DEPARTMENT OF THE ARMY TECHNICAL MANUAL

DS, GS, AND DEPOT MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOL LISTS FOR

PERISCOPE, TANK: XM47 6650-788-5464)

This copy is a reprint which includes current pages from Changes 1 through 3.

HEADQUARTERS, DEPARTMENT OF THE ARMY

1966

CHANGE
No. 3

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., *7 August 1972*

Direct Support, General Support, and Depot Maintenance Manual Including Repair Parts and Special Tools List
PERISCOPE, TANK: M47
(6650-788-5464)

TM 9-6650-221-35, 21 April 1966, is changed as follows:

1. The new or changed material in this change is indicated by a vertical bar opposite the appendix title (Appendix B).

2. New or revised illustrations are indicated by a vertical bar adjacent to the identification number.

3. Remove old pages and insert new pages as indicated below:

Remove page	*Insert page*
B-1 through B-8	B-1 through B-37

4. File this change sheet in front of the manual for reference purposes.

By Order of the Secretary of the Army:

BRUCE PALMER, JR.
General, United States Army
Acting Chief of Staff

Official:

VERNE L. BOWERS
Major General, United States Army
The Adjutant General

Distribution:

To be distributed in accordance with DA Form 12-41 (qty rqr block No. 76) Direct and General Support Maintenance Requirements for Periscope.

CHANGE
No. 2

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., *3 January 1972*

Direct Support, General Support, and Depot Maintenance Manual Including Repair Parts and Special Tools List for PERISCOPE, TANK: M47 (6650-788-5464)

TM 9-6650-221-35, 21 April 1966, is changed as follows:

1. Change XM551 Vehicle to read "M551 Vehicle" throughout the manual.

2. New or changed material is indicated by a vertical bar in the margin of the page. Revised illustrations are indicated by a letter adjacent to the identification number.

3. Remove old pages and insert new pages as indicated below.

Remove pages	*Insert pages*
6-1, 6-2	6-1, 6-2
6-5 through 6-8	6-5 through 6-8
6-13 through 6-16	6-13 through 6-16
6-19, 6-20	6-19, 6-20
B-5 through B-8	B-5 through B-8

4. File this change sheet in the front of the publication for reference purposes.

By Order of the Secretary of the Army:

W.C. WESTMORELAND
General, United States Army,
Chief of Staff

Official:

VERNE L. BOWERS,
Major General, United States Army
The Adjutant General

Distribution:

To be distributed in accordance with DA Form 12-41 (qty rqr block no. 76) Direct and General Support Maintenance requirements for Periscope.

CHANGE
No. 1

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., *28 September 1971*

Direct Support, General Support, and Depot Maintenance Manual
Including Repair Parts and Special Tools List
For
PERISCOPE, TANK: M47
(6650-788-5464)

TM 9-6650-221-35, 21 April 1966, is changed as follows:

1. Change the title to read as shown.
2. Change Periscope XM47 to read, "Periscope M47" throughout the manual.
3. Remove old pages and insert new pages as indicated below.
4. New or changed material is indicated by a vertical bar in the margin of the page.
5. Added or revised illustrations are indicated by a letter adjacent to the WE number.

Remove pages	*Insert pages*
1-1 through 1-5	1-1 through 1-5
4-1	4-1
5-1 through 5-4	5-1 through 5-4
B-3, B-4	B-3. B-4
B-7, B-8	B-7. B-8

6. File this change sheet in front of the publication for reference purposes.

By Order of the Secretary of the Army:

W.C. WESTMORELAND
General, United States Army,
Chief of Staff

Official:
VERNE L. BOWERS,
Major General, United States Army
The Adjutant General

Distribution:
To be distributed in accordance with DA Form 12-41 (qty rqr Block No. 76). Direct/General Support requirements for Periscope.

