TECHNICAL MANUAL

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

VOLUME I - TROUBLESHOOTING
VOLUME II - MAINTENANCE

TELESCOPE, ARTICULATED:

M105D (1240-00-980-1745)
M105F (1240-00-764-1668)

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

VOLUME I TROUBLESHOOTING

CHAPTER 1
INTRODUCTION 1-1

CHAPTER 2
CHECKOUT PROCEDURE 2-1

CHAPTER 3
FAULT SYMPTOM INDEX 3-1

CHAPTER 4
FAULT ISOLATION PROCEDURE 4-1

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
REPAIR PARTS AND SPECIAL TOOLS LIST C-1

HEADQUARTERS, DEPARTMENT OF THE ARMY

OCTOBER 1983

WARNING

NITROGEN GAS UNDER PRESSURE

DEATH

or severe injury may result if personnel fail to observe safety precautions listed in Job Performance Guide 113-091-9000R.

CHANGE

No. 2

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC 29 Decernber 1987

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2. New or changed material is indicated by a vertical bar in the margin of the page.
3. New or changed illustrations are indicated by a miniature pointing hand highlighting the change.

Remove Pages	Insert Pages
iii and iv	iii and iv
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4-11/(4-12 blank)	4-11 and 4-12
None	4-13 and 4-14

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General United States Army
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To be distributed in accordance with DA Form 12-41, Direct and General Support Maintenance requirements for Telescope, Articulated, M105D, M105F.

CHANGE

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HEADQUARTERS
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3. New or changed illustrations are indicated by a miniature pointing hand highlighting the change.

Remove Pages	Insert Pages
i through iv	i through iv
C-9 through C-12	C-9 through C-12
C-17 through C-20	C-17 through C-20
C-23 and C-24	C-23 and C-24

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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.

Dates of issue for original and changed pages are:

Original . . . 0 . . .

TOTAL NUMBER OF PAGES IN THIS PUBLICATION IS 107 CONSISTING OF THE FOLLOWING:

Page No.	*Change No.
Cover	0
Warning	0
A	0
B Blank	0
i - v	0
vi Blank	0

VOLUME I
TROUBLE SHOOTING

Page No.	*Change No.
Title	0
Reverse Blank	0
1-1 - 1-7	0
1-8 Blank	0
2-1 - 2-8	0
3-1	0
3-2 Blank	0
4-1 - 4-4	0

VOLUME II
MAINTENANCE

Page No.	*Change No.
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1-8 Blank	0
2-1 - 2-2	0
3-1 - 3-8	0
4-1 - 4-12	0
5-1 - 5-6	0
6-1	0
6-2 Blank	0
A-1 - A-2	0
B-1 - B-2	0
C-1 - C-5	0
C-6 Blank	0
C-7- C-15	0
C-16 Blank	0
C-17	0
C-18 Blank	0
C-19 - C-20	0
Metric Conversion Chart.	0
Cover	0

*Zero in this column indicate san original page.

Technical Manual
No. 9-1240-262-34

HEADQUARTERS.
DEPARTMENT OF THE ARMY
Washington, D.C., 28 October 1983

TECHNICAL MANUAL

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

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Current as of 3 June 1988 for APPENDIX C

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, let us know.

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

Commander
US Army Armament, Munitions and Chemical Command
ATTN: AMSMC-MAS
Rock Island, IL 61299-6000

A reply will be furnished to you.

*** This manual supersedes TM 9-1240-262-34, 31 January 1963, and TM 9-1240-262-34, 21 June 1976, including all changes.**

		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
	Test Equipment	1-4	1-4
	‘Sample Fault Isolation Procedure	1-5	1-4
2.	CHECKOUT PROCEDURE		2-1
	Scope	2-1	2-1
	Checkout	2-2	2-1
CHAPTER 3.	FAULT SYMPTOM INDEX		3-1
4.	FAULT ISOLATION PROCEDURE		4-1
	Scope	4-1	4-1
	Cannot See Clearly or Pressure Cannot Be Held In Telescope	4-2	4-1
	VOLUME II MAINTENANCE		
CHAPTER 1.	INTRODUCTION		1-1
Section 1.	General		1-1
	Scope	1-1	1-1
	Organization	1-2	1-1
2.	Description and Data		1-2
	Description	1-3	1-2
	Tabulated Data	1-4	1-6
	Differences Between Configurations	1-5	1-7
CHAPTER 2.	GENERAL MAINTENANCE INFORMATION		2-1
Section 1.	General		2-1
	Scope	2-1	2-1
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
	Lubrication	2-6	2-1
3.	Safety Procedures		2-1
	General Procedure	2-7	2-1

		Paragraph	Page
CHAPTER 3.	INSPECTION UPON RECEIPT		3-1
	Scope	3-1	3-1
	Articulated Telescope Inspection Upon Receipt	3-2	3-2
4.	ARTICULATED TELESCOPE		4-1
Section 1.	General		4-1
	Scope	4-1	4-1
	List of Telescope Items Contained In This Chapter	4-2	4-1
2.	Headrest		4-2
	Headrest Maintenance Procedures Index	4-3	4-2
	Headrest Removal	4-4	4-3
	Headrest Installation	4-5	4-4
3.	Valve		4-6
	Valve Maintenance Procedures Index	4-6	4-6
	Valve Removal	4-7	4-6
	Valve Installation	4-8	4-8
4	Window		4-10
	Window Maintenance Procedures Index	4-9	4-10
	Window Disassembly	4-10	4-11
	Window Assembly	4-10	4-11
4.1	Eyepiece Assembly		4-12
	Eyepiece Assembly Maintenance Procedure Index	4-11	4-12
	Eyepiece Assembly Removal	4-11	4-13
	Eyepiece Assembly Installation	4-12	4-14
5.	FINAL INSPECTION		5-1
	Scope	5-1	5-1
	Final Inspection Index	5-2	5-1
	Purging and Charging Articulated Telescope	5-3	5-1
	Articulated Telescope Final Inspection	5-4	5-4
6.	PACKAGING		6-1
	Scope	6-1	6-1
	Preparation for Packaging of Optical Components	6-2	6-1
	Packaging of M105D and M105F Telescopes	6-3	6-1
APPENDIX A.	EXPENDADLE/DURABLE SUPPLIES AND MATERIALS LIST		A-1
Section 1.	Introduction		A-1
	Scope	A-1	A-1
	Explanation of Columns	A-2	A-I
2.	Expendable Supplies and Materials		A-2

		Paragraph	Page	Figure
APPENDIX B.	MAINTENANCE TASK INDEX		B-1	
	Scope	B-1	B-1	
	Maintenance Task Index	B-2	B-2	
C.	DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST (INCLUDING DEPOT MAINTENANCE REPAIR PARTS)		C-1	
Section I.	Introduction		C-1	
II.	Repair Parts List		C-7	
Group 00	Articulated Telescope, M105D 8574700-1 and M105F 8574700-2 (overall view)		C-9	C-1
00	Articulated Telescope, M105D 8574700-1 and M105F 8574700-2 (partial view)		C-11	C-2
00	Articulated Telescope M105D 8574700-1 and M105F 8574700-2 (partial view)		C-14	C-3
	0001 Reticle assembly 8620422-3		C-11	C-2
	0001 Reticle assembly 8620422-5. .		C-11	C-2
	0002 Cell assembly 8574772		C-11	C-2
	0003 Cell assembly 8574773		C-11	C-2
	0004 Eyepiece assembly 8619763		C-17	C-4
	0005 Joint assembly 8574980		C-19	C-5
	000501 Prism assembly 8574981		C-19	C-5
Section III.	Special Tools List (not applicable)		C-21	
IV.	National Stock Number and Part Number Index		C-23	

HOW TO USE THIS MANUAL

This manual has two volumes of maintenance information you will need to repair and service the M105D and M105F Articulated Telescopes.

- 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 the 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
- Fault Symptom Index (Vol I, Chap 3) which lists the fault symptoms and shows where to look to fix them
- 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 1-3. 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.

TECHNIAL MANUAL

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VOLUME I - TROUBLESHOOTING

TELESCOPE, ARTICULATED:

M105D
M105F

CHAPTER 1
INTRODUCTION

1-1. SCOPE

This volume contains troubleshooting requirements and procedures for direct support and general support (DS/GS) maintenance of the M105D and M105F Articulated Telescopes. See Volume II for maintenance procedures.

1-2. ORGANIZATION

a. Chapter 2, Checkout Procedure, gives you flow charts to follow to check that the telescope is working right.

b. Chapter 3, Fault Symptom Index, lists the fault symptoms and where to look in this manual to fix each one.

c. Chapter 4, Fault Isolation Procedure, shows you step-by-step how to troubleshoot fault symptoms found in Chapter 3.

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 of the assembly 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 checkout procedure, fix them now. This does not mean small things like painting scratches.

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

(D) When a fault Symptom is found, go to the chapter noted and follow the maintenance procedure given there. If you already know the fault symptom, look at the fault symptom - index in Chapter 3 of this volume. This will also tell you what to do.

(E) After the fault symptom has been corrected, do the checkout procedure in Chapter 2 again. This is to make sure that all fault symptoms have been corrected.

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

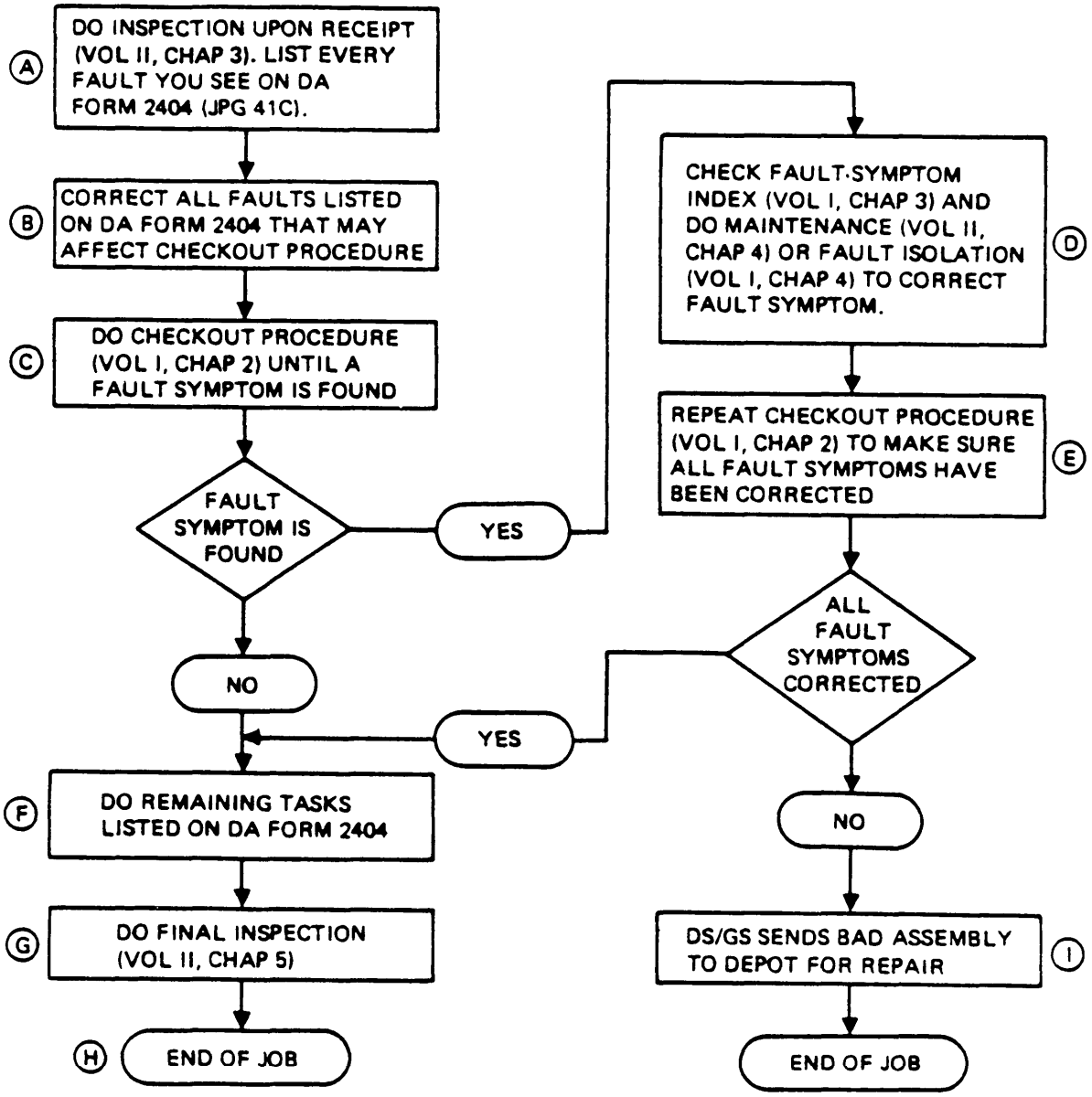
(G) Do the final inspection given in Vol II, Chap 5.

(H) The job is over and the good telescope 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.

The sample fault isolation procedure (para 1-5) shows you how to use the flow charts in this volume.

1-3. HOW TO TROUBLESHOOT (CONT)



1-4. TEST EQUIPMENT

Test Equipment	National Stock Number (NSN)	Test	Reference
1. 0-36 VDC Power Supply	6130-00-435-1116	Checkout of telescope	JPG 41C
2. Light Source Control	1240-00-970-8656	Checkout of telescope	JPG 41C

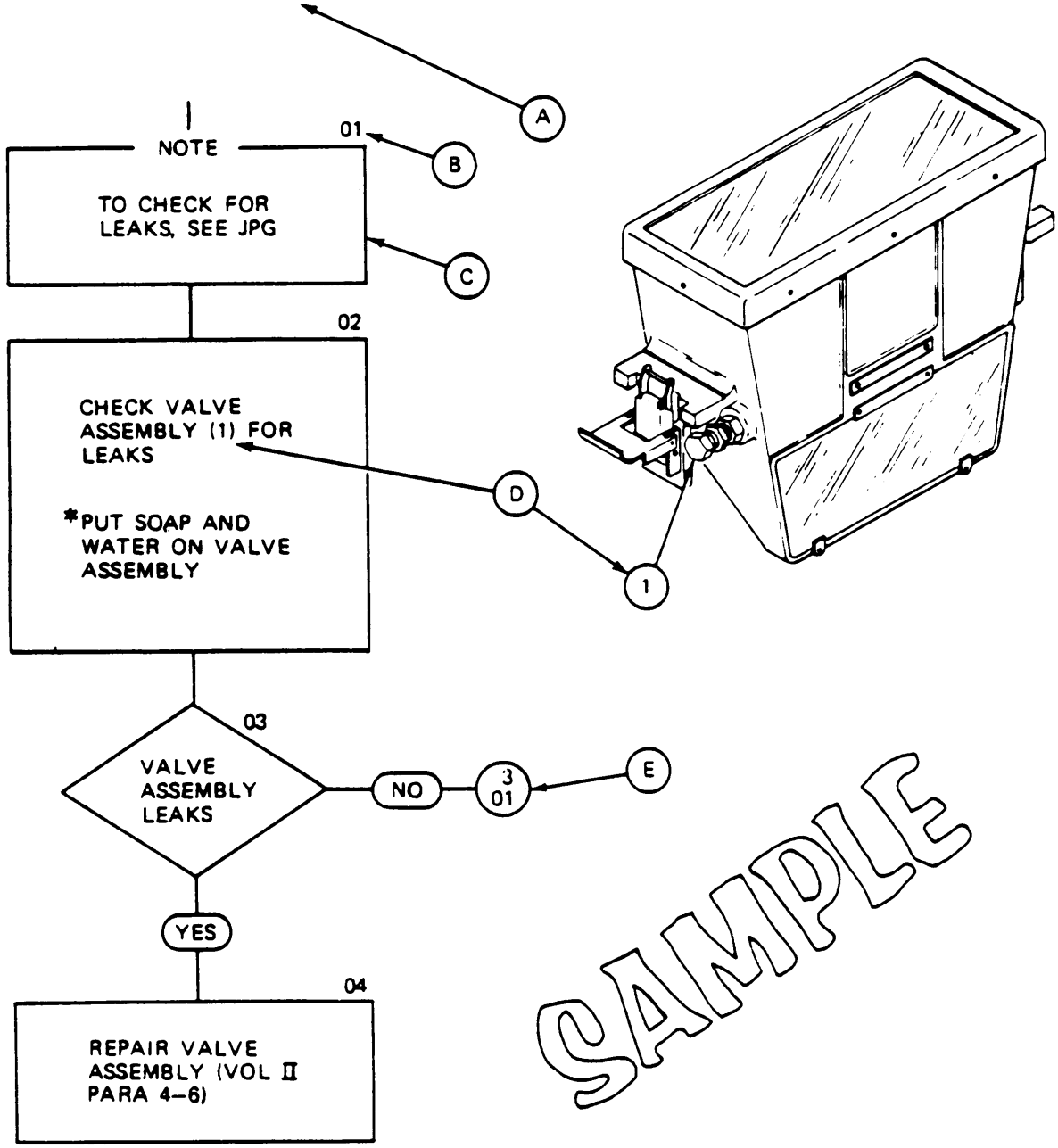
1-5. SAMPLE FAULT ISOLATION PROCEDURE

The sample fault isolation procedure tells you how to use the flow charts in Chapters 2 and 4.

Callouts	Description
(A)	This is the symptom shown in the Fault Symptom Index in Chapter 3.
(B)	Block number. Tells you the number of the block on the page. Block numbers start over at every page.
(C)	This is a note. It gives useful information that can help you in doing the procedure. A note will always come just before the step of the procedure that it is about.
	A warning will be labeled at top of block. Always follow the instruction in this kind of block carefully. If you don't, you may be injured or injure someone else.
	A caution will also be labeled at top of block. The instructions in this kind of block tell you what to do so you will not damage equipment. Be sure you always follow caution instructions carefully.
(D)	Index numbers are found in the procedures and the illustration to help you find the connector, switch, knob, etc. The illustration will always be on the same or an opposite page. Remember you will never have to turn the page to find the illustration.
(E)	The circle is used to send you to another sheet of procedure to keep on troubleshooting. The top number in the circle tells you what sheet to go to. The bottom number tells you what block on that sheet to start with. For example: (3 / 01) means that you should go to sheet 3, block 01 to keep on the procedure.

1-5. SAMPLE FAULT ISOLATION PROCEDURE (CONT)

4-3. VIEW IS NOT CLEAR (SHEET 2 OF 3)

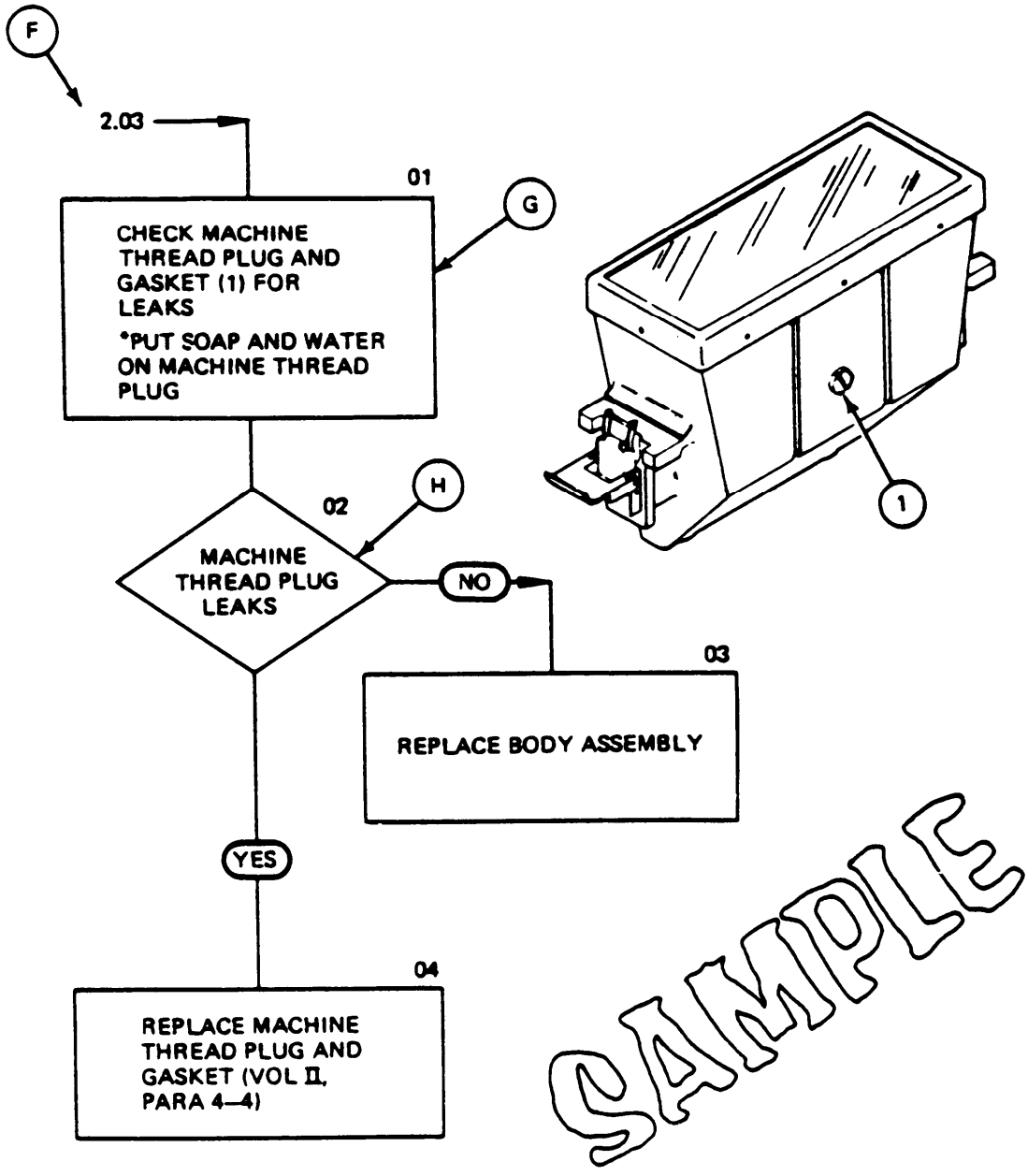


1-5. SAMPLE FAULT ISOLATION PROCEDURE (CONT)

Callouts	Description
(F)	This tells you where you came from. For example, 2.03 means you came from sheet 2, block 03.
(G)	The top part of the box tells you what to do. The bottom part tells you how to do it. After you become more skilled at troubleshooting and know more about the equipment, you may find that you only need to read the top part of the box.
(H)	This diamond shaped box is called a decision point. It asks you to answer a YES or NO question after doing the what-to-do statement. If the answer is YES, you should go down the YES branch. If the answer is NO, you should go down the NO branch.

