TECHNICAL MANUAL

OPERATOR, AVIATION UNIT AND INTERMEDIATE MAINTENANCE MANUAL WITH REPAIR PARTS AND SPECIAL TOOLS LIST (INCLUDING DEPOT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS)

FOR

ROCKET MANAGEMENT SUBSYSTEM, INVENTORY-DEPLOYMENT, XM138 PART NO. 9324106-002 NSN 1090-01-077-8939

Prepared by
BEI Electronics, Inc.
FSCM 12050

Contract No. DAAJ01-76-C-0940

HEADQUARTERS, DEPARTMENT OF THE ARMY

OCTOBER 1981

WARNING

Personnel performing operations, procedures, and practices which are included or implied in this technical manual shall observe the following warnings. Disregard of these warnings and precautionary information can cause serious injury or loss of life.

HIGH VOLTAGE

Serious burns and/or electrical shock can result from contact with exposed electrical wires or connections.

ARMAMENT

Loaded weapons, or weapons being loaded or unloaded, shall be pointed in a direction which offers the least exposure to personnel or property in the event of an accidental firing. Personnel should remain clear of a hazardous area forward and aft of all loaded weapons.

CANOPY REMOVAL SYSTEM

Ground safety pins shall be installed in pilot and gunner canopy removal arming/firing mechanisms when the helicopter is on the ground. Safety pins shall be installed during engine shutdown check. Debris may be expelled 20 feet outward when system is actuated.

NOISE LEVEL

Sound pressure levels in the helicopter during some operating conditions exceed the Surgeon General's hearing conservation criteria as defined in TB MED251. Hearing protection devices, such as the aviator helmet or ear plugs, must be worn by all personnel in and around the helicopter during its operation.

WING STORES JETTISON

All jettison safety pins shall be installed when the helicopter is on the ground. Serious injury can result from accidental ground jettison. Safety pins shall be removed prior to flight. Failure to do so will prevent emergency jettison of wing stores.

CHANGE

NO. 2

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington D. C., 29 August 1990

OPERATOR AVIATION UNIT AND INTERMEDIATE MAINTENANCE
MANUAL WITH REPAIR PARTS AND SPECIAL TOOLS LIST
(INCLUDING DEPOT MAINTENANCE REPAIR PARTS
AND SPECIAL TOOLS)

ROCKET MANAGEMENT SUBSYSTEM, INVENTORY-DEPLOYMENT, XM138

PART NUMBER 9324106-002

NSN 1090-01-077-8939

1. TM 9-1090-207-13&P, October 1981 is changed to incorporate the 20MM Turret and Rocket Management Subsystems, Electronic Circuit Boards, Failure Isolation Shop Set (FISS).

2. Remove old pages and insert new pages indicated below.

3. New or changed material is indicated by vertical bar in the margin of the page.

4. Upon receipt of this change, all references to MOS 68M will be changed to 68J due to MOS consolidation. Title for 68J is as follows: Aircraft Armament/Missile Systems Repairer.

Remove pages	Insert pages
5-3 and 5-4	5-3 and 5-4
5-15 and 5-16	5-15 and 5-16
D-3 and D-4	D-3 and D-4
D-5 and D-6	D-5 and D-6
E-37 and E-38	E-37 and E-38
E-39 and E-40	E-39 and E-40
E-43 and E-44	E-43 and E-44

5. File this change sheet in back of the publication for reference purposes.

By Order of the Secretary of the Army:

CARL E. VUONO
General, United States Army
Chief of Staff

Official :

THOMAS F.SIKORA
Brigadier General, United States Army
The Adjutant General

DISTRIBUTION: To be distributed in accordance with DA Form 12-31E, (Blocks 953. 954, 955). Operator, AVUM, AVIM, Maintenance requirements for TM 9-1090-207-13&P.

CHANGE

No. 1

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, 27 JUNE 1988

Operator, Aviation Unit and Intermediate Maintenance Manual
With Repair Parts and Special Tools List
(Including Depot Maintenance Repair Parts and Special Tools)

For

ROCKET MANAGEMENT SUBSYSTEM INVENTORY
DEPLOYMENT XM138, PART NO. 9324106-002
NSN 1090-01-077-8939

Current as of 23 June 1987

TM 9-1090-207-13&P, 26 October 1981, is changed as follows:

1. New or revised material is indicated by a vertical bar in the margin. When an entire chapter, section or illustration is added or revised, the vertical bar is placed opposite the identification number and title.

This change updates technical information and illustrations which are required as a result of modifications making the RMS compatible with the MK66 powered 2.75-inch rockets, and the AN/AVS-6 night vision goggles. The addition of the MK66 rocket motor changes the model designator from M138 to XM147 and the part number from 9324106-002 to 12011877.

NOTE

Throughout this technical manual, Rocket Management Subsystem Inventory Deployment XM138, part number 9324106-002, may be referred to as Rocket Management Subsystem Inventory Deployment XM147, part number 12011877.

2. Remove old pages and insert new pages as follows:

Remove Pages	Insert Pages	Remove Pages	Insert Pages
i thru iv	i thru iv	-5-109 thru 5-114	5-109 thru 5-114
l-1 thru 1-6	l-l thru 1-6	8-1/(8-2 blank)	8-1/(8-2 blank)
2-1 thru 2-12	2-1 thru 2-12	A-1/(A-2 blank)	A-1/(A-2 blank)
4-1 and 4-2	4-l and 4-2	B-1 and B-2	B-1 and B-2
5-1 and 5-2	5-l and 5-2	D-3 thru D-6	D-3 thru D-6
5-7 thru 5-14	5-7 thru 5-14.1/	E-5 thru E-10	E-5 thru E-10
	(5-14.2 blank)	E-17 thru E-20	E-17 thru E-20
5-33 and 5-34	5-33 and 5-34	E-25 thru E-30	E-25 thru E-28

File this transmittal sheet in back of the publication.

By Order of-the Secretary of the Army:

CARL E. VUONO
General United States Army
Chief of Staff

Official:

R. L. DILWORTH
Brigadier General United States Army
The Adjutant General

DISTRIBUTION:

To be distributed in accordance with DA Form 12-31A, AVUM and AVIM Maintenance requirements for Armament Subsystem: Rocket Management Subsystems M138 (Used on AH-1S)-

TECHNICAL MANUAL
9-1090-207- 1 3&P

HEADQUARTERS,
DEPARTMENT OF THE ARMY
WASHINGTON, DC, 26 OCTOBER 1981

OPERATOR, AVIATION UNIT AND INTERMEDIATE MAINTENANCE MANUAL WITH REPAIR PARTS AND SPECIAL TOOLS LIST (INCLUDING- DEPOT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS) FOR ROCKET MANAGEMENT SUBSYSTEM, INVENTORY DEPLOYMENT, XM138

9324 1 06-002

Current as of 23 June 1987

REPORTING OF ERRORS

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 US Army Armament Munitions and Chemical Command Attn.: AMSMC-MAS, Rock Island Arsenal, IL 61299-6000. A reply will be furnished to you.

NOTE

Throughout this technical manual, Rocket Management Subsystem Inventory Deployment XM138, part number 9324106-002, may be referred to as Rocket Management Subsystem Inventory Deployment XM147, part number 12011877.

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CHAPTER 1
INTRODUCTION

SECTION I. GENERAL

1-1. Scope. This manual contains operation and maintenance instructions for the Rocker Management Subsystem, inventory-Deployment, XM147(RMS) (figure 1-1) when installed in the AH-IS Cobra Helicopter. This manual is divided into eight chapters and seven appendixes. Chapter 1 contains general information: the description and use of the equipment; use of associated forms and records; calibration; administrative storage; destruction of Army materiel to prevent enemy use; Quality Assurance/Quality Control; reporting of equipment improvement recommendations; identification plates; and schematic diagrams. Chapter 2 describes the applicable helicopter panel controls and indicators and provides operating instructions. Chapter 3 contains operator/ crew maintenance instructions. Chapter 4 provides Aviation Unit Maintenance instructions and Chapter 5 provides Aviation Intermediate maintenance instructions. Chapter 6 contains instructions for repair of the RMS. Chapter 7 provides maintenance instructions for Auxiliary Equipment, and Chapter 8 provides final inspection data. Appendix A is a list of associated documents, Appendix B contains a list of end item components, Appendix C contains an authorization list, Appendix D contains a maintenance allocation chart, Appendix B contains a repair parts and special tools list, and Appendix F contains a list of expendable supplies and materiel. Appendix G is an index of fault codes, Appendix H is an index of test locations, and Appendix I contains schematics and wiring diagrams.

1-2. Maintenance Forms and Records. Maintenance Forms and Records which are to be used by maintenance personnel at all maintenance levels are listed in and prescribed by DA PAM 738-751, Functional Users Manual for the Army Maintenance Management System-Aviation (TAMMS-A).

1-3. Reporting of Equipment Improvement Recommendations (EIRs). Equipment Improvement Recommendations (EIRs) will be prepared on SF Form 368, Quality Deficiency Report. Instructions for preparing EIRs are provided in DA PAM 738-751, Functional Users Manual for the Army Maintenance Management System-Aviation (TAMMS-A). EIRs should be mailed directly to U.S. Army Armament Munitions and Chemical Command, Attn.: AMSMC-QAD, Rock Island, IL 61299-6000. A reply will be furnished directly to you.

1-4. Administrative Storage. Refer to TM740-90-1 and TM55-1520-236/239-23 for storage of aircraft.

1-5. Calibration. The Subsystem does not require calibration. It contains a built-in test routine that indicates the operating condition of each line-replaceable unit of the Subsystem. The Subsystem units are tested at the AVIM shop using the Subsystem Test Set.

1-6. Destruction of Army Materiel to Prevent Enemy Use. For destruction of Army materiel to prevent enemy use, refer to TM750-244-2.

SECTION II. DESCRIPTION AND TABULATED DATA

1-8. Description.

a. The Rocket Management Subsystem is a pilot-operated subsystem that interfaces with the wing stores subsystem in the helicopter. The Subsystem operates from power supplied by the aircraft and consists of one Display Unit and four Operations Units.

b. The Subsystem enables the aircraft pilot to select and launch 2.75-inch Folding-Fin Aerial Rockets (FFAR) and/or MK66 wraparound fin improved range rocket motors, with the desired warhead/fuze combination from two or four 7- or 19-tube launchers mounted under the aircraft stub wings.

c. Rockets are loaded according to warhead/fuze type combination in up to five loading zones, and the types loaded in each zone are indicated by manually setting five 12-position thumbwheel switches on the Display Unit panel. The switch positions are marked with two- or three-letter descriptors that represent the available warhead/fuze configurations. When power is applied to the Subsystem, it automatically inventories the rounds loaded in each zone and provides the pilot with a numeric display of the quantities available for launching from each zone.

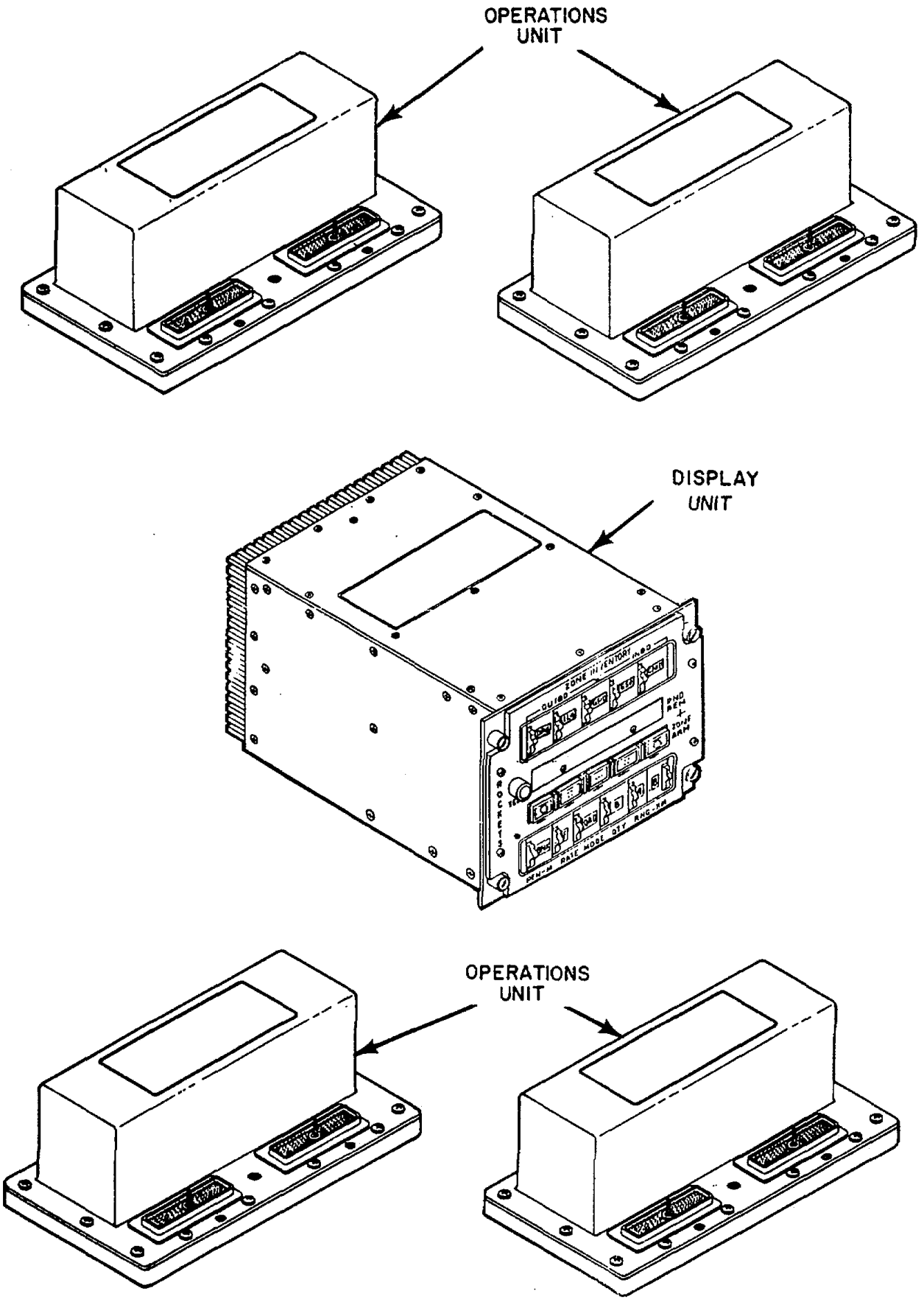

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Figure 1-1. Line-Replaceable Units of Rocket Management Subsystem

d. By setting switches on the face of the Display Unit' the pilot can select the rocker types to be launched set the rocket fuzes according to the tactical situation, and determine the quantities of rockets to be launched in each volley. Rockets are then launched when the pilot or copilot/ gunner squeezes the trigger switch on the cyclic stick. Should the trigger switch be released before the entire volley has been launched, firing will cease. As each rocket is launched, the numeric display on the face of the Display Unit is immediately updated to continuously reflect the quantities of rockets remaining in each loading zone.

e. The units of the Subsystem and the associated rocket launchers are mounted in and on the aircraft as shown in figure 1-2.

NOTE

Refer to TM55-1520-236/239-10 for authorized armament configurations and to TM9-1055-460-14 for authorized Rocket Launchers and Rocket Launcher Installation.

f. The Subsystem can control the launching of rockets from two or four 7- or 19-tube launchers. It automatically senses the quantity and type of launcher installed. The Subsystem automatically sets its firing sequence to agree with the tube numbering of the launcher on board.

g. Should one or more launchers be disabled, the Subsystem will cause the corresponding launcher on the opposite side of the airplane fuselage to become inactive, in order to maintain in-flight stability of the aircraft by equalizing the load of unfired rockets. Thereafter the Subsystem will operate normally with those launchers that remain operable, to enable the directed launching of whatever rockets remain viable.

1-9. Display Unit. The Display Unit (figure 1-3) is a cockpit-mounted line replaceable unit that presents the pilot with controls and displays for inventorying and controlling the launching of aerial rockets that are stored in 7- or 19-tube launchers mounted under the aircraft's stub wings. It also contains the power supply and other common circuits necessary for the Subsystem units to operate together as a subsystem. The Display Unit transmits the electrical command signals selected by the pilot to the Operations Units. The controls and instruments are described in table 2-2. For detailed information on how to operate the Subsystem, refer to the helicopter operations manual listed in Appendix A.

1-10. Operations Unit. The Operations Unit (figure 1-4) extends the functions commanded by the Display Unit to the rocket launcher. One Operations Unit is used for each launcher. A normal installation includes

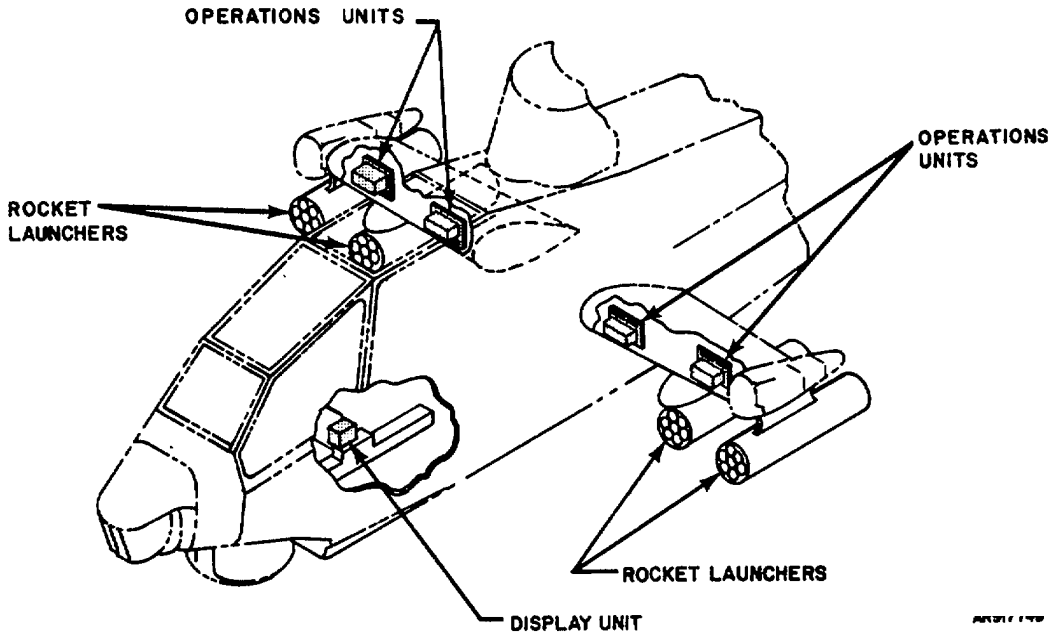

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Figure 1-2. Location of Rocket Management Subsystem Units and Associated Rocket Launchers in AH-IS Helicopter

four Operations Units, one for each launcher that may be mounted on the aircraft. The Operations Unit contains the circuitry that sets the fuzes and the circuitry that provides the squib firing pulses for the rockets loaded into the associated launcher.

1-11. Tabulated Data. Dimensions and weight of the units of the RMS are given in table 1-1.

1-12. Identification Plates. The locations of identification plates on the Subsystem units are shown in figure 1-1. Examples of the Display Unit and Operations Unit identification plates are given in figure 1-5 and 1-6, respectively.

1-13. Spares, Repair Parts, Special Tools Special Test Measurement Diagnostic Equipment (TMDE), and Other Special Support Equipment.

a. Special Tools and Equipment.

(1) No special tools or test equipment are needed for the Subsystem at the AVUM level. Checkout and troubleshooting at this level are performed by the self-test routine built into the Subsystem.

(2) The Test Set, Rocket Management Subsystem, M135 (Figured 1-7) is used at the AVIM shop for isolating a fault within a line-replaceable unit to a shop replaceable assembly. It is also used for verifying the performance of a unit after repair or at any other time. The maintenance manual and calibration procedures for the Test Set are listed in Appendix A.

b. *Spares and Repair Parts* *Spares and repair parts for the Rocket Management Subsystem are listed in Appendix E.*

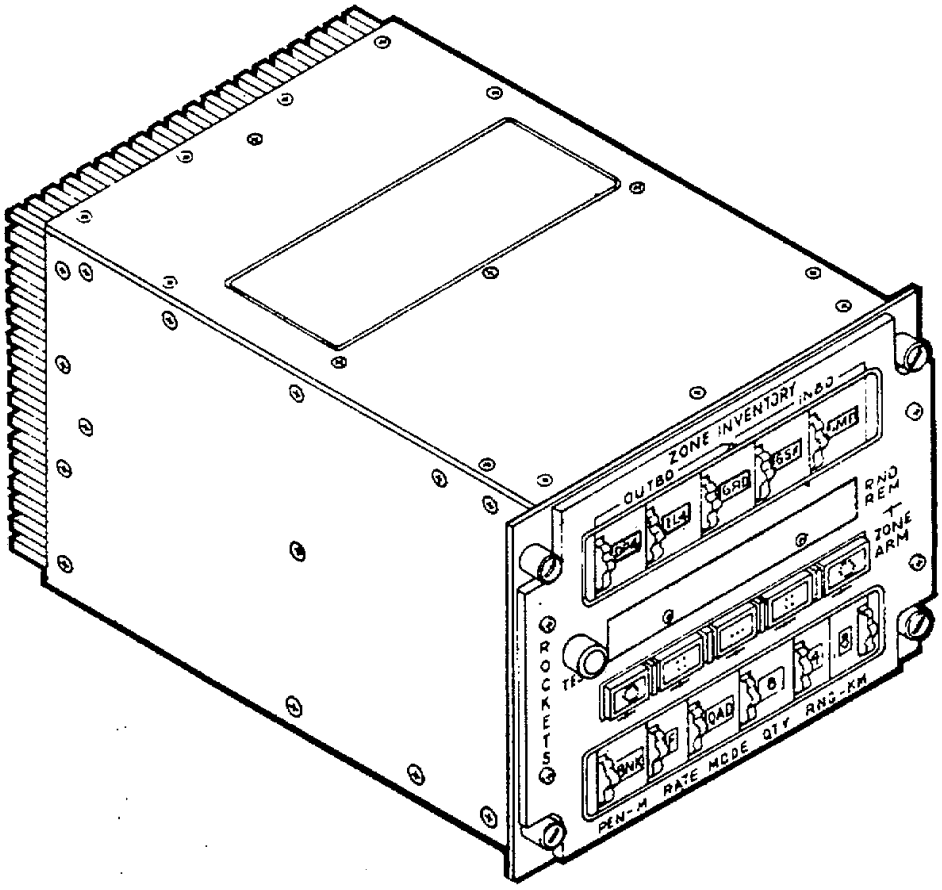

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Figure 1-3. Display Unit, Rocket Management Subsystem, XM1 47

Section III. SCHEMATIC DIAGRAMS

1-14 Schematic diagrams of the Unit and subassemblies of the Rocket Management Subsystem are presented in Appendix I,

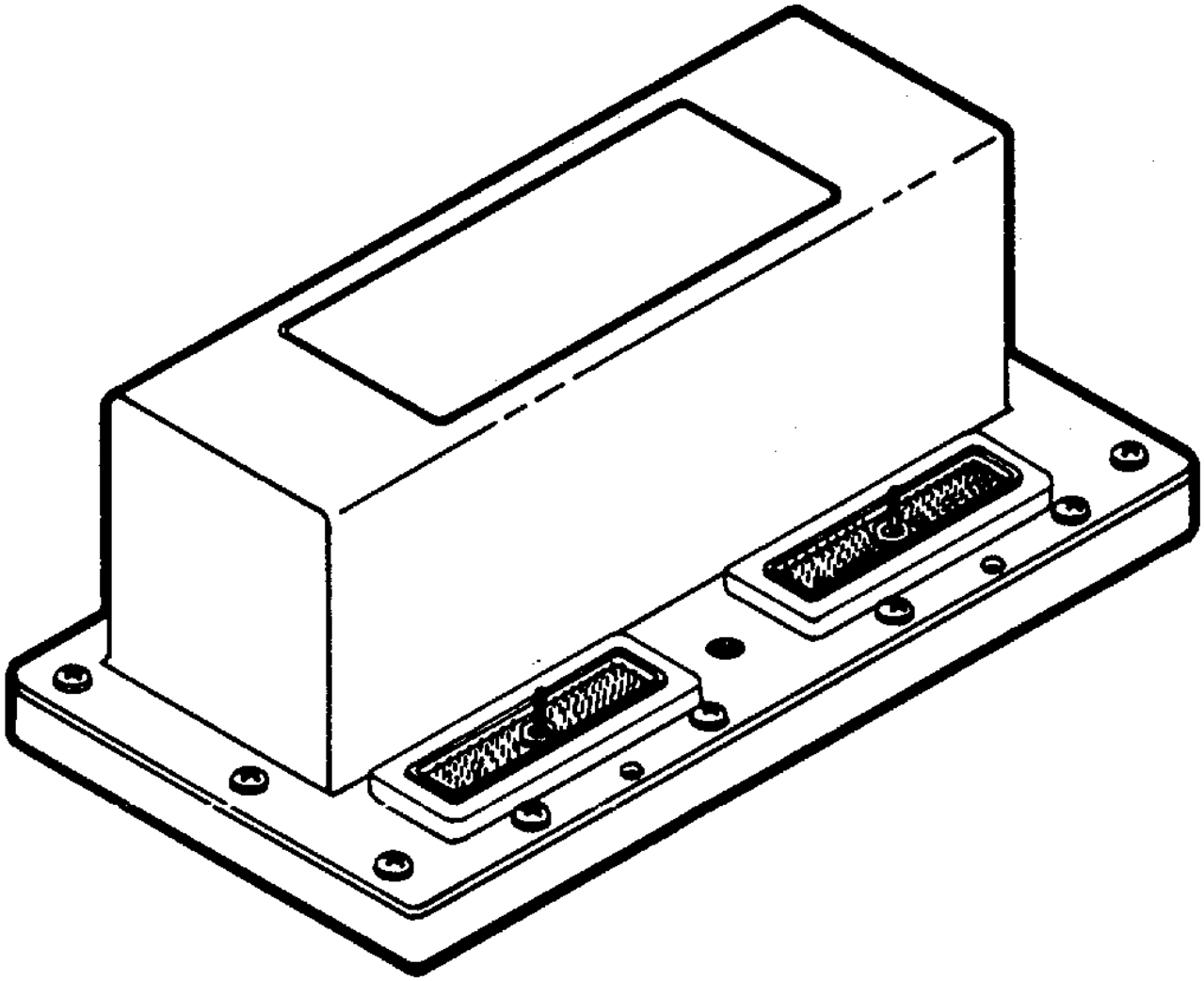

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Figure 1-4. Operations Unit, Rocket Management Subsystem XM147

Table 1-1. Dimensions and Weights of RMS Components

Unit	Width (in.)	Height (in.)	Length (in.)	Weight (lb.)
Display Unit	5.75	4.50	7.50	6.0
Left Outboard Operations Unit	7.50	3.125	4.062	2.0
Left Inboard Operations Unit	7.50	3.125	4.062	2.0
Right Inboard Operations Unit	7.50	3.125	4.062	2.0
Right Outboard Operations Unit	7.50	3.125	4.062	2.0
			Total	14.0

LABEL PART NO. 12011884

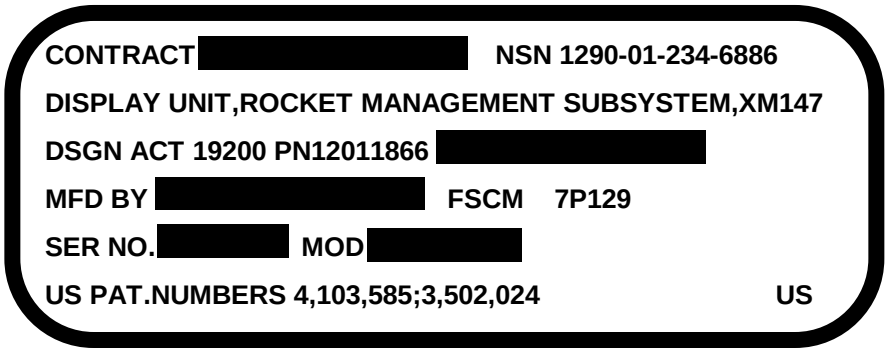
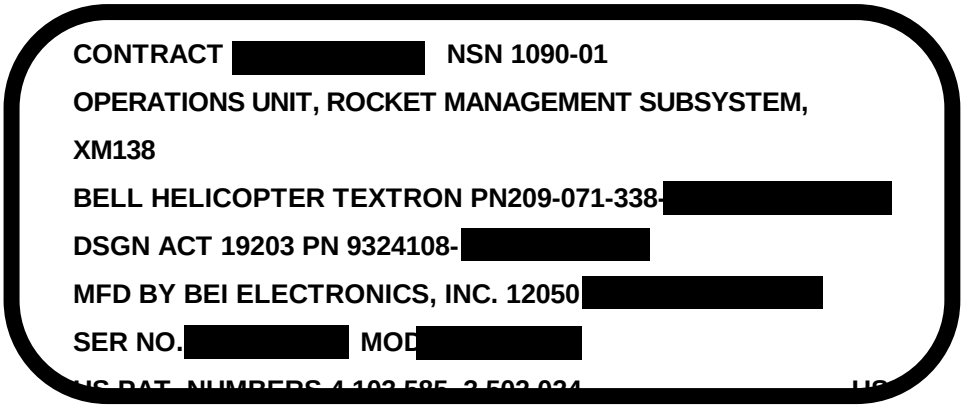


Figure 1-5. Display Unit Identification Plate

NOTE

Rocket Management Subsystem XM147 may contain Operations Units identified as XM138 or XM147. They are identical.



LABEL PART NO. 9324136-2

Figure 1-6. Operations Unit Identification Plate

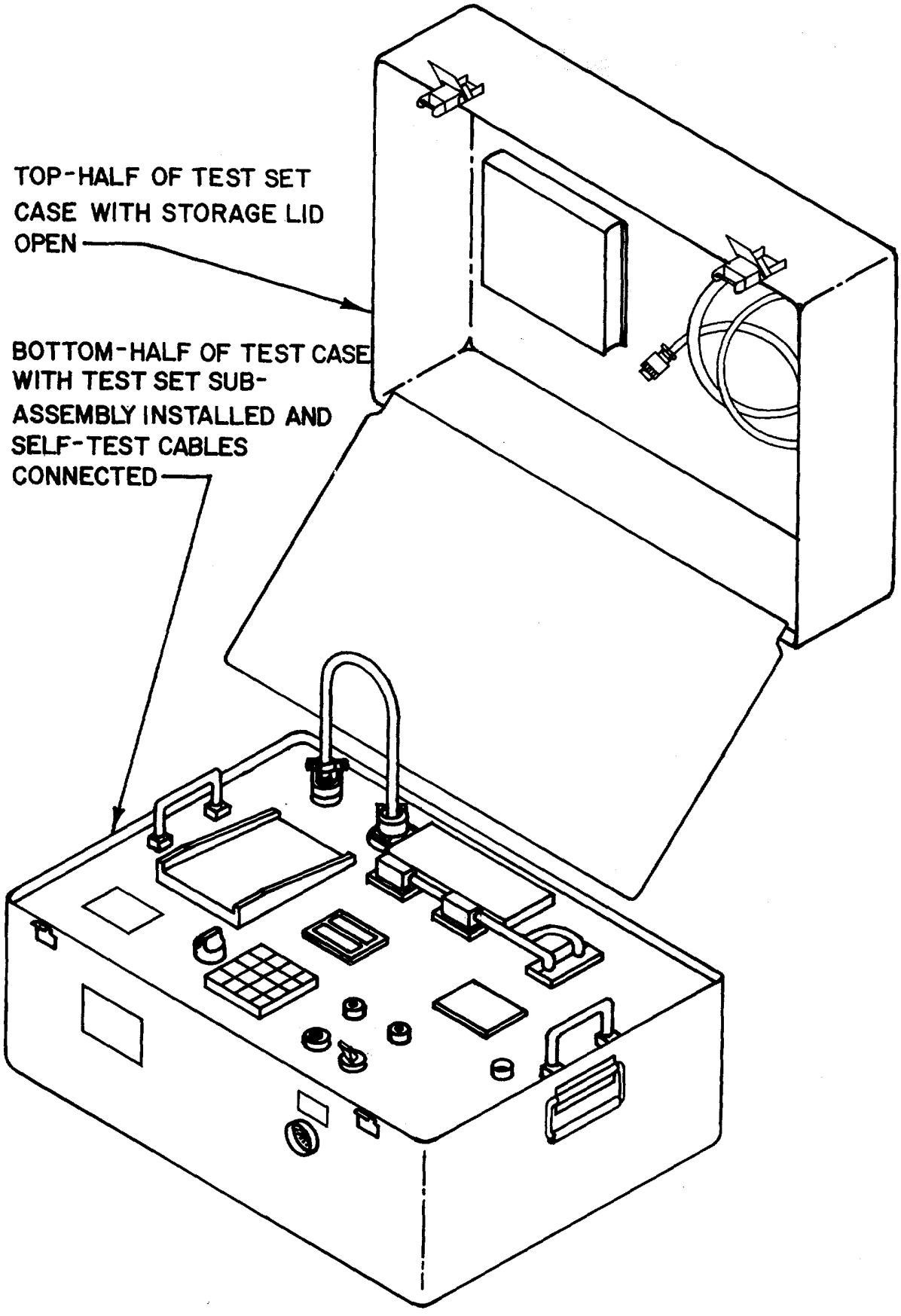


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Figure 1-7. Test Set. Rocket Management Subsystem.

CHAPTER 2
OPERATING INSTRUCTIONS

SECTION I. OPERATING INSTRUCTIONS

2-1. General. This section provides you with descriptions and illustrations of the helicopter controls and indicators that you use for operating the Rocket Management Subsystem. Although the illustrations show complete control panels, only the controls and indicators you will be using for the Subsystem are described. Refer to the helicopter operator's manual listed in Appendix A for the location of the panels in the aircraft.

2-2. Controls and Indicators. The pilot armament control panel is shown in figure 2-1, and its controls that are applicable to the Subsystem are described in table 2-1. The Rocket Management Subsystem control panel is shown in figure 2-2 and its controls and indicators are described in table 2-2.

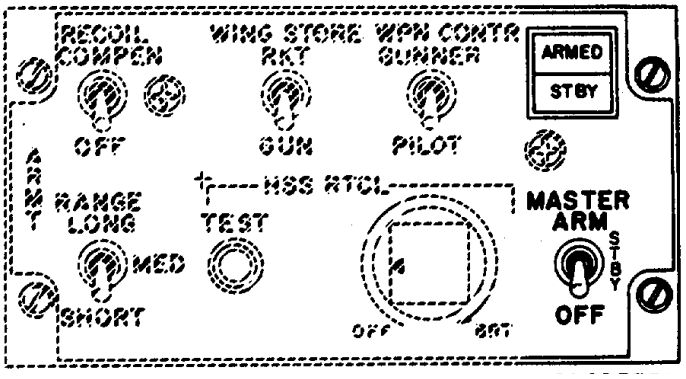

Figure 2-1. Pilot Armament Control Pane.

Table 2-1. Pilot Armament Control Panel - RMS Controls
(See figure 2-1.)

Nomenclature	Position or Indicator	Function
MASTER ARM switch		Applies standby and arming power to Subsystem
	OFF	All power is disconnected from Subsystem
	STBY	Applies standby power to Subsystem. When standby power is first applied the Subsystem inventories rocket load and displays quantities in each loading zone. Self-test routine may be performed and all controls, including ZONE ARM switches, may be exercised. Rocket fuzes will NOT be set and rockets will NOT be fired.
	ARM	Applies arming power to Subsystem. Subsystem is fully functional. Fuze setting and rocket firing are enabled.
ARMED/STBY indicator		Indicates which mode Subsystem is in. Pressing the indicator tests the lamps.
	ARMED	Blue-green lamp indicates that Subsystem is in armed mode and fully operable.
	STBY	Blue-green lamp indicates that power is applied to Subsystem, but fuse setting and rocket firing circuit is disabled.

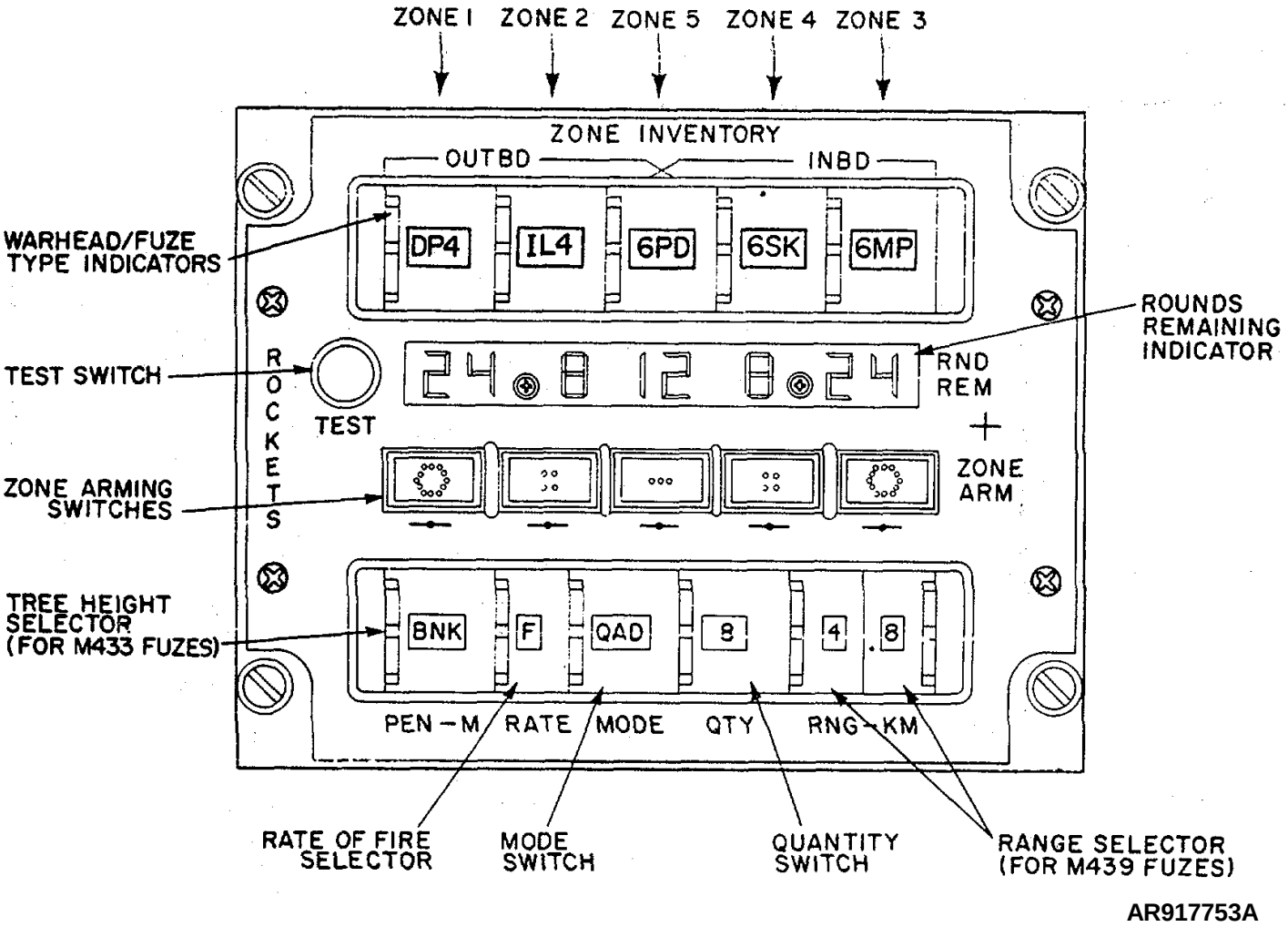

Figure 2-2. Rocket Management Subsystem Control Panel.

SECTION II. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

2-3. General. You should check the Subsystem as described in table 2-3 each day that you expect to operate it. No special maintenance inspection is required during periods of storage or inactivity.

a. Before You Operate. Always keep in mind the CAUTIONS and WARNINGS. Perform your before (B) PMCS.

b. After You Operate. Be sure to perform your after (A) PMCS.

c. If Your Equipment Fails to Operate. Troubleshoot using the built-in test routine. Report any deficiencies using the proper forms, see DA PAM 738-751, Functional Users Manuals for the Army Maintenance Management System-Aviation (TAMMS-A).

2-4. PMCS Procedure. PMCS procedures are given in table 2-3. You should do these procedures in the order listed. In recording the results of the PMCS procedures, use the number in the "Item No." column as a source of item numbers for the "TM Number" column of DA Form 2404, Equipment Inspection and Maintenance Worksheet. Dots () have been placed in the appropriate "Interval" columns to indicate when you should perform each check and service. Figure 2-3 shows the digital display during the first phase of the built-in self-test routine; figure 2-4 shows the display during the second phase. Observe that the 7s represent the Subsystem units as they are arrayed in the aircraft as seen from the pilot's seat. That is, the left-most 7 represents the left outboard Operations Unit, the center 7 represents the Display Unit, and the right-most 7 represents the right outboard Operations Unit.

Table 2-2. Rocket Management Subsystem Controls and Indicators
(See figure 2-2.)

Nomenclature	Position or Indication	Function
ZONE INVENTORY - OUTBD, INBD switch assembly		Five 12-position thumbwheel selectors designate the type of round loaded into each of five loading zones, as follows:
	PD4	High explosive warhead with point detonator fuze using MK40 rocket motor
	RC4	High explosive warhead with remote set fuze using MK40 rocket motor
	DP4	High explosive dual purpose warhead with HK40 rocket motor
	WP4	White phosphorous warhead with point detonating fuze and MK40 rocket motor
	IL4	Illumination warhead with pyrotechnic fuze and MK40 rocket motor
	SK4	Smokescreen warhead with pyrotechnic fuze and MK40 rocket motor
	6PD	High explosive point detonating warhead using MK66 rocket motor
	6RC	High explosive warhead with remote set fuze and MK66 rocket motor
	OIL	Illumination warhead with remote set fuze and MK66 rocket motor
	6SK	Smokescreen warhead with remote set fuze and MK66 rocket motor
	6MP	Multipurpose warhead with remote set fuze and MK66 rocket motor
	BLANK	Undesignated position that can be used for any warhead/fuze combination not listed above, on a mission to mission basis
TEST momentary push button switch		Initiates built-in self-test routine.
RND REM digital		Eight 7-segment incandescent digital readouts that indicate the quantity of rounds remaining in each loading zone.
ZONE ARM lighted momentary pushbutton switches		Five switches that allow the pilot to select (arm) the zone or zones from which rockets are to be fired.
	Lighted	Lighted pairs of brackets on the switch cap indicate that the corresponding zones are armed.
PEN-M thumbwheel selector switch		Sets the depth of penetration of M433 before functioning. Fuze will function after rocket has penetrated:
	10	10 meters below forest canopy
	15	15 meters below forest canopy
	20	20 meters below forest canopy
	25	25 meters below forest canopy
	30	30 meters below forest canopy
	35	35 meters below forest canopy
	40	40 meters below forest canopy
	45	45 meters below forest canopy
	SQ	Superquick function. Fuze will function immediately upon contact with target.
	BNK	Fuze will function after rocket has penetrated three feet into log and dirt bunker.

Table 2-2. Rocket Management Subsystem Controls and Indicators - Continued
(See figure 2-2.)

Nomenclature	Position or Indication	Function
RATE thumbwheel Selector switch	F	Sets the rocket firing rate for multiple firings.
	S	Rockets will be fired at 60 millisecond intervals for M439 fuze and 70 millisecond for M433 fuze.
	A	Rounds Remaining will display number of uninventoried rocket tubes and the pilot may attempt to fire uninventoried rockets. Rockets fired in this mode will be at the fast rate.
MODE thumbwheel Selector switch		Sets the mode in which rockets are fired.
	QAD	Four rounds will be fired, one from each of four launchers, with the inboard rounds leading by 30 milliseconds.
	PRS	Two rounds of same type, one from each side of aircraft will be fired simultaneously.
	SNG	One round will be fired at a time. Successive rounds will be fired from alternate sides of the aircraft to maintain aircraft balance.
QTY thumbwheel selector switch		Sets the quantities of "modes" (quads pairs, or singles) to be fired in each volley.
	1	One quad, pair, or single rocket (as set by MODE switch) will be fired.
	2	Two "modes" will be fired
	4	Four "modes" will be fired
	8	Eight "modes" will be fired Rocket firing will be sustained or continue until all rockets are expended or trigger is released.
RNG-KM thumbwheel selector switch assembly		Two switches that work together to set the range in kilometers for air-brush fuzes. The left-hand switch sets the range in 1-km increments, the right-hand switch sets the range in 100-meter increments. Possible ranges are from 0.5 to 6.0 km.
	A	Range is set automatically by the Fire Control Computer if the aircraft is equipped. In case of FCC failure or if an FCC is not installed, the RMS will shut down in this position only.

Table 2-3. Preventive Maintenance Checks and Services.

NOTE: Within the designated intervals, these checks are to be performed in the order listed.
B - Before A -After

Item No.	Interval B	Interval A	Item to be Inspected	Procedures	Equipment is Not Ready/Available If:
1.	●	●	Display Unit Panel	Set MASTER ARM switch to OFF, check for physical damage, operate all controls.	Panel shows obvious signs of damage or any control does not operate freely.
2	●	●	Display Unit. RND REM Display	Set MASTER ARM switch to STBY, observe RND REM display	RND REM displays any quantity other than the quantity of rockets loaded into each zone. RND REM does not display 0 0 0 0 0 when all rocket launches are empty.
3.	●	●	· Panel lighting circuit	With MASTER ARM switch set to STDBY: a. Turn console lighting control to OFF, observe Display Unit panel. b. Slowly turn console lighting control clockwise, observe DU panel. c. Turn console lighting to BRT, observe DU PANEL.	RND REM display is not at full brilliance, all other panel and switch lights are out. RND REM display does not go dark, then all panel switch, and display lights do not become increasingly bright in proportion to position of lighting control. All panel, switch, and display lights do not light.
	●	●	Self-Test routine	With MASTER ARM switch set to STBY, momentarily press TEST button, and a. Compare RND REM display and ZONE ARM switches with figure 2-3. b. After approximately three seconds compare RND REM display with figure 2-4.	RND REM does not indicate 88 8 88 8 38 or one or more ZONE ARM brackets do not light. RND REM does not display 7 for each RMS unit installed in the aircraft.

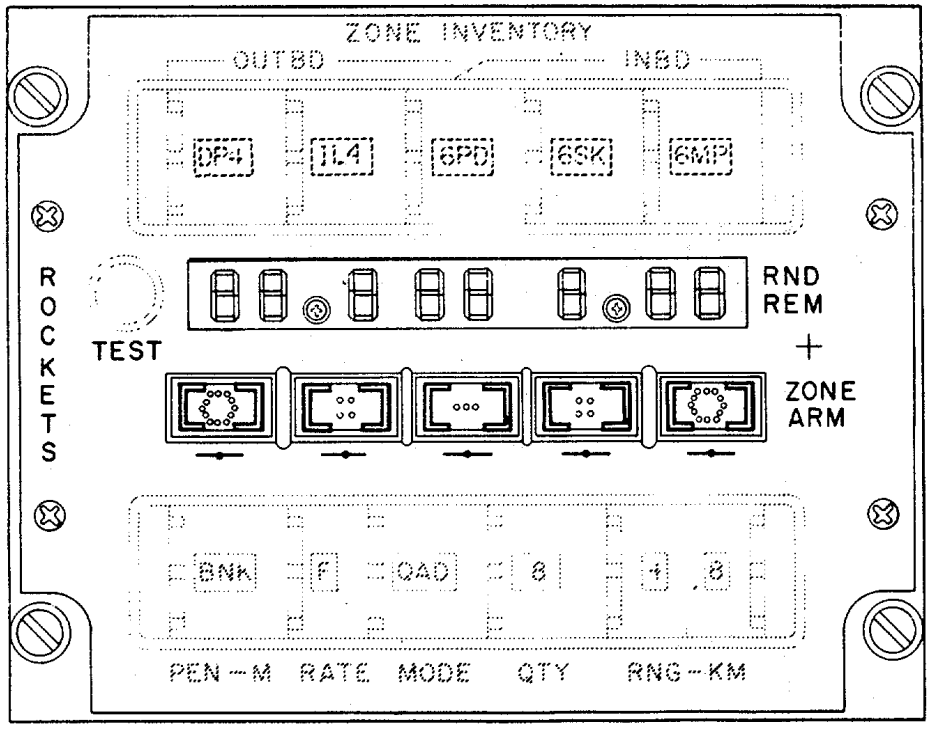

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Figure 2-3. Digital Display During First Phase of Self Test Routine-Lamp Test.

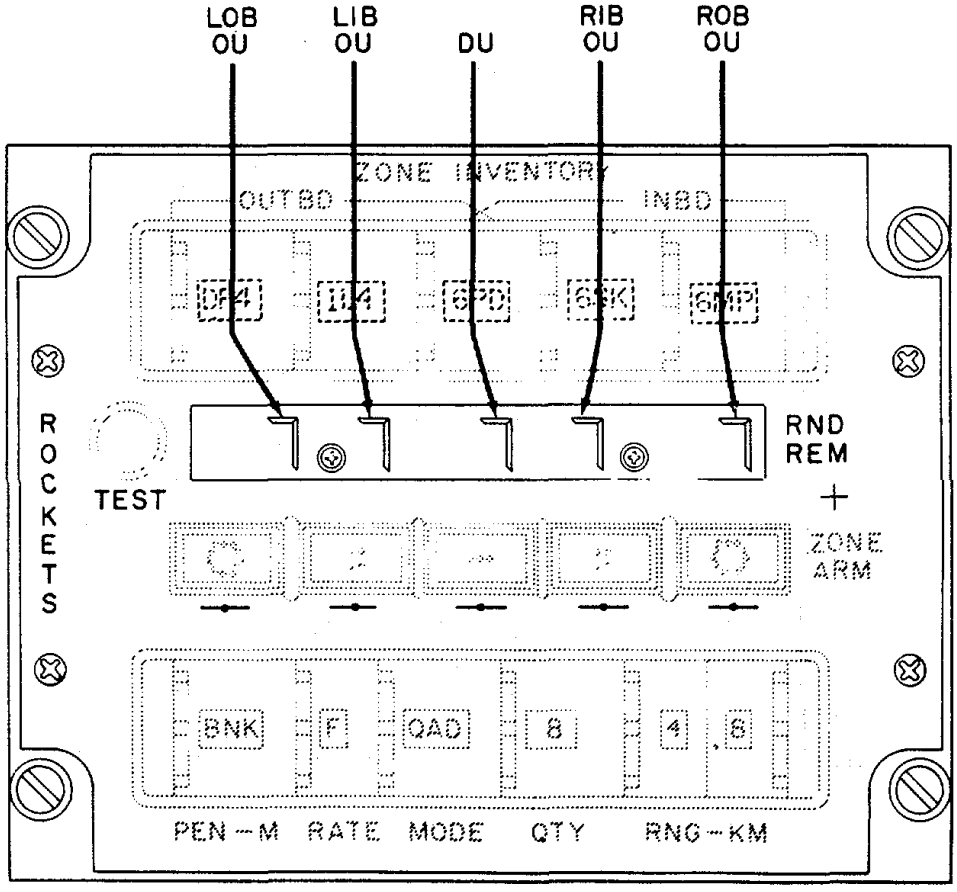

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Figure 2-4. Digital Display During Second Phase of Self Functional Test of LRU's.

SECTION III. OPERATION OF AUXILIARY EQUIPMENT

NOTE

Refer to TM55-1520-236/239-10 for authorized armament configuration and to TM9-1055-460-14 for installation of Rocket Launchers.

a, *Launcher Configuration*. The Rocket Management Subsystem operates with various

combinations of two or four 7- and 19-tube rocket launchers. The Subsystem can set fuzes and launch rockets from any authorized combination of two or four of the following launcher types: M158A1, M158A1RC, M200A1 XM227, M260, and 14261. The Subsystem is programmed to detect the type of launcher installed and to adjust its firing sequence accordingly.

b. *Remote-Set Fuzes.* After the rockets have been loaded into the launchers according to the loading order and standard loading procedures, the umbilical lines from the remote set fuzes must be connected to the umbilical connectors on the face of the launcher. Figure 2-5 shows you how these connections are made.

NOTE

Refer to TM9-1055-460-14 for specific loading information.

c. *Loading Zones.*

(1) In order to accommodate a mixed load of up to five different warhead/fuze combinations and allow the pilot to select any one of the combinations for firing, the launchers have been divided into loading zones. The zone assignments are based upon the maximum complement of four 19-tube launchers, Any given zone should be loaded with only one type of round. Any given type of round may be loaded into two or more zones,

(2) Figure 2-6 represents four 19-tube launchers and shows the zone numbers that have been assigned. Zone 1 consists of the outer rings of both outboard launchers; zone 3 consists of the outer rings of both inboard launchers. Zone 5 comprises the three center-most (horizontally grouped) rocket tubes from all four launchers. Zone 2 contains the four tubes of the inner ring of each of the outboard launchers not included in zone 5; zone 4 contains the four tubes of the inner ring of each of the inboard launchers not included in zone 5.

(3) Figure 2-7 shows the relationships between the zone numbers of the controls and indicators on the Display Unit panel. You will note that the warhead/fuze type indicator, the rounds remaining indicator, and the arming switch for each zone are arranged vertically.

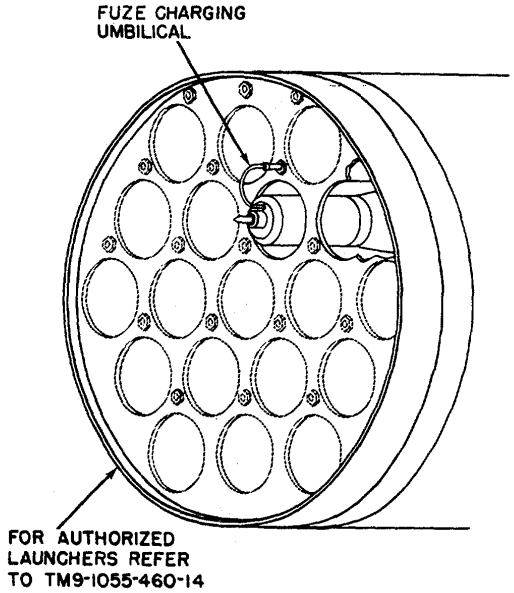

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Figure 2-5. Fuze Umbilical Connections to Launcher

2-6, Operation with Four 19-Tube Launchers. The fullest possible load, 76 rockets' is carried in four 19-tube launchers. With all rockets loaded and standby power applied to the Subsystem, the Subsystem will inventory the load and display the inventory as shown in figure 2-8.

2-7. Operation with Four 7-Tube Launchers. Seven-tube launchers do not contain the "outer ring" of tubes present in the 19-tube launchers. Therefore, with four 7-tube

launchers and standby power applied to the Subsystem, the rocket inventory will' tee displayed as shown in figure 2-9.

2-8, Operation with Two 19-Tube Launchers In Inboard Stations. The Rocket Management Subsystem can be used in combination with other weapons that are carried on the stub wings, such as TOW missiles. Figure 2-10 shows how a full rocket inventory is displayed when two 19-tube launchers are used in the inboard stations only.

Section IV. OPERATION UNDER UNUSUAL CONDITIONS.

2-9. General. There are no special requirements for operation under unusual conditions.

Section V. AMMUNITION

2-10. Authorized Rounds. All 2.75-inch Folding-Fin Aerial Rockets (FFAR) specified in TM 9-1340-222-20 and the MK-66 improved range rockets.

2-11, Identification. Refer to TM9-1340-222-20.

2-12. Safety Precautions. Refer to TM9-1340-222-20 for ammunition and TM9-1055-460-14 for loading and use of Rocket Launchers.

2-13, Handling. Refer to TM9-1340-222-20.

2-14. Storage. Refer to TM9-1055-46-14

2-15. Designation on Control Panel. The type of round loaded into each loading zone is indicated by the setting of a 12-position thumbwheel switch for each zone. At the time the rockets are loaded into the launchers, the armorer sets the ZONE INVENTORY switch to indicate to the pilot the types of rockets that are aboard. The designators and the corresponding warhead/fuze combinations are given in table 2-2.

2-16. Loading. For specific detailed instructions for loading the Rocket Launchers refer to TM9-1055-460-i4.

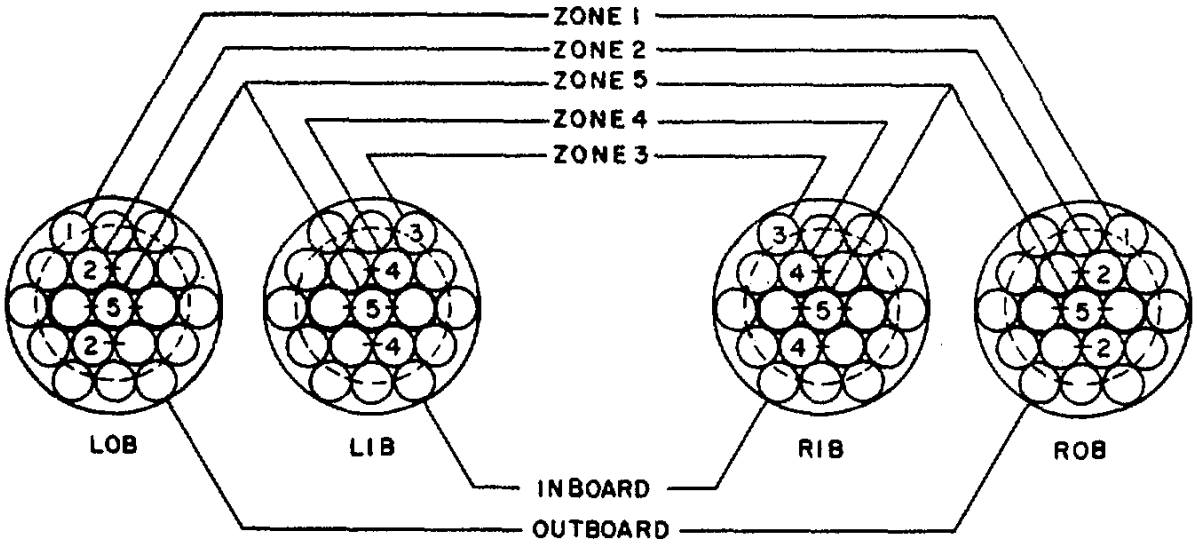

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Figure 2-6. Loading Zone Units for 19 Tube Launchers

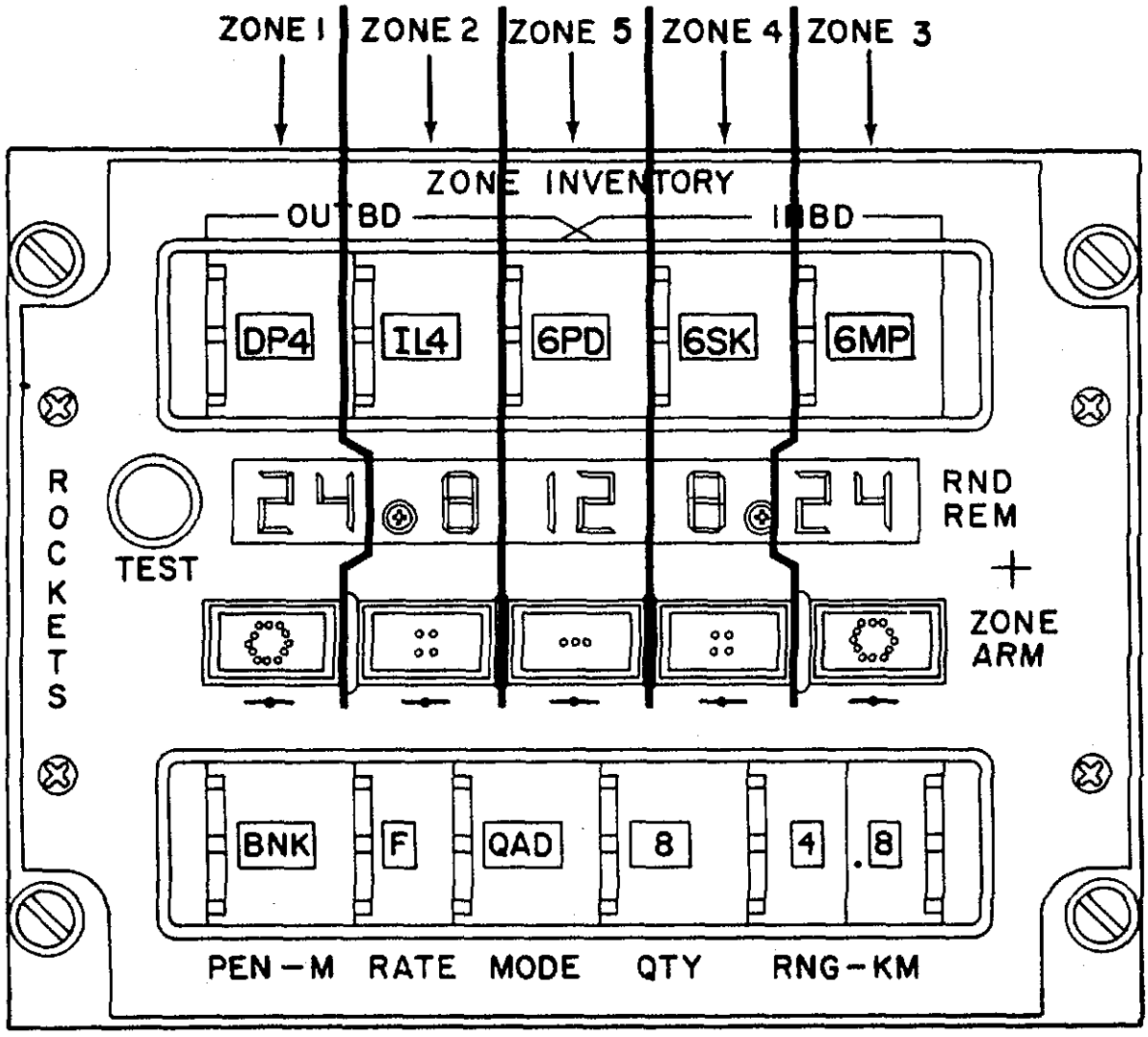

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Figure 2-7. Relationship Between Zone Numbers and Panel Controls and Indicators.

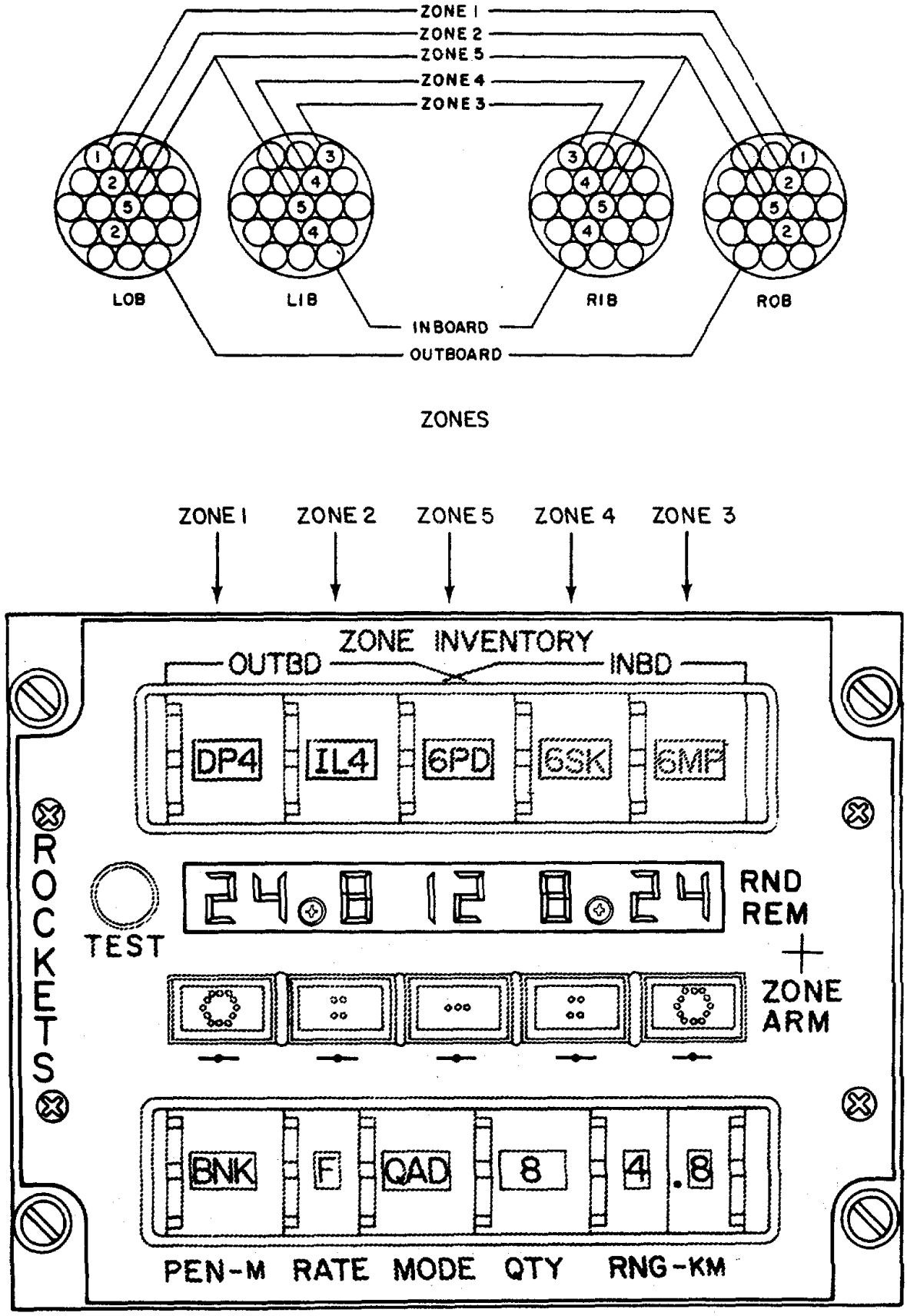

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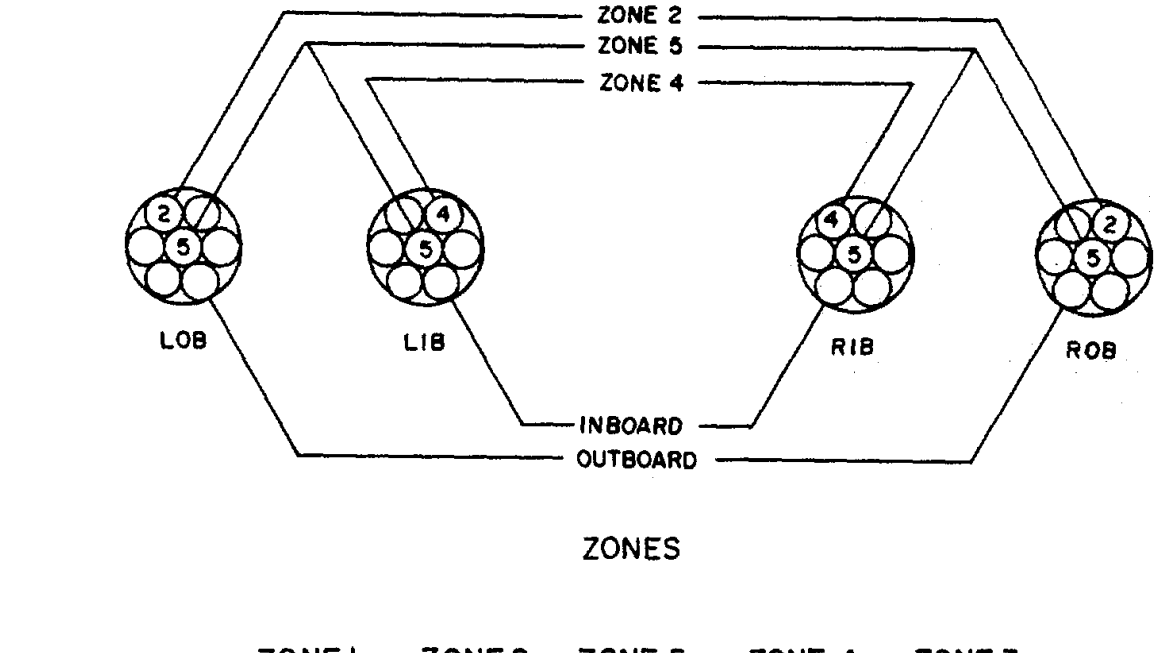
Figure 2-8. Maximum Rocket Inventory-Four 19 Tube Launchers



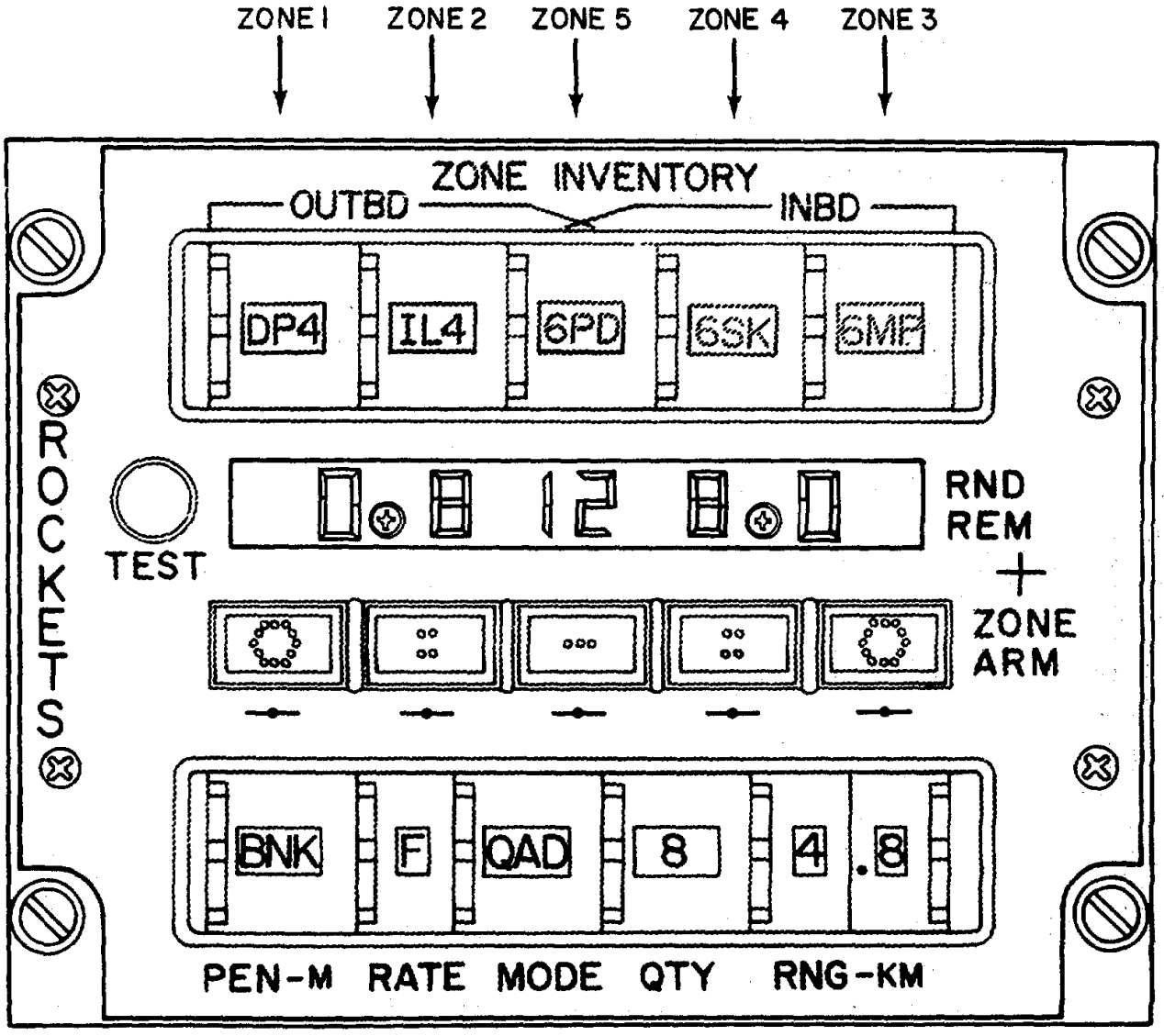
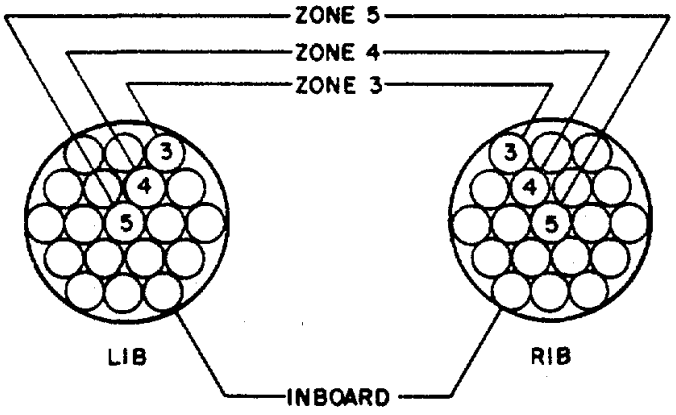


Figure 2-9. Rocket Inventory with Four 7 Tube Launchers.



