TECHNICAL MANUAL

DIRECT SUPPORT AND

GENERAL SUPPORT

MAINTENANCE MANUAL INCLUDING

REPAIR PARTS AND

SPECIAL TOOLS LIST

VOLUME I - TROUBLESHOOTING

VOLUME II - MAINTENANCE

MOUNT, PERISCOPE:

M118 (1240-00-796-9686)

M118E1 (1240-00-348-8446)

VOLUME I TROUBLESHOOTING

VOLUME II MAINTENANCE

HEADQUARTERS, DEPARTMENT OF THE ARMY

TECHNICAL MANUAL

DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST

VOLUME I - TROUBLESHOOTING

MOUNT, PERISCOPE :

M118
M118E1

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Technical Manual
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HEADQUARTERS,
DEPARTMENT OF THE ARMY
Washington, D.C. 16 *December 1983*

TECHNICAL MANUAL

DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL

MOUNT, PERISCOPE:
Ml18 (1240-00-796-9686)
Ml18E1 (1 240-00-348-8446)

Current as of 27 May 1983 for APPENDIX C.

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, let us know.

Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual directly to:

Commander
US Army Armament, Munitions and Chemical Command
ATTN: DRSMC-MAS (R)
Rock Island, IL 61299

A reply will be furnished to you.

*This manual supersedes TM 9-1240-271-35, June 1965, including all chances and TM 9-1240 271-35P, October 1970.

TABLE OF CONTENTS

HOW TO USE THIS MANUAL

This manual has two volumes of maintenance information you. will need to repair and service the M118 and M118E 1 Periscope Mounts.

- Volume I - Troubleshooting
- Volume 11- Maintenance

The organization paragraph in each volume tells you what information you can find in each chapter and appendix.

There are four ways to find any maintenance information you need:

- Index on the front cover which tells what information is contained in each chapter
- Table of Contents located at the front of the manual which has a complete listing by paragraph number and page number
- Performance Test (Vol I, Chap 2)
- Maintenance Task Index (Vol II, App B) which lists major assemblies, subassemblies, and paragraph numbers of all maintenance procedures

Before doing any maintenance, you should read and understand HOW TO TROUBLESHOOT on page 1-2. If you do not know the equipment well, you should read the section on description and data (Vol II, Chap 1).

Throughout the manual, reference is made to a Job Performance Guide 113-091-9000R (JPG 41 C) which helps yousto develop skills in doing the maintenance tasks.

CHAPTER I

INTRODUCTION

1-1. SCOPE

This volume contains troubleshooting requirements for direct support and general support (DS/GS) maintenance of the M 1 18 and M118E1 Periscope Mounts. See Volume II for maintenance procedures.

1-2. ORGANIZATION

The troubleshooting requirements for checking out the M118 and M118E1 Periscope Mounts and for finding fault symptoms are given in Chapter 2. See paragraph 1-3 for how to troubleshoot.

1-3. HOW TO TROUBLESHOOT

The following steps tell you how to troubleshoot. A diagram of these steps is on page 1-3.

(A) Do a visual check and list any faults on DA Form 2404 before making repairs. See Vol II, Chap 3 for what to check for.

(B) If you see any faults that may affect the performance test, fix them now. This does not mean small things like painting scratches.

(C) Do the performance test in Vol I, Chap 2 from the beginning until you find a fault symptom.

(D) Do the maintenance action required to correct the fault (Vol 11, Chap 4).

(E) After the bad part has been repaired or replaced, do the performance test in Chapter 2 again. This is to make sure the new part has fixed the problem.

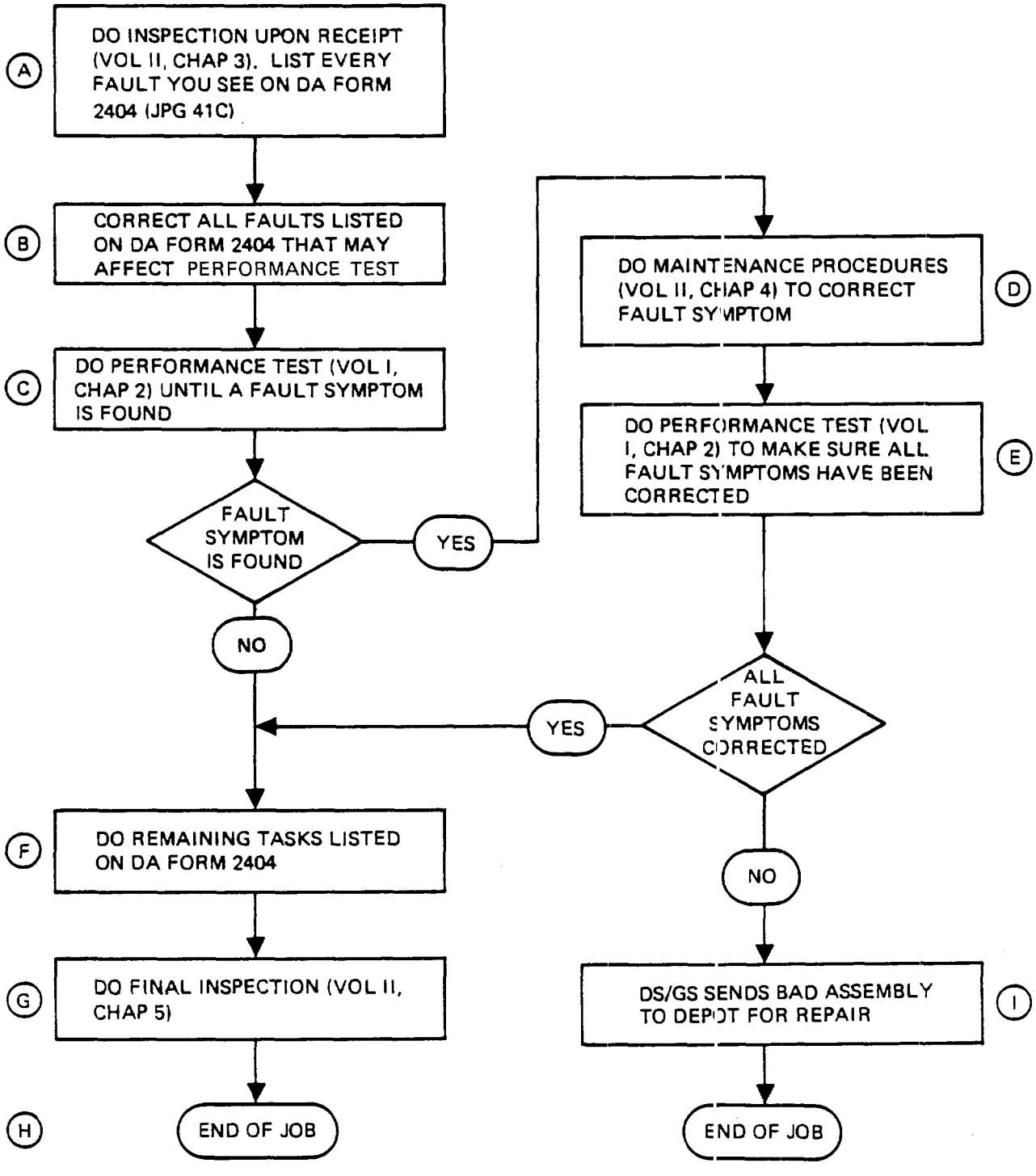
(F) If all the faults are now corrected, do the maintenance tasks on DA Form 2404.

(G) Do the final inspection given in Vol II, Chap 5.

(H) The job is over and the good assembly is sent back to service.

(I) If all faults were not corrected after step E, the bad assembly is sent back to the depot for repair.

1-3. HOW TO TROUBLESHOOT (CONT)



1-4. TEST EQUIPMENT

No special test equipment is used to test the M118 or Ml18E1 Periscope Mount.

CHAPTER 2

TROUBLESHOOTING

2-1. SCOPE

Troubleshooting of the M118 and M118E 1 Periscope Mounts is done by following the performance test in this chapter. If you find a symptom, look in the maintenance action cc lumn to find out what to do to correct it.

2-2. PERFORMANCE TEST

PERSONNEL: One

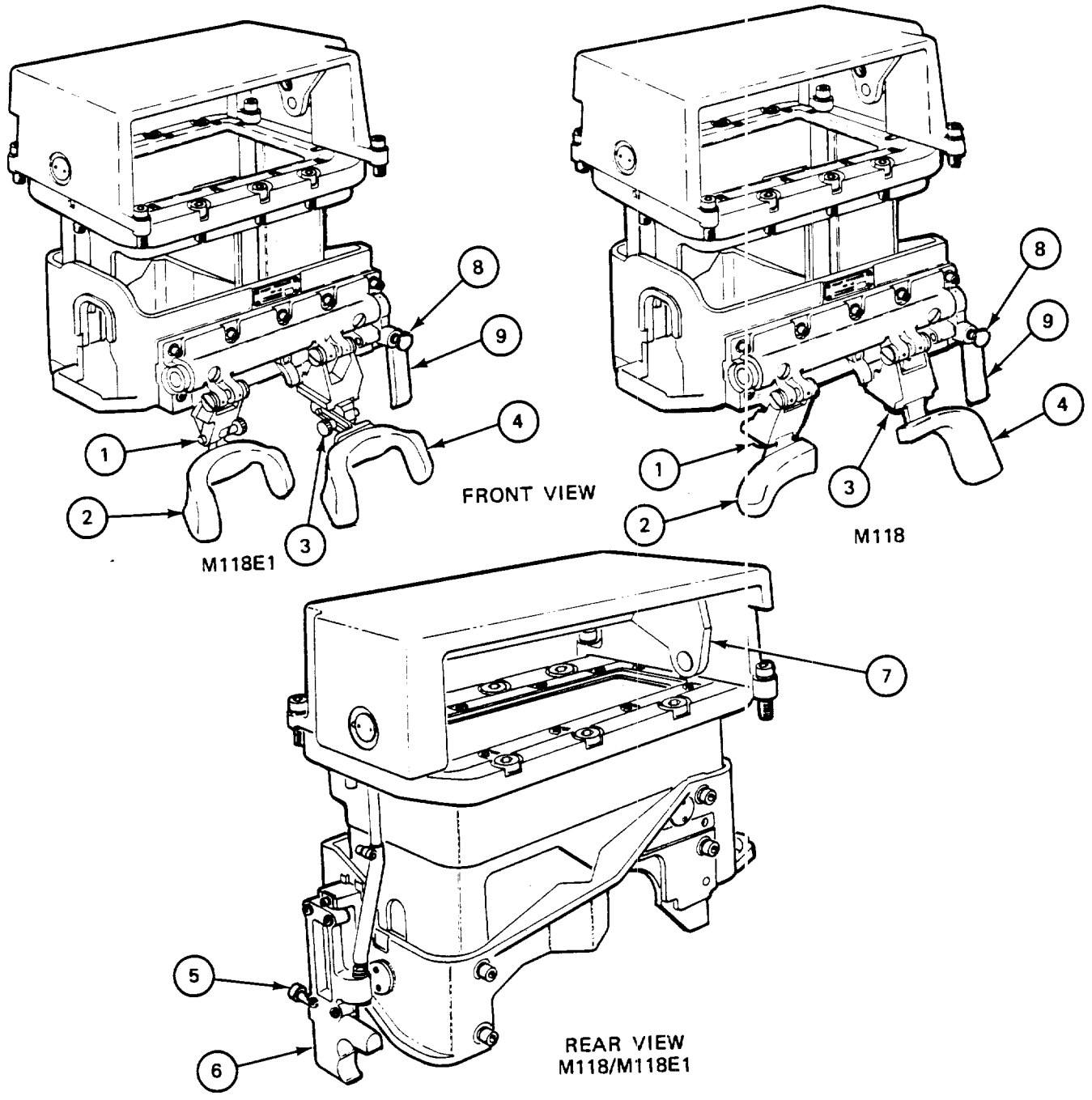
EQUIPMENT CONDITION: Periscope mount on work bench or in vehicle

2-2. PERFORMANCE TEST (CONT)

FRAME 1

Step	Procedure	Symptom	Maintenance Action
	NOTE Check which configuration is being tested and follow the appropriate illustration.		
1.	Loosen handscrew (1) and check that left headrest (2) moves freely through area allowed by slot.	Left headrest assembly does not move.	Replace headrest assembly (Vol II, para 4-14).
2.	Loosen handscrew (3) and check that right headrest assembly (4) moves freely through area allowed by slot.	Right headrest assembly does not move.	Replace headrest assembly (Vol II, para 4-14).
3.	Press in plunger (5) of shield operating handle (6) and open and close shield (7) by moving handle (6) up and down.	Shield does not open.	Replace bent or broken parts (Vol II, para 4-22).
4.	With shield (7) fully open and then fully closed, release plunger (5) and check that shield (7) locks in that position.	Shield does not lock.	Replace bent or broken parts (Vol II, para 4-22).
5.	Press plunger (8) of clamping lever (9) and check that clamping lever (9) turns freely through range of movement.	Clamping lever does not move.	Replace bent or broken parts (Vol II, para 4-17).
6.	Push clamping lever (9) forward all the way and check that it locks in place.	Clamping lever does not lock.	Replace bent or broken parts (Vol II, para 4-17).
	NOTE FOLLOW-ON MAINTENANCE Correct faults listed on DA Form 2404. Do final inspection (Vol II, para 5-2).		

2-2. PERFORMANCE TEST (CONT)



TECHNICAL MANUAL

DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST (INCLUDING DEPOT MAINTENANCE REPAIR PARTS)

VOLUME II - MAINTENANCE

MOUNT, PERISCOPE:

M118
Ml18E1

CHAPTER 1

INTRODUCTION

Section 1. GENERAL

1-1. SCOPE

This volume contains the maintenance requirements and procedures for direct support and general support (DS/GS) maintenance for the M118 and M118E1 Periscope Mounts. See Volume I for troubleshooting procedures.

1-2. ORGANIZATION

a. Chapter 2, General Maintenance Information, lists maintenance iterns and references general procedures that are necessary to do the maintenance in this manual.

b. Chapter 3, Inspection Upon Receipt, gives the kind of defects to look for when the periscope mount is returned to DS /GS. A complete inspection should be made and faults listed on DA Form 2404 before any repairs are made.

c. Chapter 4, Maintenance Procedures, gives step-by-step procedures to repair faults found during inspection or troubleshooting.

d. Chapter 5, Final Inspection, gives procedures to be done after repair to make sure that the periscope mount works.

e. Chapter 6, Packaging, gives procedures for packaging the M118 and M118E 1 Periscope Mounts for storage or shipment.

f. Appendix A, Expendable Supplies and Materials List, lists the supplies and materials needed to repair the periscope mount.

g. Appendix B, Maintenance Task Index, helps you find the necessary maintenance tasks for the periscope mount.

h. Appendix C, Repair Parts and Special Tools List, gives a listing of repair parts, special tools, and support equipment required for the performance of direct support, general support, and depot maintenance of the periscope mount.

Section 2. DESCRIPTION AND DATA

1-3. DESCRIPTION

The M118 Periscope Mount is used to hold and support the M32 or M35 periscope in the M60 series tank, and the M118E1 Periscope Mount is used for the M32E1 or M35E1 periscope. The periscope mount is made up of three main groupings: mount, support, and cow r and shield.

MOUNT. The mount is a one-piece steel casting which fits into the tank turret. A seal forms a weather-tight closing around the periscope.

SUPPORT. The support is a one-piece steel casting that is bolted to the lower part of the mount within the turret. It consists of three main parts.

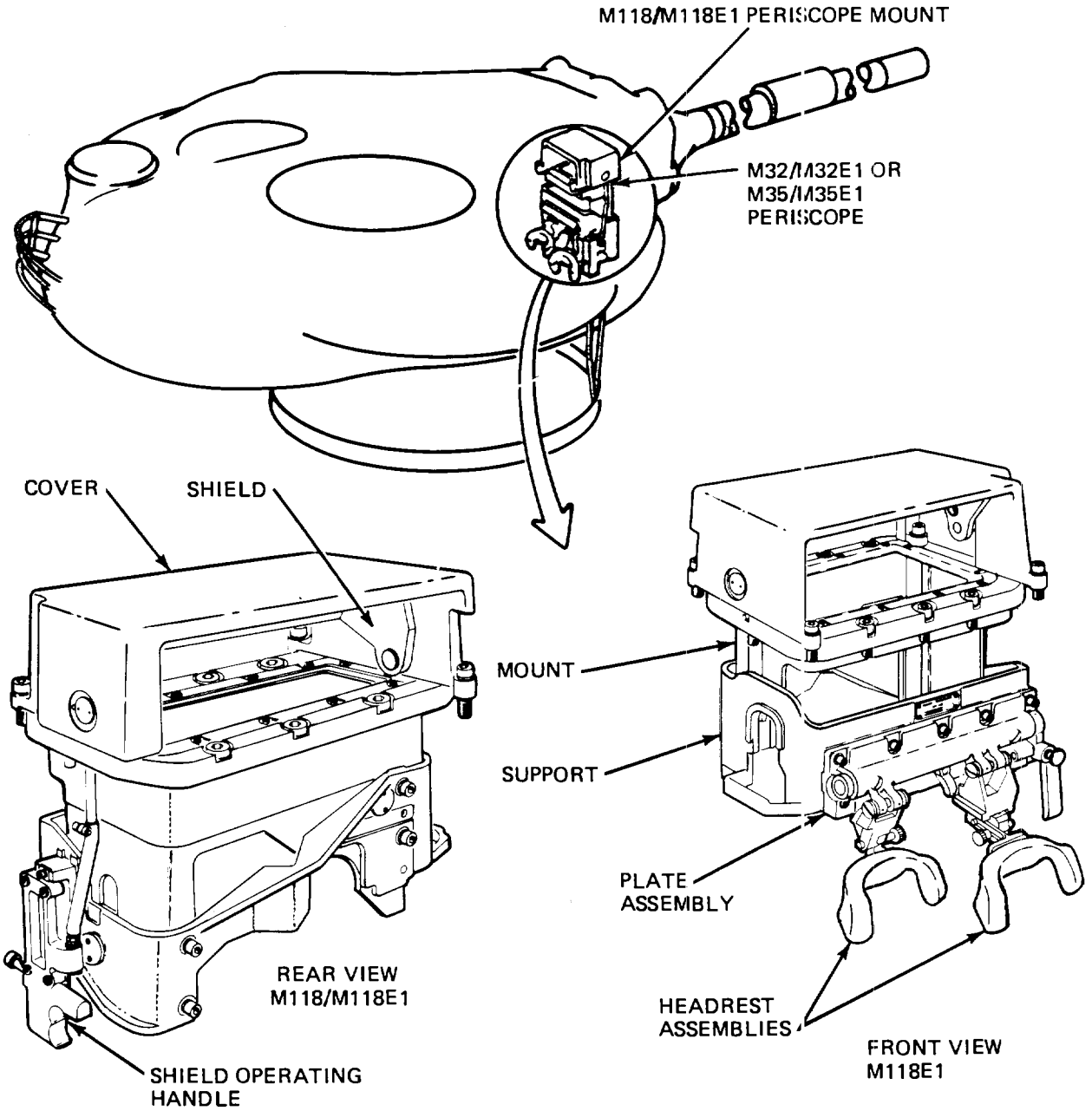
PLATE ASSEMBLY. The plate assembly is used as a support and clamping mechanism for the periscope installed in the mount.

HEADREST ASSEMBLIES. The left and right headrest assemblies can be mewed for the installation or removal of the periscope. The position of the headrest pads can also be varied.

SHIELD OPERATING HANDLE. The shield operating handle controls the opening, closing, and locking into position of the shield.

COVER AND SHIELD. The cover and shield give external protection for the periscope. The cover is bolted to the exterior of the tank turret and protects the periscope from overhead blasts. The shield is mounted within the cover and protects the entrance window of the periscope.

1-3. DESCRIPTION (CONT)



1-4. TABULATED DATA

Length ..... 11-1 /2 inches

Width ..... 16-1/4 inches

Height ..... 20-3/4 inches

Weight ..... 89 po-unds

1-5. DIFFERENCES BETWEEN CONFIGURATIONS

The differences between the M118 and M118E1 Periscope Mounts are in, the type of headrest assembly used. When needed for doing a task, the applicable configuration will be taken in the maintenance procedures. Check which configuration you have before starting the task. The differences between the M118 and M118E1 headrest assemblies are:

a. M118 Headrest Assemblies:

Left headrest assembly part number 861936

Right headrest assembly part number 861935

(1) Have short headrests

(2) Bracket and slide sections of assemblies are held together with support plates and a knob and shaft assembly.

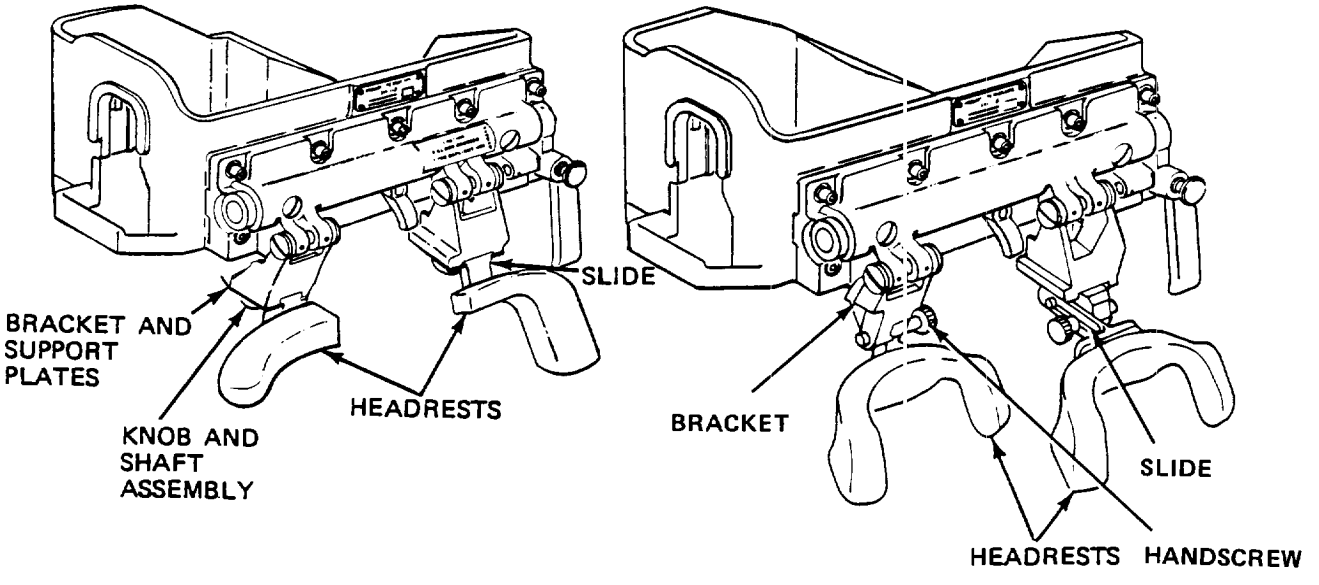
b. M118E1 Headrest Assemblies:

Left headrest assembly part number 11727422

Right headrest assembly part number 11727421

(1) Have long headrests

(2) Bracket and slide sections of assemblies are held together with a handscrew only.



M118 M118E1

CHAPTER 2

GENERAL MAINTENANCE INFORMATION

Section 1. GENERAL

2-1. SCOPE

This chapter tells you where to find general maintenance information n for the M118 and M118E 1 Periscope Mounts.

Section 2. REFERENCE DOCUMENTS

2-2. GENERAL MAINTENANCE

General maintenance procedures for fire control materiel are in TM 9-254 and Job Performance Guide 113-091-9000R (JPG 41 C).

2-3. CLEANING

General cleaning procedures are in JPG 4 lC.

2-4. PAINTING

General painting procedures are in TM 43-0139.

2-5. SEALING

General instructions for how to use sealing compounds are in JPG 41 C.

2-6. LUBRICATION

General instructions for how to apply lubricants are found in JFG 41C.

Section 3. SAFETY PROCEDURES

2-7. GENERAL PROCEDURE

General safety procedures are in AR 385-40 Safety: Accident Reporting and Records.

Section 4. SPECIAL TOOLS AND TEST EQUIPMENT

2-8. TOOLS AND TEST EQUIPMENT

No special tools or test equipment are used to maintain the M118 or M118E1 Periscope Mount.