1-5. SAMPLE FAULT ISOLATION PROCEDURE (CONT)

4-3. VIEW IS NOT CLEAR (SHEET 3 OF 3)



CHAPTER 2

CHECKOUT PROCEDURE

2-1. SCOPE

Checkout of the M105D and M105F Articulated Telescopes is done by using the flowchart procedures in this chapter. You must do the checkout procedure from the beginning until a fault symptom is found. When it **is, go** to the fault symptom index in Chapter 3. After you have corrected the fault, start at the beginning again and do the checkout procedure until the telescope is working correctly.

2-2. CHECKOUT (SHEET 1 OF 8)

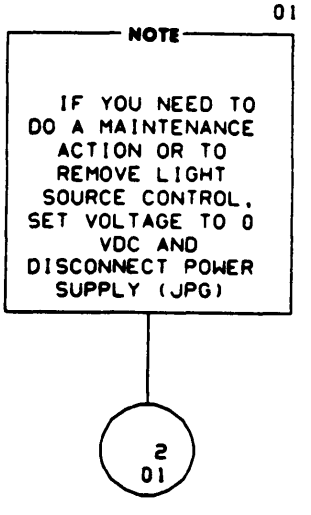
TEST EQUIPMENT: Light source control
0-36 VDC power supply

PERSONNEL: One

REFERENCES: JPG 41C for Connecting power supply
Cleaning
Lubricating
Checking for parallax

EQUIPMENT CONDITION: Telescope on work bench

PRELIMINARY PROCEDURES: Do inspection upon receipt (Vol II, para 3-2)



2-2. CHECKOUT (SHEET 2 OF 8)

1.01 →

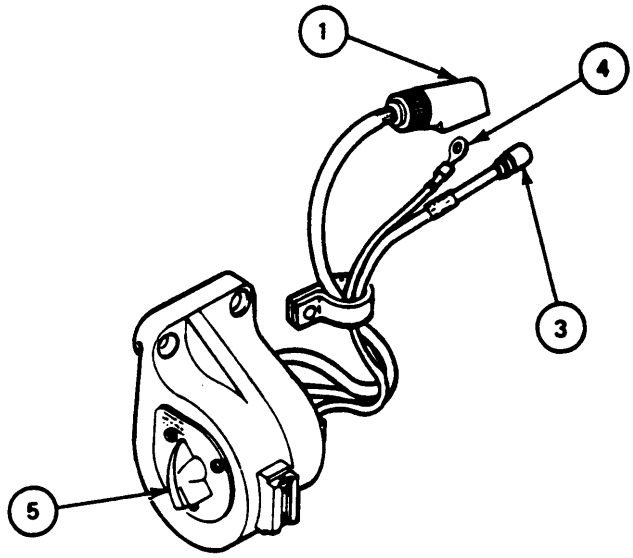
01
USING A GOOD LIGHT SOURCE CONTROL, CONNECT LIGHT HOUSING (1) TO DOVE TAIL SLOT (2)

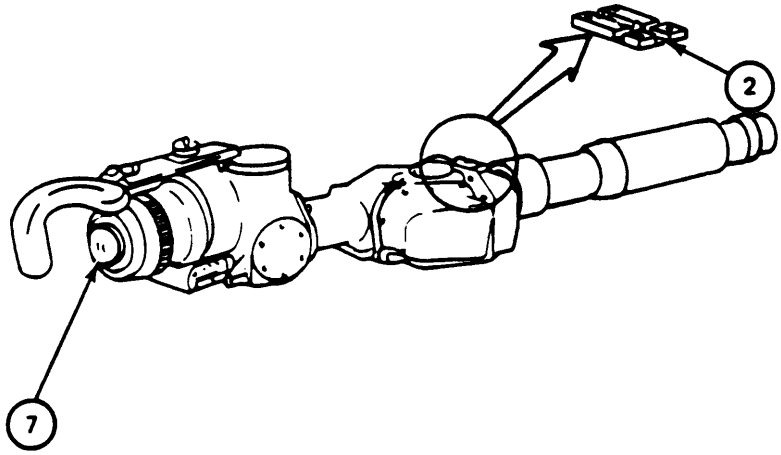
02
CONNECT 0-36 VDC POWER SUPPLY POSITIVE LEAD TO WIRE (3) AND NEGATIVE TO GROUND (4) OF LIGHT SOURCE CONTROL. SET VOLTAGE TO 24 VDC (JPG).

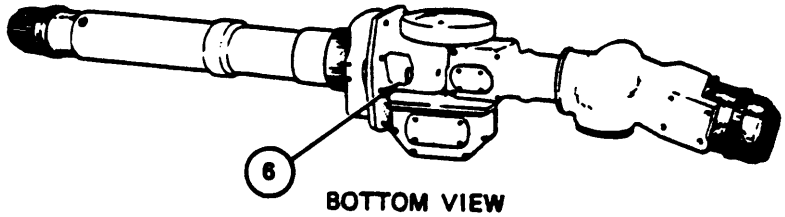
03
TURN LIGHT SOURCE CONTROL SWITCH (5) ON

04
TURN LEVER (6) CLOCKWISE THEN COUNTERCLOCKWISE. LOOK THROUGH EYEPIECE (7) AND CHECK IF RETICLES ARE LIT.

3 01

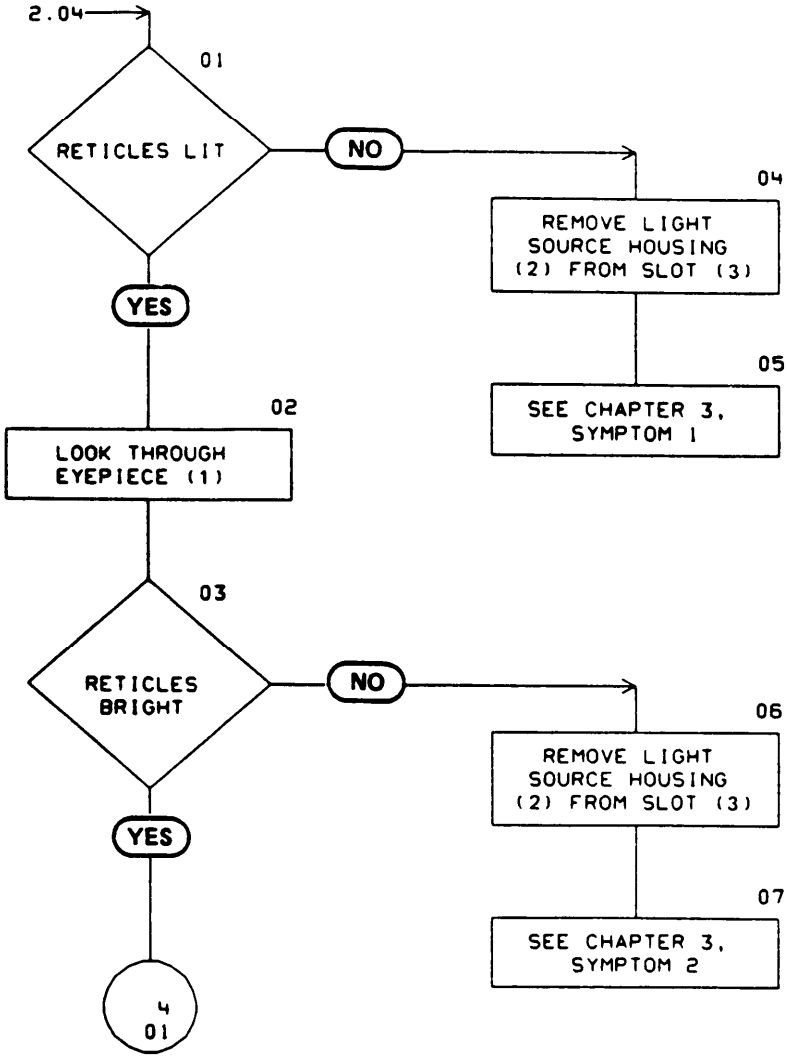


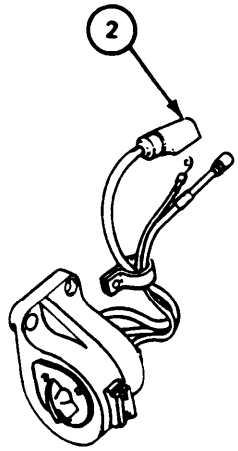


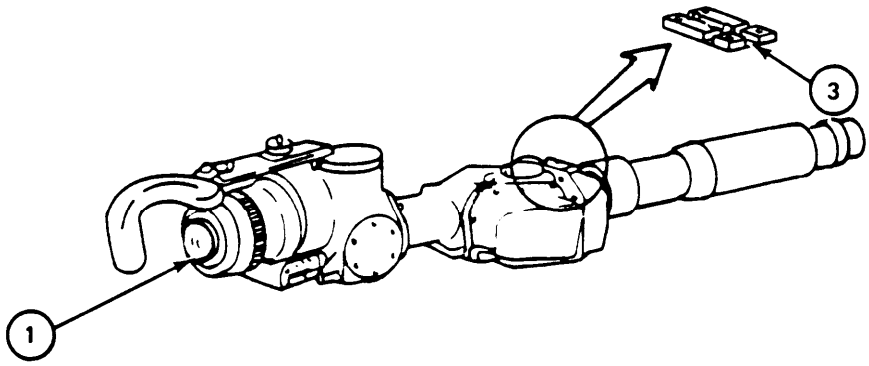


BOTTOM VIEW

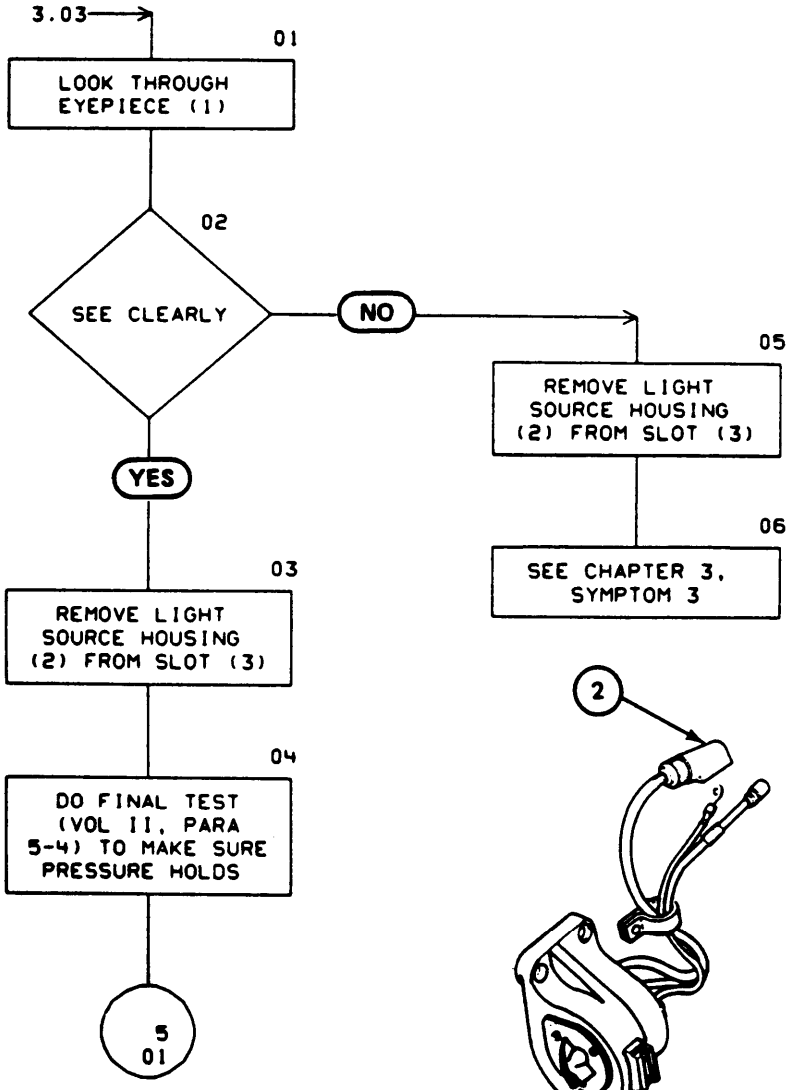
2-2. CHECKOUT (SHEET 3 OF 8)

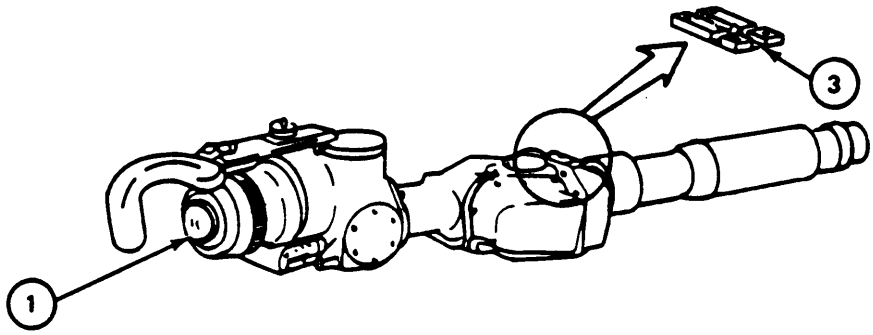




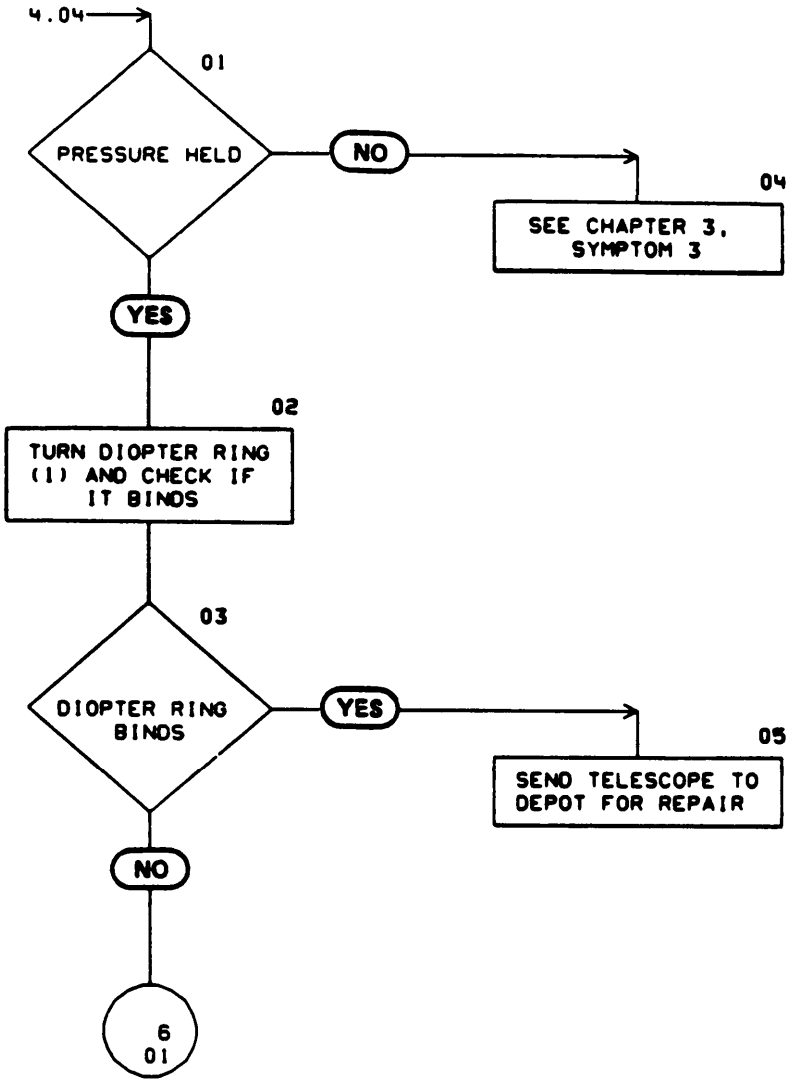


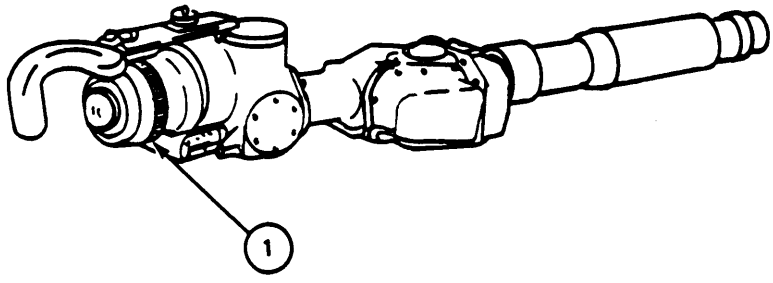
2-2. CHECKOUT (SHEET 4 OF 8)



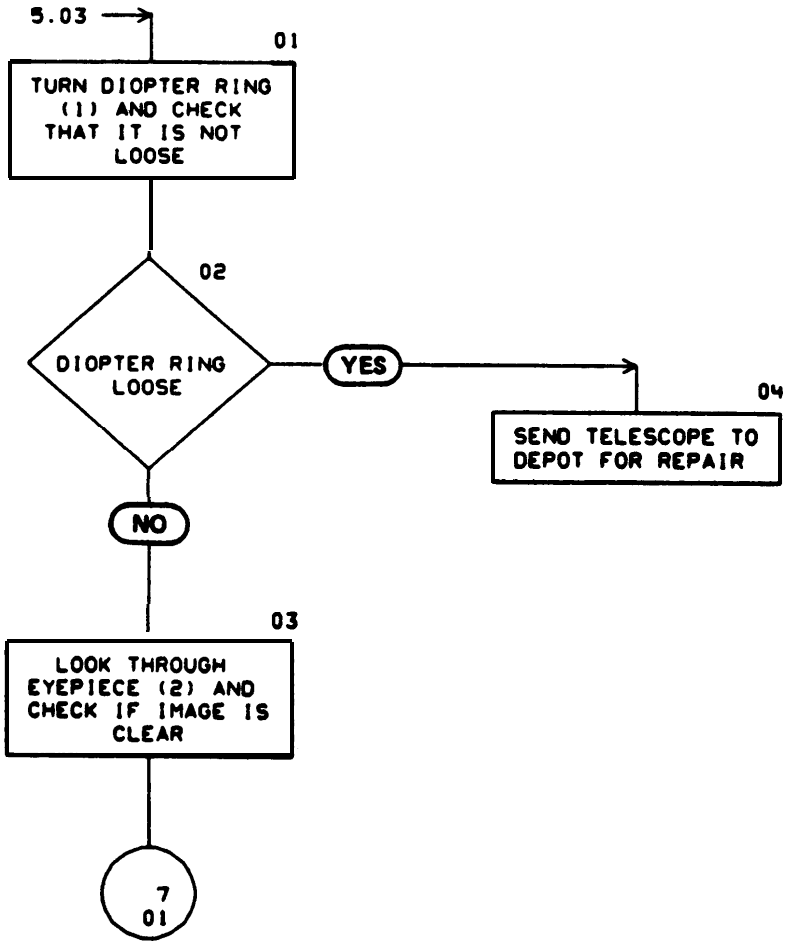


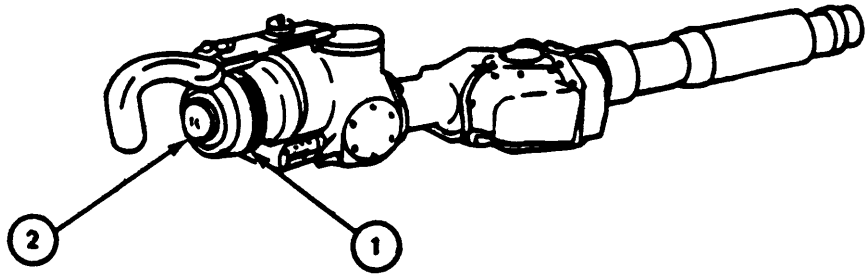
2-2. CHECKOUT (SHEET 5 OF 8)



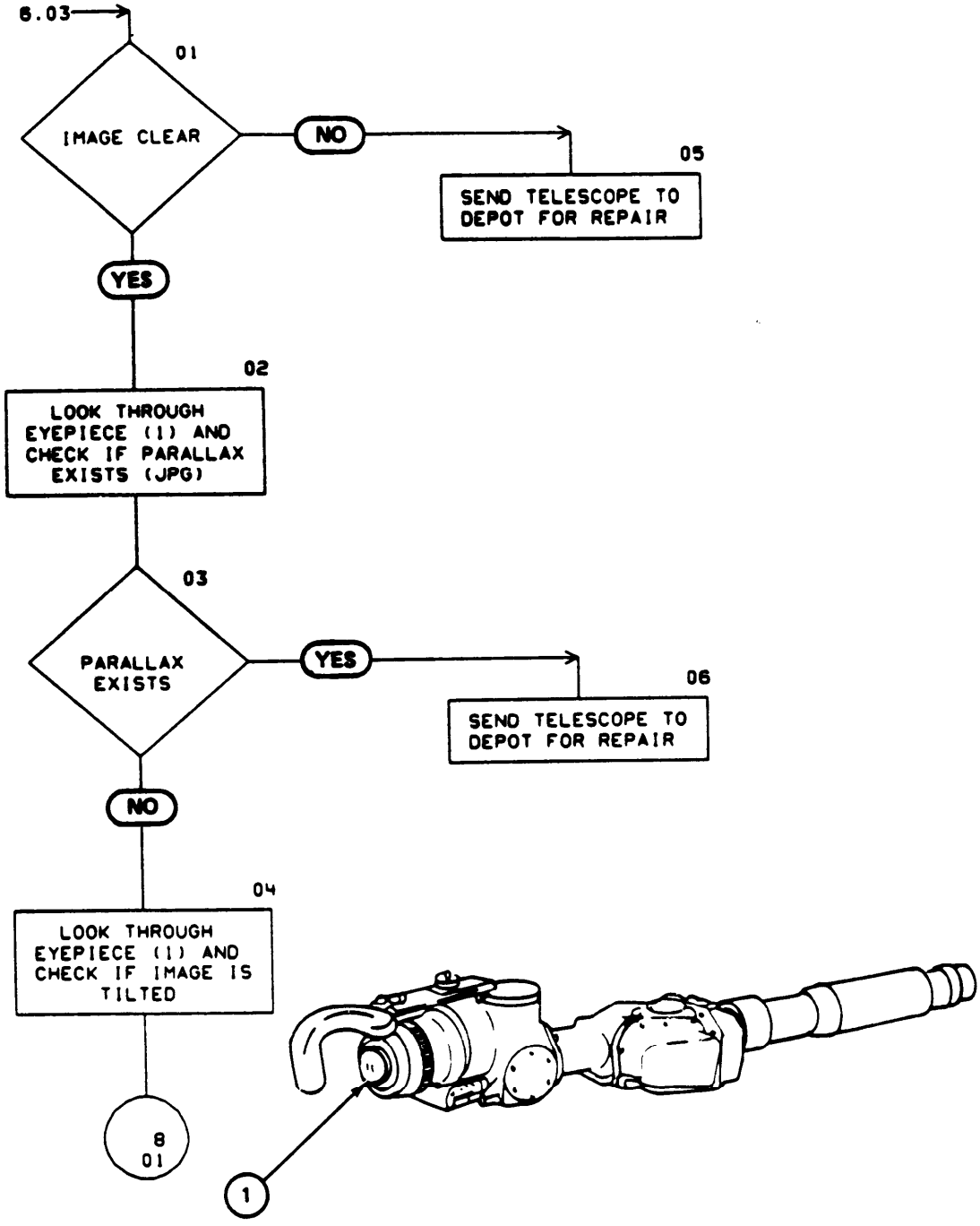


2-2. CHECKOUT (SHEET 6 OF 8)