ZONES

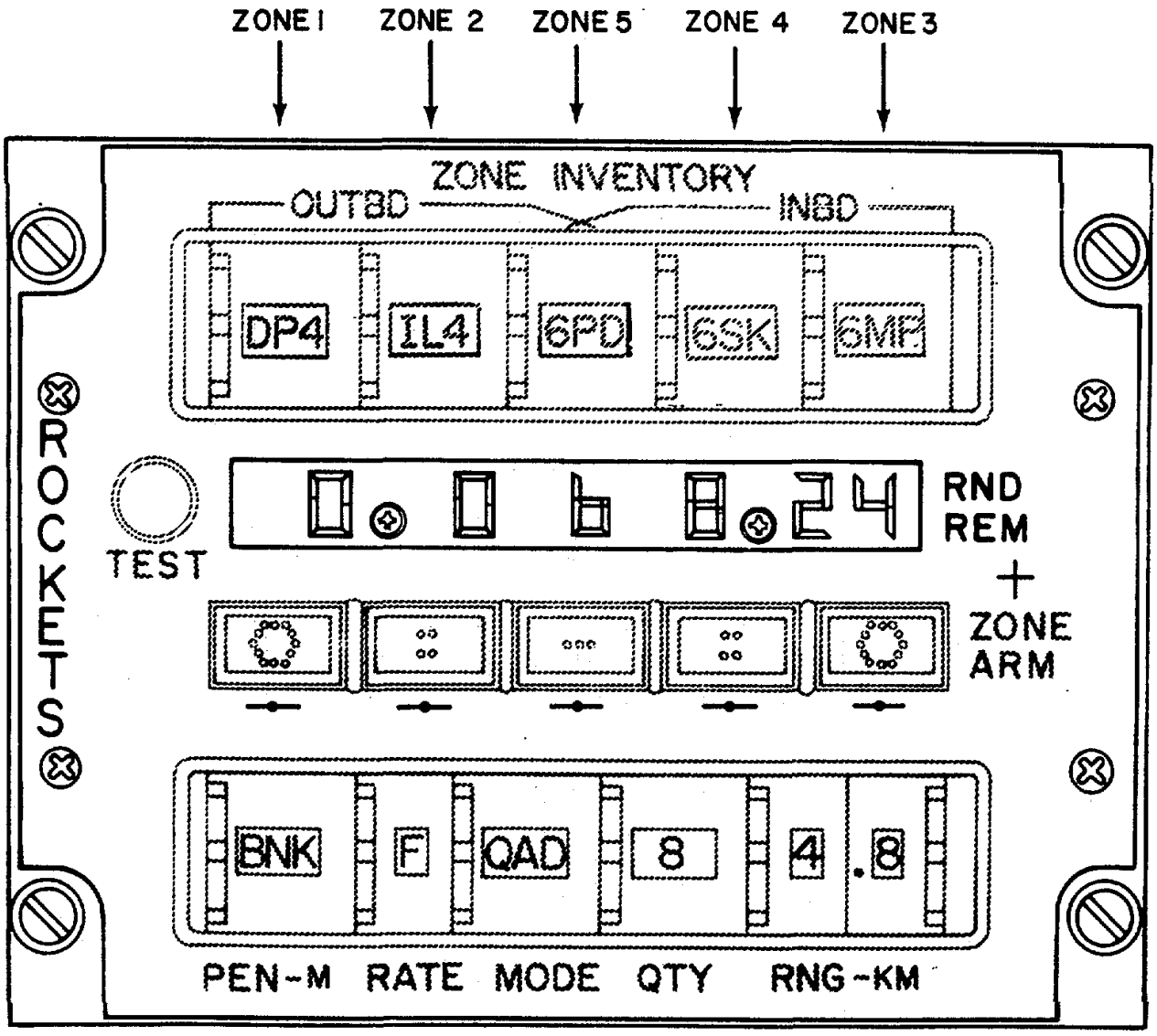


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Figure 2-10. Rocket Inventory with Nineteen Tube Launchers on Inboard Stations Only.

CHAPTER 3
OPERATOR/CREW MAINTENANCE INSTRUCTIONS

There are no authorized operator/crew maintenance instructions.

CHAPTER 4
AVIATION UNIT MAINTENANCE INSTRUCTIONS

Section I. SERVICE UPON RECEIPT OF MATERIEL

4-1. General. When new or reconditioned units are received by the using organization, they should be checked to be sure they are in condition to perform properly.

4-2. Services. Upon receipt of the Subsystem Units by a using organization, the following operations will be performed.

a. *Unpacking.* Unpack the unit carefully and check for identification tags, serial numbers and any information that may be contained on paper tags which may be attached to the packing boxes.

b. *Inspection and Cleaning.* Visually inspect for obvious physical damage such as cracked, damaged, loose, bent, or broken parts, dented surfaces, nicks, burns, scratches or chips, loose, missing, or binding knobs, corrosion, fungus growth, moisture, and missing parts.

Section II. LUBRICATION

Lubrication is not needed for any part of the Subsystem.

Section III. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

4-3. General. You should check the Subsystem as described in table 2-3 each day of expected service. After periods of inactivity or when other maintenance has been performed in or near the cockpit or storage area housing the Subsystem, you should give special attention to suspect areas. No special maintenance inspection is required during periods of storage or inactivity.

a. *Before You Operate.* Always keep in mind the CAUTIONS and WARNINGS. Perform your before (B) PMCS.

b. *After You Operate.* Be sure to perform your after (A) PMCS.

c. *If Your Equipment Fails to Operate.* Troubleshoot using the built-in test routine. Report any deficiencies using the proper forms, see DA PAM 738-751.

4-4. PMCS Procedure. Organizational PMCS procedures are given in table 2-3. You should do these procedures in the order listed.- In recording the results of the PMCS procedures, use the number in the "Item No." column as a source of item numbers for the "TM Number" column of DA Form 2404, Equipment Inspection and Maintenance Worksheet. Dots (●) have been placed in the appropriate "Interval" columns to indicate when you should perform each check and service.

Section IV. AVIATION UNIT MAINTENANCE OF ROCKET MANAGEMENT SUBSYSTEM

4-5. General. Aviation unit maintenance (AVUM) of the Subsystem is limited to inspection for obvious signs of damage, performance of the built-in self-test routine, removal and replacement of damaged or malfunctioning line-replaceable units, and removal and replacement of the lighted panel and the plug-in display on the face of the Display Unit.

4-6. Maintenance and Adjustment. At AVUM you are not authorized to repair or adjust the units of the Subsystem, except as stated in paragraph 4-5.

4-7. Removal. Figure 1-2 shows you the locations of the Subsystem units. Instructions are given for removal of all five

Subsystem units. Only the malfunctioning unit needs to be removed and replaced.

NOTE

The edge-lighted panel and the digital display and zone arm lamps can each be independently removed from the Display Unit without removing the Display Unit from the aircraft.

a. *Display Unit Edge-Lighted Panel*

(1) Remove four black pan head screws (8, figure E-2), flat washers (7), and packing (18) that hold the panel to face of Display Unit.

(2) Grasp the top and bottom edges of the plastic panel with your left hand and gently wiggle alternately the top and bottom edges to pull the panel straight out.

b. *Digital Display.*

CAUTION

Take care to not scratch the lighted panel during the procedure.

(1) Alternately loosen and disengage the captive screws that hold plug-in display (40, figure E-11) to Display Unit. These screws bill jack the display part way out of the Unit.

(2) Gently pry the display from the Unit, prying alternately on opposite ends of the display so that the display comes out evenly.

c. *Display Unit*.

NOTE

It is not necessary to first remove the lighted panel or the plug-in display.

WARNING

A 115-volt, 400-Hz power connection is exposed when the SCAS Panel is removed in the following step. This voltage is present , under the right-hand edge of the SCAS Panel. Do not reach your fingers under the SCAS Panel when removing it.

(1) Turn each of four quick-release fasteners on the SCAS Panel on the Pilot's left-hand console counterclockwise and lift the SCAS Panel out of the console. Lay the SCAS Panel aside, being careful not to touch any electrical contacts on the under side of the panel, either with your fingers or against the aircraft frame.

(2) Turn each of four quick-release fasteners on the Display Unit 1/4-turn counterclockwise.

(3) Withdraw Display Unit from instrument panel with your left hand.

(4) Disconnect EMI/RFI Filter 21A12 from the back of the Unit.

d. *Operations Units.* The Operations Units are located under doors and covers in the leading edge of the helicopter stub wings. Figure 1-2 shows you their locations on the aircraft, figure 4-1 shows the cabling and mounting of the units.

(1) For either inboard Unit, release two quick-release fasteners that secure cover assembly. Swing cover up.

(2) For either outboard Unit, remove 17 screws that hold door assembly to leading edge.

(3) Remove safety wire from the jackscrews of connectors PI and P2.

(4) Disconnect connectors *P1* and P2 from the Unit to be removed. Turn jackscrews in center of connectors counterclockwise until connectors are separated.

(5) Remove two screws and flat washers that hold cable clamps to units.

(6) Support Unit with one hand and remove other two screws and flat washers that hold Unit to wing. Lift Unit from wing.

e. *Zone Arm Lamps.* These lamps are inside of the caps of the ZONE ARM switches.

CAUTION

Do not use a screwdriver or other hard tool in the following step. A screwdriver could scratch the edge-lighted panel, rendering the panel unusable.

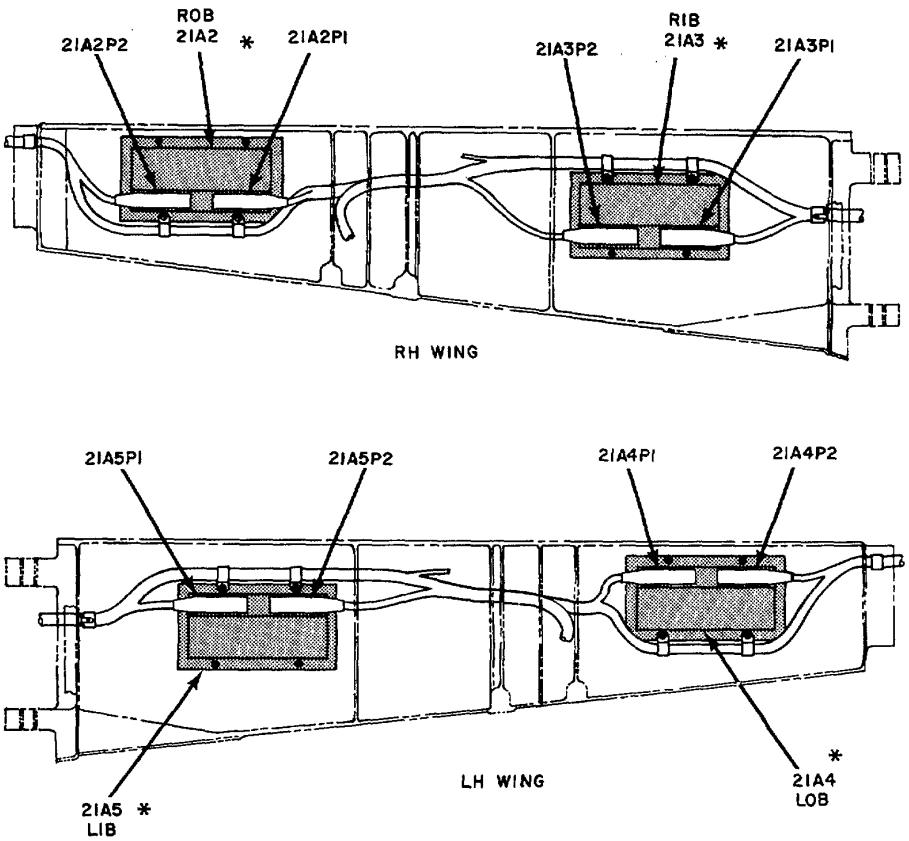
(1) Insert a soft blunt tool such as an orange stick into the groove in the top of the ZONE ARM switch (21, 24, or 25, figure E-11) cap and gently pry the cap partway out of the Display Unit.

(2) When you can grip the sides of the cap, gently pull the cap all of the way out and allow it to swing down.

(3) Lift the lamp (46, figure E-11) out of the cap.

4-8. Cleaning, Inspection, and Repair.

a. *Cleaning.* Dirt and sand may be removed from the control panel by brushing with a soft-bristled brush.



* REFER TO TM55-1520-236 / 239-23P FOR LIST OF ATTACHING HARDWARE

Figure 4-1. Cabling and Mounting of Operations Units AR917761

Units are not normally removed from the aircraft for cleaning. Should the Units become so dirty that cleaning is needed, there is a likelihood of damage that affects the Subsystem operation. You should perform the PMCS listed in table 2-3 and remove and replace all malfunctioning units.

b. *Inspection.* Inspect Units for obvious signs of physical damage and remove and replace those units that show dents or other signs of physical damage. Examine equipment status indicators on rear of Display Unit and between connectors of Operations Units. Indicators should be all black. If you see any white thru the window, the unit must be replaced. (See figure 5-4 and 5-7.)

c. *Repair.* AVUM repair of the Subsystem consists of removal and replacement of line replaceable units that are physically damaged or fail to pass the built-in self test routine. You are not authorized to repair the Units at AVUM except as stated in paragraph 4-5.

4-9. Installation.

a. *Display Unit Lighted Panel.*

NOTE

To the right of the digital display and between REM and ZONE is a '+'. This '+' indicates the location of the panel connector.

(1) Note the location of the connector on the back side of the panel (5 figure 2) and the mating connector of the Display Unit. Align the connectors and gently mate the panel with the Unit. Push on the + with one finger and push on the opposite side of the panel so that the panel is properly seated.

(2) Secure panel with four black pan head screws and flat washers, packing removed in step 4-7.a.

b. *Digital Display*.

(1) Hold plug-in display (40 figure E-11) in front of opening in Display Unit so that exposed ends of two captive screws are closest to the five ZONE ARM pushbuttons, and insert display into Display Unit.

(2) Gently press display evenly into Display Unit, but do not force it.

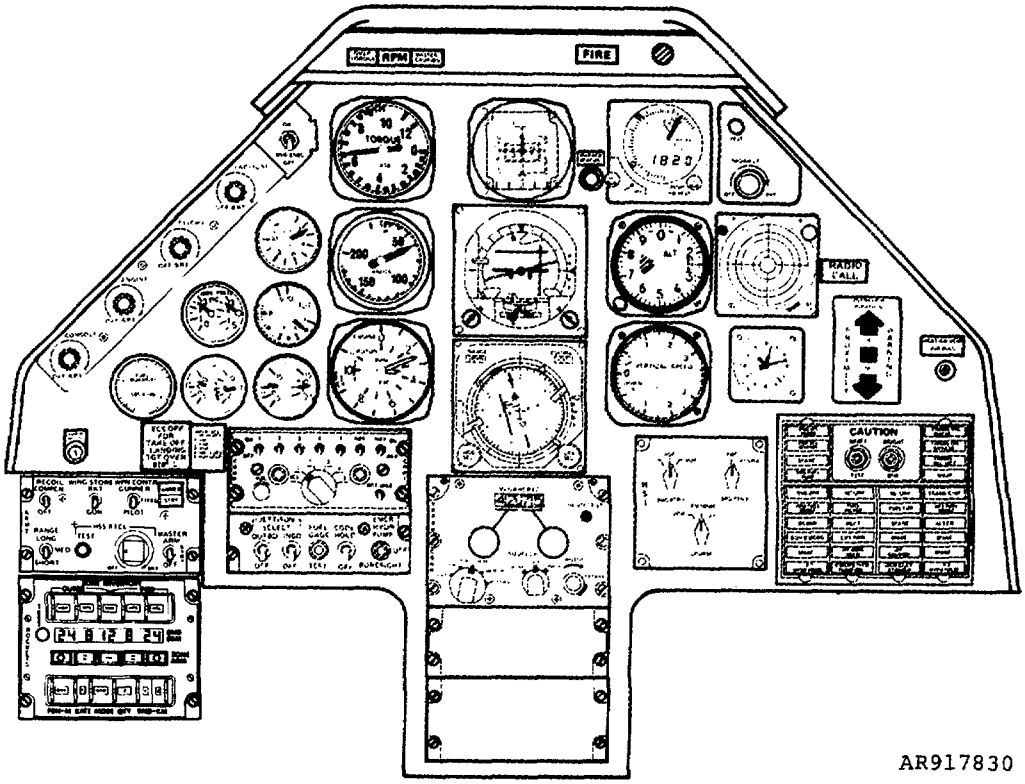


Figure 4-2. Display Unit Installed in Typical Pilot's Instrument Panel

(3) Alternately tighten two captive screws until display is firmly seated in Unit.

c. Display Unit.

NOTE

If SCAS Panel is installed in Pilot's console, refer to paragraph 4-7.c. for removal instructions.

(1) Check that equipment status indicator at rear of Display Unit shows all black. Refer to figure 5-4.

(2) Reach into mounting hole in left side of Pilot's instrument panel and withdraw EMI/RFI Filter 21A12. Check connector for bent pins or other obvious damage. Connect plug to J1 at rear of Display Unit.

(3) Slide Display Unit into mounting hole on the instrument panel. Figure 4-2 shows the Unit installed in the instrument panel.

(4) Engage and tighten four quickrelease fasteners to secure Unit to console.

(5) If lighted panel is not on Display Unit, install panel as described in a above.

WARNING

A 115-volt, 400-Hz power connection is exposed on the SCAS Panel that is installed in the next step. The voltage is present under the right-hand edge of the SCAS Panel. While handling the Panel, do not reach under it with your fingers.

(6) Set SCAS Panel in place in the console and secure it with four quickrelease fasteners.

d. *Operations Unit.* The Operations Units can only be mounted in the proper position. As you can see in figure 4-1, operations Units are installed in the right-hand wing with the connectors :own, and are installed in the left-hand wing with the connectors up.

(1) Check that equipment status indicator between Unit connectors shows all black. Refer to figure 5-7.

(2) Hold Unit in its mounting position and install two pan head screws and flat washers in the mounting holes opposite the cable clamps. Do not tighten the screws.

(3) Install two pan head screws and flat washers thru the cable clamps and into the remaining Unit mounting holes.

(4) Tighten all four screws.

(5) Check connectors for bent pins and other obvious damage. Mate aircraft connectors P1 and P2 with Unit connectors J1 and J2. Tighten connector jackscrews.

(6) Install safety wire on jackscrews of connectors P1 and P2.

(7) For inboard Units, allow cover to swing down and secure it by engaging and tightening two quick-release fasteners.

(8) For outboard Units, set door assembly in place on leading edge of wing and secure with 17 screws.

e. *Zone Arm Lamps.*

(1) Set new lamp (46 figure E-11) in place on cap of Zone Arm Switch (21, 24 or 25).

(2) Swing cap up and push it into the switch body.

Section V. TROUBLESHOOTING

4-10. Troubleshooting is based upon the PMCS procedures of table 2-3. If the equipment is not ready, find the trouble in the MALFUNCTION column of table 4-1 on troubleshoot equipment.

Table 4-1. AVUM Troubleshooting

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION

Step 1. RND REM displays quantities other than the quantity of rockets loaded into each zone. RND REM does not display 0 0 0 0 0 when all launches are empty.
Perform self-test routine as described in table 2-3.
Find trouble listed in MALFUNCTION column, below, and follow instructions.

Step 2. All lights do not light at full brilliance with console lighting control fully clockwise; panel and switch lighting intensity is uneven.
Check to see if unevenness is in the edge-lighted panel or in one of the selector switches.
If edge-lighted panel is unevenly lit, replace panel. If selector switches are unevenly lit, replace Display Unit.

Step 3. Brilliance of lights is not proportional to position of console lighting control.
Check to see if trouble appears in other console panels or occurs only in the Rocket Management Subsystem.
If trouble is common to other panels, troubleshoot console lighting control circuit. If trouble is unique to the Rocket Management Subsystem, replace Display Unit.

Step 4. RND REM does not light at full brilliance when console lighting control is fully counterclockwise.
Replace Display Unit.

Step 5. RND REM does not display 88 8 88 8 88 during first phase of self-test routine.
Replace plug-in display and repeat self-test.
If trouble does not clear, restore original plug-in display or replace Display Unit.

Step 6. One or more ZONE ARM brackets do not light during first phase of self-test routine.
Replace lamps that do not light and repeat self-test.
If trouble does not clear, restore original lamps, replace Display Unit.

NOTE

You can quickly isolate a trouble by swapping a lamp that lights with a lamp that does not light and retesting. If the trouble goes with the lamp, it is burned out; replace it. If the trouble stays with the ZONE ARM switch, replace the DU.

Step 7. During second phase of self-test routine, RND REM does not indicate a 7 for each RMS unit installed in the aircraft in the position identified in figure 2-4.
Replace each unit for which a 7 does not appear.

Step 8. Equipment status indicator on one or more units shows white.
Check indicators at rear of Display Unit or between connectors on Operations Unit.
Replace any unit whose indicator shows white.

CHAPTER 5
AVIATION INTERMEDIATE MAINTENANCE INSTRUCTIONS

Section I. SERVICE UPON RECEIPT OF MATERIEL

5-1. General. Units and subassemblies of the Rocket Management Subsystem that are received by the AVIM shop may be placed in one of two categories:

a. Units returned from the using organization.

b. New or reconditioned units and subassemblies.

5-2. Units Returned from the Using Organization. You should assume that these units have been taken out of service because of a malfunction.

a. Inspect unit for evidence of physical damage.

b. Check equipment status indicator. If any white can be seen in the indicator window, the unit has failed a Subsystem self-test.

c. Use the .M135 Test Set to lest the | operation of each unit. Refer to Section III.

5-3. New or Reconditioned Units. These units are either new from the factory or have been reconditioned at depot, and probably are in good working order. You should, however, check them for signs of possible shipping damage and check the equipment status indicator. If you see any evidence that makes you suspect the operating condition of the units, check them out using the M135 Test Set. Refer to Section III for | troubleshooting procedures.

5-4. New or Reconditioned Subassemblies. Subassemblies should be examined for signs of possible shipping damage, and any damaged subassemblies should be returned to depot.

Section II. PREEMBARKATION INSPECTION OF MATERIEL IN UNITS ALERTED FOR OVERSEAS MOVEMENT

5-5. General. This inspection is conducted on materiel in alerted units scheduled for overseas duty to insure that such materiel will not become unserviceable in a relatively short time. The inspection prescribes a higher percentage of remaining usable life in serviceable materiel to meet a specific need beyond minimum serviceability.

5-6. Inspection Points (Refer to figure 1-3).

a. Screw heads must be in serviceable condition, and threads must not be stripped. Internal threads must not be stripped.

b. Materiel must be free of burrs, particularly those on functional surfaces.

c. Parts must not be cracked, bent, distorted, or damaged, and must be free of detrimental wear.

d. Painted surfaces must be free of bare. spots.

e. Operating controls must function smoothly.

f. Identification plates must be present and secure.

g. Electrical components must function properly and have no evidence of physical damage or missing parts.

h. The plastic edge-lighted panel on the face of the Display Unit must not be scratched, nicked, or cracked.

Section III. TROUBLESHOOTING

5-7. General.

a. This section describes how to use the MS Test Set (figures 5-1 and 5-2) to test a Display Unit (DU) or an Operations Unit (OU). The RMS units are tested individually, not as a system. When you test either unit, the Test Set simulates the unit's interface with the RMS system.

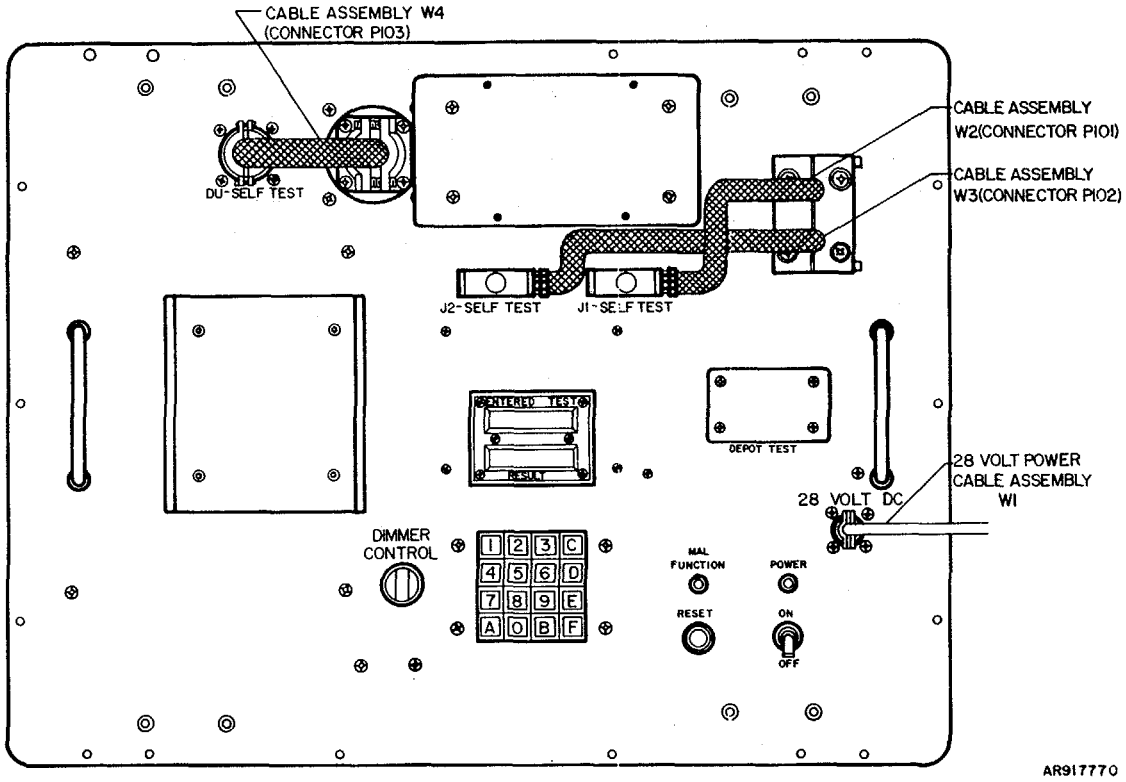


Figure 5-1. RMS Test Set Front Panel

b. When testing a unit, you enter a test code on the Test Set keyboard. The Test Set then automatically follows a programmed test routine. Upon completion of the test routine the Test Set displays a result code. If the RMS Unit is functioning properly, the Test Set will display 8888. If it displays any other number it is a malfunction indication. The failure isolation shop set (FISS), electronic circuit board: 20mm turret and rocket management subsystems provides slave boards for use during troubleshooting to aid in the identification of faulty circuit board assemblies within the line replaceable unit (LRU), once the faults circuit board has been identified the slave board is returned to the shop set for future use and a replacement board is requisitioned for the LRU.

c. After you have replaced the faulty assembly, you can use the Test Set to verify that the repaired unit is functioning properly.

d. You will find troubleshooting procedures for the DU in paragraph 5-8 and for the OU in paragraph 5-9.

5-8. Troubleshooting the Display Unit,

a. *Display Unit Set Up.*

(1) Set up the Test Set as described in TM9-4933-227-13&P.

(2) Set Test Set POWER ON/OFF switch to OFF.

(3) Set the DU on the Test Set test pad as shown in figure 5-3. Be sure DU is seated between the guide flanges of the test pad.

CAUTION

To prevent damage to the unit under test, power to the Test Set must be off when setting the DU on or removing it from the Test Set.

To prevent damage to the unit under test, be sure Test Set Connectors P101 and P102 are disconnected from their self-test jacks when testing the DU.

Do not disconnect Test Set connector P103 while the Test Set is running a test. This will damage the DU.

Be sure that the EMI/RFI filter 21A12 is removed from DU connector J1 prior to connecting the DU to Test Set.

(4) Connect Test Set connector P103 to DU connector J1. See figure 5-4.

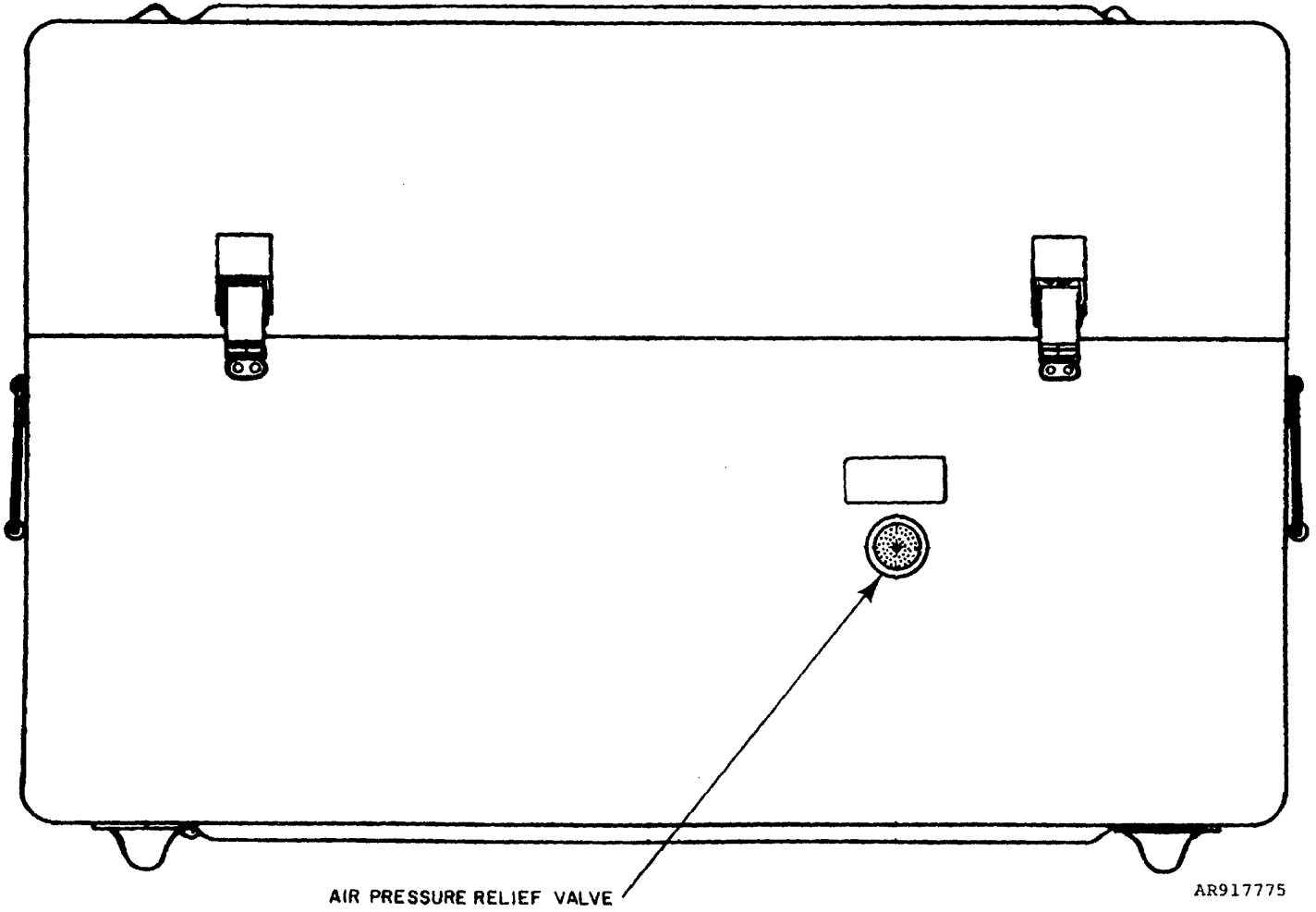


Figure 5-2. RMS Test Set Case

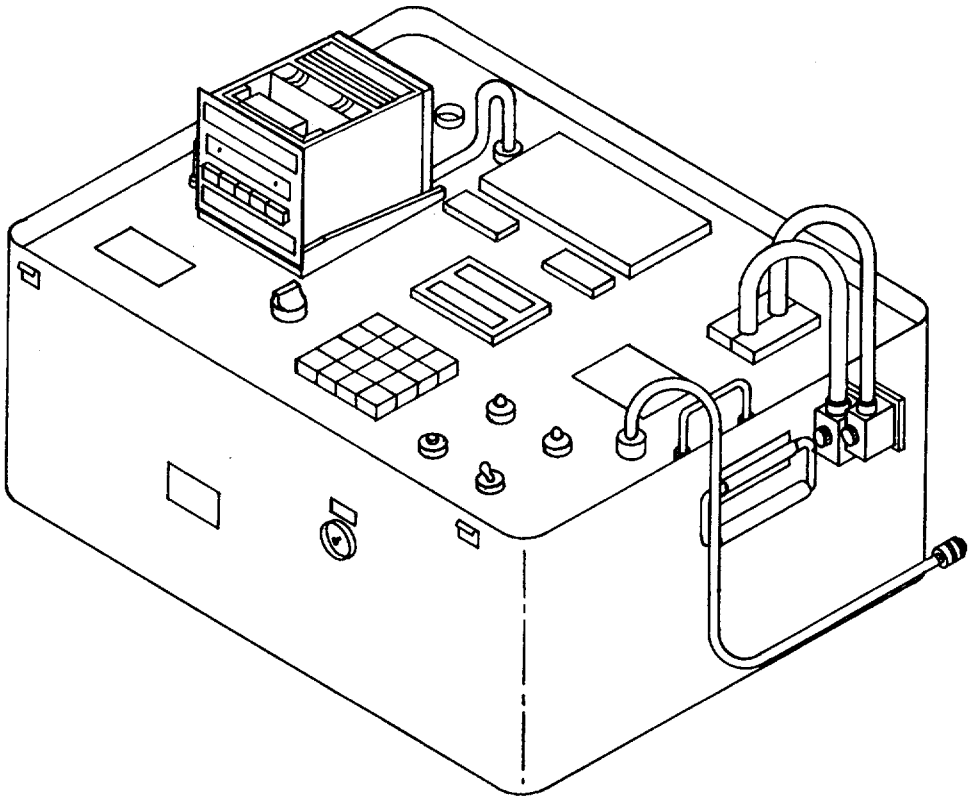


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Figure 5-3. Troubleshooting and Test Set-Up for Display Unit

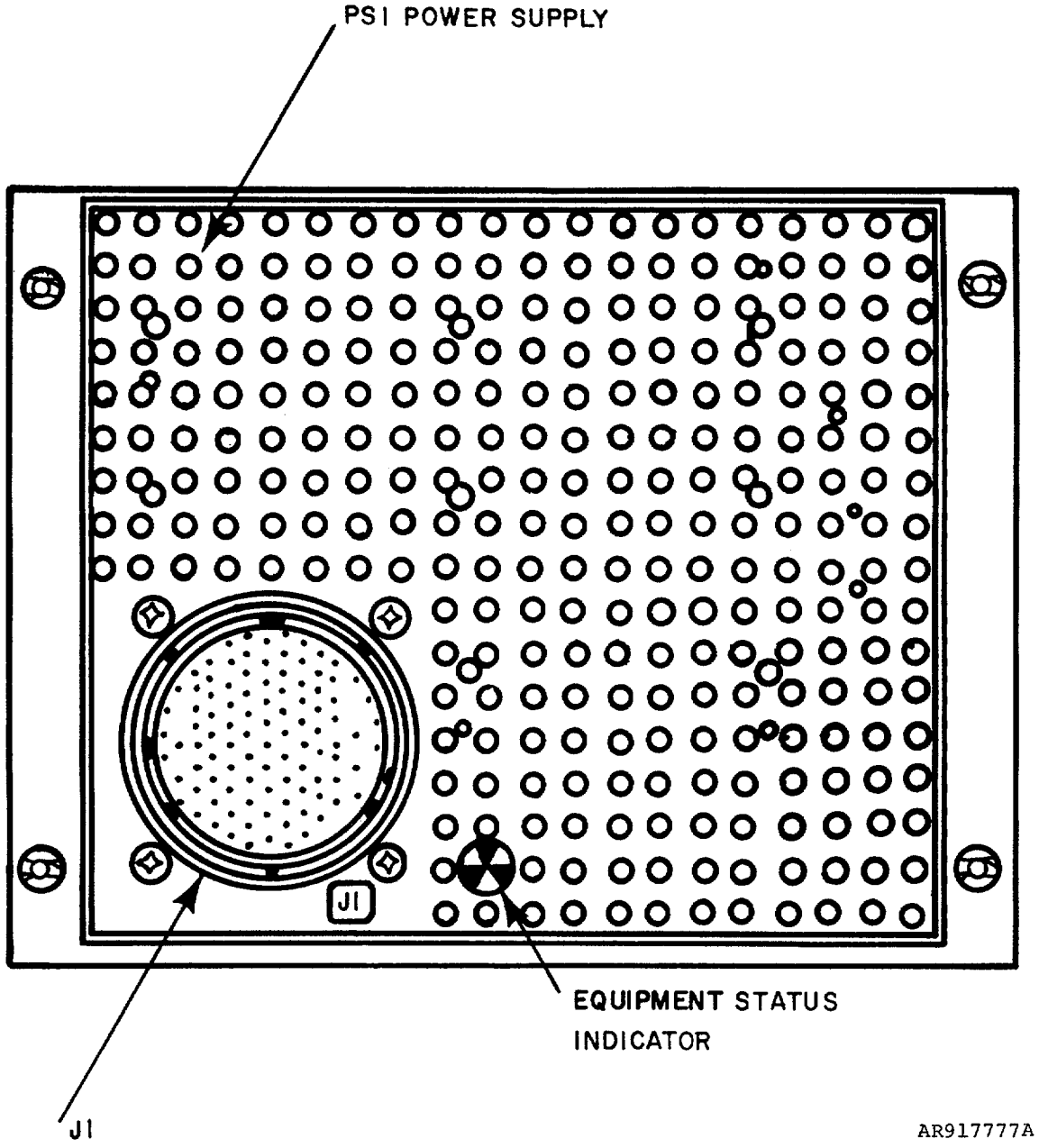


Figure 5-4. Rear View of Display Unit

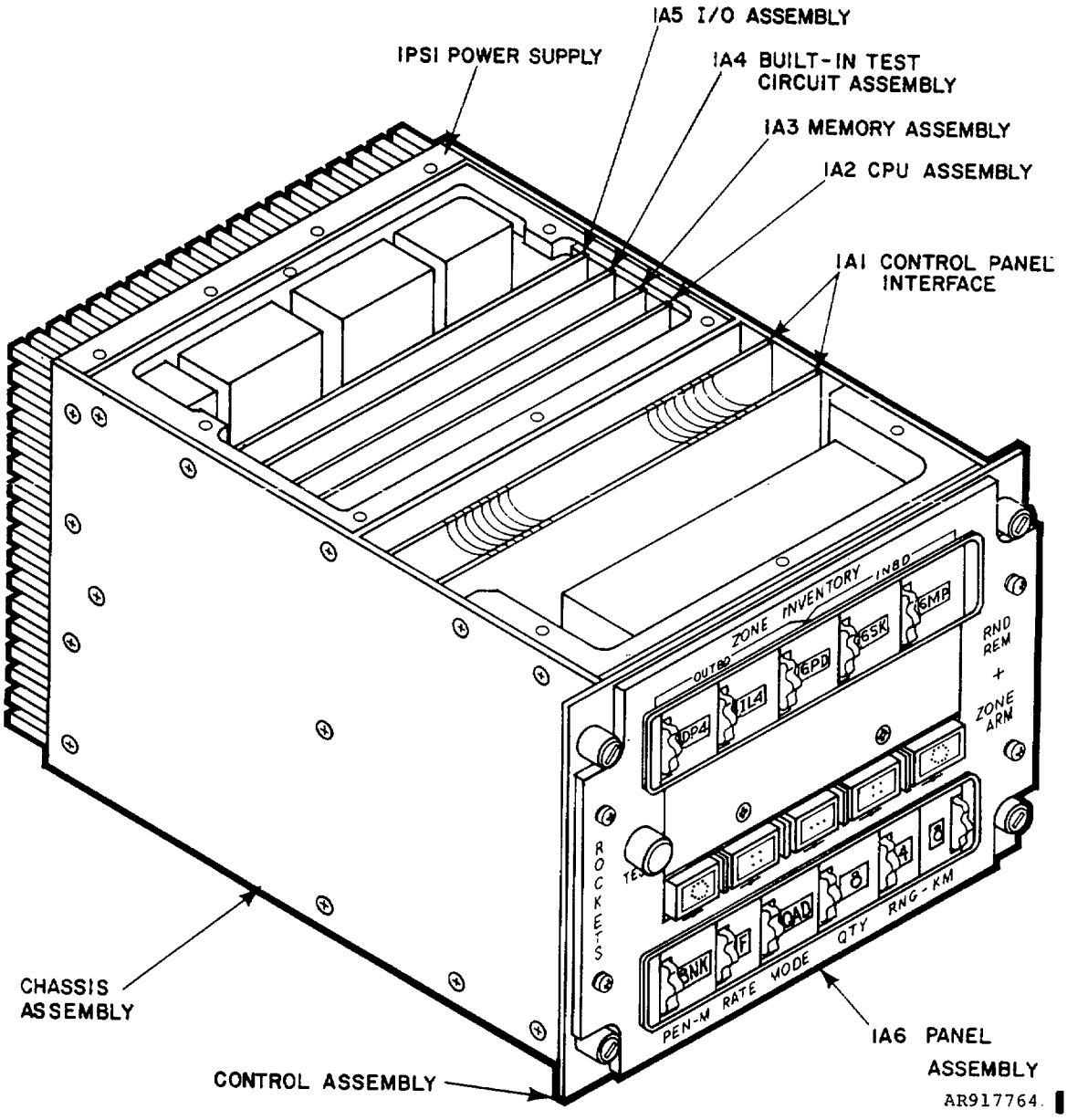


Figure 5-5. Display Unit with Cover Removed

(5) Slide the DU back in the pad until it is seated.

NOTE

If you are going to verify the performance of the DU without changing any shop-replaceable assemblies, you may omit step (6).

(6) Remove DU cover as follows:

(a) Remove 15 screws (1, figure E-2) that hold cover (2) to DU.

(b) Lift cover from DU.

(7) Set Test Set POWER ON/OFF switch to ON. Turn DIMMER CONTROL fully clockwise. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light. If MALFUNCTION lamp lights, refer to TM9-4933-227-13&P.

(8) Figure 5-5 shows the Display Unit with its top removed and identifies the shop-replaceable assemblies.

NOTE

At any time during testing and troubleshooting, if you enter a command code that causes an unusual ENTERED TEST or RESULT display, you can cancel all commands by pressing the RESET button on the Test Set.

b. *DU Diagnostic Test 10.*

(1) Set DU switches as follows:

Switch	Position
Zone Inventory (all 5)	PD4
RATE	F
QTY	ALL
RNG	6
-KM	.0

NOTE

The PEN-M and -KM switches may be left in any position. They do not affect this test.

(2) On Test Set keyboard, momentarily press key C. This clears the Test Set of any previous command code. Observe ENTERED TEST and RESULT digital displays. ENTERED TEST shall display 0 in the right-most position; RESULT shall be dark.

(3) Momentarily Dress keys 1 and 0. This enters the command code for test 10. Observe ENTERED TEST and RESULT displays. ENTERED TEST shall display 10 and RESULT display shall be dark.

NOTE

This observation is to check that you have entered the correct command code. If ENTERED TEST displays any code other than 10, you may have pressed the wrong keys. You can clear the wrong entry by returning to step (2).

(4) Momentarily press key E. This causes the test command to be executed. Observe ENTERED TEST display. ENTERED TEST shall flash 10 while test is in progress.

(5) Observe Display Unit.

(a) Approximately 22 seconds after you have pressed E, the RND REM display will flash 88 8 88 8 88 three times.

(b) Approximately ten seconds later, RND REM will display 24 8 12 8 24, the brackets on all ZONE ARM switches will light, and the quantities displayed on RND REM will begin to count down, one zone at a time, from zone 1 thru zone 5 (see figure 2-7 for zone number identification). As each zone inventory is depleted, the RND REM display for that zone bill display 0 and hold that display until the inventories for all zones are reduced to 0.

(c) Upon completion of the countdown, all lights and displays on the DU will F go dark.

(6) Observe RESULT display on Test Set. RESULT shall display 8888.

(a) If RESULT displays 8888, the DU has passed test 10. Proceed to paragraph 5-8.c.

(b) If RESULT displays any other number, it is a malfunction code. Find the displayed number in the MALFUNCTION (RESULT Display Code) column of table 5-2 and follow troubleshooting instructions.

c. *Control Panel Interface Executive Routine 11.* This is not a test, but an executive program that instructs the Test Set to scan for a secondary command code. The secondary command codes described in paragraphs d through h test specific functions of the DU controls and displays.

NOTE

In the secondary command tests described in paragraphs d through k, you can abort a secondary test at any time during its execution by pressing key A and holding it down for at least two seconds. This will abort the secondary test that is in process and allow you to initiate a different secondary test. The A key will not abort the executive routine.

NOTE

You can abort the executive routine together with the secondary test in process at any time by pressing key B and holding it down for at least five seconds. This will return the Test Set to a condition or inactivity where it will wait for further instructions from you.

(1) On Test Set keyboard, momentarily press key C. This clears the Test Set of any previous command code. Observe ENTERED TEST and RESULT displays. ENTERED TEST shall display 0 in the right-most position and RESULT shall be dark.

(2) Momentarily press key 1 twice. This enters the command code 11. Observe ENTERED TEST and RESULT displays. ENTERED TEST shall display 11 and RESULT shall be dark.

NOTE

This observation is a check that you have entered the correct command code. If ENTERED TEST displays any code other than 11, you may have pressed the wrong key. You can clear the entry by returning to step (1).

(3) Momentarily press key E. This causes the executive routine to be entered. Observe ENTERED TEST and RESULT. ENTERED TEST shall display 11 and RESULT shall be dark. All lights and displays of DU will go dark. Proceed to paragraph d.

d. *Lighting Test 40*.

(1) On Test Set keyboard, momentarily press key C to clear the Test Set of any previous secondary command code. ENTERED TEST shall display 0 in the right-most position and RESULT display shall be dark.

(2) Momentarily press keys 4 and 0. This enters the secondary command code 40. ENTERED TEST shall display 40 and RESULT shall be dark. If ENTERED TEST displays any number other than 40, clear the entry by returning to step (1).

(3) Momentarily press key E to cause the secondary test to be executed.

(4) Observe ENTERED TEST. ENTERED TEST shall flash 40.

(5) Observe RESULT. RESULT shall display 0 at the right side of the display.

(6) Observe the front of the DU. The edge-lit panel, all thumb wheel switches, the RND REM display, and the brackets in the ZONE ARM switches shall be lighted evenly.

(a) If edge-lit panel is unevenly lighted, replace panel as described in section V.

(b) If thumb wheel or ZONE ARM switches are not evenly lit, replace lamps as described in section V.

(7) Slowly turn DIMMER CONTROL on Test Set fully counterclockwise while observing the front of the DU. All lights shall become dimmer, evenly, as the DIMMER CONTROL is turned. Before the DIMMER CONTROL reaches its fully counterclockwise position, all lights shall be dark. With the DIMMER CONTROL fully counterclockwise the RND REM display, ZONE ARM brackets and all thumb wheel switch lamps shall be at full brilliance; and the edge-lit panel, if installed, shall be dark.

(8) Observe RESULT display and slowly rotate DIMMER CONTROL clockwise until RESULT displays 1. Set the DIMMER CONTROL. Leave it in this position for the remainder of the executive routine 11 tests.

(9) Abort the lighting test by pressing Test Set key A and holding it down until 40 appears in the RESULT display. This confirms the number of the test you have just aborted. Proceed to paragraph e.

e. *Dimmer* Control *Test 45.*

(1) On Test Set keyboard, momentarily press key C to clear the Test Set of the previous secondary command code. ENTERED TEST shall display 0 in the right-most position and RESULT shall be dark.

(2) Momentarily press keys 4 and 5 to enter the secondary command code 45. ENTERED TEST shall display 45 and RESULT shall be dark. If ENTERED TEST displays any number other than 45, clear the entry by returning to step (1).

(3) Momentarily press key E to execute the secondary test.

(4) Observe ENTERED TEST. ENTERED TEST shall flash 45 and continue flashing until the test is automatically completed.

(5) Observe DU thumb wheels and edgelit panel, if installed. Thumb wheels and edge-lit panel shall be evenly lit.

(6) Observe RESULT display. Approximately ten seconds after you have pressed key E, RESULT shall display 8888 to indicate that the DU has passed this test. If RESULT displays any other number, it is a fault code. Find this number in the MALFUNCTION (RESULT Display Code) column of table 5-2 and follow troubleshooting instructions.

(7) To exit the dimmer control test press key A and hold it down until 45 appears in the RESULT display. This confirms the number of the test you have aborted. Proceed to paragraph f.

f. *Thumbwheel Test 50.* This test checks the performance of each of the thumb wheel switches on the control assembly (4, figure 6-2). For each position of each switch, you are to compare the RESULT display with the listing in the Desired Result code of table

5-1. If any RESULT display does not agree with the entry in the table, it is because of a fault in the control assembly. If this happens, remove and replace the control assembly as described in section V.

(1) Set DU switches as follows:

Switch	Position
Zone Inventory (all)	-
PEN-M	45
RATE	A
MODE	QAD
QTY	ALL
RNG	A
-KM	.9

(2) On Test Set keyboard, momentarily press key C to clear the Test Set of the previous secondary command code. ENTERED TEST shall display 0 in the right-most position and RESULT shall be dark.

(3) Momentarily press keys 5 and 0 to enter the secondary command code 50. ENTERED TEST shall display 50 and RESULT shall be dark. If ENTERED TEST displays any number other than 50, clear the entry by returning to step (2).

(4) Momentarily press E to execute the test.

(5) Observe ENTERED TEST. ENTERED TEST shall flash 50.

(6) Observe RESULT. RESULT shall indicate 4.

(7) Set left-most (Zone 1) ZONE INVENTORY switch to 6MP and observe RESULT. RESULT shall display 5.

(8) Set left-most ZONE INVENTORY switch to each position in turn and observe RESULT. RESULT display shall agree with the entry in the Desired Result column of table 5-1 for each setting of the ZONE INVENTORY switch.

(9) Momentarily press key F to pass the test to the next ZONE INVENTORY switch.

(10) Repeat steps 8 and 9 for each ZONE INVENTORY switch in turn from left to right across the control assembly. When the right-most ZONE INVENTORY switch has been tested, pressing key F passes the test to the PEN-M switch.

(11) Test each of the firing profile switches in the lower part of the control assembly, in turn from left to right, comparing the RESULT display with the entry in the Desired Result column of table 5-1. After testing each position of one switch pass the test to the next switch by momentarily pressing key F.

(12) Should any of the switch positions fail the test, remove and replace the control assembly. Refer to section V.

(13) To terminate the thumb wheel test, press key A and hold it down until RESULT displays 50. Proceed to paragraph g

Table 5-1. THUMBWHEEL TEST RESULTS

Thumbwheel	Setting	Desired Result
ZONE INVENTORY	-	4
	6MP	5
	6SK	6
	OIL	7
	6RC	8
	6PD	9
	SK4	A
	IL4	B
	WP4	C
	DP4	D
	RC4	E
	PD4	F
PEN-M	45	45
	40	40
	35	35
	30	30
	25	25
	20	20
	15	15
	10	10
	BNK	B
	SQ	C
RATE	A	A
	F	F
	S	C
MODE	QAD	4
	PRS	2
	SNG	1
QTY	ALL	A
	8	8
	4	4
	2	2
	1	1
RNG	A	A
	6	6
	5	5
	4	4
	3	3
	2	2
	1	1
	0	0
-KM	.9	9
	.8	8
	.7	7
	.6	6
	.5	5
	.4	4
	.3	3
	.2	2
	.1	1
	.0	0

g. *RND REM Lighting Test 60*

(1) On Test Set keyboard, momentarily press key C to clear the Test Set of the previous secondary command code. ENTERED TEST shall display O in the right-most position and RESULT shall be dark.

(2) Momentarily press keys 6 and O to enter the secondary command code 60. ENTERED TEST shall display 60 and RESULT shall be dark. If ENTERED TEST displays any number other than 60, clear the entry by returning to step (1).

(3) Momentarily press E to execute the test.

(4) Observe RESULT display, thumb wheel switches, and RND REM display. RESULT shall be dark, panel and thumb wheel switches shall be evenly lighted and RND REM shall display 88 8 88 8 88 with all segments equally bright. If lighting or displays are not as specified, refer to table 5-3 and follow trouble shooting instructions.

(5) To end the RND REM lighting test, press key A and hold it down until 60 appears in the RESULT display This confirms that you have aborted test 60. Proceed to paragraph h.

h. *RND REM Count Display Test 65.*

(1) On Test Set keyboard momentarily press key C to clear the Test Set of the previous secondary command code. ENTERED TEST shall display O in the right-most position and RESULT shall be dark.

(2) Momentarily press keys 6 and 5. ENTERED TEST shall display 65 and RESULT shall be dark. If ENTERED TEST displays any number other than 65, clear the entry by returning to step (1).

(3) Momentarily press key E and observe RND REM display. RND REM shall display as follows: pausing one second at each display .

00	0	00	0	00
11	1	11	1	11
22	2	22	2	22
33	3	33	3	33
44	4	44	4	44
55	5	55	5	55
66	6	66	6	66
77	7	77	7	77
88	8	88	8	88
99	9	99	9	99

(Blank one second)

88

8

88

8

88

00	0	00	0	00
11	1	11	1	11

Etc.

(4) if display is not as described, refer to table 5-4 for troubleshooting instructions.

(5) If display is correct, terminate the test by pressing key A and holding it down until RESULT displays 65. Proceed to paragraph i.

i. *ZONE ARM Bracket Lighting Test 70*

(1) On Test Set keyboard, momentarily press key C to clear previous secondary command code. ENTERED TEST shall display O in the right-most position and RESULT shall be dark.

(2) Momentarily press keys 7 and 0. ENTERED TEST shall display 70 and RESULT shall be dark. If ENTERED TEST displays any number other than 70, clear the entry by returning to step (1).

(3) Momentarily press key E and observe lighted brackets on ZONE ARM switch caps. A pair of brackets shall light on each of the switch caps in the following sequence. See figure 2-7 for zone number identification of switches.

Zone 1

Zone 2

Zone 5

Zone 4

Zone 3

After all switches simultaneously lit. then all switches simultaneously dark. Then the above sequences will be repeated until aborted.

(4) If brackets do not light in the above sequence, refer to table 5-5 for troubleshooting instructions.

(5) To stop the test, press key A and hold it until RESULT displays 70. Switch lights will remain lit according to the point in the sequence when the test stopped. This does not affect the next test. Proceed to paragraph j.

j. *TEST end ZONE ARM Switches Test 75.*

(1) On Test Set keyboard, momentarily press key C to clear previous secondary command code. ENTERED TEST shall display O in the right-most position and RESULT shall be dark.

(2) Momentarily press keys 7 and 5. ENTERED TEST shall display 75 and RESULT shall be dark. If ENTERED TEST displays any other number, clear the entry by returning to step (1).

(3) Momentarily press key E. ENTERED TEST shall flash 75 and RESULT shall display 0.

(4) Press and hold *TEST* switch on front of DU. Observe RESULT. RESULT shall display B. Release TEST switch and observe RESULT. RESULT shall change from B to 0 as test switch is released.

(5) Observe RESULT: press and release zone 1 ZONE ARM switch. RESULT shall display 1 while switch is depressed and shall change to 0 when switch is released.

(6) Repeat step (5) for each of the remaining ZONE ARM switches. RESULT shall display the zone number corresponding to the depressed switch and shall return to 0 when no switch is depressed.

NOTE

Loading zones are NOT numbered consecutively from left to right. See figure 2-7 for zone number identification of switches.

(7) If RESULT does not display proper number, refer to table 5-6 and follow troubleshooting instructions.

(8) To exit this test, press key A and hold it down until RESULT displays 7;. Proceed to paragraph k.

k. *Watch Dog Test 80.*

(1) On Test Set keyboard, momentarily press key C to clear previous secondary command code. ENTERED TEST shall display O in the right-most position and RESULT shall be dark.

(2) Momentarily press keys 8 and 0. ENTERED TEST shall display 80 and RESULT shall be dark. If ENTERED TEST displays any other number, clear the entry by returning to step (1).

(3) Momentarily press key E. ENTERED TEST shall flash 80 and RESULT display shall remain dark.

(4) Observe RND REM display. RND REM shall display 88 8 88 8 88. If RND REM does not display 88 8 88 8 88, refer to table 5-7 for troubleshooting instructions.

NOTE

If there are no faults in the watch dog circuitry, ENTERED TEST will continue to flash until the test or the executive routine is exited.

(5) To exit the watch dog circuit test, press key A and hold it down until RESULT displays 80.

(6) To exit CPI Executive Routine 11, press key B and hold it down until RESULT displays 11. Proceed to paragraph 1.

NOTE

If you press key 5 after pressing key A, the executive routine will not be exited. To clear the displays, press key C or the RESET button.

l. *Equipment Statue Indicator Test 12*

(1) Observe RESULT. If RESULT displays any number between 40 and 80, press key B and hold it down until RESULT displays 11.

(2) Momentarily press key C to clear previous command code. ENTERED TEST shall display 0 and RESULT shall be dark.

(3) Momentarily press keys 1 and 2. ENTERED TEST shall display 12 and RESULT shall be dark. If ENTERED TEST displays any other number, clear the entry by returning to step (1).

(4) Simultaneously observe equipment status indicator ESI (see figure 5-4) and press key E. ESI shall change from white to black to white to black or from black to white to black. When ENTERED TEST stops flashing, observe RESULT display.

(a) If ESI action is correct and RESULT displays 8888, the unit has passed the test. Proceed to paragraph m.

(b) If ESI action is not correct and RESULT displays 8888, there probably is a mechanical fault in the ESI. Replace power supply 1PS1 as described in section V and repeat test.

(c) If RESULT displays anything other than 8888, regardless of ESI action, this is a fault code. Refer to table 5-2 for troubleshooting instructions.

m. *DU Simulation Test 13*. In this test the Test Set simulates the operating interface of the DU. It allows you to exercise the built-in self-test feature of the DU. It simulates the arming of the RMS, and it simulates the launching of a full load of rockets. It also tests the uninventoried rockets and the FCC lockout feature.

(1) Set DU switches as follows:

Switch	Position
ZONE INVENTORY (all 5)	PD4
PEN-M	45
RATE	S
MODE	SNG
QTY	ALL
RNG	6
-KM	.0

(2) Momentarily press C to clear previous command code. ENTERED TEST shall display 0 and RESULT shall be dark.

(3) Momentarily press keys 1 and 3. ENTERED TEST shall display 13 and RESULT shall be dark. If ENTERED TEST displays any other number, clear the entry by returning to step (2).

(4) Momentarily press E. ENTERED TEST shall flash 13.

(5) Observe RND REM. RND REM shall display 24 8 12 8 24. If it does not, perform tests 10, 11, and 12 and troubleshooting accordingly.

(6) Simultaneously observe lighting sequence on RND REM display and ZONE ARM switches and press TEST switch on DU.

(a) RND REM shall display 88 8 88 8 88 and all ZONE ARM brackets shall light for about two seconds.

(b) RND REM shall display 7 7 7 7 7 and all ZONE ARM brackets shall go dark for about two seconds.

(c) RND REM shall display 24 8 12 8 24 and hold this display.

(7) To repeat this lighting sequence, momentarily press TEST switch again.

(8) If RND REM or the ZONE ARM switches do not light as described, perform tests 10, 11, and 12 and troubleshoot accordingly.

(9) Observe RESULT. If RESULT displays a malfunction code, refer to table 5-2 for troubleshooting instructions.

(10) Momentarily press key A. This applies simulated master arm power to the DU.

(11) Momentarily press any one ZONE ARM switch. All ZONE ARM brackets shall light. If they do not light, perform tests 10, 11, and 12 and troubleshoot accordingly.

(12) Observe RESULT. If RESULT displays a malfunction code, refer to table 5-2 for troubleshooting information.

(13) Simultaneously observe RND REM display and ZONE ARM switches; press and hold key F. RND REM and ZONE ARM switches shall go through the following sequence:

(a) Zone 1 display shall count down to 0, then the zone 1 ZONE ARM brackets shall go dark.

(b) Zone 2 display shall count down to 0, then the zone 2 ZONE ARM brackets shall go dark.

(c) Zone 5 (center) display shall count down to 0, and the zone 5 ZONE ARM brackets shall remain lit.

(d) Zone 3 display shall count down to 0. then the zone 3 ZONE ARM brackets shall go dark.

(e) Zone 4 display shall count down to 0, then the zone 4 ZONE ARM brackets shall go dark.

(14) Release key F.

(15) If RND REM display and ZONE ARM brackets do not go through the above sequence, perform tests 10, 11, and 12 and troubleshoot accordingly.

(16) Observe RESULT. If RESULT displays a malfunction code, refer to table 5-2 for troubleshooting instructions.

(17) Reset DU switches as follows:

SWITCH	POSITION
ZONE INVENTORY (all 5)	PD4
PEN-M	45
RATE	A
MODE	SNG
QTY	ALL
RNG	6
-KM	.0

(18) Momentarily press RESET to clear previous 13 test. ENTERED TEST shall display 0 and RESULT shall be dark.

(19) Momentarily press keys C,1 and 3. ENTERED TEST shall display 13 and RESULT shall be dark. If ENTERED TEST displays any other number, clear the entry by returning to step (18).

(20) Momentarily press E. ENTERED TEST shall flash 13.

(21) Observe RND REM. RND REM shall display all uninventoried rockets, and in this test shall display 0 0 0 0 0. If it does not, replace memory assembly.

(22) Observe RESULT. If RESULT displays a malfunction code, refer to table 5-2 for troubleshooting instructions.

(23) Set DU switches as follows:

SWITCH	POSITION
ZONE INVENTORY (all 5)	PD4
PEN-M	45
RATE	S
MODE	SNG
QTY	ALL
RNC	A
-KM	.0

(24) Momentarily press RESET to clear previous test results. ENTERED TEST shall display 0 and RESULT shall be dark.

(25) Momentarily press keys C,1 and 3. ENTERED TEST shall display 13 and RESULT shall be dark. If ENTERED TEST displays any other number, clear the entry by returning to step (24).

(26) Momentarily press E. ENTERED TEST shall flash 13.

(27) Observe RND REM RND REM shall display 24 8 12 8 24. If it does not, perform tests 10 11 and 12, and troubleshoot accordingly.

(28) Simultaneously observe lighting sequence on RND REM and ZONE ARM switches

and press TEST switch on DU.

(a) RND REM shall display 88 8 88 8 88 and all ZONE ARM brackets shall light for about two seconds.

(b) RND REM shall display 7 7 7 7 7 and all ZONE ARM brackets shall go dark for about two seconds.