TECHNICAL MANUAL

No. 9-6650-221-35

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 20313, *21 April 1966*

PERISCOPE, TANK: XM47

(6650-906-7944)

			Paragraph	Page
CHAPTER	1.	INTRODUCTION		
Section	I.	General	1-1	1-1
	II.	Description and data	1-5	1-5
CHAPTER	2.	TOOLS AND EQUIPMENT	2-1	2-1
CHAPTER	3.	INSPECTION		
Section	I.	General	3-1	3-1
	II.	Inspection in the using position	3-3	3-1
	III.	Shop inspection	3-8	3-2
CHAPTER	4.	TROUBLESHOOTING		
Section	I.	General	4-1	4-1
	II.	Troubleshooting procedures	4-3	4-1
CHAPTER	5.	REPAIR		
Section	I.	General	5-1	5-1
	II	Repair	5-6	5-1
CHAPTER	6	EQUIPMENT ISSUED WITH TANK PERISCOPE XM47		
Section	I.	Description	6-1	6-1
	II.	Repair of mount assembly 6650-906-7944	6-3	6-5
	III	Repair of washer, pump, and reservoir assembly 8589793	6-6	6-7
	IV	Repair of wiper assembly 650-906-7943	6-10	6-10
CHAPTER	7.	PROCESSING AND PACKAGING	7-1	7-1
APPENDIX	I.	REFERENCES	A-1	
	II.	REPAIR PARTS AND SPECIAL TOOL LISTS	B-1	
INDEX			I-1	

CHAPTER 1
INTRODUCTION

Section I. GENERAL

1-1. Scope

a. This publication contains instructions for the repair of periscope, tank M47, 6650-788-5464, and associated equipment, by direct support (DS), general support (GS), and depot shops.

b. These instructions are used in conjunction with and are supplementary to those in the operator's and organizational maintenance manual for armored reconnaissance-airborne assault vehicle, M551. Instructions for operation, lubrication, and operator's maintenance (including installation and removal procedures, as well as tests and adjustments after installation) are contained in TM 92350-230-12. It may be necessary to refer to this manual for complete procedures.

1-2. Comments

Report errors, omissions, and recommendations directly to the Commanding Officer, Frankford, Arsenal, ATTN: AMSWE-MAF W3100, Philadelphia, Pa. 19137 on DA Form 2028.

1-3. Maintenance Allocation and Parts

The maintenance allocation chart in TM 9-2350230-12 and repair parts and tools listed in appendix II allocates maintenance responsibilities.

1-4. Forms, Records, and Reports

a. Authorized Forms. The forms are listed in DA Pamphlet 310-2 and TM 38-750.

b. Report of Accidents. The necessary reports are prescribed in AR 385-40.

c. Equipment Improvement Recommendations (EIR). Use the Equipment Improvement Recommendation section of DA Form 2407.

Section II. DESCRIPTION AND DATA

1-5. Description

a. General. Periscope M47 (figs. 1-1 and 1-2) is a unity-power daylight periscope that provides a 50-degree horizontal and 14-degree vertical field-of-view. Periscope M47 is used in conjunction with the M551 Vehicle and consists of head assembly 6650-9067941 and body assembly 10513620. A functional description and operating instruction for periscope are provided in TM 92350-230-12.

b. Optical Scheme. Two prisms and an optical instrument window (fig. 1-3) comprise the optical components of periscope XM47. Prism 8599693 is located in head assembly 6650-906-7941 and deflects a forward line of sight through optical instrument window 6650-902-9741 of body assembly 10613620 to prism 8599694. Prism 8599694 displays the field-of-view to the operator.

c. Head Assembly 6650-906-7941.

(1) Head assembly 6650-906-7941 contains prism 8599693 (fig. 1-2) which is mounted in the head and sealed against water penetration. The bottom the head is open but is provided with a gasket for sealing when joined with body assembly 10613610.

(2) Two mounting holes (fig. 1-2) are provided on the head for engaging the plungers of mount assembly 6650-906-7944. Mount assembly 6650906-7944 is required for assembling head assembly 6650-906-7941 to body assembly 10513620.

d. Body Assembly 10513620.

(1) Body assembly 10513620 is a sealed unit, filled with nitrogen gas, that receives the reflected line-of-sight from the head assembly 6650-9067941. Optical instrument window 6650-902-9741 (fig. 1-1) is enclosed in a sealed frame and is mounted on the top of the body.

