TM 9-1240-272-34&P

TECHNICAL MANUAL

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

VOLUME I - TROUBLESHOOTING
VOLUME II - MAINTENANCE

MOUNT, PERISCOPE: M119 (1240-00-394-3148) M119E1 (1240-00-394-3149)

VOLUME I – TROUBLESHOOTING

CHAPTER 1 INTRODUCTION 1-1

CHAPTER 2 TROUBLESHOOTING 2-1

VOLUME II – MAINTENANCE

CHAPTER 1 INTRODUCTION 1-1

CHAPTER 2 GENERAL MAINTENANCE INFORMATION 2-1

CHAPTER 3 INSPECTION UPON RECEIPT 3-1

CHAPTER 4 MAINTENANCE PROCEDURES 4-1

CHAPTER 5 FINAL INSPECTION 5-1

CHAPTER 6 PACKAGING 6-1

APPENDIX A EXPENDABLE SUPPLIES AND MATERIALS LIST A-1

APPENDIX B MAINTENANCE TASK INDEX B-1

APPENDIX C FABRICATED TOOL C-1

APPENDIX D REPAIR PARTS AND SPECIAL TOOLS LIST D-1

HEADQUARTERS, DEPARTMENT OF THE ARMY

INSERT LATEST CHANGED PAGES. DESTROY SUPERSEDED PAGES.

LIST OF EFFECTIVE PAGES

NOTE: The portions of the text affected by the changes are indicated 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 and changed pages are:
ORIGINAL . . . . 0 . . .

TOTAL NUMBER OF PAGES IN THIS PUBLICATION IS 136 CONSISTING OF THE FOLLOWING:

Page No.	*Change No.
Cover	0
Blank	0
A	0
B Blank	0
i - v	0
vi Blank	0
VOLUME 1 TROUBLESHOOTING	
Title	0
Reverse Blank	0
1-1 - 1-3	0
1-4 Blank	0
2-1 - 2-3	0
2-4 Blank	0
VOLUME II MAINTENANCE	
Title	0
Reverse Blank	0
1-1 - 1-4	0
2-1	0
2-2 Blank	0
3-1 - 3-9	0
3-10 Balank	0
4-1 - 4-25	0
4-26 Blank	0
4-27	0
4-30 Blank	0
4-31 - 4-51	0
4-52 Blank	0
4-53 - 4-57	0
4-58 Blank	0
5-1 - 5-9	0
5-10 Blank	0
6-1	0
6-2 Blank	0
A-1 - A-2	0
B-1 - B-2	0
C-1	0
C-2 Blank	0
D-1 - D-5	0
D-6 Blank	0
D-7 - D-15	0
D-16 Blank	0
D-17	0
D-18 Blank	0
D-19 - D-20	0
Metric Conversion Chart	0
Cover	0

Technical Manual
No. TM 9-1240-272-34&P

HEADQUARTERS,
DEPARTMENT OF THE ARMY
Washington, D.C.,

TECHNICAL MANUAL

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

MOUNT, PERISCOPE:
M119 (1240-00-394-3148)
M119E1 (1240-00-394-3149)

Current as of 16 August 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 U.S. Army Armament, Munitions and Chemical Command ATTN: DRSMC-MAS (R) Rock Island, IL 61299 A reply will be furnished to you.

*This manual supersedes the DS/GS portion of TM 9-1240-272-35, April 1964 and TM 9-1240-272-35P, October 1970, including all changes.

TABLE OF CONTENTS

		Paragraph	Page
HOW TO USE THIS MANUAL			v
	VOLUME I TROUBLESHOOTING		
CHAPTER 1.	INTRODUCTION		1-1
	Scope	1-1	1-1
	Organization	1-2	1-1
	How to Troubleshoot	1-3	1-2
CHAPTER 2.	TROUBLESHOOTING		2-1
	Scope	2-1	2-1
	Performance Test	2-2	2-1
	VOLUME II MAINTENANCE		
CHAPTER 1.	INTRODUCTION		1-1
Section 1.	General		1-1
	Scope	1-1	1-1
	Organization	1-2	1-1
Section 2.	Description and Data		1-2
	Description	1-3	1-2
	Tabulated Data	1-4	1-2
	Differences Between Configurations	1-5	1-4
CHAPTER 2.	GENERAL MAINTENANCE INFORMATION		2-1
Section 1.	General		2-1
	Scope	2-1	2-1
Section 2.	Reference Documents		2-1
	General Maintenance	2-2	2-1
	Cleaning	2-3	2-1
	Painting	2-4	2-1
	Sealing	2-5	2-1
Section 3.	Safety Procedures		2-1
	General Procedure	2-6	2-1
CHAPTER 3.	INSPECTION UPON RECEIPT		3-1
	Scope	3-1	3-1
	Inspection Upon Receipt	3-2	3-2
CHAPTER 4.	MAINTENANCE PROCEDURES		4-1
Section 1.	General		4-1
	Scope	4-1	4-1
	List of Periscope Mount Items Contained in This Chapter	4-2	4-1

		Paragraph	Page
Section 2.	Handle Assembly		4-2
	Handle Assembly Maintenance Procedures Index	4-3	4-2
	Handle Assembly Removal	4-4	4-3
	Handle Assembly Disassembly	4-5	4-4
	Handle Assembly Assembly	4-6	4-6
	Handle Assembly Installation	4-7	4-9
Section 3.	Cover Assembly		4-11
	Cover Assembly Maintenance Procedures Index	4-8	4-11
	Cover Assembly Removal	4-9	4-12
	Cover Assembly Disassembly	4-10	4-13
	Cover Assembly Assembly	4-11	4-19
	Cover Assembly Installation	4-12	4-28
Section 4.	Right Headrest Assembly		4-31
	Right Headrest Assembly Maintenance Procedures Index	4-13	4-31
	Right Headrest Assembly Removal	4-14	4-32
	Right Headrest Assembly Disassembly	4-15	4-36
	Right Headrest Assembly Assembly.	4-16	4-40
	Right Headrest Assembly Installation	4-17	4-44
Section 5.	Left Headrest Assembly		4-49
	Left Headrest Assembly Maintenance Procedures Index	4-18	4-49
	Left Headrest Assembly Removal	4-19	4-50
	Left Headrest Assembly Disassembly	4-20	4-53
	Left Headrest Assembly Assembly	4-21	4-54
	Left Headrest Assembly Installation	4-22	4-56
CHAPTER 5.	FINAL INSPECTION		5-1
	Scope	5-1	5-1
	Final Adjustment	5-2	5-2
	Periscope Mount Final Inspection.	5-3	5-6
CHAPTER 6.	PACKAGING		6-1
	Scope	6-1	6-1

		Paragraph	Page	Figure
APPENDIX A.	EXPENDABLE SUPPLIES AND MATERIALS LIST		A-1	
Section 1.	Introduction		A-1	
	Scope	A-1	A-1	
	Explanation of Columns	A-2	A-1	
Section 2.	Expendable Supplies and Materials		A-2	
APPENDIX B.	MAINTENANCE TASK INDEX		B-1	
	Scope	B-1	B-1	
	Maintenance Task Index	B-2	B-2	
APPENDIX C.	FABRICATED TOOL		C-1	
	Scope	C-1	C-1	
	Specifications	C-2	C-1	
	Fabricated Tool Diagram	C-3	C-1	
APPENDIX D.	DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST..		D-1	
Section I.	Introduction		D-1	
Section II.	Repair Parts List		D-7	
Group 00	M119 and M119E1 Periscope Mount 8619585		D-9	1
0001	Handle Assembly 8620027		D-11	2
0002	Cover Assembly 8620028		D-13	3
0003	Headrest Assembly, M119 8619420 and M119E1 11727445 (right)		D-15	4
0004	Headrest Assembly 861942 (left)		D-17	5
Section III.	Special Tools List (Non Applicable)		D-19	
Section IV.	National stock Number and Part Number Index		D-21	

HOW TO USE THIS MANUAL

This manual has two volumes of maintenance information you will need to repair and service the M119 and M119E1 Periscope Mounts.

- Volume I - Troubleshooting
- Volume II - 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 41C) which helps you to develop skills in doing the maintenance tasks.

TECHNICAL MANUAL

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

VOLUME I - TROUBLESHOOTING

MOUNT, PERISCOPE: Ml19/Ml19E1

CHAPTER 1

INTRODUCTION

1-1. SCOPE

This volume contains troubleshooting requirements for direct support and general support (DS/GS) maintenance of the M119 and M119E1 Periscope Mounts. See Volume II for maintenance procedures.

1-2. ORGANIZATION

All troubleshooting requirements for checking out the M119 and M119E1 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 II, 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.

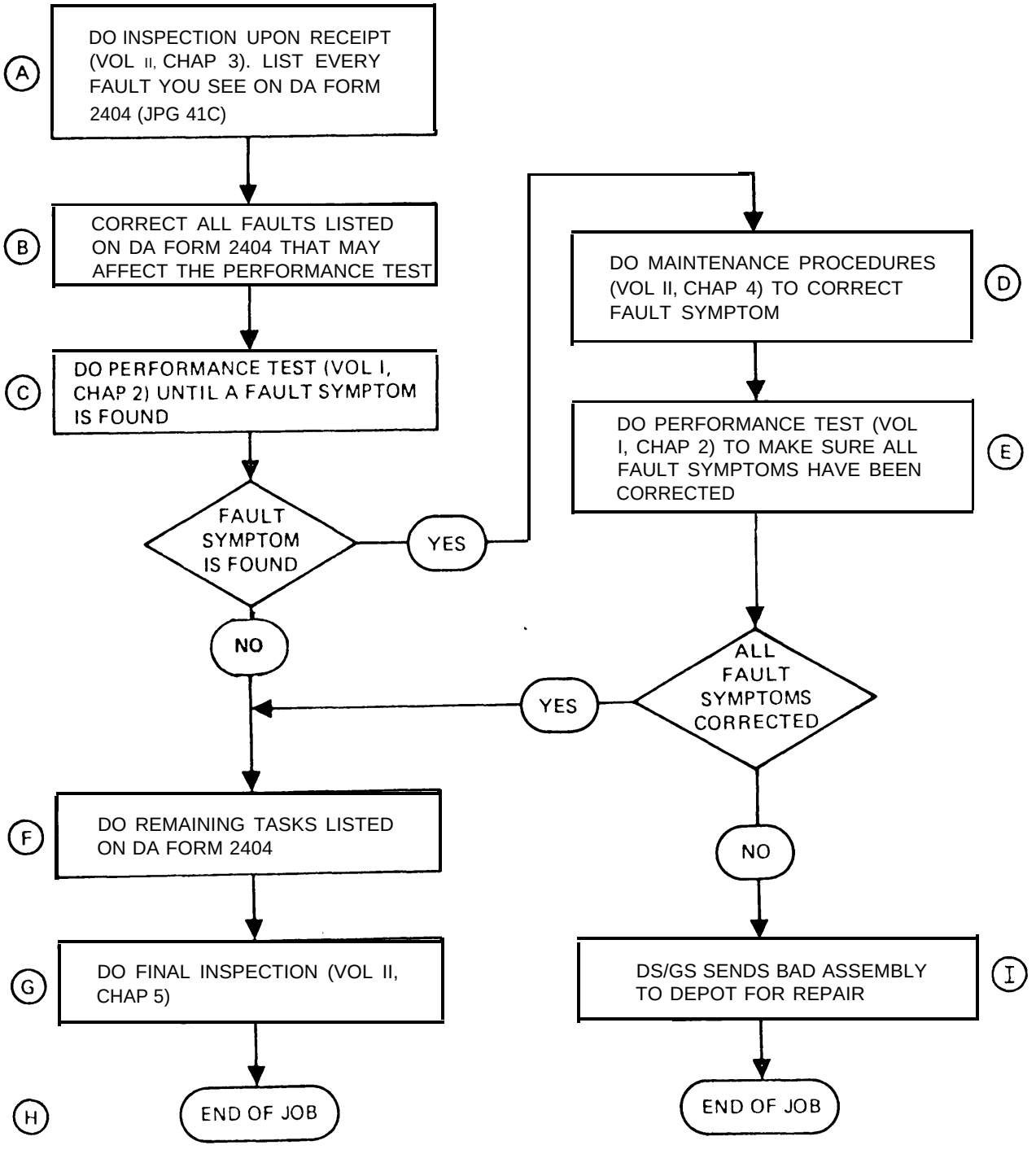
(F) If all the faults are now corrected, do the remaining maintenance tasks on DA Form 2404.

(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 fault symptoms were not corrected after step E, the bad assembly is sent back to the depot for repair.

1-3. HOW TO TROUBLESHOOT (CONT)



CHAPTER 2

TROUBLESHOOTING

2-1. SCOPE

Troubleshooting of the M119 and M119E1 Periscope Mounts is done by following the performance test in this chapter. If you find a symptom, look in the maintenance action column to find out what to do to correct it.

2-2. PERFORMANCE TEST

PERSONNEL: One

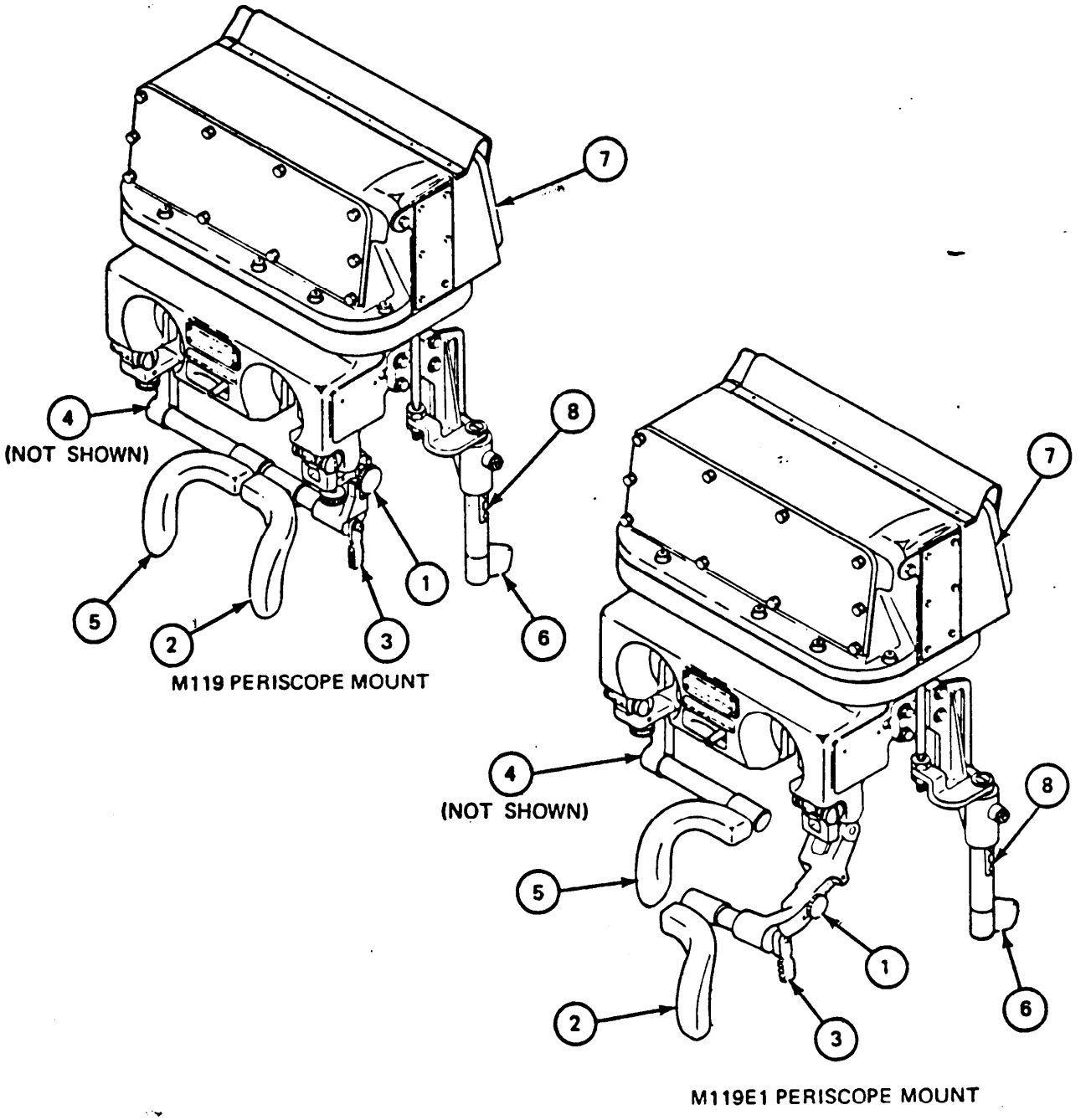
EQUIPMENT CONDITION: Periscope mount on work bench or in vehicle

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 thumbscrew (1) and check that right headrest (2) can be moved up and down.	Right headrest does not move.	Replace bent or broken parts (Vol II, para 4-13).
2.	Push back on lever (3) and check that right headrest (2) moves from left to right.	Right headrest does not move.	Replace bent or broken parts (Vol II, para 4-13).
3.	Push back on lever (4). and check that left headrest (5) moves from right to left.	Left headrest does not move.	Replace bent or broken parts (Vol II, para 4-18).
4.	Turn handle (6) clockwise and open shield (7) by pushing handle as far up as it will go.	Shield does not open.	Replace bent or broken parts (Vol II, para 4-3).
5.	Turn handle (6) counterclockwise and check that shield (7) locks in six different positions and hooks into slots (8).	Shield does not lock.	Replace bent or broken parts (Vol II, para 4-3).
	NOTE FOLLOW-ON MAINTENANCE Correct remaining faults listed on DA Form 2404. Do final adjustment (Vol II, para 5-2). Do final inspection (Vol II, para 5-3). END OF TASK		

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: Ml19/Ml19E1

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 M119 and M119E1 Periscope Mounts. See Volume I for troubleshooting procedures.

1-2. ORGANIZATION

a. Chapter 2, General Maintenance Information, lists the maintenance items 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 rcturned 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 M119 and M119E1 Periscope Mounts for storage or shipment.

f. Appendix A, Expendable Supplies and Materials, 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, Fabricated Tool, gives you specifications and a diagram for the fabricated tool used in two of the maintenance procedures.

i. Appendix D, 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 M119 Periscope Mount is used to hold and support the M32 or M36 periscope, and the M119E1 Periscope Mount is used for the M32E1 or M36E1 periscope. The periscope mount is made up of four main parts: mount, cover assembly, handle assembly, and headrest assemblies.

MOUNT. The mount is a steel casting which fits into the tank turret. The periscope is installed within the mount.

COVER ASSEMBLY. The cover assembly is an armored steel casting that is bolted to the top of the mount. The cover's shield can be raised for sighting the target, or closed for protection.

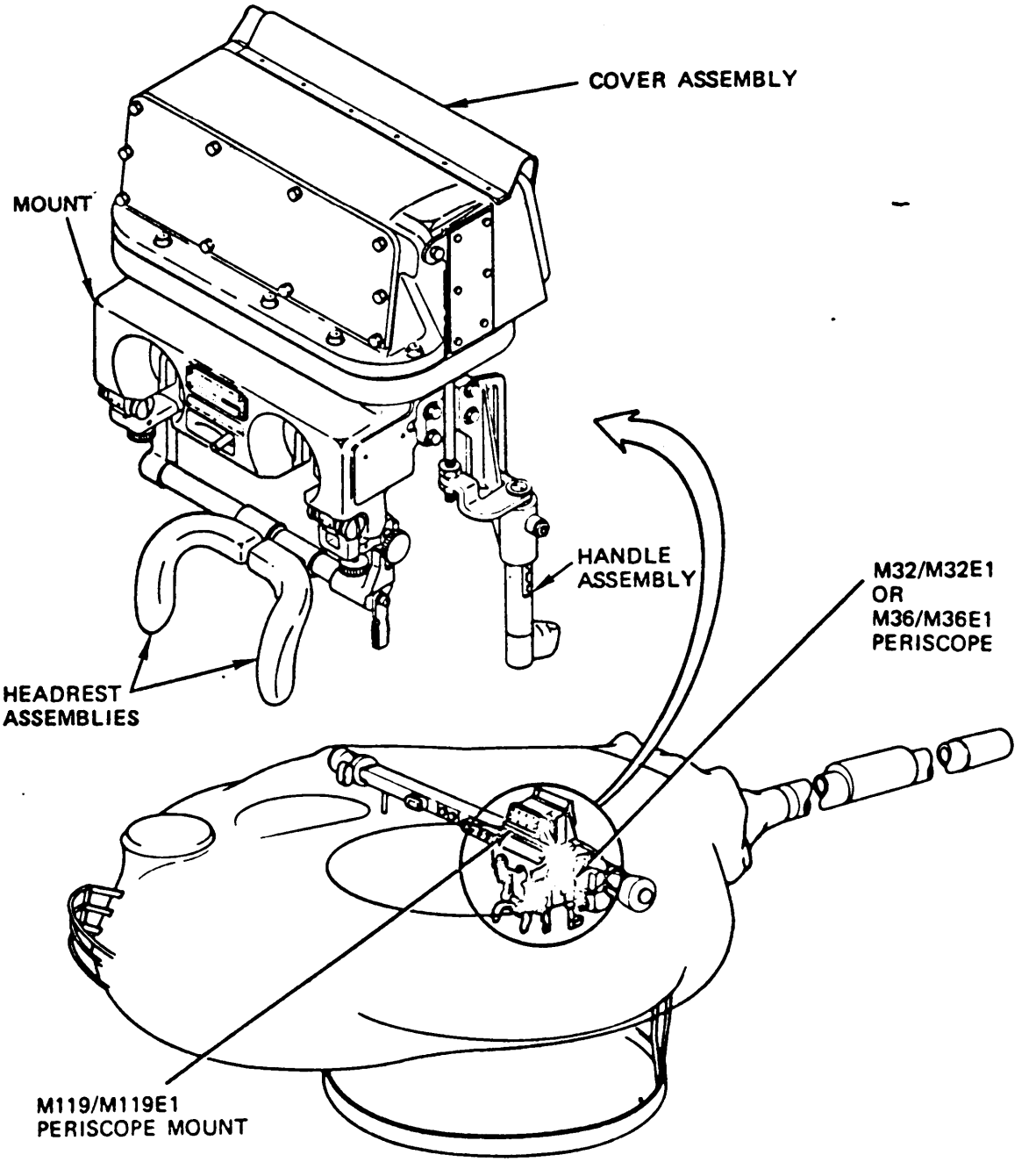
HANDLE ASSEMBLY. The handle assembly is the operating control for opening and closing the shield. It consists of a handle and a detent mechanism.

HEADREST ASSEMBLIES. The headrest assemblies are used to accommodate the eyepieces of either the M32/M32E1 or M36/M36E1 periscope. They may be rotated out of the way for installation of the periscope, or locked into place for a selected position.

1-4. TABULATED DATA

Height	16 3/4 inches
Width	15 3/4 inches
Depth	10 3/4 inches
Weight	12 1/2 pounds

1-4. TABULATED DATA (CONT)



1-5. DIFFERENCES BETWEEN CONFIGURATIONS

There is very little difference between the M119 and M119E1 Periscope Mounts, as shown below. When needed for doing a task, the applicable configuration will be given in the maintenance procedures. The differences between the configurations are:

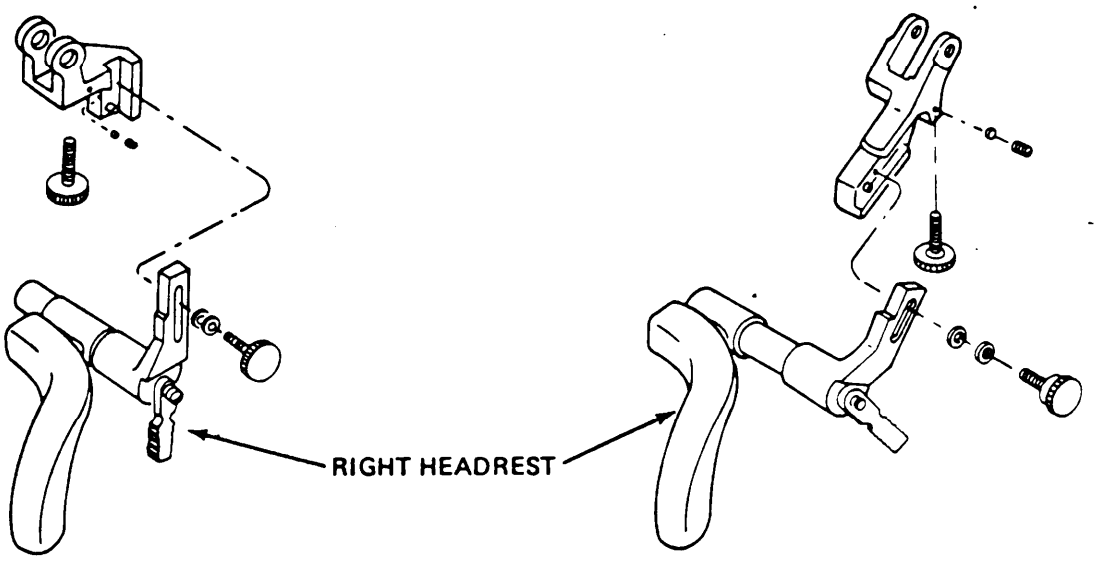
Ml19E1 configuration:

1) The arm holding the right headrest assembly to the mount is extended for night vision.

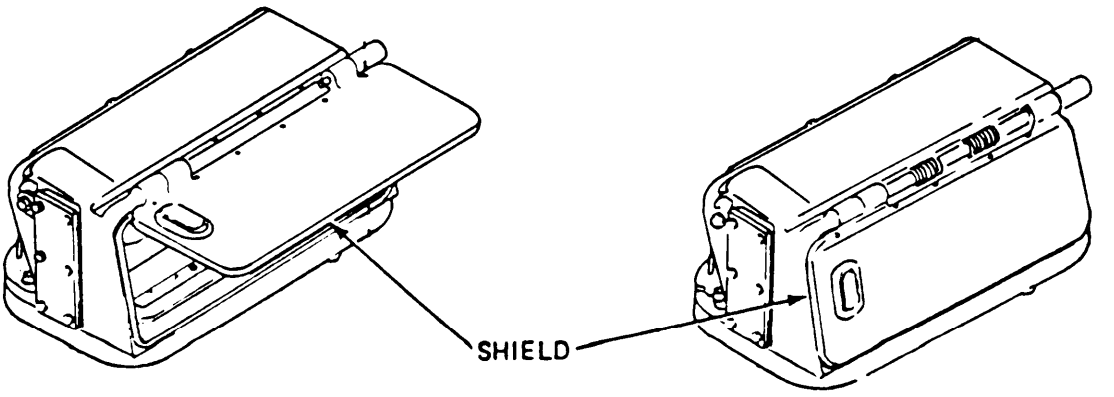
2) The right headrest assembly requires final adjustment following maintenance procedures.

3) A spring cable retention wire has been added to the cover.

4) The identification plate reads M119E1.



M119 M119E1



CHAPTER 2

GENERAL MAINTENANCE INFORMATION

Section 1. GENERAL

2-1. SCOPE

This chapter tells you where to find general maintenance information for the M119 and M119E1 Periscope Mounts.

Section 2. REFERENCE DOCUMENTS

2-2. GENERAL MAINTENANCE

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

2-3. CLEANING

General cleaning procedures are in JPG 41C.

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 41C.

Section 3. SAFETY PROCEDURES

2-6. GENERAL PROCEDURE

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

CHAPTER 3

INSPECTION UPON RECEIPT

3-1. SCOPE

This chapter gives procedures to check the M119 and M119E1 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. INSPECTION UPON RECEIPT

TOOLS: 3/8", two 7/16", and 9/16" open end wrench
3/16", 1/8", 1/4" and 3/8" flat tip screwdriver
1/4" and 5/64" socket head screw key (Allen wrench or equivalent)

SUPPLIES:" Paint (item 2, App A)

PERSONNEL: One

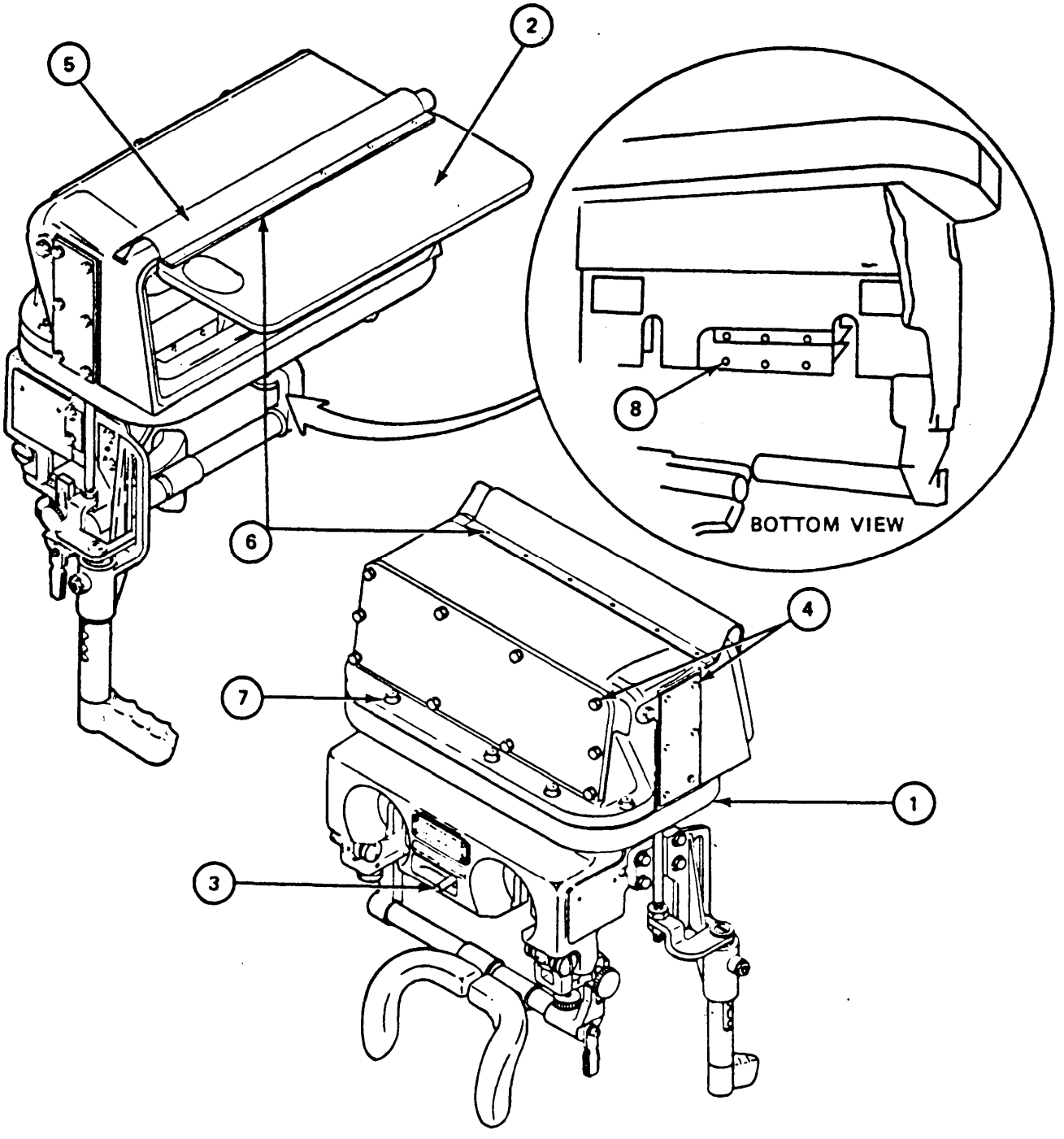
REFERENCES: TM 9-43-0139 for painting periscope mount
JPG 41C for completing DA Form 2404

EQUIPMENT CONDITION: Periscope mount on work bench or in vehicle

FRAME 1

Step	Procedure	Maintenance Action	Reference
1.	Clean exterior of periscope mount (1) and check for cracks or dents.	If cracks or dents are found, tell your supervisor.	. . .
2.	Check shield assembly (2) for cracks.	If shield assembly is cracked, replace.	Para 4-8
3.	Check that latch (3) is not missing and is spring-loaded.	If latch is missing or is not spring-loaded, send mount to depot for repair.	. . .
4.	Check periscope mount (1) for chipped paint and scratches.	Paint chipped or scratched area.	TM 43-0139
5.	Using 7/16" open end wrench, check that 16 screws (4) are tight.	Tighten. Replace if missing.	. . .
6.	Check that cover (5) is not torn or missing.	Replace torn or missing cover.	Para 4-8
7.	Using 1/4" flat tip screwdriver, check that 12 screws (6) are tight.	Tighten. Replace if missing.	. . .
8.	Using 1/4" Allen wrench, check that nine screws (7) are tight.	Tighten. Replace if missing.	. . .
9.	Using 3/16" flat tip screwdriver, check that six screws (8) are tight. GO TO FRAME 2	Tighten. Replace if missing.	. . .