(c) RND REM shall display 24 8 12 8 24 and hold this display.

(29) Observe RESULT. If RESULT displays a malfunction code, refer to table 5-2 for troubleshooting instructions.

(30) Momentarily press key A. This applies simulated master arm power to the DU

(31) Momentarily press any one ZONE ARM switch. All ZONE ARM brackets shall light. If they do not light, perform tests 10, 11, and 12, and troubleshoot accordingly.

(32) Observe RESULT. If RESULT displays a malfunction code, refer to table 5-2 for troubleshooting information.

(33) Simultaneously observe RND REM display and ZONE ARM switches; press and hold key F. There shall be no change in RND REM display or ZONE ARM switches. Release key F. If there is a change, replace memory assembly.

(34) To exit the 13 test press the RESET switch.

(35) To reset equipment status indicator, enter C12E (press C,1,2, and E keys) on test set keyboard.

n. *Display Unit Shutdown.* When you have completed testing and troubleshooting, shut down the Display unit as follows:

(1) Set POWER ON/OFF switch to OFF.

(2) Lift DU off test pad and disconnect P103 from DU connector J1.

(3) Inspect gasket (3, figure E-2) and replace if needed. Be sure gasket is seated in its groove.

(4) Set cover (2) in place on DU and secure with 15 screws (1).

(5) If control assembly (4) has been removed, check that the screws that hold it in place are all tight.

(6) To shut down Test Set, refer to TM9-4933-227-13&P.

Table 5-2. Troubleshooting the Display Unit

MALFUNCTION (RESULT Display Code) TEST OR INSPECTION CORRECTIVE ACTION	NOTE Failure isolation shop set will help identify failed circuit card assemblies.

1111

Step 1. Set Test Set POWER ON/OFF switch to OFF.

Step 2. Remove and replace CPU assembly 1A2.

Step 3. Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 4. On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress.

Step 5. Observe RESULT.

a. If RESULT displays 1111, go to step 6.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original CPU assembly 1A2. New assembly 1A2 is good. Proceed to paragraph 5-8.c.

Step 6. Set POWER ON/OFF switch to OFF.

Step 7. Remove and replace memory assembly 1A3.

Step 8. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 9. On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress.

Step 10. Wait for ENTERED TEST to stop flashing, then observe RESULT.

a. If RESULT displays 1111, go to step 11.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original memory assembly 1A3. New 1A2 and 1A3 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 1A2 assembly.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress.

(5) Wait for ENTERED TEST to stop flashing, then observe RESULT.

(a) If RESULT displays 1111, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original memory assembly 1A3. New 1A3 assembly and original 1A2 assembly are good. Proceed to paragraph 5-8.c.

Step 11. Set POWER ON/OFF switch to OFF.

Table 5-2. Troubleshooting the Display Unit (cont)

MALFUNCTION (RESULT Display Code)
TEST OR INSPECTION
CORRECTIVE ACTION

Step 12. Remove and replace built-in test circuit assembly A4.

Step 13. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 14. On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress.

Step 15. Wait for ENTERED TEST to stop flashing, then observe RESULT.

a. If RESULT displays 1111, go to step 16.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original built-in test circuit assembly 1A4. New 1A2, 1A3 and 1A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 1A3 and 1A2 assembly.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress.

(5) Wait for ENTERED TEST to stop flashing, then observe RESULT.

(a) If RESULT displays 1111, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original built-in test circuit assembly 1A4. Original 1A2, 1A3 and new 1A4 assemblies are good. Proceed to paragraph 5-8.c.

Step 16. Set POWER ON/OFF switch to OFF.

Step 17. Remove and replace control panel interface 1A1.

Step 18. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 19. On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress.

Table 5-2. Troubleshooting the Display Unit (cont)

MALFUNCTION (RESULT Display Code) TEST OR INSPECTION CORRECTIVE ACTION

Step 20. Wait for ENTERED TEST to stop flashing, then observe RESULT.

a. If RESULT displays 1111 go to step 21.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original control panel interface 1A1 New 1A1 1A2, 1A3 and 1A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 1A2, 1A3, and 1A4 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress.

(5) Wait for ENTERED TEST to stop flashing, then observe RESULT.

(a) If RESULT displays 1111, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original control panel interface assembly 1A1. Original 1A2, 1A3, 1A4 and 1A1 assemblies are good. Proceed to paragraph 5-8.c.

Step 21. Set Test Set POWER ON/OFF switch to OFF.

Step 22. Remove and replace DU motherboard assembly.

Step 23. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION shall not light.

Step 24. On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress.

Step 25. Wait for ENTERED TEST to stop flashing, then observe RESULT.

a. If RESULT displays 1111, Test Set is faulty. Refer to TM9-4933-277-13&P.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888 unit has passed the test. Fault was in original motherboard assembly. New 1A1, 1A2, 1A3, 1A4 and motherboard assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 1A2, 1A3, 1A4 and 1A1 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Table 5-2. Troubleshooting the Display Unit (cont)

MALFUNCTION (RESULT Display Code) TEST OR INSPECTION CORRECTIVE ACTION
(4) On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress. (5) Wait for ENTERED TEST to stop flashing, then observe RESULT. (a) If RESULT displays 1111 return to step 1. (b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions. (c) If RESULT displays 8888, unit has passed the test. Fault was in motherboard assembly. Original 1A1 1A2, 1A3, 1A4, and motherboard assemblies are good. Proceed to paragraph 5-8.c.
1112 Step 1. Set Test Set POWER ON/OFF switch to OFF. Step 2. Remove and replace memory assembly 1A3. Step 3. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light. Step 4. On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress. Step 5. Wait for ENTERED TEST to stop flashing, then a. If RESULT displays 1112, go to step 6. b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions. c. If RESULT displays 8888, unit has passed the test. Fault was in original memory assembly 1A3. New 1A3 assembly is good. Proceed to paragraph 5-8.c. Step 6. Set POWER ON/OFF switch to OFF. Step 7. Remove and replace control panel interface 1A1 Step 8. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light. Step 9. On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress. Step 10. Wait for ENTERED TEST to stop flashing, then a. If RESULT displays 1112, go to step 11. b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions. c. If RESULT displays 8888, unit has passed the test. Fault was in original control panel interface 1A1. New 1A1 and 1A3 assemblies are good. (1) Set Test Set POWER ON/OFF switch to OFF. (2) Reinstall original 1A3 assembly.

Table 5-2. Troubleshooting the Display Unit (cont)

MALFUNCTION (RESULT Display Code) TEST OR INSPECTION CORRECTIVE ACTION

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress.

(5) Wait for ENTERED TEST to stop flashing, then observe RESULT.

(a) If RESULT displays 1112, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original control panel interface 1A1 Original 1A3 and new 1A1 are good. Proceed to paragraph 5-8.c.

Step 11. Set POWER ON/OFF switch to OFF.

Step 12. Remove and replace CPU assembly 1A2.

Step 13. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 14. On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress.

Step 15. Wait for ENTERED TEST to stop flashing, then observe RESULT.

a. If RESULT displays 1112, go to step 16.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTIONS (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original CPU assembly 1A2. New 1A1 1A2 and 1A3 are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 1A1 and 1A3 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTIONS lamp shall not light.

(4) On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress.

(5) When ENTERED TEST stops flashing, observe RESULT.

(a) If RESULT displays 1112, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original CPU assembly 1A2. Original 1A1, 1A3 and new 1A2 assemblies are good. Proceed to paragraph 5-8.c.

Step 16. Set POWER ON/OFF switch to OFF.

Step 17. Remove and replace I/O assembly 1A5.

Table 5-2. Troubleshooting the Display Unit (cont)

MALFUNCTION (RESULT Display Code) TEST OR INSPECTION CORRECTIVE ACTION

Step 18. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 19. On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress.

Step 20. When ENTERED TEST stops flashing, observe RESULT.

a. If RESULT displays 1112, go to step 21.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8838, unit has passed the test. Fault was in original I/O assembly 1A5. New 1A1, 1A2, 1A3 and 1A5 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 1A3, 1A2 and 1A1 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in process.

(5) When ENTERED TEST stops flashing, observe RESULT.

(a) If RESULT displays 1112, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original I/O assembly 1A6. Original 1A1, 1A2, 1A3 and new 1A5 assemblies are good. Proceed to paragraph 5-8,c.

Step 21. Remove and replace control assembly.

Step 22. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION shall not light.

Step 23. On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress.

Step 24. Wait for ENTERED TEST to stop flashing, then observe RESULT.

a. If RESULT displays 1112, go to step 25.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original control assembly. New 1A1, 1A2, 1A3, 1A5 and control assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 1A3, 1A2, 1A5 and 1A1 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Table 5-2. Troubleshooting the Display Unit (cont)

MALFUNCTION (RESULT Display Code) TEST OR INSPECTION CORRECTIVE ACTION
(4) On Test Set keyboard, Enter C10E. ENTERED TEST shall flash 10 while test is in progress. (5) When ENTERED TEST stops flashing, observe RESULT. (a) If RESULT displays 1112, return to step 1. (b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions. (c) If RESULT displays 8888, unit has passed the test. Fault was in original control assembly. Original 1A1, 1A2, 1A3, 1A5 and new control assemblies are good. Proceed to paragraph 5-8.c. Step 25. Set Test Set POWER ON/OFF switch to OFF. Step 26. Remove and replace DU motherboard. Step 27. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION shall not light. Step 28. On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress. Step 29. When ENTERED TEST stops flashing, observe RESULT. a. If RESULT displays 1112, Test Set is faulty. Refer to TM9-4933-277-13&P. b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions. c. If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New 1A1, 1A2, 1A3, 1A5, control assembly and new motherboard assemblies are good. (1) Set Test Set POWER ON/OFF switch to OFF. (2) Reinstall original 1A3, 1A2, 1A5, 1A1 and control assemblies. (3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light. (4) On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress. (5) Observe RESULT. (a) If RESULT displays 1112, return to step 1. (b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTIONS (RESULT Display Code) column and follow instructions. (c) If RESULT displays 8888, unit has massed the test. Fault was in original motherboard assembly. Original 1A1, 1A2, 1A3, 1A5 and control assemblies are good. Proceed to paragraph 5-8.c.
1113 Step 1. Set Test Set POWER ON/OFF switch to OFF.

Table 5-2. Troubleshooting the Display Unit (cont)

MALFUNCTION (RESULT Display Code) TEST OR INSPECTION CORRECTIVE ACTION

Step 2. Remove and replace built-in test circuit assembly 1A4.

Step 3. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 4. On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress.

Step 5. When ENTERED TEST stops flashing, observe RESULT.

a. If RESULT displays 1113, go to step 6.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original built-in test circuit assembly 1A4. New 1A4 assembly is good. Proceed to paragraph 5-8.c.

Step 6. Set Test Set POWER ON/OFF switch to OFF.

Step 7. Remove and replace DU motherboard.

Step 8. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 9. On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress.

Step 10. When ENTERED TEST stops flashing, observe RESULT.

a. If RESULT displays 1113, Test Set is faulty. Refer to TM9-4933-227-13&P.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTIONS (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard and 1A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 1A4 assembly.

(3) Set Test Set POWER ON/OFF switch to ON. POWER Lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress.

(5) When ENTERED TEST stops flashing, observe RESULT.

(a) If RESULT displays 1113, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. Original 1A4 and new motherboard assemblies are good. Proceed to paragraph 5-8.c.

Table 5-2. Troubleshooting the Display Unit (cont)

MALFUNCTION (RESULT Display Code) TEST OR INSPECTION CORRECTIVE ACTION
1114

Step 1. Set Test Set POWER ON/OFF switch to OFF.

Step 2. Remove and replace I/O assembly 1A5

Step 3. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 4. On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test *is* in progress.

Step 5. When ENTERED TEST stops flashing, observe RESULT

a. If RESULT displays 1114, go to step 6.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original I/O assembly 1A5. New 1A5 assembly is good. Proceed to paragraph 5-8.c.

Step 6. Set Test Set POWER ON/OFF switch to OFF.

Step 7. Remove and replace CPU assembly 1A2.

Step 8. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 9. On Test Set keyboard, enter CODE. ENTERED TEST shall flash 10 while test is in progress.

Step 10. When ENTERED TEST stops flashing, observe RESULT.

a. If RESULT displays 1114, go to step 11.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original CPU assembly 1A2. New 1A2 and 1A5 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 1A5 assembly.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress.

(5) When ENTERED TEST stops flashing, observe RESULT.

(a) If RESULT displays 1114, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTIONS (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original CPU assembly 1A2. New 1A2 and original 1A5 assemblies are good. Proceed to paragraph 5-8.c.

Table 5-2. Troubleshooting the Display Unit (cont)

MALFUNCTION (RESULT Display Code)
TEST OR INSPECTION
CORRECTIVE ACTION

Step 11. Set Test Set POWER ON/OFF switch to OFF.

Step 12. Remove and replace DU motherboard.

Step 13. On Test Set keyboard enter C10E. ENTERED TEST shall flash 10 while test is in progress.

Step 14. When ENTERED TEST stops flashing, observe RESULT.

a. If RESULT displays 1114, Test Set is faulty. Refer to TM9-4933-277-13&P.

b. If RESULT displays any other code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed test. Fault was in original motherboard assembly. New 1A2, 1A5 and motherboard assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 1A2 and 1A5 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress.

(5) When ENTERED TEST stops flashing, observe RESULT.

(a) If RESULT displays 1114, return to step 1.

(b) If RESULT displays any other code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed test. Fault was in original motherboard assembly. Original 1A2, 1A5 and new motherboard assemblies are good. Proceed to paragraph 5-8.c.

1116

Step 1. Set Test Set POWER ON/OFF switch to OFF.

Step 2. Remove and replace power supply 1PS1.

Step 3. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 4. On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress.

Step 5. When ENTERED TEST stops flashing, observe RESULT.

a. If RESULT displays 1116, go to step 7.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original power supply 1PS1. New power supply 1PS1 is good.

Step 6. Set POWER ON/OFF switch to OFF.

Table 5-2. Troubleshooting the Display Unit

MALFUNCTION (RESULT Display Code)
TEST OR INSPECTION
CORRECTIVE ACTION

Step 7. Remove and replace built-in test circuit assembly 1A4.

Step 8. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 9. On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress.

Step 10. When ENTERED TEST stops flashing, observe RESULT.

a. If RESULT displays 1116, go to step 11.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly, 1PS1 and 1A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original power supply 1PS1 and 1A4 assembly.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress.

(5) When ENTERED TEST stops flashing, observe RESULT.

(a) If RESULT displays 1116, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. Original 1PS1 1A4 and new motherboard assemblies are good. Proceed to paragraph 5-8.c.

Step 11. Set Test Set POWER ON/OFF switch to OFF.

Step 12. Remove and replace DU motherboard assembly.

Step 13. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 14. On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress.

Step 15. When ENTERED TEST stops flashing, observe RESULT.

a. If RESULT displays 1116, Test Set is faulty. Refer to TM9-4933-277-13&P

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column. Follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly, 1PS1 and 1A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 1PS1 and 1A4 assemblies.

Table 5-2. Troubleshooting the Display Unit (cont)

MALFUNCTION (RESULT Display Code) TEST OR INSPECTION CORRECTIVE ACTION

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard enter C10E. ENTERED TEST shall flash 10 while test is in progress.

(5) When ENTERED TEST stops flashing, observe RESULT.

(a) If RESULT displays 1116, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly, original 1PS1 and 1A4 assemblies are good. Proceed to paragraph 5-8.c.

1147 Step 1. On Test Set keyboard, press key B and hold it down until RESULT displays 11.

Step 2. Set POWER ON/OFF switch to OFF.

Step 3. Remove and replace control panel interface assembly 1A1

Step 4. Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTIONS lamp shall not light.

Step 5. On Test Set keyboard, enter C11E ENTERED TEST shall display 11.

Step 6. Enter C45E. ENTERED TEST shall continue flashing 45.

Step 7. Observe RESULT.

a. If RESULT displays 1147, go to step 8.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed test. Fault was in original control panel interface 1A1. New 1A1 assembly is good. On Test Set keyboard, press key B and hold it down until RESULT displays 11. Proceed to paragraph 5-8.f.

Step 8. On Test Set keyboard, press key B and hold it down until RESULT displays 11.

Step 9. Set POWER ON/OFF switch to OFF.

Step 10. Remove and replace control assembly.

Step 11. Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 12. On Test Set keyboard, enter C11E ENTERED TEST shall display 11.

Step 13. Enter C45E. ENTERED TEST shall continue flashing 45.

Step 14. Observe RESULT.

a. If RESULT displays 1147, go to step 15.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

Table 5-2. Troubleshooting the Display Unit (cont)

MALFUNCTIONS (RESULT Display Code) TEST OR INSPECTION CORRECTIVE ACTION

c. If RESULT displays 8888, unit has passed the test. Fault was in original control assembly. New control assembly and 1A1 assembly are good.

(1) On Test Set keyboard press key B and hold it down until RESULT displays 11.

(2) Set POWER ON/OFF switch to OFF.

(3) Reinstall original assembly 1A1

(4) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTIONS lamp shall not light.

(5) On Test Set keyboard, enter C11E. ENTERED TEST shall display 11.

(6) On Test Set keyboard, enter C45E. ENTERED TEST shall continue flashing 45.

(7) Observe RESULT.

(a) If RESULT displays 1147, return to step 1

(b) If RESULT displays 8888, the unit has passed the test. Fault was in original control assembly. Original 1A1 assembly and new control assembly are good. On the Test Set keyboard, press key B and hold it down until RESULT displays 11. Proceed to paragraph 5-8.f.

Step 15. On Test Set keyboard, press key B and hold it down until RESULT displays 11.

Step 16. Set POWER ON/OFF switch to OFF.

Step 17. Remove and replace DU motherboard assembly.

Step 18. Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 19. On Test Set keyboard, enter C11E ENTERED TEST shall display 11.

Step 20. Enter C45E. ENTERED TEST shall continue flashing 45.

Step 21. Observe RESULT.

a. If RESULT displays 1147, Test Set is faulty. Refer to TM9-4933-277-13&P.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly, 1A1 and control assemblies are good.

(1) On Test Set keyboard, press key B and hold it down until RESULT displays 11.

(2) Set POWER ON/OFF switch to OFF.

(3) Reinstall original assembly 1A1 and control assembly.

(4) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTIONS lamp shall not light.

(5) On Test Set keyboard, enter C11E. ENTERED TEST shall display 11.

Table 5-2. Troubleshooting the Display Unit

MALFUNCTION (RESULT Display Code) TEST OR INSPECTION CORRECTIVE ACTION
(6) On Test Set keyboard, enter C45E. ENTERED TEST shall continue flashing 45. (7) Observe RESULT. (a) If RESULT displays 1147, return to step 1. (b) If RESULT displays 8888, the unit passed the test. Fault was in original motherboard assembly. Original 1A1 and control assembly are good. (c) If RESULT displays any other code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions. (d) On Test Set keyboard, press key B and hold it down until RESULT displays 11.
2111 (e) Proceed to paragraph 5-8.f. Step 1. Set Test Set POWER ON/OFF switch to OFF. Step 2. Remove and replace I/O assembly 1A5. Step 3. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light. Step 4. On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while testis in progress. Step 5. When ENTERED TEST stops flashing, observe RESULT. a. If RESULT displays 2111, go to step 6. b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions. c. If RESULT displays 8888, unit has passed the test. Fault was in original I/O assembly 1A5. New 1A5 assembly is good. Proceed to paragraph 5-8.c. Step 6. Set POWER ON/OFF switch to OFF. Step 7. Remove and replace CPU assembly 1A2. Step 8. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light. Step 9. On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress. Step 10. When ENTERED TEST stops flashing, observe RESULT. a. If RESULT displays 2111, go to step 11. b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTIONS (RESULT Display Code) column and follow instructions. c. If RESULT displays 8888, unit has passed the test. Fault was in original CPU assembly 1A2. New 1A2 and 1A5 assemblies are good. (1) Set Test Set POWER ON/OFF switch to OFF. (2) Reinstall original 1A5 assembly. (3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Table 5-2. Troubleshooting the Display Unit (cont)

MALFUNCTION (RESULT Display Code) TEST OR INSPECTION CORRECTIVE ACTION

(4) On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress.

(5) When ENTERED TEST stops flashing, observe RESULT.

(a) If RESULT displays 2111, go to step 11.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original CPU assembly 1A2. New 1A2 and original 1A5 assemblies are good. Proceed to paragraph 5-8.c.

Step 11. Set Test Set POWER ON/OFF switch to OFF.

Step 12. Remove and replace built-in test circuit assembly 1A4.

Step 13. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 14. On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress.

Step 15. When ENTERED TEST stops flashing, observe RESULT.

a. If RESULT displays 2111, go to step 16.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original built-in test circuit assembly 1A4. New 1A2, 1A4 and 1A5 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 1A2 and 1A5 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION indicator shall not light.

(4) On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress.

(5) When ENTERED TEST stops flashing, observe RESULT.

(a) If RESULT displays 2111, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in built-in test circuit assembly 1A4. Original 1A2, 1A5 and new 1A4 assemblies are good.

(d) Proceed to paragraph 5-8.f.

Step 16. Set Test Set POWER ON/OFF switch to OFF.

Step 17. Remove and replace control assembly.

Step 18. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Table 5-2. Troubleshooting the Display Unit (cont)

MALFUNCTION (RESULT Display Code)
TEST OR INSPECTION
CORRECTIVE ACTION

Step 19. On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress.

Step 20. When ENTERED TEST stops flashing, observe RESULT.

a. If RESULT displays 2111, Test Set is faulty. Refer to TM9-4933-227-13&P.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888 unit has passed the test. Fault was in original control assembly. New control assembly, 1A2, 1A4 and 1A5 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 1A4, 1A2 and 1A5 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress.

(5) When ENTERED TEST stops flashing, observe RESULT.

(a) If RESULT displays 2111 return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original control assembly. Original 1A2, 1A4, 1A5 and new control assembly are good. Proceed to paragraph 5-8.c.

Step 21. Set Test Set POWER ON/OFF switch to OFF.

Step 22. Remove and replace memory assembly 1A3.

Step 23. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit MALFUNCTION lamp shall not light.

Step 24. On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress.

Step 25. When ENTERED TEST stops flashing, observe RESULT.

a. If RESULT displays 2111, go to step 26.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original memory assembly 1A3. New 1A3, 1A4, 1A5, 1A2 and control assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original control assembly, 1A2, 1A4 and 1A5 assemblies .

(3) Set Test Set POWER ON/OFF switch to ON POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Table 5-2. Troubleshooting the Display Unit (cont)

MALFUNCTION (RESULT Display Code)
TEST OR INSPECTION
CORRECTIVE ACTION

(4) On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress.

(5) When ENTERED TEST stops flashing, observe RESULT.

(a) If RESULT displays 2111, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. Original control assembly, 1A2, 1A3, 1A4, 1A5 and new motherboard assemblies are good. Proceed to paragraph 5-8.c.

(d) Proceed to paragraph 5-8.c.

Step 26. Set POWER ON/OFF switch to OFF.

Step 27. Remove and replace DU motherboard assembly.

Step 28. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 29. On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress.

Step 30. When ENTERED TEST stops flashing, observe result.

a. If RESULT displays 2111, Test Set is faulty. Refer to TM9-4933-277-13&P.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New 1A2, 1A3, 1A4, 1A5, control assembly and motherboard assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original control assembly, 1A2, 1A3, 1A4, 1A5 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress.

(5) When ENTERED TEST stops flashing, observe result.

(a) If RESULT displays 2111, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. Original control assembly, 1A2, 1A3, 1A4, 1A5 and new motherboard assemblies are good. Proceed to paragraph 5-8.c.

Table 5-2. Troubleshooting the Display Unit (cont)

MALFUNCTION (RESULT Display Code) TEST OR INSPECTION CORRECTIVE ACTION

2113

Step 1. Set Test Set POWER ON/OFF switch to OFF.

Step 2. Remove and replace built-in test circuit assembly 1A4.

Step 3. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION indicator shall not light.

Step 4. On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress.

Step 5. When ENTERED TEST stops flashing, observe RESULT.

a. If RESULT displays 2113, go to step 6.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original built-in test circuit assembly 1A4. New 1A4 assembly is good. Proceed to paragraph 5-8.c.

Step 6. Set POWER ON/OFF switch to OFF.

Step 7. Remove and replace power supply 1PS1

Step 8. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTIONS lamp shall not light.

Step 9. On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress.

Step 10. When ENTERED TEST stops flashing, observe RESULT.

a. If RESULT displays 2113 go to step 11.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original power supply 1PS1. New power supply 1PS1 and 1A4 assembly are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original built-in test circuit assembly 1A4.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTIONS lamp shall not light.

(4) On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress.

(5) Observe RESULT.

(a) If RESULT displays 2113, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original power supply 1PS1. Original 1A4 and new power supply 1PS1 assembly are good. Proceed to paragraph 5-8.c.

Table 5-2. Troubleshooting the Display Unit (cont)

MALFUNCTION (RESULT Display Code) TEST OR INSPECTION CORRECTIVE ACTION
Step 11. Set Test Set POWER ON/OFF switch to OFF. Step 12. Remove and replace DU motherboard assembly. Step 13. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light. Step 14. On Test Set keyboard, enter C1OE. ENTERED TEST shall flash 10 while test is in progress. Step 15. When ENTERED TEST stops flashing, observe RESULT. a. If RESULT displays 2113, Test Set is faulty. Refer to TM9-4933-27713&P. b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions. c. If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly, 1A4 assembly and power supply 1PS1 are good. (1) Set Test Set POWER ON/OFF switch to OFF. (2) Reinstall original 1A4 and power supply 1PS1. (3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light. (4) On Test Set keyboard, enter C1OE. ENTERED TEST shall flash 10 while test is in progress. (5) When ENTERED TEST stops flashing, observe RESULT. (a) If RESULT displays 2113, return to step 1. (b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions. (c) If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. Original 1A4 assembly, power supply 1PS1 and new motherboard assembly are good. Proceed to paragraph 5-8.c.
2114 Step 1. Set Test Set POWER ON/OFF switch to OFF. Step 2. Remove and replace I/O assembly 1A5. Step 3. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light. Step 4. On Test Set keyboard, enter C1OE. ENTERED TEST shall flash 10 while test is in progress. Step 5. Then ENTERED TEST stops flashing, observe RESULT. a. If RESULT displays 2114, go to step 6. b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

Table 5-2. Troubleshooting the Display Unit (cont)

MALFUNCTION (RESULT Display Code) TEST OR INSPECTION CORRECTIVE ACTION

c. If RESULT displays 8888, unit has passed the test. Fault was in original I/O assembly 1A5. New 1A5 assembly is good. Proceed to paragraph 5-8.c.

Step 6. Set POWER ON/OFF switch to OFF.

Step 7. Remove and replace built-in test circuit assembly 1A4.

Step 8. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit.. MALFUNCTION lamp shall not light.

Step 9. On Test Set keyboard enter C1OE. ENTERED TEST shall flash 10 while test is in progress.

Step 10. When ENTERED TEST stops flashing, observe RESULT.

a. If RESULT displays 2114, go to step 11.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original built-in test circuit assembly 1A4. New 1A4 and 1A5 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 1A5 assembly.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C1OE. ENTERED TEST shall flash 10 while test is in progress.

(5) When ENTERED TEST stops flashing, observe RESULT.

(a) If RESULT displays 2114, retu m to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original built-in test circuit assembly 1A4. Original 1A5 and new 1A4 assemblies are good. Proceed to paragraph 5-8.c.

Step 11. Set POWER ON/OFF switch to OFF.

Step 12. Remove and replace control panel interface assembly 1A1.

Step 13. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 14. On Test Set keyboard, enter C1OE. ENTERED TEST shall flash 10 while test is in progress.

Step 15. Set POWER ON/OFF switch to OFF.

a. If RESULT displays 2114, go to step 16.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

Table 5-2. Troubleshooting the Display Unit (cont)

MALFUNCTION (RESULT Display Code) TEST OR INSPECTION CORRECTIVE ACTION

c. If RESULT displays 8888, unit has passed the test. Fault was in original control panel interface assembly 1A1. New 1A1, 1A4 and 1A5 assemblies are good.
   (1) Set Test Set POWER ON/OFF switch to OFF.
   (2) Reinstall original 1A4 and 1A5 assemblies.
   (3) Set Test Set POWER ON/OFF to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.
   (4) On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress.
   (5) When ENTERED TEST stops flashing, observe RESULT.
      (a) If RESULT displays 2114, return to step 1.
      (b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.
      (c) If RESULT displays 8888, unit has passed the test. Fault was in original control panel interface assembly 1A1. Original 1A4, lA5 and new lA1 assemblies are good. Proceed to paragraph 5-8.c.

Step 16. Set Test Set POWER ON/OFF switch to OFF.

Step 17. Remove and replace motherboard assembly.

Step 18. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 19. On Test Set keyboard, enter C1OE. ENTERED TEST shall flash 10 while test is in progress.

Step 20. When ENTERED TEST stops flashing, observe RESULT.
   a. If RESULT displays 2114, Test Set is faulty. Refer to TM9-4933-27713&P.
   b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.
   c. If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly, 1A1, 1A4 and 1A5 assemblies are good.
      (1) Set Test Set POWER ON/OFF switch to OFF.
      (2) Reinstall original 1A1 1A4 and 1A5 assemblies.
      (3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.
      (4) On Test Set keyboard, enter C1OE. ENTERED TEST shall flash 10 while test is in progress.
      (5) When ENTERED TEST stops flashing, observe RESULT.
         (a) If RESULT displays 2114, return to step 1.
         (b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

Table 5-2. Troubleshooting the Display Unit (cons)

MALFUNCTION (RESULT Display Code) TEST OR INSPECTION CORRECTIVE ACTION

(c) If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. Original 1A1, 1A4 1A5 and new motherboard assemblies are good. Proceed to paragraph 5-8.c.

2116

Step 1. Set Test Set POWER ON/OFF switch to OFF.

Step 2. Remove CPU assembly 1A2, memory assembly 1A3, built in test circuit assembly 1A4, I/O assembly 1A5 and control panel interface assembly 1A1

Step 3. Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light. MALFUNCTION lamp shall not light.

Step 4. On Test Set keyboard enter C1OE. ENTERED TEST shall flash 10.

Step 5. When ENTERED TEST stops flashing, observe RESULT.

a. If RESULT displays 2116, go to step 6.

b. If RESULT displays 8888:

(1) Set Test Set POWER ON/OFF switch to OFF,
(2) Reinstall original 1A3 assembly.
(3) Set Test Set POWER ON/OFF switch to ON.
(4) On Test Set keyboard enter C1OE.
(5) Observe RESULT.
(a) If RESULT displays 2116, remove and replace 1A3 assembly. Proceed to (6) below.
(b) If RESULT displays 8888, proceed to (6) below.
(6) Set Test Set POWER ON/OFF switch to OFF.
(7) Reinstall original 1A4 assembly.
(8) Set Test Set POWER ON/OFF switch to ON.
(9) On Test Set keyboard enter C1OE.
(10) Observe RESULT.
(a) If RESULT displays 2-16, remove and replace 1A4 assembly. Proceed to (11) below.
(b) If RESULT displays 8888, proceed to (11) below.
(11) Set Test Set POWER ON/OFF switch to OFF.
(12) Reinstall original 1A5 assembly.
(13) Set Test Set POWER ON/OFF switch to ON.
(14) On Test Set keyboard enter C1OE.
(15) Observe RESULT.
(a) If RESULT displays 2116, remove and replace 1A5 assembly. Proceed to (16) below.
(b) If RESULT displays 8888, proceed to (16) below.

Table 5-2. Troubleshooting the Display Unit (cont)

MALFUNCTION (RESULT Display Code) TEST OR INSPECTION CORRECTIVE ACTION

(16) Set Test Set POWER ON/OFF switch to OFF.

(17) Reinstall original 1A2 assembly.

(18) Set Test Set POWER ON/OFF switch to ON.

(19) On Test Set keyboard enter C1OE.

(20) Observe RESULT.
- (a) If RESULT displays 2116, remove and replace 1A2 assembly. Proceed to (21) below.
- (b) If RESULT displays 8888, proceed to (21) below.

(21 Set Test Set POWER ON/OFF switch to OFF.

(22) Reinstall original 1A1 assembly.

(23) Set Test Set POWER ON/OFF switch to ON.

(24) On Test Set keyboard enter C1OE.

(25) Observe RESULT.
- (a) If RESULT displays 2116, remove and replace 1A1 assembly. Proceed to (26) below.
- (b) If RESULT displays 8888, unit has passed test. Proceed to paragraph 5-8.c.

(26) Set Test Set POWER ON/OFF switch to ON.

(27) On Test Set keyboard enter C1OE.

(28) Observe RESULT.
- (a) If RESULT displays 2116, return to step 1 above.
- (b) If RESULT displays 8888, fault was in original 1A1 assembly. Proceed to paragraph 5-8.c.

Step 6. Set Test Set POWER ON/OFF switch to OFF.

Step 7. Remove and replace control assembly and edge light panel 1A6.

Step 8. Set Test Set POWER ON/OFF switch to ON.

Step 9. On Test Set keyboard enter C1OE.

Step 10. Observe RESULT.
- a. If RESULT displays 2116, proceed to step 11 below.
- b. If RESULT displays 8888:
  - (1) Set Test Set POWER ON/OFF switch to OFF.
  - (2) Reinstall original control assembly and 1A6 assembly.
  - (3) Set Test Set POWER ON/OFF switch to ON.
  - (4) On Test Set keyboard enter C10E.
  - (5) Observe RESULT.

Table 5-2. Troubleshooting the Display Unit (cont)

MALFUNCTION (RESULT Display Code) TEST OR INSPECTION CORRECTIVE ACTION
(a) If RESULT displays 8888, return to step 5.b.(6) above. (b) If RESULT displays 2116, proceed to step 11 below.
Step 11. Set Test Set POWER ON/OFF switch to OFF.
Step 12. Remove and replace lPS1 power supply.
Step 13. Set Test Set POWER ON/OFF switch to ON.
Step 14. On Test Set keyboard enter C1OE.
Step 15. Observe RESULT. a. If RESULT displays 2116, proceed to step 16 below. b. If RESULT displays 8888: (1) Set Test Set POWER ON/OFF switch to OFF, (2) Reinstall original control assembly and 1A6 assembly. (3) Set Test Set POWER ON/OFF switch to ON. (4) On Test Set keyboard enter C1OE. (5) Observe RESULT. (a) If RESULT displays 8888, fault was in original 1PS1 power supply. Return to step 5.b.(6) above. (b) If RESULT displays 2116, set Test Set POWER ON/OFF switch to OFF. Reinstall original 1PS1 power supply, and reinstall new control assembly and 1A6 assembly, and on Test Set keyboard enter C1OE and observe RESULT. 1 If RESULT displays 8888, fault was in original control assembly. Return to step 5.b.(b) above. 2 If RESULT displays 2116, return to step 11 above.
Step 16. Set Test Set POWER ON/OFF switch to OFF.
Step 17. Remove and replace DU motherboard assembly.
Step 18. Set Test Set POWER ON/OFF switch to ON.
Step 19. On Test Set keyboard enter C1OE.
Step 20. Observe RESULT. a. If RESULT displays 2116, Test Set is faulty. Refer to TM9-4933-227-13&P. b. If RESULT displays 8888, return to step 6.

Table 5-2. Troubleshooting the Display Unit (cont)

MALFUNCTION (RESULT Display Code) TEST OR INSPECTION CORRECTIVE ACTION

2147

Step 1. On Test Set keyboard, press key B and hold it down until RESULT displays 11.

Step 2. Set POWER ON/OFF switch to OFF.

Step 3. Remove and replace control panel interface 1A1

Step 4. Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 5. On Test Set keyboard, enter C11E. ENTERED TEST shall display 11.

Step 6. Enter C45E. ENTERED TEST shall continue flashing 45.

Step 7. Observe RESULT.

a. If RESULT displays 2147, go to step 8.
b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.
c. If RESULT displays 8888, unit is good. Fault was in original control panel interface 1A1 New 1A1 assembly is good. On Test Set keyboard, press key B and hold it down until RESULT displays 11. Proceed to paragraph 5-8.f. .

Step 8. On Test Set keyboard, press key B and hold it down until RESULT displays 11.

Step 9. Set POWER ON/OFF switch to OFF.

Step 10. Remove and replace power supply 1PS1.

Step 11. Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 12. On Test Set keyboard, enter C11E. ENTERED TEST shall display 11.

Step 13. Enter CAGE. ENTERED TEST shall continue flashing 45.

Step 14. Observe RESULT.

a. If RESULT displays 2147, go to step 15.
b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.
c. If RESULT displays 8888, unit has passed the test. Fault was in original power supply 1PS1. New power supply 1PS1 and 1A1 assemblies are good.
   (1) On Test Set keyboard, press key B and hold it down until RESULT displays 11.
   (2) Set POWER ON/OFF switch to OFF.
   (3) Reinstall original 1A1 assembly.

Table 5-2. Troubleshooting the Display Unit (cont)

MALFUNCTION (RESULT Display Code) TEST OR INSPECTION CORRECTIVE ACTION

(4) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(5) On Test Set keyboard, enter C11E. ENTERED TEST shall display 11.

(6) On Test Set keyboard, enter CAGE. ENTERED TEST shall continue flashing 45.

(7) Observe RESULT.

(a) If RESULT displays 2147, return to step 1.

(b). If RESULT displays 8888, the unit has passed the test. Fault was in power supply 1PS1. Original 1A1 and new power supply 1PS1 are good. On the Test Set keyboard, press key B and hold it down until RESULT displays 11. Proceed to paragraph 5-8.f.

Step 15. On Test Set keyboard, press key B and hold it down until RESULT displays 11.

Step 16. Set POWER ON/OFF switch to OFF.

Step 17. Remove and replace control assembly.

Step 18. Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 19. On Test Set keyboard, enter C11E. ENTERED TEST shall display 11.

Step 20. Enter C45E. ENTERED TEST shall continue flashing 45.

Step 21 Observe RESULT.

a. If RESULT displays 2147, go to step 22.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888 unit has passed the test. Fault was in original control assembly. New control assembly, power supply lPS1 and lA1 assemblies are good.

(1) On Test Set keyboard, press key B and hold it down until RESULT displays 11

(2) Set POWER ON/OFF switch to OFF.

(3) Reinstall original 1A1 and power supply 1PS1 assemblies.

(4) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(5) On Test Set keyboard, enter C11E. ENTERED TEST shall display 11.

(6) On Test Set keyboard, enter CAGE. ENTERED TEST shall continue flashing 45.

(7) Observe RESULT.

(a) If RESULT displays 2147, return to step 1.

(b) If RESULT displays 8888, the unit has passed the test. Fault was in original control assembly. Original 1A1 power supply 1PS1 and new control assembly are good. On the Test Set keyboard, press key B and hold it down until RESULT displays 11. Proceed to paragraph 5-8.f.

Table 5-2. Troubleshooting the Display Unit (cont)

MALFUNCTION (RESULT Display Code) TEST OR INSPECTION CORRECTIVE ACTION

Step 22. Remove and replace DU motherboard assembly.

Step 23. Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 24. On Test Set keyboard, enter C11E. ENTERED TEST shall display 11.

Step 25. Enter C45E. ENTERED TEST shall continue flashing 45.

Step 26. Observe RESULT.

a. If RESULT displays 2147, Test Set is faulty. Refer to TM9-4933-277-13&P.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly, control panel assembly, power supply 1PS1 and lA1 assemblies are good.

(1) On Test Set keyboard, press key B and hold it down until RESULT displays 11.
(2) Set POWER ON/OFF switch to OFF.
(3) Reinstall original 1A1 power supply 1PS1 and control assembly.
(4) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.
(5) On Test Set keyboard, enter C11E. ENTERED TEST shall display 11.
(6) On Test Set keyboard, enter CAGE. ENTERED TEST shall continue flashing 45.
(7) Observe RESULT.
(a) If RESULT displays 2147, return to step 1.
(b) If RESULT displays 8888, the unit passed the test. Fault was in original motherboard assembly. Original control assembly 141, power supply 1PS1 and new motherboard assembly are good. On Test Set keyboard, press key B and hold it down until RESULT displays 11. Proceed to paragraph 5-8.f.

3111

Step 1. Set Test SET POWER ON/OFF switch to OFF.

Step 2. Remove and replace CPU assembly 1A2.

Step 3. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 4. On Test Set keyboard, enter C1OE. ENTERED TEST shall flash 10 while test is in progress.

Step 5. When ENTERED TEST stops flashing, observe RESULT.

a. If RESULT displays 3111, go to step 6.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

Table 5-2. Troubleshooting the Display Unit (cont)

MALFUNCTION (RESULT Display Code) TEST OR INSPECTION CORRECTIVE ACTION

c. If RESULT displays 8888, unit has passed the test. Fault was in original CPU assembly 1A2. New 1A2 assembly is good. Proceed to paragraph 5-8.c.

Step 6. Set Test Set POWER ON/OFF switch to OFF.

Step 7. Remove and replace DO motherboard assembly.

Step 8. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 9. On Test Set keyboard, enter C1OE. ENTERED TEST shall flash 10 while test is in progress.

Step 10. When ENTERED TEST stops flashing, observe RESULT.

a. If RESULT displays 3111, Test Set is faulty. Refer to TM9-4933-277-13&P.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 3888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly and 1A2 assembly are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 1A2 assembly.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C1OE. ENTERED TEST shall flash 10 while test is in progress.

(5) When ENTERED TEST stops flashing, observe RESULT.

(a) If RESULT displays 3111, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions

(c) If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. Original 1A2 assembly and new motherboard assembly are good. Proceed to paragraph 5-8.c.

3113

Step 1. Set Test Set POWER ON/OFF switch to OFF.

Step 2. Remove and replace built-in test circuit assembly 1A4.

Step 3. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 4. On Test Set keyboard, enter C1OE. ENTERED TEST shall flash 10 while test is in progress.

Step 5. When ENTERED TEST stops flashing, observe RESULT.

a. If RESULT displays 3113, go to step 6.

b. If RESULT displays any other malfunction code, find the code in MALFUNCTION (RESULT Display Code) column and follow instructions.

Table 5-2. Troubleshooting the Display Unit (cont)

MALFUNCTION (RESULT Display Code)
TEST OR INSPECTION
CORRECTIVE ACTION

c. If RESULT displays 8888, unit has passed the test. Fault was in original 1A4 assembly. New 1A4 assembly is good. Proceed to paragraph 5-8.c.

Step 6. Set Test Set POWER ON/OFF switch to OFF.

Step 7. Remove and replace DU motherboard assembly.

Step 8. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain let. MALFUNCTION lamp shall not light.

Step 9. On Test Set keyboard, enter C1OE. ENTERED TEST shall flash 10 while test is in progress.

Step 10. When ENTERED TEST stops flashing, observe RESULT.

a. If RESULT displays 3113, Test Set is faulty. Refer to TM9-4933-277-13&P.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly and 1A4 assembly are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 1A4 assembly.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C1OE. ENTERED TEST shall flash 10 while test is in progress.

(5) When ENTERED TEST stops flashing, observe RESULT. ON/OFF

(a) If RESULT displays 3113, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. Original 1A4 assembly and new motherboard assembly are good. Proceed to paragraph 5-8.c.

4111

Step 1. Set Test Set POWER ON -OFF switch to OFF.

Step 2. Remove and replace CPU assembly 1A2.

Step 3. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 4. On Test Set keyboard, enter C1OE. ENTERED TEST shall flash 10 while test is in progress.

Step 5. When ENTERED TEST stops flashing, observe RESULT.

a. If RESULT displays 4111, go to step 6.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

Table 5-2. Troubleshooting the Display Unit (cont)

MALFUNCTION (RESULT Display Code) TEST OR INSPECTION CORRECTIVE ACTION

c. If RESULT displays 8888, unit has passed the test. Fault was in original 1A2 assembly. New 1A2 assembly is good. Proceed to paragraph 5-8.c.

Step 6. Set POWER ON/OFF switch to OFF.

Step 7. Remove and replace memory assembly 1A3.

Step 8. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 9. On Test Set keyboard, enter C1OE. ENTERED TEST shall flash 10 while test is in progress.

Step10. When ENTERED TEST stops flashing, observe RESULT.

a. If RESULT displays 4111, go to step 11.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original memory assembly 1A3. New 1A2 and 1A3 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 1A2 assembly.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C1OE. ENTERED TEST shall flash 10 while test is in progress.

(5) When ENTERED TEST stops flashing, observe RESULT.

(a) If RESULT displays 4111, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original memory assembly 1A3. Original 1A2 and new 1A3 assemblies are good. Proceed to paragraph 5-8.c.

Step 11. Set POWER ON/OFF switch to OFF.

Step 12. Remove and replace built-in test circuit assembly 1A4.

Step 13. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 14. On Test Set keyboard, enter C1OE. ENTERED TEST shall flash 10 while test is in progress.

Step 15. When ENTERED TEST stops flashing, observe RESULT.

a. If RESULT displays 4111, go to step 16.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

Table 5-2. Troubleshooting the Display Unit (cont)

MALFUNCTION (RESULT Display Code) TEST OR INSPECTION CORRECTIVE ACTION

c. If RESULT displays 8888, unit has passed the test. Fault was in original 1A4 assembly. New 1A2, 1A3 and 1A4 assemblies are good.
   (1) Set Test Set POWER ON/OFF switch to OFF.
   (2) Reinstall original 1A2 and 1A3 assemblies.
   (3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.
   (4) On Test Set keyboard, enter C1OE. ENTERED TEST shall flash 10 while test is in progress.
   (5) When ENTERED TEST stops flashing, observe RESULT.
      (a) If RESULT displays 4111, go to step 1.
      (b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.
      (c) If RESULT displays 8888, unit has passed the test. Fault was in original built-in test circuit assembly 1A4. Original 1A2, 1A3 and new 1A4 assemblies are good. Proceed to paragraph 5-8.c.

Step 16. Set POWER ON/OFF switch to OFF.

Step 17. Remove and replace I/O Assembly 1A5.

Step 18. Set POWER ON/OFF switch to ON. POWER lamp shall light and Certain lit. MALFUNCTION lamp shall not light.

Step 19. On Test Set keyboard, enter C1OE. ENTERED TEST shall flash 10 while test is in progress.

Step 20. When ENTERED TEST stops flashing, observe RESULT.
   a. If RESULT displays 4111, go to step 21.
   b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.
   c. If RESULT displays 8888, unit has passed the test. Fault was in original 1A5 assembly. New 1A2, 1A3, 1A4 and 1A5 assemblies are good.
   (1) Set Test Set POWER ON/OFF switch to OFF.
   (2) Reinstall original 1A2, 1A3 and 1A4 assemblies.
   (3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.
   (4) On Test Set keyboard, enter C1OE. ENTERED TEST shall flash 10 while test is in progress.
   (5) When ENTERED TEST stops flashing, observe RESULT.
      (a) If RESULT displays 4111, return to step 1.

Table 5-2. Troubleshooting the Display Unit (cont)

MALFUNCTION (RESULT Display Code) TEST OR INSPECTION CORRECTIVE ACTION

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.
(c) If RESULT displays 8888, unit has passed the test. Fault was in original I/O assembly 1A5. Original 1A2, 1A3, 1A4 and new 1A5 assemblies are good. Proceed to paragraph 5-8.c.

Step 21. Set POWER ON/OFF switch to OFF.

Step 22. Remove and replace control panel interface 1A1

Step 23. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 24. On Test Set keyboard, enter C1OE. ENTERED TEST shall flash 10 while test is in progress.

Step 25. When ENTERED TEST stops flashing, observe RESULT.
a. If RESULT displays 4111, go to step 26.
b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.
c. If RESULT displays 8888, unit has passed the test. Fault was in original 1A1 assembly. New 1A2, 1A3, 1A4, 1A5 and 1A1 assemblies are good.
(1) Set Test Set POWER ON/OFF switch to OFF.
(2) Reinstall original 1A2, 1A3, 1A4 and 1A5 assemblies.
(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.
(4) On Test Set keyboard, enter C1OE. ENTERED TEST shall flash 10 while test is in progress.
(5) When ENTERED TEST stops flashing, observe RESULT.
(a) If RESULT displays 4111, return to step 1.
(b) If RESULT displays any other malfunctioncode, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.
(c) If RESULT displays 8888, unit has passed the test. Fault was in original control panel interface assembly 1A1 Original 1A2, lA3, 1A4, 1A5 and new 1A1 assemblies are good.

Step 26. Set POWER ON/OFF switch to OFF.

Step 27. Remove panel assembly 1A6.

Step 28. Remove and replace control assembly.

Step 29. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 30. On Test Set keyboard, enter C1OE. ENTERED TEST shall flash 10 while test is in progress.

Step 31. When ENTERED TEST stops flashing, observe RESULT.

Table 5-2. Troubleshooting the Display Unit (cont)

MALFUNCTION (RESULT Display Code) TEST OR INSPECTION CORRECTIVE ACTION

a. If RESULT displays 4111, go to step 32.
b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.
c. If RESULT displays 8888 unit has passed the test. Fault was in original control assembly. New 1A2, 1A3, 1A4, 1A5, 1A1 and new control assemblies are good.
   (1) Set Test Set POWER ON/OFF switch to OFF.
   (2) Reinstall original 1A2, 1A3, 1A4, 1A5 and 1A1 assemblies.
   (3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.
   (4) On Test Set keyboard, enter C1OE. ENTERED TEST shall flash 10 while test is in progress.
   (5) When ENTERED TEST stops flashing, observe RESULT.
      (a) If RESULT displays 4111, return to step 1.
      (b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.
      (c) If RESULT displays 8888, unit has passed the test. Fault was in original control assembly. Original 1A2, 1A3, 1A4, 1A5, 1A1 assemblies and new control assembly are good. Proceed to paragraph 5-8.c.

Step 32. Set Test Set POWER ON/OFF switch to OFF.

Step 33. Remove and replace DU motherboard assembly.

Step 34. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 35. On Test Set keyboard, enter C1OE. ENTERED TEST shall flash 10 while test is in progress.

Step 36. When ENTERED TEST stops flashing, observe RESULT.
a. If RESULT displays 4111, Test Set is faulty. Refer to TM9-4933-277-13&P.
b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.
c. If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New 1A2, 1A3, 1A4, 1A5, 1A1 assemblies and motherboard assembly are good.
   (1) Set Test Set POWER ON/OFF switch to OFF.
   (2) Reinstall original control assembly ,1A2, 1A3, 1A4, 1A5, and 1A1 assemblies.
   (3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Table 5-2. Troubleshooting the Display Unit (cont)

MALFUNCTION (RESULT Display Code) TEST OR INSPECTION CORRECTIVE ACTION

(4) On Test Set keyboard, enter C1OE. ENTERED TEST shall flash 10 while test is in progress.
(5) When ENTERED TEST stops flashing, observe RESULT.
(a) If RESULT displays 4111, return to step 1.
(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.
(c) If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. Original control assembly, 1A1 1A2, 1A3, 1A4, 1A5 assemblies and new motherboard assembly are good.
(d) Reinstall original control panel assembly 1A6.
(e) Proceed to paragraph 5-8.c.

4113

Step 1. Set Test Set POWER ON/OFF switch to OFF.

Step 2. Remove and replace built-in test circuit assembly 1A4.

Step 3. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 4. On Test Set keyboard, enter C1OE. ENTERED TEST shall flash 10 while test is in progress.

Step 5. When ENTERED TEST stops flashing, observe RESULT.
a. If RESULT displays 4113, go to step 6.
b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.
c. If RESULT displays 8888, unit has passed the test. Fault was in original built-in test circuit assembly 1A4. New 1A4 assembly is good. Proceed to paragraph 5-8.c.

Step 6. Set POWER ON/OFF switch to OFF.

Step 7. Remove and replace CPU assembly 1A2.

Step 8. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 9. On Test Set keyboard, enter C1OE. ENTERED TEST shall flash 1O while test is in progress.

Step 10. When ENTERED TEST stops flashing, observe RESULT.
a. If RESULT displays 4113, go to step 11.
b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.
c. If RESULT displays 8888, unit has passed the test. Fault was in original 1A2 assembly. New 1A2 and 1A4 assemblies are good.
(1) Set Test Set POWER ON/OFF switch to OFF.

Table 5-2. Troubleshooting the Display Unit (cont)

MALFUNCTION (RESULT Display Code) TEST OR INSPECTION CORRECTIVE ACTION

(2) Reinstall original built-in test circuit assembly 1A4.
(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.
(4) On Test Set keyboard, enter C1OE. ENTERED TEST shall flash 10 while test is in progress.
(5) When ENTERED TEST stops flashing, observe RESULT.
(a) If RESULT displays 4113, return to step 1.
(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.
(c) If RESULT displays 8888, unit has passed the test. Fault was in original CPU assembly 1A2. Original 1A4 and new 1A2 assemblies are good. Proceed to paragraph 5-8.c.

Step 11. Set Test Set POWER ON/OFF switch to OFF.

Step 12. Remove and replace DU motherboard assembly.

Step 13. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 14. On Test Set keyboard, enter C10E. ENTERED TEST shall flash 10 while test is in progress.

Step 15. When ENTERED TEST stops flashing, observe RESULT.
a. If RESULT displays 4113, Test Set is faulty. Refer to TM9-4933-277-13&P.
b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.
c. If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly, 1A4 and 1A2 assemblies are good.
(1) Set Test Set POWER ON/OFF switch to OFF.
(2) Reinstall original 1A4 and 1A2 assemblies.
(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.
(4) On Test Set keyboard, enter C1OE. ENTERED TEST shall flash 10 while test is in progress.
(5) When ENTERED TEST stops flashing, observe RESULT.
(a) If RESULT displays 4113, return to step }
(b) If RESULT displays a malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.
(c) If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly and original 1A2 and 1A4 assemblies are good. Proceed to paragraph 5-8.c.

Table 5-3. Troubleshooting the RND REM Display and Lighting Segments

MALFUNCTION: RND REM does not display 88 8 88 8 88 or missing segment.

TEST OR INSPECTION

CORRECTIVE ACTION

Step 1. On Test Set keyboard, press key B and hold it down until RESULT displays 11.

Step 2. Set POWER ON/OFF switch to OFF.

Step 3. Remove and replace control panel interface 1A1.

Step 4. Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 5. On Test Set keyboard, enter C11E. ENTERED TEST shall display 11.

Step 6. Enter C60E. ENTERED TEST shall continue flashing 60.

Step 7. Observe RND REM display.

a. If RND REM does not display 88 8 88 8 88, go to step 8.

b. If RND REM displays 88 8 88 8 88, unit passed the test. Fault was in original control panel interface 1A1 New 1A1 assembly is good. On Test Set keyboard, press key B and hold it down until RESULT displays 11. Proceed to paragraph 5-8.h.

Step 8. On the Test Set keyboard, press key B and hold it down until RESULT displays 11.

Step 9. Set POWER ON/OFF switch to OFF.

Step 10. Remove and replace RND REM display.

Step 11. Set Test Set POWER ON/OEF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 12. On Test Set keyboard, enter C11E. ENTERED TEST shall display 11.

Step 13. Enter C60E. ENTERED TEST shall continue flashing 60.

Step 14. Observe RND REM display.

a. If RND REM does not display 88 8 88 8 88, go to step 15.

b. If RND REM displays 88 8 88 8 88, unit has passed the test. Fault was in original RND REM display. New 1A1 and RND REM display assemblies are good.

(1) On Test Set keyboard, press key B and hold it down until RESULT displays 11.

(2) Set POWER ON/OFF switch to OFF.

(3) Reinstall original lA1 assembly.

(4) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(5) On Test Set keyboard, enter C11E.

(6) Enter C60E. ENTERED TEST shall continue flashing 60.

(7) Observe RND REM display.

(a) If RND REM does not display 88 8 88 8 88, return to step 1.

Table 5-3. Troubleshooting the RND REM Display and Lighting Segments (cont)

MALFUNCTION: RND REM does not display 88 8 88 8 88 or missing segment.
TEST OR INSPECTION
CORRECTIVE ACTION

(b) If RND REM displays 88 8 88 8 88, unit passed the test. Fault was in RND REM display assembly. Original 1A1 assembly and new RND REM display assembly are good. On Test Set keyboard, press key B and hold it down until RESULT displays 11. Proceed to paragraph 5-8.h.

Step 15. On Test Set keyboard, press key B and hold it down until RESULT displays 11.

Step 16. Set POWER ON/OFF switch to OFF.

Step 17. Remove and replace control assembly.

Step 18. Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 19. On Test Set keyboard, enter C11E.

Step 20. Enter C60E. ENTERED TEST shall continue flashing 60.

Step 21. Observe RND REM display.

a. If RND REM does not display 88 8 88 8 88, go to step 22.

b. If RND REM displays 88 8 88 8 88, unit has passed the test. Fault was in original control assembly. New RND REM display, control assembly and 1A1 assembly are good.

(1) On Test Set keyboard, press key B and hold it down until RESULT displays 11.
(2) Set POWER ON/OFF switch to OFF.
(3) Reinstall original lA1 assembly and RND REM display.
(4) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.
(5) On Test Set keyboard, enter C11E. ENTERED TEST shall display 11.
(6) On Test Set keyboard, enter C60E. ENTERED TEST shall continue flashing 60.
(7) Observe RND REM display.
(a) If RND REM does not display 88 8 88 8 88, return to step 1.
(b) If RND REM displays 88 8 88 8 88, unit has passed the test. Fault was in original control assembly. Original 1A1 assembly, RND REM display and new control assembly are good. On Test Set keyboard, press key B and hold it down until RESULT displays 11. Proceed to paragraph 5-8.h.

Step 22. On Test Set keyboard, press key B and hold it down until RESULT displays 11.

Step 23. Set POWER ON/OFF switch to OFF.

Step 24. Remove and replace DU motherboard assembly.

Step 25. Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 26. On Test Set keyboard, enter C11E. ENTERED TEST shall indicate 11.

Step 27. Enter C60E. ENTERED TEST shall continue flashing 60. In progress.

Step 28. Observe RND REM display.

Table 5-3. Troubleshooting the RND REM Display and Lighting Segments (cont)

MALFUNCTION: RND REM does not display 88 8 88 8 88 or missing segment. TEST OR INSPECTION CORRECTIVE ACTION
a. If RND REM does not display 88 8 88 8 88, Test Set is faulty. Refer to TM9-4933-227-13&P. b. If RND REM displays 88 8 88 8 88, unit passed the test. Fault was in original motherboard assembly. New motherboard assembly, 1A1 assembly, RND REM display and control assembly are good. (1) On Test Set keyboard, press key B and hold it down until RESULT displays 11. (2) Set POWER ON/OFF switch to OFF. (3) Reinstall original 1A1 assembly, RND REM display and control assembly. (4) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light. (5) On Test Set keyboard, enter C11E. ENTERED TEST shall display 11. (6) On Test Set keyboard, enter C60E. ENTERED TEST shall continue flashing 60. (7) Observe RND REM display. (a) If RND REM does not display 88 8 88 8 83, return to step 1. (b) If RND REM displays 88 8 88 8 88, unit has passed the test. Fault was in original motherboard assembly. Original control panel, RND REM display, 1A1 assembly and new motherboard assembly are good. On Test Set keyboard, press key B and hold it down until RESULT displays 11. Proceed to paragraph 5-8.h.

Table 5-4. Testing the RND REM Count Display Circuit

MALFUNCTION: RND REM Does Not Display Correctly TEST OR INSPECTION CORRECTIVE ACTION

Step 1. On the Test Set keyboard, press key B and hold it down until RESULT displays 11.

Step 2. Set POWER ON/OFF switch to OFF.

Step 3. Remove and replace control panel interface 1A1

Step 4. Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 5. On Test Set keyboard, enter C11E. ENTERED TEST shall display 11.

Step 6. Enter C65E. ENTERED TEST shall continue flashing 65.

Step 7. Observe RND REM display.
- a. If RND REM does not display as described in paragraph 5-8.h., go to step 8.
- b. If RND REM displays correctly, the unit has passed the test. Fault was in original control panel interface 1A1 New 1A1 assembly is good. On Test Set keyboard, press key B and hold it down until RESULT displays 11. Proceed to paragraph 5-8.i.

Step 8. On Test Set keyboard, press key B and hold it down until RESULT displays 11.

Step 9. Set POWER ON/OFF switch to OFF.

Step 10. Remove and replace RND REM display.

Step 11. Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 12. On Test Set keyboard, enter C11E. ENTERED TEST shall display 11.

Step 13. Enter C65E. ENTERED TEST shall continue flashing 65. in progress.

Step 14. Observe RND REM display.
- a. If RND REM does not display as described in paragraph 5-8.h., go to step 15.
- b. If RND REM displays correctly, the unit has passed the test. Fault was in original RND REM display. New 1A1 assembly and new RND REM display are good.
  - (l) On the Test Set keyboard, press key B and hold it down until RESULT displays 11.
  - (2) Set POWER ON/OFF switch to OFF.
  - (3) Reinstall original 1A1 assembly.
  - (4) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.
  - (5) On Test Set keyboard, enter C11E. ENTERED TEST shall display 11.
  - (6) On Test Set keyboard, enter C65E. ENTERED TEST shall continue flashing 65.
  - (7) Observe RND REM display.
    - (a) If RND REM does not display as described in paragraph 5-8.h., return to step 1.

Table 5-4. Testing the RND REM Count Display Circuit (cont)

MALFUNCTION: RND REM Does Not Display Correctly

TEST OR INSPECTION

CORRECTIVE ACTION

(b) If RND REM displays correctly, the unit has passed the test. Fault was in original RND REM display. Original 1A1 assembly and new RND REM display are good. On Test Set keyboard, press key B and hold it down until RESULT displays 11. Proceed to paragraph 5-8.i.

Step 15. On the Test Set keyboard, press key B and hold it down until RESULT displays 11.

Step 16. Set POWER ON/OFF switch to OFF.

Step 17. Remove and replace control assembly.

Step 18. Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step l9. On Test Set keyboard, enter C11E. ENTERED TEST shall display 11.

Step 20. Enter C65E. ENTERED TEST shall continue flashing 65.

Step 21. Observe RND REM display.

a. If RND REM does not display as described in paragraph 5-8.h., go to step 22.

b. If RND REM displays correctly, the unit has passed the test. Fault was in original control assembly. New control assembly, 1A1 assembly and RND REM display are good.

(l) On the Test Set keyboard, press key B and hold it down until RESULT displays 11.

(2) Set POWER ON/OFF switch to OFF.

(3) Reinstall original lA1 assembly and RND REM display.

(4) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(5) On Test Set keyboard, enter C11E. ENTERED TEST shall display 11.

(6) On Test Set keyboard, enter C65E. ENTERED TEST shall continue flashing 65.

(7) Observe RND REM display.

(a) If RND REM does not display as described in paragraph 5-8.h., return to step 1.

(b) If RND REM displays correctly, the unit has passed the test. Fault was in original control assembly. Original 1A1 assembly' RND REM display and new control assembly are good. On Test Set keyboard, press key B and hold it down until RESULT displays 11. Proceed to paragraph 5-8.i.

Step 22. On the Test Set keyboard, press key B and hold it down until RESULT displays 11.

Step 23. Set POWER ON/OFF switch to OFF.

Step 24. Remove and replace DU motherboard assembly.

Step 25. Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION

Step 26. On Test Set keyboard, enter C11E. lamp shall not light.

Table 5-4. Testing the RND REM Count Display Circuit (cont)

MALFUNCTION: RND REM Does Not Display Correctly TEST OR INSPECTION CORRECTIVE ACTION

Step 27. Enter C65E. ENTERED TEST shall continue flashing 65.

Step 28. Observe RND REM display.

a. If RND REM does not display as described in paragraph 5-8.h., Test Set is faulty. Refer to TM9-4933-227-13&P.

b. If RND REM displays correctly, fault was in original motherboard assembly. New motherboard assembly, 1A1 assembly, RND REM display, and control assembly are good.

(1) On the Test Set keyboard, press key B and hold it down until RESULT displays 11.

(2) Set POWER ON/OFF switch to OFF.

(3) Reinstall original 1A1 assembly, RND REM display and control assembly.

(4) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(5) On Test Set keyboard, enter C11E.

(6) On Test Set keyboard, enter C65E. ENTERED TEST shall continue flashing 65.

(7) Observe RND REM display.

(a) If RND REM does not display as described in paragraph 5-8.h., return to step 1.

(b) If RND REM displays correctly, the unit has passed the test. Fault was in original motherboard assembly. Original 1A1 assembly, RND REM display, control assembly and new motherboard assembly are good. On Test Set keyboard, press key B and hold it down until RESULT displays 11. Proceed to paragraph 5-8.i.

Table 5-5. Troubleshooting the ZONE ARM Switch Lighting.

MALFUNCTION: ZONE ARM brackets do not light as described in paragraph 5-8.i.

TEST OR INSPECTION

CORRECTIVE ACTION

Step 1. On the Test Set keyboard, press key B and hold it down until RESULT displays 11.

NOTE

If one or more, but not all, ZONE ARM brackets do not light you can quickly isolate the trouble by interchanging lamps that light with lamps that do not light. If the trouble goes with the lamps, they are burned out and should be replaced. If the trouble stays with the ZONE ARM switch, the trouble is in the DU. Proceed to step 9.

Step 2. Set POWER ON/OFF switch to OFF.

Step 3. Remove and replace lamps that do not light.

Step 4. Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 5. On Test Set keyboard, enter C11E. ENTERED TEST shall display 11.

Step 6. Enter C70E. ENTERED TEST shall continue flashing 70. in progress.

Step 7. Observe the ZONE ARM switch lighting.

a. If ZONE ARM switches do not light as described in paragraph 5-8.i., go to step 8.

b. If all switches light correctly, original lamps were defective. New lamps are good. On Test Set keyboard, press key B and hold it down until RESULT displays 11. Proceed to paragraph 5-8.j.

Step 8. On the Test Set keyboard, press key B and hold it down until RESULT displays 11.

Step 9. Set POWER ON/OFF switch to OFF.

Step 10. Remove and replace control panel interface assembly 1A1

Step 11. Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 12. On Test Set keyboard, enter C11E. ENTERED TEST shall display 11.

Step 13. Enter C70E. ENTERED TEST shall continue flashing 70.

Step 14. Observe ZONE ARM lighting.

a. If ZONE ARM switches do not light as described in paragraph 5-8.i., go to step 15.

b. If all ZONE ARM switches light correctly, fault was in original control panel interface 1A1. New 1A1 assembly and new lamps are good. On Test Set keyboard, press key B and hold it down until RESULT displays 11. Proceed to paragraph 5-8.;.

Step 15. On the Test Set keyboard, press key B and hold it down until RESULT displays 11.

Step 16. Set POWER ON/OFF switch to OFF.

Step 17. Remove and replace control assembly.

Step 18. Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Table 5-5. Troubleshooting the ZONE ARM Switch Lighting (cont)

MALFUNCTION: ZONE ARM brackets do not light as described in paragraph 5-8.i.

TEST OR INSPECTION

CORRECTIVE ACTION

Step 19. On Test Set keyboard, enter C11E. ENTERED TEST shall display 11.

Step 20. Enter C70E. ENTERED TEST shall continue flashing 70.

Step 21. Observe ZONE ARM switch lighting.

a. If ZONE ARM switches do not light correctly as described in paragraph 5-8.i., Test Set is faulty. Refer to TM9-4933-227-13&P.

b. If all ZONE ARM indicators light correctly, fault was in original control assembly. New lamps and 1A1 assembly are good.

(1) On the Test Set keyboard, press key B and hold it down until RESULT displays 11.

(2) Set POWER ON/OFF switch to OFF.

(3) Reinstall original 1A1 assembly.

(4) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(5) On Test Set keyboard, enter C11E. ENTERED TEST shall display 11.

(6) On Test Set keyboard, enter C70E. ENTERED TEST shall continue flashing 70.

(7) Observe ZONE ARM switches.

(a) If ZONE ARM switches do not light as described in paragraph 5-8.i., return to step 1.

