AMSAM-MMC-MA-NP
REDSTONE ARSENAL, AL 35898-5230

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PAGE NO	PARA-GRAPH	FIGURE NO	TABLE NO

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UNITS ADDRESS
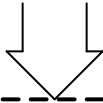
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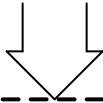
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TEAR ALONG PERFORATED LINE

The Metric System and Equivalents

Linear Measure

1 centimeter = 10 millimeters = .39 inch
1 decimeter = 10 centimeters = 3.94 inches
1 meter = 10 decimeters = 39.37 inches
1 dekameter = 10 meters = 32.8 feet
1 hectometer = 10 dekameters = 328.08 feet
1 kilometer = 10 hectometers = 3,280.8 feet

Weights

1 centigram = 10 milligrams = .15 grain
1 decigram = 10 centigrams = 1.54 grains
1 gram = 10 decigram = .035 ounce
1 decagram = 10 grams = .35 ounce
1 hectogram = 10 decagrams = 3.52 ounces
1 kilogram = 10 hectograms = 2.2 pounds
1 quintal = 100 kilograms = 220.46 pounds
1 metric ton = 10 quintals = 1.1 short tons

Liquid Measure

1 centiliter = 10 milliters = .34 fl. ounce
1 deciliter = 10 centiliters = 3.38 fl. ounces
1 liter = 10 deciliters = 33.81 fl. ounces
1 dekaliter = 10 liters = 2.64 gallons
1 hectoliter = 10 dekaliters = 26.42 gallons
1 kiloliter = 10 hectoliters = 264.18 gallons

Square Measure

1 sq. centimeter = 100 sq. millimeters = .155 sq. inch
1 sq. decimeter = 100 sq. centimeters = 15.5 sq. inches
1 sq. meter (centare) = 100 sq. decimeters = 10.76 sq. feet
1 sq. dekameter (are) = 100 sq. meters = 1,076.4 sq. feet
1 sq. hectometer (hectare) = 100 sq. dekameters = 2.47 acres
1 sq. kilometer = 100 sq. hectometers = .386 sq. mile

Cubic Measure

1 cu. centimeter = 1000 cu. millimeters = .06 cu. inch
1 cu. decimeter = 1000 cu. centimeters = 61.02 cu. inches
1 cu. meter = 1000 cu. decimeters = 35.31 cu. feet

Approximate Conversion Factors

To change	To	Multiply by	To change	To	Multiply by
inches	centimeters	2.540	ounce-inches	Newton-meters	.007062
feet	meters	.305	centimeters	inches	.394
yards	meters	.914	meters	feet	3.280
miles	kilometers	1.609	meters	yards	1.094
square inches	square centimeters	6.451	kilometers	miles	.621
square feet	square meters	.093	square centimeters	square inches	.155
square yards	square meters	.836	square meters	square feet	10.764
square miles	square kilometers	2.590	square meters	square yards	1.196
acres	square hectometers	.405	square kilometers	square miles	.386
cubic feet	cubic meters	.028	square hectometers	acres	2.471
cubic yards	cubic meters	.765	cubic meters	cubic feet	35.315
fluid ounces	milliliters	29,573	cubic meters	cubic yards	1.308
pints	liters	.473	milliliters	fluid ounces	.034
quarts	liters	.946	liters	pints	2.113
gallons	liters	3.785	liters	quarts	1.057
ounces	grams	28.349	liters	gallons	.264
pounds	kilograms	.454	grams	ounces	.035
short tons	metric tons	.907	kilograms	pounds	2.205
pound-feet	Newton-meters	1.356	metric tons	short tons	1.102
pound-inches	Newton-meters	.11296			

Temperature (Exact)

°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C