3-2. INSPECTION UPON RECEIPT (CONT)

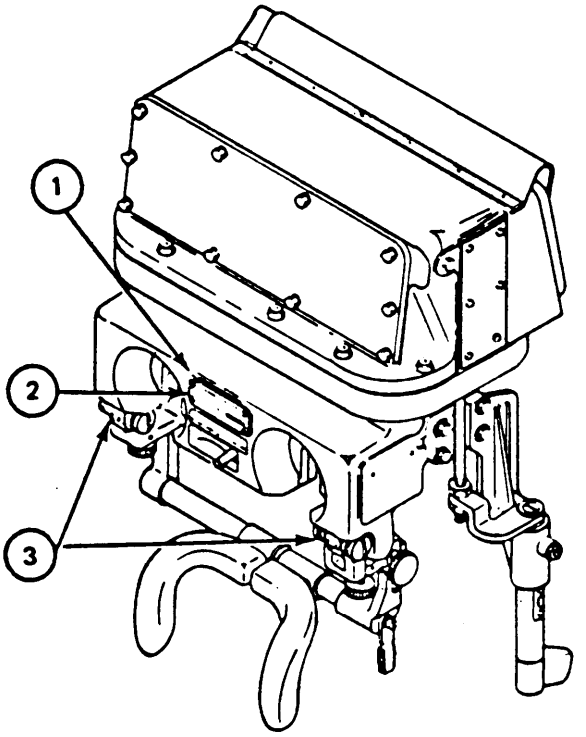


3-2. INSPECTION UPON RECEIPT (CONT)

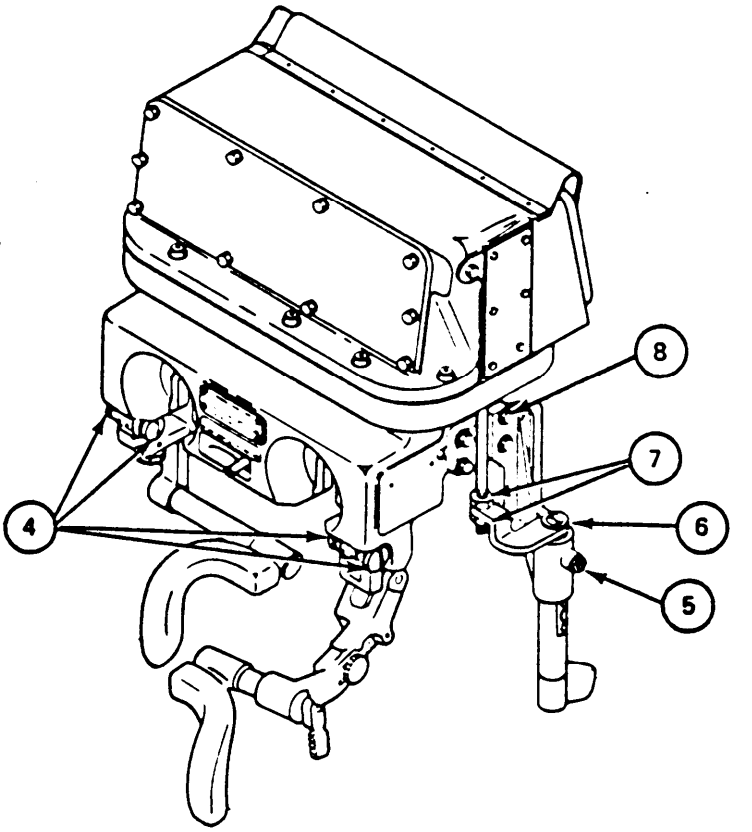
FRAME 2

Step	Procedure	Maintenance Action	Reference
1.	Using 3/16" flat tip screwdriver, check that four screws (1) are tight.	Tighten. Replace if missing.	. . .
2.	Check that identification plate (2) can be read.	If plate cannot be read, tell your supervisor.	. . .
3.	Using 1/8" flat tip screwdriver, check that four screws (3) are tight.	Tighten. Replace if missing.	. . .
4.	Using 3/8" flat tip screwdriver, check that four screws (4) are tight.	Tighten. Replace if missing.	Para 4-13 and 4-18
5.	Using 9/16" open end wrench, check that nut (5) is tight.	Tighten. Replace if missing.	. . .
6.	Using 1/4" Allen wrench, check that screw (6) is tight.	Tighten. Replace if missing.	. . .
7.	Using 9/16" open end wrench, check that two nuts (7) are tight.	Tighten. Replace if missing.	. . .
8.	Using 7/16" open end wrench, check that four screws (8) are tight. GO TO FRAME 3	Tighten. Replace if missing.	. . .

3-2. INSPECTION UPON RECEIPT (CONT)



M119 PERISCOPE MOUNT



M119E1 PERISCOPE MOUNT

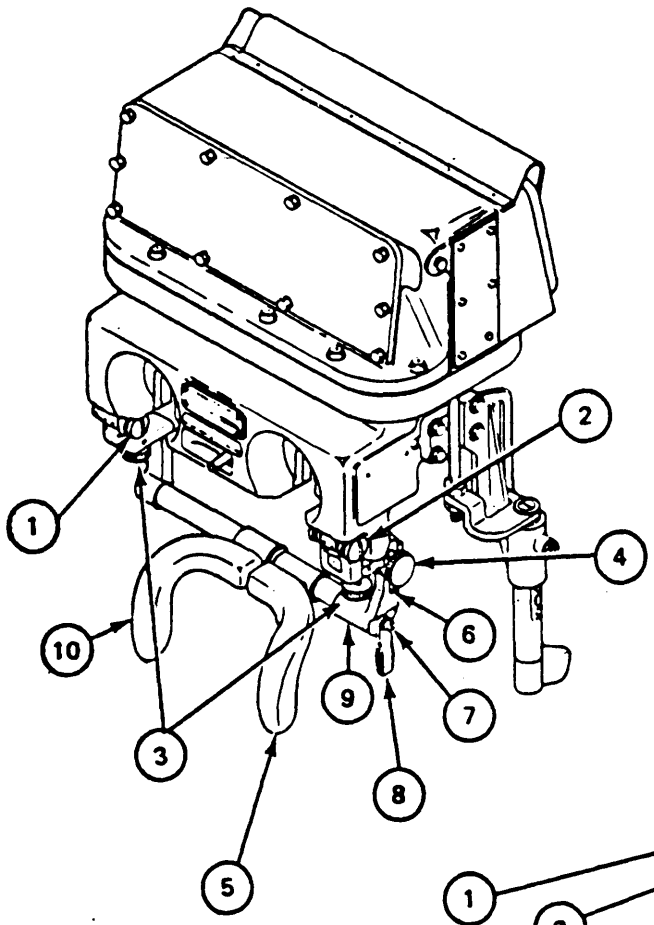
3-2. INSPECTION UPON RECEIPT (CONT)

FRAME 3

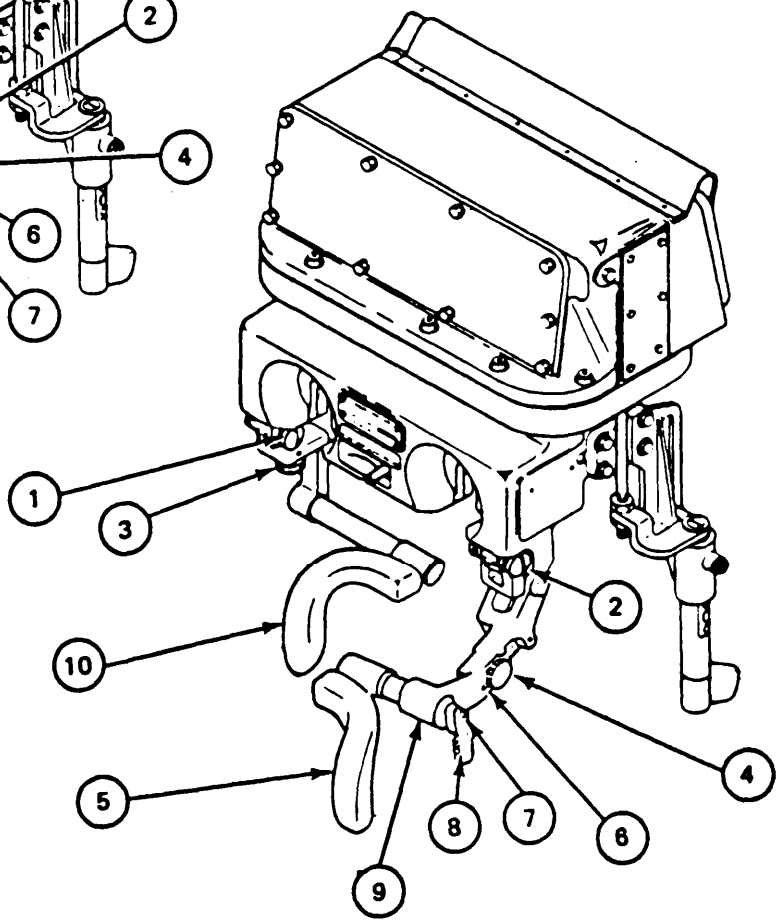
Step	Procedure	Maintenance Action	Reference
1.	Using 5/64" Allen wrench, check that two screws (1) and (2) are tight.	Tighten. Replace if missing.	. . .
2.	Check that two thumbscrews (3) on M119 configuration and one thumbscrew (3) on M119E1 configuration are tight.	Tighten. Replace if missing.	Para 4-13 and 4-18
3.	Loosen thumbscrew (4) and check that right headrest (5) can be moved through the movement range allowed by slot (6).	Replace bent or broken parts.	Para 4-13
4.	Using 1/4" flat tip screwdriver, check that screw (7) is tight.	Tighten. Replace if missing.	. . .
5.	Place lever (8) in center position and check that right headrest (5) moves from left to right.	Replace bent or broken parts.	Para 4-13
6.	Place lever (8) in lock (up or down) position and check that right headrest (5) is firmly secured to shaft (9).	Send periscope mount to depot for repair.	. . .
7.	Repeat steps 5 and 6 to check that left headrest (10) moves from right to left. GO TO FRAME 4	Replace bent or broken parts.	Para 4-18

3-2. INSPECTION UPON RECEIPT (CONT)

M119 PERISCOPE MOUNT



M119E1 PERISCOPE MOUNT

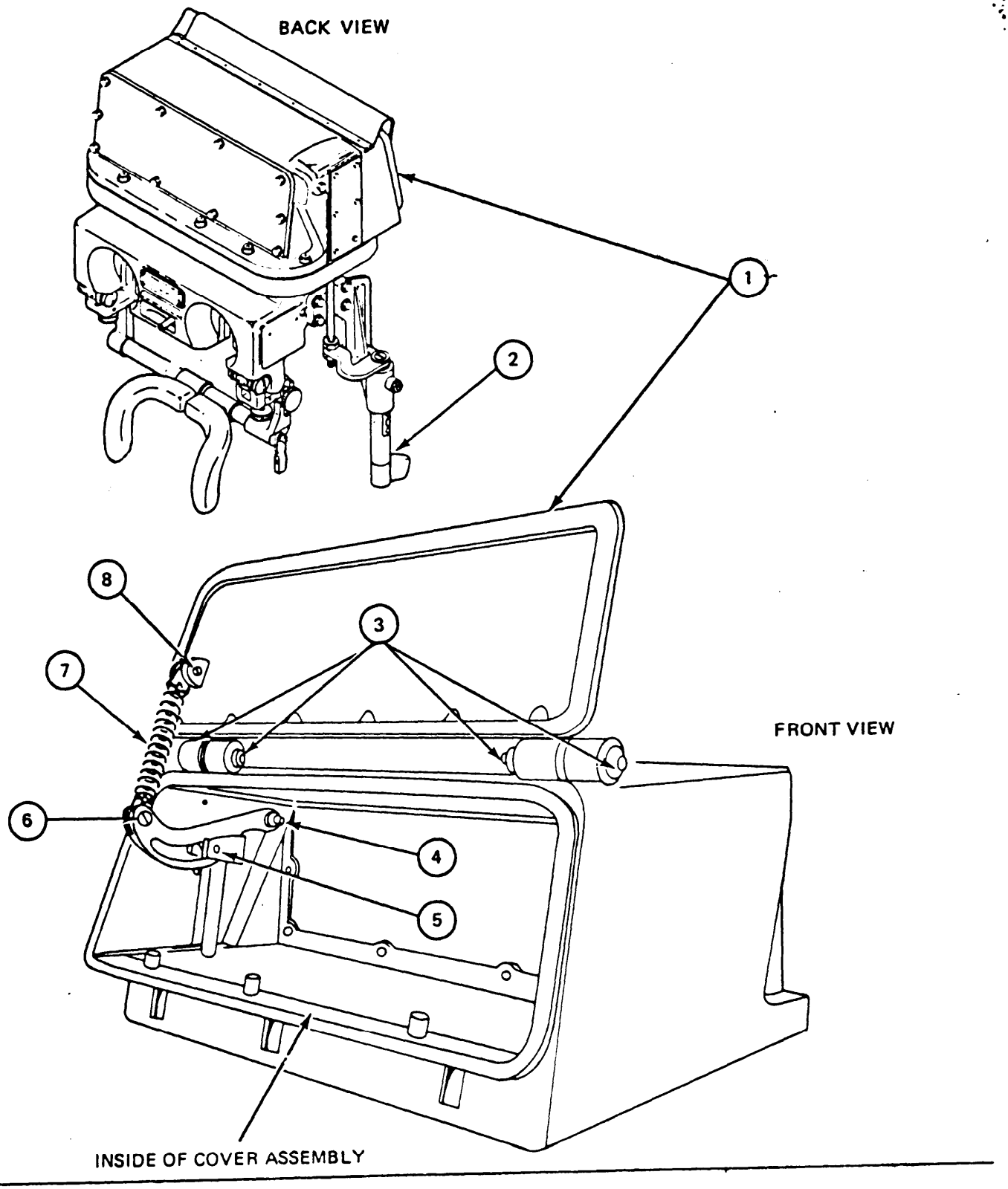


3-2. INSPECTION UPON RECEIPT (CONT)

FRAME 4

Step	Procedure	Maintenance Action	Reference
1.	Open shield (1) fully by raising handle (2).	. . .	. . .
2.	Check that two pins (3) are complete with four washers and four cotter pins.	Replace missing parts.	Para 4-3
3.	Using two 7/16" open end wrenches, check that nut (4) is tight.	Tighten. Replace if missing.	. . .
4.	Using 1/4" flat tip screwdriver and 3/8" open end wrench, check that screw (5) is tight.	Tighten. Replace if missing.	. . .
5.	Using 3/8" flat tip screwdriver, check that screw (6) is tight.	Tighten. Replace if missing.	. . .
6.	Check that spring (7) is not broken or missing.	Replace missing or broken spring.	Para 4-3
7.	Using 1/4" flat tip screwdriver, check that screw (8) is tight.	Tighten. Replace if 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		

3-2. INSPECTION UPON RECEIPT (CONT)



Para 3-2 Cont

CHAPTER 4
MAINTENANCE PROCEDURES

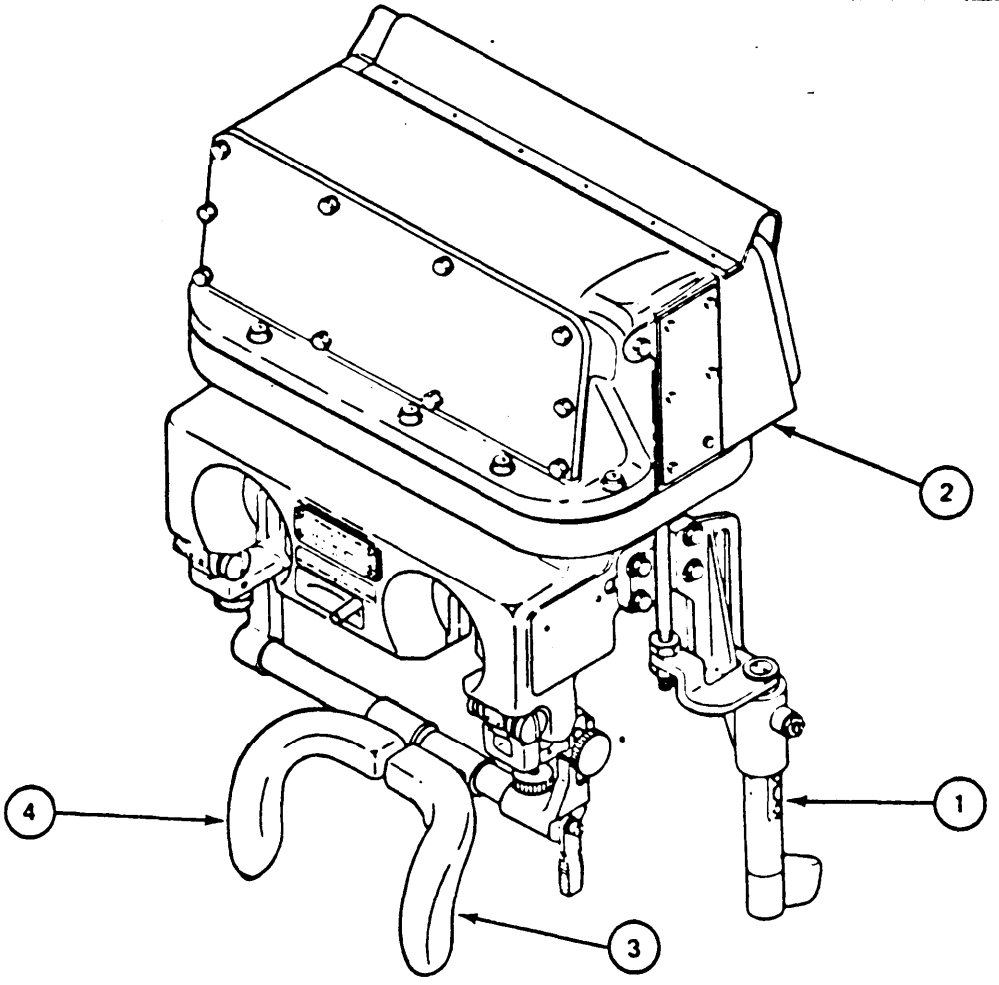
Section 1. GENERAL

4-1. SCOPE

This chapter gives maintenance procedures for the M119 and M119E1 Periscope Mounts.

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

Item	Figure Index No.	Reference (para)
Handle Assembly	1	4-3
Cover Assembly	2	4-8
Right Headrest Assembly	3	4-13
Left Headrest Assembly	4	4-18



Section 2. HANDLE ASSEMBLY

4-3. HANDLE ASSEMBLY MAINTENANCE PROCEDURES INDEX

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

4-4. HANDLE ASSEMBLY REMOVAL

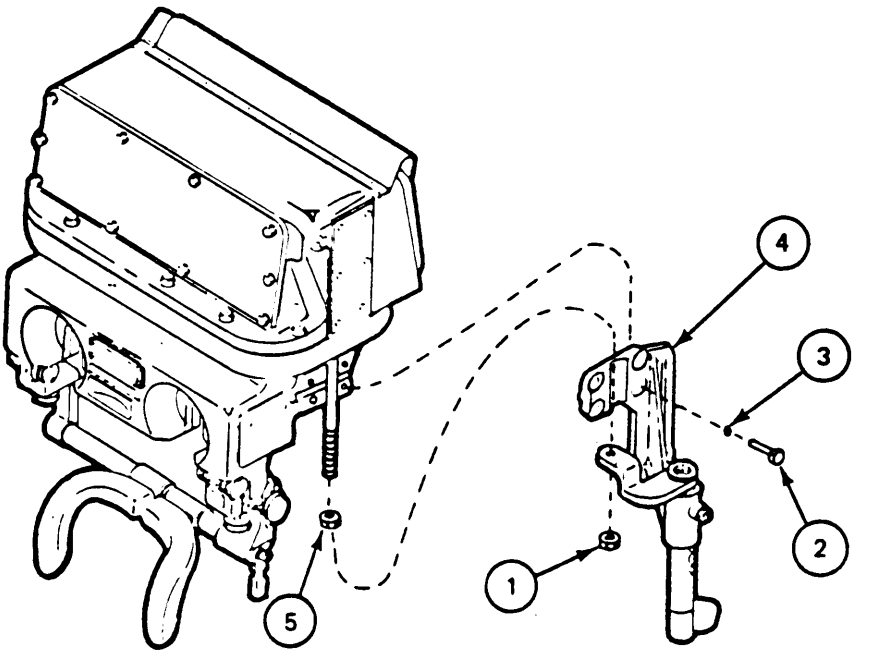
TOOLS: 7/16" and 9/16" open end wrench

PERSONNEL: One

EQUIPMENT CONDITION: Periscope mount on work bench or in vehicle

FRAME 1

Step	Procedure
1.	Using 9/16" open end wrench, remove lower nut (1).
2.	Using 7/16" open end wrench, remove four screws (2), four lockwashers (3), and handle assembly (4).
3.	Using 9/16" open end wrench, remove upper nut (5).
	END OF TASK



4-5 HANDLE ASSEMBLY DISASSEMBLY

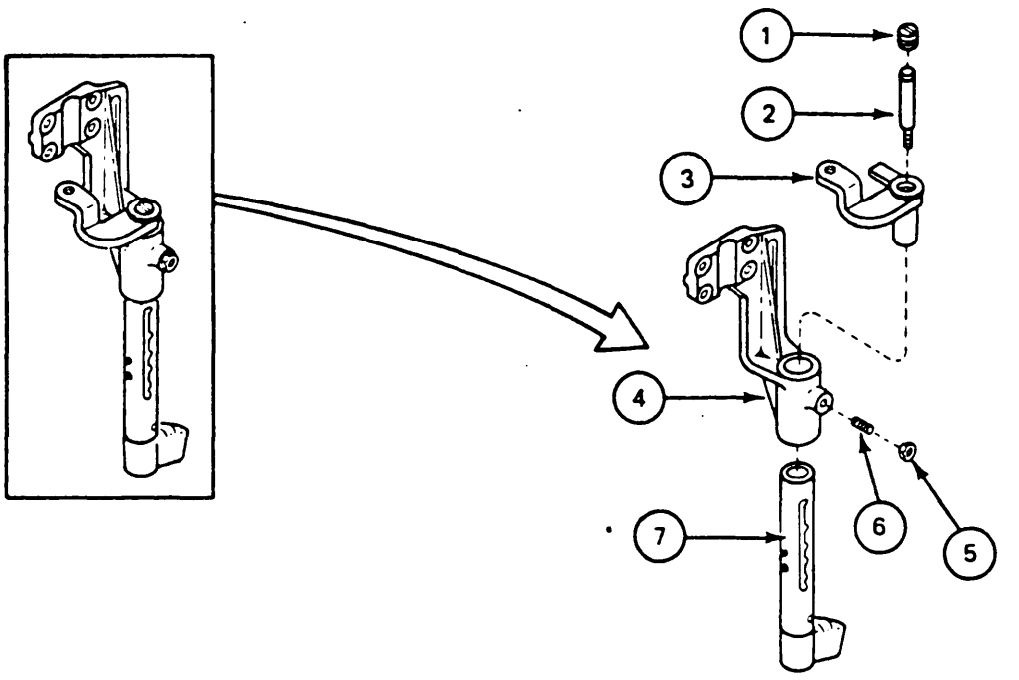
TOOLS: 1/4" flat tip screwdriver
9/16" open end wrench
1/16" and 1/4" socket head screw key (Allen wrench or equivalent)

PERSONNEL: One

EQUIPMENT CONDITION: Handle assembly on work bench or in vehicle

FRAME 1

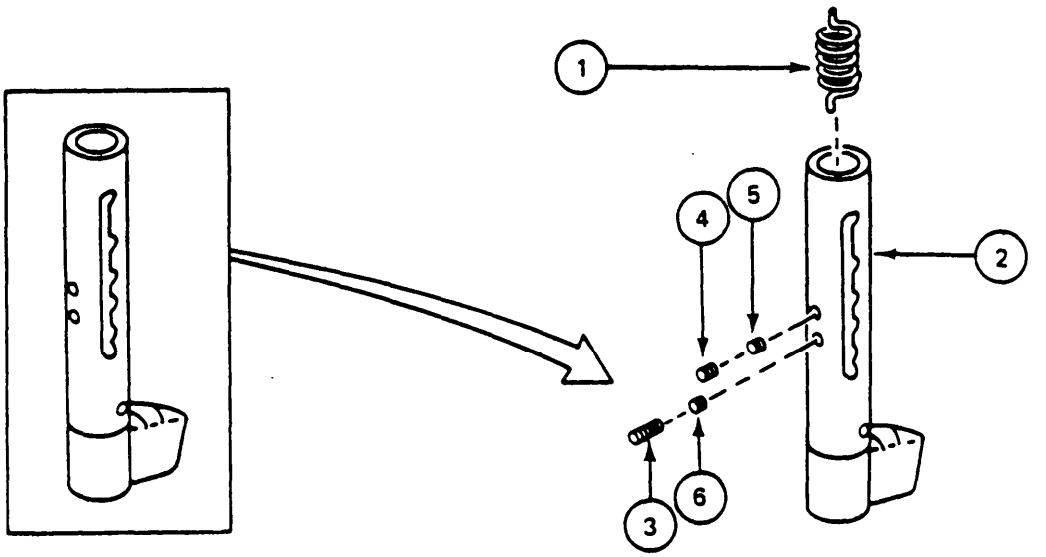
Step	Procedure
1.	Using 1/4" Allen wrench, remove setscrew (1).
2.	Using screwdriver, unscrew screw (2).
3.	Lift plate (3) out of support (4) and remove screw (2) from plate (3).
4.	Using open end wrench, remove nut (5).
5.	Using screwdriver, remove setscrew (6).
6.	Remove shaft (7) from support (4).
	GO TO FRAME 2



4-5. HANDLE ASSEMBLY DISASSEMBLY (CONT)

FRAME 2

Step	Procedure
1.	Remove spring (1) from shaft (2).
2.	Using 1/16" Allen wrench, remove setscrews (3) and (4), and remove disks (5) and (6) from shaft (2).
	END OF TASK



4-6. HANDLE ASSEMBLY ASSEMBLY

TOOLS: 1/4" flat tip screwdriver
9/16" open end wrench
1/16" and 1/4" socket head screw key (Allen wrench or equivalent)

SUPPLIES: Sealing compound (item 3, App A)

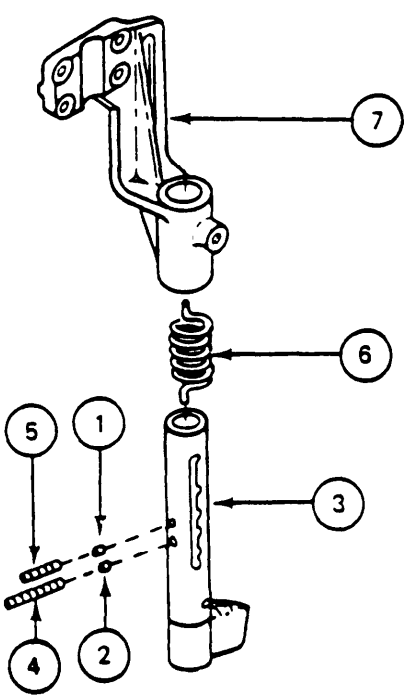
PERSONNEL: One

REFERENCES: JPG 4lC for using sealing compound

EQUIPMENT CONDITION: Handle assembly on work bench or in vehicle

FRAME 1

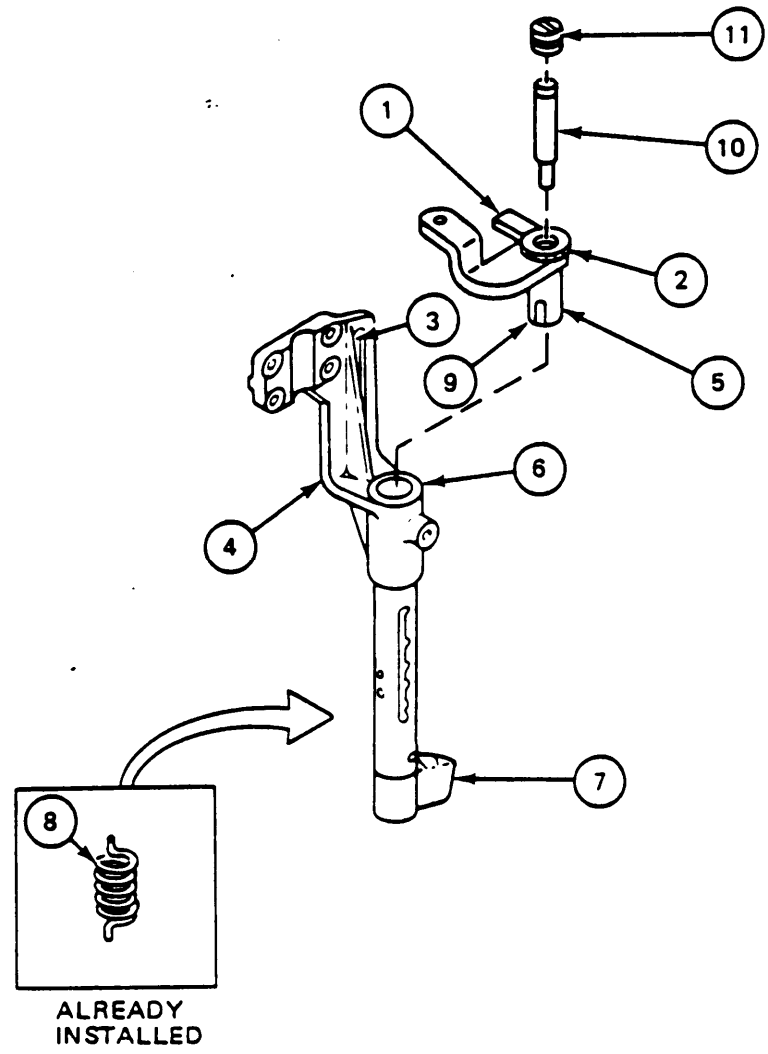
Step	Procedure
1.	Install disks (1) and (2) in shaft (3).
2.	Using 1/16" Allen wrench, install longer setscrew (4) in lower hole of shaft (3) and shorter setscrew (5) in upper hole of shaft (3).
3.	Install spring (6) in shaft (3) making sure the tip of spring enters in hole of retainer located in shaft (3).
4.	Install shaft (3) into support (7).
	GO TO FRAME 2



4-6. HANDLE ASSEMBLY ASSEMBLY (CONT)