(b) If ZONE ARM switches do light correctly, the unit has passed the test. The original control panel interface assembly 1A1 was good. Proceed to paragraph 5-8.j.

Table 5-6. Troubleshooting the ZONE ARM Switch Circuitry.

MALFUNCTION: RESULT does not display as described in paragraph 5-8.j. TEST OR INSPECTION CORRECTIVE ACTION

Step 1. On the Test Set keyboard, press key B and hold it down until RESULT displays 11.

Step 2. Set POWER ON/OFF switch to OFF.

Step 3. Remove and replace control panel interface assembly 1A1

Step 4. Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 5. On Test Set keyboard, enter C11E. ENTERED TEST shall display 11.

Step 6. Enter C75E. ENTERED TEST shall continue flashing 75.

Step 7. Press the Display Unit TEST pushbutton. RESULT shall display B. When TEST is released, RESULT shall display 0.

Step 8. Simultaneously, observe RESULT display and press each ZONE ARM switch, one at a time, beginning with ZONE 1 (See figure 2-7) and ending with ZONE 3. RESULT shall display the zone number of the depressed switch and shall display 0 when no switch is depressed.

a. If any one or all of the RESULT displays are incorrect, go to step 9.

b. If all RESULT displays are correct, the switches have passed the test. Fault was in original control panel interface assembly 1A1 New 1A1 assembly is good. On Test Set keyboard, press key B and hold it down until RESULT displays 11. Proceed to paragraph 5-8.h.

Step 9. On the Test Set keyboard, press key B and hold it down until RESULT displays 11.

Step 10. Set POWER ON/OFF switch to OFF.

Step 11. Remove and replace control assembly.

Step 12. Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 13. On Test Set keyboard, enter C11E. ENTERED TEST shall display 11.

Step 14. Enter C75E. ENTERED TEST shall continue flashing 75.

Step 15. Press the Display Unit TEST pushbutton. RESULT shall display B. When TEST is released, RESULT shall display 0.

Step 16. Simultaneously, observe RESULT displays and press each ZONE ARM switch, one at a time, beginning with ZONE 1 (See figure 2-7) and ending with Zone 3. RESULT shall display the ZONE number of the depressed switch and shall display 0 when no switch is depressed.

a. If any one or all of the RESULT displays are incorrect, Test Set is faulty. Refer to TM9-4933-227-13&P.

b. If all RESULT displays are correct, fault was in original control assembly. New control assembly and 1A1 assembly are good.

(1) On the Test Set keyboard, press key B and hold it down until RESULT displays 11.

(2) Set POWER ON/OFF switch to OFF.

(3) Reinstall original 1A1 assembly.

Table 5-6. Troubleshooting the ZONE ARM Switch Circuitry (cont)

MALFUNCTION: ZONE ARM brackets do not light as described in paragraph 5-8.i.

TEST OR INSPECTION

CORRECTIVE ACTION

(4) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION shall not light.

(5) On Test Set keyboard, enter C11E. ENTERED TEST shall display 11.

(6) Enter C75E. ENTERED TEST shall continue flashing 75.

(7) Press the Display Unit TEST pushbutton. RESULT shall display B. When TEST is released, RESULT shall display 0.

(8) Simultaneously, observe RESULT display and press each ZONE ARM switch, one at a time, beginning with ZONE 1 (See figure 2-7) and ending with Zone 3. RESULT shall display the ZONE number of the depressed switch and shall display 0 when no switch is depressed.

(a) If any one or all of the RESULT displays are incorrect, return to step 1.

(b) If all RESULT displays are correct, the switches have passed the test. Original 1A1 assembly and new control assembly are good. Proceed to paragraph 5-8.h.

Table 5-7. Troubleshooting the Watch Dog Circuitry.

MALFUNCTION RND REM does not display 88 8 88 8 88. TEST OR INSPECTION	CORRECTIVE ACTION

Step 1. On the Test Set keyboard, press key B and hold it down until RESULT displays 11.

Step 2. Set POWER ON/OFF switch to OFF.

Step 3. Remove and replace built-in test circuit assembly 1A4.

Step 4. Set Test Set POWER ON/OFF switch to ON POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 5. On Test Set keyboard, enter C11E. ENTERED TEST shall display 11.

Step 6. Enter C80E. ENTERED TEST shall continue flashing 80.

Step 7. Observe RND REM display.

a. If RND REM does not display 88 8 88 8 88, go to step 8.

b. If RND REM displays 88 8 88 8 88, unit has passed the test. Fault was in original built-in test circuit assembly 14. New 14 assembly is good. Proceed to paragraph 5-8.1.

Step 8. On the Test Set keyboard, press key B and hold it down until RESULT displays 11.

Step 9. Set POWER ON/OFF switch to OFF.

Step 10. Remove and replace control panel interface 1A1

Step 11. Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 12. On Test Set keyboard, enter C11E. ENTERED TEST shall display 11.

Step 13. Enter C80E. ENTERED TEST shall continue flashing 80.

Step 14. Observe RND REM display.

a. If RND REM does not display 88 @ 88 8 88, go to step 15.

b. If RND REM displays 88 8 38 8 88, unit has passed the test. Fault was in original control panel interface 1A1 New 1A1 and 1A4 assemblies are good.

(1) On the Test Set keyboard, press key B and hold it down until RESULT displays 11.

(2) Set POWER ON/OFF switch to OFF.

(3) Reinstall original 1A4 assembly.

(4) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(5) On Test Set keyboard, enter C11E. ENTERED TEST shall display 11.

(6) On Test Set keyboard, enter C80E. ENTERED TEST shall continue flashing 80.

(7) Observe RND REM display.

(a) If RND REM does not display 88 8 88 8 88, return to step 1.

(b) If RND REM displays 88 8 88 @ 88 the unit has passed the test. Fault was in control panel interface assembly 1A1 New 1A1 assembly and original 1A4 assembly are good. Proceed to paragraph 5-8.1.

Table 5-7. Troubleshooting the Watch Dog Circuitry (cont)

MALFUNCTION: RND REM does not display 88 8 88 8 88.
TEST OR INSPECTION
CORRECTIVE ACTION

Step 15. On the Test Set keyboard, press key B and hold it down until RESULT displays 11.

Step 16. Set POWER ON/OFF switch to OFF.

Step 17. Remove and replace DU Motherboard assembly.

Step 18. Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 19. On Test Set keyboard, enter C11E. ENTERED TEST shall display 11.

Step 20. Enter 80E. ENTERED TEST shall continue flashing 80.

Step 21. Observe RND REM display.

a. If RND REM does not display 88 8 88 8 88, Test Set is faulty. Refer to TM9-4933-227-13&P.

b. If RND REM displays 88 8 88 8 88, the unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly 1A1 and 1A4 assemblies are good.

(1) On the Test Set keyboard, press key B and hold it down until RESULT displays 11.

(2) Set POWER ON/OFF switch to OFF.

(3) Reinstall original 1A4 and 1A1 assemblies.

(4) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(5) On Test Set keyboard, enter C11E. ENTERED TEST shall display 11.

(6) On Test Set keyboard, enter C80E. ENTERED TEST shall continue flashing 80.

(7) Observe RND REM display.

(a) If RND REM does not display 88 8 88 8 88, return to step 1.

(b) If RND REM displays correctly, the unit has passed the test. Fault was in motherboard assembly. New motherboard assembly and original 1A1 and 1A4 assemblies are good. On Test Set keyboard, press key B and hold it down until RESULT displays 11. Proceed to paragraph 5-8.1.

5-9. Troubleshooting the Operations Unit.

a. *Operations Unit Set Up.*

(1) Set up the Test Set as described in TM9-4933-227-13&P.

(2) Set Test Set POWER ON/OFF switch to OFF>

(3) Set the OU on the Test Set test pad as shown in figure 5-6. Note that the aligning pins on the test pad will enter the mounting holes of the OU only when the OU is facing as shown in figure 5-6.

CAUTION

To prevent damage to the unit under test, be sure connector P103 is NOT connected to the DU SELF-TEST jack.

To prevent damage to the unit under test, do not disconnect connector P101 or P102 while a test is running.

To prevent damage to the unit under test, be sure power to the Test Set is off when setting the unit on or removing it from the Test Set.

NOTE

If you are going to verify the performance of the OU without changing any shop-replaceable assemblies, you may omit step (4).

(4) Remove 14 screws (3, figure E-14) and flat washers (4) that hold cover (2) to OU. Lift cover from OU.

(5) Connect Test Set connector P101 to OU connector 31. Tighten connector jack screw to be sure connector is properly seated.

(6) Connect Test Set connector Pl02 to OU connector J2. Tighten jack screw.

(7) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light. If MALFUNCTION lamp lights, refer to TM9-4933-277-13&P.

(8) Figure 5-7 shows the OU with its cover removed and identifies the shop-replaceable assemblies.

b. OU Diagnostic Test 29.

(1) On Test Set keyboard, momentarily press key C. This clears the Test Set of any previous command code. Observe ENTERED TEST and RESULT. ENTERED TEST shall display O in the right-most position and RESULT shall be dark.

(2) Momentarily press keys 2 and 0. This enters the command code for test 20. Observe ENTERED TEST and RESULT displays. ENTERED TEST shall display 20 and RESULT shall be dark.

NOTE

This observation is a check that you have entered the correct command code. If ENTERED TEST displays any number other than 20, you may have pressed the wrong keys. You can clear the wrong entry by returning to step (1).

(3) Momentarily press key E. This causes the test command to be executed.

(4) Observe ENTERED TEST. ENTERED TEST shall flash 20 while the test is in progress.

NOTE

This test takes about two minutes to complete. About halfway through the test you will hear the OU relays clicking as they are tested. This is a normal sound.

(5) After about two minutes, when ENTERED TEST stops flashing, observe RESULT DISPLAY.

(a) If RESULT displays 8888, the OU has passed test 20. Proceed to next test.

(b) If RESULT displays any other number, it is a malfunction code. Refer to table 5-8 and find the displayed number in the MALFUNCTION (RESULT Display Code) column and follow troubleshooting instructions.

c. Equipment Status Indicator Test 21.

(1) Momentarily press key C to clear previous command code. ENTERED TEST shall display 0 in the right-most position and RESULT shall be dark.

(2) Momentarily press keys 2 and 1. ENTERED TEST shall display 21 and RESULT shall be dark. If ENTERED TEST displays any other number' clear the entry by returning to step (1).

(3) Simultaneously observe equipment status indicator (ESI) (See figure 5-7) and press key E. ESI shall change from white to black or from black to white to black. Observe RESULT display.

(a) If ESI action is correct and RESULT displays 8888, the unit has passed this test.

5-9. (b) If ESI action is not correct and RESULT displays 8888, there probably is a mechanical fault in the ESI. Replace 0U motherboard assembly as described in section V and repeat test.

(c) If RESULT displays anything other than 8888, regardless of ESI action, this is a fault code. Refer to table 5-8 for troubleshooting instructions.

d. *Operations Unit Shutdown.* When you have completed testing and troubleshooting, shut down the OU as follows:

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Disconnect Test Set connector P101 and P102 from OU connectors J1 and J2, respectively.

(3) Inspect gasket (9, figure E-14) and replace if needed. Be sure gasket is seated in its groove.

(4) Set cover (2) in place on OU and secure it with 14 screws (3) and flat washers (4).

(5) To shut down Test Set, refer to TM9-4933-227-13&P.

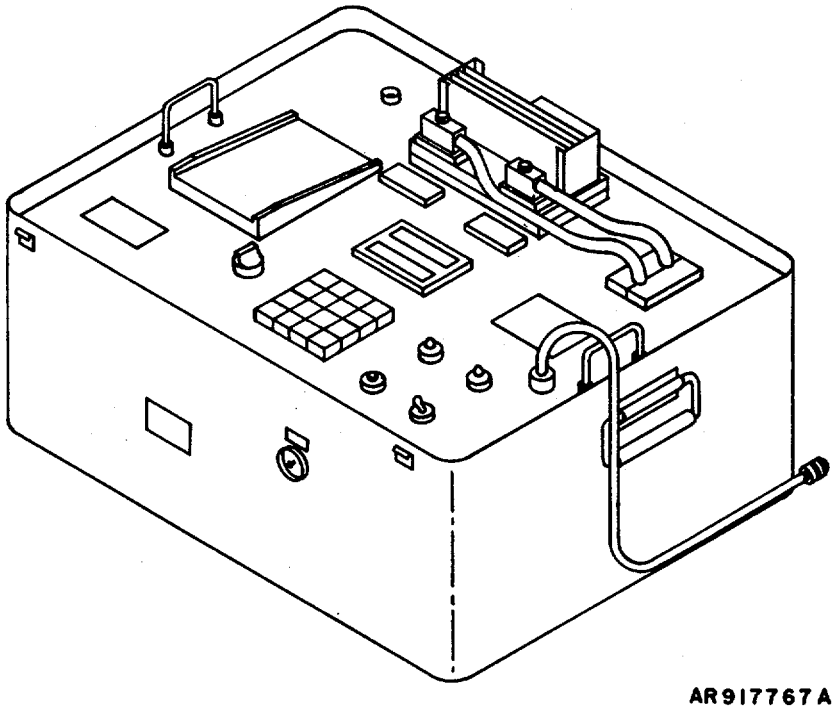


Figure 5-6. Troubleshooting and Test Set-Up for Operations Unit

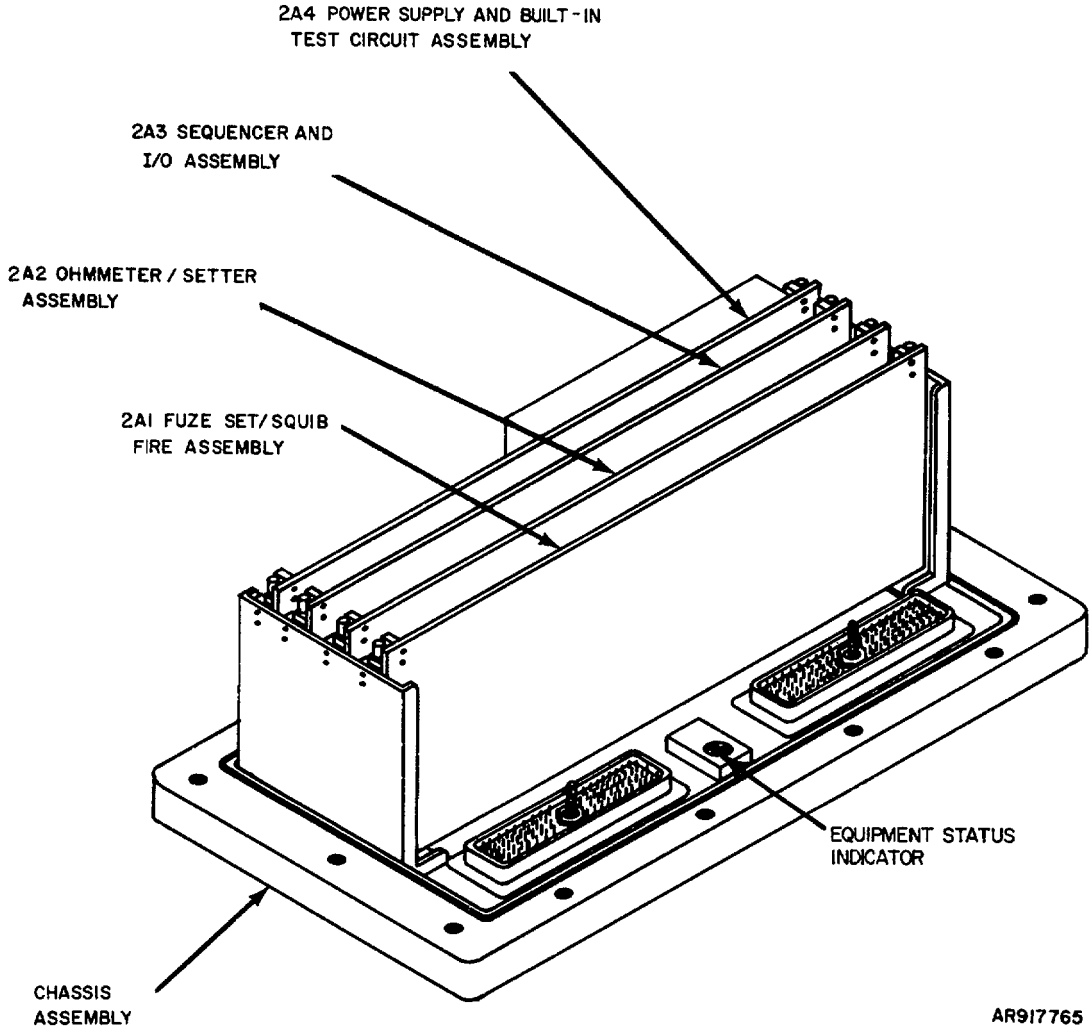


Figure 5-7. Operations Unit with Cover Removed

Table 5-8. Troubleshooting the Operation Unit

MALFUNCTION (RESULT Display)
TEST OR INSPECTION
CORRECTIVE ACTION

1117 Step 1. Set Test Set POWER ON/OFF switch to OFF.

Step 2. Remove and replace ohmmeter/setter assembly 2A2.

Step 3. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 4. On Test Set keyboard, enter C20E.

Step 5. Observe RESULT.

a. If RESULT displays 1117, go to step 6.
b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.
c. If RESULT displays 8888, unit has passed the test. Fault was in original ohmmeter/setter assembly 2A2. New 2A2 assembly is good. Proceed to paragraph 5-9.c.

Step 6. Set POWER ON/OFF switch to OFF.

Step 7. Remove and replace fuse set/squib fire assembly 2A1.

Step 8. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 9. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step l0. Observe RESULT.

a. If RESULT displays 1117, go to step 11.
b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.
c. If RESULT displays 8888, unit has passed the test. Fault was in original fuse set/squib fire assembly 2A1. New 2Al and 2A2 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A2 assembly.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 1117, return to step 1.
(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.
(c) If RESULT displays 8888, unit has passed the test. Fault was in original set/squib fire assembly 2A1. New 2Al and original 2A2 assemblies are good. Proceed to paragraph 5-9.c.

Table 5-8. Troubleshooting the Operation Unit (cont)

MALFUNCTION (RESULT Display)
TEST OR INSPECTION
CORRECTIVE ACTION

Step 11. Set POWER ON/OFF switch to OFF.

Step 12. Remove and replace sequence and I/O assembly 2A3.

Step 13. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 14. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 15. Observe RESULT.

a. If RESULT displays 1117, go to step 16.
b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.
c. If RESULT displays 8888, unit has passed the test. Fault was in original sequencer and I/O assembly 2A3. New 2A1, 2A2 and 2A3 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A1 and 2A2 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 1117, return to step 1.
(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.
(c) If RESULT displays 8888, unit has passed the test. Fault was in original I/O assembly 2A3. Original 2A1, 2A2 and new 2A3 assemblies are good.

Step 16. Set POWER ON/OFF switch to OFF.

Step 17. Remove and replace power supply and built-in test circuit assembly 2A4.

Step 18. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step l9. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 20. Observe RESULT.

a. If RESULT displays 1117, go to step 21.
b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.
c. If RESULT displays 8888, unit has passed the test. Fault was in original power supply and built-in test circuit assembly 2A4. New 2A1, 2A2, 2A3 and 2A4 assemblies are good.

Table 5-8. Troubleshooting the Operation Unit (cont)

MALFUNCTION (RESULT Display)
TEST OR INSPECTION
CORRECIVE ACTION

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A1, 2A3 and 2A2 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 1117, return to step 1.
(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.
(c) If RESULT displays 8888, unit has passed the test. Fault was in original power supply and self-test 2A4 assembly. Original 2A1, 2A2, 2A3 and new 2A4 assemblies are good. Proceed to paragraph 5-9.c.

Step 21. Set Test Set POWER ON/OFF switch to OFF.

Step 22. Remove and replace OU motherboard assembly.

Step 23. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 24. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 25. Observe RESULT.

a. If RESULT displays 1117, Test Set is faulty. Refer to TM9-4933-277-13&P.
b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.
c. If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New 2Al, 2A2, 2A3, 2A4 and new motherboard assembly are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A1, 2A2, 2A3 and 2A4 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 1117, return to step 1.
(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.
(c) If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly and original 2A1, 2A2, 2A3 and 2A4 assemblies are good. Proceed to paragraph 5-9.c.

Table 5-8. Troubleshooting the Operation Unit (cont)

MALFUNCTION (RESULT Display)
TEST OR INSPECTION
CORRECTIVE ACTION

1118

Step 1. Set Test Set POWER ON/OFF switch to OFF.

Step 2. Remove and replace ohmmeter/setter assembly 2A2.

Step 3. Set POWER ON/OFF switch to ON. POWER lamp shalt light and remain lit. MALFUNCTION lamp shall not light.

Step 4. On Test Set keyboard, enter C20E.

Step 5. Observe RESULT.

a. If RESULT displays 1118, go to step 6.
b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION
c. If RESULT displays 88&8, unit has passed the test. Fault was in original ohmmeter/setter assembly 2A2. New 2A2 assembly is good. Proceed to paragraph 5-9.c.

Step 6. Set POWER ON/OFF switch to OFF.

Step 7. Remove and replace power supply and built-in test circuit assembly 2A4.

Step 8. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 9. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 10 Observe RESULT.

a. If RESULT displays 1118, go to step 11.
b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.
c. If RESULT displays 8888, unit has passed the test. Fault was in original power supply and built-in test circuit assembly 2A4. New 2A2 and 2A4 assemblies are goods
   (1) Set Test Set POWER ON/OFF switch to OFF.
   (2) Reinstall original 2A2 assembly.
   (3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.
   (4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.
   (5) Observe RESULT.
      (a) If RESULT displays 1118, return to step 1.
      (b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.
      (c) If RESULT displays 8888, unit has passed the test. Fault was in original power supply and built-in test circuit assembly 2A4. New 2A4 and original 2A2 are good. Proceed to paragraph 5-9.c.

Table 5-8. Troubleshooting the Operation Unit (cont)

MALFUNCTION (RESULT Display)
TEST OR INSPECTION
CORRECTIVE ACTION

Step 11. Set POWER ON/OFF switch to OFF.

Step 12. Remove and replace fuse set/squib fire assembly 2A1.

Step 13. Set POWER ON/OFR switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 14. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 15. Observe RESULT.

a. If RESULT displays 1118, go to step 16.
b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.
c. If RESULT displays 8888, unit has passed the test. Fault was in original fuse set/squib fire assembly 2A1. New 2A1, 2A2 and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A2 and 2A4 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamps shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT

(a) If RESULT displays 1118, return to step 1.
(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION *(RESULT* Display Code) column and follow instructions.
(c) If RESULT displays 8888, unit has passed the test. Fault was in original fuse set/squib fire assembly 2A1. Original 2A2 2A4 and new 2A1 assemblies are good. Proceed to paragraph 5-9.c.

Step 16. Set POWER ON/OFF switch to OFF.

Step 17. Remove and replace sequencer and I/O assembly 2A3.

Step 18. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 19. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 20. Observe RESULT.

a. If RESULT displays 1118, go to step 21.
b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.
c. If RESULT displays 8888, unit has passed the test. Fault was in original sequencer and I/O assembly 2A3. New 2A1, 2A2, 2A3 and 2A4 assemblies are good. Proceed to paragraph 5-9.c.

Table 5-8. Troubleshooting the Operation Unit (cont)

MALFUNCTION (RESULT Display)
TEST OR INSPECTION
CORRECTIVE ACTION

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A1, 2A2, and 2A4 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 1118, return to step 1.
(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.
(c) If RESULT displays 8888, unit has gassed the test. Fault was in original sequencer and I/O assembly 2A3. Original 2A2, 2Al 2A4 and new 2A3 assemblies are good. Proceed to paragraph 5-9.c.

Step 21. Set Test Set POWER ON/OFF switch to OFF.

Step 22. Remove and replace OU motherboard assembly.

Step 23. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 24. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 25. Observe RESULT.

a. If RESULT displays 1118, Test Set is faulty. Refer to TM9-4933-277-13&P.
b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions .
c. If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New 2A1, 2A2, 2A3, 2A4 and motherboard assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A1, 2A2, 2A3 and 2A4 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 1118, return to step 1.
(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code column and follow instructions.

Table 5-8. Troubleshooting the Operation Unit (cont)

MALFUNCTION (RESULT Display) TEST OR INSPECTION CORRECTIVE ACTION
(c) If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly and original 2A1, 2A2, 2A3 and 2A4 assemblies are good. Proceed to paragraph 5-9.c.
1119
Step 1. Set Test Set POWER ON/OFF switch to OFF.
Step 2. Remove and replace power supply and built-in test circuit assembly 2A4.
Step 3. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.
Step 4. On Test Set keyboard, enter C20E.
Step 5. Observe RESULT. a. If RESULT displays 1119, go to step 6. b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions. c. If RESULT displays 8888, unit has passed the test. Fault was in original power supply and built-in test circuit assembly 2A4. New 2A4 assembly is good. Proceed to paragraph 5-9.c.
Step 6. Set POWER ON/OFF switch to OFF.
Step 7. Remove and replace sequencer and I/O assembly 2A3.
Step 8. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.
Step 9. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.
Step 10. Observe RESULT. a. If RESULT displays 1119, go to step 11. b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions. c. If RESULT displays 8888, unit has passed the test. Fault was in original sequencer and I/O assembly 2A3. New 2A3 and 2A4 assemblies are good. (1) Set Test Set POWER ON/OFF switch to OFF. (2) Reinstall original 2A4 assembly. (3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light. (4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20. (5) Observe RESULT (a) If RESULT displays 1119, return to step 1. (b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions. (c) If RESULT displays 8888, unit has passed test. Fault was in original sequencer and I/O assembly 2A3. New 2A3 and original 2A4 assemblies are good. Proceed to paragraph 5-9.c.

Table 5-8. Troubleshooting the Operation Unit (cont.)

MALFUNCTION (RESULT Display) TEST OR INSPECTION CORRECTIVE ACTION

Step 11. Set Test Set POWER ON/OFF switch to OFF.

Step 12. Remove and replace OU motherboard assembly.

Step 13. Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 14. On Test Set keyboard enter C20E. ENTERED TEST shall continue flashing 20.

Step 15. Observe RESULT.

a. If RESULT displays 1119, Test Set is faulty. Refer to TM 9-4933-227-13&P.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed test. Fault was in original motherboard assembly. New motherboard assembly, 2A3 and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A3 and 2A4 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 1119, return to step 1.

(b) If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly and original 2A3 and 2A4 assemblies are good. Proceed to paragraph 5-9.c.

1120

Step 1. Set Test Set POWER ON/OFF switch to OFF.

Step 2. Remove and replace power supply and built-in test circuit assembly 2A4.

Step 3. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 4. On Test Set keyboard, enter C21E. ENTERED TEST shall continue flashing

Step 5. Observe RESULT.

a. If RESULT displays 1120, go to step 6.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original power supply and built-in test circuit assembly 2A4. New 2A4 assembly is good. Proceed to paragraph 5-9.c.

Step 6. Set POWER ON/OFF switch to OFF.

Step 7. Remove and replace ohmmeter/setter assembly 2A2.

Step 8. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light'

Step 9. On Test Set keyboard, enter C21E. ENTERED TEST shall continue flashing 21.

Table 5-8. Troubleshooting the Operation Unit (cont.)

MALFUNCTION (RESULT Display)
TEST OR INSPECTION
CORRECTIVE ACTION

Step 10. Observe RESULT.

a. If RESULT displays 1120, go to step 11.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888 unit has passed the test. Fault was in original ohmmeter/setter assembly 2A2. New 2A2 and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A4 assembly.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C21E. ENTERED TEST shall continue flashing 21.

(5) Observe RESULT.

(a) If RESULT displays 1120, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original ohmmeter/setter assembly 2A2. New 2A2 and original 2A4 assemblies are good. Proceed to paragraph 5-9.c.

Step 11. Set POWER ON/OFF switch to OFF.

Step 12. Remove and replace fuse set/squib fire assembly 2A1.

Step 13. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 14. On Test Set keyboard, enter C21E. ENTERED TEST shall continue flashing 21.

Step 15. Observe RESULT

a. If RESULT displays 1120, go to step 16.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original fuze set/squib fire assembly 2A1. New 2A1, 2A2 and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A2 and 2A4 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C21E. ENTERED TEST shall continue flashing 21.

(5) Observe RESULT.

(a) If RESULT displays 1120, return to step 1.

Table 5-8. Troubleshooting the Operation Unit (cont.)

MALFUNCTION (RESULT Display)
TEST OR INSPECTION
CORRECTIVE ACTION

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original fuze set/squib fire assembly 2A1. New 2Al and original 2A2 and 2A4 are good. Proceed to paragraph 5-9.c.

Step 16. Set POWER ON/OFF switch to OFF.

Step 17. Remove and replace sequencer and I/O assembly 2A3.

Step 18. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 19. On Test Set keyboard, enter C21E. ENTERED TEST shall continue flashing

Step 20. Observe RESULT.

a. If RESULT displays 1120, go to step 21.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original sequencer and I/O assembly 2A3. New 2A3, 2A1, 2A2 and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A1, 2A2 and 2A4 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON.

(4) On Test Set keyboard enter C21E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 1120, return to step 1.

(b) If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original sequencer and I/O assembly 2A3. New 2A3 and original 2A1, 2A2 and 2A4 assemblies are good. Proceed to paragraph 5-9.c.

Step 21. Set Test Set POWER ON/OFF switch to OFF.

Step 22. Remove and replace OU motherboard assembly.

Step 23. Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 24. On Test Set keyboard enter C21E. ENTERED TEST shall continue flashing 20.

Step 25. Observe RESULT.

a. If RESULT displays 1120, Test Set is faulty. Refer to TM9-4933-227-13&P.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly, 2A1, 2A2, 2A3 and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A1, 2A2, 2A3 and 2A4 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Table 5-8. Troubleshooting the Operation Unit (cont.)

MALFUNCTION (RESULT Display)
TEST OR INSPECTION
CORRECTIVE ACTION

(4) On Test Set keyboard, enter C21E. ENTERED TEST shall continue flashing 21.

(5) Observe RESULT.

(a) If RESULT displays 1120, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard and original 2A1, 2A2, 2A3 and 2A4 assemblies are good. Proceed to paragraph 5-9.c.

1159

Step 1. Set Test Set POWER ON/OFF switch to OFF.

Step 2. Remove and replace power supply and built-in test circuit assembly 2A4.

Step 3. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 4. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 5. Observe RESULT.

a. If RESULT displays 1159, go to step 6.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original power supply and built-in test circuit assembly 2A4. New 2A4 assembly is good. Proceed to paragraph 5-9.c.

Step 6. Set POWER ON/OFF switch to OFF.

Step 7. Remove and replace fuze set/squib fire assembly 2A1.

Step 8. Sey POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 9. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 10. Observe RESULT.

a. If RESULT displays 1159, go to step 11.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original fuze set/squib fire assembly 2A1. New 2A1 and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF,

(2) Reinstall original 2A4 assembly.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

Table 5-8. Troubleshooting the Operation Unit (cont.)

MALFUNCTION (RESULT Display)
TEST OR INSPECTION
CORRECTIVE ACTION

(a) If RESULT displays 1159, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions,

(c) If RESULT displays 8888, unit has passed the test. Fault was in original fuze set/squib fire assembly 2A1. New 2A1 and original 2A4 assemblies are good. Proceed to paragraph 5-9.c.

a. If RESULT displays 1159, go to step 21.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original sequencer and I/O assembly 2A3. New 2A1, 2A3 and 2A4 assemblies are good.

Step 11. Set POWER ON/OFF switch to OFF.

Step 12. Remove and replace sequencer and I/O assembly 2A3.

Step 13. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 14. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 15. Observe RESULT.

(1) Set Test Set POWER ON/OFF switch to OFF

(2) Reinstall original 2A1 and 2A4 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 1159, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original I/O assembly 2A3. New 2A3, original 2A1 and 2A4 assemblies are good. Proceed to paragraph 5-9.c.

Step 16. Set Test Set POWER ON/OFF switch to OFF.

Step 17. Remove and replace OU motherboard assembly.

Step 18. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 19. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 20. Observe RESULT.

a. If RESULT displays 1159, Test Set is faulty. Refer to TM9-4933-227-13&P.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

Table 5-8. Troubleshooting the Operation Unit (cont.)

MALFUNCTION (RESULT Display)
TEST OR INSPECTION
CORRECTIVE ACTION

c. If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly, 2A1, 2A3 and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A1, 2A3 and 2A4 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 1159, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly and original 2A1, 2A3 and 2A4 assemblies are good. Proceed to paragraph 5-9.c.

2117

Step 1. Set Test Set POWER ON/OFF switch to OFF.

Step 2. Remove and replace fuze set/squid fire assembly 2A1.

Step 3. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 4. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 5. Observe RESULT.

a. If RESULT displays 2117, go to step 6.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original fuze set/squid fire assembly 2A1. New 2A1 assembly is good. Proceed to paragraph 5-9.c.

Step 6. Set POWER ON/OFF switch to OFF.

Step 7. Remove and replace ohmmeter/setter assembly 2A2.

Step 8. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 9. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 10. Observe RESULT.

a. If RESULT displays 2117, go to step 11.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original ohmmeter/setter assembly 2A2. New 2A1 and 2A2 assemblies are good.

Table 5-8. Troubleshooting the Operation Unit (cont.)

MALFUNCTION (RESULT Display)
TEST OR INSPECTION
CORRECTIVE ACTION

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A1 assembly.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 2117, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original ohmmeter/setter assembly 2A2. New 2A2 and original 2A1 assemblies are good. Proceed to paragraph 5-9.c.

Step 11. Set POWER ON/OFF switch to OFF.

Step 12. Remove and replace power supply and built-in test circuit assembly 2A4.

Step 13. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 14. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 15. Observe RESULT.

a. If RESULT displays 2117, go to step 16.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original power supply and built-in test circuit assembly 2A4. New 2A1, 2A2 and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A1 and 2A2 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 2117, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original power supply and built-in test circuit assembly 2A4. New 2A4 and original 2A1 and 2A2 assemblies are good. Proceed to paragraph 5-9.c.

Table 5-8. Troubleshooting the Operation Unit (cont.)

MALFUNCTION (RESULT Display)
TEST OR INSPECTION
CORRECTIVE ACTION

Step 16. Set POWER ON/OFF switch to OFF.

Step 17. Remove and replace sequencer and I/O assembly 2A3.

Step 18. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 19. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 20. Observe RESULT.

a. If RESULT displays 2117, go to step 21.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original sequencer and I/O assembly 2A3. New 2A1, 2A2, 2A3 and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A1, 2A2 and 2A4 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 2117, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original I/O assembly 2A3. Original 2A1, 2A2, 2A4 and new 2A3 assemblies are good. Proceed to paragraph 5-9.c.

Step 21. Set Test Set POWER ON/OFF switch to OFF.

Step 22. Remove and replace OU motherboard assembly.

Step 23. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 24. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 25. Observe RESULT.

a. If RESULT displays 2117, Test Set is faulty. Refer to TM9-4933-227-13&P.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly, 2A1, 2A2, 2A3 and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

Table 5-8. Troubleshooting the Operation Unit (cont.)

MALFUNCTION (RESULT Display)
TEST OR INSPECTION
CORRECTIVE ACTION

(2) Reinstall original 2A1, 2A2, 2A3 and 2A4 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 2117, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly and original 2A1, 2A2, 2A3 and 2A4 assemblies are good. Proceed to paragraph 5-9.c.

2118

Step 1. Set POWER ON/OFF switch to OFF.

Step 2. Remove and replace ohmmeter/setter assembly 2A2.

Step 3. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 4. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 5. Observe RESULT.

a. If RESULT displays 2118, go to step 6.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original ohmmeter/setter assembly 2A2. New 2A2 assembly is good. Proceed to paragraph 5-9.c.

Step 6. Set POWER ON/OFF switch to OFF.

Step 7. Remove and replace fuze set/squib fire assembly 2A1.

Step 8. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 9. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 10. Observe RESULT.

a. If RESULT displays 2118, go to step 11.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original fuze set/squib fire assembly 2A1. New 2A1 and 2A2 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A2 assembly.

Table 5-8. Troubleshooting the Operation Unit (cont.)

MALFUNCTION (RESULT Display)
TEST OR INSPECTION
CORRECTIVE ACTION

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 2118, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original ohmmeter/setter assembly 2A1. New 2A1 and original 2A2 assemblies are good.

Step 11. Set POWER ON/OFF switch to OFF.

Step 12. Remove and replace power supply and built-in test circuit assembly 2A4.

Step 13. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 14. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 15. Observe RESULT.

a. If RESULT displays 2118, go to step 16.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original power supply and built-in test circuit assembly 2A4. New 2A1, 2A2 and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A1 and 2A2 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 2118, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original power supply and built-in test circuit assembly 2A4. Original 2A1, 2A2 and new 2A4 assemblies are good. Proceed to paragraph 5-9.c.

Step 16. Set Test Set POWER ON/OFF switch to OFF.

Step 17. Remove and replace OU motherboard assembly.

Step 18. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 19. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Table 5-8. Troubleshooting the Operation Unit (cont.)

MALFUNCTION (RESULT Display)
TEST OR INSPECTION
CORRECTIVE ACTION

Step 20. Observe RESULT.

a. If RESULT displays 2118, Test Set is faulty. Refer to TM9-4933-227-13&P.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly 2A1, 2A2, and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A1, 2A2 and 2A4 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 2118, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly and original 2A1, 2A2 and 2A4 assemblies are good. Proceed

2119

Step 1. Set Test Set POWER ON/OFF switch to OFF.

Step 2. Remove and replace sequencer and I/O assembly 2A3.

Step 3. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 4. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 5. Observe RESULT.

a. If RESULT displays 2119, go to step 6.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original sequencer and I/O assembly 2A3. New 2A3 assembly is good. Proceed to paragraph 5-9.c.

Step 6. Set POWER ON/OFF switch to OFF.

Step 7. Remove and replace ohmmeter/setter assembly 2A2.

Step 8. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 9. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 10. Observe RESULT.

a. If RESULT displays 2119, go to step 11.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

Table 5-8. Troubleshooting the Operation Unit (cont.)

MALFUNCTION (RESULT Display)
TEST OR INSPECTION
CORRECTIVE ACTION

c. If RESULT displays 8888, unit has passed the test. original ohmmeter/setter assembly 2A2. are good.

(1) Set, Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A3 assembly.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 2119, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit.has passed the test. Fault was in original ohmmeter/setter assembly 2A2. New 2A2 and original 2A3 assemblies are good. Proceed to paragraph 5-9.c.

Step 11. Set POWER ON/OFF switch to OFF.

Step 12. Remove and replace fuze set/squib fire assembly 2A1.

Step 13. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 14. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 15. Observe RESULT.

a. If RESULT displays 2119, go to step 16.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original fuze set/squib fire assembly 2A1. New 2A1, 2A2 and 2A3 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A2 and 2A3 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 2119, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

Table 5-8. Troubleshooting the Operation Unit (cont.)

MALFUNCTION (RESULT Display)
TEST OR INSPECTION
CORRECTIVE ACTION

(c) If RESULT displays 8888, unit has passed the test. Fault was in original fuze set/squib fire assembly 2A1. New 2A1 and original 2A2 and 2A3 assemblies are good. Proceed to paragraph 5-9.c.

Step 16. Set POWER ON/OFF switch to OFF.

Step 17. Remove and replace power supply and built-in test circuit assembly 2A4.

Step 18. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 19. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 20. Observe RESULT.

a. If RESULT displays 2119, go to step 21.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original power supply and built-in test circuit assembly 2A4. New 2A1, 2A2, 2A3 and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A1, 2A2 and 2A3 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 2119, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original power supply and built-in test circuit assembly 2A4. New 2A4 and original 2A1, 2A2 and 2A3 assemblies are good. Proceed to paragraph 5-9.c.

Step 21. Set Test Set POWER ON/OFF switch to OFF.

Step 22. Remove and replace OU motherboard assembly.

Step 23. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 24. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 25. Observe RESULT.

a. If RESULT displays 2-19, Test Set is faulty. Refer to TM 9-4933-227-13&P.

Table 5-8. Troubleshooting the Operation Unit (cont.)

MALFUNCTION (RESULT Display)
TEST OR INSPECTION
CORRECTIVE ACTION

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly, 2A1, 2A2, 2A3 and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A1, 2A2, 2A3 and 2A4 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 2119, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly and original 2A1, 2A2, 2A3 and 2A4 assemblies are good. Proceed to paragraph 5-9.c.

2120

Step 1. Set Test Set POWER ON/OFF switch to OFF.

Step 2. Remove and replace power supply and built-in test circuit assembly 2A4.

Step 3. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 4. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 5. Observe RESULT.

a. If RESULT displays 2120, go to step 6.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original power supply and built-in test circuit assembly 2A4. New 2A4 assembly is good. Proceed to paragraph 5-9.d.

Step 6. Set POWER ON/OFF switch to OFF.

Step 7. Remove and replace ohmmeter/setter assembly 2A2.

Step 8. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 9. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 10. Observe RESULT.

a. If RESULT displays 2120, go to step 11.

Table 5-8. Troubleshooting the Operation Unit (cont.)

MALFUNCTION (RESULT Display)
TEST OR INSPECTION
CORRECTIVE ACTION

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original ohmmeter/setter assembly 2A2. New 2A2 and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A4 assembly.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 2120, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original ohmmeter/setter assembly 2A2. New 2A2 and original 2A4 assemblies are good. Proceed to paragraph 5-9.c.

Step 11. Set POWER ON/OFF switch to OFF.

Step 12. Remove and replace sequencer and I/O assembly 2A3.

Step 13. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 14. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 15. Observe RESULT.

a. If RESULT displays 2120, go to step 16.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original sequencer and I/O assembly 2A3. New 2A2, 2A3 and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A2 and 2A4 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 2120, return to step 1.

Table 5-8. Troubleshooting the Operation Unit (cont.)

MALFUNCTION (RESULT Display)
TEST OR INSPECTION
CORRECTIVE ACTION

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original sequencer and I/O assembly 2A3. New 2A3 and original 2A2 and 2A4 assemblies are good. Proceed to paragraph 5-9.c.

Step 16. Set Test Set POWER ON/OFF switch to OFF.

Step 17. Remove and replace OU motherboard assembly.

Step 18. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 19. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 20. Observe RESULT.

a. If RESULT displays 2120, Test Set is faulty. Refer to TM 9-4933-227-13&P.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly, 2A2, 2A3 and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A2, 2A3 and 2A4 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 2120, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly and original 2A2, 2A3 and 2A4 assemblies are good. Proceed to paragraph 5-9.c.

3117

Step 1. Set Test Set POWER ON/OFF switch to OFF.

Step 2. Remove and replace fuze set/squid fire assembly 2A1.

Step 3. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 4. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 5. Observe RESULT.

Table 5-8. Troubleshooting the Operation Unit (cont.)

MALFUNCTION (RESULT Display) TEST OR INSPECTION CORRECTIVE ACTION

a. If RESULT displays 3117, go to step 6.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original fuze set/squid fire assembly 2A1. New 2A1 assembly is good. Proceed to paragraph 5-9.c.

Step 6. Set POWER ON/OFF switch to OFF.

Step 7. Remove and replace power supply and built-in circuit assembly 2A4.

Step 8. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 9. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 10. Observe RESULT.

a. If RESULT displays 3117, go to step 11.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original power supply and built-in test circuit assembly 2A4. New 2A1 and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A1 assembly.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 3117, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original power supply and built-in test circuit assembly 2A4. New 2A4 and original 2A1 assemblies are good. Proceed to paragraph 5-9.c.

Step 11. Set Test Set POWER ON/OFF switch to OFF.

Step 12. Remove and replace OU motherboard assembly.

Step 13. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 14. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 15. Observe RESULT.

Table 5-8. Troubleshooting the Operation Unit (cont.)

MALFUNCTION (RESULT Display)
TEST OR INSPECTION
CORRECTIVE ACTION

a. If RESULT displays 3117, Test Set is faulty. Refer to TM9-4933-227-13&P.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly, 2A1, and 2A2 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A1 and 2A2 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 3117, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions

(c) If RESULT displays 8838, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly and original 2A1 and 2A2 assemblies are good. Proceed to paragraph 5-9.c.

3118

Step 1. Remove and replace ohmmeter/setter assembly 2A2.

Step 2. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 3. On Test Set keyboard, enter C20E. 20. ENTERED TEST shall continue flashing

Step 4. Observe RESULT.

a. If RESULT displays 3118, go to step 5.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original ohmmeter/setter assembly 2A2. New 2A2 assembly is good. Proceed to paragraph 5-9.c.

Step 5. Set POWER ON/OFF switch to OFF.

Step 6. Remove and replace fuze set/squib fire assembly 2A1.

Step 7. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 8. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 9. Observe RESULT.

a. If RESULT displays 3118, go to step 10.

Table 5-8. Troubleshooting the Operation Unit (cont.)

MALFUNCTION (RESULT Display)
TEST OR INSPECTION
CORRECTIVE ACTION

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original fuze set/squib fire assembly 2A1. New 2A1 and 2A2 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A2 assembly.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 3118, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888 unit has passed the test. Fault was in original ohmmeter/setter assembly 2A1. New 2A1 and original 2A2 assemblies are good. Proceed to paragraph 5-9.c.

Step 10. Set Test Set POWER ON/OFF switch to OFF.

Step 11. Remove and replace OU motherboard assembly.

Step 12. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 13. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 14. Observe RESULT.

a. If RESULT displays 3118, Test Set is faulty. Refer to TM9-4933-227-13&P.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly, 2A1 and 2A2 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A1 and 2A2 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 3118, return to step 1.

Table 5-8. Troubleshooting the Operation Unit (cont.)

MALFUNCTION (RESULT Display)
TEST OR INSPECTION
CORRECTIVE ACTION

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly and original 2A1 and 2A2 assemblies are good. Proceed to paragraph 5-9.c.

3119

Step 1. Set Test Set POWER ON/OFF switch to OFF.

Step 2. Remove and replace sequencer and I/O assembly 2A3.

Step 3. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 4. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 5. Observe RESULT.

a. If RESULT displays 3119, go to step 6.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original sequencer and I/O assembly 2A3. New 2A3 assembly is good. Proceed to paragraph 5-9.c.

Step 6. Set POWER ON/OFF switch to OFF.

Step 7. Remove and replace fuze setter/squid fire assembly 2A1.

Step 8. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 9. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 10. Observe RESULT.

a. If RESULT displays 3119, go to step 11.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original fuze setter and I/O assembly 2A1. New 2A1 and 2A3 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A3 assembly.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 3119, return to step 1.

Table 5-8. Troubleshooting the Operation Unit (cont.)

MALFUNCTION (RESULT Display)
TEST OR INSPECTION
CORRECTIVE ACTION

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888 unit has passed the test. Fault was in original fuze setter/squid fire and built-in test assembly 2A1. New 2A1 and original 2A3 assemblies are good. Proceed to paragraph 5-9.c.

Step 11. Set POWER ON/OFF switch to OFF.

Step 12. Remove and replace ohmmeter/setter assembly 2A2.

Step 13. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 14. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 15. Observe RESULT.

a. If RESULT displays 3119, go to step 16.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8838, unit has passed the test. Fault was in original ohmmeter/setter assembly 2A2. New 2A1, 2A2 and 2A3 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A1 and 2A3 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light'

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 3119, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original ohmmeter/setter assembly 2A2. New 2A2 and original 2A1 and 2A3 assemblies are good. Proceed to paragraph 5-9.c.

Step 16. Set POWER ON/OFF switch to OFF.

Step 17. Remove and replace power supply and built-in test circuit assembly 2A4.

Step 18. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 19. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 20. Observe RESULT.

Table 5-8. Troubleshooting the Operation Unit (cont.)

MALFUNCTION (RESULT Display) TEST OR INSPECTION CORRECTIVE ACTION

a. If RESULT displays 3119, go to step 21.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original power supply and built-in test circuit assembly 2A4. New 2A1, 2A2, 2A3 and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A1, 2A2 and 2A3 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 3119, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original power supply and built-in test circuit assembly 2A4. New 2A4 and original 2A1, 2A2 and 2A3 assemblies are good. Proceed to paragraph 5-9.c.

Step 21. Set Test Set POWER ON/OFF switch to OFF.

Step 22. Remove and replace OU motherboard assembly.

Step 23. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 24. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 25. Observe RESULT.

a. If RESULT displays 3119, Test Set is faulty. Refer to TM9-4933-227-13&P.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly, 2A1, 2A2, 2A3 and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A1, 2A2, 2A3 and 2A4 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

Table 5-8. Troubleshooting the Operation Unit (cont.)

MALFUNCTION (RESULT Display)
TEST OR INSPECTION
CORRECTIVE ACTION

(a) If RESULT displays 3119, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly and original 2A1, 2A2, 2A3 and 2A4 assemblies are good. Proceed to paragraph 5-9.c.

3120

Step 1. Set Test Set POWER ON/OFF switch to OFF.

Step 2. Remove and replace power supply and built-in test circuit assembly 2A4.

Step 3. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 4. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 5. Observe RESULT.

a. If RESULT displays 3120, go to step 6.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original power supply and built-in test circuit assembly 2A4. New 2A4 assembly is good. Proceed to paragraph 5-9.c.

Step 6. Set POWER ON/OFF switch to OFF.

Step 7. Remove and replace fuze set/squib fire assembly 2A1.

Step 8. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 9. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 10. Observe RESULTS.

a. If RESULT displays 3120, go to step 11.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original fuze set/squib fire assembly 2A1. New 2A1 and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A4 assemblie

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 3120, return to step 1.

Table 5-8. Troubleshooting the Operation Unit (cont.)

MALFUNCTION (RESULT Display)
TEST OR INSPECTION
CORRECTIVE ACTION

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original fuze set/squib fire assembly 2A1. New 2A1 and original 2A4 assemblies are good. Proceed to paragraph 5-9.c.

Step 11. Set POWER ON/OFF switch to OFF.

Step 12. Remove and replace sequencer and I/O assembly 2A3.

Step 13. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 14. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 15. Observe RESULT.

a. If RESULT displays 3120, go to step 16.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original sequencer and 1/O assembly 2A3. New 2A1, 2A3 and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A1 and 2A4 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT

(a) If RESULT displays 3120, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original sequencer and I/O assembly 2A3. New 2A3 and original 2A1 and 2A4 assemblies are good. Proceed to paragraph 5-9.c.

Step 16. Set Test Set POWER ON/OFF switch to OFF.

Step 17. Remove and replace OU motherboard assembly.

Step 18. Set POWER ON/OFF switch to ON POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 19. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 20. Observe RESULT.

a. If RESULT displays 3120, Test Set is faulty. Refer to TM9-4933-227-13&P.

Table 5-8. Troubleshooting the Operation Unit (cont.)

MALFUNCTION (RESULT Display)
TEST OR INSPECTION
CORRECTIVE ACTION

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly, 2A1, 2A3 and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A1, 2A3 and 2A4 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 3120, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly and original 2A1, 2A3 and 2A4 assemblies are good. Proceed to paragraph 5-9.c.

4117

Step 1. Set POWER ON/OFF switch to OFF.

Step 2. Remove and replace fuze set/squib fire assembly 2A1.

Step 3. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 4. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 5. Observe RESULT.

a. If RESULT displays 4117, go to step 6.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original fuze set/squib fire assembly 2A1. New 2A1 assembly is good. Proceed to paragraph 5-9.c.

Step 6. Set Test Set POWER ON/OFF switch to OFF.

Step 7. Remove and replace OU motherboard assembly.

Step 8. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 9. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 10. Observe RESULT.

a. If RESULT displays 4117, Test Set is faulty. Refer to TM9-4933-227-13&P.

Table 5-8. Troubleshooting the Operation Unit (cont.)

MALFUNCTION (RESULT Display)
TEST OR INSPECTION
CORRECTIVE ACTION

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. assembly are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A1 assembly.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 4117, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly and original 2A1 assembly are good. Proceed to paragraph 5-9.c.

4119

Step 1. Set Test Set POWER ON/OFF switch to OFF.

Step 2. Remove and replace power supply and built-in test circuit assembly 2A4.

Step 3. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 4. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 21.

Step 5. Observe RESULT.

a. If RESULT displays 4119, go to step 6.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original power supply and built-in test circuit assembly 2A4. New 2A4 assembly is good. Proceed to paragraph 5-9.c.

Step 6. Set POWER ON/OFF switch to OFF.

Step 7. Remove and replace ohmmeter/setter assembly 2A2.

Step 8. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 9. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing

Step 10. Observe RESULT.

a. If RESULT displays 4119, go to step 11.

Table 5-8. Troubleshooting the Operation Unit (cont.)

MALFUNCTION (RESULT Display)
TEST OR INSPECTION
CORRECTIVE ACTION

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original ohmmeter/setter assembly 2A2. New 2A2 and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A4 assembly.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 4119, return to step 1,

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original power supply and built-in test circuit assembly 2A4. New 2A2 and original 2A4 assemblies are good. Proceed to paragraph 5-9.c.

Step 11. Set POWER ON/OFF switch to OFF.

Step 12. Remove and replace fuze set/squib fire assembly 2A1.

Step 13. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 14. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 15. Observe RESULT.

a. If RESULT display 4119, go to step 16.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original fuze set/squib fire assembly 2A1. New 2A1, 2A2 and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A2 and 2A4 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 4119, return to step 1.

Table 5-8. Troubleshooting the Operation Unit (cont.)

MALFUNCTION (RESULT Display)
TEST OR INSPECTION
CORRECTIVE ACTION

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original fuze set/squib fire assembly 2A1. New 2A1 and original 2A2 and 2A4 assemblies are good. Proceed to paragraph 5-9.c.

Step 16. Set POWER ON/OFF switch to OFF.

Step 17. Remove and replace sequencer and I/O assembly 2A3.

Step 18. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 19. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 20. Observe RESULT.

a. If RESULT displays 4119, go to step 21.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original sequencer I/O assembly 2A3. New 2A1, 2A2, 2A3 and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A1, 2A2 and 2A4 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 4119, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original sequencer and I/O assembly 2A3. New 2A3 and original 2A1, 2A2 and 2A4 assemblies are good. Proceed to paragraph 5-9.c.

Step 21. Set Test Set POWER ON/OFF switch to OFF.

Step 22. Remove and replace OU motherboard assembly.

Step 23. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 24. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 25. Observe RESULT.

Table 5-8. Troubleshooting the Operation Unit (cont.)

MALFUNCTION (RESULT Display)
TEST OR INSPECTION
CORRECTIVE ACTION

a. If RESULT displays 4119' Test Set is faulty. Refer to TM9-4933-227-13&P.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly, 2A1, 2A2, 2A3 and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A1, 2A2, 2A3 and 2A4 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON.. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 4119, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly, original 2A1, 2A2, 2A3 and 2A4 assemblies are good. Proceed to paragraph 5-9.c.

4120

Step 1. Set Test Set POWER ON/OFF switch to OFF.

Step 2. Remove and replace power supply and built-in test circuit assembly 2A4.

Step 3. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 4. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 5. Observe RESULT.

a. If RESULT displays 4120, go to step 6.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original power supply and built-in test circuit assembly 2A4. New 2A4 assembly is good. Proceed to paragraph 5-9.c.

Step 6. Set POWER ON/OFF switch to OFF.

Step 7. Remove and replace fuze set/squib fire assembly 2A1.

Step 8. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 9. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 10. Observe RESULT.

Table 5-8. Troubleshooting the Operation Unit (cont.)

MALFUNCTION (RESULT Display) TEST OR INSPECTION CORRECTIVE ACTION

a. If RESULT displays 4120, go to step 11.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original fuze set/squib fire assembly 2A1. New 2A1 and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A4 assembly.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 4120, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original fuze set/squib fire assembly 2A1. New 2A1 and original 2A4 assemblies are good Proceed to paragraph 5-9.c.

Step 11. Set POWER ON/OFF switch to OFF.

Step 12. Remove and replace sequencer and I/O assembly 2A3.

Step 13. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 14. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 15. Observe RESULT.

a. If RESULT displays 4120, go to step 16.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original sequencer and I/O assembly 2A3. New 2A1, 2A3 and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A1 and 2A4 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

Table 5-8. Troubleshooting the Operation Unit (cont.)

MALFUNCTION (RESULT Display)
TEST OR INSPECTION
CORRECTIVE ACTION

(a) If RESULT displays 4120, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original sequencer and I/O assembly 2A3. New 2A3 and original 2A1 and 2A4 assemblies are good. Proceed to paragraph 5-9.c.

Step 16. Set Test Set POWER ON/OFF switch to OFF.

Step 17. Remove and replace OU motherboard assembly.

Step 18. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 19. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 20. Observe RESULT.

a. If RESULT displays 4120, Test Set is faulty. Refer to TM9-4933-227-13&P.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly, 2A1, 2A3 and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A1, 2A3 and 2A4 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 4120, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly and original 2A1, 2A3 and 2A4 assemblies are good. Proceed to paragraph 5-9.c.

5120

Step 1. Set Test Set POWER ON/OFF switch to OFF.

Step 2. Remove and replace power supply and built-in test circuit assembly 2A4.

Step 3. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 4. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Table 5-8. Troubleshooting the Operation Unit (cont.)

MALFUNCTION (RESULT Display) TEST OR INSPECTION CORRECTIVE ACTION

Step 5. Observe RESULT.

a. If RESULT displays 5120, go to step 6.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original power supply and built-in test circuit assembly 2A4. New 2A4 assembly is good. Proceed to paragraph 5-9.c.

Step 6. Set POWER ON/OFF switch to OFF.

Step 7. Remove and replace ohmmeter/setter assembly 2A2.

Step 8. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 9. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 10. Observe RESULT.

a. If RESULT displays 5120, go to step 11.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original ohmmeter/setter assembly 2A2. New 2A2 and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A4 assembly.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 5120, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original ohmmeter/setter assembly 2A2. New 2A2 and original 2A4 assemblies are good. Proceed to paragraph 5-9.c.

Step 11. Set POWER ON/OFF switch to OFF.

Step 12. Remove and replace fuze set/squib fire assembly 2A1.

Step 13. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION (RESULT Display Code) column and follow instructions.

Step 14. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 15. Observe RESULT.

Table 5-8. Troubleshooting the Operation Unit (cont.)

MALFUNCTION (RESULT Display) TEST OR INSPECTION CORRECTIVE ACTION

a. If RESULT displays 5120, go to step 16.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original fuze set/squib fire assembly 2A1. New 2A1, 2A2 and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A2 and 2A4 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 5120, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original ohmmeter/fuze set/squib fire assembly 2A1. New 2A1 and original 2A2 and 2A4 assemblies are good. Proceed to paragraph 5-9.c.

Step 16. Set POWER ON/OFF switch to OFF.

Step 17. Remove and replace sequencer and I/O assembly 2A3.

Step 18. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 19. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 20. Observe RESULT.

a. If RESULT displays 5120, go to step 21.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original sequencer and I/O assembly 2A3. New 2A1, 2A2, 2A3 and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A1, 2A2 and 2A4 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

Table 5-8. Troubleshooting the Operation Unit (cont.)

MALFUNCTION (RESULT Display)
TEST OR INSPECTION
CORRECTIVE ACTION

(a) If RESULT displays 5120, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original sequencer and I/O assembly 2A5. New 2A3 and original 2A1, 2A2 and 2A4 assemblies are good. Proceed to paragraph 5-9.c.

Step 21. Set Test Set POWER ON/OFF switch to OFF.

Step 22. Remove and replace OU motherboard assembly.

Step 23. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 24. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 25. Observe RESULT.

a. If RESULT displays 5120, Test Set is faulty. Refer to TM9-4933-227-13&P.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly 2A1, 2A2, 2A3 and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A1, 2A2, 2A3 and 2A4 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 5120, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly and original 2A1, 2A2, 2A3 and 2A4 assemblies are good. Proceed to paragraph 5-9.c.

6120

Step 1. Set Test Set POWER ON/OFF switch to OFF.

Step 2. Remove and replace power supply and built-in test circuit assembly 2A4.

Step 3. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 4. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 5. Observe RESULT.

Table 5-8. Troubleshooting the Operation Unit (cont.)

MALFUNCTION (RESULT Display) TEST OR INSPECTION CORRECTIVE ACTION

a. If RESULT displays 6120, to to step 6.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original power supply and built-in test circuit assembly 2A4. New 2A4 assembly is good. Proceed to paragraph 5-9.d.

Step 6. Set POWER ON/OFF switch to OFF.

Step 7. Remove and replace fuze set/squib fire assembly 2A1.

Step 8. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 9. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 10. Observe RESULT.

a. If RESULT displays 6120, go to step 11.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original fuze set/squib fire assembly 2A1. New 2A1 and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A4 assembly.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light,

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 6120, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original fuze set/squib fire assembly 2A1. New 2A1 and original 2A4 assemblies are good. Proceed to paragraph 5-9.c.

Step 11. Set POWER ON/OFF switch to OFF.

Step 12. Remove and replace sequencer and I/O assembly 2A3.

Step 13. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 14. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 15. Observe RESULT.

Table 5-8. Troubleshooting the Operation Unit (cont.)

MALFUNCTION (RESULT Display)
TEST OR INSPECTION
CORRECTIVE ACTION

a. If RESULT displays 6120, go to step 16.

b. If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original sequencer and I/O assembly 2A3. New 2A3 and 2A1 and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A1 and 2A4 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

(a) If RESULT displays 6120, return to step 1.

(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.

(c) If RESULT displays 8888, unit has passed the test. Fault was in original sequencer and I/O assembly 2A3, New 2A3 and original 2A1 and 2A4 assemblies are good. Proceed to paragraph 5-9.c.

Step 16. Set Test Set POWER ON/OFF switch to OFF.

Step 17. Remove and replace OU motherboard assembly.

Step 18. Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

Step 19. On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

Step 20. Observe RESULT.

a. If RESULT displays 6120, Test Set is faulty. Refer to TM9-4933-227-13&P.

b. If RESULT displays any other malfunction code, find the code in the MALFUNCTION (RESULT Display Code) column and follow instructions.

c. If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly, 2A1, 2A3 and 2A4 assemblies are good.

(1) Set Test Set POWER ON/OFF switch to OFF.

(2) Reinstall original 2A1, 2A3 and 2A4 assemblies.

(3) Set Test Set POWER ON/OFF switch to ON. POWER lamp shall light and remain lit. MALFUNCTION lamp shall not light.

(4) On Test Set keyboard, enter C20E. ENTERED TEST shall continue flashing 20.

(5) Observe RESULT.

Table 5-8. Troubleshooting the Operation Unit (cont.)

MALFUNCTION (RESULT Display) TEST OR INSPECTION CORRECTIVE ACTION
(a) If RESULT displays 6120, return to step 1.
(b) If RESULT displays any other malfunction code, find the code number in the MALFUNCTION (RESULT Display Code) column and follow instructions.
(c) If RESULT displays 8888, unit has passed the test. Fault was in original motherboard assembly. New motherboard assembly and original 2A1, 2A3 and 2A4 assemblies are good. Proceed to paragraph 5-9.c.

SECTION IV-GENERAL MAINTENANCE

5-10. General Maintenance Practices. The troubleshooting procedures of Section III will direct you to remove and replace specific circuit assemblies in the Display Unit or the Operations Unit. You will find specific removal and replacement instructions in Section V. In addition to the tools needed for removal and replacement of circuit assemblies, you will need the expendable supplies and materials listed in table F-1.

a. *Clean Outside of Units.*

(1) Use brush (18, table F-1) to remove loose dirt and dust from unit.

CAUTION

Do not use solvent on front panel of Display Unit. Cleaner will dissolve plastic panel.

(2) Use cloth moistened with alcohol (20, table F-1) to remove hardened or greasy substances from unit surface other than the plastic front panel.

b. *Clean Connectors* Use a brush to remove dust and dirt from connectors, inserts, insulators, and contacts.

c. Clean Circuit Assemblies Brush soiled areas of circuit board with brush until all foreign ma tter is removed.

d. Use of *Sealant.* Sealant (7, table F-1) is used on screw threads before assembly to keep screws from loosening under vibration. Sealant is anerobic, that is it hardens in the absence of air. You should not apply it as if it were glue or lacquer. A very small amount is all you need for each screw. Excess sealant will flow and may find its way into places where it can cause excessive binding.

SECTION V-REMOVAL AND REPLACEMENT OF MAJOR COMPONENTS AND AUXILIARIES.

5-11. General,

a. The following paragraphs give instructions for removal and replacement of the shop-replaceable assemblies of the Display Unit and of the Operations Unit. General maintenance practices are provided in Section IV. The troubleshooting procedures of Section III will direct you to the assemblies to be replaced. You should carry disassembly of a unit only as far as necessary to remove the indicated assembly

b. After any assemblies have been replaced, the Unit should be checked out on the M135 Test Set.

CAUTION

When handling circuit assemblies that contain microcircuits, do not touch connector pins or other circuit points. Static electricity charges on your body can damage some microcircuits.

Always place circuit assemblies immediately into the CONDUCTIVE plastic bags the replacement assemblies are shipped in. Do not use non-conductive plastic bags, these do not protect the circuit assemblies from static electricity damage. If replacement assembly is provided with conductive foam on the connector, place this foam on the connector of the assembly you are replacing before you put the assembly in the plastic bag.

When removing and installing circuit assemblies, align them with their respective card guides and move them straight into or out of the unit. Apply gentle but firm pressure evenly to the assemblies.

Figure 5-8 deleted.

5-12. Removal of Display Unit Assemblies. To remove any of the Display Unit assemblies you must first remove the cover. The plug-in circuit assemblies, power supply 1PS1 and the control assembly may each be removed without removing any of the others. During the following procedures, refer to figure E-2.

a. *Remove Cover.* Remove 14 flat head screws, (1, figure E-2) that hold cover (2) to unit. Lift cover from unit.

b. *Remove Plug-in Circuit Assemblies 1A1 1A2, 1A3, 1A4, or 1A5* Each plug-in circuit assembly may be removed without removing any of the others.

CAUTION

Do not grasp control panel interface assembly 1A1 by the interconnecting wiring. You might damage the wiring,

NOTE

Control panel interface 1A1 is a two-board assembly and is removed as an assembly.

(1) Simultaneously turn counterclockwise two jackscrews that hold the plug-in circuit assembly to the unit chassis.

(2) If jackscrews cannot be turned simultaneously, alternately turn each of the two jackscrews two or three turns counterclockwise until both screws are disengaged.

(3) Slide circuit assembly straight out of the unit.

c. Remove Power Supply 1PS1.

(1) Remove 12 screws (1, figure E-2) that hold power supply (15) to unit chassis.

(2) Remove four screws (12) that hold connector J1 to power supply heatsink.

(3) Slide power supply part of the way out of the chassis. Do not force power supply. Refer to figure 5-9.

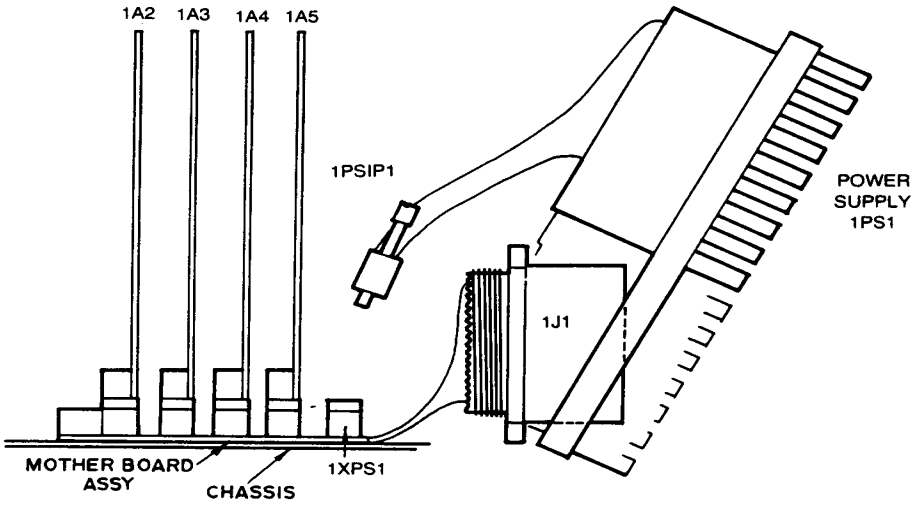


Figure 5-9. Installing Power Supply 1PS1 in Chassis

(4) Alternately loosen two jackscrews that hold connector 1PS1P1 to its mating connector on the motherboard. Turn each screw two or three turns at a time until both are disengaged. Separate the connectors.