CHAPTER 3

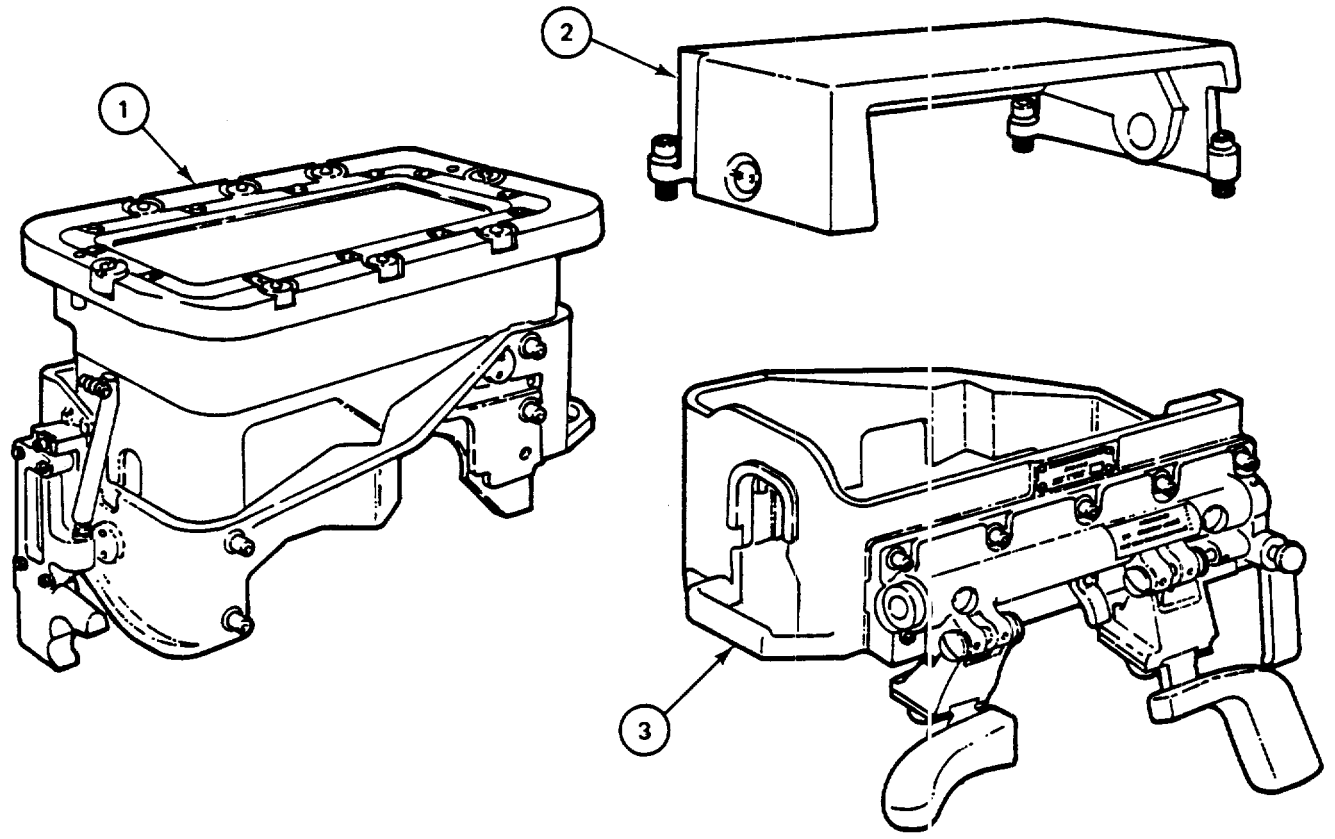
INSPECTION UPON RECEIPT

3-1. SCOPE

This chapter gives procedures to check the M118 and M118E1 Periscope Mounts for faults you can see when it is received in the DS/GS shop. It also tells you what part of this volume to go to) for various repairs. A complete inspection should be made and all faults listed on DA Form 2404 before taking any maintenance actions. The performance test in Volume I, Chapter 2, should be done after doing the inspection upon receipt.

3-2. PERISCOPE MOUNT INSPECTION UPON RECEIPT INDEX

Item	Reference (para)	Index No.
Mount	3-3	1
Cover and Shield	3-4	2
Support	3-5	3



3-3. MOUNT INSPECTION UPON RECEIPT

TOOLS: 1 /4" flat tip screwdriver
3/ 8" socket head screw key (Allen wrench or equivalent)
29/32" tubular spanner wrench

PERSONNEL: One

REFERENCES: JPG 41 C for completing DA Form 2404

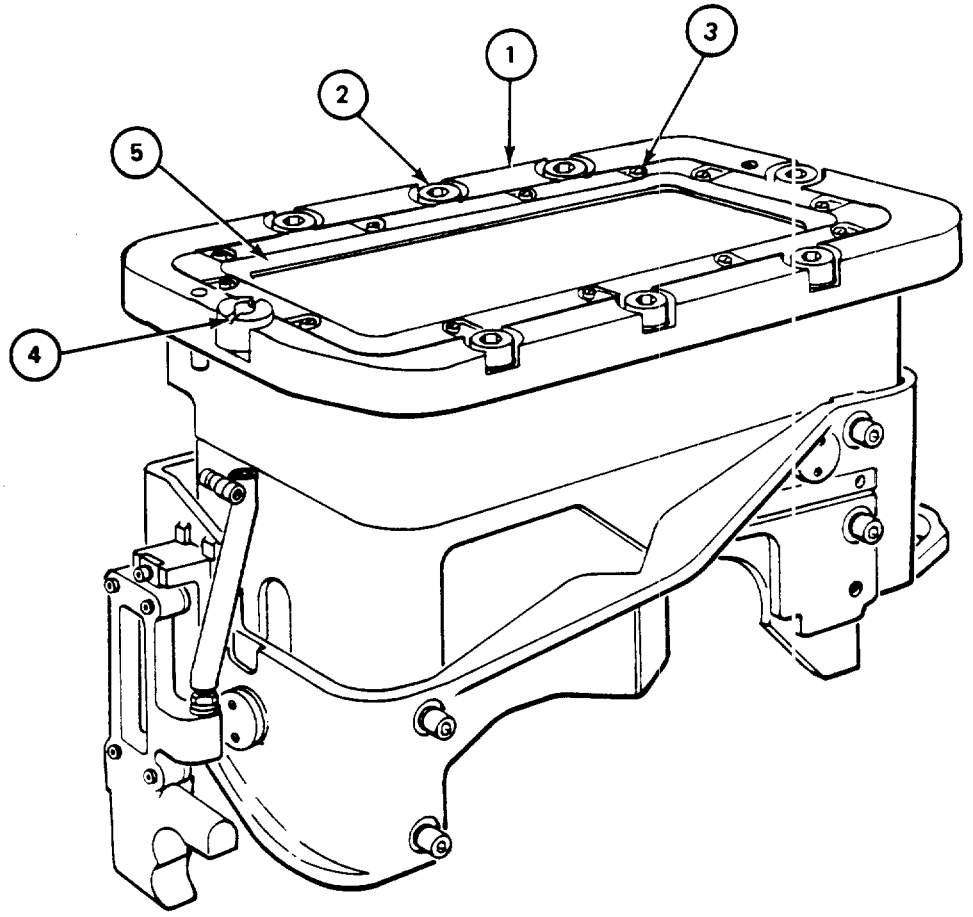
EQUIPMENT CONDITION: Mount in tank or on work bench

PRELIMINARY PROCEDURES: Remove cover and shield (para 4-4)

FRAME 1

Step	Procedure	Maintenance Action	Reference
	NOTE If mount is on work bench, go to step 3.		
1.	Clean exterior of mount (1) and check for cracks or dents.	If cracks or dents are found are found, tell your supervisor.	. . .
2.	Using Allen wrench, check that seven screen screws (2) are tight.	Tighten. Replace if missing.	. . .
3.	Using screwdriver, check that twelve screws (3) are tight.	Tighten. Replace if missing.	. . .
4.	Using spanner wrench, check that bushing (4) is tight.	Tighten. Replace if missing.	. . .
5.	Check that seal (5) is not torn or cracked.	Replace if torn or cracked.	Para 4-12
	NOTE FOLLOW-ON MAINTENANCE Correct faults listed on DA Form 2404 that may affect performance test. Do performance test (Vol I, para 2-2). END OF TASK		

3-3. MOUNT INSPECTION UPON RECEIPT (CONT)



3-4. COVER AND SHIELD INSPECTION UPON RECEIPT

SUPPLIES: Paint (item 2, App. A)

PERSONNEL: One

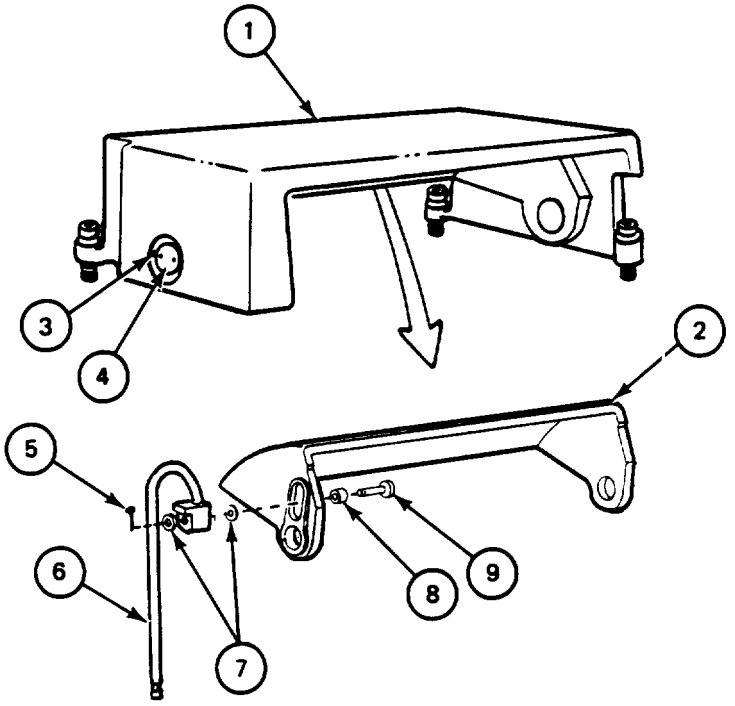
REFERENCES: TM 43-0139 for painting
JPG 41 C for completing DA Form 2404

EQUIPMENT CONDITION: Cover and shield on work bench or in vehicle

FRAME 1

Step	Procedure	Maintenance Action	Reference
1.	Clean exterior of cover (1) and check for cracks or dents.	If cracks or dents are found, tell your supervisor.	. . .
2.	Check cover (1) and shield (2) for chipped or scratched paint.	Paint chipped or scratched area.	TM 43-0139
3.	Check that two pins (3) in two studs (4) (one on each end) are not missing.	Replace if missing.	Para 4-6
4.	Check that cotter pin (5) is not missing.	Replace if missing	Para 4-6
5.	Check that rod (6) is not bent.	Replace if bent.	Para 4-5
6.	Check that two washers (7), roller (8), and pin (9) are not missing. **NOTE** FOLLOW-ON MAINTENANCE Correct faults listed on DA Form 2404 that may affect performance test. Do performance test (Vol I, para 2-2). END OF TASK	Replace if missing.	Para 4-6

3-4. COVER AND SHIELD INSPECTION UPON RECEIPT (CONT)



3-5. SUPPORT INSPECTION UPON RECEIPT

TOOLS: 1/4", 1/8", 3/8" flat tip screwdriver
7/32", 5/32", 5/64", 1/4", 1/8'and 3/16“ socket head screw key (Allen wrench or equivlent)
1 /2” open end wrench
#2 cross tip screwdriver (Phillips type)

SUPPLIES: Paint (item 2, App A)

PERSONNEL: One

REFERENCES: TM 43-0139 for painting
JPG 41 C for: Removing burrs
Completing DA Form 2404

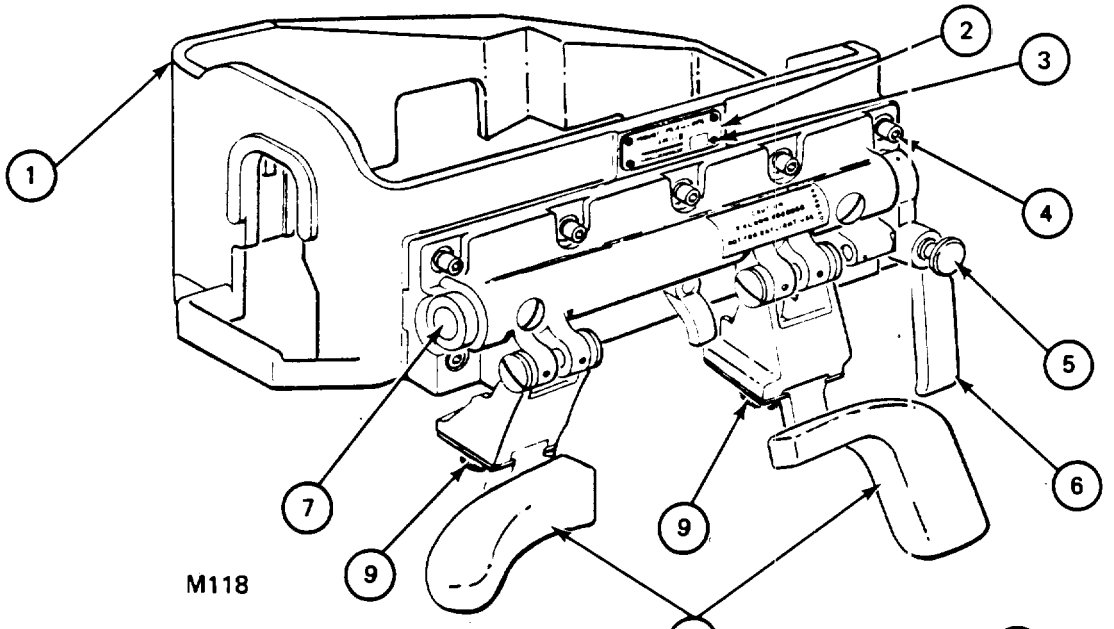
EQUIPMENT CONDITION: Support on work bench or in vehicle

FRAME 1

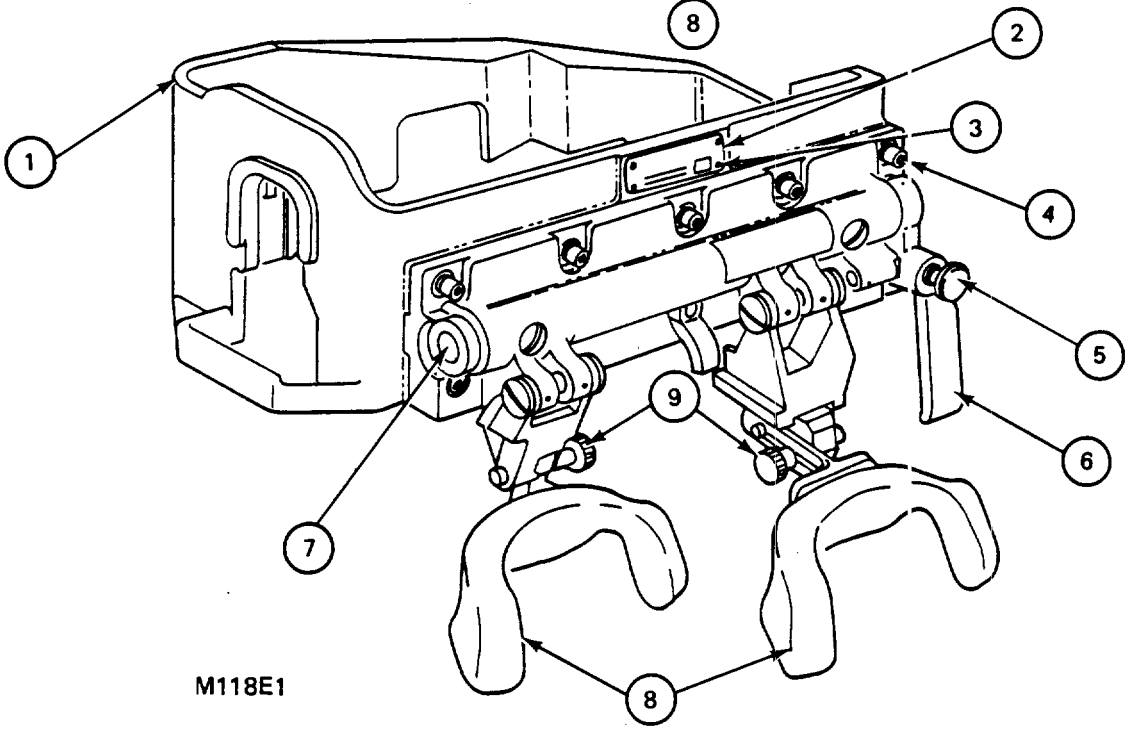
Step	Procedure	Maintenance Action	Reference
	NOTE Check which configuration is being inspected and follow the appropriate illustration.		
1.	Check support (1) for chipped or scratched paint.	Paint chipped or scratched area.	TM 43-0139
2.	Check that identification plate (2) can be read.	If plate cannot be read, tell your supervisor.	. . .
3.	Using 1/4'' screwdriver, check that four screws (3) are tight.	Tighten. Replace if missing.	. . .
4.	Using 7/32'' or 1/4'' Allen wrench, check that eight screws (4) are tight.	Tighten. Replace if missing.	. . .
5.	Press in on plunger (5) and raise lever (6) all the way, checking that shaft (7) rotates freely.	Remove burrs on shaft or replace shaft.	JPG 41C Para 4-19
6.	Check that headrests (8) are not torn or damaged.	Replace headrests if damaged.	Para 4-14

3-5. SUPPORT INSPECTION UPON RECEIPT (CONT)

Step	Procedure	Maintenance Action	Reference
7.	Loosen knobs (9) and check that headrest assemblies slide feely without binding. GO TO FRAME 2	Remove burrs in slide channels or replace headrest assembly.	JPG 41C Para 4-14



M118



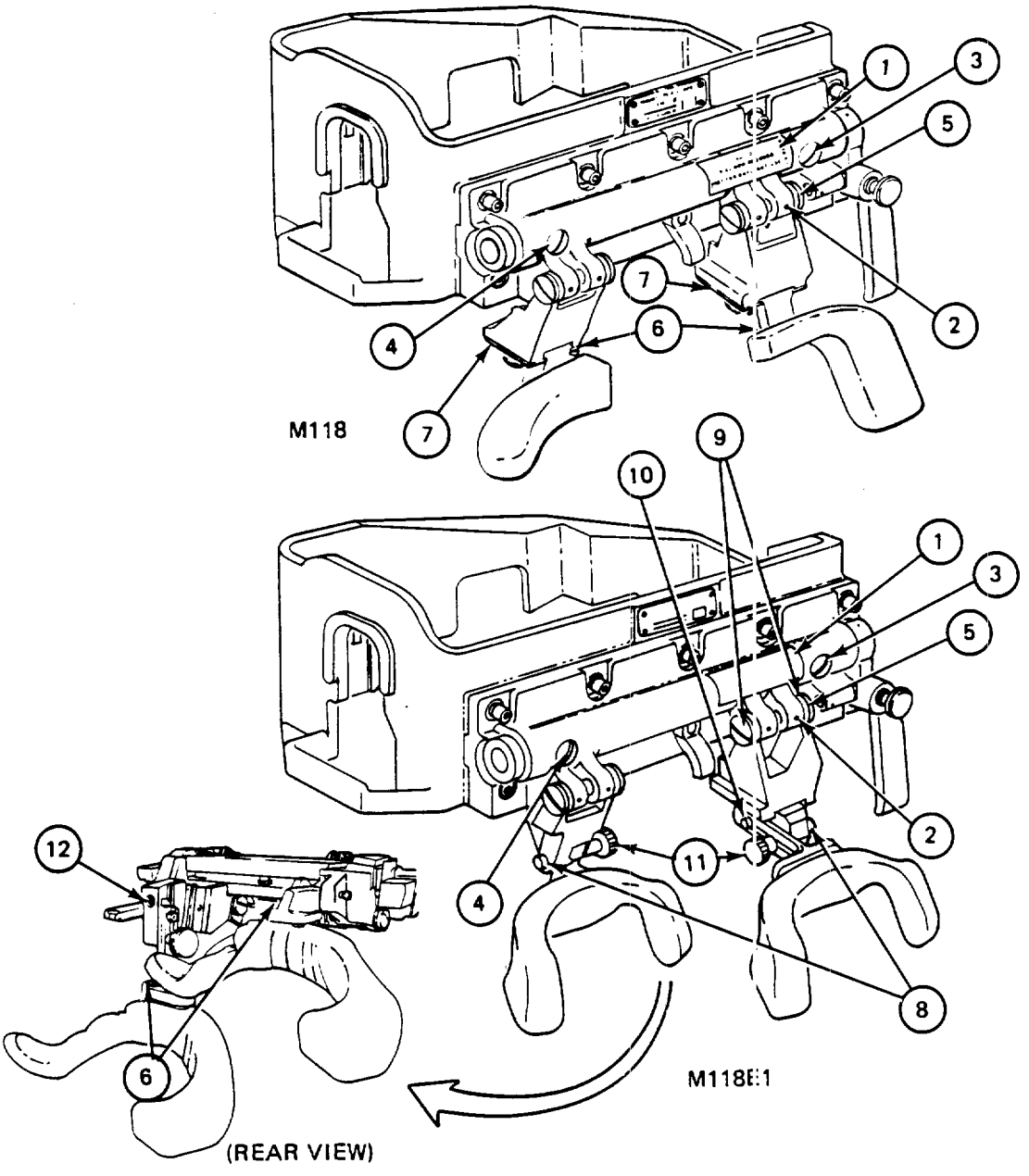
M118E1

3-5. SUPPORT INSPECTION UPON RECEIPT (CONT)

FRAME 2

Step	Procedure	Maintenance Action	Reference
1.	Check that decal (1) can be read.	If decal cannot be read, tell your supervisor.	. . .
2.	Using 1/8" screwdriver or 5/64" Allen wrench, check that four screws (2) are tight.	Tighten. Replace if necessary.	. . .
3.	Using 3/8" screwdriver, check that two plugs (3) and (4) are tight.	Tighten. Replace is missing.	. . .
4.	Using 3/8" screwdriver, check that four screws (5) are tight.	Tighten. Replace if missing.	. . .
5.	Using Phillips screwdriver, check that four screws (6) are tight at back of headrests.	Tighten. Replace if missing.	TM 9-2350-215-20
	NOTE Do step 6 for M118 configuration only.		
6.	Using 1/4" screwdriver, check that eight screws (7) are tight.	Tighten. Replace if missing.	. . .
7.	Check that two spring pins (8) are not missing.	Replace if missing.	. . .
8.	Check that two headrest stops (9) are not damaged or missing.	Replace if damaged or missing.	. . .
9.	Using 1/8" Allen wrench, check that screw (10) is tight.	Tighten.	. . .
10.	Loosen knobs (11) and check that headrest assemblies slide freely without binding.	Remove burrs in slide channels or repair headrest assembly.	JPG 41C Para 4-14
11.	Using 3/16" Allen wrench, check that screw (12) is tight. GO TO FRAME 3	Tighten.	. . .

3-5. SUPPORT INSPECTION UPON RECEIPT (CONT)

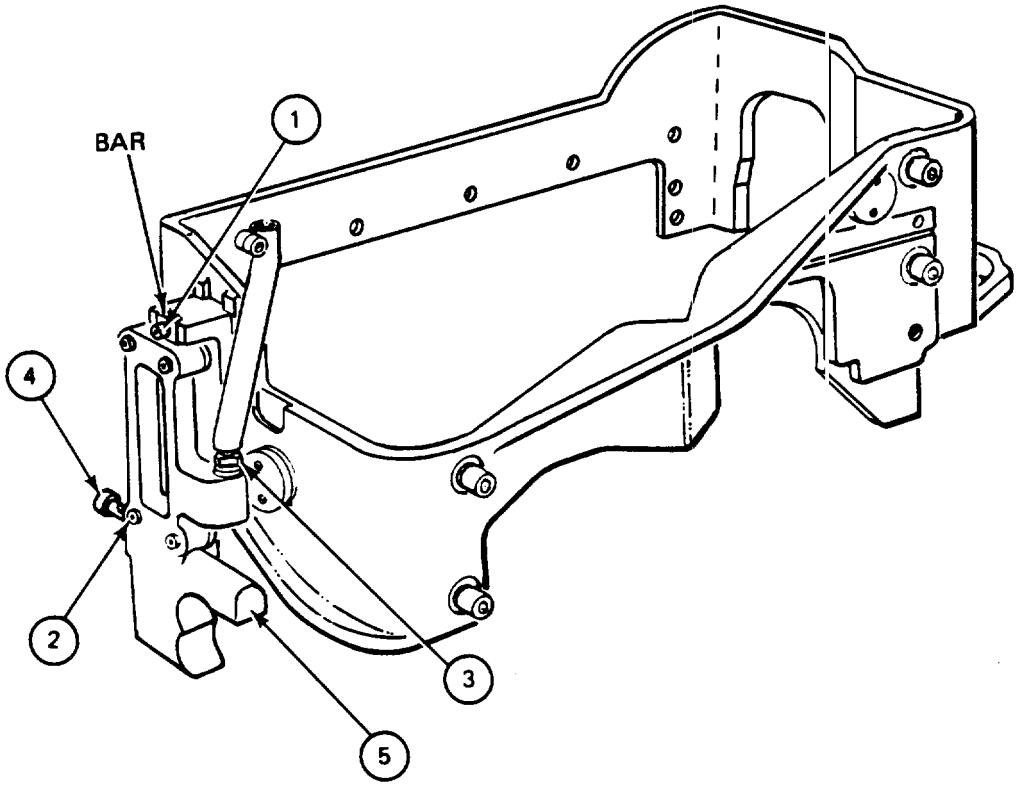


3-5. SUPPORT INSPECTION UPON RECEIPT (CONT)

FRAME 3

Step	Procedure	Maintenance Action	Reference
1.	Using 7/32" or 1/4" Allen wrench, check that two screws (1) are tight.	Tighten. Replace if missing.	. . .
2.	Using 5/32" Allen wrench, check that four screws (2) are tight.	Tighten. Replace if missing.	. . .
3.	Using 1/2" open end wrench, check that two adjusting nuts (3) are tight.	Tighten. Replace if missing.	. . .
4.	Press in on shield operating handle plunger (4) and move handle (5) up and down. Check that handle (5) moves freely without bending.	Remove burrs from bar or handle.	JPG 41C Para 4-24
5.	Press in on shield operating handle plunger (4) and move handle (5) up. Release plunger (4). Check that handle (5) remains in locked position.	Replace plunger spring.	Para 4-24
6.	Press in on shield operating handle plunger (4) and move handle (5) down. Release plunger (4). Check that handle (5) remains in locked position. **NOTE** FOLLOW-ON MAINTENANCE Correct faults listed on DA Form 2404 that may affect performance test. Do performance test (Vol I, para 2-2). END OF TASK	Replace plunger spring.	Para 4-24

3-5. SUPPORT INSPECTION UPON RECEIPT (CONT)



CHAPTER 4

MAINTENANCE PROCEDURES

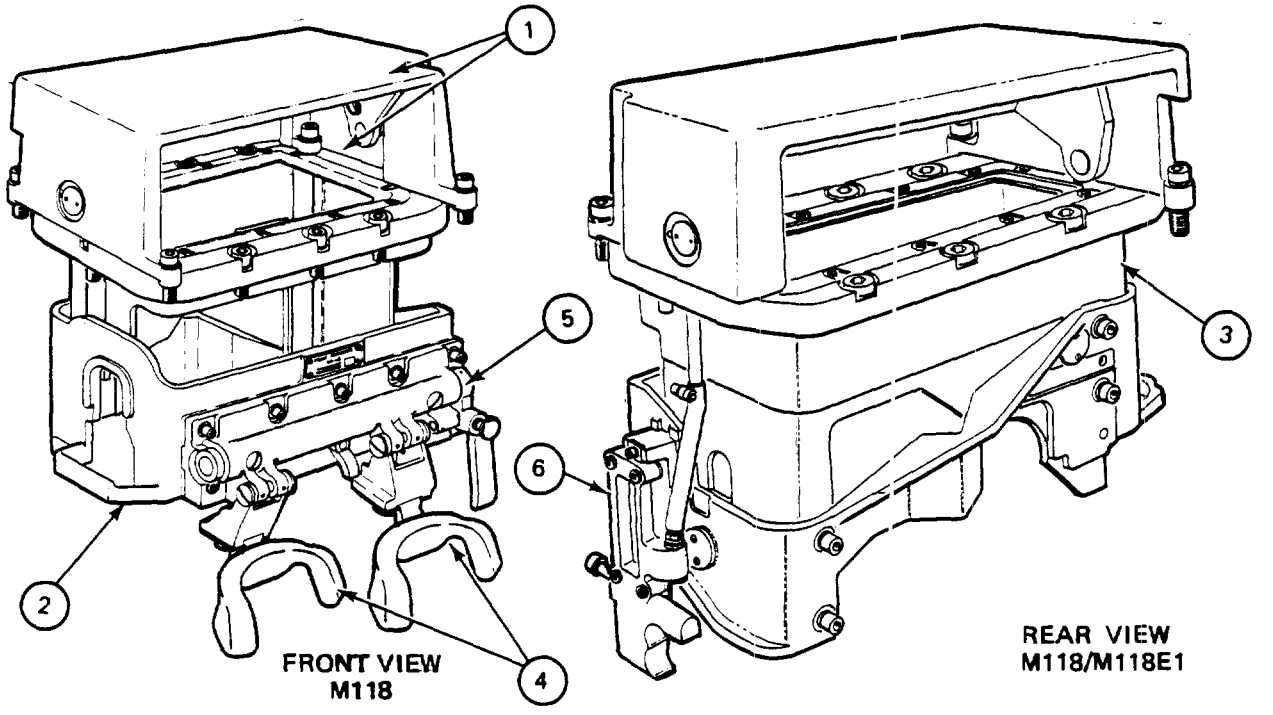
Section 1. GENERAL

4-1. SCOPE

This chapter gives maintenance procedures for the M118 and M118E1 Periscope Mounts.