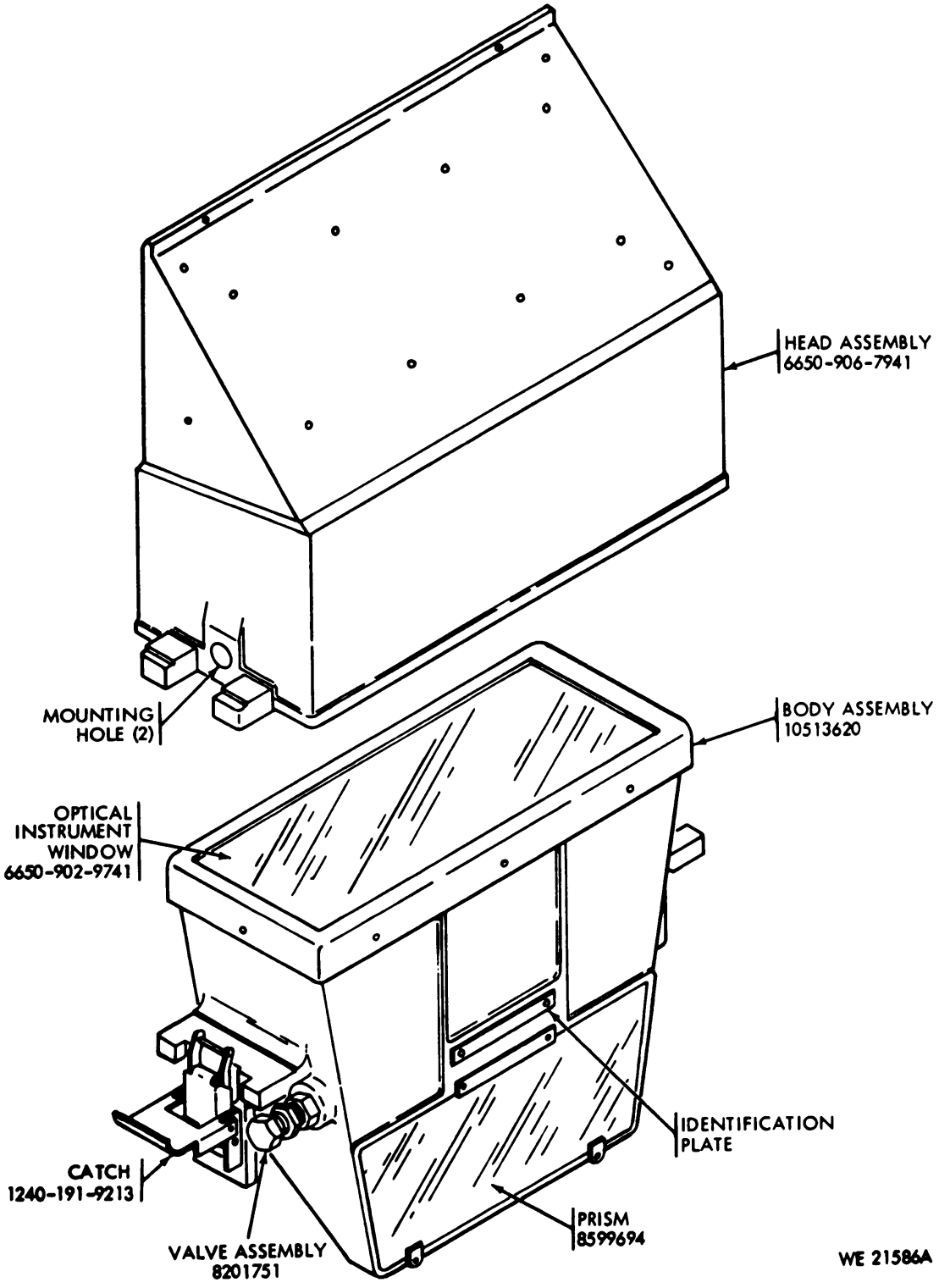


Figure 1-1. Periscope, tank, M47, 6650-788-5464.

