

**TECHNICAL MANUAL**

**AVIATION UNIT AND INTERMEDIATE  
MAINTENANCE MANUAL**

**VOLUME 1 OF 9**

**HELICOPTER, ATTACK,  
AH-64A APACHE  
(NSN 1520-01-106-9519)  
(EIC: RHA)**

**CHAPTER 1  
AIRCRAFT GENERAL**

**GLOSSARY**

**ALPHABETICAL INDEX**

This copy is a reprint which includes current pages from Change 1.

<b>TABLE OF CONTENTS</b>
<b>HOW TO USE THIS MANUAL</b>
<b>GENERAL INFORMATION</b>
<b>EQUIPMENT DESCRIPTION AND DATA</b>
<b>SERVICING</b>
<b>LUBRICATION</b>
<b>HANDLING, JACKING, MOORING, HOISTING, AND SLING LOADING</b>
<b>PREVENTATIVE MAINTENANCE INSPECTIONS</b>
<b>OVERHAUL AND RETIREMENT SCHEDULE</b>
<b>CARTRIDGE AND PROPELLANT ACTUATED DEVICES</b>
<b>GLOSSARY</b>
<b>ALPHABETICAL INDEX</b>

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

**DESTRUCTION NOTICE** For unclassified, limited documents, destroy by any method that will prevent disclosure of contents or reconstruction of the document

\* This manual together with TM 1-1520-238-23-2, 16 May 1994, TM 1-1520-238-23-3, 16 May 1994, TM 1-1520-238-23-4, 16 May 1994, TM 1-1520-238-23-5, 16 May 1994, TM 1-1520-238-23-6, 16 May 1994, TM 1-1520-238-23-7-1, 16 May 1994, TM 1-1520-238-23-7-2, 16 May 1994, TM 1-1520-238-23-8, 16 May 1994, TM 1-1520-238-23-9, 16 May 1994, supersedes TM 55-1520-238-23-1, 7 June 1988, TM 55-1520-238-23-2, 7 June 1988, TM 55-1520-238-23-3, 7 June 1988, TM 55-1520-238-23-4, 7 June 1988, TM 55-1520-238-23-5, 7 June 1988, TM 55-1520-238-23-6, 7 June 1988, TM 55-1520-238-23-7, 7 June 1988, TM 55-1520-238-23-8, 7 June 1988, TM 55-1520-238-23-9, 7 June 1988, TM 55-1520-238-23-10, 7 June 1988, including all changes.

CHANGE }  
NO. 9 }

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
WASHINGTON, D.C., 31 JULY 2001

## Aviation Unit and Intermediate Maintenance Manual

HELICOPTER, ATTACK,  
AH-64A APACHE  
(NSN 1520-01-106-9519)  
(EIC:RHA)

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

TM 1-1520-238-23-1, 16 May 1994, is changed as follows:

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

Remove pages	Insert pages
A through D	A through D
xi and xii	xi and xii
1-155 through 1-158	1-155 through 1-158
_____	1-158.1 through 1-158.34
1-371 through 1-380	1-371 through 1-380
1-383 and 1-384	1-383 and 1-384
1-387 and 1-388	1-387 and 1-388
_____	1-390.1/(1-390.2 blank)
1-391 and 1-392	1-391 and 1-392
1-401 and 1-402	1-401 and 1-402
1-402.1 through 1-402.4	1-402.1 through 1-402.4
1-402.11 and 1-402.12	1-402.11 and 1-402.12
1-407 through 1-410	1-407 through 1-410
Index 5 and Index 6	Index 5 and Index 6
Index 17 through Index 20	Index 17 through Index 20
Index 29 and Index 30	Index 29 and Index 30
Index 45 and Index 46	Index 45 and Index 46
Index 71 and Index 72	Index 71 and Index 72
Index 97 and Index 98	Index 97 and Index 98
Index 101 and Index 102	Index 101 and Index 102
Index 105 and Index 106	Index 105 and Index 106
Index 109 through Index 112	Index 109 through Index 112
Index 151 and Index 152	Index 151 and Index 152
Index 157 and Index 158	Index 157 and Index 158
Index 169 through Index 172	Index 169 through Index 172
Index 179 and Index 180	Index 179 and Index 180
Index 187 and Index 188	Index 187 and Index 188
Index 199 and Index 202	Index 199 and Index 202

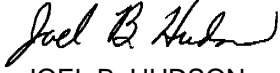
2. Retain this sheet in front of manual for reference purposes.

TM 1-1520-238-23-1  
C9

By Order of the Secretary of the Army:

ERIC K. SHINSEKI  
General, United States Army  
Chief of Staff

Official:



JOEL B. HUDSON  
Administrative Assistant to the  
Secretary of the Army

DISTRIBUTION:

To be distributed in accordance with initial distribution No. (IDN 313448) requirements for  
TM 1-1520-238-23-1.

CHANGE }  
NO. 8 }

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
WASHINGTON, D.C., 10 MAY 2000

Aviation Unit and Intermediate Maintenance Manual

**HELICOPTER, ATTACK,  
AH-64A APACHE  
(NSN 1520-01-106-9519)  
(EIC:RHA)**

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

TM 1-1520-238-23-1, 16 May 1994, is changed as follows:

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

Remove pages

-----  
xi and xii  
1-5 and 1-6  
1-153 through 1-156  
1-163 and 1-164  
1-183 and 1-184  
-----  
1-207 through 1-212  
1-235 and 1-236  
1-239 and 1-240  
1-323 and 1-324  
1-325 through 1-328  
-----  
-----  
1-329 and 1-330  
1-331 and 1-332  
-----  
1-333 and 1-334  
-----  
1-385 and 1-386  
1-386.1/(1-386.2 blank)  
1-391 through 1-394  
1-402.5 and 1-402.6  
-----  
1-407 and 1-408  
1-423 and 1-424  
Index 13 through Index 16  
Index 47 and Index 48  
Index 55 and Index 56  
Index 59 and Index 60  
Index 67 and Index 68  
Index 71 and Index 72  
Index 79 through Index 82  
Index 91 and Index 92  
Index 97 through Index 100  
Index 105 through Index 118

Insert pages

A through C/(D blank)  
xi and xii  
1-5 and 1-6  
1-153 through 1-156  
1-163 and 1-164  
1-183 and 1-184  
1-184.1/(1-184.2 blank)  
1-207 through 1-212  
1-235 and 1-236  
1-239 and 1-240  
1-323 and 1-324  
(1-325 blank) /1-326  
1-326.1 through 1-326.6  
1-327/(1-328 blank)  
1-329 and 1-330  
(1-331 blank) /1-332  
1-332.1 through 1-332.3/(1-332.4 blank)  
1-333 and 1-334  
1-334.1/(1-334.2 blank)  
1-385 and 1-386  
1-386.1/(1-386.2 blank)  
1-391 through 1-394  
1-402.5 and 1-402.6  
1-402.7 through 1-402.11/(1-402.12  
blank)  
1-407 and 1-408  
1-423 and 1-424  
Index 13 through Index 16  
Index 47 and Index 48  
Index 55 and Index 56  
Index 59 and Index 60  
Index 67 and Index 68  
Index 71 and Index 72  
Index 79 through Index 82  
Index 91 and Index 92  
Index 97 through Index 100  
Index 105 through Index 118

Remove pages  
Index 121 through Index 124  
Index 131 through Index 134  
Index 141 and Index 142  
Index 151 and Index 152  
Index 157 through Index 162  
Index 169 through Index 174  
Index 181 through Index 188  
Index 191 and Index 192  
Index 197 through Index 200

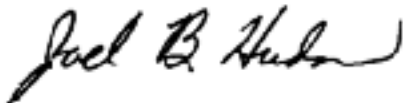
Insert pages  
Index 121 through Index 124  
Index 131 through Index 134  
Index 141 and Index 142  
Index 151 and Index 152  
Index 157 through Index 162  
Index 169 through Index 174  
Index 181 through Index 188  
Index 191 and Index 192  
Index 197 through Index 200

2. Retain this sheet in front of manual for reference purposes.

By Order of the Secretary of the Army:

ERIC K. SHINSEKI  
*General, United States Army*  
*Chief of Staff*

Official.



JOEL B. HUDSON  
*Administrative Assistant to the*  
*Secretary of the Army*  
0010202

**DISTRIBUTION:**

To be distributed in accordance with Initial Distribution Number (IDN 313448) requirements for TM 1-1520-238-23-1.

CHANGE }  
NO. 7 }

**HEADQUARTERS  
DEPARTMENT OF THE ARMY  
WASHINGTON D.C., 27 February 1998**

Aviation Unit and Intermediate Maintenance Manual

**HELICOPTER, ATTACK,  
AH-64A APACHE  
(NSN1520-01-9519)  
(EIC:RHA)**

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

TM 1-1520-238-23-1, 16 May 1994, is changed as follows:

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

Remove pages

xi and xii  
Index 53 and Index 54  
Index 65 and Index 66  
Index 111 and Index 112  
Index 115 and Index 116  
Index 159 and Index 160  
Index 167 and Index 168  
Index 175 and Index 176  
Index 183 and Index 184

Insert pages

xi and xii  
Index 53 and Index 54  
Index 65 and Index 66  
Index 111 and Index 112  
Index 115 and Index 116  
Index 159 and Index 160  
Index 167 and Index 168  
Index 175 and Index 176  
Index 183 and Index 184

2. Retain this sheet in front of manual for reference purposes.

**By Order of the Secretary of the Army:**

Official



Joel B. HUDSON

Administrative Assistant to the  
Secretary of the Army

04804

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

**DISTRIBUTION:**

To be distributed in accordance with Initial Distribution No. (IDN) 313448 requirements for TM 1-1520-238-23-1.

CHANGE

NO. 6

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
WASHINGTON, D.C., 19 December 1997

## Aviation Unit and Intermediate Maintenance Manual

**HELICOPTER, ATTACK,  
AH-64A APACHE  
(NSN 1520-01-106-9519)  
(EIC: RHA)**

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

TM 1-1520-238-23-1, 16 May 1994, is changed as follows:

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

## Remove pages

a and b  
i and ii  
xi and xii  
1-9 and 1-10  
1-105 and 1-106  
1-111 and 1-112  
1-123 through 1-128  
1-129 through 1-134  
1-269 and 1-270  
1-371 and 1-372  
1-385 and 1-386  
1-387 and 1-388  
1-401 and 1-402  
1-402.1 and 1-402.2  
1-403 and 1-404  
Index 3 and Index 4  
Index 9 through Index 12  
Index 19 through Index 32  
Index 37 through Index 38  
Index 51 through Index 54  
Index 61 and Index 62  
Index 67 and Index 68  
Index 71 through Index 84  
Index 89 through Index 92  
Index 97 through Index 100  
Index 103 and Index 104  
Index 107 through Index 110

## Insert pages

a and b  
i and ii  
xi and xii  
1-9 and 1-10  
1-105 and 1-106  
1-111 and 1-112  
1-123 through 1-128  
1-129 through 1-134  
1-269 and 1-270  
1-371 and 1-372  
1-385 and 1-386  
1-387 and 1-388  
1-401 and 1-402  
1-402.1 and 1-402.2  
1-403 and 1-404  
Index 3 and Index 4  
Index 9 through Index 12  
Index 19 through Index 32  
Index 37 through Index 38  
Index 51 through Index 54  
Index 61 and Index 62  
Index 67 and Index 68  
Index 71 through Index 84  
Index 89 through Index 92  
Index 97 through Index 100  
Index 103 and Index 104  
Index 107 through Index 110

Remove pages

Index 113 through Index 116  
Index 127 and Index 128  
Index 131 and Index 132  
Index 139 and Index 140  
Index 143 through Index 146  
Index 151 through Index 154  
Index 157 and Index 158  
Index 167 through Index 172  
Index 175 through Index 180  
Index 185 through Index 192  
Index 197 through Index 204


Insert pages

Index 113 through Index 116  
Index 127 and Index 128  
Index 131 and Index 132  
Index 139 and Index 140  
Index 143 through Index 146  
Index 151 through Index 154  
Index 157 and Index 158  
Index 167 through Index 172  
Index 175 through Index 180  
Index 185 through Index 192  
Index 197 through Index 204

2. Retain this sheet in front of manual for reference purposes.

**By Order of the Secretary of the Army:**

Official:



JOEL B. HUDSON

*Administrative Assistant to the  
Secretary of the Army*  
04562

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

DISTRIBUTION:

To be distributed in accordance with Initial Distribution Number (IDN) 313448, requirements for TM 1-1520-238-23-1.



CHANGE

NO. 5

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

Aviation Unit and Intermediate Maintenance Manual

**HELICOPTER, ATTACK,  
AH-64A APACHE  
(NSN 1520-01-106-9519)  
(EIC: RHA)**

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

TM 1-1520-238-23-1, 16 May 1994, is changed as follows:

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

Remove pages	Insert pages
a and b	a and b
i and ii	i and ii
ix through xiii/(xiv blank)	ix through xiv
1-7 and-8	1-7 and 1-8
1-19 and 1-20	1-19 and 1-20
1-25 and 1-26	1-25 and 1-26
1-31 and 1-32	1-31 and 1-32
1-37 and 1-38	1-37 and 1-38
1-41 and 1-42	1-41 and 1-42
1-57 and 1-58	1-57 and 1-58
1-105 through 1-114	1-105 through 1-114
-----	1-114.1 through 1-114.8
1-123 through 1-128	1-123 through 1-128
-----	128.1 and 1-128.2
1-129 and 1-130	1-129 and 1-130
1-149 through 1-152	1-149 through 1-152
1-175 and 1-176	1-175 and 1-176
1-243 and 1-244	1-243 and 1-244
1-246.3 and 1-246.4	1.246.3 and 1-246.4
(1-247 blank)/1-248	(1-247 blank)/1-248
1-251 and 1-252	1-251 and 1-252
1-252.1 and 1-252.2	1-252.1 and 1-252.2
1-252.5 and 1-252.6	1-252.5 and 1-252.6
1-269 through 1-272	1-269 through 1-272

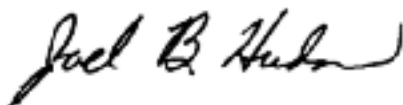
Remove pages  
1-321 and 1-322  
1-371 through 1-374  
1-385 and 1-386  
1-389 and 1-390  
1-395 and 1-396  
1-401 and 1-402  
1-402.1 and 1-402.2  
-----  
(1-403 blank)/1-404  
1-407 and 1-408  
1-413 through 1-416  
1-419(1-420 blank)  
-----  
Glossary 1 through Glossary 6  
Index 3 through Index 6  
Index 15 through Index 26  
Index 29 through Index 30  
Index 37 through Index 40  
Index 45 through Index 50  
Index 53 and-Index 54  
Index 59 and Index 60  
index 67 through Index 72  
Index 77 through Index 82  
Index 91 through Index 94  
Index 97 and Index 98  
Index 101 and Index 102  
Index 107 and Index 108  
Index 111 and Index 112  
Index 117 and Index 118  
Index 121 and Index 122  
Index 125 through Index 128  
Index 133and Index 134  
Index 139 and Index 140  
Index 145 through lx 148  
Index 151 through Index 162  
Index 169 through Index 174  
Index 177 and Index 178  
Index 183 and Index 184  
Index 187 and Index 188  
Index 193 and Index 194  
Index 199 and Index 200  
-----

Insert pages  
1-321 and 1-322  
1-371 through 1-374  
1-385 and 1-386  
1-389 and 1-390  
1-395 and 1-396  
1-401 and 1-402  
1-402.1 and 1-402.2  
1-402.5 and 1-402.6  
1-403 and 1-404  
1-407 and 1-408  
1-413 through 1-416  
1-419 and 1-420  
1-421 through 1-424  
Glossary 1 through Glossary 6  
Index 3 through Index 6  
Index 15 through Index 26  
Index 29 through Index 30  
Index 37 through Index 40  
Index 45 through Index 50  
Index 53 and Index 54  
Index 59 and Index 60  
Index 67 through Index 72  
Index 77 through Index 82  
Index 91 through Index 94  
Index 97 and Index 98  
Index 101 and Index 102  
Index 107 and Index 108  
Index 111 and Index 112  
Index 117 and Index 118  
Index 121 and Index 122  
Index 125 through Index 128  
Index 133 and Index 134  
Index 139 and Index 140  
Index 145 through Index 148  
Index 151 through Index 162  
Index 169 through Index 174  
Index 177 and Index 178  
Index 183 and Index 184  
Index 187 and Index 188  
Index 193 and Index 194  
Index 199 and Index 200  
E-mail instructions page

2. Retain this sheet in front of manual for reference purposes.

By Order of the Secretary of the Army:

Official:



JOEL B. HUDSON  
Administrative Assistant to the  
Secretary of the Army  
02654

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

DISTRIBUTION:

To be distributed in accordance with DA Form 12-31-E, block no. 3448, requirements for TM 1-1520-238-23-1.

CHANGE  
NO. 4

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
WASHINGTON, D.C., 16 FEBUARY 1996

Aviation Unit and Intermediate Maintenance Manual  
HELICOPTER, ATTACK,  
AH-64A APACHE  
(NSN 1520-01-106-9519)  
(EIC: RHA)

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

TM 1-1520-238-23-1, 16 MAY 1994, is changed as follows:

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

Remove page	Insert pages
1-1 and 1-2	1-1 and 1-2
1-37 and 1-38	1-37 and 1-38
1-41 and 1-42	1-41 and 1-42
- - - -	1-84.1 through 1-84.5/(1-64.6 blank)
1-89 through 1-94	1-89 through 1-94
1-165 and 1-166	1-165 and 1-166
1-231 and 1-232	1-231 and 1-232
1-273 and 1-274	1-273 and 1-274
- - - -	1-274.1 and 1-274.2
1-275 and 1-276	(1-275 blank)/1-276
- - - -	1-276.1 and 1-276.2
1-277 and 1-278	(1-277 blank)/1-278
1-365 and 1-366	1-365 and 1-366
1-371 and 1-372	1-371 and 1-372
1-381 through 1-384	1-381 through 1-384
1-386.1/(1-386.2 blank)	1-386.1/(1-386.2 blank)
1-387 and 1-388	1-387 and 1-388
1-401 and 1-402	1-401 and 1-402
1-402.1 and 1-402.2	1-402.1 through 1-402.4
(1-403 blank)/1-404	(1-403 blank)/1-404
1-405 through 1-418	1-405 through 1-418
Index 1 through Index 12	Index 1 through Index 12
Index 15 through Index 30	Index 15 through Index 30
Index 37 and Index 38	Index 37 and Index 38
Index 41 and Index 42	Index 41 and Index 42
Index 46 through Index 54	Index 49 through Index 54
Index 57 through Index 60	Index 57 through Index 60
Index 65 through Index 68	Index 65 through Index 68

**Remove pages**

Index 71 and Index 72  
Index 75 and Index 76  
Index 76 through Index 88  
Index 91 and Index 62  
Index 97 through Index 118  
Index 121 and Index 122  
Index 125 through Index 132  
Index 137 through Index 142  
Index 145 and Index 146  
index 148 through Index 152  
Index 155 through Index 184  
Index 187 through Index 162  
Index 201 and Index 202

**Insert pages**

Index 71 and Index 72  
Index 75 and Index 76  
Index 79 through Index 88  
Index 91 and Index 62  
Index 97 through Index 118  
Index 121 and Index 122  
Index 125 through Index 132  
Index 137 through Index 142  
Index 145 and Index 146  
Index 146 through Index 152  
Index 155 through Index 184  
Index 187 through Index 162  
Index 201 and Index 202

2. Retain this sheet in front of manual for reference purpose.

**By Order of the Secretary of the Army:**

Official:



JOEL B. HUDSON

*Acting Administrative Assistant to the  
Secretary of the Army*

01675

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

**DISTRIBUTION:**

To be distributed in accordance with DA Form 12-31-E, block no. 3448, requirements for  
TM 1-1520-238-23-1.

# URGENT

TM 1-1520-238-23-1

CHANGE

NO. 3

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
WASHINGTON, D.C., 15 JULY 1995

## Aviation Unit and Intermediate Maintenance Manual

### HELICOPTER, ATTACK, AH-64A APACHE (NSN 1520-01-106-9519) (EIC: RHA)

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

TM 1-1520-238-23-1, 16 May 1994, is changed as follows:

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

**Remove pages**

1-405 and 1-406

**Insert pages**

1-405 and 1-406

2. Retain this sheet in front of manual for reference purposes.

By Order of the Secretary of the Army:

Official:



JOEL B. HUDSON

*Acting Administrative Assistant to the  
Secretary of the Army*

00617

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

#### DISTRIBUTION:

To be distributed in accordance with DA Form 12-31-E, block no. 3448, requirements for TM 1-1520-238-23-1.

# URGENT

CHANGE }  
 NO. 2 }

HEADQUARTERS  
 DEPARTMENT OF THE ARMY  
 WASHINGTON, D.C., 15 May 1995

Aviation Unit and Intermediate Maintenance Manual

**HELICOPTER, ATTACK,  
 AH-64A APACHE  
 (NSN 1520-01-106-9519)  
 (EIC: RHA)**

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

TM 1-1520-238-23-1, 16 May 1994, is changed as follows:

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

Remove pages

1-123 through 1-126  
 1-129 and 1-130  
 1-139 through 1-146  
 -----  
 1-217 and 1-218  
 1-243 through 1-246  
 -----  
 1-247 through 1-252  
 -----  
 1-321 and 1-322  
 1-371 through 1-374  
 1-379 and 1-380  
 1-383 through 1-386  
 -----  
 1-387 and 1-388  
 -----  
 1-403 through 1-408  
 Index 1 through Index 4  
 Index 9 and Index 10  
 Index 19 and Index 20  
 Index 43 and Index 44  
 Index 57 through Index 60  
 Index 73 and Index 74  
 Index 79 through Index 82  
 Index 91 through Index 96  
 Index 111 and Index 112  
 Index 115 and Index 116  
 Index 125 through Index 130  
 Index 131 through Index 134  
 Index 139 and Index 140  
 Index 143 and Index 144  
 Index 149 through Index 152  
 Index 157 through Index 162  
 Index 167 and Index 168  
 Index 185 through Index 192

Insert pages

1-123 through 1-126  
 1-129 and 1-130  
 1-139 through 1-146  
 1-146.1/(1-146.2 blank)  
 1-217 and 1-218  
 1-243 through 1-246  
 1-246.1 through 1-246.8  
 (1-247 blank)/1-248 through 1-252  
 1-252.1 through 1-252.6  
 1-321 and 1-322  
 1-371 through 1-374  
 1-379 and 1-380  
 1-383 through 1-386  
 1-386.1/(1-386.2 blank)  
 1-387 and 1-388  
 1-402.1 and 1-402.2  
 (1-403 blank)/1-404 through 1-408  
 Index 1 through Index 4  
 Index 9 and Index 10  
 Index 19 and Index 20  
 Index 43 and Index 44  
 Index 57 through Index 60  
 Index 73 and Index 74  
 Index 79 through Index 82  
 Index 91 through Index 96  
 Index 111 and Index 112  
 Index 115 and Index 116  
 Index 125 through Index 130  
 Index 131 through Index 134  
 Index 139 and Index 140  
 Index 143 and Index 144  
 Index 149 through Index 152  
 Index 157 through Index 162  
 Index 167 and Index 168  
 Index 185 through Index 192

Remove pages

Index 199 and Index 200  
Index 203 and Index 204


Insert pages

Index 199 and Index 200  
Index 203 and Index 204

2. Retain this sheet in front of manual for reference purposes.

**By Order of the Secretary of the Army:**

Official:



JOEL B. HUDSON

*Acting Administrative Assistant to the  
Secretary of the Army*  
00148

**GORDON R. SULLIVAN**  
*General, United States Army  
Chief of Staff*

**DISTRIBUTION:**

To be distributed in accordance with DA Form 12-31-E, block no. 3448, requirements for TM1-1520-238-23-1.



# URGENT

TM 1-1520-238-23-1  
C1

CHANGE  
NO. 1

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
WASHINGTON, D.C., 30 September 1994

## Aviation Unit and Intermediate Maintenance Manual

HELICOPTER, ATTACK  
AH-64A APACHE  
(NSN 1520-01-106-9519)  
(EIC: RHA)

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

TM 1-1520-238-23-1, 16 May 1994, is changed as follows:

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

Remove pages

1-407 and 1-408

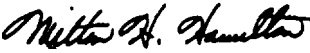
Insert pasges

1-407 and 1-408

2. Retain this sheet in front of manual for reference purposes.

By Order of the Secretary of the Army:

Official:

  
MILTON H. HAMILTON  
Administrative Assistant to the  
Secretary of the Army  
06752

GORDON R. SULLIVAN  
General, United States Army  
Chief of Staff

DISTRIBUTION:

To be distributed in accordance with DA Form 12-31-E, block no. 3448, requirements for  
TM 1-1520-238-23-1

## WARNINGS

There are tasks which could cause injury to personnel or damage to the helicopter. **WARNINGS** are used to tell where there is danger of injury or death to personnel. They appear before the danger item. **WARNINGS** must be obeyed by all personnel working on the helicopter.

### FLIGHT SAFETY PART

Failure to follow maintenance instructions may result in serious injury or death of crewmembers and/or serious damage to the helicopter.

### GROUND OPERATION

The engines shall be started and run by assigned personnel only. When near tail rotor of helicopter, tell person at controls personnel are in tail area. Approach tail rotor section of helicopter only from aft right side when engines are running. If injury occurs, seek medical aid.

### NOISE

Sound of running engines can exceed U.S. Surgeon General's noise limits (DA PAM 40-501). Ear plugs or aviation helmet must be worn when working on helicopter at these times. If injury occurs, seek medical aid.

### CAUSTIC MATERIALS

Battery fluid is an acid that harms skin and clothes. Personnel working with batteries must wear special gloves, clothing, and eye protection. A 15 percent mix of boric acid in water must be used to rinse spilled acid. Spill areas must then be well flushed with water. If injury occurs, seek medical aid.

### DANGEROUS CHEMICALS

- Conductive coating paint containing Isocyanates (a poison) and chemicals used for cleaning are explosive, flammable, and highly poisonous. Wear protective clothing and guards when working with these materials. Always assure maximum ventilation when using solvents, methyl ethyl ketone, and trichloroethane. Accidental breathing of vapors can cause dizziness and nausea. If methyl ethyl ketone contacts the skin, rinse immediately with water. If trichloroethane or methyl ethyl ketone contacts the eyes, flush with water and seek medical aid.
- Fire extinguisher fluids can make the eyes and nose sore. Use solvents only in well ventilated areas. Do not breathe solvent vapors or let them touch the skin or eyes. If injury occurs, seek medical aid.
- Dry cleaning solvent is flammable. Do not use it near oxygen storage or oxygen transfer systems. Do not use it near heat or open flame. Do not apply electrical power to aircraft while it is being used. Wear protective clothing, goggles, and respirator. If injury occurs, seek medical aid.
- Paints, thinners, and paint sprays are highly flammable. Never use near ignition sources.
- Wear air supplied respirator, rubber gloves, and protective clothing during all spray paint operations with solvent-based Fluoropolymer and Polyurethane coatings. Ensure that no skin area is exposed to paint spray mist.
- Prolonged breathing of vapors from organic solvents or materials containing organic solvents can have a toxic effect on exposed skin.

### **ENGINE EXHAUST**

Stay clear of engine exhaust when engines are operating. Exhaust gases are hot and could cause burns. Particles in the exhaust could damage eyes. If injury occurs, seek medical aid.

### **EXTERNAL ELECTRICAL AND HYDRAULIC POWER**

Application of external power or APU operation could cause injury to personnel. Ensure that all switches and controls are in a safe condition. Inform all persons working on helicopter that external power is being applied. If injury occurs, seek medical aid.

### **HOISTED COMPONENTS**

Hoisted components can cause injury or death if they fall. Keep away from all hoisted components and loaded crane. If injury occurs, seek medical aid.

### **SAFETY CHECKS**

Failure to perform safety checks could cause injury to personnel. Safety checks must be performed when called for in task. Safety checks ensure that helicopter is in a safe condition for performing tasks. If injury occurs, seek medical aid.

### **FUEL**

- Jet engine fuel is toxic and explosive. Do not breathe vapors. Do not get fuel on clothes or skin. Use water to remove fuel from skin. If injury occurs, seek medical aid.
- Do not allow sparks or flame near helicopter when servicing or maintaining fuel system. Ensure that helicopter is grounded. If injury occurs, seek medical aid.

### **ROTOR BLADES**

Rotor blades can cause injury or death. Stay clear of rotating blades. Blades can still rotate with engines off. Ensure that rotor brake is on when working in path of blades. Inform all personnel working on helicopter that blades can rotate if rotor brake is off or inoperative. If injury occurs, seek medical aid.

### **IGNITION IGNITER**

The ignition system contains high-voltage electricity that can cause injury or death. Extreme caution must be used when working on ignition system. If injury occurs, seek medical aid.

### **EXTERNAL STORES AND FIRE EXTINGUISHER CARTRIDGES**

Static electricity can fire cartridges. To prevent injury to personnel, avoid contact with cartridge primer. Maintenance instructions must be followed to prevent accidental firing of cartridges. If injury occurs, seek medical aid.

### **HIGH PRESSURE NITROGEN**

Shock struts and tires contain nitrogen under high pressure. You could get hurt from a sudden blast. To prevent possible injury, follow deflation instructions carefully. If injury occurs, seek medical aid.

INSERT LATEST CHANGED PAGES: DESTROY SUPERSEDED PAGES.

**LIST OF EFFECTIVE PAGES**

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

Date of issue for original and change pages are:

Original . . . . . 0 . . . . . 16 May 1994	Change . . . . . 6 . . . . . 19 December 1997
Change . . . . . 1 . . . . . 30 September 1994	Change . . . . . 7 . . . . . 27 February 1998
Change . . . . . 2 . . . . . 15 May 1995	Change . . . . . 8 . . . . . 10 May 2000
Change . . . . . 3 . . . . . 15 July 1995	Change . . . . . 9 . . . . . 31 July 2001
Change . . . . . 4 . . . . . 16 February 1996	
Change . . . . . 5 . . . . . 30 September 1996	

**TOTAL NUMBER OF PAGES IN THIS PUBLICATION IS 770, CONSISTING OF THE FOLLOWING:**

<b>Page No.</b>	<b>*Change No.</b>	<b>Page No.</b>	<b>*Change No.</b>
Cover . . . . .	0	1-124 – 1-125 . . . . .	6
Blank . . . . .	0	1-126 . . . . .	5
A – D Added . . . . .	9	1-127 – 1-128 . . . . .	6
a – b . . . . .	6	1-128.1 – 1-128.2 Added . . . . .	5
i . . . . .	5	1-129 . . . . .	5
ii – ix . . . . .	0	1-130 – 1-133 . . . . .	6
x . . . . .	5	1-134 – 1-139 . . . . .	0
xi – xii . . . . .	9	1-140 – 1-146 . . . . .	2
xiii – xiv . . . . .	5	1-146.1 Added . . . . .	2
1-1 . . . . .	0	1-146.2 Blank, Added . . . . .	2
1-2 . . . . .	4	1-147 – 1-148 . . . . .	0
1-3 – 1-5 . . . . .	0	1-149 – 1-152 . . . . .	5
1-6 . . . . .	8	1-153 – 1-155 . . . . .	8
1-7 . . . . .	5	1-156 – 1-158 . . . . .	9
1-8 . . . . .	0	1-158.1 – 1-158.34 . . . . .	9
1-9 . . . . .	6	1-159 – 1-162 . . . . .	0
1-10 – 1-19 . . . . .	0	1-163 – 1-164 . . . . .	8
1-20 . . . . .	5	1-165 . . . . .	4
1-21 – 1-24 . . . . .	0	1-166 – 1-175 . . . . .	0
1-25 . . . . .	5	1-176 . . . . .	5
1-26 – 1-30 . . . . .	0	1-177 – 1-183 . . . . .	0
1-31 . . . . .	5	1-184 . . . . .	8
1-32 – 1-36 . . . . .	0	1-184.1 Added . . . . .	8
1-37 . . . . .	5	1-184.2 Blank, Added . . . . .	8
1-38 – 1-41 . . . . .	0	1-185 – 1-206 . . . . .	0
1-42 . . . . .	5	1-207 – 1-212 . . . . .	8
1-43 – 1-57 . . . . .	0	1-213 – 1-216 . . . . .	0
1-58 . . . . .	5	1-217 . . . . .	2
1-59 – 1-84 . . . . .	0	1-218 – 1-231 . . . . .	0
1-84.1 – 1-84.5 Added . . . . .	4	1-232 . . . . .	4
1-84.6 Blank, Added . . . . .	4	1-233 – 1-235 . . . . .	0
1-85 – 1-89 . . . . .	0	1-236 . . . . .	8
1-90 – 1-93 . . . . .	4	1-237 – 1-239 . . . . .	0
1-94 – 1-105 . . . . .	0	1-240 . . . . .	8
1-106 . . . . .	6	1-241 – 1-242 . . . . .	0
1-107 – 1-110 . . . . .	5	1-243 – 1-244 . . . . .	5
1-111 – 1-112 . . . . .	6	1-245 – 1-246 . . . . .	2
1-113 – 1-114 . . . . .	5	1-246.1 – 246.3 Added . . . . .	2
1-114.1 – 114.8 Added . . . . .	5	1-246.4 . . . . .	5
1-115 – 1-122 . . . . .	0	1-246.5 – 1-246.8 Added . . . . .	2
1-123 . . . . .	5	1-247 Blank . . . . .	5

\*Zero in this column indicates an original page.

INSERT LATEST CHANGED PAGES: DESTROY SUPERSEDED PAGES.

**LIST OF EFFECTIVE PAGES**

Page No.	*Change No.	Page No.	*Change No.
1-248	5	1-386.2 Blank	4
1-249 – 1-250	2	1-387	6
1-251	5	1-388	9
1-252	2	1-389	0
1-252.1 Added	2	1-390	5
1-252.2	5	1-390.1 Added	9
1-252.3 – 1-252.5 Added	2	1-390.2 Blank, Added	9
1-252.6	5	1-391	9
1-253 – 1-268	0	1-392 – 1-393	0
1-269	6	1-394	8
1-270 – 1-271	0	1-395	5
1-272	5	1-396 – 1-400	0
1-273	0	1-401	6
1-274	4	1-402	9
1-274.1 – 1-274.2 Added	4	1-402.1	6
1-275 Blank	4	1-402.2 – 1-402.3	9
1-276	4	1-402.4	4
1-276.1 – 1-276.2 Added	4	1-402.5 – 1-402.10	8
1-277 Blank	4	1-402.11 – 1-402.12	9
1-278	4	1-403 – 1-404	6
1-279 – 1-320	0	1-405	3
1-321	2	1-406	4
1-322	5	1-407	9
1-323 – 1-324	8	1-408	8
1-325 Blank	8	1-409	0
1-326	8	1-410	9
1-326.1 – 1-326.6 Added	8	1-411 – 1-413	4
1-327	8	1-414	5
1-328 Blank	8	1-415	0
1-329 – 1-330	8	1-416	5
1-331 Blank	8	1-417	0
1-332	8	1-418	4
1-332.1 – 1-332.3 Added	8	1-419 – 1-422	5
1-332.4 Blank, Added	8	1-423	8
1-333 – 1-334	8	1-424	5
1-334.1 Added	8	Glossary 1	0
1-334.2 Blank, Added	8	Glossary 2 – Glossary 3	5
1-335 – 1-364	0	Glossary 4 – Glossary 5	0
1-365 – 1-366	4	Glossary 6	5
1-367 – 1-370	0	Glossary 7 – Glossary 13	0
1-371 – 1-377	9	Glossary 14 Blank	0
1-378	0	Index 1	4
1-379	9	Index 2	0
1-380	2	Index 3	6
1-381	4	Index 4 – Index 5	5
1-382	0	Index 6	9
1-383	4	Index 7	0
1-384	9	Index 8	4
1-385	5	Index 9 – Index 12	6
1-386	6	Index 13 – Index 16	8
1-386.1	4	Index 17	5

\*Zero in this column indicates an original page.

INSERT LATEST CHANGED PAGES: DESTROY SUPERSEDED PAGES.

**LIST OF EFFECTIVE PAGES**

Page No.	*Change No.	Page No.	*Change No.
Index 18 – Index 19	9	Index 92	8
Index 20 – Index 22	6	Index 93 – Index 94	5
Index 23	0	Index 95	2
Index 24 – Index 27	6	Index 96	0
Index 28	4	Index 97 – Index 98	9
Index 29	9	Index 99	6
Index 30	5	Index 100	8
Index 31	6	Index 101	9
Index 32 – Index 36	0	Index 102	5
Index 37	6	Index 103	4
Index 38 – Index 39	5	Index 104	6
Index 40	0	Index 105	9
Index 41	4	Index 106	4
Index 42	0	Index 107 – Index 108	8
Index 43	2	Index 109	6
Index 44 – Index 45	0	Index 110 – Index 111	9
Index 46	9	Index 112 – Index 117	8
Index 47	8	Index 118 – Index 121	0
Index 48 – Index 49	5	Index 122	8
Index 50	4	Index 123	0
Index 51	6	Index 124	8
Index 52	4	Index 125	0
Index 53	7	Index 126	5
Index 54	6	Index 127	4
Index 55 – Index 56	8	Index 128	6
Index 57 – Index 58	4	Index 129	4
Index 59 – Index 60	8	Index 130	0
Index 61	0	Index 131 – Index 113	8
Index 62	6	Index 134	2
Index 63 – Index 64	0	Index 135 – Index 136	0
Index 65 – Index 66	7	Index 137	4
Index 67	8	Index 138	0
Index 68	5	Index 139	5
Index 69	0	Index 140	6
Index 70	5	Index 141	0
Index 71	9	Index 142	8
Index 72 – Index 73	6	Index 143	6
Index 74	0	Index 144	2
Index 75	6	Index 145	6
Index 76	0	Index 146	5
Index 77	5	Index 147	0
Index 78	6	Index 148	5
Index 79	8	Index 149	2
Index 80	5	Index 150	4
Index 81	8	Index 151	9
Index 82 – Index 84	6	Index 152	8
Index 85	0	Index 153	6
Index 86	4	Index 154 – Index 156	5
Index 87	0	Index 157	9
Index 88	4	Index 158	6
Index 89 – Index 91	6	Index 159 – Index 162	8

\*Zero in this column indicates an original page.

INSERT LATEST CHANGED PAGES: DESTROY SUPERSEDED PAGES.

**LIST OF EFFECTIVE PAGES**

<b>Page No.</b>	<b>*Change No.</b>	<b>Page No.</b>	<b>*Change No.</b>
Index 163 – Index 166 .....	4	Index 187 .....	6
Index 167 .....	7	Index 188 .....	9
Index 168 .....	6	Index 189 – Index 191 .....	6
Index 169 .....	8	Index 192 .....	8
Index 170 – Index 171 .....	9	Index 193 .....	0
Index 172 – Index 174 .....	8	Index 194 .....	5
Index 175 .....	7	Index 195 – Index 196 .....	0
Index 176 – Index 177 .....	6	Index 197 .....	8
Index 178 .....	5	Index 198 .....	6
Index 179 .....	9	Index 199 .....	9
Index 180 .....	6	Index 200 .....	8
Index 181 .....	8	Index 201 .....	9
Index 182 .....	4	Index 202 – Index 203 .....	6
Index 183 – Index 184 .....	8	Index 204 – Index 205 .....	0
Index 185 .....	6	Index 206 Blank .....	0
Index 186 .....	8		

\*Zero in this column indicates an original page.

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
WASHINGTON, D. C. 16 May 1994

TECHNICAL MANUAL  
AVIATION UNIT AND INTERMEDIATE  
MAINTENANCE MANUAL FOR  
ARMY MODEL AH-64A HELICOPTER  
(NSN 1520-01-106-9519) (EIC: RHA)

**REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS**

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

You may also send in your comments electronically to our e-mail address: 2028@redstone.army.mil or by fax 256-842-6546/DSN 788-6546. Instructions for sending an electronic 2028 may be found at the end of this manual immediately preceding the hard copy 2028.

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

TABLE OF CONTENTS

	<u>Title</u>	<u>Page No.</u>
	How To Use This Manual .....	vi
	Safety Summary .....	xii
CHAPTER 1	AIRCRAFT GENERAL .....	1-1
Section I.	General Information .....	1-8
Section II.	Equipment Description and Data .....	1-10
Section III.	Servicing .....	1-16
Section IV.	Lubrication .....	1-189
Section V.	Handling, Jacking, Mooring, Hoisting, and Sling Loading .....	1-190
Section VI.	Preventive Maintenance Inspections .....	1-367
Section VII.	Overhaul and Retirement Schedule .....	1-404
Section VIII.	Cartridge and Propellant Actuated Devices .....	1-417
Section IX.	Flight Safety Parts Program .....	1-420
GLOSSARY .....		Glossary 1
Section I.	Abbreviations .....	Glossary 1
Section II.	Definition of Unusual Terms .....	Glossary 8



## TABLE OF CONTENTS – continued

	<u>Title</u>	<u>Page No.</u>
ALPHABETICAL INDEX .....	Index	1
<b>CHAPTER 2</b>	<b>AIRFRAME</b> .....	<b>2-1</b>
Section I.	Helicopter Access Provisions .....	2-11
Section II.	Fuselage Maintenance .....	2-35
Section III.	Forward Fuselage Maintenance .....	2-104
Section IV.	Canopy Maintenance .....	2-133
Section V.	Center Fuselage Maintenance .....	2-262
Section VI.	Aft Fuselage Maintenance .....	2-351
Section VII.	Empennage Maintenance .....	2-369
Section VIII.	Wings Maintenance .....	2-422
Section IX.	Nose Gearbox Fairing Maintenance .....	2-442
Section X.	Fuselage Fairing Maintenance .....	2-450
Section XI.	Engine Nacelle Maintenance .....	2-458
Section XII.	Equipment and Furnishings Maintenance .....	2-561
<b>CHAPTER 3</b>	<b>LANDING GEAR SYSTEM</b> .....	<b>3-1</b>
Section I.	Main Landing Gear Maintenance .....	3-5
Section II.	Wire Strike Protection Maintenance .....	3-92
Section III.	Tail Landing Gear Maintenance .....	3-100
Section IV.	Brake System Maintenance .....	3-192
<b>CHAPTER 4</b>	<b>POWER PLANTS</b> .....	<b>4-1</b>
Section I.	Engines Teardown/Buildup .....	4-11
Section II.	Cooling System Maintenance .....	4-179
Section III.	Air System Maintenance .....	4-220
Section IV.	Nacelles Maintenance .....	4-270
Section V.	Engines Maintenance .....	4-319
Section VI.	Exhaust System Maintenance .....	4-378
Section VII.	Ignition System Maintenance .....	4-425
Section VIII.	Power Controls Maintenance .....	4-426
<b>CHAPTER 5</b>	<b>ROTORS</b> .....	<b>5-1</b>
Section I.	Main Rotor Blade Maintenance .....	5-5
Section II.	Main Rotor Head Maintenance .....	5-106
Section III.	Tail Rotor Maintenance .....	5-226
<b>CHAPTER 6</b>	<b>DRIVE SYSTEM</b> .....	<b>6-1</b>
Section I.	Drive Shaft and Coupling Maintenance .....	6-8
Section II.	Engine Nose Gearbox Maintenance .....	6-97
Section III.	Main Transmission Maintenance .....	6-200
Section IV.	Intermediate Gearbox Maintenance .....	6-501
Section V.	Tail Rotor Gearbox Maintenance .....	6-545

## TABLE OF CONTENTS – continued

	<u>Title</u>	<u>Page No.</u>
CHAPTER 7	HYDRAULIC AND PNEUMATIC SYSTEMS .....	7-1
Section I.	Primary Hydraulic System Maintenance .....	7-9
Section II.	Utility Hydraulic System Maintenance .....	7-234
Section III.	Pressurized Air System Maintenance .....	7-440
CHAPTER 8	INSTRUMENTS .....	8-1
Section I.	Engine Instruments Maintenance .....	8-4
Section II.	Flight Instruments Maintenance .....	8-76
Section III.	Navigation Instruments Maintenance .....	8-110
Section IV.	Miscellaneous Instruments Maintenance .....	8-113
CHAPTER 9	ELECTRICAL SYSTEM .....	9-1
Section I.	Power Generation and Distribution Components Maintenance .....	9-9
Section II.	Lighting Provisions Components Maintenance .....	9-223
Section III.	Caution and Warning Components Maintenance .....	9-373
Section IV.	Miscellaneous Electrical Components and Wiring Harness Maintenance .....	9-471
CHAPTER 10	FUEL SYSTEM .....	10-1
Section I.	Fuel System Maintenance .....	10-8
Section II.	Auxiliary Fuel System Maintenance .....	10-579
CHAPTER 11	FLIGHT CONTROL SYSTEM .....	11-1
Section I.	Flight Controls Maintenance – General .....	11-15
Section II.	Flight Controls Maintenance – Mechanical .....	11-44
Section III.	Automatic Stabilization Equipment Maintenance .....	11-847
Section IV.	Directional Control System Maintenance .....	11-988
Section V.	Flight Controls Rigging Maintenance .....	11-1187
CHAPTER 12	UTILITY SYSTEM .....	12-1
Section I.	Windshield Wiper System Maintenance .....	12-5
Section II.	Fire Detection System Maintenance .....	12-54
Section III.	Fire Extinguishing System Maintenance .....	12-102
Section IV.	Anti-Ice/De-Ice System Maintenance .....	12-144
Section V.	Canopy Jettison System Maintenance .....	12-317
CHAPTER 13	ENVIRONMENTAL CONTROL SYSTEM .....	13-1
Section I.	Environmental Control System Maintenance .....	13-4
Section II.	Defog System Maintenance .....	13-136

TABLE OF CONTENTS – continued

	<u>Title</u>	<u>Page No.</u>
CHAPTER 14	HOISTS AND WINCHES .....	14-1
CHAPTER 15	AUXILIARY POWER SYSTEM .....	15-1
Section I.	Auxiliary Power System Maintenance .....	15-4
Section II.	Auxiliary Power Unit Mounting and Drain System .....	15-120
Section III.	Auxiliary Power Unit Exhaust System and Enclosure .....	15-148
CHAPTER 16	MISSION EQUIPMENT .....	16-1
Section I.	External Stores/Pylons Maintenance .....	16-4
Section II.	Countermeasure System Maintenance .....	16-115
Section III.	Winterization and Battery Cold Start System Maintenance .....	16-123
Section IV.	Desert Operation Provisions Maintenance .....	16-132
CHAPTER 17	EMERGENCY EQUIPMENT .....	17-1
APPENDIX A	REFERENCES .....	A-1
APPENDIX B	MAINTENANCE ALLOCATION CHART .....	B-1
Section I.	Introduction .....	B-1
Section II.	Maintenance Allocation Chart (Aviation) for AH-64A Helicopter .....	B-8
Section III.	Tools and Test Equipment Requirements for AH-64A Helicopter .....	B-135
Section IV.	Remarks for AH-64A Helicopter .....	B-161
APPENDIX C	AIRCRAFT INVENTORY MASTER GUIDE .....	C-1
Section I.	Introduction .....	C-1
Section II.	Inventoriable Items .....	C-2
APPENDIX D	ILLUSTRATED FIELD MANUFACTURE ITEMS LIST .....	D-1
Section I.	Introduction .....	D-1
Section II.	AVUM and AVIM Locally Manufactured Items .....	D-41
Section III.	Illustrated Field Manufacture Items .....	D-103
Section IV.	Illustrated Field Manufacture Tools .....	D-406
APPENDIX E	STORAGE OF AIRCRAFT .....	E-1
Section I.	Storage and Corrosion Control General Information .....	E-2
Section II.	Flyable Storage .....	E-4
Section III.	Short Term Storage .....	E-9
Section IV.	Intermediate Storage .....	E-15
APPENDIX F	EXPENDABLE AND DURABLE ITEMS LIST .....	F-1
Section I.	Introduction .....	F-1
Section II.	Expendable and Durable Items List .....	F-2

TABLE OF CONTENTS – continued

	<u>Title</u>	<u>Page No.</u>
APPENDIX G	WEIGHING AND LOADING INFORMATION .....	G-1
Section I.	Helicopter Weighing Information .....	G-2
Section II.	Loading Information .....	G-19
APPENDIX H	TOOL IDENTIFICATION LIST .....	H-1
Section I.	Introduction .....	H-1
Section II.	Tool Identification List .....	H-2

---

## HOW TO USE THIS MANUAL

---

a. Overview

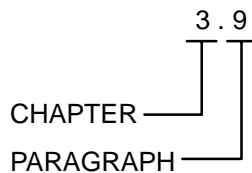
To get the job done correctly, you must be able to find all the information you need. Knowing how to use this manual is the key. You should know what is in this manual, how it is organized, and how to use it.

b. Organization

- (1) The complete AH-64A Apache helicopter (AVUM/AVIM) maintenance manual consists of a set of volumes. These volumes are numbered as follows: TM 1-1520-238-23-1 through TM 1-1520-238-23-9. The troubleshooting manual, TM 1-1520-238-T, contains a full description of each system.
- (2) Volumes are made up of chapters. Each chapter is numbered in Arabic numerals (1, 2, 3, etc.). Each chapter is an individual book which has maintenance information on a particular helicopter system.
- (3) Chapters (books) are broken down into sections. Sections are numbered in Roman numerals (I, II, III, etc.). Chapters have all the maintenance information you need on a particular system.
- (4) Sections are made up of paragraphs. Each paragraph is numbered in Arabic numerals (1, 2, 3, etc.). The sections cover major parts of a system.
- (5) Paragraphs (tasks) are detailed descriptions of a maintenance task. Some paragraphs are brief. Some are several pages long.
- (6) A paragraph starts with an initial setup which is followed by a step-by-step procedure on how to perform the task correctly. Each step in the procedure has an illustration to help make things clear.

c. Paragraph Numbering

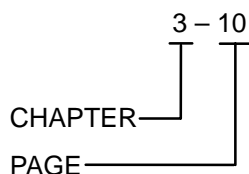
Paragraph numbers are in two parts. The first is the chapter number. The second is the paragraph number in that chapter. Each number is separated by a period (.) as shown in the example:



Paragraph numbers are the most important numbers in the manual. Always use the paragraph number to find information – NOT the page number.

d. Page Numbering

All page numbering is by chapters. The first number is the number of the chapter; the second number is the number of the page in that chapter. The numbers are separated by a dash as shown in the example:



---

**HOW TO USE THIS MANUAL**

---

e. Manual Index

- (1) The index for the entire manual is in this chapter. The index lists all paragraph titles in alphabetical order. After you find the title in the index, it tells the paragraph number of that task. For example, if you need information on the tire, either main landing gear or tail landing gear tire, go to the “T” section of the index and look under “Tire.” There you will find:

Tire, Main Landing Gear (LGS)	Tire and Tube, Tail Landing Gear (LGS)
Removal . . . . . 3.7	Removal . . . . . 3.47
Installation . . . . . 3.7	Installation . . . . . 3.47

The index tells that the tire information for the main landing gear is in chapter 3, paragraph 3.7. For the tail landing gear, it is in chapter 3, paragraph 3.47.

- (2) You can find your task in the index, even if you only know a single word in the title. In the sample tire titles you could also find your tasks by looking under “Landing.” Examples:

Landing Gear Tire, Main (LGS)	Landing Gear Tire and Tube, Tail (LGS)
Removal . . . . . 3.7	Removal . . . . . 3.47
Installation . . . . . 3.7	Installation . . . . . 3.47

Or, you could look under “Gear:”

Gear Tire, Main Landing (LGS)	Gear Tire and Tube, Tail Landing (LGS)
Removal . . . . . 3.7	Removal . . . . . 3.47
Installation . . . . . 3.7	Installation . . . . . 3.47

The abbreviation for the system is placed in parentheses, under the paragraph title in the index. In the example, the landing gear system is one of the few where an acronym is used for the system (LGS). For most systems, an abbreviation is used (example: flight control system: Flt Ctrl Sys). In the case of tires, the system would be obvious; tires would only be used on the landing gear. However, in the rest of the manual, some titles are similar though in different systems. This is true with shafts, brackets, supports, bearings, etc. The index will always provide the name of the correct system to help you avoid going to the wrong book.

- (3) Any task can be located in the way described. If you know the name, job, part, assembly, procedure, description, etc., you can use one of the words to find the paragraph number in the index. It makes locating information quick and easy.

---

## HOW TO USE THIS MANUAL - continued

---

### f. Glossary

- (1) A glossary of words used throughout the manual is located at the back of chapter 1. Section I of the glossary is the list of abbreviations and acronyms. Abbreviations are shortened terms for words. Acronyms are shortened terms for several words and use only the first letter of each of the words. Abbreviations and acronyms are defined where they are used. The list in the glossary, however, provides a good place to check if there is any doubt.
- (2) Section II of the glossary contains definitions of unusual terms that appear in the manual. Many words have more than one meaning. A word that has a certain meaning in everyday language could have a different meaning for the helicopter. This is the reason for the definitions. If you see a word in the manual you're not sure of check the list of definitions.

It is always a good idea to look over the glossary and become familiar with abbreviations, acronyms, and unusual terms.

### g. Initial Setup (Example next page)

The first page of each maintenance paragraph in the manual is the initial setup. Always check the initial setup before starting a task on the helicopter. The initial setup contains information you must know. **DON'T START A TASK UNTIL:**

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

An example initial setup is shown on the next page. Not all tasks have all the headings shown.

Each part of the initial setup is explained by the following subparagraphs (1 through 7). Each subparagraph describes initial setup entries in order of its appearance in the example.

- (1) **Title:** The title in the upper border contains the chapter/paragraph number and title of the task as listed in the index. The task is performed at the intermediate level if (AVIM) appears in the title.
- (2) **Description:** This entry appears in the border below the title. The task may require one or more operations (such as removal and installation). Each operation is listed here in order of its performance in the task.
- (3) **Tools:** This heading will list the tool kit of your MOS. The tools in this kit will be all that is required to perform the task. Tasks requiring tools other than those in this tool kit are considered **SPECIAL TOOLS**. Special tools could be: (1) tools from the shop set; (2) tools from the kits of other MOS's, or (3) tools made specially for the AH-64A Apache helicopter. Special tools will be listed in addition to MOS tool kit when needed. Tool kits and special tools have an item number assigned to them and are located in Appendix H. It is acceptable to use a substitute torque wrench other than listed as long as the torque range is the same. Example: 1/4 torque wrench **30 INCH-POUNDS to 150 INCH-POUNDS**, 3/8 torque wrench **30 INCH-POUNDS to 150 INCH-POUNDS**.

**HOW TO USE THIS MANUAL - continued**

INITIAL SETUP EXAMPLE

**10.12. FORWARD FUEL CELL PILOT VALVE HOSE REPLACEMENT**

10.12.1. Description

This task covers: Removal. Cleaning. Inspection. Installation.

10.12.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
 5/8 x 3/8-inch drive box end torque wrench adapter  
 (item 14, App H)  
 150 - 750 inch-pound 3/8-inch drive click type torque  
 wrench (item 442, App H)  
 0 - 600 inch-pound 3/8-inch drive dial indicator torque  
 wrench (item 447, App H)

**References:**

TM 1-1520-238-T  
 TM 9-1090-208-23-1

**Materials/Parts:**

Bolt MS25789 (used for removal)  
 Packing (2)  
 Wire (item 221, App F)

**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
2.2	Access doors T250L, T250R, T290L, T290R, and L325 opened
10.2	Fuel system safety precau- tions observed
TM 9-1090-208-23-1	Ammunition storage maga- zine removed

**Personnel Required:**

67R Attack Helicopter Repairer  
 One person to assist  
 67R3F Attack Helicopter Repairer/Technical  
 Inspector

(4) **Materials and Parts:** This lists materials and parts needed to complete the task. Parts are listed before materials. Most materials cannot be used on the helicopter a second time; they are expendable. Expendable materials are items such as solvent, grease, oil, hydraulic fluid, etc.

(a) Each expendable has an item number assigned to it and is located in Appendix F. The item number is placed in parentheses following the item name on the initial setup page. A typical example of an expendable items is:

Wire (item 221, App F)

See the expendable and durable item list in Appendix F for more information about expendable and durable materials.

(b) Some parts are also expendable. The replacement part will be listed under the heading by part nomenclature if the task step tells you to DISCARD a part. This will help you look up the part in TM 1-1520-238-23P.

A number in parentheses after the part indicates the quantity required for the task. Example:



---

**HOW TO USE THIS MANUAL - continued**

---

Packing (2)

This would mean two packings are required.

(c) Sometimes it is necessary to use a part as a tool to do a step of a task. These parts do not appear in TM 1-1520-238-23P. A typical example would be when a bolt is used to temporarily hold an assembly in place or to align two pieces of material to be fastened. Parts used as tools will appear in the setup table under **Materials/Parts**:

Bolt MS25784 (used for alignment)

(5) **Personnel Required:** This heading lists the people required to perform the task. It also tells the MOS of each person and the number of persons required. For example:

67R      Attack Helicopter Repairer  
            One to assist  
67R3T    Attack Helicopter Repairer/Technical Inspector

This listing would indicate that one 67R repairer and any one MOS to assist, and a 67R3T repairer/technical inspector will be needed to complete the task.

IF YOUR MOS IS NOT LISTED IN THE PERSONNEL REQUIRED COLUMN IN THE INITIAL SETUP, CHECK WITH YOUR MAINTENANCE SUPERVISOR FIRST BEFORE STARTING THE TASK.

(6) **References:** This lists other technical manuals (TMs) you will need to complete the task. The steps in the task will tell you when you must refer to another TM.

(7) **Equipment Conditions:** This lists things that must be done before starting the task. It may require an operation such as jacking the helicopter, or just the tail boom; or removing parts, assemblies, etc. These operations are described in other tasks or technical manuals. The paragraphs or TM's that describe how to do these operations are referenced here. If the job is to be done on the helicopter, the statement "Helicopter safed" will appear here. The reference will be to paragraph 1.57 where safing is described. Be sure to do the things necessary in order of listing as called out under equipment conditions; then do the task.

h. Warnings, Cautions, and Notes

Icon warnings are pictorial images which may be used in place of words. The safety summary sheet explains in detail what each icon means.



**WARNINGS are used to tell where there is danger of injury or death to personnel. They appear before the danger item. WARNINGS must be obeyed by all personnel working on the helicopter.**



CAUTIONS tell of the danger of damaging the helicopter or its parts. They appear immediately before the item where damage might happen. CAUTIONS must be obeyed by all personnel working on the helicopter.

---

**HOW TO USE THIS MANUAL - continued**

---

**NOTE**

NOTES tell something extra or special a person must know to do the task. They can appear before or after the item they tell about. NOTES must be read and remembered when working on the helicopter.

**i. Use of Shall, Will, Should, and May**

Within this technical manual the word "shall" is used to indicate a mandatory requirement. The word "will" is used to express a declaration of purpose. The word "should" is used to indicate a nonmandatory but preferred method of accomplishment. The word "may" is used to indicate an acceptable method of accomplishment.

**j. Torquing Information**

- (1) Inspect (QA) torques as required by specific instructions contained within each task.
- (2) There are two types of applied torques. They are: special torques and standard torques.
- (3) Each hardware fastener (except types used in sheet metal work) is assigned an applied torque.
- (4) Special torques are given, when needed, in each task. Torques appear in bold type. Torque wrenches and adapters to be used when a special torque is given are listed under TOOLS in the initial setup. Special torques usually differ from standard torques.
- (5) Standard torques are not in this technical manual. Refer to TM 1-1500-204-23 for all standard torque values.
- (6) Run-on torque shall always be added to all nuts in accordance with TM 1-1500-204-23, including nuts requiring special torques and standard torques, unless otherwise stated in each task.

**k. Inspection Information**

General inspection information is in the front of each chapter or section for the equipment covered in that chapter or section. Inspection criteria peculiar to a specific part, assembly, or component are in the inspection steps of the removal/installation task for that part, assembly, or component.

**l. General References**

- (1) Refer to TM 55-1500-323-24 for all electrical tasks of a general nature not peculiar to the AH-64A helicopter.
- (2) Refer to TM 1-1500-204-23 for all mechanical tasks of a general nature not peculiar to the AH-64A helicopter.
- (3) Refer to TM 1-1520-264-23 for approved nondestructive inspection methods. ■

---

## HOW TO USE THIS MANUAL


---

m. Using AH-64A Helicopter Effectivity Codes

Helicopter effectivity codes designate differences between helicopters by helicopter serial numbers. These codes consist of three letters representing various helicopter serial number blocks. They are used throughout this volume as necessary to aid the helicopter troubleshooting effort.

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

- When used within narrative text and fault isolation procedures (FIPs), effectivity codes appear within parentheses.  
For Example: Narrative text and FIPs (AAA)
- When used inside wiring interconnect diagrams, effectivity codes appear within triangular borders and are placed on the line which represents that particular helicopter's configuration.

For Example: Wiring interconnect diagrams 

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

To use the helicopter effectivity codes, note the helicopter serial number on the left side of the fuselage directly below the CPG window. Use this serial number to determine which procedure or path in a wiring interconnect diagram or FIP to use.

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

<u>Effectivity Code</u>	<u>Helicopter Serial No.</u>
ADC	Before MWO 1-1520-238-50-49
ADD	After MWO 1-1520-238-50-49
ADF	Before MWO 1-1520-238-50-52
ADG	After MWO 1-1520-238-50-52
ADH	Before MWO 1-1520-238-50-15
ADI	After MWO 1-1520-238-50-15
ADL	Before MWO 1-1520-238-50-51
ADM	After MWO 1-1520-238-50-51
ADN	After MWO 1-1520-238-30-02
ADP	After MWO 1-1520-238-50-50
ADQ	Before ECP 1315/RSN 97A001
ADR	After ECP 1315/RSN 97A001

---

**SAFETY SUMMARY**

---

This publication describes physical and chemical processes which may require the use of chemicals, solvents, paints, or other commercially available material. The user of this publication should obtain the material safety data sheets (Occupational Safety and Health Act (OSHA) Form 20 or equivalent) from the manufacturers or suppliers of materials to be used. The user must become completely familiar with the manufacturer/supplier information and adhere to the procedures, recommendations, warnings, and cautions of the manufacturer/supplier for the safe use, handling, storage, and disposal of these materials. The following are general safety precautions and instructions that people must understand and apply during many phases of operation and maintenance to ensure personal safety and health and the protection of DOD property. Portions of this may be repeated elsewhere in this publication for emphasis.

**WARNING AND CAUTION STATEMENTS**

WARNING and CAUTION statements have been strategically placed throughout this text prior to operating or maintenance procedures, practices, or conditions considered essential to the protection of personnel (WARNING) or equipment and property (CAUTION). A WARNING or CAUTION will apply each time the related step is repeated. Prior to starting any task, the WARNINGS or CAUTIONS included in the text for that task will be reviewed and understood. Refer to the materials list figure at the beginning of the appropriate manual section for material used during maintenance of this equipment. The detailed warnings for hazardous material only are listed separately in the safety summary as the "Hazardous Materials Warnings" section.

**HAZARDOUS MATERIALS WARNINGS**

Warnings for hazardous material in this manual are designed to warn personnel of hazards associated with such items when they come in contact with them during actual use. For each hazardous material used, a material safety data sheet (MSDS) is required to be provided and available for review by the users. Consult your local safety and health staff concerning any questions on hazardous chemicals, MSDSs, personal protective equipment requirements, and appropriate handling and emergency procedures.

This Hazardous Materials Warnings section gives the complete warnings for hazardous material used in this manual. To help the user understand the potential hazards of these materials, a more detailed warning for these materials and an explanation of the hazard symbols follow.

---

**SAFETY SUMMARY - continued**

---

**EXPLANATION OF HAZARD SYMBOLS**



The abstract symbol bug shows that a material may contain bacteria or viruses that present a danger to your life or health.



The symbol of drops of a liquid onto a hand shows that the material will cause burns or irritation of human skin or tissue.



The rapidly expanding symbol shows that the material may explode if subjected to high temperatures, sources of ignition, or high pressure.



The symbol of a person wearing goggles shows that the material will injure your eyes.



The symbol of a flame shows that a material can ignite and burn you.



The symbol of a skull and crossbones shows that a material is poisonous or is a danger to life.



The symbol of a three circular wedges shows that the material emits radioactive energy and can injure human tissue or organs.



The symbol of a human figure in a cloud shows that vapors of a material present a danger to your life or health.

# CHAPTER 1 AIRCRAFT GENERAL

## CHAPTER OVERVIEW

Chapter 1 contains the maintenance instructions for aircraft general support. Aircraft general troubleshooting information is contained in TM 1-1520-238-T.

## CHAPTER INDEX

<u>Para Title</u>	<u>Para No.</u>
<b>SECTION I. GENERAL INFORMATION</b>	
Scope .....	11.1
Maintenance Forms, Records, and Reports .....	11.2
Destruction of Army Material to Prevent Enemy Use .....	11.3
Preparation for Storage or Shipment .....	11.4
Quality Assurance/Quality Control (QA/QC) .....	11.5
Submitting Deficiency Reports .....	11.6
Preventive Maintenance Checks and Services .....	11.7
<b>SECTION II. EQUIPMENT DESCRIPTION AND DATA</b>	
Scope .....	1.8
Location and Description of Major Components .....	1.9
Equipment Configuration .....	1.10
Airframe Station Locations .....	1.11

CHAPTER INDEX – continued

<u>Para Title</u>	<u>Para No.</u>
<b>SECTION III. SERVICING</b>	
Servicing Points .....	1.12
Fuel System Servicing (General) .....	1.13
Fuel Servicing – Gravity Method .....	1.14
Fuel Servicing – Closed Circuit Refueling (CCR) Method .....	1.15
Fuel Servicing – Single Point Adapter (SPA) Method .....	1.16
Fuel Servicing – Hot Rapid Closed Circuit Refueling (CCR) Method .....	1.17
Fuel Servicing – Hot Rapid Single Point Adapter (SPA) Method .....	1.18
Defueling – Single Point Adapter (SPA) Method .....	1.19
Defueling – Closed Circuit Refueling (CCR) Method .....	1.20
Defueling – Gravity Method .....	1.21
Fuel System Venting .....	1.22
Fuel System Priming .....	1.23
Engine Oil System Draining and Servicing .....	1.24
Air Turbine Starter Assembly Servicing .....	1.25
APU Oil System Draining and Servicing .....	1.26
APU Oil System Sampling .....	1.27
APU Fuel System Priming .....	1.27A
Engine Nose Gearbox Servicing .....	1.28
Engine Nose Gearbox Oil Sampling .....	1.29
Intermediate Gearbox Servicing – Grease .....	1.30
Tail Rotor Gearbox Servicing – Grease .....	1.31
Main Transmission Oil System Draining, Flushing, and Servicing .....	1.32
Main Transmission Oil Sampling .....	1.33
Hydraulic Systems Servicing – Fluid .....	1.34

## CHAPTER INDEX – continued

<u>Para Title</u>	<u>Para No.</u>
Hydraulic System Bleed .....	1.35
Utility Hydraulic Accumulator Servicing – Nitrogen .....	1.36
Utility Hydraulic Return Accumulator Servicing – Nitrogen .....	1.37
Utility Hydraulic Accumulator Venting .....	1.38
Utility Hydraulic Return Accumulator Venting .....	1.39
Main Landing Gear Shock Strut Service – Nitrogen .....	1.40
Main Landing Gear Shock Strut Service – Fluid .....	1.41
Tail Landing Gear Shock Strut Servicing – Nitrogen .....	1.42
Main Landing Gear Tire Servicing .....	1.43
Tail Landing Gear Tire Servicing .....	1.44
Main Landing Gear Brake System – Service/Bleed .....	1.45
Target Acquisition and Designation Sight (TADS) Cleaning .....	1.46
Cleaning – General .....	1.47
Environmental Control Unit (ENCU) Cleaning (Water Wash) .....	1.48
Corrosion Control .....	1.49
Battery Compartment Cleaning .....	1.50
Battery Servicing .....	1.51
ENCU Turbine Servicing .....	1.52
Aircraft and Aircraft Component Washing, Cleaning, and Fresh Water Rinse Procedures .....	1.53
Anti-Icing, De-icing, and Defrosting .....	1.54
Warm-up/De-ice of Engine Load Demand Spindle (LDS) Cables .....	1.55

**SECTION IV. LUBRICATION**



CHAPTER INDEX – continued

<u>Para Title</u>	<u>Para No.</u>
<b>SECTION V. HANDLING, JACKING, MOORING, HOISTING, AND SLING LOADING</b>	
Pilot/Copilot Gunner Station Accessing .....	1.56
Helicopter Safety Procedures .....	1.57
Engine Wash .....	1.58
Protective Cover Installation .....	1.59
Protective Cover Removal .....	1.60
Brakes – Set/Release .....	1.61
Rotor Brake Lock/Unlock .....	1.62
Helicopter – Kneel/Erect .....	1.63
Grounding .....	1.64
Helicopter Dimensions .....	1.65
Helicopter Jacking (Tripod jacks at three points) .....	1.66
Main Landing Gear Jacking (At one point) .....	1.67
Tail Landing Gear Jacking (Axle jack) .....	1.68
Tail Landing Gear Jacking (Tripod jack) .....	1.69
External Power Application – Electrical .....	1.70
External Power Application – Air .....	1.71
External Power Application – Hydraulic (Primary) .....	1.72
External Power Application – Hydraulic (Utility) .....	1.73
APU Operating Instructions – Using Battery Power .....	1.74
APU Operating Instructions – Using External Power .....	1.75
Mooring – Unpaved Surface .....	1.76
Mooring – Paved Surface .....	1.77
Helicopter Towing .....	1.78

## CHAPTER INDEX – continued

<u>Para Title</u>	<u>Para No.</u>
Air Vehicle Sling Installation/Removal .....	1.79
Hoisting – Maintenance Crane .....	1.80
Hoisting – Engine Removal .....	1.81
Hoisting – Engine Installation .....	1.82
Hoisting – Main Rotor Blade Removal .....	1.83
Hoisting – Main Rotor Blade Installation .....	1.84
Hoisting – Main Rotor Head Removal .....	1.85
Hoisting – Main Rotor Head Installation .....	1.86
Hoisting – Main Rotor Gearshaft Removal .....	1.87
Hoisting – Main Rotor Gearshaft Installation .....	1.88
Hoisting – Main Rotor Support (Static) Mast Removal .....	1.89
Hoisting – Main Rotor Support (Static) Mast Installation .....	1.90
Hoisting – Main Transmission Removal .....	1.91
Hoisting – Main Transmission Installation .....	1.92
Hoisting – Main Rotor Swashplate Removal .....	1.93
Hoisting – Main Rotor Swashplate Installation .....	1.94
Hoisting – APU Removal .....	1.95
Hoisting – APU Installation .....	1.96
Maintenance Crane Installation .....	1.97
Crane Adjustment – Hoisting .....	1.98
Crane Adjustment – Engine Hoisting .....	1.99
Crane Adjustment – Main Rotor Blade Hoisting .....	1.100
Crane Adjustment – Main Rotor Head Hoisting .....	1.101
Crane Adjustment – Main Rotor Gearshaft, Support (Static) Mast, or Swashplate Hoisting ...	1.102

CHAPTER INDEX – continued

<u>Para Title</u>	<u>Para No.</u>
Crane Adjustment – Main Transmission Hoisting .....	1.103
Crane Adjustment – APU Hoisting .....	1.104
Maintenance Crane Removal .....	1.105
Main Rotor Blades Tiedown – Installation .....	1.106
Main Rotor Blades Tiedown – Removal .....	1.107
Main Rotor Track and Balance Kit Installation .....	Deleted
Main Rotor Track and Balance AVA Kit Installation .....	1.108A
Main Rotor Track and Balance Kit Removal .....	Deleted
Main Rotor Track and Balance AVA Kit Removal .....	1.109A
Tail Rotor Balance Kit Installation .....	Deleted
Tail Rotor Balance AVA Kit Installation .....	1.110A
Tail Rotor Balance Kit Removal .....	Deleted
Tail Rotor Balance AVA Kit Removal .....	1.111A
Main Rotor Blade Adapter Installation .....	1.112
Main Rotor Blade Adapter Removal .....	1.113
Main Transmission Fixture Installation .....	1.114
Main Transmission Fixture Removal .....	1.115
Main Rotor Head Fixture Installation .....	1.116
Main Rotor Head Fixture Removal .....	1.117
Main Rotor Swashplate Fixture Installation .....	1.118
Main Rotor Swashplate Fixture Removal .....	1.119
Container Transport Adapter Installation .....	1.120
Container Transport Adapter Removal .....	1.121
Component Fixture Adapter Installation .....	1.122
Component Fixture Adapter Removal .....	1.123
Environmental Control Unit and Nose Gearbox Fixture Installation .....	1.124
Environmental Control Unit and Nose Gearbox Fixture Removal .....	1.125
Intermediate Gearbox Fixture Adapter and Tail Rotor Gearbox Fixture Installation .....	1.126

CHAPTER INDEX – continued

<u>Para Title</u>	<u>Para No.</u>
Intermediate Gearbox Fixture Adapter and Tail Rotor Gearbox Fixture Removal .....	1.127
Main Rotor Gearshaft Fixture Installation .....	1.128
Main Rotor Gearshaft Fixture Removal .....	1.129
Engine Buildup Adapter Installation .....	1.130
Engine Buildup Adapter Removal .....	1.131
Squat Switch Fixture Installation/Removal .....	1.132
Positioning Helicopter for Desired Deck Angle .....	1.133
Maintenance Headset Connect/Disconnect .....	1.134
 <b>SECTION VI. PREVENTIVE MAINTENANCE INSPECTIONS</b>	
Inspection Requirements .....	1.135
Special Inspections .....	1.136
Special Inspection Checklists .....	1.137
 <b>SECTION VII. OVERHAUL AND RETIREMENT SCHEDULE</b>	
Overhaul and Retirement Schedule .....	1.138
 <b>SECTION VIII. CARTRIDGE AND PROPELLANT ACTUATED DEVICES</b>	
Cartridge and Propellant Actuated Devices .....	1.139
 <b>SECTION IX. FLIGHT SAFETY PARTS PROGRAM</b>	
Flight Safety Parts Program .....	1.140

## SECTION I. GENERAL INFORMATION

---

### 11.1. SCOPE

---

- a. Type of Manual: Aviation Unit Maintenance (AVUM) and Aviation Intermediate Maintenance (AVIM) manual.
  - b. Model Numbers and Equipment Name: AH-64A Helicopter.
  - c. Purpose of Helicopter: Serves as a gun platform for antitank and suppressive firepower.
- 

### 11.2. MAINTENANCE FORMS, RECORDS, AND REPORTS

---

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

---

### 11.3. DESTRUCTION OF ARMY MATERIAL TO PREVENT ENEMY USE

---

Destruction procedures you need to know are in TM 750-244-1-5.

---

### 11.4. PREPARATION FOR STORAGE OR SHIPMENT

---

Storage procedures for this helicopter are in Appendix E of this manual. Shipping and transportability requirements for installed engines are met when landing gear tires are inflated to correct pressures and landing gear struts are not bottomed out. Shipping information for the helicopter you may need to know is in TM 55-1520-238-S.

---

### 11.5. QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

---

Quality assurance information you are required to use is explained in FM 1-511.

GO TO NEXT PAGE

---

**11.6. SUBMITTING DEFICIENCY REPORTS**

---

Submitting Deficiency Reports (DRs) can be done by anyone who is aware of a design error or faulty maintenance procedure. It is not necessary to submit a new design or develop a new maintenance procedure. Simply mail your comment concerning the discrepancy, with your suggestion for improvement, to the address below. DRs will be prepared using SF 368 Quality Deficiency Report (QDR). Instructions for preparing QDRs are provided in DA PAM 738-751, The Army Maintenance Management System – Aviation (TAMMS-A). Mail them to Commander, U.S. Army Aviation and Missile Command, Attn: AMSAM-MMC-LS-P, Redstone Arsenal, AL 35898-5230. A reply will be furnished directly to you.

---

**11.7. PREVENTIVE MAINTENANCE CHECKS AND SERVICES**

---

- a. Inspection procedures for this helicopter are in TM 1-1520-238-PMS.
- b. Phased maintenance inspection procedures are in TM 1-1520-238-PM.
- c. Special inspections are in this TM.

END OF TASK

## SECTION II. EQUIPMENT DESCRIPTION AND DATA

---

### 1.8. SCOPE

---

#### 1.8.1. Characteristics

- a. Operated by a pilot and copilot/gunner (CPG).
- b. Serves as a gun platform for antitank and suppressive firepower.
- c. Performs close to the ground at high speeds.
- d. Carries hellfire missiles, rockets, and a 30mm automatic gun.

#### 1.8.2. Capabilities and Features

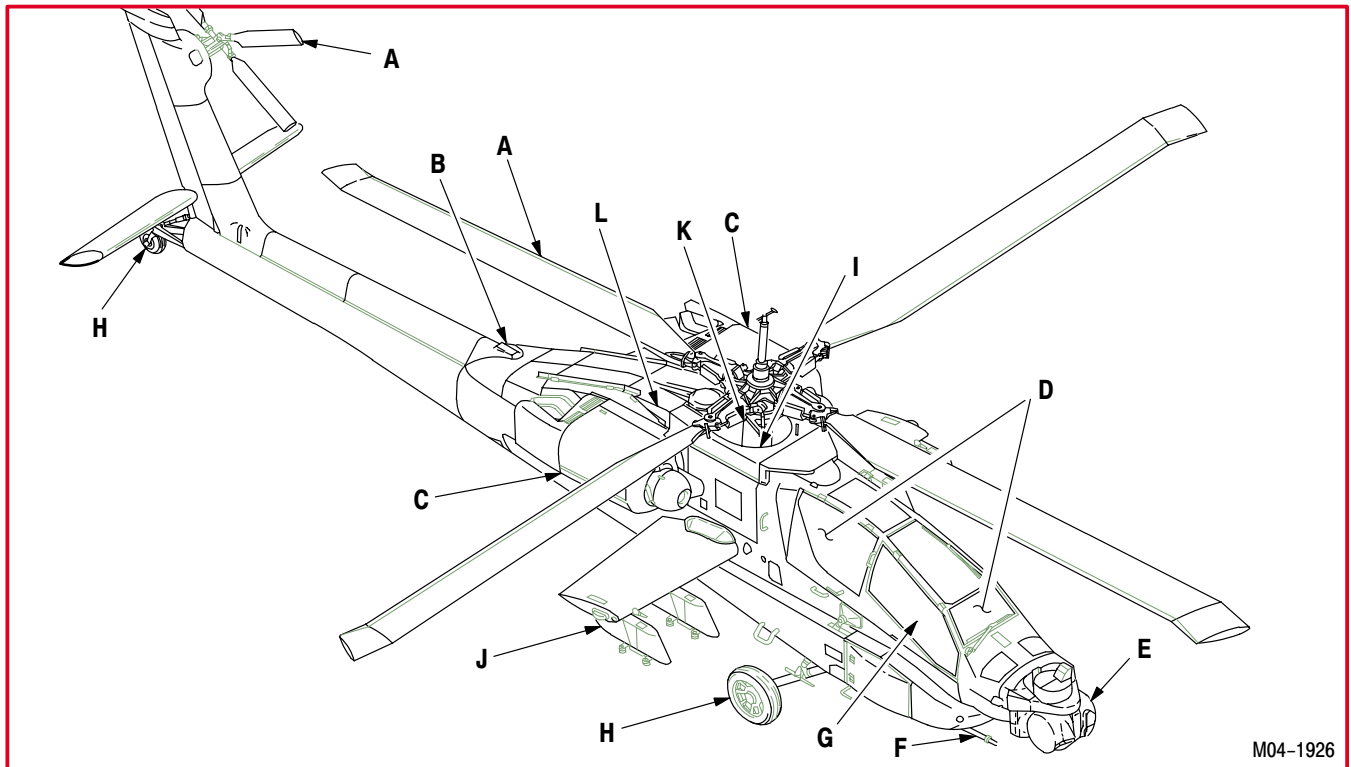
- a. Built-in fault detection/location system.
- b. Grease-lubricated intermediate and tail rotor gearboxes.
- c. Twin engines.
- d. Auxiliary power unit (APU) part of helicopter.
- e. Hydraulic-powered controls.

#### 1.8.3. Equipment Data

- a. Data on helicopter equipment is in each system chapter.
- b. More information on equipment data is in TM 55-1520-238-10.

END OF TASK

## 1.9. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS



M04-1926

- |                                      |   |
|--------------------------------------|---|
| A. ROTORS                            | – Provide lift and directional control.   |
| B. AIRFRAME                          | – Houses flight crew. Provides systems support structure.                           |
| C. POWERPLANTS AND DRIVES            | – Provide power to gearboxes and rotors.  |
| D. INSTRUMENT AND ELECTRICAL SYSTEMS | – Monitor and control most systems. Provide electrical generation and distribution. |
| E. TADS/PNVS                         | – Finds targets. Assists pilot to fly at night.                                     |
| F. 30mm GUN                          | – Mounted on turret. Fires electrically.  |
| G. ENVIRONMENTAL CONTROL SYSTEM      | – Provides conditioned air for pilot and CPG compartments and electrical systems.   |
| H. LANDING GEAR                      | – Supports and moves helicopter on the ground.                                      |
| I. FLIGHT CONTROLS                   | – Control rotor operation.  |
| J. PYLONS                            | – Have attachments for external stores.   |
| K. HYDRAULIC AND PNEUMATIC SYSTEMS   | – Boost controls and operate equipment.   |
| L. AUXILIARY POWER UNIT              | – Provides ground power.  |

END OF TASK



---

**1.10. EQUIPMENT CONFIGURATION**

---

The helicopter can be configured in different ways. Information on various configurations is listed in the following table by system.

System	Mission Equipment	Extended Range	Wing Stores
Airframe			Wing stores capable of carrying and jettisoning point target missile launchers, rocket launchers, and auxiliary fuel tanks.
Fuel		One auxiliary fuel tank for each wing pylon (4-tank),  or  One auxiliary fuel tank for each inboard wing pylon (2-tank).	
Area Weapon	Chaff dispenser installed aft fuselage left side.		
Avionics	IR jammer with infrared transmitter behind main rotor mast.  Radar Warning antennas: two on forward fuselage; two at top of vertical stabilizer.		

END OF TASK

---

## 1.11. AIRFRAME STATION LOCATIONS

---

Station locations are shown on the following pages. All dimensions are in inches.

Dimensions have FS, WL, or BL in front of the numbers.

FS – Fuselage stations are distances from a point in front of the helicopter nose. The first station is zero (0.00).

WL – Waterlines are distances from a point below the helicopter. They follow the centerline.

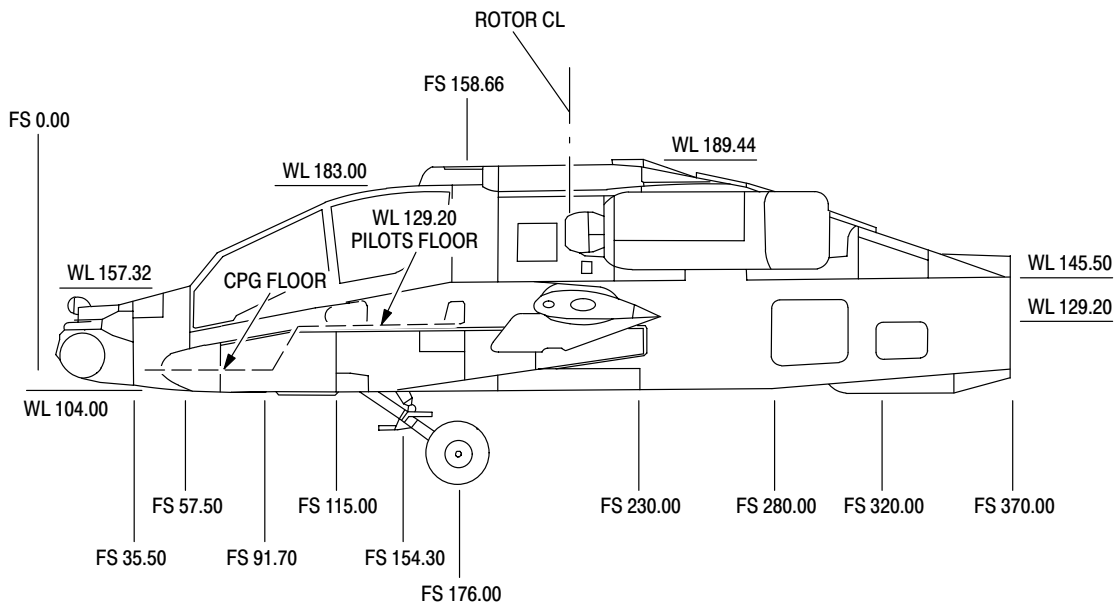
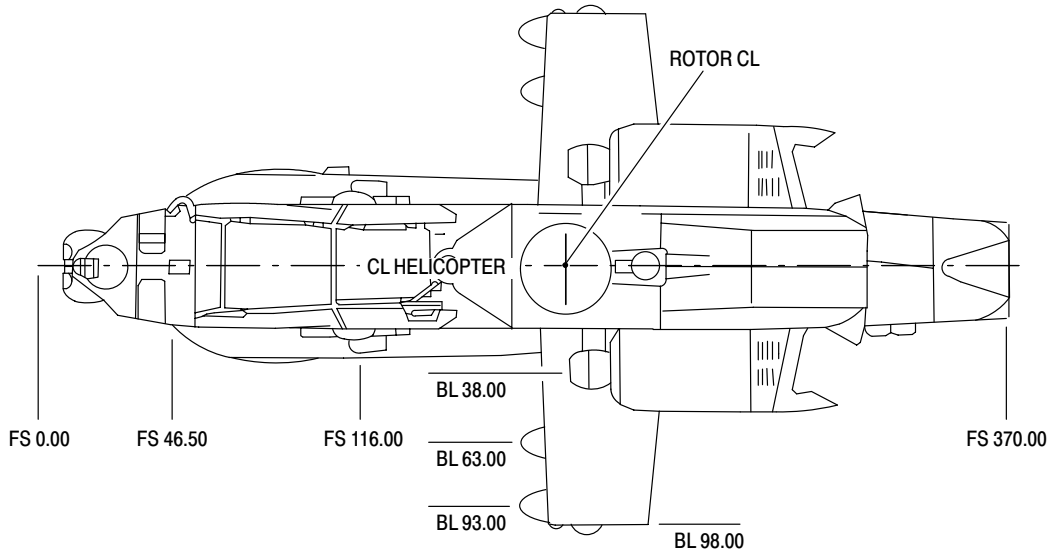
CL – Centerline is an imaginary line that passes through the center of the helicopter. The centerline runs from the nose to the tail.

BL – Buttlines are distances from the centerline. They start at the centerline and show the distance to each side of the helicopter. Buttlines will be either to the left or right side.

These dimensions help you find any point on the helicopter. Each point shown on the next page is a part of the helicopter you can see.

GO TO NEXT PAGE

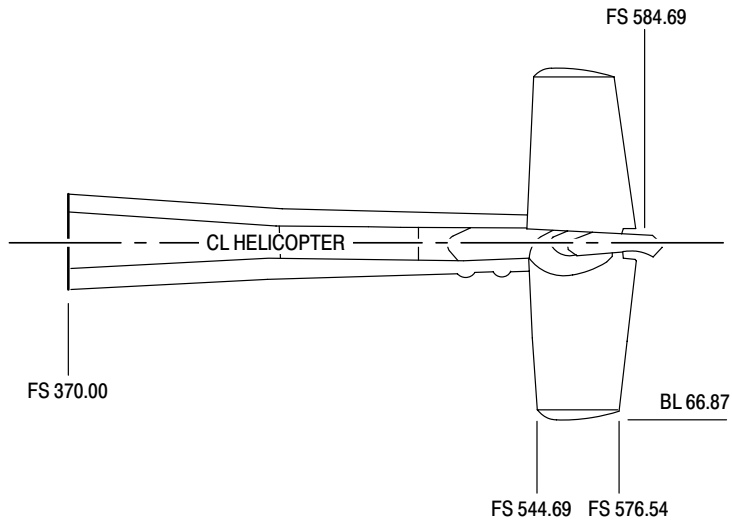
1.11. AIRFRAME STATION LOCATIONS – continued



M04-2826-1

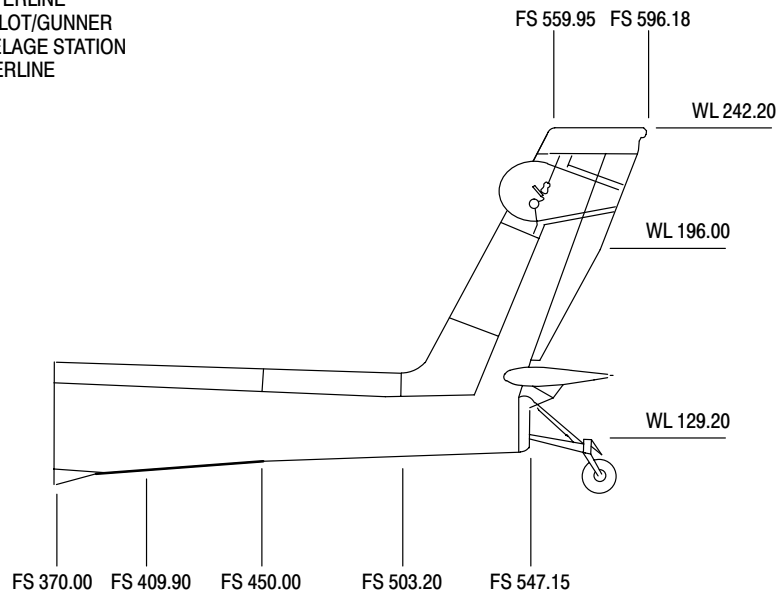
GO TO NEXT PAGE

1.11. AIRFRAME STATION LOCATIONS – continued



ALL DIMENSIONS ARE IN INCHES

- BL BUTTLINE
- CL CENTERLINE
- CPG COPILOT/GUNNER
- FS FUSELAGE STATION
- WL WATERLINE

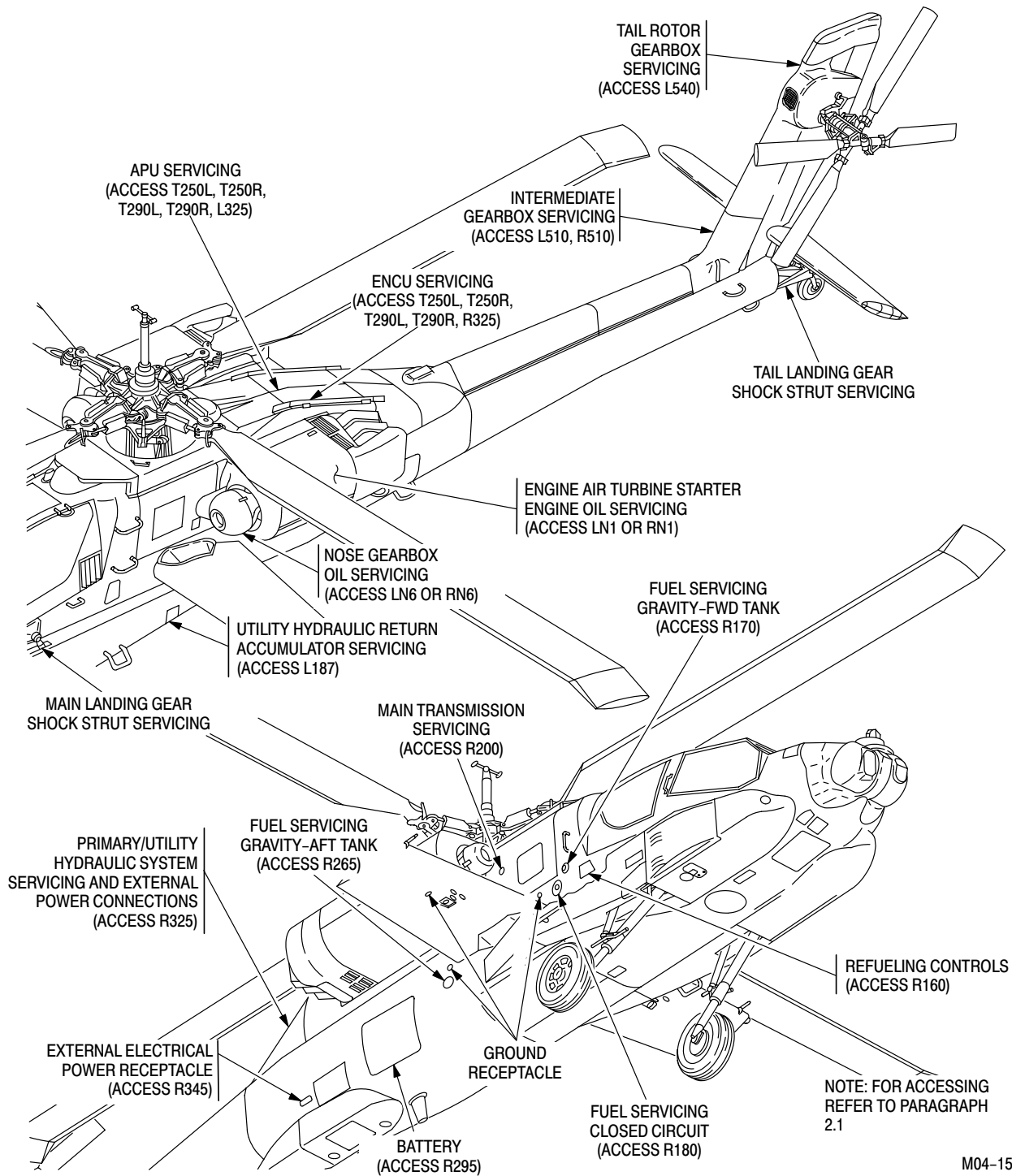


M04-2826-2

END OF TASK

## SECTION III. SERVICING

### 1.12. SERVICING POINTS



M04-1591

GO TO NEXT PAGE

**1.12. SERVICING POINTS – continued**

Tank or System	Capacity, US		Materials	Maintenance Instructions
Main Landing Gear Shock Strut	3.8 qt.	Hydraulic Fluid Nitrogen	MIL-H-5606	Para 1.41 Para 1.40
Tail Landing Gear Shock Strut		Nitrogen		Para 1.42
Brake System	0.32 gal.	Hydraulic Fluid	MIL-H-5606	Para 1.45
Engine Oil	7 qt.	Lubricating Oil	* MIL-L-23699 ** MIL-L-7808	Para 1.24
Engine Air Turbine Starter	200 cc.	Lubricating Oil	* MIL-L-23699 ** MIL-L-7808	Para 1.25
Engine Nose Gearbox	5 pt. (2.5 qt.) (each gearbox)	Lubricating Oil	* MIL-L-23699 ** MIL-L-7808	Para 1.28
Tail Rotor Gearbox	3 lb. 5 oz.	Grease, SYN-Tech	HMS 20-1155 NS 4405 FG	Para 1.31
Intermediate Gearbox	2 lb. 2 oz.	Grease, SYN-Tech	HMS 20-1155 NS 4405 FG	Para 1.30
Main Transmission	45 pt. (22.5 qt.)	Lubricating Oil	* MIL-L-23699 ** MIL-L-7808	Para 1.32
Primary Hydraulic System	3 qt.	Hydraulic Fluid	* MIL-H-83282 MIL-H-5606	Para 1.34
Utility Hydraulic System	2.6 gal.	Hydraulic Fluid	* MIL-H-83282 MIL-H-5606	Para 1.34
Utility Hydraulic Return Accumulator	231 cu. ft.	Nitrogen	BB-N-411	Para 1.37
Forward Fuel Tank	155 gal.	Turbine Fuel	MIL-T-5624 MIL-T-5624 MIL-T-83133	JP-4 JP-5 JP-8 Para 1.13 thru 1.18
Aft Fuel Tank	220 gal.	Turbine Fuel	MIL-T-5624 MIL-T-5624 MIL-T-83133	JP-4 JP-5 JP-8 Para 1.13 thru 1.18
Auxiliary Fuel Tank	230 gal. (each tank)	Turbine Fuel	MIL-T-5624 MIL-T-5624 MIL-T-83133	JP-4 JP-5 JP-8 Para 1.13 thru 1.18

\* Use in outside air temperatures of -25 °F (-32 °C) and above.

\*\* Use in outside air temperatures of -25 °F (-32 °C) and below.

GO TO NEXT PAGE

---

**1.12. SERVICING POINTS – continued**

---

Tank or System	Capacity, US		Materials	Maintenance Instructions
Environmental Control Unit Turbine		Lubricating Oil	* MIL-L-23699	Para 1.52
Auxiliary Power Unit (APU)	2 qt.	Lubricating Oil	* MIL-L-23699 ** MIL-L-7808	Para 1.26

\* Use in outside air temperatures of -25 °F (-32 °C) and above.

\*\* Use in outside air temperatures of -25 °F (-32 °C) and below.

END OF TASK

---

**1.13. FUEL SYSTEM SERVICING (GENERAL)**

---

a. Read and observe the following icons and warning before servicing the helicopter fuel system.



**WARNING**

**Fuel servicing shall not be performed during thunderstorms or possible lightning conditions.**

b. For servicing fuel system:

<u>Method</u>	<u>Paragraph</u>
Gravity Method .....	1.14
Closed Circuit Refueling (CCR) .....	1.15
Single Point Adapter (SPA) .....	1.16
Hot Rapid Closed Circuit Refueling (CCR) .....	1.17
Hot Rapid Single Point Adapter (SPA) .....	1.18
Defueling - Single Point Adapter (SPA) .....	1.19
Defueling - Closed Circuit Refueling (CCR) .....	1.20
Defueling - Gravity Method .....	1.21
Fuel System Venting .....	1.22
Fuel System Priming .....	1.23

END OF TASK



---

## 1.14. FUEL SERVICING – GRAVITY METHOD

---

### 1.14.1. Description

This task covers: Servicing.

---

### 1.14.2. Initial Setup

#### Tools:

Aircraft mechanic's tool kit (item 376, App H)

#### References:

FM 10-68  
TM 1-1520-238-T

#### Personnel Required:

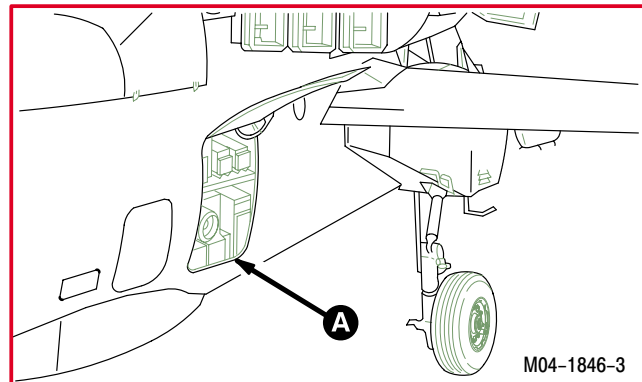
67R Attack Helicopter Repairer  
77F Petroleum Supply Specialist

#### Equipment Conditions:

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
2.2	Access doors R160 and R295 opened

---

### 1.14.3. Servicing



**Fuel servicing shall not be performed during thunderstorms or possible lightning conditions.**

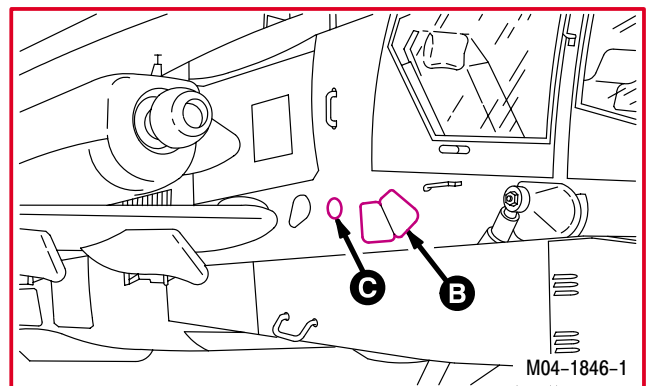
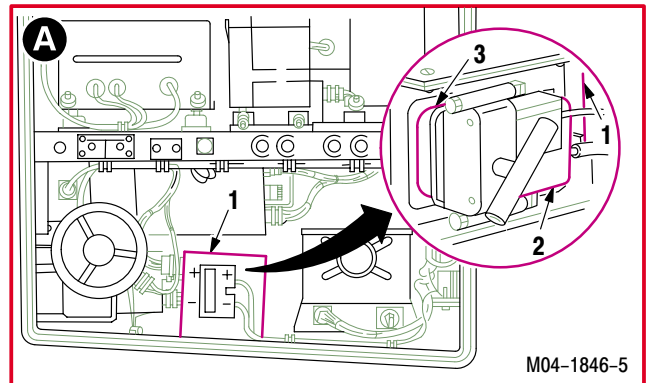
- a. **Install static ground lines (FM 10-68).**

GO TO NEXT PAGE

**1.14. FUEL SERVICING – GRAVITY METHOD – continued**

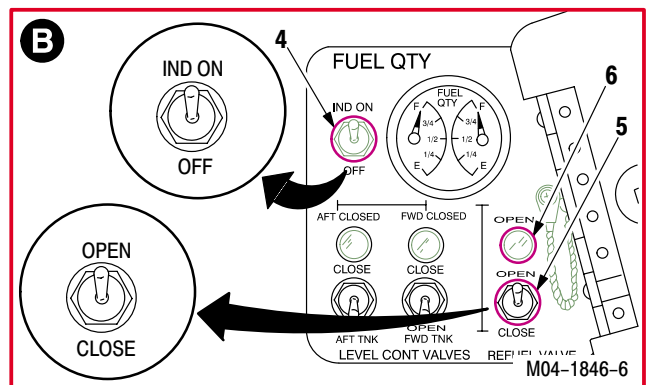
**b. Connect battery (1).**

- (1) Attach connector P87 (2) to receptacle (BT1)J3 (3).



**c. Vent fuel tanks.**

- (1) Set **FUEL QTY IND** switch (4) to **IND ON**.
- (2) Set **REFUEL VALVE** switch (5) to **OPEN**.
- (3) Check that **OPEN** indicator (6) is lighted.
- (4) Refer to TM 1-1520-238-T if indicator (6) does not light.



GO TO NEXT PAGE

**1.14. FUEL SERVICING – GRAVITY METHOD – continued**

**d. Remove forward fuel tank filler cap (7).**

- (1) Connect fuel nozzle ground plug (8) to grounding receptacle (9).
- (2) Lift and turn locking tab (10) to **OPEN**.
- (3) Remove filler cap (7) from filler port (11).
- (4) Pull until filler cap chain (12) opens check valve (13).
- (5) Position filler cap chain (12) in locking detent (14) to hold check valve (13) open.

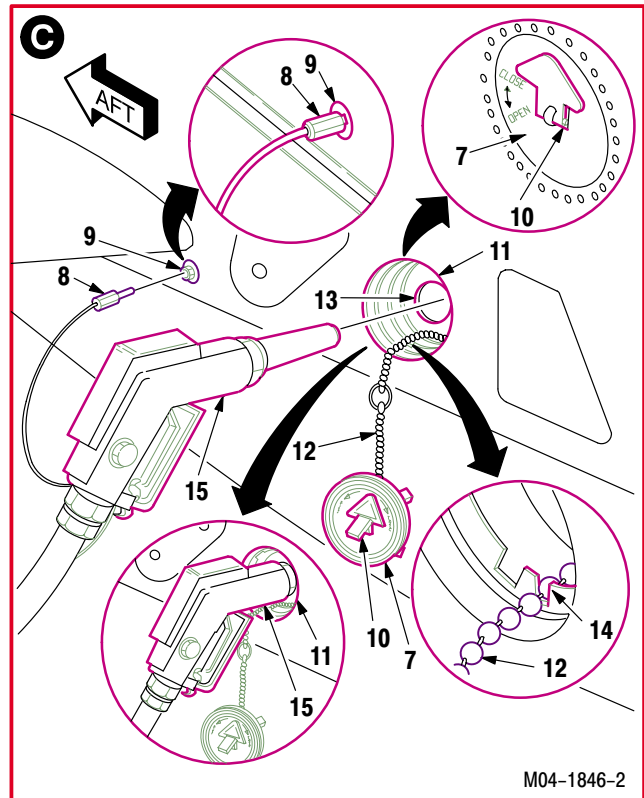
**e. Insert fuel nozzle (15) into filler port (11).**

**f. Service forward fuel tank as required.**

**g. Remove fuel nozzle (15) from filler port (11).**

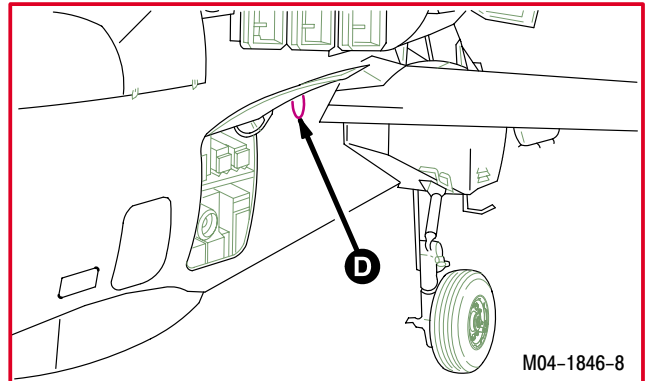
**h. Install filler cap (7).**

- (1) Release filler cap chain (12) from locking detent (14).
- (2) Install filler cap (7) in filler port (11).
- (3) Turn locking tab (10) to **CLOSED**, then press.
- (4) Disconnect fuel nozzle ground plug (8) from grounding receptacle (9).



GO TO NEXT PAGE

**1.14. FUEL SERVICING – GRAVITY METHOD – continued**



**i. Remove aft fuel tank filler cap (16).**

- (1) Connect fuel nozzle ground plug (8) to grounding receptacle (17).
- (2) Lift and turn locking tab (18) to **OPEN**.
- (3) Remove filler cap (16) from filler port (19).
- (4) Pull until filler cap chain (20) opens check valve (21).
- (5) Position filler cap chain (20) in locking detent (22) to hold check valve (21) open.

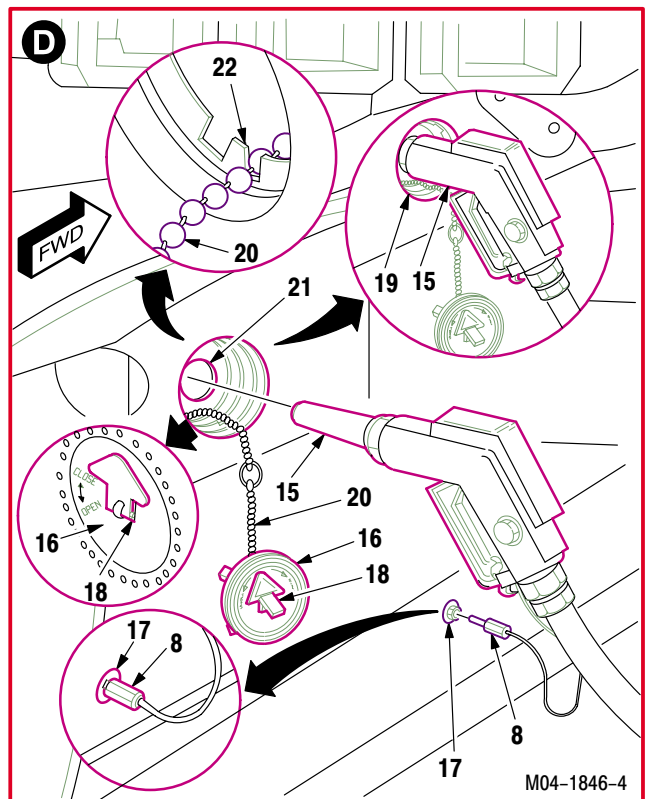
**j. Insert fuel nozzle (15) into filler port (19).**

**k. Service aft fuel tank as required.**

**l. Remove nozzle (15) from filler port (19).**

**m. Install filler cap (16).**

- (1) Release filler cap chain (20) from locking detent (22).
- (2) Disconnect fuel nozzle ground plug (8) from grounding receptacle (17).
- (3) Install filler cap (16) in filler port (19).
- (4) Turn locking tab (18) to **CLOSED**, then press.



GO TO NEXT PAGE

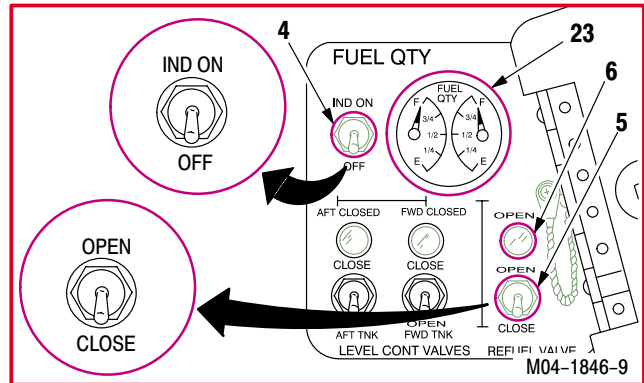
1.14. FUEL SERVICING – GRAVITY METHOD – continued

**NOTE**

If fuel quantity indications do not match, refer to fuel quantity indication operational check (TM 1-1520-238-T).

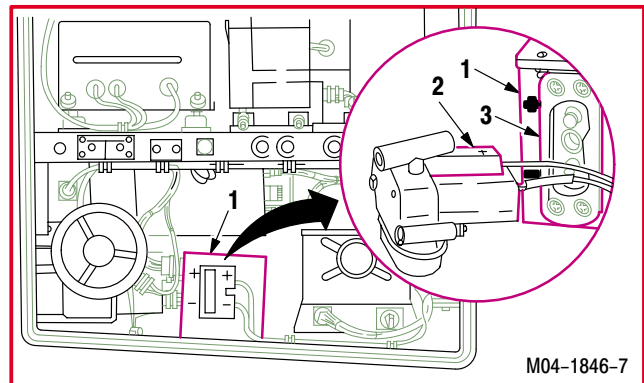
n. **Check fuel indicators (23).**

- (1) Verify that quantity of fuel put in tanks matches quantities shown on indicators (23).
- (2) Set **REFUEL VALVE** switch (5) to **CLOSE**.
- (3) Check that indicator (6) is not lighted.
- (4) Refer to TM 1-1520-238-T if indicator (6) remains lighted.
- (5) Set **FUEL QTY IND** switch (4) to **OFF**.



o. **Disconnect battery (1).**

- (1) Detach connector P87 (2) from receptacle (BT1)J3 (3).
- p. **Remove static ground lines (FM 10-68).**
- q. **Secure access doors R160 and R295 (para 2.2).**



END OF TASK

**1.15. FUEL SERVICING - CLOSED CIRCUIT REFUELING (CCR) METHOD**

1.15.1. Description

This task covers: Servicing.

1.15.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)

**References:**

FM 10-68  
TM 1-1520-238-T

**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
2.2	Access doors R160 and R295 opened; cover R180 removed

**Personnel Required:**

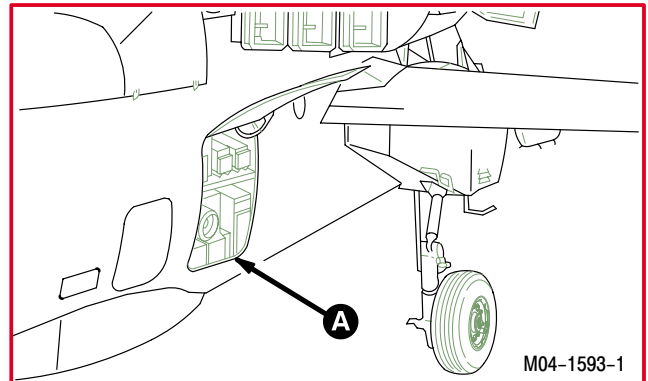
- 67R Attack Helicopter Repairer
- 77F Petroleum Supply Specialist

1.15.3. Servicing



**Fuel servicing shall not be performed during thunderstorms or possible lightning conditions.**

- a. **Install static ground lines (FM 10-68).**

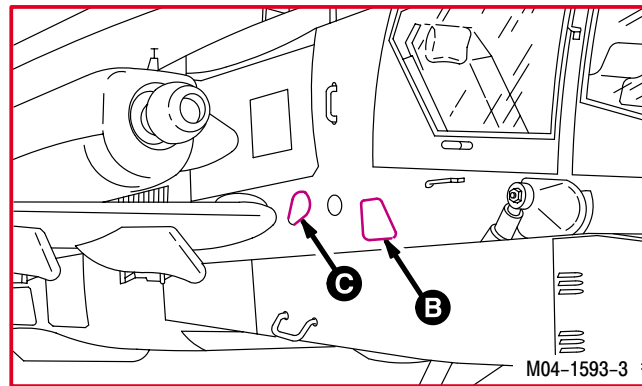
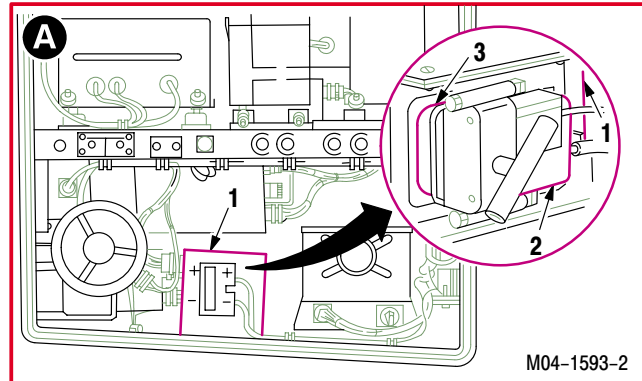


GO TO NEXT PAGE

**1.15. FUEL SERVICING - CLOSED CIRCUIT REFUELING (CCR) METHOD – continued**

**b. Connect battery (1).**

- (1) Attach connector P87 (2) to receptacle (BT1)J3 (3).



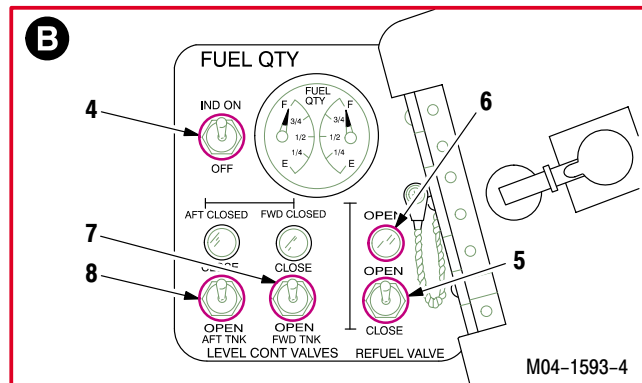
**c. Set FUEL QTY IND switch (4) to ON.**

**d. Set REFUEL VALVE switch (5) to OPEN.**

- (1) Check that **OPEN** indicator (6) is lighted.
- (2) Refer to TM 1-1520-238-T if indicator (6) does not light.

**e. Set FWD TNK switch (7) to CLOSE.**

**f. Set AFT TNK switch (8) to CLOSE.**



GO TO NEXT PAGE

1.15. FUEL SERVICING - CLOSED CIRCUIT REFUELING (CCR) METHOD – continued

**CAUTION**

To prevent damage to fuel system, do not exceed maximum fueling pressure of 15 psi.

g. **Connect closed circuit refueling nozzle (9) to adapter (10).**

- (1) Connect nozzle ground plug (11) to ground-ing receptacle (12).
- (2) Remove cap (13) from adapter (10).
- (3) Connect nozzle (9) to adapter (10).
- (4) Start refueling pump.
- (5) Move flow control (14) to **FLOW**.
- (6) Check refueling unit for fuel flow.

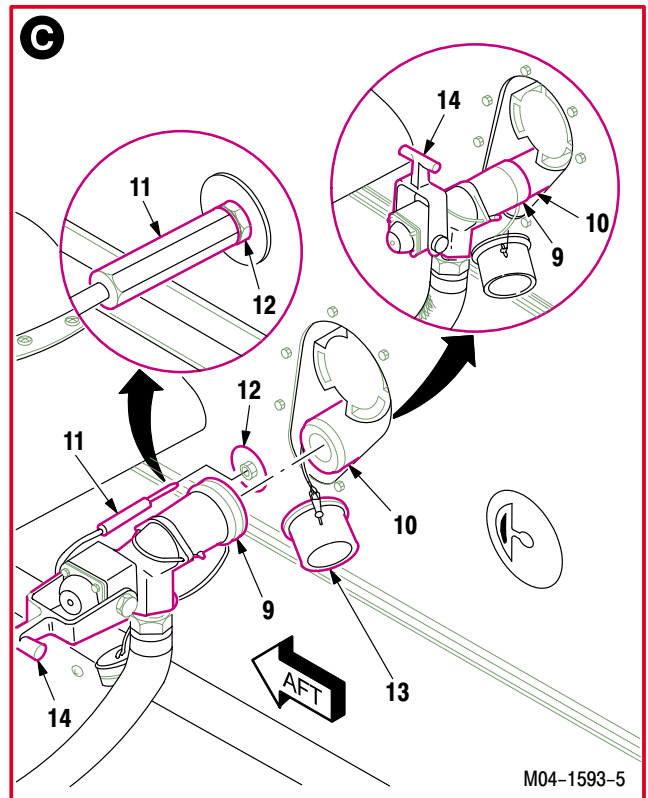
**CAUTION**

The fuel system may be damaged if **FWD CLOSED** and **AFT CLOSED** indicators do not light within 8 seconds after fuel servicing begins. If indicators do not light, automatic fuel shutoff has not actuated. Stop fuel servicing.

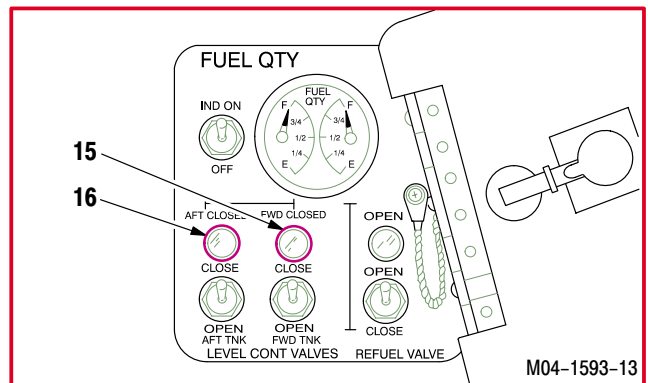
- (7) Check that **FWD CLOSED** indicator (15) and **AFT CLOSED** indicator (16) light within 8 seconds after fuel servicing begins.
- (8) Stop fuel servicing if indicators do not light (TM 1-1520-238-T).

**NOTE**

Indication of automatic fuel shutoff is a jerk of the fuel hose and no further increase on the fuel servicing unit quantity indicator.



M04-1593-5



M04-1593-13

GO TO NEXT PAGE



**1.15. FUEL SERVICING - CLOSED CIRCUIT REFUELING (CCR) METHOD – continued**

**h. Service fuel tanks as required.**

- (1) To refuel, select level control valve switch position and advisory indicator condition from following chart:

FWD TNK / AFT TNK SWITCHES		TANKS TO BE REFUELED		
		BOTH	AFT ONLY	FWD ONLY
LEVEL CONT VALVES	AFT TANK	OPEN	OPEN	CLOSED
	FWD TANK	OPEN	CLOSED	OPEN
INDICATORS	AFT CLOSED	OFF	OFF	ON
	FWD CLOSED	OFF	ON	OFF

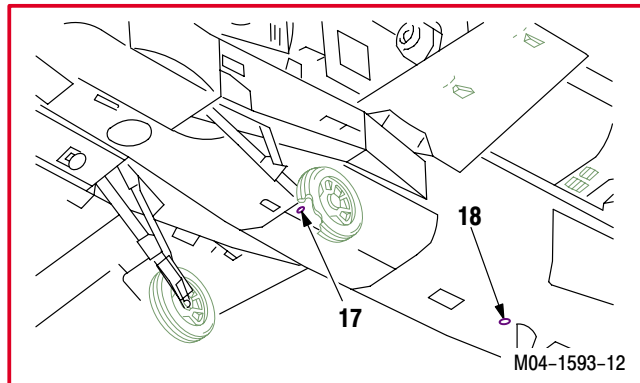
**CAUTION**

The fuel system may be damaged if air does not vent from fuel cells during servicing.

- i. **Check vent tubes (17) and (18) for escaping air.**
- j. **Stop fuel servicing if air does not escape from vent tubes (17) and (18).**

**NOTE**

**FWD CLOSED** and **AFT CLOSED** indicators will light when fuel cell is full and automatic shutoff has occurred.

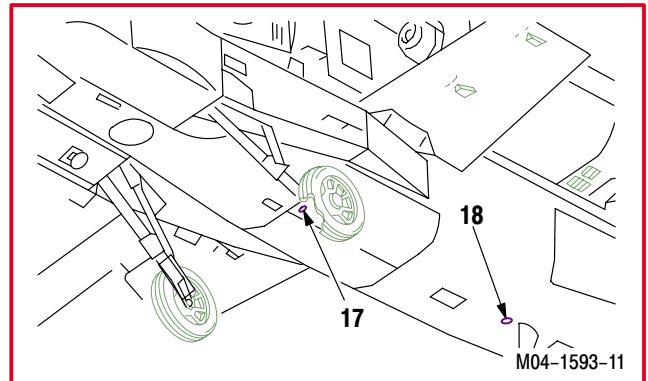


GO TO NEXT PAGE

1.15. FUEL SERVICING - CLOSED CIRCUIT REFUELING (CCR) METHOD – continued

**WARNING**

Failure of automatic shutoff sequence will be indicated by fuel flowing from fuel cell vent tubes. This failure could damage the airframe and injure personnel. Manually stop fuel flow if this occurs. If injury occurs, seek medical aid.

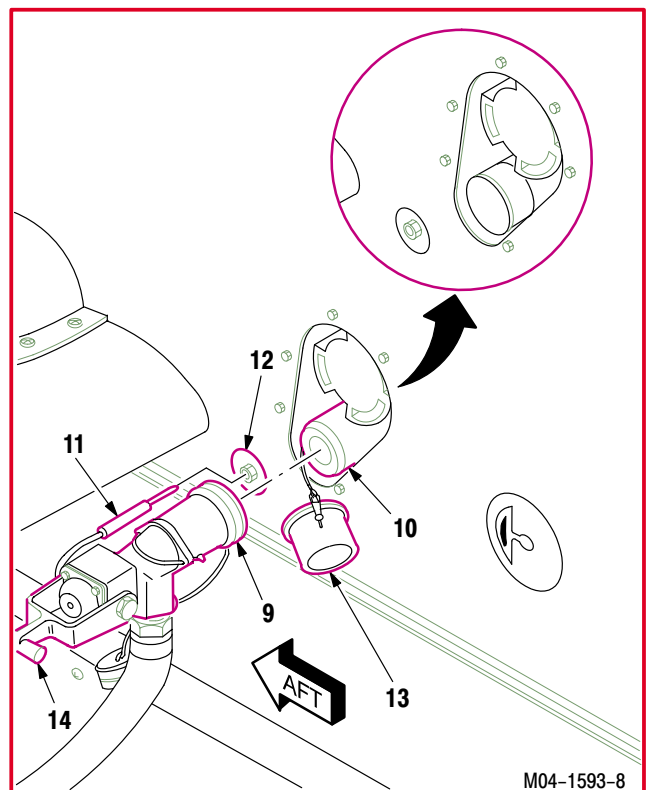


k. Stop fuel servicing when automatic fuel shut-off has occurred, or if fuel flows from vent tubes (17) and (18).

l. Stop refueling unit pump.

m. Disconnect nozzle (9) from adapter (10).

- (1) Move handle (14) to **OFF**.
- (2) Remove nozzle (9) from adapter (10).
- (3) Disconnect nozzle ground plug (11) from grounding receptacle (12).
- (4) Install cap (13) on adapter (10).



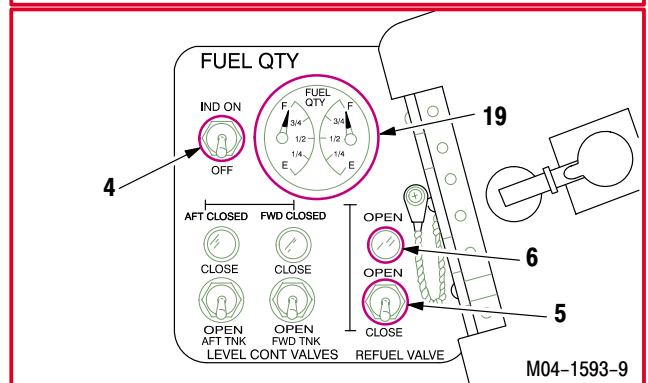
n. Set REFUEL VALVE switch (5) to **CLOSE**.

- (1) Check that **OPEN** indicator (6) does not light.
- (2) Refer to TM 1-1520-238-T if indicator (6) remains lighted.

o. Check fuel indicators (19).

- (1) Verify that fuel quantity indicated on fuel gage (19) is same as quantity of fuel in tanks.

p. Set FUEL QTY ON IND switch (4) to **OFF**.



GO TO NEXT PAGE

---

**1.15. FUEL SERVICING - CLOSED CIRCUIT REFUELING (CCR) METHOD – continued**

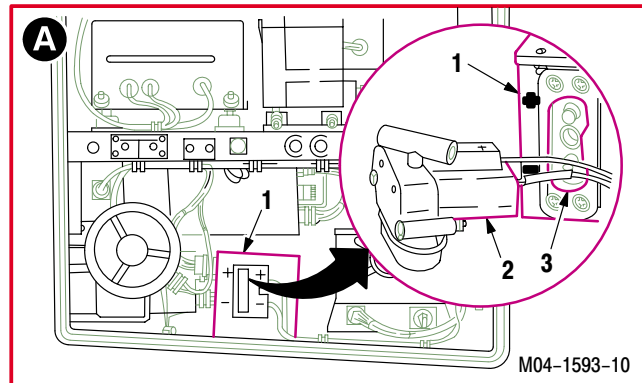
---

**q. Disconnect battery (1).**

(1) Detach connector P87 (2) from receptacle (BT1)J3 (3).

**r. Remove static ground lines (FM 10-68).**

**s. Secure access doors R160 and R295; install cover R180 (para 2.2).**



END OF TASK

**1.16. FUEL SERVICING – SINGLE POINT ADAPTER (SPA) METHOD**

1.16.1. Description

This task covers: Servicing.

1.16.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)

**References:**

FM 10-68  
TM 1-1520-238-T

**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
2.2	Access doors R160 and R295 opened; cover R180 removed

**Personnel Required:**

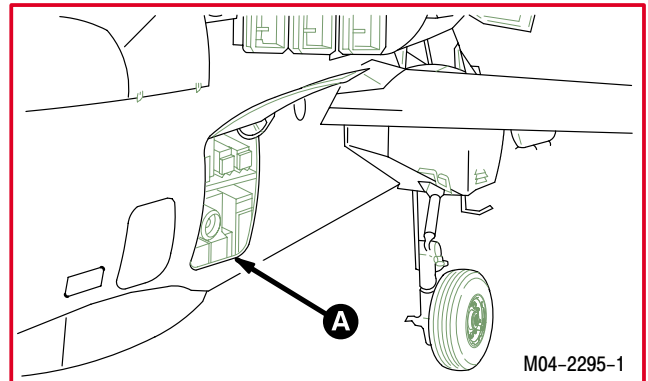
- 67R Attack Helicopter Repairer
- 77F Petroleum Supply Specialist

1.16.3. Servicing



**Fuel servicing shall not be performed during thunderstorms or possible lightning conditions.**

- a. **Install static ground lines (FM 10-68).**

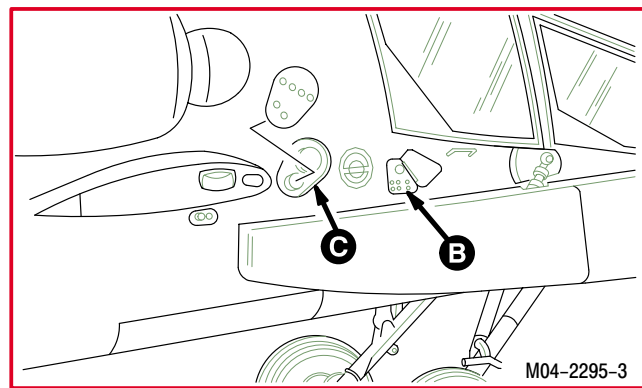
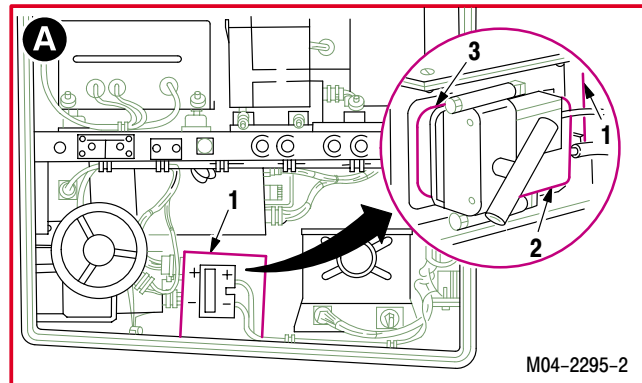


GO TO NEXT PAGE

1.16. FUEL SERVICING – SINGLE POINT ADAPTER (SPA) METHOD – continued

b. Connect battery (1).

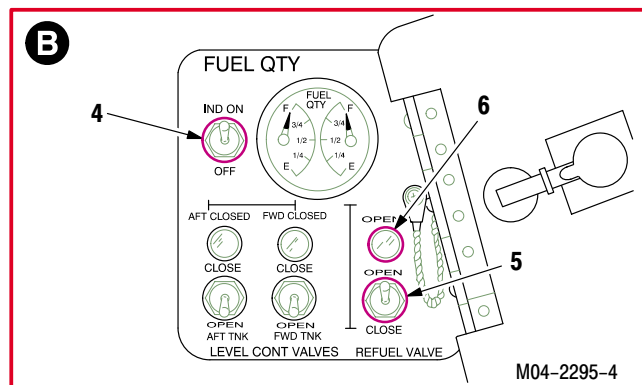
- (1) Attach connector P87 (2) to receptacle (BT1)J3 (3).



c. Set FUEL QTY IND switch (4) to ON.

d. Set REFUEL VALVE switch (5) to OPEN.

- (1) Check that **OPEN** indicator (6) is lighted.
- (2) Refer to TM 1-1520-238-T if indicator (6) does not light.



GO TO NEXT PAGE

**1.16. FUEL SERVICING – SINGLE POINT ADAPTER (SPA) METHOD – continued**

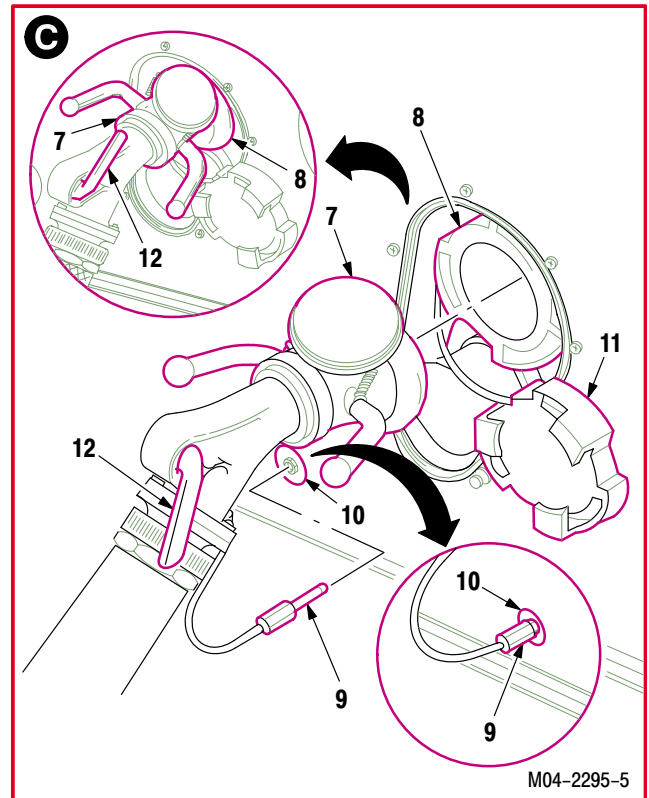
e. **Connect single point adapter nozzle (7) to adapter (8).**

- (1) Connect nozzle ground plug (9) to grounding receptacle (10).
- (2) Remove cap (11) from adapter (8).
- (3) Connect nozzle (7) to adapter (8) and turn clockwise until it locks.

**CAUTION**

To prevent damage to the fuel system, do not exceed 50 psi fueling pressure.

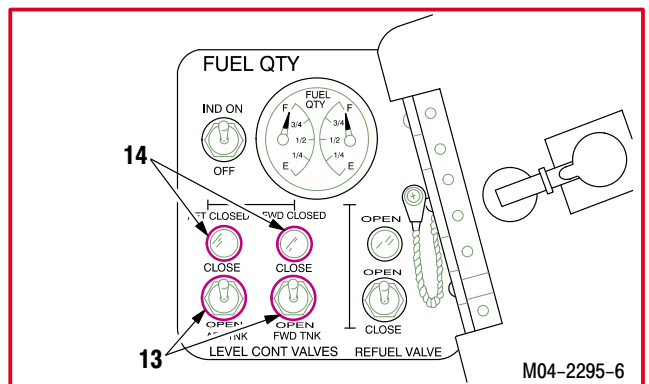
f. **To start refueling, lift valve handle (12) to OPEN position.**



g. **Place FWD and AFT TNK LEVEL CONT VALVES switches (13) to CLOSE.**

**CAUTION**

The fuel system may be damaged if **FWD CLOSED** and **AFT CLOSED** indicators do not light within 8 seconds after fuel servicing begins. If indicators do not light, automatic fuel shutoff has not actuated. Stop fuel servicing.



h. **Check that indicators FWD CLOSED and AFT CLOSED (14) light within 8 seconds after fuel service begins.**

- (1) Stop fuel servicing if indicators do not light (TM 1-1520-238-T).

GO TO NEXT PAGE

**1.16. FUEL SERVICING – SINGLE POINT ADAPTER (SPA) METHOD – continued**

**i. Check refueling unit for no fuel flow.**

- (1) Stop refueling if fuel flow continues (TM 1-1520-238-T).

**j. Refuel helicopter.**

- (1) To refuel, select level control valve switch position and advisory indicator condition from following chart:

FWD TNK / AFT TNK SWITCHES		TANKS TO BE REFUELED		
		BOTH	AFT ONLY	FWD ONLY
LEVEL CONT VALVES	AFT TANK	OPEN	OPEN	CLOSED
	FWD TANK	OPEN	CLOSED	OPEN
INDICATORS	AFT CLOSED	OFF	OFF	ON
	FWD CLOSED	OFF	ON	OFF

**CAUTION**

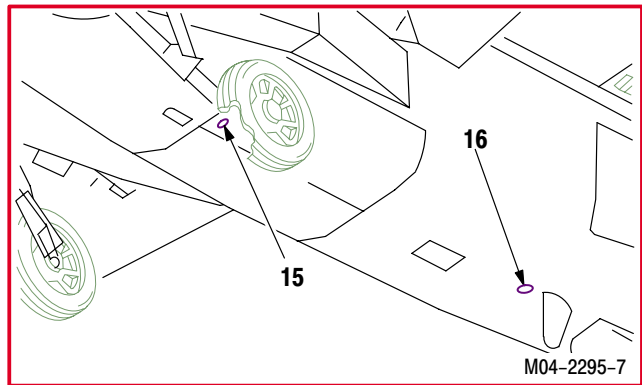
The fuel system may be damaged if air does not vent from the fuel cells during servicing.

**k. Check FWD and AFT fuel cell vents (15) and (16) for escaping air.**

**l. Stop fuel servicing if air does not escape from vent tubes (15) and (16).**

**NOTE**

**FWD CLOSED** and **AFT CLOSED** indicators will light when fuel cell is full and automatic shutoff has occurred.



GO TO NEXT PAGE

1.16. FUEL SERVICING – SINGLE POINT ADAPTER (SPA) METHOD – continued

**WARNING**

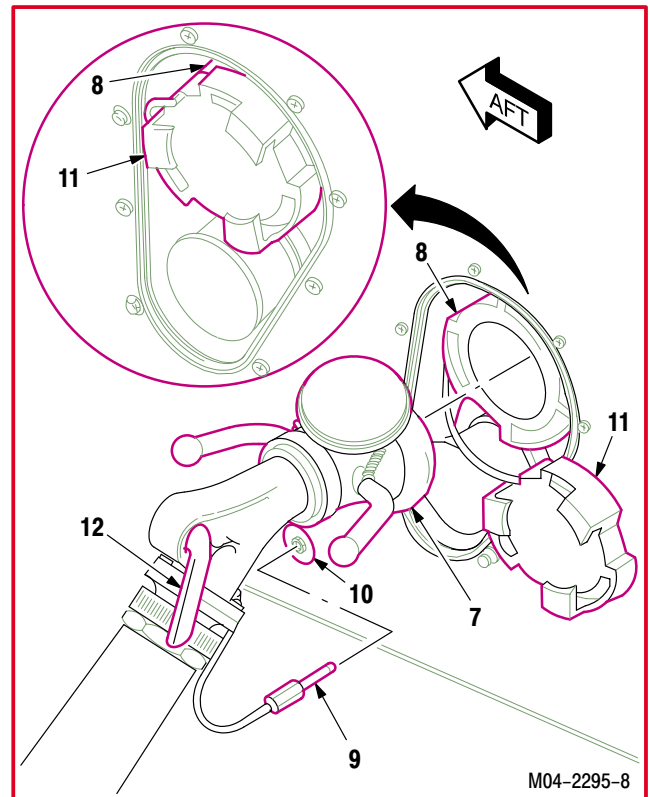
Failure of automatic shutoff sequence will be indicated by fuel flowing from fuel cell vent tubes. This failure could damage the airframe and injure personnel. Manually stop fuel flow if this occurs. If injury occurs, seek medical aid.

m. Disconnect nozzle (7) from adapter (8).

- (1) Stop refueling pump.
- (2) Move valve handle (12) to off position.
- (3) Turn nozzle (7) counterclockwise until free from adapter (8).
- (4) Disconnect nozzle ground plug (9) from grounding receptacle (10).
- (5) Install cap (11) on adapter (8).

**NOTE**

Refueling panel door will not close if either **LEVEL CONT VALVES** switch is in **CLOSE**.



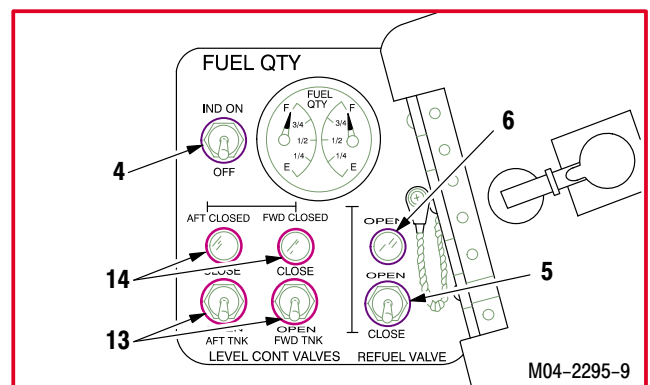
M04-2295-8

n. Set FWD TNK and AFT TNK LEVEL CONT VALVES switches (13) to OPEN.

- (1) Check that **FWD CLOSED** and **AFT CLOSED** indicators (14) do not light.

o. Set REFUEL VALVE switch (5) to CLOSE.

- (1) Check that **OPEN** indicator (6) does not light.
- (2) Refer to TM 1-1520-238-T if indicator (6) remains lighted.



M04-2295-9

p. Set FUEL QTY IND switch (4) to OFF.

q. Remove static ground lines (FM 10-68).

GO TO NEXT PAGE



---

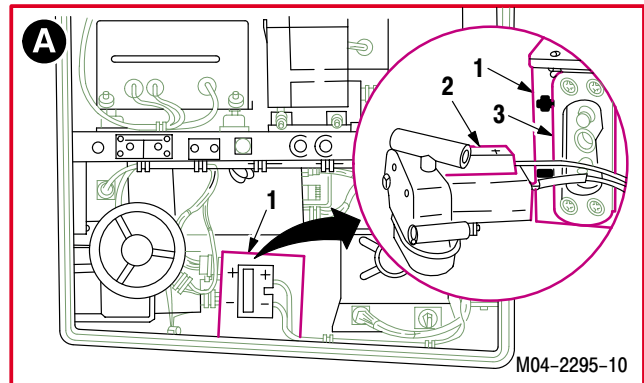
**1.16. FUEL SERVICING – SINGLE POINT ADAPTER (SPA) METHOD – continued**

---

**r. Disconnect battery (1).**

(1) Detach connector P87 (2) from receptacle (BT1)J3 (3).

**s. Secure access doors R160 and R295; install cover R180 (para 2.2).**



END OF TASK

**1.17. FUEL SERVICING – HOT RAPID CLOSED CIRCUIT REFUELING (CCR) METHOD**

1.17.1. Description

This task covers: Servicing.

1.17.2. Initial Setup

**Tools:**

- Aircraft mechanic's tool kit (item 376, App H)
- Microphone headset (item 174, App H)

**References:**

- FM 10-68
- TM 1-1520-238-T

**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
2.2	Access door R160 opened; cover R180 removed
1.134	Headset and microphone connected
TM 9-1090-208-23	Armament safety check performed

**Personnel Required:**

- 152F Pilot (2)
- 67R Attack Helicopter Repairer
- 77F Petroleum Supply Specialist

1.17.3. Servicing



**WARNING**

- Fuel servicing shall not be performed during thunderstorms or possible lightning discharge.
- Do not move around rocket pod/missile launchers until armament is safety checked. Approach the helicopter only from the side.

**NOTE**

Standard visual signals must be used if servicing is being done without voice communication to the pilot.

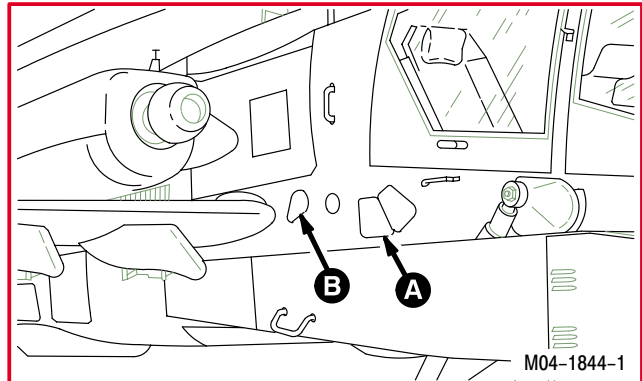
GO TO NEXT PAGE

1.17. FUEL SERVICING – HOT RAPID CLOSED CIRCUIT REFUELING (CCR) METHOD – continued

- a. Install static ground lines (FM 10-68).

**WARNING**

No. 2 (right) engine should be shut down during refueling. This is to prevent ingestion of fuel vapors. Also, jet engine intake suction can cause injury to personnel. However, when necessary, refueling may proceed with both engines operating.

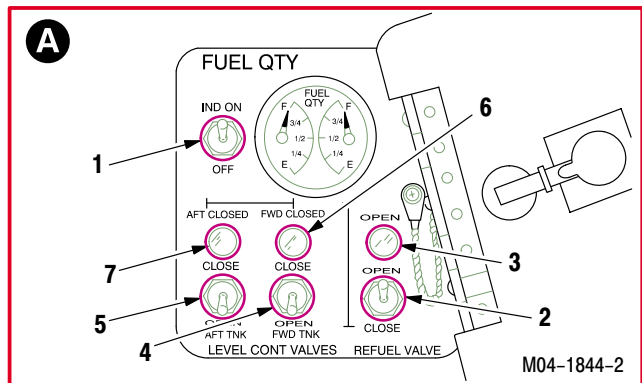


- b. Establish communication with pilot.
  - (1) Request pilot to shut down No. 2 engine.
- c. Perform prefueling check.
  - (1) Refer to pressure refuel precheck list on inside of refueling panel access door.
- d. Set FUEL QTY IND switch (1) to ON.
- e. Set REFUEL VALVE switch (2) to OPEN.

**NOTE**

Stop fuel servicing and notify pilot if indicator does not light.

- (1) Check that **OPEN** indicator (3) is lighted.
- (2) Stop fuel servicing if **OPEN** indicator (3) does not light (TM 1-1520-238-T).
- f. Set LEVEL CONT VALVES switches FWD TNK switch (4) and AFT TNK switch (5) to CLOSE.
  - (1) Check that indicators **FWD CLOSED** (6) and **AFT CLOSED** (7) does light.



GO TO NEXT PAGE

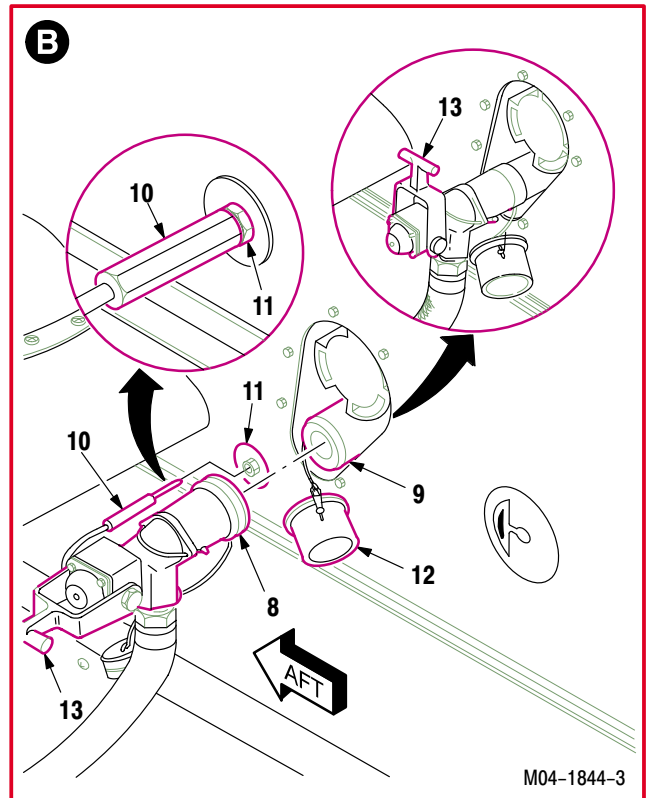
**1.17. FUEL SERVICING – HOT RAPID CLOSED CIRCUIT REFUELING (CCR) METHOD – continued**

**g. Connect closed circuit refueling nozzle (8) to adapter (9).**

- (1) Connect nozzle ground plug (10) to grounding receptacle (11).
- (2) Remove cap (12) from adapter (9).
- (3) Connect nozzle (8) to adapter (9).
- (4) Start refueling pump.
- (5) Move flow control handle (13) to **FLOW**.
- (6) Check refueling unit for fuel flow.

**CAUTION**

The fuel system may be damaged if **FWD CLOSED** and **AFT CLOSED** indicators do not light within 8 seconds after fuel servicing begins. If indicators do not light, automatic fuel shutoff has not activated. Stop fuel servicing.

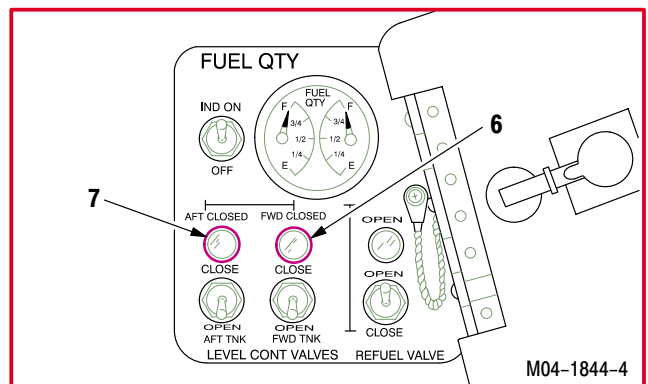


**h. Ensure automatic fuel shutoff actuated.**

- (1) Check that indicators **FWD CLOSED** (6) and **AFT CLOSED** (7) lights within 8 seconds after fuel servicing begins.
- (2) Stop fuel servicing if indicators do not light (TM 1-1520-238-T).

**NOTE**

Indication of automatic fuel shutoff is indicated by a jerk of the fuel hose and no further increase on the servicing unit quantity indicator.



GO TO NEXT PAGE

**1.17. FUEL SERVICING – HOT RAPID CLOSED CIRCUIT REFUELING (CCR) METHOD – continued**

**i. Service fuel tanks, as required, when notified by pilot.**

(1) To refuel, select level control valve switch position and advisory indicator condition from following chart:

FWD TNK / AFT TNK SWITCHES		TANKS TO BE REFUELED		
		BOTH	AFT ONLY	FWD ONLY
LEVEL CONT VALVES	AFT TANK	OPEN	OPEN	CLOSED
	FWD TANK	OPEN	CLOSED	OPEN
INDICATORS	AFT CLOSED	OFF	OFF	ON
	FWD CLOSED	OFF	ON	OFF

**CAUTION**

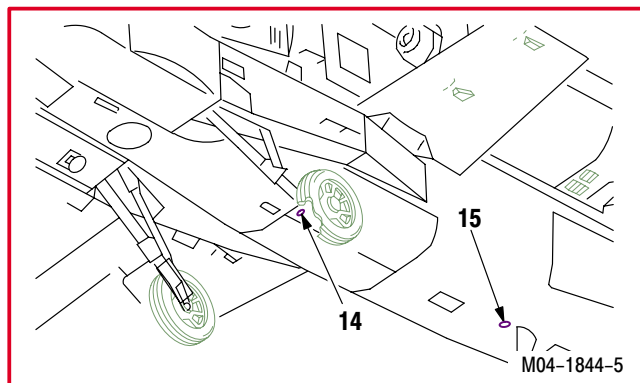
The fuel system may be damaged if air does not vent from fuel cells during servicing. Stop fuel servicing if air does not escape from vent tubes.

**j. Check vent tubes (14) and (15) for escaping air.**

**k. Stop fuel servicing when notified by pilot or when automatic fuel shutoff has occurred.**

**NOTE**

**FWD CLOSED** and **AFT CLOSED** indicators will light when fuel cell is full and automatic shutoff has occurred.



GO TO NEXT PAGE

**1.17. FUEL SERVICING – HOT RAPID CLOSED CIRCUIT REFUELING (CCR) METHOD – continued**

**l. Disconnect nozzle (8) from adapter (9).**

- (1) Move handle (13) to **OFF**.
- (2) Stop refueling pump.
- (3) Remove nozzle (8) from adapter (9).
- (4) Disconnect nozzle ground plug (10) from grounding receptacle (11).
- (5) Install cap (12) on adapter (9).

**NOTE**

Notify pilot if indicators remain lighted.

**m. Set LEVEL CONT VALVES switches FWD TNK (4) and AFT TNK (5) to OPEN.**

- (1) Check that indicators **FWD CLOSED (6)** and **AFT CLOSED (7)** are not lighted.

**NOTE**

Refueling panel door will not close if either or both **LEVEL CONT VALVES** switches are in **CLOSE**.

**n. Set REFUEL VALVE switch (2) to CLOSE.**

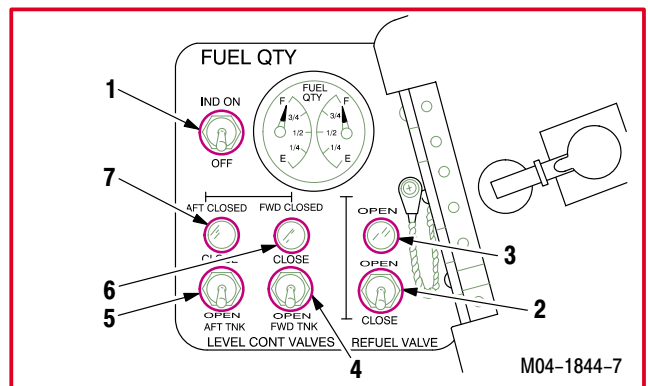
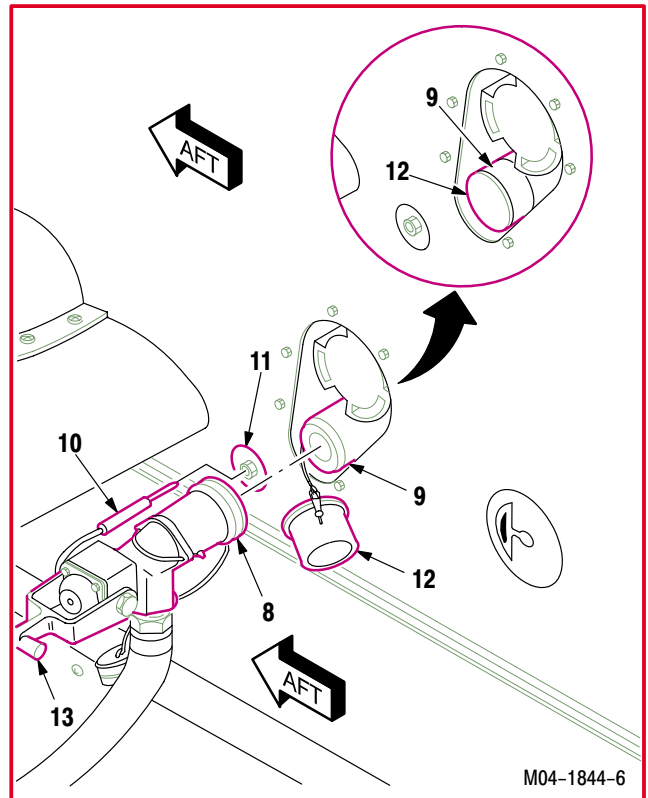
- (1) Check that **OPEN** indicator (3) is not lighted.
- (2) Refer to TM 1-1520-238-T if indicator (3) remains lighted.

**o. Set FUEL QTY IND switch (1) to OFF.**

**p. Secure access door R160; install cover R180 (para 2.2).**

**q. Remove static ground lines (FM 10-68).**

**r. Disconnect headset and microphone (para 1.134).**



END OF TASK

---

**1.18. FUEL SERVICING – HOT RAPID SINGLE POINT ADAPTER (SPA) METHOD**

---

1.18.1. Description

This task covers: Servicing.

---

1.18.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
Microphone headset (item 174, App H)

**References:**

FM 10-68  
TM 1-1520-238-T

**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
2.2	Access door R160 opened; cover R180 removed
1.134	Headset and microphone connected
TM 9-1090-208-23	Armament safety check performed

**Personnel Required:**

152F Pilot (2)  
67R Attack Helicopter Repairer  
77F Petroleum Supply Specialist

---

1.18.3. Servicing



**WARNING**

**Fuel servicing shall not be performed during thunderstorms or possible lightning conditions.**

**NOTE**

Standard visual signals must be used if servicing is being done without voice communication to the pilot.

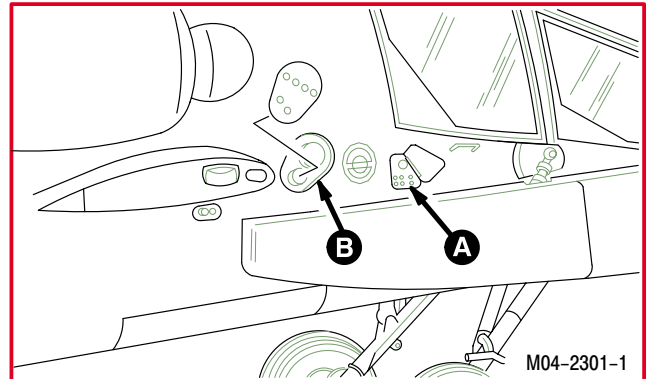
GO TO NEXT PAGE

1.18. FUEL SERVICING – HOT RAPID SINGLE POINT ADAPTER (SPA) METHOD – continued

- a. Install static ground lines (FM 10-68).

**WARNING**

No. 2 (right) engine should be shut down during refueling. This is to prevent ingestion of fuel vapors. Also, jet engine intake suction can cause injury to personnel. However, when necessary, refueling may proceed with both engines operating.



**NOTE**

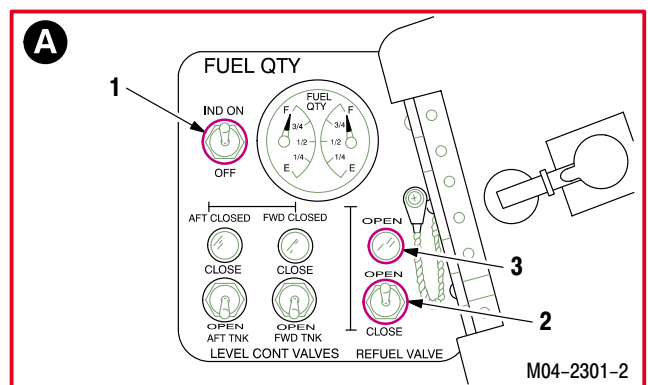
Standard visual signals must be used if servicing is being done without voice communication to the pilot.

- b. Establish communication with pilot.
  - (1) Request pilot to shut down No. 2 engine.
- c. Perform prefueling check.
  - (1) Refer to pressure refuel precheck list on inside of refueling panel access door.
- d. Set FUEL QTY IND switch (1) to ON.

**NOTE**

Stop fuel servicing and notify pilot if indicator light does not light.

- e. Set REFUEL VALVE switch (2) to OPEN.
  - (1) Check that OPEN indicator (3) is lighted.
  - (2) Stop fuel servicing if OPEN indicator (3) does not light (TM 1-1520-238-T).



GO TO NEXT PAGE



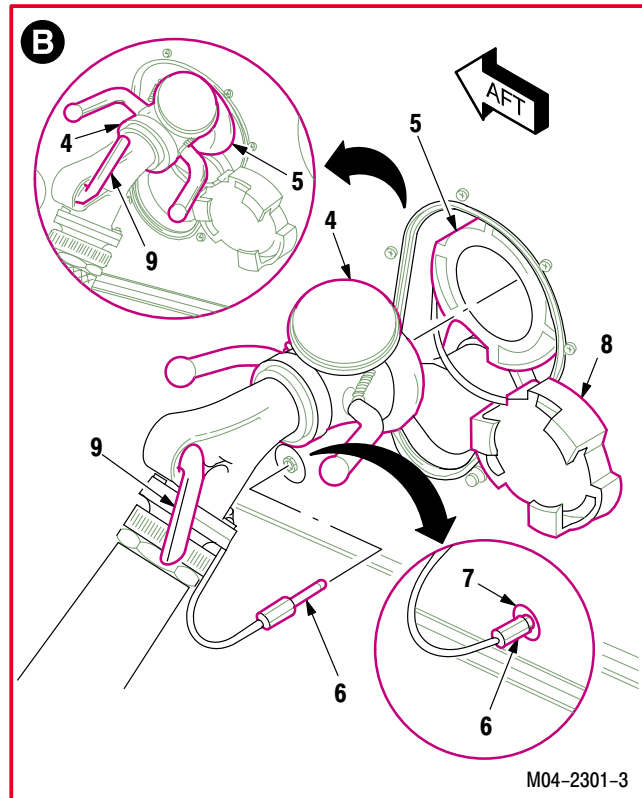
**1.18. FUEL SERVICING – HOT RAPID SINGLE POINT ADAPTER (SPA) METHOD – continued**

**f. Connect single point adapter nozzle (4) to adapter (5).**

- (1) Connect nozzle ground plug (6) to grounding receptacle (7).
- (2) Remove cap (8) from adapter (5).
- (3) Connect nozzle (4) to adapter (5). Turn nozzle clockwise until it locks.
- (4) Start refueling pump.
- (5) Move valve handle (9) to OPEN.
- (6) Check refueling unit for fuel flow.

**CAUTION**

The fuel system may be damaged if **FWD CLOSED** and **AFT CLOSED** indicators do not light within 8 seconds after fuel servicing begins. If indicators do not light, automatic fuel shutoff has not activated. Stop fuel servicing.



**g. Place FWD and AFT TNK LEVEL CONT VALVE switches (10) to CLOSE.**

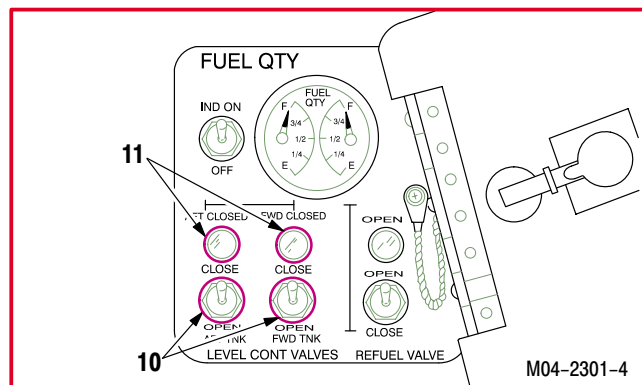
**h. Check that indicator FWD CLOSED and AFT CLOSED (11) are lighted.**

- (1) Stop fuel servicing if indicators do not light (TM 1-1520-238-T).

**i. Check refueling unit for no fuel flow.**

**j. Service fuel tanks as required when notified by pilot.**

- (1) To refuel, select level control valve switch position and advisory indicator condition from following chart.



GO TO NEXT PAGE

**1.18. FUEL SERVICING – HOT RAPID SINGLE POINT ADAPTER (SPA) METHOD – continued**

FWD TNK / AFT TNK SWITCHES		TANKS TO BE REFUELED		
		BOTH	AFT ONLY	FWD ONLY
LEVEL CONT VALVES	AFT TANK	OPEN	OPEN	CLOSED
	FWD TANK	OPEN	CLOSED	OPEN
INDICATORS	AFT CLOSED	OFF	OFF	ON
	FWD CLOSED	OFF	ON	OFF

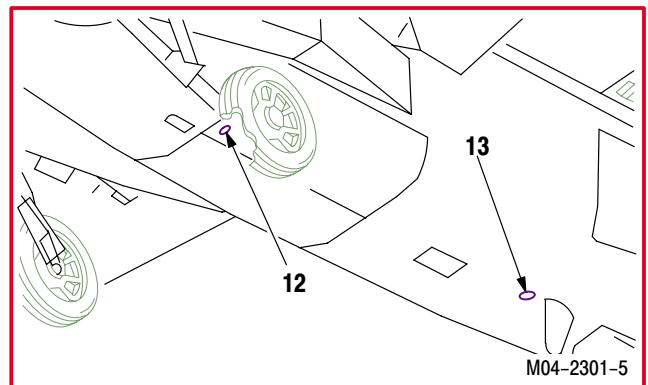
**CAUTION**

The fuel system may be damaged if air does not vent from the fuel cells during servicing. Stop fuel servicing if air does not escape from vent tubes.

- k. Check forward and aft fuel cell vents (12) and (13) for escaping air.

**WARNING**

Failure of automatic shutoff sequence will be indicated by fuel flowing from fuel cell vent tubes. This failure could damage the airframe and injure personnel. Manually stop fuel flow if this occurs. If injury occurs, seek medical aid.



- l. Stop fuel servicing manually if fuel flows from vent tubes (12) and (13).

GO TO NEXT PAGE

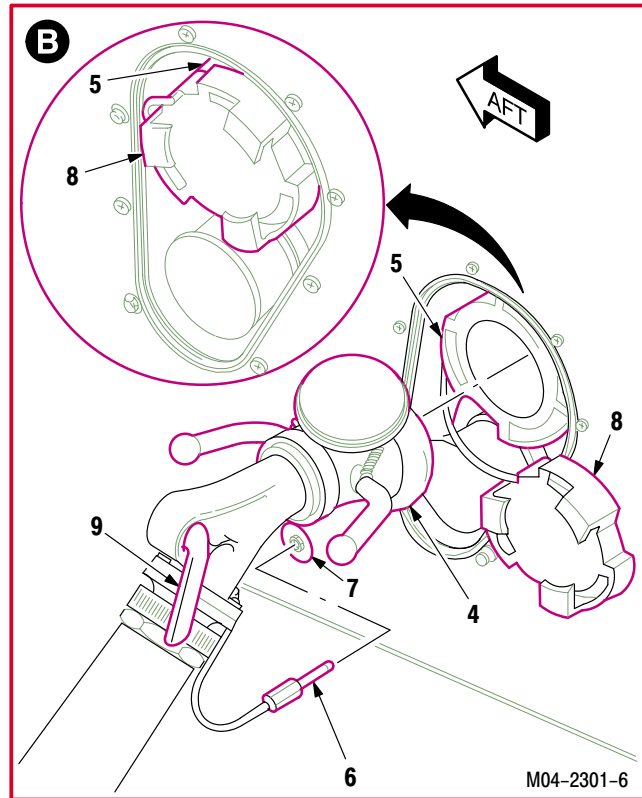
**1.18. FUEL SERVICING – HOT RAPID SINGLE POINT ADAPTER (SPA) METHOD – continued**

**NOTE**

**FWD CLOSED** and **AFT CLOSED** indicators will light when fuel cell is full and automatic shutoff has occurred.

**m. Disconnect nozzle (4) from adapter (5).**

- (1) Stop refueling pump.
- (2) Move valve handle (9) at **OFF**.
- (3) Turn nozzle (4) counterclockwise until free from adapter (5).
- (4) Disconnect plug (6) from receptacle (7).
- (5) Install cap (8) on adapter (5).



**NOTE**

Refueling panel door will not close if either or both **LEVEL CONT VALVES** switches are in **CLOSE**.

**n. Move FWD TNK and AFT TNK LEVEL CONT VALVES switches (10) to OPEN.**

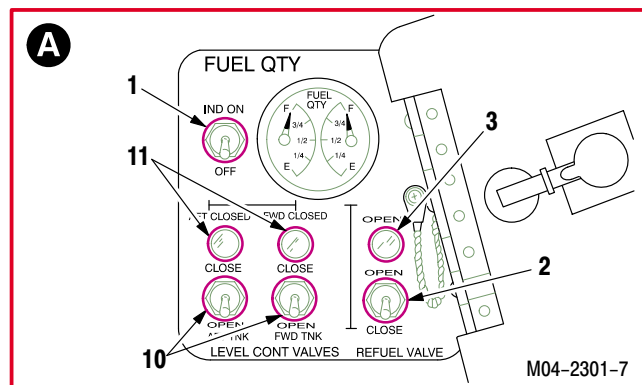
- (1) Check that indicators **FWD CLOSED** and **AFT CLOSED** (11) are not lighted.

**NOTE**

Notify pilot if indicators remain lighted.

**o. Set REFUEL VALVE switch (2) to CLOSE.**

- (1) Check that **OPEN** indicator (3) is not lighted.
- (2) Refer to TM 1-1520-238-T if indicator (3) remains lighted.



**p. Move FUEL QTY IND switch (1) to OFF.**

GO TO NEXT PAGE

---

**1.18. FUEL SERVICING – HOT RAPID SINGLE POINT ADAPTER (SPA) METHOD – continued**

---

- q. **Secure access door R160; install cover R180** (para 2.2).
- r. **Disconnect headset and microphone** (para 1.134).
- s. **Remove static ground lines** (FM 10-68).

END OF TASK

## 1.19. DEFUELING – SINGLE POINT ADAPTER (SPA) METHOD

### 1.19.1. Description

This task covers: Defueling.

### 1.19.2. Initial Setup

#### Tools:

Aircraft mechanic's tool kit (item 376, App H)  
 Chemical protective gloves (item 154, App H)  
 14-quart utility pail (item 222, App H)  
 Light duty laboratory apron (item 27, App H)  
 Industrial faceshield (item 129, App H)

#### Personnel Required:

67R Attack Helicopter Repairer

#### References:

FM 10-68  
 TM 1-1500-204-23  
 TM 1-1520-238-T

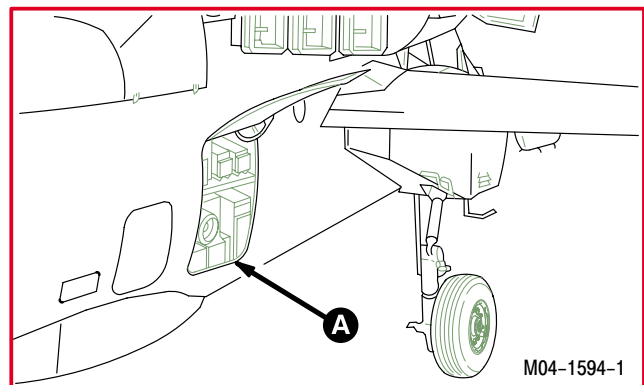
#### Equipment Conditions:

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
2.2	Access doors R160 and R295 opened; cover R180 removed

#### Materials/Parts:

Lubricating oil (item 117, App F)

### 1.19.3. Defueling



- Fuel servicing shall not be performed during thunderstorms or possible lightning conditions.
- Defueling is a very hazardous operation because of fuel vapors. Trained fire fighting personnel and equipment must stand by during the entire task.

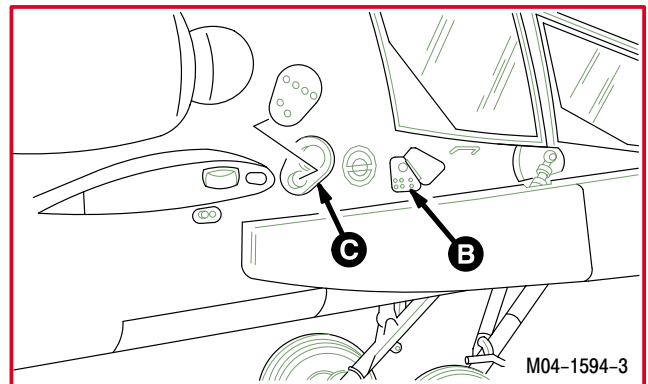
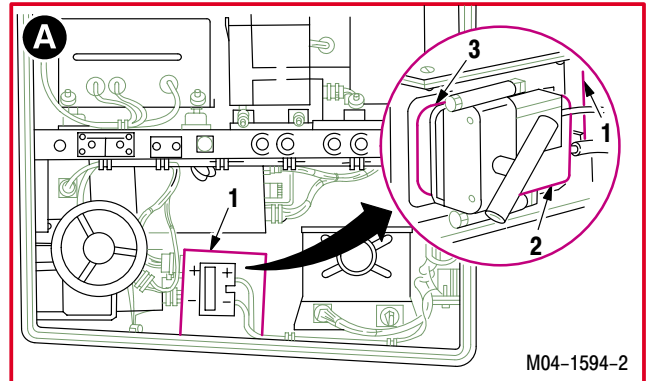
a. Install static ground lines (FM 10-68).

GO TO NEXT PAGE

**1.19. DEFUELING – SINGLE POINT ADAPTER (SPA) METHOD – continued**

**b. Connect battery (1).**

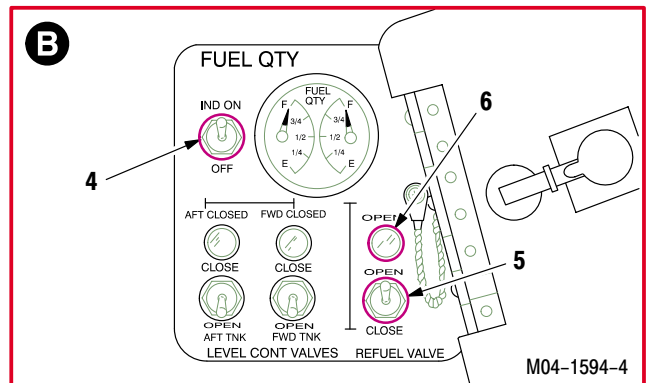
- (1) Attach connector P87 (2) to receptacle (BT1)J3 (3).



**c. Set FUEL QTY IND switch (4) to ON.**

**d. Set REFUEL VALVE switch (5) to OPEN.**

- (1) Check that **OPEN** indicator (6) is lighted.
- (2) Refer to TM 1-1520-238-T if indicator (6) does not light.



GO TO NEXT PAGE

1.19. DEFUELING – SINGLE POINT ADAPTER (SPA) METHOD – continued

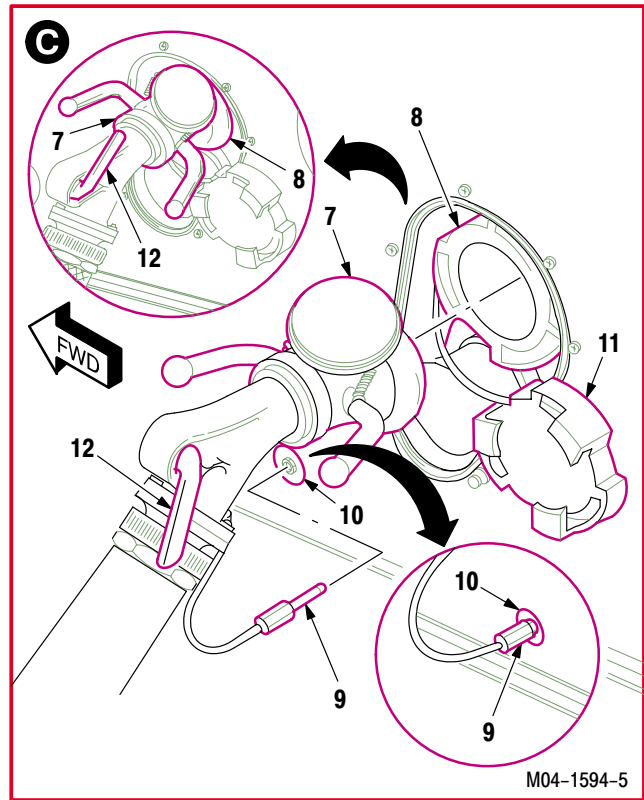
e. Connect single point adapter nozzle (7) to adapter (8).

- (1) Connect nozzle ground plug (9) to grounding receptacle (10).
- (2) Remove cap (11) from adapter (8).
- (3) Connect nozzle (7) to adapter (8). Turn nozzle clockwise until it locks.
- (4) Move handle (12) to **ON**.

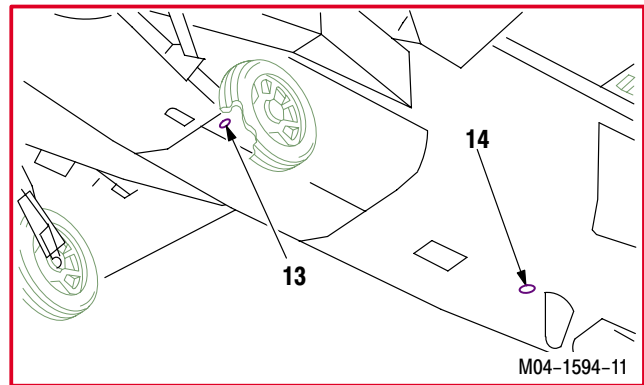
f. Start pressure defueling.

**CAUTION**

Fuel system may be damaged if air does not flow into fuel cells during defueling. Stop defueling if no air flows into cells.

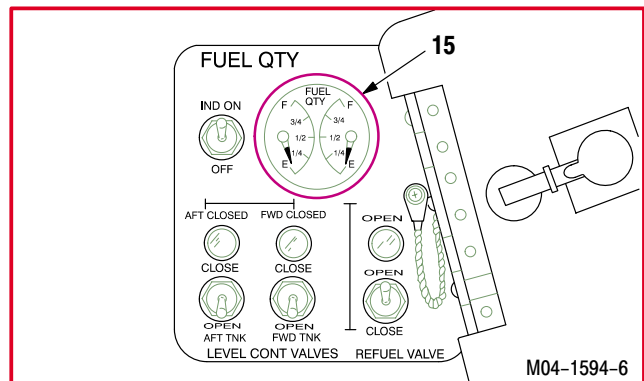


g. Check vent tubes (13) and (14) for air flowing into fuel cells.



h. Stop pressure defueling.

- (1) Stop defueling when **AFT** and **FWD FUEL QTY** indicator (15) indicates empty.

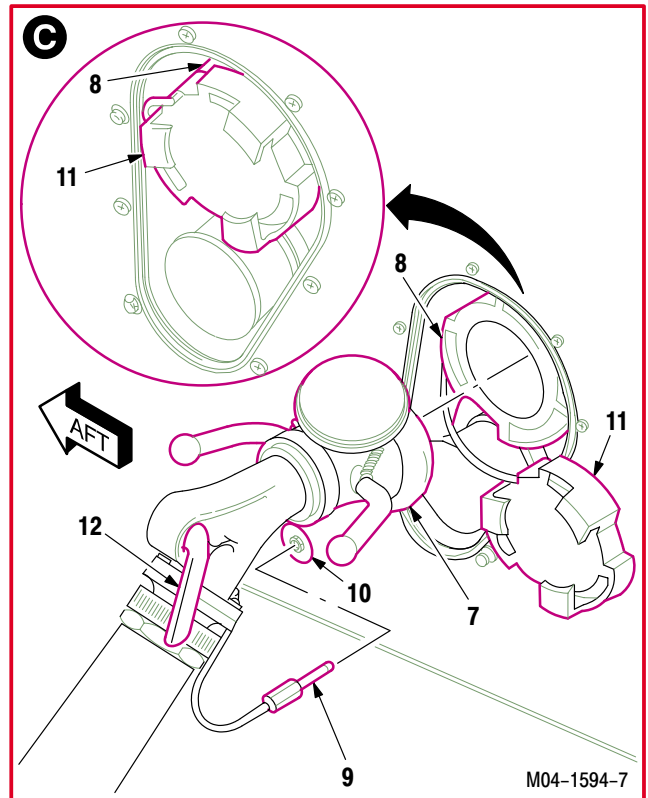


GO TO NEXT PAGE

**1.19. DEFUELING – SINGLE POINT ADAPTER (SPA) METHOD – continued**

**i. Disconnect nozzle (7) from adapter (8).**

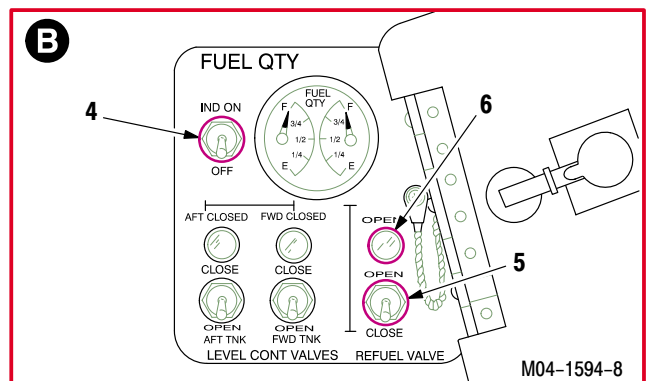
- (1) Move handle (12) to **OFF**.
- (2) Turn nozzle (7) counterclockwise until free from adapter (8).
- (3) Disconnect nozzle ground plug (9) from receptacle (10).
- (4) Install cap (11) on adapter (8).



**j. Set REFUEL VALVE switch (5) to CLOSE.**

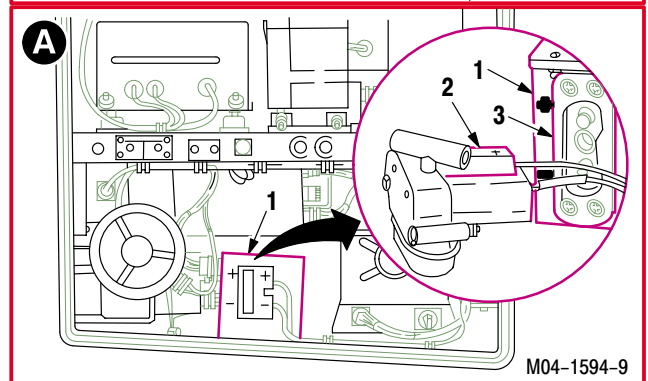
- (1) Check that **OPEN** light (6) is not lighted. Refer to TM 1-1520-238-T if light remains lighted.

**k. Set IND ON switch (4) to OFF.**



**l. Disconnect battery (1).**

- (1) Detach connector P87 (2) from receptacle (BT1)J3 (3).



GO TO NEXT PAGE



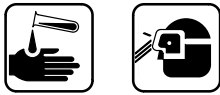
**1.19. DEFUELING – SINGLE POINT ADAPTER (SPA) METHOD – continued**

**m. Drain aft and forward sumps.**

**NOTE**

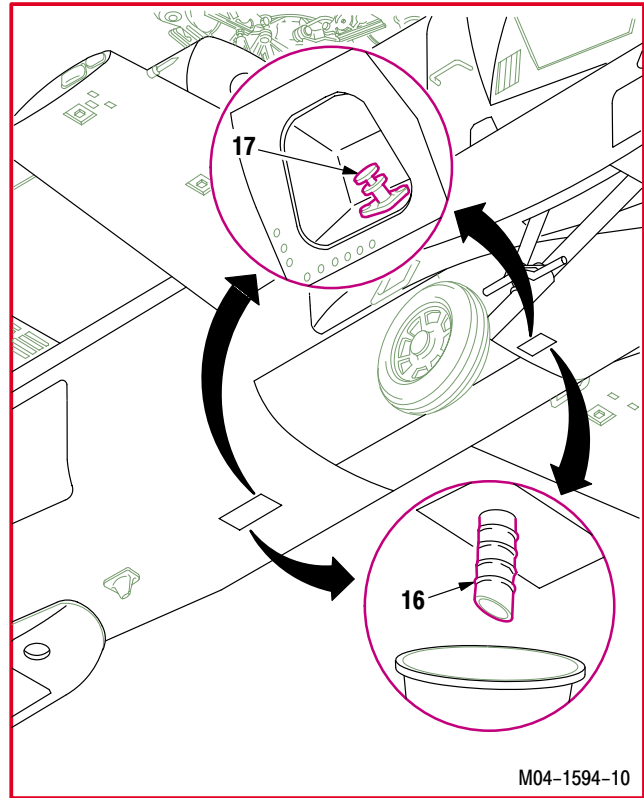
This task is typical for aft and forward tanks.

- (1) Place pail under fuel cell sump drain hoses (16).
- (2) Ground pail to airframe.
- (3) Push and hold **PUSH-TO-DRAIN** button (17).
- (4) Dispose of drained fuel.



**NOTE**

Apply a thin coat of lubricating oil (item 117, App F) to inner liner if the fuel cell is to remain empty more than 10 days (TM 1-1500-204-23).



**n. Remove static ground lines (FM 10-68).**

**o. Secure doors R160 and R295; install cover R180 (para 2.2).**

END OF TASK

## 1.20. DEFUELING – CLOSED CIRCUIT REFUELING (CCR) METHOD

### 1.20.1. Description

This task covers: Defueling.

### 1.20.2. Initial Setup

#### Tools:

Aircraft mechanic's tool kit (item 376, App H)  
 Chemical protective gloves (item 154, App H)  
 Light duty laboratory apron (item 27, App H)  
 Industrial faceshield (item 129, App H)  
 14-quart utility pail (item 222, App H)

#### References:

FM 10-68  
 TM 1-1500-204-23  
 TM 1-1520-238-T

#### Materials/Parts:

Lubricating oil (item 117, App F)

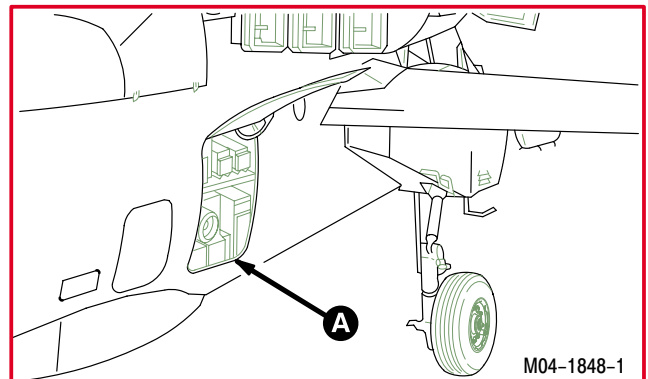
#### Equipment Conditions:

Ref	Condition
1.57	Helicopter safed
2.2	Access doors R160 and R295 opened; cover R180 removed

#### Personnel Required:

67R Attack Helicopter Repairer

### 1.20.3. Defueling



- Fuel servicing shall not be performed during thunderstorms or possible lightning conditions.
- Defueling is a very hazardous operation because of fuel vapors. Trained fire fighting personnel and equipment must stand by during the entire task.

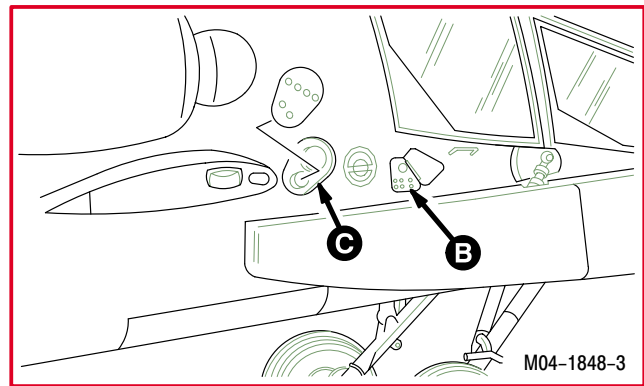
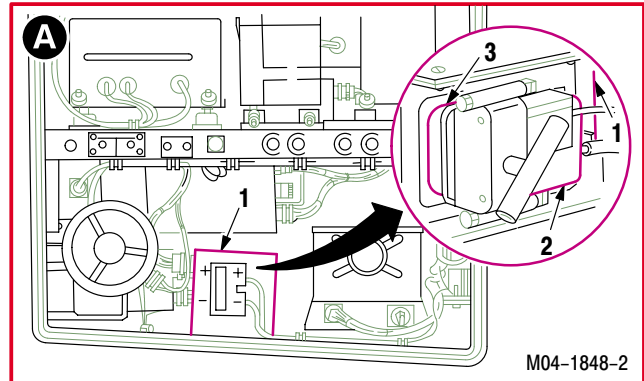
a. Install static ground lines (FM 10-68).

GO TO NEXT PAGE

1.20. DEFUELING – CLOSED CIRCUIT REFUELING (CCR) METHOD – continued

b. Connect battery (1).

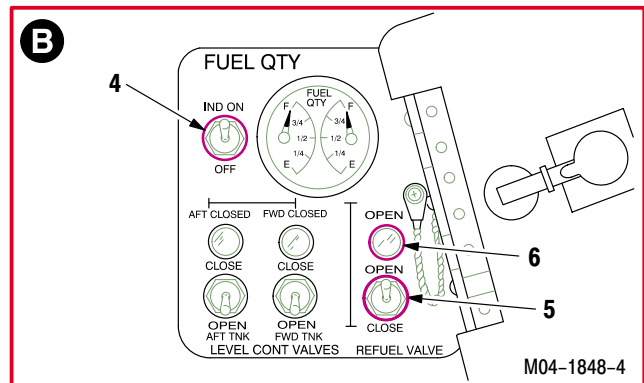
- (1) Attach connector P87 (2) to receptacle (BT1)J3 (3).



c. Set IND ON switch (4) to ON.

d. Set REFUEL VALVE switch (5) to OPEN.

- (1) Check that **OPEN** indicator (6) is lighted.
- (2) Refer to TM 1-1520-238-T if indicator (6) does not light.



GO TO NEXT PAGE

1.20. DEFUELING – CLOSED CIRCUIT REFUELING (CCR) METHOD – continued

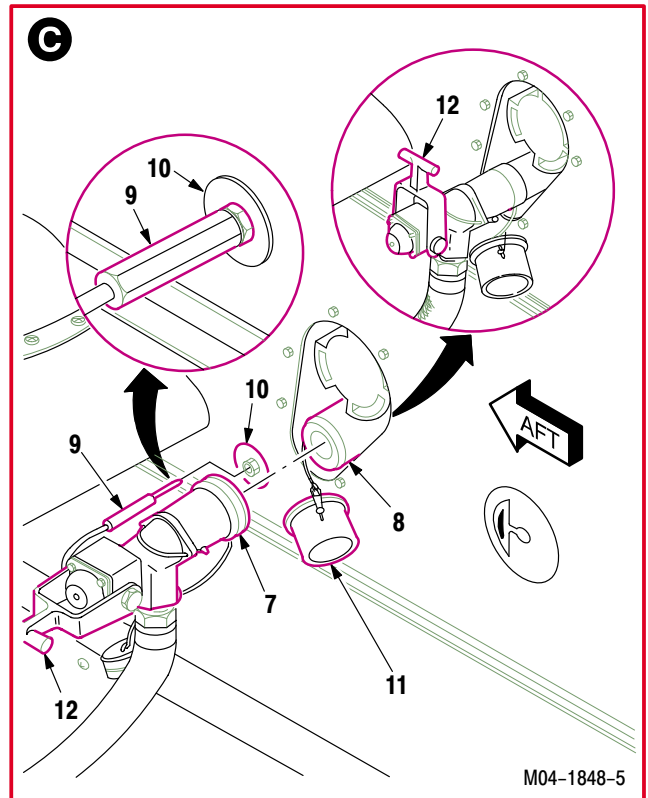
e. Connect closed circuit refueling nozzle (7) to adapter (8).

- (1) Connect nozzle ground plug (9) to grounding receptacle (10).
- (2) Remove cap (11) from adapter (8).
- (3) Connect nozzle (7) to adapter (8).
- (4) Move flow control handle (12) to **FLOW**.

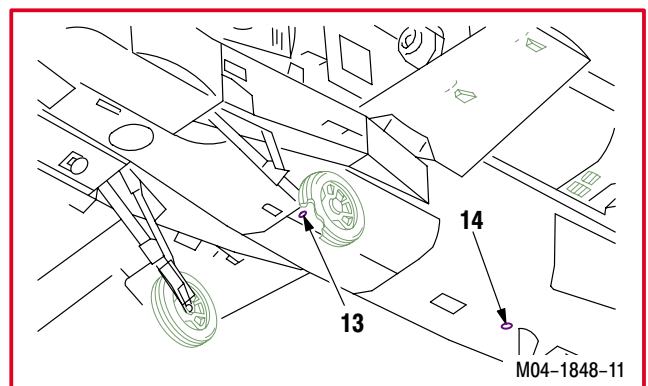
f. Start pressure defueling.

**CAUTION**

Fuel system may be damaged if air does not flow into fuel cells during defueling. Stop defueling if air does not flow into cells.

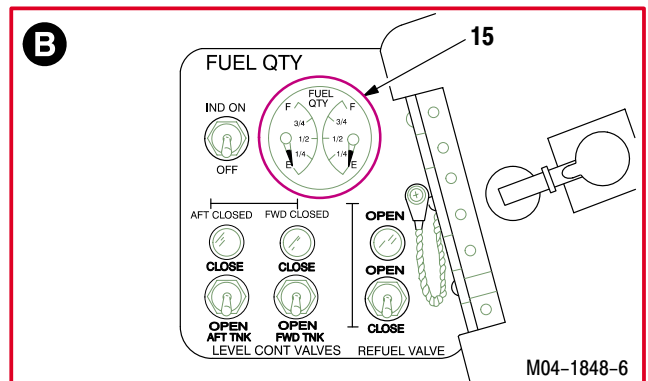


g. Check vent tubes (13) and (14) for air flowing into fuel cells.



h. Stop pressure defueling.

- (1) Stop pressure defueling when **AFT** and **FWD FUEL QTY** indicator (15) indicates empty.

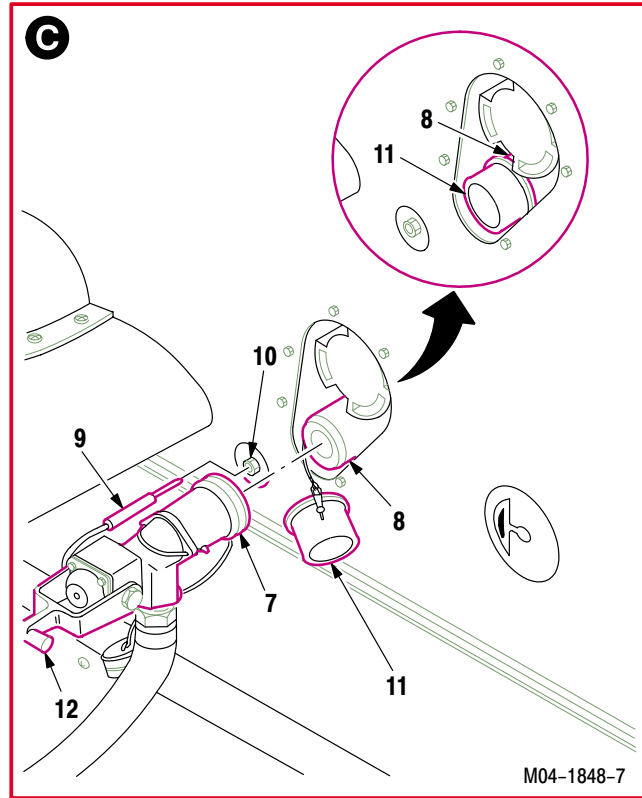


GO TO NEXT PAGE

1.20. DEFUELING – CLOSED CIRCUIT REFUELING (CCR) METHOD – continued

i. **Disconnect closed circuit refueling nozzle (7) from adapter (8).**

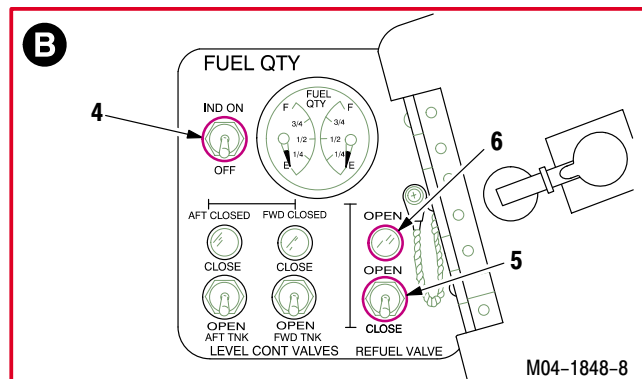
- (1) Move flow control handle (12) to **OFF** position.
- (2) Remove nozzle (7) from adapter (8).
- (3) Disconnect nozzle ground plug (9) from grounding receptacle (10).
- (4) Install cap (11) on adapter (8).



j. **Set REFUEL VALVE switch (5) to CLOSE.**

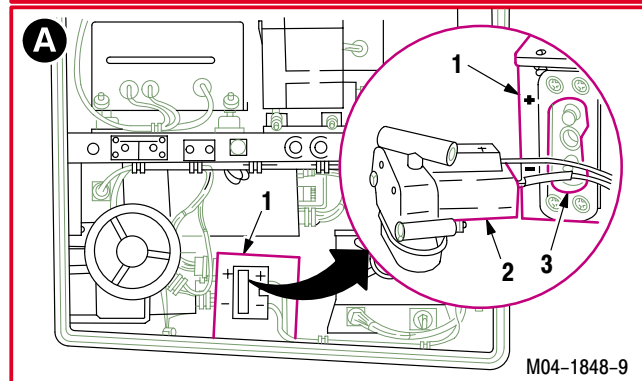
- (1) Check that **OPEN** indicator (6) does not light.
- (2) Refer to TM 1-1520-238-T if indicator (6) remains lighted.

k. **Set FUEL QTY IND switch (4) to OFF.**



l. **Disconnect battery (1).**

- (1) Detach connector P87 (2) from receptacle (BT1)J3 (3).



GO TO NEXT PAGE

---

**1.20. DEFUELING – CLOSED CIRCUIT REFUELING (CCR) METHOD – continued**


---

**m. Drain aft and forward sumps.****NOTE**

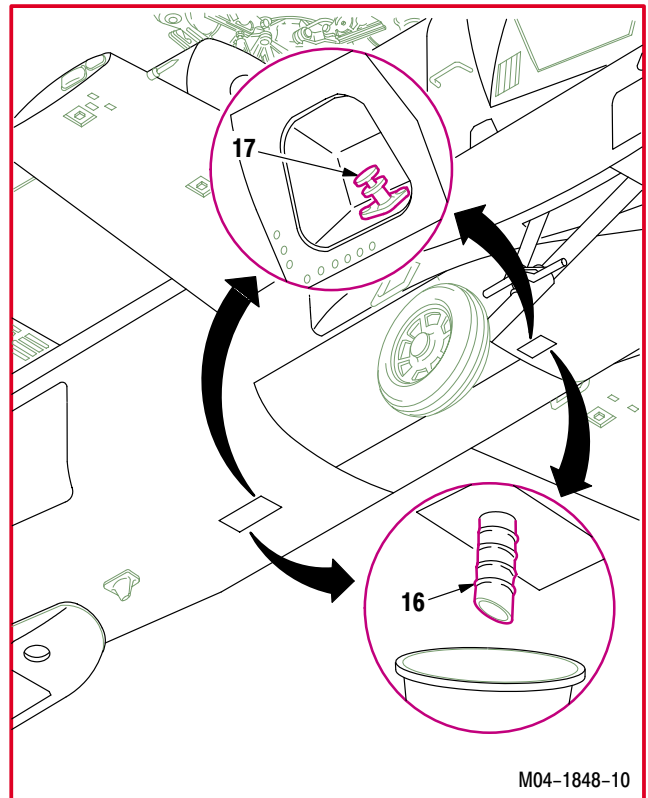
This task is typical for aft and forward tanks.

- (1) Place pail under fuel sump drain hose (16).
- (2) Ground pail to airframe.
- (3) Press and hold **PUSH-TO-DRAIN** button (17).
- (4) Dispose of drained fuel.

**NOTE**

Apply a thin coat of lubricating oil (item 117, App F) to inner liner if fuel cell is to remain empty more than 10 days (TM 1-1500-204-23).

- n. **Remove static ground lines** (FM 10-68).
- o. **Secure access doors R160 and R295; install cover R180** (para 2.2).



END OF TASK

**1.21. DEFUELING – GRAVITY METHOD**

1.21.1. Description

This task covers: Defueling.

1.21.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
 Light duty laboratory apron (item 27, App H)  
 Industrial faceshield (item 129, App H)  
 Chemical protective gloves (item 154, App H)  
 14-quart utility pail (item 222, App H)

**Personnel Required:**

67R Attack Helicopter Repairer

**References:**

FM 10-68  
 TM 1-1500-204-23

**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed

**Materials/Parts:**

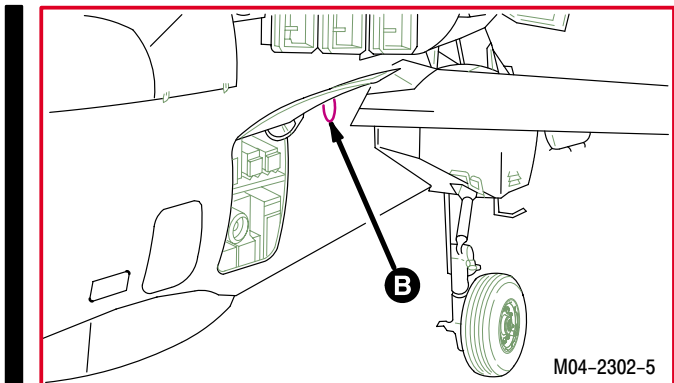
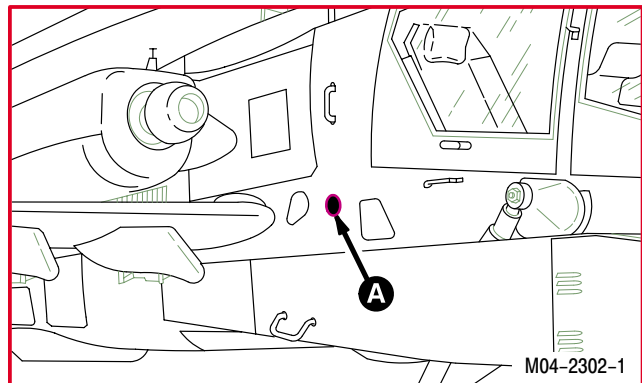
Lubricating oil (item 117, App F)

1.21.3. Defueling



- Fuel servicing shall not be performed during thunderstorms or possible lightning conditions.
- Defueling is a very hazardous operation because of fuel vapors. Trained fire fighting personnel and equipment must stand by during the entire task.

a. Install static ground lines (FM 10-68).



GO TO NEXT PAGE

## 1.21. DEFUELING – GRAVITY METHOD – continued

### b. Remove forward fuel tank filler cap (1).

- (1) Lift and turn locking tab (2) to **OPEN**.
- (2) Pull filler cap (1) out of filler port (3). Pull until filler cap chain (4) opens check valve (5).
- (3) Position filler cap chain (4) in locking detent (6) to hold check valve (5) open.
- (4) Connect defuel nozzle ground (7) to grounding receptacle (8).
- (5) Insert defueling nozzle (9) into filler port (3).

### CAUTION

Fuel cell may be damaged if air does not flow into fuel cell during defueling.

### c. Check vent tubes (10) and (11) for air flowing into fuel cell.

- (1) Stop defueling if air does not flow into fuel cell.

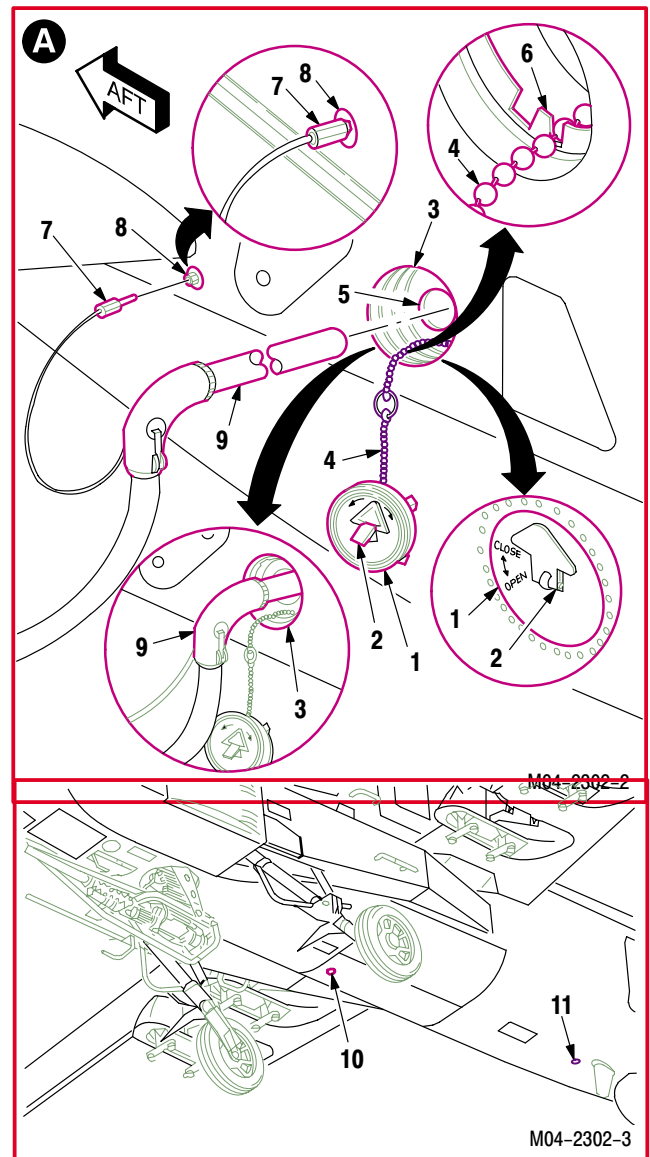
### d. Stop defueling pump when fuel cell is empty.

### e. Remove defueling nozzle (9).

- (1) Remove defueling nozzle (9) from gravity filler port (3).
- (2) Remove defueling nozzle ground (7) from grounding receptacle (8).

### f. Install filler cap (1).

- (1) Release filler cap chain (4) from locking detent (6).
- (2) Install filler cap (1) into filler port (3).
- (3) Turn locking tab (2) to **CLOSED**. Press tab (2).



GO TO NEXT PAGE



1.21. DEFUELING – GRAVITY METHOD – continued

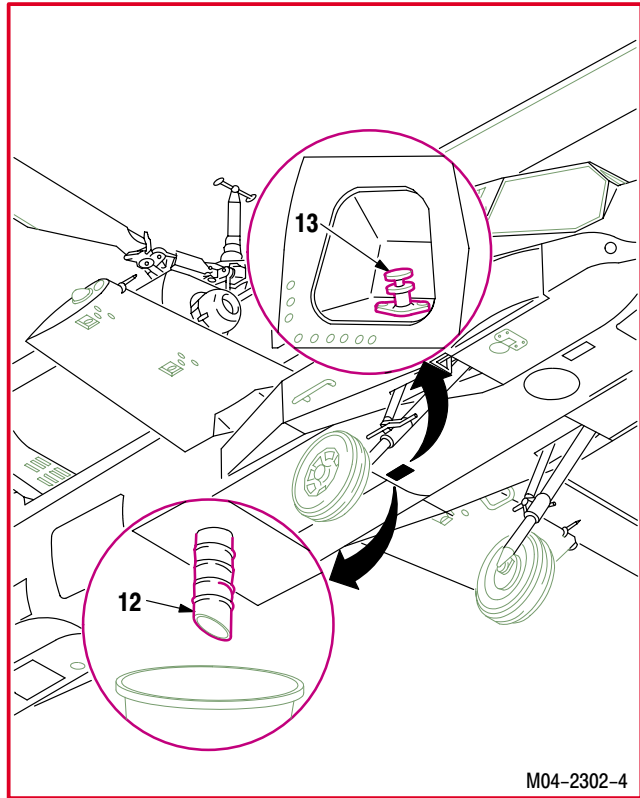
g. Drain forward sump.

- (1) Place pail under fuel sump drain hose (12).
- (2) Ground pail to airframe.
- (3) Press and hold **PUSH-TO-DRAIN** button (13).
- (4) Dispose of drained fuel.



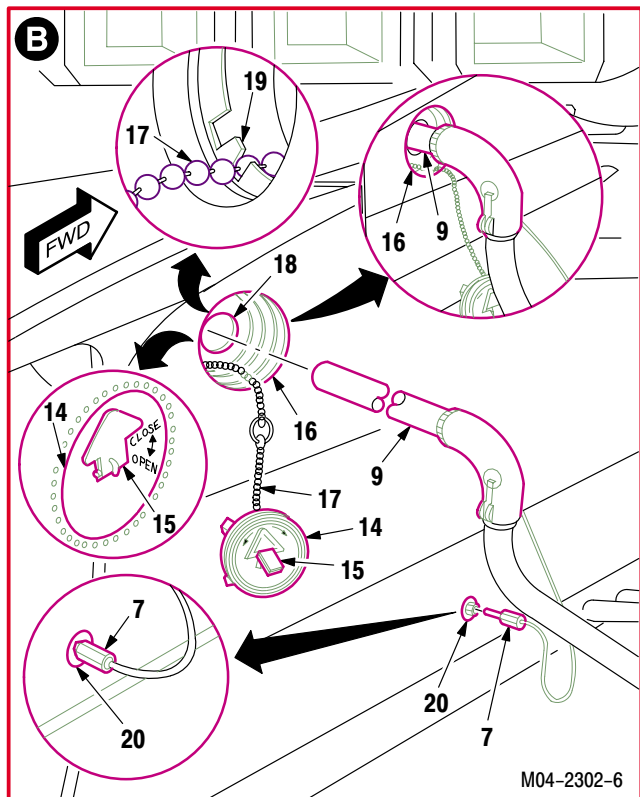
**NOTE**

Apply a thin coat of lubricating oil (item 117, App F) to inner liner if fuel cell is to remain empty more than 10 days (TM 1-1500-204-23).



h. Remove aft fuel tank filler cap (14).

- (1) Lift and turn locking tab (15) to **OPEN**.
- (2) Pull filler cap (14) out of filler port (16). Pull until filler cap chain (17) opens check valve (18).
- (3) Position chain (17) in locking detent (19) to hold check valve (18) open.
- (4) Connect defuel nozzle ground (7) to ground-ing receptacle (20).
- (5) Insert defueling nozzle (9) into filler port (16).



GO TO NEXT PAGE

1.21. DEFUELING – GRAVITY METHOD – continued

**CAUTION**

Fuel cell may be damaged if air does not flow into fuel cell during defueling.

i. **Check vent tubes (10) and (11) for air flowing into fuel cell.**

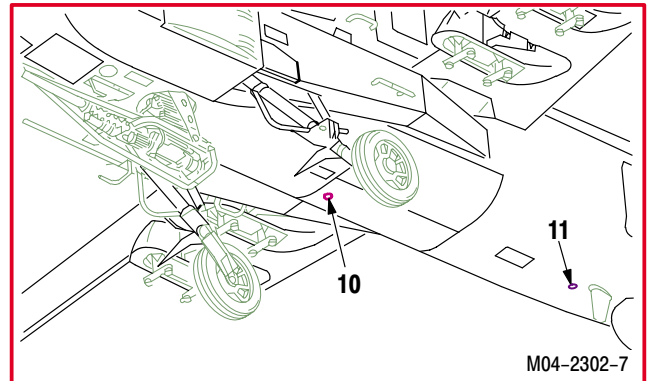
(1) Stop defueling if air does not flow into cell.

j. **Stop defueling pump when fuel cell is empty.**



**NOTE**

Apply a thin coat of lubricating oil (item 117, App F) to inner liner if fuel cell is to remain empty more than 10 days (TM 1-1500-204-23).



k. **Remove defueling nozzle (9).**

(1) Remove defueling nozzle (9) from filler port (16).

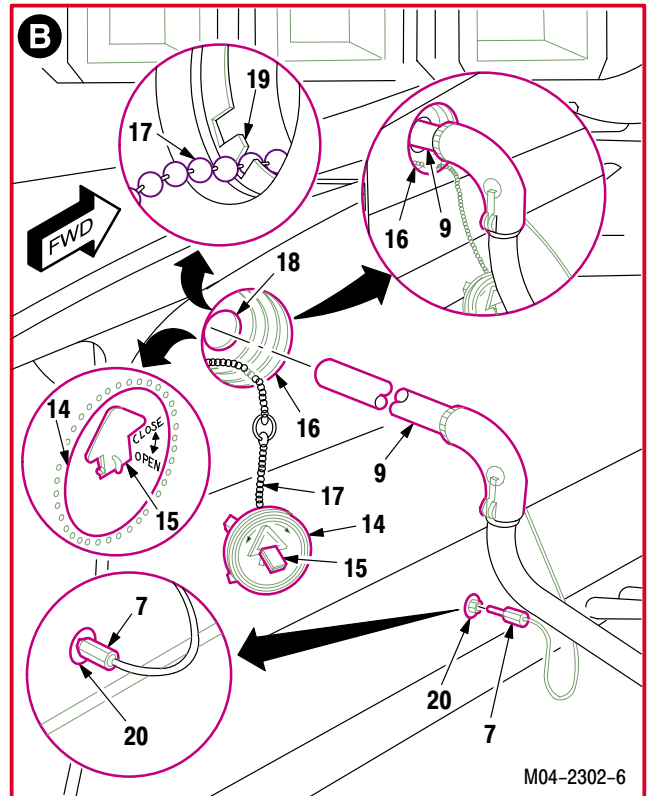
(2) Remove defueling nozzle ground (7) from grounding receptacle (20).

l. **Install aft fuel tank filler cap (14).**

(1) Release filler cap chain (17) from locking detent (19).

(2) Install filler cap (14) into filler port (16).

(3) Turn locking tab (15) to **CLOSED**. Press tab (15).



GO TO NEXT PAGE

---

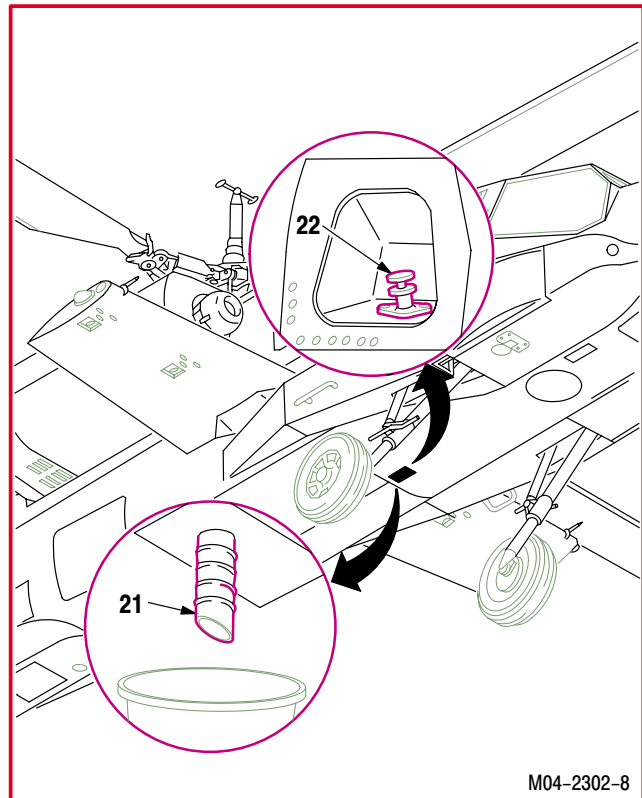
1.21. DEFUELING – GRAVITY METHOD – continued

---

m. Drain aft sump.

- (1) Place pail under fuel sump drain hose (21).
- (2) Ground pail to airframe.
- (3) Press and hold **PUSH-TO-DRAIN** button (22).
- (4) Dispose of drained fuel.

n. Remove static ground lines (FM 10-68).



END OF TASK

## 1.22. FUEL SYSTEM VENTING

### 1.22.1. Description

This task covers: Venting.

### 1.22.2. Initial Setup

#### Tools:

Aircraft mechanic's tool kit (item 376, App H)  
 Light duty laboratory apron (item 27, App H)  
 Industrial faceshield (item 129, App H)  
 Chemical protective gloves (item 154, App H)  
 14-quart utility pail (item 222, App H)  
 Aircraft power unit (item 232, App H)

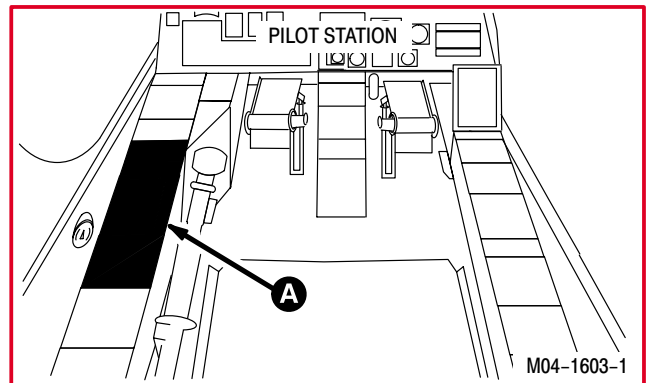
#### Equipment Conditions:

Ref	Condition
1.57	Helicopter safed
1.70	External power – electrical applied
1.71	External power – air applied

#### Personnel Required:

67R Attack Helicopter Repairer  
 One person to assist

### 1.22.3. Venting



- Fuel venting shall not be performed during thunderstorms or possible lightning conditions.
- Defueling is a very hazardous operation because of fuel vapors. Trained fire fighting personnel and equipment must stand by during the entire task.

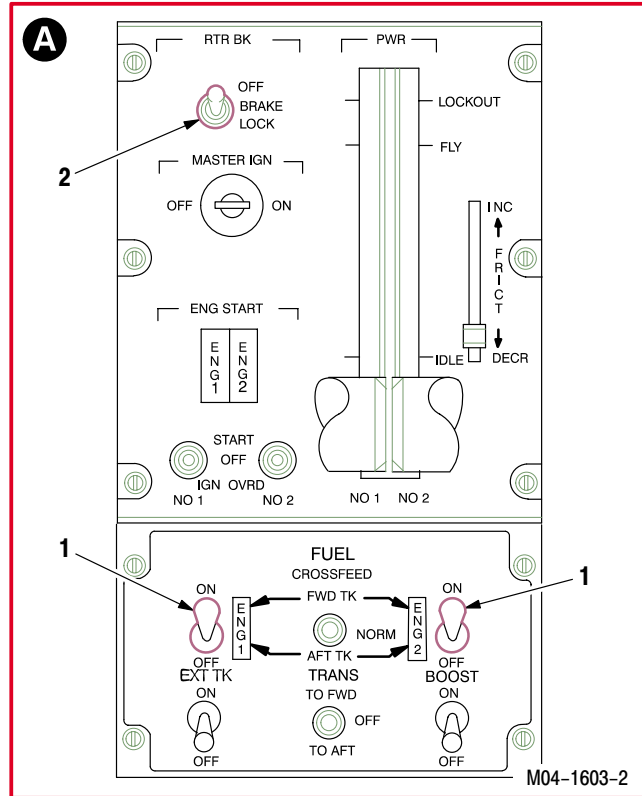
#### NOTE

This task is typical for No. 1 and No. 2 engine fuel line venting.

GO TO NEXT PAGE

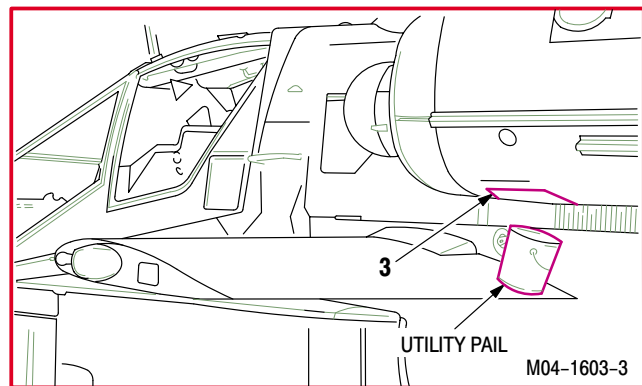
**1.22. FUEL SYSTEM VENTING – continued**

- a. Enter pilot station (para 1.56). Observe all safety precautions.
- b. Set two FUEL switches (1) to ON.
- c. Set RTR BK switch (2) to OFF.



- d. Place pail under No. 1 engine nacelle drain manifold (3).

(1) Ground pail to airframe.



GO TO NEXT PAGE

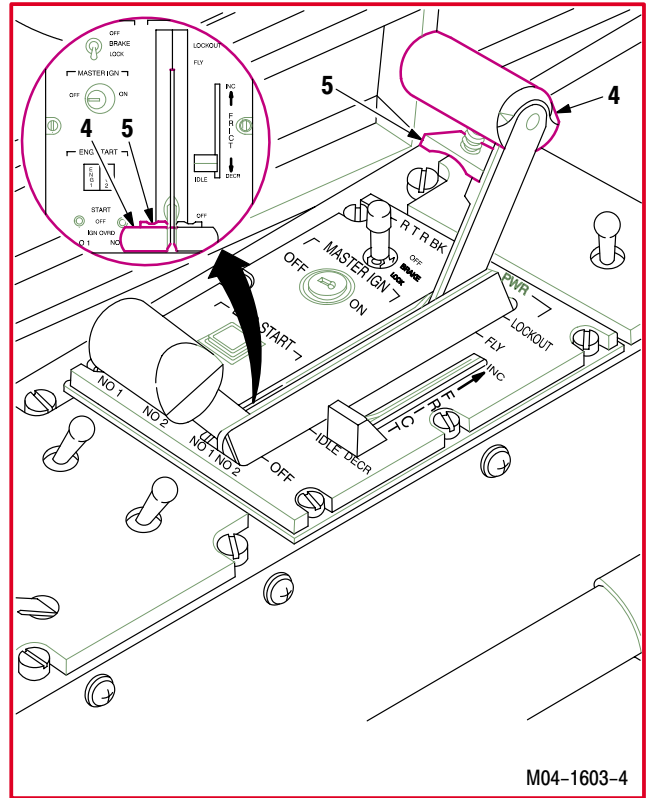
**1.22. FUEL SYSTEM VENTING – continued**

**e. Place NO. 1 PWR lever (4) in FLY.**

- (1) Raise stop release lever (5).
- (2) Move lever (4) to **LOCKOUT**.

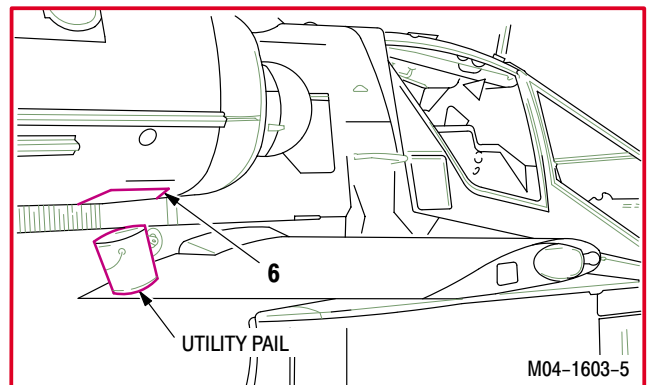
**f. When fuel stops draining, move NO. 1 PWR lever (4) to OFF.**

- (1) Move lever (4) to idle.
- (2) Raise stop release lever (5).
- (3) Move lever (4) to **OFF**.



**g. Place pail under No. 2 engine nacelle drain manifold (6).**

- (1) Ground pail to airframe.



GO TO NEXT PAGE

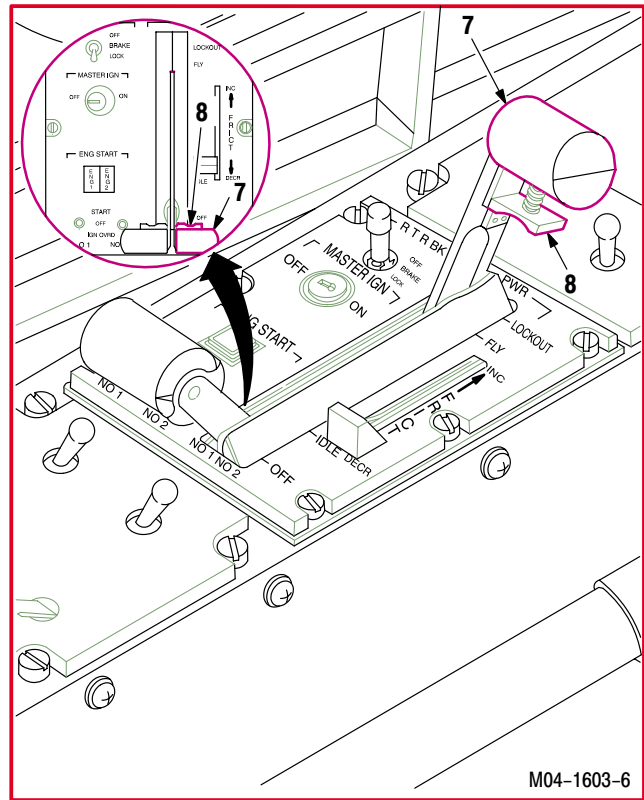
1.22. FUEL SYSTEM VENTING – continued

**h. Place NO. 2 PWR lever (7) in FLY.**

- (1) Raise stop release lever (8).
- (2) Move lever (7) to **LOCKOUT**.

**i. When fuel stops draining, move NO. 2 PWR lever (7) to OFF.**

- (1) Move lever (7) to idle.
- (2) Raise stop release lever (8).
- (3) Move lever (7) to **OFF**.

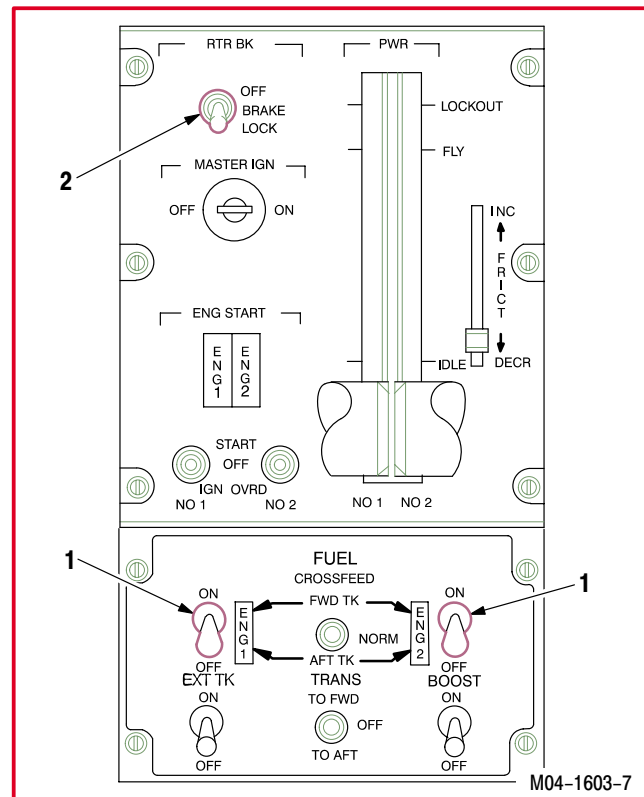


**j. Set RTR BK switch (2) to LOCK.**

**k. Set two FUEL switches (1) to OFF.**

**l. Remove external power – air (para 1.71).**

**m. Remove external power – electrical (para 1.70).**



END OF TASK

## 1.23. FUEL SYSTEM PRIMING

### 1.23.1. Description

This task covers: Priming.

### 1.23.2. Initial Setup

#### Tools:

Aircraft mechanic's tool kit (item 376, App H)  
 Light duty laboratory apron (item 27, App H)  
 Industrial faceshield (item 129, App H)  
 Chemical protective gloves (item 154, App H)  
 14-quart utility pail (item 222, App H)

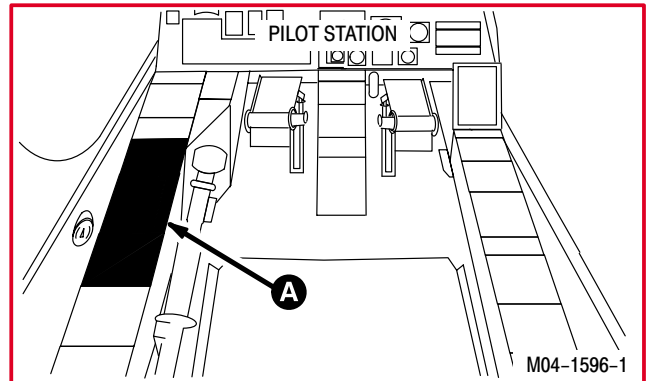
#### Personnel Required:

67R Attack Helicopter Repairer  
 One person to assist

#### Equipment Conditions:

Ref	Condition
1.57	Helicopter safed

### 1.23.3. Priming



- Fuel system priming shall not be performed during thunderstorms or possible lightning conditions.
- Defueling is a very hazardous operation because of fuel vapors. Trained fire fighting personnel and equipment must stand by during the entire task.

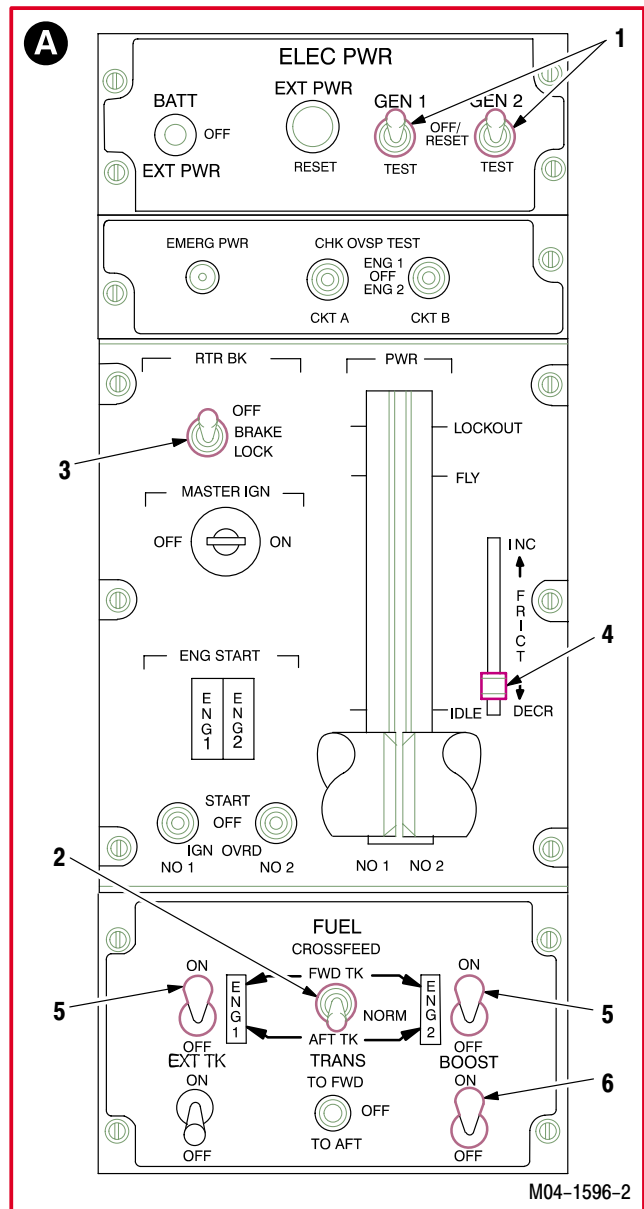
- a. Enter pilot station (para 1.56). Observe all safety precautions.
- b. Start APU (para 1.75). Observe all safety precautions.

GO TO NEXT PAGE

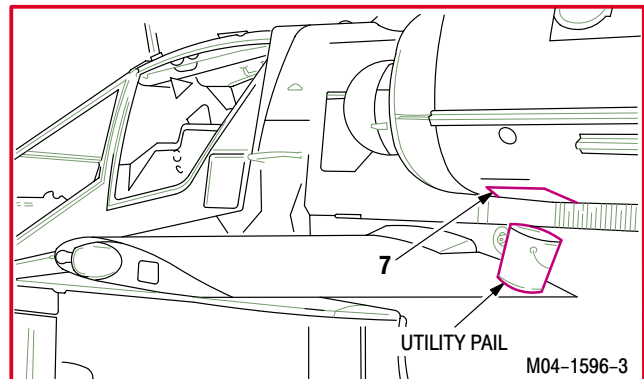


1.23. FUEL SYSTEM PRIMING – continued

- c. Set GEN 1 and GEN 2 switches (1) to GEN 1 and GEN 2.
- d. Set CROSSFEED switch (2) to AFT TK.
- e. Set RTR BK switch (3) to OFF.
- f. Set PWR FRICT lever (4) to DECR.
- g. Set two FUEL switches (5) to ON.
- h. Set BOOST switch (6) to ON.



- i. Check helicopter for fuel leaks.
  - j. Place utility pail under No. 1 engine nacelle drain manifold (7).
- (1) Ground pail to airframe.



GO TO NEXT PAGE

**1.23. FUEL SYSTEM PRIMING – continued**

**k. Place No. 1 PWR lever (8) in FLY.**

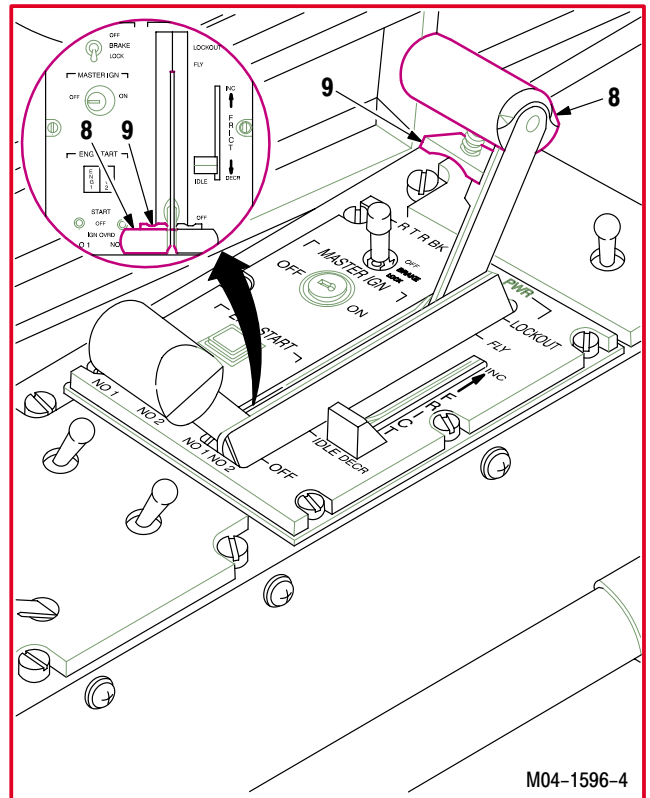
- (1) Raise stop release lever (9).
- (2) Move lever (8) to **LOCKOUT**.

**l. Observe fuel draining from manifold.**

- (1) Ensure fuel flow is steady.

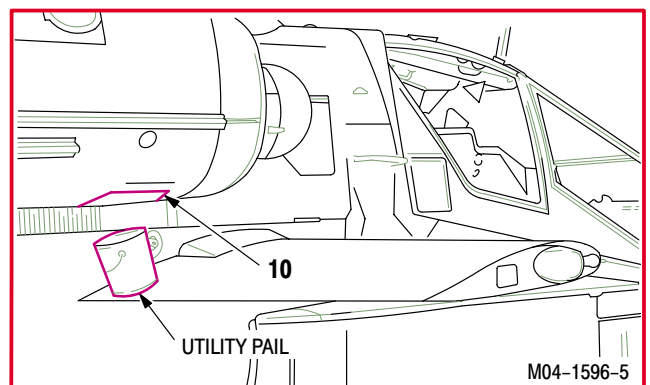
**m. Move No. 1 PWR lever (8) to OFF.**

- (1) Move lever (8) to **IDLE**.
- (2) Raise stop release lever (9).
- (3) Move lever (8) to **OFF**.



**n. Place utility pail under No. 2 engine nacelle drain manifold (10).**

- (1) Ground pail to airframe.



GO TO NEXT PAGE

**1.23. FUEL SYSTEM PRIMING – continued**

**o. Place No. 2 PWR lever (11) in FLY.**

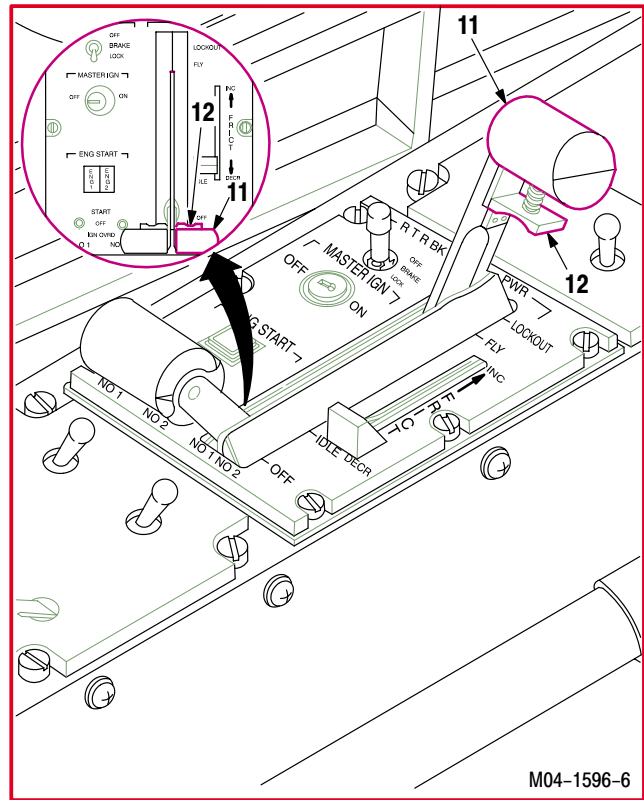
- (1) Raise stop release lever (12).
- (2) Move lever (11) to **LOCKOUT**.

**p. Observe fuel draining from manifold.**

- (1) Ensure fuel flow is steady.

**q. Move No. 2 PWR lever (11) to OFF.**

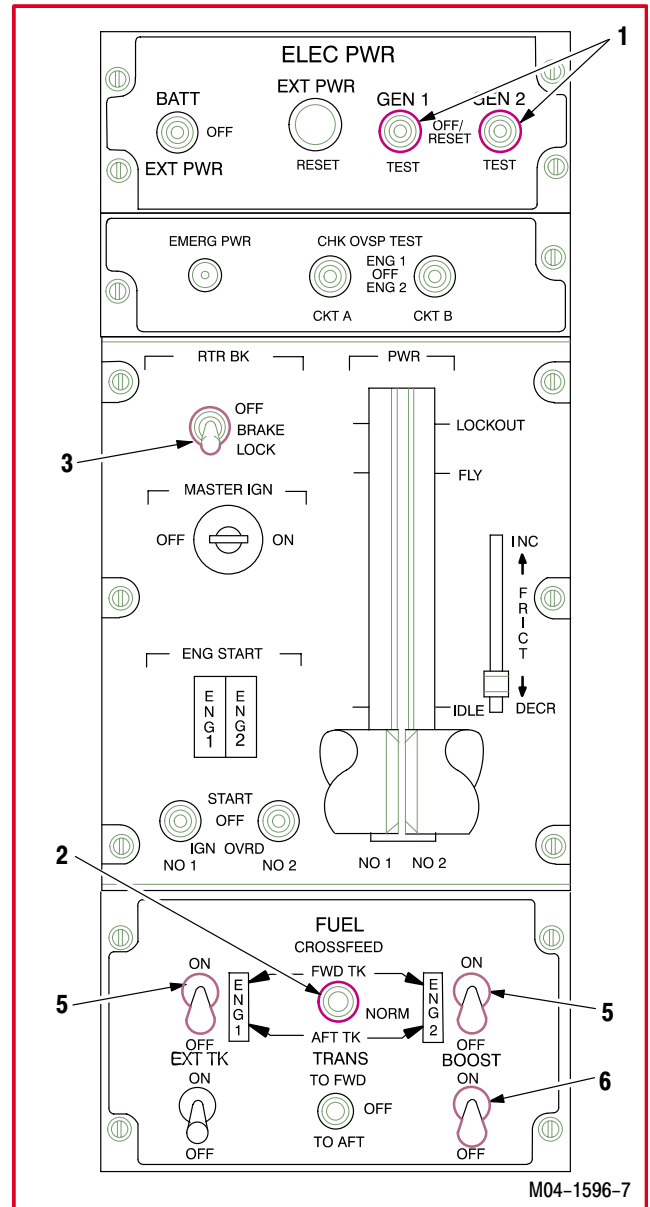
- (1) Move lever (11) to **IDLE**.
- (2) Raise stop release lever (12).
- (3) Move lever (11) to **OFF**.



GO TO NEXT PAGE

1.23. FUEL SYSTEM PRIMING – continued

- r. Set RTR BK switch (3) to LOCK.
- s. Set two FUEL switches (5) to OFF.
- t. Set CROSSFEED switch (2) to NORM.
- u. Set BOOST switch (6) to OFF.
- v. Set GEN 1 and GEN 2 switches (1) to OFF/RE-SET.
- w. Shut down APU (para 1.75).



END OF TASK

**1.24. ENGINE OIL SYSTEM DRAINING AND SERVICING**

1.24.1. Description

This task covers: Draining. Servicing.

1.24.2. Initial Setup

**Tools:**

- Aircraft mechanic's tool kit (item 376, App H)
- Light duty laboratory apron (item 27, App H)
- Industrial faceshield (item 129, App H)
- 1-quart funnel (item 140, App H)
- Chemical protective gloves (item 154, App H)
- Lube drain kit (item 192, App H)
- 14-quart utility pail (item 222, App H)

**Materials/Parts:**

- Packing
- Lubricating oil (item 118, App F) or
- Lubricating oil (item 119, App F)

**Personnel Required:**

67R Attack Helicopter Repairer

**References:**

- TM 55-2840-248-23
- TB 55-9150-200-24

**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
2.2	Access doors LN1 and/or RN1 opened; doors LN2 and/or RN2 removed

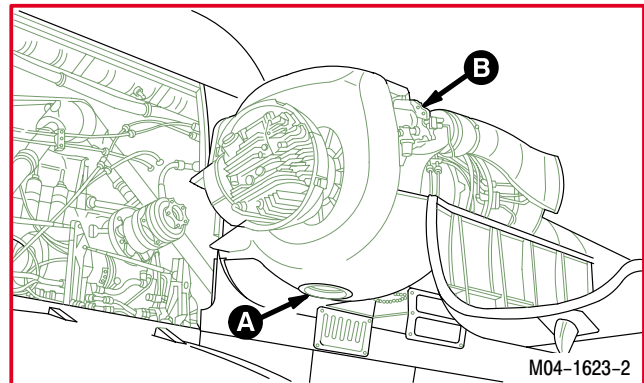
1.24.3. Draining

**CAUTION**

- Allow engine to cool at least 30 minutes before servicing oil system. This will allow oil to drain into engine reservoir and prevent possible overservicing of engine.
- Do not mix lubricating oil (item 118, App F) with lubricating oil (item 119, App F) except in an emergency. The system must be drained and refilled with the proper oil as soon as possible if it becomes necessary to mix oils.

**NOTE**

Refer to TB 55-9150-200-24 for conversion of oils MIL-L-23699 and MIL-L-7808. Failure to perform the required checks and services can result in contamination of the affected oil system.

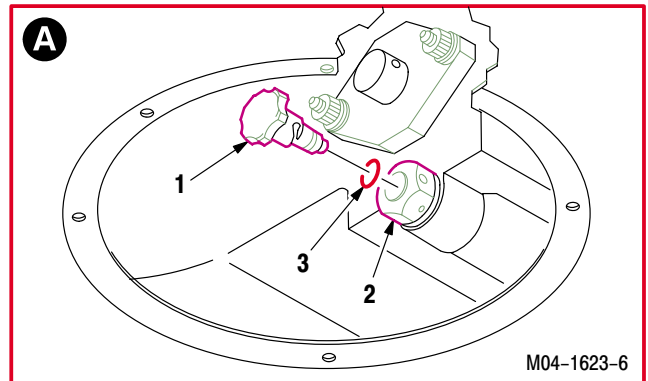


GO TO NEXT PAGE

**1.24. ENGINE OIL SYSTEM DRAINING AND SERVICING – continued**

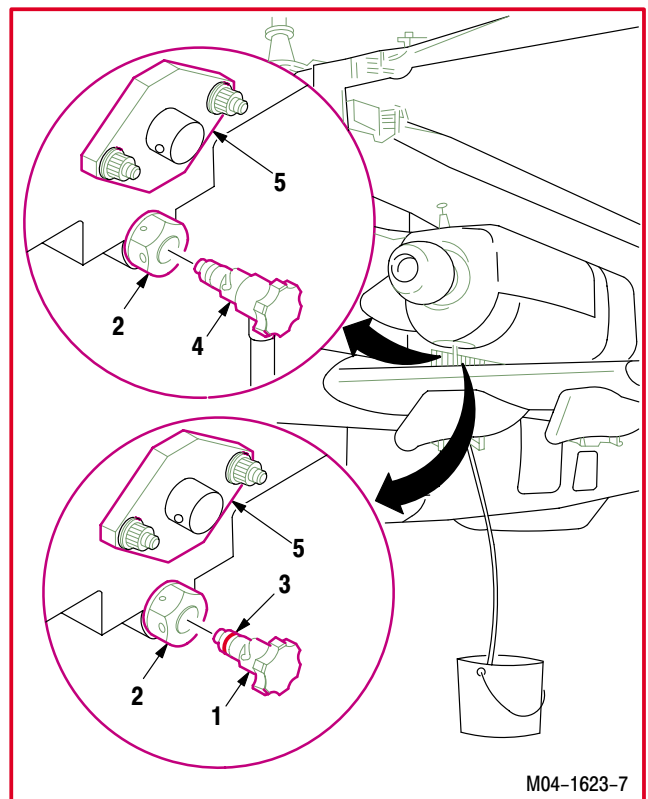
**a. Remove chip collector probe (1) from chip collector (2).**

- (1) Place rags under collector (2) to catch spills.
- (2) Push and turn probe (1) 1/2-turn counter-clockwise to remove.
- (3) Remove and discard packing (3).



**b. Drain oil from engine.**

- (1) Place end of drain hose in pail.
- (2) Push drain hose adapter (4) into collector (2) and turn 1/2-turn clockwise to lock.
- (3) Drain all oil from engine.
- (4) Push and turn adapter (4) 1/2-turn counter-clockwise to remove.



**NOTE**

Probe is properly installed when knurl tips and hex points aline.



**c. Install new packing (3) on probe (1).**

- (1) Lubricate new packing (3). Use lubricating oil (item 118, App F) or lubricating oil (item 119, App F).

**d. Install probe (1) in collector (2).**

- (1) Turn 1/2-turn clockwise to lock.

**e. Remove, clean, inspect, and install engine main frame oil strainer (5) (TM 55-2840-248-23).**

GO TO NEXT PAGE

1.24. ENGINE OIL SYSTEM DRAINING AND SERVICING – continued

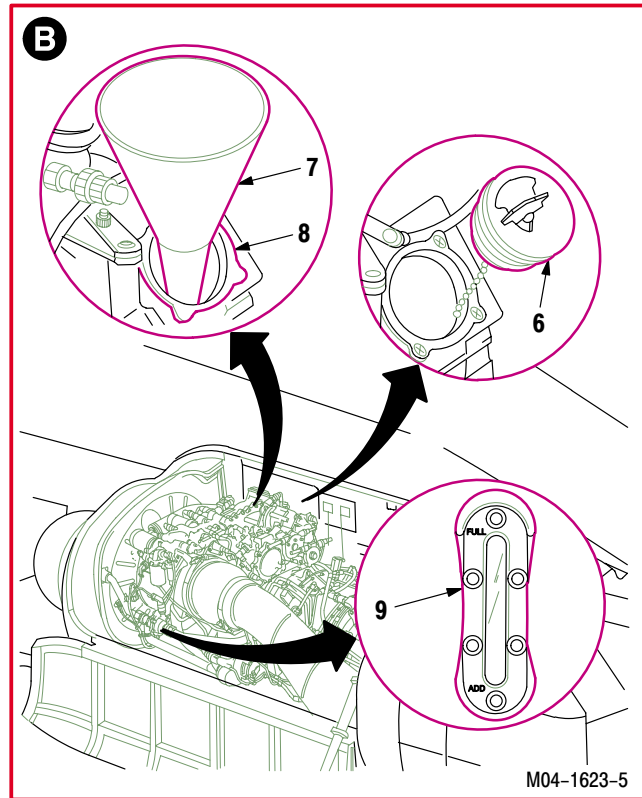
1.24.4. Servicing



a. **Service engine with seven quarts of oil.** Use lubricating oil (item 118, App F) or lubricating oil (item 119, App F).

- (1) Remove oil filler cap (6).
- (2) Insert funnel (7) into oil fill port (8).
- (3) Pour seven quarts of oil through funnel (7).
- (4) Verify quantity of oil in engine. Use oil level sight window (9).

b. **Secure access doors LN1 and/or RN1; install doors LN2 and/or RN2** (para 2.2).



END OF TASK

---

## 1.25. AIR TURBINE STARTER ASSEMBLY SERVICING

---

### 1.25.1. Description

This task covers: Servicing.

---

### 1.25.2. Initial Setup

#### Tools:

Aircraft mechanic's tool kit (item 376, App H)  
 Light duty laboratory apron (item 27, App H)  
 Industrial faceshield (item 129, App H)  
 1-quart funnel (item 140, App H)  
 Chemical protective gloves (item 154, App H)  
 0 - 30 inch-pound 1/4-inch drive dial indicator torque  
 wrench (item 445, App H)

#### Materials/Parts:

Packing  
 Lubricating oil (item 118, App F) or  
 Lubricating oil (item 119, App F)  
 Wire (item 226, App F)

#### Personnel Required:

67R Attack Helicopter Repairer

#### References:

TB 55-9150-200-24

#### Equipment Conditions:

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
2.2	Access doors LN1 and/or RN1 opened

---

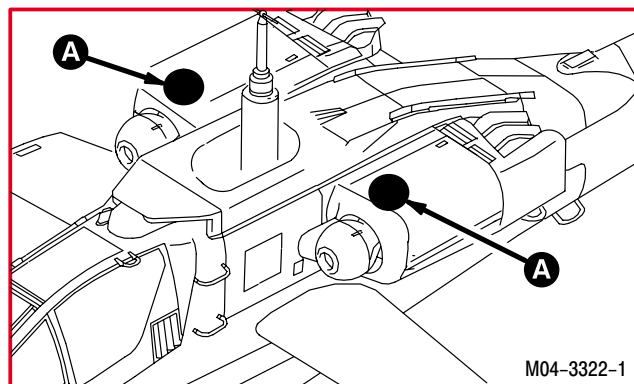
### 1.25.3. Servicing

**CAUTION**

Do not mix lubricating oil (item 118, App F) with lubricating oil (item 119, App F) except in an emergency. The system must be drained and refilled with the proper oil as soon as possible if it becomes necessary to mix oils.

#### NOTE

- This task is typical for left and/or right air turbine starters.
- Refer to TB 55-9150-200-24 for conversion of oils MIL-L-23699 and MIL-L-7808. Failure to perform the required checks and services can result in contamination of the affected oil system.



M04-3322-1

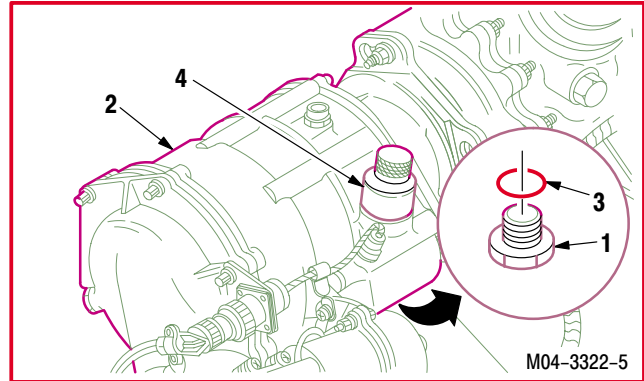
GO TO NEXT PAGE



1.25. AIR TURBINE STARTER ASSEMBLY SERVICING – continued

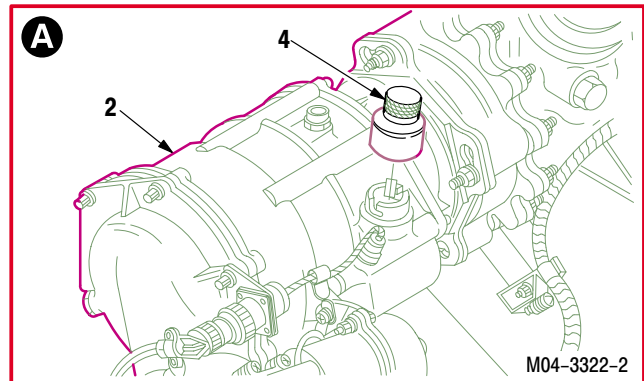
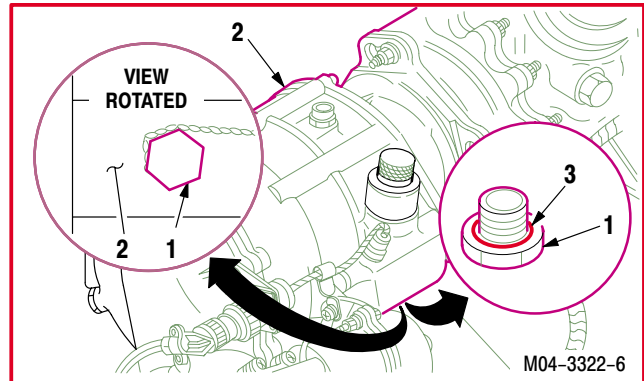
a. Remove turbine starter drain plug (1).

- (1) Remove lockwire from drain plug (1).
- (2) Place rags under starter (2) to catch spilled oil.
- (3) Remove drain plug (1) from starter (2).
- (4) Remove and discard packing (3).
- (5) Vent system. Loosen oil filler cap (4).
- (6) Allow starter (2) to drain.



b. Install drain plug (1) on starter (2). Torque drain plug (1) to **25 INCH-POUNDS**.

- (1) Lubricate new packing (3). Use lubricating oil (item 118, App F) or lubricating oil (item 119, App F).
- (2) Install new packing (3) on drain plug (1).
- (3) Install drain plug (1) in starter (2).
- (4) Torque drain plug (1) to **25 INCH-POUNDS**.
- (5) Lockwire drain plug (1) to starter (2). Use wire (item 226, App F).
- (6) Service starter (2) with lubricating oil (item 118, App F) or lubricating oil (item 119, App F).
- (7) Remove oil filler cap (4) from starter (2).
- (8) Push and turn oil filler cap (4) counterclockwise to remove.