4-2. LIST OF PERISCOPE MOUNT ITEMS CONTAINED IN THIS CHAPTER

Item	Figure Index No.	Reference (para)
Cover and Shield	1	4-3
Support	2	4-8
Mount	3	4-11
Headrest Assemblies	4	4-14
Plate Assembly	5	4-17
Shield Operating Handle	6	4-22



Section 2. COVER AND SHIELD

4-3. COVER AND SHIELD MAINTENANCE PROCEDURES INDEX

Task	Reference (para)
Removal	4-4
Disassembly	4-5
Assembly	4-6
Installation	4-7

4-4. COVER AND SHIELD REMOVAL

TOOLS: 3/8" and 5/32" socket head screw key (Allen wrench or equivalent)

PERSONNEL: One

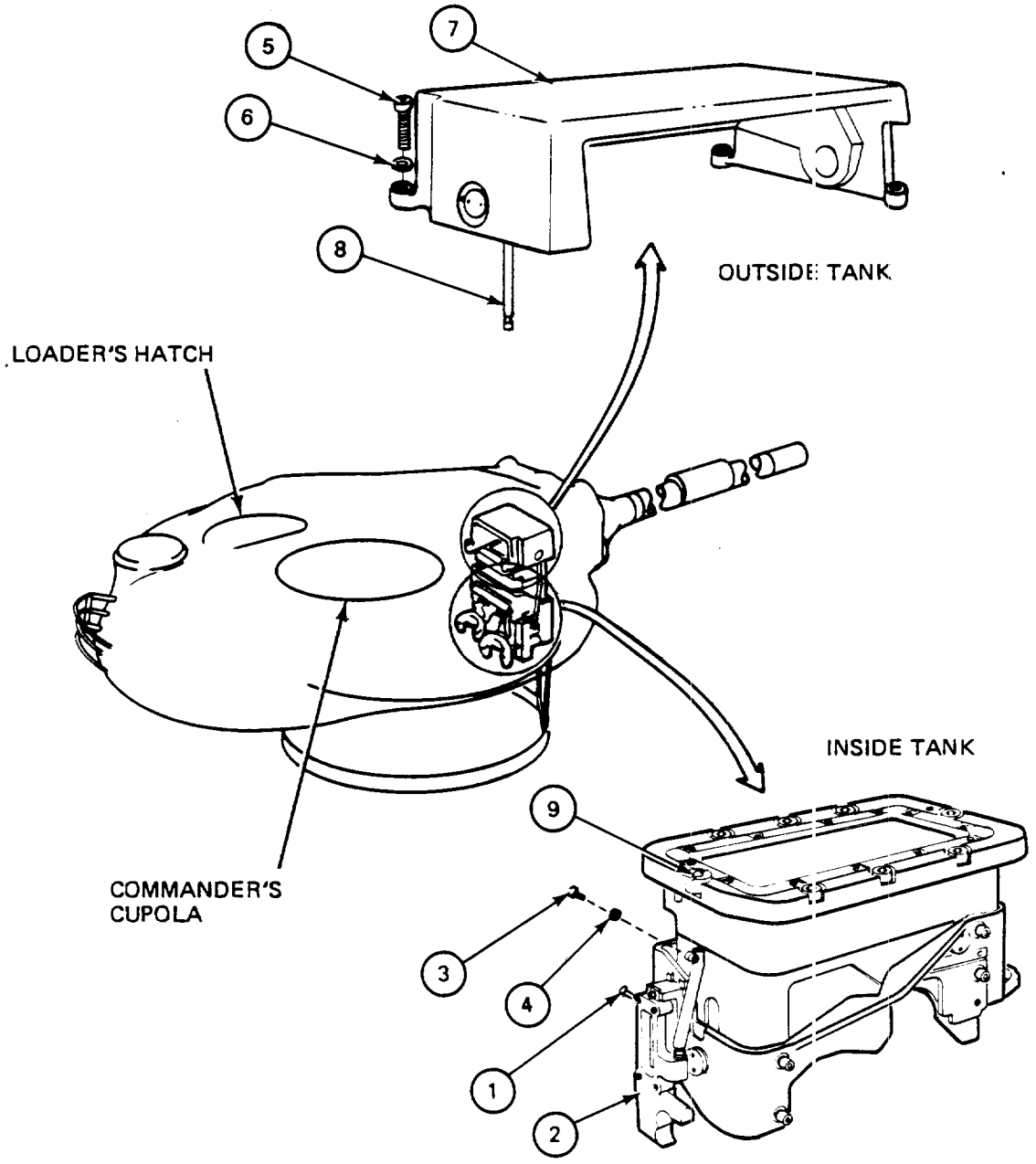
EQUIPMENT CONDITION: Periscope mount in tank and power off

PRELIMINARY PROCEDURES: Remove infinity sight and then remove periscope M32/M32El (TM 9-2350 -215-20-2 for M60A1, TM 9-2350-257 -20-2 for M60A1 Rise, TM 9-2350-260-20-2 for M60, and TM 9-2350-222 -20-2 for M728)

FRAME 1

Step	Procedure
	NOTE Do steps 1, 2, and 3 inside of tank.
1.	Push in on plunger (1) to release handle (2).
2.	Raise shield operating handle (2).
3.	Using 5/32" Allen wrench, remove screw (3) and washer (4).
	NOTE Do steps 4 and 5 outside of tank.
4.	Using 3/8" Allen wrench, remove four screws (5) and four washers (6).
5.	Carefully pull up assembled cover and shield (7) until guide rod (8) is clear of flange bushing (9).
	END OF TASK

4-4. COVER AND SHIELD REMOVAL (CONT)



4-5. COVER AND SHIELD DISASSEMBLY

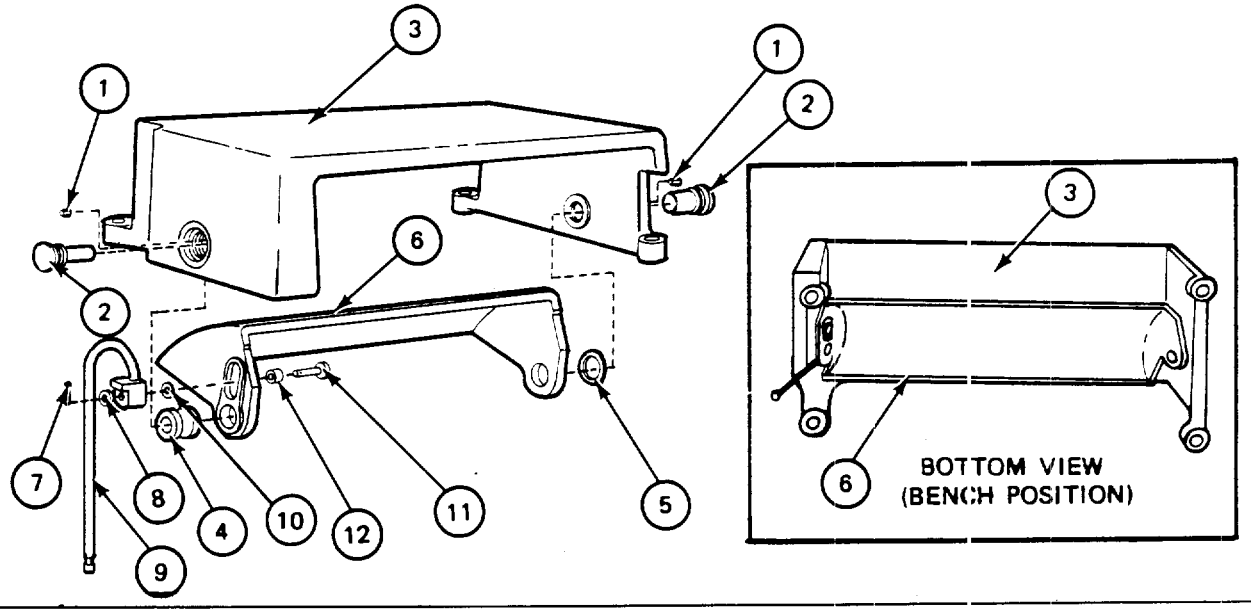
TOOLS: 4 oz. ball peen hammer
1/8" drive pin punch
0.075" to 0.085" pin diameter adjustable pin face spanner wrench
Long nose pliers

PERSONNEL: One

EQUIPMENT CONDITION: Cover and shield on work bench or in vehicle

FRAME 1

Step	Procedure
1.	Using hammer and punch, drive out two pins (1) holding two studs (2) in place on each side of the cover (3).
	NOTE Using one hand, support weight of shield (6) while doing step 2. This will prevent stud from binding during removal.
2.	Using adjustable pin face spanner wrench, remove two studs (2), spacer sleeve (4), and washer (5).
3.	Remove shield (6) from cover (3).
4.	Using pliers, remove cotter pin (7), washer (8), rod (9), washer (10), pin (11), and roller (12).
	END OF TASK

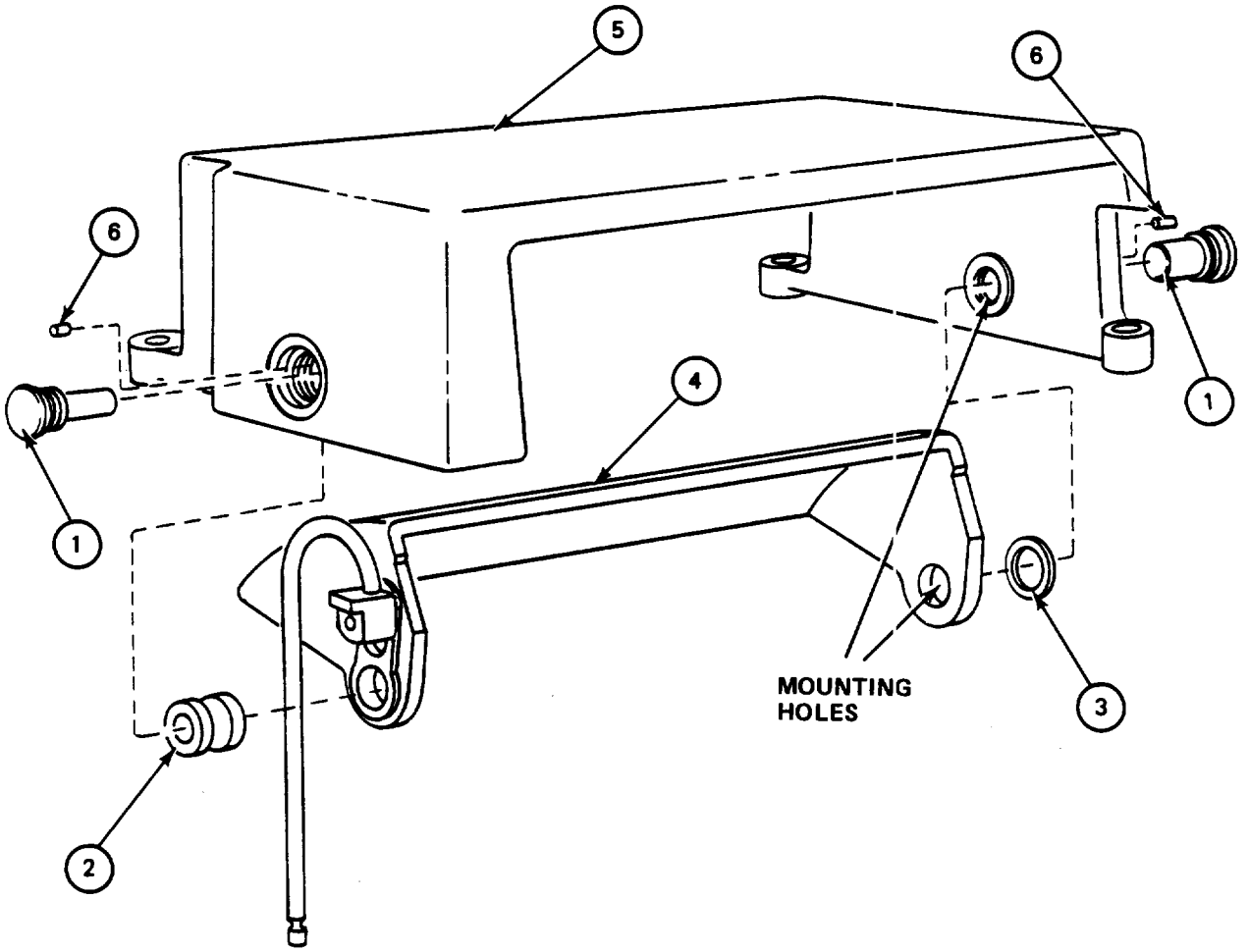


4-6. COVER AND SHIELD ASSEMBLY (CONT)

FRAME 2

Step	Procedure
1.	Apply a small amount of grease to two studs (1), spacer sleeve (2), washer (3) (JPG).
2.	Place shield (4) inside of cover (5) and line up mounting holes.
	NOTE Notch in flange of two studs (1) must be lined up with pin holes in cover (5). Also, using one hand, support weight of shield and line up holes while doing steps 3 and 4.
3.	Using fingers, install left stud (1) into mounting hole in cover (5), into spacer sleeve (2), and into left mounting hole of shield (4) and tighten finger tight. Using spanner wrench, tighten completely and line up notch with pin hole.
4.	Using fingers, install right stud (1) into right mounting hole in cover (5), into washer (3), and into right mounting hole of shield (4) and tighten finger tight. Using spanner wrench, tighten completely and line up notch with pin hole.
5.	Using pliers, hold pins (6) lined up with holes. Using hammer, start pins (6) into holes.
6.	Using hammer and punch, finish installing two pins (6) into the pin holes on each side of the cover (5).
	END OF TASK

4-6. COVER AND SHIELD ASSEMBLY (CONT)



4-7. COVER AND SHIELD INSTALLATION

TOOLS: 5/32" and 3/ 8'' socket head screw key (Allen wrench or equivalent)

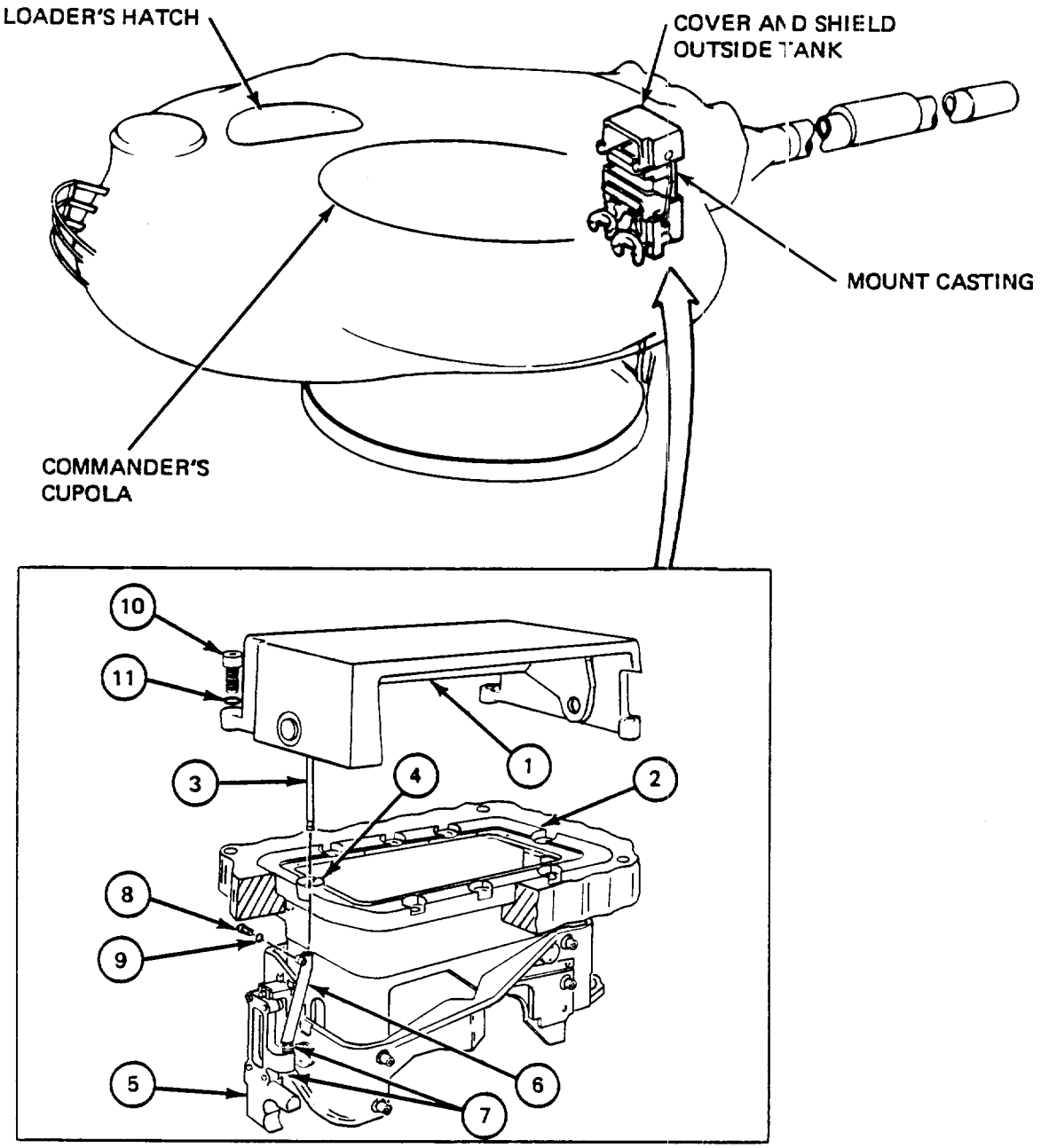
PERSONNEL: One

EQUIPMENT CONDITION: Cover and shield assembled and on work bench prior to mounting in tank. Mount is in tank.

FRAME 1

Step	Procedure
1.	Lower cover and shield (1) down on mount (2) so that rod (3) enters bushing (4).
2.	Raise shield operating handle (5), and check that rod (3) fully seats in handle rod (6).
3.	If rod (3) does not fully seat inside of handle rod (6) in step 2, loosen two nuts (7) using 1/2'' open end wrench.
4.	Move rod handle (6) so that rod (3) fully seats inside rod (6). Using 1/2'' open end wrench, tighten two nuts (7).
5.	Using 5/32'' Allen wrench, install screw (8) and washer (9) to hold rod (3) inside rod (6).
6.	Using 3/8'' Allen wrench, install four screws (10) and four washers (11).
7.	Lower shield operating handle (5).
	NOTE FOLLOW-ON MAINTENANCE Install periscope and then infinity sight (TM 9-2350-215-20-2 for the M60A1, TM 9-2350-257-20-2 for M60A1 Rise, TM 9-2350-260-20-2 for M60, and TM 9-2350-322-20-2 for M728) Do performance test (Vol I, para 2-2).
	END OF TASK

4-7. COVER AND SHIELD INSTALLATION (CONT)



Section 3. SUPPORT

4-8. SUPPORT MAINTENANCE PROCEDURES INDEX

Task	Reference (para)
Removal	4-9
Installation	4-10

4-9. SUPPORT REMOVAL

TOOLS: 1/2" box wrench
7/32" socket head screw key (Allen wrench or equivalent)
#2 cross tip screwdriver offset (Phillips type)
1/4" flat tip screwdriver offset
4 oz. ball peen hammer
3/8" drive pin punch

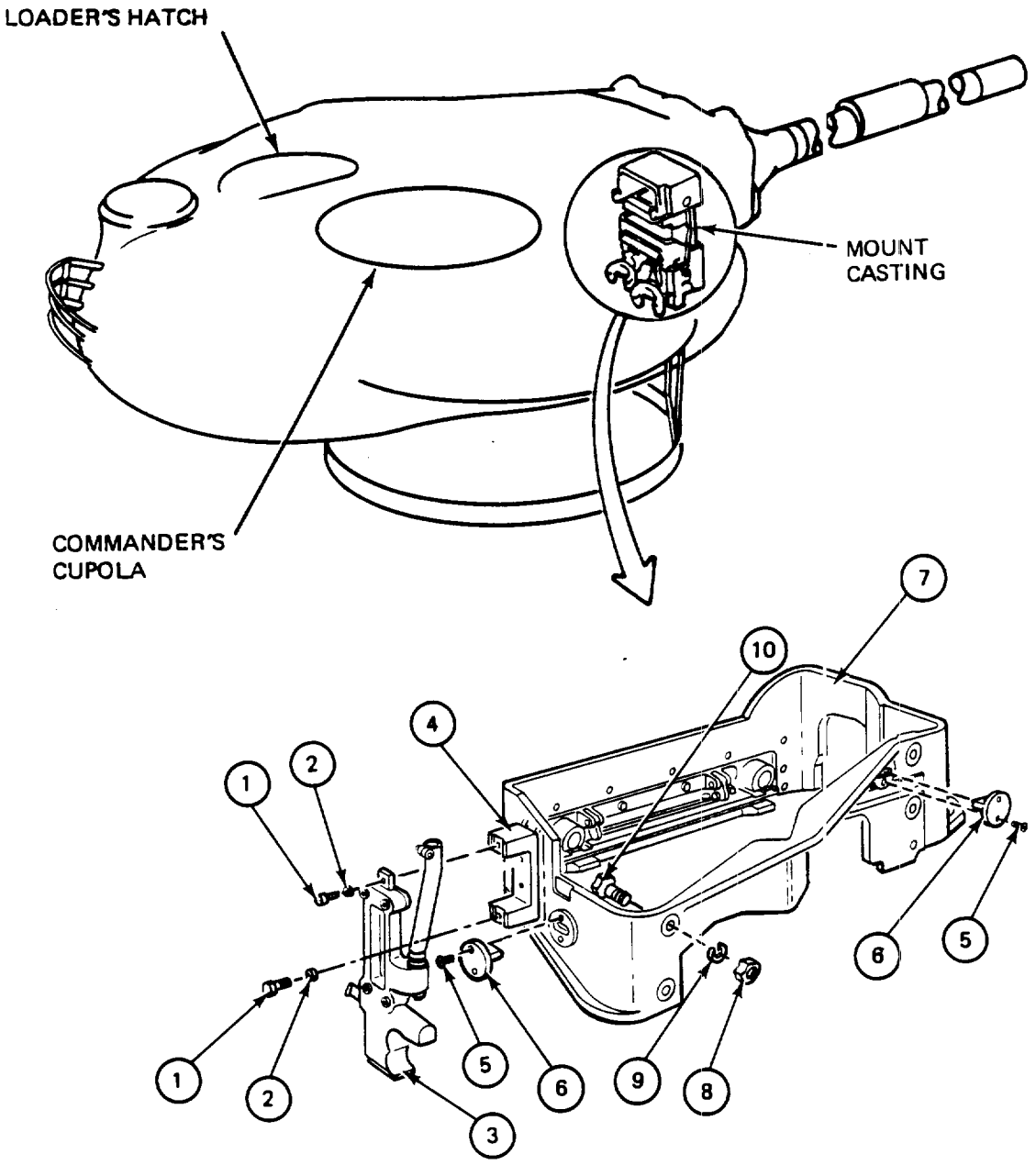
PERSONNEL: One

EQUIPMENT CONDITION: Periscope mount in tank

FRAME 1

Step	Procedure
1.	Using Allen wrench, remove two screws (1) and two washers (2).
2.	Remove shield operating handle assembly (3) from bracket (4)
3.	Using flat tip offset screwdriver, remove four screws (5) from two keys (6).
4.	Using hammer and punch, tap two keys (6) from support casting (7).
5.	Using Phillips offset screwdriver and box wrench, remove four nuts (8) and four washers (9).
	CAUTION When four screws (10) are removed, the suppc rt (7) may fall and cause injury or damage.
6.	While holding onto support (7), remove four screws (10).
7.	Carefully remove support (7) from mount.
	END OF TASK

4-9. SUPPORT REMOVAL (CONT)