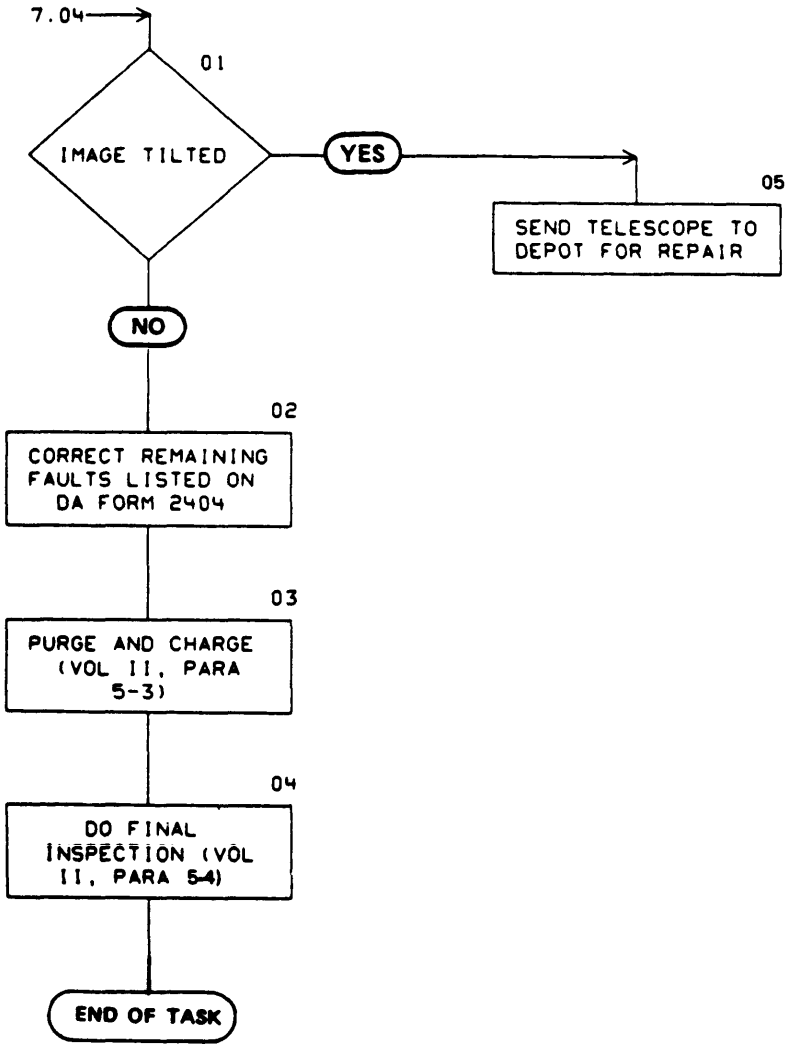




2-2. CHECKOUT (SHEET 7 OF 8)



2-2. CHECKOUT (SHEET 8 OF 8)



CHAPTER 3

FAULT SYMPTOM INDEX

	Symptom	Fault Isolation Procedure or Maintenance Procedure
1.	Reticle does not light	Remove window assembly and clean (Vol II, para 4-9)
2.	Reticle is not bright	Remove window assembly and clean (Vol II, para 4-9)
3.	Cannot see clearly or pressure cannot be held	Para 4-2
4.	Diopter ring binds	Send telescope to depot for repair
5.	Diopter ring loose	Send telescope to depot for repair
6.	Image is not clear	Send telescope to depot for repair
7.	Parallax exists	Send telescope to depot for repair
8.	Image tilted	Send telescope to depot for repair

CHAPTER 4

FAULT ISOLATION PROCEDURE

4-1. SCOPE

This chapter gives step-by-step procedures to troubleshoot the telescope for fault symptoms found during checkout. After the fault has been corrected, do the checkout procedure in Chapter 2 again. This is to make sure all faults have been corrected.

4-2. CANNOT SEE CLEARLY OR PRESSURE CANNOT BE HELD IN TELESCOPE (SHEET 1 OF 4)

TOOLS: 7/16" open end wrench
1/4" flat tip screwdriver

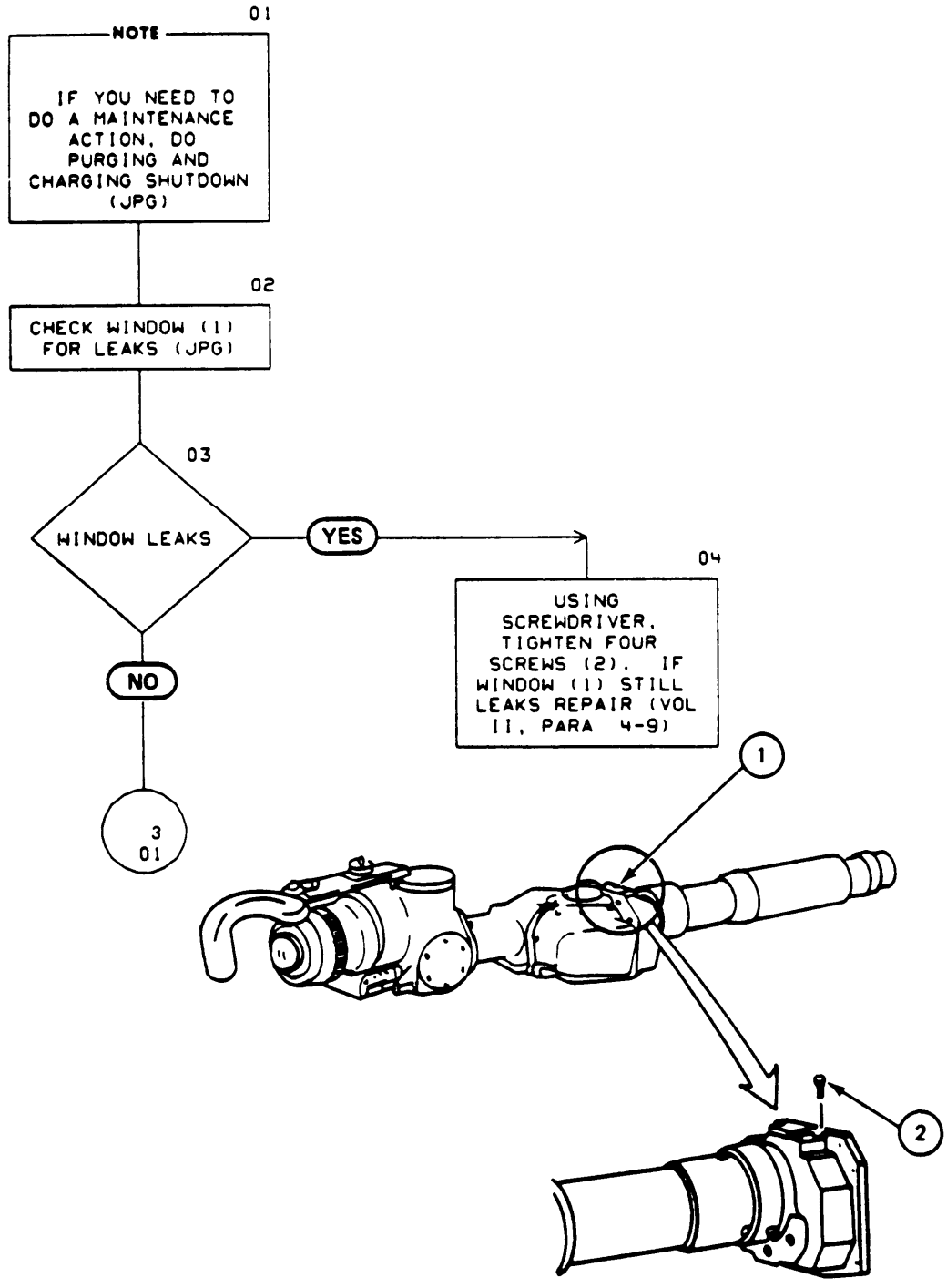
PERSONNEL: One

REFERENCES: JPG-41C for Detecting gas leaks
Purging and charging shutdown

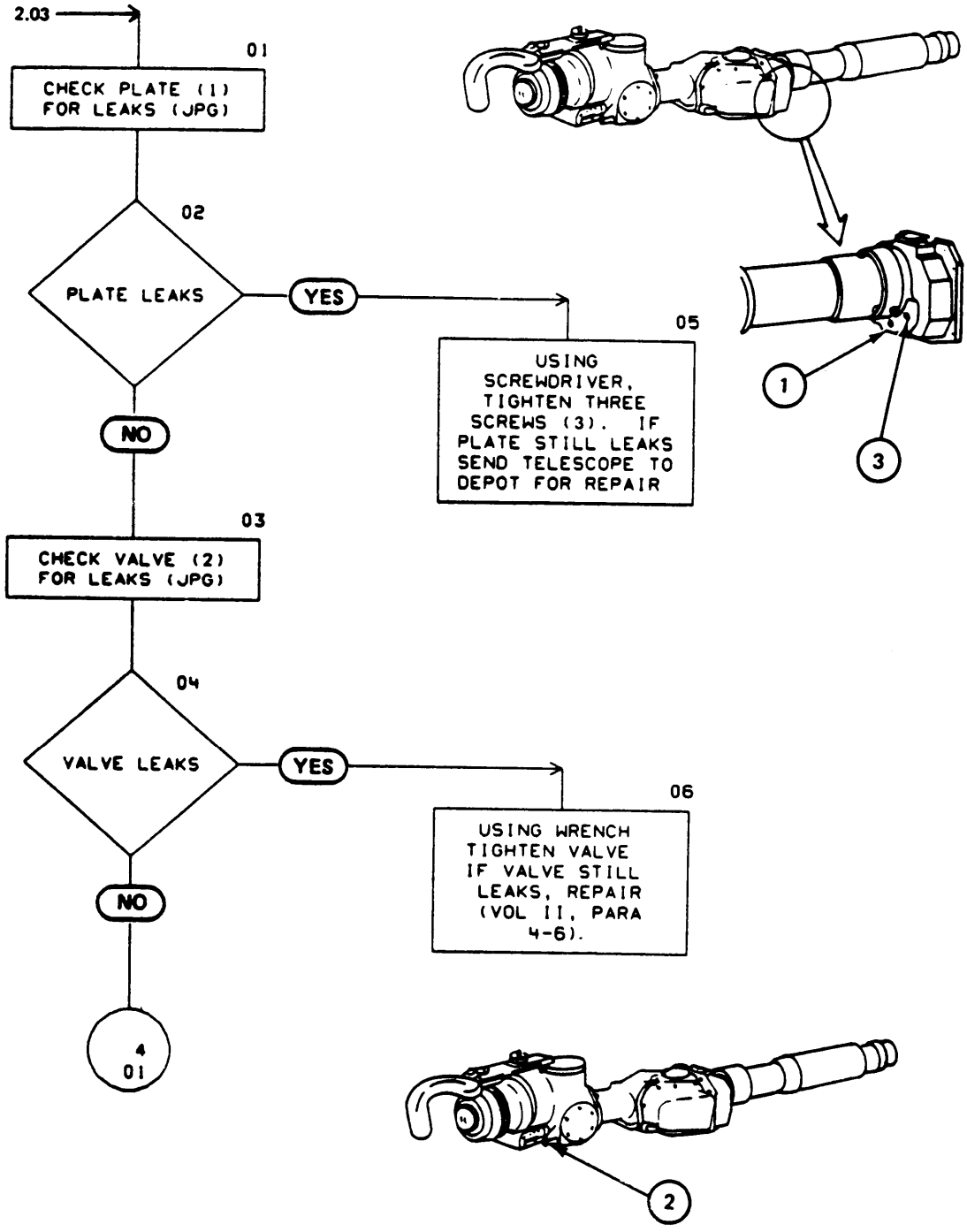
EQUIPMENT CONDITION: Telescope on work bench

PRELIMINARY PROCEDURES: Purge and charge telescope (Vol II, para 5-3)

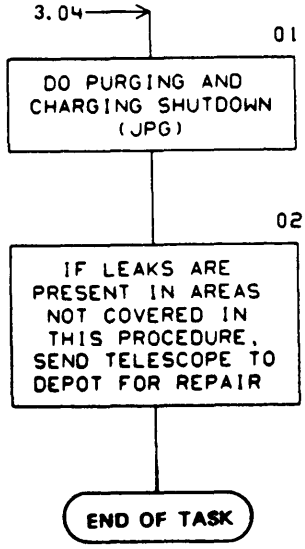
4-2. CANNOT SEE CLEARLY OR PRESSURE CANNOT BE HELD IN TELESCOPE (SHEET 2 OF 4)



4-2. CANNOT SEE CLEARLY OR PRESSURE CANNOT BE HELD IN TELESCOPE (SHEET 3 OF 4)



4-2. CANNOT SEE CLEARLY OR PRESSURE CANNOT BE HELD IN TELESCOPE (SHEET 4 OF 4)



TECHNICAL MANUAL

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

VOLUME II - MAINTENANCE

TELESCOPE, ARTICULATED:

M105D
M105F

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 M105D and M105F Articulated Telescopes. See Volume I for troubleshooting procedures.

1-2. ORGANIZATION

a. Chapter 2, General Maintenance Information, lists 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 telescope is returned to DS/GS. A complete inspection should be made and faults listed on DA Form 2404 before any repairs are made.

c. Chapter 4, Maintenance Procedures, give 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 telescope works and is ready for packaging or installation.

e. Chapter 6, Packaging, gives procedures for packaging the telescope for storage or shipment.

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

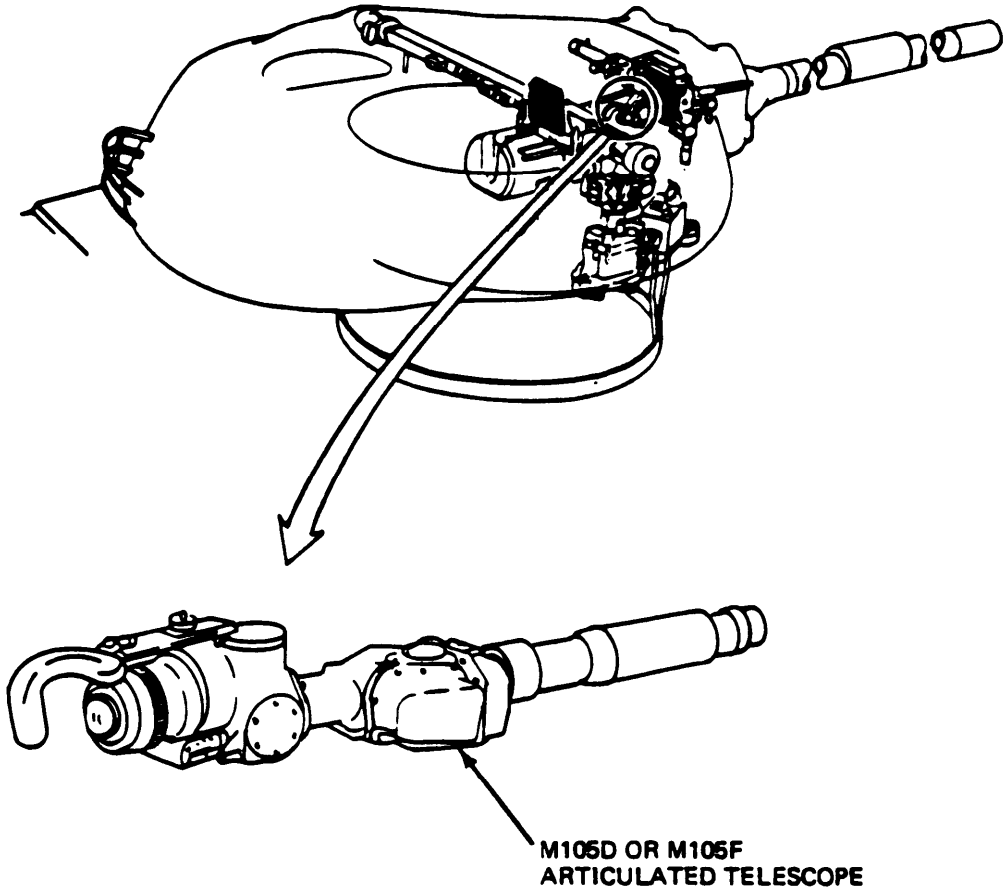
g. Appendix B, Maintenance Task Index, helps you find the necessary maintenance tasks for the telescope.

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

Section 2. DESCRIPTION AND DATA

1-3. DESCRIPTION

The M105D and M105F Articulated Telescopes are components of the of the secondary, direct, fire control systems and are mounted coaxially with the gun.



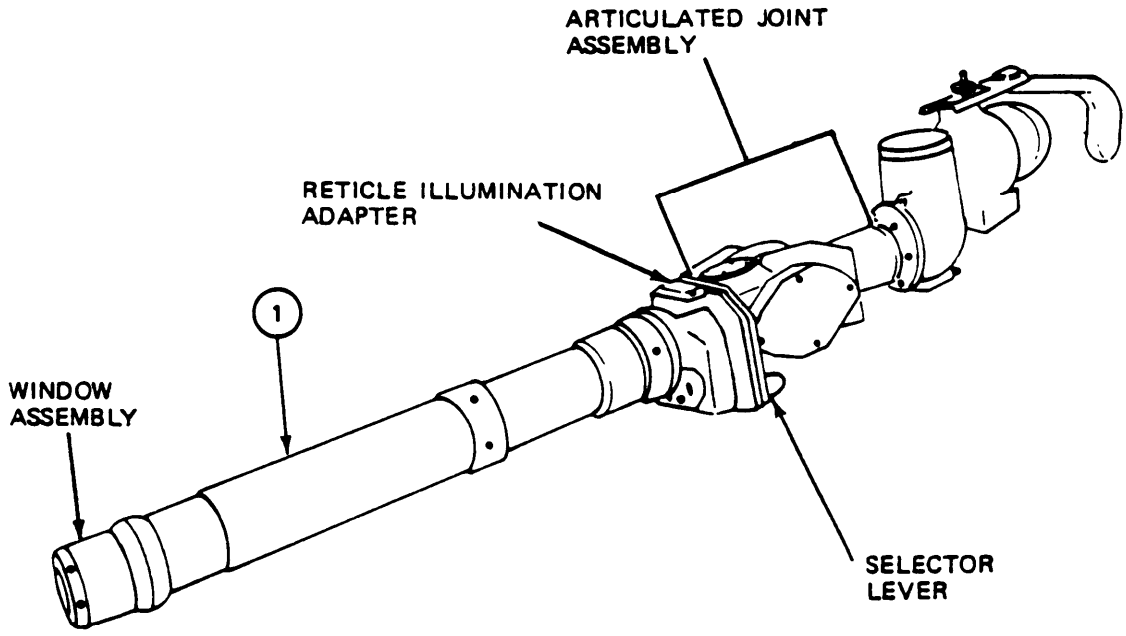
1-3. DESCRIPTION (CONT)

WINDOW ASSEMBLY is attached to the front of the objective tube (1) and fastened in place with two setscrews. The window seals the telescope against moisture, dirt and foreign matter.

RETICLE ILLUMINATION ADAPTER allows light to enter the telescope when the reticle needs to be lighted.

ARTICULATED JOINT ASSEMBLY lets the objective end of the telescope move without moving the eyepiece. This keeps the eyepiece conveniently available to the gunner throughout the range of the main gun elevation and depression. A prism system prevents image tilt.

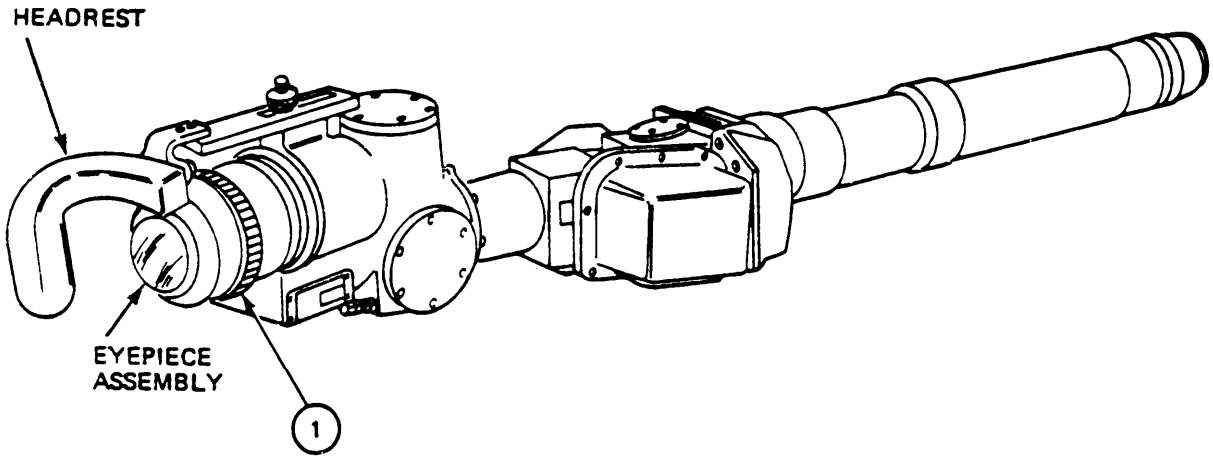
SELECTOR LEVER selects the reticle pattern according to the type of ammunition being used.