GO TO NEXT PAGE

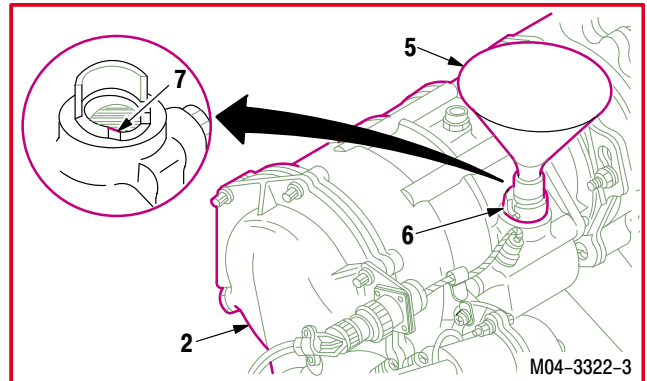
---

**1.25. AIR TURBINE STARTER ASSEMBLY SERVICING – continued**

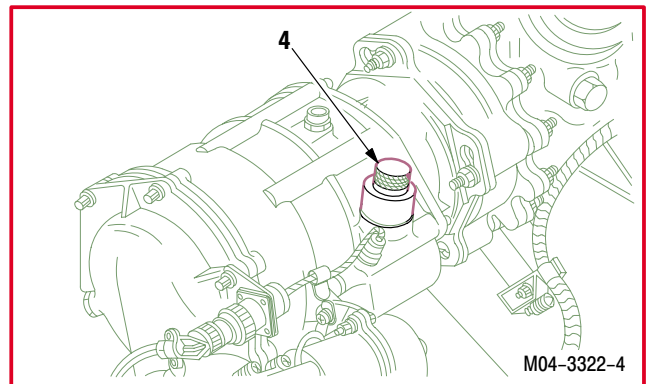
---

**c. Install funnel (5) into the oil fill port (6).**

- (1) Pour oil through funnel (5) until oil level reaches bottom of lower notch (7) of oil fill port (6).
- (2) Remove funnel (5) from the oil fill port (6).



- (3) Install oil filler cap (4).
- (4) Push and turn cap (4) clockwise until locking lugs are engaged.
- (5) Wipe any oil spillage with a clean rag.

**d. Secure access doors LN1 and/or RN1 (para 2.2).**

END OF TASK

**1.26. APU OIL SYSTEM DRAINING AND SERVICING**

1.26.1. Description

This task covers: Draining. Servicing.

1.26.2. Initial Setup

**Tools:**

- Aircraft mechanic's tool kit (item 376, App H)
- Light duty laboratory apron (item 27, App H)
- Industrial faceshield (item 129, App H)
- 1-quart funnel (item 140, App H)
- Chemical protective gloves (item 154, App H)
- Lube drain kit (item 192, App H)
- 14-quart utility pail (item 222, App H)

**Materials/Parts:**

- Packing
- Lubricating oil (item 118, App F) or
- Lubricating oil (item 119, App F)

**Personnel Required:**

- 67R Attack Helicopter Repairer

**References:**

- TB 55-9150-200-24

**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
2.2	Access doors RN5, T250L, T250R, T290L, T290R, and L325 opened

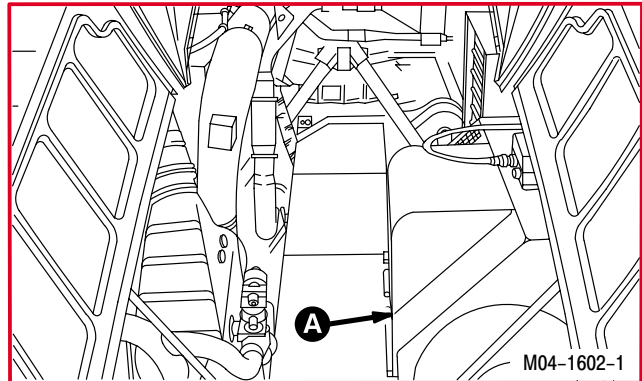
1.26.3. Draining

**CAUTION**

Do not mix lubricating oil (item 118, App F) with lubricating oil (item 119, App F) except in an emergency. The system must be drained and refilled with the proper oil as soon as possible if it becomes necessary to mix oils.

**NOTE**

Refer to TB 55-9150-200-24 for conversion of oils MIL-L-23699 and MIL-L-7808. Failure to perform the required checks and services can result in contamination of the affected oil system.

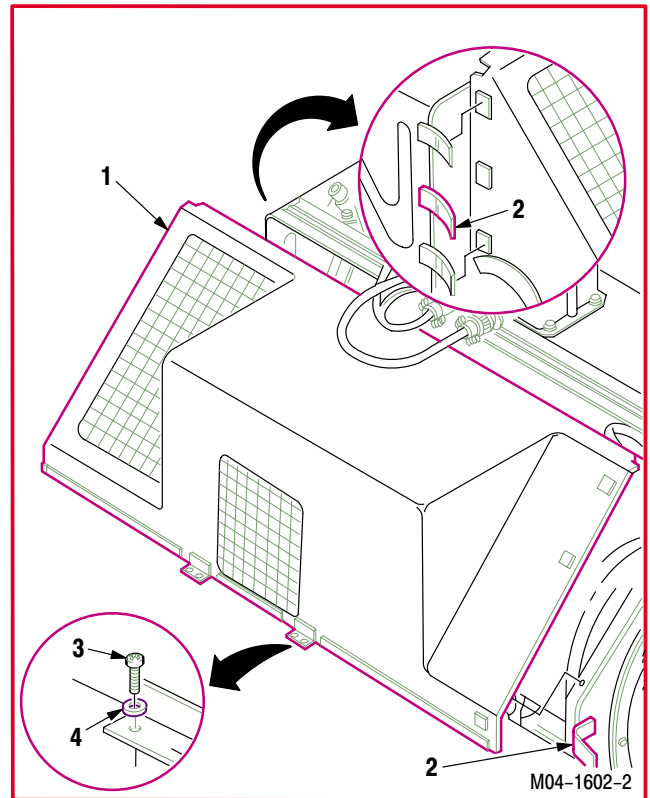


GO TO NEXT PAGE

**1.26. APU OIL SYSTEM DRAINING AND SERVICING – continued**

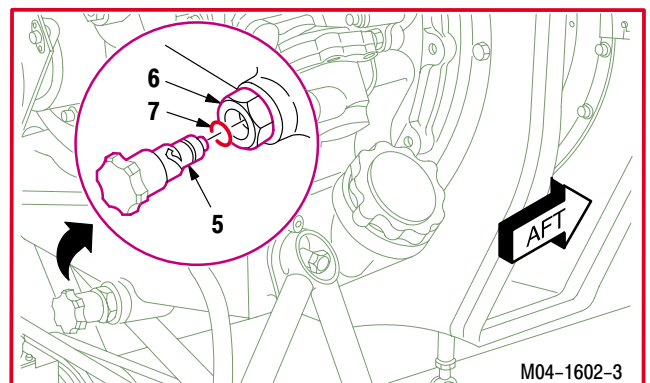
**a. Remove panel (1).**

- (1) Separate hook and pile fasteners (2).
- (2) Remove four screws (3) and washers (4).



**b. Remove chip collector (5) from magnetic drain plug (6).**

- (1) Place rags under plug (6) to catch spills.
- (2) Push and turn collector (5) counterclockwise to remove.
- (3) Remove and discard packing (7).

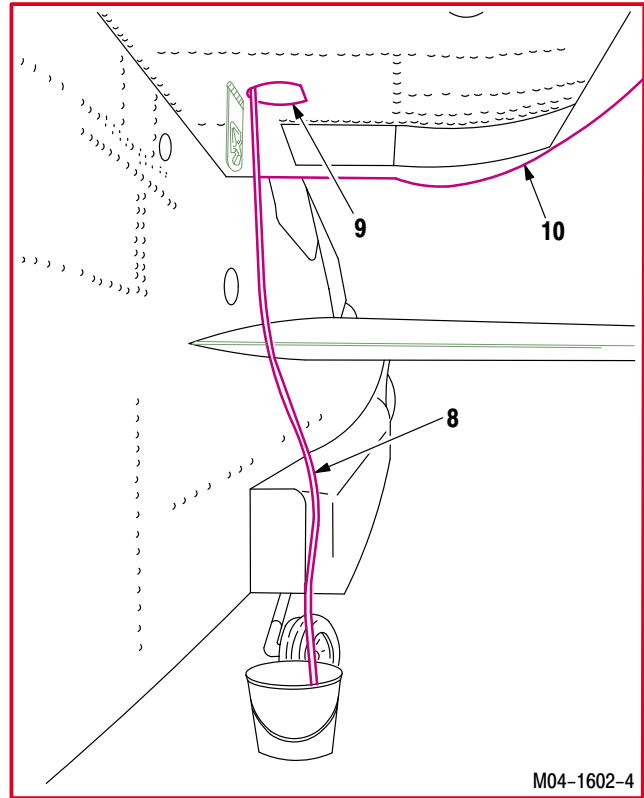


GO TO NEXT PAGE

**1.26. APU OIL SYSTEM DRAINING AND SERVICING – continued**

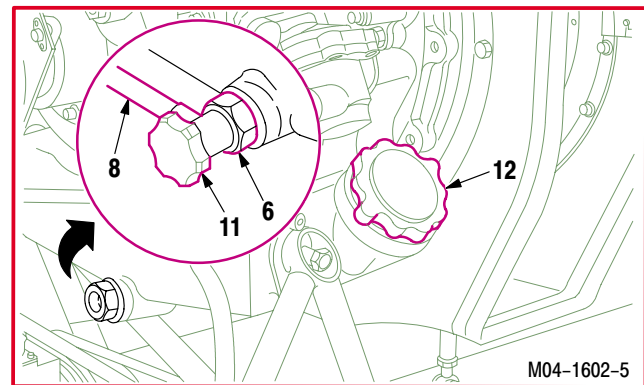
**c. Connect drain hose (8) to plug (6).**

- (1) Route hose (8) through sight gage access (9) at bottom of right nacelle (10).
- (2) Place end of hose (8) in pail.



M04-1602-4

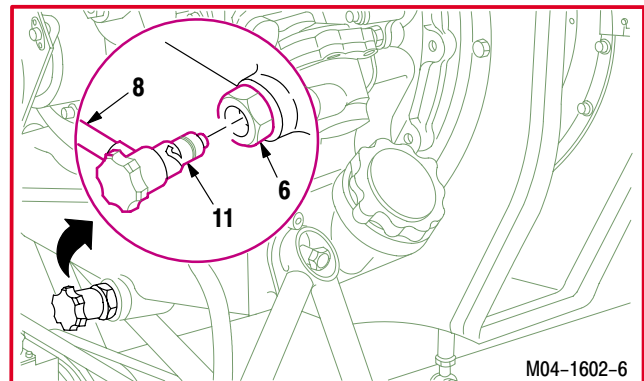
- (3) Connect hose (8) adapter probe (11) to plug (6). Turn clockwise to lock.
- (4) Vent system. Loosen filler cap (12).
- (5) Allow APU oil to drain.



M04-1602-5

**d. Disconnect drain hose (8) from plug (6).**

- (1) Push and turn adapter probe (11) counter-clockwise to unlock.
- (2) Remove hose (8).



M04-1602-6

GO TO NEXT PAGE

1.26. APU OIL SYSTEM DRAINING AND SERVICING – continued

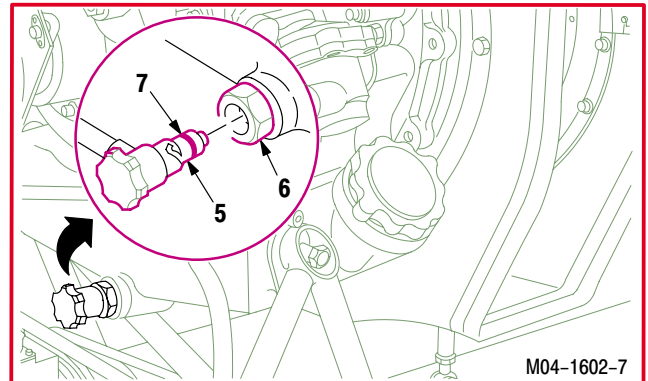


e. Install new packing (7) on collector (5).

- (1) Lubricate new packing (7). Use lubricating oil (item 118, App F) or lubricating oil (item 119, App F).
- (2) Install new packing (7) on collector (5).

f. Install collector (5) in plug (6).

- (1) Turn 1/2-turn clockwise to lock.



**NOTE**

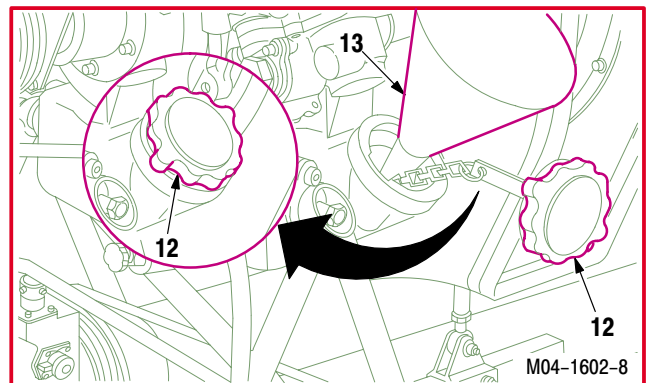
Chip collector is properly installed in magnetic drain plug when knurled tips align with hex points.

1.26.4. Servicing

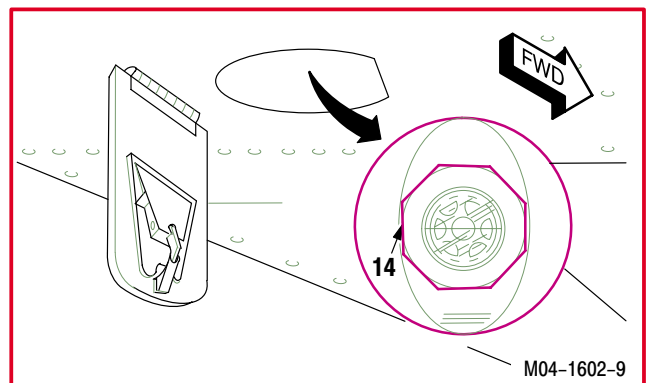


a. Service APU with oil.

- (1) Remove filler cap (12).
- (2) Add two quarts lubricating oil (item 118, App F) or lubricating oil (item 119, App F). Use funnel (13).



- (3) Verify correct oil level. Indicator ball at gage (14) midpoint.
- (4) Install filler cap (12).



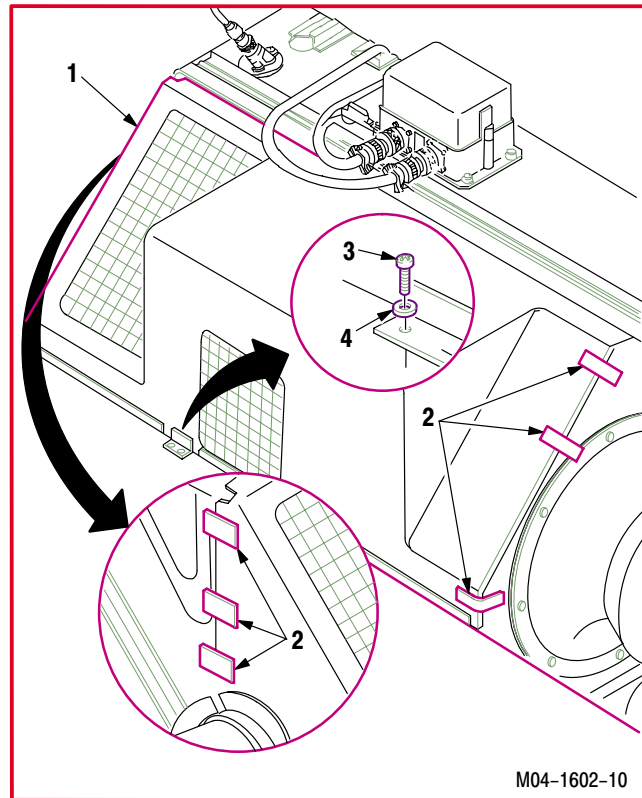
GO TO NEXT PAGE

1.26. APU OIL SYSTEM DRAINING AND SERVICING – continued

b. Secure panel (1).

- (1) Position panel (1) over APU.
- (2) Join hook and pile fasteners (2).
- (3) Install four screws (3) through four washers (4) into panel (1).

c. Secure access doors RN5, T250L, T250R, T290L, T290R, and L325 (para 2.2).



END OF TASK

**1.27. APU OIL SYSTEM SAMPLING**

1.27.1. Description

This task covers: Sampling.

1.27.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
 Chemical protective gloves (item 154, App H)

**References:**

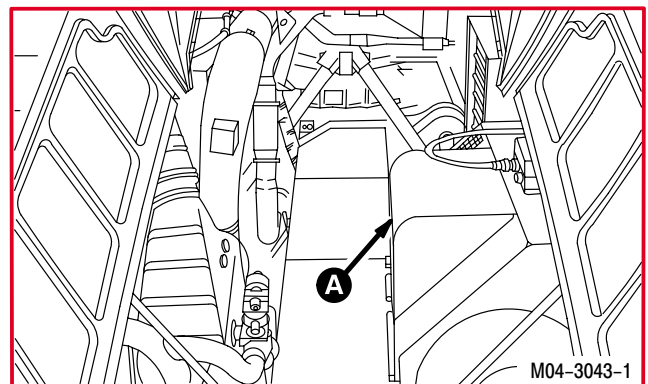
TB 43-0106

**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
2.2	Access doors T250L, T250R, T290L, T290R, and L325 opened

**Personnel Required:**

67R Attack Helicopter Repairer



GO TO NEXT PAGE



1.27. APU OIL SYSTEM SAMPLING – continued

1.27.3. Sampling

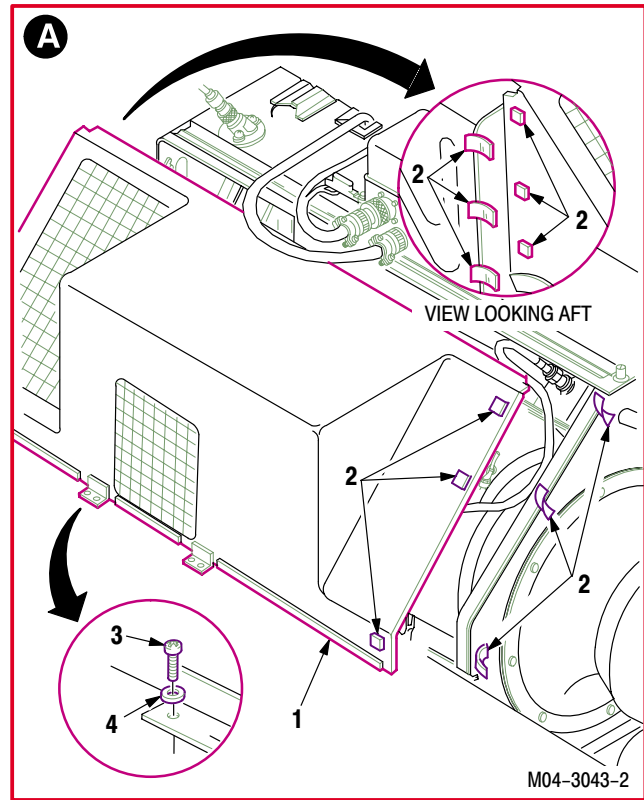
a. Remove panel (1).

- (1) Separate hook and pile fasteners (2).
- (2) Remove four screws (3) and washers (4).
- (3) Remove panel (1).



b. Obtain oil sample (TB 43-0106).

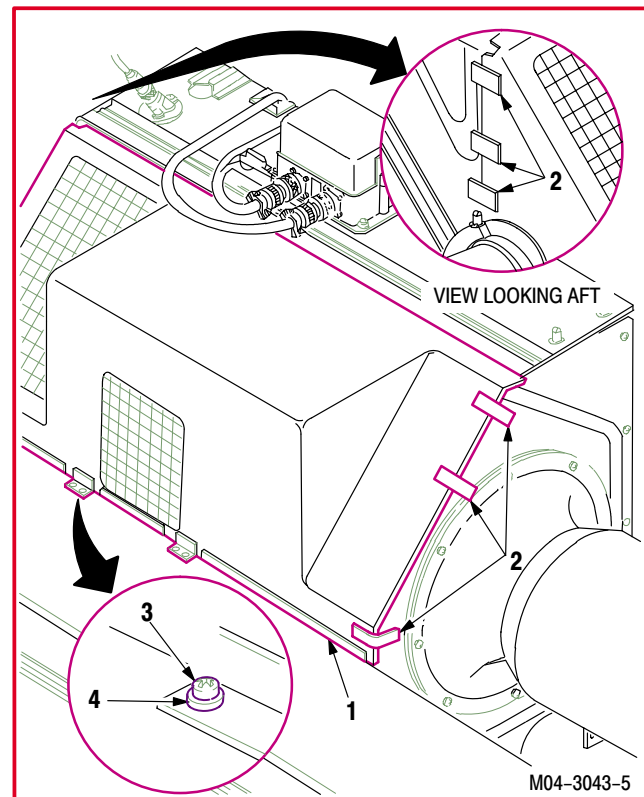
c. Service APU with oil (para 1.26).



d. Secure panel (1).

- (1) Position panel (1) over APU.
- (2) Join hook and pile fasteners (2).
- (3) Install four screws (3) through four washers (4) into panel (1).

e. Secure access doors T250L, T250R, T290L, T290R, and L325 (para 2.2).



END OF TASK

**1.27A. APU FUEL SYSTEM PRIMING**

1.27A.1. Description

This task covers: Priming.

1.27A.2. Initial Setup

**Tools:**

- Aircraft mechanic's tool kit (item 376, App H)
- Light duty laboratory apron (item 27, App H)
- Chemical protective gloves (item 154, App H)
- 14-quart utility pail (item 222, App H)
- Adjustable air filtering respirator (item 262, App H)
- APU fuel bleeder hose (item D-464, App D)

**Materials/Parts:**

- Petrolatum (item 138, App F)

**Personnel Required:**

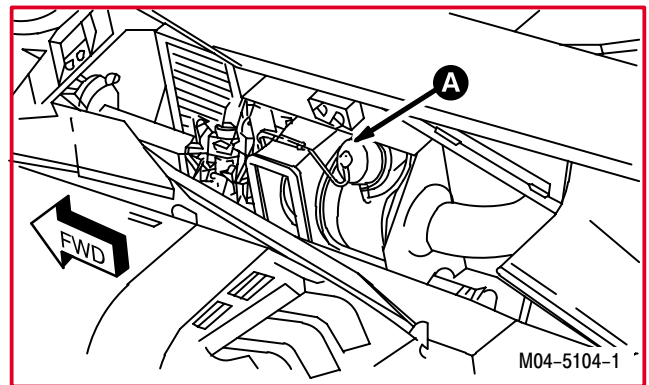
- 67R Attack Helicopter Repairer  
One person to assist
- 67R3F Attack Helicopter Repairer/Technical Inspector

**References:**

TM 1-1520-238-T

**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
15.41	APU enclosure removed



GO TO NEXT PAGE

1.27A. APU FUEL SYSTEM PRIMING – continued

1.27A.3. Priming



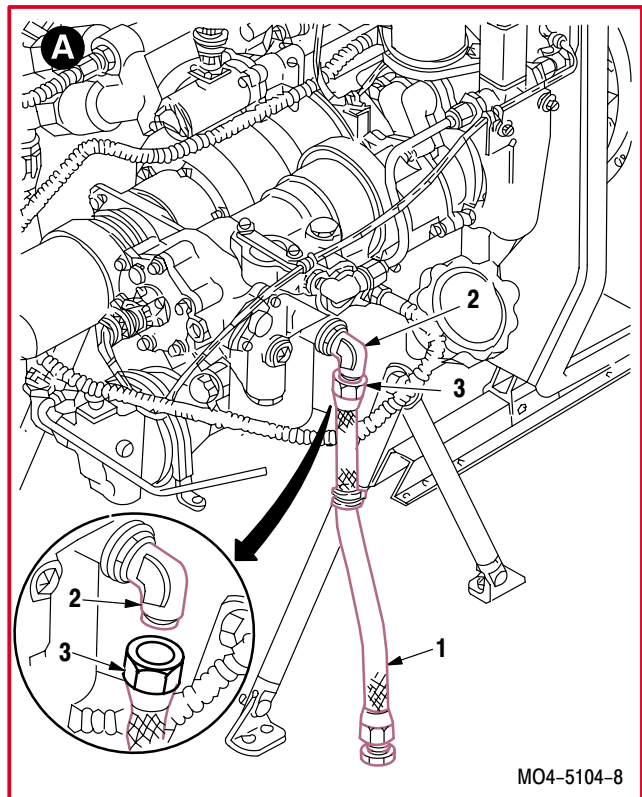
**WARNING**

- Fuel system priming shall not be performed during thunderstorms or possible lightning conditions.
- APU is easy to start. Disconnect battery and remove all electrical power before performing any maintenance in this area. If APU was to start, death or serious injury could result. If injury occurs, seek medical aid.

a. Remove APU fuel supply hose (1) from APU elbow (2).

(1) Hold elbow (2). Remove nut (3).

(2) Remove hose (1).

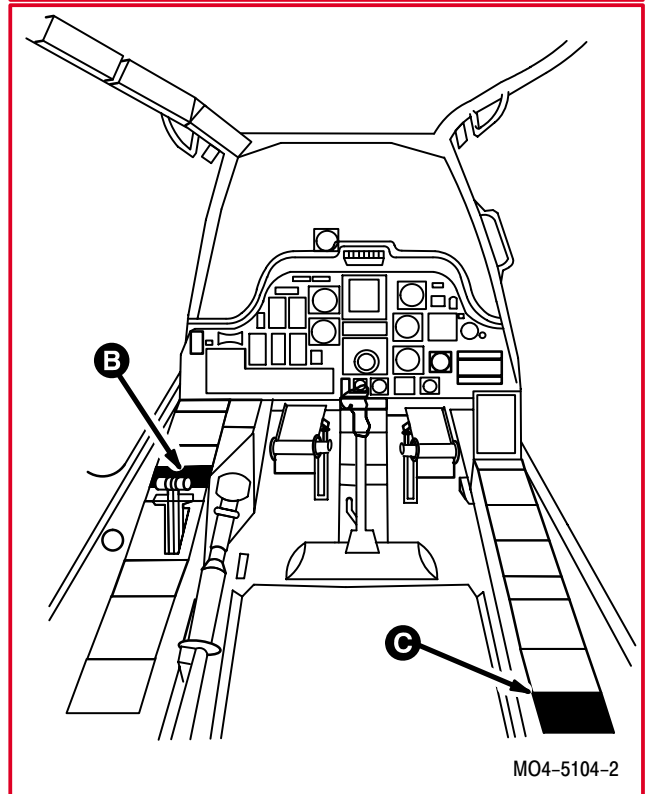
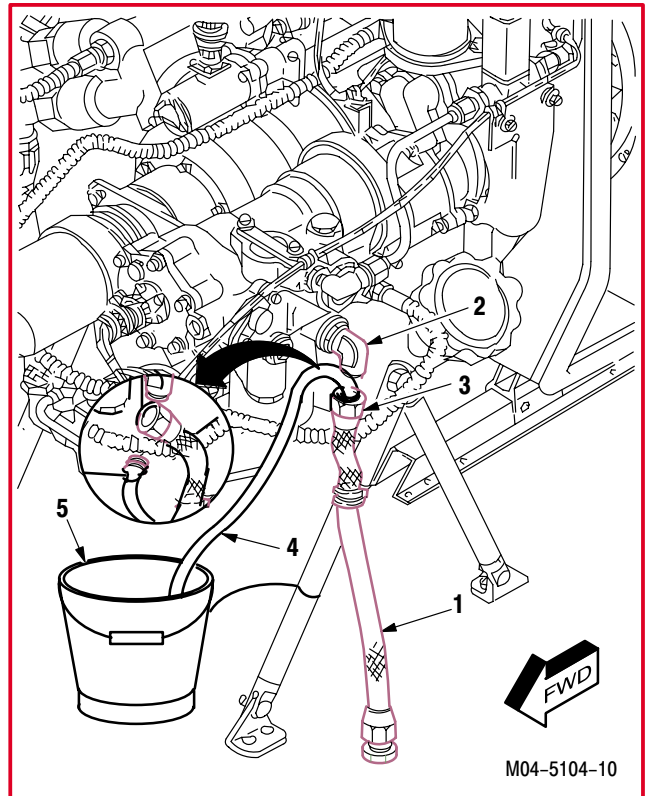


MO4-5104-8

GO TO NEXT PAGE

**1.27A. APU FUEL SYSTEM PRIMING – continued**

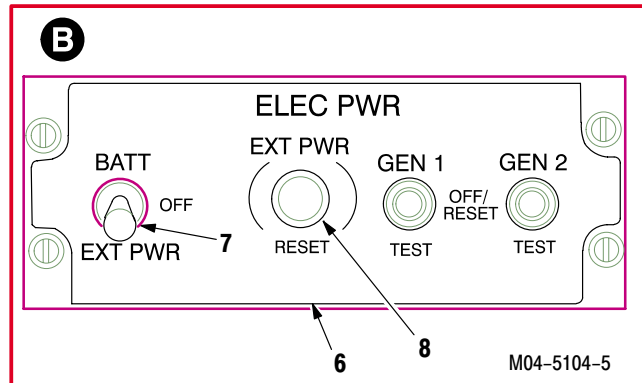
- b. **Install fuel bleeder hose (4) on open end of fuel supply hose (1).** Use APU fuel bleeder hose (item D-464, App D).
- c. **Place open end of fuel bleeder hose (4) in utility pail (5).** Use pail.
- (1) Ground pail (5) to airframe.
- d. **Apply external electrical power** (para 1.70).
- e. **Enter pilot station** (para 1.56). **Observe all safety precautions.**



GO TO NEXT PAGE

1.27A. APU FUEL SYSTEM PRIMING – continued

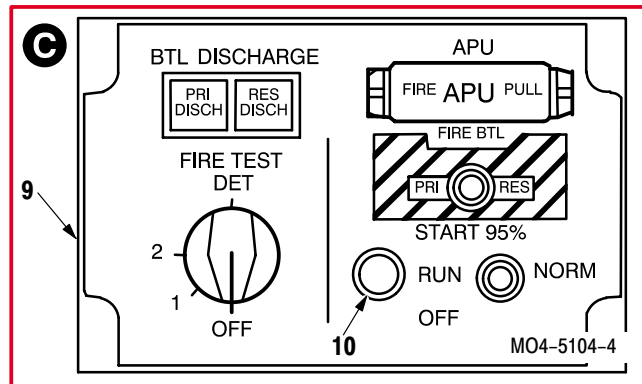
- f. On pilot ELEC PWR panel (6), select BATT/EXT PWR switch (7) to EXT PWR.
- g. On ELEC PWR panel (6), press EXT PWR RESET (8).



- h. On pilot APU FIRE TEST panel (9), hold APU RUN/START switch (10) to RUN position for 30 seconds.

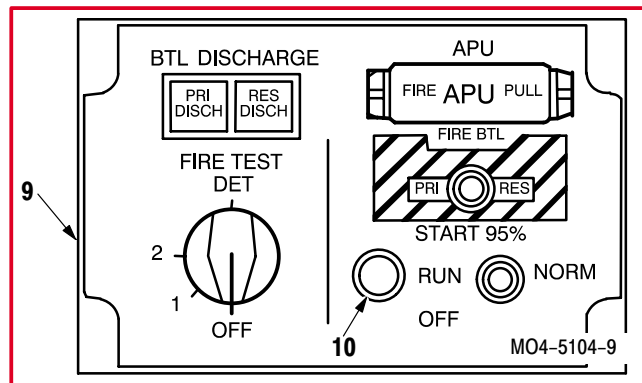
**NOTE**

No more than three 0.5 inch diameter bubbles allowed in APU bleeder hose during the thirty second RUN period.

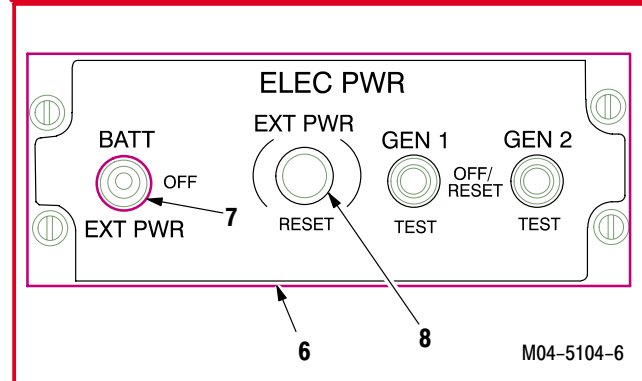


- i. Turn off power.

- (1) On pilot APU FIRE TEST panel (9), select pilot APU RUN/START switch (10) to OFF.



- (2) On pilot ELEC PWR panel (6), select BATT/EXT PWR switch (7) to OFF.



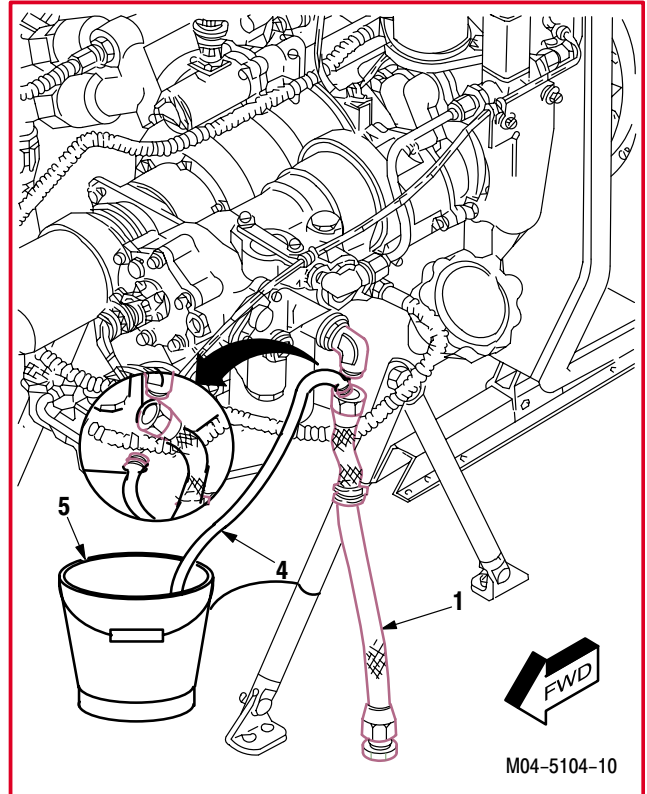
GO TO NEXT PAGE

## 1.27A. APU FUEL SYSTEM PRIMING – continued



## j. Install APU fuel supply hose (1) on APU elbow (2).

- (1) Remove APU fuel bleeder hose (4) from fuel supply hose (1).
- (2) Remove pail (5) from airframe ground.
- (3) Remove pail (5) and APU fuel bleeder hose (4) from helicopter.



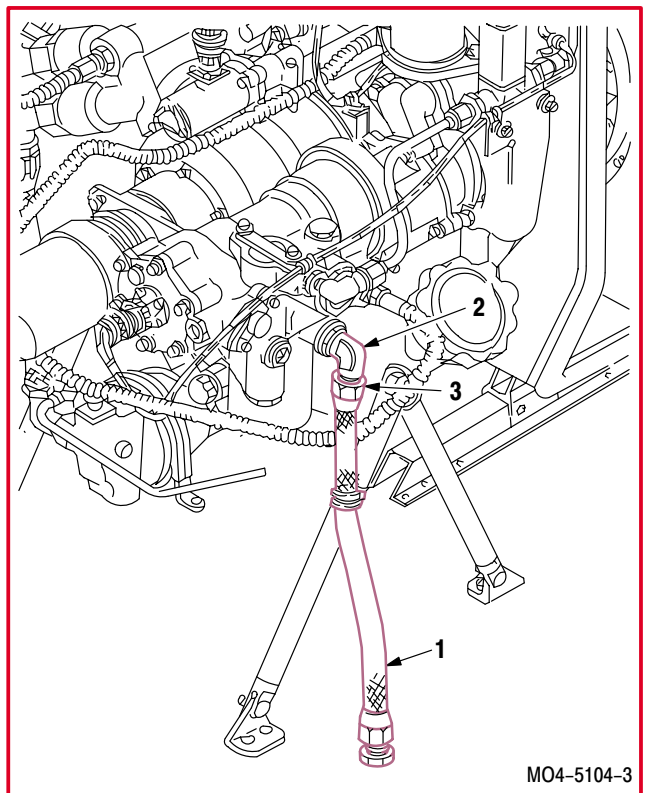
- (4) Lubricate threads of elbow (2). Use petroleum (item 138, App F).
- (5) Install fuel supply hose (1) on elbow (2).
- (6) Install nut (3).

## k. Inspect (QA).

## l. Perform auxiliary power unit maintenance operational check (TM 1-1520-238-T).

## m. Remove external electrical power (para 1.70).

## n. Install APU enclosure (para 15.41).



END OF TASK

**1.28. ENGINE NOSE GEARBOX SERVICING**

1.28.1. Description

This task covers: Servicing.

1.28.2. Initial Setup

**Tools:**

- Aircraft mechanic's tool kit (item 376, App H)
- Light duty laboratory apron (item 27, App H)
- Industrial faceshield (item 129, App H)
- 1-quart funnel (item 140, App H)
- Chemical protective gloves (item 154, App H)
- Lube drain kit (item 192, App H)
- 14-quart utility pail (item 222, App H)

**Materials/Parts:**

- Packing
- Lubricating oil (item 118, App F) or
- Lubricating oil (item 119, App F)

**Personnel Required:**

67R Attack Helicopter Repairer

**References:**

TB 55-9150-200-24

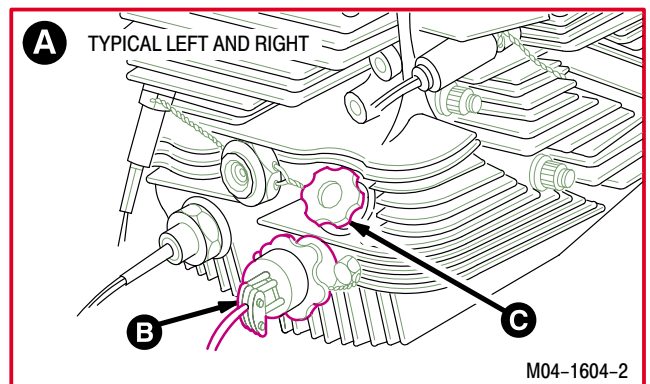
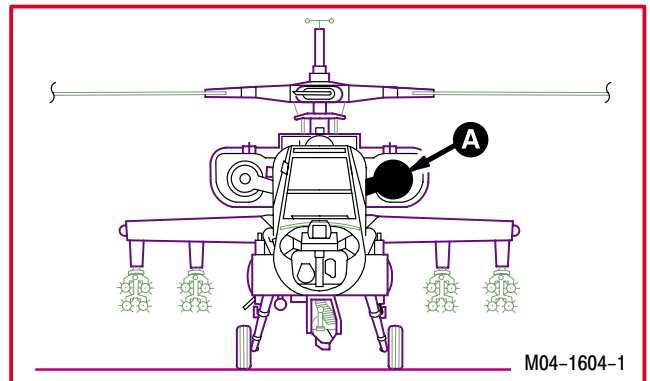
**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
2.2	Engine nose gearbox fairing LN6 or RN6 removed

1.28.3. Servicing

**NOTE**

- The level in the sight indicator may appear high immediately after shut-down. Wait 15 minutes after shutdown for NGB oil level to stabilize.
- Add oil to NGB only if the level in the sight indicator is at or below the quarter level on the sight indicator (one quarter level is 0.18 inch above the bottom of sight indicator).
- Refer to TB 55-9150-200-24 for conversion of oils MIL-L-23699 and MIL-L-7808. Failure to perform the required checks and services can result in contamination of the affected oil system.
- This task is typical for left and/or right engine nose gearbox.

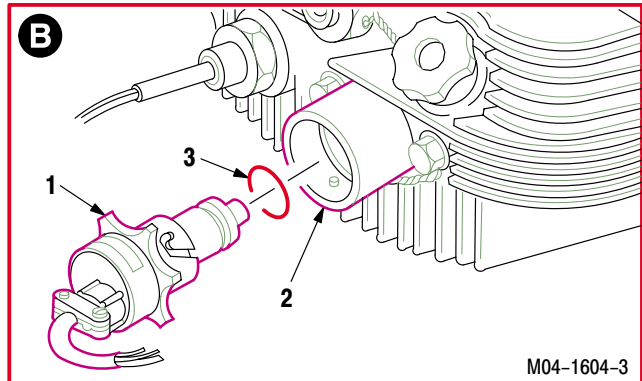


GO TO NEXT PAGE

1.28. ENGINE NOSE GEARBOX SERVICING – continued

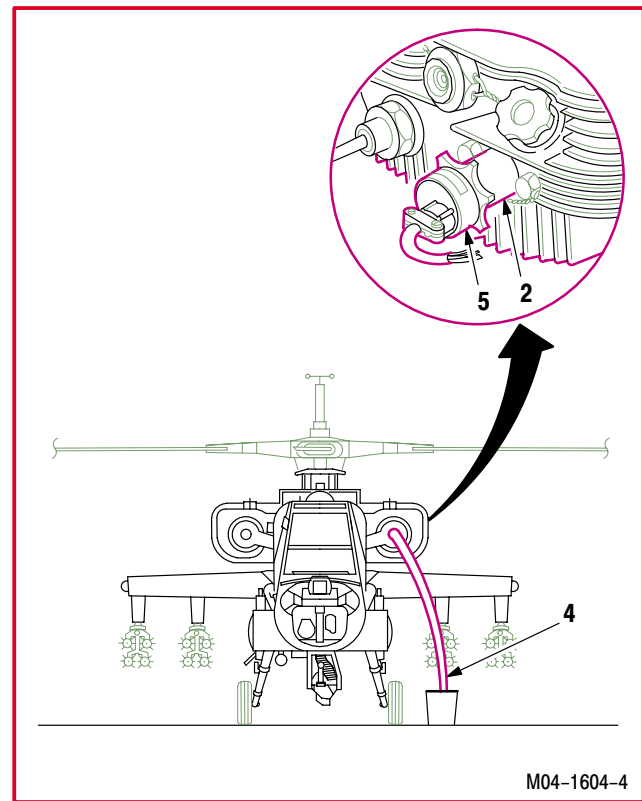
a. Remove chip detector probe (1) from gearbox (2).

- (1) Place rags to catch spills.
- (2) Push in on probe (1) and turn counterclockwise to remove.
- (3) Remove and discard packing (3) from probe (1).



b. Drain oil from gearbox (2).

- (1) Place end of drain hose (4) in pail.
- (2) Push drain hose (4) adapter (5) into gearbox (2). Turn adapter (5) clockwise to lock.
- (3) Drain all oil from gearbox (2).
- (4) Push adapter (5) and turn counterclockwise to remove.



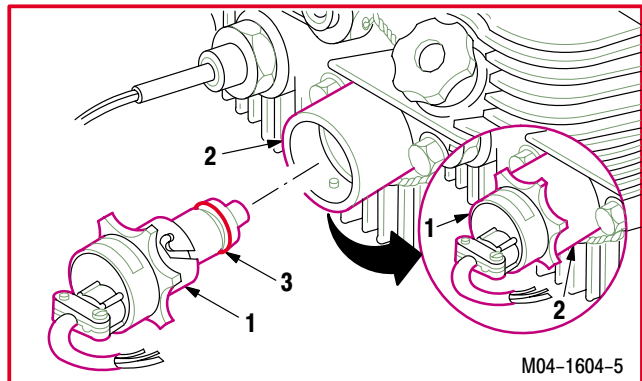
c. Install probe (1) in gearbox (2).

- (1) Lubricate new packing (3). Use lubricating oil (item 118, App F) or lubricating oil (item 119, App F).
- (2) Install packing (3) on probe (1).

**NOTE**

Probe is properly installed when knurl tips align with hex points.

- (3) Insert probe (1) into gearbox (2). Turn probe (1) clockwise to lock.



GO TO NEXT PAGE



## 1.28. ENGINE NOSE GEARBOX SERVICING – continued

**CAUTION**

Do not mix lubricating oil (item 118, App F) with lubricating oil (item 119, App F) except in an emergency. The system must be drained and refilled with the proper oil as soon as possible if it becomes necessary to mix oils.

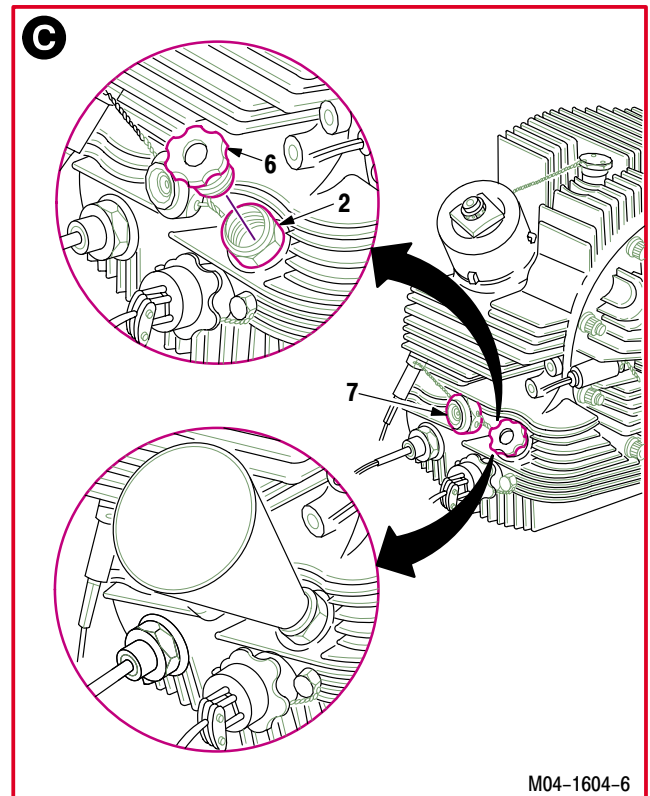
- d. **Fill gearbox (2) with new oil.** Use lubricating oil (item 118, App F), or lubricating oil (item 119, App F).

- (1) Push on filler cap (6). Turn cap (6) counter-clockwise to remove.

**NOTE**

- To prevent overservicing, wait 15 minutes after shutdown for oil level to stabilize.
  - Add oil only if the level in the sight indicator is at or below the one-quarter level.
  - Four ounces of oil will raise the level in the sight indicator one-quarter (0.18 inch). Gearbox is full when oil level is at center of sight indicator.
- (2) Add lubricating oil (item 118, App F) or lubricating oil (item 119, App F) until sight indicator (7) shows oil level is at center. Use funnel (8).
- (3) Push on filler cap (6) and turn clockwise to lock.

- e. **Install engine nose gearbox fairing LN6 or RN6** (para 2.2).



M04-1604-6

END OF TASK

**1.29. ENGINE NOSE GEARBOX OIL SAMPLING**

1.29.1. Description

This task covers: Sampling.

1.29.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
 Light duty laboratory apron (item 27, App H)  
 Industrial faceshield (item 129, App H)  
 Chemical protective gloves (item 154, App H)  
 Lube drain kit (item 192, App H)

**Personnel Required:**

67R Attack Helicopter Repairer

**References:**

TB 43-0106

**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
2.2	Engine nose gearbox fairing LN6 or RN6 removed

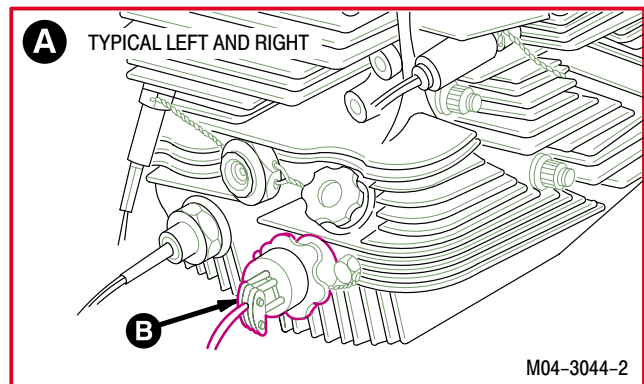
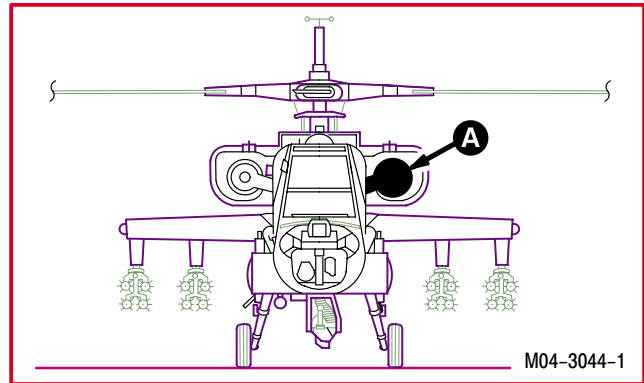
**Materials/Parts:**

Lubricating oil (item 118, App F) or  
 Lubricating oil (item 119, App F)

1.29.3. Sampling

**NOTE**

This task is typical for left and/or right engine nose gearbox.

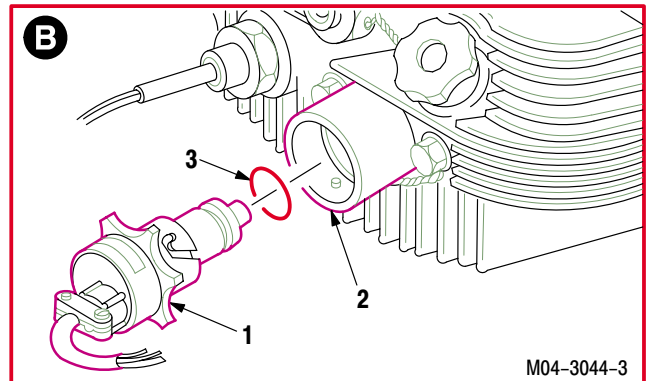


GO TO NEXT PAGE

**1.29. ENGINE NOSE GEARBOX OIL SAMPLING – continued**

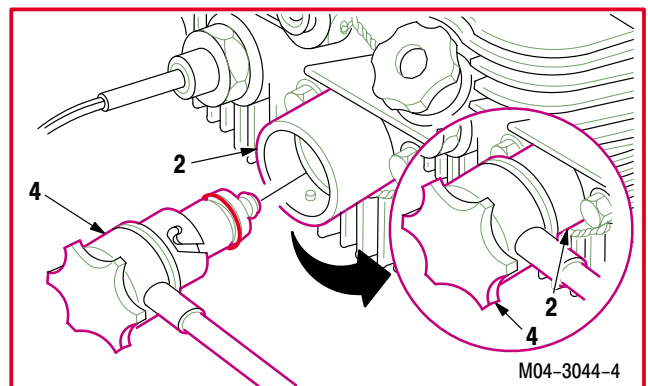
**a. Remove chip detector probe (1) from gearbox (2).**

- (1) Place rags to catch spills.
- (2) Push on probe (1) and turn counterclockwise to remove.
- (3) Remove and discard packing (3) from probe (1).



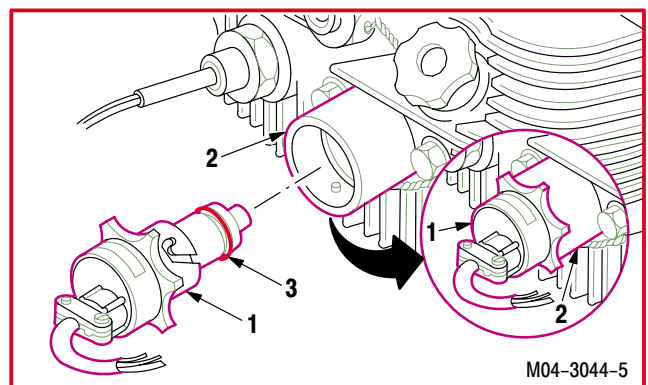
**b. Obtain oil sample (TB 43-0106).**

- (1) Insert drain adapter (4) into nose gearbox (2) and turn clockwise to lock.
- (2) Obtain oil sample.
- (3) Push on drain adapter (4) and turn counterclockwise 1/4-turn to remove.



**c. Install probe (1) in gearbox (2).**

- (1) Lubricate new packing (3). Use lubricating oil (item 118, App F) or lubricating oil (item 119, App F).
- (2) Install packing (3) on probe (1).
- (3) Push probe (1) into gearbox (2). Turn probe (1) clockwise to lock.



**NOTE**

Probe is properly installed when knurl tips align with hex points.

**d. Check oil level in engine nose gearbox and add oil if necessary (para 1.28).**

**e. Install engine nose gearbox fairing LN6 and RN6 (para 2.2).**

END OF TASK

**1.30. INTERMEDIATE GEARBOX SERVICING – GREASE**

1.30.1. Description

This task covers: Servicing.

1.30.2. Initial Setup

**Tools:**

- Aircraft mechanic's tool kit (item 376, App H)
- 1 5/16 x 3/8-inch drive open end socket wrench crow-foot attachment (item 95, App H)
- Hand lubricating gun (item 205, App H)
- Adjustable air filtering respirator (item 262, App H)
- 0 - 75 inch-pound 1/4-inch drive dial indicator torque wrench (item 446, App H)
- Intermediate gearbox and tail rotor service tool (figure D-462, App D)

**Personnel Required:**

- 67R Attack Helicopter Repairer
- 67R3F Attack Helicopter Repairer/Technical Inspector

**Equipment Conditions:**

**Materials/Parts:**

- Packing
- Grease (item 91, App F)

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
2.2	Access fairings L510 and R510 removed

**CAUTION**

Helicopter must be on level surface with both main landing gears equal for proper servicing. To prevent overfilling or underfilling the gearbox, wait 10 minutes after rotor shutdown before checking.

GO TO NEXT PAGE

## 1.30. INTERMEDIATE GEARBOX SERVICING – GREASE – continued

### 1.30.3. Servicing

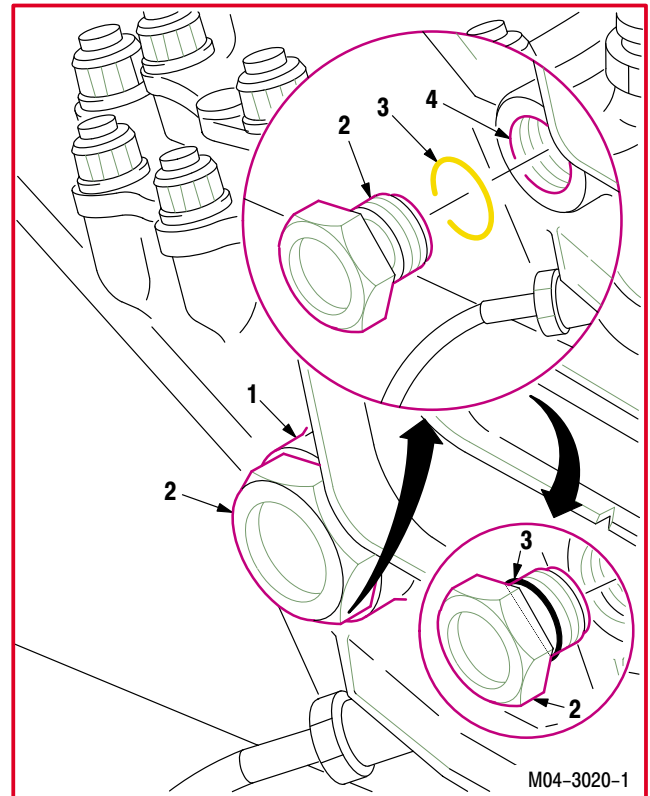


a. **Service intermediate gearbox (1).** Torque filler plug (2) to **40 INCH-POUNDS**.

- (1) Remove plug (2) from gearbox (1).
- (2) Remove and discard packing (3).
- (3) Check grease level. Use service tool.
  - (a) Insert tool with level markings pointing down and handle touching bottom of filler hole.
  - (b) Level must be within the indicated intermediate (I) **0.25 INCH** marking.
- (4) Add grease (item 91, App F) as necessary to fill to indicated intermediate (I) **0.25 INCH** markings on tool. Use hand lubricating gun.
- (5) Install new packing (3) on plug (2).
- (6) Install plug (2) in filler plug hole (4).
- (7) Torque plug (2) to **40 INCH-POUNDS**. Use torque wrench, crowfoot, and adapter.

b. **Inspect (QA).**

c. **Install access fairings L510 and R510** (para 2.2).



END OF TASK

**1.31. TAIL ROTOR GEARBOX SERVICING – GREASE**

1.31.1. Description

This task covers: Servicing.

1.31.2. Initial Setup

**Tools:**

- Aircraft mechanic's tool kit (item 376, App H)
- 1 5/16 x 3/8-inch drive open end socket wrench crow-foot attachment (item 95, App H)
- Hand lubricating gun (item 205, App H)
- Adjustable air filtering respirator (item 262, App H)
- 0 - 75 inch-pound 1/4-inch drive dial indicator torque wrench (item 446, App H)
- Intermediate gearbox and tail rotor service tool (figure D-462, App D)

**Personnel Required:**

- 67R Attack Helicopter Repairer
- 67R3F Attack Helicopter Repairer/Technical Inspector

**Equipment Conditions:**

**Materials/Parts:**

- Packing
- Grease (item 91, App F)

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
2.2	Access fairing L540 removed

**CAUTION**

Helicopter must be on level surface with both main landing gears equal for proper servicing. To prevent overfilling or underfilling the gearbox, wait 10 minutes after rotor shutdown before checking.

GO TO NEXT PAGE

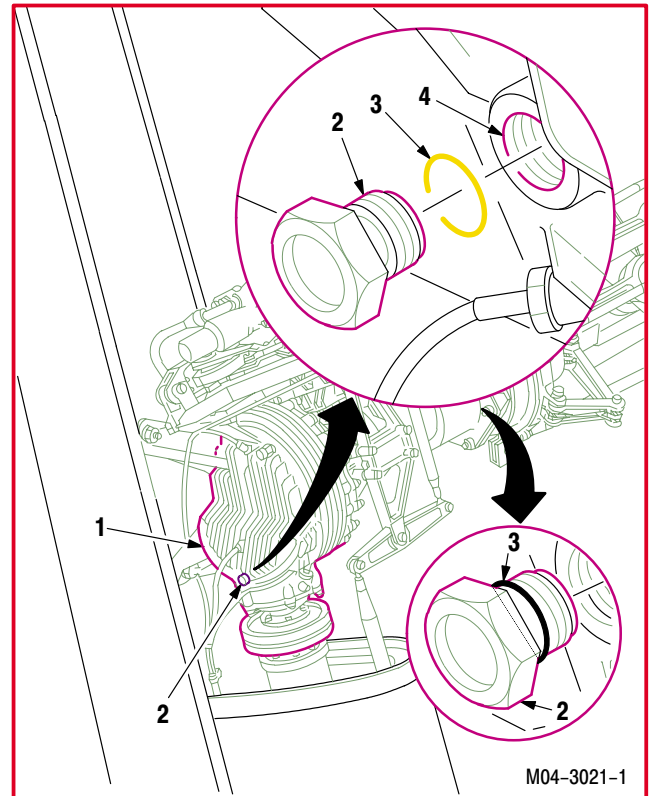
## 1.31. TAIL ROTOR GEARBOX SERVICING – GREASE – continued

### 1.31.3. Servicing



#### a. Service tail rotor gearbox (1). Torque filler plug (2) to **40 INCH-POUNDS**.

- (1) Remove plug (2) from gearbox (1).
- (2) Remove and discard packing (3).
- (3) Check grease level. Use service tool.
  - (a) Insert tool with level markings pointing down and handle touching bottom of filler hole.
  - (b) Level must be within the indicated tail rotor (TR) **0.50 INCH** marking.
- (4) Add grease (item 91, App F) as necessary to fill to the indicated tail rotor (TR) **0.50 INCH** markings on tool. Use hand lubricating gun.
- (5) Install new packing (3) on plug (2).
- (6) Install plug (2) in filler plug hole (4).
- (7) Torque plug (2) to **40 INCH-POUNDS**. Use torque wrench, crowfoot, and adapter.



#### b. Inspect (QA).

#### c. Install access fairing L540 (para 2.2).

END OF TASK

**1.32. MAIN TRANSMISSION OIL SYSTEM DRAINING, FLUSHING, AND SERVICING**

1.32.1. Description

This task covers: Draining. Flushing. Servicing.

1.32.2. Initial Setup

**Tools:**

- Aircraft mechanic's tool kit (item 376, App H)
- Light duty laboratory apron (item 27, App H)
- Industrial faceshield (item 129, App H)
- 1-quart funnel (item 140, App H)
- Chemical protective gloves (item 154, App H)
- Lube drain kit (item 192, App H)
- 14-quart utility pail (item 222, App H)

**Materials/Parts:**

- Packing (2)
- Lubricating oil (item 118, App F) or
- Lubricating oil (item 119, App F) or

**Personnel Required:**

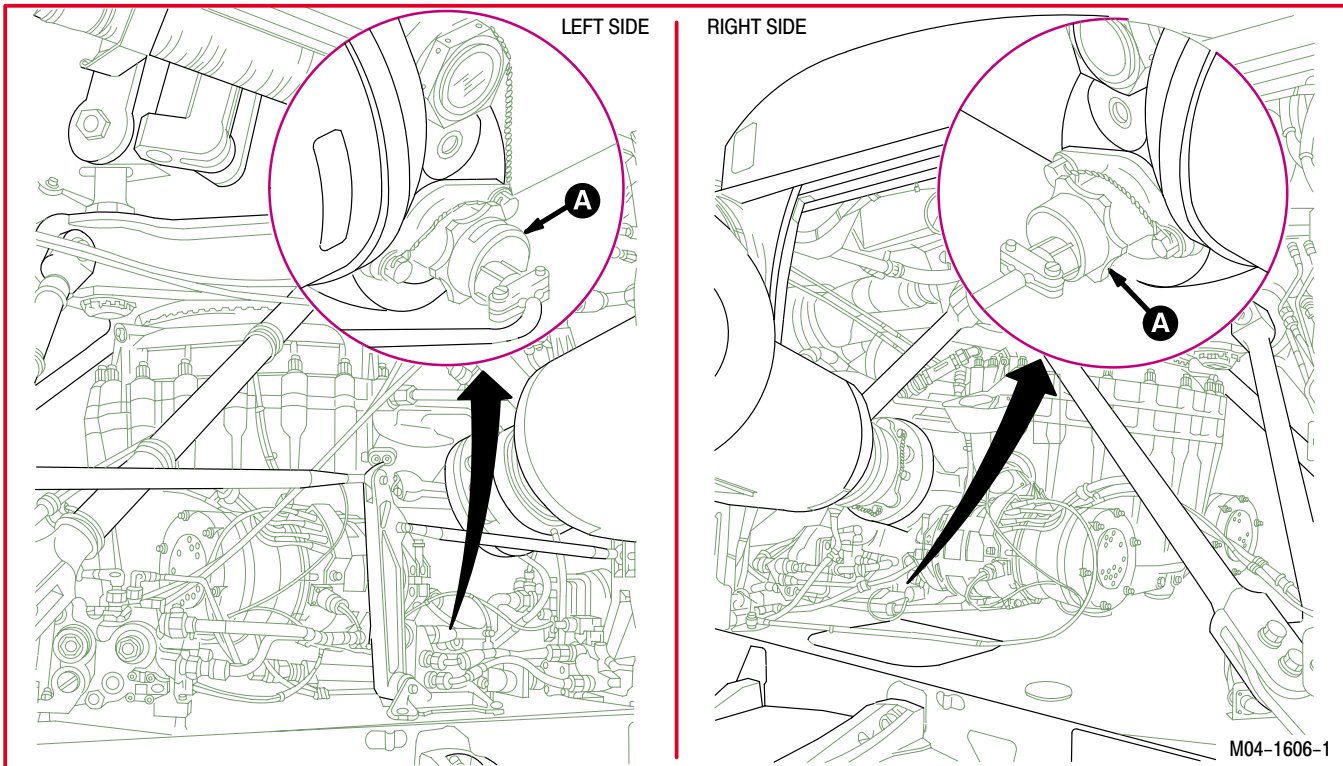
- 67R Attack Helicopter Repairer
- One person to assist

**References:**

TB 55-9150-200-24

**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
2.2	Access panels L200 and R200 removed



GO TO NEXT PAGE



**1.32. MAIN TRANSMISSION OIL SYSTEM DRAINING, FLUSHING, AND SERVICING – continued**

**NOTE**

- Drain and flush transmission oil from left and right chip detector housings at the same time.
- This task is typical for left and right sides of main transmission.

1.32.3. Draining

**a. Remove transmission chip detector probe (1) from housing (2).**

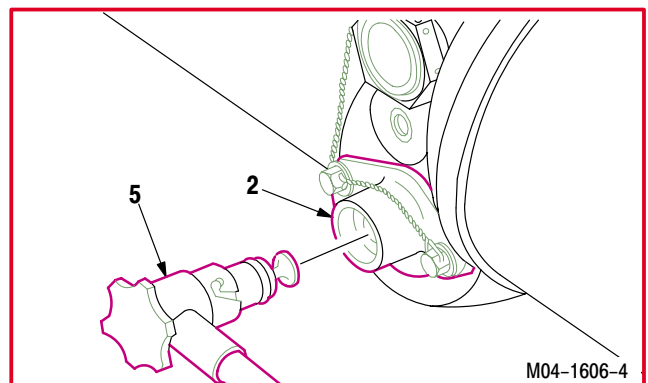
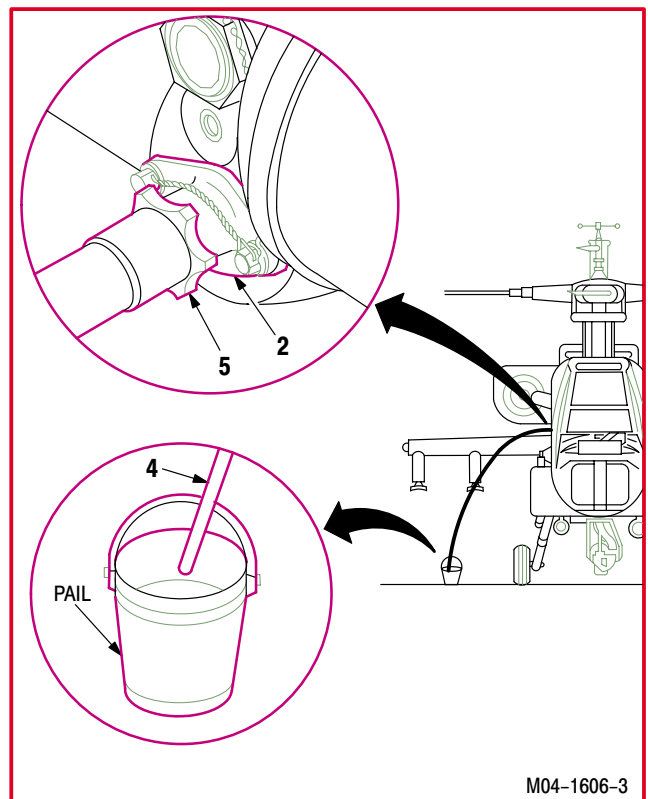
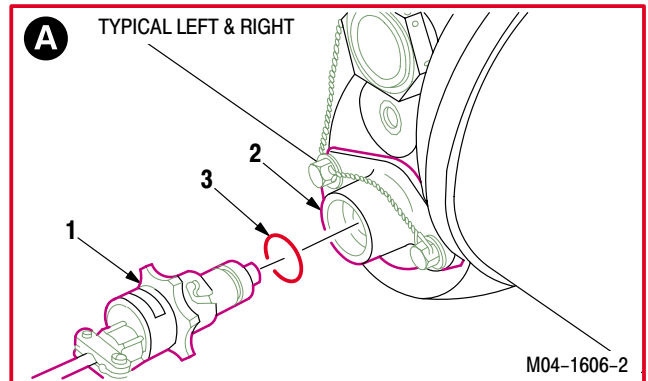
- (1) Place rags under housing (2) to catch spilled oil.
- (2) Push in probe (1) and turn counterclockwise. Pull out of housing (2).
- (3) Remove and discard packing (3).

**b. Drain transmission oil.**

- (1) Place free end of lube drain kit hose (4) in pail.
- (2) Insert lube drain kit hose adapter probe (5) in housing (2).
- (3) Push in probe (5) and turn clockwise until locked.
- (4) Allow transmission oil to drain.

**c. Remove lube drain kit hose probe (5) from housing (2).**

- (1) Push in hose probe (5), turn counterclockwise and pull remove from housing (2).



GO TO NEXT PAGE

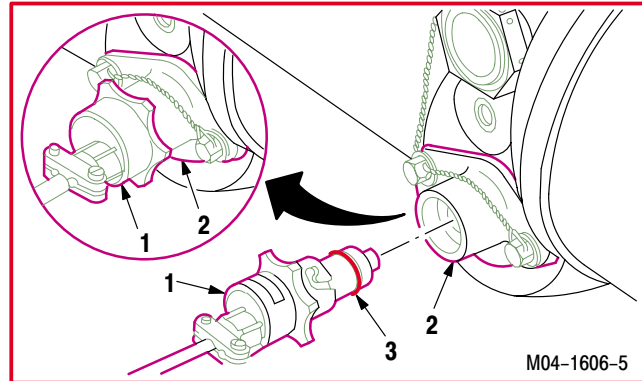
1.32. MAIN TRANSMISSION OIL SYSTEM DRAINING, FLUSHING, AND SERVICING – continued

1.32.4. Flushing



a. Install probe (1) in housing (2).

- (1) Lubricate new packing (3). Use lubricating oil (item 118, App F) or lubricating oil (item 119, App F).
- (2) Install new packing (3) on probe (1).
- (3) Insert probe (1) into housing (2).
- (4) Push probe (1) in and turn clockwise until locked in housing (2).

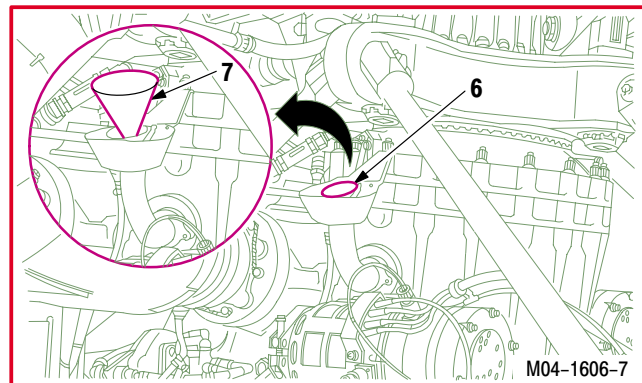


**NOTE**

Probe is properly installed when knurled tips align with hex points.

b. Flush main transmission oil system. Use lubricating oil (item 118, App F) or lubricating oil (item 119, App F).

- (1) Open filler cap (6) on right side of transmission.
- (2) Fill transmission with 24 quarts of oil. Use funnel (7) and lubricating oil (item 118, App F) or lubricating oil (item 119, App F).



c. Repeat main transmission draining steps in paragraph 1.32.3.

GO TO NEXT PAGE

---

**1.32. MAIN TRANSMISSION OIL SYSTEM DRAINING, FLUSHING, AND SERVICING – continued**

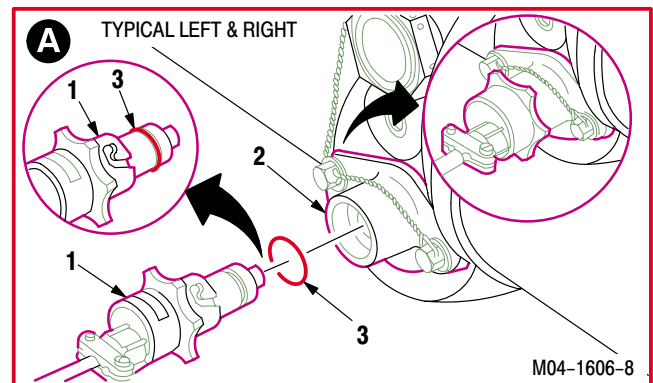

---

**NOTE**

Refer to TB 55-9150-200-24 for conversion of oils MIL-L-23699 and MIL-L-7808. Failure to perform the required checks and services can result in contamination of the affected oil system.

1.32.5. Servicing**a. Install probe (1) in housing (2).**

- (1) Lubricate new packing (3). Use lubricating oil (item 118, App F) or lubricating oil (item 119, App F).
- (2) Install new packing (3) on probe (1).
- (3) Insert probe (1) into housing (2).
- (4) Push probe (1) in and turn clockwise until locked in housing (2).

**NOTE**

Probe is properly installed when knurled tips align with hex points.

GO TO NEXT PAGE

1.32. MAIN TRANSMISSION OIL SYSTEM DRAINING, FLUSHING, AND SERVICING – continued

**CAUTION**

- Do not mix lubricating oil (item 118, App F) with lubricating oil (item 119, App F) except in an emergency. The system must be drained and refilled with the proper oil as soon as possible if it becomes necessary to mix oils.
- Helicopter must be on level surface with both main landing gears equal for proper servicing. To prevent overfilling or under filling the gearbox, wait 15 minutes after rotor shutdown before checking.

b. **Service main transmission with oil.** Use lubricating oil (item 118, App F) or lubricating oil (item 119, App F).

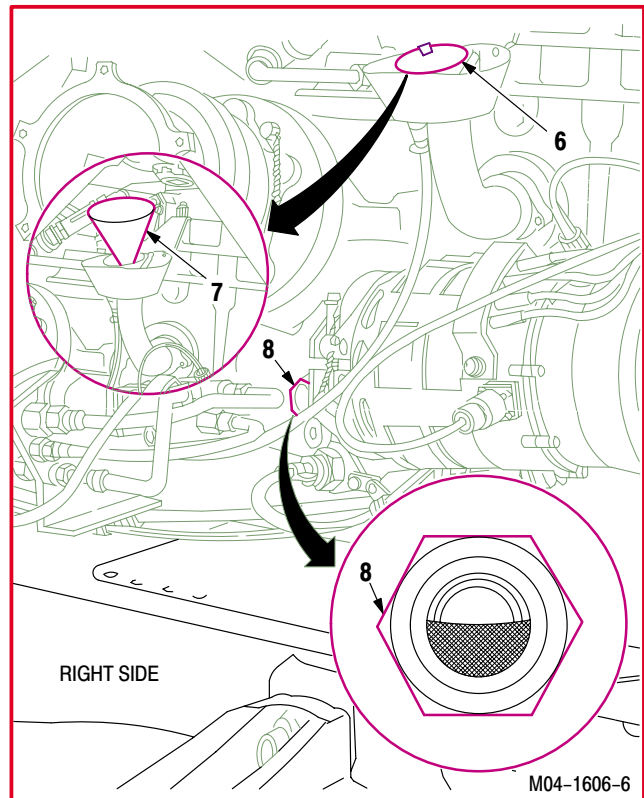
- (1) Open filler cap (6).
- (2) Add lubricating oil (item 118, App F) or lubricating oil (item 119, App F). Use funnel (7).

**NOTE**

Servicing is complete when oil level is in center of both left and right sight indicators (8).

- (3) Remove funnel (7). Close filler cap (6).

c. **Install access panels L200 and R200** (para 2.2).



END OF TASK

### 1.33. MAIN TRANSMISSION OIL SAMPLING

#### 1.33.1. Description

This task covers: Sampling.

#### 1.33.2. Initial Setup

##### **Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
 Light duty laboratory apron (item 27, App H)  
 Industrial faceshield (item 129, App H)  
 1-quart funnel (item 140, App H)  
 Chemical protective gloves (item 154, App H)  
 Lube drain kit (item 192, App H)

##### **Materials/Parts:**

Packing  
 Lubricating oil (item 119, App F)

##### **Personnel Required:**

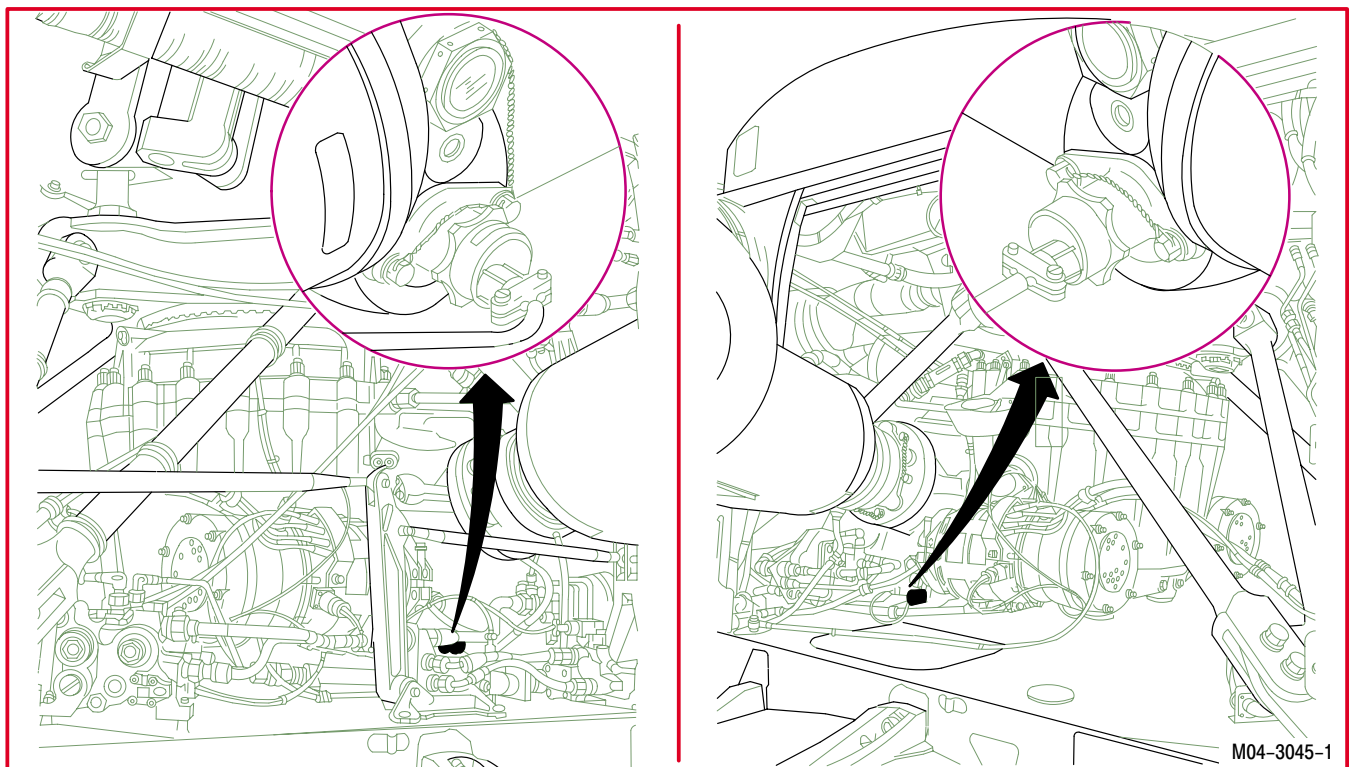
67R Attack Helicopter Repairer

##### **References:**

TB 43-0106

##### **Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
2.2	Access panels L200 and R200 removed



GO TO NEXT PAGE

1.33. MAIN TRANSMISSION OIL SAMPLING – continued

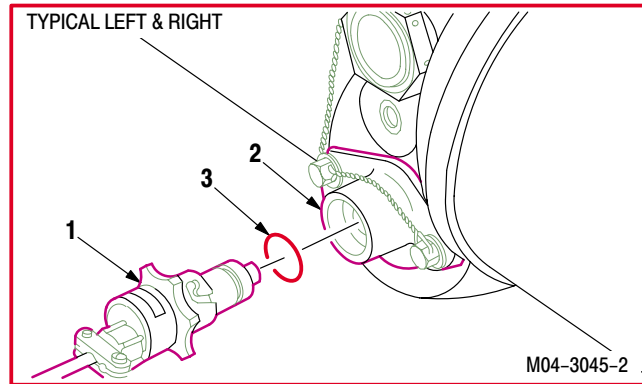
**NOTE**

This task is typical for left and right main transmission sumps.

1.33.3. Sampling

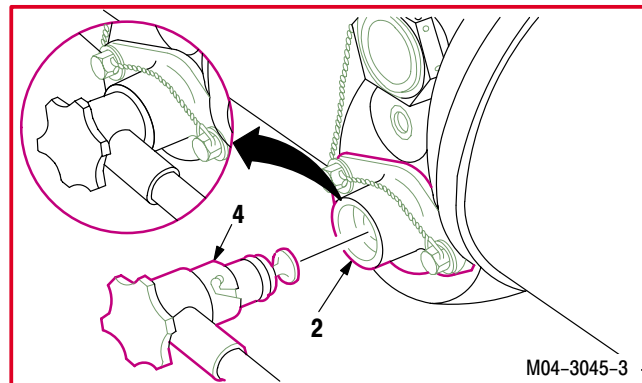
a. **Remove transmission chip detector probe (1) from housing (2).**

- (1) Place rags under housing (2) to catch spilled oil.
- (2) Push probe (1) in and turn counterclockwise and pull out of housing (2).
- (3) Remove and discard packing (3).



b. **Obtain oil sample** (TB 43-0106).

- (1) Insert lube drain kit (4) into transmission chip detector housing (2) and turn clockwise to lock.
- (2) Obtain oil sample.
- (3) Push on lube drain kit (4) and turn counterclockwise to remove.
- (4) Wipe up any spilled oil.



GO TO NEXT PAGE

---

**1.33. MAIN TRANSMISSION OIL SAMPLING – continued**

---

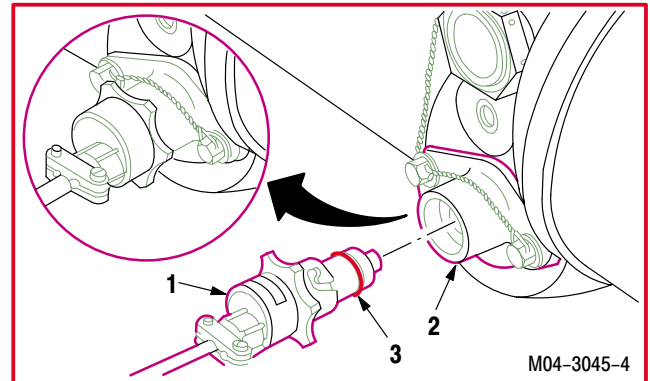
**c. Install probe (1) in housing (2).**

- (1) Lubricate new packing (3). Use lubricating oil (item 119, App F).
- (2) Install packing (3) on probe (1).
- (3) Insert probe (1) into housing (2).
- (4) Push probe (1) in and turn clockwise 1/4-turn until locked in housing (2).

**NOTE**

Probe is properly installed when knurl tips align with hex points.

- d. **Wipe up any spilled oil** (para 1.47).
- e. **Service transmission with oil** (para 1.32).
- f. **Install access panels L200 and R200** (para 2.2).



END OF TASK

**1.34. HYDRAULIC SYSTEMS SERVICING – FLUID**

1.34.1. Description

This task covers: Servicing.

1.34.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
 Fluid service unit (item 137, App H)

**References:**

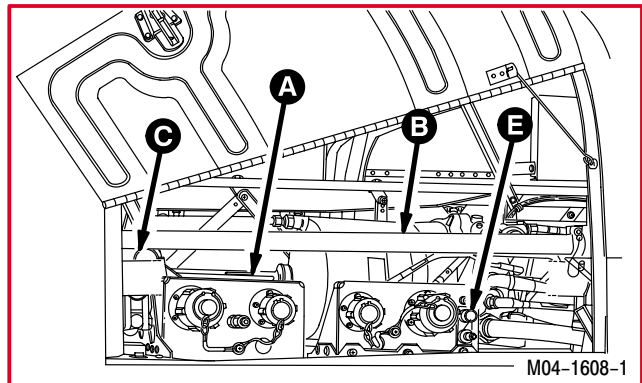
TM 1-1520-238-T

**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
1.36	Utility hydraulic accumulator serviced with nitrogen
1.37	Utility hydraulic return accumulator serviced with nitrogen
2.2	Access doors L190 and R325 opened

**Personnel Required:**

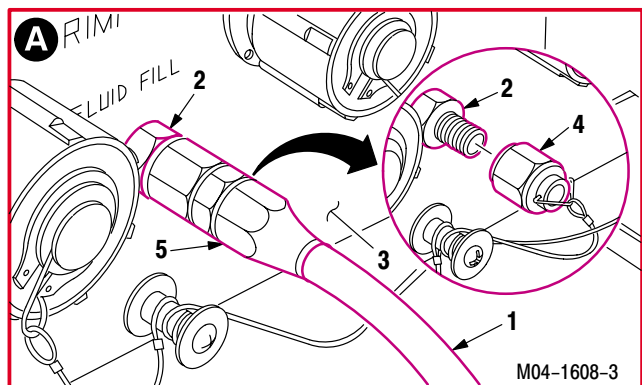
67R      Attack Helicopter Repairer  
           One person to assist



1.34.3. Servicing

a. **Connect fluid service unit hose (1) to fluid fill union (2) on primary service panel (3).**

- (1) Hold union (2). Remove dust cap (4).
- (2) Install hose (1) with adapter (5) on union (2).



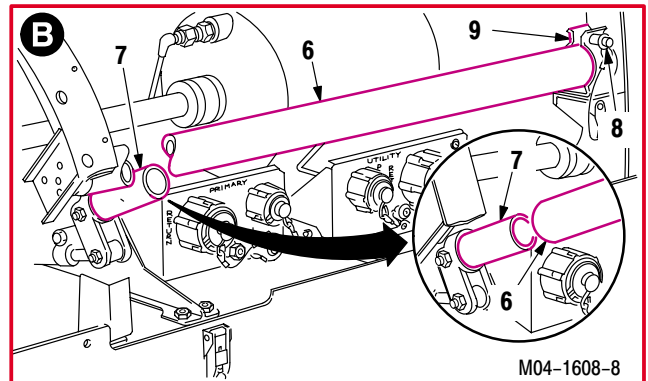
GO TO NEXT PAGE



1.34. HYDRAULIC SYSTEMS SERVICING – FLUID – continued

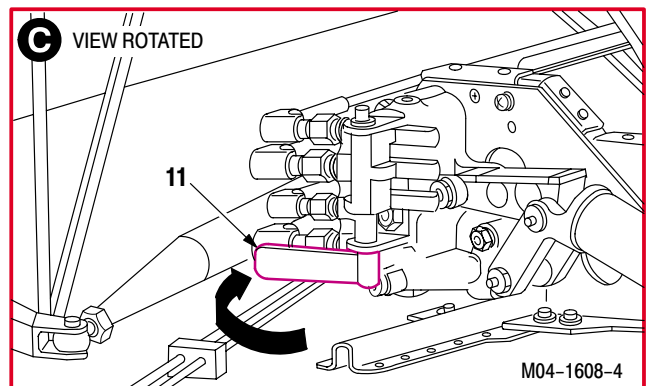
b. Install pump handle (6) on bellcrank (7).

- (1) Remove retaining pin (8) from clip (9).
- (2) Remove handle (6) from clip (9).
- (3) Slide handle (6) over bellcrank (7).



c. Service primary manifold reservoir (10).

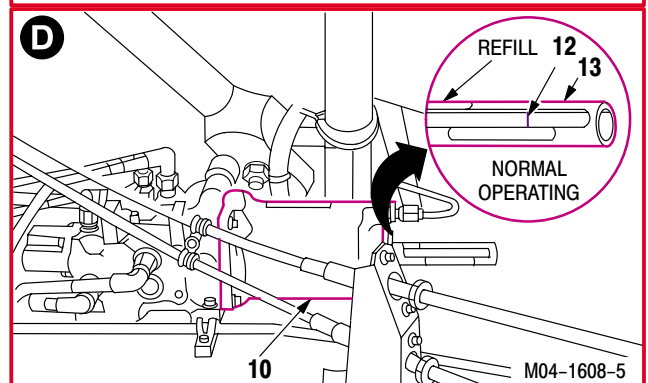
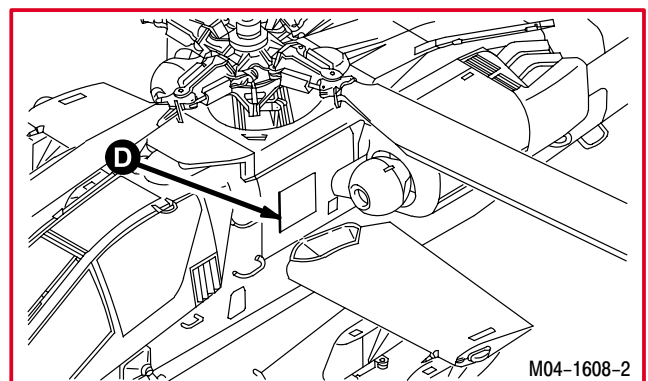
- (1) Move pump selector lever (11) to primary position (inboard).



**NOTE**

Maximum external leakage when operating hand pump is one drop per twenty-five cycles at the piston cylinder.

- (2) Fill reservoir (10) by pumping handle (6) until piston (12) appears in normal operating range of sight indicator (13). Check cylinder for leakage.
- (3) Verify indicator (13) reading.
- (4) If indicator (13) exceeds normal operating range, go to step e.

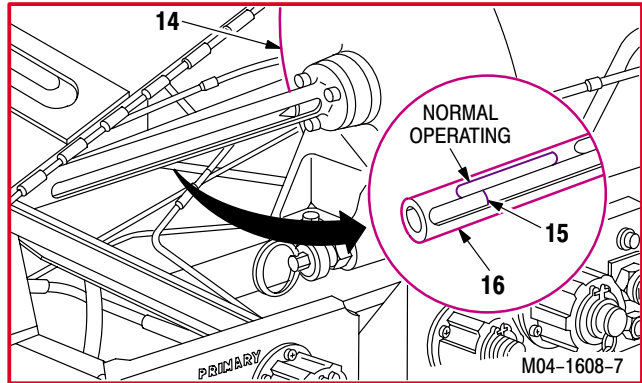


GO TO NEXT PAGE

1.34. HYDRAULIC SYSTEMS SERVICING – FLUID – continued

d. Service utility manifold reservoir (14).

- (1) Position lever (11) to utility position (out-board).
- (2) Fill reservoir (14) by pumping handle (6) until piston (15) appears in normal operating range of indicator (16). Check cylinder for leakage.
- (3) Verify indicator (16) reading.

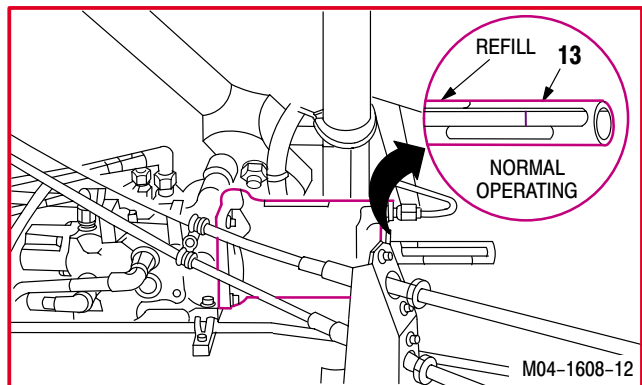
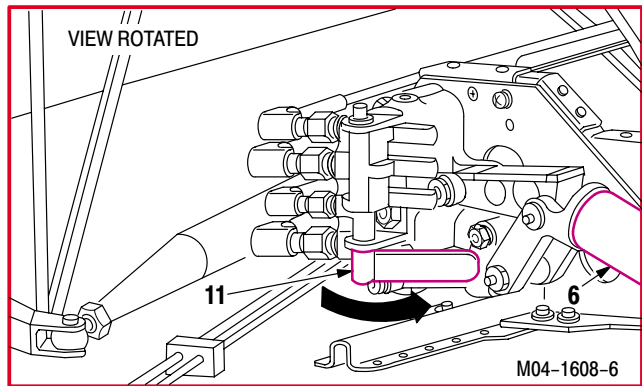


e. If indicator (13) or (16) exceeds normal operating range:

**NOTE**

This task forces excess fluid into fluid service unit.

- (1) For indicator (13), apply primary hydraulic power (para 1.72). For indicator (16), apply utility hydraulic power (para 1.73).
- (2) Apply external power – air (para 1.71).
- (3) Pressurize air system (TM 1-1520-238-T).
- (4) Operate air and hydraulic servicing units until indicator (13) and/or (16) is in normal operating range.

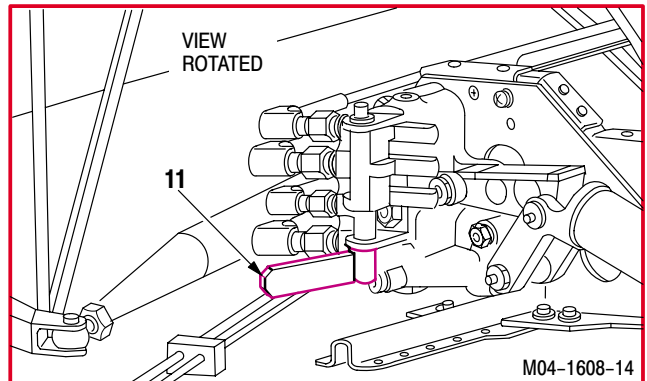


GO TO NEXT PAGE

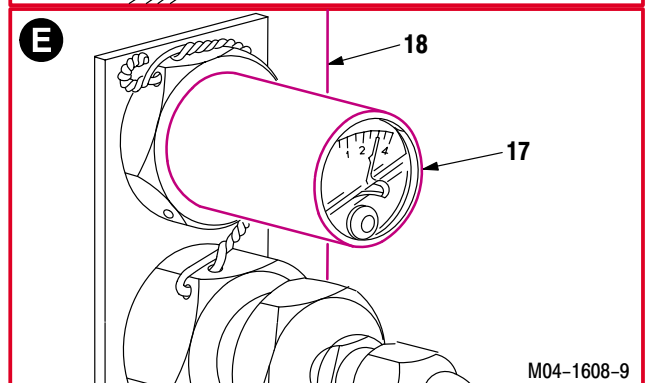
**1.34. HYDRAULIC SYSTEMS SERVICING – FLUID – continued**

**f. Charge hydraulic accumulator to 3000 psi.**

- (1) Position pump selector lever (11) to accumulator position aft.

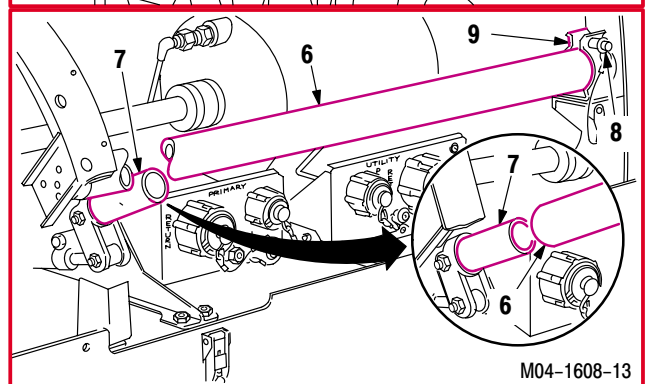


- (2) Fill accumulator until pressure gage (17) on utility service panel (18) indicates 3000 psi. **UTIL ACC** indicator on pilot instrument panel may be used also. Use fluid service unit.



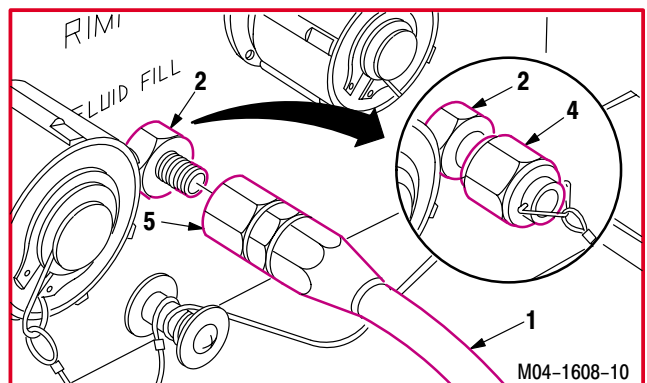
**g. Return pump handle (6) to storage clip (9).**

- (1) Slide handle (6) off bellcrank (7).
- (2) Place handle (6) in clip (9).
- (3) Install retaining pin (8) through clip (9).



**h. Remove hose (1) and adapter (5) from union (2).**

- (1) Hold union (2). Remove adapter (5).
- (2) Install dust cap (4) on union (2).



**i. Remove external power – air (para 1.71).**

**j. Remove external power – hydraulic (primary or utility) (para 1.72 or 1.73).**

**k. Secure access doors L190 and R325 (para 2.2).**

END OF TASK

**1.35. HYDRAULIC SYSTEM BLEED**

1.35.1. Description

This task covers: System Bleed.

1.35.2. Initial Setup

**Tools:**

- Aircraft mechanic's tool kit (item 376, App H)
- Aircraft maintenance tool kit (item 373, App H)
- Light duty laboratory apron (item 27, App H)
- 11/16 x 3/8-inch drive open end box socket wrench crowfoot attachment (item 70, App H)
- Industrial faceshield (item 129, App H)
- Chemical protective gloves (item 154, App H)
- 14-quart utility pail (item 222, App H)
- Aircraft power unit (item 232, App H)
- Hydraulic brake bleeder tube (item 399, App H)
- 0 - 600 inch-pound 3/8-inch drive dial indicator torque wrench (item 447, App H)
- Hydraulic pressure "Y" hose (figure D-466, App D)
- Hydraulic return "Y" hose (figure D-467, App D)

**Personnel Required:**

- 67R Attack Helicopter Repairer  
One person to assist
- 68X Armament/Electrical System Repairer
- 67R3F Attack Helicopter Repairer/Technical Inspector

**References:**

- TM 1-1270-476-20
- TM 1-1520-238-T
- TM 9-1090-208-23
- TM 55-1730-229-12

**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
2.2	Access fairing L175 removed; doors T250L, T250R, T290L, T290R, L325, and R325 opened
1.36	Utility hydraulic accumulator serviced with nitrogen
1.37	Utility hydraulic return accumulator serviced with nitrogen
7.3	Primary hydraulic system vented
7.57	Utility hydraulic system vented
1.70	External power – electrical applied

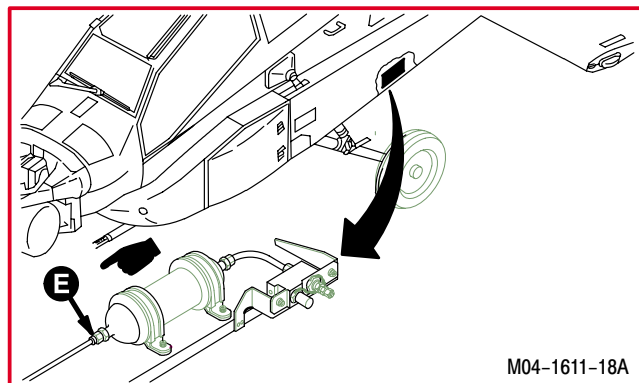
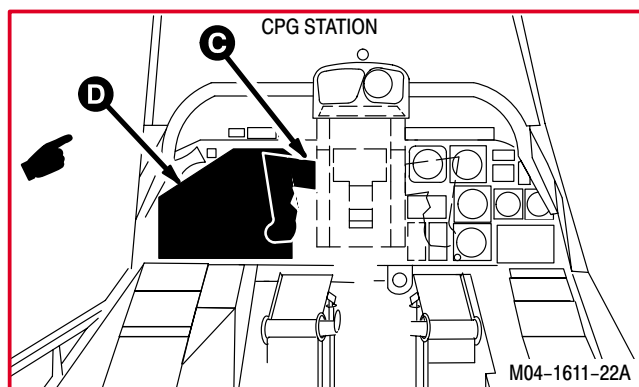
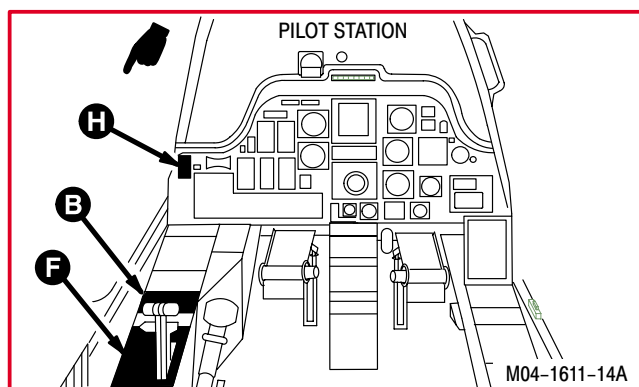
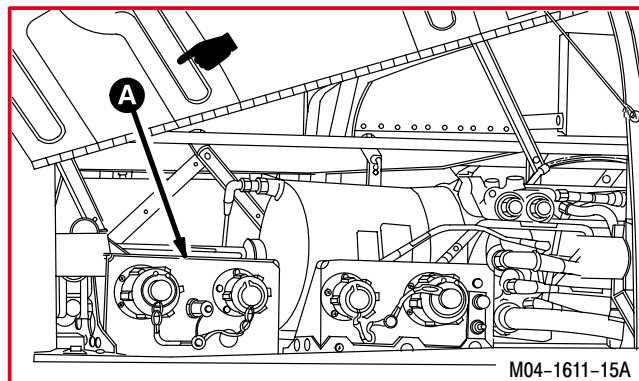


**NOTE**

- This procedure is required following replacement of any hydraulic system component. It is also recommended as an air purge to the hydraulic system if the hydraulic system or a component such as flight control actuators have trapped air.
- The procedure starts with an initial AGPU powered bleed which removes the majority of air from the hydraulic systems. An APU run purges the primary and utility hydraulic pumps, APU start motor, and return lines. A final AGPU bleed removes any air that may have pushed into the hydraulic system during the APU run.

GO TO NEXT PAGE

1.35. HYDRAULIC SYSTEM BLEED – continued



GO TO NEXT PAGE

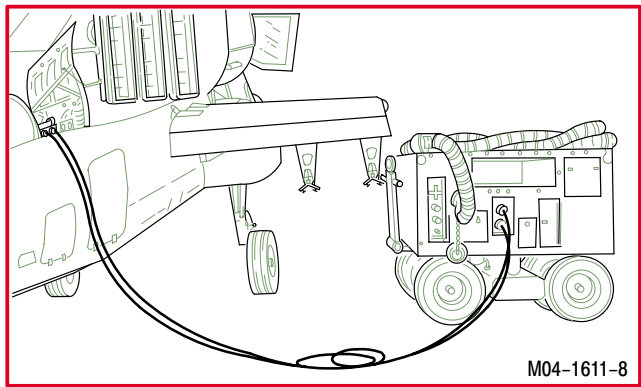
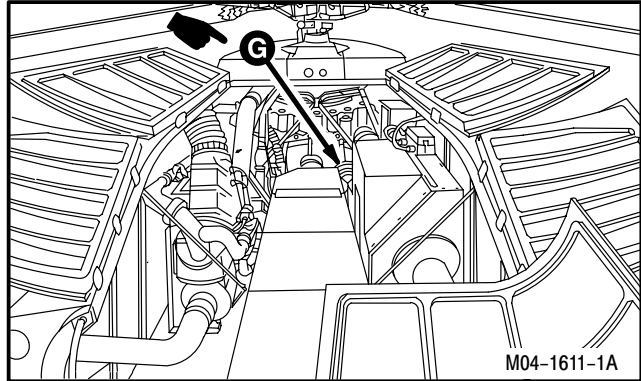
1.35. HYDRAULIC SYSTEM BLEED – continued

1.35.3. System Bleed

**CAUTION**

Do not put AGPU under a main rotor blade. Main rotor blade damage may occur from extreme heat of AGPU exhaust.

- a. Position AGPU parallel to right wing tip.

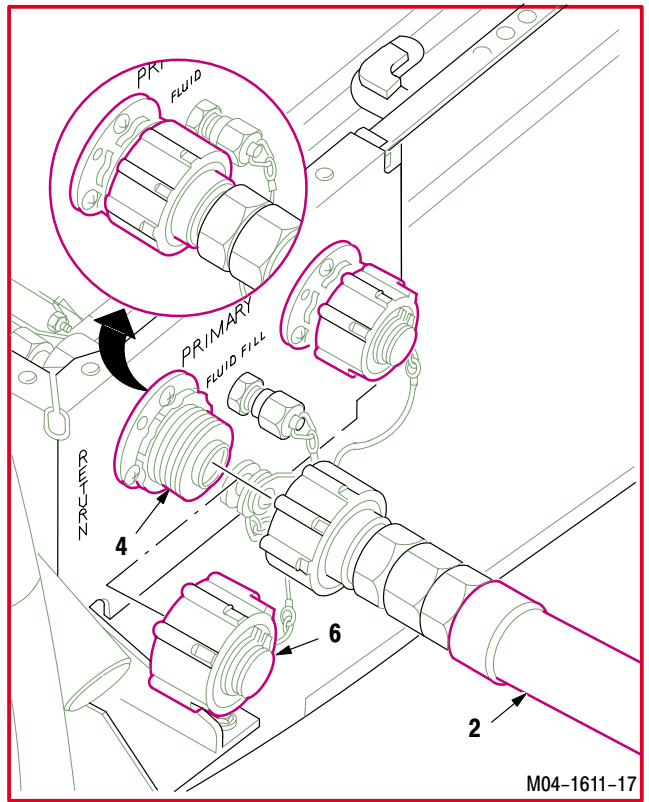
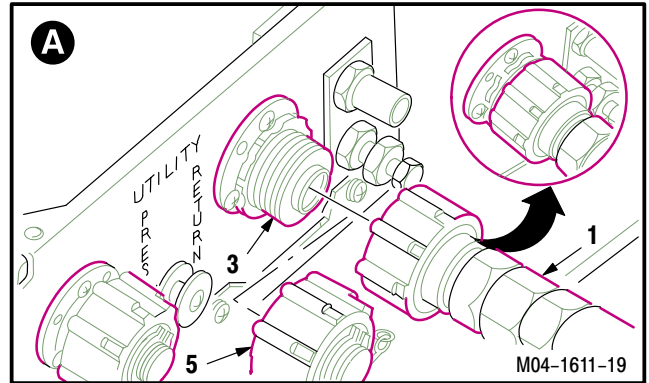


GO TO NEXT PAGE

1.35. HYDRAULIC SYSTEM BLEED – continued

b. Connect hydraulic return “Y” hoses (1) and (2) to utility return coupling (3) and primary return coupling (4).

- (1) Remove cap (5) from utility return coupling (3).
- (2) Remove cap (6) from primary return coupling (4).
- (3) Connect return “Y” hose (1) to coupling (3). Use hydraulic return “Y” hose (figure D-467, App D).
- (4) Connect return “Y” hose (2) to coupling (4).

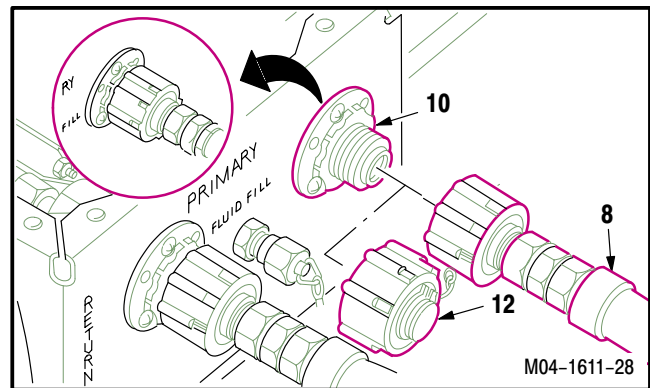
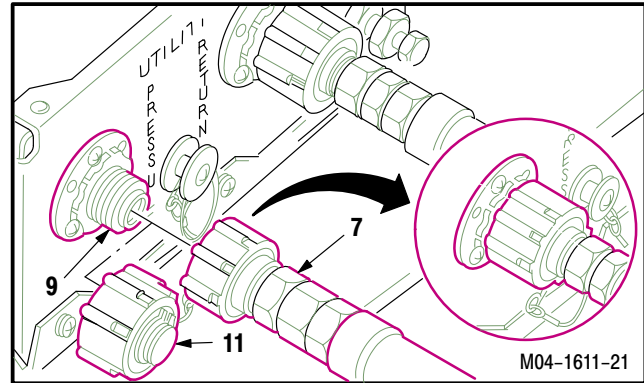


GO TO NEXT PAGE

1.35. HYDRAULIC SYSTEM BLEED – continued

c. Connect hydraulic pressure “Y” hoses (7) and (8) to utility pressure coupling (9) and primary pressure coupling (10).

- (1) Remove cap (11) from utility pressure coupling (9).
- (2) Remove cap (12) from primary pressure coupling (10).
- (3) Connect pressure “Y” hose (7) to coupling (9). Use hydraulic pressure “Y” hose (figure D-466, App D).
- (4) Connect pressure “Y” hose (8) to coupling (10).



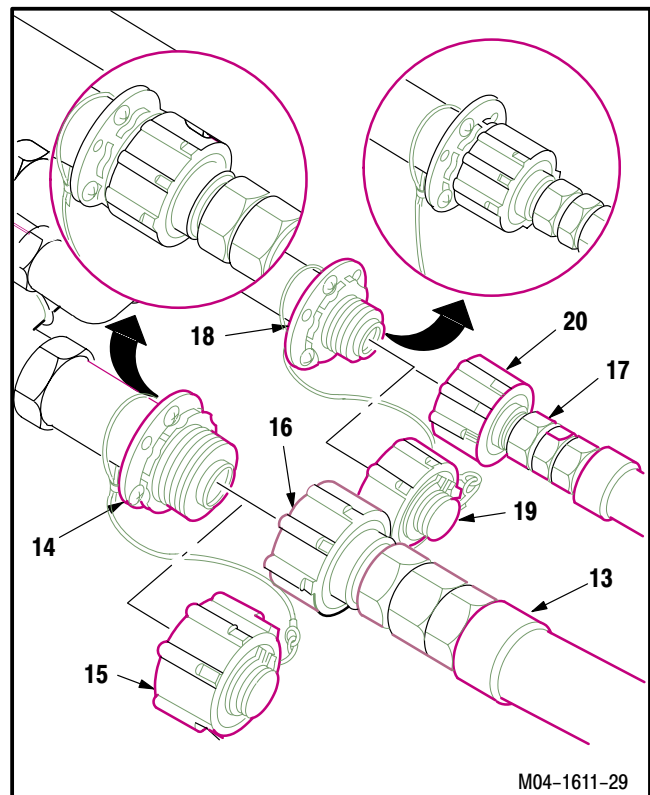
d. Connect AGPU return hose (13) to return “Y” hose coupling (14).

- (1) Remove cap (15) from “Y” hose coupling (14).
- (2) Turn coupling nut (16) clockwise until seated and locking teeth engage fully with teeth on “Y” hose coupling (14).

e. Connect AGPU pressure hose (17) to pressure “Y” hose coupling (18).

- (1) Remove cap (19) from “Y” hose coupling (18).
- (2) Turn coupling nut (20) clockwise until seated and locking teeth engage fully with teeth on “Y” hose coupling (18).

f. Enter pilot station (para 1.56). Observe all safety precautions.



GO TO NEXT PAGE

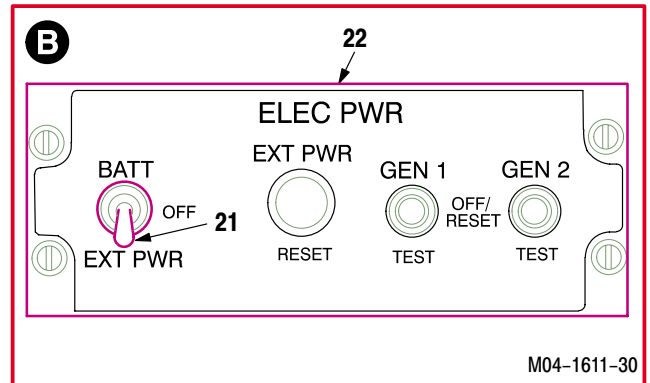


1.35. HYDRAULIC SYSTEM BLEED – continued

- g. Set BATT/EXT PWR switch (21) on ELEC PWR control panel (22) to EXT PWR.

**WARNING**

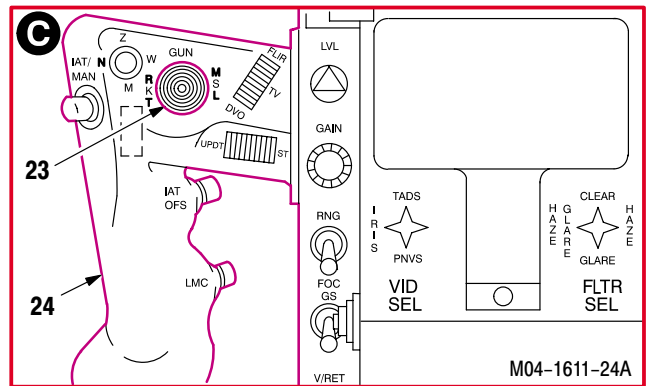
The hydraulic system is pressurized to 3000 psi. Ensure pressure is at 0 psi and system is vented before loosening any connections. Failure to do so could result in death or serious injury. If injury occurs, seek medical aid.



- h. Apply hydraulic pressure to helicopter.
  - (1) Adjust AGPU output pressure to 3000 psi (TM 55-1730-229-12).
- i. Perform area weapon system power up (TM 9-1090-208-23).

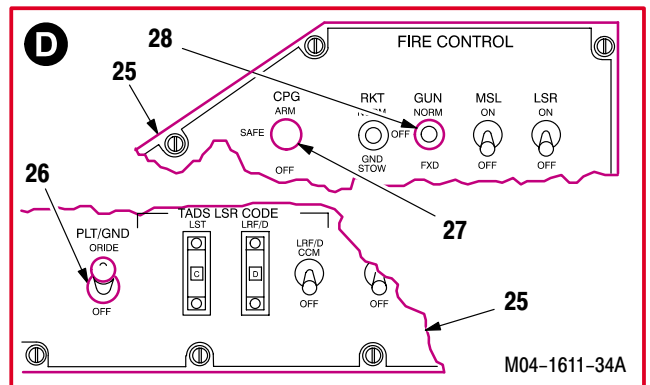
**WARNING**

- Hydraulic pressure is 3000 psi. This can cause injury. If injury occurs, seek medical aid.
- To prevent injury when moving gun turret, ensure that all personnel are clear of gun travel area during turret operation. If injury occurs, seek medical aid.



- j. Cycle gun turret to fixed forward position. Stow turret four times.
  - (1) Set RKT/GUN/MSL switch (23) on CPG ORT left handgrip (24) to GUN.
  - (2) Set switches on CPG FIRE CONTROL panel (25):

Switch	Position
PLT/GND (26)	ORIDE
CPG SAFE/ARM (27)	SAFE
GUN (28)	FXD...OFF...FXD.. OFF...FXD...OFF.. FXD...OFF



GO TO NEXT PAGE

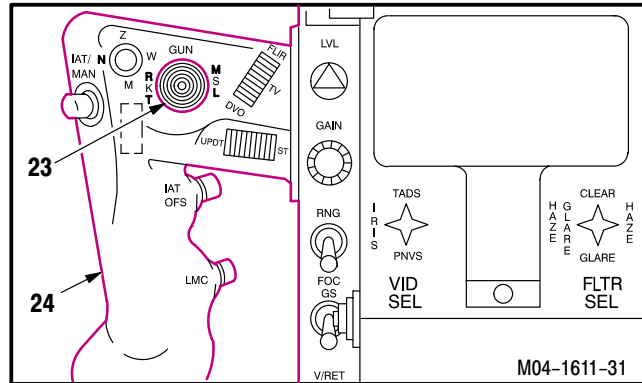
**1.35. HYDRAULIC SYSTEM BLEED – continued**

(3) Set RKT/GUN/MSL switch (23) on CPG ORT left handgrip (24) to center position.

k. Perform area weapon system power down (TM 9-1090-208-23).

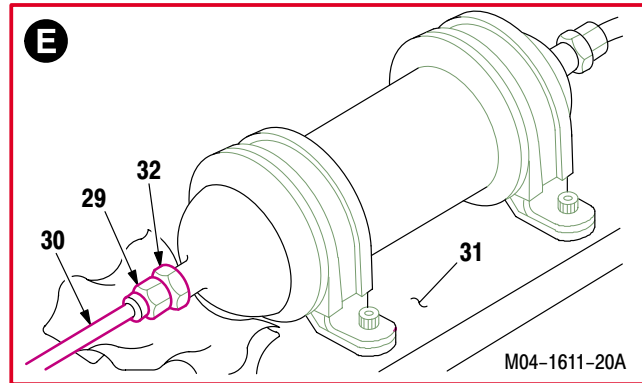
l. Adjust AGPU output pressure to 0 psi (TM 55-1730-229-12).

m. Place rags between nut (29) on utility hydraulic return accumulator fluid line (30) and air-frame (31).



n. Bleed utility hydraulic return accumulator fluid line (30). Torque nut (29) to 160 INCH-POUNDS.

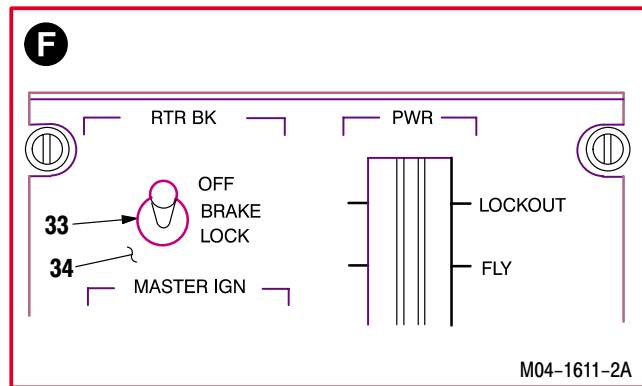
- (1) Hold reducer fitting (32).
- (2) Loosen nut (29) 1/4 turn to allow hydraulic fluid to discharge.
- (3) Watch for air bubbles in fluid.
- (4) Torque nut (29) to 160 INCH-POUNDS when fluid no longer discharges. Use torque wrench and crowfoot.



o. Repeat steps h. thru n. until no air bubbles are visible in discharged fluid.

p. Adjust AGPU output pressure to 3000 psi (TM 55-1730-229-12).

q. Set RTR BK switch (33) on pilot left console (34) to BRAKE then to OFF.



GO TO NEXT PAGE

1.35. HYDRAULIC SYSTEM BLEED – continued

**WARNING**

To prevent injury, make certain all personnel are clear of flight controls before moving pilot controls. If injury occurs, seek medical aid.

**CAUTION**

The hydraulic system operates at high pressure. To prevent the release of pressurized hydraulic fluid, do not use the **RTR BK** switch **LOCK** position during this task.

**NOTE**

The helicopter intercommunication system may be used to coordinate maintenance.

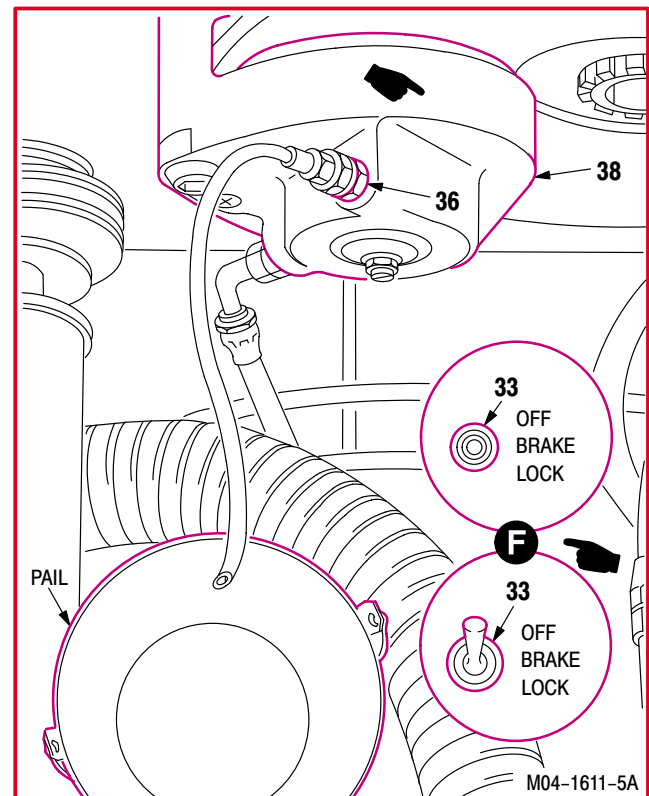
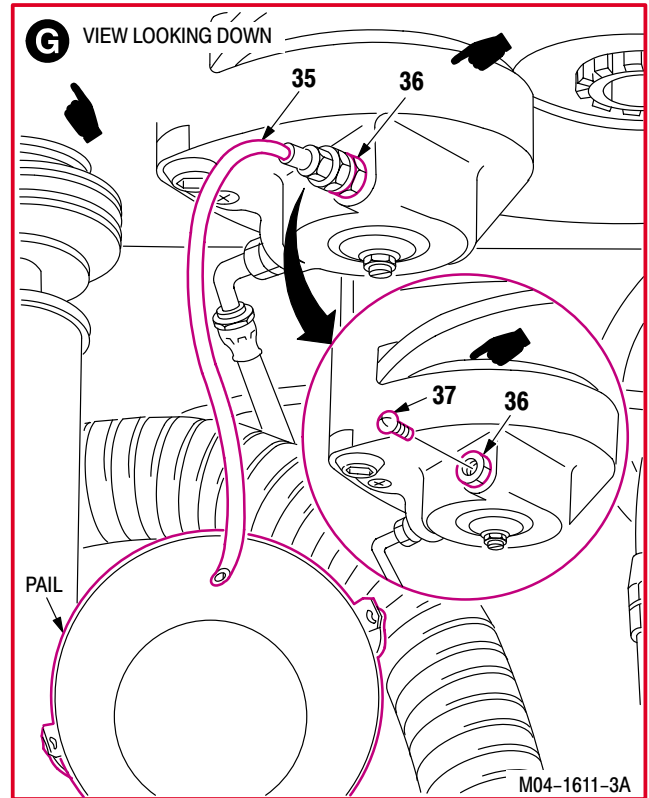
r. **Adjust AGPU output pressure to 250 psi (TM 55-1730-229-12). Do not exceed 400 psi.**

s. **Install bleeder hose (35) in aft bleed valve (36).**

- (1) Hold valve (36). Remove screw (37).
- (2) Install bleeder hose (35) in valve (36). Use bleeder tube.
- (3) Place free end of hose (35) in pail.

t. **Bleed aft rotor brake actuator (38).**

- (1) Set **RTR BK** switch (33) to **BRAKE**.
- (2) Open bleed valve (36).
- (3) Bleed actuator (38) until fluid is free of air bubbles.
- (4) Close bleed valve (36).
- (5) Set **RTR BK** switch (33) to **OFF**.

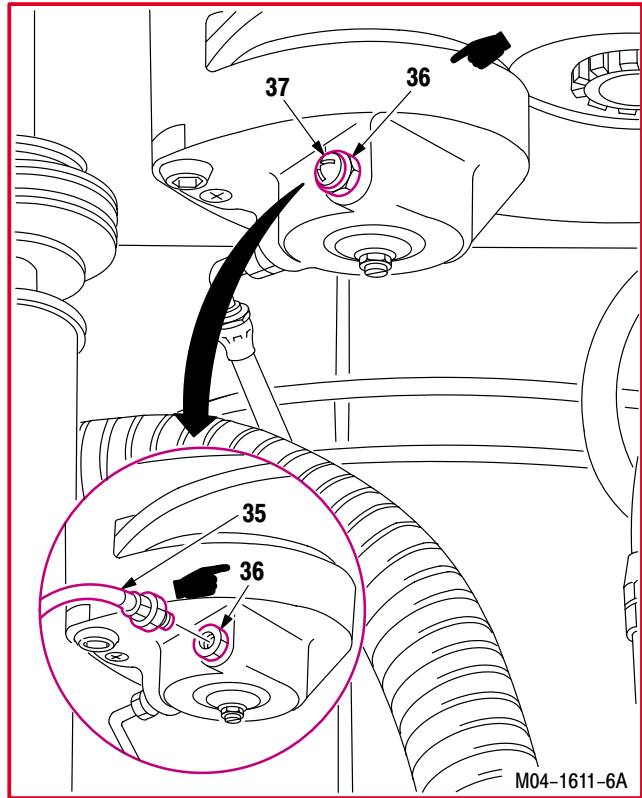


GO TO NEXT PAGE

**1.35. HYDRAULIC SYSTEM BLEED – continued**

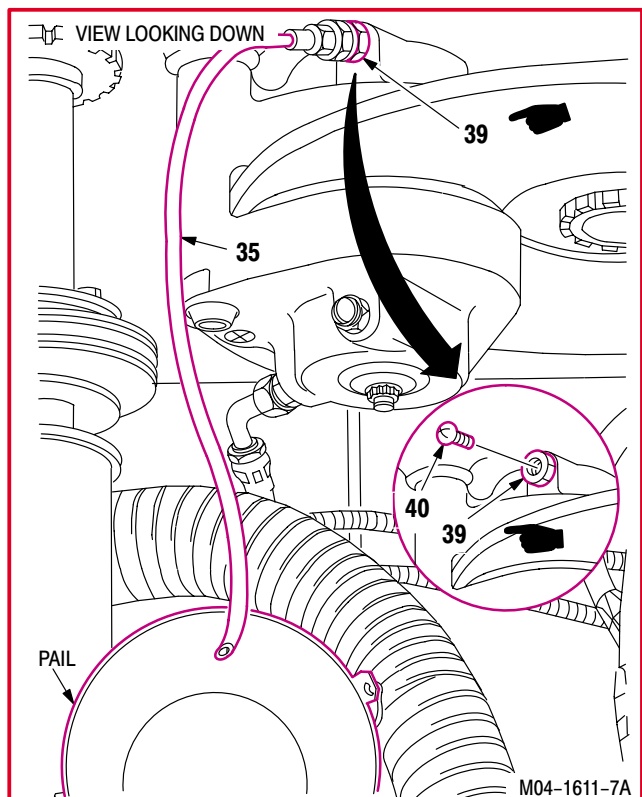
**u. Remove hose (35) from valve (36).**

- (1) Hold valve (36). Remove hose (35).
- (2) Install screw (37) in valve (36).



**v. Install bleeder hose (35) in forward bleed valve (39).**

- (1) Hold valve (39). Remove screw (40).
- (2) Install bleeder hose (35) in valve (39).
- (3) Place free end of bleeder hose (35) in pail.

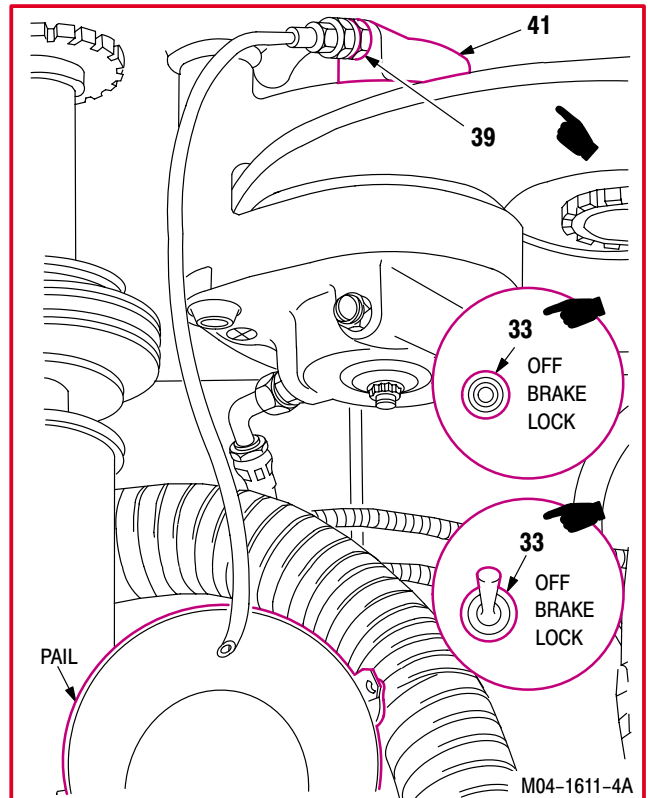


GO TO NEXT PAGE

**1.35. HYDRAULIC SYSTEM BLEED – continued**

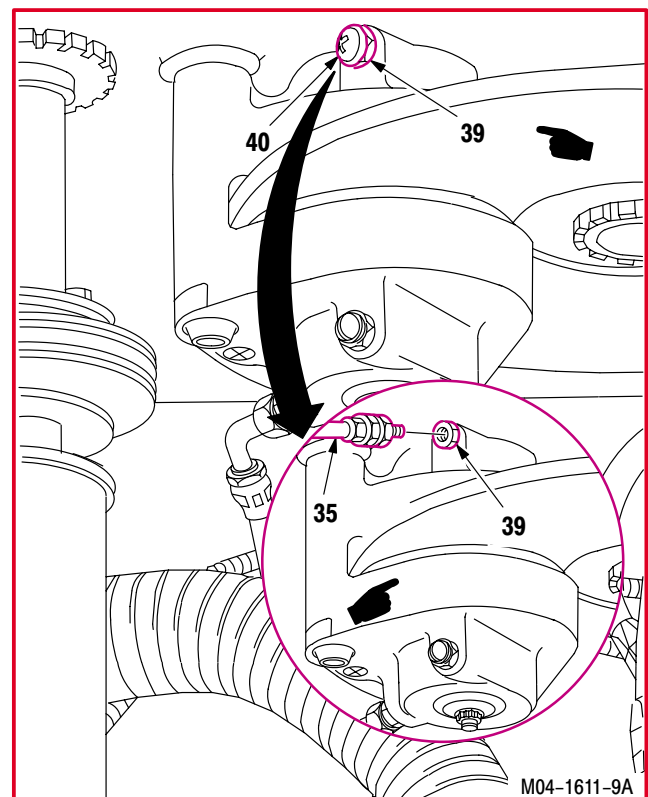
**w. Bleed forward rotor brake actuator (41).**

- (1) Set **RTR BK** switch (33) to **BRAKE**.
- (2) Open bleed valve (39).
- (3) Bleed actuator (41) until fluid is free of air bubbles.
- (4) Close bleed valve (39).
- (5) Set **RTR BK** switch (33) to **OFF**.



**x. Remove bleeder hose (35) from forward bleed valve (39).**

- (1) Hold valve (39). Remove hose (35).
- (2) Install screw (40) in valve (39).



GO TO NEXT PAGE

1.35. HYDRAULIC SYSTEM BLEED – continued

**WARNING**

Hydraulic pressure is 3000 psi. This can cause injury. If injury occurs, seek medical aid.

- y. Adjust AGPU output pressure to 3000 psi (TM 55-1730-229-12).
- z. Turn AGPU low pressure bleed valve 1/4 turn open (CCW) for system bleed (TM 55-1730-229-12).
- aa. Set TAIL WHEEL switch (42) on pilot instrument panel to LOCK.

**NOTE**

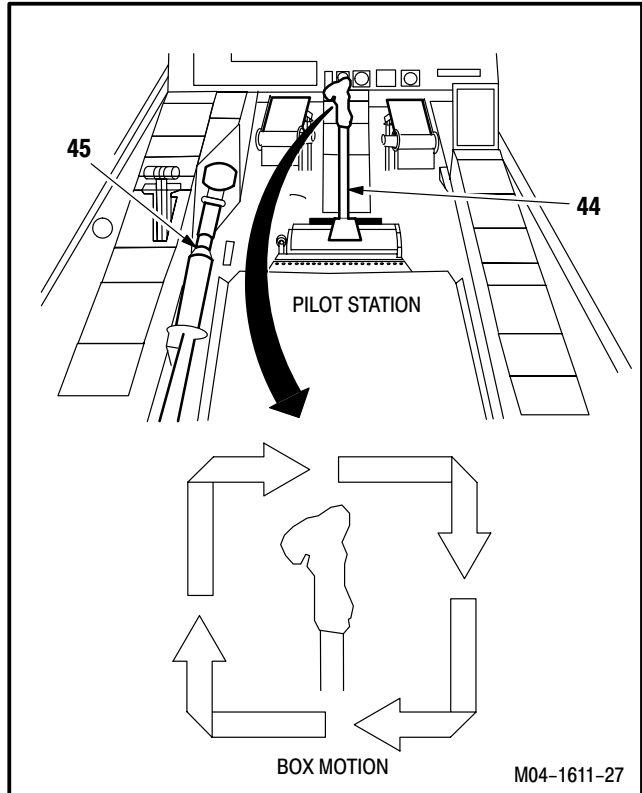
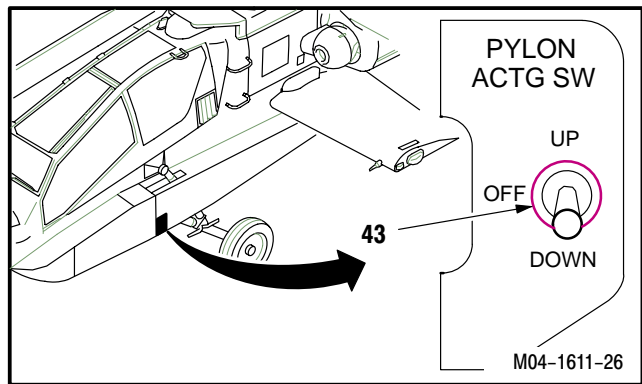
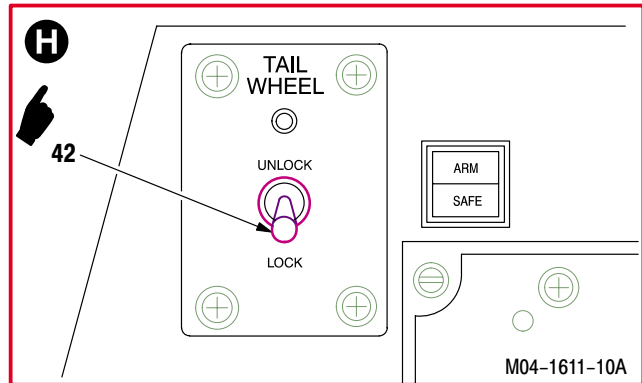
Control motions must be slow to moderate during actuator movement. This will allow air in system to dispense through AGPU pressure bleed.

- ab. Actuate hydraulic system.
  - (1) Articulate pylons 10 complete cycles.
    - (a) Open access door L115 (para 2.2).
    - (b) Toggle **PYLON ACTG** switch (43) to the **UP** position then **DOWN** 10 cycles.
  - (2) Articulate flight controls 10 complete cycles.
    - (a) Slowly move pilot cyclic stick (44) in a box motion 10 complete cycles.

**NOTE**

Movement of cyclic stick to all four corner stops will be one cycle.

- (b) Slowly move pilot collective stick (45) to full up position, then to full down. Repeat 10 complete cycles.



GO TO NEXT PAGE

**1.35. HYDRAULIC SYSTEM BLEED – continued**

(c) Slowly push pilot right pedal (46) forward to stop then back to center. Repeat for left pedal. Repeat 10 complete cycles.

(3) Verify primary and utility manifold fluid levels are correct (para 1.34).

(4) Check for air bubbles in the AGPU air bleed sight gage. Repeat steps (1) and (2) as required to clear remaining bubbles.

ac. **Reduce AGPU output pressure to 0 psi and shut down AGPU** (TM 55-1730-229-12).

ad. **Disconnect AGPU return hose (13) from return “Y” hose coupling (14).**

(1) Turn coupling nut (16) counterclockwise until it clears “Y” hose coupling (14).

(2) Install cap (15) on “Y” hose coupling (14).

ae. **Disconnect AGPU pressure hose (17) from pressure “Y” hose coupling (18).**

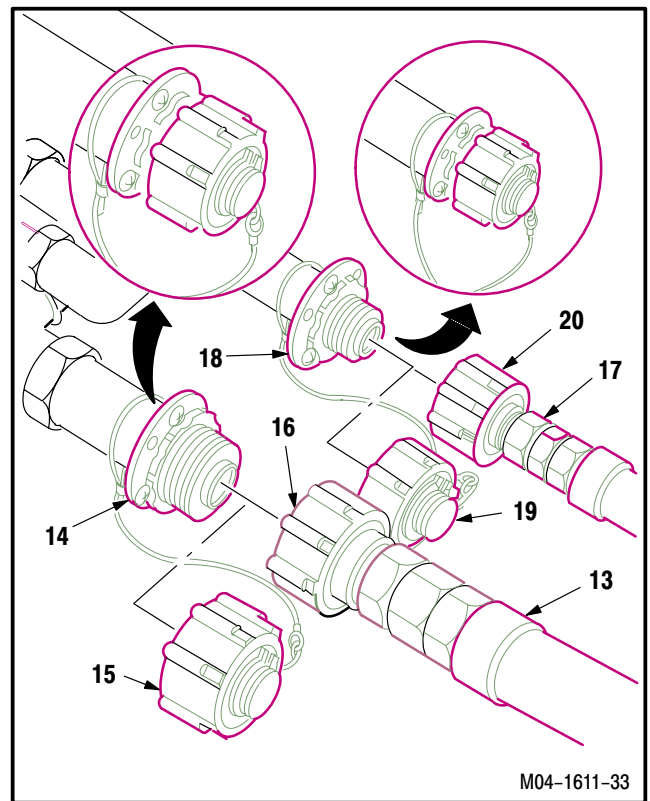
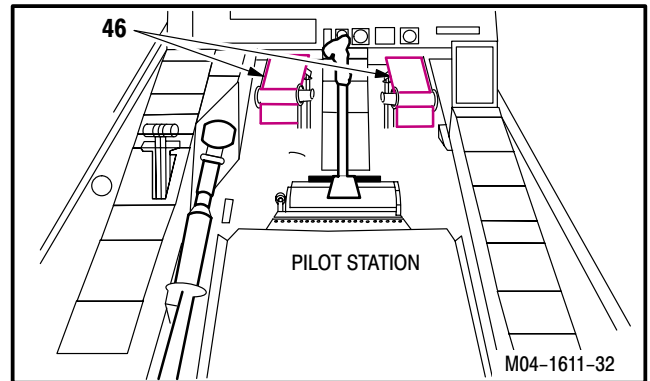
(1) Turn coupling nut (20) counterclockwise until it clears “Y” hose coupling (18).

(2) Install cap (19) on “Y” hose coupling (18).

af. **Perform APU power up** (para 1.75).

ag. **Perform TADS power up** (TM 1-1270-476-20).

ah. **Perform area weapon system power up** (TM 9-1090-208-23).



**WARNING**

- Hydraulic pressure is 3000 psi. This can cause injury. If injury occurs, seek medical aid.
- To prevent injury when moving gun turret, ensure that all personnel are clear of gun travel area during turret operation. If injury occurs, seek medical aid.

GO TO NEXT PAGE

1.35. HYDRAULIC SYSTEM BLEED – continued

**NOTE**

Gun will be slaved to TADS to accomplish azimuth and elevation movement.

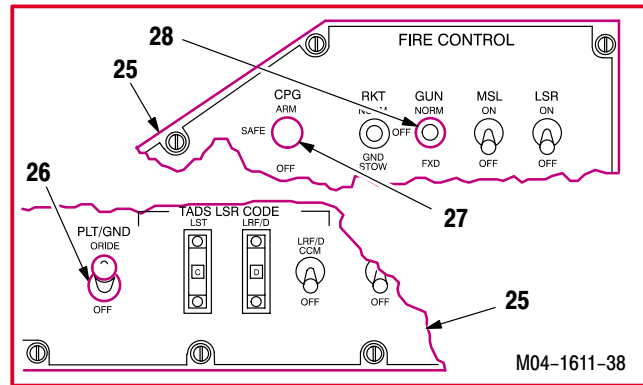
ai. **Actuate area weapons system.**

(1) Cycle gun 10 complete cycles in azimuth and elevation.

(a) Set switches on CPG **FIRE CONTROL** panel (25):

Switch	Position
<b>PLT/GND (26)</b>	<b>ORIDE</b>
<b>CPG SAFE/ARM (27)</b>	<b>SAFE</b>
<b>GUN (28)</b>	<b>NORM</b>

(b) Set **RKT/GUN/MSL** switch (23) on CPG **ORT** left handgrip (24) to **GUN**.



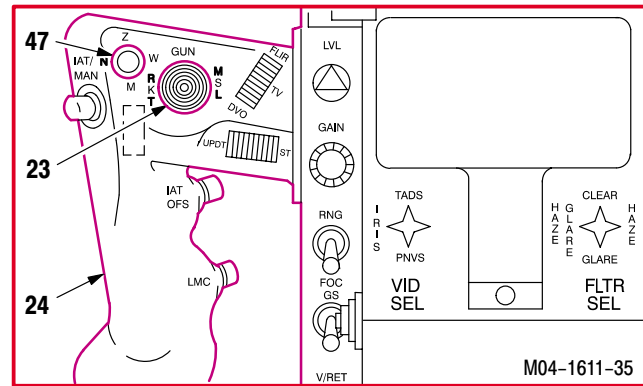
(2) Select **N/Z/W/M** field of view switch (47) on CPG **ORT** left handgrip (24) to **M** medium field of view position.

(3) Slew TADS to full up elevation, then to full down elevation (TM 1-1270-476-20). Repeat 10 complete cycles.

(4) Slew TADS to full left azimuth, then to full right azimuth (TM 1-1270-476-20). Repeat 10 complete cycles.

(5) Set **RKT/GUN/MSL** switch (23) on CPG **ORT** left handgrip (24) to center position.

(6) Set **GUN NORM/OFF/FIXED** switch (28) on CPG **FIRE** control panel (25) to **OFF**.



aj. **Perform TADS power down** (TM 1-1270-476-20).

GO TO NEXT PAGE



**1.35. HYDRAULIC SYSTEM BLEED – continued**

- ak. Repeat step ab.(1) and (2) to articulate pylons and flight controls 10 complete cycles.
- al. Perform area weapon system power down (TM 9-1090-208-23).
- am. Perform APU power down (para 1.75).
- an. Connect AGPU return hose (13) to return “Y” hose coupling (14).

(1) Remove cap (15) from “Y” hose coupling (14).

(2) Turn coupling nut (16) clockwise until seated and locking teeth engage fully with teeth on “Y” hose coupling (14).

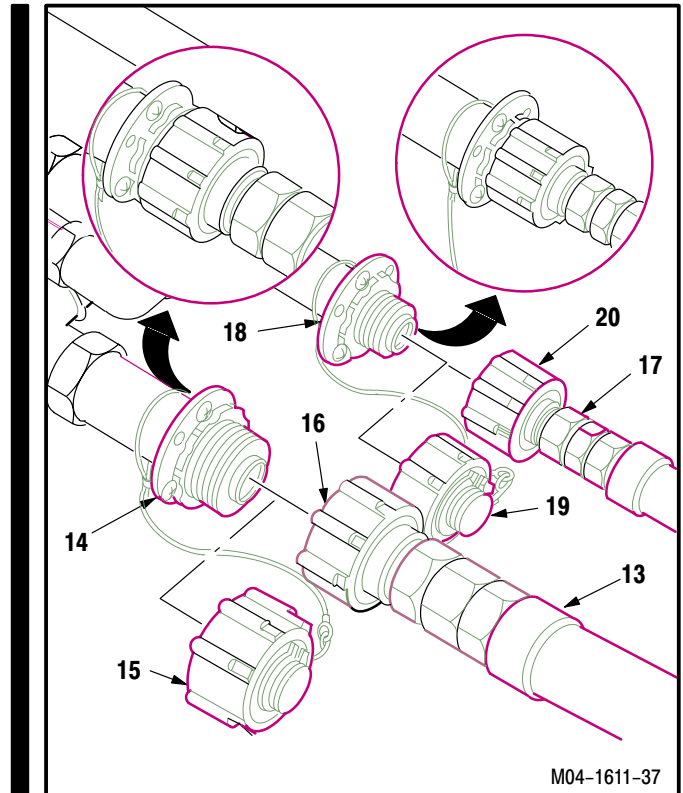
- ao. Connect AGPU pressure hose (17) to pressure “Y” hose coupling (18).

(1) Remove cap (19) from “Y” hose coupling (18).

(2) Turn coupling nut (20) clockwise until seated and locking teeth engage fully with teeth on “Y” hose coupling (18).

<b>CAUTION</b>
----------------

Hydraulic pressure is 3000 psi. This can cause injury. If injury occurs, seek medical aid.



M04-1611-37

- ap. Apply hydraulic pressure to helicopter.
- (1) Adjust AGPU output pressure to 3000 psi (TM 55-1730-229-12).
- aq. Turn AGPU low pressure bleed valve 1/4 turn open (CCW) for system bleed (TM 55-1730-229-12).

GO TO NEXT PAGE

1.35. HYDRAULIC SYSTEM BLEED – continued

ar. Repeat steps ab.(1) and (2) to articulate pylons and flight controls 10 complete cycles as required until AGPU sight gauge is clear of bubbles.

as. Close access door L115 (para 2.2).

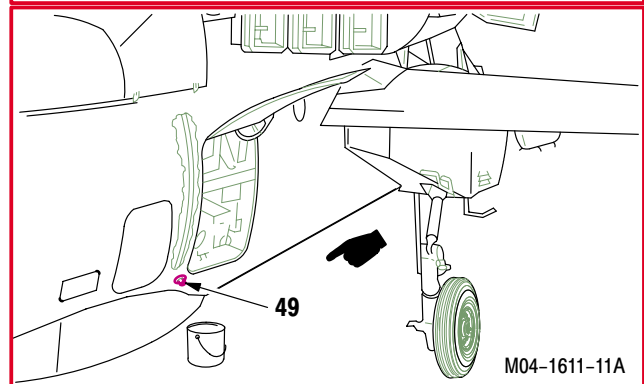
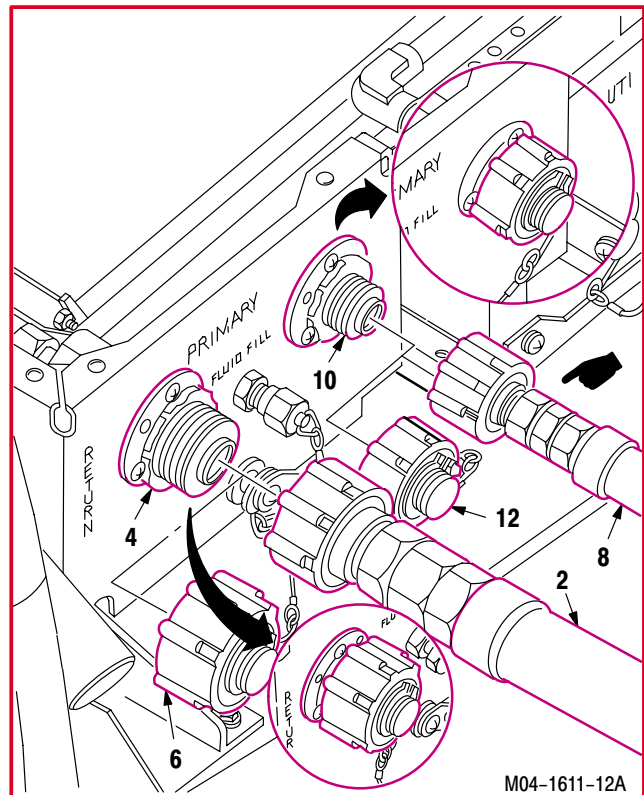
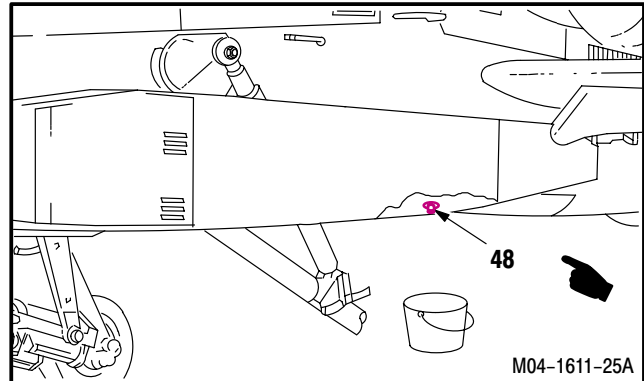
at. Adjust AGPU output pressure to 0 psi (TM 55-1730-229-12).

au. Bleed primary hydraulic reservoir.

- (1) Place pail under primary hydraulic overflow drain (48) to catch fluid.
- (2) Disconnect return "Y" hose (2) from primary return coupling (4). Install cap (6).
- (3) Slowly increase AGPU output pressure to 250 psi (TM 55-1730-229-12). Do not exceed 400 psi.
- (4) Hold pressure until overflow drain fluid is free of air bubbles.
- (5) Reduce AGPU output pressure to 0 psi (TM 55-1730-229-12).
- (6) Disconnect pressure "Y" hose (8) from primary pressure coupling (10). Install cap (12).

av. Bleed utility hydraulic reservoir.

- (1) Place utility pail under utility hydraulic overflow (49) to catch fluid.



GO TO NEXT PAGE

**1.35. HYDRAULIC SYSTEM BLEED – continued**

- (2) Disconnect return “Y” hose (1) from utility return coupling (3). Install cap (5).
- (3) Slowly increase AGPU output pressure to **250 psi** (TM 55-1730-229-12). **Do not exceed 400 psi.**
- (4) Hold pressure until overflow drain fluid is free of air bubbles.
- (5) Reduce AGPU output pressure to **0 psi** (TM 55-1730-229-12).
- (6) Disconnect pressure “Y” hose (7) from utility pressure coupling (9). Install cap (11).

aw. **Connect return “Y” hose (1) and (2) to utility return coupling (3) and primary return coupling (4).**

- (1) Remove caps (5) and (6).

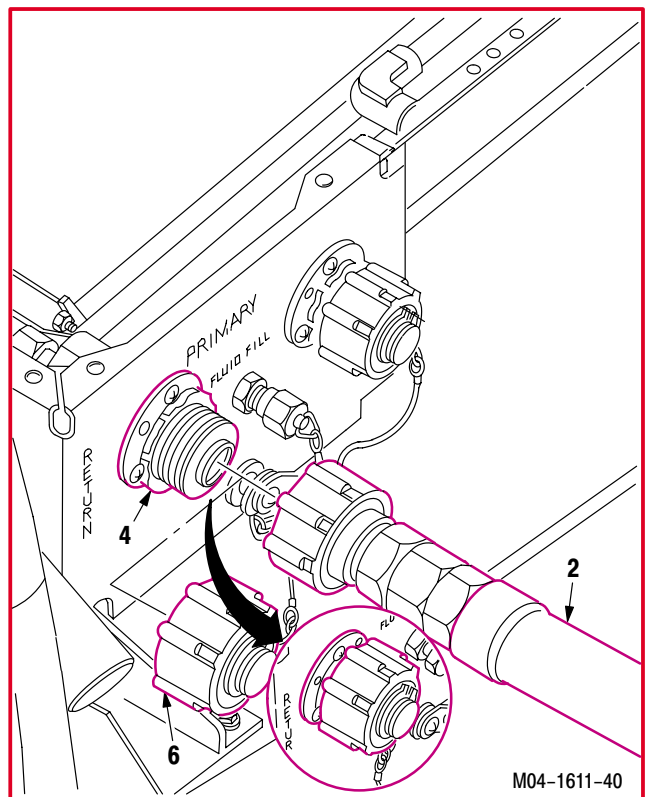
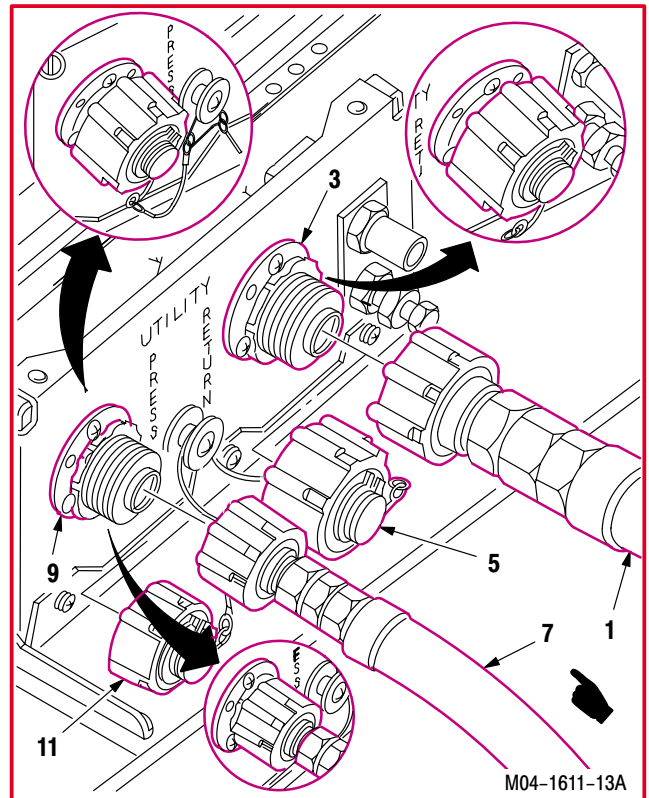
ax. **Pressurize primary and utility hydraulic manifold by applying external power – air (para 1.71).**

ay. **Operate air pressure until primary and utility manifold piston indicator is in normal operating range (para 1.34).**

az. **Remove external power – air (para 1.71).**

ba. **Disconnect return “Y” hose (1) and (2) from utility return coupling (3) and primary return coupling (4).**

- (1) Install caps (5) and (6).



GO TO NEXT PAGE

1.35. HYDRAULIC SYSTEM BLEED – continued

bb. **Disconnect AGPU return hose (13) from return “Y” hose coupling (14).**

- (1) Turn coupling nut (16) counterclockwise until it clears “Y” hose coupling (14).
- (2) Install cap (15) on “Y” hose coupling (14).

bc. **Disconnect AGPU pressure hose (17) from pressure “Y” hose coupling (18).**

- (1) Turn coupling nut (20) counterclockwise until it clears “Y” hose coupling (18).
- (2) Install cap (19) on “Y” hose coupling (18).

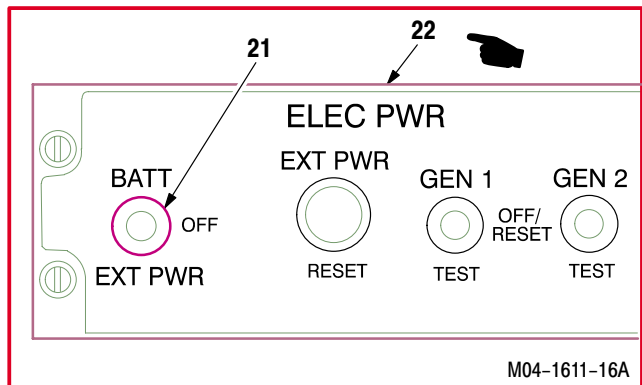
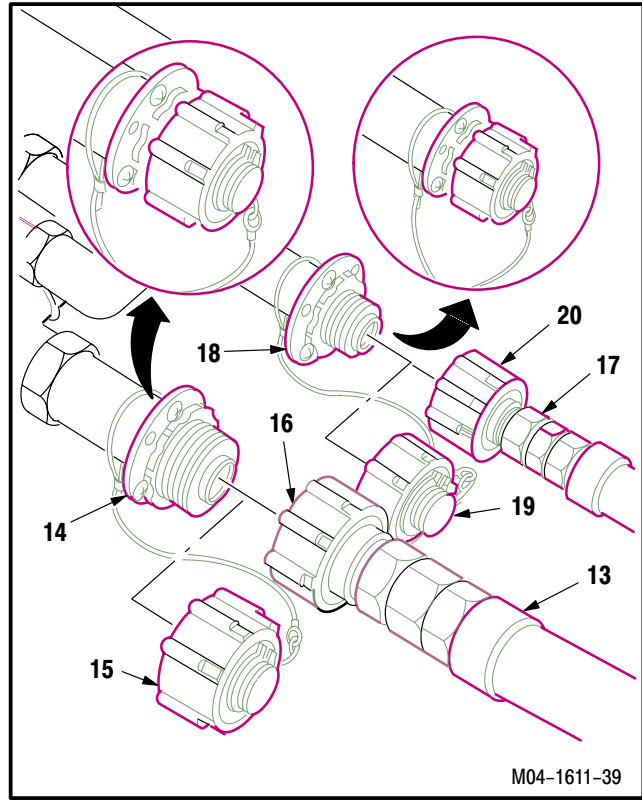
bd. **Set BATT/EXT PWR switch (21) on ELEC PWR control panel (22) to OFF.**

be. **Inspect (QA).**

bf. **Perform primary and utility hydraulic maintenance operational check (TM 1-1520-238-T).**

bg. **Remove external power – electrical (para 1.70).**

bh. **Secure access doors T250L, T250R, T290L, T290R, L325, and R325; install fairing L175 (para 2.2).**



END OF TASK

**1.36. UTILITY HYDRAULIC ACCUMULATOR SERVICING – NITROGEN**

1.36.1. Description

This task covers: Servicing.

1.36.2. Initial Setup

**Tools:**

- Aircraft mechanic's tool kit (item 376, App H)
- Industrial goggles (item 156, App H)
- Nitrogen hand truck (item NO TAG, App H)
- 30 - 150 inch-pound 1/4-inch drive click type torque wrench (item 435, App H)

**Equipment Conditions:**

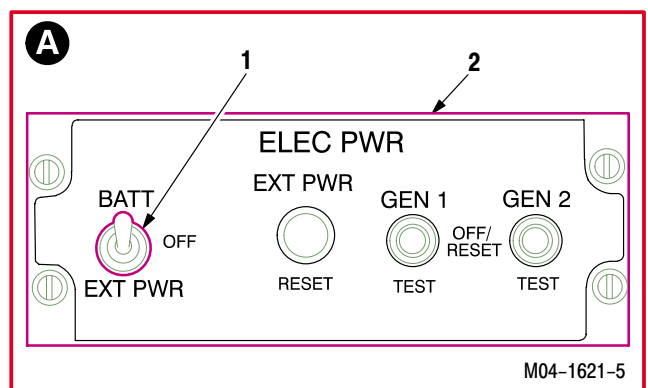
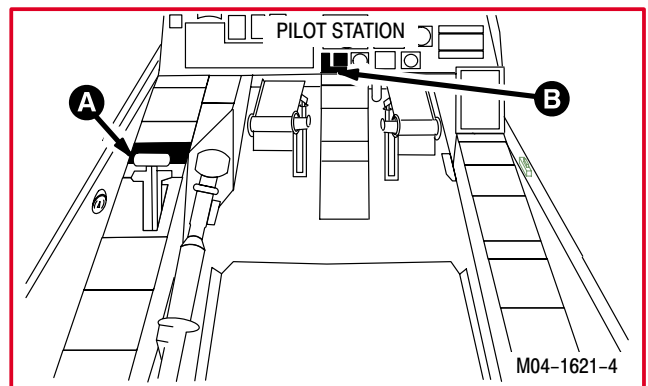
<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
2.2	Access door R325 opened

**Personnel Required:**

67R Attack Helicopter Repairer

1.36.3. Servicing

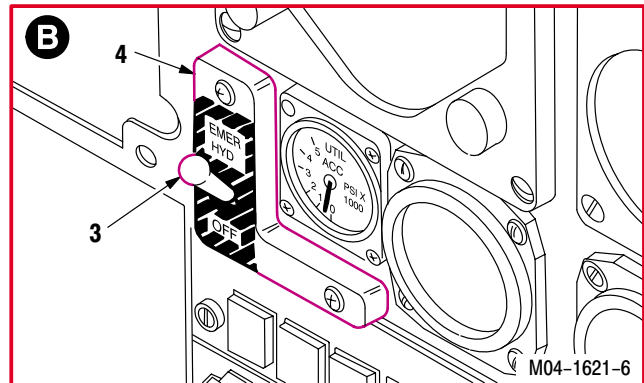
- a. **Connect battery** (para 9.40).
- b. **Enter pilot station** (para 1.56). **Observe all safety precautions.**
- c. **Set BATT/EXT PWR switch (1) on ELEC PWR control panel (2) to BATT.**



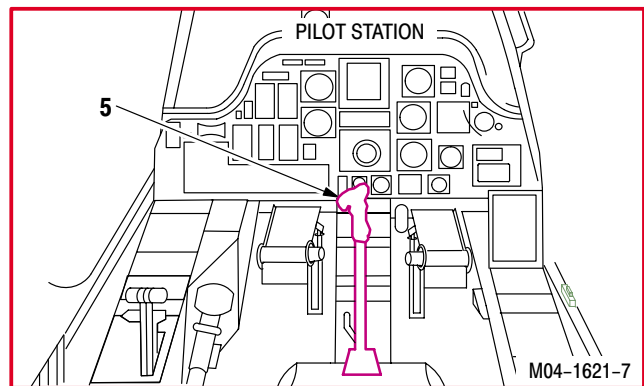
GO TO NEXT PAGE

1.36. UTILITY HYDRAULIC ACCUMULATOR SERVICING – NITROGEN – continued

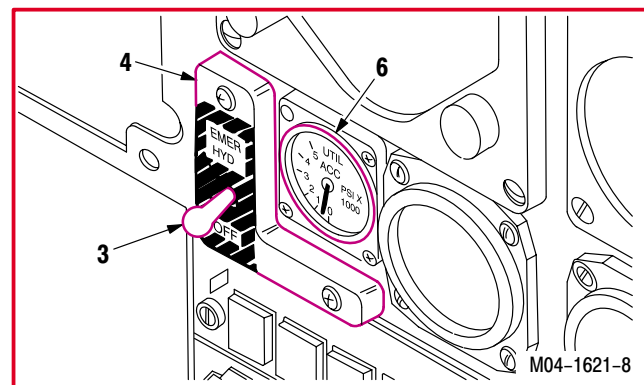
d. Set EMER HYD switch (3) on EMER HYD panel (4) to EMER HYD.



e. Move pilot cyclic stick (5) until UTIL ACC indicator (6) indicates 0 psi.

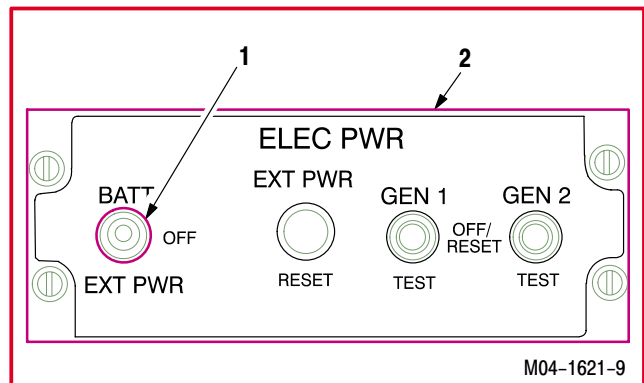


f. Set EMER HYD switch (3) on EMER HYD panel (4) to OFF.



g. Set BATT/EXT PWR switch (1) on ELEC PWR control panel (2) to OFF.

h. Disconnect battery (para 9.40).



GO TO NEXT PAGE

1.36. UTILITY HYDRAULIC ACCUMULATOR SERVICING – NITROGEN – continued

**WARNING**

The utility hydraulic accumulator contains high pressure nitrogen. Open and close valve carefully to prevent possible injury from sudden blast. If injury occurs, seek medical aid.

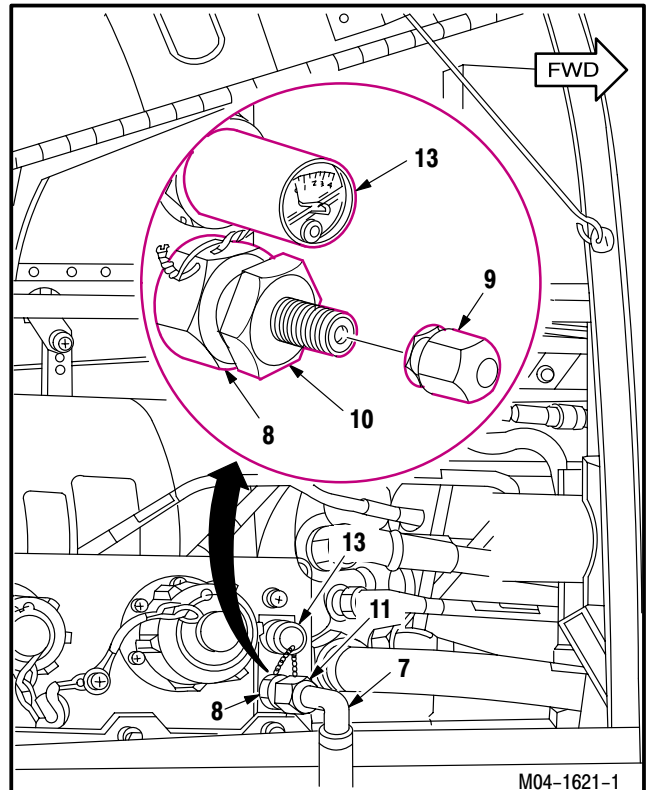
- i. Vent utility hydraulic pressure (para 7.57).
- j. Connect nitrogen truck service hose (7) to valve (8).
  - (1) Remove cap (9) from valve (8).
  - (2) Hold valve (8). Loosen nut (10). Do not allow pressure to escape.
  - (3) Install service hose nut (11) on valve (8).



- k. Service utility hydraulic accumulator according to specifications on chart (12).
  - (1) Loosen nut (10) until resistance is felt; then loosen 1/2 to 3/4 turn to off seat valve.
  - (2) Select correct pressure from chart (12) according to temperature.
  - (3) Tighten nut (10) when gage (13) reads correct pressure.

**NOTE**

Allow pressure to stabilize 5 minutes. Adjust pressure if necessary.



OUTSIDE AIR TEMPERATURE (°F)	NITROGEN PRESSURE (psig)
-65 TO -55	1235-1285
-55 TO -45	1265-1315
-45 TO -35	1295-1345
-35 TO -25	1325-1375
-25 TO -15	1355-1405
-15 TO -5	1385-1435
-5 TO +5	1415-1465
+5 TO +15	1445-1495
+15 TO +25	1474-1525
+25 TO +35	1505-1555
+35 TO +45	1535-1585
+45 TO +55	1565-1615
+55 TO +65	1595-1645
+65 TO +75	1625-1675
+75 TO +85	1655-1705
+85 TO +95	1685-1735
+95 TO +105	1715-1765
+105 TO +115	1745-1795
+115 TO +125	1775-1825
+125 TO +135	1805-1855
+135 TO +145	1835-1885

GO TO NEXT PAGE

1.36. UTILITY HYDRAULIC ACCUMULATOR SERVICING – NITROGEN – continued

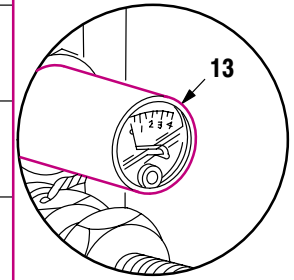
**CAUTION**

This chart is for use on aircraft equipped with winterization kit only.

**I. Service utility hydraulic accumulator according to specifications in chart (14).**

- (1) Loosen nut (10) until resistance is felt; then loosen 1/2 to 3/4 turn to off seat valve.
- (2) Select correct pressure from chart (14) according to temperature.
- (3) Tighten nut (10) when gage (13) reads correct pressure.

OUTSIDE AIR TEMPERATURE (°F)	NITROGEN PRESSURE (psig)
+65 TO +75	1995 – 2083
+55 TO +65	1957 – 1995
+45 TO +55	1919 – 1957
+35 TO +45	1881 – 1919
+25 TO +35	1843 – 1881
+15 TO +25	1805 – 1843
+5 TO +15	1767 – 1805
-5 TO +5	1729 – 1767
-15 TO -5	1691 – 1729
-25 TO -15	1653 – 1691
-35 TO -25	1615 – 1653
-45 TO -35	1577 – 1615



14

**NOTE**

Allow pressure to stabilize 5 minutes. Adjust pressure if necessary.

M04-1621-10

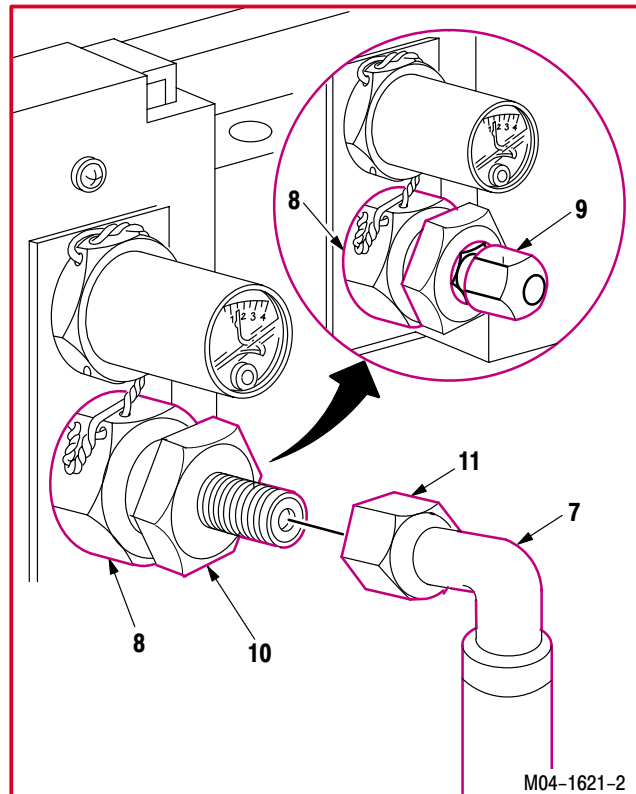
**m. Disconnect nitrogen truck service hose (7) from valve (8). Torque nut (10) to 60 INCH-POUNDS.**

- (1) Remove nitrogen pressure.
- (2) Hold valve (8). Remove nut (11).
- (3) Torque nut (10) to **60 INCH-POUNDS**. Use torque wrench.
- (4) Install cap (9) on valve (8).

**n. Inspect (QA).**

**o. Service utility hydraulic system with fluid (para 1.34).**

**p. Secure access door R325 (para 2.2).**



M04-1621-2

END OF TASK



## 1.37. UTILITY HYDRAULIC RETURN ACCUMULATOR SERVICING – NITROGEN

### 1.37.1. Description

This task covers: Servicing.

### 1.37.2. Initial Setup

#### Tools:

Aircraft mechanic's tool kit (item 376, App H)  
Tire inflator assembly (item 364, App H)  
Nitrogen hand truck (item NO TAG, App H)  
30 - 150 inch-pound 1/4-inch drive click type torque wrench (item 435, App H)

#### Materials/Parts:

Wire (item 226, App F)

#### Personnel Required:

67R Attack Helicopter Repairer  
67R3F Attack Helicopter Repairer/Technical Inspector

#### Equipment Conditions:

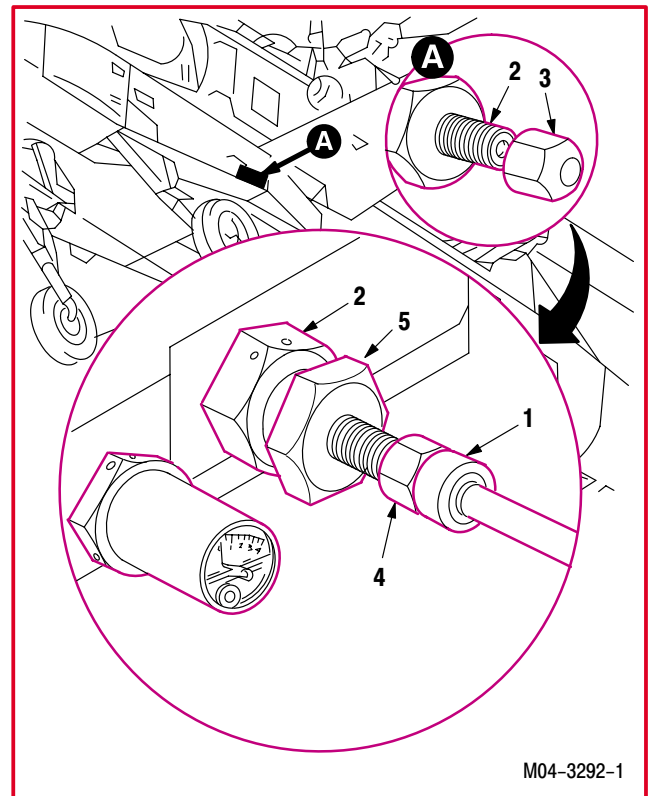
Ref	Condition
1.57	Helicopter safed
2.2	Access fairing L175 removed

### 1.37.3. Servicing

#### WARNING

The utility hydraulic accumulator contains high pressure nitrogen. Open and close valve carefully to prevent possible injury from sudden blast. If injury occurs, seek medical aid.

- a. Vent utility hydraulic pressure (para 7.57).
- b. Connect nitrogen truck and inflator kit service hose (1) to valve (2).
  - (1) Remove cap (3) from valve (2).
  - (2) Remove lockwire from valve (2).
  - (3) Hold valve (2). Install quick-disconnect adapter (4) and service hose (1) on valve (2).



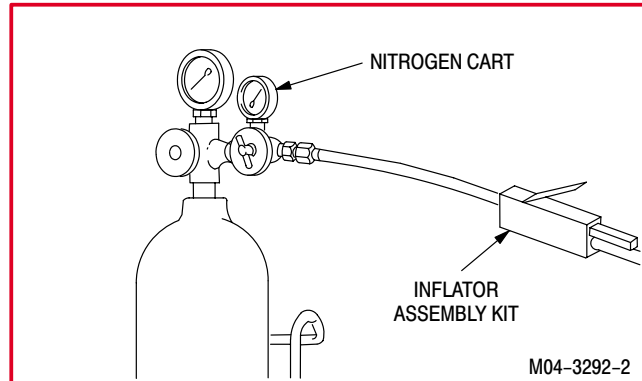
GO TO NEXT PAGE

1.37. UTILITY HYDRAULIC RETURN ACCUMULATOR SERVICING – NITROGEN – continued



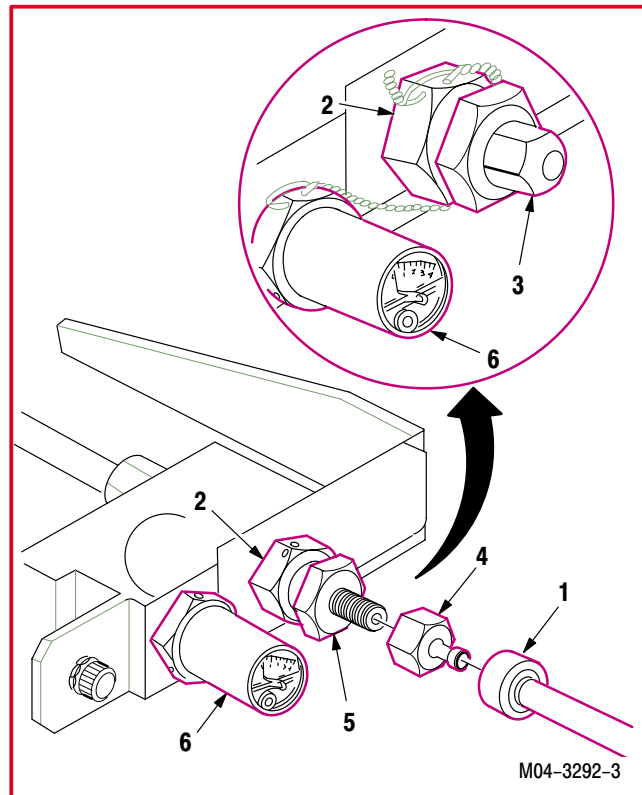
c. **Service utility hydraulic return accumulator with 55 PSIG nitrogen.**

- (1) Hold valve (2). Loosen nut (5) until resistance is felt; then loosen 1/2 to 3/4 turn to off seat valve.
- (2) Slowly pressurize accumulator to 55 PSIG using pressure regulator and pressure gage in inflator kit.
- (3) Allow pressure to stabilize 5 minutes. Read-just pressure if necessary.
- (4) Tighten nut (5).



d. **Disconnect nitrogen truck and inflator kit service hose (1) from valve (2). Torque nut (5) to 60 INCH-POUNDS.**

- (1) Remove nitrogen pressure.
- (2) Hold valve (2). Remove hose (1) and adapter (4).
- (3) Torque nut (5) to **60 INCH-POUNDS**. Use torque wrench.
- (4) Install cap (3) on valve (2).
- (5) Lockwire valve (2) to pressure gage (6). Use wire (item 226, App F).



e. **Inspect (QA).**

f. **Service utility hydraulic system with fluid (para 1.34).**

g. **Install access fairing L175 (para 2.2).**

END OF TASK

## 1.38. UTILITY HYDRAULIC ACCUMULATOR VENTING

### 1.38.1. Description

This task covers: Venting.

### 1.38.2. Initial Setup

#### Tools:

Aircraft mechanic's tool kit (item 376, App H)  
30 - 150 inch-pound 1/4-inch drive click type torque wrench (item 435, App H)

#### Materials/Parts:

Wire (item 226, App F)

#### Personnel Required:

67R Attack Helicopter Repairer  
67R3F Attack Helicopter Repairer/Technical Inspector

#### Equipment Conditions:

Ref	Condition
1.57	Helicopter safed
2.2	Access door R325 opened

### 1.38.3. Venting

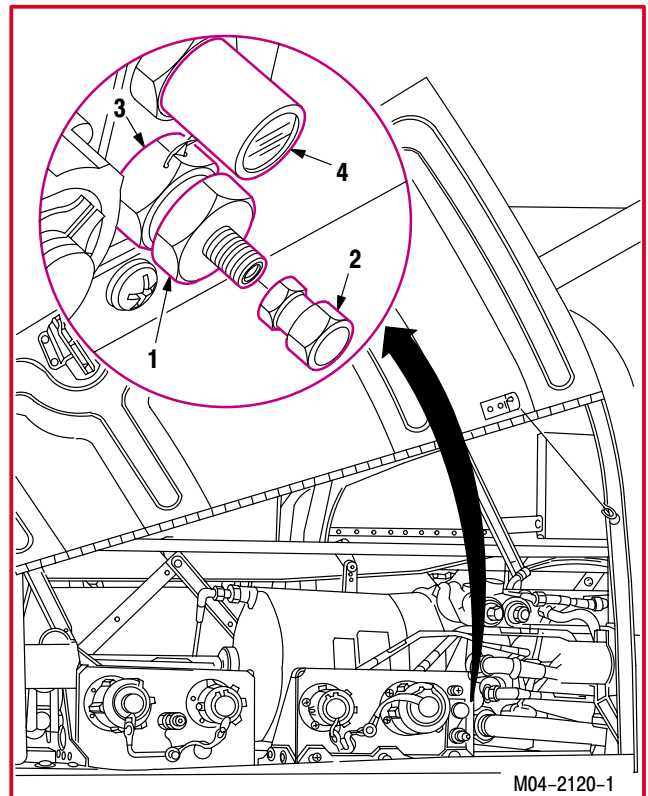


a. **Vent utility hydraulic accumulator.** Torque nut (1) to **60 INCH-POUNDS**.

- (1) Remove cap (2) from fill/bleed valve (3).
- (2) Remove lockwire from valve (3).
- (3) Hold valve (3). Loosen nut (1) until resistance is felt; then loosen 1/2 to 3/4 turn to off seat valve.
- (4) Open valve (3) until gage (4) indicates zero.
- (5) Torque nut (1) to **60 INCH-POUNDS**. Use torque wrench.
- (6) Install cap (2).
- (7) Lockwire fill/bleed valve (3) to pressure gage (4). Use wire (item 226, App F).

b. **Inspect (QA).**

c. **Secure access door R325** (para 2.2).



M04-2120-1

END OF TASK

**1.39. UTILITY HYDRAULIC RETURN ACCUMULATOR VENTING**

1.39.1. Description

This task covers: Venting.

1.39.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
 30 - 150 inch-pound 1/4-inch drive click type torque wrench (item 435, App H)

**Personnel Required:**

67R Attack Helicopter Repairer  
 67R3F Attack Helicopter Repairer/Technical Inspector

**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
2.2	Access fairing L175 removed

**Materials/Parts:**

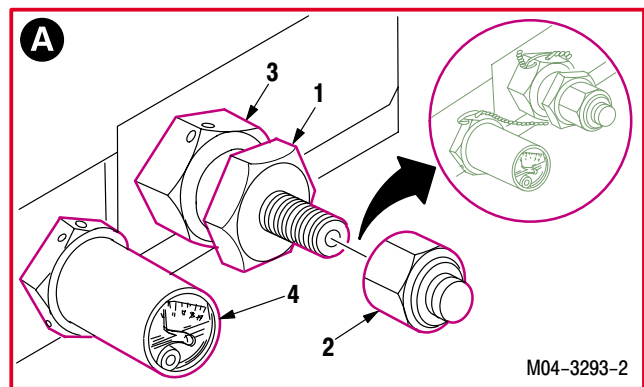
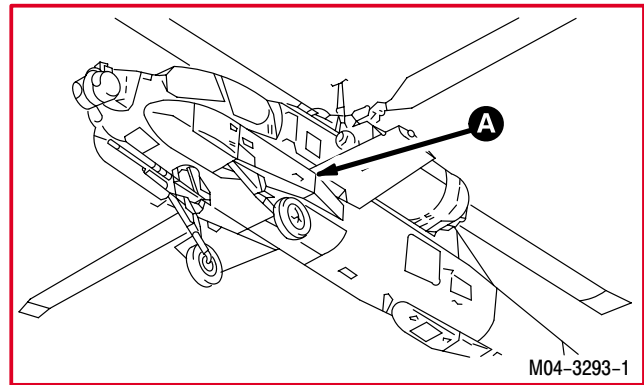
Wire (item 226, App F)

1.39.3. Venting



a. **Vent utility hydraulic return accumulator.**  
 Torque nut (1) to **60 INCH-POUNDS**.

- (1) Remove cap (2) from fill/bleed valve (3).
- (2) Remove lockwire from valve (3).
- (3) Hold valve (3). Loosen nut (1) until resistance is felt; then loosen 1/2 to 3/4 turn to off seat valve.
- (4) Open valve (3) until gage (4) indicates zero.
- (5) Torque nut (1) to **60 INCH-POUNDS**. Use torque wrench.
- (6) Install cap (2).
- (7) Lockwire fill/bleed valve (3) to pressure gage (4). Use wire (item 226, App F).



b. **Inspect (QA).**

c. **Install access fairing L175** (para 2.2).

END OF TASK

**1.40. MAIN LANDING GEAR SHOCK STRUT SERVICE – NITROGEN**

1.40.1. Description

This task covers: Service.

1.40.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
 Nitrogen hand truck (item NO TAG, App H)  
 30 - 150 inch-pound 1/4-inch drive click type torque wrench (item 435, App H)

**Personnel Required:**

67R Attack Helicopter Repairer

**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
1.66	Main landing gear jacks in place and weight on wheels or Main landing gear jacked (optional method)

**Materials/Parts:**

Wire (item 226, App F)

**NOTE**

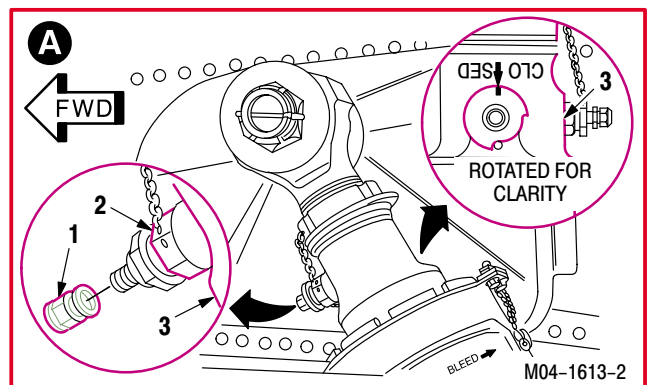
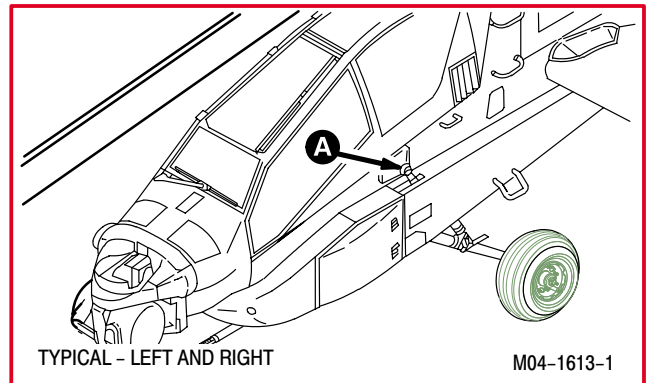
This task is typical for both main landing gear shock struts, except as noted.

1.40.3. Service



- a. **Remove cap (1) from charging valve (2) on shock strut (3).**

(1) Remove lockwire if required to hold valve.



GO TO NEXT PAGE

**1.40. MAIN LANDING GEAR SHOCK STRUT SERVICE – NITROGEN – continued**

b. **Connect nitrogen truck hose (4) to valve (2).**  
Torque nut (5) to **60 INCH-POUNDS**.

- (1) Hold valve (2).
- (2) Install nut (5) on valve (2).
- (3) Torque nut (5) to **60 INCH-POUNDS**. Use torque wrench.

c. **Open valve (2) on shock strut (3).**

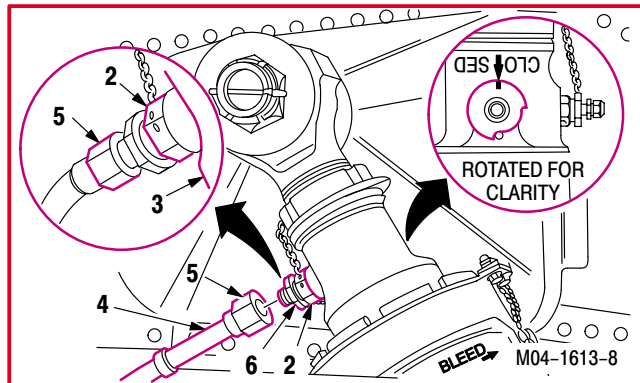
- (1) Hold valve (2).
- (2) Loosen nut (6) until resistance is felt; then loosen 1/2 to 3/4 turn to offseat valve.

**NOTE**

- Go to step d. to service shock strut with jacks in place and weight on wheels.
- Go to step e. to service shock strut with helicopter jacked (para 1.66) and wheels free of ground.

d. **Inflate shock strut (3).** Torque nut (6) to **60 INCH-POUNDS**.

- (1) Inflate shock strut (3) until pressure and distance match one pair of figures on chart (7). Use nitrogen truck.
- (2) Measure distance from center of valve (2) to top of gland nut (8).
- (3) Hold valve (2).
- (4) Torque nut (6) to **60 INCH-POUNDS**. Use torque wrench.
- (5) Go to step f.



(WITH JACKS IN PLACE AND WEIGHT ON WHEELS)

**SHOCK STRUT INFLATION INSTRUCTIONS**  
 LOOSEN GAS CHARGING VALVE UPPER 3/4 INCH-HEX NUT UP TO A MAXIMUM OF 3/4 OF A TURN  
 INFLATE WITH DRY NITROGEN UNTIL PRESSURE AND DISTANCE MATCH ONE PAIR OF FIGURES:

PRESSURE ± 10 PSIG	2700	2530	2375	2230	2110	2000	1900	1800	1725
DISTANCE X ± .030	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90	2.00

GO TO NEXT PAGE

**1.40. MAIN LANDING GEAR SHOCK STRUT SERVICE – NITROGEN – continued**

e. **Inflate shock strut (3).** Torque nut (6) to **60 INCH-POUNDS**.

- (1) Inflate shock strut (3) to **812 ±10 PSIG**. Use nitrogen truck.
- (2) Measure distance from center of valve (2) to top of gland nut (8). Distance shall be **4.18 ±0.030 INCHES**.
- (3) Hold valve (2).
- (4) Torque nut (6) to **60 INCH-POUNDS**. Use torque wrench.

f. **Inspect (QA).**

(WITH HELICOPTER JACKED AND WHEELS FREE OF GROUND)

SHOCK STRUT INFLATION INSTRUCTIONS

LOOSEN GAS CHARGING VALVE UPPER 3/4 INCH HEX NUT UP TO A MAXIMUM OF 3/4 OF A TURN.  
INFLATE WITH DRY NITROGEN UNTIL PRESSURE AND DISTANCE MATCH ONE PAIR OF FIGURES:

M04-1613-11B

g. **Disconnect nitrogen truck hose (4) from valve (2).**

- (1) Remove nitrogen pressure.
- (2) Hold valve (2).
- (3) Remove nut (5) from valve (2). Remove hose (4).
- (4) Install cap (1) on valve (2).
- (5) Lockwire valve (2) to shock strut (3) if removed. Use wire (item 226, App F).

M04-1613-10

h. **Repeat steps b. thru e. for opposite main landing gear strut as required.**

i. **Check shock struts for leaks.**

j. **If required, lower helicopter and remove jacks (para 1.66).**

END OF TASK

**1.41. MAIN LANDING GEAR SHOCK STRUT SERVICE – FLUID**

1.41.1. Description

This task covers: Servicing.

1.41.2. Initial Setup

**Tools:**

- Aircraft mechanic's tool kit (item 376, App H)
- Light duty laboratory apron (item 27, App H)
- Industrial faceshield (item 129, App H)
- Fluid service unit (item 137, App H)
- Chemical protective gloves (item 154, App H)
- 14-quart utility pail (item 222, App H)
- Nitrogen hand truck (item NO TAG, App H)
- 30 - 150 inch-pound 1/4-inch drive click type torque wrench (item 435, App H)
- Main landing gear bleed hose (figure D-469, App D)

**Materials/Parts:**

- Nipple (MS24392D2 for bleeding)
- Packing (MS28778-2 for bleeding)
- Packing
- Hydraulic fluid (item 93, App F)
- Wire (item 226, App F)

**Personnel Required:**

- 68H Aircraft Pneudraulics Repairer
- 67R3F Attack Helicopter Repairer/Technical Inspector

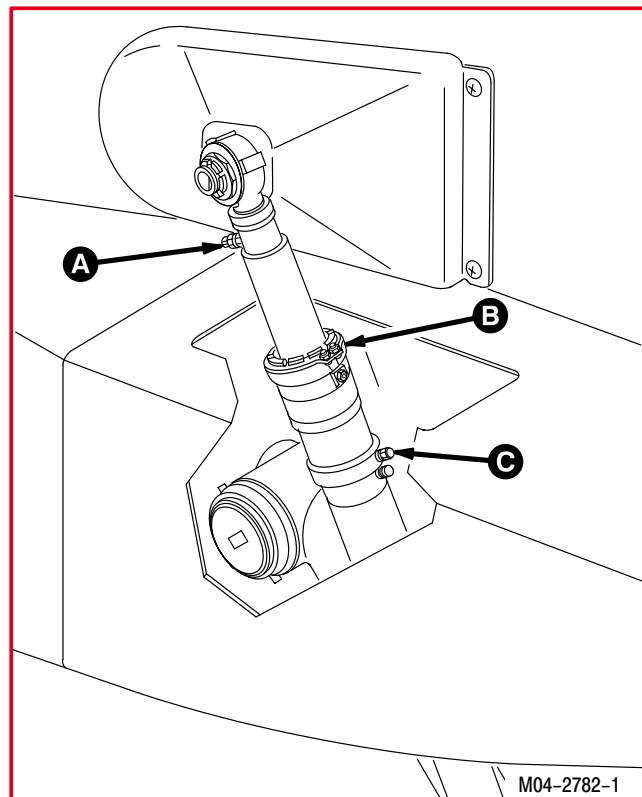
**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
1.66	Helicopter jacked (three points)
1.67	Main landing gear jacked
2.2	Access fairings L140 and R140 removed

1.41.3. Servicing

**NOTE**

This task is typical for either left or right main landing gear shock struts, except for position of control.



M04-2782-1

GO TO NEXT PAGE

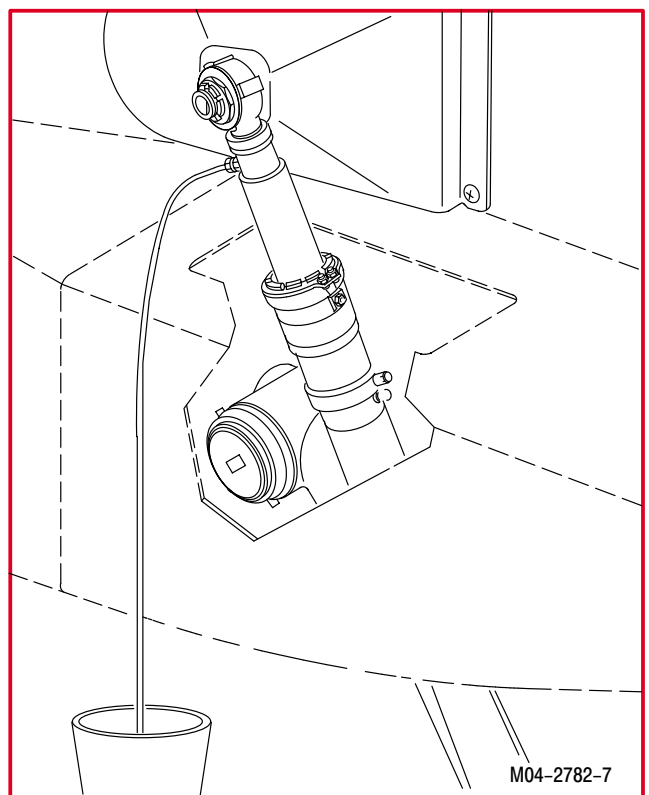
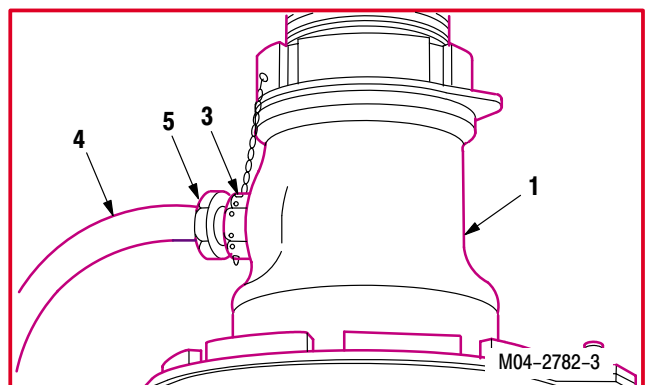
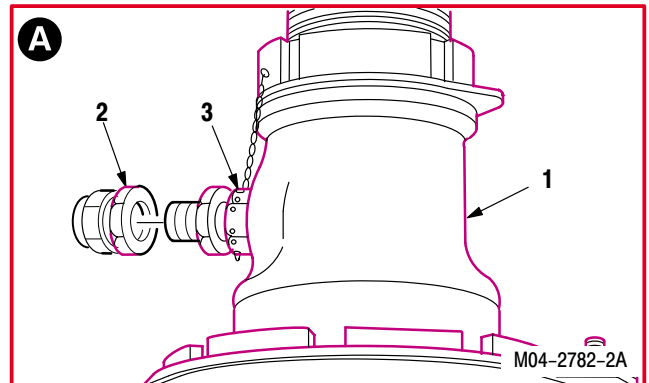


1.41. MAIN LANDING GEAR SHOCK STRUT SERVICE – FLUID – continued



a. Deflate shock strut (1).

- (1) Remove cap (2) from charging valve (3).
- (2) Install hose (4) on valve (3) and outlet end of hose into pail. Use bleed hose (figure D-469, App D) and pail.
- (3) Hold valve (3).
- (4) Loosen nut (5) until resistance is felt; then loosen 1/2 to 3/4 turn to off seat valve.
- (5) After pressure has escaped, fully open valve (3).



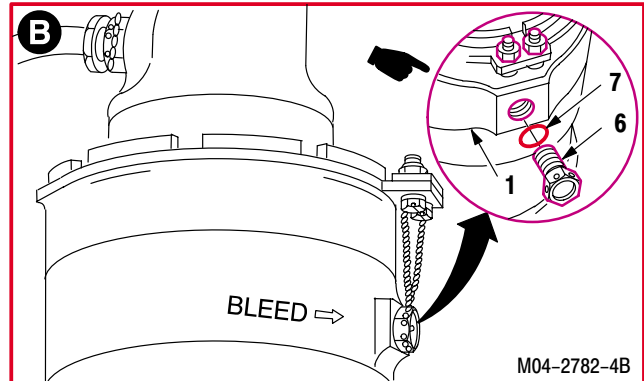
GO TO NEXT PAGE

1.41. MAIN LANDING GEAR SHOCK STRUT SERVICE – FLUID – continued



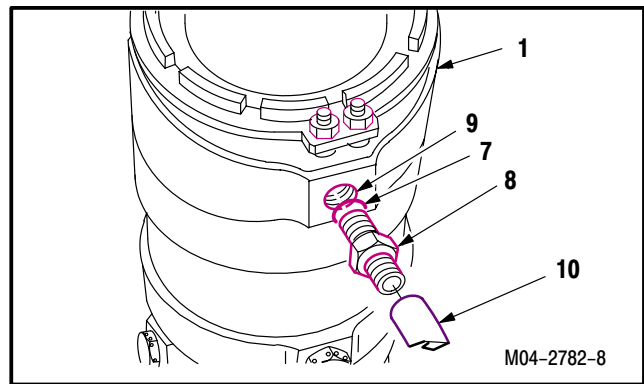
b. Remove bleed plug (6) from upper section of shock strut (1).

- (1) Remove lockwire from plug (6).
- (2) Remove plug (6).
- (3) Remove and discard packing (7).



c. Install nipple (8) on strut (1).

- (1) Lubricate new packing (7) and threads of nipple (8) with hydraulic fluid. Use hydraulic fluid (item 93, App F).
- (2) Install packing (7) on nipple (8).
- (3) Install nipple (8) in bleed port (9).
- (4) Install hose (10) on nipple (8) and outlet end of hose into pail. Use bleed hose (figure D-469, App D) and pail.



d. Connect hydraulic servicing unit hose (11) to shock strut check valve (12).

- (1) Remove valve cap (13).
- (2) Install hose (11) on check valve (12) and tighten nut (14).

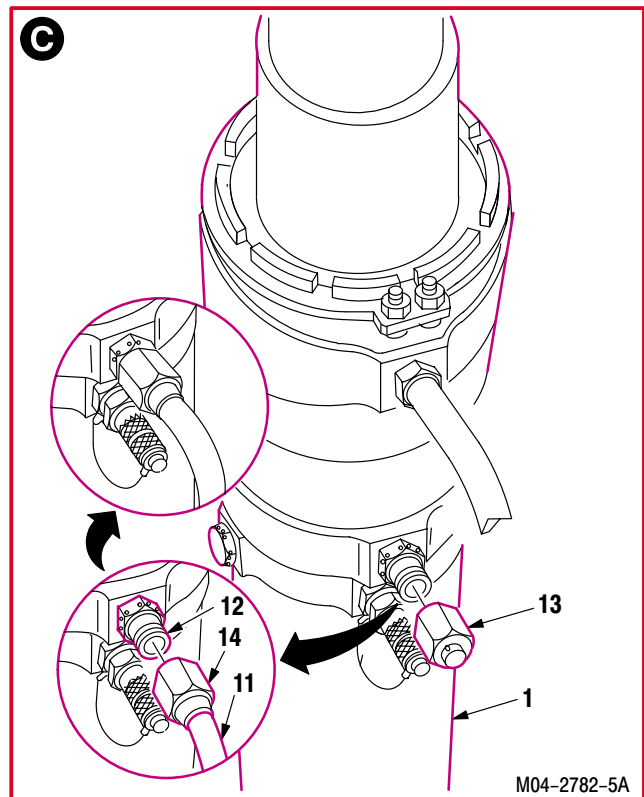
e. Collapse shock strut (1). Use main landing gear axle jack (para 1.67).

**NOTE**

Fluid pressure not to exceed **30 PSI** during filling.

f. Fill shock strut (1) with hydraulic fluid.

- (1) Fill shock strut (1) until overflow into pail is free of all air bubbles. Use hydraulic servicing unit and hydraulic fluid (item 93, App F).

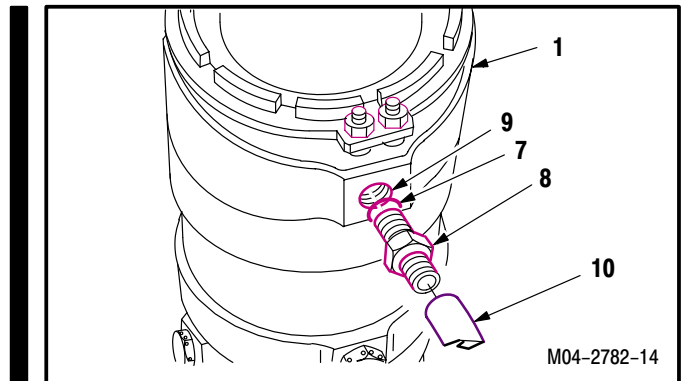


GO TO NEXT PAGE

**1.41. MAIN LANDING GEAR SHOCK STRUT SERVICE – FLUID – continued**

**g. Remove nipple (8) from strut (1).**

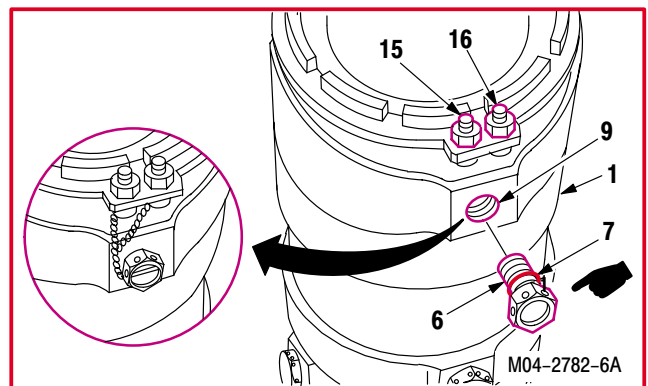
- (1) Remove hose (10) from nipple (8).
- (2) Remove nipple (8) from port (9).
- (3) Remove and discard packing (7).



**h. Install plug (6) on strut (1).**

- (1) Lubricate new packing (7) and threads of plug (6) with hydraulic fluid. Use hydraulic fluid (item 93, App F).
- (2) Install packing (7) on plug (6).
- (3) Install plug (6) in port (9).

**i. Lockwire plug (6) to screws (15) and (16). Use wire (item 226, App F).**

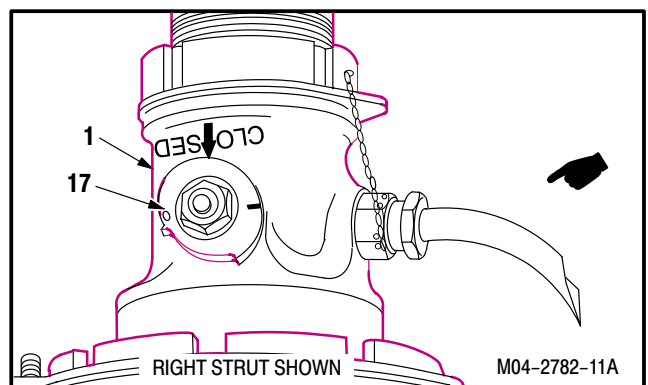


**j. Ensure floating piston is seated at top of strut (1).**

- (1) Slowly pressurize strut (1) with hydraulic fluid to **100 to 200 PSI** to seat floating piston.
- (2) Remove hydraulic pressure from strut (1).

**k. Open bleed control valve (17).**

- (1) Remove lockwire. Rotate valve (17) 90 degrees clockwise.



GO TO NEXT PAGE

1.41. MAIN LANDING GEAR SHOCK STRUT SERVICE – FLUID – continued

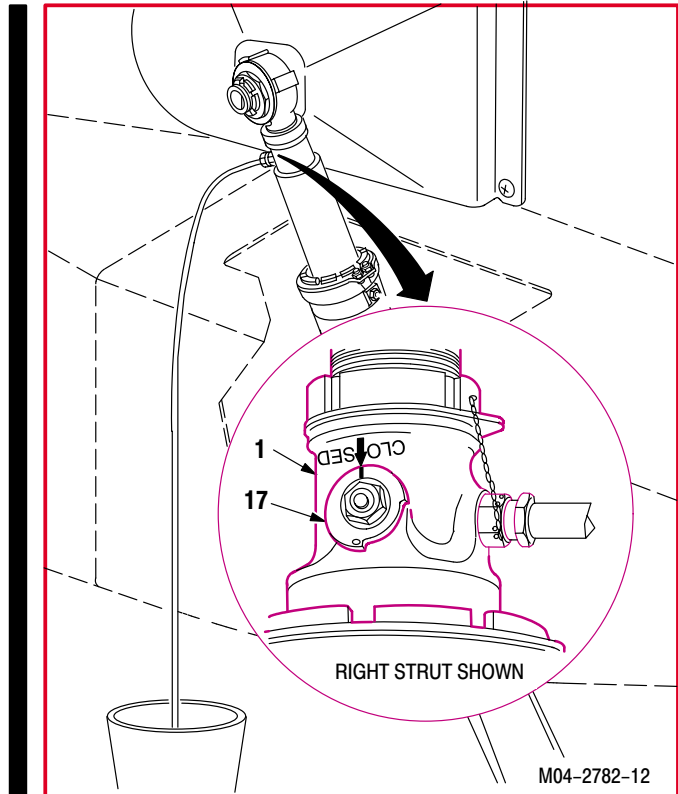
**NOTE**

Fluid pressure not to exceed **30 PSI** during filling.

**l. Fill shock strut (1) with hydraulic fluid.**

(1) Fill shock strut (1) until overflow into pail is free of all air bubbles. Use hydraulic servicing unit and hydraulic fluid (item 93, App F).

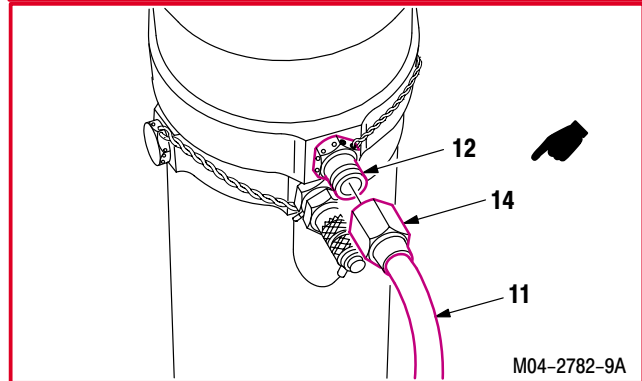
**m. Close valve (17).** Rotate valve (17) counterclockwise to close.



**n. Disconnect hydraulic servicing unit hose (11) from check valve (12).** Torque cap (13) to **135 INCH-POUNDS**.

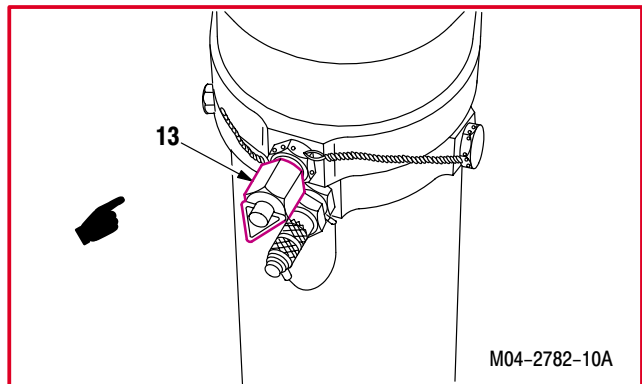
(1) Hold check valve (12).

(2) Loosen nut (14). Remove hose (11) from check valve (12).



(3) Install cap (13).

(4) Torque cap (13) to **135 INCH-POUNDS**. Use torque wrench.



GO TO NEXT PAGE

---

**1.41. MAIN LANDING GEAR SHOCK STRUT SERVICE – FLUID – continued**

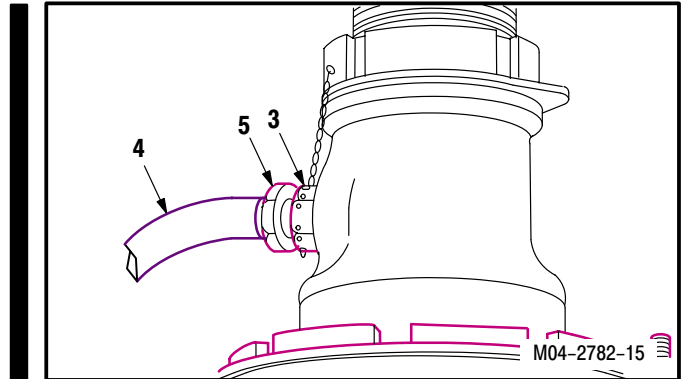

---

**CAUTION**

To prevent improper servicing of shock strut, check valve must be closed and capped before removing axle jack.

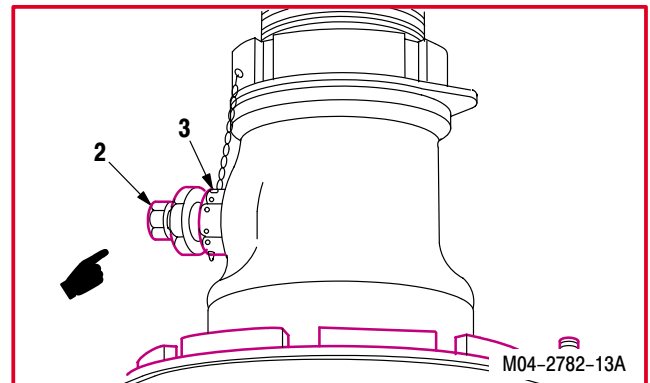
- o. **Close nut (5).** Torque nut (5) to **60 INCH-POUNDS.**

- (1) Hold valve (3).
- (2) Torque nut (5) to **60 INCH-POUNDS.** Use torque wrench.
- (3) Remove hose (4) from valve (3).



- (4) Install cap (2) on charging valve (3).

- p. **Remove main landing gear from axle jack** (para 1.67).
- q. **Service shock strut with nitrogen** (para 1.40).
- r. **Remove aircraft from jacks** (para 1.66).
- s. **Inspect (QA).**
- t. **Install access fairings L140 and R140** (para 2.2).



END OF TASK

---

## 1.42. TAIL LANDING GEAR SHOCK STRUT SERVICING – NITROGEN

---

### 1.42.1. Description

This task covers: Servicing.

---

### 1.42.2. Initial Setup

#### **Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
Nitrogen hand truck (item NO TAG, App H)  
30 - 150 inch-pound 1/4-inch drive click type torque wrench (item 435, App H)

#### **Personnel Required:**

67R Attack Helicopter Repairer  
67R3F Attack Helicopter Repairer/Technical Inspector

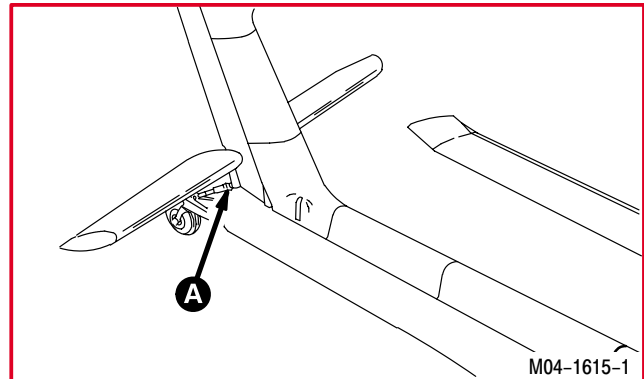
#### **Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
1.68	Tail landing gear jack in place and weight on wheels or Tail landing gear jacked (optional method)

#### **Materials/Parts:**

Wire (item 226, App F)

---



GO TO NEXT PAGE

## 1.42. TAIL LANDING GEAR SHOCK STRUT SERVICING – NITROGEN – continued

### 1.42.3. Servicing

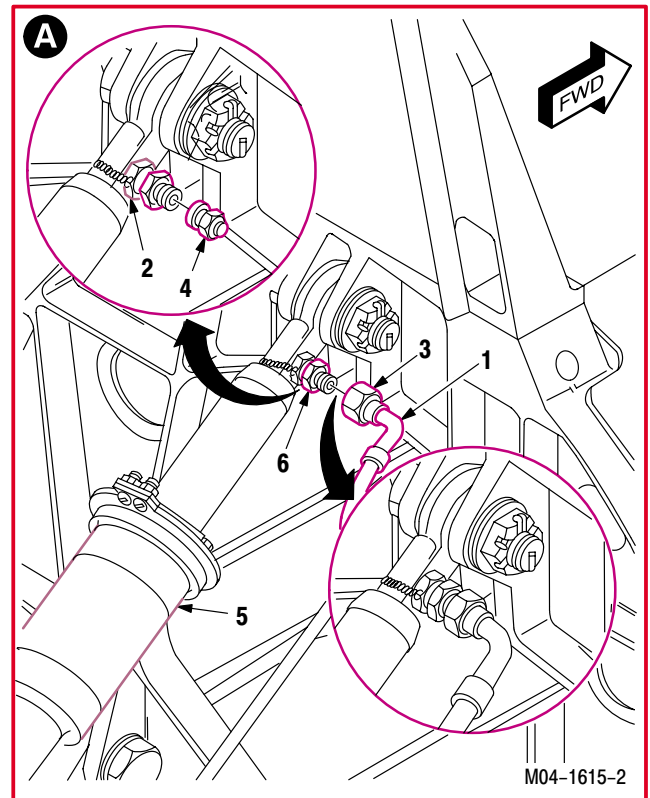


- a. **Connect nitrogen truck hose (1) to valve (2).**  
Torque nut (3) to **60 INCH-POUNDS**.

- (1) Remove cap (4) from valve (2).
- (2) Hold valve (2).
- (3) Install nut (3) on valve (2).
- (4) Torque nut (3) to **60 INCH-POUNDS**. Use torque wrench.

- b. **Open valve (2) on shock strut (5).**

- (1) Hold valve (2).
- (2) Loosen nut (6) 1/2 turn. Do not exceed 3/4 turn.



GO TO NEXT PAGE

1.42. TAIL LANDING GEAR SHOCK STRUT SERVICING – NITROGEN – continued

**NOTE**

- Go to step c. to service shock strut with jacks in place and weight on wheels.
- Go to step d. to service shock strut with tail landing gear jacked (para 1.68) and wheel free of ground.

**c. Inflate shock strut (5) to pressures on chart (7). Torque nut (6) to 60 INCH-POUNDS.**

- (1) Inflate shock strut (5) until pressure and distance match one pair of figures on chart (7). Use nitrogen truck.
- (2) Measure distance from center of valve (2) to top of gland nut (8).
- (3) Hold valve (2).
- (4) Torque nut (6) to **60 INCH-POUNDS**. Use torque wrench.
- (5) Go to step e.

(WITH JACK IN PLACE AND WEIGHT ON WHEEL)

SHOCK STRUT INFLATION INSTRUCTIONS

LOOSEN GAS CHARGING VALVE UPPER 3/4 INCH-HEX NUT UP TO A MAXIMUM OF 3/4 OF A TURN. INFLATE WITH DRY NITROGEN UNTIL PRESSURE AND DISTANCE MATCH ONE PAIR OF FIGURES:

PRESSURE ± 10 PSIG	3540	3300	3080	2890	2710	2550	2420	2300	2190
DISTANCE X ±.030	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90

2090	2000	1920	1840	1770	1700	1640	1580
2.00	2.10	2.20	2.30	2.40	2.50	2.60	2.70

M04-1615-5

GO TO NEXT PAGE



1.42. TAIL LANDING GEAR SHOCK STRUT SERVICING – NITROGEN – continued

d. **Inflate shock strut (5).** Torque nut (6) to **60 INCH-POUNDS**.

- (1) Inflate shock strut (5) to **794 ±10 PSIG**. Use nitrogen truck.
- (2) Measure distance from center of valve (2) to top of gland nut (8). Distance shall be **5.12 ±0.030 INCHES**.
- (3) Hold valve (2).
- (4) Torque nut (6) to **60 INCH-POUNDS**. Use torque wrench.

e. **Inspect (QA).**

f. **Disconnect hose (1) from valve (2).**

- (1) Remove nitrogen pressure.
- (2) Hold valve (2).
- (3) Remove nut (3) and hose (1).
- (4) Install cap (4) on valve (2).
- (5) Lockwire valve (2) to shock strut (5) if removed. Use wire (item 226, App F).

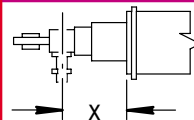
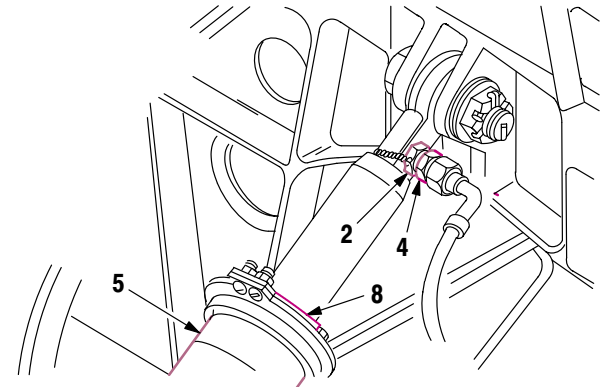
g. **Check shock strut for leaks.**

h. **If required, lower tail landing gear and remove jack** (para 1.68).

(TAILWHEEL FREE OF GROUND AND STRUT FULLY EXTENDED)

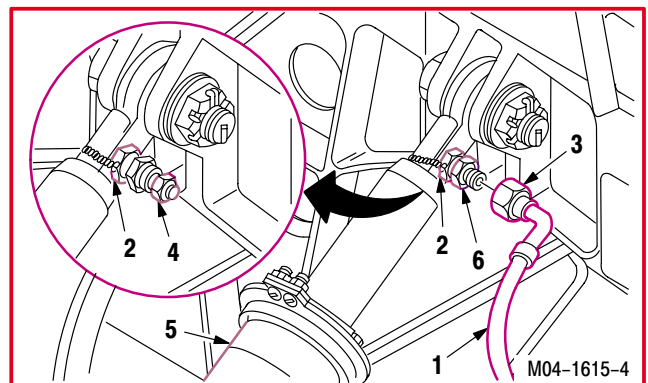
SHOCK STRUT INFLATION INSTRUCTIONS

LOOSEN GAS CHARGING VALVE UPPER 3/4 INCH HEX NUT UP TO A MAXIMUM OF 3/4 OF A TURN. INFLATE WITH DRY NITROGEN UNTIL PRESSURE AND DISTANCE MATCH ONE PAIR OF FIGURES:



OPTIONAL METHOD ; WITH WHEEL FREE OF GROUND AND STRUT FULLY EXTENDED (X=5.12 ± 0.030 INCHES) INFLATE TO 794 ±10 PSIG

M04-1615-6



M04-1615-4

END OF TASK

---

## 1.43. MAIN LANDING GEAR TIRE SERVICING

---

### 1.43.1. Description

This task covers: Servicing.

---

### 1.43.2. Initial Setup

#### **Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
Chemical protective gloves (item 154, App H)  
Nitrogen hand truck (item NO TAG, App H)

#### **Materials/Parts:**

Leak test compound (item 109, App F)

#### **Personnel Required:**

67R Attack Helicopter Repairer

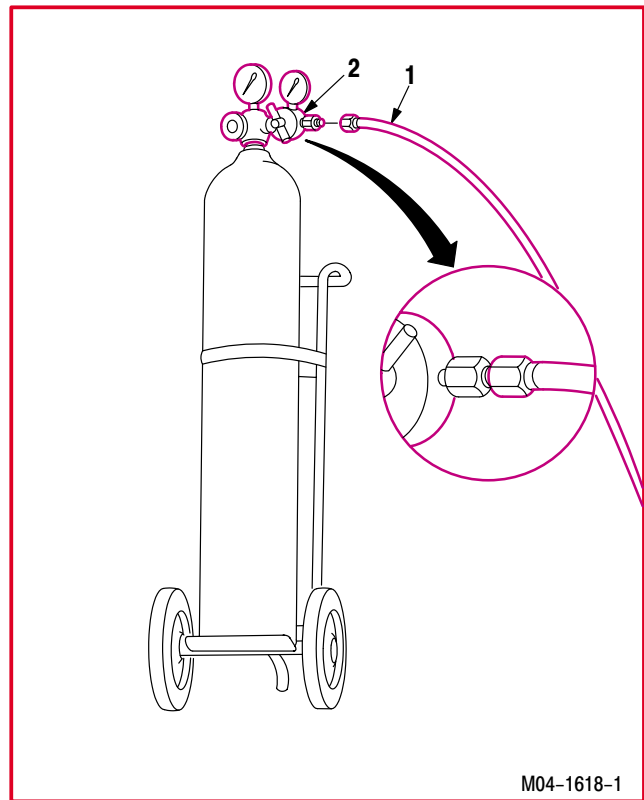
#### **Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed

---

### 1.43.3. Servicing

- a. **Connect tire inflator hose (1) to regulator (2).**

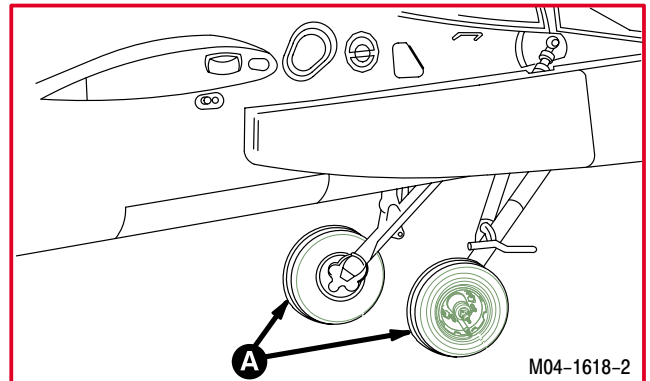


GO TO NEXT PAGE

1.43. MAIN LANDING GEAR TIRE SERVICING – continued

**WARNING**

Tire may explode and cause bodily injury if over inflated. Use extreme care while inflating tire. Keep all personnel away from tire during inflation procedure. If injury occurs, seek medical aid.

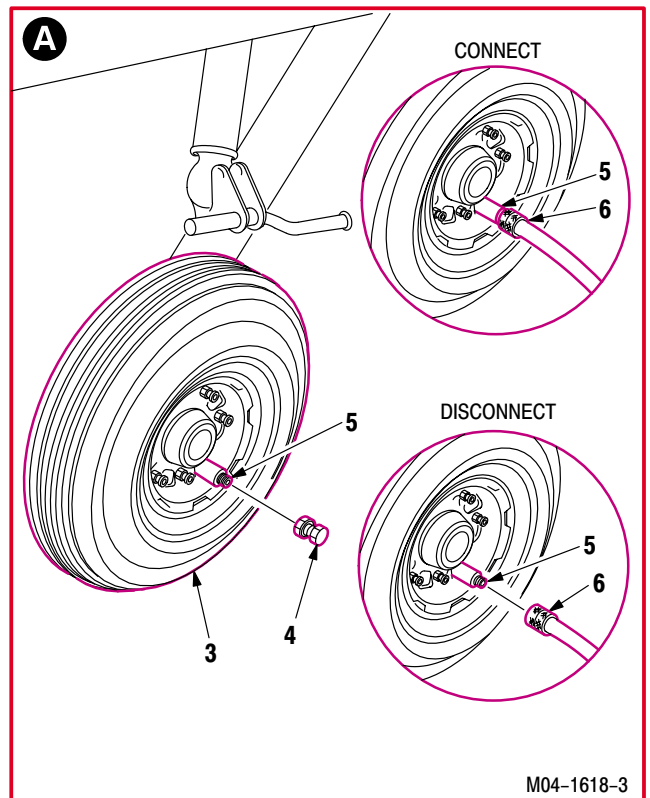


b. Service main landing gear tire (3) to 105 ±5 psi.

- (1) Remove valve cap (4) from valve stem (5).
- (2) Connect air chuck (6) to stem (5).
- (3) Slowly inflate tire (3) to 105 ±5 psi.
- (4) Disconnect air chuck (6) from stem (5).



c. Check tire (3) for leaks. Use leak test compound (item 109, App F).



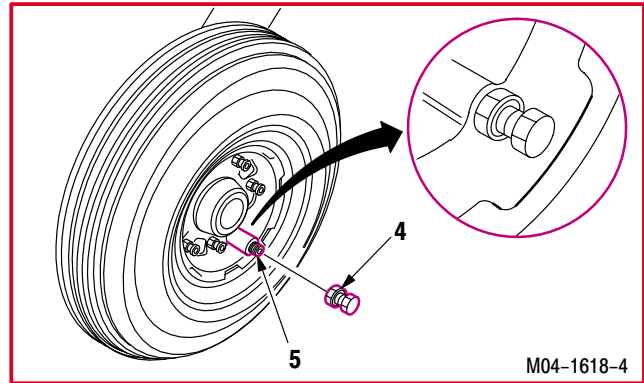
GO TO NEXT PAGE

---

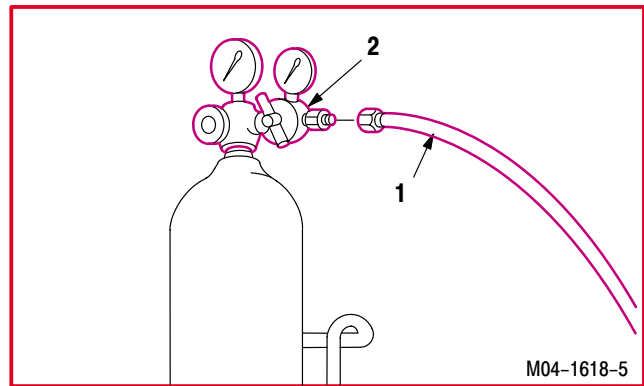
**1.43. MAIN LANDING GEAR TIRE SERVICING – continued**

---

- d. Install cap (4) on stem (5).
- e. Repeat steps b, c, and d for opposite landing gear tire.



- f. Disconnect tire inflator hose (1) from regulator (2).



END OF TASK

**1.44. TAIL LANDING GEAR TIRE SERVICING**

1.44.1. Description

This task covers: Servicing.

1.44.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
 Chemical protective gloves (item 154, App H)  
 Nitrogen hand truck (item NO TAG, App H)

**Materials/Parts:**

Leak test compound (item 109, App F)

**Personnel Required:**

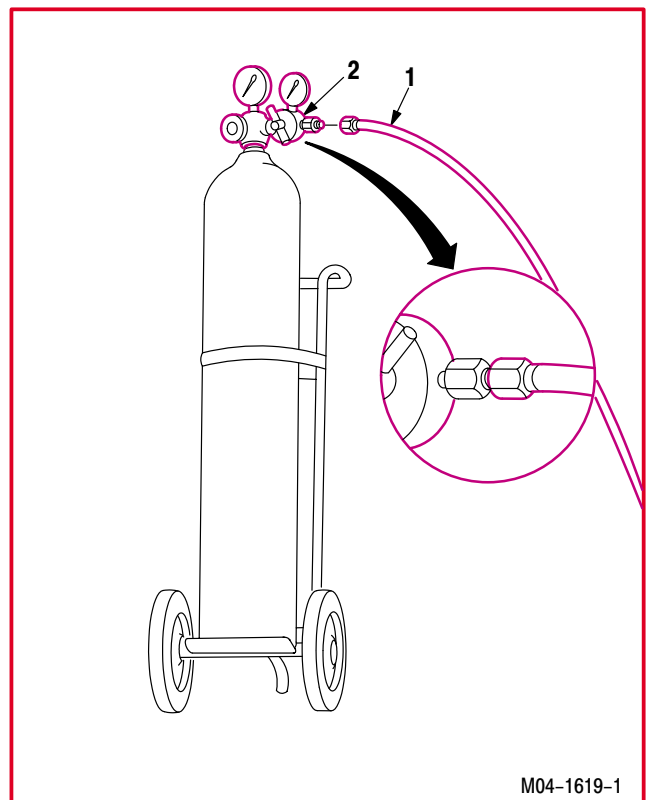
67R Attack Helicopter Repairer

**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed

1.44.3. Servicing

- a. **Connect tire inflator hose (1) to regulator (2).**



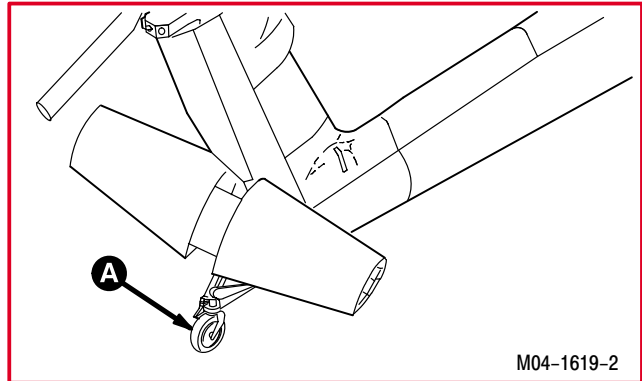
M04-1619-1

GO TO NEXT PAGE

1.44. TAIL LANDING GEAR TIRE SERVICING – continued

**WARNING**

Tire may explode and cause bodily injury if over inflated. Use extreme care while inflating tire. Keep all personnel away from tire during inflation procedure. If injury occurs, seek medical aid.

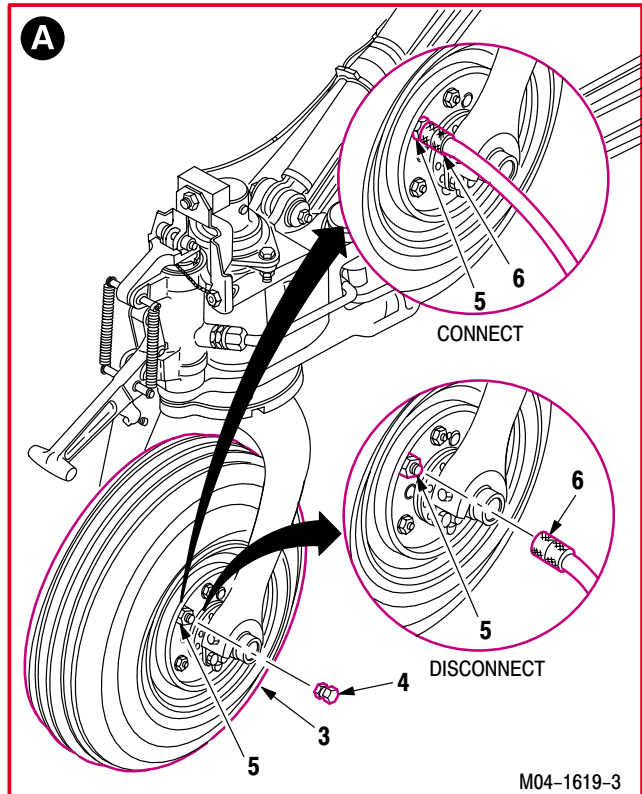


b. Service tail landing gear tire (3) to 105 ±5 psi.

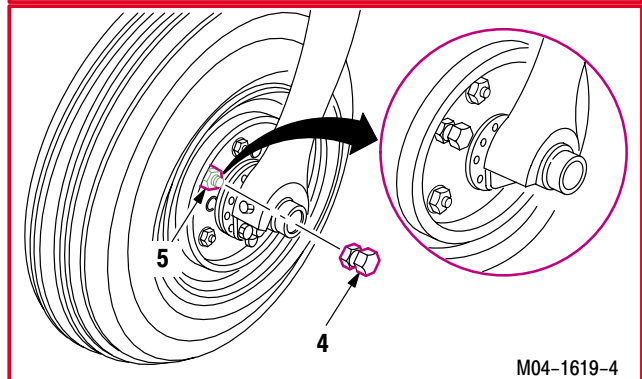
- (1) Remove valve cap (4) from valve stem (5).
- (2) Connect air chuck (6) to stem (5).
- (3) Slowly inflate tire (3) to 105 ±5 psi.
- (4) Disconnect air chuck (6) from stem (5).



c. Check tire (3) for leaks. Use leak test compound (item 109, App F).



d. Install cap (4) on stem (5).



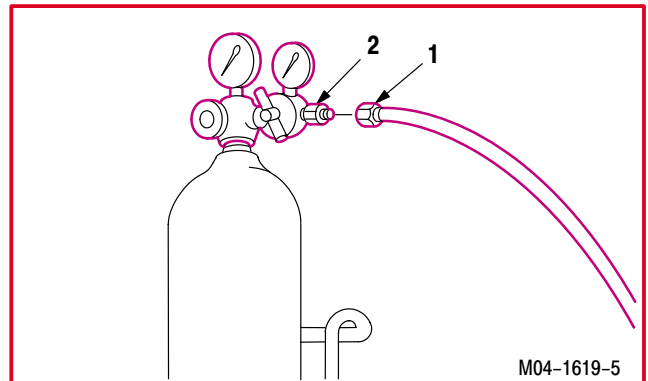
GO TO NEXT PAGE

---

**1.44. TAIL LANDING GEAR TIRE SERVICING – continued**

---

- e. Disconnect tire inflator hose (1) from regulator (2).



END OF TASK

**1.45. MAIN LANDING GEAR BRAKE SYSTEM – SERVICE/BLEED**

1.45.1. Description

This task covers: Service/Bleed.

1.45.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
 Light duty laboratory apron (item 27, App H)  
 Industrial faceshield (item 129, App H)  
 Filler and bleeder (item 131, App H)  
 Chemical protective gloves (item 154, App H)  
 3/16-inch tube nipple (item 216, App H)  
 14-quart utility pail (item 222, App H)  
 Hydraulic brake bleeder tube (item 399, App H)

**Personnel Required:**

67R Attack Helicopter Repairer  
 One person to assist  
 67R3F Attack Helicopter Repairer/Technical Inspector

**Materials/Parts:**

Seal (2)  
 Wire (item 226, App F)

**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
2.161	CPG seat tilted forward

1.45.3. Service/Bleed

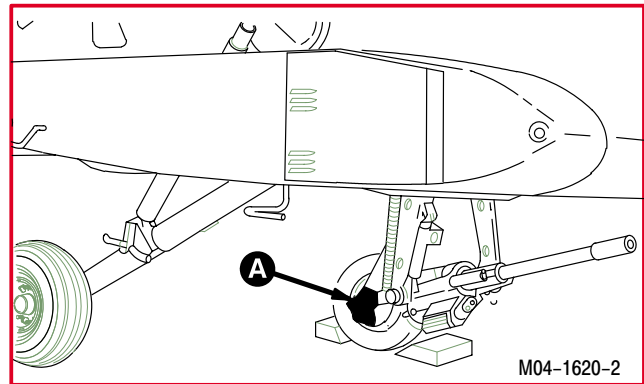
**CAUTION**

Tighten hose only finger tight when installing bleeder hose. Over torquing can cause damage to bleeder hose or bleeder port.

**NOTE**

- This task is typical for right and left main landing gear brake. Bleed right side first if bleeding both systems.
- This task is typical for both vendor bleeders except as noted.
- Removal and installation of lockwire is not required on both vendor bleeders.

- a. **Enter pilot station** (para 1.56). **Observe all safety precautions.**



GO TO NEXT PAGE

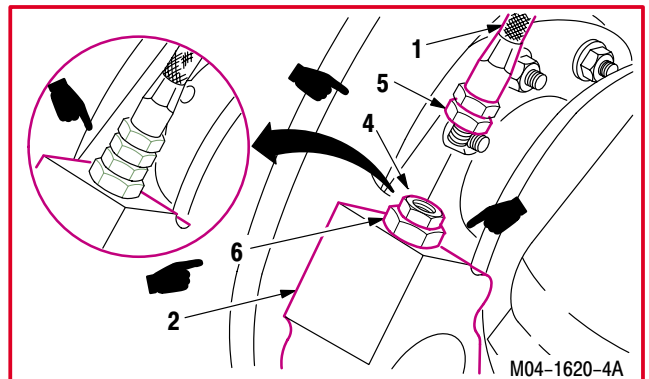
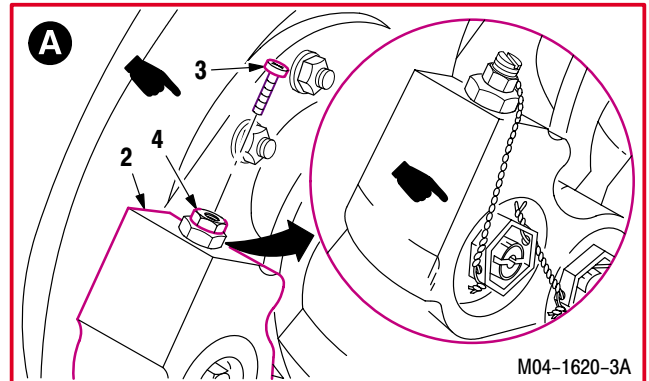


**1.45. MAIN LANDING GEAR BRAKE SYSTEM – SERVICE/BLEED – continued**

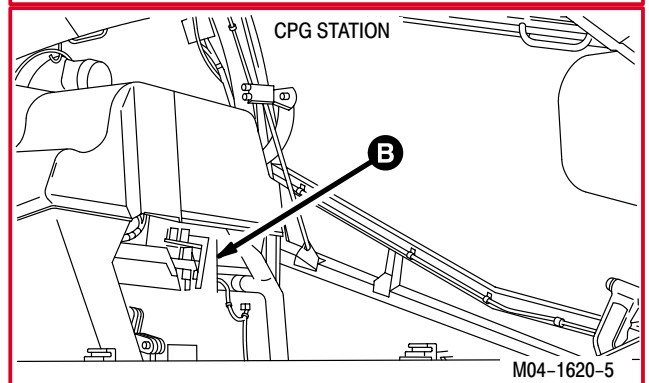
b. Release parking brake (para 1.61).

c. Install hydraulic filler and bleeder pressure hose (1) to wheel brake cylinder (2).

- (1) Remove lockwire (if required).
- (2) Remove bleeder screw (3) from bleeder valve (4).
- (3) Install hose (1) with nipple tube (5) in bleeder valve adapter (6) on wheel brake cylinder (2).
- (4) Loosen bleeder valve (4) as required to allow hydraulic fluid to enter wheel brake cylinder (2).



d. Enter CPG station (para 1.56). Observe all safety precautions.



GO TO NEXT PAGE

1.45. MAIN LANDING GEAR BRAKE SYSTEM – SERVICE/BLEED – continued

e. Install bleeder hose (7) to pilot station master cylinder (8).

- (1) Remove lockwire.
- (2) Remove screw (9) and seal (10) from port (11). Discard seal (10).
- (3) Install hose (7) with adapter (12) in port (11) on master cylinder (8).
- (4) Place outlet end of hose (7) in pail.



f. Bleed pilot station master cylinder (8).

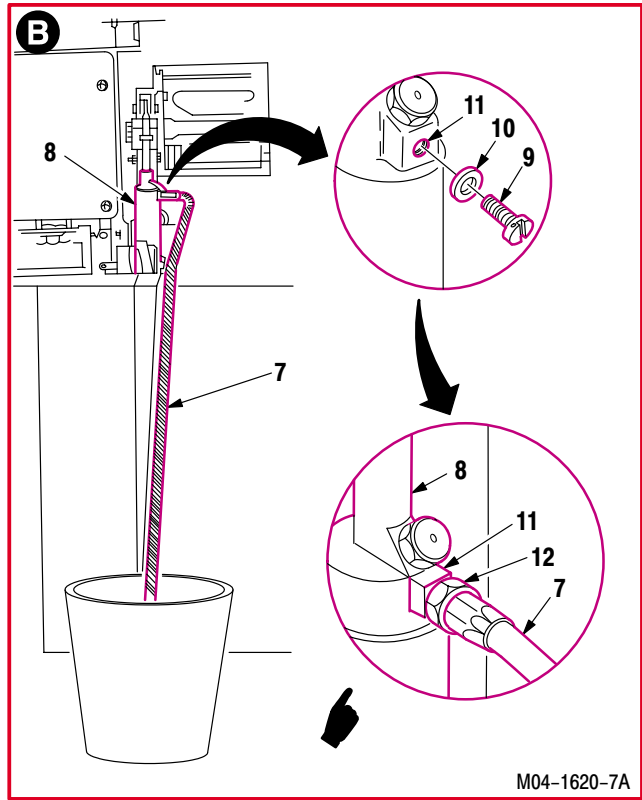
- (1) Fill master cylinder (8) through wheel brake cylinder (2) until overflow into pail is free of bubbles. Use filler and bleeder.

**CAUTION**

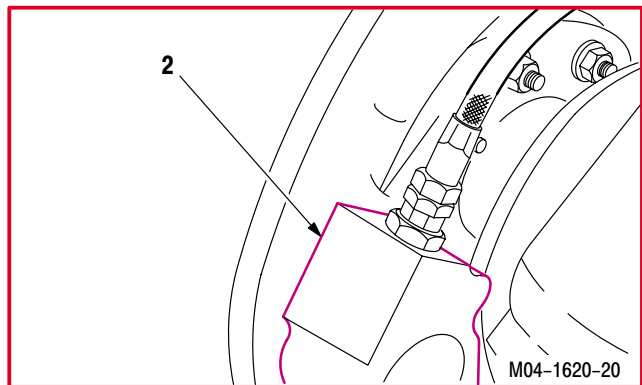
Overservicing the brake hydraulic system may cause system damage.

**NOTE**

A small amount of fluid can be expected to seep from the check valve weep hole, especially if the brake system is over-serviced with fluid.



M04-1620-7A



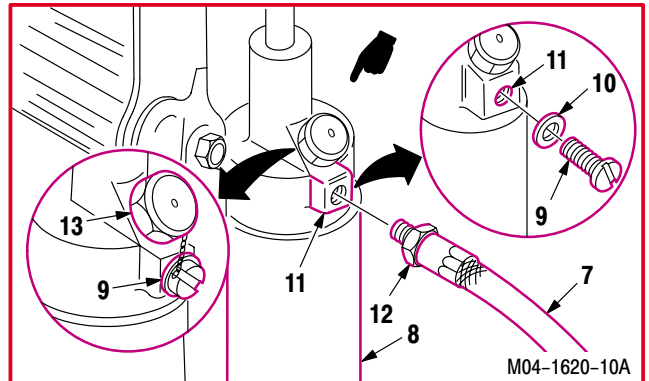
M04-1620-20

GO TO NEXT PAGE

1.45. MAIN LANDING GEAR BRAKE SYSTEM – SERVICE/BLEED – continued

g. **Remove bleeder hose (7) from pilot station master cylinder (8).**

- (1) Remove hose adapter (12) with hose (7) from port (11).
- (2) Wrap a clean rag around cylinder (8) and allow excess hydraulic fluid to drain from port (11). Wipe up all drained fluid with rag.
- (3) Install screw (9) with new seal (10) in port (11).

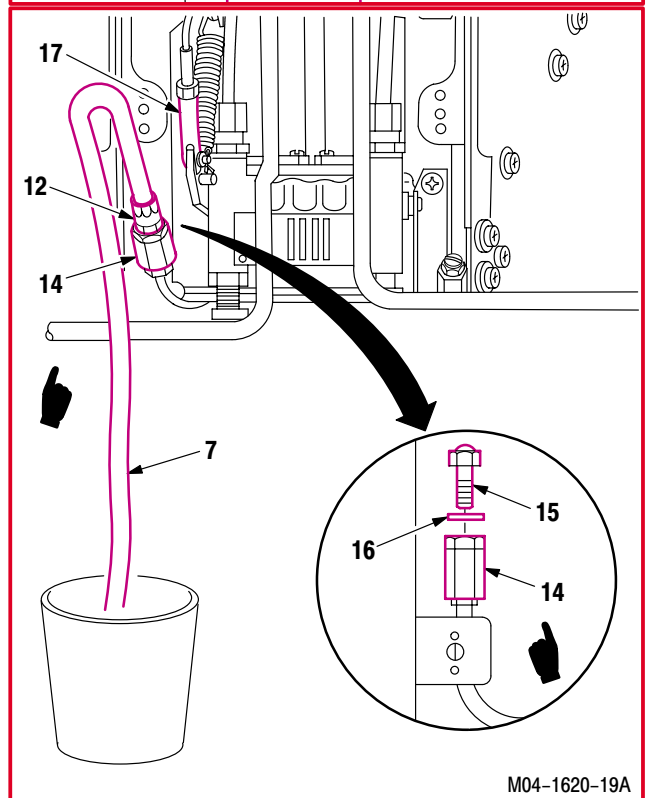


h. **Lockwire screw (9) to cap (13).** Use wire (item 226, App F).

i. **Set parking brake** (para 1.61).

j. **Install bleeder hose (7) to parking brake compensator bleeder valve (14).**

- (1) Remove screw (15) and washer (16).
- (2) Install bleeder hose (7) with adapter (12) in bleeder valve (14).
- (3) Place outlet end of hose (7) in pail.
- (4) Loosen valve (14).



k. **Bleed parking brake compensator bleeder valve (14) until overflow into pail is free of bubbles.** Use filler and bleeder.

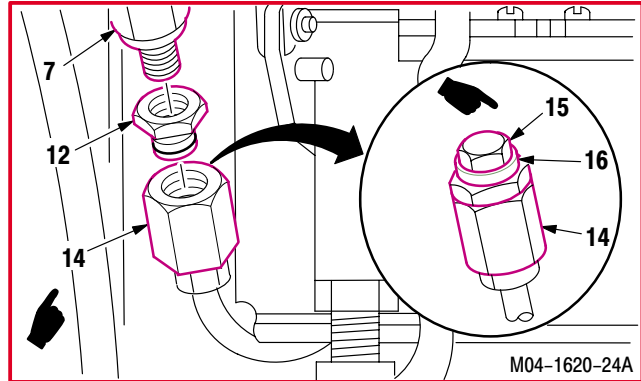
- (1) Operate filler and bleeder.
- (2) Pull up and hold brake lever (17).
- (3) Release brake lever (17) when overflow in pail is free of air bubbles.
- (4) Shut off filler and bleeder.

GO TO NEXT PAGE

1.45. MAIN LANDING GEAR BRAKE SYSTEM – SERVICE/BLEED – continued

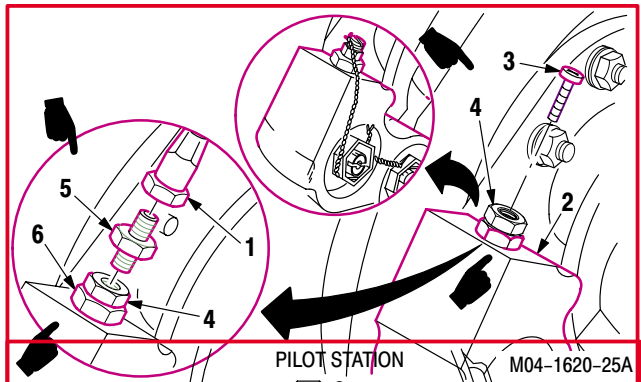
**l. Remove hose (7) from valve (14).**

- (1) Tighten valve (14).
- (2) Remove hose (7) and adapter (12).
- (3) Install washer (16) and screw (15) in valve (14).

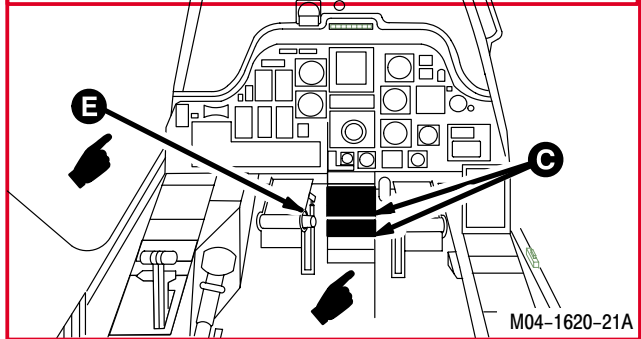


**m. Remove hose (1) from wheel brake cylinder (2).**

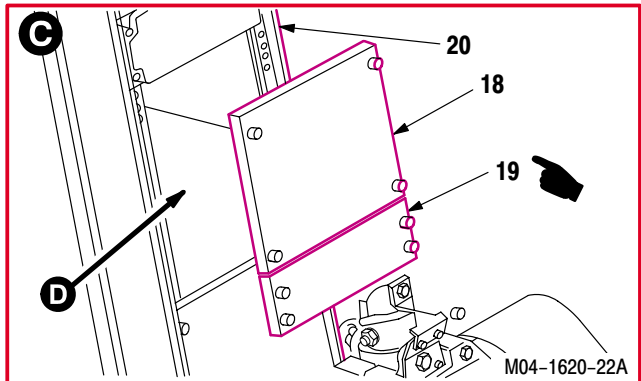
- (1) Tighten bleeder valve (4) in bleeder valve adapter (6) on wheel brake cylinder (2).
- (2) Remove nipple tube (5) with hose (1) from bleeder valve (4) on adapter (6).
- (3) Install bleeder screw (3) in bleeder valve (4).



**n. Lockwire screw (3) to wheel brake cylinder (2) (if required). Use wire (item 226, App F).**



**o. Remove two blank panels (18) and (19) from pilot instrument panel center console (20).**

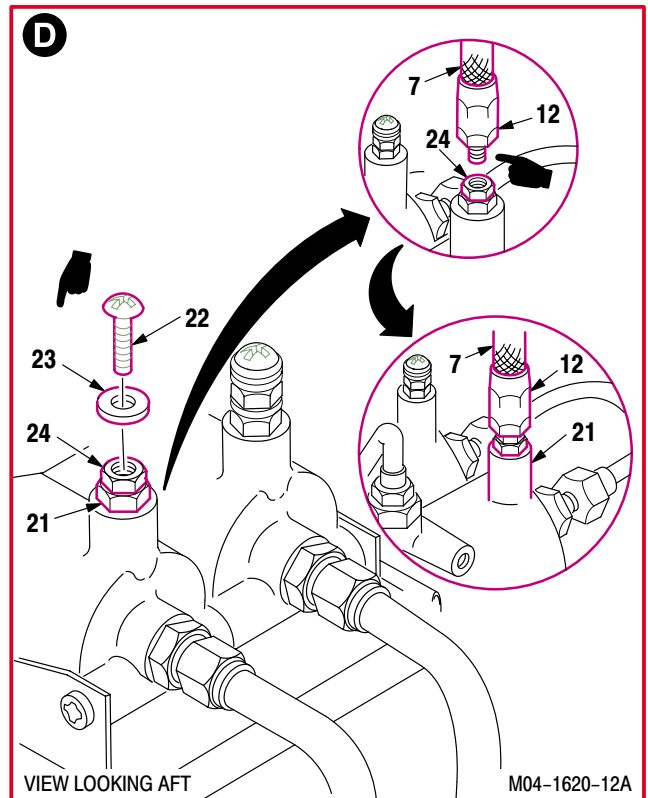


GO TO NEXT PAGE

**1.45. MAIN LANDING GEAR BRAKE SYSTEM – SERVICE/BLEED – continued**

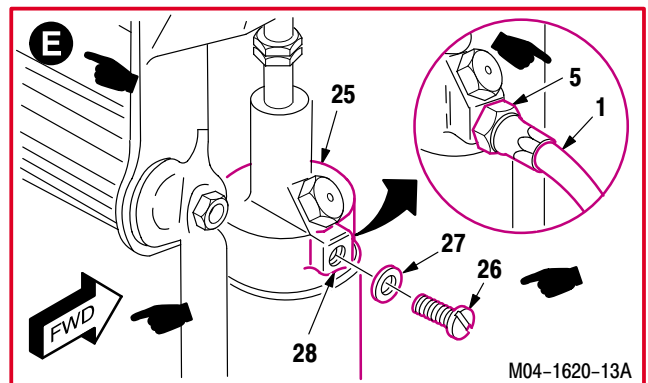
**p. Install bleeder hose (7) to transfer valve (21).**

- (1) Remove screw (22) and washer (23) from bleeder valve (24).
- (2) Install hose (7) with adapter (12) into valve (24).
- (3) Place outlet end of hose (7) in pail.
- (4) Loosen bleeder valve (24).



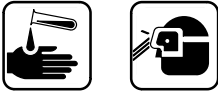
**q. Install hose (1) to CPG master cylinder (25).**

- (1) Remove lockwire (if required).
- (2) Remove screw (26) and seal (27) from CPG master cylinder port (28). Discard seal (27).
- (3) Install hose (1) with nipple tube (5) into port (28).