4-10. SUPPORT INSTALLATION

TOOLS: #2 cross tip screwdriver offset (Phillips type)
7/32" socket head screw key (Allen wrench or equivalent)
1/4" flat tip screwdriver offset
4 oz. ball peen hammer
1/2" socket wrench (3/8" drive)

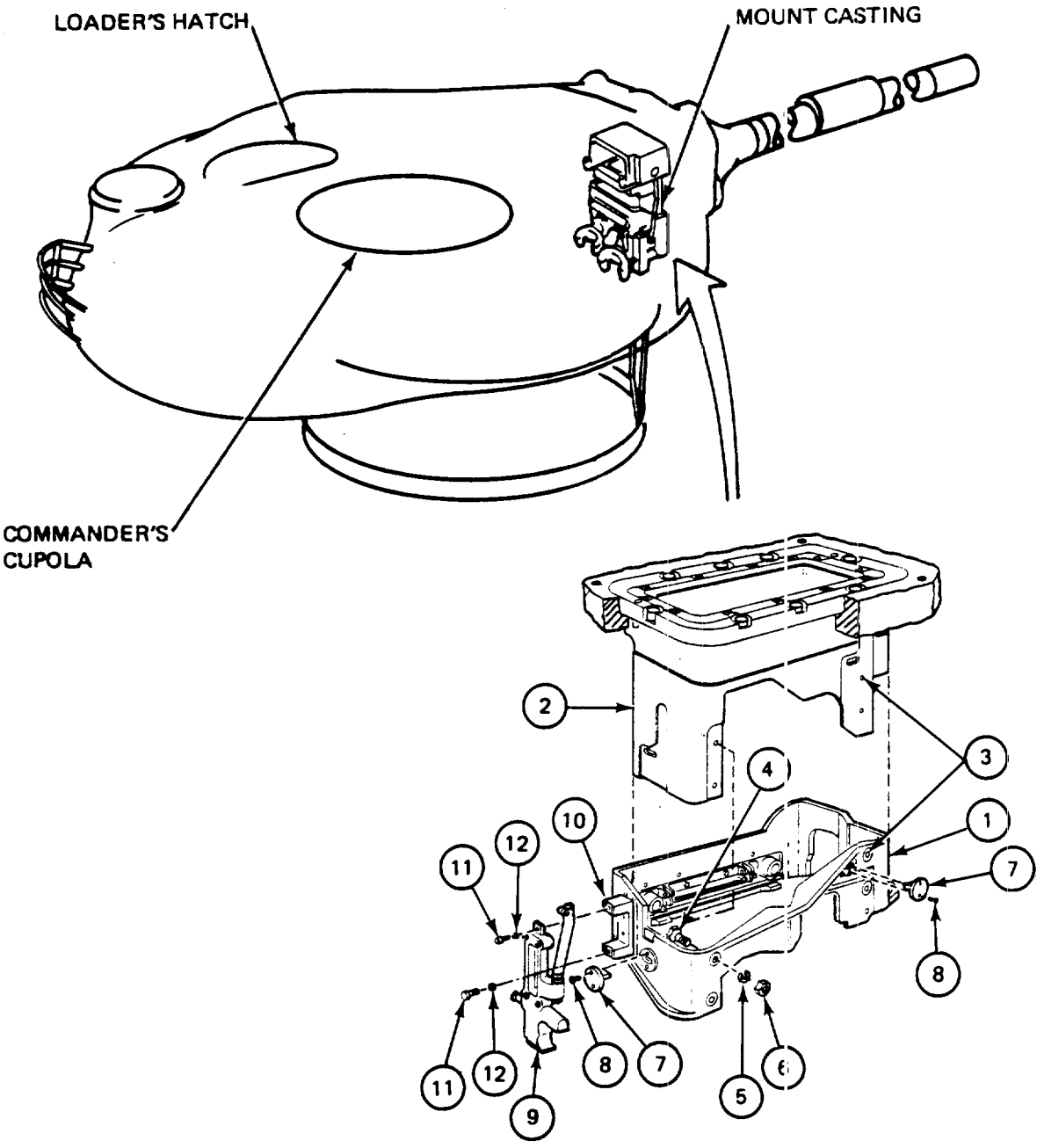
PERSONNEL: One

EQUIPMENT CONDITION: Mount in tank

FRAME 1

Step	Procedure
1.	Slide support (1) upwards over bottom of mount (2) until mounting holes (3) are lined up.
2.	Install four screws (4), four washers (5), and four nuts (6) loosely.
3.	Using hammer, tap two keys (7) through support (1) and into mount (2).
4.	Using flat tip offset screwdriver, install four screws (8).
5.	Using socket wrench and cross tip screwdriver, tighten four nuts (6).
6.	Install shield operating handle assembly (9) onto bracket (10).
7.	Using Allen wrench, install two screws (11) and two washers (12).
	NOTE FOLLOW-ON MAINTENANCE Do performance test (Vol I, para 2-2).
	END OF TASK

4-10. SUPPORT INSTALLATION (CONT)



Section 4. MOUNT

4-11. MOUNT MAINTENANCE PROCEDURES INDEX

Task	Reference (para)
Removal and Disassembly	4-12
Assembly and Installation	4-13

4-12. MOUNT REMOVAL AND DISASSEMBLY

TOOLS: 3/8" socket head screw key (Allen wrench or equivalent)
1/4" flat tip screwdriver
29/32" tubular spanner wrench

PERSONNEL: One

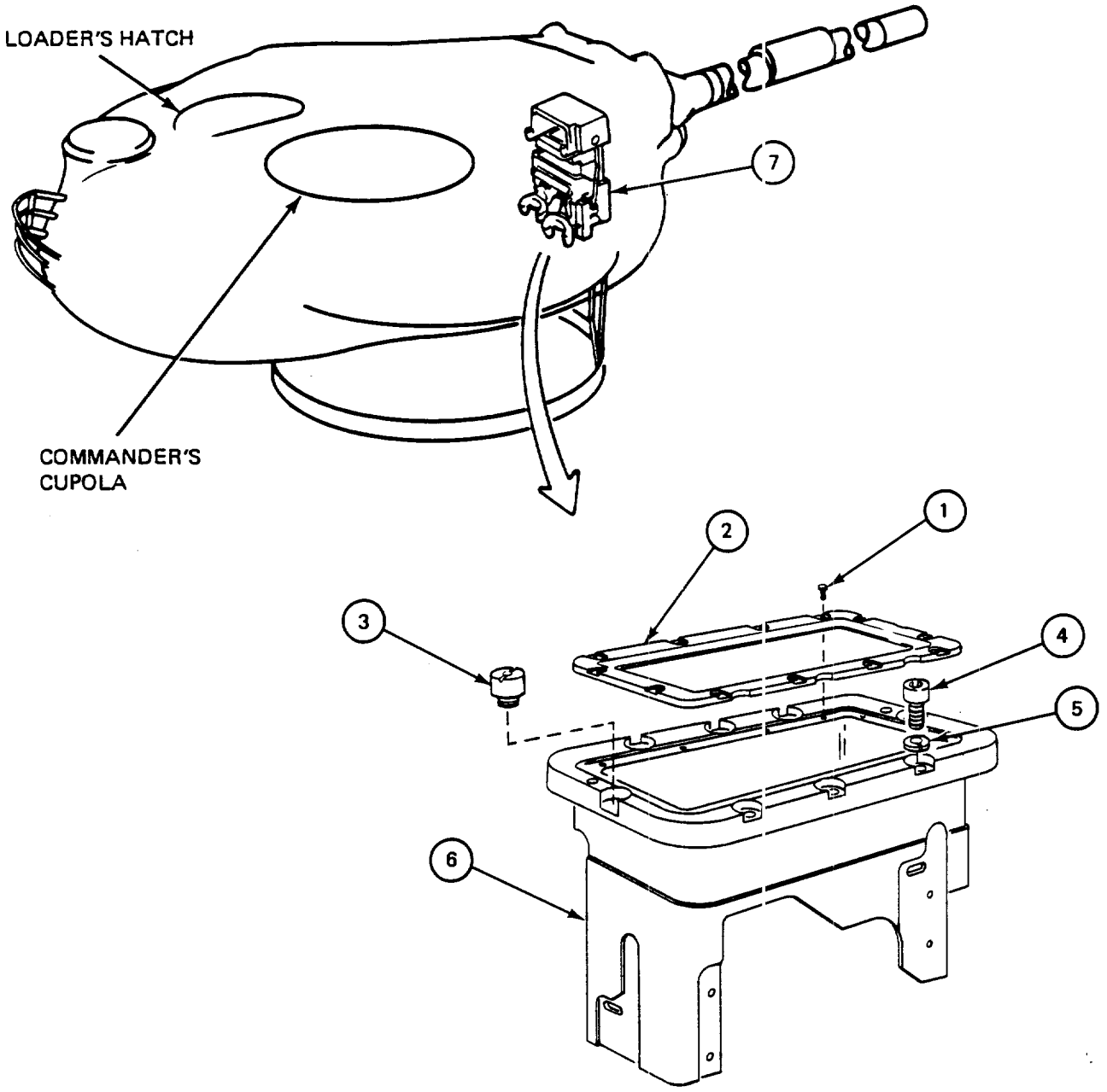
EQUIPMENT CONDITION: Mount in tank

PRELIMINARY PROCEDURES: Remove cover and shield (para 4-4)
Remove support (para 4-9)

FRAME 1

Step	Procedure
1.	Using screwdriver, remove twelve screws (1).
2	Remove seal (2).
3.	Using spanner wrench, remove bushing (3).
4.	Using Allen wrench, remove seven screws (4) and seven washers (5).
5.	Carefully lift mount (6) out of tank turret support (7).
	END OF TASK

4-12. MOUNT REMOVAL AND DISASSEMBLY (CONT)



4-13. MOUNT ASSEMBLY AND INSTALLATION

TOOLS: 3/8" socket head screw key stud (Allen wrench or equivalent)
3/8" torque wrench, lb-ft.
1/4" flat tip screwdriver
3/8" socket head wrench
29/32" tubular spanner wrench

PERSONNEL: One

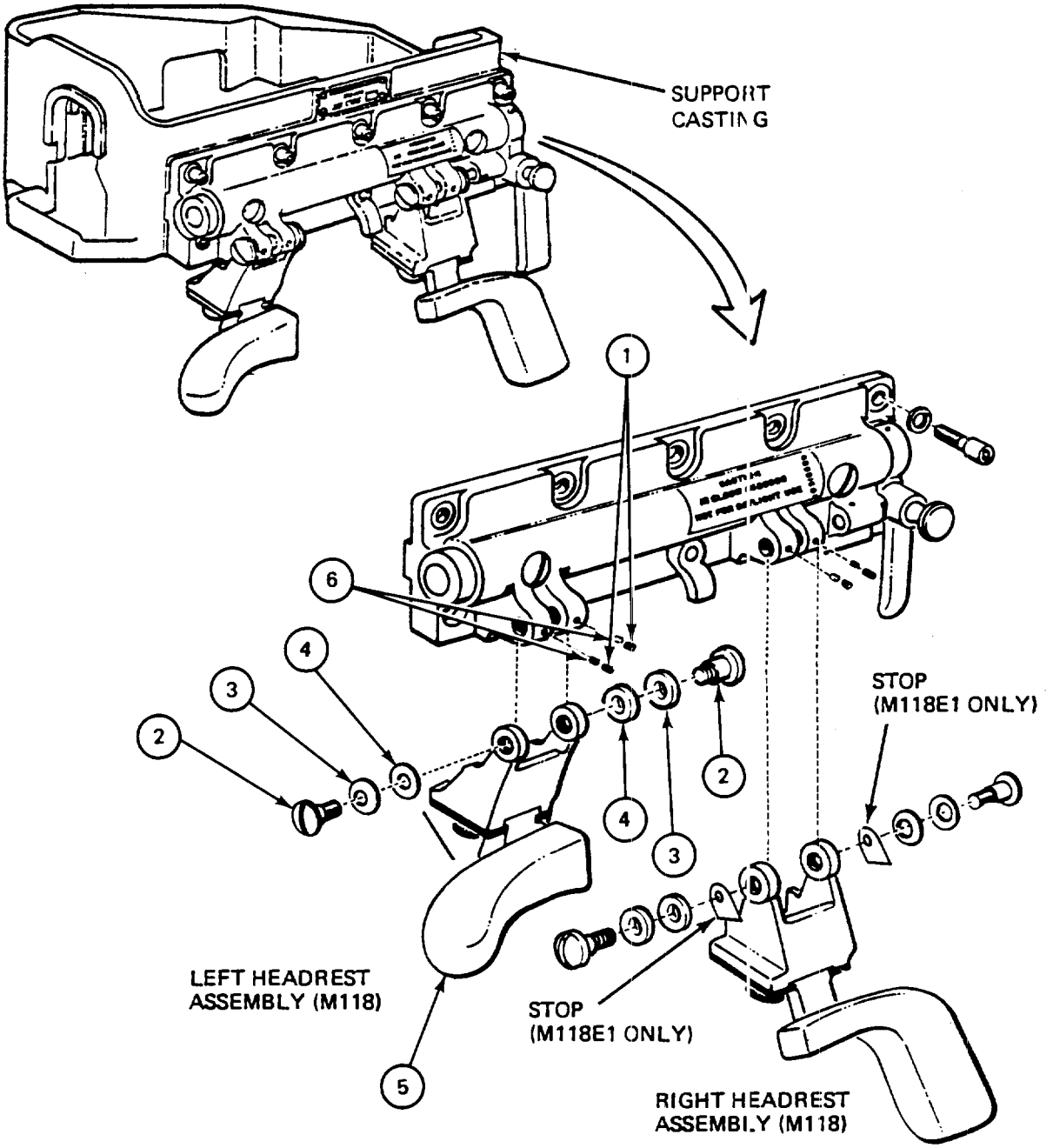
REFERENCES: JPG 41 C for using torque wrench

EQUIPMENT CONDITION: Mount on work bench or on tank for steps 1, 2, and 3

FRAME 1

Step	Procedure
1.	Using spanner wrench, install bushing (1).
2.	Using hand, push seal (2) into recess of mount (3).
3.	Using screwdriver, install twelve screws (4) to mount seal (2) evenly in place.
	NOTE Dowel pins (5) may stay in turret or may come cut with mount.
4.	Lower mount (3) into turret (6) so that two pins (5) are in ine with mounting holes in turret (6).
5.	Using Allen wrench, install seven screws (7) and seven washers (8)
6.	Using torque wrench, tighten each of the seven screws (7) to a torque reading of 70 pound-feet.
	NOTE FOLLOW-ON MAINTENANCE Install cover and shield (para 4-7). Install support casting (para 4-10). Do performance test (Vol I, para 2-2).
	END OF TASK

4-15. HEADREST ASSEMBLIES REMOVAL (CONT)



4-16. HEADREST ASSEMBLIES INSTALLATION

TOOLS: 5/64" socket head screw key (Allen wrench or equivalent)
1/8" and 3/8" flat tip screwdriver

SUPPLIES: Aircraft and instrument grease (item 1, App A)

PERSONNEL: One

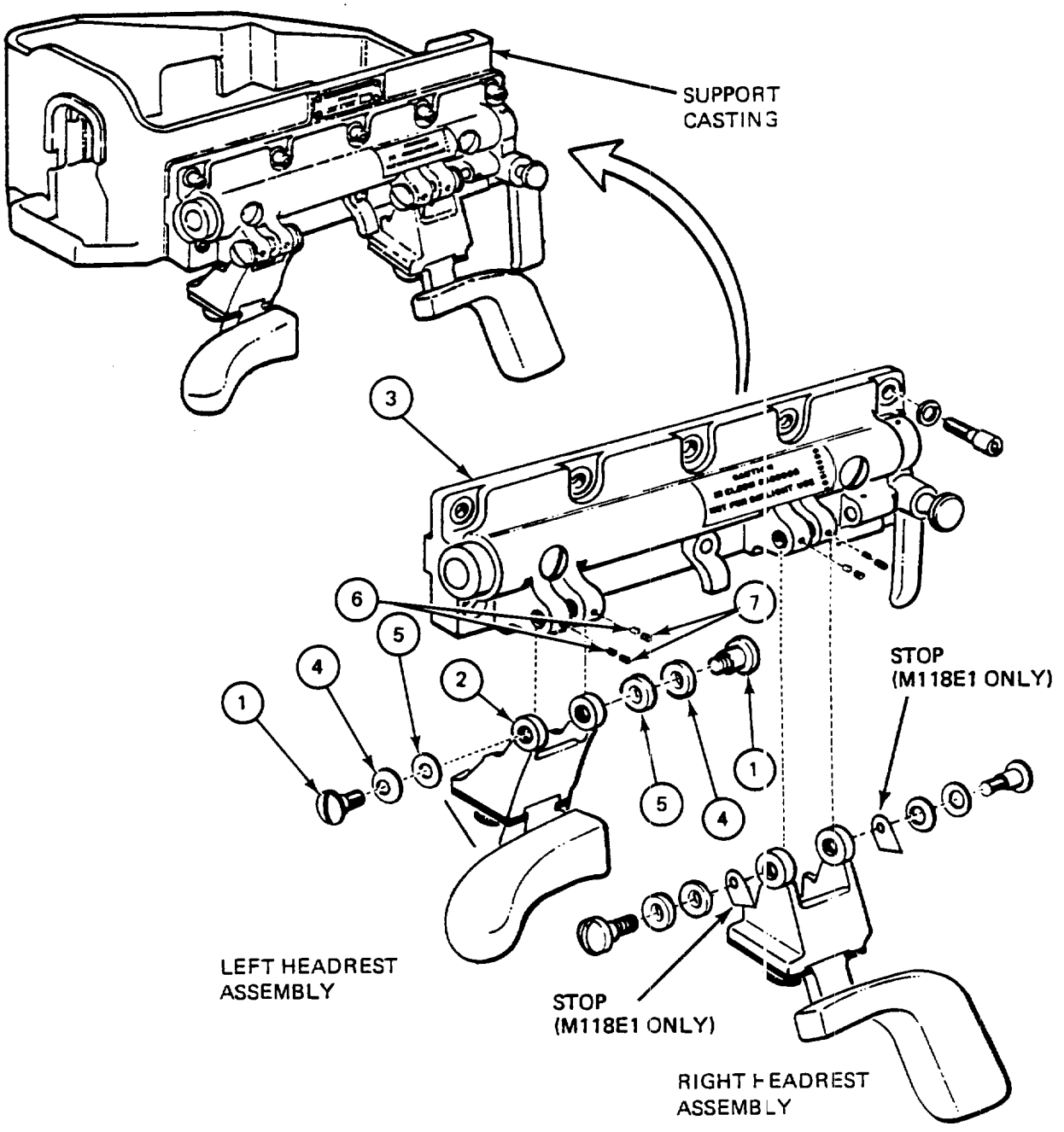
REFERENCES: JPG 41 C for lubrication

EQUIPMENT CONDITION: Support on work bench or in tank and headrest assemblies on work bench prior to installation in tank

FRAME 1

Step	Procedure
	NOTE This procedure is the same for both left and right headrest assemblies.
1.	Put a small amount of gre0ase on screws (1) and in mounting; holes of bracket (2) (JPG).
2.	Using hand, slide bracket (2) onto plate (3) and line up holes in bracket (2) and plate (3).
3.	Using fingers, install screws (1), spring washer (4), thrust (flat) washer (5), and stops by tightening screws (1) into plate (3).
	NOTE Bracket may require a slight rotary movement to allow the hub of the screw to enter the hole in the bratket.
4.	Using 3/8” screwdriver, tighten screws (1) until there is a noticeable bind between bracket (2) and plate (3). Do not overtighten; spring washers, will become useless.
5.	Install two disks (6) into set screw hole in plate (3) and push down slightly with 1 /8" screwdriver.
6.	Using 1 /8” screwdriver or Allen wrench, install two setscrews (7) and tighten until they prevent rotation of two screws (1) when bracket (2) is rotated.
	NOTE FOLLOW-ON MAINTENANCE Do performance test (Vol I, para 2-2).
	END OF TASK

4-16. HEADREST ASSEMBLIES INSTALLATION (CONT)



APPENDIX A

EXPENDABLE SUPPLIES AND MATERIALS LIST

Section 1. INTRODUCTION

A-1. SCOPE

This appendix lists expendable supplies and materials you will need to repair the M118 and M118E1 Periscope Mounts. These items are authorized to you by CTA 50-970, Expendable Items (except Medical, Class V, Repair Parts, and Heraldic Items).

A-2. EXPLANATION OF COLUMNS

a. Column 1 - Item Number. This number is assigned to the entry in the listing and is used in the manual to identify the material, for example, paint (item 2, App A).

b. Column 2- Level. This column identifies the lowest level of maintenance that requires the listed item.

F - Direct Support Maintenance

H - General Support Maintenance

c. Column 3- National Stock Number. This is the national, stock number assigned to the item. Use it to request or requisition the item.

d. Column 4- Description. This tells the federal item name and, if needed, a description to identify the item. The last line for each item indicates the part number followed by the Federal Supply Code for Manufacturer (FSCM) in parentheses, if applicable.

e. Column 5- Unit of Measure (U/M). This column shows how the item is measured; for example, you may see these abbreviations: ea (each), in (inches), or pr (pair). Order the smallest amount you need.

SECTION 2.EXPENDABLE SUPPLIES AND MATERIALS LIST

(1)	(2)	(3)	(4)	(5)
Item Number	Level	National Stock Number	Description	U/M
1	F	9150-00-261-8298	GREASE: AIRCRAFT AND INSTRUMENT, MIL-G-23827 12 OZ. TUBE	TU
2	F	8010-01-070-0922	PAINT: GREEN TYPE 2 (81348) MIL-L-52909 1 GAL. CAN	GL
3	F	8010-00-229-4813	PRIMER: GREEN MIL-D-23377 1 GAL. CAN	GL

APPENDIX C

DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST

Section I. INTRODUCTION

C-1. SCOPE

This appendix lists spares and repair parts, special test, measurement, and diagnostic equipment (TMDE), and other special support equipment required for performance of direct support and general support maintenance of the Mount, Periscope, M118 and M118E1. It authorizes the requisitioning and issue of spares and repair parts as indicated by the source and maintenance codes.

C-2. GENERAL

This Repair Parts and Special Tools List is divided into the following sections:

a. Section II. Repair Parts List. A list of spares and repair parts authorized for use in the performance of maintenance. The list also includes parts which must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in numeric sequence, with the parts in each group listed in figure and item number sequence.

b. Section III. Special Tools List. (Not Applicable)

c. Section IV. National Stock Number and Part Number Index. A list in National item identification number (NIIN) sequence, of all National stock numbers (NSN) appearing in the listings, followed by a list in alphameric sequence of all part numbers appearing in the listings. National stock numbers and part numbers are cross-referenced to each illustration figure and item number appearance.

C-3. EXPLANATION OF COLUMNS

a. Illustration. This column is divided as follows:

(1) Figure Number. Indicates the figure number of the illustration on which the item is shown.

(2) Item Number. The number used to identify item called out in the illustration.

b. Source, Maintenance, and Recoverability (SMR) Codes.

(1) Source Code. Source codes indicate the manner of acquiring

support items for maintenance, repair, or overhaul of end items. Source codes are entered in the first and second positions of the Uniform SMR Code format as follows:

Code	Definition
PA	-Item procured and stocked for anticipated or known usage.
PB	-Item procured and stocked for insurance purpose because essentiality dictates that a minimum quantity be available in the supply system.
PC	-Item procured and stocked and which otherwise would be coded PA except that it is deteriorative in nature.
PD	-Support item, excluding support equipment, procured for initial issue or outfitting and stocked only for subsequent or additional initial issues or outfittings. Not subject to automatic replenishment.
PE	-Support equipment procured and stocked for initial issue or outfitting to specified maintenance repair activities.
PF	-Support equipment which will not be stocked but which will be centrally procured on demand.
PG	-Item procured and stocked to provide for sustained support for the life of the equipment. It is applied to an item peculiar to the equipment which, because of probable discontinuance or shutdown of production facilities, would prove uneconomical to reproduce at a later time.
KD	-An item of a depot overhaul/ repair kit anti not purchased separately. Depot kit defined as a kit that provides items required at the time of overhaul or repair.
KF	-An item of a maintenance kit and not purchased separately. Maintenance kit defined as a kit that provides an item that can be replaced at organizational, or intermediate levels of maintenance.
KB	-Item included in both a depot overhaul, repair kit and a maintenance kit.
MO	-Item to be manufactured or fabricated at organizational Level.
MF	-Item to be manufactured or fabricated at the direct support maintenance level.
MH	-Item to the manufactured or fabricated at the general support maintenance level.
MD	-Itern to be manufactured or fabricated at the depot maintenance level.
AO	-Item to be assembled at organizaltional. level.
AF	-Item to be assembled at direct support maintenance level.
AH	-Item to be assembled at general support maintenance level.

AD -Item to be assembled at depot maintenance level.

XA -Item is not procured or stocked because the requirements for the item will result in the replacement of the next higher assembly.

XB -Item is not procured or stocked. If not available through salvage, requisition.

xc -Installation drawing, diagram, instruction sheet, field service drawing, that is identified by manufacturer's part number.

XD -A support item that is not stocked. When required, item will be procured through normal supply channels.

NOTE : Cannibalization or salvage may be used as a source of supply for any items coded above except. those coded XA and aircraft support items as restricted by AR 700-42.

(2) Maintenance Code. Maintenance codes are assigned to indicate the levels of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third and fourth positions of the Uniform SMR Code format as follows:

(a) The maintenance code entered in the third position will indicate the lowest maintenance level authorized to remove, replace, and use the support item. The maintenance code entered in the third position will indicate one of the following levels of maintenance:

Code	Application/Explanation
c	-Crew or operator maintenance performed within organizational maintenance.
O	-Support item is removed, replaced, used at the organizational level.
F	-Support item is removed, replaced, used at the direct support level..
H	-Support item is removed, replaced, used at the general support level..
D	-Support items that are removed, replaced, used at depot, mobile depot, or specialized repair activity only.