FRAME 2

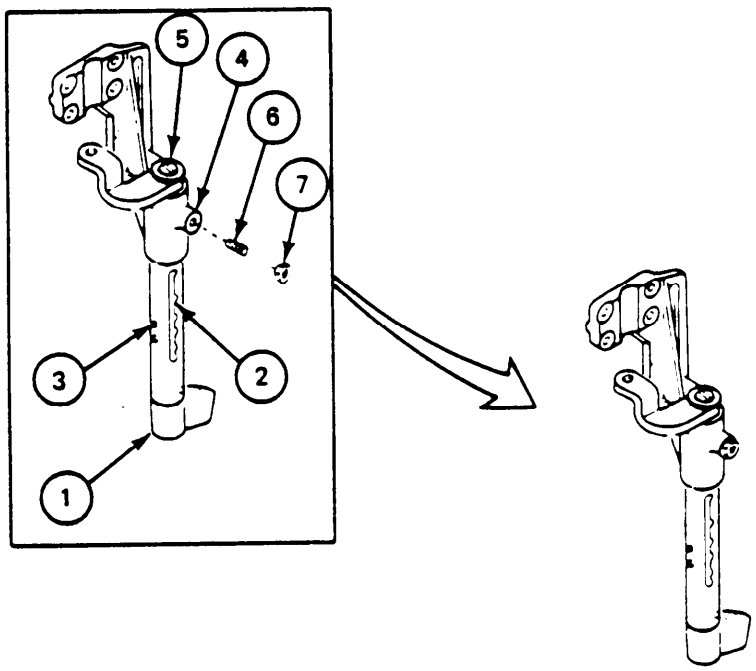
Step	Procedure
1.	Install leg (1) of plate (2) into slot (3) of support (4).
2.	Install tube (5) of plate (2) into shaft (6).
3.	Hold plate (2) in left hand and push down. At the same time push shaft (6) up and turn handle (7). This will make tip of spring (8) go into slot (9) on plate (2).
4.	Using screwdriver, install screw (10) into end of shaft (6).
5.	Using 1/4" Allen wrench, install setscrew (11).
	GO TO FRAME 3



4-6. HANDLE ASSEMBLY ASSEMBLY (CONT)

FRAME 3

Step	Procedure
1.	Hold handle (1) and turn it to the right until slot (2) in shaft (3) can be seen through hole (4) in support (5).
2.	Using screwdriver, install setscrew (6) into hole (4).
3.	Using 9/16" open end wrench, install nut (7) onto setscrew (6).
	END OF TASK



4-7. HANDLE ASSEMBLY INSTALLATION

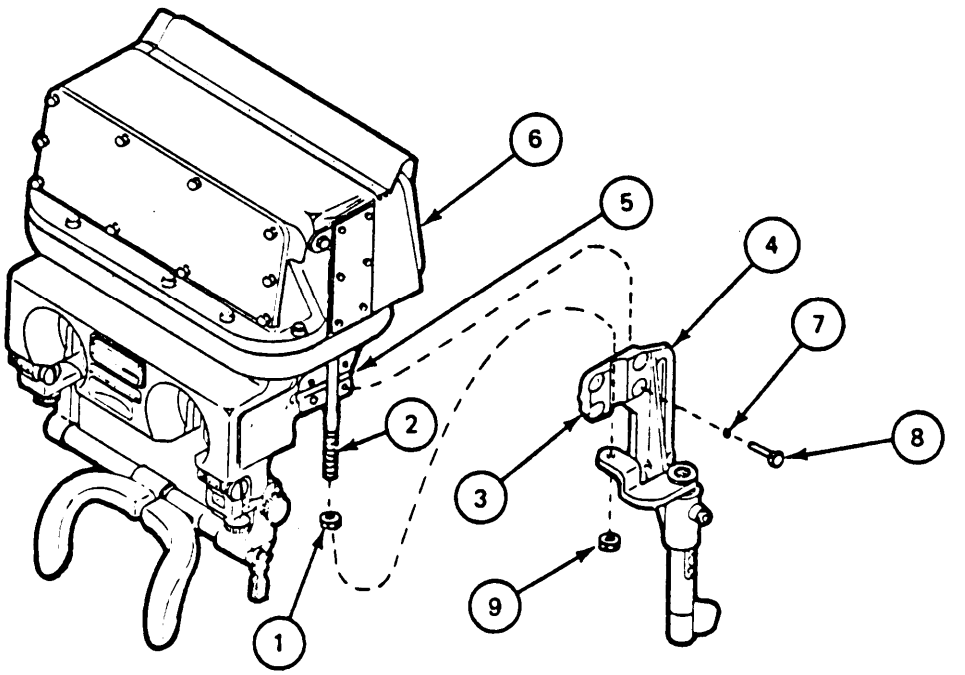
TOOLS: 9/16" and 7/16" open end wrench
0.005" thickness gage

PERSONNEL: One

EQUIPMENT CONDITION: Periscope mount on work bench or in vehicle

FRAME 1

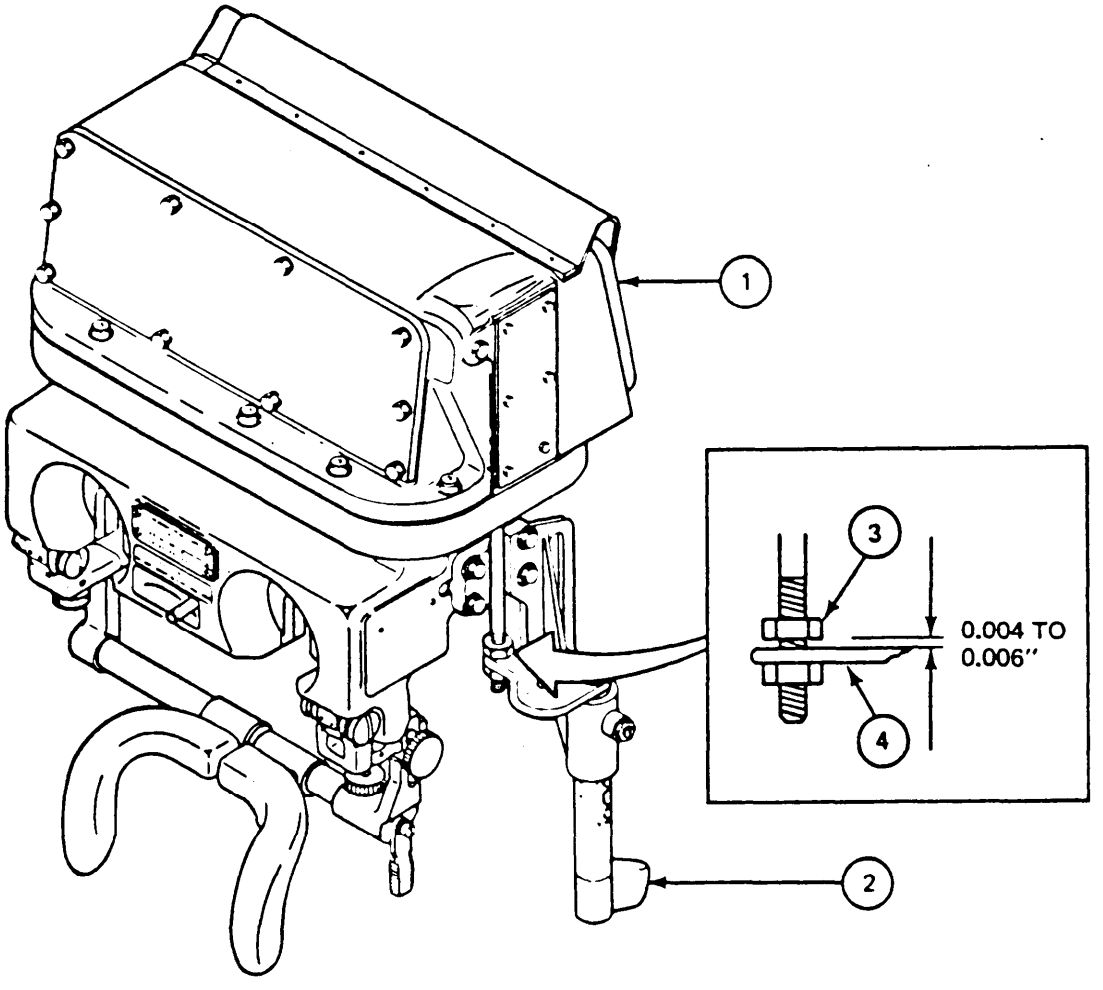
Step	Procedure
1.	Using 9/16" open end wrench, install nut (1) on shaft (2).
	NOTE When installing handle assembly, you must get key (3) on back of assembly (4) into slot (5) on mount (6).
2.	Install handle assembly (4) onto mount (6).
3.	Using 7/16" open end wrench, install four lockwashers (7) and four screws (8) into mount (6).
4.	Using 9/16" open end wrench, install nut (9) onto shaft (2).
	GO TO FRAME 2



4-7. HANDLE ASSEMBLY INSTALLATION (CONT)

FRAME 2

Step	Procedure
	NOTE The shield (1) must be fully closed, and the handle (2) must be locked all the way down.
1.	Using 0.005" thickness gage, adjust nut (3) so that the distance between nut (3) and plate (4) is 0.004 to 0.006 inch.
	NOTE FOLLOW-ON MAINTENANCE Do performance test (Vol I, para 2-2).
	END OF TASK



Section 3. COVER ASSEMBLY

4-8. COVER ASSEMBLY MAINTENANCE PROCEDURES INDEX

Task	Reference (para)
Removal	4-9
Disassembly	4-10
Assembly	4-11
Installation	4-12

4-9. COVER ASSEMBLY REMOVAL

TOOLS: 1/4" socket head screw key (Allen wrench or equivalent)
1/4" flat tip screwdriver

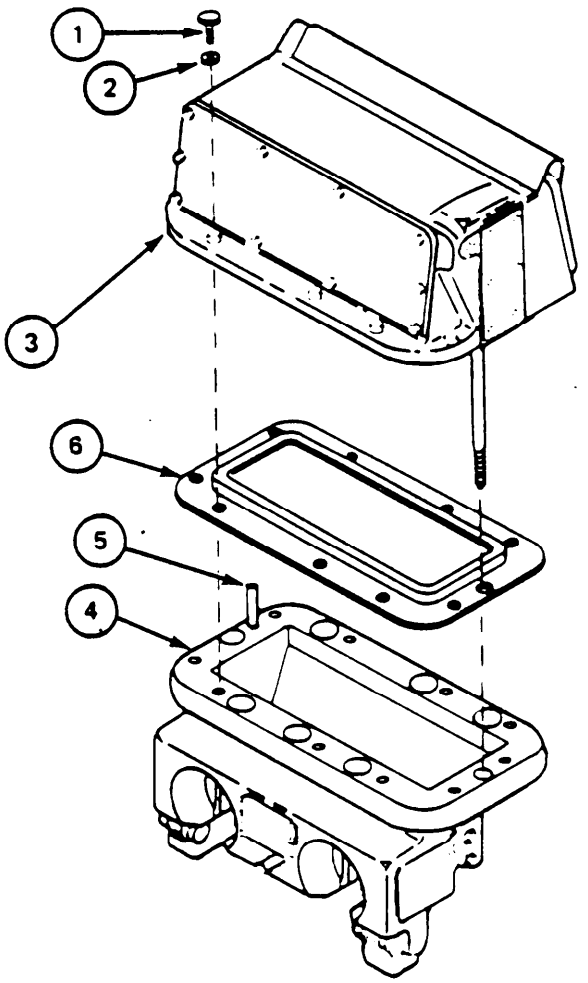
PERSONNEL: One

EQUIPMENT CONDITION: Periscope mount on work bench or in vehicle

PRELIMINARY PROCEDURES: Remove handle assembly (para 4-4)

FRAME 1

Step	Procedure
1.	Using Allen wrench, remove nine screws (1), nine lockwashers (2), and lift cover assembly (3) from mount (4).
	NOTE
	Do not remove pin (5) unless it is bent or broken.
2.	Remove seal (6).
	END OF TASK



4-10. COVER ASSEMBLY DISASSEMBLY

TOOLS: 7/16" and 3/8" open end wrench
3/16" and 1/4" flat tip screwdriver
1 cross tip screwdriver (Phillips type)
Brass drift pin
6" adjustable wrench
Soft face hammer
Long nose pliers
4 oz ball peen hammer

SUPPLIES: Fabricated tool (App C)

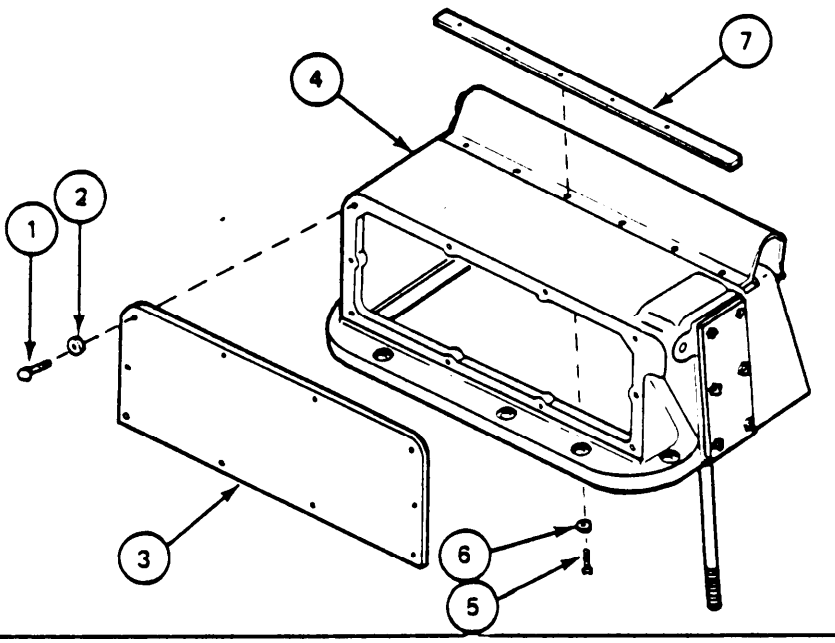
PERSONNEL: One

REFERENCES: JPG 41C for removing cotter pins

EQUIPMENT CONDITION: Cover assembly on work bench or in vehicle

FRAME 1

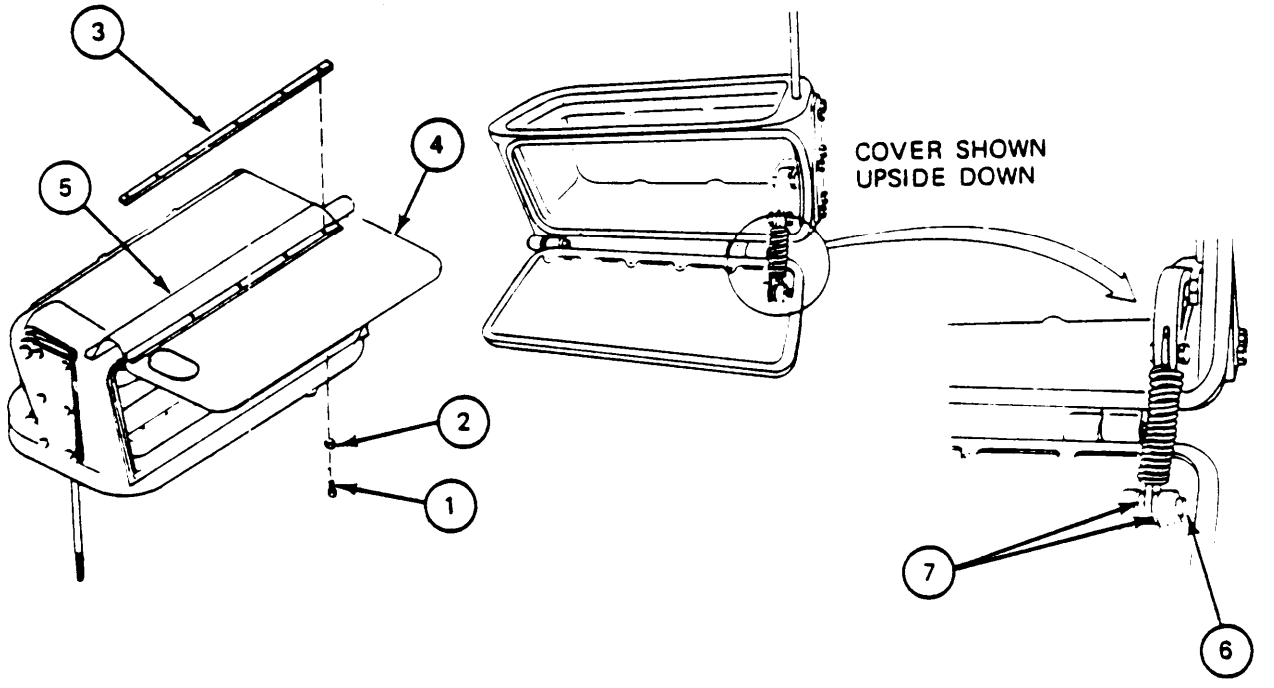
Step	Procedure
1.	Using 7/16" open end wrench, remove ten screws (1) and ten lockwashers (2).
2.	Using soft face hammer, remove plate (3) from cover assembly (4).
3.	Using Phillips screwdriver, remove six screws (5) and six lockwashers (6) and remove strap (7).
	GO TO FRAME 2



4-10. COVER ASSEMBLY DISASSEMBLY (CONT)

FRAME 2

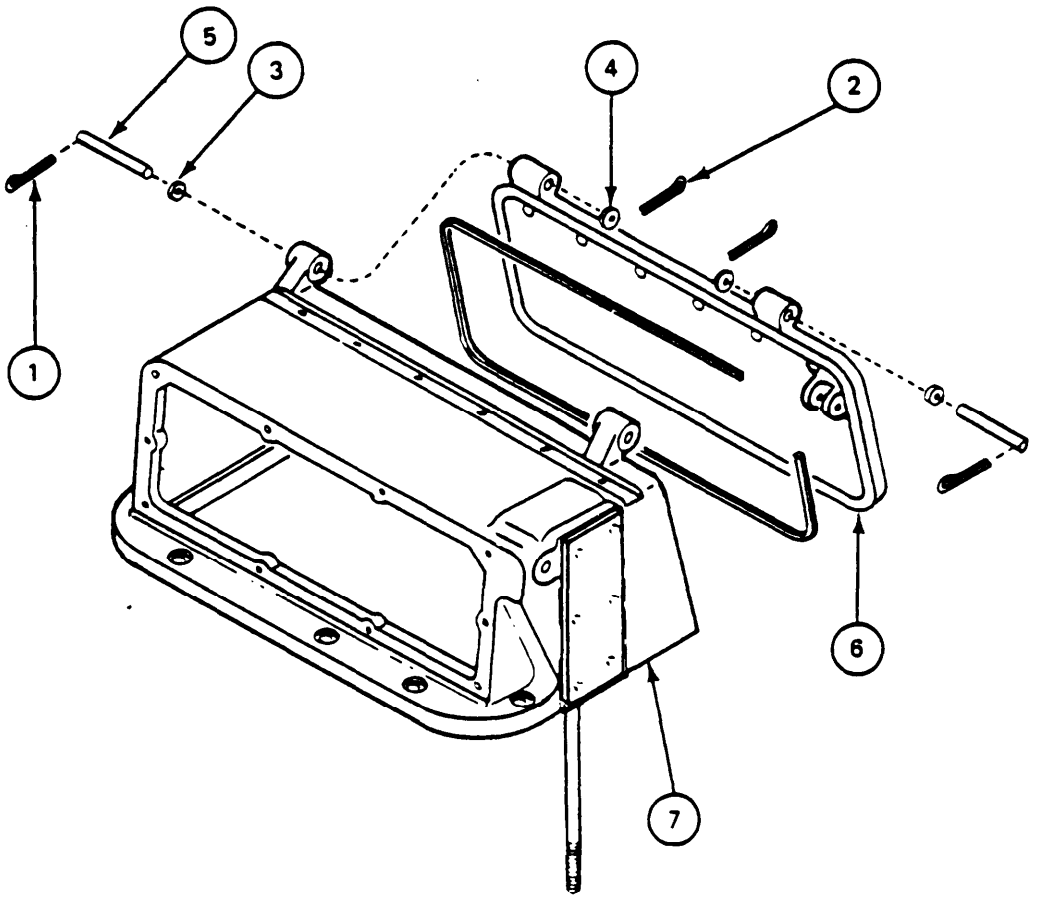
Step	Procedure
1.	Using Phillips screwdriver, remove six screws (1) and six washers (2).
2.	Remove strap (3) from shield (4).
3.	Lift away cover (5) from shield (4).
4.	Using 3/16" flat tip screwdriver, remove threaded pin (6) and two bushings (7).
	NOTE For M119E1 configuration, go to frame 4.
	GO TO FRAME 3 OR 4



4-10. COVER ASSEMBLY DISASSEMBLY (CONT)

FRAME 3

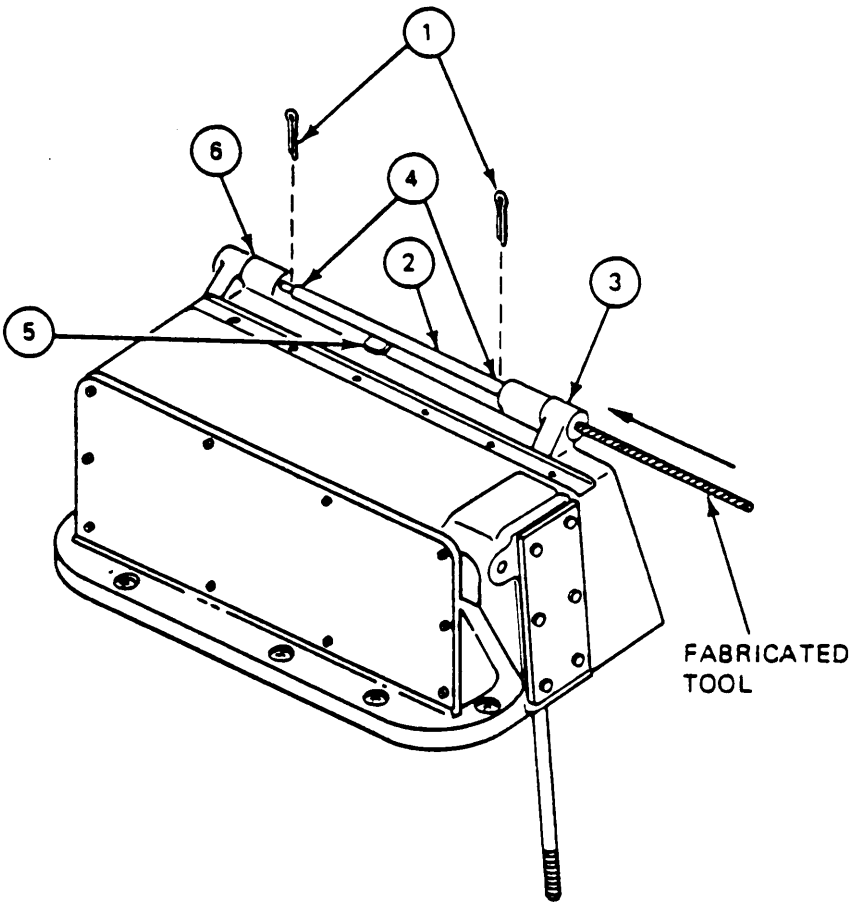
Step	Procedure
	NOTE Do frame 3 for M119 configuration only.
1.	Using long nose pliers, remove cotter pins (1) and (2) (JPG).
2.	Remove washers (3) and (4).
3.	Using ball peen hammer and drift pin, remove pin (5) from shield (6) and cover (7).
4.	Repeat steps 1 through 3 for other side.
	GO TO FRAME 5



4-10. COVER ASSEMBLY DISASSEMBLY (CONT)

FRAME 4

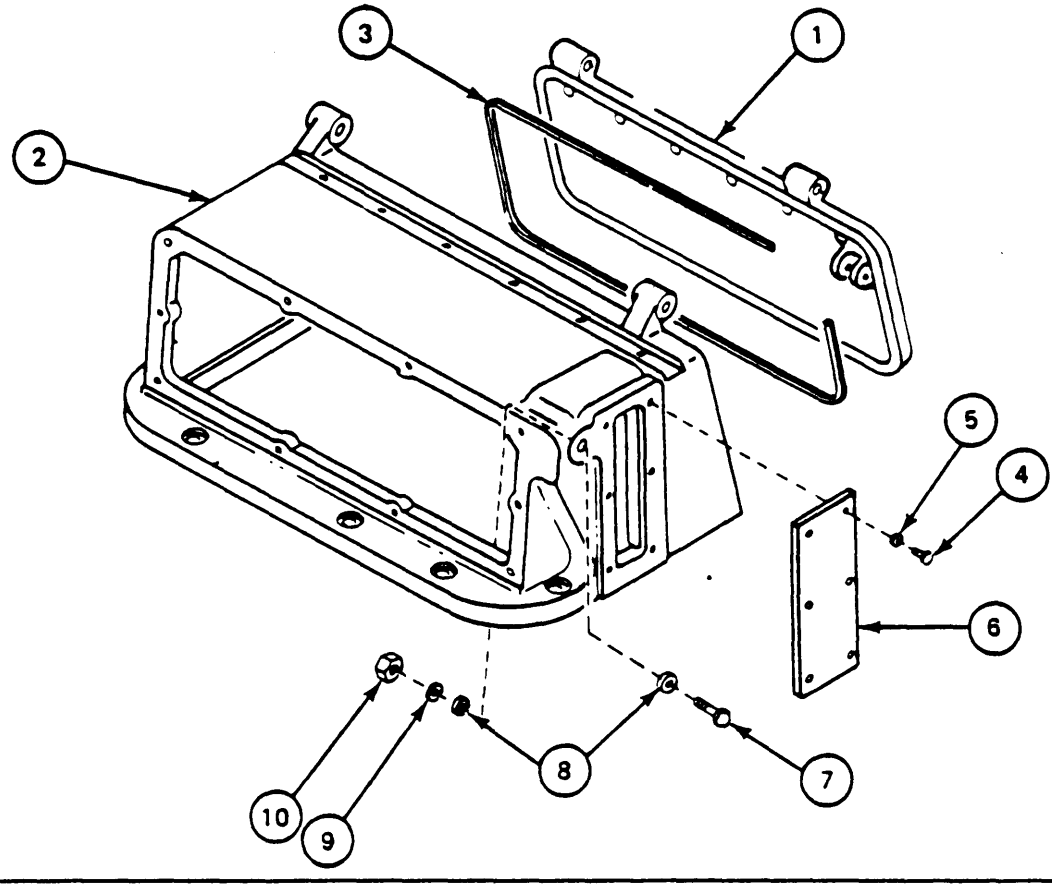
Step	Procedure
	NOTE Do frame 4 for M119E1 configuration only.
1.	Using long nose pliers, remove two cotter pins (1) (JPG).
2.	Using fabricated tool and soft face hammer, drive pin (2) from cover assembly (3) and remove two washers (4) when they reach the end of pin (2).
3.	Remove fabricated tool and spring (5) from shield (6). GO TO FRAME 5



4-10. COVER ASSEMBLY DISASSEMBLY (CONT)

FRAME 5

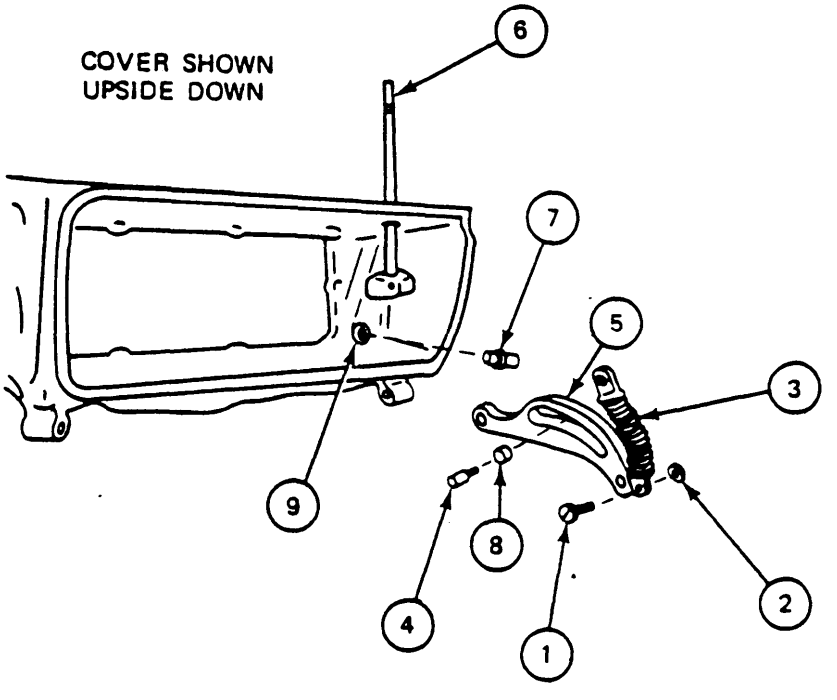
Step	Procedure
1.	Remove shield (1) from cover assembly (2).
	NOTE Do not remove seal (3) from cover (2) unless seal is damaged. If seal is not damaged, go to step 3.
2.	Remove seal (3) from cover (2).
3.	Using 7/16" open end wrench, remove six screws (4) and six washers (5) and remove plate (6).
4.	Using 7/16" open end wrench and 6" adjustable wrench, remove screw (7), two flat washers (8), one lockwasher (9) and nut (10).
	GO TO FRAME 6



4-10. COVER ASSEMBLY DISASSEMBLY (CONT)

FRAME 6

Step	Procedure
1.	Using 1/4" flat tip screwdriver and 3/8" open end wrench, remove screw (1), nut (2), and spring (3).
2.	Using 1/4" flat tip screwdriver, remove screw (4) from slot in lever (5).
3.	Using right hand, lift shaft (6) and with left hand, remove lever (5) from pin (7).
4.	Remove roller (8) from lever (5).
5.	Remove pin (7) from hole (9).
	END OF TASK



4-11. COVER ASSEMBLY ASSEMBLY

TOOLS: 7/16" and 3/8" open end wrench
3/16" and 1/4"' flat tip screwdriver
6" adjustable wrench
4 oz. ball peen hammer
Long nose pliers
1 cross tip screwdriver (Phillips type)
Soft face hammer

SUPPLIES: Sealing compound (item 3, App A)
Adhesive (item 1, App A)
Fabricated tool (App C)