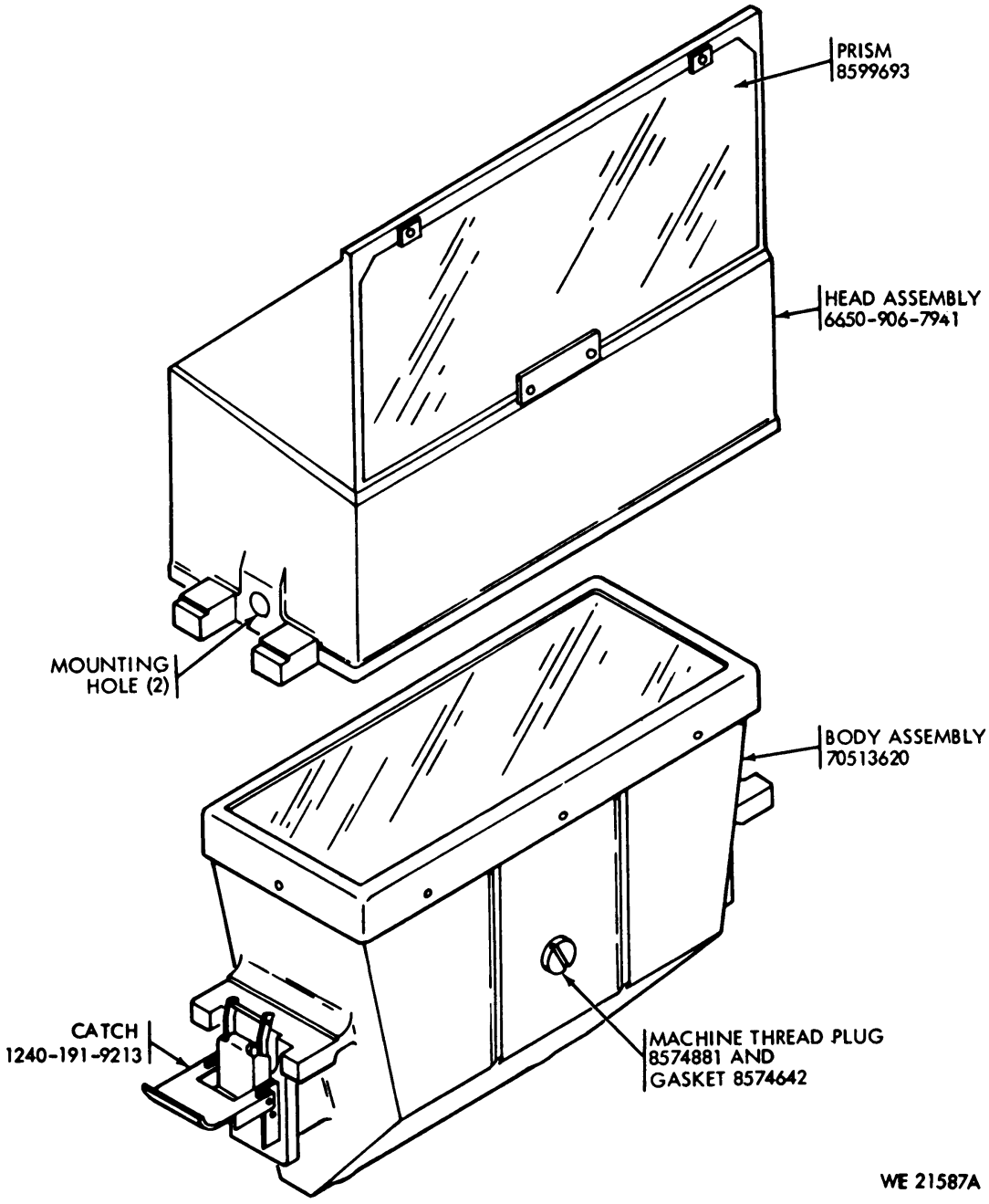


Figure 1-2. Periscope, tank, M47, 6650-788-5464.

Prism 8599694 is located at the bottom of the body and is also sealed.

(2) Valve assembly 8201751 (fig. 1-1), located on the side of the body, is used for purging and charging the body with nitrogen gas. Machine thread plug 4730-684-4401 and gasket 533083 9573 (fig. 1-2) are located on the rear of the body and are removed for purging operations.