1-3. DESCRIPTION (CONT)

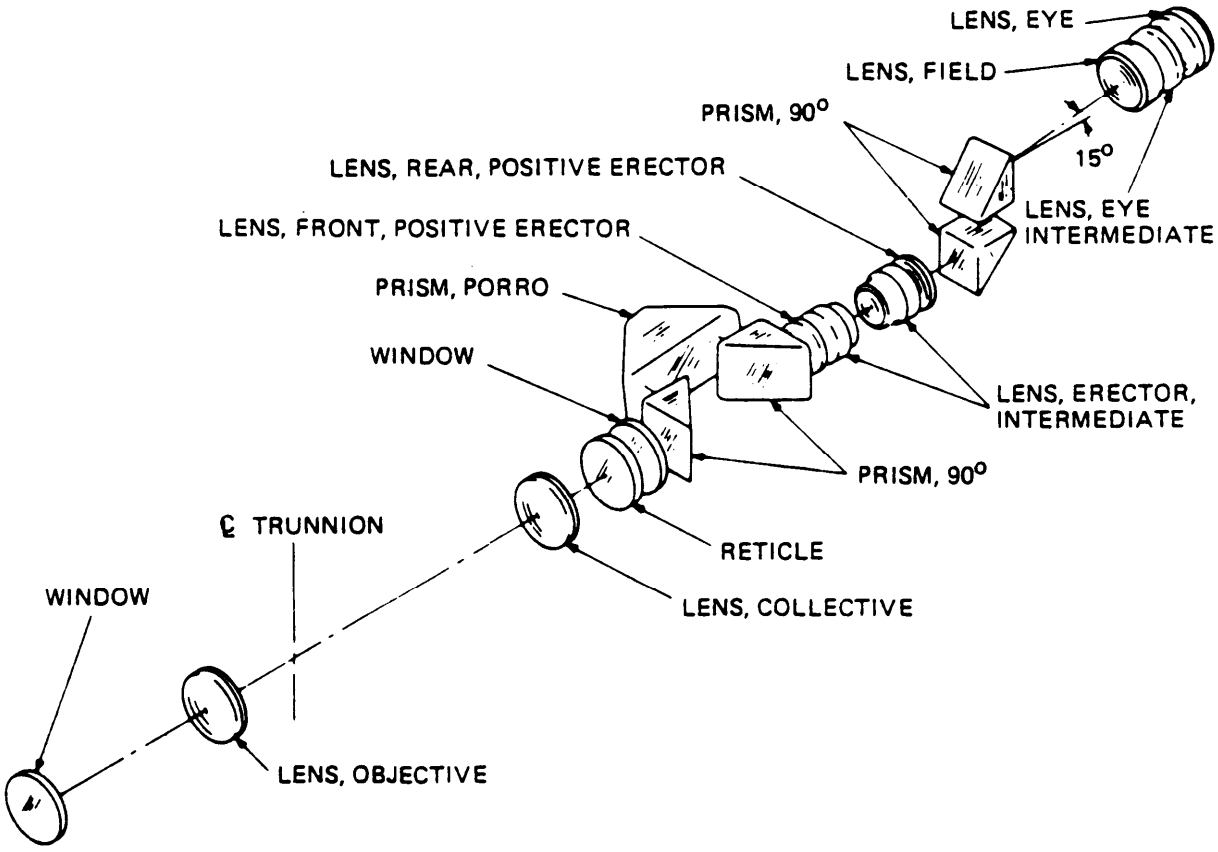
HEADREST can be easily adjusted to change the distance from the eyepiece assembly for the best view of image and reticle.

EYEPIECE ASSEMBLY is made up of a field lens, an intermediate lens and an eye lens. The wide angle eyepiece magnifies the final image of reticle and target. The diopter ring (1) is used to focus the eyepiece.



1-3. DESCRIPTION (CONT)

When an object is sighted through the telescope, an objective lens and a collective lens in the objective tube form an inverted image of the object on the reticle. After passing through prisms in the articulated joint assembly, the image is erected by the erector assembly and projected through two offset prisms to the eyepiece assembly. The offset prisms raise the eyepiece 2 inches and displace it 15 degrees to the right for the convenience of the gunner. The outside surfaces of all optical elements, except the reticle blank and the reflecting surfaces of the prisms, are covered with a thin coating of magnesium fluoride. This coating increases light transmission and minimizes internal reflections.



1-4. TABULATED DATA

a. Dimensions

Maximum overall length	46.6 inches
Maximum overall width	7.0 inches
Weight	53.5 pounds

b. Operating Limits

Range of travel (mounted in vehicle)	19 degrees above horizontal boresighting position; 9 degrees below horizontal boresighting position
Operable temperature range	-40 degrees F to +150 degrees F
Storage temperature range	-80 degrees F to +160 degrees F

c. Optical Characteristics

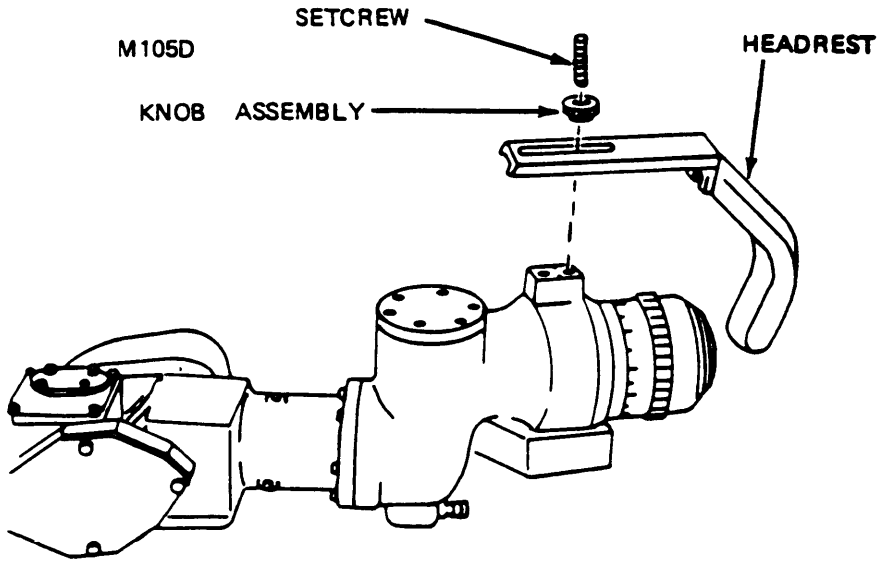
Power	8X
Field-of-View	7.5 degrees
Diameter of exit pupil	0.197 inches
Equivalent focal length of objective	12.000 inches
Equivalent focal length of eyepiece	1.500 inches
Clear eye distance	0.967 inches

1-5. DIFFERENCES BETWEEN CONFIGURATIONS

There are two types of knob assemblies (M105D and M105 F). When doing **a** task, the **differences** between the knob assemblies are given in the maintenance procedures. Check the type of knob assembly (M105D or M105F) you have before starting the task. The difference between the M105D and M105F knob assemblies can be seen below:

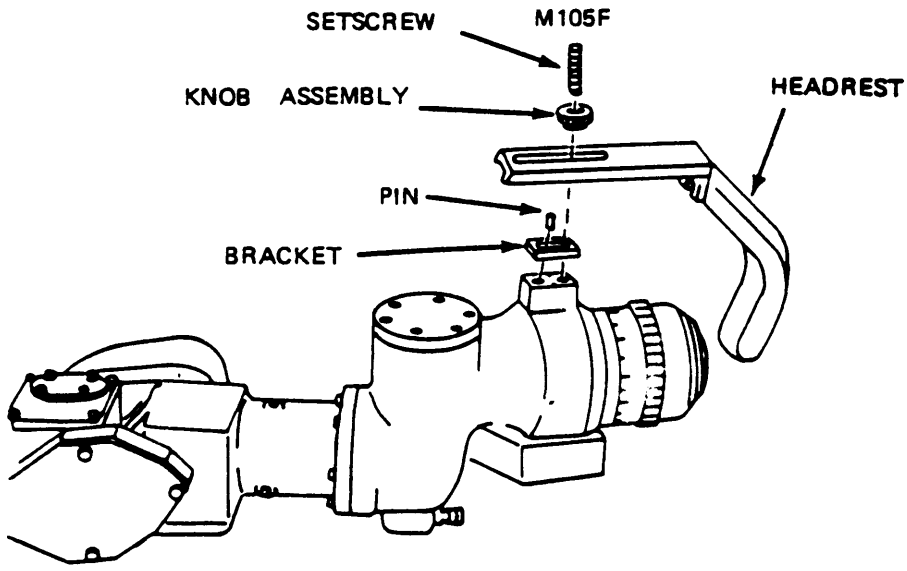
a. M105D

The headrest is held on to M105D telescope by a setscrew and knob. **This configuration does** not have a pin or bracket.



b. M105F

The headrest is held on the M105F telescope by a setscrew and knob. **This configuration has a** bracket held in place on the telescope by a pin.



CHAPTER 2
GENERAL MAINTENANCE INFORMATION

Section 1. GENERAL

2-1. SCOPE

This chapter tells you what special tools and test equipment are needed and where to find general information for the maintenance procedures in this volume.

Section 2. REFERENCE DOCUMENTS

2-2. GENERAL MAINTENANCE

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

2-6. LUBRICATION

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

Section 3. SAFETY PROCEDURES

2-7. GENERAL PROCEDURE

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

Safety procedures for using power supplies and nitrogen tanks are in JPG 41C .

Section 4. SPECIAL TOOLS AND TEST EQUIPENT

2-8. TOOLS AND TEST EQUIPMENT

Item	National Stock Number	Part Number (FSCM)	Use
Fire Control Purging Kit	4931-00-065-1110	SC 4931-91-CL-J54	Purging and charging telescope

CHAPTER 3

INSPECTION UPON RECEIPT

3-1. SCOPE

This chapter gives procedures to check the M105D and M105F Articulated Telescopes for faults you can see when they are 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.

3-2. ARTICULATED TELESCOPE INSPECTION UPON RECEIPT

TOOLS: 1/8", 5/64", 1/16", 3/32" and 0.050"socket headscrew key
(Allen wrench or equivalent)
3/16", 1/4" and 3/8" flat tip screwdriver
3/8" and 7/16" open end wrench

SUPPLIES: Paint (item 1, App A)
Paint (item 2, App A)
Paint (item 3, App A)
Primer (item 3, App A)

PERSONNEL: One

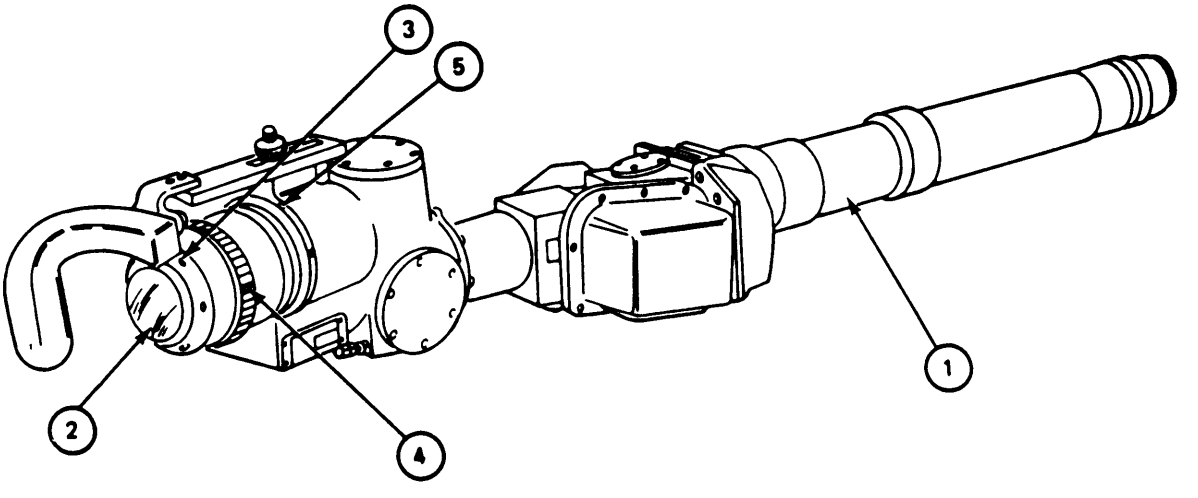
REFERENCES: TM 43-0139 for painting
TM 9-254 for general maintenance
JPG 41C for 'Completing DA Form 2404
Cleaning

EQUIPMENT CONDITION: Telescope on work bench

FRAME 1

Step	Procedure	Maintenance Action	Reference
1.	Clean exterior of telescope (1) and check for cracks or dents.	If cracks or dents are found, tell your supervisor.	JPG 41C
2.	Check eyepiece (2) lens for cracks or discoloration.	If cracks or discoloration are found, tell your supervisor.	. . .
3.	Using 0.050" Allen wrench, check that three setscrews (3) are tight.	Tighten. Replace if missing.	. . .
4.	Using 0.050" Allen wrench, check that three setscrews (4) are tight.	Tighten. Replace if missing.	. . .
5.	Using 0.050" Allen wrench, check that three setscrews (5) are tight.	Tighten. Replace if missing.	. . .
	GO TO FRAME 2		

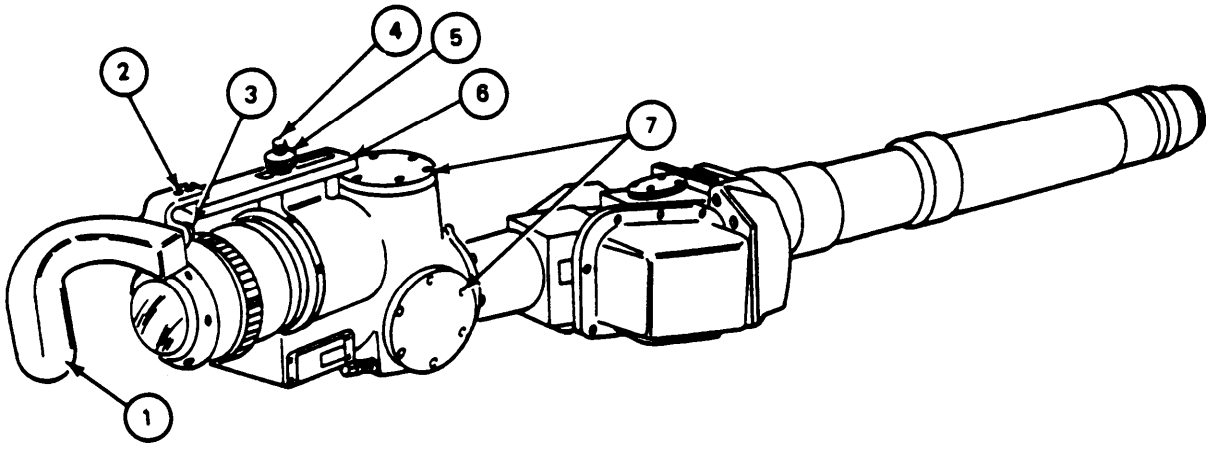
3-2. ARTICULATED TELESCOPE INSPECTION UPON RECEIPT (CONT)



3-2. ARTICULATED TELESCOPE INSPECTION UPON RECEIPT (CONT)

FRAME 2

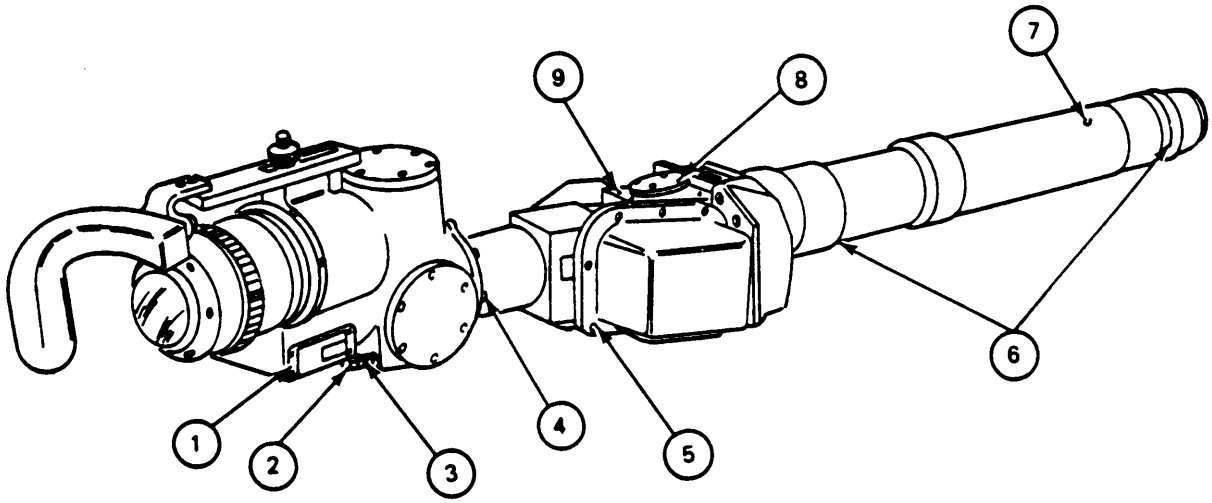
Step	Procedure	Maintenance Action	Reference
1.	Check that headrest (1) is not torn or worn.	Replace headrest.	Para 4-3
2.	Using 1/4" flat tip screwdriver, check that two screws (2) are tight.	Tighten. Replace if missing.	. . .
3.	Using 3/8" flat tip screwdriver, check that two screws (3) are tight.	Tighten. Replace if missing.	. . .
4.	Using 3/8" flat tip screwdriver, check that setscrew (4) is tight.	Tighten. Replace if missing.	. . .
5.	Loosen knob (5) and check that bracket (6) moves smoothly.	Remove burrs or replace.	TM 9-254 or Para 4-3
6.	Using 3/32" Allen wrench, check that 12 screws (7) are tight. GO TO FRAME 3	Tighten. Replace if missing.	. . .



3-2. ARTICULATED TELESCOPE INSPECTION UPON RECEIPT (CONT)

FRAME 3

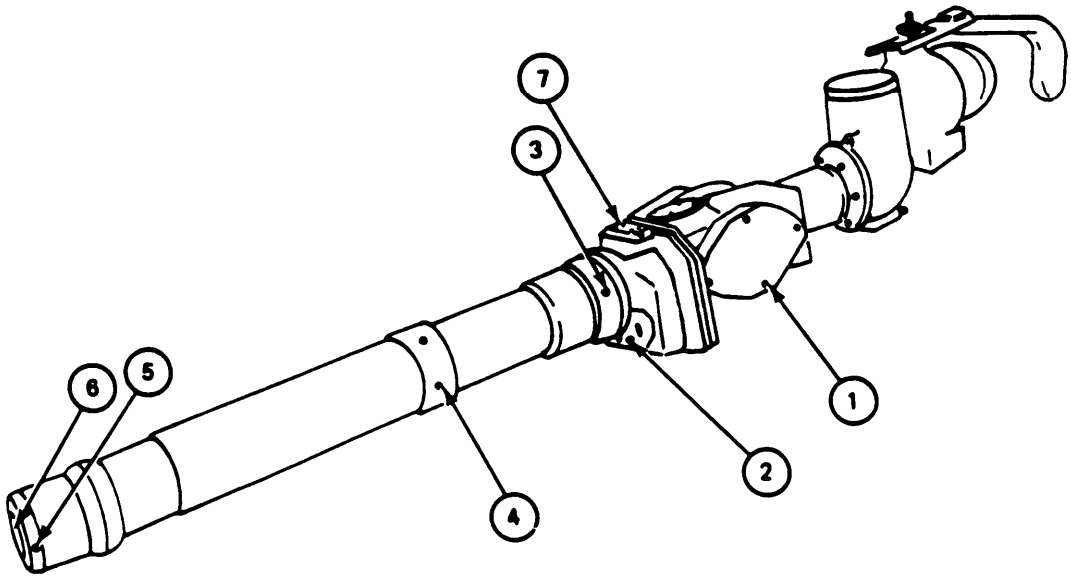
Step	Procedure	Maintenance Action	Reference
1.	Check that identification plate (1) can be read.	If it cannot be read, tell your supervisor.	. . .
2.	Using 3/8" open end wrench, check that cap (2) is tight.	Tighten. Replace if missing.	Para 4-6
3.	Using 7/16" open end wrench, check that valve stem (3) is tight.	Tighten. Replace if missing.	Para 4-6
4.	Using 1/8" Allen wrench, check that six screws (4) are tight.	Tighten. Replace if missing.	. . .
5.	Using 1/4" flat tip screwdriver, check that nine screws (5) are tight.	Tighten. Replace if missing.	. . .
6.	Check that bearing surfaces (6) are clean and free of rust and corrosion.	Clean.	TM 9-254
7.	Check that machine thread plug (7) is tight.	Tighten. Replace if missing.	Para 5-3
8.	Using 1/4" flat tip screwdriver, check that four screws (8) are tight.	Tighten. Replace if missing.	. . .
9.	Using 1/4" flat tip screwdriver, check that four screws (9) are tight.	Tighten. Replace if missing.	. . .
	GO TO FRAME 4		



3-2. ARTICULATED TELESCOPE INSPECTION UPON RECEIPT (CONT)

FRAME 4

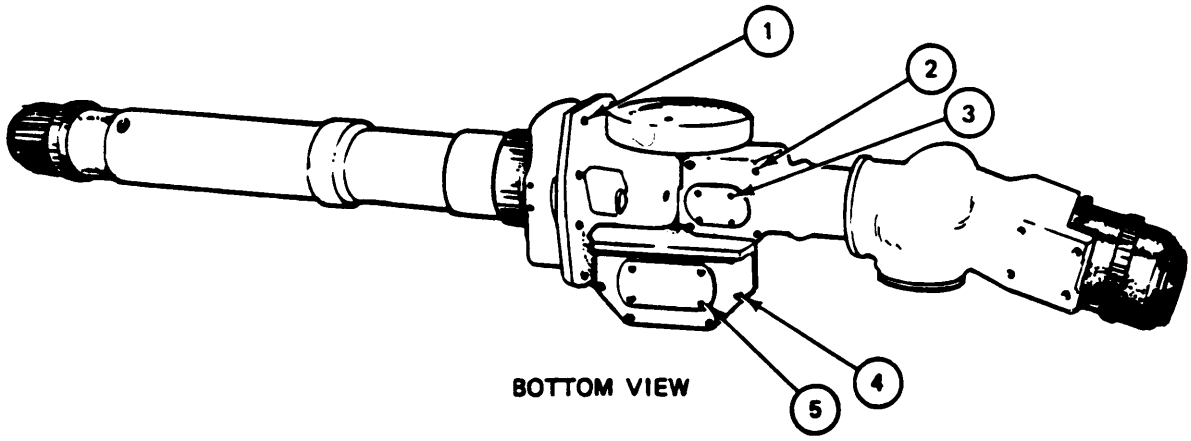
Step	Procedure	Maintenance Action	Reference
1.	Using 1/4" flat tip screwdriver, check that four screws (1) are tight.	Tighten. Replace if missing.	. . .
2.	Using 1/4" flat tip screwdriver, check that three screws (2) are tight.	Tighten. Replace if missing.	. . .
3.	Check that pin (3) is not broken or missing.	Send telescope to depot for repair.	. . .
4.	Using 3/16" flat tip screwdriver, check that three screws (4) are tight.	Tighten. Replace if missing.	. . .
5.	Using 1/16" Allen wrench, check that two screws (5) are tight.	Tighten. Replace if missing.	. . .
6.	Check lens (6) for cracks or discoloration.	If cracks or discoloration are found, tell your supervisor.	. . .
7.	Using 1/4" flat tip screwdriver, check that four screws (7) are tight. GO TO FRAME 5	Tighten. Replace if missing.	. . .