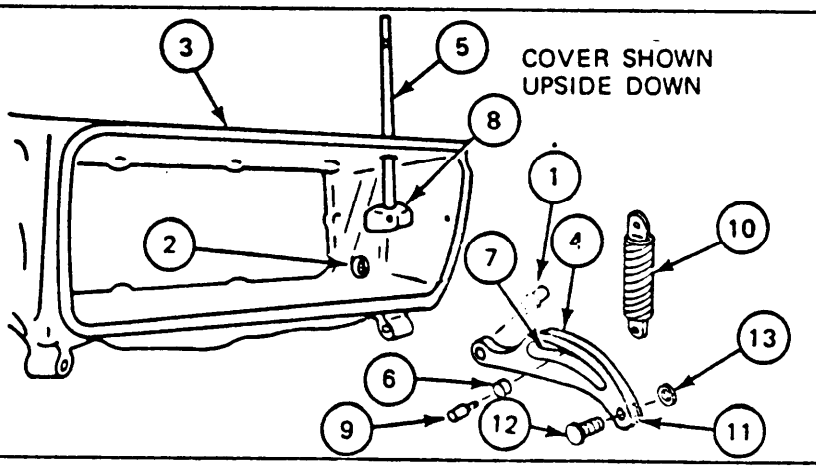
PERSONNEL: One

REFERENCES: JPG 41C for Using sealing compound
Installing cotter pins

EQUIPMENT CONDITION: Cover assembly on work bench or in vehicle

FRAME 1

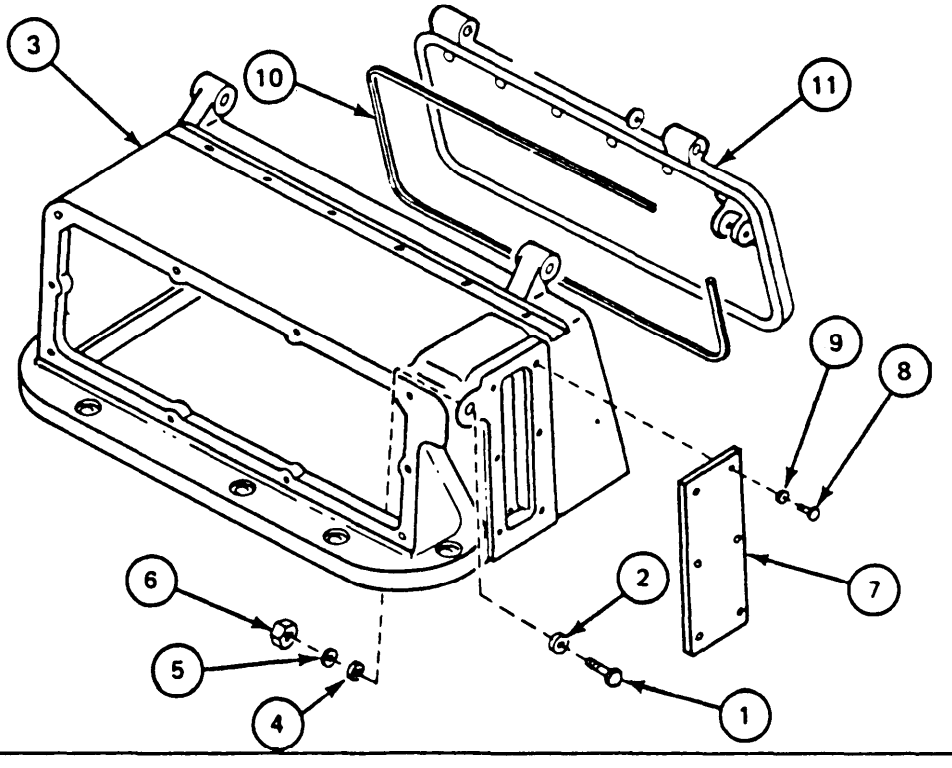
Step	Procedure
1.	Install pin (1) into hole (2) in cover (3).
2.	With bow side of lever (4) facing up, lift shaft (5) and install lever (4) onto pin (1).
3.	Install roller (6) into slot (7) of lever (4).
4.	Line up holes in arm (8), roller (6), and slot (7).
5.	Install screw (9) into lined-up holes.
6.	Install spring (10) into slot (11) on lever (4) and fasten with screw (12) and nut (13), using 1/4" flat tip screwdriver and 3/8" open end wrench.
	GO TO FRAME 2



4-11. COVER ASSEMBLY ASSEMBLY (CONT)

FRAME 2

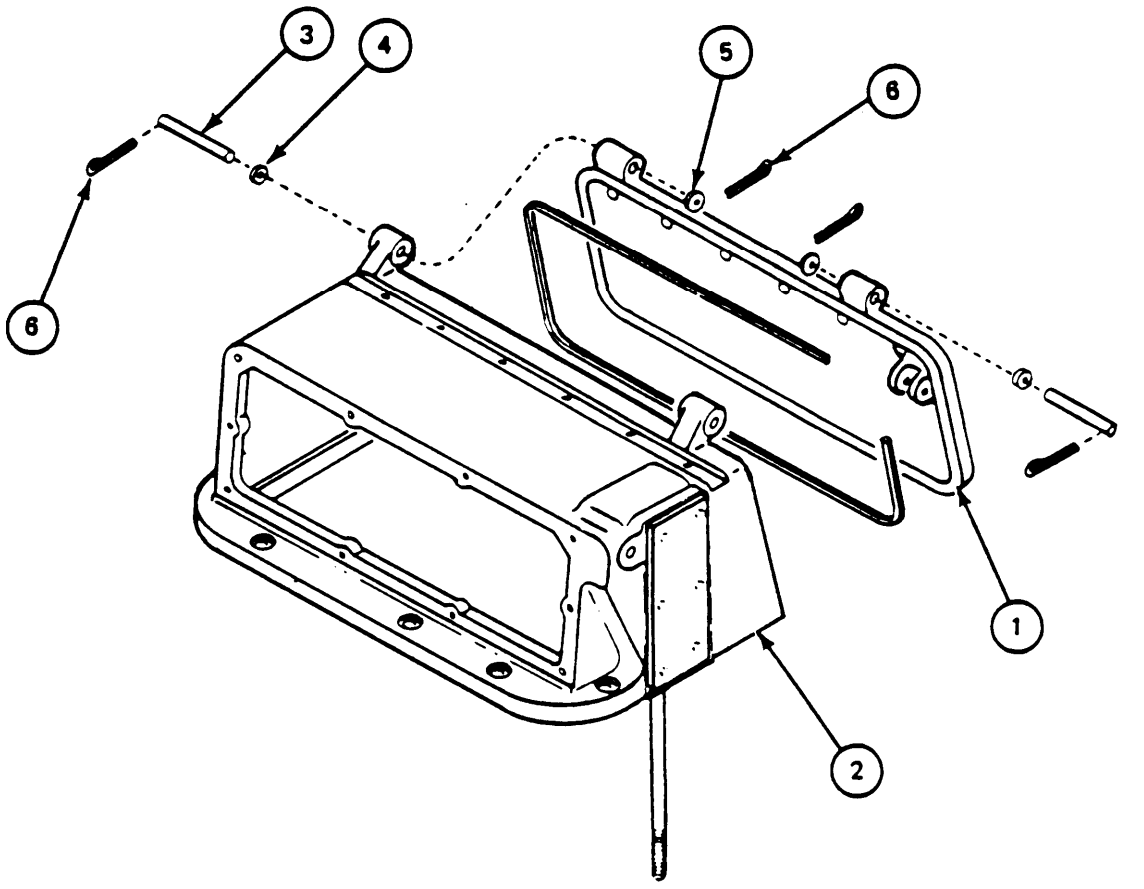
Step	Procedure
1.	Install screw (1) and flat washer (2) into cover assembly (3).
2.	Using 7/16" open end wrench and 6" adjustable wrench, install flat washer (4), lockwasher (5), and nut (6) onto screw (1).
3.	Put sealing compound on inside edges of plate (7) (JPG).
4.	Using 7/16" open end wrench, install plate (7) to cover assembly (3) with six screws (8) and six lockwashers (9).
	NOTE If seal (10) was removed, do step 5. If seal was not removed, go to frame 3 or frame 4.
5.	Put adhesive on seal (10) and install seal (10) on shield (11).
	NOTE For M119E1 configuration, go to frame 4.
	GO TO FRAME 3 OR 4



4-11. COVER ASSEMBLY ASSEMBLY (CONT)

FRAME 3

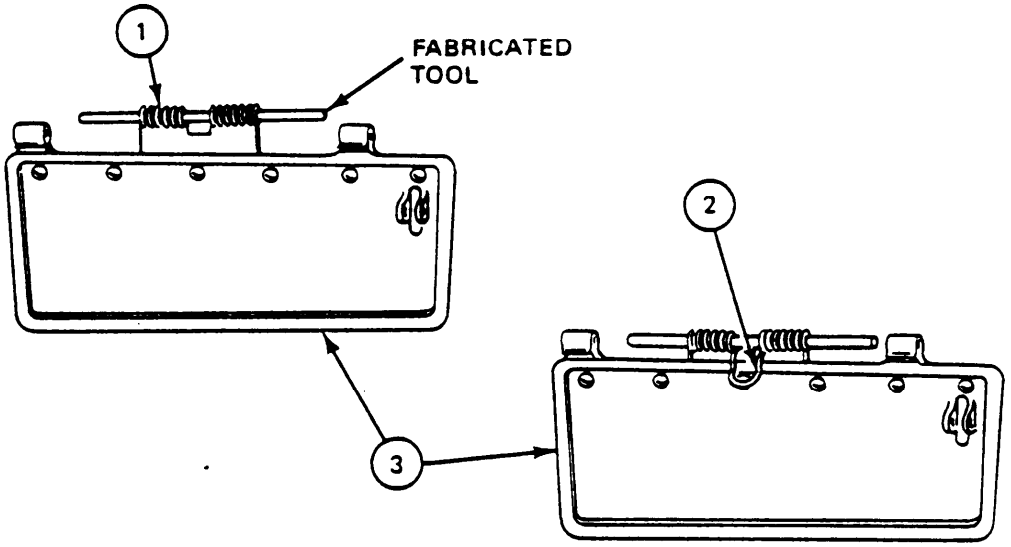
Step	Procedure
	NOTE Do frame 3 for M119 configuration only.
1.	Connect shield (1) to cover assembly.
2.	Using ball peen hammer, tap pin (3) through cover assembly (2) and shield (1).
3.	Install washers (4) and (5) on pin (3).
4.	Using long nose pliers, install two cotter pins (6) into pin (3).
5.	Repeat steps 2 through 4 for other side.
	GO TO FRAME 7



4-11. COVER ASSEMBLY ASSEMBLY (CONT)

FRAME 4

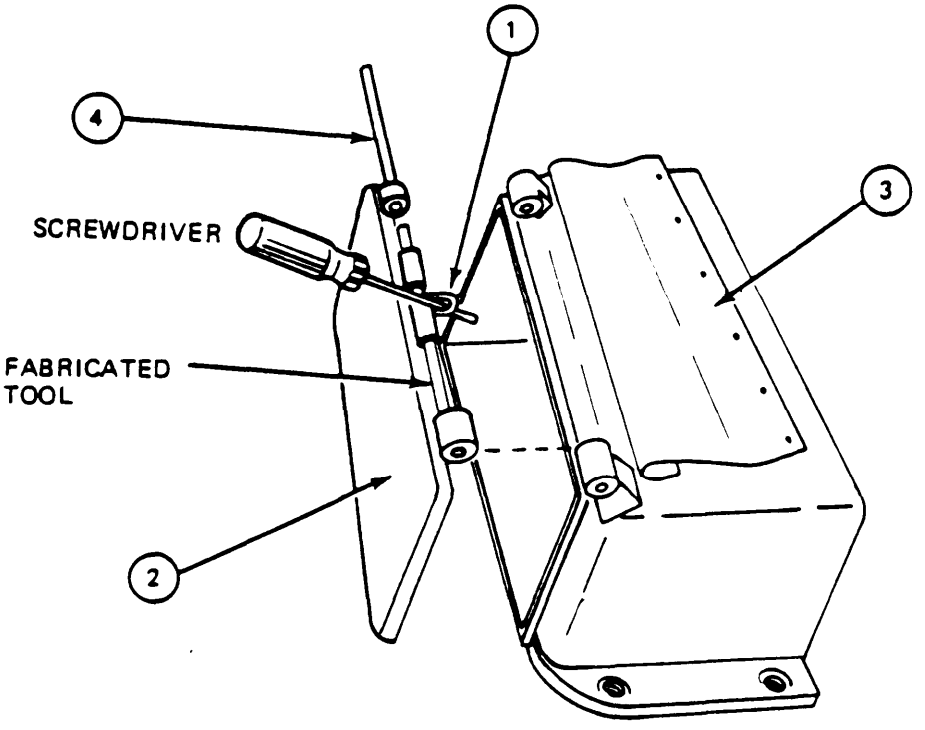
Step	Procedure
	NOTE Do frames 4, 5, and 6 for M119E1 configuration only.
1.	Insert fabricated tool into spring (1), and put new spring (2) with fabricated tool part way into shield (3).
	NOTE Step 2 is to load spring (2).
2.	Turn center of spring (2) one turn and seat spring (1) fully into shield (3) and hold in place. GO TO FRAME 5



4-11. COVER ASSEMBLY ASSEMBLY (CONT)

FRAME 5

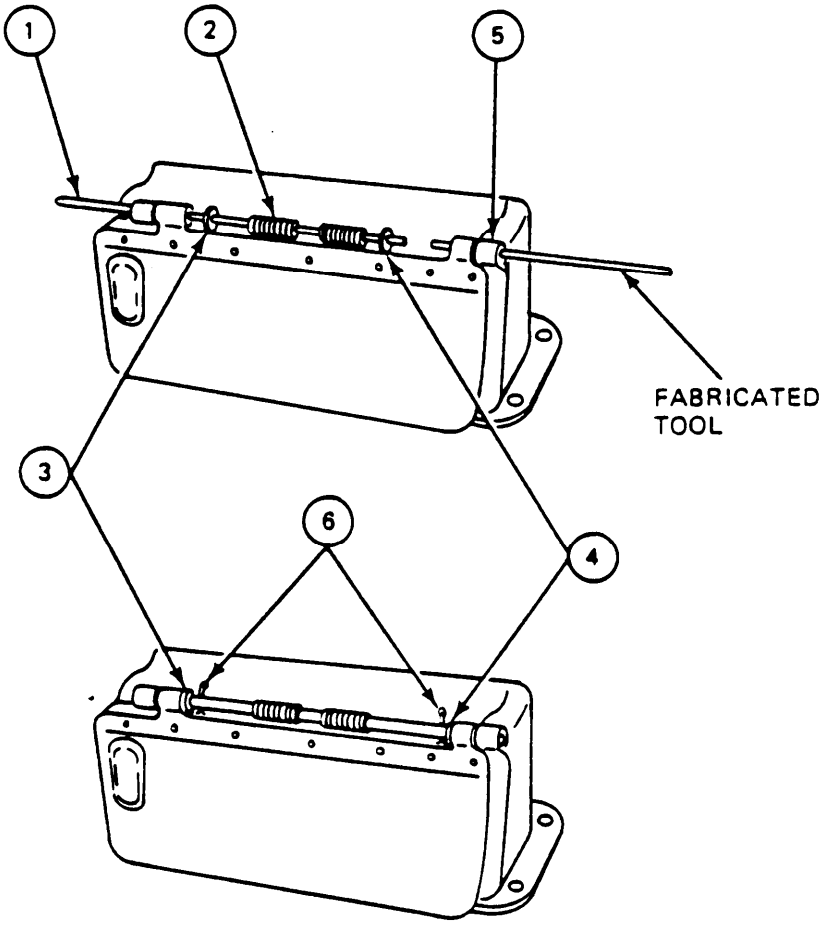
Step	Procedure
1.	Using flat tip screwdriver, hold spring (1) and fabricated tool in place on shield (2).
2.	Set shield (2) in place on cover (3)
3.	Install pin (4) into one end of cover (3).
	GO TO FRAME 6



4-11. COVER ASSEMBLY ASSEMBLY (CONT)

FRAME 6

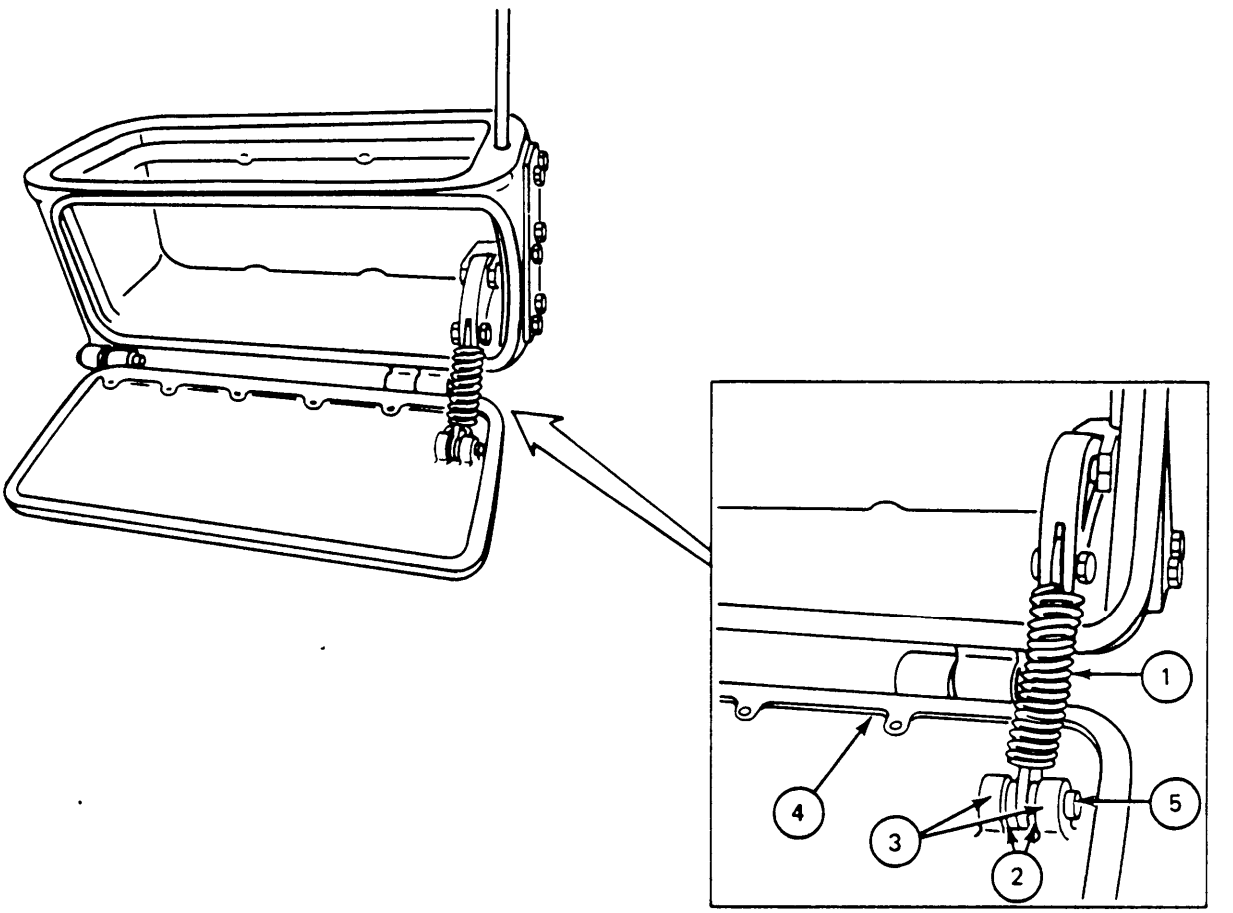
Step	Procedure
1.	Using hammer, start driving pin (1) in direction of spring (2) and install washer (3) before pin (1) enters spring (2).
2.	Install washer (4) at position shown. Finish driving pin (1) until fabricated tool is out of cover (5).
3.	Position washers (3) and (4) as shown. Using pliers, install two cotter pins (6) (JPG).
	GO TO FRAME 7



4-11. COVER ASSEMBLY ASSEMBLY (CONT)

FRAME 7

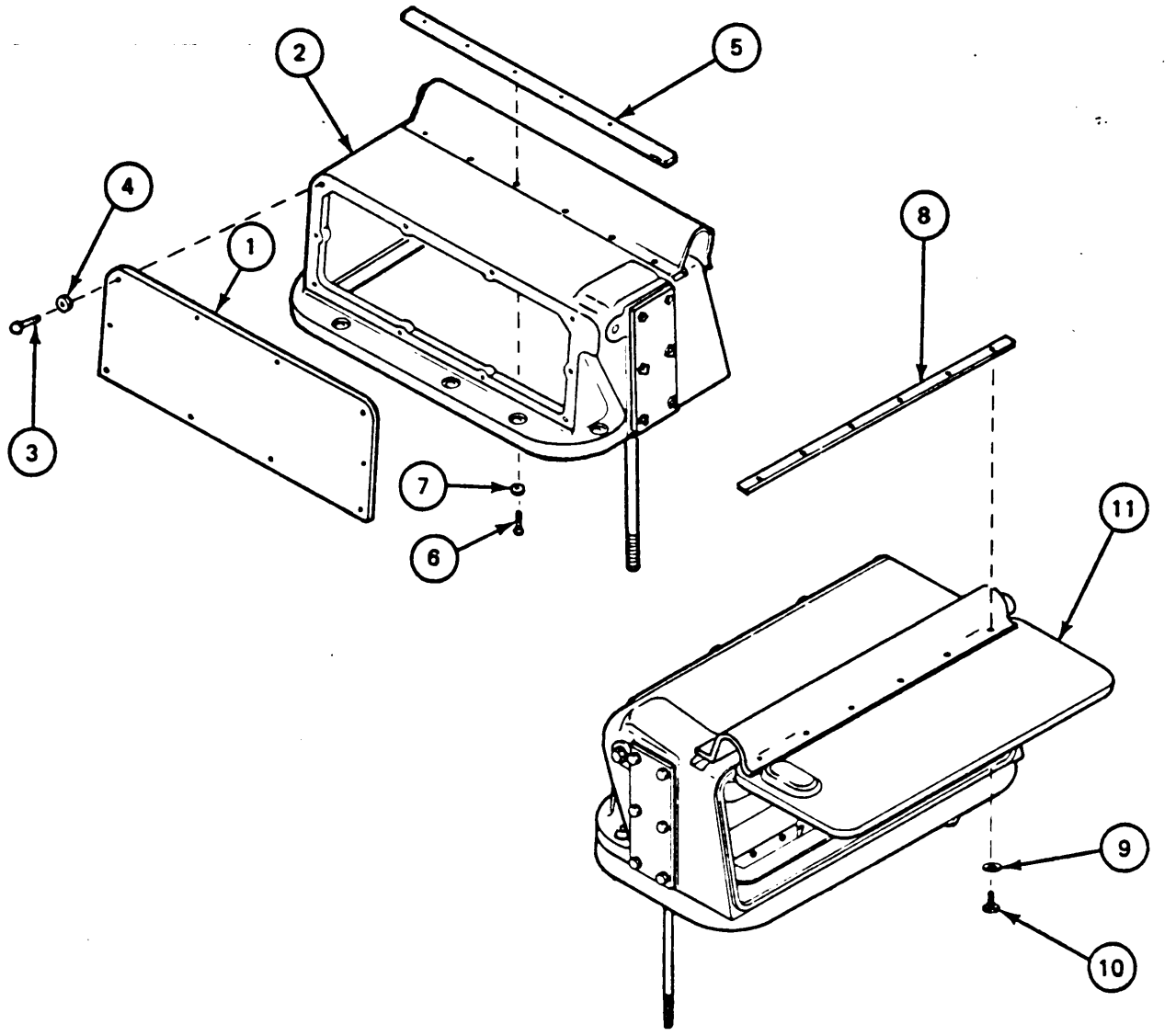
Step	Procedure
	NOTE There should be one washer on each side of spring (1).
1.	Install spring (1) and two washers (2) between the two mounting holes (3) on shield (4).
2.	Using 3/16" flat tip screwdriver, install threaded pin (5) into hole on shield (4).
	GO TO FRAME 8



4-11. COVER ASSEMBLY ASSEMBLY (CONT)

FRAME 8

Step	Procedure
1.	Put sealing compound on inside edges of plate (1) (JPG).
2.	Using 7/16" open end wrench, connect plate (1) to cover assembly (2) with ten screws (3) and ten lockwashers (4).
3.	Using Phillips screwdriver, connect strap (5) to cover assembly (2) with six screws (6) and six lockwashers (7).
4.	Using Phillips screwdriver, install second strap (8) with six lockwashers (9) and six screws (10) onto shield (11).
	END OF TASK



4-12. COVER ASSEMBLY INSTALLATION

TOOLS: 1/4" socket head screw key (Allen wrench or equivalent)

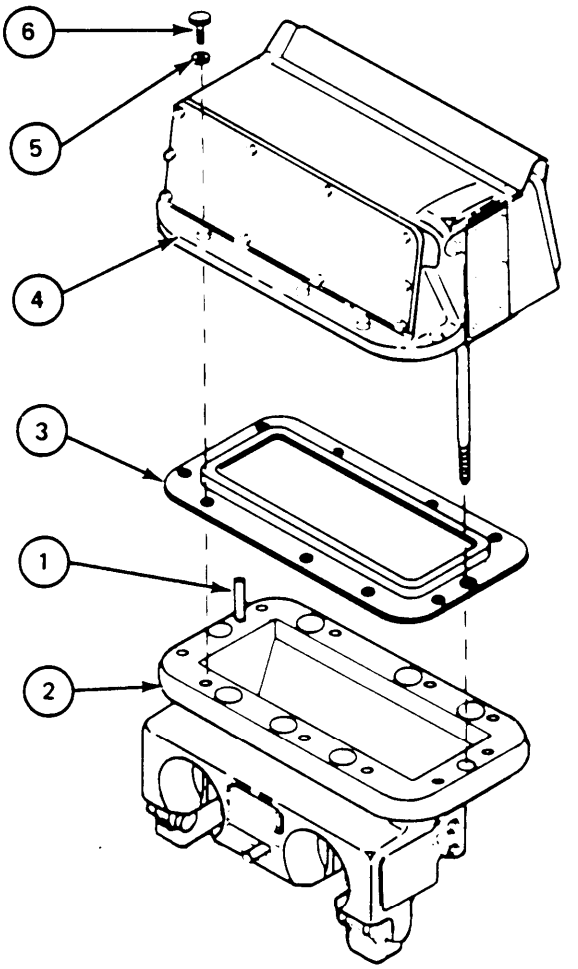
PERSONNEL: One

EQUIPMENT CONDITION: Periscope mount and cover assembly on work bench or in vehicle

FRAME 1

Step	Procedure
	NOTE If pin (1) was removed, do step 1. If it was not, go to step 2.
1.	Press pin (1) flush into mount (2).
2.	Place seal (3) on mount (2).
3.	Place cover assembly (4) on mount (2).
4.	Using Allen wrench, install nine lockwashers (5) and nine screws (6).
	NOTE FOLLOW-ON MAINTENANCE Install handle assembly (para 4-7). Do performance test (VOL I, para 2-2).
	END OF TASK

4-12. COVER ASSEMBLY INSTALLATION (CONT)



Section 4. RIGHT HEADREST ASSEMBLY

4-13. RIGHT HEADREST ASSEMBLY MAINTENANCE PROCEDURES INDEX

Task	Reference (para)
Removal	4-14
Disassembly	4-15
Assembly	4-16
Installation	4-17

4-14. RIGHT HEADREST ASSEMBLY REMOVAL

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

PERSONNEL: One

EQUIPMENT CONDITION: Periscope mount on work bench or in vehicle

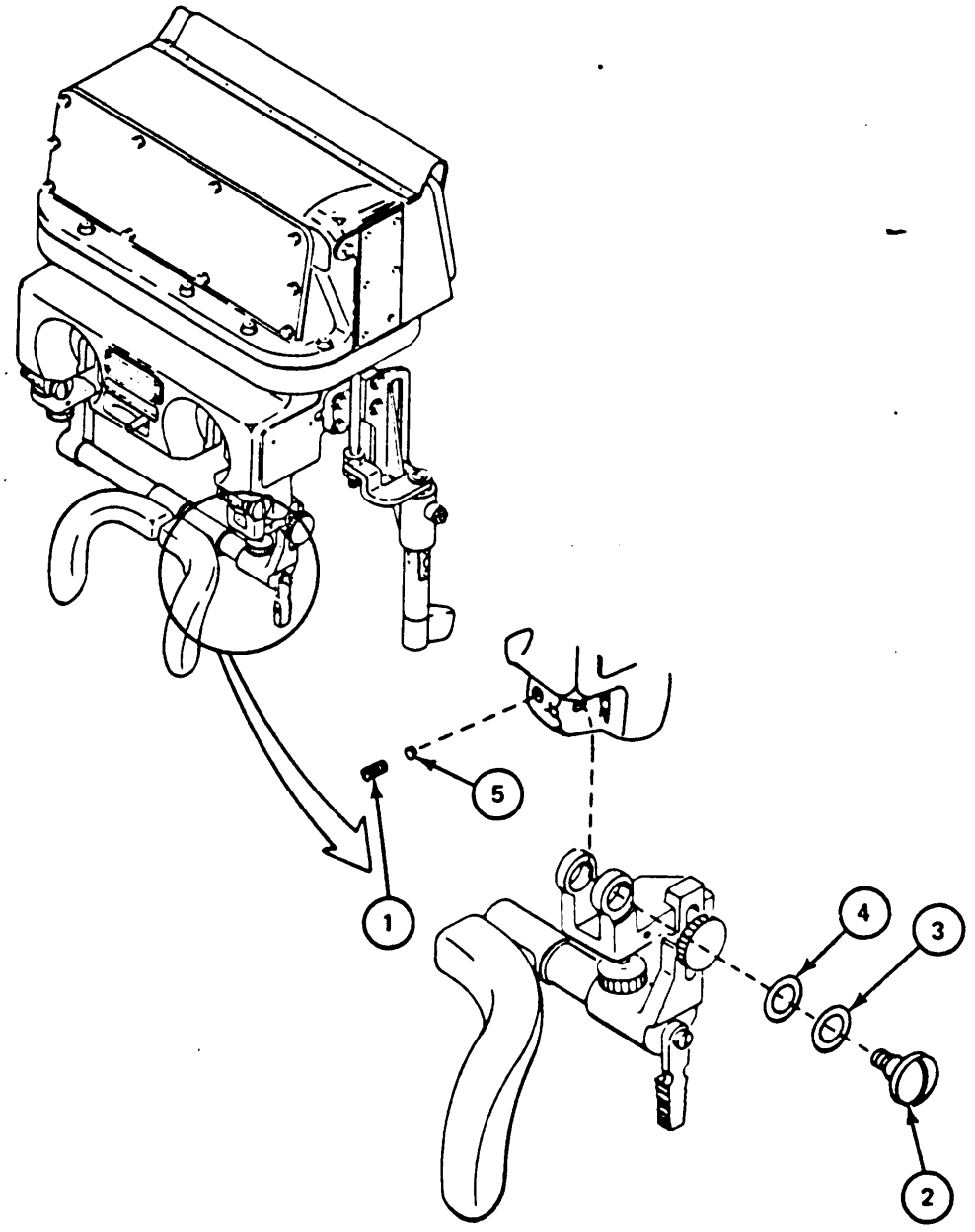
NOTE

For M119E1 headrest assembly, go to frame 3.