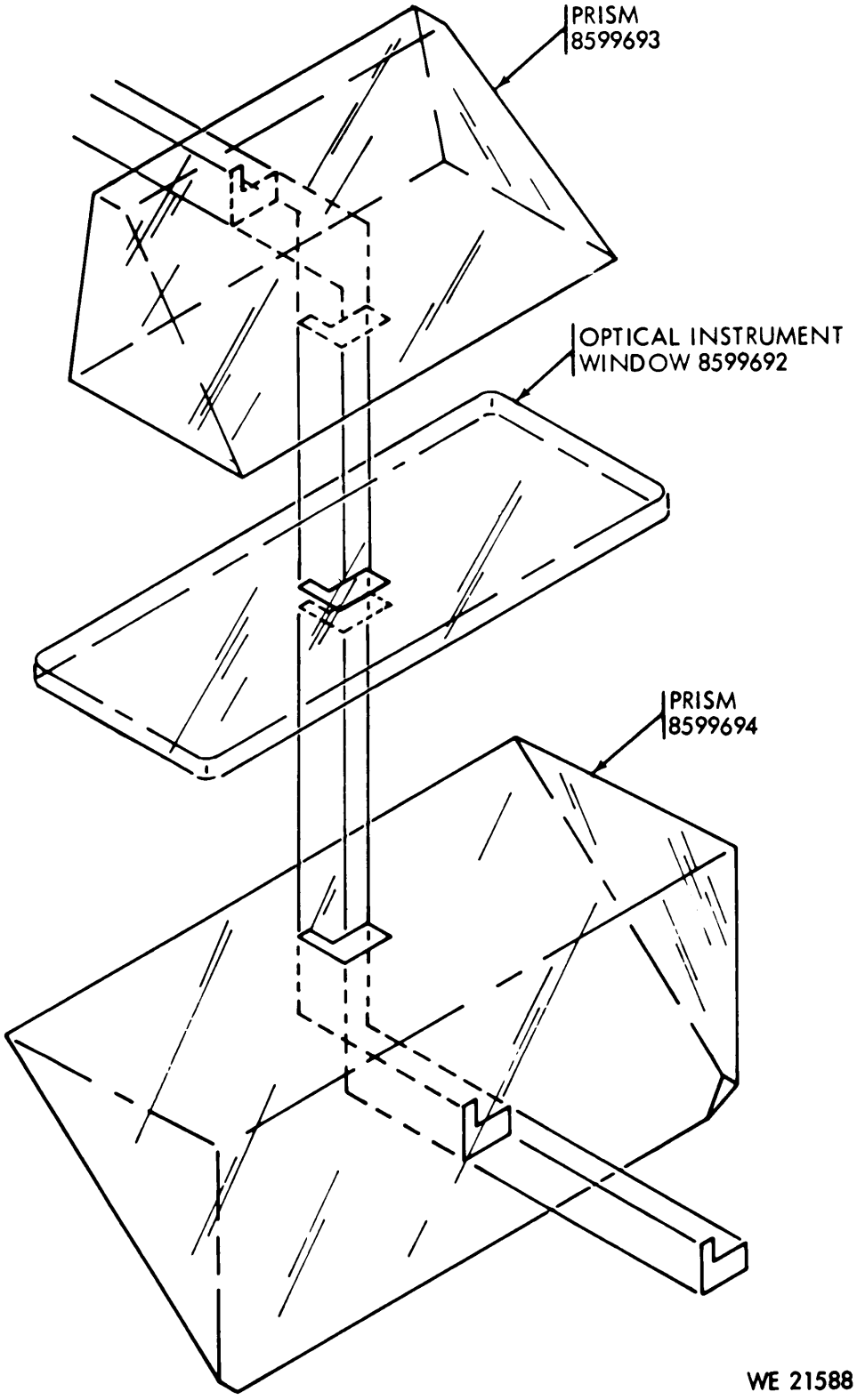


Figure 1-3. Periscope M47 - optical diagram.

(3) Two catches (fig. 1-1 and 1-2), engage corresponding strikes on mount assembly 6650-9067944 when mounting body assembly 10513620. The identification plate (fig. 1-2) for Periscope M47 is mounted on body assembly 10513620 and contains the serial number of the unit.

1-6. Data

a. Optical Characteristics.

Power	1.00X
Field-of-view	50° horizontal 14° vertical

b. Weight.

Head assembly	5.5 lb
Body assembly	4.25 lb

c. Size

Width	10.125 in.
Overall height	9.625 in.
Maximum depth	3.625 in.

CHAPTER 2

TOOLS AND EQUIPMENT

2-1. Common Tools and Equipment

Standard and commonly used tools and equipment having general application to this materiel are authorized for issue by TA and TOE.

2-2. Special Tools and Equipment

Table 2-1 lists the special tools and equipment which are necessary to perform the operations described in this manual. Special tool sets of a general nature are authorized by TA and TOE. Special tools peculiar to this equipment are authorized in appendix II.