3-2. ARTICULATED TELESCOPE INSPECTION UPON RECEIPT (CONT)

FRAME 5

Step	Procedure	Maintenance Action	Reference
1.	Using 3/8" flat tip screwdriver, check that eight screws (1) are tight.	Tighten. Replace if missing.	. . .
2.	Using 1/4" flat tip screwdriver, check that four screws (2) are tight.	Tighten. Replace if missing.	. . .
3.	Using 1/4" flat tip screwdriver, check that four screws (3) are tight.	Tighten. Replace if missing.	. . .
4.	Using 1/4" flat tip screwdriver, check that seven screws (4) are tight.	Tighten. Replace if missing.	. . .
5.	Using 1/4" flat tip screwdriver, check that four screws (5) are tight. GO TO FRAME 6	Tighten. Replace if missing.	. . .

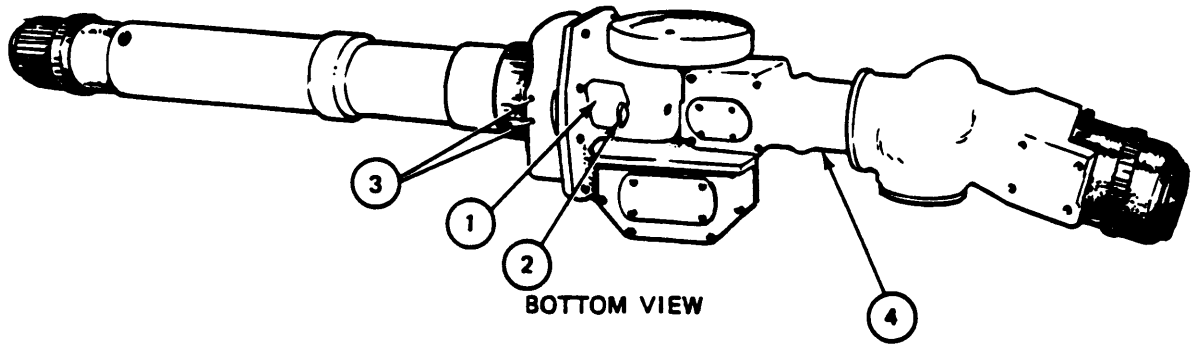


BOTTOM VIEW

3-2. ARTICULATED TELESCOPE INSPECTION UPON RECEIPT (CONT)

FRAME 6

Step	Procedure	Maintenance Action	Reference
1.	Check that lever (1) operates smoothly and rests on limit stop.	If lever does not operate smoothly, or rests on stop, tell your supervisor.	. . .
2.	Check that retaining ring (2) on end of lever (1) is not broken or missing.	Tell your supervisor.	. . .
3.	Using 5/64" Allen wrench, check that two screws (3) are tight.	Tighten. Replace if missing.	. . .
4.	Check telescope (4) for chipped or scratched paint.	Paint chipped or scratched area.	TM 43-0139
	NOTE FOLLOW-ON MAINTENANCE Correct faults listed on DA Form 2404 that may affect checkout procedure. Do checkout procedure (Vol I, para 2-2). END OF TASK		



BOTTOM VIEW

CHAPTER 4

ARTICULATED TELESCOPE

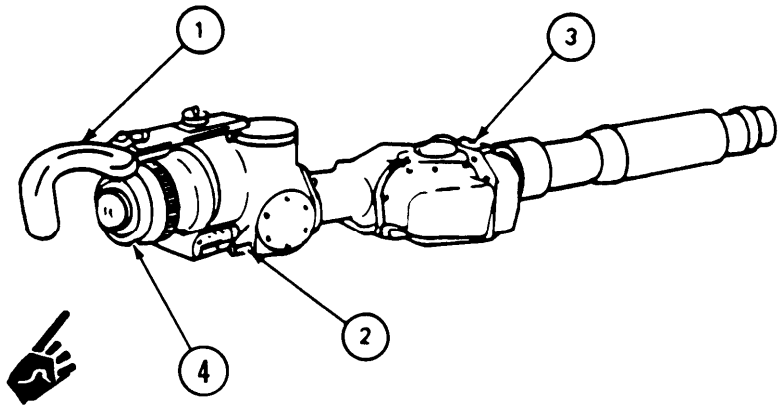
Section 1. GENERAL

4-1. SCOPE

This chapter gives maintenance procedures of the M105D and M105F Articulated Telescopes.

4-2. LIST OF TELESCOPE ITEMS CONTAINED IN THIS CHAPTER

Item	Figure Index No.	Reference (para)
Headrest	1	4-3
Valve	2	4-6
Window	3	4-9
Eyepiece Assembly	4	4-12



Section 2. HEADREST

4-3. HEADREST MAINTENANCE PROCEDURE INDEX

Task	Reference (Para)
Removal	4-4
Installation	4-5

4-4. HEADREST REMOVAL

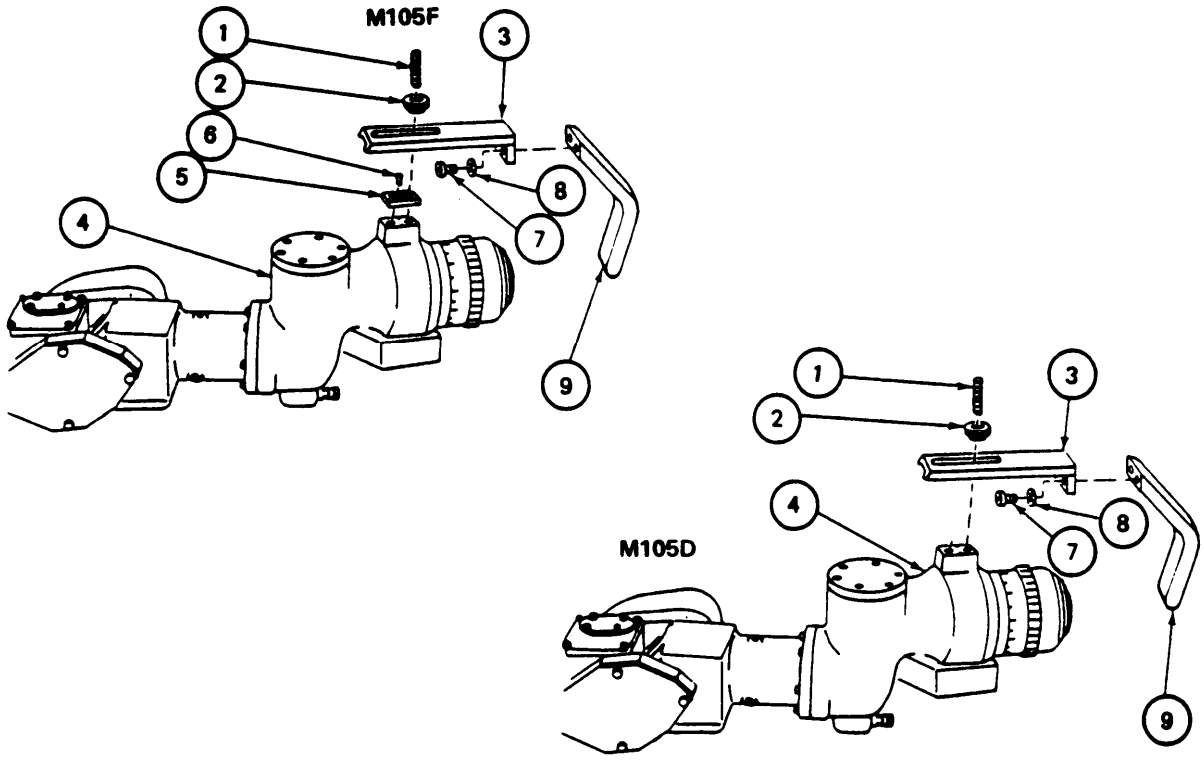
TOOLS: 3/8" flat tip screwdriver
1/8" socket head screw key (Allen wrench or equivalent)

PERSONNEL: One

EQUIPMENT CONDITION: Telescope on work bench

FRAME 1

Step	Procedure
1.	Using screwdriver (M105D) or Allen wrench (M105F), remove setscrew (1) with knob (2) and bracket (3) from telescope (4).
2.	Using fingers, remove knob (2) from setscrew (1).
3.	Remove plate (5) and pin (6) (M105F only).
4.	Using screwdriver, remove two screws (7), two washers (8) and headrest (9) from bracket (3).
	END OF TASK



4-5. HEADREST INSTALLATION

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

SUPPLIES: Sealing compound (item 5, APP A)

PERSONNEL: One

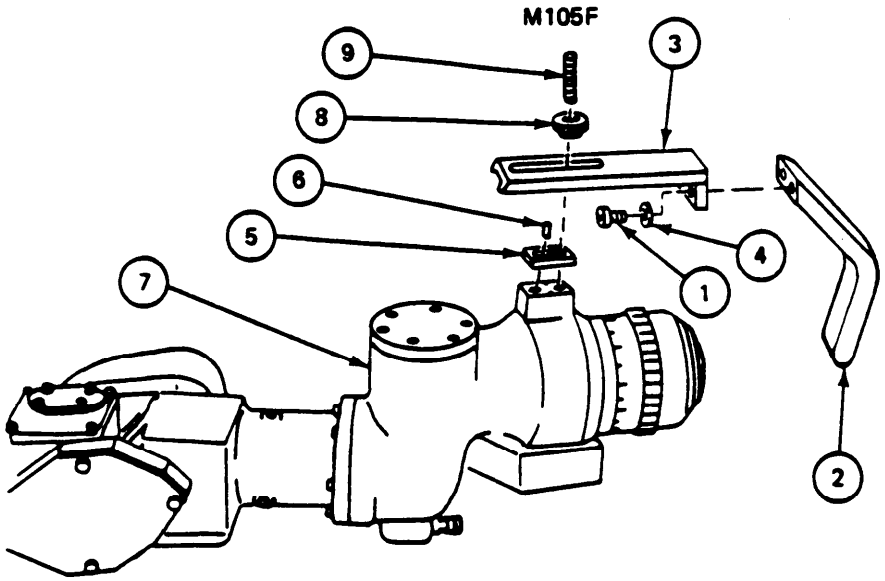
REFERENCES: JPG 41C for using sealing compound

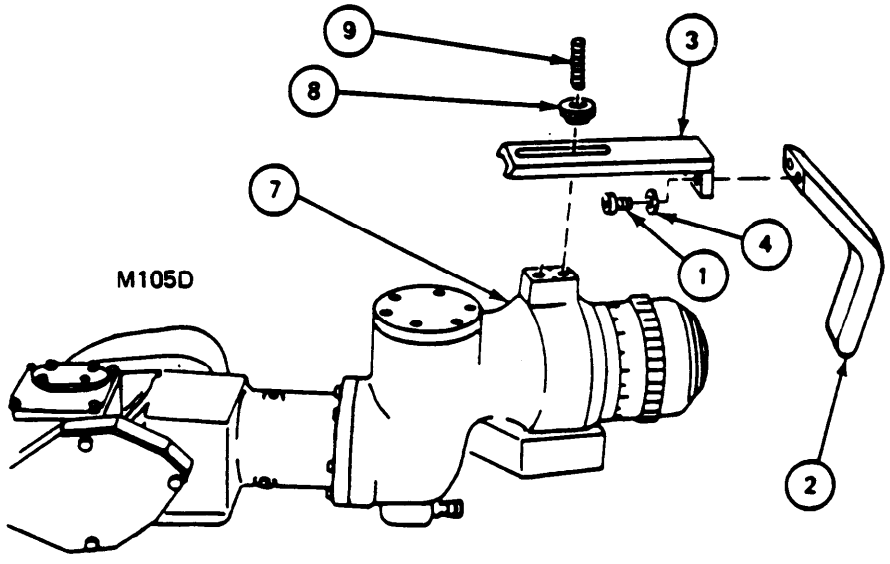
EQUIPMENT CONDITION: Telescope on work bench

FRAME 1

Step	Procedure
1.	Put sealing compound on threads of two screws (1) (JPG).
2.	Put headrest (2) on bracket (3) and line up holes.
3.	Using screwdriver, install two washers (4), two screws (1) and headrest (2) on bracket (3).
4.	Install plate (5) and pin (6) on telescope (7) (M105F only).
5.	Using fingers, install knob (8) on setscrew (9).
6.	Place bracket (3) on telescope (7).
7.	Using screwdriver (M105D) or Allen wrench (M105 F), install setscrew (9) and knob (8) onto telescope (7).
	END OF TASK

4-5. HEADREST INSTALLATION (CONT)





Section 3. VALVE

4-6. VALVE MAINTENANCE PROCEDURES INDEX

Task	Reference (para)
Removal	4-7
Installation	4-8

4-7. VALVE REMOVAL

TOOLS: 3/8", 7/16" open end wrench
Valve core wrench

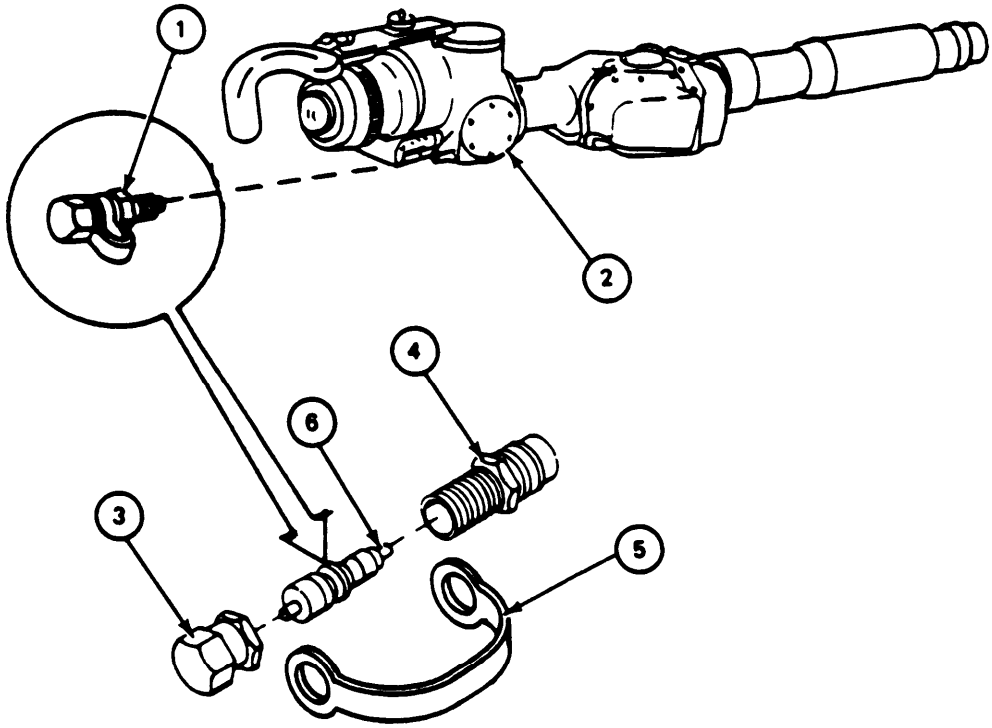
PERSONNEL: One

EQUIPMENT CONDITION: Telescope on work bench

FRAME 1

Step	
1.	Using 7/16" open end wrench, remove valve (1) from telescope (2).
2.	Using 3/8" open end wrench, remove cap (3) from valve stem (4) and remove valve strap (5) from cap (3) and valve stem (4).
3.	Using valve core wrench, remove valve core **6)** from valve stem (4).
	END OF TASK

4-7. VALVE REMOVAL (CONT)



4-8. VALVE INSTALLATION

TOOLS: 3/8", 7/16" open end wrench
Valve core wrench

SUPPLIES: Sealing compound (item 5, APP A)

PERSONNEL: One

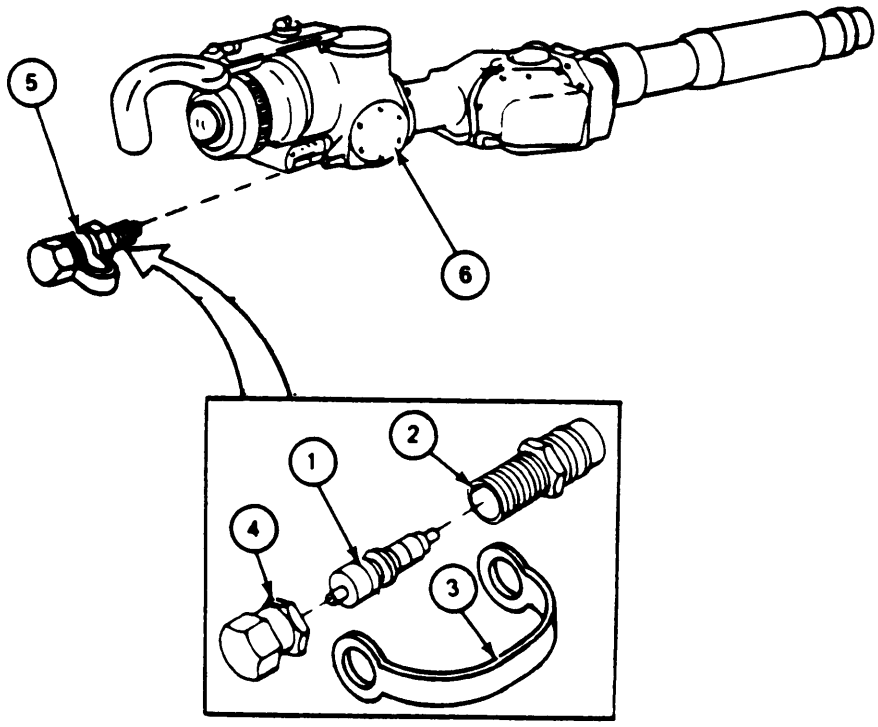
REFERENCES: JPG 41C for using sealing compound

EQUIPMENT CONDITION: Telescope and valve assembly on work bench

FRAME 1

Step	Procedure
1.	Using valve core wrench, install valve core (1) in valve stem (2).
2.	Install valve strap (3) on valve stem (2) and cap (4).
3.	Using open end wrench, install cap (4) to valve stem (2) and valve strap (3).
4.	Put a small amount of sealing compound on threads of valve stem (2) (JPG).
5.	Using open end wrench, install valve (5) in telescope (6).
	NOTE FOLLOW-ON MAINTENANCE Do checkout procedure (Vol I, para 2-2).
	END OF TASK

4-8. VALVE INSTALLATION (CONT)



Section 4. **WINDOW**

4-9. WINDOW MAINTENANCE PROCEDURES INDEX

Task	Reference (para)
Disassembly	4-10
Assembly	4-11

4-10. WINDOW DISASSEMBLY

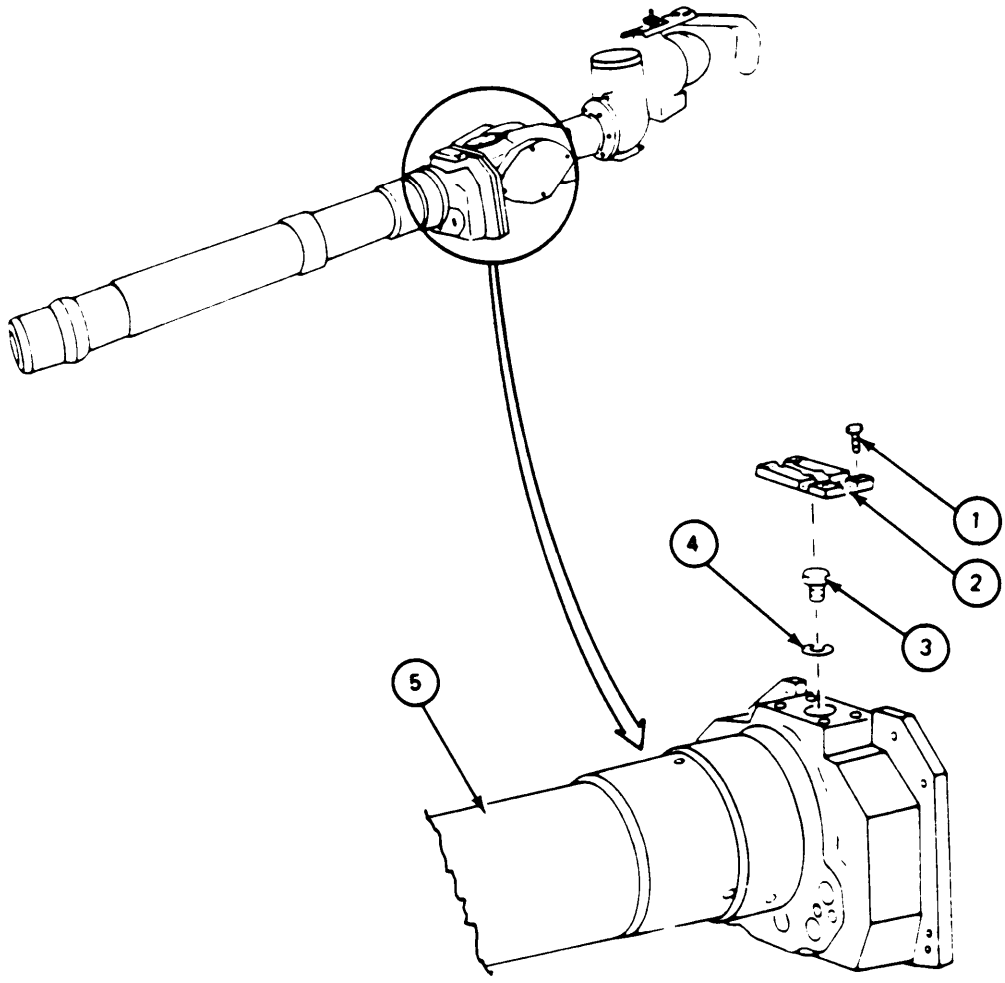
TOOLS: 1/4" **flat** tip scewdriver

PERSONNEL: One

EQUIPMENT CONDITION: Telescope on work bench

FRAME 1

Step	Procedure
1.	Using screwdriver, remove four screws (1) and lift away adapter (2).
2.	Remove window (3) and preformed packing (4) from telescope (5).
	END OF TASK