(5) Roll power supply up and out of chassis. You will have to wiggle the power supply and connector 1J1 so the locking pins of lJ1 will clear the large hole in the heatsink.

d. *Remove RND REM* Display

(1) Alternately loosen two jackscrews located on the face of the RND REM display under ZONE 2 INVENTORY thumbwheel switch and ZONE 4 INVENTORY thumbwheel switch (figure 2-7). These two screws jack the RND REM display assembly from the DU connector and must be loosened evenly.

(2) Remove the RND REM display assembly (44, figure E-11) from the front of the DU.

e. *Remove Edge-Lighted Panel Assembly*

(1) Remove four screws (8, figure E-2) that hold the panel (5) to the face of the Display Unit.

(2) Remove four 0-rings (6) and four flat washers (7).

(3) Grasp the top and bottom edges of the plastic panel with your hand and gently wiggle alternately the top and bottom edges to pull the panel straight out and over the DU TEST pushbutton switch.

f. *Remove Control Assembly.*

(1) Turn unit over and remove five flat head screws that hold control assembly (4, figure E-2) to chassis.

(2) Set unit right side up and remove from each side four flat head screws that hold control assembly to chassis.

(3) Grasp control assembly in one hand so that your fingers are at the bottom edge of the panel and your thumb is at the top edge. Gently rock the control assembly up and down while pulling it out of the chassis.

5-13. Replacement of Display Unit Assemblies. In the following paragraphs you will find instructions for a buildup of the Display Unit. If you are replacing a plug-in circuit assembly, the control assembly, or power supply 1PS1., follow the instructions in the appropriate paragraphs. During the following procedures, refer to figure E-2, or as stated.

g. Deleted

h. Deleted

i. Remove DU Motherboard Assembly

(1) Remove plug-in circuit assemblies 1A1, 1A2, 1A3, 1A4, and 1A5.

(2) Remove power supply 1PS1

(3) Remove control assembly and edgelighted panel assembly as one unit.

(4) Remove eight screws (2, figure E-12) and flat washers (3) that hold left (1) and right (14) card guide-assemblies to chassis. Lift card guide assemblies out of chassis.

(5) Remove two cap screws (5), one nut (6). and three flat washers (3) that hold motherboard assembly (8) to chassis.

(6) Raise rear end of motherboard assembly so it is clear of stud and spacer (10). Withdraw motherboard assembly from chassis (9). You might have to wiggle the motherboard assembly to free gasket (7) from chassis,

(7) Lift spacer (10) from stud.

5-13. Replacement of Display Unit Assemblies.

CAUTION

In the following procedures, do not apply too much sealant to the screws. Excess sealant will creep and may find its way to a place where it could cause undesired binding.

NOTE

By placing a drop of sealant on your workbench surface, then dipping the end of the screw in the sealant, you will get just the right amount of sealant on the screw.

a. Install DU Motherboard Assembly

(1) Inspect gasket (7, figure E-12) and replace, if necessary.

(2) Set spacer (10) over stud in chassis (9).

(3) Raise rear end of motherboard assembly and pass it into the chassis so that connector on front end of motherboard assembly extends into rectangular opening in bulkhead (12). When assembly is fully inserted into chassis, lower rear end so that stud passes through mounting hold in connector 1XPS1 and assembly is seated on spacer (10).

(4) Apply a small amount of sealant (7, table F-1) to ends of two cap screws (5) and install screws, three washers (3) and one self-locking nut (6).

(5) Set left card guide assembly (1) the display assembly into its connector and in place and secure it with four screws (2) must be tightened evenly. and flat washers (3). Apply a small amount of sealant to end of each screw before inserting it.

(6) Repeat step (5) for right card guide assembly (14).

(7) Install power supply lPSl.

(8) Install control assembly and edge-lighted panel assembly.

(9) Install plug-in circuit assemblies lAl, 1A2, 1A3, 1A4, and 1A5.

b. *Install Control Assembly*

(1) Set replacement control assembly in chassis (figure E-2) and slide it toward rear, being sure its connector lines up with the mating connector on the motherboard assembly (figure E-13).

(2) Gently press control assembly into chassis until backplate is seated against sides of chassis.

(3) Secure control assembly to chassis with 13 flat head screws (1, figure E-2) removed in 5-12.g.

c. Install Edge-Lighted Panel Assembly

(1) Locate the connector on the back surface of the panel and the mating connector at front of the Display Unit.

(2) Locate the "+" to the right of the digital display on the Display Unit, between RND and ZONE (See figure 2-2).

(3) Align the connectors and gently mate the panel with the unit, passing the TEST switch aperture over the DU TEST pushbutton switch.

(4) Press on the "+" with one finger and press on the opposite side of the panel with another finger so that the panel is properly seated.

(5) Insert four 0-rings (6, figure E-2) in screw openings of panel.

(6) Secure panel to control assembly with four screws (8) and flat washers (7).

d. *Install RND REM Display*

(1) Place the RND REM display assembly, (44, figure E-ll) in the cavity of the DU. Mounting supports are positioned so that the assembly will only mate the proper way.

(2) Alternately tighten the two captive jack screws on the face of the RND REM display under ZONE 2 INVENTORY thumbwheel switch and ZONE 4 INVENTORY thumbwneel switch (figure 2-7). These two screws jack

e. Deleted

f. Deleted

g. *Install Power Supply 1PS1.*

NOTE

You cannot tell the condition of a replacement power supply by examining the equipment status indicator. Indicators on good power supplies may or may not show white. Indicators show the condition of fully assembled Display Units that have had power applied.

(1) Inspect gasket (11, figure E-2), replace if necessary. Check that gasket is in place and oriented with respect to connector screw holes.

(2) Position the replacement power supply to the rear of the chassis as shown in figure 5-9.

(3) Roll power supply into chassis in such a way that power supply connector 1PS1P1 passes behind unit connector J1 to reach its mating connector on the motherboard assembly.

(4) Engage 1PS1P1 in its mating connector and tighten its jackscrews. A1ternately turn each jackscrew two or three turns until the connector is firmly seated.

(5) Align unit connector lJ1 with large hole in power supply heatsink and slide power supply into chassis. Wiggle the connector as needed so the connector locking pins can pass -hru the heatsink hole.

(6) Pass four screws (12, figure E-2) (removed in step 5-12.c.) thru the smaller holes in the heatsink and start them into the threaded holes of the connector.

(7) Seat power supply in chassis and secure it with the twelve flat head screws (1) removed in 5-12.c.(1).

(8) Remove one of the screws started in (6), apply a very small amount of sealant (7, table F-1) to the threads, and screw it back into its hole.

(9) Repeat (8) for each of the three remaining screws, one at a time. When all four screws are reinstalled, tighten them.

h. *Install Plug-in Circuit Assemblies 1A1, 1A2, 1A3, 1A4, or 1A5.*

(1) Compare part number of replacement circuit assembly with the listing in Appendix E for group 01, and with figure E-2 to be sure you are installing the assembly in its correct location.

(2) Face the replacement assembly as shown in figure E-2 and slide it into the card guides of the unit chassis.

NOTE

If all plug-in circuit assemblies are out of the chassis, you may have to gently spread the card guide assemblies away from each other in order to start the first circuit assembly into the guides.

CAUTION

In the next step, do not force the jackscrews. Insertion force should be about the same as was needed to remove the old assembly. Excessive force indicates a misfit that could damage the circuit assembly or its mating connector.

(3) Simultaneously engage and tighten two jackscrews that hold the assembly to the chassis. If jackscrews cannot be turned simultaneously, alternately turn each of the jackscrews two or three turns clockwise until both screws are tight.

(4) Repeat (1) thru (3) for each replacement circuit assembly.

i. Replace Cover.

(1) Check that EMI/RFI gasket (3, figure E-2) is in place and shows no sign of damage.

(2) Set cover in place as shown in figure E-2 and secure it with 15 flat head screws (1).

j. Check Out Display Unit. After reassembly of Display Unit, check it out by performing the troubleshooting procedures described in paragraph 5-8.

5-14. Removal of Operations Unit Assemblies. To remove any of the plug-in circuit assemblies, you must first remove the unit cover.

During the following procedures, refer to figure E-14.

a. *Remove Cover.*

(1) Remove 14 screws (3, figure E-14) and flat washers (4) that hold cover (2) to Unit.

(2) Lift cover straight up.

b. *Remove Plug-in Circuit Assemblies 2A1 2A2 2A3 or 2A4.* Each plug-in circult assembly may be removed without removing any of the others.

(1) If circuit assembly 2A4 (11, figure E-14) is to be removed, remove two flat head screws (12).

(2) Simultaneously turn counterclockwise two jackscrews that hold the plug-in circuit assembly to the Unit.

(3) If jackscrews cannot be turned simultaneously, alternately turn each of the jackscrews two or three turns counterclockwise until both screws are disengaged.

(4) Slide circuit assembly straight out of the unit.

c. Remove OU Motherboard assembly

(1) Remove plug-in circuit assemblies 2A1, 2A2, 2A3, and 2A4.

(2) Remove eight screws (1, figure E-20) and flat washers (2) that hold right (3) and left (7) card guide assemblies to OU subassembly.

(3) Remove four screws (12) and flat washers (11).

(4) Remove four screws (5).

(5) Lift motherboard assembly (4) from baseplate assembly (6).

5-15. Replacement of Operations Unit Assemblies. In the following paragraphs you will find instructions for a buildup of the Operations Unit.

a. *Install Operations Unit Subassembly.*

CAUTION

In the following procedures, do not apply too much sealant to the screws. Excess sealant will creep and may find its way to a place where it could cause undesired binding.

NOTE

By placing a drop of sealant on your workbench surface, then dipping the end of the screw in the sealant, you will get just the right amount of sealant on the screw.

(1) Set motherboard assembly (4) in place in baseplate assembly (6).

(2) Apply a small amount of sealant (7, table F-1) to the ends of four screws (5, figure E-20) and install them.

(3) Apply a small amount of sealant to the ends of four screws (12) and install screws with flat washers (11). Be sure washers are seated between raised portions of connectors.

(4) Set right card guide assembly (3) in place and secure it with four screws (1) and flat washers (2). Apply a small amount of sealant to end of each screw before inserting it.

(5) Repeat step (4) for left card guide assembly (7).

(6) Install plug-in circuit assemblies 2A1, 2A2, 2A3, and 2A4.

b. *Install! PLug-in Circuit Assemblies 2A1, 2A2, 2A3, or 2A4.*

(1) Compare part number of replacement circuit assembly with the listing in figure E-14 to be sure you are installing the assembly in its correct location.

NOTE

If all four plug-in circuit assemblies are out of the chassis, you may have to gently spread the card guide assemblies away from each other in order to start the first circuit assembly into the guides.

(2) Face the replacement assembly as shown in figure E-14 and slide it into the card guides.

CAUTION

In the next step, do not force the jackscrews. Insertion force should be about the same as was needed to remove the old assembly. Excessive force indicates a misfit that could damage the circuit assembly or its mating connector.

(3) Simultaneously engage and tighten jackscrews that hold the assembly to the chassis. If jackscrews cannot be turned simultaneously, alternately turn each of the jackscrews two or three turns clockwise until both screws are tight.

(4) Repeat (1) thru (3) above for each replacement circuit assembly.

(5) If removed in 5-14.b.(1), install and tighten two flat head screws (12, figure E-14) that hold circuit assembly 2A4 to OU base.

c. Replace Cover.

(1) Check that EMI/RFI gasket (10, figure E-14) is in place on unit base and shows no sign of damage.

(2) Set cover in place and secure it to base with 14 screws (3) and flat washers (4).

d. *Check Out Operations Unit*. After reassembly or Operations Unit, check it out by performing the troubleshooting procedure described in paragraph 5-9.

CHAPTER 6
REPAIR OF THE ROCKET MANAGEMENT SUBSYSTEM

Repair of the Rocket Management Subsystem consists of removal and replacement of faulty shop-replaceable assemblies. Refer to Chapter 5 for troubleshooting, removal, and replacement instructions.

CHAPTER 7
MAINTENANCE OF AUXILLIARY EQUIPMENT

Technical manuals containing maintenance instructions for the rocket launchers are listed in Appendix A.

CHAPTER 8
FINAL INSPECTION

8-1. General.

After repairs have been made to the Subsystem, units, they should be physically inspected and functionally tested before they are returned to stock or sent to a using organization.

8-2. Physical Inspection.

a. Inspect the plastic front panel of the Display Unit for cracks or scratches. Be sure it is securely attached to the Unit.

b. Inspect the units for cleanliness, for corrosion, for nicks, dents, or scratches and for other signs of' damage.

c. Inspect the unit connectors for bent pins or other damage.

d. Check that all screws and bolts that hold covers on are tight.

e. Be sure TEST switch knob is in place on Display Unit.

f. Check all switches for free operation.

8-3. Performance Test.

Connect the repaired unit to the M135 Test Set and check it out as described in Chapter 5. Unit shall pass all tests with no indications of trouble.

APPENDIX A - REFERENCES

A-1. Supply Catalogs.

The following Department of the Army Supply Publications pertain to repair of this material:

Brushes, Paints, Sealers, and Adhesives	C8000-IL-A
Miscellaneous Chemical Specialities	C6800-IL
Miscellaneous Hardware	C5340-IL-A, Vol. 1,2,&3
Tool Set, Aircraft Armament Repairman: Basic (4933-987-9816)	SC9433-95-CL-A13
Tool Set, Aircraft Armament Repairman; Supplemental (4933-994-9242)	SC4933-95-CL-A14

A-2. Other Publications.

a. *General.*

Functional Users Manual for the Army Maintenance Management System Aviation (TAMNS-A)	DA PAM 738-751
Procedures for Destruction of Electronics Material to Prevent Enemy Use	TM 750-244-2

b. *Maintenance.*

Aviation Unit and Intermediate Maintenance Instructions Army Model AH-1S Helicopter	TM55-1520-236-23
Aviation Unit and Intermediate Maintenance Instructions Army Model AH-1S Helicopter	TM55-1520-239-23
Operator's Organizational, Direct Support and General Support Maintenance Manual for Power Supply, Hydraulic/Electric, Portable	TM9-4933-211-14
Operator's Aviation Unit, and Intermediate Maintenance Manual with Repair Parts and Special Tools List (Including Depot Maintenance Repair Parts and Special Tools) for Test Set. Rocket Management Sub-system, M135	TM9-4933-227-13&P

c. *Shipment and Storage.*

Administrative Storage of Equipment	TM 740-90-1

APPENDIX B
COMPONENTS OF END ITEM LIST

Section I. INTRODUCTION

B-1. Scope.

This appendix lists integral components of and basic issue items for the Rocket Management Subsystem to help you inventory items required for safe and efficient operation.

B-2. General.

This Components of End Item List is divided into the following sections:

a. *Section II. Integral Components of the End Item.* These items, when assembled, comprise the Rocket Management Subsystem and must accompany it whenever it is transferred or turned in. The illustrations will help you identify these items.

b. *Section III. Basic Issue Items.* These are the minimum essential items required to place the Rocket Management Subsystem in operation, to operate it, and to perform emergency repairs. Although shipped separately packed, they must accompany the Rocket Management Subsystem during operation and whenever it is transferred between accountable officers. The illustrations will assist you with hard-to-identify items. This manual is your authority to requisition replacement BII, based on TOE/MTOE authorization of the end item.

B-3. Explanation of Columns.

a. *Illustration.* This column is divided as follows:

(1) *Figure Number.* Indicates the figure number of the illustration on which the item is shown.

(2) *Item Number.* The number used to identify an item called out in the illustration.

b. *National Stock Number.* Indicates the National stock number assigned to the item and which will be used for requisitioning.

c. *Part Number.* Indicates the primary number used by the manufacturer which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards, and inspection requirements to identify an item or range of items.

d. *Description.* Indicates the Federal item name and, if required, a minimum description to identify the item.

e. *Location.* The physical location of each item listed is given in this column. The lists are designed to inventory all items in one area of the major item before moving on to an adjacent area.

f. *Usable on Code.* "USABLE ON" codes are included to help you identify which component items are used on the different models. There is only one model of the Rocket Management Subsystem.

g. *Quantity Required (Qty Reqd).* This column lists the quantity of each item required for a complete major item.

h. *Quantity.* This column is left blank for use during an inventory, Under the Rec'd column, list the quantity you actually receive of your major item. The Date columns are for your use when you inventory the major item at a later date, such as for shipment to another site.

Section II. INTEGRAL COMPONENTS OF END ITEM

(1) ILLUSTRATION (a) FIGURE NO	(1) ILLUSTRATION (b) ITEM NO	(2) NATIONAL STOCK NUMBER	(3) PART NO	(4) DESCRIPTION	(5) LOCATION	(6) USABLE ON CODE	(7) QTY REQD	(8) QUANTITY RCVD	(8) QUANTITY DATE	(8) QUANTITY DATE	(8) QUANTITY DATE
1-3			12011866	Display Unit	Cockpit Pilot's Control Panel		1				
1-4			9324108-002	Operations Unit	Leading Edge of Wings (See Figure 1-2)		4				

APPENDIX C
ADDITIONAL AUTHORIZATION LIST

Not Applicable

APPENDIX D
MAINTENANCE ALLOCATION CHART

Section I. INTRODUCTION

D-1. General.

a. This section provides a general explanation of all maintenance and repair functions authorized at various maintenance levels.

b. The Maintenance Allocation Chart (MAC) in Section II designates overall responsibility for the performance of maintenance functions on the Rocket Management Subsystem. The implementation of the maintenance functions upon the Rocket Management Subsystem will be consistent with the assigned maintenance functions.

c. Section III lists the special tools and test equipment required for each maintenance function as referenced from Section II.

d. Section IV contains supplemental instructions or explanatory notes for a particular maintenance function.

D-2. Maintenance Functions.

a. *Inspect.* To determine the serviceability of an item by comparing its physical and mechanical characteristics with established standards through examination.

b. *Test.* To verify serviceability and detect incipient failure by measuring the mechanical or electrical characteristics of an item and comparing those characteristics with prescribed standards.

c. *Service.* Operations required periodically to keep an item in proper operating condition, i. e., to clean (decontaminate), to preserve, to drain to paint, or to replenish fuel, lubricants hydraulic fluids, or compressed air supplies.

d. *Adjust.* To maintain within prescribed limits by bringing into proper or exact position or by setting the operating characteristics to specified parameters.

e. *Align.* To adjust specified variable elements of an item to bring about optimum or desired performance.

f. *Calibrate. To* determine and cause corrections to be made on instruments or test measuring and diagnostic equipment used in precision measurement. Consists of comparisions *of* two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.

g. *Install.* The act of emplacing, seating, or fixing into position an item, part, or module (component or assembly) in a manner to allow the proper functioning *of* an equipment or system.

h. *Replace.* The act of substituting a serviceable like type part, subassembly or module (component or assembly) *for* an unserviceable counterpart.

i. *Repair.* The application of maintenance services (inspect, test, adjust, align, calibrate, or replace) or other maintenance actions (welding, grinding, riveting, straightening, facing, remachine-ing, or resurfacing) to restore serviceability to an item by correcting specific damage fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

j. *Overhaul.* The maintenance effort (services/actions) necessary to restore an item to a completely serviceable/operational condition as prescribed by maintenance standards (i.e. Depot Maintenance Work Requirement) in appropriate technical publications. Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like new condition.

k. *Rebuild.* Consists of those services/actions necessary for the restoration of unserviceable equipment to a like-new condition in accordance with original manufacturing standards. Rebuild is the highest degree of material maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (hours/miles etc.) considered in classifying Army equipment/components.

D-3. Explanation of Columns in MAC, Section II.

a. *Column 1, Group Number.* Column 1 lists group numbers, the purpose of which is to identify components, assemblies, subassemblies, and modules with next higher assembly.

b. *Column 2, Component/Assembly.* Column 2 contains the names of components assemblies, subassemblies, and modules for which maintenance is authorized.

c. *Column 3. Maintenance Functions.* Column 3 lists the functions to be performed on the item listed in column 2. (For detailed explanation of these functions, see D-2.)

d. *Column 4. Maintenance Category.* Column 4 specifies, by the listing of a "work time" figure in the appropriate subcolumns, the lowest level of maintenance authorized to perform the function listed in column 3. This figure represents the active time required to perform the maintenance function at the indicated level of maintenance. Where the number or complexity of the tasks within the listed maintenance function vary at different maintenance levels, appropriate "work time" figures are shown for each level. The number of manhours specified by the "work time" figure represents the average time required to restore an item (assembly subassembly component, module, end item, or system) to a serviceable condition under typical field operating conditions. This time includes preparation time, troubleshooting time, and quality assurance/quality control time in addition to the time required to perform the specific task identified for the maintenance functions authorized in the maintenance allocation chart. The symbol designations for the various maintenance levels are as follows:

C	Operator or crew.
O	Aviation Unit Maintenance.
F	Aviation Intermediate Maintenance.
D	Depot Maintenance.

e. *Column 5. Tools and Equipment.* Column 5 specifies by code, those common tool sets (not individual tools) and special tools, TMDE, and support equipment required to perform the designated function.

f. *Column 6. Remarks.* This column contains a letter code keyed to the remarks contained in Section IV.

D-4. Explanation of Columns in Tool and Test Equipment Requirements. Section III.

a. *Column 1. Reference Code.* The tool and TMDE reference code correlates with a code used in the MAC, Section II, Column 5.

b. *Column 2. Maintenance Level.* The lowest level of maintenance authorized to use the tool or test equipment.

c. *Column 3. Nomenclature.* Name or identification of the tool or test equipment.

d. *Column 4. National Stock Number.* The National stock number of the tool or TMDE.

e. *Column 5. Tool Part Number.* The manufacturer’s part number.

D-5. Explanation of Columns in Remarks Section IV.

a. *Reference Code.* The code recorded in column 6, Section II.

b. *Remarks.* This column lists information pertinent to the maintenance function being performed as indicated in the MAC, Section II.

Section II. MAINTENANCE ALLOCATION CHART

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY			(5) TOOLS AND EQUIP	(6) REMARKS
			AVUM	AVIM	DEPOT		
00	Rocket Management	Inspect	0.1			2	
	Subsystem, Inventory	Test	0.05				B
	Deployment: XM147	Install	1.0			2	
		Replace	1.3			2	
		Repair	0.5			2	
		Overhaul			20.0	1,2,3,4,5,10,12	A
01	Display Unit,	Inspect	0.01				
	Unit	Test	0.05	0.5		1,4,11,12	B,G
		Install	0.1			2	
		Replace	0.15			2	
		Repair	0.05	1.0	1 5	2	E
		Overhaul			4.0	1,2,3,4,5,10,12	A
0101	Control Panel	Inspect		0.1		2	C
	Interface, A1	Test		0.5		1,4,12	D
		Install		0.1		2	
		Replace		0.1		2	
		Repair			1.0	1,2,3,4,5,10,12	A
		Overhaul			1.0	1 2 3 4 5 10 12	A
010101	Control Panel Inter-	Inspect		0.1		2	C
&	face Subassembly	Test		0.5		1,4,12	D
010102	A & B	Install			0 5	2 3	A
		Replace			0 5	2 3	A
		Repair			1.0	1,2,3,4,5,10,12	A
		Overhaul			1.0	1,2,3,4,5,10,12	A
0102	Circuit Card	Inspect		0.1		2	C
Thru	Assemblies A2, A3,	Test		0.5		1,4,12	D
0105	A4 & A5	Install		0.1		2	
		Replace		0.1		2	
		Repair			2.0	1 2,3,4,5,10,12	A
		Overhaul			2.0	1 2.3,4.5,10,12	A
0106	Power Supply, PS1	Inspect		0.1		2	C
		Test		0.5		1.4,12	D
		Install		0.2		2	
		Replace		0.2		2	
		Repair		2.5		1 2 3 4,5;1O,12	A,F
		Overhaul		2.5		1 2 3 4,5,10,12	A,F
0107	Control Assembly	Inspect	0.05				D
		Test	0.05	0.5		1,4.12	D
		Install		0 2		2	
		Replace		0 2		2	
		Repair	0.05		1.0	2	E
		0verhaul			1.0	1.2.3,4,5,10,12	A
0108	Chassis Assembly	Inspect		0.1		2	C
		Test		0.5		1,4,12	D
		Install		0.5		2	
		Replace		0.5		2	
		Repair			0.7	2	
		0verhaul			0.7	2,3,5	A

Section II. MAINTENANCE ALLOCATION CHART

(1) GROUP NUMBER	(2) COMPONENT / ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY			(5) TOOLS AND EQUIP	(6) REMARKS
			AVUM	AVIM	DEPOT		
010801	DU Motherboard	Inspect		0.1		2	C
	Assembly	Test		0 5		1,4,12	D
		Install			0.2	2	
		Replace			0.2	2	
		Repair			0.5	2 10	
		Overhaul			0.5	2 3,5,10	A
02	Operations Unit,	Inspect	0.05			2	
	Unit 2, 3, 4 & 5	Test	0.05	0.5		1,4,11,12	B,G
		Install	0 2			2	
		Replace	0.2			2	
		Repair		1.0	1.5	1,2,3,4,5,	A
		Overhaul			4.0	10,12	
0201	Cover, Access	Inspect	0.5			2	
		Install		0.2		2	
		Replace		0.2		2	
		Repair			0.5	2,3	
0202	Circuit Card	Inspect		0.2		2	C
Thru	Assemblies 2A1, \2,	Test		0 5		1,4,12	D
0205	2A2, 2A3, & 2A4	Install		0.2		2	
		Replace		0.2		2	
		Repair			2.0	1,2,3,4,5,10,12	A
		Overhaul			3.0	1,2,3,4,5,10,12	A
0206	Operations Unit	Inspect		0.1			C
	Subassembly	Test		0.5		1,4,12	D
		Install		0.5		2	
		Replace		0.5		2	
		Repair		0.7		2 10	
		Overhaul		0.7		2 3,5,lO	A
020601	DU Motherboard	Inspect		0.1		2	C
	Assembly	Test		0.5		1,4,12	D
		Install			0.2	2	
		Replace			0.2	2	
		Repair			0 5	2 10	A
		Overhaul			0.5	2,3,5,10	

Section III. TOOL AND TEST EQUIPMENT REQUIREMENTS

(1) REFERENCE CODE	(2) MAINTENANCE LEVEL	(3) NOMENCLATURE	(4) NATIONAL STOCK NUMBER	(5) TOOL PART NUMBER
1	F,D	Test Set, Rocket Management Subsystem M135		9324500-001
2	O,F,D	Tool Set, Basic Aircraft Armament Repairman	4933-00-987-9816	
3	F,D	Tool Set, Aircraft Armament Repairman, Supplemental	4933-00-994-9242	
4	F,D	Power Distribution Panel	4933-00-916-9582	12007200
5	D	Multimeter AN/USM223	6625-00-999-7465	
6		Deleted		
7		Deleted		
8		Deleted		
9		Deleted		
10	D	Digital Card Tester AN/USM 465A	6625-01-060-6804	2225A
11	F	Shop Set, Failure Isolation, Electronic Circuit Boards: 20MM Turret and Rocket Management Subsystems	4933-01-229-0617	11838720
12	F,D	Power Supply	6130-00-542-6385	PT1104C

Section IV. REMARKS

(1) REFERENCE CODE	(2) REMARKS
A	Preliminary estimation pending Depot Maintenance Work Requirement (DMWR) action.
B	AVUM level testing is restricted to Built-in Test (BIT).
C	Periodic inspection not required. Item is inspected during troubleshooting and repair of next higher assembly.
D	Item is tested during test of next higher assembly.
E	Repair of the Display Unit by AVUM is restricted to replacing the panel assembly and the display plug-in. The display plug-in is listed under the 0107 control assembly in the repair parts and special tools list.
F	Depot level repair parts to be determined.
G	Refer to TM 94933-270-30 for description and use of Failure Isolation Shop Set (FISS).

APPENDIX E
REPAIR PARTS AND SPECIAL TOOLS LIST
(INCLUDING DEPOT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS)

Section I. INTRODUCTION

E-1. Scope.

This appendix lists spares and repair parts; special tools; special test, measurement, and diagnostic equipment (TDME); and other special support equipment required for performance of AVUM, AVIM, and depot maintenance of the Rocket Management Subsystem. It authorizes the requisitioning and issue of spares and repair parts as indicated by the source and maintenance codes.

E-2. General.

This Repair Parts and Special Tools List is divided into the following sections:

a. *Section II. Repair Parts List.* A list *of* spares and repair parts authorized for use in performing maintenance. The list also includes parts which must be removed for replacement *of* the authorized parts. Parts lists are composed of functional groups in numeric sequence, with the parts in each group listed in figure and item number sequence.

b. *Section III. Special Tools List.* A list of special tools, special TMDE, and other special support equipment authorized for the performance of maintenance.

c. Section IV. National Stock Number and Part Number Index. A list in national item identification number (NIIN) sequence, of all national stock numbers (NSN) appearing in the listing, followed by a list in alphameric sequence of all part numbers appearing in the listings. National stock numbers and part numbers are cross-referenced to each illustration figure and item number appearance.

This index is followed by a cross-reference list *of* reference designations to figure and item numbers.

E-3. Explanation of Columns.

a. *Illustration.* This column is divided as follows:

(1) *Figure Number.* Indicates the figure number of the illustration on which the item is shown.

(2) *Item Number.* The number used to identify item called out in the illustration.

b. *Source, Maintenance, and Recoverability (SMR) Codes.*

(1) *Source Code.* Source codes indicate the manner of acquiring support items for maintenance, repair, or overhaul of end items. Source codes are entered in the first and second positions of the Uniform SMR Code format as follows:

Code	Definition
PA	Item procured and stocked for anticipated or known usage.
PB	Item procured and stocked for insurance purpose because essentiality dictates that a minimum quantity be available in the supply system.
PC	Item procured and stocked and which otherwise would be coded PA except that it is deteriorative in nature.
PD	Support item, excluding support equipment, procured for initial issue or outfitting and stocked only for susequent or additional initial issues or outfittings. Not subject to automatic replenishment.
PE	Support equipment procured and stocked for initial issue or outfitting to specified maintenance repair activities.
PF	Support equipment which will not *be* stocked but which will be centrally procured on demand.
PG	Item procured and stocked to provide for sustained support for the life of the equipment. It is applied to an item peculiar to the equipment which, because of probable discontinuance or shutdown of production facilities, would prove uneconomical to reproduce at a later time.
KD	An item of a depot overhaul/repair kit and not purchased separately. Depot kit defined as a kit that provides items required at the time of overhaul or repair.

KF -An item of a maintenance kit and not purchased separately. Maintenance kit defined as a kit that provides an item that can be replaced at organizational or intermediate levels of maintenance.

KB -Item included in both a depot overhaul/repair kit and a maintenance kit.

MO -Item to be manufactured or fabricated at organizational level.

MF -Item to be manufactured or fabricated at a direct support maintenance level.

MH -Item to be manufactured or fabricated at the general support maintenance level.

MD -Item to be manufactured or fabricated at the depot maintenance level.

AO -Item to be assembled at organizational level.

AF -Item to be assembled at direct support maintenance level.

AH -Item to be assembled at general support maintenance level.

AD -Item to be assembled at depot maintenance level.

XA -Item is not procured or stocked because the requirements for the item will result in the replacement of the next higher assembly.

XB -Item is not procured or stocked. If not available through salvage, requisition.

XC -Installation drawing, diagram, instruction sheet field service drawing, that is identified by manufacturer's part number.

XD -A support item that is not stocked. When required, item will be procured through normal supply channels.

NOTE

Cannibalization or salvage may be used as a source of supply for any items coded above except those coded XA and aircraft support items as restricted by AR700-42,

(2) *Maintenance Code.* Maintenance codes are assigned to indicate the levels of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third and fourth positions of the Uniform SMR Code format as follows;

(a) The maintenance code entered in the third position indicates the lowest maintenance level authorized to remove, replace, and use the support item. The maintenance code entered in the third position indicates one of the following levels of maintenance:

Code Application/Explanation

C -Crew or operator maintenance performed within organizational maintenance.

O -Support item is removed, replaced, used at the organizational (AVUM) level.

F -Support item is removed, replaced, used at the direct support (AVIM) level.

H -Support item is removed, replaced, used at the general support level.

D- Support items that are removed replaced, used at depot, mobile depot or specialized repair activity only.

(b) The maintenance code entered in the fourth position indicates if the item is to be repaired and identifies the lowest maintenance level with the capability to perform complete repair (i.e., all authorized maintenance functions). This position contains one of the following maintenance codes.

Code Application/Explanation

O -The lowest maintenance level capable of complete repair of the support item is the Aviation Unit Maintenance level.

F -The lowest maintenance level capable of complete repair of the support item is the Aviation Intermediate Maintenance level.

D -The lowest maintenance level capable of complete repair of the support item is the depot level.

(3) *Recoverability Code.* Recoverability codes are assigned to support items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the Uniform SMR Code format as follows:

Recoverability Code Definition

Z -Nonrepairable item. When unserviceable, condemn and dispose at the level indicated in position 3.

O -Repairable item. When uneconomically repairable, condemn and dispose at Aviation Unit Maintenance level.

F -Repairable item. When uneconomically repairable, condemn and dispose at the Aviation Intermediate Maintenance level.

D -Repairable item. When beyond lower level repair capability, return to depot. Condemnation and disposal not authorized below depot level.

c. *National Stock Number.* Indicates the National stock number assigned to the item, which will be used for requisitioning.

d. *Part Number.* Indicates the primary number used by the manufacturer (individual, company, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards, and inspection requirements to identify an item or range of items.

NOTE

When a stock numbered item is requisitioned, the item received may have a different part number than the part being replaced.

e. *Federal Supply Code for Manufacturer (FSCM).* The FSCM is a 5-digit numeric code listed in SB 708-42 which is used to identify the manufacturer, distributor, or Government agency, etc.

f. *Description.* Indicates the Federal item name and, if required, a minimum description to identify the item. The physical security classification of the item, if applicable, is indicated by a parenthetical entry ((C)Confidential, (S)-Secret, (T)-Top Secret). Items that are included in kits and sets are listed below the name of the kit or set with the quantity of each item in the kit or set indicated in the quantity incorporated in unit column. When the part to be used differs between serial numbers of the same model, the effective serial numbers are shown as the last line of the description. In the Special Tools List, the initial basis of issue (BOI) appears as the last line of the entry for each special tool, special TMDE, and other special support equipment. When density of equipments supported exceeds density spread indicated in the basis of issue, the total authorization is increased accordingly.

g. *Unit of Measure (U/M).* Indicates the standard of the basic quantity of the listed item as used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea. in, pr, etc). When the unit of measure differs from the unit of issue the lowest unit of issue that will satisfy the required units of measure will be requisitioned.

h. *Quantity Incorporated in Unit.* Indicates the quantity of the item used in the breakout shown on the illustration figure, which is prepared for a functional group, subfunctional group, or an assembly. A "V" appearing in this column in lieu of a quantity indicates that no specific quantity is applicable, (e.g., shims, spacers, etc).

E-4. Special Information.

a. Usable on codes are not used in this listing. There is only one model of the Rocket Management Subsystem.

b. (Applicable to revisions or changes only). Action change codes indicated in the left-hand margin of the listing page denote the following;

N-indicates an added item.

C-Indicates a change in data.

R-Indicates a change in NSN only.

E-5. How to Locate Repair Parts.

a. *When National Stock Number or Part Number Is Unknown;*

(1) *First.* Using the table of contents, determine the functional group or subgroup within which the item belongs. This is necessary since illustrations are prepared as functional groups or subgroups and listings are divided into the same groups.

(2) *Second.* Find the illustration covering the functional group or subgroup to which the item belongs.

(3) *Third.* Identify the item on the illustration and note the illustration figure and item number of the item.

(4) *Fourth.* Using the Repair Parts Listing, find the figure and item number noted on the illustration.

b. *When National Stock Dumber or Part Number is Known;*

(1) *First.* Using the Index of National Stock Numbers and Part Numbers find the pertinent National stock number or part number. This index is in NIIN sequence followed by a list of part numbers in alphameric sequence, cross-referenced to the illustration figure number and item number.

(2) *Second.* After finding the figure and item number, locate the figure and item number in the repair parts list.

E-6. Abbreviations.

Abbreviation	Explanation
cd-or	Cadmium-ore
zn-pltd	zinc-plated
MOD	model
opn	opening

Section II REPAIR PARTS LIST

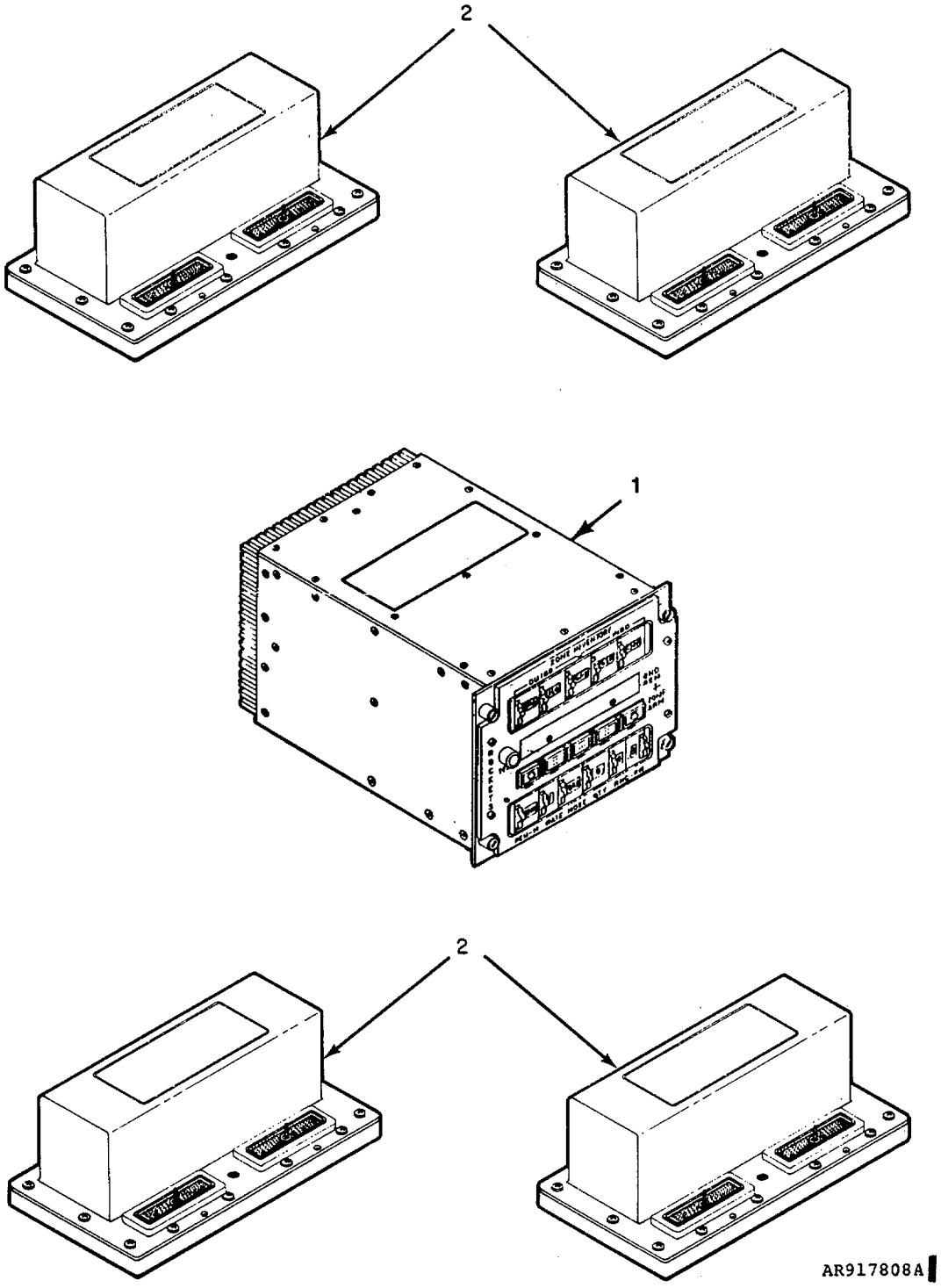


Figure E-1. Rocket Management Subsystem

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) FEDERAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION *USABLE ON CODE*	(7) U/M	(8) QTY INC IN UNIT
						GROUP 00 ROCKET MANGEMENT SUBSYSTEM: XM1147 12011877		
E-1	1	PAODD	1290-01-234-6886	12011866	19200	DISPLAY UNIT	EA	1
E-1	2	PADDD	1090-01-077-8938	9324108-002	19203	OPERATIONS UNIT	EA	4

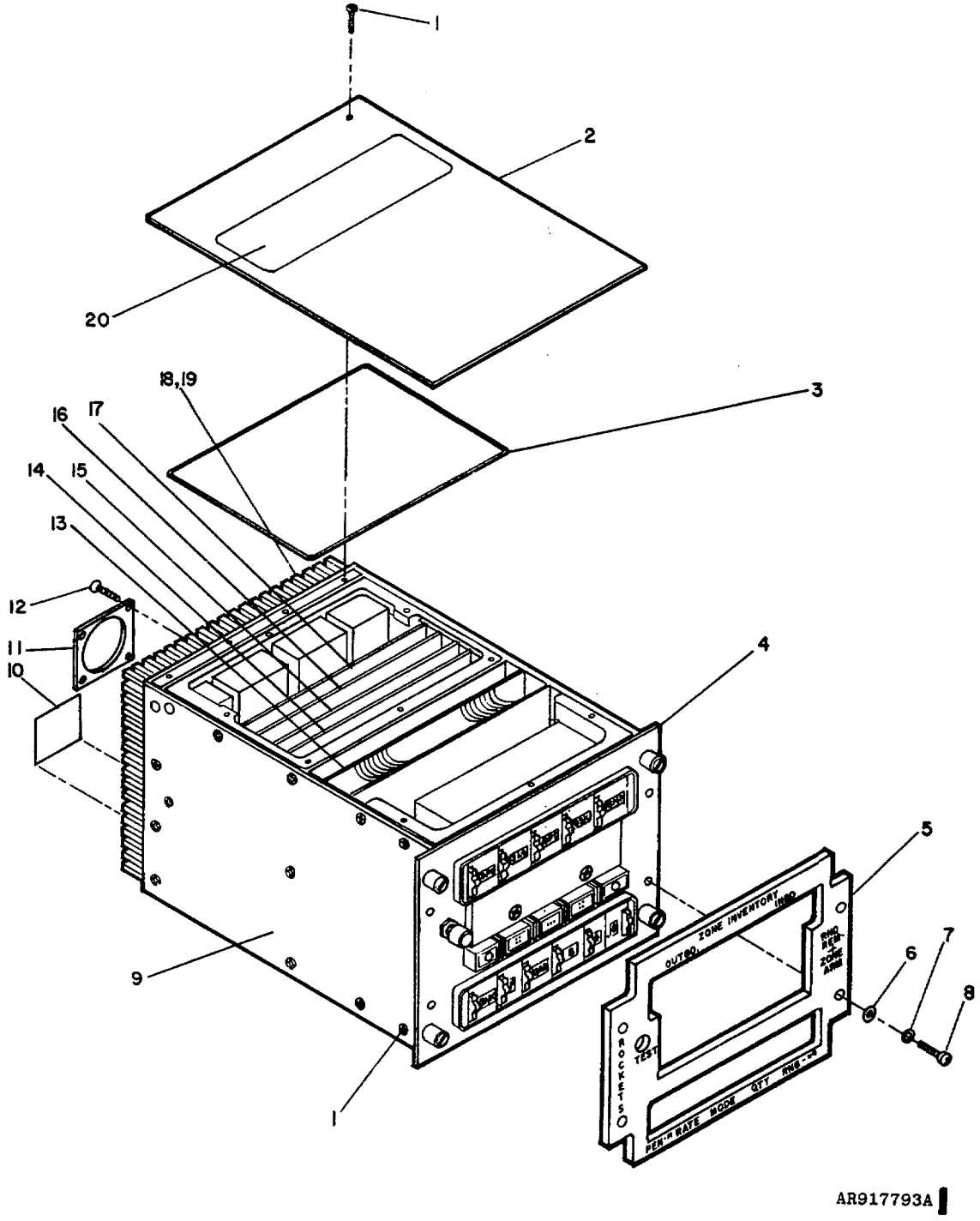


Figure E-2. Display Unit

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) FEDERAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION *USABLE ON CODE*	(7) U/M	(8) QTY INC IN UNIT
						GROUP 01 DISPLAY UNIT 12011866		
E-2	1	PAFZZ	5305-00-993-9189	MS24693-C2	96906	SCREW	EA	40
E-2	2	PAFZZ	1090-01-061-6238	9324153	19203	COVER	EA	1
E-2	3	MFFZZ		9324370-1	19203	GASKET, EMI/RFI (MAKE FROM PN 9324370,	IN	17
						NSN5330-01-156-7529)	EA	1
E-2	4	PAFDD	1090-01-239-2358	12011865	19203	CONTROL ASSEMBLY	EA	1
E-2	5	PAOZZ	1090-01-236-0233	12011885	19203	PANEL ASSEMBLY 1A6	EA	1
E-2	6	PAOZZ	5330-00 -166 -0967	M83248/1-008	81349	PACKING	EA	4
E-2	7	PAOZZ	5310-00-687 -6664	MS15795-804B	96906	WASHER, FLAT, BLACK	EA	4
E-2	8	PAOZZ	5305-00-494-7333	MS51957-13B	96906	SCREW	EA	4
E-2	9	PAFDD	1090-01-077 -8946	9324143-002	19203	CHASSIS ASSEMBLY	EA	1
E-2	10	MDDZZ		9324274-2	19203	LABEL, CONNECTOR REF DES (MAKE FROM	EA	1
						QQ-A-250/1 9535-01-125-9078)		
E-2	11	PAFZZ	5999-01-079 -9252	9324172	19203	GASKET, EMI/RFI	EA	1
E-2	12	PAFZZ	5305-00-054-6654	MS51957-30	96906	SCREW	EA	4
E-2	13	PAFDD	1090-01-077-8944	9324147-002	19203	CONTROL PANEL INTERFACE 1A1	EA	1
E-2	14	PAFDD	1090-01-077-8979	9324111-002	19203	CIRCUIT CARD ASSY 1A2, CPU	EA	1
E-2	15	PAFDD	5999-01-239-2397	12011874	19203	CIRCUIT CARD ASSY 1A3, MEMORY	EA	1
E-2	16	PAFDD	1090-01-077-8981	9324113 -002	19203	CIRCUIT CARD ASSY 1A4, BUILT-IN TST	EA	1
E-2	17	PAFDD	1090-01-077-8982	9324114-002	19203	CIRCUIT CARD ASSY 1A5, I/O	EA	1
E-2	18	PAFDD	1090-01-077-8953	9324341	19203	POWER SUPPLY 1PS1	EA	1
E-2	19	MFFZZ		9324370-2	19203	GASKET, EMI/RFI (MAKE FROM PN 9324370,	IN	18
						NSN 5330-D1-156-75291		
E-2	20	MDDZZ		12011884	19203	LABEL, NAMEPLATE(MAKE FROM QQ-A-250/1	EA	1
						NSN 9535-01-120-9078)		

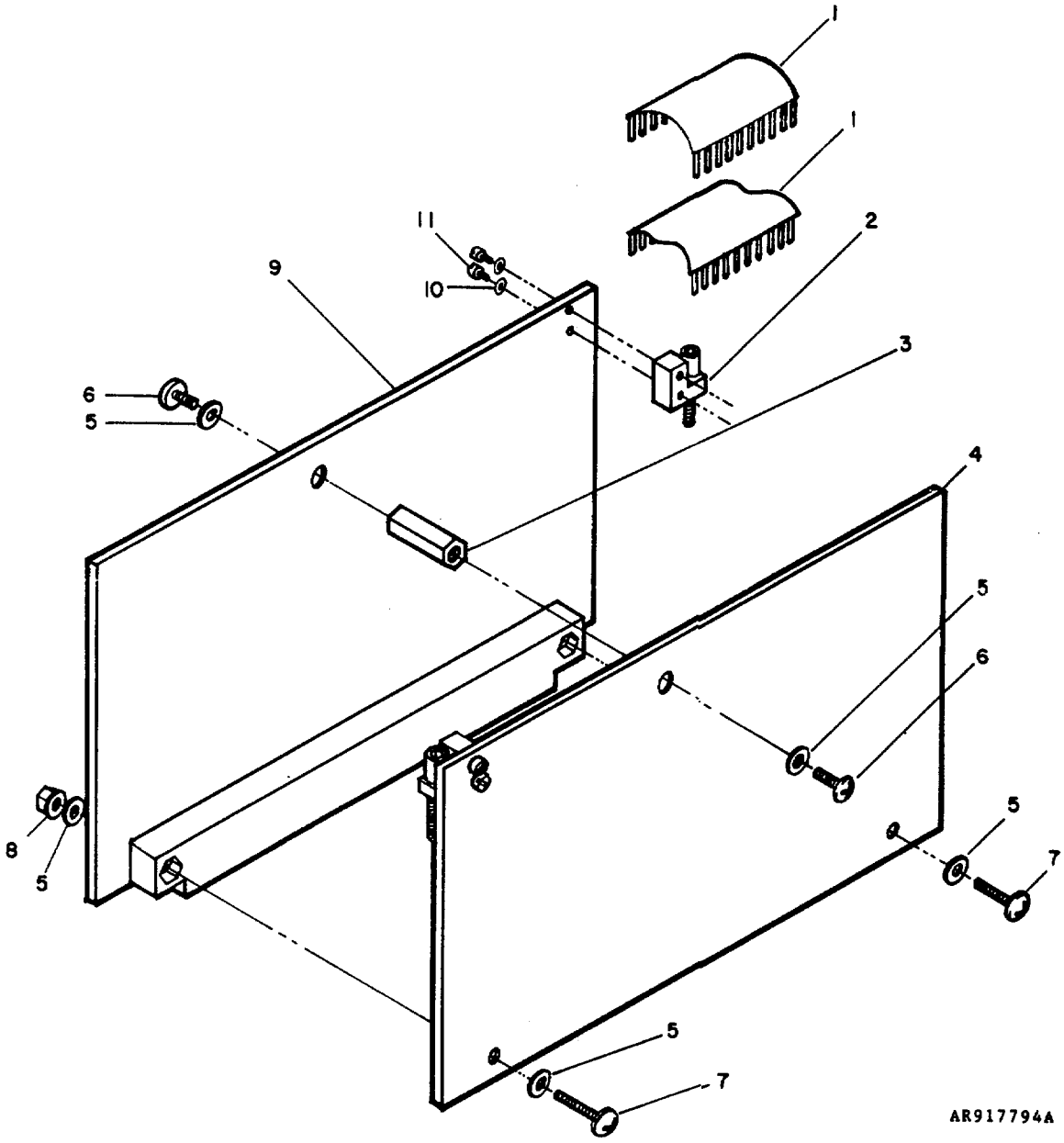
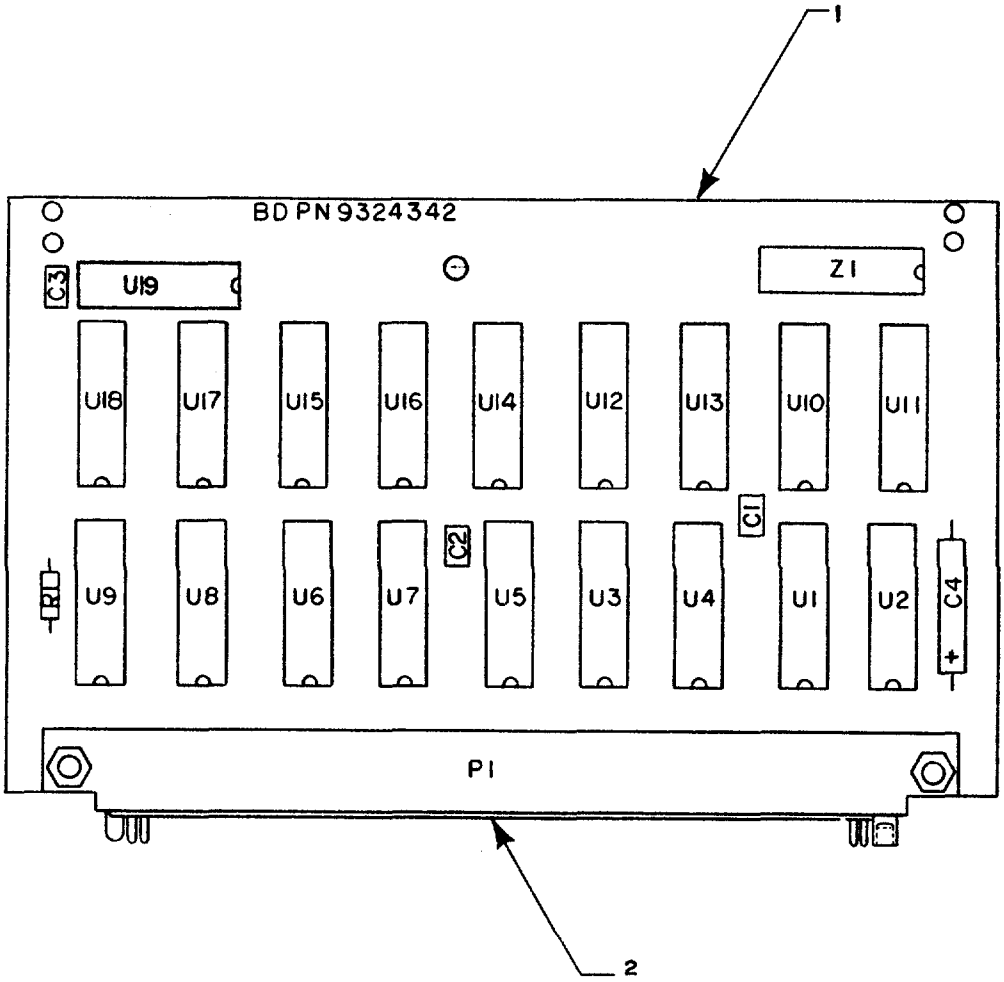


Figure E-3. Control Panel Interface Assembly 1A1

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) FEDERAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION *USABLE ON CODE*	(7) U/M	(8) QTY INC IN UNIT
						GROUP 0101 CONTROL PANEL INTERFACE 1A1 9324147-002		
E-3	1	PADZZ	1090-01-073-5956	9324263-10	19203	CABLE ASSEMBLY, FLEXIBLE	EA	2
E-3	2	PADZZ	1090-01-068-0439	9324212	19203	RETAINER - EJECTOR, CIRCUIT CARD	EA	2
E-3	3	PADZZ	5340-01-078-4162	9324262	19203	SPACER, HEX	EA	1
E-3	4	PADDD	1090-01-077-8943	9324110-002	19203	CIRCUIT CARD ASSEMBLY 1A1A2, CPI B	EA	1
E-3	5	PADZZ	5310-00-595-6211	MS15795-803	96906	WASHER, FLAT	EA	6
E-3	6	PADZZ	5305-00-054-5647	MS51957-13	96906	SCREW, MACHINE	EA	2
E-3	7	PADZZ	5305-01-064-3418	9324148	19203	SCREW, MACHINE	EA	2
E-3	8	PADZZ	5310-00-878-3292	MS21043-04	96906	LOCKNUT	EA	2
E-3	9	PADDD	1090-01-077-8942	9324109-002	19203	CIRCUIT CARD ASSEMBLY 1A1A1, CPI A	EA	1
E-3	10	PADZZ	5310-01-061-6323	9324209	19203	WASHER, FLAT	EA	4
E-3	11	PADZZ	5305-00-922-8777	MS35275-202	96906	SCREW, MACHINE	EA	4

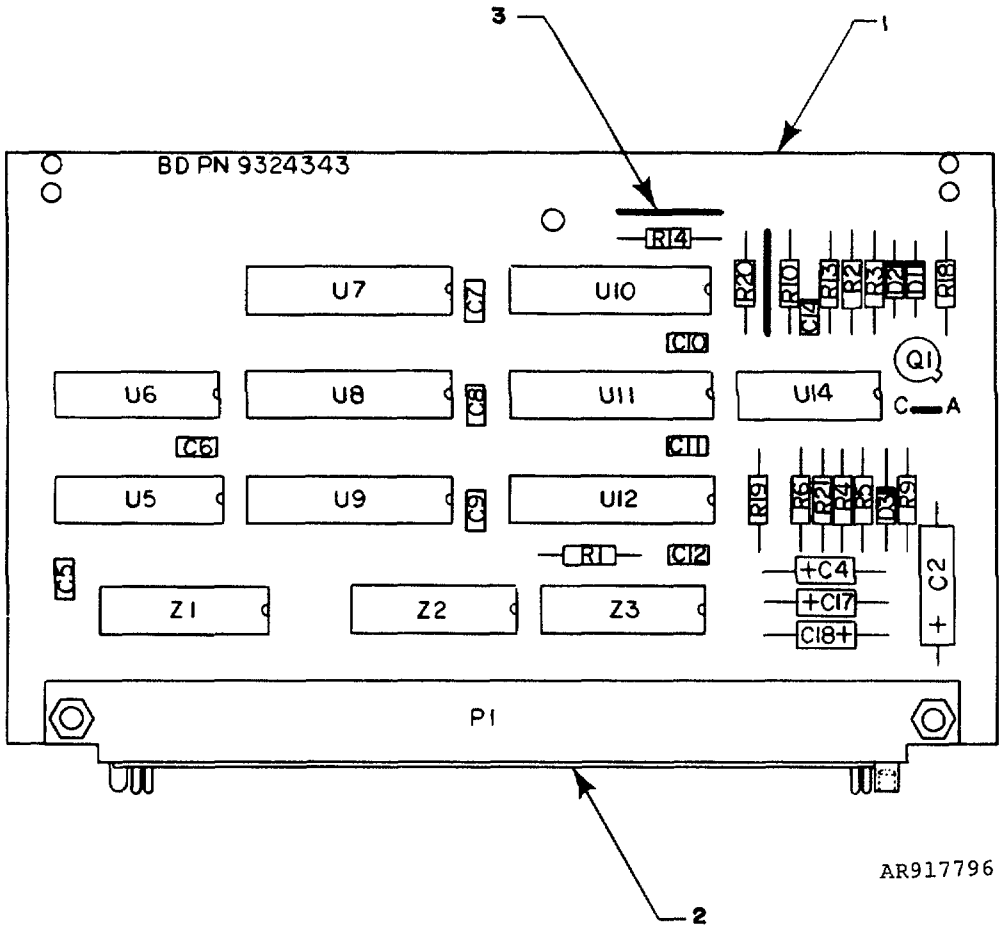


LEGEND

Ref Des	Item No	Ref Des	Item No
C1	3	U7	7
C2	3	U8	7
C3	3	U9	7
C4	4	U10	8
P1	5	U11	8
R1	6	U12	8
U1	7	U13	8
U2	7	U14	8
U3	7	U15	8
U4	7	U16	8
U5	7	U17	8
U6	7	U18	9
		U19	9
		Z1	10

Figure E-4. Circuit Card Assembly 1A1A1, Control Panel Interface Subassembly A

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) FEDERAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION *USABLE ON CODE*	(7) U/M	(8) QTY INC IN UNIT
						GROUP 010101 CIRCUIT CARD ASSY 1A1A1 CPI A 9324109-002		
E-4	1	XADZZ		9324342	19203	CIRCUIT BOARD	EA	1
E-4	2	PADZZ		9324139-70	19203	GASKET, CONNECTOR	EA	1
E-4	3	PADZZ	5910-01-056-5472	M39014-01-1594	81349	CAPACITOR, FIXED, CERAMIC	EA	3
E-4	4	PADZZ	5910-00-113-5475	M39003/01-2287	81349	CAPACITOR, FIXED, ELCTLT	EA	1
E-4	5	PADZZ	5935-01-030-2991	M55302/57A70Y-1	81349	CONNECTOR, RECEPTACLE, ELECTRICAL	EA	1
E-4	6	PADZZ	5905-00-110-7620	RCR07G102JS	81349	RESISTOR, FIXED COMPOSITION	EA	1
E-4	7	PADZZ	5962-01-077-8969	9324292	19203	MICROCIRCUIT, DIGITAL	EA	9
E-4	8	PADZZ		9324288	19203	MICROCIRCUIT, DIGITAL	EA	8
E-4	9	PADZZ	5962-01-043-3940	M38510/30106 BEB	81349	MICROCIRCUIT, DIGITAL	EA	2
E-4	10	PADZZ	5905-01-033-6580	M8340102M22 02JB	81349	NETWORK, RESISTOR	EA	1



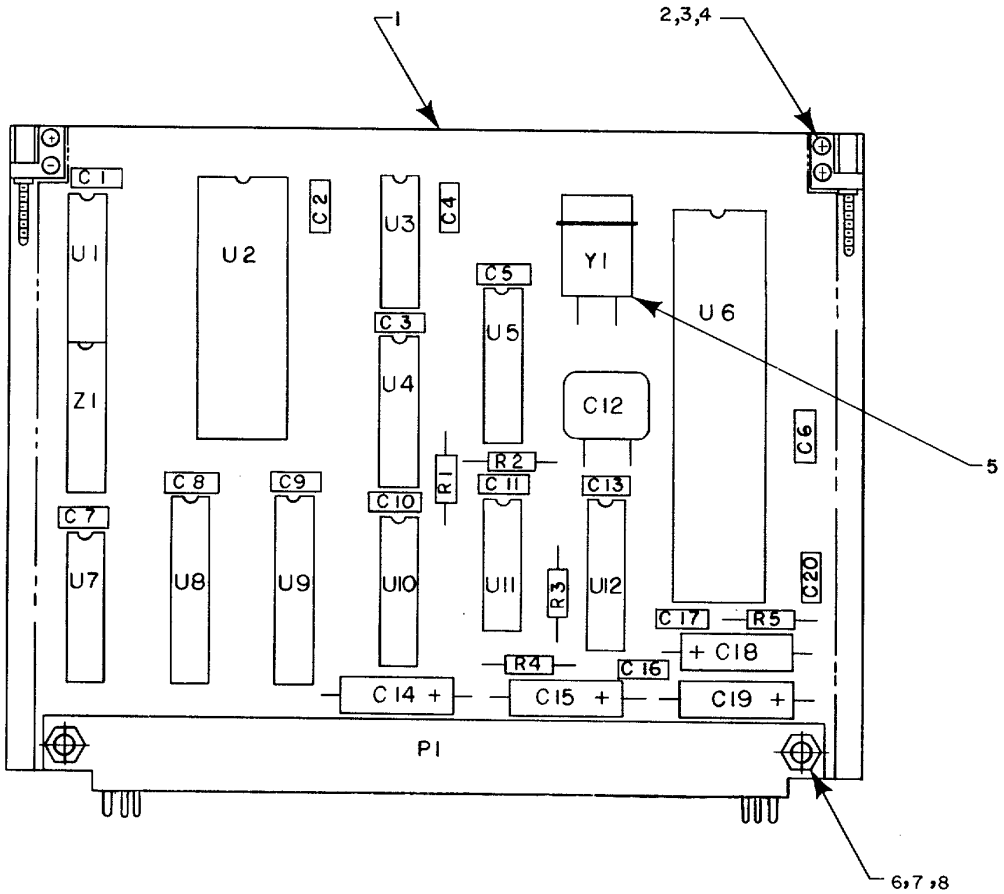
LEGEND

Ref Des	Item No	Ref Des	Item No	Ref Des	Item No
C2	3	C21	29	R18	11
C4	4	D1	7	R19	17
C5	5	D2	7	R20	16
C6	5	D3	8	R21	15
C7	5	D4	28	R22	25
C8	5	P1	9	U5	18
C9	5	Q1	10	U6	18
C10	5	R1	11	U7	19
C11	5	R2	12	U8	19
C12	5	R3	14	U9	19
		R4	14	U10	19
C14	5	R6	13	U11	19
C17	4	R9	22	U12	19
C18	6	R10	30	U14	20
C19	26	R13	23	Z1	21
C20	27	R14	24	Z2	21
				Z3	21

NOTE: Ref Des not used: C1, C3, C13, C15, C16, R5, R7, R8, R11, R12

Figure E-5. Circuit Card Assembly 1A1A2, Control Panel Interface Subassembly B

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) FEDERAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION *USABLE ON CODE*	(7) U/M	(8) QTY INC IN UNIT
						GROUP 010102 CIRCUIT CARD ASSY 1A1A2, CPI B 9324110-002		
E-5	1	XADZZ		9324343	19203	CIRCUIT BOARD	EA	1
E-5	2	PADZZ		9324139-70	19203	GASKET, CONNECTOR	EA	1
E-5	3	PADZZ	5910-00-113-5475	M39003/01-2287	81349	CAPACITOR, FIXED, ELECTROLYTIC	EA	1
E-5	4	PADZZ		M39002/01-2357	81349	CAPACITOR, FIXED ELECTROLYTIC	EA	2
E-5	5	PADZZ	5910-01-056-5472	M39014/01-1594	81349	CAPACITOR, FIXED, CERAMIC	EA	9
E-5	6	PADZZ	5910-00-189-3178	M39003/01-3058	81349	CAPACITOR, FIXED, ELECTROLYTIC	EA	1
E-5	7	PADZZ	5961-00-938-1135	JAN1N4148	81350	SEMICONDUCTOR DEVICE, DIODE	EA	2
E-5	8	PADZZ		JANTX1N963B	81350	SEMICONDUCTOR DEVICE, DIODE	EA	1
E-5	9	PADZZ	5935-01-030-2991	M55302/57A70 Y-3	81349	CONNECTOR, RECEPTACLE, ELECTRICAL	EA	1
E-5	10	PADZZ	5961-00-951-8757	JAN2N2222A	81350	TRANSISTOR	EA	1
E-5	11	PADZZ	5905-00-110-7620	RCR07G102JS	81349	RESISTOR, FIXED, COMPOSITION	EA	2
E-5	12	PADZZ	5905-00-228-5506	RCR07G622JS	81349	RESISTOR, FIXED, COMPOSITION	EA	1
E-5	13	PADZZ	5905-00-114-0708	RCR07G202JS	81349	RESISTOR, FIXED, COMPOSITION	EA	1
E-5	14	PADZZ	5905-00-106-1356	RCR07G152JS	81349	RESISTOR, FIXED, COMPOSITION	EA	2
E-5	15	PADZZ	5905-00-106-3666	RCR07G103JS	81349	RESISTOR, FIXED, COMPOSITION	EA	1
E-5	16	PADZZ	5905-00-111-4845	RCR07G201JS	81349	RESISTOR, FIXED, COMPOSITION	EA	1
E-5	17	PADZZ	5905-00-106-9356	RCR07G203JS	81349	RESISTOR, FIXED, COMPOSITION	EA	1
E-5	18	PADZZ	5962-01-050-0918	M38510/30701 BEB	81349	MICROCIRCUIT DIGITAL	EA	2
E-5	19	PADZZ	5962-01-033-6351	9324268	19203	MICROCIRCUIT, DIGITAL	EA	6
E-5	20	PADZZ		9324264	19203	MICROCIRCUIT, DIGITAL	EA	1
E-5	21	PADZZ	5905-01-033-6580	M8340102M22 02JB	81349	NETWORK, RESISTOR	EA	3
E-5	22	PADZZ		RCR07G361JS	81349	RESISTOR, FIXED, COMPOSITION	EA	1
E-5	23	PADZZ		RCR07G242JS	81349	RESISTOR, FIXED, COMPOSITION	EA	1
E-5	24	PADZZ		RCR07G122JS	81349	RESISTOR, FIXED, COMPOSITION	EA	1
E-5	25	PADZZ		RCR07G473JS	81349	RESISTOR, FIXED, COMPOSITION	EA	1
E-5	26	PADZZ		M39014/01-1587	81349	CAPACITOR, FIXED, CERAMIC	EA	1
E-5	27	PADZZ	5910-00-214-6378	M39014/01-1576	81349	CAPACITOR, FIXED, CERAMIC	EA	1
E-5	28	PADZZ		JAN1N751A	81350	SEMICONDUCTOR DEVICE, DIODE	EA	1
E-5	29	PADZZ	5910-00-010-8666	M39014/01-1358	81349	CAPACITOR, FIXED, CERAMIC	EA	1
E-5	30	PADZZ		RCR07G220JS	81349	RESISTOR, FIXED, COMPOSITION	EA	1