FRAME 1

Step	Procedure
1.	Using 1/8" screwdriver, loosen left setscrew (1).
2.	Using 3/8" screwdriver, remove screw (2) and washers (3) and (4).
3.	Using 1/8" screwdriver, turn in setscrew (1) and force out disk (5).
4.	Using 1/8" screwdriver, remove setscrew (1).
	GO TO FRAME 2

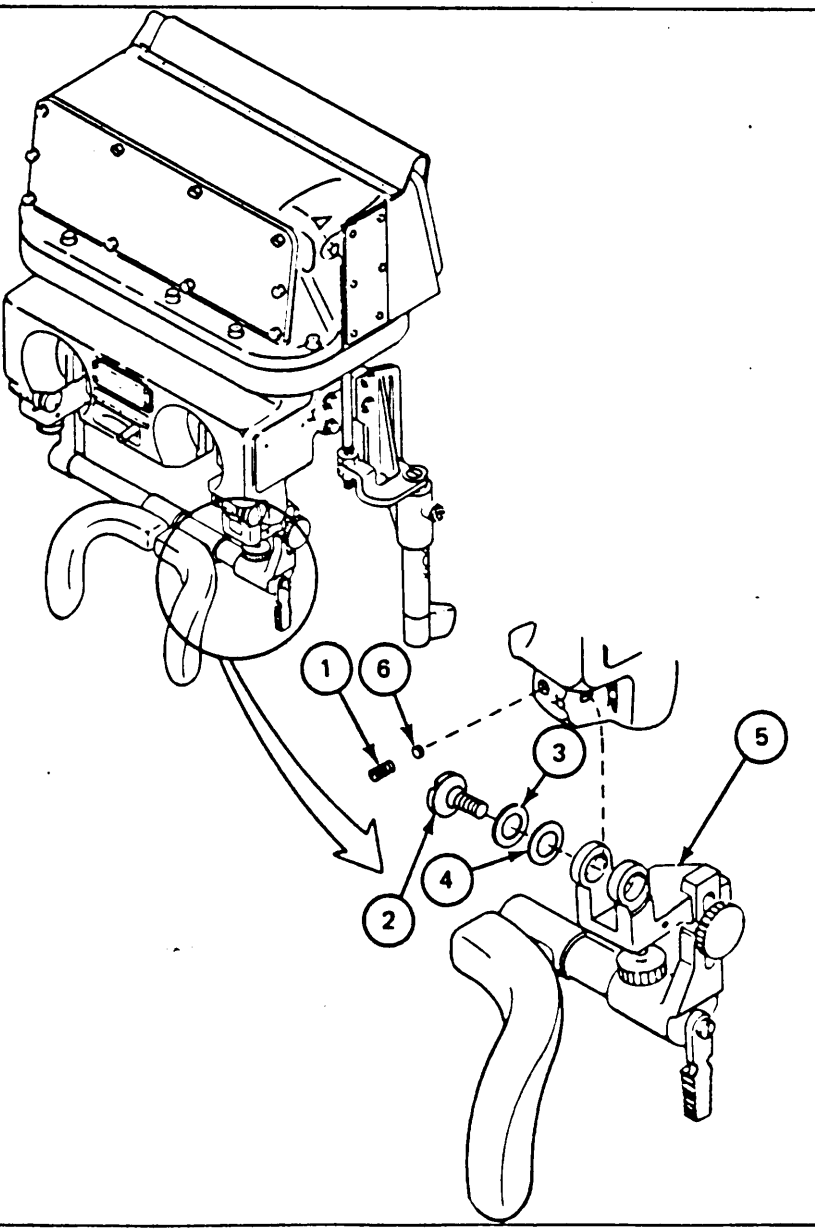
4-14. RIGHT HEADREST ASSEMBLY REMOVAL (CONT)



4-14. RIGHT HEADREST ASSEMBLY REMOVAL (CONT)

FRAME 2

Step	Procedure
1.	Using 1/8" screwdriver, loosen right setscrew (1).
2.	Using 3/8" screwdriver, remove screw (2) and washers (3) and (4).
3.	Remove right headrest assembly (5).
4.	Using 1/8" screwdriver, turn in setscrew (1) and force out disk (6).
5.	Using 1/8" screwdriver, remove setscrew (1).
	END OF TASK

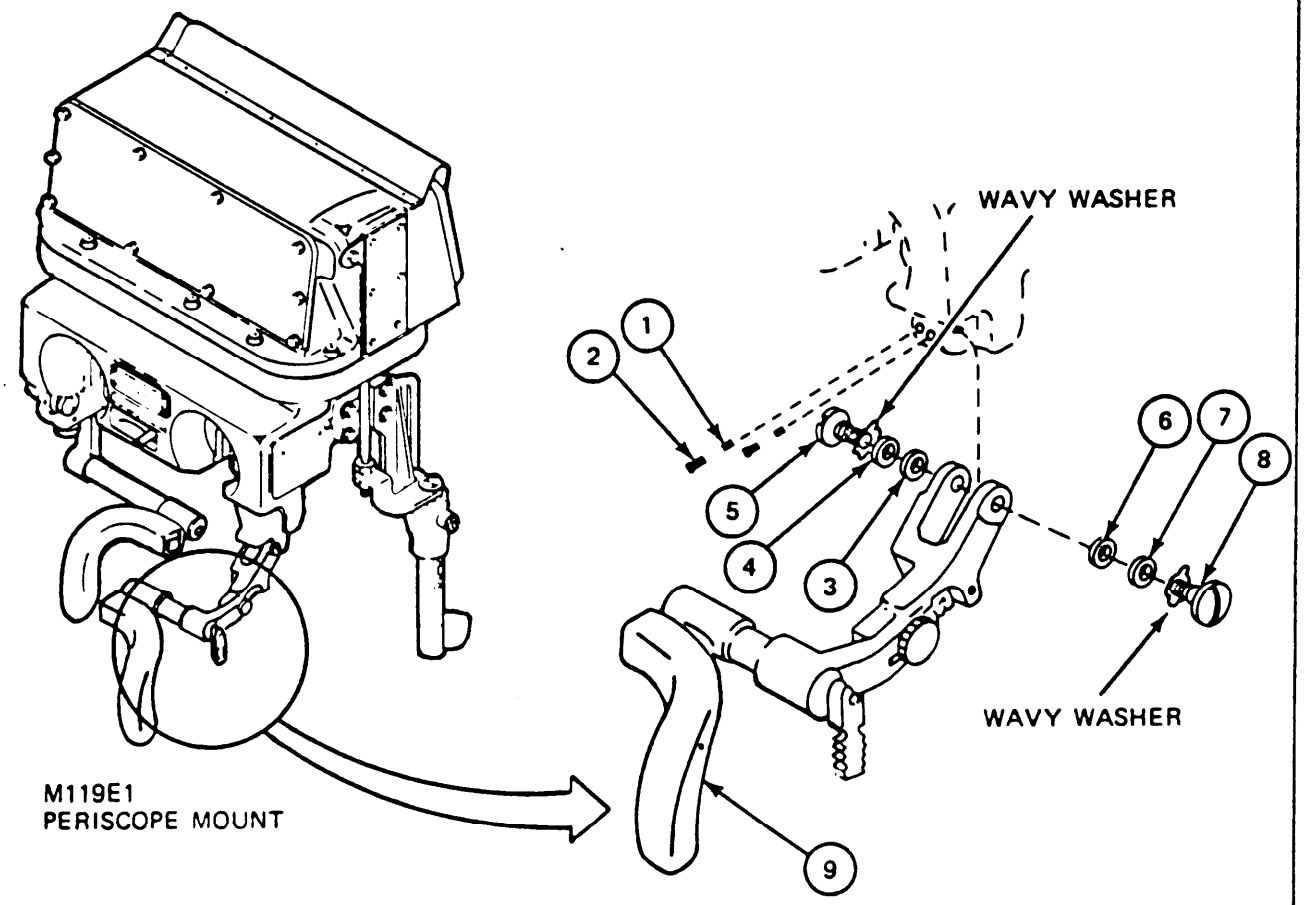


Para 4-14 Cont

4-14. RIGHT HEADREST ASSEMBLY REMOVAL (CONT)

FRAME 3

Step	Procedure
	NOTE Do frame 3 for M119E1 headrest assembly only.
1.	Using Allen wrench, remove two disks (1) and two setscrews (2).
2.	Using 3/8" screwdriver, remove three washers (3), (4), wavy washer, and screw (5).
3.	Using 3/8" screwdriver, remove three washers (6), (7), wavy washer, and screw (8).
4.	Remove headrest assembly (9).
	END OF TASK



4-15. RIGHT HEADREST ASSEMBLY DISASSEMBLY

TOOLS: 1/4" flat tip screwdriver
4 oz. ball peen hammer
1/4" brass drift pin
5/64" socket head screw key (Allen wrench or equivalent)
#2 cross tip screwdriver (Phillips type)

PERSONNEL: One

EQUIPMENT CONDITION: Right headrest assembly on work bench or in vehicle

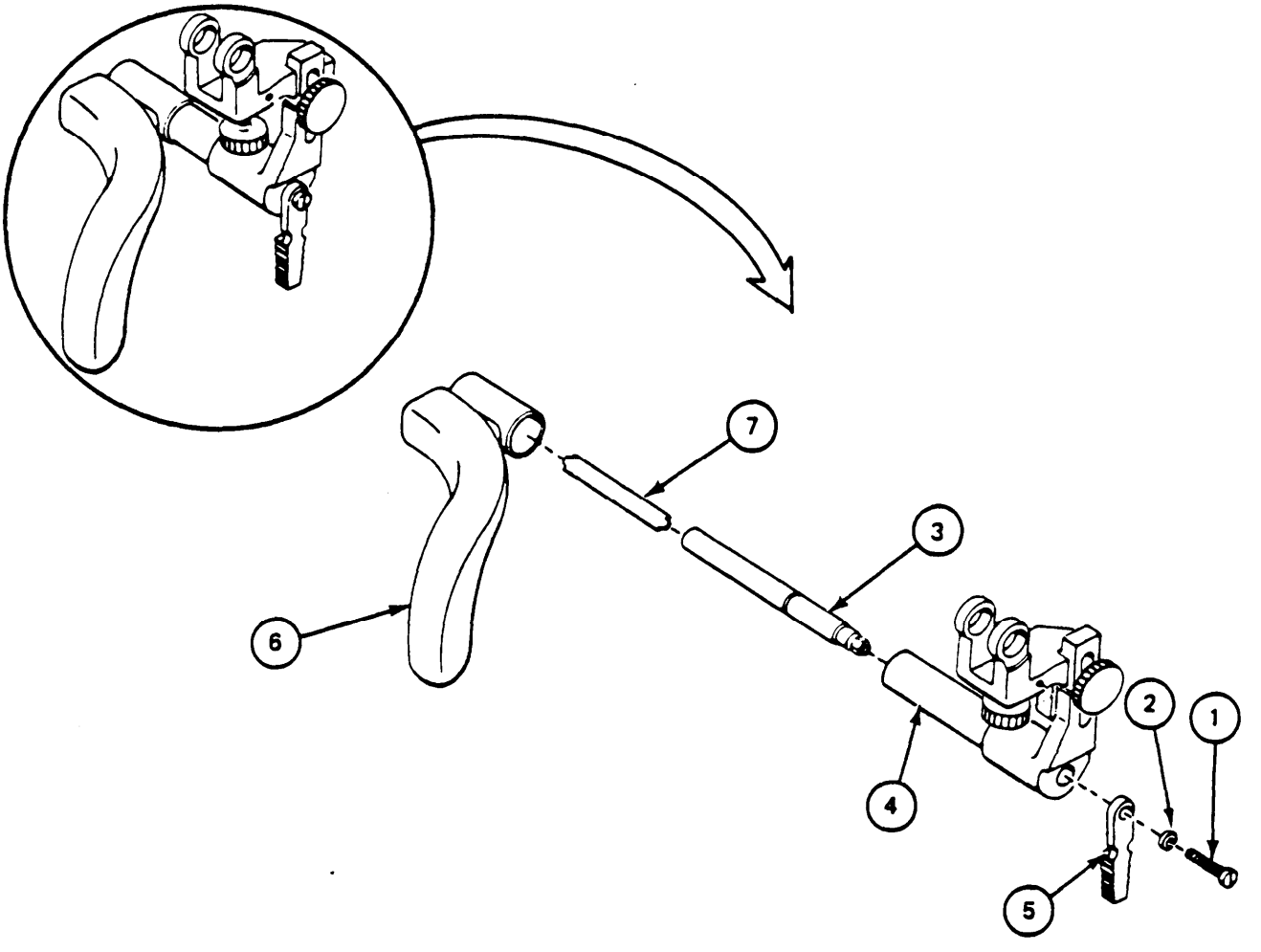
NOTE

For M119E1 headrest assembly, go to frame 3.

FRAME 1

Step	Procedure
1.	Using flat tip screwdriver, remove screw (1) and washer (2).
	NOTE
	Put brass drift pin on threaded end of shaft (3).
2.	Using brass drift pin and hammer, tap shaft (3) out of support (4) and remove lever (5).
3.	Remove headrest (6) and segment (7).
	GO TO FRAME 2

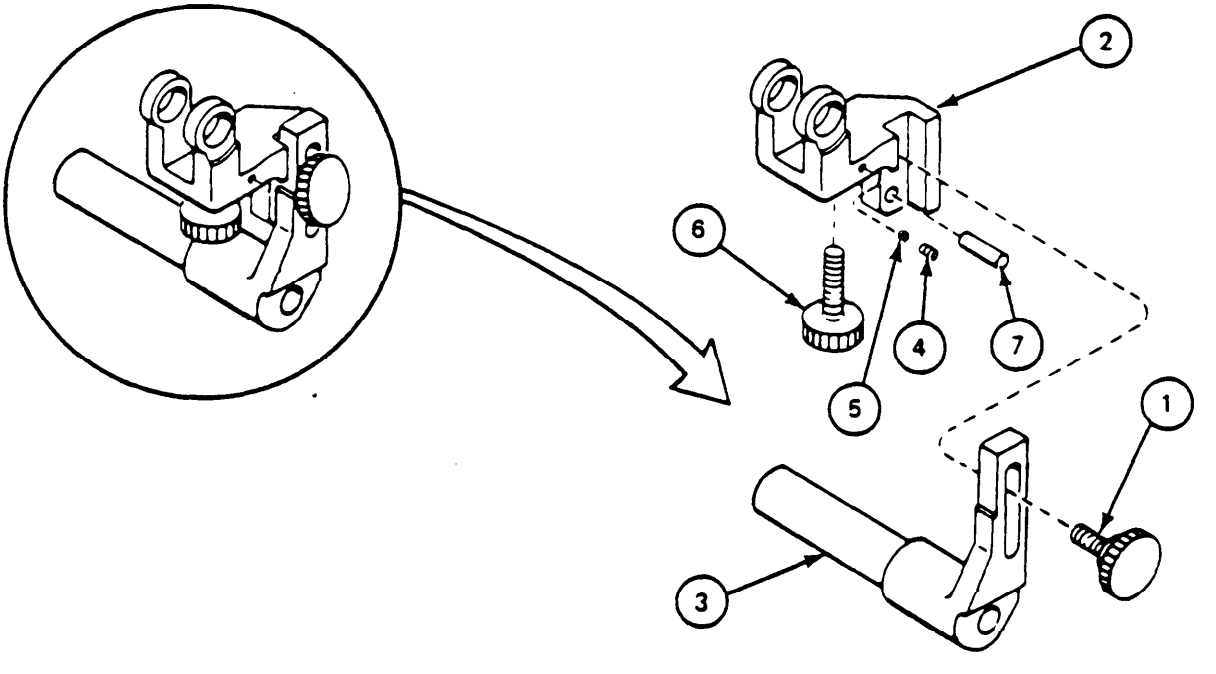
4-15. RIGHT HEADREST ASSEMBLY DISASSEMBLY (CONT)



4-15. RIGHT HEADRESTASSEMBLY DISASSEMBLY CONT

FRAME 2

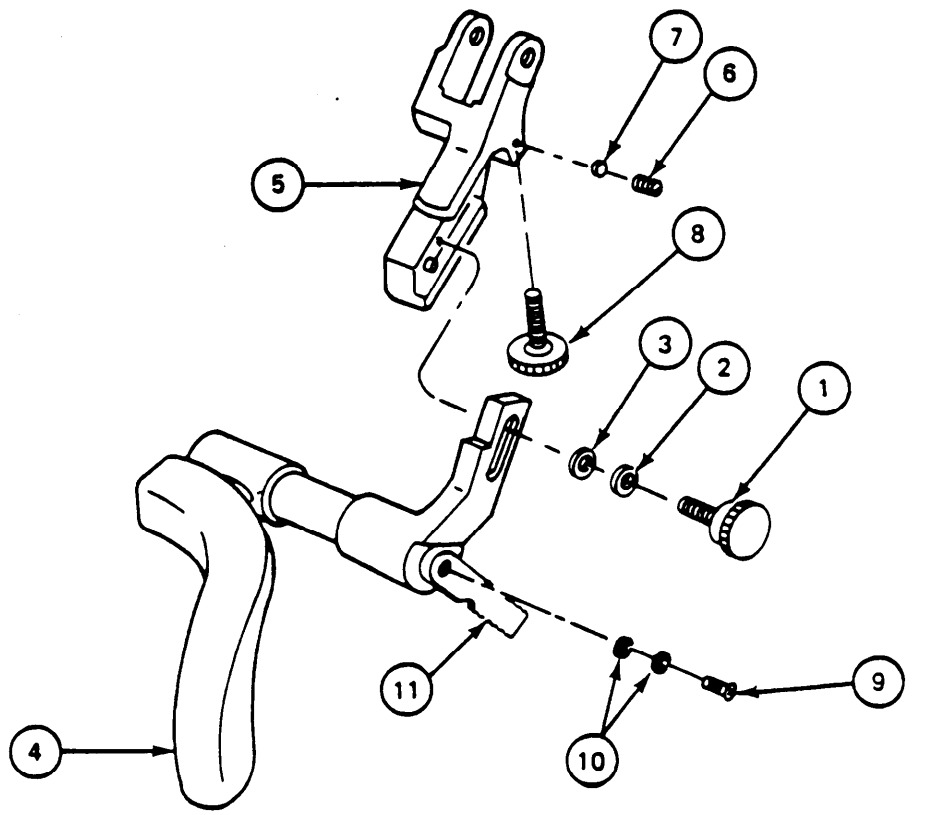
Step	Procedure
1.	Remove thumbscrew (1) and separate support (2) from arm (3).
2.	Using Allen wrench, loosen setscrew (4) to release pressure of disk (5) on thumbscrew (6).
3.	Remove thumbscrew (6).
4.	Using Allen wrench, turn in setscrew (4) clockwise and force out disk (5).
5.	Remove setscrew (4).
	NOTE Do not remove locating pin (7) unless it is bent or broken.
	END OF TASK



4-15. RIGHT HEADREST ASSEMBLY DISASSEMBLY (CONT)

FRAME 3

Step	Procedure
	NOTE Do frame 3 for M119E1 headrest assembly only.
1.	Remove thumbscrew (1) and washers (2) and (3).
2.	Remove headrest assembly (4) from arm (5).
3.	Using Allen wrench, turn setscrew (6) clockwise and force out disk (7).
4.	Remove stop screw (8) from arm (5).
5.	Using Phillips screwdriver, remove screw (9), two washers (10), and lever (11).
	END OF TASK



4-16. RIGHT HEADREST ASSEMBLY ASSEMBLY

TOOLS: 5/64" socket head screw key (Allen wrench or equivalent)
1/4" flat tip screwdriver
Machinist rule
#2 cross tip screwdriver (Phillips type)

SUPPLIES: Sealing compound, (item 3, App A)

PERSONNEL: One

REFERENCES: JPG 41C for using sealing compound

EQUIPMENT CONDITION: Right headrest assembly on work bench or in vehicle

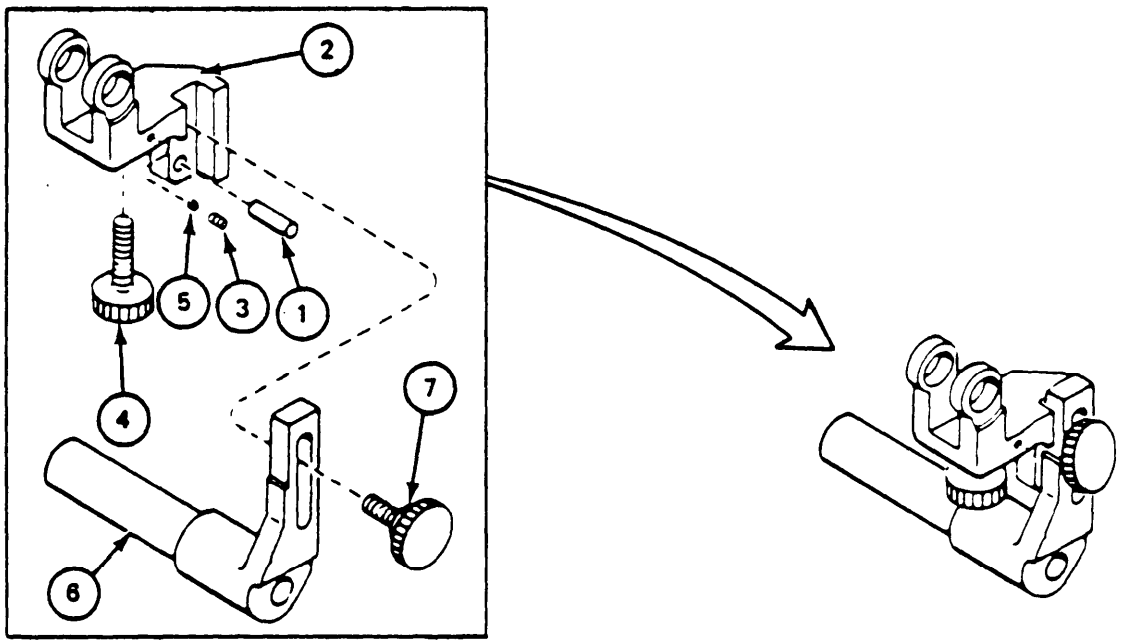
NOTE

For M119E1 headrest assembly, go to frame 3.

FRAME 1

Step	Procedure
	NOTE If locating pin (1) has been removed, do step 1. If it has not been removed, go to step 2.
1.	Press locating pin (1) into support (2) and allow it to stick out 3/8 ± 1/64 inch.
2.	Put sealing compound on threads of setscrew (3) (JPG).
3.	Install thumbscrew (4) to support (2).
4.	Using Allen wrench, install disk (5) and setscrew (3).
5.	Put support (2) on arm (6) with thumbscrew (7).
	GO TO FRAME 2

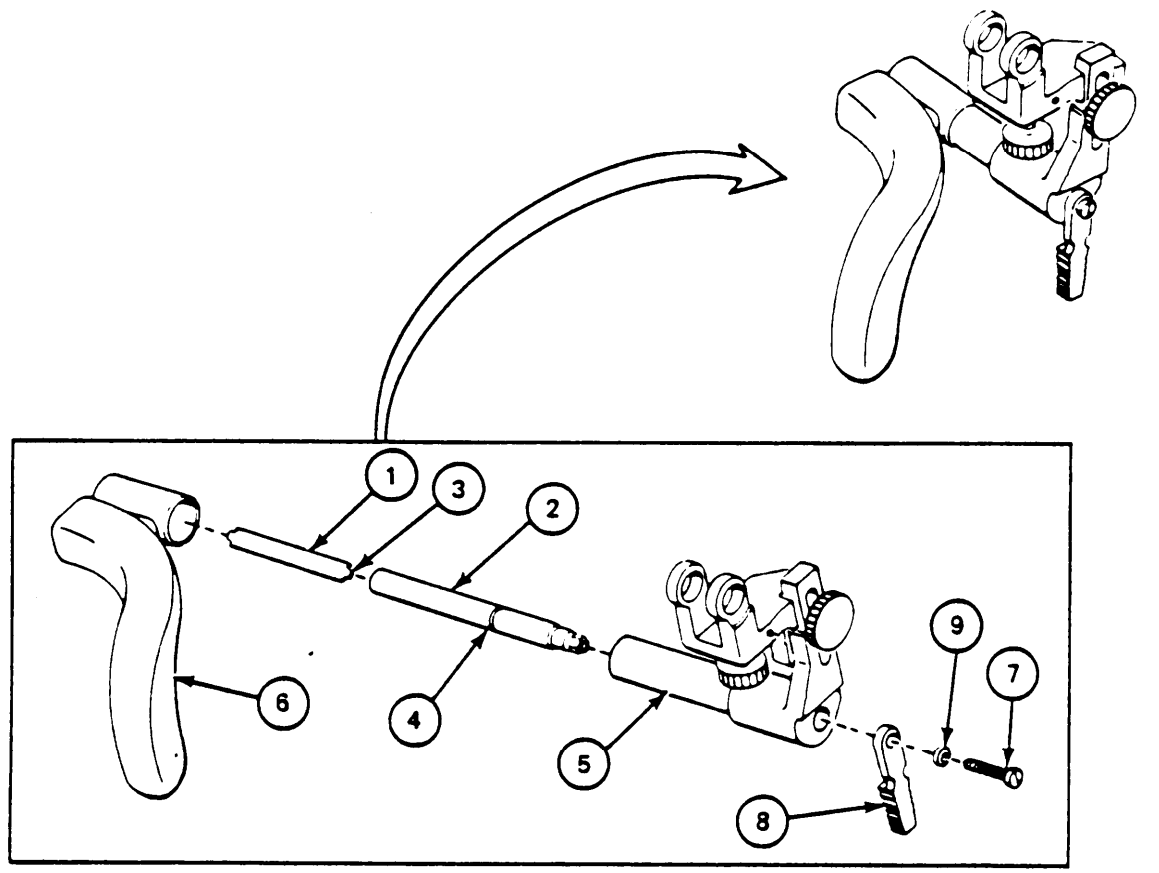
4-16. RIGHT HEADREST ASSEMBLY ASSEMBLY (CONT)



4-16. HEADREST ASSEMBLY ASSEMBLY (CONT)

FRAME 2

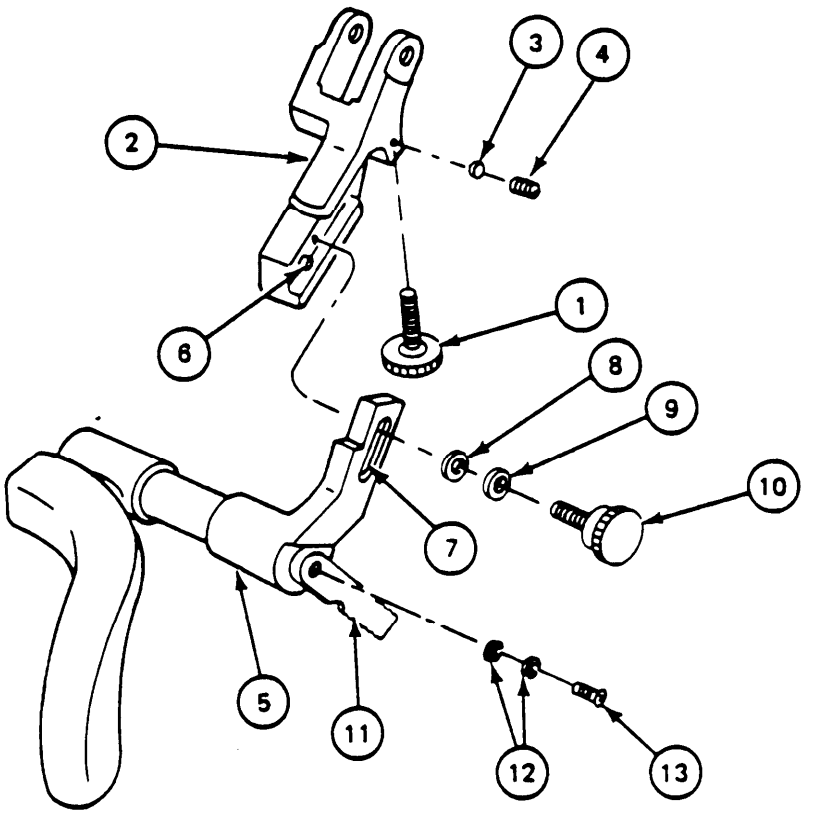
Step	Procedure
1.	Lay segment (1) on shaft (2) with bent end (3) in slot (4).
2.	Place shaft (2) halfway on support (5).
3.	Slide headrest (6) over shaft (2) and segment (1) and push shaft (2) into support (5).
4.	Put sealing compound on threads of screw (7).
5.	Using flat tip screwdriver, install lever (8) to support (5) with washer (9) and screw (7).
	END OF TASK



4-16. RIGHT HEADREST ASSEMBLY ASSEMBLY (CONT)

FRAME 3

Step	Procedure
	NOTE Do frame 3 for M119E1 headrest assembly only.
1.	Install stop screw (1) to arm (2).
	NOTE Do not install disk (3) or setscrew (4) at this time.
2.	Hold headrest assembly (5) on arm (2) and check that locating pin (6) fits into slot (7) on headrest assembly (5).
3.	Install two washers (8) and (9) and thumbscrew (10).
4.	Using Phillips screwdriver, install lever (11), two washers (12), and screw (13) onto headrest assembly (5).
	END OF TASK



4-17. RIGHT HEADREST ASSEMBLY INSTALLATION

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

SUPPLIES: Sealing compound, (item 3, App A)

PERSONNEL: One

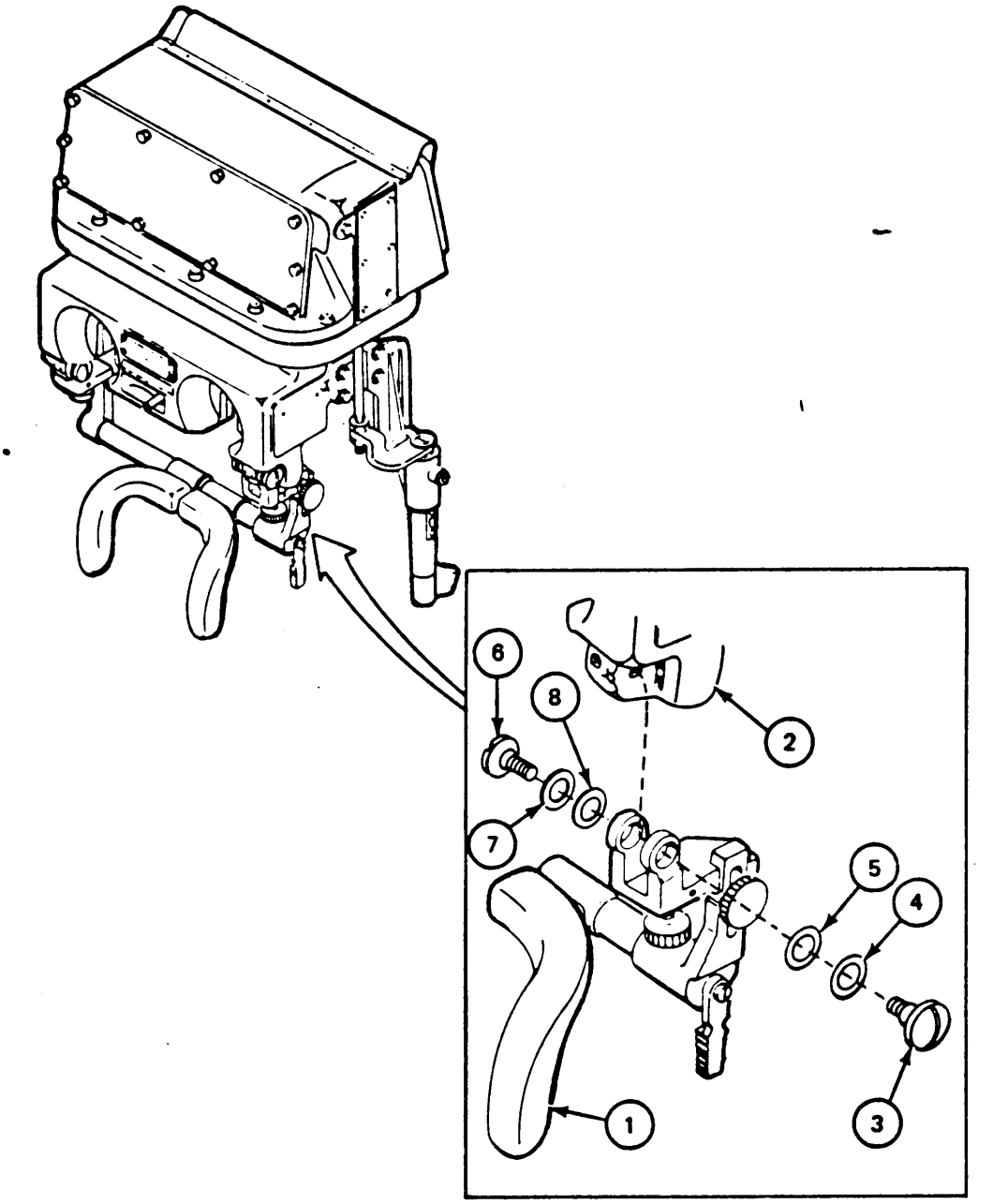
REFERENCES: JPG 41C for using sealing compound

EQUIPMENT CONDITION: Periscope mount on work bench or in vehicle

FRAME 1

Step	Procedure
	NOTE For M119E1 headrest assembly, go to frame 3.
1.	Place right headrest assembly (1) to mount (2).
2.	Using 3/8" screwdriver, install screw (3) and washers (4) and (5).
3.	Using 3/8" screwdriver, install screw (6) and washers (7) and (8).
	GO TO FRAME 2

4-17. RIGHT HEADREST ASSEMBLY INSTALLATION (CONT)