(b) The maintenance code entered in the fourth position indicates whether the item is to be repaired and identifies the lowest maintenance level with the capability to perform complete repair (i.e., all authorized maintenance functions). This position will contain one of the following maintenance codes.

Code	Application/Explanation
O	-The lowest maintenance level capable of complete repair of the support item is the organizational level.
F	-The lowest maintenance level capable of complete repair of the support item is the direct support level.
H	-The lowest maintenance level capable of complete repair of the support item is the general support level.

D -The lowest maintenance level capable of complete repair of the support item is the depot level.

L -Repair restricted to Specialized Repair Activity. (Not Applicable).

z -Nonreparable. No repair is authorized.

B -No repair is authorized. The item may be reconditioned by adjusting, lubricating, etc., at the user level. No parts or special tools are procured for the maintenance of this item.

(3) Recoverability Code. Recoverability codes are assigned to support items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the Uniform SMR Code format as follows:

Recoverability Codes	Definition
z	-Nonreparable item. When unserviceable, condemn and dispose at the level indicated in position 3.
0	-Reparable item. When uneconomically reparable, condemn and dispose at organizational level.
F	-Reparable item. When uneconomically reparable, condemn and dispose at the direct support level.
H	-Reparable item. When uneconomically reparable, condemn and dispose at the general support level.
D	-Reparable item. When beyond lower level repair capability, return to depot. Condemnation and disposal not authorized below depot level.
L	-Reparable item. Repair, condemnation, and disposal not authorized below depot/ specialized repair activity level.
A	-Item requires special handling or condemnation procedures because of specific reasons (i.e., precious metal content, high dollar value, critical material or hazardous material). Refer to appropriate manuals/directives for specific instructions.

c. National Stock Number. Indicates the National stock number assigned to the item and which will be used for requisitioning.

d. Federal Supply Code for Manufacturer (FSCM). The FSCM is a 5-digit numeric code listed in SB 708-42 which is used to identify the manufacturer, distributor, or Government agency, etc.

e. Part Number. Indicates the primary number used by the manufacturer (individual, company, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards, and inspection requirements to identify an item or range of items.

NOTE: When a stock numbered item is requisitioned, the item received may have a different part number than the part being replaced.

f. Description. Indicates the Federal item name and, if required, a minimum description to identify the item.

g. Unit of Measure (U/M). Indicates the standard of the basic quantity of the listed item as used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea, in, pr, etc). When the unit of measure differs from the unit of issue, the lowest unit of issue that will satisfy the required units of measure will be requisitioned.

h. Quantity Incorporated in Unit. Indicates the quantity of the item used in the breakout shown on the illustration figure, which is prepared for a functional group, subfunctional group, or an assembly. A "V" appearing in this column in lieu of a quantity indicates that no specific quantity is applicable, (e.g., shims, spacers, etc).

C-4. SPECIAL INFORMATION

Usable on codes are shown in the description column. Uncoded items are applicable to all models. Identification of the usable codes used in this publication are:

Code	Used On
065	Mount, Periscope, M118
F49	Mount, Periscope, M118E1

C-5. HOW TO LOCATE REPAIR PARTS

a. When National Stock Number or Part Number is Unknown:

(1) First. Using the table of contents, determine the functional group within which the item belongs. This is necessary since illustrations are prepared for functional groups, and listings are divided into the same groups.

(2) Second. Find the illustration covering the functional group to which the item belongs.,

(3) Third. Identify the item on the illustration and note the illustration figure and item number of the item.

(4) Fcurth. Using the Repair Parts Listing, find the figure and item number noted on the illustration.

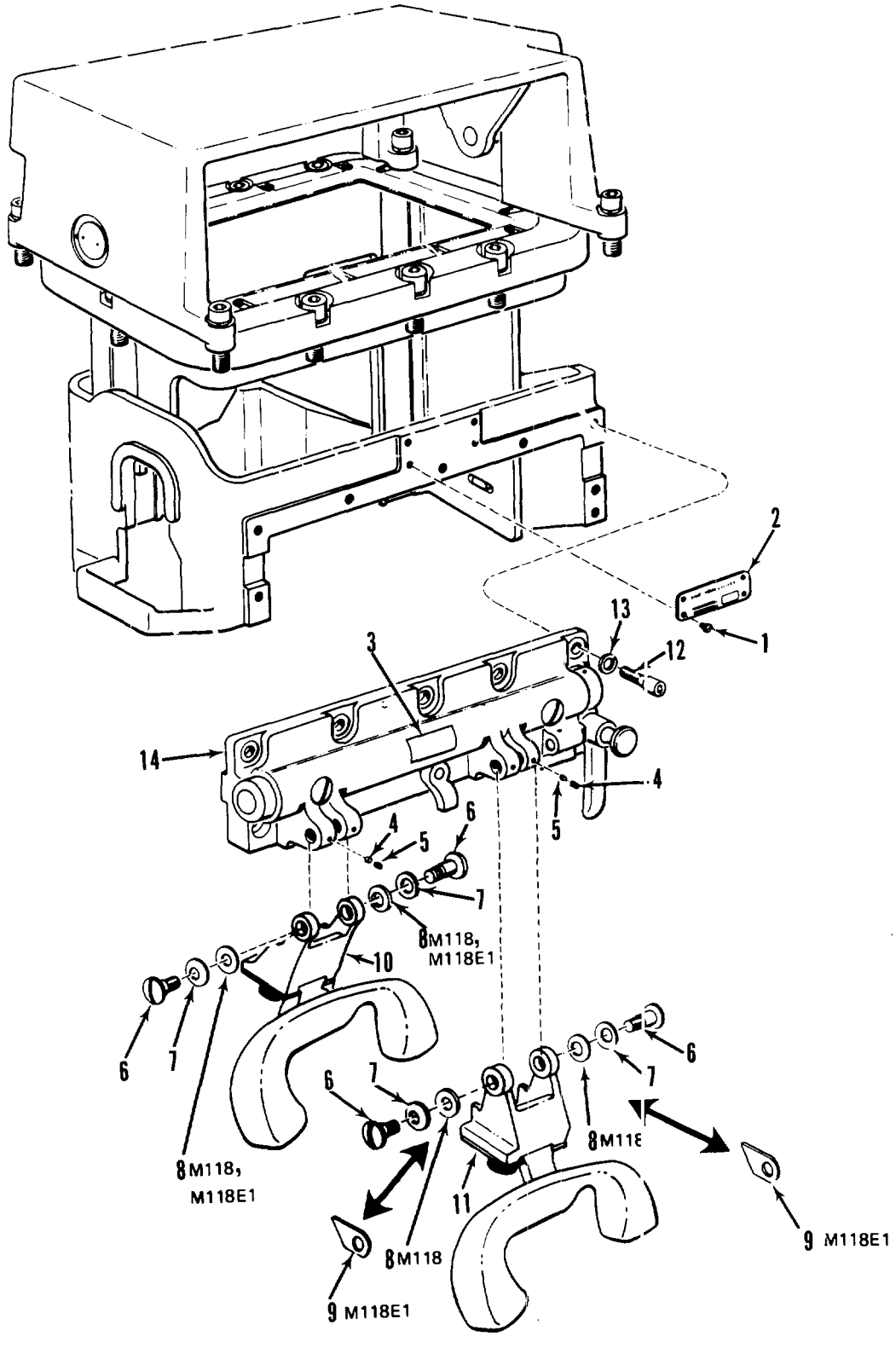
b. When National Stock Number or Part Number is Known:

(1) First. Using the Index of National Stock Numbers and Part Numbers, find the pertinent National stock number or part number. This index is in NIIN sequence followed by a list of part numbers in alphameric sequence, cross-referenced to the illustration figure number and item number.

(2) Second. After finding the figure and item number, locate the figure and item number in the repair parts list.

C-6. ABBREVATIONS

(Not Applicable)



AR 924447

Figure C-1. Periscope mount Ml 18 8619450, Ml18E1 11727490 (back view)

(1) ILLUSTRATION (a) FIG NO	(b) ITEM NO	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION	USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 00 PERISCOPE MOUNT M118 8619450,			
						M118E1 11727490 (BACK VIEW)			
C-1	1	PAHZZ	5305-00-057-0521	96906	MS51958-25	SCREW,MACHINE		EA	4
C-1	2	PAHZZ	9905-00-195-0900	19200	10541767	PLATE	O65	EA	1
C-1	2	PAHZZ	9905-01-105-5354	19200	11727491	PLATE	F49	EA	1
C-1	3	PAOZZ	1240-00-196-2756	19200	11727364	DECAL,MT PERISCOPE	O65	EA	1
C-1	4	PAFZZ	5305-00-993-3589	96906	MS51031-34	SETSCREW		EA	4
C-1	5	PAFZZ	5340-00-685-0831	19200	8620013	DISK,SOLID,PLAIN		EA	4
C-1	6	PAFZZ	5305-00-820-8562	19200	8619463	SCREW,SHOULDER		EA	4
C-1	7	PAFZZ	5310-00-655-9990	19200	8229064	WASHER,SPRING		EA	4
C-1	8	PAFZZ	3120-00-647-0895	19207	8229063	BEARING,WASHER	O65	EA	4
C-1	8	PAFZZ	3120-00-647-0895	19207	8229063	BEARING,WASHER	F49	EA	2
C-1	9	PAFZZ	1240-01-107-9164	19200	11727448	STOP	F49	EA	2
C-1	10	PAFZZ	1240-01-109-7669	19200	11727422	HEADREST		EA	1
C-1	11	PAFZZ	1240-01-109-7668	19200	11727421	HEADREST		EA	1
C-1	12	PAFZZ	5305-00-225-9451	96906	MS16996-31	SCREW,CAP,SOCKET HEAD		EA	8
C-1	13	PAFZZ	5310-00-974-6623	96906	MS35338-140	WASHER,LOCK		EA	8
C-1	14	XDFFF		19200	11727496	PLATE ASSEMBLY	F49	EA	1
C-1	14	XDFFF		19200	8619489	PLATE ASSEMBLY	O65	EA	1

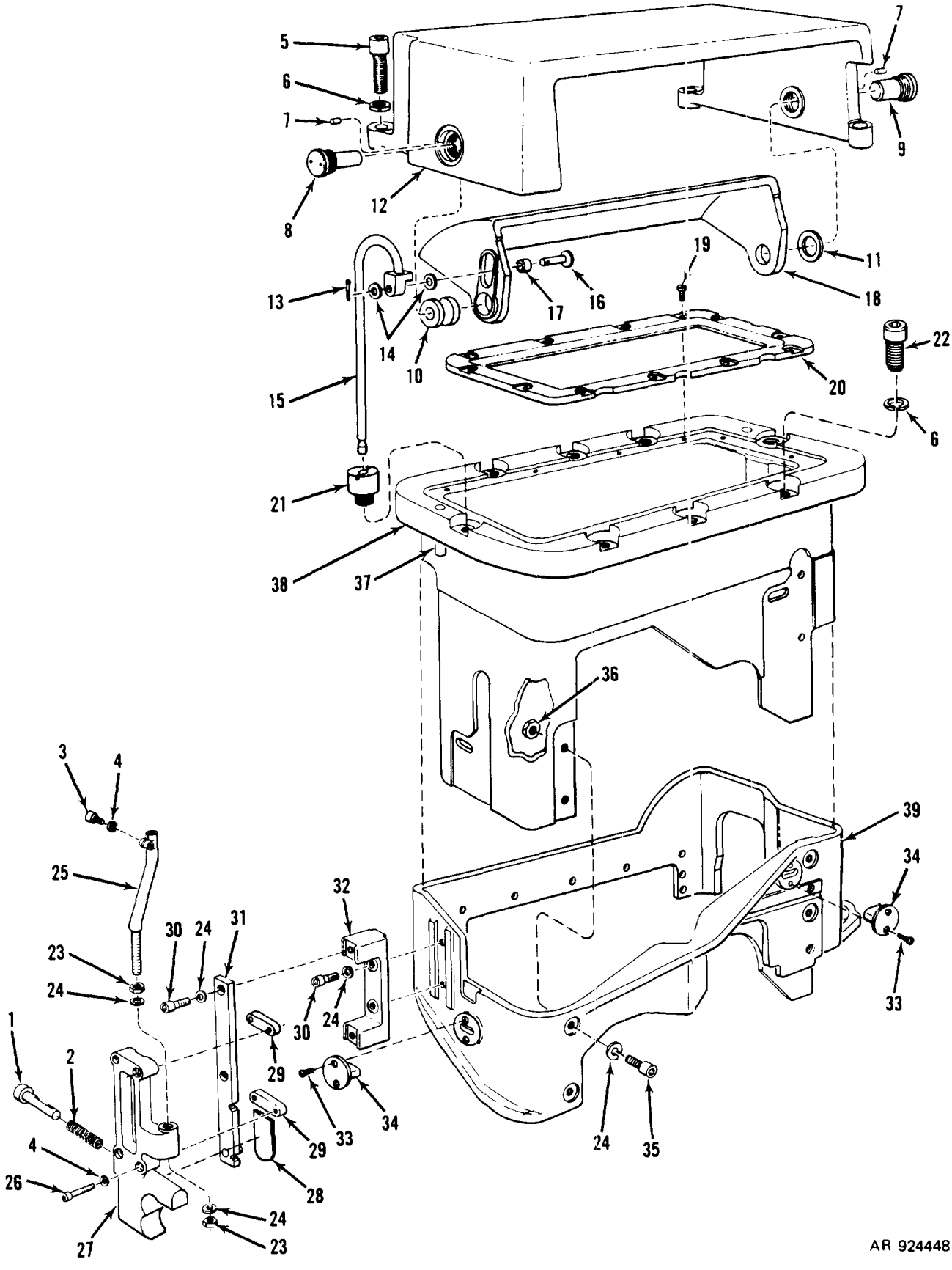


Figure C-2. Periscope mount M118 8619450, M118E1 1727490 (partial view)

(1) ILLUSTRATION (a) FIG NO	(b) ITEM NO	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION	USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 00 PERISCOPE MOUNT M118 8619450,			
						M118E1 11727490 (PARTIAL VIEW)			
C-2	1	PAFZZ	1240-00-675-0481	19200	8606139	PLUNGER		EA	1
C-2	2	PAFZZ	5360-00-582-3308	19200	8298482	SPRING,HELICAL		EA	1
C-2	3	PAFZZ	5305-00-052-6456	96906	MS16996-10	SCREW,CAP,SOCKET HEAD		EA	1
C-2	4	PAFZZ	5310-00-933-8120	96906	MS35338-138	WASHER,LOCK		EA	5
C-2	5	PAFZZ	5305-00-983-7463	96906	MS16997-144	SCREW,CAP,SOCKET HEAD		EA	4
C-2	6	PAFZZ	5310-00-933-8778	96906	MS35338-143	WASHER,LOCK		EA	11
C-2	7	PAFZZ	5315-00-805-7288	96906	MS9105-82	PIN,STRAIGHT		EA	2
C-2	8	PAFZZ	5305-00-910-9444	19200	10516718	SETSCREW		EA	1
C-2	9	PAFZZ	5305-01-116-4389	19200	11747344	SCREW,MACHINE		EA	1
C-2	10	PAFZZ	5365-00-910-8137	19200	10516719	SPACER,SLEEVE		EA	1
C-2	11	PAFZZ	5365-01-124-2636	19200	11747345	SPACER SLEEVE		EA	1
C-2	12	XDFZZ		19200	8619542	COVER		EA	1
C-2	13	PAFZZ	5315-01-027-6616	96906	MS24665-132	PIN, COTTER		EA	1
C-2	14	PAFZZ	5310-00-582-3323	19200	8298475	WASHER, FLAT		EA	2
C-2	15	PAFZZ	1240-00-253-5894	19200	8620497	ROD, MT PERISCOPE		EA	1
C-2	16	PAFZZ	5315-00-145-2084	19200	8619536	PIN, STRAIGHT		EA	1
C-2	17	PAFZZ	1240-00-795-9712	19200	8619535	ROLLER		EA	1
C-2	18	XDFZZ		19200	8619531	SHIELD		EA	1
C-2	19	PAFZZ	5305-00-701-5061	96906	MS51958-45	SCREW, MACHINE		EA	12
C-2	20	PAHZZ	5330-00-991-0261	19200	8635162	SEAL, RUBBER		EA	1
C-2	21	PAFZZ	5365-00-991-0262	19200	8619549	BUSHING, MACHINE		EA	1
C-2	22	PAFZZ	5305-00-187-9934	96906	MS16997-142	SCREW, CAP, SOCKET		EA	7
C-2	23	PAFZZ	5310-00-849-6895	96906	MS35691-15	NUT, PLAIN, HEXAGON		EA	2
C-2	24	PAFZZ	5310-00-974-6623	96906	MS35338-140	WASHER, LOCK		EA	10
C-2	25	PAFZZ	5315-00-487-5456	19200	8620526	ROD, SPECIAL		EA	1
C-2	26	PAFZZ	5305-00-958-6517	96906	MS16996-12	SCREW, CAP, SOCKET HEAD		EA	4
C-2	27	PAFZZ	1240-00-451-8176	19200	8619530	HANDLE, MOUNT		EA	1
C-2	28	XDFZZ		19200	8619545	COVER		EA	1
C-2	29	PAFZZ	5340-00-685-6701	19200	8298480	PLATE, MENDING		EA	2
C-2	30	PAFZZ	5305-00-225-9451	96906	MS16996-31	SCREW, CAP, SOCKET HEAD		EA	4
C-2	31	PAFZZ	1240-00-455-1456	19200	8619529	BAR, MT PERISCOPE		EA	1
C-2	32	PAHZZ	1240-00-455-1466	19200	8619533	BRACKET, PERISCOPE		EA	1
C-2	33	PAHZZ	5305-00-765-4257	96906	MS51959-43	SCREW, MACHINE		EA	4
C-2	34	PAHZZ	1240-00-795-9708	19200	8619456	KEY		EA	2

(1) ILLUSTRATION (a) FIG NO	(b) ITEM NO	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION	USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 00 PERISCOPE MOUNT M118 8619450,			
						M118E1 11727490 (PARTIAL VIEW)			
						CONTINUED			
C-2	35	PAHZZ	5305-00-763-7829	96906	MS51959-99	SCREW,MACHINE		EA	4
C-2	36	PAHZZ	5310-00-767-0445	96906	MS51971-2	NUT,PLAIN,HEXAGON	F49	EA	4
C-2	37	PAHZZ	5315-00-849-7232	96906	MS16556-661	PIN,STRAIGHT		EA	1
C-2	38	XDHZZ		19200	8619454	MOUNT,		EA	1
C-2	39	XDHZZ		19200	8619488	SUPPORT		EA	1

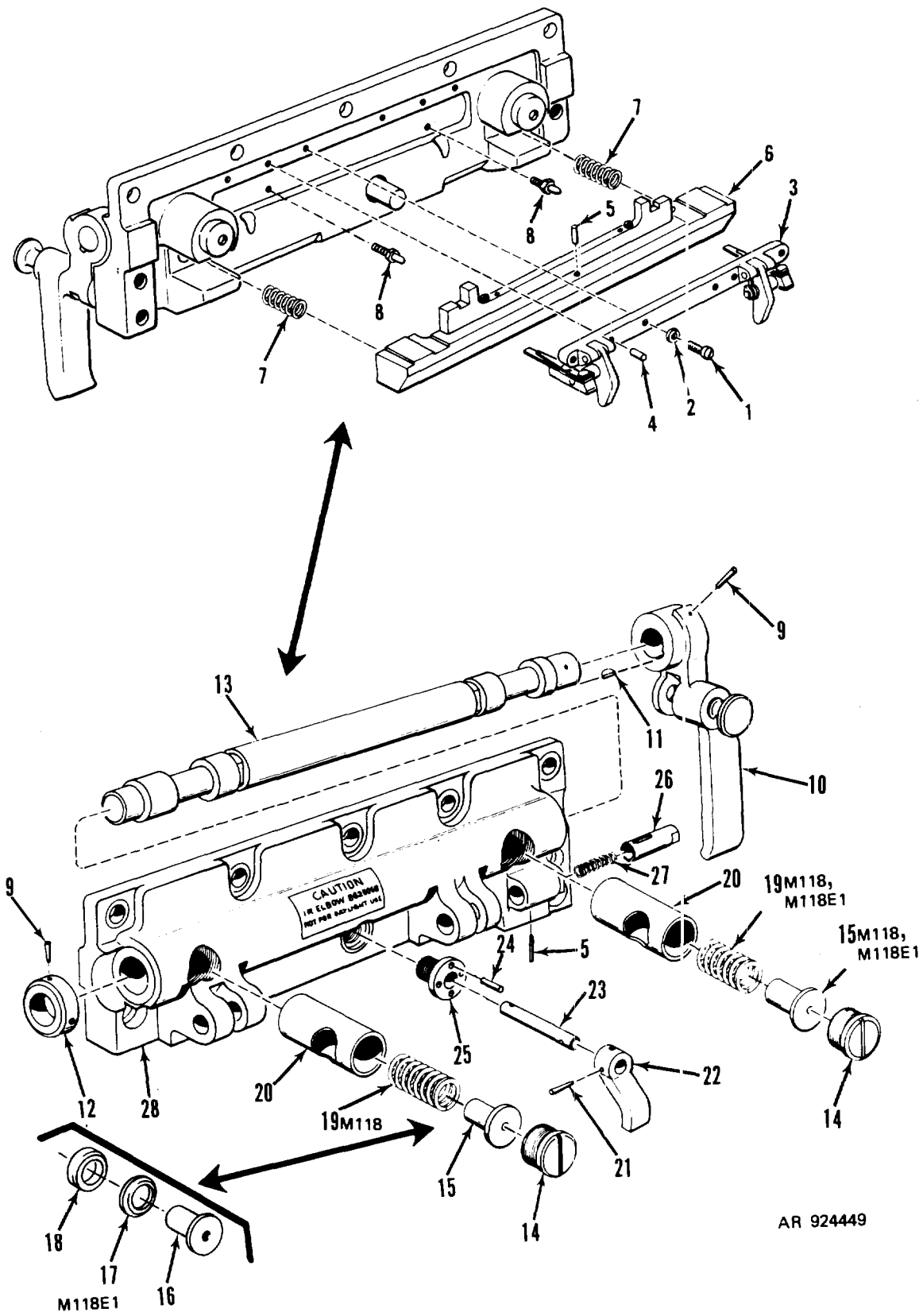


Figure C-3. Plate assembly 8619489, 11727496

(1) ILLUSTRATION (a) FIG NO	(b) ITEM NO	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION	USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 0001 PLATE ASSEMBLY 8619489,			
						11727496			
C-3	1	PAFZZ	5305-00-057-0528	96906	MS51958-46	SCREW,MACHINE		EA	4
C-3	2	PAFZZ	5310-00-933-8119	96906	MS35338-137	WASHER,LOCK		EA	4
C-3	3	XDFZZ		19200	8619657	BRACKET,		EA	1
C-3	4	PAFZZ	5315-00-682-1732	96906	MS16555-635	PIN,STRAIGHT,		EA	2
C-3	5	PAFZZ	5315-00-847-5751	96906	MS16555-629	PIN,STRAIGHT,		EA	2
C-3	6	XDFZZ		19200	8619473	LATCH ASSEMBLY		EA	1
C-3	7	PAFZZ	5360-00-584-0170	19200	8298445	SPRING,HELICAL,		EA	2
C-3	8	PAFZZ	5305-00-675-0483	19200	8298492	SCREW,SELF-LOCKING		EA	2
C-3	9	PAFZZ	5315-00-187-3278	96906	MS24692-114	PIN,TAPERED,PLAIN		EA	2
C-3	10	XDFZZ		19200	8619484	LEVER ASSEMBLY		EA	1
C-3	11	PAFZZ	5315-00-616-5514	96906	MS35756-6	KEY,WOODRUFF		EA	1
C-3	12	XDFZZ		19200	8298438	COLLAR		EA	1
C-3	13	XDFZZ		19200	8619490	SHAFT		EA	1
C-3	14	PAFZZ	5365-00-541-8453	19200	8298440	PLUG,MACHINE		EA	2
C-3	15	PAFZZ	1290-00-612-1439	19200	8298441	PLUNGER,DETENT	F49	EA	1
C-3	15	PAFZZ	1290-00-612-1439	19200	8298441	PLUNGER,DETENT	O65	EA	2
C-3	16	PAFZZ	1240-01-083-4721	19200	11727492	PLUNGER	F49	EA	1
C-3	17	PAFZZ	5310-01-077-8673	19200	11747301	WASHER,SPRING	F49	EA	18
C-3	18	PAFZZ	5365-01-074-0628	19200	11727499	SPACER,SLEEVE	F49	EA	1
C-3	19	PAFZZ	5360-00-990-0699	19200	8635158	SPRING,HELICAL,	F49	EA	1
C-3	19	PAFZZ	5360-00-990-0699	19200	8635158	SPRING,HELICAL,	O65	EA	2
C-3	20	PAFZZ	1290-00-612-1440	19200	8298442	PLUNGER,DETENT		EA	2
C-3	21	PAFZZ	5315-00-187-3258	96906	MS24692-84	PIN,TAPERED,PLAIN		EA	1
C-3	22	XDFZZ		19200	8298439	GRIP		EA	1
C-3	23	XDFZZ		19200	8298444	SHAFT		EA	1
C-3	24	PAFZZ	5315-00-664-1624	70210	S8152N8-0-250	PIN,STRAIGHT,		EA	1
C-3	25	PAFZZ	3120-00-316-0268	19200	7595183	BUSHING,SLEEVE		EA	1
C-3	26	PAFZZ	1240-00-402-5237	19200	8619471	PLUNGER,MOUNT		EA	1
C-3	27	PAFZZ	5360-00-824-8681	19200	8619469	SPRING,HELICAL,		EA	1
C-3	28	XDFZZ		19200	8619487	PLATE		EA	1

Section III

SPECIAL TOOLS LIST

(NOT APPLICABLE)