4-11. EYEPIECE ASSEMBLY MAINTENANCE PROCEDURE INDEX

Task	Reference (para)
Removal	4-13
Installation	4-14

4-11. EYEPIECE ASSEMBLY REMOVAL

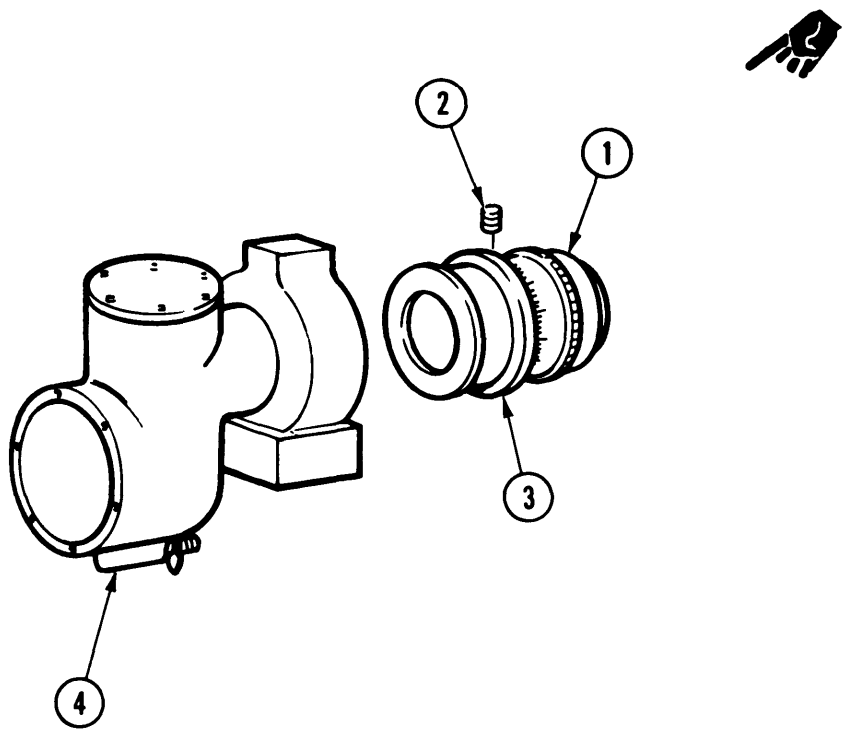
TOOLS: 1/4" flat tip screwdriver
Wrench, spanner, jointed (NSN 5120-00-277-9077)

PERSONNEL: One

EQUIPMENT CONDITION: Telescope on work bench

FRAME 1

Step	Procedure
1.	Remove two setscrews (2) in externally threaded ring (3) of eyepiece assembly (1). Discard setscrews.
2.	Using jointed spanner wrench NSN 5120-00-277-9077 remove eyepiece assembly (1) from pinned housing assembly (4).
	END OF TASK



4-12. EYEPIECE ASSEMBLY INSTALLATION

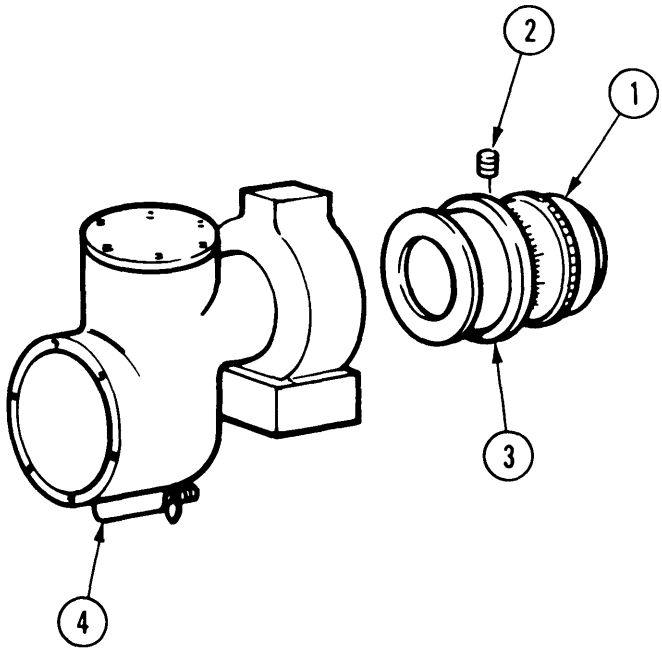
TOOL.S: 1/4" Flat Tip screwdriver
Wrench. spanner, jointed (NSN 5120-00-277-9077)

PERSONNEL: One

EQUIPMENT CONDITION: Telescope on work bench

FRAME

Step	Procedure
1.	Install eyepiece assembly (1) in pinned housing (4).
2.	Secure by threading external threaded ring (3) of eyepiece assembly (1) into pinned housing (4).
	END OF TASK



*U.S. GOVERNMENT PRINTING oFFICE: 1988 542-043/80034

CHAPTER 5

FINAL INSPECTION

5-1. SCOPE

This chapter gives final inspection and maintenance procedures to be done after repairing the M 105 D and M105F Articulated Telescopes.

5-2. FINAL INSPECTION INDEX

Task	Reference (para)
Purging and Charging Articulated Telescope	5-3
Articulated Telescope Final Inspection	5-4

5-3. PURGING AND CHARGING ARTICULATED TELESCOPE

TOOLS: 3/8" flat tip screwdriver
3/8" open end wrench
Fire control purging kit

PERSONNEL: One

REFERENCES: JPG 41C for: Purging and charging setup and shutdown
Detecting gas leaks

EQUIPMENT CONDITION: Telescope on work bench

PRELIMINARY PROCEDURES: Do purging and charging setup (JPG)

5-3. PURGING AND CHARGING ARTICULATED TELESCOPE (CONT)

WARNING

NITROGEN GAS UNDER PRESSURE

DEATH

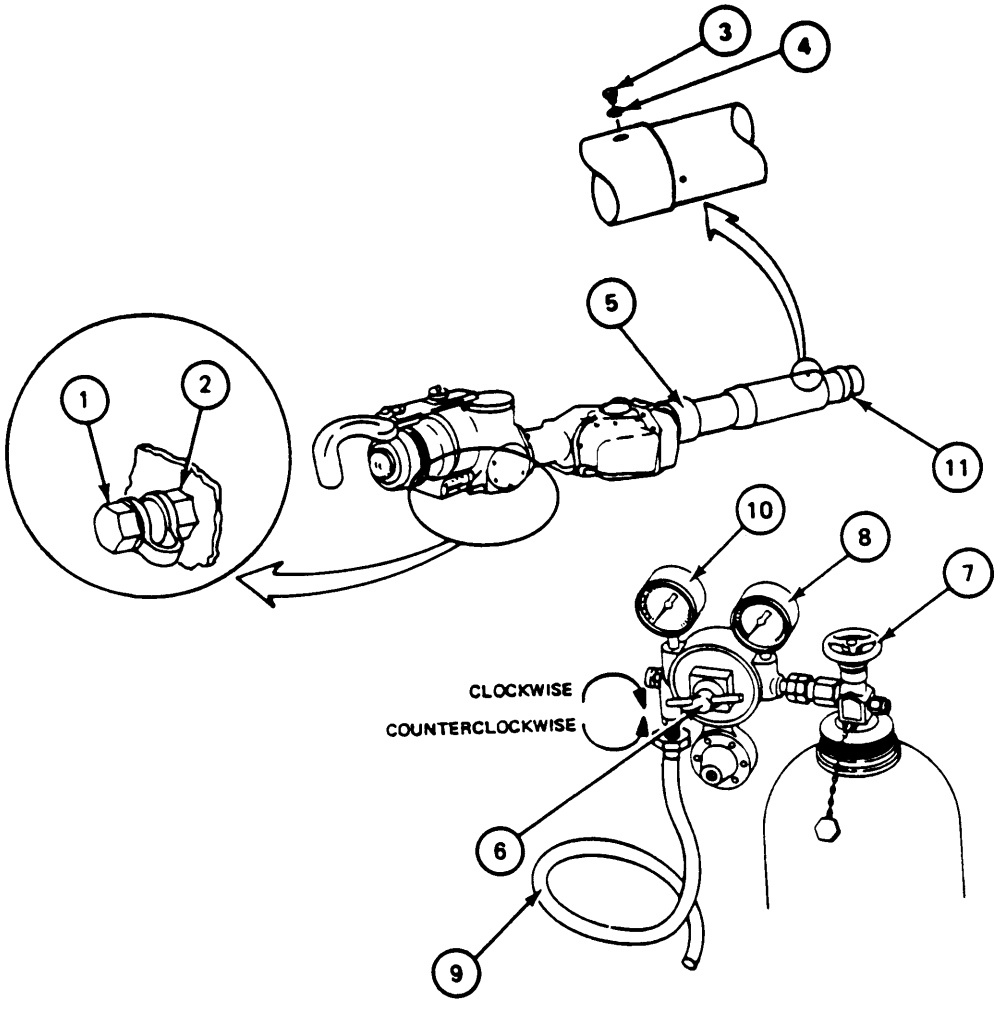
or severe injury may result if personnel fail to observe safety precautions listed in Job Performance Guide 113-091-9000R.

FRAME 1

Step	Procedure
1.	Using 3/8" wrench, remove cap (1) from valve assembly (2).
2.	Using screwdriver, remove machine thread plug (3) and gasket (4) from telescope (5).
3.	Check that low pressure valve (6) is fully counter clockwise.
4.	Open high pressure valve (7) on tank until reading on high pressure gage (8) is greater that 100 psi (if 100 psi is not reached with valve (7) fully opened, replace nitrogen tank).
5.	Connect free end of hose assembly (9) to valve assembly (2).
6.	Turn low pressure valve (6) slowly clockwise until reading on low pressure gage (10) is 5 psi.
7.	Wait 5 minutes. Reduce pressure to 2 psi. Using screwdriver, install machine thread plug (3) and gasket (4) in telescope.
8.	Check for leaks around optical element (11), valve assembly (2) and machine thread plug (3) (JPG).
9.	If leaks are found, fault isolate leaks (Vol I para 4-2). If no leaks are found, go to step 10.
10.	Turn low pressure valve (6) slowly counter-clockwise until reading on low pressure gage (10) is 1 psi.
11.	Wait two minutes, turn low pressure valve (6) fully counter-clockwise. Close high pressure valve (7). Check that pressure on low pressure gage remains.
12.	Remove hose assembly (9) from valve assembly (2).
13.	Check valve core of valve assembly (2) for leaks (JPG).
14.	If leaks are found, repair valve assembly (para 4-6) and repeat purging and charging procedures.
15.	Using wrench, replace cap (1) on valve assembly (2).

5-3. PURGING AND CHARGING ARTICULATED TELESCOPE (CONT)

Step	Procedure
	NOTE FOLLOW-ON MAINTENANCE Do purging and charging shut down (JPG). END OF TASK



5-4. ARTICULATED TELESCOPE FINAL INSPECTION

PERSONNEL: One

EQUIPMENT CONDITION: Telescope on work bench

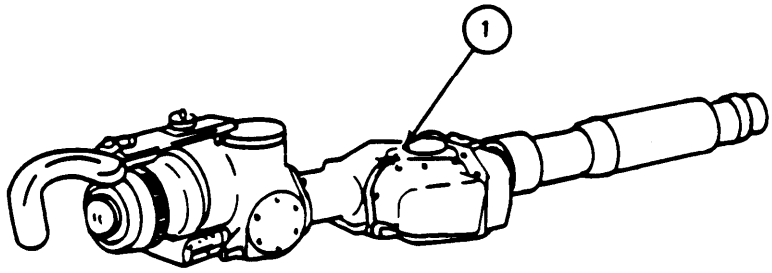
PRELIMINARY PROCEDURES:

NOTE

If you find a fault, tell your supervisor.
If you do not find a fault, send the good telescope back to service.

FRAME 1

Step	Procedure
1.	Check telescope (1) is complete with all screws, nuts, seals and washers in place.
2.	Check no bare metal is exposed. Check for corrosion or evidence of damage or misuse.
	END OF TASK



CHAPTER 6

PACKAGING

6-1. SCOPE

This chapter gives information on packaging the **M105D** and M105F Articulated Telescopes for storage or shipment.

6-2. PREPARATION FOR PACKAGING OF OPTICAL COMPONENTS

Cover all prisms or optical elements with at least four thicknesses of neutral lens tissue, (item 6, App A) and hold in place with water-resistant, pressure-sensitive adhesive tape. Cover the lens tissue with cellulose cushioning material and hold in place with pressure-sensitive tape.

6-3. PACKAGING M105D AND M105F ARTICULATED TELESCOPES

Package and pack the M105D and M105F Telescopes in accordance with MIL-P- 14232/P8635466 and TM 9-200.

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 M105D and M105F Articulated Telescopes. These item 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 4, 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

(1)		(2)	(4)	(5)
Item Number	Level	Stock No.	Description	U/M
1	F	8010-00-298-2300	PAINT, ENAMEL ALKALYD GLOSS, TT-E-489, GRAY 1 QT CAN	QT
2	F	8010-00-286-7758	PAINT, ENAMEL ALKALYD GLOSS, TT-E-489, YELLOW 1 QT CAN	QT
3	F	8010-00-298-2287	PAINT, ENAMEL ALKALYD GLOSS, TT-E-489, WHITE 1 GAL CAN	GL
4	F	8010-00-292-1127	PRIMER, SYNTHETIC, RUST INHIBITOR TT-P-664 1 GAL CAN	GL
5	F	8030-00-275-8110	SEALING COMPOUND, MIL-S-11031 1 KIT	KT
6	F	6640-00-285-8012	TISSUE LENS, NNN-P40 100 SHEET PACKAGE	HD

APPENDIX B

MAINTENANCE TASK INDEX

B-1. SCOPE

This appendix helps you find maintenance tasks for the M105D and M105F Articulated Telescopes by giving you references to the procedures.

B-2. MAINTENANCE TASK INDEX

ARTICULATED TELESCOPE M105D (1240-00-980-1745) ARTICULATED TELESCOPE M105F (1240-00-764-1668) / NOMENCLATURE	MAINTENANCE TASKS: INSPECTION UPON RECEIPT (VOL II)	FINAL INSPECTION (VOL II)	CHECKOUT (VOL I)	TROUBLESHOOT (VOL I)	REMOVAL/INSTALLATION (VOL II)	DISASSEMBLY/ASSEMBLY (VOL II)	TOOLS AND TEST EQUIPMENT (VOL I/VOL II)	NOTES
M105D AND M105F ARTICULATED TELESCOPES	Para 3-2	Para 5-4	Para 2-2	Para 4-2			Para 1-4/ 2-8	
HEADREST					Para 4-4/ 4-5			
VALVE					Para 4-7/ 4-8			
WINDOW						Para 4-10/ 4-11		

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

Section I INTRODUCTION

C-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 and depot maintenance of the Telescope, Articulated, M105D and Telescope, Articulated, M105F. It authorizes the requisitioning and issue of spares and repair parts as indicated by the source and maintenance codes.

C-2. GENERAL

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

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

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

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

C-3. EXPLANATION OF COLUMNS

a. Illustration. This column is divided as follows:

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

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

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

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

Code	Definition
PA	-Item procured and stocked for anticipated or known usage.
PB	-Item procured and stocked for insurance purpose because essentiality dictates that a minimum quantity be available in the supply system.
PC	-Item procured and stocked and which otherwise would be coded PA except that it is deteriorative in nature.
PD	-Support item, excluding support equipment, procured for initial issue or outfitting and stocked only for subsequent or additional initial issues or 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 q aintenance 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 q ay 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.
0	-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.
	-The lowest maintenance level capable of complete repair of the support item is the direct support level.
H	-The lowest maintenance level capable of complete repair of the support item is the general support level.

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

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

Z -Nonreparable. No repair is authorized.

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

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

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

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

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

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

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

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

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

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

C-4. SPECIAL INFORMATION.

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

Code	Used On
663	TELESCOPE, ARTICULATED, M105D
712	TELESCOPE, ARTICULATED, M105F

C-5. HOW TO LOCATE REPAIR PARTS.

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

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

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

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

(4) 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.

C-6. ABBREVIATIONS.

(Not Applicable)

Section II

REPAIR PARTS LIST

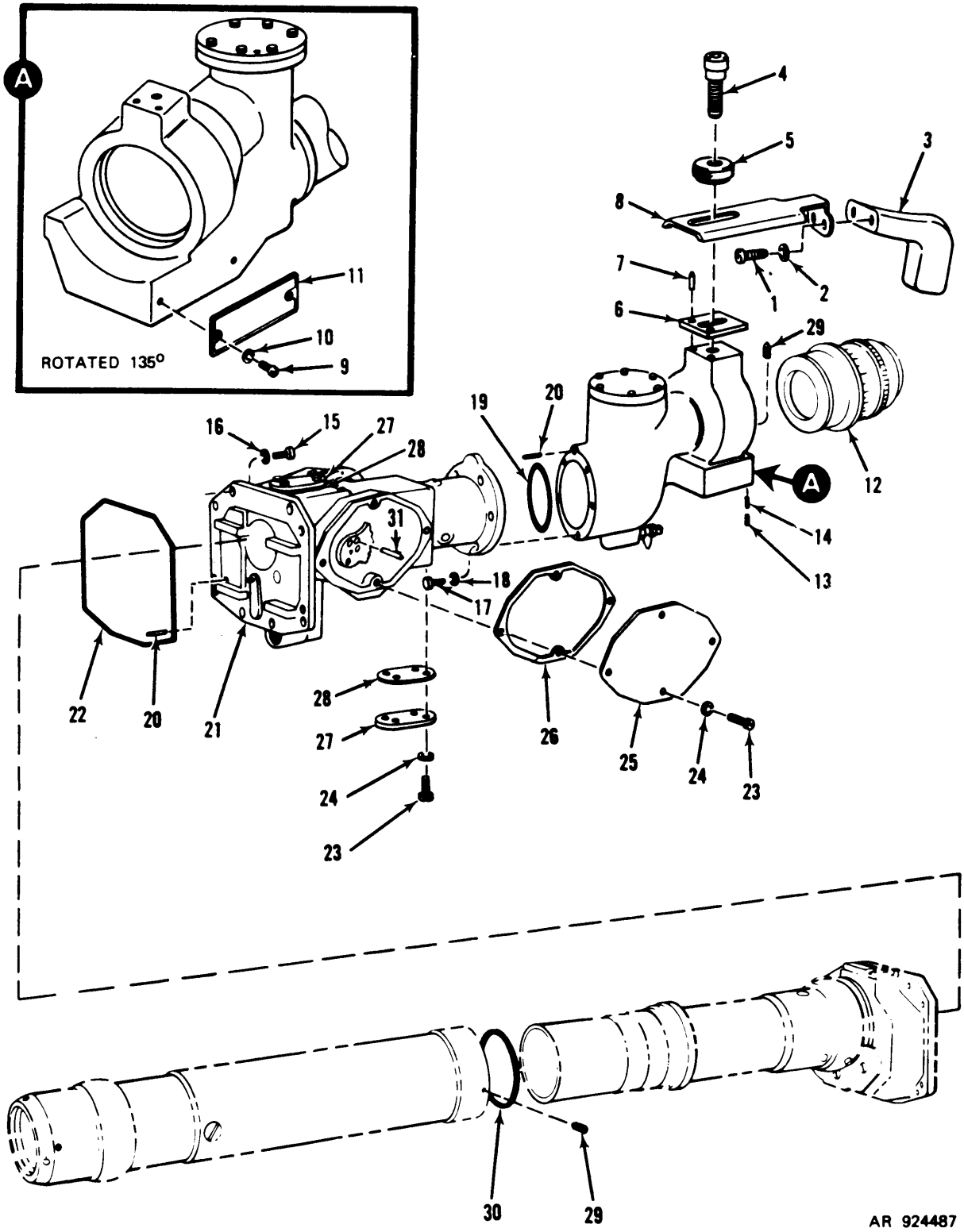


Figure C-1. Articulated telescope, M105D 8574700-1 and M105F 8574700-2 (overall view)