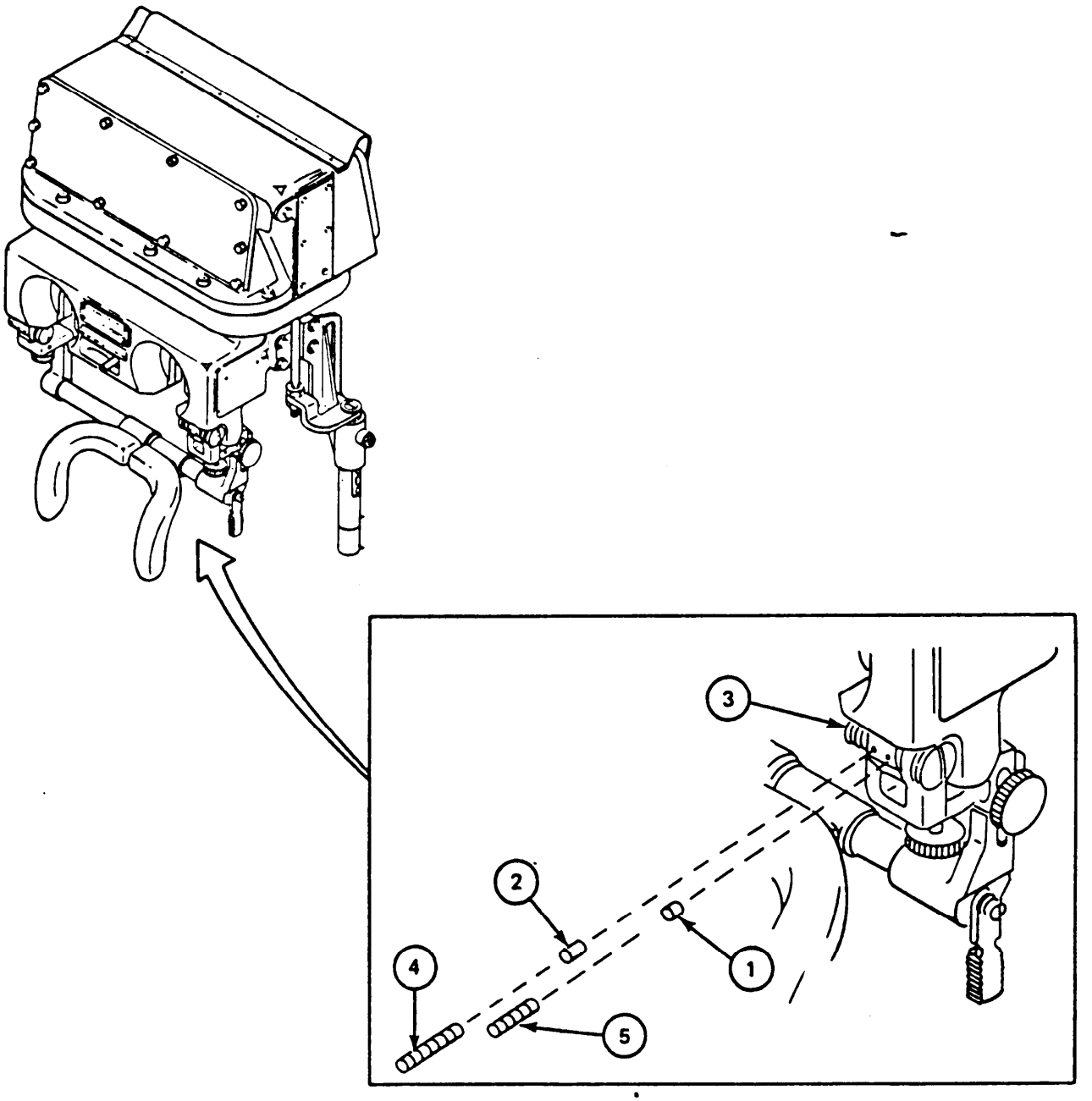


4-17. RIGHT HEADREST ASSEMBLY INSTALLATION (CONT)

FRAME 2

Step	Procedure
1.	Put disks (1) and (2) in mount (3).
2.	Put sealing compound on the threads of setscrews (4) and (5) (JPG).
3.	Using 1/8" screwdriver, install setscrews (4) and (5).
	NOTE FOLLOW-ON MAINTENANCE Do performance test (Vol I, para 2-2). END OF TASK

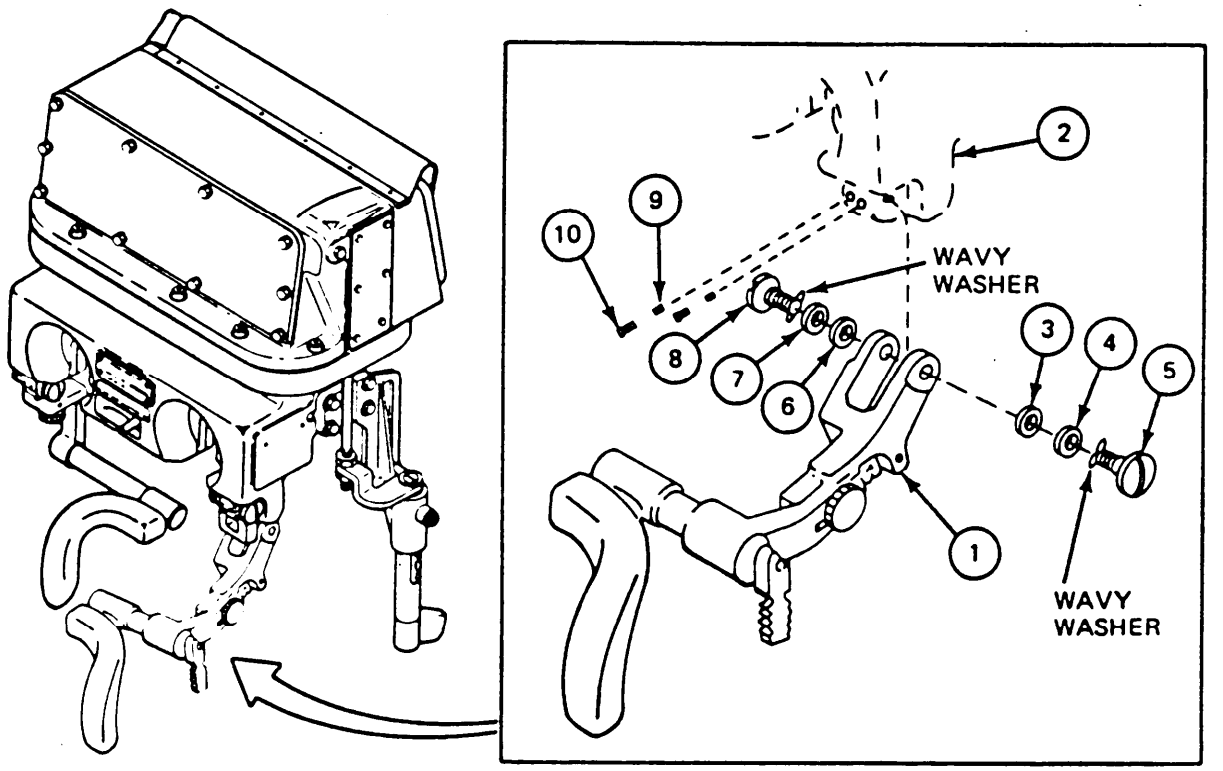
4-17. RIGHT HEADREST ASSMBLY INSTALLATION (CONT)



4-17. RIGHT HEADREST ASSEMBLY INSTALLATION (CONT)

FRAME 3

Step	Procedure
	NOTE Do frame 3 for M119E1 headrest assembly only.
1.	Place headrest assembly (1) on mount (2).
2.	Using 3/8" screwdriver, install three washers (3), (4), wavy washer, and screw (5).
3.	Using 3/8" screwdriver, install three washers (6), (7), wavy washer, and screw (8).
4.	Using Allen wrench, install two disks (9) and two setscrews (10).
	NOTE FOLLOW-ON MAINTENANCE Do performance test (Vol I, para 2-2).
	END OF TASK



M119E1 PERISCOPE MOUNT

Section 5. LEFT HEADREST ASSEMBLY

4-18. LEFT HEADREST ASSEMBLY MAINTENANCE PROCEDURES INDEX

Task	Reference (para)
Removal	4-19
Disassembly	4-20
Assembly	4-21
Installation	4-22

4-19. LEFT HEADREST ASSEMBLY REMOVAL

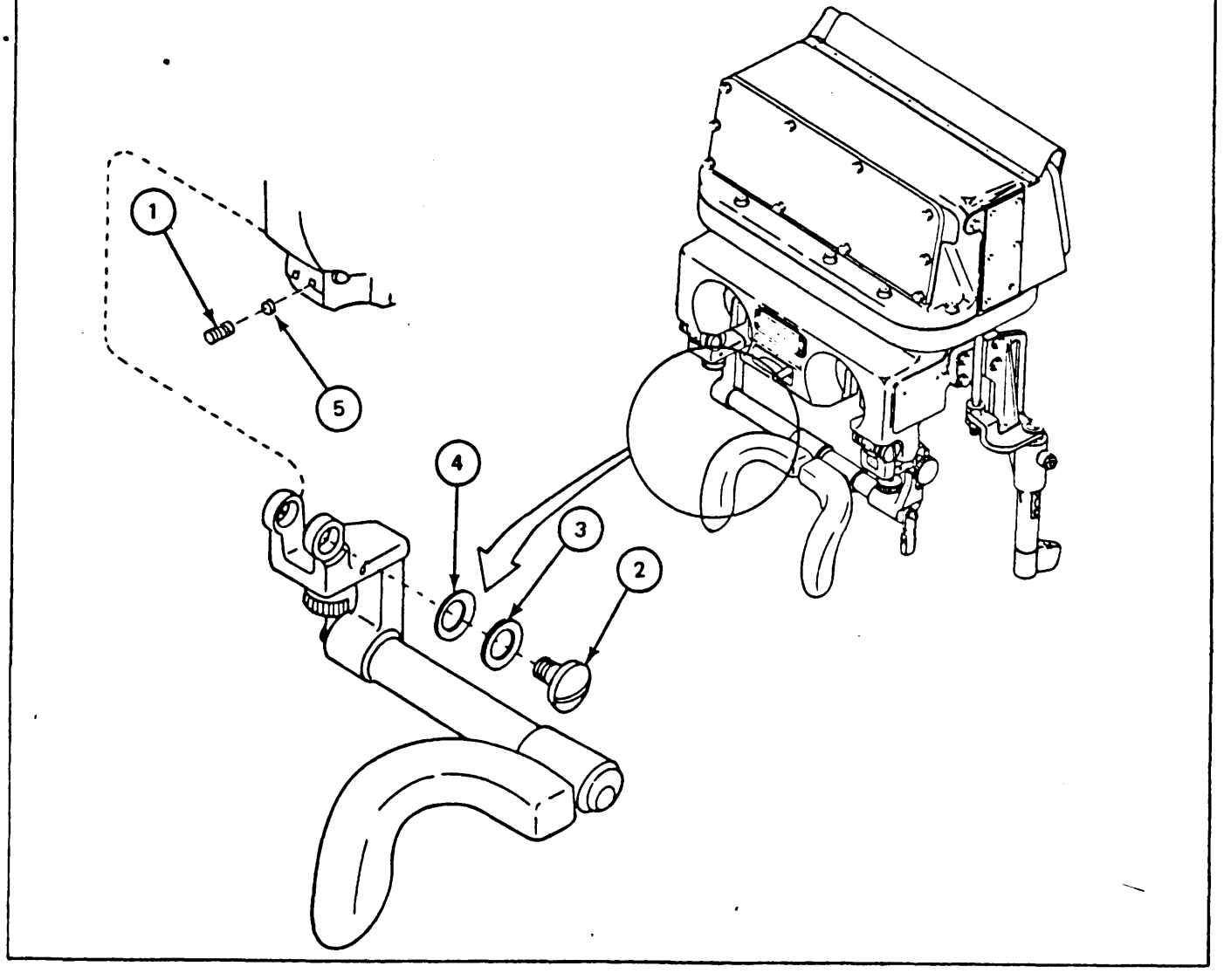
TOOLS: 1/8" and 3/8" flat tip screwdriver

PERSONNEL: One

EQUIPMENT CONDITION: Periscope mount on work bench or in vehicle

FRAME 1

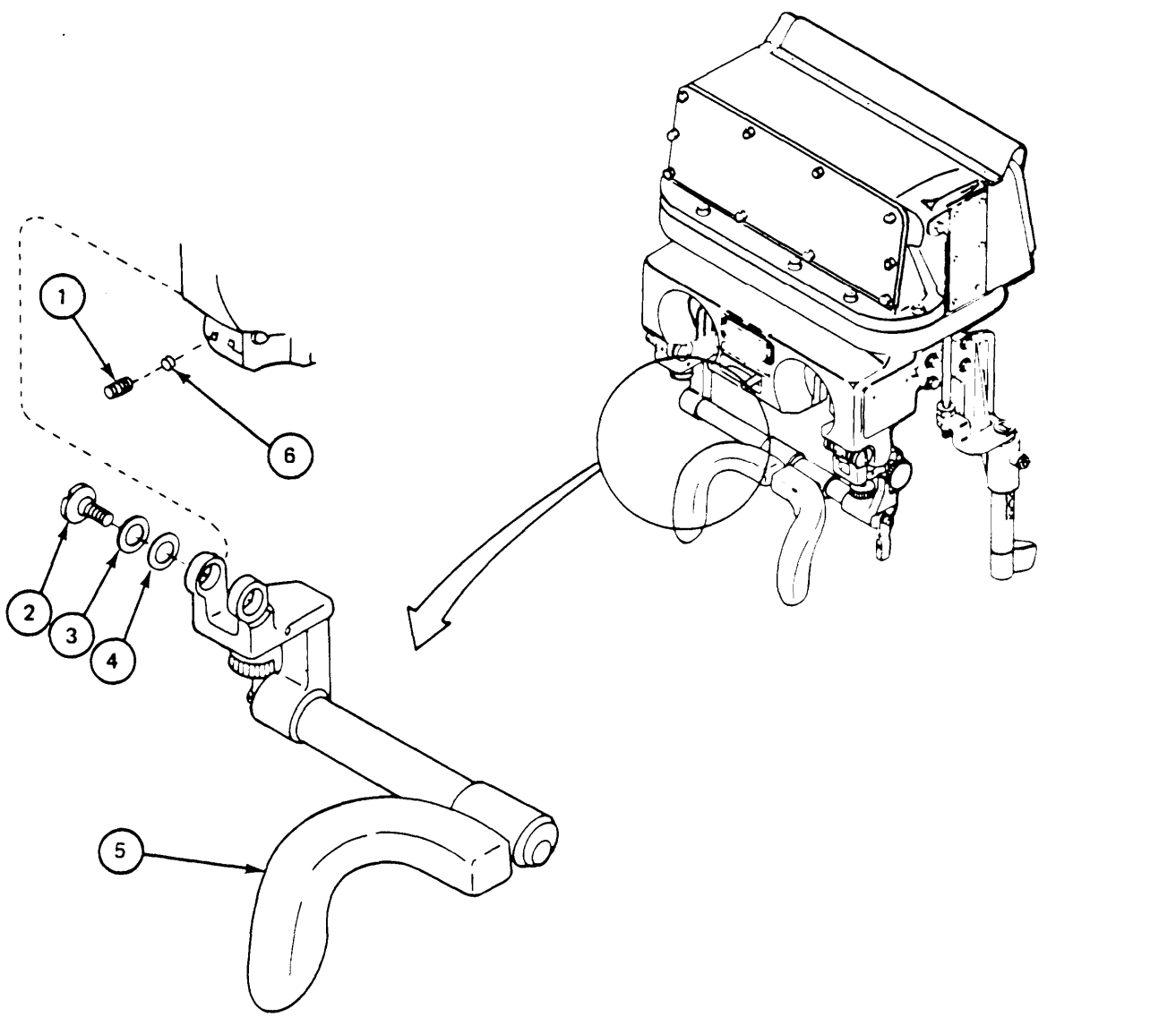
Step	Procedure
1.	Using 1/8" screwdriver, loosen right setscrew (1).
2.	Using 3/8" screwdriver, remove screw (2) and washers (3) and (4).
3.	Using 1/8" screwdriver, turn in setscrew (1) and push out disk (5).
4.	Using 1/8" screwdriver, remove setscrew (1).
	GO TO FRAME 2



4-19. LEFT HEADREST ASSEMBLY REMOVAL (CONT)

FRAME 2

Step	Procedure
1.	Using 1/8" screwdriver, loosen left setscrew (1).
2.	Using 3/8" screwdriver, remove screw (2) and washers (3) and (4).
3.	Remove left headrest assembly (5).
4.	Using 1/8" screwdriver, turn in setscrew (1) and push out disk (6).
5.	Using 1/8" screwdriver, remove setscrew (1).
	END OF TASK



4-20. LEFT HEADREST ASSEMBLY DISASSEMBLY

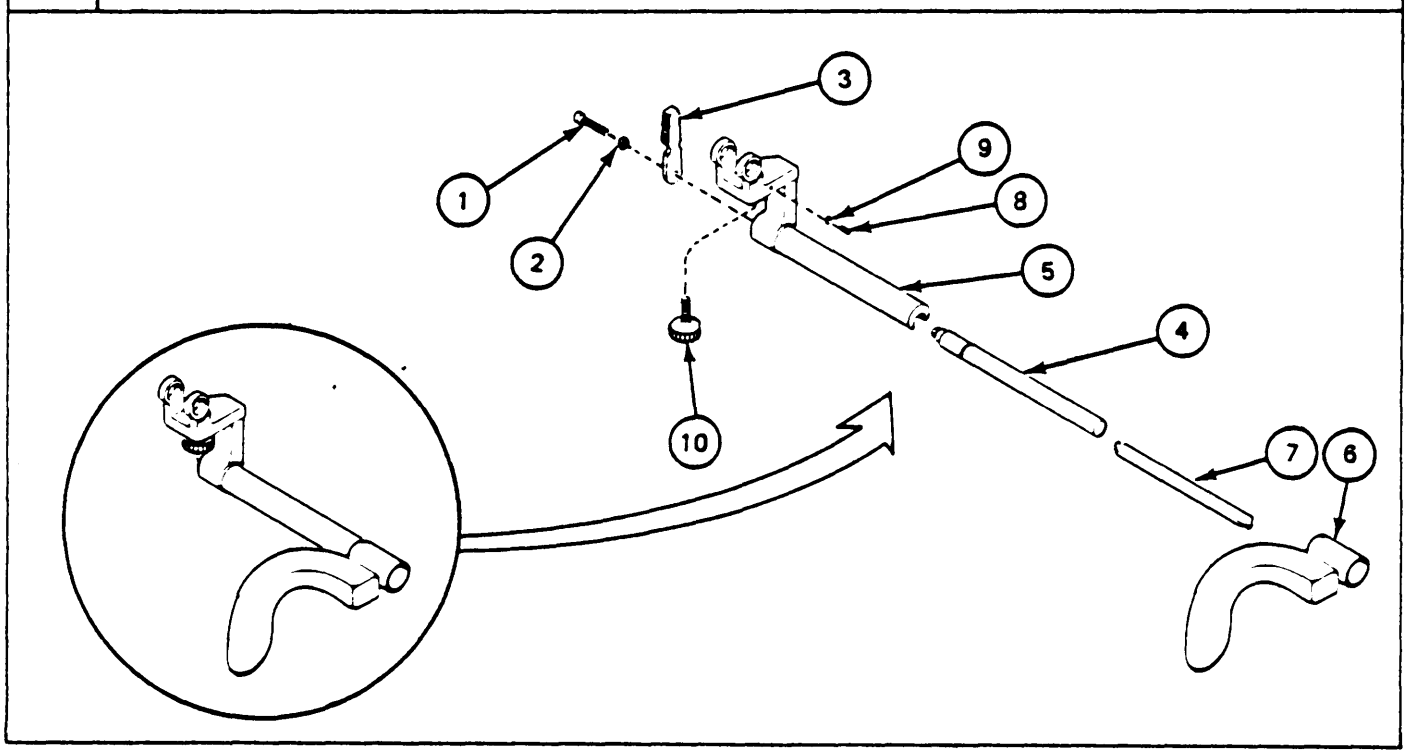
TOOLS: 1/4" flat tip screwdriver
4 oz ball peen hammer
1/4" brass drift pin
5/64" socket head screw key (Allen wrench or equivalent)

PERSONNEL: One

EQUIPMENT CONDITION: Left headrest assembly on work bench or in vehicle

FRAME 1

Step	Procedure
1.	Using screwdriver, remove screw (1), washer (2), and lever (3).
2.	Using brass drift pin and hammer, tap shaft (4) out of support (5).
3.	Remove headrest (6) and segment (7). Using Allen wrench, loosen setscrew to release pressure of disk (9) on thumbscrew (10).
4.	Remove thumbscrew (10).
5.	Using Allen wrench, turn in setscrew (8) and push out disk (9).
6.	Remove setscrew (8).
	END OF TASK



4-21. LEFT HEADREST ASSEMBLY ASSEMBLY

TOOLS: 5/64" socket head screw key (Allen wrench or equivalent)
1/4" flat tip screwdriver

SUPPLIES: Sealing compound (item 3, App A)

PERSONNEL: One

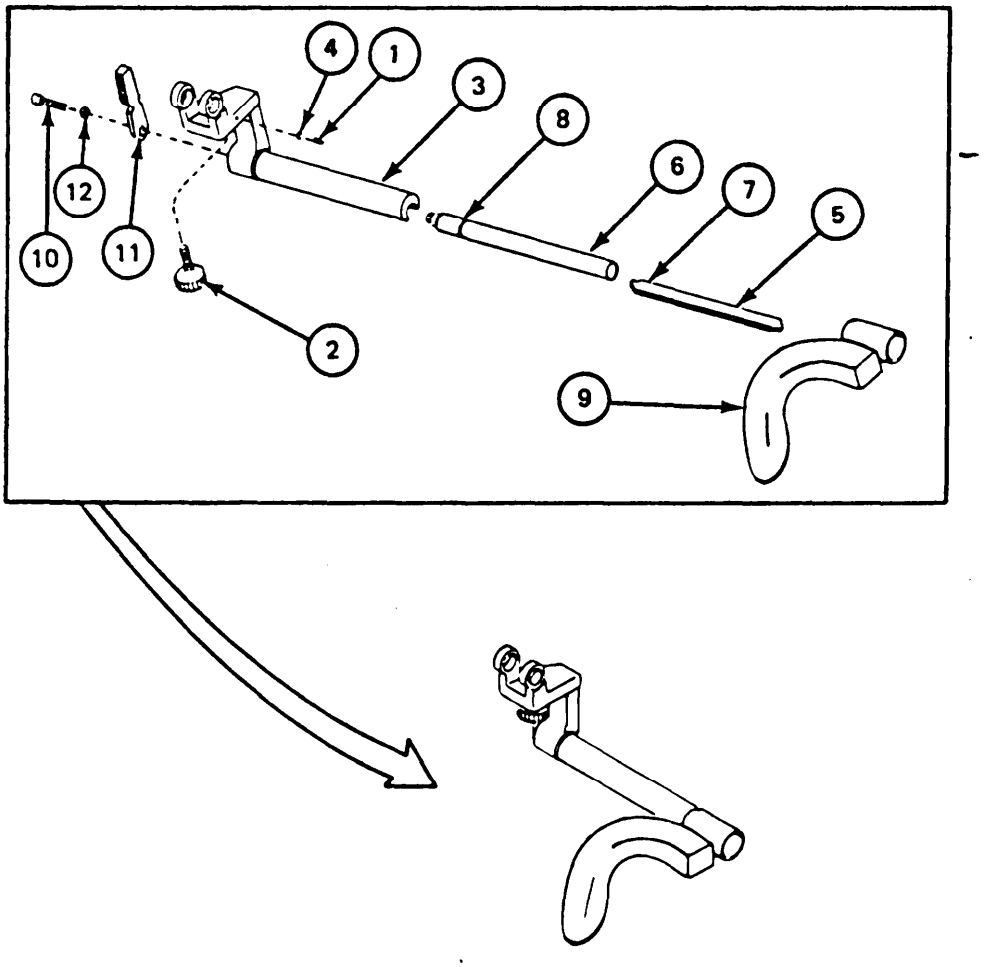
REFERENCE: JPG 41C for using sealing commpound

EQUIPMENT CONDITION: Left headrest assembly on work bench or in vehicle

FRAME 1

Step	Procedure
1.	Put sealing compound on threads of setscrew (1).
2.	Install thumbscrew (2) to arm (3).
3.	Using Allen wrench, install disk (4) and setscrew (1).
4.	Place segment (5) on shaft (6), making sure tip (7) of segment (5) is hooked in notch (8) of shaft (6).
5.	Place shaft (6) halfway on support (3).
6.	Slide headrest (9) over shaft (6) and segment (5) and push shaft (6) into support (3).
7.	Put sealing compound on threads of screw (10).
8.	Using screwdriver, install lever (11) to arm (3) with washer (12) and screw (10).
	END OF TASK

4-21. LEFT HEADREST ASSEMBLY ASSEMBLY (CONT)



4-22. LEFT HEADREST ASSEMBLY INSTALLATION

TOOLS: 1/8" and 3/8" flat tip screwdriver

SUPPLIES: Sealing compound (item 3, App A)

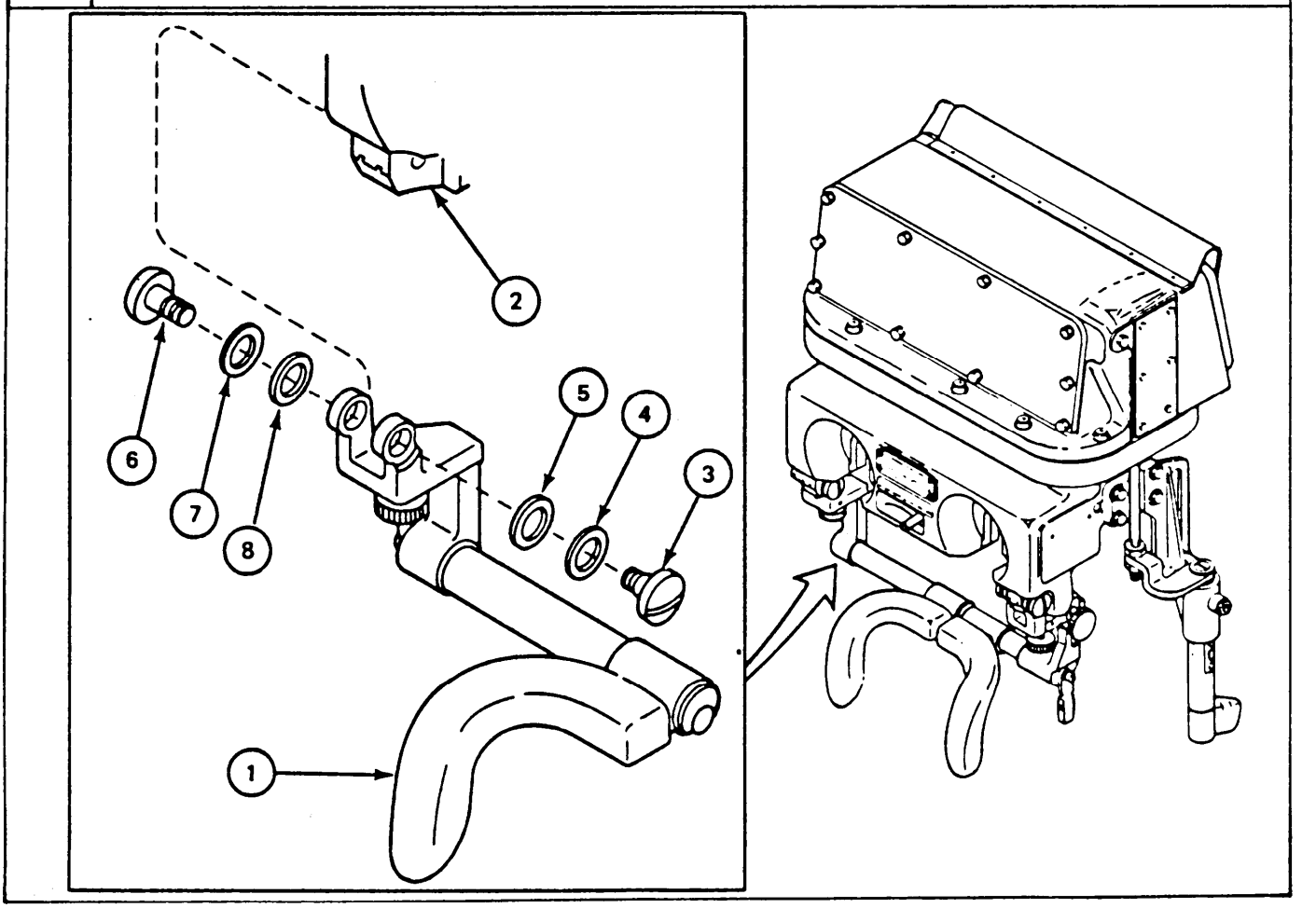
PERSONNEL: One

REFERENCES: JPG 41C for using sealing compound

EQUIPMENT CONDITION: Periscope mount on work bench or in vehicle

FRAME 1

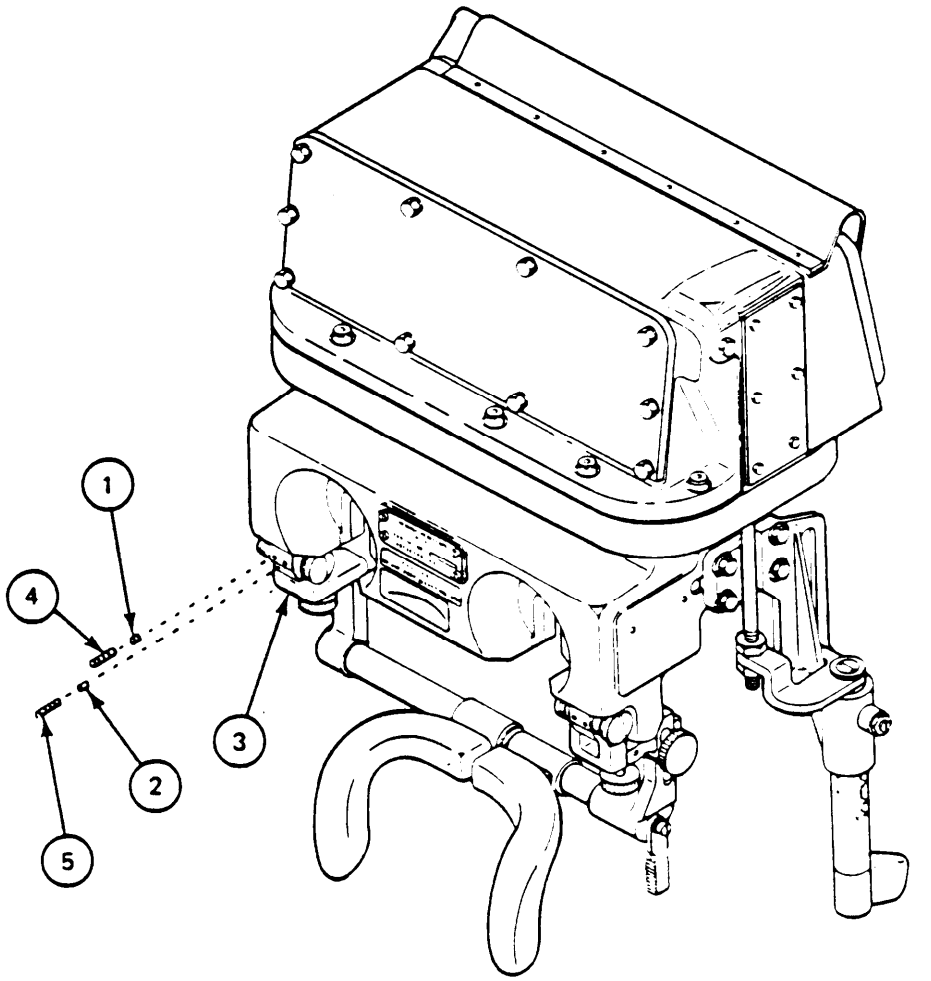
Step	Procedure
1.	Place left headrest assembly (1) to mount (2).
2.	Using 3/8" screwdriver, install screw (3) and washers (4) and (5).
3.	Using 3/8" screwdriver, install screw (6) and washers (7) and (8).
	GO TO FRAME 2



4-22. LEFT HEADREST INSTALLATION (CONT)

FRAME 2

Step	Procedure
1.	Put disks (1) and (2) in mount (3).
2.	Put sealing compound on threads of setscrews (4) and (5).
3.	Using 1/8" screwdriver, install setscrews (4) and (5).
	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 final adjustment and inspection procedures to be done after repairing the M119 and M119E1 Periscope Mounts.