Section IV

NATIONAL STOCK NUMBER AND PART NUMBER INDEX

NATIONAL STOCK NUMBER AND PART NUMBER INDEX

STOCK NUMBER	FIGURE NO.	ITEM NO.	STOCK NUMBER	FIGURE NO.	ITEM NO.
5305-00-052-6456	C-2	3	1240-00-795-9712	C-2	17
5305-00-057-0521	C-1	1	5315-00-805-7288	C-2	7
5305-00-057-0528	C-3	1	5305-00-820-8562	C-1	6
5315-00-145-2084	C-2	16	5360-00-824-8681	C-3	27
5315-00-187-3258	C-3	21	5315-00-847-5751	C-3	5
5315-00-187-3278	C-3	9	5310-00-849-6895	C-2	23
5305-00-187-9934	C-2	22	5315-00-849-7232	C-2	37
9905-00-195-0900	C-1	2	5365-00-910-8137	C-2	10
1240-00-196-2756	C-1	3	5305-00-910-9444	C-2	8
5305-00-225-9451	C-1	12	5310-00-933-8119	C-3	2
5305-00-225-9451	C-2	30	5310-00-933-8120	C-2	4
1240-00-253-5894	C-2	15	5310-00-933-8778	C-2	6
3120-00-316-0268	C-3	25	5305-00-958-6517	C-2	26
1240-00-402-5237	C-3	26	5310-00-974-6623	C-1	13
1240-00-451-8176	C-2	27	5310-00-974-6623	C-2	24
1240-00-455-1456	C-2	31	5305-00-983-7463	C-2	5
1240-00-455-1466	C-2	32	5360-00-990-0699	C-3	19
5315-00-487-5456	C-2	25	5360-00-990-0699	C-3	19
5365-00-541-8453	C-3	14	5330-00-991-0261	C-2	20
5360-00-582-3308	C-2	2	5365-00-991-0262	C-2	21
5310-00-582-3323	C-2	14	5305-00-993-3589	C-1	4
5360-00-584-0170	C-3	7	5315-01-027-6616	C-2	13
1290-00-612-1439	C-3	15	5365-01-074-0628	C-3	18
1290-00-612-1439	C-3	15	5310-01-077-8673	C-3	17
1290-00-612-1440	C-3	20	1240-01-083-4721	C-3	16
5315-00-616-5514	C-3	11	9905-01-105-5354	C-1	2
3120-00-647-0895	C-1	8	1240-01-107-9164	C-1	9
3120-00-647-0895	C-1	8	1240-01-109-7668	C-1	11
5310-00-655-9990	C-1	7	1240-01-109-7669	C-1	10
5315-00-664-1624	C-3	24	5305-01-116-4389	C-2	9
1240-00-675-0481	C-2	1	5365-01-124-2636	C-2	11
5305-00-675-0483	C-3	8	1240-01-134-7111	C-1	14
5315-00-682-1732	C-3	4			
5340-00-685-0831	C-1	5			
5340-00-685-6701	C-2	29			
5305-00-701-5061	C-2	19			
5305-00-763-7829	C-2	35			
5305-00-765-4257	C-2	33			
5310-00-767-0445	C-2	36			
1240-00-795-9708	C-2	34			

FSCM	PART NUMBER	FIGURE NO.	ITEM NO.	FSCM	PART NUMBER	FIGURE NO.	ITEM NO.
96906	MS16555-629	C-3	5	19200	11727491	C-1	2
96906	MS16555-635	C-3	4	19200	11727492	C-3	16
96906	MS16556-661	C-2	37	19200	11727496	C-1	14
96906	MS16996-10	C-2	3	19200	11727499	C-3	18
96906	MS16996-12	-2	26	19200	11747301	C-3	17
96906	MS16996-31	C-1	12	19200	11747344	C-2	9
96906	MS16996-31	C-2	30	19200	11747345	C-2	11
96906	MS16997-142	C-2	22	19200	7595183	C-3	25
96906	MS16997-144	C-2	5	19207	8229063	C-1	8
96906	MS24665-132	C-2	13	19207	8229063	C-1	8
96906	MS24692-114	C-3	9	19200	8229064	C-1	7
96906	MS24692-84	C-3	21	19200	8298438	C-3	12
96906	MS35338-137	C-3	2	19200	8298439	C-3	22
96906	MS35338-138	C-2	4	19200	8298440	C-3	14
96906	MS35338-140	C-1	13	19200	8298441	C-3	15
96906	MS35338-140	C-2	24	19200	8298441	C-3	15
96906	MS35338-143	C-2	6	19200	8298442	C-3	20
96906	MS35691-15	C-2	23	19200	8298444	C-3	23
96906	MS35756-6	C-3	11	19200	8298445	C-3	7
96906	MS51031-34	C-1	4	19200	8298475	C-2	14
96906	MS51958-25	C-1	1	19200	8298480	C-2	29
96906	MS51958-45	C-2	19	19200	8298482	C-2	2
96906	MS51958-46	C-3	1	19200	8298492	C-3	8
96906	MS51959-43	C-2	33	19200	8606139	C-2	1
96906	MS51959-99	C-2	35	19200	8619454	C-2	38
96906	MS51971-2	C-2	36	19200	8619456	C-2	34
96906	MS9105-82	C-2	7	19200	8619463	C-1	6
70210	S8152N8-0-250	C-3	24	19200	8619469	C-3	27
19200	10516718	C-2	8	19200	8619471	C-3	26
19200	10516719	C-2	10	19200	8619473	C-3	6
19200	10541767	C-1	2	19200	8619484	C-3	10
19200	11727364	C-1	3	19200	8619487	C-3	28
19200	11727421	C-1	11	19200	8619488	C-2	39
19200	11727422	C-1	10	19200	8619489	C-1	14
19200	11727448	C-1	9	19200	8619490	C-3	13

NATIONAL STOCK NUMBER AND PART NUMBER INDEX

FSCM	PART NUMBER	FIGURE NO.	ITEM NO.	FSCM	PART NUMBER	FIGURE NO.	ITEM NO.
19200	8619529	C-2	31	19200	8619549	C-2	21
19200	8619530	C-2	27	19200	8619657	C-3	3
19200	8619531	C-2	18	19200	8620013	C-1	5
19200	8619533	C-2	32	19200	8620497	C-2	15
19200	8619535	C-2	17	19200	8620526	C-2	25
19200	8619536	C-2	16	19200	8635158	C-3	19
19200	8619542	C-2	12	19200	8635158	C-3	19
19200	8619545	C-2	28	19200	8635162	C-2	20

Section 6. PLATE ASSEMBLY

4-17. PLATE ASSEMBLY MAINTENANCE PROCEDURES INDEX

Task	Reference (para)
Removal	4-18
Disassembly	4-19
Assembly	4-20
Installation	4-21

4-18. PLATE ASSEMBLY REMOVAL

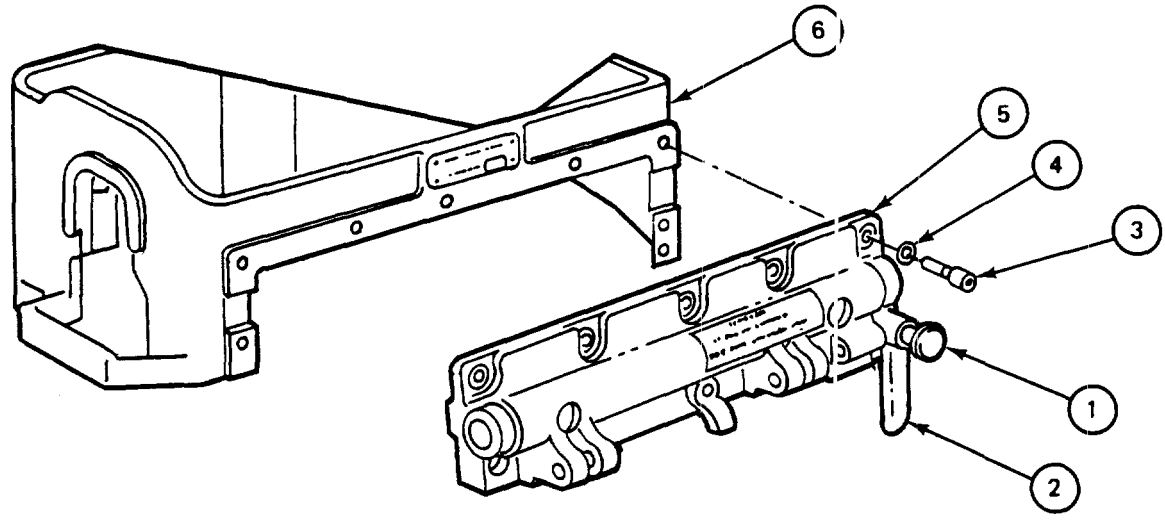
TOOLS: 7/32" socket head screw key (Allen wrench or equivalent)

PERSONNEL: One

EQUIPMENT CONDITION: Support on work bench or in tank

FRAME **1**

Step	Procedure
1.	Press in on plunger (1) and raise lever (2).
2.	Using Allen wrench, remove eight screws (3) and eight washers (4) and separate plate assembly (5) from support (6).
	END OF TASK



4-19. PLATE ASSEMBLY DISASSEMBLY

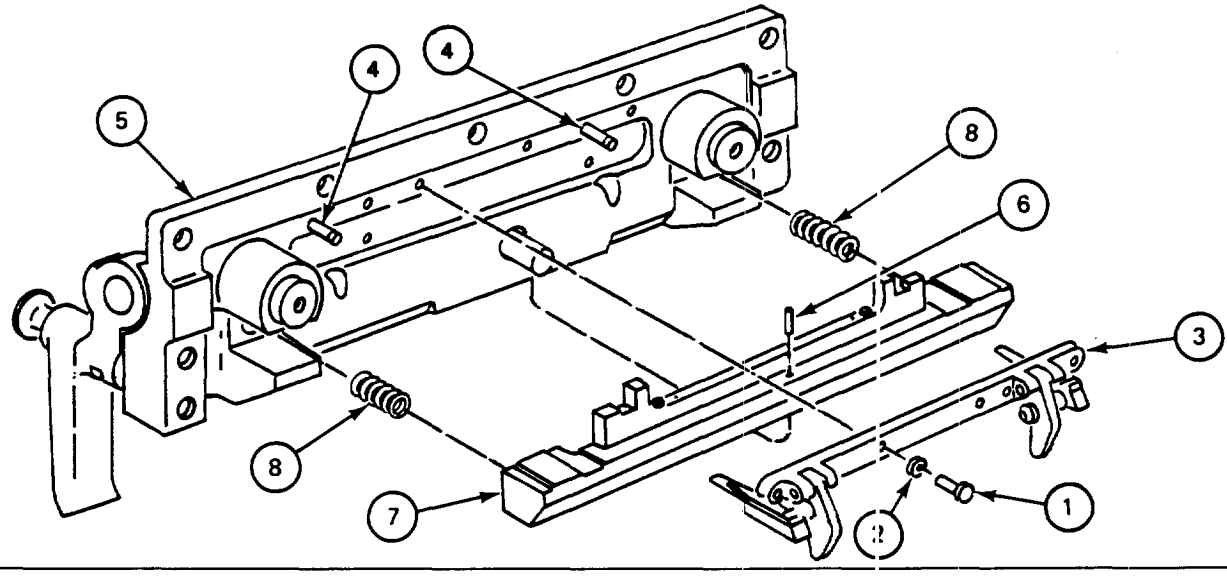
TOOLS: 1/4", 3/8" flat tip screwdriver
3/32", 1/8" drive pin punch
4 oz. ball peen hammer
5/32" socket head screw key (Allen wrench or equivalent)
1/4" open end wrench
Retaining ring pliers, external 0.023 tip
Retaining ring pliers, external bent tip 002.2
Brass drift pin
Scriber, machinists
Parallel action jaw pliers

PERSONNEL: One

EQUIPMENT CONDITION: Plate assembly on work bench

FRAME 1

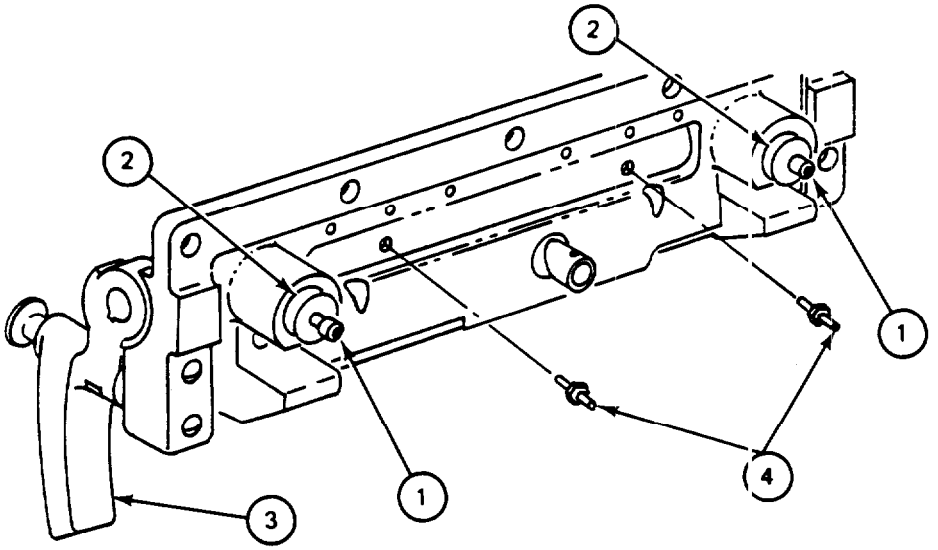
Step	Procedure
1.	Using 1/4” flat tip screwdriver, remove four screws (1) and four washers (2).
2.	Using fingers, slide bracket assembly (3) from pins (4) mounted in plate (5), then remove bracket assembly (3).
3.	Using hammer and 3/32" punch, remove pin (6), but allow 3/32"' punch to stay in pin (6) hole holding parts in place.
4.	Using one hand, put a little pressure on latch assembly (7) to compress springs (8). With other hand, remove 3/32" punch.
5.	Release pressure slowly and remove latch assembly (7) and two springs (8).
	GO TO FRAME 2



4-19. PLATE ASSEMBLY DISASSEMBLY (CONT)

FRAME 2

Step	Procedure
	NOTE Two 10-32 x 5/8 screws from shield operating handle may be used (para 4-25, Frame 2, item 1).
1.	Using Allen wrench, tighten two 10-32 x 5/8 screws (1) into plungers (2).
2.	Move lever (3) up and down and tighten both screws (1) unti1 lever (3) and shaft move easily.
3.	Using open end wrench, remove two self-locking screws (4).
	GO TO FRAME 3

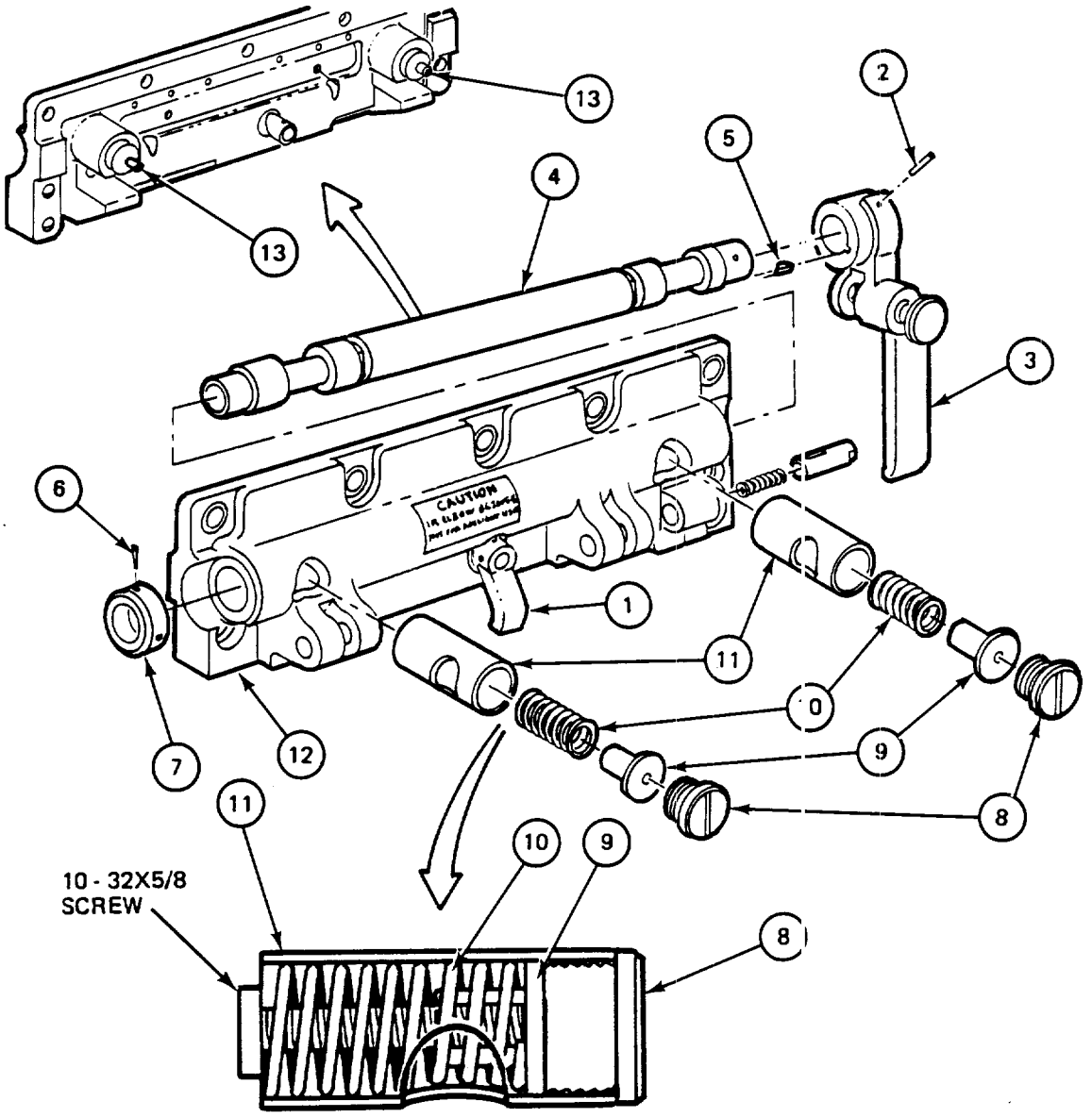


4-19. PLATE ASSEMBLY DISASSEMBLY (CONT)

FRAME 3

Step	Procedure
1.	Pull out grip assembly (l).
	NOTE Pin (2) is tapered and can only be removed one way.
2.	Using hammer and 3/32" punch, remove pin (2). Scribe mark on lever (3) and. shaft (4) to line up holes for assembly.
3.	Using hammer and brass drift pin, remove lever (3) from shaft (4) and remove key (5).
4.	Using hammer and 3/32" punch, remove pin (6). Scribe mark on collar (7) and shaft (4) to line up holes. Slide collar (7) off end of shaft (4).
	NOTE Plunger assemblies (8), (9), (10), and (11) may require slight up and down movement to free shaft (4) during removal.
5.	Remove shaft (4) from right end of plate (12).
6.	Using Allen wrench, remove two 10-32 x 5/8 screws (13) that were installed in Frame 2.
7.	Using 3/8" flat tip screwdriver, remove two plugs (8), two plungers (9), two springs (10), and two plungers (11).
	GO TO FRAME 4

4-19. PLATE ASSEMBLY DISASSEMBLY (CONT)

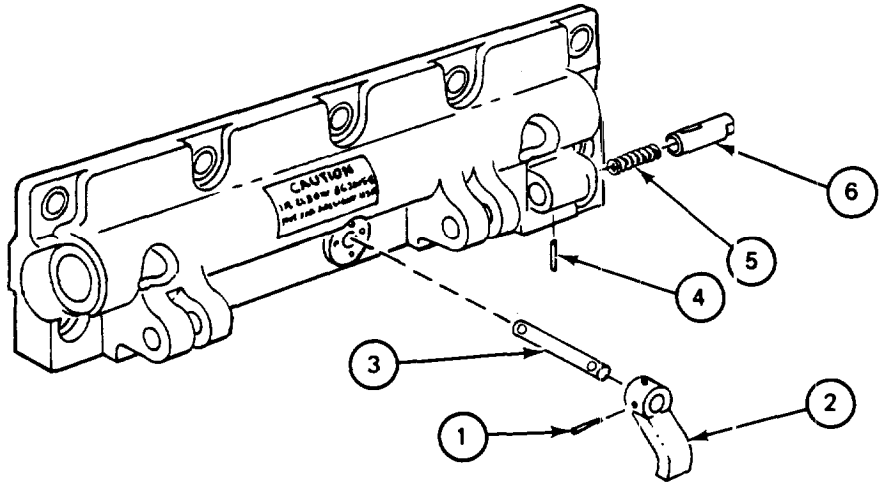


SIDE VIEW OF PLUNGER ASSEMBLY

4-19. PLATE ASSEMBLY DISASSEMBLY (CONT)

FRAME 4

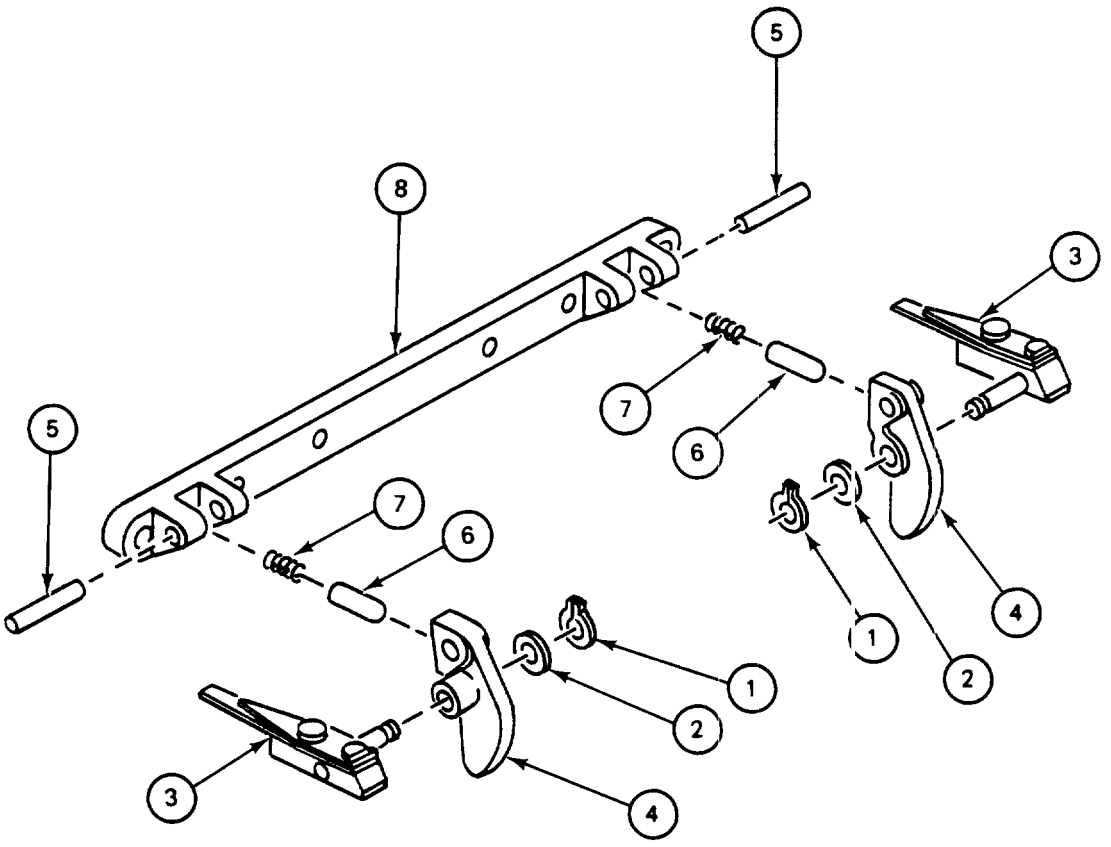
Step	Procedure
	NOTE Pin (1) is tapered and can be removed. only one way.
1.	Using hammer and 3/32” punch, remove pin (1) from grip (2) and remove grip (2) from shaft (3). No more disassembly is required as items are replaced as a unit.
2.	Using hammer and 3/32” punch, drive pin (4) as far out as the punch will let it go.
3.	Using parallel action jaw pliers, remove pin (4) and push out spring (5) and plunger (6).
	GO TO FRAME 5



4-19. PLATE ASSEMBLY DISASSEMBLY (CONT)

FRAME 5

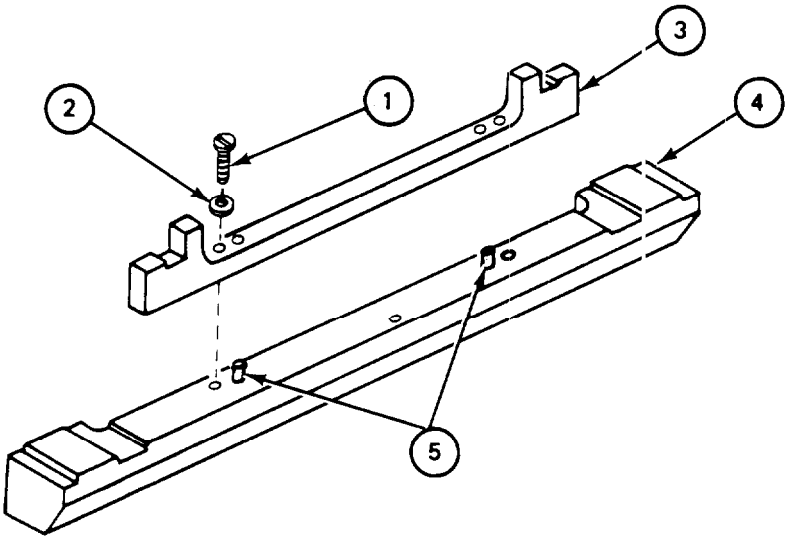
Step	Procedure
1.	Using retaining ring pliers, remove two rings (1) and two washers (2). Remove two supports (3) from two arms (4).
2.	Using hammer and 1 /8" punch, remove two pins (5) and leave punch in pin hole. Hold arm (4) under slight pressure and remove punch. Remove two arms (4), two plungers (6), and two springs (7) from bracket (8).
	GO TO FRAME 6