GO TO NEXT PAGE

1.45. MAIN LANDING GEAR BRAKE SYSTEM – SERVICE/BLEED – continued



r. Bleed master cylinder (25).

- (1) Fill master cylinder (25) until overflow from transfer valve (21) into pail is free of bubbles. Use filler and bleeder.

**CAUTION**

Overservicing the brake hydraulic system may cause system damage.

**NOTE**

A small amount of fluid can be expected to seep from the check valve weep hole. Especially if the brake system is over-serviced with fluid.

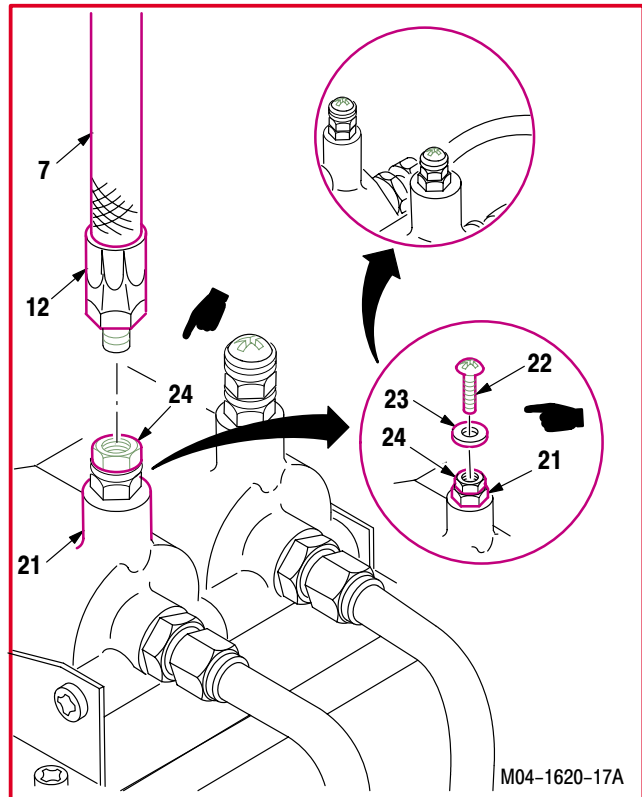
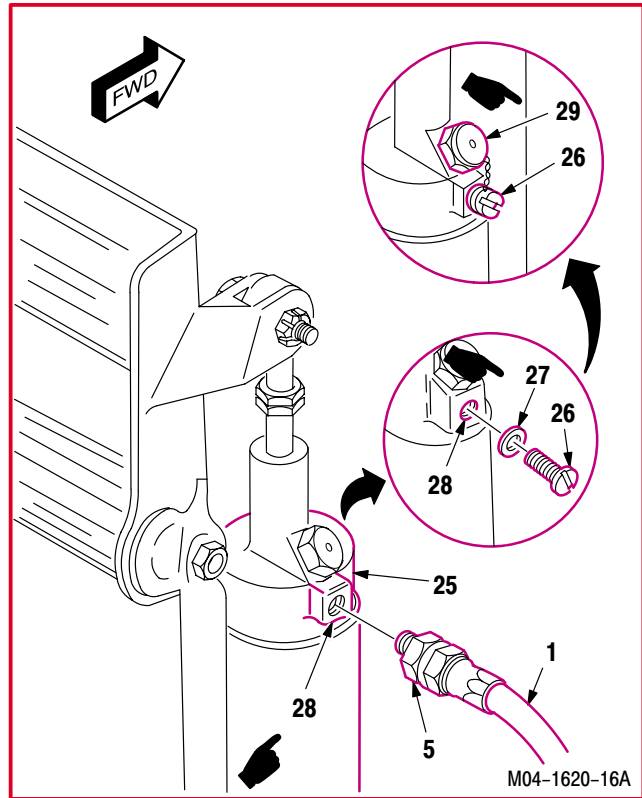
s. Remove hose (1) from CPG master cylinder (25).

- (1) Remove adapter (5) and hose (1) from port (28).
- (2) Wrap a clean rag around cylinder (25) and allow excess hydraulic fluid to drain from port (28). Wipe up all drained fluid with a rag.
- (3) Install screw (26) with new seal (27) in port (28).

t. Lockwire screw (26) to cap (29) (if required). Use wire (item 226, App F).

u. Remove hose (7) from valve (21).

- (1) Tighten valve (24).
- (2) Remove adapter (12) and hose (7) from valve (24).
- (3) Install screw (22) through washer (23) into valve (24).



GO TO NEXT PAGE

---

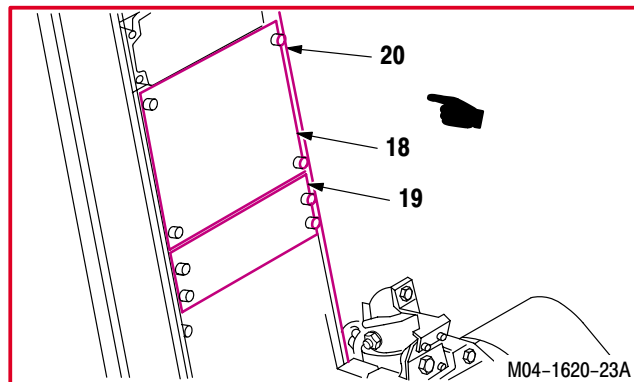
**1.45. MAIN LANDING GEAR BRAKE SYSTEM – SERVICE/BLEED – continued**

---

v. Inspect (QA).

w. Install two blank panels (18) and (19) on pilot instrument panel center console (20).

x. Install CPG seat (para 2.161).



END OF TASK

**1.46. TARGET ACQUISITION AND DESIGNATION SIGHT (TADS) CLEANING**

1.46.1. Description

This task covers: TADS Turret and Shroud Cleaning. Optical Relay Tube (ORT) Window Cleaning.

1.46.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
 Aircraft maintenance tool kit (item 373, App H)  
 Industrial faceshield (item 129, App H)  
 Chemical protective gloves (item 154, App H)  
 14-quart utility pail (item 222, App H)

**References:**

TM 1-1270-476-20

**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
TM 1-1270-476-20	Day sensor assembly (DSA) window cover removed; night sensor assembly (NSA) window cover removed; boresight module window cover removed; Pilot/CPG station maintenance performed

**Materials/Parts:**

Cloth (item 52, App F)  
 Detergent (item 71, App F)

**Personnel Required:**

67R Attack Helicopter Repairer  
 68X Armament/Electrical System Repairer

**CAUTION**

- Do not clean DSA, NSA, or boresight windows unless instructed to do so. Refer to TM 1-1270-476-20 if DSA, NSA, and boresight windows are dirty.
- Water can destroy inner optics and electronics. Ensure shroud assembly and installation hardware are securely fastened before cleaning.
- Do not touch lens with bare hands. Do not wipe lens with cleaning cloth. Damage to special optical coatings could result. Clean with appropriate materials only (TM 1-1270-476-20).

**NOTE**

Water flow over windows is allowed when washing.

1.46.3. TADS Turret and Shroud Cleaning

- a. **Remove foreign matter (leaves, twigs, insects, etc.) from painted areas to be cleaned.**
- b. **Wash painted areas with clean lint-free cloth and water.** Move TADS out of stow as necessary to clean all paint surfaces. Use cloth (item 52, App F).
- c. **Wipe cleaned area with dampened lint-free cloth.** Use cloth (item 52, App F). Go to step d if additional cleaning is necessary. Go to step e if clean.

GO TO NEXT PAGE



---

1.46. TARGET ACQUISITION AND DESIGNATION SIGHT (TADS) CLEANING – continued

---



**CAUTION**

Water can destroy inner optics and electronics. Ensure shroud assemblies and installation hardware are securely fastened before cleaning.

d. **Repeat steps b and c; use detergent and water solution.**

- (1) Mix one ounce of detergent with one gallon of water. Use pail and detergent (item 71, App F).
- (2) Rinse with clean fresh water.

e. **Allow surface to air dry 10 MINUTES.**

1.46.4. Optical Relay Tube (ORT) Window Cleaning



**CAUTION**

- Do not touch lens with bare hands. Do not wipe lens with cleaning cloth. Damage to special optical coatings could result. Clean with appropriate materials only (TM 1-1270-476-20).
- The water and detergent solution can damage internal ORT components. Make sure solution does not seep into internal structure.

- a. **Mix 1 ounce of detergent with 1 gallon of water.** Use pail and detergent (item 71, App F).
- b. **Wash ORT window surfaces with a clean lint-free cloth and water-detergent solution.** Cloth should be damp but not wet enough to drip. Use cloth (item 52, App F) and detergent (item 71, App F).
- c. **Rinse all surfaces immediately with clean fresh water.** Use a clean cloth (item 52, App F) that is damp but not wet enough to drip.
- d. **Allow surfaces to air dry.**

END OF TASK

---

## 1.47. CLEANING - GENERAL

---

### 1.47.1. Description

This task covers: Nonremovable Parts. Removeable Parts. Surfaces and Areas. Exterior Water Wash. Electronic/Electrical Equipment. Hydraulic Hoses and Components. Bearings. Cleanable Filters.

---

### 1.47.2. Initial Setup

#### Tools:

Light duty laboratory apron (item 27, App H)  
 Industrial faceshield (item 129, App H)  
 Chemical protective gloves (item 154, App H)  
 Industrial goggles (item 156, App H)  
 14-quart utility pail (item 222, App H)  
 Adjustable air filtering respirator (item 262, App H)

#### Materials/Parts:

Brush (item 34, App F)  
 Cloth (item 52, App F)  
 Dry cleaning solvent (item 74, App F)  
 Methyl ethyl ketone (item 124, App F)  
 Tape (item 206, App F)  
 Wrapping paper

#### References:

TM 55-1500-322-24

---

### WARNING

**Chemicals used for cleaning are explosive, flammable, and highly poisonous. Always assure maximum ventilation when using solvents, methyl ethyl ketone (MEK) and dry cleaning solvent. Accidental breathing of vapors can cause dizziness and nausea. If methyl ethyl ketone contacts the skin, rinse immediately with water. If dry cleaning solvent or methyl ethyl ketone contacts the eyes, flush with water and seek medical aid. When working with cleaning materials, wear protective clothing and guards.**

### CAUTION

- When cleaning parts, surfaces, and areas of the helicopter: dry cleaning solvent and methyl ethyl ketone must be prevented from spilling or spattering on wiring, adjacent parts, or compartments particularly under the work area. Where cleaning agents can run on or contact ball or roller bearings, rubber parts, or painted surfaces: these areas shall be covered or masked, and dry cleaning solvent (item 74, App F) shall be used for cleaning. Never expose bearings, rubber, or paint to methyl ethyl ketone. Use clean dry rags as a protective coating for nonaffected items or areas. If necessary, use wrapping paper and tape (item 206, App F) to mask wiring, parts, surfaces, openings, or seams. Any area or surface of a part or assembly sensitive to methyl ethyl ketone must be masked before cleaning.
- When cleaning parts, surfaces, and areas of helicopter that will require bonding, sealing, or painting in immediate subsequent repair operations, methyl ethyl ketone (item 124, App F) shall be used.

GO TO NEXT PAGE

1.47. CLEANING - GENERAL – continued

**CAUTION**

- Do not use trichloroethane, chlorofluoroethane, or any other product with “chlor” in the name, for cleaning titanium, magnesium, aluminium, or galvanized metals. Products with “chlor” in the name are corrosive to these metals.
- Do not allow vapor degreasing of titanium, magnesium, aluminium, or galvanized metals. Vapor degreasing uses trichloroethane and other products with “chlor” in the name which are corrosive to these metals.

**NOTE**

- Do not allow alcohol to evaporate from surface. Discoloration will occur. Wipe off alcohol residue with distilled water and lint free cloth.
- Pay particular attention to cleaning all scuppers and drains when cleaning the aft equipment bay area.

1.47.3. Nonremovable Parts



- a. **Use clean rag dampened in solvent to clean grease and oil from part.** Immediately after cleaning, dry part with clean lint-free cloth. Use dry cleaning solvent (item 74, App F) and cloth (item 52, App F).



- b. **To remove stubborn dirt, grime, dried adhesive, or sealant, dip acid swabbing brush lightly in MEK, and brush to dislodge dirt.** If removal is difficult, scrub strongly with increased amount of MEK, but do not flood. Use methyl ethyl ketone (item 124, App F) and brush (item 34, App F). Discard brush in suitable container.
- c. **Wipe with clean lint-free cloth.** Use cloth (item 52, App F).
- d. **Remove protective rags, covering, or masking if used.**

1.47.4. Removeable Parts



- a. **Use clean rag dampened in solvent to remove grease and oil from part.** Dry cleaned part with clean lint-free cloth immediately after cleaning. Use dry cleaning solvent (item 74, App F) and cloth (item 52, App F).

GO TO NEXT PAGE

---

**1.47. CLEANING - GENERAL – continued**


---



- b. **To remove stubborn dirt, grime, dried adhesive, or sealant, dip acid swabbing brush lightly in MEK, and use brush to dislodge dirt.** If removal is difficult, scrub strongly with increased amount of MEK. When clean, immediately dry part with clean lint-free cloth. Use methyl ethyl ketone (item 124, App F) and brush (item 34, App F). Discard brush in suitable container.

**CAUTION**

When cleaning parts that will require bonding, sealing, or painting in immediate subsequent repair operations, methyl ethyl ketone (item 124, App F) shall be used. Use of other cleaners could adversely affect bonding.

- c. **A group of small parts can be dipped in pail partly filled with solvent or MEK, then cleaned and dried.** If this method is used, fill pail with only amount of solvent or MEK needed. Use dry cleaning solvent (item 74, App F) or methyl ethyl ketone (item 124, App F).
- d. **Wipe with clean lint-free cloth.** Use cloth (item 52, App F).
- e. **Remove covering or masking if used.**

**1.47.5. Surfaces and Areas**


- a. **Use clean rag dampened in solvent to remove grease or oil from surface or area.** Use dry cleaning solvent (item 74, App F). Immediately after cleaning, dry area with clean dry rag.



- b. **To remove stubborn dirt, grime, dried adhesive, or sealant, dip acid swabbing brush lightly in MEK, and use brush to dislodge dirt.** Use methyl ethyl ketone (item 124, App F) and brush (item 34, App F). If removal is difficult, scrub strongly with increased amount of MEK, but do not flood. Discard brush in suitable container.
- c. **Wipe with clean lint-free cloth.** Use cloth (item 52, App F).
- d. **Remove covering or masking if used.**

GO TO NEXT PAGE

---

1.47. CLEANING - GENERAL – continued

---

1.47.6. Exterior Water Wash

- a. Refer to paragraph 1.53.

1.47.7. Electronic/Electrical Equipment



- a. Use clean rag dampened in dry cleaning solvent to remove grease, oil, and dirt from the exterior of wiring, connectors, electronic/electrical components and equipment. Use dry cleaning solvent (item 74, App F).
- b. Immediately dry electronic/electrical units, wiring, and connectors with clean lint-free cloth. Use cloth (item 52, App F).

1.47.8. Hydraulic Hoses and Components



- a. Use clean rag dampened in solvent to remove grease and oil from part. Use dry cleaning solvent (item 74, App F). Dry clean part with clean cloth (item 52, App F) immediately after cleaning.
- b. A group of small parts can be dipped in pail partly filled with solvent, then cleaned and dried. If this method is used, fill pail with only amount of solvent needed. Use dry cleaning solvent (item 74, App F).
- c. Wipe with clean lint-free cloth. Use cloth (item 52, App F).
- d. Remove covering or masking if used.

1.47.9. Bearings

- a. Refer to TM 55-1500-322-24.

1.47.10. Cleanable Filters



- a. Clean filter element in MEK. Use methyl ethyl ketone (item 124, App F). Allow to drain and dry with low pressure compressed air.
- b. Replace filter element when cracks, tears, or other signs of deterioration are noted.

END OF TASK

**1.48. ENVIRONMENTAL CONTROL UNIT (ENCU) CLEANING (WATER WASH)**

1.48.1. Description

This task covers: Cleaning.

1.48.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
 Light duty laboratory apron (item 27, App H)  
 Electric vacuum cleaner (item 64, App H)  
 Pneumatic cleaning gun (item 66, App H)  
 Reciprocating compressor unit (item 67, App H)  
 Industrial faceshield (item 129, App H)  
 Chemical protective gloves (item 154, App H)  
 Air blow gun (item 158, App H)  
 Nonmetallic hose assembly (item 168, App H)  
 Aircraft power unit (item 232, App H)  
 Adjustable air filtering respirator (item 262, App H)

**Materials/Parts:**

Wrapping paper  
 Brush (item 34, App F)  
 Cloth (item 52, App F)  
 Dry cleaning solvent (item 74, App F)  
 Tape (item 205, App F)

**Personnel Required:**

67R Attack Helicopter Repairer  
 Two persons to assist  
 152F Pilot

**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
1.70	External power – electrical applied
1.71	External power – air applied
2.2	Access doors T250L, T250R, T290L, T290R, and L325 opened
■ 13.12	ENCU filter removed

**References:**

TM 1-1520-238-CL

**CAUTION**

- Do this task if environmental control unit (ENCU) malfunctions are reported; or if ENCU compressor makes unusual sounds. To prevent damage to ENCU, do not clean if temperature is below 32 °F (0 °C).
- High pressure water/air can damage helicopter components and electrical wiring. Use only hand-cleaning methods in catwalk and engine-bay areas, or where damage to components or electrical wiring may occur.
- Do not spill solvent on adjacent parts or surfaces, especially under the work area. Mask roller and ball bearings exposed to solvent. Mask wiring, surface openings, and seams.

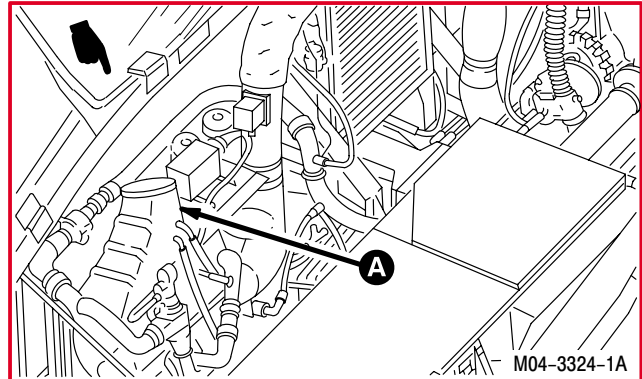
GO TO NEXT PAGE

1.48. ENVIRONMENTAL CONTROL UNIT (ENCU) CLEANING (WATER WASH) – continued

1.48.3. Cleaning

**CAUTION**

To prevent damage to internal fins, use extreme care when removing debris from ENCU. Fins can be easily bent by finger pressure.

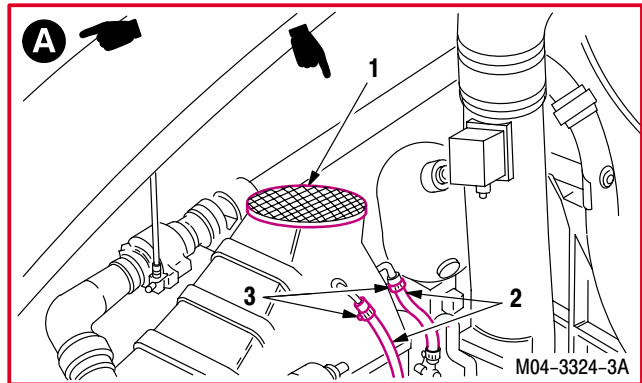


a. **Clean inlet (1).** Use vacuum cleaner.

b. **Remove two hoses (2).**

(1) Loosen two clamps (3).

(2) Remove two hoses (2).



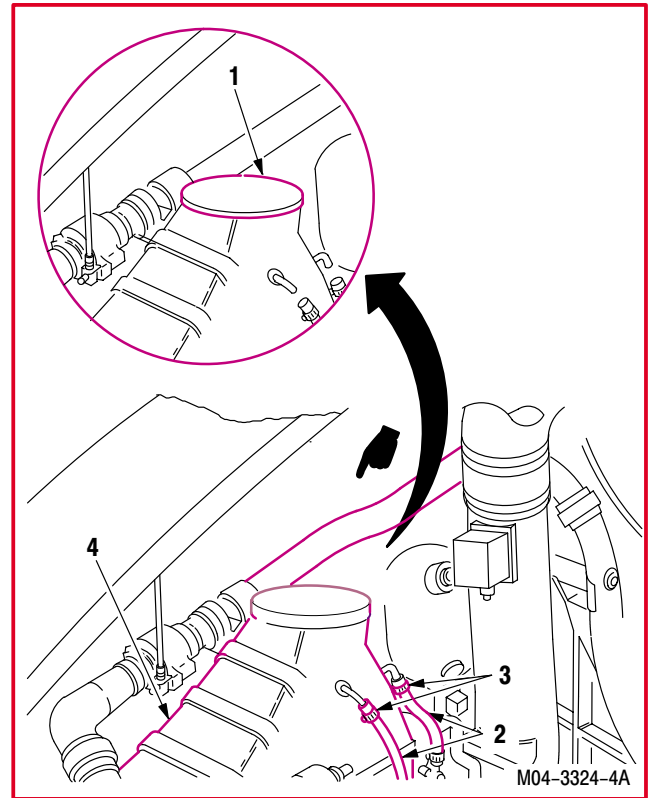
GO TO NEXT PAGE

## 1.48. ENVIRONMENTAL CONTROL UNIT (ENCU) CLEANING (WATER WASH) – continued

- c. **Blow out two hoses (2).** Use compressor and air blow gun, set to discharge air at no more than 80 psi.



- d. **Run ENCU (4) (TM 1-1520-238-CL) at least 1 MINUTE while spraying solvent into inlet (1).** Use dry cleaning solvent (item 74, App F) and cleaning gun set on coarse spray.
- e. **Rinse inlet (1) with clean water for at least 3 MINUTES.**
- f. **Stop ENCU (4) (TM 1-1520-238-CL).**
- g. **Install two hoses (2).**
- (1) Position two clamps (3) on two hoses (2). Do not tighten.
  - (2) Install two hoses (2) on ENCU (4).
  - (3) Tighten two clamps (3).
- h. **Run ENCU (4) (TM 1-1520-238-CL) at least 1 MINUTE to eliminate water from ENCU ducts.**
- i. **Install ENCU filter (para 13.12).**
- j. **Remove external power – air (para 1.71).**
- k. **Remove external power – electrical (para 1.70).**
- l. **Secure access doors T250L, T250R, T290L, T290R, and L325 (para 2.2).**



END OF TASK



---

**1.49. CORROSION CONTROL/INSPECTION**

---

1.49.1. Description

This task covers: General Corrosion. Corrosion Identification. General Information. Development of Corrosion. Types of Corrosion. Corrosion and Mechanical Factors. Corrosion and Composites. Corrosive Environments. Corrosion Preventative and Corrective Maintenance. Aircraft Inspection Areas. Initial Cleaning and Inspection. Degrees of Corrosion. Corrosion Removal. Corrosion Resistant Coatings. Aircraft Modification Procedures. Aircraft Washing and Cleaning Procedures.

---

1.49.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
 Light duty laboratory apron (item 27, App H)  
 Cleaning aircraft brush (item 43, App H)  
 Scratch wire brush (item 44, App H)  
 Chemical protective gloves (item 154, App H)  
 Aircraft cleaning kit (item 188A, App H)  
 Identification kit (item 190, App H)  
 14-quart utility pail (item 222, App H)  
 Adjustable air filtering respirator (item 262, App H)

**Materials/Parts:**

Adhesive (item 2, App F)  
 Adhesive (item 3, App F)  
 Adhesive (item 16, App F)  
 Brush (item 34, App F)  
 Calcium sulfite (item 39A, App F)  
 Chromium trioxide (item 41A, App F)  
 Cleaning compound (item 44, App F)  
 Cleaning compound (item 44A, App F)  
 Cloth (item 47, App F)  
 Cloth (item 51, App F)  
 Cloth (item 54, App F)  
 Corrosion preventive compound (item 61, App F)  
 Corrosion preventive compound (item 62, App F)  
 Corrosion preventive compound (item 62A, App F)  
 Corrosion preventive compound (item 62B, App F)  
 Corrosion preventive compound (item 63, App F)  
 Corrosion preventive compound (item 63A, App F)  
 Corrosion preventive compound (item 64, App F)  
 Corrosion resistant coating (item 64A, App F)  
 Corrosion removing compound (item 64B, App F)  
 Dishwashing compound (item 72, App F)  
 Dry cleaning solvent (item 74, App F)

**Materials/Parts: (continued)**

Epoxy primer coating kit (item 76A, App F)  
 Epoxy primer coating kit (item 76B, App F)  
 Epoxy primer coating kit (item 78A, App F)  
 Grease (item 88, App F)  
 Hydraulic fluid (item 92, App F)  
 Isopropyl alcohol (item 106, App F)  
 Lubricating oil (item 119A, App F)  
 Pad (item NO TAG, App F)  
 Paper (item 133, App F)  
 Petrolatum (item 138, App F)  
 Polyurethane coating (item 140A, App F)  
 Polyurethane coating (item 140B, App F)  
 Primer (item 143, App F)  
 Sealing compound (item 158A, App F)  
 Sealing compound (item 160, App F)  
 Sealing compound (item 161, App F)  
 Sealing compound (item 162, App F)  
 Sealing compound (item 164, App F)  
 Sealing compound (item 170A, App F)  
 Sealing compound (item 170C App F)  
 Sealing compound (item 171, App F)  
 Sodium phosphate (item 188, App F)  
 Tape (item 206, App F)

**Personnel Required:**

67R Attack Helicopter Repairer  
 68X Armament/Electrical System Repairer

**References:**

TM 1-1500-328-23  
 TM 1-1500-343-23  
 TM 1-1500-344-23  
 TM 55-1500-345-23

---

GO TO NEXT PAGE

---

**1.49. CORROSION CONTROL/INSPECTION – continued**

---

**NOTE**

- Expendables listed include alternates to be used in the absence of the primary materials.
- This task can be performed in its entirety or by sections, as required, to comply with scheduled maintenance or special inspection requirements.

**WARNING**

**Chemicals used for cleaning are explosive, flammable, and highly poisonous. Always assure maximum ventilation when using solvents, such as dry cleaning solvent. Accidental breathing of vapors can cause dizziness and nausea. If dry cleaning solvent contacts the eyes, flush with water and seek medical aid. When working with cleaning materials, wear protective clothing and guards.**

**CAUTION**

When cleaning parts, surfaces, and areas of the helicopter, dry cleaning solvent must be prevented from spilling or spattering on wiring, adjacent parts, or compartments particularly under the work area. Where cleaning agents can run on or contact ball or roller bearings, rubber parts, or painted surfaces: these areas shall be covered or masked, and dry cleaning solvent (item 74, App F) shall be used for cleaning. Use clean dry rags as a protective coating for nonaffected items or areas. If necessary, use wrapping paper and tape (item 206, App F) to mask wiring, parts, surfaces, openings, or seams.

**1.49.3. General Corrosion**

- Everyone must ensure that safe, clean work habits and methods are used to prevent corrosion.** Refer to TM 1-1500-344-23 for more information.
- Corrosion of metal starts as soon as a part is made, and continues through the life of the metal.** Protective coatings and preventive maintenance can slow or stop corrosion.
- Check readability of part number and serial number when removing corrosion near identification plates, covers, and placards.**
  - (1) Use aircraft records to verify part number and serial number.
  - (2) Use permanent ink that contrasts with color of part if numbers are not present or are unreadable.
  - (3) Stencil part number and serial number on identification plate, cover, or placard in area originally marked.
  - (4) Characters shall be a minimum of **0.125 INCH** high.
  - (5) Cover dried ink with a protective coat of clear lacquer.

GO TO NEXT PAGE

---

**1.49. CORROSION CONTROL/INSPECTION**

---

**d. Remove corrosion where it is found.**

- (1) Be sure ALL corrosion is removed. Remove paint to make sure.
- (2) Treat area, then paint or protect as directed in paragraphs 1.49.15 and 1.49.16.

**e. There are three general types of metal in the helicopter: aluminum, steel (ferrous alloys), and magnesium.**

- (1) Metal identification kit can be used to find the type of metal you are working with.
- (2) A simple check will tell you if the material is steel. Use a magnet: if it holds it is on steel.
- (3) If required, go to TM 1-1500-344-23 for further corrosion information.

**1.49.4. Corrosion Identification**

**a. Aluminum.**

- (1) Look for a white-to-gray powdery metal. Check if it can be removed by using something softer than the metal part.
- (2) Look to see if the part is slightly yellow. This is caused by an anodize coating used on some aluminum parts.
- (3) Go to paragraph 1.49.15 for corrosion removal.

**b. Steel (ferrous alloys).**

- (1) Look for rust. It should be reddish brown scaling or flaking on the surface.
- (2) Steel is painted to prevent corrosion. Look for breaks in the painted surface.
- (3) Check the part with a magnet if in doubt: if it holds, it is steel.
- (4) Go to paragraph for 1.49.15 for corrosion removal.

**c. Magnesium.**

- (1) If the part is not steel or aluminum (nose gearboxes, main transmission, tail rotor gearboxes, and generators) go to TM 1-1500-344-23 for information on positive identification.
- (2) TM 1-1500-344-23 gives a chemical procedure that will identify the metal.
- (3) Go to paragraph 1.49.15 for corrosion removal.

GO TO NEXT PAGE

---

## 1.49. CORROSION CONTROL/INSPECTION

---

### 1.49.5. General Information

Corrosion is the deterioration of a substance, usually a metal, because of a reaction with its environment. Corrosion reactions are said to be electrochemical because it involves the transfer of electrons. Four conditions must exist for corrosion to occur:

- a. A metal known as the anode must be present, which is the corroding metal.
- b. A dissimilar conductive material, the cathode which has less tendency to corrode.
- c. A conductive liquid, the electrolyte, must be in contact with the anode and cathode to carry the electric current.
- d. Electrical contact between the anode and cathode (dissimilar metals) must exist.

The elimination of any one of the above four conditions that create corrosion, will stop corrosive action.

### 1.49.6. Development of Corrosion

All corrosive attacks begin on the surface of metals, and if allowed to progress can penetrate into the metal. When corrosion products form, they often precipitate onto the corroding surface as a powdery deposit. This film of corrosion products may reduce the rate of corrosion, if the film acts like a barrier to electrolytes. Metals such as stainless steel and titanium may produce corrosion products, that if bound tight enough to the corroding metal, forms a passive film preventing further corrosion. When the corrosion product film is loose and porous, such as aluminum and magnesium, the electrolyte will penetrate and continue the corrosion process.

### 1.49.7. Types of Corrosion

#### a. **Uniform surface corrosion**

Uniform surface corrosion results from a direct chemical attack on a metal surface and involves only the metal surface. On a polished surface, this type of corrosion is first seen as a general dulling or etching of the surface and if the attack is allowed to continue, the surface becomes rough and possibly frosted in appearance. This type of corrosion appears uniform because the anodes and cathodes are very small and constantly shift from one area of the surface to another. An example is the etching of metals by acids. The discoloration or general dulling of metal created by exposure to elevated temperatures is not considered to be uniform surface corrosion.

#### b. **Pitting**

The most common corrosion of aluminum and magnesium alloys is pitting. It is first noticeable as a white or gray powdery deposit, similar to dust, which blotches the surface. When the deposit is cleaned away, tiny pits or holes can be seen in the surface. Pitting corrosion may also occur in other metal types or alloys. The combination of small active anodes to large passive cathodes causes severe pitting.

#### c. **Galvanic**

Galvanic corrosion occurs when different metals are in contact with each other and an electrolyte, such as salt water, is present. It is usually recognizable by the presence of a buildup of corrosion at the joint between the metals. Two dissimilar metals joined together form a galvanic couple if moisture and contamination are present.

GO TO NEXT PAGE

---

**1.49. CORROSION CONTROL/INSPECTION**

---

**d. Crevice**

Crevice corrosion occurs when the electrolyte has a different concentration from one area to another. This type of corrosion is also known as concentration cell corrosion. Electrolyte inside the crevice contains less oxygen and more metal ions than electrolyte just outside the crevice. As a result, the metal surfaces, even though they may be part of the same metal, than have different activities and corrosion occurs inside the crevice. This kind of corrosion also occurs when a surface is covered by a foreign material. There are three general types of crevice corrosion: (1) metal ion concentration cells, (2) oxygen concentration cells, and (3) active-passive cells.

**e. Intergranular**

Intergranular corrosion is an attack on the grain boundaries of the metal. It consists of quantities of individual grains, each having a clearly defined boundary, which chemically differs from the metal within the grain. Frequently the grain boundaries are anoxic to the metal within the grain. When in contact with an electrolyte, rapid corrosion occurs at the grain boundaries.

**f. Exfoliation**

Exfoliation is an advanced form of intergranular corrosion where the surface grains of a metal are lifted up by the force of expanding corrosion products occurring at the grain boundaries. The lifting up or swelling is visible evidence of exfoliation corrosion. Exfoliation occurs on extruded, rolled, wrought, and forged high strength aluminum and magnesium parts.

**g. Filiform**

Filiform corrosion is a special form of oxygen concentration cell corrosion or crevice corrosion which occurs on metal surfaces having an organic coating system. It is recognized by its characteristic wormlike trace for corrosion products beneath the paint film. Filiform occurs when the relative humidity or the air is between 78 percent and 90 percent, and when the surface is slightly acidic. It starts at breaks in the coating system, such as scratches and cracks around fasteners and seams, and proceeds underneath the coating, due to the diffusion of water vapor and oxygen from the air through the coating. Filiform corrosion can attack steel, magnesium, and aluminum surfaces and may lead to more serious corrosion in some locations. Filiform corrosion can be prevented by storing equipment and aircraft in an environment with a relative humidity below 70 percent, by using coating systems having a low rate of diffusion for oxygen and water vapors, by maintaining coatings in good condition, and by washing equipment and aircraft to remove acidic contaminants from the surface. Maintain coatings in good condition and apply corrosion preventive compounds when paint is damaged.

**1.49.8. Corrosion and Mechanical Factors**

a. Stress corrosion cracking is the intergranular cracking of a metal caused by the combined effects of constant tensile stress (internal or applied) and corrosion. Internal or residual stresses are produced by cold working, forming, and heat treatment operations during manufacture of a part and remain concealed in the part unless stress relief operations are used. Other hidden stresses are induced in parts when press or shrink fits are used and when slightly mismatched parts are clamped together with rivets and bolts. All these stresses add to those caused by applying normal loads to parts during operation. Metals have threshold stresses below which stress corrosion cracking will not occur. This threshold stress which varies from metal to metal, is different for different tempers of the same metal, and is different for each of the three directions in which stress can be applied.

GO TO NEXT PAGE

---

## 1.49. CORROSION CONTROL/INSPECTION

---

b. Associated hazards. Stress corrosion cracking is an extremely dangerous type of failure because it can occur at stress levels far below the rated strength of a metal, starting from what is thought to be a very minor corrosion pit. Parts can completely sever in a split second or they can crack slowly, and the rate of cracking is very unpredictable in operating service.

c. Causes. Specific environments have been identified which cause stress corrosion cracking of certain alloys. Salt solutions, sea water, and moist, salt-laden air may cause stress corrosion cracking of heat-treatable aluminum alloys, stainless steels, and some titanium alloys. Magnesium alloys may stress corrode in moist air. Stress corrosion can be prevented by placing an insulating barrier between the metal and the corrosive environment by applying protective coatings and water displacing corrosion preventive compounds. Stress relief operations during fabrication of parts will help, because it lowers the stress level on the parts. Shot peening a metal increases resistance to stress corrosion cracking by creating compressive stresses on the surface, which must be overcome by an applied tensile stress before the surface sees any tension load.

d. Corrosion fatigue is the cracking of metals caused by the combined effects of cyclic stress and corrosion, and is very similar to stress corrosion cracking. No metal is immune to some reduction in its resistance to cyclic stressing if the metal is in a corrosive environment. Damage from fatigue corrosion is greater than the sum of the damage from both cyclic stresses and corrosion. Corrosion fatigue failure occurs in two stages. During the first stage, the combined action of corrosion and cyclic stress damages the metal by pitting and crack formation in the pitted area. The second stage is the continuation of crack propagation by a straight fatigue mode, in which the rate of cracking is controlled by: (a) stress concentration in the main cross section, and (b) the physical properties of the metal. Fracture of metal part due to fatigue corrosion occurs at a stress far below the fatigue limit, even though the amount of corrosion is unbelievably small. For this reason, protection of all parts subject to alternating stress is particularly important, even in environments that are only mildly corrosive. Preventive measures are the same as those given for stress corrosion cracking as stated above.

e. Fretting corrosion is a special form of concentration cell corrosion, which occurs in combination with surface wear. The corrosion products increase the wear of the surface and the wear exposes more bare metal surface to be corroded. The overall effect is greater than the single effects of corrosion and wear added together. It has the general appearance of galling, in which chunks of metal are torn from the surface, with corrosion at the torn areas or ragged pits. This type of corrosion occurs on mating surfaces of close tolerance and on parts under high pressure in a corrosive environment when there is slight relative movement of the parts, such as that caused by vibration.

### 1.49.9. Corrosion and Composites

Composite materials do not corrode; however, they may accelerate corrosion on adjacent metal structures and attaching hardware due to galvanic effect. Graphite composites are made from carbon fibers which are electrically conductive, and one of the noble metals (gold, silver, mercury, platinum, palladium, iridium, and etc.) materials in the galvanic series. Special precautions must be exercised when metal parts are present with composite parts. Also many composite parts may have metal sandwiched between layers or composite at edges, holes, and attaching points. These metals, if exposed, may corrode and cause delamination.

GO TO NEXT PAGE

---

**1.49. CORROSION CONTROL/INSPECTION**

---

**a. Microbial Induced Corrosion**

Operations in high temperature and high humidity areas are susceptible to microbial attack. Bacteria living adjacent to metals, can cause corrosion by depleting the oxygen supply or by releasing corrosive products. Fungi may damage organic materials by retaining moisture on a metal surface and clogging drainage holes, and secreting corrosive fluids. Micro-organisms, when transferred from a hot/wet area to a dry/cold area, may become dormant and appear to die. Then, when returned to a hot/wet climate, the micro-organisms will again become active.

**1.49.10. Corrosive Environments****a. Moisture**

Moisture is present in the air and often contains contaminants such as chlorides, sulfates, and nitrates. Condensed moisture after it evaporates, will leave its contaminants on surfaces of the aircraft. Accumulations of moisture may result from cycles of warming and cooling, and drawn along poor bond lines by capillary action.

**b. Temperature/Climate**

Generally, corrosion will increase as temperatures rise, but a moderate increase may reduce corrosion by preventing condensation. Temperatures above 104 °F (40 °C) will inhibit mold and bacteria growth. Temperatures held at the lower end of the range will generally reduce the rate of corrosion. Warm, moist air, normally found in tropical climates tends to accelerate corrosion while cold, dry air normally found in arctic climates tends to reduce corrosion rates. Corrosion does not occur in very dry conditions. Certain areas within an aircraft, such as the cockpit and air conditioned equipment bays, may be subjected to climatic dry air that has been cooled by air conditioners. This reduces its ability to hold moisture, and when ducted into interior area of the aircraft, can release sufficient moisture to accelerate corrosion.

**c. Salt**

Salt dissolved in water forms a strong electrolyte. Normal winds carry 10 to 100 pounds of sea salt per cubic mile of air. Since dissolved salts are strong electrolytes, salt water environments are highly corrosive to aircraft.

**d. Ozone**

Ozone is an active form of oxygen which is formed naturally during thunderstorms, by arcing in electrical devices, and by photochemical reactions in smog. When ozone is absorbed by electrolyte solutions in contact with metals, it increases the rate of corrosion.

**e. Sand/Dust**

Sand and dust are present in many areas, but particularly in industrial areas where they often contain tar products, ashes, and soot. Dust is also found in the tropic zones during times of little or no rainfall. Sand and dust are extreme problems in the deserts, since dry, powdery sand and dust are carried by the wind. During sandstorms, they can penetrate sealed equipment as well as many internal areas of airframes. Sand and dust are hygroscopic and, when present on internal or external surfaces of aircraft or electronic parts, can absorb and hold moisture. Dust from volcanic areas contain chlorides and sulfates, which are extremely corrosive in the presence of moisture. Although small amounts of sand or dust may be unnoticed by operation personnel they may be sufficient to promote corrosion.

**f. Insects/Birds**

GO TO NEXT PAGE

**1.49. CORROSION CONTROL/INSPECTION – continued**

Damage to aircraft and aircraft subsystems may be caused by insects, birds, and various small animals, especially in tropical environments. Equipment in storage is most susceptible to this type of attack, since animals may enter through vent holes or tears in packaging and sometimes build nests. Moisture absorbed by nest plus excretions from the animals may cause corrosion and deterioration that goes unnoticed until equipment is put to use.

**g. Environmental Areas**

**NOTE**

- To perform corrosion preventive maintenance procedures go to paragraph 1.49.17.
- MIL-S-8802 or MIL-S-29574 will be used in lieu of primer in coastal and tropical areas as noted in procedures.

Desert	Intermediate	Coastal	Tropics
High daytime temperatures	Winter temperatures -25 to 59 °F (-32 to 15 °C)	High humidity	Humidity up to 100% at ambient air temperatures of 85 °F (29 °C) and dew-points approaching 85 °F (29 °C)
High humidity	Summer temperatures 59 to 125 °F (15 to 52 °C)	High concentrations of salt	
Ultraviolet radiation	Humidity fluctuates between 5 and 100%	Within 30 miles of coast	
Dust	Most North American and European continents		

GO TO NEXT PAGE



---

**1.49. CORROSION CONTROL/INSPECTION**

---

1.49.11. Corrosion Preventative and Corrective Maintenance

**NOTE**

This plan provides Corrosion Prevention and Control for the AH-64A helicopter in high humidity, salt and sand environments which promote accelerated corrosion and reduce the life of the aircraft.

To effectively control corrosion, active participation of all Apache maintainers is required. To obtain this participation a corrosion control regime consistent with the Army aviation corrosion prevention and control policy as stated in TM 1-1500-328-23, Aeronautical Equipment Maintenance Management Policies and Procedures, must be employed.

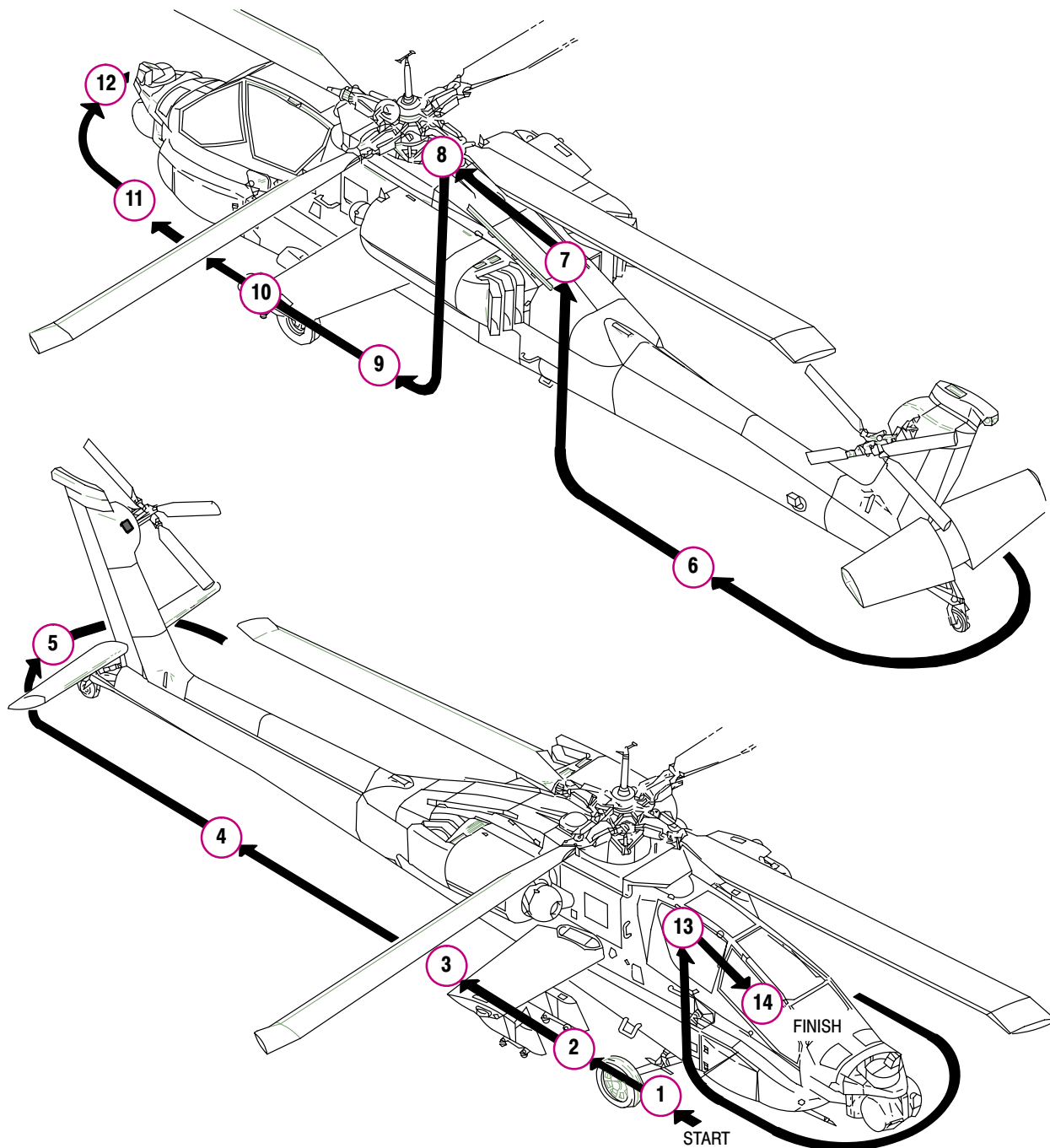
This corrosion control regime requires a formal rinse, wash with reapplication of corrosion preventative compounds and inspection of corrosion prone areas procedure which is accomplished on a frequency based on calendar time adjusted for operating environment. The operating environment where corrosion is concerned has been divided into four types: Extremely severe, Severe, Moderate, and Slight. The amount of corrosion control effort required should be tailored to operator's environments.

If corrosion is detected, it must be repaired. The two Tri-Service Corrosion Control Manuals: TM 1-1500-343-23, Avionic Cleaning and Corrosion Prevention, and TM 1-1500-344-23, Tri-Service Aircraft Weapons System Cleaning and Corrosion Control provide general corrosion repair and prevention techniques which should be used to the fullest extent possible in maintaining the Apache. Another general manual, TM 55-1500-345-23, Painting and Marking for Army Aircraft, is used in the Apache Corrosion Prevention and Control Program.

GO TO NEXT PAGE

1.49. CORROSION CONTROL/INSPECTION

1.49.12. Aircraft Inspection Areas



AIRCRAFT INSPECTION AREAS

M04-4492-1

GO TO NEXT PAGE

**1.49. CORROSION CONTROL/INSPECTION – continued**

Table I. Aircraft Inspection Areas

Area No.	Aircraft Location	Inspection Requirements
1	Fuselage – right side, forward	All surfaces, components, and equipment in forward avionics bay. Includes landing gear and search light.
2	Fuselage – right side, center	All surfaces, components, and equipment aft of crew station to engine nacelle. includes transmission deck, right nose gearbox, engine installation components, wing, and stores.
3	Engine nacelle – right	All surfaces, components, and equipment aft of auxiliary power unit (APU) exhaust duct. Includes lower nacelle aft electronics compartment, and infrared (IR) suppressor.
4	Fuselage – right side, aft	All surfaces, components, and equipment aft of auxiliary power unit (APU) exhaust duct and forward of intermediate gearbox. Includes hydraulic ground service panel and aft horizontal tail rotor drive shaft.
5	Tail section	All surfaces, components, and equipment aft of tail boom area. Includes horizontal stabilator, tail landing gear, intermediate and tail rotor gearboxes, aft vertical tail rotor drive shaft, and tail rotor.
6	Fuselage – left side, aft	All surfaces, components, and equipment forward of intermediate gearbox and aft of environmental control unit, (ENCU) exhaust duct.
7	Catwalk	All surfaces, components, and equipment in catwalk area. Includes shaft-driven compressor, forward tail rotor drive shaft, fire extinguisher containers, ENCU, and APU.
8	Main rotor mast	All surfaces, components, and equipment in the mast area. Includes main rotor, air data sensor, and upper controls (mixer).
9	Engine nacelle – left	All surfaces, components, and equipment forward of ENCU exhaust duct and aft of left nose gearbox. Includes IR suppressor, aft avionics compartment, and lower nacelle.
10	Fuselage – left side, center	All surfaces, components, and equipment forward of engine nacelle and aft of left forward avionics bay. Includes left transmission deck, wing and stores, nose gearbox, and engine installation components.
11	Fuselage – left side, forward	All surfaces, components, and equipment in forward avionics bay. Includes landing gear.
12	Nose section	All surfaces, components, and equipment on or under the helicopter nose. Includes target acquisition and designation system/pilot night vision system (TADS/PNVS) turret and area weapon.
13	Pilot station	All surfaces, components, and equipment in the pilot station. Includes windshields, landing gear brake control, canopy jettison system, lighting and indicator components, power and flight controls and instruments.
14	Copilot/gunner station (CPG)	All surfaces, components, and equipment in the CPG station. Includes windshields, landing gear brake control, canopy jettison system, lighting and indicator components, power and flight controls and instruments.

GO TO NEXT PAGE

---

## 1.49. CORROSION CONTROL/INSPECTION

---

### 1.49.13. Initial Cleaning and Inspection



a. Clean suspected area thoroughly using a clean cloth (item 54, App F) dampened with dry cleaning solvent (item 74, App F).

b. Inspect area using a 10X magnifying glass and flashlight.

(1) Examine edges of skin panels, rivet heads, and corrosion-prone areas. If there are blisters, bubbles, or other coating irregularities present, attempt to dislodge the paint by carefully scraping using a sharp, plastic tool.

(2) When corrosion is suspected, but no irregularities are present, apply a strip of masking tape (item 206, App F) over the suspected area and remove the tape with an abrupt lifting motion.

(3) Where paint is removed, inspect and determine extent of corrosion.

### 1.49.14. Degrees of Corrosion



#### a. **Light corrosion**

(1) Where the condition of the metal is characterized by discoloration and pitting to a depth of **0.001 INCH** (1 mil). This type of damage can normally be removed by light hand sanding.

#### b. **Moderate corrosion**

(1) Where the condition of the metal is characterized by blisters, evidence of scaling, of the coating or paint system, intergranular corrosion, and pitting to a depth of **0.001 INCH** (1 mil) to **0.010 INCH** (10 mils). This type of damage shall be removed by extensive hand sanding, light mechanical sanding, or by deoxidizing with a corrosion removing compound (item 64B, App F).

#### c. **Severe corrosion**

(1) Where the condition of the metal is characterized by blistering, evidence of scaling, flaking of the coating or paint system, intergranular corrosion, and pitting to a depth greater than **0.010 INCH** (10 mils). This type of damage shall be removed by extensive mechanical sanding, grinding, or by deoxidizing with a corrosion removing compound (item 64B, App F).

GO TO NEXT PAGE

---

**1.49. CORROSION CONTROL/INSPECTION**

---

**d. Corrosion-prone areas**

- (1) Aft avionics bay.
- (2) Control cables.
- (3) Electrical connectors.
- (4) Exhaust impingement areas.
- (5) Fasteners.
- (6) Faying surfaces and crevices.
- (7) Hinges.
- (8) Landing gear.
- (9) Magnesium parts, such as magnesium housings.
- (10) Spot-welded assemblies.
- (11) Water entrapment areas.

1.49.15. Corrosion Removal



**a. Aluminum**

- (1) Remove paint (TM 55-1500-345-23).
- (2) Remove surface corrosion using either a stainless steel brush or Scotchbrite pads and dry cleaning solvent (item 74, App F) or deoxidize with corrosion removing compound (item 64B, App F).
- (3) Apply corrosion removing compound (item 64B, App F) to metal surface.
- (4) Allow area to soak for 5 to 10 minutes until corrosion is loosened or dissolved.
- (5) Keep surface wet until all oxidation and corrosion are removed.

**NOTE**

Scrubbing with a stiff bristle brush will speed up corrosion removal.

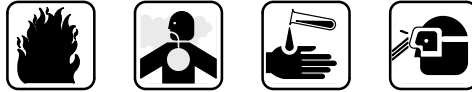
- (6) Rinse thoroughly using clean, potable water, and allow to dry at ambient temperature. Go to paragraph 1.49.16.

GO TO NEXT PAGE

---

**1.49. CORROSION CONTROL/INSPECTION – continued**


---

**b. Steel (Ferrous Alloys)**

- (1) Remove loose surface corrosion using a stainless steel brush and dry cleaning solvent (item 74, App F).
- (2) Abrade corroded surface using abrasive paper (item 133, App F).
- (3) Apply corrosion removing compound (item 64B, App F). to corroded area using a swab or a brush (item 34, App F).
- (4) Allow area to soak for 5 to 10 minutes until a bright, clean surface is produced.
- (5) Rinse thoroughly using clean, potable water, and allow to dry at ambient temperature. Go to paragraph 1.49.16.

**c. Magnesium****NOTE**

TM 55-1500-345-23 should be referenced for proper identification of corrosion on magnesium parts. TM 55-1500-344-23 also gives a chemical procedure that will identify the metal.

- (1) Remove surface corrosion using a nonmetallic, stiff, bristle brush and dry cleaning solvent (item 74, App F).
- (2) Abrade corroded surface using aluminum oxide cloth (item 47, App F) to smooth and blend rough areas.
- (3) Remove any remaining surface corrosion using a nonmetallic, stiff, bristle brush and dry cleaning solvent (item 74, App F).
- (4) Mix chemical conversion coating (Dow 19) using chromium trioxide (item 41A, App F) and calcium sulfite (item 39A, App F) prior to application. Apply chemical conversion coating (Dow 19) to repaired surface as soon as cleaning solvent has evaporated.

GO TO NEXT PAGE

---

**1.49. CORROSION CONTROL/INSPECTION**

---

**1.49.16. Corrosion Resistant Coatings****a. Aluminum**

- (1) Clean surface using dry cleaning solvent (item 74, App F).
- (2) Apply a corrosion resistant coating (item 64A, App F) as soon as possible.
- (3) Allow area to soak for three to five minutes until a light, yellow coating is produced.
- (4) Rinse thoroughly using clean, potable water, and allow to dry at ambient temperature.
- (5) Apply coatings as follows:
  - (a) Reapply organic coating that has been removed in accordance with TM 1-1500-344-23.
  - (b) Use epoxy primer coating kit (item 76A, App F) or epoxy primer coating kit (item 78A, App F).
  - (c) Use topcoat for exterior. Use polyurethane coating (item 140B, App F).
  - (d) Use topcoat for interior of cockpit and LRU's. Use polyurethane coating (item 140A, App F).
  - (e) In the event coatings are not available, apply corrosion preventive compound (item 62A, App F) or corrosion preventive compound (item 61, App F) to the repaired area. Extend compound **0.5 to 1.0 INCH** (13 to 25 mm) beyond periphery of repair.
  - (f) Allow to dry at ambient temperature for about one hour.

**b. Steel (Ferrous Alloys)**

- (1) For those applications requiring an organic coating to be reapplied it is recommended that primer (item 143, App F) be applied to bare metal within one hour after after corroded area has dried.
- (2) Allow to dry at ambient temperature. If an organic coating is not to be applied and a protective coating is needed, apply corrosion preventive compound (item 62A, App F) or corrosion preventive compound (item 61, App F) to the repaired area. Extend compound **0.5 to 1.0 INCH** (13 to 25 mm) beyond periphery of repair.

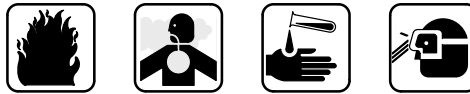
**c. Magnesium**

- (1) Mix chemical conversion coating using chromium trioxide (item 41A, App F) and calcium sulfite (item 39A, App F) prior to application. Apply chemical conversion coating (Dow 19 or equivalent), as soon as cleaning solvent has evaporated, and apply corrosion resistant coatings as follows:
  - (a) Reapply organic coating that has been removed in accordance with TM 1-1500-344-23.

GO TO NEXT PAGE

**1.49. CORROSION CONTROL/INSPECTION**

- (b) Use epoxy primer coating kit (item 76A, App F) or epoxy primer coating kit (item 78A, App F).
- (c) Use topcoat for drive system components; gear boxes and main transmission polyurethane coating (item 140A, App F).
- (b) If an organic coating is not to be applied and a protective coating is needed, apply corrosion preventive compound (item 62A, App F) to the repaired area. Extend compound **0.5 to 1.0 INCH** (13 to 25mm) beyond periphery of repair.

**1.49.17. Aircraft Modification Procedures****CAUTION**

When torque stripe is used, apply corrosion preventive compound (item 62A, App F). Do not apply MIL-S-8802 or MIL-S-29574. This applies for all aircraft modification procedures. All areas shall be cleaned prior to applying corrosion preventive compounds.

**NOTE**

- Use the following procedures on aircraft operating in extremely corrosive environment.
- Use sealing compound (item 162, App F) or sealing compound (item 170A, App F) in lieu of primer in coastal areas.

**a. Forward Fuselage – right side (area 1)**

- (1) Seal gap next to fuselage at R105 and pilot's exterior armor panel with sealing compound (item 170C, App F) or sealing compound (item 164, App F).
- (2) Apply corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F) to door hinges and latches on access doors R90 and R115.
- (3) Seal around static port brace and panel next to fuselage with sealing compound (item 170A, App F) or sealing compound (item 162, App F).

GO TO NEXT PAGE



**1.49. CORROSION CONTROL/INSPECTION – continued**

**b. Avionics Bay (area 1)**

- (1) Apply corrosion preventive compound (item 64, App F) to electrical connectors followed by corrosion preventive compound (item 62B, App F) in accordance with TM 1-1500-343-23.
- (2) Apply epoxy primer coating kit (item 76A, App F), epoxy primer coating kit (item 78A, App F), or corrosion preventive compound (item 62B, App F) to all bolt heads, nuts, exposed threads, mounting brackets, and fasteners.

**c. Landing Gear (area 1)**



- (1) Apply sealing compound (item 161, App F), sealing compound (item 170A, App F), or epoxy primer coating kit (item 76B, App F) to all bolt heads, nuts, exposed threads, and metal connectors on shock strut.
- (2) Apply hydraulic fluid (item 92, App F) to crash attenuation piston shafts. Use corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F) as alternate. Wipe off excess with a clean dry cloth (item 54, App F).
- (3) Seal wheel data tag, bolt heads, nuts, and exposed threads with sealing compound (item 162, App F) or sealing compound (item 170A, App F).
- (4) Coat inside of trailing arm with corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F).
- (5) Apply sealing compound (item 162, App F), sealing compound (item 170A, App F) or epoxy primer coating kit (item 76B, App F) to metal clamps on trailing arm and all unprotected exposed metal areas at upper end.
- (6) Seal cross tube end cap with sealing compound (item 164, App F) or sealing compound (item 170C, App F).

**d. Search Light (area 1)**



- (1) Coat all electrical contacts with corrosion preventive compound (item 64, App F) followed by corrosion preventive compound (item 62B, App F).

GO TO NEXT PAGE

---

**1.49. CORROSION CONTROL/INSPECTION – continued**


---

**e. Center Fuselage – right side (area 2)**

- (1) Seal skin splice in front of access door R180 with sealing compound (item 162, App F) or sealing compound (item 170A, App F).
- (2) Seal skin splice above access door R160 with sealing compound (item 162, App F) or sealing compound (item 170A, App F).
- (3) Apply corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F) to R180 hinges and latches.

**f. Main Transmission Deck (area 2)**

- (1) Apply epoxy primer coating kit (item 76A, App F) or epoxy primer coating kit (item 78A, App F) to all bolt heads, nuts, exposed threads, retainers, control rod ends, lateral actuator, and linkages. Do not apply primer to bearings. Use sealing compound (item 162, App F) or sealing compound (item 170A, App F) as alternate, if primer is not available.
- (2) Apply corrosion preventive compound (item 64, App F) to all electrical connectors followed by corrosion preventive compound (item 62B, App F).
- (3) Apply epoxy primer coating kit (item 76A, App F) to screw heads, seams, and mounting brackets on airspeed transducers. Use sealing compound (item 162, App F) or sealing compound (item 170A, App F) as alternate, if primer is not available.
- (4) Apply epoxy primer coating kit (item 76A, App F) or epoxy primer coating kit (item 78A, App F) to screw heads, seams, and mounting brackets on hydraulic primary manifold hydraulic pressure transducer. Use sealing compound (item 162, App F) or sealing compound (item 170A, App F) as alternate, if primer is not available.

**g. Nose Gearbox (area 2)**

- (1) Apply corrosion preventive compound (item 64, App F) to all electrical connectors.
- (2) Apply corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F) to latches on RN6.

GO TO NEXT PAGE

**1.49. CORROSION CONTROL/INSPECTION – continued**

**h. Wing (area 2)**



- (1) Seal around anticollision light, navigation light, and formation light with sealing compound (item 162, App F) or sealing compound (item 170A, App F).
- (2) Seal seams on top of wing with sealing compound (item 162, App F) or sealing compound (item 170A, App F).
- (3) Seal wing mounting bolts with sealing compound (item 162, App F) or sealing compound (item 170A, App F).
- (4) Apply corrosion preventive compound (item 63, App F) corrosion preventive compound (item 63A, App F) to hinge and latch on access door RW12.

**i. Pylon (area 2)**



- (1) Apply corrosion preventive compound (item 64, App F) to all electrical connectors followed by corrosion preventive compound (item 62B, App F); apply corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F) to all hinges and latches.
- (2) Apply epoxy primer coating kit (item 76A, App F) or epoxy primer coating kit (item 78A, App F) to all bolt heads, nuts, exposed threads, hinges, and exposed metal areas. Use sealing compound (item 162, App F) or sealing compound (item 170A, App F) as alternate, if primer is not available.

**j. Engine Nacelle – right (area 3)**



- (1) Apply corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F) to hinges and latches on engine access doors RN1, RN3, RN4, and RN5.
- (2) Apply corrosion preventive compound (item 62B, App F) to leveling jack RN1.
- (3) Seal engine exhaust mounting backing at fuselage with sealing compound (item 162, App F) or sealing compound (item 170A, App F).

GO TO NEXT PAGE

## 1.49. CORROSION CONTROL/INSPECTION – continued

### k. Electronics Compartment Bay (area 3)



- (1) Apply corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F) to hinges and latches on access door R295.
- (2) Apply corrosion preventive compound (item 64, App F) to electrical connectors, followed by corrosion preventive compound (item 62B, App F).

### l. Fuselage – right side aft (area 4)



- (1) Seal two holes and skin splice at top right corner of access door R295 with sealing compound (item 162, App F) or sealing compound (item 170A, App F).
- (2) Apply corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F) to hinges and latches on hydraulic access door R325, external power access door R345, and stowage compartment door R330.
- (3) Seal tail rotor drive shaft hanger mounts where they attach to fuselage with sealing compound (item 162, App F) or sealing compound (item 170A, App F).
- (4) Apply epoxy primer coating kit (item 76A, App F) or epoxy primer coating kit (item 78A, App F) to all drive shaft hanger mount bolts. Use sealing compound (item 162, App F) or sealing compound (item 170A, App F) as alternate, if primer is not available.
- (5) Apply epoxy primer coating kit (item 76A, App F) or epoxy primer coating kit (item 78A, App F) to tail rotor drive shaft couplings flanges and bolts under R410 and R475 fairing.
- (6) Apply corrosion preventive compound (item 63A, App F) (fluid film) to all teflon clamps on hydraulic lines under R410 and R475 fairing.

### m. Tail Section (area 5)



- (1) Seal skin seams around vertical stabilizer mounting brackets with sealing compound (item 164, App F) or sealing compound (item 170C, App F).
- (2) Apply sealing compound (item 162, App F) or sealing compound (item 170A, App F) to stabilizer mounting bolts and nuts.

GO TO NEXT PAGE

**1.49. CORROSION CONTROL/INSPECTION – continued**

- (3) Seal around formation and navigation lights and on top of vertical stabilizer with sealing compound (item 162, App F) or sealing compound (item 170A, App F).

**n. Horizontal Stabilator (area 5)**



- (1) Seal mounting bolt hardware, servo attachment fittings, and mounting hardware with sealing compound (item 162, App F) or sealing compound (item 170A, App F).
- (2) Apply corrosion preventive compound (item 64, App F) to all electrical connectors, followed by corrosion preventive compound (item 62B, App F).
- (3) Fill Hi-Lok installation cavities (water traps) with RTV adhesive (item 16, App F).

**o. Tail Landing Gear (area 5)**



- (1) Apply epoxy primer coating kit (item 76A, App F) or epoxy primer coating kit (item 78A, App F) to bolt heads, nuts, and exposed threads at strut frame mount. Use sealing compound (item 162, App F) or sealing compound (item 170A, App F) as alternate, if primer is not available.
- (2) Apply epoxy primer coating kit (item 76A, App F) or epoxy primer coating kit (item 78A, App F) to all wheel trailing arms and attaching bolt heads, nuts, and exposed threads. Use sealing compound (item 162, App F) or sealing compound (item 170A, App F) as alternate, if primer is not available.
- (3) Apply corrosion preventive compound (item 64, App F) to all electrical connectors, followed by corrosion preventive compound (item 62B, App F)
- (4) Apply hydraulic fluid (item 92, App F) to crash attenuation piston shafts. Use corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F) as alternate. Wipe off excess with a clean dry cloth (item 54, App F).
- (5) Coat inside wheel axle with corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F).

**p. Intermediate gearbox (area 5)**



- (1) Prime/seal exposed machined area (controls mounts) with epoxy primer coating kit (item 76A, App F) or epoxy primer coating kit (item 78A, App F).

GO TO NEXT PAGE

**1.49. CORROSION CONTROL/INSPECTION – continued**

- (2) Seal all bolt heads, nuts, exposed threads, fittings, and connectors with sealing compound (item 160, App F) or sealing compound (item 170A, App F).
- (3) Fill bolt holes in gearbox with RTV adhesive (item 16, App F).
- (4) Apply corrosion preventive compound (item 64, App F) to all electrical connectors, followed by corrosion preventive compound (item 62B, App F).

**q. Tail Rotor Gearbox (area 5)**

- (1) Seal all bolt heads, nuts, exposed threads, fittings, and connectors with sealing compound (item 160, App F) or sealing compound (item 170A, App F).
- (2) Fill bolt holes in gearbox with RTV adhesive (item 16, App F).
- (3) Apply corrosion preventive compound (item 64, App F) to all electrical connectors, followed by corrosion preventive compound (item 62B, App F).
- (4) Seal all gaps at base directional servo actuator with sealing compound (item 161, App F) or sealing compound (item 170C, App F).

**r. Fuselage – left side aft (area 6)**

- (1) Apply corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F) to stowage compartment L330 door, hinge, latch, and fairing hinges on access doors R410 and R475.
- (2) Seal around electrical connector J97 with sealing compound (item 160, App F) or sealing compound (item 170A, App F).

**s. Catwalk (area 8)**

- (1) Apply corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F) to latches and hinges on equipment bay doors L325, T290L, T290R, T250L, and T250R.
- (2) Apply corrosion preventive compound (item 64, App F) to all electrical connectors, followed by corrosion preventive compound (item 62B, App F).

GO TO NEXT PAGE

**1.49. CORROSION CONTROL/INSPECTION – continued**

- (3) On ENCU temperature control unit, seal box edges and mounting screws with sealing compound (item 160, App F) or sealing compound (item 170A, App F).
- (4) On hydraulic utility manifold hydraulic pressure transducers, seal around mounting surfaces and fasteners with sealing compound (item 162, App F) or sealing compound (item 170A, App F).

**t. Main Rotor and Mast (area 8)**



- (1) Apply epoxy primer coating kit (item 76A, App F) or epoxy primer coating kit (item 78A, App F) to bolt heads, nuts, exposed threads, retainers, control rod ends, linkages, and exposed metal areas. Use sealing compound (item 162, App F) or sealing compound (item 170A, App F) as alternate, if primer is not available.
- (2) Apply coating of corrosion preventive compound (item 62, App F) or fill mast support base lightening holes with grease (item 88, App F) or petrolatum (item 138, App F). Install covers by applying a thin coat of adhesive (item 2, App F) or adhesive (item 3, App F) on cover face and mast base. Seal caps with sealing compound (item 164, App F) or sealing compound (item 170C, App F).

**u. Engine Nacelle – (area 9)**



- (1) Apply corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F) to hinge and latch on electronic access door L295.
- (2) Apply corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F) to hinges and latches on engine access doors LN1, LN3, LN4, and LN5.
- (3) Seal two holes and skin splice at top left over electrical equipment access door L295 with sealing compound (item 164, App F) or sealing compound (item 170C, App F).
- (4) Seal engine exhaust mounting bracket at fuselage in front of hydraulic access door L325 with sealing compound (item 162, App F) or sealing compound (item 170A, App F).
- (5) Apply corrosion preventive compound (item 62B, App F) to leveling jack LN1.

**v. Fuselage – left side center (area 10)**



- (1) Seal wing mounting bolts with sealing compound (item 162, App F) or sealing compound (item 170A, App F).

GO TO NEXT PAGE

**1.49. CORROSION CONTROL/INSPECTION – continued**

- (2) Seal formation, anticollision, and navigation lights with sealing compound (item 162, App F) or sealing compound (item 170A, App F).
- (3) If not ready present, add a **0.5 INCH** drain hole in lower surface of wing to fuselage fairing (approximately **1.5 INCHES** from the inboard edge, at lowest point).
- (4) Apply corrosion preventive compound (item 64, App F) to all electrical connectors in pylon area, followed by corrosion preventive compound (item 62B, App F).
- (5) Apply corrosion preventive compound (item 64, App F) to all electrical connectors in engine nose gearbox.
- (6) Apply corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F) to hinges on access doors L190 and L210.
- (7) Seal skin splice over L160 controls access with sealing compound (item 160, App F) or sealing compound (item 170A, App F).

**w. Fuselage – left side forward (area 11)**

- (1) Apply corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F) to hinges and latches on doors L117 and L187.
- (2) Apply sealing compound (item 162, App F) or sealing compound (item 170A, App F) to main landing gear shock strut, bolt heads, nuts, and exposed threads.
- (3) Coat inside of trailing arm with corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F).
- (4) Apply sealing compound (item 162, App F) or sealing compound (item 170A, App F) to metal clamps on trailing arm and all unprotected exposed metal areas at upper end.
- (5) Seal main landing gear end cap with sealing compound (item 164, App F) or sealing compound (item 170C, App F).
- (6) Apply corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F) to crash attenuation piston shafts. Wipe off excess with a clean dry cloth.
- (7) Seal wheel data tag, bolt heads, nuts, and exposed threads with sealing compound (item 162, App F) or sealing compound (item 170A, App F).
- (8) Apply corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F) to hinge and latch on avionics door.
- (9) Apply corrosion preventive compound (item 64, App F), followed by corrosion preventive compound (item 62B, App F), to all electrical connectors in avionics areas.

GO TO NEXT PAGE



**1.49. CORROSION CONTROL/INSPECTION – continued**

- (10) Seal pilot external armor plate with sealing compound (item 164, App F) or sealing compound (item 170A, App F).
- (11) Seal around static port brace and panel adjacent to fuselage with sealing compound (item 162, App F) or sealing compound (item 170C, App F).
- (12) Apply corrosion preventive compound (item 64, App F), followed by corrosion preventive compound (item 62B, App F) to all electrical connectors in access are L115.

**x. Nose Section (area 12)**



- (1) Apply corrosion preventive compound (item 64, App F), followed by corrosion preventive compound (item 62B, App F), to all electrical connectors under access panels R40 and L40.
- (2) Apply epoxy primer coating kit (item 76A, App F) or epoxy primer coating kit (item 78A, App F) to all bolt heads, nuts, exposed threads, mounting brackets, and fasteners. Use sealing compound (item 162, App F) or sealing compound (item 170A, App F) as an alternate, if primer is not available.
- (2) Apply corrosion preventive compound (item 64, App F), followed by corrosion preventive compound (item 62B, App F), to all electrical connectors in the TADS/PNVS turret.

**y. Armament**



- (1) Apply lubricating oil (item 119A, App F) or corrosion preventive compound (item 63A, App F) to all exposed metal areas.

**z. Pilot Station (area 13)**

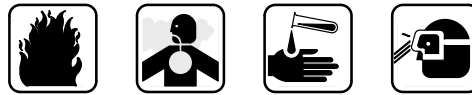


- (1) Apply corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F) to canopy door latch, hinges, and canopy support strut.
- (2) Apply sealing compound (item 162, App F) or corrosion preventive compound (item 62B, App F) to seat attachment fittings and pins.
- (3) Apply corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F) to armor swing plate hinges and latches.

GO TO NEXT PAGE

**1.49. CORROSION CONTROL/INSPECTION**

**aa. Copilot/Gunner Station (area 14)**



- (1) Apply corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F) to canopy latch, hinges, and canopy support strut.
- (2) Apply sealing compound (item 162, App F) or corrosion preventive compound (item 62B, App F) to seat attachment fittings and pins.
- (3) Apply corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F) to armor swing plate hinges and latches.

**1.49.18. Aircraft Washing and Cleaning Procedures**

**CAUTION**

High pressure (above 175 psi) cleaning shall not be used when washing and cleaning aircraft.

**NOTE**

This procedure is to be used on aircraft operating in corrosive environments. For standard or detailed aircraft cleaning procedures, refer to para 1.53.

**a. Frequency (minimum requirements)**

Environment	Fresh Water Rinse Frequency	Wash Frequency	Corrosion Inspection
Extreme severe (Tropics/Salt water)	Daily	7 Days	7 Days
Severe (Coastal)	7 Days	30 Days	30 Days
Moderate (Intermediate)	14 Days	60 Days	60 Days
Slight (Desert)	30 Days	120 Days	120 Days

GO TO NEXT PAGE

---

**1.49. CORROSION CONTROL/INSPECTION – continued**


---

**b. Rinsing Procedure**

- (1) Rinse aircraft with a soft fan-spray pattern to avoid damage and water intrusion.
- (2) Rinse external surfaces at a flow of 8 gallons (30 liters) per minute at a **20 to 25 PSI** (140 to 170 kPa) supply pressure.
- (3) Direct water at an angle of 15 to 30 degrees from the surface.
- (4) Reapply corrosion preventive compound (item 63, App F) on structural components, and corrosion preventive compound (item 64, App F) on electrical components after each rinse.
- (5) Wipe out standing water on transmission deck.
- (6) Ensure that there is not standing water in the tailboom.

**c. Washing Procedure**

- (1) Rinse aircraft surface with fresh water to reduce skin temperature.
- (2) Prepare cleaning compound (item 44, App F) or cleaning compound (item 44A, App F) in accordance with manufacturer's instructions. Apply from a bucket, spraying equipment, or foaming equipment. Scrub surfaces as necessary with aircraft cleaning kit or with a brush.
- (3) Rinse the cleaner and loosened soil from aircraft surface with a fan spray nozzle directed at an angle between 15 and 30 degrees from the surface. Continue rinsing until all evidence of cleaner and soils have been removed from aircraft.
- (4) Reapply corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F) on structural components, and corrosion preventive compound (item 64, App F) on electrical components and avionics after each rinse, followed by corrosion preventive compound (item 62B, App F), if required.
- (5) Wipe out standing water on transmission deck.
- (6) Ensure that there is not standing water in the tailboom.

**d. Cleaning Wipe-Down**

- (1) For component cleaning wipe-down, use corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F) on structural components, and corrosion preventive compound (item 64, App F) on electrical and avionic components.

GO TO NEXT PAGE

## 1.49. CORROSION CONTROL/INSPECTION – continued

## NOTE

Mechanical maintenance areas should be performed by 67R personnel and all electrical, armament, and avionics maintenance areas should be performed by 68X personnel.

Table II. Requirements for Cleaning Specific Areas and Components

Area or Component	Type of soil	Material	Directions	Cleaning Procedures
Exterior surfaces	Light soil	Cleaning compound (item 44, App F) or cleaning compound (item 44A, App F)	3 ounces per gallon	Apply cleaning compound (item 44, App F) or cleaning compound (item 44A, App F) with aircraft cleaning kit, or cleaning brush. Rinse with fan spray until cleaner and soils are removed.
	Oils	Cleaning compound (item 44A, App F)	3 ounces per gallon	Same as above.
	Heavy soil	Dry cleaning solvent (item 74, App F)		Dry cleaning
Cloth (item 51, App F)			Cotton cheesecloth	
Cleaning compound (item 44A, App F)			3 ounces per gallon	
Cockpit	Dirt	Cleaning compound (item 44A, App F)	3 ounces per gallon	Remove loose dirt with vacuum cleaner. Wipe with cleaning compound (item 44A, App F), and rinse with fresh water on cloth.
Forward avionics	Oil	Dry cleaning solvent (item 74, App F)	Dry cleaning solvent	Remove loose dirt with vacuum cleaner. Wipe with cloth wet with dry cleaning solvent (item 74, App F). Wipe off excess solvent with clean cloth (item 51, App F).
		Cloth (item 51, App F)	Cotton cheesecloth	
	Dust	Cleaning compound (item 44A, App F)	3 ounces per gallon	Remove loose dirt with vacuum cleaner. Wipe with cloth wet with cleaning compound (item 44A, App F), and rinse with fresh water on cloth.

GO TO NEXT PAGE

1.49. CORROSION CONTROL/INSPECTION – continued

Table II. Requirements for Cleaning Specific Areas and Components – continued

Area or Component	Type of soil	Material	Directions	Cleaning Procedures
Plastic environmental	Light debris, dust	Dishwashing compound (item 72, App F)	1 ounce per gallon	Wipe with cloth wet with dishwashing compound (item 72, App F) or cleaning compound (item 44A, App F), and rinse with cloth wet with fresh water. Dry with clean cloth.
		Cleaning compound (item 44A, App F)	3 ounces per gallon	
Tailboom interior (as required)	Dust, dirt, oil	Corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F)	Corrosion preventive compound	Vacuum and wipe with clean cloth dampened with corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F) with ventilation.
		Cleaning compound (item 44A, App F)	3 ounces per gallon	Alternate for poor ventilation.
Parts, instrument faces	Smudges	Dishwashing compound (item 72, App F)	1 ounce per gallon	Clean with detergent and rinse with cloth wet with fresh water.
		Cloth (item 54, App F)	Cloth flannel	Dry with clean cloth.
Elastomeric seals, boots	Dust, dirt, oil	Dishwashing compound (item 72, App F)	1 ounce per gallon	Clean with detergent and rinse with cloth wet with fresh water.
		Cloth (item 51, App F)	Cotton cheesecloth	Dry with clean cloth.
Fabric parts	Oils, spots	Dishwashing compound (item 72, App F)	1 ounce per gallon	Flush with fresh water. Rub gently with bare hands or clean cloth while applying fresh water. Dry with clean cloth damp with distilled or deionized water in a one-direction movement while applying light pressure.

GO TO NEXT PAGE

## 1.49. CORROSION CONTROL/INSPECTION – continued

Table II. Requirements for Cleaning Specific Areas and Components – continued

Area or Component	Type of soil	Material	Directions	Cleaning Procedures
Canopy exterior	Dust, dirt, salt	Dishwashing compound (item 72, App F)	1 ounce per gallon	Flush with fresh water. Rub gently with bare hands or clean cloth while applying fresh water. Dry with clean cloth damp with distilled or deionized water in a one-direction movement while applying light pressure.
Interior plastic	—————	Dishwashing compound (item 72, App F)	1 ounce per gallon	Apply with clean cloth dampened with dishwashing compound (item 72, App F). Rinse with cloth dampened with fresh water.
		Cloth (item 54, App F)	Flannel cloth	Wipe with flannel cloth (item 54, App F) dampened with distilled water or deionized water in a one-direction movement.
Control cables, hoses	Dust, dirt, oil	Corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F)	Corrosion preventive compound	Wipe clean with a cloth dampened with corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F).
Landing gear, piston surfaces	Sand, dirt, salt	Hydraulic fluid (item 92, App F)	Hydraulic fluid	Apply hydraulic fluid (item 92, App F), to pistons. Wipe clean with corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F) as an alternate.
		Corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F) as alternate	Corrosion preventive compound	

GO TO NEXT PAGE

**1.49. CORROSION CONTROL/INSPECTION – continued**

Table II. Requirements for Cleaning Specific Areas and Components – continued

Area or Component	Type of soil	Material	Directions	Cleaning Procedures
Crash attenuation pistons		Corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F)	Corrosion preventive compound	Wipe clean with corrosion preventive compound (item 63, App F).
Door hinges and locks	Dust, dirt, oil	Corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F)	Corrosion preventive compound	Apply corrosion preventive compound (item 63, App F) to surfaces as needed.
Wheels and brakes	Dust, dirt, salt	Cleaning compound (item 44A, App F)	3 ounces per gallon	Clean exposed areas with cleaning compound (item 44A, App F) using a brush. Rinse thoroughly with fresh water. Relubricate as required.

GO TO NEXT PAGE

## 1.49. CORROSION CONTROL/INSPECTION – continued

Table II. Requirements for Cleaning Specific Areas and Components – continued

Area or Component	Type of soil	Material	Directions	Cleaning Procedures
Main and tail rotor blades, swashplates and turret	Dust, salt, oil	Dishwashing compound (item 72, App F)  Use corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F)	Rinse with fresh water	Apply with clean cloth dampened with dishwashing compound (item 72, App F). Rinse with cloth dampened with fresh water. Or as an alternate, apply a thin film of corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F) to a convenient sized area. Wipe clean with a cloth, and remove the corrosion preventive compound along with loosened soil and residue.
	Salt water	Corrosion preventive compound (item 63, App F) or Corrosion preventive compound (item 63A, App F)	Corrosion preventive compound	Flush with fresh water. Spray with corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F).
		Cloth (item 54, App F)	Flannel cloth	Remove excess with clean dry cloth (item 54, App F).
Aft avionics bay	Electrolytes deposits	Dishwashing compound (item 72, App F)	Rinse with fresh water	Apply with clean cloth dampened with dishwashing compound (item 72, App F). Rinse with cloth dampened with fresh water. Dry with a clean wiping cloth.
Fuselage bilge areas	Hydraulic fluid, dirt, salt water	Cleaning compound (item 44A, App F)	3 ounces per gallon	Vacuum and dry. Wipe area with a sponge dampened in cleaning compound (item 44A, App F). Rinse with sponge and fresh water. Wipe dry with clean cloth (item 54, App F).
Electrical connectors, avionics	Dust, dirt, oil, grease	Corrosion preventive compound (item 64, App F)	Corrosion preventive compound	Apply a thin film of corrosion preventive compound (item 64, App F) to component. To clean, wipe with a cloth to remove corrosion preventive compound and residue. For corrosion control and water displacement, let set for 5 minutes minimum.

GO TO NEXT PAGE



**1.49. CORROSION CONTROL/INSPECTION – continued**

Table II. Requirements for Cleaning Specific Areas and Components – continued

Area or Component	Type of soil	Material	Directions	Cleaning Procedures
Flight control rods, threads, jam nuts, washers, bolts	Corrosion and water intrusion	Corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F)	Corrosion preventive compound	Apply a thin film of corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 63A, App F).
Weapon turret	Sand, salt, oil	Cleaning compound (item 44A, App F)	3 ounces per gallon	Clean exposed areas with cleaning compound (item 44A, App F), rinse with fresh water, and dry with clean cloth (item 54, App F).
		Lubricating oil (item 119A, App F) or corrosion preventive compound (item 63A, App F)	Lubricating oil, water displacing	Apply lubricating oil (item 119A, App F), and wipe off excess oil with dry clean cloth (item 54, App F). Use corrosion preventive compound (item 63A, App F) as an alternate.

GO TO NEXT PAGE

**1.49. CORROSION CONTROL/INSPECTION – continued**

Table III. Reapplication of CPC Compounds, Sealants, and Primers after Washing and Rinsing MIL-C-81309, Type II Corrosion preventive compound (item 63, App F) or Corrosion preventive compound (item 63A, App F).

Area	Location	Specifics
<b>NOTE</b>		
After washes and rinses, reapplication of CPC compounds, sealants, and primers shall be performed daily as specified in this table.		
1	Avionics bay	Apply to all hinges and latches in access door R90.
	Fuselage – right side, forward	Apply to door hinges and latches on access doors for pilot and copilot.
	Landing gear	Apply to crash attenuation piston shafts, and wipe off excess with a clean cloth.
Apply to inside of trailing arm.		
2	Fuselage – right side, center	Apply to hinges and latches on R180 access door.
	Wing	Apply to hinge and latch on access door RW12.
	Pylons	Apply to all hinges and latches.
3	Engine nacelle – right	Apply to hinges and latches on engine access doors RN1, RN2, RN3, RN4, RN5, and RN6.
4	Fuselage – right side, aft	Apply to hinge and latches on access door R295.
		Apply to hinges and latches on hydraulic access door R325, external power access door R345, and stowage compartment door R330.
5	Tail Section	Apply to crash attenuation piston shafts, and wipe off excess with a clean cloth.
		Apply to inside of wheel axle.
6	Fuselage – left side, aft	Apply to hinges and latches on stowage compartment door L330, doors R410, R475 and T32.
7	Catwalk	Apply to hinges and latches on equipment bay doors, L325, T290L, T290R, T250L, and T250R.
9	Engine nacelle – left	Apply to hinges and latches on electronic equipment door L295.
		Apply to hinges and latches on engine access doors LN1, LN2, LN3, LN4, LN5, L210 and L225.
10	Fuselage – left side, center	Apply to hinges and latches on access doors L190 and L210.
	Pylons	Apply to all hinges and latches.
11	Fuselage – left side, forward	Apply to hinges and latches on access doors L115, L117, and L187.
		Apply to hinge and latches on avionics door L90.
13	Pilot station	Apply to hinges, latch, and canopy support strut.
		Apply to armor swing plate hinges and latch.
14	Copilot/gunner station	Apply to hinges, latch, and canopy support strut.
		Apply to armor swing plate hinges and latch.

GO TO NEXT PAGE

**1.49. CORROSION CONTROL/INSPECTION – continued**

Application of MIL-C-81309, Type III Corrosion preventive compound (item 64, App F). If additional protection is needed, apply corrosion preventive compound (item 62B, App F) (cont).z

Area	Location	Specifics
1	Avionics bay	Apply to all electrical connectors on black boxes, and wire bundle clamps in access door R90.
	Searchlight	Apply to all electrical contacts.
2	Engine nose gearbox	Apply to all electrical connectors and wire bundle clamps.
	Pylons	Apply to all electrical connectors and wire bundle clamps.
	Transmission deck	Apply to all electrical connectors, wire bundle clamps, and black boxes.
4	Electronics equipment bay	Apply to all electrical connectors on black boxes, and wire bundle clamps in access door R295.
5	Horizontal stabilator	Apply to all electrical connectors.
	Tail landing gear	Apply to all electrical connectors.
	Intermediate gearbox	Apply to all electrical connectors and wire bundle clamps.
	Tail rotor gear box	Apply to all electrical connectors and wire bundle clamps.
7	Catwalk	Apply to all electrical connectors on black boxes, and wire bundle clamps.
10	Fuselage – left side, center	Apply to all electrical connectors and wire bundle clamps in access doors L90 and L210.
	Engine nose gearbox	Apply to all electrical connectors and wire bundle clamps.
	Pylons	Apply to all electrical connectors and wire bundle clamps.
11	Fuselage – left side, forward	Apply to all electrical connectors and wire bundle clamps in avionics bay (access doors L90, L115, L117, and L187.
12	Nose section	Apply to all electrical connectors on black boxes, and wire bundle clamps in access panel areas R40, L40, R60, and L60 when removing panels during routine inspection.
	TADS/PNVS turret	Apply to all electrical connectors and wire bundle clamps.

Application of epoxy primer coating kit (item 78A, App F) or epoxy primer coating kit (item 76A, App F) in desert and intermediate areas. Sealing with sealing compound (item 162, App F) or sealing compound (item 170A, App F) is optional.

- NOTE:** 1. Inspect, and reapply when there are visible cracks or loss of adhesion.  
 2. Where torque stripe is used, apply corrosion preventive compound (item 62B, App F).

Area	Location	Specifics
1	Main Landing gear	Apply epoxy primer coating kit (item 78A, App F) to wheel lug nuts,, then apply topcoat polyurethane coating (item 140B, App F).
2	Main transmission deck	Apply to all bolt heads, nuts, exposed threads, retainers, control rod ends, and linkages. Do not apply primer to bearings.
	Pylons	Apply to all bolt heads, nuts, and exposed threads.
4	Electronics equipment bay	Apply to all bolt heads, nuts, and exposed threads in access door R295.

GO TO NEXT PAGE

**1.49. CORROSION CONTROL/INSPECTION – continued**

5	Tail landing gear	Apply to all bolt heads, nuts, and exposed threads at strut frame mount.
		Apply to all bolt heads, nuts, and exposed threads on trailing arm and wheel.
		Apply epoxy primer coating kit (item 78A, App F) to wheel lug nuts, then apply topcoat polyurethane coating (item 140B, App F).
8	Main rotor and mast	Apply to all bolt heads, nuts, exposed threads, retainers, control rod ends, linkages, and exposed metal areas.
10	Landing gear	Apply epoxy primer coating kit (item 78A, App F) to wheel lug nuts, then apply topcoat polyurethane coating (item 140B, App F).
Application of sealing compound (item 162, App F) or sealing compound (item 170A, App F) in coastal and tropical areas.		
<b>NOTE:</b> 1. Inspect and reapply when there are visible cracks or loss of adhesion.		
2. Where torque stripe is used, apply corrosion preventive compound (item 62B, App F).		
Area	Location	Specifics
1	Main Landing gear	Apply to all bolt heads, nuts, exposed threads, and metal connectors on shock strut.
		Apply to metal clamps on trailing arm and all unprotected, exposed metal areas at upper end.
2	Fuselage – right side, center	Apply to wing mounting bolts.
	Transmission deck	Apply to screw heads, seams, and mounting brackets on air speed transducer.
		Apply to screw heads, mounting brackets, and seams on both air speed transducers.
3	Engine nacelle – right	Apply corrosion preventive compound (item 62B, App F) to leveling jack RN1.
4	Fuselage – right side, aft	Apply to all tail rotor drive shaft hanger mount bolts.
		Apply to all tail rotor drive shaft coupling flanges and bolts.
5	Tail section	Apply to vertical stabilizer mounting bolts.
		Apply to horizontal stabilator mounting bolts and servo attachment fittings.
	Directional servo actuator	Seal cracks at base.
	Intermediate gearbox	Apply to all bolt heads, nuts, exposed threads, and fittings.
	Tail rotor gearbox	Apply to all bolt heads, nuts, exposed threads, and fittings.
9	Engine nacelle	Apply corrosion preventive compound (item 62B, App F) to leveling jack LN1.
10	Fuselage – left side, center	Apply to wing mounting bolts.
11	Fuselage – left side, forward	Apply to metal clamps on trailing arm and all unprotected, exposed metal areas at upper end.

GO TO NEXT PAGE

**1.49. CORROSION CONTROL/INSPECTION – continued**

13	Pilot station	Apply sealing compound (item 162, App F) to seat attachment fittings and pins; as an alternate, use corrosion preventive compound (item 62B, App F). Do not use MIL-S-29574 in cockpit areas.
14	Copilot/gunner	Apply sealing compound (item 162, App F) to seat attachment fittings and pins; as an alternate, use corrosion preventive compound (item 62B, App F). Do not use MIL-S-29574 in cockpit areas.

END OF TASK

**1.50. BATTERY COMPARTMENT CLEANING**

1.50.1. Description

This task covers: Cleaning.

1.50.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
 Light duty laboratory apron (item 27, App H)  
 Industrial faceshield (item 129, App H)  
 Chemical protective gloves (item 154, App H)

**Materials/Parts:**

Boric acid (item 33, App F)  
 Brush (item 34, App F)

**Personnel Required:**

67R Attack Helicopter Repairer

**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
9.40	Battery removed

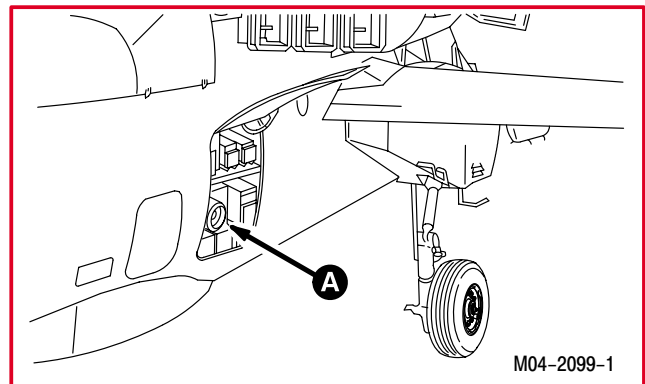
1.50.3. Cleaning

**WARNING**

**Potassium hydroxide in the electrolyte of a nickel cadmium battery is very corrosive. When spilled on hands, clothing, or other material, flood the affected area immediately with cold water or boric acid solution. When the eyes are involved, wash them with a stream of water. When handling potassium hydroxide, face-shield, rubber gloves, and apron shall be worn. If injury occurs, seek medical aid.**

**CAUTION**

Do not use water or steam on electrical equipment.



GO TO NEXT PAGE

---

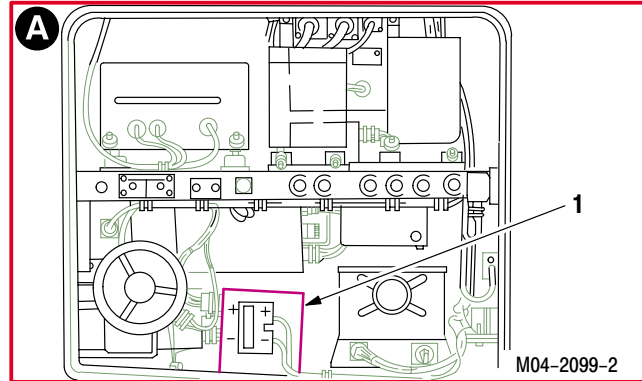
1.50. BATTERY COMPARTMENT CLEANING – continued

---



a. Clean battery compartment (1).

- (1) Carefully neutralize spilled electrolyte by treating with 3 percent solution of boric acid in water. Use boric acid (item 33, App F).
- (2) Apply solution with acid swabbing brush. Use brush (item 34, App F). Allow to remain on the surface 10 minutes. Discard brush in a suitable container.
- (3) Remove neutralized electrolyte with a wet mop or sponge. Rinse area thoroughly with clean tap water.



b. Install battery (para 9.40).

END OF TASK

---

**1.51. BATTERY SERVICING**

---

1.51.1. Description

This task covers: Servicing.

---

1.51.2. Initial Setup**Tools:**

Aircraft mechanic's tool kit (item 376, App H)

**References:**

TM 11-6140-203-14-2

**Equipment Conditions:****Personnel Required:**

67R      Attack Helicopter Repairer

RefCondition

1.57

Helicopter safed

2.2

Access door R295 opened

---

1.51.3. Servicing

- a. **Service battery** (TM 11-6140-203-14-2).
- b. **Secure access door R295** (para 2.2).

END OF TASK



## 1.52. ENCU TURBINE SERVICING

### 1.52.1. Description

This task covers: Servicing.

### 1.52.2. Initial Setup

#### Tools:

Aircraft mechanic's tool kit (item 376, App H)  
 Chemical protective gloves (item 154, App H)  
 Hand oiler (item 220, App H)

#### Materials/Parts:

Packing (2)  
 Lubricating oil (item 118, App F) (below -25 °F)  
 Lubricating oil (item 119, App F) (above -25 °F)  
 Wire (item 225, App F)

#### Personnel Required:

67R Attack Helicopter Repairer  
 67R3F Attack Helicopter Repairer/Technical Inspector

#### Equipment Conditions:

Ref	Condition
1.57	Helicopter safed
2.2	Access doors T250L, T250R, T290L, T290R, and L325 opened
2.84	Center aft catwalk removed

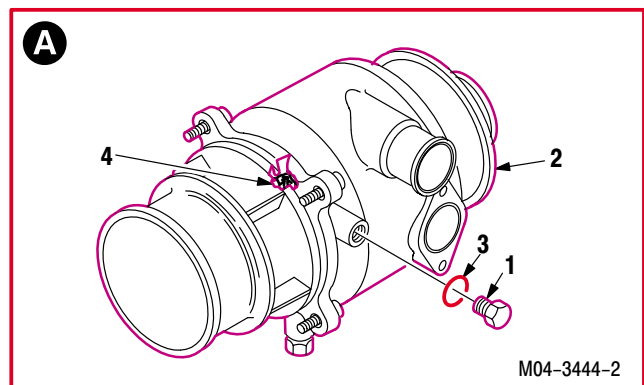
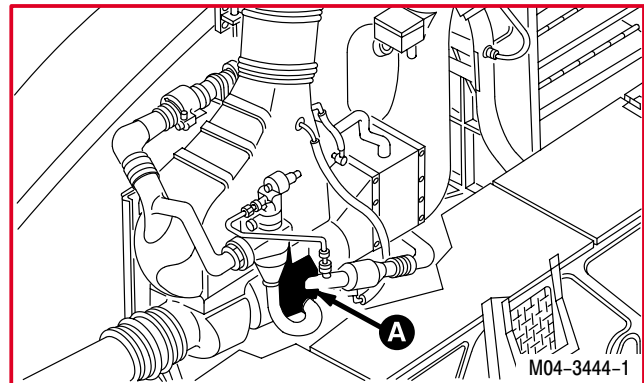
### 1.52.3. Servicing

#### a. Remove fill plug (1) from ENCU turbine (2).

- (1) Remove lockwire from plug (1).
- (2) Remove plug (1) from turbine (2).
- (3) Remove and discard packing (3) from plug (1).



- #### b. Service ENCU turbine (2) until cotton (4) will not absorb any more oil. Use lubricating oil (item 118, App F) or lubricating oil (item 119, App F) and oiler.



GO TO NEXT PAGE

---

**1.52. ENCU TURBINE SERVICING – continued**


---

**NOTE**

ENCU turbine is fully serviced when excess oil can be drained.

**c. Drain excess oil from ENCU turbine (2).**

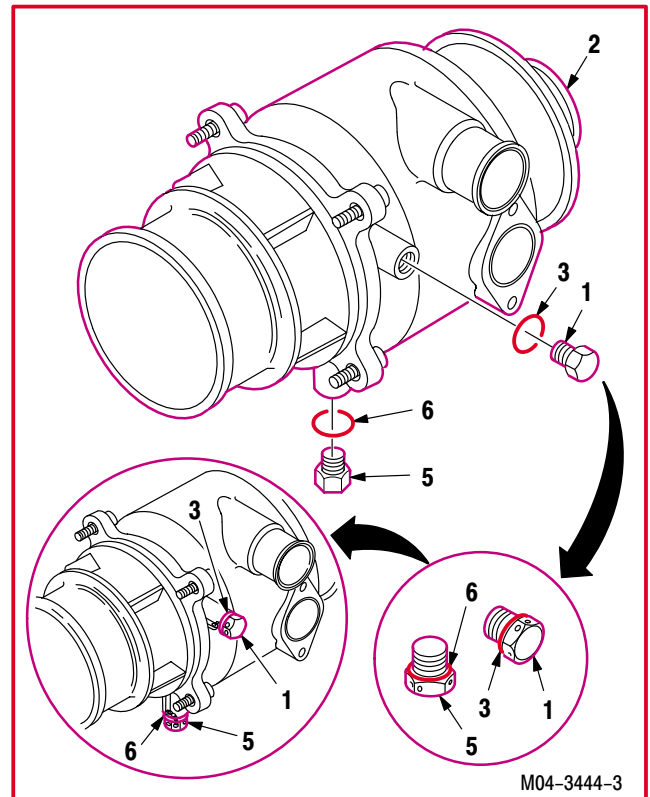
- (1) Remove lockwire from drain plug (5).
- (2) Remove drain plug (5) from turbine (2).
- (3) Remove and discard packing (6) from plug (5).
- (4) Drain excess oil from turbine (2).

**d. Install plug (5) on turbine (2).**

- (1) Install new packing (6) on plug (5).
- (2) Install plug (5) on turbine (2).

**e. Install plug (1) on turbine (2).**

- (1) Install new packing (3) on plug (1).
- (2) Install plug (1) in turbine (2).

**f. Lockwire plug (5) and plug (1).** Use wire (item 225, App F).**g. Inspect (QA).****h. Install center aft catwalk panel** (para 2.84).**i. Secure access doors T250L, T250R, T290L, T290R, and L325** (para 2.2).

END OF TASK

---

**1.53. AIRCRAFT AND AIRCRAFT COMPONENT WASHING, CLEANING, AND FRESH WATER RINSE PROCEDURES**

---

1.53.1. Description

This task covers: General Cleaning/Washing Procedures. Preferred Washing Procedures. Alternate Cleaning Procedures. Wipe Down With Water Displacing Film. Specific Item, Area, and Component Cleaning. Aircraft Wash Frequency (specific conditions).

---

1.53.2. Initial Setup

**Tools:**

- Light duty laboratory apron (item 27, App H)
- Applicator bottle (item 42, App H)
- Cleaning aircraft brush (item 43, App H)
- Industrial faceshield (item 129, App H)
- Chemical protective gloves (item 154, App H)
- 14-quart utility pail (item 222, App H)
- Adjustable air filtering respirator (item 262, App H)

**Materials/Parts:**

- Brush (item 34, App F)
- Cleaning compound (item 44, App F)
- Cloth (item 51, App F)
- Cloth (item 52, App F)
- Cloth (item 54, App F)
- Cloth (item 56, App F)
- Corrosion preventive compound (item 61, App F)
- Corrosion preventive compound (item 62, App F)
- Corrosion preventive compound (item 63, App F)
- Corrosion preventive compound (item 64, App F)
- Detergent (item 71, App F)
- Dishwashing compound (item 72, App F)
- Dry cleaning solvent (item 74, App F)
- Hydraulic fluid (item 92, App F)
- Isopropyl alcohol (item 106, App F)
- Mat (item 121, App F)
- Rain repellent (item 148, App F)
- Sodium phosphate (item 188, App F)
- Sponge (item 190, App F)

**Personnel Required:**

- 67R Attack Helicopter Repairer
- Two persons to assist

**References:**

- TM 1-1270-476-20
- TM 1-1500-328-23
- TM 1-1500-343-23
- TM 1-1500-344-23
- TM 1-1520-238-PM
- TM 1-1520-238-T
- TM 1-5855-265-20
- TM 9-1090-208-23-1
- TM 55-2835-208-23
- TM 55-2840-248-23

**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed

---

GO TO NEXT PAGE

---

**1.53. AIRCRAFT AND AIRCRAFT COMPONENT WASHING, CLEANING, AND FRESH WATER RINSE PROCEDURES – continued**

---

**1.53.3. General Cleaning/Washing Procedures****CAUTION**

- Use of high pressure wash on any part of this aircraft is prohibited.
  - Do not rinse aircraft with a solid stream of water. Use a soft spray pattern to avoid damage and water intrusion.
  - Water must not be directed at pitot tubes, static ports, gearboxes, fillers, and vents, etc. Critical areas shall be adequately protected (ground plugs, covers, etc.).
  - Use low water flow pressure to avoid forcing water past static and dynamic seals. Avoid water intrusion into light fixtures, electrical components, antennas, etc.
  - Washing of main rotor or tail rotor head requires a reapplication of corrosion preventive compound (item 63, App F) to designated areas.
  - Use appropriate water flow and media which will not lead to scratching of the transparent sections of the canopy.
- a. **Use a soft flow or spray pattern to dissolve, dislodge, and flush away visible salt encrustation as well as rinse the external surfaces.** A recommended flow of eight gallons per minute at approximately 25 PSI supply pressure is recommended.
- b. **Direct water at an angle of 15 to 30 degrees from the surface.** Ensure that sufficient water flow is achieved on all surfaces.
- c. **Rinsing sequence.**

**NOTE**

Preposition blades at approximately 45 degrees relationship to fuselage longitudinal center line to minimize water drainage into the main transmission deck area.

- (1) Main rotor blades.
- (2) Main rotor head (to include strap pack accessible areas).
- (3) Main rotor fairing.
- (4) Left side of center fuselage, left nacelle, and wing.
- (5) Canopy and forward fuselage (top and sides).
- (6) Right side of center fuselage, right nacelle, and wing.
- (7) Forward and center fuselage belly.

GO TO NEXT PAGE

---

**1.53. AIRCRAFT AND AIRCRAFT COMPONENT WASHING, CLEANING, AND FRESH WATER RINSE PROCEDURES – continued**

---

- (8) Tail rotor blades, hub, and swashplate.
- (9) Vertical stabilizer (from top down).
- (10) Horizontal stabilator.
- (11) Top and sides of tailboom.
- (12) Tailboom belly.



**d. Finishing/Cleanup Steps.**

- (1) Reapply corrosion preventive compound (item 64, App F), to electrical/electronic connectors, switches, and transducers after exposure to water wash.
- (2) Wipe any standing water from the transmission deck.
- (3) Wipe up any standing water inside the tail boom.
- (4) Apply corrosion preventive compound (item 64, App F) to horizontal stabilator mount (para 2.113).
- (5) Apply corrosion preventive compound (item 64, App F) to pylon rack pivot features (para 16.4).

1.53.4. Preferred Washing Procedures

**CAUTION**

Do not use abrasive mats (MIL-A-9962) for cleaning painted surfaces.

**NOTE**

- This procedure shall be used when fresh water is available for rinsing purposes.
  - Dilute cleaning compound (item 44, App F) 1 part cleaner to 9 parts water.
- a. **Rinse aircraft surfaces when necessary to reduce skin temperature.** Streaking will occur if cleaning solutions are allowed to run down hot painted surfaces.

GO TO NEXT PAGE

---

**1.53. AIRCRAFT AND AIRCRAFT COMPONENT WASHING, CLEANING, AND FRESH WATER RINSE PROCEDURES – continued**


---



- b. **Apply cleaning compound (item 44, App F) from a pail, spraying equipment, or foaming equipment.** Scrub surfaces when necessary with brush (fitted with a cleaning pad or sponge) or with a cleaning brush (item 34, App F).
- c. **Rinse away the loosened soil and cleaner solution with freshwater.**
- (1) For rinsing, a rubber-padded shut-off spray nozzle is recommended.
  - (2) Rinse the cleaner solution and loosened soil from aircraft surface with a fan spray nozzle, directed at an angle of 15 degrees to 30 degrees from the surface.
  - (3) Continue rinsing until all evidence of cleaner solution and soils have been removed from the aircraft.
- d. **Refer to TABLE I for recommended cleaning sequence.**

**1.53.5. Alternate Cleaning Procedures**


**NOTE**

- This procedure is for use only when water is not available for rinsing, or when cold weather prevents the use of water.
  - Dilute cleaning compound (item 44, App F) 1 part cleaner to 9 parts water.
- a. **Using a applicator bottle, apply cleaning compound (item 44, App F) to exterior surfaces of the aircraft.** (No more than a few square feet at a time.)
  - b. **After 30 seconds, scrub, then wipe cleaner solution and loosened soil from the surface with a clean cloth.**
  - c. **Rinsing with a cloth wet with fresh water following the use of cleaning compound (item 44, App F) is desirable.**
  - d. **Rinse cleaned surfaces with fresh water when available.**

GO TO NEXT PAGE

---

**1.53. AIRCRAFT AND AIRCRAFT COMPONENT WASHING, CLEANING, AND FRESH WATER RINSE PROCEDURES – continued**

---

1.53.6. Wipe Down With Water Displacing Film



**CAUTION**

Do not spray corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 64, App F) on any transparent or optical surfaces or directly at any bearings or seals. Wiping the seals exposed surfaces with a clean cloth moistened with corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 64, App F) (as applicable) is an acceptable cleaning alternative.

- a. **Apply a thin film of corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 64, App F) (as applicable) to a conveniently sized area.** (No more than a few square feet at a time.)
- b. **Wipe area with a cloth to clean and remove the corrosion preventive compound (item 63, App F), or corrosion preventive compound (item 64, App F) (as applicable) along with loosened soil and/or oil residue.**
- c. **When additional cleaning is required, a second coat of corrosion preventive compound (item 63, App F) or corrosion preventive compound (item 64, App F) (as applicable) may be applied and wiped off with a clean cloth.**

1.53.7. Specific Item, Area, and Component Cleaning

**NOTE**

- TABLE I designates the recommended sequence in descending order of cleaning for designated major item areas when the entire aircraft is involved.
- TABLE I also provides references for TABLE II cleaning instructions.

GO TO NEXT PAGE

**1.53. AIRCRAFT AND AIRCRAFT COMPONENT WASHING, CLEANING, AND FRESH WATER RINSE PROCEDURES – continued**

Table I. Recommended Cleaning Sequence

Seq	Component	General Cleaning Instruction and Paragraph	Specific Cleaning Instruction Table II Item No.
1.	Engine		TM 55-2840-248-23
2.	APU		TM 55-2835-208-23
3.	Main rotor blades	Wipe down with water displacing compound (WDC)	23
4.	Main rotor hub assy	Wipe down with WDC	23
5.	Main rotor swashplate assy.	Wipe down with WDC	23
6.	Main transmission deck area	Wipe down with WDC	23
7.	Fuselage exterior, to include: center fuselage, nacelles, wings, etc.	Wash with cleaning compound	2, 3
8.	Canopy	See Table II	16
9.	Forward fuselage	Wash with cleaning compound	2, 3
10.	Aft fuselage	Wash with cleaning compound	2, 3
11.	Tail rotor blades	Wipe down with WDC	23
12.	Tail rotor hub and swashplate	Wipe down with WDC	23
13.	Vertical stabilizer	Wash with cleaning compound	2, 3
14.	Horizontal stabilator	Wash with cleaning compound	2, 3
15.	Tailboom exterior	Wash with cleaning compound	2, 3
16.	Tailboom interior	See Table II	23 or 25
17.	FABS interior	See Table II	9
18.	Interior spaces	See Table II	8 or 10
19.	Gun turret	Wipe down with WDC	23

GO TO NEXT PAGE



**1.53. AIRCRAFT AND AIRCRAFT COMPONENT WASHING, CLEANING, AND FRESH WATER RINSE PROCEDURES – continued**


Table I. Recommended Cleaning Sequence – continued

Seq	Component	General Cleaning Instruction and Paragraph	Specific Cleaning Instruction Table II Item No.
20.	Other A/C components/areas	See Table II	
21.	30mm gun		TM 9-1090-208-23-1

GO TO NEXT PAGE

**1.53. AIRCRAFT AND AIRCRAFT COMPONENT WASHING, CLEANING, AND FRESH WATER RINSE PROCEDURES – continued**

Table II. Cleaning of Specific Areas and Components

Item No.	Area or Component	Type of Soil	Cleaning Agent or Compound & Nomenclature	Mixing Directions	Cleaning Procedures
 <div style="border: 2px solid black; padding: 5px; display: inline-block;"><b>WARNING</b></div> <p><b>If cleaning compound is splashed in eyes, rinse thoroughly with fresh water for 15 minutes and report to medical facility. Remove clothing saturated with cleaning compound immediately and flush exposed skin areas with fresh water.</b></p> <div style="border: 2px solid black; padding: 5px; display: inline-block;"><b>CAUTION</b></div> <p>Open all circuit breakers associated with battery power (TM 1-1520-238-T) prior to application of dry cleaning solvent (item 74, App F).</p>					
1.	Painted exterior surfaces (to include fwd, ctr, and aft fuselage, wings, nacelles, stabilizer, stabilator, tailboom, FABs, kevlar fairings).	Light soils (dirt, dust, mud, salt, loose soot)	Cleaning compound (item 44, App F)	1 part cleaner in 9 parts water	Apply cleaning compound (item 44, App F) with foam generator, spray, sponge, soft brush, or cloth. Scrub (if necessary) and then rinse with fresh water and dry.
2.	(same as 1)	Moderate oils, (hydraulic fluids, lube oils, light preservatives)	Cleaning compound (item 44, App F)	1 part cleaner in 4 parts water	Apply cleaning compound (item 44, App F) with foam generator spray, sponge, soft brush, or cloth. Rub gently with a circular motion for up to 1 minute. Rinse with fresh water and dry.

GO TO NEXT PAGE

**1.53. AIRCRAFT AND AIRCRAFT COMPONENT WASHING, CLEANING, AND FRESH WATER RINSE PROCEDURES – continued**

Table II. Cleaning of Specific Areas and Components – continued

Item No.	Area or Component	Type of Soil	Cleaning Agent or Compound & Nomenclature	Mixing Directions	Cleaning Procedures
3.	(same as 1)	Heavy soils (carbonized oil, aged preservatives, grease, gun blast, and exhaust deposits)	Dry cleaning solvent (item 74, App F)  Cloth (item 51, App F)  Cleaning compound (item 44, App F)	1 part cleaner in 1 part water	Pre-clean by wiping or brushing soiled area with dry cleaning solvent (item 74, App F). Then apply cleaning compound (item 44, App F) with foam generator, spray, sponge, or cloth. Allow the cleaner to dwell for up to one minute without scrubbing, then scrub for up to one minute. Rinse thoroughly, then dry. Do not allow cleaning solutions to dry on surfaces, or streaking will occur.
4.	Unpainted exterior surfaces	Gun blast residues, carbonized exhaust	Cleaning compound (item 44, App F)  Mat (item 121, App F)	1 part cleaner in 4 parts water	Wet surface with fresh water. Apply cleaning compound (item 44, App F) and scrub briskly with mat (item 121, App F). Rinse with fresh water.
5.	Unpainted exterior surfaces	Gun blast residues, carbonized exhaust	Corrosion preventive compound (item 63, App F)		For stubborn deposits spray area with corrosion preventive compound (item 63, App F), then follow with brushing.
6.	Cockpit floor	Human or animal urine, feces	Cleaning compound (item 44, App F)	1 part cleaner in 9 parts water	Wash thoroughly with cleaning compound (item 44, App F) using a soft bristle brush, then rinse with fresh water.

GO TO NEXT PAGE

**1.53. AIRCRAFT AND AIRCRAFT COMPONENT WASHING, CLEANING, AND FRESH WATER RINSE PROCEDURES – continued**

Table II. Cleaning of Specific Areas and Components – continued

Item No.	Area or Component	Type of Soil	Cleaning Agent or Compound & Nomenclature	Mixing Directions	Cleaning Procedures
7.	Cockpit and compartments	Dirt, debris	Cleaning compound (item 44, App F)	1 part cleaner in 9 parts water	Remove loose dirt with vacuum cleaner. Wipe with cleaning compound (item 44, App F); rinse with fresh water on cloth.
<div style="border: 2px solid black; padding: 5px; display: inline-block;"><b>CAUTION</b></div>					
<ul style="list-style-type: none"> <li>● Open all circuit breakers associated with battery power (TM 1-1520-238-T) prior to application of dry cleaning solvent (item 74, App F).</li> <li>● Avoid use of compressed air to clean electronic equipment. Do not use abrasives on high pressure seals, breathers/vents.</li> </ul>					
8.	Forward avionics bay (FAB)	Oil	Dry cleaning solvent (item 74, App F)  Cloth (item 51, App F)	1 part cleaner in 9 parts water	Remove loose dirt with vacuum cleaner. Wipe fiberglass with cloth saturated with dry cleaning solvent (item 74, App F). Wipe excess solvent with cloth (item 51, App F).
		Dust, dirt and debris	Cleaning compound (item 44, App F)  Corrosion preventive compound (item 64, App F)		Remove loose dirt with vacuum cleaner. Wipe with cleaning compound (item 44, App F); rinse with cloth wet with fresh water.  Wipe with cloth wet with corrosion preventive compound (item 64, App F).

GO TO NEXT PAGE

**1.53. AIRCRAFT AND AIRCRAFT COMPONENT WASHING, CLEANING, AND FRESH WATER RINSE PROCEDURES – continued**

Table II. Cleaning of Specific Areas and Components – continued

Item No.	Area or Component	Type of Soil	Cleaning Agent or Compound & Nomenclature	Mixing Directions	Cleaning Procedures
9.	Cockpit interior	Dust, dirt mud, and light debris	Cleaning compound (item 44, App F)  Detergent (item 71, App F)	1 part cleaner in 9 parts water  1 oz. in 1 gallon water	Use brush to loosen mud or debris on control pedals, floor, or other components and vacuum area. Wipe with cloth saturated in cleaning compound (item 44, App F) or detergent (item 71, App F) and follow with cloth wet with fresh water. Dry with clean cloth.
10.	Environmental control ducting	Light debris, dust, and grime	Cleaning compound (item 44, App F)  Detergent (item 71, App F)	1 part cleaner in 9 parts water  1 oz. in 1 gallon water	Wipe with cloth saturated in cleaning compound (item 44, App F) or detergent (item 71, App F) and follow with cloth wet with fresh water. Dry with clean cloth.
11.	Tailboom interior, engine, APU and SDC compartments, hydraulic manifolds and gear box exteriors	Dust, dirt, oil, and debris	Cleaning compound (item 44, App F)  Corrosion preventive compound (item 63, App F) (structural)	1 part cleaner in 4 parts water	Vacuum and then wipe with cloth wet with cleaning compound (item 44, App F). Wipe with cloth wet with fresh water. Dry with clean cloth and spray with corrosion preventive compound (item 63, App F) when area can be ventilated.
12.	Acrylic plastic parts, instrument faces (excluding canopies)	Light soil and smudges	Detergent (item 71, App F)  Cloth (item 54, App F)	1 oz. in 1 gallon water	Wipe with cloth saturated in detergent (item 71, App F) and follow with fresh water rinse. Dry with clean cloth (item 54, App F).

GO TO NEXT PAGE

**1.53. AIRCRAFT AND AIRCRAFT COMPONENT WASHING, CLEANING, AND FRESH WATER RINSE PROCEDURES – continued**

Table II. Cleaning of Specific Areas and Components – continued

Item No.	Area or Component	Type of Soil	Cleaning Agent or Compound & Nomenclature	Mixing Directions	Cleaning Procedures
13.	Elastomeric seals (boots and MLG strut to FAB seal)	Dust, dirt, oil, and grime	Detergent (item 71, App F)  Cloth (item 51, App F)	1 oz. in 1 gallon water	Wipe with cloth saturated with detergent (item 71, App F) and follow with fresh water rinse. Dry with clean cloth (item 51, App F).
14.	Fabric parts, sound proofing, and upholstery	Light soil and oil spots	Detergent (item 71, App F)  Cleaning compound (item 44, App F)	1 part in 16 parts water  1 part cleaner in 4 parts water	Remove loose dirt with vacuum cleaner. Apply detergent (item 71, App F) or cleaning compound (item 44, App F) with sponge and scrub briskly. Rinse with fresh water cloth. Allow area to dry. Raise nap by brushing.

GO TO NEXT PAGE

**1.53. AIRCRAFT AND AIRCRAFT COMPONENT WASHING, CLEANING, AND FRESH WATER RINSE PROCEDURES – continued**

Table II. Cleaning of Specific Areas and Components – continued

Item No.	Area or Component	Type of Soil	Cleaning Agent or Compound & Nomenclature	Mixing Directions	Cleaning Procedures
<div style="border: 2px solid black; padding: 5px; display: inline-block;"><b>WARNING</b></div> <p><b>Do not use synthetic wiping cloths with flammable solvents having a flash point of 100 °F (38 °C) or less.</b></p> <div style="border: 2px solid black; padding: 5px; display: inline-block;"><b>CAUTION</b></div> <p>Remove rings, watches, or other hard objects from hands or wrists before washing transparent plastics. Personnel must also take precautions to prevent buttons, badges, or other hard objects from scratching surfaces. Do not use hard, dirty, or gritty cloth in cleaning and polishing transparent plastics. Wiping with such cloths can mar and scratch plastic surfaces. Do not use any chemical compounds unless specifically authorized for cleaning plastics. Do not rub dry plastic panels with dry cloth, which might scratch surface or create electrostatic charge that attracts dust. Do not use paper towels or similar products which are coarse and might scratch surface on light contact.</p>					
15.	Canopy exterior (plastic and glass panels)	Dust, dirt, grime, salt spray, paint over spray, oil, grease	Cloth (item 54, App F)  Dishwashing compound (item 72, App F)  Isopropyl alcohol (item 106, App F)  Rain repellent (item 148, App F)  Cloth (item 56, App F)		Prepare a solution of 80% de-ionized or distilled water and 20% isopropyl alcohol. Mix 1/4 oz. of dishwashing compound (item 72, App F) per gallon of water/alcohol solution. If isopropyl alcohol is not available, use detergent and water only. Flush with fresh water to remove loose dirt. Spray cleaning solution on and rub gently with bare hand or clean cloth while applying fresh water.

GO TO NEXT PAGE

**1.53. AIRCRAFT AND AIRCRAFT COMPONENT WASHING, CLEANING, AND FRESH WATER RINSE PROCEDURES – continued**

Table II. Cleaning of Specific Areas and Components – continued

Item No.	Area or Component	Type of Soil	Cleaning Agent or Compound & Nomenclature	Mixing Directions	Cleaning Procedures
15. (cont)					Flush with fresh water and dry with clean cloth dampened in de-ionized or distilled water. Wipe in one direction applying light pressure. Wring out excessive water and continue. Polish dry with a fresh clean cloth. Apply rain repellent (item 148, App F) to cloth (item 56, App F). Apply repellent using small firm circular motion over entire area. Allow repellent to dry for 1 minute. Use a clean cloth (item 56, App F) to wipe the treated surface until excess repellent is removed.
16.	Interior plastic or glass panels	Dust, dirt, grime.	Sponge (item 190, App F)  Isopropyl alcohol (item 106, App F)  Cloth (item 54, App F)  Dishwashing compound (item 72, App F)		Same procedure as item 15. Except stream of water is not practical. Use clean cloth or sponge for cleaning and wipe with clean cloth rinsed frequently in de-ionized or distilled water.

GO TO NEXT PAGE



**1.53. AIRCRAFT AND AIRCRAFT COMPONENT WASHING, CLEANING, AND FRESH WATER RINSE PROCEDURES – continued**

Table II. Cleaning of Specific Areas and Components – continued

Item No.	Area or Component	Type of Soil	Cleaning Agent or Compound & Nomenclature	Mixing Directions	Cleaning Procedures
17.	Control cables, hose, metallic braid	Dust, dirt, oil, grease	Corrosion preventive compound (item 64, App F) (avionics)  Corrosion preventive compound (item 62, App F)		Wipe with clean cloth dampened in corrosion preventive compound (item 64, App F). Recoat cables (not hoses) with corrosion preventive compound (item 62, App F).
<b>CAUTION</b>					
<ul style="list-style-type: none"> <li>• Open all circuit breakers associated with battery power (TM 1-1520-238-T) before applying of dry cleaning solvent (item 74, App F).</li> <li>• Do not use corrosion preventive compound (item 62, App F) or corrosion preventive compound (item 61, App F) on micro-switches or exposed piston rod surfaces.</li> </ul>					
18.	Door hinges, linkages, lock cylinder housings	Dust, dirt, oil, grease	Dry cleaning solvent (item 74, App F)  Corrosion preventive compound (item 63, App F)  Corrosion preventive compound (item 62, App F)  Corrosion preventive compound (item 61, App F)		Brush surfaces as necessary with dry cleaning solvent (item 74, App F).  Apply corrosion preventive compound (item 63, App F) to surfaces as necessary. Cover rod ends and springs with corrosion preventive compound (item 62, App F).  Where lubrication is not required apply corrosion preventive compound (item 62, App F).

GO TO NEXT PAGE

**1.53. AIRCRAFT AND AIRCRAFT COMPONENT WASHING, CLEANING, AND FRESH WATER RINSE PROCEDURES – continued**

Table II. Cleaning of Specific Areas and Components – continued

Item No.	Area or Component	Type of Soil	Cleaning Agent or Compound & Nomenclature	Mixing Directions	Cleaning Procedures
<b>CAUTION</b>					
<ul style="list-style-type: none"> <li>● Open all circuit breakers associated with battery power (TM 1-1520-238-T) before applying of dry cleaning solvent (item 74, App F).</li> <li>● Protect tires from contact with dry cleaning solvent (item 74, App F) and cleaning compound (item 44, App F).</li> </ul>					
19.	Landing gear	Dirt, grime, grease, hydraulic fluid, etc.	Dry cleaning solvent (item 74, App F)  Cleaning compound (item 44, App F)  Corrosion preventive compound (item 61, App F)	1 part cleaner in 4 parts water	Brush surfaces as necessary with dry cleaning solvent (item 74, App F). Alternate procedure: brush on dry cleaning solvent (item 74, App F) to loosen stubborn soil. Apply cleaning compound (item 44, App F), then brush and rinse. Note: corrosion preventive compound (item 61, App F) may be applied to provide a clear protective film.
<b>CAUTION</b>					
Wipe away from seal areas to prevent collection of soil at seal junction areas. Ensure piston surface is clean and completely lubricated but not dripping. If piston is dry, telescoping action of strut will force gritty particles into cylinder, causing leaks and eventual failure. Do not use aerosol dispensed fluid on hydraulic systems.					
<b>NOTE</b>					
Crash attenuation features of the landing gear shock struts (lower exposed piston areas) should be wiped clean with corrosion preventive compound (item 63, App F) then lightly coated with corrosion preventive compound (item 62, App F).					

GO TO NEXT PAGE

**1.53. AIRCRAFT AND AIRCRAFT COMPONENT WASHING, CLEANING, AND FRESH WATER RINSE PROCEDURES – continued**

Table II. Cleaning of Specific Areas and Components – continued

Item No.	Area or Component	Type of Soil	Cleaning Agent or Compound & Nomenclature	Mixing Directions	Cleaning Procedures
20.	Landing gear exposed piston surfaces	Sand, dirt, salt deposits, and other foreign particles	Hydraulic fluid (item 92, App F)		Clean exposed surfaces with clean cloth dampened with hydraulic fluid (item 92, App F). Take care not to scratch the surface. Wipe away from seals.
21.	Wheels and brakes	Oil, dirt, sand, and other foreign matter	Preferred:  Cleaning compound (item 44, App F)  Alternate:  Corrosion preventive compound (item 63, App F)	1 part cleaner in 4 parts water	Clean exposed areas with cleaning compound (item 44, App F) by brushing. Rinse thoroughly with fresh water. Relubricate as required (TM 1-1520-238-PM).  Apply a thin film of corrosion preventive compound (item 63, App F) to a localized area. Wipe with a clean cloth to remove the corrosion preventive compound (item 63, App F) along with the loosened soil and or residue.

GO TO NEXT PAGE

**1.53. AIRCRAFT AND AIRCRAFT COMPONENT WASHING, CLEANING, AND FRESH WATER RINSE PROCEDURES – continued**

Table II. Cleaning of Specific Areas and Components – continued

Item No.	Area or Component	Type of Soil	Cleaning Agent or Compound & Nomenclature	Mixing Directions	Cleaning Procedures
<div style="border: 2px solid black; padding: 5px; display: inline-block; margin-bottom: 10px;"><b>WARNING</b></div> <ul style="list-style-type: none"> <li>● <b>Open all circuit breakers associated with battery power (TM 1-1520-238-T) prior to application of isopropyl alcohol (item 106, App F).</b></li> <li>● <b>Do not use synthetic wiping cloth with flammable solvents such as isopropyl alcohol.</b></li> </ul>					
22.	Organic materials (plastics, paints)	Fungi (mold)	Isopropyl alcohol (item 106, App F)  Cloth (item 51, App F)		Wipe with cloth (item 51, App F) wet with isopropyl alcohol (item 106, App F). To prevent recurring fungus growth, keep area dry and clean. Procedure does not apply to treatment of fuel system internal fungus attack.
23.	Helicopter blades, main and tail rotor heads, main and tail swashplates, turret	Grime, oil, grease, dust, water saturation  Salt, salt water	Corrosion preventive compound (item 63, App F)  Corrosion preventive compound (item 63, App F)  Cloth (item 54, App F)		Apply a thin film of corrosion preventive compound (item 63, App F) to a localized area. Wipe with a cloth (item 54, App F) to remove the compound along with loosened soil and/or residue.  Flush thoroughly with fresh water. Blow dry with clean compressed air. Spray with corrosion preventive compound (item 63, App F). Remove excess with cloth (item 54, App F) to avoid dust attraction.

GO TO NEXT PAGE

**1.53. AIRCRAFT AND AIRCRAFT COMPONENT WASHING, CLEANING, AND FRESH WATER RINSE PROCEDURES – continued**

Table II. Cleaning of Specific Areas and Components – continued

Item No.	Area or Component	Type of Soil	Cleaning Agent or Compound & Nomenclature	Mixing Directions	Cleaning Procedures
<div style="border: 2px solid black; padding: 5px; display: inline-block;"><b>WARNING</b></div> <p><b>Never use a wire brush to clean a battery. Wear rubber gloves, an impermeable apron, and protective goggles when handling batteries.</b></p> <div style="border: 2px solid black; padding: 5px; display: inline-block;"><b>CAUTION</b></div> <ul style="list-style-type: none"> <li>● Nickel-cadmium batteries must not be exposed to acid or acid vapors. Battery electrolytes are extremely corrosive. Spilled electrolytes will be removed immediately.</li> <li>● Fumes from overheated electrolytes will spread to adjacent areas, causing rapid corrosion on unprotected surfaces.</li> </ul>					
24.	Battery compartment	Nickel-cadmium battery electrolyte deposits (potassium hydroxide solution)	Sodium phosphate (item 188, App F)  Corrosion preventive compound (item 64, App F)	6 oz. in 1 gallon water	Remove spilled electrolyte immediately by flushing with fresh water. Neutralize the area by sponging generously with sodium phosphate (item 188, App F). Brush with a fiber brush, then flush with fresh water. Dry with clean wiping cloths. Keep the cell vents open. Preserve compartment. Use corrosion preventive compound (item 64, App F). Do not paint or preserve batteries.

GO TO NEXT PAGE

**1.53. AIRCRAFT AND AIRCRAFT COMPONENT WASHING, CLEANING, AND FRESH WATER RINSE PROCEDURES – continued**

Table II. Cleaning of Specific Areas and Components – continued

Item No.	Area or Component	Type of Soil	Cleaning Agent or Compound & Nomenclature	Mixing Directions	Cleaning Procedures
25.	Fuselage bilge areas	Hydraulic fluid, water, dirt, metallic debris	Cleaning compound (item 44, App F)  Sponge (item 190, App F)  Dry cleaning solvent (item 74, App F)	1 part cleaner in 9 parts water	Vacuum clean liquids, debris, and dry. Wipe area with a sponge (item 190, App F) dampened with cleaning compound (item 44, App F). Rinse by sponging with freshwater. Wipe dry with a clean cloth. Wipe with cloth dampened with dry cleaning solvent (item 74, App F). Wipe dry with a clean cloth.
26.	Optical glass	Dust, grease, oil	Cloth (item 52, App F)	(TADS)  (PNVS)	TM 1-1270-476-20  TM 1-5855-265-20

GO TO NEXT PAGE

**1.53. AIRCRAFT AND AIRCRAFT COMPONENT WASHING, CLEANING, AND FRESH WATER RINSE PROCEDURES – continued**

Table II. Cleaning of Specific Areas and Components – continued

Item No.	Area or Component	Type of Soil	Cleaning Agent or Compound & Nomenclature	Mixing Directions	Cleaning Procedures
<div style="border: 2px solid black; padding: 5px; display: inline-block;"><b>WARNING</b></div>					
<p><b>Before cleaning electrical and avionic equipment, ensure electrical power is disconnected. Injury or death may occur. Material and procedures below are general. TM 55-1500-343-23 procedures shall be used as specified there in.</b></p>					
27.	Electrical Connectors, Avionics Components, Electrical, and Avionics Equipment	Dust, dirt, other loose foreign matter, grease, oil smudges, light tarnish, light corrosion, water intrusion	Corrosion preventive compound (item 64, App F)		Apply a thin film of corrosion preventive compound (item 64, App F) to component. Wipe with a clean cloth to remove corrosion preventive compound (item 64, App F) along with soil and residue. For corrosion control and water displacement, let compound stand for at least 5 minutes before wiping off.
28.	Flight control rod end threads, jam nuts, lock washers, sliding bushings, bolts	Fungus Signs of light corrosion, water intrusion	Cloth (item 51, App F) Corrosion preventive compound (item 63, App F)	(TM 1-1500-343-23)	Apply a thin film of corrosion preventive compound (item 63, App F) using straw applicator. Wipe away excess to eliminate dust attraction.

GO TO NEXT PAGE

---

**1.53. AIRCRAFT AND AIRCRAFT COMPONENT WASHING, CLEANING, AND FRESH WATER RINSE PROCEDURES**

---

**1.53.8. Aircraft Wash Frequency (specific conditions)****a. The following cleaning frequency shall be applied for aircraft.**

- (1) Cleaning will be accomplished after aircraft have been subjected to any of the following conditions:
- (a) Spilled electrolyte or corrosive deposits around battery terminals and general vicinity of the battery area.
  - (b) Exposed to corrosive fire extinguishing materials.
  - (c) Exposed to salt water spray.

**WARNING**

- **Keep corrosion preventive compound MIL-C-81309 away from all sources of ignition. Avoid eye and skin contact. Avoid inhalation. This material will displace oxygen in enclosed spaces.**
- **Avoid eye or skin contact with general purpose preservative VVL-L-800. Avoid inhalation and ingestion.**
- **Avoid eye or skin contact with hydraulic fluid, MIL-H-83282. Avoid inhalation or ingestion. Use with adequate ventilation. Wash hands after handling.**

**NOTE**

- In the absence of the specific conditions noted above, the aircraft wash frequency will be in accordance with the guidance provided in Section VIII of TM 1-1500-328-23 and TM 1-1500-344-23, as supplemented by local installation/unit standard operating procedures.
- Frequent wipe down is recommended for actuating rods of hydraulic cylinders using MIL-H-83282 hydraulic fluid.

END OF TASK



---

## 1.54. ANTI-ICING, DE-ICING, AND DEFROSTING

---

### 1.54.1. Description

This task covers: De-icing Helicopter.

---

### 1.54.2. Initial Setup

#### Personnel Required:

67R      Attack Helicopter Repairer

#### Equipment Conditions:

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed

#### References:

TM 1-1500-204-23  
 TM 1-5855-265-20  
 TM 1-1270-476-20

---

**CAUTION**

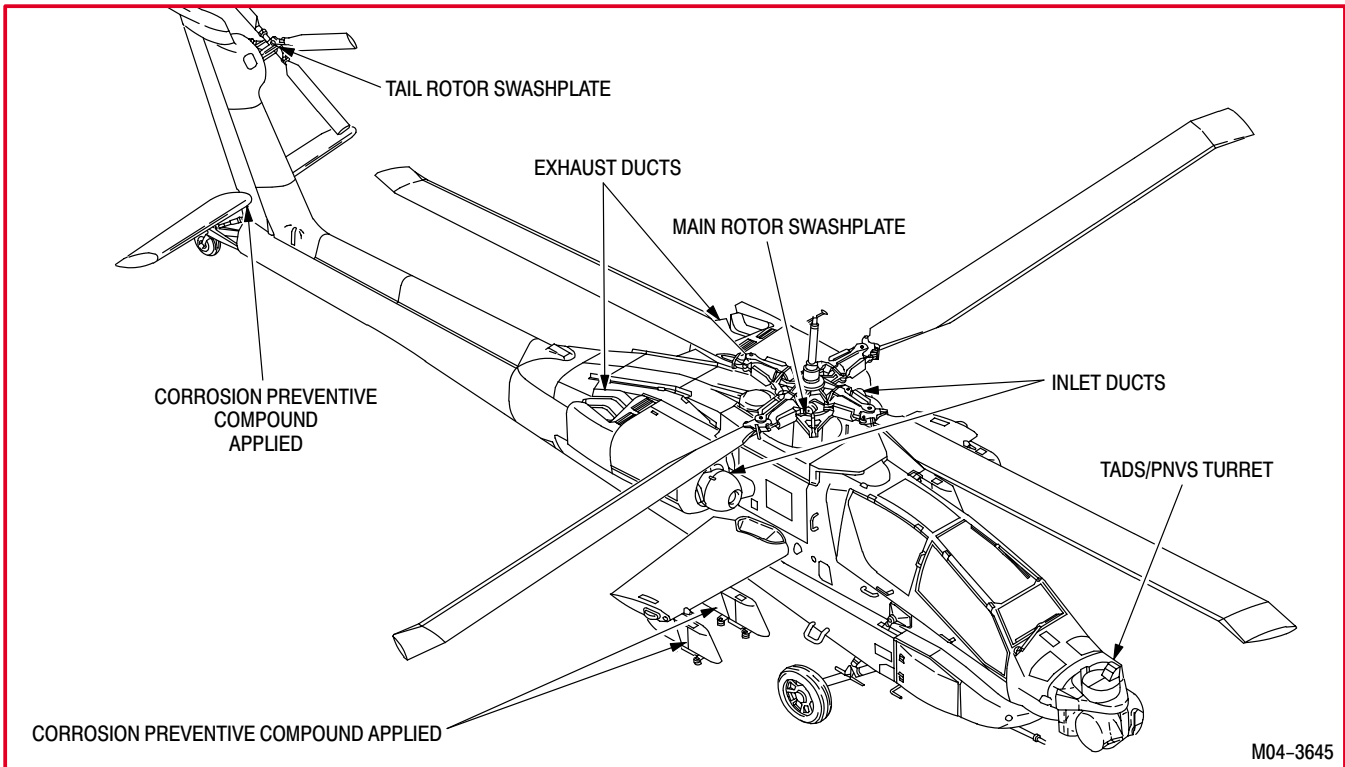
- To prevent damage to engines, inlet and exhaust ducts shall be covered during de-ice procedure.
- To prevent loss of corrosion protection, avoid spraying parts coated with corrosion preventive compound.
- To prevent loss of lubrication, avoid spraying main rotor and tail rotor swashplate bearing areas.
- To avoid damage to optical surfaces, avoid spraying TADS/PNVS turret (TM 1-1270-476-20, TM 1-5855-265-20).

### 1.54.3. De-ice Helicopter

- a. **Refer to TM 1-1500-204-23.**

GO TO NEXT PAGE

1.54. ANTI-ICING, DE-ICING, AND DEFROSTING – continued



END OF TASK

---

## 1.55. WARM-UP/DE-ICE OF ENGINE LOAD DEMAND SPINDLE (LDS) CABLES

---

### 1.55.1. Description

This task covers: Warm-up/De-ice of Engine Load Demand Spindle (LDS) Cables.

---

### 1.55.2. Initial Setup

#### Tools:

Aircraft mechanic's tool kit (item 376, App H)  
 Portable duct type heater (item 162, App H)  
 Aircraft power unit (item 232, App H)

#### References:

TM 1-1500-204-23

#### Personnel Required:

67R Attack Helicopter Repairer  
 One person to assist  
 67R3F Attack Helicopter Repairer/Technical  
 Inspector

#### Equipment Conditions:

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
2.2	Access panel L200 or R200 removed

---

### 1.55.3. Warm-Up/De-ice of Engine Load Demand Spindle (LDS) Cables

**CAUTION**

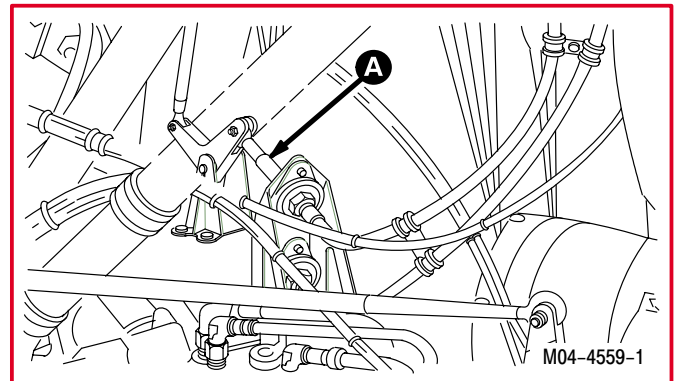
- Warm-up/De-ice of transmission deck area must be performed prior to APU/aircraft operations.
- Do not apply heat to LDS cables above 300 °F (148 °C).

#### NOTE

This task is applicable for aircraft preflight in cold weather, 32 °F (0 °C) or less with Cablecraft LDS cables. Cablecraft cables are identified by black tubing exterior.

a. **In freezing temperatures, 32 °F (0 °C) or less, perform the following operational preflight:**

- (1) Apply external heat to transmission deck area through access L200 or R200 using ducted heater (TM 1-1500-204-23) for a minimum of 20 minutes.



GO TO NEXT PAGE

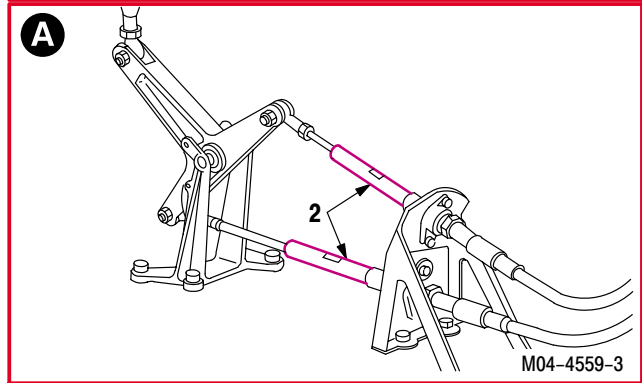
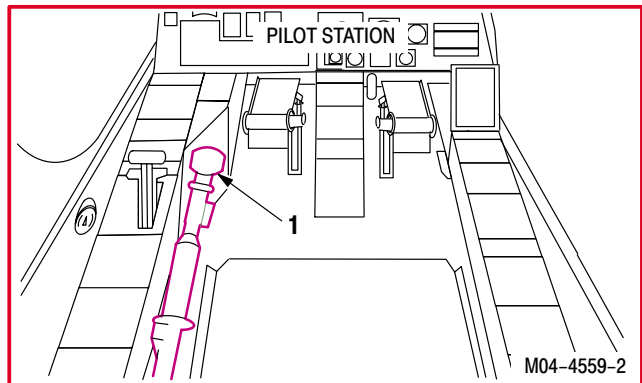
**1.55. WARM-UP/DE-ICE OF ENGINE LOAD DEMAND SPINDLE (LDS) CABLES – continued**

- b. **Apply external power - hydraulic (primary)** (para 1.72) **or operate APU** (para 1.74).
- c. **Enter pilot station** (para 1.56). **Observe all safety precautions.**

**CAUTION**

If attempted cable movement in step d shows evidence of bending, bowing, or other distortion of the LDS bellcrank and/or cable support, remove power and perform step f.

- d. **Slowly move pilot collective stick (1) approximately 2 inches and have observer verify movement of forward LDS cables (2).**
- e. **If LDS cables (2) move freely, no further action is required.**
- f. **If LDS cables (2) do not move, repeat steps a thru d with emphasis on de-icing LDS forward cables. LDS cables should feel warm to the touch. If cables do not move on second attempt, perform inspection and LDS rigging check** (para 4.184).
- g. **Remove heater.**
- h. **Remove external power – hydraulic (primary)** (para 1.72) **or shutdown APU** (para 1.74).
- i. **Inspect (QA).**
- j. **Install access panel L200 or R200** (para 2.2).



END OF TASK

## SECTION IV. LUBRICATION

---

### NOTE

All lubrication is done during servicing and maintenance.



END OF TASK

## SECTION V. HANDLING, JACKING, MOORING, HOISTING, AND SLING LOADING

---

### 1.56. PILOT/COPILOT GUNNER STATION ACCESSING

---

#### 1.56.1. Description

This task covers: Accessing.

---

#### 1.56.2. Initial Setup

##### Tools:

Aircraft mechanic's tool kit (item 376, App H)

##### Personnel Required:

67R Attack Helicopter Repairer

##### Equipment Conditions:

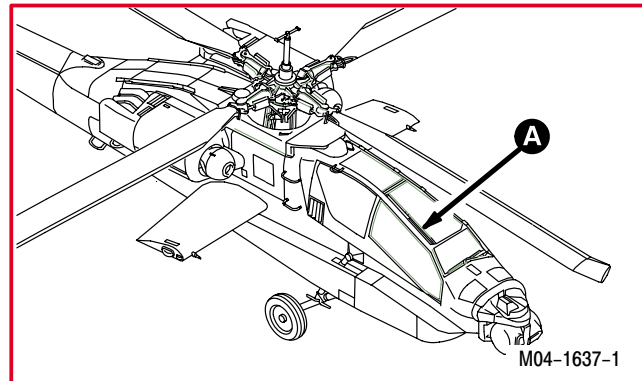
<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed

### **CAUTION**

To prevent damage to shear pin activated decoupler (SPAD) shear pin in BUCS activated aircraft, do not force directional pedals and cyclic or collective sticks against any resistance.

### **NOTE**

This task is typical for either pilot and/or copilot station accessing.

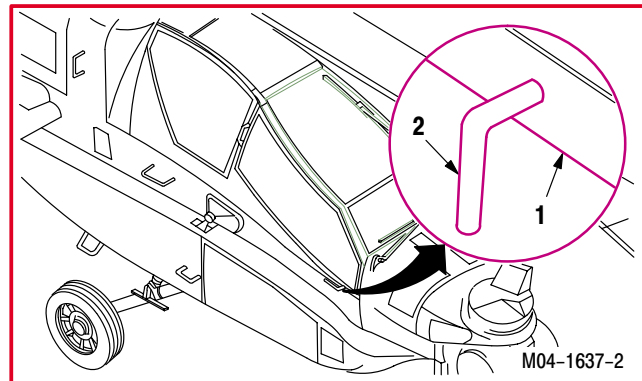


#### 1.56.3. Accessing

##### a. **Open door (1) from outside.**

(1) Turn door handle (2) counterclockwise to **OPEN**.

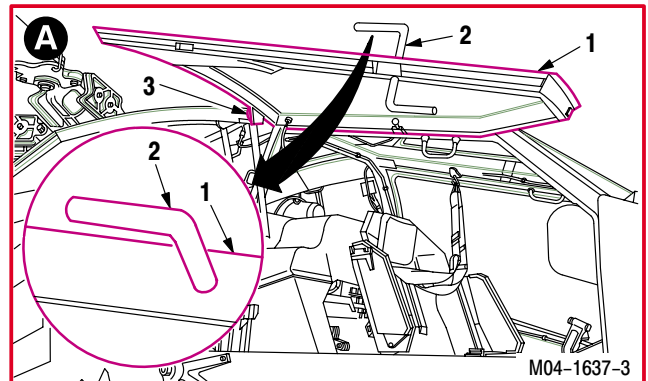
(2) Lift door (1) up as far as it will go.



GO TO NEXT PAGE

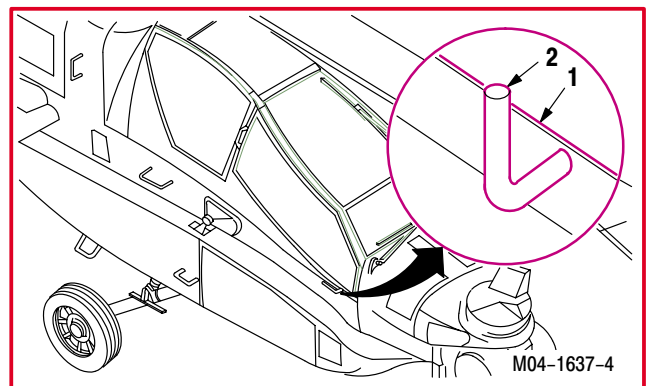
**1.56. PILOT/COPILOT GUNNER STATION ACCESSING – continued**

- (3) With door (1) fully open, turn handle (2) clockwise to **CLOSED** position to engage strut detent (3).



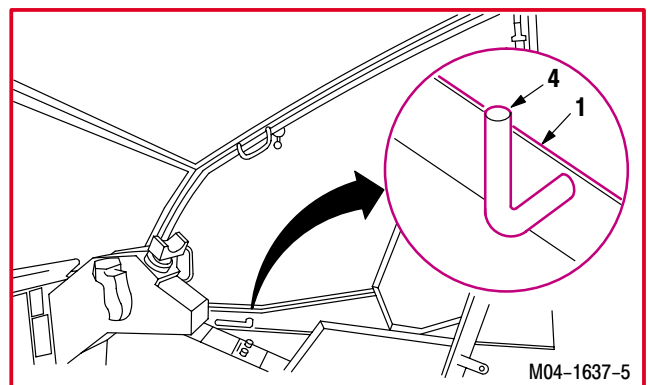
**b. Close door (1) from outside.**

- (1) Turn handle (2) counterclockwise to **OPEN** to release strut detent (3).
- (2) Close door (1) fully and turn handle (2) clockwise to **CLOSED** to lock.



**c. Open door (1) from inside.**

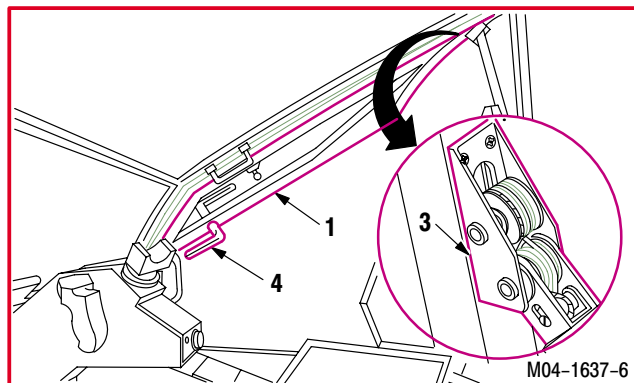
- (1) Turn door handle (4) clockwise to **OPEN**.
- (2) Push door (1) up as far as it will go.



GO TO NEXT PAGE

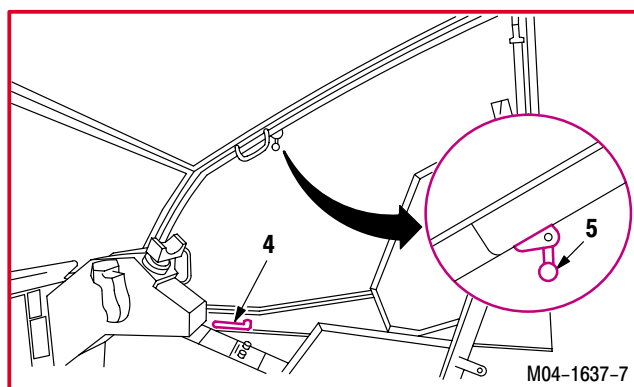
1.56. PILOT/COPILOT GUNNER STATION ACCESSING – continued

- (3) With door (1) fully open, turn handle (4) counterclockwise to **CLOSED** position to engage strut detents (3).



d. Close door (1) from inside.

- (1) Move strut release lever (5) to release detent (3).
- (2) Fully close door (1) and turn handle (4) counterclockwise to **CLOSED**.



END OF TASK



---

## 1.57. HELICOPTER SAFETY PROCEDURES

---

### 1.57.1. Description

This task covers: External Safe. Pilot Station Safe. CPG Station Safe.

---

### 1.57.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
Aircraft mooring tiedown kit (item 363, App H)

**Personnel Required:**

67R      Attack Helicopter Repairer

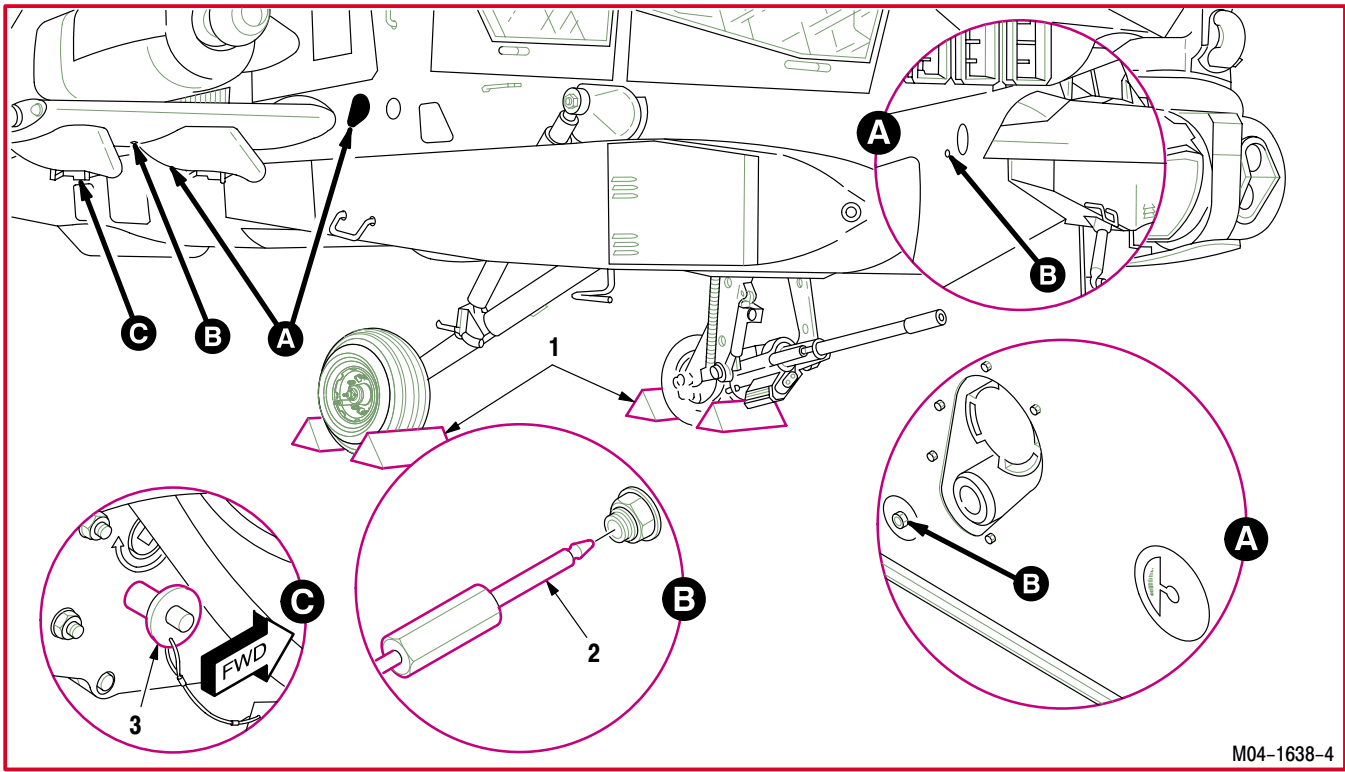
---

**CAUTION**

- To prevent damage to the shear pin activated decoupler (SPAD) shear pins in BUCS activated aircraft, do not force direction pedals and cyclic or collective sticks against any resistance.
- The safety procedures contained herein are to be accomplished consecutively and completely.

GO TO NEXT PAGE

1.57. HELICOPTER SAFETY PROCEDURES – continued



M04-1638-4

1.57.3. External Safe

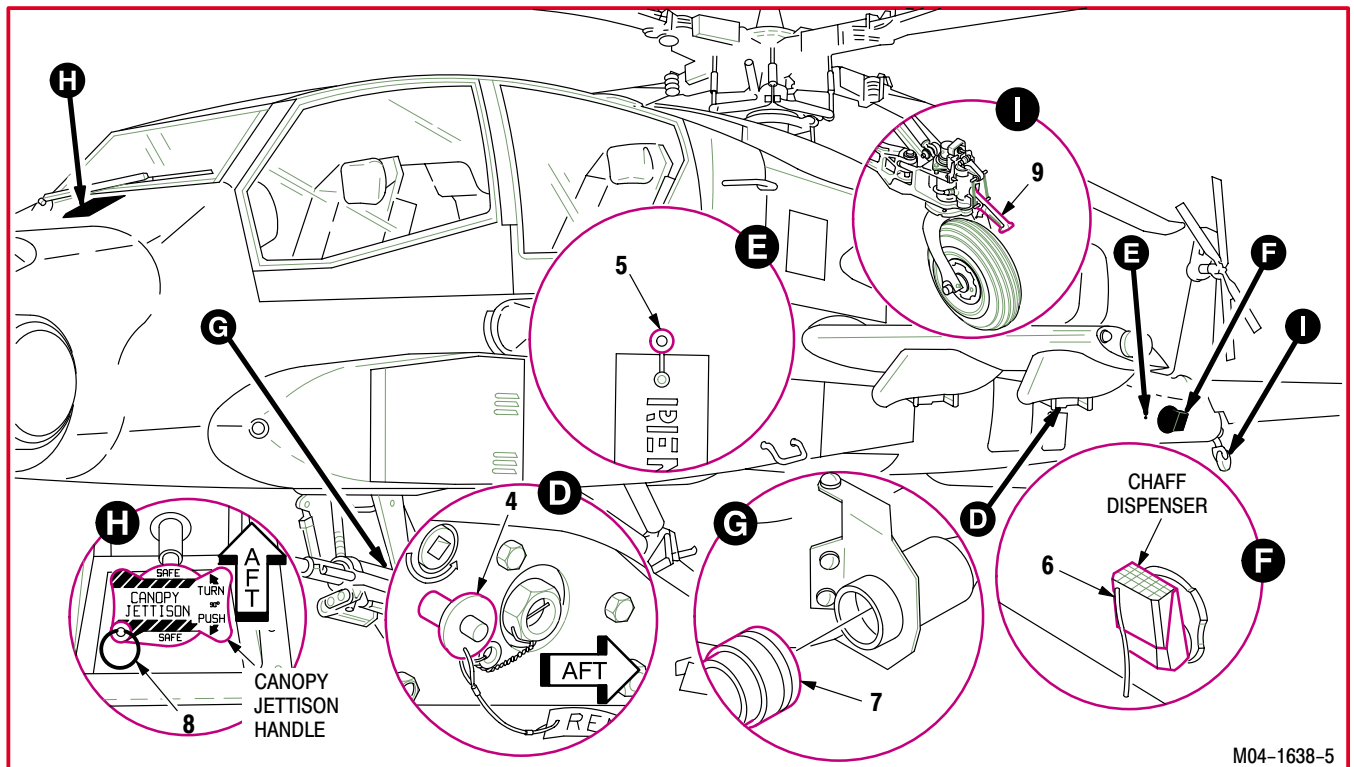
**NOTE**

Ensure TADS is stowed before starting safe check.

<u>Identification</u>	<u>Location</u>	<u>Procedure</u>
Wheel chocks (1)	Main landing gear	Chock
Battery	Aft avionics bay	Disconnect battery (para 9.40)
Helicopter grounded (2) (4 places)	Right side of fuselage (2 places) and under right and left wing	Insert cable plug in receptacle
Pylon stores	Right side	Verify no stores
Pylon safety pin (3) (outboard side-2 places)	Right outboard pylon	Insert pin in hole
	Right inboard pylon	Insert pin in hole
Safe/arm switches	Launchers (if installed)	SAFE position

GO TO NEXT PAGE

1.57. HELICOPTER SAFETY PROCEDURES – continued



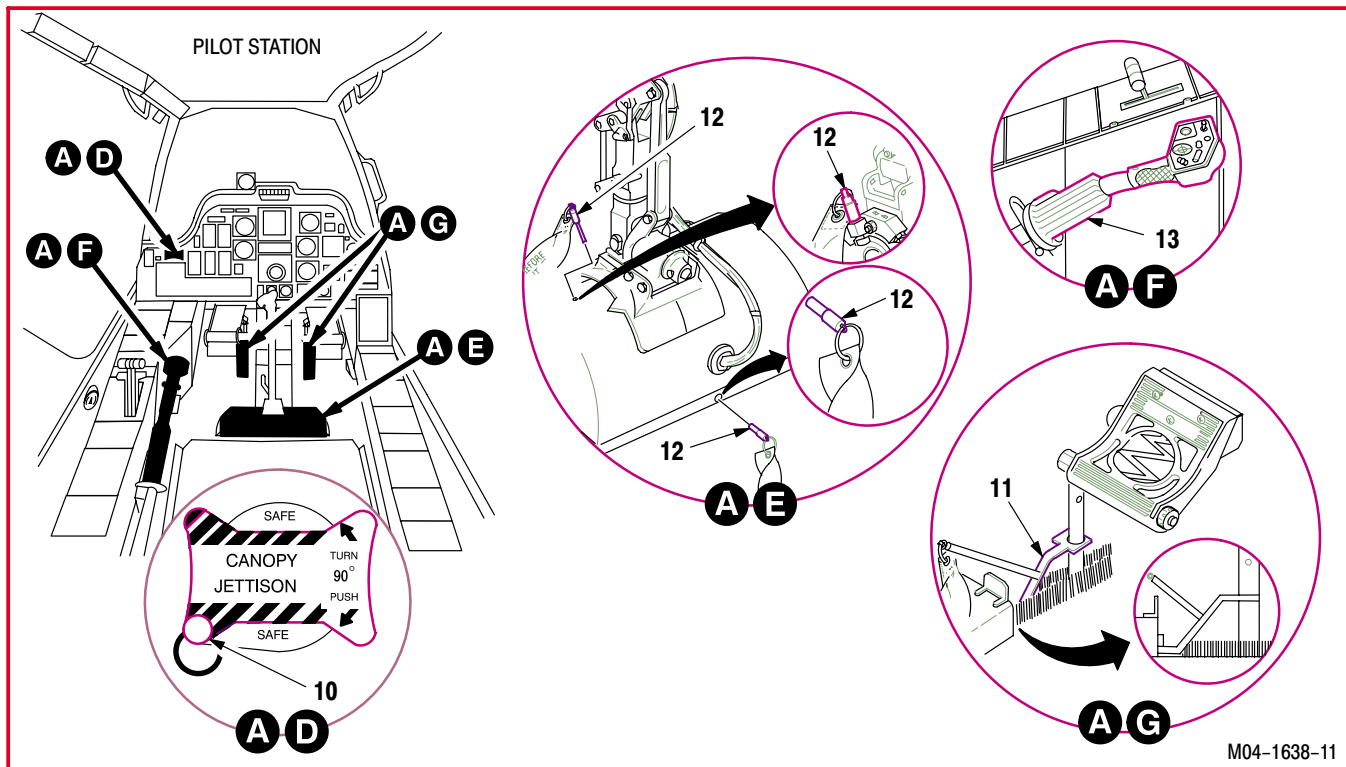
M04-1638-5

1.57.3 External Safe - continued

<u>Identification</u>	<u>Location</u>	<u>Procedure</u>
Pylon stores	Left side pylon	Verify no stores
Pylon safety pin (4) (outboard side-2 places)	Left outboard pylon Left inboard pylon	Insert pin in hole Insert pin in hole
Safe/arm switches	Launchers (if installed)	SAFE position
Chaff dispenser safety pin (5)	Forward of chaff dispenser (if installed)	Insert pin in hole
Chaff stores (6)	Chaff dispenser	Verify no stores
Area weapon electrical connector (7)	On turret	Disconnect; install cap
External canopy jettison handle safety pin (8)	Below center of CPG windshield	Open access door T50; insert pin in handle. Close door, leaving safety flag exposed.
Tail wheel lock (9)	Tail landing gear	Engage lock.

GO TO NEXT PAGE

1.57. HELICOPTER SAFETY PROCEDURES – continued



1.57.4. Pilot Station Safe

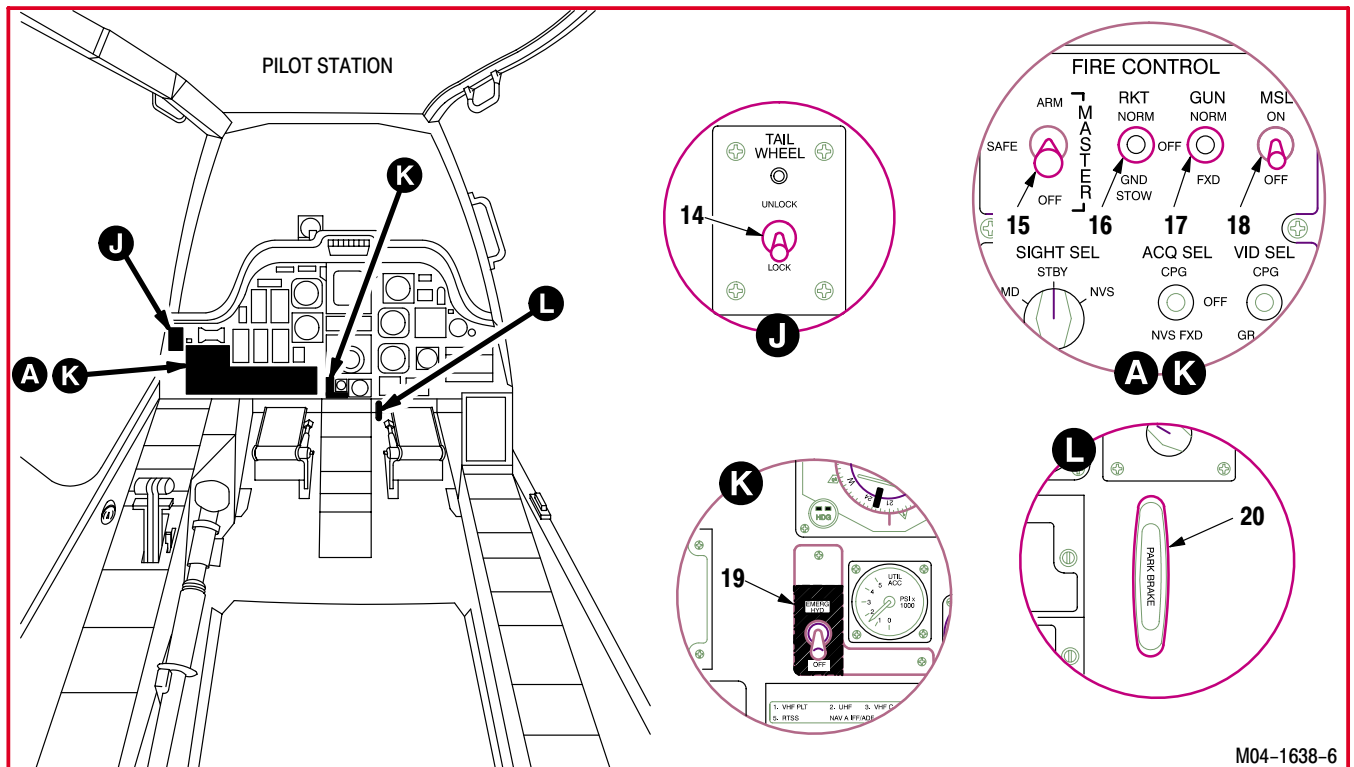
- a. Enter pilot station (para 1.56). Observe all safety precautions.
- b. Insert safety pin in pilot canopy jettison handle on instrument panel upper left side (10).

NOTE

- Steps c, d, and e are for BUCS activated helicopters only.
  - Apply hydraulic pressure to helicopter before installing or removing ground locks.
- c. Install tail rotor pedal ground locks (11). Unlock the pedal adjust; move the pedals all the way forward insert locks through brushes and cutouts in floor and rest on shelf. Move pedals aft until fork tightly engages tail rotor pedal support assembly immediately below the skirt, lock the pedal adjust.
  - d. Insert cyclic ground lock pins (12).
  - e. Position collective stick full down and apply full friction lock (13).

GO TO NEXT PAGE

1.57. HELICOPTER SAFETY PROCEDURES – continued



M04-1638-6

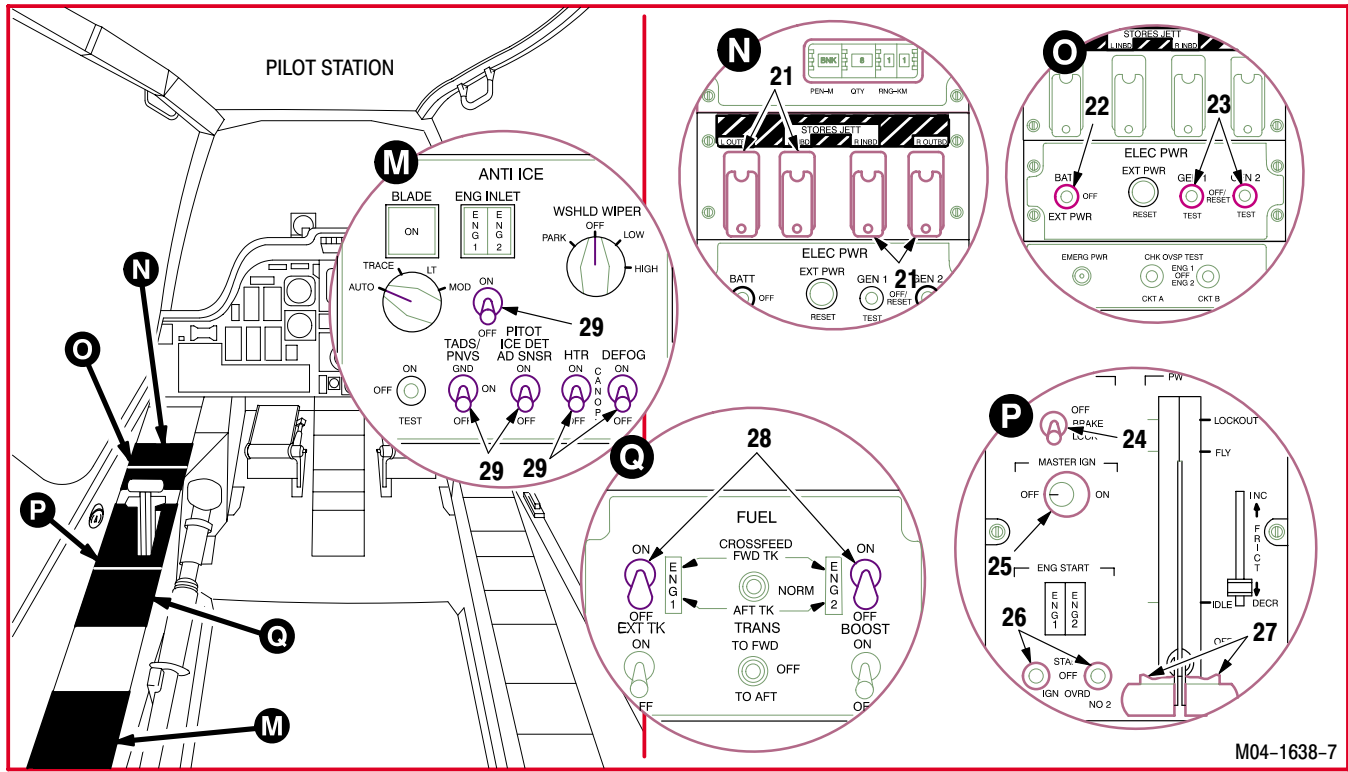
1.57.4 Pilot Station Safe - continued

f. Set switch positions in pilot station:

<u>Identification</u>	<u>Location</u>	<u>Set To</u>
(1) Tailwheel switch (14)	Left instrument panel	LOCK
(2) Pilot FIRE CONTROL panel		
(a) Master ARM/SAFE switch (15)	Left instrument panel	OFF
(b) RKT switch (16)	Left instrument panel	OFF
(c) GUN switch (17)	Left instrument panel	OFF
(d) MSL switch (18)	Left instrument panel	OFF
(3) Emergency hydraulic switch (19)	Center instrument panel	OFF
(4) Parking brake (20)	Lower right instrument panel	Set parking brake

GO TO NEXT PAGE

1.57. HELICOPTER SAFETY PROCEDURES – continued



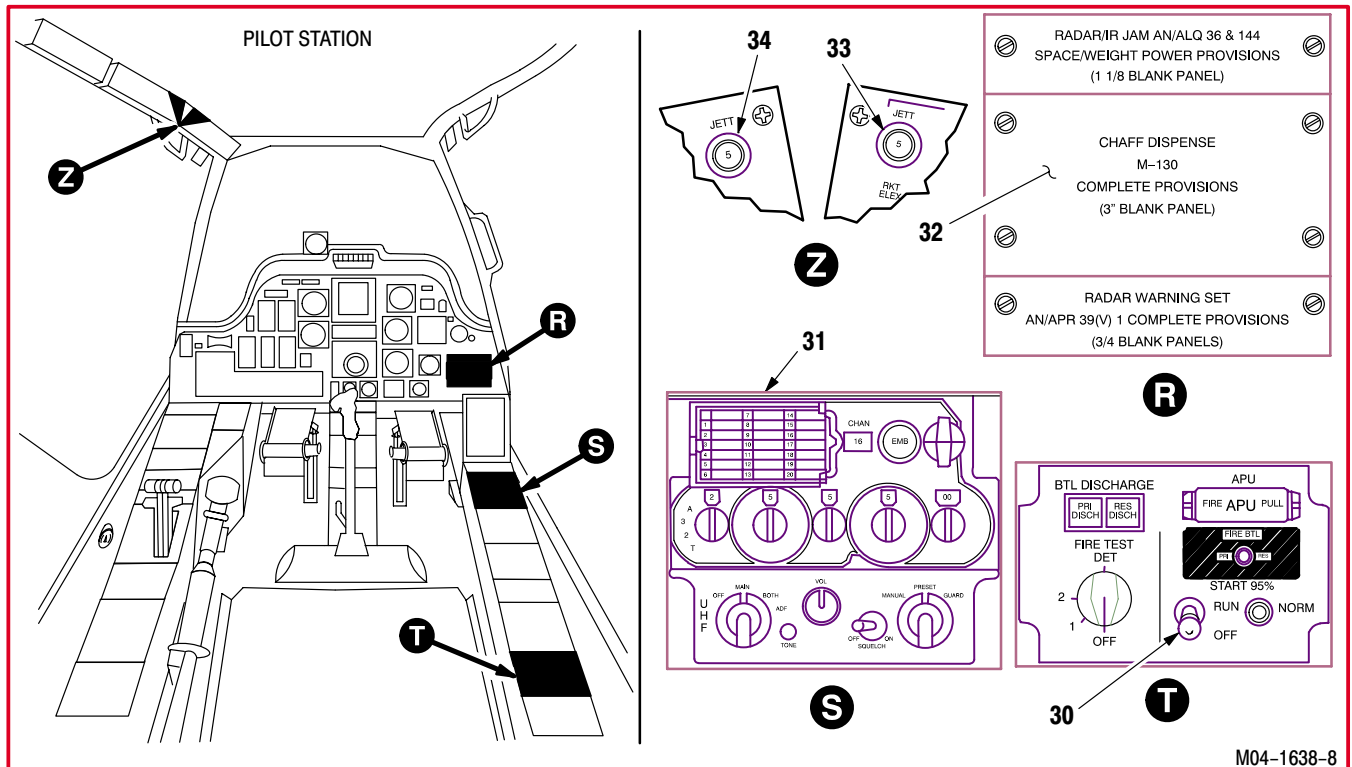
M04-1638-7

1.57.4 Pilot Station Safe - continued

Identification	Location	Set To
(5) Pilot left console		
(a) L OUTBD, L INBD, R INBD, R OUTBD (21)	STORES JETT panel	OFF; covers down
(b) BATT/EXT PWR (22)	ELEC PWR panel	OFF
(c) GEN 1, GEN 2 switches (23)	ELEC PWR panel	OFF
(d) RTR BRK switch (24)	Pilot power quadrant	LOCK
(e) MASTER IGN switch (25)	Pilot power quadrant	OFF
(f) ENG START ENG 1 switch ENG START ENG 2 switch (26)	Pilot power quadrant	OFF
(g) PWR levers (27)	Pilot power lever panel	OFF
(h) FUEL ENG 1 and FUEL ENG 2 switch (28)	FUEL panel	OFF
(i) ANTI-ICE panel (29)	ANTI-ICE panel	OFF

GO TO NEXT PAGE

1.57. HELICOPTER SAFETY PROCEDURES – continued



1.57.4 Pilot Station Safe - continued

<u>Identification</u>	<u>Location</u>	<u>Set To</u>
(6) Pilot right console		
(a) <b>APU</b> control switch (30)	<b>APU</b> panel	<b>OFF</b>
(b) Radios (31)	Right side console	Radios <b>OFF</b>
(c) Chaff dispenser (32)	Right instrument panel (if installed)	<b>SAFE</b>
(7) Pilot circuit breaker panel		

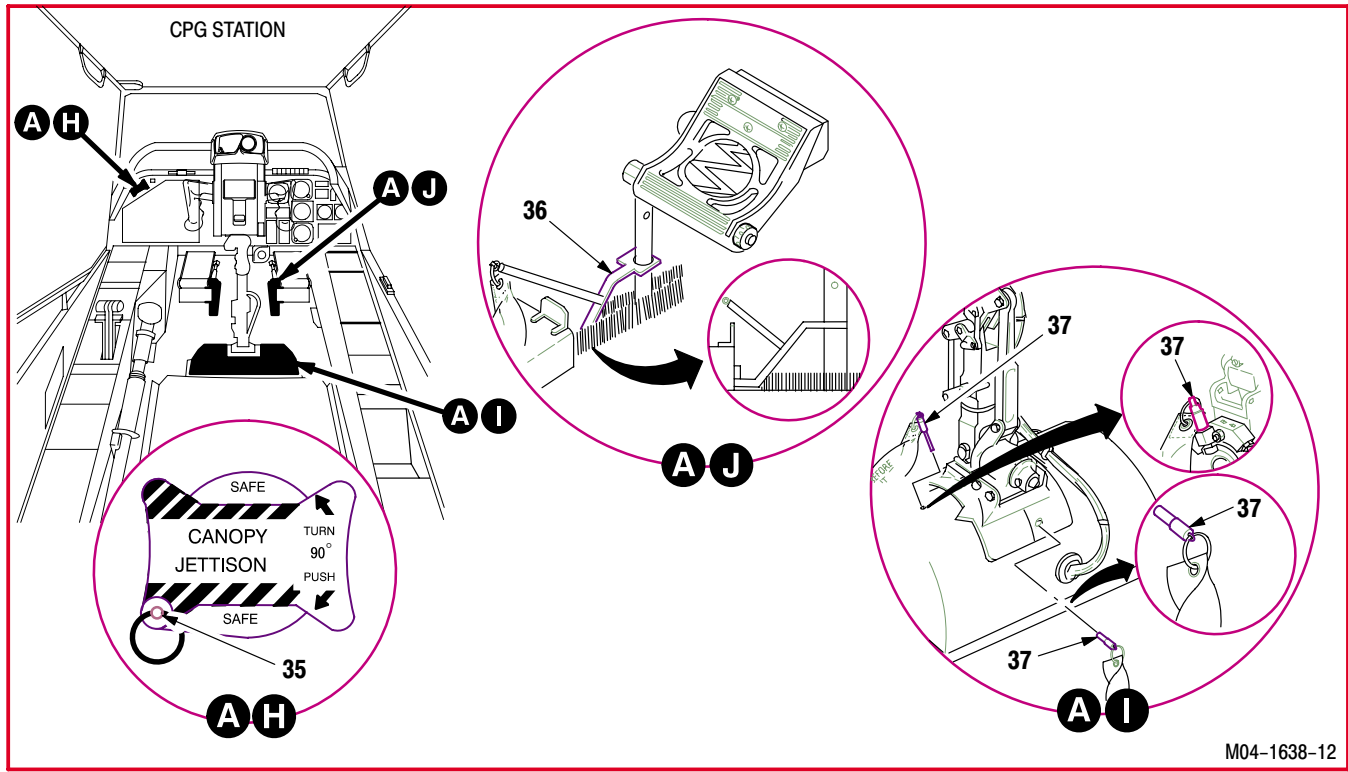
**NOTE**

All circuit breakers on pilot circuit breaker panel remain closed except as noted.

(a) <b>MISSION JETT</b> circuit breaker (33)	Forward circuit breaker panel	<b>MISSION JETT</b> circuit breaker open
(b) <b>JETT</b> circuit breaker (34)	Center circuit breaker panel	<b>JETT</b> circuit breaker open

GO TO NEXT PAGE

1.57. HELICOPTER SAFETY PROCEDURES – continued



1.57.5. CPG Station Safe

- a. Enter CPG station (para 1.56). Observe all safety precautions.
- b. Insert safety pin in CPG canopy jettison handle on instrument panel upper left side (35).

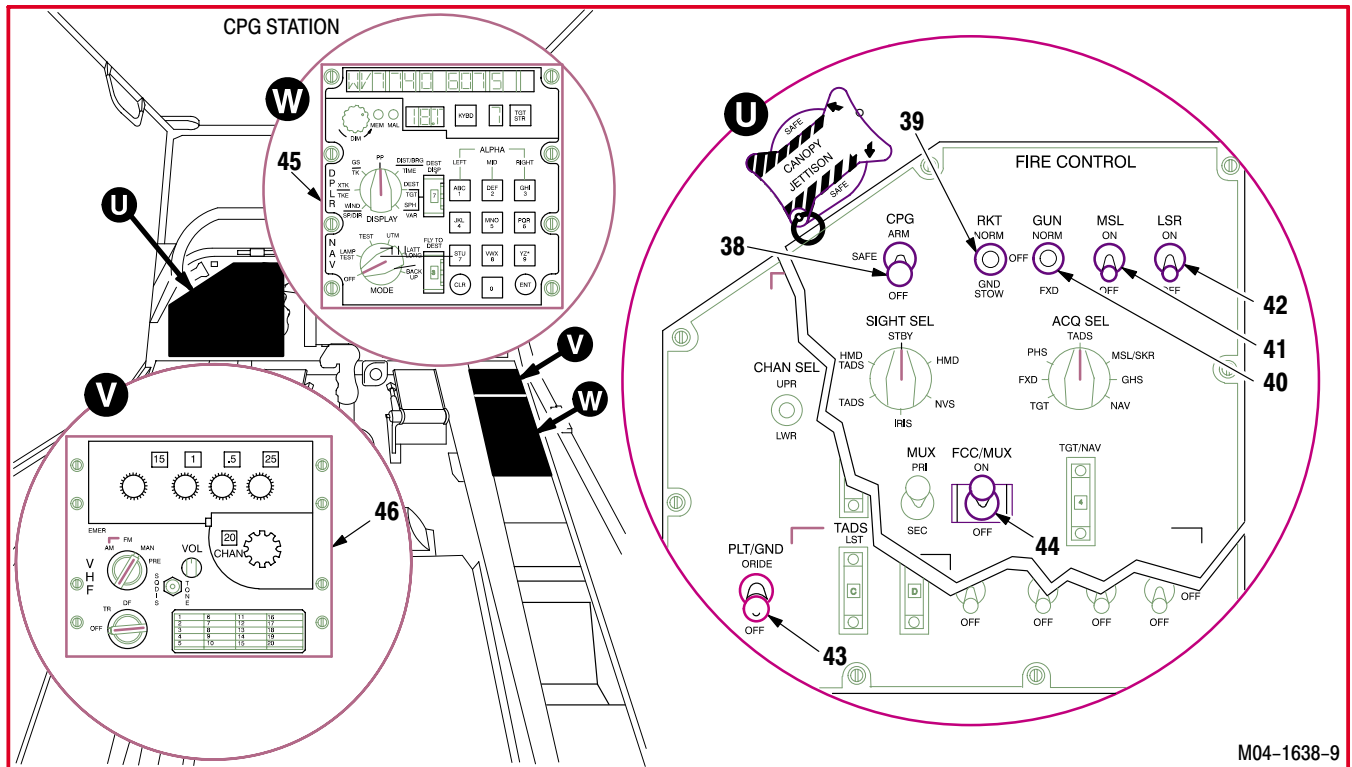
NOTE

- Steps c, and d are for BUCS activated helicopters only.
  - Apply hydraulic pressure to helicopter before installing and removing ground locks.
- c. Install tail rotor pedal ground locks (36). Unlock the pedal adjust; move the pedals all the way forward; insert locks through brushes and cutouts in floor and rest on shelf. Move pedals aft until fork tightly engages tail rotor pedal support assembly immediately below the skirt; lock the pedal adjust.
  - d. Insert cyclic ground lock pins (37).

GO TO NEXT PAGE



1.57. HELICOPTER SAFETY PROCEDURES – continued



M04-1638-9

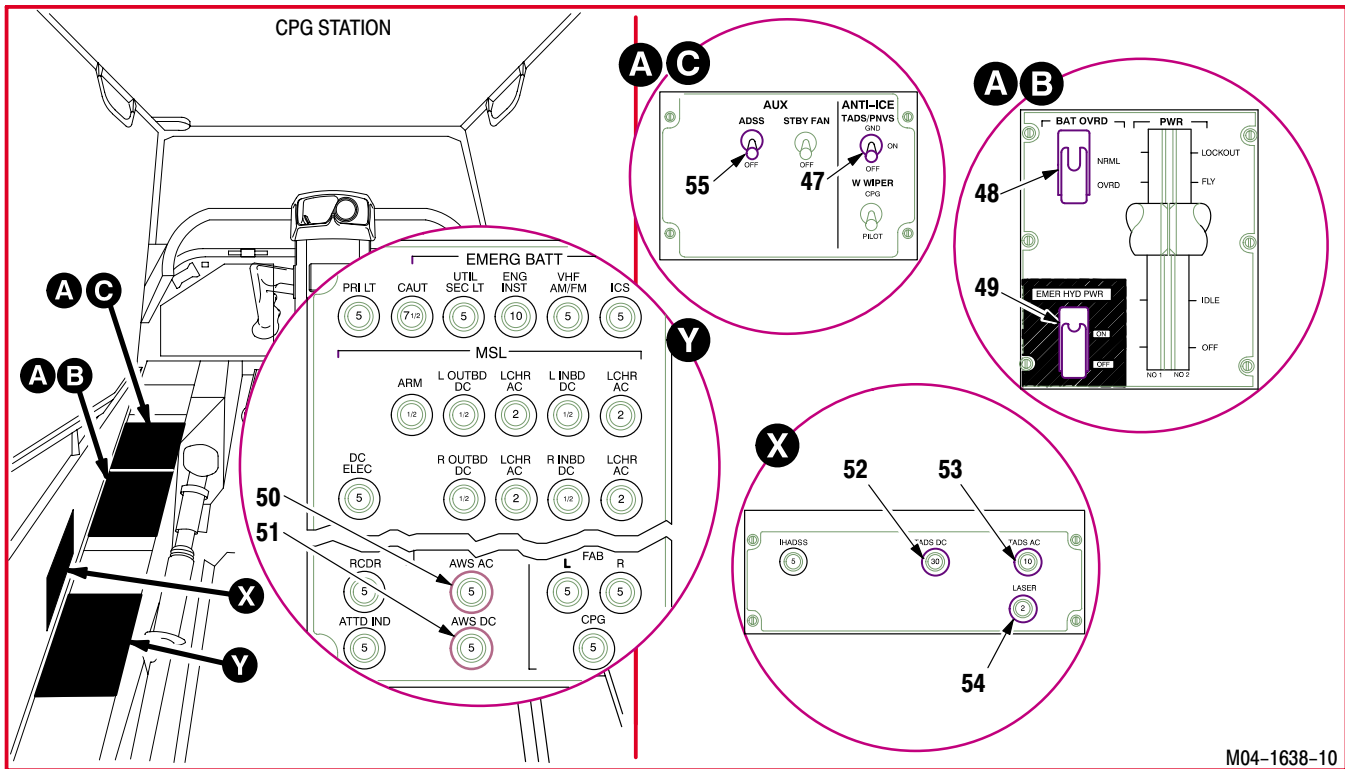
1.57.5 CPG Station Safe - continued

e. Set switch positions in CPG station:

<u>Identification</u>	<u>Location</u>	<u>Set To</u>
(1) CPG FIRE CONTROL panel		
(a) CPG (38)	FIRE CONTROL panel	OFF
(b) RKT switch (39)	FIRE CONTROL panel	OFF
(c) GUN switch (40)	FIRE CONTROL panel	OFF
(d) MSL switch (41)	FIRE CONTROL panel	OFF
(e) LSR switch (42)	FIRE CONTROL panel	OFF
(f) PLT/GND ORIDE switch (43)	FIRE CONTROL panel	OFF
(g) FCC/MUX switch (44)	FIRE CONTROL panel	ON
(2) CPG right console		
(a) Doppler/Navigation (45)	Right side console	NAV MODE OFF
(b) VHF radio (46)	Right side console	Radio OFF

GO TO NEXT PAGE

1.57. HELICOPTER SAFETY PROCEDURES – continued



M04-1638-10

1.57.5 CPG Station Safe - continued

Identification	Location	Set To
(3) CPG left console		
(a) TADS/PNVS GND switch (47)	ANTI-ICE panel	OFF
(b) BAT OVRD switch (48)	Power lever panel	NRML, cover down
(c) EMER HYD PWR switch (49)	Power lever panel	OFF, cover down

**NOTE**

All circuit breakers on CPG circuit breaker panels closed except as noted.

(d) AWS AC circuit breaker (50)	Circuit breaker panel	Open
(e) AWS DC circuit breaker (51)	Circuit breaker panel	Open
(f) TADS DC circuit breaker (52)	Circuit breaker panel	Open
(g) TADS AC circuit breaker (53)	Circuit breaker panel	Open
(h) LASER circuit breaker (54)	Circuit breaker panel	Open
(i) ADSS switch (55)	AUX panel	OFF

END OF TASK

---

## 1.58. ENGINE WASH

---

### 1.58.1. Description

This task covers: Washing.

---

### 1.58.2. Initial Setup

#### **Tools:**

Aircraft maintenance tool kit (item 371, App H)

#### **References:**

TM 55-2840-248-23

#### **Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
2.2	Access doors LN2 and RN2 doors removed

#### **Personnel Required:**

68B Aircraft Powerplant Repairer

---

### 1.58.3. Washing

- a. **Perform engine wash** (TM 55-2840-248-23).
- b. **Install access doors LN2 and RN2** (para 2.2).

END OF TASK

---

**1.59. PROTECTIVE COVER INSTALLATION**

---

1.59.1. Description

This task covers: Installation.

---

1.59.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
Aircraft mooring tiedown kit (item 363, App H)

**References:**

TM 1-5855-265-20  
TM 1-1270-476-20

**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
2.2	Access doors T250L, T250R, T290L, T290R, L325, and L330 opened

**Personnel Required:**

67R      Attack Helicopter Repairer  
            Two persons to assist

---

GO TO NEXT PAGE

---

**1.59. PROTECTIVE COVER INSTALLATION – continued**


---

**1.59.3. Installation**
**a. Install omnidirectional airspeed sensor protective cover (1).**

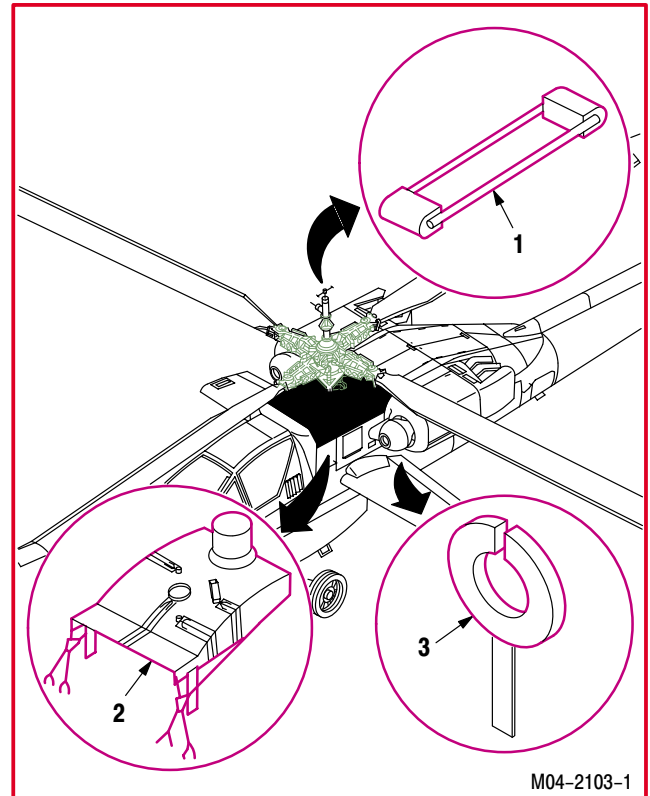
- (1) Position one end of cover (1) on main rotor mast airspeed sensor.
- (2) Extend bungee cords and secure other end of cover (1) on opposite end of sensor.

**b. Install main rotor mast aperture protective cover (2).**

- (1) Position cover (2) forward portion around main rotor mast and over infrared antenna.
- (2) Position aft portion of cover (2) around longitudinal bellcrank, lateral control links, and the main rotor mast. Tighten and tie collars around bellcrank, control links, and rotor mast.
- (3) Engage hook-and-pile fastener at each collar. Tie down cover to left side step and handhold, and to right side handhold.

**c. Install engine air inlet protective shield (3).**

- (1) Position each shield (3) on air inlet duct with streamer downward on forward side.
- (2) Push shield (3) ring rearward into air inlet and around nose gearbox air inlet.



GO TO NEXT PAGE

**1.59. PROTECTIVE COVER INSTALLATION – continued**

**d. Install nose gearbox cooling air inlet protective shield (4).**

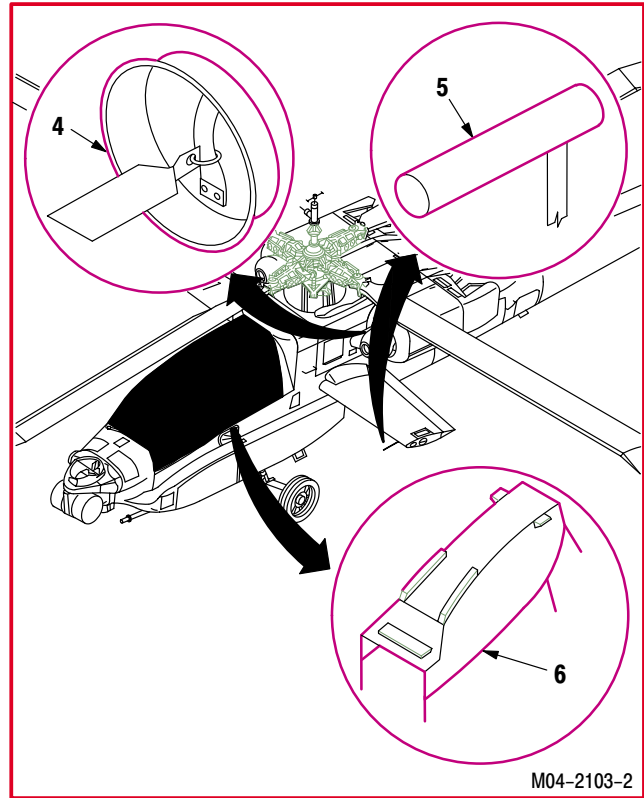
- (1) Position each shield (4) into air inlet fairing.

**e. Install two pitot head protective covers (5).**

- (1) Place two covers (5) on two pitot tubes.
- (2) Fasten two covers (5) with hook-and-pile fasteners.

**f. Install aircraft canopy protective cover (6).**

- (1) Position cover (6) on top of helicopter canopy and over canopy emergency door release.
- (2) Separate cover (6) forward strap, extend it around fuselage, and secure loosely to enable further positioning of cover.
- (3) Draw cover (6) left panel aft to engage cover boot to canopy handhold.
- (4) Extend and secure cover (6) left panel straps to fuselage steps.
- (5) Position cover (6) top panel to engage cutout and around IFF antenna.
- (6) Position and secure cover (6) right aft panel with aft strap to vertical handhold and downward with a strap to step.
- (7) To seal forward and aft panel overlaps, overlap canopy handhold through forward panel (with canopy handhold through forward panel cutout) and engage panel hook-and-pile fasteners.



GO TO NEXT PAGE

**1.59. PROTECTIVE COVER INSTALLATION – continued**

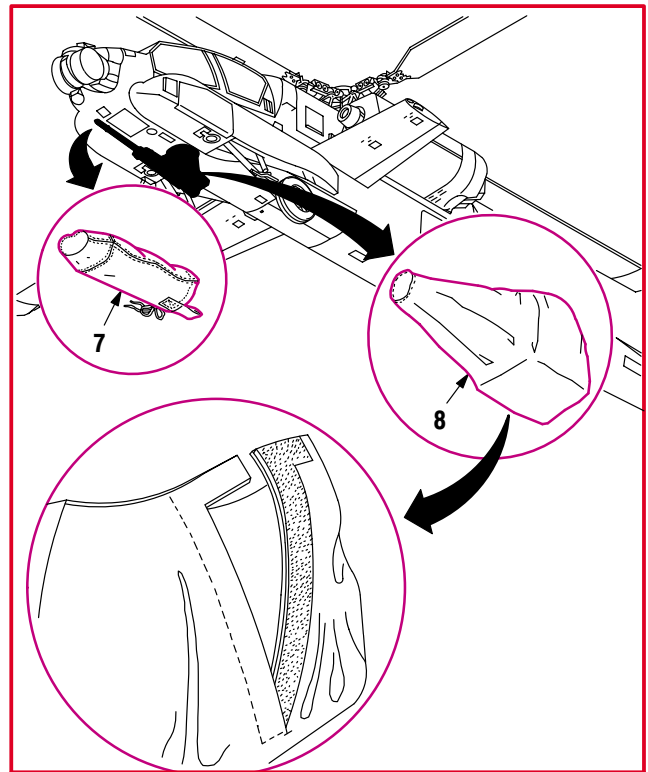
- g. **If severe environmental conditions of icing or dust exists, or are expected, install gun muzzle cover (7).**

**NOTE**

Gun muzzle cover may be fired through.

- h. **Install area weapon/turret protective cover (8).**

- (1) Open cover (8) hook-and-pile fastener.
- (2) Pull cover (8) over weapon barrel and upward to enclose weapon and turret.
- (3) Aline and secure hook-and-pile fastener on cover (8).



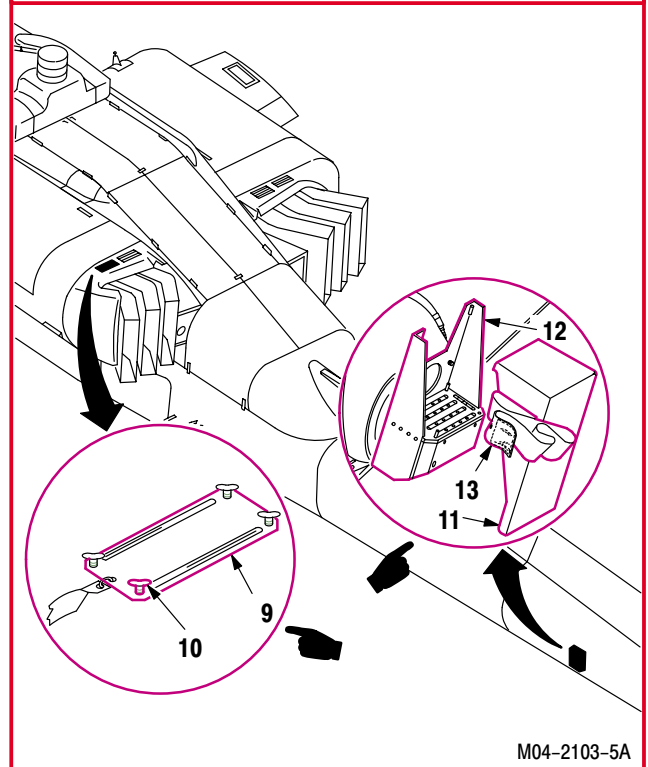
M04-2103-3

- i. **Install four upper louver engine nacelle protective covers (9).**

- (1) Position each cover (9) on structure.
- (2) Secure with four stud fasteners (10) on each engine.

- j. **Install chaff dispenser protection cover (11) on chaff dispenser (12).**

- (1) Secure strap (13).



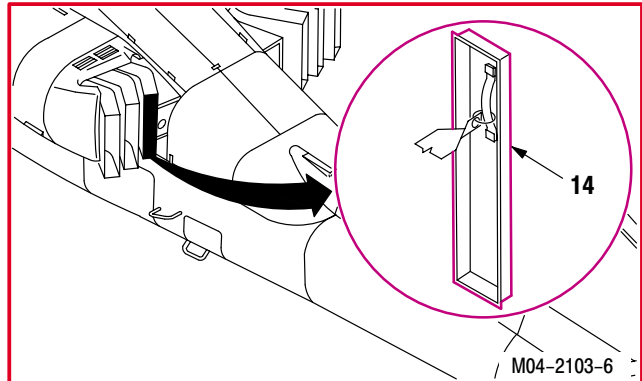
M04-2103-5A

GO TO NEXT PAGE

**1.59. PROTECTIVE COVER INSTALLATION – continued**

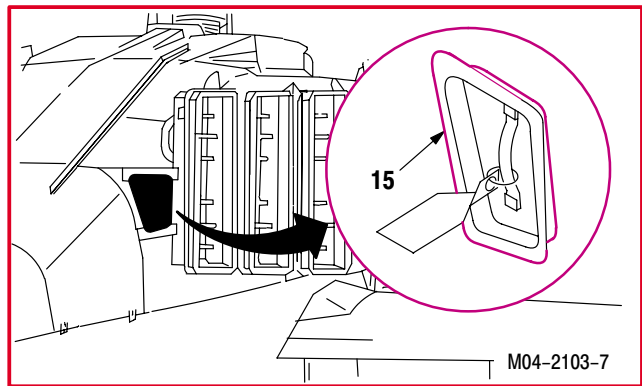
**k. Install six engine exhaust protective cover shields (14).**

- (1) Position cover (14) into each of six engine exhaust nozzles and press into place.
- (2) Ensure each cover (14) is secure in engine exhaust nozzle.



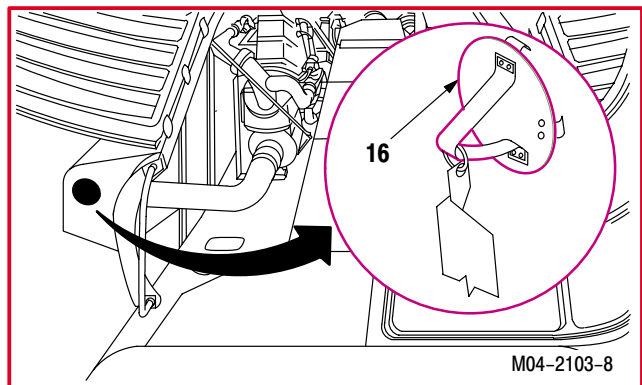
**l. Install APU exhaust protective guard (15).**

- (1) Position guard (15) in exhaust duct outlet.
- (2) Press edges of guard (15) to engage exhaust duct outlet.



**m. Install ENCU exhaust protective shield (16).**

- (1) Position shield (16) with retainers facing exhaust port.
- (2) Press shield (16) plate to engage, by friction contact, four retainers in exhaust port.



**n. Secure access doors T250L, T250R, T290L, T290R, L325, and L330 (para 2.2).**

**o. Install TADS nightside, dayside, and bore-sight window covers (TM 1-1270-476-20).**

**p. Install TADS/PNVS protective cover (TM 1-5855-265-20).**

**q. Install PNVS window cover (TM 1-5855-265-20).**

END OF TASK



**1.60. PROTECTIVE COVER REMOVAL**

1.60.1. Description

This task covers: Removal.

1.60.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)

**References:**

TM 1-5855-265-20  
 TM 1-1270-476-20

**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
2.2	Access doors T250L, T250R, T290L, T290R, L325, and L330 opened

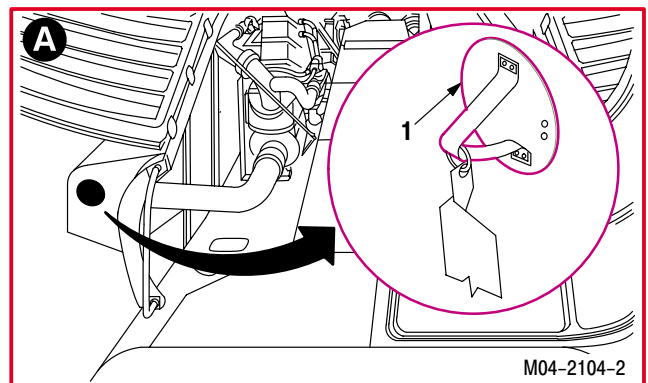
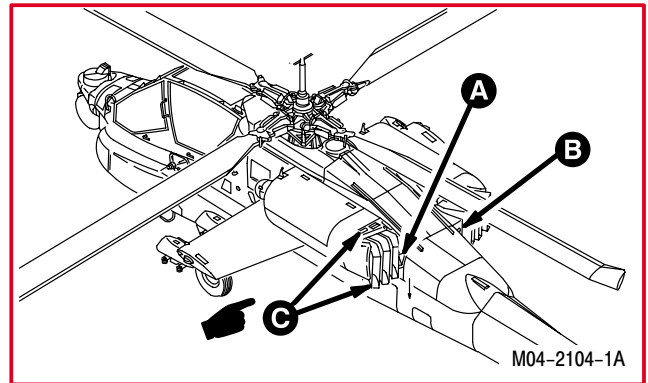
**Personnel Required:**

67R      Attack Helicopter Repairer  
 Two persons to assist

1.60.3. Removal

a. **Remove ENCU exhaust protective shield (1).**

(1) Pull out on shield plate strap.

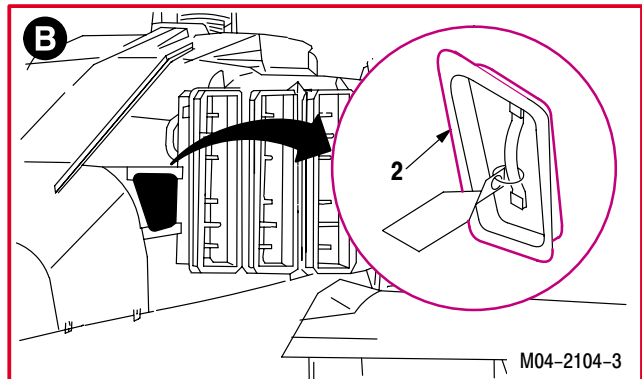


GO TO NEXT PAGE

**1.60. PROTECTIVE COVER REMOVAL – continued**

**b. Remove APU exhaust protective shield (2).**

- (1) Pull out on shield strap.



**c. Remove six engine exhaust protective guards (3).**

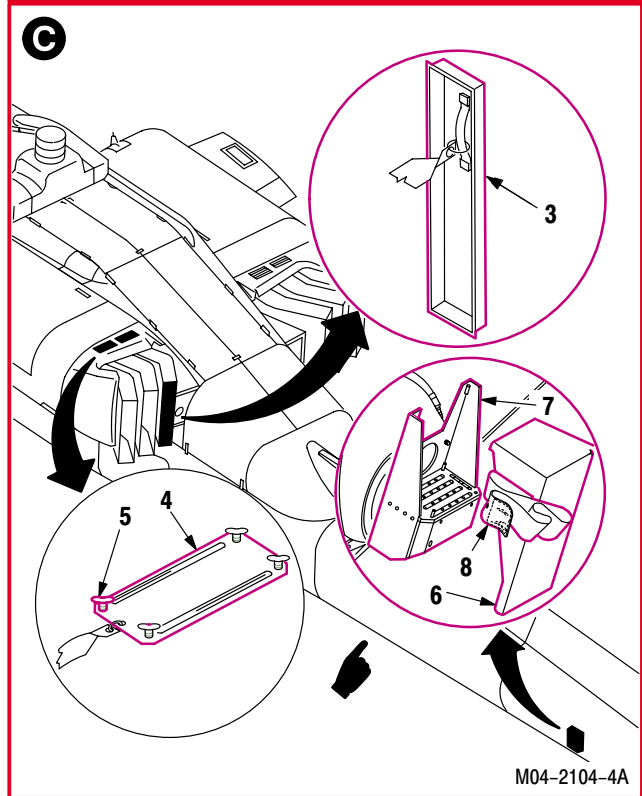
- (1) Pull out on guard (3) strap.
- (2) Remove three guards (3) from each engine.

**d. Remove four upper louver engine nacelle protective covers (4).**

- (1) Loosen four stud fasteners (5).
- (2) Remove cover (4).
- (3) Remove four protective covers.

**e. Remove chaff dispenser protection cover (6) from chaff dispenser (7).**

- (1) Separate strap (8).
- (2) Remove cover (6).



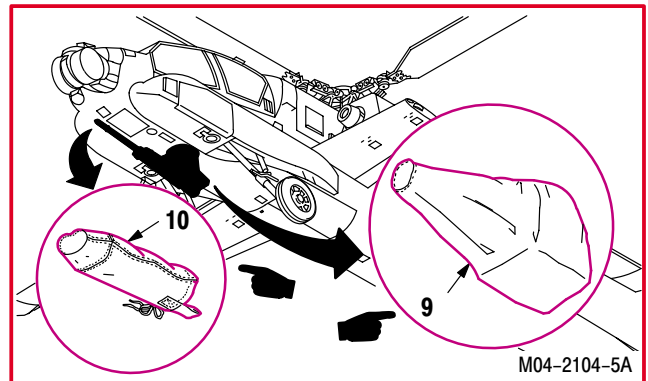
GO TO NEXT PAGE

**1.60. PROTECTIVE COVER REMOVAL – continued****f. Remove area weapon/turret protective cover (9).**

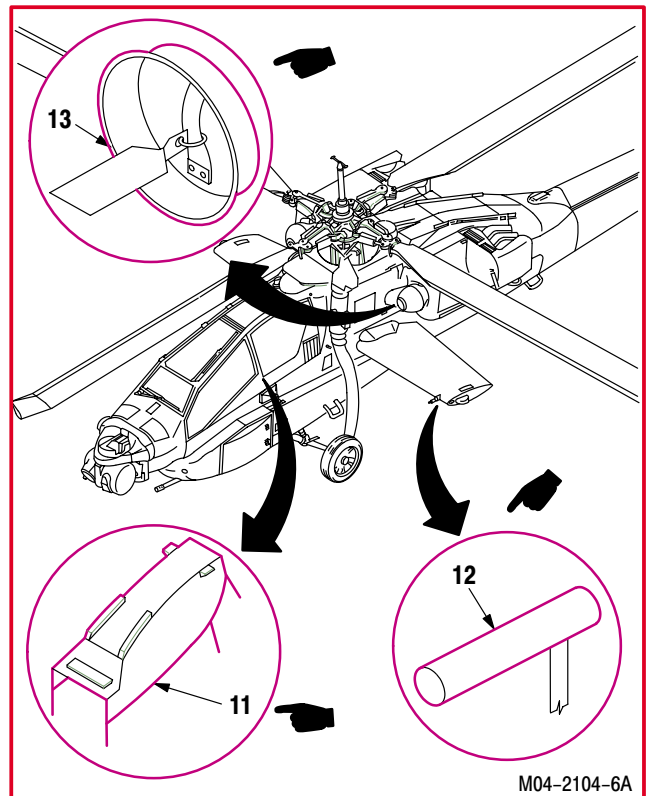
- (1) Open cover (9) hook-and-pile fastener.
- (2) Pull cover (9) from turret and weapon.

**NOTE**

Gun muzzle cover can be fired through.

**g. If severe environmental conditions of icing or dust exist or are expected, do not remove gun muzzle cover (10).****h. Remove helicopter canopy protective cover (11).**

- (1) Open panel hook-and-pile fasteners on forward and aft panel overlaps.
- (2) Loosen right strap to vertical handhold.
- (3) Loosen strap to step.
- (4) Loosen left panel straps secured to fuselage steps.
- (5) Loosen strap extended around fuselage.
- (6) Remove cover (11) from top of helicopter.

**i. Remove two pitot head protective covers (12).**

- (1) Loosen hook-and-pile fasteners.
- (2) Remove pitot head protective cover (12) from left and right wing pitot tubes.

**j. Remove nose gearbox cooling air inlet protective shields (13).**

- (1) Pull and remove strap from each shield (13).

GO TO NEXT PAGE

**1.60. PROTECTIVE COVER REMOVAL – continued**

**k. Remove engine air inlet protective shields (14).**

- (1) Pull shield (14) to remove.

**l. Remove main rotor mast aperture protective cover (15).**

- (1) Open hook-and-pile fasteners at each collar.
- (2) Loosen left side strap in handhold.
- (3) Loosen right side strap from handhold.
- (4) Loosen collar around bellcrank, control links, and rotor mast.
- (5) Remove cover (15) from helicopter.

**m. Remove omnidirectional airspeed protective cover (16).**

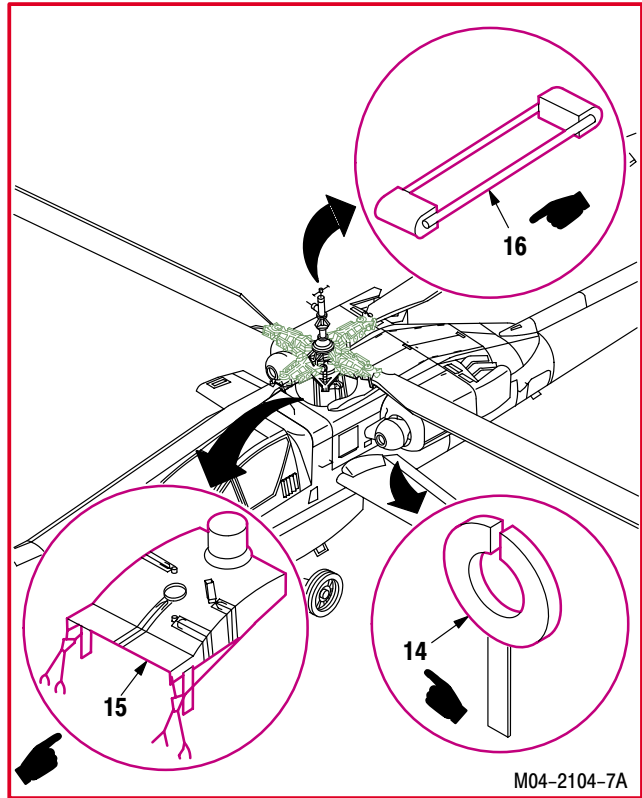
- (1) Extend bungee cords. Remove cover (16) end from end of sensor.
- (2) Remove cover (16) from opposite end of sensor.

**n. Secure access doors T250L, T250R, T290L, T290R, L325, and L330 (para 2.2).**

**o. Remove TADS nightside, dayside, and bore-sight window covers (TM 1-1270-476-20).**

**p. Remove TADS/PNVS protective cover (TM 1-5855-265-20).**

**q. Remove PNVS window cover (TM 1-5855-265-20).**



END OF TASK

---

## 1.61. PARKING BRAKES – SET/RELEASE

---

### 1.61.1. Description

This task covers: Set/Release.

---

### 1.61.2. Initial Setup

#### Tools:

Aircraft mechanic's tool kit (item 376, App H)  
 #1 & #2 phillips offset screwdriver (item 276, App H)

#### Equipment Conditions:

Ref	Condition
1.57	Helicopter safed

#### Personnel Required:

67R Attack Helicopter Repairer

---

### 1.61.3. Set/Release

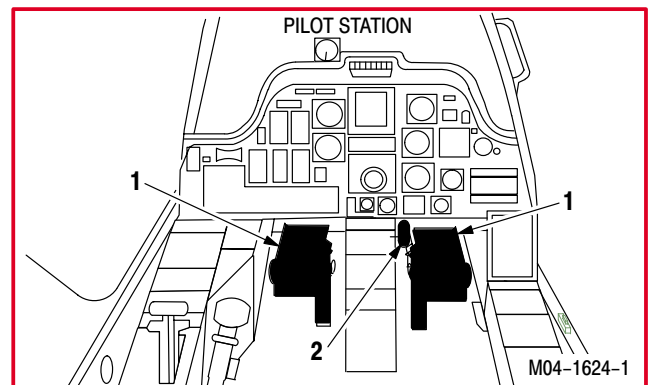
- a. **Enter pilot station** (para 1.56). **Observe all safety precautions.**
- b. **Set parking brakes.**
  - (1) Press upper part of directional control pedals (1).
  - (2) Pull **PARK BRAKE** handle (2) until it engages.
  - (3) Release directional control pedals (1).

#### NOTE

**PARK BRAKE** handle will retract when parking brakes release. If parking brake is set when right MLG system is low on fluid, pressing pedals may not release parking brake. Go to step d if this should occur.

- c. **Release parking brakes.**

- (1) Press directional control pedals (1).
- (2) Release directional control pedals (1).



GO TO NEXT PAGE

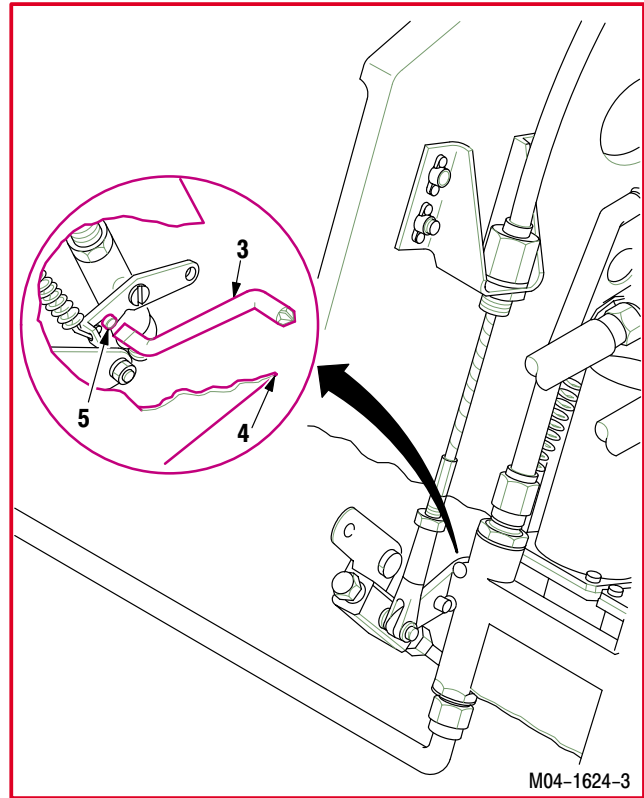
---

1.61. PARKING BRAKES – SET/RELEASE – continued

---

d. Insert offset screwdriver blade (3) through right side of center console (4).

(1) Push on parking brake lever lock pin (5) to release parking brake.



END OF TASK

**1.62. ROTOR BRAKE - LOCK/UNLOCK**

1.62.1. Description

This task covers: Unlock. Lock.

1.62.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)

**Personnel Required:**

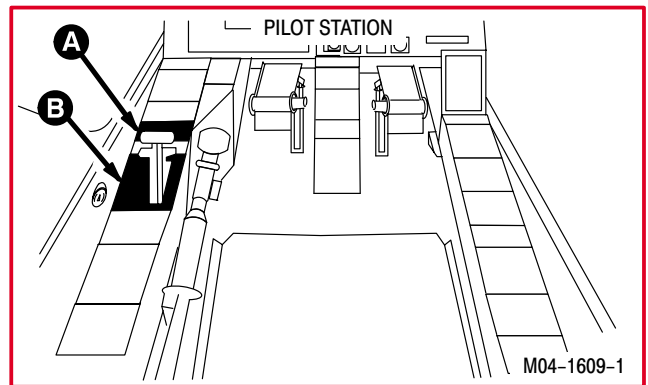
67R Attack Helicopter Repairer

**Equipment Conditions:**

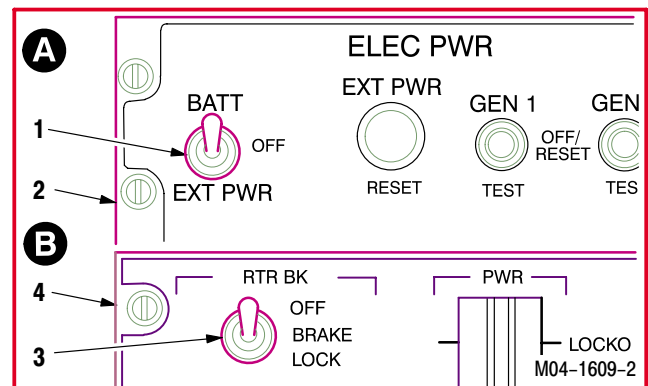
<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed

1.62.3. Unlock

- a. **Connect battery** (para 9.40).
- b. **Enter pilot station** (para 1.56). **Observe all safety precautions.**



- c. **Unlock rotor brake.**
  - (1) Set **BATT/EXT PWR** switch (1) on **ELEC PWR** control panel (2) to **BATT**.
  - (2) Set **RTR BK** switch (3) on power quadrant (4) to **OFF**.



GO TO NEXT PAGE

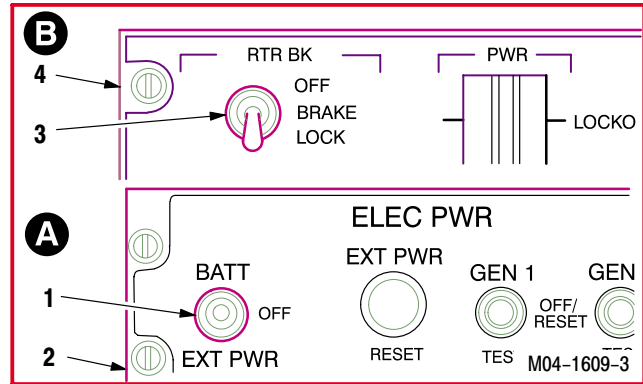
1.62. ROTOR BRAKE - LOCK/UNLOCK – continued

1.62.4. Lock

a. Lock rotor brake.

- (1) Set **RTR BK** switch (3) on power quadrant (4) to **LOCK**.
- (2) Set **BATT/EXT PWR** switch (1) on **ELEC PWR** control panel (2) to **OFF**.

b. Disconnect battery (para 9.40).



END OF TASK



---

**1.63. HELICOPTER – KNEEL/ERECT**

---

**NOTE**

For kneel/erect system use, refer to TM 55-1520-238-S.

END OF TASK

---

## 1.64. GROUNDING

---

### 1.64.1. Description

This task covers: Grounding.

---

### 1.64.2. Initial Setup

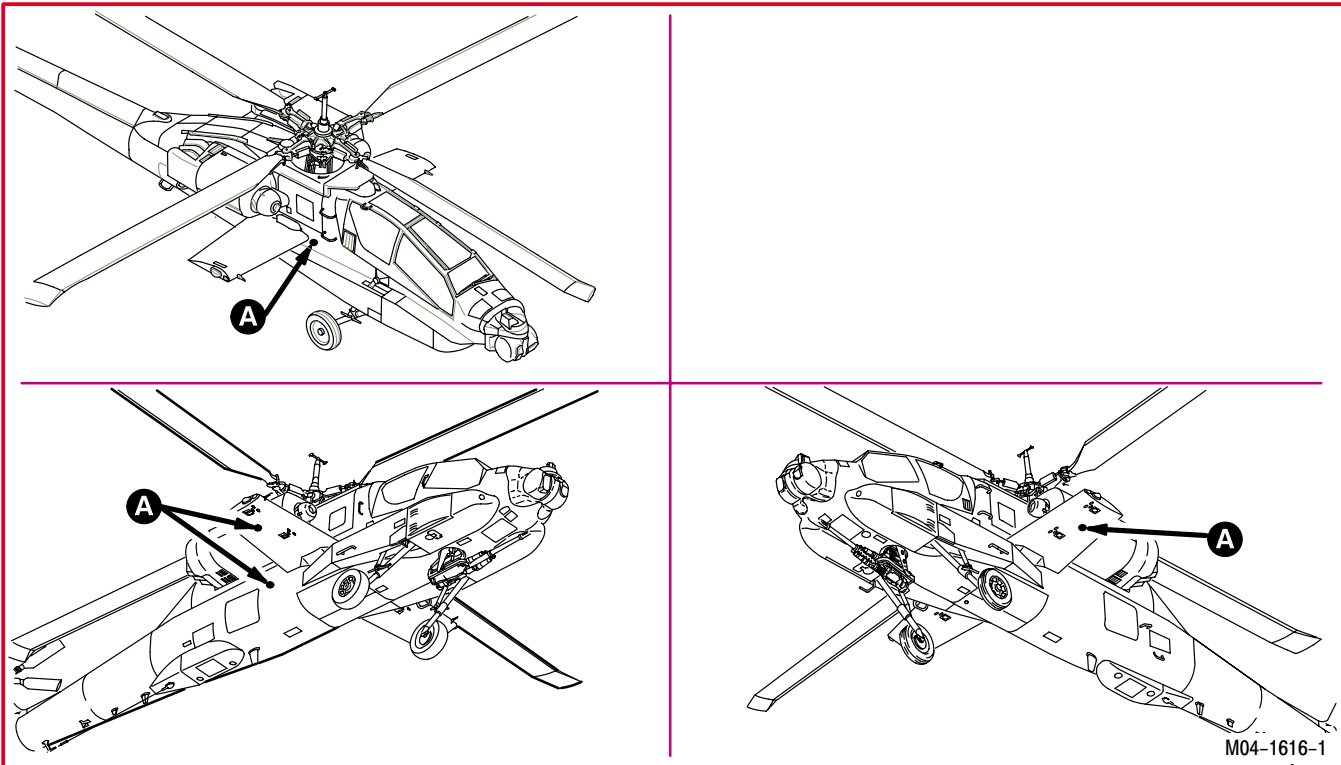
#### Tools:

Aircraft mechanic's tool kit (item 376, App H)

#### Personnel Required:

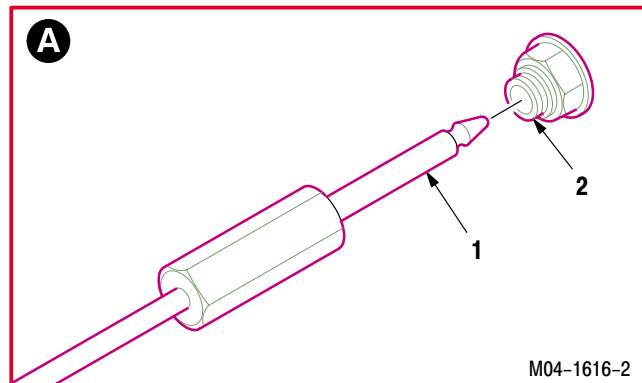
67R      Attack Helicopter Repairer

---



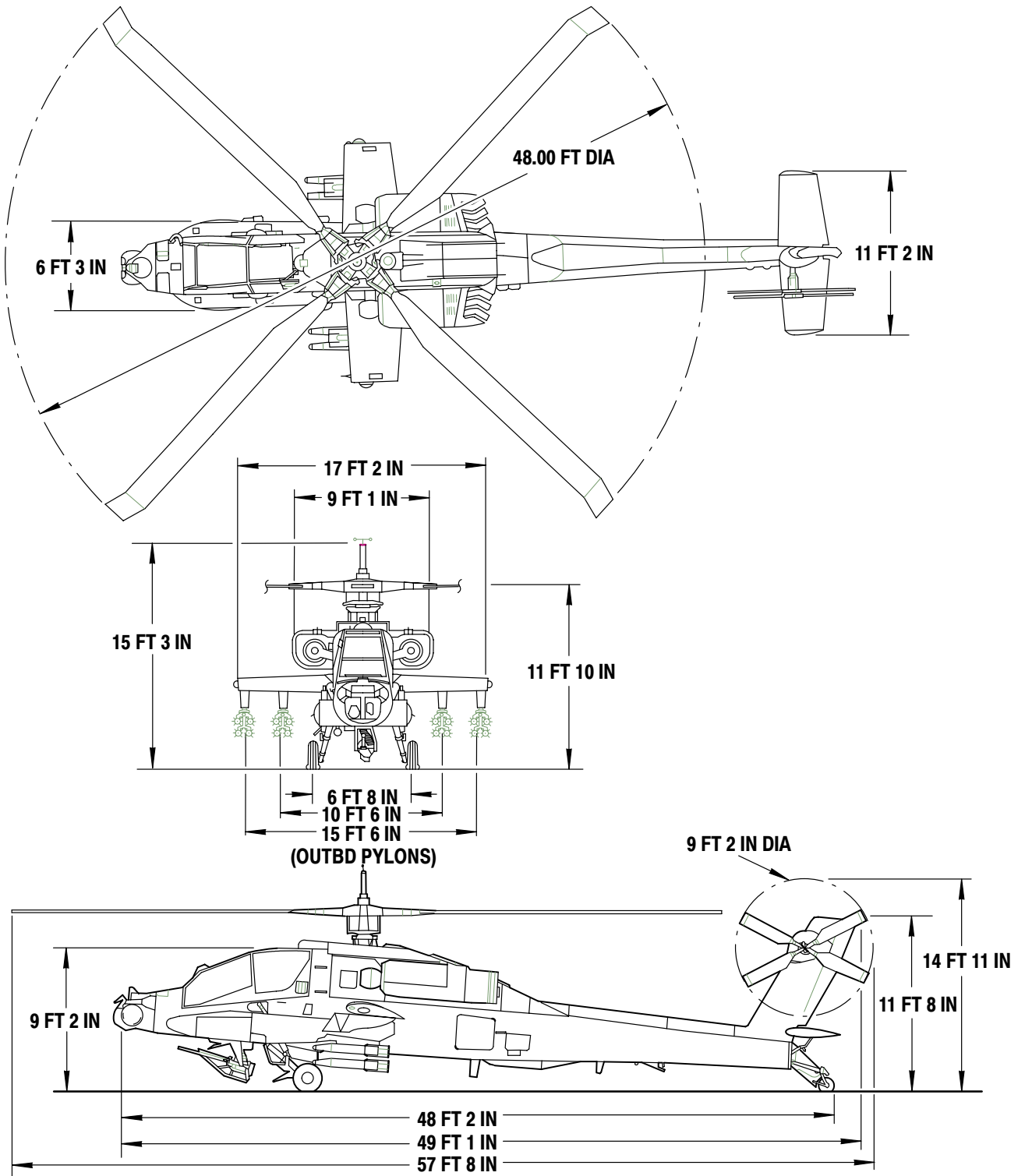
### 1.64.3. Grounding

- a. **To ground helicopter: insert grounding plug (1) into grounding receptacle (2).**
- b. **To remove ground from helicopter: remove grounding plug (1) from grounding receptacle (2).**



END OF TASK

1.65. HELICOPTER DIMENSIONS



M04-2795

END OF TASK

**1.66. HELICOPTER JACKING (TRIPOD JACKS AT THREE POINTS)**

1.66.1. Description

This task covers: Jacking.

1.66.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
 Fuselage jack adapter (item 1, App H) (p/o item 391, App H) (2)  
 3-ton tripod hydraulic jack (item 184, App H)  
 5-ton aircraft landing gear jack (item 183, App H) (2)  
 Special tool kit (item 390, App H) (2)

**Personnel Required:**

67R Attack Helicopter Repairer  
 Three persons to assist

**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
G.1	Plumb bob, bracket, and target installed

1.66.3. Jacking



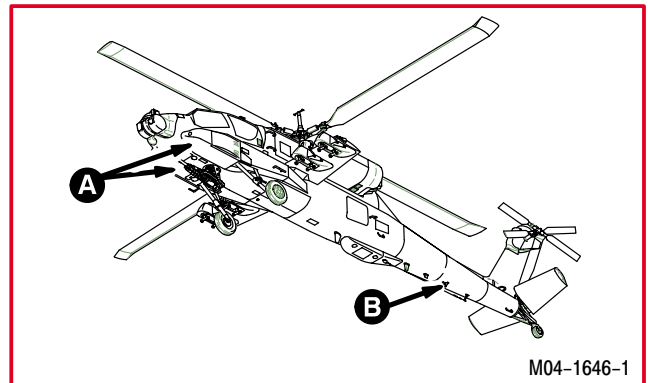
**To prevent death or injury to personnel, jack helicopter evenly on a firm flat surface so that it stays level at all times. Helicopter is unstable on jacks. Do not jack helicopter if wind exceeds 15 mph. If injury occurs, seek medical aid.**



- Area shall be roped off and warning signs “**HELICOPTER ON JACKS**” shall be displayed.
- Unauthorized personnel shall not be in or around helicopter while it is on jacks.
- Airframe structure damage can occur if stress panels are not in place before jacking. Ensure all stress panels are installed (para 2.6) and canopies are closed (para 1.56).
- A pound sign (#) after an access number indicates a stress panel that must be installed during jacking operations.

GO TO NEXT PAGE

**1.66. HELICOPTER JACKING (TRIPOD JACKS AT THREE POINTS) – continued**

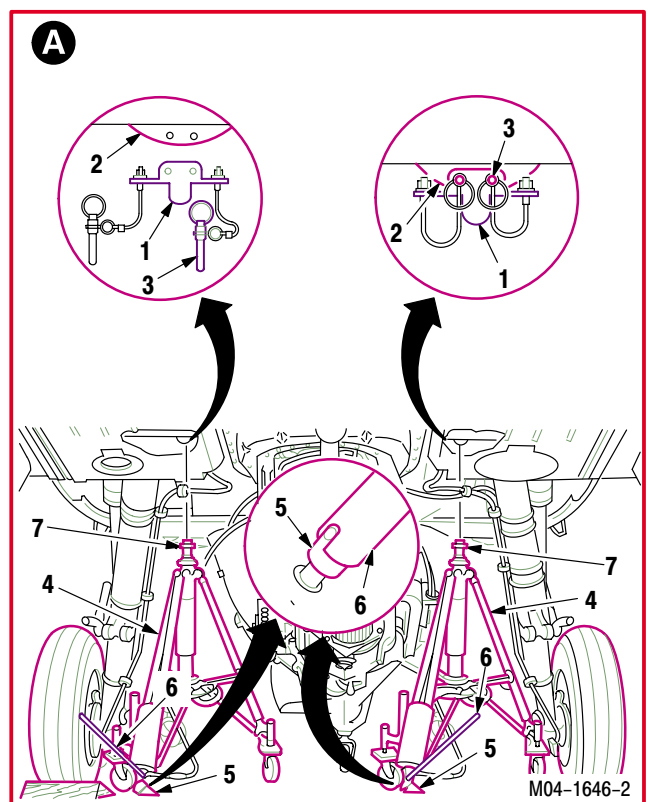


**a. Install jack adapters (1) on brackets (2).**

- (1) Place adapters (1) on brackets (2).
- (2) Insert pins (3) in holes of adapter (1) and brackets (2).

**b. Position two 5-ton tripod jacks (4) under adapters (1). Use jacks.**

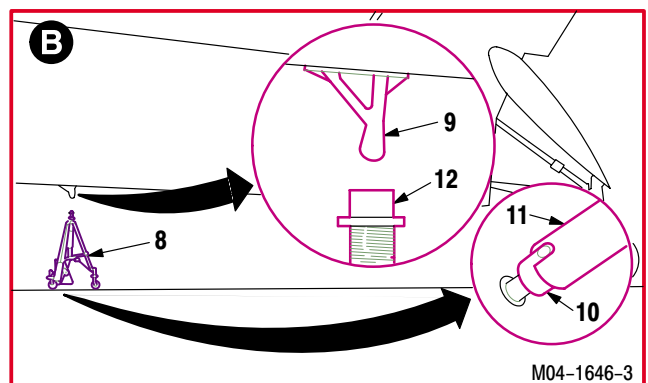
- (1) Turn two pressure valve screws (5) clockwise to close. Use jack handle (6).
- (2) Pump handle (6) until ram (7) contacts adapter (1).



**c. Position 3-ton tripod jack (8) under tail boom jack pad (9).**

- (1) Turn pressure valve screw (10) clockwise to close. Use jack handle (11).
- (2) Pump handle (11) until ram (12) contacts pad (9).

**d. Release parking brake (para 1.61).**



GO TO NEXT PAGE

1.66. HELICOPTER JACKING (TRIPOD JACKS AT THREE POINTS) – continued

- e. Remove wheel chocks (13).
- f. Position one person to watch plumb bob (para G.1) and direct jack operators during jacking.

**NOTE**

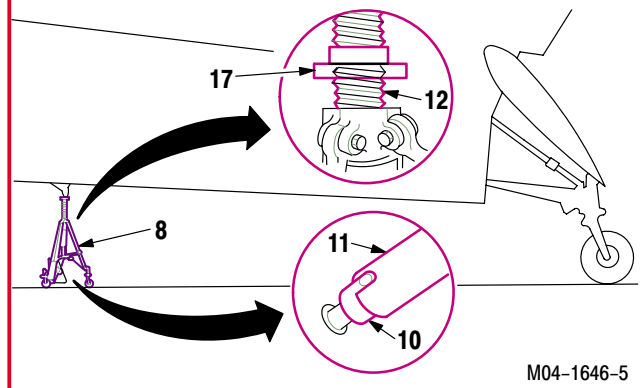
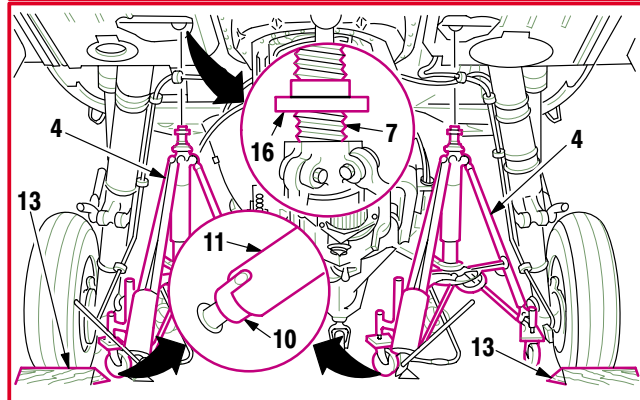
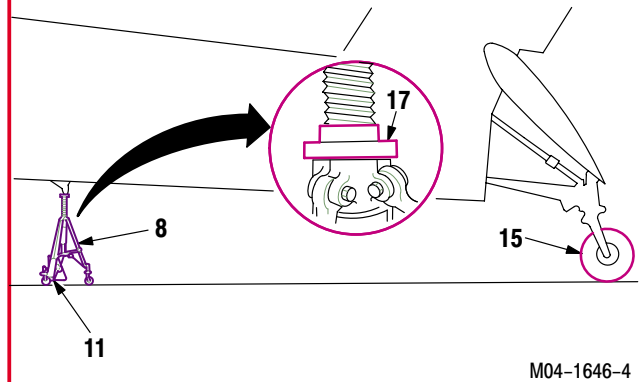
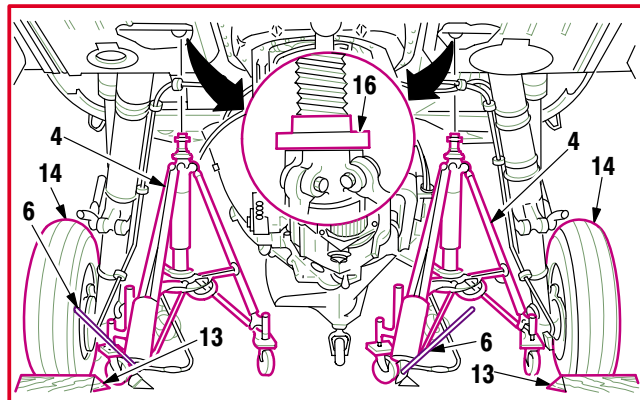
When plumb bob is not available use the protractor method (para 1.133).

- g. Raise helicopter slowly and evenly.
  - (1) Raise jack (4) and (8) until tires (14) and (15) clear ground.
  - (2) Turn two lockrings (16) and (17) clockwise to maintain contact with shoulders of jacks (4) and (8).

- h. Perform maintenance task.
- i. Position one person to watch plumb bob (para G.1) and direct jack operators during lowering.

- j. Lower helicopter slowly and evenly.
  - (1) Raise jacks (4) and (8) until lockrings (16) and (17) turn freely.
  - (2) Slowly release pressure. Turn pressure valve screws (5) and (10) counterclockwise. Use jack handles (6) and (11).
  - (3) Slowly turn lockrings (16) and (17) counterclockwise as rams (7) and (12) lower.

- k. Install wheel chocks (13).
- l. Set parking brake (para 1.61).
- m. Remove jacks (4) and (8).



GO TO NEXT PAGE

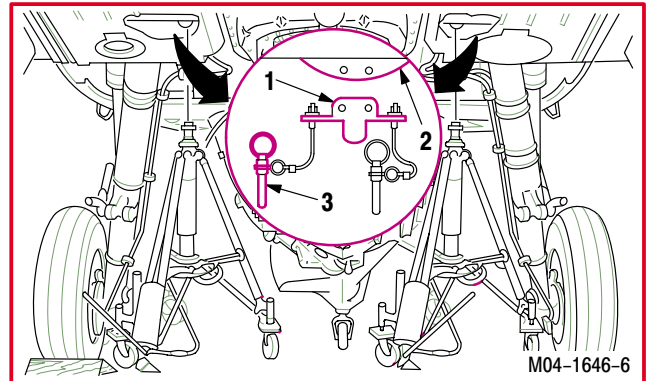
---

**1.66. HELICOPTER JACKING (TRIPOD JACKS AT THREE POINTS) – continued**

---

**n. Remove adapters (1) from brackets (2).**

- (1) Remove pins (3) from adapters (1).
- (2) Remove adapters (1) from brackets (2).

**o. Remove plumb bob, bracket, and target (para G.1).****p. Remove rope and warning signs.**

END OF TASK

---

## 1.67. MAIN LANDING GEAR JACKING (AT ONE POINT)

---

### 1.67.1. Description

This task covers: Jacking.

---

### 1.67.2. Initial Setup

#### **Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
5-ton aircraft landing gear jack (item 183, App H)

#### **Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed

#### **Personnel Required:**

67R Attack Helicopter Repairer  
One person to assist

---

### 1.67.3. Jacking

**WARNING**

**To prevent death or injury to personnel, jack helicopter evenly on a firm flat surface so that it stays level at all times. Helicopter is unstable on jacks. Do not jack helicopter if wind exceeds 15 mph. If injury occurs, seek medical aid.**

**CAUTION**

- Area shall be roped off and warning signs “**HELICOPTER ON JACKS**” shall be displayed.
- Unauthorized personnel shall not be in or around helicopter while it is on jacks.
- Airframe structural damage can occur if stress panels are not in place during jacking. Ensure all stress panels are installed (para 2.6) and canopies are closed (para 1.56).
- A pound sign (#) after an access number indicates a stress panel that must be installed during jacking operations.

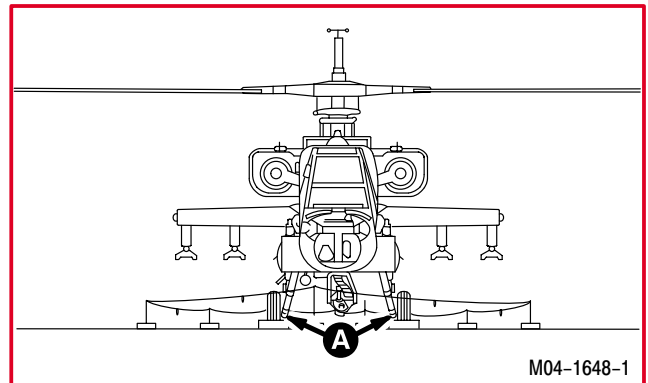
GO TO NEXT PAGE



---

**1.67. MAIN LANDING GEAR JACKING (AT ONE POINT) – continued**


---


**a. Position jack (1) to either jack pad (2).**

(1) Turn pressure valve screw (3) clockwise to close. Use jack handle (4).

(2) Raise jack (1) until ram (5) contacts pad (2).

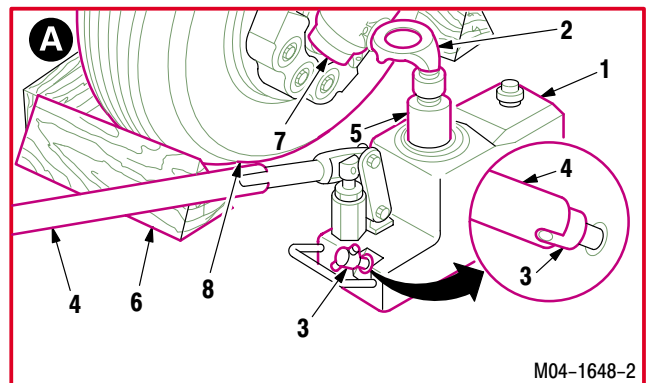
**b. Release parking brake (para 1.61).**
**c. Remove wheel chocks (6).**
**d. Raise landing gear (7).**

(1) Raise jack (1) until tire (8) clears ground.

**e. Perform maintenance task.**
**f. Slowly lower landing gear (7).**

(1) Turn pressure valve screw (3) counterclockwise to open.

(2) Use jack handle (4).

**g. Install wheel chock (6).**
**h. Set parking brake (para 1.61).**
**i. Remove jack (1).**
**j. Remove rope and warning signs.**


END OF TASK

---

## 1.68. TAIL LANDING GEAR JACKING (AXLE JACK)

---

### 1.68.1. Description

This task covers: Jacking.

---

### 1.68.2. Initial Setup

#### Tools:

Aircraft mechanic's tool kit (item 376, App H)  
5-ton aircraft landing gear jack (item 183, App H)

#### Equipment Conditions:

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
3.27	Tail landing gear deflector removed

#### Personnel Required:

67R Attack Helicopter Repairer  
One person to assist

---

### 1.68.3. Jacking

**WARNING**

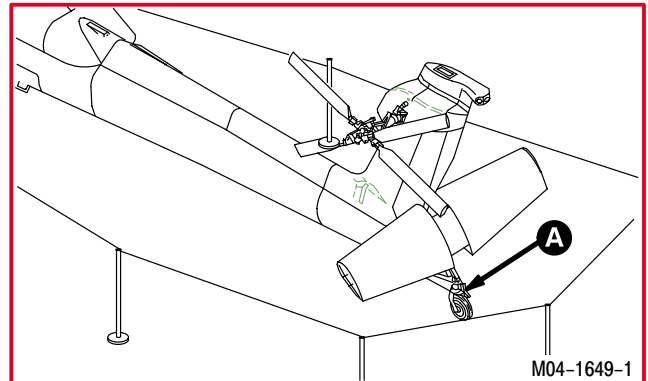
**To prevent death or injury to personnel, jack helicopter evenly on a firm flat surface so that it stays level at all times. Helicopter is unstable on jacks. Do not jack helicopter if wind exceeds 15 mph. If injury occurs, seek medical aid.**

**CAUTION**

- Area shall be roped off and warning signs “**HELICOPTER ON JACKS**” shall be displayed.
- Unauthorized persons shall not be in or around helicopter while it is on jacks.
- Airframe structural damage can occur if stress panels are not in place during jacking. Ensure all stress panels are installed and canopies are closed (para 2.6).
- A pound sign (#) after an access number indicates a stress panel that must be installed during jacking operations.

GO TO NEXT PAGE

1.68. TAIL LANDING GEAR JACKING (AXLE JACK) – continued



a. Position jack (1) under pad (2).

- (1) Turn pressure valve screw (3) clockwise to close. Use jack handle (4).
- (2) Raise jack (1) until ram (5) contacts pad (2).

b. Raise tail landing gear slowly.

- (1) Raise jack (1) until tire (6) clears ground.

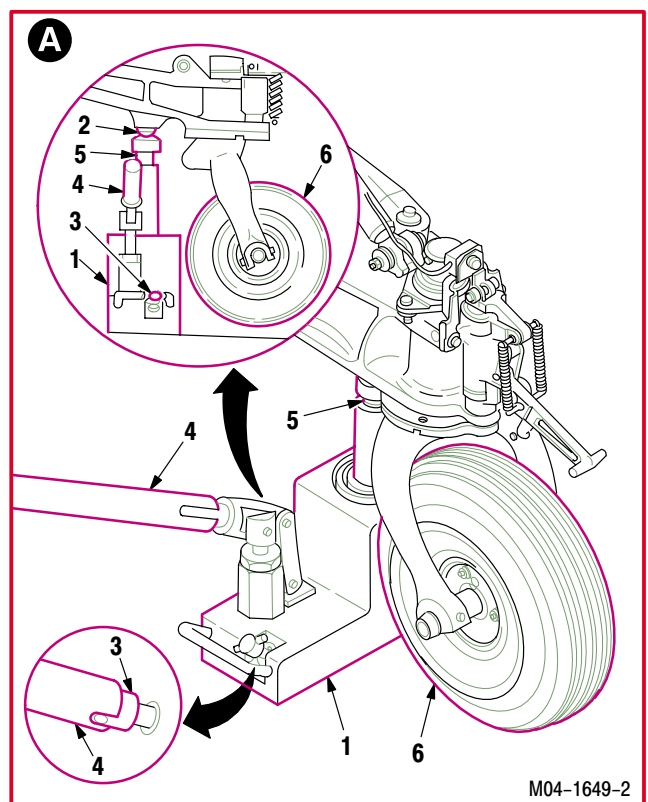
c. Perform maintenance task.

d. Lower tail landing gear slowly.

- (1) Turn pressure valve screw (3) counterclockwise to open.
- (2) Use jack handle (4).

e. Remove jack (1).

f. Remove rope and warning signs.



END OF TASK

---

## 1.69. TAIL LANDING GEAR JACKING (TRIPOD JACK)

---

### 1.69.1. Description

This task covers: Jacking.

---

### 1.69.2. Initial Setup

#### Tools:

Aircraft mechanic's tool kit (item 376, App H)  
3-ton tripod hydraulic jack (item 184, App H)

#### Equipment Conditions:

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed

#### Personnel Required:

67R Attack Helicopter Repairer  
One person to assist

---

### 1.69.3. Jacking

**WARNING**

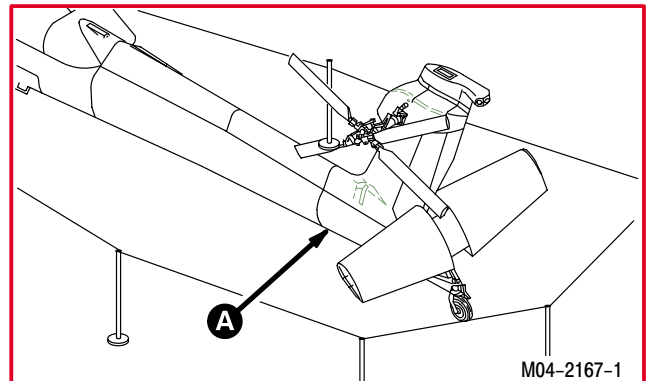
**To prevent death or injury to personnel, jack helicopter evenly on a firm flat surface so that it stays level at all times. Helicopter is unstable on jacks. Do not jack helicopter if wind exceeds 15 mph. If injury occurs, seek medical aid.**

**CAUTION**

- Area shall be roped off and warning signs “**HELICOPTER ON JACKS**” shall be displayed.
- Unauthorized personnel shall not be in or around helicopter while it is on jacks.
- Airframe structural damage can occur if stress panels are not in place during jacking. Ensure all stress panel are installed and canopies are closed (para 2.6).
- A pound sign (#) after an access number indicates a stress panel that must be installed during jacking operations.

GO TO NEXT PAGE

**1.69. TAIL LANDING GEAR JACKING (TRIPOD JACK) – continued**

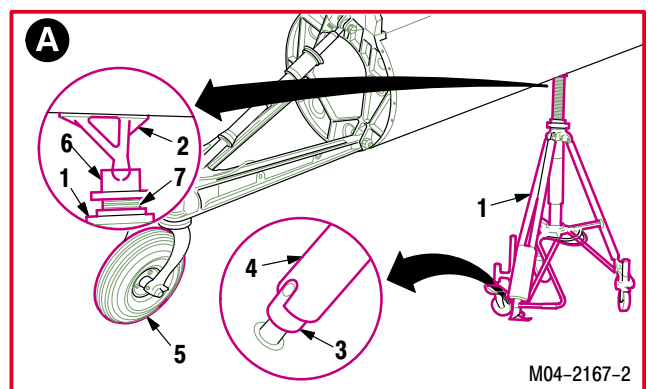


**a. Position jack (1) under pad (2).**

- (1) Turn pressure valve screw (3) clockwise to close. Use jack handle (4).