Task	Reference (para)
Final Adjustment (M119E1 configuration only)	5-2
Final Inspection	5-3

5-2. FINAL ADJUSTMENT

APPLICABLE CONFIGURATIONS: M119E1

TOOLS: #2 cross tip screwdriver (Phillips type)
5/64" socket head screw key (Allen wrench or equivalent)

SUPPLIES: Sealing compound (item 3, App A)

PERSONNEL: One

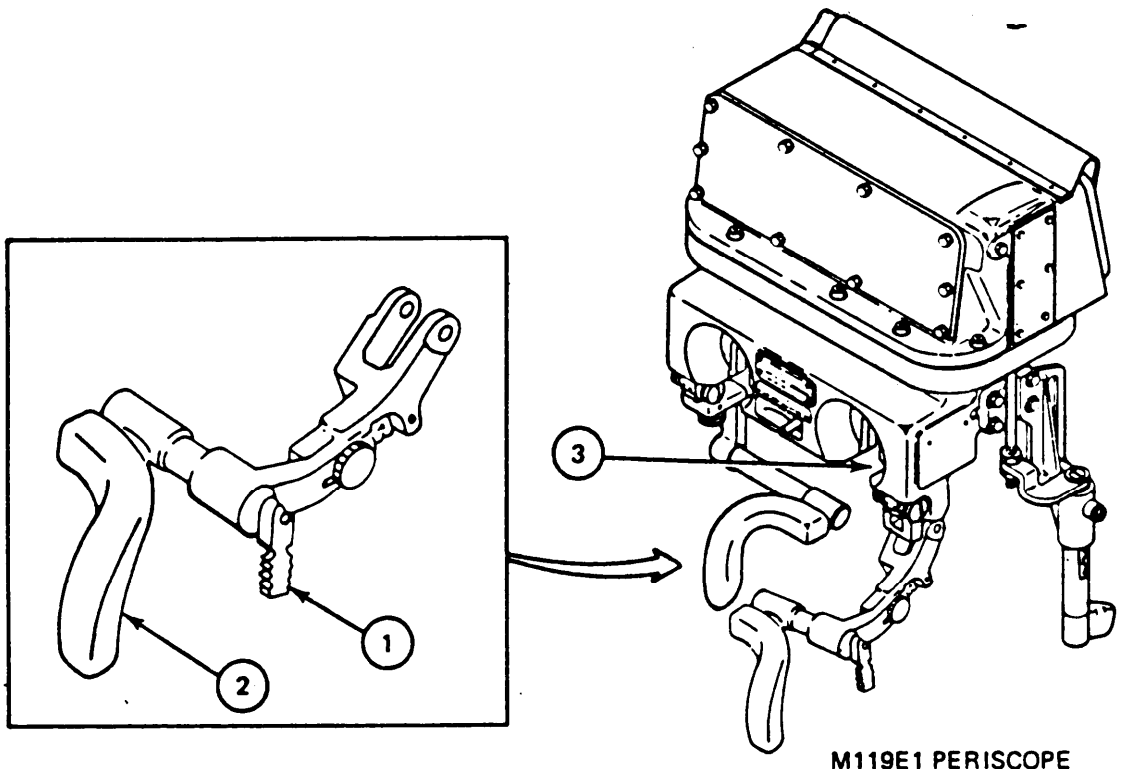
REFERENCES: JPG 41C for using sealing compound

EQUIPMENT CONDITION: Periscope mount on work bench or in vehicle

FRAME 1

Step	Procedure
	NOTE Final adjustment is done only for the M119E1 right headrest assembly.
1.	Turn locking lever (1) counterclockwise.
2.	Carefully move headrest assembly (2) down into position in front of the night viewer eyepiece (3). GO TO FRAME 2

5-2. FINAL ADJUSTMENT (CONT)

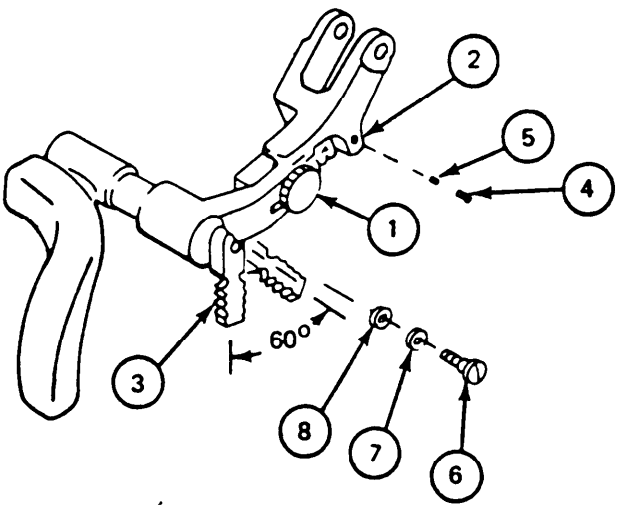


M119E1 PERISCOPE MOUNT

5-2. FINAL ADJUSTMENT **(CONT)**

FRAME 2

Step	Procedure
1.	Adjust slide screw (1) and stop screw (2) and check that there is a clear view through the periscope.
2.	Tighten locking lever (3).
3.	Tighten slide screw (1).
4.	Put sealing compound on threads of setscrew (4) (JPG).
5.	Using Allen wrench, install disk (5) and setscrew (4).
6.	Using Phillips screwdriver, remove screw (6), washers (7) and (8), and locking lever (3).
7.	Put sealing compound on threads of screw (6) (JPG).
	GO TO FRAME 3

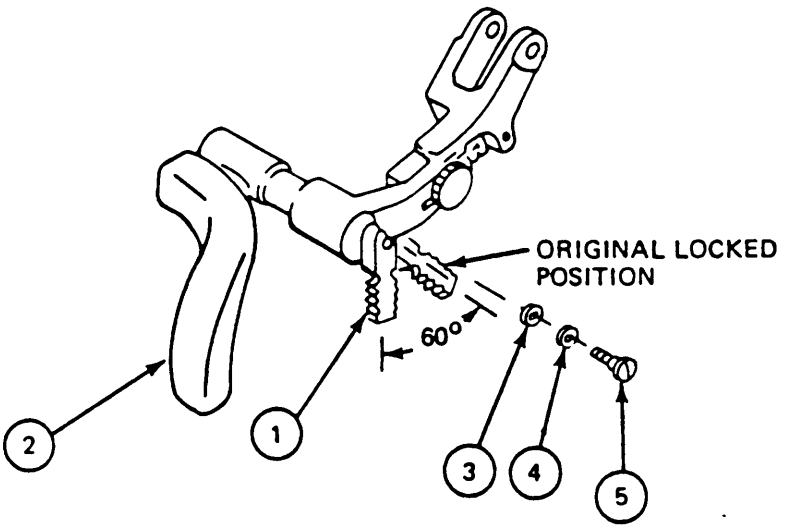


Para 5-2 Cont

5-2. FINAL ADJUSTMENT (CONT)

FRAME 3

Step	Procedure
1.	Put locking lever (1) back on headrest (2) so that it is vertical or slightly clockwise of vertical.
	NOTE Locking lever (1) must be approximately 60° clockwise from original locked position.
2.	Using Phillips screwdriver, install locking lever (1), washers (3) and (4), and screw (5).
	NOTE FOLLOW-ON MAINTENANCE Do Final Inspection (para 5-3).
	END OF TASK



Para 5-2 Cont

5-3. PERISCOPE MOUNT FINAL INSPECTION

PERSONNEL: One

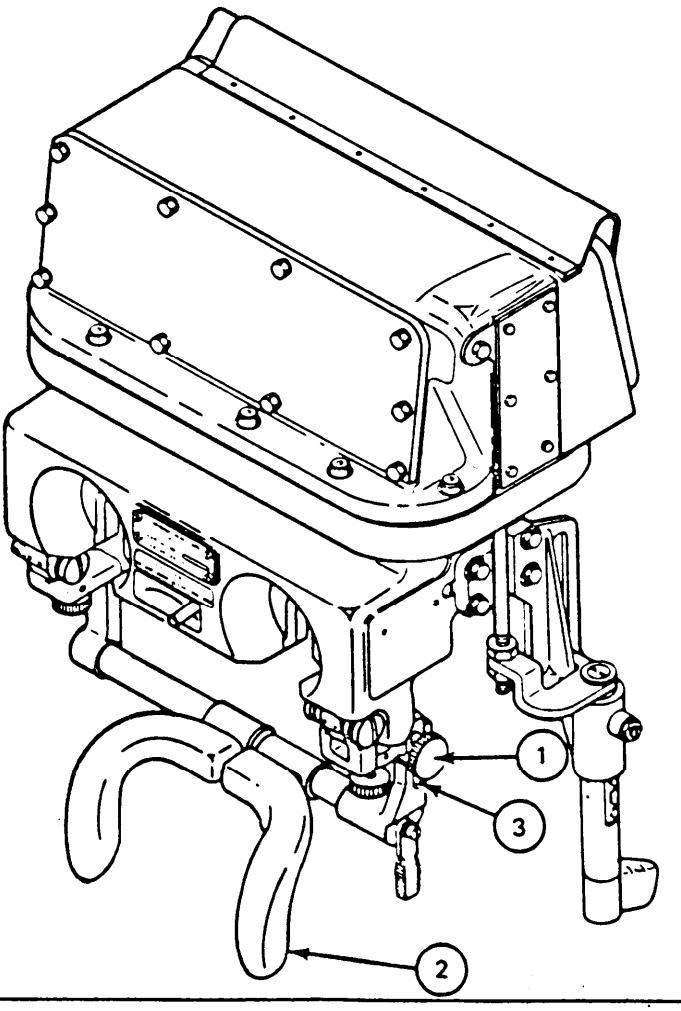
EQUIPMENT CONDITION: Periscope mount on work bench

NOTE

If you find any faults, tell your supervisor. If you do not find any faults, send the periscope mount back into service.

FRAME 1

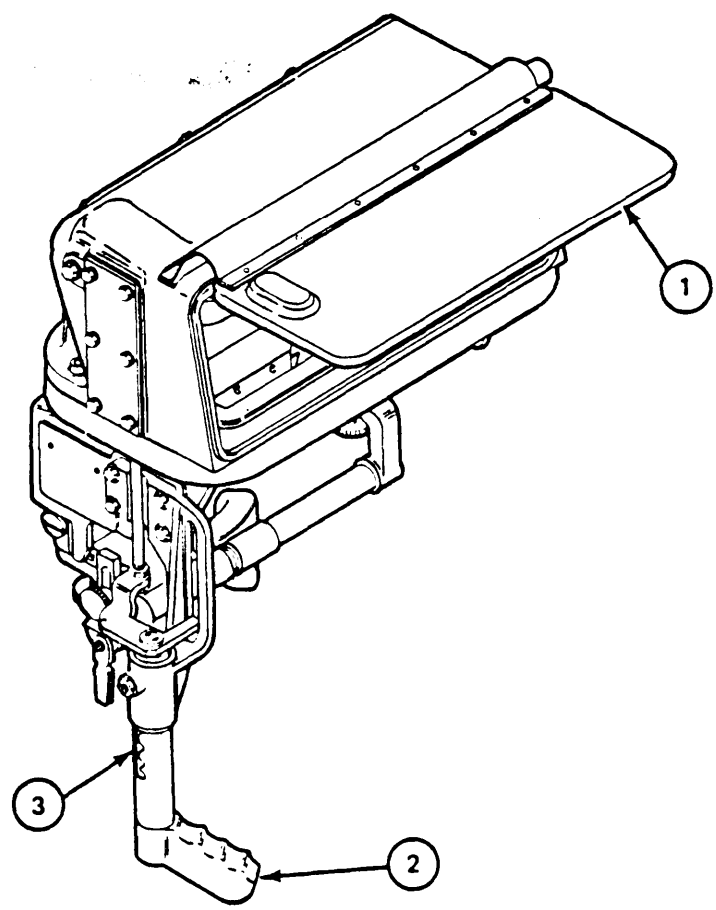
Step	Procedure
1.	Check that all parts are clean and free from dirt, grease, and corrosion.
2.	Loosen thumbscrew (1) and make sure the right headrest (2) can be moved through the movement area allowed by slot (3).
	GO TO FRAME 2



5-3. PERISCOPE MOUNT FINAL INSPECTION (CONT)

FRAME 2

Step	Procedure
1.	Make sure that the shield (1) opens fully and closes completely by raising and lowering the handle (2).
2.	Make sure that the shield (1) locks in six different positions by turning the handle (2) and hooking the slots (3). GO TO FRAME 3

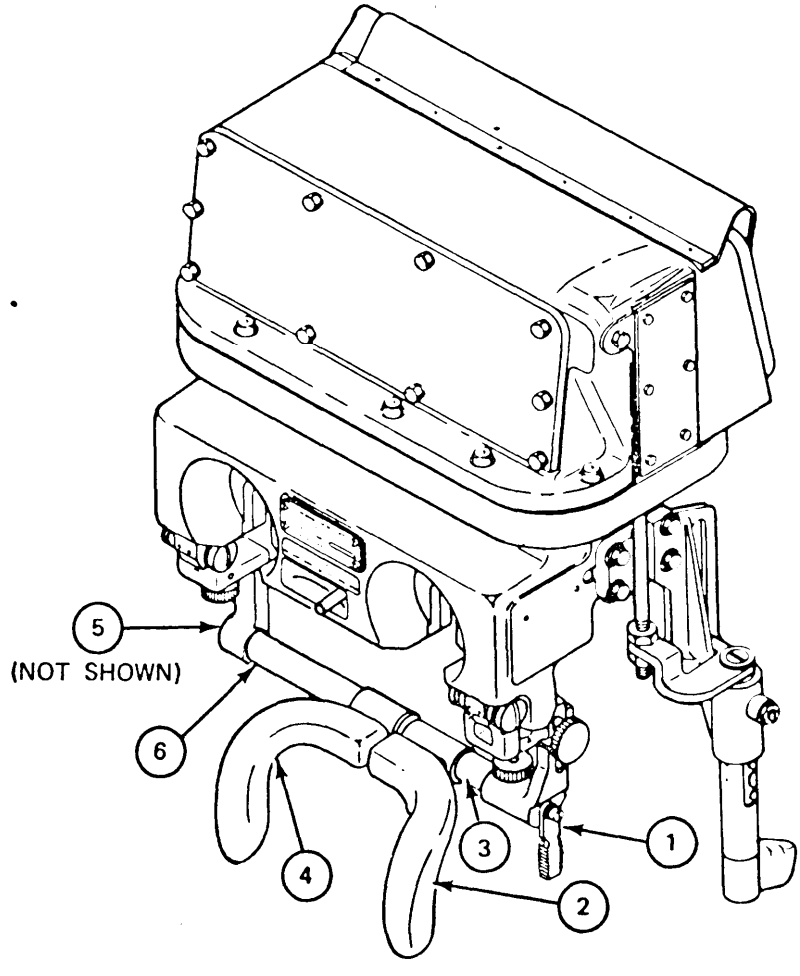


5-3. PERISCOPE MOUNT FINAL INSPECTION (CONT)

FRAME 3

Step	Procedure
1.	Press lever (1) and check that the right headrest (2) moves from left to right.
	NOTE When lever (1) is in the locked position, the right headrest is tightly connected to the shaft (3).
2.	Check that the left headrest (4) moves from right to left by loosening the lever (5) on the opposite side.
	NOTE When lever (5) is in the locked position, the left headrest is tightly connected to the shaft (6).
	END OF TASK

5-3. PERISCOPE MOUNT FINAL INSPECTION (CONT)



CHAPTER 6

PACKAGING

6-1. SCOPE

Instructions for packaging the M119 and M119E1 Periscope Mounts are found in MIL-P-14232/ P869585A, TM 9-200, level C.

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 M119 and M119E1 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, sealing compound (item 3, 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	8040-00-664-4318	ADHESIVE: RECLAIMED RUBBER, LIQUID,GENERAL PURPOSE: TYPE II MIL-A-5092A 5 OZ. CAN	OZ
2	F	FED. STD. 595	PAINT OD NO. X24087 1 GAL. CAN	GL
3	F	8030-00-275-8110	SEALING COMPOUND MIL-S-11031A 1 PT. CAN	PT
4	F	8030-00-275-8114	SEALING COMPOUND: TYPE I,CLASS I MIL-S-11030B 1 PT. CAN	PT

APPENDIX B

MAINTENANCE TASK INDEX

B-1. SCOPE

This appendix helps you find maintenance tasks for the M119 and M119E1 Periscope Mounts. The maintenance tasks are referenced to help you find the procedure.

B-2. MAINTENANCE TASK INDEX (CONT)

MOUNT, PERISCOPE: M119 (1240-00-394-3148) M119E1 (1240-00-394-3149) / Item	Maintenance Tasks: Inspection Upon Receipt (Vol II)	Final Inspection (Vol II)	Performance Test (Vol I)	Adjust, Align, Calibrate (Vol II)	Troubleshoot (Vol I)	Removal/Installation (Vol II)	Disassembly/Assembly (Vol II)	Notes
M119/M119E1 PERISCOPE MOUNT	Para 3-2	Para 5-2	Para 2-2	Para 5-2	Chap 2			
COVER ASSEMBLY						Para 4-9 4-12	Para 4-10 4-11	
HANDLE ASSEMBLY						Para 4-4 4-7	Para 4-5 4-6	
LEFT HEADREST ASSEMBLY						Para 4-19 4-22	Para 4-20 4-21	
RIGHT HEADREST ASSEMBLY						Para 4-14 4-17	Para 4-15 4-16	

APPENDIX C

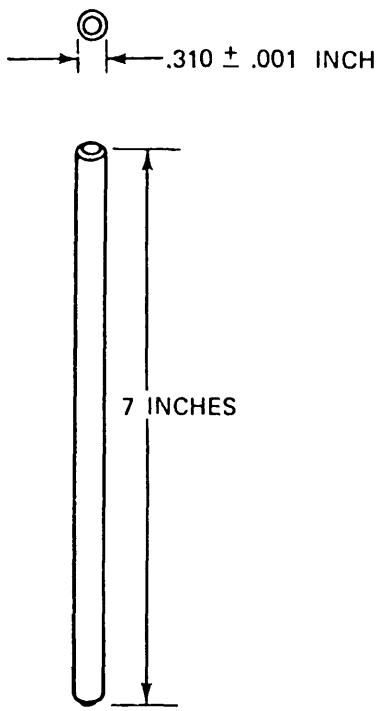
FABRICATED TOOL

C-1. SCOPE

The fabricated tool is used in the removal and installation of the shield assembly (paras 4-10 and 4-11). This appendix shows the tool, with dimensions so that you can have the tool made.

C-2. FABRICATED TOOL DIAGRAM

MATERIAL: Steel rod stock



APPENDIX D

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

Section 1. INTRODUCTION

D-1. SCOPE

This appendix lists spares and repair parts; special- tools; 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, M119 and Mount, Periscope, M119E1. It authorizes the requisitioning and issue of spares and repair parts as indicated by the source and maintenance codes.

D-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.

D-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 outfitting. Not subject to automatic replenishment.
PE	-Support equipment procured and stocked for initial issue or outfitting to specified maintenance repair activities.
PF	-Support equipment which will not be stocked but which will be centrally procured on demand.
PG	-Item procured and stocked to provide for sustained support for the life of the equipment. It is applied to an item peculiar to the equipment which, because of probable discontinuance or shutdown of production facilities, would prove uneconomical to reproduce at a later time.
KD	-An item of a depot overhaul/ repair kit and not purchased separately. Depot kit defined as a kit that provides items required at the time of overhaul or repair.
KF	-An item of a maintenance kit and not purchased separately. Maintenance kit defined as a kit that provides an item that can be replaced at organizational or intermediate levels of maintenance.
KB	-Item included in both a depot overhaul/repair kit and a maintenance kit.
MO	-Item to be manufactured or fabricated at organizational level.
MF	-Item to be manufactured or fabricated at the direct support maintenance level.
MH	-Item to be manufactured or fabricated at the general support maintenance level.
MD	-Item to be manufactured or fabricated at the depot maintenance level.
AO	-Item to be assembled at organizational level.
AF	-Item to be assembled at direct support maintenance level.
AH	-Item to be assembled at general support maintenance level.

AD -Item to be assembled at depot maintenance level.

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

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

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

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

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

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.

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.

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).

D-4 SPECIAL INFORMATION

a. 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
084	MOUNT, PERISCOPE, M119
F85	MOUNT, PERISCOPE, M119E1

b. Detailed assembly instructions for items source coded to be assembled are found in this manual.

D-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) Fourth. 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.

D-6. ABBREVIATIONS

(Not Applicable)

Section II

REPAIR PARTS LIST

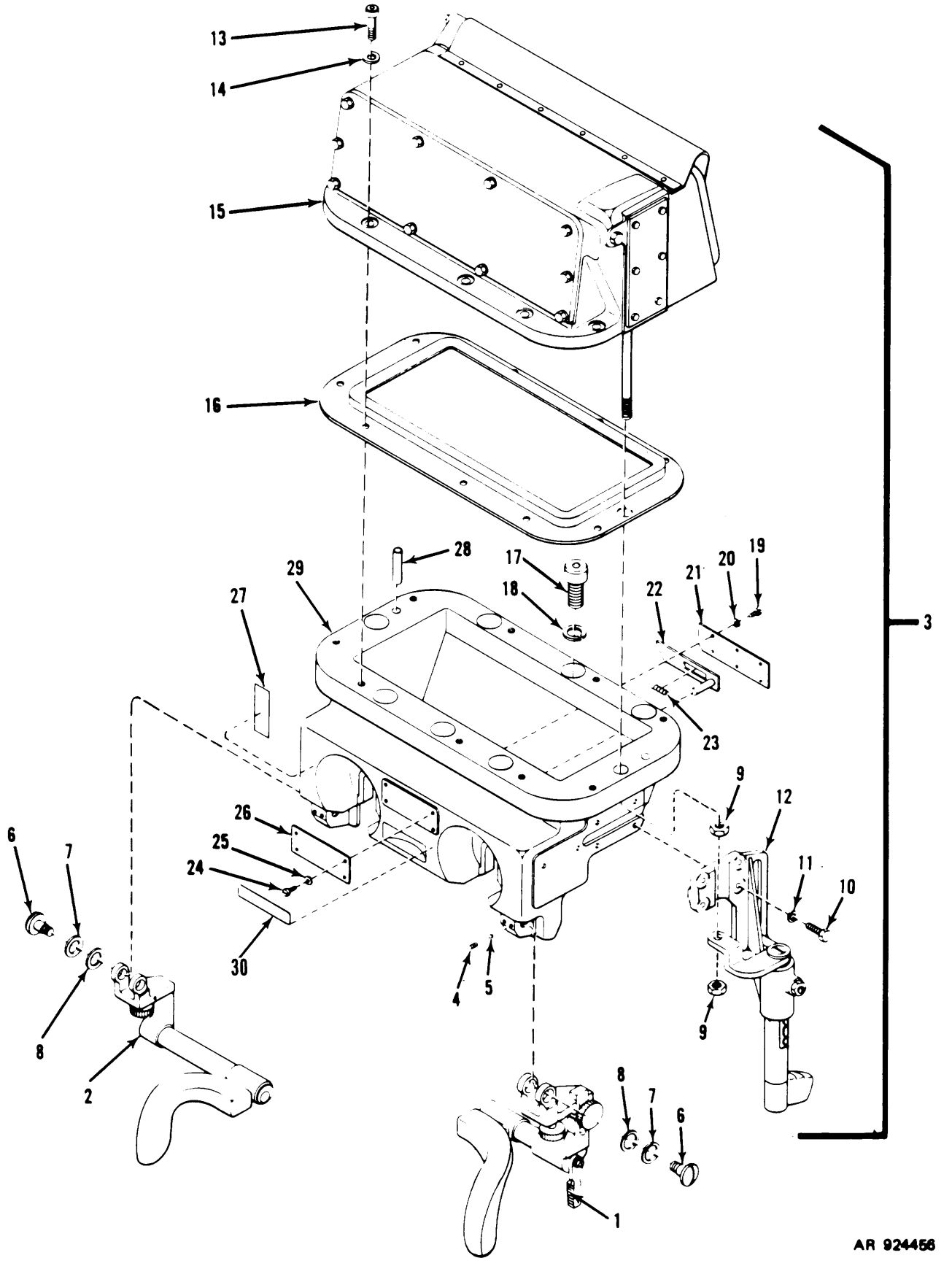


Figure D-1. Periscope Mount M119 11727488, M119E1 11727489

(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 M119 11727488, M119E1 11727489			
D-1	1	AFFFF		19200	11727445	HEADREST,OPTICAL INSTRUMENT	FB5	EA	1
D-1	1	AFFFF		19200	8619420	HEADREST ASSEMBLY	O84	EA	1
D-1	2	AFFFF		19200	8619421	HEADREST ASSEMBLY		EA	1
D-1	3	XAFHH		19200	8619585	MOUNT,PERISCOPE		EA	1
D-1	4	PAFZZ	5305-00-993-3589	96906	MS51031-34	SETSCREW		EA	4
D-1	5	PAFZZ	5340-00-685-0831	19200	8620013	DISK,SOLID,PLAIN		EA	4
D-1	6	PAFZZ	5305-00-819-9602	19200	8619691	SCREW,SHOULDER		EA	4
D-1	7	PAFZZ	5310-00-655-9990	19200	8229064	WASHER,SPRING		EA	4
D-1	8	PAFZZ	3120-00-647-0895	19207	8229063	BEARING,WASHER		EA	4
D-1	9	PAFZZ	5310-00-926-1852	96906	MS21083N6	NUT,SELF-LOCKING		EA	2
D-1	10	PAFZZ	5305-00-702-4523	96906	MS35307-306	SCREW,CAP,HEXAGON HEADLESS		EA	4
D-1	11	PAFZZ	5310-00-933-8121	96906	MS35338-139	WASHER,LOCK		EA	4
D-1	12	PAHHH	1240-00-457-9370	19200	8620027	HANDLE ASSEMBLY		EA	1
D-1	13	PAFZZ	5305-00-988-7840	96906	MS16995-66	SCREW,CAP,SOCKET HEADLESS		EA	9
D-1	14	PAFZZ	5310-00-688-2196	90598	TM706	WASHER,LOCK		EA	9
D-1	15	XDFFF		19200	8620028	COAVER ASSEMBLY		EA	1
D-1	16	PAFZZ	1240-00-797-3570	19200	8619584	SEAL		EA	1
D-1	17	PAFZZ	5305-00-187-9934	96906	MS16997-142	SCREW,CAP,SOCKET HEADLESS		EA	7
D-1	18	PAFZZ	5310-00-933-8778	96906	MS35338-143	WASHER,LOCK		EA	7
D-1	19	PAFZZ	5305-00-054-5647	96906	MS51957-13	SCREW,MACHINE		EA	6
D-1	20	PAFZZ	5310-00-058-3599	96906	MS35335-57	WASHER,LOCK		EA	6
D-1	21	XDFZZ		19200	8619639	COVER		EA	1
D-1	22	PAFZZ	1240-00-403-0980	19200	8619640	LATCH,MOUNT TELESCOPE		EA	1
D-1	23	PAFZZ	5360-00-150-3050	19200	8619622	SPRING,HELICAL		EA	1
D-1	24	PAHZZ	5305-00-057-0522	96906	MS51958-26	SCREEW,MACHINE		EA	4
D-1	25	PAHZZ	5310-00-933-8119	96906	MS35338-137	WASHER,LOCK		EA	4
D-1	26	PAHZZ	9905-01-042-7767	19200	11727383	PLATE,IDENTIFICATION		EA	1
D-1	27	PAFZZ	5940-00-825-4605	19200	11727361	SPLICE,CONDUCTOR		EA	1
D-1	28	PAFZZ	5315-00-849-7232	96906	MS16556-661	PIN,STRAIGHT		EA	2
D-1	29	XDFZZ		19200	8619582	MUONT		EA	1
D-1	30	PAFZZ	7690-00-880-5775	19200	10516589	DECAL	O84	EA	1

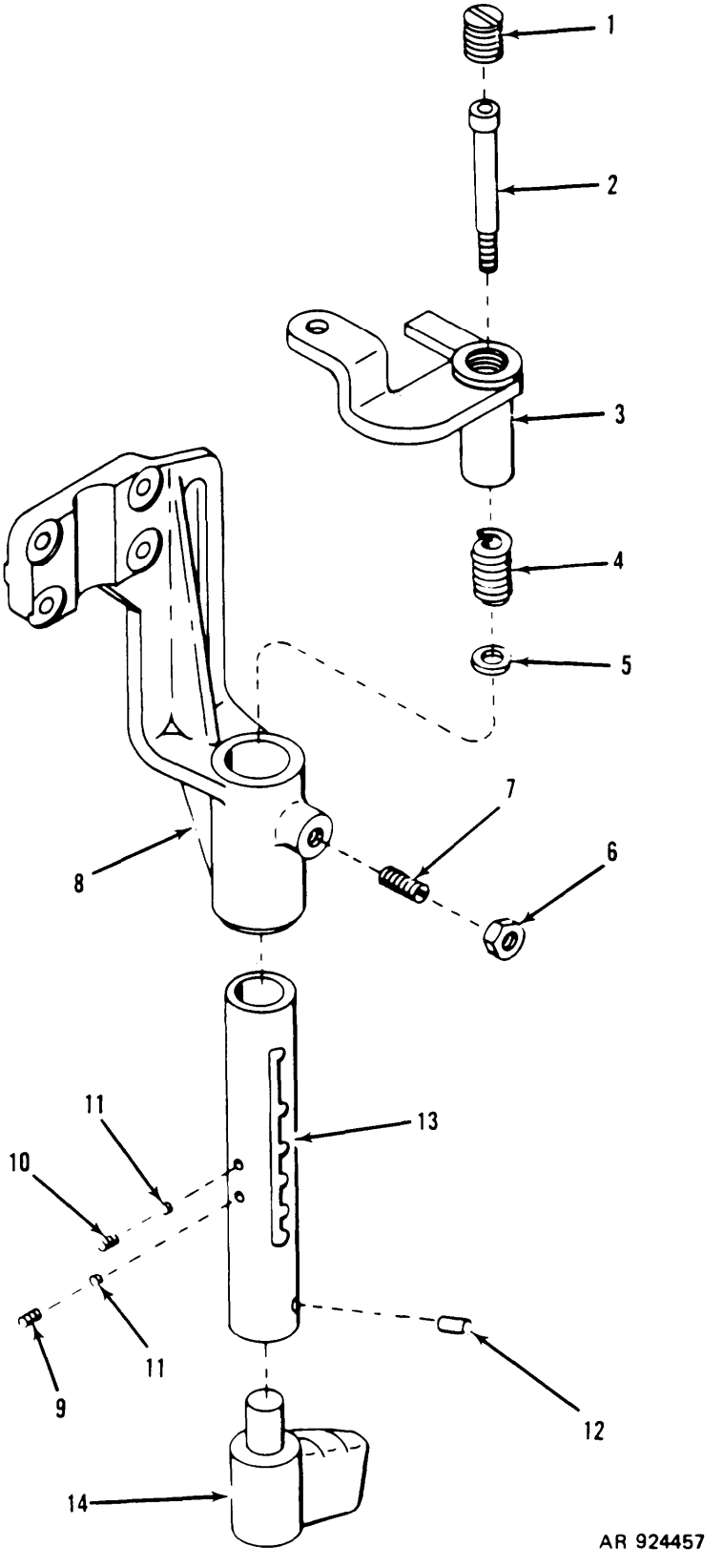


Figure D-2. Handle assembly 8620027

(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 HANDLE ASSEMBLY 8620027		
D-2	1	PAHZZ	5305-00-724-5856	96906	MS51031-91	SETSCREW	EA	1
D-2	2	PAHZZ	5305-00-987-3221	19200	8619706	SCREW,SHOULDER	EA	1
D-2	3	XAHZZ		19200	8619710	PLATE	EA	1
D-2	4	PAHZZ	5360-00-991-3190	19200	8620421	SPRING,HELICAL TORSION	EA	1
D-2	5	PAHZZ	1240-00-403-0977	19200	8619629	RETAINER,MOUNT PERISCOPE	EA	1
D-2	6	PAHZZ	5310-00-926-5913	96906	MS35691-23	NUT,PLAIN,HEXAGON	EA	1
D-2	7	PAHZZ	5305-00-991-3188	19200	8619712	SETSCREW	EA	1
D-2	8	XAHZZ		19200	8619704	SUPPORT	EA	1
D-2	9	PAHZZ	5305-00-724-3438	96906	MS51031-27	SETSCREW		
D-2	10	PAHZZ	5305-00-582-9064	96906	MS51031-24	SETSCREW	EA	1
D-2	11	PAHZZ	1220-00-087-2729	19200	8619986	DISK,SOLID,PLAIN	EA	2
D-2	12	PAHZZ	5315-00-275-8263	96906	MS39086-253	PIN,SPRING	EA	1
D-2	13	XAHZZ		19200	8620023	SHAFT	EA	1
D-2	14	PAHZZ	5340-01-146-1381	19200	8619707	HANDLE	EA	1