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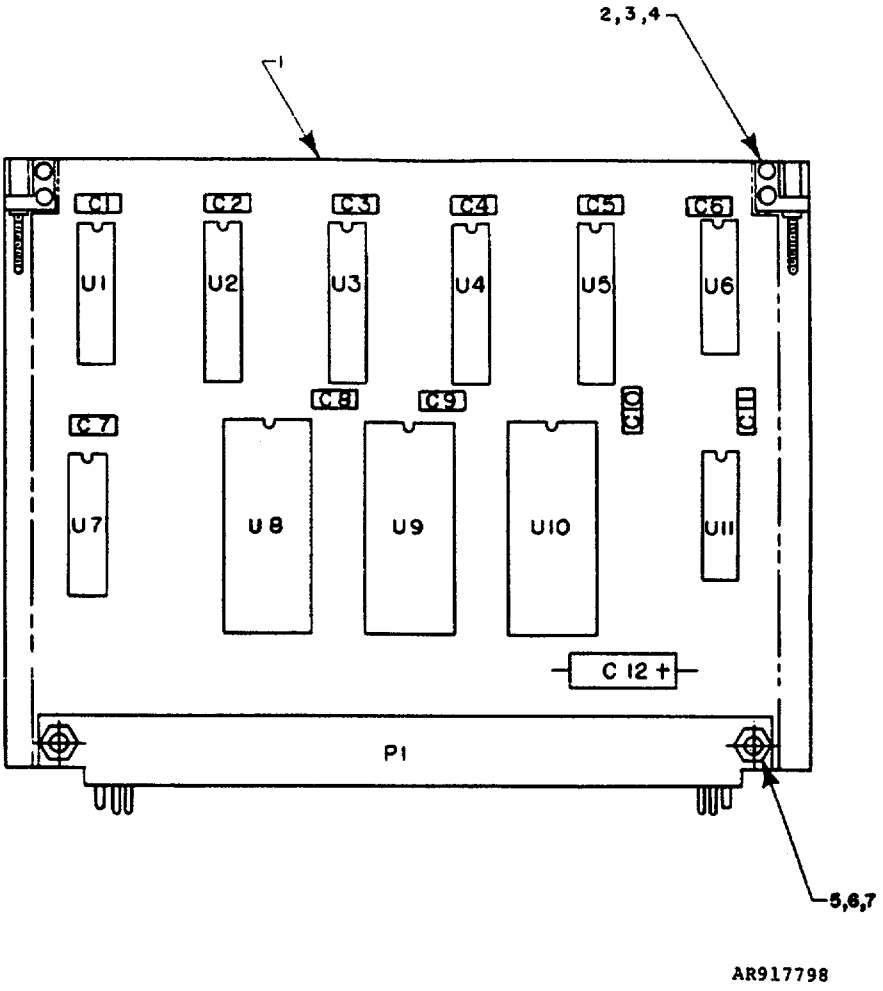
LEGEND

Ref Des	Item No	Ref Des	Item No
C1	9	P1	13
C2	9	R1	14
C3	9	R2	14
C4	9	R3	14
C5	9	R4	14
C6	9	R5	14
C7	9	U1	15
C8	9	U2	16
C9	9	U3	17
C10	9	U4	18
C11	9	U5	18
C12	10	U6	19
C13	11	U7	15
C14	12	U8	20
C15	12	U9	20
C16	9	U10	21
C17	9	U11	22
C18	12	U12	23
C19	12	Y1	24
C20	9	Z1	25

Figure E-6. Circuit Card Assembly 1A2, CPU

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) FEDERAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION *USABLE ON CODE*	(7) U/M	(8) QTY INC IN UNIT
						GROUP 0102 CIRCU17 CARD ASSY :1A2. CPU 9324110-002		
E-6	1	XADZZ		9326364	19203	CIRCUIT BOARD	EA	1
E-6	2	PADZZ	1090-01-068-0439	9334212	19203	RETAINER - EJECTOR, CIRCUIT CARD	EA	2
E-6	3	PADZZ	5105-00-922 8777	MS35275-202	96906	SCREW MACHINE	EA	4
E-6	4	PADZZ	5310-01-061-6323	9324209	19203	WASHER, FLAT-	EA	4
E-6	5	PADZZ	1090-01-074-8966	9324300	19203	PAD	EA	1
E-6	6	PADZZ	5305-00-054-5648	MSS1957-14	96906	SCREW,. MACHINE	EA	2
E-6	7	PADZZ	5310-00-208-3786	NAS67104	80205	NUT, HEX SMALL PATTERN	EA	2
E-6	8	PADZZ	5310-00-595-6211	MS15795-803	96906	WASHER, FLAT	EA	2
E-6	9	PADZZ	5910-01-056-5472	M39014/01-1594	81349	CAPACITOR. FIXED, CERAMIC	EA	14
E-6	10	PADZZ		M39014/05-2213	91349	CAPACITOR, FIXED, CERAMIC	EA	1
E-6	11	PADZZ	5910-00-214-6378	M39014/01-1576	81349	CAPACITOR. FIXED, CERAMIC	EA	1
E-6	12	PADZZ	5910-00-113-5475	M39003/01-2287	81349	CAPACITOR, FIXED, ELECTLT	EA	4
E-6	13	PADZZ		MS5302/57A66Y-1	81349	CONNECTOR, RECEPTACLE, ELECTRICAL	EA	1
E-6	14	PADZZ	5905-00-114-0711	RCR07C472JS	81349	RESISTOR, FIXED, COMPOSITION	EA	5
E-6	15	PADZZ	5962-01-083-4684	9324307	19203	MICROCIRCUIT, DIGITAL	EA	2
E-6	16	PADZZ	5962-01-066-1586	9324309	19203	MICROCIRCUIT, DIGTAL	EA	1
E-6	17	PADZZ	5962-01-030-6352	M38510/30005 BCB	81349	MICROCIRCUIT, DIGITAL	EA	1
E-6	18	PADZZ	5962-01-065-7026	M38510/31504 BEB	81349	MICROCIRCUIT	EA	2
E-6	19	PADZZ		9324303	19203	MICROCIRCUIT, DIGTAL	EA	1
E-6	20	PADZZ	5962-01-033-6351	9324268	19203	MICROCIRCUIT, DIGITAL	EA	2
E-6	21	PADZZ	5962-01-050-0918	M38510/30701 BEB	81349	MICROCIRCUIT, DIGITAL	EA	1
E-6	22	PADZZ	5962-01-027-6863	M38510/30003 BCB	81349	MICROCIRCUIT, DIGITAL	EA	1
E-6	23	PADZZ		9324308	19203	MICROCIRCUIT, DIGITAL	EA	1
E-6	24	PADZZ	5955-01-069-9526	9324247	19203	CRYSTAL	EA	1
E-6	25	PADZZ	5905-01-076-5665	M8340102M220 1JA	81349	NETWORK, RESISTOR	EA	1

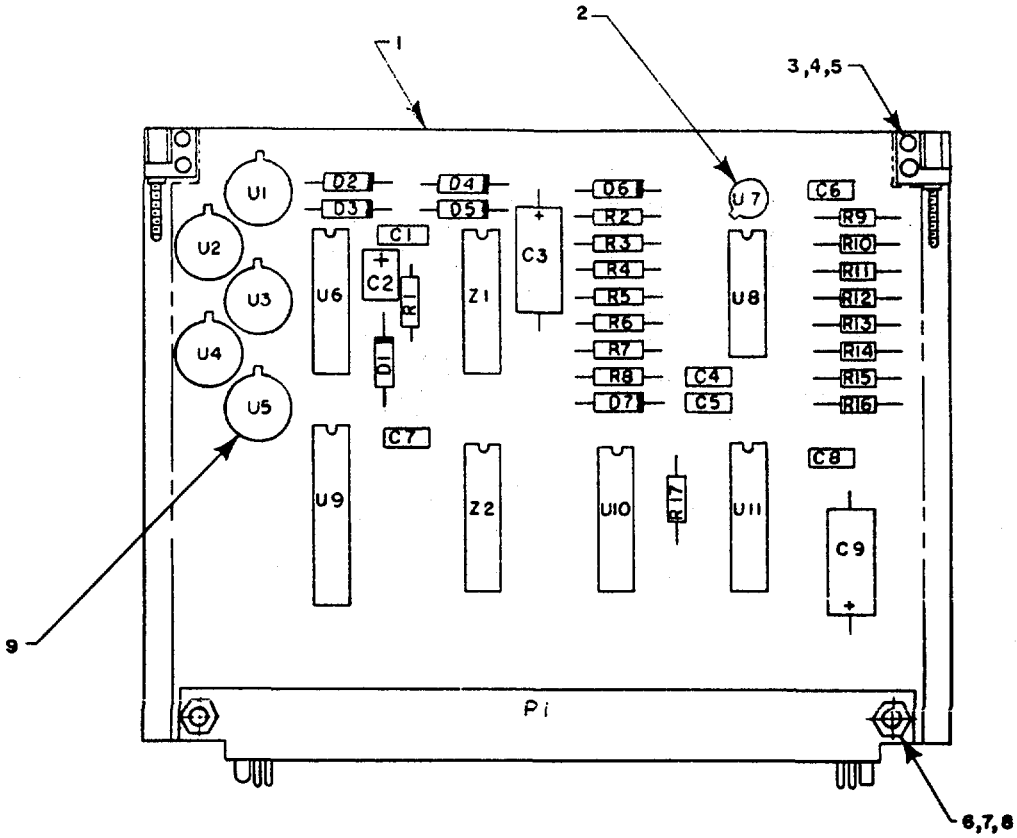


LEGEND

Ref Des	Item No	Ref Des	Item No
C1	8	P1	10
C2	8	U1	11
C3	8	U2	12
C4	8	U3	12
C5	8	U4	12
C6	8	U5	12
C7	8	U6	13
C8	8	U7	11
C9	8	U8	14
C10	8	U9	14
C11	8	U10	14
C12	9	U11	15

Figure E-7. Circuit Card Assembly 1A3, Memory

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) FEDERAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION *USABLE ON CODE*	(7) U/M	(8) QTY INC IN UNIT
						GROUP 0103 CIRCUIT CARD ASSEMBLY 1A3, MEMORY (12011874)		
E-7	1	XADZZ		9324345	19203	PRINTED WIRING BOARD	EA	1
E-7	2	PADZZ	1090-01-068-0439	9324212	19203	JACKSCREW ASSEMBLY EJECTOR, ELECTRICAL CARD	EA	2
E-7	3	PADZZ	5305-00-922-8777	MS35275-202	96906	SCREW, MACHINE	EA	4
E-7	4	PADZZ	5310-01-061-6323	9324209	19203	WASHER, FLAT	EA	4
E-7	5	PADZZ	5305-00-054-5648	MS51957-14	96906	SCREW, MACHINE	EA	*2*
E-7	6	PADZZ	5310-00-208-3786	NAS671C4	80205	NUT, PLAIN, HEXAGON	EA	2
E-7	7	PADZZ	5310-00-595-6211	MS15795-803	96906	WASHER, FLAT	EA	2
E-7	8	PADZZ	5910-00-010-8717	M39014/01-1593	81349	CAPACITOR, FIXED, CER ELECTROLYTIC	EA	11
E-7	9	PADZZ	5910-00-113-547S	M39003-01-3006	81349	CAPACITOR,FIXED, ELECTROLYTIC	EA	1
E-7	10	PADZZ	5935-01-058-6S17	M55302/57A66Y	81349	CONNECTOR, RECEPTACL ELECTRICAL	EA EA	1
E-7	11	PADZZ	5962-01-083-4684	9324307	19203	MICROCIRCUIT, DIGITAL	EA	2
E-7	12	PADZZ	5962-01-071-6651	9324304	19203	MICROCIRCUIT, DIGITAL	EA	4
E-7	13	PADZZ	5962-01-031-7030	M38510/30001 BCB	81349	MICROCIRCUIT, DIGITAL	EA	1
E-7	14	PADZZ	5962-01-077-8970	9324223	19203	MICROCIRCUIT, DIGITAD PROGRAM U8 IAW 19200 12011871 PROGRAM U9 1AW 19200 12011872 PROGRAM U10 1AW 19200 12011873	EA	3
E-7	15	PADZZ	5962-01-026-2493	M38510/30007 BCB	81349	MICROCIRCUIT, DIGITAL	EA	1



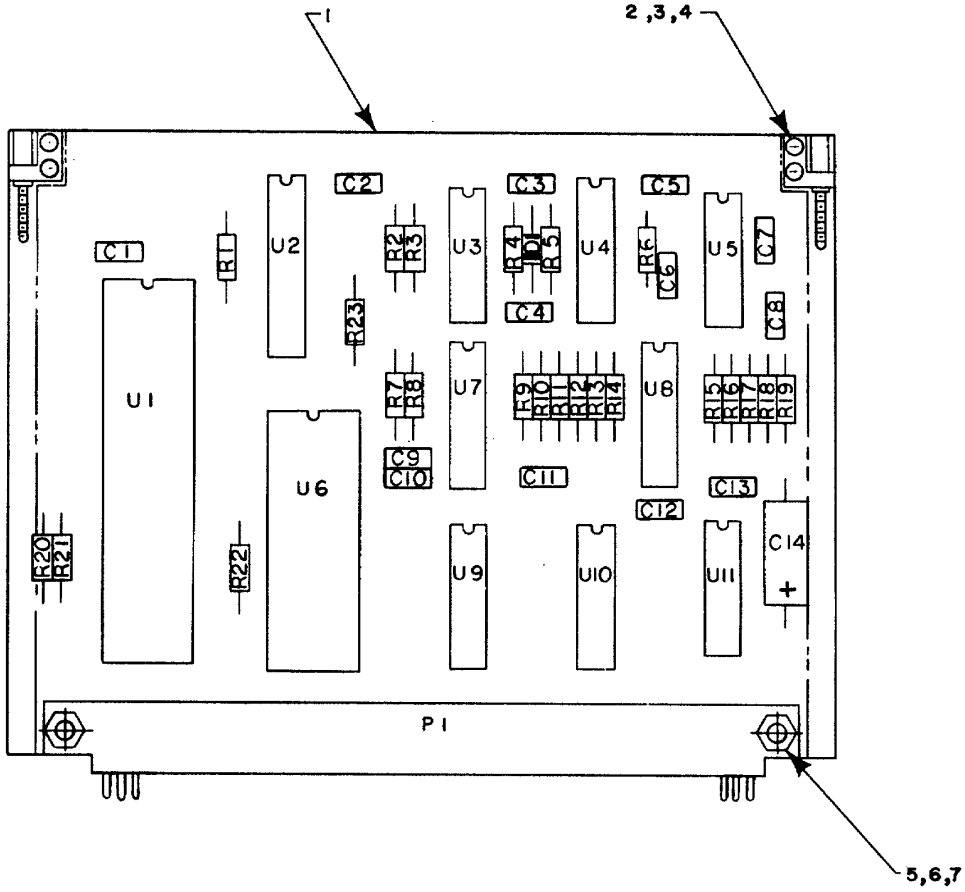
LEGEND

Ref Des	Item No	Ref Des	Item No	Ref Des	Item No
C1	11	D7	16	R15	30
C2	12	P1	10	R16	25
C3	13	R1	17	R17	28
C4	11	R2	18	U1	31
C5	11	R3	19	U2	31
C6	14	R4	20	U3	31
C7	11	R5	21	U4	31
C8	11	R6	22	U5	31
C9	13	R7	23	U6	32
D1	15	R8	24	U7	33
D2	15	R9	25	U8	34
D3	15	R10	26	U9	35
D4	15	R11	27	U10	36
D5	15	R12	28	U11	37
D6	16	R13	29	Z1	38
				Z2	39

NOTE: Ref Des not used - R14

Figure E-8. Circuit Card Assembly 1A4, Built-In Test

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) FEDERAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION *USABLE ON CODE*	(7) U/M	(8) QTY INC IN UNIT
						GROUP 0104 CIRCUIT CARD ASSY 1A4, BUILT-IN TST 9324113-002		
E-8	1	XADZZ		9324346	19203	CIRCUIT BOARD	EA	1
E-8	2	PADZZ	5999-01-015-3901	M38527/1-01D	81349	PAD, COMPONENT MOUNTING	EA	1
E-8	3	PADZZ	1090-01-068-0439	9324212	19203	RETAINER - EJECTOR, ELECTRICAL CARD	EA	2
E-8	4	PADZZ	5305-00-922-8777	MS35275-202	96906	SCREW MACHINE	EA	4
E-8	5	PADZZ	5310-01-061-6323	9324209	19203	WASHER FLAT	EA	4
E-8	6	PADZZ	5305-00-054-5648	MS51957-14	96906	SCREW, MACHINE	EA	2
E-8	7	PADZZ	5310-00-208-3786	NAS671C4	80205	NUT, HEX, SMALL PATTERN	EA	2
E-8	8	PADZZ	5310-00-595-6211	MS15795-803	96906	WASHER, FLAT	EA	2
E-8	9	PADZZ	5999-01-064-9543	M38527/2-05D	81349	PAD, COMPONENT MOUNTING	EA	5
E-8	10	PADZZ		M55302/57A66Y-11	81349	CONNECTOR, RECEPTACLE, ELECTRICAL	EA	1
E-8	11	PADZZ	5910-01-056-5472	M39014/01-1594	81349	CAPACITOR, FIXED, CERAMIC	EA	5
E-8	12	PADZZ		9324371	19203	CAPACITOR FIXED, ELECTLT	EA	1
E-8	13	PADZZ	5910-00-113-5475	M39003/01-2287	81349	CAPACITOR, FIXED, ELECTROLYTIC	EA	2
E-8	14	PADZZ	5910-00-214-6378	M39014/01-1576	81369	CAPACITOR FIXED CERAMIC	EA	1
E-8	15	PADZZ	5961-00-898-2138	JAN1N4946	81350	SEMICONDUCTOR DEVICE, DIODE	EA	5
E-8	16	PADZZ	5961-00-842-9864	JAN1N966B	81358	SEMICONDUCTOR DEVICE, DIODE	EA	2
E-8	17	PADZZ	5905-00-114-5344	RCR07G184JS	81349	RESISTOR, FIXED, COMPOSITION	EA	1
E-8	18	PADZZ	5905-00-110-7620	RCR07G102JS	61349	RESISTOR, FIXED, COMPOSITION	EA	1
E-8	19	PADZZ	5905-00-114-0711	RCR07G472JS	81349	RESISTOR, FIXED, COMPOSITION	EA	1
E-8	20	PADZZ	5905-00-116-8555	RCR07G153JS	81349	RESISTOR, FIXED, COMPOSITION	EA	1
E-8	21	PADZZ	5905-00-471-2424	RNC55H2672FS	8.349	RESISTOR, FIXED, FILM	EA	1
E-8	22	PADZZ	5905-00-256-9323	RNC55H1782FS	81349	RESISTOR, FIXED, FILM	EA	1
E-8	23	PADZZ	5905-00-412-0772	RNC55H5622FS	81349	RESISTOR, FIXED, COMPOSITION	EA	1
E-8	24	PADZZ	5905-00-223-2741	RNC55H1002FS	81349	RESISTOR, FIXED, FILM	EA	1
E-8	25	PADZZ	5905-00-477-9176	RNC55H2001FS	81349	RESISTOR, FIXED, FILM	EA	2
E-8	26	PADZZ	5905-00-484-7884	RNC55H1581FS	81349	RESISTOR, FIXED, FILM	EA	1
E-8	27	PADZZ	5905-00-110-0388	RCR07G104JS	81349	RESISTOR, FIXED, COMPOSITION	EA	1
E-8	28	PADZZ	5905-00-111-4727	RCR07G272JS	81349	RESISTOR, FIXED, COMPOSITION	EA	2
E-8	29	PADZZ	5905-00-492-2173	RNC55H4750FS	81349	RESISTOR, FIXED, FILM	EA	1
E-8	30	PADZZ	5905-00-410-1577	RNC55H2211FS	81349	RESISTOR, FIXED, FILM	EA	1
E-8	31	PADZZ		9324395	19203	ISOLATOR, OPTCALLY COUPLED	EA	5
E-8	32	PADZZ		M38510/3140 1 BEA	81349	MICROCIRCUIT DIGITAL	EA	1
E-8	33	PADZZ	5962-01-075-3772	9324310	19203	MICROCIRCUIT, LINEAR	EA	1
E-8	34	PADZZ	5962-01-066-0337	9324284	19203	MICROCIRCUIT, LINEAR	EA	1
E-8	35	PADZZ	5962-01-033-6351	9324268	19203	MICROCIRCUIT, DIGITAL	EA	1
E-8	36	PADZZ	5962-01-077-8969	9324292	19203	MICROCIRCUIT, LINEAR	EA	1
E-8	37	PADZZ	5962-01-057-3455	M38510/3010 7 BEB	81349	MICROCIRCUIT, DIGITAL	EA	1
	38	PADZZ		M8340102M680 1JA	81349	NETWORK, RESISTOR	EA	1
	39	PADZZ	5905-01-081-3641	M8340102M390 1JA	81349	NETWORK, RESISTOR	EA	1



LEGEND

Ref Des	Item No	Ref Des	Item No	Ref Des	Item No
C1	9	R2	14	R17	14
C2	9	R3	14	R18	19
C3	9	R4	15	R19	18
C4	9	R5	16	R20	14
C5	9	R6	14	R21	14
C6	10	R7	17	R22	14
C7	9	R8	18	R23	14
C8	9	R9	17	U1	21
C9	9	R10	18	U2	22
C10	11	R11	18	U3	23
C11	11	R12	19	U4	24
C12	9	R13	19	U5	25
C13	9	R14	29	U6	26
C14	12	R13	19	U7	27
D1	13	R14	20	U8	28
P1	8	R15	19	U9	29
R1	14	R16	14	U10	29
				U11	30

Figure E-9. Circuit Card Assembly 1A5, I/O

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) FEDERAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION *USABLE ON CODE*	(7) U/M	(8) QTY INC IN UNIT
						GROUP 0105 CIRCUIT CARD ASSY 1A5, I/O 9324114-002		
E-9	1	XADZZ		9324347	19203	CIRCUIT BOARD	EA	1
E-9	2	PADZZ	1090-01-068-0439	9324212	19203	RETAINER - EJECTOR, CIRCUIT CARD	EA	2
E-9	3	PADZZ	5305-00-922-8777	MS35275-202	96906	SCREW MACHINE	EA	4
E-9	4	PADZZ	5310-01-061-6323	9324209	19203	WASHER FLAT	EA	4
E-9	5	PADZZ	5305-00-054-5648	MS51957-14	96906	SCREW, MACHINE	EA	2
E-9	6	PADZZ	5310-00-208-3786	NAS671C4	80205	NUT, HEX, SMALL PATTERN	EA	2
E-9	7	PADZZ	5310-00-595-6211	MS15795-803	96906	WASHER, FLAT	EA	2
E-9	8	PADZZ	5935-01-058-6517	M55302/57A66Y-16	81349	CONNECTOR RECEPTACLE, ELECTRICAL	EA	1
E-9	9	PADZZ	5910-01-056-5472	M39014/01-1594	81349	CAPACITOR, FIXED, CERAMIC	EA	10
E-9	10	PADZZ	5510-00-113-5445	M39014/01-1339	81349	CAPACITOR, FIXED, CERAMIC	EA	1
E-9	11	PADZZ	5910-00-010-8666	M39014/01-1358	81349	CAPACITOR, FIXED CERAMIC	EA	2
E-9	12	PADZZ	5510-00-113-5475	M39003/01-2287	81349	CAPACITOR, FIXED, ELECTROLYTIC	EA	1
E-9	13	PADZZ	5561-00-938-1135	JANIN4148	81350	SEMICONDUCTOR DEVICE, DIODE	EA	1
E-9	14	PADZZ	5905-00-114-0711	RCR07G472JS	81349	RESISTOR, FIXED, COMPOSITION	EA	10
E-9	15	PADZZ	5905-00-126-6683	RCR07G332JS	81349	RESISTOR, FIXED, COMPOSITION	EA	1
E-9	16	PADZZ	5905-00-118-4559	RCR07G333JS	81349	RESISTOR, FIXED, COMPOSITION	EA	1
E-9	17	PADZZ	5905-00-141-0742	RCR07G181JS	81349	RESISTOR, FIXED, COMPOSITION	EA	2
E-9	18	PADZZ	5905-00-106-1356	RCR07G152JS	81349	RESISTOR, FIXED, COMPOSITION	EA	4
E-9	19	PADZZ	5905-00-106-1249	RCR07G510JS	81349	RESISTOR, FIXED, COMPOSITION	EA	4
E-9	20	PADZZ	5905-00-110-7620	RCR07G102JS	81349	RESISTOR, FIXED, COMPOSITION	EA	1
E-9	21	PADZZ	1090-01-068-0442	9324311	19203	MICROCIRCUIT, DIGITAL	EA	1
E-9	22	PADZZ	5962-01-033-6351	9324268	19203	MICROCIRCUIT, DIGITAL	EA	1
E-9	23	PADZZ	5562-01-061-1483	M38510/30004 BCB	81349	MICROCIRCUIT, DIGITAL	EA	1
E-9	24	PADZZ		9324365	19203	MICROCIRCUIT, DIGITAL	EA	1
E-9	25	PADZZ	5962-01-031-7030	M38510/30001 BCB	81349	MICROCIRCUIT	EA	1
E-9	26	PADZZ	5962-01-083-4685	9324315	19203	MICROCIRCUIT, DIGITAL	EA	1
E-9	27	PADZZ		9324291	19203	MICROCIRCUIT, DIGITAL	EA	1
E-9	28	PADZZ		9324279	19203	MICROCIRCUIT, DIGITAL	EA	1
E-9	29	PADZZ	5962-01-050-0918	M38510/30701 BEB	81349	MICROCIRCUIT, DIGITAL	EA	1
E-9	30	PADZZ	5362-01-034-9832	M38510/31004 BCB	81349	MICROCIRCUIT, DIGITAL	EA	1

(Data not Available)

Figure E-10. Power supply PS1

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) FEDERAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION *USABLE ON CODE*	(7) U/M	(8) QTY INC IN UNIT
						GROUP 0106 POWER SUPPLY 1PS1 9324341-001		
E-10						(DATA NOT AVAILABLE)		

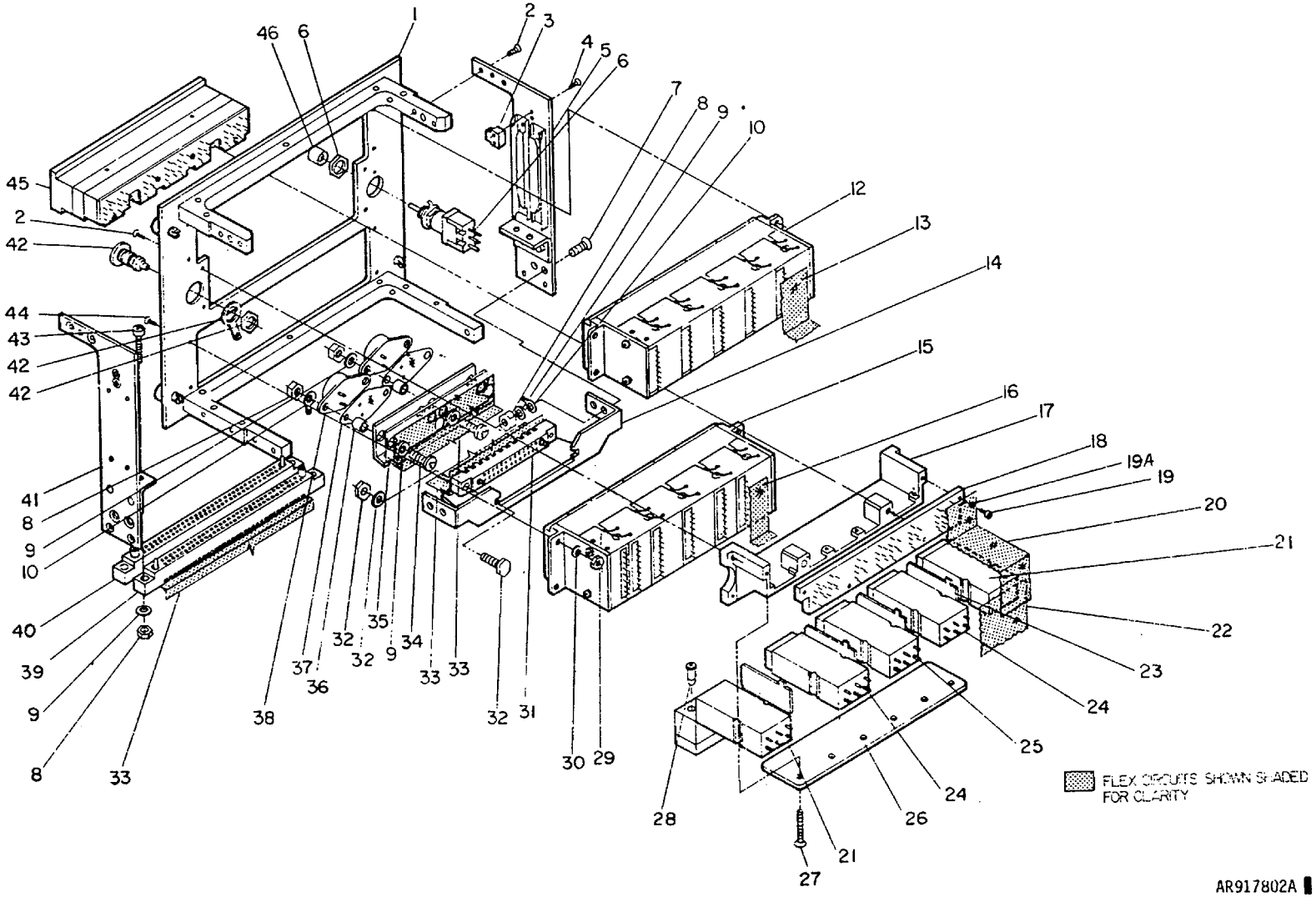


Figure E-11, Control Assembly

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) FEDERAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION *USABLE ON CODE*	(7) U/M	(8) QTY INC IN UNIT
						GROUP 0107 CONTROL ASSEMBLY (9324134-002)		
E-11	1	PADZZ	1090-01-068-8718	9324142	19203	BACKPLATE ASSEMBLY	EA	1
E-11	2	PADZZ	5305-00-993-9189	MS24693C2	96906	SCREW, MACHINE	EA	20
E-11	3	PADZZ	1090-01-092-9517	9324389	19203	BLOCK, CARD EXTRACTOR	EA	2
E-11	4	PADZZ	5305-00-764-2966	MS51959-2	96906	SCREW, MACNINE	EA	4
E-11	5	PADZZ	5999-01-207-9261	9324175-2	19203	HOLDER, ELECTRICAL C LEFT	EA	1
E-11	6	PADZZ	5930-01-063-2447	9324229	19203	SWITCH, PUSH	EA	1
E-11	7	PADZZ	5305-00-225-6400	MS24693-03	96906	SCREW, MACHINE	EA	4
E-11	8	PADZZ	5310-00-878-3292	MS21043-04	96906	NUT, SELF-L0CXING,	EA	12
E-11	9	PADZZ	5310-00-595-6211	MS15795-803	96906	WASHER, FLAT	EA	10
E-11	10	PADZZ	5940-00-614-0537	MS35431-1	96906	TERMINAL, LUG	EA	2
E-11	11					Deleted		
E-11	12	PADZZ	5930-01-236-0260	12011863	19200	SWITCH ASSEMBLY	EA	1
E-11	13	PADZZ	1090-01-119-7850	9324354	19203	PRINTED WIRING BOARD	EA	1
E-11	14	PADZZ	5930-01-115-6860	9324360	19203	BRACKET, ELECTRICAL	EA	1
E-11	15	PADZZ	5930-01-236-0261	12011875	19200	SWITCH ASSEMBLY	EA	1
E-11	16	PADZZ	1090-01-122-1070	9324357	19203	CIRCUIT, FLEXIBLE	EA	1
E-11	17	PADZZ	1090-01-088-8014	9324121	19203	BRACKET, SWITCH DISPLAY & ARM SWITCH ASSEMBLY	EA	1
E-11	18	PADZZ	5935-01-120-0811	9324232	19203	SOCKET, PLUG-IN ELECTRICAL	EA	1
E-11	19	PADZZ	5305-00-054-5637	MS51957-3	36906	SCREW, MACHINE	EA	4
E-11	19A	PADZZ	5310-00-360-2358	1JA2634H34	37942	WASHER,F LAT	EA	2
E-11	20	PADZZ	1090-01-122-1071	9324355	19203	CIRCUIT, FLEXIBLE	EA	1
E-11	21	PADZZ	1090-01-067-1688	9324234-1	19203	SWITCH, ZONE ARM	EA	2
E-11	21	PADZZ	1090-01-236-0237	12011867-1	19200	SWITCH, ZONE ARM	EA	1
E-11	22	PADZZ	1090-01-119-7844	9324356	19203	CIRCUIT, FLEXIBLE	EA	1
E-11	23	PADZZ	1090-01-091-9630	9324236	19203	PLATE, ELECTRICAL SWITCH	EA	4
E-11	24	PADZZ	1090-01-236-0236	12011867-2	19200	SWITCH, ZONE ARM	EA	1
E-11	25	PADZZ	1090-01-236-0235	12011867-3	19200	SWITCH, ZONE ARM	EA	1
E-11	26	PADZZ	1090-01-113-2435	9324361	19203	CLAMP, ARMING SWITCH	EA	1
E-11	27	PADZZ	5305-00-780-8454	MS24693-07	96906	SCREW, MACHINE	EA	6
E-11	28	PADZZ	6240-00-372-4785	6180	08108	LAMP, INCANDESCENT	EA	0
E-11	29	PADZZ	5310-00-938-2013	MS35649-224	96906	NUT, PLAIN, HEXAGON	EA	8
E-11	30	PADZZ	5310-00-595-6761	MS15795-802	96906	WASHER, FLAT	EA	8
E-11	31	PADZZ	5935-01-081-5488	M55302/58-B36X	91349	C0NNECTOR, RECEPTACL	EA	1
E-11	32	PADZZ	1090-01-068-6452	9324240	19203	PARTS KIT, ELECTRONIC EQUIPMENT	EA	2
E-11	33	PADZZ	1090-01-122-1072	9324358	19203	CIRCUIT, FLEXIBLE	EA	1
E-11	34	PADZZ	5305-00-054-5649	MS51957-15	16906	SCREW, MACHINE	EA	4
E-11	35	PADZZ	5970-01-095-0691	9324362	19203	INSULATOR, PLATE LAMP DRIVER	EA	1
E-11	36	PADZZ	5365-01-112-3995	9324191-1	19203	SPACER, SLEEVE INSULATOR	EA	4
E-11	37	PADZZ	5970-01-045-7597	9324324	19203	INSULATOR, PLATE	EA	2
E-11	38	PADZZ	5961-01-014-1061	9324265	19203	TRANSISTOR	EA	2
E-11	39	PADZZ	5935-01-075-4624	M55302/58-B70Y	81349	CONNECTOR, RECEPTACL ELECTRICAL	EA	1
E-11	40	PADZZ	5935-01-075-4624	H55302/58-B70Y	31349	CONNECTOR,RECEPTACL	EA	1
E-11	41	PADZZ	1090-01-068-8724	9324175-1	19203	UPRIGHT ASSEMBLY RIGHT	EA	1
E-11	42	PADZZ	5935-01-061-1483	MS90335-1	96906	CONNECTOR, (PART OF ITEM 39)	EA	1
E-11	43	PADZZ	5305-00-054-5651	MS51957-17	96906	SCREW, MACHINE	EA	4
E-11	44	PADZZ	5305-00-764-2964	MS5151959-4	96906	SCREW, MACHINE	EA	8
E-11	45	PAFDD	1090-01-236-0234	12011869	19200	DISPLAY, PLUG-IN	EA	1
E-11	46	PAOZZ	5355-01-061-6293	3324230	19203	KNOB	EA	1

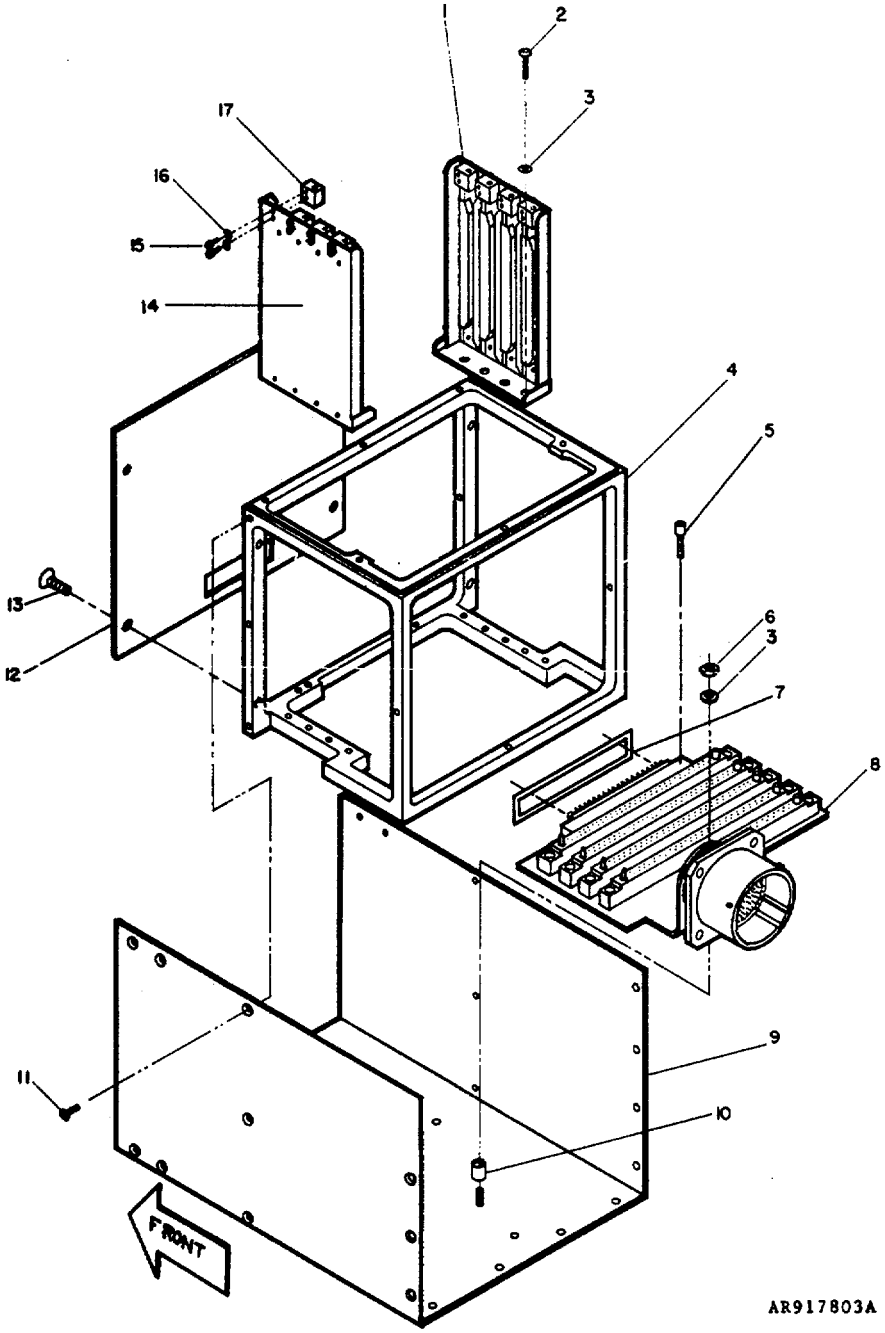
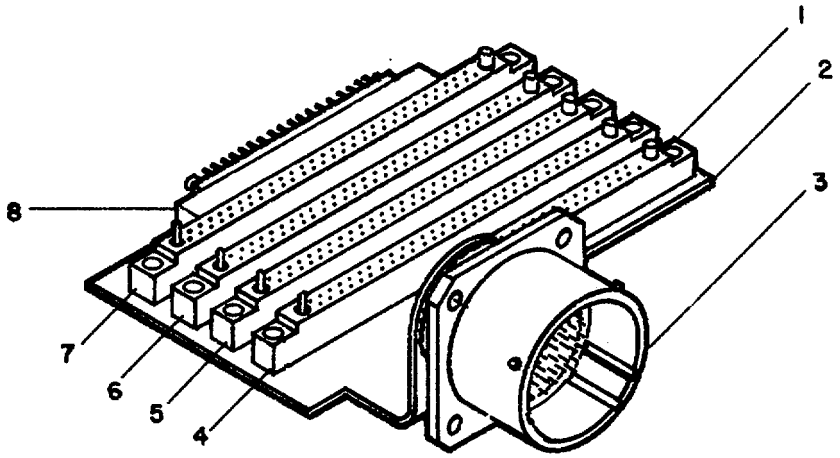


Figure E-12. Chassis Assembly

☆U.S. GOVERNMENT PRINTING OFFICE: 1988 542-043/80168

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION *USABLE ON CODE*	(7) U/M	(8) QTY INC IN UNIT
						GROUP 0108 CHASSIS ASSEMBLY 9324143 -002		
E-12	1	PADZZ	1090-01-068-8726	9324168-1	19203	CARD GUIDE ASSEMBLY, LEFT	EA	1
E-12	2	PAFZZ	5305-00-054-5651	MS51957-17	96906	SCREW MACHINE	EA	9
E-12	3	PAFZZ	5310-00-595-6211	MS15795-803	96906	WASHER, FLAT	EA	11
E-12	4	XADZZ		9324177	19203	FRAME ASSEMBLY	EA	1
E-12	5	PAFZZ		MS16995-10	96906	SCREW, CAP, SOCH	EA	2
E-12	6	PAFZZ	5310-00-878-3292	MS21043-04	96906	NUT SELF-LOCKING	EA	1
E-12	7	PAFZZ		9324139-36	19203	GASKET, CONNECTOR	EA	1
E-12	8	PAFDD	1090-01-077-8983	9324135-002	19203	MOTHERBOARD ASSEMBLY, DU	EA	1
E-12	9	PADZZ	1090-01-068-8730	9324206	19203	COVER ASSEMBLY	EA	1
E-12	10	PAFZZ	5365-01-073-8457	9324242-2	19203	SPACER SLEEVE	EA	1
E-12	11	PADZZ		MS24693-C1	96906	SCREW, MACHINE	EA	17
E-12	12	PADZZ	1090-01-079-9994	9324171	19203	BULKHEAD	EA	1
E-12	13	PADZZ		MS51957-2	96906	SCREW, MACHINE	EA	4
E-12	14	PADZZ	1090-01-068-8727	9324168-2	19203	CARD GUIDE ASSEMBLY, RIGHT	EA	1
E-12	15	PADZZ	5305-00-922-8777	MS35275-202	96906	SCREW, MACHINE	EA	16
E-12	16	PADZZ	5310-01-061-6323	9324209	19203	WASHER, FLAT	EA	16
E-12	17	PADZZ	1090-01-077-8941	9324198	19203	BLOCK CARD EXTRACTOR	EA	4,



AR917811A

Figure E-13. DU Motherboard Assembly

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION *USABLE ON CODE*	(7) U/M	(8) QTY INC IN UNIT
						GROUP 010801 MOTHERBOARD ASSEMBLY, DU 9324135-002		
E-13	1	PADZZ	5935-01-065-9768	9324243	19203	CONNECTOR RECEPTACLE, ELECTRICAL	EA	1
E-13	2	XADZZ		9324352	19203	CIRCUIT BOARD	EA	1
E-13	3	PADZZ	1090-01-068-0437	9324239	19203	CONNECTOR ASSEMBLY, ELECTRICAL	EA	1
E-13	4	PADZZ		M55302/58B66Y-16	81349	CONNECTOR RECEPTACLE, ELECTRICAL	EA	1
E-13	5	PADZZ		M55302/58B66Y-11	81349	CONNECTOR RECEPTACLE, ELECTRICAL	EA	1
E-13	6	PADZZ		M55302/58B66Y-6	81349	CONNECTOR RECEPTACLE, ELECTRICAL	EA	1
E-13	7	PADZZ		M55302/58B66Y-1	81349	CONNECTOR RECEPTACLE, ELECTRICAL	EA	1
E-13	8	PADZZ	5935-01-046-0102	M55302/57A36X	81349	CONNECTOR RECEPTACLE, ELECTRICAL	EA	1

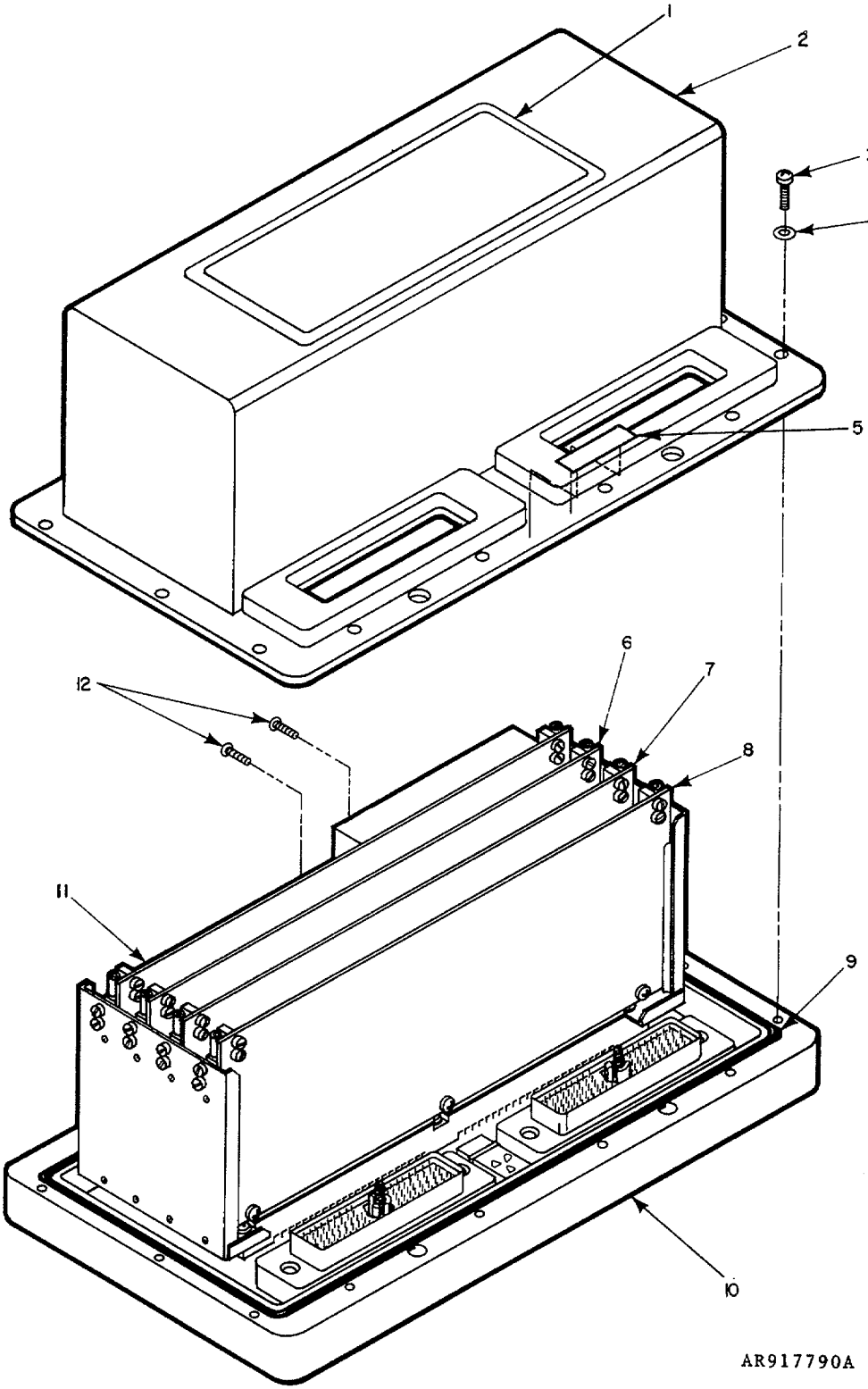


Figure E-14. Operations Unit

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION *USABLE ON CODE*	(7) U/M	(8) QTY INC IN UNIT
						GROUP 02 OPERATIONS UNIT 9324108-002		
E-14	1	MDDZZ	- - -	9324136-2	19203	LABEL, NAMEPLATE, (MAKE FROM 9905-01-066-1532)	EA	1
E-14	2	PAFDD	1090-01-061-6313	9324122	19203	COVER, ACCESS	EA	1
E-14	3	PAFZZ	5305-00-054-5647	MS51957-13	96906	SCREW MACHINE	EA	14
E-14	4	PAFZZ	5310-00-595-6211	MS15795-803	96906	WASHER FLAT	EA	14
E-14	5	MDDZZ	- - -	9324274-1	19203	LABEL, CONNECTOR REF DES, (MAKE FROM 9905-01-066-1532)	EA	1
E-14	6	PAFDD	1090-01-078-4163	9324119-002	19203	CIRCUIT CARD ASSY 2A3, SEQ & I/O	EA	1
E-14	7	PAFDD	1090-01-077-8976	9324118-002	19203	CIRCUIT CARD ASSY 2A2, OHMMETER/SETTER	EA	1
E-14	8	PAFDD	- - -	9324393-001	19203	CIRCUIT CARD ASSY 2A1, FZ SET/SQB FIRE	EA	1
E-14	9	MFFZZ	- - -	9324370-3	19203	GASKET, EMI/RFI, (MAKE FROM BULK ITEM 5)	IN	21
E-14	10	PAFDD	- - -	9324123-002	19203	OPERATIONS UNIT SUBASSEMBLY	EA	1
E-14	11	PAFDD	1090-01-077 -8977	9324120-002	19203	CIRCUIT CARD ASSY 2A4, PWR SPLY & BIT	EA	1
E-14	12	PAFZZ	5305-00-764-2966	MS51959-2	96906	SCREW	EA	2

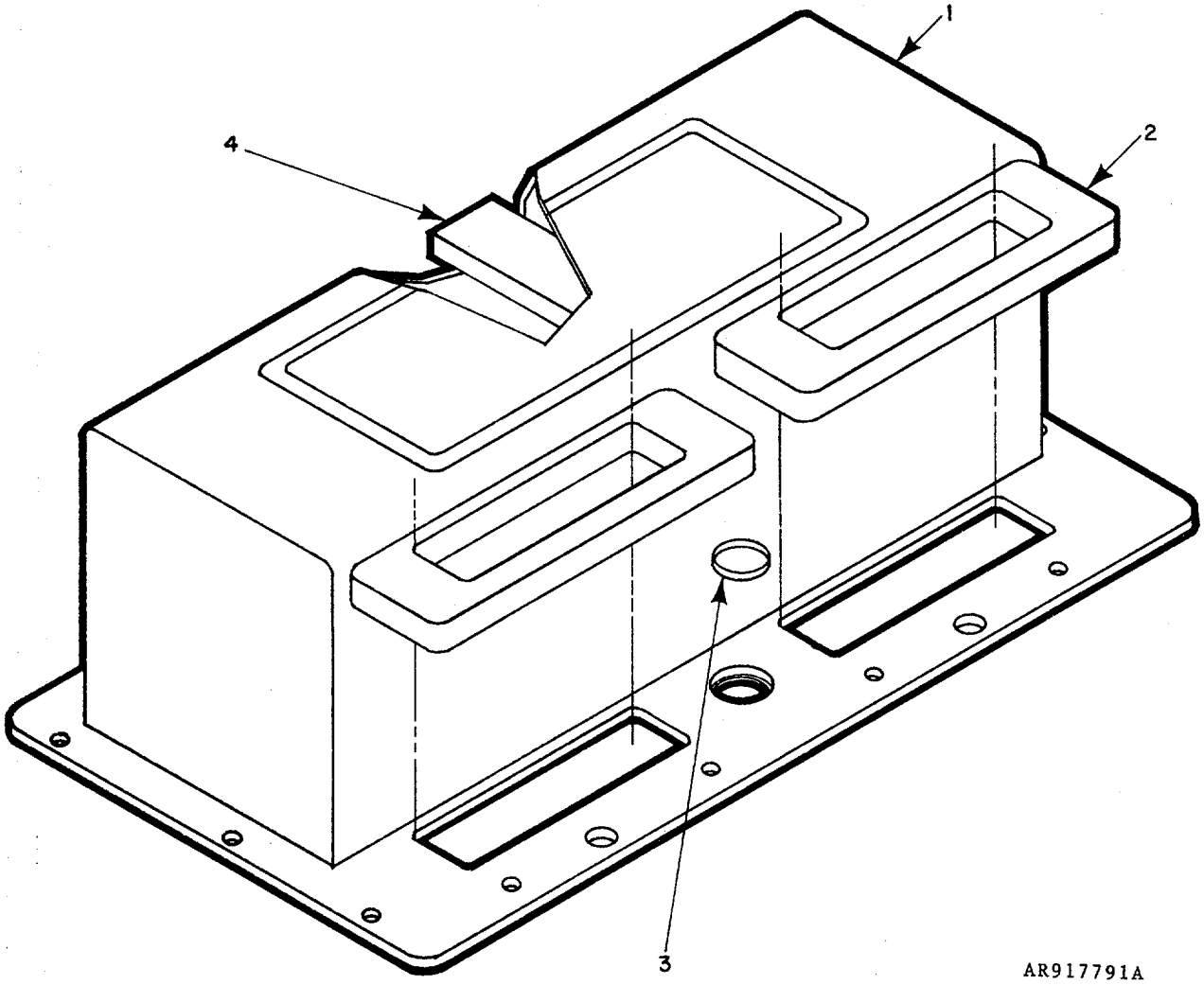
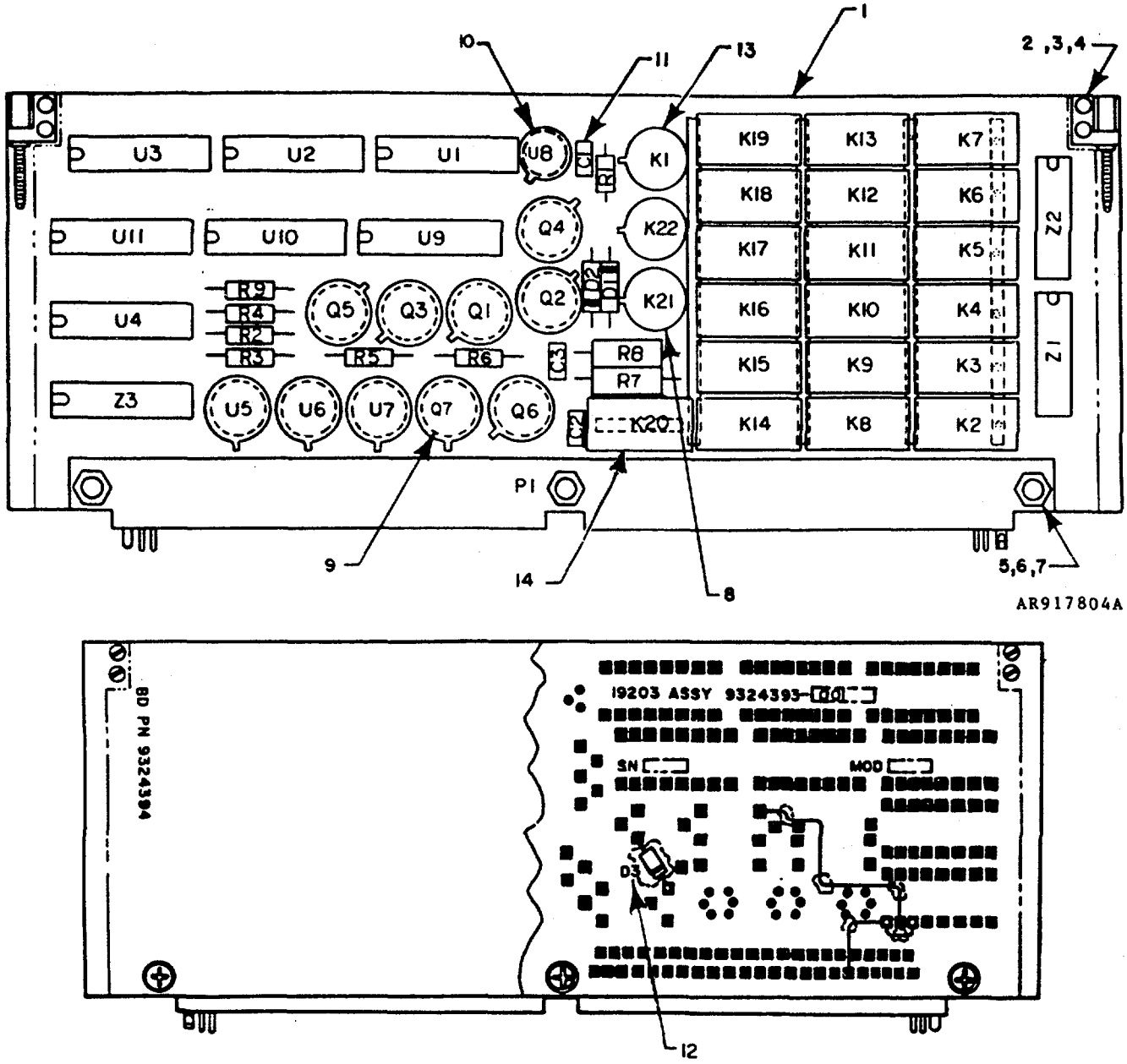


Figure E-15. Operations Unit Access Cover

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION *USABLE ON CODE*	(7) U/M	(8) QTY INC IN UNIT
						GROUP 0201 COVER, ACCESS 9324122		
E-15	1	XAFZZ		9324130	19203	COVER	EA	1
E-15	2	PADZZ	1090-01-068-8716	9324125	19203	GASKET	EA	2
E-15	3	PADZZ	1090-01-068-0586	9324126	19203	WINDOW, INDICATOR	EA	1
E-15	4	PADZZ	1090-01-068-8717	9324128	19203	DAMPER CARD	EA	1

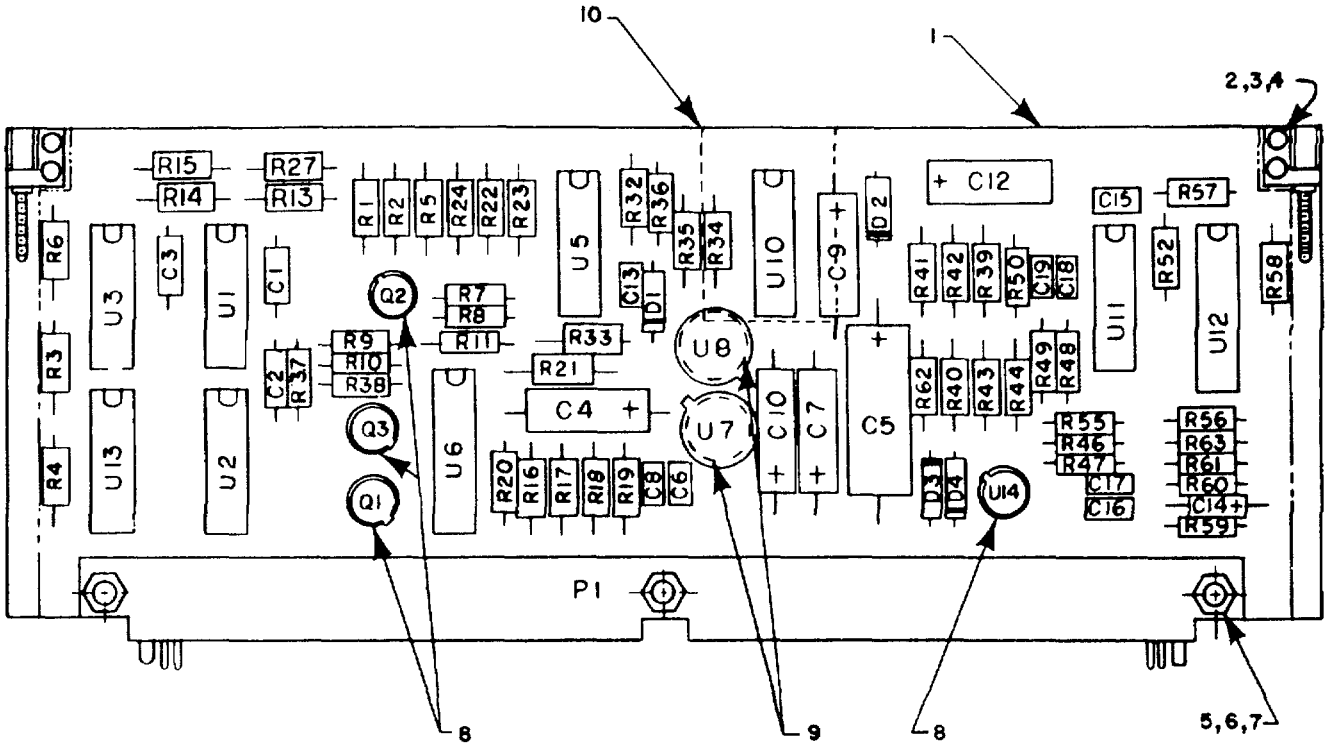


LEGEND

Ref Des	Item No.	Ref Des	Item No.	Ref Des	Item No.	Ref Des	Item No.	Ref Des	Item No.
C1	11	K7	14	K18	14	Q7	30	U3	21
C2	11	K8	14	K19	14	R1	16	U4	21
C3	11	K9	14	K20	14	R2	17	U5	22
D1	12	K10	14	K21	13	R3	20	U6	22
D2	12	K11	14	K22	13	R4	20	U7	22
D3	12	K12	14	P1	29	R5	26	U8	28
K1	13	K13	14	Q1	15	R6	18	U9	23
K2	14	K14	14	Q2	15	R7	19	U10	23
K3	14	K15	14	Q3	15	R8	19	U11	23
K4	14	K16	14	Q4	15	R9	27	Z1	24
K5	14	K17	14	Q5	15	U1	21	Z2	24
K6	14			Q6	15	U2	21	Z3	25

Figure E-16. Circuit Card Assembly 2A1, Fuse Set/Squib Fire

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION *USABLE ON CODE*	(7) U/M	(8) QTY INC IN UNIT
						GROUP 0202 CIRCUIT CARD ASSY 2A1, FZ SET/SQB FIR 9324393 -001		
E-16	1	XAFZZ		9324394	19203	CIRCUIT BOARD	EA	1
E-16	2	PAFZZ	1090-01-068-0439	9324212	19203	RETAINER - EJECTOR CIRCUIT CARD	EA	2
E-16	3	PAFZZ	5305-00-922-8777	MS35275-202	96906	SCREW, MACHINE	EA	4
E-16	4	PAFZZ	5310-01-061-6323	9324209	19203	WASHER. FLAT	EA	4
E-16	5	PADZZ	5305-00-056-5648	MS51957-14	96906	SCREW, MACHINE	EA	4
E-16	6	PADZZ	5310-00-595-6211	MS15795-803	96906	WASHER, FLAT	EA	3
E-16	7	PADZZ	5310-00-208-3786	NAS671C4	80205	NUT, HEX, SMALL PATTERN	EA	3
E-16	8	PADZZ		9324372	19203	PAD, TRANSISTOR	EA	3
E-16	9	PADZZ	5999-01-064-9543	M38527/2-05D	81349	PAD, TRANSISTOR	EA	10
E-16	10	PADZZ	5999-01-015-3901	M38527/1-01D	81349	PAD, TRANSISTOR	EA	1
E-16	11	PADZZ	5910-00-056-5472	M39014/01-1594	81349	CAPACITOR, FIXED, CERAMIC	EA	3
E-16	12	PADZZ	5961-00-938-1135	JAN1N4148	31350	SEMICONDUCTOR DEVICE, DIODE	EA	3
E-16	13	PADZZ		M39016/09-012L	81349	RELAY	EA	3
E-16	14	PADZZ	5945-01-010-5767	M39016/13-057L	81349	RELAY	EA	19
E-16	15	PADZZ		9324213	19203	TRANSISTOR	EA	6
E-16	16	PADZZ	5905-00-433-6479	RCR05G100JS	81349	RESISTOR FIXED COMPOSITION	EA	1
E-16	17	PADZZ		RCR07G302JS	81349	RESISTOR FIXED, COMPOSITION	EA	I
E-16	18	PADZZ		RCR20G182JS	81349	RESISTOR FIXED, COMPOSITION	EA	1
E-16	19	PADZZ		RWR8255R11FR	81349	RESISTOR, WIRE-WOUND	EA	2
E-16	20	PADZZ		RCR07G392JS	81349	RESISTOR FIXED, COMPOSITION	EA	2
E-16	21	PADZZ	5962-01-077-8969	9324292	19203	MICROCIRCUIT LINEAR	EA	4
E-16	22	PADZZ		9324395	19203	ISOLATOR, OPTICALLY COUPLED	EA	3
E-16	23	PADZZ	5962-01-066-1590	9324289	19203	MICROCIRCUIT DIGITAL	EA	3
E-16	24	PADZZ	5905-01-075-8888	M8340101M1001JB	81349	NETWORK, RESISTOR	EA	2
E-16	25	PADZZ		M8340102M2701JA	81349	NETWORK, RESISTOR	EA	1
E-16	26	PADZZ	5905-00-458-9500	RCR05G102JS	81349	RESISTOR FIXED, COMPOSITION	EA	1
E-16	27	PADZZ	5905-00-111-4845	RCR07G201JS	81349	RESISTOR FIXED, COMPOSITION	EA	1
E-16	28	PADZZ	5962-01-075-3772	9324310	19203	MICROCIRCUIT, LINEAR	EA	1
E-16	29	PADZZ		M55302/59A90Y-1	81349	CONNECTOR, RECEPTACLE ELECTRICAL	EA	1
E-16	30	PADZZ		JAN2N3019	81350	TRANSISTOR	EA	1



LEGEND

Ref Des	Item No.	Ref Des	Item No.	Ref Des	Item No.	Ref Des	Item No.
C1	11	Q1	23	R22	25	R55	56
C2	11	Q2	24	R23	25	R56	56
C3	11	Q3	23	R24	31	R57	56
C4	12	R1	25	R27	31	R58	58
C5	13	R2	25	R32	31	R59	57
C6	14	R3	25	R33	31	R60	58
C7	15	R4	25	R34	25	R61	57
C8	14	R5	25	R35	25	R62	59
C9	15	R6	25	R36	55	R63	57
C10	16	R7	26	R37	56	U1	62
C12	16	R8	27	R38	57	U2	62
C13	17	R9	28	R39	60	U3	62
C14	18	R10	29	R40	61	U5	63
C15	14	R11	30	R41	60	U6	64
C16	19	R13	31	R42	72	U7	65
C17	19	R14	31	R43	73	U8	66
C18	19	R15	31	R44	73	U10	67
C19	19	R16	32	R46	57	U11	68
D1	20	R17	*	R47	57	U12	69
D2	20	R18	**	R48	57	U13	70
D3	21	R19	53	R49	57	U14	71
D4	21	R20	54	R50	56		
P1	22	R21	31	R52	56		

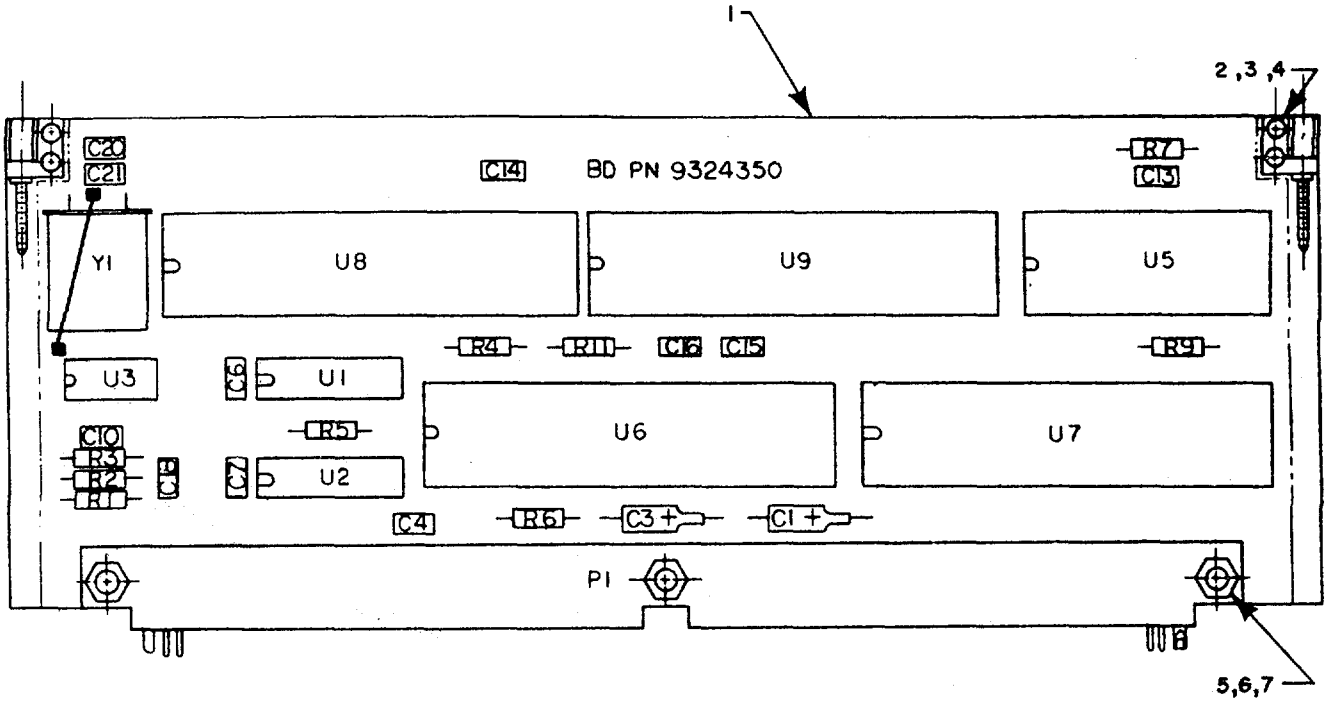
Note: Ref Des not used - C11
R12, R25, R26, R28, R29, R30, R31, R45, R51, R53, R54
U4, U9

* Select R17 from items 33 thru 42.
** Select R18 from items 43 thru 52.