**b. Raise tail boom slowly.**

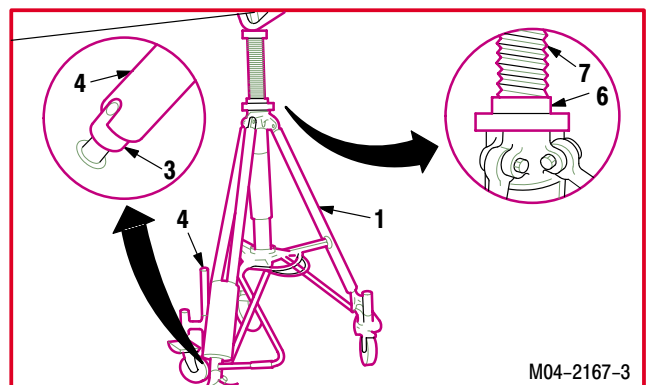
- (1) Raise jack (1) until tire (5) clears ground.
- (2) Turn lockring (6) clockwise to maintain contact with shoulder of jack (1).



**c. Perform maintenance task.**

**d. Lower tail boom slowly.**

- (1) Slowly turn lockring (6) counterclockwise as ram (7) lowers.
- (2) Turn pressure valve (3) counterclockwise to open. Use jack handle (4).



**e. Remove jack (1).**

**f. Remove rope and warning signs.**

END OF TASK

---

## 1.70. EXTERNAL POWER APPLICATION – ELECTRICAL

---

### 1.70.1. Description

This task covers: Application.

---

### 1.70.2. Initial Setup

#### Tools:

Aircraft mechanic's tool kit (item 376, App H)  
Aircraft power unit (item 232, App H)

#### Personnel Required:

67R Attack Helicopter Repairer

#### References:

TM 55-1730-229-12

#### Equipment Conditions:

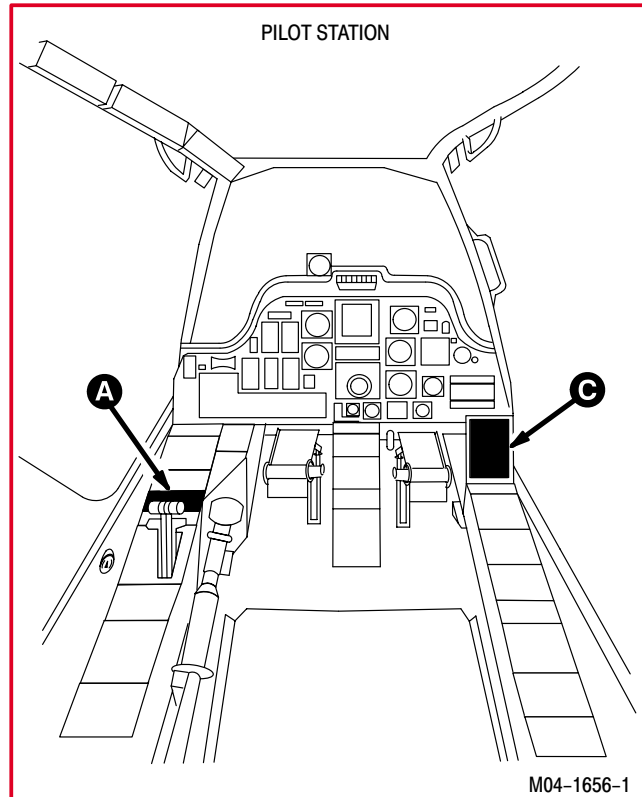
<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
2.2	Access door R345 opened

---

### 1.70.3. Application

**CAUTION**

Apply air if ambient air temperature is below 0 °F (-18 °C) or above 80 °F (27 °C). Failure to do so may cause avionics equipment damage.



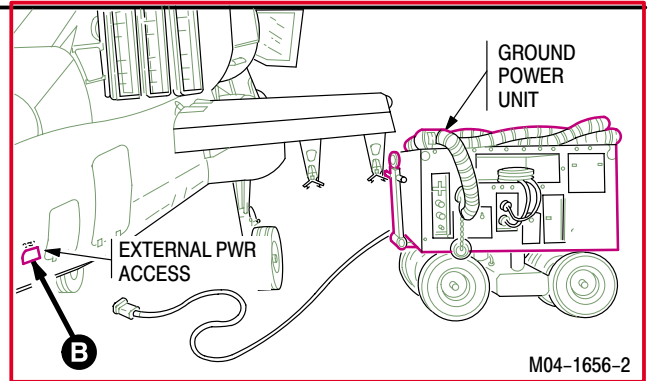
GO TO NEXT PAGE

1.70. EXTERNAL POWER APPLICATION – ELECTRICAL – continued

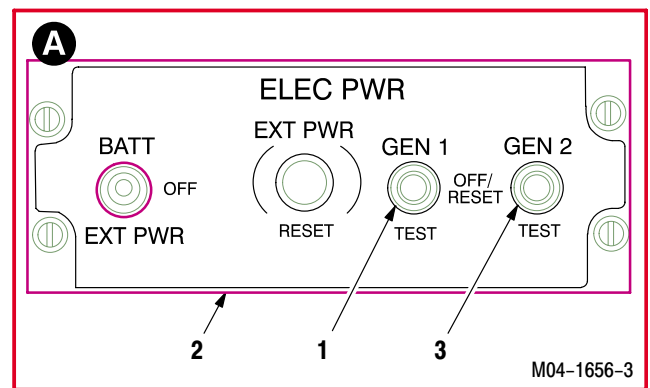
**CAUTION**

Do not put AGPU under a main rotor blade. Main rotor blade damage may occur from extreme heat of AGPU exhaust.

- a. Position AGPU parallel to right wing tip.
- b. Enter pilot station (para 1.56). Observe all safety precautions.
- c. Set GEN 1 switch (1) on pilot ELEC PWR panel (2) to OFF/RESET.
- d. Set GEN 2 switch (3) on pilot ELEC PWR panel (2) to OFF/RESET.

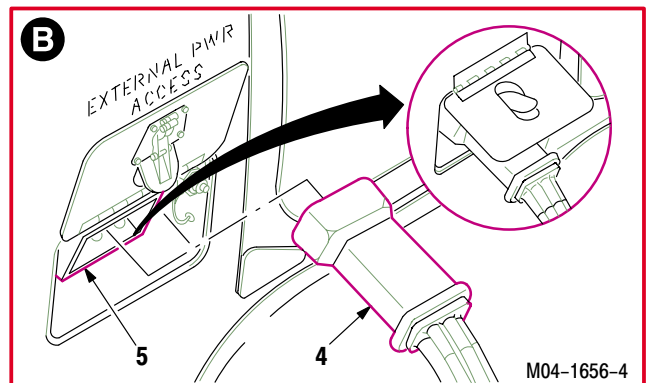


M04-1656-2



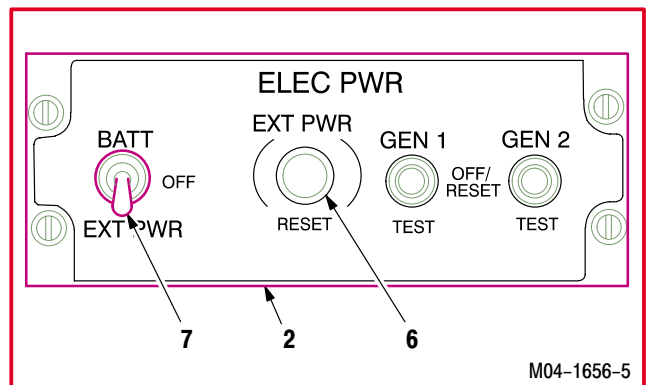
M04-1656-3

- e. Connect AGPU power cable (4) to EXTERNAL PWR ACCESS receptacle J14 (5).
- f. Operate AGPU to supply power to helicopter (TM 55-1730-229-12).



M04-1656-4

- g. Press EXT PWR RESET button (6) on pilot ELEC PWR panel (2).
- h. Set BATT/EXT PWR switch (7) on pilot ELEC PWR panel (2) to EXT PWR.

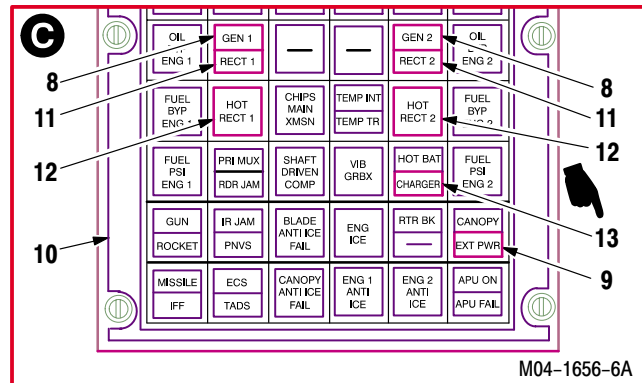


M04-1656-5

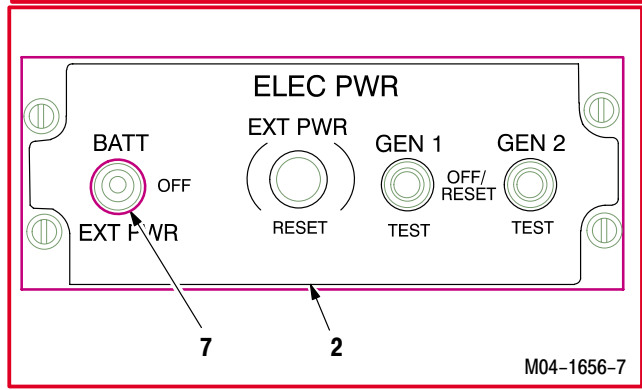
GO TO NEXT PAGE

1.70. EXTERNAL POWER APPLICATION – ELECTRICAL – continued

- i. Verify GEN 1 and GEN 2 lights (8), CHARGER light (13) and EXT PWR light (9) on pilot caution/warning panel (10) are lighted.
- j. Verify RECT 1 and RECT 2 lights (11) on pilot caution/warning panel (10) are not lighted.
- k. Verify HOT RECT 1 and HOT RECT 2 lights (12) on pilot caution/warning panel are not lighted.
- l. Perform maintenance task.
- m. Set BATT/EXT PWR switch (7) on pilot ELEC PWR panel (2) to OFF.
- n. Shut down AGPU (TM 55-1730-229-12).

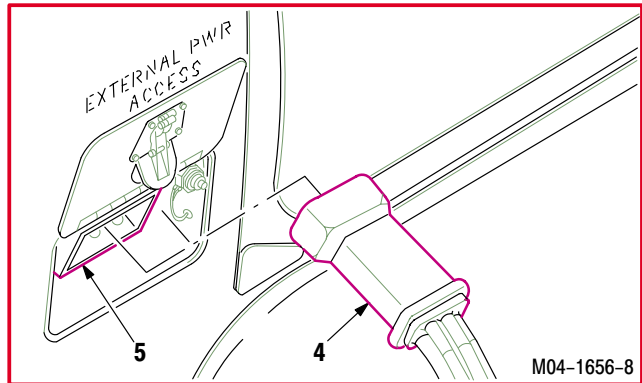


M04-1656-6A



M04-1656-7

- o. Disconnect AGPU power cable (4) from EXTERNAL PWR ACCESS receptacle J14 (5).
- p. Remove AGPU from work area.
- q. Secure access door R345 (para 2.2).



M04-1656-8

END OF TASK



**1.71. EXTERNAL POWER APPLICATION – AIR**

1.71.1. Description

This task covers: Application.

1.71.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
 Aircraft power unit (item 232, App H)

**References:**

TM 55-1730-229-12

**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
2.2	Access door LN5 opened

**Personnel Required:**

67R Attack Helicopter Repairer

1.71.3. Application

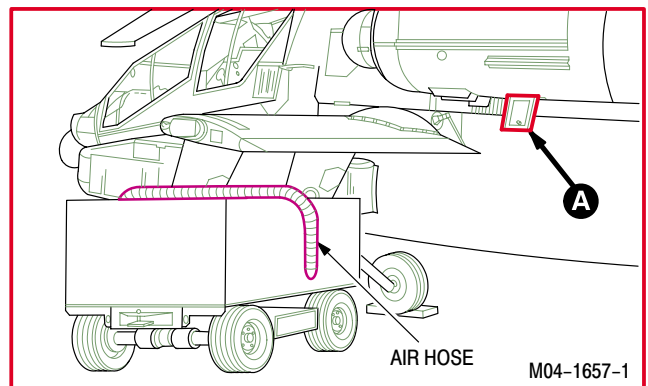
**CAUTION**

Do not put AGPU under a main rotor blade. Main rotor blade damage may occur from extreme heat of AGPU exhaust.

a. **Position AGPU near left wing tip.**

**NOTE**

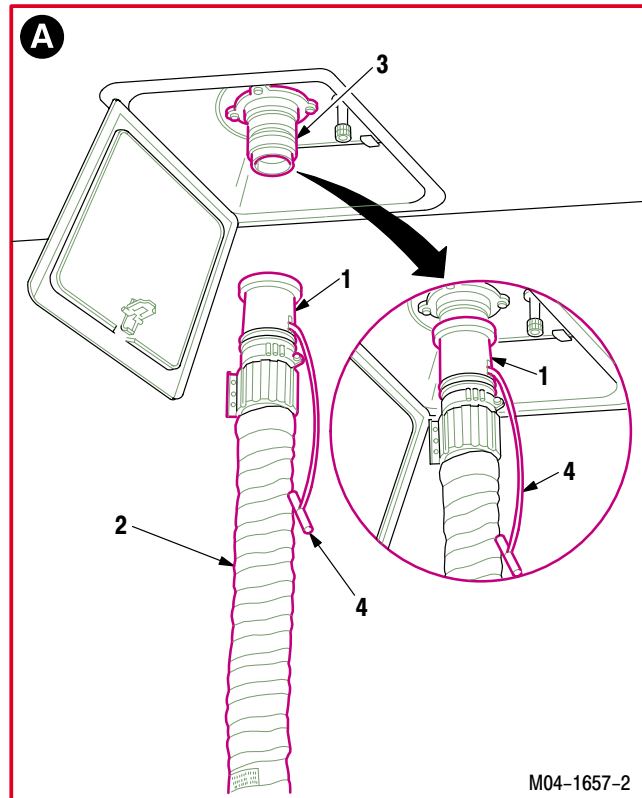
The AGPU will provide 48 psi with no electrical load. Electrical load can be carried by AGPU together with air but large electrical loads should be avoided.



GO TO NEXT PAGE

1.71. EXTERNAL POWER APPLICATION – AIR – continued

- b. **Connect coupling (1) of hose (2) to air nipple (3).**
- c. **Operate AGPU to supply air** (TM 55-1730-229-12).
- d. **Perform maintenance task.**
- e. **Shut off air supply** (TM 55-1730-229-12).
- f. **Shut down AGPU** (TM 55-1730-229-12).
- g. **Disconnect hose (2).**
- h. Pull release handle (4) on coupling (1) to remove hose (2) from air nipple (3).
- i. **Secure access door LN5** (para 2.2).



END OF TASK

**1.72. EXTERNAL POWER APPLICATION – HYDRAULIC (PRIMARY)**

1.72.1. Description

This task covers: Application.

1.72.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
 Aircraft power unit (item 232, App H)

**References:**

TM 55-1730-229-12

**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
2.2	Access door R325 opened

**Personnel Required:**

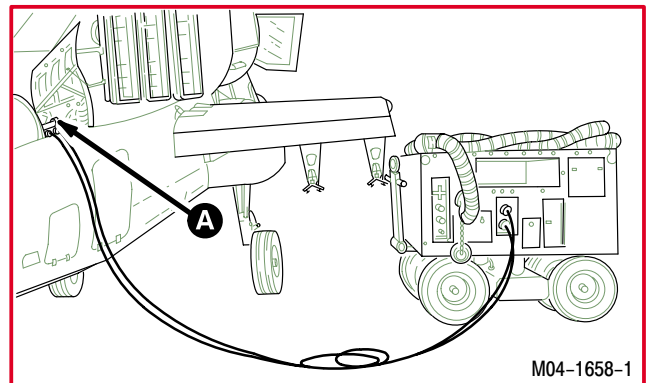
67R      Attack Helicopter Repairer

1.72.3. Application

**CAUTION**

Do not put AGPU under a main rotor blade. Main rotor blade damage may occur from extreme heat of AGPU exhaust.

- a. **Position AGPU parallel to right wing tip.**



GO TO NEXT PAGE

**1.72. EXTERNAL POWER APPLICATION – HYDRAULIC (PRIMARY) – continued**

b. **Connect AGPU return hose (1) to PRIMARY coupling (2).**

- (1) Remove cap (3) from coupling (2).
- (2) Turn coupling nut (4) clockwise until seated and locking teeth engage fully with teeth on coupling (2).

c. **Connect AGPU pressure hose (5) to PRIMARY coupling (6).**

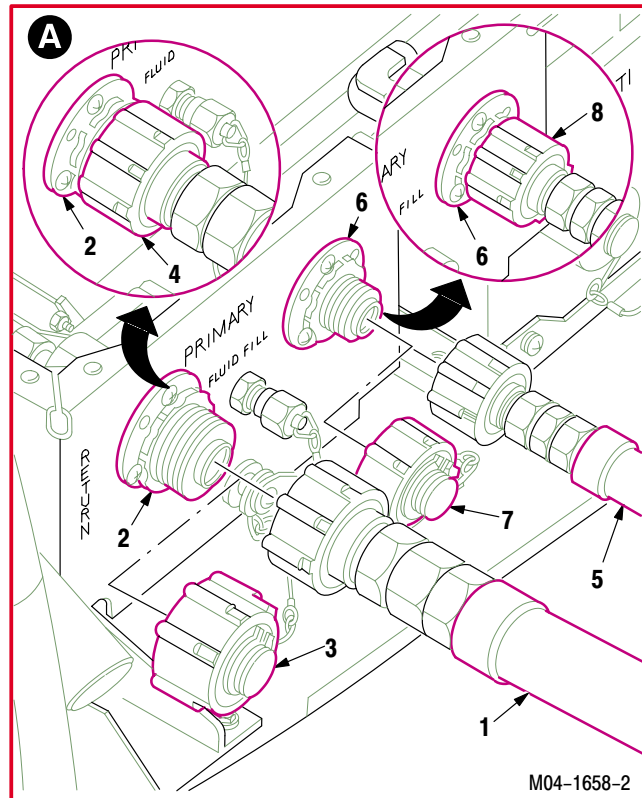
- (1) Remove cap (7) from coupling (6).
- (2) Turn coupling nut (8) clockwise until seated and locking teeth engage fully with teeth on coupling (6).

d. **Connect battery (para 9.40).**

e. **Enter pilot station (para 1.56). Observe all safety precautions.**

f. **Set BATT/EXT PWR switch (9) on ELEC PWR control panel (10) to BATT.**

- (1) If external power is applied (para 1.70), set BATT/EXT PWR switch (9) to EXT PWR.



**WARNING**

The hydraulic system is pressurized to 3000 psi. Be certain that trapped hydraulic pressure is released before loosening any connections. Failure to do so could result in death or serious injury. If injury occurs, seek medical aid.

**CAUTION**

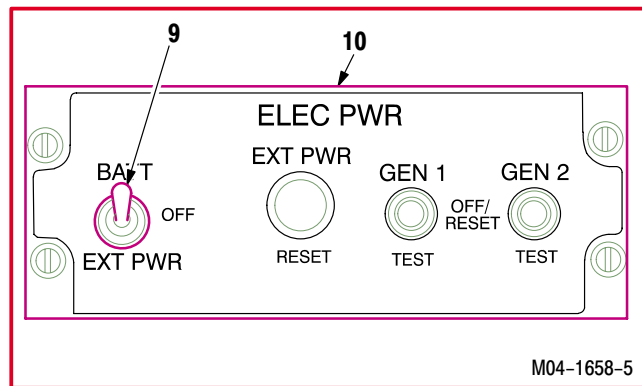
Do not exceed 3000 PSI or damage to hydraulic system and components may occur.

g. **Apply hydraulic pressure to helicopter (TM 55-1730-229-12).**

- (1) Adjust AGPU to 3000 psi output pressure.

h. **Perform maintenance task.**

GO TO NEXT PAGE



---

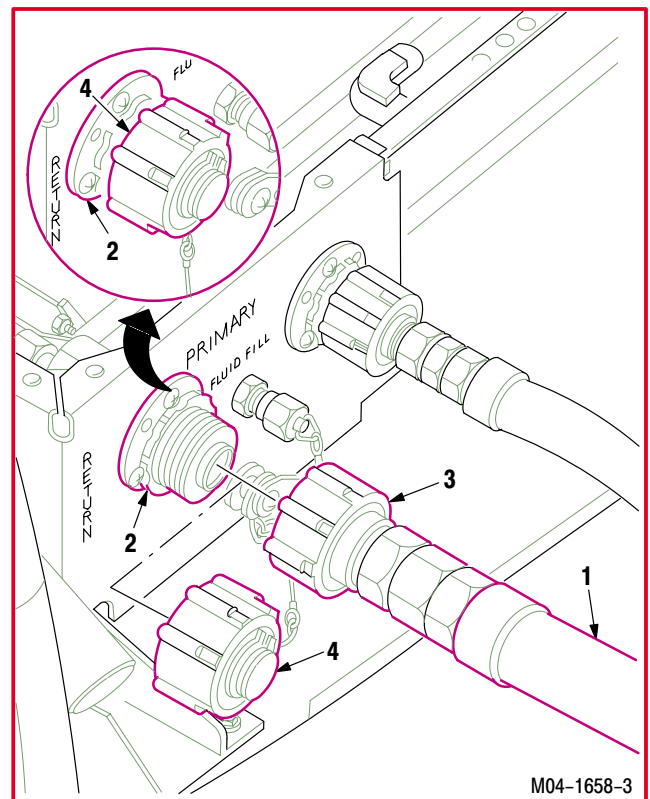
**1.72. EXTERNAL POWER APPLICATION – HYDRAULIC (PRIMARY) – continued**


---

**NOTE**

Disconnect AGPU hydraulic pressure and return hoses from ground service panel immediately after completion of maintenance task. This will prevent over servicing of hydraulic manifold.

- i. **Reduce AGPU pressure to 0 psi** (TM 55-1730-229-12).
- j. **Service primary hydraulic manifold reservoir** (para 1.34).
- k. **Disconnect AGPU return hose (1) from PRIMARY coupling (2).**
  - (1) Turn coupling nut (3) counterclockwise until it clears coupling (2).
  - (2) Install cap (4) on coupling (2).



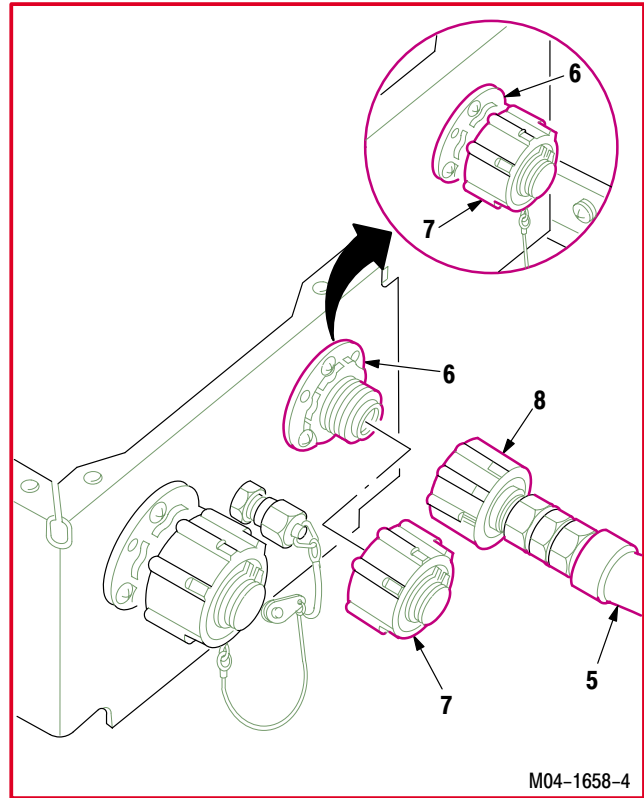
GO TO NEXT PAGE

**1.72. EXTERNAL POWER APPLICATION – HYDRAULIC (PRIMARY) – continued**

**l. Disconnect AGPU pressure hose (5) from PRIMARY coupling (6).**

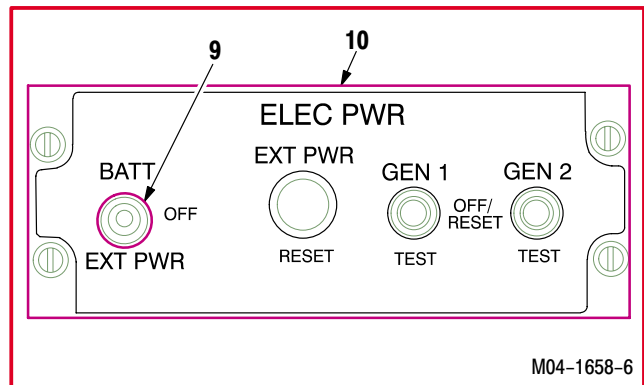
- (1) Turn coupling nut (8) counterclockwise until it clears coupling (6).
- (2) Install cap (7) on coupling (6).

**m. Pressurize primary and utility hydraulic manifolds by applying external power – air (para 1.71).**



**n. Set BATT/EXT PWR switch (9) on ELEC PWR control panel (10) to OFF.**

- o. Disconnect battery (para 9.40).**
- p. Secure access door R325 (para 2.2).**



END OF TASK

**1.73. EXTERNAL POWER APPLICATION – HYDRAULIC (UTILITY)**

1.73.1. Description

This task covers: Application.

1.73.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
 Aircraft power unit (item 232, App H)

**References:**

TM 55-1730-229-12

**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
2.2	Access door R325 opened

**Personnel Required:**

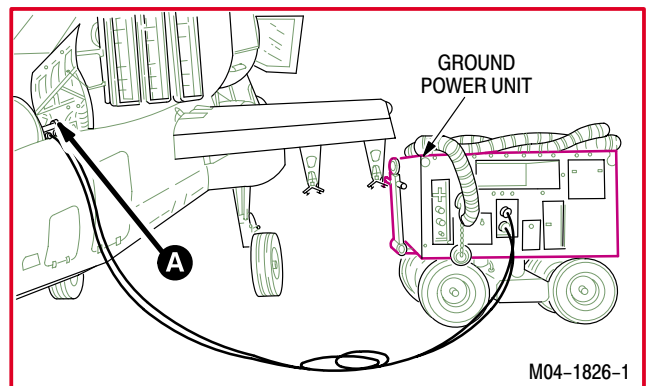
67R      Attack Helicopter Repairer

1.73.3. Application

**CAUTION**

Do not put AGPU under a main rotor blade. Main rotor blade damage may occur from extreme heat of AGPU exhaust.

- a. **Position AGPU parallel to right wing tip.**



GO TO NEXT PAGE

**1.73. EXTERNAL POWER APPLICATION – HYDRAULIC (UTILITY) – continued**

b. **Connect AGPU return hose (1) to UTILITY coupling (2).**

- (1) Remove cap (3) from coupling (2).
- (2) Turn coupling nut (4) clockwise until seated and locking teeth engage fully with teeth on coupling (2).

c. **Connect AGPU pressure hose (5) to UTILITY coupling (6).**

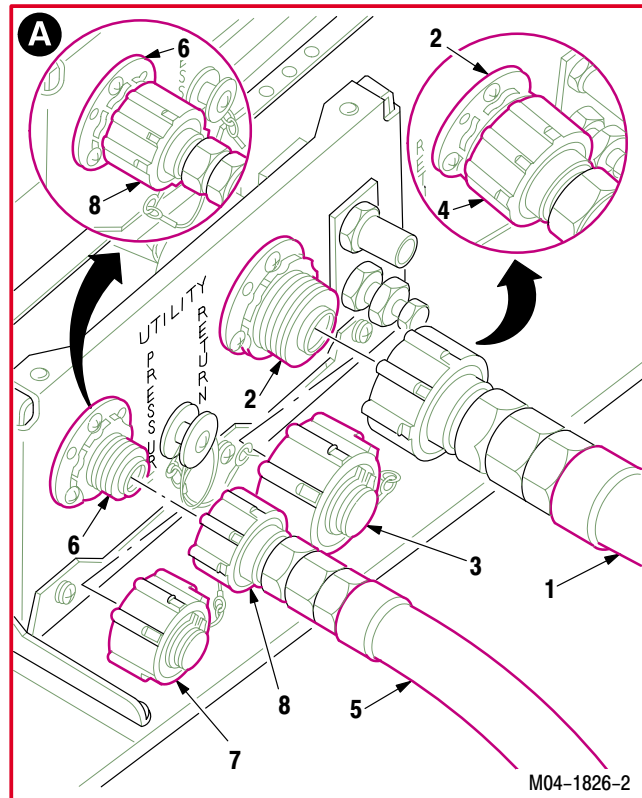
- (1) Remove cap (7) from coupling (6).
- (2) Turn coupling nut (8) clockwise until seated and locking teeth engage fully with teeth on coupling (6).

d. **Connect battery** (para 9.40).

e. **Enter pilot station** (para 1.56). **Observe all safety precautions.**

f. **Set BATT/EXT PWR switch (9) on ELEC PWR control panel (10) to BATT.**

- (1) If external power is applied (para 1.70), set **BATT/EXT PWR switch (9) to EXT PWR.**



**WARNING**

The hydraulic system is pressurized to 3000 psi. Be certain that trapped hydraulic pressure is released before loosening any connections. Failure to do so could result in death or serious injury. If injury occurs, seek medical aid.

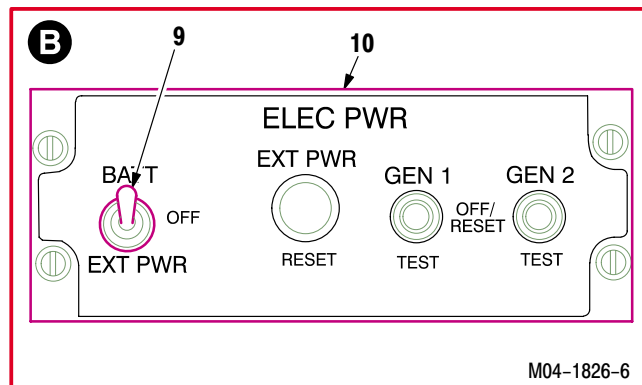
**CAUTION**

Do not exceed 3000 PSI or damage to hydraulic system and components may occur.

g. **Apply hydraulic pressure to helicopter** (TM 55-1730-229-12).

- (1) Adjust AGPU to 3000 psi output pressure.

h. **Perform maintenance task.**



GO TO NEXT PAGE



---

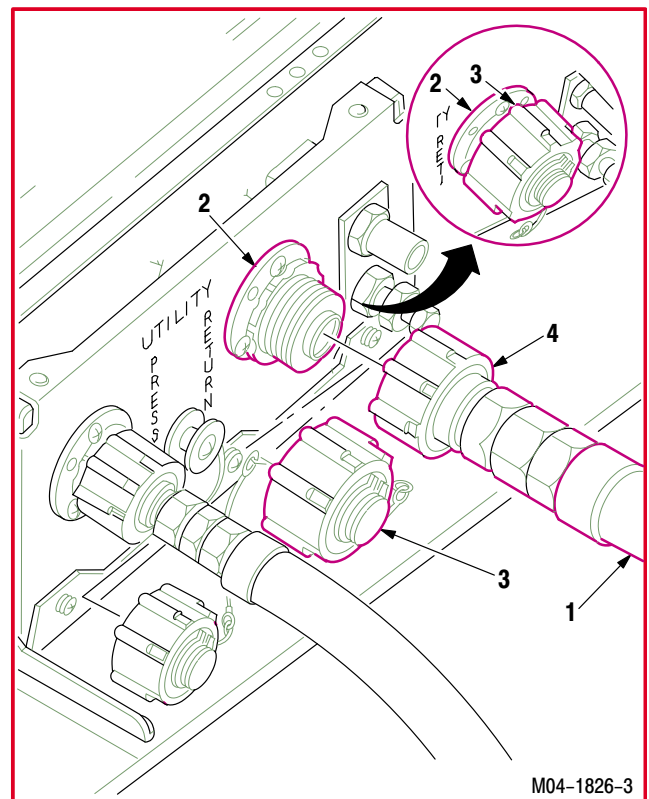
**1.73. EXTERNAL POWER APPLICATION – HYDRAULIC (UTILITY) – continued**

---

**NOTE**

Disconnect hydraulic AGPU pressure and return hose from ground service panel immediately after completion of maintenance task. This will prevent over servicing of hydraulic manifold.

- i. **Reduce AGPU hydraulic pressure to 0 psi** (TM 55-1730-229-12).
- j. **Service utility manifold reservoir** (para 1.34).
- k. **Disconnect AGPU return hose (1) from UTILITY coupling (2).**
  - (1) Turn coupling nut (4) counterclockwise until it clears coupling (2).
  - (2) Install cap (3) on coupling (2).



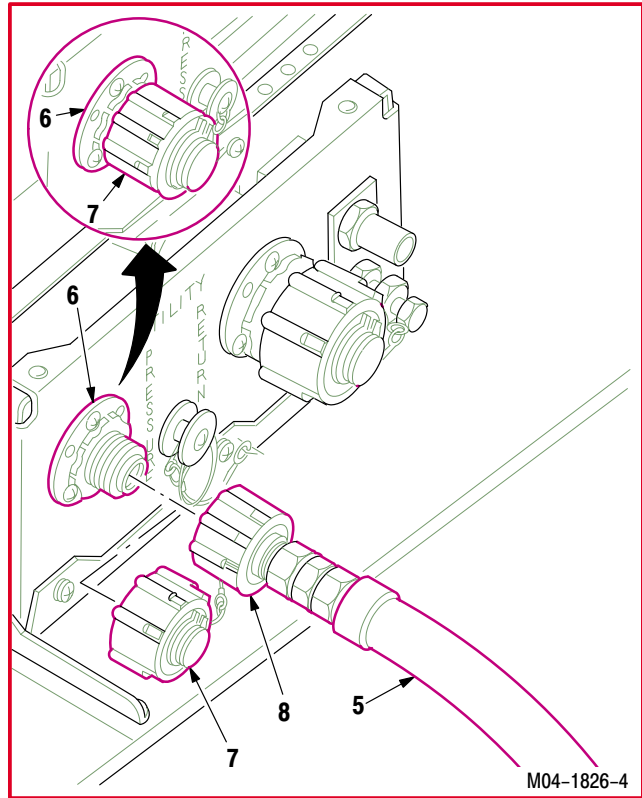
GO TO NEXT PAGE

**1.73. EXTERNAL POWER APPLICATION – HYDRAULIC (UTILITY) – continued**

**l. Disconnect AGPU pressure hose (5) from utility coupling (6).**

- (1) Turn coupling nut (8) counterclockwise until it clears coupling (6).
- (2) Install cap (7) on coupling (6).

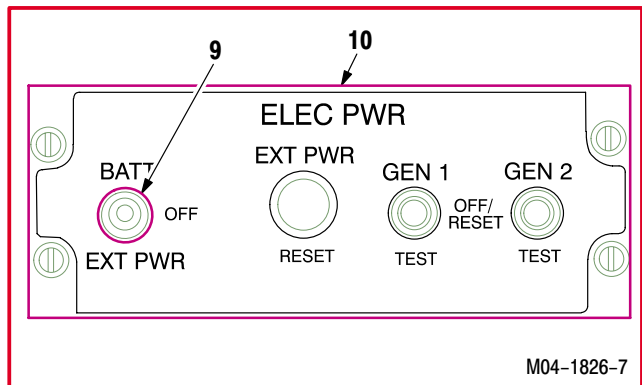
**m. Pressurize primary and utility hydraulic manifolds by applying external power – air (para 1.71).**



**n. Set BATT/EXT PWR switch (9) on ELECT PWR control panel (10) to OFF.**

**o. Disconnect battery (para 9.40).**

**p. Secure access door R325 (para 2.2).**



END OF TASK

**1.74. APU OPERATING INSTRUCTIONS – USING BATTERY POWER**

1.74.1. Description

This task covers: Operating Instructions.

1.74.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)

**References:**

TM 1-1270-476-20  
 TM 1-1520-238-T  
 TM 1-5855-265-20

**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
1.134	Maintenance headset connected
TM 1-1520-238-T	Fuel system – visual check completed
1.13	Aft fuel tank level checked
9.40	Battery connected

**Personnel Required:**

67R Attack Helicopter Repairer  
 One person to assist

**CAUTION**

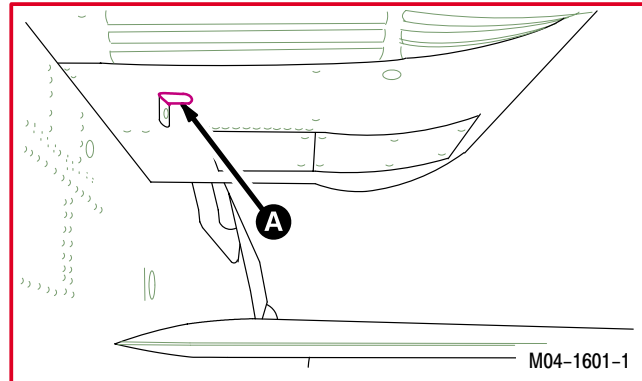
Only certified personnel are authorized to operate the APU. Failure to comply could result in equipment damage.

1.74.3. Operating Instructions

- a. **Verify correct main transmission oil level right sight indicator** (para 1.32).
- b. **Verify correct primary hydraulic fluid level** (para 1.34).
- c. **Open access door RN5** (para 2.2).

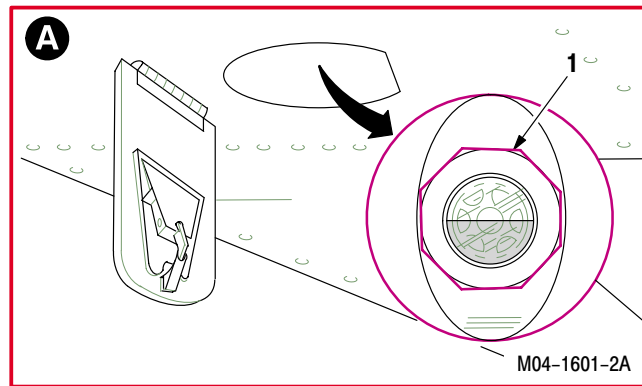
GO TO NEXT PAGE

1.74. APU OPERATING INSTRUCTIONS – USING BATTERY POWER – continued



d. **Verify correct APU oil level.**

- (1) Use access at bottom right nacelle.
- (2) Indicator ball at gage (1) midpoint.



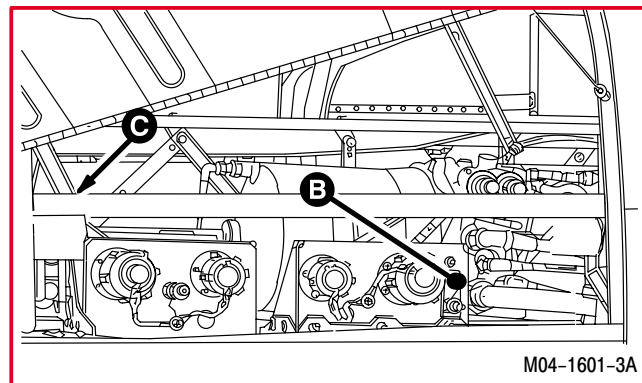
e. **Secure access door RN5 (para 2.2).**

f. **Open aft electronics equipment door R295, and close APU circuit breaker in aft avionics bay (para 2.2).**

g. **Secure access door R295 (para 2.2).**

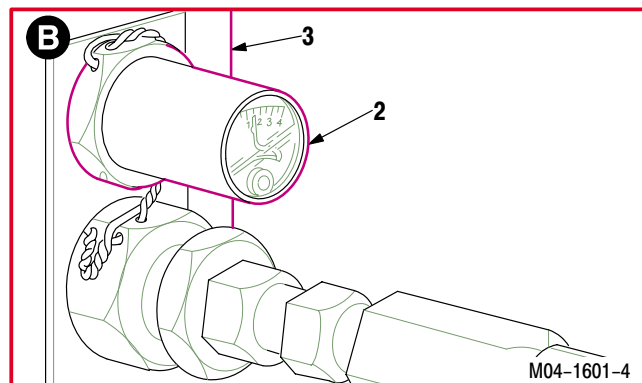
h. **Open access door R325 (para 2.2).**

i. **Verify correct utility hydraulic fluid level (para 1.34).**



j. **Verify 3000 psi hydraulic pressure.**

- (1) Check utility pressure gage (2) on utility service panel (3) indicates between 2600 and 3000 psi.



GO TO NEXT PAGE

## 1.74. APU OPERATING INSTRUCTIONS – USING BATTERY POWER – continued

**CAUTION**

Use of excessive force to actuate hydraulic hand pump could cause damage to helicopter components. If actuation of hand pump is stiff or 3000 psi cannot be accomplished, this may be an indication that the utility hydraulic accumulator requires nitrogen servicing (para 1.36).

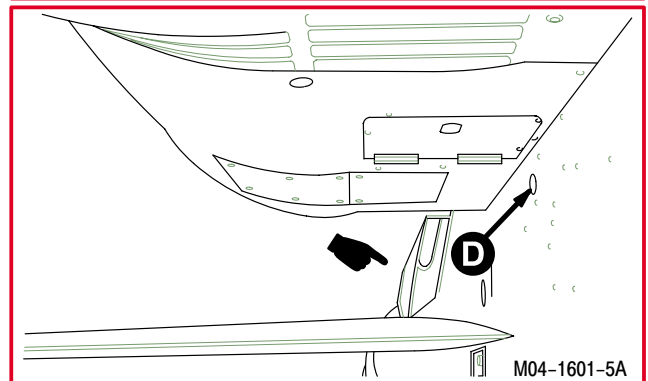
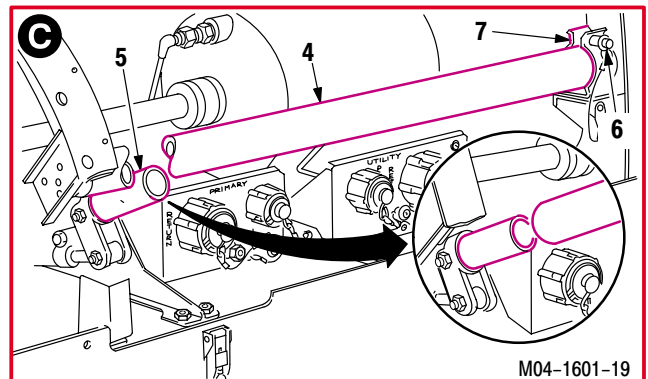
- (2) If pressure is below 2600 psi use hand pump to increase pressure to 3000 psi. If not, proceed to step k.

- (a) Install pump handle (4) on bellcrank (5).

- 1 Remove retaining pin (6) from clip (7) and handle (4).
- 2 Slide handle (4) over bellcrank (5) and hand pump 2600 to 3000 psi.

- (b) Stow pump handle (4) in clip (7).

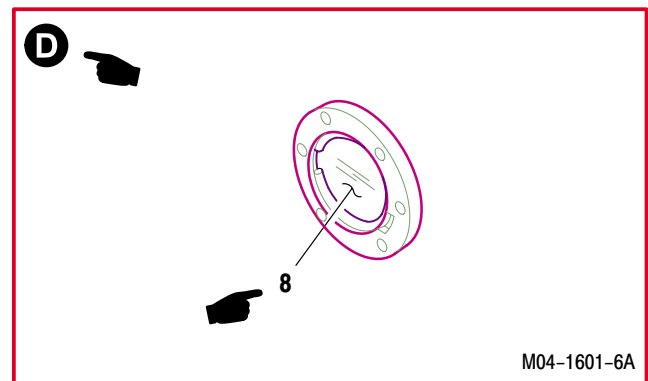
- 1 Install handle in clip (7) and insert retaining pin (6).

**CAUTION**

Ensure access door R325 is closed and secured before APU start up. Failure to comply could result in thermal damage to aircraft structure.

- k. **Secure access door R325** (para 2.2).
- l. **Verify APU enclosure air inlet screen is clean of FOD** (para 15.42).
- m. **Verify fire extinguisher blow out indicator (8) is in place.**

- (1) Check indicator (8) below left engine nacelle.



GO TO NEXT PAGE

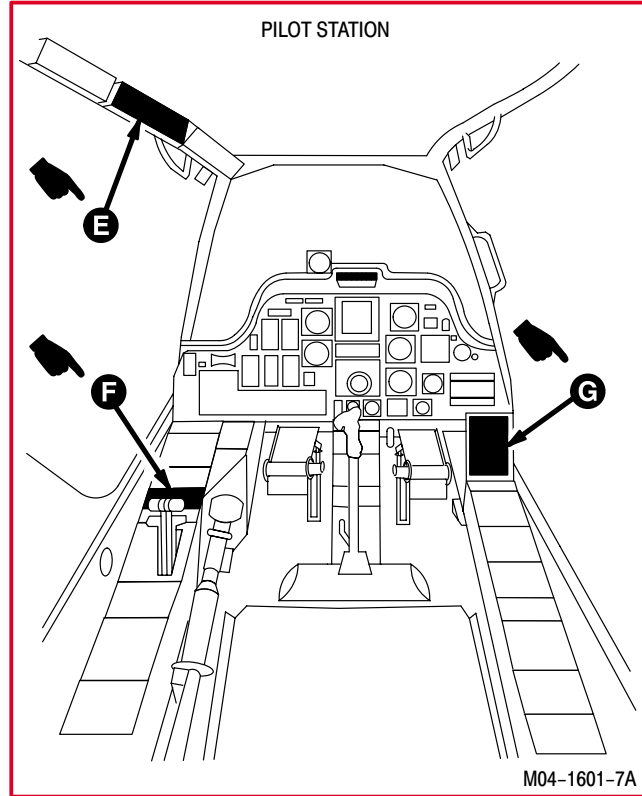
1.74. APU OPERATING INSTRUCTIONS – USING BATTERY POWER – continued

- n. Verify correct main transmission oil level left sight indicator (para 1.32).
- o. Remove TADS window cover assembly (TM 1-1270-476-20).
- p. Remove PNVS window cover assembly (TM 1-5855-265-20).

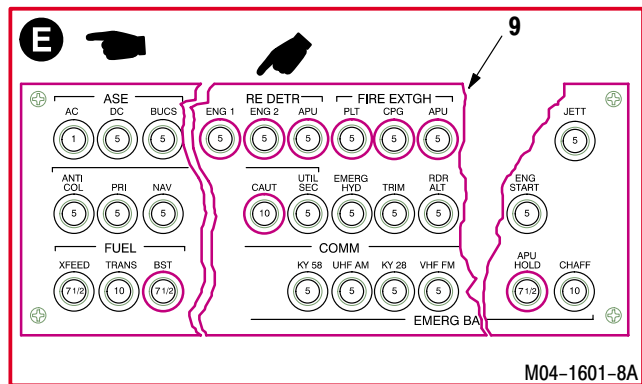
**CAUTION**

A qualified person shall be in pilot station to monitor instruments and fire warning system.

- q. Enter pilot station (para 1.56). Observe all safety precautions.



- r. On pilot center circuit breaker panel (9), close FUEL BST, APU HOLD, LT CAUT, FIRE DETR ENG 1, FIRE DETR ENG 2, FIRE DETR APU, FIRE EXTGH PLT, FIRE EXTGH CPG, and FIRE EXTGH APU circuit breakers.



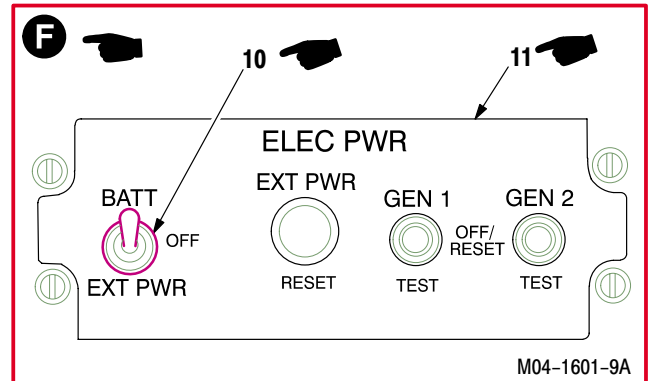
GO TO NEXT PAGE

1.74. APU OPERATING INSTRUCTIONS – USING BATTERY POWER – continued

**CAUTION**

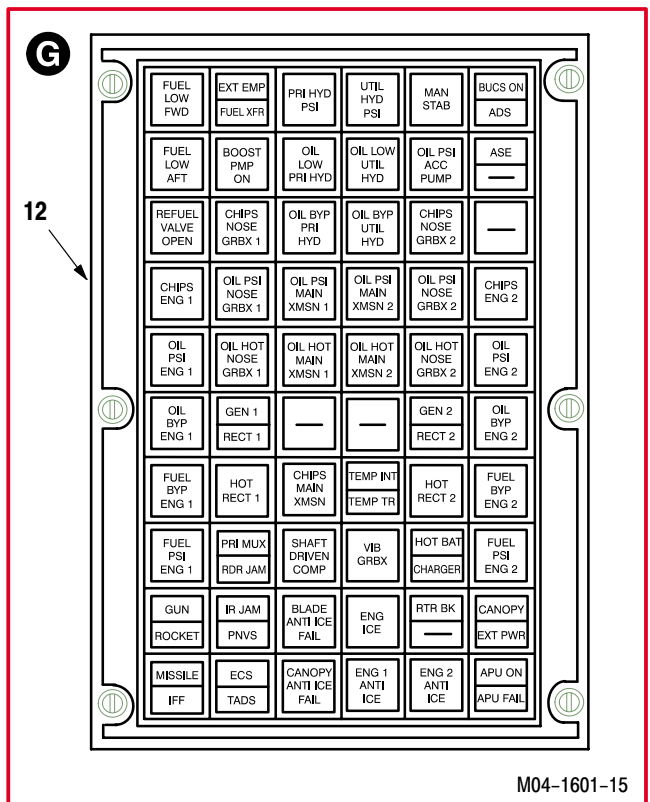
Ensure CPG and pilot engine fire pull handles, and pilot APU fire pull handle is pushed in. Failure to do so could result in accidental fire bottle discharge.

- s. Set BATT/EXT PWR switch (10) on pilot ELEC PWR panel (11) to BATT.



- t. On the pilot caution/warning panel (12) check that the following segments illuminate:

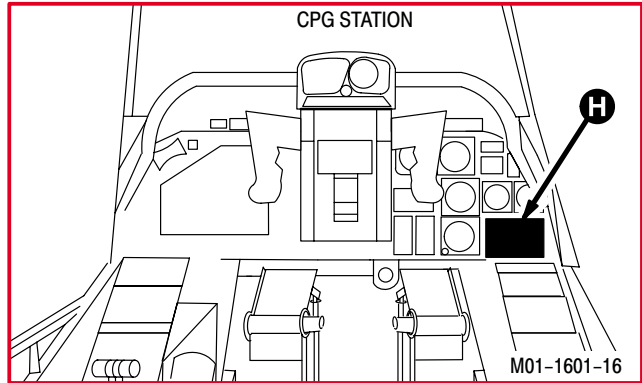
PRI HYD PSI	UTIL HYD PSI
MAN STAB	OIL PSI ACC PUMP
OIL PSI NOSE GRBX 1	OIL PSI MAIN XMSN 1
OIL PSI MAIN XMSN 2	OIL PSI NOSE GRBX 2
OIL PSI ENG 1	OIL PSI ENG 2
GEN 1/RECT 1	GEN 2/RECT 2
FUEL PSI ENG 1	SHAFT DRIVEN COMP
FUEL PSI ENG 2	CANOPY (if open)
ENG 1 ANTI-ICE	ENG 2 ANTI ICE



GO TO NEXT PAGE

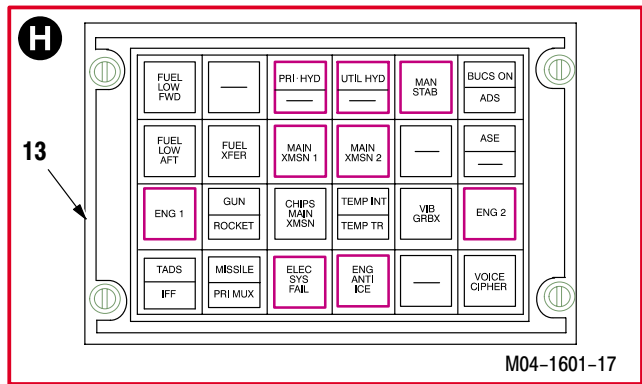
1.74. APU OPERATING INSTRUCTIONS – USING BATTERY POWER – continued

- u. Enter CPG station (para 1.56). Observe all safety precautions.



- v. On the CPG caution/warning panel (13) check that the following segments illuminate:

PRI-HYD	UTIL HYD
MAN STAB	MAIN XMSN 1
MAIN XMSN 2	ENG 1
ENG 2	ELEC SYS FAIL
ENG ANTI ICE	



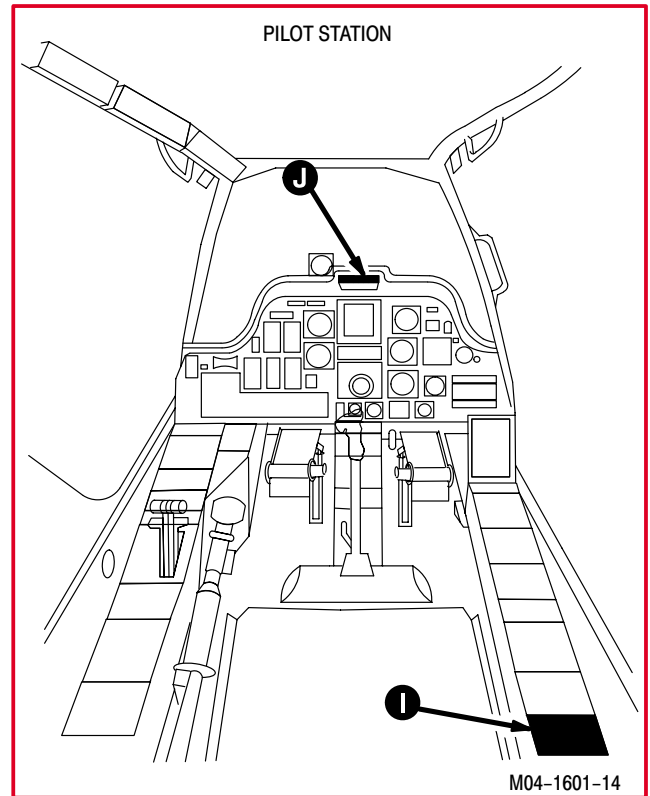
GO TO NEXT PAGE



1.74. APU OPERATING INSTRUCTIONS – USING BATTERY POWER – continued

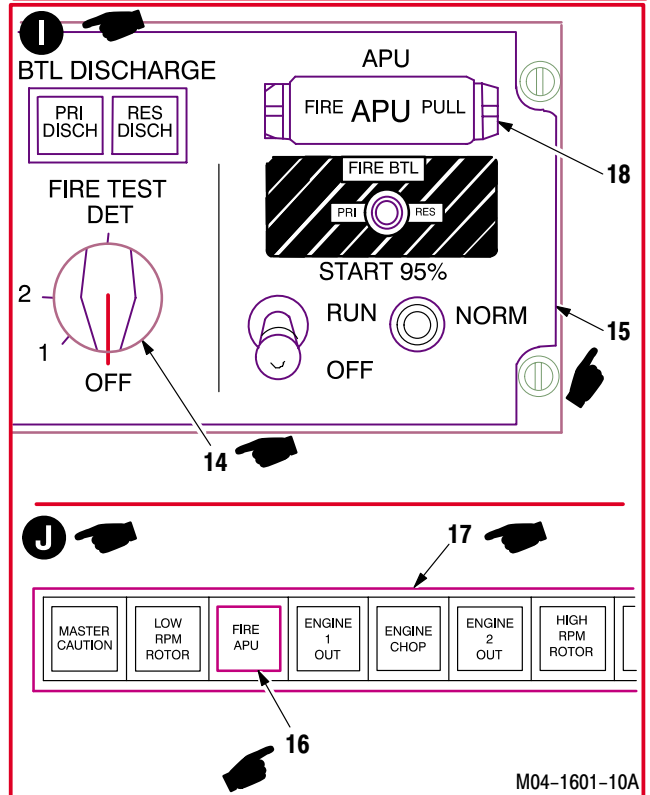
**CAUTION**

Ensure fire bottle select switch **PRI/RES** is centered or fire bottle may discharge.



w. Check APU fire detection system.

- (1) Set **FIRE TEST DET** switch (14) on APU fire test panel (15) to 1.
- (2) Verify **FIRE APU** light (16) on master caution warning panel (17) is lighted.
- (3) Verify **APU FIRE PULL** handle light (18) on APU fire test panel (15) is lighted.
- (4) Set **FIRE TEST DET** switch (14) on APU fire test panel (15) to 2.
- (5) Verify **FIRE APU** light (16) and **APU FIRE PULL** light (18) are lighted.
- (6) Set **FIRE TEST DET** switch (14) on APU fire test panel (15) to **OFF**.



GO TO NEXT PAGE

---

1.74. APU OPERATING INSTRUCTIONS – USING BATTERY POWER – continued

---

**WARNING**

- APU operation exceeds acceptable safe noise levels. Personnel working near or operating will wear approved ear protection to protect their hearing. Failure to comply could result in permanent hearing loss.
- To prevent accidental APU start, ensure that the APU circuit breaker in the AFT avionics bay and the APU HOLD circuit breaker on the pilot center circuit breaker panel are open when battery or external electrical power is attached to the helicopter and unqualified personnel are in and around the pilot crewstation.
- APU fires may go unnoticed by crew/operators in crewstations. Post a fire guard in continuous communication by the intercommunication system (ICS) with the crew/operators during APU run-up.

**CAUTION**

- Do not attempt to use the **95 % NORM** switch when outside ambient air temperature is above  $-18^{\circ}$  C ( $0^{\circ}$  F). The viscosity of the hydraulic fluid and APU oil varies with surrounding climatic conditions of the region. If the **95% NORM** switch is used in warm climatic conditions, extreme mechanical stress is placed on the utility hydraulic accumulator shaft. Excessive wear loads are also placed on the power takeoff (PTO) clutch during sudden engagement which occurs during 95% norm operation, causing a decrease in the duty life of the dry friction clutch.
- If APU does not start, wait 30 seconds for combustion chamber to drain before attempting APU restart.

**NOTE**

**APU RUN** switch is spring loaded from **START** to **RUN**. Automatic starting will shut down if switch is operated improperly.

- x. Have assistant check vicinity of helicopter and warn personnel that APU is about to start. Wait for assistant to advise **CLEAR FOR APU START** through ICS.
- y. Have assistant take position 10 feet to side of engine No. 2 exhaust with fire extinguisher.

GO TO NEXT PAGE

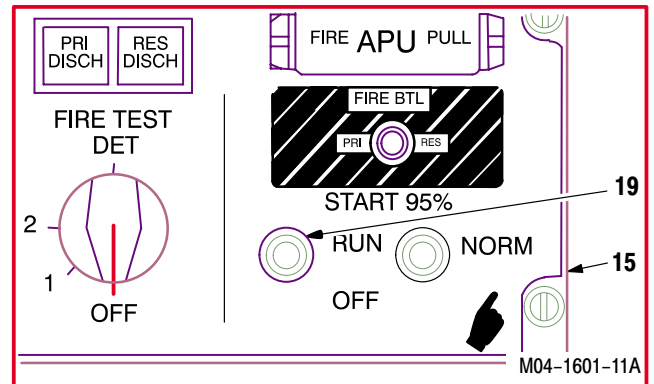
1.74. APU OPERATING INSTRUCTIONS – USING BATTERY POWER – continued

z. Start APU.

- (1) On APU fire test panel (15), hold **RUN** switch (19) to **RUN** for 1 or 2 seconds, then to **START** for 1 or 2 seconds.
- (2) Release switch (19).

**NOTE**

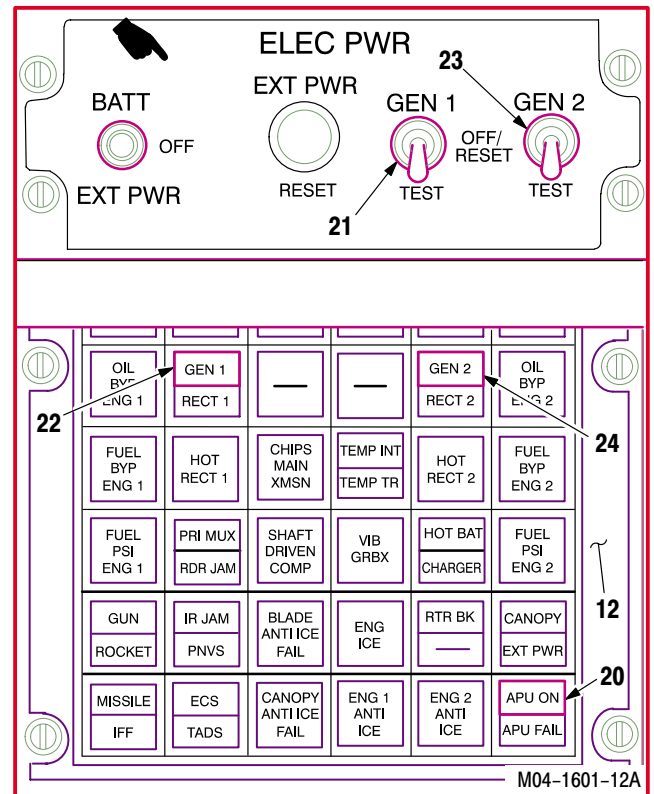
- APU is hydraulically started. If it does not start, hydraulic accumulator pressure may be too low.
- When the APU turbine rotor reaches 95% or greater of normal revolution per minute (rpm), the **APU ON** indicator on the pilot caution/warning panel lights.
- **APU FAIL** indicator on the caution/warning panel remains lit until APU oil pressure reaches normal operating pressure.



aa. Verify **APU ON** indicator light (20) is lighted on pilot caution/warning panel (12).

ab. Turn on two generators.

- (1) Set **GEN 1** switch (21) to **TEST**.
- (2) Verify **GEN 1** light (22) on pilot caution/warning panel (18) is not lighted.
- (3) Set **GEN 2** switch (23) to **TEST**.
- (4) Verify **GEN 2** light (24) on pilot caution/warning light panel (12) is not lighted.
- (5) Set switches (21) and (23) to **GEN 1** and **GEN 2**.
- (6) Verify **GEN 1** light (22) and **GEN 2** light (24) are not lighted.

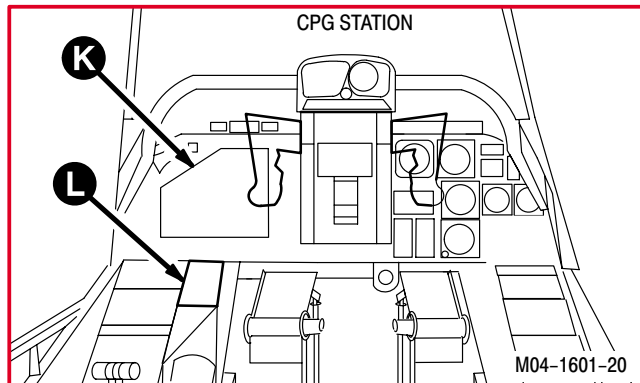


GO TO NEXT PAGE

1.74. APU OPERATING INSTRUCTIONS – USING BATTERY POWER – continued

ac. Verify switch positions on CPG FIRE CONTROL panel (25) and data entry keyboard (DEK) (26).

- (1) MUX switch (27) is set to **PRI**.
- (2) FCC/MUX switch (28) is set to **ON**.
- (3) SYSTEM FC SYM GEN switch (29) is set to **FC SYM GEN**.
- (4) SYSTEM TADS switch (30) is set to **OFF**.
- (5) DATA ENTRY switch is (31) set to **STBY**.

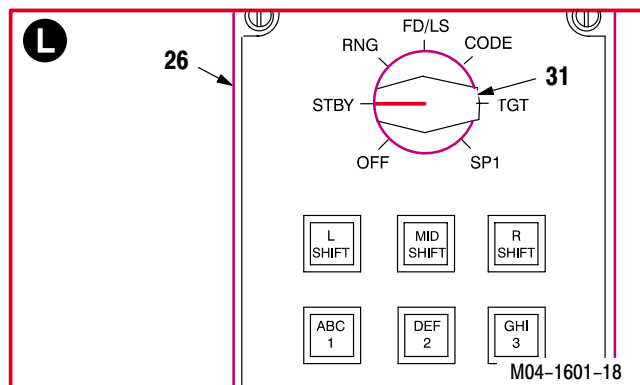
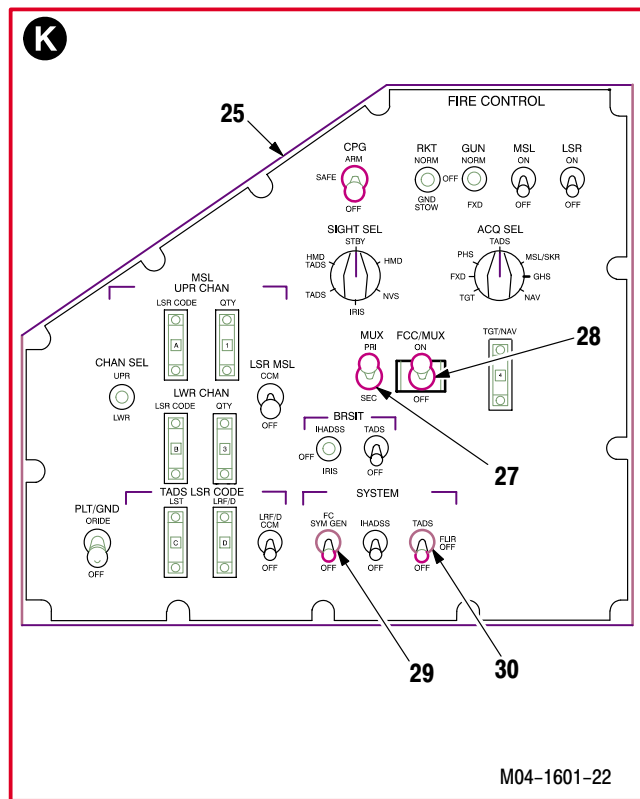


**CAUTION**

- If XMSN 1 and XMSN 2 temperature exceed 130°C (266°F), shut down APU. Allow the transmission fluid to cool for 30 minutes prior to resuming APU ground operations; or transmission fluid may be cooled by authorized personnel operating engine with turning rotor.
- Do not operate the APU for more than 5 minutes at a main transmission oil temperature of 120°C (248°F). Shut down APU to prevent damaging accessory gear box components.

**NOTE**

- The main transmission oil temperature and pressure can be viewed on the CPG heads out display (HOD) or any selected pilot/CPG crewstation video monitor.
- If ECS air temperature is very warm and cannot be adjusted with TEMP control, shutdown APU.

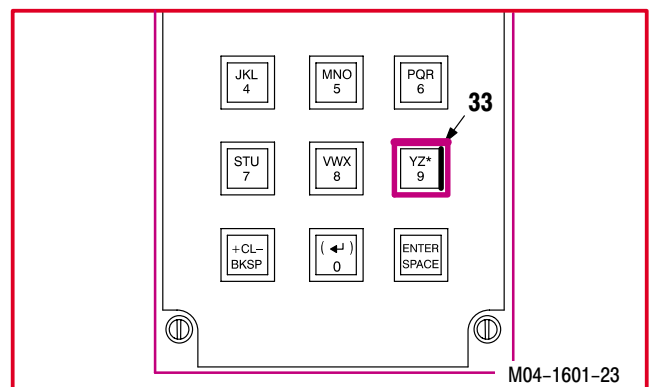
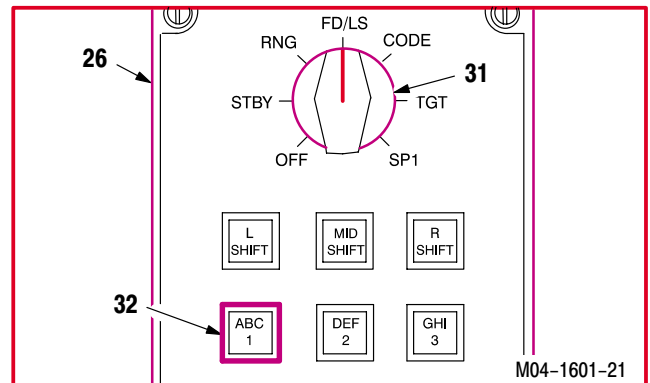


GO TO NEXT PAGE

1.74. APU OPERATING INSTRUCTIONS – USING BATTERY POWER – continued

ad. **Monitor transmission oil temperature and pressure every 30 minutes** (or as required) **of APU operation.**

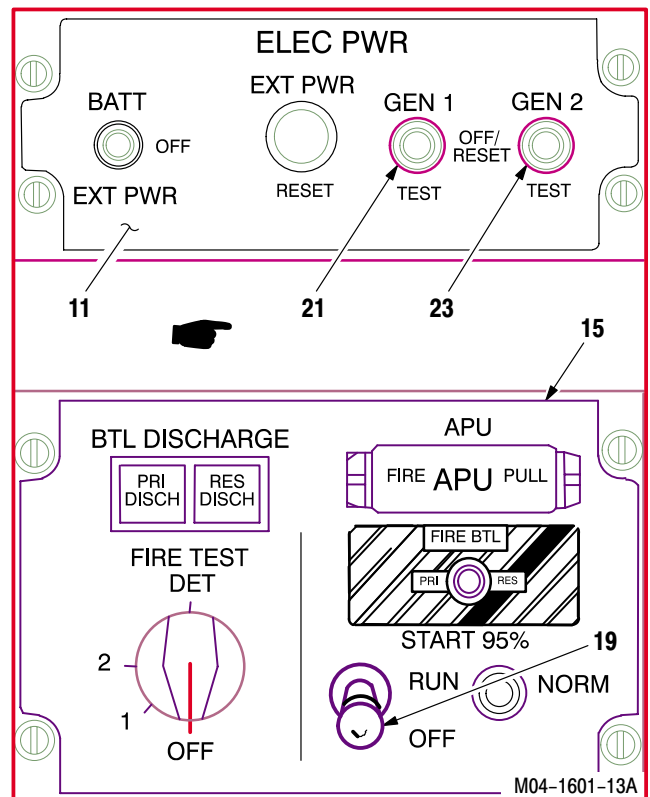
- (1) Set **DATA ENTRY** switch (31) to **FD/LS**
- (2) On DEK (26) press any key except **ENTER SPACE** or **SHIFT**.
- (3) On DEK (26), press and release **ABC/1** (32) and **YZ\*/9** (33) keys.
- (4) To return to the maintenance FD/LS menu and abort the FD/LS transmission check, set **DATA ENTRY** switch (31) to **STBY** and repeat steps (1) and (2).



ae. **Perform maintenance task.**

af. **Turn off two generators.**

- (1) Set **GEN 1** switch (21) on **ELEC PWR** panel (11) to **OFF/RESET**.
- (2) Set **GEN 2** switch (23) on **ELEC PWR** panel (11) to **OFF/RESET**.



**CAUTION**

The APU may be restarted after roll down (compressor comes to a complete stop). Wait 30 seconds for fuel to drain. The PTO clutch duty cycle allows two consecutive start attempts and then a 20 minute delay before the next start attempt. No more than three starts shall be allowed in a 1 hour period. Start attempts in which the clutch does not engage do not apply. Failure to comply could result in damage to the PTO clutch.

ag. **Turn off APU.**

- (1) Set **RUN** switch (19) on APU fire test panel (15) to **OFF**.

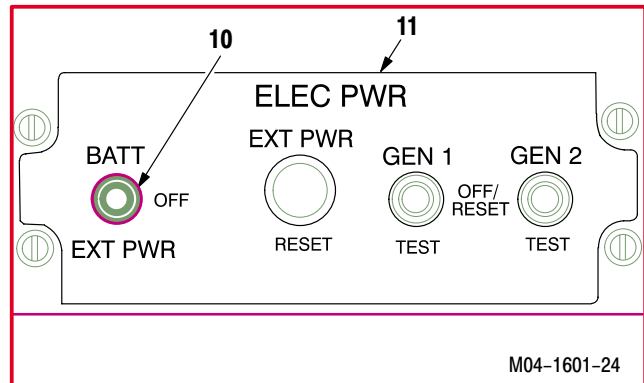
**NOTE**

Allow APU to roll down before proceeding with the following procedures.

GO TO NEXT PAGE

1.74. APU OPERATING INSTRUCTIONS – USING BATTERY POWER – continued

- ah. **Set BATT/EXT PWR switch (10) on ELEC PWR panel (11) to OFF.**
- ai. **Install PNVS window cover assembly** (TM 1-5855-265-20).
- aj. **Install TADS window cover assembly** (TM 1-1270-476-20).
- ak. **Disconnect battery** (para 9.40).
- al. **Disconnect and remove maintenance headset** (para 1.134).



END OF TASK

**1.75. APU OPERATING INSTRUCTIONS – USING EXTERNAL POWER**

1.76.1. Description

This task covers: Operating Instructions.

1.76.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)

**References:**

TM 1-1270-476-20  
 TM 1-1520-238-T  
 TM 1-5855-265-20

**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
1.134	Maintenance headset connected
TM 1-1520-238-T	Fuel system – visual check completed
1.73	External power – hydraulic (utility) applied

**Personnel Required:**

67R Attack Helicopter Repairer  
 One person to assist



**APU will start with battery switch in OFF if battery is connected. Death or serious injury could result if APU starts. If injury occurs, seek medical aid.**



Only certified personnel are authorized to operate the APU. Failure to comply could result in equipment damage.

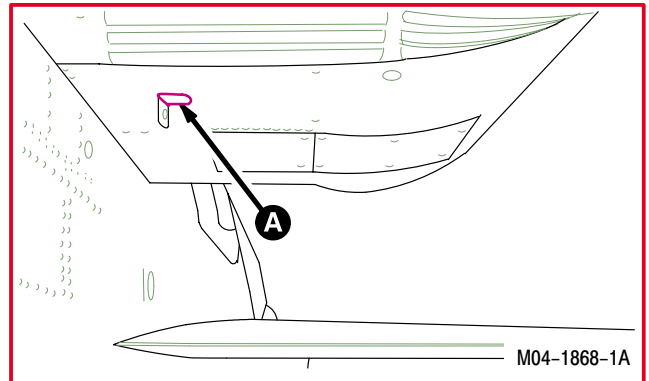
1.76.3. Operating Instructions

- a. **Verify correct main transmission oil level in right sight indicator** (para 1.32).
- b. **Verify correct primary hydraulic fluid level** (para 1.34).

GO TO NEXT PAGE

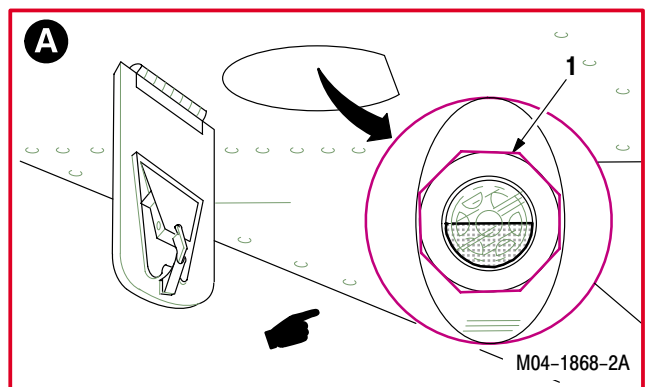
**1.75. APU OPERATING INSTRUCTIONS – USING EXTERNAL POWER – continued**

c. **Open access door RN5 (para 2.2).**



d. **Verify correct APU oil level.**

- (1) Use access at bottom right nacelle.
- (2) Indicator ball at gage (1) midpoint.



e. **Secure access door RN5 (para 2.2).**

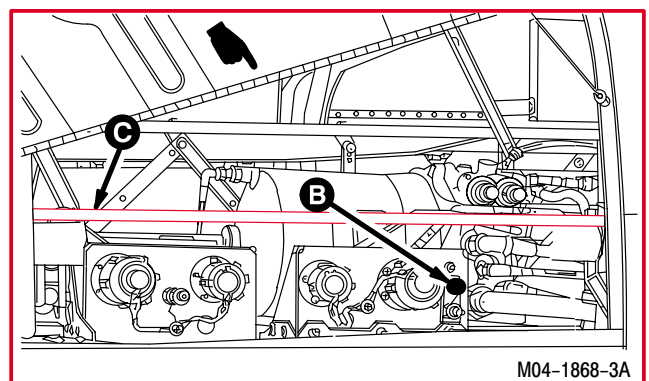
f. **Open access door R295 (para 2.2).**

g. **Close APU circuit breaker in aft avionics bay.**

h. **Secure access door R295 (para 2.2).**

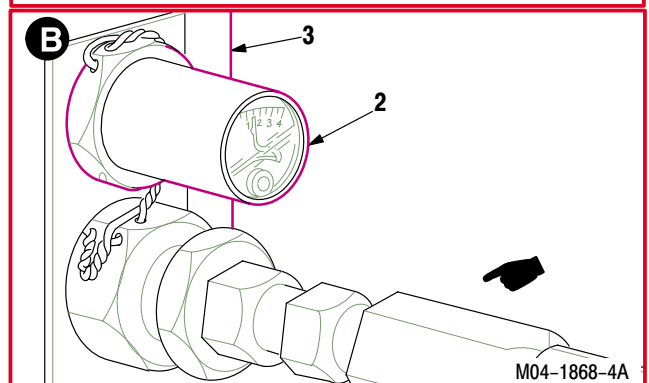
i. **Open access door R325 (para 2.2).**

j. **Verify correct utility hydraulic fluid level (para 1.34).**



k. **Verify 3000 psi hydraulic pressure.**

- (1) Check utility pressure gage (2) on utility service panel (3) indicates between 2600 and 3000 psi.



GO TO NEXT PAGE



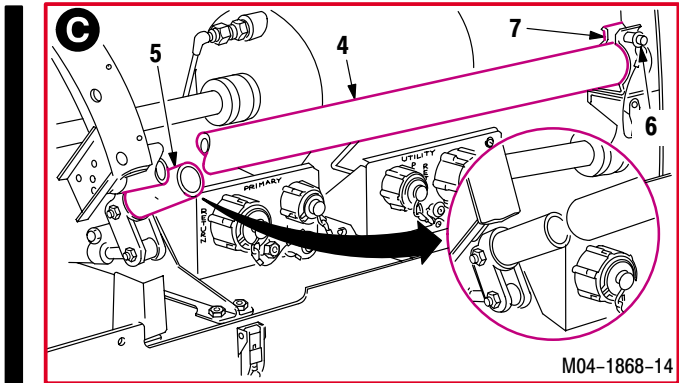
1.75. APU OPERATING INSTRUCTIONS – USING EXTERNAL POWER – continued

**CAUTION**

Use of excessive force to actuate hydraulic hand pump could cause damage to helicopter components. If actuation of hand pump is stiff or 3000 psi cannot be accomplished, this may be an indication that the utility hydraulic accumulator requires nitrogen servicing (para 1.36).

(2) If pressure is below 2600 psi use hand pump to increase pressure to 3000 psi. If not, proceed to step I.

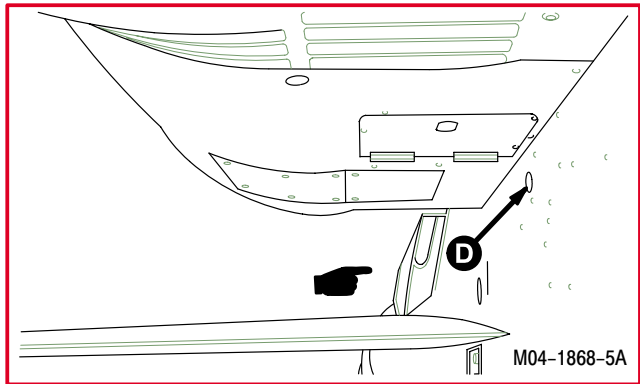
- (a) Install pump handle (4) on bellcrank (5).
  - 1 Remove retaining pin (6) and handle (4) from clip (7).
  - 2 Slide handle (4) over bellcrank (5) and hand pump to 2600 to 3000 psi.



- (b) Stow handle (4) in clip (7).
  - 1 Install handle (4) in clip (7) and insert retaining pin (6).

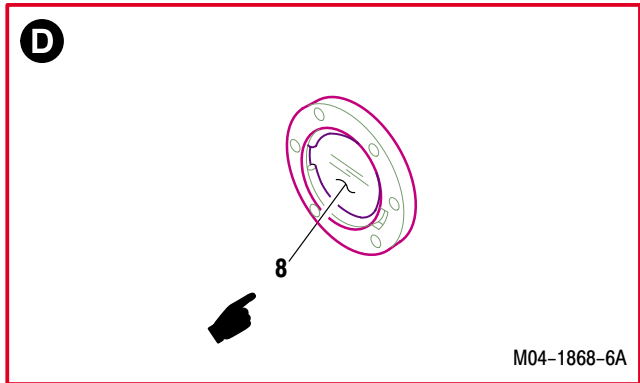
**CAUTION**

Ensure access door R325 is closed and secured before APU start up. Failure to comply could result in thermal damage to aircraft structure.



- I. **Secure access door R325** (para 2.2).
- m. **Verify APU enclosure air inlet screen is clean of FOD** (para 15.42).
- n. **Verify fire extinguisher blowout indicator (8) is in place.**

(1) Check indicator (8) below left engine nacelle.



GO TO NEXT PAGE

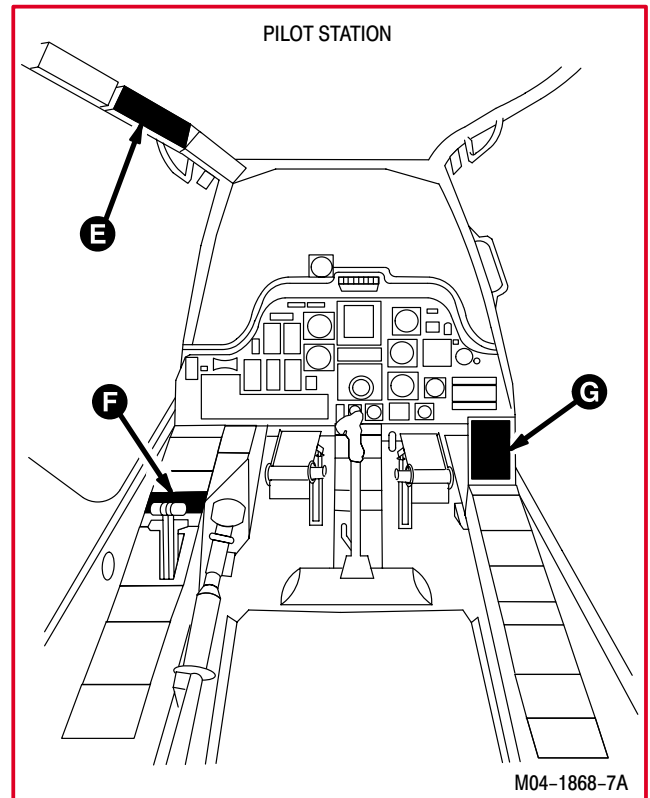
**1.75. APU OPERATING INSTRUCTIONS – USING EXTERNAL POWER – continued**

- o. Verify correct main transmission oil level on left sight indicator (para 1.32).
- p. Remove TADS window cover assembly (TM 1-1270-476-20).
- q. Remove PNVS window cover assembly (TM 1-5855-265-20).

**CAUTION**

A qualified person shall be in pilot station to monitor instruments and fire warning system.

- r. Enter pilot station (para 1.56). Observe all safety precautions.

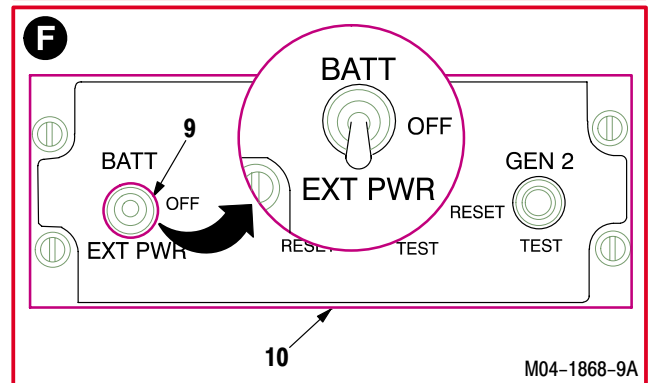
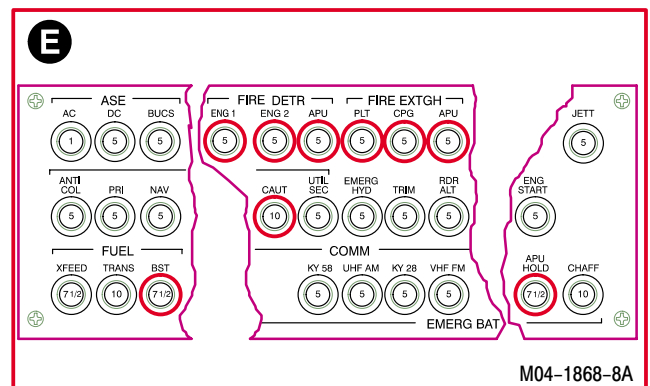


- s. On pilot center circuit breaker panel, close FUEL BST, APU HOLD, LT CAUT, FIRE DETR ENG 1, FIRE DETR ENG 2, FIRE DETR APU, FIRE EXTGH PLT, FIRE EXTGH CPG, and FIRE EXTGH APU circuit breakers.

**CAUTION**

Ensure CPG and pilot engine fire pull handles and pilot APU fire handle is pushed in. Failure to do so could result in accidental fire bottle discharge.

- t. Set BATT/EXT PWR switch (9) on ELEC PWR control panel (10) to EXT PWR.

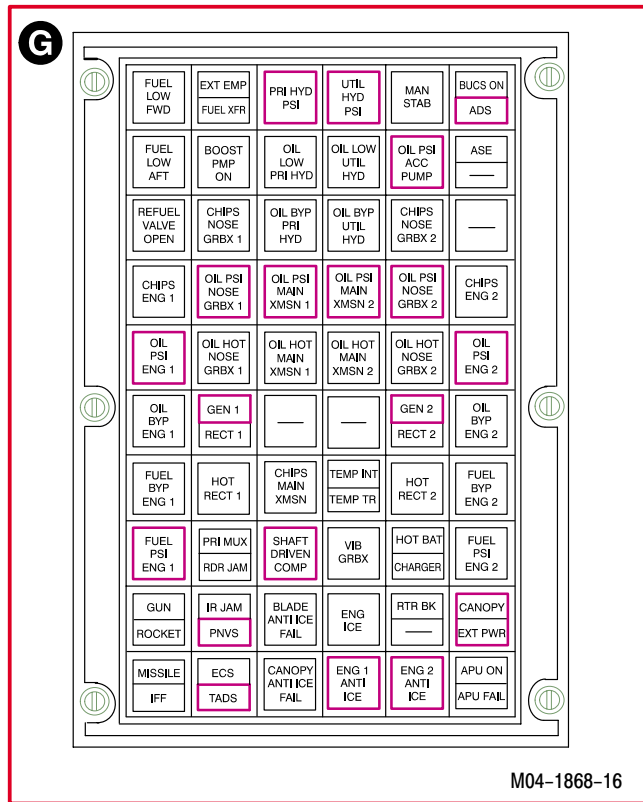


GO TO NEXT PAGE

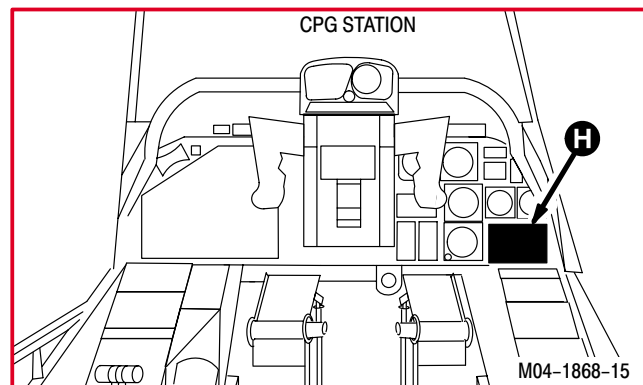
1.75. APU OPERATING INSTRUCTIONS – USING EXTERNAL POWER – continued

u. On the pilot caution/warning panel check that the following segments illuminate:

PRI HYD PSI	UTIL HYD PSI
ADS	OIL PSI ACC PUMP
OIL PSI NOSE GRBX 1	OIL PSI MAIN XMSN 1
OIL PSI MAIN XMSN 2	OIL PSI NOSE GRBX 2
OIL PSI ENG 1	OIL PSI ENG 2
GEN 1	GEN 2
FUEL PSI ENG 1	SHAFT DRIVEN COMP
PNVS	CANOPY (if open) EXT PWR
TADS	ENG 1 ANTI-ICE
ENG 2 ANTI-ICE	

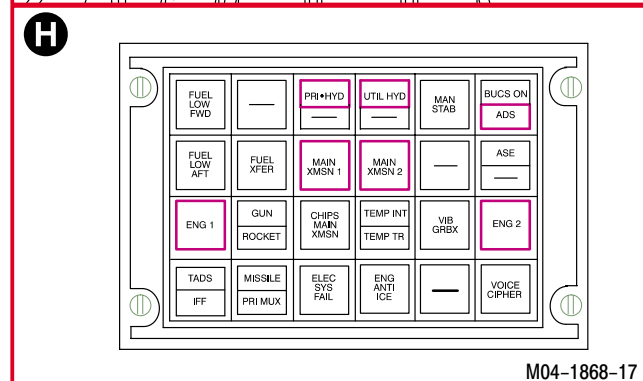


v. Enter CPG station (para 1.56). Observe all safety precautions.



w. On the CPG caution/warning panel check that the following segments illuminate:

PRI HYD	UTIL HYD
MAIN XMSN 1	MAIN XMSN 2
ENG 1	ENG 2
ADS	

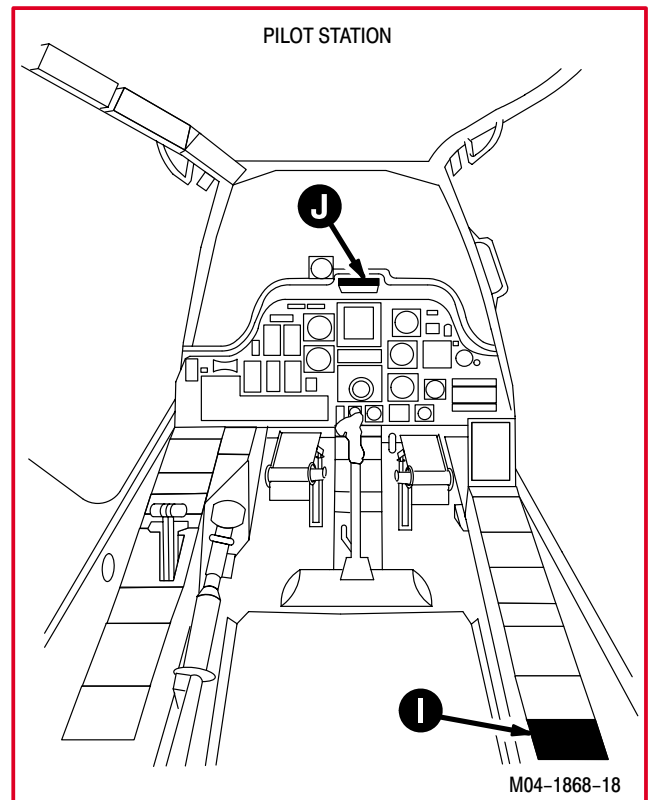


GO TO NEXT PAGE

1.75. APU OPERATING INSTRUCTIONS – USING EXTERNAL POWER – continued

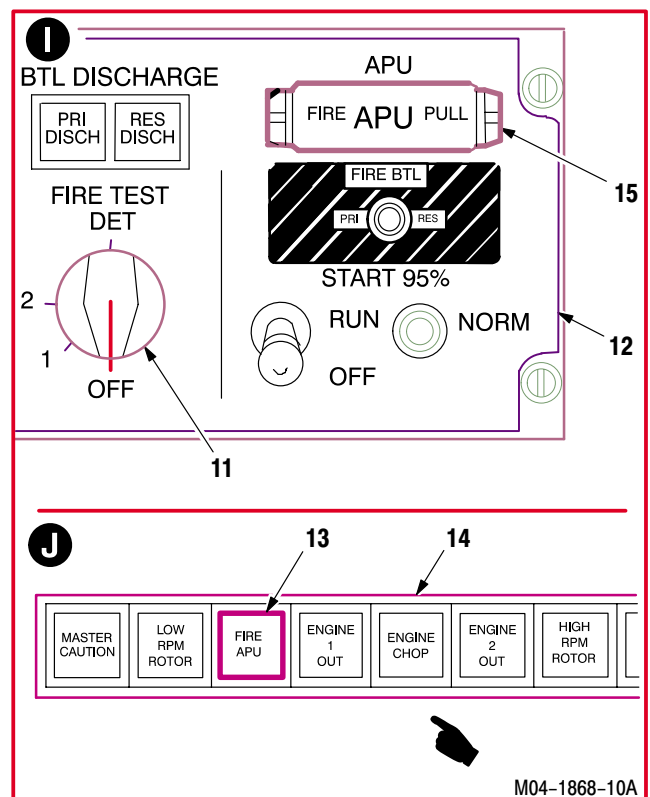
**CAUTION**

Ensure **FIRE BTL** select switch is centered between **PRI/RES** or fire bottle may discharge.



x. Check APU fire detection system.

- (1) Set **FIRE TEST DET** switch (11) on APU fire test panel (12) to 1.
- (2) Verify **FIRE APU** light (13) on pilot master caution panel (14) lights.
- (3) Verify **APU FIRE PULL** handle light (15) on APU fire test panel (12) is lighted.
- (4) Set **FIRE TEST DET** switch (11) on APU fire test panel (12) to 2.
- (5) Verify **FIRE APU** light (13) and **APU FIRE PULL** light (15) are lighted.
- (6) Set **FIRE TEST DET** switch (11) on APU fire test panel (12) to **OFF**.



GO TO NEXT PAGE

---

1.75. APU OPERATING INSTRUCTIONS – USING EXTERNAL POWER – continued

---

**WARNING**

- APU operation exceeds acceptable safe noise levels. Personnel working near or operating will wear approved ear protection to protect their hearing. Failure to comply could result in permanent hearing loss.
- To prevent accidental APU start, ensure that the APU circuit breaker in the AFT avionics bay and the APU HOLD circuit breaker on the pilot center circuit breaker panel are open when battery or external electrical power is attached to the helicopter and unqualified personnel are in and around the pilot crewstation.
- APU fires may go unnoticed by crew/operators in crewstations. Post a fire guard in continuous communication by the intercommunication system (ICS) with the crew/operators during APU run-up.

**CAUTION**

- Do not attempt to use the **95% NORM** switch when outside ambient air temperature is above -18° C (0° F). The viscosity of the hydraulic fluid and APU oil varies with surrounding climatic conditions of the region. If the **95% NORM** switch is used in warm climatic conditions, extreme mechanical stress is placed on the utility hydraulic accumulator shaft. Excessive wear loads are also placed on the power takeoff (PTO) clutch during sudden engagement which occurs during 95% norm operation, causing a decrease in duty life of the dry friction clutch.
- If APU does not start, wait 30 seconds for combustion chamber to drain before attempting APU restart.

**NOTE**

**APU RUN** switch is spring loaded from **START** to **RUN**. Automatic starting will shut down if switch is operated improperly.

- y. Have assistant check vicinity of helicopter and warn personnel that APU is about to start. Wait for assistant to advise **CLEAR FOR APU START** through ICS.
- z. Have assistant take position 10 feet to side of engine No. 2 exhaust with fire extinguisher.

GO TO NEXT PAGE

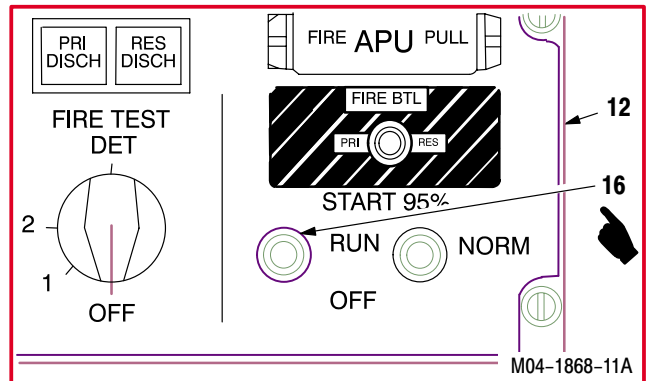
**1.75. APU OPERATING INSTRUCTIONS – USING EXTERNAL POWER – continued**

**aa. Start APU.**

- (1) On APU fire test panel (12), hold **START/RUN** switch (16) to **RUN** for 1 or 2 seconds, then to **START** for 1 or 2 seconds.
- (2) Release switch (16).

**NOTE**

- APU is hydraulically started. If it does not start, hydraulic accumulator pressure may be too low.
- When the APU turbine rotor reaches 95% or greater of normal revolutions per minute (rpm), the **APU ON** indicator on the pilot caution/warning panel lights.
- **APU FAIL** indicator on the caution/warning panel remains lighted until APU oil pressure reaches normal operating pressure.

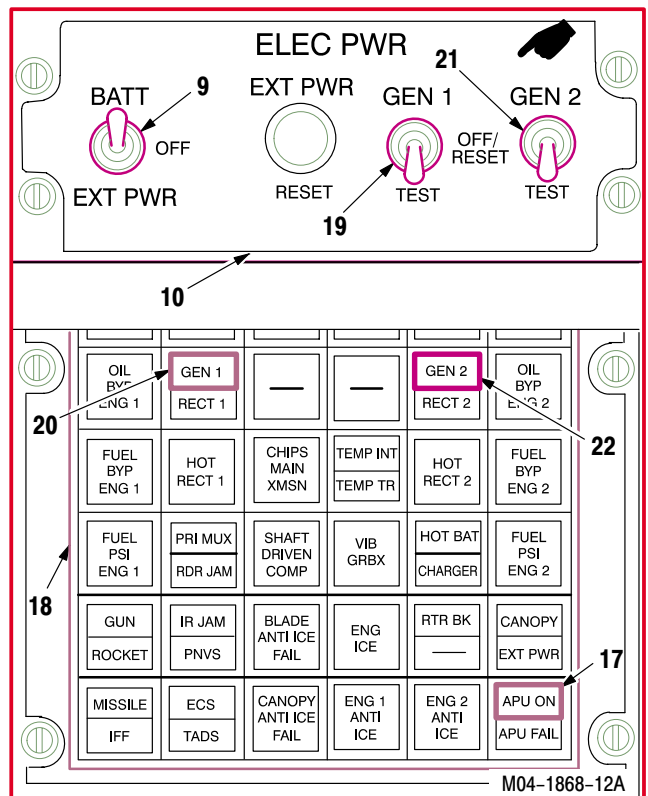


**ab. Verify APU ON indicator light (17) is lighted on pilot caution/warning panel (18).**

**ac. Set BATT/EXT PWR switch (9) on ELEC PWR panel (10) to BATT.**

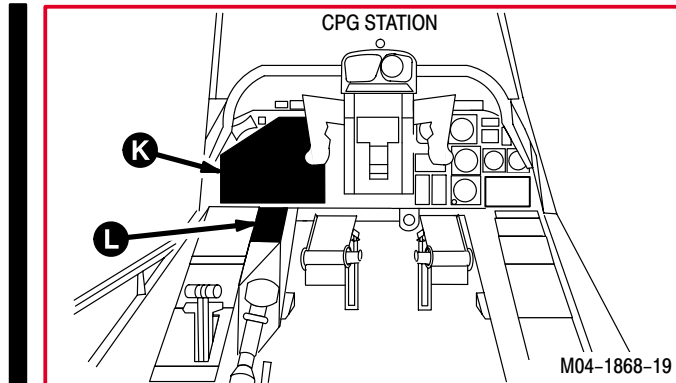
**ad. Turn on two generators.**

- (1) Set **GEN 1** switch (19) to **TEST**.
- (2) Verify **GEN 1** light (20) on pilot caution/warning panel (18) is not lighted.
- (3) Set **GEN 2** switch (21) to **TEST**.
- (4) Verify **GEN 2** light (22) on pilot caution/warning panel (18) is not lighted.
- (5) Set switches (19) and (21) to **GEN 1** and **GEN 2**.
- (6) Verify **GEN 1** light (20) and **GEN 2** light (22) are not lighted.



GO TO NEXT PAGE

1.75. APU OPERATING INSTRUCTIONS – USING EXTERNAL POWER – continued

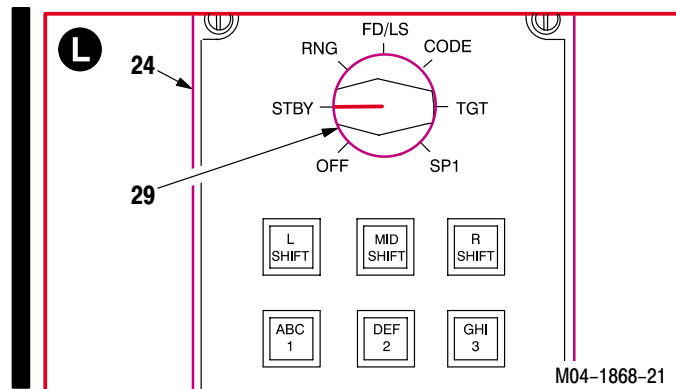
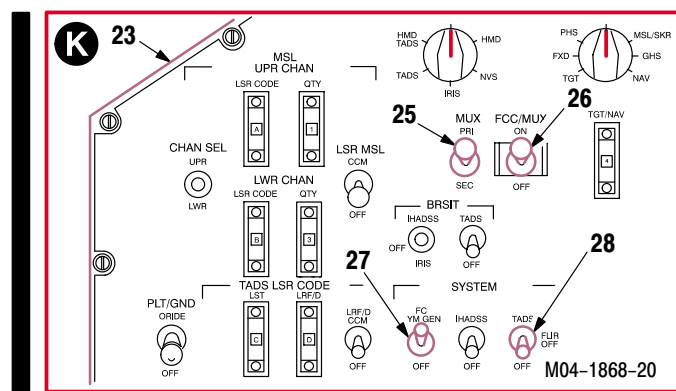


ae. Verify switch positions on CPG FIRE CONTROL panel (23) and data entry keyboard (DEK) (24).

- (1) MUX switch (25) is set to PRI.
- (2) FCC/MUX switch (26) is set to ON.
- (3) SYSTEM FC SYM GEN switch (27) is set to FC SYM GEN.
- (4) SYSTEM TADS switch (28) is set to OFF.
- (5) DATA ENTRY switch (29) is set to STBY.

**CAUTION**

- If XMSN 1 and XMSN 2 temperatures exceed 130° C (266° F), shut down APU. Allow the transmission fluid to cool for 30 minutes prior to resuming APU ground operations; or transmission fluid may be cooled by authorized personnel operating engine.
- Do not operate the APU for more than five minutes at a main transmission oil temperature of 120° C (248° F). Shut down APU to prevent damaging accessory gear box components.



GO TO NEXT PAGE

1.75. APU OPERATING INSTRUCTIONS – USING EXTERNAL POWER – continued

**NOTE**

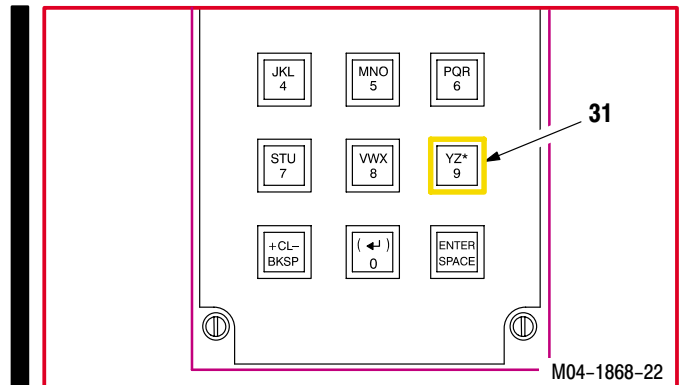
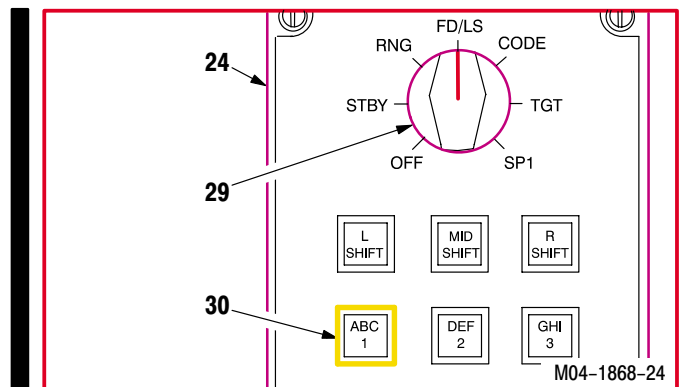
- The main transmission oil temperature and pressure can be viewed on the CPG heads out display (HOD) or any selected pilot/CPG crew station video monitor.
- If ECS air temperature is very warm and cannot be adjusted with **TEMP** control, shutdown APU.

af. **Monitor transmission oil temperature and pressure every 30 minutes** (or as required) of APU operation.

- (1) Set **DATA ENTRY** switch (29) to **FD/LS**.
- (2) On **DEK** (24) press any key except **ENTER SPACE** or **SHIFT**.
- (3) On **DEK** (24) press and release **ABC/1** (30) and **YZ\*/9** (31) keys.
- (4) To return to the maintenance **FD/LS** menu and abort the **FD/LS** transmission check, set **DATA ENTRY** switch to **STBY** and repeat steps (1) and (2).

ag. **Remove external power – electrical** (para 1.70).

ah. **Perform maintenance task.**



GO TO NEXT PAGE



1.75. APU OPERATING INSTRUCTIONS – USING EXTERNAL POWER – continued

ai. Turn off two generators.

- (1) Set **GEN 1** switch (19) on **ELEC PWR** panel (10) to **OFF/RESET**.
- (2) Set **GEN 2** switch (21) on **ELEC PWR** panel (10) to **OFF/RESET**.

**CAUTION**

The APU may be restarted after roll down (compressor comes to a complete stop). Wait 30 seconds for fuel to drain. The PTO clutch duty cycle allows two consecutive start attempts and then a 20 minute delay before the next start attempt. No more than three starts shall be allowed in a one hour period. Start attempts in which the clutch does not engage do not apply. Failure to comply could result in damage to the PTO clutch.

aj. Turn off APU.

- (1) Set **RUN** switch (16) on panel (12) to **OFF**.

**NOTE**

Allow APU to roll down before proceeding with the following procedures.

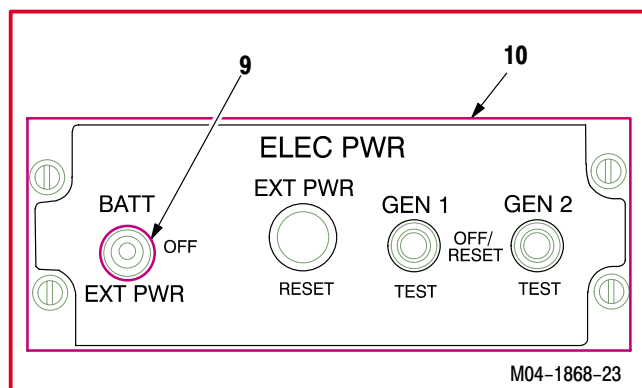
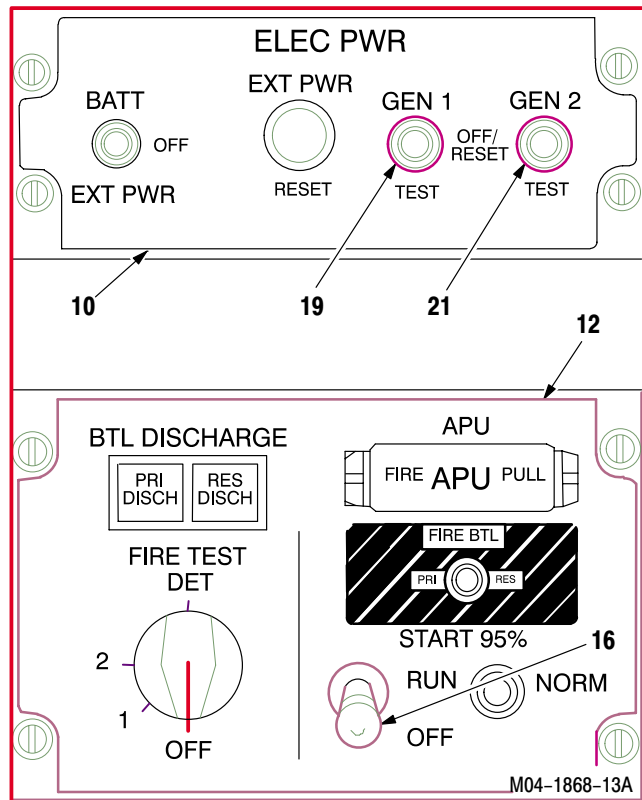
ak. Set **BATT/EXT PWR** switch (9) on **ELEC PWR** panel (10) to **OFF**.

al. Install **PNVS window cover assembly** (TM 1-5855-265-20).

am. Install **TADS window cover assembly** (TM 1-1270-476-20).

an. Remove external hydraulic power (para 1.73).

ao. Disconnect and remove maintenance headset (para 1.134).



END OF TASK

**1.76. MOORING – UNPAVED SURFACE**

1.76.1. Description

This task covers: Mooring.

1.76.1. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
 Aircraft mooring tiedown kit (item 362, App H)  
 Tension adjuster assembly (item 26, App H)  
 Single leg chain assembly (item 62, App H)

**Personnel Required:**

67R Attack Helicopter Repairer

**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
2.2	Access doors L115 and R115 opened
1.61	Brakes locked
1.59	Protective covering installed
1.106	Main rotor blades tiedown installed

1.76.1. Mooring

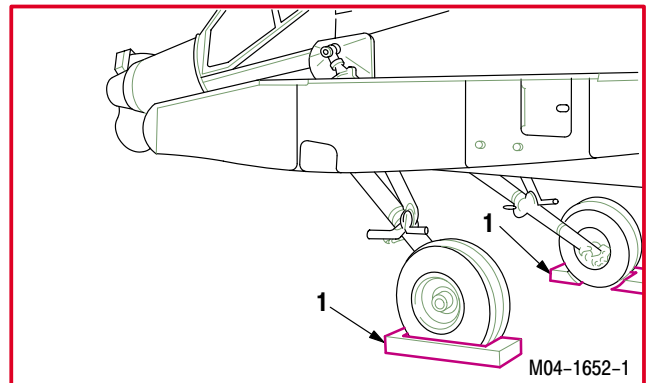
**NOTE**

The mooring hardware is not considered flyaway equipment. All active mooring points shall be equipped with this hardware.

- a. **Place wheel chocks (1) in place.**
- b. **Remove six rope assemblies from mooring kit.**

**NOTE**

Mooring line should extend at a 45 degree angle from ground. Leave slack in mooring line to allow for expansion and contraction of mooring point.

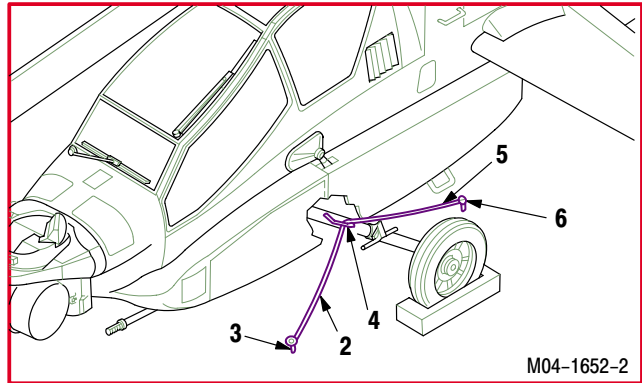


GO TO NEXT PAGE

**1.76. MOORING – UNPAVED SURFACE – continued**

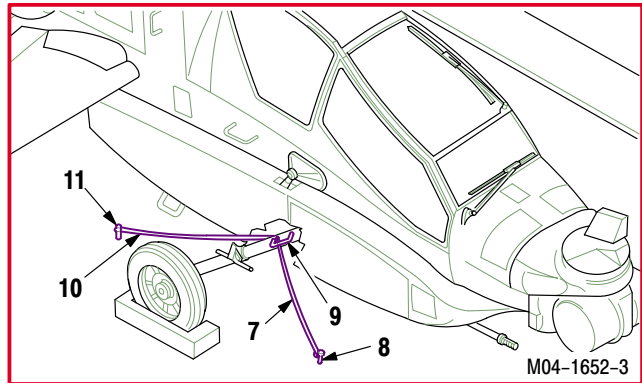
**c. Moor helicopter forward left side.**

- (1) Attach mooring line (2) to ground mooring point (3).
- (2) Pass opposite end of mooring line (2) over the top of and through helicopter mooring point (4).
- (3) Moor loose end to mooring point (4).
- (4) Attach mooring line (5) to ground mooring point (6).
- (5) Pass opposite end of mooring line (5) over the top of and through helicopter mooring point (4).
- (6) Moor loose end to mooring point (4).



**d. Moor helicopter forward right side.**

- (1) Attach mooring line (7) to ground mooring point (8).
- (2) Pass opposite end of mooring line (7) over the top of and through helicopter mooring point (9).
- (3) Moor loose end to mooring point (9).
- (4) Attach mooring line (10) to ground mooring point (11).
- (5) Pass opposite end of mooring line (10) over the top of and through helicopter mooring point (9).
- (6) Moor loose end to mooring point (9).



GO TO NEXT PAGE

---

**1.76. MOORING – UNPAVED SURFACE – continued**

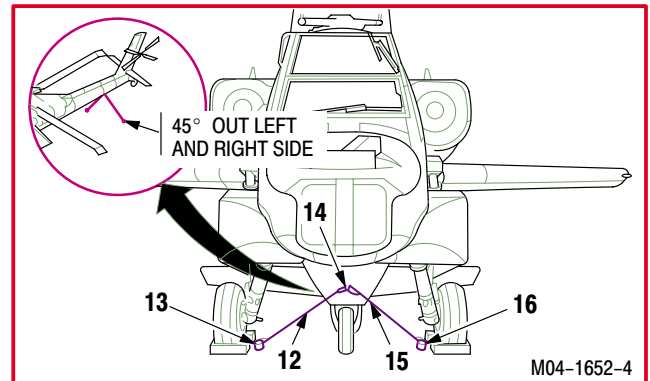
---

**e. Moor helicopter right aft side.**

- (1) Attach mooring line (12) to ground and mooring point (13).
- (2) Pass opposite end of mooring line (12) through and around helicopter mooring point (14).
- (3) Moor loose end to mooring point (14).

**f. Moor helicopter left aft side.**

- (1) Attach mooring line (15) to ground mooring point (16).
- (2) Pass opposite end of mooring line (15) through and around helicopter mooring point (14).
- (3) Moor loose end to mooring point (13).

**c. Secure access doors L115 and R115 (para 2.2).**

END OF TASK

**1.77. MOORING – PAVED SURFACE**

1.77.1. Description

This task covers: Mooring.

1.77.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
 Aircraft mooring tiedown kit (item 362, App H)  
 Tension adjuster assembly (item 26, App H)  
 Single leg chain assembly (item 62, App H)

**Personnel Required:**

67R Attack Helicopter Repairer

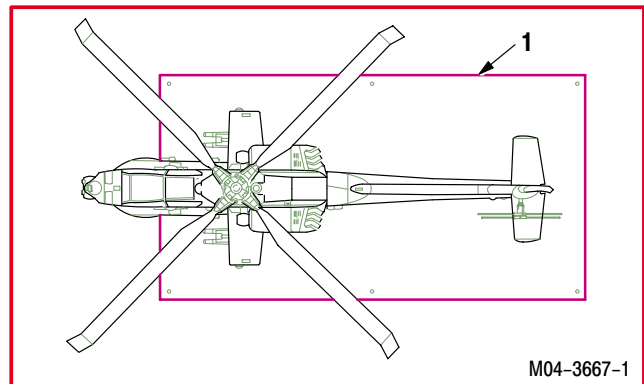
**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
2.2	Access doors L115 and R115 opened
1.61	Brakes locked
1.59	Protective covering installed
1.106	Main rotor blades tiedown installed

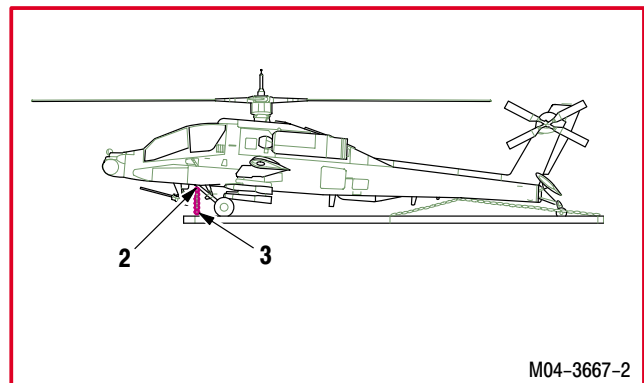
1.77.3. Mooring

a. **Position aircraft on mooring pad.**

- (1) Position the aircraft on the mooring pad with the longitudinal centerline of the aircraft directly above and parallel to the longitudinal axis of the pad (1).



- (2) Position the forward mooring rings (2), located on the main landing gear struts, directly in line laterally with the forward mooring points (3) on the pad (1).

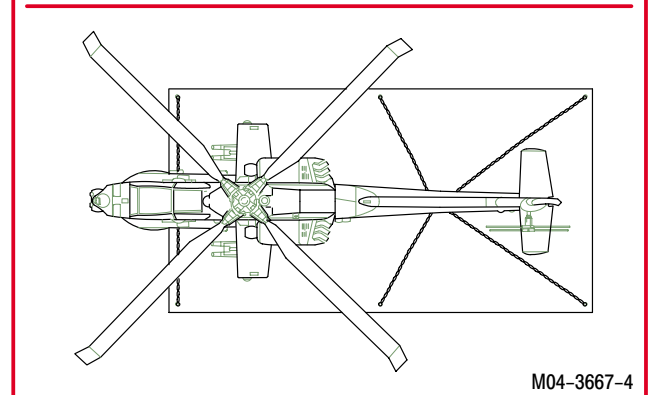
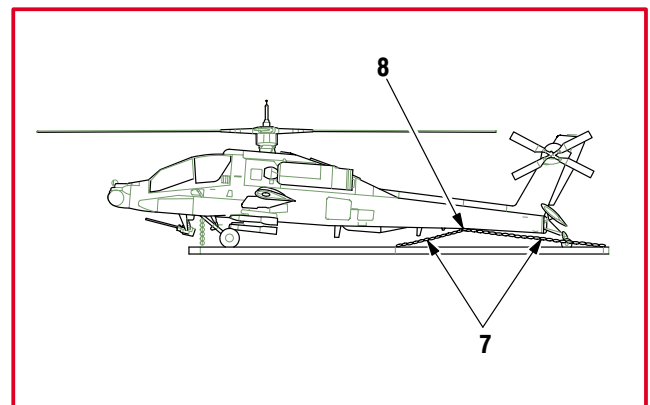
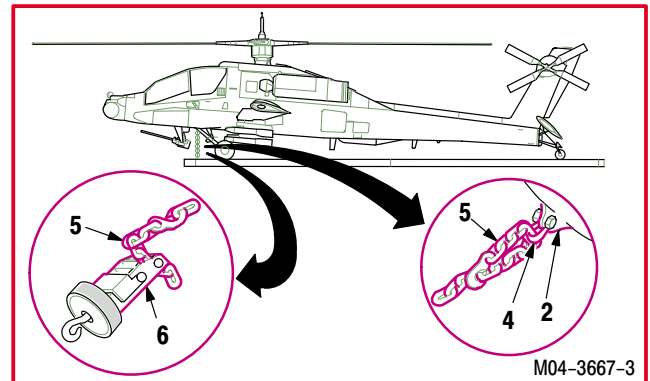


GO TO NEXT PAGE

## 1.77. MOORING – PAVED SURFACE – continued

### b. Chain installation.

- (1) Install the hooks (4) of the forward mooring chains (5) into the aircraft mooring rings (2).
- (2) Adjust the chains (5) with the chain adjuster (6). Mooring chains (5) and chain adjusters (6) are provided at each of the mooring points (3) on the mooring pad (1).
- (3) Chains (5) should be adjusted to the point where slack has been removed.
- (4) Repeat this procedure for the four aft mooring chains (7).
- (5) All chains (7) will hook into the mooring ring (8) located on the lower surface of the tail-boom at F.S. 450.



END OF TASK

---

**1.78. HELICOPTER TOWING**

---

1.78.1. Description

This task covers: Helicopter Towing.

---

1.78.2. Initial Setup

**Tools:**

Aircraft towbar (item 395, App H)

**References:**

TM 1-1500-204-23

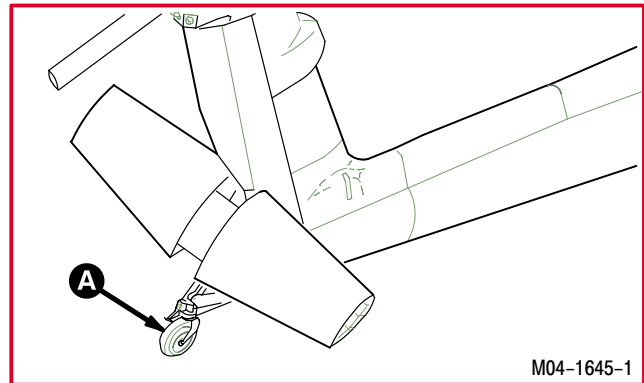
**Personnel Required:**

67R Attack Helicopter Repairer  
Five persons to assist

**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed

---



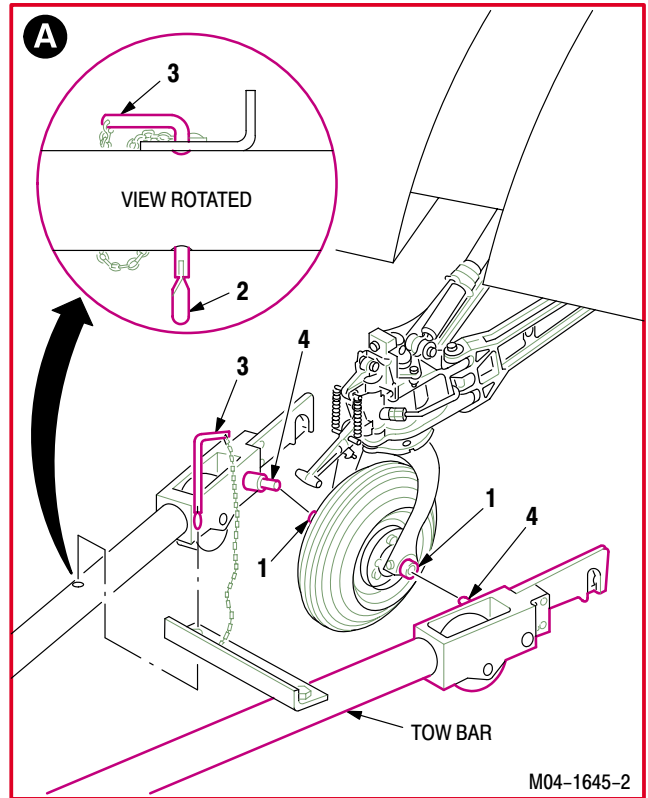
GO TO NEXT PAGE

**1.78. HELICOPTER TOWING – continued**

1.78.3. Helicopter Towing

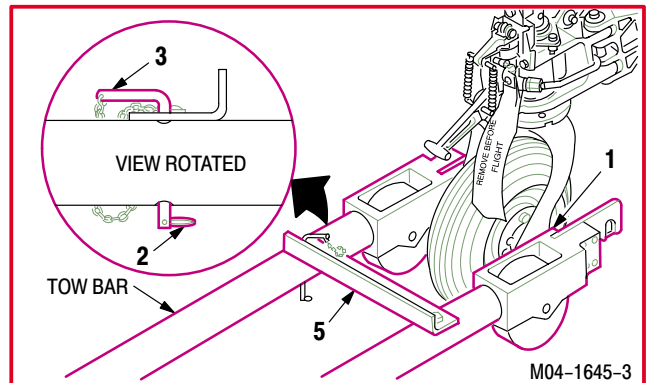
**a. Connect towbar to tail wheel axle (1).**

- (1) Aline release stop (2) with hole in towbar and pull release handle (3).
- (2) Spread towbar and aline axle pins (4) with axle (1).
- (3) Insert pins (4) in both ends of axle (1).



**b. Lock towbar to axle (1) by positioning locking plate (5) and inserting handle (3).**

**c. Lock release stop (2).**



GO TO NEXT PAGE



1.78. HELICOPTER TOWING – continued

d. **Unlock tail wheel actuator (6).**

- (1) Push handle (7) down to release actuator locking pin (8).
- (2) Visually check to make sure pin (8) is released.
- (3) Install safety pin (9) in hole (10).
- (4) Use towbar to slowly move tail wheel (11) laterally to ensure it moves freely.

e. **Connect towbar to tow vehicle.**

**CAUTION**

Stress panels must be installed before movement of aircraft. If stress panels are not installed, structural damage can occur.

**NOTE**

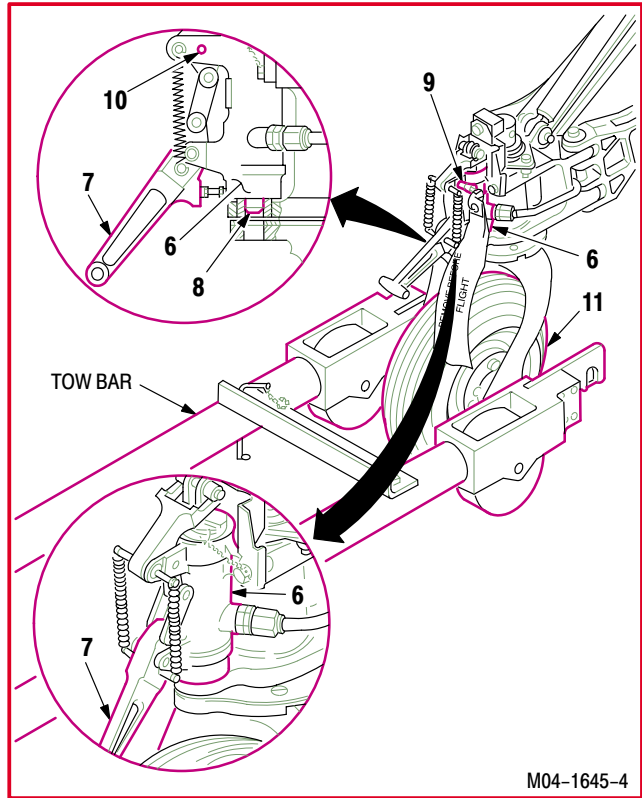
The helicopter has a turning radius of 38 feet, rotor diameter of 48 feet, and height of 15 feet, 3 inches.

f. **Tow helicopter to desired location**  
(TM 1-1500-204-23).

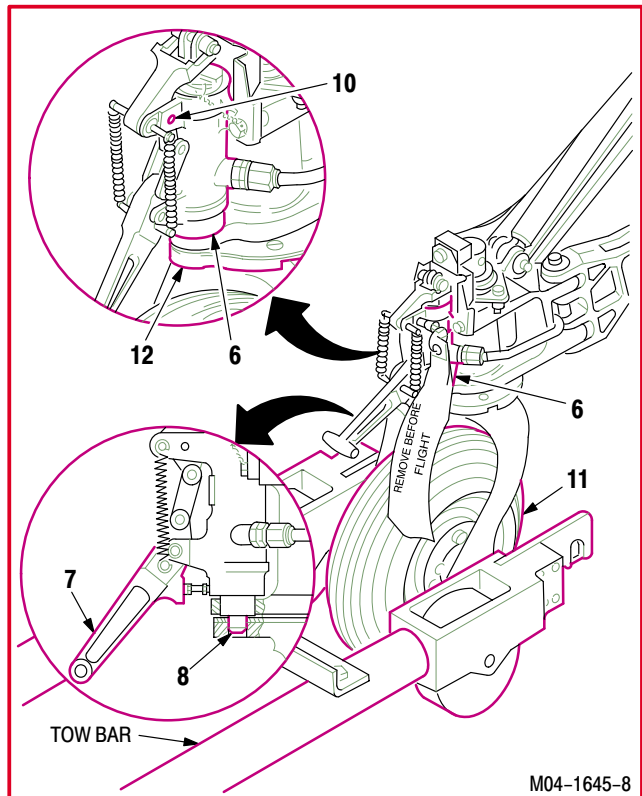
g. **Disconnect towbar from tow vehicle.**

h. **Lock tail actuator (6).**

- (1) Aline cam plate (12) with actuator (6) by aligning tail wheel with helicopter centerline.
- (2) Remove safety pin from hole (10).
- (3) Pull handle (7) up. Set locking pin (8).
- (4) Slowly move towbar from side to side to ensure pin (8) is seated.



M04-1645-4



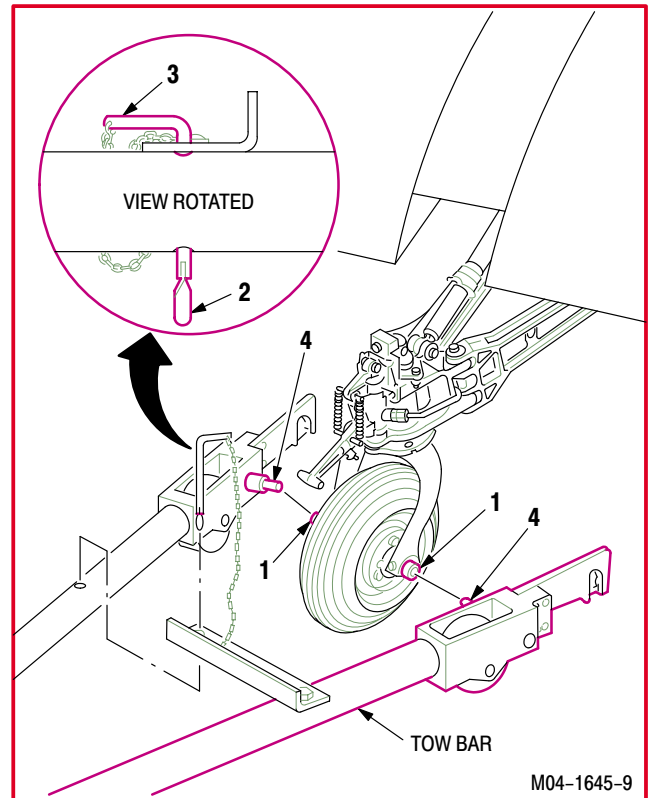
M04-1645-8

GO TO NEXT PAGE

## 1.78. HELICOPTER TOWING – continued

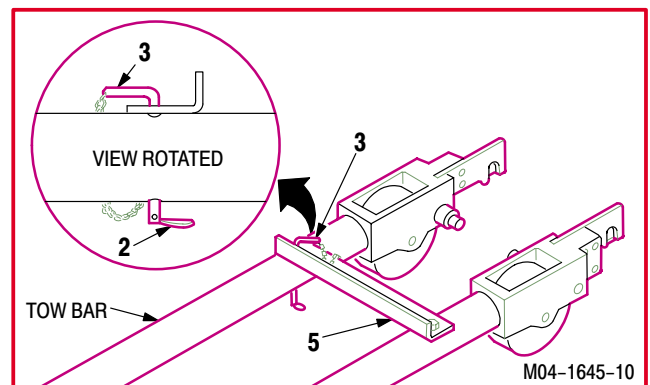
### i. Remove towbar from helicopter.

- (1) Aline release stop (2) with hole in towbar. Pull release handle (3).
- (2) Spread towbar to remove axle pins (4) from axle (1).



### j. Lock towbar by positioning locking plate (5) and inserting handle (3).

- (1) Lock release stop (2).



END OF TASK

---

**1.79. AIR VEHICLE SLING INSTALLATION/REMOVAL**

---

1.79.1. Description

This task covers: Installation. Removal.

---

1.79.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
Air vehicle sling assembly (item 290, App H)  
(p/o item 194, App H)

**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
6.90	Main rotor de-ice power distributor and air data system (ADS) removed

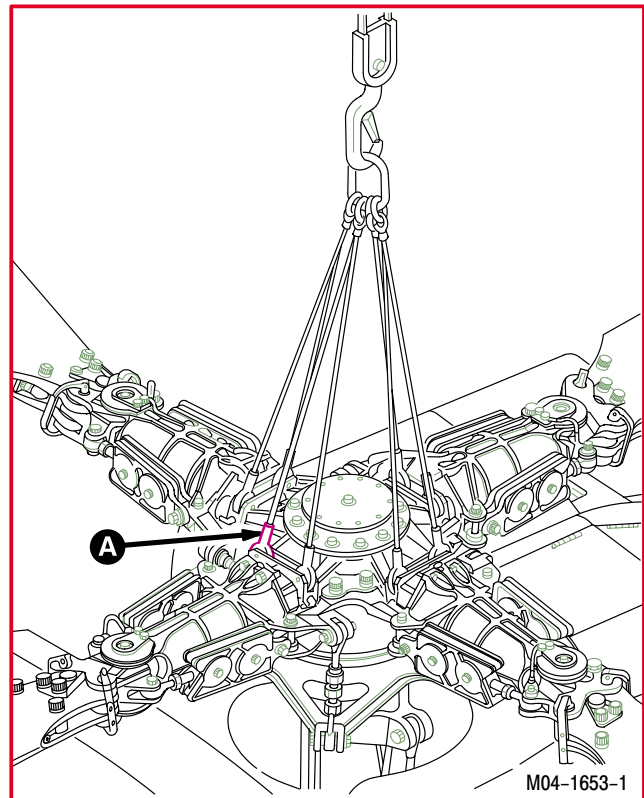
**Personnel Required:**

67R Attack Helicopter Repairer

---

**NOTE**

This task is typical for all four sling mounting points.



GO TO NEXT PAGE

---

**1.79. AIR VEHICLE SLING INSTALLATION/REMOVAL – continued**

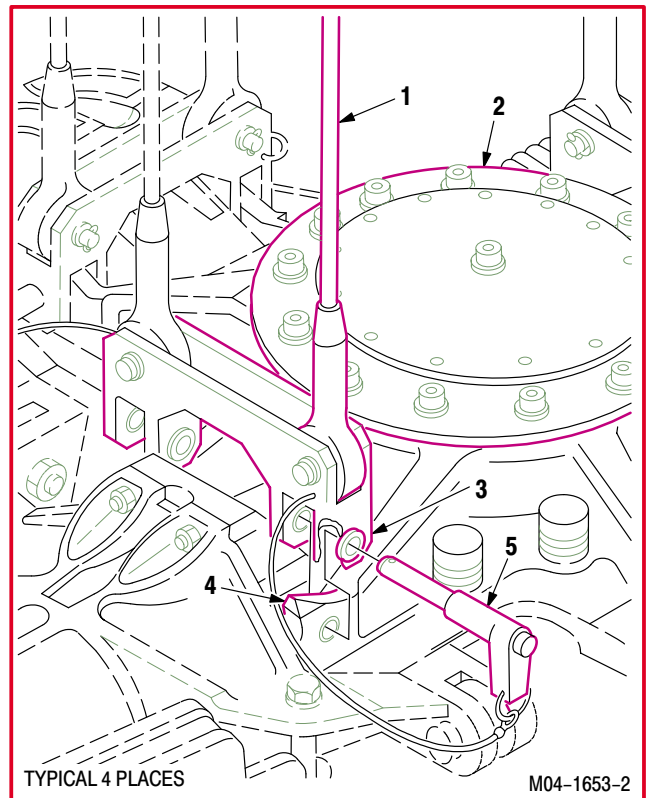
---

**1.79.3. Installation****a. Install air vehicle lifting sling (1) on main rotor head (2).**

- (1) Align holes in sling fitting (3) with hole in lifting lug (4).
- (2) Install pin (5) in aligned hole (typical four places).

**1.79.4. Removal****a. Remove sling (1) from head (2).**

- (1) Remove pin (5) from fitting (3) and lug (4) (typical four places).
- (2) Remove sling (1) from head (2).

**b. Install main rotor de-ice power distributor and air data system (ADS) (para 6.90).**

END OF TASK

---

**1.80. HOISTING – MAINTENANCE CRANE**

---

1.80.1. Description

This task covers:

- 1.81. Hoisting – Engine Removal
- 1.82. Hoisting – Engine Installation
- 1.83. Hoisting – Main Rotor Blade Removal
- 1.84. Hoisting – Main Rotor Blade Installation
- 1.85. Hoisting – Main Rotor Head Removal
- 1.86. Hoisting – Main Rotor Head Installation
- 1.87. Hoisting – Main Rotor Gearshaft Removal
- 1.88. Hoisting – Main Rotor Gearshaft Installation
- 1.89. Hoisting – Main Rotor Support (Static) Mast Removal
- 1.90. Hoisting – Main Rotor Support (Static) Mast Installation
- 1.91. Hoisting – Main Transmission Removal
- 1.92. Hoisting – Main Transmission Installation
- 1.93. Hoisting – Main Rotor Swashplate Removal
- 1.94. Hoisting – Main Rotor Swashplate Installation
- 1.95. Hoisting – APU Removal
- 1.96. Hoisting – APU Installation

---

1.80.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)

**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
1.97	Maintenance crane installed

**Personnel Required:**

67R Attack Helicopter Repairer  
Two persons to assist

---

**NOTE**

Pilot and CPG access doors must be closed for crane installation on right side.

GO TO CORRECT PARAGRAPH

---

**1.81. HOISTING – ENGINE REMOVAL**


---

1.81.1. Removal

**WARNING**

**Hoisted components can cause injury or death if they fall. Keep away from hoisted components and loaded crane. If injury occurs, seek medical aid.**

a. **Install crane hook (1) on engine (2).**

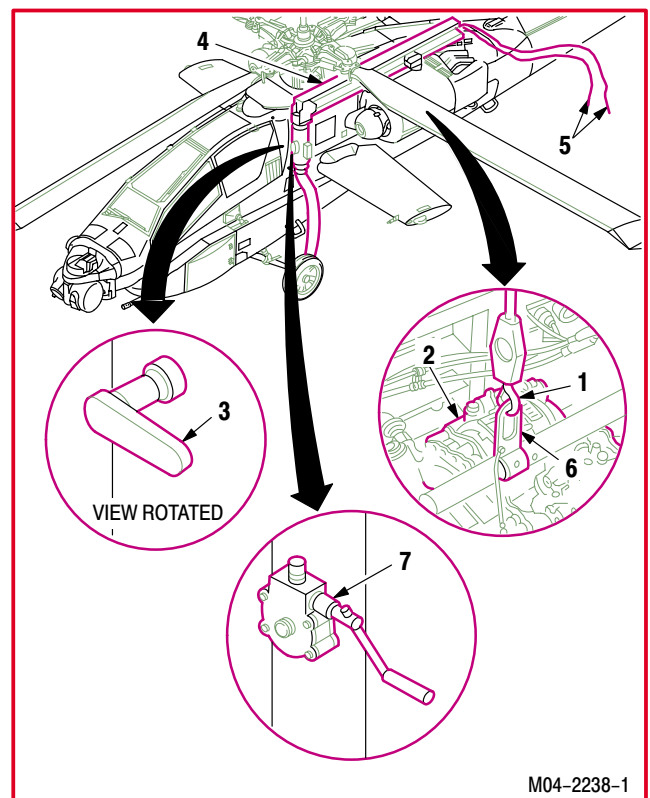
- (1) Rotate crane handle (3) to up position to allow lateral movement of crane boom arm (4).
- (2) Use two tag lines (5) to move boom arm (4).
- (3) Aline arm (4) under main rotor blade positioned 90 degrees to helicopter.
- (4) Aline hook (1) over lifting eye of sling (6). Ensure that lifting eye of sling is alined to hole 2.
- (5) Rotate handle (3) to down position to prevent lateral movement of boom arm (4).

**CAUTION**

To prevent crossing of cable on spool and damage to crank, tension must be applied when letting out or taking in cable.

b. **Install hook (1) on engine (2).**

- (1) Crank winch (7) to position hook (1) below lifting eye of sling (6).
- (2) Snap hook (1) into lifting eye of sling (6).
- (3) Crank winch (7) to remove cable slack.
- (4) Tie two 10-foot tag lines to forward and aft ends of engine.



M04-2238-1

GO TO NEXT PAGE

1.81. HOISTING – ENGINE REMOVAL – continued

**NOTE**

Use tag lines to control engine position.

**c. Lift engine (2) from nacelle after disconnecting and demounting.**

- (1) Crank winch (7) up until engine weight is off mounts.
- (2) Perform engine removal (para 4.3).
- (3) Crank winch (7) up to hoist engine (2) from nacelle.

**d. Position engine handling adapter (8) in front of wing with empty side next to leading edge.**

**e. Position engine (2) over handling adapter (8).**

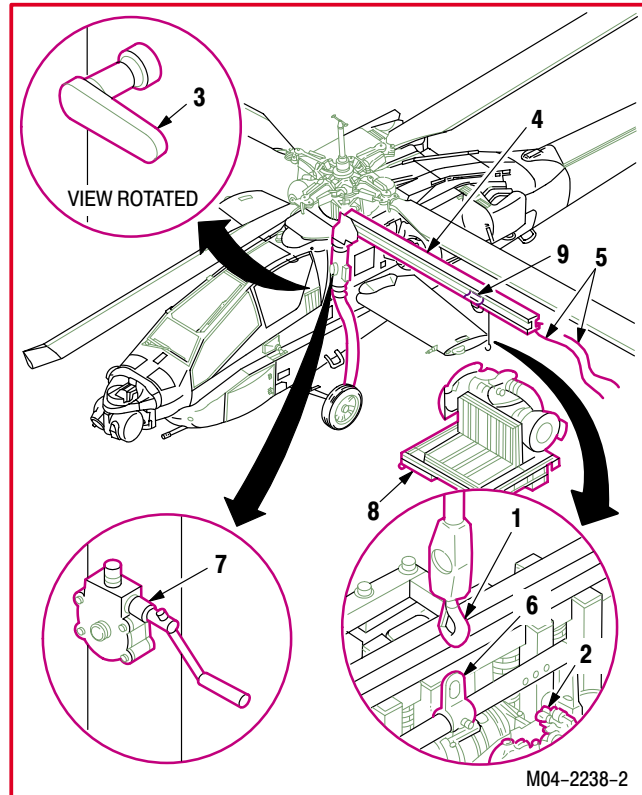
- (1) Rotate handle (3) to up position to allow lateral movement of boom arm (4).
- (2) Use tag lines (5) to move boom arm (4). Turn arm (4) and rotor blade as needed to align engine over adapter (8).
- (3) Rotate handle (3) to down position to prevent lateral movement of boom arm (4).

**f. Mount engine (2) on adapter (8).**

- (1) Crank winch (7) down and slowly lower engine (2) on adapter (8).
- (2) Crank winch (7) down to provide cable slack below lifting eye of sling (6).
- (3) Unsnap hook (1) from lifting eye of sling (6).

**g. Retract hook (1).**

- (1) Crank winch (7) to position hook (1) about 6 inches below boom sheave (9).
- (2) Remove two 10-foot tag lines from forward and aft ends of engine.



END OF TASK

---

**1.82. HOISTING – ENGINE INSTALLATION**


---

1.82.1. Installation

**WARNING**

**Hoisted components can cause injury or death if they fall. Keep away from hoisted components and loaded crane. If injury occurs, seek medical aid.**

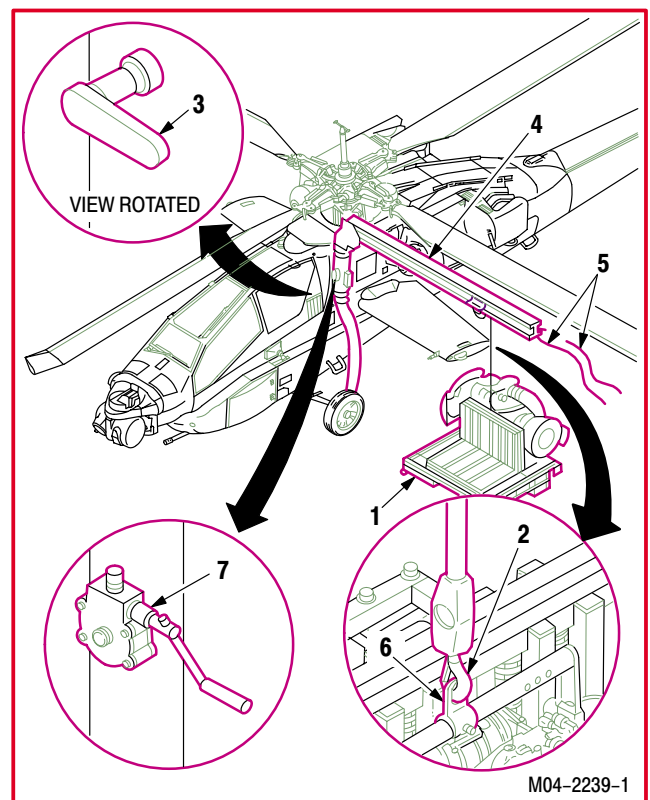
- a. **Position handling adapter (1) with engine parallel and next to wing leading edge.**
- b. **Position crane hook (2) over installed engine sling.**

- (1) Rotate crane handle (3) to the up position to allow lateral movement of crane boom arm (4).
- (2) Use two tag lines (5) to move crane boom arm (4).
- (3) Turn arm (4) to aline hook (2) over lifting eye (6).
- (4) Rotate handle (3) to down position to prevent lateral movement of crane boom arm (4).

**CAUTION**

To prevent crossing of cable on spool and damage to crank, tension must be applied when letting out or taking in cable.

- c. **Insert hook (2) into lifting eye (6).**
- (1) Crank winch (7) to position hook (2) below lifting eye (6).
  - (2) Snap hook (2) into lifting eye (6).
  - (3) Crank winch (7) to remove cable slack.
  - (4) Tie two 10-foot tag lines to forward and aft ends of engine.



GO TO NEXT PAGE



1.82. HOISTING – ENGINE INSTALLATION – continued

**NOTE**

Use tag lines to control engine position.

**d. Lift engine from adapter (1).**

- (1) Crank winch (7) up until engine weight is off mounts.
- (2) Crank winch (7) up and hoist engine higher than top of nacelle.

**e. Position engine over nacelle.**

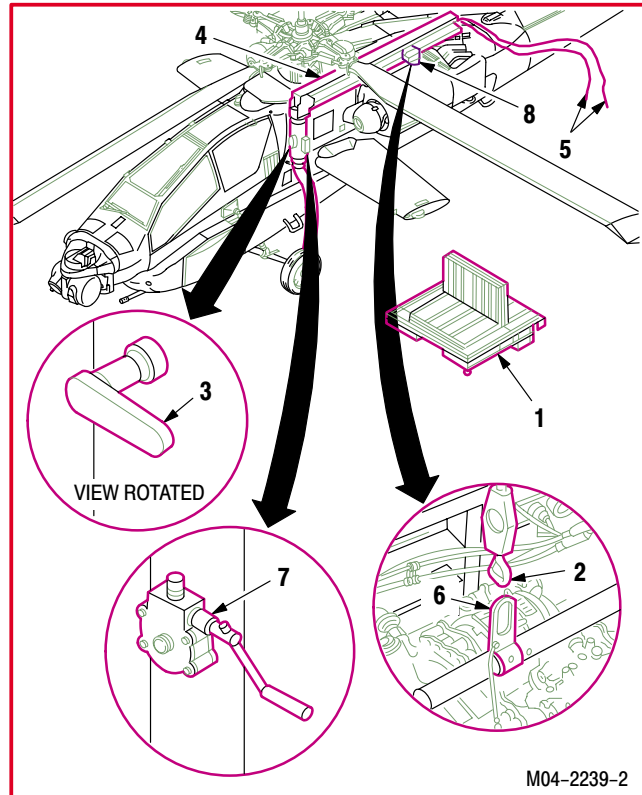
- (1) Rotate handle (3) to up position to allow lateral movement of crane boom arm (4).
- (2) Use tag lines (5) to move crane boom arm (4). Turn crane boom arm (4) and main rotor blade as needed to position engine over nacelle.
- (3) Rotate handle (3) to down position to prevent lateral movement of crane boom arm (4).
- (4) Aline and hold engine forward and aft end positions.

**f. Lower engine into nacelle.**

- (1) Crank winch (7) down and slowly lower engine into nacelle.
- (2) Mount engine in nacelle.

**g. Retract hook (2).**

- (1) Unsnap crane hook (2) from lifting eye (6).
- (2) Crank winch (7) to position hook (2) about 6 inches below boom sheave (8).



M04-2239-2

END OF TASK

**1.83. HOISTING – MAIN ROTOR BLADE REMOVAL**

1.83.1. Removal

**WARNING**

Hoisted components can cause injury or death if they fall. Keep away from hoisted components and loaded crane. If injury occurs, seek medical aid.

a. **Position crane hook (1) over installed blade sling.**

- (1) Rotate crane handle (2) to up position to allow lateral movement of crane boom arm (3) (para 5.3).
- (2) Use two tag lines (4) to move boom arm (3).
- (3) Turn boom arm (3) to align hook (1) over sling hoisting ring (5).
- (4) Rotate handle (2) to down position to prevent lateral movement of boom arm (3).

**WARNING**

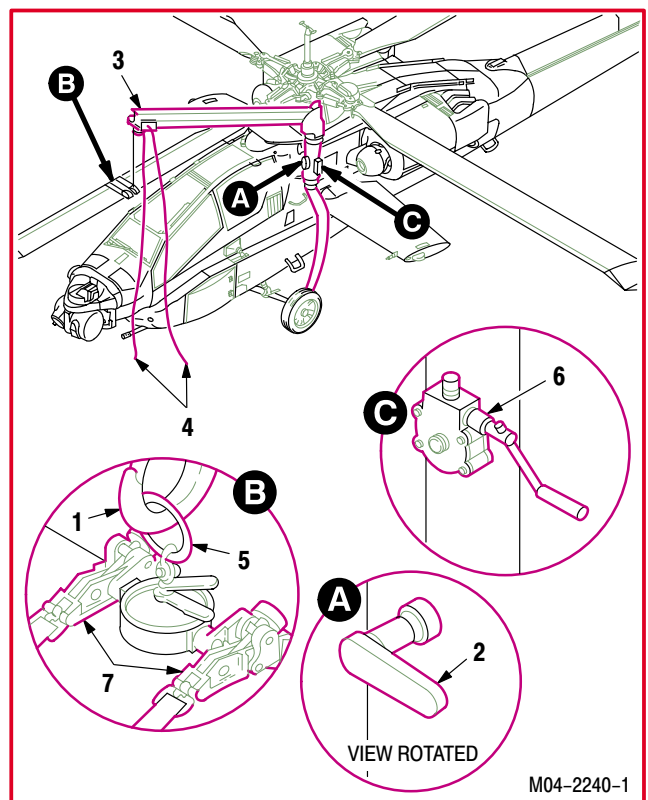
Lifting eye bolt on main rotor blade sling shall have no more than two visible threads above clamp handle prior to lifting blade. Failure to do so could result in hoisting injuries.

**CAUTION**

To prevent crossing cable on spool and damage to crank, tension must be applied when letting out or taking in cable.

b. **Insert hook (1) into hoisting ring (5).**

- (1) Crank winch (6) to position hook (1) just above sling support frame (7).
- (2) Snap hook (1) into ring (5).
- (3) Crank winch (6) to remove cable slack.



GO TO NEXT PAGE

1.83. HOISTING – MAIN ROTOR BLADE REMOVAL – continued

**NOTE**

Use two tag lines and tiedown to control blade position.

- c. Install main rotor blade tiedown (para 1.106).
- d. Install tag lines to hub end of rotor blade.
- e. Lift main rotor blade until weight is off main rotor head.
  - (1) Crank winch (6) up to unload blade attaching pins.

f. Install droop stop wedges (8).

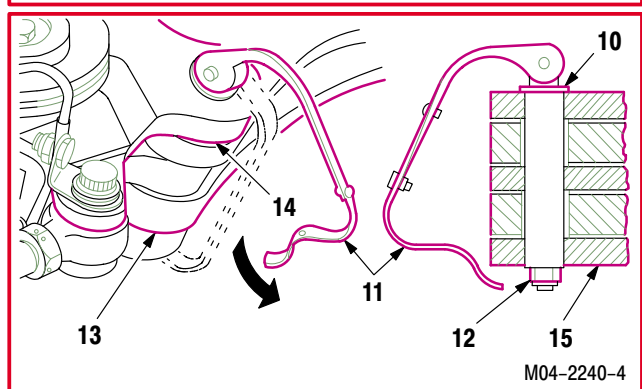
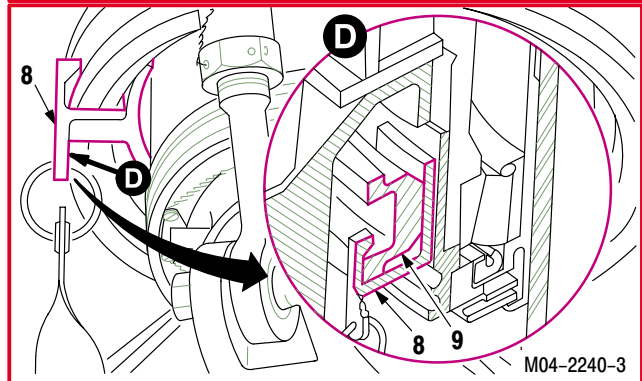
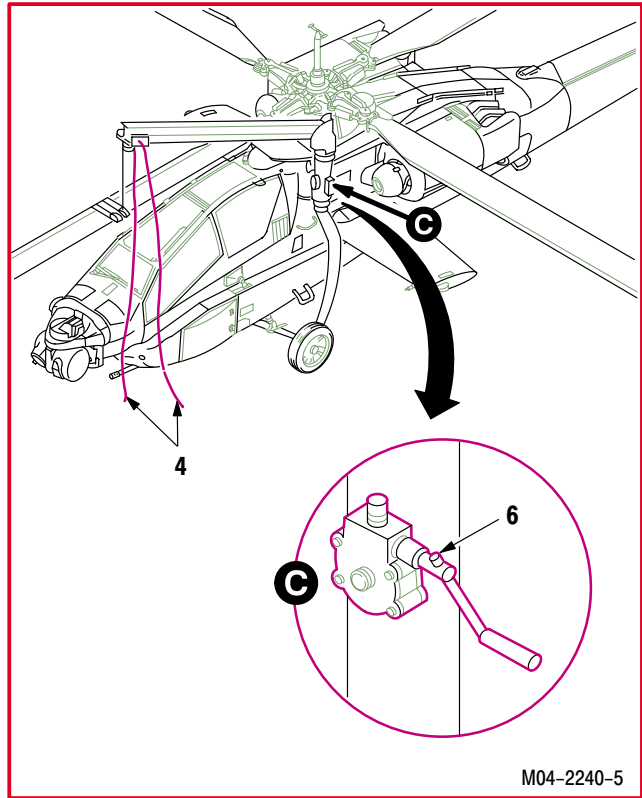
- (1) Equally space wedges (8) around droop stop ring (9).
- (2) Push wedges (8) up until seated on ring (9).

**WARNING**

The main rotor blade could move after the pins are removed. A sudden blade movement could sever or crush your fingers or hand. Keep fingers and hands away from the lead lag link. If injury occurs, seek medical aid.

g. Unlatch and remove attaching pins (10).

- (1) Push down on spring clip (11). Remove clip (11) from nut (12).
- (2) Lift clip (11) to vertical.
- (3) Move pin (10) up until it clears blade root (13) and lead lag link (14). Use crane to relieve tension on blade (15).



GO TO NEXT PAGE

**1.83. HOISTING – MAIN ROTOR BLADE REMOVAL – continued****h. Remove blade attaching pins (10).**

- (1) Slide blade outward and hold clear of lead lag link.
- (2) Crank winch (6) to position blade below main rotor head.

**i. Position blade over main rotor blade handling adapter (16).**

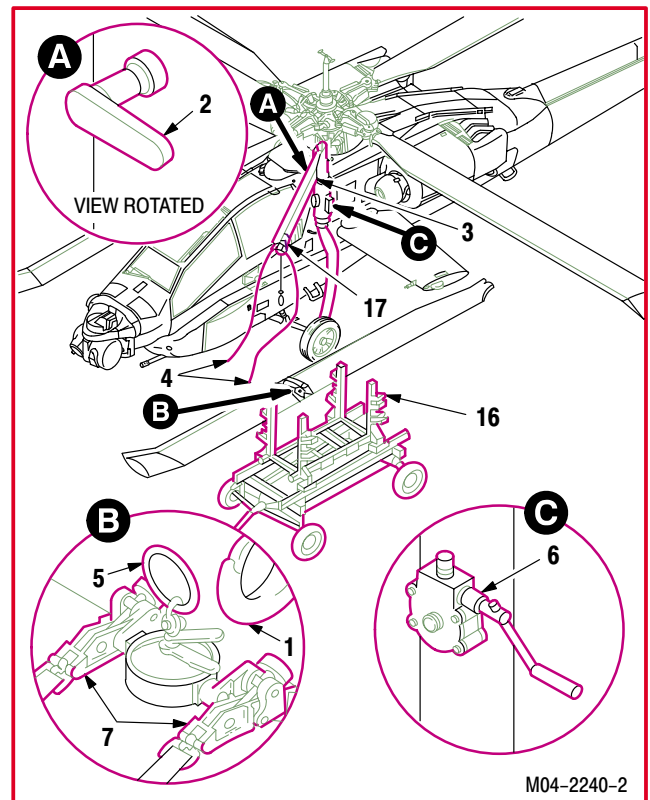
- (1) Rotate handle (2) to up position.
- (2) Use tag lines (4) to move crane boom arm (3).
- (3) Turn arm (3) to align blade over adapter (16).
- (4) Rotate handle (2) to down position.

**j. Lower blade to handling adapter (16).**

- (1) Crank winch (6) down and carefully lower blade on adapter (16).

**k. Release tension on lifting cable.****l. Crank winch (6) to position hook (1) just above sling support frame (7).****m. Retract hook (1).**

- (1) Unsnap hook (1) from ring (5).
- (2) Crank winch (6) up to position hook (1) about 6 inches below boom sheaves (17).



END OF TASK

1.84. HOISTING – MAIN ROTOR BLADE INSTALLATION

1.84.1. Installation

**WARNING**

Hoisted components can cause injury or death if they fall. Keep away from hoisted components and loaded crane. If injury occurs, seek medical aid.

a. Position crane hook (1) over installed blade sling.

- (1) Rotate crane handle (2) to up position to allow lateral movement of crane boom arm (3).
- (2) Use two tag lines (4) to move boom arm (3).
- (3) Turn boom arm (3) to align hook (1) over sling hoisting ring (5).
- (4) Rotate handle (2) to down position to prevent lateral movement of boom arm (3).

**WARNING**

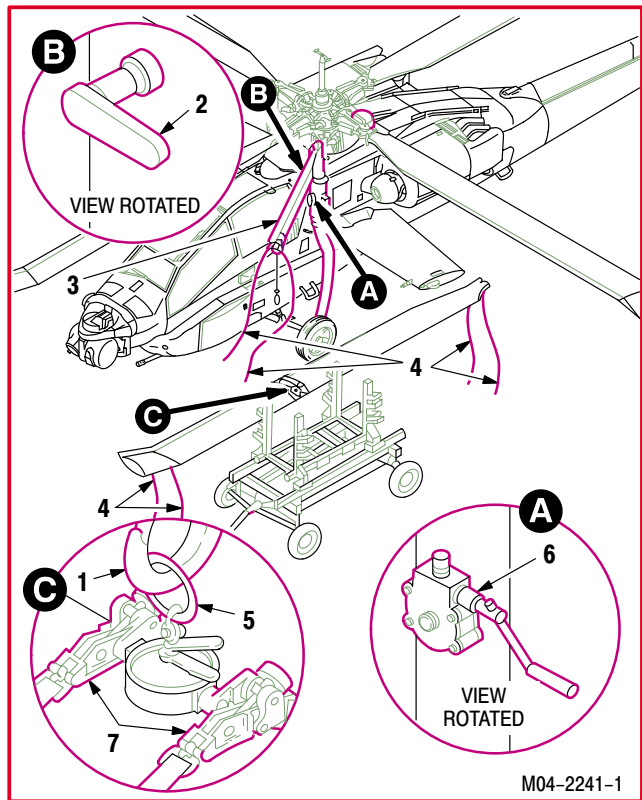
Lifting eye bolt on main rotor blade sling shall have no more than two visible threads above clamp handle prior to lifting blade. Failure to do so could result in hoisting injuries.

**CAUTION**

To prevent crossing cable on spool and damage to crank, tension must be applied when letting out or taking in cable.

b. Insert hook (1) into ring (5).

- (1) Crank winch (6) to position hook (1) just above sling support frame (7).
- (2) Snap hook (1) into ring (5).
- (3) Crank winch (6) to remove cable slack.



M04-2241-1

GO TO NEXT PAGE

---

**1.84. HOISTING – MAIN ROTOR BLADE INSTALLATION – continued**


---

**NOTE**

Use tag lines to control blade position.

c. **Tie 15-foot tag lines to inboard and outboard ends of blade.**

d. **Lift main rotor blade.**

(1) Crank winch (6) to hoist blade level with main rotor head (8).

e. **Position blade at main rotor head lead lag link (9).**

(1) Rotate handle (2) to up position to allow lateral movement of boom arm (3).

(2) Use two tag lines (4) to move crane boom arm (3). Turn boom arm (3) to align blade root next to link (9).

(3) Rotate crane handle (2) to down position to prevent lateral movement of boom arm (3).

f. **Remove droop stop wedges.**

g. **Install blade attaching pins (para 5.4).**

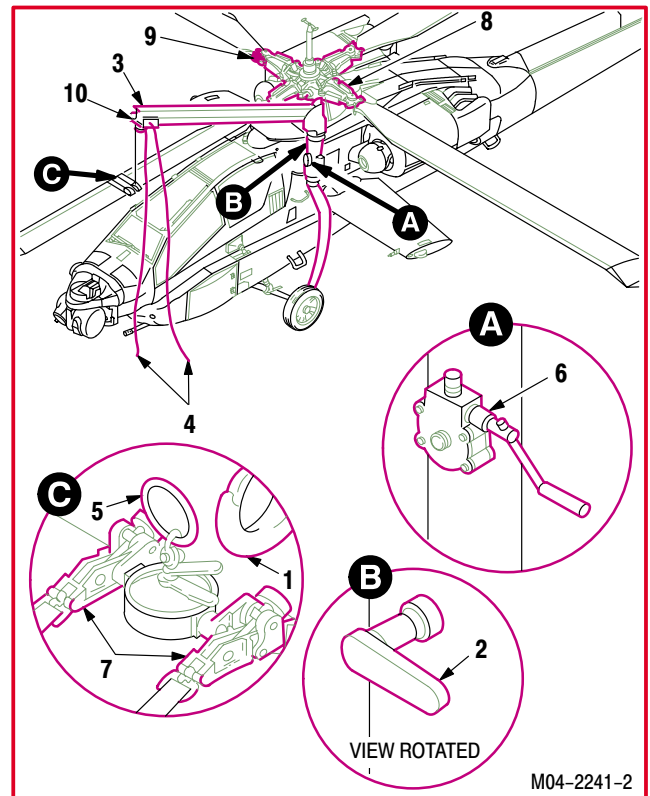
h. **Release tension on lifting cable (7).**

(1) Crank winch (6) to position hook (1) just above sling support frame (7).

i. **Retract hook (1).**

(1) Unsnap hook (1) from ring (5).

(2) Crank winch (6) to position hook (1) about 6 inches below boom sheave (10).



END OF TASK

1.85. HOISTING – MAIN ROTOR HEAD REMOVAL

1.85.1. Removal

**WARNING**

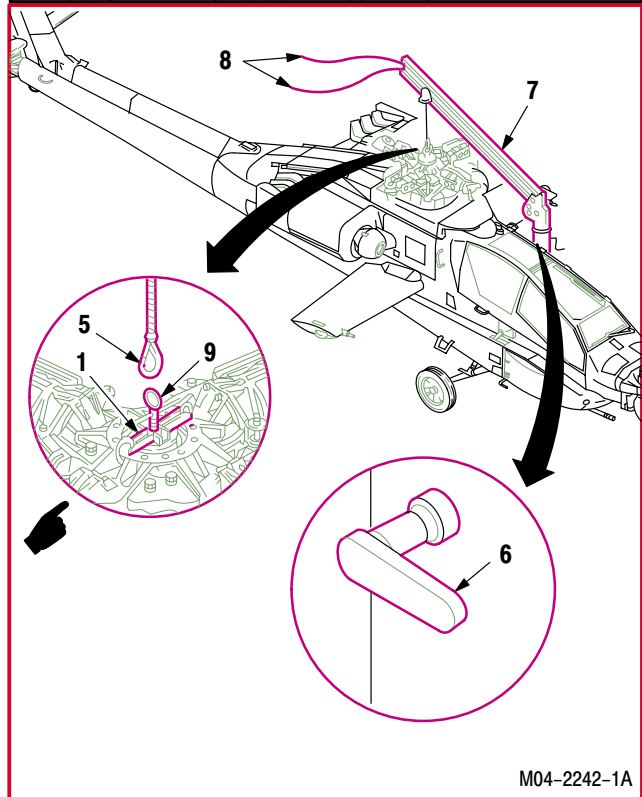
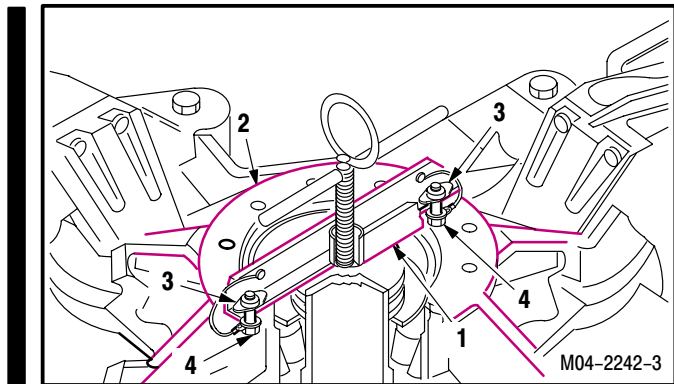
- Hoisted components can cause injury or death if they fall. Keep away from hoisted components and loaded crane. If injury occurs, seek medical aid.
- Failure to install bearing retainer prior to hoisting operation may result in main rotor component damage or personnel injury. If injury occurs, seek medical aid.

a. Install rotor head puller/sling (1) on rotor head (2).

- (1) Position puller/sling (1) on top of head (2).
- (2) Aline nutplates (3) with bolt holes in head (2).
- (3) Install two captive bolts (4) through head (2) into nutplates (3).
- (4) Tighten two captive bolts (4).

b. Position crane hook (5) over installed puller/sling (1).

- (1) Rotate crane handle (6) to up position to allow lateral movement of crane boom arm (7).
- (2) Use two tag lines (8) to move boom arm (7).
- (3) Turn boom arm (7) to aline hook (5) over puller/sling (1) lifting eye (9).
- (4) Rotate handle (6) to down position to allow prevent movement of boom arm (7).



GO TO NEXT PAGE

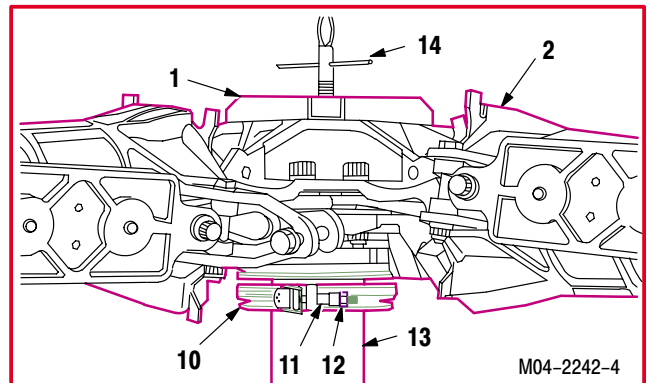
**1.85. HOISTING – MAIN ROTOR HEAD REMOVAL – continued**

**c. Install bearing retainer (10) on head (2).**

- (1) Install retainer (10) in bottom groove of head (2).
- (2) Close retainer (10). Engage quick coupler (11).
- (3) Tighten nut (12).

**d. Break head (2) loose from mast (13).**

- (1) Turn jack handle (14) of puller/sling (1) clockwise until jack plate contacts mast (13).
- (2) Continue to turn handle (14) until head (2) is loose from mast (13).



**CAUTION**

To prevent crossing cable on spool and damage to crank, tension must be applied when letting out or taking in cable.

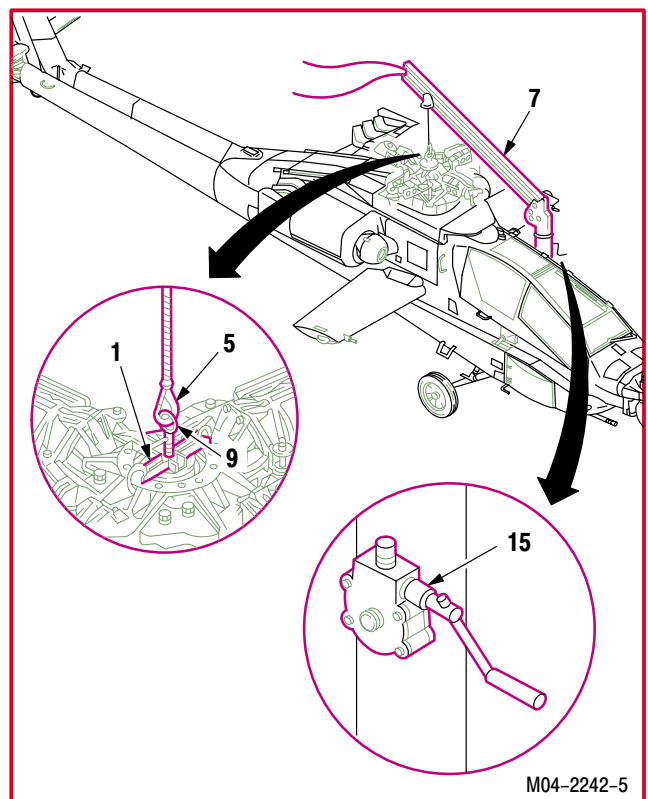
**e. Insert hook (5) into lifting eye (9).**

- (1) Crank winch (15) to position hook (5) below lifting eye (9).
- (2) Snap hook (5) into lifting eye (9).
- (3) Crank winch (15) to remove cable slack.

**NOTE**

Use two tag lines to control rotor head position.

**f. Tie two 15-foot lines to opposite ends of rotor head.**



GO TO NEXT PAGE



1.85. HOISTING – MAIN ROTOR HEAD REMOVAL – continued

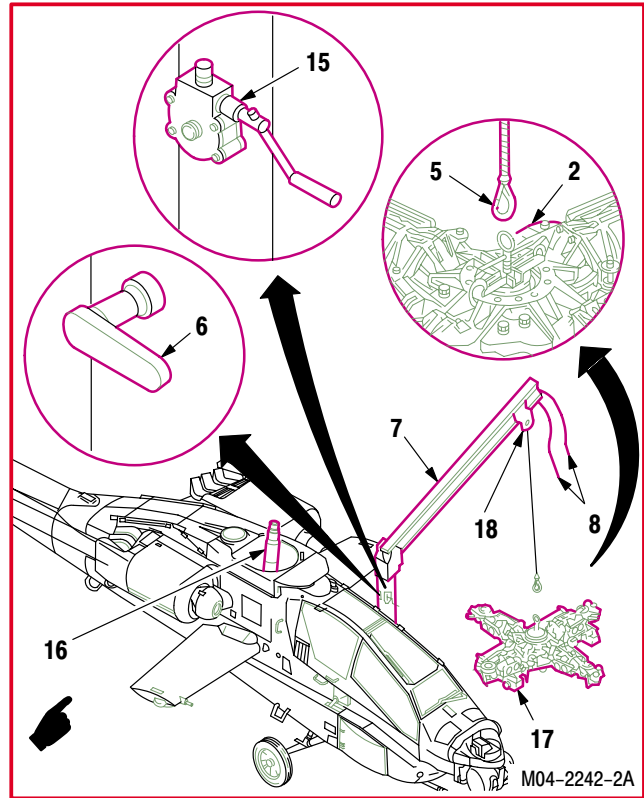
**CAUTION**

Plan to provide clearance during crane operation.

g. **Crank winch (15) up and hoist head (2) above static mast (16).**

h. **Position head (2) over main rotor head mount fixture (17).**

- (1) Rotate head (2) to a position that will clear boom arm (7).
- (2) Rotate handle (6) to up position to allow lateral movement of boom arm (7).
- (3) Use two tag lines (8) to move boom arm (7). Turn boom arm (7) to aline head (2) over fixture (17).
- (4) Rotate handle (6) to down position to prevent lateral movement of boom arm (7).
- (5) Crank winch (15) down and slowly lower rotor head (2) on fixture (17).



i. **Remove retainer (10) from head (2).**

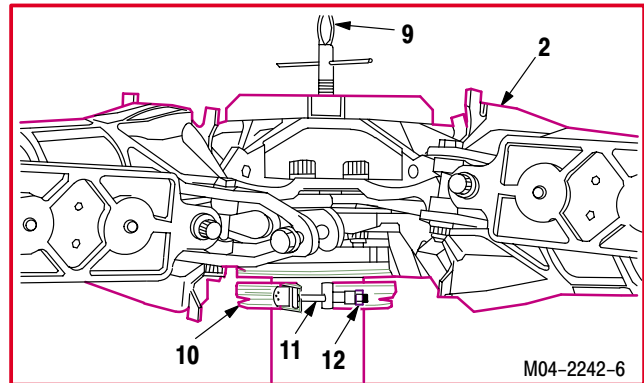
- (1) Loosen nut (12).
- (2) Disengage quick coupler (11). Open retainer (10).
- (3) Remove retainer (10) from bottom groove of head (2).

j. **Release tension on lifting cable after installing head (2) on fixture (17).**

- (1) Crank winch (15) down to provide cable slack below eye (9).

k. **Retract hook (1).**

- (1) Unsnap hook (5) from eye (9).
- (2) Crank winch (15) up to position hook (5) about 6 inches below boom sheaves (18).



END OF TASK

1.86. HOISTING – MAIN ROTOR HEAD INSTALLATION

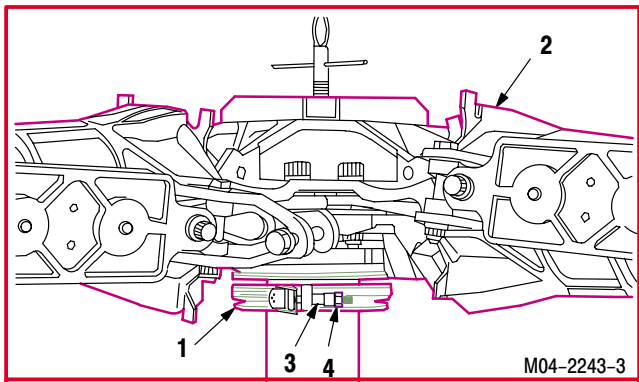
1.86.1. Installation

**WARNING**

- Hoisted components can cause injury or death if they fall. Keep away from hoisted components and loaded crane. If injury occurs, seek medical aid.
- Failure to install bearing retainer prior to hoisting operation may result in main rotor component damage or personnel injury. If injury occurs, seek medical aid.

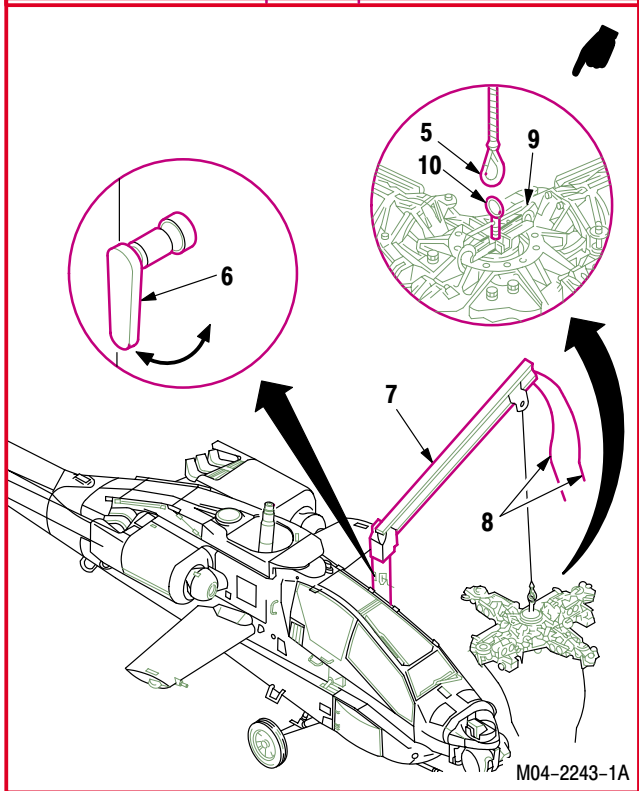
a. Install bearing retainer (1) on main rotor head (2).

- (1) Install retainer (1) in bottom groove of head (2).
- (2) Close retainer (1). Engage quick coupler (3).
- (3) Tighten nut (4).



b. Position crane hook (5) over installed rotor head puller/sling.

- (1) Rotate crane handle (6) to up position to allow lateral movement of crane boom arm (7).
- (2) Use tag lines (8) to move boom arm (7). Turn boom arm (7) to align hook (5) over puller/sling (9) lifting eye (10).
- (3) Rotate handle (6) to down position to prevent lateral movement of boom arm (7).



**CAUTION**

To prevent crossing cable on spool and damage to crank, tension must be applied when letting out or taking in cable.

GO TO NEXT PAGE

**1.86. HOISTING – MAIN ROTOR HEAD INSTALLATION – continued**

**c. Insert hook (5) into lifting eye (10).**

- (1) Crank winch (11) to position hook (5) below eye (10).
- (2) Snap hook (5) into eye (10).
- (3) Crank winch (11) to remove cable slack.

**NOTE**

Use tag lines to control rotor head.

**d. Tie two 15-foot tag lines to opposite ends of rotor head.**

**e. Lift head (2).**

- (1) Crank winch (11) to hoist head (2) higher than top of static mast (12).

**f. Position head (2) over static mast (12).**

- (1) Rotate handle (6) to the up position to allow lateral movement of boom arm (7).
- (2) Use two tag lines (8) to move boom arm (7). Turn boom arm (7) to aline head (2) over mast (12).
- (3) Rotate handle (6) to the down position to prevent lateral movement of boom arm (7).

**g. Lower head (2) to mast (12).**

- (1) Crank winch (11) and slowly lower head (2) to mast.

**h. Remove bearing retainer (1) from head (2).**

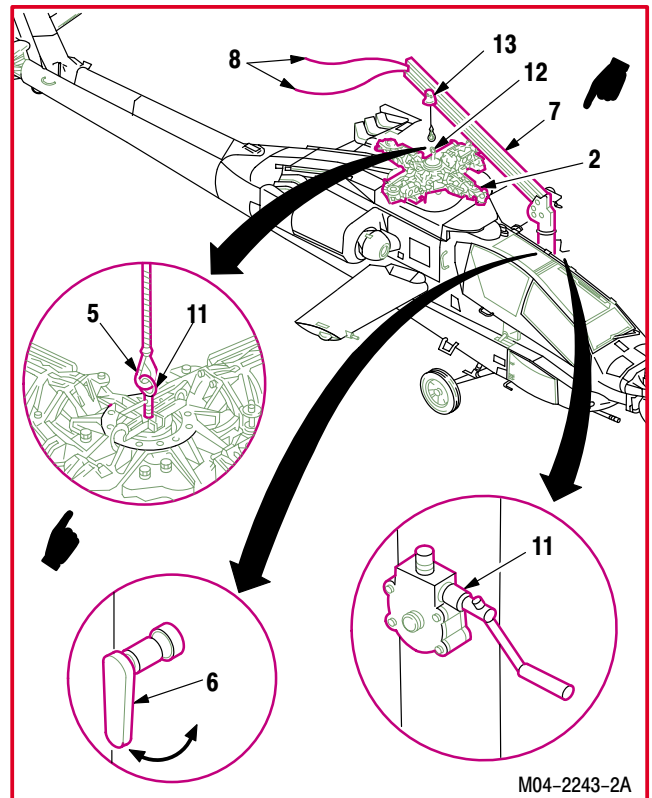
- (1) Loosen nut (4).
- (2) Disengage quick coupler (3). Open retainer (1).
- (3) Remove retainer (1) from bottom groove of head (2).

**i. Release tension on lifting cable.**

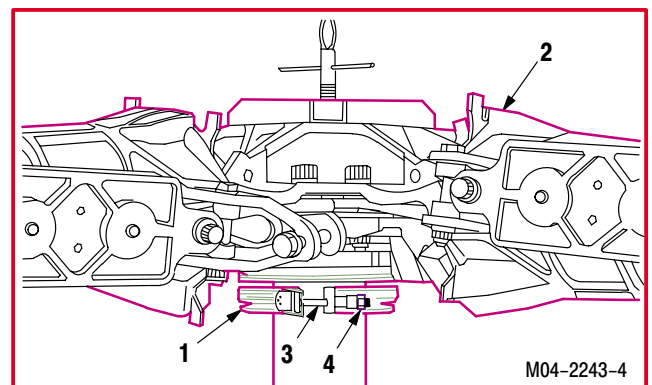
- (1) Crank winch (11) to provide cable slack below eye (10).

**j. Retract hook (5).**

- (1) Unsnap hook (5) from eye (10).
- (2) Crank winch (11) to position hook (5) about 6 inches below boom sheave (13).



M04-2243-2A



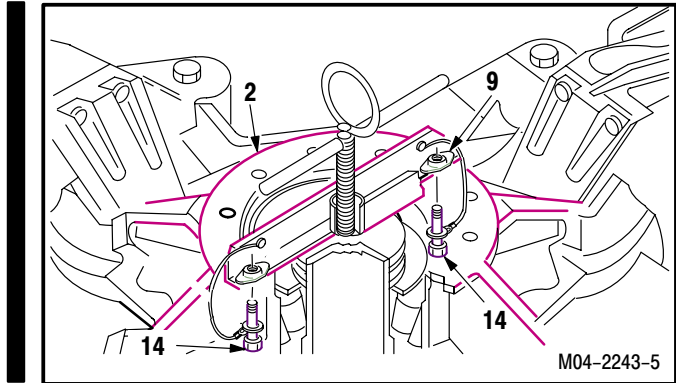
M04-2243-4

GO TO NEXT PAGE

1.86. HOISTING – MAIN ROTOR HEAD INSTALLATION – continued

k. Remove puller/sling (9) from head (2).

- (1) Remove two captive bolts (14) from puller/sling (9).
- (2) Remove puller sling (9).



END OF TASK

**1.87. HOISTING – MAIN ROTOR GEARSHAFT REMOVAL**

1.87.1. Removal

**WARNING**

**Hoisted components can cause injury or death if they fall. Keep away from hoisted components and loaded crane. If injury occurs, seek medical aid.**

**a. Position crane hook (1) over installed gearshaft sling (2).**

- (1) Rotate crane handle (3) to up position to allow lateral movement of crane boom arm (4).
- (2) Use two tag lines (5) to move crane boom arm (4). Turn boom arm (4) to align hook (1) over sling hoisting ring (6).
- (3) Rotate handle (3) to down position to prevent lateral movement of boom arm (4).

**CAUTION**

To prevent crossing cable on spool and damage to crank, tension must be applied when letting out or taking in cable.

**b. Insert hook (1) into ring (6).**

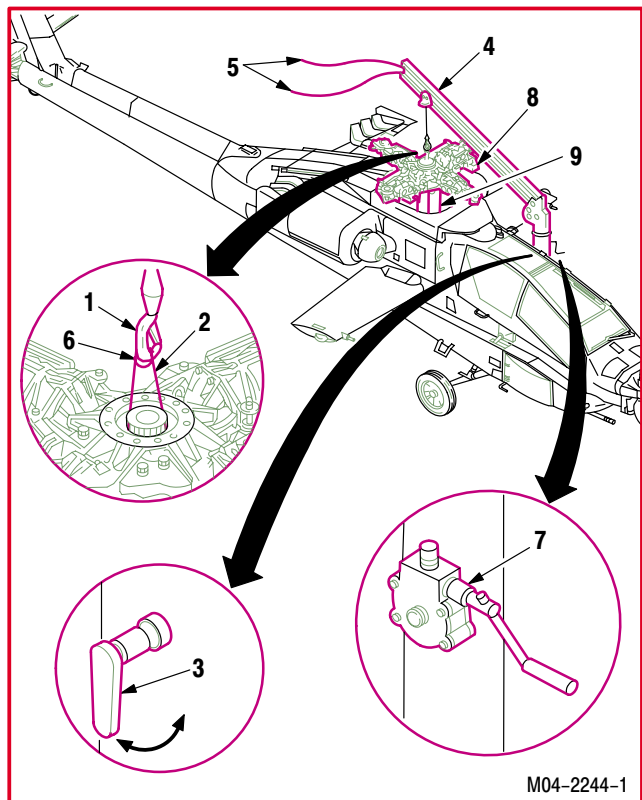
- (1) Crank winch (7) to position hook (1) just above ring (6).
- (2) Snap hook (1) into ring (6).
- (3) Crank winch (7) up to remove cable slack.

**c. Lift main rotor gearshaft.**

- (1) Crank winch (7) to hoist gearshaft just clear of main rotor head (8) and static mast (9).

**NOTE**

Use tag line to control gearshaft.



GO TO NEXT PAGE

---

**1.87. HOISTING – MAIN ROTOR GEARSHAFT REMOVAL – continued**


---

d. **Tie 20-foot tag line to bottom center of gearshaft.**

e. **Position main rotor gearshaft over main rotor gearshaft mount fixture (10).**

- (1) Rotate handle (3) to up position to allow lateral movement of boom arm (4).
- (2) Use two tag lines (5) to move boom arm (4).
- (3) Turn boom arm (4) to align gearshaft over fixture (10).
- (4) Rotate handle (3) to down position to prevent lateral movement of boom arm (4).

f. **Lower gearshaft to fixture (10).**

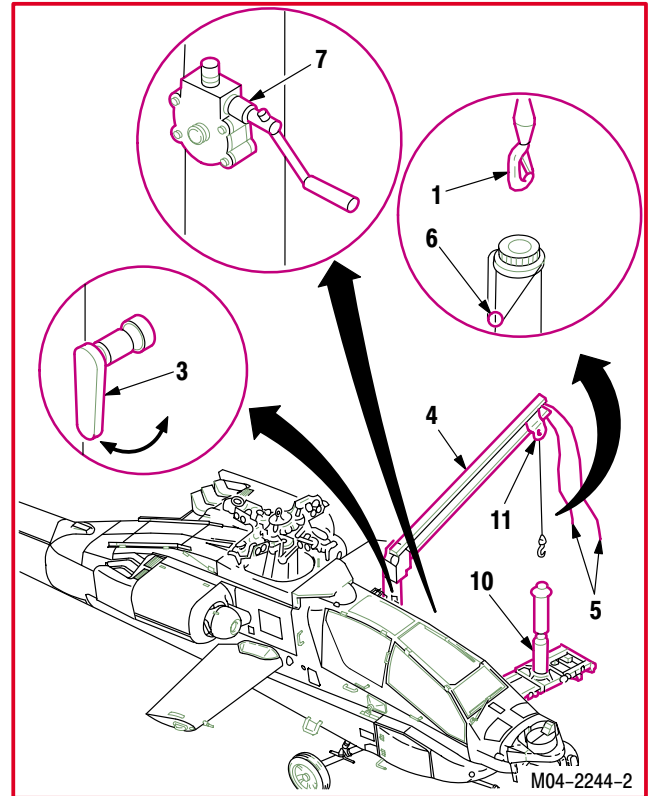
- (1) Crank winch (7) and slowly lower gearshaft on fixture.

g. **Release tension on lifting cable.**

- (1) Crank winch (7) down to position hook (1) below top of gearshaft.

h. **Retract hook (1).**

- (1) Unsnap hook (1) from hoisting ring (6).
- (2) Crank winch (7) to position hook (1) about 6 inches below boom sheave (11).



END OF TASK

**1.88. HOISTING – MAIN ROTOR GEARSHAFT INSTALLATION**

1.88.1. Installation

**WARNING**

**Hoisted components can cause injury or death if they fall. Keep away from hoisted components and loaded crane. If injury occurs, seek medical aid.**

**a. Position crane hook (1) over installed main rotor gearshaft (2).**

- (1) Rotate crane handle (3) to up position to allow lateral movement of crane boom arm (4).
- (2) Use two tag lines (5) to move boom arm (4).
- (3) Turn boom arm (4) to aline hook (1) over sling hoisting ring (6).
- (4) Rotate handle (3) to down position to prevent lateral movement of boom arm (4).

**CAUTION**

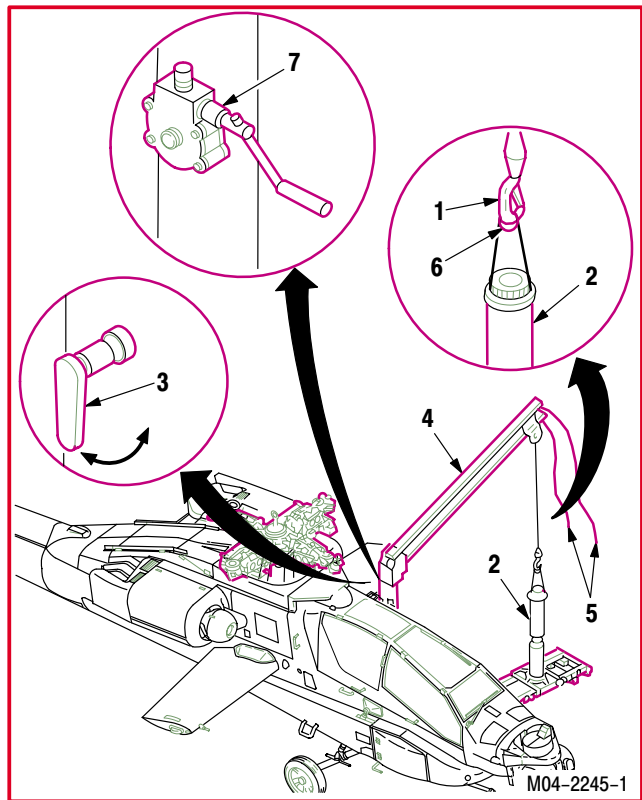
To prevent crossing cable on spool and damage to crank, tension must be applied when letting out or taking in cable.

**b. Insert hook (1) in ring (6).**

- (1) Crank winch (7) to position hook (1) just above gearshaft (2).
- (2) Snap hook (1) into ring (6).
- (3) Crank winch (7) to remove cable slack.
- (4) Tie 20-foot tag line to bottom center of gearshaft (2).

**NOTE**

Use tag line to control gearshaft.



GO TO NEXT PAGE

## 1.88. HOISTING – MAIN ROTOR GEARSHAFT INSTALLATION – continued

### c. Position gearshaft (2) over static mast (8).

- (1) Crank winch (7) to hoist gearshaft (2) higher than top of rotor head (9).
- (2) Rotate handle (3) to up position to allow lateral movement of crane boom arm (4).
- (3) Use two tag lines (5) to move boom arm (4). Turn boom arm (4) to align gearshaft (2) over mast (8) on rotor head (9).
- (4) Rotate handle (3) to down position to prevent lateral movement of boom arm (4).

### d. Install gearshaft (2) on mast (8).

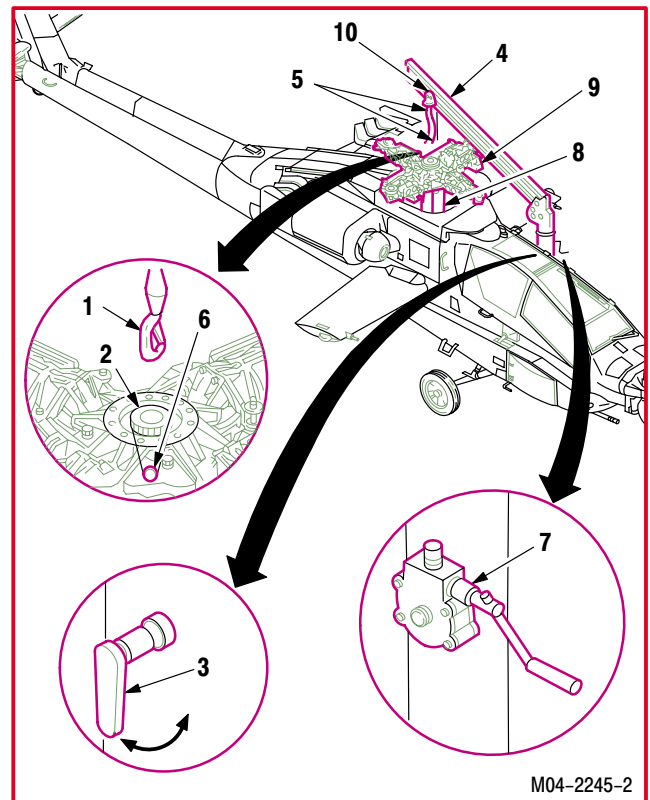
- (1) Crank winch (7) down and carefully insert end of gearshaft (2) into mast (8).
- (2) Remove tag lines from gearshaft (2).
- (3) Insert gearshaft (2) on mast (8).

### e. Remove hook (1) from gearshaft (2).

- (1) Release tension on lifting cable. Crank winch (7) down to position hook (1) just above gearshaft (2).
- (2) Unsnap hook (1) from ring (6).

### f. Retract hook (1).

- (1) Crank winch (7) to position hook (1) about 6 inches below boom sheave (10).



M04-2245-2

END OF TASK



**1.89. HOISTING – MAIN ROTOR SUPPORT (STATIC) MAST REMOVAL**

1.89.1. Removal

**WARNING**

**Hoisted components can cause injury or death if they fall. Keep away from hoisted components and loaded crane. If injury occurs, seek medical aid.**

**a. Position crane hook (1) over installed mast lifting eye (2).**

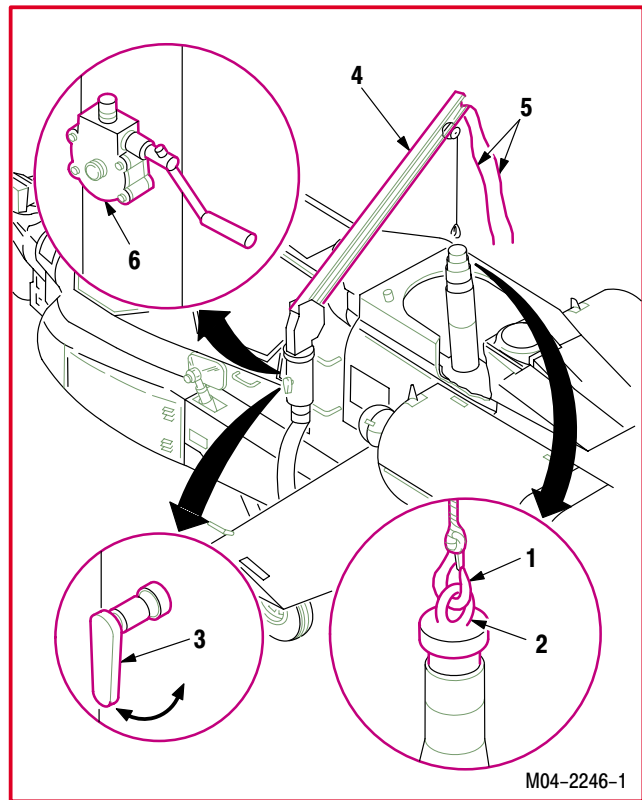
- (1) Rotate crane handle (3) to up position to allow lateral movement of crane boom arm (4).
- (2) Use tag lines (5) to move crane boom arm (4).
- (3) Turn crane boom arm (4) to align hook (1) over eye (2).
- (4) Rotate handle (3) to down position to prevent lateral movement of crane boom arm (4).

**CAUTION**

To prevent crossing cable on spool and damage to crank, tension must be applied when letting out or taking in cable.

**b. Insert hook (1) into eye (2).**

- (1) Crank winch (6) to position hook (1) below eye (2).
- (2) Snap hook (1) into eye (2).
- (3) Crank winch (6) to remove cable slack.



GO TO NEXT PAGE

**1.89. HOISTING – MAIN ROTOR SUPPORT (STATIC) MAST REMOVAL – continued****NOTE**

Use tag line to control mast.

**c. Attach tag line to mast.**

- (1) Tie 20-foot line to bottom center of mast.

**d. Lift mast from support base after removing mast mounting nuts and washers.**

- (1) Crank winch (6) to hoist mast (7) above upper fairing (8).

**e. Position mast (7) over unloading surface.**

- (1) Rotate handle (3) to up position to allow lateral movement of boom arm (4).
- (2) Use two tag lines (5) to move boom arm (4).
- (3) Turn arm (4) to aline mast (7) over level surface.
- (4) Rotate handle (3) to down position to prevent lateral movement of boom arm (4).

**f. Lower mast (7) to unloading surface.**

- (1) Crank winch (6) down and slowly lower mast (7) to level surface.

**g. Release tension on lifting cable when static mast is secure.**

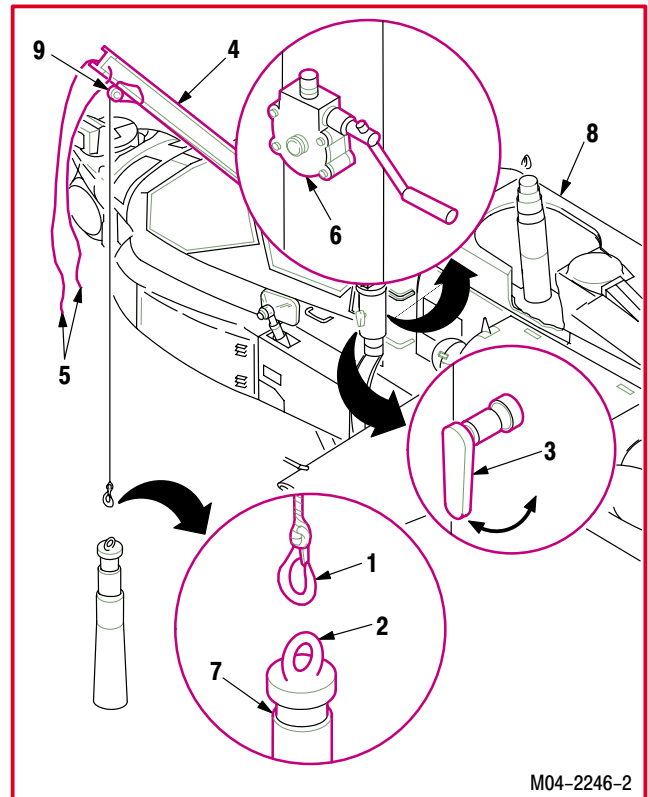
- (1) Crank winch (6) down to position hook (1) below eye (2).

**h. Remove hook (1) from eye (2).**

- (1) Unsnap hook (1) from eye (2).

**i. Retract crane hook (1).**

- (1) Crank winch (6) up to position hook (1) about 6 inches below boom sheave (9).



M04-2246-2

END OF TASK

**1.90. HOISTING – MAIN ROTOR SUPPORT (STATIC) MAST INSTALLATION**

1.90.1. Installation

**WARNING**

**Hoisted components can cause injury or death if they fall. Keep away from hoisted components and loaded crane. If injury occurs, seek medical aid.**

**a. Position crane hook (1) over installed static mast lifting eye (2).**

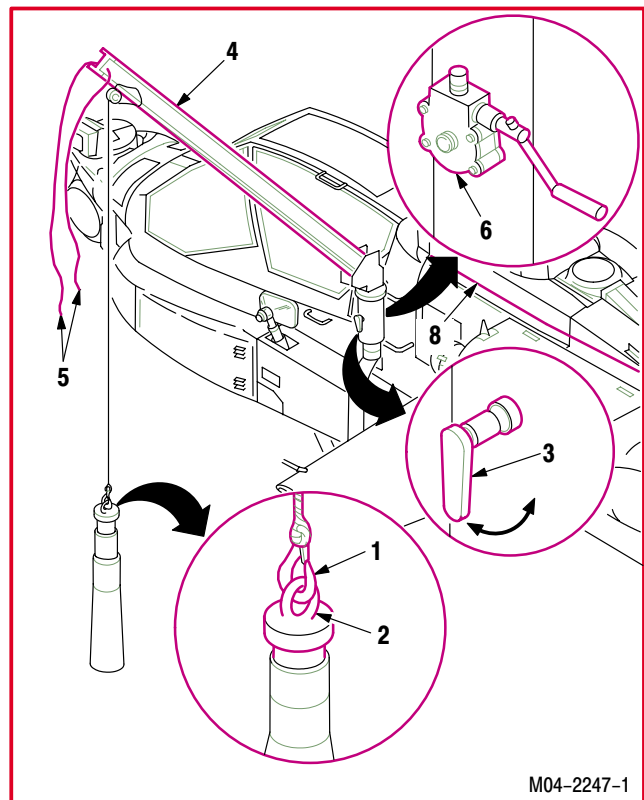
- (1) Rotate crane handle (3) to up position to allow lateral movement of crane boom arm (4).
- (2) Use tag lines (5) to move boom arm (4).
- (3) Turn boom arm (4) to align hook (1) over eye (2).
- (4) Rotate handle (3) to down position to prevent lateral movement of boom arm (4).

**CAUTION**

To prevent crossing cable on spool and damage to crank, tension must be applied when letting out or taking in cable.

**b. Insert hook (1) into eye (2).**

- (1) Crank winch (6) to position hook (1) below eye (2).
- (2) Snap hook (1) into eye (2).
- (3) Crank winch (6) to remove cable slack.



M04-2247-1

GO TO NEXT PAGE

---

**1.90. HOISTING – MAIN ROTOR SUPPORT (STATIC) MAST INSTALLATION – continued**


---

**NOTE**

Use a tag line to control mast.

**c. Attach tag line to static mast.**

- (1) Tie 20-foot line to bottom center of mast.

**d. Lift mast (7).**

- (1) Crank winch (6) to hoist mast (7) higher than top of upper fairing (8).

**e. Position mast (7) over support base (9).**

- (1) Rotate handle (3) to up position to allow lateral movement of boom arm (4).
- (2) Use two tag lines (5) to move boom arm (4).
- (3) Turn boom arm (4) to aline mast (7) over base (9).
- (4) Rotate handle (3) to down position to prevent lateral movement of boom arm (4).

**f. Lower mast to base (9).**

- (1) Crank winch (6) down and slowly lower mast (7) on base.

**g. Install mast mounting washers and nuts (para 6.97).****h. Release tension on lifting cable.**

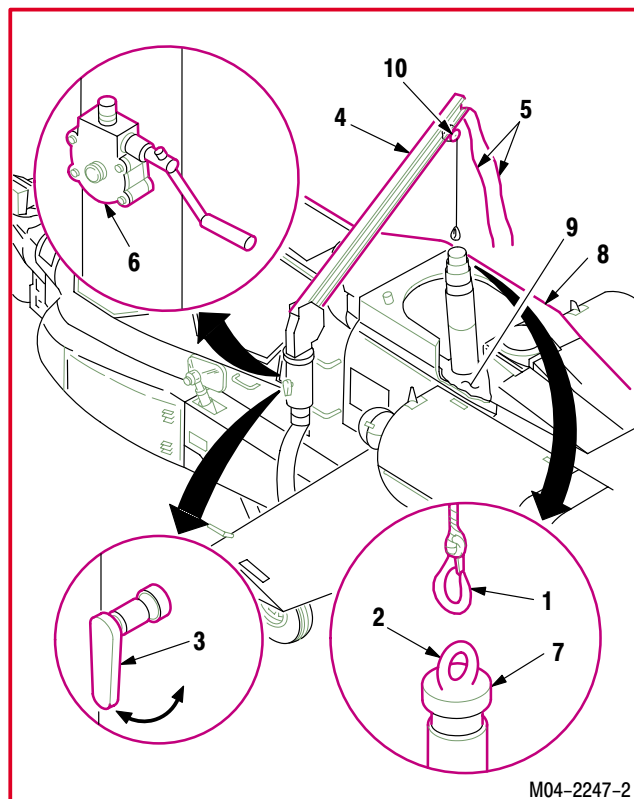
- (1) Crank winch (6) to position hook (1) below eye (2).

**i. Remove hook (1) from eye (2).**

- (1) Unsnap hook (1) from eye (2).

**j. Retract hook (1).**

- (1) Crank winch (6) to position hook (1) about 6 inches below boom sheave (10).



END OF TASK

**1.91. HOISTING - MAIN TRANSMISSION REMOVAL**

1.91.1. Removal

**WARNING**

**Hoisted components can cause injury or death if they fall. Keep away from hoisted components and loaded crane. If injury occurs, seek medical aid.**

**a. Position crane hook (1) over installed transmission sling (2).**

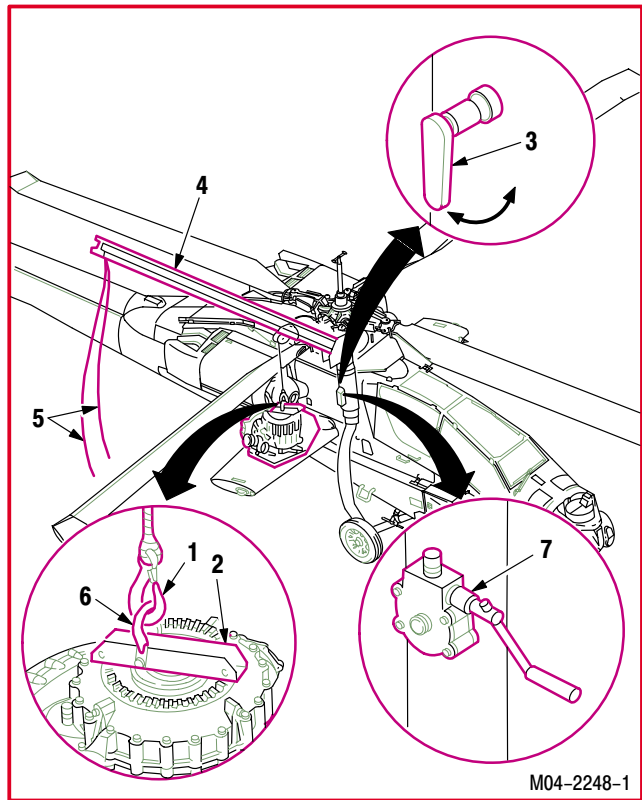
- (1) Rotate crane handle (3) to up position to allow lateral movement of crane boom arm (4).
- (2) Use two tag lines (5) to move boom arm (4).
- (3) Turn boom arm (4) to align hook (1) over sling shackle (6).
- (4) Rotate handle (3) to down position to prevent lateral movement of boom arm (4).

**CAUTION**

To prevent crossing cable on spool and damage to crank, tension must be applied when letting out or taking in cable.

**b. Insert hook (1) into shackle (6).**

- (1) Crank winch (7) to position hook (1) below shackle (6).
- (2) Snap hook (1) into shackle (6).
- (3) Crank winch (7) to remove cable slack.



M04-2248-1

GO TO NEXT PAGE

**1.91. HOISTING - MAIN TRANSMISSION REMOVAL – continued****NOTE**

Use two tag lines to control transmission.

c. **Tie two 10-foot lines to left and right sides of main transmission (8).**

d. **Lift transmission (8) from platform (9).**

(1) Crank winch (7) to hoist transmission above platform (9).

e. **Position transmission (8) over maintenance trailer (10).**

(1) Rotate handle (3) to up position to allow lateral movement of boom arm (4).

(2) Use two tag lines (5) to move boom arm (4).

(3) Turn boom arm (4) to align transmission (8) over bed of trailer (10).

(4) Rotate handle (3) to down position to prevent lateral movement of boom arm (4).

f. **Lower transmission (8) to maintenance trailer (10).**

(1) Crank winch (7) to slowly lower transmission (8) to trailer (10).

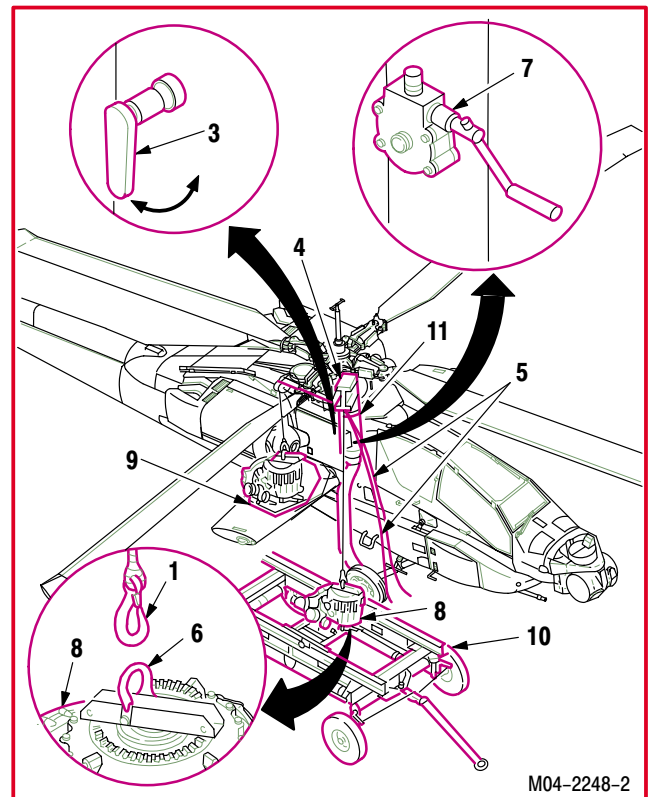
g. **Secure transmission (8) to trailer (10).**

(1) Crank winch (7) to provide cable slack below shackle (6).

h. **Retract hook (1).**

(1) Unsnap hook (1) from shackle (6).

(2) Crank winch (7) to position hook (1) about 6 inches below boom sheave (11).



END OF TASK

1.92. HOISTING – MAIN TRANSMISSION INSTALLATION

1.92.1. Installation

**WARNING**

Hoisted components can cause injury or death if they fall. Keep away from hoisted components and loaded crane. If injury occurs, seek medical aid.

a. Position crane hook (1) over installed transmission sling (2).

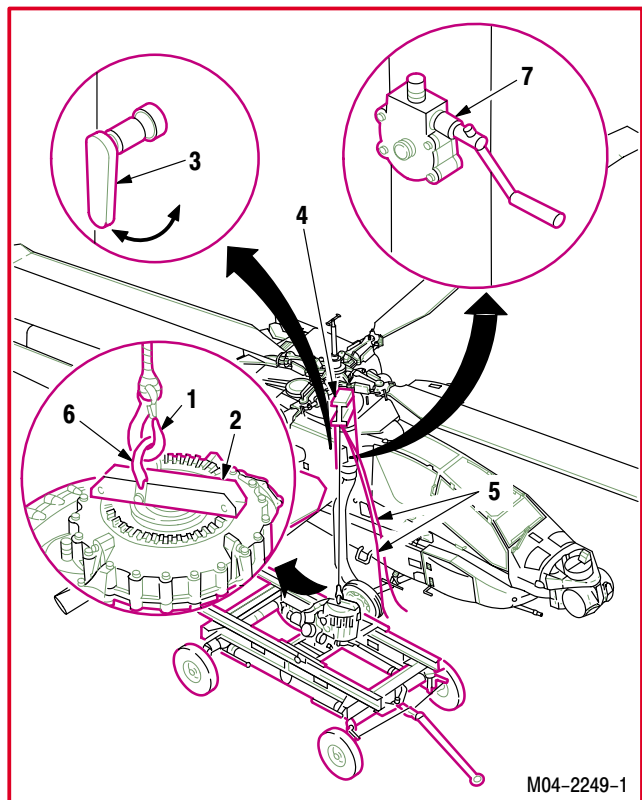
- (1) Rotate crane handle (3) to up position to allow lateral movement of crane boom arm (4).
- (2) Use two tag lines (5) to move boom arm (4).
- (3) Turn boom arm (4) to align hook (1) over sling shackle (6).
- (4) Rotate handle (3) to down position to prevent lateral movement of boom arm (4).

**CAUTION**

To prevent crossing cable on spool and damage to crank, tension must be applied when letting out or taking in cable.

b. Insert hook (1) into shackle (6).

- (1) Crank winch (7) to position hook (1) below shackle (6).
- (2) Snap hook (1) into shackle (6).
- (3) Crank winch (7) to remove cable slack.



GO TO NEXT PAGE

**1.92. HOISTING – MAIN TRANSMISSION INSTALLATION – continued****NOTE**

Use tag lines to control transmission position.

c. **Tie two 10-foot lines to left and right sides of main transmission (8).**

d. **Lift transmission (8) from maintenance trailer (9).**

(1) Crank winch (7) to hoist transmission (8) higher than top of installed platform (10).

e. **Position transmission (8) over platform (10).**

(1) Rotate handle (3) to up position to allow lateral movement of boom arm (4).

(2) Use two tag lines (5) to move boom arm (4). Turn boom arm (4) to position transmission (8) over platform (10).

(3) Rotate handle (3) to down position to prevent lateral movement of boom arm (4).

(4) Aline and hold positions of transmission (8) left and right input housings.

f. **Lower main transmission (8) to platform.**

(1) Crank winch (7) to slowly lower transmission (8) to platform (10).

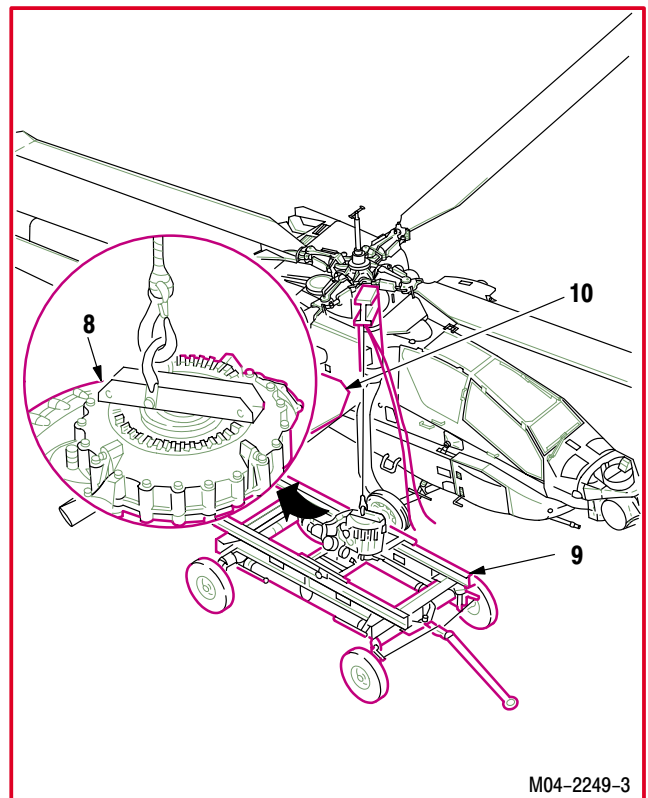
(2) Secure transmission (8) to platform (10).

g. **Crank winch (7) to provide cable slack below shackle (6).**

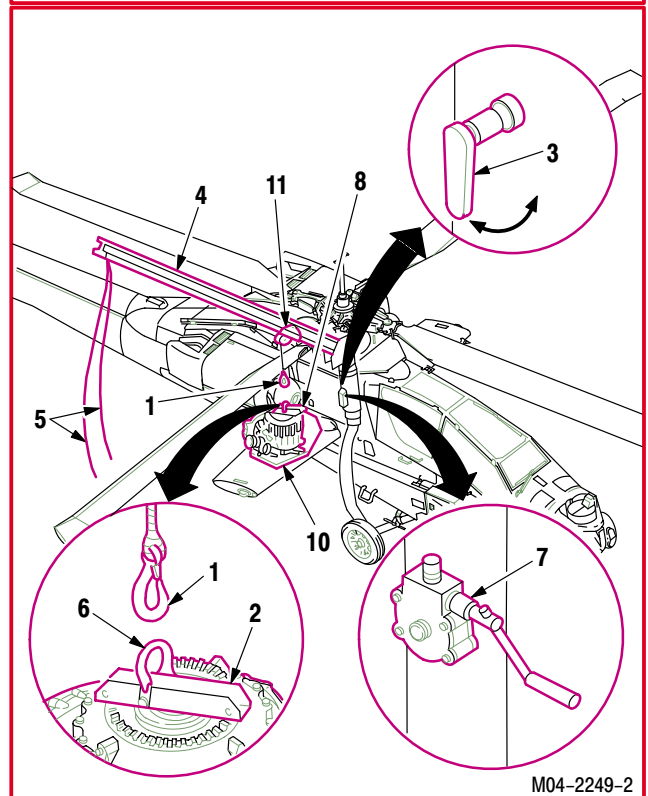
h. **Retract hook (1).**

(1) Unsnap hook (1) from shackle (6).

(2) Crank winch (7) to position hook (1) about 6 inches below boom sheave (11).



M04-2249-3



M04-2249-2

END OF TASK



**1.93. HOISTING – MAIN ROTOR SWASHPLATE REMOVAL**

1.93.1. Removal

**WARNING**

**Hoisted components can cause injury or death if they fall. Keep away from hoisted components and loaded crane. If injury occurs, seek medical aid.**

**a. Position crane hook (1) over installed universal sling (2).**

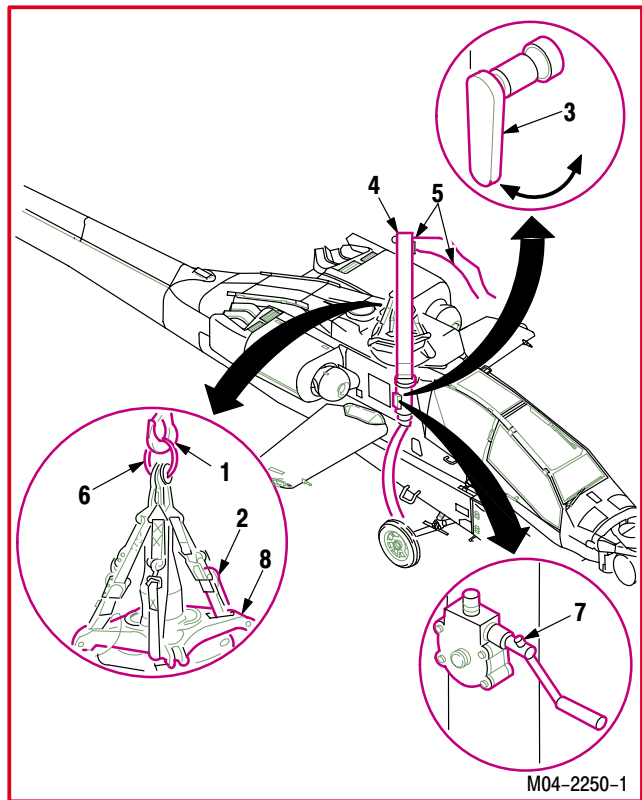
- (1) Rotate crane handle (3) to up position to allow lateral movement of crane boom arm (4).
- (2) Use two tag lines (5) to move boom arm (4).
- (3) Turn boom arm (4) to align hook (1) over sling lifting eye (6).
- (4) Rotate handle (3) to down position to prevent lateral movement of boom arm (4).

**CAUTION**

To prevent crossing cable on spool and damage to crank, tension must be applied when letting out or taking in cable.

**b. Insert hook (1) into eye (6).**

- (1) Crank winch (7) down to position hook (1) just above top of main rotor swashplate (8).
- (2) Snap hook (1) into eye (6).
- (3) Crank winch (7) up to remove cable slack.



GO TO NEXT PAGE

**1.93. HOISTING – MAIN ROTOR SWASHPLATE REMOVAL – continued****NOTE**

- Secure disconnected control links.
- Use tag line to control swashplate.

c. **Tie 20-foot line to one open web of swashplate (8).**

d. **Lift swashplate (8) from static mast (9).**

- (1) Crank winch (7) up and hoist swashplate (8) above mast (9).

e. **Position swashplate (8) over maintenance trailer (10).**

- (1) Rotate handle (3) to up position to allow lateral movement of boom arm (4).
- (2) Use two tag lines (5) to move boom arm (4).
- (3) Turn boom arm (4) to align swashplate (8) over bed of trailer (10).
- (4) Rotate handle (3) to down position to prevent lateral movement of boom arm (4).

f. **Crank winch (7) and slowly lower swashplate to trailer bed (10).**

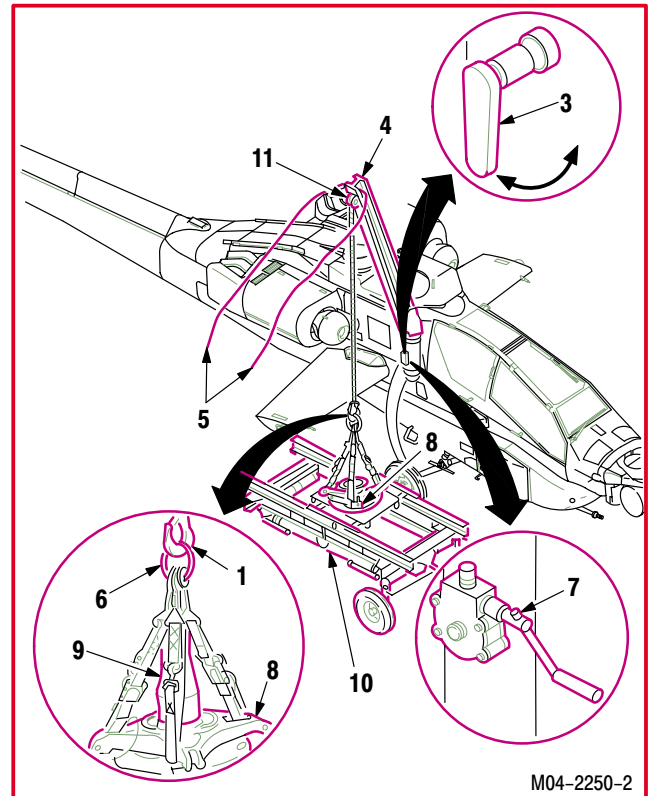
- (1) Secure swashplate (8) on trailer (10).

g. **Release tension on lifting cable.**

- (1) Crank winch (7) to position hook (1) just above top of swashplate (8).

h. **Retract hook (1).**

- (1) Remove hook (1) from eye (6).
- (2) Crank winch (7) to position hook (1) about 6 inches below boom sheave (11).



M04-2250-2

END OF TASK

**1.94. HOISTING – MAIN ROTOR SWASHPLATE INSTALLATION**

1.94.1. Installation

**WARNING**

**Hoisted components can cause injury or death if they fall. Keep away from hoisted components and loaded crane. If injury occurs, seek medical aid.**

**a. Position crane hook (1) over installed universal sling (2).**

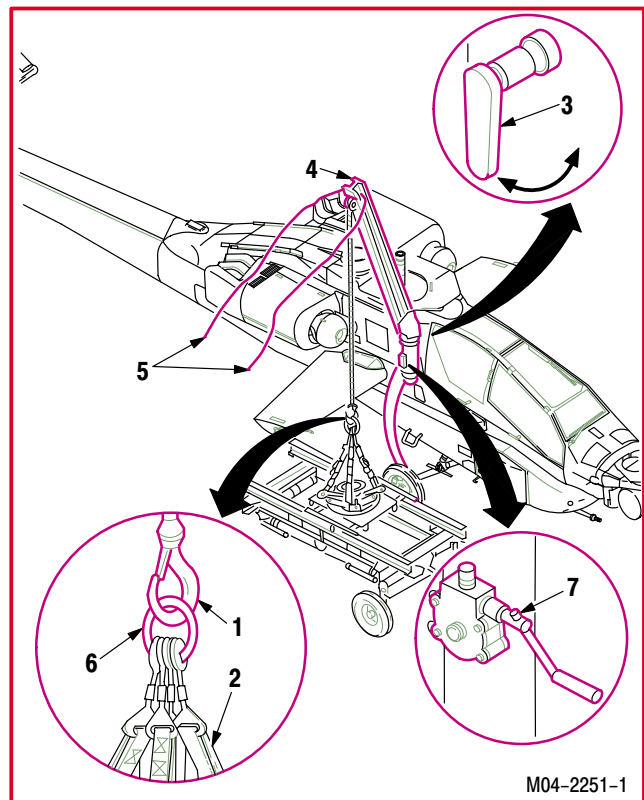
- (1) Rotate crane handle (3) to up position to allow lateral movement of crane boom arm (4).
- (2) Use two tag lines (5) to move boom arm (4).
- (3) Turn boom arm (4) to align hook (1) over sling lifting eye (6).
- (4) Rotate handle (3) to down position to prevent lateral movement of boom arm (4).

**CAUTION**

To prevent crossing cable on spool and damage to crank, tension must be applied when letting out or taking in cable.

**b. Insert hook (1) into eye (6).**

- (1) Crank winch (7) to position hook (1) just above top of main rotor swashplate (8).
- (2) Snap hook (1) into eye (6).
- (3) Crank winch (7) up to remove cable slack.



GO TO NEXT PAGE

**1.94. HOISTING – MAIN ROTOR SWASHPLATE INSTALLATION – continued**

**NOTE**

Use tag line to control swashplate.

**c. Attach tag line to swashplate (8).**

- (1) Tie 20-foot line to one open web of swashplate (8).

**d. Lift swashplate (8) from maintenance trailer (9).**

- (1) Crank winch (7) to hoist swashplate (8) higher than top of static mast (10).

**e. Position swashplate (8) over mast (10).**

- (1) Rotate crane handle (3) to up position to allow lateral movement of boom arm (4).
- (2) Use two tag lines (5) to move boom arm (4).
- (3) Turn boom arm (4) to align swashplate (8) over mast (10).
- (4) Rotate handle (3) to down position to prevent lateral movement of boom arm (4).

**f. Lower swashplate (8) onto mast (10).**

- (1) Crank winch (7) down and carefully lower swashplate (8) to mast (10).

**g. Connect control links to swashplate (8) (para 11.56).**

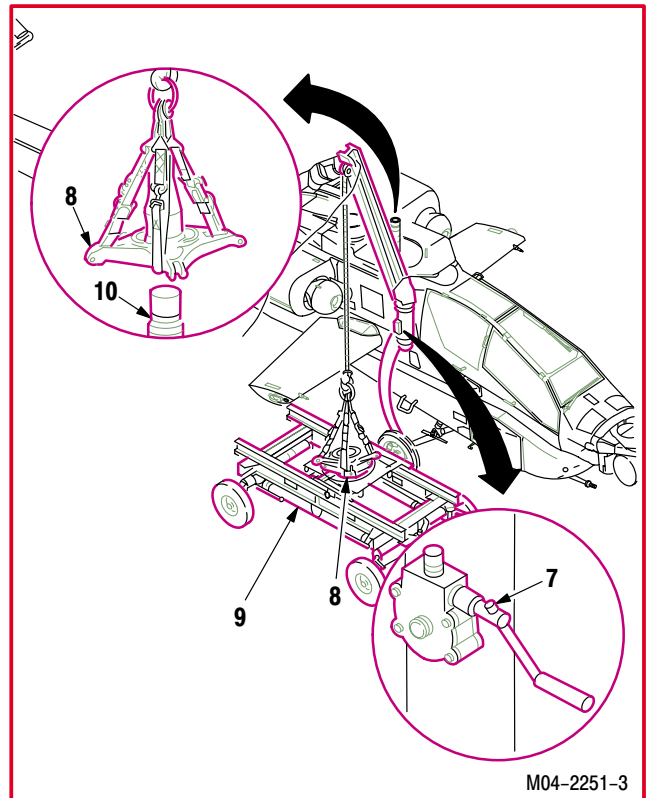
**h. Release tension on lifting cable.**

- (1) Crank winch (7) to position hook (1) just above top of swashplate (10).

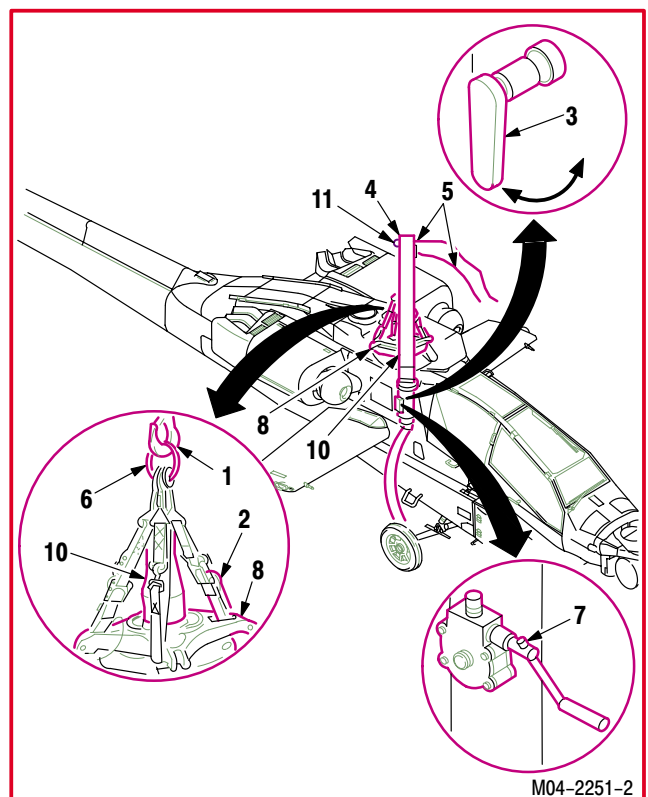
**i. Remove hook (1) from lifting eye (6).**

**j. Retract hook (1).**

- (1) Crank winch (7) to position hook (1) about 6 inches below boom sheave (11).



M04-2251-3



M04-2251-2

END OF TASK

1.95. HOISTING – APU REMOVAL

1.95.1. Removal

**WARNING**

- Hoisted components can cause injury or death if they fall. Keep away from hoisted components and loaded crane. If injury occurs, seek medical aid.
- Inspect APU lifting lug for damage, bends, or cracks. Failure of lifting lug can cause structural damage and injury to personnel. If an injury occurs, seek medical aid.

a. Check APU lifting lug (1) for damage, bends, or cracks.

b. Position crane hook (2) over APU lug (1).

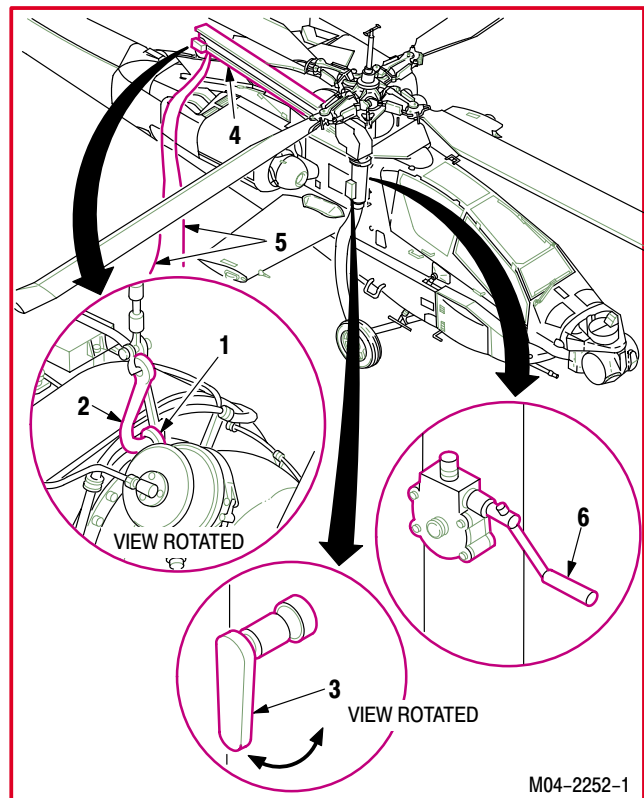
- (1) Rotate crane handle (3) to up position to allow lateral movement of boom arm (4).
- (2) Use two tag lines (5) to move arm (4). Turn boom arm (4) to align hook (1) over lug (2).
- (3) Rotate handle (3) to down position to prevent lateral movement of boom arm (4).

**CAUTION**

To prevent crossing cable on spool and damage to crank, tension must be applied when letting out or taking in cable.

c. Insert hook (2) into lug (1).

- (1) Crank winch (6) to position hook (2) below lug (1).
- (2) Snap hook (2) into lug (1).
- (3) Crank winch (6) to remove cable slack.



M04-2252-1

GO TO NEXT PAGE

---

**1.95. HOISTING – APU REMOVAL – continued**


---

**NOTE**

Use a tag line to control APU.

d. **Tie 20-foot lines to forward and aft ends of APU (7).**

e. **Lift APU (7) to relieve weight from APU mounts.**

f. **Lift APU (7) from equipment bay deck after disconnecting and demounting.**

(1) Crank winch (6) to hoist APU (7) above deck area access doors and fairing.

g. **Position APU (7) over workstand (8).**

(1) Rotate crane handle (3) to up position to allow lateral movement of boom arm (4).

(2) Use two tag lines (5) to move arm (4). Turn boom arm (4) to align APU over workstand (8).

(3) Rotate handle (3) to the down position to prevent lateral movement of boom arm (4).

h. **Crank winch (6) and slowly lower APU (7) to workstand (8).**

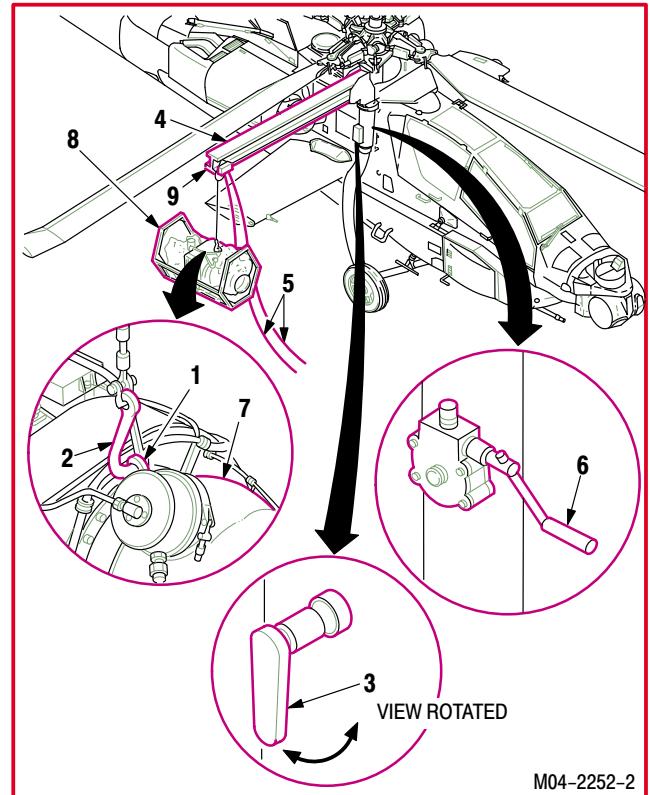
(1) Mount APU (7) on workstand (8).

i. **Crank winch (6) to provide cable slack below lug (1).**

j. **Retract hook (2).**

(1) Unsnap hook (2) from lug (1).

(2) Crank winch (6) to position hook (2) about 6 inches below boom sheave (9).



END OF TASK

**1.96. HOISTING – APU INSTALLATION**

1.96.1. Installation

**WARNING**

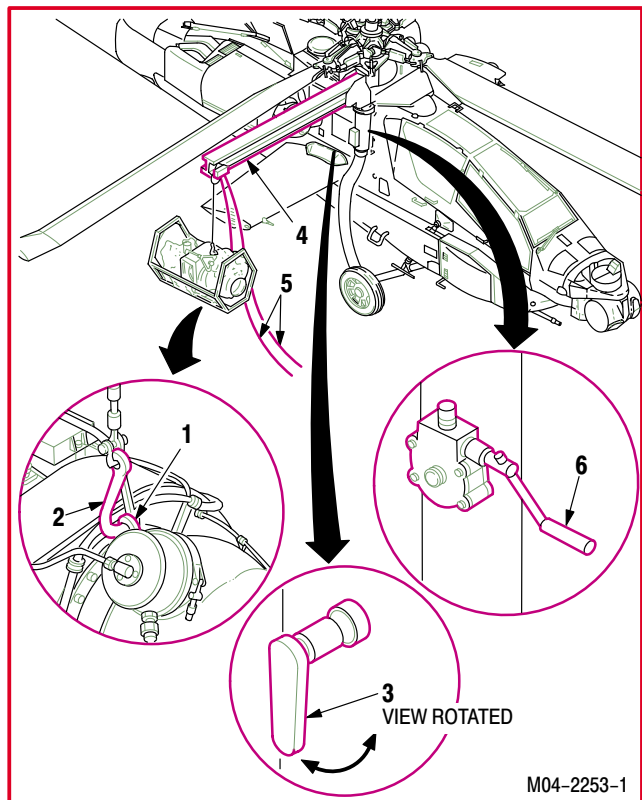
- Hoisted components can cause injury or death if they fall. Keep away from hoisted components and loaded crane. If injury occurs, seek medical aid.
- Inspect APU lifting lug for damage, bends, or cracks. Failure of lifting lug can cause structural damage and personal injury. If an injury occurs, seek medical aid.

- a. Check APU lug (1) for damage, bends, or cracks.
- b. Position crane hook (2) over APU lifting lug (1).
  - (1) Rotate crane handle (3) to up position to allow lateral movement of crane boom arm (4).
  - (2) Use two tag lines (5) to move arm (4). Turn boom arm (4) to align hook (2) over lug (1).
  - (3) Rotate handle (3) to down position to prevent lateral movement of boom arm (4).

**CAUTION**

To prevent crossing cable on spool and damage to crank, tension must be applied when letting out or taking in cable.

- c. Insert hook (1) into lug (2).
  - (1) Crank winch (6) to position hook (2) below lug (1).
  - (2) Snap hook (2) into lug (1).



M04-2253-1

GO TO NEXT PAGE

## 1.96. HOISTING – APU INSTALLATION – continued

**NOTE**

Use tag lines to control APU.

d. **Tie two 20-foot lines to forward and aft ends of APU (7).**

e. **Crank winch (6) up to relieve weight from APU mounts.**

f. **Lift APU (7) from APU workstand after de-mounting.**

(1) Crank winch (6) to hoist APU (7) higher than deck area access doors and fairing.

g. **Position APU (7) over equipment bay.**

(1) Rotate handle (3) to up position to allow lateral movement of boom arm (4).

(2) Use two tag lines (5) to move boom arm (4). Turn boom arm (4) to position APU over APU mounts on equipment deck.

(3) Rotate handle (3) to down position to prevent lateral movement of boom arm (4).

(4) Aline and hold positions of APU (7) forward and aft ends.

(5) Crank winch (6) down and slowly lower APU (7) to deck mounting surfaces.

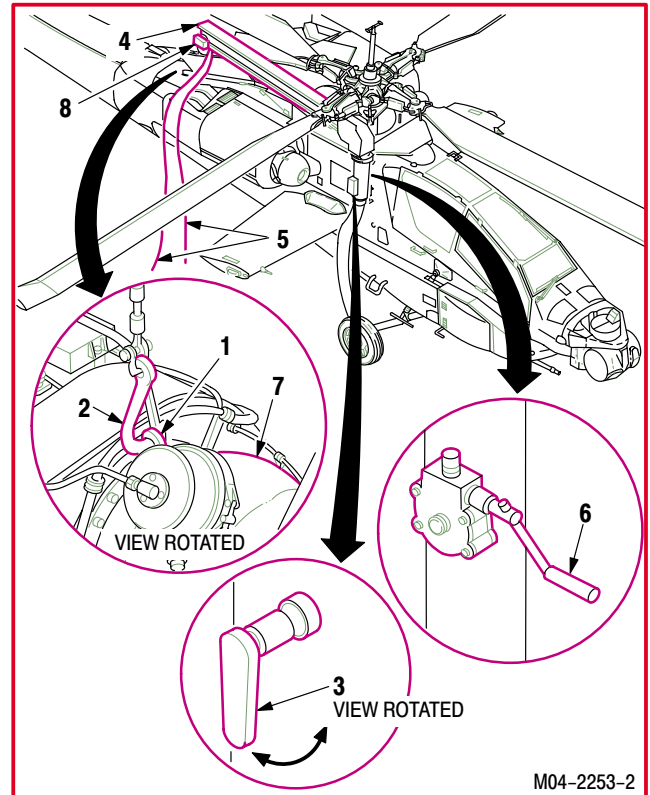
(6) Mount APU (7) on equipment deck.

h. **Crank winch (6) down to provide cable slack below lug (1).**

i. **Retract hook (2).**

(1) Unsnap hook (2) from lifting lug (1).

(2) Crank winch (6) up to position hook (2) about 6 inches below boom sheave (8).



END OF TASK



---

## 1.97. MAINTENANCE CRANE INSTALLATION

---

### 1.97.1. Description

This task covers: Removal from Stowage. Cleaning. Inspection. Installation.

---

### 1.97.2. Initial Setup

#### Tools:

Aircraft mechanic's tool kit (item 376, App H)  
Aircraft mounted crane (item 69, App H)

#### Personnel Required:

67R Attack Helicopter Repairer  
Two persons to assist  
67R3F Attack Helicopter Repairer/Technical  
Inspector

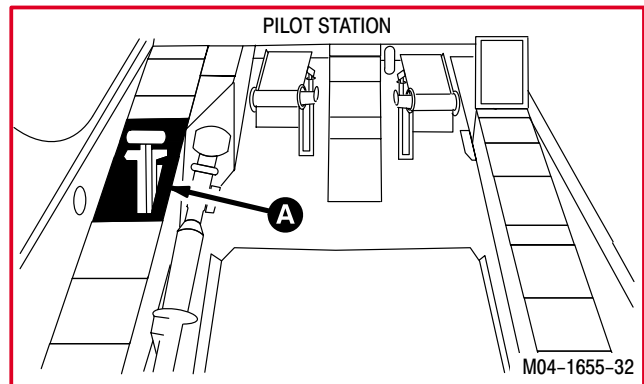
#### Equipment Conditions:

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
2.2	Access door R295 opened

---

### 1.97.3. Removal from Stowage

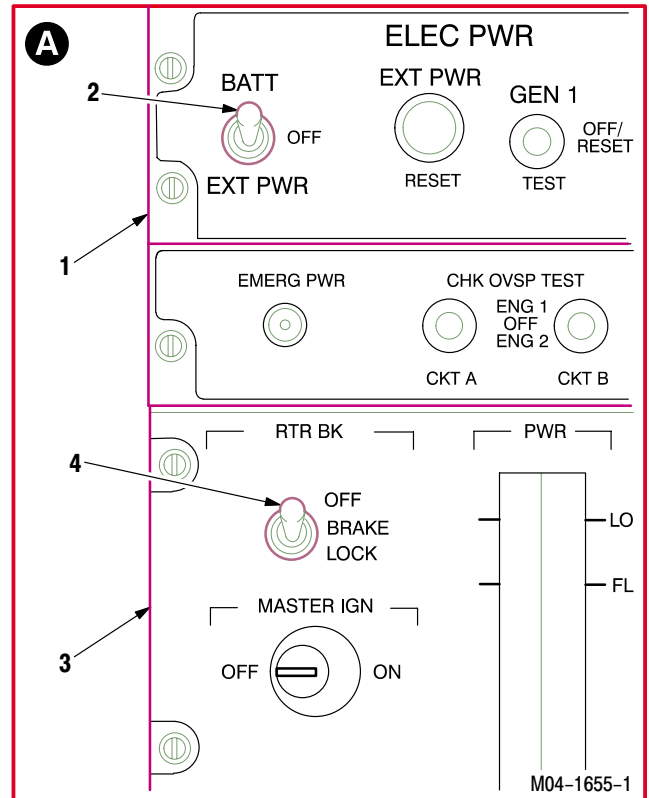
- a. **Connect battery** (para 9.40).
- b. **Enter pilot station** (para 1.56). **Observe all safety precautions.**



GO TO NEXT PAGE

1.97. MAINTENANCE CRANE INSTALLATION – continued

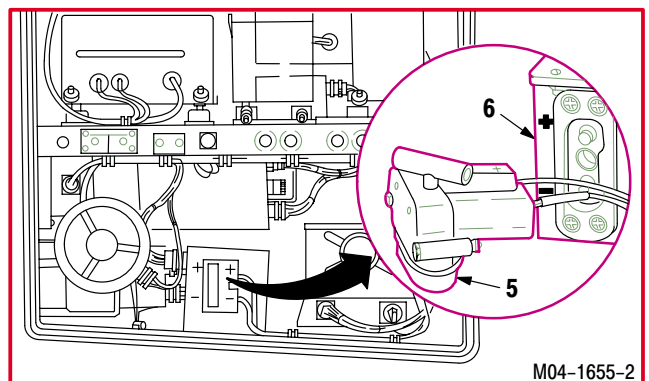
- c. Set pilot ELEC PWR panel (1) BATT EXT PWR switch (2) to BATT.
- d. Set pilots power lever quadrant (3) RTR BRK switch (4) to OFF.
- e. Set BATT EXT PWR switch (2) to OFF.



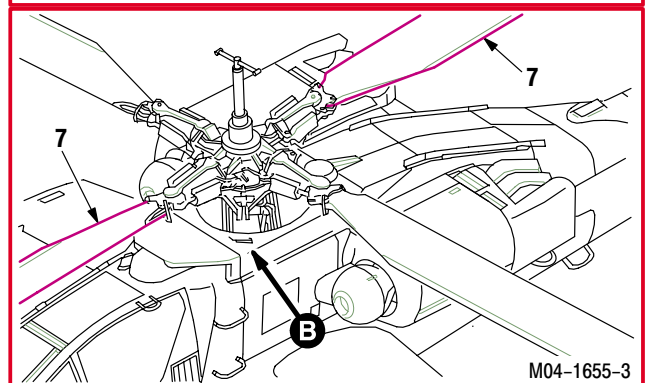
- f. Disconnect battery plug (5) from battery receptacle (6).

**NOTE**

Pilot and CPG access doors must be closed for crane installation on right side.



- g. Aline two rotor blades (7) with longitudinal centerline of helicopter.

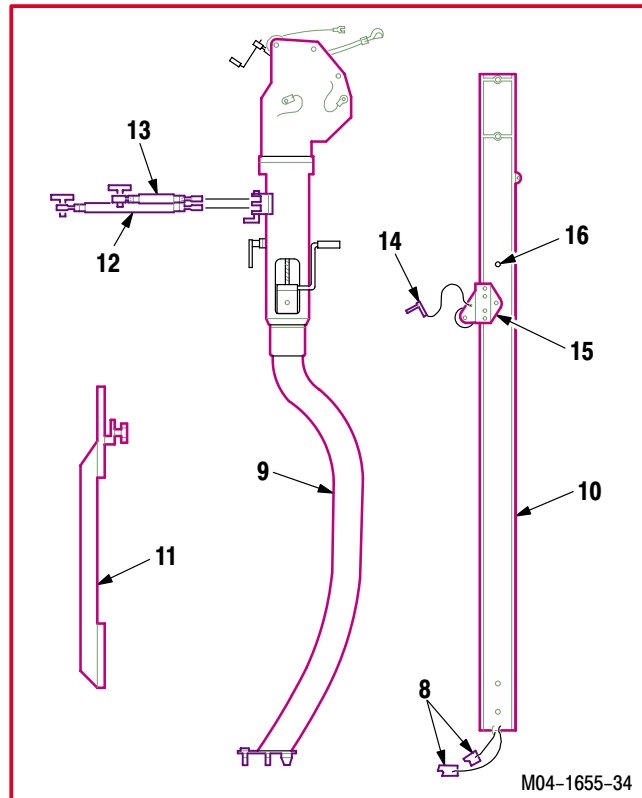


GO TO NEXT PAGE

1.97. MAINTENANCE CRANE INSTALLATION – continued

h. **Disassemble stowed crane.**

- (1) Unwrap tag lines (8) from dogleg (9), boom arm (10), torque arm (11), long tierod (12), and short tierod (13).
- (2) Remove quick-release pin (14) from boom sheave (15) and boom arm (10).
- (3) Slide sheave (15) to align with position 1 (16) on boom arm (10).
- (4) Install pin (14) through sheave (15) and boom arm (10).
- (5) Separate dogleg (9), boom arm (10), torque arm (11), long tierod (12), and short tierod (13).



1.97.4. Cleaning

- a. **Wipe removed and attaching parts with a clean rag.**

1.97.5. Inspection

- a. **Check boom arm for cracks and broken or missing components.**
- b. **Check tag lines for fraying or loose installation of snap hooks.**
- c. **Check sheave for binding or loose installation.**
- d. **Check tierods for cracks and broken or missing parts.**
- e. **Check dogleg for cracks, frayed foot tether, and broken or missing parts.**
- f. **Check hoist for binding and cracks or missing parts.**
- g. **Check wire rope for frayed or kinked wires.**
- h. **Check boom hoist drum for binding and loose attachment.**

GO TO NEXT PAGE

---

**1.97. MAINTENANCE CRANE INSTALLATION – continued**


---

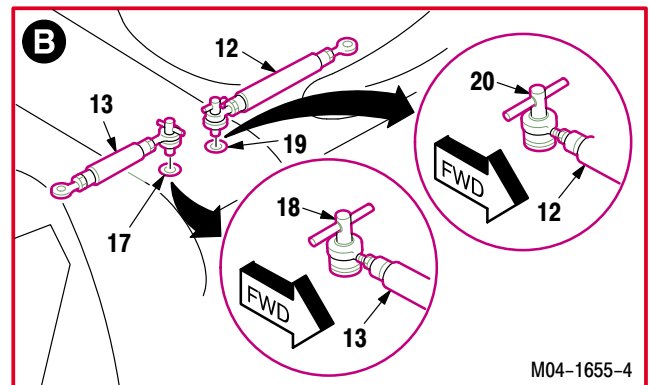
- i. **Check boom line for fraying and missing shackle.**
- j. **Check torque arm for loose or missing parts, loose or missing thread inserts, broken arm clamp, and broken or stripped torque handle.**
- k. **Check all parts for corrosion (para 1.49).**

**1.97.6. Installation**
**a. Install short tierod (13) in fuselage forward fitting (17).**

- (1) Engage threads of T-handle (18) with threads in fitting (17).
- (2) Tighten T-handle (18).
- (3) Lay tierod (13) on fuselage.

**b. Install long tierod (12) in fuselage aft fitting (19).**

- (1) Engage threads of T-handle (20) with threads in fitting (19).
- (2) Tighten T-handle (20).
- (3) Lay tierod (12) on fuselage.