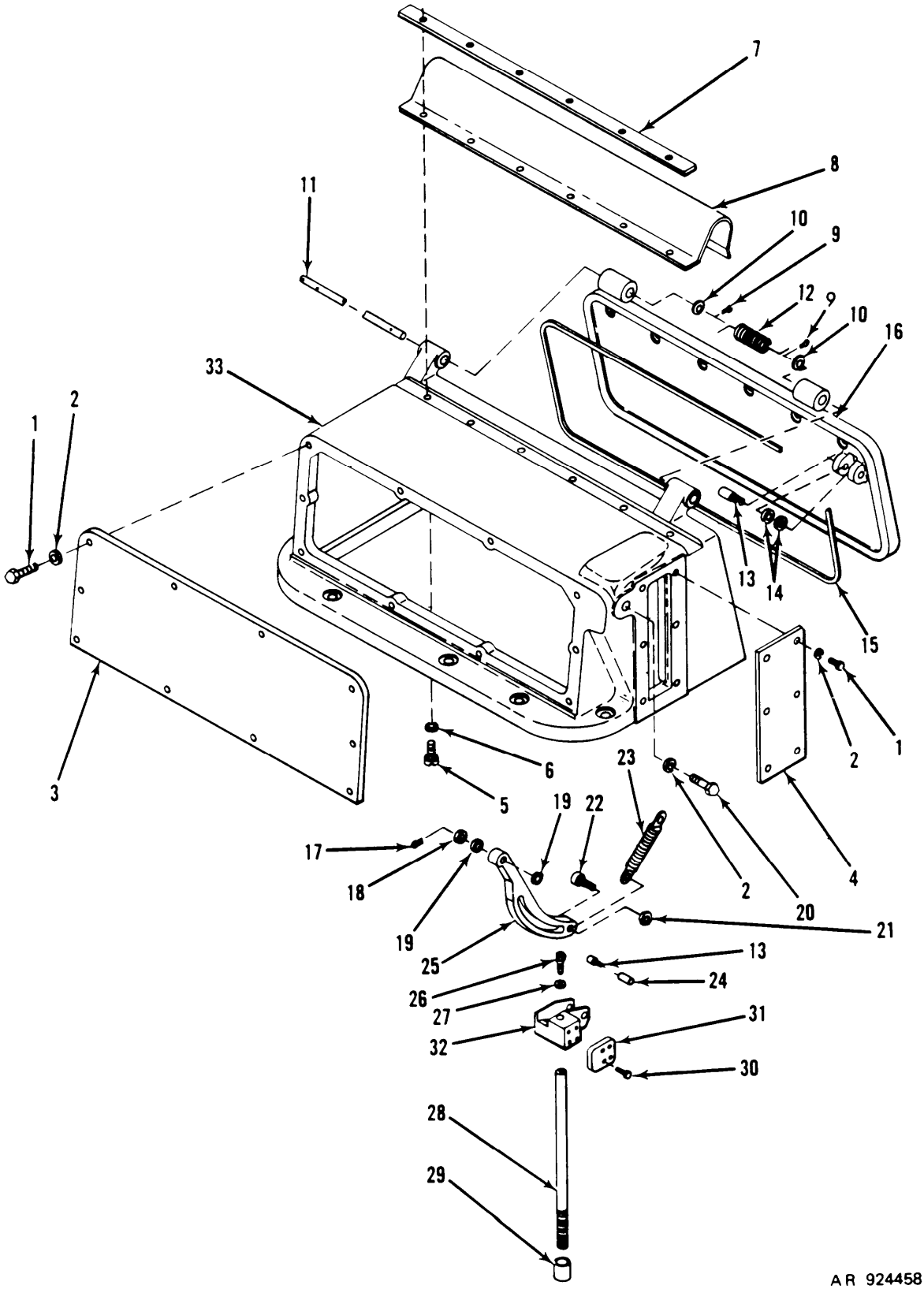


Figure D-3. Cover assembly 8620028

(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 0002 COVER ASSEMBLY 8620028			
D-3	1	PAFZZ	5305-00-719-3997	96906	MS35307-303	SCREW,CAP,HEXAGON HEADLESS		EA	16
D-3	2	PAFZZ	5310-00-933-8121	96906	MS35338-139	WASHER,LOCK		EA	17
D-3	3	XAFZZ		19200	8619705	PLATE		EA	1
D-3	4	XAFZZ		19200	8619632	COVER		EA	1
D-3	5	PAFZZ	5305-00-054-6669	96906	MS51957-44	SCREW,MACHINE		EA	12
D-3	6	PAFZZ	5310-00-543-2739	96906	MS35333-72	WASHER,LOCK		EA	12
D-3	7	PAFZZ	1240-00-991-3189	19200	10516035	STRAP		EA	2
D-3	8	PAFZZ	1240-00-796-9688	19200	8619581	COVER		EA	1
D-3	9	PAFZZ	5315-00-234-1861	96906	MS24665-298	PIN,COTTER		EA	2
D-3	10	PAFZZ	5310-00-625-5756	96906	MS15795-812	WASHER,FLAT		EA	2
D-3	11	PAFZZ	5315-00-395-2938	19200	11727419	PIN,STRAIGHT		EA	1
D-3	12	PAFZZ	5360-00-435-8969	19200	11727420	SPRING,HELICAL		EA	1
D-3	13	PAFZZ	5315-00-995-2538	19200	8619709	PIN,STRAIGHT		EA	2
D-3	14	PAFZZ	5310-00-983-9445	19200	10516633	WASHER,FLAT		EA	2
D-3	15	PAFZZ	1240-00-991-3185	19200	8619708	SEAL		EA	1
D-3	16	PAFZZ	1240-01-021-9793	19200	11727428	SHIELD,ASSEMLBY		EA	1
D-3	17	PAFZZ	5315-00-757-6303	19200	8619711	PIN,SHOULDER, HEADLESS		EA	1
D-3	18	PAFZZ	5310-00-840-5785	96906	MS35691-7	NUT,PLAIN,HEXAGON		EA	1
D-3	19	PAFZZ	5310-00-582-5677	96906	MS15795-810	WASHER,FLAT		EA	2
D-3	20	PAFZZ	5305-00-814-7395	96906	MS35308-314	SCREW,CAP,HEXAGON HEAD		EA	1
D-3	21	PAFZZ	5310-00-934-9765	96906	MS35650-304	NUT,PLAIN,HEXAGON		EA	1
D-3	22	PAFZZ	5305-00-990-4056	19200	8619713	SETSCREW		EA	1
D-3	23	PAFZZ	1240-01-084-0448	19200	11747405	SPRING ASSEMBLY		EA	1
D-3	24	PAFZZ	3120-00-113-8111	19200	8619630	BEARING,SLEEVE		EA	1
D-3	25	PAFZZ	1240-00-191-1389	19200	8619623	LEVER,MOUNT PERISCOPE HEAD		EA	1
D-3	26	PAFZZ	5305-00-989-3119	96906	MS16995-37	SCREW,CAP,SOCKET HEAD		EA	1
D-3	27	PAFZZ	5310-00-933-8120	96906	MS35338-138	WASHER,LOCK		EA	1
D-3	28	PAFZZ	3040-00-480-7361	19200	8619618	SHAFT,STRAIGHT		EA	1
D-3	29	PAFZZ	1240-00-403-0978	19200	8619631	SLEEVE,MOUNT PERISCOPE		EA	1
D-3	30	PAFZZ	5305-00-765-4257	96906	MS51959-43	SCREW,MACHINE		EA	4
D-3	31	PBFZZ	5365-01-126-9950	19200	8619701	SPACER,PLATE		EA	1
D-3	32	PBFZZ	1240-01-126-4266	19200	8619702	ARM,COVER ASSEMBLY		EA	1
D-3	33	XAFZZ		19200	8619633	COVER		EA	1

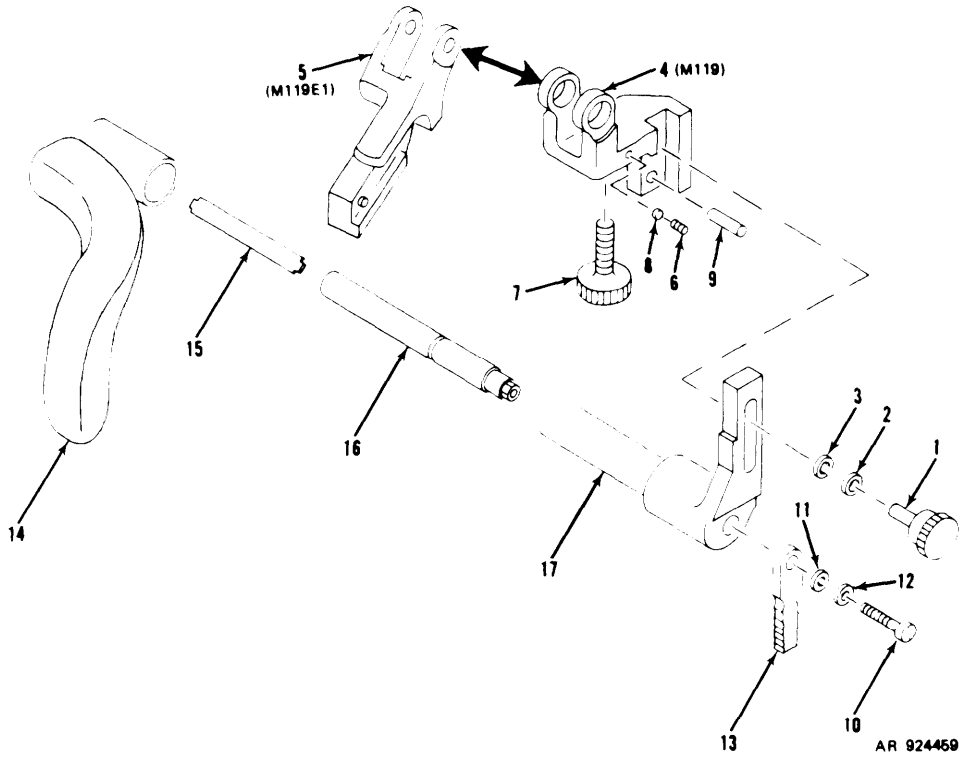


Figure D-4. Headrest assembly (right) Ml19 8619420, Ml19E1 11727445

(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 0003 HEADREST ASSEMBLY (RIGHT)			
						M119 8618420 AND M119E1 11727445			
D-4	1	PAFZZ	1240-00-403-0979	19200	10556521	SCREW,SPECIAL	F85	EA	1
D-4	1	PAOZZ	5305-00-991-3187	19200	8619176	THUMBSCREW	O84	EA	1
D-4	2	PAFZZ	5310-00-933-8121	96906	MS35338-139	WASHER,LOCK	F85	EA	1
D-4	3	PAFZZ	5310-00-582-5677	96906	MS15795-810	WASHER,FLAT	F85	EA	1
D-4	4	PAFZZ	1240-01-126-4260	19200	8619187	ARM ASSEMBLY	O84	EA	1
D-4	5	PAFZZ	1240-01-122-9894	19200	11727446	ARM CLEVIS ASSEMBLY	F85	EA	1
D-4	6	PAFZZ	5305-00-724-3477	96906	MS51031-36	SETSCREW		EA	1
D-4	7	PAFZZ	5305-00-990-4057	19200	8619177	THUMBSCREW		EA	1
D-4	8	PAFZZ	5340-00-685-0831	19200	8620013	DISK,SOLID,PLAIN		EA	1
D-4	9	PAFZZ	5315-00-682-1733	96906	MS16555-646	PIN,STRAIGHT, HEADLESS	O84	EA	1
D-4	10	PAFZZ	5305-00-701-5061	96906	MS51958-45	SCREW,MACHINE		EA	1
D-4	11	PAFZZ	5310-00-933-8119	96906	MS35338-137	WASHER,LOCK		EA	1
D-4	12	PAFZZ	5310-00-880-5978	96906	MS15795-807	WASHER,FLAT ASSEMBLY		EA	1
D-4	13	PAFZZ	1240-00-728-8077	19200	8619179	LEVER,MANUAL		EA	1
D-4	14	PAOZZ	1240-00-987-3218	19200	8619190	HEADREST,OPTICAL		EA	1
D-4	15	PAFZZ	1240-00-240-9372	19200	8619194	SEGMENT,HEADREST ASSEMBLY		EA	1
D-4	16	PAFZZ	3040-00-470-6777	19200	8619188	SHAFT,SHOULDER		EA	1
D-4	17	PAFZZ	1240-00-097-8360	19200	8619393	SUPPORT ASSEMBLY		EA	1

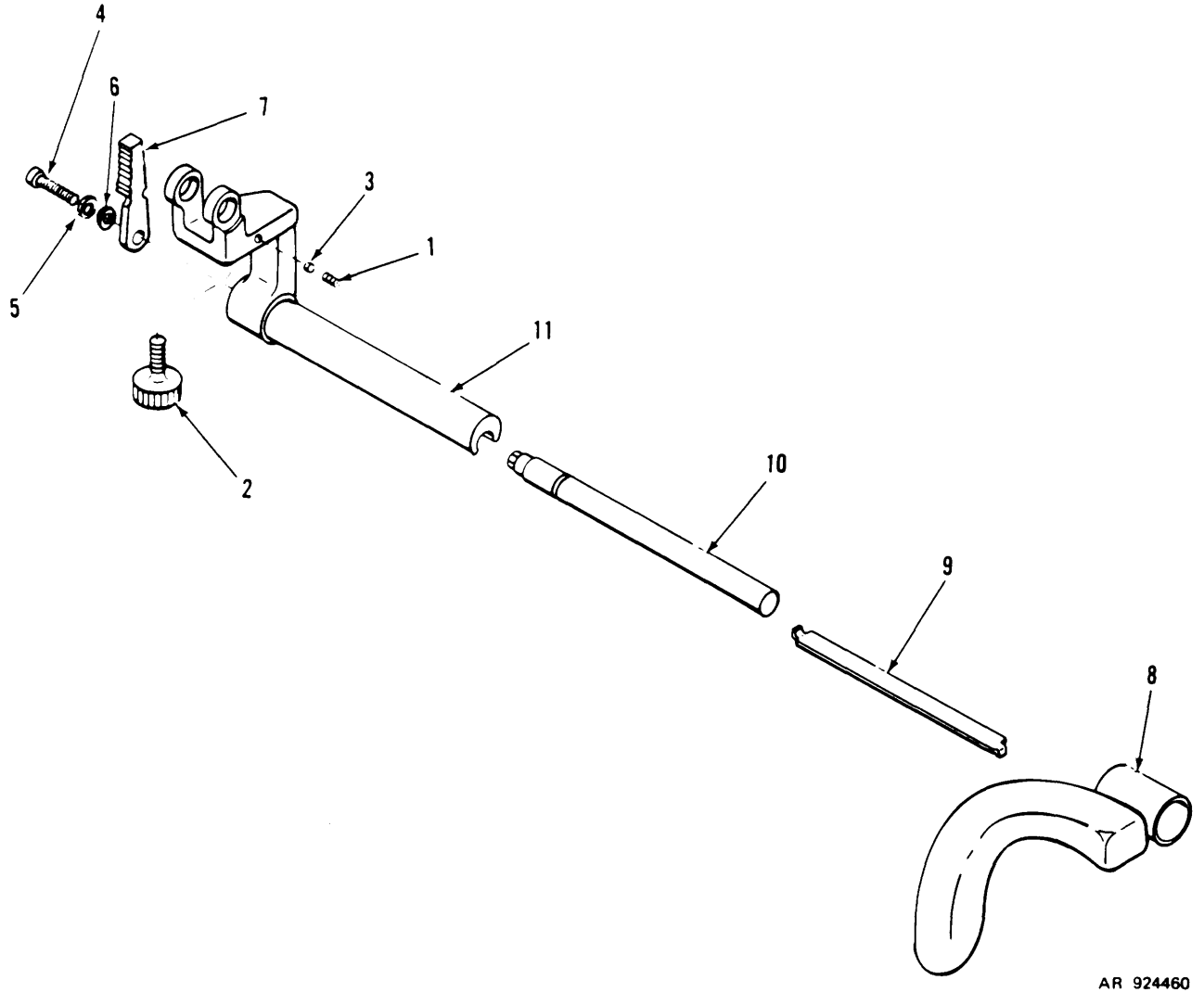


Figure D-5. Headrest assembly (left) 8619421

(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 0004 HEADREST ASSEMBLY (LEFT)			
						8619421			
D-5	1	PAFZZ	5305-00-724-3477	96906	MS51031-36	SETSCREW		EA	1
D-5	2	PAFZZ	5305-00-990-4058	19200	8619178	THUMBSCREW		EA	1
D-5	3	PAFZZ	5340-00-685-0831	19200	8620013	DISK,SOLID,PLAIN		EA	1
D-5	4	PAFZZ	5305-00-701-5061	96906	MS51958-45	SCREW,MACHINE		EA	1
D-5	5	PAFZZ	5310-00-880-5978	96906	MS15795-807	WASHER,FLAT		EA	1
D-5	6	PAFZZ	5310-00-933-8119	96906	MS35338-137	WASHER,LOCK		EA	1
D-5	7	PAFZZ	1240-00-728-8077	19200	8619179	LEVER,MANUAL		EA	1
D-5	8	PAOZZ	1240-00-987-3219	19200	8619185	HEADREST,OPTICAL		EA	1
D-5	9	PAFZZ	1240-00-240-9374	19200	8619195	SEGMENT,HEADREST		EA	1
D-5	10	PAFZZ	1240-00-494-6603	19200	8619183	SHAFT,SHOULDERED		EA	1
D-5	11	PAFZZ	1240-01-122-9895	19200	8619394	CLEVIS ASSEMBLY,HEA		EA	1

Section III

SPECIAL TOOLS LIST

(NOT APPLICABLE)

Section IV

NATIONAL STOCK NUMBER AND PART NUMBER INDEX

STOCK NUMBER	FIGURE NO.	ITEM NO.	STOCK NUMBER	FIGURE NO.	ITEM NO.
5305-00-054-5647	D-1	19	5305-00-765-4257	D-3	30
5305-00-054-6669	D-3	5	1240-00-796-9688	D-3	8
5305-00-057-0522	D-1	24	1240-00-797-3570	D-1	16
5310-00-058-3599	D-1	20	5305-00-814-7395	D-3	20
1220-00-087-2729	D-2	11	5305-00-819-9602	D-1	6
1240-00-097-8360	D-4	17	5940-00-825-4605	D-1	27
3120-00-113-8111	D-3	24	5310-00-840-5785	D-3	18
5360-00-150-3050	D-1	23	5315-00-849-7232	D-1	28
5305-00-187-9934	D-1	17	7690-00-880-5775	D-1	30
1240-00-191-1389	D-3	25	5310-00-880-5978	D-4	12
5315-00-234-1861	D-3	9	5310-00-880-5978	D-5	5
1240-00-240-9372	D-4	15	5310-00-926-1852	D-1	9
1240-00-240-9374	D-5	9	5310-00-926-5913	D-2	6
5315-00-275-8263	D-2	12	5310-00-933-8119	D-1	25
5315-00-395-2938	D-3	11	5310-00-933-8119	D-4	11
1240-00-403-0977	D-2	5	5310-00-933-8119	D-5	6
1240-00-403-0978	D-3	29	5310-00-933-8120	D-3	27
1240-00-403-0979	D-4	1	5310-00-933-8121	D-1	11
1240-00-403-0980	D-1	22	5310-00-933-8121	D-3	2
5360-00-435-8969	D-3	12	5310-00-933-8121	D-4	2
1240-00-457-9370	D-1	12	5310-00-933-8778	D-1	18
3040-00-470-6777	D-4	16	5310-00-934-9765	D-3	21
3040-00-480-7361	D-3	28	5310-00-983-9445	D-3	14
1240-00-494-6603	D-5	10	1240-00-987-3218	D-4	14
5310-00-543-2739	D-3	6	1240-00-987-3219	D-5	8
5310-00-582-5677	D-3	19	5305-00-987-3221	D-2	2
5310-00-582-5677	D-4	3	5305-00-988-7840	D-1	13
5305-00-582-9064	D-2	10	5305-00-989-3119	D-3	26
5310-00-625-5756	D-3	10	5305-00-990-4056	D-3	22
3120-00-647-0895	D-1	8	5305-00-990-4057	D-4	7
5310-00-655-9990	D-1	7	5305-00-990-4058	D-5	2
5315-00-682-1733	D-4	9	1240-00-991-3185	D-3	15
5340-00-685-0831	D-1	5	5305-00-991-3187	D-4	1
5340-00-685-0831	D-4	8	5305-00-991-3188	D-2	7
5340-00-685-0831	D-5	3	1240-00-991-3189	D-3	7
5310-00-688-2196	D-1	14	5360-00-991-3190	D-2	4
5305-00-701-5061	D-4	10	5305-00-993-3589	D-1	4
5305-00-701-5061	D-5	4	5315-00-995-2538	D-3	13
5305-00-702-4523	D-1	10	1240-01-021-9793	D-3	16
5305-00-719-3997	D-3	1	9905-01-042-7767	D-1	26
5305-00-724-3438	D-2	9	1240-01-084-0448	D-3	23
5305-00-724-3477	D-4	6	1240-01-122-9894	D-4	5
5305-00-724-3477	D-5	1	1240-01-122-9895	D-5	11
5305-00-724-5856	D-2	1	1240-01-126-4260	D-4	4
1240-00-728-8077	D-4	13	1240-01-126-4266	D-3	32
1240-00-728-8077	D-5	7	5365-01-126-9950	D-3	31
5315-00-757-6303	D-3	17	5340-01-146-1381	D-2	14

FSCM	PART NUMBER	FIGURE NO.	ITEM NO.	FSCM	PART NUMBER	FIGURE NO.	ITEM NO.
96906	MS15795-807	D-4	12	96906	MS39086-253	D-2	12
96906	MS15795-807	D-5	5	96906	MS51031-24	D-2	10
96906	MS15795-810	D-3	19	96906	MS51031-27	D-2	9
96906	MS15795-810	D-4	3	96906	MS51031-34	D-1	4
96906	MS15795-812	D-3	10	96906	MS51031-36	D-4	6
96906	MS16555-646	D-4	9	96906	MS51031-36	D-5	1
96906	MS16556-661	D-1	28	96906	MS51031-91	D-2	1
96906	MS16995-37	D-3	26	96906	MS51957-13	D-1	19
96906	MS16995-66	D-1	13	96906	MS51957-44	D-3	5
96906	MS16997-142	D-1	17	96906	MS51958-26	D-1	24
96906	MS21083N6	D-1	9	96906	MS51958-45	D-4	10
96906	MS24665-298	D-3	9	96906	MS51958-45	D-5	4
96906	MS35307-303	D-3	1	96906	MS51959-43	D-3	30
96906	MS35307-306	D-1	10	90598	TM706	D-1	14
96906	MS35308-314	D-3	20	19200	10516035	D-3	7
96906	MS35333-72	D-3	6	19200	10516589	D-1	30
96906	MS35335-57	D-1	20	19200	10516633	D-3	14
96906	MS35338-137	D-1	25	19200	10556521	D-4	1
96906	MS35338-137	D-4	11	19200	11727361	D-1	27
96906	MS35338-137	D-5	6	19200	11727383	D-1	26
96906	MS35338-138	D-3	27	19200	11727419	D-3	11
96906	MS35338-139	D-1	11	19200	11727420	D-3	12
96906	MS35338-139	D-3	2	19200	11727428	D-3	16
96906	MS35338-139	D-4	2	19200	11727445	D-1	1
96906	MS35338-143	D-1	18	19200	11727446	D-4	5
96906	MS35650-304	D-3	21	19200	11747405	D-3	23
96906	MS35691-23	D-2	6	19207	8229063	D-1	8
96906	MS35691-7	D-3	18	19200	8229064	D-1	7

FSCM	PART NUMBER	FIGURE NO.	ITEM NO.	FSCM	PART NUMBER	FIGURE NO.	ITEM NO.
19200	8619176	D-4	1	19200	8619632	D-3	4
19200	8619177	D-4	7	19200	8619633	D-3	33
19200	8619178	D-5	2	19200	8619639	D-1	21
19200	8619179	D-4	13	19200	8619640	D-1	22
19200	8619179	D-5	7	19200	8619691	D-1	6
19200	8619183	D-5	10	19200	8619701	D-3	31
19200	8619185	D-5	8	19200	8619702	D-3	32
19200	8619187	D-4	4	19200	8619704	D-2	8
19200	8619188	D-4	16	19200	8619705	D-3	3
19200	8619190	D-4	14	19200	8619706	D-2	2
19200	8619194	D-4	15	19200	8619707	D-2	14
19200	8619195	D-5	9	19200	8619708	D-3	15
19200	8619393	D-4	17	19200	8619709	D-3	13
19200	8619394	D-5	11	19200	8619710	D-2	3
19200	8619420	D-1	1	19200	8619711	D-3	17
19200	8619421	D-1	2	19200	8619712	D-2	7
19200	8619581	D-3	8	19200	8619713	D-3	22
19200	8619582	D-1	29	19200	8619986	D-2	11
19200	8619584	D-1	16	19200	8620013	D-1	5
19200	8619585	D-1	3	19200	8620013	D-4	8
19200	8619618	D-3	28	19200	8620013	D-5	3
19200	8619622	D-1	23	19200	8620023	D-2	13
19200	8619623	D-3	25	19200	8620027	D-1	12
19200	8619629	D-2	5	19200	8620028	D-1	15
19200	8619630	D-3	24	19200	8620421	D-2	4
19200	8619631	D-3	29				

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS

THEN. . JOT DOWN THE DOPE ABOUT IT ON THIS FORM, CAREFULLY TEAR IT OUT, FOLD IT AND DROP IT IN THE MAIL!

SOMETHING WRONG WITH THIS PUBLICATION?

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)
Your mailing address.

DATE SENT: Date you fill out this form.

PUBLICATION NUMBER	PUBLICATION DATE	PUBLICATION TITLE
TM 9-1240-272-34&P	Date of TM	MOUNT, PERISCOPE: M119, M119E1

BE EXACT PIN-POINT WHERE IT IS

PAGE NO	PARA-GRAPH	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

PRINTED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER

SIGN HERE

DA FORM 1 JUL 79 2028-2

PREVIOUS EDITIONS ARE OBSOLETE.

P.S.--IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS

REVERSE OF DA FORM 2028-2

FILL IN YOUR UNIT'S ADDRESS

FOLD BACK

DEPARTMENT OF THE ARMY

OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE, $300

POSTAGE AND FEES PAID
DEPARTMENT OF THE ARMY
DOD-314

U.S. MAIL

TEAR ALONG DOTTED LINE

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

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS

THEN. . JOT DOWN THE DOPE ABOUT IT ON THIS FORM, CAREFULLY TEAR IT OUT, FOLD IT AND DROP IT IN THE MAIL!

SOMETHING WRONG WITH THIS PUBLICATION?

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER	PUBLICATION DATE	PUBLICATION TITLE
TM 9-1240-272-34&P		MOUNT, PERISCOPE: M119, M119E1

BE EXACT. . . PIN-POINT WHERE IT IS

PAGE NO	PARA-GRAPH	FIGURE NO	TABLE NO

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

PRINTED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER

SIGN HERE

DA FORM 1 JUL 79 2028-2

PREVIOUS EDITIONS ARE OBSOLETE.

P.S.--IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS

REVERSE OF DA FORM 2028-2

FILL IN YOUR UNIT'S ADDRESS

FOLD BACK

DEPARTMENT OF THE ARMY

OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE, $300

POSTAGE AND FEES PAID
DEPARTMENT OF THE ARMY
DOD-314

U.S. MAIL

TEAR ALONG DOTTED LINE

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

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS

SOMETHING WRONG WITH THIS PUBLICATION?

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER	PUBLICATION DATE	PUBLICATION TITLE
TM 9-1240-272-34&P		MOUNT, PERISCOPE: M119, M119E1

BE EXACT. PIN-POINT WHERE IT IS

PAGE NO	PARA-GRAPH	FIGURE NO	TABLE NO

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

PRINTED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER

SIGN HERE

DA FORM 1 JUL 79 **2028-2**

PREVIOUS EDITIONS ARE OBSOLETE.

P.S.--IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS

REVERSE OF DA FORM 2028-2

FILL IN YOUR UNIT'S ADDRESS

FOLD BACK

DEPARTMENT OF THE ARMY

OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE, $300

POSTAGE AND FEES PAID
DEPARTMENT OF THE ARMY
DOD-314

U.S. MAIL

TEAR ALONG DOTTED LINE

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

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

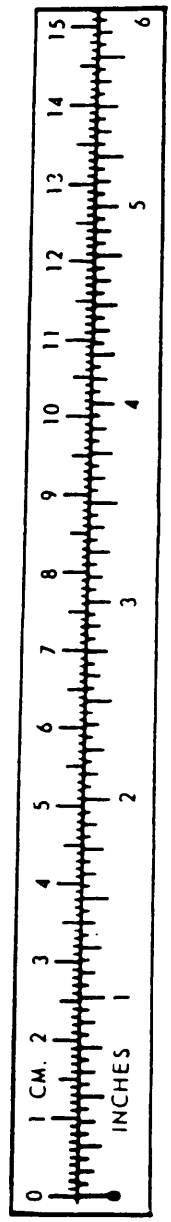
TEMPERATURE

$5/9\ (^0F - 32) = {}^0C$
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

By Order of the Secretary of the Army:

JOHN A. WICKHAM, JR.
General, United States Army
Chief of Staff

Official:

ROBERT M. JOYCE
Major General, United States Army
The Adjutant General

DISTRIBUTION:

TM 9-1240-272-34&P

MOUNT, PERISCOPE: M119 (1240-00-394-3148), M119E1 (1240-00-394-3149)