Figure E-17. Circuit Card Assembly 2A2, Ohmmeter/Setter

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION *USABLE ON CODE*	(7) U/M	(8) QTY INC IN UNIT
						GROUP 0203 CIRCUIT CARD ASSY 2A2, OHMMETER/SETTER 9324118-002		
E-17	1	XADZZ		9324349	19203	CIRCUIT BOARD	EA	1
E-17	2	PADZZ	1090-01-068-0439	9324212	19203	RETAINER - EJECTOR, CIRCUIT CARD	EA	2
E-17	3	PADZZ	5305-00-922-8777	MS35275-202	96906	SCREW, MACHINE	EA	4
E-17	4	PADZZ	5310-01-061-6323	9324209	19203	WASHER FLAT	EA	4
E-17	5	PADZZ	5305-00-054-5648	MS51957-14	96906	SCREW, MACHINE	EA	3
E-17	6	PADZZ	5310-00-208-3786	NAS671C4	80205	NUT, HEX, SMALL PATTERN	EA	3
E-17	7	PADZZ	5310-00-595-6211	MS15795-803	96906	WASHER, FLAT	EA	3
E-17	8	PADZZ		M38527/3-01D	81349	PAD, TRANSISTOR	EA	4
E-17	9	PADZZ	5999-01-064-9543	M38527/2-05D	81349	PAD, TRANSISTOR	EA	2
E-17	10	PADZZ		9324328-1	19203	PAD, SILICONE RUBBER	EA	1
E-17	11	PADZZ		CFR04ASA103JP	81349	CAPACITOR, FIXED, PLASTIC	EA	3
E-17	12	PADZZ	5910-00-010-8422	M39003/01-2244	81349	CAPACITOR, FIXED, ELCTLT	EA	1
E-17	13	PADZZ	5905-00-141-1132	M39003/01-5016	81349	CAPACITOR, FIXED, ELECTROLYTIC	EA	1
E-17	14	PADZZ	5910-01-056-5472	M39014/01-1594	81349	CAPACITOR, FIXED, CERAMIC	EA	3
E-17	15	PADZZ	5910-00-144-4381	M39003/01-2305	81349	CAPACITOR, FIXED, ELCTLT	EA	2
E-17	16	PADZZ	5910-00-131-5475	M39003/01-2287	81349	CAPACITOR, FIXED, ELCTLT	EA	2
E-17	17	PADZZ	5910-00-010-8666	M39014/01-1358	81349	CAPACITOR, FIXED, CERAMIC	EA	1
E-17	18	PADZZ	5910-00-189-3178	M39003/01-3058	81349	CAPACITOR FIXED, ELCTLT	EA	1
E-17	19	PADZZ	5910-00-214-6378	M39014/01-1576	81349	CAPACITOR, FIXED, CERAMIC	EA	4
E-17	20	PADZZ	5961-00-938-1135	JAN1N4148	81350	SEMICONDUCTOR DEVICE, DIODE	EA	2
E-17	21	PADZZ	5961-00-237-2384	JAN1N5614	81350	SEMICONDUCTOR DEVICE, DIODE	EA	2
E-17	22	PADZZ		M55302/59A90Y-16	81349	CONNECTOR, RECEPTACLE, ELECTRICAL	EA	1
E-17	23	PADZZ	5961-00-951-8757	JAN2N2222A	81350	TRANSISTOR, SI, NPN	EA	2
E-17	24	PADZZ	5961-00-925-3777	JAN2N2907A	81350	TRANSISTOR	EA	1
E-17	25	PADZZ	5905-00-236-0895	RNC55H4992FS	81349	RESISTOR, FIXED, FILM	EA	10
E-17	26	PADZZ	5905-00-135-6045	RCR05G511JS	81349	RESISTOR, FIXED, COMPOSITION	EA	1
E-17	27	PADZZ	5905-00-470-9481	RCR05G202JS	81349	RESISTOR, FIXED, COMPOSITION	EA	1
E-17	28	PADZZ		RCR07G302JS	81349	RESISTOR, FIXED, COMPOSITION	EA	1
E-17	29	PADZZ		RCR07G301JS	81349	RESISTOR, FIXED, COMPOSITION	EA	1
E-17	30	PADZZ	5905-00-113-4860	RCR07G270JS	81349	RESISTOR, FIXED, COMPOSITION	EA	1
E-17	31	PADZZ	5905-01-076-8441	9324218	19203	RESISTOR, TRACKING,(REPLACE AS A MATCHED SET)	EA	1
E-17	32	PADZZ	5905-00-477-9176	RNC55H2001FS	81349	RESISTOR, FIXED, FILM	EA	1
E-17	33	PADZZ	5905-00-721-3305	RNC55H4222FS	81349	RESISTOR, FIXED, FILM, SELECTED VALUE	EA	1
E-17	34	PADZZ		RNC55H4422FS	81349	RESISTOR, FIXED, FILM, SELECTED VALUE	EA	1
E-17	35	PADZZ	5905-00-184-7790	RNC55H4642FS	81349	RESISTOR, FIXED, FILM, SELECTED VALUE	EA	1
E-17	36	PADZZ	5905-00-275-0269	RNC55H4872FS	81349	RESISTOR, FIXED, FILM, SELECTED VALUE	EA	1
E-17	37	PADZZ	5905-00-005-2880	RNC55H5112FS	81349	RESISTOR, FIXED, FILM, SELECTED VALUE	EA	1
E-17	38	PADZZ		RNC55H5312FS	81349	RESISTOR, FIXED, FILM, SELECTED VALUE	EA	1
E-17	39	PADZZ	5905-00-412-0772	RNC55H5622FS	81349	RESISTOR, FIXED, FILM, SELECTED VALUE	EA	1
E-17	40	PADZZ	5905-00-721-3681	RNC55H5902FS	81349	RESISTOR, FIXED, FILM, SELECTED VALUE	EA	1

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION *USABLE ON CODE*	(7) U/M	(8) QTY INC IN UNIT
						GROUP 0203 CIRCUIT CARD ASSY 2A2OHMMETER/SETTER 9324118-002 (CONTINUED)		
E-17	41	PADZZ	5905-00-541-7410	RNCS5H6192FS	81349	RESISTOR, FIXED, FILM, SELECTED VALUE	EA	1
E-17	42	PADZZ	5905-00-402-1400	RNC55H6342FS	81349	RESISTOR, FIXED, FILM, SELECTED VALUE	EA	1
E-17	43	PADZZ		RNC55H1912FS	81349	RESISTOR, FIXED, FILM, SELECTED VALUE	EA	1
E-17	44	PADZZ	5905-00-412-4048	RNC55H2002FS	81349	RESISTOR, FIXED, FILM, SELECTED VALUE	EA	1
E-17	45	PADZZ	5905-00-480-4026	RNC55H2102FS	81349	RESISTOR, FIXED, FILM, SELECTED VALUE	EA	1
E-17	46	PADZZ	5905-00-471-2423	RNC55H2212FS	81349	RESISTOR, FIXED, FILM, SELECTED VALUE	EA	1
E-17	47	PADZZ	5905-00-479-9945	RNC55H2322FS	81349	RESISTOR, FIXED, FILM, SELECTED VALUE	EA	1
E-17	48	PADZZ	5905-00-197-4110	RNC55H2432FS	81349	RESISTOR, FIXED, FILM, SELECTED VALUE	EA	1
E-17	49	PADZZ	5905-00-292-0981	RNC55H2552FS	81349	RESISTOR, FIXED, FILM, SELECTED VALUE	EA	1
E-17	50	PADZZ	5905-00-471-2424	RNC55H2672FS	81349	RESISTOR, FIXED, FILM, SELECTED VALUE	EA	1
E-17	51	PADZZ	5905-00-412-0764	RNC55H2802FS	81349	RESISTOR, FIXED, FILM, SELECTED VALUE	EA	1
E-17	52	PADZZ	5905-00-431-5149	RNC55H2942FS	81349	RESISTOR, FIXED, FILM, SELECTED VALUE	EA	1
E-17	53	PADZZ	5905-00-468-5815	RNC55H9090FS	81349	RESISTOR, FIXED, FILM	EA	1
E-17	54	PADZZ	5905-00-470-0370	RCR05G205JS	81349	RESISTOR, FIXED, COMPOSITION	EA	1
E-17	55	PADZZ	5905-00-401-7430	RCRO5G752JS	81349	RESISTOR, FIXED, COMPOSITION	EA	1
E-17	56	PADZZ	5905-00-617-5091	RCR05G472JS	81349	RESISTOR, FIXED, COMPOSITION	EA	6
E-17	57	PADZZ	5905-01-035-5065	RCR05G103JS	81349	RESISTOR, FIXED, COMPOSITION	EA	8
E-17	58	PADZZ	5905-00-110-7620	RCR07G102JS	81349	RESISTOR, FIXED, COMPOSITION	EA	2
E-17	59	PADZZ	5905-00-484-7874	RNC55H1210FS	81349	RESISTOR, FIXED, FILM	EA	1
E-17	60	PADZZ	5905-00-480-5196	RNC55H1501FS	81349	RESISTOR, FIXED, FILM	EA	2
E-17	61	PADZZ	5905-00-112-2181	RNC55H2101FS	81349	RESISTOR, FIXED, FILM	EA	1
E-17	62	PADZZ		9324298	19203	MICROCIRCUIT LINEAR	EA	3
E-17	63	PADZZ		9324299	19203	MICROCIRCUIT LINEAR	EA	1
E-17	64	PADZZ		9324296	19203	MICROCIRCUIT DIGITAL	EA	1
E-17	65	PADZZ		9324294-20	19203	MICROCIRCUIT LINEAR	EA	1
E-17	66	PADZZ		9324295-20	19203	MICROCIRCUIT LINEAR	EA	1
E-17	67	PADZZ	5962-01-058-1539	M38510/30102BCB	81349	MICROCIRCUIT DIGITAL	EA	1
E-17	68	PADZZ	5962-01-066-0337	9324284	19203	MICROCIRCUIT DIGITAL	EA	1
E-17	69	PADZZ	5962-01-043-3089	9324219	19203	MICROCIRCUIT DIGITAL	EA	1
E-17	70	PADZZ	5962-01-031-7030	M38510/30001BCB	81349	MICROCIRCUIT. DIGITAL	EA	1
E-17	71	PADZZ	5962-01-075-3772	9324310	19203	MICROCIRCUIT, LINEAR	EA	1
E-17	72	PADZZ	5905-01-025-2021	RNC55H12R1FS	81349	RESISTOR, FIXED, FILM	EA	1
E-17	73	PADZZ	5905-00-244-8512	RNC55H10R0FS	81349	RESISTOR, FIXED, FILM	EA	2



LEGEND

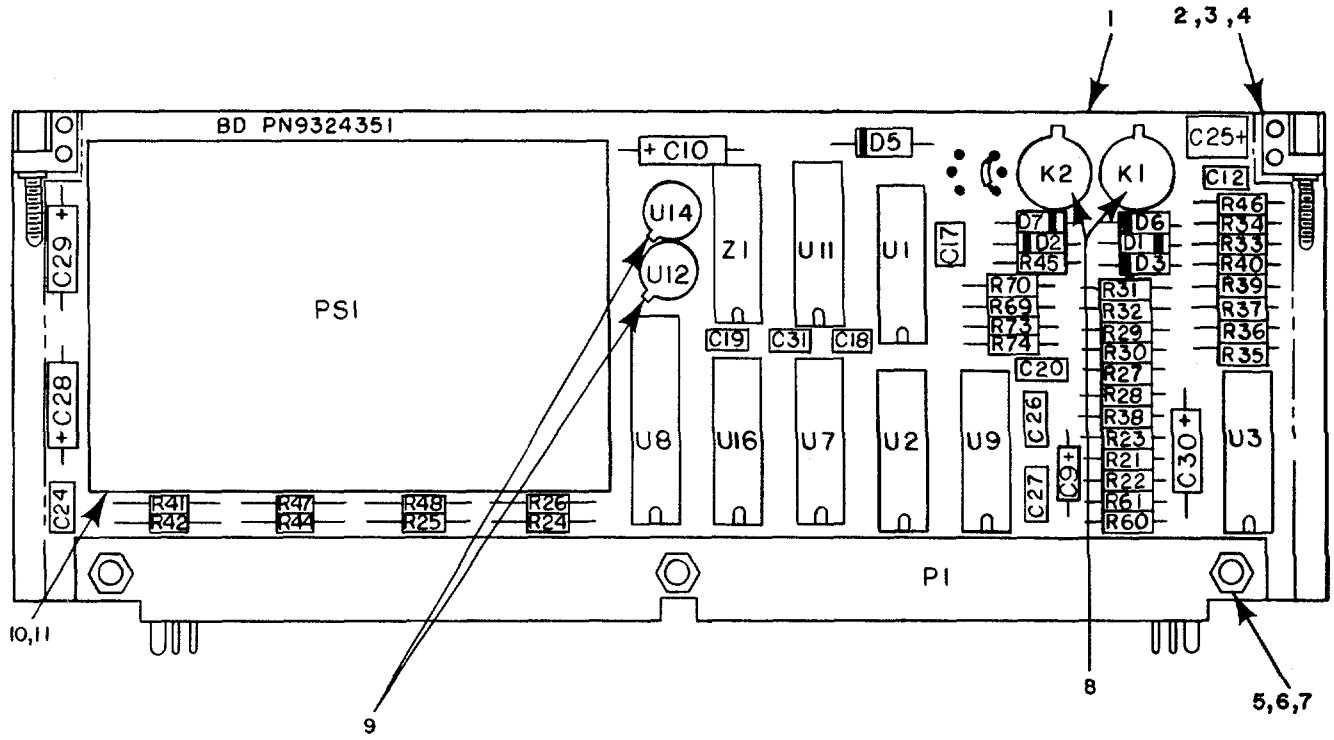
Ref Des	Item No.	Ref Des	Item No.
C1	8	R3	14
C3	8	R4	15
C4	9	R5	15
C6	9	R6	15
C7	9	R7	15
C10	9	R9	15
C13	9	R11	15
C14	9	U1	16
C15	9	U2	17
C16	9	U3	18
C18	10	U5	19
C20	11	U6	20
C21	11	U7	21
P1	12	U8	22
R1	13	U9	23
R2	14	Y1	24

NOTE: Ref Des not used:
C2, C5, C8, C9, C11
C12, C17, C19
R8, R10
U4

Figure E-18. Circuit Card Assembly 2A3, Sequencer and I/O

☆U.S. GOVERNMENT PRINTING OFFICE: 1990-743-049:20223 PIN: 049954-002

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION *USABLE ON CODE*	(7) U/M	(8) QTY INC IN UNIT
						GROUP 0204 CIRCUIT CARD ASSY 2A3, SEQ & I/O 9324119-002		
E-18	1	XADZZ		9324350	19203	CIRCUIT BOARD	EA	1
E-18	2	PADZZ	1090-01-068-0439	9324212	19203	RETAINER - EJECTOR, CIRCUIT CARD	EA	2
E-18	3	PADZZ	5305-00-922-8777	MS35275-202	96906	SCREW, MACHINE	EA	4
E-18	4	PADZZ	5310-01-061-6323	9324209	19203	WASHER FLAT	EA	4
E-18	5	PADZZ	5305-00-054-5648	MS51957-14	96906	SCREW MACHINE	EA	3
E-18	6	PADZZ	5310-00-208-3786	NAS671C4	80205	NUT HEX, SMALL PATTERN	EA	3
E-18	7	PADZZ	5310-00-595-6211	MS15795-803	96906	WASHER FLAT	EA	3
E-18	8	PADZZ	5910-00-460-0850	M39003/01-2357	81349	CAPACITOR, FIXED, ELECTROLYTIC	EA	:2
E-18	9	PADZZ	5910-00-056-5472	M39014/01-1594	81349	CAPACITOR, FIXED, CERAMIC	EA	8
E-18	10	PADZZ	5910-00-010-8666	M39014/01-1358	81349	CAPACITOR, FIXED, CERAMIC	EA	1
E-18	11	PADZZ	5910-00-010-8485	M39014/01-1324	81349	CAPACITOR, FIXED, CERAMIC	EA	2
E-18	12	PADZZ		MS5302/59A90Y-11	81349	CONNECTOR, RECEPTACLE, ELECTRICAL	EA	1
E-18	13	PADZZ	5905-00-458-9348	RCR0SG181JS	81349	RESISTOR, FIXED, COMPOSITION	EA	1
E-18	14	PADZZ	5905-00-412-0758	RCRO5G510JS	81349	RESISTOR FIXED COMPOSITION	EA	2
E-18	15	PADZZ	5905-01-035-5065	RCRO5G103JS	81349	RESISTOR, FIXED, COMPOSITION	EA	6
E-18	16	PADZZ	5962-01-031-5065	M38510/30001BCB	81349	MICROCIRCUIT, DIGITAL	EA	1
E-18	17	PADZZ	5962-01-055-4258	M38510/30006BCB	81349	MICROCIRCUIT, DIGITAL	EA	1
E-18	18	PADZZ	5962-01-077-8968	9324366	19203	MICROCIRCUIT, LINEAR	EA	1
E-18	19	PADZZ		9324379	19203	MICROCIRCUIT DIGITAL, EPROM, PRGMD	EA	1
E-18	20	PADZZ	1090-01-068-0442	9324311	19203	MICROCIRCUIT, DIGITAL	EA	I
E-18	21	PADZZ		9324313	19203	MICROCIRCUIT DIGITAL	EA	1
E-18	22	PADZZ		9324312	19203	MICROCIRCUIT DIGITAL	EA	1
E-18	23	PADZZ		9324314	19203	MICROCIRCUIT DIGITAL	EA	1
E-18	24	PADZZ	5955-01-077-8951	9324359	19203	CRYSTAL QUARTZ	EA	1



Ref Des	Item No.	Ref Des	Item No.	Ref Des	Item No.	Ref Des	Item No.
C9	13	D3	16	R31	28	R61	21
C10	13	D5	17	R32	29	R69	24
		D6	16	R33	30	R70	28
C12	14	D7	16	R34	31	R73	28
C17	14	K1	18	R35	32	R74	24
C18	14	K2	18	R36	32	U1	39
C19	14	P1	19	R37	33	U2	40
C20	14	PS1	20	R38	34	U3	40
C24	14	R21	21	R39	32	U7	41
C25	15	R22	22	R40	35	U8	42
C26	14	R23	21	R41	36	U9	43
C27	14	R24	23	R42	36	U11	44
C28	13	R25	22	R44	36	U12	45
C29	13	R26	22	R45	37	U14	45
C30	13	R27	24	R46	37	U16	46
C31	14	R28	25	R47	38	Z1	12
D1	16	R29	26	R48	25		
D2	16	R30	27	R60	21		

NOTE: Ref Des not used - C1 thru C8, C11, C13 thru C16, C21 thru C23
D4
R1 thru R20, R43, R49 thru R59, R62 thru R68, R71, R72
U4, U5, U6, U10, U13, U15

Figure E-19. Circuit Card Assembly 2A4, Power Supply and Built-In Test

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION *USABLE ON CODE*	(7) U/M	(8) QTY INC IN UNIT
						GROUP 0205 CIRCUIT CARD ASSY 2A4, PWR SPLY & BIT 9324120-002		
E-19	1	XADZZ		9324351	19203	CIRCUIT BOARD	EA	1
E-19	2	PADZZ	1090-01-068-0439	9324212	19203	RETAINER - EJECTOR, CIRCUIT CARD	EA	2
E-19	3	PADZZ	5305-00-922-8777	MS35275-202	96906	SCREW MACHINE	EA	4
E-19	4	PADZZ	5310-01-061-6323	9324209	19203	WASHER, FLAT	EA	4
E-19	5	PADZZ	5305-00-054-5648	MS51957-14	96906	SCREW, MACHINE	EA	3
E-19	6	PADZZ	5310-00-208-3786	NAS671C4	80205	NUT, HEX, SMALL PATTERN	EA	3
E-19	7	PADZZ	5310-00-595-6211	MS15795-803	96906	WASHER FLAT	EA	3
E-19	8	PADZZ		9324372	19203	PAD, MOUNTING	EA	2
E-19	9	PADZZ		M38527/3-01D	81349	PAD, MOUNTING	EA	2
E-19	10	PADZZ	1090-01-068-8722	9324189	19203	INSULATOR, POWER SUPPLY	EA	1
E-19	11	PADZZ	5305-00-054-5651	MS51957-17	96906	SCREW MACHINE	EA	1
E-19	12	PADZZ	5905-01-065-5934	M8340101M1002JB	81349	NETWORK, RESISTOR	EA	1
E-19	13	PADZZ	5910-00-495-0042	M39003/01-2356	81349	CAPACITOR, FIXED, ELCTLT	EA	5
E-19	14	PADZZ	5910-00-214-6378	M39014/01-1576	81349	CAPACITOR FIXED, CERAMIC	EA	9
E-19	15	PADZZ		9324371	19203	CAPACITOR, FIXED, ELCTLT	EA	1
E-19	16	PADZZ	5961-00-938-1135	JAN1N4148	81350	SEMICONDUCTOR DEVICE, DIODE	EA	5
E-19	17	PADZZ	5961-00-237-2384	JAN1N5614	81350	SEMICONDUCTOR DEVICE, DIODE	EA	1
E-19	18	PADZZ		M39016/09-012L	81349	RELAY, ARMATURE	EA	2
E-19	19	PADZZ		M55302/59A90Y-6	81349	CONNECTOR, RECEPTACLE, ELECTRICAL	EA	1
E-19	20	PADZZ	1090-01-067-1687	9324221	19203	MODULE, POWER SUPPLY	EA	1
E-19	21	PADZZ		RNC50H2491FS	81349	RESISTOR, FIXED FILM	EA	4
E-19	22	PADZZ		RNC50H1001FS	81349	RESISTOR, FIXED FILM	EA	3
E-19	23	PADZZ		RNC50H3921FS	81349	RESISTOR, FIXED FILM	EA	1
E-19	24	PADZZ		RNC50H1242FS	81349	RESISTOR, FIXED FILM	EA	3
E-19	25	PADZZ		RNC50H2001FS	81349	RESISTOR, FIXED, FILM	EA	2
E-19	26	PADZZ		RNC50H4991FS	81349	RESISTOR, FIXED FILM	EA	1
E-19	27	PADZZ		RNC50H6041FS	81349	RESISTOR, FIXED FILM	EA	1
E-19	28	PADZZ		RNC50H1003FS	81349	RESISTOR, FIXED, FILM	EA	3
E-19	29	PADZZ		RNC50H3162FS	81349	RESISTOR FIXED, FILM	EA	1
E-19	30	PADZZ	5905-01-035-5065	RCR05G103JS	81349	RESISTOR, COMPOSITION	EA	1
E-19	31	PADZZ	5905-00-180-8303	RCR05G152JS	81349	RESISTOR COMPOSITION	EA	1
E-19	32	PADZZ	5905-00-458-9346	RCR05G104JS	81349	RESISTOR, COMPOSITION	EA	3
E-19	33	PADZZ		RCR05G824JS	81349	RESISTOR, FIXED, COMPOSITION	EA	1
E-19	34	PADZZ		RCR05G393JS	81349	RESISTOR, FIXED, COMPOSITION	EA	1
E-19	35	PADZZ	5905-00-458-9500	RCR05G102JS	81349	RESISTOR, COMPOSITION	EA	1
E-19	36	PADZZ		RNC50H10R0FS	81349	RESISTOR, FIXED, FILM	EA	3
E-19	37	PADZZ	5905-00-403-8837	RCR05G470JS	81349	RESISTOR, COMPOSITION	EA	2
E-19	38	PADZZ		RNC50H1500FS	81349	RESISTOR, FIXED, FILM	EA	1
E-19	39	PADZZ	5962-01-066-1588	9324280	19203	MICROCIRCUIT LINEAR	EA	1
E-19	40	PADZZ	5962-01-066-0337	9324284	19203	MICROCIRCUIT, DIGITAL	EA	2

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION *USABLE ON CODE*	(7) U/M	(8) QTY INC IN UNIT
						GROUP 0205CIRCUIT CARD ASSY 2A4, PWR SPLY & BIT 9324120-002(CONTINUED)		
E-19	41	PADZZ	5962-01-066-1590	9324289	19203	MICROCIRCUIT, DIGITAL	EA	1
E-19	42	PADZZ	5962-01-033-6351	9324268	19203	MICROCIRCUIT, DIGITAL	EA	1
E-19	43	PADZZ	5962-01-030-3146	M38510/30002BCB	81349	MICROCIRCUIT, DIGITAL	EA	1
E-19	44	PADZZ	5962-01-077-8969	9324292	19203	MICROCIRCUIT, LINEAR	EA	1
E-19	45	PADZZ	5962-01-075-3772	9324310	19203	MICROCIRCUIT, LINEAR	EA	2
E-19	46	PADZZ	5962-01-050-0918	M38510/30701BEB	81349	MICROCIRCUIT DIGITAL	EA	1

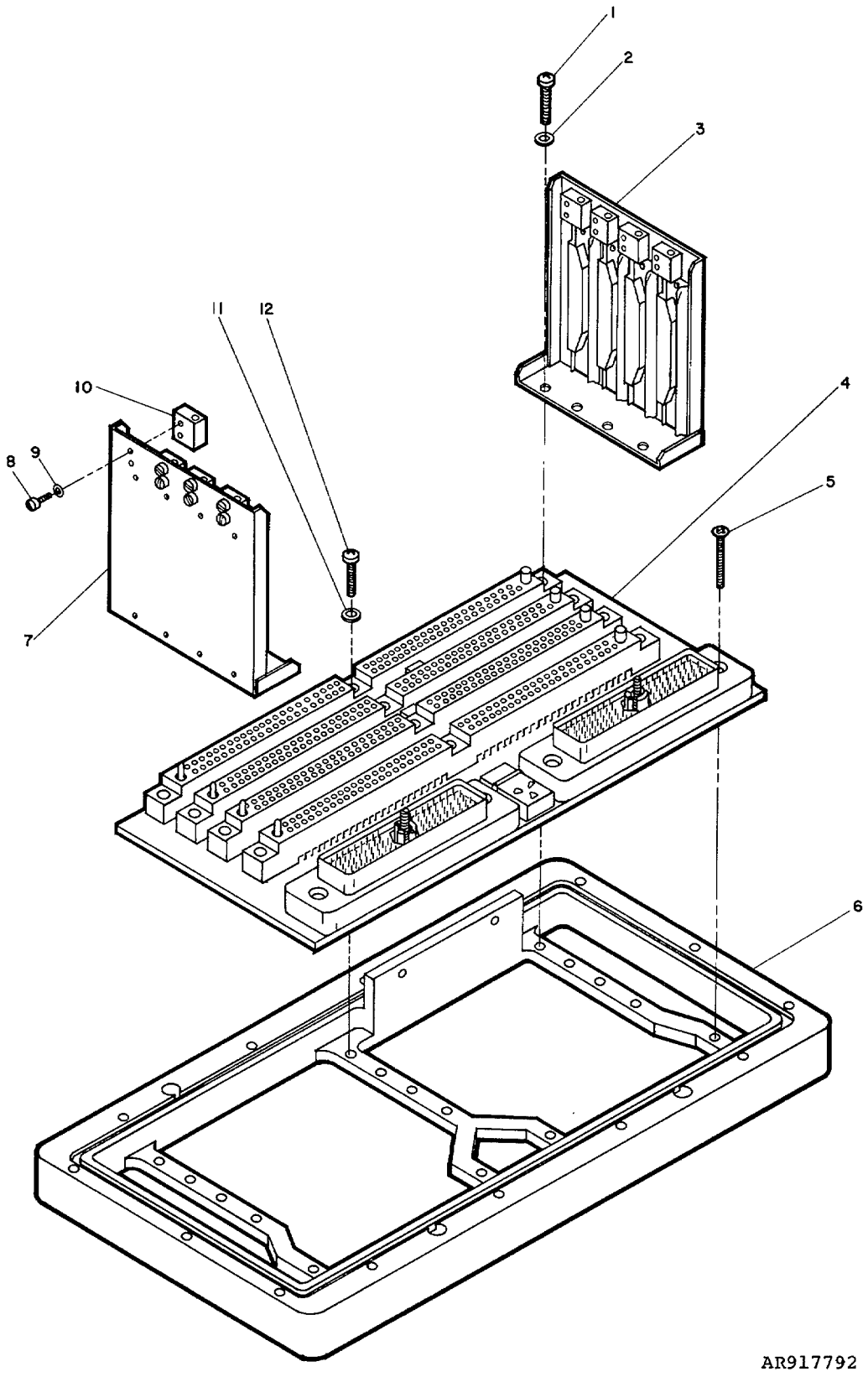


Figure E-20. Operations Unit Subassembly

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION *USABLE ON CODE*	(7) U/M	(8) QTY INC IN UNIT
						GROUP 0206OPERATIONS UNIT SUBASSEMBLY 9324123-002		
E-20	1	PAFZZ	5305-00-054-5651	MS51957-17	96906	SCREW, MACHINE	EA	8
E-20	2	PAFZZ	5310-00-595-6211	MS15795-803	96906	WASHER, FLAT	EA	8
E-20	3	PAFZZ	5999-01-061-6388	9324132-2	19203	CARD GUIDE ASSEMBLY, RIGHT	EA	1
E-20	4	PAFDD	1090-01-077-8978	9324159-002	19203	MOTHERBOARD ASSEMBLY, OU	EA	1
E-20	5	PAFZZ	5305-00-066-7325	MS24693-C5	96906	SCREW MACHINE	EA	4
E-20	6	XADZZ		9324176	19203	BASEPLATE ASSEMBLY	EA	1
E-20	7	PAFZZ	5999-01-080-2560	9324132-1	19203	CARD GUIDE ASSEMBLY, LEFT	EA	1
E-20	8	PAFZZ	5305-00-922-8777	MS35275-202	96906	SCREW, MACHINE	EA	16
E-20	9	PAFZZ	5310-01-061-6323	9324209	19203	WASHER, FLAT	EA	16
E-20	10	PAFZZ	1090-01-077-8941	9324198	19203	BLOCK CARD EXTRACTOR	EA	8
E-20	11	PAFZZ	5310-01-061-6322	9324174	19203	WASHER FIAT	EA	4
E-20	12	PAFZZ	5305-00-054-5650	MS51957-16	96906	SCREW MACHINE	EA	4

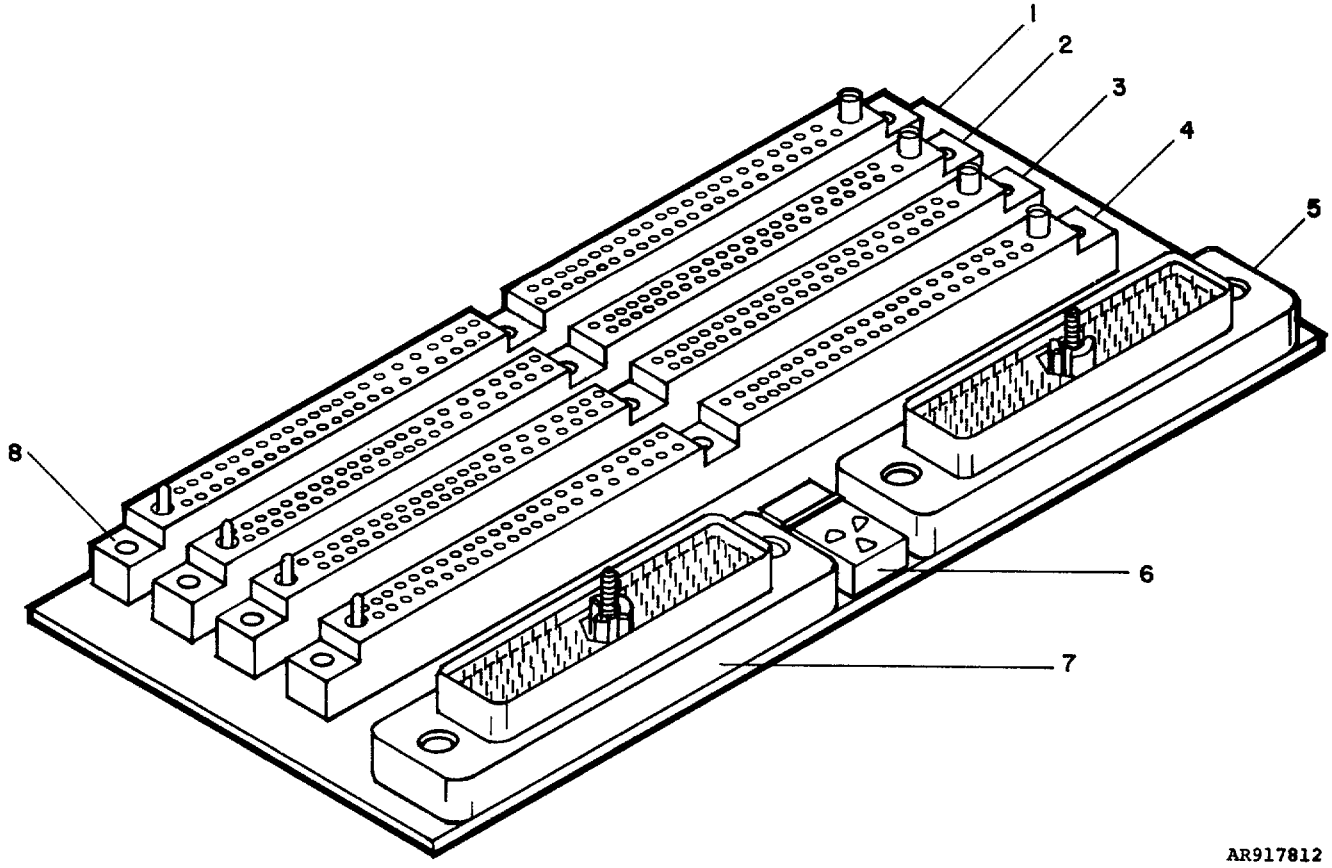


Figure E-21. OU Motherboard Assembly

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION *USABLE ON CODE*	(7) U/M	(8) QTY INC IN UNIT
						GROUP 020601 MOTHERBOARD ASSEMBLY. OU 9324159-002		
E-21	1	XADZZ		9324353	19203	CIRCUIT BOARD	EA	1
E-21	2	PADZZ	5935-01-076-6416	M55302/60B90Y-11	81349	CONNECTOR, RECEPTACLE, ELECTRICAL	EA	1
E-21	3	PADZZ	5935-01-076-6416	M55302/60B90Y-16	81349	CONNECTOR, RECEPTACLE, ELECTRICAL	EA	1
E-21	4	PADZZ	5935-01-076-6416	M55302/60B90Y-1	81349	CONNECTOR, RECEPTACLE, ELECTRICAL	EA	1
E-21	5	PADZZ	5935-01-078-4161	9324316-3N	19203	CONNECTOR, RECEPTACLE, ELECTRICAL	EA	1
E-21	6	PADZZ	1090-01-068-8721	9324211	19203	INDICATOR, EQUIPMENT STATUS	EA	1
E-21	7	PADZZ	5935-01-078-4160	9324316-3V	19203	CONNECTOR, RECEPTACLE, ELECTRICAL	EA	1
E-21	8	PADZZ	5935-01-076-6416	M55302/60B90Y-6	81349	CONNECTOR RECEPTACLE, ELECTRICAL	EA	1

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION *USABLE ON CODE*	(7) U/M	(8) QTY INC IN UNIT
						GROUP 9999 BULK ITEMS		
BULK	1	PADZZ		AWG22, TYPE S	81348	WIRE, SOLID, TINNED (PER QQ-W-343)	IN	V
BULK	2	PADZZ	9905-01-066-1532	MILP15024 TYPE G	81349	FOIL, NAMEPLATE LABEL MATERIAL	IN	V
BULK	3	PADZZ		TYPE GE.015	81349	PLASTIC SHEET, GLASS, EPOXY	IN	V
BULK	4	PADZZ		AWG26	81349	TUBING, TFE, PER MIL-I-22129	FT	V
BULK	5	PAFZZ		9324370	19203	ELASTOMER, ROUND, CORD	IN	V
BULK	6	PADZZ		AWG22, BLK	81349	WIRE, STRANDED, TFE PER MIL-W-16878/4	FT	V
BULK	7	PADZZ		AWG26, TYPE S	81348	WIRE, SOLID, TINNED, PER QQ-W-343	FT	V
BULK	8	PADZZ		M23053/6-105-S	81349	TUBING, HEAT-SHRINKABLE	FT	V
BULK	9	PADZZ		AWG22, RED	81349	WIRE, STRANDED, TFE PER MIL-W-16878/4	FT	V

Section III. SPECIAL TOOLS LIST

There are no special tools required at this time.

NATIONAL STOCK NUMBER INDEX

STOCK NUMBER	FIGURE NO.	ITEM NO.
5905-00-005-2880	17	37
5910-00-010-8422	17	12
5910-00-010-8485	18	11
5910-00-010-8666	5	29
5910-00-010-8666	9	11
5910-00-010-8666	17	17
5910-00-010-8666	18	10
5305-00-054-5647	3	6
5305-00-054-5647	14	3
5305-00-054-5648	6	6
5305-00-054-5648	7	5
5305-00-054-5648	8	6
5305-00-054-5648	9	5
5305-00-054-5648	16	5
5305-00-054-5648	17	5
5305-00-054-5646	18	5
5305-00-054-5648	19	5
5305-00-054-5649	11	34
5305-00-054-5650	20	12
5305-00-054-5651	12	2
5305-00-054-5651	19	11
5305-00-054-5651	20	1
5305-00-054-6654	2	12
5910-00-056-5472	16	11
5910-00-056-5472	18	9
5305-00-066-7325	20	5
5905-00-106-1249	9	19
5905-00-106-1356	5	14
5905-00-106-1356	9	18
5905-00-106-3666	5	15
5905-00-106-9356	5	17
5905-00-110-0388	8	27
5905-00-110-7620	4	6
5905-00-110-7620	5	11
5905-00-110-7620	8	18
5905-00-110-7620	9	20
5905-00-110-7620	17	58
5905-00-111-4727	8	28
5905-00-111-4845	5	16
5905-00-111-4845	16	27
5905-00-112-2181	17	61
5905-00-113-4860	17	30
5910-00-113-5446	9	10
5910-00-113-5475	4	4
5910-00-113-5475	5	3
5910-00-113-5475	6	12
5910-00-113-5475	7	9
5910-00-113-5475	8	13
5910-00-113-5475	9	12
5905-00-114-0708	5	13
5905-00-114-0711	6	14
5905-00-114-0711	8	19
5905-00-114-0711	9	14
5905-00-114-5344	8	17
5905-00-116-8555	8	20
5905-00-118-4559	9	16
5905-00-126-6683	9	15
5910-00-131-5475	17	16
5905-00-135-6045	17	26
5905-00-141-0742	9	17
5905-00-141-1132	17	13
5910-00-144-4381	17	15
5330-00-166-0967	2	6
5905-00-180-8303	19	31
5905-00-184-7790	17	35
5910-00-189-3174	5	6
5910-00-189-3178	17	18
5905-00-197-4110	17	48
5310-00-208-3786	5	7
5310-00-208-3786	7	6
5310-00-208-3786	8	7
5310-00-208-3786	9	6
5310-00-208-3786	16	7
5310-00-208-3786	17	6
5310-00-208-3786	18	6
5310-00-208-3766	19	6
5910-00-214-5378	5	27
5910-00-214-6378	6	11
5410-00-214-6378	8	14
5910-00-214-6378	17	19
5910-00-214-6376	19	14
5905-00-223-2741	8	24
5905-00-228-5506	5	12
5905-00-236-0895	17	25
5961-00-237-2384	17	21
5961-00-237-2384	19	17
5905-00-244-8512	17	73
5905-00-256-9323	8	22
5905-00-275-0269	17	36
5905-00-292-0981	17	49
5905-00-401-7430	17	55
5905-00-402-1400	17	42
5905-00-403-8837	19	37
5905-00-410-1577	8	30
5905-00-412-0758	18	14
5905-00-412-0764	17	51
5905-00-412-0772	8	23
5905-00-412-0772	17	39
5905-00-412-4048	17	44
5905-00-431-5149	17	52
5905-00-433-6479	16	16
5905-00-458-9346	19	32
5905-00-458-9348	18	13
5905-00-458-9500	16	26
5905-00-458-9500	19	35
5910-00-460-0850	18	8
5905-00-468-5816	17	53
5905-00-470-0370	17	54
5905-00-470-9481	17	27
5905-00-471-2423	17	46
5905-00-471-2424	8	21
5905-00-471-2424	17	50
5905-00-471-9176	8	25
5905-00-477-9176	17	32
5905-00-479-9945	17	47
5905-00-480-4026	17	45
5905-00-480-5196	17	60
5905-00-484-7874	17	59
5905-00-484-7884	8	26
5905-00-492-2173	8	29
5305-00-494-7133	2	8
5910-00-495-0042	19	13
5905-00-541-7410	17	41
5310-00-595-6211	3	5
5310-00-595-6211	6	8
5310-00-595-6211	7	7
5310-00-595-6211	8	8
5310-00-595-6211	9	7
5310-00-595-6211	11	9
5310-00-595-6211	12	3
5310-00-595-6211	14	4
5310-00-595-6211	16	6

NATIONAL STOCK NUMBER INDEX (CONT.)

STOCK NUMBER	FIGURE NO.	ITEM NO.
5310-00-595-6211	17	7
5310-00-595-6211	18	7
5310-00-595-6211	19	7
5310-00-545-6211	20	2
5310-00-595-6761	11	30
5940-00-614-0537	11	10
5905-00-617-5091	17	56
5310-00-687-6664	2	7
5905-00-721-3305	17	33
5905-00-721-3681	17	40
5305-00-764-2966	11	4
5305-00-764-2966	14	12
5961-00-842-9864	8	16
5310-00-878-3292	3	8
5310-00-878-3292	11	8
5310-00-878-3292	12	6
3439-00-892-4408	ESMD	3
5961-00-898-2138	8	15
5305-00-922-8777	3	11
5305-00-922-8777	6	3
5305-00-922-8777	7	3
5305-00-922-8777	8	4
5305-00-972-8777	9	3
5305-00-922-8777	12	15
5305-00-922-8777	16	3
5305-00-922-8777	17	3
5305-00-922-8777	16	3
5305-00-922-8777	19	3
5305-00-922-8777	20	8
5961-00-925-3777	17	24
5961-00-938-1135	5	7
5961-00-938-1135	9	13
5961-00-938-1135	16	12
5961-00-938-1135	17	20
5961-00-938-1135	19	16
5310-00-938-2013	11	29
5961-00-951-8757	5	10
5961-00-951-8757	11	23
5305-00-993-9189	2	1
5305-00-993-9189	11	2
5945-01-010-5767	16	14
5999-01-015-3901	8	2
5999-01-015-3901	16	10
5905-01-025-2021	17	72
5962-01-026-2493	1	17
5962-01-027-6863	6	22
5935-01-030-2991	4	5
5935-01-030-2991	5	9
5962-01-030-3146	19	43
5962-01-030-6352	6	17
5962-01-031-7030	7	13
5962-01-031-7030	9	25
5962-01-031-7030	17	70
5962-01-031-7030	18	16
5962-01-033-6351	5	19
5962-01-033-6351	6	20
5962-01-033-6351	8	35
5962-01-033-6351	9	22
5962-01-033-6351	19	42
5905-01-033-6580	4	10
5905-01-033-6580	5	21
5962-01-034-9832	9	30
5905-01-035-5065	17	57
5905-01-035-5065	18	15
5905-01-035-5065	19	30
5962-01-043-3089	17	69
5962-01-043-3940	4	9
5935-01-046-0102	13	8
5962-01-050-0918	5	1
5962-01-050-0918	6	21
5962-01-050-0918	9	29
5962-01-050-0918	19	46
5962-01-055-4258	18	17
5910-01-056-5472	4	3
5910-01-056-5472	5	5
5910-01-056-5472	6	9
5910-01-056-5472	7	8
5910-01-056-5472	8	11
5910-01-056-5472	9	9
5910-01-056-5472	17	14
5962-01-057-3455	8	37
5962-01-058-1539	11	67
5935-01-058-6517	9	8
5962-01-061-1483	9	23
1090-01-061-6237	2	5
1090-01-061-6238	2	2
1090-01-061-6240	11	45
5355-01-061-6293	11	46
1090-01-061-6313	14	2
5310-01-061-6322	20	11
5310-01-061-6323	3	10
5310-01-061-6323	6	4
5310-01-061-6323	7	9
5310-01-061-6323	8	5
5310-01-061-6323	9	4
5310-01-061-6323	17	16
5310-01-061-6323	16	4
5310-01-061-6323	17	4
5310-01-061-6323	18	4
5310-01-061-6323	19	4
5310-01-061-6323	20	9
5999-01-061-6388	20	3
5930-01-063-2447	11	6
5305-01-064-3418	3	7
5999-01-064-9543	8	9
5999-01-064-9543	16	9
5999-01-064-9543	17	9
5905-01-065-5934	19	12
5962-01-065-7026	5	18
5935-01-065-9768	13	1
5962-01-066-0337	8	34
5962-01-066-0337	17	68
5962-01-066-0337	19	40
9905-01-066-1532	BULK	2
5962-01-066-1586	6	16
5962-01-066-1588	19	39
5962-01-066-1590	16	23
5962-01-066-1590	19	41
1090-01-067-1687	11	20
1090-01-067-1688	11	21
1090-01-067-1689	11	25
1090-01-067-1690	11	24
1090-00-068-0437	13	3
1090-00-068-0439	3	2
1090-01-068-0439	6	2
1090-01-068-0439	7	2
1090-01-068-0439	8	3
1090-01-068-0439	9	2
1090-01-068-0439	16	2
1090-01-068-0439	17	2
1090-01-068-0439	18	2
1090-01-068-0439	19	2

NATIONAL STOCK NUMBER INDEX (CONT.)

STOCK NUMBER	FIGURE NO.	ITEM NO.
1090-01-068-0442	9	21
1090-01-068-0442	18	20
1090-01-068-0586	15	3
1090-01-068-6452	11	32
1090-01-068-8716	15	2
1090-01-068-8717	15	4
1090-01-068-8718	11	1
1190-01-068-8721	21	6
1090-01-068-8122	19	10
1090-01-068-8724	11	41
1090-01-068-8726	12	1
1090-01-068-8727	12	14
1090-01-068-8730	12	9
5955-01-069-9526	6	24
5962-01-071-6651	7	12
1090-01-073-5956	3	1
5365-01-073-8457	12	10
1090-01-074-8966	6	5
5962-01-075-3772	8	33
5962-01-075-3772	16	28
5962-01-075-3772	17	71
5962-01 075-3772	19	45
5905-01-075-8888	16	24
5905-01-076-5665	6	25
5935-01-076-6416	21	4
5935-01-076-6416	21	2
5935-01-076-6416	21	3
5935-01-076-6416	21	8
5905-01-076-8441	17	31
1090-01-077-8938	1	2
1090-01-017-8941	12	17
1090-01-077-8941	20	10
1090-01-077-8942	3	9
1090-01-077-8943	3	4
1090-01-077-8944	2	13
1091-01-077-8940	2	9
1090-01-077-8947	1	1
1990-01-077-8948	2	4
5955-01-077-8951	18	24
1090-01-077-8953	2	18
5962-01-077-8968	18	18
5962-01-077-8969	4	7
5962-01-077-8969	8	36
5962-01-077-8969	16	21
5962-01-077-8969	19	44
1090-01-077-8976	14	7
1090-01-077-8977	14	11
1090-01-077-8978	20	4
1090-01-077-8980	2	15
1091-01-077-8981	2	16
1090-01-077-8983	12	8
5935-01-078-4160	21	7
5935-01-078-4161	21	5
5340-01-078-4167	3	3
1090-01-078-4163	14	6
5999-01-079-9252	2	11
1090-01-079-9994	12	12
5999-01-080-2560	20	7
5905-01-081-3641	8	39
5962-01-083-4684	6	15
5962-01-083-4684	7	11
5962-01-083-4685	9	26

NATIONAL PART NUMBER INDEX

PART NUMBER	FSCM	FIG NO.	ITEM NO.	PART NUMBER	FSCM	FIG NO.	ITEM NO.
		2	21	MS35275-202	96906	16	3
		2	22	MS35275-202	96906	17	3
		10	1	MS35275-202	96906	18	3
		14	13	MS35275-202	96906	19	3
		14	14	MS35275-202	96906	20	8
		14	15	MS35431-1	96906	11	10
		17	74	MS35649-224	96906	11	29
		17	75	MS51957-13	96906	3	6
		ESMD	18	MS51957-13	96906	14	3
		ESMD	19	MS51957-13B	96906	2	8
		ESMD	20	MS51957-14	96906	6	6
		ESMD	21	MS51957-14	96906	7	5
AWG22, BLK	81349	BULK	6	MS51957-14	96906	8	6
AWG22, RED	81349	BULK	9	MS51957-14	96906	9	5
AWG22, TYPE S	81348	BULK	1	MS51957-14	96906	16	5
AWG26	81349	BULK	4	MS51957-14	96906	17	5
AWG26, TYPE S	81348	BULK	7	MS51957-14	96906	18	5
CFR04ASA103JP	81349	17	11	MS51957-14	96906	19	5
JANTX1N963B	81349	5	8	MS51957-15	96906	11	34
JAN1N4148	81350	5	7	MS51957-16	96906	20	12
JAN1N4148	81350	9	13	MS51957-17	96906	12	2
JAN1N4148	81350	16	12	MS51957-17	96906	19	11
JAN1N4148	81350	17	20	MS51957-17	96906	20	1
JAN1N14148	81350	19	16	MS51957-18	96906	11	43
JAN1N4946	81350	8	15	MS51957-2	96906	12	13
JAN1N5614	81350	17	21	MS51957-3	96906	11	19
JAN1N5614	81350	19	17	MS51957-30	96906	2	12
JAN1N751A	81350	5	28	MS51959-2	96906	11	4
JAN1N966B	81350	8	16	MS51959-2	96906	14	12
JAN2N2222A	81350	5	10	MS51959-4	96906	11	44
JAN2N2222A	81350	17	23	MS90335-1	96906	11	42
JAN2N2907A	81350	17	24	M23053/6-105-5	81349	BULK	8
JAN2N3019	81350	16	30	M38510/30001BCB	81349	7	13
MIL146058TYPE AH	81349	ESMD	1	M38510/30001BCB	81349	9	25
MILP15024 TYPE G	81349	BULK	2	M38510/30001BCB	81349	17	70
MILP23377CLASS1	81349	ESMD	12	M38510/30001BCB	81349	18	16
MS15795-802	96906	11	30	M38510/30002BCB	81349	19	43
MS15795-803	96906	3	5	M38510/30003BCB	81349	6	22
MS15795-803	96906	6	8	M38510/30004BCB	81349	9	23
MS15795-803	96906	7	7	M38510/30005BCB	81349	6	17
MS15795-803	96906	8	8	M38510/30006BCB	91349	18	17
MS15795-803	96906	9	7	M38510/30007BCB	81349	7	17
MS15795-803	96906	11	9	M38510/30102BCB	81349	17	67
MS15795-803	96906	12	8	M38510/30106BEB	81349	4	9
MS15795-803	96906	14	4	M38510/30107BEB	81349	8	37
MS15795-803	96906	16	6	M38510/30701BEB	81349	5	18
MS15795-803	96906	17	7	M38510/30701BEB	81349	6	21
MS15795-803	96906	18	7	M38510/30701BEB	81349	9	29
MS15795-803	96906	19	7	M38510/30701BEB	81349	19	46
MS15795-803	96906	20	2	M38510/31004BCB	81349	9	30
MS15795-804B	96906,	2	7	M38510/31401BEA	81349	8	32
MS16995-10	96906	12	5	M38510/31504BEB	81349	6	18
MS21043-04	96906	3	8	M38527/1-01D	81349	8	2
MS21043-04	96906	11	8	M38527/1-01D	81349	16	10
MS21043-04	96906	12	6	M38527/2-05D	81349	8	9
MS24515-718AS15	96906	11	11	M38527/2-05D	81349	16	9
MS24693-C1	96906	12	11	M38527/2-05D	81349	17	9
MS24693-C2	96906	2	1	M38527/3-01D	81349	17	8
MS24693-C2	96906	11	2	M38527/3-01D	81349	19	9
MS24693-C3	96906	11	7	M39003/01-2244	81349	17	12
MS24693-C5	96906	20	5	M39003/01-2287	81349	4	4
MS24693-C7	96906	11	27	M39003/01-2287	81349	5	3
MS35275-202	96906	3	11	M39003/01-2287	81349	6	12
MS35275-202	96906	6	3	M39003/01-2287	81349	7	9
MS35275-202	96906	7	3	M39003/01-2287	81349	8	13
MS35275-202	96906	8	4	M39003/01-2787	81349	9	12
MS35275-202	96906	9	3	M39003/01-2287	81349	17	16
MS35275-202	96906	12	15	M39003/01-2305	81349	17	15

NATIONAL PART NUMBER INDEX (CONT.)

PART NUMBER	FSCM	FIG	I ITEM NO.	PART NUMBER NO.	FSCM	FIG NO.	ITEM NO.
M39003/01-2356	81349	19	13	NAS671C4	80205	18	6
M39003/01-2357	81349	5	4	NAS671C4	80205	19	6
M39003/01-2357	81349	17	8	RCR05G100J5	81349	16	16
M39003/01-3058	81349	17	6	RCR05G102JS	81349	16	26
M39003/01-3058	81349	4	18	RCR05G102JS	81349	19	35
M39003/01-5016	81349	18	13	RCR05G103JS	81349	17	57
M39014-01-1594	81349	9	3	RCR05G103JS	81349	18	15
M39014/01-1324	81349	5	11	RCR05G103JS	81349	19	30
M39014/01-1339	81349	9	10	RCR05G104JS	81349	19	32
M39014/01-1358	81349	17	29	RCR05G152JS	81349	19	31
M39014/01-1358	81349	18	11	RCR05G202JS	81349	18	27
M39014/01-1358	81349	5	10	RCR05G205JS	81349	17	54
M39014/01-1576	81349	6	27	RCR05G393JS	81349	17	.34
M39014/01-1576	81349	8	11	RCR05G470JS	81349	19	56
M39014/01-1576	81349	17	19	RCR05G510JS	8139	19	37
M39014/01-1576	81349	19	14	RCR05G511JS	81349	17	26
M39014/01-1587	81349	5	26	RCR05G752JS	81349	17	55
M39014/01-1594	81349	5	5	RCR05G824JS	81349	19	33
M39014/01-1594	81349	6	9	RCR07G102JS	81349	4	6
M39014/01-1594	81349	7	8	RCR07G102JS	81349	5	11
M39014/01-1594	81349	8	11	RCR07G102JS	81349	8	18
M39014/01-1594	81349	9	9	RCR07G102JS	81349	9	20
M39014/01-1594	81349	16	11	RCR07G102JS	81349	17	56
M39014/01-1594	81349	17	14	RCR07G103JS	81349	5	15
M39014/01-1594	81349	18	9	RCR07G104JS	81349	8	27
M39014/05-2213	81349	6	10	RCR07G122JS	81349	5	24
M39016/09-12D	81349	16	13	RCR07G152JS	81349	5	14
M39016/09-12D	81349	19	18	RCR07G152JS	81349	9	18
M39016/13-057D	81349	16	14	RCR07G153JS	81349	8	20
M55302/57A36X	81349	13	8	RCR07G181JS	81349	9	17
M55302/57A66Y-1	81349	6	13	RCR07G184JS	81349	8	17
M55302/57A66Y-1	81349	7	10	RCR07G201JS	81349	5	16
M55302/57A66Y-11	81349	8	10	PCR07G201JS	81349	16	27
MS5302/57A66Y-16	81349	9	8	RCR07G202JS	81349	5	13
M55302/57A70Y-1	81349	4	5	RCR07G203JS	81349	5	17
M55302/57A70Y-3	81349	5	9	RCR07G220JS	81349	5	30
M55302/58B36X	81349	11	31	RCR07G242JS	81349	5	23
M55302/58B66Y-1	81349	13	7	RCR07G270JS	81349	17	10
M55302/58B66Y-11	81349	13	5	RCR01G272J5	81349	8	28
M55302/58B66Y-16	81349	13	4	RCR07G301JS	81349	17	29
M55302/58B66Y-8	81349	13	6	RCR07G302JS	81349	16	17
M55302/58B70Y-1	81349	11	40	RCR07G302JS	81349	17	28
M55302/58B70Y-3	81349	11	39	RCR07G332JS	81349	9	15
M55302/59A90Y-1	81349	16	29	RCR07G333JS	81349	9	16
M55302/59A90Y-11	81349	18	12	RCR07G361JS	81349	5	22
M55302/59A90Y-16	81349	17	22	RCR07G392JS	81349	16	20
M55302/59A90Y-6	81349	19	19	RCR07G472JS	81349	6	14
M55302/60B90Y-1	81349	21	4	RCR07G472JS	81349	8	19
M55302/60B90Y-11	81349	21	2	RCR07G472JS	81349	9	14
M55302/60B90Y-16	81349	21	3	RCR07G473JS	81349	5	25
M55302/60B90Y-6	81349	21	8	RCR07G510JS	81349	9	19
M83248/1-008	81349	2	6	RCR07G622JS	81349	5	12
M8340101M1001JB	81349	16	24	RCR20G182JS	81349	16	18
M8340101M1002JB	81349	19	12	RNC50H10R0FS	81349	19	36
M8340102M2201JA	81349	6	25	RNC50H1001FS	81349	19	22
M8340102M2202JB	81349	4	10	RNC50H1003FS	81349	19	28
M8340102M2202JB	81349	5	21	RNC50H1242FS	81349	19	24
M8340102M2701JA	81349	16	25	RNC50H1500FS	81349	19	38
M8340102M3901JA	81349	8	39	RNC50H2001FS	81349	19	25
M8340102M6801JA	81349	8	38	RNC50H2491FS	81349	19	21
NAS671C4	80205	6	7	RNC50H3162FS	81349	19	29
NAS671C4	80205	7	6	RNC50H3921FS	81349	19	23
NAS671C4	80205	8	7	RNC50H4991FS	81349	19	26
NAS671C4	80205	9	6	RNC50H6041FS	81349	19	27
NAS671C4	80205	16	7	RNC55H10R0FS	81349	17	73
NAS671C4	80205	17	6	RNC55H1002FS	81349	8	24

NATIONAL PART NUMBER INDEX (CONT.)

PART NUMBER	FSCM	FIG	I ITEM NO.	PART NUMBER NO.	FSCM	FIG NO.	ITEM NO.
RNC55H12R1FS	81349	17	72	9324139-36	19203	12	7
RNC55HI210FS	81349	17	59	9324139-70	19203	4	2
RNC55H1501FS	81349	17	60	9324139-70	19203j	5	2
RNC55H1581FS	81349	8	26	9324142	19203	11	1
RNC55H1782FS	81349	8	22	9324143-002	1903	2	9
RNC55H1912FS	81349	17	43	9324141-002	19203	2	13
RNC55H2001FS	81349	8	25	9324148	19203	3	7
RNC55H2001FS	81349	17	32	9324153	19203	2	2
RNC55H2002FS	81349	17	44	9324158	19203	2	5
RNC55H2101FS	81349	17	61	9324159-002	19203	20	4
RNC55H2102FS	81349	17	45	9324168-1	19203	12	1
RNC55H2211FS	81349	8	30	9324168-2	19203	I2	14
RNC55H2212FS	81349	17	46	9324171	19203	12	12
RNC55H2322FS	81349	17	47	9324172	19203	2	11
RNC55H2432FS	81349	17	48	9324174	19203	20	11
RNC55H2552FS	81349	17	49	9324175-1	19203	11	41
RNC55H2672FS	81349	8	21	9324175-2	19203	11	5
RNC55H2672FS	81349	17	50	9324176	19203	20	6
RNC55H2802FS	81349	17	51	9324177	19203	12	4
RNC55H2942FS	81349	17	52	9324181	19203	ESML	15
RNC55H4222FS	81349	17	33	9324189	19203	19	10
RNC55H4422FS	81349	17	34	9324191-1	19203	11	36O
RNC55H4642FS	81349	17	35	9324197	19203	ESML	14
RNC55H4750FS	81349	8	29	9324198	19203	12	17
RNC55H4872FS	81349	17	36	9324198	19203	20	10
RNC55H4992FS	81349	17	25	9324200	19203	ESML	10
RNC55H5112FS	81349	17	37	9324206	19203	12	9
RNC55H5312FS	81349	17	38	9324209	19203	3	10
RNC55H5622FS	81349	8	23	9324209	19203	6	4
RNC55H5622FS	81349	17	39	9324209	19203	7	4
RNC55H5902FS	81349	17	40	9324209	19203	8	5
RNC55H6192FS	81349	17	41	9324209	19203	9	4
RNC55H6342FS	81349	17	42	9324209	19203	12	16
RCN55H9090FS	81349	17	53	9324209	19203	16	4
RWR82S25R11FR	81349	16	19	9324209	19203	17	4
SN63WRAP3 .031	81348	ESML	3	9324209	19203	18	4
TYPE GE.015	81349	BULK	3	9324209	19203	19	4
TYPE I	81349	ESML	11	9324209	19203	20	9
TYPE I, CLASS 3	81348	ESML	16	9324211	19203	21	6
TYPE II, GRADE N	81349	ESML	7	9324212	19203	3	2
TYPE ll, SIZE 5	81349	ESML	2	9324212	19203	6	2
TYPE RA	81348	ESML	4	9324212	19203	7	2
TYPE RMA	81348	ESML	5	9324212	19203	8	3
TYPE SR	81348	ESML	17	9324212	19203	9	2
9324107-002	19203	1	1	9324212	19203	16	2
9324108-002	19203	1	2	9324212	19203	17	2
9324109-002	19203	3	9	9324212	19203	18	2
9324110-002	19203	3	4	9324212	19203	19	2
9324111-002	19203	2	14	9324213	19203	16	15
9324112-002	19203	2	15	9324218	19203	17	31
9324113-002	19203	2	16	9324219	19203	17	69
9324114-002	19203	2	17	9324221	19203	19	20
9324118-002	19203	14	7	9324229	19203	11	6
9324119-002	19203	14	6	9324230	19203	11	46
9324120-002	19203	14	11	9324232	19203	11	18'
9324121	19203	11	17	9324233	19203	11	45
9324122	19203	14	2	9324234-1	19203	11	21
9324123-002	19203	14	10	9324234-2	19203	11	24
9324125	19203	15	2	9324234-3	19023	11	25
9324126	19203	15	3	9324235	19203	11	28
9324128	19203	15	4	9324236	19203	11	23
9324130	19203	15	1	9324239	19203	13	3
9324132-1	19203	20	7	9324240	19203	11	32
9324132-2	19203	20	3	9324242-2	19203	12	10
9324134-002	19203	2	4	9324243	19203	13	1
9324135-002	19203	12	8	9324247	19203	5	24
9324136-1	19203	2	20	9324261	19203	ESML	8
9324136-2	19203	14	1	9324262	19203	3	3

NATIONAL PART NUMBER INDEX (CONT.)

PART NUMBER	FSCM	FIG	I ITEM NO.	PART NUMBER NO.	FSCM	FIG NO.	ITEM NO.
9324263-10	19203	3	1	9324321	19203	ESML	9
9324264	19203	5	20	9324324	19203	11	37
9324265	19203	11	38	9324327	19203	ESML	6
9324268	19203	5	19	9324328-1	19203	17	10
9324268	19203	6	20	9324341	19203	2	18
9324268	19203	8	35	9324342	19203	4	1
9324268	19203	9	22	9324343	19203	5	1
9324268	19203	19	42	9324344	19203	6	1
9324274-1	19203	14	5	9324345	19203	7	1
9324274-2	19203	2	10	9324346	19203	8	1
9324277	19203	ESML	13	9324347	19203	9	1
9324279	19203	9	28	9324349	19203	17	1
9324280	19203	19	39	9324350	19203	18	1
9324284	19203	8	34	9324351	19203	19	1
9324284	19203	17	68	9324352	19203	13	2
9324284	19203	19	40	9324353	19203	21	1
9324288	19203	4	8	9324354	19203	11	13
9324289	19203	16	23	9324355	19203	11	20
9324289	19203	19	41	9324356	19203	11	22
9324291	19203	9	27	9324357	19203	11	16
9324292	19203	4	7	9324358	19203	11	33
9324292	19203	8	36	9324359	19203	18	24
9324292	19203	16	21	9324360	19203	11	14
9324292	19203	19	44	9324361	19203	11	26
9324294-20	19203	17	65	9324362	19203	11	35
9324295-20	19203	17	66	9324363	19203	11	15
9324296	19203	17	64	9324364	19203	11	12
9324298	19203	17	62	9324365	19203	9	24
9324299	19203	17	63	9324366	19203	18	18
9324300	19203	6	5	9324370	19203	BULK	5
9324303	19203	6	19	9324370-1	19203	2	3
9324304	19203	7	12	9324370-2	19203	2	19
9324307	19203	6	15	9324370-3	19203	14	9
9324307	19203	7	11	9324371	19203	8	12
9324308	19203	6	23	9324371	19203	19	15
9324309	19203	6	16	9324372	19203	16	8
9324310	19203	8	33	9324372	19203	19	8
9324310	19203	16	28	9324376	19203	7	14
9324310	19203	17	71	9324377	19203	7	15
9324310	19203	19	45	9324378	19203	7	16
9324311	19203	9	21	9324379	19203	18	19
9324311	19203	18	20	9324389	19203	11	3
9324312	19203	18	22	9324393-001	19203	14	8
9324313	19203	18	21	9324394	19203	16	1
9324314	19203	18	23	9324395	19203	8	31
9324315	19203	9	26	9324395	19203	16	22
9324316-3N	19203	21	5				
9324316-3V	19203	21	7				

APPENDIX F
EXPENDABLE SUPPLIES AND MATERIALS LIST

Section I. INTRODUCTION

F-1. Scope.