(1) ILLUSTRATION (a) FIG NO	(b) ITEM NO	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION	USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 00 ARTICULATED TELESCOPE, M105D			
						8574700-1,M105F 8574700-2			
						(OVERALL VIEW)			
C-1	1	PAFZZ	5305-00-059-3675	96906	MS51958-79	SCREW, MACHINE		EA	2
C-1	2	PAFZZ	5310-00-933-8121	96906	MS35338-139	WASHER, LOCK HEAD		EA	2
C-1	3	PAFZZ	1240-00-610-7758	19200	8574831	HEADREST,OPTICAL		EA	1
C-1	4	PAFZZ	5305-00-988-7846	96906	MS16995-83	SCREW, CAP, SOCKET HE HEAD 3/8-16UNC-3A, 1-1/2 L		EA	1
C-1	5	PAFZZ	5355-01-061-4490	19200	11727440	KNOB		EA	1
C-1	6	PAFZZ	1240-01-069-4553	19200	11747329	PLATE		EA	1
C-1	7	PADZZ	5315-00-682-1726	96906	MS16555-617	PIN, STRAIGHT		EA	2
C-1	8	PAFZZ	1240-01-019-3397	19200	11747342	BRACKET, TELESCOPE		EA	1
C-1	9	PAFZZ	5305-00-054-5635	96906	MS51957-1	SCREW, MACHINE		EA	2
C-1	10	PAFZZ	5310-00-543-4652	96906	MS35333-69	WASHER, LOCK		EA	2
C-1	11	PADZZ	9905-01-098-2214	19200	10559697-3	PLATE, IDENTIFICATION	663	EA	1
C-1	11	PADZZ	9905-01-098-7989	19200	10559697-4	PLATE	712	EA	1
C-1	12	PADDD	1240-01-147-2030	19200	8619763	EYEPIECE ASSEMBLY O		EA	1
C-1	13	PAFZZ	5305-00-724-3478	96906	MS51031-37	SETSCREW		EA	2
C-1	14	PADZZ	5340-00-685-0831	19200	8620013	DISK, SOLID, PLAIN		EA	1
C-1	15	PAFZZ	5305-00-059-3660	96906	MS51958-64	SCREW, MACHINE		EA	8
C-1	16	PAFZZ	5310-00-933-8120	96906	MS35338-138	WASHER,LOCK		EA	8
C-1	17	PAFZZ	5305-00-988-7603	96906	MS16995-27	SCREW, CAP, SOCKET HEAD		EA	6
C-1	18	PAFZZ	5310-00-933-8119	96906	MS35338-137	WASHER,LOCK		EA	6
C-1	19	PADZZ	5330-00-683-9571	96906	MS9021-136	PACKING,PREFORMED		EA	1
C-1	20	PADZZ	5315-00-806-5316	96906	MS9105-59	PIN, STRAIGHT		EA	3
C-1	21	XBDDD		19200	8574980	JOINT ASSEMBLY		EA	1
C-1	22	PADZZ	5330-00-683-9569	19200	8574991	PAKCING, PREFORMED		EA	1
C-1	23	PAFZZ	5305-00-057-0524	96906	MS51958-28	SCREW, MACHINE		EA	12
C-1	24	PAFZZ	5310-00-933-8119	96906	MS35338-137	WASHER,LOCK		EA	12
C-1	25	XBDZZ		19200	8574848	COVER		EA	1
C-1	26	PADZZ	5330-00-683-9588	19200	8574917	GASKET		EA	1
C-1	27	XBDZZ		19200	8574828	PLATE		EA	2
C-1	28	PADZZ	5970-00-682-8859	19200	8574646	INSULATOR,PLATE		EA	2
C-1	29	PAFZZ	5305-00-690-8286	19200	8574910	SETSCREW		EA	3
C-1	30	XBDZZ		19200	8574681	PACKING,PREFORMED		EA	1
C-1	31	PADZZ	5315-00-721-5130	96906	MS9105-87	PIN,STAIGHT, HEADLESS		EA	2

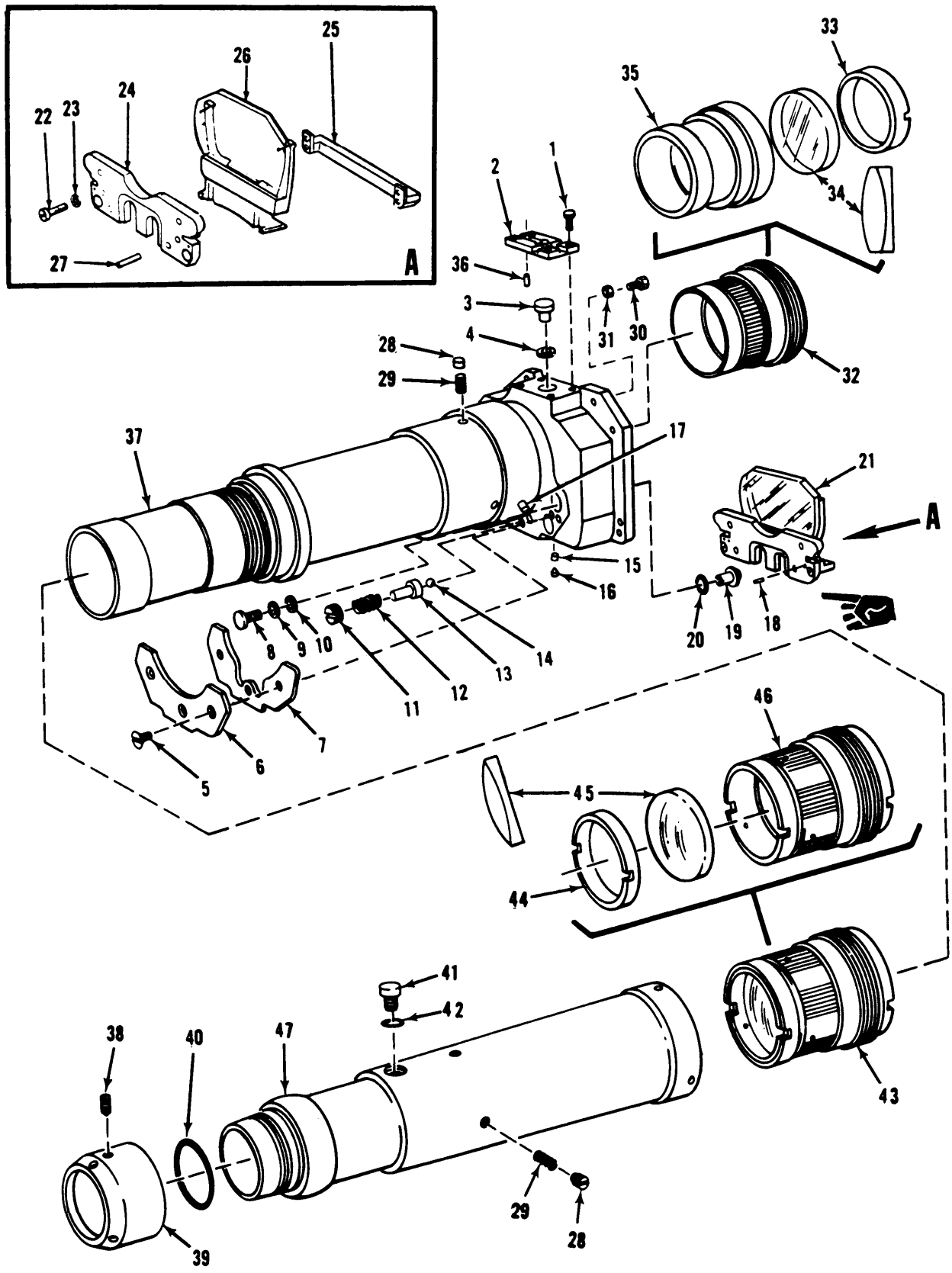


Figure C-2. **Articulated telescope, M105D 857400-1** and M105F 8574700-2 (partial view), Reticle assembly 8620422-3, Reticle assembly 8820422-5, cell assembly 8574772 and Cell assembly 8574773.

(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 ARTICULATED TELESCOPE, M105D			
						85747-1,M105F 8574700-2			
						(PARTIAL VIEW).			
						GROUP 0001 RETICLE ASSEMBLY 8620422-3			
						AND RETICLE ASSEMBLY 8620422-5.			
						GROUP 0002 CELL ASSEMBLY 8574772 AND			
						GROUP 003 CELL ASSEMBLY 85747773			
C-2	1	PAFZZ	5305-00-082-6768	96906	MS51960-32	SCREW, MACHINE		EA	4
C-2	2	PAFZZ	1240-00-675-0474	19200	8574972	ADAPTER		EA	1
C-2	3	PAFZZ	1240-00-675-0478	19200	8574985	WINDOW		EA	1
C-2	4	PAFZZ	5330-00-683-9574	19200	8574678	PACKING, PREFORMED		EA	1
C-2	5	PAFZZ	5305-00-071-1320	96906	MS51960-63	SCREW, MACHINE		EA	3
C-2	6	XBDZZ		19200	8574861	PLATE		EA	1
C-2	7	PADZZ	5330-00-675-0472	19200	8574641	GASKET		EA	1
C-2	8	PADZZ	5305-00-912-8120	96906	MS35276-230	SCREW,MACHINE		EA	4
C-2	9	PADZZ	5310-00-929-6395	96906	MS35338-136	WASHER,LOCK		EA	4
C-2	10	PADZZ	5310-00-880-5976	96906	MS15795-806	WASHER,FLAT		EA	4
C-2	11	PADZZ	5365-00-889-1829	19200	10516076	PLUG,MACHINE		EA	2
C-2	12	PADZZ	5360-00-088-6194	19200	10516043	SPRING,HELICAL		EA	2
C-2	13	PADZZ	1240-00-675-0479	19200	8574858	PLUNGER		EA	2
C-2	14	PADZZ	3110-00-965-8485	96906	MS19060-1012	BALL,BEARING		EA	2
C-2	15	PAFZZ	5305-00-057-2602	96906	MS51031-35	SETSCREW		EA	2
C-2	16	PAFZZ	5305-00-724-3454	96906	MS51038-49	SETSCREW		EA	2
C-2	17	XBDZZ		19200	7593617	PIN,STRAIGHT		EA	1
C-2	18	XBDZZ		96906	MS9105-57	PIN,STRAIGHT		EA	2
C-2	19	PADZZ	1240-00-495-6532	19200	10516039	ECCEBTRUC		EA	2
C-2	20	PADZZ	5330-00-180-9191	19200	8620812	PACKING,PREFORMED		EA	2
C-2	21	PADDD	1240-01-091-9620	19200	8620422-3	RETICLE ASSEMBLY	663	EA	1
C-2	21	PADDD	1240-01-091-1924	19200	8620422-5	RETICLE ASSEMBLY	712	EA	1
C-2	22	PADZZ	5305-00-057-0524	96906	MS51958-28	SCREW,MACHINE		EA	1
C-2	23	PADZZ	5310-00-929-6395	96906	MS35338-136	WASHER,LOCK		EA	2
C-2	24	XDDZZ		19200	8574851	PLATE		EA	1
C-2	25	XDDZZ		19200	10516041	SLIDE		EA	1
C-2	26	PADZZ	1240-00-973-2816	19200	8635365	RETICLE OPTICAL INS	663	EA	1
C-2	26	PADZZ	1240-00-971-5965	19200	10541751	RETICLE ASSEMBLY	712	EA	1
C-2	27	PADZZ	5315-00-702-9650	96906	MS16555-602	PIN,STRAIGHT, HEADLESS		EA	2
C-2	28	PADZZ	5340-01-054-1817	96906	MS35648-1	PLUG,EXPANSION		EA	7

(1) ILLUSTRATION (a) FIG NO	(b) ITEM NO	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION	(7) U/M	(8) QTY INC IN UNIT
						USABLE ON CODE		
						GROUP 00 ARTICULATED TELESCOPE,M105D		
						8574700-1,M105F 8574700-2		
						(PARTIAL VIEW),		
						GROUP 0001 RETICLE ASSEMBLY 8620422-3		
						GROUP 0001 RETICLE ASSEMBLY 8620422-3		
						AND RETICLE ASSEMBLY 8620422-5		
						GROUP 0002 CELL ASSEMBLY 85747772 AND		
						GROUP 0003 CELL ASSEMBLY 8574773		
						-CONTINUED-		
C-2	29	PADZZ	5305-00-675-0471	19200	8574919	PLUG,MACHINE	EA	7
C-2	30	PADZZ	1240-00-675-0473	19200	8574988	BUMPER	EA	2
C-2	31	PADZZ	5310-00-934-9752	96906	MS35650-364	NUT,PLAIN,HEXAGON	EA	2
C-2	32	XBDDD		19200	8574772	CELL ASSEMBLY	EA	1
C-2	33	XBDZZ		19200	8574874	RING, EXTERNALLY	EA	1
C-2	34	PADZZ	1240-00-683-9549	19200	8574718	LENS, OPTICAL	EA	1
C-2	35	XBDZZ		19200	8574873	CELL	EA	1
C-2	36	PADZZ	5315-00-682-1726	96906	MS16555-617	PIN,STRAIGHT	EA	1
C-2	37	XBDZZ		19200	8574968	TUBE	EA	1
C-2	38	PAFZZ	5305-00-127-5420	19200	10541765-2	SETSCREW	EA	2
C-2	39	PADZZ	1240-00-675-0488	19200	8574774	WINDOW ASSY	EA	1
C-2	40	PADZZ	5330-00-683-9571	19200	8574679	PACKING,PREFORMED	EA	1
C-2	41	PADZZ	5365-00-684-4401	19200	8574881	PLUG, MACHINE	EA	1
C-2	42	PADZZ	5330-00-683-9573	19200	8574642	GASKET	EA	1
C-2	43	XBDDD		19200	8574773	CELL ASSEMBLY	EA	1
C-2	44	XBDZZ		19200	8574877	RING	EA	1
C-2	45	PADZZ	1240-00-683-9558	19200	8574719	LENS, OPTICAL	EA	1
C-2	46	XBDZZ		19200	8574876	CELL	EA	1
C-2	47	XBDZZ		19200	8574875	TUBE	EA	1

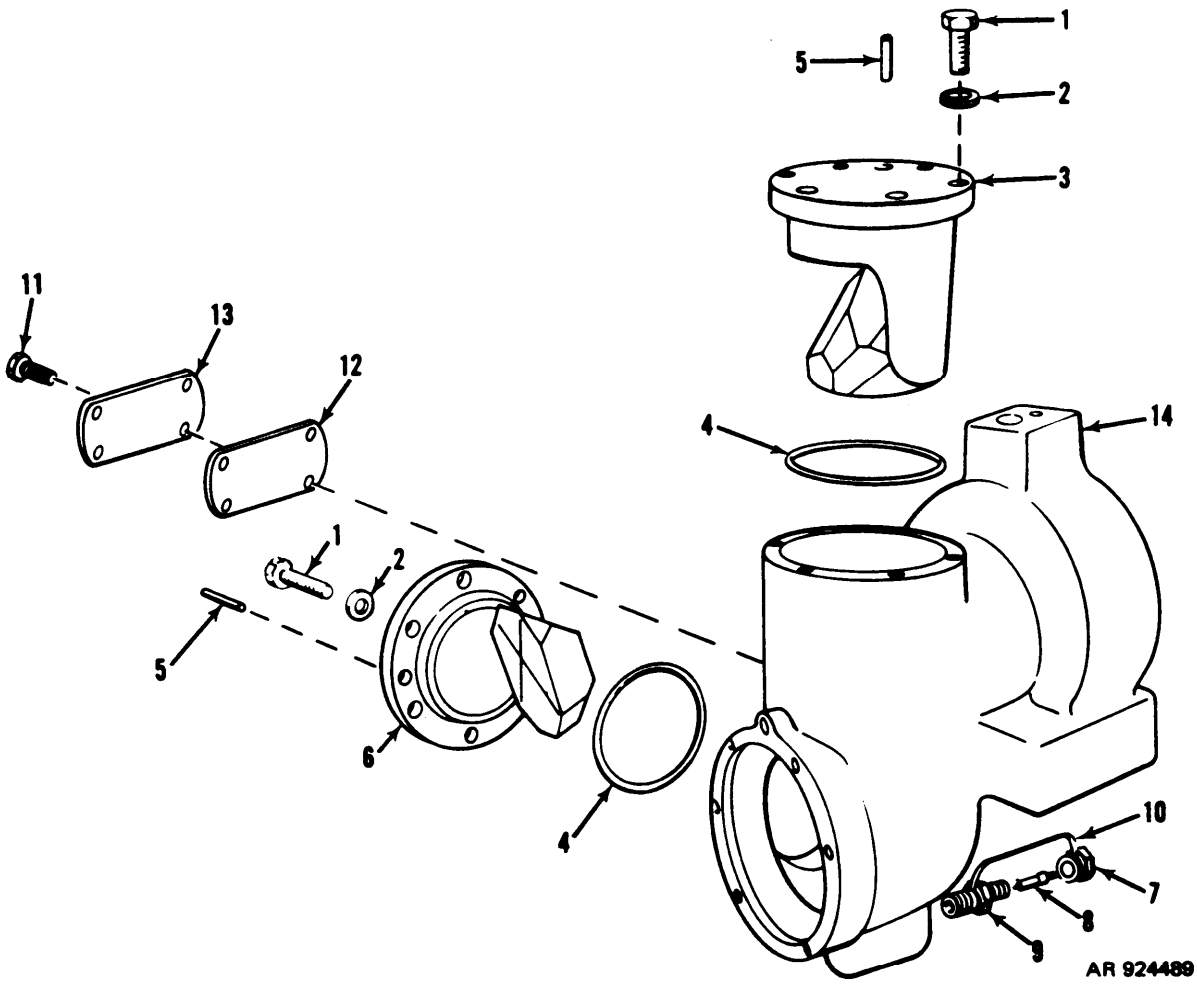


Figure C-3. Articulated telescope, M105D 8574700-1 and M105F 8574700-2 (partial view)

(1) ILLUSTRATION (a) FIG NO	(b) ITEM NO	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION	(7) U/M	(8) QTY INC IN UNIT
						USABLE ON CODE		
						GROUP 00 ARTICULATED TELESCOPE, M105D		
						8574700-1, M105F 8574700-2		
						(PARTIAL VIEW)		
C-3	1	PADZZ	5305-00-959-0379	96906	MS16995-10	SCREW,CAP,SOCKET HEAD	EA	12
C-3	2	PADZZ	5310-00-933-8118	96906	MS35338-135	WASHER,LOCK	EA	12
C-3	3	PADZZ	1240-00-654-6950	19200	8574744	PRISM ASSEMBLY	EA	1
C-3	4	PADZZ	5330-01-098-2194	19200	11747367	PACKING,PREFORMED	EA	2
C-3	5	PADZZ	5315-00-806-5316	96906	MS9105-59	PIN,STRAIGHT, HEADLESS	EA	2
C-3	6	PADZZ	1240-00-675-0485	19200	8574745	PRISM ASSEMBLY	EA	1
C-3	7	PADZZ	2640-00-507-9260	19200	8200055	CAP,PNEUMATIC VALUE	EA	1
C-3	8	PAFZZ	2640-00-060-3543	96906	MS51377-2	VALVE CORE	EA	1
C-3	9	PADZZ	2640-00-114-1096	96906	MS51607-1	VALVE STEM,PURGING	EA	1
C-3	10	PAFZZ	1240-00-464-4792	19200	10516567	STRAP,VALVE CAP	EA	1
C-3	11	PAFZZ	5305-00-774-9651	96906	MS51960-30	SCREW,MACHINE	EA	4
C-3	12	PADZZ	5970-00-682-8860	19200	8574653	INSULATOR,PLATE	EA	1
C-3	13	XBDZZ		19200	8574844	PLATE	EA	1
C-3	14	XBDZZ		19200	8574740	HOUSING	EA	1

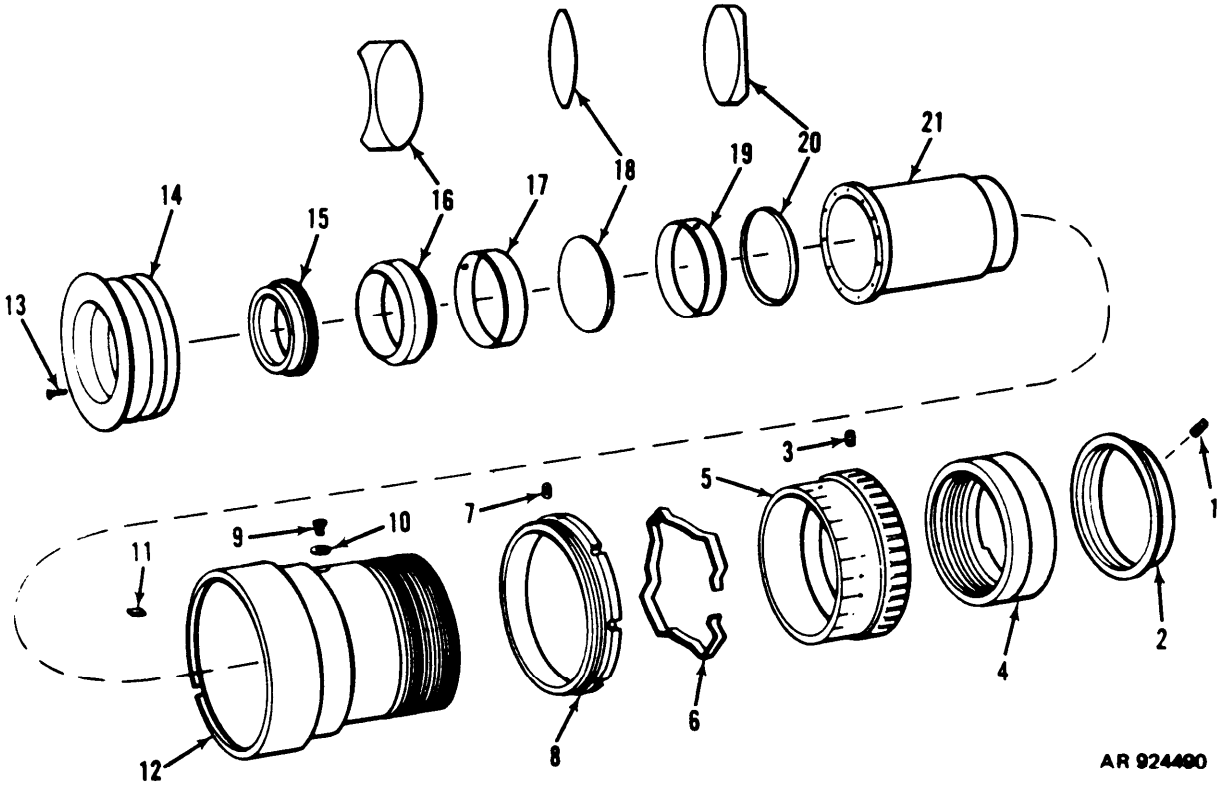


Figure C-4. Eyepiece assembly 8619763

(1) ILLUSTRATION (a) FIG NO	(b) ITEM NO	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION	(7) U/M	(8) QTY INC IN UNIT
						USABLE ON CODE		
						GROUP 0004 EYEPIECE ASSEMBLY 8619763		
C-4	1	PAFZZ	5305-00-051-1484	96906	MS51973-9	SETSCREW	EA	3
C-4	2	XBDZZ		19200	8574743	RING ASSY	EA	1
C-4	3	PAFZZ	5305-00-800-7261	96906	MS51021-9	SETSCREW	EA	3
C-4	4	XBDZZ	1240-00-682-8064	19200	8574785	RING,RETAINING	EA	1
C-4	5	XBDZZ	1240-00-610-7756	19200	8574787	SCALE,DIOPTER	EA	1
C-4	6	PADZZ	1240-00-184-9877	19200	8620523	SPRING, TELESCOPE	EA	1
C-4	7	PADZZ	5305-00-724-6779	96906	MS51965-10	SETSCREW	EA	2
C-4	8	PADZZ	5365-00-582-7206	19200	8574802	RING,EXTERNALLY THREADED	EA	1
C-4	9	PADZZ	5305-00-656-0000	19200	8574702	SCREW,MACHINE	EA	1
C-4	10	PADZZ	5310-00-058-3599	96906	MS35335-57	WASHER,LOCK	EA	1
C-4	11	XBDZZ		19200	8574812	KEY	EA	1
C-4	12	XBDZZ		19200	8574786	TUBE	EA	1
C-4	13	PADZZ	5305-00-701-5230	96906	MS51960-8	SCREW, MACHINE	EA	12
C-4	14	PADZZ	1240-00-611-3414	19200	8574733	BELLOWS ASSY	EA	A
C-4	15	XBDZZ		19200	8574792	RING	EA	1
C-4	16	PADZZ	1240-00-683-9551	19200	8574707	LENS, OPTICAL	EA	1
C-4	17	XBDZZ		19200	8574797	SPACER	EA	1
C-4	18	PADZZ	1240-00-683-9557	19200	8574706	LENS, OPTICAL	EA	1
C-4	19	XBDZZ		19200	8574810	SPACER	EA	1
C-4	20	PADZZ	1240-00-683-9552	19200	8574705	LENS, OPTICAL	EA	1
C-4	21	XBDZZ		19200	8574811	BARREL	EA	1