Table 2-1. Special Tools and Equipment

Nomenclature	Federal stock no.	Part no.	References		Use
			Fig.	Para	
ADAPTER, NITROGEN FILLING:	4931-507-5453	7680682	5-3	5-11	Connects regulator 1240-558-0922 to nitrogen tank.
HOSE, ASSEMBLY:	4931-508-5546	8572413	5-3	5-11	Used with test gage assembly 4931-546-9773
HOSE ASSEMBLY, RUBBER:	49-561-0713	8572414	5-3	5-11	Connects regulator 1240-558-0922 to periscope XM47.
REGULATOR, HELIUM PRESSURE:	1240-558-0922	5580922	5-3	5-11	Used to control the flow of nitrogen during purging and charging operations.
SEALING COMPOUND GUN, HYDRAULIC: INJECTION	4931-508-5428	6721501			Used for injecting non-curing sealing compound Type I, class I, MIL-S-11030
TANK, NITROGEN:	6830-264-9086	----------	5-3	5-11	Container with dry nitrogen gas used in purging and charging operations.
TEST, GAGE	4931-546-9773	8572412	5-3	5-11	Used with hose assembly 4931-508-5546 to check internal pressure during purging and charging operations.

CHAPTER 3

INSPECTION

Section I. GENERAL

3-1. Scope

This chapter sets forth inspection of periscope XM47 in the using position and in maintenance shops.

3-2. Purpose

Inspection is performed primarily, (1) to determine completeness, (2) to determine the nature of unserviceability,. (3) to determine the work, repair parts, and supplies required to return the materiel to serviceability, (4) to ensure that work in process is being performed properly, and (5) to ensure that completed work complies fully with serviceability standards.

Section II. INSPECTION IN THE USING POSITION

3-3. General

In general, periscope XM47 will be considered serviceable if it is complete and all deficiencies have been corrected ensuring operation in accordance with serviceability standards.

3-4. Using Position

Inspection in the using position refers to the inspection performed by maintenance personnel when periscope is mounted in position on the XM551 vehicle. Inspection of periscope removed from the end item is set forth in paragraphs 3-8 through 3-11.

3-5. Modification Work Orders (MWO)

All applicable modification work orders will be applied. DA Pamphlet 310-4 contains the MWO index and equipment records DA Form 2408-5 or DA Form 2409 list MWO's applied.

3-6. General Inspection

a. Note general appearance as an indication of the condition of the materiel and the type of treatment it has received.

b. Check exterior of materiel and accessible parts for dented surfaces, bent or broken parts, missing parts, moisture or corrosion, and other evidence of damage or misuse which might indicate a need for repair.

c. Inspect all sealed portions of the materiel to determine whether sealing is complete.

d. Inspect identification plate for legibility.

e. Inspect for bare spots or damaged' finish which expose metal surfaces and lead to corrosion.

f. The two catches on the body assembly must operate smoothly without binding or rough motion and must properly engage the strikes on the mount assembly.

g. The equipment must be clean and free from dirt and grit.

h. Refer to the Basic Issue Items List in TM 9-2350-230-12 and check for completeness of repair parts, tools, and equipment.

3-7. Inspection of Optical Components

a. The prism on the body assembly must be free from scratches, pits, dirt, and chips that will interfere with or affect the optical performance of the instrument.

b. When sighting through the instrument, the field-of-view must be clear with no signs of fogging.

Section III. SHOP INSPECTION

3-8. General

This section sets forth the procedure to be followed by maintenance shops in performing inspection of periscope XM47 when removed from the end item and turned in to the shop for repair.

3-9. Initial Inspection

The inspection procedures outlined in paragraphs 3-3 through 3-7 should be followed when periscope XM47 is initially received in the shop.

3-10. Sealing

Determine integrity of all seals with soap and water solution as specified in 5-11a(10).

3-11. Inspection of Optical Components

a. Head Assembly. When looking through the head assembly of the periscope there shall be no objectional dirt smears, scratches, digs, condensate or fungus growth. Chips and fractures are permitted provided they are stoned or ground and do not extend more than 1/4-inch beyond the clear aperture. In all cases prime emphasis should be placed on performance of the periscope rather than the optical appearance, unless the latter definitely indicates poor workmanship.

b. Body Assembly. When looking directly through the viewing prism of the body assembly, all optical surfaces must be free from dirt, digs, condensate or fungus growth. Scratches are acceptable provided they are ground or stoned. Cement separations must not extend more than 1/4-inch from edge of aperture.