4-19. PLATE ASSEMBLY DISASSEMBLY (CONT)

FRAME 6

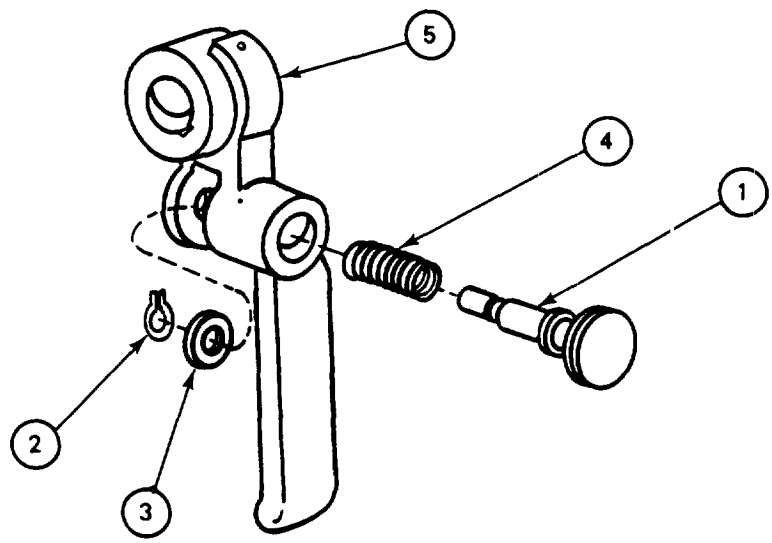
Step	Procedure
1.	Using 1/4" flat tip screwdriver, remove two screws (1) and two washers (2).
2.	Pull apart evenly stop (3) and latch (4) and slide off dowel pins (5).
	NOTE Do not remove dowel pins (5) except to replace if damaged.
3.	Using parallel action jaw pliers, remove two dowel pins (5). GO TO FRAME 7



4-19. PLATE ASSEMBLY DISASSEMBLY (CONT)

FRAME 7

Step	Procedure
1.	Using finger, put a slight pressure on plunger (1) and hold while doing step 2.
2.	Using bent tip retaining ring pliers, remove ring (2). Release pressure on plunger (1). Remove washer (3), holding spring (4) and plunger (1) from lever (5).
	END OF TASK



4-20. PLATE ASSEMBLY ASSEMBLY

TOOLS: 1/4", 3/8", 1/8" flat tip screwdriver
1/8" drive pin punch
4 oz. ball peen hammer
Soft face hammer
Retaining ring pliers (external tip .023, bent tip .022)
5/32" socket head screw key (Allen wrench or equivalent)
1/4" open end wrench

SUPPLIES: Aircraft and instrument grease (item 1, App. A)

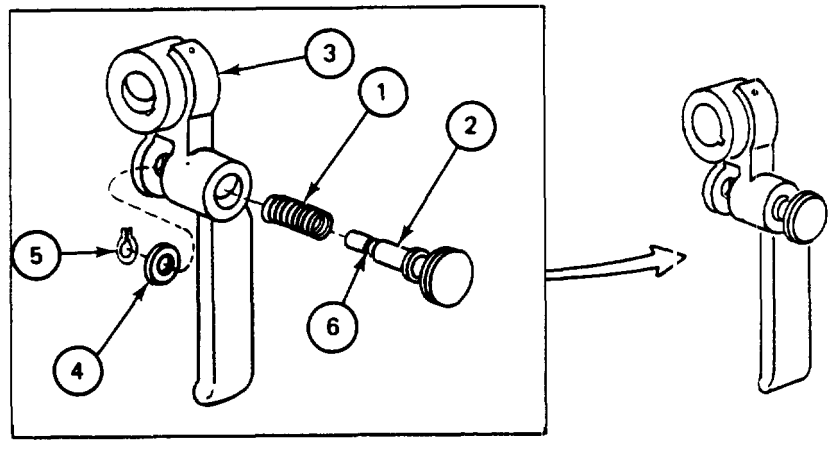
PERSONNEL: One

REFERENCES: JPG 41 C for lubricaton

EQUIPMENT CONDITION: Plate assembly on work bench

FRAME **1**

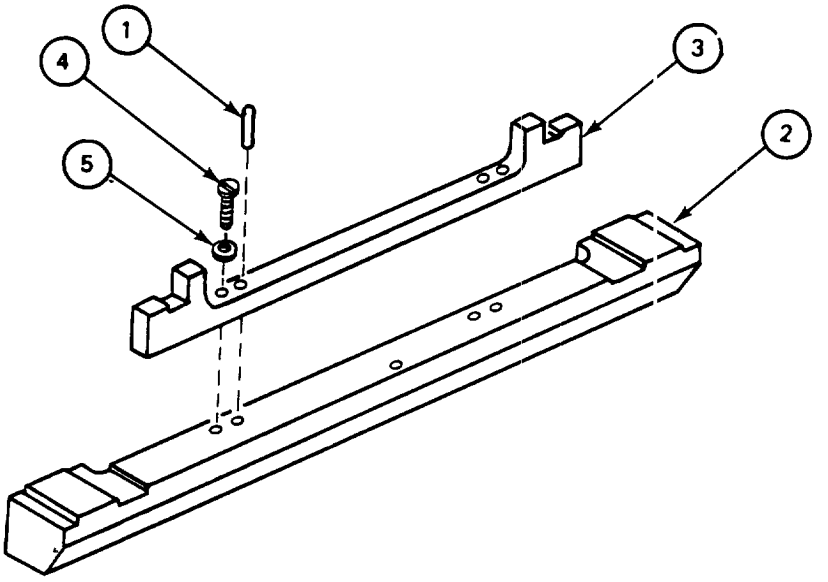
Step	Procedure
1.	Spread a small amount of grease on spring (1), plunger (2), and to mounting hole in handle (3) (JPG).
2.	Put spring (1) on plunger (2) and place part way into lever handle (3).
3.	Put washer (4) on end of plunger (2). Using finger, put enough pressure on plunger (2) to expose plunger (2).
4.	Using bent tip pliers put retaining ring (5) on plunger groove (6). Release pressure on plunger (2).
	GO TO FRAME 2



4-20. PLATE ASSEMBLY ASSEMBLY (CONT)

FRAME 2

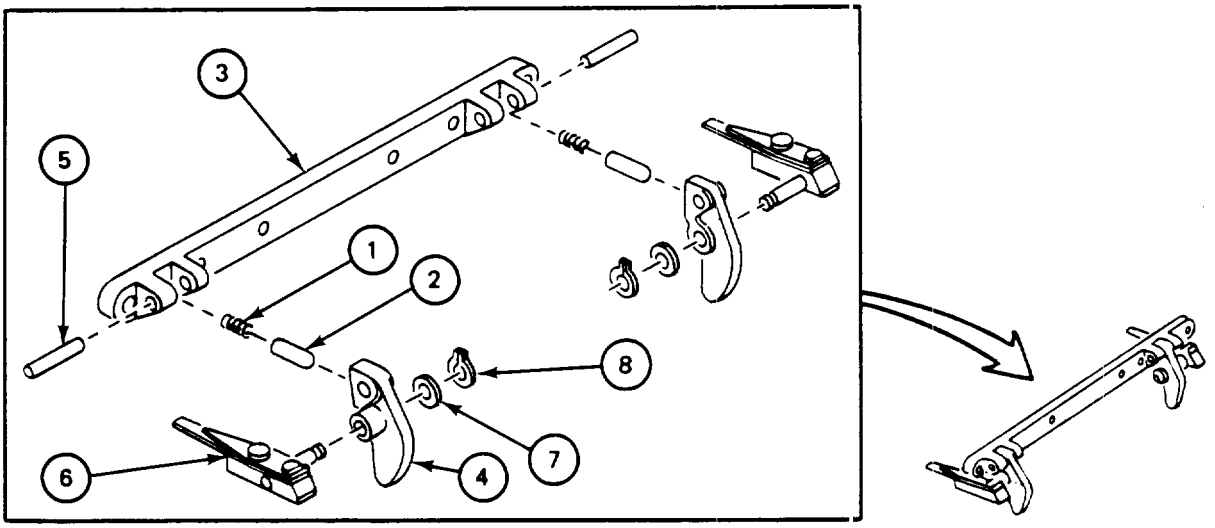
Step	Procedure
	NOTE If dowel pins (1) were not removed, go to step 2
1.	Using soft face hammer, install two pins (1) to latch (2).
2.	Place stop (3) on top of latch (2) so that mounting holes are in line with pins (1). Using hand, press stop (3) in place.
3.	Using 1 /4" flat tip screwdriver, install two screws (4) and two washers (5).
	GO TO FRAME 3



4-20. PLATE ASSEMBLY ASSEMBLY (CONT)

FRAME 3

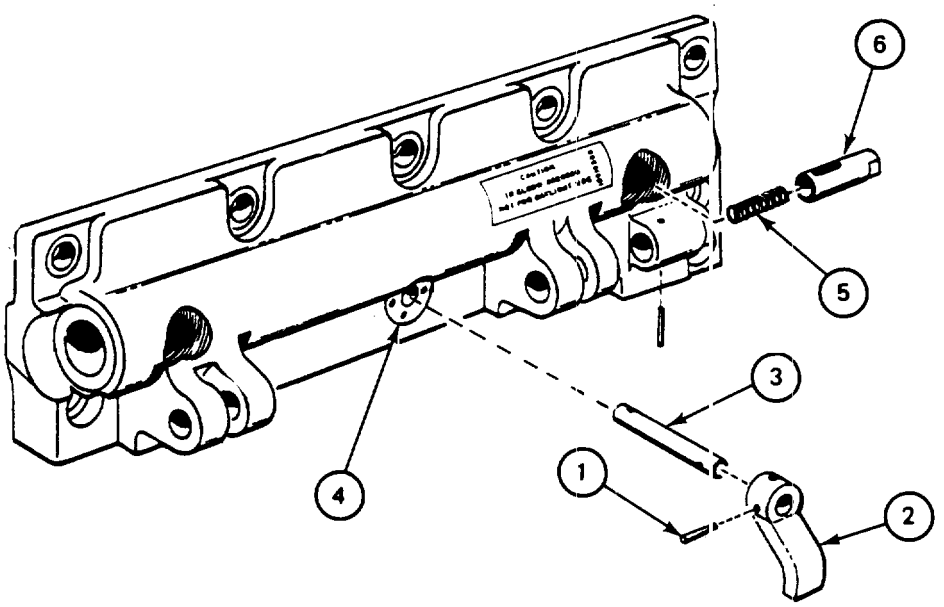
Step	Procedure
1.	Put small amount of grease on spring (1) and plunger 2).
2.	Put spring (1) into plunger (2).
3.	Put plunger (2) with spring in bracket (3).
4.	Put arm (4) with flat side over plunger (2).
5.	Line up hole in arm (4) with hole in bracket (3) and hold in place.
6.	Using fingers, start pin (5) in hole. Using ball peen hammer, install pin (5) through bracket (3) and arm (4).
7.	Install support (6) into arm (4) and put on washer (7).
8.	Using retaining ring pliers, put retaining ring (8) on support (6).
	GO TO FRAME 4



4-20. PLATE ASSEMBLY ASSEMBLY (CONT)

FRAME 4

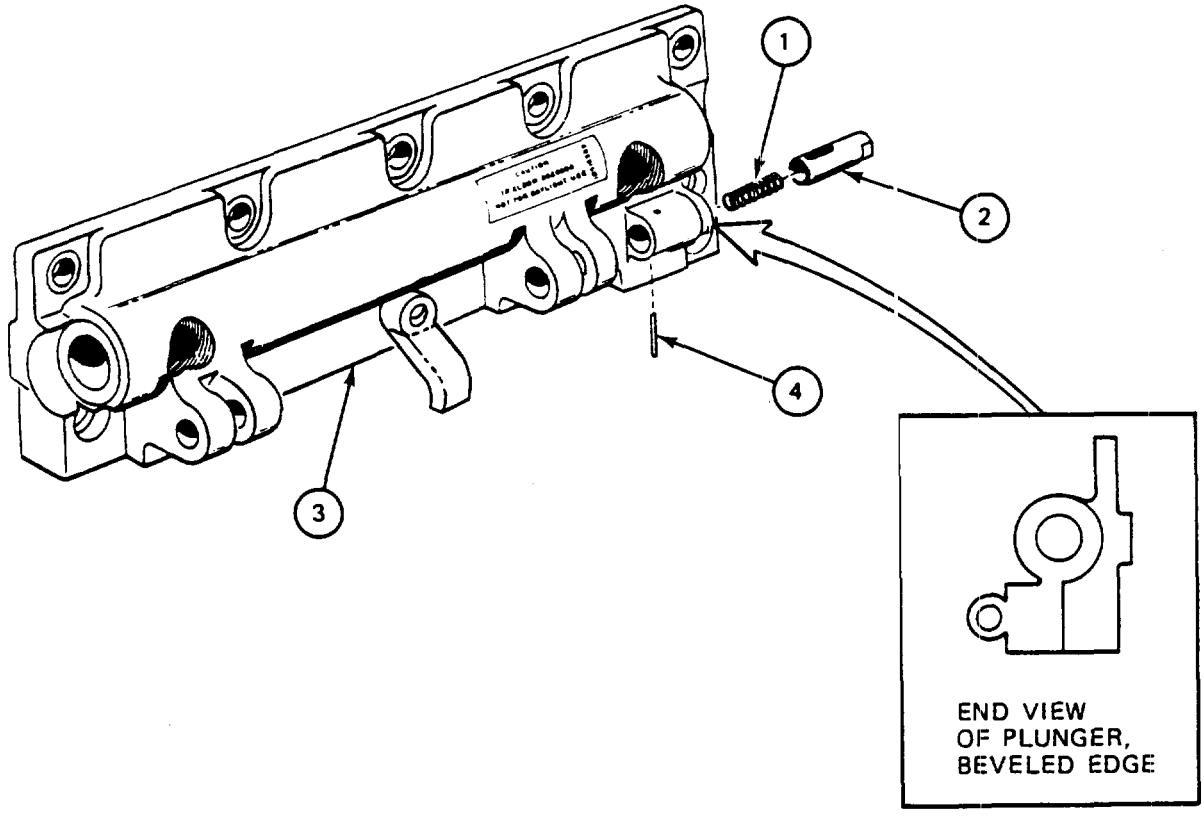
Step	Procedure
	NOTE Pin (1) is tapered and can be installed one way only.
1.	using banner and punch, install pin (1) to hold grip (2) to shaft (3).
2.	Install shaft (3) with grip (2) into bushing (4).
3.	Put a small amount of grease on spring (5) and plunger (6) (JPG).
	GO TO FRAME 5



4-20. PLATE ASSEMBLY ASSSEMBLY (CONT)

FRAME 5

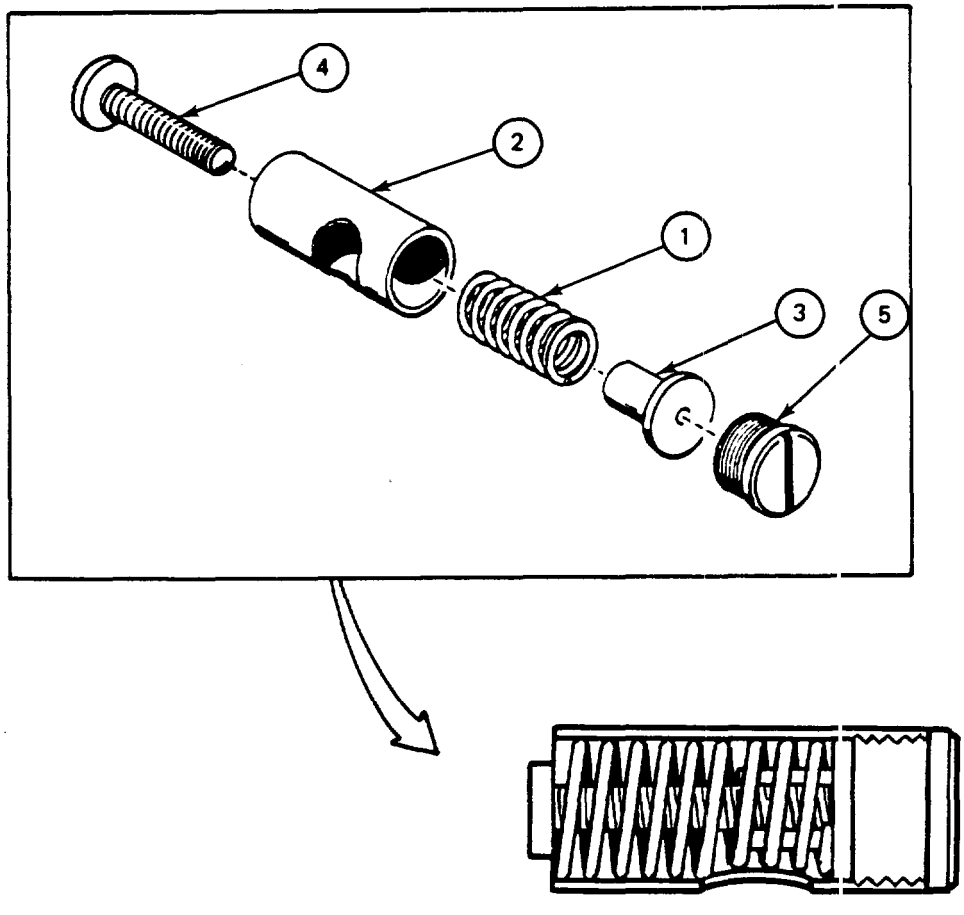
Step	Procedure
	NOTE Install plunger (2) with beveled edge facing out.
1.	Place spring (1) into plunger (2) and slide both into plate (3) so that slot in plunger (2) is in line with pin hole in plate (3).
2.	Usng fingers, hold plunger (2) in plate (3).
3.	Using 1/8" screwdriver, press against the end of spring (1) until spring (1) is clear of slot in plunger (2). Hold screwdriver with same hand that is holding plunger (2).
4.	Using fingers, install pin (4) into hole in plate (3).
5.	Using hammer, tap in through plate (3). and plunger (2) until it holds spring. Remove 1 /8" screwdriver, and using hammer and punch, drive pin all the way in.
	GO TO FRAME 6



4-20. PLATE ASSEMBLY ASSEMBLY (CONT)

FRAME 6

Step	Procedure
1.	Put two springs (1) into two plungers (2).
2.	Put two plungers (3) into two springs (1).
	NOTE If two screws required in step 3 are not available, two screws from the shield operating handle may be used (para 4-25, Frame 2, item 1).
3.	Using Allen wrench, install and tighten two 10-32 x 5/8" screws (4) into two plungers (3).
4.	Using 3/8" screwdriver, install two plugs (5).
	GO TO FRAME 7

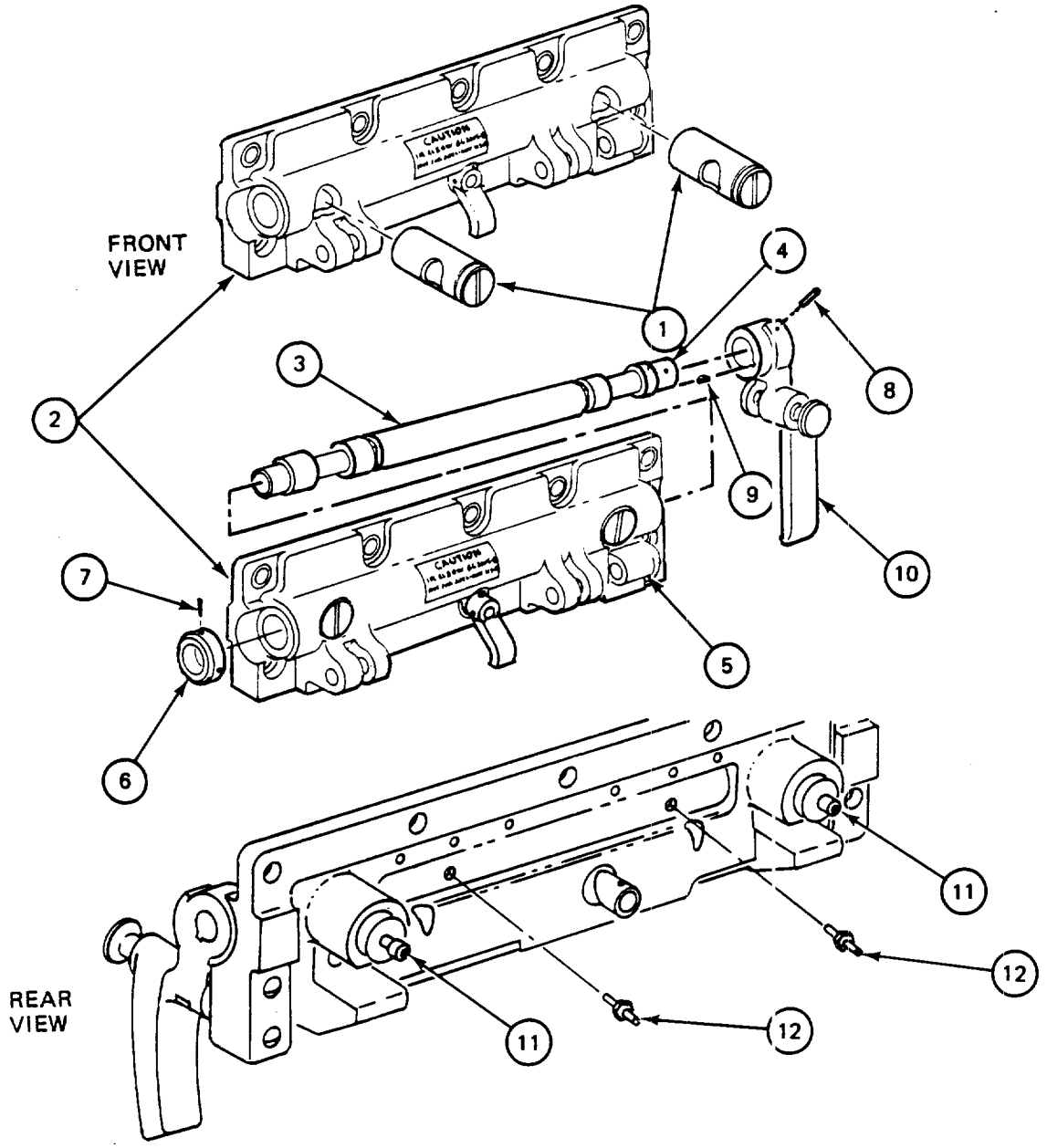


4-20. PLATE ASSEMBLY ASSEMBLY (CONT)

FRAME 7

Step	Procedure
1.	Install two plunger assemblies (1) into plate (2).
	NOTE When installing shaft (3), check that shaft holes in plungers (1) are in line and flat center part of shaft (3) is at open side of plate (2).
2.	Put a small amount of grease on shaft (3) (JPG).
	NOTE It may be necessary to move plungers (1) to allow installation of shaft (3).
3.	Install shaft (3) into plate (2) making sure keyed end of shaft (4) is on same side as lever plunger (5). Push shaft (3) into plate (2) Far enough to put on collar (6).
4.	Put collar (6) on end of shaft (3) and line up holes.
	NOTE Pins (7) and (8) are tapered and can be installed one way only. Line up scribe marks made in disassembly.
5.	Using hammer, install pin (7). Push shaft (3) into plate (2) until collar (6) is against plate (2).
6.	Place key (9) in keyway of shaft (3) and slide or tap gently lever assembly (10) over end of shaft (3).
7.	Using hammer, install pin (8).
8.	Using Allen wrench, remove two 10-32 x 5/8 screws (11).
9.	Using open end wrench, install two self-locking screws (12).
	GO TO FRAME 8

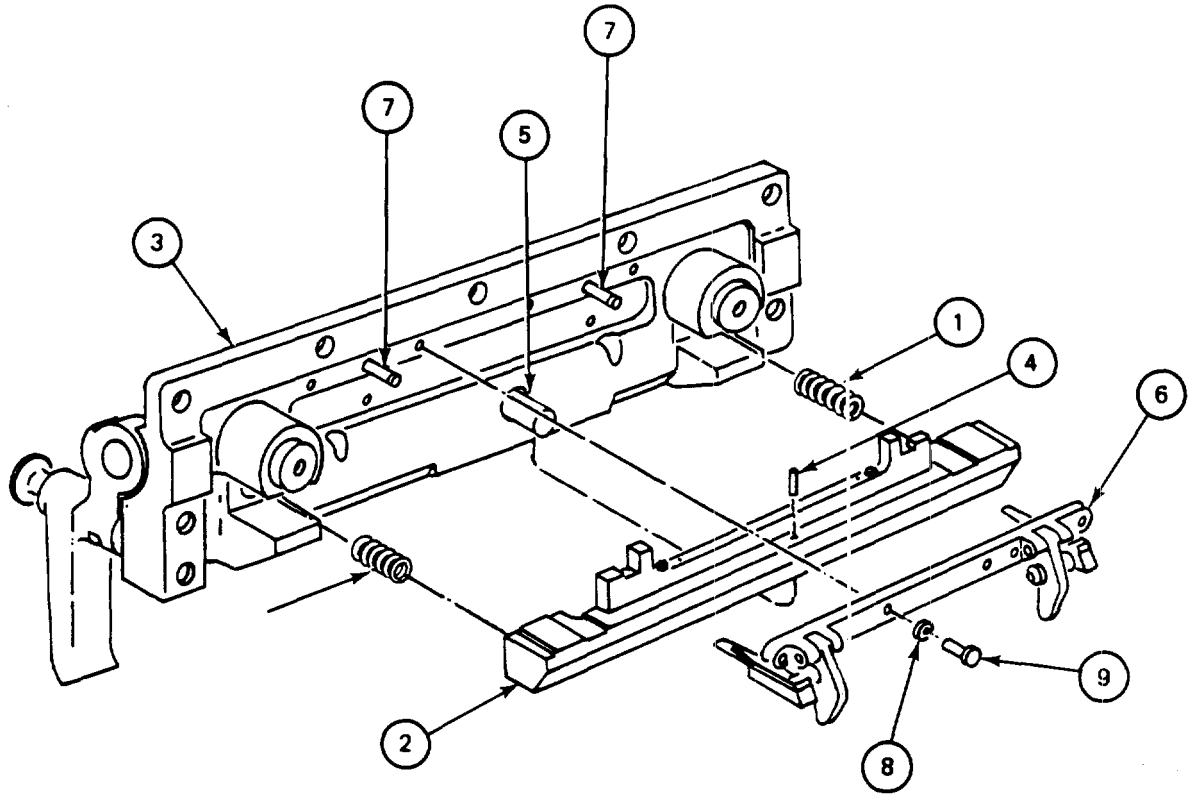
4-20. PLATE ASSEMBLY ASSEMBLY (CONT)



4-20. PLATE ASSEMBLY ASSEMBLY (CONT)

FRAME 8

Step	Procedure
1.	Put two springs (1) in latch assembly (2). Put latch assembly (2) in plate (3). Line up holes and hold in place.
2.	Using finger, put pin (4) in hole. Using ball peen hammer and punch, install pin (4) to hold latch assembly (2) to latch grip (5).
3.	Place bracket assembly (6) in line with two locating pins (7) and push bracket assembly (6) gently onto plate (3).
4.	Using 1 /4" flat tip screwdriver, install four washers (8) and our screws (9).
	END OF TASK



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PUBLICATION NUMBER	DATE	TITLE
TM 9-XXXX-XXX-XX	Date of TM	Title of TM

BE EXACT. . .PIN-POINT WHERE IT IS

PAGE NO.	PARAGRAPH	FIGURE NO.	TABLE NO.	IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:
3		2		Item 10. Change illustration. Reason: Tube end shown assembled on wrong side of lever cam.
109		51		Item 3. The NSN and P/N are not listed on the AMDF nor the MCRL. Request correct NSN and P/N be furnished.
2-8			2-1	Preventive Maintenance Checks and Services. Item 7 under "Items to be inspected" should be changed to read as follows: Firing linkage and firing mechanism pawl.
12	1-6a			Since there are both 20- and 30- round magazines for this rifle, data on both should be listed.