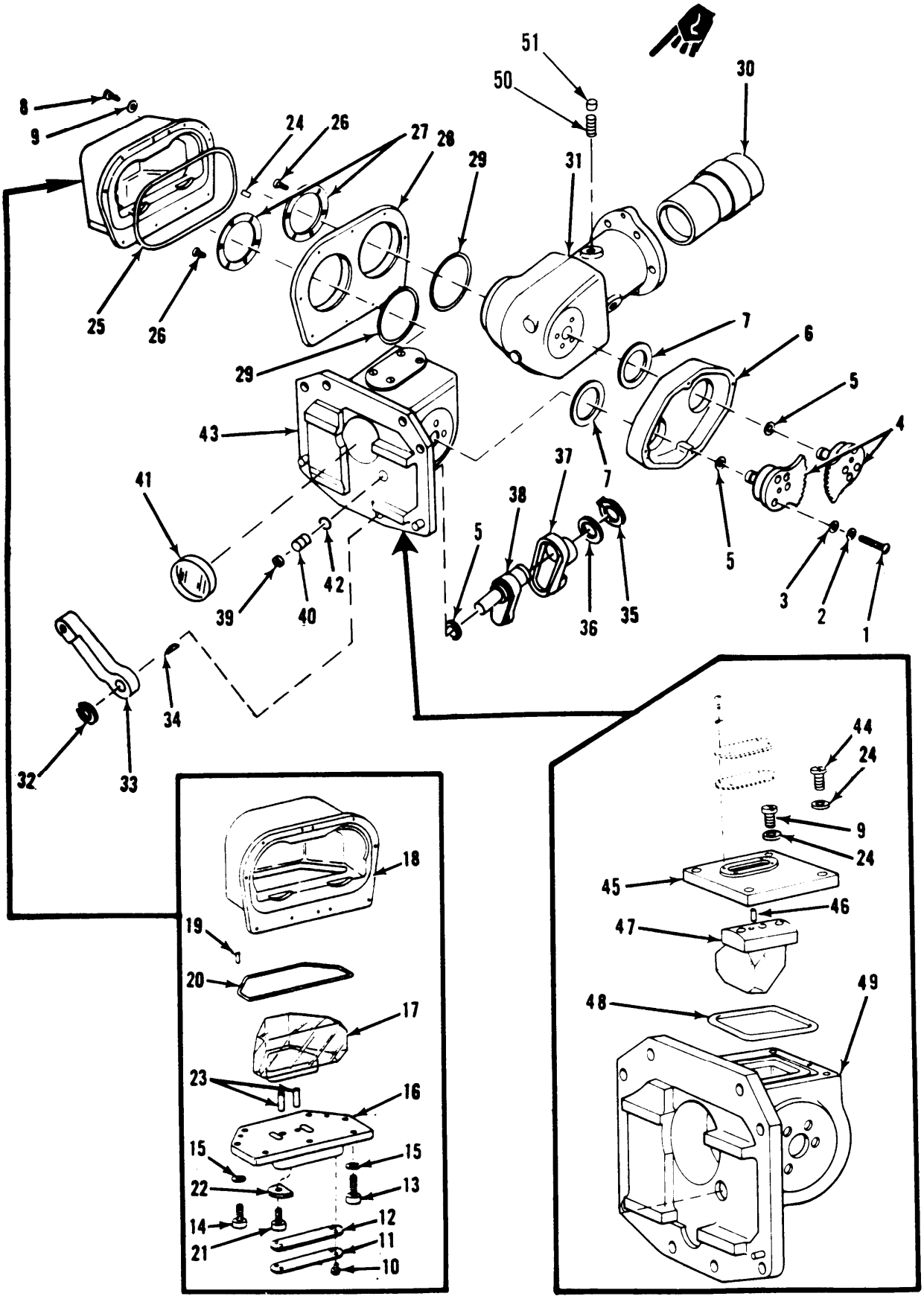


Figure C-5. Joint assembly 8574980

(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 0005 JOINT ASSEMBLY 8574980 AND		
						GROUP 000501 PRISM ASSEMBLY 8574981		
C-5	1	PADZZ	5305-00-054-6673	96906	MS51957-48	SCREW, MACHINE	EA	6
C-5	2	PADZZ	5310-00-933-8119	96906	MS35338-137	WASHER,LOCK	EA	6
C-5	3	PADZZ	5310-00-880-5978	96906	MS15795-807	WASHER,FLAT	EA	6
C-5	4	PADZZ	1240-00-675-0477	19200	8574847	GEAR SEGMENT	EA	2
C-5	5	PADZZ	5330-00-683-9586	96906	MS9021-011	PACKING,PREFORMED	EA	3
C-5	6	XBDZZ		19200	8574846	HOUSING	EA	1
C-5	7	XBDZZ		19200	8574849	SPACER	EA	2
C-5	8	PAFZZ	5305-00-057-0526	96906	MS51958-30	SCREW,MACHINE	EA	13
C-5	9	PAFZZ	5310-00-933-8119	96906	MS35338-137	WASHER,LOCK	HD	16
C-5	10	PADZZ	5305-00-774-9651	96906	MS51960-30	SCREW,MACHINE	EA	4
C-5	11	XDDZZ		19200	8574844	PLATE	EA	1
C-5	12	PADZZ	5970-00-682-8860	19200	8574653	INSULATOR,PLATE	EA	1
C-5	13	PADZZ	5305-00-057-0524	96906	MS51958-28	SCREW,MACHINE	EA	3
C-5	14	PADZZ	5305-00-057-0526	96906	MS51958-30	SCREW,MACHINE	EA	4
C-5	15	PADZZ	5310-00-929-6395	96906	MS35338-136	WASHER,LOCK	EA	7
C-5	16	XDDZZ		19200	8574842	COVER	EA	1
C-5	17	PADZZ	1240-00-675-0484	19200	8574754	PRISM ASSEMBLY	EA	1
C-5	18	XDDZZ		19200	8574840	HOUSING	EA	1
C-5	19	XDDZZ	5315-00-828-3234	96906	MS9105-56	PIN,STRAIGHT, HEADLESS	EA	2
C-5	20	PADZZ	5330-00-683-9575	19200	8574654	PACKING,PREFORMED	EA	1
C-5	21	PADZZ	5305-00-983-6651	96906	MS16998-27	SCREW,CAP,SOCKET HEAD	EA	2
C-5	22	PADZZ	5310-00-647-0894	19200	8574845	WASHER,FLAT	EA	2
C-5	23	XDDZZ	5315-00-682-1724	96906	MS9105-32	PIN,STRAIGHT, HEADLESS	EA	2
C-5	24	XBDZZ	5315-00-847-5677	96906	MS16555-626	PIN,STRAIGHT	EA	2
C-5	25	PADZZ	5330-00-683-9576	19200	8574652	PACKING, PREFORMED	EA	1
C-5	26	PADZZ	5305-00-728-2982	96906	MS51960-29	SCREW,MACHINE	EA	12
C-5	27	XBDZZ		19200	8574839	PLATE,RETAINING	EA	2
C-5	28	XBDZZ		19200	8574841	PLATE	EA	1
C-5	29	PADZZ	5330-00-683-9571	19200	8574679	PACKING,PREFORMED	EA	2
C-5	30	PADZZ	1240-01-098-2366	19200	8574746	CALL ASSEMBLY	EA	1
C-5	30	PADZZ	1240-01-098-2366	19200	8574746	CALL ASSEMBLY	EA	1
C-5	31	PADZZ	1240-01-089-9603	19200	8574982	HOUSING ASSEMBLY	EA	1
C-5	32	PADZZ	5365-00-803-7313	96906	MS16624-1031	RING, RETAINING	EA	1

(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
C-5	33	PADZZ	1240-00-675-0475	19200	8574762	LEVER		EA	1
C-5	34	PADZZ	5315-00-616-5519	96906	MS35756-1	KEY,WOODRUFF		EA	1
C-5	35	PADZZ	5365-00-811-4319	96906	MS16628-2050	RING, RETAINING		EA	1
C-5	36	PADZZ	5310-00-655-9984	19200	8574763	WASHER, FLAT		EA	1
C-5	37	XBDZZ		19200	8574891	LEVER		EA	1
C-5	38	XBDZZ		19200	8574758	SHAFT		EA	1
C-5	39	PADZZ		96906	MS35337-80	WASHER,LOCK		EA	1
C-5	40	PADZZ	1240-01-111-5850	19200	8574859	FILTER, LIGHT		EA	1
C-5	41	PADZZ	1240-00-683-9127	19200	8574727	WINDOW,OPTICAL		EA	1
C-5	42	PADZZ	5365-00-804-9735	96906	MS16625-1037	RING,RETAINING		EA	1
C-5	43	PADZZ	1240-01-089-9604	19200	8574981	PRISM ASSEMLBY		EA	1
C-5	44	PAFZZ	5305-00-057-0524	96906	MS51958-28	SCREW, MACHINE		EA	3
C-5	45	XBDZZ		19200	8574971	COVER		EA	1
C-5	46	PADZZ	5315-00-753-8386	96906	MS16555-641	PIN, STRAIGHT, HEADLESS		EA	1
C-5	47	PADZZ	1240-00-675-0484	19200	8574754	PRISM ASSEMBLY		EA	1
C-5	48	PADZZ	5330-00-683-9575	19200	8574654	PACKING, PREFORMED		EA	1
C-5	49	XBDZZ		19200	8574970	HOUSING		EA	1
C-5	50	PADZZ	5305-00-675-0471	19200	8574919	PLUG, MACHINE		EA	3
C-5	51	PADZZ	5340-01-054-1817	96906	MS35648-1	PLUG, EXPANSION		EA	3

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.
5305-00-051-4484	C-4	1	5330-00-683-9571	C-5	29
5305-00-054-5635	C-1	9	5330-00-683-9573	C-2	42
5305-00-054-6673	C-5	1	5330-00-683-9574	C-2	4
5305-00-057-0524	C-1	23	5330-00-683-9575	C-5	20
5305-00-057-0524	C-2	22	5330-00-683-9575	C-5	48
5305-00-057-0524	C-5	13	5330-00-683-9576	C-5	25
5305-00-057-0524	C-5	44	5330-00-683-9586	C-5	5
5305-00-057-0526	C-5	8	5330-00-683-9588	C-1	26
5305-00-057-0526	C-5	14	5365-00-684-4401	C-2	41
5305-00-057-2602	C-2	15	5340-00-685-0831	C-1	14
5310-00-058-3599	C-4	10	5305-00-690-8286	C-1	29
5305-00-059-3660	C-1	15	5305-00-701-5230	C-4	13
5305-00-059-3675	C-1	1	5315-00-702-9650	C-2	27
2640-00-060-3543	C-3	8	5315-00-721-4995	C-2	18
5305-00-071-1320	C-2	5	5315-00-721-5130	C-1	31
5305-00-082-6768	C-2	1	5305-00-724-3454	C-2	16
5360-00-088-6194	C-2	12	5305-00-724-3478	C-1	13
2640-00-114-1096	C-3	9	5305-00-724-6779	C-4	7
5305-00-127-5420	C-2	38	5305-00-728-2982	C-5	26
5330-00-180-9191	C-2	20	5315-00-753-8386	C-5	46
1240-00-184-9877	C-4	6	5305-00-774-9651	C-3	11
5315-00-460-4568	C-2	17	5305-00-774-9651	C-5	10
1240-00-464-4792	C-3	10	5305-00-800-7261	C-4	3
1240-00-495-6532	C-2	19	5365-00-803-7313	C-5	32
2640-00-507-9260	C-3	7	5365-00-804-9735	C-5	42
5310-00-543-4652	C-1	10	5315-00-806-5316	C-1	20
5365-00-582-7206	C-4	8	5315-00-806-5316	C-3	5
1240-00-610-7755	C-4	2	5365-00-811-4319	C-5	35
1240-00-610-7756	C-4	5	5315-00-828-3234	C-5	19
1240-00-610-7758	C-1	3	5315-00-847-5677	C-5	24
1240-00-611-3414	C-4	14	5310-00-830-5976	C-2	10
5315-00-616-5519	C-5	34	5310-00-830-5978	C-5	3
5310-00-647-0894	C-5	22	5365-00-839-1829	C-2	11
1240-00-654-6950	C-3	3	5305-00-912-8120	C-2	8
5310-00-655-9984	C-5	36	5310-00-929-6395	C-2	9
5305-00-656-0000	C-4	9	5310-00-929-6395	C-2	23
5305-00-675-0471	C-2	29	5310-00-929-6395	C-5	15
5305-00-675-0471	C-5	50	5310-00-933-8118	C-3	2
5330-00-675-0472	C-2	7	5310-00-933-8119	C-1	18
1240-00-675-0473	C-2	30	5310-00-933-8119	C-1	24
1240-00-675-0474	C-2	2	5310-00-933-8119	C-5	2
1240-00-675-0475	C-5	33	5310-00-933-8119	C-5	9
1240-00-675-0477	C-5	4	5310-00-933-8120	C-1	16
1240-00-675-0478	C-2	3	5310-00-933-8121	C-1	2
1240-00-675-0479	C-2	13	5310-00-934-9752	C-2	31
1240-00-675-0484	C-5	17	5305-00-959-0379	C-3	1
1240-00-675-0484	C-5	47	3110-00-965-8485	C-2	14
1240-00-675-0485	C-3	6	1240-00-971-5965	C-2	26
1240-00-675-0488	C-2	39	1240-00-973-2816	C-2	26
5315-00-682-1724	C-5	23	5305-00-983-6651	C-5	21
5315-00-682-1726	C-1	7	5305-00-988-7603	C-1	17
5315-00-682-1726	C-2	36	5305-00-988-7846	C-1	4
1240-00-682-8064	C-4	4	1240-01-019-3397	C-1	8
5970-00-682-8859	C-1	28	5340-01-054-1817	C-2	28
5970-00-682-8860	C-3	12	5340-01-054-1817	C-5	51
5970-00-682-8860	C-5	12	5355-01-061-4490	C-1	5
1240-00-683-9127	C-5	41	1240-01-069-4553	C-1	6
1240-00-683-9549	C-2	34	1240-01-089-9603	C-5	31
1240-00-683-9551	C-4	16	1240-01-089-9604	C-5	43
1240-00-683-9552	C-4	20	1240-01-091-1924	C-2	21
1240-00-683-9557	C-4	18	1240-01-091-9620	C-2	21
1240-00-683-9561	C-5	27	9905-01-098-2214	C-1	11
5330-00-683-9568	C-1	30	1240-01-098-2366	C-5	30
5330-00-683-9569	C-1	22	9905-01-098-7989	C-1	11
5330-00-683-9571	C-1	19	1240-01-111-5850	C-5	40
5330-00-683-9571	C-2	40			

FSCM	PART NUMBER	FIGURE NO.	ITEM NO.	FSCM	PART NUMBER	FIGURE NO.	ITEM NO.
96906	MS15795-806	C-2	10	96906	MS16628-2050	C-5	35
96906	MS15795-807	C-5	3	6906	MS16995-10	C-3	1
96906	MS16555-602	C-2	27	96906	MS16995-27	C-1	17
96906	MS16555-617	C-1	7	96906	MS16995-83	C-1	4
96906	MS16555-617	C-2	36	96906	MS16998-27	C-5	21
96906	MS16555-626	C-5	24	96906	MS19060-1012	C-2	14
96906	MS16555-641	C-5	46	96906	MS35276-230	C-2	8
96906	MS16624-1031	C-5	32	96906	MS35333-69	C-1	10
96906	MS16625-1037	C-5	42	96906	MS35335 57	C-4	10

NATIONAL STOCK NUMBER AND PART NUMBER INDEX

FSCM	PART NUMBER	FIGURE NO.	ITEM NO.	FSCM	PART NUMBER	FIGURE NO.	ITEM NO.
96906	MS35337-80	C-5	39	19200	8574705	C-4	20
96906	MS35338-135	C-3	2	19200	8574706	C-4	18
96906	MS35338-136	C-2	9	19200	8574707	C-4	16
96906	MS35338-136	C-2	23	19200	8574718	C-2	34
96906	MS35338-136	C-5	15	19200	8574719	C-2	45
96906	MS35338-137	C-1	18	19200	8574727	C-5	41
96906	MS35338-137	C-1	24	19200	8574733	C-4	14
96906	MS35338-137	C-5	2	19200	8574740	C-3	14
96906	MS35338-137	C-5	9	19200	8574743	C-4	2
96906	MS35338-138	C-1	16	1920	8574744	C-3	3
96906	MS35338-139	C-1	2	19200	8574745	C-3	6
96906	MS35648-1	C-2	28	19200	8574746	C-5	30
96906	MS35650-364	C-2	31	19200	8574754	C-5	17
96906	MS35756-1	C-5	34	19200	8574754	C-5	47
96906	MS51021-9	C-4	3	19200	8574758	C-5	38
96906	MS51031-35	C-2	16	19200	8574762	C-5	33
96906	MS51031-37	C-1	13	19200	8574763	C-5	36
96906	MS51038-49	C-2	15	19200	8574772	C-2	32
96906	MS51377-2	C-3	8	19200	8574773	C-2	43
96906	MS51607-1	C-3	9	19200	8574774	C-2	39
96906	MS51957-1	C-1	9	19200	8574785	C-4	4
96906	MS51957-48	C-5	1	19200	8574786	C-4	12
96906	MS51958-28	C-1	23	19200	8574787	C-4	5
96906	MS51958-28	C-2	22	19200	8574792	C-4	15
96906	MS51958-28	C-5	1	19200	8574797	C-4	17
96906	MS51958-28	C-5	44	19200	8574802	C-4	8
96906	MS51958-30	C-5	8	19200	8574810	C-4	19
96906	MS51958-30	C-5	14	19200	8574811	C-4	21
96906	MS51958-64	C-1	15	19200	8574812	C-4	11
96906	MS51958-79	C-1	1	19200	8574828	C-1	27
96906	MS51960-29	C-5	26	19200	8574831	C-1	3
96906	MS51960-30	C-3	11	19200	8574839	C-5	27
96906	MS51960-30	C-5	10	19200	8574840	C-5	18
96906	MS51960-32	C-2	1	19200	8574841	C-5	28
96906	MS51960-63	C-2	5	19200	8574842	C-5	16
96906	MS51960-8	C-4	13	19200	8574844	C-3	13
96906	MS51965-10	C-4	7	19200	8574844	C-5	11
96906	MS51973-9	C-4	1	19200	8574845	C-5	22
96906	MS9105-32	C-5	23	19200	8574846	C-5	6
96906	MS9105-56	C-5	19	19200	8574847	C-5	4
96906	MS9105-57	C-2	18	19200	8574848	C-1	25
96906	MS9105-59	C-1	20	19200	8574849	C-5	7
96906	MS9105-59	C-3	5	19200	8574851	C-2	24
96906	MS9105-87	C-1	31	19200	8574858	C-2	13
19200	10516039	C-2	19	19200	8574859	C-5	40
19200	10516041	C-2	25	19200	8574861	C-2	6
19200	10516043	C-2	12	19200	8574873	C-2	35
19200	10516076	C-2	11	19200	8574874	C-2	33
19200	10516567	C-3	10	19200	8574875	C-2	47
19200	10541751	C-2	26	19200	8574876	C-2	46
19200	10541765-2	C-2	38	19200	8574877	C-2	44
19200	10559697-3	C-1	11	19200	8574881	C-2	41
19200	10559697-4	C-1	11	19200	8574891	C-5	37
19200	11727440	C-1	5	19200	8574910	C-1	29
19200	11747329	C-1	6	19200	8574917	C-1	26
19200	11747342	C-1	8	19200	8574919	C-2	29
19200	11747367	C-3	4	19200	8574968	C-2	37
19200	7593617	C-2	17	19200	8574970	C-5	49
19200	8200055	C-3	7	19200	8574971	C-5	45
19200	8574641	C-2	1	19200	8574972	C-2	2
19200	8574642	C-2	42	19200	8574980	C-1	21
19200	8574646	C-1	28	19200	8574981	C-5	43
19200	8574652	C-5	25	1920	8574982	C-5	31
19200	8574653	C-3	12	19200	8574985	C-2	3
19200	8574653	C-2	12	19200	8574988	C-2	30
19200	8574654	C-5	20	19200	8574991	C-1	22
19200	8574654	C-2	48	19200	8619763	C-1	12
19200	8574676	C-5	5	19200	8620013	C-1	14
19200	8574678	C-2	4	19200	8620422-3	C-2	21
19200	8574679	C-1	19	19200	8620422-5	C-2	21
19200	8574679	C-2	40	19200	8620523	C-4	6
19200	8574679	C-5	29	19200	8620812	C-2	20
19200	8574681	C-1	30	19200	8635365	C-2	26
19200	8574702	C-4	9				

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

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400		183	
512		191	

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

Change illustration Reason: Tube end shown assembled on wrong side of lever cam.

Figure 191, item 3 has the wrong NSN. Supply rejects orders for this item. The NSN shown here is not listed in the AMDF or the MCRL.

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John Smith

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THE METRIC SYSTEM AND EQUIVALENTS

LINEAR MEASURE

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

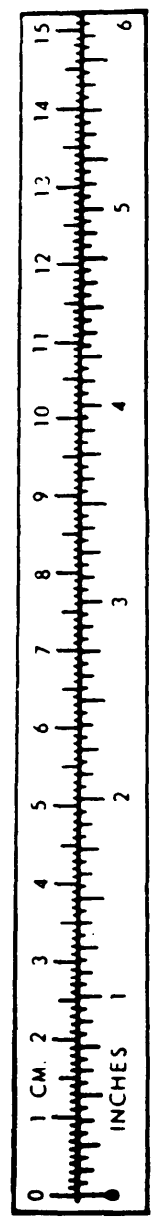
TEMPERATURE

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



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