GO TO NEXT PAGE

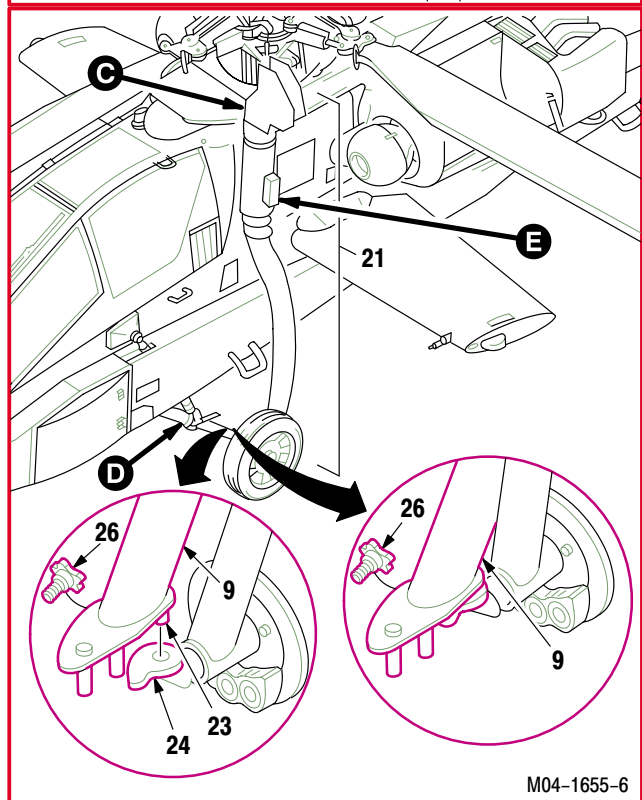
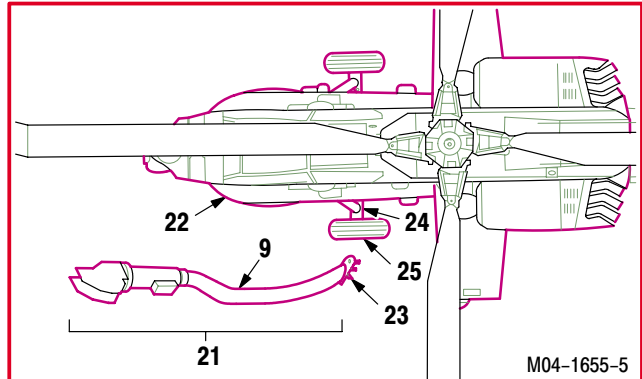
1.97. MAINTENANCE CRANE INSTALLATION – continued

**WARNING**

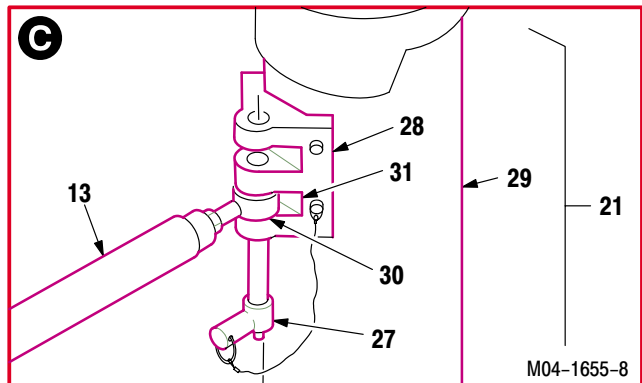
The vertical mast weighs 150 pounds. The mast must be securely supported with the mast foot cone kept in the jackpad during installation. Keep area clear of unnecessary personnel. If injury occurs, seek medical aid.

c. Mount vertical mast (21) on helicopter.

- (1) Position mast (21) alongside forward avionics bay (22), with dogleg (9) outboard and foot cone (23) aligned with jackpad (24) on main landing gear axle (25).
- (2) Unscrew torque handle (26) from foot of dogleg (9).
- (3) Raise mast (21) to vertical. Insert foot cone (23) into jackpad (24).



- (4) Remove quick-release pin (27) from tie down block (28) on main leg (29).
- (5) Place short tiedown rod-end (30) into bottom clevis (31) of block (28).
- (6) Put pin (27) part way through block (28) and through rod-end (30), to secure short tiedown rod (13) to mast (21).



GO TO NEXT PAGE

**1.97. MAINTENANCE CRANE INSTALLATION – continued**

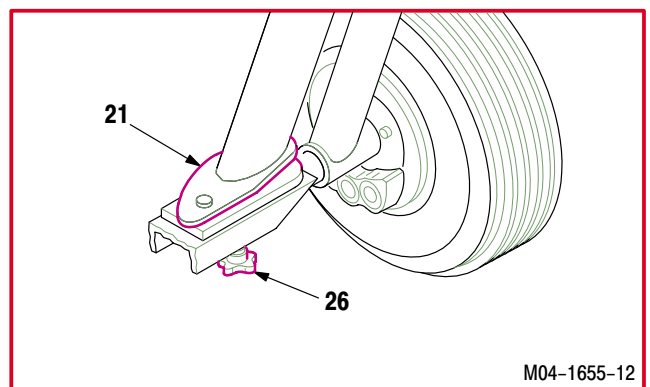
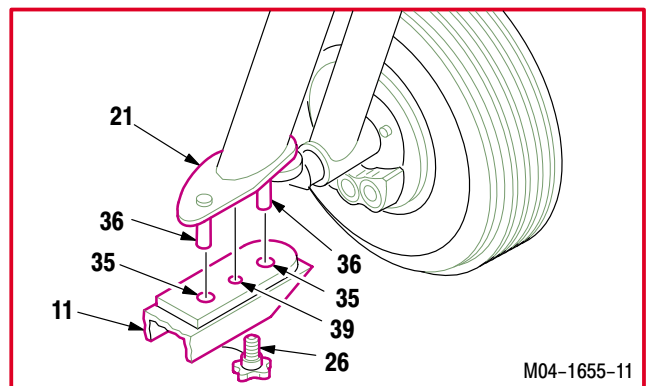
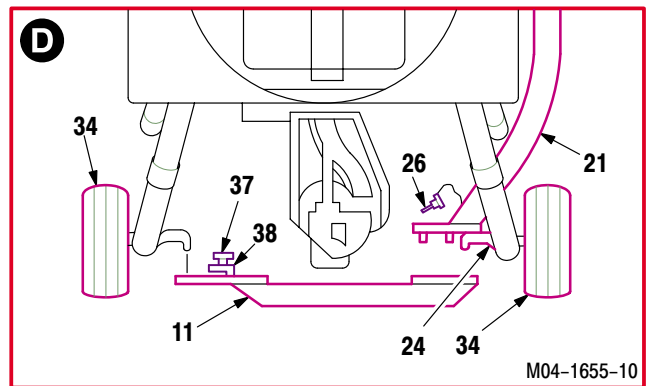
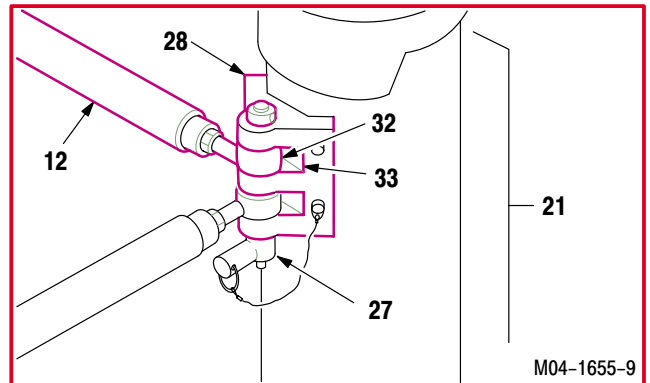
- (7) Place long tiedown rod-end (32) into top clevis (33) of block (28).
- (8) Complete installation of pin (27) through block (28) and rod-end (32) to secure long tiedown rod (12) to mast (21).

**CAUTION**

To prevent damage to jackpads or mast, torque handle and clamp screw must be tightened evenly.

**d. Install arm (11) on mast (21) to hold jackpad (24).**

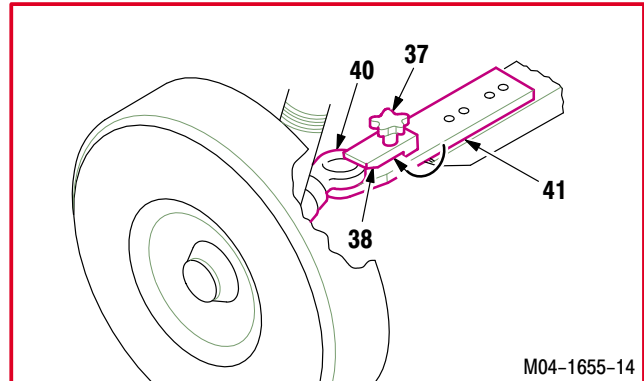
- (1) Position arm (11) between main landing gear wheels (34). Make sure two large holes (35) with studs (36) are aligned on bottom of mast.
- (2) Loosen clamp screw (37) to allow maximum free-play of clamp (38).
- (3) Lift arm (11) to engage studs (36) with holes (35).
- (4) Install torque handle (26) through center hole (39) of arm (11) to engage threads in bottom of mast (21). Do not tighten handle (26).



GO TO NEXT PAGE

**1.97. MAINTENANCE CRANE INSTALLATION – continued**

- (5) Engage opposite main landing gear jackpad (40) with hole in end plate (41).
- (6) Swivel clamp (38) over jackpad (40).
- (7) Engage threads of clamp screw (37) in end plate (41).
- (8) Tighten clamp screw (37) and handle (26) evenly.

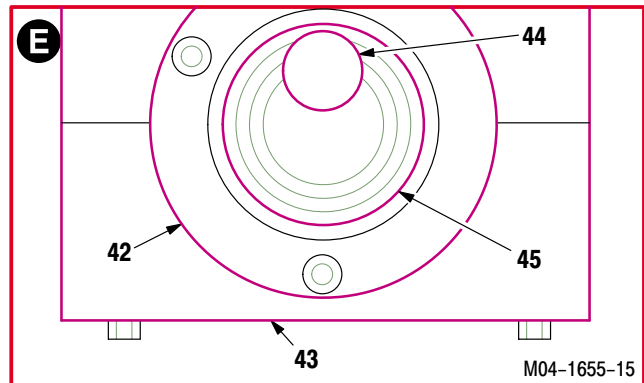


**WARNING**

**The maintenance crane is unsafe to lift components if vertical mast is not within 3 degrees of vertical. Helicopter must be moved to a more level position.**

**e. Check level (42) on winch gearbox (43) for mast vertical alignment.**

- (1) Outer edge of air bubble (44) must be within 3 degrees indicator ring (45).
- (2) Ground-handle helicopter to obtain mast vertical alignment within limits (para 1.78).



GO TO NEXT PAGE

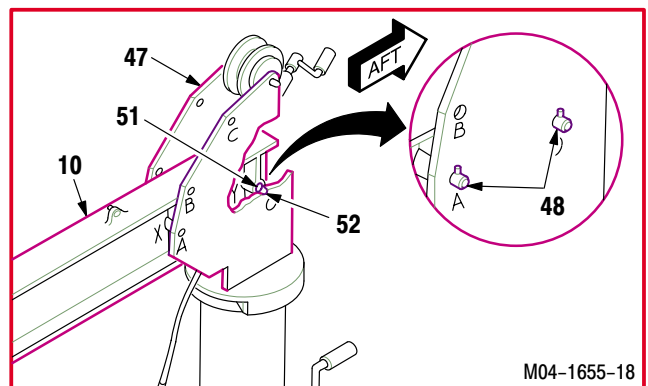
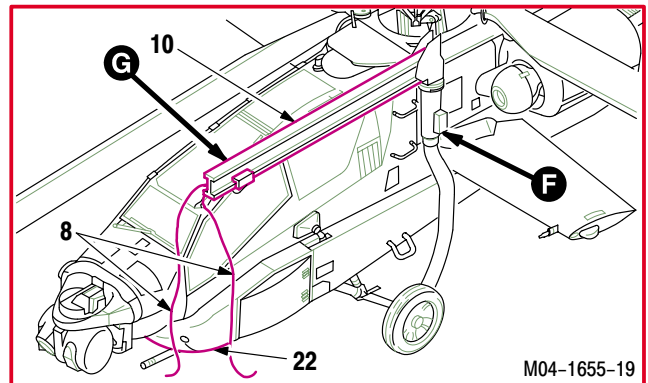
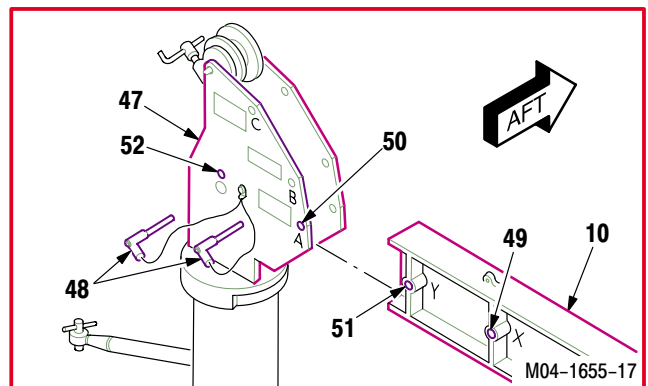
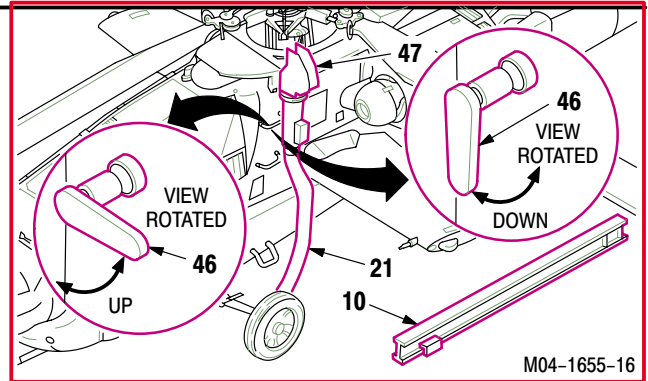
1.97. MAINTENANCE CRANE INSTALLATION – continued

**WARNING**

The crane boom arm weighs 58 pounds and can cause injury to personnel if allowed to fall. Keep hands away from area between crane boom arm and elevation yoke. Keep area clear of unnecessary personnel. If injury occurs, seek medical aid.

f. Install crane boom arm (10) on mast (21).

- (1) Move lift mechanism handle (46) up to unlock yoke (47).
- (2) Swivel yoke (47) so open face is outboard.
- (3) Move handle (46) down to lock yoke (47).
- (4) Remove two quick-release pins (48) from yoke (47).
- (5) Position pivot end of arm (10) in yoke (47) to aline boom hole X (49) with yoke hole A (50).
- (6) Install one pin (48) through yoke holes A (50) and boom hole X (49).
- (7) Move handle (46) up to unlock yoke (47).
- (8) Swing arm (10) forward (inboard) until end of arm is 1 foot from forward avionics bay (22).
- (9) Move handle (46) down to lock yoke (47).
- (10) Install two tag lines (8) on crane boom arm (10).
- (11) Have assistant raise crane boom arm (10) to aline boom hole Y (51) with yoke holes O (52).
- (12) Install remaining pins (48) through yoke holes O (52) and boom hole Y (51).



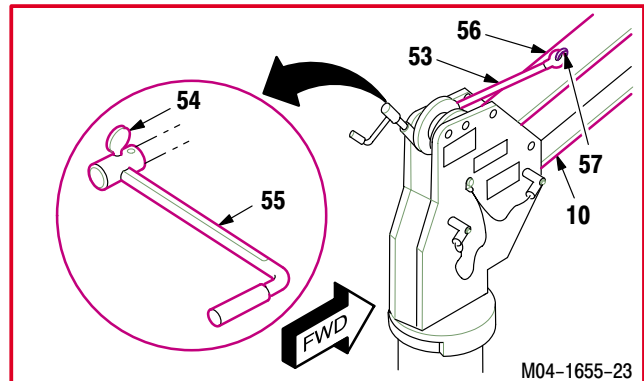
GO TO NEXT PAGE



1.97. MAINTENANCE CRANE INSTALLATION – continued

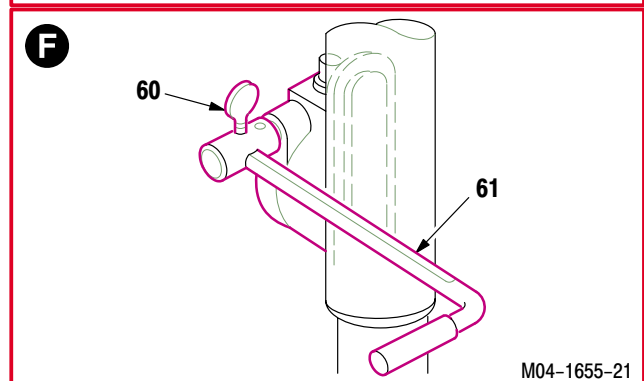
g. Connect boom line (53) to arm (10).

- (1) Loosen thumbscrew (54). Extend winch handle (55). Tighten thumbscrew (54).
- (2) Turn handle (55) to pull line (53) until shackle (56) reaches boom lifting eye (57).
- (3) Attach shackle (56) to eye (57).
- (4) Turn handle (55) to take up slack in line (53).

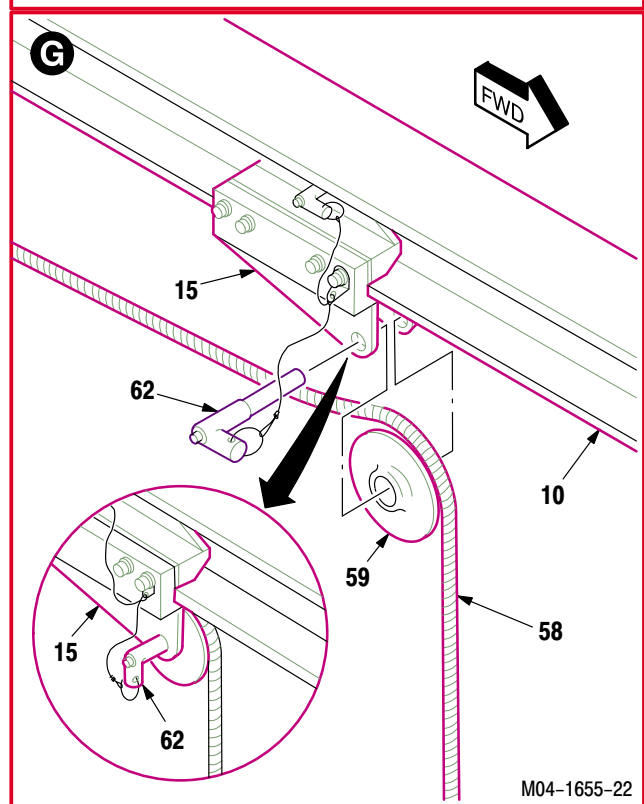


h. Install hoist wire rope (58) in cable sheave (59).

- (1) Loosen thumbscrew (60). Extend hoist winch handle (61). Tighten thumbscrew (60).



- (2) Remove quick-release pin (62) from sheave (15) to release sheave (59).
- (3) Turn handle (61). Pull wire rope (58) 2 feet beyond sheave (15).
- (4) Place rope (58) in sheave (59).
- (5) Position sheave (59) in sheave (15) to align holes.
- (6) Install pin (62) through sheave (15) and sheave (59).



i. Inspect (QA).

**NOTE**

Refer to paragraph 1.98 for maintenance crane adjustments.

END OF TASK

---

**1.98. CRANE ADJUSTMENT – HOISTING**


---

1.98.1. Description

This task covers:

- 1.99. Crane Adjustment – Engine Hoisting
  - 1.100. Crane Adjustment – Main Rotor Blade Hoisting
  - 1.101. Crane Adjustment – Main Rotor Head Hoisting
  - 1.102. Crane Adjustment – Main Rotor Gearshaft, Support (Static) Mast, or Swashplate Hoisting
  - 1.103. Crane Adjustment – Main Transmission Hoisting
  - 1.104. Crane Adjustment – APU Hoisting
- 

1.98.2. Initial Setup**Tools:**

Aircraft mechanic's tool kit (item 376, App H)

**Personnel Required:**

67R Attack Helicopter Repairer  
Two persons to assist

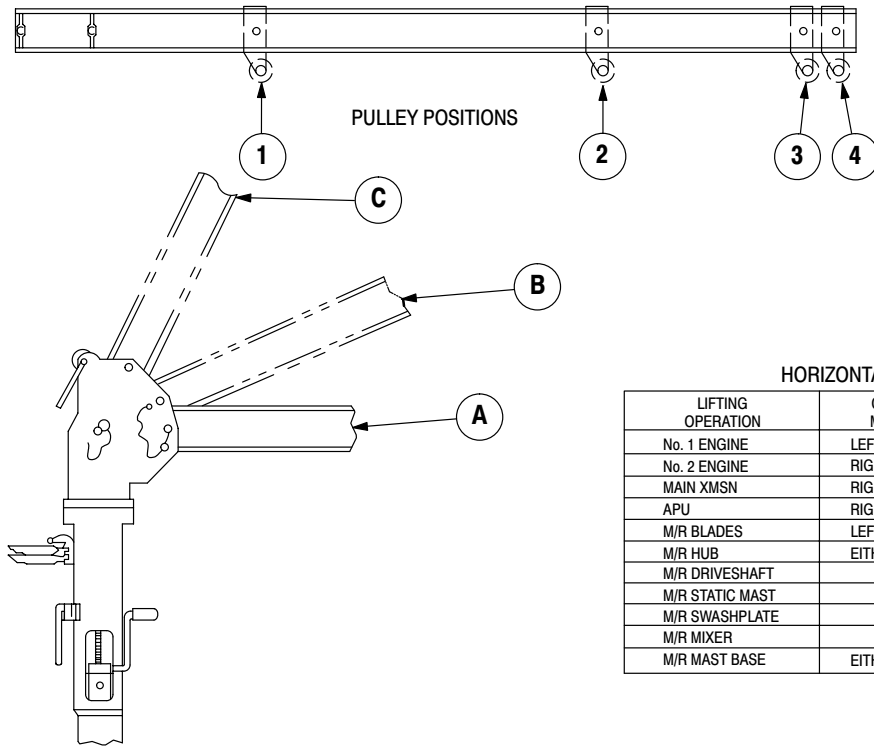
**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
1.97	Maintenance crane installed

---

GO TO NEXT PAGE

**1.98. CRANE ADJUSTMENT – HOISTING**



**HORIZONTAL BOOM POSITIONS**

LIFTING OPERATION	CRANE MOUNT	PULLEY POSITION	BOOM POSITION
No. 1 ENGINE	LEFT SIDE	2	A
No. 2 ENGINE	RIGHT	2	A
MAIN XMSN	RIGHT	1	A
APU	RIGHT	3	A
M/R BLADES	LEFT	4	B
M/R HUB	EITHER SIDE	4	C
M/R DRIVESHAFT		4	C
M/R STATIC MAST		4	C
M/R SWASHPLATE		4	C
M/R MIXER		4	C
M/R MAST BASE	EITHER SIDE	4	C

M04-2269

GO TO CORRECT PARAGRAPH

**1.99. CRANE ADJUSTMENT – ENGINE HOISTING**

1.99.1. Hoisting

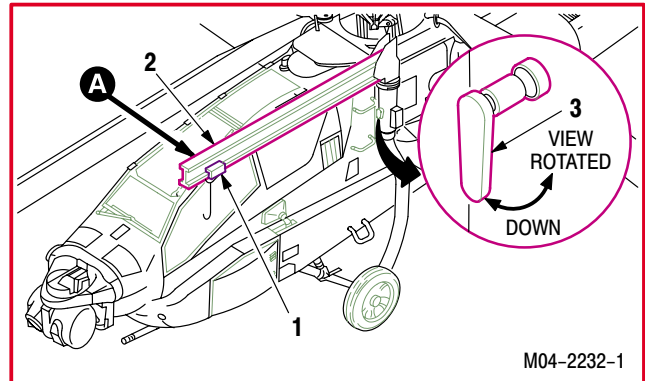
a. **Move sheave (1) to position 2 on boom (2).**

- (1) Move crane handle (3) up.

**NOTE**

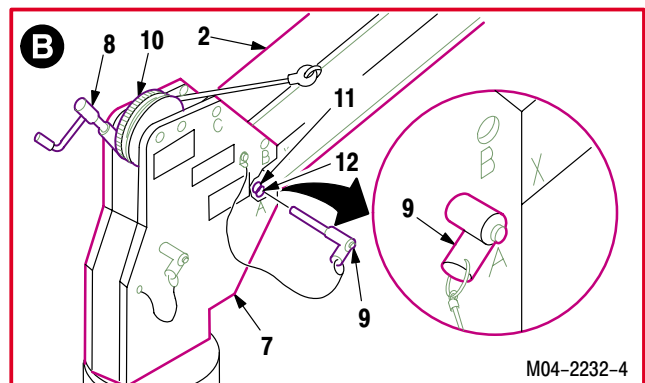
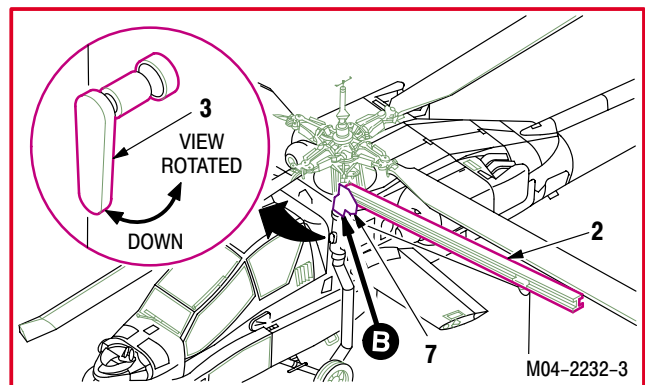
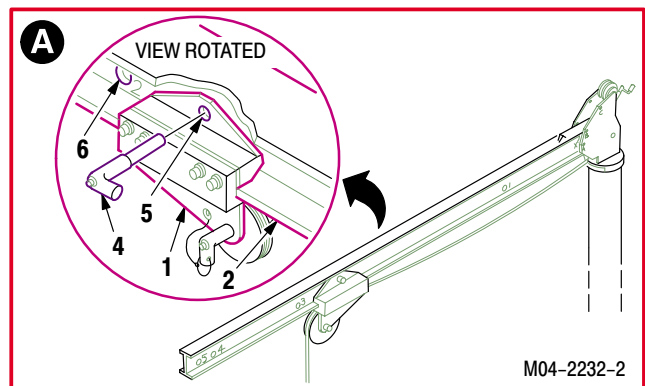
Use tag lines to move boom.

- (2) Turn boom (2) forward until it is about 1 foot out from side of fuselage.
- (3) Move handle (3) down.
- (4) Remove quick-release pin (4) from sheave (1) and boom (2).
- (5) Slide sheave (1) on boom (2). Aline sheave hole (5) with boom position hole 2 (6).
- (6) Install pin (4) through sheave (1) and boom (2).



b. **Adjust boom (2) to position A on elevation yoke (7).**

- (1) Move handle (3) up.
- (2) Turn boom (2) aft until it is 90 degrees from side of fuselage.
- (3) Move handle (3) down.
- (4) Crank winch (8) until quick-release pin (9) turns freely.
- (5) Remove pin (9) from yoke (7) and boom (2).
- (6) Crank boom hoist drum (10) to aline boom X hole (11) with yoke position hole A (12).
- (7) Install pin (9) through yoke (7) and boom (2).
- (8) Crank winch (8) to loosen boom lift line.



END OF TASK

**1.100. CRANE ADJUSTMENT – MAIN ROTOR BLADE HOISTING**

1.100.1. Hoisting

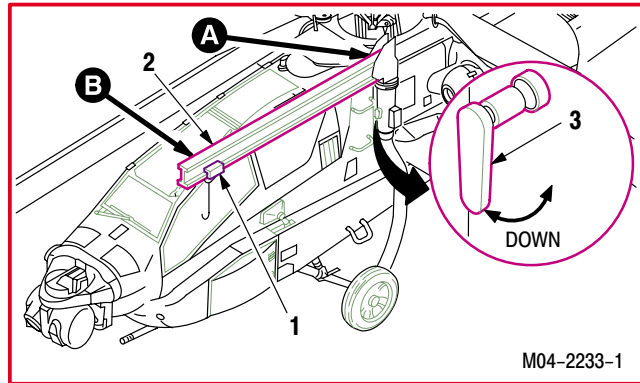
a. **Move sheave (1) to position 5 on boom (2).**

- (1) Move crane handle (3) up.

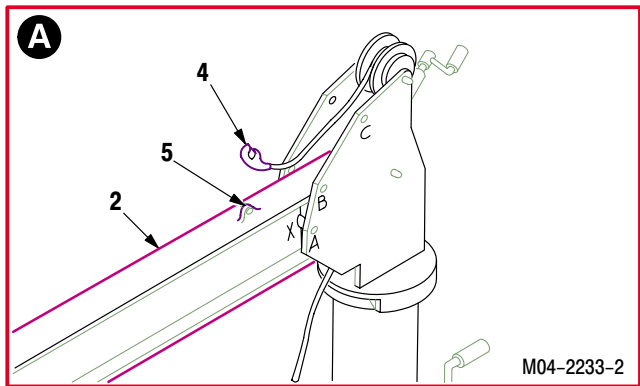
**NOTE**

Use tag lines to move boom.

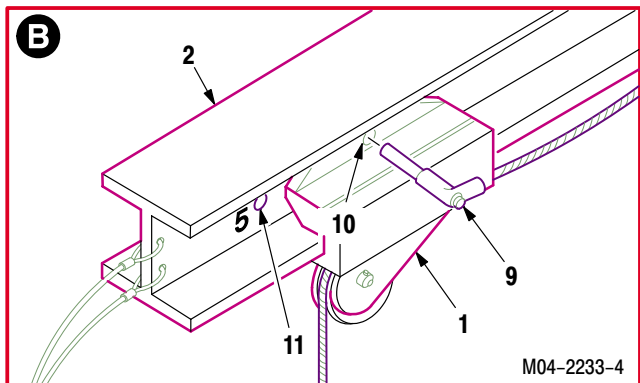
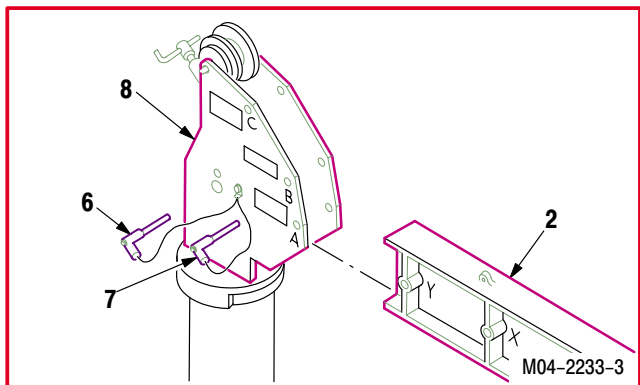
- (2) Turn boom (2) forward until it is about 1 foot out from side of fuselage.
- (3) Move handle (3) down.
- (4) Remove shackle (4) from eye (5).



- (5) Lift boom (2) until quick-release pins (6) and (7) turn freely.
- (6) Support boom (2). Remove pins (6) and (7) from yoke (8) and boom (2).
- (7) Lower boom (2) to ground.



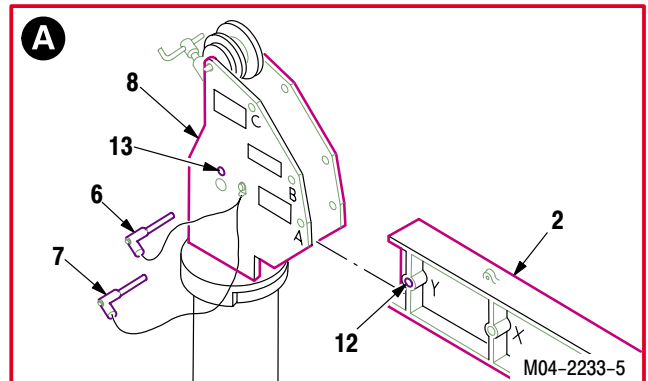
- (8) Remove quick-release pin (9) from sheave (1) and boom (2).
- (9) Slide sheave (1) on boom (2) to align sheave hole (10) with boom position hole 5 (11).
- (10) Install pin (9) through sheave (1) and boom (2).



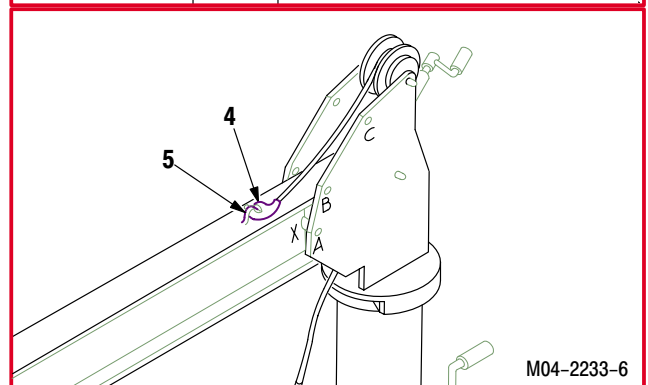
GO TO NEXT PAGE

**1.100. CRANE ADJUSTMENT – MAIN ROTOR BLADE HOISTING – continued**

- (11) Raise pivot end of boom (2) and slide into yoke (8).
- (12) Aline arm pivot Y hole (12) with yoke pivot O hole (13).
- (13) Install pin (6) through yoke (8) and boom (2).



- (14) Install shackle (4) on eye (5).



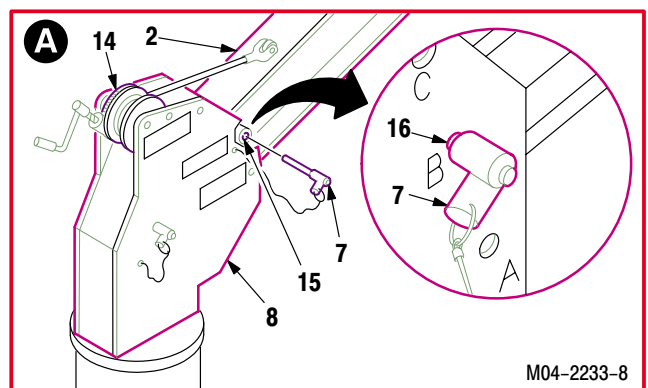
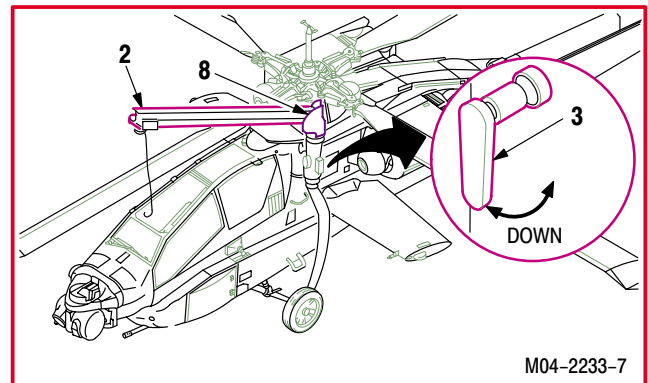
**b. Adjust boom (2) to position B on yoke (8).**

- (1) Move handle (3) up.

**NOTE**

Use tag lines to move boom.

- (2) Turn boom (2) aft until it is 90 degrees from side of fuselage.
- (3) Move handle (3) down.
- (4) Crank boom hoist drum (14) to aline boom X hole (15) with yoke (8) position B hole (16).
- (5) Install pin (7) through yoke (8) and boom (2).
- (6) Crank boom hoist drum (14) to loosen boom line.



END OF TASK

**1.101. CRANE ADJUSTMENT – MAIN ROTOR HEAD HOISTING**

1.101.1. Hoisting

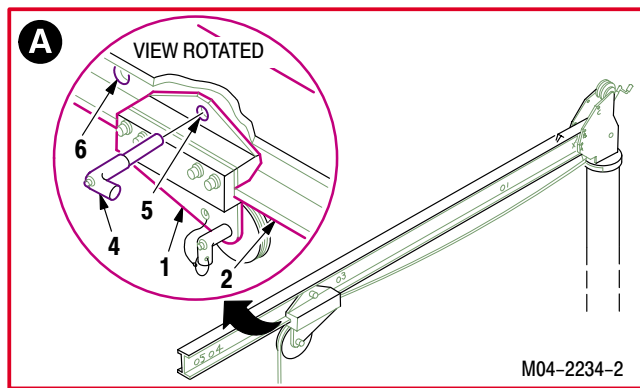
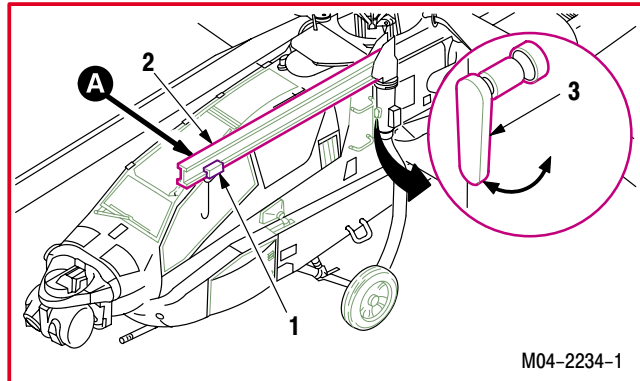
**a. Move sheave (1) to boom (2) position 3.**

- (1) Move handle (3) up.

**NOTE**

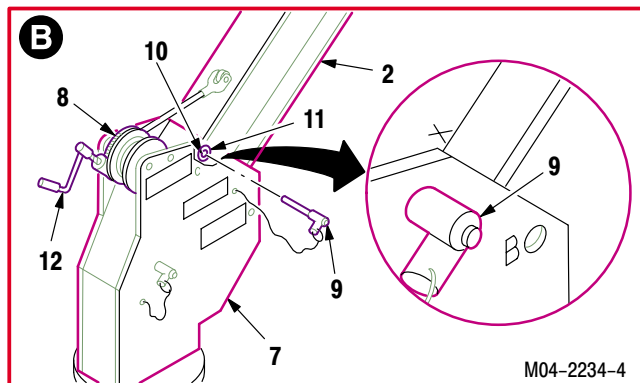
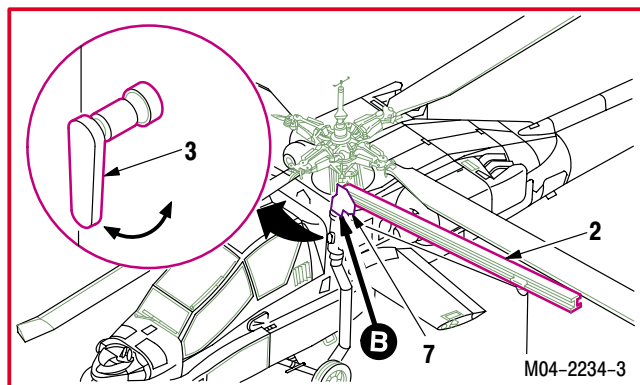
Use tag lines to move boom.

- (2) Turn boom (2) forward until it is about 1 foot from side of fuselage.
- (3) Move handle (3) down.
- (4) Remove pin (4) from sheave (1) and boom (2).
- (5) Slide sheave (1) on boom (2). Aline sheave hole (5) with boom position 3 hole (6).
- (6) Install pin (4) through sheave (1) and boom (2).



**b. Adjust boom (2) to yoke (7) position C.**

- (1) Move handle (3) up.
- (2) Turn boom (2) aft until boom is 90 degrees from side of fuselage.
- (3) Move handle (3) down.
- (4) Crank boom hoist drum (8) until pin (9) turns freely.
- (5) Remove pin (9) from yoke (7) and boom (2).
- (6) Crank boom hoist drum (8). Aline arm X hole (10) with yoke position hole C (11).
- (7) Install pin (9) as far as it will go through yoke (7) and boom (2).
- (8) Crank winch (12) to loosen boom line.



END OF TASK

**1.102. CRANE ADJUSTMENT – MAIN ROTOR GEARSHAFT, SUPPORT (STATIC) MAST, OR SWASHPLATE HOISTING**

1.102.1. Crane Adjustment

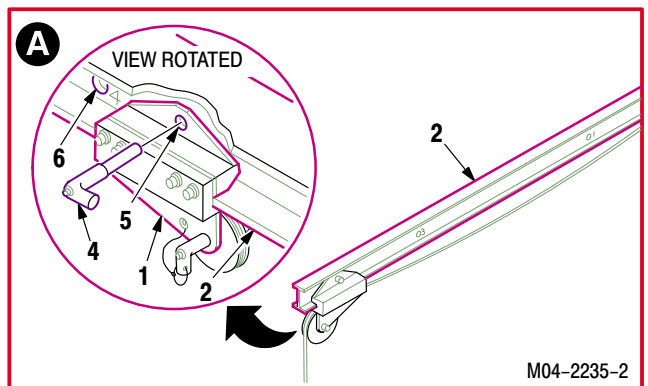
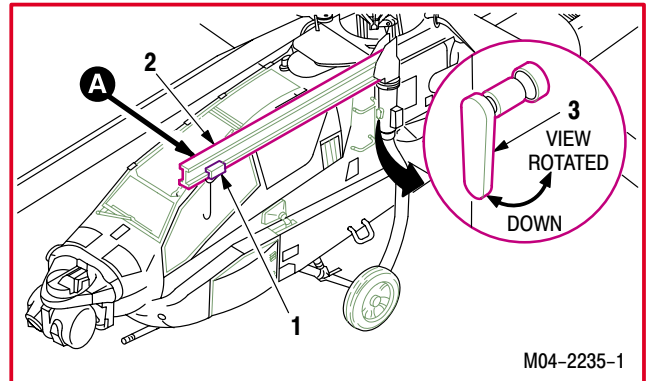
a. Move sheave (1) to boom (2) position 4.

- (1) Move crane handle (3) up.

**NOTE**

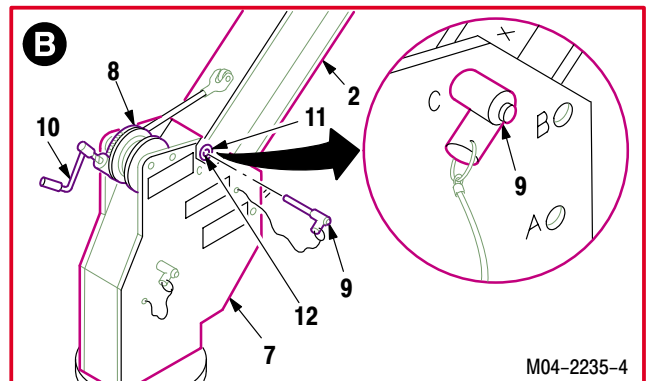
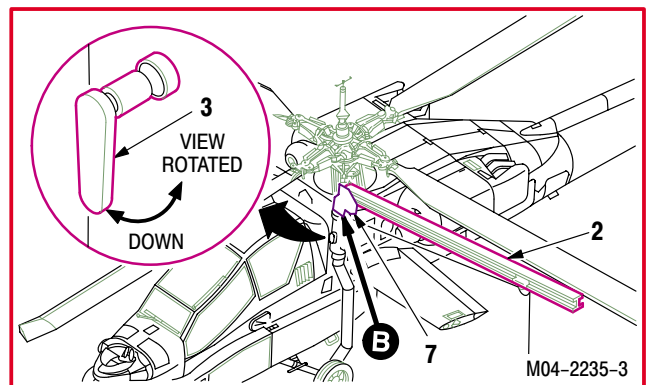
Use tag lines to move boom.

- (2) Turn boom (2) forward until it is about 1 foot from side of fuselage.
- (3) Move handle (3) down.
- (4) Remove quick-release pin (4) from sheave (1) and boom (2).
- (5) Slide sheave (1) on boom (2). Aline sheave hole (5) with arm position hole 4 (6).
- (6) Install pin (4) through sheave (1) and boom (2).



b. Adjust boom (2) to yoke (7) on position C.

- (1) Move handle (3) up.
- (2) Turn boom (2) aft until boom is 90 degrees from side of fuselage.
- (3) Move handle (3) down.
- (4) Crank boom hoist drum (8) until quick-release pin (9) turns freely.
- (5) Remove pin (9) from yoke (7) and boom (2).
- (6) Crank winch (10). Aline boom (2) hole X (11) with yoke (7) position hole C (12).
- (7) Install pin (9) through yoke (7) and boom (2).
- (8) Crank boom hoist drum (8) to loosen boom line.



END OF TASK



**1.103. CRANE ADJUSTMENT – MAIN TRANSMISSION HOISTING**

1.103.1. Crane Adjustment

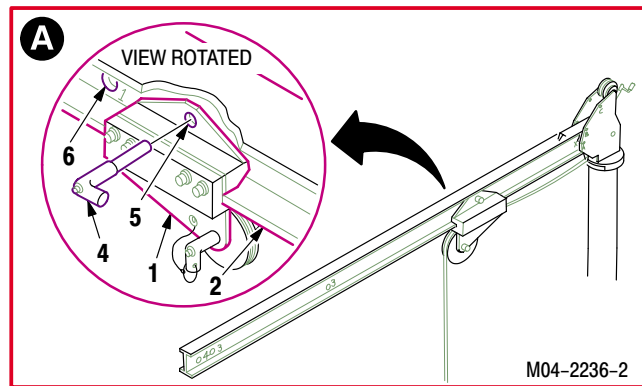
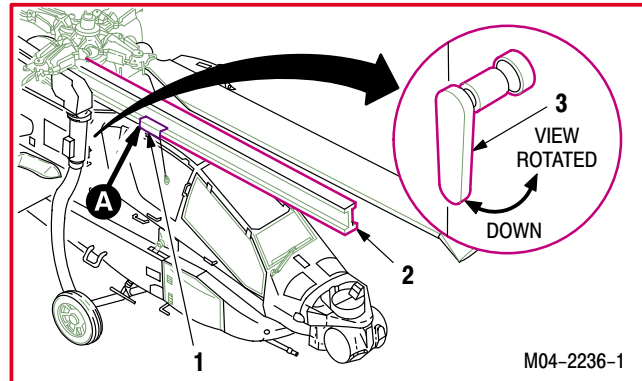
a. **Move sheave (1) to position 1 on boom (2).**

- (1) Move crane handle (3) up.

**NOTE**

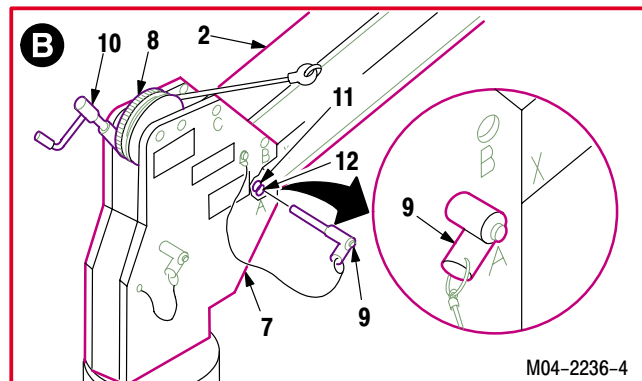
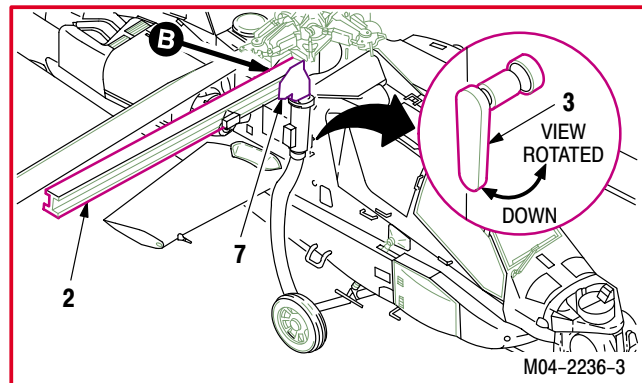
Use tag lines to move boom.

- (2) Turn boom (2) forward until boom is about 1 foot from side of fuselage.
- (3) Move handle (3) down.
- (4) Remove quick-release pin (4) from sheave (1) and boom (2).
- (5) Slide sheave (1) on boom (2). Aline sheave hole (5) with boom position hole 1 (6).
- (6) Install pin (4) through sheave (1) and boom (2).



b. **Adjust boom (2) to yoke (7) position B.**

- (1) Move handle (3) up.
- (2) Turn boom (2) aft until it is 90 degrees from side of fuselage.
- (3) Move handle (3) down.
- (4) Crank boom hoist drum (8) until pin (9) turns freely.
- (5) Remove pin (9) from yoke (7) and boom (2).
- (6) Crank winch (10). Aline boom hole X (11) with yoke position hole B (12).
- (7) Install pin (9) through yoke (7) and boom (2).
- (8) Crank boom hoist drum (8) to loosen boom line.



END OF TASK

**1.104. CRANE ADJUSTMENT – APU HOISTING**

1.104.1. Crane Adjustment

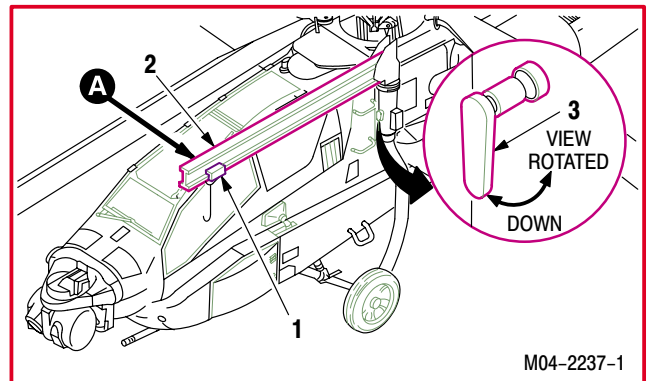
a. **Move sheave (1) to boom (2) position 4.**

- (1) Move crane handle (3) up.

**NOTE**

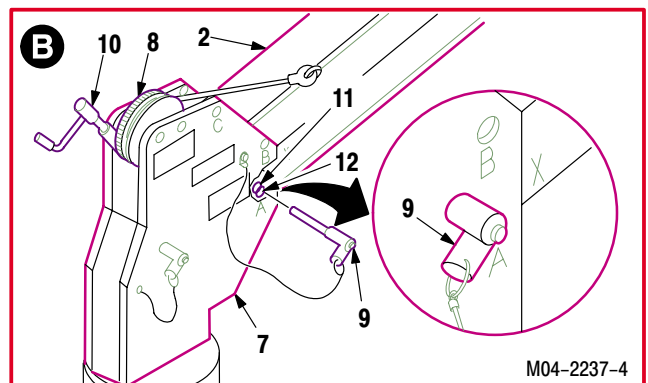
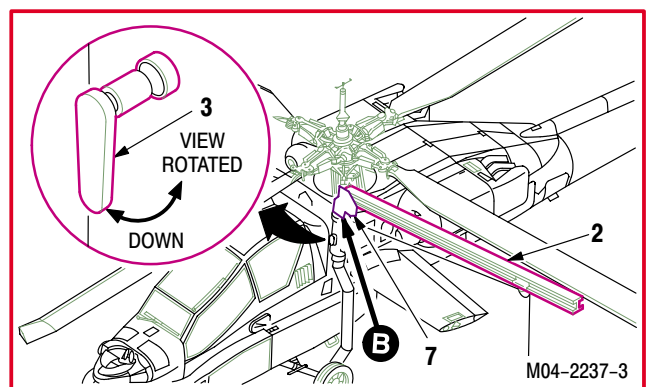
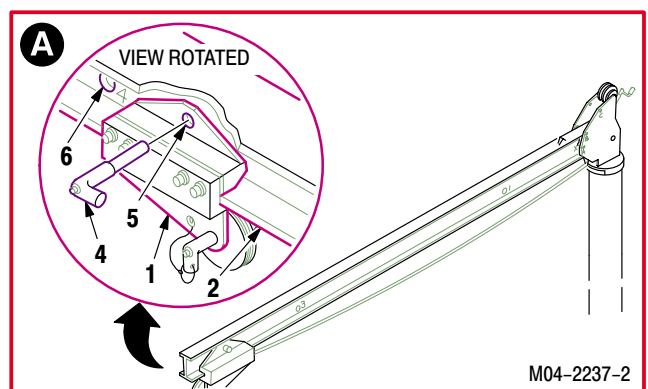
Use tag lines to move boom.

- (2) Turn boom (2) forward until it is about 1 foot from side of fuselage.
- (3) Move handle (3) down.
- (4) Remove quick-release pin (4) from sheave (1) and boom (2).
- (5) Slide sheave (1) on boom (2). Aline sheave hole (5) with boom position hole 4 (6).
- (6) Install pin (4) through sheave (1) and boom (2).



b. **Adjust boom (2) to yoke (7) position A.**

- (1) Move handle (3) up.
- (2) Turn boom (2) aft until it is 90 degrees from side of fuselage.
- (3) Move handle (3) down.
- (4) Crank boom hoist drum (8) until quick-release pin (9) turns freely.
- (5) Remove pin (9) from yoke (7) and boom (2).
- (6) Crank winch (10). Aline boom hole X (11) with yoke position hole A (12).
- (7) Install pin (9) through yoke (7) and boom (2).
- (8) Crank boom hoist drum (8) to loosen boom line.



END OF TASK

---

**1.105. MAINTENANCE CRANE REMOVAL**

---

1.105.1. Description

This task covers: Removal From Helicopter. Stowage.

---

1.105.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)

**Personnel Required:**

67R Attack Helicopter Repairer  
Two persons to assist

**Equipment Conditions:**

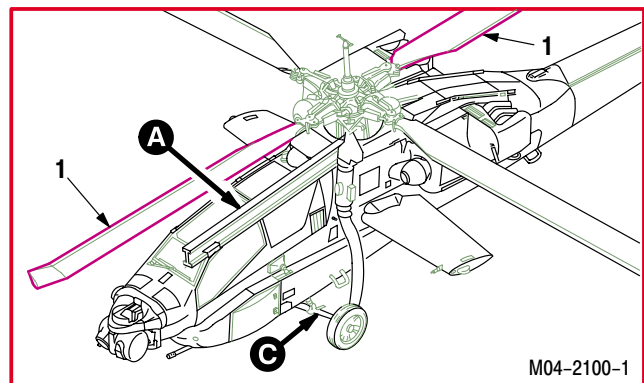
<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
1.99	Engine hoisting crane adjusted

**WARNING**

- The boom arm weighs 58 pounds and can cause injury to personnel if allowed to fall. Keep hands away from area between boom arm and elevation yoke. Keep area clear of unnecessary personnel. If injury occurs, seek medical aid.
  
- The vertical mast weighs 150 pounds. The mast must be securely supported with the mast foot cone kept on the jackpad until tierods are disconnected and personnel are ready to remove it. Keep work area clear of unnecessary personnel and removed components. If injury occurs, seek medical aid.

1.105.3. Removal From Helicopter

- a. **Aline two rotor blades (1) with helicopter longitudinal centerline.**



GO TO NEXT PAGE

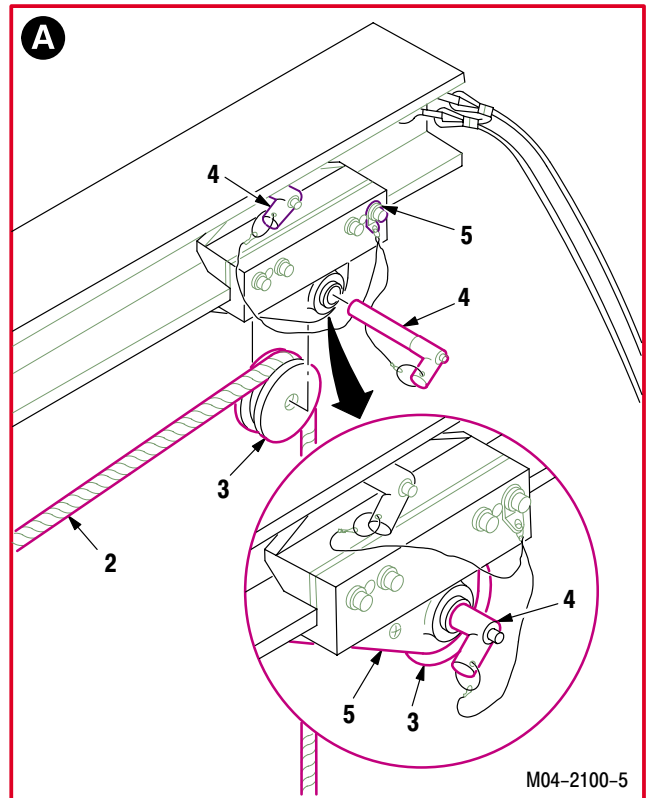
**1.105. MAINTENANCE CRANE REMOVAL – continued**

**b. Remove wire rope (2) from cable sheave (3).**

- (1) Support sheave (3) and rope (2).
- (2) Remove quick-release pin (4) from boom sheave (5) to release sheave (3).
- (3) Remove rope (2) from sheave (3).
- (4) Aline holes in sheave (3) with holes in sheave (5).
- (5) Install pin (4) through sheave (5) and sheave (3).

**CAUTION**

To prevent damage to wire rope, keep tension on rope while operating hoist drum.



**c. Store wire rope (2) on hoist drum (6).**

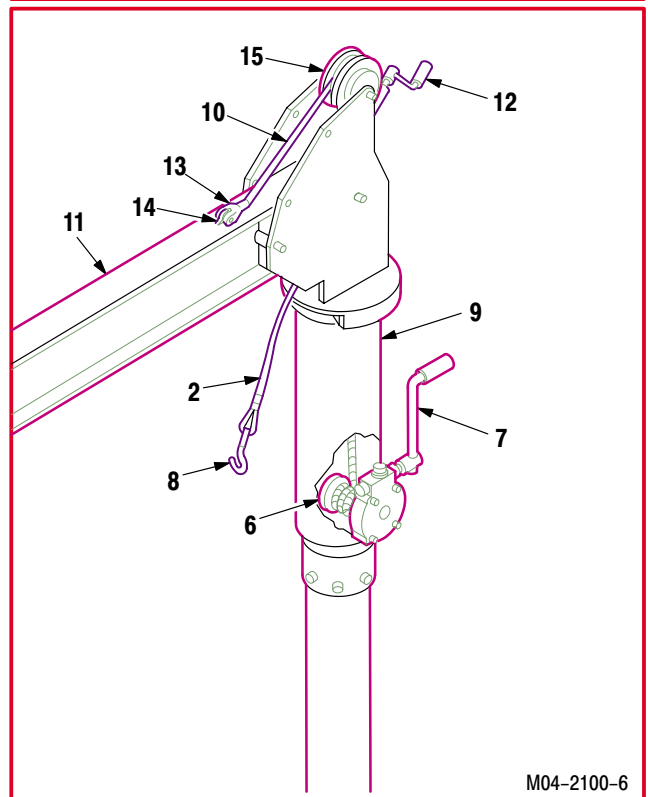
- (1) With assistant providing tension on wire rope (2), turn handle (7) to store rope on hoist drum (6) until hook (8) is 1 foot from vertical mast (9).

**d. Disconnect boom line (10) from crane boom arm (11).**

- (1) Turn boom winch handle (12) to give slack in line (10).
- (2) Disconnect shackle (13) from boom arm lifting eye (14).
- (3) Secure shackle (13) on line (10).

**e. Store line (10) on boom hoist drum (15).**

- (1) With assistant providing tension on boom line (10), turn handle (12) to store line on drum (15).

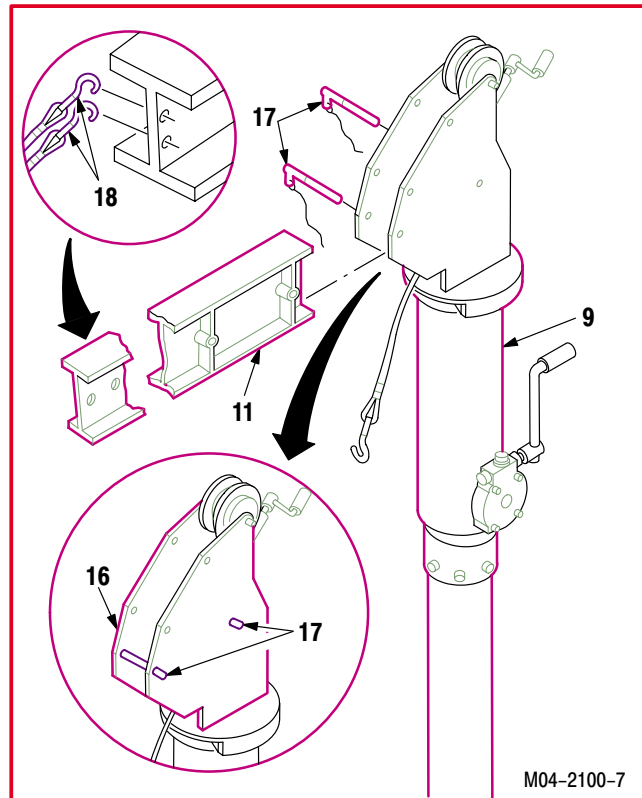


GO TO NEXT PAGE

**1.105. MAINTENANCE CRANE REMOVAL – continued**

**f. Remove arm (11) from elevation yoke (16).**

- (1) With assistants supporting arm (11), remove two quick-release pins (17) from yoke (16) and arm (11).
- (2) Remove arm (11) from yoke (16).
- (3) Remove two tag lines (18) from arm (11).
- (4) Set arm (11) and tag lines (18) away from work area.
- (5) Reinstall two pins (17) through holes in yoke (16).



GO TO NEXT PAGE

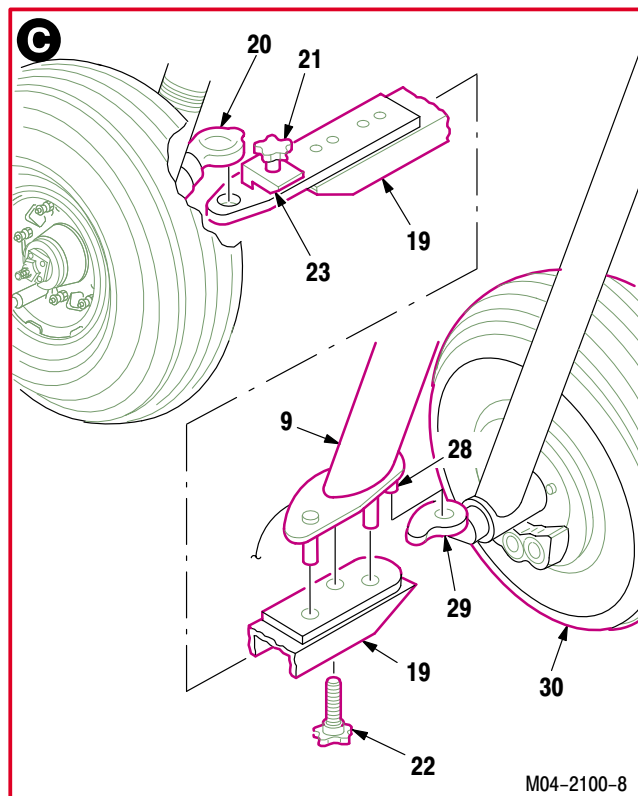
## 1.105. MAINTENANCE CRANE REMOVAL – continued

**CAUTION**

To prevent damage to jackpads or vertical mast, torque arm must be supported while torque handle and clamp screw are loosened evenly.

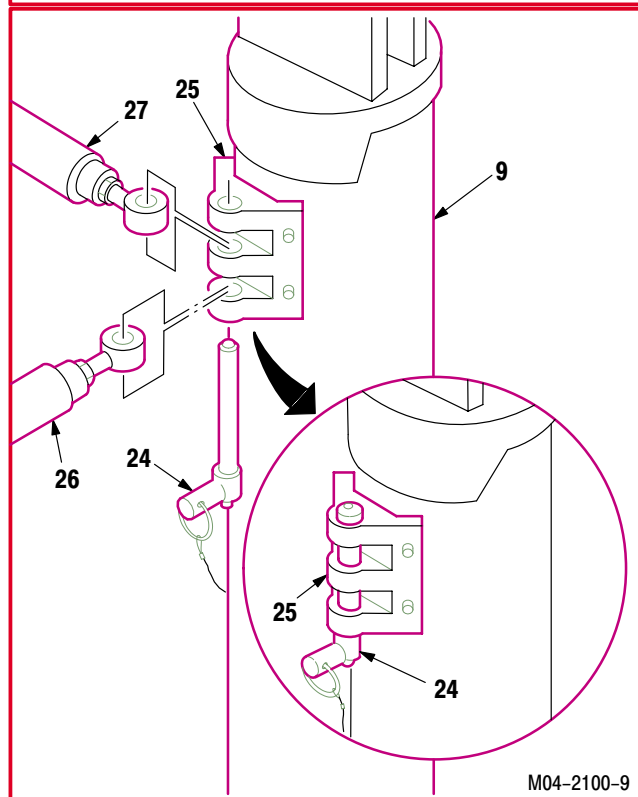
**g. Remove support arm (19) from jackpad (20) and mast (9).**

- (1) Have assistant support arm (19).
- (2) Loosen clamp screw (21) and torque handle (22).
- (3) Swivel clamp (23) away from jackpad (20).
- (4) Remove handle (22) from bottom of mast (9).
- (5) Remove support arm (19).
- (6) Set support arm (19) with other removed crane components.



**h. Remove mast (9) from helicopter.**

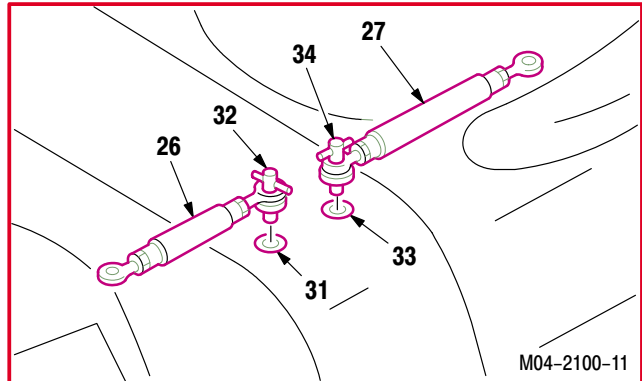
- (1) With assistants securely supporting mast (9), remove quick-release pin (24) from tie block (25).
- (2) Hold mast (9). Swing short tierod (26) and long tierod (27) out of tie block (25) to top of fuselage.
- (3) Reinstall pin (24) in block (25).
- (4) With all personnel lifting mast (9) together, lift foot cone (28) out of jackpad (29) and away from helicopter.
- (5) Set foot of mast (9) down when it clears main landing gear wheel.
- (6) Lower mast (9) (forward) to lay on ground alongside helicopter.



GO TO NEXT PAGE

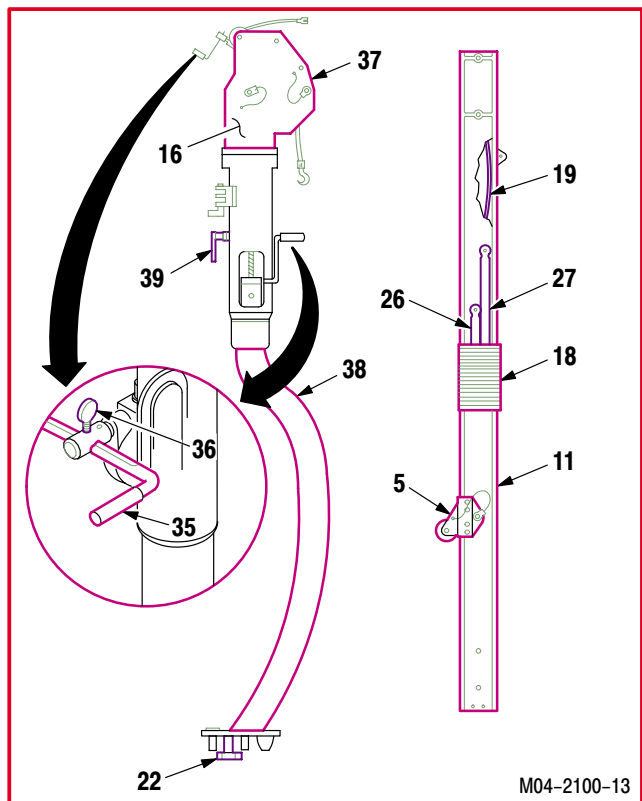
**1.105. MAINTENANCE CRANE REMOVAL – continued**

- i. Remove short tierod (26) from fuselage forward fitting (31). Remove T-handle (32).
- j. Remove long tierod (27) from fuselage aft fitting (33). Remove T-handle (34).



1.105.4. Stowage

- a. **Retract two winch handles (35).**
  - (1) Loosen thumbscrew (36). Retract handle (35). Tighten thumbscrew.
  - (2) Repeat step a for other handle (35).
- b. **Position yoke (16) with open side (37) aligned with dogleg (38).**
  - (1) Move lift mechanism handle (39) up to unlock yoke (16).
  - (2) Turn yoke (16) so open side (37) aligns with dogleg (38).
  - (3) Move handle (39) down to lock yoke (16).
- c. **Lay support arm (19) in arm (11) channel.**
- d. **Lay short tierod (26) and long tierod (27) in opposite channel of arm (11).**
- e. **Wrap tag lines (18) around arm (19), short tierod (26), long tierod (27), and arm (11).**
- f. **Install handle (22) in bottom of dogleg (38).**
- g. **Return maintenance crane to storage.**



END OF TASK

---

**1.106. MAIN ROTOR BLADES TIEDOWN – INSTALLATION**

---

1.106.1. Description

This task covers: Installation.

---

1.106.2. Initial Setup**Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
Aircraft mooring tiedown kit (item 363, App H)  
Fibrous rope (item 271, App H)

**Personnel Required:**

67R      Attack Helicopter Repairer

**References:**

■ TM 1-1500-250-23

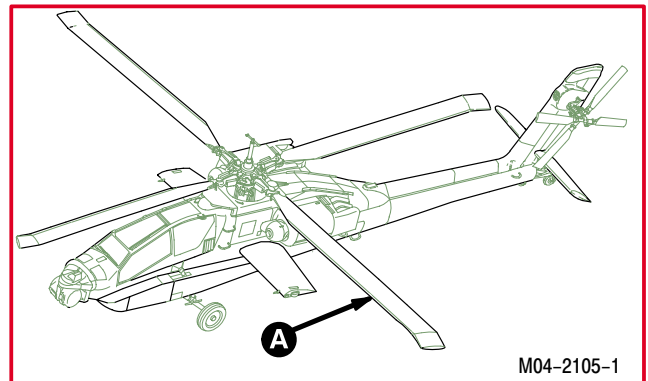
**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed

---

**NOTE**

This task describes forward and aft tie-down installation.



GO TO NEXT PAGE



**1.106. MAIN ROTOR BLADES TIEDOWN – INSTALLATION – continued**

1.106.3. Installation

**NOTE**

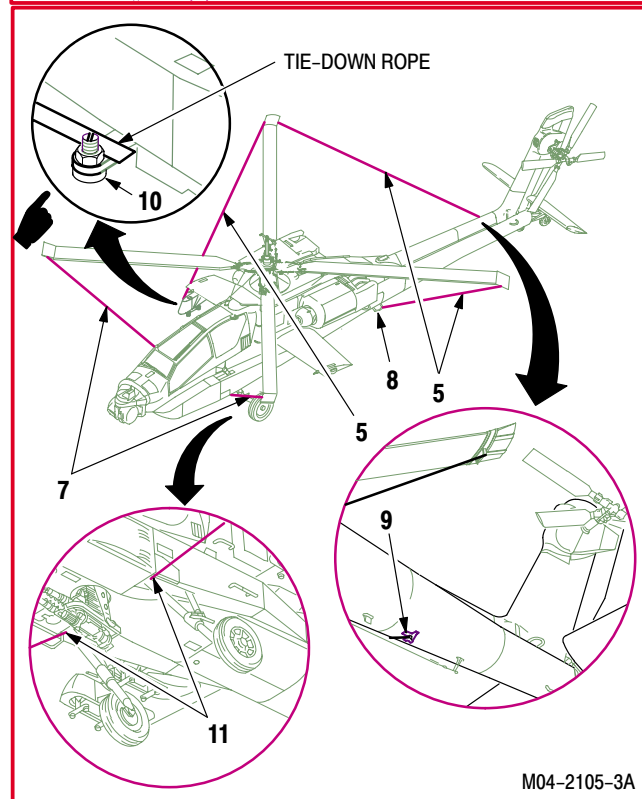
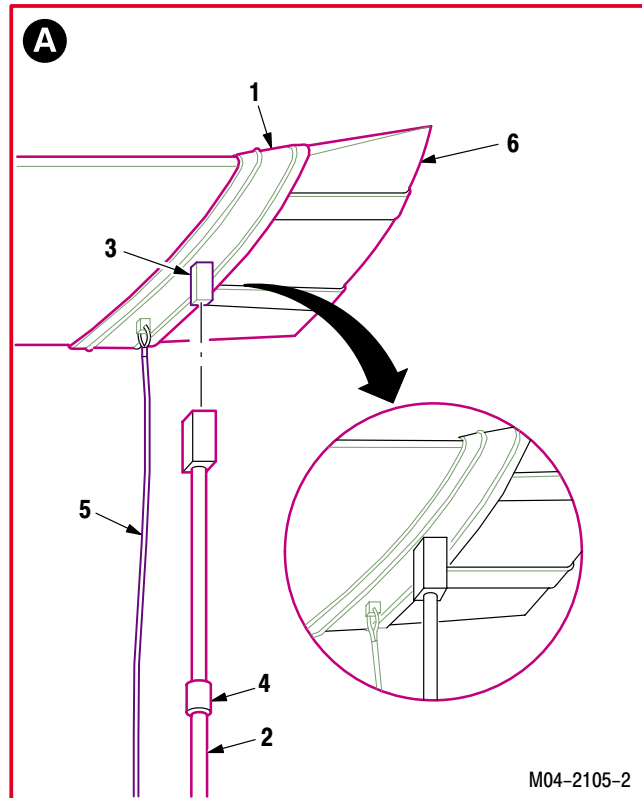
- Ensure that main rotor blade tiedown boot is in good repair and the two nylon end straps are securely attached.
- Ensure tiedown ropes are long enough to tie rotor blades to required locations (TM 1-1500-250-23).

**a. Install main rotor blades tiedown (1).**

- (1) Extend tiedown pole (2). Attach pole (2) to tiedown bracket (3).
- (2) Rotate tiedown pole lock (4) to maintain extension.
- (3) Hold main rotor blade tiedown rope (5) to stabilize tiedown (1).
- (4) Position tiedown (1) over end of rotor blade (6) trailing edge first.
- (5) Remove tiedown pole (2) from tiedown bracket (3).
- (6) Repeat steps a.(1) thru a.(5) for other three rotor blades.

**b. Secure tiedown ropes (5) and (7).**

- (1) Secure left aft tiedown rope (5) to catwalk step (8).
- (2) Secure right aft tiedown rope (5) to aft jackpad (9).
- (3) Secure a second right aft tiedown rope (5) to right outboard pylon rack sway restraint (10).
- (4) Secure two tiedown ropes (7) to each forward landing gear mooring point (11).



END OF TASK

---

## 1.107. MAIN ROTOR BLADES TIEDOWN – REMOVAL

---

### 1.107.1. Description

This task covers: Removal.

---

### 1.107.2. Initial Setup

#### Tools:

Aircraft mechanic's tool kit (item 376, App H)  
Aircraft mooring tiedown kit (item 363, App H)

#### Equipment Conditions:

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed

#### Personnel Required:

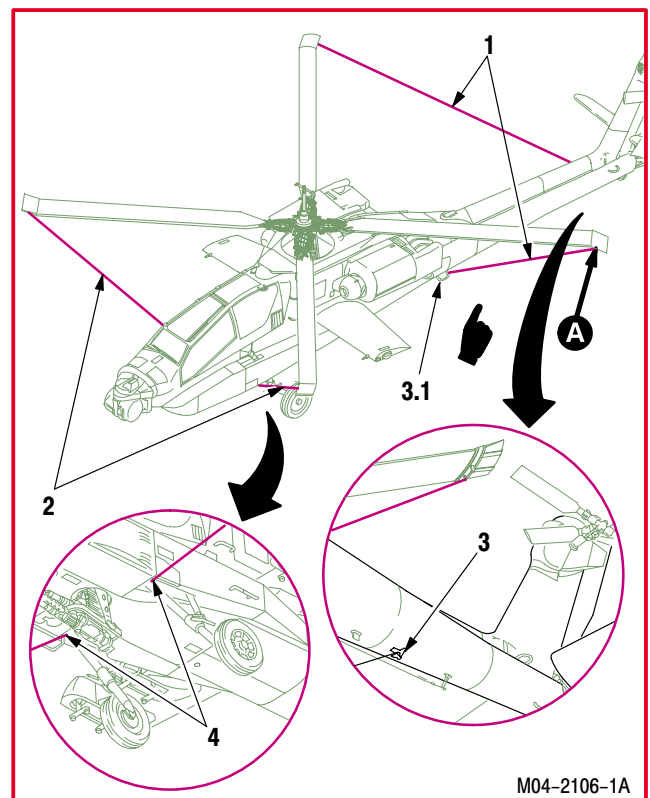
67R     Attack Helicopter Repairer

---

### 1.107.3. Removal

#### a. Release main rotor blade tiedown ropes (1) and (2).

- (1) Release right aft tiedown rope (1) from aft jackpad (3).
- (2) Release left aft tiedown rope (1) from catwalk step (3.1).
- (3) Release two tiedown ropes (2) from each forward landing gear mooring point (4).



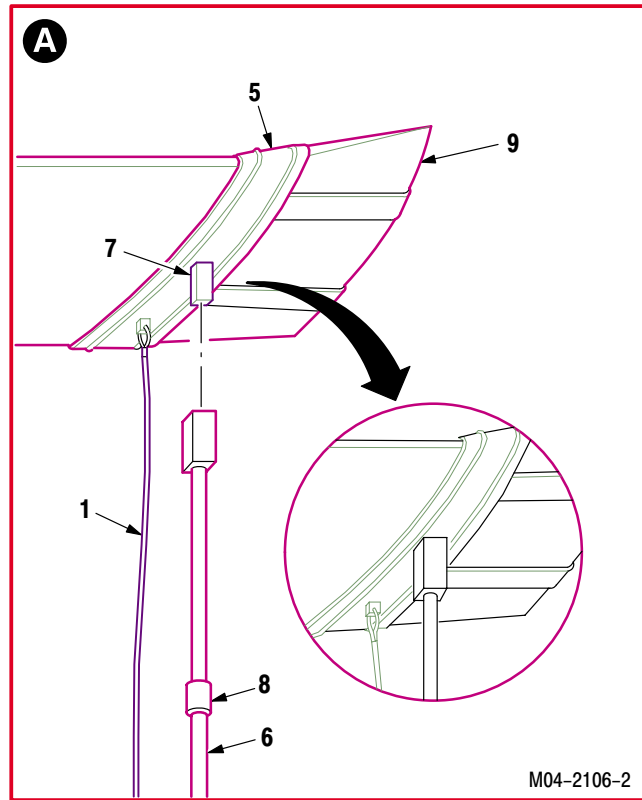
GO TO NEXT PAGE

**1.107. MAIN ROTOR BLADES TIEDOWN – REMOVAL – continued**

**b. Remove main rotor blade tiedown (5).**

- (1) Extend tiedown pole (6). Attach pole (6) to tiedown bracket (7).
- (2) Rotate tiedown pole lock (8) to maintain extension.
- (3) Hold tiedown rope (1) to stabilize tiedown (5).
- (4) Remove tiedown (5) from end of rotor blade (9).
- (5) Remove pole (6) from tiedown bracket (7).
- (6) Repeat steps b.(1) thru b.(5) for other three rotor blades.

**c. Stow pole (6) and tiedown (5) in flyaway kit in aft stowage bay.**



M04-2106-2

END OF TASK

**1.108A. MAIN ROTOR TRACK AND BALANCE AVA KIT INSTALLATION**

1.108A.1. Description

This task covers: Aircraft Preparation. Equipment Installation. Universal Tracking Device (UTD) Installation. SPU Bypass Installation Instructions. Night-Time Tracking Setup Instructions.

1.108A.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
 Helicopter rotor head balance and blade track run test equipment (item 353A, App H)  
 Aviation vibration analysis test set (item 354B, App H)  
 Maintenance platform (item 209, App H)

**Personnel Required:**

67R Attack Helicopter Repairer  
 67R3F Attack Helicopter Repairer/Technical Inspector

**References:**

TM 1-1520-238-T

**Materials/Parts:**

Screw, machine NAS603-10P

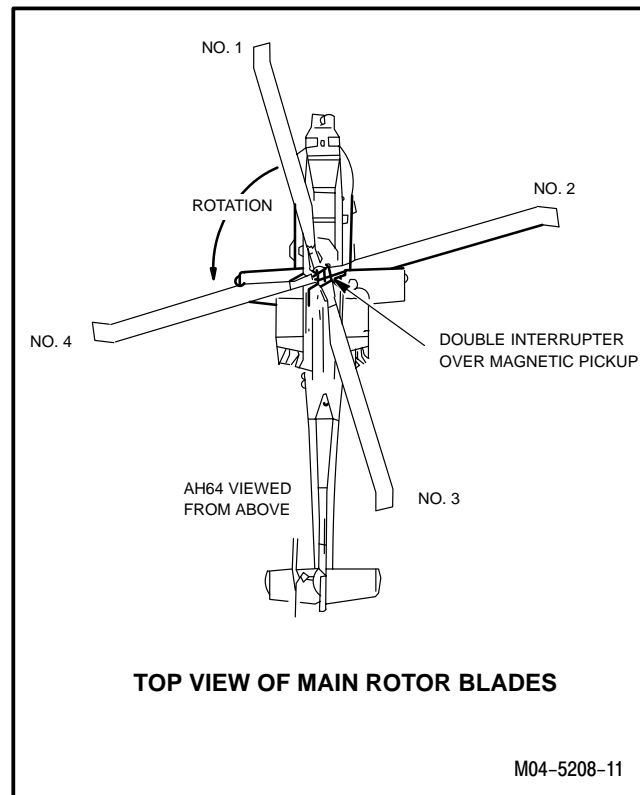
**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed

1.108A.3. Aircraft Preparation

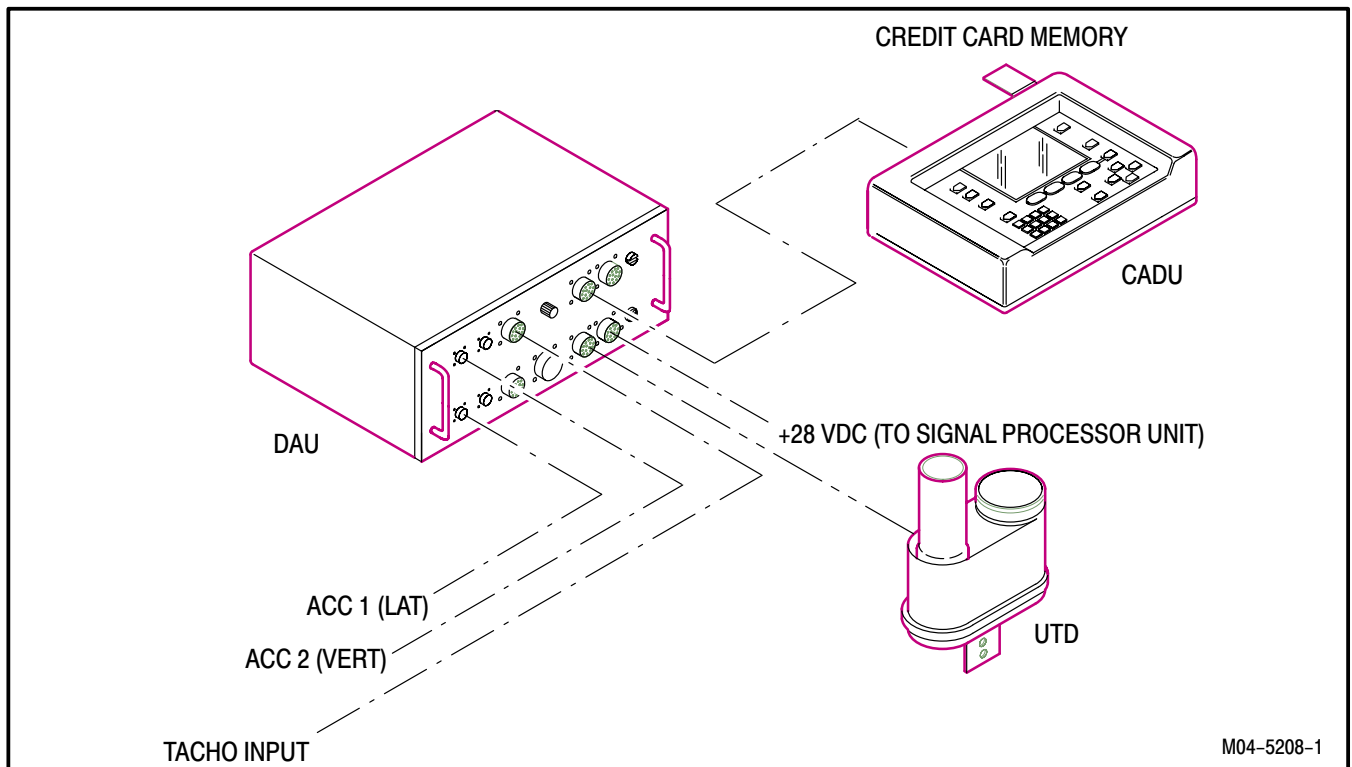
a. **Position main rotor blades.**

- (1) Rotate main rotor head such that double interrupter is over magnetic pickup and mark blades as follows:
  - (a) Blade #1 is over nose of aircraft.
  - (b) Blade #2 is to the right as viewed from aft of aircraft.
  - (c) Blade #3 is over tailboom.
  - (d) Blade #4 is to the left as viewed from aft of aircraft.
- (2) Mark blades accordingly.



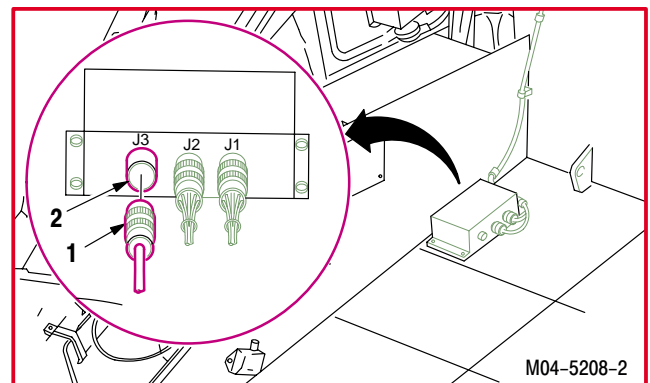
GO TO NEXT PAGE

1.108A. MAIN ROTOR TRACK AND BALANCE AVA KIT INSTALLATION – continued



1.108A.4. Equipment Installation

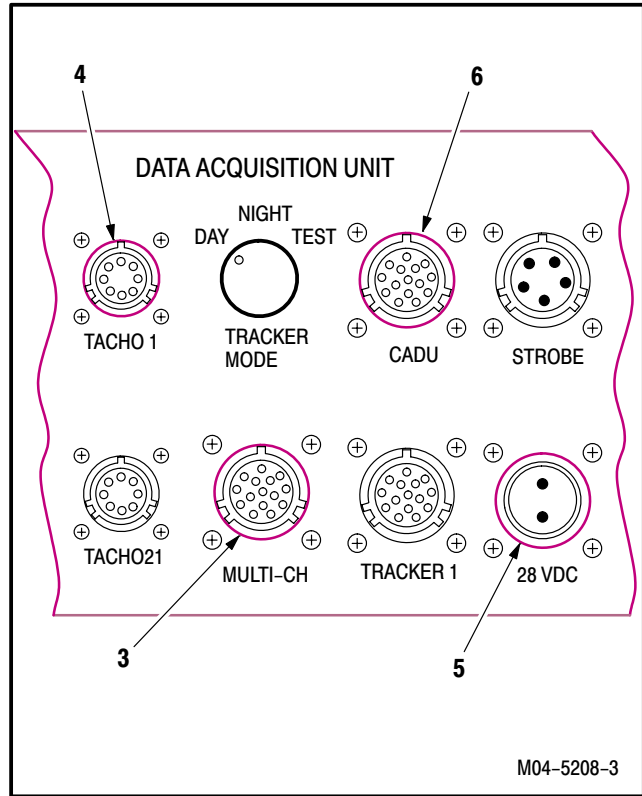
- a. **Enter CPG station** (para 1.56). **Observe all safety precautions.**
- b. **Install Aviation Vibration Analysis Equipment (AVA).**
  - (1) Remove AVA blade tracking equipment from transport case. Check for possible damaged equipment and frayed cables.
  - (2) Place Data Acquisition Unit (DAU) on out-board side of copilot's left armor plate oriented such that the **ON/OFF** switch is forward with connectors facing up and secure DAU using canvas straps and D-rings.
  - (3) Attach AH-64-to-DAU cable (29304600) connector **P4** (1) to signal processing unit (SPU) receptacle **J3** (2) located beneath and to the right of copilot's seat.
  - (4) Route AH-64 to DAU cable behind copilot's seat and around to the DAU.



GO TO NEXT PAGE

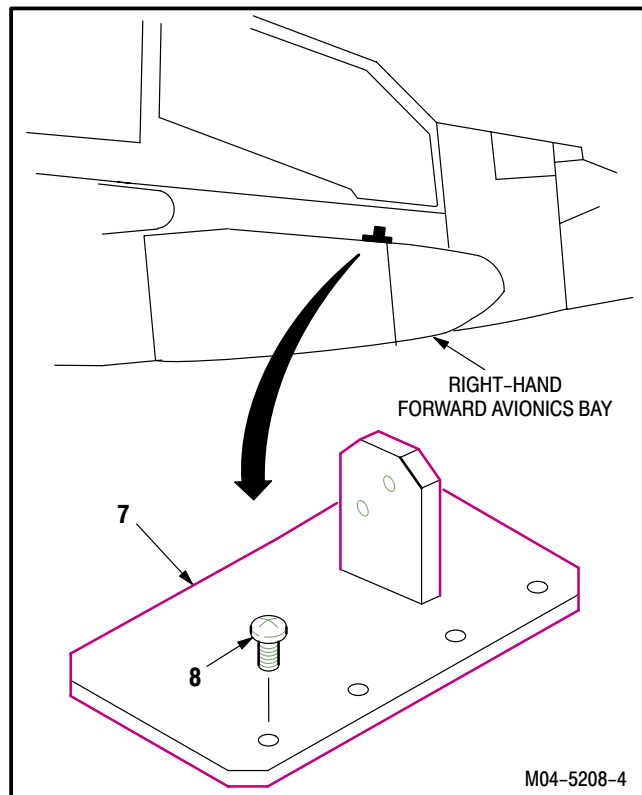
**1.108A. MAIN ROTOR TRACK AND BALANCE AVA KIT INSTALLATION – continued**

- (5) Attach AH-64 to DAU cable terminations to DAU receptacles labeled **MULTI-CH** (3), **TACHO 1** (4), and **28 VDC** (5).
- (6) Locate Control and Display Unit (CADU) in CPG cockpit. Attach CADU to DAU cable (29325601) to CADU and to DAU receptacle labeled **CADU** (6).



1.108A.5. Universal Tracking Device (UTD) Installation

- a. Remove four outside aircraft screws located at the top and all the way forward on right-hand (FAB). Retain screws for reinstallation.
- b. Install UTD mounting bracket (7) to outboard edge of FAB with screws P/N NAS603-10P (8). Ensure screws extend a minimum of two threads.

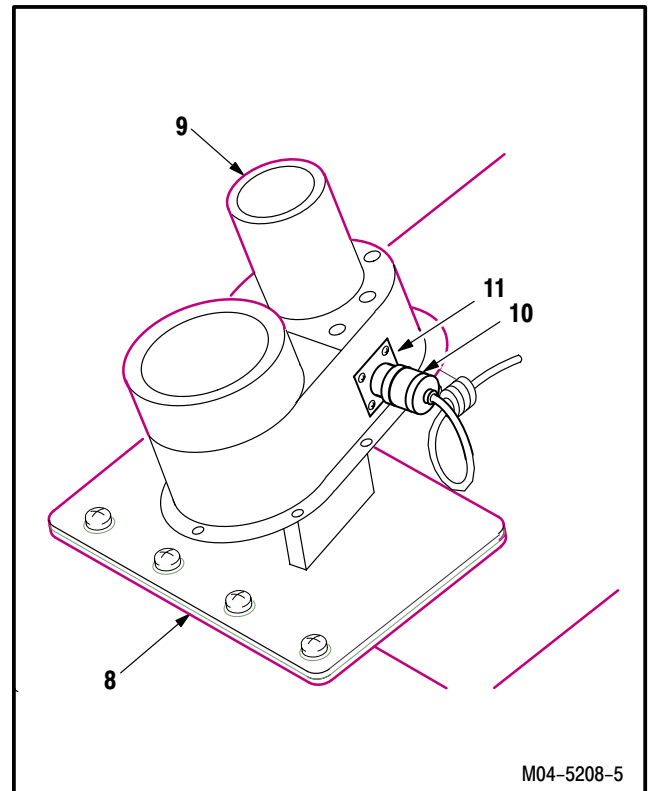


GO TO NEXT PAGE

**1.108A. MAIN ROTOR TRACK AND BALANCE AVA KIT INSTALLATION – continued****NOTE**

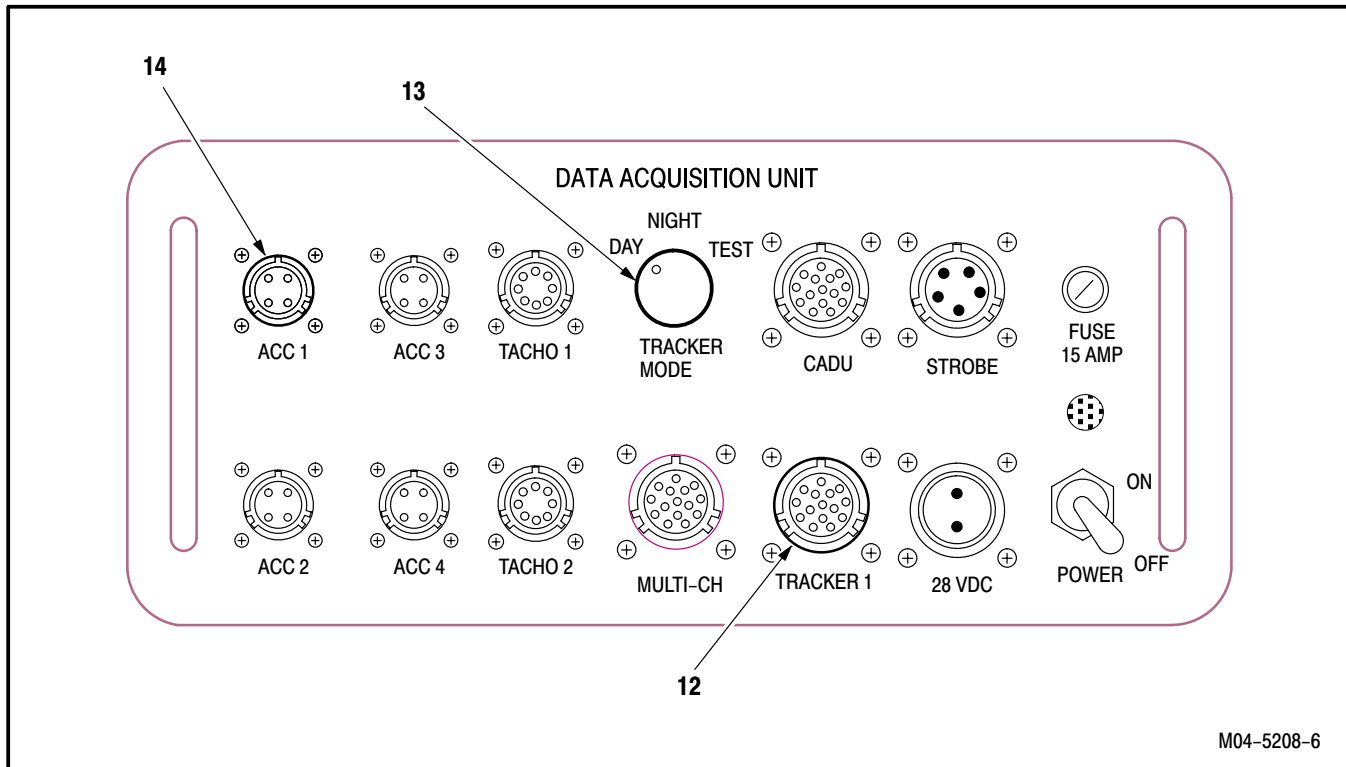
If UTD captive mounting bolts are lost or damaged, use NAS13005-14 bolts of suitable length as temporary replacements.

- c. **Mount UTD (9) on inboard side of bracket (8), ensuring that night lens (red lens on UTD) is below the optical lens (clear lens).**
- d. **Attach UTD cable (10) (29325701) to UTD receptacle (11) and route cable to CPG station.**
  - (1) Remove R40 access panel from nose of helicopter (para 2.2).
  - (2) Route UTD cable forward from mount towards front of FAB and then go up and through R40 access panel opening and under instrument panel to CPG station.
  - (3) Reinstall the R40 access panel (para 2.2).
  - (4) Route UTD cable along side of right hand console along with AH-64-DAU cable to DAU. Slack in cable can be stored in map holder near copilot's right elbow.



GO TO NEXT PAGE

1.108A. MAIN ROTOR TRACK AND BALANCE AVA KIT INSTALLATION – continued



M04-5208-6

(5) Attach UTD cable to DAU receptacle labeled **TRACKER 1** (12).

**NOTE**

- If signal processing unit is suspected defective, go to subparagraph 1.108A.6.
- If night tracking is required, go to subparagraph 1.108A.7, otherwise go to step (6).

(6) Ensure that **TRACKER MODE** switch on front of DAU is in **DAY** (13) position.

e. **Inspect (QA).**

f. **Perform main rotor track and balance maintenance operational check (TM 1-1520-238-T).**

1.108A.6. SPU Bypass Installation Instructions

**NOTE**

This step provides instructions for bypassing the signal processing unit (SPU). This is done if SPU is defective.

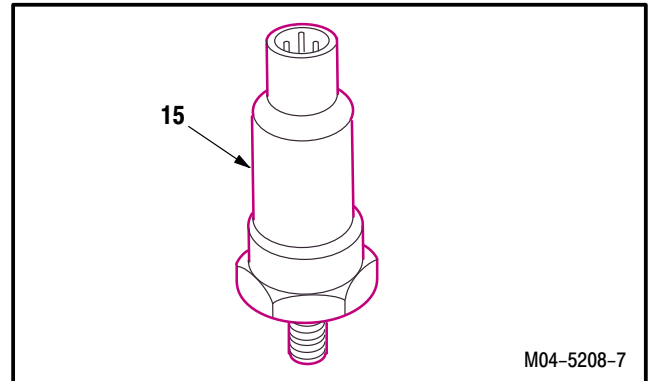
- Detach connector from lateral accelerometer located above and to the rear of pilots head.**
- Attach accelerometer cable (29105600) to the lateral accelerometer.**
- Route cable to CPG station and attach to receptacle marked ACC1 (14) on DAU.**

GO TO NEXT PAGE



**1.108A. MAIN ROTOR TRACK AND BALANCE AVA KIT INSTALLATION – continued**

- d. Install vertical accelerometer (28110900) (15) on accelerometer mounting bracket (29313000).
- e. Orient accelerometer vertically, with connector facing down and mount bracket on right-hand bulkhead panel near gunner's right knee, third screw down.

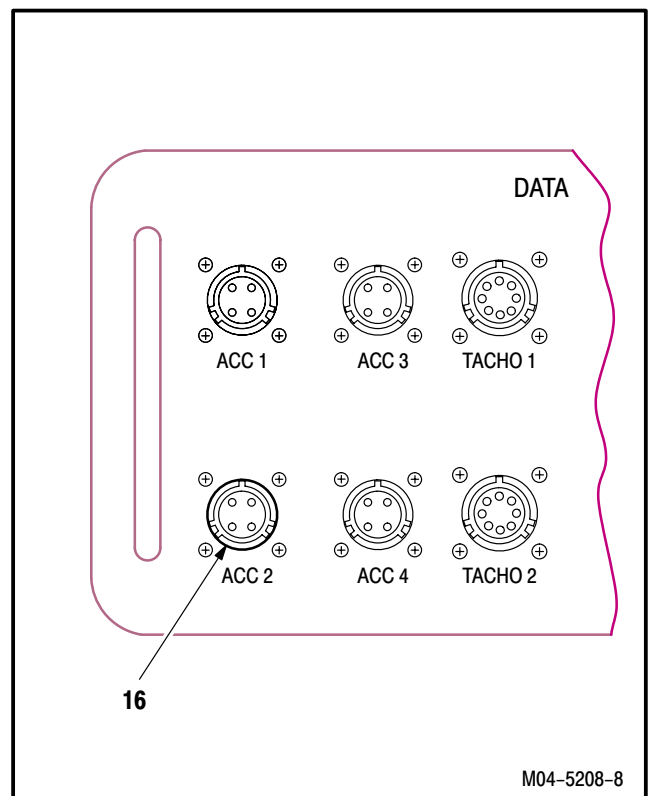


- f. Attach accelerometer cable (29105605) to vertical accelerometer, and attach to DAU receptacle marked ACC 2 (16).

**CAUTION**

Do not secure disconnected cable in next procedure to any moving components which may interfere with flight controls.

- g. Detach existing cable from RPM sensor, and secure cable with a tie wrap to a convenient location.
- h. Attach magnetic RPM sensor cable (2910543) to magnetic RPM sensor.
- (1) Route cable along wire bundle above R200 panel forward and secure to cable with wire ties. Go across front of transmission upper pylon and secure cable to wire bundle above L200 panel.
  - (2) Route cable through ventilation air intake panel on left side of aircraft. Route cable down left side of aircraft, securing to left upper hand hold and into emergency air vent. Route cable under transparent barrier's pass-thru tray to DAU in CPG station.



GO TO NEXT PAGE

**1.108A. MAIN ROTOR TRACK AND BALANCE AVA KIT INSTALLATION – continued**

- i. Detach previously attached connector from receptacle labeled TACHO 1.
- j. Attach magnetic RPM sensor cable to DAU receptacle labeled TACHO 1 (4).
- k. If day time tracking is performed, ensure that TRACKER MODE switch on front of DAU is in DAY position. If night time tracking is performed, go to subparagraph 1.108A.7.
- l. Inspect (QA).

**NOTE**

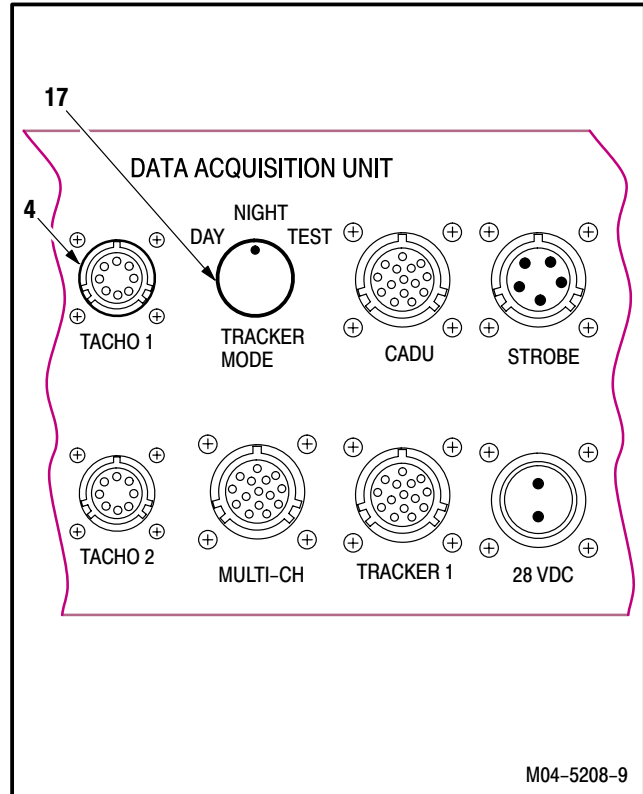
For this installation, on the CADU, select "Aircraft Type" as AH64NB, then operate the system as normal.

- m. Perform main rotor track and balance maintenance operational check (TM 1-1520-238-T).

1.108A.7. Night-Time Tracking Setup Instructions

**NOTE**

- The following steps are to be taken if night-time tracking is required. If no flights will be performed after dusk, proceed directly to tracking procedures (TM 1-1520-238-T).
  - If SPU is found defective, go to subparagraph 1.108A.6.
- a. Ensure that TRACKER MODE switch on front of DAU is in NIGHT (17) position.
  - b. Ensure that underside and trailing edge of all blades is as clean as possible. This is necessary for optimum adhesion of reflective tape.

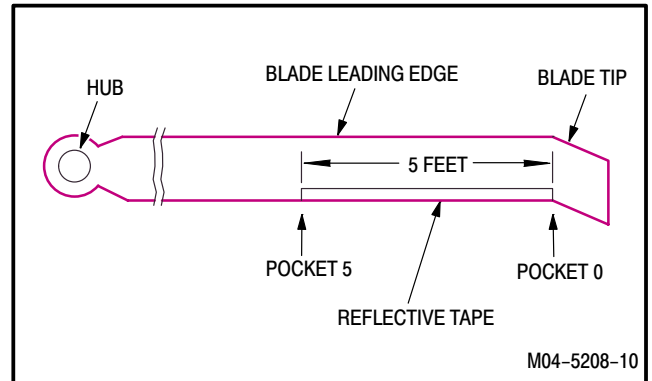


M04-5208-9

GO TO NEXT PAGE

**1.108A, MAIN ROTOR TRACK AND BALANCE AVA KIT INSTALLATION – continued**

- c. Place a single, 5-foot strip of reflective tape on underside, trailing edge (on trim tab) of each blade from tab pocket #0 to tab pocket #5. Ensure that tape is smooth and as straight as possible using edge of blade as a reference. Use maintenance platform.
- d. If verification of tape is desired, it can be viewed by holding a flashlight near your head and shining it at rotating blades. Any misplaced sections of tape will stand out.
- e. Inspect (QA).
- f. Perform main rotor track and balance maintenance operational check (TM 1-1520-238-T).



END OF TASK

**1.109A. MAIN ROTOR TRACK AND BALANCE AVA KIT REMOVAL**

1.109A.1. Description

This task covers: Removal.

1.109A.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
 Helicopter rotor head balance and blade track run test equipment (item 353A, App H)  
 Aviation vibration analysis test set (item 354B, App H)  
 Maintenance platform (item 209, App H)

**Equipment Conditions:**

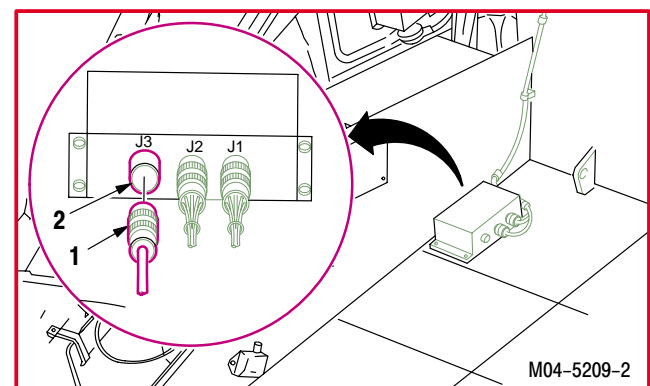
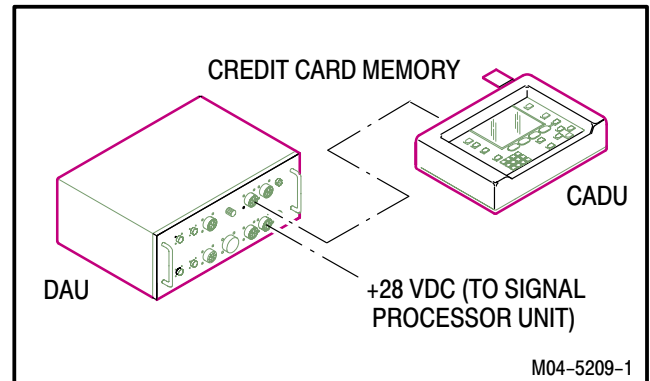
Ref	Condition
1.57	Helicopter safed

**Personnel Required:**

67R Attack Helicopter Repairer  
 67R3F Attack Helicopter Repairer/Technical Inspector

1.109A.3. Removal

- a. **Enter CPG station** (para 1.56). **Observe all safety precautions.**
- b. **Remove AVA equipment.**
  - (1) Detach the following connectors from DAU.
    - (a) Detach **TACHO 1** cable from DAU.
    - (b) Detach connector from DAU receptacle labeled **CADU**.
    - (c) Detach **MULTI-CH** cable from DAU.
    - (d) Detach **TRACKER 1** cable from DAU.
    - (e) Detach **28VDC** cable from DAU.
    - (f) If connected, detach **ACC 1** cable from DAU.
    - (g) If connected, detach **ACC 2** cable from DAU.
- c. **Detach cable from CADU.**
- d. **Remove DAU, CADU, and cable disconnected from aircraft.**
- e. **Disconnect SPU.**
  - (1) Detach connector **P4** (1) from SPU receptacle **J3** (2).
  - (2) Install protective cap on SPU **J3** receptacle.
  - (3) Remove AH-64-to-DAU cable from aircraft.

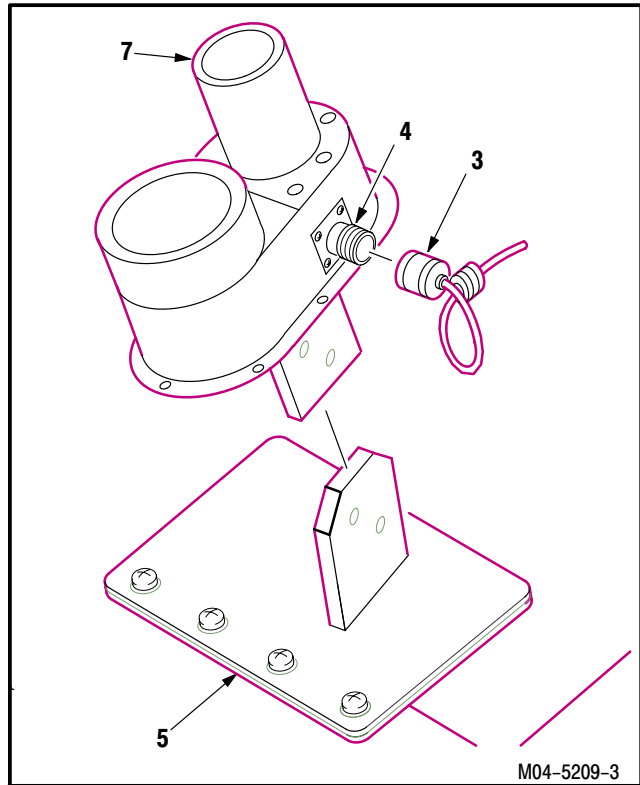


GO TO NEXT PAGE

**1.109A. MAIN ROTOR TRACK AND BALANCE AVA KIT REMOVAL – continued**

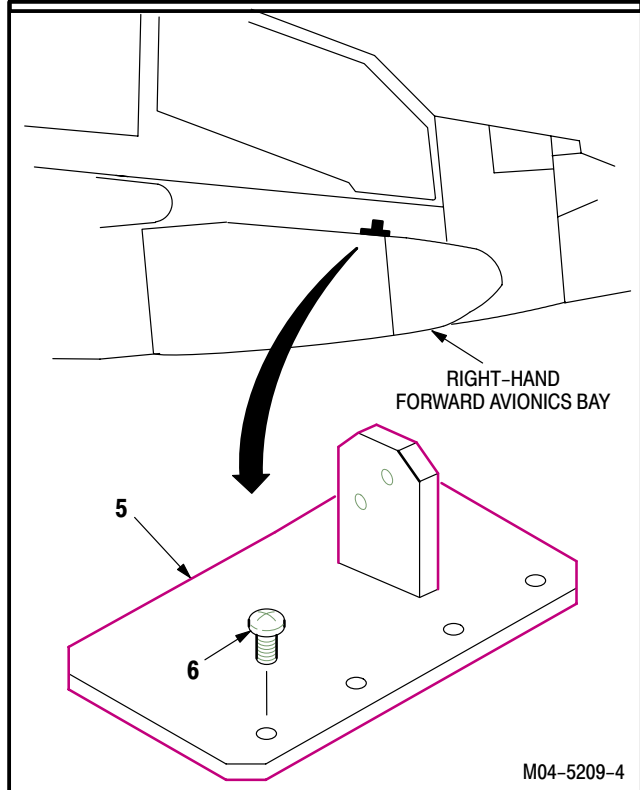
**f. Remove UTD.**

- (1) Detach UTD cable (3) from receptacle (4).
- (2) Remove UTD bracket (5) from right hand forward avionics bay (FAB).
  - (a) Remove four screws (6) from bracket (5).
  - (b) Remove UTD (7) with bracket (5) from FAB.
  - (c) Remove UTD (7) from bracket (5).
  - (d) Reinstall previously removed screws in FAB fairing.
  - (e) Remove R40 panel (para 2.2).
  - (f) Remove UTD to DAU cable from CPG station.
  - (g) Install R40 panel (para 2.2).



**g. If SPU bypass procedure was performed, perform the following.**

- (1) Detach DAU cable from lateral accelerometer and attach aircraft connector to lateral accelerometer.
- (3) Detach connector from vertical accelerometer.
- (4) Remove vertical accelerometer and mount bracket from aircraft.
- (5) Remove vertical accelerometer from mount bracket.
- (6) Remove DAU 29105600 and 28110900 cables from aircraft.
- (7) Detach DAU to RPM sensor cable connector from RPM sensor and attach aircraft RPM sensor connector to RPM sensor.
- (9) Remove RPM sensor to DAU cable 2910543 from aircraft.



**h. If night-time tracking was performed, remove and discard reflective tape from main rotor blade trailing edge.**

**i. Stow all main rotor track and balance AVA equipment in accessory kit.**

**j. Inspect (QA).**

END OF TASK

**1.110A. TAIL ROTOR BALANCE AVA KIT INSTALLATION**

1.110A.1. Description

This task covers: Equipment Installation. Optical RPM Sensor Installation. Accelerometer Installation.

1.110A.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
 Aviation vibration analysis test set (item 354B, App H)  
 Blade balancing kit (item 28, App H)  
 Maintenance platform (item 209, App H)  
 30 - 200 inch-pound 1/4-inch drive click type torque wrench (item 436, App H)

**Personnel Required:**

67R Attack Helicopter Repairer  
 67R3F Attack Helicopter Repairer/Technical Inspector

**References:**

TM 1-1520-238-T

**Equipment Conditions:**

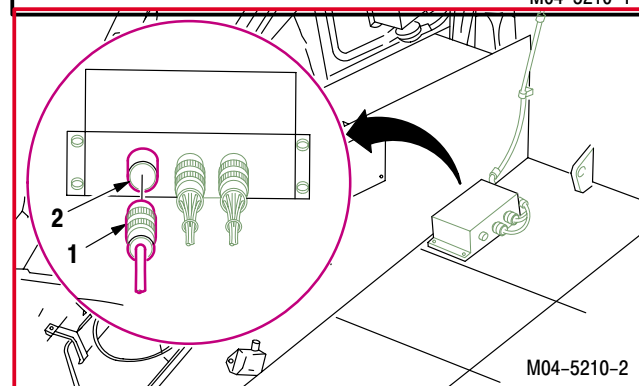
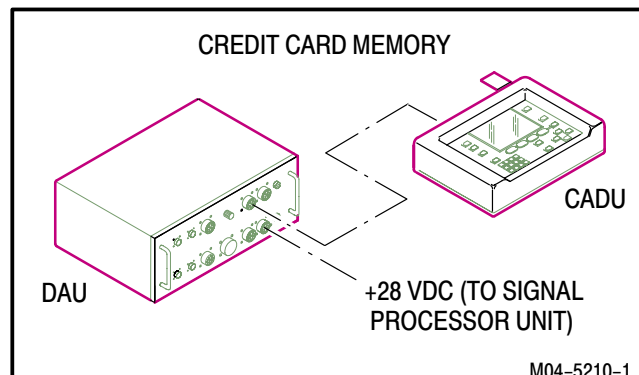
<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
2.2	Access fairing L540 removed

**Materials/Parts:**

Screw, machine NAS603-10P

1.110A.3. Equipment Installation

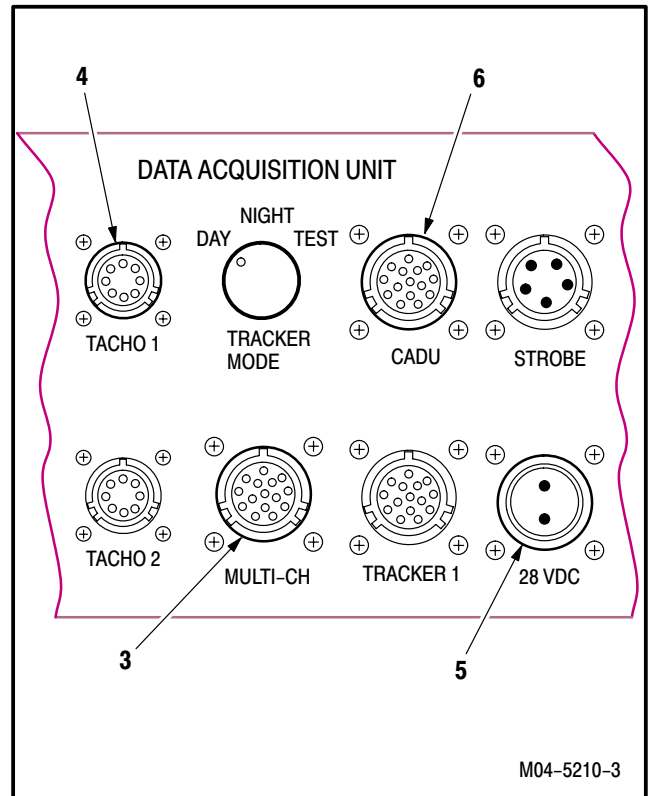
- a. **Enter CPG station** (para 1.56). **Observe all safety precautions.**
- b. **Install Aviation Vibration Analysis equipment (AVA).**
  - (1) Remove AVA tail rotor balancing equipment from transport case. Check for possible damaged equipment and frayed cables.
  - (2) Place Data Acquisition Unit (DAU) on out-board side of copilot's armor plate oriented such that the **ON/OFF** switch is forward with connectors facing up and secure DAU using canvas straps and D-rings.
  - (3) Attach AH-64-to-DAU cable (29304600) connector (1) to signal processing unit (SPU) receptacle (2) located beneath and to the right of copilot's seat.
  - (4) Route AH64-to-DAU cable behind copilot's seat and around to the DAU.



GO TO NEXT PAGE

**1.110A. TAIL ROTOR BALANCE AVA KIT INSTALLATION – continued**

- (5) Attach AH-64 to DAU cable terminations to DAU receptacles labeled **MULTI-CH** (3), **TACHO 1** (4), and **28 VDC** (5).
- (6) Locate Control and Display Unit (CADU) in CPG cockpit. Connect CADU to DAU cable (29325601) to CADU and to DAU receptacle labeled **CADU** (6).



**1.110A.4. Optical RPM Sensor Installation**

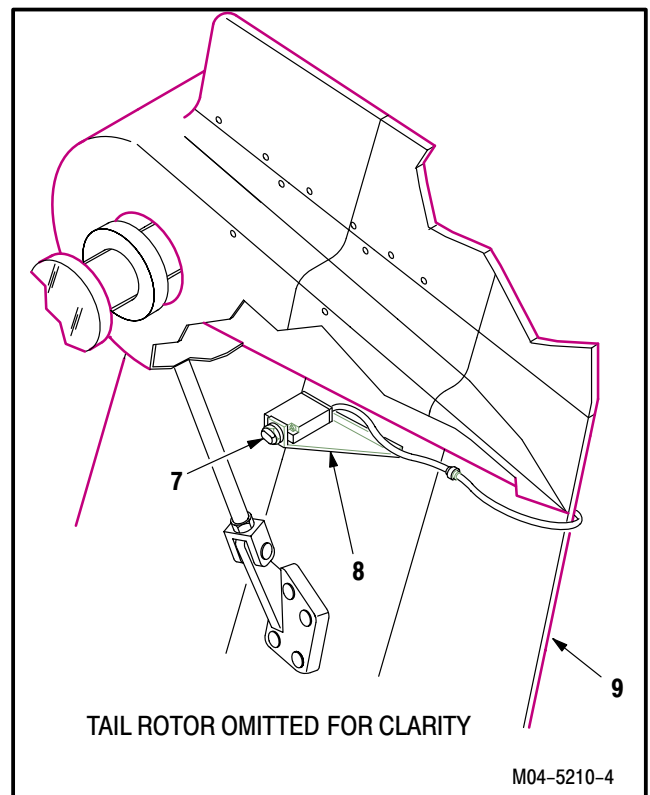
a. **Install optical RPM sensor (7).** Use maintenance platform.

- (1) Remove two airframe screws located on bottom and in center of tail rotor gearbox fairing. Retain screws for reinstallation.
- (2) Mount optical RPM sensor mounting bracket (8) on vertical stabilizer (9) with arrow on bracket facing aft.
- (3) Secure bracket (8) with screws PN NAS603-10P. Ensure to provide a minimum protrusion of two threads.
- (4) Mount optical RPM sensor (7) on bracket (8).

**NOTE**

Cable will be routed to CPG station after tail rotor accelerometer is installed.

- (5) Route cable around and down vertical stabilizer. Secure cable with clamps.



GO TO NEXT PAGE

1.110A. TAIL ROTOR BALANCE AVA KIT INSTALLATION – continued

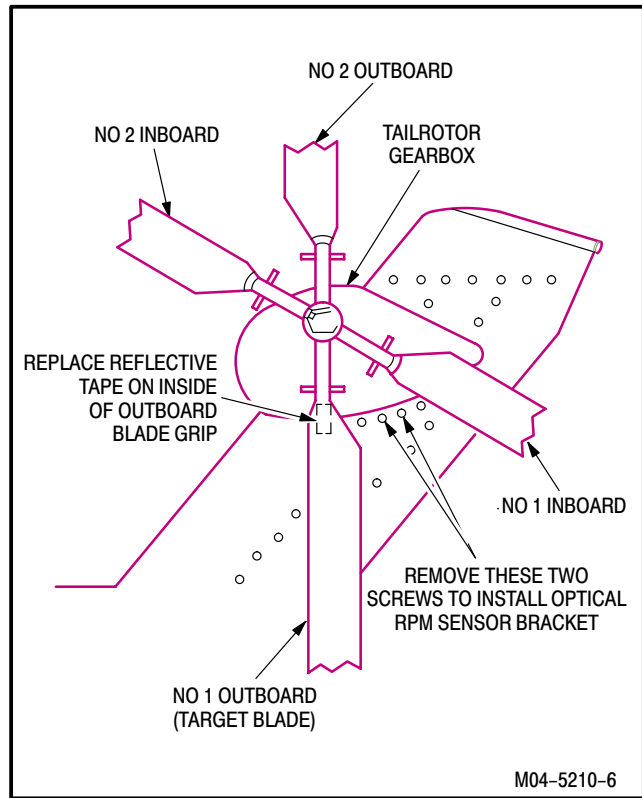
**NOTE**

If there is any unserviceable tape remaining from previous balance routines, it must be completely removed to ensure a clean and accurate tachometer signal to DAU.

- (6) Place a single, 4-inch strip of reflective tape on either outboard blade, aligning the tape with the approximate location of the 5-degree beam from sensor. (Tape should be placed with span of blade.)

**NOTE**

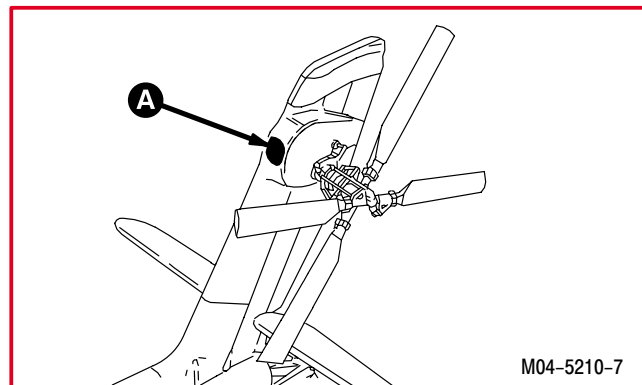
Blade with reflective tape will be referred to in the AVA diagnostics as the #1 outboard blade. Rotate blades in the direction of rotation and next blade is #1 inboard, and next blade is #2 outboard, the next blade is #2 inboard.



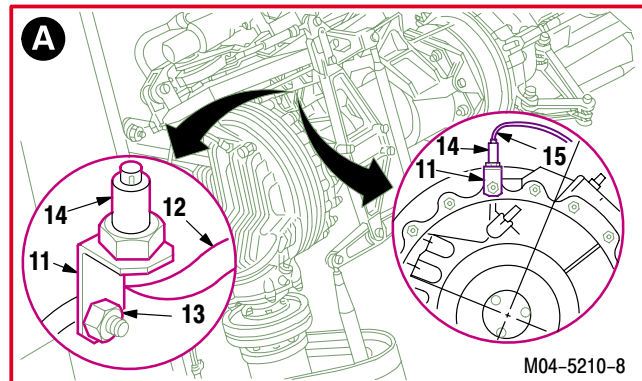
1.110A.5. Accelerometer Installation

- a. **Install accelerometer adapter bracket (11) on tail rotor gearbox (12).** Use maintenance platform. Torque nut (13) to **150 INCH-POUNDS**.

- (1) Remove nut (13) from gearbox (12) at the 12:00 position.
- (2) Install bracket (11) on gearbox (12) with nut (3).
- (3) Position bracket (11) so long axis of accelerometer (14) will be vertical.
- (4) Torque nut (13) to **150 INCH-POUNDS**. Use torque wrench.



- b. **Inspect (QA).**
- c. **Install accelerometer (14) on bracket (11).**
- d. **Attach accelerometer cable connector (15) to accelerometer (14).**

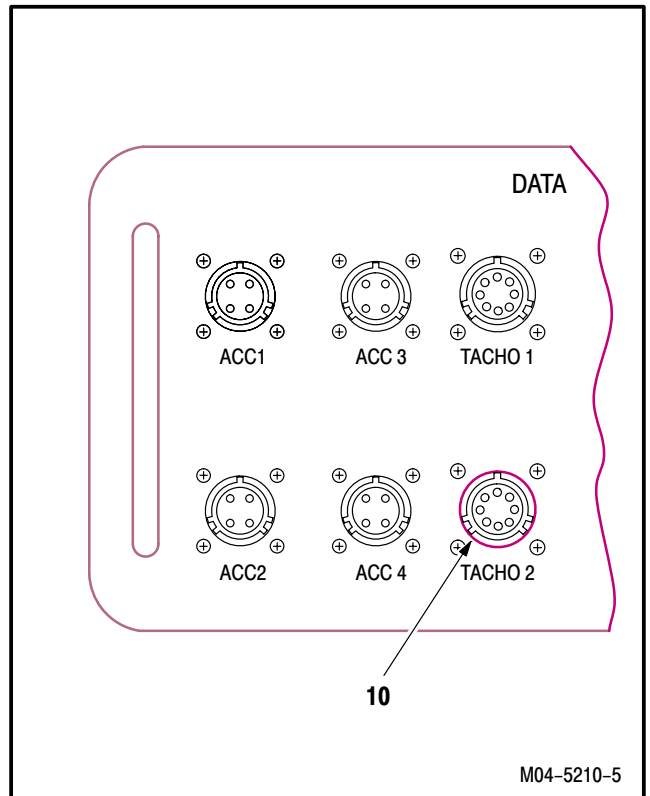


GO TO NEXT PAGE

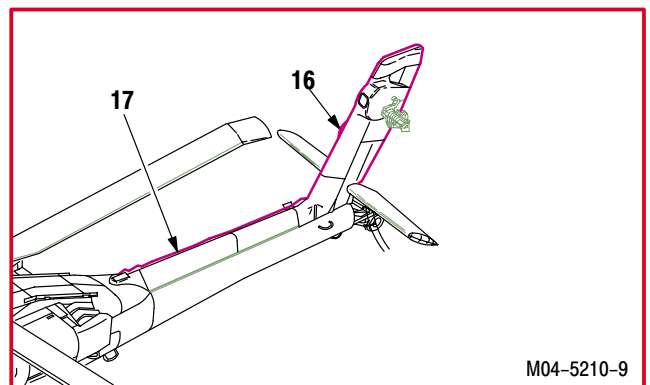


**1.110A. TAIL ROTOR BALANCE AVA KIT INSTALLATION – continued**

- e. Attach optical sensor cable to DAU receptacle labeled **TACHO 2** (10).

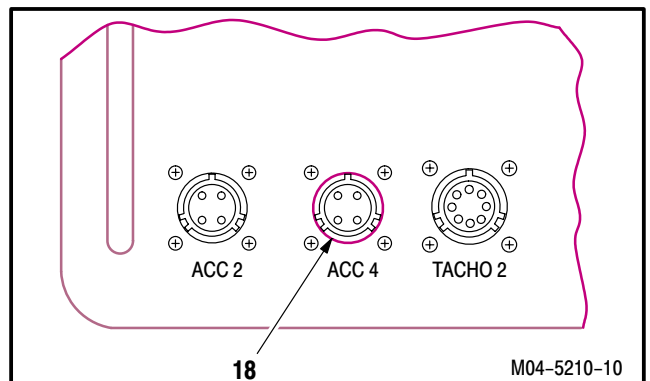


- f. Route and clamp accelerometer cable (16) down right side of vertical stabilizer and tail-boom with optical sensor cable (17) forward to DAU in CPG station.



- g. Attach accelerometer cable to DAU receptacle labeled **ACC 4** (18).

- h. Remove maintenance platform.
- i. Perform AVA tail rotor balance maintenance operational check (TM 1-1520-238-T).



END OF TASK

**1.111A. TAIL ROTOR BALANCE AVA KIT REMOVAL**

1.111A.1. Description

This task covers: Removal.

1.111A.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
 Helicopter rotor head balance and blade tracking test equipment (item 354, App H)  
 Blade balancing kit (item 28, App H)  
 Maintenance platform (item 209, App H)  
 30 - 200 inch-pound 1/4-inch drive click type torque wrench (item 436, App H)

**Personnel Required:**

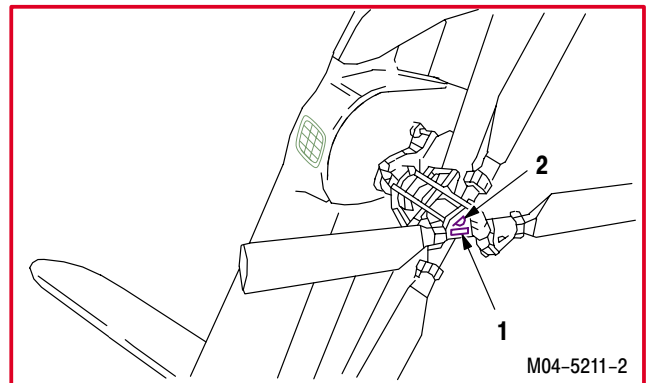
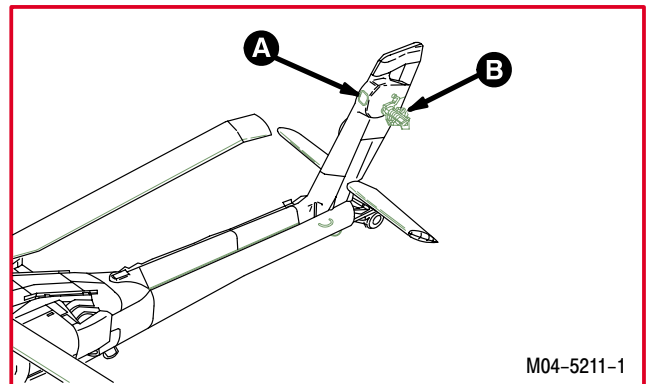
67R Attack Helicopter Repairer  
 67R3F Attack Helicopter Repairer/Technical Inspector

**Equipment Conditions:**

Ref	Condition
1.57	Helicopter safed

1.111A.3. Removal

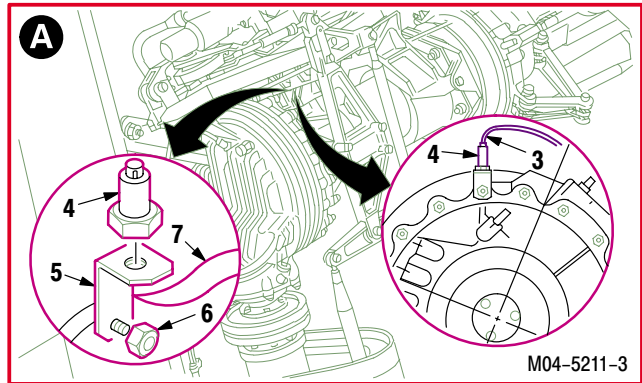
- a. Remove reflective tape (1) from outboard tail rotor blade grip (2). Use maintenance platform.



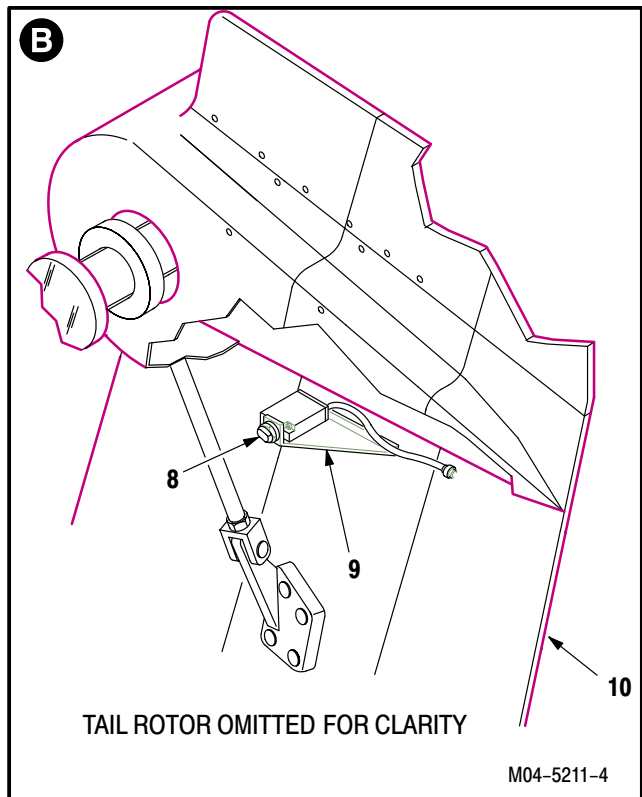
GO TO NEXT PAGE

1.111A. TAIL ROTOR BALANCE AVA KIT REMOVAL – continued

- b. Detach accelerometer cable connector (3) from accelerometer (4).
- c. Remove accelerometer (4) from accelerometer bracket (5).
- d. Remove nut (6) and bracket (5) from tail rotor gearbox (7).
- e. Install nut (6) and torque to 150 INCH-POUNDS. Use torque wrench.



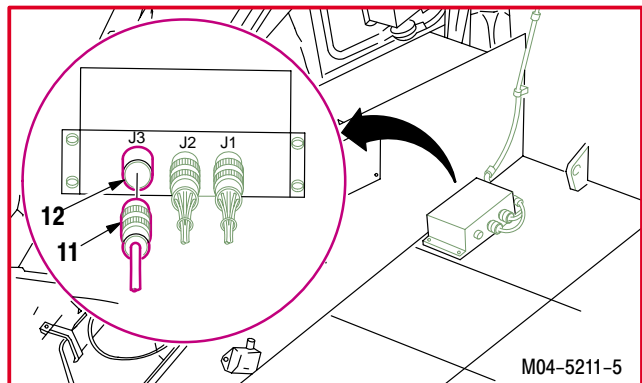
- f. Remove optical RPM sensor (8) from bracket (9).
- g. Remove bracket (9) from vertical stabilizer (10).
- h. Install screws previously removed.
- i. Remove accelerometer and optical sensor cables.
- j. Enter CPG station (para 1.56). Observe all safety precautions.



- k. Detach DAU connectors.
  - (1) Detach TACHO 1 cable from DAU.
  - (2) Detach TACHO 2 cable from DAU.
  - (3) Detach ACC 4 cable from DAU.
  - (4) Detach connector from DAU receptacle labeled CADU.
  - (5) Detach MULTI-CH cable from DAU.
  - (6) Detach 28VDC cable from DAU.

- l. Detach cable connector from CADU.
- m. Remove DAU, CADU, and cable disconnected from aircraft.
- n. Disconnect SPU.

- (1) Detach connector P4 (11) from SPU receptacle J3 (12).
- (2) Install protective cap on receptacle J3 (12).



GO TO NEXT PAGE

---

**1.111A. TAIL ROTOR BALANCE AVA KIT REMOVAL – continued**

---

- o. **Stow all tail rotor balance equipment in helicopter rotor head balance and blade tracking test equipment.**
- p. **Stow AVA Basic Kit Rotor Track and Balance equipment in kit container.**
- q. **Install access fairing L540 (para 2.2).**
- r. **Inspect (QA).**
- s. **Remove maintenance platform.**

END OF TASK

**1.112. MAIN ROTOR BLADE ADAPTER INSTALLATION**

1.112.1. Description

This task covers: Installation.

1.112.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
 Airframe adapter kit (item 25, App H)  
 Rail type trailer (item 396, App H)

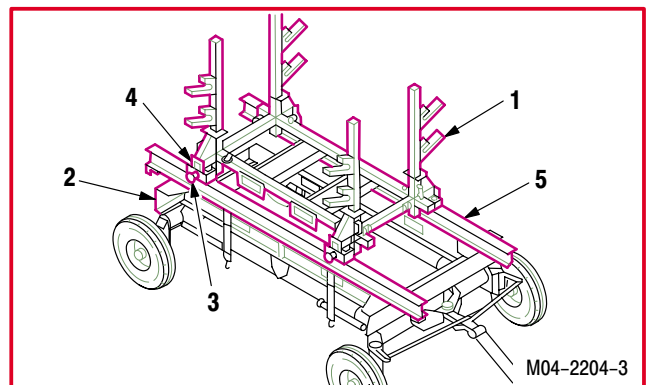
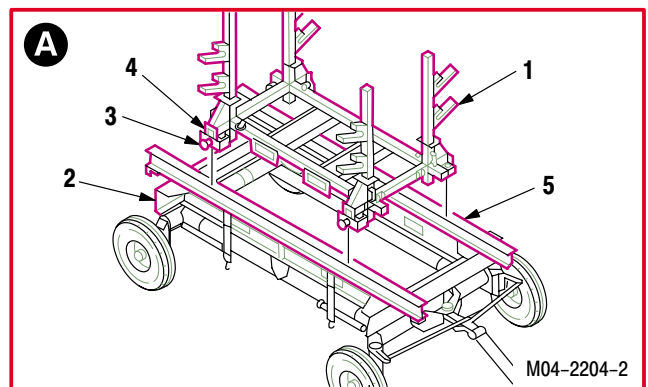
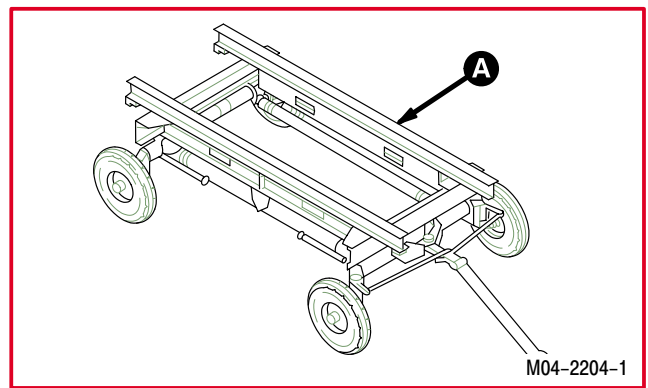
**Personnel Required:**

67R Attack Helicopter Repairer  
 One person to assist

1.112.3. Installation

**a. Install main rotor blade adapter (1) on hoist trailer (2).**

- (1) Position adapter (1) above trailer (2). Use hoist.
- (2) Loosen four clamp knobs (3) to open four roller adapters (4).
- (3) Lower adapter (1) until four roller adapters (4) seat on load rails (5).
- (4) Tighten four clamp knobs (3) to lock roller adapters (4) on load rails (5).
- (5) Move hoist clear of adapter (1) and trailer (2).



END OF TASK

---

## 1.113. MAIN ROTOR BLADE ADAPTER REMOVAL

---

### 1.113.1. Description

This task covers: Removal.

---

### 1.113.2. Initial Setup

#### Tools:

Aircraft mechanic's tool kit (item 376, App H)

#### Personnel Required:

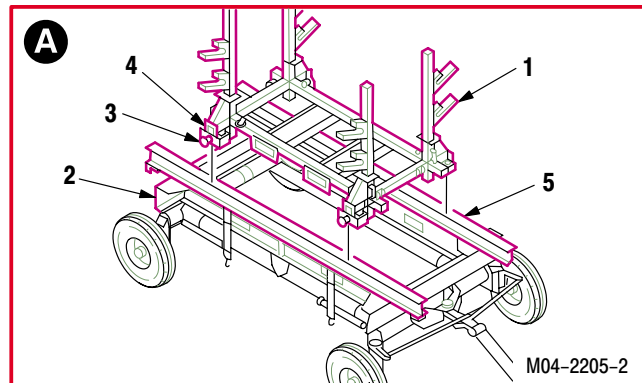
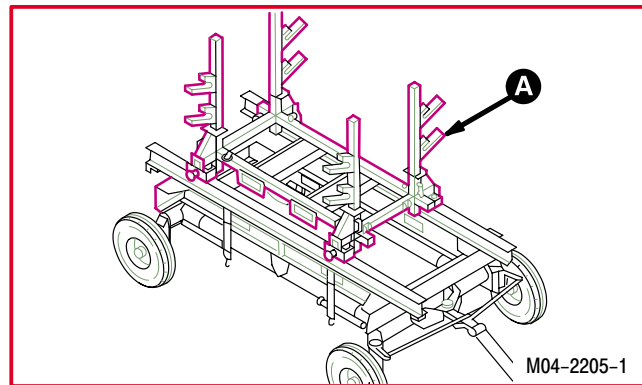
67R     Attack Helicopter Repairer  
One person to assist

---

### 1.113.3. Removal

a. **Remove main rotor blade adapter (1) from maintenance trailer (2).**

- (1) Loosen four clamp knobs (3) until roller adapters (4) are unlocked from load rails (5).
- (2) Lift main rotor blade adapter (1) from maintenance trailer (2). Use hoist.



END OF TASK

---

**1.114. MAIN TRANSMISSION FIXTURE INSTALLATION**

---

**1.114.1. Description**

This task covers: Installation.

---

**1.114.2. Initial Setup****Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
Rail type trailer (item 396, App H)

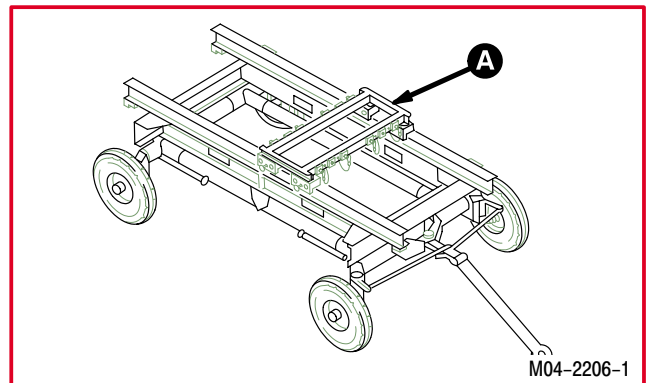
**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.122	Component fixture adapter installed

**Personnel Required:**

67R     Attack Helicopter Repairer  
         One person to assist

---



GO TO NEXT PAGE

---

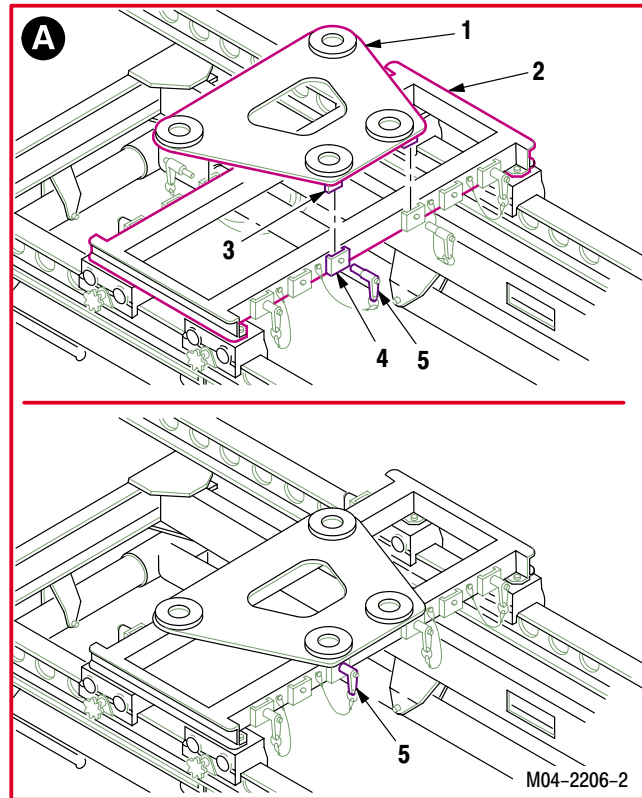
**1.114. MAIN TRANSMISSION FIXTURE INSTALLATION – continued**

---

1.114.3. Installation

a. **Install main transmission fixture (1) on component fixture adapter (2).**

- (1) Aline four lugs (3) with brackets (4).
- (2) Insert four lugs (3) into brackets (4).
- (3) Install four quick-release pins (5) through four brackets (4) and lugs (3).



END OF TASK



---

## 1.115. MAIN TRANSMISSION FIXTURE REMOVAL

---

### 1.115.1. Description

This task covers: Removal.

---

### 1.115.2. Initial Setup

#### Tools:

Aircraft mechanic's tool kit (item 376, App H)

#### Personnel Required:

67R     Attack Helicopter Repairer  
 One person to assist

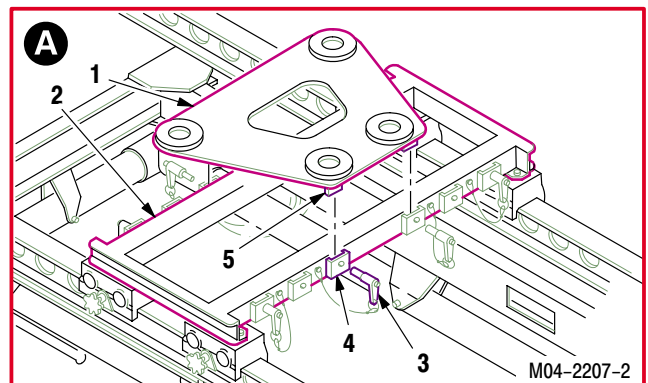
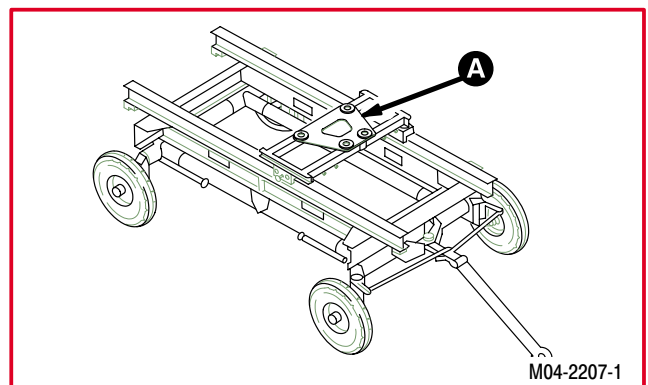
---

### 1.115.3. Removal

#### a. Remove main transmission fixture (1) from component fixture adapter (2).

- (1) Remove four quick-release pins (3) from four brackets (4) and lugs (5).
- (2) Lift main transmission fixture (1) from component adapter (2).

#### b. Remove component fixture adapter (2) (para 1.123).



END OF TASK

---

## 1.116. MAIN ROTOR HEAD FIXTURE INSTALLATION

---

### 1.116.1. Description

This task covers: Installation.

---

### 1.116.2. Initial Setup

#### **Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
Rail type trailer (item 396, App H)

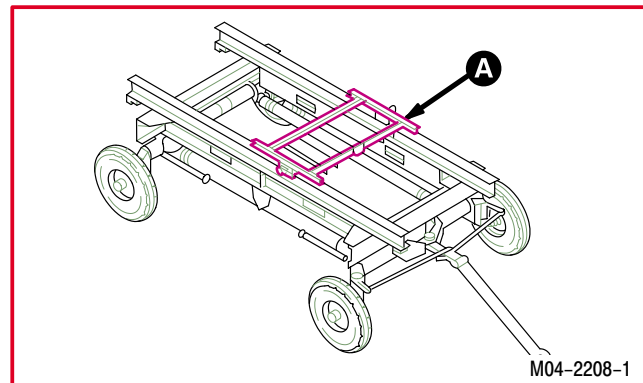
#### **Personnel Required:**

67R     Attack Helicopter Repairer  
          One person to assist

---

#### **Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.122	Component fixture adapter installed



GO TO NEXT PAGE

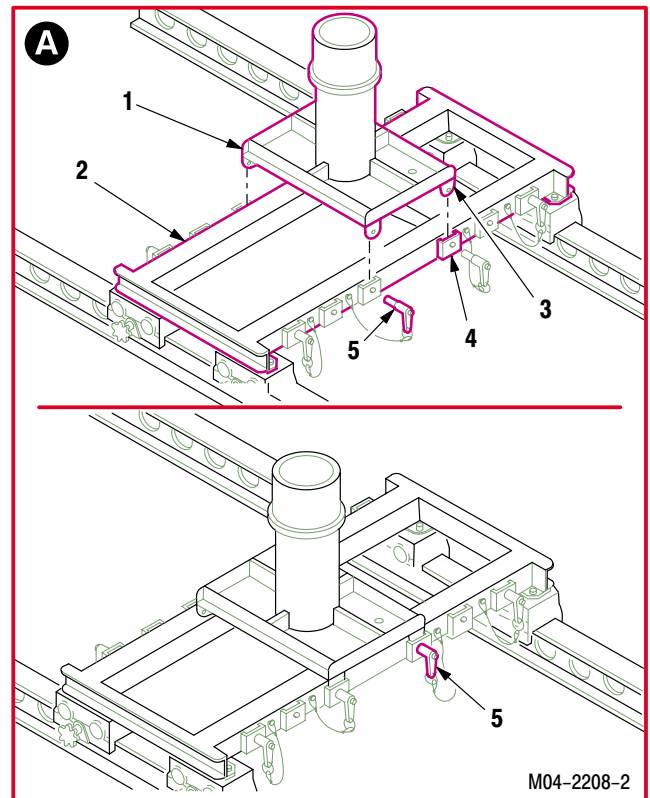
---

**1.116. MAIN ROTOR HEAD FIXTURE INSTALLATION – continued**

---

**1.116.3. Installation****a. Install main rotor head fixture (1) on component fixture adapter (2).**

- (1) Aline four lugs (3) with four adapter brackets (4).
- (2) Place head fixture (1) on component adapter (2).
- (3) Insert four lugs (3) into adapter brackets (4).
- (4) Install four quick-release pins (5) through four brackets (4) and lugs (3).



END OF TASK

---

## 1.117. MAIN ROTOR HEAD FIXTURE REMOVAL

---

### 1.117.1. Description

This task covers: Removal.

---

### 1.117.2. Initial Setup

#### Tools:

Aircraft mechanic's tool kit (item 376, App H)

#### Personnel Required:

67R      Attack Helicopter Repairer  
One person to assist

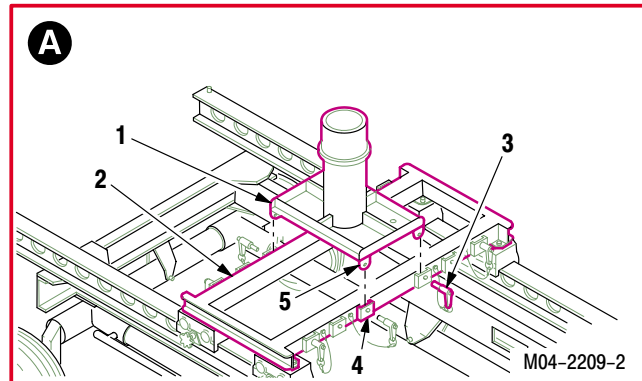
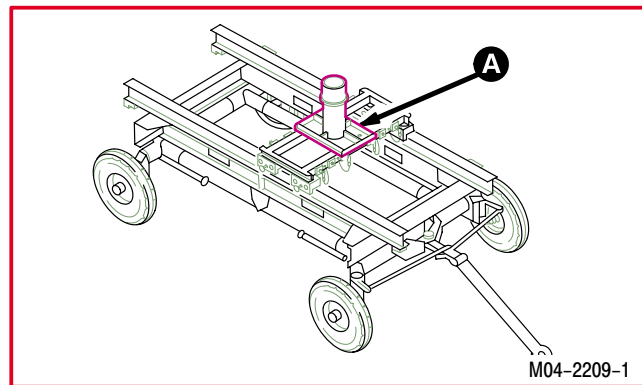
---

### 1.117.3. Removal

a. **Remove main rotor head fixture (1) from component fixture adapter (2).**

- (1) Remove four quick-release pins (3) from four brackets (4) and lugs (5).
- (2) Lift main rotor head fixture (1) from component adapter (2).

b. **Remove component fixture adapter (2)** (para 1.123).



END OF TASK

---

**1.118. MAIN ROTOR SWASHPLATE FIXTURE INSTALLATION**

---

1.118.1. Description

This task covers: Installation.

---

1.118.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
 Rail type trailer (item 396, App H)

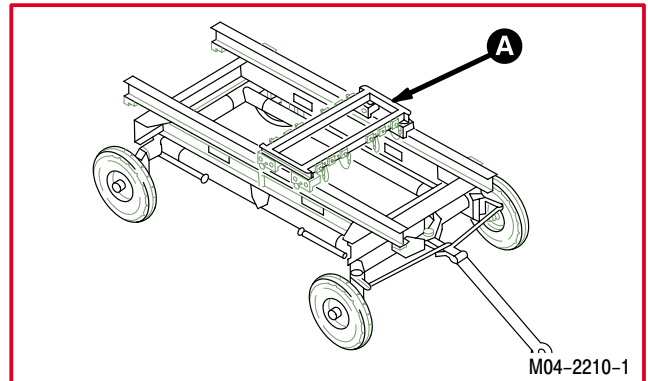
**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.122	Component fixture adapter installed

**Personnel Required:**

67R      Attack Helicopter Repairer  
           One person to assist

---



GO TO NEXT PAGE

---

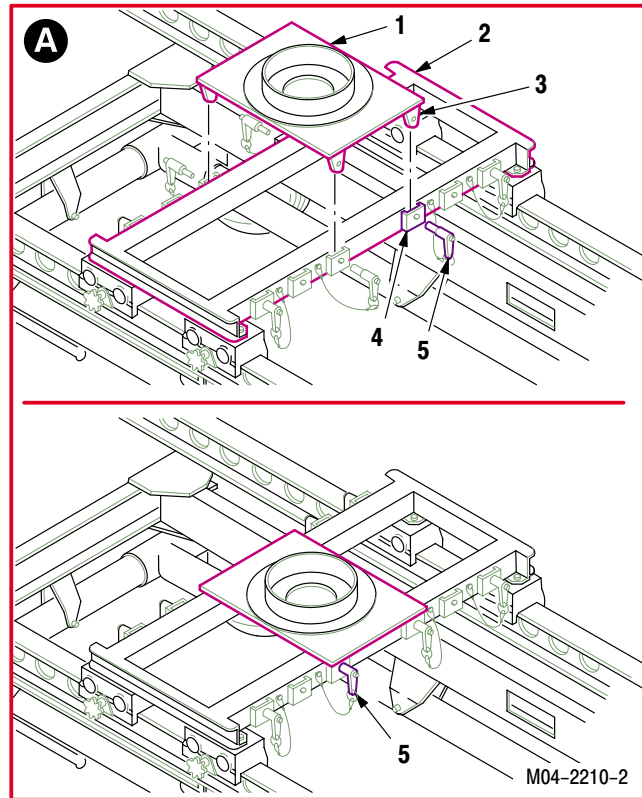
**1.118. MAIN ROTOR SWASHPLATE FIXTURE INSTALLATION – continued**

---

1.118.3. Installation

a. **Install main rotor swashplate fixture (1) on component fixture adapter (2).**

- (1) Place fixture (1) on component adapter (2).
- (2) Aline four lugs (3) with brackets (4).
- (3) Insert four lugs (3) into four brackets (4).
- (4) Install four quick-release pins (5) through four brackets (4) and lugs (3).



END OF TASK

---

## 1.119. MAIN ROTOR SWASHPLATE FIXTURE REMOVAL

---

### 1.119.1. Description

This task covers: Removal.

---

### 1.119.2. Initial Setup

#### Tools:

Aircraft mechanic's tool kit (item 376, App H)

#### References:

67R Attack Helicopter Repairer  
One person to assist

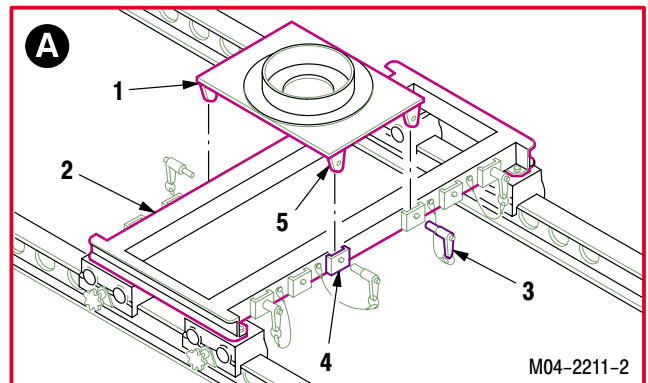
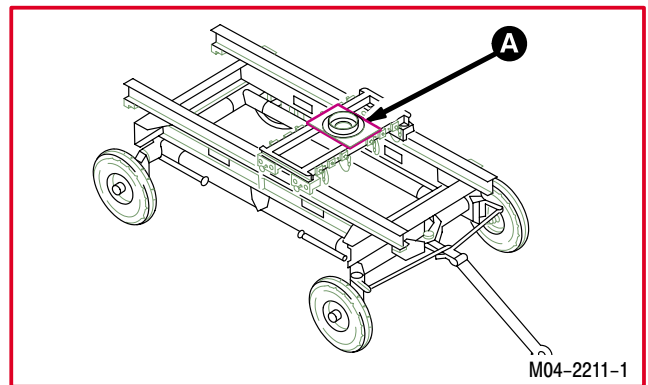
---

### 1.119.3. Removal

#### a. Remove main rotor swashplate fixture (1) from component fixture adapter (2).

- (1) Remove four quick-release pins (3) from four brackets (4) and lugs (5).
- (2) Remove fixture (1) from component adapter (2).

#### b. Remove component fixture adapter (2) (para 1.123).



END OF TASK

**1.120. CONTAINER TRANSPORT ADAPTER INSTALLATION**

1.120.1. Description

This task covers: Installation.

1.120.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
 Rail type trailer (item 396, App H)

**Personnel Required:**

67R Attack Helicopter Repairer  
 Three persons to assist

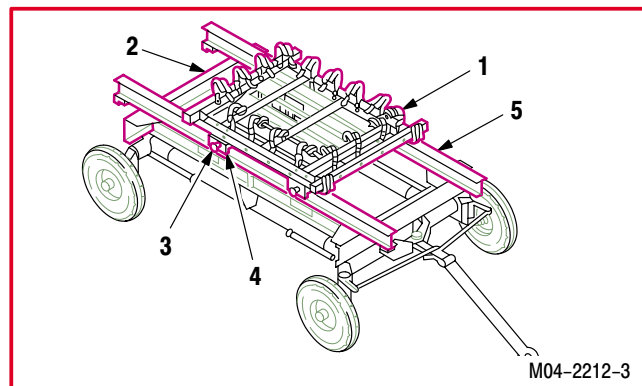
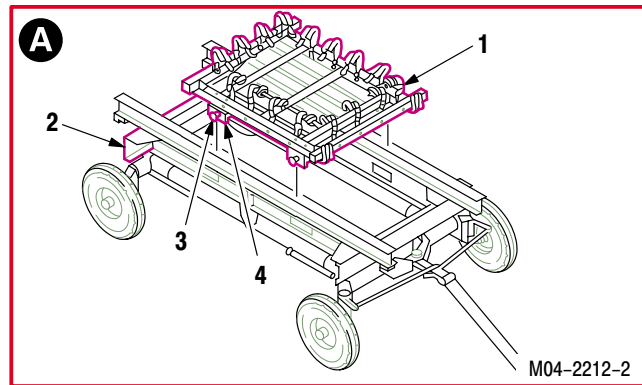
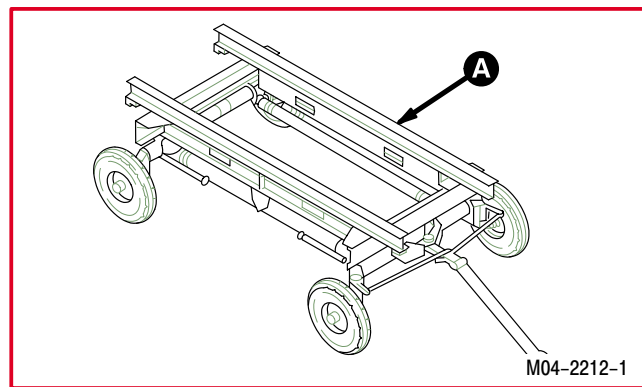
1.120.3. Installation

a. **Install container transport adapter (1) on hoist trailer (2).**

(1) Loosen four clamp knobs (3) until roller adapters (4) are completely open.

(2) Position adapter (1) on trailer (2) so roller adapters (4) ride on load rail (5).

(3) Tighten four knobs (3) to lock roller adapters (4) on rail (5).



END OF TASK



---

## 1.121. CONTAINER TRANSPORT ADAPTER REMOVAL

---

### 1.121.1. Description

This task covers: Removal.

---

### 1.121.2. Initial Setup

#### Tools:

Aircraft mechanic's tool kit (item 376, App H)

#### Personnel Required:

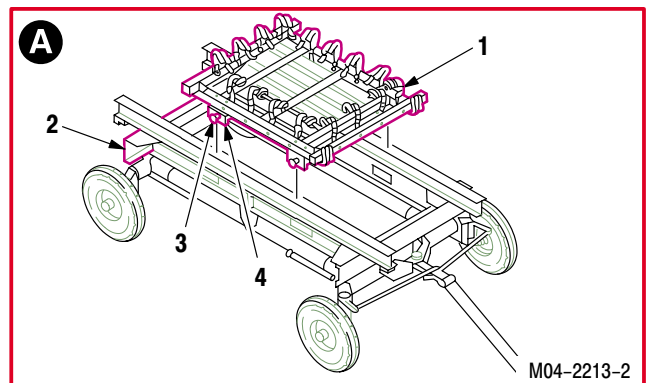
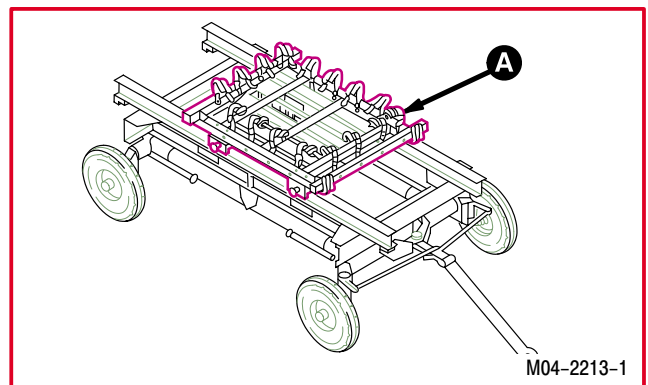
67R      Attack Helicopter Repairer  
Three persons to assist

---

### 1.121.3. Removal

a. **Remove container transport adapter (1) from hoist trailer (2).**

- (1) Loosen four clamp knobs (3) until roller adapters (4) are unlocked.
- (2) Lift container transport adapter (1) from trailer (2). Use hoist.



END OF TASK

**1.122. COMPONENT FIXTURE ADAPTER INSTALLATION**

1.122.1. Description

This task covers: Installation.

1.122.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
 Rail type trailer (item 396, App H)

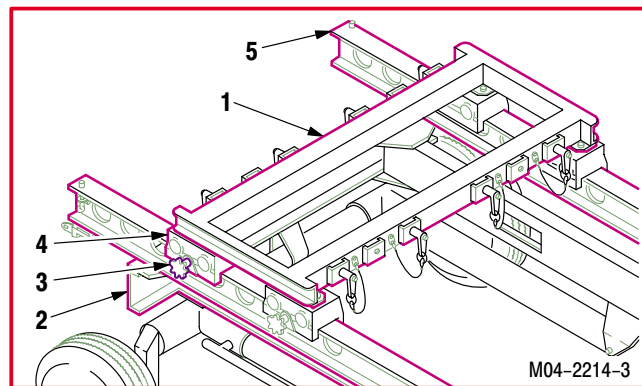
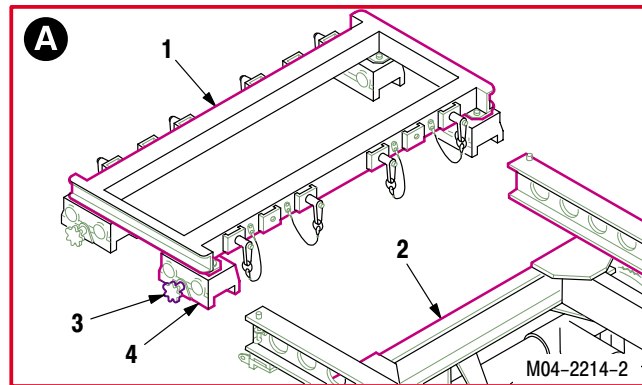
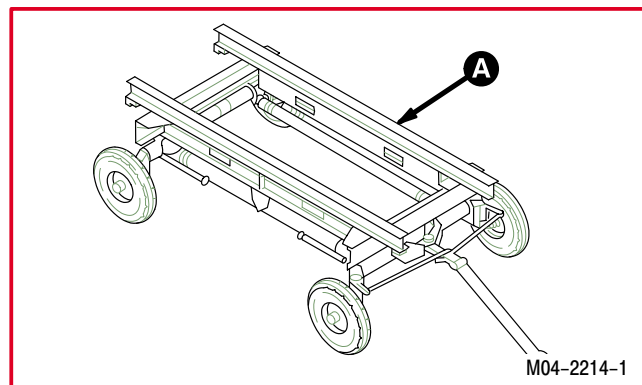
**Personnel Required:**

67R Attack Helicopter Repairer  
 One person to assist

1.122.3. Installation

a. **Install component fixture adapter (1) on hoist trailer (2).**

- (1) Loosen four clamp knobs (3) until roller adapters (4) are completely open.
- (2) Position component adapter (1) on trailer (2) so roller adapters (4) ride on load rails (5).
- (3) Tighten four clamp knobs (3) to lock roller adapters (4) on load rails (5).



END OF TASK

---

## 1.123. COMPONENT FIXTURE ADAPTER REMOVAL

---

### 1.123.1. Description

This task covers: Removal.

---

### 1.123.2. Initial Setup

#### Tools:

Aircraft mechanic's tool kit (item 376, App H)

#### Personnel Required:

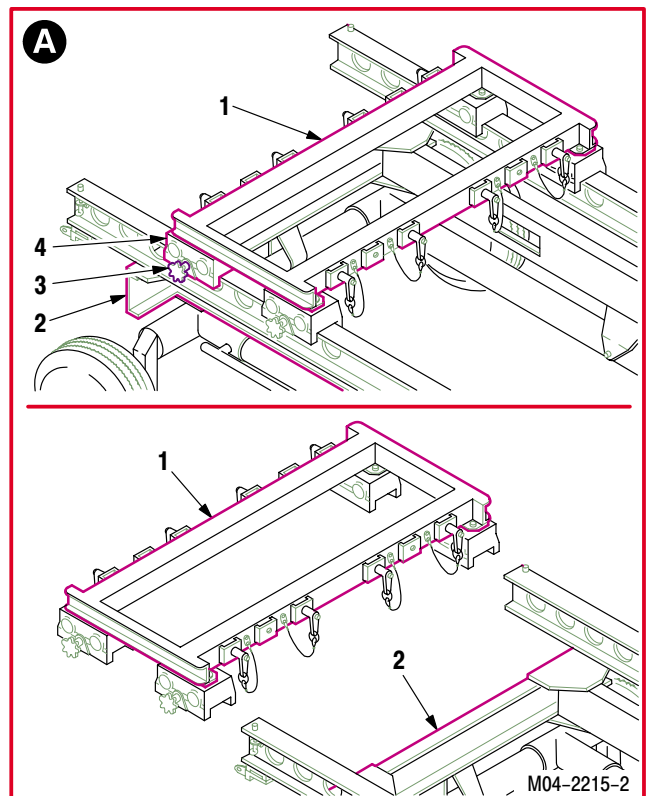
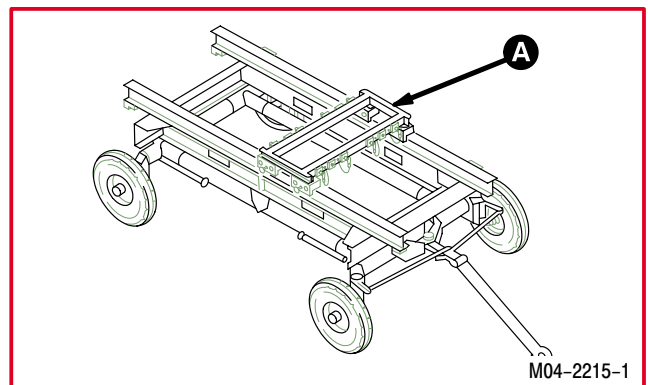
67R     Attack Helicopter Repairer  
 One person to assist

---

### 1.123.3. Removal

#### a. Remove component fixture adapter (1) from hoist trailer (2).

- (1) Loosen four clamp knobs (3) until roller adapters (4) are unlocked.
- (2) Remove component adapter (1) from trailer (2).



END OF TASK

---

**1.124. ENVIRONMENTAL CONTROL UNIT AND NOSE GEARBOX FIXTURE INSTALLATION**

---

1.124.1. Description

This task covers: Installation.

---

1.124.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
Rail type trailer (item 396, App H)

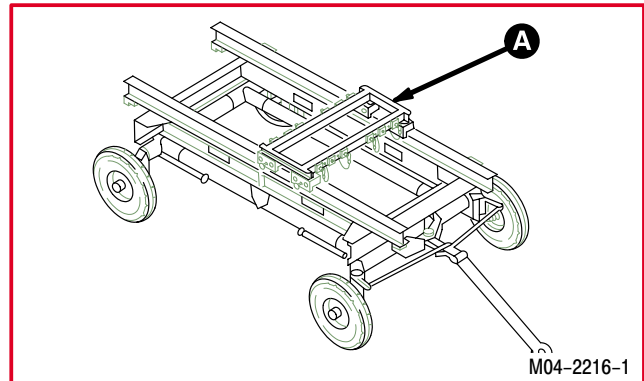
**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.122	Component fixture adapter installed

**Personnel Required:**

67R     Attack Helicopter Repairer  
          One person to assist

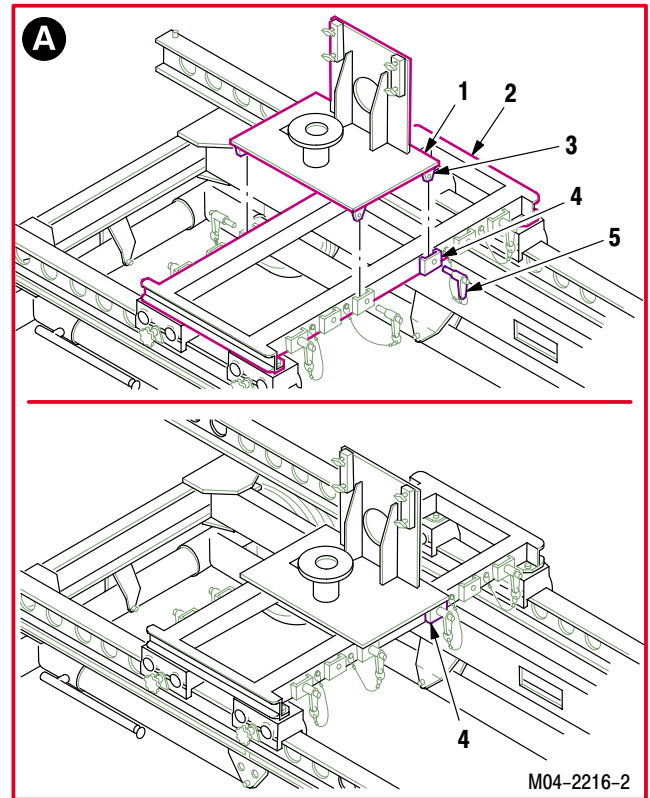
---



GO TO NEXT PAGE

**1.124. ENVIRONMENTAL CONTROL UNIT AND NOSE GEARBOX FIXTURE INSTALLATION – continued**1.124.3. Installation**a. Install environmental control unit and nose gearbox fixture (1) on component fixture adapter (2).**

- (1) Place fixture (1) on component adapter (2).
- (2) Aline four lugs (3) with four brackets (4).
- (3) Insert four lugs (3) into four brackets (4).
- (4) Install four quick-release pins (5) through four brackets (4) and lugs (3).



END OF TASK

---

**1.125. ENVIRONMENTAL CONTROL UNIT AND NOSE GEARBOX FIXTURE  
REMOVAL**

---

1.125.1. Description

This task covers: Removal.

---

1.125.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)

**Personnel Required:**

67R      Attack Helicopter Repairer  
One person to assist

---

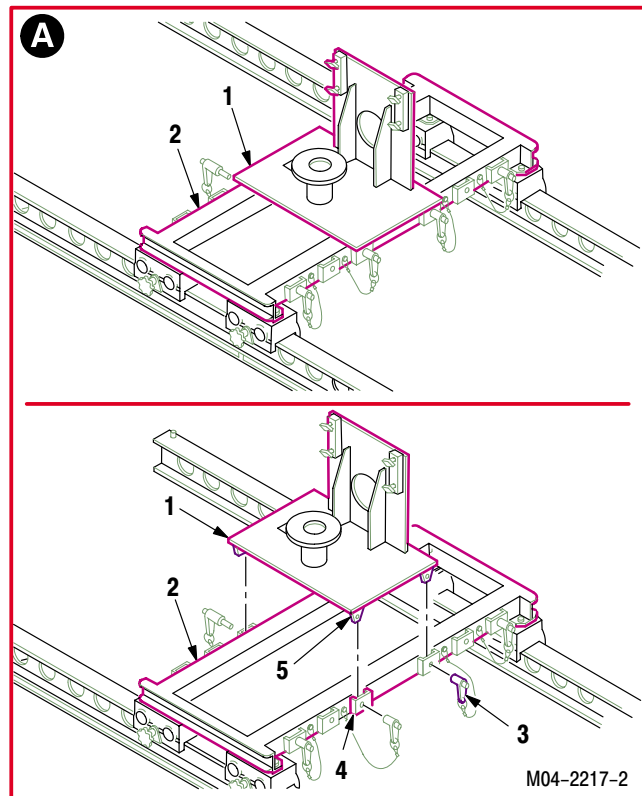
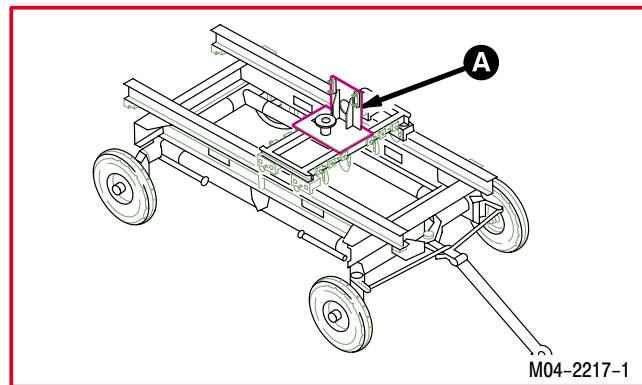
1.125.3. Removal

a. **Remove environmental control unit and nose gearbox fixture (1) from component fixture adapter (2).**

(1) Remove four quick-release pins (3) from four brackets (4) and lugs (5).

(2) Lift fixture (1) from component adapter (2).

b. **Remove component fixture adapter (para 1.123).**



END OF TASK

---

## 1.126. INTERMEDIATE GEARBOX FIXTURE ADAPTER AND TAIL ROTOR GEARBOX FIXTURE INSTALLATION

---

### 1.126.1. Description

This task covers: Installation.

---

### 1.126.2. Initial Setup

#### Tools:

Aircraft mechanic's tool kit (item 376, App H)  
 Rail type trailer (item 396, App H)

#### Equipment Conditions:

Ref	Condition
1.122	Component fixture adapter installed

#### Personnel Required:

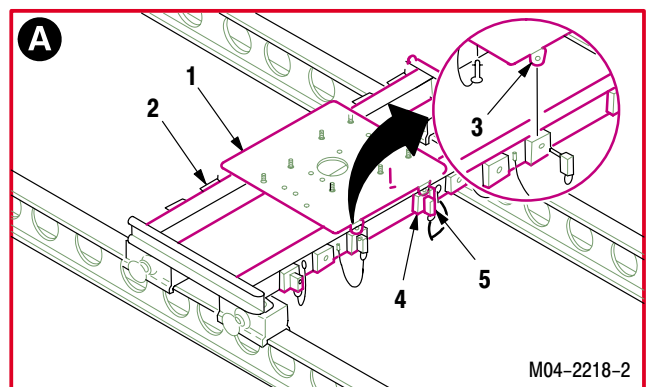
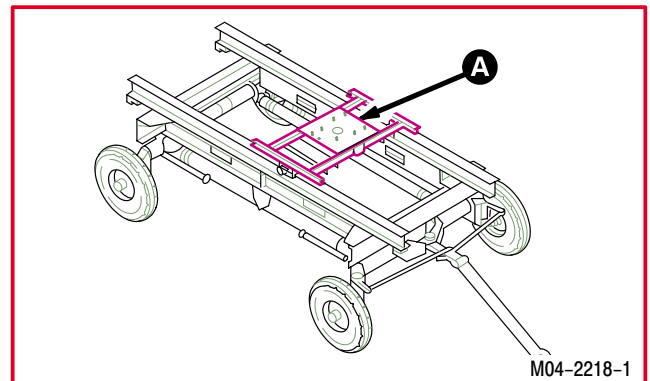
67R     Attack Helicopter Repairer  
           One person to assist

---

### 1.126.3. Installation

#### a. Install fixture (1) on component fixture adapter (2).

- (1) Place fixture (1) on component adapter (2).
- (2) Aline four lugs (3) with four brackets (4).
- (3) Insert four lugs (3) into four brackets (4).
- (4) Insert four quick-release pins (5) through brackets (4) and lugs (3).



GO TO NEXT PAGE

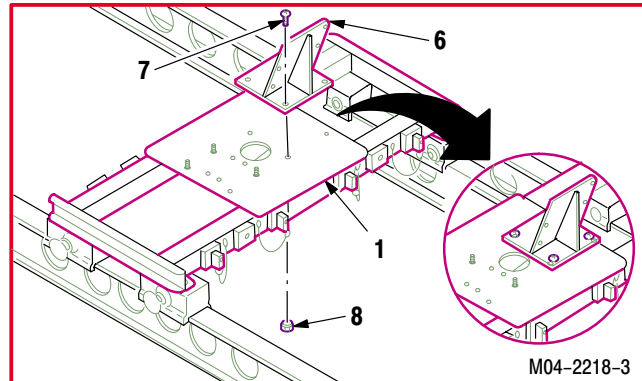
---

**1.126. INTERMEDIATE GEARBOX FIXTURE ADAPTER AND TAIL ROTOR GEARBOX FIXTURE  
INSTALLATION – continued**

---

**b. Install intermediate gearbox fixture adapter (6) on fixture (1).**

- (1) Aline mounting holes on adapter (6) with mounting holes on fixture (1).
- (2) Install four screws (7) through mounting holes.
- (3) Hold four screws (7).
- (4) Install four nuts (8).



END OF TASK



---

## 1.127. INTERMEDIATE GEARBOX FIXTURE ADAPTER AND TAIL ROTOR GEARBOX FIXTURE REMOVAL

---

### 1.127.1. Description

This task covers: Removal.

---

### 1.127.2. Initial Setup

#### Tools:

Aircraft mechanic's tool kit (item 376, App H)

#### Personnel Required:

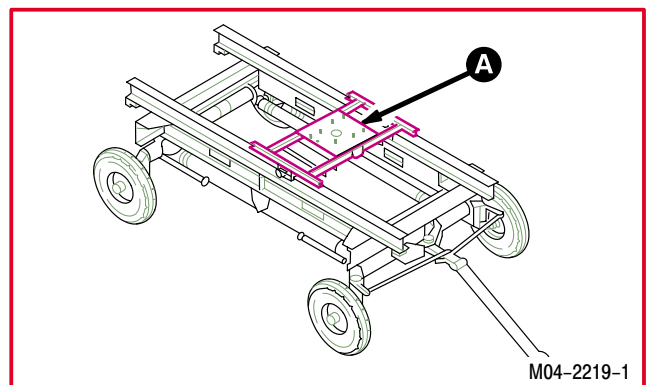
67R     Attack Helicopter Repairer  
One person to assist

---

### 1.127.3. Removal

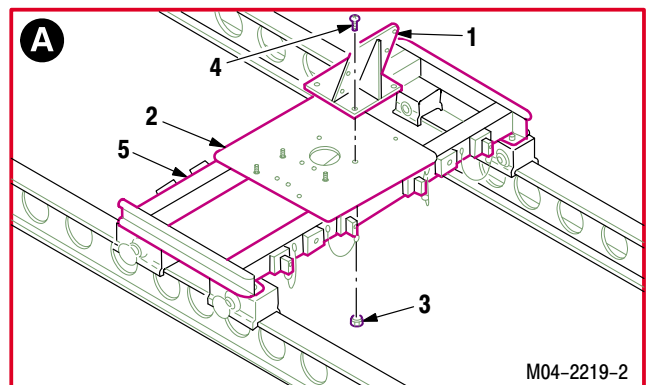
#### a. Remove intermediate gearbox fixture adapter (1) from fixture (2).

- (1) Remove four nuts (3) and screws (4).
- (2) Remove adapter (1) from fixture (2).

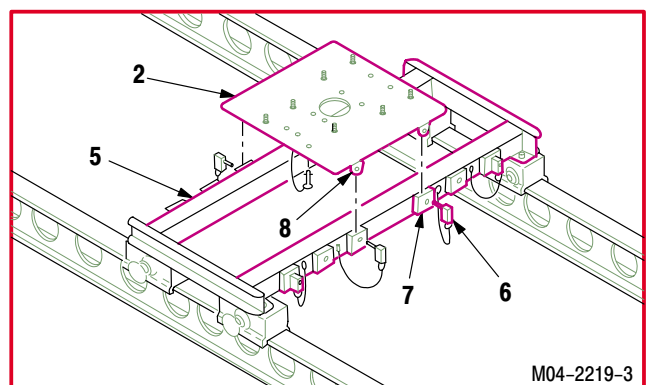


#### b. Remove fixture (2) from component fixture adapter (5).

- (1) Remove four quick release pins (6) from four brackets (7) and lugs (8).
- (2) Lift fixture (2) from component adapter (5).



#### c. Remove component fixture adapter (para 1.123).



END OF TASK

---

## 1.128. MAIN ROTOR GEARSHAFT FIXTURE INSTALLATION

---

### 1.128.1. Description

This task covers: Installation.

---

### 1.128.2. Initial Setup

#### **Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
Rail type trailer (item 396, App H)

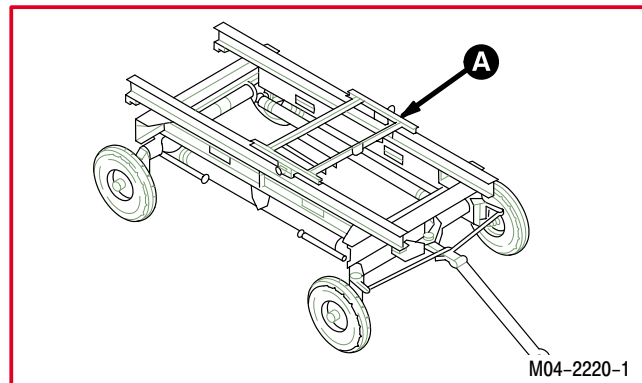
#### **Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.122	Component fixture adapter installed

#### **Personnel Required:**

67R     Attack Helicopter Repairer  
          One person to assist

---



GO TO NEXT PAGE

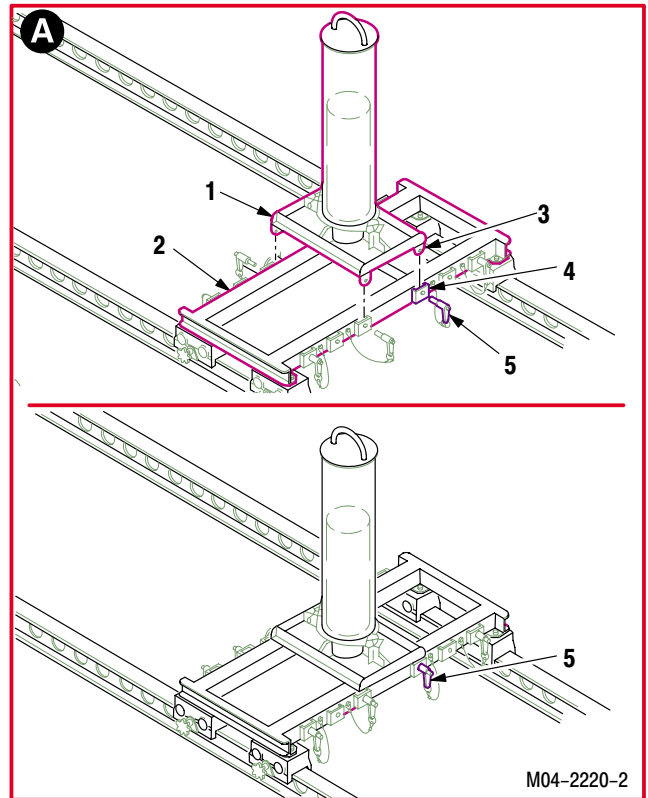
---

**1.128. MAIN ROTOR GEARSHAFT FIXTURE INSTALLATION – continued**

---

**1.128.3. Installation****a. Install main rotor gearshaft fixture (1) on component fixture adapter (2).**

- (1) Place fixture (1) on component adapter (2).
- (2) Aline four lugs (3) with four brackets (4).
- (3) Insert four lugs (3) into four brackets (4).
- (4) Install four quick-release pins (5) through four brackets (4) and lugs (3).



END OF TASK

**1.129. MAIN ROTOR GEARSHAFT FIXTURE REMOVAL**

1.129.1. Description

This task covers: Removal.

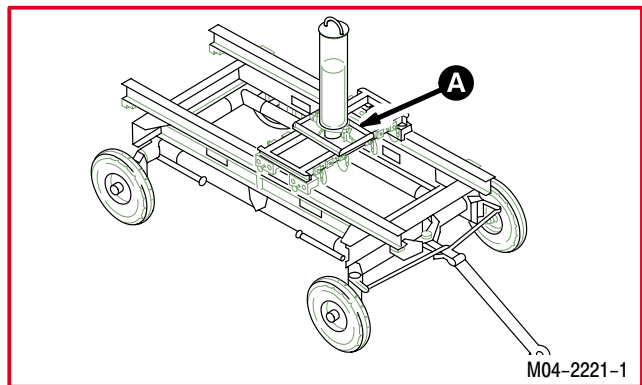
1.129.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)

**Personnel Required:**

67R     Attack Helicopter Repairer  
 One person to assist

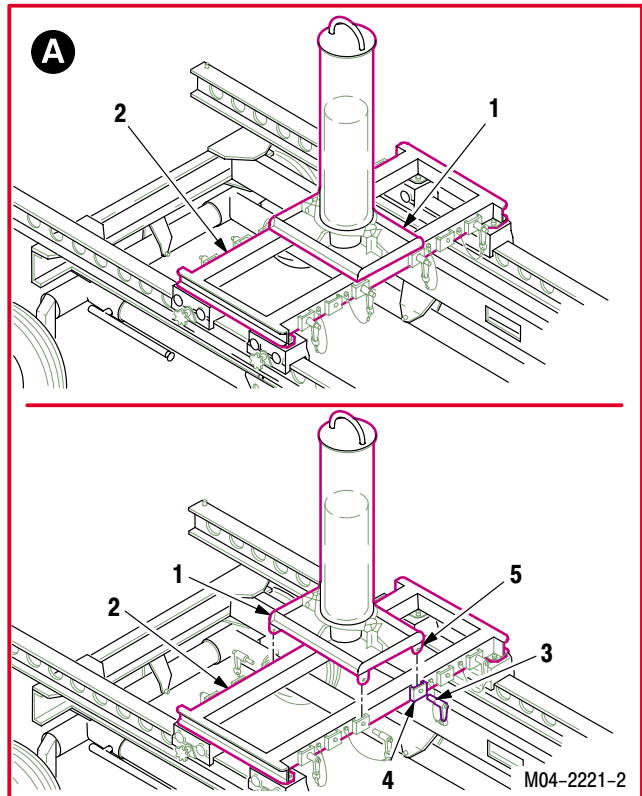


1.129.3. Removal

a. **Remove main rotor gearshaft fixture (1) from component fixture adapter (2).**

- (1) Remove four quick-release pins (3) from four brackets (4) and lugs (5).
- (2) Lift gearshaft fixture (1) from component adapter (2).

b. **Remove component fixture adapter (2)** (para 1.123).



END OF TASK

## 1.130. ENGINE BUILDUP ADAPTER INSTALLATION

### 1.130.1. Description

This task covers: Installation.

### 1.130.2. Initial Setup

#### Tools:

Aircraft maintenance tool kit (item 371, App H)  
Rail type trailer (item 396, App H)

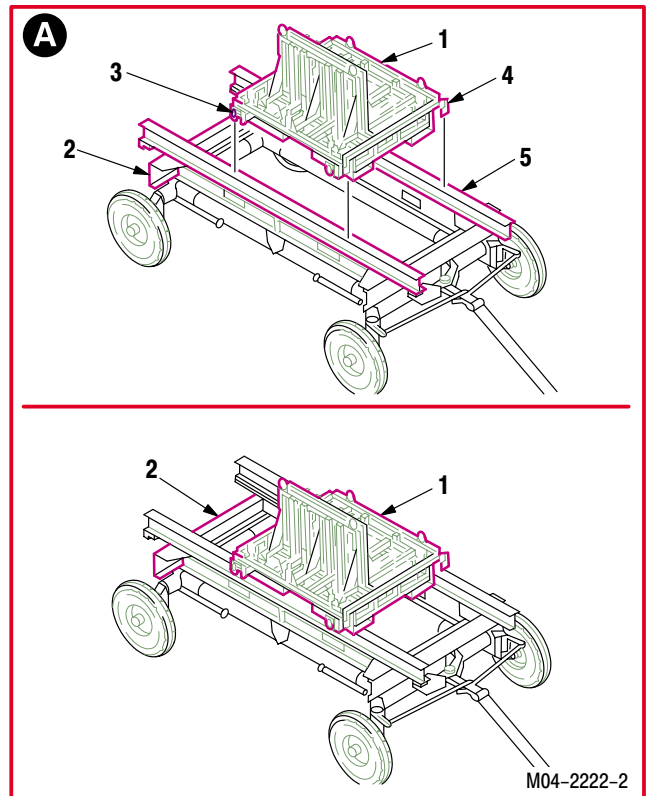
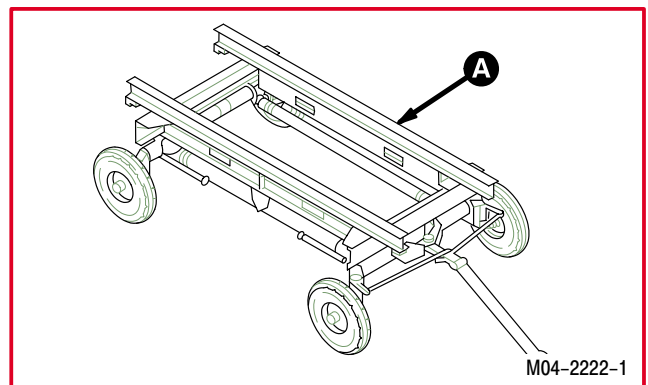
#### Personnel Required:

67R Attack Helicopter Repairer  
Three persons to assist

### 1.130.3. Installation

#### a. Install engine buildup adapter (1) on maintenance trailer (2).

- (1) Loosen four clamp knobs (3) until four clamp adapters (4) are open.
- (2) Position adapter (1) above trailer (2).
- (3) Lower adapter (1) until clamp adapters (4) seat on load rails (5). Use hoist.
- (4) Tighten four knobs (3) to lock four clamp adapters (4) on load rails (5).



END OF TASK

---

## 1.131. ENGINE BUILDUP ADAPTER REMOVAL

---

### 1.131.1. Description

This task covers: Removal.

---

### 1.131.2. Initial Setup

#### Tools:

Aircraft maintenance tool kit (item 371, App H)

#### Personnel Required:

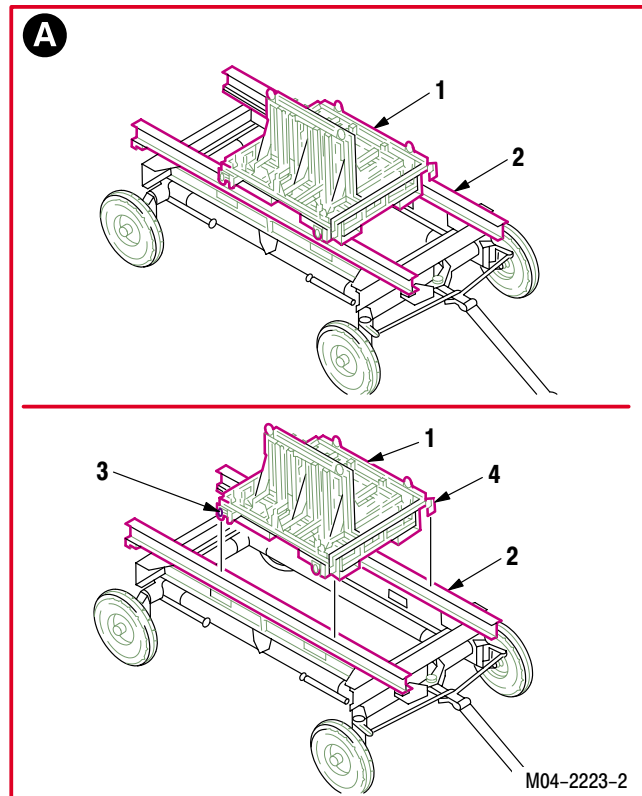
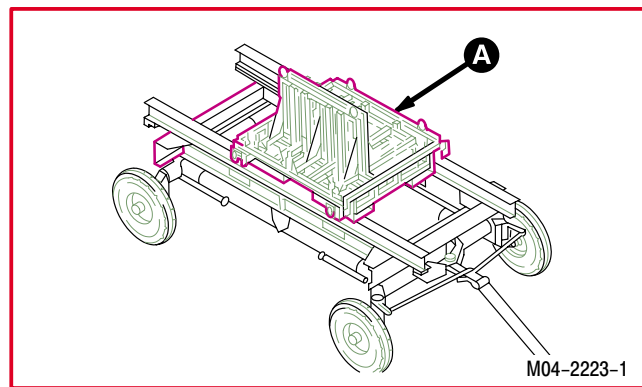
67R      Attack Helicopter Repairer  
Three persons to assist

---

### 1.131.3. Removal

a. **Remove engine buildup adapter (1) from maintenance trailer (2).**

- (1) Loosen four clamp knobs (3) until four clamp adapters (4) open.
- (2) Lift adapter (1) clear of trailer (2). Use hoist.



END OF TASK

---

**1.132. SQUAT SWITCH FIXTURE INSTALLATION/REMOVAL**

---

**1.132.1. Description**

This task covers: Installation. Removal.

---

**1.132.2. Initial Setup****Tools:**

Aircraft maintenance tool kit (item 373, App H)  
Squat switch fixture (Figure D-446, App D)

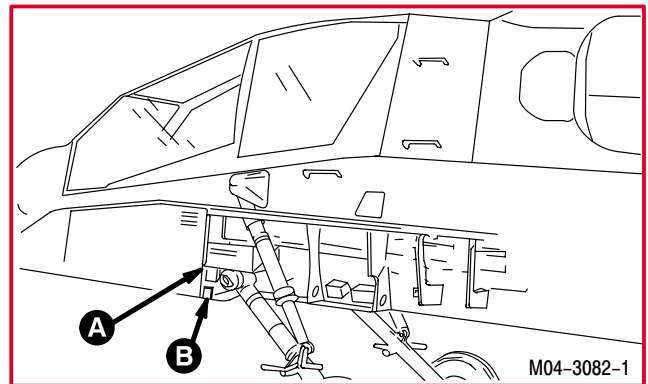
**Personnel Required:**

68X Armament/Electrical System Repairer

---

**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
2.2	Fairing L140 opened



GO TO NEXT PAGE

---

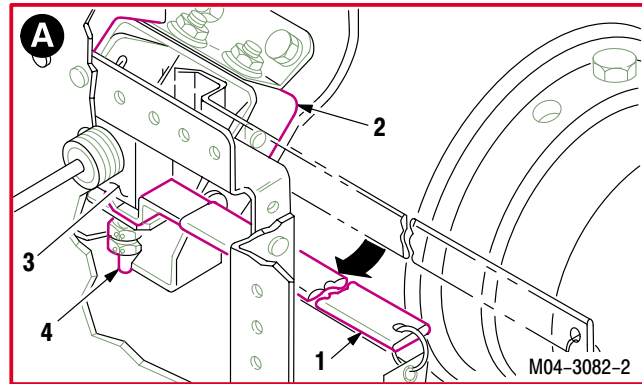
**1.132. SQUAT SWITCH FIXTURE INSTALLATION/REMOVAL – continued**

---

1.132.3. Installation

- a. **Position bent end of fixture (1) inside of target bracket (2) just aft of squat switch (3) (Figure D-446, App D).**

(1) Carefully slide fixture (1) between squat switch (3) and target (4).

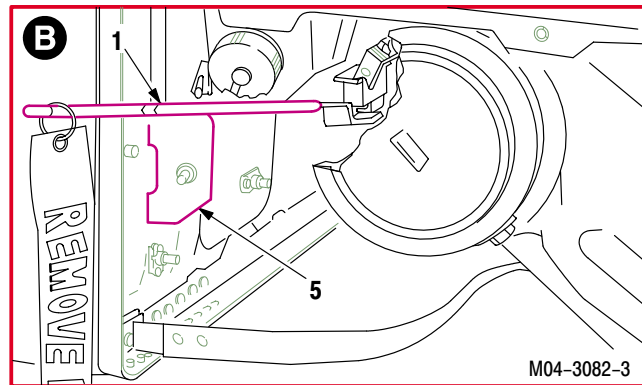


(2) Rest handle of fixture (1) on pylon actuating switch bracket (5).

1.132.4. Removal

- a. **Carefully slide fixture (1) aft from between squat switch (3) and target (4).**

- b. **Secure fairing L140 (para 2.2).**



END OF TASK



**1.133. POSITIONING HELICOPTER FOR DESIRED DECK ANGLE**

1.133.1. Description

This task covers: Deck Angle Positioning.

1.133.2. Initial Setup

**Tools:**

Aircraft mechanic's tool kit (item 376, App H)  
 Protractor assembly (item 238, App H)

**Personnel Required:**

67R Attack Helicopter Repairer  
 One person to assist  
 67R3F Attack Helicopter Repairer/Technical  
 Inspector

**References:**

TM 1-1500-204-23

**Equipment Conditions:**

<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
2.2	Access panel L200 removed
1.66	Helicopter jacking (tripod jacks at three points) or
1.67	Main landing gear jacking (axle jack at one point) or
1.68	Tail landing gear jacking (axle jack) or
1.69	Tail landing gear jacking (tripod jack)

**WARNING**

To prevent death or injury to personnel, jack helicopter evenly on a firm, flat surface so that it stays level at all times. Helicopter is unstable on jacks. Do not jack helicopter if wind exceeds 15 mph. If injury occurs, seek medical aid.

**CAUTION**

- Area shall be roped off and warning signs “HELICOPTER ON JACKS” shall be displayed.
- Unauthorized personnel shall not be in or around helicopter while it is on jacks.

GO TO NEXT PAGE

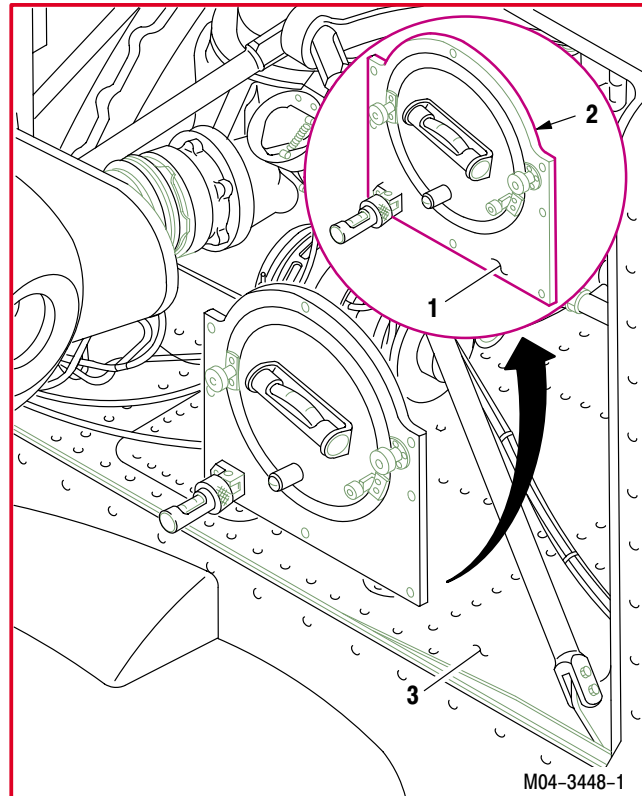
---

**1.133. POSITIONING HELICOPTER FOR DESIRED DECK ANGLE – continued**

---

1.133.3. Deck Angle Positioning

- a. **Jack helicopter to obtain correct deck angle**  
(para 1.66 thru para 1.69).
  - (1) Position indicating surface (1) of protractor assembly (2) on deck (3) (TM 1-1500-204-23).
  - (2) Raise or lower jack slowly until desired deck angle is achieved.
- b. **Inspect (QA).**
- c. **Perform maintenance task.**
- d. **Perform appropriate jacking procedure to remove jacks from helicopter** (para 1.66 thru para 1.72).
- e. **Install access panel L200** (para 2.2).



END OF TASK

**1.134. MAINTENANCE HEADSET CONNECT/DISCONNECT**

1.134.1. Description

This task covers: Connecting/Disconnecting at Ground Service Panel. Connecting/Disconnecting in Pilot/CPG Station

1.134.2. Initial Setup

**Tools:**

- Electrical cord assembly (item 68, App H)
- Microphone headset (item 174, App H)
- Intercommunication system adapter harness (figure D-463, App D)

**Equipment Conditions:**

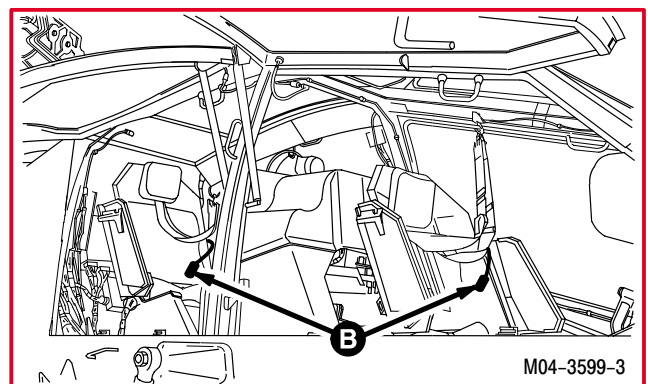
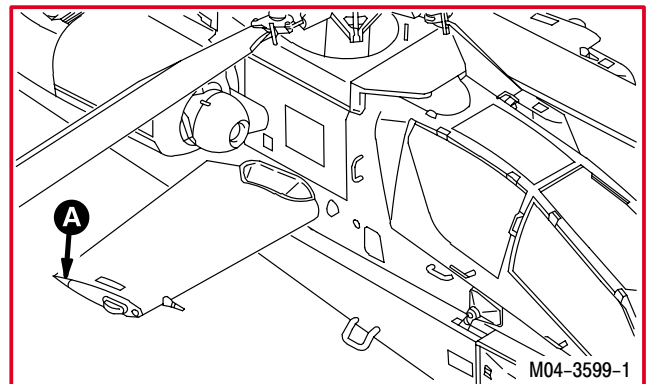
<u>Ref</u>	<u>Condition</u>
1.57	Helicopter safed
2.2	Access door LW12 or RW12 opened

**Personnel Required:**

67R     Attack Helicopter Repairer

**NOTE**

This task is typical for right and left wings or pilot and CPG cockpits.



GO TO NEXT PAGE

**1.134. MAINTENANCE HEADSET CONNECT/DISCONNECT – continued**

**1.134.3. Connecting/Disconnecting at Ground Service Panel**

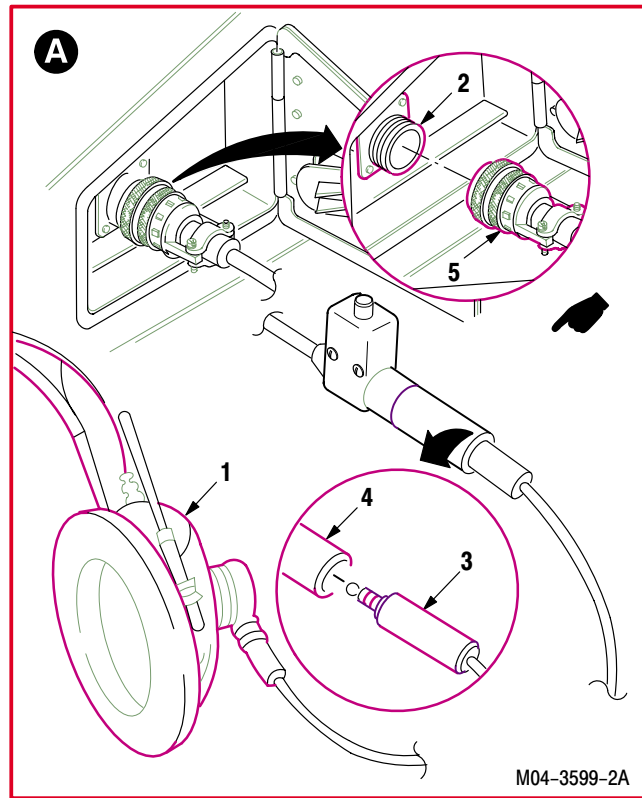
**a. Connect headset (1) to ground service receptacle (2).**

- (1) Connect headset connector (3) to cord assembly connector (4). Use cord assembly.
- (2) Connect cord assembly connector P1 (5) to ground service receptacle (2).

**b. Disconnect headset connector (1) from ground service receptacle (2).**

- (1) Disconnect headset connector (3) from cord assembly connector (4).
- (2) Disconnect P1 (5) from ground service receptacle (2).

**c. Close access door LW12 or RW12 (para 2.2).**



**1.134.4. Connecting/Disconnecting in Pilot/CPG Station**

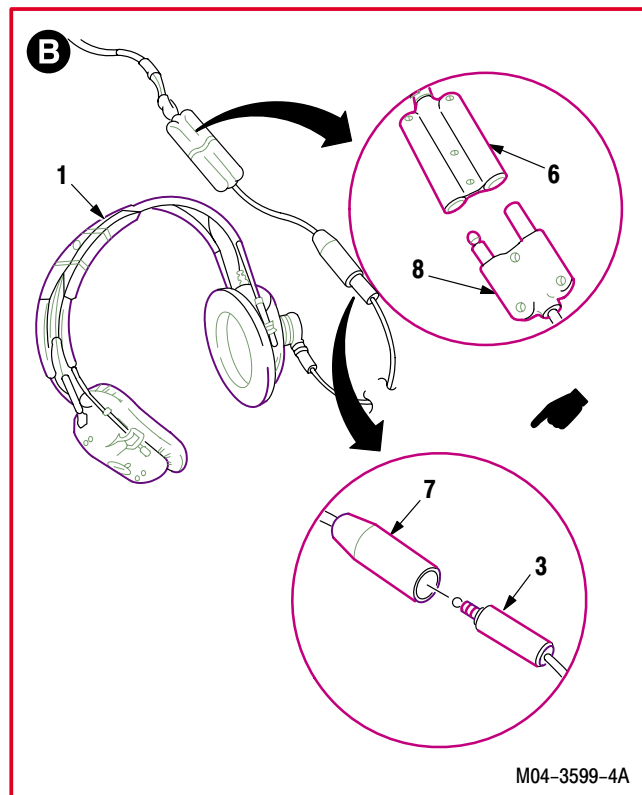
**a. Enter crew station (para 1.56). Observe all safety precautions.**

**b. Connect headset (1) to in-station receptacle (6).**

- (1) Connect headset connector (3) to adapter harness connector (7). Use adapter harness.
- (2) Connect adapter harness connector (8) to in-station receptacle (6).

**c. Disconnect headset (1) from in-station receptacle (6).**

- (1) Disconnect headset connector (3) from adapter harness connector (7).
- (2) Disconnect adapter harness connector (8) from in-station receptacle (6).



END OF TASK

## SECTION VI. PREVENTIVE MAINTENANCE INSPECTIONS

### 1.135. INSPECTION REQUIREMENTS

- a. Check helicopter at specific intervals.
- b. Check helicopter parts and surrounding area every time you work on the part.
- c. Checks are performed by aviation unit maintenance (AVUM) personnel. Aviation intermediate maintenance (AVIM) personnel are called in if needed.
- d. There are three types of inspections:

<u>Inspection</u>	<u>Publication</u>	<u>Interval</u>
PHASED MAINTENANCE SERVICES	TM 1-1520-238-PMS	10 HOUR/14 DAY
PHASED MAINTENANCE	TM 1-1520-238-PM	After helicopter operated a specific number of hours.
SPECIAL	TM 1-1520-238-23 (Go to para 1.136)	After beyond-normal conditions (such as hard landings, overspeeds) and for safety equipment.  After something unusual happens or by calendar time.

- e. Inspections apply to all helicopters maintained with this manual. Equipment to be inspected may not be installed on your helicopter. If this is so, you do not have to do this inspection.
- f. Your helicopter may go to another organization. Standards of serviceability for transfer of aircraft are in TM 1-1500-328-23.

END OF TASK

---

**1.136. SPECIAL INSPECTIONS**

---

- a. Special inspections are extra inspections not described elsewhere in this manual or other manuals.
- b. Special inspections do not follow helicopter regular inspection periods. Typical types of special inspections are:
  - SAFETY OF FLIGHT – Inspections to check for damage after hard landings, rotor stoppage, overspeed, etc.
  - CALENDAR – Inspections to be made after a number of days on items such as first aid kits, fire extinguishers, etc.
  - ENGINE – Engine inspections to be made on engines that are special or inspections based only on engine operating time.
- c. Refer to DA PAM 738-751 for applicable forms, records, and worksheets.
- d. Refer to paragraph 1.137 for the special inspection checksheet.

END OF TASK

---

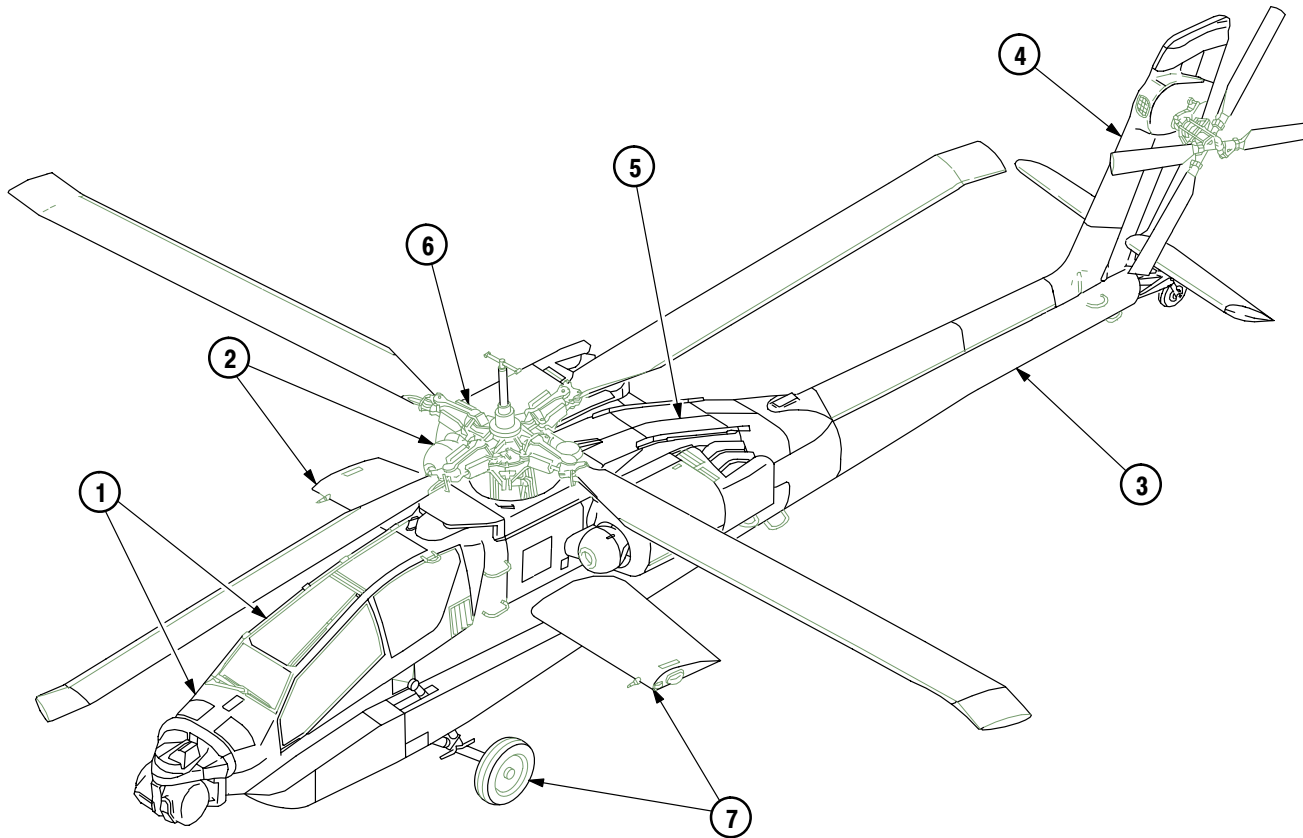
**1.137. SPECIAL INSPECTION CHECKLIST**

---

- a. The checksheets on the next pages can be copied and used for special inspections.
- b. Complete all the information at the top of each page.
- c. The area diagram will help you find the parts to be inspected. EXAMPLE: The inspection is in the tail area if there is 4 in the AREA No. column.
- d. The SPECIAL INSPECTION No. column lists all inspections in numerical order.
- e. The REQUIREMENT EVERY column tells when the inspection is needed.
- f. The ITEM column tells you what to do. It also tells where to go for additional information.
- g. The STATUS column is used for helicopter records.

GO TO NEXT PAGE

1.137. SPECIAL INSPECTION CHECKLIST – continued



- |            |  |
|------------|--|
| AREA NO. 1 | CANOPY, CREW STATION, AVIONICS COMPARTMENTS, FORWARD FUSELAGE  |
| AREA NO. 2 | RIGHT FUSELAGE, WING, PYLONS, RIGHT MAIN LANDING GEAR, NO. 2 ENGINE AND NACELLE, BATTERY COMPARTMENT |
| AREA NO. 3 | AFT FUSELAGE, TAIL ROTOR DRIVES AND CONTROLS   |
| AREA NO. 4 | STABILIZER, STABILATOR, TAIL WHEEL, TAIL ROTOR DRIVES AND CONTROLS                                   |
| AREA NO. 5 | AFT EQUIPMENT BAY (ALL EQUIPMENT)  |
| AREA NO. 6 | MAIN ROTOR AND CONTROLS  |
| AREA NO. 7 | LEFT FUSELAGE, WING, PYLONS, LEFT MAIN LANDING GEAR, NO. 1 ENGINE AND NACELLE, AMMO COMPARTMENT      |

M04-1918

GO TO NEXT PAGE



**1.137. SPECIAL INSPECTION CHECKLIST – continued**

Helicopter Serial No.: \_\_\_\_\_ Date: \_\_\_\_\_

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
2	1	6 MONTHS	Weight check portable fire extinguisher (TM 1-1500-204-23).	
1	2	12 MONTHS	Check magnetic compasses for liquid discoloration and proper calibration (TM 1-1500-204-23).	
ALL	3	12 MONTHS	Inventory helicopter (DA PAM 738-751).	
ALL	4	24 MONTHS	Weigh helicopter (AR 95-1).	
2	5	100 HOURS/120 DAYS (WHICHEVER COMES FIRST)	Remove and send aircraft batteries BB-564 and BB-664 to battery shop (AVIM) for servicing (TM 11-6140-203-23).	
2,4,5,6,7	6	25 HOURS (Aircraft Operating Time)	Obtain oil samples (TB 43-0106) from: a. No. 1 engine nose gearbox b. No. 2 engine nose gearbox c. Main transmission d. Auxiliary Power Unit (APU)	
		50 HOURS (Aircraft Operating Time)	Auxiliary Power Unit (APU).  Inspect duplex vent and forward lip seal for grease. If present, remove grease and clean PTO clutch exterior. Record findings in aircraft log book.	
<b>NOTE</b>				
Grease will usually appear within 15 hours of operation after clutch replacement. If grease is noted after two consecutive inspections following initial finding, remove and replace PTO clutch and initiate category 1 deficiency report.				
		50 HOURS (Aircraft Operating Time)	Auxiliary Power Unit (APU).  Check clutch output housing bolts for proper torque ( <b>50 INCH-POUNDS</b> ). If proper torque does not exist, break existing torque and retorque bolts to <b>50 INCH-POUNDS</b> .	

GO TO NEXT PAGE

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

Helicopter Serial No.: \_\_\_\_\_ Date: \_\_\_\_\_

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
2	7	25 HOURS/30 DAYS (WHICHEVER COMES FIRST)	Perform Preventive Maintenance Checks and Services (AVUM) on aircraft battery BB-564 (TM 11-6140-203-23).	
		50 HOURS/30 DAYS (WHICHEVER COMES FIRST)	Perform Preventive Maintenance Checks and Services (AVUM) on aircraft battery BB-664 (TM 11-6140-203-23).	
ALL	8	<div style="border: 2px solid black; padding: 5px; display: inline-block;"><b>CAUTION</b></div> <p>Use of high pressure wash on any part of this aircraft is prohibited.</p> <p>AIRCRAFT SHALL BE CLEANED/WASHED (PER TABLE I) EVERY 45 DAYS (para 1.53).</p> <p>AIRCRAFT ENGAGED IN EXTENDED EXPOSURE OR LOW LEVEL OPERATIONS OVER BRACKISH OR SALT WATER SHALL REQUIRE A FRESH WATER RINSE (PER TABLE I) AT CONCLUSION OF EACH DAY'S OPERATION (para 1.53).</p> <p>AIRCRAFT STATIONED WITHIN TWO MILES OF BRACKISH OR SALT WATER SHALL REQUIRE A FRESH WATER RINSE EVERY 14 DAYS (para 1.53).</p> <p style="text-align: center;"><b>NOTE</b></p> <p>A fresh water rinse is not to be considered as a substitute for the 45 day cleaning/washing requirement.</p>		
ALL	9	IF AIRCRAFT HAS BEEN OPERATED WITHIN 200 MILES OF VOLCANIC ACTIVITY	Water wash engine internally (TM 55-2840-248-23).	
ALL	10	Deleted		

GO TO NEXT PAGE

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

Helicopter Serial No.:

Date:

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
2,3,4,7	11	HARD LANDING	<p>If cracks are suspected, perform nondestructive inspection (TM 1-1520-264-23).</p> <p>a. Main and tail landing gear wheels and tires:</p> <ul style="list-style-type: none"> <li>(1) Check wheels for cracks or distortion. Use 10-power magnifier for crack check.</li> <li>(2) Check tires for leakage, tears, and other damage.</li> <li>(3) Check tire pressures.</li> </ul> <p>b. Main and tail landing gear shock struts:</p> <ul style="list-style-type: none"> <li>(1) Check for cracks or distortion. Use 10-power magnifier for crack check.</li> <li>(2) Check for improper extension and seal damage (para 3.28). Raise landing gear clear of ground.</li> <li>(3) Check fluid levels.</li> <li>(4) Check strut charge pressures.</li> <li>(5) Check strut hardware for torque stripe movement (if applied), cracks, distortion, or other stress damage.</li> </ul> <p>c. Tail landing gear shock strut:</p> <ul style="list-style-type: none"> <li>(1) Check for obviously collapsed condition or hydraulic fluid leakage.</li> <li>(2) Check for expelled silicon rubber material around orifice at lower end of strut if strut appears normal.</li> <li>(3) Replace tail landing gear shock strut (para 3.38) if strut is collapsed, leaking hydraulic fluid, or has silicon expelled around orifice.</li> <li>(4) Jack tail boom (para 1.69) if no material is visible around orifice.</li> <li>(5) Service upper piston if required (para 1.42).</li> </ul>	

GO TO NEXT PAGE

---

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

---

Helicopter Serial No.:

Date:

---

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status	
2,3,4,7	11 (cont)	<b>NOTE</b>			
		Tail boom must remain on jack while performing step (6).			
		(6) Measure overall length of strut from rod end to rod end after upper piston is properly serviced. Strut must measure <b>30.73 to 30.97 INCHES</b> with strut fully extended and properly pressurized.			
		(7) Replace tail landing gear shock strut if measurement taken is not satisfactory.			
		(8) Lower tail boom (para 1.68) if measurement taken is satisfactory.			
		d. Tail landing gear fork and main and tail landing gear trailing arms:			
		(1) Check for cracks, distortion, and loose mounting. Use 10-power magnifier for crack check.			
		(2) Check fork and arm hardware for torque stripe movement, cracks, distortion, and other stress damage.			
		e. Replace defective components if cracked, distorted, and other damage is evident at any point on wheels, landing gear struts, trailing arms, or tail fork.			
		f. Airframe in main landing gear area:			
		(1) Perform magnetic particle inspection (para 2.76).			
		(2) Check shafts and cross tube for cracks, distortion, and loose mounting.			
		(3) Check fuselage frame at FS 91.7, FS 105, FS 115, FS 125, FS 136, FS 144, and FS 154.3 for distortion and buckling.			
		(4) Check outer skins and pilot floor from FS 91.7 to FS 154.3 for buckling and sheared rivets.			
		g. Airframe in tail landing gear area:			
		(1) Check frame end bulkhead for distortion and buckling.			
		(2) Check bulkhead strut attach and trailing arm pivot lugs for cracks and distortion.			
		h. Tailboom:			

---

GO TO NEXT PAGE

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

Helicopter Serial No.:

Date:

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
2,3,4,7	11 (cont)	<p>(1) Check outer skins from FS 370 to FS 547 for buckling and sheared rivets.</p> <p>(2) Check stringers from FS 370 to FS 547 for cracks and buckling.</p> <p>(3) Check fuselage frame from FS 370 to FS 531 for buckling.</p> <p>i. Wing mounts:</p> <p>(1) Remove ammunition flat pack.</p> <p>(2) Check interior wing mount castings for cracks. Use 10-power magnifier and flashlight.</p> <p>(3) Check exterior wing root areas for cracks and distortion.</p> <p>j. Check pylon wing mounts in case of stores or pylon ground strike:</p> <p>(1) Remove stores and pylons.</p> <p>(2) Check pylon mounting areas under wings for cracks and distortion.</p> <p>k. Engine mounts:</p> <p>(1) Open access doors LN1, RN1, LN3, RN3, LN4, RN4, T250L, T250R, T290L, T290R, and L325.</p> <p>(2) Check inboard engine mount support brackets for cracks or distortion.</p> <p>(3) Check nacelle engine mounts for cracks or distortion.</p> <p>(4) Secure access doors LN1, RN1, LN3, RN3, LN4, RN4, T250L, T250R, T290L, T290R, and L325.</p>		

GO TO NEXT PAGE

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

Helicopter Serial No.: \_\_\_\_\_ Date: \_\_\_\_\_

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
2,3,4,7	11 (cont)	l. Check main rotor droop stops for bending or distortion, especially in roller-to-pitch housing areas.  m. TADS/PNVS mounts: (1) Remove TADS/PNVS turret (TM 1-1270-476-20). (2) Check support fittings for cracks, distortion, corrosion, and dirt. Use 10-power magnifier for crack check. (3) Check seals for deterioration, leakage and improper fit. (4) Check upper (brass) bushings for out-of-round condition or distortion. (5) Reinstall TADS/PNVS turret (TM 1-1270-476-20).  n. Check lower wire strike cutter for bends, cracks, and alinement. Replace cutter if damaged. (para 2.195).		
6	12	MAIN ROTOR BLADE STRIKE	If cracks/delaminations are suspected, perform nondestructive inspection (TM 1-1520-264-23).  a. Check full blade chord for strike damage from impact point to trailing edge. b. Check entire blade trailing edge for buckling. c. Carefully check all blade root end doublers and blade station 82 trailing edge bond joints for delamination. d. Check main rotor head for cracks or other damage, with special attention to: (1) Lead lag links and pitch housing in areas of lead lag link stops. (2) Strap packs: check for leading edge failures and trailing edge buckling. (3) Feathering bearing housings: check for cracked lugs.	

GO TO NEXT PAGE

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

Helicopter Serial No.:

Date:

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
4	13	TAIL ROTOR BLADE STRIKE	<p>If cracks/delaminations are suspected, perform nondestructive inspection (TM 1-1520-264-23).</p> <ul style="list-style-type: none"> <li>a. Check full blade chord for strike damage from impact point to trailing edge.</li> <li>b. Check entire blade trailing edge for buckling.</li> <li>c. Check all root end doublers for delamination.</li> <li>d. Check tail rotor head and fork for cracks and other damage.</li> <li>e. Check tail rotor blade for improper feathering function.</li> </ul>	
4,6	14	ROTOR OVERSPEED	<p>If cracks/delaminations are suspected, perform nondestructive inspection (TM 1-1520-264-23).</p> <p>100% to 110%: No inspection required.</p> <p>111% to 115%:</p> <ul style="list-style-type: none"> <li>a. Check main and tail rotor blades for root area cracks, delamination, and distortion.</li> <li>b. Check main and tail rotor heads for cracks or other damage. Give special attention to:                             <ul style="list-style-type: none"> <li>(1) Straps packs: cracks, buckling, and edge failures.</li> <li>(2) Lead lag link: cracks and distortion.</li> </ul> </li> </ul> <p>116% to 119%:</p> <ul style="list-style-type: none"> <li>a. Remove main rotor blades.</li> <li>b. Remove tail rotor blades.</li> <li>c. Check main rotor blade pins and tail blade bolts for cracks or rotor deformation.</li> <li>d. Check main and tail rotor blades for root area cracks, delamination, and distortion.</li> </ul>	

GO TO NEXT PAGE

---

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

---

Helicopter Serial No.:

Date:

---

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
4,6	14 (cont)	e. Check main and tail rotor heads with special attention to: (1) Strap packs: cracks, buckling, and edge failures. (2) Blade mount areas: cracks and distortion. f. Install tail rotor blades. g. Install main rotor blades. Rotor speed greater than 119%: Replace main rotor and tail rotor heads and blades.		
2	15	AFTER EACH GRAVITY REFUELING OPERATION	PN 7-117420021-3 fuel flapper valve installations: a. Leave filler ports open, after refueling. b. Pull firmly on chain to open flapper valve. c. Check flapper packing for damage and looseness. Use flashlight. d. Replace flapper valve if packing is damaged or dislodged. e. Close filler ports.	
6	16	250-HOUR PHASED INSPECTION	Check ADS resilient mount for tears: a. Determine if damage extends through the mount if tear exists. Use feeler gage. Replace mount if tear extends through mount and 45 degrees around circumference. b. Check resilient mount at 125-hour intervals if tear is less than above limits. c. Continue inspection at 250-hour intervals if no tears exist.	

---

GO TO NEXT PAGE



**1.137. SPECIAL INSPECTION CHECKLIST – continued**

Helicopter Serial No.:

Date:

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
2,4,6,7	17	ENGINE OVERTORQUE OR ROTOR UNDERSPEED.		
		If cracks are suspected, perform nondestructive inspection (TM 1-1520-264-23).		
		125% or below single-engine overtorque with engine failure - No inspection required.		
		125% or below single-engine overtorque without engine failure - No inspection required.		
		126% to 130% single-engine overtorque with engine failure:		
		a. Remove main transmission input drive shaft and couplings on overtorqued side. Check shaft, couplings, and all drive bolt holes for cracks, enlargement, deformation, and other indications of overstress.		
		b. Check overtorqued engine nose gearbox and main transmission for cracks or oil leakage.		
		c. Remove overtorqued engine nose gearbox oil filter and main transmission oil filter. Internally check each filter for metallic particles (chips). If chips are evident, perform the following steps:		
		(1) Take "hot" oil samples from engine nose gearbox and main transmission.		
		(2) Flush engine nose gearbox and main transmission.		
		(3) Flush main transmission (para 1.32).		
		(4) Ground run aircraft for a minimum of 15 minutes.		
		(5) Inspect engine nose gearbox and main transmission filters.		
		(6) If no chips are found, resample after approximately 5 flight hours.		
		126% to 130% single-engine overtorque without engine failure:		
		a. Perform steps a. thru c. listed for 126% to 130% overtorque with engine failure.		
		b. Check tail rotor drive shafts for cracks, deformation, and other indications of overstress.		

GO TO NEXT PAGE

---

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

---

Helicopter Serial No.:

Date:

---

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
----------	------------------------	-------------------	------	--------

2,4,6,7

17  
(cont)

Above 130% single-engine overtorque with engine failure:

**NOTE**

Momentary 130% overtorque indication will normally be considered below 130%; a stabilized 130% overtorque indication will be considered above 130% for purposes of this special inspection.

- a. Replace main transmission input drive shaft and couplings on overtorqued side.
- b. Replace engine nose gearbox on overtorqued side.
- c. Replace main transmission.
- d. Check mounting system of overtorqued engine for loose hardware, brackets, mounts or links, and other indications of overstress.
- e. Check tail rotor drive shafts for cracks, deformation, and other indications of overstress.

Above 130% single-engine overtorque without engine failure:

- a. Perform steps a. thru e. listed for 130% or above overtorque with engine failure.
  - b. Check main rotor drive shaft and drive plate for cracks, distortion, and other indications of overstress.
  - c. Check main rotor strap packs for buckling and other indication of overstress.
  - d. Check main rotor blades for buckling at trailing edges.
  - e. Check main rotor damper attachment holes for looseness (hole enlargement). Replace damper, trunnion, and mounting hardware if hole enlargement is found.
  - f. Check tail rotor for buckling and looseness.
  - g. Replace tail rotor fork.
- 

GO TO NEXT PAGE

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

Helicopter Serial No.:

Date:

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
----------	------------------------	-------------------	------	--------

2,4,6,7

17  
(cont)

Below 115% dual-engine overtorque - No inspection required.  
115% to 130% dual-engine overtorque:

**NOTE**

Refer to special inspection 14 if dual-engine overtorque is accompanied by rotor overspeed.

- a. Remove both main transmission input drive shafts and couplings. Check both shafts, couplings, and all drive bolt holes for cracks, enlargement, deformation, and other indications of overstress.
- b. Check both engine nose gearboxes and main transmission for cracks or oil leakage.
- c. Remove both engine nose gearbox oil filters and main transmission oil filters. Internally check each filter for metallic particles (chips). If chips are evident, perform the following steps:
  - (1) Take hot oil samples from engine nose gearboxes and main transmission.
  - (2) Flush engine nose gearbox.
  - (3) Flush main transmission (para 1.32).
  - (4) Ground run aircraft for a minimum of 15 minutes.
  - (5) Inspect engine nose gearbox and main transmission filters.
  - (6) If no chips are found, resample after approximately 5 flight hours.
- d. Check main rotor drive shaft and drive plate for cracks, distortion, and other indications of overstress.
- e. Check tail rotor drive shaft for cracks, deformation, and other indications of overstress.
- f. Check main rotor strap packs for buckling and other indications of overstress.
- g. Check main rotor blades for buckling at trailing edges.

GO TO NEXT PAGE

---

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

---

Helicopter Serial No.:

Date:

---

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
2,4,6,7	17 (cont)	h. Check main rotor damper attachment holes for looseness (hole enlargement). Replace damper, trunnion, and mounting hardware if hole enlargement is found.		
		i. Check tail rotor assembly for buckling and looseness.		
		Above 130% dual-engine overtorque:		
		a. Replace both main transmission input drive shaft and couplings.		
		b. Replace both engine nose gearboxes.		
		c. Replace main transmission.		
		d. Replace main rotor drive shaft.		
		e. Check main rotor drive plate for cracks, distortion, and other indications of overstress.		
		f. Check tail rotor drive shaft for cracks, deformation, and other indications of overstress.		
		g. Check main rotor strap packs for buckling and other indications of overstress.		
		h. Check main rotor blades for buckling at trailing edges.		
		i. Check main rotor damper attachment holes for looseness (hole enlargement). Replace damper, trunnion, and mounting hardware if hole enlargement is found.		
		j. Check tail rotor for buckling and looseness.		
		k. Replace tail rotor fork.		
		l. Check both engine mounting systems for loose hardware, brackets, mounts or links, and other indications of overstress.		
		m. Check main rotor mast base for looseness, cracks, deformed flange, and for loose and missing base nuts or PLI washers.		

---

GO TO NEXT PAGE

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

Helicopter Serial No.:

Date:

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
2,4,6,7	17 (cont)	Rotor underspeed (droop) below 90% with engine failure:		
		a. Check tail rotor drive shafting for cracks, deformation, and other indications of overstress.		
		b. Check main rotor strap packs for buckling and other indications of overstress.		
		c. Check main rotor blades for buckling at trailing edges.		
		d. Check main rotor damper attachment holes for looseness (hole enlargement). Replace damper, trunnion, and mounting hardware if hole enlargement is found.		
		e. Check tail rotor for buckling or looseness.		
	18	Deleted.		
2,7	19	DAILY BEFORE FIRST ENGINE START OF DAY		
		Check oil levels in engines No. 1 and No. 2.		
		a. No further action required if engine oil level has not changed.		
		b. Service to acceptable limits if engine oil has decreased.		
		c. Check level of corresponding engine nose gearbox (NGB) if engine oil level has increased.		
		(1) Ensure engine oil level is in limits and note conditions.		
		(2) Quill shaft seal has failed if NGB oil level is low. Replace quill shaft within next 50 flight hours (para 6.36).		

GO TO NEXT PAGE

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

Helicopter Serial No.:

Date:

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
1	20	12 MONTHS (OR NEAREST PHASE INSPECTION)		
		Perform outside air temperature indicator functional check (TM 1-1500-204-23).		
2,4,6,7	21	IF HELICOPTER EXPERIENCES A SUDDEN STOPPAGE CAUSED BY:		
		If cracks/delaminations are suspected, perform nondestructive inspection (TM 1-1520-264-23).		
		<ul style="list-style-type: none"> <li>a. Blade striking an object</li> <li>b. Engine compressor stall</li> <li>c. Foreign object damage</li> <li>d. Main transmission seizure</li> </ul>		
		Main rotor blade:		
		<ul style="list-style-type: none"> <li>a. Check full blade chord for strike damage from impact point to trailing edge.</li> <li>b. Check entire blade trailing edge for buckling.</li> <li>c. Check all blade root end doublers and blade station 82 trailing edge bond joints for delamination.</li> </ul>		
		Head assembly main rotor:		
		<ul style="list-style-type: none"> <li>a. Check rotor head for cracks or other obvious damage.</li> <li>b. Check lead lag links and pitch housing in areas of lead lag link stops.</li> <li>c. Check strap packs for leading edge failures and trailing edge buckling.</li> <li>d. Check feathering bearing housings for cracked lugs.</li> <li>e. Check main rotor hub for distortion (crinkled paint) and elongated bolt holes.</li> <li>f. Check main rotor drive plate and upper spline coupling on main rotor drive shaft for damage.</li> <li>g. Check droop stop mechanism.</li> </ul>		

GO TO NEXT PAGE

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

Helicopter Serial No.: \_\_\_\_\_ Date: \_\_\_\_\_

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
----------	------------------------	-------------------	------	--------

2,4,6,7

21  
(cont)

**NOTE**

Replace main transmission, nose gearbox, input drive shaft, and couplings if excessive damage is noted to main transmission coupling.

Engine:

- a. Check engine mounts for security, cracks, and misalignment.
- b. Check engine control linkage for bends, breaks, and improper operation.
- c. Check engine inlets for foreign objects and unusual noise.

Tail rotor drive system:

- a. Check tail rotor blades for dents, nicks, scratches, separation of skin, buckling of trailing edge, and delamination of SPAR bond lines and root doubler bond.
- b. Check tail rotor drive fork, pitch links, swashplates, and pitch control bearing housing for damage.
- c. Check tail rotor transmission mounting flanges for cracks.
- d. Check tail rotor drive shaft and couplings for distortion and cracks.

Tail rotor blades:

- a. Check tail rotor blades for dents, nicks, scratches, separation of skin, buckling of trailing edge, and delamination of SPAR bond lines and root doubler bond.
- b. Check tail rotor drive fork, pitch links, swashplates, and pitch control bearing housing for damage.
- c. Check tail rotor transmission mounting flanges for cracks.

Transmission and nose gearboxes:

- a. Check chip detectors and lube oil filters for metal accumulation.
- b. Check main transmission couplings.
- c. Check tail rotor drive shaft and couplings for distortion and cracks.

GO TO NEXT PAGE

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

Helicopter Serial No.:		Date:		
Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
5	22	AT EACH 125 FLIGHT HOURS	Service ENCU cooling turbine lubrication (para 1.52).	
1	23	Deleted		
1	24	Deleted		
1	25	12 MONTHS	Check pitot static system, altimeter, and airspeed indicator accuracy (TM 1-1500-204-23).	
4	26	50 FLIGHT HOURS	<ul style="list-style-type: none"> <li>a. Check for evidence of main rotor swashplate lower seal grease leakage, and ball bearing condition (para 11.5).</li> <li>b. After reaching 1750 swashplate hours or if any grease leakage is observed from the sealed bearing of the rotating swashplate, accomplish the following every 50 flight hours:                             <ul style="list-style-type: none"> <li>(1) Disconnect lower ends of pitch links (4 places) from swashplate (para 11.14). Secure pitch links.</li> <li>(2) Disconnect lower ends of main and secondary scissors (1 place each) from swashplate (para 11.16 and para 11.18). Secure scissors.</li> <li>(3) Inspect for axial play between rotating and non-rotating swashplate. No discernable axial play allowed.</li> <li>(4) While rotating swashplate, check for ratchety or noisy operation. If either condition exists, replace swashplate.</li> <li>(5) If no irregularities are found, reconnect lower ends of main and secondary scissors (para 11.16 and para 11.18) and lower ends of pitch links (para 11.14).</li> </ul> </li> </ul>	

GO TO NEXT PAGE



**1.137. SPECIAL INSPECTION CHECKLIST – continued**

Helicopter Serial No.:

Date:

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
4	26 (cont)	<p>c. Inspect main rotor pitch change links for radial and axial play.</p> <p>(1) Maximum allowable radial play is <b>0.014 INCH</b>.</p> <p>(2) Maximum allowable axial play is <b>0.030 INCH</b>.</p> <p>d. Inspect tail rotor pitch change links for radial and axial play.</p> <p>(1) Maximum allowable radial play is:</p> <p>(a) Large bearing – <b>0.011 INCH</b>.</p> <p>(b) Small bearing – <b>0.006 INCH</b>.</p> <p>(2) Maximum allowable axial play is:</p> <p>(a) Large bearing – <b>0.020 INCH</b>.</p> <p>(b) Small bearing – <b>0.014 INCH</b>.</p>		
5	26A	50 FLIGHT HOURS	<p>INSPECTION OF AUXILIARY POWER UNIT POWER TAKE-OFF CLUTCH (P/N 3886000-5).</p> <p>a. Inspect duplex vent and forward lip seal for grease.</p> <p>(1) If present, remove grease and clean PTO clutch exterior. Record findings on DA Form 2408-13-1.</p> <p style="text-align: center;"><b>NOTE</b></p> <p>Grease will usually appear within 15 hours of operation after clutch replacement. If grease is noted after two consecutive 50 flight hour inspections following the initial finding, remove and replace PTO clutch and initiate category 1 deficiency report. Wetness from the duplex vent is acceptable.</p> <p>b. Check clutch housing bolts for proper torque.</p> <p>(1) Torque bolts to <b>50 INCH POUNDS</b>.</p>	

GO TO NEXT PAGE

---

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

---

Helicopter Serial No.:

Date:

---

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
6	27	10 FLIGHT HOURS		

CHECK MAIN ROTOR STRAP PACK FOR THE FOLLOWING:

- a. Perform inspection per step c. until one laminate is found discrepant.
- b. A failed top or bottom laminate of strap pack assembly may be repaired unless a crack or failure of a laminate is detected within one inch of outboard shoe or inboard abrasion strip. If a crack is found, strap pack assembly is unserviceable.

**NOTE**

- Repair is not allowed for laminate failures under outboard or inboard shoes. Repair limits are defined in paragraph 5.36. Upon detection of any other discrepant laminate, strap pack assembly is unserviceable.
  - Ensure that collective control stick is in mid position, cyclic stick is in neutral position, and swashplate is level/centered with respect to the aircraft.
- c. Inspect accessible portion of each strap pack for cracked, buckled, broken, or horizontally displaced laminates. Use inspection mirror, flashlight, and tongue depressor.
  - d. If the inspection of step c. is not conclusive, remove main rotor blade (para 5.3) and reinspect per step c. Ensure strap pack is as flat as possible during inspection.
  - e. If the inspection of step d. is still not conclusive, remove pitch housing (para 5.25) and reinspect per step c. Measure horizontal displacement. Maximum allowable displacement is **0.020 INCH** or if any change in displacement exceeding **0.010 INCH** is detected between inspections.
- 

GO TO NEXT PAGE

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

Helicopter Serial No.:		Date:		
Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
6	27 (cont)	CRITERIA FOR REPLACEMENT		
		a. If one laminate, other than a previously trimmed top or bottom laminate is discrepant, strap pack assembly is unserviceable, but a one time flight to an adequate AH-64 maintenance facility is authorized. This flight shall not exceed two hours.  b. If two laminates, other than a previously trimmed top or bottom laminate are discrepant, strap pack assembly is unserviceable and no flights are authorized.		
6	27A	20 FLIGHT HOURS PERFORM MAIN ROTOR STRAP PACK BORESCOPE INSPECTION: <p style="text-align: center;"><b>NOTE</b></p> This inspection to be done in conjunction with special inspection #27. a. Perform borescope inspection (para 5.34A).		
5	27B	10 FLIGHT HOURS CHECK ENCU FILTER FOR CONTAMINATION: a. Clean ENCU filter element (para 13.12).		
	28	10 HOURS/14 DAY If cracks are suspected, perform nondestructive inspection (TM 1-1520-264-23).  On PN 7-311310001-5, -7, -13, -15, -21, and -25 main transmission, accomplish the following: a. Remove access panels L200 and R200. b. Open access doors T250L, T250R, T290L, T290R, and L325. c. Thoroughly clean exteriors of main transmission cover and intermediate support. d. Check intermediate gear support left and right side gear covers (ears) and flange bolt hole bosses and webs for evidence of cracks or oil leakage. Use 5-power magnifier. e. Secure access doors T250L, T250R, T290L, T290R, and L325. f. Secure access panels L200 and R200.		

GO TO NEXT PAGE

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

Helicopter Serial No.: \_\_\_\_\_ Date: \_\_\_\_\_

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
2	29	10 HOURS/14 DAY	<p>On helicopter S/N 82-23355 thru 82-23365 and 83-23787 thru 83-23834, accomplish the following:</p> <ul style="list-style-type: none"> <li>a. Open refueling access door R160.</li> <li>b. Set REFUEL VALVE to OPEN position. Check that OPEN light illuminates. If light does not come on, perform fuel system MOC (TM 1-1520-238-T).</li> <li>c. Remove cap from forward gravity filler port.</li> <li>d. Remove access panel R200.</li> <li>e. Remove filler neck access (round slotted) panel from transmission deck forward right side.</li> <li>f. Check interior and exterior of filler neck assembly. Use inspection mirror and flashlight:               <ul style="list-style-type: none"> <li>(1) Inspect for cracks in area of welded filler tube.</li> <li>(2) Inspect for separation of lower flange from filler tube, and for sheared or missing tube flange rivets.</li> </ul> </li> <li>g. If any listed defect is evident and/or at the next phase inspection, replace filler neck assembly.</li> <li>h. Set REFUEL VALVE switch to CLOSE. Check that OPEN light goes out.</li> <li>i. Install access panels.</li> <li>j. Secure refueling access door R160 and access panel R200.</li> <li>k. Install filler cap.</li> </ul>	

GO TO NEXT PAGE

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

Helicopter Serial No.:

Date:

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
----------	------------------------	-------------------	------	--------

6	30	50 FLIGHT HOURS		
---	----	-----------------	--	--

CHECK MAIN ROTOR PITCH HOUSING NUTS FOR THE FOLLOWING:

- a. Check torque on 16 nuts using torque wrench set to **270 INCH-POUNDS**.
- b. Check for proper bolt thread extension through nut. The allowable number of threads visible beyond the nut is no less than 1 1/2 and no more than 5 1/2.
- c. If the torque is **270 INCH-POUNDS** or more and the number of visible threads are within allowable range, the inspection is complete. If either condition is not met, proceed to step d.

**NOTE**

Use only one washer under nut on lower pitch housing bolt (HS1446-6-20) and two washers under nut on upper pitch housing bolts (HS1446-6-28).

- d. If only one bolt on a single pitch housing is less than **270 INCH-POUNDS**, replace nut, bolt, and washer(s) with new ones. Lubricate threads of bolts and nuts with lubricant (item NO TAG, App F). Torque nut(s) to **350 INCH-POUNDS**. Apply torque stripe.
- e. If two or more bolts on a single pitch housing are less than **270 INCH-POUNDS**, check for possible damage to pitch housing and/or feather bearing assembly. If no damage is found, replace undertorqued nuts, bolts, and washers with new ones. Lubricate threads of bolts and nuts with lubricant (item NO TAG, App F). Torque nuts to **350 INCH-POUNDS**. Apply torque stripe.
- f. If less than 1 1/2 or more than 5 1/2 threads can be seen beyond the nut(s), replace nut(s), bolt(s), and washer(s). Lubricate threads of new bolt(s), nut(s), and washer(s) with lubricant (item NO TAG, App F). Torque nut to **350 INCH-POUNDS**. Apply torque stripe.

GO TO NEXT PAGE

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

Helicopter Serial No.:

Date:

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
----------	------------------------	-------------------	------	--------

6

30  
(cont)

INSPECT STRAP PACK BOLTS FOR CRACKS.

If cracks are suspected, perform nondestructive inspection (TM 1-1520-264-23).

**NOTE**

Inspection may be conducted without removing the lead lag link.

- a. Remove center bolt from lead lag link pin (para 5.32).
- b. Check bolt for cracks. None allowed.
- c. Install center bolt in lead lag link pin (para 5.32).

INSPECT LEAD LAG LINK TEFLON SLEEVE BEARINGS.

On lead lag links P/N 7-31141155-11 accomplish the following:

- a. Remove main rotor blade lead lag link (para 5.33).
- b. Inspect teflon sleeve bearing liner(s) for serviceable condition (para 5.33).
- c. Check teflon sleeve bearing liner(s) for color.
  - (1) If teflon sleeve bearing liner(s) is brown or black no further action is required. Re-install link.
  - (2) If teflon sleeve bearing liner(s) have a milky white film reinspect every 50 flight hours.
- d. Install main rotor blade lead lag link (para 5.33).

GO TO NEXT PAGE

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

Helicopter Serial No.: \_\_\_\_\_ Date: \_\_\_\_\_

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
5	31	IF AIRCRAFT HAS BEEN OPERATED IN A LOOSE GRASS ENVIRONMENT		
		a. Perform ENCU cleaning as required (para 1.48).		
ALL	32	AFTER KNOWN OR PROBABLE WIRE STRIKE		
		If voids or delamination are suspected, perform nondestructive inspection (TM 1-1520-264-23).		
		a. Check wire strike deflectors for bends, cracks, and alinement. Replace if damage is found.		
		b. Check wire strike cutters for bends, cracks, and alinement. Replace if damage is found.		
		c. Check mounting areas for cracks and deformation of structure and attaching fasteners. Repair if damage is found (TM 1-1500-204-23).		
ALL	33	AFTER KNOWN OR SUSPECTED LIGHTNING STRIKE		
		If voids or delamination are suspected, perform nondestructive inspection (TM 1-1520-264-23).		
		<b>NOTE</b>		
		<ul style="list-style-type: none"> <li>● Following a known or suspected lightning strike perform the following inspection and operational checks prior to next flight.</li> <li>● Lightning strike damage can be distinguished from other damage, such as gouging, denting, or erosion, because it normally appears as a blackened surface, pit, or hole with a burned rim.</li> <li>● Lightning is attracted to sharp objects. Pay close attention to protrusions, sharp corners, and outer surfaces, such as main and tail rotor tips and trailing edges, electrostatic dischargers, and antennas.</li> </ul>		
		a. PRELIMINARY LIGHTNING STRIKE INSPECTION REQUIREMENTS		
		(1) Check surfaces of main rotor blades and main rotor hub assembly; including lead lag link joints, pitch housings, droop stop mechanisms, hub, dampers, controls, and swashplate assemblies for evidence of lightning damage.		