SAMPLE

TYPED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER

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PUBLICATION NUMBER	DATE	TITLE
TM 9-1240-271-34&P		MOUNT, PERISCOPE: M118, M118E1

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Chief of Staff

Official:

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Major General, United States Army
The Adjutant General

Distribution: To be distributed in accordance with DA Form 12-41, Direct and General Support Maintenance requirements for Periscope.

THE METRIC SYSTEM AND EQUIVALENTS

LINEAR MEASURE

1 Centimeter = 10 Millimeters = 0.01 Meters = 0.3937 Inches
1 Meter = 100 Centimeters = 1000 Millimeters = 39.37 Inches
1 Kilometer = 1000 Meters = 0.621 Miles

WEIGHTS

1 Gram = 0.001 Kilograms = 1000 Milligrams = 0.035 Ounces
1 Kilogram = 1000 Grams = 2.2 Lb
1 Metric Ton = 1000 Kilograms = 1 Megagram = 1.1 Short Tons

LIQUID MEASURE

1 Milliliter = 0.001 Liters = 0.0338 Fluid Ounces
1 Liter = 1000 Milliliters = 33.82 Fluid Ounces

SQUARE MEASURE

1 Sq Centimeter = 100 Sq Millimeters = 0.155 Sq Inches
1 Sq Meter = 10,000 Sq Centimeters = 10.76 Sq Feet
1 Sq Kilometer = 1,000,000 Sq Meters = 0.386 Sq Miles

CUBIC MEASURE

1 Cu Centimeter = 1000 Cu Millimeters = 0.06 Cu Inches
1 Cu Meter = 1,000,000 Cu Centimeters = 35.31 Cu Feet

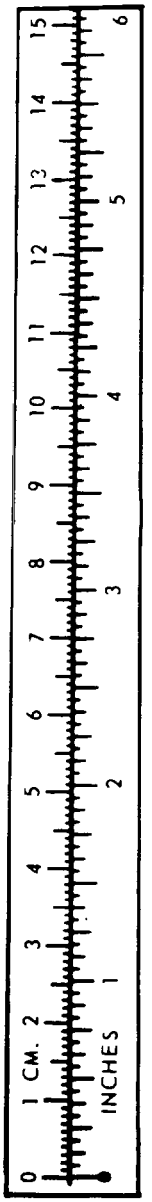
TEMPERATURE

$5/9\ (^0F - 32) = {}^0C$
212^0 Fahrenheit is equivalent to 100^0 Celsius
90^0 Fahrenheit is equivalent to 32.2^0 Celsius
32^0 Fahrenheit is equivalent to 0^0 Celsius
$9/5\ C^0 + 32 = F^0$

APPROXIMATE CONVERSION FACTORS

TO CHANGE	TO	MULTIPLY BY
Inches	Centimeters	2.540
Feet	Meters	0.305
Yards	Meters	0.914
Miles	Kilometers	1.609
Square Inches	Square Centimeters	6.451
Square Feet	Square Meters	0.093
Square Yards	Square Meters	0.836
Square Miles	Square Kilometers	2.590
Acres	Square Hectometers	0.405
Cubic Feet	Cubic Meters	0.028
Cubic Yards	Cubic Meters	0.765
Fluid Ounces	Milliliters	29.573
Pints	Liters	0.473
Quarts	Liters	0.946
Gallons	Liters	3.785
Ounces	Grams	28.349
Pounds	Kilograms	0.454
Short Tons	Metric Tons	0.907
Pound-Feet	Newton-Meters	1.356
Pounds per Square Inch	Kilopascals	6.895
Miles per Gallon	Kilometers per Liter	0.425
Miles per Hour	Kilometers per Hour	1.609

TO CHANGE	TO	MULTIPLY BY
Centimeters	Inches	0.394
Meters	Feet	3.280
Meters	Yards	1.094
Kilometers	Miles	0.621
Square Centimeters	Square Inches	0.155
Square Meters	Square Feet	10.764
Square Meters	Square Yards	1.196
Square Kilometers	Square Miles	0.386
Square Hectometers	Acres	2.471
Cubic Meters	Cubic Feet	35.315
Cubic Meters	Cubic Yards	1.308
Milliliters	Fluid Ounces	0.034
Liters	Pints	2.113
Liters	Quarts	1.057
Liters	Gallons	0.264
Grams	Ounces	0.035
Kilograms	Pounds	2.205
Metric Tons	Short Tons	1.102
Newton-Meters	Pound-Feet	0.738
Kilopascals	Pounds per Square Inch	0.145
Kilometers per Liter	Miles per Gallon	2.354
Kilometers per Hour	Miles per Hour	0.621



TA089991

Section 7. SHIELD OPERATING HANDLE

4-22. SHIELD OPERATING HANDLE MAINTENANCE PROCEDURE INDEX

Task	Reference (para)
Removal and Disassembly	4-23
Assembly and Installation	4-24

4-23. SHIELD OPERATING HANDLE REMOVAL AND DISASSEMBLY

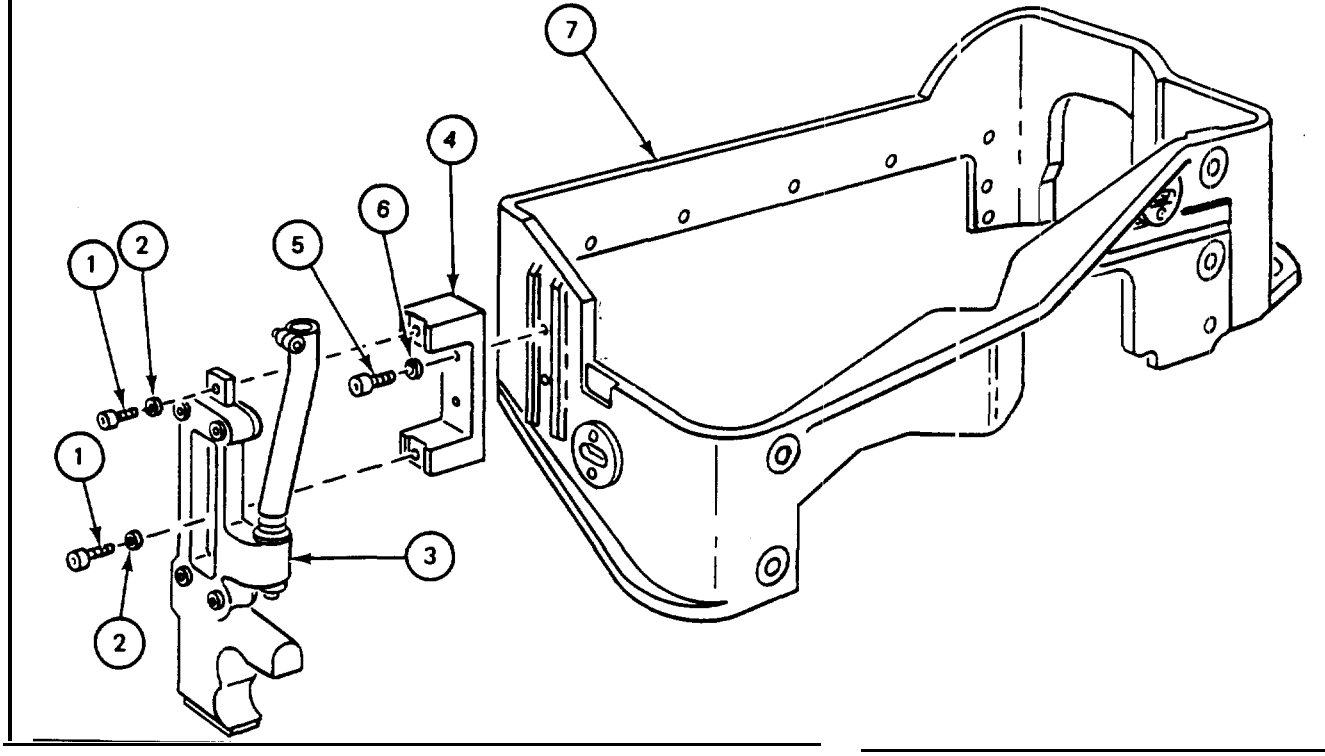
TOOLS: 1/4", 7/32", 5/32" socket head screw key
(Allen wrench or equivalent)
1/2" open end wrench
Soft face hammer

PERSONNEL: One

EQUIPMENT CONDITION: Support on work bench or in tank

FRAME 1

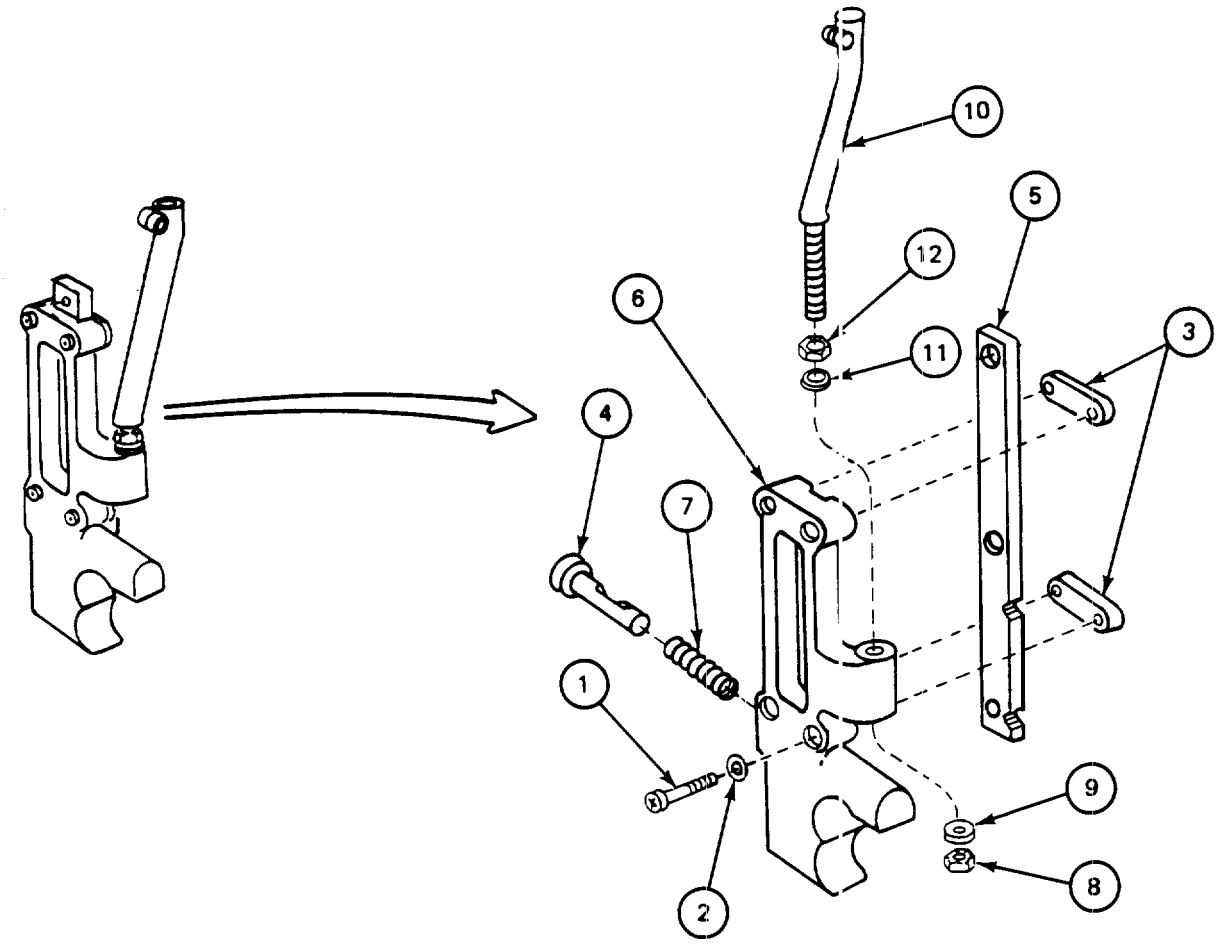
Step	Procedure
1.	Using 7/32" or 1/4" Allen wrench, remove two screws (1) and two washers (2). Lift off handle (3) and attached parts from bracket (4).
	NOTE Bracket may need a slight tap with soft face hammer to separate it from support.
2.	Using 7/32" wrench, remove two screws (5), two washers (6), and bracket (4) from support (7). GO TO FRAME 2



4-23. SHIELD OPERATING HANDLE REMOVAL AND DISASSEMBLY (CONT)

FRAME 2

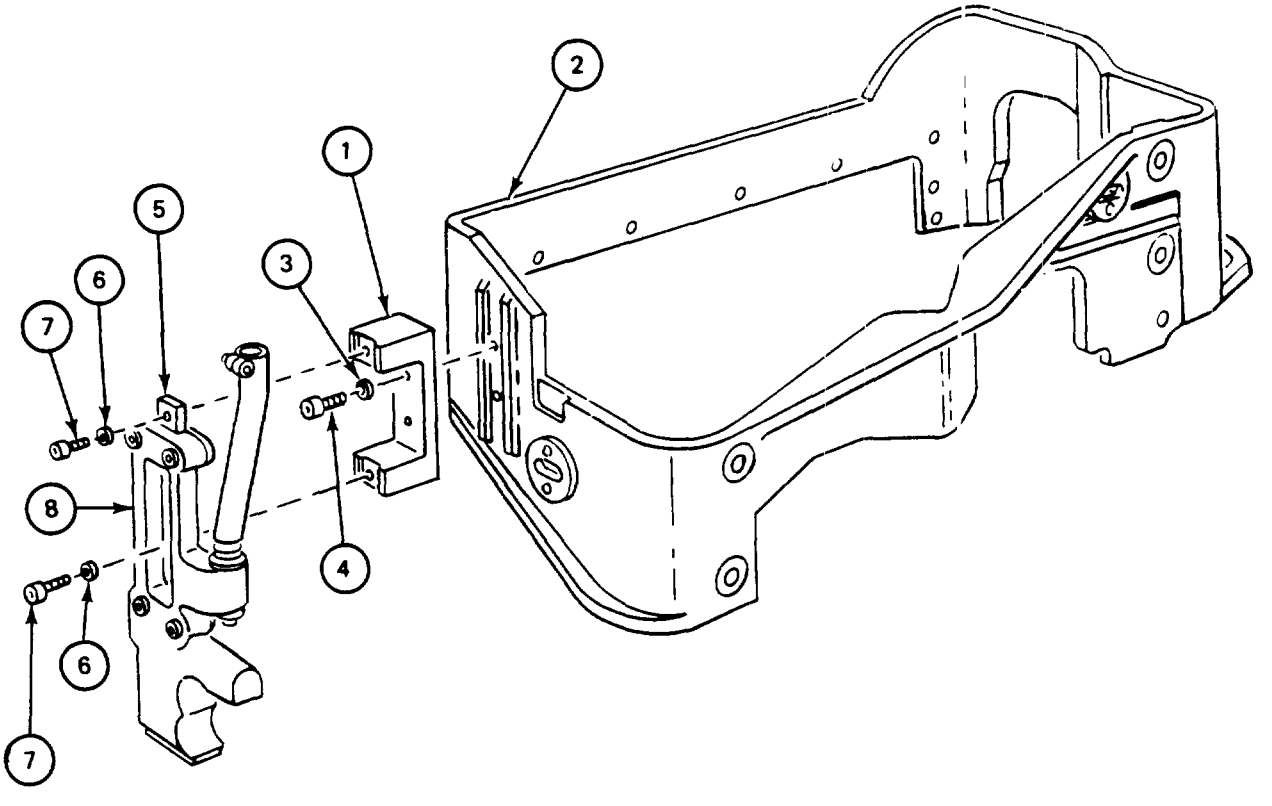
Step	Procedure
1.	Using 5/32" Allen wrench, remove four screws (1), four washers (2), and two retainers (3).
2.	Depress plunger (4) and remove bar (5) from handle (6).
3.	Remove plunger (4) and spring (7).
4.	Using open end wrench, remove nut (8) and washer (9). Lift rod (10) away from handle (6).
5.	Remove washer (11). Using open end wrench, remove nut (12) from rod (10).
	END OF TASK



4-24. SHIELD OPERATING HANDLE ASSEMBLY AND INSTALLATION (CONT)

FRAME 2

Step	Procedure
1.	Place bracket (1) on support (2) and line up holes, key, and key way. Push, or using soft face hammer, gently tap in place.
2.	Using 7/32" or 1 /4" Allen wrench, install two washers (3) and two screws (4) to hold bracket (1) to support (2).
3.	put a small amount of aircraft and instrument grease on bar (5) (JPG).
4.	Using 7/32" or 1 /4" Allen wrench, install two washers (6) and two screws (7) through bars (5) to hold handle (8) to bracket (1).
	NOTE FOLLOW-ON MAINTENANCE Do performance test (Vol I, para 2-2).
	END OF TASK



CHAPTER 5

FINAL INSPECTION

5-1. SCOPE

This chapter gives the final inspection procedure to be done after repairing the M118 and M118E1 Periscope Mounts.

5-2. PERISCOPE MOUNT FINAL INSPECTION

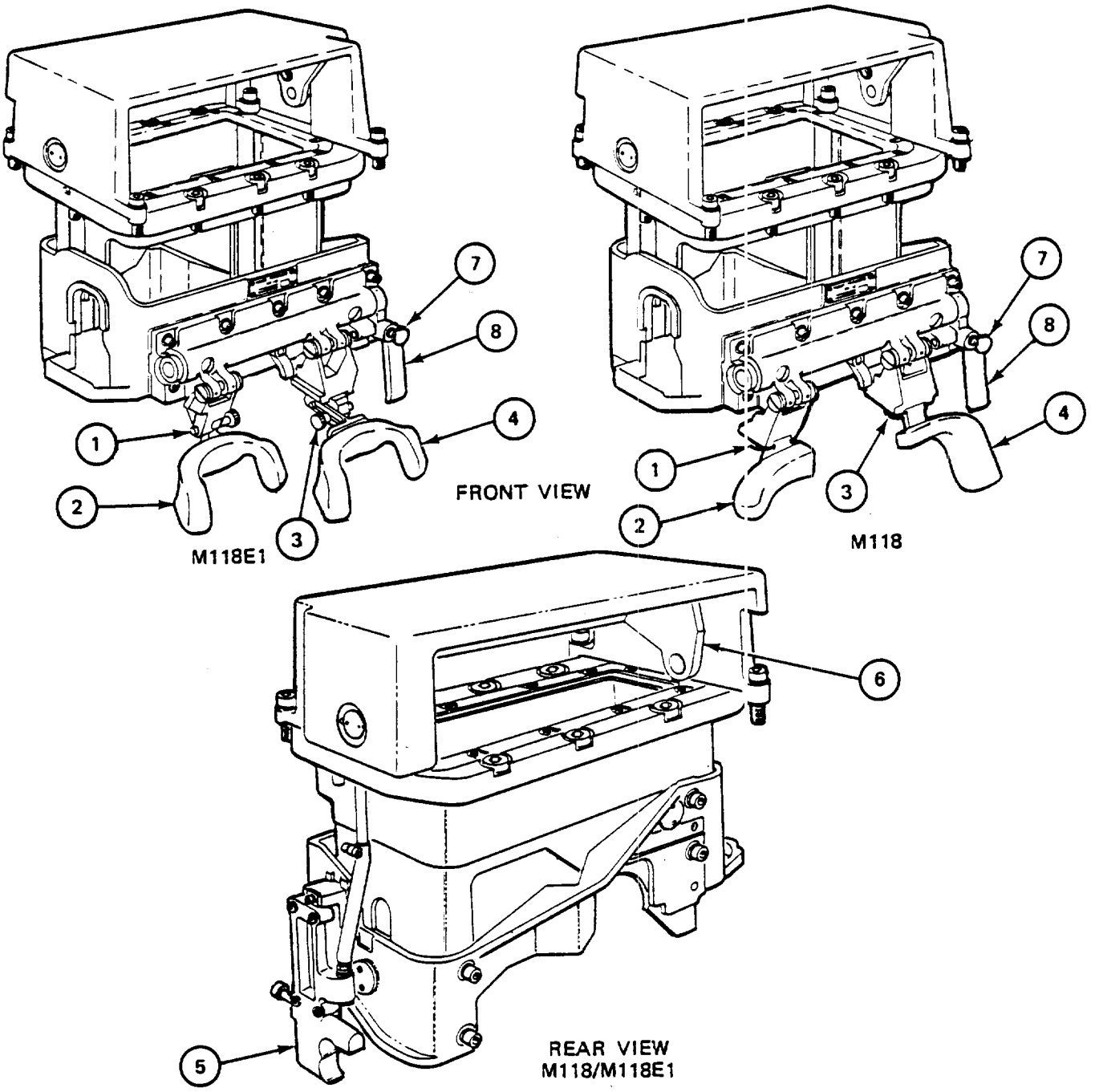
PERSONNEL: One

EQUIPMENT CONDITION: Periscope mount on work bench or in tank

FRAME 1

Step	Procedure
	NOTE If you find a fault, tell your supervisor. If you do not find a fault, send the good periscope mount back into service,
1.	Check that all parts are clean and free from dirt, grease and corrosion.
2.	Loosen left headrest handscrew (1) and check that left headrest assembly (2) is easy to adjust through movement range allowed by long slot in assembly (2).
3.	Loosen right headrest handscrew (3) and check that right headrest assembly (4) is easy to adjust through movement range allowed by slot in assembly (4).
4.	Depress plunger of shield operating handle (5) and check that full up and down movement of handle causes shield (6) to operate through a full range of travel. With shield (6) fully open and then fully closed, check that release of handle plunger (5) locks shield (6) in that position.
5.	Depress plunger (7) and check that lever assembly (8) can turn its shaft freely through its complete range of travel.
6.	Check that lever assembly (8) locks in place when turned upward all the way.
	END OF TASK

5-2. PERISCOPE MOUNT FINAL INSPECTION (CONT)



CHAPTER 6

PACKAGING

6-1. SCOPE

Instructions for packaging the M118 and M118E1 Periscope. Mounts are found in MlL-P-14232/ P8619450A and TM 9-200.

APPENDIX B

MAINTENANCE TASK INDEX

B-1. SCOPE

This appendix helps you find maintenance tasks for the M118 and M118E1 Periscope Mounts. The maintenance tasks are referenced to help you find the procedure.

B-2. MAINTENANCE TASK INDEX

MOUNT, PERISCOPE:
M118 (1240-00-796-9686)
M118E1 (1240-00-348-8446)

NOMENCLATURE	MAINTENANCE TASKS							
	INSPECTION UPON RECEIPT (VOL II)	FINAL INSPECTION (VOL II)	PERFORMANCE TEST (VOL I)	TROUBLESHOOT (VOL I)	REMOVAL/INSTALLATION (VOL II)	DISASSEMBLY/ASSEMBLY (VOL II)	TOOLS AND TEST EQUIPMENT (VOL I/VOL II)	NOTES
M118/M118E1 PERISCOPE MOUNT	Chap 3	Para 5-2	Para 2-2	Chap 2			Para 1-4/ 2-8	
COVER AND SHIELD	Para 3-4				Para 4-4/ 4-7	Para 4-5/ 4-6		
HEADREST ASSEMBLIES					Para 4-15/ 4-16			
MOUNT	Para 3-3				Para 4-12/ 4-13	Para 4-12/ 4-13		
PLATE ASSEMBLY					Para 4-18/ 4-21	Para 4-19/ 4-20		

B-2. MAINTENANCE TASK INDEX (CONT)

MOUNT, PERISCOPE: M118 (1240-00-796-9686) M118E1 (1240-00-348-8446)	MAINTENANCE TASKS							
NOMENCLATURE	INSPECTION UPON RECEIPT (VOL II)	FINAL INSPECTION (VOL II)	PERFORMANCE TEST (VOL I)	TROUBLESHOOT (VOL I)	REMOVAL/INSTALLATION (VOL II)	DISASSEMBLY/ASSEMBLY (VOL II)	TOOLS AND TEST EQUIPMENT (VOL I/VOL II)	NOTES
SHIELD OPERATING HANDLE					Para 4-23/ 4-24	Para 4-23/ 4-24		
SUPPORT	Para 3-5				Para 4-9/ 4-10			

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