This appendix lists expendable supplies and material you will need to operate and maintain the Rocket Management Subsystem. These items are authorized to you by CTA 50-970, Expendable Items (Except Medical Class V, Repair Parts, and Heraldic Items).

F-2. Explanation of Columns.

a. *Column 1 - Item Number*. This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the material (e.g., "Use cleaning compound, item 5, Appendix F).

b. *Column 2 - Level*. This column identifies the lowest level of maintenance that requires the listed item.

C - Operator/Crew
O - Aviation Unit Maintenance
F - Aviation Intermediate Maintenance

c. *Column 3 - National Stock Number*. This is the National stock number assigned to the item. Use it to request or requisition the item.

d. *Column 4 - Description*. Indicates the Federal item name and, if required, the description to identify the item. The last line for each item indicates the part number followed by the Federal Supply Code for Manufacturer (FSCM) in parentheses, if applicable.

e. *Column 5 - Unit of Measure (U/M)*. Indicates the measure used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea. in, pr). If the unit of measure differs from the unit of issue, requisition the lowest unit of issue that will satisfy your requirements.

Table F-1. Expendable Supplies and Materials

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESRIPTION	(5) U/M
1	D		Coating Conformal MIL146058 Type AR	
2	D		Tape, Lacing, Style 20, Finish B. Type II Size 5	
3	F	3439-00-892-4408	Solder, SN63WRAP3 .031	LB
4	F,D		Flux, Type RA	
5	F,D		Flux, Type RMA	
6	D		Ink, Black, Marking, PN 9324327	
7	D		Sealant, Type II, Grade N	
8	D		Compound Thermal Conducting, PN 9324261	
9	F,D		Petrolatum, White, USP, PN 9324321	
10	D		Adhesive, Epoxy, PN 9324200	
11	F,D		Lacquer, Black, Low-Reflective, Type I	

Table F-1. Expendable Supplies and Materials (Cont)

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESRIPTION	(5) U/M
12	F,D		Primer Polyamide Epoxy, MILP23377 Class I	
13	D		Adhesive, Sealant, PN 9324277	
14	D		Adhesive, PN 9324197	
15	D		Adhesive Structural, PN 9324181	
16	D		Adhesive, Type I, Class 3	
17	D		Coating, Conformal, Type SR	
18	F,D		Brush, Soft Bristle	
19	F,D		Cloth, Soft	
20	D		Alcohol, Isopropyl	
21	D		Wire, Wicking	

APPENDIX G
INDEX OF FAULT CODES

APPENDIX H
INDEX OF TEST LOCATIONS

APPENDIX I
DIAGRAMS

I-1. Scope. Figures FO-1 thru F0-13 are schematic diagrams of the DU Control Assembly, the DU and OU Motherboard Assemblies, and the plug-in circuit assemblies of the DU and the OU. There is no point-to-point wiring in either unit; therefore, no wiring diagrams are given.

I-2. General.

a. The reference designation prefix of each plug-in circuit assembly is given on the face of its respective schematic diagram. The motherboard schematic diagram shows the reference designations of the connectors into which the plug-in circuit assemblies are inserted. The connector designations indicate the reference designations of the circuit assemblies.

Examples:

1. Memory Assembly 1A3 (figure F0-6) plugs into connector XA3 of the DU Motherboard Assembly (figure FO-2).

2. Connector P1 of the Control Assembly (figure F0-1) plugs into connector XP1 of the DU Motherboard Assembly.

3. Connector J1 of the DU Motherboard Assembly is the input/output (I/O) connector for the DU and, as such, is the interfacing connector between the DU and the aircraft wiring, including the wiring to the OU's.

b. By using the connector and circuit assembly reference designations, you can trace circuit paths from diagram to diagram and, thereby, from one unit subassembly to another.

By Order of the Secretary of the Army:

E. C. MEYER
General' United States Army
Chief of Staff

Official:

ROBERT M. JOYCE
Brigadier General, United States Army
The Adjutant General

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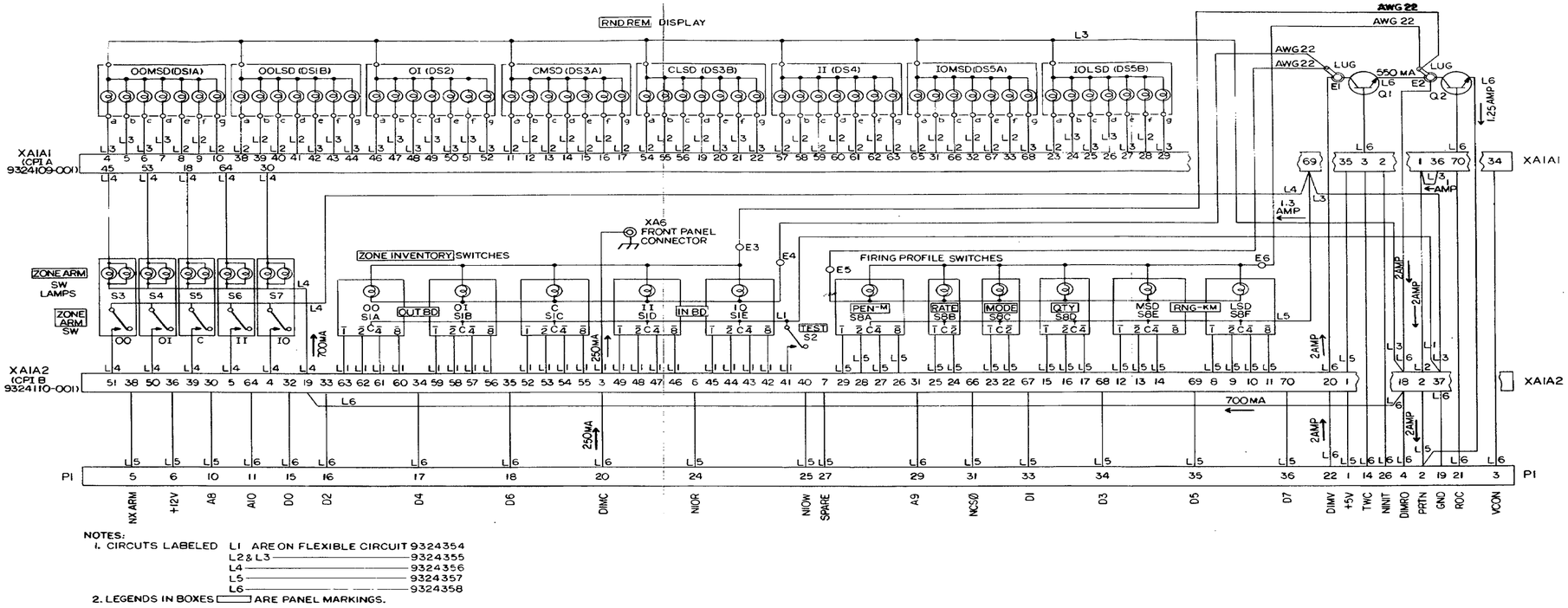
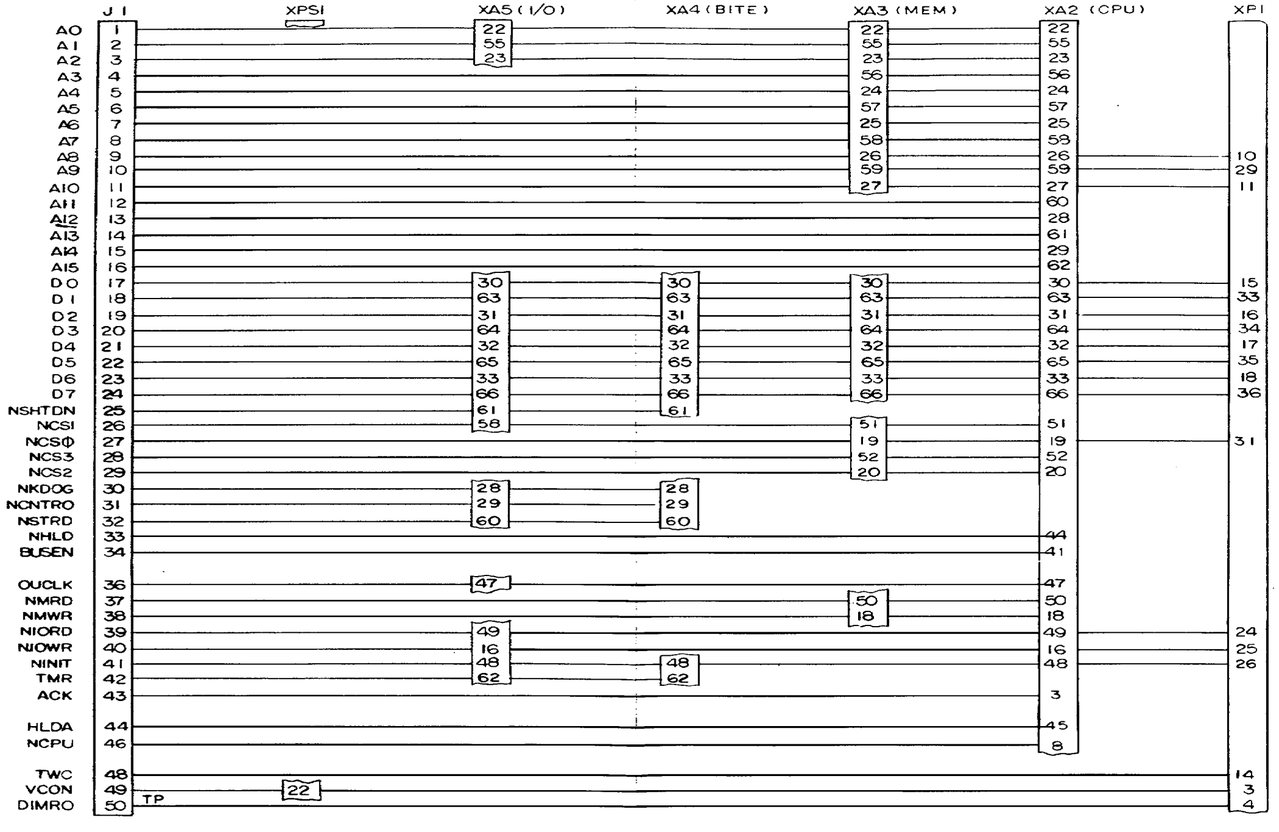


NOTES:
1. CIRCUITS LABELED L1 ARE ON FLEXIBLE CIRCUIT 9324354
   L2 & L3 ——— 9324355
   L4 ——— 9324356
   L5 ——— 9324357
   L6 ——— 9324358
2. LEGENDS IN BOXES ☐ ARE PANEL MARKINGS.

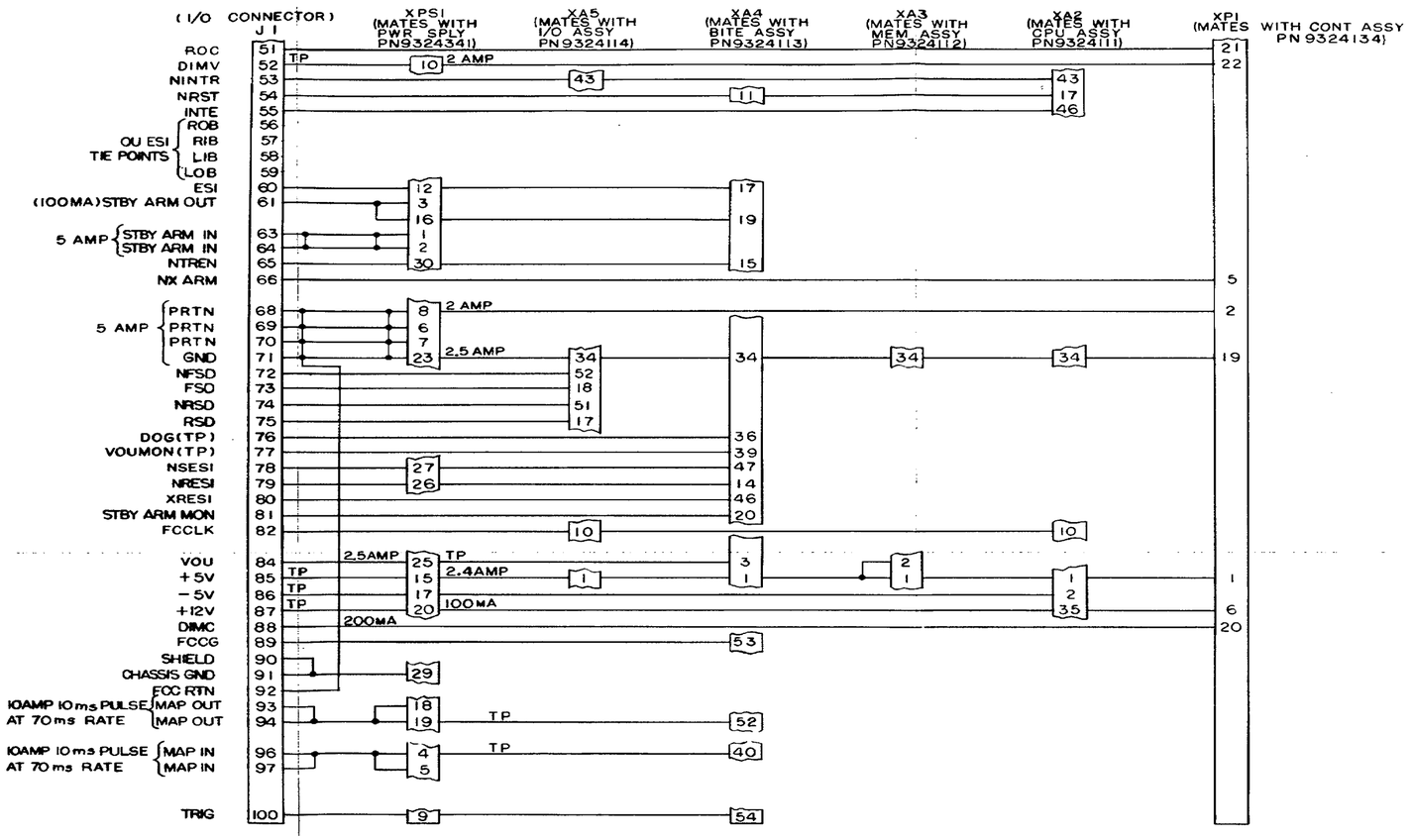
AR917814

Figure FO-1. Control Assembly Schematic Diagram.



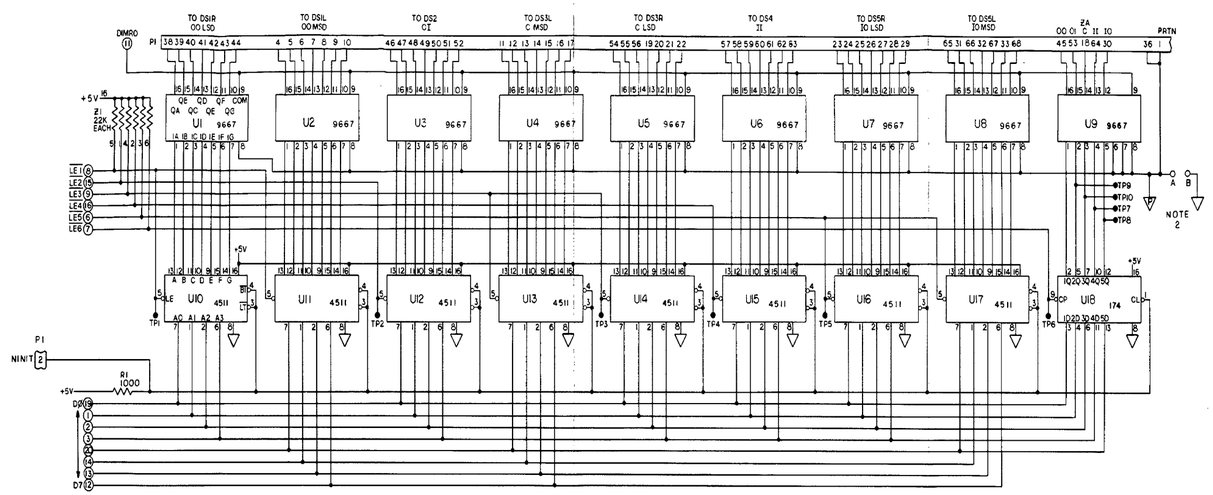
AR917815

Figure FO-2. DU Motherboard Assemble Schematic Diagram (Sheet 1 of 2)



AR917816

Figure FO-2. DU Motherboard Assembly Schematic Diagram (Sheet 2 0f 2)



REF DES PREFIX 1A1A1

REFERENCE DESIGNATIONS	
HIGHEST	NOT USED
C4	
P1	
R1	
U18	
Z1	

NOTES:

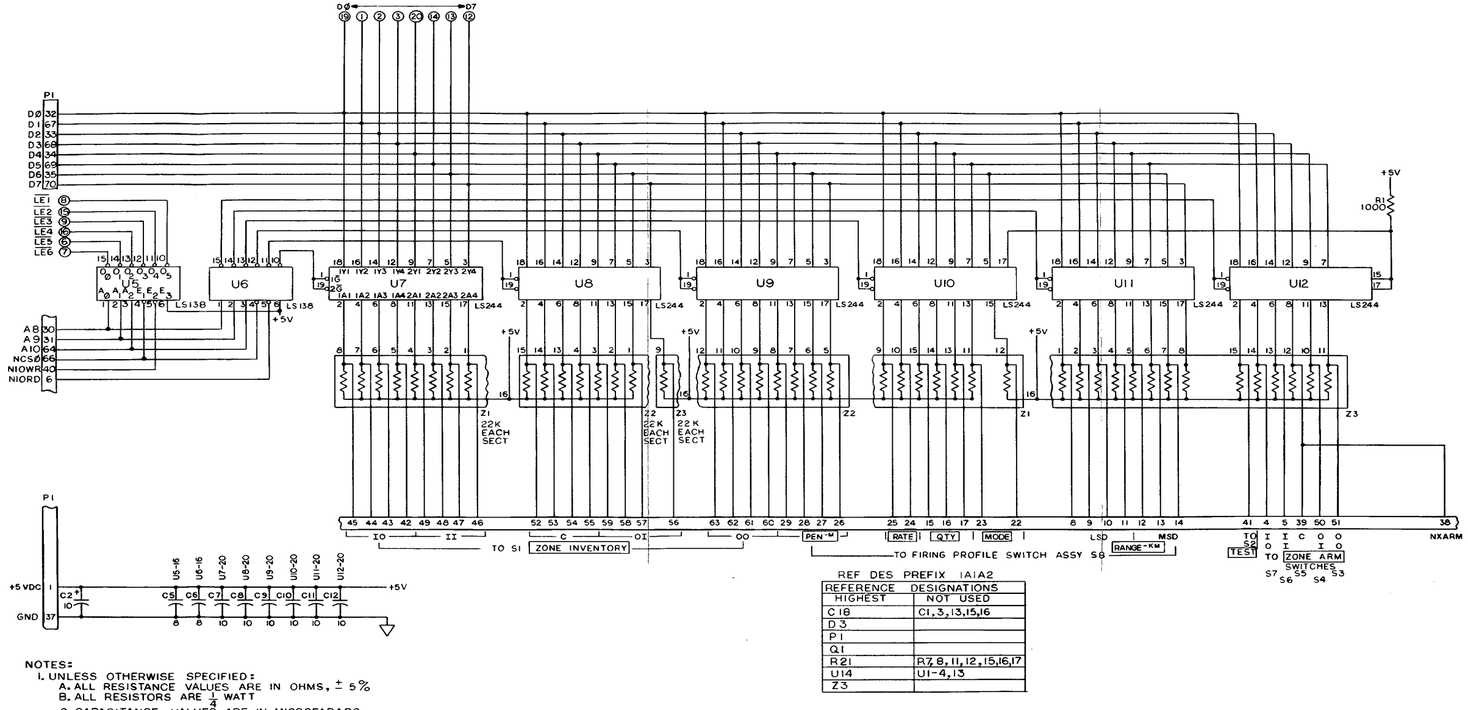
1. UNLESS OTHERWISE SPECIFIED:
   - A. ALL RESISTANCE VALUES ARE IN OHMS ± 5%
   - B. ALL RESISTORS ARE 1/8 WATT
   - C. CAPACITANCE VALUES ARE IN MICROFARADS
   - D. CAPACITORS ARE 0.1 µF, 50V
2. ⏚ INDICATES SIGNAL RETURN

   ⏚ INDICATES POWER RETURN
3. NUMBERED CIRCLES ○ ARE CONNECTIONS TO A1A2

AR917817

AR917817

Figure FO-3. Control Panel Interface Subassembly A 1A1A1 Schematic Diagram



REF DES PREFIX 1A1A2

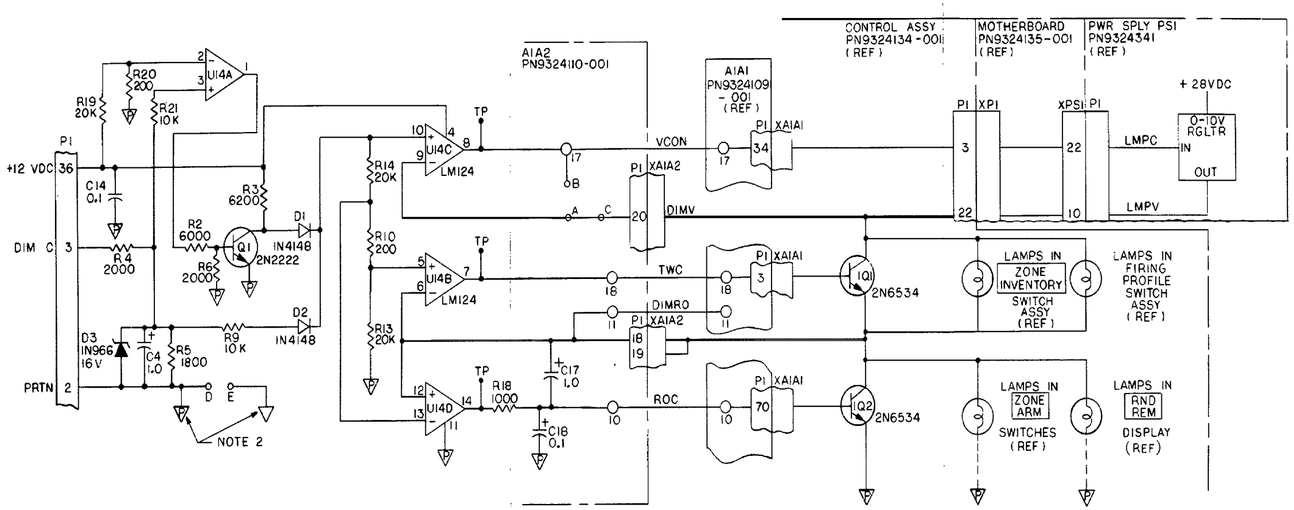
REFERENCE DESIGNATIONS	
HIGHEST	NOT USED
C18	C1,3,13,15,16
D3	
P1	
Q1	
R21	R7,8,11,12,15,16,17
U14	U1-4,13
Z3	

NOTES:
1. UNLESS OTHERWISE SPECIFIED:
   A. ALL RESISTANCE VALUES ARE IN OHMS, ± 5%
   B. ALL RESISTORS ARE ¼ WATT
   C. CAPACITANCE VALUES ARE IN MICROFARADS
   D. CAPACITORS ARE 0.1 UF
2. ⏚ INDICATES SIGNAL GROUND
   ⏚ INDICATES POWER RETURN
3. LEGEND IN BOXES ▭ ARE PANEL MARKINGS
4. NUMBERED CIRLES ○ ARE CONNECTIONS TO A1A1

AR917818

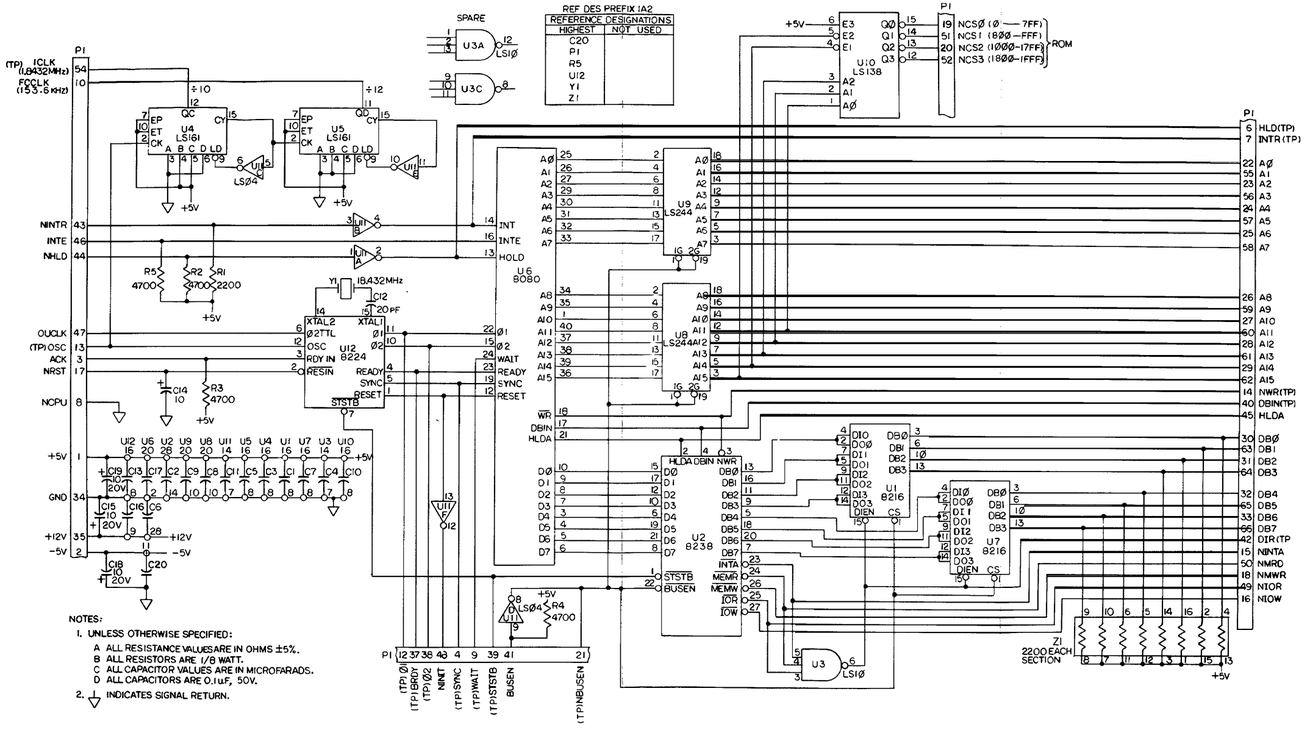
Figure FO-4. Control Panel Interface Subassembly B 1A1A2 Schematic Diagram (Sheet 1 of 2)

Figure FO-4. Control Panel Interface Subassembly B 1A1A2 Schematic Diagram (Sheet 1 of 2)



AR917819

Figure FO-4. Control Panel Interface Subassembly B 1A1A2 Schematic Diagram (Sheet 2 of 2)



AR917820A

Figure FO-5. CPU Assembly 1A2, Serial No. 399 and below Schematic Diagram

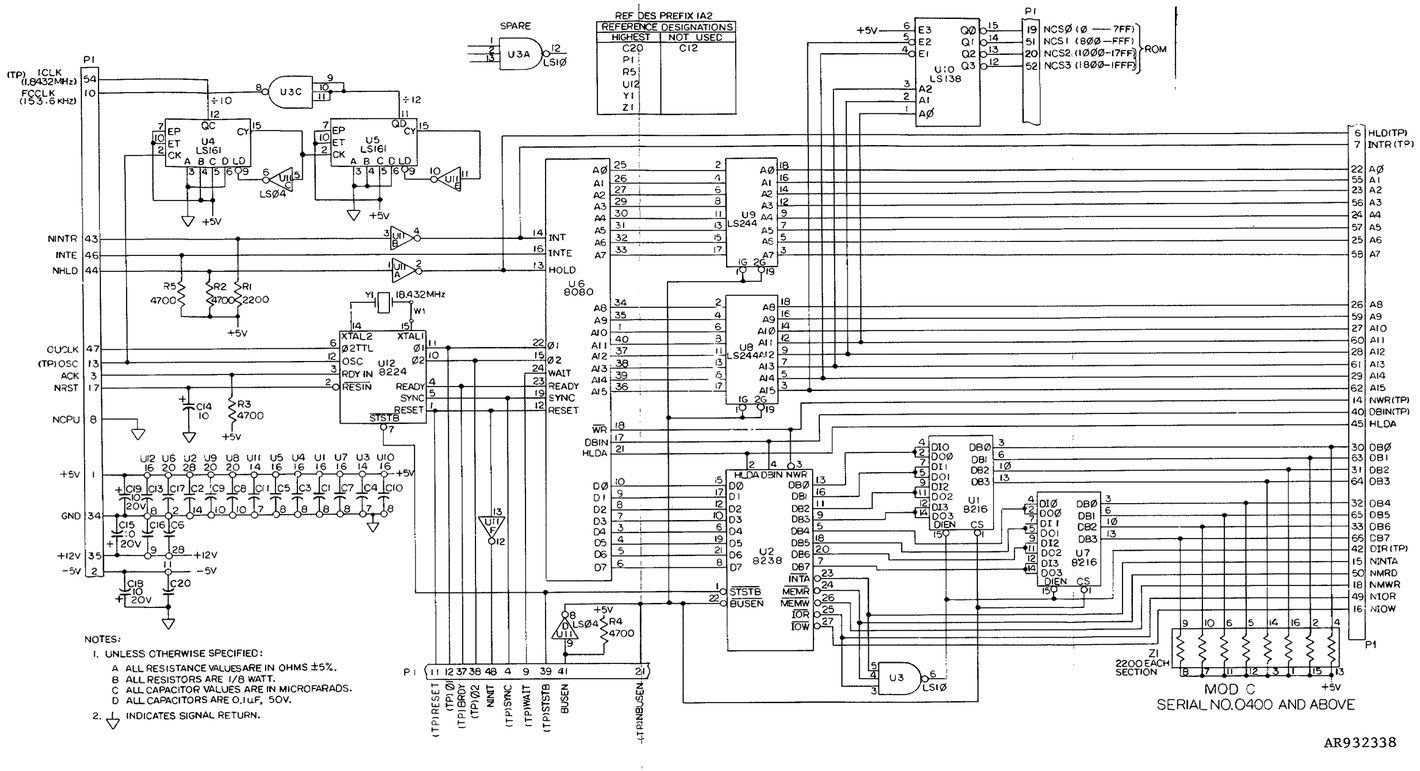
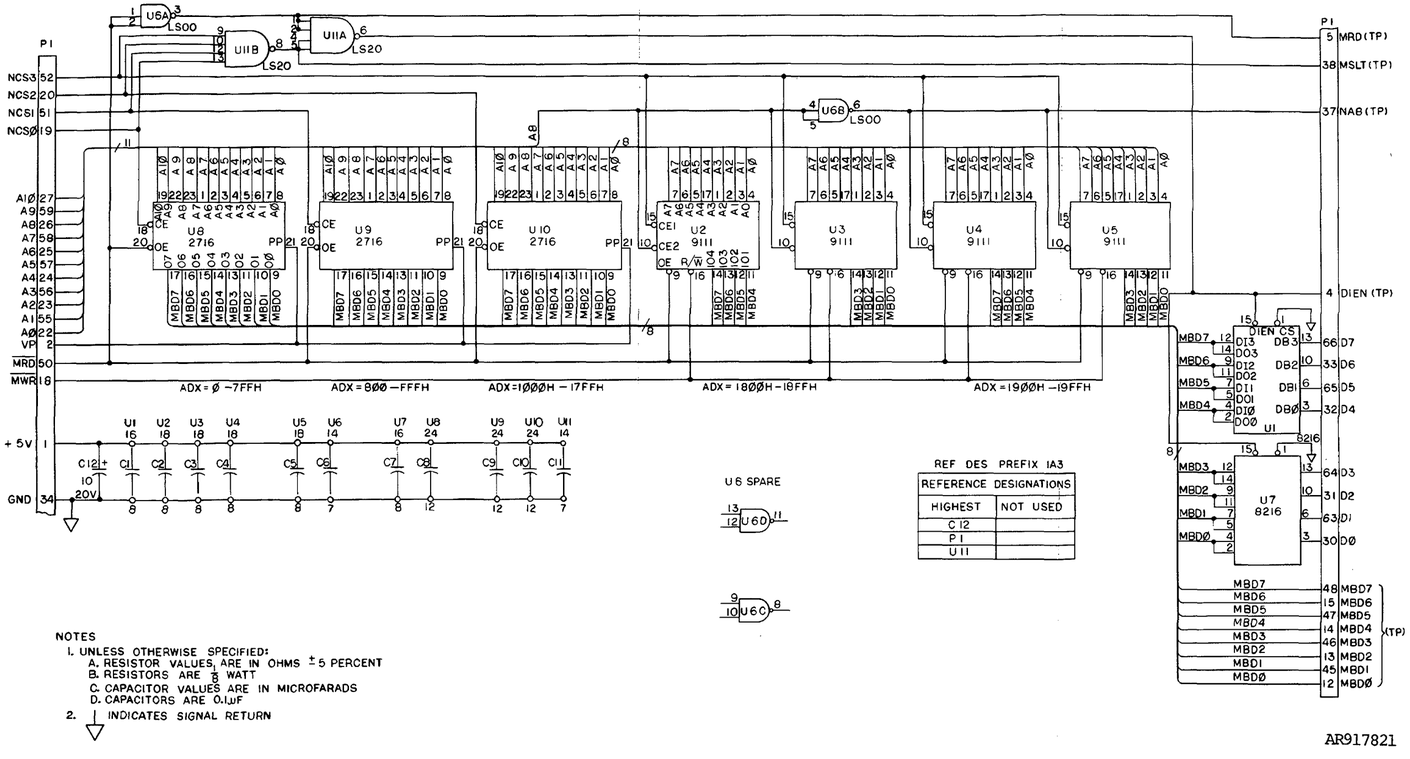
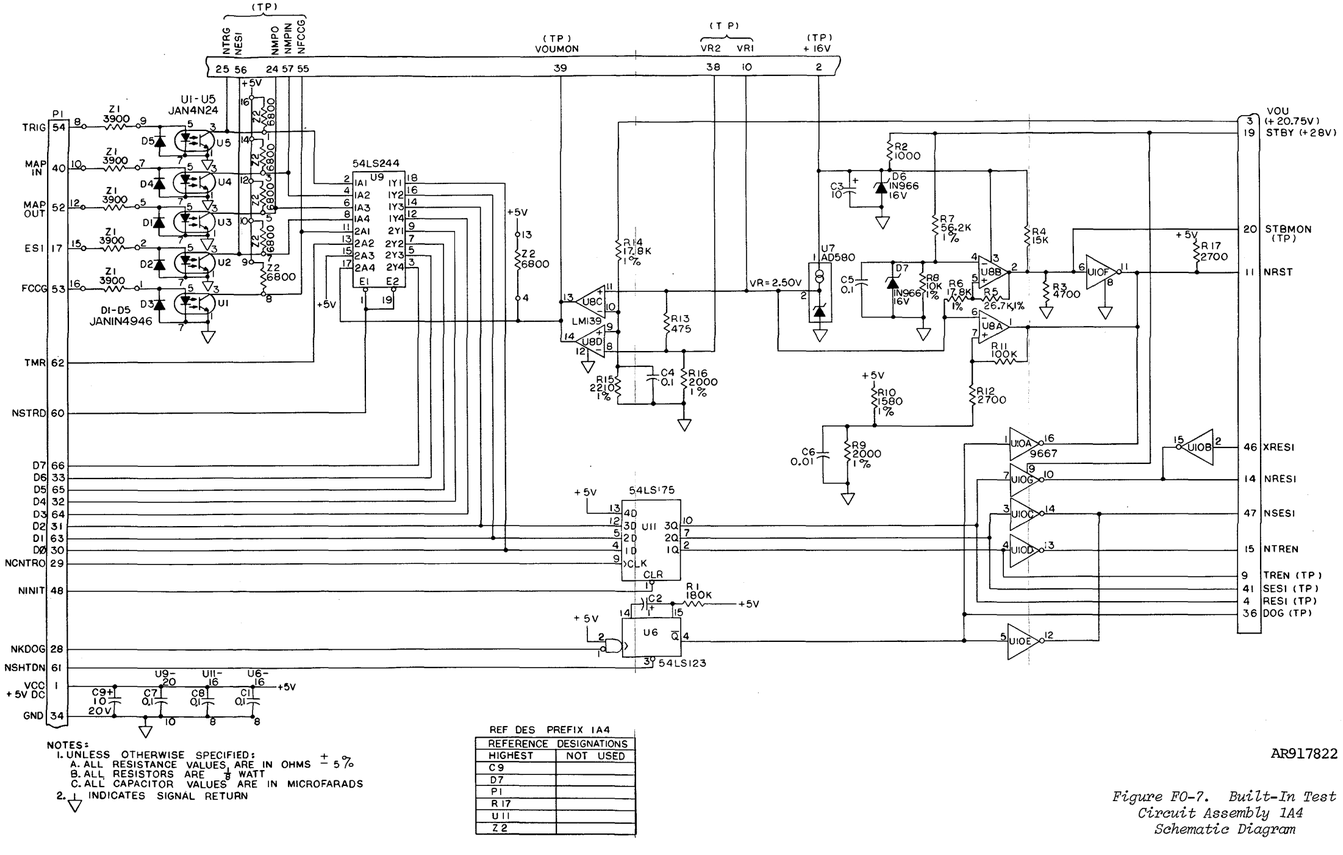


Figure FO-5A. CPU Assembly 1A2 MOD C, Serial No. 400 and above Schematic Diagram



NOTES
1. UNLESS OTHERWISE SPECIFIED:
   A. RESISTOR VALUES ARE IN OHMS ±5 PERCENT
   B. RESISTORS ARE 1/8 WATT
   C. CAPACITOR VALUES ARE IN MICROFARADS
   D. CAPACITORS ARE 0.1μF
2. ⏚ INDICATES SIGNAL RETURN

Figure FO-6. Memory Assembly 1A3 Schematic Diagram



NOTES:
1. UNLESS OTHERWISE SPECIFIED:
   A. ALL RESISTANCE VALUES ARE IN OHMS ± 5%
   B. ALL RESISTORS ARE ⅛ WATT
   C. ALL CAPACITOR VALUES ARE IN MICROFARADS
2. ⏚ INDICATES SIGNAL RETURN

REF DES PREFIX 1A4

REFERENCE DESIGNATIONS	
HIGHEST	NOT USED
C9	
D7	
P1	
R17	
U11	
Z2	

Figure FO-7. Built-In Test Circuit Assembly 1A4 Schematic Diagram

Figure FO-7. Built-In Test Circuit Assembly 1A4 Schematic Diagram

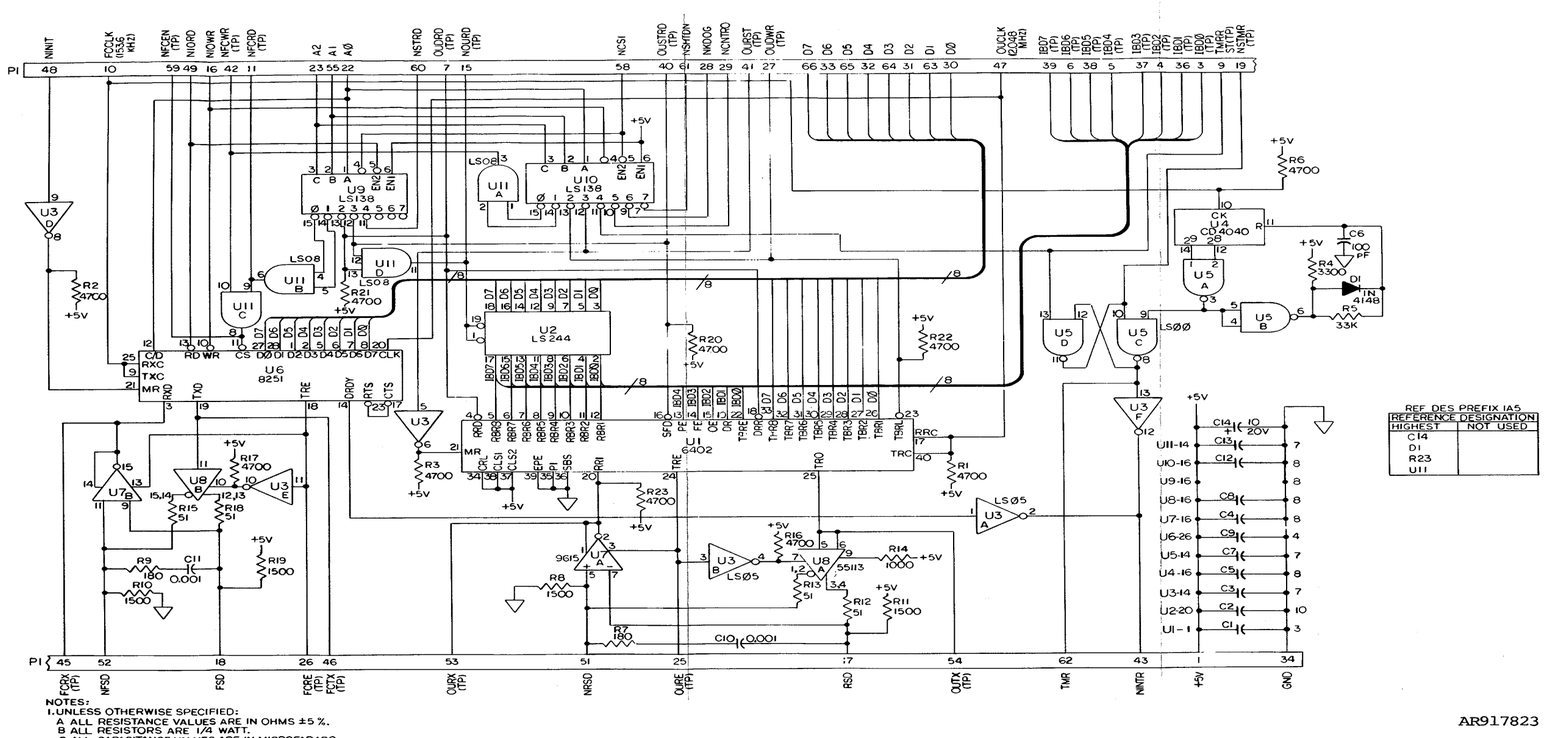


Figure FO-8. I/O Assembly 1A5 Schematic Diagram

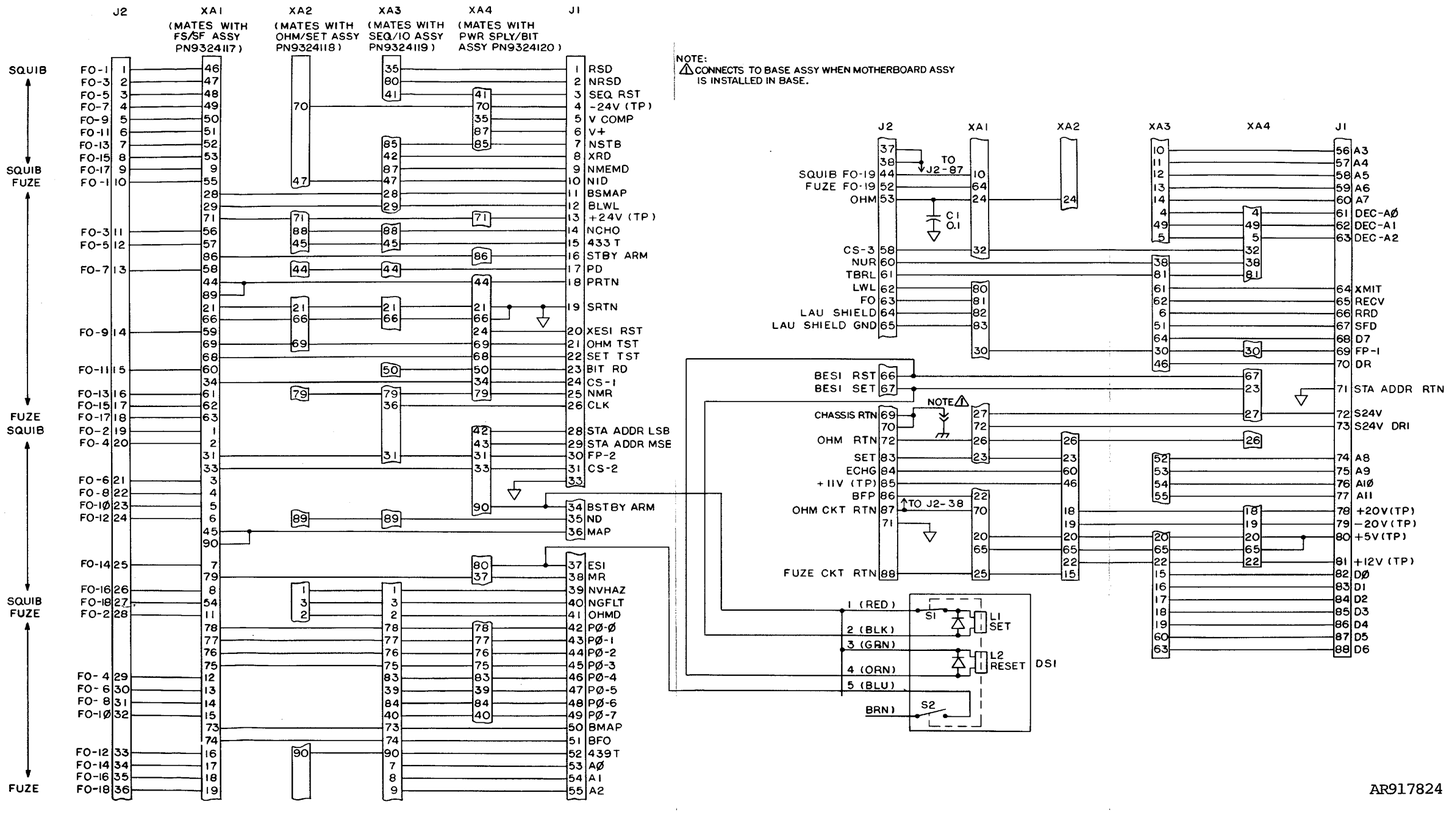


Figure FO-9. OU Motherboard Assembly Schematic Diagram

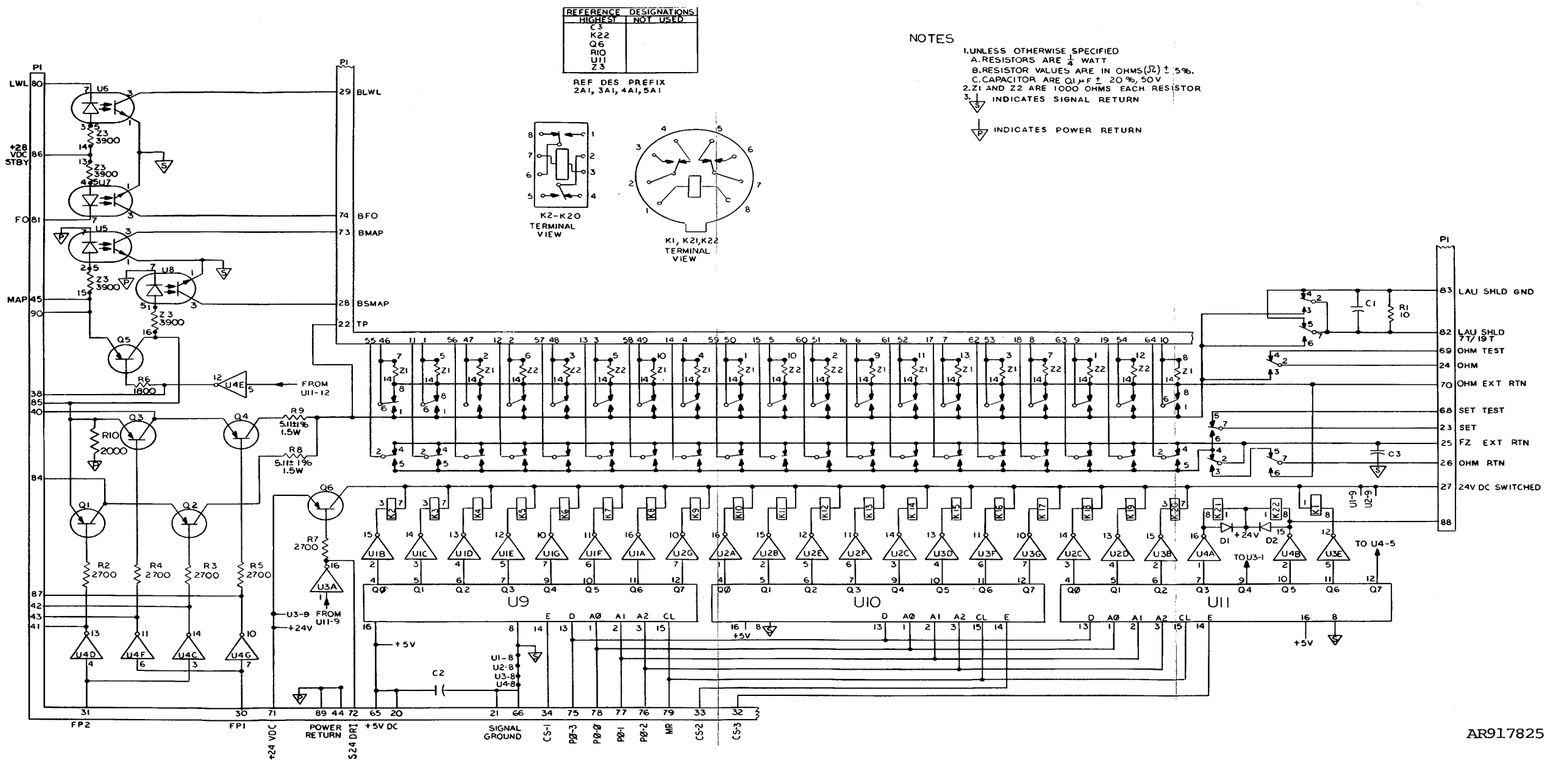
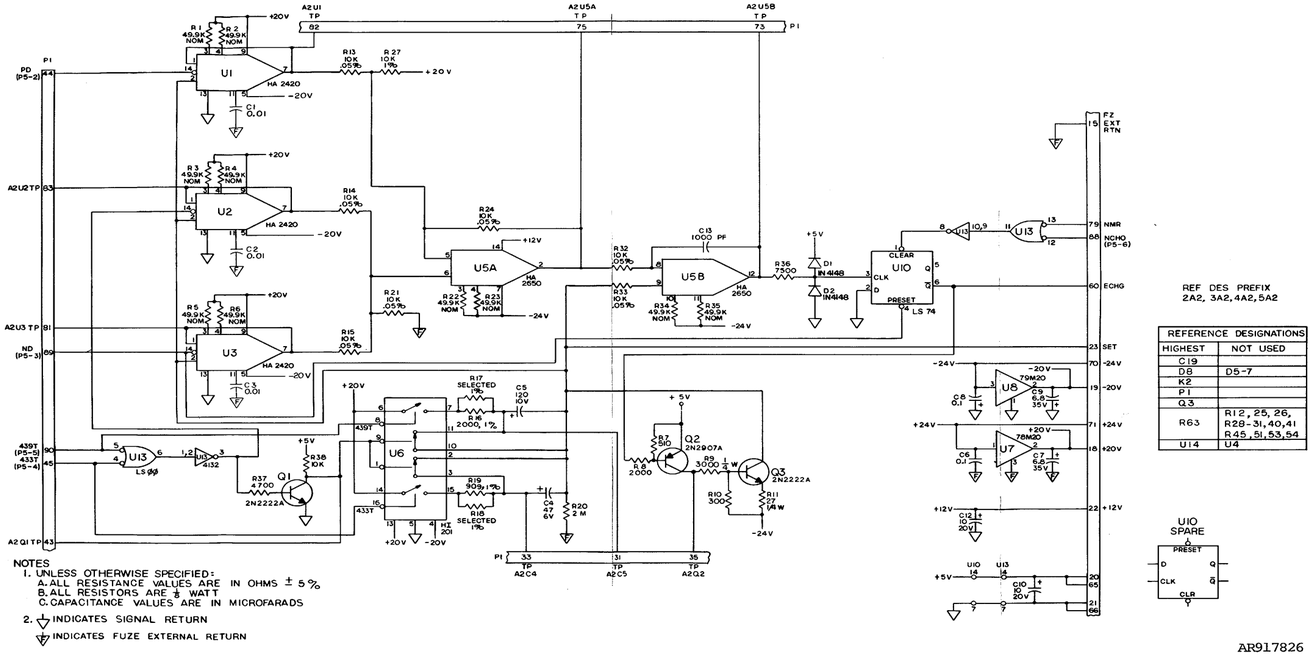


Figure FO-10. Fuze Set/Squib Fire Assembly 2A1 Schematic Diagram



NOTES
1. UNLESS OTHERWISE SPECIFIED:
   A. ALL RESISTANCE VALUES ARE IN OHMS ± 5%
   B. ALL RESISTORS ARE ¼ WATT
   C. CAPACITANCE VALUES ARE IN MICROFARADS
2. ⏚ INDICATES SIGNAL RETURN
   ⏚ INDICATES FUZE EXTERNAL RETURN

REF DES PREFIX
2A2, 3A2, 4A2, 5A2

REFERENCE DESIGNATIONS	
HIGHEST	NOT USED
C19	
D8	D5-7
K2	
P1	
Q3	
R63	R12, 25, 26, R28-31, 40, 41 R45, 51, 53, 54
U14	U4

Figure FO-11. Ohmeter/Setter Assembly 2A2 Schematic Diagram (Sheet 1 of 2)

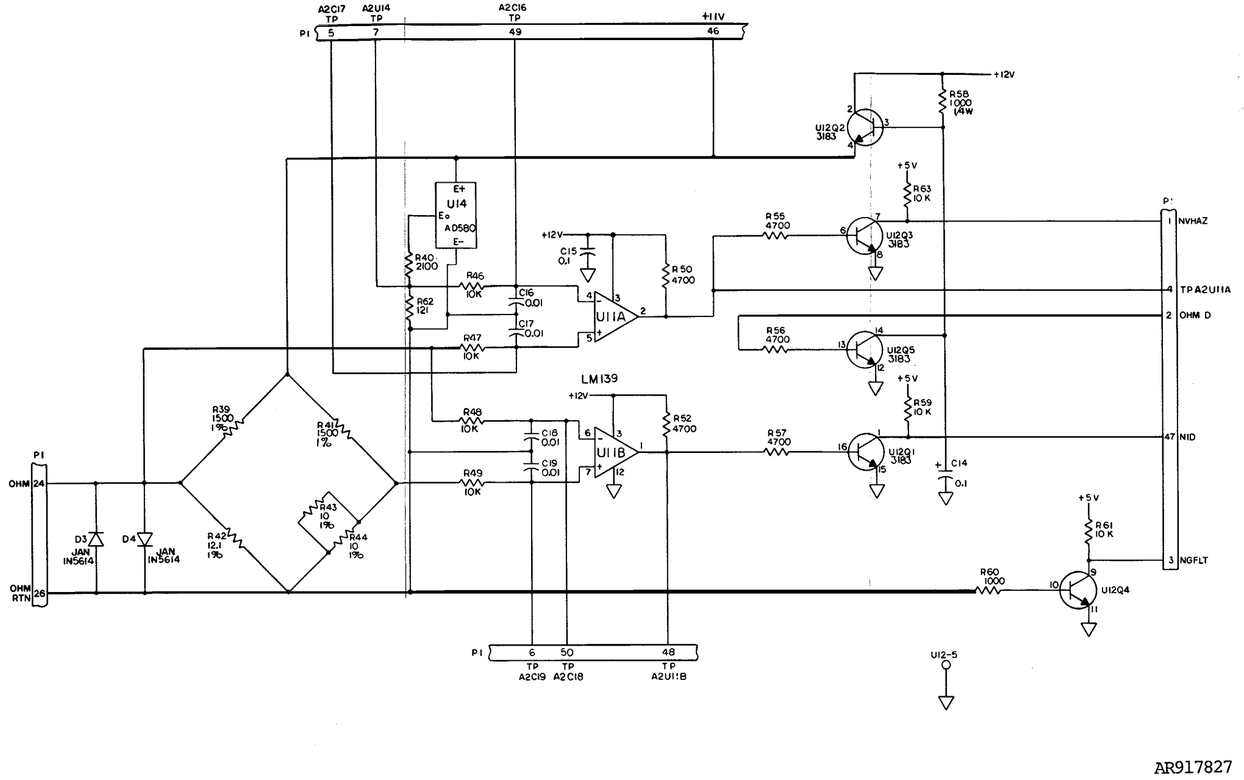


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Figure FO-11. Ohmeter/Setter Assembly 2A2 Schematic Diagram (Sheet 2 of 2)

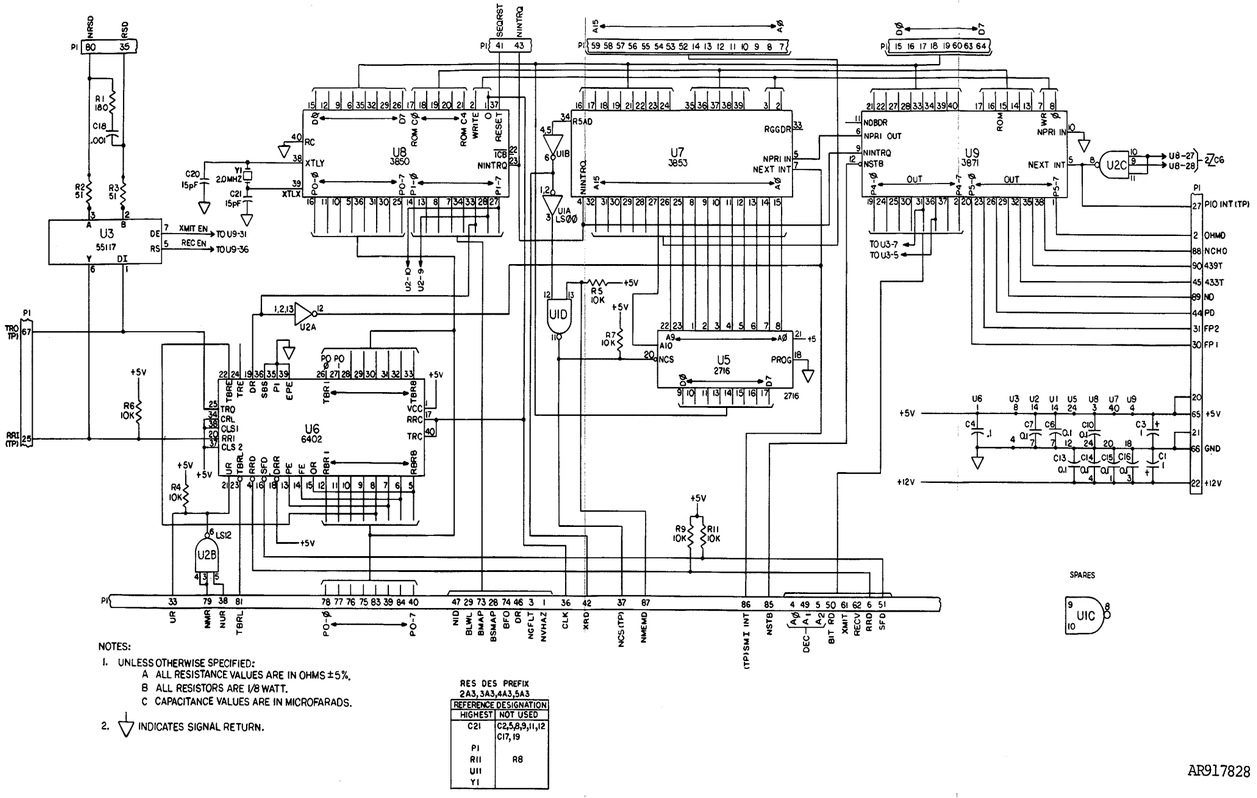
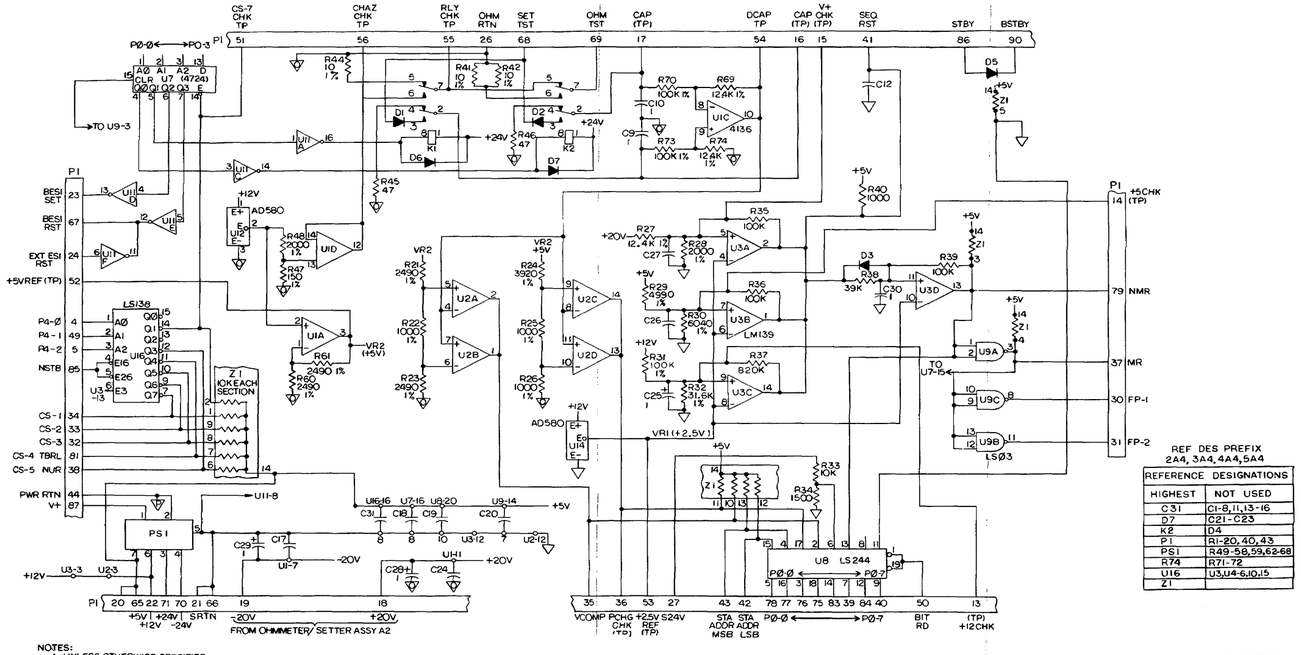


Figure FO-12. Sequencer and I/O Assembly 2A3 Schematic Diagram



REF DES PREFIX
2A4, 3A4, 4A4, 5A4

REFERENCE DESIGNATIONS	
HIGHEST	NOT USED
C31	C1-8, 11, 13-16
D7	C21-C23
K2	D4
P1	R1-20, 40, 43
PS1	R49-58, 59, 62-68
R74	R71-72
U16	U3, U4-6, 10, 15
Z1	

NOTES:
1. UNLESS OTHERWISE SPECIFIED:
   A. ALL RESISTANCE VALUES ARE IN OHMS ±5%.
   B. ALL RESISTORS ARE 1/8 WATT.
   C. CAPACITANCE VALUES ARE IN MICROFARADS.
   D. CAPACITORS ARE 0.01uF.
2. ▽ INDICATES SIGNAL RETURN; ▽ INDICATES OHMMETER RETURN; ▽ INDICATES POWER RETURN

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*U.S. GOVERNMENT PRINTING OFFICE: 1981-750-002/1206

Figure FO-13. Power Supply and Built-In Test Circuit Assembly 2A4 Schematic Diagram.

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THE METRIC SYSTEM AND EQUIVALENTS

LINEAR MEASURE
1 Centimeter = 10 Millimeters =0.01 Meters = 0.3937 Inches
1 Meter= 100 Centimeters= 1000 Millimeters=39.37 Inches
1 Kilorneter= 1000 Meters 0.621 Miles

WEIGHTS
1 Gram=0.001 Kilograms=1000 Milligrams=0.035 Ounces
1 Kilogram =1000 Grams =2.2 Lb
1 Metric Ton =1000 Kilograms =1 Megagram =1.1 Short Ton;

LIQUID MEASURE
1 Milliliter=0.001 Liters=0.0338 Fluid Ounces
1 Liter= 1000 Milliliters=33.82 Fluid Ounces

SQUARE MEASURE
1 Sq Centimeter=100 Sq Millimeters=C.155 Sq Inches
1 Sq Meter=10,000 Sq Centirneters=10.7654 Fee'
1 Sq Kilometer=1,000,000 Sq Meters=0.386 Sq Miles

CUBIC MEASURE
1 Cu Centimeter=1000 Cu Millimeters=0.06 Cu lnches
1 Cu Meter =1,000 ,000 Cu Centimeters =35.31 Cu Feet

TEMPERATURE
5/9 (OF - 32) =°C
212° Fahrenheit is equivalent to 100° Celsius
90° Fahrenheit is equivalent to 32.2° Celsius
32° Fahrenheit is equivalent *to 00* Celsius
9/5 C° + 32 = F °

APPROXIMATE CONVERSION FACTORS

TO CHANGE	TO	MULTIPLY BY
Inches	Centimeters	2.540
Feet	Meters	0.305
Yards	Meters	0.914
Miles	Kilometers	1.609
Square Inches	Square Centimeters	6.451
Square Feet	Square Meters	0.093
Square Yards	Square Meters	0.836
Square Miles	Square Kilometers	2. 590
Acres	Square Hectometers	0.405
Cubic Feet	Cubic Meters	0.028
Cubic Yards	Cubic Meters	0.765
Fluid Ounces	Milli liters.	29.573
Pints	Liters	0.473
Quarts.	Liters	0.946
Gallons	Liters	3.785
Ounces.	Grams	28.349
Pounds	Kilograms.	0.454
Short Tons	Metric Tons	0.907
Pound-Feet	Newton-Meters.	1.356
Pounds per Square Inch	Kilopascals.	6.895
Miles per Gallon.	Kilometers per Liter	0.425
Miles per Hour	Kilometers per Hour	1.609

TO CHANGE	TO	MULTIPLY BY
Centimeters	Inches	0.394
Meters	Feet	. 3.280
Meters	Yards.	1.094
Kilometers.	Miles	0.621
Square Centimeters	Square Inches	0.155
Square Meters	Square Feet	10. 764
Square Meters	Square Yards	1.196
Square Kilometers	Square Miles	0.386
Square Hectometers	Acres.	2.471
Cubic Meters	Cubic Feet	35.315
Cubic Meters	Cubic Yards	1.308
Milliliters	Fluid Ounces	0.034
Liters.	Pints	2.113
Liters.	Quarts	1.057
Liters.	Gallons	0.264
Grams	Ounces	0.035
Kilograms	Pounds	2.205
Metric Tons	Short Tons	1.102
Newton-Meters	Pound-Feet	0.738
Kilopascals	Pounds per Square Inch	.. 0.145
Kilometers per Liter	Miles per Gallon	2.354
Kilometers per Hour	Miles per Hour	0.621