GO TO NEXT PAGE

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

Helicopter Serial No.:

Date:

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
ALL	33 (cont)	<ul style="list-style-type: none"> <li>(2) Check wire strike hardware (if applicable).</li> <li>(3) Check main rotor blade electrostatic bonding cables and de-ice wire harnesses for burned insulation and/or damage.</li> <li>(4) Check main rotor electrostatic discharge brushes and de-ice harness brush blocks for erosion and/or damage.</li> <li>(5) Check main rotor mast for signs of arcing, pitting, and/or damage.</li> <li>(6) Check surfaces of tail rotor blades and tail rotor assembly; including links, pitch horn, pitch change swashplate, hubs, forks, and control linkages for evidence of lightning damage.</li> <li>(7) Check tail rotor electrostatic bonding cables and de-ice wire harnesses for burnt insulation and/or damage.</li> <li>(8) Check tail rotor electrostatic discharge brushes and de-ice harness brush blocks for erosion and/or damage.</li> <li>(9) Check flight controls for evidence of lightning damage. Check for freedom of movement of all flight controls.</li> <li>(10) Check entire aircraft surface for burns, burn holes, burn streaks, paint discoloration, lost or eroded metal, torn metal, bulged or delaminated composite surface pits and punctures, no matter how slight.</li> <li>(11) Check exposed electrical wiring, including wiring in TADS/PNVS avionics bays and under main rotor mast aperture fairing.</li> <li>(12) Check all electrical, AFCS and avionic components, including antennas, for damage.</li> <li>(13) Check all hydraulic components, including tubes, hoses, and fittings, for damage.</li> <li>(14) Check gravity refueling ports, pressure refueling port, and fuel cell vents for evidence of arcing and/or damage.</li> <li>(15) Check APU for damage.</li> </ul>		

GO TO NEXT PAGE



**1.137. SPECIAL INSPECTION CHECKLIST – continued**

Helicopter Serial No.:

Date:

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
ALL	33 (cont)	(16) If no damage is found, do a complete operational check of the electrical, avionics and automatic flight control systems and all subsystems with electrical controls and/or wiring, (e.g. DASE, stabilator, rotor brake, cockpit control panels, engine fire detection and extinguishing systems, caution and advisory warning systems) and hydraulic systems. Check VSWR on all antenna systems and check the magnetic compass accuracy.  (17) If no damage was noted after completing a full operational check of the aircraft, then either the lightning energy was very low or there was a near miss and no further inspection is required.  (18) If any damage was noted, then refer to lightning damage inspection requirements.  (19) Tag all components being sent to depot with "LIGHTNING STRIKE."  (20) Repair or replace damaged components per maintenance procedures. Discard all damaged hardware not covered under standard reclamation procedures.		
6		b. LIGHTNING DAMAGE INSPECTION REQUIREMENTS		
		c. MAIN ROTOR AND FLIGHT CONTROLS		
		(1) Remove each SPAD shear pin and cycle the mechanism to ensure proper operation. (2) Replace any component showing evidence of lightning damage. (3) Check entire top and bottom length of main rotor blades for the following:		
		<b>NOTE</b>		
		If minor external damage is found, major internal damage may have occurred.		
		(a) Check entire blade length leading and trailing edge for burns, burn holes, burn streaks, paint discoloration, voids, delamination and puncture marks.		

GO TO NEXT PAGE

---

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

---

Helicopter Serial No.:

Date:

---

6

33  
(cont)

- (b) Check tip cap attach screws and tab for burns or discoloration.
  - (c) During blade removal, remove one expandable pin (blade attachment pin) at a time from blade root and check for discoloration.
    - 1. If damage is found, replace expandable pin.
    - 2. If damage is found, return blade to depot.
  - (d) After blade removal, check for the following:
    - 1. Check electrostatic bonding and de-ice wiring and hardware for damage. If damaged, replace components as required.
    - 2. Remove lead lag link bushings and pin. Check for damage, discoloration and arc burns on parts. If damage is found, replace parts as required.
    - 3. Check damper joints, damper attach holes, bushings and rod end bearings for arcing, pitting, and burn marks. If damaged is found, replace parts as required.
    - 4. Remove pitch housing and inspect the housing and strap pack assembly for damage, arcing, and burn marks. If damaged is found, replace parts as required.
    - 5. Check hub/mast electrostatic discharge brush holders for damage, arcing, discoloration and burn marks.
    - 6. Remove and check upper mast bearing for arcing and damage. If damage is found, send rotor hub and bearings to depot for evaluation and damage assessment.
    - 7. Remove pitch control rod bolt from swashplate and check upper and lower pitch control rod bearings for arcing. If damaged is found, replace control rod.
    - 8. Check rotating scissors for damage. If damaged is found, replace scissors.
    - 9. Disconnect servo control rods and check swashplate for proper rotation and cyclic and collective movement. Replace swashplate if rotating or stationary parts are damaged and if pitch control rod or damper attach bolts were damaged.
    - 10. Check entire hub assembly for direct lightning attachment points.
- 

GO TO NEXT PAGE

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

Helicopter Serial No.:

Date:

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
6	33 (cont)	(e) After main rotor blade lightning strike, remove damper and check the following:	<ol style="list-style-type: none"> <li>1. Check damper attach bolts for arcing, pitting or burn marks. If damaged is found, replace bolts.</li> <li>2. Check bearings for arcing, pitting or burn marks. If damaged is found, send damper to depot.</li> <li>3. Check damper bracket lugs and bushings for arc damage. If damaged is found, send hub assembly to depot.</li> </ol>	
		(f) After blade lightning strike, check the following:	<ol style="list-style-type: none"> <li>1. Check bearings, bushings and attach bolts of flight control rods, bellcranks, and levers between servo output rods and swashplate for burn marks. If burn marks are found, replace parts.</li> <li>2. Check front and aft bellcrank support attach fittings for arc burns. If arc burns are found, replace bellcrank supports.</li> </ol>	
		(g) After any lightning strike, check primary servo input and output linkage bearings for arcing and burn marks. Fully extend pistons and check for roughness, pitting, or burn marks. If damaged is found, send servo to depot.		
		<b>d. MAIN TRANSMISSION AND DRIVE SHAFT</b>		
		(1) Check main gearbox mounting points, attach bolts and exposed portion of main rotor shaft for arcing or leakage. If damaged is found, remove main transmission and send to depot.		
		(2) If any main rotor shaft component shows signs of lightning strike damage, remove main transmission and send to depot.		
		(3) Check input drive shafts, gimbals, and support tubes for arcing or leakage. If damaged is found, send components to depot.		

GO TO NEXT PAGE

---

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

---

Helicopter Serial No.:

Date:

---

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
4	33 (cont)	e. TAIL ROTOR SYSTEM		
		(1) Check entire inboard and outboard surfaces of tail rotor blades for the following:		
		(a) Entire blade length for burns, burn holes, burn streaks, arcing, paint discoloration, voids, and delaminations.		
		(b) Blade tip and trailing edge for arcing, burns, delamination and loose screws in tip cap.		
		(c) Leading edge and skin-to-horn joint for arc burns.		
		(2) Check the following on tail rotor system:		
		(a) Check de-ice wires for damage. If damage is found, replace.		
		(b) Remove blades and check strap pack, hub, teetering bearing, teetering bolt, fork, and fork drive shaft for damage, arcing, discoloration, and burn marks. If damage is found, return to depot.		
		(c) If damage is found, do the following:		
		1. Check pitch control rod end bearings, pitch change swashplate, hubs and fork. If damaged, return components to depot.		
		2. Check pitch rod attach bolts. If damage is found, replace bolts.		
		3. Check tail rotor mechanism by manually cycling to ensure proper operation.		
2,7		f. MAIN LANDING GEAR		
		(1) Check strut lower stage piston, axle, trailing arm, and attaching parts of main landing gear for damage. Check landing gear for proper servicing and leaks.		

---

GO TO NEXT PAGE

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

Helicopter Serial No.:

Date:

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
2,7	33 (cont)	(2) If damage is found, remove main landing gear and perform the following:		
		(a) Check trailing arm shock strut attach bolt and pivot at cross tube for arcing. If damaged, replace or repair parts as required.		
		(b) Check ground wire (left side only) and bonding jumper from fuselage to drag beam for damage. If damaged, replace component as required.		
		(c) Fully extend upper piston of shock strut and check for pitting. If damaged, send shock strut to depot.		
		(d) Check tire rim for damage. If damage is found, replace rim.		
3,4		g. TAIL LANDING GEAR		
		(1) Check tail landing gear for damage, proper dimensions, and leaks.		
		(2) If damage is found, remove tail landing gear and perform the following:		
		(a) Check yoke and landing gear shock strut attach bolts for arcing. If damaged, replace bolts.		
		(b) Check inside diameter of yoke bushings for arc damage.		
		(c) Check bearings in shock strut for arc damage.		
		(d) Fully extend upper piston of shock strut and check for pitting and roughness.		
		(e) If damaged, send tail landing gear to depot.		
		(f) Check tire rim for damage. If damage is found, replace rim.		

GO TO NEXT PAGE

---

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

---

Helicopter Serial No.:

Date:

---

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
4	33 (cont)	h. STABILATOR		
		<ul style="list-style-type: none"> <li>(1) Check surface of pivot joint, stabilator, and electrostatic dischargers for lightning strike damage.</li> <li>(2) If damaged, repair per maintenance procedures.</li> <li>(3) Remove stabilator and inspect attach bolts, bearings, attachment fittings, actuator attach bolts, and bearings for damage. If damage is found, send stabilator to depot. Replace attaching hardware as required.</li> </ul>		
		i. VERTICAL STABILIZER		
		<ul style="list-style-type: none"> <li>(1) Check surface of vertical stabilizer, tip cap, radar warning antenna, tail light, position light, and trailing edge antenna.</li> <li>(2) If damaged, remove vertical stabilizer and perform the following:                             <ul style="list-style-type: none"> <li>(a) Check for arcing at lower attach bolts and attach lug surfaces, stabilator pivot bushings, antenna attach surfaces, fairing attach surfaces, and skin.</li> <li>(b) If damaged, send vertical stabilizer to depot.</li> <li>(c) Replace attaching hardware as required.</li> </ul> </li> </ul>		
2,7		j. WING		
		<ul style="list-style-type: none"> <li>(1) Check surfaces of wing, electrostatic dischargers, wing tip, formation lights, and all pylons for damage.</li> <li>(2) If damage is found, check the following:                             <ul style="list-style-type: none"> <li>(a) Check attach bolts for arcing. If damaged, replace bolts.</li> <li>(b) Check pylon mounts, attach lugs, and shear pin bushings. If damaged, send to depot.</li> </ul> </li> </ul>		

---

GO TO NEXT PAGE

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

Helicopter Serial No.:

Date:

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
2,7	33 (cont)	(c) Check electrostatic dischargers, internal wiring and connectors, hydraulic lines and fittings. If damaged, replace parts as required.  (d) Check lights. If damaged, replace as required.		
ALL		k. AIRFRAME STRUCTURE		
		(1) Check airframe skin surfaces and all attach points where assemblies or actuators have been removed for arcing or visible indication of lightning strike damage.  (2) Check all fairings and door interfaces.  (3) If damaged, return airframe to depot for repair (para 2.12).		
3,4		I. INTERMEDIATE AND TAIL ROTOR GEARBOXES AND DRIVE SHAFT		
		(1) Check intermediate and tail rotor gearboxes mounting points and attaching hardware for arcing or leakage. If damaged, remove gearbox and send to depot. Replace attaching hardware as required.  (2) If no visible damage was found on intermediate gearbox, but any one of the viscous damper bearings, hardware, or shafts adjacent to the gearbox are damaged, remove intermediate gearbox and send to depot.  (3) Check tail rotor drive shafts, couplings, and viscous damper bearings for arcing or leakage. If damaged, remove component and send to depot.  (4) If no visible damage was found on tail rotor gearbox, but there was evidence of lightning strike on the tail rotor, remove tail rotor gearbox and servo and send to depot.		

GO TO NEXT PAGE

---

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

---

Helicopter Serial No.:

Date:

---

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
5	33 (cont)	m. OIL COOLER		
			(1) Check oil cooler and fan for arcing or leakage. If damaged, remove damaged component and send to depot.	
2,7		n. ENGINE		
			(1) Check engine compartments, input drive shafts and engine mounting points for signs of arcing. If damaged, replace damaged components.	
			(2) Perform engine inspection (TM 55-2840-248-23).	
			(3) If no visible damage was found, perform a full operational check. Perform complete functional check of all subsystems (TM 55-2840-248-23).	
5		o. APU		
			(1) Check APU for damage. If damaged, send APU to depot.	
			(2) If no visible damage was found, perform a full operational check. Perform a complete functional check (TM 1-1520-238-T).	
ALL		p. ELECTRICAL/FUEL		
			(1) Check exposed electrical wiring, including wiring in TADS/PNVS, FABS compartments, and under main rotor pylon, for burns or chaffing. Repair or replace damaged wiring per TM 1-1500-204-23.	
			(2) Check electrical, AFCS, and avionic components for damage. Remove and perform bench check on all damaged components. Replace all damaged components found during bench checks or inspections.	

---

GO TO NEXT PAGE



**1.137. SPECIAL INSPECTION CHECKLIST – continued**

Helicopter Serial No.:

Date:

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
ALL	33 (cont)	(3) Check gravity refueling ports, pressure refuel port, and fuel cell vents for arc burns. Replace any damaged component. During next refueling, check pressure refuel/defuel shutoff valves, and vent valve for proper operation.		
		(4) Perform continuity check on wiring to any damaged component. After installing a replacement component perform an operational check of the new component.		
1		q. SDC		
		(1) Check SDC and attaching hardware for arcing and leakage. If damaged, send SDC to depot. If no damage is found, perform operational check (TM 1-1520-238-T).		
2,7		r. EXTERNAL FUEL TANKS		
		(1) Check refueling port, air/fuel and electrical interfaces for arcing or burns.		
		(2) Check for any indication of damage to composite structure.		
		(3) If damage exceeds maximum allowable tolerances, the tank must be returned to the contractor.		
ALL		s. WIRE STRIKE		
		(1) Check wire strike hardware for damage.		
		(2) Check cutting edges and sharp protrusions for indication of damage. If damage is found, replace as required. Return damaged components to depot.		

2,4,7

34

30 DAYS

STABILATOR HINGE AND WEAPONS PYLON PIVOT

**NOTE**

Do not use corrosion preventive film on weapons pylons (teflon coated) pivot pins, part number 7-318000061-3.

Make a follow up application of corrosion preventive film and water displacing compound (para 2.114/para 16.4).

GO TO NEXT PAGE

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

Helicopter Serial No.: \_\_\_\_\_ Date: \_\_\_\_\_

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
----------	------------------------	-------------------	------	--------

6            35            WHEN PRIMARY AND/OR UTILITY HYDRAULIC PRESSURE HAS BEEN AT 3400 PSI OR HIGHER FOR FIVE MINUTES OR MORE.

- a. Inspect the appropriate hydraulic system (primary/utility) for signs of overheated conditions.

**WARNING**

**Do not touch any component that is suspected of being overheated until it has cooled. Overheated components can cause burns if they come in contact with skin. If burns occur, seek medical aid.**

- (1) Check hydraulic manifolds, actuators, pumps, etc. for high heat radiation.
- (2) Check connectors associated with hydraulic components for melted potting compound.
- (3) Check B nuts for melted torque stripes.
- (4) Check all hydraulic components for heat induced discoloration.
- b. Replace any component(s) displaying clear evidence of overheating.
- c. Replace discrepant hydraulic pump (primary/utility) (para 7.4/para 7.58).

1            36            ANYTIME THE TADS/PNVS IS REMOVED INSPECT TADS/PNVS SUPPORT FITTINGS AND BUSHINGS.

- If cracks are suspected, perform nondestructive inspection (TM 1-1520-264-23).
- a. Check support fittings for cracks, distortion, corrosion, and dirt. Use 10-power magnifier for crack check.
  - b. Check seals for deterioration, leakage, and improper fit.
  - c. Check upper (brass) bushings for out-of-round condition or distortion.
  - d. Replace discrepant bushings (para 2.46A).

GO TO NEXT PAGE

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

Helicopter Serial No.:

Date:

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
5	37	125 FLIGHT HOURS, OR MORE OFTEN IF REQUIRED.		
		INSPECT SHAFT DRIVEN COMPRESSOR AND CLEAN SDC TOTAL PRESSURE SENSE LINE FILTER AND SURGE VALVE PRESSURE FILTER.		
		a. Remove shaft driven compressor (para 7.120).		
		(1) Inspect SDC in accordance with (para 7.120) steps n, o, p, q, r, and s.		
		b. Remove total pressure sense line and surge valve pressure filters (para 7.125).		
		c. Clean total pressure sense line and surge valve pressure filters (para 1.47).		
		d. Install total pressure sense line and surge valve pressure filters (para 7.125).		
		e. Install SDC (para 7.121).		
5	38	10 HOURS/14 DAYS DURING DESERT OPERATIONS		
		a. Replace aft avionics bay filter (para 16.35).		
		b. Replace APU air filter (para 16.36).		
3,4	39	Deleted.		

GO TO NEXT PAGE

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

Helicopter Serial No.:		Date:		
Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
2	40	MONTHLY	a. Spray corrosion preventive compound corrosion preventive compound (item 63, App F) or equivalent in to the air outlet of the fuel booster pump.	
4	41	50 FLIGHT HOURS	TAILBOOM FRAME ASSEMBLY INSPECTION (FS 530 and FS 547)	

**NOTE**

If cracks or workings rivets are confirmed during the following inspection, report defects immediately to local Apache LAR and U. S. Army Aviation and Missile Command (AMCOM), AMSAM-AR-EI-P-A (AH-64), DSN 897-4925 or Commercial 265-313-4925 DATA FAX is DSN 897-1874. Further flight is authorized only following incorporation of AMCOM approved repairs as directed by AMCOM Engineering. If cracks are found, submit a CAT I DR.

If cracks are suspected, perform nondestructive inspection (TM 1-1520-264-23).

- a. Remove fairings L545 and R545 (para 2.2).
- b. Check the forward face of the FS 530 and FS 547 frame assemblies for cracks and/or working rivets.
  - (1) Cracks found in the FS 530 frame initiating at the upper corners of the square central cutout will require visual inspection from the forward side at 10 HOUR/14 DAY intervals until the frame is replaced. Any of these cracks which propagate beyond the vertical stabilizer attachment assembly (7-311114160-11) must be reported and repaired per AMCOM approved repairs.
  - (2) Cracks found in the FS 530 frame initiating at the lower corners of the square central cutout that are no longer than **1.0 INCH** will require daily visual inspection from the forward side until the approved repairs are accomplished. The cracks will be stop-drilled without affecting any structural members. The repair should be performed no later than the next scheduled phase inspection. After the repairs are accomplished, inspect at 10 HOUR/14 DAY intervals until the frame is replaced.

GO TO NEXT PAGE

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

Helicopter Serial No.:

Date:

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
		<p>(3) Cracks found in the FS 547 frame no longer than <b>1.5 INCHES</b> at the 2L stringer attachment pocket (running at a 90° angle to the centerline of the stringer) will be inspected daily. Cracks at any other location or outside the above limits of the FS 547 frame require replacement per AMCOM approved repairs.</p> <p>c. Check the entire length of stringers 2L and 2R (7-311114181-17 and -18) located under the vertical stabilizer captive mounts, for cracks or working rivets.</p> <p>d. Check all additional stringers attached to the FS 530 and FS 547 frame assemblies, from approximately <b>6 INCHES</b> along the stringer to the attachment point of FS 530 and FS 547 for cracks.</p> <p>e. Check fuselage exterior surfaces at, and adjacent to, FS 530 and FS 547 for cracks and working rivets.</p> <p>f. Install fairings R545 and L545 (para 2.2).</p>		
6	42	<p>YEARLY</p> <p>MAST SUPPORT BASE CORROSION INSPECTION AND SHEAR BOLT TORQUE CHECK.</p> <p>a. Perform shear bolt/nut torque check (18 total).</p> <p>(1) Apply <b>100 INCH-POUND</b> tightening torque on nut (HS4133-8) (para 6.97).</p> <p>(2) If washer or nut turns or moves (by use of scribe), proceed to step (3), if not proceed to step b.</p> <p>(3) If washer or nut turns, contact local Apache LAR and U. S. Army Aviation and Missile Command (AMCOM), AMSAM-AR-EI-P-A (AH-64), DSN 897-4925 or Commercial 265-313-4925 DATA FAX is DSN 897-1874.</p> <p>b. Remove old adhesive and sealant, under four lightening hole covers, on top of mast support base (para 2.88).</p> <p>c. Inspect upper portion of mast support base in areas around four lightening holes for corrosion (para 1.49).</p> <p>(1) Remove surface corrosion (para 1.49).</p> <p>(2) Inspect for pitting (para 2.88).</p> <p>(a) If no pitting is found, go to step d.</p> <p>(b) If pitting is within depth values (para 2.88), go to step d.</p> <p>(c) If pitting exceeds depth values (para 2.88), go to step e.</p>		

GO TO NEXT PAGE

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

Helicopter Serial No.:

Date:

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
6	42 (cont)	<p>d. Inspect wall and bottom areas of each lightening hole cavity using flashlight and mirror (para 2.88).</p> <p>(1) Remove dirt, fluid, and debris to prepare surface for inspection (para 1.47).</p> <p>(2) If no corrosion is observed, treat internal surfaces of four holes (para 1.49).</p> <p>(3) If surface corrosion is observed, remove corrosion (para 2.88).</p> <p>(4) Check for pitting on walls and bottom of lightening holes (para 2.88).</p> <p>(a) If no pitting is observed, treat lightening hole areas (para 1.49).</p> <p>(b) If pitting is observed, apply impression compound to all surfaces of each lightening hole (para 2.88).</p> <p>e. Inspect impressions (para 2.88).</p> <p>(1) If pits do not exceed depth values in (para 2.88), rework (para 2.88).</p> <p>(2) If pits exceed the depth values in (para 2.88), replace mast support base (para 2.88).</p> <p>(3) Submit a CAT I Deficiency Report.</p> <p>f. Replace lightening hole covers (para 2.88).</p>		

GO TO NEXT PAGE

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

Helicopter Serial No.: \_\_\_\_\_ Date: \_\_\_\_\_

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
----------	------------------------	-------------------	------	--------

3	43	Deleted.		
---	----	----------	--	--

7	43A	125 FLIGHT HOURS		
---	-----	------------------	--	--

APPLICABLE TO AIRCRAFT WITH SERIAL NUMBERS PRIOR TO 84-25351.  
MAGAZINE BAY AIRFRAME STRUCTURE INSPECTION.

- a. Remove ammunition bay door B200 (para 2.2).
- b. Remove ammo storage magazine (TM 9-1090-208-23-1).
- c. Using a flashlight and 10X magnifier, inspect the upper right corner of the FS 176 frame for cracks. If cracks are found, refer to paragraph h. and complete inspection.
- d. Check frame upper right side areas around holes as follows:
 

Hole No.	Hole Dia. Right Side	Loction on Frame		Distance From Top
		WL	BL	
1	0.63	144	17	1.5
2	0.44	144	16.14	1.5
3	0.312	142.75	16	2.75
4	Remaining eight holes in upper RH aft side of frame. Do not remove grommets, anti-chafe material, or sealing compound.			
- e. Using a flashlight and 10X magnifier inspect the upper left corner of FS 176 frame. Pay particular attention to the area around all holes. If cracks are found, refer to paragraph h. and complete inspection.
- f. Using a flashlight and 10X magnifier, inspect the upper portion of the FS 176 frame cells between left BL 23.75 and right BL 23.75, and between WL 145.5 and 141.62. If cracks are found, refer to to paragraph h. and complete inspection.
- g. Using a flashlight and 10X magnifier inspect the area of the No. 2 right/left hand stringer connection at BL 23.75, WL 145.5. If cracks are found, refer to paragraph h. and complete inspection.
- h. If cracks are found, submit a CAT I DR.

GO TO NEXT PAGE

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

Helicopter Serial No.:

Date:

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
7	43A (cont)	i. Install ammo storage magazine (TM 9-1090-208-23-1). j. Install ammunition bay door B200 (para 2.2).		
3	43B	BEFORE EACH FLIGHT		
		APPLICABLE TO AIRCRAFT WITH 1750 OR MORE FLIGHT HOURS WHICH HAVE NOT BEEN MODIFIED BY MWO 1-1520-238-50-32 OR BY CLOSURE OF THE SLOT AREA BETWEEN FS 370 AND 450.		
		THE INSPECTION AREA BOUNDS THE NO. 2 LEFT HAND STRINGER BETWEEN FS 409 AND 476.		
		INSPECTION PROCEDURES		
		a. Inspect the skin surface over the No. 2 left hand stringer area of the slot on the upper left side of the tailboom from FS 409 to 476 before each flight. b. Concentrate on the skin surface over the No. 2 left hand stringer. Inspect for working rivets or skin cracking. c. If working rivets or skin cracking are found, refer to correction procedures. d. If no defects are found, aircraft is operational. Continue to perform the recurring inspection before each flight. The accumulated flight hours shall not exceed three (3) flight hours between inspections. e. This recurring inspection shall be performed until a doubler strap is installed or the slot area is closed between fuselage stations FS 370 and 450. f. Mark the skin inspection area using paint stripes to facilitate inspection. Put paint stripe at FS 408 and another at FS 477 on the area around the No. 2 left hand stringer.		

GO TO NEXT PAGE



**1.137. SPECIAL INSPECTION CHECKLIST – continued**

Helicopter Serial No.:

Date:

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
3	43B (cont)	CORRECTION PROCEDURES		
		<p>a. If skin cracks are found, inspect the No. 2L stringer inside fuselage.</p> <p>(1) Inspect the area of the stringer directly in line with the skin crack and the area 3 rivet rows forward and aft of the crack.</p> <p>(2) Perform a florescent penetrant inspection and use a 10X magnifier.</p> <p>(a) If stringer is cracked aircraft is non–operational until stringer is replaced. Submit a CAT I DR.</p> <p>(b) If no crack is found proceed to step (3).</p> <p>(3) Perform Eddy Current inspection. Contact technical POC.</p> <p>b. If working rivets are found, inspect the corresponding hole area in the No. 2L stringer inside the tailboom and check three adjacent fastener holes forward and aft.</p> <p>(1) Determine if the fastener can be moved by hand. If any are found loose, submit a CAT I DR.</p> <p>(2) Use 10X magnifier to inspect for No. 2L stringer cracks.</p> <p>(a) If crack is found, aircraft is non-operational until stringer is replaced. Submit a CAT I DR.</p>		

GO TO NEXT PAGE

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

Helicopter Serial No.: \_\_\_\_\_ Date: \_\_\_\_\_

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
----------	------------------------	-------------------	------	--------

5                      43C                      125 FLIGHT HOURS

INSPECTION OF AUXILIARY POWER UNIT POWER TAKE-OFF CLUTCH (P/N 3886000-5) AND MOUNTING STRUTS.

a. Inspect PTO clutch (P/N 3886000-5).

(1) Remove anti-flail support and APU drive shaft (para 6.16).

**NOTE**

External grease leakage is most likely to be at the forward lip seal and duplex vent and will usually appear at the vent within the first 15 hours of operation of a new clutch. Do not confuse grease at the covered port with grease coming from the duplex vent. Grease from the duplex vent will migrate to the covered port area. Grease may vent through the duplex vent under certain conditions such as overfilling or operating under high temperatures, under these conditions, wipe grease away from the housing and perform APU MOC.

(2) Check APU PTO clutch for external oil or grease leaks.

**NOTE**

Grease discharge from the covered port at the bottom of the PTO clutch housing is not acceptable. This is an indication of internal leakage which will contaminate clutch surfaces. If grease discharge is noted at the covered port, the clutch assembly shall be replaced. Wetness from oil seepage at the covered port is acceptable.

(3) Check APU PTO clutch for grease discharge from the covered port. None allowed.

**NOTE**

Heat discoloration is usually confined to the duplex bearing housing area.

(4) Check APU PTO clutch for heat discoloration. None allowed.

(5) Check APU PTO clutch for cracks.

(a) If cracks are suspected, perform nondestructive inspection (TM 1-1520-264-23).

(6) Check APU PTO clutch for corrosion. None allowed.

GO TO NEXT PAGE

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

Helicopter Serial No.:

Date:

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
5	43C (cont.)	b. Visually inspect the duplex bearing area.		
		(1) Check the output bearing grease seal for damage or metal contamination. None allowed.		
		(2) Manually rotate the clutch output shaft in both directions. The rotating motion should be smooth with no roughness or binding. A light amount of drag, caused by the shaft seal, is to be expected.		
		c. Visually inspect the needle bearing area.		
		(1) Remove the spiral retaining ring (M27426-3112D) from the inside of clutch output drive shaft.		
		(2) Remove the aluminum plug (3886028-1) from the output shaft by inserting a suitable tool (allen wrench or equivalent) into the inner groove of the plug, and pull the plug straight out. Discard packing. Ensure plug is not damaged or lost. Retain plug for re-installation.		
		(3) Inspect the inside of the bearing cavity for burnt, dry, or blackened grease. None allowed.		
		(4) Inspect for the presence of metal particles or other contamination in the needle bearing cavity. None allowed.		
		(5) Inspect for damage to the visible portion of the needle bearing and/or shaft. None allowed.		
		(6) Rotate the output drive on the clutch while observing the needle bearing with a flashlight. If the output shaft does not rotate smoothly and the needle bearing and/or pilot shaft does not remain centered during rotation, replace the clutch assembly.		
		(7) Inspect for signs of overheating, characterized by bluing or yellowing of the metal surface. None allowed.		

GO TO NEXT PAGE

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

Helicopter Serial No.: \_\_\_\_\_ Date: \_\_\_\_\_

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
5	43C (cont.)	<b>CAUTION</b>		
		Contamination of the bearings or failure to follow the prescribed procedures may cause premature failure of the needle bearings.		
		(8) Verify bearing cavity is properly packed with grease (item 87, App F). Pack grease approximately one half cubic inch (1CC) around inside diameter.		
		(9) Lightly lubricate new packing (M83248/1-113) with grease (item 87, App F) and install on plug (3886028-1).		
		(10) Install plug into the clutch output drive shaft.		
		(11) Install the spiral lock ring (M27426-3112D) and ensure that it has good positive engagement.		
		(12) Install anti-flail bracket and APU drive shaft (para 6.16). Check circumferential clearance.		
		(13) Perform an APU maintenance operational check (TM 1-1520-238-T). Check for oil leakage from the covered port with the APU running. Replace clutch if the oil leakage rate exceeds one drop per minute from the covered port.		
		d. Visually inspect clutch mounting pad (with PTO clutch installed) for cracks and corrosion. None allowed.		
		e. Inspect friction disk for wear.		
		(1) Remove one screw from name plate.		
		(2) Loosen remaining screw.		
		(3) Carefully rotate nameplate and gasket upward and secure remaining screw.		
		(4) Push disk backwards until it bottoms.		

GO TO NEXT PAGE

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

Helicopter Serial No.:

Date:

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
----------	------------------------	-------------------	------	--------

5

43C  
(cont)

**NOTE**

Friction disk has four uniformly spaced radial grooves cut into its surface. Measurements must be taken in area between grooves.

- (5) Replace clutch if gap between friction disk and plate will accept 9/64 inch socket head screw key.
- (6) Loosen screw and carefully rotate nameplate and gasket back into position.
- (7) Install removed screw into nameplate.
- (8) Tighten two screws.

**INSPECT APU MOUNTS**

- a. Inspect APU mounts for cracks, dents, distortion, loose bolts, and corrosion. None allowed.

**NOTE**

Particular attention must be given to welded joints.

- (1) Inspect the entire length of each weld line for cracks and any other abnormalities (para 15.1). Use inspection mirror and flash light as required.
- (2) Inspect all attachment lugs for cracks and looseness. None allowed.
- (3) Inspect all attachment points for loose or missing hardware. All bushings must be in place and hardware must be properly torqued (para 15.31/para 15.32/para 15.33).
- (4) Verify length of aft support strut (para 15.31).

GO TO NEXT PAGE

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

Helicopter Serial No.:

Date:

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
6	43C (cont)	INSPECT STRAP PACK BOLTS FOR CRACKS.		
		If cracks are suspected, perform nondestructive inspection (TM 1-1520-264-23).		
		<b>NOTE</b>		
		Inspection may be conducted without removing the lead lag link.		
		a. Remove center bolt from lead lag link pin (para 5.32).		
		b. Check bolt for cracks. None allowed.		
		c. Install center bolt in lead lag link pin (para 5.32).		
		INSPECT LEAD LAG LINK TEFLON SLEEVE BEARINGS.		
		On lead lag links P/N 7-31141155-11 accomplish the following:		
		a. Remove main rotor blade lead lag link (para 5.33).		
		b. Inspect teflon sleeve bearing liner(s) for serviceable condition (para 5.33).		
		c. Check teflon sleeve bearing liner(s) for color.		
		(1) If teflon sleeve bearing liner(s) is brown or black no further action is required. Re-install link.		
		(2) If teflon sleeve bearing liner(s) have a milky white film reinspect every 50 flight hours.		
		d. Install main rotor blade lead lag link (para 5.33).		

GO TO NEXT PAGE

---

**1.137. SPECIAL INSPECTION CHECKLIST – continued**

---

Helicopter Serial No.:

Date:

---

Area No.	Special Inspection No.	REQUIREMENT EVERY	Item	Status
2, 7	44	BEFORE EACH FLIGHT		
		IF AIRCRAFT HAS AUXILIARY FUEL TANKS INSTALLED, CHECK PYLONS FOR THE FOLLOWING:		
		<ul style="list-style-type: none"> <li>a. Open pylon fairing P1 (para 2.2).</li> <li>b. Visually inspect the pylon rack yoke area of the pylon frame (where pylon rack hollow pin is installed), and the front and side plates of frame for cracks. None allowed.</li> <li>c. Slightly rock nose of auxiliary fuel tank back and forth to reveal cracks.</li> <li>d. If cracks are found, replace the pylon frame (para 16.22).</li> </ul>		
3, 4	45	25 FLIGHT HOURS		
		CHECK INTERMEDIATE AND TAIL ROTOR GEARBOXES FOR THE FOLLOWING:		
		<ul style="list-style-type: none"> <li>a. Check intermediate gearbox grease level (para 1.30) and service if necessary.</li> <li>b. Check tail rotor gearbox grease level (para 1.31) and service if necessary.</li> </ul>		

---

END OF TASK

## SECTION VII. OVERHAUL AND RETIREMENT SCHEDULE

### 1.138. OVERHAUL AND RETIREMENT SCHEDULE

- a. The overhaul and retirement schedule lists parts that must be removed after specific operating times. The schedule gives the total operating hours after which the maintenance must be performed.
- b. Parts can be removed during the inspection nearest the time before removal is due. Exceptions to this are in TM 1-1500-328-23.
- c. The removed part is either overhauled or discarded when parts are replaced (retired).
- d. The schedule has five headings:
  - PART NAME – Name of the part. An asterisk (\*) preceding the part name indicates an indented subassembly.
  - PART NUMBER – Number assigned to the part. Check TM 1-1520-238-23P for part numbers of replacement parts.
  - OVERHAUL INTERVAL HOURS – Maximum operating time allowed on the part before it is to be overhauled.
  - OVERHAUL INTERVAL NOTES – Covered by special inspection No. 27 (para 1.137).
  - RETIREMENT INTERVAL HOURS – Maximum operating time allowed on the part before it is removed and condemned.
  - RETIREMENT INTERVAL NOTES – All retirement life items will have a Demil Code of "L" and will be mutilated in accordance with DOD 4160.21-M-1, Defense Demilitarization manual and TM 1-1500-328-23, Aeronautical Equipment Maintenance Management Policies and Procedures.
- e. Be sure to fill out all forms, records, and worksheets required by DA PAM 738-751 when replacing parts.
- f. The following parts will be removed from service 1440 days after installation:

**NOTE**

A double asterisk (\*\*) preceding the part name indicates overhaul and retirement schedule interval note 11 applies.

NOMENCLATURE	PART NUMBER
**Pitch Rod End	7-311511137-3
**Pitch Rod End	7-311511137-5
**Pitch Rod End	7-311511137-11
**Pitch Rod End	7-311511137-13
**Bearing, Plain Rod End	289330-1
**Bearing, Plain Rod End	289332-1
Support Assembly Mixer	7-211160040

- g. Refer to Section VIII for management of cartridge and propellant actuated devices.

GO TO NEXT PAGE



**1.138. OVERHAUL AND RETIREMENT SCHEDULE – continued**

Part Name	Part Number	Overhaul Interval Hours	Overhaul Interval Notes	Retirement Interval Hours	Retirement Interval Notes
Main Rotor Head Assembly	7-311411003-601	1,750			
	7-311411003-605	1,750			
	7-311411003-607	1,750			
	7-311411003-609	1,750			
	7-311411003-611	1,750			
	7-311411003-613	1,750			
	7-311411003-615	1,750			
	7-311411003-617	1,750			
	7-311411003-619	1,750			
* Bearing, Lower	7-114110011			91,400	
* Bearing, Upper	7-211411202			1,750	
	7-311411202			1,750	
	7-311411202-5			1,750	
	7-311411202-7			1,750	
* Plate, Upper	7-311411096			10,800	
	7-311411096-3			10,800	
* Plate, Lower	7-311411080			10,800	
	7-311411080-7			10,800	
* Lower Shoe Assembly	7-311411088			13,000	
	7-311411088-7			13,000	
	7-311411088-9			13,000	
* Hub Subassembly	7-311411015			13,000	
	7-311411015-3			13,000	
	7-311411015-5			13,000	
	7-311411015-7			13,000	
* Lead Lag Damper	7-311411110			8,700	
	7-311411110-3			8,700	
	7-311411110-5			8,700	
	7-311411110-7			8,700	
* Rod End, Damper	7-211411186-5			7,100	
* Trunnion Damper	7-311411187			6,500	
* Trunnion Attachment Bolts	NAS1312-33			7,100	2
	NAS1312-38H			7,100	
	NAS1312-66			7,100	
	NAS6612-33			7,100	
	NAS6612-38H			7,100	
	NAS6612-66			7,100	

GO TO NEXT PAGE

**1.138. OVERHAUL AND RETIREMENT SCHEDULE – continued**

Part Name	Part Number	Overhaul Interval Hours	Overhaul Interval Notes	Retirement Interval Hours	Retirement Interval Notes
Stretched Strap	7-311411146-5		1	4,500	
	7-311411146-7		1	4,500	
* Lead Lag Link Assembly	7-311411155		1	5,200	
	7-311411155-5		1	5,200	
	7-311411155-9		1	5,200	
	7-311411155-11		1	5,200	
* Feathering Bearing	7-311411193		1	7,100	
	7-311411193-11		1	7,100	
	7-311411193-15		1	7,100	
* Pitch Housing	7-311411215		1	5,300	
	7-311411215-7		1	5,300	
	7-311411215-11		1	5,300	
	7-311411215-13		1	5,300	
	7-311411215-15		1	5,300	
M/R Hub Retention Nut	7-311411102			22,500	
	7-311411102-3			22,500	
	7-311411102-5			22,500	
Main Rotor Blade	7-311412000			4,700	
	7-311412000-3			4,700	
	7-311412000-5			4,700	
* Swept Tip	7-311412035-3			18,000	
Main Rotor Attach Pin	ABC.6625			8,800	
	SL54005			8,800	
	53460-3			2,350	
Tail Rotor Fork Assembly	7-211421008-7			4,700	
	7-211421008-9			4,700	
	7-211421008-11			4,700	
Tail Rotor Hub	7-211421037-3			22,000	
	7-211421037-7			22,000	

GO TO NEXT PAGE

**1.138. OVERHAUL AND RETIREMENT SCHEDULE – continued**

Part Name	Part Number	Overhaul Interval Hours	Overhaul Interval Notes	Retirement Interval Hours	Retirement Interval Notes
Tail Rotor Strap Assembly	7-211421035-5			18,000	
	7-211421035-7			18,000	
Tail Rotor Blade Assembly	7-311422050-3			4,600	
	7-311422050-5			4,600	
	7-311422050-7			4,600	
	7-311422050-9			4,600	
Main Transmission Assembly	7-311310001-5	1,000		4,500	
	7-311310001-9			4,500	
	7-311310001-13	1,000		4,500	
	7-311310001-17			4,500	
	7-311310001-21	1,000		4,500	
	7-311310001-23			4,500	
	7-311310001-25	1,000		4,500	
	7-311310001-27			4,500	
	7-311210001-29	1,000		4,500	
	7-311310001-31	1,000		4,500	
	7-311310001-33			4,500	
	7-311310001-35			4,500	
	7-311310001-37			4,500	
	7-311310001-39			4,500	
7-311310001-41			4,500		
7-311310001-43			4,500		
* Clutch Assembly	7-311310003	1,000		4,500	
	7-311310003-3	1,000		4,500	
	7-311310003-7	1,000		4,500	
	7-311310003-9	1,000		4,500	
Main Rotor Drive Shaft	7-211350021			5,400	1
	7-211350021-3			5,400	1
Main Rotor Drive Plate	7-211310098-5			5,400	
	7-211310098-7			5,400	
	7-211310098-9			5,400	
	7-211310098-11			5,400	
Nose Gearbox Assembly, LH	7-311320001-3			4,500	
	7-311320001-5			4,500	
* Quill Shaft Assembly	7-211320093			4,500	
Nose Gearbox Assembly, RH	7-311320001-4			4,500	
	7-311320001-6			4,500	

GO TO NEXT PAGE

**1.138. OVERHAUL AND RETIREMENT SCHEDULE – continued**

Part Name	Part Number	Overhaul Interval Hours	Overhaul Interval Notes	Retirement Interval Hours	Retirement Interval Notes
Intermediate Gearbox Assembly	7-311330001			4,500	
	7-311330001-3			4,500	
	7-311330001-5			4,500	
* Drive Flange	7-311330025-5			4,500	
Tail Rotor Gearbox	7-311340001			4,500	
	7-311340001-3			4,500	
	7-311340001-5			4,500	
	7-311340001-7			4,500	
Tail Rotor Static Support	7-311340027			4,500	
	7-311340027-3			4,500	
Clutch, APU	3886000-5	500	2		
Shaft, APU	7-211350009			4,500	
Hanger Bearing, Fwd	7-311350008	2,500		39,700	
	7-311350008-3	2,500		8,800	
	7-311350008-5	2,500		8,800	
Hanger Bearing, Aft	7-211350007	2,500		39,700	
	7-211350007-3	2,500		8,800	
	7-211350007-5	2,500		8,800	

GO TO NEXT PAGE

---

**1.138. OVERHAUL AND RETIREMENT SCHEDULE – continued**


---

Part Name	Part Number	Overhaul Interval Hours	Overhaul Interval Notes	Retirement Interval Hours	Retirement Interval Notes
Main Rotor Actuator	7-311820011			22,500	
	7-311820011-3			22,500	
	7-311820011-5			22,500	
	7-311820011-7			22,500	
	7-311820011-9			22,500	
	7-311820011-11			22,500	
	7-311820011-13			22,500	
	7-311820011-15			22,500	
	7-311820011-XY			22,500	
	7-311820011-XYW			22,500	
	7-311820011-3XY			22,500	
	7-311820012			22,500	
	7-311820012-3			22,500	
	7-311820012-5			22,500	
	7-311820012-7			22,500	
	7-311820012-9			22,500	
	7-311820012-11			22,500	
	7-311820012-13			22,500	
	7-311820012-15			22,500	
	7-311820012-XY			22,500	
7-311820012-XYW			22,500		
7-311820012-3XY			22,500		
Tail Rotor Actuator	7-311820014			18,000	
	7-311820014-3			18,000	
	7-311820014-5			18,000	
	7-311820014-7			18,000	
	7-311820014-9			18,000	
	7-311820014-XY			18,000	
	7-311820014-XYW			18,000	
Pitch Rod End	7-311511137-23			22,500	
	7-311511137-25			22,500	
	7-311511137-31			22,500	
	7-311511137-33			22,500	
Bearing, Plain Rod End	289332-5			22,500	
Shaft Driven Compressor	7-211710013-9	3,000			
	7-211710013-11	3,000			
	7-211710013-13	3,000			
	7-211710013-15	3,000			
	7-211710013-17	3,000			
	7-211710013-19	3,000			

GO TO NEXT PAGE

**1.138. OVERHAUL AND RETIREMENT SCHEDULE – continued**

Part Name	Part Number	Overhaul Interval Hours	Overhaul Interval Notes	Retirement Interval Hours	Retirement Interval Notes
Main Rotor Swashplate	7-311511101			20,800	
	7-311511101-7			20,800	
	7-311511101-13			11,800	
	7-311511101-17			4,500	
	7-311511101-19			4,500	
	7-311511101-23			4,500	
M/R Swashplate Bearing	7-311511103			2,250	10
	7-311511103-3			2,250	10
	7-311511103-5			2,250	10
M/R Lower Bearing Retainer	7-211511105-9			22,500	
	7-211511105-11			11,800	
M/R Non-Rotating Swashplate	7-311511107			18,500	
M/R Rotating Swashplate	7-311511102			22,500	
M/R Upper Bearing Retainer	7-211511104-7			22,500	
	7-211511104-9			22,500	
M/R Pitch Link Assembly	7-311511135			22,500	
	7-311311135-3			22,500	
	7-311311135-5			22,500	
	7-311311135-7			22,500	
M/R Scissors Assembly	7-311511158-3			22,400	
	7-311511158-5			22,400	
Tail Rotor Swashplate Assembly	7-311527038-7	250			
	7-311527038-9	250			
	7-311527038-11	250			
	7-311527038-13	250			
	7-311527038-15	1,500			3
	7-311527038-17	1,500			3
	7-311527038-19	1,500			3
	7-311527038-601	250			
	7-311527038-603	250			
	7-311527038-901	1,500			3

GO TO NEXT PAGE

**1.138. OVERHAUL AND RETIREMENT SCHEDULE – continued**

Part Name	Part Number	Overhaul Interval Hours	Overhaul Interval Notes	Retirement Interval Hours	Retirement Interval Notes
T/R Pitch Link Assembly	7-311527035-3			22,500	
	7-311527035-5			22,500	
	7-311527035-25			22,500	
	7-311527035-27			22,500	
	7-311527035-29			22,500	
	7-311527035-31			22,500	
	7-311527035-41			22,500	
	7-311527035-43			22,500	
T/R Scissors Link Assembly	7-311527009			22,500	
	7-311527009-5			22,500	
T/R Control Support Bracket	7-311525065			5,300	
T/R Gearbox Studs	HS5155-0377			18,600	4
T/R Actuator Support Assembly	7-311525062			18,000	
	7-311525062-3			18,000	
	7-311525062-5			18,000	
	7-311525062-7			18,000	
	7-311525062-9			18,000	
	7-311525062-11			18,000	
	7-311525062-15			7,800	
	7-311525062-19			7,800	
T/R Directional Bellcrank	7-311525063			18,000	
	7-311520563-3			18,000	
	7-311520563-7			18,000	
	7-311520563-13			7,800	
	7-311520563-17			7,800	
T/R Link Assembly	7-311525064			18,000	
	7-311525064-5			18,000	
	7-311525064-11			7,800	
	7-311525064-21			7,800	
Support Assembly Mixer	7-211160040-5			20,800	
	7-211160040-7			20,800	
Collective Bellcrank	7-311511117			20,800	
	7-311511117-5			20,800	
	7-311511117-7			20,800	
	7-311511117-9			20,800	
	7-311511117-11			20,800	
	7-311511117-13			20,800	

GO TO NEXT PAGE

**1.138. OVERHAUL AND RETIREMENT SCHEDULE – continued**

Part Name	Part Number	Overhaul Interval Hours	Overhaul Interval Notes	Retirement Interval Hours	Retirement Interval Notes
Lateral Bellcrank	7-311511123			22,500	
	7-311511123-5			22,500	
	7-311511123-9			22,500	
	7-311511123-13			22,500	
	7-311511123-17			22,500	
Aft Longitudinal Bellcrank	7-311511125			20,000	
	7-311511125-5			20,000	
	7-311511125-9			20,000	
	7-311511125-13			20,000	
	7-311511125-17			20,000	
Fwd Longitudinal Bellcrank	7-311511127			20,000	
	7-311511127-5			20,000	
Longitudinal Link	7-311511130			21,600	
	7-311511130-5			21,600	
	7-311511130-9			21,600	
	7-311511130-15			21,600	
Bolt, Mixer Pivot Support	7-311160044			20,500	
	7-311160044-3			20,500	
Bolt, Self-Locking, Rotor Cont.	7-211511133			20,800	
	7-211511133-3			20,800	
Bolt, Lateral Bellcrank Support	7-211511134			20,800	
	7-211511134-3			20,800	
Longitudinal Torque Link Assembly	7-311511181			20,100	
	7-311511181-35			20,100	
	7-311511181-39			20,100	
	7-311511181-43			20,100	
Lateral Link	7-311511182			22,500	
	7-311511182-5			22,500	
	7-311511182-11			22,500	
	7-311511182-17			22,500	
Bolt, Aft Long Bellcrank Support	7-211511209			20,000	
	7-211511209-3			20,000	
Bolt, Torque Link Support	7-211511211			20,000	
	7-211511211-3			20,000	

GO TO NEXT PAGE



**1.138. OVERHAUL AND RETIREMENT SCHEDULE – continued**

Part Name	Part Number	Overhaul Interval Hours	Overhaul Interval Notes	Retirement Interval Hours	Retirement Interval Notes
Longitudinal Actuator Support	7-311511175			20,000	
	7-311511175-5			20,000	
	7-311511175-7			20,000	
	7-311511175-11			10,100	
	7-311511175-15			10,100	
	7-311511175-17			10,100	
Collective Actuator Support Assy	7-311511176			20,800	
	7-311511176-5			18,600	
	7-311511176-7			18,600	
Lateral Actuator Support	7-311511139			20,000	
	7-311511139-3			20,000	
	7-311511139-5			4,500	
	7-311511139-7			4,500	
	7-311511139-9			4,500	
Stabilator Actuator	7-311D10018			22,500	
	7-311D10018-3			22,500	
Stabilator Fitting	7-311D10023				5
	7-311D10023-3			22,500	
Mast M/R Support	7-311160020			5,300	
	7-311160020-5			5,300	
Mast Base M/R Support	7-311160035			5,300	
Base Assembly, Mast Support	7-311160030			5,330	
	7-311160030-7			5,330	
Strut, Fwd Center, LH	7-311160055-1			8,050	
Strut, Fwd Center, RH	7-311160055-2			5,240	
Strut, Fwd Side, LH	7-311160060-1			5,240	
Strut, Fwd Side, RH	7-311160060-2			5,240	
Strut, Aft Side, LH	7-311160070-1			12,800	

GO TO NEXT PAGE

**1.138. OVERHAUL AND RETIREMENT SCHEDULE – continued**

Part Name	Part Number	Overhaul Interval Hours	Overhaul Interval Notes	Retirement Interval Hours	Retirement Interval Notes
Strut, Aft Side, RH	7-311160070-2			21,200	
Strut, Aft Center, LH	7-311160085-1			5,240	
Strut, Aft Center, RH	7-311160085-2			5,240	
Spar Box Assembly, Vert Stab	7-311122601			4,500	6
	7-311122601-29			4,500	
	7-311122601-31			4,500	
	7-311122601-33			4,500	
Stabilator Assembly	7-311123600			21,200	7
Wing Assembly, LH	7-311130200-1			22,500	8
	7-311130200-601			22,500	
Wing Assembly, RH	7-311130200-2			22,500	
	7-311130200-602			22,500	
Tail Rotor Brace, Fwd	7-311340185-3			17,900	
	7-311340185-11			17,900	
Tail Rotor Brace, Aft	7-311340185-5			17,900	
	7-311340185-13			17,900	
Stabilator Actuator Fitting Assembly	7-311114201			6,020	
Stabilator Actuator Fitting	7-311123622			6,020	
Eng Mount Spt, Fwd Inbd	7-311670131			22,500	
	7-311670131-3			22,500	
Eng Mount Spt, Inbd, Fwd	7-211671010-601			22,500	9
Rod Assy, Primary Spt Eng Mount	7-211670105-3			22,400	
Eng Mount Fitting Lower, Fwd	7-311670014-3			22,400	

GO TO NEXT PAGE

**1.138. OVERHAUL AND RETIREMENT SCHEDULE – continued**

Part Name	Part Number	Overhaul Interval Hours	Overhaul Interval Notes	Retirement Interval Hours	Retirement Interval Notes
Spt Assy, Eng Mount, Aft	7-311670117			2,500	
	7-311670117-3			2,500	
	7-311670117-11			2,500	
	7-311670117-13			2,500	
	7-311670117-21			4,500	
	7-311670117-23			4,500	
Engine Mount V-Link, Aft	7-311670024			4,500	
Spt Assy, Fwd Eng Mount, LH	7-311113290-3			17,700	
Spt Assy, Fwd Eng Mount, RH	7-311113290-5			17,700	
Spt Assy, Fwd Eng Mount	7-311113292			17,700	
Spt Assy, Aft Eng Mount, LH	7-311113128-3			22,500	
Spt Assy, Aft Eng Mount, RH	7-311113128-4			22,500	
Standpipe, ADS	7-319720011			4,500	
Drive Plate Cover	7-319720014			4,500	
Flexible Support	7-319720015			4,500	
Bearing Housing	7-319720018			4,500	
Bearing	7-319720020			4,500	
Support Housing	7-319720022			4,500	
Power Dist M/R De-Ice	7-311A10025			198,000	
	7-311A10025-3			198,000	
Adapter	7-319720026			4,500	
Soft Mount	7-319720027			3,500	
Shaft Assembly	7-319720028			4,500	
	7-319720028-5			4,500	

**Refer to Section VIII for Cartridge and Propellant Actuated Devices**

GO TO NEXT PAGE

---

**1.138. OVERHAUL AND RETIREMENT SCHEDULE – continued**

---

**NOTE**

**Overhaul Interval Notes:**

1. Covered by special inspection No. 27 in paragraph 1.137 and paragraph 5.1 step e, AVUM/AVIM Manual for Army AH-64A Helicopter.
2. Overhaul interval hours are measured from the time of the last bearing replacement performed by the Allied Signal contract team or from the last complete depot overhaul, whichever is lower.

**Retirement Interval Notes:**

1. Reduce the current retirement life of 5,400 hours to 1,750 hours on Fenn manufactured main rotor drive shafts (P/N 7-211350021 and P/N 7-211350021-3) marked with serial numbers 0052220001 through 0052220357, 1103 through 1111, and FM0253 through FM0263. All other main rotor drive shafts not having the above Fenn serial numbers will retain the retirement life of 5,400 hours.
2. Located on main rotor head assembly drawing 7-311411003 (all bolt dash numbers).
3. See AMSAT-R-EIA (70-62b) Interim Statement of Airworthiness Qualification for AH-64A Helicopter.
4. Included in the T/R output shaft, P/N 7-311340092.
5. Remove from service 1440 days after installation.
6. Includes spar assembly P/N 7-311122604, which includes spar cap P/N 7-311122605.
7. Includes spars P/N 7-311123602, 7-311123605, and 7-311123606.
8. Includes wing spars P/N 7-311130221 and 7-311130251.
9. Includes fitting P/N 7-211671011 and cap P/N 7-211671022.
10. Bearing retirement life under discussion between MDHS and ATCOM engineering. Contact AMSAT-R-EIA, DSN 693-1679 or commercial (314) 263-1679 for disposition instructions before removal. Special inspection No. 26 (para 1.137) remains applicable every 50 hours. Beginning at 1750 hours and each 50 hour inspection thereafter, mandatory rotational inspection of the swashplate with pitch links removed will be added to this special inspection.
11. Magnetic particle inspect 1440 days after installation (TM 55-1500-335-23). Any evidence of cracking or corrosion is cause for rejection. Parts not showing evidence of cracks or corrosion may be reinstalled and used for an additional 180 days.

END OF TASK

## SECTION VIII. CARTRIDGE AND PROPELLANT ACTUATED DEVICES

---

### 1.139. CARTRIDGE AND PROPELLANT ACTUATED DEVICES

---

- a. The following list of items are Class V ammunition items and should be managed in accordance with chapter 11, DA PAM 710-2-1.
- b. Shelf life/Service Life (Retirement Interval) will be in accordance with TB 9-1300-385, MUNITIONS RESTRICTED OR SUSPENDED. Changes to Shelf and Service life appear in Ammunition Supplemental Notices between quarterly revisions. This Manual is updated biannually, request for this document will be referred to Commander, AMCCOM, ATTN: AMSMC-QAS, Rock Island, IL 61299-6000.
- c. Shelf life. The total period of time, beginning the date of manufacture/cure/assembly that an item may remain in the combined wholesale (including manufacture) and retail storage system and still remain suitable for issue to, and use by end user (shelf life is not to be confused with service life which is a measurement of anticipated total in-use time).
- d. Parts can be removed during the inspection nearest the time before removal is due. Exceptions to this are in TM 1-1500-328-23.
- e. Continued operation of the Canopy Removal System (CRS) beyond established retirement life of P/N 7-311112017-31 (1377-MS90) and P/N 7-311112017-37 (1377-MS93) is allowed providing each crewmember is equipped with a survival knife P/N MIL-K-8662E, NSN 7340-00-098-4327.
- f. The computed item replacement, installation date, and lot number shall be recorded on DA form 2408-18 for each installed item.
- g. Be sure to fill out all forms, records, and worksheets required by DA PAM 738-751 when replacing parts.
- h. Unserviceable item shall be tagged with NSN, installation date, removal date, reason for removal, lot number, helicopter type/model and serial number, and aviation unit designation, and returned to the supporting ammunition supply activity in the container to transport the replacement item.
- i. The listing has four headings:
 

NOMENCLATURE	– Name of the part.
PART NUMBER	– Number assigned to the part. Check TM 1-1520-238-23P for part numbers of replacement parts.
NSN	– National Stock Number assigned to the part. Reference TM 1-1520-238-23P.
DODAC	– Department of Defense Ammunition Code. Indicates type of Ammunition and Packaging. Ref DOD Ammo Codes HD bk, SB708-3

GO TO NEXT PAGE

**1.139. CARTRIDGE AND PROPELLANT ACTUATED DEVICES – continued**

Nomenclature	Part Number	NSN	DODAC
Initiator, Cartridge MT06 (3 per)	7-31112017-39 51207-3 51207-7 6260964	1377-01-269-6496	1377-MT06
Severance Device (CA) MS90, Cord, Det	7-31112017-31 51135-1 6260906-1	1377-01-186-9899	1377-MS90
Replaced by Thin Line Explosive SP03, Cord, Det	7-31112017-49	1377-01-356-7842	1377-SP03
Severance Device (CA) MS91, Cord, Det	7-31112017-33 51135-2 6260906-2	1377-01-186-9900	1377-MS91
Severance Device (CA) MS93, Cord, Det	7-31112017-37 51135-4 6260906-4	1377-01-186-9902	1377-MS93
Replaced by Thin Line Explosive SP02, Cord, Det	7-31112017-47	1377-01-356-7841	1377-SP02
Severance Device (CA) MS89, Cord, Det	7-31112017-43 51135-5 6260906-5	1377-01-170-5260	1377-MS89
Severance Device (CA) MS92, Cord, Det	7-31112017-35 51135-7 6260906-7	1377-01-186-9901	1377-MS92
Severance Device (FWD) MS94, Cord, Det	7-31112017-5 51388-1 6260965-1	1377-01-184-6112	1377-MS94
Severance Device (AFT) MS95, Cord, Det	7-31112017-7 51390-1 6260965-3	1377-01-184-6113	1377-MS95
Severance Device (P) MS96, Cord, Det	7-31112017-11 51391-1 6260965-4	1377-01-185-8908	1377-MS96
Severance Assembly (CPG) MS97, Cord, Det	7-31112017-9 51389-1 6260965-2	1377-01-187-4477	1377-MS97

GO TO NEXT PAGE

**1.139. CARTRIDGE AND PROPELLANT ACTUATED DEVICES – continued**

Nomenclature	Part Number	NSN	DODAC
Cartridge, Fire Extinguisher MH92 (6 per) May only be used on HTL Model Fire Extinguishers	30903824-1 1512AS105	1377-01-185-2622	1377-MH92
Cartridge, Impulse MD66 (4 per)	5184850	1377-01-063-3164	1377-MD66
Severance Device MS88, Cord, Det	7-311112017-29 51134-35 6260905-35	1377-01-186-9898	1377-MS88
Severance Device MS83, Cord, Det	7-311112017-27 51134-45 6260905-45	1377-01-170-5261	1377-MS83
Severance Device MS84, Cord, Det	7-311112017-25 51134-57 6260905-57	1377-01-170-5262	1377-MS84
Severance Device MS85, Cord, Det	7-311112017-23 51134-55 6260905-55	1377-01-170-5263	1377-MS85
Severance Device MS86, Cord, Det	7-311112017-21 51134-23 6260905-23	1377-01-170-5264	1377-MS86
Severance Device MS87, Cord, Det	7-311112017-19 51134-49 6260905-49	1377-01-170-5265	1377-MS87
Severance Device MS80, Cord, Det	7-311112017-17 51134-47 6260905-47	1377-01-170-5244	1377-MS80
Severance Device (CA) MS81, Cord, Det	7-311112017-15 51134-53 6260905-53	1377-01-170-5245	1377-MS81
Severance Device (CA) MS82, Cord, Det	7-311112017-13 51134-51 6260905-51	1377-01-170-5246	1377-MS82

END OF TASK

## SECTION IX. FLIGHT SAFETY PARTS PROGRAM

### 1.140. FLIGHT SAFETY PARTS PROGRAM

a. A flight safety part (FSP) is defined as any part, assembly, or installation whose failure, malfunction, or absence could cause loss of aircraft, serious damage to aircraft, death of crewmembers, or serious injury to crewmembers.

b. A Critical characteristic is defined as any feature throughout the life cycle of a FSP, such as a dimension, tolerance, finish, material or assembly, manufacturing process, inspection process, operation, field maintenance requirement, depot overhaul requirement, or other feature that if nonconforming, missing, or degraded, could cause failure or malfunction of a FSP.

c. The following list identifies parts and assemblies under the flight safety parts program. Throughout the maintenance tasks, FLIGHT SAFETY PARTS warnings appear emphasizing that these parts require special handling during maintenance.

d. The list has two headings:

- Part Number – Number assigned to the part. Refer to TM 1-1520-238-23P for part numbers of replacement parts.
- Nomenclature – Name of the part.

Part Number	Nomenclature
Airframe Components	
7-211160040-7	Support Assembly, Rotor
7-311160020-5	Mast, Main Rotor Support
7-311160035-7	Mast Base
7-311160044-3	Bolt, Mixer Support
7-311210100-3	Main Landing Gear Subassembly – Kneeling
7-311210100-4	Main Landing Gear Subassembly – Kneeling
7-311340185-11	Strut, Tail Rotor
7-311340185-13	Strut, Tail Rotor

GO TO NEXT PAGE



**1.140. FLIGHT SAFETY PARTS PROGRAM – continued**

Part Number	Nomenclature
Drive System Components	
7-113100029-3	Gear, Spur
7-113100121-3	Nut, Planet Carrier, Main Transmission
7-113100141-3	Spindle, Main Transmission
7-211310027-3	Gear Cluster
7-211310035-3	Gearshaft, Multiple
7-211310039-5	Gear, Helical, Tail Rotor Output
7-211330021-5	Gear, Bevel
7-211330023-5	Gear, Helical
7-211340021-5	Gear, Spiral Bevel Pinion
7-211340023-5	Gear, Helical
7-211350004-3	Coupling, Tail Rotor
7-211350005-3	Shaft and Carrier Assembly
7-211350006-5	Shaft Assembly, Tail Rotor
7-211350007-5	Bearing Unit, Ball
7-211350021-3	Gearshaft, Spur
7-211350027-3	Shaft, Shouldered
7-311310016-3	Carrier, Hub
7-311310025-3	Gear, Helical
7-311340011-9	Assembly, Housing, Tail Rotor, Gearbox
7-311340012-5	Cover, Gearbox, Tail Rotor
7-311340027-3	Support, Static, Gear
7-311350008-5	Bearing Unit, Ball

GO TO NEXT PAGE

**1.140. FLIGHT SAFETY PARTS PROGRAM – continued**

Part Number	Nomenclature
Flight Control System Components	
7-211511133-3	Bolt, Self-Locking
7-211511134-3	Bolt, Rotor Controls
7-211511209-3	Bolt, Internally Relieved
7-211511211-3	Bolt, Self-Locking
7-311511102-11	Swashplate, Control
7-311511103-5	Bearing, Ball, Annular
7-311511107-13	Swashplate Assembly
7-311511117-13	Bellcrank Assembly
7-311511123-17	Bellcrank Assembly
7-311511125-17	Bellcrank Assembly
7-311511127-7	Bellcrank Assembly
7-311511130-15	Connecting Link, Rigid
7-311511136-9	Barrel, Adjustable Pitch Link
7-311511137-31	Rod End Assembly
7-311511137-33	Rod End Assembly
7-311511139-9	Bracket Assembly, Actuator
7-311511175-17	Bracket Assembly, Actuator
7-311511175-19	Bracket Assembly, Actuator
7-311511181-43	Connecting Link
7-311511182-17	Link Assembly, Main Rotor
7-311511186-19	Bracket Assembly, Collective
7-311525062-19	Support Assembly, Tail Rotor
7-311525063-17	Bellcrank Assembly

GO TO NEXT PAGE

**1.140. FLIGHT SAFETY PARTS PROGRAM – continued**

Part Number	Nomenclature
Flight Control System Components (continued)	
7-311525064-21	Lever, Remote Control
7-311527003-13	Swashplate, Control
7-311527016-7	Bearing Housing, Tail Rotor Rotating
7-311527016-9	Bearing Housing, Tail Rotor Rotating
7-311527035-41	Connecting Link, Rigid
7-311527035-43	Connecting Link, Rigid
7-311527069-3	Bearing Set – Swashplate
Hydraulic System Components	
289300-1019 (7-311820011-13)	Servocylinder
289300-1021 (7-311820011-15)	Servocylinder Assembly
308900-1015 (7-311820012-13)	Servocylinder
308900-1017 (7-311820012-15)	Servocylinder Assembly
289400-1009 (7-311820014-7)	Servocylinder
289400-1011 (7-311820014-9)	Servocylinder Assembly
Rotor Components	
7-311411015-7	Main Rotor Hub
7-311411155-5	Connecting Link, Rigid
7-211411185-3	Pin, Blade, Main Rotor
7-211411199-3	Pin Assembly, Link, Rotor
7-211421008-11	Fork Assembly, Tail Rotor
7-211421035-7	Strap Assembly, Tail Rotor
7-211421037-7	Hub, Tail Rotor
7-311411009-5	Main Rotor Hub
7-311411045-3	Stud Plain

GO TO NEXT PAGE

**1.140. FLIGHT SAFETY PARTS PROGRAM – continued**

Part Number	Nomenclature
Rotor Components (continued)	
7-311411080-7	Plate Assembly, Hub, Main
7-311411088-9	Shoe Assembly, Main Rotor
7-311411096-3	Load Plate, Hub, Main
7-311411102-3	Nut – Hub Retention Main Rotor
7-311411102-5	Nut, Plain, Round
7-311411146-7	Strap Assembly, Main Rotor
7-311411193-15	Bearing Assembly, Rotor
7-311411202-5	Bearing, Roller, Tape
7-311411215-15	Housing Assembly, Pitch
7-311412000-5	Blade, Rotary Wing
7-311412000-3	Blade, Rotary Wing
7-311422030-7	Bracket, Eye, Rotating
7-311422050-9	Blade, Rotary Rudder

END OF TASK

# GLOSSARY

## SECTION I. ABBREVIATIONS

This section lists abbreviations and acronyms peculiar to the helicopter. Other abbreviations and acronyms are in MIL-STD-12.

AC	.....	alternating current
acc	.....	accessory
acft genl	.....	aircraft general
ACM	.....	automatic control module
actr	.....	actuator
ADS	.....	air data system
ADP	.....	air data processor
al aly	.....	aluminum alloy
Alcd	.....	Alclad (aluminum)
AGPU	.....	Aviation ground power unit
ANSI	.....	American National Standards Institute
Appx	.....	appendix
APU	.....	auxiliary power unit
aux	.....	auxiliary
AVIM	.....	aviation intermediate maintenance
AVUM	.....	aviation unit maintenance
AWS	.....	area weapon system
batt	.....	battery
bksp	.....	backspace
BL	.....	buttlane
brk sys	.....	brake system
BRU	.....	boresight reticle unit

bst	boost
BUCS	backup control system
C	Celsius
CDU	control display unit, computer display unit
col	collision
con	contactor
cm	centimeter
CPG	copilot/gunner
CRT	cathode ray tube
CRS	course selector
DAP	display adjust panel
DASEC	digital automatic stabilization equipment computer
DC	direct current
dest	destination
DEU	display electronics unit
DLTU	data link terminal unit
DNS	doppler navigation system
DPLR	doppler
dr sft	drive shaft
DS	drive system
DVO	direct view optics
E/emp	empty
EADI	electronic attitude director indicator
ECS	environmental control system
EETF	electronic equipment test facility
ENCU	environmental control unit
eng instr	engine instrument
EOW	engine out warning
ESDS	electrostatic discharge sensitive

EU ..... electronic unit

F ..... Fahrenheit

FCC ..... fire control computer

FCIC ..... fire control interface components

FCP ..... fire control panel

FD/LS ..... fault detection/location system

flt instr ..... flight instrument

FLIR ..... forward looking infrared radar

FOD ..... foreign object damage

FS ..... fuselage station

FSC ..... fuel signal conditioner

■ FSP ..... flight safety part

g ..... force of gravity

GB ..... gearbox

GCU ..... generator control unit

GFE ..... Government furnished equipment

GPU ..... ground power unit

GRY SC ..... gray scale

GS ..... ground stud

HARS ..... heading attitude reference system

HDU ..... helmet display unit

hg ..... mercury

HMD ..... helmet mounted display

HMS ..... helmet mounted sight

HMU ..... hydromechanical unit

HUD ..... heads up display

hyd/pneu sys ..... hydraulic/pneumatic system

Hz ..... Hertz

ICU ..... integrated control unit

ident	identify/identity
IFF	identification friend or foe
IGB	intermediate gearbox
IHADSS	integrated helmet and display sight system
IHU	integrated helmet unit
ILT	indicating light transmitting
IS	instrument system
J	jack
Jett	jettison
kHz	kilohertz
km	kilometer
LDNS	lightweight doppler navigational system
LDS	load demand spindle
LGS	landing gear system
LH	left-hand
LRU	line replaceable unit
LSR	laser
LVDT	linear variable differential transducer
MAC	maintenance allocation chart
mHz	megahertz
misc instr	miscellaneous instrument
MLG	main landing gear
mm	millimeter
mn xmsn	main transmission
MOC	maintenance operational check
M/R	main rotor
MRTU	multiplexer remote terminal unit
MTC	mass termination connectors



MTOE	modified table of organization and equipment
MUX	multiplex
Nav Instr	navigation Instrument
Ng	engine gas generator rpm
NGB	engine nose gearbox
ninety degree grbx	tail rotor gearbox
N <sub>P</sub>	engine turbine speed
N <sub>R</sub>	engine rotor rpm
NS	nose
NSN	National Stock Number
NVS	night vision
OAT	outside air temperature
ORT	optical relay tube
P	plug
PAS	pressurized air system
PAS	power available spindle
PM	phase maintenance
PMS	preventive maintenance service
PNVS	pilot night vision system
pos	position
pri hyd sys	primary hydraulic system
PRI LTS	primary lights
PYL	pylon
QAA	quick attach assembly
RAI	remote attitude indicator
rcpt	receptacle
res	reserve
RH	right-hand

RPSTL ..... repair parts and special tools list  
rtr sys ..... rotor system  
RTSS ..... remote transmit select switch  
SAI ..... standby attitude indicator  
SDC ..... shaft driven compressor  
SDC ..... signal data converter  
■ SDCC ..... signal data converter computer  
SDD ..... selectable digital display  
SEU ..... sight electronics unit  
SPAD ..... shear pin activated decoupler  
SPR ..... single-point refueling  
SPT ..... support  
SSU ..... sensor surveying unit  
SRU ..... shop replaceable unit  
STAB ..... stabilator  
SYM GEN ..... symbol generator  
SV ..... sight visor  
T ..... to  
TB ..... terminal board  
TADS ..... target acquisition and designation sight  
TGT ..... turbine gas temperature  
THIR ..... ten hour/fourteen day inspection requirements  
TI ..... technical inspector  
TK1-E ..... Tank No. 1-Empty  
TK2-E ..... Tank No. 2-Empty  
TK1-F ..... Tank No. 1-Full  
TK2-F ..... Tank No. 2-Full  
TMDE ..... test, measurement, and diagnostic equipment  
T/R ..... tail rotor

TSEC ..... transmitter security

TV/IR ..... television/infrared radar

U/M ..... unit of measure

VDU ..... video display unit

vlv ..... valve

VSI ..... vertical speed indicator

WL ..... waterline

wpr ..... wiper

wshld ..... windshield

XDCR ..... transducer

XFEED ..... crossfeed

XFER/Trans ..... transfer

XK ..... relay

XFMR ..... transformer

XMTR ..... transmitter

XMSN ..... transmission

## SECTION II. DEFINITION OF UNUSUAL TERMS

### A

Abrasive – Rough (sandpaper, emery paper, file, etc.).

Access – Entrance or opening through which to reach equipment.

Actuated – Moved or put into action.

Aft – Rear.

ALCLAD – Bonded plating on aluminum sheet.

Aline – To position an item or mark to line up with another.

Ambient – Surrounding atmosphere.

Amplifier – Increases sound, light, etc.

Anvil – Hard-faced surface upon which something is hammered or pressed.

Applicable – Relative to, matching, associated with, connected.

Ascent – Upward movement.

Audible – Sound that can be heard.

Audio – Sound reproduction.

Augment – To increase, make more of, to add.

Auxiliary – Extra or reserve unit or source.

### B

Bay – A place on the helicopter that houses systems, parts, or components.

Binds – Does not move freely.

Bulkhead – Wall that separates bays or compartments.

Bus – A point that receives many electrical connections either for grounding or carrying a signal to further points.

Bushing – A round, removable part inserted in an opening to limit size, eliminate abrasion on parts passing through it, or to serve as a guide.

Buttline – Distance left or right of the helicopter centerline.

**C**

Clevis – A U-shaped part with ends drilled to hold controls.

Compartment – An enclosed part of the helicopter.

Component – Parts of an assembly, circuit, or system.

Configuration – The way or shape something is built or put together.

Contact – When two objects touch.

Continuity – Uninterrupted series of power, functions, or signals.

Contracted – Made smaller.

Corrosion – Decay of metal caused by weather, water, temperature, chemical action, etc.

Coupling – Connector or connection joining two parts.

**D**

Detector – A device that seeks and finds heat (fire, signals, etc.).

Detent – Notch or groove that holds one part to another.

Diaphragm – A thin, flexible disk.

Diffuser – Scatters. Deflects air or energy in several directions.

Duckbill – Shop term for pliers with broad flat jaws.

Duct – Tube that directs flow of air or exhaust.

**E**

Eductor – An injector-type device for mixing two fluids.

Elongated – Made longer.

Empennage – The stabilator and vertical stabilizer.

Energized – To start power.

Environment – The air around us.

Expendable – Can be discarded after use.

External – Outside or outer.

Extractor – A device for removing something.

**F**

Fairing – A cover made to streamline a surface.

Flange – An angled or raised portion of a part; usually for fastening or fitting to another part.

Flexible – Easily bent or shaped.

Flow Rate – Amount of liquid, gas, or air passing a specific point in a measured amount of time.

Forward – Toward the front of the helicopter.

Fragment – Small particle or piece.

Friction – When two objects or surfaces rub together.

Fuselage Station – Distance from a point in front of the helicopter.

**G**

Galling – Transfer of metal from one surface to another surface by welding and breakaway of particles during sliding friction contact.

Glazing (Glazed) – Appearance of being covered by a glassy film.

**H**

Hoist – To raise by mechanical means. The machine to do so.

Horizontal – Parallel to the horizon or a baseline (across).

Housing – An enclosure in which mechanisms function.

**I**

Impact – Two or more objects coming together with force.

Inboard – Toward the center of the helicopter.

Initial – The first.

Inlet – An opening for intake of air, gas, or fluid.

Interchangeable – Can be used in place of a similar item to do the same job.

Isolate – To separate one item from others.

**J**

**K**

**L**

Lateral – Coming from the side.

Longitudinal – With the length, or lengthwise dimension.

**M**

Manifold – A housing with two or more openings to collect and direct flow of liquid, air, or gas.

Mate – To join two items.

Mode – A particular way, manner, angle, condition, or arrangement of operation.

Mount – To attach in proper position.

**N**

Nomenclature – Name of an item. May include serial numbers or other information.

**O**

Obstruction – Something in the way. An interference.

Orifice – An opening through which something may pass.

Outboard – Outward and away from the center of the helicopter.

Outlet – A point from which something is allowed to exit.

Overboard – To go out of or away from the helicopter.

**P**

Particle – A very small (sometimes microscopic) part of something.

Pitch – Up-and-down movement. Blade angle in relation to horizontal or vertical.

Pivot – A shaft, pin, or part on which something turns or revolves.

Port – An opening to allow flow or venting of air, liquid, or gas.

Primary – The main or principal one.

Proximity – Near, or within close range.

**Q**

**R**

Remote – A considerable distance away but in communication range.

Retaining – Describes a device or part that holds or restrains.

**S**

Scoring – Lines, grooves, or scratches worn into a surface.

Seat – Special surface or recess in which a part functions or rests. To place a part on that surface or recess.

Secondary – Subordinate. Not first in order of importance or function.

Sequence – The order in which things occur or are done.

Shim – A thin piece of material used to fill in space between parts for support, leveling, or adjustment.

Stable – Steady, dependable, not subject to changing course.

Stability – Steadiness, dependability.

Standby – A device or system ready for operational use but held in reserve.

Station – Positions on the helicopter measured from a point in front of the nose.

Surge – Sudden rise.

Swivel – To rotate in place.

System – A group of parts working together.

**T**

Torque – Measurement of the tightness of threaded hardware. A torque wrench is used to measure (and control) the tightness of bolts, screws, nuts, etc.

Troubleshooting – Steps to locate and correct problems in systems.

**U**

Union – A point of connection where items are joined.

Utility – Serves for general, rather than special, use.

**V**

Vertical – Straight up and down; 90 degrees to the horizon.

**W**

Waterline – Distance from a point below the helicopter parallel to the fuselage center line.



X

Y

Z

## ALPHABETICAL INDEX

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
<b>A</b>			
AC Generator No. 1 Removal/Installation .....	9.26	Access Door B60R Removal/ Installation, Ground Service .....	2.42A
AC Generator No. 2 Removal/Installation .....	9.27	Access Door Canopy Pawl Fastener Removal/Installation, Pilot/CPG Station .....	2.51
Accelerometer Removal/Installation, Intermediate Gearbox .....	6.129	Access Door Latch Replacement .....	2.33
Accelerometer Removal/Installation, Tail Rotor Gearbox .....	6.139	Access Door Lower Hinge Butt Removal/Installation, CPG Station ..	2.58
Accelerometer Removal/Installation, Pilot .....	8.33	Access Door Lower Hinge Butt Removal/Installation, Pilot Station ...	2.66
Accelerometer Replacement, CPG Track/Balance .....	9.128	Access Door Mechanism Repair (AVIM), CPG Station .....	2.56
Accelerometer Replacement, Pilot Track/Balance .....	9.129	Access Door Mechanism Repair (AVIM), Pilot Station .....	2.64
Access and Ventilation Door Assembly Door Linkage Idler Replacement, Engine .....	2.143	Access Door Removal/Installation, Forward Avionics Bay .....	2.43
Access and Ventilation Door Assembly Latch Replacement, Engine .....	2.142	Access Door Removal/Installation, Pilot Station .....	2.62
Access and Ventilation Door Assembly Rig Connecting Link Actuating Link Rod and Rod End Clevis Replacement, Engine .....	2.145	Access Door Replacement, Engine ....	2.148
Access and Ventilation Door Assembly Rig Connecting Link Removal/Installation, Engine .....	2.144	Access Door Seal Replacement, Canopy .....	2.40
Access Cover Removal/Installation, Windshield Anti-Ice Temperature Control Box .....	12.67	Access Door Strut Pulley Removal/Installation, CPG Station ..	2.57
Access Cover Removal/Installation, Aft Fuel Cell Access Panel and .....	10.32	Access Door Strut Pulley Removal/Installation, Pilot Station ...	2.65
Access Cover Replacement (AVIM), Pilot Fuel Panel Electronic Component Assembly and .....	10.59	Access Door Switch Removal/Installation, External Power	9.39
Access Covers Removal/Installation, Tailboom Closeout Fairing .....	2.127	Access Door L210 or R210 Removal/ Installation, Transmission Access Panel .....	2.126C
Access Door Adjustable Tension Thumb Latch and Hook Replacement/Adjustment .....	2.44	Access Door L325 Removal/ Installation, Left Hand .....	2.126B
Access Door Adjustment, CPG Station .	2.55	Access Door T250L or T250R Removal/Installation .....	2.125
Access Door Adjustment, Pilot Station .	2.63	Access Door T290L or T290R Removal/Installation .....	2.126
		Access Door Upper Hinge Butt Removal/Installation, CPG Station ..	2.59
		Access Door Upper Hinge Butt Removal/Installation, Pilot Station ...	2.67
		Access Panel and Access Cover Removal/Installation, Aft Fuel Cell ...	10.32
		Access Panel Removal/Installation, Aft Fuel Cell Forward .....	10.33

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Access Provisions .....	2.2	Accumulator Nitrogen Manifold Pressure Gage Replacement, Utility Hydraulic Return .....	7.96
Access Provisions – Bottom Side .....	2.6	Accumulator Nitrogen Manifold Removal/Installation, Utility Hydraulic	7.85
Access Provisions – Inspection/Repair .	2.1	Accumulator Nitrogen Manifold Replacement, Utility Hydraulic Return	7.98
Access Provisions – Left Side .....	2.3	Accumulator Nitrogen Manifold Tube Removal/Installation, Utility Hydraulic Return .....	7.97
Access Provisions – Right Side .....	2.4	Accumulator One-Way Restrictor Valve Replacement, Utility Hydraulic .....	7.86
Access Provisions – Top Side .....	2.5	Accumulator Piston Packing Replacement (AVIM), Utility Hydraulic	7.92
Access Provisions – Top Side Engine Work Platform and Equipment Bay ..	2.7	Accumulator Removal/Installation, Utility Hydraulic .....	7.82
Accessing, Pilot/CPG Station .....	1.56	Accumulator Removal/Installation, Utility Hydraulic Return .....	7.94
Accessory Drive Lube Pump Removal/Installation, Main Transmission .....	6.71	Accumulator Removal/Installation, Utility Pneumatic .....	7.99
Accessory Pump Filter Bowl, Element, and Pressure Indicator Removal/Installation, Main Transmission .....	6.70	Accumulator Removal/Installation, Winterization .....	16.31
Accessory Pump Oil Pressure Switch Removal/Installation, Main Transmission .....	6.69	Accumulator Servicing – Nitrogen, Utility Hydraulic .....	1.36
Accumulator APU Start Check Valve Replacement (AVIM), Utility Hydraulic	7.91	Accumulator Servicing – Nitrogen, Utility Hydraulic Return .....	1.37
Accumulator APU Start Motor Pressure Hose Replacement, Utility Hydraulic .	7.89	Accumulator Venting, Utility Hydraulic ..	1.38
Accumulator APU Start Motor Return Hose Replacement, Utility Hydraulic .	7.90	Accumulator Venting, Utility Hydraulic Return .....	1.39
Accumulator APU Start Solenoid Valve Replacement, Utility Hydraulic .....	7.88	Action Switch Replacement, Cyclic Stick Weapons .....	11.51
Accumulator Check Valve Replacement, Utility Hydraulic .....	7.87	Actuated Devices, Cartridge and Propellant .....	1.139
Accumulator Leak Check (AVIM), Utility Hydraulic .....	7.93	Actuating Cylinder Air Tube Replacement, Left .....	4.92
Accumulator Nitrogen Manifold Fill/Bleed Valve Replacement, Utility Hydraulic .....	7.83	Actuating Cylinder Air Tube Replacement, Right .....	4.93
Accumulator Nitrogen Manifold Fill/Bleed Valve Replacement, Utility Hydraulic Return .....	7.95	Actuating Cylinder Flexible Air Hose Replacement, Left or Right .....	4.91
Accumulator Nitrogen Manifold Pressure Gage Replacement, Utility Hydraulic .....	7.84		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Actuating Cylinder Fuse Pin Replacement, Tail Landing Gear . . . .	3.37	Actuator Hose and Nipple Removal/Installation, Pylon . . . . .	16.10
Actuating Cylinder Lock Release Handle Replacement, Tail Landing Gear . . . . .	3.35	Actuator Hose Replacement, No. 1 or No. 2 Engine Louver . . . . .	4.62
Actuating Cylinder Lock Switch Assembly Replacement, Tail Landing Gear . . . . .	3.34	Actuator Hose Replacement, Tail Wheel Lock . . . . .	7.106
Actuating Cylinder Removal/Installation, No. 2 . . . . .	4.90	Actuator Removal/Installation, No. 1 and No. 2 Engine Louver . . . . .	4.57
Actuating Cylinder Removal/Installation, Tail Landing Gear . . . . .	3.32	Actuator Removal/Installation, Stabilator	11.224
Actuating Cylinder Spring Replacement (AVIM), Tail Landing Gear . . . . .	3.33	Actuator Rod End Removal/Installation, Pylon . . . . .	16.13
Actuating Cylinder Wheel Lock Target Replacement, Tail Landing Gear . . . .	3.36	Adapter and Elbow Removal/Installation, No. 2 Engine Compressor Bleed Air . . . . .	4.76
Actuating Link Rod and Rod End Clevis Replacement, Engine Access and Ventilation Door Assembly Rig Connecting Link . . . . .	2.145	Adapter and Seal Removal/Installation, Main Transmission Compressor Drive . . . . .	6.54
■ Actuator (Goodyear/ABSC) Disassembly/Assembly (AVIM), Main Transmission Rotor Brake . . . . .	6.68	Adapter and Tail Rotor Gearbox Fixture Installation, Intermediate Gearbox Fixture . . . . .	1.126
■ Actuator (Goodyear/ABSC) Removal/Installation, Main Transmission Rotor Brake . . . . .	6.64	Adapter and Tail Rotor Gearbox Fixture Removal, Intermediate Gearbox Fixture . . . . .	1.127
Actuator (Parker Hannifin) Disassembly/Assembly (AVIM), Main Transmission Rotor Brake . . . . .	6.67A	Adapter Installation, Component Fixture	1.122
Actuator (Parker Hannifin) Removal/Installation, Main Transmission Rotor Brake . . . . .	6.65	Adapter Installation, Container Transport . . . . .	1.120
Actuator and Top Plate Removal/Installation, Pylon . . . . .	16.9	Adapter Installation, Engine Buildup . . .	1.130
Actuator Cylinder Removal/Installation, Pylon . . . . .	16.12	Adapter Installation, Main Rotor Blade .	1.112
Actuator Disassembly/Assembly, Stabilator . . . . .	11.225	Adapter Removal, Component Fixture .	1.123
Actuator Filter Hose and Adapter Removal/Installation, Pylon . . . . .	16.11	Adapter Removal, Container Transport .	1.121
Actuator Fitting Removal/Installation, Horizontal Stabilator . . . . .	2.114	Adapter Removal, Engine Buildup . . . .	1.131
		Adapter Removal, Main Rotor Blade . . .	1.113
		Adapter Removal/Installation, Aft Fuel Cell Upper Vent . . . . .	10.31
		Adapter Removal/Installation, Fuel . . . .	10.96
		Adapter Removal/Installation, Ground Support Air Coupling and . . . . .	7.143
		Adapter Removal/Installation, Main Landing Gear Jack Pad . . . . .	3.5
		Adapter Removal/Installation, Main Transmission Generator Spline . . . . .	6.72

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Adapter Removal/Installation, Pilot Boresight Reticle Unit (BRU) Mount .	2.187	Advisory Switch Removal/Installation, Pilot Power Quadrant Panel – . . . . .	4.190
Adapter Removal/Installation, Pylon Actuator Filter Hose and . . . . .	16.11	Aerial Bracket Removal/Installation, Pylon . . . . .	16.14
Adapter Replacement, Hydraulic . . . . .	7.112	Aft Access Panel and Aft Cover Removal/Installation, Forward Fuel Cell . . . . .	10.8
Adapter Replacement, KYK Interface Connector . . . . .	9.156	Aft Air Tube Removal/Installation, Environmental Control Unit . . . . .	7.155
Adapter, Engine Teardown – No. 1 and No. 2 Engine Installation on Handling	4.32	Aft Air Vent/Pressure Relief Valve Removal/Installation . . . . .	10.41
Adapter, Engine Teardown – No. 1 and No. 2 Engine Removal from Handling	4.28	Aft Avionics Bay Distribution Box Disassembly/Assembly . . . . .	9.57
Adhesive Seal Replacement, Nose Gearbox Shroud . . . . .	2.124A	Aft Avionics Bay Distribution Box Removal/Installation . . . . .	9.55
Adjust Handle Support Assembly Removal/Installation, Pedal . . . . .	11.175	Aft Avionics Bay Distribution Box Transformer T1 or T2 Replacement (T700-GE-701) . . . . .	9.56
Adjust Spring Removal/Installation, Directional Control Pedal . . . . .	11.237	Aft Avionics Bay Filters Replacement . .	16.35
Adjustable Cyclic Stick Link Removal/Installation, CPG . . . . .	11.68	Aft Avionics Bay Isolation Transformer Filter Box Disassembly/Assembly (AVIM) . . . . .	9.59
Adjustable Rod End Bearing Assembly Replacement/ Adjustment, Flight Control System Push-Pull Rod . . . . .	11.2	Aft Avionics Bay Isolation Transformer Filter Box Removal/Installation . . . . .	9.58
Adjustable Tension Thumb Latch and Hook Replacement/Adjustment . . . . .	2.44	Aft Avionics Bay Thermostatic Switch Replacement, ECS . . . . .	13.42
Adjusting Crank Assembly Removal/Installation (AVIM), Directional Control Pedal . . . . .	11.238	Aft Bumper Replacement, Pylon Fairing	16.26
Adjustment – Main Rotor Gearshaft, Support (Static) Mast, or Swashplate Hoisting, Crane . . . . .	1.102	Aft Cable Installation, No. 1 Engine Load Demand Spindle . . . . .	4.177
Adjustment (T700–GE–701 Engine), Engine Turbine Speed Control Unit . .	4.136	Aft Cable Installation, No. 1 Engine Power Available Spindle . . . . .	4.171
Adjustment (T700–GE–701C Engine), Engine Turbine Speed Control Unit . .	4.137	Aft Cable Installation, No. 2 Engine Load Demand Spindle . . . . .	4.179
Adjustment – Main Transmission Hoisting, Crane . . . . .	1.103	Aft Cable Installation, No. 2 Engine Power Available Spindle . . . . .	4.174
Adjustment Criteria, Linear Variable Differential Transducer (LVDT) . . . . .	11.217	Aft Cable Removal, No. 1 Engine Load Demand Spindle . . . . .	4.176
Advisory Light Replacement, CPG FUEL XFER . . . . .	9.123	Aft Cable Removal, No. 1 Engine Power Available Spindle . . . . .	4.170
Advisory Light Replacement, Pilot FUEL XFER . . . . .	9.124	Aft Cable Removal, No. 2 Engine Load Demand Spindle . . . . .	4.178
		Aft Cable Removal, No. 2 Engine Power Available Spindle . . . . .	4.173

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Aft Cable Spring Tension Clip Removal/Installation, No. 1 Engine Load Demand Spindle/Power Available Spindle . . . . .	4.180	Aft Fuel Cell Filler Neck Removal/Installation . . . . .	10.34
Aft Cable Spring Tension Clip Removal/Installation, No. 2 Engine Load Demand Spindle/Power Available Spindle . . . . .	4.181	Aft Fuel Cell Forward Access Panel Removal/Installation . . . . .	10.33
Aft Cable Support Removal/Installation, No. 1 Engine Power Control Gearbox	4.172	Aft Fuel Cell Four-Way Check Valve Removal/Installation . . . . .	10.36
Aft Canopy Windshield Panel Removal/Installation, Upper . . . . .	2.74	Aft Fuel Cell Fuel Level Control Pilot Valve Removal/Installation . . . . .	10.37
Aft Canopy Windshield Panel Removal/Installation, Left . . . . .	2.71	Aft Fuel Cell Fuel Outlet Breakaway Valve Removal/Installation . . . . .	10.43
Aft Cockpit Stow Box Cover Assembly Removal/Installation . . . . .	2.160	Aft Fuel Cell Fuel Quantity Transmitter Removal/Installation . . . . .	10.39
Aft Cover Removal/Installation, Forward Fuel Cell Aft Access Panel and . . . . .	10.8	Aft Fuel Cell Fuel Shutoff Valve Removal/Installation . . . . .	10.40
Aft Deck Left Side Connector Bracket and Wire Harness Support Bracket Removal/Installation . . . . .	9.151	Aft Fuel Cell Fuel Valve Isolation Switch Removal/Installation . . . . .	10.48
Aft Deck Right Side Connector Bracket and Wire Harness Support Bracket Removal/Installation . . . . .	9.150	Aft Fuel Cell Fuel/Defuel Check Valve Removal/Installation . . . . .	10.35
Aft Door Latch Structural Plate and Canopy Lock Switch Removal/Installation . . . . .	2.69	Aft Fuel Cell Installation . . . . .	10.50
Aft Engine Mount Removal/Installation, Link Assembly . . . . .	4.87	Aft Fuel Cell Lower Vent Tube and Lightning Arrestor Removal/Installation . . . . .	10.45
Aft Engine Mount Support Bearing Replacement (AVIM), No. 1 or No. 2 . . . . .	4.85A	Aft Fuel Cell Nitrogen Inert Breakaway Valve Hose Removal/Installation . . . . .	10.131
Aft Engine Mount Support Removal/Installation, No. 1 or No. 2 . . . . .	4.85	Aft Fuel Cell Nitrogen Inert Breakaway Valve Removal/Installation . . . . .	10.119
Aft Fitting Removal/Installation, APU . . . . .	15.35	Aft Fuel Cell Nitrogen Inert Check Valve Removal/Installation . . . . .	10.133
Aft Fuel Cell Access Panel and Access Cover Removal/Installation . . . . .	10.32	Aft Fuel Cell Nitrogen Inert Orifice Hose Removal/Installation . . . . .	10.132
Aft Fuel Cell Backing Board Removal/Installation, Forward or . . . . .	10.51	Aft Fuel Cell Nitrogen Inert Outlet Orifice Removal/Installation . . . . .	10.120
Aft Fuel Cell Ballistic Foam Repair/Replacement, Forward or . . . . .	10.53	Aft Fuel Cell Pilot Valve Hose Replacement . . . . .	10.38
Aft Fuel Cell Engine Fuel Supply Hose Replacement . . . . .	10.47	Aft Fuel Cell Refueling Breakaway Valve Removal/Installation . . . . .	10.42
		Aft Fuel Cell Refueling Hose Replacement . . . . .	10.44
		Aft Fuel Cell Removal . . . . .	10.49
		Aft Fuel Cell Upper Fuel Supply Hose Removal/Installation . . . . .	10.46
		Aft Fuel Cell Upper Vent Adapter Removal/Installation . . . . .	10.31

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Aft Fuel Cell Upper Vent Tube Replacement .....	10.30	Aft Right Center Transmission Rotor Support Strut Assembly Removal/Installation .....	2.91
Aft Fuel Quantity Transmitter Removal/Installation, Forward Fuel Cell .....	10.6	Aft Side Transmission Rotor Support Strut Assembly Removal/Installation, Left .....	2.94
Aft Fuel/Defuel Check Valve Disassembly/Assembly (AVIM), Forward and .....	10.20	Aft Side Transmission Rotor Support Strut Assembly Removal/Installation, Right .....	2.95
Aft Gear Fitting Replacement, Tail Rotor Gearbox .....	6.141	Aft Strut Removal/Installation, Tail Rotor Gearbox .....	6.140
Aft Hanger Bearing and Support Removal/Installation .....	6.10	Aft Support Strut and Rod End Removal/Installation, APU .....	15.31
Aft Hanger Bearing Coupling Removal/Installation .....	6.9	Aft Tip Weight Removal/Installation (AVIM) Main Rotor Blade Forward and .....	5.14A
Aft Inboard Engine Mount Support Bearing Bore Repair, Firewall Assembly No. 1 or No. 2 .....	2.150A	Aft Vaneaxial Fan Removal/Installation .	13.33
Aft Inboard Engine Mount Support Bearing Replacement, Firewall Assembly No. 1 or No. 2 .....	2.150	Aft Vertical Cockpit Glareshield Removal/Installation, Left .....	2.159
Aft Inboard Mount Removal/Installation, No. 1 and No. 2 Engine .	4.115	Aft Vertical Cockpit Glareshield Removal/Installation, Right .....	2.158
Aft Inboard Mount/Aft Lower Mount Bushing Removal/Installation (AVIM), No. 1 or No. 2 Engine .....	4.56	Aft Warm Air Supply Tube Replacement, Ice Detector .....	7.157
Aft Left Center Transmission Rotor Support Strut Assembly Removal/Installation .....	2.90	Air Check Valve Replacement, Primary Hydraulic Manifold .....	7.13
Aft Link Removal/Installation, CPG Cyclic Stick .....	11.70	Air Check Valve Replacement, Utility Hydraulic Manifold .....	7.66
Aft Longitudinal Bellcrank Removal/Installation .....	11.12	Air Connection Flange Removal/Installation, Start Air Valve and Ground .....	7.142
Aft Lower Mount Bushing Removal/Installation (AVIM), No. 1 or No. 2 Engine Aft Inboard Mount/ .....	4.56	Air Connection Manifold, Engine Air Flexible Connection Housing, and Utility Tube Removal/Installation, Ground .....	7.144
Aft Lower Mount Removal/Installation, No. 1 and No. 2 Engine .	4.116	Air Control Valve Inboard Tube Replacement, Fuel Transfer Pump/ .	10.81
Aft Mount Pads Sleeve Bushing Replacement (AVIM), Gun and Ammo Support .....	2.37	Air Control Valve Outboard Tube Replacement, Fuel Transfer Pump/ .	10.80
Aft Oil Jet Removal/Installation, Main Transmission .....	6.52	Air Control Valve Removal/Installation, Fuel Transfer .....	10.83
Aft Poppet Draincock and Control Removal/Installation, Forward and ..	10.3	Air Cooling Duct Assembly Removal/Installation, ENCU .....	13.4
Aft Refueling Hose Replacement .....	10.84	Air Cooling Duct Assembly Removal/Installation, Forward Avionics Bay .....	13.32

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Air Coupling and Adapter Removal/Installation, Ground Support	7.143	Air Flexible Connection Flanged Seal Replacement, Secondary	7.140
Air Data System (ADS) Mast Removal/Installation, Main Rotor De-Ice Power Distributor and	6.90	Air Flexible Connection Housing Removal/Installation, No. 2 Engine Start Air Tube and	7.146
Air Data System (ADS) Mast Repair (AVIM), Main Rotor	6.91	Air Flexible Connection Housing Removal/Installation, Standby System Engine Bleed Air Tube and Engine	7.141
Air Data System (ADS) Standpipe Removal/Installation, Main Rotor	6.94	Air Hose Removal/Installation, No. 2 Engine Compressor Bleed	4.75
Air Duct Identification, ECS	13.2	Air Hose Replacement, Left or Right Actuating Cylinder Flexible	4.91
Air Duct Installation, Engine Buildup – No. 1 and No. 2 Engine	4.47	Air Inlet Assembly Seal Replacement, Engine	4.83
Air Duct No. 1 Removal/Installation	13.17	Air Inlet Duct Installation, SDC	7.130
Air Duct No. 10 Removal/Installation	13.26	Air Inlet Duct Removal, SDC	7.129
Air Duct No. 11 Removal/Installation	13.27	Air Inlet Hose Removal/Installation, Nitrogen Inerting Unit (NIU) Cooling	10.129
Air Duct No. 2 Removal/Installation	13.18	Air Inlet Hose Replacement, Fuel Boost Pump	10.118
Air Duct No. 3 Removal/Installation	13.19	Air Inlet Installation, Engine Buildup – No. 1 and No. 2 Engine	4.45
Air Duct No. 4 Removal/Installation	13.20	Air Inlet Removal, Engine Teardown – No. 1 and No. 2 Engine	4.15
Air Duct No. 5 Removal/Installation	13.21	Air Mixer and Hose Removal/Installation, Defog System	13.45
Air Duct No. 6 Removal/Installation	13.22	Air Outlet Duct Replacement, ENCU	13.5
Air Duct No. 7 Removal/Installation	13.23	Air Particle Separator (With Filter) Removal/Installation	7.117
Air Duct No. 8 Removal/Installation	13.24	Air Particle Separator Filter Replacement	7.118
Air Duct No. 9 Removal/Installation	13.25	Air Particle Separator Removal/Installation	7.116
Air Duct Removal, Engine Teardown – No. 1 and No. 2 Engine	4.13	Air Pressure Fluid Manifold Installation, Aircraft	7.138
Air Duct Removal/Installation, Forward Avionics Bay Vaneaxial Fan	13.31	Air Pressure Fluid Manifold Removal, Aircraft	7.137
Air Duct Removal/Installation, No. 1 Engine	4.77	Air Pressure Regulating Valve Removal/Installation	7.148
Air Duct Removal/Installation, No. 2 Engine	4.78	Air Shutoff Valve/Check Valve Removal/Installation, Bleed	7.139
Air Exhaust Hose Removal/Installation, Nitrogen Inerting Unit (NIU) Cooling	10.130		
Air Exhaust Vent Tube Coupler Hose Replacement, Fuel Transfer Valve	10.78		
Air Exhaust Vent Tube Replacement, Fuel Transfer Valve	10.79		
Air Filter Replacement, APU	16.36		
Air Filter Replacement, Primary and/or Utility Hydraulic Manifold	7.160		



<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Air Start Line Removal/Installation, No. 2 Engine .....	7.145	Air System Removal, Engine Teardown – No. 2 Engine Anti-Ice and Bleed ..	4.22
Air Starter and Regulating Valve Installation, Engine Buildup – No. 1 Engine .....	4.38	Air System Tee and Check Valve Removal/Installation, Pressurized ...	7.136
Air Starter and Regulating Valve Installation, Engine Buildup – No. 2 Engine .....	4.39	Air Temperature Indicator Removal/Installation, Outside .....	8.47
Air Starter and Regulating Valve Removal, Engine Teardown – No. 1 Engine .....	4.19	Air Tube and Engine Air Flexible Connection Housing Removal/Installation, Standby System Engine Bleed .....	7.141
Air Starter and Regulating Valve Removal, Engine Teardown – No. 2 Engine .....	4.20	Air Tube Removal/Installation, Environmental Control Unit Aft .....	7.155
Air Starter Output Shaft Replacement, Engine .....	4.82A	Air Tube Removal/Installation, Environmental Control Unit Forward .	7.153
Air Starter Removal/Installation, No. 1 Engine .....	4.81	Air Tube Removal/Installation, No. 1 Engine Compressor Bleed .....	4.74
Air Starter Removal/Installation, No. 2 Engine .....	4.82	Air Tube Replacement, Left Actuating Cylinder .....	4.92
Air Supply Hose Removal/Installation, Nitrogen Inerting Unit (NIU) Pressurized .....	10.127	Air Tube Replacement, Right Actuating Cylinder .....	4.93
Air Supply Inlet Hose Removal/Installation, Nitrogen Inerting Unit (NIU) Pressurized .....	10.128	Air Turbine Starter Assembly Servicing .	1.25
Air Supply Valve Replacement, Ice Detector Warm .....	7.156	Air Turbine Starter Flow Switch and Turbine Speed Cutout Flow Switch Replacement .....	9.152
Air System Fuel Boost Pump Hose Replacement, Pressurized .....	7.147	Air Valve and Ground Air Connection Flange Removal/Installation, Start ...	7.142
Air System Inspection, Pressurized ...	7.114	Air Vehicle Sling Installation/Removal ..	1.79
Air System Installation, Engine Buildup – No. 1 Engine Anti-Ice and Bleed ..	4.40	Air Vent/Pressure Relief Valve Removal/Installation, Aft .....	10.41
Air System Installation, Engine Buildup – No. 2 Engine Anti-Ice and Bleed ..	4.41	Air Vent/Pressure Relief Valve Removal/Installation, Forward Fuel Cell .....	10.15
Air System Leak Check, Pressurized ...	7.115	Air, External Power Application – .....	1.71
Air System Left and Right Auxiliary Fuel Quick-Disconnect Branch Tubes and Couplings Removal/Installation, Pressurized .....	7.152	Aircraft Air Pressure Fluid Manifold Installation .....	7.138
Air System Removal, Engine Teardown – No. 1 Engine Anti-Ice and Bleed ..	4.21	Aircraft Air Pressure Fluid Manifold Removal .....	7.137
		Aircraft and Aircraft Component Washing, Cleaning, and Fresh Water Rinse Procedures .....	1.53
		Aircraft Cable Cutter Blades Replacement, Wire Strike Protection	2.195

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Aircraft Cable Cutter Removal/Installation (AVIM), Wire Strike Protection .....	2.193	Antenna Pan Mount Fuselage Repair (AVIM), Wide Band FM .....	2.101A
Aircraft Inventory .....	C.8	Anti-Abrasive Coating Application .....	2.35
Aircraft Inventory Master Guide .....	C.7	Anti-Abrasion Provision Repair .....	2.29
Airframe Station Locations .....	1.11	Anti-Collision Light Lens Replacement .	9.97
Airframe Step Assembly Removal/Installation, Forward Avionics Bay .....	2.45	Anti-Collision Light Power Supply Removal/Installation .....	9.100
Airspeed Indicator Removal/Installation, Pilot/CPG .....	8.30	Anti-Collision Light Red Flashtube Lamp Replacement .....	9.98
Airspeed Transducer Removal/ Installation, Stabilator .....	9.148	Anti-Collision Light Subassembly Replacement .....	9.99
Alarm Control Unit Replacement Temperature .....	9.125	Anti-Collision Light Unit Removal/Installation .....	9.96
Allocation Chart (Section II), Use of the Maintenance .....	B.4	Anti-Flail Bearing Nut Disassembly/Assembly, Engine Nose Gearbox .....	6.34
Allocation Chart, Maintenance .....	B.3	Anti-Flail Support Removal/Installation, No. 4 Tail Rotor Drive Shaft, Damper, and .....	6.8
Altimeter Removal/Installation, Pilot/CPG Barometric .....	8.31	Anti-Flail Support Removal/Installation, No. 5 Tail Rotor Drive Shaft, Damper and .....	6.11
Ammo Support Aft Mount Pads Sleeve Bushing Replacement (AVIM), Gun and .....	2.37	Anti-Flail Support Removal/Installation, No. 7 (APU) Drive Shaft and .....	6.16
Ammo Support Forward Mount Pad Sleeve Bushing Replacement (AVIM), Gun and .....	2.38	Anti-Ice and Bleed Air System Installation, Engine Buildup – No. 1 Engine .....	4.40
Ammunition Magazine Strut and Eye Bolt Removal/Installation .....	2.82	Anti-Ice and Bleed Air System Installation, Engine Buildup – No. 2 Engine .....	4.41
Amplifier Replacement, Engine Flame Detector Control .....	12.26	Anti-Ice and Bleed Air System Removal, Engine Teardown – No. 1 Engine ...	4.21
Analog or Interface Circuit Card on Torque, TGT, Fuel, and Ng Indicators Replacement (AVIM) .....	8.11	Anti-Ice and Bleed Air System Removal, Engine Teardown – No. 2 Engine ...	4.22
Anchor Strut Rod Removal/Installation, Canopy Door .....	2.68	Anti-Ice Panel Assembly Removal/Installation, Pilot .....	12.47
Angle Bracket Replacement, APU Wiring Harness .....	TM 1-2835-213-23	Anti-Ice Panel Indicator Switch Replacement (AVIM), Pilot .....	12.52
Angle Measurement, Main Rotor Blade Droop .....	5.10	Anti-Ice Panel Light Indicating Panel Receptacle Replacement (AVIM), Pilot .....	12.51
Angle, Positioning Helicopter for Desired Deck .....	1.133	Anti-Ice Panel Light Indicating Panel Removal/Installation, Pilot .....	12.48

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Anti-Ice Panel Receptacle Replacement, Pilot .....	12.50	Anti-Peel Doubler Repair (AVIM), Main Rotor Blade .....	5.12
Anti-Ice Panel Switch Replacement (AVIM), Pilot .....	12.49	Anti-Skid Coating Application .....	2.36
Anti-Ice Relay Box Disassembly/Assembly, Engine .....	12.58	Application – Air, External Power .....	1.71
Anti-Ice Relay Box Removal/Installation, Engine .....	12.57	Application – Electrical, External Power .....	1.70
Anti-Ice Supply Tube Removal/Installation, No. 1 and No. 2 Engine .....	4.72	Application – Hydraulic (Primary), External Power .....	1.72
Anti-Ice Support Removal/Installation, No. 1 or No. 2 Engine .....	4.71	Application – Hydraulic (Utility), External Power .....	1.73
Anti-Ice Temperature Control Box Access Cover Removal/Installation (AVIM), Windshield .....	12.67	APU Aft Fitting Removal/Installation ...	15.35
Anti-Ice Temperature Control Box Capacitor Replacement (AVIM), Windshield .....	12.69	APU Aft Flame Detector Replacement .	12.25
Anti-Ice Temperature Control Box Circuit Card Assembly (CCA) Removal/Installation (AVIM), Windshield .....	12.68	APU Aft Support Strut and Rod End Removal/Installation .....	15.31
Anti-Ice Temperature Control Box Current Transformer Replacement (AVIM), Windshield .....	12.72	APU Air Filter Replacement .....	16.36
Anti-Ice Temperature Control Box Receptacle Replacement (AVIM), Windshield .....	12.73	APU Chip Collector and Magnetic Drain Plug Replacement ...	TM 1-2835-213-23
Anti-Ice Temperature Control Box Relay Replacement (AVIM), Windshield ...	12.70	APU Circuit Breaker Removal/Installation, MAINT LT or ..	9.42
Anti-Ice Temperature Control Box Removal/Installation, Windshield .....	12.66	APU Cold Start – Battery .....	16.33
Anti-Ice Temperature Control Box Semiconductor Replacement (AVIM), Windshield .....	12.71	APU Combustor Liner, Cap, Fuel Nozzle, and Ignitor Plug Removal/Installation .....	TM 1-2835-213-23
Anti-Ice Temperature Control Box Terminal Stud Replacement (AVIM), Windshield .....	12.74	APU Controller Removal/Installation ...	15.23
Anti-Ice Tube Removal/Installation, No. 1 or No. 2 Engine .....	4.70	APU Drain Hose Removal/Installation ..	15.38
Anti-Ice/De-Ice System Inspection .....	12.46	APU Drain Tube Removal/Installation ..	15.39
Anti-Icing, De-Icing, and Defrosting .....	1.54	APU Drive Flange Removal/Installation, Main Transmission .....	6.73
		APU Enclosure Installation .....	15.42
		APU Enclosure Removal .....	15.41
		APU Enclosure Support Brackets Removal/Installation .....	15.43
		APU Exhaust Gas Temperature (EGT) Thermocouple Removal/Installation .....	TM 1-2835-213-23
		APU Exhaust Nozzle and Duct Removal/Installation .....	15.40
		APU Fire Panel Assembly Removal/Installation .....	12.17
		APU Fire Panel Circuit Card Replacement (AVIM) .....	12.22

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
APU Fire Panel Indicator Replacement .	12.20	APU Ignition Exciter Unit Bracket Removal/Installation . . . . .	TM 1-2835-213-23
APU Fire Panel Light Indicating Panel Receptacle Replacement (AVIM) . . . .	12.21	APU Ignition Exciter Unit Removal/Installation . . . . .	TM 1-2835-213-23
APU Fire Panel Light Indicating Panel Removal/Installation . . . . .	12.18	APU Input Seal Removal/Installation, Main Transmission . . . . .	6.74
APU Fire Panel Switch Replacement (AVIM) . . . . .	12.19	APU Installation . . . . .	15.3
APU Flame Detector Control Amplifier Replacement . . . . .	12.27	APU Installation, Hoisting – . . . . .	1.96
APU Forward Flame Detector Replacement . . . . .	12.24	APU Low Oil Pressure (LOP) Switch Removal/Installation . . . . .	TM 1-2835-213-23
APU Forward Left or Right Mount Fitting Replacement . . . . .	15.36	APU Motional Transducer Removal/Installation . . . . .	TM 1-2835-213-23
APU Fuel Control Removal/Installation . . . . .	TM 1-2835-213-23	APU Oil Filter Replacement . . . . .	TM 1-2835-213-23
APU Fuel Drain Check Valve Removal/Installation . .	TM 1-2835-213-23	APU Oil Level Sight Gage Indicator Replacement . . . . .	TM 1-2835-213-23
APU Fuel Filter Replacement . . . . .	TM 1-2835-213-23	APU Oil System Draining and Servicing	1.26
APU Fuel Inlet Hose Replacement . . . . .	10.107	APU Oil System Sampling . . . . .	1.27
APU Fuel Pump Fuel Supply Elbow Removal/Installation . . . . .	10.113	APU Operating Instructions – Using Battery Power . . . . .	1.74
APU Fuel Pump Inlet Tube Replacement . . . . .	10.109	APU Operating Instructions – Using External Power . . . . .	1.75
APU Fuel Pump Outlet Tube Replacement . . . . .	10.110	APU Plenum Drain Hose Replacement .	15.37
APU Fuel Pump Pressure Switch Removal/Installation . . . . .	10.112	APU Power Take-Off (PTO) Clutch Removal/Installation . . . . .	TM 1-2835-213-23
APU Fuel Pump Removal/Installation . .	10.108	APU Power Take-Off (PTO) Clutch Solenoid Valve Disassembly/Assembly . . . . .	TM 1-2835-213-23
APU Fuel Shutoff Valve Removal/Installation . . . . .	10.111	APU Power Take-Off (PTO) Clutch Solenoid Valve Removal/Installation . . . . .	TM 1-2835-213-23
APU Fuel Solenoid Support Bracket Removal/Installation . . . . .	TM 1-2835-213-23	APU Removal . . . . .	15.2
APU Fuel Solenoid Valve Removal/Installation . . . . .	TM 1-2835-213-23	APU Removal, Hoisting – . . . . .	1.95
APU Fuel Supply Hose Replacement . .	15.20	APU Start Check Valve Replacement (AVIM), Utility Hydraulic Accumulator	7.91
APU Fuel System Priming . . . . .	1.27A	APU Start Motor Pressure Hose Replacement, Utility Hydraulic Accumulator . . . . .	7.89
APU Gearbox Oil Filler Cap Removal/Installation . . . . .	TM 1-2835-213-23	APU Start Motor Return Hose Replacement, Utility Hydraulic Accumulator . . . . .	7.90
APU Hoisting, Crane Adjustment – . . . .	1.104	APU Start Solenoid Valve Replacement, Utility Hydraulic Accumulator . . . . .	7.88
APU Hydraulic Starter Removal/Installation . . . . .	TM 1-2835-213-23		
APU Identification Plate Replacement . . . . .	TM 1-2835-213-23		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
APU START/RUN/OFF Switch Replacement .....	15.13	Armored Crew Seat Handle Assembly Replacement, Pilot/CPG .....	2.164
APU Support Deck Fitting Removal/Installation .....	15.34	Armored Crew Seat Lap Belt Removal/Installation, Pilot/CPG .....	2.176
APU Time Totalizing Meter Removal/Installation .....	15.24	Armored Crew Seat M-43 Blower Mount Bracket Bonding, Pilot/CPG .....	2.167
APU Wiring Harness Angle Bracket Replacement .....	TM 1-2835-213-23	Armored Crew Seat Removal/Installation, Pilot/CPG .....	2.161
APU Wiring Harness Removal/Installation .....	TM 1-2835-213-23	Armored Crew Seat Restraint Control Assembly Removal/Installation, Pilot/CPG .....	2.173
Arm Assembly Disassembly/Assembly (AVIM), Pilot Cyclic Stick Flight Control .....	11.62	Armored Crew Seat Rotary Buckle Removal/Installation, Pilot/CPG .....	2.175
Arm Assembly Removal/Installation, Main Landing Gear Trailing .....	3.16	Armored Crew Seat Shoulder Harness and Inertia Reel Removal/Installation, Pilot/CPG .....	2.174
Arm Shear Rivet Replacement (AVIM), Pilot Directional Shear Pin Activated Decoupler (SPAD) Transducer .....	11.156	Armored Crew Seat Strap Guide Assembly Removal/Installation, Pilot/CPG .....	2.169
Armor Assembly Removal/ Installation, Nontransparent Barrier ..	2.178	Armored Crew Seat Wing Panel (Armored Swing Panel) Removal/Installation, Pilot/CPG .....	2.165
Armor Barrier Replacement, Transparent Crew Protection .....	2.180	Armored Crew Seat Wing Panel Slider Plate Removal/Installation, Pilot/CPG	2.166
Armor Channel Assemblies Removal/Installation, Tailboom Utility Hydraulic Tubes .....	2.196	Armored Panel Seal Removal/Installation .....	2.181D
Armor Channels Removal/Installation, Tailboom Primary Hydraulic .....	2.197	Armored Side Panel Removal/Installation, CPG Left Hand or Right Hand .....	2.181B
Armor Panel Removal/Installation, CPG Floor .....	2.181	Armored Side Panel Removal/Installation, Pilot Left Hand or Right Hand .....	2.181A
Armor Pass-Thru Tray Removal/Installation, Nontransparent Barrier .....	2.179	Armored Side Panel Removal/Installation, Pilot Left Hand Upper .....	2.181C
Armor Plate Removal/Installation, Tailboom Utility Low Level Shutoff Valve .....	2.198	Arms Removal/Installation, Tail Landing Gear Trailing .....	3.45
Armored Crew Seat Bucket Assembly Replacement, Pilot/CPG .....	2.177	Army Material to Prevent Enemy Use, Destruction of .....	1.3
Armored Crew Seat Control Assembly Removal/Installation, Pilot/CPG .....	2.172	Arrestor Removal/Installation, Aft Fuel Cell Lower Vent Tube and Lightning .	10.45
Armored Crew Seat Cushion Removal/Installation, Pilot/CPG .....	2.168	Arrestor Removal/Installation, Forward Fuel Cell Lightning .....	10.4
Armored Crew Seat Frame Assembly Attenuator Removal/Installation, Pilot/CPG .....	2.171	ASE Panel BUCS TST Switch Replacement (AVIM) .....	11.194
Armored Crew Seat Frame Assembly Helical Extension Spring Removal/Installation, Pilot/CPG .....	2.170	ASE Panel Circuit Card Assembly (CCA) Replacement (AVIM) .....	11.195

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
ASE Panel Light Indicating Panel Removal/Installation (AVIM) . . . . .	11.192	Auxiliary Fuel Tank Kit (Four Tank) Removal . . . . .	10.142
ASE Panel Removal/Installation . . . . .	11.191	Auxiliary Fuel Tank Kit (Two Tank) Installation . . . . .	10.137
ASE Panel Switch Replacement (AVIM) . . . . .	11.193	Auxiliary Fuel Tank Kit (Two Tank) Removal . . . . .	10.138
ASE Release Switch Replacement, Cyclic Stick . . . . .	11.49	Auxiliary Fuel Tank Quick-Disconnect Coupling Removal/Installation, Left and Right . . . . .	10.91
Assurance/Quality Control (QA/QC), Quality . . . . .	1.5	Auxiliary Fuel Tank Removal . . . . .	10.140
Attenuator Removal/Installation, Pilot/CPG Armored Crew Seat Frame Assembly . . . . .	2.171	Auxiliary Fuel Transfer Tube Replacement, Left . . . . .	10.86
Attenuator Replacement (AVIM), CPG INTR LT Panel INST, R CSL, or L CSL . . . . .	9.90	Auxiliary Fuel Transfer Tube Replacement, F.S. 186 to 199 Left . . . . .	10.87
Attenuator Replacement (AVIM), Pilot EXT LT/INTR LT Panel INST . . . . .	9.73	Auxiliary Fuel Transfer Tube Replacement, F.S. 199 to 214 Left . . . . .	10.88
Attenuator Replacement (AVIM), Pilot EXT LT/INTR LT Panel R/CTR CSL . . . . .	9.71	Auxiliary Fuel Transfer Tube Replacement, F.S. 214 to 225 Left . . . . .	10.89
Attitude Indicator Removal/Installation. CPG Remote . . . . .	8.35	Auxiliary Panel Assembly Removal/Installation, CPG . . . . .	12.53
Attitude Indicator Removal/Installation, CPG Remote . . . . .	8.36	Auxiliary Panel Light Indicating Panel Removal/Installation, CPG . . . . .	12.54
Attitude Indicator Removal/Installation, Pilot Standby . . . . .	8.34	Auxiliary Power System Components Inspection . . . . .	15.1
Automatic Stabilization Equipment (ASE) Inspection . . . . .	11.190	Auxiliary Power Unit (APU) Depreservation . . . . .	E.12
Auxiliary Fuel Inlet Hose Replacement, Right . . . . .	10.92	Auxiliary Power Unit (APU) Storage Preservation . . . . .	E.11
Auxiliary Fuel Quick-Disconnect Branch Tubes and Couplings Removal/Installation, Pressurized Air System Left and Right . . . . .	7.152	Auxiliary Return Check Valve Replacement, Utility Hydraulic . . . . .	7.110
Auxiliary Fuel Quick-Disconnect to F.S. 214 Tube Replacement, Right . . . . .	10.93	AVA Kit Installation, Main Rotor Track and Balance . . . . .	1.108A
Auxiliary Fuel Tank Check Valve Removal/Installation, Left . . . . .	10.85	AVA Kit Installation, Tail Rotor Balance . . . . .	1.110A
Auxiliary Fuel Tank Check Valve Removal/Installation, Right . . . . .	10.90	AVA Kit Removal, Main Rotor Track and Balance . . . . .	1.109A
Auxiliary Fuel Tank Installation . . . . .	10.139	AVA Kit Removal, Tail Rotor Balance . . . . .	1.111A
Auxiliary Fuel Tank Kit (Four Tank) Installation . . . . .	10.141	Avionics Bay Access Door Removal/Installation, Forward . . . . .	2.43
		Avionics Bay Air Cooling Duct Assembly Removal/Installation, Forward . . . . .	13.32
		Avionics Bay Airframe Step Assembly Removal/Installation, Forward . . . . .	2.45

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Avionics Bay Distribution Box Disassembly/Assembly, Aft .....	9.57	Avionics Bay Thermostatic Switch Replacement, ECS Aft .....	13.42
Avionics Bay Distribution Box Removal/Installation, Aft .....	9.55	Avionics Bay Thermostatic Switch Replacement, ECS Forward .....	13.41
Avionics Bay Distribution Box Transformer T1 or T2 Replacement (T700-GE-701), Aft .....	9.56	Avionics Bay Vaneaxial Fan Air Duct Removal/Installation, Forward .....	13.31
Avionics Bay Filters Replacement, Aft ..	16.35	Avionics Bay Vaneaxial Fan Removal/Installation, Forward .....	13.30
Avionics Bay Isolation Transformer Filter Box Disassembly/Assembly (AVIM), Aft .....	9.59	Axle Removal/Installation, Tail Landing Gear Wheel (With Grease Fitting) and .....	3.46
Avionics Bay Isolation Transformer Filter Box Removal/Installation, Aft ..	9.58	Axle Removal/Installation, Tail Landing Gear Wheel (Without Grease Fitting) and .....	3.49
Avionics Bay Nose Fairing Assembly Seal Replacement (AVIM), Forward ..	2.42		
Avionics Bay Structure Frame Assembly Forward Step Sleeve Bushing Replacement, Forward .....	2.46		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
<b>B</b>			
B60R Removal/Installation, Ground Service Access Door .....	2.42A	Baseplate and Spindle Gearboxes Installation, Engine Buildup – No. 1 and No. 2 Engine .....	4.37
Backing Board Removal/Installation, Forward or Aft Fuel Cell .....	10.51	Baseplate and Spindle Gearboxes Removal, Engine Teardown – No. 1 and No. 2 Engine .....	4.23
Balance Accelerometer Replacement, CPG Track/ .....	9.128	Baseplate Removal/Installation, No. 1 and No. 2 Engine Power Control Spindle Gearbox .....	4.142
Balance Accelerometer Replacement, Pilot Track/ .....	9.129	BAT OVRD Switch Removal/Installation (AVIM), CPG .....	4.199
Balance AVA Kit Installation, Main Rotor Track and .....	1.108A	BATT/EXT PWR Switches Replacement, Pilot ELEC PWR Panel GEN 1, GEN 2 or .....	9.36
Balance AVA Kit Installation, Tail Rotor	1.110A	Battery Compartment Cleaning .....	1.50
Balance AVA Kit Removal, Main Rotor Track and .....	1.109A	Battery Heater Blanket Removal/Installation .....	16.32
Balance AVA Kit Removal, Tail Rotor ..	1.111A	Battery Power, APU Operating Instructions – Using .....	1.74
Balance Signal Processor Unit Removal/Installation, Rotor .....	9.127	Battery Relay Removal/Installation ....	9.41
Balance Weight Removal/Installation, Main Rotor Blade .....	5.9	Battery Removal/Installation, Helicopter	9.40
Balance Weight Removal/Installation, Tail Rotor Blade .....	5.57	Battery Servicing .....	1.51
Ballistic Foam Repair/Replacement, Forward or Aft Fuel Cell .....	10.53	Battery, APU Cold Start – .....	16.33
Barometric Altimeter Removal/Installation, Pilot/CPG .....	8.31	Bay Access Door Removal/Installation, Forward Avionics .....	2.43
Barrel Nut Replacement, Wing .....	2.25	Bay Air Cooling Duct Assembly Removal/Installation, Forward Avionics .....	13.32
Barrier Armor Assembly Removal/Installation, Nontransparent	2.178	Bay Airframe Step Assembly Removal/Installation, Forward Avionics .....	2.45
Barrier Armor Pass-Thru Tray Removal/Installation, Nontransparent	2.179	Bay Distribution Box Disassembly/Assembly, Aft Avionics ..	9.57
Barrier Replacement, Transparent Crew Protection Armor .....	2.180	Bay Distribution Box Removal/Installation, Aft Avionics ...	9.55
Base Oil Seal Retainer Removal/Installation (AVIM), Mast ..	6.100	Bay Distribution Box Transformer T1 or T2 Replacement (T700-GE-701), Aft Avionics .....	9.56
Base Removal/Installation, Rotor Support Mast Support .....	2.88	Bay Filters Replacement, Aft Avionics ..	16.35
Base Spacer Plate Removal/Installation, Main Rotor Mast Support .....	6.98	Bay Isolation Transformer Filter Box Disassembly/Assembly (AVIM), Aft Avionics .....	9.59



<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Bay Isolation Transformer Filter Box Removal/Installation, Aft Avionics . . .	9.58	Bearing Replacement, Firewall Assembly No. 1 or No. 2 Aft Inboard Engine Mount Support . . . . .	2.150
Bay Nose Fairing Assembly Seal Replacement (AVIM), Forward Avionics . . . . .	2.42	Bearing Replacement, Flight Control System Push-Pull Rod Non-adjustable Rod End Bearing . . .	11.3
Bay Structure Frame Assembly Forward Step Sleeve Bushing Replacement, Forward Avionics . . . . .	2.46	Bearing Replacement, Pilot/CPG Canted Bulkhead Seat Fitting . . . . .	2.162
Bay Thermostatic Switch Replacement, ECS Aft Avionics . . . . .	13.42	Bearing Replacement, Pilot/CPG Canted Frame . . . . .	2.163
Bay Thermostatic Switch Replacement, ECS Forward Avionics . . . . .	13.41	Bearing Replacement, Remote Control Lever Sleeve . . . . .	3.30
Bay Vaneaxial Fan Air Duct Removal/Installation, Forward Avionics . . . . .	13.31	Bearing Retainer and Rotor Hub Bearing Removal/Installation, Main Rotor Lead Lag Link . . . . .	5.32
Bay Vaneaxial Fan Removal/Installation, Forward Avionics . . . . .	13.30	Bearing/Bushing Replacement (AVIM), Flight Control System . . . . .	11.4
Bay, Access Provisions – Top Side Engine Work Platform and Equipment . . . . .	2.7	Bearings Replacement (AVIM), Main Rotor Blade Lead Lag Link Pivot Low Friction Sleeve . . . . .	5.33A
Beam Handle Removal/Installation, Bow	2.49	Bearings Replacement, Main Rotor Lower Shoe Scissor Attach Sleeve . .	5.49A
Bearing and Support Removal/Installation, Aft Hanger . . . .	6.10	Bellcrank and Bracket Removal/Installation, Directional F.S. 121.40 . . . . .	11.151
Bearing and Support Removal/Installation, Forward Hanger . . . . .	6.7	Bellcrank and Bracket Removal/Installation, Directional F.S. 159.98 . . . . .	11.167
Bearing Bore Repair, Firewall Assembly No. 1 or No. 2 Aft Inboard Engine Mount Support . . . . .	2.150A	Bellcrank and Lateral Links Installation, Lateral . . . . .	11.11
Bearing Coupling Removal/Installation, Aft Hanger . . . . .	6.9	Bellcrank and Lateral Links Removal, Lateral . . . . .	11.10
Bearing Grease Repacking (AVIM), Main Rotor Lower . . . . .	5.46C	Bellcrank Bracket Assembly Removal/Installation, Collective F.S. 161.60 . . . . .	11.137
Bearing Housing Removal/Installation, Main Rotor Feathering . . . . .	5.37	Bellcrank Bracket Assembly Removal/Installation, Lateral F.S. 159.13 . . . . .	11.104
Bearing Inner Race/Rollers Grease Repacking (AVIM), Main Rotor Upper	5.46B	Bellcrank Bracket Assembly Removal/Installation, Lateral F.S. 160.56 . . . . .	11.106
Bearing Nut Disassembly/Assembly, Engine Nose Gearbox Anti-flail . . . . .	6.34	Bellcrank Bracket Assembly Removal/Installation, Lateral F.S. 164.95 . . . . .	11.109
Bearing Removal/Installation, Main Rotor Lead Lag Link Bearing Retainer and Rotor Hub . . . . .	5.32	Bellcrank Bracket Assembly Removal/Installation, Longitudinal F.S. 129.25 . . . . .	11.123
Bearing Replacement (AVIM), No. 1 or No. 2 Aft Engine Mount Support . . . .	4.85A		
Bearing Replacement (AVIM), Tail Landing Gear Shock Strut . . . . .	3.42		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Bellcrank Bracket Assembly Removal/Installation, Pilot Station Directional .....	11.150	Bellcrank Removal/Installation, CPG to Pilot Control Directional F.S. 118.50 .	11.161
Bellcrank Bracket Removal/Installation, Directional F.S. 164.33 .....	11.171	Bellcrank Removal/Installation, CPG to Pilot Control F.S. 111.50 .....	11.92
Bellcrank Bracket Removal/Installation, Directional F.S. 216.25 .....	11.251	Bellcrank Removal/Installation, CPG to Pilot Control Lateral 83.45 Idler .....	11.89
Bellcrank Bracket Removal/Installation, Directional F.S. 520 .....	11.268	Bellcrank Removal/Installation, CPG to Pilot Control Lateral F.S. 118.50 ....	11.95
Bellcrank Installation, Directional F.S. 199.25 .....	11.246	Bellcrank Removal/Installation, CPG to Pilot Control Longitudinal F.S. 118.50	11.118
Bellcrank Installation, Directional F.S. 216.25 .....	11.250	Bellcrank Removal/Installation, CPG to Pilot Control Longitudinal F.S. 82.80 .	11.112
Bellcrank Installation, Tail Rotor Swashplate Control .....	11.264	Bellcrank Removal/Installation, CPG to Pilot Control Longitudinal F.S. 96.50 .	11.115
Bellcrank Link Removal/Installation, Tail Rotor .....	11.265	Bellcrank Removal/Installation, Directional F.S. 164.33 .....	11.170
Bellcrank Removal, Directional F.S. 199.25 .....	11.245	Bellcrank Removal/Installation, Directional F.S. 275 .....	11.254
Bellcrank Removal, Directional F.S. 216.25 .....	11.249	Bellcrank Removal/Installation, Directional F.S. 348 .....	11.257
Bellcrank Removal, Tail Rotor Swashplate Control .....	11.263	Bellcrank Removal/Installation, Directional F.S. 520 .....	11.267
Bellcrank Removal/Installation, Directional F.S. 156.07 .....	11.165	Bellcrank Removal/Installation, Directional F.S. 534 .....	11.270
Bellcrank Removal/Installation, Directional F.S. 542 .....	11.272	Bellcrank Removal/Installation, Engine Load Demand Spindle .....	4.154
Bellcrank Removal/Installation, Aft Longitudinal .....	11.12	Bellcrank Removal/Installation, Lateral F.S. 132.84 .....	11.100
Bellcrank Removal/Installation, Collective F.S. 161.54 .....	11.134	Bellcrank Removal/Installation, Lateral F.S. 159.13 .....	11.102
Bellcrank Removal/Installation, Collective F.S. 161.60 .....	11.138	Bellcrank Removal/Installation, Lateral F.S. 160.56 .....	11.105
Bellcrank Removal/Installation, Collective F.S. 164.95 .....	11.140	Bellcrank Removal/Installation, Lateral F.S. 164.95 .....	11.107
Bellcrank Removal/Installation, CPG to Pilot Control Collective F.S. 118.50 ..	11.130	Bellcrank Removal/Installation, Longitudinal F.S. 129.25 .....	11.121
Bellcrank Removal/Installation, CPG to Pilot Control Directional F.S. 112.50 .	11.158	Bellcrank Removal/Installation, Longitudinal F.S. 159.62 .....	11.124

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Bellcrank Removal/Installation, Longitudinal F.S. 164.38 .....	11.126	Blade Identification Plate Replacement, Main Rotor .....	5.18
Bellcrank Removal/Installation, Pilot Power Available Spindle .....	4.162	Blade Identification Plate Replacement, Tail Rotor .....	5.58
Bellcrank Repair (AVIM), Engine Load Demand Spindle .....	4.155	Blade Installation, Hoisting – Main Rotor	1.84
Bellcrank Replacement, Hydraulic Hand Pump Lever .....	7.26	Blade Installation, Main Rotor .....	5.4
Bellcrank Support Removal/Installation, Engine Load Demand Spindle .....	4.156	Blade Installation, Tail Rotor .....	5.54
Bellcranks Removal/Installation, Longitudinal and Collective .....	11.9	Blade Lead Lag Link Pivot Low Friction Sleeve Bearings Replacement (AVIM), Main Rotor .....	5.33A
Belt Removal/Installation, Pilot/CPG Armored Crew Seat Lap .....	2.176	Blade Lead Lag Link Removal/Installation, Main Rotor ....	5.33
Blade – Electrical Lead Removal/Installation, Main Rotor Pitch Housing and .....	5.31	Blade Lead Lag Link Sleeve Bushings Replacement (AVIM), Main Rotor ...	5.33B
Blade Adapter Installation, Main Rotor .	1.112	Blade Leading Edge Tip Replacement, Main Rotor .....	5.13
Blade Adapter Removal, Main Rotor ...	1.113	Blade Paint Erosion Touchup, Main Rotor .....	5.11
Blade Anti-Peel Doubler Repair (AVIM), Main Rotor .....	5.12	Blade Part Number/Serial Number Plate Replacement, Tail Rotor .....	5.59
Blade Balance Weight Removal/Installation, Main Rotor ....	5.9	Blade Phase Adjustment, Main Rotor ..	5.8
Blade Balance Weight Removal/Installation, Tail Rotor .....	5.57	Blade Receptacle Connector Replacement, Main Rotor .....	5.17
Blade De-Ice Controller Adjustment ....	12.56	Blade Removal, Hoisting – Main Rotor .	1.83
Blade De-Ice Controller Removal/Installation .....	12.55	Blade Removal, Main Rotor .....	5.3
Blade De-Ice Remote Control Circuit Breaker Relay Removal/Installation .	9.12	Blade Removal, Tail Rotor .....	5.53
Blade Debonded Doubler or Spar Repair, Main Rotor (AVIM) .....	5.7	Blade Repair Criteria, Main Rotor .....	5.2
Blade Dent and Depression Repair, Tail Rotor .....	5.56	Blade Repair Criteria, Tail Rotor .....	5.52
Blade Dent, Depression, and Crease Repair (AVIM), Main Rotor .....	5.5	Blade Scratch, Nick, or Gouge Repair, Main Rotor .....	5.6
Blade Droop Angle Measurement, Main Rotor .....	5.10	Blade Scratch, Nick, or Gouge Repair, Tail Rotor .....	5.55
Blade Electrical Bracket Replacement, Main Rotor .....	5.16	Blade Strap Pack Repair Criteria, Main Rotor .....	5.36
Blade Electrostatic Discharger Disassembly/Assembly, Main Rotor .	5.15	Blade Spar to Spar Debond Repair (AVIM), Main Rotor .....	5.7A
Blade Forward and Aft Tip Weight Removal/Installation (AVIM), Main Rotor .....	5.14A	Blade Weight Support Fitting Insert Replacement (AVIM), Main Rotor ...	5.14
Blade Hoisting, Crane Adjustment – Main Rotor .....	1.100	Blades Replacement, Wire Strike Protection Aircraft Cable Cutter .....	2.195
		Blades Tiedown – Installation, Main Rotor .....	1.106
		Blades Tiedown – Removal, Main Rotor	1.107

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Blanket Removal/Installation, Battery Heater .....	16.32	Board Replacement (AVIM), Vertical Display Lamp .....	8.12
Bleed Air Adapter and Elbow Removal/Installation, No. 2 Engine Compressor .....	4.76	Board Replacement, Emergency Bus Terminal .....	9.19
Bleed Air Hose Removal/Installation, No. 2 Engine Compressor .....	4.75	Bolt Fit Check, Self-Retaining .....	11.1
Bleed Air Shutoff Valve/Check Valve Removal/Installation .....	7.139	Bolt Removal/Installation, Ammunition Magazine Strut and Eye .....	2.82
Bleed Air System Installation, Engine Buildup – No. 1 Engine Anti-Ice and .	4.40	Bolt Removal/Installation, Rotor Support Mixer Assembly and .....	2.86
Bleed Air System Installation, Engine Buildup – No. 2 Engine Anti-Ice and .	4.41	Bolt Replacement (AVIM), Main Rotor Mast Mounting .....	6.99
Bleed Air System Removal, Engine Teardown – No. 1 Engine Anti-Ice and .....	4.21	Bolt Replacement, Engine Nacelle Fairing Assembly Eye .....	2.136
Bleed Air System Removal, Engine Teardown – No. 2 Engine Anti-Ice and .....	4.22	Bonding, Pilot/CPG Armored Crew Seat M-43 Blower Mount Bracket .....	2.167
Bleed Air Tube and Engine Air Flexible Connection Housing Removal/Installation, Standby System Engine .....	7.141	Boost Pump Air Inlet Hose Replacement, Fuel .....	10.118
Bleed Air Tube Removal/Installation, No. 1 Engine Compressor .....	4.74	Boost Pump Canister Removal/Installation, Fuel .....	10.116
Bleed Valve Replacement, Primary Hydraulic Manifold Manual .....	7.12	Boost Pump Hose Replacement, Pressurized Air System Fuel .....	7.147
Bleed Valve Replacement, Utility Hydraulic Manifold Manual .....	7.65	Boost Pump Inlet Hose Replacement, Fuel .....	10.115
Bleed, Hydraulic System .....	1.35	Boost Pump Outlet Hose Replacement, Fuel .....	10.117
Bleed, Main Landing Gear Brake System – Service/ .....	1.45	Boost Pump Pressure Switch Removal/Installation, Fuel .....	10.112
Block Removal/Installation, Tail Rotor De-Ice Brush .....	11.278	Boost Pump Switch Replacement (AVIM), CPG Fuel Panel .....	10.67
Blower Mount Bracket Bonding, Pilot/CPG Armored Crew Seat M-43 .	2.167	Boost Pump, Motor, and Drain Tube Removal/Installation, Fuel .....	10.114
Blower Assembly Removal/Installation, Radar Jammer .....	16.30A	Boost Pump Solenoid Shutoff Valve Removal/Installation, Fuel .....	7.150
Blower Assembly Disassembly/Assembly, Radar Jammer .....	16.30B	Borescope Inspection, Main Rotor Strap Pack .....	5.34A
Board Removal/Installation, Forward or Aft Fuel Cell Backing .....	10.51	Boresight Mount Fitting Removal/Installation, CPG .....	2.39
		Boresight Reticle Unit (BRU) Mount Adapter Removal/Installation, Pilot ..	2.187
		Boresight Reticle Unit (BRU) Mount Removal/Installation, Pilot .....	2.186
		Boresight Reticle Unit (BRU) Mount Support Removal/Installation, Pilot ..	2.188

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Boresight Switch Replacement, Collective Stick .....	11.31	Box Removal/Installation, Engine Anti-Ice Relay .....	12.57
Bottom Side, Access Provisions – .....	2.6	Bracket Assembly Removal/Installation, Brake Control Valves .....	3.64
Bottom Skin Plates, Fuselage .....	2.18	Bracket Assembly Removal/Installation, Collective F.S. 161.54 .....	11.135
Bow Beam Handle Removal/Installation	2.49	Bracket Assembly Removal/Installation, Collective F.S. 161.60 Bellcrank ....	11.137
Bow Handle Removal/Installation, Fuselage .....	2.78	Bracket Assembly Removal/Installation, Collective Stick Switch and .....	11.34
Bowl, Element, and Differential Pressure Switch (Lockwired Type) Removal/Installation, Main Transmission Filter .....	6.61	Bracket Assembly Removal/Installation, CPG Directional F.S. 60.56 Shear Pin Activated Decoupler (SPAD) .....	11.149
Bowl, Element, and Differential Pressure Switch (Retainer Ringed Type) Removal/Installation, Main Transmission Filter .....	6.62	Bracket Assembly Removal/Installation, CPG to Pilot Lateral F.S. 111.50 .....	11.94
Bowl, Element, and Pressure Indicator Removal/Installation, Main Transmission Accessory Pump Filter	6.70	Bracket Assembly Removal/Installation, Lateral F.S. 159.13 Bellcrank .....	11.104
Bowl, Strainer Element, and Differential Pressure Switch (Lockwired Type) Removal/Installation, Engine Nose Gearbox Oil Filter .....	6.18	Bracket Assembly Removal/Installation, Longitudinal F.S. 129.25 Bellcrank ..	11.123
Bowl, Strainer Element, and Differential Pressure Switch (Retainer, Ringed Type) Removal/Installation, Engine Nose Gearbox Oil Filter .....	6.19	Bracket Assembly Removal/Installation, Parking Brake Pull Control Assembly and .....	3.59
Box Cover Assembly Removal/Installation, Aft Cockpit Stow .....	2.160	Bracket Assembly Removal/Installation, Pilot Station Directional Bellcrank ...	11.150
Box Cover Removal/Installation, Electrical Power Distribution .....	9.9	Bracket Assembly Replacement (AVIM), Pilot Fuel Panel .....	10.60
Box Frame Structure, Vertical Stabilizer Spar .....	2.104	Bracket Bonding, Pilot/CPG Armored Crew Seat M-43 Blower Mount .....	2.167
Box Power Transformer T1 or T2 Replacement (T701-GE-701), Electrical Power Distribution .....	9.24	Bracket Disassembly/Assembly, Main Landing Gear Squat Switch Target and .....	3.17
Box Power Transformer T3 Replacement, Electrical Power Distribution .....	9.25	Bracket Removal/Installation, Pylon Aerial .....	16.14
Box Relay Cover Removal/Installation, Electrical Power Distribution .....	9.10	Bracket Removal/Installation, Fire Extinguisher Mounting .....	2.47
Box Relay Replacement (AVIM), Windshield Anti-Ice Temperature Control .....	12.70	Bracket Removal/Installation, APU Fuel Solenoid Support .....	TM 1-2835-213-23
		Bracket Removal/Installation, APU Fuel Solenoid Support .....	TM 1-2835-213-23

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Bracket Removal/Installation, APU Ignition Exciter Unit . . . . .	TM 1-2835-213-23	Brake Actuator (Goodyear/ABSC) Disassembly/Assembly (AVIM), Main Transmission Rotor . . . . .	6.68
Bracket Removal/Installation, Directional F.S. 164.33 Bellcrank . . . .	11.171	Brake Actuator (Goodyear/ABSC) Removal/Installation, Main Transmission Rotor . . . . .	6.64
Bracket Removal/Installation, Directional F.S. 216.25 Bellcrank . . . .	11.254	Brake Actuator (Parker Hannifin) Disassembly/Assembly (AVIM), Main Transmission Rotor . . . . .	6.67A
Bracket Removal/Installation, Directional Servocylinder Utility Hydraulic Pressure/Return Hose . . . .	7.40	Brake Actuator (Parker Hannifin) Removal/Installation, Main Transmission Rotor . . . . .	6.65
Bracket Removal/Installation, Lateral Servocylinder Wire Harness Support	2.85	Brake Control Valves Bracket Assembly Removal/Installation . . . . .	3.64
Bracket Removal/Installation, No. 1 and No. 2 Engine Inboard Secondary Nozzle Heat Shield and Support . . . .	4.131	Brake Control Valves Internal Leakage Repair and Test (AVIM) . . . . .	3.63
Bracket Removal/Installation, No. 1 and No. 2 Engine Outboard and Center Secondary Nozzle Vertical Heat Shield and Support . . . . .	4.129	Brake Control Valves Removal/Installation . . . . .	3.62
Bracket Removal/Installation, No. 1 or No. 2 Anti-Ice Valve and . . . . .	4.68	Brake Disk Removal/Installation (Goodyear/ABSC), Single Disk Brake, Friction Lining, and . . . . .	3.66
Bracket Removal/Installation, Pylon Multiplex Remote Terminal Unit (MRTU) . . . . .	16.16	Brake Disk Removal/Installation (Parker-Hannifin), Single Disk Brake, Friction Lining, and . . . . .	3.65
Bracket Removal/Installation, Surge Valve . . . . .	7.134	Brake Disk Removal/Installation, Main Transmission Rotor . . . . .	6.66
Bracket Removal/Installation, Utility Hydraulic Pump Tubing Support . . . .	7.63	Brake Functional Test, Parking . . . . .	3.71
Bracket Removal/Installation, Utility Hydraulic Tubing Bulkhead Support . .	7.109	Brake Hose Assembly Removal/Installation, CPG . . . . .	3.55
Bracket Replacement (AVIM), Main Rotor Pitch Housing Wire Support . . .	5.28	Brake Hose Assembly Removal/Installation, Pilot Parking . .	3.54
Bracket Replacement, APU Wiring Harness Angle . . . . .	TM 1-2835-213-23	Brake Hose Removal/Installation, Main Landing Gear Wheel . . . . .	3.70
Bracket Replacement, Main Rotor Blade Electrical . . . . .	5.16	Brake Hose Replacement, Rotor . . . . .	7.104
Brackets Removal/Installation, APU Enclosure Support . . . . .	15.43	Brake Leakage and Operational Test (AVIM), Main Landing Gear Wheel . .	3.67
Brackets Removal/Installation, Tail Landing Gear Tail Wheel Deflector, Structural Support, and Tail Wheel . .	3.27	Brake Lock/Unlock, Rotor . . . . .	1.62
		Brake Master Cylinder Disassembly/Assembly (AVIM), Parking . . . . .	3.58
		Brake Master Cylinders Removal/Installation, CPG . . . . .	3.57
		Brake Master Cylinders Removal/Installation, Pilot . . . . .	3.56

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Brake Mechanism Assembly Disassembly/Assembly (AVIM), Lateral Magnetic .....	11.187	Brake, Friction Lining, and Brake Disk Removal/Installation (Goodyear/ABSC), Single Disk .....	3.66
Brake Mechanism Assembly Removal/Installation, Lateral Magnetic .....	11.186	Brake, Hose (Nonmetallic), Tube, and Clamp Removal/Installation, Main Landing Gear Wheel .....	3.68
Brake Pressure Switch Removal/Installation, Rotor .....	7.105	Brakes – Set/Release, Parking .....	1.61
Brake Pull Control Assembly and Bracket Assembly Removal/Installation, Parking .....	3.59	Branch Tubes and Couplings Removal/Installation, Pressurized Air System Left and Right Auxiliary Fuel Quick-Disconnect .....	7.152
Brake Removal/Installation, Directional Magnetic .....	11.176	Breakaway Valve Hose Removal/Installation, Aft Fuel Cell Nitrogen Inert .....	10.131
Brake Removal/Installation, Lateral Magnetic .....	11.180	Breakaway Valve Hose Removal/Installation, Forward Fuel Cell Nitrogen Inert .....	10.134
Brake Removal/Installation, Longitudinal Magnetic .....	11.181	Breakaway Valve Removal/Installation, Forward Fuel Cell Nitrogen Inert .....	10.121
Brake Rotary Direct Valve Removal/Installation, Parking .....	3.60	Breakaway Valve Removal/Installation, Aft Fuel Cell Fuel Outlet .....	10.43
Brake Rotary Direct Valve Repair and Test (AVIM), Parking .....	3.61	Breakaway Valve Removal/Installation, Aft Fuel Cell Nitrogen Inert .....	10.119
Brake Seal Replacement, Main Transmission Rotor .....	6.67	Breakaway Valve Removal/Installation, Aft Fuel Cell Refueling .....	10.42
Brake Spring Mechanism Disassembly/Assembly (AVIM), Longitudinal Magnetic .....	11.189	Breakaway Valve Removal/Installation, Forward Fuel Cell Engine Fuel Supply .....	10.16
Brake Spring Mechanism Removal/Installation, Longitudinal Magnetic .....	11.188	Breakaway Valve Removal/Installation, Forward Fuel Cell Refueling .....	10.17
Brake Support Disassembly/Assembly (AVIM), Directional Magnetic .....	11.185	Breakaway Valve Removal/Installation, No. 1 Engine Firewall .....	10.104
Brake Support Removal/Installation, Directional Magnetic .....	11.184	Breakaway Valve Removal/Installation, No. 2 Engine Firewall .....	10.105
Brake System – Service/Bleed, Main Landing Gear .....	1.45	Breather Removal/Installation, Intermediate Gearbox .....	6.126
Brake System Inspection .....	3.53	Breather Removal/Installation, Main Transmission .....	6.58
Brake Tube and Hose Clamp Removal/Installation, Main Landing Gear Wheel .....	3.69	Breather Removal/Installation, Tail Rotor Gearbox .....	6.136
		Breather Replacement, Engine Nose Gearbox .....	6.24

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
BRU Mount Adapter Removal/Installation, Pilot Boresight Reticle Unit .....	2.187	Bus Terminal Board Replacement, Emergency .....	9.19
BRU Mount Support Removal/Installation, Pilot Boresight Reticle Unit .....	2.188	Bus Tie Contactor Removal/Installation, DC .....	9.21
Brush and Shunt Replacement (AVIM), Tail Rotor De-Ice .....	11.279	Bus Tie Terminal Junction Box Replacement, DC .....	9.22
Brush Block Removal/Installation, Tail Rotor De-Ice .....	11.278	Bushing Removal/Installation (AVIM), No. 1 or No. 2 Engine Aft Inboard Mount/Aft Lower Mount .....	4.56
Brush, Electrical Holder, and Pitch Web Electrical Lead Removal/Installation, Main Rotor Electrical .....	5.48	Bushing Replacement (AVIM), Gun and Ammo Support Aft Mount Pads Sleeve .....	2.37
Bucket Assembly Replacement, Pilot/CPG Armored Crew Seat .....	2.177	Bushing Replacement (AVIM), Gun and Ammo Support Forward Mount Pads Sleeve .....	2.38
Buckle Removal/Installation, Pilot/CPG Armored Crew Seat Rotary .....	2.175	Bushing Replacement (AVIM), Main Rotor Blade Lead Lag Link Sleeve ..	5.33B
BUCS Select Trigger Grip Switch Replacement, CPG Collective Stick .	11.33	Bushing Replacement (AVIM), No. 1 and No. 2 Engine Secondary Nozzle Support .....	4.128
BUCS TST Switch Replacement (AVIM), ASE Panel .....	11.194	Bushing Replacement (AVIM), No. 1 and No. 2 Engine Secondary Nozzle Upper and Intermediate Support Strut .....	4.127
BUCS Warning Plate Replacement, Directional Servocylinder .....	7.35	Bushing Replacement (AVIM), TADS/PNVs Support Control Surface Sleeve .....	2.46A
BUCS Warning Plate Replacement, Hydraulic Name Plate and .....	7.54	Bushing Replacement, Forward Avionics Bay Structure Frame Assembly Forward Step Sleeve .....	2.46
Buildup – No. 1 and No. 2 Engine Drain System Installation (T700-GE-701C Engine), Engine .....	4.35	Bushing Replacement, Pylon Frame ...	16.25
Buildup – No. 1 and No. 2 Engine Fuel Inlet Hose Installation, Engine .....	4.44	Bushing Replacement (AVIM), Main Rotor Support Strut .....	2.95B
Buildup – No. 2 Engine Wiring Installation, Engine .....	4.43	Butt Removal/Installation, CPG Station Access Door Lower Hinge .....	2.58
Buildup Adapter Installation, Engine ...	1.130	Butt Removal/Installation, CPG Station Access Door Upper Hinge .....	2.59
Buildup Adapter Removal, Engine .....	1.131	Butt Removal/Installation, Pilot Station Access Door Lower Hinge .....	2.66
Bulkhead Seat Fitting Bearing Replacement, Pilot/CPG Canted .....	2.162	Butt Removal/Installation, Pilot Station Access Door Upper Hinge .....	2.67
Bulkhead Support Bracket Removal/Installation, Utility Hydraulic Tubing .....	7.109	Butt Replacement, Hinge .....	2.24
Bumper Replacement, Pylon Fairing Aft	16.26	Bypass Valve Replacement, Main Transmission Heat Exchanger .....	6.83
Bumper Replacement, Tail Rotor Teeter Stop .....	5.65		
Bus Isolation Diode Removal/Installation, DC .....	9.20		



<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
<b>C</b>			
C1 or C2 Replacement (AVIM), CPG Caution/Warning Panel Fixed Capacitor .....	9.118	Cable Installation, No. 2 Engine Power Available Spindle Aft .....	4.174
C1, C2, C3, or C4 Replacement (AVIM), Pilot Caution/Warning Panel Fixed Capacitor .....	9.111	Cable Installation, No. 2 Engine Power Available Spindle Center .....	4.148
C3 or C4 Replacement (AVIM), CPG Caution/Warning Panel Fixed Capacitor .....	9.119	Cable Removal (Pilot to CPG), No. 1 Engine Power Available Spindle .....	4.158
C5 Replacement (AVIM), CPG Caution/Warning Panel Ceramic Fixed Capacitor .....	9.120	Cable Removal (Pilot to CPG), No. 2 Engine Power Available Spindle .....	4.160
Cable Assembly Replacement, Main Landing Gear .....	3.2	Cable Removal, No. 1 Engine Power Available Spindle Aft .....	4.170
Cable Connecting Links Disassembly/Assembly, No. 1 or No. 2 Power Available Spindle .....	4.165	Cable Removal, No. 1 Engine Power Available Spindle Center .....	4.145
Cable Connecting Links Removal/Installation, No. 1 or No. 2 Power Available Spindle .....	4.164	Cable Removal, No. 1 or No. 2 Engine Load Demand Spindle Forward .....	4.149
Cable Cutter Blades Replacement, Wire Strike Protection Aircraft .....	2.195	Cable Removal, No. 2 Engine Load Demand Spindle Aft .....	4.178
Cable Cutter Removal/Installation (AVIM), Wire Strike Protection Aircraft .....	2.193	Cable Removal, No. 2 Engine Power Available Spindle Aft .....	4.173
Cable Cutter Removal/Installation, Main Landing Gear .....	3.26	Cable Removal, No. 2 Engine Power Available Spindle Center .....	4.147
Cable Installation (Pilot to CPG), No. 1 Engine Power Available Spindle .....	4.159	Cable Spring Tension Clip Removal/Installation, No. 1 Engine Load Demand Spindle/Power Available Spindle Aft .....	4.180
Cable Installation (Pilot to CPG), No. 2 Engine Power Available Spindle .....	4.161	Cable Spring Tension Clip Removal/Installation, No. 2 Engine Load Demand Spindle/Power Available Spindle Aft .....	4.181
Cable Installation, No. 1 Engine Load Demand Spindle Aft .....	4.177	Cable Support Bracket Removal/Installation (Pilot to CPG), No. 1 or No. 2 Power Available Spindle .....	4.163
Cable Installation, No. 1 Engine Power Available Spindle Aft .....	4.171	Cable Support Removal/Installation, Engine Load Demand Spindle .....	4.157
Cable Installation, No. 1 Engine Power Available Spindle Center .....	4.146	Cable Support Removal/Installation, No. 1 and No. 2 Engine Power Available Spindle Center .....	4.175
Cable Installation, No. 1 or No. 2 Engine Load Demand Spindle Forward .....	4.150	Cable Support Removal/Installation, No. 1 Engine Power Control Gearbox Aft	4.172
Cable Installation, No. 2 Engine Load Demand Spindle Aft .....	4.179	Cables, Warm-Up/De-Ice of Engine Load Demand Spindle (LDS) .....	1.55
		Cam Housing Repair, Tail Landing Gear Upper .....	3.31
		Cam Valve Replacement (AVIM), Main Landing Gear Shock Strut .....	3.19A
		Canister Removal/Installation, Fuel Boost Pump .....	10.116
		Canopy Access Door Seal Replacement	2.40

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Canopy Door Anchor Strut Rod Removal/Installation .....	2.68	Capacitor C1 or C2 Replacement (AVIM), CPG Caution/Warning Panel Fixed .....	9.118
Canopy Door and Windshield Drain Tube Replacement .....	2.41	Capacitor C3 or C4 Replacement (AVIM), CPG Caution/Warning Panel Fixed .....	9.119
Canopy Jettison System Inspection ....	12.76	Capacitor C5 Replacement (AVIM), CPG Caution/Warning Panel Ceramic Fixed .....	9.120
Canopy Lock Switch Removal/Installation, Aft Door Structural Plate and .....	2.69	Capacitor Replacement (AVIM), Generator Control Unit (GCU) Fixed .	9.17
Canopy Pawl Fastener Removal/Installation, Pilot/CPG Station Access Door .....	2.51	Capacitor Replacement (AVIM), Windshield Anti-Ice Temperature Control Box .....	12.69
Canopy Severance Device Removal/Installation .....	12.77	Card on Torque, TGT, Fuel, and Ng Indicators Replacement (AVIM), Analog or Interface Circuit .....	8.11
Canopy Severance Initiator Handle Removal/Installation .....	12.78	Card Replacement (AVIM), Selectable Digital Display (SDD) Panel Circuit ..	8.16
Canopy Transparent Panel Assembly Seal Replacement .....	2.52	Card Replacement (AVIM), Torque, TGT, Fuel, and Ng Indicators Light Panel, Digital Display Driver Circuit ..	8.10
Canopy Vent Handle Assembly Removal/Installation .....	2.50	Carry-Thru Post Assembly Removal/Installation, Nacelle .....	2.97
Canopy Windshield Panel Assembly Removal/Installation, Left Forward ..	2.70	Carry-Thru Strut Assembly Removal/Installation, Nacelle .....	2.96
Canopy Windshield Panel Removal/Installation, Upper Aft .....	2.74	Cartridge and Propellant Actuated Devices .....	1.139
Canopy Windshield Panel Removal/Installation, Left Aft .....	2.71	Cartridge Disassembly/Assembly (AVIM), Feel Spring .....	11.179
Canopy Windshield Panel Removal/Installation, Upper Center .	2.73	Cartridge Installation, Directional Feel Spring .....	11.178
Canopy Windshield Panel Removal/Installation, Upper Forward	2.72	Cartridge Removal, Directional Feel Spring .....	11.177
Canted Bulkhead Seat Fitting Bearing Replacement, Pilot/CPG .....	2.162	Cartridge Removal/Installation, Pylon Rack Ejector Impulse .....	16.3
Canted Frame Bearing Replacement, Pilot/CPG .....	2.163	Case Replacement (AVIM), Selectable Digital Display (SDD) Panel .....	8.17
Cap Removal/Installation, APU Gearbox Oil Filler ....	TM 1-2835-213-23	Catch Striker Removal/Installation, Forward Door .....	2.60
Cap Removal/Installation, Engine Nose Gearbox Filler .....	6.23	Categories, Description of Storage ....	E.1
Cap Removal/Installation, Pilot or CPG Caution/Warning and Master Caution/Warning Panel Pushbutton .	9.106	Categories, Services Common to the Three Storage .....	E.3
Cap Screen Removal/Installation, Main Transmission Oil Filler .....	6.47		
Cap, Fuel Nozzle, and Ignitor Plug Removal/Installation, APU Combustor Liner .....	TM 1-2835-213-23		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Catwalk Area, Transmission Installation – Connect .....	6.111	Center Cable Removal, No. 2 Engine Power Available Spindle .....	4.147
Catwalk Area, Transmission Removal – Disconnect .....	6.103	Center Cable Support Removal/Installation, No. 1 and No. 2 Engine Power Available Spindle ....	4.175
Catwalk Fold/Unfold .....	2.83	Center Canopy Windshield Panel Removal/Installation, Upper .....	2.73
Caution and Warning Components Inspection .....	9.104	Center Fuselage Frame Structure .....	2.14
CB3, CB201, CB202, CB203, or CB204 Remote Control Circuit Breaker Replacement .....	9.13	Center Secondary Nozzle Removal/Installation, No. 1 and No. 2 Engine .....	4.122
CCA Replacement (AVIM), Ice Detector Signal Processor Interconnection ...	12.61	Center Secondary Nozzle Vertical Heat Shield and Support Bracket Removal/Installation, No. 1 and No. 2 Engine Outboard and .....	4.129
CCA Replacement (AVIM), Ice Detector Signal Processor Power Supply .....	12.63	Center Transmission Rotor Support Strut Assemblies Removal/Installation, Forward Left or Right .....	2.89
CCA Replacement (AVIM), Ice Detector Signal Processor Probe Oscillator Reference or Rate Output .....	12.62	Center Transmission Rotor Support Strut Assembly Removal/Installation, Aft Left .....	2.90
CCA Removal/Installation (AVIM), Windshield Anti-Ice Temperature Control Box Circuit Card Assembly .	12.68	Center Transmission Rotor Support Strut Assembly Removal/Installation, Aft Right .....	2.91
CCA Stack Removal/Installation (AVIM), Ice Detector Signal Processor, Circuit Card Assembly .....	12.60	Centrifugal Fan, Input Coupling, and Flange Removal/Installation, Intermediate Gearbox .....	6.12
CDU Data Bus Relay K8 Replacement .	9.155	Ceramic Fixed Capacitor C5 Replacement (AVIM), CPG Caution/Warning Panel .....	9.120
Cell Frame F.S. 163.20 Cover Removal/Installation, Forward Fuel ..	2.47A	Chaff Dispenser Support Removal/Installation .....	16.29
Cell Fuel Level Control Pilot Valve Removal/Installation, Forward Fuel ..	10.13	Chaff Safety Switch Replacement .....	16.30
Cell Fuel Quantity Transmitter Removal/Installation, Aft Fuel .....	10.39	Channel Assemblies Removal/Installation, Tailboom Utility Hydraulic Tubes Armor .....	2.196
Cell Fuel Shutoff Valve Removal/Installation, Aft Fuel .....	10.40	Channels Removal/Installation, Tailboom Primary Hydraulic Tubes Armor .....	2.197
Cell Lightning Arrestor Removal/Installation, Forward Fuel ..	10.4	Chart (Section II), Use of the Maintenance Allocation .....	B.4
Cell Pilot Valve Hose Replacement, Forward Fuel .....	10.12	Chart, Maintenance Allocation .....	B.3
Cell Retainer Panel Removal/Installation, Forward Fuel ..	2.47A	Chassis Disassembly/Assembly (AVIM), Multichannel Dimming Controller ....	9.77
Center Cable Installation, No. 1 Engine Power Available Spindle .....	4.146		
Center Cable Installation, No. 2 Engine Power Available Spindle .....	4.148		
Center Cable Removal, No. 1 Engine Power Available Spindle .....	4.145		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Chassis Replacement (AVIM), Digital Automatic Stabilization Equipment (DASE) Electrical Equipment .....	11.223	Check Valve Tube Removal/Installation, SDC .....	7.135
Check Panel Disassembly/Assembly (AVIM), Emergency Power .....	4.139	Check/Thermal Relief Valve Removal/Installation, Forward Fuel Cell .....	10.11
Check Panel Removal/Installation, Emergency Power .....	4.138	Checklist, Special Inspection .....	1.137
Check Valve Disassembly/Assembly (AVIM), Forward and Aft Fuel/Defuel	10.20	Checks and Services, Preventive Maintenance .....	1.7
Check Valve Removal/Installation, Aft Fuel Cell Four-Way .....	10.36	Chip Collector and Magnetic Drain Plug Replacement, APU .....	TM 1-2835-213-23
Check Valve Removal/Installation, Aft Fuel Cell Fuel/Defuel .....	10.35	Chip Collector Installation, Engine Buildup – No. 1 and No. 2 Engine Oil	4.33
Check Valve Removal/Installation, Aft Fuel Cell Nitrogen Inert .....	10.133	Chip Collector Removal, Engine Teardown – No. 1 and No.2 Oil .....	4.27
Check Valve Removal/Installation, APU Fuel Drain .....	TM 1-2835-213-23	Chip Collector Removal/Installation, No. 1 or No. 2 Engine Oil .....	4.101
Check Valve Removal/Installation, Bleed Air Shutoff Valve/ .....	7.139	Chip Detector Inspection, Engine Nose Gearbox Metallic .....	6.25
Check Valve Removal/Installation, Forward Fuel Cell Fuel/Defuel .....	10.19	Chip Detector Inspection, Main Transmission .....	6.45
Check Valve Removal/Installation, Left Auxiliary Fuel Tank .....	10.85	Chip Detector Removal/Installation, Engine Nose Gearbox Metallic .....	6.26
Check Valve Removal/Installation, Main Landing Gear Shock Strut .....	3.22	Chip Detector Replacement, Main Transmission .....	6.46
Check Valve Removal/Installation, Main Transmission .....	6.80	Circuit Breaker Light Indicating Panel Removal/Installation, Pilot .....	9.4
Check Valve Removal/Installation, Pressurized Air System Tee and .....	7.136	Circuit Breaker Panel Edge LT PNL ON/OFF Switch Replacement, Pilot .	9.6
Check Valve Removal/Installation, Primary Hydraulic Pump Pressure ..	7.9	Circuit Breaker Panel Hinge Strap Removal/Installation, Pilot .....	9.5
Check Valve Removal/Installation, Right Auxiliary Fuel Tank .....	10.90	Circuit Breaker Panel Installation, Pilot .	9.3
Check Valve Removal/Installation, Servocylinder .....	7.50	Circuit Breaker Panel No. 1 Circuit Breakers (Attached to Bus Bars) Replacement, CPG .....	9.45
Check Valve Replacement (AVIM), Hydraulic Hand Pump .....	7.30	Circuit Breaker Panel No. 1 Circuit Breakers (Not Attached to Bus Bars) Replacement, CPG .....	9.46
Check Valve Replacement (AVIM), Utility Hydraulic Accumulator APU Start .....	7.91	Circuit Breaker Panel No. 1 Light Indicating Panel Removal/Installation, CPG .....	9.44
Check Valve Replacement, Utility Hydraulic Accumulator .....	7.87	Circuit Breaker Panel No. 1 Removal/Installation, CPG .....	9.43
Check Valve Replacement, Utility Hydraulic Auxiliary Return .....	7.110		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Circuit Breaker Panel No. 2 Circuit Breaker Replacement, CPG .....	9.49	Circuit Card Removal/Installation (AVIM), Pilot Caution/Warning Panel	9.109
Circuit Breaker Panel No. 2 Light Indicating Panel Removal/Installation, CPG .....	9.48	Circuit Card Removal/Installation (AVIM), Digital Automatic Stabilization Equipment (DASE), Computer .....	11.221
Circuit Breaker Panel No. 2 Removal/Installation, CPG .....	9.47	Circuit Card Replacement (AVIM), APU Fire Panel .....	12.22
Circuit Breaker Panel Removal, Pilot ...	9.2	Circuit Card Replacement (AVIM), CPG Caution/Warning Panel .....	9.115
Circuit Breaker Relay Removal/Installation, Blade De-Ice Remote Control .....	9.12	Circuit Card Replacement (AVIM), Selectable Digital Display (SDD) Panel .....	8.16
Circuit Breaker Removal/Installation, MAINT LT or APU .....	9.42	Circuit Card Replacement (AVIM), Signal Data Converter .....	8.19
Circuit Breaker Replacement, CB3, CB201, CB202, CB203, or CB204 Remote Control .....	9.13	Circuit Card Replacement (AVIM), Torque, TGT, Fuel, and Ng Indicators Light Panel, Digital Display Driver ...	8.10
Circuit Breaker Replacement, Electrical Test Panel .....	9.28	Circuit Refueling (CCR) Method, Defueling – Closed .....	1.20
Circuit Breakers (Attached to Bus Bars) Replacement, Pilot .....	9.8	Circuit Refueling (CCR) Method, Fuel Servicing – Closed .....	1.15
Circuit Breakers (Not Attached to Bus Bars) Replacement, Pilot .....	9.7	Circuit Refueling (CCR) Method, Fuel Servicing – Hot Rapid Closed .....	1.17
Circuit Card and Jettison Wire Harness Removal/Installation, Pylon .....	16.19	Clamp and Locking Plate Removal/Installation (AVIM), Tail Rotor Fork .....	5.63
Circuit Card Assembly (CCA) Removal/Installation (AVIM), Stabilator Controller .....	11.228	Clamp Removal/Installation, Main Landing Gear Wheel Brake Tube and Hose .....	3.69
Circuit Card Assembly (CCA) Removal/Installation (AVIM), Stabilator Controller Interconnect ...	11.229	Clamp Removal/Installation, Main Landing Gear Wheel Brake, Hose (Nonmetallic), Tube, and .....	3.68
Circuit Card Assembly (CCA) Replacement (AVIM), ASE Panel ...	11.195	Clamp Replacement, Horizontal Stabilator Position Sensor .....	2.114A
Circuit Card Assembly (CCA) Removal/Installation (AVIM), Windshield Anti-Ice Temperature Control Box .....	12.68	Classification of Empennage Damage and Types of Repair .....	2.103
Circuit Card Installation (AVIM), Generator Control Unit (GCU) .....	9.16	Classification of Fuselage Damage and Types of Repair .....	2.12
Circuit Card on Torque, TGT, Fuel, and Ng Indicators Replacement (AVIM), Analog or Interface .....	8.11	Classification of Nacelle Damage and Types of Repair .....	2.129
Circuit Card Removal (AVIM), Generator Control Unit (GCU) .....	9.15	Classification of Wing Damage and Types of Repair .....	2.117

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Cleaning (Water Wash), Environmental Control Unit .....	1.48	Coaxial Mass Termination Connector (MTC) Repair .....	9.138
Cleaning – General .....	1.47	Cockpit Glareshield Removal/Installation, Left Aft Vertical	2.159
Cleaning, and Fresh Water Rinse Procedures, Aircraft and Aircraft Component Washing .....	1.53	Cockpit Glareshield Removal/Installation, Right Aft Vertical .....	2.158
Cleaning, Battery Compartment .....	1.50	Cockpit Sealing .....	2.48
Cleaning, ENCU Temperature Control Shutoff Valve/Electrical Control Valve	13.8	Cockpit Stow Box Cover Assembly Removal/Installation, Aft .....	2.160
Cleaning, Engine .....	4.1	Cockpit Thermal Insulation and Hook and Pile Fastener Removal/Installation, Pilot/CPG .....	2.10
Cleaning, Surge Valve .....	7.130A	Coil L1 or L2 Replacement (AVIM), CPG Caution/Warning Panel .....	9.117
Cleaning, Target Acquisition Designation Sight (TADS) .....	1.46	Coil L1 or L2 Replacement (AVIM), Pilot Caution/Warning Panel .....	9.113
Clevis Assembly Replacement (AVIM), Directional Servocylinder .....	7.40A	Cold Start – Battery, APU .....	16.33
Clevis Replacement, Engine Access and Ventilation Door Assembly Rig Connecting Link Actuating Link Rod and Rod End .....	2.145	Collar Replacement, Collective Stick Grip Control .....	11.25
Clip Replacement, No. 1 and No. 2 Engine Drain Manifold Support .....	4.110	Collective Bellcranks Removal/Installation, Longitudinal and .....	11.9
Clock Removal/Installation, Pilot/CPG ..	8.46	Collective Control Position Linear Variable Differential Transducer (LVDT) Installation, CPG .....	11.204
Closed Circuit Refueling (CCR) Method, Defueling – .....	1.20	Collective Control Position Linear Variable Differential Transducer (LVDT) Installation, Pilot .....	11.208
Closed Circuit Refueling (CCR) Method, Fuel Servicing – .....	1.15	Collective Control Position Linear Variable Differential Transducer (LVDT) Removal, CPG .....	11.203
Closed Circuit Refueling (CCR) Method, Fuel Servicing – Hot Rapid .....	1.17	Collective Control Position Linear Variable Differential Transducer (LVDT) Removal, Pilot .....	11.207
Closeout Fairing Access Covers Removal/Installation, Tailboom .....	2.127	Collective Control Variable Resistor Adjustment, Pilot .....	11.206
Clutch Removal/Installation, APU Power Take-Off (PTO) .....	TM 1-2835-213-23	Collective Control Variable Resistor Removal/Installation, Pilot .....	11.205
Clutch Removal/Installation, Main Transmission Input Drive .....	6.115	Collective F.S. 118.50 Bellcrank Removal/Installation, CPG to Pilot Control .....	11.130
Clutch Solenoid Valve Disassembly/Assembly, APU Power Take-Off (PTO) .....	TM 1-2835-213-23	Collective F.S. 118.50 Support Bracket Removal/Installation, CPG to Pilot Control .....	11.132
Clutch Solenoid Valve Removal/Installation, APU Power Take-Off (PTO) .....	TM 1-2835-213-23		
Coating Application, Anti-Abrasive .....	2.35		
Coating Application, Anti-Skid .....	2.36		
Coating Application, Electromagnetic Conductive .....	2.34		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Collective F.S. 161.54 Bellcrank Removal/Installation . . . . .	11.134	Collective Stick Boresight Switch Replacement . . . . .	11.31
Collective F.S. 161.54 Bracket Assembly Removal/Installation . . . . .	11.135	Collective Stick BUCS Select Trigger Grip Switch Replacement, CPG . . . . .	11.33
Collective F.S. 161.54 Push-Pull Rod Assembly Removal/Installation . . . . .	11.136	Collective Stick Cover Removal/Installation . . . . .	11.44
Collective F.S. 161.60 Bellcrank Bracket Assembly Removal/Installation . . . . .	11.137	Collective Stick Cylinder Assembly Disassembly/Assembly (AVIM) . . . . .	11.37
Collective F.S. 161.60 Bellcrank Removal/Installation . . . . .	11.138	Collective Stick Cylinder Assembly Removal/Installation, Pilot . . . . .	11.36
Collective F.S. 161.60 Push-Pull Rod Assembly Removal/Installation . . . . .	11.139	Collective Stick Cylinder Removal/Installation, CPG . . . . .	11.40
Collective F.S. 164.95 Bellcrank Removal/Installation . . . . .	11.140	Collective Stick Grip Assembly Removal/Installation . . . . .	11.24
Collective F.S. 164.95 Push-Pull Rod Assembly Removal/Installation . . . . .	11.141	Collective Stick Grip Control Collar Replacement . . . . .	11.25
Collective F.S. 176.00 Servocylinder Mount Bracket Removal/Installation . . . . .	11.142	Collective Stick Installation, Pilot or CPG . . . . .	11.21
Collective Flight Controls Between Pilot and CPG Collective Sticks, Rigging . . . . .	11.281	Collective Stick Removal, Pilot or CPG . . . . .	11.20
Collective Flight Controls Between Pilot Collective Stick and Collective Servocylinder, Rigging . . . . .	11.282	Collective Stick RF Override Switch Replacement . . . . .	11.30
Collective Push-Pull Rod Assembly Removal/Installation, Pilot . . . . .	11.133	Collective Stick Searchlight Directional Switch Replacement . . . . .	11.28
Collective Servocylinder Engine Control Rod Adapter Removal/Installation . . . . .	4.153	Collective Stick Searchlight ON/OFF Switch Replacement . . . . .	11.27
Collective Servocylinder Engine Control Rod Disassembly/Assembly . . . . .	4.152	Collective Stick Shear Pin Replacement, CPG . . . . .	11.43
Collective Servocylinder Engine Control Rod Removal/Installation . . . . .	4.151	Collective Stick Shear Pin Replacement, Pilot . . . . .	11.23
Collective Servocylinder Installation . . . . .	7.42	Collective Stick Stabilator Manual Switch Removal/Installation . . . . .	11.26
Collective Servocylinder Removal . . . . .	7.41	Collective Stick Stop Bolts, Rigging Pilot and CPG . . . . .	11.283
Collective Servocylinder Rod End Replacement . . . . .	7.43	Collective Stick Stores Jettison Switch Cover Replacement . . . . .	11.29A
Collective Servocylinder, Rigging Collective Flight Controls Between Pilot and Collective Stick and . . . . .	11.282	Collective Stick Stores Jettison Switch Replacement . . . . .	11.29
Collective Stick and Collective Servocylinder, Rigging Collective Flight Controls Between Pilot and . . . . .	11.282	Collective Stick Support Assembly Disassembly/Assembly (AVIM), CPG . . . . .	11.42

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Collective Stick Support Assembly Disassembly/Assembly (AVIM), Pilot	11.39	Compass Removal/Installation, Pilot Magnetic .....	8.42
Collective Stick Support Removal/Installation, Pilot .....	11.38	Component Assembly and Access Cover Replacement (AVIM), Pilot Fuel Panel Electronic .....	10.59
Collective Stick Switch and Bracket Assembly Removal/Installation .....	11.34	Component Fixture Adapter Installation	1.122
Collective Stick TADS/PNVS Switch Replacement .....	11.32	Component Fixture Adapter Removal ..	1.123
Collective Stick Tube Assembly Disassembly/Assembly (AVIM) .....	11.35	Component Washing, Cleaning, and Fresh Water Rinse Procedures, Aircraft and Aircraft .....	1.53
Collective Sticks, Rigging Collective Flight Controls Between Pilot and CPG .....	11.281	Components Inspection, Auxiliary Power System .....	15.1
Collective Support Removal/Installation, CPG .....	11.41	Components Inspection, Lighting Provisions .....	9.61
Collective Upper Flight Controls, Rigging .....	11.284	Components Inspection, Power Generation and Distribution .....	9.1
Collector Installation, Engine Buildup – No. 1 and No. 2 Engine Oil Chip .....	4.33	Components, Location and Description of Major .....	1.9
Collector Removal, Engine Teardown – No. 1 and No.2 Oil Chip .....	4.27	Compressor (SDC) Removal, Shaft Driven .....	7.120
Collector Removal/Installation, No. 1 or No. 2 Engine Oil Chip .....	4.101	Compressor Bleed Air Adapter and Elbow Removal/Installation, No. 2 Engine .....	4.76
Columns in Remarks, Section IV, Explanation of .....	B.8	Compressor Bleed Air Hose Removal/Installation, No. 2 Engine ..	4.75
Columns in the MAC, Section II, Explanation of .....	B.6	Compressor Bleed Air Tube Removal/Installation, No. 1 Engine ..	4.74
Columns in Tools and Test Equipment Requirements, Section III, Explanation of .....	B.7	Compressor Drive Adapter and Seal Removal/Installation, Main Transmission .....	6.54
Columns, Expendable and Durable Items List, Explanation of .....	F.14	Computer Circuit Card Removal/Installation (AVIM), Digital Automatic Stabilization Equipment (DASE) .....	11.221
Columns, Tool Identification List, Explanation of .....	H.4	Computer Cover Removal/Installation (AVIM), Digital Automatic Stabilization Equipment (DASE) ....	11.219
Combustor Drain Hose Replacement, No. 1 and No. 2 Engine .....	4.111	Computer Cover Seal Replacement (AVIM), Digital Automatic Stabilization Equipment (DASE) ....	11.220
Combustor Liner, Cap, Fuel Nozzle, and Ignitor Plug Removal/Installation, APU .....	TM 1-2835-213-23	Computer Power Supply Removal/Installation (AVIM), Digital Automatic Stabilization Equipment (DASE) .....	11.222
Common to the Three Storage Categories, Services .....	E.3		
Compartment Cleaning, Battery .....	1.50		
Compartment Removal/Installation, CPG Map Stowage .....	2.184		



<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Computer Removal/Installation, Digital Automatic Stabilization Equipment (DASE) .....	11.218	Connecting Links Removal/Installation, No. 1 or No. 2 Power Available Spindle Cable .....	4.164
Conditioned Air Outlet Hose Removal/Installation, Nitrogen Inerting Unit (NIU) .....	10.126	Connection Flange Removal/Installation, Start Air Valve and Ground Air .....	7.142
Conditioner Adjustment, Fuel Signal ...	10.136	Connection Flanged Seal Replacement, Secondary Air Flexible .....	7.140
Conditioner Removal/Installation, Fuel Signal .....	8.27	Connection Housing Removal/Installation, No. 2 Engine Start Air Tube and Air Flexible .....	7.146
Conditions, Environmental .....	E.4	Connection Housing Removal/Installation, Standby System Engine Bleed Air Tube and Engine Air Flexible .....	7.141
Conductive Coating Application, Electromagnetic .....	2.34	Connection Housing, and Utility Tube Removal/Installation, Ground Air Connection Manifold Engine Air Flexible .....	7.144
Cone and Rollers Packing, Main Landing Gear Wheel Tapered .....	3.15	Connection Manifold, Engine Air Flexible Connection Housing, and Utility Tube Removal/Installation, Ground Air .....	7.144
Cone and Rollers Packing, Tail Landing Gear Wheel Tapered .....	3.52	Connector (MTC) (1 or 2 inch) Repair, Mass Termination .....	9.135
Cone and Rollers Removal/Installation (Eight-Bolts), Main Landing Gear Wheel Tapered .....	3.14	Connector (MTC) Keying, Mass Termination .....	9.137
Cone and Rollers Removal/Installation (Nine-Bolts), Main Landing Gear Wheel Tapered .....	3.10	Connector (MTC) Repair, Coaxial Mass Termination .....	9.138
Cone and Rollers Removal/Installation, Tail Landing Gear Wheel (With Grease Fitting) Tapered .....	3.48	Connector (MTC) With Shield Bus (1 or 2 Inch) Repair, Mass Termination ...	9.136
Cone and Rollers Removal/Installation, Tail Landing Gear Wheel (Without Grease Fitting) Tapered .....	3.51	Connector Bracket and Wire Harness Support Bracket Removal/Installation, Aft Deck Left Side .....	9.151
Configuration, Equipment .....	1.10	Connector Bracket and Wire Harness Support Bracket Removal/Installation, Aft Deck Right Side .....	9.150
Connecting Link Actuating Link Rod and Rod End Clevis Replacement, Engine Access and Ventilation Door Assembly Rig .....	2.145	Connector Plate Removal/Installation, Pylon Top .....	16.24
Connecting Link Removal/Installation, Engine Access and Ventilation Door Assembly Rig .....	2.144	Connector Replacement, CPG Engine Instruments Dimmer Power Supply ..	8.26
Connecting Link Removal/Installation, Tail Rotor .....	11.266		
Connecting Links Disassembly/Assembly, No. 1 or No. 2 Power Available Spindle Cable ....	4.165		
Connecting Links Removal/Installation, Engine .....	4.86		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Connector Replacement, Main Rotor Blade Receptacle .....	5.17	Control Box Receptacle Replacement (AVIM), Windshield Anti-Ice Temperature .....	12.73
Connector Replacement, Refueling Line	10.18	Control Box Relay Replacement (AVIM), Windshield Anti-Ice Temperature ....	12.70
Console Panels Removal/Installation, Pilot Left and Right .....	2.8	Control Box Removal/Installation, Windshield Anti-Ice Temperature ....	12.66
Contactory Relay No. 1 or No. 2 Removal/Installation, Generator ....	9.18	Control Box Semiconductor Replacement (AVIM), Windshield Anti-Ice Temperature .....	12.71
Contactory Relay Removal/Installation, External Power .....	9.23	Control Box Terminal Stud Replacement (AVIM), Windshield Anti-Ice Temperature .....	12.74
Container Transport Adapter Installation	1.120	Control Bracket Assembly Removal/Installation, CPG to Pilot Lateral F.S. 118.50 .....	11.97
Container Transport Adapter Removal .	1.121	Control Bracket Assembly Removal/Installation, CPG to Pilot Lateral F.S. 65.50 .....	11.87
Control Amplifier Replacement, APU Flame Detector .....	12.27	Control Bracket Assembly Removal/Installation, CPG to Pilot Longitudinal F.S. 96.59 .....	11.117
Control Amplifier Replacement, Engine Flame Detector .....	12.26	Control Bracket Removal/Installation, CPG to Pilot Directional F.S. 112.50 .	11.160
Control Arm Assembly Disassembly/Assembly (AVIM), CPG Cyclic Stick Flight .....	11.85	Control Bracket Removal/Installation, CPG to Pilot Longitudinal F.S. 82.80 .	11.114
Control Arm Assembly Disassembly/Assembly (AVIM), Pilot Cyclic Stick Flight .....	11.62	Control Bracket Removal/Installation, Directional F.S. 275 Rotor .....	11.255
Control Assembly and Bracket Assembly Removal/Installation, Parking Brake Pull .....	3.59	Control Bracket Removal/Installation, Tail Rotor .....	11.253
Control Assembly Removal/Installation, Pilot/CPG Armored Crew .....	2.172	Control Collar Replacement, Collective Stick Grip .....	11.25
Control Assembly Removal/Installation, Pilot/CPG Armored Crew Seat Restraint .....	2.173	Control Collective F.S. 118.50 Bellcrank Removal/Installation, CPG to Pilot ..	11.130
Control Box Access Cover Removal/Installation (AVIM), Windshield Anti-Ice Temperature ....	12.67	Control Collective F.S. 118.50 Support Bracket Removal/Installation, CPG to Pilot .....	11.132
Control Box Capacitor Replacement (AVIM), Windshield Anti-Ice Temperature .....	12.69	Control Directional F.S. 112.50 Bellcrank Removal/Installation, CPG to Pilot ..	11.158
Control Box Circuit Card Assembly (CCA) Removal/Installation (AVIM), Windshield Anti-Ice Temperature ....	12.68		
Control Box Current Transformer Replacement (AVIM), Windshield Anti-Ice Temperature Control Box ...	12.72		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Control Directional F.S. 118.50 Bellcrank Removal/Installation, CPG to Pilot ..	11.161	Control Panel Disassembly/Assembly (AVIM), Pilot/CPG Engine Instrument Dim/Test .....	8.23
Control Directional F.S. 118.50 Support Bracket Removal/Installation, CPG to Pilot .....	11.162	Control Panel Front Panel Removal/Installation (AVIM), Pilot/CPG Engine Instrument Dim/Test .....	8.24
Control Flight Bracket Assembly Removal/Installation, CPG to Pilot Longitudinal F.S. 118.50 .....	11.120	Control Pedal Adjust Spring Removal/Installation, Directional ....	11.237
Control Gearbox Aft Cable Support Removal/Installation, No. 1 Engine Power .....	4.172	Control Pedal Adjusting Crank Assembly Removal/Installation (AVIM), Directional .....	11.238
Control Knob Removal/Installation, CPG INTR LT Panel .....	9.82	Control Pedal and Pedal Skirt Removal/Installation, CPG Directional .....	11.239
Control Knob Removal/Installation, Pilot EXT LT/INTR LT Panel .....	9.63	Control Pedal and Pedal Skirt Removal/Installation, Pilot Directional	11.233
Control Lateral F.S. 111.50 Bellcrank Removal/Installation, CPG to Pilot ..	11.92	Control Pedal Housing Assembly Removal/Installation, CPG Directional .....	11.243
Control Lateral F.S. 118.50 Bellcrank Removal/Installation, CPG to Pilot ..	11.95	Control Pedal Housing Assembly Removal/Installation, Pilot Directional	11.236
Control Lateral F.S. 83.45 Idler Bellcrank Removal/Installation, CPG to Pilot .....	11.89	Control Pedal Pivot Support Assembly Removal/Installation, Pilot Directional	11.234
Control Lever Removal/Installation, CPG Cyclic Stick Remote .....	11.72	Control Pedal Pivot Support Assembly Removal/Installation, CPG Directional .....	11.241
Control Lever Removal/Installation, Remote .....	3.29	Control Pedal Release Shaft Assembly Removal/Installation, CPG Directional .....	11.242
Control Lever Sleeve Bearing Replacement, Remote .....	3.30	Control Pedal Release Shaft Assembly Removal/Installation, Pilot Directional	11.235
Control Longitudinal F.S. 118.50 Bellcrank Removal/Installation, CPG to Pilot .....	11.118	Control Pedal Weight Removal/Installation, CPG Directional .....	11.240
Control Longitudinal F.S. 82.80 Bellcrank Removal/Installation, CPG to Pilot .....	11.112	Control Pilot Valve Removal/Installation, Aft Fuel Cell Fuel Level .....	10.37
Control Longitudinal F.S. 96.59 Bellcrank Removal/Installation, CPG to Pilot .....	11.115	Control Pilot Valve Removal/Installation, Forward Fuel Cell Fuel Level .....	10.13
Control Module Assembly Replacement, Nose Gearbox Fuselage Fairing ....	2.124		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Control Position Linear Variable Differential Transducer (LVDT) Installation, Pilot Lateral .....	11.213	Control Position Linear Variable Differential Transducer (LVDT) Removal, Pilot Longitudinal .....	11.214
Control Position Linear Variable Differential Transducer (LVDT) Installation, CPG Collective .....	11.204	Control Removal/Installation, Engine Out Warning .....	8.28
Control Position Linear Variable Differential Transducer (LVDT) Installation, CPG Control .....	11.200	Control Removal/Installation, Forward and Aft Poppet Draincock and .....	10.3
Control Position Linear Variable Differential Transducer (LVDT) Installation, CPG Directional .....	11.197	Control Rod Adapter Removal/Installation, Collective Servocylinder Engine .....	4.153
Control Position Linear Variable Differential Transducer (LVDT) Installation, CPG Lateral .....	11.199	Control Rod Disassembly/Assembly, Collective Servocylinder Engine ....	4.152
Control Position Linear Variable Differential Transducer (LVDT) Installation, CPG Longitudinal .....	11.201	Control Rod Removal/Installation, Collective Servocylinder Engine ....	4.151
Control Position Linear Variable Differential Transducer (LVDT) Installation, Pilot Collective .....	11.208	Control Shutoff Valve Removal/Installation, No. 1 or No. 2 Engine Directional .....	4.63
Control Position Linear Variable Differential Transducer (LVDT) Installation, Pilot Directional .....	11.211	Control Solenoid Valve Replacement, Servocylinder .....	7.51
Control Position Linear Variable Differential Transducer (LVDT) Installation, Pilot Longitudinal .....	11.215	Control Spindle Gearbox Baseplate Removal/Installation, No. 1 and No. 2 Engine Power .....	4.142
Control Position Linear Variable Differential Transducer (LVDT) Removal, CPG Collective .....	11.203	Control System (ECS) Inspection, Environmental .....	13.1
Control Position Linear Variable Differential Transducer (LVDT) Removal, CPG Directional .....	11.196	Control System Bearing/Bushing Replacement (AVIM), Flight .....	11.4
Control Position Linear Variable Differential Transducer (LVDT) Removal, CPG Lateral .....	11.198	Control System Inspection, Directional .	11.232
Control Position Linear Variable Differential Transducer (LVDT) Removal, Pilot Collective .....	11.207	Control System Push-Pull Rod Adjustable Rod End Bearing Assembly Replacement/Adjustment, Flight .....	11.2
Control Position Linear Variable Differential Transducer (LVDT) Removal, Pilot Directional .....	11.210	Control System Push-Pull Rod Non-adjustable Rod End Bearing Replacement, Flight .....	11.3
Control Position Linear Variable Differential Transducer (LVDT) Removal, Pilot Lateral .....	11.212	Control Unit (GCU) Circuit Card Installation (AVIM), Generator .....	9.16
		Control Unit (GCU) Circuit Card Removal (AVIM), Generator .....	9.15
		Control Unit (GCU) Fixed Capacitor Replacement (AVIM), Generator ....	9.17
		Control Unit (GCU) No. 1 or No. 2 Removal/Installation, Generator ....	9.14

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Control Unit Adjustment (T700-GE-701 Engine), Engine Turbine Speed . . . . .	4.136	Controller Electrical Chassis Repair, Stabilator . . . . .	11.230
Control Unit Adjustment (T700-GE-701C Engine), Engine Turbine Speed . . . . .	4.137	Controller Interconnect Circuit Card Assembly (CCA) Removal/Installation (AVIM), Stabilator . . . . .	11.229
Control Unit and Nose Gearbox Fixture Installation, Environmental . . . . .	1.124	Controller Module Disassembly/Assembly (AVIM), Multichannel Dimming . . . . .	9.76
Control Unit and Nose Gearbox Fixture Removal, Environmental . . . . .	1.125	Controller Module Removal/Installation (AVIM), Multichannel Dimming . . . . .	9.75
Control Unit Cleaning (Water Wash), Environmental . . . . .	1.48	Controller Removal, Stabilator . . . . .	11.226
Control Unit Replacement, Temperature Alarm . . . . .	9.125	Controller Removal/Installation, APU . . . . .	15.23
Control Unit Replacement, Engine Turbine Speed . . . . .	4.135	Controller Removal/Installation, Blade De-Ice . . . . .	12.55
Control Valve Removal/Installation, Fuel Tank Pressure . . . . .	7.151	Controller Unit Circuit Card Assembly (CCA) Removal/Installation (AVIM), Stabilator . . . . .	11.228
Control Valve Removal/Installation, Fuel Transfer Air . . . . .	10.83	Controller Installation, Stabilator . . . . .	11.227
Control Valve Replacement, Tail Wheel Lock . . . . .	7.107	Controller Unit Removal/Installation, Multichannel Dimming . . . . .	9.74
Control Valves Bracket Assembly Removal/Installation, Brake . . . . .	3.64	Controls – Inspection (Main Rotor), Flight . . . . .	11.5
Control Valves Internal Leakage Repair and Test (AVIM), Brake . . . . .	3.63	Controls Between Pilot and CPG Collective Sticks, Rigging Collective Flight . . . . .	11.281
Control Valves Removal/Installation, Brake . . . . .	3.62	Controls Between Pilot and CPG Cyclic Sticks, Rigging Lateral Flight . . . . .	11.289
Control Variable Resistor Adjustment, Pilot Collective . . . . .	11.206	Controls Between Pilot and CPG Cyclic Sticks, Rigging Longitudinal Flight . . . . .	11.285
Control Variable Resistor Removal/Installation, Pilot Collective . . . . .	11.205	Controls Between Pilot Collective Stick and Collective Servocylinder, Rigging Collective Flight . . . . .	11.282
Control, Corrosion . . . . .	1.49	Controls Between Pilot Cyclic Stick and Lateral Servocylinder, Rigging Lateral Flight . . . . .	11.290
Control, Corrosion . . . . .	E.2	Controls Between Pilot Cyclic Stick and Longitudinal Servocylinder, Rigging Longitudinal Flight . . . . .	11.286
Controller Adjustment, Blade De-Ice . . . . .	12.56	Controls Between Pilot Pedals and Directional Servocylinder, Rigging Directional Flight . . . . .	11.294
Controller and Controller Bracket Removal/Installation, Pylon . . . . .	16.15		
Controller Chassis Disassembly/Assembly (AVIM), Multichannel Dimming . . . . .	9.77		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Converter Circuit Card Replacement (AVIM), Signal Data .....	8.19	Coupling Removal/Installation, Left and Right Auxiliary Fuel Tank Quick-Disconnect .....	10.91
Converter Power Supply Replacement (AVIM), Signal Data .....	8.20	Coupling Removal/Installation, Main Transmission Input .....	6.3
Converter Removal/Installation, Signal Data .....	8.18	Coupling Removal/Installation, Main Transmission Tail Rotor .....	6.4
Converter Tray Removal/Installation, Signal Data .....	8.21	Coupling Removal/Installation, No. 1 or No. 2 Engine Inlet .....	4.73
Cooling Air Exhaust Hose Removal/Installation, Nitrogen Inerting Unit (NIU) .....	10.130	Coupling Removal/Installation, Tail Rotor Gearbox Input .....	6.15
Cooling Air Inlet Hose Removal/Installation, Nitrogen Inerting Unit (NIU) .....	10.129	Coupling Replacement, Primary Hydraulic GSE Pressure .....	7.23
Cooling Turbine Assembly Removal/Installation, ENCU .....	13.9	Coupling Replacement, Primary Hydraulic GSE Return .....	7.24
Cork Stopper Replacement, Main Transmission Generator Spline Adapter and .....	6.72	Coupling Replacement, Utility Hydraulic GSE Pressure .....	7.80
Cork Stopper Replacement, Main Transmission Tail Rotor Flange .....	6.76	Coupling Replacement, Utility Hydraulic GSE Return .....	7.81
Cork Stopper Replacement, Tail Landing Gear Shock Strut .....	3.41	Coupling Replacement, Wing Fuselage Quick-Disconnect .....	7.101
Corrosion Control .....	1.49	Coupling Replacement, Wing Quick-Disconnect .....	7.100
Corrosion Control .....	E.2	Coupling, and Flange Removal/Installation, Intermediate Gearbox Centrifugal Fan, Input .....	6.12
Coupler Hose Replacement, Fuel Transfer Valve Air Exhaust Vent Tube .....	10.78	Coupling, Vaneaxial Fan, and Inlet Diffuser Removal/Installation, Engine Nose Gearbox Flexible .....	6.33
Coupling and Adapter Removal/Installation, Ground Support Air .....	7.143	Couplings Removal/Installation, Pressurized Air System Left and Right Auxiliary Fuel Quick-Disconnect Branch Tubes and .....	7.152
Coupling Half Removal/Installation, No. 1 and No. 2 Engine Water Wash .....	4.102	Cover Assembly Removal/Installation, Aft Cockpit Stow Box .....	2.160
Coupling Halves Replacement, Main Transmission .....	6.77	Cover Assembly Removal/Installation, HDU Helmet Holster and .....	2.185
Coupling Halves Replacement, Turret ..	7.111	Cover Installation, Protective .....	1.59
Coupling Nipple Replacement, Wing Fuselage .....	7.102	Cover Oil Jet Removal/Installation, Main Transmission Upper .....	6.53
Coupling Removal/Installation, Aft Hanger Bearing .....	6.9	Cover Removal, Protective .....	1.60
Coupling Removal/Installation, Forward Hanger Bearing .....	6.6	Cover Removal/Installation (AVIM), Digital Automatic Stabilization Equipment (DASE) Computer .....	11.219
Coupling Removal/Installation, Intermediate Gearbox Output .....	6.13	Cover Removal/Installation, Collective Stick .....	11.44

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Cover Removal/Installation, CPG Left or Right Directional Control Pedal Protective .....	11.244	CPG Armored Crew Seat Rotary Buckle Removal/Installation, Pilot/ .....	2.175
Cover Removal/Installation, Forward Fuel Cell Forward Access .....	10.7	CPG Armored Crew Seat Shoulder Harness and Inertia Reel Removal/Installation, Pilot/ .....	2.174
Cover Removal/Installation, Forward Fuel Cell Frame F.S. 163.20 .....	2.47A	CPG Armored Crew Seat Strap Guide Assembly Removal/Installation, Pilot/ .....	2.169
Cover Removal/Installation, Horizontal Stabilator Debris .....	2.115	CPG Armored Crew Seat Wing Panel (Armored Swing Panel) Removal/Installation, Pilot/ .....	2.165
Cover Removal/Installation, Main Rotor Drive Plate .....	6.92	CPG Armored Crew Seat Wing Panel Slider Plate Removal/Installation, Pilot/ .....	2.166
Cover Removal/Installation, Pilot Left or Right Directional Control Pedal Protective .....	11.244A	CPG Auxiliary Panel Assembly Removal/Installation .....	12.53
Cover Replacement (AVIM), Pilot Fuel Panel Electronic Component Assembly and Access .....	10.59	CPG Auxiliary Panel Light Indicating Panel Removal/Installation .....	12.54
Cover Replacement, Collective Stick Stores Jettison Switch .....	11.29A	CPG Barometric Altimeter Removal/Installation, Pilot/ .....	8.31
Cover Seal Replacement (AVIM), Digital Automatic Stabilization Equipment (DASE) Computer .....	11.220	CPG BAT OVRD Switch Removal/Installation (AVIM) .....	4.199
Covers Removal/Installation, Tailboom Closeout Fairing Access .....	2.127	CPG Boresight Mount Fitting Removal/Installation .....	2.39
CPG Adjustable Cyclic Stick Link Removal/Installation .....	11.68	CPG Brake Hose Assembly Removal/Installation .....	3.55
CPG Airspeed Indicator Removal/Installation, Pilot/ .....	8.30	CPG Brake Master Cylinders Removal/Installation .....	3.57
CPG Armored Crew Seat Bucket Assembly Replacement, Pilot/ .....	2.177	CPG Canted Bulkhead Seat Fitting Bearing Replacement, Pilot/ .....	2.162
CPG Armored Crew Seat Control Assembly Removal/Installation, Pilot/ .....	2.172	CPG Canted Frame Bearing Replacement, Pilot/ .....	2.163
CPG Armored Crew Seat Cushion Removal/Installation, Pilot/ .....	2.168	CPG Caution/Warning and Master Caution/Warning Panel Lamp Replacement, Pilot or .....	9.108
CPG Armored Crew Seat Frame Assembly Attenuator Removal/Installation, Pilot/ .....	2.171	CPG Caution/Warning and Master Caution/Warning Panel Light Switch Replacement (AVIM), Pilot or .....	9.107
CPG Armored Crew Seat Frame Assembly Helical Extension Spring Removal/Installation, Pilot/ .....	2.170	CPG Caution/Warning and Master Caution/Warning Panel Pushbutton Cap Removal/Installation, Pilot or ...	9.106
CPG Armored Crew Seat Handle Assembly Replacement, Pilot .....	2.164	CPG Caution/Warning Panel Ceramic Fixed Capacitor C5 Replacement (AVIM) .....	9.120
CPG Armored Crew Seat Lap Belt Removal/Installation, Pilot/ .....	2.176	CPG Caution/Warning Panel Circuit Card Replacement (AVIM) .....	9.115
CPG Armored Crew Seat Removal/Installation, Pilot/ .....	2.161		
CPG Armored Crew Seat Restraint Control Assembly Removal/Installation, Pilot/ .....	2.173		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
CPG Caution/Warning Panel Coil L1 or L2 Replacement (AVIM) .....	9.117	CPG Collective F.S. 118.50 Push-Pull Rod Assembly Removal/Installation .	11.131
CPG Caution/Warning Panel Fixed Capacitor C1 or C2 Replacement (AVIM) .....	9.118	CPG Collective Stick BUCS Select Trigger Grip Switch Replacement ...	11.33
CPG Caution/Warning Panel Fixed Capacitor C3 or C4 Replacement (AVIM) .....	9.119	CPG Collective Stick Cylinder Removal/Installation .....	11.40
CPG Caution/Warning Panel Fixed Wire Resistor Replacement (AVIM) .....	9.121	CPG Collective Stick Installation, Pilot or .....	11.21
CPG Caution/Warning Panel Housing Disassembly/Assembly (AVIM) .....	9.116	CPG Collective Stick Removal, Pilot or .	11.20
CPG Caution/Warning Panel Removal/Installation .....	9.114	CPG Collective Stick Shear Pin Replacement .....	11.43
CPG Circuit Breaker Panel No. 1 Circuit Breakers (Attached to Bus Bars) Replacement .....	9.45	CPG Collective Stick Stop Bolts, Rigging Pilot and .....	11.283
CPG Circuit Breaker Panel No. 1 Circuit Breakers (Not Attached to Bus Bars) Replacement .....	9.46	CPG Collective Stick Support Assembly Disassembly/Assembly (AVIM) .....	11.42
CPG Circuit Breaker Panel No. 1 Light Indicating Panel Removal/Installation	9.44	CPG Collective Sticks, Rigging Collective Flight Controls Between Pilot and .....	11.281
CPG Circuit Breaker Panel No. 1 Removal/Installation .....	9.43	CPG Collective Support Removal/Installation .....	11.41
CPG Circuit Breaker Panel No. 2 Circuit Breaker Replacement .....	9.49	CPG Cyclic Lateral Push-Pull Rod Assembly Removal/Installation .....	11.86
CPG Circuit Breaker Panel No. 2 Light Indicating Panel Removal/Installation	9.48	CPG Cyclic Stick Aft Link Removal/Installation .....	11.70
CPG Circuit Breaker Panel No. 2 Removal/Installation .....	9.47	CPG Cyclic Stick and Lateral Link Installation .....	11.67
CPG Clock Removal/Installation, Pilot/ .	8.46	CPG Cyclic Stick and Lateral Link Removal .....	11.66
CPG Cockpit Thermal Insulation and Hook and Pile Fastener Removal/Installation, Pilot/ .....	2.10	CPG Cyclic Stick Cover Removal/Installation .....	11.65
CPG Collective Control Position Linear Variable Differential Transducer (LVDT) Installation .....	11.204	CPG Cyclic Stick Flight Control Arm Assembly Disassembly/Assembly (AVIM) .....	11.85
CPG Collective Control Position Linear Variable Differential Transducer (LVDT) Removal .....	11.203	CPG Cyclic Stick Forward Link Removal/Installation .....	11.69
		CPG Cyclic Stick Housing Assembly Disassembly/Assembly (AVIM) .....	11.84
		CPG Cyclic Stick Housing Lateral Shear Pin Replacement .....	11.83
		CPG Cyclic Stick Housing Longitudinal Shear Pin Replacement .....	11.82



<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
CPG Cyclic Stick Housing Removal/Installation .....	11.81	CPG Directional Shear Pin Activated Decoupler (SPAD) Assembly Disassembly/Assembly (AVIM) .....	11.148
CPG Cyclic Stick Lever Lock Release Retainer Removal/Installation .....	11.75	CPG Directional Shear Pin Activated Decoupler (SPAD) Installation .....	11.145
CPG Cyclic Stick Lock Release Wire Rope Removal/Installation .....	11.76	CPG Directional Shear Pin Activated Decoupler (SPAD) Push-Pull Rod Assembly Removal/Installation .....	11.143
CPG Cyclic Stick Lock Removal/Installation .....	11.77	CPG Directional Shear Pin Activated Decoupler (SPAD) Removal .....	11.144
CPG Cyclic Stick Remote Control Lever Removal/Installation .....	11.72	CPG Directional Shear Pin Activated Decoupler (SPAD) Shear Pin Replacement .....	11.146
CPG Cyclic Stick Trim and Force Feel Release Switch Replacement .....	11.80	CPG Directional Shear Pin Activated Decoupler (SPAD) Shear Rivet Replacement (AVIM) .....	11.147
CPG Cyclic Stick Wire Rope Release Fitting Removal/Installation .....	11.74	CPG Door Transparent Panel Assembly Removal/Installation .....	2.53
CPG Cyclic Sticks, Rigging Lateral Flight Controls Between Pilot and ...	11.289	CPG EMER HYD PWR Switch Removal/ Installation .....	4.200
CPG Cyclic Sticks, Rigging Longitudinal Flight Controls Between Pilot and ...	11.285	CPG Engine Fire Pull Switch Removal/Installation .....	12.36
CPG Directional Control Pedal and Pedal Skirt Removal/Installation ....	11.239	CPG Engine Instrument Dim/Test Control Panel Disassembly/Assembly (AVIM), Pilot/ .....	8.23
CPG Directional Control Pedal Housing Assembly Removal/Installation .....	11.243	CPG Engine Instrument Dim/Test Control Panel Front Panel Removal/Installation (AVIM), Pilot/ ..	8.24
CPG Directional Control Pedal Pivot Support Assembly Removal/Installation .....	11.241	CPG Engine Instrument Dim/Test Control Panel Removal/Installation, Pilot/ .....	8.22
CPG Directional Control Pedal Release Shaft Assembly Removal/Installation	11.242	CPG Engine Instruments Dimmer Power Supply Connector Replacement .....	8.26
CPG Directional Control Pedal Weight Removal/Installation .....	11.240	CPG Engine Instruments Dimmer Power Supply Removal/Installation ..	8.25
CPG Directional Control Position Linear Variable Differential Transducer (LVDT) Installation .....	11.197	CPG Engine Torque Indicator Removal/Installation, Pilot/ .....	8.3
CPG Directional Control Position Linear Variable Differential Transducer (LVDT) Removal .....	11.196	CPG Engine/Rotor RPM Indicator Removal/Installation, Pilot/ .....	8.4
CPG Directional F.S. 60.56 Shear Pin Activated Decoupler (SPAD) Bracket Assembly Removal/Installation .....	11.149	CPG Fire Bottle Select Switch Replacement .....	12.37
CPG Directional Pedal Stop Bolts, Rigging Pilot and .....	11.295		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
CPG Fixed Glareshield Removal/Installation .....	2.154	CPG INTR LT Panel Resistor R3, R4, or R5 Replacement (AVIM) .....	9.87
CPG Floor Armor Panel Removal/Installation .....	2.181	CPG INTR LT Panel Semiconductor Device CR1 or CR2 Replacement (AVIM) .....	9.84
CPG Foot Guard Removal/Installation, Pilot/ .....	2.189	CPG INTR LT Panel Semiconductor Device CR3, CR4, or CR5 Replacement (AVIM) .....	9.85
CPG Fuel Panel Boost Pump Switch Replacement (AVIM) .....	10.67	CPG Lateral Control Position Linear Variable Differential Transducer (LVDT) Installation .....	11.199
CPG Fuel Panel Light Indicating Panel Replacement .....	10.63	CPG Lateral Control Position Linear Variable Differential Transducer (LVDT) Removal .....	11.198
CPG Fuel Panel Pilot Override Switch Replacement (AVIM) .....	10.65	CPG Lateral Cyclic Stick Stop Bolts, Rigging Pilot and .....	11.291
CPG Fuel Panel Removal/Installation ..	10.62	CPG Left and Right Console Panels Removal/Installation .....	2.9
CPG Fuel Panel Support Panel Replacement (AVIM) .....	10.68	CPG Left Hand or Right Hand Armored Side Panel Removal/Installation ....	2.181B
CPG Fuel Panel Tank Select Switch Replacement (AVIM) .....	10.66	CPG Left or Right Directional Control Pedal Protective Cover Removal/Installation .....	11.244
CPG Fuel Panel Transfer Switch Replacement (AVIM) .....	10.64	CPG Lock Release Lever Removal/Installation .....	11.71
CPG FUEL XFER Advisory Light Replacement .....	9.123	CPG Longitudinal Control Position Linear Variable Differential Transducer (LVDT) Installation .....	11.201
CPG Glareshield Curtain/Tray Removal/Installation .....	2.152	CPG Longitudinal Control Position Linear Variable Differential Transducer (LVDT) Removal .....	11.200
CPG Glareshield Extension Assembly Removal/Installation .....	2.153	CPG Longitudinal Cyclic Stick Stop Bolts, Rigging Pilot and .....	11.287
CPG Instrument Glareshield Lamp Replacement, Pilot or .....	9.80	CPG Map Stowage Compartment Removal/Installation .....	2.184
CPG Instrument Glareshield Light Removal/Installation, Pilot or .....	9.79	CPG Master Caution/Warning Panel Removal/Installation, Pilot or .....	9.122
CPG INTR LT Edge Light Indicating Panel Removal/Installation .....	9.83	CPG Pedals, Rigging Directional Flight Controls Between Pilot and .....	11.293
CPG INTR LT Panel Control Knob Removal/Installation .....	9.82	CPG Power Quadrant Disassembly/Assembly (AVIM) .....	4.169
CPG INTR LT Panel FLOOD Switch Replacement (AVIM) .....	9.88	CPG Power Quadrant Lever Release Switch Removal/Installation (AVIM) .	4.198
CPG INTR LT Panel INST, R CSL or L CSL Attenuator Replacement (AVIM)	9.90		
CPG INTR LT Panel Relay K1 Replacement (AVIM) .....	9.89		
CPG INTR LT Panel Removal/Installation .....	9.81		
CPG INTR LT Panel Resistor R1 or R2 Replacement (AVIM) .....	9.86		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
CPG Power Quadrant Light Indicating Panel Removal/Installation . . . . .	4.195	CPG Station Replacement, Data Link Termination Unit (DLTU) . . . . .	9.140
CPG Power Quadrant No. 1 Engine Out Disable Switch Removal/Installation (AVIM) . . . . .	4.196	CPG to Pilot Control Collective F.S. 118.50 Bellcrank Removal/Installation	11.130
CPG Power Quadrant No. 2 Engine Out Disable Switch Removal/Installation (AVIM) . . . . .	4.197	CPG to Pilot Control Collective F.S. 118.50 Support Bracket Removal/Installation . . . . .	11.132
CPG Power Quadrant Removal/Installation . . . . .	4.168	CPG to Pilot Control Directional F.S. 112.50 Bellcrank Removal/Installation	11.158
CPG Rear View Mirror Assembly Removal/Installation . . . . .	2.190	CPG to Pilot Control Directional F.S. 118.50 Bellcrank Removal/Installation	11.161
CPG Remote Attitude Indicator Removal/Installation . . . . .	8.35	CPG to Pilot Control Directional F.S. 118.50 Support Bracket Removal/Installation . . . . .	11.162
CPG Scuff Plate Assembly Removal/Installation . . . . .	2.183	CPG to Pilot Control Lateral F.S. 111.50 Bellcrank Removal/Installation . . . . .	11.92
CPG Selectable Digital Display (SDD) Panel Removal/Installation . . . . .	8.13	CPG to Pilot Control Lateral F.S. 118.50 Bellcrank Removal/Installation . . . . .	11.95
CPG Stabilator Position Indicator Removal/Installation, Pilot/ . . . . .	8.48	CPG to Pilot Control Lateral F.S. 83.45 Idler Bellcrank Removal/Installation .	11.89
CPG Stabilator Position Placard ILT Panel Removal/Installation, Pilot/ . . .	8.49	CPG to Pilot Control Longitudinal F.S. 118.50 Bellcrank Removal/Installation	11.118
CPG Station Access Door Adjustment .	2.55	CPG to Pilot Control Longitudinal F.S. 82.80 Bellcrank Removal/Installation	11.112
CPG Station Access Door Canopy Pawl Fastener Removal/Installation, Pilot/ .	2.51	CPG to Pilot Control Longitudinal F.S. 96.59 Bellcrank Removal/Installation	11.115
CPG Station Access Door Lower Hinge Butt Removal/Installation . . . . .	2.58	CPG to Pilot Directional F.S. 112.50 Control Bracket Removal/Installation	11.160
CPG Station Access Door Mechanism Repair (AVIM) . . . . .	2.56	CPG to Pilot Lateral Control F.S. 83.45 Support Bracket Assembly Removal/Installation . . . . .	11.91
CPG Station Access Door Removal/Installation . . . . .	2.54	CPG to Pilot Lateral F.S. 111.50 Bracket Assembly Removal/Installation . . . . .	11.94
CPG Station Access Door Strut Pulley Removal/Installation . . . . .	2.57	CPG to Pilot Lateral F.S. 118.50 Control Bracket Assembly Removal/Installation . . . . .	11.97
CPG Station Access Door Upper Hinge Butt Removal/Installation . . . . .	2.59		
CPG Station Accessing, Pilot/ . . . . .	1.56		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
CPG to Pilot Longitudinal F.S. 118.50 Control Flight Bracket Assembly Removal/Installation .....	11.120	Crane Installation, Maintenance .....	1.97
CPG to Pilot Longitudinal F.S. 82.80 Control Bracket Removal/Installation	11.114	Crane Removal, Maintenance .....	1.105
CPG to Pilot Longitudinal F.S. 96.59 Control Bracket Assembly Removal/Installation .....	11.117	Crane, Hoisting – Maintenance .....	1.80
CPG Track/Balance Accelerometer Replacement .....	9.128	Crease Repair (AVIM), Main Rotor Blade Dent, Depression, and .....	5.5
CPG Utility Light and Mounting Base Removal/Installation, Pilot or .....	9.78	Crew Protection Armor Barrier Replacement, Transparent .....	2.180
CPG Vertical Speed Indicator Removal/Installation, Pilot/ .....	8.32	Crew Seat Bucket Assembly Replacement, Pilot/CPG Armored ...	2.177
CPG W210 Microphone Wire Harness Removal/Installation .....	9.131	Crew Seat Control Assembly Removal/Installation, Pilot/CPG Armored .....	2.172
CPG W219 Microphone Wire Harness Disassembly/Assembly, Pilot W220 or .....	9.132	Crew Seat Cushion Removal/Installation, Pilot/CPG Armored .....	2.168
CPG Windshield Wiper Alinement .....	12.15	Crew Seat Frame Assembly Attenuator Removal/Installation, Pilot/CPG Armored .....	2.171
CPG Windshield Wiper Arm Replacement .....	12.10	Crew Seat Frame Assembly Helical Extension Spring Removal/Installation, Pilot/CPG Armored .....	2.170
CPG Windshield Wiper Blade Replacement .....	12.9	Crew Seat Handle Assembly Replacement, Pilot/CPG Armored ...	2.164
CPG Windshield Wiper Converter Replacement .....	12.12	Crew Seat Lap Belt Removal/Installation, Pilot/CPG Armored .....	2.176
CPG Windshield Wiper Link Replacement .....	12.11	Crew Seat M-43 Blower Mount Bracket Bonding, Pilot/CPG Armored .....	2.167
CPG Windshield Wiper Motor Replacement .....	12.14	Crew Seat Removal/Installation, Pilot/CPG Armored .....	2.161
Crack Repair (AVIM), No. 1 or No. 2 Engine Secondary Nozzle .....	4.134	Crew Seat Restraint Control Assembly Removal/Installation, Pilot/CPG Armored .....	2.173
Crane Adjustment – APU Hoisting .....	1.104	Crew Seat Rotary Buckle Removal/Installation, Pilot/CPG Armored .....	2.175
Crane Adjustment – Engine Hoisting ...	1.99	Crew Seat Shoulder Harness and Inertia Reel Removal/Installation, Pilot/CPG Armored .....	2.174
Crane Adjustment – Hoisting .....	1.98	Crew Seat Strap Guide Assembly Removal/Installation, Pilot/CPG Armored .....	2.169
Crane Adjustment – Main Rotor Blade Hoisting .....	1.100		
Crane Adjustment – Main Rotor Gearshaft Support (Static) Mast, or Swashplate Hoisting .....	1.102		
Crane Adjustment – Main Rotor Head Hoisting .....	1.101		
Crane Adjustment – Main Transmission Hoisting .....	1.103		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Crew Seat Wing Panel (Armored Swing Panel) Removal/Installation, Pilot/CPG Armored .....	2.165	Cyclic Lateral Push-Pull Rod Assembly Removal/Installation, CPG .....	11.86
Crew Seat Wing Panel Slider Plate Removal/Installation, Pilot/CPG Armored .....	2.166	Cyclic Lateral Push-Pull Rod Assembly Removal/Installation, Pilot .....	11.98
Crew Station Ducts Removal/Installation, ECS .....	13.28	Cyclic Longitudinal Push-Pull Rod Assembly Removal/Installation, Pilot .....	11.111
Criteria, Main Rotor Blade Repair .....	5.2	Cyclic Stick Aft Link Removal/Installation, CPG .....	11.70
Criteria, Main Rotor Blade Strap Pack Repair .....	5.36	Cyclic Stick and Lateral Link Installation, CPG .....	11.67
Criteria, Tail Rotor Blade Repair .....	5.52	Cyclic Stick and Lateral Link Removal, CPG .....	11.66
Cross Tube Removal/Installation, Main Landing Gear .....	2.81	Cyclic Stick and Lateral Servocylinder, Rigging Lateral Flight Controls Between Pilot .....	11.290
Crossfeed Fuel Hose Replacement .....	10.101	Cyclic Stick and Longitudinal Servocylinder, Rigging Longitudinal Flight Controls Between Pilot .....	11.286
Crossfeed Switch Replacement (AVIM), Pilot Fuel Panel .....	10.56	Cyclic Stick ASE Release Switch Replacement .....	11.49
Crossfeed/Shutoff Valve Removal/Installation, No. 1 Engine ..	10.99	Cyclic Stick Cover Removal/Installation, CPG .....	11.65
Crossfeed/Shutoff Valve Removal/Installation, No. 2 Engine ..	10.100	Cyclic Stick Cover Removal/Installation, Pilot .....	11.46
Curtain/Tray Removal/Installation, CPG Glareshield .....	2.152	Cyclic Stick Flight Control Arm Assembly Disassembly/Assembly (AVIM), CPG .....	11.85
Curtain/Tray Removal/Installation, Pilot Glareshield .....	2.155	Cyclic Stick Flight Control Arm Assembly Disassembly/Assembly (AVIM), Pilot .....	11.62
Cushion Removal/Installation, Pilot/CPG Armored Crew Seat .....	2.168	Cyclic Stick Forward Link Removal/Installation, CPG .....	11.69
Cutout Flow Switch Replacement, Air Turbine Flow Switch and Turbine Speed .....	9.152	Cyclic Stick Housing Assembly Disassembly/Assembly (AVIM), CPG .....	11.84
Cutter and Deflector Removal/Installation, Gun Wire Strike .....	2.194	Cyclic Stick Housing Assembly Disassembly/Assembly (AVIM), Pilot .....	11.61
Cutter Blades Replacement, Wire Strike Protection Aircraft Cable .....	2.195	Cyclic Stick Housing Installation, Pilot ..	11.55
Cutter Removal/Installation (AVIM), Wire Strike Protection Aircraft Cable ..	2.193	Cyclic Stick Housing Lateral Shear Pin Replacement, CPG .....	11.83
Cutter Removal/Installation, Main Landing Gear Cable .....	3.26	Cyclic Stick Housing Lateral Shear Pin Replacement, Pilot .....	11.56
Cyclic Input Arm Assembly Repair (AVIM) .....	11.63		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Cyclic Stick Housing Longitudinal Shear Pin Replacement, CPG .....	11.82	Cylinder Air Tube Replacement, Left Actuating .....	4.92
Cyclic Stick Housing Removal, Pilot ...	11.54	Cylinder Air Tube Replacement, Right Actuating .....	4.93
Cyclic Stick Housing Removal/Installation, CPG .....	11.81	Cylinder Assembly Disassembly/Assembly (AVIM), Collective Stick .....	11.37
Cyclic Stick Lever Lock Release Retainer Removal/Installation, CPG .	11.75	Cylinder Assembly Removal/Installation, Pilot Collective Stick .....	11.36
Cyclic Stick Link Removal/Installation, CPG Adjustable .....	11.68	Cylinder Disassembly/Assembly (AVIM), Parking Brake Master .....	3.58
Cyclic Stick Lock Release Wire Rope Removal/Installation, CPG .....	11.76	Cylinder External Leakage Repair, Main Landing Gear Shock Strut .....	3.21
Cyclic Stick Lock Removal/Installation, CPG .....	11.77	Cylinder Flexible Air Hose Replacement, Left or Right Actuating	4.91
Cyclic Stick RADIO-ICS Switch Replacement .....	11.50	Cylinder Fuse Pin Replacement, Tail Landing Gear Actuating .....	3.37
Cyclic Stick Remote Control Lever Removal/Installation, CPG .....	11.72	Cylinder Lock Release Handle Replacement, Tail Landing Gear Actuating .....	3.35
Cyclic Stick Remote Transmitter Selector Switch Replacement, Pilot .	11.48	Cylinder Lock Switch Assembly Replacement, Tail Landing Gear Actuating .....	3.34
Cyclic Stick Removal/Installation, Pilot .	11.45	Cylinder Removal/Installation, CPG Collective Stick .....	11.40
Cyclic Stick Stop Bolts, Rigging Pilot and CPG Lateral .....	11.291	Cylinder Removal/Installation, No. 1 Actuating .....	4.89
Cyclic Stick Stop Bolts, Rigging Pilot and CPG Longitudinal .....	11.287	Cylinder Removal/Installation, No. 2 Actuating .....	4.90
Cyclic Stick Symbol Select Switch Replacement .....	11.53	Cylinder Removal/Installation, Pylon Actuator .....	16.12
Cyclic Stick Trigger Switch Replacement .....	11.52	Cylinder Removal/Installation, Tail Landing Gear Actuating .....	3.32
Cyclic Stick Trim and Force Feel Release Switch Replacement, CPG .	11.80	Cylinder Spring Replacement (AVIM), Tail Landing Gear Actuating .....	3.33
Cyclic Stick Trim and Force Feel Release Switch Replacement, Pilot .	11.47	Cylinder Wheel Lock Target Replacement, Tail Landing Gear Actuating .....	3.36
Cyclic Stick Weapons Action Switch Replacement .....	11.51	Cylinders Removal/Installation, CPG Brake Master .....	3.57
Cyclic Stick Wire Rope Release Fitting Removal/Installation, CPG .....	11.74	Cylinders Removal/Installation, Pilot Brake Master .....	3.56
Cyclic Stick, Rigging Lateral Flight Controls Between Pilot and CPG ....	11.289		
Cyclic Sticks, Rigging Longitudinal Flight Controls Between Pilot and CPG .....	11.285		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
<b>D</b>			
Damage and Types of Repair, Classification of Empennage . . . . .	2.103	DC Bus Isolation Diode Removal/Installation . . . . .	9.20
Damage and Types of Repair, Classification of Fuselage . . . . .	2.12	DC Bus Tie Contactor Removal/Installation . . . . .	9.21
Damage and Types of Repair, Classification of Nacelle . . . . .	2.129	DC Bus Tie Terminal Junction Box Replacement . . . . .	9.22
Damage and Types of Repair, Classification of Wing . . . . .	2.117	De-Ice Brush Block Removal/Installation, Tail Rotor . . . . .	11.278
Damper Removal/Installation, Main Rotor . . . . .	5.23	De-Ice Controller Adjustment, Blade . . .	12.56
Damper Rod End Removal/Installation, Main Rotor . . . . .	5.24	De-Ice Controller Removal/Installation, Blade . . . . .	12.55
Damper, and Anti-Flail Support Removal/Installation, No. 4 Tail Rotor Drive Shaft, . . . . .	6.8	De-Ice of Engine Load Demand Spindle (LDS) Cables, Warm-Up/ . . . . .	1.55
Damper, and Anti-Flail Support Removal/Installation, No. 5 Tail Rotor Drive Shaft, . . . . .	6.11	De-Ice Power Distributor and Air Data System (ADS) Mast Removal/Installation, Main Rotor . . . .	6.90
Data Bus Relay K8 Replacement, CDU	9.155	De-Ice Remote Control Circuit Breaker Relay Removal/Installation, Blade . . .	9.12
Data Bus Relay K9 Replacement, SDCC . . . . .	9.157	De-Icing, and Defrosting, Anti-Icing, . . .	1.54
Data Converter Circuit Card Replacement (AVIM), Signal . . . . .	8.19	Debonded Doubler or Spar Repair (AVIM), Main Rotor Blade . . . . .	5.7
Data Converter Power Supply Replacement (AVIM), Signal . . . . .	8.20	Debris Cover Removal/Installation, Horizontal Stabilator . . . . .	2.115
Data Converter Removal/Installation, Signal . . . . .	8.18	Deck Angle, Positioning Helicopter for Desired . . . . .	1.133
Data Converter Tray Removal/Installation, Signal . . . . .	8.21	Deck Fitting Removal/Installation, APU Support . . . . .	15.34
Data Link Termination Unit (DLTU) (Aft Avionics Bay) Replacement . . . . .	9.145	Decoupler (SPAD) Assembly Disassembly/Assembly (AVIM), Pilot Longitudinal Shear Pin Activated . . . .	11.174
Data Link Termination Unit (DLTU) (CPG Station) Replacement . . . . .	9.140	Debond Repair (AVIM), Main Rotor Blade Spar to Spar . . . . .	5.7A
Data Link Termination Unit (DLTU) (Left Aft Catwalk Area) Replacement . . . . .	9.144	Deficiency Reports, Submitting . . . . .	1.6
Data Link Termination Unit (DLTU) (Left Forward Catwalk Area) Replacement	9.142	Deflector Extension Replacement (AVIM), Wire Strike Lower . . . . .	2.192
Data Link Termination Unit (DLTU) (Right Forward Catwalk Area) Replacement . . . . .	9.143	Deflector Removal/Installation, Gun Wire Strike Cutter and . . . . .	2.194
Data Link Termination Unit (DLTU) T37, T38, T39, or T40 Replacement . . . . .	9.154	Deflector, Structural Support, and Tail Wheel Brackets Removal/Installation, Tail Landing Gear Tail Wheel . . . . .	3.27
Data Scope, Equipment Description and	1.8	Defog Shutoff Valve Removal/Installation . . . . .	13.43
		Defog System Air Mixer and Hose Removal/Installation . . . . .	13.44
		Defog System Inspection . . . . .	13.42

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Defrosting, Anti-Icing, De-Icing, and ...	1.54	Destruction of Army Material to Prevent Enemy Use .....	1.3
Defueling – Closed Circuit Refueling (CCR) Method .....	1.20	Detection System Inspection, Fire .....	12.16
Defueling – Gravity Method .....	1.21	Detector Control Amplifier Replacement, Engine Flame .....	12.26
Defueling – Single Point Adapter (SPA) Method .....	1.19	Detector Inspection, Engine Nose Gearbox Metallic Chip .....	6.25
De-Ice Brush and Shunt Replacement (AVIM), Tail Rotor .....	11.279	Detector Inspection, Main Transmission Chip .....	6.45
De-Ice System Inspection, Anti-Ice/ .....	12.46	Detector Removal/Installation, Engine Nose Gearbox Metallic Chip .....	6.26
Demand Spindle (LDS) Cables, Warm-Up/De-Ice of Engine Load .....	1.55	Detector Replacement, Engine Flame ..	12.23
Demand Spindle Aft Cable Removal, No. 1 Engine Load .....	4.176	Detector Replacement, Main Transmission Chip .....	6.46
Demand Spindle Aft Cable Removal, No. 2 Engine Load .....	4.178	Detector Signal Processor Probe Oscillator Reference or Rate Output CCA Replacement (AVIM), Ice .....	12.62
Demand Spindle Gearbox Main Sleeve and Runout Tube Removal/Installation, No. 1 or No. 2 Engine Load .....	4.144A	Detector Signal Processor Removal/Installation, Ice .....	12.59
Demand Spindle/Power Available Spindle Aft Cable Spring Tension Clip Removal/Installation, No. 1 Engine Load .....	4.180	Device CR1, CR2, CR3, CR5, CR7, CR8, or CR9 Replacement (AVIM), Pilot EXT LT/INTR LT Panel Semiconductor .....	9.65
Dent and Depression Repair, Tail Rotor Blade .....	5.56	Differential Pressure Switch (Lockwired Type) Removal/Installation, Engine Nose Gearbox Oil Filter Bowl, Strainer Element, and .....	6.18
Dent, Depression, and Crease Repair (AVIM), Main Rotor Blade .....	5.5	Differential Pressure Switch (Lockwired Type) Removal/Installation, Main Transmission Filter Bowl, Element and .....	6.61
Depreservation, Auxiliary Power Unit (APU) .....	E.12	Differential Pressure Switch (Retainer, Ringed Type) Removal/Installation, Engine Nose Gearbox Oil Filter Bowl, Strainer Element, and .....	6.19
Depression Repair, Tail Rotor Blade Dent and .....	5.56	Differential Pressure Switch (Retainer, Ringed Type) Removal/Installation, Main Transmission Filter Bowl, Element, and .....	6.62
Depression, and Crease Repair (AVIM), Main Rotor Blade Dent, .....	5.5	Diffuser (One-Piece) Removal/Installation, Engine Input Drive Shaft and Outer .....	6.2
Description and Data Scope, Equipment	1.8	Diffuser (Two-Section) Removal/Installation, Engine Nose Gearbox Outer .....	6.32
Description of Major Components, Location and .....	1.9		
Desert Operation Provisions Description and Operation .....	16.34		
Designation Sight (TADS) Cleaning, Target Acquisition .....	1.46		
Desired Deck Angle, Positioning Helicopter for .....	1.133		



<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Diffuser Removal/Installation, Engine Nose Gearbox Flexible Coupling, Vaneaxial Fan, and Inlet . . . . .	6.33	Dim/Test Control Panel Removal/Installation, Pilot/CPG Engine Instrument . . . . .	8.22
Digital Automatic Stabilization Equipment (DASE) – Computer Circuit Card Removal/Installation (AVIM) . . . . .	11.221	Dimensions, Helicopter . . . . .	1.65
Digital Automatic Stabilization Equipment (DASE) Computer Cover Removal/Installation (AVIM) . . . . .	11.219	Dimmer Power Supply Connector Replacement, CPG Engine Instruments . . . . .	8.26
Digital Automatic Stabilization Equipment (DASE) Computer Cover Seal Replacement (AVIM) . . . . .	11.220	Dimmer Power Supply Removal/Installation, CPG Engine Instruments . . . . .	8.25
Digital Automatic Stabilization Equipment (DASE) Computer Power Supply Removal/Installation (AVIM) . . . . .	11.222	Dimming Controller Chassis Disassembly/Assembly (AVIM), Multichannel . . . . .	9.77
Digital Automatic Stabilization Equipment (DASE) Computer Removal/Installation . . . . .	11.218	Dimming Controller Module Disassembly/Assembly (AVIM), Multichannel . . . . .	9.76
Digital Automatic Stabilization Equipment (DASE) Electrical Equipment Chassis Replacement (AVIM) . . . . .	11.223	Dimming Controller Module Removal/Installation (AVIM), Multichannel . . . . .	9.75
Digital Display (SDD) Panel Circuit Card Replacement (AVIM), Selectable . . . . .	8.16	Dimming Controller Unit Removal/Installation, Multichannel . . . . .	9.74
Digital Display (SDD) Panel Front Panel Removal/Installation (AVIM), Selectable . . . . .	8.14	Diode Removal/Installation, DC Bus Isolation . . . . .	9.20
Digital Display (SDD) Panel Removal/Installation, CPG Selectable . . . . .	8.13	Direct Valve Removal/Installation, Parking Brake Rotary . . . . .	3.60
Digital Display (SDD) Panel Switch Module Replacement (AVIM), Selectable . . . . .	8.15	Direct Valve Repair and Test (AVIM), Parking Brake Rotary . . . . .	3.61
Digital Display Driver Circuit Card Replacement (AVIM), Torque, TGT, Fuel, and Ng Indicators Light Panel, . . . . .	8.10	Directional Bellcrank Bracket Assembly Removal/Installation, Pilot Station . . . . .	11.150
Dim/Test Control Panel Disassembly/Assembly (AVIM), Pilot/CPG Engine Instrument . . . . .	8.23	Directional Control Pedal Adjust Spring Removal/Installation . . . . .	11.237
Dim/Test Control Panel Front Panel Removal/Installation (AVIM), Pilot/CPG Engine Instrument . . . . .	8.24	Directional Control Pedal Adjusting Crank Assembly Removal/Installation (AVIM) . . . . .	11.238
		Directional Control Pedal and Pedal Skirt Removal/Installation, CPG . . . . .	11.239
		Directional Control Pedal and Pedal Skirt Removal/Installation, Pilot . . . . .	11.233
		Directional Control Pedal Housing Assembly Removal/Installation, CPG . . . . .	11.243

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Directional Control Pedal Housing Assembly Removal/Installation, Pilot	11.236	Directional F.S. 118.50 Bellcrank Removal/Installation, CPG to Pilot Control .....	11.161
Directional Control Pedal Pivot Support Assembly Removal/Installation, Pilot	11.234	Directional F.S. 118.50 Support Bracket Removal/Installation, CPG to Pilot Control .....	11.162
Directional Control Pedal Protective Cover Removal/Installation, CPG Left or Right .....	11.244	Directional F.S. 121.40 Bellcrank and Bracket Removal/Installation .....	11.151
Directional Control Pedal Protective Cover Removal/Installation, Pilot Left or Right .....	11.244A	Directional F.S. 121.40 Push-Pull Rod Assembly Removal/Installation .....	11.164
Directional Control Pedal Release Shaft Assembly Removal/Installation, CPG	11.242	Directional F.S. 156.07 Bellcrank Removal/Installation .....	11.165
Directional Control Pedal Release Shaft Assembly Removal/Instruction, Pilot .	11.235	Directional F.S. 156.07 Push-Pull Rod Assembly Removal/Installation .....	11.166
Directional Control Pedal Weight Removal/Installation, CPG .....	11.240	Directional F.S. 159.98 Push-Pull Rod Assembly Removal/Installation .....	11.168
Directional Control Position Linear Variable Differential Transducer (LVDT) Installation, CPG .....	11.197	Directional F.S. 164.33 Bellcrank Bracket Removal/Installation .....	11.171
Directional Control Position Linear Variable Differential Transducer (LVDT) Installation, Pilot .....	11.211	Directional F.S. 164.33 Bellcrank Removal/Installation .....	11.170
Directional Control Position Linear Variable Differential Transducer (LVDT) Removal, CPG .....	11.196	Directional F.S. 164.33 Push-Pull Rod Removal/Installation .....	11.169
Directional Control Position Linear Variable Differential Transducer (LVDT) Removal, Pilot .....	11.210	Directional F.S. 199.25 Bellcrank Installation .....	11.246
Directional Control Shutoff Valve Removal/Installation, No. 1 or No. 2 Engine .....	4.63	Directional F.S. 199.25 Bellcrank Removal .....	11.245
Directional Control System Inspection ..	11.232	Directional F.S. 199.25 Push-Pull Rod Removal/Installation .....	11.247
Directional F.S. 112.50 Bellcrank Removal/Installation, CPG to Pilot Control .....	11.158	Directional F.S. 199.25 Tail Rotor Fitting Removal/Installation .....	11.248
Directional F.S. 112.50 Control Bracket Removal/Installation, CPG to Pilot ..	11.160	Directional F.S. 216.25 Bellcrank Bracket Removal/Installation .....	11.251
Directional F.S. 112.50 Push-Pull Rod Assembly Removal/Installation .....	11.159	Directional F.S. 216.25 Bellcrank Installation .....	11.250
		Directional F.S. 216.25 Bellcrank Removal .....	11.249
		Directional F.S. 216.25 Push-Pull Rod Removal/Installation .....	11.252
		Directional F.S. 275 Bellcrank Removal/Installation .....	11.254
		Directional F.S. 275 Push-Pull Rod Removal/Installation .....	11.256

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Directional F.S. 275 Rotor Control Bracket Removal/Installation .....	11.255	Directional Pedal Stop Bolts, Rigging Pilot and CPG .....	11.295
Directional F.S. 348 Bellcrank Removal/Installation .....	11.257	Directional Push-Pull Rod Guide Disassembly/Assembly .....	11.273
Directional F.S. 348 Push-Pull Rod with Guides Installation .....	11.260	Directional Servocylinder BUCS Warning Plate Replacement .....	7.35
Directional F.S. 348 Push-Pull Rod with Guides Removal .....	11.259	Directional Servocylinder Clevis Assembly Replacement (AVIM) .....	7.40A
Directional F.S. 348 Tail Rotor Bracket Removal/Installation .....	11.258	Directional Servocylinder Installation ...	7.33
Directional F.S. 520 Bellcrank Bracket Removal/Installation .....	11.268	Directional Servocylinder Primary Pressure Hose Replacement .....	7.36
Directional F.S. 520 Bellcrank Removal/Installation .....	11.267	Directional Servocylinder Primary Return Hose Replacement .....	7.37
Directional F.S. 520 Push Pull-Rod Removal/Installation .....	11.269	Directional Servocylinder Removal ....	7.32
Directional F.S. 534 Bellcrank Removal/Installation .....	11.270	Directional Servocylinder Rod End Replacement .....	7.34
Directional F.S. 534 Push-Pull Rod Removal/Installation .....	11.271	Directional Servocylinder Support and Support Bracket Removal/Installation	11.261
Directional F.S. 542 Bellcrank Removal/Installation .....	11.272	Directional Servocylinder Utility Hydraulic Pressure/Return Hose Bracket Removal/Installation .....	7.40
Directional F.S. 60.56 Shear Pin Activated Decoupler (SPAD) Bracket Assembly Removal/Installation, CPG	11.149	Directional Servocylinder Utility Pressure Hose Replacement .....	7.38
Directional Feel Spring Cartridge Installation .....	11.178	Directional Servocylinder Utility Return Hose Replacement .....	7.39
Directional Feel Spring Cartridge Removal .....	11.177	Directional Servocylinder, Rigging Directional Flight Controls Between Pilot Pedals and .....	11.294
Directional Flight Controls Between Pilot and CPG Pedals, Rigging .....	11.293	Directional Shear Pin Activated Decoupler (SPAD) Assembly Disassembly/Assembly (AVIM), CPG	11.148
Directional Flight Controls Between Pilot Pedals and Directional Servocylinder, Rigging .....	11.294	Directional Shear Pin Activated Decoupler (SPAD) Assembly Disassembly/Assembly (AVIM), Pilot	11.154
Directional Flight Controls, Rigging Tail Rotor .....	11.296	Directional Shear Pin Activated Decoupler (SPAD) Installation, CPG .	11.145
Directional Magnetic Brake Removal/Installation .....	11.176	Directional Shear Pin Activated Decoupler (SPAD) Installation, Pilot .	11.153
Directional Magnetic Brake Support Disassembly/Assembly (AVIM) .....	11.185	Directional Shear Pin Activated Decoupler (SPAD) Push-Pull Rod Assembly Removal/Installation, CPG	11.143
Directional Magnetic Brake Support Removal/Installation .....	11.184	Directional Shear Pin Activated Decoupler (SPAD) Removal, CPG ..	11.144

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Directional Shear Pin Activated Decoupler (SPAD) Removal, Pilot . . .	11.152	■ Disk Drive Key Assembly Replacement (Goodyear/ABSC), Main Landing Gear Wheel . . . . .	3.9
Directional Shear Pin Activated Decoupler (SPAD) Shear Pin Replacement (AVIM), Pilot . . . . .	11.155	■ Disk Removal/Installation (Goodyear/ABSC), Single Disk Brake, Friction Lining, and Brake . . . .	3.66
Directional Shear Pin Activated Decoupler (SPAD) Shear Rivet Replacement (AVIM), CPG . . . . .	11.147	Disk Removal/Installation, Main Transmission Rotor Brake . . . . .	6.65
Directional Shear Pin Activated Decoupler (SPAD) Shear Rivet Replacement (AVIM), Pilot . . . . .	11.157	Dispenser Support Removal/Installation, Chaff . . . . .	16.29
Directional Shear Pin Activated Decoupler (SPAD) Transducer Arm Shear Rivet Replacement (AVIM), Pilot . . . . .	11.156	Display (SDD) Panel Circuit Card Replacement (AVIM), Selectable Digital . . . . .	8.16
Directional Switch Replacement, Collective Stick Searchlight . . . . .	11.28	Display (SDD) Panel Front Panel Removal/Installation (AVIM), Selectable Digital . . . . .	8.14
Dirty Filter Indicator Replacement, Primary Hydraulic Manifold . . . . .	7.17	Display (SDD) Panel Removal/Installation, CPG Selectable Digital . . . . .	8.13
Dirty Filter Indicator, Utility Hydraulic Manifold . . . . .	7.71	Display (SDD) Panel Switch Module Replacement (AVIM), Selectable Digital . . . . .	8.15
Disable Switch Removal/Installation (AVIM), CPG Power Quadrant No. 1 Engine Out . . . . .	4.196	Display Driver Circuit Card Replacement (AVIM), Torque, TGT, Fuel, and Ng Indicators Light Panel, Digital . . . . .	8.10
Disable Switch Removal/Installation (AVIM), CPG Power Quadrant No. 2 Engine Out . . . . .	4.197	Display Lamp Board Replacement (AVIM), Vertical . . . . .	8.12
Discharge Indicator Replacement, Thermal . . . . .	12.45	Distribution Box Cover Removal/Installation, Electrical Power . . . . .	9.9
Discharger Disassembly/Assembly, Main Rotor Blade Electrostatic . . . . .	5.15	Distribution Box Disassembly/Assembly, Aft Avionics Bay . . . . .	9.57
Discharger Holder Replacement, Electrostatic . . . . .	2.32	Distribution Box Enclosed Link Fuse/Holder Block F1/XF1 or F2/XF2 Replacement, Electrical Power . . . . .	9.11
Discharger Replacement, Electrostatic .	2.31	Distribution Box Power Transformer T1 or T2 Replacement (T700-GE-701), Electrical Power . . . . .	9.24
Disconnect Left Side, Transmission Removal – . . . . .	6.102	Distribution Box Power Transformer T3 Replacement, Electrical Power . . . . .	9.25
■ Disk Brake, Friction Lining, and Brake Disk Removal/Installation (Goodyear/ABSC), Single . . . . .	3.66	Distribution Box Relay Cover Removal/Installation, Electrical Power . . . . .	9.10
Disk Brake, Friction Lining, and Brake Disk Removal/Installation (Parker-Hannifin), Single . . . . .	3.65		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Distribution Box Removal/Installation, Aft Avionics Bay .....	9.55	Door Catch Striker Removal/Installation, Forward .....	2.60
Distribution Box Transformer T1 or T2 Replacement (T700-GE-701), Aft Avionics Bay .....	9.56	Door Installation Assembly Removal/Installation, Engine Nacelle	2.149
Distribution Box Ventilating Fan Removal/Installation, Electrical Power .....	9.153	Door L115 or R115 Removal/ Installation, Mooring Lug .....	2.43A
Distribution Components Inspection, Power Generation and .....	9.1	Door L210 or R210 Removal/ Installation, Transmission Access Panel .....	2.126C
Distributor and Air Data System (ADS) Mast Removal/Installation, Main Rotor De-Ice Power .....	6.90	Door L325 Removal/Installation, Left Hand Access .....	2.126B
Diverter Valve Disassembly/Assembly, Main Transmission Float .....	6.120	Door Latch Replacement, Access .....	2.33
Diverter Valve Removal/Installation, Main Transmission Float .....	6.119	Door Latch Replacement, Work Platform .....	2.139
Door Adjustable Tension Thumb Latch Replacement/Adjustment, Forward Avionics Bay Access .....	2.44	Door Latch Structural Plate and Canopy Lock Switch Removal/Installation, Aft	2.69
Door Adjustment, CPG Station Access .	2.55	Door Linkage Idler Replacement, Engine Access and Ventilation Door Assembly .....	2.143
Door Adjustment, Pilot Station Access .	2.63	Door Lower Hinge Butt Removal/Installation, CPG Station Access .....	2.58
Door Anchor Strut Rod Removal/Installation, Canopy .....	2.68	Door Lower Hinge Butt Removal/Installation, Pilot Station Access .....	2.66
Door and Windshield Drain Tube Replacement, Canopy .....	2.41	Door Mechanism Repair (AVIM), CPG Station Access .....	2.56
Door Assembly Door Linkage Idler Replacement, Engine Access and Ventilation .....	2.143	Door Mechanism Repair (AVIM), Pilot Station Access .....	2.64
Door Assembly Latch Replacement, Engine Access and Ventilation .....	2.142	Door Removal/Installation, CPG Station Access .....	2.54
Door Assembly Replacement, Engine Ventilation .....	2.146	Door Removal/Installation, Forward Avionics Bay Access .....	2.43
Door Assembly Rig Connecting Link Actuating Link Rod and Rod End Clevis Replacement, Engine Access and Ventilation .....	2.145	Door Removal/Installation, Pilot Station Access .....	2.62
Door Assembly Rig Connecting Link Removal/Installation, Engine Access and Ventilation .....	2.144	Door Removal/Installation, Work Platform .....	2.137
Door B60R Removal/Installation, Ground Service Access .....	2.42A	Door Replacement, Engine Access ....	2.148
Door Canopy Pawl Fastener Removal/Installation, Pilot/CPG Station Access .....	2.51	Door Replacement, Engine Ventilation .	2.147
		Door Seal Replacement, Canopy Access .....	2.40
		Door Structural Support Strut Removal/Installation, Work Platform .	2.138
		Door Structure, Work Platform Nacelle .	2.130
		Door Strut Pulley Removal/Installation, Pilot Station Access .....	2.65
		Door Switch Removal/Installation, External Power Access .....	9.39

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Door T250L or T250R Removal/Installation, Access .....	2.125	Drain Manifold Removal/Installation, No. 2 Engine .....	4.109
Door T290L or T290R Removal/Installation, Access .....	2.126	Drain Manifold Support Clip Replacement, No. 1 and No. 2 Engine .....	4.110
Door Transparent Panel Assembly Removal/Installation, CPG .....	2.53	Drain Pan Replacement, Tailboom Fluid	2.101
Door Transparent Panel Assembly Removal/Installation, Pilot .....	2.61	Drain Plug Replacement, APU Chip Collector and Magnetic .....	TM 1-2835-213-23
Door Upper Hinge Butt Removal/Installation, CPG Station Access .....	2.59	Drain System Installation (T700-GE-701 Engine), Engine Buildup – No. 1 and No. 2 Engine .....	4.34
Door Upper Hinge Butt Removal/Installation, Pilot Station Access .....	2.67	Drain System Installation (T700-GE-701C Engine), Engine Buildup – No. 1 and No. 2 Engine ...	4.35
Doppler Fairing Removal/Installation ...	2.99	Drain System Removal (T700-GE-701 Engine), Engine Teardown – No. 1 and No. 2 Engine .....	4.25
Doppler Mount Removal/Installation, Structural Assembly .....	2.99A	Drain System Removal (T700-GE-701C Engine), Engine Teardown – No. 1 and No. 2 Engine .....	4.26
Doubler or Spar Repair (AVIM), Main Rotor Blade Debonded .....	5.7	Drain Tube Removal/Installation (T700-GE-701 Engine), No. 1 and No. 2 Engine Swirl Frame .....	4.113
Doubler Repair (AVIM), Main Rotor Blade Anti-Peel .....	5.12	Drain Tube Removal/Installation (T700-GE-701C Engine), No. 1 and No. 2 Engine Swirl Frame .....	4.114
Drain Hose Removal/Installation, APU .	15.38	Drain Tube Removal/Installation, APU .	15.39
Drain Hose Removal/Installation, No. 1 and No. 2 Engine Gearbox .....	4.105	Drain Tube Removal/Installation, Fuel Boost Pump, Motor, and .....	10.114
Drain Hose Replacement, APU Plenum	15.37	Drain Tube Removal/Installation, Quill Housing/Hydraulic Pump Seal .....	6.88
Drain Hose Replacement, No. 1 and No. 2 Engine Combustor .....	4.111	Drain Tube Replacement, Canopy Door and Windshield .....	2.41
Drain Hose Replacement, No. 1 or No. 2 Engine .....	4.112	Drain Tube Replacement, Fuel Transfer Pump .....	10.82
Drain Hose Replacement, Primary Hydraulic Manifold .....	7.19	Drain Tube Replacement, Tailboom Fluid .....	2.100
Drain Hose Replacement, Primary Hydraulic Pump Case .....	7.7	Drain Tubes Removal/Installation, Main Transmission Oil .....	6.87
Drain Hose Replacement, Primary Hydraulic Pump Seal .....	7.8	Drain Valve Hose Removal/Installation, No. 1 Engine Overspeed .....	4.106
Drain Hose Replacement, Utility Hydraulic Manifold .....	7.78	Drain Valve Hose Removal/Installation, No. 2 Engine Overspeed .....	4.107
Drain Hose Replacement, Utility Hydraulic Pump Case .....	7.61		
Drain Hose Replacement, Utility Hydraulic Pump Seal .....	7.62		
Drain Manifold Removal/Installation, No. 1 Engine .....	4.108		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Draincock and Control Removal/Installation, Forward and Aft Poppet .....	10.3	Drive Shaft Fairing T355 Repair (AVIM), Tail Rotor .....	2.126A
Draining and Servicing, APU Oil System	1.26	Driver Circuit Card Replacement (AVIM), Torque, TGT, Fuel, and Ng Indicators Light Panel, Digital Display	8.10
Draining and Servicing, Engine Oil System .....	1.24	Droop Angle Measurement, Main Rotor Blade .....	5.10
Draining, Flushing, and Servicing, Main Transmission Oil System .....	1.32	Droop Stop Follower Installation (AVIM), Main Rotor .....	5.39
Drive Adapter and Seal Removal/Installation, Main Transmission Compressor .....	6.54	Droop Stop Follower Removal (AVIM), Main Rotor .....	5.38
Drive Clutch Removal/Installation, Main Transmission Input .....	6.115	Droop Stop Follower Repair (AVIM), Main Rotor .....	5.40
Drive Flange Removal/Installation, Main Transmission APU .....	6.73	Droop Stop Follower Roller and Inner Race Replacement, Main Rotor .....	5.41
Drive Housing Removal/Installation, Main Transmission Input .....	6.117	Droop Stop Ring Removal/Installation (AVIM), Main Rotor .....	5.44
Drive Key Assembly Replacement (Goodyear/ABSC), Main Landing Gear Wheel Disk .....	3.9	Dual Hydraulic Pressure Indicator Removal/Installation .....	8.45
Drive Link Installation, Tail Rotor .....	11.275	Duct Assembly Removal/Installation, ENCU Air Cooling .....	13.4
Drive Link Removal, Tail Rotor .....	11.274	Duct Assembly Removal/Installation, Forward Avionics Bay Air Cooling ...	13.32
Drive Lube Pump Removal/Installation, Main Transmission Accessory .....	6.71	Duct Installation, Engine Buildup – No. 1 and No. 2 Engine Air .....	4.47
Drive Plate Cover Removal/Installation, Main Rotor .....	6.92	Duct Installation, SDC Air Inlet .....	7.130
Drive Plate Removal/Installation, Main Rotor .....	6.96	Duct Removal, SDC Air Inlet .....	7.129
Drive Seal Replacement, Main Transmission Tail Rotor .....	6.75	Duct Removal/Installation, APU Exhaust Nozzle and .....	15.40
Drive Shaft and Anti-Flail Support Removal/Installation, No. 7 (APU) ...	6.16	Duct Removal/Installation, ENCU Overboard Exhaust .....	13.13
Drive Shaft and Outer Diffuser (One-Piece) Removal/Installation, Engine Input .....	6.2	Duct Removal/Installation, Environmental Control Unit Shutoff Valve .....	7.154
Drive Shaft Inspection .....	6.1	Duct Removal/Installation, Forward Avionics Bay Vaneaxial Fan Air .....	13.31
Drive Shaft Removal/Installation, No. 3 Tail Rotor .....	6.5	Duct Removal/Installation, No. 1 Engine Air .....	4.77
Drive Shaft, Damper, and Anti-Flail Support Removal/Installation, No. 4 Tail Rotor .....	6.8	Duct Removal/Installation, No. 2 Engine Air .....	4.78
Drive Shaft, Damper, and Anti-Support Removal/Installation, No. 5 Tail Rotor	6.11	Duct Replacement, ENCU Air Outlet ...	13.5
Drive Shaft Fairing R410 or R475 Removal/Installation, Tail Rotor .....	2.126D	Duct Seal Replacement, ECS .....	13.29
		Ducts Removal/Installation, ECS Crew Station .....	13.28

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
<b>E</b>			
ECS Aft Avionics Bay Thermostatic Switch Replacement .....	13.42	Ejector Test Set Installation/Removal, Pylon Rack .....	16.8
ECS Air Duct Identification .....	13.2	Elastomeric Mount Removal/Installation, Vertical Stabilizer .....	2.107A
ECS Crew Station Ducts Removal/Installation .....	13.28	Elbow Removal/Installation, APU Fuel Pump Fuel Supply .....	10.113
ECS Duct Seal Replacement .....	13.29	Elbow Removal/Installation, No. 2 Engine Compressor Bleed Air Adapter and .....	4.76
ECS Forward Avionics Bay Thermostatic Switch Replacement ..	13.41	ELEC PWR Light Indicating Panel Replacement, Pilot .....	9.34
ECS Panel Light Indicating Panel Removal/Installation .....	13.35	ELEC PWR Panel EXT PWR/RESET Switch Replacement, Pilot .....	9.35
ECS Panel Receptacle Replacement (AVIM) .....	13.39	ELEC PWR Panel GEN 1, GEN 2, or BATT/EXT PWR Switches Replacement, Pilot .....	9.36
ECS Panel Removal/Installation .....	13.34	ELEC PWR Panel Removal/Installation, Pilot .....	9.33
ECS Panel Resistor Assembly Removal/Installation (AVIM) .....	13.36	Electrical Bracket Replacement, Main Rotor Blade .....	5.16
ECS Panel Toggle Switch Replacement (AVIM) .....	13.38	Electrical Brush, Electrical Holder and Pitch Web Electrical Lead Removal/Installation, Main Rotor ....	5.48
ECS Panel Variable Resistor Replacement (AVIM) .....	13.37	Electrical Chassis Repair (AVIM), Stabilator Controller .....	11.230
ECS Shutoff Valve Removal/Installation	13.15	Electrical Components Inspection, Miscellaneous .....	9.126
ECS Support Panel Removal/Installation (AVIM) .....	13.40	Electrical Control Valve Cleaning, ENCU Temperature Control Shutoff Valve/ ..	13.8
Edge Light Indicating Panel Removal/Installation, CPG INST LT ..	9.83	Electrical Control Valve Removal/Installation, ENCU .....	13.7
Edge LT PNL ON/OFF Switch Replacement, Pilot Circuit Breaker Panel .....	9.6	Electrical Equipment Chassis Replacement (AVIM), Digital Automatic Stabilization Equipment (DASE) .....	11.223
Edge Removal/Installation, Vertical Stabilizer Trailing .....	2.111	Electrical Lead Removal/Installation, Main Rotor Pitch Housing and Blade - .....	5.31
Edge Removal/Installation, Wing Trailing .....	2.122	Electrical Lead Removal/Installation, Tail Rotor .....	11.276
Edge Tip Replacement, Main Rotor Blade Leading .....	5.13	Electrical Power Distribution Box Cover Removal/Installation .....	9.9
Ejector Disassembly/Assembly, Pylon Rack .....	16.7		
Ejector Impulse Cartridge Removal/Installation, Pylon Rack ...	16.3		
Ejector Removal/Installation, Pylon Rack .....	16.6		



<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Electrical Power Distribution Box Power Transformer T1 or T2 Replacement (T700-GE-701 Engine) . . . . .	9.24	Element, and Differential Pressure Switch (Retainer, Ringed Type) Removal/Installation, Engine Nose Gearbox Oil Filter Bowl, Strainer . . . .	6.19
Electrical Power Distribution Box Power Transformer T3 Replacement . . . . .	9.25	Element, and Differential Pressure Switch (Retainer Ringed Type) Removal/Installation, Main Transmission Filter Bowl . . . . .	6.62
Electrical Power Distribution Box Relay Cover Removal/Installation . . . . .	9.10	Element, and Pressure Indicator Removal/Installation, Main Transmission Accessory Pump Filter Bowl . . . . .	6.70
Electrical Power Distribution Box Ventilating Fan Removal/Installation .	9.153	EMER HYD PWR Switch Removal/Installation, CPG . . . . .	4.200
Electrical Test Panel Box Removal/Installation . . . . .	9.29	Emergency Bus Terminal Board Replacement . . . . .	9.19
Electrical Test Panel Circuit Breaker Replacement . . . . .	9.28	Emergency Hydraulic Switch Removal/Installation, Pilot . . . . .	9.147
Electrical, External Power Application –	1.70	Emergency Power Check Panel Disassembly/Assembly (AVIM) . . . . .	4.139
Electromagnetic Conductive Coating Application . . . . .	2.34	Emergency Power Check Panel Removal/Installation . . . . .	4.138
Electromagnetic Interference (EMI) Gasket Repair . . . . .	2.27	EMI Filter Replacement (AVIM), Ice Detector Signal Processor . . . . .	12.64
Electronic Compartment Support Assembly (HARS) Removal/Installation . . . . .	2.98	Empennage Damage and Types of Repair, Classification of . . . . .	2.103
Electronic Component Assembly and Access Cover Replacement (AVIM), Pilot Fuel Panel . . . . .	10.59	Empennage Inspection . . . . .	2.102
Electronic Module Replacement, Fire Extinguisher . . . . .	12.41	Empennage Skin Plates . . . . .	2.106
Electronic Relay and Module Replacement . . . . .	9.139	Encased Seal Removal/Installation, Main Rotor Upper Seal Retainer and Plain . . . . .	5.45
Electrostatic Discharger Disassembly/Assembly, Main Rotor Blade . . . . .	5.15	Enclosed Link Fuse/Holder Block F1/XF1 or F2/XF2 Replacement, Electrical Power Distribution Box . . . .	9.11
Electrostatic Discharger Holder Replacement . . . . .	2.32	Enclosure Installation, APU . . . . .	15.42
Electrostatic Discharger Replacement .	2.31	Enclosure Removal, APU . . . . .	15.41
Element Removal/Installation, SDC Filter . . . . .	7.124	Enclosure Support Brackets Removal/Installation, APU . . . . .	15.43
Element, and Differential Pressure Switch (Lockwired Type) Removal/Installation, Engine Nose Gearbox Oil Filter Bowl, Strainer . . . .	6.18	ENCU Air Cooling Duct Assembly Removal/Installation . . . . .	13.4
Element, and Differential Pressure Switch (Lockwired Type) Removal/Installation, Main Transmission Filter Bowl . . . . .	6.61	ENCU Air Outlet Duct Replacement . .	13.5

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
ENCU Cooling Turbine Assembly Removal/Installation .....	13.9	Engine Air Flexible Connection Housing, and Utility Tube Removal/Installation, Ground Air Connection Manifold, .....	7.144
ENCU Electrical Control Valve Removal/Installation .....	13.7	Engine Air Inlet Assembly Seal Replacement .....	4.83
ENCU Filter Removal/Installation .....	13.12	Engine Air Start Line Removal/Installation, No. 2 .....	7.145
ENCU Overboard Exhaust Duct Removal/Installation .....	13.13	Engine Air Starter Output Shaft Replacement .....	4.82A
ENCU Support Removal/Installation ...	13.14	Engine Air Starter Removal/Installation, No. 1 .....	4.81
ENCU Temperature Control Sensor Removal/Installation .....	13.11	Engine Anti-Ice Relay Box Disassembly/Assembly .....	12.58
ENCU Temperature Control Shutoff Valve Removal/Installation .....	13.6	Engine Anti-Ice Relay Box Removal/Installation .....	12.57
ENCU Temperature Control Shutoff Valve/Electrical Control Valve Cleaning .....	13.8	Engine Anti-Ice Support Removal/Installation, No. 1 or No. 2 .	4.71
ENCU Turbine Servicing .....	1.52	Engine Bleed Air Tube and Engine Air Flexible Connection Housing Removal/Installation, Standby System .....	7.141
ENCU Water Extractor Assembly Replacement .....	13.10	Engine Buildup – No. 1 and No. 2 Engine .....	4.30
Enemy Use, Destruction of Army Material to Prevent .....	1.3	Engine Buildup – No. 1 and No. 2 Engine Air Duct Installation .....	4.47
ENG IGN OVRD Switch Removal/Installation, Pilot Power Quadrant Panel – .....	4.191	Engine Buildup – No. 1 and No. 2 Engine Air Inlet Installation .....	4.45
ENG START Advisory Switch Removal/Installation, Pilot Power Quadrant Panel – .....	4.190	Engine Buildup – No. 1 and No. 2 Engine Baseplate and Spindle Gearboxes Installation .....	4.37
Engine Access and Ventilation Door Assembly Door Linkage Idler Replacement .....	2.143	Engine Buildup – No. 1 and No. 2 Engine Drain System Installation (T700-GE-701 Engine) .....	4.34
Engine Access and Ventilation Door Assembly Latch Replacement .....	2.142	Engine Buildup – No. 1 and No. 2 Engine Drain System Installation (T700-GE-701C Engine) .....	4.35
Engine Access and Ventilation Door Assembly Rig Connecting Link Actuating Link Rod and Rod End Clevis Replacement .....	2.145	Engine Buildup – No. 1 and No. 2 Engine Fuel Inlet Hose Installation ..	4.44
Engine Access and Ventilation Door Assembly Rig Connecting Link Removal/Installation .....	2.144	Engine Buildup – No. 1 and No. 2 Engine Installation on Handling Adapter .....	4.32
Engine Access Door Replacement .....	2.148	Engine Buildup – No. 1 and No. 2 Engine Mount Installation .....	4.31
Engine Air Flexible Connection Housing Removal/Installation, Standby System Engine Bleed Air Tube and ..	7.141		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Engine Buildup – No. 1 and No. 2 Engine Oil Chip Collector Installation	4.33	Engine Firewall Breakaway Valve Removal/Installation, No. 2	10.105
Engine Buildup – No. 1 and No. 2 Engine Shroud Seal Ring Installation	4.46	Engine Flame Detector Control Amplifier Replacement	12.26
Engine Buildup – No. 1 and No. 2 Engine Shroud Support Installation	4.36	Engine Flame Detector Replacement	12.23
Engine Buildup – No. 1 Engine Air Starter and Regulating Valve Installation	4.38	Engine Fuel Inlet Hose Replacement, No. 1	10.97
Engine Buildup – No. 1 Engine Anti-Ice and Bleed Air System Installation	4.40	Engine Fuel Inlet Hose Replacement, No. 2	10.98
Engine Buildup – No. 1 Engine Wiring Installation	4.42	Engine Fuel Pressure Switch Replacement, No. 1	4.97
Engine Buildup – No. 2 Engine Air Starter and Regulating Valve Installation	4.39	Engine Fuel Pressure Switch Replacement, No. 2	4.98
Engine Buildup – No. 2 Engine Anti-Ice and Bleed Air System Installation	4.41	Engine Fuel Supply Breakaway Valve Removal/Installation, Forward Fuel Cell	10.16
Engine Buildup – No. 2 Engine Wiring Installation	4.43	Engine Fuel Supply Hose Replacement, Aft Fuel Cell	10.47
Engine Buildup Adapter Installation	1.130	Engine Fuel Supply Hose Replacement, Forward Fuel Cell	10.21
Engine Buildup Adapter Removal	1.131	Engine Fuel Supply Hose Replacement, No. 2	10.103
Engine Cleaning	4.1	Engine Gas Generator Ng RPM Indicator Removal/Installation, Pilot Engine Turbine Gas Temperature (TGT) Indicator and	8.9
Engine Connecting Links Removal/Installation	4.86	Engine Gearbox Drain Hose Removal/Installation, No. 1 and No. 2	4.105
Engine Control Rod Adapter Removal/Installation, Collective Servocylinder	4.153	Engine Hoisting, Crane Adjustment –	1.99
Engine Control Rod Disassembly/Assembly, Collective Servocylinder	4.152	Engine Input Drive Shaft and Outer Diffuser (One-Piece) Removal/Installation	6.2
Engine Control Rod Removal/Installation, Collective Servocylinder	4.151	Engine Inspection	4.2
Engine Crossfeed/Shutoff Valve Removal/Installation, No. 1	10.99	Engine Installation, Hoisting –	1.82
Engine Crossfeed/Shutoff Valve Removal/Installation, No. 2	10.100	Engine Installation, No 1	4.48
Engine Firewall Breakaway Valve Removal/Installation, No. 1	10.104	Engine Installation, No 2	4.52
		Engine Instrument Dim/Test Control Panel Disassembly/Assembly (AVIM), Pilot/CPG	8.23

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Engine Instrument Dim/Test Control Panel Front Panel Removal/Installation (AVIM), Pilot/CPG .....	8.24	Engine Mount Support Removal/Installation, No. 1 or No. 2 Forward .....	4.84
Engine Instrument Dim/Test Control Panel Removal/Installation, Pilot/CPG .....	8.22	Engine Nacelle Door Installation Assembly Removal/Installation .....	2.149
Engine Instrument Indicator Disassembly/Assembly (AVIM), Typical .....	8.2	Engine Nacelle Fairing Assembly Eye Bolt Replacement .....	2.136
Engine Instruments Dimmer Power Supply Connector Replacement, CPG .....	8.26	Engine Nacelle Fairing Removal/Installation .....	2.135
Engine Instruments Dimmer Power Supply Removal/Installation, CPG ..	8.25	Engine Nacelle Inspection .....	2.128
Engine Instruments Inspection .....	8.1	Engine Nacelle Removal/Installation, No. 1 .....	2.133
Engine Load Demand Spindle (LDS) Cables, Warm-Up/De-Ice of .....	1.55	Engine Nacelle Removal/Installation, No. 2 .....	2.134
Engine Load Demand Spindle Bellcrank Removal/Installation .....	4.154	Engine Nacelle Skin Plates .....	2.132
Engine Load Demand Spindle Bellcrank Repair (AVIM) .....	4.155	Engine Nacelle Structure .....	2.131
Engine Load Demand Spindle Bellcrank Support Removal/Installation .....	4.156	Engine Nacelle Strut Assembly Removal/Installation .....	2.151
Engine Load Demand Spindle Cable Support Removal/Installation .....	4.157	Engine Nose Gearbox and Quill Shaft Removal/Installation .....	6.36
Engine Load Demand Spindle Gearbox Main Sleeve and Runout Tube Removal/Installation, No. 1 or No. 2 .	4.144A	Engine Nose Gearbox Anti-flail Bearing Nut Disassembly/Assembly .....	6.34
Engine Lower Fuel Supply Hose Replacement, No.1 .....	10.102	Engine Nose Gearbox Breather Replacement .....	6.24
Engine Mount Removal, Engine Teardown – No. 1 and No. 2 .....	4.29	Engine Nose Gearbox Filler Cap Removal/Installation .....	6.23
Engine Mount Removal/Installation, Link Assembly Aft .....	4.87	Engine Nose Gearbox Flexible Coupling, Vaneaxial Fan, and Inlet Diffuser Removal/Installation .....	6.33
Engine Mount Support Bearing Bore Repair, Firewall Assembly No. 1 or No. 2 Aft Inboard .....	2.150A	Engine Nose Gearbox Identification Plate Replacement .....	6.27
Engine Mount Support Bearing Replacement, Firewall Assembly No. 1 or No. 2 Aft Inboard .....	2.150	Engine Nose Gearbox Input Seal Assembly Removal/Installation .....	6.37
Engine Mount Support Bearing Replacement (AVIM), No. 1 or No. 2 Aft .....	4.85A	Engine Nose Gearbox Inspection .....	6.17
Engine Mount Support Removal/Installation, No. 1 or No. 2 Aft .....	4.85	Engine Nose Gearbox Low Oil Pressure Switch Removal/Installation .....	6.21
		Engine Nose Gearbox Lube Pump Removal/Installation .....	6.30
		Engine Nose Gearbox Metallic Chip Detector Inspection .....	6.25
		Engine Nose Gearbox Metallic Chip Detector Removal/Installation .....	6.26
		Engine Nose Gearbox Oil Filter Bowl, Strainer Element, and Differential Pressure Switch (Lockwired Type) Removal/Installation .....	6.18
		Engine Nose Gearbox Oil Filter Bowl, Strainer Element, and Differential Pressure Switch (Retainer, Ringed Type) Removal/Installation .....	6.19

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Engine Nose Gearbox Oil Filter Safety Relief Valve Replacement .....	6.20	Engine Removal – Pilot Station, No. 1 ..	4.4
Engine Nose Gearbox Oil Jet Filters Removal/Installation .....	6.31	Engine Removal – Remove from Helicopter, No. 1 .....	4.7
Engine Nose Gearbox Oil Jet Removal/Installation .....	6.35	Engine Removal – Remove from Helicopter, No. 2 .....	4.11
Engine Nose Gearbox Oil Pressure Transducer Removal/Installation ....	6.29	Engine Removal – Upper Disconnection, No. 1 .....	4.5
Engine Nose Gearbox Oil Sampling ...	1.29	Engine Removal – Upper Disconnection, No. 2 .....	4.9
Engine Nose Gearbox Oil Temperature Transducer Removal/Installation ....	6.28	Engine Removal from Handling Adapter, Engine Teardown – No. 1 and No. 2 .	4.28
Engine Nose Gearbox Outer Diffuser (Two-Section) Removal/Installation ..	6.32	Engine Removal, Hoisting .....	1.81
Engine Nose Gearbox Output Seal Assembly Removal/Installation (AVIM) .....	6.38	Engine Removal, No. 1 .....	4.3
Engine Nose Gearbox Preload Shim Removal/Installation (AVIM) .....	6.40	Engine Removal, No. 2 .....	4.8
Engine Nose Gearbox Rotor Output Shaft Seal Removal/Installation (AVIM) .....	6.39	Engine Secondary Nozzle Intermediate Support Strut Removal/Installation, No. 1 and No. 2 .....	4.125
Engine Nose Gearbox Servicing .....	1.28	Engine Shroud Seal Ring Installation, Engine Buildup – No. 1 and No. 2 ...	4.46
Engine Nose Gearbox Sight Indicator Removal/Installation .....	6.22	Engine Shroud Seal Ring Removal, Engine Teardown – Engine No. 1 and No. 2 .....	4.14
Engine Oil Chip Collector Installation, Engine Buildup – No. 1 and No. 2 ...	4.33	Engine Shroud Seal Ring Removal/Installation .....	4.104
Engine Oil Pressure Indicator Removal/Installation, Pilot .....	8.6	Engine Start Air Tube and Air Flexible Connection Housing Removal/Installation, No. 2 .....	7.146
Engine Oil System Draining and Servicing .....	1.24	Engine Teardown – No. 1 and No. 2 Engine .....	4.12
Engine Out Warning Control Removal/Installation .....	8.28	Engine Teardown – No. 1 and No. 2 Engine Air Duct Removal .....	4.13
Engine Outboard Secondary Nozzle Removal/Installation, No. 1 and No. 2	4.120	Engine Teardown – No. 1 and No. 2 Engine Air Inlet Removal .....	4.15
Engine Power Available Spindle Gearbox Main Sleeve and Runout Tube Removal/Installation, No. 1 or No. 2 .....	4.141A	Engine Teardown – No. 1 and No. 2 Engine Baseplate and Spindle Gearboxes Removal .....	4.23
Engine Primary Exhaust Nozzle Removal/Installation, No. 1 and No. 2	4.119	Engine Teardown – No. 1 and No. 2 Engine Drain System Removal (T700-GE-701 Engine) .....	4.25
Engine Removal – Lower Disconnections, No. 1 .....	4.6	Engine Teardown – No. 1 and No. 2 Engine Drain System Removal (T700-GE-701C Engine) .....	4.26
Engine Removal – Lower Disconnections, No. 2 .....	4.10		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Engine Teardown – No. 1 and No. 2 Engine Fuel Inlet Hose Removal . . . .	4.16	Engine Ventilation Door Replacement . .	2.147
Engine Teardown – No. 1 and No. 2 Engine Mount Removal . . . . .	4.29	Engine Wash . . . . .	1.58
Engine Teardown – No. 1 and No. 2 Engine Removal from Handling Adapter . . . . .	4.28	Engine Work Platform and Equipment Bay, Access Provisions – Top Side . .	2.7
Engine Teardown – No. 1 and No. 2 Engine Shroud Seal Ring Removal . .	4.14	Engine/Rotor RPM Indicator Front Panel Removal/Installation (AVIM) . .	8.5
Engine Teardown – No. 1 and No. 2 Engine Shroud Support Removal . . .	4.24	Engine/Rotor RPM Indicator Removal/Installation, Pilot/CPG . . . . .	8.4
Engine Teardown – No. 1 Engine Air Starter and Regulating Valve Removal . . . . .	4.19	Environmental Conditions . . . . .	E.4
Engine Teardown – No. 1 Engine Anti-Ice and Bleed Air System Removal . . . . .	4.21	Environmental Control System (ECS) Inspection . . . . .	13.1
Engine Teardown – No. 1 Engine Wiring Removal . . . . .	4.17	Environmental Control Unit (ENCU) Removal/Installation . . . . .	13.3
Engine Teardown – No. 2 Engine Air Starter and Regulating Valve Removal . . . . .	4.20	Environmental Control Unit Aft Air Tube Removal/Installation . . . . .	7.155
Engine Teardown – No. 2 Engine Anti-Ice and Bleed Air System Removal . . . . .	4.22	Environmental Control Unit and Nose Gearbox Fixture Installation . . . . .	1.124
Engine Teardown – No. 2 Engine Wiring Removal . . . . .	4.18	Environmental Control Unit and Nose Gearbox Fixture Removal . . . . .	1.125
Engine Teardown – No. 1 and No. 2 Engine Oil Chip Collector Removal . .	4.27	Environmental Control Unit Cleaning (Water Wash) . . . . .	1.48
Engine Torque Indicator Removal/Installation, Pilot/CPG . . . . .	8.3	Environmental Control Unit Forward Air Tube Removal/Installation . . . . .	7.153
Engine Turbine Gas Temperature (TGT) Indicator and Engine Gas Generator Ng RPM Indicator Removal/Installation, Pilot . . . . .	8.9	Environmental Control Unit Shutoff Valve Duct Removal/Installation . . . .	7.154
Engine Turbine Speed Control Unit Adjustment (T700-GE-701 Engine) . .	4.136	Epoxy Paint Repair (AVIM), No. 1 or No. 2 Engine Louver . . . . .	4.67
Engine Turbine Speed Control Unit Adjustment (T700-GE-701C Engine)	4.137	Equipment Bay, Access Provisions – Top Side Engine Work Platform and .	2.7
Engine Turbine Speed Control Unit Replacement . . . . .	4.135	Equipment Chassis Replacement (AVIM), Digital Automatic Stabilization Equipment (DASE) Electrical . . . . .	11.223
Engine Upper Fuel Supply Hose Replacement, No. 1 . . . . .	10.106	Equipment Configuration . . . . .	1.10
Engine Ventilation Door Assembly Replacement . . . . .	2.146	Equipment Description and Data Scope	1.8
		Equipment Requirements, Section III, Explanation of Columns in Tools and Test . . . . .	B.7
		Erosion Touchup, Main Rotor Blade Paint . . . . .	5.11
		Exchanger Bypass Valve Replacement, Main Transmission Heat . . . . .	6.83

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Exchanger Installation, Heat . . . . .	6.86	EXT LT/INTR LT Panel Control Knob Removal/Installation, Pilot . . . . .	9.63
Exchanger Pressure Transducer Removal/Installation, Heat . . . . .	6.84	EXT LT/INTR LT Panel FORM Variable Resistor Replacement (AVIM), Pilot . . . . .	9.70
Exchanger Removal, Heat . . . . .	6.85	EXT LT/INTR LT Panel INST Attenuator Replacement (AVIM), Pilot . . . . .	9.73
Exciter Unit Bracket Removal/Installation, APU Ignition . . . . . TM 1-2835-213-23		EXT LT/INTR LT Panel L CSL Variable Resistor Replacement (AVIM), Pilot . . . . .	9.72
Exciter Unit Removal/Installation, APU Ignition . . . . . TM 1-2835-213-23		EXT LT/INTR LT Panel Light Indicating Panel Removal/Installation, Pilot . . . . .	9.64
Exhaust Duct Removal/Installation, ENCU Overboard . . . . .	13.13	EXT LT/INTR LT Panel R/CTR CSL Attenuator Replacement (AVIM), Pilot . . . . .	9.71
Exhaust Gas Temperature (EGT) Thermocouple Removal/Installation, APU . . . . . TM 1-2835-213-23		EXT LT/INTR LT Panel Relay K1/K2 and Socket XK1/XK2 Replacement (AVIM), Pilot . . . . .	9.69
Exhaust Hose Replacement, Surge Valve . . . . .	7.133	EXT LT/INTR LT Panel Removal/Installation, Pilot . . . . .	9.62
Exhaust Interconnect Tube Removal/Installation, Surge Valve . . . . .	7.131	EXT LT/INTR LT Panel Resistor R1, R2, R3, R7, R8, or R9 Replacement (AVIM), Pilot . . . . .	9.66
Exhaust Nozzle and Duct Removal/Installation, APU . . . . .	15.40	EXT LT/INTR LT Panel Resistor R4 or R6 Replacement (AVIM), Pilot . . . . .	9.67
Exhaust Nozzle Removal/Installation, No. 1 and No. 2 Engine Primary . . . . .	4.119	EXT LT/INTR LT Panel Semiconductor Device CR1, CR2, CR3, CR5, CR7, CR8, or CR9 Replacement (AVIM), Pilot . . . . .	9.65
Exhaust Vent Tube Coupler Hose Replacement, Fuel Transfer Valve Air . . . . .	10.78	EXT LT/INTR LT Panel Switch Replacement (AVIM), Pilot . . . . .	9.68
Exhaust Vent Tube Replacement, Fuel Transfer Valve Air . . . . .	10.79	EXT PWR/RESET Switch Replacement, Pilot ELEC PWR Panel . . . . .	9.35
Expansion Plug Replacement (AVIM), Intermediate Gearbox Input Flange and Output Shouldered Shaft . . . . .	6.123	Extension Assembly Removal/Installation, CPG Glareshield . . . . .	2.153
Expansion Plug Replacement (AVIM), Tail Rotor Gearbox Shouldered Shaft . . . . .	6.134	Extension Assembly Removal/Installation, Pilot Glareshield . . . . .	2.157
Explanation of Columns in Remarks, Section IV . . . . .	B.8	Extension Replacement (AVIM), Wire Strike Lower Deflector . . . . .	2.192
Explanation of Columns in the MAC, Section II . . . . .	B.6	Extension Spring Removal/Installation, Pilot/CPG Armored Crew Seat Frame Assembly Helical . . . . .	2.170
Explanation of Columns in Tools and Test Equipment Requirements, Section III . . . . .	B.7		
Explanation of Columns, Expendable and Durable Items List . . . . .	F.14		
Explanation of Columns, Tool Identification List . . . . .	H.4		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
External Leakage Repair, Main Landing Gear Shock Strut Cylinder . . . . .	3.21	External Power Contactor Relay Removal/Installation . . . . .	9.23
External Leakage Repair, Upper Main Landing Gear Shock Strut . . . . .	3.20	External Power Monitor . . . . .	9.37
External Power Access Door Switch Removal/Installation . . . . .	9.39	External Power Receptacle Removal/Installation . . . . .	9.38
External Power Application – Air . . . . .	1.71	External Power, APU Operating Instructions – Using . . . . .	1.75
External Power Application – Electrical .	1.70	Extractor Assembly Replacement, ENCU Water . . . . .	13.10
External Power Application – Hydraulic (Primary) . . . . .	1.72	Eye Bolt Removal/Installation, Ammunition Magazine Strut and . . . .	2.82
External Power Application – Hydraulic (Utility) . . . . .	1.73	Eye Bolt Replacement, Engine Nacelle Fairing Assembly . . . . .	2.136



<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
<b>F</b>			
F.S. 111.50 Bellcrank Removal/Installation, CPG to Pilot Control Lateral .....	11.92	F.S. 121.40 Bellcrank and Bracket Removal/Installation, Directional ....	11.151
F.S. 111.50 Bracket Assembly Removal/Installation, CPG to Pilot Lateral .....	11.94	F.S. 121.40 Push-Pull Rod Assembly Removal/Installation, Directional ....	11.164
F.S. 111.50 Push-Pull Rod Assembly Removal/Installation, Lateral .....	11.93	F.S. 129.25 Bellcrank Bracket Assembly Removal/Installation, Longitudinal ...	11.123
F.S. 112.50 Bellcrank Removal/Installation, CPG to Pilot Control Directional .....	11.158	F.S. 129.25 Bellcrank Removal/Installation, Longitudinal ...	11.121
F.S. 112.50 Control Bracket Removal/Installation, CPG to Pilot Directional .....	11.160	F.S. 129.25 Push-Pull Rod Assembly Removal/Installation, Longitudinal ...	11.122
F.S. 112.50 Push-Pull Rod Assembly Removal/Installation, Directional ....	11.159	F.S. 132.84 Bellcrank Removal/Installation, Lateral .....	11.100
F.S. 118.50 Bellcrank Removal/Installation, CPG to Pilot Control Collective .....	11.130	F.S. 132.84 Flight Bracket Assembly Removal/Installation, Lateral .....	11.101
F.S. 118.50 Bellcrank Removal/Installation, CPG to Pilot Control Directional .....	11.161	F.S. 132.84 Push-Pull Rod Assembly Removal/Installation, Lateral .....	11.99
F.S. 118.50 Bellcrank Removal/Installation, CPG to Pilot Control Lateral .....	11.95	F.S. 156.07 Bellcrank Removal/Installation, Directional ....	11.165
F.S. 118.50 Control Bracket Assembly Removal/Installation, CPG to Pilot Lateral .....	11.97	F.S. 156.07 Push-Pull Rod Assembly Removal/Installation, Directional ....	11.166
F.S. 118.50 Control Flight Bracket Assembly Removal/Installation, CPG to Pilot Longitudinal .....	11.120	F.S. 159.13 Bellcrank Bracket Assembly Removal/Installation, Lateral .....	11.104
F.S. 118.50 Push-Pull Rod Assembly Removal/Installation, CPG Collective	11.131	F.S. 159.13 Bellcrank Removal/Installation, Lateral .....	11.102
F.S. 118.50 Push-Pull Rod Assembly Removal/Installation, Lateral .....	11.96	F.S. 159.13 Push-Pull Rod Assembly Removal/Installation, Lateral .....	11.103
F.S. 118.50 Push-Pull Rod Assembly Removal/Installation, Longitudinal ...	11.119	F.S. 159.62 Bellcrank Removal/Installation, Longitudinal ...	11.124
F.S. 118.50 Support Bracket Removal/Installation, CPG to Pilot Control Collective .....	11.132	F.S. 159.62 Push-Pull Rod Assembly Removal/Installation, Longitudinal ...	11.125
F.S. 118.50 Support Bracket Removal/Installation, CPG to Pilot Control Directional .....	11.162	F.S. 159.98 Bellcrank and Bracket Removal/Installation, Directional ....	11.167
		F.S. 159.98 Push-Pull Rod Assembly Removal/Installation, Directional ....	11.168
		F.S. 160.56 Bellcrank Bracket Assembly Removal/Installation, Lateral .....	11.106
		F.S. 160.56 Bellcrank Removal/Installation, Lateral .....	11.105
		F.S. 161.54 Bellcrank Removal/Installation, Collective .....	11.134
		F.S. 161.54 Bracket Assembly Removal/Installation, Collective .....	11.135

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
F.S. 161.54 Push-Pull Rod Assembly Removal/Installation, Collective . . . . .	11.136	F.S. 214 Tube Replacement, Right Auxiliary Fuel Quick-Disconnect to ..	10.93
F.S. 161.60 Push-Pull Rod Assembly Removal/Installation, Collective . . . . .	11.139	F.S. 216.25 Bellcrank Bracket Removal/Installation, Directional . . . .	11.251
F.S. 164.33 Bellcrank Bracket Removal/Installation, Directional . . . .	11.171	F.S. 216.25 Bellcrank Installation, Directional . . . . .	11.250
F.S. 164.33 Bellcrank Removal/Installation, Directional . . . .	11.170	F.S. 216.25 Bellcrank Removal, Directional . . . . .	11.249
F.S. 164.33 Push-Pull Rod Removal/Installation, Directional . . . .	11.169	F.S. 216.25 Push-Pull Rod Removal/Installation, Directional . . . .	11.252
F.S. 164.38 Bellcrank Removal/Installation, Longitudinal . . .	11.126	F.S. 275 Bellcrank Removal/Installation, Directional . . . . .	11.254
F.S. 164.38 Push-Pull Rod Removal/Installation, Longitudinal . . .	11.127	F.S. 275 Push-Pull Rod Removal/Installation, Directional . . . .	11.256
F.S. 164.95 Bellcrank Bracket Assembly Removal/Installation, Lateral . . . . .	11.109	F.S. 275 Rotor Control Bracket Removal/Installation, Directional . . . .	11.255
F.S. 164.95 Bellcrank Removal/Installation, Collective . . . . .	11.140	F.S. 348 Bellcrank Removal/Installation, Directional . . . . .	11.257
F.S. 164.95 Bellcrank Removal/Installation, Lateral . . . . .	11.107	F.S. 348 Push-Pull Rod with Guides Installation, Directional . . . . .	11.260
F.S. 164.95 Push-Pull Rod Assembly Removal/Installation, Collective . . . . .	11.141	F.S. 348 Push-Pull Rod with Guides Removal, Directional . . . . .	11.259
F.S. 164.95 Push-Pull Rod Assembly Removal/Installation, Lateral . . . . .	11.108	F.S. 348 Tail Rotor Bracket Removal/Installation, Directional . . . .	11.258
F.S. 176.00 Servocylinder Mount Bracket Assembly Removal/Installation, Lateral . . . . .	11.110	F.S. 520 Bellcrank Bracket Removal/Installation, Directional . . . .	11.268
F.S. 176.00 Servocylinder Mount Bracket Assembly Removal/Installation, Longitudinal . . .	11.128	F.S. 520 Bellcrank Removal/Installation, Directional . . . . .	11.267
F.S. 176.00 Servocylinder Mount Bracket Removal/Installation, Collective . . . . .	11.142	F.S. 520 Push Pull-Rod Removal/Installation, Directional . . . .	11.269
F.S. 186 to 199 Left Auxiliary Fuel Transfer Tube Replacement . . . . .	10.87	F.S. 534 Bellcrank Removal/Installation, Directional . . . . .	11.270
F.S. 199 to 214 Left Auxiliary Fuel Transfer Tube Replacement . . . . .	10.88	F.S. 534 Push-Pull Rod Removal/Installation, Directional . . . .	11.271
F.S. 199.25 Bellcrank Installation, Directional . . . . .	11.246	F.S. 542 Bellcrank Removal/Installation, Directional . . . . .	11.272
F.S. 199.25 Bellcrank Removal, Directional . . . . .	11.245	F.S. 60.56 Shear Pin Activated Decoupler (SPAD) Bracket Assembly Removal/Installation, CPG Directional	11.149
F.S. 199.25 Push-Pull Rod Removal/Installation, Directional . . . .	11.247	F.S. 65.50 Control Bracket Assembly Removal/Installation, CPG to Pilot Lateral . . . . .	11.87
F.S. 199.25 Tail Rotor Fitting Removal/Installation, Directional . . . .	11.248	F.S. 65.50 Push-Pull Rod Assembly Removal/Installation, Lateral . . . . .	11.88
F.S. 214 to 225 Left Auxiliary Fuel Transfer Tube Replacement . . . . .	10.89	F.S. 82.80 Bellcrank Removal/Installation, CPG to Pilot Control Longitudinal . . . . .	11.112

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
F.S. 82.80 Control Bracket Removal/Installation, CPG to Pilot Longitudinal .....	11.114	Fairing Removal/Installation, Doppler ..	2.99
F.S. 82.80 Push-Pull Rod Assembly Removal/Installation, Longitudinal ...	11.113	Fairing Removal/Installation, Engine Nacelle .....	2.135
F.S. 83.45 Idler Bellcrank Removal/Installation, CPG to Pilot Control Lateral .....	11.89	Fairing Removal/Installation, Main Landing Gear Fuselage .....	2.75
F.S. 83.45 Push-Pull Rod Assembly Removal/Installation, Lateral .....	11.90	Fairing Riveted Seal Replacement, Nose Gearbox .....	2.124B
F.S. 83.45 Support Bracket Assembly Removal/Installation, CPG to Pilot Lateral Control .....	11.91	Fairing Stud Nut Replacement, Nose Gearbox .....	2.124E
F.S. 96.59 Bellcrank Removal/Installation, CPG to Pilot Control Longitudinal .....	11.115	Fairing T205L or T205R Removal/Installation, Main Rotor Shaft .....	2.126E
F.S. 96.59 Control Bracket Assembly Removal/Installation, CPG to Pilot Longitudinal .....	11.117	Fairing T355 Repair (AVIM), Tail Rotor Drive Shaft .....	2.126A
F.S. 96.59 Push-Pull Rod Assembly Removal/Installation, Longitudinal ...	11.116	Fairings T545A and T545 Removal/Installation, Vertical Stabilizer Tip .....	2.110
F1/XF1 or F2/XF2 Replacement, Electrical Power Distribution Box Enclosed Link Fuse Holder Block ...	9.11	Fan Air Duct Removal/Installation, Forward Avionics Bay Vaneaxial ....	13.31
Fairing Access Covers Removal/Installation, Tailboom Closeout .....	2.127	Fan Impeller, and Inlet Diffuser Removal/Installation, Engine Nose Gearbox Flexible Coupling, .....	6.33
Fairing Aft Bumper Replacement, Pylon	16.26	Fan Removal/Installation, Aft Vaneaxial	13.33
Fairing and Shroud Removal/Installation, Nose Gearbox Fuselage .....	2.123	Fan Removal/Installation, Forward Avionics Bay Vaneaxial .....	13.30
Fairing Assembly Eye Bolt Replacement, Engine Nacelle .....	2.136	Fan, Input Coupling, and Flange Removal/Installation, Intermediate Gearbox Centrifugal .....	6.12
Fairing Assembly Seal Replacement (AVIM), Forward Avionics Bay Nose .	2.42	Fastener Removal/Installation, Pilot/CPG Cockpit Thermal Insulation and Hook and Pile .....	2.10
Fairing Control Module Assembly Replacement, Nose Gearbox Fuselage .....	2.124	Fastener Removal/Installation, Pilot/CPG Station Access Door Canopy Pawl .....	2.51
Fairing Guide Pin Replacement, Nose Gearbox .....	2.124D	Feathering Bearing Housing Removal/Installation, Main Rotor ....	5.37
Fairings L510 and R510 Removal/Installation, Vertical Stabilizer .....	2.108	Feel Release Switch Replacement, CPG Cyclic Stick Trim and Force .....	11.80
Fairing L530 Removal/Installation, Vertical Stabilizer .....	2.109	Feel Release Switch Replacement, Pilot Cyclic Stick Trim and Force .....	11.47
Fairing Latch Replacement, Nose Gearbox .....	2.124C	Feel Spring Cartridge Disassembly/Assembly (AVIM) .....	11.179
Fairing R410 or R475 Removal/ Installation, Tail Rotor Drive Shaft ...	2.126D	Feel Spring Cartridge Installation, Directional .....	11.178
		Feel Spring Cartridge Installation, Lateral .....	11.58
		Feel Spring Cartridge Installation, Longitudinal .....	11.60

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Feel Spring Cartridge Removal, Directional .....	11.177	Filter Bowl, Strainer Element, and Differential Pressure Switch (Lockwired Type) Removal/Installation, Engine Nose Gearbox Oil .....	6.18
Feel Spring Cartridge Removal, Lateral	11.57	Filter Bowl, Strainer Element, and Differential Pressure Switch (Retainer, Ringed Type) Removal/Installation, Engine Nose Gearbox Oil .....	6.19
Feel Spring Cartridge Removal, Longitudinal .....	11.59	Filter Box Disassembly/Assembly (AVIM), Aft Avionics Bay Isolation Transformer .....	9.59
Fill Port Five Micron Cartridge Filter Assembly Replacement (ADG), Primary Hydraulic GSE .....	7.21B	Filter Box Removal/Installation, Aft Avionics Bay Isolation Transformer ..	9.58
Fill Port Five Micron Cartridge Filter Element Replacement (ADG), Primary Hydraulic GSE .....	7.21A	Filter Element Removal/Installation, SDC .....	7.124
Fill Port Forty-Five Micron Screen Filter Replacement (ADF), Primary Hydraulic GSE .....	7.21	Filter Element Replacement (ADG), Primary Hydraulic GSE Fill Port Five Micron Cartridge .....	7.21A
Fill Port Nipple Replacement, Primary Hydraulic GSE .....	7.22	Filter Hose and Adapter Removal/Installation, Pylon Actuator	16.11
Fill/Bleed Valve Replacement, Utility Hydraulic Accumulator Nitrogen Manifold .....	7.83	Filter Indicator Replacement, Primary Hydraulic Manifold Dirty .....	7.17
Fill/Bleed Valve Replacement, Utility Hydraulic Return Accumulator Nitrogen Manifold .....	7.95	Filter Indicator Replacement, Utility Hydraulic Manifold Dirty .....	7.71
Filler Cap Removal/Installation, Engine Nose Gearbox .....	6.23	Filter Inspection, Main Transmission ...	6.60
Filler Cap Screen Removal/Installation, Main Transmission Oil .....	6.47	Filter Removal/Installation, Nitrogen Inerting Unit (NIU) .....	10.125
Filler Neck Removal, Forward Fuel Cell	10.26	Filter Removal/Installation, ENCU .....	13.12
Filler Neck Removal/Installation, Aft Fuel Cell .....	10.34	Filter Removal/Installation, Main Transmission Oil Jet .....	6.50
Filler Removal/Installation, Main Transmission Oil .....	6.48	Filter Replacement (AVIM), Ice Detector Signal Processor EMI .....	12.64
Filter Assembly Replacement (ADG), Primary Hydraulic GSE Fill Port Five Micron Cartridge .....	7.21B	Filter Replacement, Air Particle Separator .....	7.118
Filter Bowl, Element, and Differential Pressure Switch (Lockwired Type) Removal/Installation, Main Transmission .....	6.61	Filter Replacement, APU Air .....	16.36
Filter Bowl, Element, and Differential Pressure Switch (Retainer, Ringed Type) Removal/Installation, Main Transmission .....	6.62	Filter Replacement, APU Oil .....	TM 1-2835-213-23
Filter Bowl, Element, and Pressure Indicator Removal/Installation, Main Transmission Accessory Pump .....	6.70	Filter Replacement (ADF), Primary Hydraulic GSE Fill Port Forty-Five Micron Screen .....	7.21
		Filter Replacement, Servocylinder Pressure .....	7.53
		Filter Safety Relief Valve Removal/Installation, Main Transmission Oil .....	6.63

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Filter Safety Relief Valve Replacement, Engine Nose Gearbox Oil .....	6.20	Fire/Overheat Detector Removal/Installation, Right Engine Firewall Louver .....	12.30
Filter Sleeve, Manifold Guide, and Spring Replacement, Hydraulic Manifold Return .....	7.70	Firewall Assembly No. 1 or No. 2 Aft Inboard Engine Mount Support Bearing Bore Repair .....	2.150A
Filters Removal/Installation, Engine Nose Gearbox Oil Jet .....	6.31	Firewall Assembly No. 1 or No. 2 Aft Inboard Engine Mount Support Bearing Replacement .....	2.150
Filters Replacement, Aft Avionics Bay ..	16.35	Firewall Breakaway Valve Removal/Installation, No. 1 Engine ..	10.104
Fire Bottle Select Switch Replacement, CPG .....	12.37	Firewall Breakaway Valve Removal/Installation, No. 2 Engine ..	10.105
Fire Bottle Select Switch Replacement, Pilot .....	12.35	Firewall Louver Fire/Overheat Detector Frame Removal/Installation, Left Engine .....	12.29
Fire Detection System Inspection .....	12.16	Firewall Louver Fire/Overheat Detector Frame Removal/Installation, Right Engine .....	12.31
Fire Extinguisher Cartridge Removal/Installation .....	12.40	Firewall Louver Fire/Overheat Detector Removal/Installation, Left Engine ...	12.28
Fire Extinguisher Electronic Module Replacement .....	12.41	Firewall Louver Fire/Overheat Detector Removal/Installation, Right Engine ..	12.30
Fire Extinguisher Fitting Replacement, No. 1 Engine .....	12.43	Fit Check, Self-Retaining Bolt .....	11.1
Fire Extinguisher Fitting Replacement, No. 2 Engine .....	12.44	Fitting Bearing Replacement, Pilot/CPG Canted Bulkhead Seat .....	2.162
Fire Extinguisher Installation, Primary and Reserve .....	12.39	Fitting Bushing Replacement (AVIM), Vertical Stabilizer Pivot .....	2.113
Fire Extinguisher Mounting Bracket Removal/Installation .....	2.47	Fitting Removal/Installation, CPG Boresight Mount .....	2.39
Fire Extinguisher Removal, Primary and Reserve .....	12.38	Fitting Removal/Installation, Horizontal Stabilator Actuator .....	2.114
Fire Extinguishing System Inspection ..	12.33	Fitting Replacement, No. 1 Engine Fire Extinguisher .....	12.43
Fire Panel Light Indicating Panel Receptacle Replacement (AVIM), APU .....	12.21	Fitting Replacement, No. 2 Engine Fire Extinguisher .....	12.44
Fire Pull Switch Removal/Installation, CPG Engine .....	12.36	Fixed Capacitor C1 or C2 Replacement (AVIM), CPG Caution/Warning Panel	9.118
Fire Pull Switch Removal/Installation, Pilot Engine .....	12.34	Fixed Capacitor C1, C2, C3, or C4 Replacement (AVIM), Pilot Caution/Warning Panel .....	9.111
Fire/Overheat Detector Frame Removal/Installation, Left Engine Firewall Louver .....	12.29	Fixed Capacitor C3 or C4 Replacement (AVIM), CPG Caution/Warning Panel	9.119
Fire/Overheat Detector Frame Removal/Installation, Right Engine Firewall Louver .....	12.31		
Fire/Overheat Detector Removal/Installation, Left Engine Firewall Louver .....	12.28		
Fire/Overheat Detector Removal/Installation, Main Deck ....	12.32		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Fixed Capacitor C5 Replacement (AVIM), CPG Caution/Warning Panel Ceramic .....	9.120	Fixture Removal, Intermediate Gearbox Fixture Adapter and Tail Rotor Gearbox .....	1.127
Fixed Capacitor Replacement (AVIM), Generator Control Unit (GCU) .....	9.17	Fixture Removal, Main Rotor Gearshaft	1.129
Fixed Glaeshield Removal/Installation, CPG .....	2.154	Fixture Removal, Main Rotor Head ....	1.117
Fixed Glaeshield Removal/Installation, Pilot .....	2.156	Fixture Removal, Main Rotor Swashplate .....	1.119
Fixed Resistor Replacement, Pilot Instrument Panel Matrix .....	9.53	Fixture Removal, Main Transmission ...	1.115
Fixed Wire Resistor Replacement (AVIM), CPG Caution/Warning Panel	9.121	Flame Detector Control Amplifier Replacement, APU .....	12.27
Fixed Wire Resistor Replacement (AVIM), Pilot Caution/Warning Panel	9.112	Flame Detector Control Amplifier Replacement, Engine .....	12.26
Fixture Adapter and Tail Rotor Gearbox Fixture Installation, Intermediate Gearbox .....	1.126	Flame Detector Replacement, APU Aft .	12.25
Fixture Adapter and Tail Rotor Gearbox Fixture Removal, Intermediate Gearbox .....	1.127	Flame Detector Replacement, APU Forward .....	12.24
Fixture Adapter Installation, Component	1.122	Flame Detector Replacement, Engine ..	12.23
Fixture Adapter Removal, Component .	1.123	Flange and Output Shouldered Shaft Expansion Plug Replacement (AVIM), Intermediate Gearbox Input .....	6.123
Fixture Installation, Environmental Control Unit and Nose Gearbox .....	1.124	Flange Cork Stopper Replacement, Main Transmission Tail Rotor .....	6.76
Fixture Installation, Intermediate Gearbox Fixture Adapter and Tail Rotor Gearbox .....	1.126	Flange Removal/Installation, Intermediate Gearbox Centrifugal Fan, Input Coupling, and .....	6.12
Fixture Installation, Main Rotor Gearshaft .....	1.128	Flange Removal/Installation, Main Transmission APU Drive .....	6.73
Fixture Installation, Main Rotor Head ..	1.116	Flange Removal/Installation, Start Air Valve and Ground Air Connection ...	7.142
Fixture Installation, Main Rotor Swashplate .....	1.118	Flanged Seal Replacement, Secondary Air Flexible Connection .....	7.140
Fixture Installation, Main Transmission .	1.114	Flapper Valve Replacement, Forward Fuel Cell .....	10.9
Fixture Installation/Removal, Squat Switch .....	1.132	Flashtube Lamp Replacement, Anti-Collision Light Red .....	9.98
Fixture Removal, Environmental Control Unit and Nose Gearbox .....	1.125	Flexible Air Hose Replacement, Left or Right Actuating Cylinder .....	4.91
		Flexible Connection Flanged Seal Replacement, Secondary Air .....	7.140

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Flexible Connection Housing Removal/Installation, No. 2 Engine Start Air Tube and Air .....	7.146	Flight Controls Between Pilot Collective Stick and Collective Servocylinder, Rigging Collective .....	11.282
Flexible Connection Housing Removal/Installation, Standby System Engine Bleed Air Tube and Engine Air	7.141	Flight Controls Between Pilot Cyclic Stick and Lateral Servocylinder, Rigging Lateral .....	11.290
Flexible Connection Housing, and Utility Tube Removal/Installation, Ground Air Connection Manifold, Engine Air .	7.144	Flight Controls Between Pilot Cyclic Stick and Longitudinal Servocylinder, Rigging Longitudinal .....	11.286
Flexible Coupling, Vaneaxial Fan, and Inlet Diffuser Removal/Installation, Engine Nose Gearbox .....	6.33	Flight Controls Between Pilot Pedals and Directional Servocylinder, Rigging Directional .....	11.294
Flexible Support Removal/Installation, Main Rotor .....	6.93	Flight Controls, Rigging Collective Upper	11.284
Flight Bracket Assembly Removal/Installation, CPG to Pilot Longitudinal F.S. 118.50 Control ....	11.120	Flight Controls, Rigging Tail Rotor Directional .....	11.296
Flight Bracket Assembly Removal/Installation, Lateral F.S. 132.84 .....	11.101	Flight Controls, Rigging Upper Lateral .	11.292
Flight Control Arm Assembly Disassembly/Assembly (AVIM), CPG Cyclic Stick .....	11.85	Flight Controls, Rigging Upper Longitudinal .....	11.288
Flight Control Arm Assembly Disassembly/Assembly (AVIM), Pilot Cyclic Stick .....	11.62	Flight Instruments Inspection .....	8.29
Flight Control System Bearing/Bushing Replacement (AVIM) .....	11.4	Flight Safety Parts Program .....	1.140
Flight Control System Push-Pull Rod Adjustable Rod End Bearing Assembly Replacement/Adjustment .	11.2	Float Diverter Valve Disassembly/Assembly, Main Transmission .....	6.120
Flight Control System Push-Pull Rod Non-adjustable Rod End Bearing Replacement .....	11.3	Float Diverter Valve Removal/Installation, Main Transmission .....	6.119
Flight Controls – Inspection (Main Rotor)	11.5	FLOOD Switch Replacement (AVIM), CPG INTR LT Panel .....	9.88
Flight Controls Between Pilot and CPG Collective Sticks, Rigging Collective .	11.281	Floor Armor Panel Removal/Installation, CPG .....	2.181
Flight Controls Between Pilot and CPG Cyclic Sticks, Rigging Lateral .....	11.289	Flow Switch Replacement, Air Turbine Flow Switch and Turbine Speed Cutout .....	9.152
Flight Controls Between Pilot and CPG Cyclic Sticks, Rigging Longitudinal ..	11.285	Fluid Drain Pan Replacement, Tailboom	2.101
Flight Controls Between Pilot and CPG Pedals, Rigging Directional .....	11.293	Fluid Drain Tube Replacement, Tailboom .....	2.100
		Fluid Manifold Installation, Aircraft Air Pressure .....	7.138
		Fluid Manifold Removal, Aircraft Air Pressure .....	7.137
		Fluid, Hydraulic Systems Servicing – ...	1.34

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Fluid, Main Landing Gear Shock Strut Service –	1.41	Forms and Records	C.9
Flushing, and Servicing, Main Transmission Oil System Draining, ..	1.32	Forms, Records, and Reports, Maintenance	1.2
Flyable Storage – No Time Limit	E.5	Forward Access Cover Removal/Installation, Forward Fuel Cell	10.7
Flyable Storage – No Time Limit Removal from	E.6	Forward Air Tube Removal/Installation, Environmental Control Unit	7.153
FM Antenna Pan Mount Fuselage Repair (AVIM), Wide Band	2.101A	Forward and Aft Fuel/Defuel Check Valve Disassembly/Assembly (AVIM)	10.20
Follower Installation (AVIM), Main Rotor Droop Stop	5.39	Forward and Aft Poppet Draincock and Control Removal/Installation	10.3
Follower Removal (AVIM), Main Rotor Droop Stop	5.38	Forward and Aft Tip Weight Removal/Installation (AVIM) Main Rotor Blade	5.14A
Follower Repair (AVIM), Main Rotor Droop Stop	5.40	Forward Avionics Bay Access Door Removal/Installation	2.43
Follower Roller and Inner Race Replacement, Main Rotor Droop Stop	5.41	Forward Avionics Bay Air Cooling Duct Assembly Removal/Installation	13.32
Foot Guard Removal/Installation, Pilot/CPG	2.189	Forward Avionics Bay Airframe Step Assembly Removal/Installation	2.45
Footstep Removal/Installation, Left Fuselage	2.80	Forward Avionics Bay Nose Fairing Assembly Seal Replacement (AVIM)	2.42
Force Feel Release Switch Replacement, CPG Cyclic Stick Trim and	11.80	Forward Avionics Bay Structure Frame Assembly Forward Step Sleeve Bushing Replacement	2.46
Force Feel Release Switch Replacement, Pilot Cyclic Stick Trim and	11.47	Forward Avionics Bay Thermostatic Switch Replacement, ECS	13.41
Fork Assembly Disassembly/Assembly, Tail Landing Gear	3.44	Forward Avionics Bay Vaneaxial Fan Air Duct Removal/Installation	13.31
Fork Clamp and Locking Plate Removal/Installation (AVIM), Tail Rotor	5.63	Forward Avionics Bay Vaneaxial Fan Removal/Installation	13.30
Fork Identification Plate Replacement, Tail Rotor	5.66	Forward Cable Installation, No. 1 or No. 2 Engine Load Demand Spindle	4.150
Fork Locking Plate Disassembly/Assembly (AVIM), Tail Rotor	5.64	Forward Cable Removal, No. 1 or No. 2 Engine Load Demand Spindle	4.149
Fork Removal/Installation, Tail Landing Gear	3.43	Forward Canopy Windshield Panel Assembly Removal/Installation, Left	2.70
Fork and Teeter Stop Disassembly/Assembly, Tail Rotor	5.67	Forward Canopy Windshield Panel Removal/Installation, Upper	2.72
Formation Light Removal/Installation	9.92	Forward Door Catch Striker Removal/Installation	2.60



<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Forward Engine Mount Support Removal/Installation, No. 1 or No. 2 .	4.84	Forward Fuel Cell Refueling Hose Replacement .....	10.22
Forward Fuel Cell Aft Access Panel and Aft Cover Removal/Installation .....	10.8	Forward Fuel Cell Removal .....	10.28
Forward Fuel Cell Aft Fuel Quantity Transmitter Removal/Installation ....	10.6	Forward Fuel Cell Restraint Pan Removal/Installation .....	10.52
Forward Fuel Cell Air Vent/Pressure Relief Valve Removal/Installation ...	10.15	Forward Fuel Cell Retainer Panel Removal/Installation .....	2.47A
Forward Fuel Cell Check/Thermal Relief Valve Removal/Installation .....	10.11	Forward Fuel Cell Upper Vent Tube and Vent Tube Adapter Removal/Installation .....	10.10
Forward Fuel Cell Engine Fuel Supply Breakaway Valve Removal/Installation .....	10.16	Forward Fuel Cell Vent Tube Replacement .....	10.23
Forward Fuel Cell Engine Fuel Supply Hose Replacement .....	10.21	Forward Fuel Quantity Transmitter Removal/Installation, Forward Fuel Cell .....	10.5
Forward Fuel Cell Filler Neck Installation	10.27	Forward Fuselage Frame Structure ....	2.13
Forward Fuel Cell Filler Neck Removal .	10.26	Forward Gear Fitting Replacement, Tail Rotor Gearbox .....	6.143
Forward Fuel Cell Flapper Valve Replacement .....	10.9	Forward Hanger Bearing Coupling Removal/Installation .....	6.6
Forward Fuel Cell Forward Access Cover Removal/Installation .....	10.7	Forward Inboard Mount Removal/Installation, No. 1 and No. 2 Engine .....	4.117
Forward Fuel Cell Fuel Level Control Pilot Valve Removal/Installation .....	10.13	Forward Left or Right Center Transmission Rotor Support Strut Assemblies Removal/Installation ....	2.89
Forward Fuel Cell Fuel Shutoff Valve Removal/Installation .....	10.14	Forward Left or Right Mount Fitting Replacement, APU .....	15.36
Forward Fuel Cell Fuel Valve Isolation Switch Removal/Installation .....	10.25	Forward Link Removal/Installation, CPG Cyclic Stick .....	11.69
Forward Fuel Cell Fuel/Defuel Check Valve Removal/Installation .....	10.19	Forward Lower Mount Removal/Installation, No. 1 and No. 2 Engine .....	4.118
Forward Fuel Cell Installation .....	10.29	Forward Mount Pads Sleeve Bushing Replacement (AVIM), Gun and Ammo Support .....	2.38
Forward Fuel Cell Lightning Arrestor Removal/Installation .....	10.4	Forward Oil Jet and Nozzle Removal/Installation, Main Transmission .....	6.51
Forward Fuel Cell Lower Vent Tube Removal/Installation .....	10.24	Forward or Aft Fuel Cell Backing Board Removal/Installation .....	10.51
Forward Fuel Cell Nitrogen Inert Breakaway Valve Hose Removal/Installation .....	10.134	Forward or Aft Fuel Cell Ballistic Foam Repair/Replacement .....	10.53
Forward Fuel Cell Nitrogen Inert Breakaway Valve Removal/Installation .....	10.121		
Forward Fuel Cell Pilot Valve Hose Replacement .....	10.12		
Forward Fuel Cell Refueling Breakaway Valve Removal/Installation .....	10.17		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Forward Refueling Hose Replacement .	10.77	Fresh Water Rinse Procedures, Aircraft and Aircraft Component Washing, Cleaning, and .....	1.53
Forward Side Transmission Rotor Support Strut Assembly Removal/Installation, Left .....	2.92	Friction Guide Removal/Installation ....	11.22
Forward Side Transmission Rotor Support Strut Assembly Removal/Installation, Right .....	2.93	Friction Lining, and Brake Disk Removal/Installation (Goodyear/ABSC), Single Disk Brake,	3.66
Forward Step Sleeve Bushing Replacement, Forward Avionics Bay Structure Frame Assembly .....	2.46	Friction Lining, and Brake Disk Removal/Installation (Parker-Hannifin), Single Disk Brake,	3.65
Forward Strut Removal/Installation, Tail Rotor Gearbox .....	6.142	Front Panel Removal/Installation (AVIM), Engine Oil Pressure Indicator .....	8.7
Frame Assembly Attenuator Removal/Installation, Pilot/CPG Armored Crew Seat .....	2.171	Front Panel Removal/Installation (AVIM), Engine/ Rotor RPM Indicator .....	8.5
Frame Assembly Forward Step Sleeve Bushing Replacement, Forward Avionics Bay Structure .....	2.46	Front Panel Removal/Installation (AVIM), Pilot/CPG Engine Instrument Dim/Test Control Panel .....	8.24
Frame Assembly Helical Extension Spring Removal/Installation, Pilot/CPG Armored Crew Seat .....	2.170	Front Panel Removal/Installation (AVIM), Selectable Digital Display (SDD) Panel .....	8.14
Frame Bearing Replacement, Pilot/CPG Canted .....	2.163	Fuel Adapter Removal/Installation .....	10.96
Frame Bushing Replacement, Pylon ...	16.25	Fuel Boost Pump Air Inlet Hose Replacement .....	10.118
Frame Drain Tube Removal/Installation (T700-GE-701 Engine), No. 1 and No. 2 Engine Swirl .....	4.113	Fuel Boost Pump Canister Removal/Installation .....	10.116
Frame Drain Tube Removal/Installation (T700-GE-701C Engine), No. 1 and No. 2 Engine Swirl .....	4.114	Fuel Boost Pump Hose Replacement, Pressurized Air System .....	7.147
Frame Removal/Installation, Pylon ....	16.22	Fuel Boost Pump Inlet Hose Replacement .....	10.115
Frame Removal/Installation, Secondary Nozzle .....	4.133	Fuel Boost Pump Outlet Hose Replacement .....	10.117
Frame Straight Pin Replacement, Pylon	16.20	Fuel Boost Pump Solenoid Shutoff Valve Removal/Installation .....	7.150
Frame Structure, Aft Fuselage .....	2.15	Fuel Boost Pump Switch Replacement (AVIM), Pilot Fuel Panel .....	10.57
Frame Structure, Center Fuselage .....	2.14	Fuel Boost Pump, Motor, and Drain Tube Removal/Installation .....	10.114
Frame Structure, Forward Fuselage ...	2.13	Fuel Boost Pump Pressure Switch Removal/Installation .....	10.112
Frame Structure, Horizontal Stabilator .	2.105	Fuel Cell Access Panel and Access Cover Removal/Installation, Aft .....	10.32
Frame Structure, Vertical Stabilizer Spar Box .....	2.104		
Frame Structure, Wing .....	2.118		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Fuel Cell Air Vent/Pressure Relief Valve Removal/Installation, Forward . . . . .	10.15	Fuel Cell Fuel/Defuel Check Valve Removal/Installation, Aft . . . . .	10.35
Fuel Cell Backing Board Removal/Installation, Forward or Aft .	10.51	Fuel Cell Fuel/Defuel Check Valve Removal/Installation, Forward . . . . .	10.19
Fuel Cell Ballistic Foam Repair/Replacement, Forward or Aft .	10.53	Fuel Cell Installation, Aft . . . . .	10.50
Fuel Cell Check/Thermal Relief Valve Removal/Installation, Forward . . . . .	10.11	Fuel Cell Installation, Forward . . . . .	10.29
Fuel Cell Engine Fuel Supply Breakaway Valve Removal/Installation, Forward . . . . .	10.16	Fuel Cell Lightning Arrestor Removal/Installation, Forward . . . . .	10.4
Fuel Cell Engine Fuel Supply Hose Replacement, Aft . . . . .	10.47	Fuel Cell Lower Vent Tube and Lightning Arrestor Removal/Installation, Aft . . .	10.45
Fuel Cell Engine Fuel Supply Hose Replacement, Forward . . . . .	10.21	Fuel Cell Lower Vent Tube Removal/Installation, Forward . . . . .	10.24
Fuel Cell Filler Neck Installation, Forward . . . . .	10.27	Fuel Cell Nitrogen Inert Breakaway Valve Hose Removal/Installation, Aft	10.131
Fuel Cell Filler Neck Removal, Forward	10.26	Fuel Cell Nitrogen Inert Breakaway Valve Hose Removal/Installation, Forward . . . . .	10.134
Fuel Cell Filler Neck Removal/Installation, Aft . . . . .	10.34	Fuel Cell Nitrogen Inert Breakaway Valve Removal/Installation, Forward .	10.121
Fuel Cell Forward Access Panel Removal/Installation, Aft . . . . .	10.33	Fuel Cell Nitrogen Inert Breakaway Valve Removal/Installation, Aft . . . . .	10.119
Fuel Cell Four-Way Check Valve Removal/Installation, Aft . . . . .	10.36	Fuel Cell Nitrogen Inert Check Valve Removal/Installation, Aft . . . . .	10.133
Fuel Cell Fuel Level Control Pilot Valve Removal/Installation, Aft . . . . .	10.37	Fuel Cell Nitrogen Inert Orifice Hose Removal/Installation, Aft . . . . .	10.132
Fuel Cell Fuel Level Control Pilot Valve Removal/Installation, Forward . . . . .	10.13	Fuel Cell Nitrogen Inert Outlet Orifice Removal/Installation, Aft . . . . .	10.120
Fuel Cell Fuel Outlet Breakaway Valve Removal/Installation, Aft . . . . .	10.43	Fuel Cell Pilot Valve Hose Replacement, Aft . . . . .	10.38
Fuel Cell Fuel Quantity Transmitter Removal/Installation, Aft . . . . .	10.39	Fuel Cell Pilot Valve Hose Replacement, Forward . . . . .	10.12
Fuel Cell Fuel Shutoff Valve Removal/Installation, Aft . . . . .	10.40	Fuel Cell Refueling Breakaway Valve Removal/Installation, Aft . . . . .	10.42
Fuel Cell Fuel Shutoff Valve Removal/Installation, Forward . . . . .	10.14	Fuel Cell Refueling Breakaway Valve Removal/Installation, Forward . . . . .	10.17
Fuel Cell Fuel Valve Isolation Switch Removal/Installation, Aft . . . . .	10.48	Fuel Cell Refueling Hose Replacement, Aft . . . . .	10.44
Fuel Cell Fuel Valve Isolation Switch Removal/Installation, Forward . . . . .	10.25	Fuel Cell Refueling Hose Replacement, Forward . . . . .	10.22
		Fuel Cell Removal, Aft . . . . .	10.49
		Fuel Cell Removal, Forward . . . . .	10.28

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Fuel Cell Restraint Pan Removal/Installation, Forward . . . . .	10.52	Fuel Panel Bracket Assembly Replacement (AVIM), Pilot . . . . .	10.60
Fuel Cell Retainer Panel Removal/Installation, Forward . . . . .	2.47A	Fuel Panel Crossfeed Switch Replacement (AVIM), Pilot . . . . .	10.56
Fuel Cell Upper Fuel Supply Hose Removal/Installation, Aft . . . . .	10.46	Fuel Panel Electronic Component Assembly and Access Cover Replacement (AVIM), Pilot . . . . .	10.59
Fuel Cell Upper Vent Adapter Removal/Installation, Aft . . . . .	10.31	Fuel Panel Fuel Boost Pump Switch Replacement (AVIM), Pilot . . . . .	10.57
Fuel Cell Upper Vent Tube Replacement, Aft . . . . .	10.30	Fuel Panel Light Indicating Panel Removal/Installation, Pilot . . . . .	10.55
Fuel Cell Vent Tube Replacement, Forward . . . . .	10.23	Fuel Panel Light Indicating Panel Replacement, CPG . . . . .	10.63
Fuel Control Removal/Installation, APU . . . . .	TM 1-2835-213-23	Fuel Panel Pilot Override Switch Replacement (AVIM), CPG . . . . .	10.65
Fuel Drain Check Valve Removal/Installation, APU . . . . .	TM 1-2835-213-23	Fuel Panel Removal/Installation, CPG .	10.62
Fuel Filter Replacement, APU . . . . .	TM 1-2835-213-23	Fuel Panel Removal/Installation, Pilot ..	10.54
Fuel Hose Replacement, Crossfeed . . .	10.101	Fuel Panel Support Panel Replacement (AVIM), CPG . . . . .	10.68
Fuel Inlet Hose Installation, Engine Buildup – No. 1 and No. 2 Engine . . .	4.44	Fuel Panel Support Panel Replacement (AVIM), Pilot . . . . .	10.61
Fuel Inlet Hose Removal, Engine Teardown – No. 1 and No. 2 Engine . .	4.16	Fuel Panel Switch Replacement (AVIM), Pilot . . . . .	10.58
Fuel Inlet Hose Replacement, APU . . . .	10.107	Fuel Panel Tank Select Switch Replacement (AVIM), CPG . . . . .	10.66
Fuel Inlet Hose Replacement, No. 1 Engine . . . . .	10.97	Fuel Panel Transfer Switch Replacement (AVIM), CPG . . . . .	10.64
Fuel Inlet Hose Replacement, No. 2 Engine . . . . .	10.98	Fuel Pressure Switch Replacement, No. 1 Engine . . . . .	4.97
Fuel Inlet Hose Replacement, Right Auxiliary . . . . .	10.92	Fuel Pressure Switch Replacement, No. 2 Engine . . . . .	4.98
Fuel Level Control Pilot Valve Removal/Installation, Aft Fuel Cell . . .	10.37	Fuel Pump Fuel Supply Elbow Removal/Installation, APU . . . . .	10.113
Fuel Level Control Pilot Valve Removal/Installation, Forward Fuel Cell . . . . .	10.13	Fuel Pump Inlet Tube Replacement, APU . . . . .	10.109
Fuel Manifold Nipple Removal/Installation . . . . .	10.95	Fuel Pump Outlet Tube Replacement, APU . . . . .	10.110
Fuel Manifold Removal/Installation, Pressure . . . . .	10.94	Fuel Pump Pressure Switch Removal/Installation, APU . . . . .	10.112
Fuel Nozzle, and Ignitor Plug Removal/Installation, APU Combustor Liner, Cap, . . . . .	TM 1-2835-213-23	Fuel Pump Removal/Installation, APU ..	10.108
Fuel Outlet Breakaway Valve Removal/Installation, Aft Fuel Cell . . .	10.43	Fuel Quantity Indicator Removal/Installation, Pilot . . . . .	8.8
Fuel Panel Boost Pump Switch Replacement (AVIM), CPG . . . . .	10.67	Fuel Quantity Indicator Test Set (TF 579) Installation/Removal . . . . .	10.135
		Fuel Quantity Transmitter Removal/Installation, Aft Fuel Cell . . .	10.39

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Fuel Quick-Disconnect to F.S. 214 Tube Replacement, Right Auxiliary .....	10.93	Fuel Tank Check Valve Removal/Installation, Left Auxiliary ..	10.85
Fuel Servicing – Closed Circuit Refueling (CCR) Method .....	1.15	Fuel Tank Check Valve Removal/Installation, Right Auxiliary .	10.90
Fuel Servicing – Gravity Method .....	1.14	Fuel Tank Installation, Auxiliary .....	10.139
Fuel Servicing – Hot Rapid Closed Circuit Refueling (CCR) Method ....	1.17	Fuel Tank Kit (Four Tank) Installation, Auxiliary .....	10.141
Fuel Servicing – Hot Rapid Single Point Adapter (SPA) Method .....	1.18	Fuel Tank Kit (Four Tank) Removal, Auxiliary .....	10.142
Fuel Servicing – Single Point Adapter (SPA) Method .....	1.16	Fuel Tank Kit (Two Tank) Installation, Auxiliary .....	10.137
Fuel Shutoff Valve Removal/Installation, Aft Fuel Cell .....	10.40	Fuel Tank Kit (Two Tank) Removal, Auxiliary .....	10.138
Fuel Shutoff Valve Removal/Installation, APU .....	10.111	Fuel Tank Pressure Control Valve Removal/Installation .....	7.151
Fuel Shutoff Valve Removal/Installation, Forward Fuel Cell .....	10.14	Fuel Tank Quick-Disconnect Coupling Removal/Installation, Left and Right Auxiliary .....	10.91
Fuel Signal Conditioner Adjustment ....	10.136	Fuel Tank Removal, Auxiliary .....	10.140
Fuel Signal Conditioner Removal/Installation .....	8.27	Fuel Transfer Air Control Valve Removal/Installation .....	10.83
Fuel Solenoid Support Bracket Removal/Installation, APU .....	15.21	Fuel Transfer Pump Drain Tube Replacement .....	10.82
Fuel Solenoid Valve Removal/Installation, APU .....	15.19	Fuel Transfer Pump Installation .....	10.76
Fuel Supply Breakaway Valve Removal/Installation, Forward Fuel Cell Engine .....	10.16	Fuel Transfer Pump Removal .....	10.75
Fuel Supply Hose Removal/Installation, Aft Fuel Cell Upper .....	10.46	Fuel Transfer Pump/Air Control Valve Inboard Tube Replacement .....	10.81
Fuel Supply Hose Replacement, Aft Fuel Cell Engine .....	10.47	Fuel Transfer Pump/Air Control Valve Outboard Tube Replacement .....	10.80
Fuel Supply Hose Replacement, APU ..	15.20	Fuel Transfer Shutoff Valve Removal/Installation .....	10.74
Fuel Supply Hose Replacement, Forward Fuel Cell Engine .....	10.21	Fuel Transfer Tube Replacement, Left Auxiliary .....	10.86
Fuel Supply Hose Replacement, No. 1 Engine Upper .....	10.106	Fuel Transfer Tube Replacement, F.S. 186 to 199 Left Auxiliary .....	10.87
Fuel Supply Hose Replacement, No. 2 Engine .....	10.103	Fuel Transfer Tube Replacement, F.S. 199 to 214 Left Auxiliary .....	10.88
Fuel System Priming .....	1.23	Fuel Transfer Tube Replacement, F.S. 214 to 225 Left Auxiliary .....	10.89
Fuel System Safety Precautions .....	10.2	Fuel Transfer Valve Air Exhaust Vent Tube Coupler Hose Replacement ...	10.78
Fuel System Servicing (General) .....	1.13		
Fuel System Venting .....	1.22		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Fuel Transfer Valve Air Exhaust Vent Tube Replacement .....	10.79	Fuse/Holder Block F1/XF1 or F2/XF2 Replacement, Electrical Power Distribution Box Enclosed Link .....	9.11
Fuel Valve Isolation Switch Removal/Installation, Aft Fuel Cell ...	10.48	Fuselage Bottom Skin Plates .....	2.18
Fuel Valve Isolation Switch Removal/Installation, Forward Fuel Cell .....	10.25	Fuselage Bow Handle Removal/Installation .....	2.78
FUEL XFER Advisory Light Replacement, CPG .....	9.123	Fuselage Coupling Nipple Replacement, Wing .....	7.102
FUEL XFER Advisory Light Replacement, Pilot .....	9.124	Fuselage Damage and Types of Repair, Classification of .....	2.12
Fuel, and Ng Indicators Light Panel, Digital Display Driver Circuit Card Replacement (AVIM), Torque, TGT, .	8.10	Fuselage Fairing and Shroud Removal/Installation, Nose Gearbox .	2.123
Fuel, and Ng Indicators Replacement (AVIM), Analog or Interface Circuit Card on Torque, TGT, .....	8.11	Fuselage Fairing Control Module Assembly Replacement, Nose Gearbox .....	2.124
Fuel/Defuel Check Valve Disassembly/Assembly (AVIM), Forward and Aft .....	10.20	Fuselage Fairing Removal/Installation, Main Landing Gear .....	2.75
Fuel/Defuel Check Valve Removal/Installation, Aft Fuel Cell ...	10.35	Fuselage Footstep Removal/Installation, Left .....	2.80
Fuel/Defuel Check Valve Removal/Installation, Forward Fuel Cell .....	10.19	Fuselage Frame Structure, Aft .....	2.15
Functional Check (AVIM), Hydraulic Hand Pump .....	7.31	Fuselage Frame Structure, Center .....	2.14
Functional Test, Parking Brake .....	3.71	Fuselage Frame Structure, Forward ...	2.13
Functions, Maintenance .....	B.5	Fuselage Inspection .....	2.11
Fuse Pin Replacement, Tail Landing Gear Actuating Cylinder .....	3.37	Fuselage Quick-Disconnect Coupling Replacement, Wing .....	7.101
		Fuselage Side Skin Plates .....	2.16
		Fuselage Step Removal/Installation ...	2.79
		Fuselage Stringers .....	2.19
		Fuselage Top Skin Plates .....	2.17

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
<b>G</b>			
Gage Indicator Replacement, APU Oil Level Sight . . . . .	TM 1-2835-213-23	Gear Fork Removal/Installation, Tail Landing . . . . .	3.43
Gas Temperature (EGT) Thermocouple Removal/Installation, APU Exhaust . . . . .	TM 1-2835-213-23	Gear Fuselage Fairing Removal/Installation, Main Landing . .	2.75
Gas Temperature (TGT) Indicator and Engine Gas Generator Ng RPM Indicator Removal/Installation, Pilot Engine Turbine . . . . .	8.9	Gear Inspection, Main Landing . . . . .	3.1
Gasket Repair, Electromagnetic Interference (EMI) . . . . .	2.27	Gear Inspection, Tail Landing . . . . .	3.28
Gear Actuating Cylinder Fuse Pin Replacement, Tail Landing . . . . .	3.37	Gear Jack Pad Adapter Removal/Installation, Main Landing . .	3.5
Gear Actuating Cylinder Lock Release Handle Replacement, Tail Landing . .	3.35	Gear Jacking (At One Point), Main Landing . . . . .	1.67
Gear Actuating Cylinder Lock Switch Assembly Replacement, Tail Landing	3.34	Gear Jacking (Axle Jack), Tail Landing .	1.68
Gear Actuating Cylinder Removal/Installation, Tail Landing . . .	3.32	Gear Jacking (Tripod Jack), Tail Landing	1.69
Gear Actuating Cylinder Spring Replacement (AVIM), Tail Landing . .	3.33	Gear Left Shock Strut Structural Support Removal/Installation, Main Landing . . . . .	2.76
Gear Actuating Cylinder Wheel Lock Target Replacement, Tail Landing . . .	3.36	Gear Lower Structural Support Removal/Installation, Main Landing . .	3.4
Gear Brake System – Service/Bleed, Main Landing . . . . .	1.45	Gear Right Shock Strut Structural Support Removal/Installation, Main Landing . . . . .	2.77
Gear Cable Assembly Replacement, Main Landing . . . . .	3.2	Gear Shock Strut Bearing Replacement (AVIM), Tail Landing . . . . .	3.42
Gear Cable Cutter Removal/Installation, Main Landing . . . . .	3.26	Gear Shock Strut Cam Valve Replacement (AVIM), Main Landing . .	3.19A
Gear Cross Tube Removal/Installation, Main Landing . . . . .	2.81	Gear Shock Strut Check Valve Removal/Installation, Main Landing . .	3.22
Gear Fitting Replacement, Tail Rotor Gearbox Aft . . . . .	6.141	Gear Shock Strut Cork Stopper Replacement, Tail Landing . . . . .	3.41
Gear Fitting Replacement, Tail Rotor Gearbox Forward . . . . .	6.143	Gear Shock Strut Cylinder External Leakage Repair, Main Landing . . . . .	3.21
Gear Fork Assembly Disassembly/Assembly, Tail Landing	3.44	Gear Shock Strut External Leakage Repair, Upper Main Landing . . . . .	3.20
		Gear Shock Strut Identification Plate Replacement, Main Landing . . . . .	3.25
		Gear Shock Strut Piston Removal/Installation (AVIM), Tail Landing . . . . .	3.39
		Gear Shock Strut Pneumatic Valve Removal/Installation, Tail Landing . . .	3.40
		Gear Shock Strut Pneumatic Valve Replacement, Main Landing . . . . .	3.19

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Gear Shock Strut Removal/Installation, Main Landing . . . . .	3.18	Gear Wheel (Without Grease Fitting) and Axle Removal/Installation, Tail Landing . . . . .	3.49
Gear Shock Strut Removal/Installation, Tail Landing . . . . .	3.38	Gear Wheel (Without Grease Fitting), Repair, Tail Landing . . . . .	3.51A
Gear Shock Strut Service – Fluid, Main Landing . . . . .	1.41	Gear Wheel (Without Grease Fitting), Tapered Cone, and Rollers Removal/Installation, Tail Landing . . . . .	3.51
Gear Shock Strut Service – Nitrogen, Main Landing . . . . .	1.40	Gear Wheel (Without Grease Fitting), Tire, and Tube Removal/Installation, Tail Landing . . . . .	3.50
Gear Shock Strut Servicing – Nitrogen, Tail Landing . . . . .	1.42	Gear Wheel and Tire Removal/Installation, Main Landing . . . . .	3.6
Gear Shock Strut Upper Rod End Replacement (AVIM), Main Landing . . . . .	3.23	Gear Wheel Brake Hose Removal/Installation, Main Landing . . . . .	3.70
Gear Shock Strut Upper Seal Assembly Replacement (AVIM), Main Landing . . . . .	3.24	Gear Wheel Brake Leakage and Operational Test (AVIM), Main Landing . . . . .	3.67
Gear Tail Wheel Deflector, Structural Support, and Tail Wheel Brackets Removal/Installation, Tail Landing . . . . .	3.27	Gear Wheel Brake Tube and Hose Clamp Removal/Installation, Main Landing . . . . .	3.69
Gear Tire Removal/Installation (Goodyear), Main Landing . . . . .	3.7	Gear Wheel Brake, Hose (Nonmetallic), Tube, and Clamp Removal/Installation, Main Landing . . . . .	3.68
Gear Tire Removal/Installation (Parker-Hannifin), Main Landing . . . . .	3.11	Gear Wheel Disk Drive Key Assembly Replacement (Goodyear/ABSC), Main Landing . . . . .	3.9
Gear Tire Servicing, Main Landing . . . . .	1.43	Gear Wheel Machine Key Assembly Replacement (Parker-Hannifin), Main Landing . . . . .	3.13
Gear Tire Servicing, Tail Landing . . . . .	1.44	Gear Wheel Repair (Goodyear/ABSC), Main Landing . . . . .	3.7A
Gear Tire Valve Assembly Replacement (Goodyear/ABSC), Main Landing . . . . .	3.8	Gear Wheel Repair (Parker-Hannifin), Main Landing . . . . .	3.11A
Gear Tire Valve Assembly Replacement (Parker-Hannifin), Main Landing . . . . .	3.12	Gear Wheel Tapered Cone and Rollers Removal/Installation (Eight-Bolts), Main Landing . . . . .	3.14
Gear Trailing Arm Assembly Removal/Installation, Main Landing . . . . .	3.16	Gear Wheel Tapered Cone and Rollers Removal/Installation (Nine-Bolts), Main Landing . . . . .	3.10
Gear Trailing Arms Removal/Installation, Tail Landing . . . . .	3.45	Gearbox Accelerometer Removal/Installation, Intermediate . . . . .	6.129
Gear Upper Cam Housing Repair, Tail Landing . . . . .	3.31	Gearbox Accelerometer Removal/Installation, Tail Rotor . . . . .	6.139
Gear Upper Structural Support Removal/Installation, Main Landing . . . . .	3.3		
Gear Wheel (With Grease Fitting) and Axle Removal/Installation, Tail Landing . . . . .	3.46		
Gear Wheel (With Grease Fitting) Repair, Tail Landing . . . . .	3.48A		
Gear Wheel (With Grease Fitting) Tapered Cone and Rollers Removal/Installation, Tail Landing . . . . .	3.48		



<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Gearbox Aft Cable Support Removal/Installation, No. 1 Engine Power Control .....	4.172	Gearbox Fixture Removal, Environmental Control Unit and Nose	1.125
Gearbox Aft Gear Fitting Replacement, Tail Rotor .....	6.141	Gearbox Fixture Removal, Intermediate Gearbox Fixture Adapter and Tail Rotor .....	1.127
Gearbox Aft Strut Removal/Installation, Tail Rotor .....	6.140	Gearbox Flexible Coupling, Vaneaxial Fan, and Inlet Diffuser Removal/Installation, Engine Nose ..	6.33
Gearbox and Quill Shaft Removal/Installation, Engine Nose ..	6.36	Gearbox Forward Gear Fitting Replacement, Tail Rotor .....	6.143
Gearbox Anti-flail Bearing Nut Disassembly/Assembly, Engine Nose	6.34	Gearbox Forward Strut Removal/Installation, Tail Rotor .....	6.142
Gearbox Baseplate Removal/Installation, No. 1 and No. 2 Engine Power Control Spindle .....	4.142	Gearbox Fuselage Fairing and Shroud Removal/Installation, Nose .....	2.123
Gearbox Breather Removal/Installation, Intermediate .....	6.126	Gearbox Fuselage Fairing Control Module Assembly Replacement, Nose .....	2.124
Gearbox Breather Replacement, Engine Nose .....	6.24	Gearbox Identification Plate Replacement, Engine Nose .....	6.27
Gearbox Centrifugal Fan, Input Coupling, and Flange Removal/Installation, Intermediate ..	6.12	Gearbox Identification Plate Replacement, Intermediate .....	6.128
Gearbox Drain Hose Removal/Installation, No. 1 and No. 2 Engine .....	4.105	Gearbox Identification Plate Replacement, Tail Rotor .....	6.137
Gearbox Fairing Guide Pin Replacement, Nose .....	2.124D	Gearbox Input Coupling Removal/Installation, Tail Rotor .....	6.15
Gearbox Fairing Latch Replacement, Nose .....	2.124C	Gearbox Breather Removal/Installation, Tail Rotor .....	6.136
Gearbox Fairing Riveted Seal Replacement, Nose .....	2.124B	Gearbox Input Flange and Output Shouldered Shaft Expansion Plug Replacement (AVIM), Intermediate ..	6.123
Gearbox Fairing Stud Nut Replacement, Nose .....	2.124E	Gearbox Input Seal Assembly Removal/Installation, Engine Nose ..	6.37
Gearbox Filler Cap Removal/Installation, Engine Nose ..	6.23	Gearbox Input Seal Assembly Removal/Installation, Intermediate ..	6.124
Gearbox Fixture Adapter and Tail Rotor Gearbox Fixture Installation, Intermediate .....	1.126	Gearbox Input Seal Assembly Removal/Installation, Tail Rotor .....	6.135
Gearbox Fixture Adapter and Tail Rotor Gearbox Fixture Removal, Intermediate .....	1.127	Gearbox Inspection, Engine Nose .....	6.17
Gearbox Fixture Installation, Environmental Control Unit and Nose	1.124	Gearbox Inspection, Intermediate .....	6.121
Gearbox Fixture Installation, Intermediate Gearbox Fixture Adapter and Tail Rotor .....	1.126	Gearbox Inspection, Tail Rotor .....	6.132
		Gearbox Low Oil Pressure Switch Removal/Installation, Engine Nose ..	6.21
		Gearbox Lube Pump Removal/Installation, Engine Nose ..	6.30

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Gearbox Machine Plug Removal/Installation, Intermediate ..	6.127	Gearbox Removal/Installation, Intermediate .....	6.131
Gearbox Machine Plug Removal/Installation, Tail Rotor .....	6.146	Gearbox Removal/Installation, No. 1 Engine Load Demand Spindle .....	4.143
Gearbox Main Sleeve and Runout Tube Removal/Installation, No. 1 or No. 2 Engine Load Demand Spindle .....	4.144A	Gearbox Removal/Installation, No. 1 Engine Power Available Spindle ....	4.140
Gearbox Main Sleeve and Runout Tube Removal/Installation, No. 1 or No. 2 Engine Power Available Spindle ....	4.141A	Gearbox Removal/Installation, No. 2 Engine Load Demand Spindle .....	4.144
Gearbox Metallic Chip Detector Inspection, Engine Nose .....	6.25	Gearbox Removal/Installation, No. 2 Engine Power Available Spindle ....	4.141
Gearbox Metallic Chip Detector Removal/Installation, Engine Nose ..	6.26	Gearbox Removal/Installation, Tail Rotor .....	6.145
Gearbox Oil Filler Cap Removal/Installation, APU .	TM 1-2835-213-23	Gearbox Rotor Output Shaft Seal Removal/Installation (AVIM), Engine Nose .....	6.39
Gearbox Oil Filter Bowl, Strainer Element, and Differential Pressure Switch (Lockwired Type) Removal/Installation, Engine Nose ..	6.18	Gearbox Servicing, Engine Nose .....	1.28
Gearbox Oil Filter Bowl, Strainer Element, and Differential Pressure Switch (Retainer, Ringed Type) Removal/Installation, Engine Nose ..	6.19	Gearbox Servicing – Grease, Intermediate .....	1.30
Gearbox Oil Filter Safety Relief Valve Replacement, Engine Nose .....	6.20	Gearbox Servicing – Grease, Tail Rotor	1.31
Gearbox Oil Jet Filters Removal/Installation, Engine Nose ..	6.31	Gearbox Shouldered Shaft Expansion Plug Replacement (AVIM), Tail Rotor	6.134
Gearbox Oil Jet Removal/Installation, Engine Nose .....	6.35	Gearbox Shouldered Shaft Removal/Installation, Tail Rotor .....	6.133
Gearbox Oil Pressure Transducer Removal/Installation, Engine Nose ..	6.29	Gearbox Shouldered Shaft Stud Replacement (AVIM), Tail Rotor .....	6.147
Gearbox Oil Sampling, Engine Nose ...	1.29	Gearbox Shroud Adhesive Seal Replacement, Nose .....	2.124A
Gearbox Oil Temperature Transducer Removal/Installation, Engine Nose ..	6.28	Gearbox Sight Indicator Removal/Installation, Engine Nose ..	6.22
Gearbox Outer Diffuser (Two-Section) Removal/Installation, Engine Nose ..	6.32	Gearbox Strut Disassembly/Assembly, Tail Rotor .....	6.144
Gearbox Output Coupling Removal/Installation, Intermediate ..	6.13	Gearbox Temperature Sensor Removal/Installation, Tail Rotor .....	6.138
Gearbox Output Seal Assembly Removal/Installation, Engine Nose ..	6.38	Gearbox Temperature Sensor Removal/Installation, Intermediate ..	6.130
Gearbox Output Seal Assembly Removal/Installation, Intermediate ..	6.125	Gearboxes Installation, Engine Buildup – No. 1 and No. 2 Engine Baseplate and Spindle .....	4.37
Gearbox Output Shouldered Shaft Removal/Installation, Intermediate ..	6.122	Gearboxes Removal, Engine Teardown – No. 1 and No. 2 Engine Baseplate and Spindle .....	4.23
Gearbox Preload Shim Removal/Installation (AVIM), Engine Nose .....	6.40	Gearshaft Fixture Installation, Main Rotor .....	1.128
		Gearshaft Fixture Removal, Main Rotor	1.129
		Gearshaft Installation, Hoisting – Main Rotor .....	1.88

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Gearshaft Removal, Hoisting – Main Rotor .....	1.87	Glareshield Extension Assembly Removal/Installation, Pilot .....	2.157
Gearshaft Removal/Installation, Main Rotor .....	6.95	Glareshield Lamp Replacement, Pilot or CPG Instrument .....	9.80
Gearshaft, Support (Static) Mast, or Swashplate Hoisting, Crane Adjustment – Main Rotor .....	1.102	Glareshield Light Removal/Installation, Pilot or CPG Instrument .....	9.79
GEN 1, GEN 2, or BATT/EXT PWR Switches Replacement, Pilot ELEC PWR Panel .....	9.36	Glareshield Removal/Installation, CPG Fixed .....	2.154
General References .....	A.1	Glareshield Removal/Installation, Left Aft Vertical Cockpit .....	2.159
General, Cleaning – .....	1.47	Glareshield Removal/Installation, Pilot Fixed .....	2.156
Generation and Distribution Components Inspection, Power .....	9.1	Gouge Repair, Main Rotor Blade Scratch, Nick, or .....	5.6
Generator Contactor Relay No. 1 or No. 2 Removal/Installation .....	9.18	Gouge Repair, Tail Rotor Blade Scratch, Nick or .....	5.55
Generator Control Unit (GCU) Circuit Card Installation (AVIM) .....	9.16	Gravity Method, Defueling – .....	1.21
Generator Control Unit (GCU) Circuit Card Removal (AVIM) .....	9.15	Gravity Method, Fuel Servicing – .....	1.14
Generator Control Unit (GCU) Fixed Capacitor Replacement (AVIM) .....	9.17	Grease, Intermediate Gearbox Servicing – .....	1.30
Generator Control Unit (GCU) No. 1 or No. 2 Removal/Installation .....	9.14	Grease Repacking (AVIM), Main Rotor Upper Bearing Inner Race/Rollers ..	5.46B
Generator Ng RPM Indicator Removal/Installation, Pilot Engine Turbine Gas Temperature (TGT) Indicator and Engine Gas .....	8.9	Grease, Tail Rotor Gearbox Servicing – .....	1.31
Generator No. 1 Removal/Installation, AC .....	9.26	Grip Assembly Removal/Installation, Collective Stick .....	11.24
Generator No. 2 Removal/Installation, AC .....	9.27	Grip Control Collar Replacement, Collective Stick .....	11.25
Generator Quick-Attach Assembly Removal/Installation, Main Transmission .....	6.49	Grip Switch Replacement, CPG Collective Stick BUCS Select Trigger	11.33
Generator Seal Replacement, Main Transmission .....	6.43	Ground Air Connection Flange Removal/Installation, Start Air Valve and .....	7.142
Generator Spline Adapter and Cork Stopper Replacement, Main Transmission .....	6.72	Ground Air Connection Manifold, Engine Air Flexible Connection Housing, and Utility Tube Removal/Installation .....	7.144
Glareshield Curtain/Tray Removal/Installation, CPG .....	2.152	Ground Maintenance Pylon Switch Bracket Removal/Installation .....	16.28
Glareshield Curtain/Tray Removal/Installation, Pilot .....	2.155	Ground Maintenance Pylon Switch Removal/Installation .....	16.27
Glareshield Extension Assembly Removal/Installation, CPG .....	2.153	Ground Service Access Door B60R Removal/Installation .....	2.42A
		Ground Service Utility Receptacle Removal/Installation .....	9.50
		Ground Support Air Coupling and Adapter Removal/Installation .....	7.143

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Grounding .....	1.64	GSE Return Coupling Replacement, Utility Hydraulic .....	7.81
Grounding Jack Replacement .....	2.26	Guard Removal/Installation, Pilot/CPG Foot .....	2.189
GSE Fill Port Five Micron Cartridge Filter Assembly Replacement (ADG), Primary Hydraulic .....	7.21B	Guard/Radiation Shield Replacement, Left or Right Nacelle Engine .....	4.94
GSE Fill Port Five Micron Cartridge Filter Element Replacement (ADG), Primary Hydraulic .....	7.21A	Guide, and Spring Replacement, Hydraulic Manifold Return Filter Sleeve, Manifold .....	7.70
GSE Fill Port Forty-Five Micron Screen Filter Replacement (ADF), Primary Hydraulic .....	7.21	Guide Assembly Removal/Installation, Pilot/CPG Armored Crew Seat Strap	2.169
GSE Fill Port Nipple Replacement, Primary Hydraulic .....	7.22	Guide Disassembly/Assembly, Directional Push-Pull Rod .....	11.273
GSE Panel Removal/Installation, Primary Hydraulic .....	7.20	Guide Pin Replacement, Nose Gearbox Shroud .....	2.124D
GSE Panel Removal/Installation, Utility Hydraulic .....	7.79	Guide Removal/Installation, Friction ...	11.22
GSE Pressure Coupling Replacement, Primary Hydraulic .....	7.23	Guide, Aircraft Inventory Master .....	C.7
GSE Pressure Coupling Replacement, Utility Hydraulic .....	7.80	Gun and Ammo Support Forward Mount Pad Sleeve Bushing Replacement (AVIM) .....	2.38
GSE Return Coupling Replacement, Primary Hydraulic .....	7.24	Gun Wire Strike Cutter and Deflector Removal/Installation .....	2.194

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
<b>H</b>			
Halves Replacement, Main Transmission Coupling .....	6.77	Hanger Bearing Coupling Removal/Installation, Aft .....	6.9
Halves Replacement, Turret Coupling ..	7.111	Hanger Bearing Coupling Removal/Installation, Forward .....	6.6
Hand Pump Check Valve Replacement (AVIM), Hydraulic .....	7.30	Harness and Inertia Reel Removal/Installation, Pilot/CPG Armored Crew Seat Shoulder .....	2.174
Hand Pump Functional Check (AVIM), Hydraulic .....	7.31	Harness Angle Bracket Replacement, APU Wiring .....	TM 1-2835-213-23
Hand Pump Lever Bellcrank Replacement, Hydraulic .....	7.26	Harness Installation, APU Wiring .....	TM 1-2835-213-23
Hand Pump Removal/Installation, Hydraulic .....	7.25	Harness Removal, APU Wiring .....	TM 1-2835-213-23
Hand Pump Selector Lever Replacement (AVIM), Hydraulic .....	7.29	Harness Support Bracket Removal/Installation, Lateral Servocylinder Wire .....	2.85
Hand Pump Support Replacement, Hydraulic .....	7.28	HDU Helmet Holster and Cover Assembly Removal/Installation .....	2.185
Handhold Steps Removal/Installation, Vertical Stabilizer .....	2.112	Head Assembly (AVIM), Main Rotor ...	5.43
Handle Assembly Removal/Installation, Canopy Vent .....	2.50	Head Disassembly (AVIM), Main Rotor .	5.42
Handle Assembly Replacement, Pilot/CPG Armored Crew Seat .....	2.164	Head Fixture Installation, Main Rotor ..	1.116
Handle Removal/Installation, Bow Beam	2.49	Head Fixture Removal, Main Rotor ....	1.117
Handle Removal/Installation, Canopy Severance Initiator .....	12.78	Head Hoisting, Crane Adjustment – Main Rotor .....	1.101
Handle Removal/Installation, Fuselage Bow .....	2.78	Head Identification Plate Replacement, Main Rotor .....	5.22
Handle Replacement, Tail Landing Gear Actuating Cylinder Lock Release ....	3.35	Head Installation, Hoisting – Main Rotor	1.86
Handle Support Assembly Removal/Installation, Pedal Adjust ..	11.175	Head Installation, Tail Rotor .....	5.61
Handling Adapter, Engine Buildup – No. 1 and No. 2 Engine Installation on ...	4.32	Head Removal, Hoisting – Main Rotor .	1.85
Handling Adapter, Engine Teardown – No. 1 and No. 2 Engine Removal from .....	4.28	Head Removal, Tail Rotor .....	5.60
Hanger Bearing and Support Removal/Installation, Aft .....	6.10	Head Removal/Installation, Main Rotor .	5.21
Hanger Bearing and Support Removal/Installation, Forward .....	6.7	Headset Connect/Disconnect, Maintenance .....	1.134
		Heat Exchanger Bypass Valve Replacement, Main Transmission ...	6.83
		Heat Exchanger Installation .....	6.86
		Heat Exchanger Pressure Transducer Removal/Installation .....	6.84
		Heat Exchanger Removal .....	6.85

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Heat Shield and Shield Panel Removal/Installation, No. 1 and No. 2 Engine Secondary Nozzle Horizontal	4.130	Hoisting – Engine Removal	1.81
Heat Shield and Support Bracket Removal/Installation, No. 1 and No. 2 Engine Inboard Secondary Nozzle	4.131	Hoisting – Main Rotor Blade Installation	1.84
Heat Shield and Support Bracket Removal/Installation, No. 1 and No. 2 Engine Outboard and Center Secondary Nozzle Vertical	4.129	Hoisting – Main Rotor Blade Removal	1.83
Heater Blanket Removal/Installation, Battery	16.32	Hoisting – Main Rotor Gearshaft Installation	1.88
Helical Extension Spring Removal/Installation, Pilot/CPG Armored Crew Seat Frame Assembly	2.170	Hoisting – Main Rotor Gearshaft Removal	1.87
Helicopter – Kneel/Erect	1.63	Hoisting – Main Rotor Head Installation	1.86
Helicopter Battery Removal/Installation	9.40	Hoisting – Main Rotor Head Removal	1.85
Helicopter Dimensions	1.65	Hoisting – Main Rotor Support (Static) Mast Installation	1.90
Helicopter for Desired Deck Angle, Positioning	1.133	Hoisting – Main Rotor Support (Static) Mast Removal	1.89
Helicopter Jacking (Tripod Jacks at Three Points)	1.66	Hoisting – Main Rotor Swashplate Installation	1.94
Helicopter Safety Procedures	1.57	Hoisting – Main Rotor Swashplate Removal	1.93
Helicopter Towing	1.78	Hoisting – Main Transmission Installation	1.92
Helicopter Weighing (Aircraft on Jacks)	G.1	Hoisting – Main Transmission Removal	1.91
Helmet Holster and Cover Assembly Removal/Installation, HDU	2.185	Hoisting – Maintenance Crane	1.80
Hinge Butt Removal/Installation, CPG Station Access Door Lower	2.58	Hoisting, Crane Adjustment –	1.98
Hinge Butt Removal/Installation, CPG Station Access Door Upper	2.59	Hoisting, Crane Adjustment – APU	1.104
Hinge Butt Removal/Installation, Pilot Station Access Door Lower	2.66	Hoisting, Crane Adjustment – Engine	1.99
Hinge Butt Removal/Installation, Pilot Station Access Door Upper	2.67	Hoisting, Crane Adjustment – Main Rotor Gearshaft, Support (Static) Mast, or Swashplate	1.102
Hinge Butt Replacement	2.24	Holder, and Pitch Web Electrical Lead Removal/Installation, Main Rotor Electrical Brush, Electrical	5.48
Hinge Strap Removal/Installation, Pilot Circuit Breaker Panel	9.5	Holder Replacement, Electrostatic Discharger	2.32
Hoisting – APU Installation	1.96	Holster and Cover Assembly Removal/Installation, HDU Helmet	2.185
Hoisting – APU Removal	1.95	Hook and Pile Fastener Removal/Installation, Pilot/CPG Cockpit Thermal Insulation and	2.10
Hoisting – Engine Installation	1.82	Horizontal Heat Shield and Shield Panel Removal/Installation, No. 1 and No. 2 Engine Secondary Nozzle	4.130

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Horizontal Stabilator Actuator Fitting Removal/Installation .....	2.114	Hose Removal/Installation, Main Landing Gear Wheel Brake .....	3.70
Horizontal Stabilator Debris Cover Removal/Installation .....	2.115	Hose Removal/Installation, Nitrogen Inerting Unit (NIU) Conditioned Air Outlet .....	10.126
Horizontal Stabilator Frame Structure ..	2.105	Hose Removal/Installation, Nitrogen Inerting Unit (NIU) Cooling Air Exhaust .....	10.130
Horizontal Stabilator Position Sensor Clamp Replacement .....	2.114A	Hose Removal/Installation, Nitrogen Inerting Unit (NIU) Cooling Air Inlet ..	10.129
Horizontal Stabilator Removal/Installation .....	2.113	Hose Removal/Installation, Nitrogen Inerting Unit (NIU) Pressurized Air Supply .....	10.127
Horizontal Stabilator, Rigging .....	11.298	Hose Removal/Installation, Nitrogen Inerting Unit (NIU) Pressurized Air Supply Inlet .....	10.128
Horn Washer Replacement (AVIM), Main Rotor Pitch .....	5.29A	Hose Removal/Installation, No. 1 and No. 2 Engine Gearbox Drain .....	4.105
Hose (Left Side) Replacement, Main Transmission Lube System .....	6.81	Hose Removal/Installation, No. 1 Engine Overspeed Drain Valve .....	4.106
Hose (Nonmetallic), Tube, and Clamp Removal/Installation, Main Landing Gear Wheel Brake, .....	3.68	Hose Removal/Installation, No. 2 Engine Compressor Bleed Air .....	4.75
Hose (Right Side) Replacement, Main Transmission Lube System .....	6.82	Hose Removal/Installation, No. 2 Engine Overspeed Drain Valve .....	4.107
Hose Assembly Removal/Installation, CPG Brake .....	3.55	Hose Removal/Installation, SDC Pressure Outlet .....	7.127
Hose Assembly Removal/Installation, Pilot Parking Brake .....	3.54	Hose Replacement, No.1 Engine Lower Fuel Supply .....	10.102
Hose Bracket Removal/Installation, Directional Servocylinder Utility Hydraulic Pressure/Return .....	7.40	Hose Replacement, Aft Fuel Cell Engine Fuel Supply .....	10.47
Hose Clamp Removal/Installation, Main Landing Gear Wheel Brake Tube and	3.69	Hose Replacement, Aft Fuel Cell Pilot Valve .....	10.38
Hose Installation, Engine Buildup – No. 1 and No. 2 Engine Fuel Inlet .....	4.44	Hose Replacement, Aft Fuel Cell Refueling .....	10.44
Hose Removal, Engine Teardown – No. 1 and No. 2 Engine Fuel Inlet .....	4.16	Hose Replacement, Aft Refueling .....	10.84
Hose Removal/Installation, Aft Fuel Cell Nitrogen Inert Breakaway Valve .....	10.131	Hose Replacement, APU Fuel Inlet .....	10.107
Hose Removal/Installation, Aft Fuel Cell Nitrogen Inert Orifice .....	10.132	Hose Replacement, APU Fuel Supply ..	15.20
Hose Removal/Installation, Aft Fuel Cell Upper Fuel Supply .....	10.46	Hose Replacement, Crossfeed Fuel ...	10.101
Hose Removal/Installation, APU Drain ..	15.38	Hose Replacement, Directional Servocylinder Primary Pressure .....	7.36
Hose Removal/Installation, Defog System Air Mixer and .....	13.45	Hose Replacement, Directional Servocylinder Primary Return .....	7.37
Hose Removal/Installation, Forward Fuel Cell Nitrogen Inert Breakaway Valve .....	10.134	Hose Replacement, Directional Servocylinder Utility Pressure .....	7.38
		Hose Replacement, Directional Servocylinder Utility Return .....	7.39

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Hose Replacement, Forward Fuel Cell Engine Fuel Supply .....	10.21	Hose Replacement, Right Auxiliary Fuel Inlet .....	10.92
Hose Replacement, Forward Fuel Cell Pilot Valve .....	10.12	Hose Replacement, Rotor Brake .....	7.104
Hose Replacement, Forward Fuel Cell Refueling .....	10.22	Hose Replacement, SDC Pressure Interconnect .....	7.126
Hose Replacement, Forward Refueling	10.77	Hose Replacement, Surge Valve Exhaust .....	7.133
Hose Replacement, Fuel Boost Pump Air Inlet .....	10.118	Hose Replacement, Surge Valve Pressure .....	7.132
Hose Replacement, Fuel Boost Pump Outlet .....	10.117	Hose Replacement, Tail Wheel Lock Actuator .....	7.106
Hose Replacement, Fuel Transfer Valve Air Exhaust Vent Tube Coupler .....	10.78	Hose Replacement, Utility Hydraulic Accumulator APU Start Motor Pressure .....	7.89
Hose Replacement, Left or Right Actuating Cylinder Flexible Air .....	4.91	Hose Replacement, Utility Hydraulic Accumulator APU Start Motor Return	7.90
Hose Replacement, No. 1 and No. 2 Engine Combustor Drain .....	4.111	Hose Replacement, Utility Hydraulic Manifold Drain .....	7.78
Hose Replacement, No. 1 Engine Fuel Inlet .....	10.97	Hose Replacement, Utility Hydraulic Pump Case Drain .....	7.61
Hose Replacement, No. 1 Engine Upper Fuel Supply .....	10.106	Hose Replacement, Utility Hydraulic Pump Pressure .....	7.59
Hose Replacement, No. 1 or No. 2 Engine Drain .....	4.112	Hose Replacement, Utility Hydraulic Pump Return .....	7.60
Hose Replacement, No. 1 or No. 2 Engine Louver Actuator .....	4.62	Hose Replacement, Utility Hydraulic Pump Seal Drain .....	7.62
Hose Replacement, No. 2 Engine Fuel Inlet .....	10.98	Hose Replacement, Wing Hydraulic ...	7.103
Hose Replacement, No. 2 Engine Fuel Supply .....	10.103	Hot Rapid Closed Circuit Refueling (CCR) Method, Fuel Servicing – .....	1.17
Hose Replacement, Pressurized Air System Fuel Boost Pump .....	7.147	Hot Rapid Single Point Adapter (SPA) Method, Fuel Servicing – .....	1.18
Hose Replacement, Primary Hydraulic Manifold Drain .....	7.19	Housing and Blade – Electrical Lead Removal/Installation, Main Rotor Pitch .....	5.31
Hose Replacement, Primary Hydraulic Pump Case Drain .....	7.7	Housing Assembly Disassembly/Assembly (AVIM), CPG Cyclic Stick .....	11.84
Hose Replacement, Primary Hydraulic Pump Pressure .....	7.5	Housing Assembly Removal/Installation, CPG Directional Control Pedal .....	11.243
Hose Replacement, Primary Hydraulic Pump Return .....	7.6	Housing Assembly Removal/Installation, Pilot Directional Control Pedal .....	11.236
Hose Replacement, Primary Hydraulic Pump Seal Drain .....	7.8	Housing Disassembly/Assembly (AVIM), CPG Caution/Warning Panel .....	9.116



<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Housing Disassembly/Assembly (AVIM), Pilot Caution/Warning Panel . . . . .	9.110	Hub Bearing Removal/Installation, Main Rotor Lead Lag Link Bearing Retainer and Rotor . . . . .	5.32
Housing Identification Plate Replacement, Main Rotor Pitch . . . . .	5.34	Hub Identification Plate Replacement, Main Rotor . . . . .	5.49
Housing Installation, Main Rotor Pitch . .	5.26	Hub Identification Plate Replacement, Tail Rotor . . . . .	5.62
Housing Lateral Shear Pin Replacement, CPG Cyclic Stick . . . . .	11.83	Hub Lower Plate Pad Replacement (AVIM), Main Rotor . . . . .	5.47
Housing Lateral Shear Pin Replacement, Pilot Cyclic Stick . . . . .	11.56	Hub Retention Nut Installation, Main Rotor . . . . .	5.20
Housing Longitudinal Shear Pin Replacement, CPG Cyclic Stick . . . . .	11.82	Hub Retention Nut Removal, Main Rotor . . . . .	5.19
Housing Removal, Main Rotor Pitch . . .	5.25	Hydraulic (Primary), External Power Application – . . . . .	1.72
Housing Removal/Installation, Main Rotor Feathering Bearing . . . . .	5.37	Hydraulic (Utility), External Power Application – . . . . .	1.73
Housing Removal/Installation, CPG Cyclic Stick . . . . .	11.81	Hydraulic Accumulator APU Start Check Valve Replacement (AVIM), Utility . . .	7.91
Housing Removal/Installation, Main Transmission Input Drive . . . . .	6.117	Hydraulic Accumulator APU Start Motor Pressure Hose Replacement, Utility .	7.89
Housing Removal/Installation, No. 2 Engine Start Air Tube and Air Flexible Connection . . . . .	7.146	Hydraulic Accumulator APU Start Motor Return Hose Replacement, Utility . . .	7.90
Housing Removal/Installation, Standby System Engine Bleed Air Tube and Engine Air Flexible Connection . . . . .	7.141	Hydraulic Accumulator APU Start Solenoid Valve Replacement, Utility .	7.88
Housing Repair, Tail Landing Gear Upper Cam . . . . .	3.31	Hydraulic Accumulator Check Valve Replacement, Utility . . . . .	7.87
Housing Shim Replacement (AVIM), Main Rotor Pitch . . . . .	5.27	Hydraulic Accumulator Leak Check (AVIM), Utility . . . . .	7.93
Housing Striker Strip Replacement (AVIM), Main Rotor Pitch . . . . .	5.29	Hydraulic Accumulator Nitrogen Manifold Fill/Bleed Valve Replacement, Utility . . . . .	7.83
Housing Wire Support Bracket Replacement (AVIM), Main Rotor Pitch . . . . .	5.28	Hydraulic Accumulator Nitrogen Manifold Pressure Gage Replacement, Utility . . . . .	7.84
Housing, and Utility Tube Removal/Installation, Ground Air Connection Manifold, Engine Air Flexible Connection . . . . .	7.144	Hydraulic Accumulator Nitrogen Manifold Removal/Installation, Utility	7.85
Housing/Hydraulic Pump Seal Drain Tube Removal/Installation, Quill . . . .	6.88	Hydraulic Accumulator One-Way Restrictor Valve Replacement, Utility	7.86
		Hydraulic Accumulator Piston Packing Replacement (AVIM), Utility . . . . .	7.92

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Hydraulic Accumulator Removal/Installation, Utility .....	7.82	Hydraulic Manifold Air Check Valve Replacement, Utility .....	7.66
Hydraulic Accumulator Servicing – Nitrogen, Utility .....	1.36	Hydraulic Manifold Air Filter Replacement, Primary and/or Utility .	7.160
Hydraulic Accumulator Venting, Utility ..	1.38	Hydraulic Manifold Dirty Filter Indicator Replacement, Primary .....	7.17
Hydraulic Adapter Replacement .....	7.112	Hydraulic Manifold Dirty Filter Indicator Replacement, Utility .....	7.71
Hydraulic Auxiliary Return Check Valve Replacement, Utility .....	7.110	Hydraulic Manifold Drain Hose Replacement, Primary .....	7.19
Hydraulic GSE Fill Port Five Micron Cartridge Filter Assembly Replacement (ADG), Primary .....	7.21B	Hydraulic Manifold Drain Hose Replacement, Utility .....	7.78
Hydraulic GSE Fill Port Five Micron Cartridge Filter Element Replacement (ADG), Primary .....	7.21A	Hydraulic Manifold Low Level Piston Replacement (AVIM), Utility .....	7.76
Hydraulic GSE Fill Port Forty-Five Micron Screen Filter Replacement (ADF), Primary .....	7.21	Hydraulic Manifold Low Level Valve Replacement (AVIM), Utility .....	7.77
Hydraulic GSE Fill Port Nipple Replacement, Primary .....	7.22	Hydraulic Manifold Manual Bleed Valve Replacement, Primary .....	7.12
Hydraulic GSE Panel Removal/Installation, Primary .....	7.20	Hydraulic Manifold Manual Bleed Valve Replacement, Utility .....	7.65
Hydraulic GSE Panel Removal/Installation, Utility .....	7.79	Hydraulic Manifold Pressure Relief Valve Replacement, Utility .....	7.72
Hydraulic GSE Pressure Coupling Replacement, Primary .....	7.23	Hydraulic Manifold Pressure Switch Replacement, Primary .....	7.14
Hydraulic GSE Pressure Coupling Replacement, Utility .....	7.80	Hydraulic Manifold Pressure Switch Replacement, Utility .....	7.67
Hydraulic GSE Return Coupling Replacement, Primary .....	7.24	Hydraulic Manifold Pressure Transducer Replacement, Primary .....	7.15
Hydraulic GSE Return Coupling Replacement, Utility .....	7.81	Hydraulic Manifold Pressure Transducer Replacement, Utility .....	7.68
Hydraulic Hand Pump Check Valve Replacement (AVIM) .....	7.30	Hydraulic Manifold Removal/Installation, Primary .....	7.11
Hydraulic Hand Pump Functional Check (AVIM) .....	7.31	Hydraulic Manifold Removal/Installation, Utility .....	7.64
Hydraulic Hand Pump Lever Bellcrank Replacement .....	7.26	Hydraulic Manifold Reservoir Seal Replacement (AVIM), Primary .....	7.18
Hydraulic Hand Pump Removal/Installation .....	7.25	Hydraulic Manifold Reservoir Seal Replacement (AVIM), Utility .....	7.74
Hydraulic Hand Pump Selector Lever Replacement (AVIM) .....	7.29	Hydraulic Manifold Return Filter Sleeve, Manifold Guide, and Spring Replacement .....	7.70
Hydraulic Hand Pump Support Replacement .....	7.28	Hydraulic Manifold Solenoid Valve Replacement, Utility .....	7.73
Hydraulic Hose Replacement, Wing ...	7.103	Hydraulic Manifold Strainer Element Removal/Installation (AVIM), Utility ..	7.75
Hydraulic Manifold Air Check Valve Replacement, Primary .....	7.13	Hydraulic Manifold Strainer Replacement, Primary .....	7.16

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Hydraulic Manifold Strainer Replacement, Utility .....	7.69	Hydraulic Return Accumulator Nitrogen Manifold Fill/Bleed Valve Replacement, Utility .....	7.95
Hydraulic Pressure Indicator Removal/Installation .....	8.44	Hydraulic Return Accumulator Nitrogen Manifold Pressure Gage Replacement, Utility .....	7.96
Hydraulic Pressure Indicator Removal/Installation, Dual .....	8.45	Hydraulic Return Accumulator Nitrogen Manifold Replacement, Utility .....	7.98
Hydraulic Pressure/Return Hose Bracket Removal/Installation, Directional Servocylinder Utility .....	7.40	Hydraulic Return Accumulator Nitrogen Manifold Tube Removal/Installation, Utility .....	7.97
Hydraulic Pump Case Drain Hose Replacement, Primary .....	7.7	Hydraulic Return Accumulator Removal/Installation, Utility .....	7.94
Hydraulic Pump Case Drain Hose Replacement, Utility .....	7.61	Hydraulic Return Accumulator Servicing – Nitrogen, Utility .....	1.37
Hydraulic Pump Pressure and Return Tube Support Bracket Removal/Installation, Primary .....	7.10	Hydraulic Return Accumulator Venting, Utility .....	1.39
Hydraulic Pump Pressure Check Valve Removal/Installation, Primary .....	7.9	Hydraulic Servocylinder Name Plate and BUCS Warning Plate Replacement .....	7.54
Hydraulic Pump Pressure Hose Replacement, Primary .....	7.5	Hydraulic Starter Removal/Installation, APU .....	TM 1-2835-213-23
Hydraulic Pump Pressure Hose Replacement, Utility .....	7.59	Hydraulic Switch Removal/Installation, Pilot Emergency .....	9.147
Hydraulic Pump Removal/Installation, Primary .....	7.4	Hydraulic System Bleed .....	1.35
Hydraulic Pump Removal/Installation, Utility .....	7.58	Hydraulic System Inspection, Primary ..	7.1
Hydraulic Pump Return Hose Replacement, Primary .....	7.6	Hydraulic System Inspection, Utility .....	7.56
Hydraulic Pump Return Hose Replacement, Utility .....	7.60	Hydraulic System Leak Check .....	7.2
Hydraulic Pump Seal Drain Hose Replacement, Primary .....	7.8	Hydraulic System, Vent Primary .....	7.3
Hydraulic Pump Seal Drain Hose Replacement, Utility .....	7.62	Hydraulic System, Vent Utility .....	7.57
Hydraulic Pump Seal Drain Tube Removal/Installation, Quill Housing/ ..	6.88	Hydraulic Systems Servicing – Fluid ...	1.34
Hydraulic Pump Seal Replacement, Main Transmission .....	6.89	Hydraulic Tubes and Fittings Permaswage Repair .....	7.113
Hydraulic Pump Tubing Support Bracket Removal/Installation, Utility .....	7.63	Hydraulic Tubes Armor Channel Assemblies Removal/Installation, Tailboom Utility .....	2.196
		Hydraulic Tubes Armor Channels Removal/Installation, Tailboom Primary .....	2.197
		Hydraulic Tubing Bulkhead Support Bracket Removal/Installation, Utility ..	7.109

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
<b>I</b>			
Ice Detector Aft Warm Air Supply Tube Replacement .....	7.157	Identification Plate Replacement, Main Rotor Pitch Housing .....	5.34
Ice Detector Center Warm Air Supply Tube Replacement .....	7.158	Identification Plate Replacement, Main Transmission .....	6.57
Ice Detector Forward Warm Air Supply Tube Replacement .....	7.159	Identification Plate Replacement, Rotor Support Mixer Assembly .....	2.87
Ice Detector Sensor Removal/Installation .....	12.65	Identification Plate Replacement, Tail Rotor Blade .....	5.58
Ice Detector Signal Processor Circuit Card Assembly (CCA) Stack Removal/Installation (AVIM) .....	12.60	Identification Plate Replacement, Tail Rotor Fork .....	5.66
Ice Detector Signal Processor EMI Filter Replacement (AVIM) .....	12.64	Identification Plate Replacement, Tail Rotor Gearbox .....	6.137
Ice Detector Signal Processor Probe Oscillator Reference or Rate Output CCA Replacement (AVIM) .....	12.62	Identification Plate Replacement, Tail Rotor Hub .....	5.62
Ice Detector Signal Processor Removal/Installation .....	12.59	Idle Bellcrank Removal/Installation, CPG to Pilot Control Lateral F.S. 83.45 .....	11.89
Ice Detector Signal Processor Interconnection CCA Replacement (AVIM) .....	12.61	Idle Replacement, Engine Access and Ventilation Door Assembly Door Linkage .....	2.143
Ice Detector Warm Air Supply Valve Replacement .....	7.156	Ignition Exciter Unit Bracket Removal/Installation, APU .....	TM 1-2835-213-23
Icing Severity Meter Removal/Installation, Pilot .....	8.50	Ignition Exciter Unit Removal/Installation, APU .....	TM 1-2835-213-23
Identification Plate Replacement, Main Rotor Hub .....	5.49	Ignition Lock Switch Removal/Installation (AVIM), Pilot Power Quadrant Panel – .....	4.192
Identification Plate Replacement (AVIM), Main Rotor Lower Shoe ....	5.50	Ignitor Plug Removal/Installation, APU Combustor Liner, Cap, Fuel Nozzle, and .....	TM 1-2835-213-23
Identification Plate Replacement, APU .....	TM 1-2835-213-23	ILT Panel Removal/Installation, Pilot/CPG Stabilator Position Placard .....	8.49
Identification Plate Replacement, Engine Nose Gearbox .....	6.27	Impulse Cartridge Removal/Installation, Pylon Rack Ejector .....	16.3
Identification Plate Replacement, Intermediate Gearbox .....	6.128	Inboard Engine Mount Support Bearing Bore Repair, Firewall Assembly No. 1 or No. 2 Aft .....	2.150A
Identification Plate Replacement, Main Landing Gear Shock Strut .....	3.25	Inboard Engine Mount Support Bearing Replacement, Firewall Assembly No. 1 or No. 2 Aft .....	2.150
Identification Plate Replacement, Main Rotor Blade .....	5.18	Inboard Mount Removal/Installation, No. 1 and No. 2 Engine Aft .....	4.115
Identification Plate Replacement, Main Rotor Head .....	5.22	Inboard Mount Removal/Installation, No. 1 and No. 2 Engine Forward .....	4.117

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Inboard Mount/Aft Lower Mount Bushing Removal/Installation (AVIM), No. 1 or No. 2 Engine Aft .....	4.56	Indicator Front Panel Removal/Installation (AVIM), Engine Oil Pressure .....	8.7
Inboard Secondary Nozzle Heat Shield and Support Bracket Removal/Installation, No. 1 and No. 2 Engine .....	4.131	Indicator Front Panel Removal/Installation (AVIM), Engine/ Rotor RPM .....	8.5
Inboard Secondary Nozzle Removal/Installation, No. 1 and No. 2 Engine .....	4.121	Indicator Light Replacement, Refueling Panel .....	10.72
Inboard Tube Replacement, Fuel Transfer Pump/Air Control Valve ....	10.81	Indicator Panel Replacement, Refueling Panel .....	10.73
Indicating Panel Receptacle Replacement (AVIM), APU Fire Panel	12.21	Indicator Removal/Installation, Refueling .....	10.70
Indicating Panel Receptacle Replacement (AVIM), Pilot Anti-Ice Panel Light .....	12.51	Indicator Removal/Installation, CPG Remote Attitude .....	8.35
Indicating Panel Removal/Installation, APU Fire Panel Light .....	12.18	Indicator Removal/Installation, Dual Hydraulic Pressure .....	8.45
Indicating Panel Removal/Installation, CPG Circuit Breaker Panel No. 1 Light .....	9.44	Indicator Removal/Installation, Engine Nose Gearbox Sight .....	6.22
Indicating Panel Removal/Installation, CPG Circuit Breaker Panel No. 2 Light .....	9.48	Indicator Removal/Installation, Main Transmission Accessory Pump Filter Bowl, Element, and Pressure .....	6.70
Indicating Panel Removal/Installation, CPG INST LT Edge Light .....	9.83	Indicator Removal/Installation, Main Transmission Sight .....	6.59
Indicating Panel Removal/Installation, CPG Power Quadrant Light .....	4.195	Indicator Removal/Installation, Pilot Engine Oil Pressure .....	8.6
Indicating Panel Removal/Installation, ECS Panel Light .....	13.35	Indicator Removal/Installation, Pilot Engine Turbine Gas Temperature (TGT) Indicator and Engine Gas Generator Ng RPM .....	8.9
Indicating Panel Removal/Installation, Pilot Circuit Breaker Light .....	9.4	Indicator Removal/Installation, Pilot Fuel Quantity .....	8.8
Indicating Panel Removal/Installation (AVIM), Pilot Power Quadrant Light .	4.188	Indicator Removal/Installation, Pilot Standby Attitude .....	8.34
Indicating Panel Replacement, CPG Fuel Panel Light .....	10.63	Indicator Removal/Installation, Pilot/CPG Airspeed .....	8.30
Indicating Panel Replacement, Pilot ELEC PWR Light .....	9.34	Indicator Removal/Installation, Pilot/CPG Vertical Speed .....	8.32
Indicator and Engine Gas Generator Ng RPM Indicator Removal/Installation, Pilot Engine Turbine Gas Temperature (TGT) .....	8.9	Indicator Replacement, APU Oil Level Sight Gage .....	TM 1-2835-213-23
Indicator Disassembly/Assembly (AVIM), Typical Engine Instrument ..	8.2	Indicator Replacement, Primary Hydraulic Manifold Dirty Filter .....	7.17
		Indicator Test Set (TF 579) Installation/Removal, Fuel Quantity ..	10.135

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Indicators Light Panel, Digital Display Driver Circuit Card Replacement (AVIM), Torque, TGT, Fuel, and Ng . .	8.10	Inerting Unit (NIU) Pressurized Air Supply Inlet Hose Removal/Installation, Nitrogen . . . . .	10.128
Indicators Replacement (AVIM), Analog or Interface Circuit Card on Torque TGT, Fuel, and Ng . . . . .	8.11	Inerting Unit (NIU) Removal/Installation, Nitrogen . . . . .	10.124
Inert Breakaway Valve Hose Removal/Installation, Aft Fuel Cell Nitrogen . . . . .	10.131	Information, Loading . . . . .	G.2
Inert Breakaway Valve Hose Removal/Installation, Forward Fuel Cell Nitrogen . . . . .	10.134	Initiator Handle Removal/Installation, Canopy Severance . . . . .	12.78
Inert Breakaway Valve Removal/Installation, Forward Fuel Cell Nitrogen . . . . .	10.121	Inlet Assembly Seal Replacement, Engine Air . . . . .	4.83
Inert Breakaway Valve Removal/Installation, Aft Fuel Cell Nitrogen . . . . .	10.119	Inlet Coupling Removal/Installation, No. 1 or No. 2 Engine . . . . .	4.73
Inert Check Valve Removal/Installation, Aft Fuel Cell Nitrogen . . . . .	10.133	Inlet Diffuser Removal/Installation, Engine Nose Gearbox Flexible Coupling, Vaneaxial Fan, and . . . . .	6.33
Inert Orifice Hose Removal/Installation, Aft Fuel Cell Nitrogen . . . . .	10.132	Inlet Duct Installation, SDC Air . . . . .	7.130
Inert Outlet Orifice Removal/Installation, Aft Fuel Cell Nitrogen . . . . .	10.120	Inlet Duct Removal, SDC Air . . . . .	7.129
Inert Vent Valve Removal/Installation, Nitrogen . . . . .	10.122	Inlet Hose Installation, Engine Buildup – No. 1 and No. 2 Engine Fuel . . . . .	4.44
Inertia Reel Removal/Installation, Pilot/CPG Armored Crew Seat Shoulder Harness and . . . . .	2.174	Inlet Hose Removal, Engine Teardown – No. 1 and No. 2 Engine Fuel . . . . .	4.16
Inerting Monitor Panel Removal/Installation, Nitrogen . . . . .	10.123	Inlet Hose Removal/Installation, Nitrogen Inerting Unit (NIU) Cooling Air . . . . .	10.129
Inerting Unit (NIU) Conditioned Air Outlet Hose Removal/Installation, Nitrogen . . . . .	10.126	Inlet Hose Removal/Installation, Nitrogen Inerting Unit (NIU) Pressurized Air Supply . . . . .	10.128
Inerting Unit (NIU) Cooling Air Exhaust Hose Removal/Installation, Nitrogen . .	10.130	Inlet Hose Replacement, APU Fuel . . . .	10.107
Inerting Unit (NIU) Cooling Air Inlet Hose Removal/Installation, Nitrogen . .	10.129	Inlet Hose Replacement, Fuel Boost Pump . . . . .	10.115
Inerting Unit (NIU) Filter Removal Installation, Nitrogen . . . . .	10.125	Inlet Hose Replacement, Fuel Boost Pump Air . . . . .	10.118
		Inlet Hose Replacement, No. 1 Engine Fuel . . . . .	10.97
		Inlet Hose Replacement, No. 2 Engine Fuel . . . . .	10.98
		Inlet Hose Replacement, Right Auxiliary Fuel . . . . .	10.92
		Inlet Installation, Engine Buildup – No. 1 and No. 2 Engine Air . . . . .	4.45
		Inlet Throttle Valve Removal/Installation	7.119

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Inlet Tube Replacement, APU Fuel Pump .....	10.109	Inspection Requirements, Preventive Maintenance .....	1.135
Inner Race Replacement, Main Rotor Droop Stop Follower Roller and .....	5.41	Inspection, Auxiliary Power System Components .....	15.1
Input Arm Assembly Repair (AVIM), Cyclic .....	11.63	Inspection, Brake System .....	3.53
Input Coupling Removal/Installation, Main Transmission .....	6.3	Inspection, Defog System .....	13.43
Input Coupling Removal/Installation, Tail Rotor Gearbox .....	6.15	Inspection, Drive Shaft .....	6.1
Input Coupling, and Flange Removal/Installation, Intermediate Gearbox Centrifugal Fan, .....	6.12	Inspection, Engine .....	4.2
Input Drive Clutch Removal/Installation, Main Transmission .....	6.115	Inspection, Engine Nose Gearbox .....	6.17
Input Drive Housing Removal/Installation, Main Transmission .....	6.117	Inspection, Engine Nose Gearbox Metallic Chip Detector .....	6.25
Input Drive Shaft and Outer Diffuser (One-Piece) Removal/Installation, Engine .....	6.2	Inspection, Environmental Control System (ECS) .....	13.1
Input Flange and Output Shouldered Shaft Expansion Plug Replacement (AVIM), Intermediate Gearbox .....	6.123	Inspection, Fuselage .....	2.11
Input Pinion Seal Removal/Installation, Main Transmission .....	6.116	Inspection, Intermediate Gearbox .....	6.121
Input Seal Assembly Removal/Installation, Engine Nose Gearbox .....	6.37	Inspection, Lighting Provisions Components .....	9.61
Input Seal Assembly Removal/Installation, Intermediate Gearbox .....	6.124	Inspection, Main Landing Gear .....	3.1
Input Seal Assembly Removal/Installation, Tail Rotor Gearbox .....	6.135	Inspection, Main Rotary .....	5.1
Input Seal Removal/Installation, Main Transmission APU .....	6.74	Inspection, Main Transmission .....	6.41
Input Shaft Oil Jet and Screen Removal/Installation, Main Transmission .....	6.55	Inspection, Primary Hydraulic System ..	7.1
Insert Replacement (AVIM), Main Rotor Blade Weight Support Fitting .....	5.14	Inspection, Tail Rotor Assembly .....	5.51
Inspection Checklist, Special .....	1.137	Inspection, Tail Rotor Gearbox .....	6.132
		Inspections, Special .....	1.136
		INST Attenuator Replacement (AVIM), Pilot EXT LT/INTR LT Panel .....	9.73
		INST, R CSL, or L CSL Attenuator Replacement (AVIM), CPG INTR LT Panel .....	9.90
		Instructions – Using Battery Power, APU Operating .....	1.74
		Instructions – Using External Power, APU Operating .....	1.75
		Instrument Dim/Test Control Panel Disassembly/Assembly (AVIM), Pilot/CPG Engine .....	8.23
		Instrument Dim/Test Control Panel Front Panel Removal/Installation (AVIM), Pilot/CPG Engine .....	8.24
		Instrument Dim/Test Control Panel Removal/Installation, Pilot/CPG Engine .....	8.22

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Instrument Glareshield Lamp Replacement, Pilot or CPG . . . . .	9.80	Intermediate Gearbox Accelerometer Removal/Installation . . . . .	6.129
Instrument Glareshield Light Removal/Installation, Pilot or CPG . .	9.79	Intermediate Gearbox Breather Removal/Installation . . . . .	6.126
Instrument Indicator Disassembly/Assembly (AVIM), Typical Engine . . . . .	8.2	Intermediate Gearbox Centrifugal Fan, Input Coupling, and Flange Removal/Installation . . . . .	6.12
Instrument Panel Matrix Fixed Resistor Replacement, Pilot . . . . .	9.53	Intermediate Gearbox Fixture Adapter and Tail Rotor Gearbox Fixture Installation . . . . .	1.126
Instrument Panel Matrix Removal/Installation, Pilot . . . . .	9.51	Intermediate Gearbox Fixture Adapter and Tail Rotor Gearbox Fixture Removal . . . . .	1.127
Instrument Panel Matrix Terminal Junction Box and Relay Track Assembly Replacement, Pilot . . . . .	9.54	Intermediate Gearbox Identification Plate Replacement . . . . .	6.128
Instrument Panel Matrix Variable Resistor Replacement, Pilot . . . . .	9.52	Intermediate Gearbox Input Flange and Output Shouldered Shaft Expansion Plug Replacement (AVIM) . . . . .	6.123
Instruments Dimmer Power Supply Connector Replacement, CPG Engine . . . . .	8.26	Intermediate Gearbox Input Seal Assembly Removal/Installation . . . . .	6.124
Instruments Dimmer Power Supply Removal/Installation, CPG Engine . .	8.25	Intermediate Gearbox Inspection . . . . .	6.121
Instruments Inspection, Engine . . . . .	8.1	Intermediate Gearbox Machine Plug Removal/Installation . . . . .	6.127
Insulation and Hook and Pile Fastener Removal/Installation, Pilot/CPG Cockpit Thermal . . . . .	2.10	Intermediate Gearbox Output Coupling Removal/Installation . . . . .	6.13
Interconnect Circuit Card Assembly (CCA) Removal/Installation, Stabilator Controller . . . . .	11.229	Intermediate Gearbox Output Seal Assembly Removal/Installation . . . . .	6.125
Interconnect Hose Replacement, SDC Pressure . . . . .	7.126	Intermediate Gearbox Output Shouldered Shaft Removal/Installation . . . . .	6.122
Interconnect Tube Removal/Installation, Surge Valve Exhaust . . . . .	7.131	Intermediate Gearbox Removal/Installation . . . . .	6.131
Interface Circuit Card on Torque, TGT, Fuel, and Ng Indicators Replacement (AVIM), Analog or . . . . .	8.11	Intermediate Gearbox Servicing – Grease . . . . .	1.30
Interference (EMI) Gasket Repair, Electromagnetic . . . . .	2.27	Intermediate Gearbox Temperature Sensor Removal/Installation . . . . .	6.130
Interference (EMI) Tape Repair, Electromagnetic . . . . .	2.28	Intermediate Storage – 46 to 180 Days .	E.9
Interlock Switch Removal/Installation (AVIM), Pilot Power Quadrant Panel – No. 1 Engine . . . . .	4.193	Intermediate Storage – 46 to 180 Days, Removal from . . . . .	E.10
Interlock Switch Removal/Installation (AVIM), Pilot Power Quadrant Panel – No. 2 Engine . . . . .	4.194	Intermediate Support Strut Bushing Replacement (AVIM), No. 1 and No. 2 Engine Secondary Nozzle Upper and . . . . .	4.127



<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Intermediate Support Strut Removal/Installation, No. 1 and No. 2 Engine Secondary Nozzle .....	4.125	INTR LT Panel Semiconductor Device CR3, CR4, or CR5 Replacement (AVIM), CPG .....	9.85
Internal Leakage Repair and Test (AVIM), Brake Control Valves .....	3.63	Inventoriable Items .....	C.11
INTR LT Edge Light Indicating Panel Removal/Installation, CPG .....	9.83	Inventory Master Guide, Aircraft .....	C.7
INTR LT Panel Control Knob Removal/Installation, CPG .....	9.82	Inventory, Aircraft .....	C.8
INTR LT Panel Relay K1 Replacement (AVIM), CPG .....	9.89	Inventory, Periods of .....	C.12
INTR LT Panel Removal/Installation, CPG .....	9.81	Isolation Diode Removal/Installation, DC Bus .....	9.20
INTR LT Panel Resistor R1 or R2 Replacement (AVIM), CPG .....	9.86	Isolation Switch Removal/Installation, Aft Fuel Cell Fuel Valve .....	10.48
INTR LT Panel Resistor R3, R4, or R5 Replacement (AVIM), CPG .....	9.87	Isolation Switch Removal/Installation, Forward Fuel Cell Fuel Valve .....	10.25
INTR LT Panel Semiconductor Device CR1 or CR2 Replacement (AVIM), CPG .....	9.84	Isolation Transformer Filter Box Disassembly/Assembly (AVIM), Aft Avionics Bay .....	9.59
		Isolation Transformer Filter Box Removal/Installation, Aft Avionics Bay .....	9.58

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
<b>J</b>		<b>K</b>	
Jack Assembly Replacement, Level ...	2.141	Kevlar Repair .....	2.30
Jack Pad Adapter Removal/Installation, Main Landing Gear .....	3.5	Key Assembly Replacement (Goodyear/ABSC), Main Landing Gear Wheel Disk Drive .....	3.9
Jack Replacement, Grounding .....	2.26	Key Assembly Replacement (Parker-Hannifin), Main Landing Gear Wheel Machine .....	3.13
Jacking (At One Point), Main Landing Gear .....	1.67	Kit Installation, Main Rotor Track and Balance AVA .....	1.108A
Jacking (Axle Jack), Tail Landing Gear .	1.68	Kit Installation, Tail Rotor Balance AVA	1.110A
Jacking (Tripod Jack), Tail Landing Gear	1.69	Kit Removal, Tail Rotor Balance AVA ..	1.111A
Jacking (Tripod Jacks at Three Points), Helicopter .....	1.66	Kit Removal, Main Rotor Track and Balance AVA .....	1.109A
Jammer Blower Assembly Removal/Installation, Radar .....	16.30A	Kneel/Erect, Helicopter – .....	1.63
Jammer Blower Assembly Disassembly/Assembly, Radar .....	16.30B	KYK Interface Connector Adapter Replacement .....	9.156
Jet and Nozzle Removal/Installation, Main Transmission Forward Oil .....	6.51		
Jet and Screen Removal/Installation, Main Transmission Input Shaft Oil ...	6.55		
Jet Filter Removal/Installation, Main Transmission Oil .....	6.50		
Jet Filters Removal/Installation, Engine Nose Gearbox Oil .....	6.31		
Jet Removal/Installation, Engine Nose Gearbox Oil .....	6.35		
Jet Removal/Installation, Main Transmission Aft Oil .....	6.52		
Jet Removal/Installation, Main Transmission Upper Cover Oil .....	6.53		
Jettison Switch Cover Replacement, Collective Stick Stores .....	11.29A		
Jettison Switch Replacement, Collective Stick Stores .....	11.29		
Jettison System Inspection, Canopy ...	12.76		
Jettison Wire Harness Removal/Installation, Pylon Circuit Card and .....	16.19		
Junction Box and Relay Track Assembly Replacement, Pilot Instrument Panel Matrix Terminal .....	9.54		
Junction Box Replacement, DC Bus Tie Terminal .....	9.22		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
<b>L</b>			
L CSL Attenuator Replacement (AVIM), CPG INTR LT Panel INST, R CSL, or	9.90	Landing Gear Actuating Cylinder Removal/Installation, Tail	3.32
L CSL Variable Resistor Replacement (AVIM), Pilot EXT LT/INTR LT Panel	9.72	Landing Gear Actuating Cylinder Spring Replacement (AVIM), Tail	3.33
L1 or L2 Replacement (AVIM), CPG Caution/Warning Panel Coil	9.117	Landing Gear Actuating Cylinder Wheel Lock Target Replacement, Tail	3.36
L1 or L2 Replacement (AVIM), Pilot Caution/Warning Panel Coil	9.113	Landing Gear Cable Assembly Replacement, Main	3.2
L510 and R510 Removal/Installation, Vertical Stabilizer Fairings	2.108	Landing Gear Cable Cutter Removal/Installation, Main	3.26
L530 Removal/Installation, Vertical Stabilizer Fairing	2.109	Landing Gear Cross Tube Removal/Installation, Main	2.81
Lag Link Bearing Retainer and Rotor Hub Bearing Removal/Installation, Main Rotor Lead	5.32	Landing Gear Fork Assembly Disassembly/Assembly, Tail	3.44
Lag Link Removal/Installation, Main Rotor Blade Lead	5.33	Landing Gear Fork Removal/Installation, Tail	3.43
Lag Link Sleeve Bushings Replacement (AVIM), Main Rotor Blade Lead	5.33B	Landing Gear Fuselage Fairing Removal/Installation, Main	2.75
Lamp Board Replacement (AVIM), Vertical Display	8.12	Landing Gear Inspection, Main	3.1
Lamp Replacement, Anti-Collision Light Red Flashtube	9.98	Landing Gear Inspection, Tail	3.28
Lamp Replacement, Landing/Searchlight	9.102	Landing Gear Jack Pad Adapter Removal/Installation, Main	3.5
Lamp Replacement, Pilot or CPG Caution/Warning and Master Caution/Warning Panel	9.108	Landing Gear Jacking (At One Point), Main	1.67
Lamp Replacement, Pilot or CPG Instrument Glareshield	9.80	Landing Gear Jacking (Axle Jack), Tail	1.68
Lamp Replacement, Tail or Wing Navigation	9.95	Landing Gear Jacking (Tripod Jack), Tail	1.69
Landing Gear Brake System – Service/Bleed, Main	1.45	Landing Gear Left Shock Strut Structural Support Removal/Installation, Main	2.76
Landing Gear Actuating Cylinder Fuse Pin Replacement, Tail	3.37	Landing Gear Lower Structural Support Removal/Installation, Main	3.4
Landing Gear Actuating Cylinder Lock Release Handle Replacement, Tail	3.35	Landing Gear Right Shock Strut Structural Support Removal/Installation, Main	2.77
Landing Gear Actuating Cylinder Lock Switch Assembly Replacement, Tail	3.34	Landing Gear Shock Strut Bearing Replacement (AVIM), Tail	3.42
		Landing Gear Shock Strut Cam Valve Replacement (AVIM), Main	3.19A
		Landing Gear Shock Strut Check Valve Removal/Installation, Main	3.22
		Landing Gear Shock Strut Cork Stopper Replacement, Tail	3.4
		Landing Gear Shock Strut Cylinder External Leakage Repair, Main	3.21

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Landing Gear Shock Strut External Leakage Repair, Upper Main . . . . .	3.20	Landing Gear Tire Valve Assembly Replacement (Parker-Hannifin), Main	3.12
Landing Gear Shock Strut Identification Plate Replacement, Main . . . . .	3.25	Landing Gear Trailing Arm Assembly Removal/Installation, Main . . . . .	3.16
Landing Gear Shock Strut Piston Removal/Installation (AVIM), Tail . . . .	3.39	Landing Gear Trailing Arms Removal/Installation, Tail . . . . .	3.45
Landing Gear Shock Strut Pneumatic Valve Removal/Installation, Tail . . . . .	3.40	Landing Gear Upper Cam Housing Repair, Tail . . . . .	3.31
Landing Gear Shock Strut Pneumatic Valve Replacement, Main . . . . .	3.19	Landing Gear Upper Structural Support Removal/Installation, Main . . . . .	3.3
Landing Gear Shock Strut Removal/Installation, Main . . . . .	3.18	Landing Gear Wheel (With Grease Fitting) and Axle Removal/Installation, Tail . . . . .	3.46
Landing Gear Shock Strut Removal/Installation, Tail . . . . .	3.38	Landing Gear Wheel (With Grease Fitting) Tapered Cone and Rollers Removal/Installation, Tail . . . . .	3.48
Landing Gear Shock Strut Service – Fluid, Main . . . . .	1.41	Landing Gear Wheel (With Grease Fitting) Tire and Tube Removal/Installation, Tail . . . . .	3.47
Landing Gear Shock Strut Service – Nitrogen, Main . . . . .	1.40	Landing Gear Wheel (Without Grease Fitting) and Axle Removal/Installation, Tail . . . . .	3.49
Landing Gear Shock Strut Servicing – Nitrogen, Tail . . . . .	1.42	Landing Gear Wheel (Without Grease Fitting) Tapered Cone and Rollers Removal/Installation, Tail . . . . .	3.51
Landing Gear Shock Strut Structural Support Pin Replacement, Main . . . .	2.77A	Landing Gear Wheel (Without Grease Fitting) Tire and Tube Removal/Installation, Tail . . . . .	3.50
Landing Gear Shock Strut Upper Rod End Replacement (AVIM), Main . . . . .	3.23	Landing Gear Wheel and Tire Removal/Installation, Main . . . . .	3.6
Landing Gear Shock Strut Upper Seal Assembly Replacement (AVIM), Main	3.24	Landing Gear Wheel Brake Hose Removal/Installation, Main . . . . .	3.70
Landing Gear Squat Switch Target and Bracket Disassembly/Assembly, Main	3.17	Landing Gear Wheel Brake Leakage and Operational Test (AVIM), Main . .	3.67
Landing Gear Tail Wheel Deflector, Structural Support, and Tail Wheel Brackets Removal/Installation, Tail . .	3.27	Landing Gear Wheel Brake Tube and Hose Clamp Removal/Installation, Main . . . . .	3.69
Landing Gear Tapered Cone and Rollers Packing, Tail . . . . .	3.52	Landing Gear Wheel Brake, Hose (Nonmetallic), Tube, and Clamp Removal/Installation, Main . . . . .	3.68
Landing Gear Tire Removal/Installation (Goodyear), Main . . . . .	3.7		
Landing Gear Tire Removal/Installation (Parker-Hannifin), Main . . . . .	3.11		
Landing Gear Tire Servicing, Main . . . . .	1.43		
Landing Gear Tire Servicing, Tail . . . . .	1.44		
Landing Gear Tire Valve Assembly Replacement (Goodyear/ABSC), Main . . . . .	3.8		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Landing Gear Wheel Disk Drive Key Assembly Replacement (Goodyear/ABSC), Main .....	3.9	Lateral Control Position Linear Variable Differential Transducer (LVDT) Installation, CPG .....	11.199
Landing Gear Wheel Machine Key Assembly Replacement (Parker-Hannifin), Main .....	3.13	Lateral Control Position Linear Variable Differential Transducer (LVDT) Removal, CPG .....	11.198
Landing Gear Wheel Repair (Goodyear/ABSC), Main .....	3.7A	Lateral Control Position Linear Variable Differential Transducer (LVDT) Removal, Pilot .....	11.212
Landing Gear Wheel Repair (Parker-Hannifin), Main .....	3.11A	Lateral Cyclic Stick Stop Bolts, Rigging Pilot and CPG .....	11.291
Landing Gear Wheel Tapered Cone and Rollers Removal/Installation (Eight-Bolts), Main .....	3.14	Lateral F.S. 111.50 Bracket Assembly Removal/Installation, CPG to Pilot ..	11.94
Landing Gear Wheel Tapered Cone and Rollers Removal/Installation (Nine-Bolts), Main .....	3.10	Lateral F.S. 111.50 Bellcrank Removal/Installation, CPG to Pilot Control .....	11.92
Landing Gear Wheel (With Grease Fitting) Repair, Tail .....	3.48A	Lateral F.S. 111.50 Push-Pull Rod Assembly Removal/Installation .....	11.93
Landing Gear Wheel (Without Grease Fitting) Repair, Tail .....	3.51A	Lateral F.S. 118.50 Bellcrank Removal/Installation, CPG to Pilot Control .....	11.95
Landing/Searchlight Lamp Replacement	9.102	Lateral F.S. 118.50 Control Bracket Assembly Removal/Installation, CPG to Pilot .....	11.97
Landing/Searchlight Relay Replacement	9.103	Lateral F.S. 118.50 Push-Pull Rod Assembly Removal/Installation .....	11.96
Landing/Searchlight Removal/Installation .....	9.101	Lateral F.S. 132.84 Bellcrank Removal/Installation .....	11.100
Lap Belt Removal/Installation, Pilot/CPG Armored Crew Seat .....	2.176	Lateral F.S. 132.84 Flight Bracket Assembly Removal/Installation .....	11.101
Latch Replacement, Access Door .....	2.33	Lateral F.S. 132.84 Push-Pull Rod Assembly Removal/Installation .....	11.99
Latch Replacement, Engine Access and Ventilation Door Assembly .....	2.142	Lateral F.S. 159.13 Bellcrank Bracket Assembly Removal/Installation .....	11.104
Latch Replacement, Nose Gearbox ....	2.124C	Lateral F.S. 159.13 Bellcrank Removal/Installation .....	11.102
Latch Replacement, Work Platform Door .....	2.139	Lateral F.S. 159.13 Push-Pull Rod Assembly Removal/Installation .....	11.103
Latch Replacement/Adjustment, Forward Avionics Bay Access Door Adjustable Tension Thumb .....	2.44	Lateral F.S. 160.56 Bellcrank Bracket Assembly Removal/Installation .....	11.106
Latch Structural Plate and Canopy Lock Switch Removal/Installation, Aft Door	2.69	Lateral F.S. 160.56 Bellcrank Removal/Installation .....	11.105
Lateral Bellcrank and Lateral Links Installation .....	11.11	Lateral F.S. 164.395 Bellcrank Removal/Installation .....	11.107
Lateral Bellcrank and Lateral Links Removal .....	11.10	Lateral F.S. 164.95 Bellcrank Bracket Assembly Removal/Installation .....	11.109
Lateral Control F.S. 83.45 Support Bracket Assembly Removal/Installation, CPG to Pilot ..	11.91		
Lateral Control Position Linear Variable Differential Transducer (LVDT) Installation, Pilot .....	11.213		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Lateral F.S. 164.95 Push-Pull Rod Assembly Removal/Installation . . . . .	11.108	Lateral Servocylinder Rod End Replacement . . . . .	7.46
Lateral F.S. 176.00 Servocylinder Mount Bracket Assembly Removal/Installation . . . . .	11.110	Lateral Servocylinder Wire Harness Support Bracket Removal/Installation	2.85
Lateral F.S. 65.50 Control Bracket Assembly Removal/Installation, CPG to Pilot . . . . .	11.87	Lateral Servocylinder, Rigging Lateral Flight Controls Between Pilot Cyclic Stick and . . . . .	11.290
Lateral F.S. 65.50 Push-Pull Rod Assembly Removal/Installation . . . . .	11.88	Lateral Shear Pin Replacement, CPG Cyclic Stick Housing . . . . .	11.83
Lateral F.S. 83.45 Idler Bellcrank Removal/Installation, CPG to Pilot Control . . . . .	11.89	Lateral Shear Pin Replacement, Pilot Cyclic Stick Housing . . . . .	11.56
Lateral F.S. 83.45 Push-Pull Rod Assembly Removal/Installation . . . . .	11.90	Lead Lag Link Bearing Retainer and Rotor Hub Bearing Removal/Installation, Main Rotor . . . . .	5.32
Lateral Feel Spring Cartridge Installation . . . . .	11.58	Lead Lag Link Pivot Low Friction Sleeve Bearings Replacement (AVIM), Main Rotor Blade . . . . .	5.33A
Lateral Feel Spring Cartridge Removal . . . . .	11.57	Lead Lag Link Removal/Installation, Main Rotor Blade . . . . .	5.33
Lateral Flight Controls Between Pilot and CPG Cyclic Sticks, Rigging . . . . .	11.289	Lead Lag Link Sleeve Bushings Replacement (AVIM), Main Rotor Blade . . . . .	5.33B
Lateral Flight Controls Between Pilot Cyclic Stick and Lateral Servocylinder, Rigging . . . . .	11.290	Lead Removal/Installation, Main Rotor Electrical Brush, Electrical Holder, and Pitch Web Electrical . . . . .	5.48
Lateral Flight Controls, Rigging Upper . . . . .	11.292	Lead Removal/Installation, Main Rotor Pitch Housing and Blade – Electrical	5.31
Lateral Link Installation, CPG Cyclic Stick and . . . . .	11.67	Lead Removal/Installation, Tail Rotor Electrical . . . . .	11.276
Lateral Link Removal, CPG Cyclic Stick and . . . . .	11.66	Leading Edge Tip Replacement, Main Rotor Blade . . . . .	5.13
Lateral Links Installation, Lateral Bellcrank and . . . . .	11.11	Leak Check (AVIM), Utility Hydraulic Accumulator . . . . .	7.93
Lateral Links Removal, Lateral Bellcrank and . . . . .	11.10	Leak Check, Hydraulic System . . . . .	7.2
Lateral Magnetic Brake Mechanism Assembly Disassembly/Assembly (AVIM) . . . . .	11.187	Leak Check, Pressurized Air System . . . . .	7.115
Lateral Magnetic Brake Mechanism Assembly Removal/Installation . . . . .	11.186	Leakage and Operational Test (AVIM), Main Landing Gear Wheel Brake . . . . .	3.67
Lateral Magnetic Brake Removal/Installation . . . . .	11.180	Leakage Repair and Test (AVIM), Brake Control Valves Internal . . . . .	3.63
Lateral Push-Pull Rod Assembly Removal/Installation, CPG Cyclic . . . . .	11.86	Leakage Repair, Main Landing Gear Shock Strut Cylinder External . . . . .	3.21
Lateral Push-Pull Rod Assembly Removal/Installation, Pilot Cyclic . . . . .	11.98	Leakage Repair, Upper Main Landing Gear Shock Strut External . . . . .	3.20
Lateral Servocylinder Installation . . . . .	7.45	Left Actuating Cylinder Air Tube Replacement . . . . .	4.92
Lateral Servocylinder Removal . . . . .	7.44		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Left Aft Canopy Windshield Panel Removal/Installation . . . . .	2.71	Left Hand Access Door L325 Removal/Installation . . . . .	2.126B
Left Aft Catwalk Area Replacement, Data Link Termination Unit (DLTU) . .	9.144	Left Hand or Right Hand Longeron Removal/Installation . . . . .	2.95A
Left Aft Side Transmission Rotor Support Strut Assembly Removal/Installation . . . . .	2.94	Left Nacelle Radiation Shields Replacement . . . . .	4.96
Left Aft Vertical Cockpit Glareshield Removal/Installation . . . . .	2.159	Left or Right Actuating Cylinder Flexible Air Hose Replacement . . . . .	4.91
Left and Right Auxiliary Fuel Quick-Disconnect Branch Tubes and Couplings Removal/Installation, Pressurized Air System . . . . .	7.152	Left or Right Center Transmission Rotor Support Strut Assemblies Removal/Installation, Forward . . . . .	2.89
Left and Right Auxiliary Fuel Tank Quick-Disconnect Coupling Removal/Installation . . . . .	10.91	Left or Right Directional Control Pedal Protective Cover Removal/Installation, CPG . . . . .	11.244
Left and Right Console Panels Removal/Installation, Pilot . . . . .	2.8	Left or Right Directional Control Pedal Protective Cover Removal/Installation, Pilot . . . . .	11.244A
Left Auxiliary Fuel Tank Check Valve Removal/Installation . . . . .	10.85	Left or Right Mount Fitting Replacement, APU Forward . . . . .	15.36
Left Auxiliary Fuel Transfer Tube Replacement . . . . .	10.86	Left or Right Nacelle Engine Guard/Radiation Shield Replacement	4.94
Left Auxiliary Fuel Transfer Tube Replacement, F.S. 186 to 199 . . . . .	10.87	Left Shock Strut Structural Support Removal/Installation, Main Landing Gear . . . . .	2.76
Left Auxiliary Fuel Transfer Tube Replacement, F.S. 199 to 214 . . . . .	10.88	Left Side Area, Transmission Installation – Connect . . . . .	6.112
Left Auxiliary Fuel Transfer Tube Replacement, F.S. 214 to 225 . . . . .	10.89	Left Side Connector Bracket and Wire Harness Support Bracket Removal/Installation, Aft Deck . . . . .	9.151
Left Center Transmission Rotor Support Strut Assembly Removal/Installation, Aft . . . . .	2.90	Left Side, Access Provisions – . . . . .	2.3
Left Engine Firewall Louver Fire/Overheat Detector Frame Removal/Installation . . . . .	12.29	Left Truss Removal/Installation . . . . .	15.33
Left Engine Firewall Louver Fire/Overheat Detector Removal/Installation . . . . .	12.28	Left Wing Pitot Tube Removal/Installation, Right or . . . . .	8.37
Left Forward Canopy Windshield Panel Assembly Removal/Installation . . . . .	2.70	Lens Replacement, Anti-Collision Light .	9.97
Left Forward Catwalk Area Replacement, Data link Termination Unit (DLTU) . . . . .	9.142	Level Control Pilot Valve Removal/Installation, Aft Fuel Cell Fuel . . . . .	10.37
Left Forward Side Transmission Rotor Support Strut Assembly Removal/Installation . . . . .	2.92	Level Jack Assembly Replacement . . . . .	2.141
Left Fuselage Footstep Removal/Installation . . . . .	2.80	Level Shutoff Valve Armor Plate Removal/Installation, Tailboom Utility Low . . . . .	2.198
		Level Shutoff Valve Replacement, Utility Low . . . . .	7.108
		Lever Lock Release Retainer Removal/Installation, CPG Cyclic Stick . . . . .	11.75

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Lever Release Switch Removal/Installation (AVIM) , CPG Power Quadrant .....	4.198	Light Indicating Panel Removal/Installation (AVIM), Pilot Power Quadrant .....	4.188
Lever Removal/Installation, Remote Control .....	3.29	Light Indicating Panel Replacement, CPG Fuel Panel .....	10.63
Lever Replacement (AVIM), Hydraulic Hand Pump Selector .....	7.29	Light Indicating Panel Replacement, Pilot ELEC PWR .....	9.34
Lever Sleeve Bearing Replacement, Remote Control .....	3.30	Light Installation, Tail or Wing Navigation .....	9.94
Light Disassembly/Assembly, Utility Maintenance .....	9.91	Light Lens Replacement, Anti-Collision .	9.97
Light Indicating Panel Receptacle Replacement (AVIM), APU Fire Panel	12.21	Light Panel, Digital Display Driver Circuit Card Replacement (AVIM), Torque, TGT, Fuel, and Ng Indicators	8.10
Light Indicating Panel Receptacle Replacement (AVIM), Pilot Anti-Ice Panel .....	12.51	Light Power Supply Removal/Installation, Anti-Collision ..	9.100
Light Indicating Panel Removal/Installation (AVIM), ASE Panel .....	11.192	Light Red Flashtube Lamp Replacement, Anti-Collision .....	9.98
Light Indicating Panel Removal/Installation, CPG Auxiliary Panel .....	12.54	Light Removal, Tail or Wing Navigation .	9.93
Light Indicating Panel Removal/Installation, CPG Circuit Breaker Panel No. 1 .....	9.44	Light Removal/Installation, Formation ..	9.92
Light Indicating Panel Removal/Installation, CPG Circuit Breaker Panel No. 2 .....	9.48	Light Removal/Installation, Pilot or CPG Instrument Glareshield .....	9.79
Light Indicating Panel Removal/Installation, CPG INST LT Edge .....	9.83	Light Replacement (AVIM), Refueling Panel Indicator .....	10.72
Light Indicating Panel Removal/Installation, CPG Power Quadrant .....	4.195	Light Replacement, CPG FUEL XFER Advisory .....	9.123
Light Indicating Panel Removal/Installation, ECS Panel ....	13.35	Light Replacement, Pilot FUEL XFER Advisory .....	9.124
Light Indicating Panel Removal/Installation, Pilot Anti-Ice Panel .....	12.48	Light Subassembly Replacement, Anti-Collision .....	9.99
Light Indicating Panel Removal/Installation, Pilot Circuit Breaker .....	9.4	Light Switch Replacement (AVIM), Pilot or CPG Caution/Warning and Master Caution/Warning Panel .....	9.107
Light Indicating Panel Removal/Installation, Pilot Fuel Panel	10.55	Light Unit Removal/Installation, Anti-Collision .....	9.96
		Lighting Provisions Components Inspection .....	9.61
		Lightning Arrestor Removal/Installation, Aft Fuel Cell Lower Vent Tube and ..	10.45
		Lightning Arrestor Removal/Installation, Forward Fuel Cell .....	10.4
		Limit, Flyable Storage – No Time .....	E.5



<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Limit, Removal from Flyable Storage – No Time .....	E.6	Linear Variable Differential Transducer (LVDT) Removal, Pilot Directional Control Position .....	11.210
Line Connector Replacement, Refueling	10.18	Linear Variable Differential Transducer (LVDT) Removal, Pilot Lateral Control Position .....	11.212
Linear Variable Differential Transducer (LVDT) Adjustment .....	11.216	Linear Variable Differential Transducer (LVDT) Removal, Pilot Longitudinal Control Position .....	11.214
Linear Variable Differential Transducer (LVDT) Adjustment Criteria .....	11.217	Linear Variable Differential Transducer (LVDT) Rod End Replacement, CPG Collective Control Position .....	11.202
Linear Variable Differential Transducer (LVDT) Installation, CPG Collective Control Position .....	11.204	Lining, and Brake Disk Removal/Installation (Goodyear/ABSC), Single Disk Brake, Friction .....	3.66
Linear Variable Differential Transducer (LVDT) Installation, CPG Directional Control Position .....	11.197	Lining, and Brake Disk Removal/Installation (Parker-Hannifin), Single Disk Brake, Friction .....	3.65
Linear Variable Differential Transducer (LVDT) Installation, CPG Lateral Control Position .....	11.199	Link Assembly Aft Engine Mount Removal/Installation .....	4.87
Linear Variable Differential Transducer (LVDT) Installation, CPG Longitudinal Control Position .....	11.201	Link Bearing Retainer and Rotor Hub Bearing Removal/Installation, Main Rotor Lead Lag .....	5.32
Linear Variable Differential Transducer (LVDT) Installation, Pilot Collective Control Position .....	11.208	Link Disassembly/Assembly, Main Rotor Pitch .....	11.15
Linear Variable Differential Transducer (LVDT) Installation, Pilot Directional Control Position .....	11.211	Link Fuse/Holder Block F1/XF1 or F2/XF2 Replacement, Electrical Power Distribution Box Enclosed ....	9.11
Linear Variable Differential Transducer (LVDT) Installation, Pilot Lateral Control Position .....	11.213	Link Installation, CPG Cyclic Stick and Lateral .....	11.67
Linear Variable Differential Transducer (LVDT) Installation, Pilot Longitudinal Control Position .....	11.215	Link Installation, Tail Rotor Drive .....	11.275
Linear Variable Differential Transducer (LVDT) Removal, CPG Collective Control Position .....	11.203	Link Pivot Low Friction Sleeve Bearings Replacement (AVIM), Main Rotor Blade Lead Lag .....	5.33A
Linear Variable Differential Transducer (LVDT) Removal, CPG Directional Control Position .....	11.196	Link Removal, Tail Rotor Drive .....	11.274
Linear Variable Differential Transducer (LVDT) Removal, CPG Lateral Control Position .....	11.198	Link Removal/Installation, Engine Access and Ventilation Door Assembly Rig Connecting .....	2.144
Linear Variable Differential Transducer (LVDT) Removal, CPG Longitudinal Control Position .....	11.200	Link Removal/Installation, Main Rotor Blade Lead Lag .....	5.33
Linear Variable Differential Transducer (LVDT) Removal, Pilot Collective Control Position .....	11.207	Link Removal/Installation, Main Rotor Pitch .....	11.14

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Link Removal/Installation, Tail Rotor Connecting .....	11.266	Load Demand Spindle Bellcrank Support Removal/Installation, Engine	4.156
Link Removal/Installation, Tail Rotor Pitch .....	11.277	Load Demand Spindle Cable Support Removal/Installation, Engine .....	4.157
Link Removal/Installation, Torque .....	11.19	Load Demand Spindle Forward Cable Installation, No. 1 or No. 2 Engine ...	4.150
Link Replacement (AVIM), Servocylinder Universal .....	7.55	Load Demand Spindle Forward Cable Removal, No. 1 or No. 2 Engine ....	4.149
Link Sleeve Bushings Replacement (AVIM), Main Rotor Blade Lead Lag	5.33B	Load Demand Spindle Gearbox Removal/Installation, No. 1 Engine ..	4.143
Link Termination Unit (DLTU) (Aft Avionics Bay) Replacement, Data ...	9.145	Load Demand Spindle Gearbox Removal/Installation, No. 2 Engine ..	4.144
Link Termination Unit (DLTU) (Nose Section) Replacement, Data .....	9.141	Load Demand Spindle Gearbox Main Sleeve and Runout Tube Removal/Installation, No. 1 or No. 2 Engine .....	4.144A
Linkage Idler Replacement, Engine Access and Ventilation Door Assembly Door .....	2.143	Load Demand Spindle Rigging Check, No. 1 and No. 2 Engine .....	4.184
Links Disassembly/Assembly, No. 1 or No. 2 Power Available Spindle Cable Connecting .....	4.165	Load Demand Spindle Rigging, No. 1 and No. 2 Engine .....	4.185
Links Installation, Lateral Bellcrank and Lateral .....	11.11	Load Demand Spindle/Power Available Spindle Aft Cable Spring Tension Clip Removal/Installation, No. 1 Engine ..	4.180
Links Removal, Lateral Bellcrank and Lateral .....	11.10	Load Demand Spindle/Power Available Spindle Aft Cable Spring Tension Clip Removal/Installation, No. 2 Engine ..	4.181
Links Removal/Installation, Engine Connecting .....	4.86	Loading Information .....	G.2
Links Removal/Installation, Longitudinal	11.13	Location and Description of Major Components .....	1.9
Links Removal/Installation, No. 1 or No. 2 Power Available Spindle Cable Connecting .....	4.164	Locations, Airframe Station .....	1.11
Load Bearing Main Rotor Scissor Removal/Installation .....	11.16	Lock Actuator Hose Replacement, Tail Wheel .....	7.106
Load Bearing Scissor Disassembly/Assembly .....	11.17	Lock Control Valve Replacement, Tail Wheel .....	7.107
Load Demand Spindle (LDS) Cables, Warm-up/De-Ice of Engine .....	1.55	Lock Release Handle Replacement, Tail Landing Gear Actuating Cylinder ....	3.35
Load Demand Spindle Aft Cable Installation, No. 1 Engine .....	4.177	Lock Release Retainer Removal/Installation, CPG Cyclic Stick Lever .....	11.75
Load Demand Spindle Aft Cable Installation, No. 2 Engine .....	4.179	Lock Release Wire Rope Removal/Installation, CPG Cyclic Stick .....	11.76
Load Demand Spindle Aft Cable Removal, No. 1 Engine .....	4.176	Lock Removal/Installation, CPG Cyclic Stick .....	11.77
Load Demand Spindle Aft Cable Removal, No. 2 Engine .....	4.178		
Load Demand Spindle Bellcrank Removal/Installation, Engine .....	4.154		
Load Demand Spindle Bellcrank Repair (AVIM), Engine .....	4.155		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Lock Switch Assembly Replacement, Tail Landing Gear Actuating Cylinder	3.34	Longitudinal F.S. 129.25 Bellcrank Bracket Assembly Removal/Installation . . . . .	11.123
Lock Switch Removal/Installation (AVIM), Pilot Power Quadrant Panel – Ignition . . . . .	4.192	Longitudinal F.S. 129.25 Bellcrank Removal/Installation . . . . .	11.121
Lock Switch Removal/Installation, Aft Door Structural Plate and Canopy . . .	2.69	Longitudinal F.S. 129.25 Push-Pull Rod Assembly Removal/Installation . . . . .	11.122
Lock Target Replacement, Tail Landing Gear Actuating Cylinder Wheel . . . . .	3.36	Longitudinal F.S. 159.62 Bellcrank Removal/Installation . . . . .	11.124
Lock/Unlock, Rotor Brake . . . . .	1.62	Longitudinal F.S. 159.62 Push-Pull Rod Assembly Removal/Installation . . . . .	11.125
Locking Plate Disassembly/Assembly (AVIM), Tail Rotor Fork . . . . .	5.64	Longitudinal F.S. 164.38 Bellcrank Removal/Installation . . . . .	11.126
Locking Plate Removal/Installation (AVIM), Tail Rotor Fork Clamp and . .	5.63	Longitudinal F.S. 164.38 Push-Pull Rod Removal/Installation . . . . .	11.127
Longeron Removal/Installation, Left Hand or Right Hand . . . . .	2.95A	Longitudinal F.S. 176.00 Servocylinder Mount Bracket Assembly Removal/Installation . . . . .	11.128
Longitudinal and Collective Bellcranks Removal/Installation . . . . .	11.9	Longitudinal F.S. 82.80 Control Bracket Removal/Installation, CPG to Pilot . .	11.114
Longitudinal Bellcrank Removal/Installation, Aft . . . . .	11.12	Longitudinal F.S. 82.80 Push-Pull Rod Assembly Removal/Installation . . . . .	11.113
Longitudinal Control Position Linear Variable Differential Transducer (LVDT) Installation, CPG . . . . .	11.201	Longitudinal F.S. 96.59 Bellcrank Removal/Installation, CPG to Pilot Control . . . . .	11.115
Longitudinal Control Position Linear Variable Differential Transducer (LVDT) Installation, Pilot . . . . .	11.215	Longitudinal F.S. 96.59 Control Bracket Assembly Removal/Installation, CPG to Pilot . . . . .	11.117
Longitudinal Control Position Linear Variable Differential Transducer (LVDT) Removal, CPG . . . . .	11.200	Longitudinal F.S. 96.59 Push-Pull Rod Assembly Removal/Installation . . . . .	11.116
Longitudinal Control Position Linear Variable Differential Transducer (LVDT) Removal, Pilot . . . . .	11.214	Longitudinal Feel Spring Cartridge Installation . . . . .	11.60
Longitudinal Cyclic Stick Stop Bolts, Rigging Pilot and CPG . . . . .	11.287	Longitudinal Feel Spring Cartridge Removal . . . . .	11.59
Longitudinal F.S. 118.50 Bellcrank Removal/Installation, CPG to Pilot Control . . . . .	11.118	Longitudinal Flight Controls Between Pilot and CPG Cyclic Sticks, Rigging	11.285
Longitudinal F.S. 118.50 Control Flight Bracket Assembly Removal/Installation, CPG to Pilot . .	11.120	Longitudinal Flight Controls Between Pilot Cyclic Stick and Longitudinal Servocylinder, Rigging . . . . .	11.286
Longitudinal F.S. 118.50 Push-Pull Rod Assembly Removal/Installation . . . . .	11.119	Longitudinal Flight Controls, Rigging Upper . . . . .	11.288
		Longitudinal Links Removal/Installation	11.13
		Longitudinal Magnetic Brake Removal/Installation . . . . .	11.181

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Longitudinal Magnetic Brake Spring Mechanism Disassembly/Assembly (AVIM) .....	11.189	Low Level Piston Replacement (AVIM), Utility Hydraulic Manifold .....	7.76
Longitudinal Magnetic Brake Spring Mechanism Removal/Installation ....	11.188	Low Level Shutoff Valve Armor Plate Removal/Installation, Tailboom Utility	2.198
Longitudinal Push-Pull Rod Assembly Removal/Installation, Pilot Cyclic ....	11.111	Low Level Shutoff Valve Replacement, Utility .....	7.108
Longitudinal Servocylinder Installation .	7.48	Low Level Valve Replacement (AVIM), Utility Hydraulic Manifold .....	7.77
Longitudinal Servocylinder Removal ...	7.47	Low Oil Pressure (LOP) Switch Removal/Installation, APU .....	TM 1-2835-213-23
Longitudinal Servocylinder Rod End Replacement .....	7.49	Low Oil Pressure Switch Removal/Installation, Engine Nose Gearbox .....	6.21
Longitudinal Servocylinder, Rigging Longitudinal Flight Controls Between Pilot Cyclic Stick and .....	11.286	Low Oil Pressure Switch Removal/Installation, Main Transmission .....	6.78
Longitudinal Shear Pin Activated Decoupler (SPAD) Assembly Disassembly/Assembly (AVIM), Pilot	11.174	Lower Bearing Grease Repacking (AVIM), Main Rotor .....	5.46C
Longitudinal Shear Pin Activated Decoupler (SPAD) Shear Pin Replacement, Pilot .....	11.173	Lower Connections, No. 1 Engine Installation – .....	4.50
Longitudinal Shear Pin Replacement, CPG Cyclic Stick Housing .....	11.82	Lower Connections, No. 2 Engine Installation – .....	4.54
Louver Actuator Hose Replacement, No. 1 or No. 2 Engine .....	4.62	Lower Deflector Extension Replacement (AVIM), Wire Strike .....	2.192
Louver Actuator Removal/Installation, No. 1 and No. 2 Engine .....	4.57	Lower Disconnections, No. 1 Engine Removal – .....	4.6
Louver Disassembly/Assembly (AVIM), No. 1 and No. 2 Engine .....	4.66	Lower Disconnections, No. 2 Engine Removal – .....	4.10
Louver Epoxy Paint Repair (AVIM), No. 1 or No. 2 Engine .....	4.67	Lower Hinge Butt Removal/Installation, CPG Station Access Door .....	2.58
Louver Installation, No. 1 Engine .....	4.59	Lower Hinge Butt Removal/Installation, Pilot Station Access Door .....	2.66
Louver Installation, No. 2 Engine .....	4.61	Lower Mount Bushing Removal/Installation (AVIM), No. 1 or No. 2 Engine Aft Inboard Mount/Aft ..	4.56
Louver Removal, No. 1 Engine .....	4.58	Lower Mount Removal/Installation, No. 1 and No. 2 Engine Aft .....	4.116
Louver Removal, No. 2 Engine .....	4.60	Lower Mount Removal/Installation, No. 1 and No. 2 Engine Forward .....	4.118
Louver Support Removal/Installation, No. 1 Engine .....	4.64	Lower Oil Seal Retainer Reseating, Main Rotor .....	5.46A
Louver Support Removal/Installation, No. 2 Engine .....	4.65		
Low Friction Sleeve Bearings Replacement (AVIM), Main Rotor Blade Lead Lag Link Pivot .....	5.33A		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Lower Plate Pad Replacement (AVIM), Main Rotor Hub .....	5.47	Lube Oil Rotary Pump Removal/Installation, Main Transmission Primary .....	6.114
Lower Seal and Oil Seal Retainer Replacement (AVIM), Main Rotor ...	5.46	Lube Pump Removal/Installation, Engine Nose Gearbox .....	6.30
Lower Shoe Identification Plate Replacement (AVIM), Main Rotor ...	5.50	Lube Pump Removal/Installation, Main Transmission Accessory Drive .....	6.71
Lower Shoe Scissor Attach Sleeve Bearings Replacement, Main Rotor .	5.49A	Lube System Hose (Left Side) Replacement, Main Transmission ...	6.81
Lower Structural Support Removal/Installation, Main Landing Gear .....	3.4	Lube System Hose (Right Side) Replacement, Main Transmission ...	6.82
Lower Fuel Supply Hose Replacement, No.1 Engine .....	10.102	Lug Door L115 or R115 Removal/Installation, Mooring .....	2.43A
Lower Vent Tube and Lightning Arrestor Removal/Installation, Aft Fuel Cell ...	10.45	LVDT Adjustment, Linear Variable Differential Transducer .....	11.216
Lower Vent Tube Removal/Installation, Forward Fuel Cell .....	10.24		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
<b>M</b>			
M-43 Blower Mount Bracket Bonding, Pilot/CPG Armored Crew Seat . . . . .	2.167	Main Landing Gear Cable Assembly Replacement . . . . .	3.2
MAC, Section II, Explanation of Columns in the . . . . .	B.6	Main Landing Gear Cable Cutter Removal/Installation . . . . .	3.26
Machine Key Assembly Replacement (Parker-Hannifin), Main Landing Gear Wheel . . . . .	3.13	Main Landing Gear Cross Tube Removal/Installation . . . . .	2.81
Machine Plug Removal/Installation, Intermediate Gearbox . . . . .	6.127	Main Landing Gear Fuselage Fairing Removal/Installation . . . . .	2.75
Machine Plug Removal/Installation, Tail Rotor Gearbox . . . . .	6.146	Main Landing Gear Inspection . . . . .	3.1
Magazine Strut and Eye Bolt Removal/Installation, Ammunition . . .	2.82	Main Landing Gear Jack Pad Adapter Removal/Installation . . . . .	3.5
Magnetic Brake Mechanism Assembly Disassembly/Assembly (AVIM), Lateral . . . . .	11.187	Main Landing Gear Jacking (At One Point) . . . . .	1.67
Magnetic Brake Mechanism Assembly Removal/Installation, Lateral . . . . .	11.186	Main Landing Gear Left Shock Strut Structural Support Removal/Installation . . . . .	2.76
Magnetic Brake Removal/Installation, Directional . . . . .	11.176	Main Landing Gear Lower Structural Support Removal/Installation . . . . .	3.4
Magnetic Brake Removal/Installation, Lateral . . . . .	11.180	Main Landing Gear Right Shock Strut Structural Support Removal/Installation . . . . .	2.77
Magnetic Brake Removal/Installation, Longitudinal . . . . .	11.181	Main Landing Gear Shock Strut Cam Valve Replacement (AVIM) . . . . .	3.19A
Magnetic Brake Spring Mechanism Disassembly/Assembly (AVIM), Longitudinal . . . . .	11.189	Main Landing Gear Shock Strut Check Valve Removal/Installation . . . . .	3.22
Magnetic Brake Spring Mechanism Removal/Installation, Longitudinal . . .	11.188	Main Landing Gear Shock Strut Cylinder External Leakage Repair . . .	3.21
Magnetic Brake Support Disassembly/Assembly (AVIM), Directional . . . . .	11.185	Main Landing Gear Shock Strut External Leakage Repair, Upper . . . .	3.20
Magnetic Brake Support Removal/Installation, Directional . . . .	11.184	Main Landing Gear Shock Strut Identification Plate Replacement . . . .	3.25
Magnetic Compass Removal/Installation, Pilot . . . . .	8.42	Main Landing Gear Shock Strut Pneumatic Valve Replacement . . . . .	3.19
Magnetic Drain Plug Replacement, APU Chip Collector and . . . . .	TM 1-2835-213-23	Main Landing Gear Shock Strut Removal/Installation . . . . .	3.18
Magnetic Pickup Replacement, Main Transmission . . . . .	6.44	Main Landing Gear Shock Strut Service – Fluid . . . . .	1.41
Main Deck Fire/Overheat Detector Removal/Installation . . . . .	12.32	Main Landing Gear Shock Strut Service – Nitrogen . . . . .	1.40
Main Landing Gear Brake System – Service/Bleed . . . . .	1.45	Main Landing Gear Shock Strut Structural Support Pin Replacement . .	2.77A
		Main Landing Gear Shock Strut Upper Rod End Replacement (AVIM) . . . . .	3.23
		Main Landing Gear Shock Strut Upper Seal Assembly Replacement (AVIM)	3.24
		Main Landing Gear Squat Switch Target and Bracket Disassembly/Assembly .	3.17
		Main Landing Gear Tire Removal/Installation (Goodyear) . . . .	3.7

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Main Landing Gear Tire Removal/Installation (Parker-Hannifin) .....	3.11	Main Rotor Air Data System (ADS) Standpipe Removal/Installation .....	6.94
Main Landing Gear Tire Servicing .....	1.43	Main Rotor Blade Adapter Installation ..	1.112
Main Landing Gear Tire Valve Assembly Replacement (Goodyear/ABSC) .....	3.8	Main Rotor Blade Adapter Removal ...	1.113
Main Landing Gear Tire Valve Assembly Replacement (Parker-Hannifin) .....	3.12	Main Rotor Blade Anti-Peel Doubler Repair (AVIM) .....	5.12
Main Landing Gear Trailing Arm Assembly Removal/Installation .....	3.16	Main Rotor Blade Balance Weight Removal/Installation .....	5.9
Main Landing Gear Upper Structural Support Removal/Installation .....	3.3	Main Rotor Blade Debonded Doubler or Spar Repair (AVIM) .....	5.7
Main Landing Gear Wheel and Tire Removal/Installation .....	3.6	Main Rotor Blade Dent, Depression, and Crease Repair (AVIM) .....	5.5
Main Landing Gear Wheel Brake Hose Removal/Installation .....	3.70	Main Rotor Blade Droop Angle Measurement .....	5.10
Main Landing Gear Wheel Brake Leakage and Operational Test (AVIM)	3.67	Main Rotor Blade Electrical Bracket Replacement .....	5.16
Main Landing Gear Wheel Brake, Hose (Nonmetallic), Tube, and Clamp Removal/Installation .....	3.68	Main Rotor Blade Electrostatic Discharger Disassembly/Assembly ..	5.15
Main Landing Gear Wheel Brake Tube and Hose Clamp Removal/Installation .....	3.69	Main Rotor Blade Forward and Aft Tip Weight Removal/Installation (AVIM) .	5.14A
Main Landing Gear Wheel Disk Drive Key Assembly Replacement (Goodyear/ABSC) .....	3.9	Main Rotor Blade Hoisting, Crane Adjustment – .....	1.100
Main Landing Gear Wheel Machine Key Assembly Replacement (Parker-Hannifin) .....	3.13	Main Rotor Blade Identification Plate Replacement .....	5.18
Main Landing Gear Wheel Repair (Goodyear/ABSC) .....	3.7A	Main Rotor Blade Installation .....	5.4
Main Landing Gear Wheel Repair (Parker-Hannifin) .....	3.11A	Main Rotor Blade Installation, Hoisting –	1.84
Main Landing Gear Wheel Tapered Cone and Rollers Packing .....	3.15	Main Rotor Blade Lead Lag Link Pivot Low Friction Sleeve Bearings Replacement (AVIM) .....	5.33A
Main Landing Gear Wheel Tapered Cone and Rollers Removal/Installation (Eight-Bolts) ...	3.14	Main Rotor Blade Lead Lag Link Sleeve Bushing Replacement (AVIM) Main	5.33B
Main Landing Gear Wheel Tapered Cone and Rollers Removal/Installation (Nine-Bolts) ...	3.10	Main Rotor Blade Lead Lag Link Removal/Installation .....	5.33
Main Rotor Air Data System (ADS) Mast Repair (AVIM) .....	6.91	Main Rotor Blade Leading Edge Tip Replacement .....	5.13
		Main Rotor Blade Paint Erosion Touchup .....	5.11
		Main Rotor Blade Phase Adjustment ...	5.8
		Main Rotor Blade Receptacle Connector Replacement .....	5.17
		Main Rotor Blade Removal .....	5.3
		Main Rotor Blade Removal, Hoisting –	1.83
		Main Rotor Blade Repair Criteria .....	5.2
		Main Rotor Blade Scratch, Nick, or Gouge Repair .....	5.6

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Main Rotor Blade Strap Pack Repair Criteria .....	5.36	Main Rotor Gearshaft Removal/Installation .....	6.95
Main Rotor Blade Spar to Spar Debond Repair (AVIM) .....	5.7A	Main Rotor Gearshaft Support (Static) Mast, or Swashplate Hoisting, Crane Adjustment – .....	1.102
Main Rotor Blade Weight Support Fitting Insert Replacement (AVIM) ...	5.14	Main Rotor Head Assembly (AVIM) ....	5.43
Main Rotor Blade Trailing Edge Trim Tab Marking .....	5.8A	Main Rotor Head Disassembly (AVIM) .	5.42
Main Rotor Blades Tiedown – Installation .....	1.106	Main Rotor Head Fixture Installation ...	1.116
Main Rotor Blades Tiedown – Removal	1.107	Main Rotor Head Fixture Removal .....	1.117
Main Rotor Damper Removal/Installation .....	5.23	Main Rotor Head Hoisting, Crane Adjustment – .....	1.101
Main Rotor Damper Rod End Removal/Installation .....	5.24	Main Rotor Head Identification Plate Replacement .....	5.22
Main Rotor De-Ice Power Distributor and Air Data System (ADS) Mast Removal/Installation .....	6.90	Main Rotor Head Installation, Hoisting –	1.86
Main Rotor Drive Plate Cover Removal/Installation .....	6.92	Main Rotor Head Removal, Hoisting – .	1.85
Main Rotor Drive Plate Removal/Installation .....	6.96	Main Rotor Head Removal/Installation .	5.21
Main Rotor Droop Stop Follower Installation (AVIM) .....	5.39	Main Rotor Hub Identification Plate Replacement .....	5.49
Main Rotor Droop Stop Follower Removal (AVIM) .....	5.38	Main Rotor Hub Lower Plate Pad Replacement (AVIM) .....	5.47
Main Rotor Droop Stop Follower Repair (AVIM) .....	5.40	Main Rotor Hub Retention Nut Installation .....	5.20
Main Rotor Droop Stop Follower Roller and Inner Race Replacement .....	5.41	Main Rotor Hub Retention Nut Removal	5.19
Main Rotor Droop Stop Ring Removal/Installation (AVIM) .....	5.44	Main Rotor Inspection .....	5.1
Main Rotor Electrical Brush, Electrical Holder, and Pitch Web Electrical Lead Removal/Installation .....	5.48	Main Rotor Lead Lag Link Bearing Retainer and Rotor Hub Bearing Removal/Installation .....	5.32
Main Rotor Feathering Bearing Housing Removal/Installation .....	5.37	Main Rotor Air Data System (ADS) Mast Repair (AVIM) .....	6.91
Main Rotor Flexible Support Removal/Installation .....	6.93	Main Rotor Lower Bearing Grease Repacking (AVIM) .....	5.46C
Main Rotor Gearshaft Fixture Installation .....	1.128	Main Rotor Lower Oil Seal Retainer Reseating .....	5.46A
Main Rotor Gearshaft Fixture Removal .	1.129	Main Rotor Lower Seal and Oil Seal Retainer Replacement (AVIM) .....	5.46
Main Rotor Gearshaft Installation, Hoisting – .....	1.88	Main Rotor Lower Shoe Identification Plate Replacement (AVIM) .....	5.50
Main Rotor Gearshaft Removal, Hoisting – .....	1.87	Main Rotor Lower Shoe Scissor Attach Sleeve Bearings Replacement .....	5.49A
		Main Rotor Mast Mounting Bolt Replacement (AVIM) .....	6.99
		Main Rotor Mast Support Base Spacer Plate Removal/Installation .....	6.98
		Main Rotor Pitch Horn Washer Replacement (AVIM) .....	5.29A
		Main Rotor Pitch Housing and Blade – Electrical Lead Removal/Installation .	5.31



<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Main Rotor Pitch Housing Identification Plate Replacement .....	5.34	Main Rotor Track and Balance AVA Kit Installation .....	1.108A
Main Rotor Pitch Housing Installation ..	5.26	Main Rotor Track and Balance AVA Kit Removal .....	1.109A
Main Rotor Pitch Housing Removal ....	5.25	Main Rotor Upper Bearing Inner Race/Rollers Grease Repacking (AVIM) .....	5.46B
Main Rotor Pitch Housing Shim Replacement (AVIM) .....	5.27	Main Rotor Upper Seal Retainer and Plain Encased Seal Removal/Installation .....	5.45
Main Rotor Pitch Housing Striker Strip Replacement (AVIM) .....	5.29	Main Rotor, Flight Controls – Inspection	11.5
Main Rotor Pitch Housing Wire Support Bracket Replacement (AVIM) .....	5.28	Main Sleeve and Runout Tube Removal/Installation, No. 1 or No. 2 Engine Load Demand Spindle Gearbox .....	1.144A
Main Rotor Pitch Link Disassembly/Assembly .....	11.15	Main Sleeve and Runout Tube Removal/Installation, No. 1 or No. 2 Engine Power Available Spindle Gearbox .....	1.141A
Main Rotor Pitch Link Removal/Installation .....	11.14	Main Transmission Accessory Drive Lube Pump Removal/Installation ....	6.71
Main Rotor Scissor Removal/Installation, Load Bearing ..	11.16	Main Transmission Accessory Pump Filter Bowl, Element, and Pressure Indicator Removal/Installation .....	6.70
Main Rotor Scissor Removal/Installation, Secondary ....	11.18	Main Transmission Accessory Pump Oil Pressure Switch Removal/Installation	6.69
Main Rotor Shaft Fairing T205L or T205R Removal/Installation .....	2.126E	Main Transmission Aft Oil Jet Removal/Installation .....	6.52
Main Rotor Strap Pack Borescope Inspection .....	5.34A	Main Transmission APU Drive Flange Removal/Installation .....	6.73
Main Rotor Strap Pack Replacement ..	5.35	Main Transmission APU Input Seal Removal/Installation .....	6.74
Main Rotor Striker Plate Removal/Installation .....	5.30	Main Transmission Breather Removal/Installation .....	6.58
Main Rotor Support (Static) Mast Installation, Hoisting – .....	1.90	Main Transmission Check Valve Removal/Installation .....	6.80
Main Rotor Support (Static) Mast Removal, Hoisting – .....	1.89	Main Transmission Chip Detector Inspection .....	6.45
Main Rotor Support Mast Removal/Installation .....	6.97	Main Transmission Chip Detector Replacement .....	6.46
Main Rotor Support Strut Bushing Replacement (AVIM) .....	2.95B	Main Transmission Compressor Drive Adapter and Seal Removal/Installation .....	6.54
Main Rotor Swashplate Fixture Installation .....	1.118	Main Transmission Coupling Halves Replacement .....	6.77
Main Rotor Swashplate Fixture Removal .....	1.119		
Main Rotor Swashplate Installation ....	11.7		
Main Rotor Swashplate Installation, Hoisting – .....	1.94		
Main Rotor Swashplate Removal .....	11.6		
Main Rotor Swashplate Removal, Hoisting – .....	1.93		
Main Rotor Swashplate Shoulder Pin Replacement .....	11.8		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Main Transmission Filter Bowl, Element, and Differential Pressure Switch (Lockwired Type) Removal/Installation . . . . .	6.61	Main Transmission Installation, Hoisting – . . . . .	1.92
Main Transmission Filter Bowl, Element, and Differential Pressure Switch (Retainer Ringed Type) Removal/Installation . . . . .	6.62	Main Transmission Low Oil Pressure Switch Removal/Installation . . . . .	6.78
Main Transmission Filter Inspection . . . . .	6.60	Main Transmission Lube System Hose (Left Side) Replacement . . . . .	6.81
Main Transmission Fixture Installation . . . . .	1.114	Main Transmission Lube System Hose (Right Side) Replacement . . . . .	6.82
Main Transmission Fixture Removal . . . . .	1.115	Main Transmission Magnetic Pickup Replacement . . . . .	6.44
Main Transmission Float Diverter Valve Disassembly/Assembly . . . . .	6.120	Main Transmission Oil Drain Tubes Removal/Installation . . . . .	6.87
Main Transmission Float Diverter Valve Removal/Installation . . . . .	6.119	Main Transmission Oil Filler Cap Screen Removal/Installation . . . . .	6.47
Main Transmission Forward Oil Jet and Nozzle Removal/Installation . . . . .	6.51	Main Transmission Oil Filler Removal/Installation . . . . .	6.48
Main Transmission Generator Quick-Attach Assembly Removal/Installation . . . . .	6.49	Main Transmission Oil Filter Safety Relief Valve Removal/Installation . . . . .	6.63
Main Transmission Generator Seal Replacement . . . . .	6.43	Main Transmission Oil Jet Filter Removal/Installation . . . . .	6.50
Main Transmission Generator Spline Adapter and Cork Stopper Replacement . . . . .	6.72	Main Transmission Oil Pressure Switch Tee Removal/Installation . . . . .	6.79
Main Transmission Heat Exchanger Bypass Valve Replacement . . . . .	6.83	Main Transmission Oil Sampling . . . . .	1.33
Main Transmission Hoisting, Crane Adjustment – . . . . .	1.103	Main Transmission Oil System Draining, Flushing and Servicing . . . . .	1.32
Main Transmission Hydraulic Pump Seal Replacement . . . . .	6.89	Main Transmission Pressure Relief Valve Removal/Installation . . . . .	6.56
Main Transmission Identification Plate Replacement . . . . .	6.57	Main Transmission Primary Lube Oil Rotary Pump Removal/Installation . . . . .	6.114
Main Transmission Input Coupling Removal/Installation . . . . .	6.3	Main Transmission Removal . . . . .	6.101
Main Transmission Input Drive Clutch Removal/Installation . . . . .	6.115	Main Transmission Removal, Hoisting – . . . . .	1.91
Main Transmission Input Drive Housing Removal/Installation . . . . .	6.117	Main Transmission Rotor Brake Actuator (Goodyear/ABSC) Disassembly/Assembly (AVIM) . . . . .	6.68
Main Transmission Input Pinion Seal Removal/Installation . . . . .	6.116	Main Transmission Rotor Brake Actuator (Goodyear/ABSC) Removal/Installation . . . . .	6.64
Main Transmission Input Shaft Oil Jet and Screen Removal/Installation . . . . .	6.55	Main Transmission Rotor Brake Actuator (Parker Hannifin) Disassembly/Assembly (AVIM) . . . . .	6.67A
Main Transmission Inspection . . . . .	6.41	Main Transmission Rotor Brake Actuator (Parker Hannifin) Removal/Installation . . . . .	6.65
Main Transmission Installation . . . . .	6.107		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Main Transmission Rotor Brake Disk Removal/Installation . . . . .	6.66	Manifold Air Filter Replacement, Primary and/or Utility Hydraulic . . . . .	7.160
Main Transmission Rotor Brake Seal Replacement . . . . .	6.67	Manifold Dirty Filter Indicator Replacement, Primary Hydraulic . . . . .	7.17
Main Transmission Sight Indicator Removal/Installation . . . . .	6.59	Manifold Dirty Filter Indicator, Utility Hydraulic . . . . .	7.71
Main Transmission Standpipe Removal/Installation (AVIM) . . . . .	6.118	Manifold Drain Hose Replacement, Primary Hydraulic . . . . .	7.19
Main Transmission Tail Rotor Coupling Removal/Installation . . . . .	6.4	Manifold Drain Hose Replacement, Utility Hydraulic . . . . .	7.78
Main Transmission Tail Rotor Drive Seal Replacement . . . . .	6.75	Manifold Fill/Bleed Valve Replacement, Utility Hydraulic Accumulator Nitrogen . . . . .	7.83
Main Transmission Tail Rotor Flange Cork Stopper Replacement . . . . .	6.76	Manifold Fill/Bleed Valve Replacement, Utility Hydraulic Return Accumulator Nitrogen . . . . .	7.95
Main Transmission Temperature Transducer Replacement . . . . .	6.42	Manifold Installation, Aircraft Air Pressure Fluid . . . . .	7.138
Main Transmission Upper Cover Oil Jet Removal/Installation . . . . .	6.53	Manifold Low Level Piston Replacement (AVIM), Utility Hydraulic . . . . .	7.76
MAINT LT or APU Circuit Breaker Removal/Installation . . . . .	9.42	Manifold Low Level Valve Replacement (AVIM), Utility Hydraulic . . . . .	7.77
Maintenance Allocation Chart . . . . .	B.3	Manifold Manual Bleed Valve Replacement, Primary Hydraulic . . . . .	7.12
Maintenance Allocation Chart (Section II), Use of the . . . . .	B.4	Manifold Manual Bleed Valve Replacement, Utility Hydraulic . . . . .	7.65
Maintenance Checks and Services, Preventive . . . . .	1.7	Manifold Nipple Removal/Installation, Fuel . . . . .	10.95
Maintenance Crane Installation . . . . .	1.97	Manifold Pressure Gage Replacement, Utility Hydraulic Accumulator Nitrogen . . . . .	7.84
Maintenance Crane Removal . . . . .	1.105	Manifold Pressure Gage Replacement, Utility Hydraulic Return Accumulator Nitrogen . . . . .	7.96
Maintenance Crane, Hoisting – . . . . .	1.80	Manifold Pressure Relief Valve Replacement, Utility Hydraulic . . . . .	7.72
Maintenance Forms, Records, and Reports . . . . .	1.2	Manifold Pressure Switch Replacement, Primary Hydraulic . . . . .	7.14
Maintenance Functions . . . . .	B.5	Manifold Pressure Switch Replacement, Utility Hydraulic . . . . .	7.67
Maintenance Headset Connect/Disconnect . . . . .	1.134	Manifold Pressure Transducer Replacement, Primary Hydraulic . . . . .	7.15
Maintenance Inspection Requirements, Preventive . . . . .	1.135	Manifold Pressure Transducer Replacement, Utility Hydraulic . . . . .	7.68
Maintenance Light Disassembly/Assembly, Utility . . . . .	9.91	Manifold Removal, Aircraft Air Pressure Fluid . . . . .	7.137
Major Components, Location and Description of . . . . .	1.9		
Manifold Air Check Valve Replacement, Primary Hydraulic . . . . .	7.13		
Manifold Air Check Valve Replacement, Utility Hydraulic . . . . .	7.66		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Manifold Removal/Installation, No. 1 Engine Drain .....	4.108	Manual Switch Removal/Installation, Collective Stick Stabilator .....	11.26
Manifold Removal/Installation, No. 2 Engine Drain .....	4.109	Map Stowage Compartment Removal/Installation, CPG .....	2.184
Manifold Removal/Installation, Pressure	7.149	Marking, Main Rotor Blade Trailing Edge Trim Tab .....	5.8A
Manifold Removal/Installation, Pressure Fuel .....	10.94	Mass Termination Connector (MTC) (1 or 2 Inch) Repair .....	9.135
Manifold Removal/Installation, Primary Hydraulic .....	7.11	Mass Termination Connector (MTC) Keying .....	9.137
Manifold Removal/Installation, Utility Hydraulic .....	7.64	Mass Termination Connector (MTC) Repair, Coaxial .....	9.138
Manifold Removal/Installation, Utility Hydraulic Accumulator Nitrogen ....	7.85	Mass Termination Connector (MTC) With Shield Bus (1 or 2 Inch) Repair .	9.136
Manifold Replacement, Utility Hydraulic Return Accumulator Nitrogen .....	7.98	Mast Base Oil Seal Retainer Removal/Installation (AVIM) .....	6.100
Manifold Reservoir Seal Replacement (AVIM), Primary Hydraulic .....	7.18	Mast Installation, Hoisting – Main Rotor Support (Static) .....	1.90
Manifold Reservoir Seal Replacement (AVIM), Utility Hydraulic .....	7.74	Mast Mounting Bolt Replacement (AVIM), Main Rotor .....	6.99
Manifold Return Filter Sleeve, Manifold Guide, and Spring Replacement, Hydraulic .....	7.70	Mast Removal, Hoisting – Main Rotor Support (Static) .....	1.89
Manifold Solenoid Valve Replacement, Utility Hydraulic .....	7.73	Mast Removal/Installation, Main Rotor De-Ice Power Distributor and Air Data System (ADS) .....	6.90
Manifold Strainer Element Removal/Installation (AVIM), Utility Hydraulic .....	7.75	Mast Removal/Installation, Main Rotor Support .....	6.97
Manifold Strainer Replacement, Primary Hydraulic .....	7.16	Mast Repair (AVIM), Main Rotor Air Data System (ADS) .....	6.91
Manifold Strainer Replacement, Utility Hydraulic .....	7.69	Mast Support Base Removal/Installation, Rotor Support .	2.88
Manifold Support Clip Replacement, No. 1 and No. 2 Engine Drain .....	4.110	Mast Support Base Spacer Plate Removal/Installation, Main Rotor ....	6.98
Manifold Tube Removal/Installation, Utility Hydraulic Return Accumulator Nitrogen .....	7.97	Mast, or Swashplate Hoisting, Crane Adjustment – Main Rotor Gearshaft Support (Static) .....	1.102
Manifold, Engine Air Flexible Connection Housing, and Utility Tube Removal/Installation, Ground Air Connection .....	7.144	Master Caution/Warning Panel Light Switch Replacement (AVIM), Pilot or CPG Caution/Warning and .....	9.107
Manual Bleed Valve Replacement, Primary Hydraulic Manifold .....	7.12	Master Caution/Warning Panel Pushbutton Cap Removal/Installation, Pilot or CPG Caution/Warning and .....	9.106
Manual Bleed Valve Replacement, Utility Hydraulic Manifold .....	7.65		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Master Caution/Warning Panel Removal/Installation, Pilot or CPG ..	9.122	Miscellaneous Electrical Components Inspection .....	9.126
Master Cylinder Disassembly/Assembly (AVIM), Parking Brake .....	3.58	Miscellaneous Instruments Inspection ..	8.43
Master Cylinders Removal/Installation, CPG Brake .....	3.57	Mixer Assembly and Bolt Removal/Installation, Rotor Support ..	2.86
Master Cylinders Removal/Installation, Pilot Brake .....	3.56	Mixer Assembly Identification Plate Replacement, Rotor Support .....	2.87
Master Guide, Aircraft Inventory .....	C.7	Module Assembly Replacement, Nose Gearbox Fuselage Control .....	2.124
Matrix Fixed Resistor Replacement, Pilot Instrument Panel .....	9.53	Module Disassembly/Assembly (AVIM), Multichannel Dimming Controller ....	9.76
Matrix Removal/Installation, Pilot Instrument Panel .....	9.51	Module Removal/Installation (AVIM), Multichannel Dimming Controller ....	9.75
Matrix Terminal Junction Box and Relay Track Assembly Replacement, Pilot Instrument Panel .....	9.54	Module Replacement (AVIM), Selectable Digital Display (SDD) Panel Switch .....	8.15
Matrix Variable Resistor Replacement, Pilot Instrument Panel .....	9.52	Module Replacement, Electronic Relay and .....	9.139
Measurement, Main Rotor Blade Droop Angle .....	5.10	Monitor Panel Removal/Installation, Nitrogen Inerting .....	10.123
Mechanism Repair (AVIM), CPG Station Access Door .....	2.56	Monitor, External Power .....	9.37
Metallic Chip Detector Inspection, Engine Nose Gearbox .....	6.25	Mooring Lug Door L115 or R115 Removal/Installation .....	2.43A
Metallic Chip Detector Removal/Installation, Engine Nose Gearbox .....	6.26	Mooring – Paved Surface .....	1.77
Meter Removal/Installation, Pilot Icing Severity .....	8.50	Mooring – Unpaved Surface .....	1.76
Method, Defueling – Closed Circuit Refueling (CCR) .....	1.20	Motional Transducer Removal/Installation .....	11.182
Method, Defueling – Gravity .....	1.21	Motional Transducer Removal/Installation, APU .....	TM 1-2835-213-23
Method, Fuel Servicing – Hot Rapid Closed Circuit Refueling (CCR) .....	1.17	Motional Transducer Support Bracket Replacement .....	11.183
Method, Fuel Servicing – Hot Rapid Single Point Adapter (SPA) .....	1.18	Motor Pressure Hose Replacement, Utility Hydraulic Accumulator APU Start .....	7.89
Microphone Wire Harness Disassembly/Assembly, Pilot W220 or CPG W219 .....	9.132	Motor Return Hose Replacement, Utility Hydraulic Accumulator APU Start ...	7.90
Mirror Assembly Removal/Installation, CPG Rear View .....	2.190	Motor, and Drain Tube Removal/Installation, Fuel Boost Pump .....	10.114

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Mount Adapter Removal/Installation, Pilot Boresight Reticle Unit (BRU) ...	2.187	Mount Removal/Installation, Sensor Surveying Unit (SSU) .....	2.191
Mount Bracket Assembly Removal/Installation, Lateral F.S. 176.00 Servocylinder .....	11.110	Mount Support Bearing Bore Repair, Firewall Assembly No. 1 or No. 2 Aft Inboard Engine .....	2.150A
Mount Bracket Bonding, Pilot/CPG Armored Crew Seat M-43 Blower ...	2.167	Mount Support Bearing Replacement, Firewall Assembly No. 1 or No. 2 Aft Inboard Engine .....	2.150
Mount Bushing Removal/Installation (AVIM), No. 1 or No. 2 Engine Aft Inboard Mount/Aft Lower .....	4.56	Mount Support Bearing Replacement (AVIM), No. 1 or No. 2 Aft Engine ...	4.85A
Mount, Removal/Installation, Structural Assembly Doppler	2-99A	Mount Support Removal/Installation, No. 1 or No. 2 Aft Engine .....	4.85
Mount, Fitting Removal/Installation, CPG Boresight .....	2.39	Mount Support Removal/Installation, No. 1 or No. 2 Forward Engine .....	4.84
Mount Fitting Replacement, APU Forward Left or Right .....	15.36	Mount Support Removal/Installation, Pilot Boresight Reticle Unit (BRU) ...	2.188
Mount Installation, Engine Buildup – No. 1 and No. 2 Engine .....	4.31	Mount/Aft Lower Mount Bushing Removal/Installation (AVIM), No. 1 or No. 2 Engine Aft Inboard .....	4.56
Mount Pads Sleeve Bushing Replacement (AVIM), Gun and Ammo Support Aft .....	2.37	Mounting Base Removal/Installation, Pilot or CPG Utility Light and .....	9.78
Mount Pads Sleeve Bushing Replacement (AVIM), Gun and Ammo Support Forward .....	2.38	Mounting Bolt Replacement (AVIM), Main Rotor Mast .....	6.99
Mount Removal, Engine Teardown – No. 1 and No. 2 Engine .....	4.29	Mounting Bracket Removal/Installation, Fire Extinguisher .....	2.47
Mount Removal/Installation, Link Assembly Aft Engine .....	4.87	Multichannel Dimming Controller Chassis Disassembly/Assembly (AVIM) .....	9.77
Mount Removal/Installation, No. 1 and No. 2 Engine Aft Inboard .....	4.115	Multichannel Dimming Controller Module Disassembly/Assembly (AVIM) .....	9.76
Mount Removal/Installation, No. 1 and No. 2 Engine Aft Lower .....	4.116	Multichannel Dimming Controller Module Removal/Installation (AVIM) .	9.75
Mount Removal/Installation, No. 1 and No. 2 Engine Forward Inboard .....	4.117	Multichannel Dimming Controller Unit Removal/Installation .....	9.74
Mount Removal/Installation, No. 1 and No. 2 Engine Forward Lower .....	4.118	Multiplex Remote Terminal Unit (MRTU) Bracket Removal/Installation, Pylon .	16.16
Mount Removal/Installation, Pilot Boresight Reticle Unit (BRU) .....	2.186		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
<b>N</b>			
Nacelle Carry-Thru Post Assembly Removal/Installation . . . . .	2.97	Ng Indicators Light Panel, Digital Display Driver Circuit Card Replacement (AVIM), Torque, TGT, Fuel, and . . . . .	8.10
Nacelle Carry-Thru Strut Assembly Removal/Installation . . . . .	2.96	Ng Indicators Replacement (AVIM), Analog or Interface Circuit Card on Torque, TGT, Fuel, and . . . . .	8.11
Nacelle Damage and Types of Repair, Classification of . . . . .	2.129	Ng RPM Indicator Removal/Installation, Pilot Engine Turbine Gas Temperature (TGT) Indicator and Engine Gas Generator . . . . .	8.9
Nacelle Door Installation Assembly Removal/Installation, Engine . . . . .	2.149	Nick, or Gouge Repair, Main Rotor Blade Scratch, . . . . .	5.6
Nacelle Door Structure, Work Platform .	2.130	Nick, or Gouge Repair, Tail Rotor Blade Scratch, . . . . .	5.55
Nacelle Fairing Assembly Eye Bolt Replacement, Engine . . . . .	2.136	Nipple Removal/Installation, Fuel Manifold . . . . .	10.95
Nacelle Fairing Removal/Installation, Engine . . . . .	2.135	Nipple Removal/Installation, Pylon Actuator Hose and . . . . .	16.10
Nacelle Inspection, Engine . . . . .	2.128	Nipple Replacement, Primary Hydraulic GSE Fill Port . . . . .	7.22
Nacelle Radiation Shields Replacement, Left . . . . .	4.96	Nipple Replacement, Wing Fuselage Coupling . . . . .	7.102
Nacelle Radiation Shields Replacement, Right . . . . .	4.95	Nitrogen Inert Breakaway Valve Hose Removal/Installation, Aft Fuel Cell . .	10.131
Nacelle Removal/Installation, No. 1 Engine . . . . .	2.133	Nitrogen Inert Breakaway Valve Hose Removal/Installation, Forward Fuel Cell . . . . .	10.134
Nacelle Removal/Installation, No. 2 Engine . . . . .	2.134	Nitrogen Inert Breakaway Valve Removal/Installation, Forward Fuel Cell . . . . .	10.121
Nacelle Skin Plates, Engine . . . . .	2.132	Nitrogen Inert Breakaway Valve Removal/Installation, Aft Fuel Cell . .	10.119
Nacelle Structure, Engine . . . . .	2.131	Nitrogen Inert Check Valve Removal/Installation, Aft Fuel Cell . .	10.133
Nacelle Strut Assembly Removal/Installation, Engine . . . . .	2.151	Nitrogen Inert Orifice Hose Removal/Installation, Aft Fuel Cell . .	10.132
Name Plate and BUCS Warning Plate Replacement, Hydraulic . . . . .	7.54	Nitrogen Inert Outlet Orifice Removal/Installation, Aft Fuel Cell . .	10.120
Navigation Instruments Inspection . . . .	8.41	Nitrogen Inert Vent Valve Removal/Installation . . . . .	10.122
Navigation Lamp Replacement, Tail or Wing . . . . .	9.95	Nitrogen Inerting Monitor Panel Removal/Installation . . . . .	10.123
Navigation Light Installation, Tail or Wing . . . . .	9.94		
Navigation Light Removal, Tail or Wing .	9.93		
Neck Installation, Forward Fuel Cell Filler . . . . .	10.27		
Neck Removal, Forward Fuel Cell Filler	10.26		
Neck Removal/Installation, Aft Fuel Cell Filler . . . . .	10.34		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Nitrogen Inerting Unit (NIU) Conditioned Air Outlet Hose Removal/Installation	10.126	No Time Limit, Flyable Storage –	E.5
Nitrogen Inerting Unit (NIU) Cooling Air Exhaust Hose Removal/Installation	10.130	No Time Limit, Removal from Flyable Storage –	E.6
Nitrogen Inerting Unit (NIU) Cooling Air Inlet Hose Removal/Installation	10.129	No. 1 Actuating Cylinder Removal/Installation	4.89
Nitrogen Inerting Unit (NIU) Filter Removal Installation	10.125	No. 1 and No. 2 Engine Aft Inboard Mount Removal/Installation	4.115
Nitrogen Inerting Unit (NIU) Pressurized Air Supply Hose Removal/Installation	10.127	No. 1 and No. 2 Engine Aft Lower Mount Removal/Installation	4.116
Nitrogen Inerting Unit (NIU) Pressurized Air Supply Inlet Hose Removal/Installation	10.128	No. 1 and No. 2 Engine Air Duct Installation, Engine Buildup –	4.47
Nitrogen Inerting Unit (NIU) Removal/Installation	10.124	No. 1 and No. 2 Engine Air Duct Removal, Engine Teardown	4.13
Nitrogen Manifold Fill/Bleed Valve Replacement, Utility Hydraulic Accumulator	7.83	No. 1 and No. 2 Engine Air Inlet Installation, Engine Buildup –	4.45
Nitrogen Manifold Fill/Bleed Valve Replacement, Utility Hydraulic Return Accumulator	7.95	No. 1 and No. 2 Engine Air Inlet Removal, Engine Teardown –	4.15
Nitrogen Manifold Pressure Gage Replacement, Utility Hydraulic Accumulator	7.84	No. 1 and No. 2 Engine Anti-Ice Supply Tube Removal/Installation	4.72
Nitrogen Manifold Pressure Gage Replacement, Utility Hydraulic Return Accumulator	7.96	No. 1 and No. 2 Engine Baseplate and Spindle Gearboxes Installation, Engine Buildup –	4.37
Nitrogen Manifold Removal/Installation, Utility Hydraulic Accumulator	7.85	No. 1 and No. 2 Engine Baseplate and Spindle Gearboxes Removal, Engine Teardown –	4.23
Nitrogen Manifold Replacement, Utility Hydraulic Return Accumulator	7.98	No. 1 and No. 2 Engine Center Secondary Nozzle Removal/Installation	4.122
Nitrogen Manifold Tube Removal/Installation, Utility Hydraulic Return Accumulator	7.97	No. 1 and No. 2 Engine Combustor Drain Hose Replacement	4.111
Nitrogen, Main Landing Gear Shock Strut Service –	1.40	No. 1 and No. 2 Engine Drain Manifold Support Clip Replacement	4.110
Nitrogen, Tail Landing Gear Shock Strut Servicing –	1.42	No. 1 and No. 2 Engine Drain System Installation (T700-GE-701 Engine), Engine Buildup –	4.34
Nitrogen, Utility Hydraulic Accumulator Servicing –	1.36	No. 1 and No. 2 Engine Drain System Installation (T700-GE-701C Engine), Engine Buildup –	4.35
Nitrogen, Utility Hydraulic Return Accumulator Servicing –	1.37	No. 1 and No. 2 Engine Drain System Removal (T700-GE-701 Engine), Engine Teardown –	4.25



<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
No. 1 and No. 2 Engine Drain System Removal (T700-GE-701C Engine), Engine Teardown – . . . . .	4.26	No. 1 and No. 2 Engine Power Available Spindle Center Cable Support Removal/Installation . . . . .	4.175
No. 1 and No. 2 Engine Forward Inboard Mount Removal/Installation . . . . .	4.117	No. 1 and No. 2 Engine Power Control Spindle Gearbox Baseplate Removal/Installation . . . . .	4.142
No. 1 and No. 2 Engine Forward Lower Mount Removal/Installation . . . . .	4.118	No. 1 and No. 2 Engine Primary Exhaust Nozzle Removal/Installation . . . . .	4.119
No. 1 and No. 2 Engine Fuel Inlet Hose Installation, Engine Buildup – . . . . .	4.44	No. 1 and No. 2 Engine Removal from Handling Adapter, Engine Teardown – . . . . .	4.28
No. 1 and No. 2 Engine Fuel Inlet Hose Removal, Engine Teardown – . . . . .	4.16	No. 1 and No. 2 Engine Secondary Nozzle Horizontal Heat Shield and Shield Panel Removal/Installation . . . . .	4.130
No. 1 and No. 2 Engine Gearbox Drain Hose Removal/Installation . . . . .	4.105	No. 1 and No. 2 Engine Secondary Nozzle Intermediate Support Strut Removal/Installation . . . . .	4.125
No. 1 and No. 2 Engine Inboard Secondary Nozzle Heat Shield and Support Bracket Removal/Installation . . . . .	4.131	No. 1 and No. 2 Engine Secondary Nozzle Pin Replacement . . . . .	4.132
No. 1 and No. 2 Engine Inboard Secondary Nozzle Removal/Installation . . . . .	4.121	No. 1 and No. 2 Engine Secondary Nozzle Structural Support Removal/Installation . . . . .	4.123
No. 1 and No. 2 Engine Installation on Handling Adapter, Engine Buildup – . . . . .	4.32	No. 1 and No. 2 Engine Secondary Nozzle Support Bushing Replacement (AVIM) . . . . .	4.128
No. 1 and No. 2 Engine Load Demand Spindle Rigging . . . . .	4.185	No. 1 and No. 2 Engine Secondary Nozzle Support Removal/Installation . . . . .	4.126
No. 1 and No. 2 Engine Load Demand Spindle Rigging Check . . . . .	4.184	No. 1 and No. 2 Engine Secondary Nozzle Upper and Intermediate Support Strut Bushing Replacement (AVIM) . . . . .	4.127
No. 1 and No. 2 Engine Louver Actuator Removal/Installation . . . . .	4.57	No. 1 and No. 2 Engine Secondary Nozzle Upper Support Strut and Clevis Removal/Installation . . . . .	4.124
No. 1 and No. 2 Engine Mount Installation, Engine Buildup – . . . . .	4.31	No. 1 and No. 2 Engine Shroud Seal Ring Installation, Engine Buildup – . . . . .	4.46
No. 1 and No. 2 Engine Mount Removal, Engine Teardown – . . . . .	4.29	No. 1 and No. 2 Engine Shroud Seal Ring Removal, Engine Teardown – . . . . .	4.14
No. 1 and No. 2 Engine Oil Chip Collector Installation, Engine Buildup – . . . . .	4.33	No. 1 and No. 2 Engine Shroud Support Installation, Engine Buildup – . . . . .	4.36
No. 1 and No. 2 Engine Outboard and Center Secondary Nozzle Vertical Heat Shield and Support Bracket Removal/Installation . . . . .	4.129		
No. 1 and No. 2 Engine Outboard Secondary Nozzle Removal/Installation . . . . .	4.120		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
No. 1 and No. 2 Engine Shroud Support Removal, Engine Teardown – . . . . .	4.24	No. 1 Engine Fuel Inlet Hose Replacement . . . . .	10.97
No. 1 and No. 2 Engine Swirl Frame Drain Tube Removal/Installation (T700-GE-701 Engine) . . . . .	4.113	No. 1 Engine Fuel Pressure Switch Replacement . . . . .	4.97
No. 1 and No. 2 Engine Swirl Frame Drain Tube Removal/Installation (T700-GE-701C Engine) . . . . .	4.114	No. 1 Engine Lower Fuel Supply Hose Replacement . . . . .	10.102
No. 1 and No. 2 Engine Water Wash Coupling Half Removal/Installation . .	4.102	No. 1 Engine Installation . . . . .	4.48
No. 1 and No. 2 Engine, Engine Buildup – . . . . .	4.30	No. 1 Engine Installation – Install in Nacelle . . . . .	4.49
No. 1 and No. 2 Engine, Engine Teardown – . . . . .	4.12	No. 1 Engine Installation – Lower Connections . . . . .	4.50
No. 1 and No. 2 Engine Oil Chip Collector Removal, Engine Teardown – . . . . .	4.27	No. 1 Engine Installation – Upper Connections . . . . .	4.51
No. 1 Circuit Breakers (Attached to Bus Bars) Replacement, CPG Circuit Breaker Panel . . . . .	9.45	No. 1 Engine Interlock Switch Removal/Installation (AVIM), Pilot Power Quadrant Panel – . . . . .	4.193
No. 1 Circuit Breakers (Not Attached to Bus Bars) Replacement, CPG Circuit Breaker Panel . . . . .	9.46	No. 1 Engine Load Demand Spindle Aft Cable Removal . . . . .	4.176
No. 1 Engine Air Starter and Regulating Valve Installation, Engine Buildup – .	4.38	No. 1 Engine Load Demand Spindle Gearbox Removal/Installation . . . . .	4.143
No. 1 Engine Air Starter and Regulating Valve Removal, Engine Teardown – .	4.19	No. 1 Engine Load Demand Spindle/Power Available Spindle Aft Cable Spring Tension Clip Removal/Installation . . . . .	4.180
No. 1 Engine Air Starter Removal/Installation . . . . .	4.81	No. 1 Engine Louver Installation . . . . .	4.59
No. 1 Engine Anti-Ice and Bleed Air System Removal, Engine Teardown –	4.21	No. 1 Engine Louver Removal . . . . .	4.58
No. 1 Engine Anti-Ice and Bleed Air System Installation, Engine Buildup –	4.40	No. 1 Engine Louver Support Removal/Installation . . . . .	4.64
No. 1 Engine Compressor Bleed Air Tube Removal/Installation . . . . .	4.74	No. 1 Engine Nacelle Removal/Installation . . . . .	2.133
No. 1 Engine Crossfeed/Shutoff Valve Removal/Installation . . . . .	10.99	No. 1 Engine Oil Pressure Transmitter Removal/Installation . . . . .	4.99
No. 1 Engine Drain Manifold Removal/Installation . . . . .	4.108	No. 1 Engine Out Disable Switch Removal/Installation (AVIM), CPG Power Quadrant . . . . .	4.196
No. 1 Engine Fire Extinguisher Fitting Replacement . . . . .	12.43	No. 1 Engine Overspeed Drain Valve Hose Removal/Installation . . . . .	4.106
No. 1 Engine Firewall Breakaway Valve Removal/Installation . . . . .	10.104	No. 1 Engine Power Available Spindle (PAS) Rigging Procedure . . . . .	4.182
		No. 1 Engine Power Available Spindle Aft Cable Installation . . . . .	4.171
		No. 1 Engine Power Available Spindle Aft Cable Removal . . . . .	4.170

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
No. 1 Engine Power Available Spindle Cable Installation (Pilot to CPG) . . . .	4.159	No. 1 or No. 2 Engine Aft Inboard Mount/Aft Lower Mount Bushing Removal/Installation (AVIM) . . . . .	4.56
No. 1 Engine Power Available Spindle Cable Removal (Pilot to CPG) . . . . .	4.158	No. 1 or No. 2 Engine Anti-Ice Support Removal/Installation . . . . .	4.71
No. 1 Engine Power Available Spindle Center Cable Installation . . . . .	4.146	No. 1 or No. 2 Engine Anti-Ice Tube Removal/Installation . . . . .	4.70
No. 1 Engine Power Available Spindle Center Cable Removal . . . . .	4.145	No. 1 or No. 2 Engine Directional Control Shutoff Valve Removal/Installation . . . . .	4.63
No. 1 Engine Power Available Spindle Gearbox Removal/Installation . . . . .	4.140	No. 1 or No. 2 Engine Drain Hose Replacement . . . . .	4.112
No. 1 Engine Power Available Spindle System Rigging Check . . . . .	4.186	No. 1 or No. 2 Engine Inlet Coupling Removal/Installation . . . . .	4.73
No. 1 Engine Power Control Gearbox Aft Cable Support Removal/Installation . . . . .	4.172	No. 1 or No. 2 Engine Load Demand Spindle Forward Cable Installation . .	4.150
No. 1 Engine Regulating Valve Removal/Installation . . . . .	4.79	No. 1 or No. 2 Engine Load Demand Spindle Forward Cable Removal . . . .	4.149
No. 1 Engine Removal . . . . .	4.3	No. 1 or No. 2 Engine Load Demand Spindle Gearbox Main Fitting and Runout Tube Removal/Installation . . .	4.144A
No. 1 Engine Removal – Lower Disconnections . . . . .	4.6	No. 1 or No. 2 Engine Louver Actuator Hose Replacement . . . . .	4.62
No. 1 Engine Removal – Pilot Station . .	4.4	No. 1 or No. 2 Engine Louver Epoxy Paint Repair (AVIM) . . . . .	4.67
No. 1 Engine Removal – Remove from Helicopter . . . . .	4.7	No. 1 or No. 2 Engine Oil Chip Collector Removal/Installation . . . . .	4.101
No. 1 Engine Removal – Upper Disconnections . . . . .	4.5	No. 1 or No. 2 Engine Power Available Spindle Gearbox Main Fitting and Runout Tube Removal/Installation . . .	4.141A
No. 1 Engine Upper Fuel Supply Hose Replacement . . . . .	10.106	No. 1 or No. 2 Engine Quick Release Pins Replacement . . . . .	4.88
No. 1 Engine Wiring Installation, Engine Buildup – . . . . .	4.42	No. 1 or No. 2 Engine Secondary Nozzle Crack Repair (AVIM) . . . . .	4.134
No. 1 Engine Wiring Removal, Engine Teardown – . . . . .	4.17	No. 1 or No. 2 Engine Shroud Assembly Removal/Installation . . . . .	4.103
No. 1 Light Indicating Panel Removal/Installation, CPG Circuit Breaker Panel . . . . .	9.44	No. 1 or No. 2 Forward Engine Mount Support Removal/Installation . . . . .	4.84
No. 1 or No. 2 Aft Engine Mount Support Bearing Replacement (AVIM) . . . . .	4.85A	No. 1 or No. 2 Power Available Spindle Cable Connecting Links Disassembly/Assembly . . . . .	4.165
No. 1 or No. 2 Aft Engine Mount Support Removal/Installation . . . . .	4.85	No. 1 or No. 2 Power Available Spindle Cable Connecting Links Removal/Installation . . . . .	4.164
No. 1 or No. 2 Aft Inboard Engine Mount Support Bearing Bore Repair, Firewall Assembly . . . . .	2.150A	No. 1 or No. 2 Power Available Spindle Cable Support Bracket Removal/Installation (Pilot to CPG) . .	4.163
No. 1 or No. 2 Aft Inboard Engine Mount Support Bearing Replacement, Firewall Assembly . . . . .	2.150	No. 1 Removal/Installation, Air Duct . . .	13.17
No. 1 or No. 2 Anti-Ice Thermostatic Switch Removal/Installation . . . . .	4.69	No. 10 Removal/Installation, Air Duct . .	13.26
No. 1 or No. 2 Anti-Ice Valve and Bracket Removal/Installation . . . . .	4.68		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
No. 11 Removal/Installation, Air Duct . .	13.27	No. 2 Engine Center Secondary Nozzle Removal/Installation, No. 1 and . . . . .	4.122
No. 2 Actuating Cylinder Removal/Installation . . . . .	4.90	No. 2 Engine Combustor Drain Hose Replacement, No. 1 and . . . . .	4.111
No. 2 Aft Engine Mount Support Removal/Installation, No. 1 or . . . . .	4.85	No. 2 Engine Compressor Bleed Air Adapter and Elbow Removal/Installation . . . . .	4.76
No. 2 Aft Inboard Engine Mount Support Bearing Replacement, Firewall Assembly No. 1 or . . . . .	2.150	No. 2 Engine Crossfeed/Shutoff Valve Removal/Installation . . . . .	10.100
No. 2 Anti-Ice Thermostatic Switch Removal/Installation, No. 1 or . . . . .	4.69	No. 2 Engine Directional Control Shutoff Valve Removal/Installation, No. 1 or . .	4.63
No. 2 Anti-Ice Valve and Bracket Removal/Installation, No. 1 or . . . . .	4.68	No. 2 Engine Drain Hose Replacement, No. 1 or . . . . .	4.112
No. 2 Engine Aft Inboard Mount Removal/Installation, No. 1 and . . . . .	4.115	No. 2 Engine Drain Manifold Removal/Installation . . . . .	4.109
No. 2 Engine Aft Inboard Mount/Aft Lower Mount Bushing Removal/Installation (AVIM), No. 1 or	4.56	No. 2 Engine Drain Manifold Support Clip Replacement, No. 1 and . . . . .	4.110
No. 2 Engine Aft Lower Mount Removal/Installation, No. 1 and . . . . .	4.116	No. 2 Engine Fire Extinguisher Fitting Replacement . . . . .	12.44
No. 2 Engine Air Duct Removal/Installation . . . . .	4.78	No. 2 Engine Firewall Breakaway Valve Removal/Installation . . . . .	10.105
No. 2 Engine Air Start Line Removal/Installation . . . . .	7.145	No. 2 Engine Forward Inboard Mount Removal/Installation, No. 1 and . . . . .	4.117
No. 2 Engine Air Starter and Regulating Valve Installation, Engine Buildup – .	4.39	No. 2 Engine Forward Lower Mount Removal/Installation, No. 1 and . . . . .	4.118
No. 2 Engine Air Starter and Regulating Valve Removal, Engine Teardown – .	4.20	No. 2 Engine Fuel Inlet Hose Installation, Engine Buildup – No. 1 and . . . . .	4.44
No. 2 Engine Air Starter Removal/Installation . . . . .	4.82	No. 2 Engine Fuel Inlet Hose Replacement . . . . .	10.98
No. 2 Engine Anti-Ice and Bleed Air System Installation, Engine Buildup –	4.41	No. 2 Engine Fuel Pressure Switch Replacement . . . . .	4.98
No. 2 Engine Anti-Ice and Bleed Air System Removal, Engine Teardown –	4.22	No. 2 Engine Fuel Supply Hose Replacement . . . . .	10.103
No. 2 Engine Anti-Ice Supply Tube Removal/Installation, No. 1 and . . . . .	4.72	No. 2 Engine Gearbox Drain Hose Removal/Installation, No. 1 and . . . . .	4.105
No. 2 Engine Anti-Ice Support Removal/Installation, No. 1 or . . . . .	4.71	No. 2 Engine Inboard Secondary Nozzle Heat Shield and Support Bracket Removal/Installation, No. 1 and . . . . .	4.131
No. 2 Engine Anti-Ice Tube Removal/Installation, No. 1 or . . . . .	4.70		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
No. 2 Engine Inboard Secondary Nozzle Removal/Installation, No. 1 and . . . . .	4.121	No. 2 Engine Louver Support Removal/Installation . . . . .	4.65
No. 2 Engine Inlet Coupling Removal/Installation, No. 1 or . . . . .	4.73	No. 2 Engine Nacelle Removal/Installation . . . . .	2.134
No. 2 Engine Installation – Install in Nacelle . . . . .	4.53	No. 2 Engine Power Available Spindle Gearbox Main Fitting and Runout Tube Removal/Installation, No. 1 or . . . . .	4.141A
No. 2 Engine Installation . . . . .	4.52	No. 2 Engine Oil Chip Collector Installation, Engine Buildup – No. 1 and . . . . .	4.33
No. 2 Engine Installation – Lower Connections . . . . .	4.54	No. 2 Engine Oil Chip Collector Removal/Installation, No. 1 or . . . . .	4.101
No. 2 Engine Installation – Upper Connections . . . . .	4.55	No. 2 Engine Oil Pressure Transmitter Removal/Installation . . . . .	4.100
No. 2 Engine Interlock Switch Removal/Installation (AVIM), Pilot Power Quadrant Panel – . . . . .	4.194	No. 2 Engine Out Disable Switch Removal/Installation (AVIM), CPG Power Quadrant . . . . .	4.197
No. 2 Engine Load Demand Spindle Aft Cable Installation . . . . .	4.179	No. 2 Engine Outboard and Center Secondary Nozzle Vertical Heat Shield and Support Bracket Removal/Installation, No. 1 and . . . . .	4.129
No. 2 Engine Load Demand Spindle Aft Cable Removal . . . . .	4.178	No. 2 Engine Outboard Secondary Nozzle Removal/Installation, No. 1 and . . . . .	4.120
No. 2 Engine Load Demand Spindle Forward Cable Installation, No. 1 or . . . . .	4.150	No. 2 Engine Overspeed Drain Valve Hose Removal/Installation . . . . .	4.107
No. 2 Engine Load Demand Spindle Forward Cable Removal, No. 1 or . . . . .	4.149	No. 2 Engine Power Available Spindle (PAS) Rigging Procedure . . . . .	4.183
No. 2 Engine Load Demand Spindle Gearbox Main Fitting and Runout Tube Removal/Installation, No. 1 or . . . . .	4.144A	No. 2 Engine Power Available Spindle Aft Cable Installation . . . . .	4.174
No. 2 Engine Load Demand Spindle Gearbox Removal/Installation . . . . .	4.144	No. 2 Engine Power Available Spindle Aft Cable Removal . . . . .	4.173
No. 2 Engine Load Demand Spindle Rigging Check, No. 1 and . . . . .	4.184	No. 2 Engine Power Available Spindle Cable Installation (Pilot to CPG) . . . . .	4.161
No. 2 Engine Load Demand Spindle Rigging, No. 1 and . . . . .	4.185	No. 2 Engine Power Available Spindle Cable Removal (Pilot to CPG) . . . . .	4.160
No. 2 Engine Load Demand Spindle/Power Available Spindle Aft Cable Spring Tension Clip Removal/Installation . . . . .	4.181	No. 2 Engine Power Available Spindle Center Cable Installation . . . . .	4.148
No. 2 Engine Louver Actuator Hose Replacement, No. 1 or . . . . .	4.62	No. 2 Engine Power Available Spindle Center Cable Removal . . . . .	4.147
No. 2 Engine Louver Actuator Removal/Installation, No. 1 and . . . . .	4.57	No. 2 Engine Power Available Spindle Center Cable Support Removal/Installation, No. 1 and . . . . .	4.175
No. 2 Engine Louver Disassembly/Assembly (AVIM), No. 1 and . . . . .	4.66	No. 2 Engine Power Available Spindle Gearbox Removal/Installation . . . . .	4.141
No. 2 Engine Louver Epoxy Paint Repair (AVIM), No. 1 or . . . . .	4.67	No. 2 Engine Power Available Spindle System Rigging Check . . . . .	4.187
No. 2 Engine Louver Installation . . . . .	4.61		
No. 2 Engine Louver Removal . . . . .	4.60		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
No. 2 Engine Power Control Spindle Gearbox Baseplate Removal/Installation, No. 1 and . . . . .	4.142	No. 2 Engine Shroud Assembly Removal/Installation, No. 1 or . . . . .	4.103
No. 2 Engine Primary Exhaust Nozzle Removal/Installation, No. 1 and . . . . .	4.119	No. 2 Engine Shroud Seal Ring Installation, Engine Buildup – No. 1 and . . . . .	4.46
No. 2 Engine Quick Release Pins Replacement, No. 1 or . . . . .	4.88	No. 2 Engine Shroud Seal Ring Removal, Engine Teardown – Engine No. 1 and . . . . .	4.14
No. 2 Engine Regulating Valve Removal/Installation . . . . .	4.80	No. 2 Engine Start Air Tube and Air Flexible Connection Housing Removal/Installation . . . . .	7.146
No. 2 Engine Removal . . . . .	4.8	No. 2 Engine Swirl Frame Drain Tube Removal/Installation (T700-GE-701 Engine), No. 1 and . . . . .	4.113
No. 2 Engine Removal – Lower Disconnections . . . . .	4.10	No. 2 Engine Swirl Frame Drain Tube Removal/Installation (T700-GE-701C Engine), No. 1 and . . . . .	4.114
No. 2 Engine Removal – Remove from Helicopter . . . . .	4.11	No. 2 Engine Water Wash Coupling Half Removal/Installation, No. 1 and . . . . .	4.102
No. 2 Engine Removal – Upper Disconnections . . . . .	4.9	No. 2 Engine Wiring Installation, Engine Buildup – . . . . .	4.43
No. 2 Engine Secondary Nozzle Crack Repair (AVIM), No. 1 or . . . . .	4.134	No. 2 Engine Wiring Removal, Engine Teardown – . . . . .	4.18
No. 2 Engine Secondary Nozzle Horizontal Heat Shield and Shield Panel Removal/Installation, No. 1 and . . . . .	4.130	No. 2 Forward Engine Mount Support Removal/Installation, No. 1 or . . . . .	4.84
No. 2 Engine Secondary Nozzle Intermediate Support Strut Removal/Installation, No. 1 and . . . . .	4.125	No. 2 Oil Engine Chip Collector Removal, Engine Teardown – No. 1 and . . . . .	4.27
No. 2 Engine Secondary Nozzle Pin Replacement, No. 1 and . . . . .	4.132	No. 2 Power Available Spindle Cable Connecting Links Disassembly/Assembly, No. 1 or . . . . .	4.165
No. 2 Engine Secondary Nozzle Structural Support Removal/Installation, No. 1 and . . . . .	4.123	No. 2 Power Available Spindle Cable Connecting Links Removal/Installation, No. 1 or . . . . .	4.164
No. 2 Engine Secondary Nozzle Support Bushing Replacement (AVIM), No. 1 and . . . . .	4.128	No. 2 Power Available Spindle Cable Support Bracket Removal/Installation (Pilot to CPG), No. 1 or . . . . .	4.163
No. 2 Engine Secondary Nozzle Support Removal/Installation, No. 1 and . . . . .	4.126	No. 2 Removal/Installation, Air Duct . . .	13.18
No. 2 Engine Secondary Nozzle Upper and Intermediate Support Strut Bushing Replacement (AVIM), No. 1 and . . . . .	4.127	No. 3 Removal/Installation, Air Duct . . .	13.19
No. 2 Engine Secondary Nozzle Upper Support Strut and Clevis Removal/Installation, No. 1 and . . . . .	4.124	No. 3 Tail Rotor Drive Shaft Removal/Installation . . . . .	6.5
		No. 4 Removal/Installation, Air Duct . . .	13.20

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
No. 4 Tail Rotor Drive Shaft, Damper, and Anti-Flail Support Removal/Installation . . . . .	6.8	Nose Gearbox Flexible Coupling, Vaneaxial Fan, and Inlet Diffuser Removal/Installation, Engine . . . . .	6.33
No. 5 Removal/Installation, Air Duct . . .	13.21	Nose Gearbox Fuselage Fairing and Shroud Removal/Installation . . . . .	2.123
No. 5 Tail Rotor Drive Shaft, Damper, and Anti-Flail Support Removal/Installation . . . . .	6.11	Nose Gearbox Fuselage Fairing Control Module Assembly Replacement . . . . .	2.124
No. 6 Removal/Installation, Air Duct . . .	13.22	Nose Gearbox Identification Plate Replacement, Engine . . . . .	6.27
No. 6 Tail Rotor Drive Shaft Removal/Installation . . . . .	6.14	Nose Gearbox Input Seal Assembly Removal/Installation, Engine . . . . .	6.37
No. 7 (APU) Drive Shaft and Anti-Flail Support Removal/Installation . . . . .	6.16	Nose Gearbox Inspection, Engine . . . . .	6.17
No. 7 Removal/Installation, Air Duct . . .	13.23	Nose Gearbox Low Oil Pressure Switch Removal/Installation, Engine . . . . .	6.21
No. 8 Removal/Installation, Air Duct . . .	13.24	Nose Gearbox Lube Pump Removal/Installation, Engine . . . . .	6.30
No. 9 Removal/Installation, Air Duct . . .	13.25	Nose Gearbox Metallic Chip Detector Inspection, Engine . . . . .	6.25
Non-adjustable Rod End Bearing Replacement, Flight Control System Push-Pull Rod . . . . .	11.3	Nose Gearbox Metallic Chip Detector Removal/Installation, Engine . . . . .	6.26
Nontransparent Barrier Armor Assembly Removal/Installation . . . . .	2.178	Nose Gearbox Oil Filter Bowl, Strainer Element, and Differential Pressure Switch (Lockwired Type) Removal/Installation, Engine . . . . .	6.18
Nontransparent Barrier Armor Pass-Thru Tray Removal/Installation . . . . .	2.179	Nose Gearbox Oil Filter Bowl, Strainer Element, and Differential Pressure Switch (Retainer, Ringed Type) Removal/Installation, Engine . . . . .	6.19
Nose Fairing Assembly Seal Replacement (AVIM), Forward Avionics Bay . . . . .	2.42	Nose Gearbox Oil Filter Safety Relief Valve Replacement, Engine . . . . .	6.20
Nose Gearbox and Quill Shaft Removal/Installation, Engine . . . . .	6.36	Nose Gearbox Oil Jet Filters Removal/Installation, Engine . . . . .	6.31
Nose Gearbox Anti-Flail Bearing Nut Disassembly/Assembly, Engine . . . . .	6.34	Nose Gearbox Oil Jet Removal/Installation, Engine . . . . .	6.35
Nose Gearbox Breather Replacement, Engine . . . . .	6.24	Nose Gearbox Oil Pressure Transducer Removal/Installation, Engine . . . . .	6.29
Nose Gearbox Fairing Guide Pin Replacement . . . . .	2.124D	Nose Gearbox Oil Sampling, Engine . . .	1.29
Nose Gearbox Fairing Latch Replacement . . . . .	2.124C	Nose Gearbox Oil Temperature Transducer Removal/Installation, Engine . . . . .	6.28
Nose Gearbox Fairing Riveted Seal Replacement . . . . .	2.124B	Nose Gearbox Outer Diffuser (Two-Section) Removal/Installation, Engine . . . . .	6.32
Nose Gearbox Fairing Stud Nut Replacement . . . . .	2.124E		
Nose Gearbox Filler Cap Removal/Installation, Engine . . . . .	6.23		
Nose Gearbox Fixture Installation, Environmental Control Unit and . . . . .	1.124		
Nose Gearbox Fixture Removal, Environmental Control Unit and . . . . .	1.125		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Nose Gearbox Output Seal Assembly Removal/Installation, Engine . . . . .	6.38	Nozzle Removal/Installation, No. 1 and No. 2 Engine Inboard Secondary . . . .	4.121
Nose Gearbox Preload Shim Removal/Installation (AVIM), Engine .	6.40	Nozzle Removal/Installation, No. 1 and No. 2 Engine Outboard Secondary . .	4.120
Nose Gearbox Rotor Output Shaft Seal Removal/Installation (AVIM), Engine .	6.39	Nozzle Removal/Installation, No. 1 and No. 2 Engine Primary Exhaust . . . . .	4.119
Nose Gearbox Servicing, Engine . . . . .	1.28	Nozzle Support Bushing Replacement (AVIM), No. 1 and No. 2 Engine Secondary . . . . .	4.128
Nose Gearbox Shroud Adhesive Seal Replacement . . . . .	2.124A	Nozzle Support Removal/Installation, No. 1 and No. 2 Engine Secondary . .	4.126
Nose Gearbox Sight Indicator Removal/Installation, Engine . . . . .	6.22	Nozzle Upper and Intermediate Support Strut Bushing Replacement (AVIM), No. 1 and No. 2 Engine Secondary . .	4.127
Nozzle Crack Repair (AVIM), No. 1 or No. 2 Engine Secondary . . . . .	4.134	Nozzle Upper Support Strut and Clevis Removal/Installation, No. 1 and No. 2 Engine Secondary . . . . .	4.124
Nozzle Frame Removal/Installation, Secondary . . . . .	4.133	Nozzle Vertical Heat Shield and Support Bracket Removal/Installation, No. 1 and No. 2 Engine Outboard and Center Secondary . . . . .	4.129
Nozzle Heat Shield and Support Bracket Removal/Installation, No. 1 and No. 2 Engine Inboard Secondary	4.131	Nut Disassembly/Assembly, Engine Nose Gearbox Anti-Flail Bearing . . . .	6.34
Nozzle Horizontal Heat Shield and Shield Panel Removal/Installation, No. 1 and No. 2 Engine Secondary . .	4.130	Nut Installation, Main Rotor Hub Retention . . . . .	5.20
Nozzle Intermediate Support Strut Removal/Installation, No. 1 and No. 2 Engine Secondary . . . . .	4.125	Nut Removal, Main Rotor Hub Retention . . . . .	5.19
Nozzle Pin Replacement, No. 1 and No. 2 Engine Secondary . . . . .	4.132	Nut Replacement, Nose Gearbox Fairing Stud . . . . .	2.124E
Nozzle Removal/Installation, Main Transmission Forward Oil Jet and . . .	6.51	Nut Replacement, Wing Barrel . . . . .	2.25
Nozzle Removal/Installation, No. 1 and No. 2 Engine Center Secondary . . . .	4.122	Nutplate Replacement . . . . .	2.23



<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
<b>O</b>			
OFF Switch Replacement, APU START/RUN/ .....	15.13	Oil Jet Filters Removal/Installation, Engine Nose Gearbox .....	6.31
Oil Chip Collector Installation, Engine Buildup – No. 1 and No. 2 Engine ...	4.33	Oil Jet Removal/Installation, Engine Nose Gearbox .....	6.35
Oil Chip Collector Removal, Engine Teardown – No. 1 and No.2 Engine .	4.27	Oil Jet Removal/Installation, Main Transmission Aft .....	6.52
Oil Chip Collector Removal/Installation, No. 1 or No. 2 Engine .....	4.101	Oil Jet Removal/Installation, Main Transmission Upper Cover .....	6.53
Oil Drain Tubes Removal/Installation, Main Transmission .....	6.87	Oil Level Sight Gage Indicator Replacement, APU .....	TM 1-2835-213-23
Oil Filler Cap Removal/Installation, APU Gearbox .....	TM 1-2835-213-23	Oil Pressure Indicator Front Panel Removal/Installation (AVIM), Engine .	8.7
Oil Filler Cap Screen Removal/Installation, Main Transmission .....	6.47	Oil Pressure Indicator Removal/Installation, Pilot Engine ...	8.6
Oil Filler Removal/Installation, Main Transmission .....	6.48	Oil Pressure Switch Removal/Installation, Engine Nose Gearbox Low .....	6.21
Oil Filter Bowl, Strainer Element, and Differential Pressure Switch (Lockwired Type) Removal/Installation, Engine Nose Gearbox .....	6.18	Oil Pressure Switch Removal/Installation, Main Transmission Accessory Pump .....	6.69
Oil Filter Bowl, Strainer Element, and Differential Pressure Switch (Retainer, Ringed Type) Removal/Installation, Engine Nose Gearbox .....	6.19	Oil Pressure Switch Removal/Installation, Main Transmission Low .....	6.78
Oil Filter Replacement, APU .....	TM 1-2835-213-23	Oil Pressure Switch Tee Removal/Installation, Main Transmission .....	6.79
Oil Filter Safety Relief Valve Removal/Installation, Main Transmission .....	6.63	Oil Pressure Transducer Removal/Installation, Engine Nose Gearbox .....	6.29
Oil Filter Safety Relief Valve Replacement, Engine Nose Gearbox	6.20	Oil Pressure Transmitter Removal/Installation, No. 1 Engine ..	4.99
Oil Jet and Nozzle Removal/Installation, Main Transmission Forward .....	6.51	Oil Pressure Transmitter Removal/Installation, No. 2 Engine ..	4.100
Oil Jet and Screen Removal/Installation, Main Transmission Input Shaft .....	6.55	Oil Rotary Pump Removal/Installation, Main Transmission Primary Lube ...	6.114
Oil Jet Filter Removal/Installation, Main Transmission .....	6.50	Oil Sampling, Engine Nose Gearbox ...	1.29
		Oil Sampling, Main Transmission .....	1.33
		Oil Seal Retainer Removal/Installation (AVIM), Mast Base .....	6.100
		Oil Seal Retainer Replacement (AVIM), Main Rotor Lower Seal and .....	5.46
		Oil Seal Retainer Reseating, Main Rotor Lower .....	5.46A
		Oil System Draining and Servicing, APU	1.26

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Oil System Draining and Servicing, Engine .....	1.24	Outer Diffuser (Two-Section) Removal/Installation, Engine Nose Gearbox .....	6.32
Oil System Draining, Flushing, and Servicing, Main Transmission .....	1.32	Outlet Breakaway Valve Removal/Installation, Aft Fuel Cell Fuel .....	10.43
Oil System Sampling, APU .....	1.27	Outlet Duct Replacement, ENCU Air ...	13.5
Oil Temperature Transducer Removal/Installation, Engine Nose Gearbox .....	6.28	Outlet Hose Removal/Installation, Nitrogen Inerting Unit (NIU) Conditioned Air .....	10.126
ON/OFF Switch Replacement, Collective Stick Searchlight .....	11.27	Outlet Hose Removal/Installation, SDC Pressure .....	7.127
One-Way Restrictor Valve Replacement, Utility Hydraulic Accumulator .....	7.86	Outlet Hose Replacement, Fuel Boost Pump .....	10.117
Operating Instructions – Using Battery Power, APU .....	1.74	Outlet Orifice Removal/Installation, Aft Fuel Cell Nitrogen Inert .....	10.120
Operating Instructions – Using External Power, APU .....	1.75	Outlet Pressure Switch Removal/Installation, SDC .....	7.128
Operational Test (AVIM), Main Landing Gear Wheel Brake Leakage and ....	3.67	Outlet Tube Replacement, APU Fuel Pump .....	10.110
Orifice Hose Removal/Installation, Aft Fuel Cell Nitrogen Inert .....	10.132	Output CCA Replacement (AVIM), Ice Detector Signal Processor Probe Oscillator Reference or Rate .....	12.62
Orifice Removal/Installation, Aft Fuel Cell Nitrogen Inert Outlet .....	10.120	Output Coupling Removal/Installation, Intermediate Gearbox .....	6.13
Oscillator Reference or Rate Output CCA Replacement (AVIM), Ice Detector Signal Processor Probe ...	12.62	Output Seal Assembly Removal/Installation, Engine Nose Gearbox .....	6.38
Out Disable Switch Removal/Installation (AVIM), CPG Power Quadrant No. 1 Engine .....	4.196	Output Seal Assembly Removal/Installation, Intermediate Gearbox .....	6.125
Out Disable Switch Removal/Installation (AVIM), CPG Power Quadrant No. 2 Engine .....	4.197	Output Shaft Replacement, Engine Air Starter .....	4.82A
Out Warning Control Removal/Installation, Engine .....	8.28	Output Shaft Seal Removal/Installation (AVIM), Engine Nose Gearbox Rotor	6.39
Outboard and Center Secondary Nozzle Vertical Heat Shield and Support Bracket Removal/Installation, No. 1 and No. 2 Engine .....	4.129	Output Shouldered Shaft Expansion Plug Replacement (AVIM), Intermediate Gearbox Input Flange and .....	6.123
Outboard Secondary Nozzle Removal/Installation, No. 1 and No. 2 Engine .....	4.120	Output Shouldered Shaft Removal/Installation, Intermediate Gearbox .....	6.122
Outer Diffuser (One-Piece) Removal/Installation, Engine Input Drive Shaft and .....	6.2	Outside Air Temperature Indicator Removal/Installation .....	8.47
		Outside Air Temperature Sensor Removal/Installation .....	12.75

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Overboard Exhaust Duct Removal/Installation, ENCU . . . . .	13.13	Override Switch Replacement, Collective Stick RF . . . . .	11.30
Overhaul and Retirement Schedule . . . .	1.138	Overspeed Drain Valve Hose Removal/Installation, No. 1 Engine . .	4.106
Override Switch Replacement (AVIM), CPG Fuel Panel Pilot . . . . .	10.65	Overspeed Drain Valve Hose Removal/Installation, No. 2 Engine . .	4.107

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
<b>P</b>			
Pack Repair Criteria, Main Rotor Blade Strap .....	5.36	Panel Box Removal/Installation, Electrical Test .....	9.29
Pack Replacement, Main Rotor Strap ..	5.35	Panel Bracket Assembly Replacement (AVIM), Pilot Fuel .....	10.60
Packing, Tail Landing Gear Tapered Cone and Rollers .....	3.52	Panel Case Replacement (AVIM), Selectable Digital Display (SDD) ....	8.17
Pad Adapter Removal/Installation, Main Landing Gear Jack .....	3.5	Panel Circuit Breaker Replacement, Electrical Test .....	9.28
Pad Replacement (AVIM), Main Rotor Hub Lower Plate .....	5.47	Panel Circuit Card Replacement (AVIM), APU Fire .....	12.22
Pads Sleeve Bushing Replacement (AVIM), Gun and Ammo Support Aft Mount .....	2.37	Panel Coil L1 or L2 Replacement (AVIM), CPG Caution/Warning .....	9.117
Pads Sleeve Bushing Replacement (AVIM), Gun and Ammo Support Forward Mount .....	2.38	Panel Coil L1 or L2 Replacement (AVIM), Pilot Caution/Warning .....	9.113
Paint Erosion Touchup, Main Rotor Blade .....	5.11	Panel Control Knob Removal/Installation, CPG INTR LT .	9.82
Pan Mount Fuselage Repair (AVIM), Wide Band FM Antenna .....	2.101A	Panel Control Knob Removal/Installation, Pilot EXT LT/INTR LT .....	9.63
Paint Repair (AVIM), No. 1 or No. 2 Engine Louver Epoxy .....	4.67	Panel Disassembly/Assembly (AVIM), Emergency Power Check .....	4.139
Pan Removal/Installation, Forward Fuel Cell Restraint .....	10.52	Panel Doors L210 or R210 Removal/Installation, Transmission Access ...	2.126C
Pan Replacement, Tailboom Fluid Drain	2.101	Panel Edge LT PNL ON/OFF Switch Replacement, Pilot Circuit Breaker ..	9.6
Panel (Armored Swing Panel) Removal/Installation, Pilot/CPG Armored Crew Seat Wing .....	2.165	Panel FORM Variable Resistor Replacement (AVIM), Pilot EXT LT/INTR LT .....	9.70
Panel and Access Cover Removal/Installation, Aft Fuel Cell Access .....	10.32	Panel Fuel Boost Pump Switch Replacement (AVIM), Pilot Fuel .....	10.57
Panel Assembly Removal/Installation, APU Fire .....	12.17	Panel Hinge Strap Removal/Installation, Pilot Circuit Breaker .....	9.5
Panel Assembly Removal/Installation, CPG Door Transparent .....	2.53	Panel Indicator Light Replacement, Refueling .....	10.72
Panel Assembly Removal/Installation, Pilot Anti-Ice .....	12.47	Panel Indicator Panel Replacement, Refueling .....	10.73
Panel Assembly Removal/Installation, Pilot Door Transparent .....	2.61	Panel Indicator Replacement (AVIM), APU Fire .....	12.20
Panel Assembly Seal Replacement, Canopy Transparent .....	2.52	Panel Indicator Switch Replacement (AVIM), Pilot Anti-Ice .....	12.52
		Panel Installation, Pilot Circuit Breaker .	9.3
		Panel Light Indicating Panel Receptacle Replacement (AVIM), APU Fire .....	12.21
		Panel Light Indicating Panel Receptacle Replacement (AVIM), Pilot Anti-Ice ..	12.51

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Panel Light Indicating Panel Removal/Installation, APU Fire . . . . .	12.18	Panel Removal/Installation, CPG Circuit Breaker Panel No. 1 Light Indicating .	9.44
Panel Light Indicating Panel Removal/Installation, ECS . . . . .	13.35	Panel Removal/Installation, CPG Floor Armor . . . . .	2.181
Panel Light Indicating Panel Removal/Installation, Pilot EXT LT/INTR LT . . . . .	9.64	Panel Removal/Installation, CPG INST LT Edge Light Indicating . . . . .	9.83
Panel Light Indicating Panel Removal/Installation, Pilot Fuel . . . . .	10.55	Panel Removal/Installation, CPG Left Hand or Right Hand Armored Side . .	2.181B
Panel Light Indicating Panel Replacement, CPG Fuel . . . . .	10.63	Panel Removal/Installation, CPG Power Quadrant Light Indicating . . . . .	4.195
Panel No. 1 Circuit Breakers (Attached to Bus Bars) Replacement, CPG Circuit Breaker . . . . .	9.45	Panel Removal/Installation, ECS . . . . .	13.34
Panel No. 1 Circuit Breakers (Not Attached to Bus Bars) Replacement, CPG Circuit Breaker . . . . .	9.46	Panel Removal/Installation, Emergency Power Check . . . . .	4.138
Panel No. 1 Light Indicating Panel Removal/Installation, CPG Circuit Breaker . . . . .	9.44	Panel Removal/Installation, Forward Fuel Cell Retainer . . . . .	2.47A
Panel No. 1 Removal/Installation, CPG Circuit Breaker . . . . .	9.43	Panel Removal/Installation, Nitrogen Inerting Monitor . . . . .	10.123
Panel No. 2 Circuit Breaker Replacement, CPG Circuit Breaker . .	9.49	Panel Removal/Installation, Pilot Circuit Breaker Light Indicating . . . . .	9.4
Panel No. 2 Light Indicating Panel Removal/Installation, CPG Circuit Breaker . . . . .	9.48	Panel Removal/Installation, Pilot ELEC PWR . . . . .	9.33
Panel No. 2 Removal/Installation, CPG Circuit Breaker . . . . .	9.47	Panel Removal/Installation, Pilot EXT LT/INTR LT . . . . .	9.62
Panel Receptacle Replacement (AVIM), APU Fire Panel Light Indicating . . . . .	12.21	Panel Removal/Installation, Pilot Fuel . .	10.54
Panel Receptacle Replacement (AVIM), ECS . . . . .	13.39	Panel Removal/Installation, Pilot Fuel Panel Light Indicating . . . . .	10.55
Panel Receptacle Replacement, Pilot Anti-Ice . . . . .	12.50	Panel Removal/Installation, Pilot Left Hand or Right Hand Armored Side . .	2.181A
Panel Removal, Pilot Circuit Breaker . .	9.2	Panel Removal/Installation, Pilot Left Hand Upper Armored Side . . . . .	2.181C
Panel Removal/Installation (AVIM), ECS Support . . . . .	13.40	Panel Removal/Installation, Pilot or CPG Master Caution/Warning . . . . .	9.122
Panel Removal/Installation (AVIM), Engine Oil Pressure Indicator Front .	8.7	Panel Removal/Installation, Refueling . .	10.69
Panel Removal/Installation (AVIM), Pilot Power Quadrant Light Indicating . . .	4.188	Panel Removal/Installation, Start Mode Relay . . . . .	9.60
Panel Removal/Installation, Aft Fuel Cell Forward Access . . . . .	10.33	Panel Replacement (AVIM), CPG Fuel Panel Support . . . . .	10.68
Panel Removal/Installation, CPG Auxiliary Panel Light Indicating . . . . .	12.54	Panel Replacement, Refueling Panel Indicator . . . . .	10.73
Panel Removal/Installation, CPG Caution/Warning . . . . .	9.114	Panel Replacement, Pilot ELEC PWR Light Indicating . . . . .	9.34
		Panel Resistor Assembly Removal/Installation (AVIM), ECS . . .	13.36
		Panel Slider Plate Removal/Installation, Pilot/CPG Armored Crew Seat Wing .	2.166
		Panel Switch Replacement (AVIM), APU Fire . . . . .	12.19

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Panel Switch Replacement (AVIM), Pilot EXT LT/INTR LT .....	9.68	Pedal Adjust Handle Support Assembly Removal/Installation .....	11.175
Panel Switch Replacement (AVIM), Pilot Fuel .....	10.58	Pedal Adjust Spring Removal/Installation, Directional Control .....	11.237
Panel Switch Replacement, Refueling ..	10.71	Pedal Adjusting Crank Assembly Removal/Installation (AVIM), Directional Control .....	11.238
Panel Switch Replacement Pilot, Anti-Ice .....	12.49	Pedal Housing Assembly Removal/Installation, Pilot Directional Control .....	11.236
Panel Toggle Switch Replacement (AVIM), ECS .....	13.38	Pedal Pivot Support Assembly Removal/Installation, Pilot Directional Control .....	11.234
Panel Variable Resistor Replacement (AVIM), ECS .....	13.37	Pedal Protective Cover Removal/Installation, CPG Left or Right Directional Control .....	11.244
Panels Removal/Installation, CPG Left and Right Console .....	2.9	Pedal Protective Cover Removal/Installation, Pilot Left or Right Directional Control .....	11.244A
Panels Removal/Installation, Pilot Left and Right Console .....	2.8	Pedal Release Shaft Assembly Removal/Installation, Pilot Directional Control .....	11.235
Parking Brake Functional Test .....	3.71	Pedal Skirt Removal/Installation, CPG Directional Control Pedal and .....	11.239
Parking Brake Hose Assembly Removal/Installation, Pilot .....	3.54	Pedal Skirt Removal/Installation, Pilot Directional Control Pedal and .....	11.233
Parking Brake Master Cylinder Disassembly/Assembly (AVIM) .....	3.58	Pedals and Directional Servocylinder, Rigging Directional Flight Controls Between Pilot .....	11.294
Parking Brake Pull Control Assembly and Bracket Assembly Removal/Installation .....	3.59	Pedals, Rigging Directional Flight Controls Between Pilot and CPG ....	11.293
Parking Brake Rotary Direct Valve Removal/Installation .....	3.60	Periods of Inventory .....	C.12
Parking Brake Rotary Direct Valve Repair and Test (AVIM) .....	3.61	Permaswage Repair, Hydraulic Tubes and Fittings .....	7.113
Parking Brakes – Set/Release .....	1.61	Phase Adjustment, Main Rotor Blade ..	5.8
Part Number/Serial Number Plate Replacement, Tail Rotor Blade .....	5.59	Pickup Replacement, Main Transmission Magnetic .....	6.44
Particle Separator (With Filter) Removal/Installation, Air .....	7.117	Pile Fastener Removal/Installation, Pilot/CPG Cockpit Thermal Insulation and Hook and .....	2.10
Particle Separator Filter Replacement, Air .....	7.118	Pilot Accelerometer Removal/Installation .....	8.33
Particle Separator Removal/Installation, Air .....	7.116	Pilot and CPG Collective Stick Stop Bolts, Rigging .....	11.283
Pass-Thru Tray Removal/Installation, Nontransparent Barrier Armor .....	2.179	Pilot and CPG Collective Sticks, Rigging Collective Flight Controls Between ..	11.281
Paved Surface, Mooring – .....	1.77		
Pawl Fastener Removal/Installation, Pilot/CPG Station Access Door Canopy .....	2.51		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Pilot and CPG Cyclic Sticks, Rigging Lateral Flight Controls Between . . . . .	11.289	Pilot Caution/Warning Panel Removal/Installation . . . . .	9.105
Pilot and CPG Cyclic Sticks, Rigging Longitudinal Flight Controls Between . . . . .	11.285	Pilot Circuit Breaker Light Indicating Panel Removal/Installation . . . . .	9.4
Pilot and CPG Directional Pedal Stop Bolts, Rigging . . . . .	11.295	Pilot Circuit Breaker Panel Edge LT PNL ON/OFF Switch Replacement . . . . .	9.6
Pilot and CPG Lateral Cyclic Stick Stop Bolts, Rigging . . . . .	11.291	Pilot Circuit Breaker Panel Hinge Strap Removal/Installation . . . . .	9.5
Pilot and CPG Longitudinal Cyclic Stick Stop Bolts, Rigging . . . . .	11.287	Pilot Circuit Breaker Panel Installation . . . . .	9.3
Pilot and CPG Pedals, Rigging Directional Flight Controls Between . . . . .	11.293	Pilot Circuit Breaker Panel Removal . . . . .	9.2
Pilot Anti-Ice Panel Assembly Removal/Installation . . . . .	12.47	Pilot Circuit Breakers (Attached to Bus Bars) Replacement . . . . .	9.8
Pilot Anti-Ice Panel Indicator Switch Replacement (AVIM) . . . . .	12.52	Pilot Circuit Breakers (Not Attached to Bus Bars) Replacement . . . . .	9.7
Pilot Anti-Ice Panel Light Indicating Panel Receptacle Replacement (AVIM) . . . . .	12.51	Pilot Collective Control Position Linear Variable Differential Transducer (LVDT) Installation . . . . .	11.208
Pilot Anti-Ice Panel Light Indicating Panel Removal/Installation . . . . .	12.48	Pilot Collective Control Position Linear Variable Differential Transducer (LVDT) Removal . . . . .	11.207
Pilot Anti-Ice Panel Receptacle Replacement . . . . .	12.50	Pilot Collective Control Variable Resistor Adjustment . . . . .	11.206
Pilot Anti-Ice Panel Switch Replacement (AVIM) . . . . .	12.49	Pilot Collective Control Variable Resistor Removal/Installation . . . . .	11.205
Pilot Boresight Reticle Unit (BRU) Mount Adapter Removal/Installation . . . . .	2.187	Pilot Collective Push-Pull Rod Assembly Removal/Installation . . . . .	11.133
Pilot Boresight Reticle Unit (BRU) Mount Removal/Installation . . . . .	2.186	Pilot Collective Stick and Collective Servocylinder, Rigging Collective Flight Controls Between . . . . .	11.282
Pilot Boresight Reticle Unit (BRU) Mount Support Removal/Installation . . . . .	2.188	Pilot Collective Stick Cylinder Assembly Removal/Installation . . . . .	11.36
Pilot Brake Master Cylinders Removal/Installation . . . . .	3.56	Pilot Collective Stick Shear Pin Replacement . . . . .	11.23
Pilot Caution/Warning Panel Circuit Card Removal/Installation (AVIM) . . . . .	9.109	Pilot Collective Stick Support Assembly Disassembly/Assembly (AVIM) . . . . .	11.39
Pilot Caution/Warning Panel Coil L1 or L2 Replacement (AVIM) . . . . .	9.113	Pilot Collective Stick Support Removal/Installation . . . . .	11.38
Pilot Caution/Warning Panel Fixed Capacitor C1, C2, C3, or C4 Replacement (AVIM) . . . . .	9.111	Pilot Control Collective F.S. 118.50 Bellcrank Removal/Installation, CPG to . . . . .	11.130
Pilot Caution/Warning Panel Housing Disassembly/Assembly (AVIM) . . . . .	9.110	Pilot Control Collective F.S. 118.50 Support Bracket Removal/Installation, CPG to . . . . .	11.132

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Pilot Control Directional F.S. 112.50 Bellcrank Removal/Installation, CPG to .....	11.158	Pilot Cyclic Stick Housing Installation ..	11.55
Pilot Control Directional F.S. 118.50 Bellcrank Removal/Installation, CPG to .....	11.161	Pilot Cyclic Stick Housing Lateral Shear Pin Replacement .....	11.56
Pilot Control Directional F.S. 118.50 Support Bracket Removal/Installation, CPG to .....	11.162	Pilot Cyclic Stick Housing Removal .....	11.54
Pilot Control Lateral F.S. 111.50 Bellcrank Removal/Installation, CPG to .....	11.92	Pilot Cyclic Stick Remote Transmitter Selector Switch Replacement .....	11.48
Pilot Control Lateral F.S. 118.50 Bellcrank Removal/Installation, CPG to .....	11.95	Pilot Cyclic Stick Trim and Force Feel Release Switch Replacement .....	11.47
Pilot Control Lateral F.S. 83.45 Idler Bellcrank Removal/Installation, CPG to .....	11.89	Pilot Directional Control Pedal and Pedal Skirt Removal/Installation .....	11.233
Pilot Control Longitudinal F.S. 118.50 Bellcrank Removal/Installation, CPG to .....	11.118	Pilot Directional Control Pedal Housing Assembly Removal/Installation .....	11.236
Pilot Control Longitudinal F.S. 82.80 Bellcrank Removal/Installation, CPG to .....	11.112	Pilot Directional Control Pedal Pivot Support Assembly Removal/Installation .....	11.234
Pilot Control Longitudinal F.S. 96.59 Bellcrank Removal/Installation, CPG to .....	11.115	Pilot Directional Control Pedal Release Shaft Assembly Removal/Installation	11.235
Pilot Cyclic Stick Removal/Installation ..	11.45	Pilot Directional Control Position Linear Variable Differential Transducer (LVDT) Installation .....	11.211
Pilot Cyclic Lateral Push-Pull Rod Assembly Removal/Installation .....	11.98	Pilot Directional Control Position Linear Variable Differential Transducer (LVDT) Removal .....	11.210
Pilot Cyclic Longitudinal Push-Pull Rod Assembly Removal/Installation .....	11.111	Pilot Directional F.S. 112.50 Control Bracket Removal/Installation, CPG to	11.160
Pilot Cyclic Stick and Lateral Servocylinder, Rigging Lateral Flight Controls Between .....	11.290	Pilot Directional Shear Pin Activated Decoupler (SPAD) Assembly Disassembly/Assembly (AVIM) .....	11.154
Pilot Cyclic Stick and Longitudinal Servocylinder, Rigging Longitudinal Flight Controls Between .....	11.286	Pilot Directional Shear Pin Activated Decoupler (SPAD) Installation .....	11.153
Pilot Cyclic Stick Cover Removal/Installation .....	11.46	Pilot Directional Shear Pin Activated Decoupler (SPAD) Removal .....	11.152
Pilot Cyclic Stick Flight Control Arm Assembly Disassembly/Assembly (AVIM) .....	11.62	Pilot Directional Shear Pin Activated Decoupler (SPAD) Shear Pin Replacement .....	11.155
Pilot Cyclic Stick Housing Assembly Disassembly/Assembly (AVIM) .....	11.61	Pilot Directional Shear Pin Activated Decoupler (SPAD) Shear Rivet Replacement (AVIM) .....	11.157
		Pilot Directional Shear Pin Activated Decoupler (SPAD) Transducer Arm Shear Rivet Replacement (AVIM) ...	11.156
		Pilot Door Transparent Panel Assembly Removal/Installation .....	2.61



<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Pilot ELEC PWR Light Indicating Panel Replacement .....	9.34	Pilot EXT LT/INTR LT Panel Semiconductor Device CR1, CR2, CR3, CR5, CR7, CR8, or CR9 Replacement (AVIM) .....	9.65
Pilot ELEC PWR Panel EXT PWR/RESET Switch Replacement ..	9.35	Pilot Fire Bottle Select Switch Replacement .....	12.35
Pilot ELEC PWR Panel GEN 1, GEN 2, or BATT/EXT PWR Switches Replacement .....	9.36	Pilot Fixed Glareshield Removal/Installation .....	2.156
Pilot ELEC PWR Panel Removal/Installation .....	9.33	Pilot Fuel Panel Bracket Assembly Replacement (AVIM) .....	10.60
Pilot Emergency Hydraulic Switch Removal/Installation .....	9.147	Pilot Fuel Panel Crossfeed Switch Replacement (AVIM) .....	10.56
Pilot Engine Fire Pull Switch Removal/Installation .....	12.34	Pilot Fuel Panel Electronic Component Assembly and Access Cover Replacement (AVIM) .....	10.59
Pilot Engine Oil Pressure Indicator Removal/Installation .....	8.6	Pilot Fuel Panel Fuel Boost Pump Switch Replacement (AVIM) .....	10.57
Pilot Engine Turbine Gas Temperature (TGT) Indicator and Engine Gas Generator Ng RPM Indicator Removal/Installation .....	8.9	Pilot Fuel Panel Light Indicating Panel Removal/Installation .....	10.55
Pilot EXT LT/INTR LT Panel Control Knob Removal/Installation .....	9.63	Pilot Fuel Panel Removal/Installation ..	10.54
Pilot EXT LT/INTR LT Panel FORM Variable Resistor Replacement (AVIM) .....	9.70	Pilot Fuel Panel Support Panel Replacement (AVIM) .....	10.61
Pilot EXT LT/INTR LT Panel INST Attenuator Replacement (AVIM) ....	9.73	Pilot Fuel Panel Switch Replacement (AVIM) .....	10.58
Pilot EXT LT/INTR LT Panel L CSL Variable Resistor Replacement (AVIM) .....	9.72	Pilot Fuel Quantity Indicator Removal/Installation .....	8.8
Pilot EXT LT/INTR LT Panel Light Indicating Panel Removal/Installation	9.64	Pilot FUEL XFER Advisory Light Replacement .....	9.124
Pilot EXT LT/INTR LT Panel R/CTR CSL Attenuator Replacement (AVIM)	9.71	Pilot Glareshield Curtain/Tray Removal/Installation .....	2.155
Pilot EXT LT/INTR LT Panel Relay K1/K2 and Socket XK1/XK2 Replacement (AVIM) .....	9.69	Pilot Glareshield Extension Assembly Removal/Installation .....	2.157
Pilot EXT LT/INTR LT Panel Removal/Installation .....	9.62	Pilot Icing Severity Meter Removal/Installation .....	8.50
Pilot EXT LT/INTR LT Panel Resistor R1, R2, R3, R7, R8, or R9 Replacement (AVIM) .....	9.66	Pilot Instrument Panel Matrix Fixed Resistor Replacement .....	9.53
Pilot EXT LT/INTR LT Panel Resistor R4 or R6 Replacement (AVIM) .....	9.67	Pilot Instrument Panel Matrix Removal/Installation .....	9.51
		Pilot Instrument Panel Matrix Terminal Junction Box and Relay Track Assembly Replacement .....	9.54
		Pilot Instrument Panel Matrix Variable Resistor Replacement .....	9.52

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Pilot Lateral Control F.S. 83.45 Support Bracket Assembly Removal/Installation, CPG to . . . . .	11.91	Pilot Magnetic Compass Removal/Installation . . . . .	8.42
Pilot Lateral Control Position Linear Variable Differential Transducer (LVDT) Installation . . . . .	11.213	Pilot or CPG Caution/Warning and Master Caution/Warning Panel Lamp Replacement . . . . .	9.108
Pilot Lateral Control Position Linear Variable Differential Transducer (LVDT) Removal . . . . .	11.212	Pilot or CPG Caution/Warning and Master Caution/Warning Panel Light Switch Replacement (AVIM) . . . . .	9.107
Pilot Lateral F.S. 111.50 Bracket Assembly Removal/Installation, CPG to . . . . .	11.94	Pilot or CPG Caution/Warning and Master Caution/Warning Panel Pushbutton Cap Removal/Installation	9.106
Pilot Lateral F.S. 118.50 Control Bracket Assembly Removal/Installation, CPG to . . . . .	11.97	Pilot or CPG Collective Stick Installation	11.21
Pilot Left and Right Console Panels Removal/Installation . . . . .	2.8	Pilot or CPG Collective Stick Removal .	11.20
Pilot Left Hand or Right Hand Armored Side Panel Removal/Installation . . . .	2.181A	Pilot or CPG Instrument Glareshield Lamp Replacement . . . . .	9.80
Pilot Left Hand Upper Armored Side Panel Removal/Installation . . . . .	2.181C	Pilot or CPG Instrument Glareshield Light Removal/Installation . . . . .	9.79
Pilot Longitudinal Control Position Linear Variable Differential Transducer (LVDT) Installation . . . . .	11.215	Pilot or CPG Master Caution/Warning Panel Removal/Installation . . . . .	9.122
Pilot Longitudinal Control Position Linear Variable Differential Transducer (LVDT) Removal . . . . .	11.214	Pilot or CPG Utility Light and Mounting Base Removal/Installation . . . . .	9.78
Pilot Longitudinal F.S. 118.50 Control Flight Bracket Assembly Removal/Installation, CPG to . . . . .	11.120	Pilot Override Switch Replacement (AVIM), CPG Fuel Panel . . . . .	10.65
Pilot Longitudinal F.S. 82.80 Control Bracket Removal/Installation, CPG to	11.114	Pilot Parking Brake Hose Assembly Removal/Installation . . . . .	3.54
Pilot Longitudinal F.S. 96.59 Control Bracket Assembly Removal/Installation, CPG to . . . . .	11.117	Pilot Pedals and Directional Servocylinder, Rigging Directional Flight Controls Between . . . . .	11.294
Pilot Longitudinal Shear Pin Activated Decoupler (SPAD) Assembly Disassembly/Assembly (AVIM) . . . . .	11.174	Pilot Power Available Spindle Bellcrank Removal/Installation . . . . .	4.162
Pilot Longitudinal Shear Pin Activated Decoupler (SPAD) Removal/Installation . . . . .	11.172	Pilot Power Quadrant Disassembly/Assembly (AVIM) . . . . .	4.167
Pilot Longitudinal Shear Pin Activated Decoupler (SPAD) Shear Pin Replacement . . . . .	11.173	Pilot Power Quadrant Light Indicating Panel Removal/Installation (AVIM) . .	4.188
		Pilot Power Quadrant Panel – ENG IGN OVRD Switch Removal/Installation . .	4.191
		Pilot Power Quadrant Panel – ENG START Advisory Switch Removal/Installation . . . . .	4.190
		Pilot Power Quadrant Panel – Ignition Lock Switch Removal/Installation (AVIM) . . . . .	4.192
		Pilot Power Quadrant Panel – No. 2 Engine Interlock Switch Removal/Installation (AVIM) . . . . .	4.194

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Pilot Power Quadrant Panel – RTR BRK Switch Removal/Installation (AVIM) .	4.189	Pilot Windshield Wiper Blade Replacement . . . . .	12.2
Pilot Power Quadrant Removal/Installation . . . . .	4.166	Pilot Windshield Wiper Converter Replacement . . . . .	12.5
Pilot Scuff Plate Assembly Removal/Installation . . . . .	2.182	Pilot Windshield Wiper Flex Shaft Replacement . . . . .	12.6
Pilot Standby Attitude Indicator Removal/Installation . . . . .	8.34	Pilot Windshield Wiper Link Replacement . . . . .	12.4
Pilot Station Access Door Adjustment . .	2.63	Pilot Windshield Wiper Motor Replacement . . . . .	12.7
Pilot Station Access Door Lower Hinge Butt Removal/Installation . . . . .	2.66	Pilot/CPG Airspeed Indicator Removal/Installation . . . . .	8.30
Pilot Station Access Door Mechanism Repair (AVIM) . . . . .	2.64	Pilot/CPG Armored Crew Seat Bucket Assembly Replacement . . . . .	2.177
Pilot Station Access Door Removal/Installation . . . . .	2.62	Pilot/CPG Armored Crew Seat Control Assembly Removal/Installation . . . . .	2.172
Pilot Station Access Door Strut Pulley Removal/Installation . . . . .	2.65	Pilot/CPG Armored Crew Seat Cushion Removal/Installation . . . . .	2.168
Pilot Station Access Door Upper Hinge Butt Removal/Installation . . . . .	2.67	Pilot/CPG Armored Crew Seat Frame Assembly Attenuator Removal/Installation . . . . .	2.171
Pilot Station Directional Bellcrank Bracket Assembly Removal/Installation . . . . .	11.150	Pilot/CPG Armored Crew Seat Frame Assembly Helical Extension Spring Removal/Installation . . . . .	2.170
Pilot Station, No. 1 Engine Removal – . .	4.4	Pilot/CPG Armored Crew Seat Handle Assembly Replacement . . . . .	2.164
Pilot TAIL WHEEL LOCK Switch Removal/Installation . . . . .	9.146	Pilot/CPG Armored Crew Seat Lap Belt Removal/Installation . . . . .	2.176
Pilot Track/Balance Accelerometer Replacement . . . . .	9.129	Pilot/CPG Armored Crew Seat M-43 Blower Mount Bracket Bonding . . . . .	2.167
Pilot Valve Hose Replacement, Aft Fuel Cell . . . . .	10.38	Pilot/CPG Armored Crew Seat Removal/Installation . . . . .	2.161
Pilot Valve Hose Replacement, Forward Fuel Cell . . . . .	10.12	Pilot/CPG Armored Crew Seat Restraint Control Assembly Removal/Installation . . . . .	2.173
Pilot Valve Removal/Installation, Aft Fuel Cell Fuel Level Control . . . . .	10.37	Pilot/CPG Armored Crew Seat Rotary Buckle Removal/Installation . . . . .	2.175
Pilot Valve Removal/Installation, Forward Fuel Cell Fuel Level Control . . . . .	10.13	Pilot/CPG Armored Crew Seat Shoulder Harness and Inertia Reel Removal/Installation . . . . .	2.174
Pilot W220 Microphone Wire Harness Removal/Installation . . . . .	9.130	Pilot/CPG Armored Crew Seat Strap Guide Assembly Removal/Installation . . . . .	2.169
Pilot W220 or CPG W219 Microphone Wire Harness Disassembly/Assembly . . . . .	9.132		
Pilot Windshield Wiper Alinement . . . . .	12.8		
Pilot Windshield Wiper Arm Replacement . . . . .	12.3		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Pilot/CPG Armored Crew Seat Wing Panel (Armored Swing Panel) Removal/Installation .....	2.165	Pin Replacement, Nose Gearbox Fairing Guide .....	2.124D
Pilot/CPG Armored Crew Seat Wing Panel Slider Plate Removal/Installation .....	2.166	Pin Replacement, Pilot Collective Stick Shear .....	11.23
Pilot/CPG Barometric Altimeter Removal/Installation .....	8.31	Pin Replacement, Tail Landing Gear Actuating Cylinder Fuse .....	3.37
Pilot/CPG Canted Bulkhead Seat Fitting Bearing Replacement .....	2.162	Pinion Seal Removal/Installation, Main Transmission Input .....	6.116
Pilot/CPG Canted Frame Bearing Replacement .....	2.163	Pins Replacement, No. 1 or No. 2 Engine Quick Release .....	4.88
Pilot/CPG Clock Removal/Installation ..	8.46	Piston Packing Replacement (AVIM), Utility Hydraulic Accumulator .....	7.92
Pilot/CPG Cockpit Thermal Insulation and Hook and Pile Fastener Removal/Installation .....	2.10	Piston Removal/Installation (AVIM), Tail Landing Gear Shock Strut .....	3.39
Pilot/CPG Engine Instrument Dim/Test Control Panel Disassembly/Assembly (AVIM) .....	8.23	Piston Removal/Installation, Hydraulic Hand Pump .....	7.27
Pilot/CPG Engine Instrument Dim/Test Control Panel Front Panel Removal/Installation (AVIM) .....	8.24	Piston Replacement (AVIM), Utility Hydraulic Manifold Low Level .....	7.76
Pilot/CPG Engine Instrument Dim/Test Control Panel Removal/Installation ..	8.22	Pitch Horn Washer Replacement (AVIM), Main Rotor .....	5.29A
Pilot/CPG Engine Torque Indicator Removal/Installation .....	8.3	Pitch Housing and Blade – Electrical Lead Removal/Installation, Main Rotor .....	5.31
Pilot/CPG Engine/Rotor RPM Indicator Removal/Installation .....	8.4	Pitch Housing Identification Plate Replacement, Main Rotor .....	5.34
Pilot/CPG Foot Guard Removal/Installation .....	2.189	Pitch Housing Installation, Main Rotor ..	5.26
Pilot/CPG Stabilator Position Indicator Removal/Installation .....	8.48	Pitch Housing Removal, Main Rotor ...	5.25
Pilot/CPG Stabilator Position Placard ILT Panel Removal/Installation .....	8.49	Pitch Housing Shim Replacement (AVIM), Main Rotor .....	5.27
Pilot/CPG Station Access Door Canopy Pawl Fastener Removal/Installation ..	2.51	Pitch Housing Striker Strip Replacement (AVIM), Main Rotor .....	5.29
Pilot/CPG Station Accessing .....	1.56	Pitch Housing Wire Support Bracket Replacement (AVIM), Main Rotor ...	5.28
Pilot/CPG Vertical Speed Indicator Removal/Installation .....	8.32	Pitch Link Disassembly/Assembly, Main Rotor .....	11.15
Pilot Left or Right Directional Control Pedal Protective Cover Removal/Installation .....	11.244A	Pitch Link Removal/Installation, Main Rotor .....	11.14
Pin Replacement, Main Landing Gear Shock Strut Structural Support .....	2.77A	Pitch Link Removal/Installation, Tail Rotor .....	11.277
Pin Replacement, Main Rotor Swashplate Shoulder .....	11.8	Pitch Web Electrical Lead Removal/Installation, Main Rotor Electrical Brush, Electrical Holder, and .....	5.48
Pin Replacement, No. 1 and No. 2 Engine Secondary Nozzle .....	4.132	Pitot Static System Tubing Swagelok Fitting Replacement .....	8.40
		Pitot Static System Tubing Transition Replacement .....	8.38

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Pitot Static System Tubing Splice Replacement .....	8.39	Plate Replacement (AVIM), Main Rotor Lower Shoe Identification .....	5.50
Pitot Static Tester Installation/Removal .	8.36	Plate Replacement, APU Identification .....	TM 1-2835-213-23
Pitot Tube Removal/Installation, Right or Left Wing .....	8.37	Plate Replacement, Directional Servocylinder BUCS Warning .....	7.35
Pivot Low Friction Sleeve Bearings Replacement (AVIM), Main Rotor Blade Lead Lag Link .....	5.33A	Plate Replacement, Engine Nose Gearbox Identification .....	6.27
Pivot Support Assembly Removal/Installation, CPG Directional Control Pedal .....	11.241	Plate Replacement, Intermediate Gearbox Identification .....	6.128
Pivot Support Assembly Removal/Installation, Pilot Directional Control Pedal .....	11.234	Plate Replacement, Main Landing Gear Shock Strut Identification .....	3.25
Placard ILT Panel Removal/Installation, Pilot/CPG Stabilator Position .....	8.49	Plate Replacement, Main Rotor Blade Identification .....	5.18
Plain Encased Seal Removal/Installation, Main Rotor Upper Seal Retainer and .....	5.45	Plate Replacement, Main Rotor Head Identification .....	5.22
Plate and Canopy Lock Switch Removal/Installation, Aft Door Structural .....	2.69	Plate Replacement, Main Rotor Hub Identification .....	5.49
Plate Assembly Removal/Installation, CPG Scuff .....	2.183	Plate Replacement, Main Rotor Pitch Housing Identification .....	5.34
Plate Assembly Removal/Installation, Pilot Scuff .....	2.182	Plate Replacement, Main Transmission Identification .....	6.57
Plate Cover Removal/Installation, Main Rotor Drive .....	6.92	Plate Replacement, Rotor Support Mixer Assembly Identification .....	2.87
Plate Disassembly/Assembly (AVIM), Tail Rotor Fork Locking .....	5.64	Plate Replacement, SDC Seal .....	7.122
Plate Pad Replacement (AVIM), Main Rotor Hub Lower .....	5.47	Plate Replacement, Tail Rotor Blade Identification .....	5.58
Plate Removal/Installation (AVIM), Tail Rotor Fork Clamp and Locking .....	5.63	Plate Replacement, Tail Rotor Blade Part Number/Serial Number .....	5.59
Plate Removal/Installation, Main Rotor Drive .....	6.96	Plate Replacement, Tail Rotor Fork Identification .....	5.66
Plate Removal/Installation, Main Rotor Mast Support Base Spacer .....	6.98	Plate Replacement, Tail Rotor Gearbox Identification .....	6.137
Plate Removal/Installation, Main Rotor Striker .....	5.30	Plate Replacement, Tail Rotor Hub Identification .....	5.62
Plate Removal/Installation, Pilot/CPG Armored Crew Seat Wing Panel Slider .....	2.166	Plates, Empennage Skin .....	2.106
Plate Removal/Installation, Tailboom Utility Low Level Shutoff Valve Armor	2.198	Plates, Engine Nacelle Skin .....	2.132
		Plates, Fuselage Bottom Skin .....	2.18
		Plates, Fuselage Side Skin .....	2.16
		Plates, Fuselage Top Skin .....	2.17
		Plates, Wing Skin .....	2.119
		Platform and Equipment Bay, Access Provisions – Top Side Engine Work .	2.7

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Platform Door Latch Replacement, Work .....	2.139	Position Linear Variable Differential Transducer (LVDT) Installation, CPG Lateral Control .....	11.199
Platform Door Removal/Installation, Work .....	2.137	Position Linear Variable Differential Transducer (LVDT) Installation, CPG Longitudinal Control .....	11.201
Platform Door Structural Support Strut Removal/Installation, Work .....	2.138	Position Linear Variable Differential Transducer (LVDT) Installation, Pilot Collective Control .....	11.208
Platform Installation, Transmission Removal – .....	6.105	Position Linear Variable Differential Transducer (LVDT) Installation, Pilot Directional Control .....	11.211
Platform Nacelle Door Structure, Work .	2.130	Position Linear Variable Differential Transducer (LVDT) Installation, Pilot Lateral Control .....	11.213
Platform, Transmission Installation – Install Transmission on .....	6.108	Position Linear Variable Differential Transducer (LVDT) Installation, Pilot Longitudinal Control .....	11.215
Platform, Transmission Installation – Remove .....	6.110	Position Linear Variable Differential Transducer (LVDT) Removal, CPG Collective Control .....	11.203
Plenum Drain Hose Replacement, APU	15.37	Position Linear Variable Differential Transducer (LVDT) Removal, CPG Directional Control .....	11.196
Plug Removal/Installation, Intermediate Gearbox Machine .....	6.127	Position Linear Variable Differential Transducer (LVDT) Removal, CPG Lateral Control .....	11.198
Plug Removal/Installation, Tail Rotor Gearbox Machine .....	6.146	Position Linear Variable Differential Transducer (LVDT) Removal, CPG Longitudinal Control .....	11.200
Plug Replacement (AVIM), Intermediate Gearbox Input Flange and Output Shouldered Shaft Expansion .....	6.123	Position Linear Variable Differential Transducer (LVDT) Removal, Pilot Collective Control .....	11.207
Plug Replacement (AVIM), Tail Rotor Gearbox Shouldered Shaft Expansion .....	6.134	Position Linear Variable Differential Transducer (LVDT) Removal, Pilot Directional Control .....	11.210
Pneumatic Accumulator Removal/Installation, Utility .....	7.99	Position Linear Variable Differential Transducer (LVDT) Removal, Pilot Lateral Control .....	11.212
Pneumatic Valve Removal/Installation, Tail Landing Gear Shock Strut .....	3.40	Position Linear Variable Differential Transducer (LVDT) Removal, Pilot Longitudinal Control .....	11.214
Pneumatic Valve Replacement, Main Landing Gear Shock Strut .....	3.19		
Point Adapter (SPA) Method, Fuel Servicing – Hot Rapid Single .....	1.18		
Points, Servicing .....	1.12		
Poppet Draincock and Control Removal/Installation, Forward and Aft	10.3		
Position Indicator Removal/Installation, Pilot/CPG Stabilator .....	8.48		
Position Linear Variable Differential Transducer (LVDT) Installation, CPG Collective Control .....	11.204		
Position Linear Variable Differential Transducer (LVDT) Installation, CPG Directional Control .....	11.197		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Position Placard ILT Panel Removal/Installation, Pilot/CPG Stabilator .....	8.49	Power Available Spindle Cable Removal (Pilot to CPG), No. 1 Engine .....	4.158
Position Sensor Clamp Replacement, Horizontal Stabilator .....	2.114A	Power Available Spindle Cable Removal (Pilot to CPG), No. 2 Engine .....	4.160
Position Transducer Removal/Installation, Stabilator .....	11.231	Power Available Spindle Center Cable Installation, No. 1 Engine .....	4.146
Positioning Helicopter for Desired Deck Angle .....	1.133	Power Available Spindle Center Cable Installation, No. 2 Engine .....	4.148
Post Assembly Removal/Installation, Nacelle Carry-Thru .....	2.97	Power Available Spindle Center Cable Removal, No. 1 Engine .....	4.145
Power Access Door Switch Removal/Installation, External .....	9.39	Power Available Spindle Center Cable Removal, No. 2 Engine .....	4.147
Power Application – Air, External .....	1.71	Power Available Spindle Gearbox Removal/Installation, No. 1 Engine ..	4.140
Power Application – Electrical, External	1.70	Power Available Spindle Gearbox Removal/Installation, No. 2 Engine ..	4.141
Power Application – Hydraulic (Primary), External .....	1.72	Power Available Spindle Gearbox Main Sleeve and Runout Tube Removal/Installation, No. 1 or No. 2 Engine .....	1.141A
Power Application – Hydraulic (Utility), External .....	1.73	Power Available Spindle System Rigging Check, No. 1 Engine .....	4.186
Power Available Spindle (PAS) Rigging Procedure, No. 1 Engine .....	4.182	Power Available Spindle System Rigging Check, No. 2 Engine .....	4.187
Power Available Spindle (PAS) Rigging Procedure, No. 2 Engine .....	4.183	Power Check Panel Disassembly/Assembly (AVIM), Emergency .....	4.139
Power Available Spindle Aft Cable Installation, No. 1 Engine .....	4.171	Power Check Panel Removal/Installation, Emergency ...	4.138
Power Available Spindle Aft Cable Installation, No. 2 Engine .....	4.174	Power Contactor Relay Removal/Installation, External .....	9.23
Power Available Spindle Aft Cable Removal, No. 1 Engine .....	4.170	Power Control Gearbox Aft Cable Support Removal/Installation, No. 1 Engine .....	4.172
Power Available Spindle Aft Cable Removal, No. 2 Engine .....	4.173	Power Control Spindle Gearbox Baseplate Removal/Installation, No. 1 and No. 2 Engine .....	4.142
Power Available Spindle Aft Cable Spring Tension Clip Removal/Installation, No. 1 Engine Load Demand Spindle/ .....	4.180	Power Distribution Box Cover Removal/Installation, Electrical .....	9.9
Power Available Spindle Aft Cable Spring Tension Clip Removal/Installation, No. 2 Engine Load Demand Spindle/ .....	4.181	Power Distribution Box Enclosed Link Fuse/Holder Block F1/XF1 or F2/XF2 Replacement, Electrical .....	9.11
Power Available Spindle Bellcrank Removal/Installation, Pilot .....	4.162	Power Distribution Box Relay Cover Removal/Installation, Electrical .....	9.10
Power Available Spindle Cable Installation (Pilot to CPG), No. 1 Engine .....	4.159	Power Distributor and Air Data System (ADS) Mast Removal/Installation, Main Rotor De-Ice .....	6.90
Power Available Spindle Cable Installation (Pilot to CPG), No. 2 Engine .....	4.161		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Power Generation and Distribution		Power Supply Connector Replacement,	
Components Inspection .....	9.1	CPG Engine Instruments Dimmer ...	8.26
Power Monitor, External .....	9.37	Power Supply Removal/Installation,	
Power Quadrant Disassembly/Assembly		CPG Engine Instruments Dimmer ...	8.25
(AVIM), CPG .....	4.169	Power Supply Removal/Installation,	
Power Quadrant Disassembly/Assembly		Anti-Collision Light .....	9.100
(AVIM), Pilot .....	4.167	Power Supply Removal/Installation	
Power Quadrant Lever Release Switch		(AVIM), Digital Automatic	
Removal/Installation (AVIM) , CPG ..	4.198	Stabilization Equipment (DASE)	
Power Quadrant Light Indicating Panel		Computer .....	11.222
Removal/Installation, CPG .....	4.195	Power Supply Replacement (AVIM),	
Power Quadrant Light Indicating Panel		Signal Data Converter .....	8.20
Removal/Installation (AVIM), Pilot ...	4.188	Power System Components Inspection,	
Power Quadrant No. 1 Engine Out		Auxiliary .....	15.1
Disable Switch Removal/Installation		Power Take-Off (PTO) Clutch Removal/Installation,	
(AVIM), CPG .....	4.196	APU .....	TM 1-2835-213-23
Power Quadrant No. 2 Engine Out		Power Take-Off (PTO) Clutch	
Disable Switch Removal/Installation		Solenoid Valve	
(AVIM), CPG .....	4.197	Disassembly/Assembly,	
Power Quadrant Panel – ENG IGN		APU .....	TM 1-2835-213-23
OVRD Switch Removal/Installation,		Power Take-Off (PTO) Clutch	
Pilot .....	4.191	Solenoid Valve	
Power Quadrant Panel – ENG START		Removal/Installation,	
Advisory Switch Removal/Installation,		APU .....	TM 1-2835-213-23
Pilot .....	4.190	Power Transformer T1 or T2	
Power Quadrant Panel – Ignition Lock		Replacement (T700-GE-701 Engine),	
Switch Removal/Installation (AVIM),		Electrical Power Distribution Box ....	9.24
Pilot .....	4.192	Power Transformer T3 Replacement,	
Power Quadrant Panel – No. 1 Engine		Electrical Power Distribution Box ....	9.25
Interlock Switch Removal/Installation		Power Unit (APU) Depreservation,	
(AVIM), Pilot .....	4.193	Auxiliary .....	E.12
Power Quadrant Panel – No. 2 Engine		Power Unit (APU) Storage Preservation,	
Interlock Switch Removal/Installation		Auxiliary .....	E.11
(AVIM), Pilot .....	4.194	Power, APU Operating Instructions –	
Power Quadrant Panel – RTR BRK		Using Battery .....	1.74
Switch Removal/Installation (AVIM),		Power, APU Operating Instructions –	
Pilot .....	4.189	Using External .....	1.75
Power Quadrant Removal/Installation,		Preload Shim Removal/Installation	
CPG .....	4.168	(AVIM), Engine Nose Gearbox .....	6.40
Power Quadrant Removal/Installation,		Preparation for Installation,	
Pilot .....	4.166	Transmission Removal .....	6.106B
Power Receptacle Removal/Installation,		Preparation for Shipment, Transmission	
External .....	9.38	Installation .....	6.106A
Power Supply CCA Replacement		Preparation for Storage or Shipment ...	1.4
(AVIM), Ice Detector Signal		Preservation, Auxiliary Power Unit	
Processor .....	12.63	(APU) Storage .....	E.11



<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Pressure and Return Tube Support Bracket Removal/Installation, Primary Hydraulic Pump .....	7.10	Pressure Indicator Removal/Installation, Dual Hydraulic .....	8.45
Pressure Check Valve Removal/Installation, Primary Hydraulic Pump .....	7.9	Pressure Indicator Removal/Installation, Hydraulic .....	8.44
Pressure Control Valve Removal/Installation, Fuel Tank .....	7.151	Pressure Indicator Removal/Installation, Main Transmission Accessory Pump Filter Bowl, Element, and .....	6.70
Pressure Coupling Replacement, Primary Hydraulic GSE .....	7.23	Pressure Indicator Removal/Installation, Pilot Engine Oil .....	8.6
Pressure Coupling Replacement, Utility Hydraulic GSE .....	7.80	Pressure Interconnect Hose Replacement, SDC .....	7.126
Pressure Filter Replacement, Servocylinder .....	7.53	Pressure Manifold Removal/Installation	7.149
Pressure Fluid Manifold Installation, Aircraft Air .....	7.138	Pressure Outlet Hose Removal/Installation, SDC .....	7.127
Pressure Fluid Manifold Removal, Aircraft Air .....	7.137	Pressure Relief Valve Removal/Installation, Aft Air Vent/ ...	10.41
Pressure Fuel Manifold Removal/Installation .....	10.94	Pressure Relief Valve Removal/Installation, Forward Fuel Cell Air Vent/ .....	10.15
Pressure Gage Replacement, Utility Hydraulic Accumulator Nitrogen Manifold .....	7.84	Pressure Relief Valve Removal/Installation, Main Transmission .....	6.56
Pressure Gage Replacement, Utility Hydraulic Return Accumulator Nitrogen Manifold .....	7.96	Pressure Relief Valve Replacement, Utility Hydraulic Manifold .....	7.72
Pressure Hose Replacement, Directional Servocylinder Primary ...	7.36	Pressure Filter Removal/Installation, SDC Total Pressure Sense Line Filter and Surge Valve .....	7.125
Pressure Hose Replacement, Directional Servocylinder Utility .....	7.38	Pressure Sense Line Filter and Surge Valve Pressure Filter Removal/Installation, SDC Total ....	7.125
Pressure Hose Replacement, Primary Hydraulic Pump .....	7.5	Pressure Switch (Lockwired Type) Removal/Installation, Engine Nose Gearbox Oil Filter Bowl, Strainer Element, and Differential .....	6.18
Pressure Hose Replacement, Surge Valve .....	7.132	Pressure Switch (Lockwired Type) Removal/Installation, Main Transmission Filter Bowl, Element, and Differential .....	6.61
Pressure Hose Replacement, Utility Hydraulic Accumulator APU Start Motor .....	7.89	Pressure Switch Removal/Installation, Fuel Boost Pump .....	10.112
Pressure Hose Replacement, Utility Hydraulic Pump .....	7.59	Pressure Switch (Retainer, Ringed Type) Removal/Installation, Engine Nose Gearbox Oil Filter Bowl, Strainer Element, and Differential ...	6.19
Pressure Indicator Front Panel Removal/Installation (AVIM), Engine Oil .....	8.7		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Pressure Switch (Retainer, Ringed Type) Removal/Installation, Main Transmission Filter Bowl, Element, and Differential .....	6.62	Pressure/Return Hose Bracket Removal/Installation, Directional Servocylinder Utility Hydraulic .....	7.40
Pressure Switch Removal/Installation, APU Fuel Pump .....	10.112	Pressurized Air Supply Hose Removal/Installation, Nitrogen Inerting Unit (NIU) .....	10.127
Pressure Switch Removal/Installation, Engine Nose Gearbox Low Oil .....	6.21	Pressurized Air Supply Inlet Hose Removal/Installation, Nitrogen Inerting Unit (NIU) .....	10.128
Pressure Switch Removal/Installation, Main Transmission Accessory Pump Oil .....	6.69	Pressurized Air System Fuel Boost Pump Hose Replacement .....	7.147
Pressure Switch Removal/Installation, Main Transmission Low Oil .....	6.78	Pressurized Air System Inspection .....	7.114
Pressure Switch Removal/Installation, Rotor Brake .....	7.105	Pressurized Air System Leak Check ...	7.115
Pressure Switch Removal/Installation, SDC Outlet .....	7.128	Pressurized Air System Left and Right Auxiliary Fuel Quick-Disconnect Branch Tubes and Couplings Removal/Installation .....	7.152
Pressure Switch Replacement, No. 1 Engine Fuel .....	4.97	Pressurized Air System Tee and Check Valve Removal/Installation .....	7.136
Pressure Switch Replacement, No. 2 Engine Fuel .....	4.98	Prevent Enemy Use, Destruction of Army Material to .....	1.3
Pressure Switch Replacement, Primary Hydraulic Manifold .....	7.14	Preventive Maintenance Checks and Services .....	1.7
Pressure Switch Replacement, Utility Hydraulic Manifold .....	7.67	Preventive Maintenance Inspection Requirements .....	1.135
Pressure Switch Tee Removal/Installation, Main Transmission Oil .....	6.79	Primary and Reserve Fire Extinguisher Installation .....	12.39
Pressure Transducer Removal/Installation, Engine Nose Gearbox Oil .....	6.29	Primary and Reserve Fire Extinguisher Removal .....	12.38
Pressure Transducer Removal/Installation, Heat Exchanger .....	6.84	Primary and/or Utility Hydraulic Manifold Air Filter Replacement .....	7.160
Pressure Transducer Replacement, Primary Hydraulic Manifold .....	7.15	Primary Exhaust Nozzle Removal/Installation, No. 1 and No. 2 Engine .....	4.119
Pressure Transducer Replacement, Utility Hydraulic Manifold .....	7.68	Primary Hydraulic GSE Fill Port Five Micron Cartridge Filter Element Replacement (ADG) .....	7.21B
Pressure Transmitter Removal/Installation, No. 1 Engine Oil .....	4.99	Primary Hydraulic GSE Fill Port Five Micron Cartridge Filter Element Replacement (ADG) .....	7.21A
Pressure Transmitter Removal/Installation, No. 2 Engine Oil .....	4.100	Primary Hydraulic GSE Fill Port Forty-Five Micron Screen Filter Replacement (ADF) .....	7.21
		Primary Hydraulic GSE Fill Port Nipple Replacement .....	7.22
		Primary Hydraulic GSE Panel Removal/Installation .....	7.20
		Primary Hydraulic GSE Pressure Coupling Replacement .....	7.23

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Primary Hydraulic GSE Return Coupling Replacement .....	7.24	Priming, APU Fuel System .....	1.27A
Primary Hydraulic Manifold Air Check Valve Replacement .....	7.13	Priming, Fuel System .....	1.23
Primary Hydraulic Manifold Dirty Filter Indicator Replacement .....	7.17	Probe Oscillator Reference or Rate Output CCA Replacement (AVIM), Ice Detector Signal Processor .....	12.62
Primary Hydraulic Manifold Drain Hose Replacement .....	7.19	Processor Interconnection CCA Replacement (AVIM), Ice Detector Signal .....	12.61
Primary Hydraulic Manifold Manual Bleed Valve Replacement .....	7.12	Processor Circuit Card Assembly (CCA) Stack Removal/Installation (AVIM), Ice Detector Signal .....	12.60
Primary Hydraulic Manifold Pressure Switch Replacement .....	7.14	Processor Probe Oscillator Reference or Rate Output CCA Replacement (AVIM), Ice Detector Signal .....	12.62
Primary Hydraulic Manifold Pressure Transducer Replacement .....	7.15	Processor Removal/Installation, Ice Detector Signal .....	12.59
Primary Hydraulic Manifold Removal/Installation .....	7.11	Processor Unit Removal/Installation, Rotor Balance Signal .....	9.127
Primary Hydraulic Manifold Reservoir Seal Replacement (AVIM) .....	7.18	Program, Flight Safety Parts .....	1.140
Primary Hydraulic Manifold Strainer Replacement .....	7.16	Propellant Actuated Devices, Cartridge and .....	1.139
Primary Hydraulic Pump Case Drain Hose Replacement .....	7.7	Protection Aircraft Cable Cutter Blades Replacement, Wire Strike .....	2.195
Primary Hydraulic Pump Pressure and Return Tube Support Bracket Removal/Installation .....	7.10	Protection Aircraft Cable Cutter Removal/Installation (AVIM), Wire Strike .....	2.193
Primary Hydraulic Pump Pressure Check Valve Removal/Installation ...	7.9	Protection Armor Barrier Replacement, Transparent Crew .....	2.180
Primary Hydraulic Pump Pressure Hose Replacement .....	7.5	Protective Cover Installation .....	1.59
Primary Hydraulic Pump Removal/Installation .....	7.4	Protective Cover Removal .....	1.60
Primary Hydraulic Pump Return Hose Replacement .....	7.6	Protective Cover Removal/Installation, CPG Left or Right Directional Control Pedal .....	11.244
Primary Hydraulic Pump Seal Drain Hose Replacement .....	7.8	Protective Cover Removal/Installation, Pilot Left or Right Directional Control Pedal .....	11.244A
Primary Hydraulic System Inspection ..	7.1	Provision Repair, Anti-Abrasion .....	2.29
Primary Hydraulic System, Vent .....	7.3	Provisions – Bottom Side, Access .....	2.6
Primary Hydraulic Tubes Armor Channels Removal/Installation, Tailboom .....	2.197	Provisions – Inspection/Repair, Access ..	2.1
Primary Lube Oil Rotary Pump Removal/Installation, Main Transmission .....	6.114	Provisions – Left Side, Access .....	2.3
Primary Pressure Hose Replacement, Directional Servocylinder .....	7.36	Provisions – Right Side, Access .....	2.4
Primary Return Hose Replacement, Directional Servocylinder .....	7.37	Provisions – Top Side Engine Work Platform and Equipment Bay, Access	2.7
		Provisions – Top Side, Access .....	2.5
		Provisions, Access .....	2.2

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Pull Control Assembly and Bracket Assembly Removal/Installation, Parking Brake .....	3.59	Pump Removal, Fuel Transfer .....	10.75
Pulley Removal/Installation, CPG Station Access Door Strut .....	2.57	Pump Removal/Installation, Engine Nose Gearbox Lube .....	6.30
Pulley Removal/Installation, Pilot Station Access Door Strut .....	2.65	Pump Removal/Installation, Hydraulic Hand .....	7.25
Pump Air Inlet Hose Replacement, Fuel Boost .....	10.118	Pump Removal/Installation, Main Transmission Accessory Drive Lube .	6.71
Pump Canister Removal/Installation, Fuel Boost .....	10.116	Pump Removal/Installation, Main Transmission Primary Lube Oil Rotary .....	6.114
Pump Case Drain Hose Replacement, Primary Hydraulic .....	7.7	Pump Removal/Installation, Primary Hydraulic .....	7.4
Pump Case Drain Hose Replacement, Utility Hydraulic .....	7.61	Pump Removal/Installation, Utility Hydraulic .....	7.58
Pump Check Valve Replacement (AVIM), Hydraulic Hand .....	7.30	Pump Return Hose Replacement, Primary Hydraulic .....	7.6
Pump Drain Tube Replacement, Fuel Transfer .....	10.82	Pump Return Hose Replacement, Utility Hydraulic .....	7.60
Pump Filter Bowl, Element, and Pressure Indicator Removal/Installation, Main Transmission Accessory .....	6.70	Pump Seal Drain Hose Replacement, Primary Hydraulic .....	7.8
Pump Functional Check (AVIM), Hydraulic Hand .....	7.31	Pump Seal Drain Hose Replacement, Utility Hydraulic .....	7.62
Pump Installation, Fuel Transfer .....	10.76	Pump Seal Drain Tube Removal/Installation, Quill Housing/Hydraulic .....	6.88
Pump Lever Bellcrank Replacement, Hydraulic Hand .....	7.26	Pump Seal Replacement, Main Transmission Hydraulic .....	6.89
Pump Oil Pressure Switch Removal/Installation, Main Transmission Accessory .....	6.69	Pump Selector Lever Replacement (AVIM), Hydraulic Hand .....	7.29
Pump Outlet Hose Replacement, Fuel Boost .....	10.117	Pump Solenoid Shutoff Valve Removal/Installation, Fuel Boost ....	7.150
Pump Piston Removal/Installation, Hydraulic Hand .....	7.27	Pump Support Replacement, Hydraulic Hand .....	7.28
Pump Pressure and Return Tube Support Bracket Removal/Installation, Primary Hydraulic .....	7.10	Pump Switch Replacement (AVIM), CPG Fuel Panel Boost .....	10.67
Pump Pressure Check Valve Removal/Installation, Primary Hydraulic .....	7.9	Pump Switch Replacement (AVIM), Pilot Fuel Panel Fuel Boost .....	10.57
Pump Pressure Hose Replacement, Primary Hydraulic .....	7.5	Pump Tubing Support Bracket Removal/Installation, Utility Hydraulic	7.63
Pump Pressure Hose Replacement, Utility Hydraulic .....	7.59	Push-Pull Rod Removal/Installation, Directional F.S. 520 .....	11.269
		Pushbutton Cap Removal/Installation, Pilot or CPG Caution/Warning and Master Caution/Warning Panel .....	9.106

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Push-Pull Rod Adjustable Rod End Bearing Assembly Replacement/Adjustment, Flight Control System .....	11.2	Push-Pull Rod Removal/Installation, Directional F.S. 275 .....	11.256
Push-Pull Rod Assembly Removal/Installation, Collective F.S. 161.60 .....	11.139	Push-Pull Rod With Guides Installation, Directional F.S. 348 .....	11.260
Push-Pull Rod Assembly Removal/Installation, CPG Collective F.S. 118.50 .....	11.131	Push-Pull Rod Assembly Removal/Installation, Collective F.S. 161.54 .....	11.136
Push-Pull Rod Assembly Removal/Installation, CPG Directional Shear Pin Activated Decoupler (SPAD) .....	11.143	Push-Pull Rod Assembly Removal/Installation, Directional F.S. 156.07 .....	11.166
Push-Pull Rod Assembly Removal/Installation, Directional F.S. 112.50 .....	11.159	Push-Pull Rod Assembly Removal/Installation, Lateral F.S. 118.50 .....	11.96
Push-Pull Rod Assembly Removal/Installation, Directional F.S. 121.40 .....	11.164	Push-Pull Rod Assembly Removal/Installation, Lateral F.S. 65.50 .....	11.88
Push-Pull Rod Assembly Removal/Installation, Directional F.S. 159.98 .....	11.168	Push-Pull Rod Assembly Removal/Installation, Longitudinal F.S. 118.50 .....	11.119
Push-Pull Rod Assembly Removal/Installation, Lateral F.S. 111.50 .....	11.93	Push-Pull Rod Assembly Removal/Installation, Collective F.S. 164.95 .....	11.141
Push-Pull Rod Assembly Removal/Installation, Lateral F.S. 132.84 .....	11.99	Push-Pull Rod Assembly Removal/Installation, Lateral F.S. 159.13 .....	11.103
Push-Pull Rod Assembly Removal/Installation, Lateral F.S. 83.45 .....	11.90	Push-Pull Rod Assembly Removal/Installation, Lateral F.S. 164.95 .....	11.108
Push-Pull Rod Assembly Removal/Installation, Longitudinal F.S. 159.62 .....	11.125	Push-Pull Rod Assembly Removal/Installation, Longitudinal F.S. 129.25 .....	11.122
Push-Pull Rod Assembly Removal/Installation, CPG Cyclic Lateral .....	11.86	Push-Pull Rod Assembly Removal/Installation, Longitudinal F.S. 82.80 .....	11.113
Push-Pull Rod Assembly Removal/Installation, Pilot Cyclic Lateral .....	11.98	Push-Pull Rod Assembly Removal/Installation, Longitudinal F.S. 96.59 .....	11.116
Push-Pull Rod Assembly Removal/Installation, Pilot Cyclic Longitudinal .....	11.111	Push-Pull Rod Assembly Removal/Installation, Pilot Collective	11.133
		Push-Pull Rod Guide Disassembly/Assembly, Directional ..	11.273
		Push-Pull Rod Non-adjustable Rod End Bearing Replacement, Flight Control System .....	11.3

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Push-Pull Rod Removal/Installation, Directional F.S. 164.33 .....	11.169	Pylon Frame Removal/Installation .....	16.22
Push-Pull Rod Removal/Installation, Directional F.S. 199.25 .....	11.247	Pylon Frame Straight Pin Replacement	16.20
Push-Pull Rod Removal/Installation, Directional F.S. 216.25 .....	11.252	Pylon Inspection .....	16.1
Push-Pull Rod Removal/Installation, Directional F.S. 534 .....	11.271	Pylon Multiplex Remote Terminal Unit (MRTU) Bracket Removal/Installation	16.16
Push-Pull Rod Removal/Installation, Longitudinal F.S. 164.38 .....	11.127	Pylon Rack Disassembly/Assembly (AVIM) .....	16.5
Push-Pull Rod With Guides Removal, Directional F.S. 348 .....	11.259	Pylon Rack Ejector Disassembly/Assembly .....	16.7
Pylon Actuator and Top Plate Removal/Installation .....	16.9	Pylon Rack Ejector Impulse Cartridge Removal/Installation .....	16.3
Pylon Actuator Cylinder Removal/Installation .....	16.12	Pylon Rack Ejector Removal/Installation	16.6
Pylon Actuator Filter Hose and Adapter Removal/Installation .....	16.11	Pylon Rack Ejector Test Set Installation/Removal .....	16.8
Pylon Actuator Hose and Nipple Removal/Installation .....	16.10	Pylon Rack Removal/Installation .....	16.4
Pylon Actuator Rod End Removal/Installation .....	16.13	Pylon Removal/Installation .....	16.2
Pylon Aerial Bracket Removal/Installation .....	16.14	Pylon Stow Bracket Removal/Installation .....	16.17
Pylon Circuit Card and Jettison Wire Harness Removal/Installation .....	16.19	Pylon Sway Brace Replacement (AVIM)	16.21
Pylon Controller and Controller Bracket Removal/Installation .....	16.15	Pylon Switch Bracket Removal/Installation, Ground Maintenance .....	16.28
Pylon Fairing Aft Bumper Replacement	16.26	Pylon Switch Removal/Installation, Ground Maintenance .....	16.27
Pylon Frame Bushing Replacement ...	16.25	Pylon Telescoping Strut and Support Bracket Removal/Installation .....	16.23
		Pylon Top Connector Plate Removal/Installation .....	16.24
		Pylon Wire Harness Replacement .....	16.18

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
<b>Q</b>			
Quadrant Disassembly/Assembly (AVIM), CPG Power .....	4.169	Quadrant Removal/Installation, Pilot Power .....	4.166
Quadrant Disassembly/Assembly (AVIM), Pilot Power .....	4.167	Quality Assurance/Quality Control (QA/QC) .....	1.5
Quadrant Lever Release Switch Removal/Installation (AVIM), CPG Power .....	4.198	Quality Control (QA/QC), Quality Assurance/ .....	1.5
Quadrant Light Indicating Panel Removal/Installation (AVIM), Pilot Power .....	4.188	Quantity Indicator Removal/Installation, Pilot Fuel .....	8.8
Quadrant Light Indicating Panel Removal/Installation, CPG Power ...	4.195	Quantity Indicator Test Set (TF 579) Installation/Removal, Fuel .....	10.135
Quadrant No. 1 Engine Out Disable Switch Removal/Installation (AVIM), CPG Power .....	4.196	Quantity Transmitter Removal/Installation, Forward Fuel Cell Forward Fuel .....	10.5
Quadrant No. 2 Engine Out Disable Switch Removal/Installation (AVIM), CPG Power .....	4.197	Quantity Transmitter Removal/Installation, Forward Fuel Cell Aft Fuel .....	10.6
Quadrant Panel – ENG IGN OVRD Switch Removal/Installation, Pilot Power .....	4.191	Quick Release Pins Replacement, No. 1 or No. 2 Engine .....	4.88
Quadrant Panel – ENG START Advisory Switch Removal/Installation, Pilot Power .....	4.190	Quick-Attach Assembly Removal/Installation, Main Transmission Generator .....	6.49
Quadrant Panel – Ignition Lock Switch Removal/Installation (AVIM), Pilot Power .....	4.192	Quick-Disconnect Branch Tubes and Couplings Removal/Installation, Pressurized Air System Left and Right Auxiliary Fuel .....	7.152
Quadrant Panel – No. 1 Engine Interlock Switch Removal/Installation (AVIM), Pilot Power .....	4.193	Quick-Disconnect Coupling Removal/Installation, Left and Right Auxiliary Fuel Tank .....	10.91
Quadrant Panel – No. 2 Engine Interlock Switch Removal/Installation (AVIM), Pilot Power .....	4.194	Quick-Disconnect Coupling Replacement, Wing .....	7.100
Quadrant Panel – RTR BRK Switch Removal/Installation (AVIM), Pilot Power .....	4.189	Quick-Disconnect Coupling Replacement, Wing Fuselage .....	7.101
Quadrant Removal/Installation, CPG Power .....	4.168	Quick-Disconnect to F.S. 214 Tube Replacement, Right Auxiliary Fuel ..	10.93
		Quill Housing/Hydraulic Pump Seal Drain Tube Removal/Installation .....	6.88
		Quill Shaft Removal/Installation, Engine Nose Gearbox and .....	6.36

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
<b>R</b>			
R CSL, or L CSL Attenuator Replacement (AVIM), CPG INTR LT Panel INST, .....	9.90	Rear View Mirror Assembly Removal/Installation, CPG .....	2.190
R/CTR CSL Attenuator Replacement (AVIM), Pilot EXT LT/INTR LT Panel .	9.71	Receptacle Connector Replacement, Main Rotor Blade .....	5.17
R210 Removal/Installation, Transmission Access Panel Door or L210 .....	1.126C	Receptacle Removal/Installation, External Power .....	9.38
R115 Removal/Installation, Mooring Lug Door L115 .....	2.43A	Receptacle Removal/Installation, Ground Service Utility .....	9.50
R510 Removal/Installation, Vertical Stabilizer Fairings L510 and .....	2.108	Receptacle Replacement (AVIM), ECS Panel .....	13.39
Race/Rollers Grease Repacking (AVIM), Main Rotor Upper Bearing Inner ....	5.46B	Receptacle Replacement, APU Fire Panel Light Indicating Panel .....	12.21
Race Replacement, Main Rotor Droop Stop Follower Roller and Inner .....	5.41	Receptacle Replacement, Pilot Anti-Ice Panel .....	12.50
Rack Disassembly/Assembly (AVIM), Pylon .....	16.5	Receptacle Replacement, Turnlock ....	2.20
Rack Ejector Disassembly/Assembly, Pylon .....	16.7	Receptacle Replacement (AVIM), Windshield Anti-Ice Temperature Control Box .....	12.73
Rack Ejector Impulse Cartridge Removal/Installation, Pylon .....	16.3	Records, and Reports, Maintenance Forms .....	1.2
Rack Ejector Removal/Installation, Pylon .....	16.6	Records, Forms and .....	C.9
Rack Ejector Test Set Installation/Removal, Pylon .....	16.8	Rectifier No. 1 Removal/Installation, Transformer- .....	9.30
Rack Removal/Installation, Pylon .....	16.4	Rectifier No. 1 Support Structure Removal/Installation, Transformer- ..	9.31
Radar Jammer Blower Assembly Removal/Installation .....	16.30A	Rectifier No. 2 Removal/Installation, Transformer- .....	9.32
Radar Jammer Blower Assembly Disassembly/Assembly .....	16.30B	Red Flashtube Lamp Replacement, Anti-Collision Light .....	9.98
Radiation Shield Replacement, Left or Right Nacelle Engine Guard/ .....	4.94	Reel Removal/Installation, Pilot/CPG Armored Crew Seat Shoulder Harness and Inertia .....	2.174
Radiation Shields Replacement, Right Nacelle .....	4.95	References .....	A.2
RADIO-ICS Switch Replacement, Cyclic Stick .....	11.50	References, General .....	A.1
Rapid Closed Circuit Refueling (CCR) Method, Fuel Servicing – Hot .....	1.17	Refueling (CCR) Method, Defueling – Closed Circuit .....	1.20
Rapid Single Point Adapter (SPA) Method, Fuel Servicing – Hot .....	1.18	Refueling (CCR) Method, Defueling – Closed Circuit .....	1.20
Rate Output CCA Replacement (AVIM), Ice Detector Signal Processor Probe Oscillator Reference or .....	12.62	Refueling (CCR) Method, Fuel Servicing – Closed Circuit .....	1.15
		Refueling (CCR) Method, Fuel Servicing – Hot Rapid Closed Circuit .....	1.17
		Refueling Breakaway Valve Removal/Installation, Aft Fuel Cell ...	10.42
		Refueling Breakaway Valve Removal/Installation, Forward Fuel Cell .....	10.17
		Refueling Hose Replacement, Aft .....	10.84



<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Refueling Hose Replacement, Aft Fuel Cell .....	10.44	Relay K8 Replacement, CDU Data Bus	9.155
Refueling Hose Replacement, Forward	10.77	Relay K9 Replacement, SDCC Data Bus .....	9.157
Refueling Hose Replacement, Forward Fuel Cell .....	10.22	Relay No. 1 or No. 2 Removal/Installation, Generator Contactor .....	9.18
Refueling Indicator Removal/Installation	10.70	Relay Panel Removal/Installation, Start Mode .....	9.60
Refueling Line Connector Replacement	10.18	Relay Removal/Installation, Battery ....	9.41
Refueling Panel Indicator Light Replacement .....	10.72	Relay Removal/Installation, Blade De-Ice Remote Control Circuit Breaker .....	9.12
Refueling Panel Indicator Panel Replacement .....	10.73	Relay Replacement, Landing/Searchlight .....	9.103
Refueling Panel Removal/Installation ..	10.69	Relay Replacement (AVIM), Windshield Anti-Ice Temperature Control Box ...	12.70
Refueling Panel Switch Replacement ..	10.71	Relay Track Assembly Replacement, Pilot Instrument Panel Matrix Terminal Junction Box and .....	9.54
Regulating Valve Installation, Engine Buildup – No. 1 Engine Air Starter and .....	4.38	Release Fitting Removal/Installation, CPG Cyclic Stick Wire Rope .....	11.74
Regulating Valve Installation, Engine Buildup – No. 2 Engine Air Starter and .....	4.39	Release Handle Replacement, Tail Landing Gear Actuating Cylinder Lock .....	3.35
Regulating Valve Removal, Engine Teardown – No. 1 Engine Air Starter and .....	4.19	Release Lever Removal/Installation, CPG Lock .....	11.71
Regulating Valve Removal, Engine Teardown – No. 2 Engine Air Starter and .....	4.20	Release Pins Replacement, No. 1 or No. 2 Engine Quick .....	4.88
Regulating Valve Removal/Installation, Air Pressure .....	7.148	Release Retainer Removal/Installation, CPG Cyclic Stick Lever Lock .....	11.75
Regulating Valve Removal/Installation, No. 1 Engine .....	4.79	Release Shaft Assembly Removal/Installation, CPG Directional Control Pedal .....	11.242
Regulating Valve Removal/Installation, No. 2 Engine .....	4.80	Release Shaft Assembly Removal/Installation, Pilot Directional Control Pedal .....	11.235
Relay and Module Replacement, Electronic .....	9.139	Release Switch Removal/Installation (AVIM) , CPG Power Quadrant Lever	4.198
Relay Box Disassembly/Assembly, Engine Anti-Ice .....	12.58	Release Switch Replacement, CPG Cyclic Stick Trim and Force Feel ....	11.80
Relay Box Disassembly/Assembly, Stabilator .....	9.134	Release Switch Replacement, Cyclic Stick ASE .....	11.49
Relay Box Removal/Installation, Engine Anti-Ice .....	12.57	Release Switch Replacement, Pilot Cyclic Stick Trim and Force Feel ....	11.47
Relay Box Removal/Installation, Stabilator .....	9.133		
Relay Cover Removal/Installation, Electrical Power Distribution Box ....	9.10		
Relay K1 Replacement (AVIM), CPG INTR LT Panel .....	9.89		
Relay K1/K2 and Socket XK1/XK2 Replacement (AVIM), Pilot EXT LT/INTR LT Panel .....	9.69		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Release Wire Rope Removal/Installation, CPG Cyclic Stick Lock .....	11.76	Reserve Fire Extinguisher Removal, Primary and .....	12.38
Release, Parking Brakes – Set/ .....	1.61	Reservoir Seal Replacement (AVIM), Primary Hydraulic Manifold .....	7.18
Relief Valve Removal/Installation, Aft Air Vent/Pressure .....	10.41	Reservoir Seal Replacement (AVIM), Utility Hydraulic Manifold .....	7.74
Relief Valve Removal/Installation, Forward Fuel Cell Air Vent/Pressure .	10.15	Resistor Adjustment, Pilot Collective Control Variable .....	11.206
Relief Valve Removal/Installation, Forward Fuel Cell Check/Thermal ...	10.11	Resistor Assembly Removal/Installation (AVIM), ECS Panel .....	13.36
Relief Valve Removal/Installation, Main Transmission Oil Filter Safety .....	6.63	Resistor R1 or R2 Replacement (AVIM), CPG INTR LT Panel .....	9.86
Relief Valve Removal/Installation, Main Transmission Pressure .....	6.56	Resistor R1, R2, R3, R7, R8, or R9 Replacement (AVIM), Pilot EXT LT/INTR LT Panel .....	9.66
Relief Valve Replacement, Engine Nose Gearbox Oil Filter Safety .....	6.20	Resistor R3, R4, or R5 Replacement (AVIM), CPG INTR LT Panel .....	9.87
Remarks, Section IV, Explanation of Columns in .....	B.8	Resistor R4 or R6 Replacement (AVIM), Pilot EXT LT/INTR LT Panel .....	9.67
Remote Attitude Indicator Removal/Installation, CPG .....	8.35	Resistor Removal/Installation, Pilot Collective Control Variable .....	11.205
Remote Control Circuit Breaker Relay Removal/Installation, Blade De-Ice ..	9.12	Resistor Replacement (AVIM), CPG Caution/Warning Panel Fixed Wire ..	9.121
Remote Control Circuit Breaker Replacement, CB3, CB201, CB202, CB203, or CB204 .....	9.13	Resistor Replacement (AVIM), ECS Panel Variable .....	13.37
Remote Control Lever Removal/Installation .....	3.29	Resistor Replacement (AVIM), Pilot EXT LT/INTR LT Panel FORM Variable ...	9.70
Remote Control Lever Removal/Installation, CPG Cyclic Stick .....	11.72	Resistor Replacement (AVIM), Pilot EXT LT/INTR LT Panel L CSL Variable ...	9.72
Remote Control Lever Sleeve Bearing Replacement .....	3.30	Resistor Replacement (AVIM), Pilot Caution/Warning Panel Fixed Wire ..	9.112
Remote Terminal Unit (MRTU) Bracket Removal/Installation, Pylon Multiplex	16.16	Resistor Replacement, Pilot Instrument Panel Matrix Fixed .....	9.53
Remote Transmitter Selector Switch Replacement, Pilot Cyclic Stick .....	11.48	Resistor Replacement, Pilot Instrument Panel Matrix Variable .....	9.52
Reports, Maintenance Forms, Records, and .....	1.2	Restraint Control Assembly Removal/Installation, Pilot/CPG Armored Crew Seat .....	2.173
Reports, Submitting Deficiency .....	1.6	Restraint Pan Removal/Installation, Forward Fuel Cell .....	10.52
Requirements, Preventive Maintenance Inspection .....	1.135	Restrictor Valve Replacement, Utility Hydraulic Accumulator One-Way ....	7.86
Reserve Fire Extinguisher Installation, Primary and .....	12.39	Retainer Panel Removal/Installation, Forward Fuel Cell .....	2.47A

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Retainer and Plain Encased Seal Removal/Installation, Main Rotor Upper Seal .....	5.45	Return Coupling Replacement, Primary Hydraulic GSE .....	7.24
Retainer and Rotor Hub Bearing Removal/Installation, Main Rotor Lead Lag Link Bearing .....	5.32	Return Coupling Replacement, Utility Hydraulic GSE .....	7.81
Retainer Removal/Installation (AVIM), Mast Base Oil Seal .....	6.100	Return Filter Sleeve, Manifold Guide, and Spring Replacement, Hydraulic Manifold .....	7.70
Retainer Removal/Installation, CPG Cyclic Stick Lever Lock Release ....	11.75	Return Hose Replacement, Directional Servocylinder Primary .....	7.37
Retainer Replacement (AVIM), Main Rotor Lower Seal and Oil Seal .....	5.46	Return Hose Replacement, Directional Servocylinder Utility .....	7.39
Retainer Reseating, Main Rotor Lower Oil Seal .....	5.46A	Return Hose Replacement, Primary Hydraulic Pump .....	7.6
Retention Nut Installation, Main Rotor Hub .....	5.20	Return Hose Replacement, Utility Hydraulic Accumulator APU Start Motor .....	7.90
Retention Nut Removal, Main Rotor Hub .....	5.19	Return Hose Replacement, Utility Hydraulic Pump .....	7.60
Reticle Unit (BRU) Mount Adapter Removal/Installation, Pilot Boresight .	2.187	RF Override Switch Replacement, Collective Stick .....	11.30
Reticle Unit (BRU) Mount Removal/Installation, Pilot Boresight .	2.186	Rig Connecting Link Actuating Link Rod and Rod End Clevis Replacement, Engine Access and Ventilation Door Assembly .....	2.145
Retirement Schedule, Overhaul and ...	1.138	Rig Connecting Link Removal/Installation, Engine Access and Ventilation Door Assembly .....	2.144
Return Accumulator Nitrogen Manifold Fill/Bleed Valve Replacement, Utility Hydraulic .....	7.95	Rigging Check, No. 1 and No. 2 Engine Load Demand Spindle .....	4.184
Return Accumulator Nitrogen Manifold Pressure Gage Replacement, Utility Hydraulic .....	7.96	Rigging Collective Flight Controls Between Pilot and CPG Collective Sticks .....	11.281
Return Accumulator Nitrogen Manifold Replacement, Utility Hydraulic .....	7.98	Rigging Collective Flight Controls Between Pilot Collective Stick and Collective Servocylinder .....	11.282
Return Accumulator Nitrogen Manifold Tube Removal/Installation, Utility Hydraulic .....	7.97	Rigging Collective Upper Flight Controls	11.284
Return Accumulator Removal/Installation, Utility Hydraulic	7.94	Rigging Directional Flight Controls Between Pilot and CPG Pedals .....	11.293
Return Accumulator Servicing – Nitrogen, Utility Hydraulic .....	1.37	Rigging Directional Flight Controls Between Pilot Pedals and Directional Servocylinder .....	11.294
Return Accumulator Venting, Utility Hydraulic .....	1.39	Rigging Flight Controls .....	11.280
Return Check Valve Replacement, Utility Hydraulic Auxiliary .....	7.110		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Rigging Horizontal Stabilator .....	11.298	Right Auxiliary Fuel Tank Check Valve Removal/Installation .....	10.90
Rigging Lateral Flight Controls Between Pilot and CPG Cyclic Stick .....	11.289	Right Auxiliary Fuel Tank Quick-Disconnect Coupling Removal/Installation, Left and .....	10.91
Rigging Lateral Flight Controls Between Pilot Cyclic Stick and Lateral Servocylinder .....	11.290	Right Center Transmission Rotor Support Strut Assemblies Removal/Installation, Forward Left or	2.89
Rigging Longitudinal Flight Controls Between Pilot and CPG Cyclic Sticks	11.285	Right Center Transmission Rotor Support Strut Assembly Removal/Installation, Aft .....	2.91
Rigging Longitudinal Flight Controls Between Pilot Cyclic Stick and Longitudinal Servocylinder .....	11.286	Right Console Panels Removal/Installation, Pilot Left and ..	2.8
Rigging Pilot and CPG Collective Stick Stop Bolts .....	11.283	Right Directional Control Pedal Protective Cover Removal/Installation, CPG Left or ...	11.244
Rigging Pilot and CPG Directional Pedal Stop Bolts .....	11.295	Right Directional Control Pedal Protective Cover Removal/Installation, Pilot Left or ...	11.244A
Rigging Pilot and CPG Lateral Cyclic Stick Stop Bolts .....	11.291	Right Engine Firewall Louver Fire/Overheat Detector Frame Removal/Installation .....	12.31
Rigging Pilot and CPG Longitudinal Cyclic Stick Stop Bolts .....	11.287	Right Engine Firewall Louver Fire/Overheat Detector Removal/Installation .....	12.30
Rigging Procedure, No. 1 Engine Power Available Spindle (PAS) .....	4.182	Right Forward Catwalk Area Replacement, Data link Termination Unit (DLTU) .....	9.143
Rigging Procedure, No. 2 Engine Power Available Spindle (PAS) .....	4.183	Right Forward Side Transmission Rotor Support Strut Assembly Removal/Installation .....	2.93
Rigging Tail Rotor Directional Flight Controls .....	11.296	Right Hand Longeron Removal/Installation, Left Hand or ..	2.95A
Rigging Upper Lateral Flight Controls ..	11.292	Right Nacelle Engine Guard/Radiation Shield Replacement, Left or .....	4.94
Rigging Upper Longitudinal Flight Controls .....	11.288	Right or Left Wing Pitot Tube Removal/Installation .....	8.37
Right Actuating Cylinder Air Tube Replacement .....	4.93	Right Shock Strut Structural Support Removal/Installation, Main Landing Gear .....	2.77
Right Actuating Cylinder Flexible Air Hose Replacement, Left or .....	4.91	Right Side Area, Transmission Installation – Connect .....	6.113
Right Aft Side Transmission Rotor Support Strut Assembly Removal/Installation .....	2.95	Right Side Connector Bracket and Wire Harness Support Bracket Removal/Installation, Aft Deck .....	9.150
Right Aft Vertical Cockpit Glareshield Removal/Installation .....	2.158	Right Side, Access Provisions – .....	2.4
Right Auxiliary Fuel Inlet Hose Replacement .....	10.92		
Right Auxiliary Fuel Quick-Disconnect Branch Tubes and Couplings Removal/Installation, Pressurized Air System Left and .....	7.152		
Right Auxiliary Fuel Quick-Disconnect to F.S. 214 Tube Replacement .....	10.93		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Right Side, Transmission Removal – Disconnect .....	6.104	Rod Assembly Removal/Installation, Longitudinal F.S. 82.80 Push-Pull ...	11.113
Right Truss Removal/Installation .....	15.32	Rod Disassembly/Assembly, Collective Servocylinder Engine Control .....	4.152
Ring Installation, Engine Buildup – No. 1 and No. 2 Engine Shroud Seal ....	4.46	Rod End Adjustment, Servocylinder ...	11.297
Ring Removal/Installation (AVIM), Main Rotor Droop Stop .....	5.44	Rod End Bearing Replacement, Flight Control System Push-Pull Rod Non-adjustable .....	11.3
Ring Removal/Installation, Engine Shroud Seal .....	4.104	Rod End Removal/Installation, APU Aft Support Strut and .....	15.31
Rinse Procedures, Aircraft and Aircraft Component Washing, Cleaning and Fresh Water .....	1.53	Rod End Removal/Installation, Main Rotor Damper .....	5.24
Rivet Replacement (AVIM), Pilot Directional Shear Pin Activated Decoupler (SPAD) Shear .....	11.157	Rod End Removal/Installation, Pylon Actuator .....	16.13
Rivet Replacement (AVIM), Pilot Directional Shear Pin Activated Decoupler (SPAD) Transducer Arm Shear .....	11.156	Rod End Replacement (AVIM), Main Landing Gear Shock Strut Upper ....	3.23
Riveted Seal Replacement, Nose Gearbox Fairing .....	2.124B	Rod End Replacement, Collective Servocylinder .....	7.43
Rod Adapter Removal/Installation, Collective Servocylinder Engine Control .....	4.153	Rod End Replacement, Directional Servocylinder .....	7.34
Rod and Rod End Clevis Replacement, Engine Access and Ventilation Door Assembly Rig Connecting Link Actuating Link .....	2.145	Rod End Replacement, Lateral Servocylinder .....	7.46
Rod Assembly Removal/Installation, Collective F.S. 161.54 Push-Pull ....	11.136	Rod End Replacement, Longitudinal Servocylinder .....	7.49
Rod Assembly Removal/Installation, Directional F.S. 156.07 Push-Pull ...	11.166	Rod Removal/Installation, Canopy Door Anchor Strut .....	2.68
Rod Assembly Removal/Installation, CPG Collective F.S. 118.50 Push-Pull	11.131	Rod Removal/Installation, Collective Servocylinder Engine Control .....	4.151
Rod Assembly Removal/Installation, CPG Directional Shear Pin Activated Decoupler (SPAD) Push-Pull .....	11.143	Rod Removal/Installation, Directional F.S. 216.25 Push-Pull .....	11.252
Rod Assembly Removal/Installation, Lateral F.S. 118.50 Push-Pull .....	11.96	Roller and Inner Race Replacement, Main Rotor Droop Stop Follower ....	5.41
Rod Assembly Removal/Installation, Lateral F.S. 65.50 Push-Pull .....	11.88	Rollers Packing, Main Landing Gear Tapered Cone and .....	3.15
Rod Assembly Removal/Installation, Longitudinal F.S. 118.50 Push-Pull ..	11.119	Rollers Packing, Tail Landing Gear Tapered Cone and .....	3.52
		Rollers Removal/Installation (Eight-Bolts), Main Landing Gear Wheel Tapered Cone and .....	3.14
		Rollers Removal/Installation (Nine-Bolts), Main Landing Gear Wheel Tapered Cone and .....	3.10

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Rollers Removal/Installation, Tail Landing Gear Wheel (With Grease Fitting) Tapered Cone and .....	3.48	Rotor Blade Electrical Bracket Replacement, Main .....	5.16
Rollers Removal/Installation, Tail Landing Gear Wheel (Without Grease Fitting) Tapered Cone and ..	3.51	Rotor Blade Electrostatic Discharger Disassembly/Assembly, Main .....	5.15
Rope Release Fitting Removal/Installation, CPG Cyclic Stick Wire .....	11.74	Rotor Blade Forward and Aft Tip Weight Removal/Installation (AVIM), Main ..	5.14A
Rope Removal/Installation, CPG Cyclic Stick Lock Release Wire .....	11.76	Rotor Blade Hoisting, Crane Adjustment – Main .....	1.100
Rotary Buckle Removal/Installation, Pilot/CPG Armored Crew Seat .....	2.175	Rotor Blade Identification Plate Replacement, Main .....	5.18
Rotary Direct Valve Removal/Installation, Parking Brake ..	3.60	Rotor Blade Identification Plate Replacement, Tail .....	5.58
Rotary Direct Valve Repair and Test (AVIM), Parking Brake .....	3.61	Rotor Blade Installation, Hoisting – Main	1.84
Rotary Pump Removal/Installation, Main Transmission Primary Lube Oil .....	6.114	Rotor Blade Installation, Main .....	5.4
Rotor Air Data System (ADS) Mast Repair (AVIM), Main .....	6.91	Rotor Blade Installation, Tail .....	5.54
Rotor Air Data System (ADS) Standpipe Removal/Installation, Main .....	6.94	Rotor Blade Lead Lag Link Pivot Low Friction Sleeve Bearings Replacement (AVIM), Main .....	5.33A
Rotor Assembly Inspection, Tail .....	5.51	Rotor Blade Lead Lag Link Removal/Installation, Main .....	5.33
Rotor Balance AVA Kit Installation, Tail	1.110A	Rotor Blade Lead Lag Link Sleeve Bushings Replacement (AVIM), Main	5.33B
Rotor Balance AVA Kit Removal, Tail ..	1.111A	Rotor Blade Leading Edge Tip Replacement, Main .....	5.13
Rotor Balance Signal Processor Unit Removal/Installation .....	9.127	Rotor Blade Paint Erosion Touchup, Main .....	5.11
Rotor Bellcrank Link Removal/Installation, Tail .....	11.265	Rotor Blade Part Number/Serial Number Plate Replacement, Tail ....	5.59
Rotor Blade Adapter Installation, Main ..	1.112	Rotor Blade Phase Adjustment, Main ..	5.8
Rotor Blade Adapter Removal, Main ...	1.113	Rotor Blade Receptacle Connector Replacement, Main .....	5.17
Rotor Blade Anti-Peel Doubler Repair (AVIM), Main .....	5.12	Rotor Blade Removal, Hoisting – Main ..	1.83
Rotor Blade Balance Weight Removal/Installation, Main .....	5.9	Rotor Blade Removal, Main .....	5.3
Rotor Blade Balance Weight Removal/Installation, Tail .....	5.57	Rotor Blade Removal, Tail .....	5.53
Rotor Blade Debonded Doubler or Spar Repair (AVIM), Main .....	5.7	Rotor Blade Repair Criteria, Main .....	5.2
Rotor Blade Dent and Depression Repair, Tail .....	5.56	Rotor Blade Repair Criteria, Tail .....	5.52
Rotor Blade Dent, Depression, and Crease Repair (AVIM), Main .....	5.5	Rotor Blade Scratch, Nick, or Gouge Repair, Main .....	5.6
Rotor Blade Droop Angle Measurement, Main .....	5.10	Rotor Blade Scratch, Nick, or Gouge Repair, Tail .....	5.55
		Rotor Blade Spar to Spar Debond Repair (AVIM), Main .....	5.7A
		Rotor Blade Strap Pack Repair Criteria, Main .....	5.36

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Rotor Blade Trailing Edge Trim Tab Marking, Main .....	5.8A	Rotor De-Ice Brush and Shunt Replacement (AVIM), Tail .....	11.279
Rotor Blade Weight Support Fitting Insert Replacement (AVIM), Main ...	5.14	Rotor Directional Flight Controls, Rigging Tail .....	11.296
Rotor Blades Tiedown – Installation, Main .....	1.106	Rotor Drive Link Installation, Tail .....	11.275
Rotor Blades Tiedown – Removal, Main	1.107	Rotor Drive Link Removal, Tail .....	11.274
Rotor Bracket Removal/Installation, Directional F.S. 348 Tail .....	11.258	Rotor Drive Plate Cover Removal/Installation, Main .....	6.92
Rotor Brake Actuator (Goodyear/ABSC) Disassembly/Assembly (AVIM), Main Transmission .....	6.68	Rotor Drive Plate Removal/Installation, Main .....	6.96
Rotor Brake Actuator (Goodyear/ABSC) Removal/Installation, Main Transmission .....	6.64	Rotor Drive Seal Replacement, Main Transmission Tail .....	6.75
Rotor Brake Actuator (Parker Hannifin) Disassembly/Assembly (AVIM), Main Transmission .....	6.67A	Rotor Drive Shaft Removal/Installation, No. 3 Tail .....	6.5
Rotor Brake Actuator (Parker Hannifin) Removal/Installation, Main Transmission .....	6.65	Rotor Drive Shaft Removal/Installation, No. 6 Tail .....	6.14
Rotor Brake Disk Removal/Installation, Main Transmission .....	6.66	Rotor Drive Shaft, Damper, and Anti-Flail Support Removal/Installation, No. 4 Tail .....	6.8
Rotor Brake Hose Replacement .....	7.104	Rotor Drive Shaft, Damper, and Anti-Flail Support Removal/Installation, No. 5 Tail .....	6.11
Rotor Brake Lock/Unlock .....	1.62	Rotor Drive Shaft Fairing R410 or R475 Removal/Installation, Tail .....	2.126D
Rotor Brake Pressure Switch Removal/Installation .....	7.105	Rotor Drive Shaft Fairing T355 Repair (AVIM), Tail .....	2.126A
Rotor Brake Seal Replacement, Main Transmission .....	6.67	Rotor Droop Stop Follower Installation (AVIM), Main .....	5.39
Rotor Connecting Link Removal/Installation, Tail .....	11.266	Rotor Droop Stop Follower Removal (AVIM), Main .....	5.38
Rotor Control Bracket Removal/Installation, Directional F.S. 275 .....	11.255	Rotor Droop Stop Follower Repair (AVIM), Main .....	5.40
Rotor Control Bracket Removal/Installation, Tail .....	11.253	Rotor Droop Stop Follower Roller and Inner Race Replacement, Main .....	5.41
Rotor Coupling Removal/Installation, Main Transmission Tail .....	6.4	Rotor Droop Stop Ring Removal/Installation (AVIM), Main ..	5.44
Rotor Damper Removal/Installation, Main .....	5.23	Rotor Electrical Brush, Electrical Holder, and Pitch Web Electrical Lead Removal/Installation, Main .....	5.48
Rotor Damper Rod End Removal/Installation, Main .....	5.24	Rotor Electrical Lead Removal/Installation, Tail .....	11.276
Rotor De-Ice Brush Block Removal/Installation, Tail .....	11.278	Rotor Fitting Removal/Installation, Directional F.S. 199.25 Tail .....	11.248
Rotor De-Ice Power Distributor and Air Data System (ADS) Mast Removal/Installation, Main .....	6.90	Rotor Flange Cork Stopper Replacement, Main Transmission Tail	6.76
		Rotor Flexible Support Removal/Installation, Main .....	6.93

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Rotor Fork Clamp and Locking Plate Removal/Installation (AVIM), Tail . . . .	5.63	Rotor Gearbox Shouldered Shaft Removal/Installation, Tail . . . . .	6.133
Rotor Fork Identification Plate Replacement, Tail . . . . .	5.66	Rotor Gearbox Shouldered Shaft Stud Replacement (AVIM), Tail . . . . .	6.147
Rotor Fork Locking Plate Disassembly/Assembly (AVIM), Tail .	5.64	Rotor Gearbox Strut Disassembly/Assembly, Tail . . . . .	6.144
Rotor Fork and Teeter Stop Disassembly/Assembly (AVIM), Tail .	5.67	Rotor Gearbox Temperature Sensor Removal/Installation, Tail . . . . .	6.138
Rotor Gearbox Accelerometer Removal/Installation, Tail . . . . .	6.139	Rotor Gearshaft Fixture Installation, Main . . . . .	1.128
Rotor Gearbox Aft Gear Fitting Replacement, Tail . . . . .	6.141	Rotor Gearshaft Fixture Removal, Main	1.129
Rotor Gearbox Aft Strut Removal/Installation, Tail . . . . .	6.140	Rotor Gearshaft Installation, Hoisting – Main . . . . .	1.88
Rotor Gearbox Breather Removal/Installation, Tail . . . . .	6.136	Rotor Gearshaft Removal, Hoisting – Main . . . . .	1.87
Rotor Gearbox Fixture Installation, Intermediate Gearbox Fixture Adapter and Tail . . . . .	1.126	Rotor Gearshaft Removal/Installation, Main . . . . .	6.95
Rotor Gearbox Fixture Removal, Intermediate Gearbox Fixture Adapter and Tail . . . . .	1.127	Rotor Gearshaft, Support (Static) Mast, or Swashplate Hoisting, Crane Adjustment – Main . . . . .	1.102
Rotor Gearbox Forward Gear Fitting Replacement, Tail . . . . .	6.143	Rotor Head Assembly (AVIM), Main . . .	5.43
Rotor Gearbox Forward Strut Removal/Installation, Tail . . . . .	6.142	Rotor Head Disassembly (AVIM), Main .	5.42
Rotor Gearbox Identification Plate Replacement, Tail . . . . .	6.137	Rotor Head Fixture Installation, Main . .	1.116
Rotor Gearbox Input Coupling Removal/Installation, Tail . . . . .	6.15	Rotor Head Fixture Removal, Main . . . .	1.117
Rotor Gearbox Input Seal Assembly Removal/Installation, Tail . . . . .	6.135	Rotor Head Hoisting, Crane Adjustment – Main . . . . .	1.101
Rotor Gearbox Inspection, Tail . . . . .	6.132	Rotor Head Identification Plate Replacement, Main . . . . .	5.22
Rotor Gearbox Machine Plug Removal/Installation, Tail . . . . .	6.146	Rotor Head Installation, Hoisting – Main	1.86
Rotor Gearbox Removal/Installation, Tail . . . . .	6.145	Rotor Head Installation, Tail . . . . .	5.61
Rotor Gearbox Servicing – Grease, Tail	1.31	Rotor Head Removal, Hoisting – Main .	1.85
Rotor Gearbox Shouldered Shaft Expansion Plug Replacement (AVIM), Tail . . . . .	6.134	Rotor Head Removal, Tail . . . . .	5.60
		Rotor Head Removal/Installation, Main .	5.21
		Rotor Hub Bearing Removal/Installation, Main Rotor Lead Lag Link Bearing Retainer and . . . . .	5.32
		Rotor Hub Identification Plate Replacement, Main . . . . .	5.49
		Rotor Hub Identification Plate Replacement, Tail . . . . .	5.62
		Rotor Hub Lower Plate Pad Replacement (AVIM), Main . . . . .	5.47



<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Rotor Hub Retention Nut Installation, Main .....	5.20	Rotor Pitch Link Removal/Installation, Tail .....	11.277
Rotor Hub Retention Nut Removal, Main .....	5.19	Rotor RPM Indicator Front Panel Removal/Installation (AVIM), Engine/	8.5
Rotor Inspection, Main .....	5.1	Rotor RPM Indicator Removal/Installation, Pilot/CPG Engine/ .....	8.4
Rotor Lead Lag Link Bearing Retainer and Rotor Hub Bearing Removal/Installation, Main .....	5.32	Rotor Scissor Removal/Installation, Load Bearing Main .....	11.16
Rotor Lower Bearing Grease Repacking (AVIM), Main .....	5.46C	Rotor Scissor Removal/Installation, Secondary Main .....	11.18
Rotor Lower Oil Seal Retainer Reseating, Main .....	5.46A	Rotor Shaft Fairing T205L or T205R Removal/Installation, Main .....	2.126E
Rotor Lower Seal and Oil Seal Retainer Replacement (AVIM), Main .....	5.46	Rotor Strap Pack Replacement, Main ..	5.35
Rotor Lower Shoe Identification Plate Replacement (AVIM), Main .....	5.50	Rotor Strap Pack Borescope Inspection, Main .....	5.34A
Rotor Lower Shoe Scissor Attach Sleeve Bearings Replacement, Main	5.49A	Rotor Striker Plate Removal/Installation, Main .....	5.30
Rotor Mast Mounting Bolt Replacement (AVIM), Main .....	6.99	Rotor Support (Static) Mast Installation, Hoisting – Main .....	1.90
Rotor Mast Support Base Spacer Plate Removal/Installation, Main .....	6.98	Rotor Support (Static) Mast Removal, Hoisting – Main .....	1.89
Rotor Output Shaft Seal Removal/Installation (AVIM), Engine Nose Gearbox .....	6.39	Rotor Support Mast Removal/Installation, Main .....	6.97
Rotor Pitch Horn Washer Replacement (AVIM), Main .....	5.29A	Rotor Support Mast Support Base Removal/Installation .....	2.88
Rotor Pitch Housing and Blade – Electrical Lead Removal/Installation, Main .....	5.31	Rotor Support Mixer Assembly and Bolt Removal/Installation .....	2.86
Rotor Pitch Housing Identification Plate Replacement, Main .....	5.34	Rotor Support Mixer Assembly Identification Plate Replacement ....	2.87
Rotor Pitch Housing Installation, Main ..	5.26	Rotor Support Strut Assemblies Removal/Installation, Forward Left or Right Center Transmission .....	2.89
Rotor Pitch Housing Removal, Main ...	5.25	Rotor Support Strut Assembly Removal/Installation, Aft Left Center Transmission .....	2.90
Rotor Pitch Housing Shim Replacement (AVIM), Main .....	5.27	Rotor Support Strut Assembly Removal/Installation, Aft Right Center Transmission .....	2.91
Rotor Pitch Housing Striker Strip Replacement (AVIM), Main .....	5.29	Rotor Support Strut Assembly Removal/Installation, Left Aft Side Transmission .....	2.94
Rotor Pitch Housing Wire Support Bracket Replacement (AVIM), Main ..	5.28	Rotor Support Strut Assembly Removal/Installation, Left Forward Side Transmission .....	2.92
Rotor Pitch Link Disassembly/Assembly, Main .....	11.15		
Rotor Pitch Link Removal/Installation, Main .....	11.14		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Rotor Support Strut Assembly Removal/Installation, Right Aft Side Transmission .....	2.95	Rotor Track and Balance AVA Kit Removal, Main .....	1.109A
Rotor Support Strut Assembly Removal/Installation, Right Forward Side Transmission .....	2.93	Rotor Upper Bearing Inner Race/Rollers Grease Repacking (AVIM), Main ...	5.46B
Rotor Support Strut Bushing Replacement, Main (AVIM) .....	2.95B	Rotor Upper Seal Retainer and Plain Encased Seal Removal/Installation, Main .....	5.45
Rotor Swashplate Control Bellcrank Installation, Tail .....	11.264	RPM Indicator Front Panel Removal/Installation (AVIM), Engine/ Rotor .....	8.5
Rotor Swashplate Control Bellcrank Removal, Tail .....	11.263	RPM Indicator Removal/Installation, Pilot Engine Turbine Gas Temperature (TGT) Indicator and Engine Gas Generator Ng .....	8.9
Rotor Swashplate Fixture Installation, Main .....	1.118	RPM Indicator Removal/Installation, Pilot/CPG Engine/Rotor .....	8.4
Rotor Swashplate Fixture Removal, Main .....	1.119	RTR BRK Switch Removal/Installation (AVIM), Pilot Power Quadrant Panel - .....	4.189
Rotor Swashplate Installation, Hoisting - Main .....	1.94	RUN/OFF Switch Replacement, APU START/ .....	15.13
Rotor Swashplate Installation, Main ....	11.7	Runout Tube Removal/Installation, No. 1 or No. 2 Engine Load Demand Spindle Gearbox Main Sleeve and ..	4.144A
Rotor Swashplate Removal, Hoisting - Main .....	1.93	Runout Tube Removal/Installation, No. 1 or No. 2 Engine Power Available Spindle Gearbox Main Sleeve and ..	4.141A
Rotor Swashplate Removal, Main .....	11.6		
Rotor Swashplate Shoulder Pin Replacement, Main .....	11.8		
Rotor Teeter Stop Bumper Replacement, Tail .....	5.65		
Rotor Track and Balance AVA Kit Installation, Main .....	1.108A		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
<b>S</b>			
Safety Precautions, Fuel System .....	10.2	SDC Air Inlet Duct Installation .....	7.130
Safety Procedures, Helicopter .....	1.57	SDC Air Inlet Duct Removal .....	7.129
Safety Parts Program, Flight .....	1.140	SDC Check Valve Tube Removal/Installation .....	7.135
Safety Relief Valve Removal/Installation, Main Transmission Oil Filter .....	6.63	SDC Filter Element Removal/Installation	7.124
Safety Relief Valve Replacement, Engine Nose Gearbox Oil Filter .....	6.20	SDC Installation .....	7.121
Safety Switch Replacement, Chaff .....	16.30	SDC Outlet Pressure Switch Removal/Installation .....	7.128
Sampling, APU Oil System .....	1.27	SDC Pressure Interconnect Hose Replacement .....	7.126
Sampling, Engine Nose Gear Box Oil ..	1.29	SDC Pressure Outlet Hose Removal/Installation .....	7.127
Sampling, Main Transmission Oil .....	1.33	SDC Seal Plate Replacement .....	7.122
Schedule, Overhaul and Retirement ...	1.138	SDC Temperature Sensor Removal/Installation .....	7.123
Scissor Attach Sleeve Bearings Replacement, Main Rotor Lower Shoe .....	5.49A	SDC Total Pressure Sense Line Filter and Surge Valve Pressure Filter Removal/Installation .....	7.125
Scissor Disassembly/Assembly, Load Bearing .....	11.17	SDCC Data Bus Relay K9 Replacement	9.157
Scissor Disassembly/Assembly, Secondary .....	11.17A	Seal and Oil Seal Retainer Replacement (AVIM), Main Rotor Lower .....	5.46
Scissor Removal/Installation, Load Bearing Main Rotor .....	11.16	Seal Assembly Removal/Installation, Engine Nose Gearbox Input .....	6.37
Scissor Removal/Installation, Secondary Main Rotor .....	11.18	Seal Assembly Removal/Installation, Engine Nose Gearbox Output .....	6.38
Scope, Equipment Description and Data	1.8	Seal Assembly Removal/Installation, Intermediate Gearbox Input .....	6.124
Scope, Expendable and Durable Items List .....	F.13	Seal Assembly Removal/Installation, Intermediate Gearbox Output .....	6.125
Scope, General Information .....	1.1	Seal Assembly Removal/Installation, Tail Rotor Gearbox Input .....	6.135
Scope, Tool Identification List .....	H.3	Seal Assembly Replacement (AVIM), Main Landing Gear Shock Strut Upper .....	3.24
Scratch, Nick, or Gouge Repair, Main Rotor Blade .....	5.6	Seal Drain Tube Removal/Installation, Quill Housing/Hydraulic Pump .....	6.88
Scratch, Nick, or Gouge Repair, Tail Rotor Blade .....	5.55	Seal Plate Replacement, SDC .....	7.122
Screen Removal/Installation, Main Transmission Input Shaft Oil Jet and	6.55	Seal Removal/Installation, Armored Panel .....	2.181D
Screen Removal/Installation, Main Transmission Oil Filler Cap .....	6.47	Seal Removal/Installation (AVIM), Engine Nose Gearbox Rotor Output Shaft .....	6.39
Scuff Plate Assembly Removal/Installation, CPG .....	2.183		
Scuff Plate Assembly Removal/Installation, Pilot .....	2.182		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Seal Removal/Installation, Main Rotor Upper Seal Retainer and Plain Encased .....	5.45	Seal Retainer Replacement (AVIM), Main Rotor Lower Seal and Oil .....	5.46
Seal Removal/Installation, Main Transmission APU Input .....	6.74	Seal Ring Installation, Engine Buildup – No. 1 and No. 2 Engine Shroud .....	4.46
Seal Removal/Installation, Main Transmission Compressor Drive Adapter and .....	6.54	Seal Ring Removal, Engine Teardown – Engine No. 1 and No. 2 Engine Shroud .....	4.14
Seal Removal/Installation, Main Transmission Input Pinion .....	6.116	Seal Ring Removal/Installation, Engine Shroud .....	4.104
Seal Replacement (AVIM), Digital Automatic Stabilization Equipment (DASE) Computer Cover .....	11.220	Sealing, Cockpit .....	2.48
Seal Replacement (AVIM), Forward Avionics Bay Nose Fairing Assembly	2.42	Searchlight Directional Switch Replacement, Collective Stick .....	11.28
Seal Replacement (AVIM), Primary Hydraulic Manifold Reservoir .....	7.18	Searchlight Lamp Replacement, Landing/ .....	9.102
Seal Replacement (AVIM), Utility Hydraulic Manifold Reservoir .....	7.74	Searchlight ON/OFF Switch Replacement, Collective Stick .....	11.27
Seal Replacement, Canopy Access Door .....	2.40	Searchlight Relay Replacement, Landing/ .....	9.103
Seal Replacement, Canopy Transparent Panel Assembly .....	2.52	Searchlight Removal/Installation, Landing/ .....	9.101
Seal Replacement, ECS Duct .....	13.29	Seat Bucket Assembly Replacement, Pilot/CPG Armored Crew .....	2.177
Seal Replacement, Engine Air Inlet Assembly .....	4.83	Seat Control Assembly Removal/Installation, Pilot/CPG Armored Crew .....	2.172
Seal Replacement, Main Transmission Generator .....	6.43	Seat Cushion Removal/Installation, Pilot/CPG Armored Crew .....	2.168
Seal Replacement, Main Transmission Hydraulic Pump .....	6.89	Seat Fitting Bearing Replacement, Pilot/CPG Canted Bulkhead .....	2.162
Seal Replacement, Main Transmission Rotor Brake .....	6.67	Seat Frame Assembly Attenuator Removal/Installation, Pilot/CPG Armored Crew .....	2.171
Seal Replacement, Main Transmission Tail Rotor Drive .....	6.75	Seat Frame Assembly Helical Extension Spring Removal/Installation, Pilot/CPG Armored Crew .....	2.170
Seal Replacement, Nose Gearbox Fairing Riveted .....	2.124B	Seat Handle Assembly Replacement, Pilot/CPG Armored Crew .....	2.164
Seal Replacement, Nose Gearbox Shroud Adhesive .....	2.124A	Seat Lap Belt Removal/Installation, Pilot/CPG Armored Crew .....	2.176
Seal Replacement, Secondary Air Flexible Connection Flanged .....	7.140	Seat M-43 Blower Mount Bracket Bonding, Pilot/CPG Armored Crew ..	2.167
Seal Retainer and Plain Encased Seal Removal/Installation, Main Rotor Upper .....	5.45	Seat Removal/Installation, Pilot/CPG Armored Crew .....	2.161
Seal Retainer Removal/Installation (AVIM), Mast Base Oil .....	6.100		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Seat Restraint Control Assembly Removal/Installation, Pilot/CPG Armored Crew .....	2.173	Secondary Nozzle Structural Support Removal/Installation, No. 1 and No. 2 Engine .....	4.123
Seat Rotary Buckle Removal/Installation, Pilot/CPG Armored Crew .....	2.175	Secondary Nozzle Support Bushing Replacement (AVIM), No. 1 and No. 2 Engine .....	4.128
Seat Shoulder Harness and Inertia Reel Removal/Installation, Pilot/CPG Armored Crew .....	2.174	Secondary Nozzle Support Removal/Installation, No. 1 and No. 2 Engine .....	4.126
Seat Strap Guide Assembly Removal/Installation, Pilot/CPG Armored Crew .....	2.169	Secondary Nozzle Upper and Intermediate Support Strut Bushing Replacement (AVIM), No. 1 and No. 2 Engine .....	4.127
Seat Wing Panel (Armored Swing Panel) Removal/Installation, Pilot/CPG Armored Crew .....	2.165	Secondary Nozzle Upper Support Strut and Clevis Removal/Installation, No. 1 and No. 2 Engine .....	4.124
Seat Wing Panel Slider Plate Removal/Installation, Pilot/CPG Armored Crew .....	2.166	Secondary Nozzle Vertical Heat Shield and Support Bracket Removal/Installation, No. 1 and No. 2 Engine Outboard and Center .....	4.129
Secondary Air Flexible Connection Flanged Seal Replacement .....	7.140	Secondary Scissor Disassembly/Assembly .....	11.17A
Secondary Main Rotor Scissor Removal/Installation .....	11.18	Security .....	C.10
Secondary Nozzle Crack Repair (AVIM), No. 1 or No. 2 Engine .....	4.134	Select Switch Replacement (AVIM), CPG Fuel Panel Tank .....	10.66
Secondary Nozzle Frame Removal/Installation .....	4.133	Select Switch Replacement Cyclic Stick Symbol .....	11.53
Secondary Nozzle Heat Shield and Support Bracket Removal/Installation, No. 1 and No. 2 Engine Inboard .....	4.131	Select Switch Replacement, CPG Fire Bottle .....	12.37
Secondary Nozzle Horizontal Heat Shield and Shield Panel Removal/Installation, No. 1 and No. 2 Engine .....	4.130	Select Switch Replacement, Pilot Fire Bottle .....	12.35
Secondary Nozzle Intermediate Support Strut Removal/Installation, No. 1 and No. 2 Engine .....	4.125	Select Trigger Grip Switch Replacement, CPG Collective Stick BUCS .....	11.33
Secondary Nozzle Pin Replacement, No. 1 and No. 2 Engine .....	4.132	Selectable Digital Display (SDD) Panel Case Replacement (AVIM) .....	8.17
Secondary Nozzle Removal/Installation, No. 1 and No. 2 Engine Center .....	4.122	Selectable Digital Display (SDD) Panel Circuit Card Replacement (AVIM) ...	8.16
Secondary Nozzle Removal/Installation, No. 1 and No. 2 Engine Outboard ...	4.120	Selectable Digital Display (SDD) Panel Front Panel Removal/Installation (AVIM) .....	8.14
		Selectable Digital Display (SDD) Panel Removal/Installation, CPG .....	8.13

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Selectable Digital Display (SDD) Panel Switch Module Replacement (AVIM) .	8.15	Separator Removal/Installation, Air Particle .....	7.116
Selector Lever Replacement (AVIM), Hydraulic Hand Pump .....	7.29	Serial Number Plate Replacement, Tail Rotor Blade Part Number/ .....	5.59
Selector Switch Replacement, Pilot Cyclic Stick Remote Transmitter ....	11.48	Service – Fluid, Main Landing Gear Shock Strut .....	1.41
Self-Retaining Bolt Fit Check .....	11.1	Service – Nitrogen, Main Landing Gear Shock Strut .....	1.40
Semiconductor Device CR1 or CR2 Replacement (AVIM), CPG INTR LT Panel .....	9.84	Service/Bleed, Main Landing Gear Brake System – .....	1.45
Semiconductor Device CR1, CR2, CR3, CR5, CR7, CR8, or CR9 Replacement (AVIM), Pilot EXT LT/INTR LT Panel .....	9.65	Service Access Door B60R Removal/Installation, Ground .....	2.42A
Semiconductor Device CR3, CR4, or CR5 Replacement (AVIM), CPG INTR LT Panel .....	9.85	Services Common to the Three Storage Categories .....	E.3
Semiconductor Replacement, Windshield Anti-Ice Temperature Control Box .....	12.71	Services, Preventive Maintenance Checks and .....	1.7
Sense Line Filter and Surge Valve Pressure Filter Removal/Installation, SDC Total Pressure .....	7.125	Servicing (General), Fuel System .....	1.13
Sensor Clamp Replacement, Horizontal Stabilator Position .....	2.114A	Servicing – Closed Circuit Refueling (CCR) Method, Fuel .....	1.15
Sensor Removal/Installation, ENCU Temperature Control .....	13.11	Servicing – Fluid, Hydraulic Systems ...	1.34
Sensor Removal/Installation, Ice Detector .....	12.65	Servicing – Gravity Method, Fuel .....	1.14
Sensor Removal/Installation, Outside Air Temperature .....	12.75	Servicing – Grease, Intermediate Gearbox .....	1.30
Sensor Removal/Installation, SDC Temperature .....	7.123	Servicing – Grease, Tail Rotor Gearbox	1.31
Sensor Removal/Installation, Tail Rotor Gearbox Temperature .....	6.138	Servicing – Hot Rapid Closed Circuit Refueling (CCR) Method, Fuel .....	1.17
Sensor Surveying Unit (SSU) Mount Removal/Installation .....	2.191	Servicing – Hot Rapid Single Point Adapter (SPA) Method, Fuel .....	1.18
Sensor Removal/Installation, Intermediate Gearbox Temperature .	6.130	Servicing – Nitrogen, Tail Landing Gear Shock Strut .....	1.42
Separator (With Filter) Removal/Installation, Air Particle ....	7.117	Servicing – Nitrogen, Utility Hydraulic Accumulator .....	1.36
Separator Filter Replacement, Air Particle .....	7.118	Servicing – Nitrogen, Utility Hydraulic Return Accumulator .....	1.37
		Servicing Points .....	1.12
		Servicing, Air Turbine Starter Assembly	1.25
		Servicing, APU Oil System Draining and	1.26
		Servicing, Battery .....	1.51
		Servicing, ENCU Turbine .....	1.52
		Servicing, Engine Nose Gearbox .....	1.28
		Servicing, Engine Oil System Draining and .....	1.24
		Servicing, Main Landing Gear Tire .....	1.43

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Servicing, Main Transmission Oil System Draining, Flushing, and . . . . .	1.32	Servocylinder Removal, Longitudinal . .	7.47
Servicing, Tail Landing Gear Tire . . . . .	1.44	Servocylinder Rod End Replacement, Collective . . . . .	7.43
Servocylinder BUCS Warning Plate Replacement, Directional . . . . .	7.35	Servocylinder Rod End Adjustment . . . .	11.297
Servocylinder Check Valve Removal/Installation . . . . .	7.50	Servocylinder Rod End Replacement, Directional . . . . .	7.34
Servocylinder Clevis Assembly Replacement (AVIM), Directional . . . .	7.40A	Servocylinder Rod End Replacement, Lateral . . . . .	7.46
Servocylinder Control Solenoid Valve Replacement . . . . .	7.51	Servocylinder Rod End Replacement, Longitudinal . . . . .	7.49
Servocylinder Engine Control Rod Adapter Removal/Installation, Collective . . . . .	4.153	Servocylinder Support and Support Bracket Removal/Installation, Directional . . . . .	11.261
Servocylinder Engine Control Rod Disassembly/Assembly, Collective . .	4.152	Servocylinder Universal Link Replacement (AVIM) . . . . .	7.55
Servocylinder Engine Control Rod Removal/Installation, Collective . . . . .	4.151	Servocylinder Utility Hydraulic Pressure/Return Hose Bracket Removal/Installation, Directional . . . .	7.40
Servocylinder Hydraulic Servovalve Replacement . . . . .	7.52	Servocylinder Utility Pressure Hose Replacement, Directional . . . . .	7.38
Servocylinder Installation, Collective . . .	7.42	Servocylinder Utility Return Hose Replacement, Directional . . . . .	7.39
Servocylinder Installation, Directional . .	7.33	Servovalve Replacement, Servocylinder Hydraulic . . . . .	7.52
Servocylinder Installation, Lateral . . . . .	7.45	Set/Release, Parking Brakes – . . . . .	1.61
Servocylinder Installation, Longitudinal .	7.48	Severance Device Removal/Installation, Canopy . . . . .	12.77
Servocylinder Mount Bracket Assembly Removal/Installation, Lateral F.S. 176.00 . . . . .	11.110	Severance Initiator Handle Removal/Installation, Canopy . . . . .	12.78
Servocylinder Mount Bracket Assembly Removal/Installation, Longitudinal F.S. 176.00 . . . . .	11.128	Severity Meter Removal/Installation, Pilot Icing . . . . .	8.50
Servocylinder Mount Bracket Removal/Installation, Collective F.S. 176.00 . . . . .	11.142	Shaft and Anti-Flail Support Removal/Installation, No. 7 (APU) Drive . . . . .	6.16
Servocylinder Name Plate and BUCS Warning Plate Replacement, Hydraulic . . . . .	7.54	Shaft and Outer Diffuser (One-Piece) Removal/Installation, Engine Input Drive . . . . .	6.2
Servocylinder Pressure Filter Replacement . . . . .	7.53	Shaft Assembly Removal/Installation, Pilot Directional Control Pedal Release . . . . .	11.235
Servocylinder Primary Pressure Hose Replacement, Directional . . . . .	7.36	Shaft Driven Compressor (SDC) Removal . . . . .	7.120
Servocylinder Primary Return Hose Replacement, Directional . . . . .	7.37	Shaft Expansion Plug Replacement (AVIM), Intermediate Gearbox Input Flange and Output Shouldered . . . . .	6.123
Servocylinder Removal, Collective . . . . .	7.41		
Servocylinder Removal, Directional . . . .	7.32		
Servocylinder Removal, Lateral . . . . .	7.44		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Shaft Expansion Plug Replacement (AVIM), Tail Rotor Gearbox Shouldered .....	6.134	Shear Pin Activated Decoupler (SPAD) Bracket Assembly Removal/Installation, CPG Directional F.S. 60.56 .....	11.149
Shaft Fairing R410 or R475 Replacement, Tail Rotor Drive .....	2.126D	Shear Pin Activated Decoupler (SPAD) Installation, CPG Directional .....	11.145
Shaft Fairing T205L or T205R Removal/Installation, Main Rotor .....	2.126E	Shear Pin Activated Decoupler (SPAD) Installation, Pilot Directional .....	11.153
Shaft Fairing T355 Repair (AVIM), Tail Rotor Drive .....	2.126A	Shear Pin Activated Decoupler (SPAD) Push-Pull Rod Assembly Removal/Installation, CPG Directional .....	11.143
Shaft Inspection, Drive .....	6.1	Shear Pin Activated Decoupler (SPAD) Removal, CPG Directional .....	11.144
Shaft Oil Jet and Screen Removal/Installation, Main Transmission Input .....	6.55	Shear Pin Activated Decoupler (SPAD) Removal, Pilot Directional .....	11.152
Shaft Removal/Installation, Engine Nose Gearbox and Quill .....	6.36	Shear Pin Activated Decoupler (SPAD) Removal/Installation, Pilot Longitudinal .....	11.172
Shaft Removal/Installation, Intermediate Gearbox Output Shouldered .....	6.122	Shear Pin Activated Decoupler (SPAD) Shear Pin Replacement, CPG Directional .....	11.146
Shaft Removal/Installation, No. 3 Tail Rotor Drive .....	6.5	Shear Pin Activated Decoupler (SPAD) Shear Pin Replacement, Pilot Directional .....	11.155
Shaft Removal/Installation, No. 6 Tail Rotor Drive .....	6.14	Shear Pin Activated Decoupler (SPAD) Shear Rivet Replacement (AVIM), CPG Directional .....	11.147
Shaft Removal/Installation, Tail Rotor Gearbox Shouldered .....	6.133	Shear Pin Activated Decoupler (SPAD) Shear Rivet Replacement (AVIM), Pilot Directional .....	11.157
Shaft Replacement, Engine Air Starter Output .....	4.82A	Shear Pin Activated Decoupler (SPAD) Switch Replacement (AVIM) .....	11.64
Shaft Seal Removal/Installation (AVIM), Engine Nose Gearbox Rotor Output .....	6.39	Shear Pin Activated Decoupler (SPAD) Transducer Arm Shear Rivet Replacement (AVIM), Pilot Directional .....	11.156
Shaft Stud Replacement (AVIM), Tail Rotor Gearbox Shouldered .....	6.147	Shear Pin Replacement, CPG Collective Stick .....	11.43
Shaft, Damper, and Anti-Flail Support Removal/Installation, No. 4 Tail Rotor Drive .....	6.8	Shear Pin Replacement, CPG Cyclic Stick Housing Lateral .....	11.83
Shaft, Damper, and Anti-Flail Support Removal/Installation, No. 5 Tail Rotor Drive .....	6.11	Shear Pin Replacement, CPG Cyclic Stick Housing Longitudinal .....	11.82
Shear Pin Activated Decoupler (SPAD) Assembly Disassembly/Assembly (AVIM), CPG Directional .....	11.148	Shear Pin Replacement, CPG Directional Shear Pin Activated Decoupler (SPAD) .....	11.146
Shear Pin Activated Decoupler (SPAD) Assembly Disassembly/Assembly (AVIM), Pilot Directional .....	11.154		
Shear Pin Activated Decoupler (SPAD) Assembly Disassembly/Assembly (AVIM), Pilot Longitudinal .....	11.174		



<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Shear Pin Replacement, Pilot Longitudinal Shear Pin Activated Decoupler (SPAD) .....	11.173	Shim Removal/Installation (AVIM), Engine Nose Gearbox Preload .....	6.40
Shear Pin Replacement, Pilot Collective Stick .....	11.23	Shim Replacement (AVIM), Main Rotor Pitch Housing .....	5.27
Shear Pin Replacement, Pilot Cyclic Stick Housing Lateral .....	11.56	Shipment, Preparation for Storage or ..	1.4
Shear Pin Replacement, Pilot Directional Shear Pin Activated Decoupler (SPAD) .....	11.155	Shipment, Transmission Installation–Preparation for .....	6.106A
Shear Rivet Replacement (AVIM), CPG Directional Shear Pin Activated Decoupler (SPAD) .....	11.147	Shock Strut Bearing Replacement (AVIM), Tail Landing Gear .....	3.42
Shear Rivet Replacement (AVIM), Pilot Directional Shear Pin Activated Decoupler (SPAD) .....	11.157	Shock Strut Cam Valve Replacement (AVIM), Main Landing Gear .....	3.19A
Shear Rivet Replacement (AVIM), Pilot Directional Shear Pin Activated Decoupler (SPAD) Transducer Arm .	11.156	Shock Strut Check Valve Removal/Installation, Main Landing Gear .....	3.22
Shield and Shield Panel Removal/Installation, No. 1 and No. 2 Engine Secondary Nozzle Horizontal Heat .....	4.130	Shock Strut Cork Stopper Replacement, Tail Landing Gear .....	3.41
Shield and Support Bracket Removal/Installation, No. 1 and No. 2 Engine Inboard Secondary Nozzle Heat .....	4.131	Shock Strut Cylinder External Leakage Repair, Main Landing Gear .....	3.21
Shield and Support Bracket Removal/Installation, No. 1 and No. 2 Engine Outboard and Center Secondary Nozzle Vertical Heat ....	4.129	Shock Strut External Leakage Repair, Upper Main Landing Gear .....	3.20
Shield Bus (1 or 2 Inch) Repair, Mass Termination Connector (MTC) With ..	9.136	Shock Strut Identification Plate Replacement, Main Landing Gear ...	3.25
Shield Panel Removal/Installation, No. 1 and No. 2 Engine Secondary Nozzle Horizontal Heat Shield and .....	4.130	Shock Strut Piston Removal/Installation (AVIM), Tail Landing Gear .....	3.39
Shield Replacement, Left or Right Nacelle Engine Guard/Radiation ....	4.94	Shock Strut Pneumatic Valve Removal/Installation, Tail Landing Gear .....	3.40
Shields Replacement, Left Nacelle Radiation .....	4.96	Shock Strut Pneumatic Valve Replacement, Main Landing Gear ...	3.19
Shields Replacement, Right Nacelle Radiation .....	4.95	Shock Strut Removal/Installation, Main Landing Gear .....	3.18
		Shock Strut Removal/Installation, Tail Landing Gear .....	3.38
		Shock Strut Service – Fluid, Main Landing Gear .....	1.41
		Shock Strut Service – Nitrogen, Main Landing Gear .....	1.40
		Shock Strut Servicing – Nitrogen, Tail Landing Gear .....	1.42
		Shock Strut Structural Support Pin Replacement, Main Landing Gear ...	2.77A
		Shock Strut Structural Support Removal/Installation, Main Landing Gear Left .....	2.76
		Shock Strut Structural Support Removal/Installation, Main Landing Gear Right .....	2.77

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Shock Strut Upper Rod End Replacement (AVIM), Main Landing Gear .....	3.23	Shutoff Valve Duct Removal/Installation, Environmental Control Unit .....	7.154
Shock Strut Upper Seal Assembly Replacement (AVIM), Main Landing Gear .....	3.24	Shutoff Valve Removal/Installation, Aft Fuel Cell Fuel .....	10.40
Shoe Identification Plate Replacement (AVIM), Main Rotor Lower .....	5.50	Shutoff Valve Removal/Installation, APU Fuel .....	10.111
Shoe Scissor Attach Sleeve Bearings Replacement, Main Rotor Lower ....	5.49A	Shutoff Valve Removal/Installation, Defog .....	13.44
Short Term Storage – 1 to 45 Days ....	E.7	Shutoff Valve Removal/Installation, ECS	13.15
Short Term Storage – 1 to 45 Days, Removal from .....	E.8	Shutoff Valve Removal/Installation, ENCU Temperature Control .....	13.6
Shoulder Harness and Inertia Reel Removal/Installation, Pilot/CPG Armored Crew Seat .....	2.174	Shutoff Valve Removal/Installation, Forward Fuel Cell Fuel .....	10.14
Shoulder Pin Replacement, Main Rotor Swashplate .....	11.8	Shutoff Valve Removal/Installation, Fuel Boost Pump Solenoid .....	7.150
Shouldered Shaft Expansion Plug Replacement (AVIM), Intermediate Gearbox Input Flange and Output ...	6.123	Shutoff Valve Removal/Installation, Fuel Transfer .....	10.74
Shouldered Shaft Expansion Plug Replacement (AVIM), Tail Rotor Gearbox .....	6.134	Shutoff Valve Removal/Installation, No. 1 Engine Crossfeed/ .....	10.99
Shouldered Shaft Removal/Installation, Intermediate Gearbox Output .....	6.122	Shutoff Valve Removal/Installation, No. 1 or No. 2 Engine Directional Control	4.63
Shouldered Shaft Removal/Installation, Tail Rotor Gearbox .....	6.133	Shutoff Valve Removal/Installation, No. 2 Engine Crossfeed/ .....	10.100
Shouldered Shaft Stud Replacement (AVIM), Tail Rotor Gearbox .....	6.147	Shutoff Valve Replacement, Utility Low Level .....	7.108
Shroud Adhesive Replacement, Nose Gearbox .....	2.144A	Shutoff Valve/Check Valve Removal/Installation, Bleed Air .....	7.139
Shroud Assembly Removal/Installation, No. 1 or No. 2 Engine .....	4.103	Shutoff Valve/Electrical Control Valve Cleaning, ENCU Temperature Control .....	13.8
Shroud Removal/Installation, Nose Gearbox Fuselage Fairing and .....	2.123	Side Engine Work Platform and Equipment Bay, Access Provisions – Top .....	2.7
Shroud Seal Ring Removal/Installation, Engine .....	4.104	Side Panel Removal/Installation, CPG Left Hand or Right Hand Armored ...	2.181B
Shroud Support Installation, Engine Buildup – No. 1 and No. 2 Engine ...	4.36	Side Panel Removal/Installation, Pilot Left Hand or Right Hand Armored ...	2.181A
Shroud Support Removal, Engine Teardown – No. 1 and No. 2 Engine .	4.24	Side Panel Removal/Installation, Pilot Left Hand Upper Armored .....	2.181C
Shunt Replacement (AVIM), Tail Rotor De-Ice Brush and .....	11.279	Side Skin Plates, Fuselage .....	2.16
Shutoff Valve Armor Plate Removal/Installation, Tailboom Utility Low Level .....	2.198	Side Transmission Rotor Support Strut Assembly Removal/Installation, Left Aft .....	2.94
		Side Transmission Rotor Support Strut Assembly Removal/Installation, Left Forward .....	2.92

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Side Transmission Rotor Support Strut Assembly Removal/Installation, Right Aft .....	2.95	Single Disk Brake, Friction Lining, and Brake Disk Removal/Installation (Parker-Hannifin) .....	3.65
Side Transmission Rotor Support Strut Assembly Removal/Installation, Right Forward .....	2.93	Single Point Adapter (SPA) Method, Defueling – .....	1.19
Sight (TADS) Cleaning, Target Acquisition Designation .....	1.46	Single Point Adapter (SPA) Method, Fuel Servicing – .....	1.16
Sight Gage Indicator Replacement, APU Oil Level .....	TM 1-2835-213-23	Single Point Adapter (SPA) Method, Fuel Servicing – Hot Rapid .....	1.18
Sight Indicator Removal/Installation, Engine Nose Gearbox .....	6.22	Skin Plates, Empennage .....	2.106
Sight Indicator Removal/Installation, Main Transmission .....	6.59	Skin Plates, Engine Nacelle .....	2.132
Signal Conditioner Adjustment, Fuel ...	10.136	Skin Plates, Fuselage Side .....	2.16
Signal Conditioner Removal/Installation, Fuel .....	8.27	Skin Plates, Fuselage Top .....	2.17
Signal Data Converter Circuit Card Replacement (AVIM) .....	8.19	Skin Plates, Wing .....	2.119
Signal Data Converter Power Supply Replacement (AVIM) .....	8.20	Sleeve and Runout Tube Removal/Installation, No. 1 or No. 2 Engine Load Demand Spindle Gearbox Main .....	1.144A
Signal Data Converter Removal/Installation .....	8.18	Sleeve and Runout Tube Removal/Installation, No. 1 or No. 2 Engine Power Available Spindle Gearbox Main .....	1.141A
Signal Data Converter Tray Removal/Installation .....	8.21	Sleeve Bearings Replacement (AVIM), Main Rotor Blade Lead Lag Link Pivot Low Friction .....	5.33A
Signal Processor Circuit Card Assembly (CCA) Stack Removal/Installation (AVIM), Ice Detector .....	12.60	Sleeve Bearings Replacement, Main Rotor Lower Shoe Scissor Attach ...	5.49A
Signal Processor EMI Filter Replacement (AVIM), Ice Detector ..	12.64	Sleeve Bearing Replacement, Remote Control Lever .....	3.30
Signal Processor Power Supply CCA Replacement (AVIM), Ice Detector ..	12.63	Sleeve Bushing Replacement (AVIM), Gun and Ammo Support Aft Mount Pads .....	2.37
Signal Processor Probe Oscillator Reference or Rate Output CCA Replacement (AVIM), Ice Detector ..	12.62	Sleeve Bushing Replacement (AVIM), Gun and Ammo Support Forward Mount Pads .....	2.38
Signal Processor Removal/Installation, Ice Detector .....	12.59	Sleeve Bushing Replacement (AVIM), TADS/PNVS Support Control Surface	2.46A
Signal Processor Unit Removal/Installation, Rotor Balance .	9.127	Sleeve Bushings Replacement (AVIM), Main Rotor Blade Lead Lag Link ....	5.33B
Signal Processor Interconnection CCA Replacement (AVIM), Ice Detector ..	12.61	Sleeve Bushing Replacement, Forward Avionics Bay Structure Frame Assembly Forward Step .....	2.46
Single Disk Brake, Friction Lining, and Brake Disk Removal/Installation (Goodyear/ABSC) .....	3.66	Slider Plate Removal/Installation, Pilot/CPG Armored Crew Seat Wing Panel .....	2.166
		Sling Installation/Removal, Air Vehicle .	1.79

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Socket XK1/XK2 Replacement (AVIM), Pilot EXT LT/INTR LT Panel Relay K1/K2 and .....	9.69	Spindle Gearbox Main Sleeve and Runout Tube Removal/Installation, No. 1 or No. 2 Engine Power Available .....	4.141A
Solenoid Shutoff Valve Removal/Installation, Fuel Boost Pump .....	7.150	Spindle Gearboxes Installation, Engine Buildup – No. 1 and No. 2 Engine Baseplate and .....	4.37
Solenoid Support Bracket Removal/Installation, APU Fuel .....	TM 1-2835-213-23	Spindle Gearboxes Removal, Engine Teardown – No. 1 and No. 2 Engine Baseplate and .....	4.23
Solenoid Valve Disassembly/Assembly, APU Power Take-Off (PTO) Clutch .....	TM 1-2835-213-23	Spindle/Power Available Spindle Aft Cable Spring Tension Clip Removal/Installation, No. 1 Engine Load Demand .....	4.180
Solenoid Valve Removal/Installation, APU Fuel .....	TM 1-2835-213-23	Splice Replacement, Pitot Static System Tubing .....	8.39
Solenoid Valve Removal/Installation, APU Power Take-Off (PTO) Clutch .....	TM 1-2835-213-23	Spline Adapter and Cork Stopper Replacement, Main Transmission Generator .....	6.72
Solenoid Valve Replacement, Servocylinder Control .....	7.51	Spring Cartridge Installation, Lateral Feel .....	11.58
Solenoid Valve Replacement, Utility Hydraulic Accumulator APU Start ...	7.88	Spring Cartridge Installation, Longitudinal Feel .....	11.60
Solenoid Valve Replacement, Utility Hydraulic Manifold .....	7.73	Spring Cartridge Removal, Lateral Feel	11.57
Spacer Plate Removal/Installation, Main Rotor Mast Support Base .....	6.98	Spring Cartridge Removal, Longitudinal Feel .....	11.59
Spar Box Frame Structure, Vertical Stabilizer .....	2.104	Spring Mechanism Disassembly/Assembly (AVIM), Longitudinal Magnetic Brake .....	11.189
Spar to Spar Debond Repair (AVIM), Main Rotor Blade .....	5.7A	Spring Mechanism Removal/Installation, Longitudinal Magnetic Brake .....	11.188
Spar Repair (AVIM), Main Rotor Blade Debonded Doubler or .....	5.7	Spring Removal/Installation, Directional Control Pedal Adjust .....	11.237
Special Inspection Checklist .....	1.137	Spring Removal/Installation, Pilot/CPG Armored Crew Seat Frame Assembly Helical Extension .....	2.170
Special Inspections .....	1.136	Spring Replacement (AVIM), Tail Landing Gear Actuating Cylinder ....	3.33
Speed Control Unit Adjustment (T700-GE-701 Engine), Engine Turbine .....	4.136	Spring Replacement, Hydraulic Manifold Return Filter Sleeve, Manifold Guide, and .....	7.70
Speed Control Unit Adjustment (T700-GE-701C Engine), Engine Turbine .....	4.137	Squat Switch Fixture Installation/Removal .....	1.132
Speed Control Unit Replacement, Engine Turbine .....	4.135	Squat Switch Replacement .....	9.158
Spindle (LDS) Cables, Warm-Up/De-Ice of Engine Load Demand .....	1.55	Squat Switch Target and Bracket Disassembly/Assembly, Main Landing Gear .....	3.17
Spindle Aft Cable Removal, No. 2 Engine Load Demand .....	4.178		
Spindle Gearbox Main Sleeve and Runout Tube Removal/Installation, No. 1 or No. 2 Engine Load Demand	4.144A		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Squat Switch Target Plate Adjustment . .	9.149	Stabilizer Removal/Installation, Vertical .	2.107
Stabilator Actuator		Stabilizer Spar Box Frame Structure,	
Disassembly/Assembly . . . . .	11.225	Vertical . . . . .	2.104
Stabilator Actuator Fitting		Stabilizer Tip Fairings T545A and T545	
Removal/Installation, Horizontal . . . .	2.114	Removal/Installation, Vertical . . . . .	2.110
Stabilator Actuator Removal/Installation	11.224	Stabilizer Trailing Edge	
Stabilator Airspeed Transducer		Removal/Installation, Vertical . . . . .	2.111
Removal/Installation . . . . .	9.148	Standby Attitude Indicator	
Stabilator Controller Electrical Chassis		Removal/Installation, Pilot . . . . .	8.34
Repair (AVIM) . . . . .	11.230	Standby System Engine Bleed Air Tube	
Stabilator Controller Interconnect Circuit		and Engine Air Flexible Connection	
Card Assembly (CCA)		Housing Removal/Installation . . . . .	7.141
Removal/Installation (AVIM) . . . . .	11.229	Standpipe Removal/Installation, Main	
Stabilator Controller Removal . . . . .	11.226	Rotor Air Data System (ADS) . . . . .	6.94
Stabilator Controller Circuit Card		Standpipe Removal/Installation (AVIM),	
Assembly (CCA) Removal/Installation		Main Transmission . . . . .	6.118
(AVIM) . . . . .	11.228	Start Air Tube and Air Flexible	
Stabilator Controller Unit Installation . . .	11.227	Connection Housing	
Stabilator Debris Cover		Removal/Installation, No. 2 Engine . .	7.146
Removal/Installation, Horizontal . . . .	2.115	Start Air Valve and Ground Air	
Stabilizer Elastomeric Mount		Connection Flange	
Removal/Installation, Vertical . . . . .	2.107A	Removal/Installation . . . . .	7.142
Stabilator Frame Structure, Horizontal .	2.105	Start Check Valve Replacement (AVIM),	
Stabilator Manual Switch		Utility Hydraulic Accumulator APU . .	7.91
Removal/Installation, Collective Stick	11.26	Start Mode Relay Panel	
Stabilator Position Indicator		Removal/Installation . . . . .	9.60
Removal/Installation, Pilot/CPG . . . .	8.48	Start Motor Pressure Hose	
Stabilator Position Placard ILT Panel		Replacement, Utility Hydraulic	
Removal/Installation, Pilot/CPG . . . .	8.49	Accumulator APU . . . . .	7.89
Stabilator Position Sensor Clamp		Start Motor Return Hose Replacement,	
Replacement, Horizontal . . . . .	2.114A	Utility Hydraulic Accumulator APU . .	7.90
Stabilator Position Transducer		Start Solenoid Valve Replacement,	
Removal/Installation . . . . .	11.231	Utility Hydraulic Accumulator APU . .	7.88
Stabilator Relay Box		START/RUN/OFF Switch Replacement,	
Disassembly/Assembly . . . . .	9.134	APU . . . . .	15.13
Stabilator Relay Box		Starter and Regulating Valve Removal,	
Removal/Installation . . . . .	9.133	Engine Teardown – No. 1 Engine Air	4.19
Stabilator Removal/Installation,		Starter Assembly Servicing, Air Turbine	1.25
Horizontal . . . . .	2.113	Starter Flow Switch and Turbine Speed	
Stabilator, Rigging Horizontal . . . . .	11.298	Cutout Flow Switch Replacement, Air	
Stabilizer Fairing L530		Turbine . . . . .	9.152
Removal/Installation, Vertical . . . . .	2.109	Starter Output Shaft Replacement,	
Stabilizer Fairings L510 and R510		Engine Air . . . . .	4.82A
Removal/Installation, Vertical . . . . .	2.108	Starter Removal/Installation, No. 1	
Stabilizer Handhold Steps		Engine Air . . . . .	4.81
Removal/Installation, Vertical . . . . .	2.112		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Starter Removal/Installation, No. 2 Engine Air .....	4.82	Stick Cylinder Assembly Disassembly/Assembly (AVIM), Collective .....	11.37
Static System Tubing Splice Replacement, Pitot .....	8.39	Stick Cylinder Assembly Removal/Installation, Pilot Collective	11.36
Static System Tubing Swagelok Fitting Replacement, Pitot .....	8.40	Stick Cylinder Removal/Installation, CPG Collective .....	11.40
Static System Tubing Transition Replacement, Pitot .....	8.38	Stick Flight Control Arm Assembly Disassembly/Assembly (AVIM), CPG Cyclic .....	11.85
Station Access Door Canopy Pawl Fastener Removal/Installation, Pilot/CPG .....	2.51	Stick Flight Control Arm Assembly Disassembly/Assembly (AVIM), Pilot Cyclic .....	11.62
Station Access Door Removal/Installation, CPG .....	2.54	Stick Forward Link Removal/Installation, CPG Cyclic .....	11.69
Station Accessing, Pilot/CPG .....	1.56	Stick Grip Assembly Removal/Installation, Collective .....	11.24
Station Ducts Removal/Installation, ECS Crew .....	13.28	Stick Grip Control Collar Replacement, Collective .....	11.25
Station Locations, Airframe .....	1.11	Stick Housing Assembly Disassembly/Assembly (AVIM), CPG Cyclic .....	11.84
Station, No. 1 Engine Removal – Pilot ..	4.4	Stick Housing Assembly Disassembly/Assembly (AVIM), Pilot Cyclic .....	11.61
Step Assembly Removal/Installation, Forward Avionics Bay Airframe .....	2.45	Stick Housing Installation, Pilot Cyclic ..	11.55
Step Removal/Installation, Fuselage ...	2.79	Stick Housing Lateral Shear Pin Replacement, CPG Cyclic .....	11.83
Step Sleeve Bushing Replacement, Forward Avionics Bay Structure Frame Assembly Forward .....	2.46	Stick Housing Lateral Shear Pin Replacement, Pilot Cyclic .....	11.56
Steps Removal/Installation, Vertical Stabilizer Handhold .....	2.112	Stick Housing Longitudinal Shear Pin Replacement, CPG Cyclic .....	11.82
Stick and Lateral Link Installation, CPG Cyclic .....	11.67	Stick Housing Removal, Pilot Cyclic ...	11.54
Stick and Lateral Link Removal, CPG Cyclic .....	11.66	Stick Housing Removal/Installation, CPG Cyclic .....	11.81
Stick ASE Release Switch Replacement, Cyclic .....	11.49	Stick Installation, Pilot or CPG Collective .....	11.21
Stick Boresight Switch Replacement, Collective .....	11.31	Stick Lever Lock Release Retainer Removal/Installation, CPG Cyclic ...	11.75
Stick BUCS Select Trigger Grip Switch Replacement, CPG Collective .....	11.33	Stick Link Removal/Installation, CPG Adjustable Cyclic .....	11.68
Stick Cover Removal/Installation, Collective .....	11.44	Stick Lock Release Wire Rope Removal/Installation, CPG Cyclic ...	11.76
Stick Cover Removal/Installation, CPG Cyclic .....	11.65		
Stick Cover Removal/Installation, Pilot Cyclic .....	11.46		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Stick Lock Removal/Installation, CPG Cyclic .....	11.77	Stick Weapons Action Switch Replacement, Cyclic .....	11.51
Stick RADIO-ICS Switch Replacement, Cyclic .....	11.50	Stick Wire Rope Release Fitting Removal/Installation, CPG Cyclic ...	11.74
Stick Remote Control Lever Removal/Installation, CPG Cyclic ...	11.72	Stop Disassembly/Disassembly (AVIM), Tail Rotor Fork and Teeter .....	5.67
Stick Removal, Pilot or CPG Collective .	11.20	Stop Bolts, Rigging Pilot and CPG Collective Stick .....	11.283
Stick RF Override Switch Replacement, Collective .....	11.30	Stop Bolts, Rigging Pilot and CPG Directional Pedal .....	11.295
Stick Searchlight Directional Switch Replacement, Collective .....	11.28	Stop Bolts, Rigging Pilot and CPG Lateral Cyclic Stick .....	11.291
Stick Searchlight ON/OFF Switch Replacement, Collective .....	11.27	Stop Bolts, Rigging Pilot and CPG Longitudinal Cyclic Stick .....	11.287
Stick Shear Pin Replacement, CPG Collective .....	11.43	Stop Bumper Replacement, Tail Rotor Teeter .....	5.65
Stick Shear Pin Replacement, Pilot Collective .....	11.23	Stop Check Valve Replacement, Fire Extinguisher .....	12.42
Stick Stabilator Manual Switch Removal/Installation, Collective .....	11.26	Stop Follower Installation (AVIM), Main Rotor Droop .....	5.39
Stick Stores Jettison Switch Replacement, Collective .....	11.29	Stop Follower Removal (AVIM), Main Rotor Droop .....	5.38
Stick Stores Jettison Switch Cover Replacement, Collective .....	11.29A	Stop Follower Repair (AVIM), Main Rotor Droop .....	5.40
Stick Support Assembly Disassembly/Assembly (AVIM), CPG Collective .....	11.42	Stop Follower Roller and Inner Race Replacement, Main Rotor Droop ....	5.41
Stick Support Assembly Disassembly/Assembly (AVIM), Pilot Collective .....	11.39	Stop Ring Removal/Installation (AVIM), Main Rotor Droop .....	5.44
Stick Support Removal/Installation, Pilot Collective .....	11.38	Stopper Replacement, Main Transmission Tail Rotor Flange Cork	6.76
Stick Switch and Bracket Assembly Removal/Installation, Collective .....	11.34	Storage – 1 to 45 Days, Removal from Short Term .....	E.8
Stick Symbol Select Switch Replacement, Cyclic .....	11.53	Storage – 1 to 45 Days, Short Term ....	E.7
Stick TADS/PNVS Switch Replacement, Collective .....	11.32	Storage – 46 to 180 Days, Intermediate	E.9
Stick Trigger Switch Replacement, Cyclic .....	11.52	Storage – 46 to 180 Days, Removal from Intermediate .....	E.10
Stick Trim and Force Feel Release Switch Replacement, CPG Cyclic ...	11.80	Storage – No Time Limit, Flyable .....	E.5
Stick Trim and Force Feel Release Switch Replacement, Pilot Cyclic ...	11.47	Storage – No Time Limit, Removal from Flyable .....	E.6
Stick Tube Assembly Disassembly/Assembly (AVIM), Collective .....	11.35	Storage Categories, Description of ....	E.1
		Storage Categories, Services Common to the Three .....	E.3
		Storage or Shipment, Preparation for ..	1.4
		Storage Preservation, Auxiliary Power Unit (APU) .....	E.11

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Stores Jettison Switch Cover Replacement, Collective Stick . . . . .	11.29A	Striker Removal/Installation, Forward Door Catch . . . . .	2.60
Stores Jettison Switch Replacement, Collective Stick . . . . .	11.29	Striker Strip Replacement (AVIM), Main Rotor Pitch Housing . . . . .	5.29
Stow Box Cover Assembly Removal/Installation, Aft Cockpit . . . .	2.160	Stringers, Fuselage . . . . .	2.19
Stow Bracket Removal/Installation, Pylon . . . . .	16.17	Strip Replacement (AVIM), Main Rotor Pitch Housing Striker . . . . .	5.29
Stowage Compartment Removal/Installation, CPG Map . . . . .	2.184	Structural Assembly Doppler Mount Removal/Installation . . . . .	2.99A
Straight Pin Replacement, Pylon Frame	16.20	Structural Plate and Canopy Lock Switch Removal/Installation, Aft Door Latch . . . . .	2.69
Strainer Element Removal/Installation (AVIM), Utility Hydraulic Manifold . . .	7.75	Structural Support Pin Replacement, Main Landing Gear Shock Strut . . . . .	2.77A
Strainer Element, and Differential Pressure Switch (Lockwired Type) Removal/Installation, Engine Nose Gearbox Oil Filter Bowl, . . . . .	6.18	Structural Support Removal/Installation, Main Landing Gear Left Shock Strut .	2.76
Strainer Element, and Differential Pressure Switch (Retainer, Ringed Type) Removal/Installation, Engine Nose Gearbox Oil Filter Bowl, . . . . .	6.19	Structural Support Removal/Installation, Main Landing Gear Lower . . . . .	3.4
Strainer Replacement, Primary Hydraulic Manifold . . . . .	7.16	Structural Support Removal/Installation, Main Landing Gear Right Shock Strut	2.77
Strainer Replacement, Utility Hydraulic Manifold . . . . .	7.69	Structural Support Removal/Installation, Main Landing Gear Upper . . . . .	3.3
Strap Guide Assembly Removal/Installation, Pilot/CPG Armored Crew Seat . . . . .	2.169	Structural Support Removal/Installation, No. 1 and No. 2 Engine Secondary Nozzle . . . . .	4.123
Strap Pack Borescope Inspection, Main Rotor . . . . .	5.34A	Structural Support Strut Disassembly/Assembly (AVIM) . . . . .	2.140
Strap Pack Repair Criteria, Main Rotor Blade . . . . .	5.36	Structural Support Strut Removal/Installation, Work Platform Door . . . . .	2.138
Strap Pack Replacement, Main Rotor . .	5.35	Structural Support, and Tail Wheel Brackets Removal/Installation, Tail Landing Gear Tail Wheel Deflector, . .	3.27
Strike Cutter and Deflector Removal/Installation, Gun Wire . . . . .	2.194	Structure Frame Assembly Forward Step Sleeve Bushing Replacement, Forward Avionics Bay . . . . .	2.46
Strike Lower Deflector Extension Replacement (AVIM), Wire . . . . .	2.192	Structure Removal/Installation, Transformer-Rectifier No. 1 Support .	9.31
Strike Protection Aircraft Cable Cutter Blades Replacement, Wire . . . . .	2.195	Structure, Forward Fuselage Frame . . .	2.13
Strike Protection Aircraft Cable Cutter Removal/Installation (AVIM), Wire . . .	2.193	Structure, Horizontal Stabilator Frame . .	2.105
Striker Plate Removal/Installation, Main Rotor . . . . .	5.30	Structure, Vertical Stabilizer Spar Box Frame . . . . .	2.104



<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Structure, Work Platform Nacelle Door .	2.130	Strut Cylinder External Leakage Repair, Main Landing Gear Shock . . . . .	3.21
Strut and Eye Bolt Removal/Installation, Ammunition Magazine . . . . .	2.82	Strut Disassembly/Assembly, Tail Rotor Gearbox . . . . .	6.144
Strut and Support Bracket Removal/Installation, Pylon Telescoping . . . . .	16.23	Strut External Leakage Repair, Upper Main Landing Gear Shock . . . . .	3.20
Strut Assemblies Removal/Installation, Forward Left or Right Center Transmission Rotor Support . . . . .	2.89	Strut Identification Plate Replacement, Main Landing Gear Shock . . . . .	3.25
Strut Assembly Removal/Installation, Aft Left Center Transmission Rotor Support . . . . .	2.90	Strut Piston Removal/Installation (AVIM), Tail Landing Gear Shock . . . .	3.39
Strut Assembly Removal/Installation, Aft Right Center Transmission Rotor Support . . . . .	2.91	Strut Pneumatic Valve Removal/Installation, Tail Landing Gear Shock . . . . .	3.40
Strut Assembly Removal/Installation, Engine Nacelle . . . . .	2.151	Strut Pneumatic Valve Replacement, Main Landing Gear Shock . . . . .	3.19
Strut Assembly Removal/Installation, Left Aft Side Transmission Rotor Support . . . . .	2.94	Strut Pulley Removal/Installation, CPG Station Access Door . . . . .	2.57
Strut Assembly Removal/Installation, Left Forward Side Transmission Rotor Support . . . . .	2.92	Strut Pulley Removal/Installation, Pilot Station Access Door . . . . .	2.65
Strut Assembly Removal/Installation, Nacelle Carry-Thru . . . . .	2.96	Strut Removal/Installation, Main Landing Gear Shock . . . . .	3.18
Strut Assembly Removal/Installation, Right Aft Side Transmission Rotor Support . . . . .	2.95	Strut Removal/Installation, No. 1 and No. 2 Engine Secondary Nozzle Intermediate Support . . . . .	4.125
Strut Assembly Removal/Installation, Right Forward Side Transmission Rotor Support . . . . .	2.93	Strut Removal/Installation, Tail Landing Gear Shock . . . . .	3.38
Strut Bearing Replacement (AVIM), Tail Landing Gear Shock . . . . .	3.42	Strut Removal/Installation, Tail Rotor Gearbox Aft . . . . .	6.140
Strut Bushing Replacement (AVIM), No. 1 and No. 2 Engine Secondary Nozzle Upper and Intermediate Support . . . . .	4.127	Strut Removal/Installation, Tail Rotor Gearbox Forward . . . . .	6.142
Strut Bushing Replacement (AVIM), Main Rotor Support . . . . .	2.95B	Strut Removal/Installation, Work Platform Door Structural Support . . . .	2.138
Strut Cam Valve Replacement (AVIM), Main Landing Gear Shock . . . . .	3.19A	Strut Rod Removal/Installation, Canopy Door Anchor . . . . .	2.68
Strut Check Valve Removal/Installation, Main Landing Gear Shock . . . . .	3.22	Strut Service – Fluid, Main Landing Gear Shock . . . . .	1.41
Strut Cork Stopper Replacement, Tail Landing Gear Shock . . . . .	3.41	Strut Service – Nitrogen, Main Landing Gear Shock . . . . .	1.40
		Strut Servicing – Nitrogen, Tail Landing Gear Shock . . . . .	1.42
		Strut Structural Support Removal/Installation, Main Landing Gear Left Shock . . . . .	2.76
		Strut Structural Support Removal/Installation, Main Landing Gear Right Shock . . . . .	2.77

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Strut Upper Rod End Replacement (AVIM), Main Landing Gear Shock ..	3.23	Support Assembly Disassembly/Assembly (AVIM), Pilot Collective Stick .....	11.39
Submitting Deficiency Reports .....	1.6	Support Assembly Removal/Installation, Pedal Adjust Handle .....	11.175
Strut Upper Seal Assembly Replacement (AVIM), Main Landing Gear Shock .....	3.24	Support Base Removal/Installation, Rotor Support Mast .....	2.88
Stud (With Packings) Replacement, Turnlock .....	2.22	Support Base Spacer Plate Removal/Installation, Main Rotor Mast .....	6.98
Stud Nut Replacement, Nose Gearbox . Fairing .....	2.124E	Support Bearing Bore Repair, Firewall Assembly No. 1 or No. 2 Aft Inboard Engine Mount .....	2.150A
Stud Replacement (AVIM), Tail Rotor Gearbox Shouldered Shaft .....	6.147	Support Bearing Replacement, Firewall Assembly No. 1 or No. 2 Aft Inboard Engine Mount .....	2.150
Stud Replacement (AVIM), Windshield Anti-Ice Temperature Control Box Terminal .....	12.74	Support Bearing Replacement (AVIM), No. 1 or No. 2 Aft Engine Mount ....	4.85A
Stud Replacement, Turnlock .....	2.21	Support Bracket Assembly Removal/Installation, CPG to Pilot Lateral Control F.S. 83.45 .....	11.91
Supply Hose Removal/Installation, Nitrogen Inerting Unit (NIU) Pressurized Air .....	10.127	Support Bracket Removal/Installation (Pilot to CPG), No. 1 or No. 2 Power Available Spindle Cable .....	4.163
Supply Hose Replacement, No.1 Engine Lower Fuel .....	10.102	Support Bracket Removal/Installation, Aft Deck Left Side Connector Bracket and Wire Harness .....	9.151
Supply Hose Replacement, No. 2 Engine Fuel .....	10.103	Support Bracket Removal/Installation, Aft Deck Right Side Connector Bracket and Wire Harness .....	9.150
Supply Removal/Installation (AVIM), Digital Automatic Stabilization Equipment (DASE) Computer Power	11.222	Support Bracket Removal/Installation, CPG to Pilot Control Collective F.S.118.50 .....	11.132
Supply Tube Removal/Installation, No. 1 and No. 2 Engine Anti-Ice .....	4.72	Support Bracket Removal/Installation, CPG to Pilot Control Directional F.S. 118.50 .....	11.162
Supply Tube Replacement, Ice Detector Aft Warm Air .....	7.157	Support Bracket Removal/Installation, Directional Servocylinder Support and .....	11.261
Support (Static) Mast Installation, Hoisting – Main Rotor .....	1.90	Support Bracket Removal/Installation, Lateral Servocylinder Wire Harness .	2.85
Support (Static) Mast Removal, Hoisting – Main Rotor .....	1.89		
Support (Static) Mast, or Swashplate Hoisting, Crane Adjustment – Main Rotor Gearshaft, .....	1.102		
Support Aft Mount Pads Sleeve Bushing Replacement (AVIM), Gun and Ammo .....	2.37		
Support Assembly (HARS) Removal/Installation, Electronic Compartment .....	2.98		
Support Assembly Disassembly/Assembly (AVIM), CPG Collective Stick .....	11.42		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Support Bracket Removal/Installation, No. 1 and No. 2 Engine Inboard Secondary Nozzle Heat Shield and . .	4.131	Support Mixer Assembly Identification Plate Replacement, Rotor . . . . .	2.87
Support Bracket Removal/Installation, No. 1 and No. 2 Engine Outboard and Center Secondary Nozzle Vertical Heat Shield and . . . . .	4.129	Support Panel Removal/Installation (AVIM), ECS . . . . .	13.40
Support Bracket Removal/Installation, Primary Hydraulic Pump Pressure and Return Tube . . . . .	7.10	Support Panel Replacement (AVIM), CPG Fuel Panel . . . . .	10.68
Support Bracket Removal/Installation, Pylon Telescoping Strut and . . . . .	16.23	Support Panel Replacement (AVIM), Pilot Fuel Panel . . . . .	10.61
Support Bracket Removal/Installation, Utility Hydraulic Pump Tubing . . . . .	7.63	Support Removal, Engine Teardown – No. 1 and No. 2 Engine Shroud . . . . .	4.24
Support Bracket Removal/Installation, Utility Hydraulic Tubing Bulkhead . . .	7.109	Support Removal/Installation, Aft Hanger Bearing and . . . . .	6.10
Support Bracket Replacement (AVIM), Main Rotor Pitch Housing Wire . . . . .	5.28	Support Removal/Installation, CPG Collective . . . . .	11.41
Support Bracket Replacement, Motional Transducer . . . . .	11.183	Support Removal/Installation, Directional Magnetic Brake . . . . .	11.184
Support Brackets Removal/Installation, APU Enclosure . . . . .	15.43	Support Removal/Installation, ENCU . . .	13.14
Support Bushing Replacement (AVIM), No. 1 and No. 2 Engine Secondary Nozzle . . . . .	4.128	Support Removal/Installation, Engine Load Demand Spindle Bellcrank . . . . .	4.156
Support Clip Replacement, No. 1 and No. 2 Engine Drain Manifold . . . . .	4.110	Support Removal/Installation, Engine Load Demand Spindle Cable . . . . .	4.157
Support Control Surface Sleeve Bushing Replacement (AVIM), TADS/PNVS . . . . .	2.46A	Support Removal/Installation, Forward Hanger Bearing and . . . . .	6.7
Support Deck Fitting Removal/Installation, APU . . . . .	15.34	Support Removal/Installation, Main Landing Gear Left Shock Strut Structural . . . . .	2.76
Support Fitting Insert Replacement (AVIM), Main Rotor Blade Weight . . .	5.14	Support Removal/Installation, Main Landing Gear Lower Structural . . . . .	3.4
Support Forward Mount Pads Sleeve Bushing Replacement (AVIM), Gun and Ammo . . . . .	2.38	Support Removal/Installation, Main Landing Gear Right Shock Strut Structural . . . . .	2.77
Support Mast Removal/Installation, Main Rotor . . . . .	6.97	Support Removal/Installation, Main Landing Gear Upper Structural . . . . .	3.3
Support Mast Support Base Removal/Installation, Rotor . . . . .	2.88	Support Removal/Installation, Main Rotor Flexible . . . . .	6.93
Support Mixer Assembly and Bolt Removal/Installation, Rotor . . . . .	2.86	Support Removal/Installation, No. 1 and No. 2 Engine Secondary Nozzle . . . . .	4.126
		Support Removal/Installation, No. 1 and No. 2 Engine Secondary Nozzle Structural . . . . .	4.123
		Support Removal/Installation, No. 1 Engine Louver . . . . .	4.64
		Support Removal/Installation, No. 1 or No. 2 Aft Engine Mount . . . . .	4.85

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Support Removal/Installation, No. 1 or No. 2 Engine Anti-Ice .....	4.71	Support Strut Bushing Replacement (AVIM), No. 1 and No. 2 Engine Secondary Nozzle Upper and Intermediate .....	4.127
Support Removal/Installation, No. 1 or No. 2 Forward Engine Mount .....	4.84	Support Strut Disassembly/Assembly (AVIM), Structural .....	2.140
Support Removal/Installation, No. 2 Engine Louver .....	4.65	Support Strut Removal/Installation, No. 1 and No. 2 Engine Secondary Nozzle Intermediate .....	4.125
Support Removal/Installation, No. 4 Tail Rotor Drive Shaft, Damper, and Anti-Flail .....	6.8	Support Strut Removal/Installation, Work Platform Door Structural .....	2.138
Support Removal/Installation, No. 5 Tail Rotor Drive Shaft, Damper, and Anti-Flail .....	6.11	Support, and Tail Wheel Brackets Removal/Installation, Tail Landing Gear Tail Wheel Deflector, Structural	3.27
Support Removal/Installation, No. 7 (APU) Drive Shaft and Anti-Flail ....	6.16	Surface, Mooring – Paved .....	1.77
Support Removal/Installation, Pilot Boresight Reticle Unit (BRU) Mount .	2.188	Surface, Mooring – Unpaved .....	1.76
Support Replacement, Hydraulic Hand Pump .....	7.28	Surge Valve Bracket Removal/Installation .....	7.134
Support Structure Removal/Installation, Transformer-Rectifier No. 1 .....	9.31	Surge Valve Cleaning .....	7.130A
Support Strut and Rod End Removal/Installation, APU Aft .....	15.31	Surge Valve Exhaust Hose Replacement .....	7.133
Support Strut Assembly Removal/Installation, Aft Left Center Transmission Rotor .....	2.90	Surge Valve Exhaust Interconnect Tube Removal/Installation .....	7.131
Support Strut Assembly Removal/Installation, Aft Right Center Transmission Rotor .....	2.91	Surge Valve Pressure Hose Replacement .....	7.132
Support Strut Assembly Removal/Installation, Forward Center Transmission Rotor .....	2.89	Surge Valve Pressure Filter Removal/Installation, SDC Total Pressure Sense Line Filter and .....	7.125
Support Strut Assembly Removal/Installation, Left Aft Side Transmission Rotor .....	2.94	Surveying Unit (SSU) Mount Removal/Installation, Sensor .....	2.191
Support Strut Assembly Removal/Installation, Left Forward Side Transmission Rotor .....	2.92	Swagelok Fitting Replacement, Pitot Static System Tubing .....	8.40
Support Strut Assembly Removal/Installation, Right Aft Side Transmission Rotor .....	2.95	Swashplate Control Bellcrank Installation, Tail Rotor .....	11.264
Support Strut Assembly Removal/Installation, Right Forward Side Transmission Rotor .....	2.93	Swashplate Control Bellcrank Removal, Tail Rotor .....	11.263
		Swashplate Fixture Installation, Main Rotor .....	1.118
		Swashplate Fixture Removal, Main Rotor .....	1.119
		Swashplate Hoisting, Crane Adjustment – Main Rotor Gearshaft, Support (Static) Mast, or .....	1.102

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Swashplate Installation, Hoisting – Main Rotor .....	1.94	Switch Module Replacement (AVIM), Selectable Digital Display (SDD) Panel .....	8.15
Swashplate Installation, Main Rotor ....	11.7	Switch Removal/Installation (AVIM), CPG BAT OVRD .....	4.199
Swashplate Removal, Hoisting – Main Rotor .....	1.93	Switch Removal/Installation (AVIM), CPG Power Quadrant No. 1 Engine Out Disable .....	4.196
Swashplate Removal, Main Rotor .....	11.6	Switch Removal/Installation (AVIM), CPG Power Quadrant No. 2 Engine Out Disable .....	4.197
Swashplate Removal/Installation, Tail Rotor .....	11.262	Switch Removal/Installation (AVIM), Pilot Power Quadrant Panel – Ignition Lock .....	4.192
Swashplate Shoulder Pin Replacement, Main Rotor .....	11.8	Switch Removal/Installation (AVIM), Pilot Power Quadrant Panel – No. 1 Engine Interlock .....	4.193
Sway Brace Replacement (AVIM), Pylon	16.21	Switch Removal/Installation (AVIM), Pilot Power Quadrant Panel – No. 2 Engine Interlock .....	4.194
Swirl Frame Drain Tube Removal/Installation (T700-GE-701 Engine), No. 1 and No. 2 Engine ....	4.113	Switch Removal/Installation (AVIM), Pilot Power Quadrant Panel – RTR BRK .....	4.189
Swirl Frame Drain Tube Removal/Installation (T700-GE-701C Engine), No. 1 and No. 2 Engine ....	4.114	Switch Removal/Installation, Aft Door Structural Plate and Canopy Lock ...	2.69
Switch Cover Replacement, Collective Stick Stores Jettison .....	11.29A	Switch Removal/Installation, Aft Fuel Cell Fuel Valve Isolation .....	10.48
Switch (Lockwired Type) Removal/Installation, Engine Nose Gearbox Oil Filter Bowl, Strainer Element, and Differential Pressure ..	6.18	Switch Removal/Installation, APU Low Oil Pressure (LOP) .....	TM 1-2835-213-23
Switch (Lockwired Type) Removal/Installation, Main Transmission Filter Bowl, Element, and Differential Pressure .....	6.61	Switch Removal/Installation, Collective Stick Stabilator Manual .....	11.26
Switch (Retainer, Ringed Type) Removal/Installation, Engine Nose Gearbox Oil Filter Bowl, Strainer Element, and Differential Pressure ..	6.19	Switch Removal/Installation, Engine Nose Gearbox Low Oil Pressure ....	6.21
Switch (Retainer, Ringed Type) Removal/Installation, Main Transmission Filter Bowl, Element, and Differential Pressure .....	6.62	Switch Removal/Installation, Forward Fuel Cell Fuel Valve Isolation .....	10.25
Switch and Bracket Assembly Removal/Installation, Collective Stick	11.34	Switch Removal/Installation, Ground Maintenance Pylon .....	16.27
Switch Assembly Replacement, Tail Landing Gear Actuating Cylinder Lock .....	3.34	Switch Removal/Installation, Main Transmission Accessory Pump Oil Pressure .....	6.69
Switch Bracket Removal/Installation, Ground Maintenance Pylon .....	16.28	Switch Removal/Installation, Main Transmission Low Oil Pressure ....	6.78
Switch Fixture Installation/Removal, Squat .....	1.132	Switch Removal/Installation, No. 1 or No. 2 Anti-Ice Thermostatic .....	4.69

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Switch Removal/Installation, Pilot Emergency Hydraulic .....	9.147	Switch Replacement, Collective Stick RF Override .....	11.30
Switch Removal/Installation, Pilot Power Quadrant Panel – ENG IGN OVRD ..	4.191	Switch Replacement, Collective Stick Searchlight Directional .....	11.28
Switch Removal/Installation, Pilot TAIL WHEEL LOCK .....	9.146	Switch Replacement, Collective Stick Searchlight ON/OFF .....	11.27
Switch Removal/Installation, Rotor Brake Pressure .....	7.105	Switch Replacement, Collective Stick Stores Jettison .....	11.29
Switch Removal/Installation, SDC Outlet Pressure .....	7.128	Switch Replacement (AVIM), Pilot Anti-Ice Panel .....	12.49
Switch Replacement (AVIM), ASE Panel	11.193	Switch Replacement, Collective Stick TADS/PNVS .....	11.32
Switch Replacement (AVIM), ASE Panel BUCS TST .....	11.194	Switch Replacement, ECS Aft Avionics Bay Thermostatic .....	13.42
Switch Replacement (AVIM), CPG Fuel Panel Boost Pump .....	10.67	Switch Replacement, ECS Forward Avionics Bay Thermostatic .....	13.41
Switch Replacement (AVIM), CPG Fuel Panel Pilot Override .....	10.65	Switch Replacement, No. 1 Engine Fuel Pressure .....	4.97
Switch Replacement (AVIM), CPG Fuel Panel Tank Select .....	10.66	Switch Replacement, No. 2 Engine Fuel Pressure .....	4.98
Switch Replacement (AVIM), CPG Fuel Panel Transfer .....	10.64	Switch Replacement, Pilot Circuit Breaker Panel Edge LT PNL ON/OFF	9.6
Switch Replacement (AVIM), CPG INTR LT Panel FLOOD .....	9.88	Switch Replacement, Primary Hydraulic Manifold Pressure .....	7.14
Switch Replacement (AVIM), Pilot Anti-Ice Panel Indicator .....	12.52	Switch Target and Bracket Disassembly/Assembly, Main Landing Gear Squat .....	3.17
Switch Replacement (AVIM), Pilot EXT LT/INTR LT Panel .....	9.68	Switch Target Plate Adjustment, Squat .	9.149
Switch Replacement (AVIM), Pilot Fuel Panel .....	10.58	Switch Tee Removal/Installation, Main Transmission Oil Pressure .....	6.79
Switch Replacement (AVIM), Pilot Fuel Panel Crossfeed .....	10.56	Symbol Select Switch Replacement, Cyclic Stick .....	11.53
Switch Replacement (AVIM), Pilot Fuel Panel Fuel Boost Pump .....	10.57	System (ECS) Inspection, Environmental Control .....	13.1
Switch Replacement (AVIM), Pilot Anti-Ice Panel .....	12.49	System – Service/Bleed, Main Landing Gear Brake .....	1.45
Switch Replacement, Refueling Panel ..	10.71	System Bleed, Hydraulic .....	1.35
Switch Replacement (AVIM), Shear Pin Activated Decoupler (SPAD) .....	11.64	System Draining and Servicing, APU Oil	1.26
Switch Replacement, APU START/RUN/OFF .....	15.13	System Draining and Servicing, Engine Oil .....	1.24
Switch Replacement, Collective Stick Boresight .....	11.31	System Draining, Flushing, and Servicing, Main Transmission Oil . . . .	1.32

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
System Engine Bleed Air Tube and Engine Air Flexible Connection Housing Removal/Installation, Standby .....	7.141	System Safety Precautions, Fuel .....	10.2
System Hose (Left Side) Replacement, Main Transmission Lube .....	6.81	System Sampling, APU Oil .....	1.27
System Hose (Right Side) Replacement, Main Transmission Lube .....	6.82	System Servicing (General), Fuel .....	1.13
System Inspection, Anti-Ice/De-Ice ....	12.46	System Tee and Check Valve Removal/Installation, Pressurized Air	7.136
System Inspection, Primary Hydraulic ..	7.1	System Tubing Splice Replacement, Pitot Static .....	8.39
System Inspection, Utility Hydraulic ....	7.56	System Tubing Swagelok Fitting Replacement, Pitot Static .....	8.40
System Leak Check, Hydraulic .....	7.2	System Tubing Transition Replacement, Pitot Static .....	8.38
System Priming, APU Fuel .....	1.27A	System Venting, Fuel .....	1.22
System Priming, Fuel .....	1.23	System, Vent Primary Hydraulic .....	7.3
		System, Vent Utility Hydraulic .....	7.57
		Systems Servicing – Fluid, Hydraulic ...	1.34

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
<b>T</b>			
T1 or T2 Replacement (T700-GE-701), Aft Avionics Bay Distribution Box Transformer . . . . .	9.56	Tail Landing Gear Actuating Cylinder Lock Switch Assembly Replacement	3.34
T1 or T2 Replacement (T700-GE-701), Electrical Power Distribution Box Power Transformer . . . . .	9.24	Tail Landing Gear Actuating Cylinder Removal/Installation . . . . .	3.32
T205L or T205R Shaft Fairing Removal/Installation, Main Rotor . . . .	2.126E	Tail Landing Gear Actuating Cylinder Spring Replacement (AVIM) . . . . .	3.33
T250L or T250R Removal/Installation, Access Door . . . . .	2.125	Tail Landing Gear Actuating Cylinder Wheel Lock Target Replacement . . . .	3.36
T290L or T290R Removal/Installation, Access Door . . . . .	2.126	Tail Landing Gear Fork Assembly Disassembly/Assembly . . . . .	3.44
T3 Replacement, Electrical Power Distribution Box Power Transformer .	9.25	Tail Landing Gear Fork Removal/Installation . . . . .	3.43
T545 Removal/Installation, Vertical Stabilizer Tip Fairings T545A and . . .	2.110	Tail Landing Gear Inspection . . . . .	3.28
T545A and T545 Removal/Installation, Vertical Stabilizer Tip Fairings . . . . .	2.110	Tail Landing Gear Jacking (Axle Jack) .	1.68
T700-GE-701 Engine, Engine Buildup – No. 1 and No. 2 Engine Drain System Installation . . . . .	4.34	Tail Landing Gear Jacking (Tripod Jack)	1.69
T700-GE-701 Engine, Engine Teardown – No. 1 and No. 2 Engine Drain System Removal . . . . .	4.25	Tail Landing Gear Shock Strut Bearing Replacement (AVIM) . . . . .	3.42
T700-GE-701 Engine, No. 1 and No. 2 Engine Swirl Frame Drain Tube Removal/Installation . . . . .	4.113	Tail Landing Gear Shock Strut Cork Stopper Replacement . . . . .	3.41
T700-GE-701C Engine, Engine Buildup – No. 1 and No. 2 Engine Drain System Installation . . . . .	4.35	Tail Landing Gear Shock Strut Piston Removal/Installation (AVIM) . . . . .	3.39
T700-GE-701C Engine, Engine Teardown – No. 1 and No. 2 Engine Drain System Removal . . . . .	4.26	Tail Landing Gear Shock Strut Pneumatic Valve Removal/Installation . . . . .	3.40
T700-GE-701C Engine, No. 1 and No. 2 Engine Swirl Frame Drain Tube Removal/Installation . . . . .	4.114	Tail Landing Gear Shock Strut Removal/Installation . . . . .	3.38
TADS/PNVS Support Control Surface Sleeve Bushing Replacement (AVIM)	2.46A	Tail Landing Gear Shock Strut Servicing – Nitrogen . . . . .	1.42
TADS/PNVS Switch Replacement, Collective Stick . . . . .	11.32	Tail Landing Gear Tail Wheel Deflector, Structural Support, and Tail Wheel Brackets Removal/Installation . . . . .	3.27
Tail Landing Gear Actuating Cylinder Fuse Pin Replacement . . . . .	3.37	Tail Landing Gear Tapered Cone and Rollers Packing . . . . .	3.52
Tail Landing Gear Actuating Cylinder Lock Release Handle Replacement .	3.35	Tail Landing Gear Tire Servicing . . . . .	1.44
		Tail Landing Gear Trailing Arms Removal/Installation . . . . .	3.45
		Tail Landing Gear Upper Cam Housing Repair . . . . .	3.31
		Tail Landing Gear Wheel (With Grease Fitting) and Axle Removal/Installation	3.46
		Tail Landing Gear Wheel (With Grease Fitting) Tapered Cone and Rollers Removal/Installation . . . . .	3.48
		Tail Landing Gear Wheel (With Grease Fitting) Repair, . . . . .	3.48A
		Tail Landing Gear Wheel (Without Grease Fitting) Repair . . . . .	3.51A



<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Tail Landing Gear Wheel (With Grease Fitting) Tire and Tube Removal/Installation .....	3.47	Tail Rotor De-Ice Brush and Shunt Replacement (AVIM) .....	11.279
Tail Landing Gear Wheel (Without Grease Fitting) and Axle Removal/Installation .....	3.49	Tail Rotor De-Ice Brush Block Removal/Installation .....	11.278
Tail Landing Gear Wheel (Without Grease Fitting) Tapered Cone and Rollers Removal/Installation .....	3.51	Tail Rotor Directional Flight Controls, Rigging .....	11.296
Tail Landing Gear Wheel (Without Grease Fitting) Tire and Tube Removal/Installation .....	3.50	Tail Rotor Drive Link Installation .....	11.275
Tail or Wing Navigation Lamp Replacement .....	9.95	Tail Rotor Drive Link Removal .....	11.274
Tail or Wing Navigation Light Installation	9.94	Tail Rotor Drive Seal Replacement, Main Transmission .....	6.75
Tail or Wing Navigation Light Removal	9.93	Tail Rotor Drive Shaft Fairing R410 or R475 Removal/Installation .....	2.126D
Tail Rotor Assembly Inspection .....	5.51	Tail Rotor Drive Shaft Fairing T355 Repair (AVIM) .....	2.126A
Tail Rotor Balance AVA Kit Installation	1.110A	Tail Rotor Drive Shaft Removal/Installation, No. 3 .....	6.5
Tail Rotor Balance AVA Kit Removal	1.111A	Tail Rotor Drive Shaft Removal/Installation, No. 6 .....	6.14
Tail Rotor Bellcrank Link Removal/Installation .....	11.265	Tail Rotor Drive Shaft, Damper, and Anti-Flail Support Removal/Installation, No. 4 .....	6.8
Tail Rotor Blade Balance Weight Removal/Installation .....	5.57	Tail Rotor Drive Shaft, Damper, and Anti-Flail Support Removal/Installation, No.5 .....	6.11
Tail Rotor Blade Dent and Depression Repair .....	5.56	Tail Rotor Electrical Lead Removal/Installation .....	11.276
Tail Rotor Blade Identification Plate Replacement .....	5.58	Tail Rotor Fitting Removal/Installation, Directional F.S. 199.25 .....	11.248
Tail Rotor Blade Installation .....	5.54	Tail Rotor Flange Cork Stopper Replacement, Main Transmission ...	6.76
Tail Rotor Blade Part Number/Serial Number Plate Replacement .....	5.59	Tail Rotor Fork Clamp and Locking Plate Removal/Installation (AVIM) ...	5.63
Tail Rotor Blade Removal .....	5.53	Tail Rotor Fork Identification Plate Replacement .....	5.66
Tail Rotor Blade Repair Criteria .....	5.52	Tail Rotor Fork Locking Plate Disassembly/Assembly (AVIM) .....	5.64
Tail Rotor Blade Scratch, Nick, or Gouge Repair .....	5.55	Tail Rotor Fork and Teeter Stop Disassembly/Assembly .....	5.67
Tail Rotor Bracket Removal/Installation, Directional F.S. 348 .....	11.258	Tail Rotor Gearbox Accelerometer Removal/Installation .....	6.139
Tail Rotor Connecting Link Removal/Installation .....	11.266	Tail Rotor Gearbox Aft Gear Fitting Replacement .....	6.141
Tail Rotor Control Bracket Removal/Installation .....	11.253	Tail Rotor Gearbox Aft Strut Removal/Installation .....	6.140
Tail Rotor Coupling Removal/Installation, Main Transmission .....	6.4		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Tail Rotor Gearbox Breather Removal/Installation .....	6.136	Tail Rotor Swashplate Control Bellcrank Installation .....	11.264
Tail Rotor Gearbox Fixture Installation, Intermediate Gearbox Fixture Adapter and .....	1.126	Tail Rotor Swashplate Control Bellcrank Removal .....	11.263
Tail Rotor Gearbox Fixture Removal, Intermediate Gearbox Fixture Adapter and .....	1.127	Tail Rotor Swashplate Removal/Installation .....	11.262
Tail Rotor Gearbox Forward Gear Fitting Replacement .....	6.143	Tail Rotor Teeter Stop Bumper Replacement .....	5.65
Tail Rotor Gearbox Forward Strut Removal/Installation .....	6.142	Tail Wheel Brackets Removal/Installation, Tail Landing Gear Tail Wheel Deflector, Structural Support, and .....	3.27
Tail Rotor Gearbox Identification Plate Replacement .....	6.137	Tail Wheel Deflector, Structural Support, and Tail Wheel Brackets Removal/Installation, Tail Landing Gear .....	3.27
Tail Rotor Gearbox Input Coupling Removal/Installation .....	6.15	Tail Wheel Lock Actuator Hose Replacement .....	7.106
Tail Rotor Gearbox Input Seal Assembly Removal/Installation .....	6.135	Tail Wheel Lock Control Valve Replacement .....	7.107
Tail Rotor Gearbox Inspection .....	6.132	TAIL WHEEL LOCK Switch Removal/Installation, Pilot .....	9.146
Tail Rotor Gearbox Machine Plug Removal/Installation .....	6.146	Tailboom Closeout Fairing Access Covers Removal/Installation .....	2.127
Tail Rotor Gearbox Removal/Installation	6.145	Tailboom Fluid Drain Pan Replacement	2.101
Tail Rotor Gearbox Servicing – Grease .	1.31	Tailboom Fluid Drain Tube Replacement	2.100
Tail Rotor Gearbox Shouldered Shaft Expansion Plug Replacement (AVIM)	6.134	Tailboom Primary Hydraulic Tubes Armor Channels Removal/Installation	2.197
Tail Rotor Gearbox Shouldered Shaft Removal/Installation .....	6.133	Tailboom Utility Hydraulic Tubes Armor Channel Assemblies Removal/Installation .....	2.196
Tail Rotor Gearbox Shouldered Shaft Stud Replacement (AVIM) .....	6.147	Tailboom Utility Low Level Shutoff Valve Armor Plate Removal/Installation ...	2.198
Tail Rotor Gearbox Strut Disassembly/Assembly .....	6.144	Take-Off (PTO) Clutch Removal/Installation, APU Power .....	TM 1-2835-213-23
Tail Rotor Gearbox Temperature Sensor Removal/Installation .....	6.138	Tank Select Switch Replacement (AVIM), CPG Fuel Panel .....	10.66
Tail Rotor Head Installation .....	5.61	Tape Repair, Electromagnetic Interference (EMI) .....	2.28
Tail Rotor Head Removal .....	5.60	Tapered Cone and Rollers Packing, Main Landing Gear .....	3.15
Tail Rotor Hub Assembly Removal/Installation (AVIM) .....	5.57A		
Tail Rotor Hub Identification Plate Replacement .....	5.62		
Tail Rotor Pitch Link Removal/Installation .....	11.277		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Tapered Cone and Rollers Packing, Tail Landing Gear .....	3.52	Temperature Control Box Access Cover Removal/Installation (AVIM), Windshield Anti-Ice .....	12.67
Tapered Cone and Rollers Removal/Installation (Eight-Bolts), Main Landing Gear Wheel .....	3.14	Temperature Control Box Capacitor Replacement (AVIM), Windshield Anti-Ice .....	12.69
Tapered Cone and Rollers Removal/Installation (Nine-Bolts), Main Landing Gear Wheel .....	3.10	Temperature Control Box Circuit Card Assembly (CCA) Removal/Installation (AVIM), Windshield Anti-Ice .....	12.68
Tapered Cone and Rollers Removal/Installation, Tail Landing Gear Wheel (With Grease Fitting) ...	3.48	Temperature Control Box Current Transformer Replacement (AVIM), Windshield Anti-Ice .....	12.72
Tapered Cone and Rollers Removal/Installation, Tail Landing Gear Wheel (Without Grease Fitting)	3.51	Temperature Control Box Receptacle Replacement (AVIM), Windshield Anti-Ice .....	12.73
Target Acquisition Designation Sight (TADS) Cleaning .....	1.46	Temperature Control Box Relay Replacement (AVIM), Windshield Anti-Ice .....	12.70
Target and Bracket Disassembly/Assembly, Main Landing Gear Squat Switch .....	3.17	Temperature Control Box Removal/Installation, Windshield Anti-Ice .....	12.66
Target Plate Adjustment, Squat Switch .	9.149	Temperature Control Box Semiconductor Replacement (AVIM), Windshield Anti-Ice .....	12.71
Target Replacement, Tail Landing Gear Actuating Cylinder Wheel Lock .....	3.36	Temperature Control Box Terminal Stud Replacement (AVIM), Windshield Anti-Ice .....	12.74
Teardown – No. 1 Engine Air Starter and Regulating Valve Removal, Engine .....	4.19	Temperature Control Sensor Removal/Installation, ENCU .....	13.11
Teardown – No. 2 Engine Wiring Removal, Engine .....	4.18	Temperature Control Shutoff Valve Removal/Installation, ENCU .....	13.6
Tee and Check Valve Removal/Installation, Pressurized Air System .....	7.136	Temperature Control Shutoff Valve/Electrical Control Valve Cleaning, ENCU .....	13.8
Tee Removal/Installation, Main Transmission Oil Pressure Switch ...	6.79	Temperature Indicator Removal/Installation, Outside Air ....	8.47
Teeter Stop Bumper Replacement, Tail Rotor .....	5.65	Temperature Sensor Removal/Installation, Outside Air ....	12.75
Teeter Stop Disassembly/Assembly (AVIM), Tail Rotor Fork and .....	5.67	Temperature Sensor Removal/Installation, SDC .....	7.123
Telescoping Strut and Support Bracket Removal/Installation, Pylon .....	16.23	Temperature Sensor Removal/Installation, Tail Rotor Gearbox .....	6.138
Temperature (TGT) Indicator and Engine Gas Generator Ng RPM Indicator Removal/Installation, Pilot Engine Turbine Gas .....	8.9		
Temperature Alarm Control Unit Replacement .....	9.125		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Temperature Sensor Removal/Installation, Intermediate Gearbox .....	6.130	Test (AVIM), Parking Brake Rotary Direct Valve Repair and .....	3.61
Temperature Transducer Removal/Installation, Engine Nose Gearbox Oil .....	6.28	Test Control Panel Removal/Installation, Pilot/CPG Engine Instrument Dim/ ..	8.22
Temperature Transducer Replacement, Main Transmission .....	6.42	Test Equipment Requirements, Section III, Explanation of Columns in Tools and .....	B.7
Tension Thumb Latch Replacement/Adjustment, Forward Avionics Bay Access Door Adjustable	2.44	Test Panel Box Removal/Installation, Electrical .....	9.29
Term Storage – 1 to 45 Days, Removal from Short .....	E.8	Test Panel Circuit Breaker Replacement, Electrical .....	9.28
Terminal Junction Box and Relay Track Assembly Replacement, Pilot Instrument Panel Matrix .....	9.54	Test, Parking Brake Functional .....	3.71
Terminal Junction Box Replacement, DC Bus Tie .....	9.22	Test Set (TF 579) Installation/Removal, Fuel Quantity Indicator .....	10.135
Terminal Stud Replacement (AVIM), Windshield Anti-Ice Temperature Control Box .....	12.74	Test Set Installation/Removal, Pylon Rack Ejector .....	16.8
Terminal Unit (MRTU) Bracket Removal/Installation, Pylon Multiplex Remote .....	16.16	Tester Installation/Removal, Pitot Static	8.36
Termination Connector (MTC) (1 or 2 Inch) Repair, Mass .....	9.135	TGT, Fuel, and Ng Indicators Light Panel, Digital Display Driver Circuit Card Replacement (AVIM), Torque, .	8.10
Termination Connector (MTC) Keying, Mass .....	9.137	TGT, Fuel, and Ng Indicators Replacement (AVIM), Analog or Interface Circuit Card on Torque ....	8.11
Termination Connector (MTC) Repair, Coaxial Mass .....	9.138	Thermal Discharge Indicator Replacement .....	12.45
Termination Connector (MTC) With Shield Bus (1 or 2 Inch) Repair, Mass	9.136	Thermal Insulation and Hook and Pile Fastener Removal/Installation, Pilot/CPG Cockpit .....	2.10
Termination Unit (DLTU) (Aft Avionics Bay) Replacement, Data Link .....	9.145	Thermal Relief Valve Removal/Installation, Forward Fuel Cell Check/ .....	10.11
Termination Unit (DLTU) (Nose Section) Replacement, Data Termination .....	9.141	Thermocouple Removal/Installation, APU Exhaust Gas Temperature (EGT) .....	TM 1-2835-213-23
Termination Unit (DLTU) T37, T38, T39, or T40 Replacement, Data Link .....	25.154	Thermostatic Switch Removal/Installation, No. 1 or No. 2 Anti-Ice .....	4.69
Test (AVIM), Brake Control Valves Internal Leakage Repair and .....	3.63	Thermostatic Switch Replacement, ECS Aft Avionics Bay .....	13.42
Test (AVIM), Main Landing Gear Wheel Brake Leakage and Operational ....	3.67	Thermostatic Switch Replacement, ECS Forward Avionics Bay .....	13.41

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Throttle Valve Removal/Installation, Inlet	7.119	Tools and Test Equipment	
Thumb Latch and Hook		Requirements, Section III,	
Replacement/Adjustment, Access		Explanation of Columns in	B.7
Door Adjustable Tension	2.44	Top Connector Plate	
Tie Contactor Removal/Installation, DC		Removal/Installation, Pylon	16.24
Bus	9.21	Top Plate Removal/Installation, Pylon	
Tie Terminal Junction Box Replacement,		Actuator and	16.9
DC Bus	9.22	Top Side Engine Work Platform and	
Tiedown – Installation, Main Rotor		Equipment Bay, Access Provisions –	2.7
Blades	1.106	Top Side, Access Provisions –	2.5
Tiedown – Removal, Main Rotor Blades	1.107	Top Skin Plates, Fuselage	2.17
Time Limit, Flyable Storage – No	E.5	Torque Indicator Removal/Installation,	
Time Limit, Removal from Flyable		Pilot/CPG Engine	8.3
Storage – No	E.6	Torque Link Removal/Installation	11.19
Time Totalizing Meter		Torque, TGT, Fuel, and Ng Indicators	
Removal/Installation, APU	15.24	Light Panel, Digital Display Driver	
Tip Fairings T545A and T545		Circuit Card Replacement (AVIM)	8.10
Removal/Installation, Vertical		Torque, TGT, Fuel, and Ng Indicators	
Stabilizer	2.110	Replacement (AVIM), Analog or	
Tip Replacement, Main Rotor Blade		Interface Circuit Card on	8.11
Leading Edge	5.13	Total Pressure Sense Line Filter and	
Tip Weight Removal/Installation		Surge Valve Pressure Filter	
(AVIM) Main Rotor Blade Forward		Removal/Installation, SDC	7.125
and Aft	5.14A	Totalizing Meter Removal/Installation,	
Tire and Tube Removal/Installation, Tail		APU Time	15.24
Landing Gear Wheel (With Grease		Towing, Helicopter	1.78
Fitting)	3.47	Track and Balance, AVA Kit Installation,	
Tire Removal/Installation (Goodyear),		Main Rotor	1.108A
Main Landing Gear	3.7	Track and Balance, AVA Kit Removal,	
Tire Removal/Installation		Main Rotor	1.109A
(Parker-Hannifin), Main Landing		Track Assembly Replacement, Pilot	
Gear	3.11	Instrument Panel Matrix Terminal	
Tire Removal/Installation, Main Landing		Junction Box and Relay	9.54
Gear Wheel and	3.6	Track/Balance Accelerometer	
Tire Servicing, Main Landing Gear	1.43	Replacement, CPG	9.128
Tire Servicing, Tail Landing Gear	1.44	Track/Balance Accelerometer	
Tire Valve Assembly Replacement		Replacement, Pilot	9.129
(Goodyear/ABSC), Main Landing		Trailing Arm Assembly	
Gear	3.8	Removal/Installation, Main Landing	
Tire Valve Assembly Replacement		Gear	3.16
(Parker-Hannifin), Main Landing		Trailing Arms Removal/Installation, Tail	
Gear	3.12	Landing Gear	3.45
Tire and Tube Removal/Installation, Tail		Trailing Edge Removal/Installation,	
Landing Gear Wheel (Without		Vertical Stabilizer	2.111
Grease Fitting),	3.50		
Toggle Switch Replacement (AVIM),			
ECS Panel	13.38		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Trailing Edge Removal/Installation, Wing .....	2.122	Transfer Tube Replacement, F.S. 214 to 225 Left Auxiliary Fuel .....	10.89
Trailing Edge Trim Tab Marking, Main Rotor Blade .....	5.8A	Transfer Valve Air Exhaust Vent Tube Coupler Hose Replacement, Fuel ...	10.78
Transducer Arm Shear Rivet Replacement (AVIM), Pilot Directional Shear Pin Activated Decoupler (SPAD) .....	11.156	Transfer Valve Air Exhaust Vent Tube Replacement, Fuel .....	10.79
Transducer Removal/Installation, APU Motional .....	TM 1-2835-213-23	Transformer Filter Box Disassembly/Assembly (AVIM), Aft Avionics Bay Isolation .....	9.59
Transducer Removal/Installation, Engine Nose Gearbox Oil Pressure .	6.29	Transformer Filter Box Removal/Installation, Aft Avionics Bay Isolation .....	9.58
Transducer Removal/Installation, Engine Nose Gearbox Oil Temperature .....	6.28	Transformer Replacement, Windshield Anti-Ice Temperature Control Box Current .....	12.72
Transducer Removal/Installation, Heat Exchanger Pressure .....	6.84	Transformer T1 or T2 Replacement (T700-GE-701 Engine), Aft Avionics Bay Distribution Box .....	9.56
Transducer Removal/Installation, Motional .....	11.182	Transformer T1 or T2 Replacement (T700-GE-701 Engine), Electrical Power Distribution Box Power .....	9.24
Transducer Removal/Installation, Stabilator Airspeed .....	9.148	Transformer T3 Replacement, Electrical Power Distribution Box Power .....	9.25
Transducer Replacement, Main Transmission Temperature .....	6.42	Transformer-Rectifier No. 1 Removal/Installation .....	9.30
Transducer Replacement, Primary Hydraulic Manifold Pressure .....	7.15	Transformer-Rectifier No. 1 Support Structure Removal/Installation .....	9.31
Transducer Replacement, Utility Hydraulic Manifold Pressure .....	7.68	Transformer-Rectifier No. 2 Removal/Installation .....	9.32
Transducer Support Bracket Replacement, Motional .....	11.183	Transmission Access Panel Doors L210 and R210 Removal/ Installation .....	2.126C
Transfer Air Control Valve Removal/Installation, Fuel .....	10.83	Transmission Accessory Drive Lube Pump Removal/Installation, Main ...	6.71
Transfer Pump Drain Tube Replacement, Fuel .....	10.82	Transmission Accessory Pump Filter Bowl, Element, and Pressure Indicator Removal/Installation, Main .	6.70
Transfer Pump Installation, Fuel .....	10.76	Transmission Accessory Pump Oil Pressure Switch Removal/Installation, Main .....	6.69
Transfer Pump Removal, Fuel .....	10.75	Transmission Aft Oil Jet Removal/Installation, Main .....	6.52
Transfer Pump/Air Control Valve Inboard Tube Replacement, Fuel ...	10.81	Transmission APU Drive Flange Removal/Installation, Main .....	6.73
Transfer Pump/Air Control Valve Outboard Tube Replacement, Fuel ..	10.80	Transmission APU Input Seal Removal/Installation, Main .....	6.74
Transfer Shutoff Valve Removal/Installation, Fuel .....	10.74	Transmission Breather Removal/Installation, Main .....	6.58
Transfer Switch Replacement (AVIM), CPG Fuel Panel .....	10.64		
Transfer Tube Replacement, F.S. 199 to 214 Left Auxiliary Fuel .....	10.88		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Transmission Check Valve Removal/Installation, Main .....	6.80	Transmission Input Drive Clutch Removal/Installation, Main .....	6.115
Transmission Chip Detector Inspection, Main .....	6.45	Transmission Input Drive Housing Removal/Installation, Main .....	6.117
Transmission Chip Detector Replacement, Main .....	6.46	Transmission Input Pinion Seal Removal/Installation, Main .....	6.116
Transmission Compressor Drive Adapter and Seal Removal/Installation, Main .....	6.54	Transmission Input Shaft Oil Jet and Screen Removal/Installation, Main ..	6.55
Transmission Coupling Halves Replacement, Main .....	6.77	Transmission Inspection, Main .....	6.41
Transmission Filter Bowl, Element, and Differential Pressure Switch (Lockwired Type) Removal/Installation, Main .....	6.61	Transmission Installation – Connect Catwalk Area .....	6.111
Transmission Filter Bowl, Element, and Differential Pressure Switch (Retainer, Ringed Type) Removal/Installation, Main .....	6.62	Transmission Installation – Connect Left Side Area .....	6.112
Transmission Filter Inspection, Main ...	6.60	Transmission Installation – Connect Right Side Area .....	6.113
Transmission Fixture Installation, Main .	1.114	Transmission Installation – Install Transmission .....	6.109
Transmission Fixture Removal, Main ...	1.115	Transmission Installation – Install Transmission on Platform .....	6.108
Transmission Float Diverter Valve Disassembly/Assembly, Main .....	6.120	Transmission Installation – Preparation for Shipment .....	6.106A
Transmission Float Diverter Valve Removal/Installation, Main .....	6.119	Transmission Installation – Remove Platform .....	6.110
Transmission Forward Oil Jet and Nozzle Removal/Installation, Main ..	6.51	Transmission Installation, Hoisting – Main .....	1.92
Transmission Generator Quick-Attach Assembly Removal/Installation, Main	6.49	Transmission Installation, Main .....	6.107
Transmission Generator Seal Replacement, Main .....	6.43	Transmission Low Oil Pressure Switch Removal/Installation, Main .....	6.78
Transmission Generator Spline Adapter and Cork Stopper Replacement, Main .....	6.72	Transmission Lube System Hose (Left Side) Replacement, Main .....	6.81
Transmission Heat Exchanger Bypass Valve Replacement, Main .....	6.83	Transmission Lube System Hose (Right Side) Replacement, Main .....	6.82
Transmission Hoisting, Crane Adjustment – Main .....	1.103	Transmission Magnetic Pickup Replacement, Main .....	6.44
Transmission Hydraulic Pump Seal Replacement, Main .....	6.89	Transmission Oil Drain Tubes Removal/Installation, Main .....	6.87
Transmission Identification Plate Replacement, Main .....	6.57	Transmission Oil Filler Cap Screen Removal/Installation, Main .....	6.47
Transmission Input Coupling Removal/Installation, Main .....	6.3	Transmission Oil Filler Removal/Installation, Main .....	6.48
		Transmission Oil Filter Safety Relief Valve Removal/Installation, Main ....	6.63
		Transmission Oil Jet Filter Removal/Installation, Main .....	6.50

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Transmission Oil Pressure Switch Tee Removal/Installation, Main . . . . .	6.79	Transmission Rotor Support Strut Assembly Removal/Installation, Left Aft Side . . . . .	2.94
Transmission Oil Sampling, Main . . . . .	1.33	Transmission Rotor Support Strut Assembly Removal/Installation, Left Forward Side . . . . .	2.92
Transmission Oil System Draining, Flushing, and Servicing, Main . . . . .	1.32	Transmission Rotor Support Strut Assembly Removal/Installation, Right Aft Side . . . . .	2.95
Transmission Pressure Relief Valve Removal/Installation, Main . . . . .	6.56	Transmission Rotor Support Strut Assembly Removal/Installation, Right Forward Side . . . . .	2.93
Transmission Primary Lube Oil Rotary Pump Removal/Installation, Main . . .	6.114	Transmission Sight Indicator Removal/Installation, Main . . . . .	6.59
Transmission Removal – Disconnect Catwalk Area . . . . .	6.103	Transmission Standpipe Removal/Installation (AVIM), Main . .	6.118
Transmission Removal – Disconnect Left Side . . . . .	6.102	Transmission Tail Rotor Coupling Removal/Installation, Main . . . . .	6.4
Transmission Removal – Disconnect Right Side . . . . .	6.104	Transmission Tail Rotor Drive Seal Replacement, Main . . . . .	6.75
Transmission Removal – Lower and Remove Transmission . . . . .	6.106	Transmission Tail Rotor Flange Cork Stopper Replacement, Main . . . . .	6.76
Transmission Removal – Platform Installation . . . . .	6.105	Transmission Temperature Transducer Replacement, Main . . . . .	6.42
Transmission Removal – Preparation for Installation . . . . .	6.106B	Transmission Upper Cover Oil Jet Removal/Installation, Main . . . . .	6.53
Transmission Removal, Hoisting – Main	1.91	Transmitter Removal/Installation, Forward Fuel Cell Forward Fuel Quantity . . . . .	10.5
Transmission Removal, Main . . . . .	6.101	Transmitter Removal/Installation, Aft Fuel Cell Fuel Quantity . . . . .	10.39
Transmission Rotor Brake Actuator (Goodyear/ABSC) Disassembly/Assembly (AVIM), Main	6.68	Transmitter Removal/Installation, Forward Fuel Cell Aft Fuel Quantity .	10.6
Transmission Rotor Brake Actuator (Goodyear/ABSC) Removal/Installation, Main . . . . .	6.64	Transmitter Removal/Installation, No. 1 Engine Oil Pressure . . . . .	4.99
Transmission Rotor Brake Actuator (Parker Hannifin) Disassembly/Assembly (AVIM), Main	6.67A	Transmitter Removal/Installation, No. 2 Engine Oil Pressure . . . . .	4.100
Transmission Rotor Brake Actuator (Parker Hannifin) Removal/Installation, Main . . . . .	6.65	Transparent Crew Protection Armor Barrier Replacement . . . . .	2.180
Transmission Rotor Brake Disk Removal/Installation, Main . . . . .	6.66	Transparent Panel Assembly Removal/Installation, CPG Door . . . .	2.53
Transmission Rotor Brake Seal Replacement, Main . . . . .	6.67	Transparent Panel Assembly Removal/Installation, Pilot Door . . . .	2.61
Transmission Rotor Support Strut Assembly Removal/Installation, Aft Left Center . . . . .	2.90		
Transmission Rotor Support Strut Assembly Removal/Installation, Aft Right Center . . . . .	2.91		
Transmission Rotor Support Strut Assembly Removal/Installation, Forward Center . . . . .	2.89		



<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Transparent Panel Assembly Seal Replacement, Canopy .....	2.52	Tube Removal/Installation, No. 1 and No. 2 Engine Anti-Ice Supply .....	4.72
Transport Adapter Installation, Container .....	1.120	Tube Removal/Installation, No. 1 Engine Compressor Bleed Air .....	4.74
Transport Adapter Removal, Container .	1.121	Tube Removal/Installation, No. 1 or No. 2 Engine Anti-Ice .....	4.70
Tray Removal/Installation, CPG Glareshield Curtain/ .....	2.152	Tube Removal/Installation, No. 1 or No. 2 Engine Load Demand Spindle Gearbox Main Sleeve and Runout ..	4.144A
Tray Removal/Installation, Nontransparent Barrier Armor Pass-Thru .....	2.179	Tube Removal/Installation, No. 1 or No. 2 Engine Power Available Spindle Gearbox Main Sleeve and Runout ..	4.141A
Tray Removal/Installation, Pilot Glareshield Curtain/ .....	2.155	Tube Removal/Installation, Quill Housing/Hydraulic Pump Seal Drain .	6.88
Tray Removal/Installation, Signal Data Converter .....	8.21	Tube Removal/Installation, Right or Left Wing Pitot .....	8.37
Trigger Grip Switch Replacement, CPG Collective Stick BUCS Select .....	11.33	Tube Removal/Installation, SDC Check Valve .....	7.135
Trigger Switch Replacement, Cyclic Stick .....	11.52	Tube Removal/Installation, Surge Valve Exhaust Interconnect .....	7.131
Trim and Force Feel Release Switch Replacement, CPG Cyclic Stick .....	11.80	Tube Removal/Installation, Tail Landing Gear Wheel (With Grease Fitting) Tire and .....	3.47
Trim and Force Feel Release Switch Replacement, Pilot Cyclic Stick .....	11.47	Tube Removal/Installation, Tail Landing Gear Wheel (Without Grease Fitting) Tire and .....	3.50
Trim Tab Marking, Main Rotor Blade Trailing Edge .....	5.8A	Tube Removal/Installation, Utility Hydraulic Return Accumulator Nitrogen Manifold .....	7.97
Truss Removal/Installation, Left .....	15.33	Tube Replacement, Left Auxiliary Fuel Transfer .....	10.86
Truss Removal/Installation, Right .....	15.32	Tube Replacement, Aft Fuel Cell Upper Vent .....	10.30
Tube and Hose Clamp Removal/Installation, Main Landing Gear Wheel Brake .....	3.69	Tube Replacement, APU Fuel Pump Inlet .....	10.109
Tube and Lightning Arrestor Removal/Installation, Aft Fuel Cell Lower Vent .....	10.45	Tube Replacement, APU Fuel Pump Outlet .....	10.110
Tube Assembly Disassembly/Assembly (AVIM), Collective Stick .....	11.35	Tube Replacement, F.S. 186 to 199 Left Auxiliary Fuel Transfer .....	10.87
Tube Coupler Hose Replacement, Fuel Transfer Valve Air Exhaust Vent .....	10.78	Tube Replacement, F.S. 199 to 214 Left Auxiliary Fuel Transfer .....	10.88
Tube Removal/Installation (T700-GE-701 Engine), No. 1 and No. 2 Engine Swirl Frame Drain .....	4.113	Tube Replacement, F.S. 214 to 225 Left Auxiliary Fuel Transfer .....	10.89
Tube Removal/Installation (T700-GE-701C Engine), No. 1 and No. 2 Engine Swirl Frame Drain .....	4.114	Tube Replacement, Forward Fuel Cell Vent .....	10.23
Tube Removal/Installation, Environmental Control Unit Aft Air ...	7.155	Tube Replacement, Fuel Transfer Pump Drain .....	10.82
Tube Removal/Installation, Forward Fuel Cell Lower Vent .....	10.24		
Tube Removal/Installation, Main Landing Gear Cross .....	2.81		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Tube Replacement, Fuel Transfer Pump/Air Control Valve Inboard . . . . .	10.81	Tubing Swagelok Fitting Replacement, Pitot Static System . . . . .	8.40
Tube Replacement, Fuel Transfer Pump/Air Control Valve Outboard . . .	10.80	Tubing Transition Replacement, Pitot Static System . . . . .	8.38
Tube Replacement, Fuel Transfer Valve Air Exhaust Vent . . . . .	10.79	Turbine Assembly Removal/Installation, ENCU Cooling . . . . .	13.9
Tube Replacement, Ice Detector Aft Warm Air Supply . . . . .	7.157	Turbine Gas Temperature (TGT) Indicator and Engine Gas Generator Ng RPM Indicator Removal/Installation, Pilot Engine . . .	8.9
Tube Replacement, Ice Detector Center Warm Air Supply . . . . .	7.158	Turbine Servicing, ENCU . . . . .	1.52
Tube Replacement, Ice Detector Forward Warm Air Supply . . . . .	7.159	Turbine Speed Control Unit Adjustment (T700-GE-701 Engine), Engine . . . . .	4.136
Tube Replacement, Left Actuating Cylinder Air . . . . .	4.92	Turbine Speed Control Unit Adjustment (T700-GE-701C Engine), Engine . . . . .	4.137
Tube Replacement, Right Actuating Cylinder Air . . . . .	4.93	Turbine Speed Control Unit Replacement, Engine . . . . .	4.135
Tube Replacement, Tailboom Fluid Drain . . . . .	2.100	Turbine Speed Cutout Flow Switch Replacement, Air Turbine Flow Switch and . . . . .	9.152
Tube Support Bracket Removal/Installation, Primary Hydraulic Pump Pressure and Return	7.10	Turbine Starter Assembly Servicing , Air	1.25
Tube, and Clamp Removal/Installation, Main Landing Gear Wheel Brake, Hose (Nonmetallic), . . . . .	3.68	Turnlock Receptacle Replacement . . . . .	2.20
Tubes Armor Channel Assemblies Removal/Installation, Tailboom Utility Hydraulic . . . . .	2.196	Turnlock Stud (With Packings) Replacement . . . . .	2.22
Tubes Armor Channels Removal/Installation, Tailboom Primary . . . . .	2.197	Turnlock Stud Replacement . . . . .	2.21
Tubes Removal/Installation, Main Transmission Oil Drain . . . . .	6.87	Turret Coupling Halves Replacement . .	7.111
Tubing Bulkhead Support Bracket Removal/Installation, Utility Hydraulic	7.109	Types of Repair, Classification of Empennage Damage and . . . . .	2.103
Tubing Splice Replacement, Pitot Static System . . . . .	8.39	Types of Repair, Classification of Fuselage Damage and . . . . .	2.12
		Types of Repair, Classification of Nacelle Damage and . . . . .	2.129
		Types of Repair, Classification of Wing Damage and . . . . .	2.117
		Typical Engine Instrument Indicator Disassembly/Assembly (AVIM) . . . . .	8.2

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
<b>U</b>			
Unfold, Catwalk Fold/ .....	2.84	Upper Forward Canopy Windshield Panel Removal/Installation .....	2.72
Unit Adjustment (T700-GE-701 Engine), Engine Turbine Speed Control .....	4.136	Upper Fuel Supply Hose Removal/Installation, Aft Fuel Cell ...	10.46
Unit Adjustment (T700-GE-701C Engine), Engine Turbine Speed Control .....	4.137	Upper Fuel Supply Hose Replacement, No. 1 Engine .....	10.106
Unit and Nose Gearbox Fixture Installation, Environmental Control ..	1.124	Upper Hinge Butt Removal/Installation, CPG Station Access Door .....	2.59
Unit and Nose Gearbox Fixture Removal, Environmental Control ....	1.125	Upper Hinge Butt Removal/Installation, Pilot Station Access Door .....	2.67
Unit Cleaning (Water Wash), Environmental Control .....	1.48	Upper Lateral Flight Controls, Rigging .	11.292
Unit Replacement, Engine Turbine Speed Control .....	4.135	Upper Longitudinal Flight Controls, Rigging .....	11.288
Universal Link Replacement (AVIM), Servocylinder .....	7.55	Upper Main Landing Gear Shock Strut External Leakage Repair .....	3.20
Unpaved Surface, Mooring – .....	1.76	Upper Rod End Replacement (AVIM), Main Landing Gear Shock Strut .....	3.23
Upper Aft Canopy Windshield Panel Removal/Installation .....	2.74	Upper Seal Assembly Replacement (AVIM), Main Landing Gear Shock Strut .....	3.24
Upper and Intermediate Support Strut Bushing Replacement (AVIM), No. 1 and No. 2 Engine Secondary Nozzle	4.127	Upper Seal Retainer and Plain Encased Seal Removal/Installation, Main Rotor .....	5.45
Upper Bearing Inner Race/Rollers Grease Repacking (AVIM), Main Rotor .....	5.46B	Upper Structural Support Removal/Installation, Main Landing Gear .....	3.3
Upper Cam Housing Repair, Tail Landing Gear .....	3.31	Upper Vent Adapter Removal/Installation, Aft Fuel Cell ...	10.31
Upper Center Canopy Windshield Panel Removal/Installation .....	2.73	Upper Vent Tube and Vent Tube Adapter Removal/Installation, Forward Fuel Cell .....	10.10
Upper Connections, No. 1 Engine Installation – .....	4.51	Upper Vent Tube Replacement, Aft Fuel Cell .....	10.30
Upper Connections, No. 2 Engine Installation .....	4.55	Use of the Maintenance Allocation Chart (Section II) .....	B.4
Upper Cover Oil Jet Removal/Installation, Main Transmission .....	6.53	Utility Hydraulic Accumulator APU Start Check Valve Replacement (AVIM) ...	7.91
Upper Disconnections, No. 1 Engine Removal – .....	4.5	Utility Hydraulic Accumulator APU Start Motor Pressure Hose Replacement .	7.89
Upper Disconnections, No. 2 Engine Removal – .....	4.9	Utility Hydraulic Accumulator APU Start Motor Return Hose Replacement ...	7.90
Upper Flight Controls, Rigging Collective .....	11.284		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Utility Hydraulic Accumulator APU Start Solenoid Valve Replacement .....	7.88	Utility Hydraulic Manifold Manual Bleed Valve Replacement .....	7.65
Utility Hydraulic Accumulator Check Valve Replacement .....	7.87	Utility Hydraulic Manifold Pressure Relief Valve Replacement .....	7.72
Utility Hydraulic Accumulator Leak Check (AVIM) .....	7.93	Utility Hydraulic Manifold Pressure Switch Replacement .....	7.67
Utility Hydraulic Accumulator Nitrogen Manifold Fill/Bleed Valve Replacement .....	7.83	Utility Hydraulic Manifold Pressure Transducer Replacement .....	7.68
Utility Hydraulic Accumulator Nitrogen Manifold Pressure Gage Replacement .....	7.84	Utility Hydraulic Manifold Removal/Installation .....	7.64
Utility Hydraulic Accumulator Nitrogen Manifold Removal/Installation .....	7.85	Utility Hydraulic Manifold Reservoir Seal Replacement (AVIM) .....	7.74
Utility Hydraulic Accumulator One-Way Restrictor Valve Replacement .....	7.86	Utility Hydraulic Manifold Solenoid Valve Replacement .....	7.73
Utility Hydraulic Accumulator Piston Packing Replacement (AVIM) .....	7.92	Utility Hydraulic Manifold Strainer Element Removal/Installation (AVIM)	7.75
Utility Hydraulic Accumulator Removal/Installation .....	7.82	Utility Hydraulic Manifold Strainer Replacement .....	7.69
Utility Hydraulic Accumulator Servicing – Nitrogen .....	1.36	Utility Hydraulic Pressure/Return Hose Bracket Removal/Installation, Directional Servocylinder .....	7.40
Utility Hydraulic Accumulator Venting ..	1.38	Utility Hydraulic Pump Case Drain Hose Replacement .....	7.61
Utility Hydraulic Auxiliary Return Check Valve Replacement .....	7.110	Utility Hydraulic Pump Pressure Hose Replacement .....	7.59
Utility Hydraulic GSE Panel Removal/Installation .....	7.79	Utility Hydraulic Pump Removal/Installation .....	7.58
Utility Hydraulic GSE Pressure Coupling Replacement .....	7.80	Utility Hydraulic Pump Return Hose Replacement .....	7.60
Utility Hydraulic GSE Return Coupling Replacement .....	7.81	Utility Hydraulic Pump Seal Drain Hose Replacement .....	7.62
Utility Hydraulic Manifold Air Check Valve Replacement .....	7.66	Utility Hydraulic Pump Tubing Support Bracket Removal/Installation .....	7.63
Utility Hydraulic Manifold Air Filter Replacement, Primary and/or .....	7.160	Utility Hydraulic Return Accumulator Nitrogen Manifold Fill/Bleed Valve Replacement .....	7.95
Utility Hydraulic Manifold Dirty Filter Indicator Replacement .....	7.71	Utility Hydraulic Return Accumulator Nitrogen Manifold Pressure Gage Replacement .....	7.96
Utility Hydraulic Manifold Drain Hose Replacement .....	7.78	Utility Hydraulic Return Accumulator Nitrogen Manifold Replacement .....	7.98
Utility Hydraulic Manifold Low Level Piston Replacement (AVIM) .....	7.76	Utility Hydraulic Return Accumulator Nitrogen Manifold Tube Removal/Installation .....	7.97
Utility Hydraulic Manifold Low Level Valve Replacement (AVIM) .....	7.77		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Utility Hydraulic Return Accumulator Removal/Installation .....	7.94	Utility Low Level Shutoff Valve Replacement .....	7.108
Utility Hydraulic Return Accumulator Servicing – Nitrogen .....	1.37	Utility Maintenance Light Disassembly/Assembly .....	9.91
Utility Hydraulic Return Accumulator Venting .....	1.39	Utility Pneumatic Accumulator Removal/Installation .....	7.99
Utility Hydraulic System Inspection ....	7.56	Utility Pressure Hose Replacement, Directional Servocylinder .....	7.38
Utility Hydraulic System, Vent .....	7.57	Utility Receptacle Removal/Installation, Ground Service .....	9.50
Utility Hydraulic Tubes Armor Channel Assemblies Removal/Installation, Tailboom .....	2.196	Utility Return Hose Replacement, Directional Servocylinder .....	7.39
Utility Hydraulic Tubing Bulkhead Support Bracket Removal/Installation	7.109	Utility Tube Removal/Installation, Ground Air Connection Manifold, Engine Air Flexible Connection Housing, and .....	7.144
Utility Light and Mounting Base Removal/Installation, Pilot or CPG ..	9.78		
Utility Low Level Shutoff Valve Armor Plate Removal/Installation, Tailboom	2.198		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
<b>V</b>			
Valve Air Exhaust Vent Tube Coupler Hose Replacement, Fuel Transfer ...	10.78	Valve Hose Replacement, Forward Fuel Cell Pilot .....	10.12
Valve Air Exhaust Vent Tube Replacement, Fuel Transfer .....	10.79	Valve Inboard Tube Replacement, Fuel Transfer Pump/Air Control .....	10.81
Valve and Bracket Removal/Installation, No. 1 or No. 2 Anti-Ice .....	4.68	Valve Isolation Switch Removal/Installation, Aft Fuel Cell Fuel .....	10.48
Valve and Ground Air Connection Flange Removal/Installation, Start Air	7.142	Valve Isolation Switch Removal/Installation, Forward Fuel Cell Fuel .....	10.25
Valve Armor Plate Removal/Installation, Tailboom Utility Low Level Shutoff ...	2.198	Valve Outboard Tube Replacement, Fuel Transfer Pump/Air Control .....	10.80
Valve Assembly Replacement (Parker-Hannifin), Main Landing Gear Tire .....	3.12	Valve Pressure Hose Replacement, Surge .....	7.132
Valve Bracket Removal/Installation, Surge .....	7.134	Valve Pressure Filter Removal/Installation, SDC Total Pressure Sense Line Filter and Surge	7.125
Valve Disassembly/Assembly (AVIM) Forward and Aft Fuel/Defuel Check .	10.20	Valve Removal, Engine Teardown – No. 1 Engine Air Starter and Regulating .	4.19
Valve Disassembly/Assembly, APU Power Take-Off (PTO) Clutch Solenoid .....	TM 1-2835-213-23	Valve Removal, Engine Teardown – No. 2 Engine Air Starter and Regulating .	4.20
Valve Disassembly/Assembly, Main Transmission Float Diverter .....	6.120	Valve Removal/Installation, Forward Fuel Cell Nitrogen Inert Breakaway ..	10.121
Valve Duct Removal/Installation, Environmental Control Unit Shutoff ..	7.154	Valve Removal/Installation, Aft Air Vent/Pressure Relief .....	10.41
Valve Exhaust Hose Replacement, Surge .....	7.133	Valve Removal/Installation, Aft Fuel Cell Four-Way Check .....	10.36
Valve Exhaust Interconnect Tube Removal/Installation, Surge .....	7.131	Valve Removal/Installation, Aft Fuel Cell Fuel Level Control Pilot .....	10.37
Valve Hose Removal/Installation, Aft Fuel Cell Nitrogen Inert Breakaway ..	10.131	Valve Removal/Installation, Aft Fuel Cell Fuel Outlet Breakaway .....	10.43
Valve Hose Removal/Installation, Forward Fuel Cell Nitrogen Inert Breakaway .....	10.134	Valve Removal/Installation, Aft Fuel Cell Fuel Shutoff .....	10.40
Valve Hose Removal/Installation, No. 1 Engine Overspeed Drain .....	4.106	Valve Removal/Installation, Aft Fuel Cell Fuel/Defuel Check .....	10.35
Valve Hose Removal/Installation, No. 2 Engine Overspeed Drain .....	4.107	Valve Removal/Installation, Aft Fuel Cell Nitrogen Inert Breakaway .....	10.119
Valve Hose Replacement, Aft Fuel Cell Pilot .....	10.38	Valve Removal/Installation, Aft Fuel Cell Nitrogen Inert Check .....	10.133

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Valve Removal/Installation, Aft Fuel Cell Refueling Breakaway .....	10.42	Valve Removal/Installation, Main Transmission Check .....	6.80
Valve Removal/Installation, Air Pressure Regulating .....	7.148	Valve Removal/Installation, Main Transmission Float Diverter .....	6.119
Valve Removal/Installation, APU Fuel Drain Check .... TM 1-2835-213-23		Valve Removal/Installation, Main Transmission Oil Filter Safety Relief .	6.63
Valve Removal/Installation, APU Fuel Shutoff .....	10.111	Valve Removal/Installation, Main Transmission Pressure Relief .....	6.56
Valve Removal/Installation, APU Fuel Solenoid .....	TM 1-2835-213-23	Valve Removal/Installation, Nitrogen Inert Vent .....	10.122
Valve Removal/Installation, APU Power Take-Off (PTO) Clutch Solenoid .....	TM 1-2835-213-23	Valve Removal/Installation, No. 1 Engine Crossfeed/Shutoff .....	10.99
Valve Removal/Installation, ENCU Electrical Control .....	13.7	Valve Removal/Installation, No. 1 Engine Firewall Breakaway .....	10.104
Valve Removal/Installation, ENCU Temperature Control Shutoff .....	13.6	Valve Removal/Installation, No. 1 Engine Regulating .....	4.79
Valve Removal/Installation, Forward Fuel Cell Air Vent/Pressure Relief ...	10.15	Valve Removal/Installation, No. 1 or No. 2 Engine Directional Control Shutoff .	4.63
Valve Removal/Installation, Forward Fuel Cell Check/Thermal Relief .....	10.11	Valve Removal/Installation, No. 2 Engine Crossfeed/Shutoff .....	10.100
Valve Removal/Installation, Forward Fuel Cell Engine Fuel Supply Breakaway .....	10.16	Valve Removal/Installation, No. 2 Engine Firewall Breakaway .....	10.105
Valve Removal/Installation, Forward Fuel Cell Fuel Level Control Pilot ...	10.13	Valve Removal/Installation, No. 2 Engine Regulating .....	4.80
Valve Removal/Installation, Forward Fuel Cell Fuel Shutoff .....	10.14	Valve Removal/Installation, Parking Brake Rotary Direct .....	3.60
Valve Removal/Installation, Forward Fuel Cell Fuel/Defuel Check .....	10.19	Valve Removal/Installation, Pressurized Air System Tee and Check .....	7.136
Valve Removal/Installation, Forward Fuel Cell Refueling Breakaway .....	10.17	Valve Removal/Installation, Primary Hydraulic Pump Pressure Check ....	7.9
Valve Removal/Installation, Fuel Boost Pump Solenoid Shutoff .....	7.150	Valve Removal/Installation, Right Auxiliary Fuel Tank Check .....	10.90
Valve Removal/Installation, Fuel Tank Pressure Control .....	7.151	Valve Removal/Installation, Servocylinder Check .....	7.50
Valve Removal/Installation, Fuel Transfer Air Control .....	10.83	Valve Removal/Installation, Tail Landing Gear Shock Strut Pneumatic .....	3.40
Valve Removal/Installation, Fuel Transfer Shutoff .....	10.74	Valve Repair and Test (AVIM), Parking Brake Rotary Direct .....	3.61
Valve Removal/Installation, Inlet Throttle	7.119	Valve Replacement (AVIM), Hydraulic Hand Pump Check .....	7.30
Valve Removal/Installation, Main Landing Gear Shock Strut Check ...	3.22	Valve Replacement (AVIM), Utility Hydraulic Accumulator APU Start Check .....	7.91

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Valve Replacement (AVIM), Utility Hydraulic Manifold Low Level . . . . .	7.77	Valve Replacement, Utility Hydraulic Return Accumulator Nitrogen Manifold Fill/Bleed . . . . .	7.95
Valve Replacement (Goodyear/ABSC), Main Landing Gear Tire . . . . .	3.8	Valve Replacement, Utility Low Level Shutoff . . . . .	7.108
Valve Replacement, Engine Nose Gearbox Oil Filter Safety Relief . . . . .	6.20	Valve Cleaning, Surge . . . . .	7.130A
Valve Replacement, Forward Fuel Cell Flapper . . . . .	10.9	Valve Tube Removal/Installation, SDC Check . . . . .	7.135
Valve Replacement, Ice Detector Warm Air Supply . . . . .	7.156	Valve/Check Valve Removal/Installation, Bleed Air Shutoff . . . . .	7.139
Valve Replacement, Main Landing Gear Shock Strut Pneumatic . . . . .	3.19	Valve/Electrical Control Valve Cleaning, ENCU Temperature Control Shutoff . . . . .	13.8
Valve Replacement, Main Transmission Heat Exchanger Bypass . . . . .	6.83	Valves Bracket Assembly Removal/Installation, Brake Control . . . . .	3.64
Valve Replacement, Primary Hydraulic Manifold Air Check . . . . .	7.13	Valves Internal Leakage Repair and Test (AVIM), Brake Control . . . . .	3.63
Valve Replacement, Primary Hydraulic Manifold Manual Bleed . . . . .	7.12	Valves Removal/Installation, Brake Control . . . . .	3.62
Valve Replacement, Servocylinder Control Solenoid . . . . .	7.51	Vaneaxial Fan Air Duct Removal/Installation, Forward Avionics Bay . . . . .	13.31
Valve Replacement, Tail Wheel Lock Control . . . . .	7.107	Vaneaxial Fan, and Inlet Diffuser Removal/Installation, Engine Nose Gearbox Flexible Coupling, . . . . .	6.33
Valve Replacement, Utility Hydraulic Accumulator APU Start Solenoid . . . . .	7.88	Vaneaxial Fan Removal/Installation, Aft . . . . .	13.33
Valve Replacement, Utility Hydraulic Accumulator Check . . . . .	7.87	Vaneaxial Fan Removal/Installation, Forward Avionics Bay . . . . .	13.30
Valve Replacement, Utility Hydraulic Accumulator Nitrogen Manifold Fill/Bleed . . . . .	7.83	Variable Resistor Adjustment, Pilot Collective Control . . . . .	11.206
Valve Replacement, Utility Hydraulic Accumulator One-Way Restrictor . . . . .	7.86	Variable Resistor Removal/Installation, Pilot Collective Control . . . . .	11.205
Valve Replacement, Utility Hydraulic Auxiliary Return Check . . . . .	7.110	Variable Resistor Replacement (AVIM), ECS Panel . . . . .	13.37
Valve Replacement, Utility Hydraulic Manifold Air Check . . . . .	7.66	Variable Resistor Replacement (AVIM), Pilot EXT LT/INTR LT Panel FORM . . . . .	9.70
Valve Replacement, Utility Hydraulic Manifold Manual Bleed . . . . .	7.65	Variable Resistor Replacement (AVIM), Pilot EXT LT/INTR LT Panel L CSL . . . . .	9.72
Valve Replacement, Utility Hydraulic Manifold Pressure Relief . . . . .	7.72	Variable Resistor Replacement, Pilot Instrument Panel Matrix . . . . .	9.52
Valve Replacement, Utility Hydraulic Manifold Solenoid . . . . .	7.73	Vehicle Sling Installation/Removal, Air . . . . .	1.79
		Velocity Indicator Removal/Installation, Pilot/CPG Vertical . . . . .	8.32



<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Vent Adapter Removal/Installation, Aft Fuel Cell Upper .....	10.31	Ventilation Door Assembly Rig Connecting Link Removal/Installation, Engine Access and .....	2.144
Vent Handle Assembly Removal/Installation, Canopy .....	2.50	Ventilation Door Replacement, Engine ..	2.147
Vent Primary Hydraulic System .....	7.3	Venting, Fuel System .....	1.22
Vent Tube Adapter Removal/Installation, Forward Fuel Cell Upper Vent Tube and .....	10.10	Venting, Utility Hydraulic Accumulator ..	1.38
Vent Tube Coupler Hose Replacement, Fuel Transfer Valve Air Exhaust .....	10.78	Venting, Utility Hydraulic Return Accumulator .....	1.39
Vent Tube Removal/Installation, Forward Fuel Cell Lower .....	10.24	Vertical Cockpit Glareshield Removal/Installation, Left Aft .....	2.159
Vent Tube Replacement, Aft Fuel Cell Upper .....	10.30	Vertical Cockpit Glareshield Removal/Installation, Right Aft .....	2.158
Vent Tube Replacement, Forward Fuel Cell .....	10.23	Vertical Display Lamp Board Replacement (AVIM) .....	8.12
Vent Tube Replacement, Fuel Transfer Valve Air Exhaust .....	10.79	Vertical Heat Shield and Support Bracket Removal/Installation, No. 1 and No. 2 Engine Outboard and Center Secondary Nozzle .....	4.129
Vent Utility Hydraulic System .....	7.57	Vertical Speed Indicator Removal/Installation, Pilot/CPG .....	8.32
Vent Valve Removal/Installation, Nitrogen Inert .....	10.122	Vertical Stabilizer Elastomeric Mount Removal/Installation .....	2.107A
Ventilating Fan Removal/Installation, Electrical Power Distribution Box .....	9.153	Vertical Stabilizer Fairing L530 Removal/Installation .....	2.109
Ventilation Door Assembly Door Linkage Idler Replacement, Engine Access and .....	2.143	Vertical Stabilizer Fairings L510 and R510 Removal/Installation .....	2.108
Ventilation Door Assembly Latch Replacement, Engine Access and ...	2.142	Vertical Stabilizer Handhold Steps Removal/Installation .....	2.112
Ventilation Door Assembly Replacement, Engine .....	2.146	Vertical Stabilizer Removal/Installation ..	2.107
Ventilation Door Assembly Rig Connecting Link Actuating Link Rod and Rod End Clevis Replacement, Engine Access and .....	2.145	Vertical Stabilizer Spar Box Frame Structure .....	2.104
		Vertical Stabilizer Tip Fairings T545A and T545 Removal/Installation .....	2.110
		Vertical Stabilizer Trailing Edge Removal/Installation .....	2.111

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
<b>W</b>			
W210 Microphone Wire Harness Removal/Installation, CPG .....	9.131	Weighing (Aircraft on Jacks), Helicopter Weight Removal/Installation, CPG Directional Control Pedal .....	G.1 11.240
W220 Microphone Wire Harness Removal/Installation, Pilot .....	9.130	Weight Removal/Installation, Main Rotor Blade Balance .....	5.9
Warm Air Supply Tube Replacement, Ice Detector Aft .....	7.157	Weight Removal/Installation (AVIM) Main Rotor Blade Forward and Aft Tip .....	5.14A
Warm Air Supply Tube Replacement, Ice Detector Center .....	7.158	Weight Removal/Installation, Tail Rotor Blade Balance .....	5.57
Warm Air Supply Tube Replacement, Ice Detector Forward .....	7.159	Weight Support Fitting Insert Replacement (AVIM), Main Rotor Blade .....	5.14
Warm Air Supply Valve Replacement, Ice Detector .....	7.156	Wheel (With Grease Fitting) and Axle Removal/Installation, Tail Landing Gear .....	3.46
Warm-Up/De-Ice of Engine Load Demand Spindle (LDS) Cables .....	1.55	Wheel (With Grease Fitting) Tapered Cone and Rollers Removal/Installation, Tail Landing Gear .....	3.48
Warning Components Inspection, Caution and .....	9.104	Wheel (With Grease Fitting) Tire and Tube Removal/Installation, Tail Landing Gear .....	3.47
Warning Panel Removal/Installation, Pilot Caution .....	9.105	Wheel (Without Grease Fitting) and Axle Removal/Installation, Tail Landing Gear .....	3.49
Warning Plate Replacement, Directional Servocylinder BUCS .....	7.35	Wheel (Without Grease Fitting) Tapered Cone and Rollers Removal/Installation, Tail Landing Gear .....	3.51
Warning Plate Replacement, Hydraulic Name Plate and BUCS .....	7.54	Wheel (Without Grease Fitting) Tire and Tube Removal/Installation, Tail Landing Gear .....	3.50
Wash Coupling Half Removal/Installation, No. 1 and No. 2 Engine Water .....	4.102	Wheel and Tire Removal/Installation, Main Landing Gear .....	3.6
Washer Replacement (AVIM), Main Rotor Pitch Horn .....	5.29A	Wheel Brackets Removal/Installation, Tail Landing Gear Tail Wheel Deflector, Structural Support, and Tail	3.27
Wash, Engine .....	1.58	Wheel Brake Hose Removal/Installation, Main Landing Gear .....	3.70
Washing, Cleaning, and Fresh Water Rinse Procedures, Aircraft and Aircraft Component .....	1.53	Wheel Brake Leakage and Operational Test (AVIM), Main Landing Gear ....	3.67
Water Extractor Assembly Replacement, ENCU .....	13.10		
Water Rinse Procedures, Aircraft and Aircraft Component Washing, Cleaning, and Fresh .....	1.53		
Water Wash Coupling Half Removal/Installation, No. 1 and No. 2 Engine .....	4.102		
Weapons Action Switch Replacement, Cyclic Stick .....	11.51		
Web Electrical Lead Removal/Installation, Main Rotor Electrical Brush, Electrical Holder, and Pitch .....	5.48		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Wheel Brake Tube and Hose Clamp Removal/Installation, Main Landing Gear .....	3.69	Windshield Anti-Ice Temperature Control Box Relay Replacement (AVIM) .....	12.70
Wheel Brake, Hose (Nonmetallic), Tube, and Clamp Removal/Installation, Main Landing Gear .....	3.68	Windshield Anti-Ice Temperature Control Box Removal/Installation ....	12.66
Wheel Deflector, Structural Support, and Tail Wheel Brackets Removal/Installation, Tail Landing Gear Tail .....	3.27	Windshield Anti-Ice Temperature Control Box Semiconductor Replacement (AVIM) .....	12.71
Wheel Disk Drive Key Assembly Replacement (Goodyear/ABSC), Main Landing Gear .....	3.9	Windshield Anti-Ice Temperature Control Box Terminal Stud Replacement (AVIM) .....	12.74
Wheel Lock Actuator Hose Replacement, Tail .....	7.106	Windshield Drain Tube Replacement, Canopy Door and .....	2.41
Wheel Lock Control Valve Replacement, Tail .....	7.107	Windshield Panel Assembly Removal/Installation, Left Forward Canopy .....	2.70
Wheel Lock Target Replacement, Tail Landing Gear Actuating Cylinder ....	3.36	Windshield Panel Removal/Installation, Upper Aft Canopy .....	2.74
Wheel Machine Key Assembly Replacement (Parker-Hannifin), Main Landing Gear .....	3.13	Windshield Panel Removal/Installation, Left Aft Canopy .....	2.71
Wheel Tapered Cone and Rollers Removal/Installation (Eight-Bolts), Main Landing Gear .....	3.14	Windshield Panel Removal/Installation, Upper Center Canopy .....	2.73
Wheel Tapered Cone and Rollers Removal/Installation (Nine-Bolts), Main Landing Gear .....	3.10	Windshield Panel Removal/Installation, Upper Forward Canopy .....	2.72
Wide Band FM Antenna Pan Mount Fuselage Repair (AVIM) .....	2.101A	Windshield Wiper System Inspection ...	12.1
Windshield Anti-Ice Temperature Control Box Access Cover Removal/Installation (AVIM) .....	12.67	Wing Barrel Nut Replacement .....	2.25
Windshield Anti-Ice Temperature Control Box Capacitor Replacement (AVIM) .....	12.69	Wing Damage and Types of Repair, Classification of .....	2.117
Windshield Anti-Ice Temperature Control Box Circuit Card Assembly (CCA) Removal/Installation (AVIM) ..	12.68	Wing Frame Structure .....	2.118
Windshield Anti-Ice Temperature Control Box Current Transformer Replacement (AVIM) .....	12.72	Wing Fuselage Coupling Nipple Replacement .....	7.102
Windshield Anti-Ice Temperature Control Box Receptacle Replacement (AVIM) .....	12.73	Wing Fuselage Quick-Disconnect Coupling Replacement .....	7.101
		Wing Hydraulic Hose Replacement ....	7.103
		Wing Inspection .....	2.116
		Wing Installation .....	2.121
		Wing Navigation Lamp Replacement, Tail or .....	9.95
		Wing Navigation Light Installation, Tail or .....	9.94
		Wing Navigation Light Removal, Tail or .	9.93

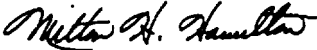
<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Wing Panel (Armored Swing Panel) Removal/Installation, Pilot/CPG Armored Crew Seat .....	2.165	Wire Harness Removal/Installation, CPG W219 Microphone .....	9.131
Wing Panel Slider Plate Removal/Installation, Pilot/CPG Armored Crew Seat .....	2.166	Wire Harness Removal/Installation, Pilot W220 Microphone .....	9.130
Wing Pitot Tube Removal/Installation, Right or Left .....	8.37	Wire Harness Removal/Installation, Pylon Circuit Card and Jettison .....	16.19
Wing Quick-Disconnect Coupling Replacement .....	7.100	Wire Harness Replacement, Pylon .....	16.18
Wing Removal .....	2.120	Wire Harness Support Bracket Removal/Installation, Aft Deck Left Side Connector Bracket and .....	9.151
Wing Skin Plates .....	2.119	Wire Harness Support Bracket Removal/Installation, Aft Deck Right Side Connector Bracket and .....	9.150
Wing Trailing Edge Removal/Installation	2.122	Wire Harness Support Bracket Removal/Installation, Lateral Servocylinder .....	2.85
Winterization Accumulator Removal/Installation .....	16.31	Wire Resistor Replacement (AVIM), CPG Caution/Warning Panel Fixed ..	9.121
Wiper Alinement, CPG Windshield .....	12.15	Wire Resistor Replacement (AVIM), Pilot Caution/Warning Panel Fixed ..	9.112
Wiper Alinement, Pilot Windshield .....	12.8	Wire Rope Release Fitting Removal/Installation, CPG Cyclic Stick .....	11.74
Wiper Arm Replacement, CPG Windshield .....	12.10	Wire Rope Removal/Installation, CPG Cyclic Stick Lock Release .....	11.76
Wiper Arm Replacement, Pilot Windshield .....	12.3	Wire Strike Cutter and Deflector Removal/Installation, Gun .....	2.194
Wiper Blade Replacement, CPG Windshield .....	12.9	Wire Strike Lower Deflector Extension Replacement (AVIM) .....	2.192
Wiper Blade Replacement, Pilot Windshield .....	12.2	Wire Support Bracket Replacement (AVIM), Main Rotor Pitch Housing ...	5.28
Wiper Converter Replacement, CPG Windshield .....	12.12	Wiring Harness Angle Bracket Replacement, APU .....	TM 1-2835-213-23
Wiper Converter Replacement, Pilot Windshield .....	12.5	Wiring Harness Installation, APU .....	TM 1-2835-213-23
Wiper Flex Shaft Replacement, CPG Windshield .....	12.13	Wiring Harness Removal, APU .....	15.10
Wiper Flex Shaft Replacement, Pilot Windshield .....	12.6	Wiring Installation, Engine Buildup – No. 1 Engine .....	4.42
Wiper Link Replacement, CPG Windshield .....	12.11	Wiring Installation, Engine Buildup – No. 2 Engine .....	4.43
Wiper Link Replacement, Pilot Windshield .....	12.4	Wiring Removal, Engine Teardown – No. 1 Engine .....	4.17
Wiper Motor Replacement, CPG Windshield .....	12.14	Wiring Removal, Engine Teardown – No. 2 Engine .....	4.18
Wiper Motor Replacement, Pilot Windshield .....	12.7		
Wire Harness Disassembly/Assembly, Pilot W220 or CPG W219 Microphone .....	9.132		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
Work Platform and Equipment Bay, Access Provisions – Top Side Engine	2.7		
Work Platform Door Latch Replacement	2.139		
Work Platform Door Removal/Installation . . . . .	2.137		
Work Platform Door Structural Support Strut Removal/Installation . . . . .	2.138		
Work Platform Nacelle Door Structure . .	2.130		

<u>Subject</u>	<u>Para No.</u>	<u>Subject</u>	<u>Para No.</u>
		<b>X</b>	
			<b>Y</b>
XFER Advisory Light Replacement, CPG FUEL .....	9.123		
XFER Advisory Light Replacement, Pilot FUEL .....	9.124		<b>Z</b>

By Order of the Secretary of the Army:

Official:

  
MILTON H. HAMILTON  
*Administrative Assistant to the  
Secretary of the Army*

GORDON R. SULLIVAN  
*General, United States Army  
Chief of Staff*

DISTRIBUTION :

To be distributed in accordance with DA Form 12-31-E, block no. 3448, requirements for TM 1-1520-238-23-1.

● U.S. GOVERNMENT PRINTING OFFICE: 1994-555-121/80108

**THESE ARE THE INSTRUCTIONS FOR SENDING AN ELECTRONIC 2028**

The following format must be used if submitting an electronic 2028. The subject line must be exactly the same and all fields must be included; however only the following fields are mandatory: 1, 3, 4, 5, 6, 7, 8, 9, 10, 13, 15, 16, 17, and 27.

From: "Whomever" <whomever@avma27.army.mil>

To: 2028@redstone.army.mil

Subject: DA Form 2028

1. **From:** Joe Smith
2. Unit: Home
3. **Address:** 4300 Park
4. **City:** Hometown
5. **St:** MO
6. **Zip:** 77777
7. **Date Sent:** 19-Oct-93
8. **Pub no:** 55-2840-229-23
9. **Pub Title:** TM
10. **Publication Date:** 04-Jul-85
11. Change Number: 7
12. Submitter Rank: MSG
13. **Submitter Fname:** Joe
14. Submitter Mname: T
15. **Submitter Lname:** Smith
16. **Submitter Phone:** (123) 123-1234
17. **Problem:** 1
18. Page: 2
19. Paragraph: 3
20. Line: 4
21. NSN: 5
22. Reference: 6
23. Figure: 7
24. Table: 8
25. Item: 9
26. Total: 123
27. **Text:**

This is the text for the problem below line 27.



RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS



**SOMETHING WRONG WITH THIS PUBLICATION?**

*THEN . . . JOT DOWN THE DOPE ABOUT IT ON THIS FORM. CAREFULLY TEAR IT OUT, FOLD IT AND DROP IT IN THE MAIL.*

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)  
**SSG John Doe**  
**F Troop 5th Cav. 1st Training Bldg.**  
**Fort Knox, Kentucky 12345-6789**

DATE SENT  
 20 October 1990

PUBLICATION NUMBER <b>TM 55-1520-238-S</b>	PUBLICATION DATE <b>30 September 1990</b>	PUBLICATION TITLE <b>Preparation for Shipment FOR Army Model AH-64A Helicopters</b>
---	--	--

BE EXACT . . . PIN-POINT WHERE IT IS				IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:
PAGE NO.	PARA-GRAPH	FIGURE NO.	TABLE NO.	
2-60	2-26, 151			T.M. references should be TM 55- <u>1520</u> -238 S, not TM 55- <u>1500</u> -238-S
2-68		2-30		Support AFT FUS STA <u>430</u> should read Support AFT FUS STA <u>450</u> .

**SAMPLE**

PRINTED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER  
**SP4 John Doe (805) 555-1234**

SIGN HERE

TEAR ALONG PERFORATED LINE



# SOMETHING WRONG WITH THIS PUBLICATION?

*THEN . . . JOT DOWN THE DOPE ABOUT IT ON THIS FORM. CAREFULLY TEAR IT OUT, FOLD IT AND DROP IT IN THE MAIL.*

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER	PUBLICATION DATE	PUBLICATION TITLE
--------------------	------------------	-------------------

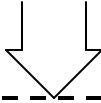
BE EXACT . . . PIN-POINT WHERE IT IS				IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:
PAGE NO.	PARA-GRAPH	FIGURE NO.	TABLE NO.	

PRINTED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER

SIGN HERE

TEAR ALONG PERFORATED LINE

FILL IN YOUR  
UNITS ADDRESS



FOLD BACK

DEPARTMENT OF THE ARMY

---

---

OFFICIAL BUSINESS

COMMANDER  
U.S. ARMY AVIATION AND MISSILE COMMAND  
ATTN: AMSAM-MMC-MA-NP  
REDSTONE ARSENAL, AL 35898-5230

TEAR ALONG PERFORATED LINE



# SOMETHING WRONG WITH THIS PUBLICATION?

*THEN . . . JOT DOWN THE DOPE ABOUT IT ON THIS FORM. CAREFULLY TEAR IT OUT, FOLD IT AND DROP IT IN THE MAIL.*

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER

PUBLICATION DATE

PUBLICATION TITLE

BE EXACT . . . PIN-POINT WHERE IT IS

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

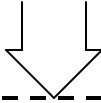
PAGE NO.	PARA-GRAPH	FIGURE NO.	TABLE NO.

PRINTED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER

SIGN HERE

TEAR ALONG PERFORATED LINE

FILL IN YOUR  
UNITS ADDRESS



FOLD BACK

DEPARTMENT OF THE ARMY

---

---

OFFICIAL BUSINESS

COMMANDER  
U.S. ARMY AVIATION AND MISSILE COMMAND  
ATTN: AMSAM-MMC-MA-NP  
REDSTONE ARSENAL, AL 35898-5230

TEAR ALONG PERFORATED LINE



# SOMETHING WRONG WITH THIS PUBLICATION?

*THEN . . . JOT DOWN THE DOPE ABOUT IT ON THIS FORM. CAREFULLY TEAR IT OUT, FOLD IT AND DROP IT IN THE MAIL.*

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER

PUBLICATION DATE

PUBLICATION TITLE

BE EXACT . . . PIN-POINT WHERE IT IS

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

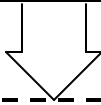
PAGE NO.	PARA-GRAPH	FIGURE NO.	TABLE NO.

PRINTED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER

SIGN HERE

TEAR ALONG PERFORATED LINE

FILL IN YOUR  
UNITS ADDRESS



FOLD BACK

DEPARTMENT OF THE ARMY

---

---

OFFICIAL BUSINESS

COMMANDER  
U.S. ARMY AVIATION AND MISSILE COMMAND  
ATTN: AMSAM-MMC-MA-NP  
REDSTONE ARSENAL, AL 35898-5230

TEAR ALONG PERFORATED LINE

# The Metric System and Equivalents

## Linear Measure

1 centimeter = 10 millimeters = .39 inch  
 1 decimeter = 10 centimeters = 3.94 inches  
 1 meter = 10 decimeters = 39.37 inches  
 1 dekameter = 10 meters = 32.8 feet  
 1 hectometer = 10 dekameters = 328.08 feet  
 1 kilometer = 10 hectometers = 3,280.8 feet

## Weights

1 centigram = 10 milligrams = .15 grain  
 1 decigram = 10 centigrams = 1.54 grains  
 1 gram = 10 decigrams = .035 ounce  
 1 dekagram = 10 grams = .35 ounce  
 1 hectogram = 10 dekagrams = 3.52 ounces  
 1 kilogram = 10 hectograms = 2.2 pounds  
 1 quintal = 100 kilograms = 220.46 pounds  
 1 metric ton = 10 quintals = 1.1 short tons

## Liquid Measure

1 centiliter = 10 milliliters = .34 fl. ounces  
 1 deciliter = 10 centiliters = 3.38 fl. ounces  
 1 liter = 10 deciliters = 33.81 fl. ounces  
 1 dekaliter = 10 liters = 2.64 gallons  
 1 hectoliter = 10 dekaliters = 26.42 gallons  
 1 kiloliter = 10 hectoliters = 264.18 gallons

## Square Measure

1 sq. centimeter = 100 sq. millimeters = .155 sq. inch  
 1 sq. decimeter = 100 sq. centimeters = 15.5 sq. inches  
 1 sq. meter (centare) = 100 sq. decimeters = 10.76 sq. feet  
 1 sq. dekameter (are) = 100 sq. meters = 1,076.4 sq. feet  
 1 sq. hectometer (hectare) = 100 sq. dekameters = 2.47 acres  
 1 sq. kilometer = 100 sq. hectometers = .386 sq. mile

## Cubic Measure

1 cu. centimeter = 1000 cu. millimeters = .06 cu. inch  
 1 cu. decimeter = 1000 cu. centimeters = 61.02 cu. inches  
 1 cu. meter = 1000 cu. decimeters = 35.31 cu. feet

## Approximate Conversion Factors

To change	To	Multiply by	To change	To	Multiply by
inches	centimeters	2.540	ounce-inches	newton-meters	.007062
feet	meters	.305	centimeters	inches	.394
yards	meters	.914	meters	feet	3.280
miles	kilometers	1.609	meters	yards	1.094
square inches	square centimeters	6.452	kilometers	miles	.621
square feet	square meters	.093	square centimeters	square inches	.155
square yards	square meters	.836	square meters	square feet	10.764
square miles	square kilometers	2.590	square meters	square yards	1.196
acres	square hectometers	.405	square kilometers	square miles	.386
cubic feet	cubic meters	.028	square hectometers	acres	2.471
cubic yards	cubic meters	.765	cubic meters	cubic feet	35.315
fluid ounces	milliliters	29.573	cubic meters	cubic yards	1.308
pints	liters	.473	milliliters	fluid ounces	.034
quarts	liters	.946	liters	pints	2.113
gallons	liters	3.785	liters	quarts	1.057
ounces	grams	28.349	liters	gallons	.264
pounds	kilograms	.454	grams	ounces	.035
short tons	metric tons	.907	kilograms	pounds	2.205
pound-feet	newton-meters	1.356	metric tons	short tons	1.102
pound-inches	newton-meters	.11296			

## Temperature (Exact)

° F Fahrenheit temperature  $\frac{5}{9}$  (after subtracting 32) Celsius temperature ° C



**PIN: 072826-009**