CHAPTER 4
TROUBLESHOOTING

Section I. GENERAL

4-1. Purpose

Troubleshooting is a systematic isolation and remedy of malfunction and defective components by means of symptoms and tests. Close adherence to the procedure covered herein will materially reduce the time required to locate trouble and restore the equipment to normal operation.

Caution: **Operation of materiel without a preliminary examination can cause further damage to a faulty component. Exercise care during troubleshooting, to avoid further damage.**

4-2. General

For troubleshooting procedures performed by organizational maintenance, refer to TM 9-2350230-12.

Table 4-1. Troubleshooting

Malfunction	Probable cause	Corrective action	Lowest maintenance category
1. Poor visibility	Chipped, scratched or otherwise damaged optical instrument window 6650-902-9741 (3, fig. 5-2) in body assembly 10513620.	Replace optical instrument window (para 5-7).	Depot
2. Pressure cannot be maintained in body assembly 10513620	a. Defective valve assembly 8201751 (7. fig. 5-2).	a. Disassemble and repair vale assembly (para 5-9)	DS
	b. Faulty machine thread plug 5365684-4401 (8. fig. 5-2) or gasket 5330-683-9573 (19 fig. 5-2).	b. Replace machine thread plug and/or gasket i para 5-10.	DS
	c. Faulty sealing around optical instrument window 6650-902-9741 (3. fig. 5-2).	Remove. replace. and reseal optical instrument window (para 5-7).	DS
3. Head assembly does not attach securely to mount assembly 6650906-7944.	Faulty catch(es) 1240-191-9213 (6, fig. 5-2).	Replace catch(es) para 5-8).	DS

Section II. TROUBLESHOOTING PROCEDURES

4-3. General

The troubleshooting procedure described in this section is one of determining the cause of the malfunction and taking the necessary action.

4-4. Troubleshooting

Table 4-1 describes the troubleshooting procedure.

CHAPTER 5
REPAIR

Section I. GENERAL

5-1. Scope

This chapter contains instructions for the repair of periscope M47.

Note. **This manual contains exploded-view illustrations which depict the complete disassembly of the materiel. This should not be construed as authority to disassemble the materiel beyond that required to perform operations authorized on the MAC or to replace parts other than those authorized in the applicable columns in appendix II.**

5-2. Parts Replacement

In subsequent repair paragraphs, replacement of authorized parts damaged beyond repair is understood.

5-3. General Maintenance Procedures

TM 9-254 presents general maintenance procedures that are most often required in repairing fire control materiel.

5-4. Rescinded

5-5. Cleaning

Refer to TM 9-208-1 for procedures most often required in cleaning fire control materiel.

Section II. REPAIR

5-6. General

The paragraphs that follow set forth the procedures to replace authorized repair parts and to perform purely maintenance operations not involving repair parts replacement. Refer to Appendix II for a list of authorized repair parts.

5-7. Replacement of Optical Instrument Window 6650-902-9741

a. Removal. Disassemble items 1, 2, and 3 (fig. 5-2).

b. Inspection. Inspect the general condition of the frame and housing to ensure that neither has been dented, bent or otherwise deformed. Inspect the optical instrument window for scratches, chips, or other damage that would impair its optical performance.

c. Cleaning. Scrape the surface of the frame and the housing to remove all traces of the old sealing compound and then wipe the complete surface with a cloth moistened with dry cleaning solvent, 6850-336-8170.

***Caution*: Take particular care during any scraping operations to avoid nicking or gouging the surface of the frame or housing.**

d. Repair and Reclamation. A window having chips or fractures may be reclaimed by stoning or grinding if the chips and fractures do not extend ’4-inch beyond the clear aperture. Refer to TM 9-254 for instructions on stoning and grinding optical components.

e. Assembly. To assemble the window, frame, and housing, proceed as follows:

Note. **The key numbers shown in parentheses refer to figure 5-2.**

(1) Apply a bead of sealing compound, MIL-S11031, 8030-275-8110 to the frame (2) and install window (3) into position.

(2) Clean any excess sealing compound from the window before installing the frame.

(3) Install frame (2) on housing (17) and secure with eight screws (1), applying a small amount of sealing compound, MIL-S-11031, to threads and under the head of each screw.

5-8. Replacement of Catch 1240-191-9213

a. Removal. Disassemble items, 4, 5, and 6 (fig. 5-2).

b. Inspection.

(1) Inspect the hinge pin and the latching member for proper alinement.

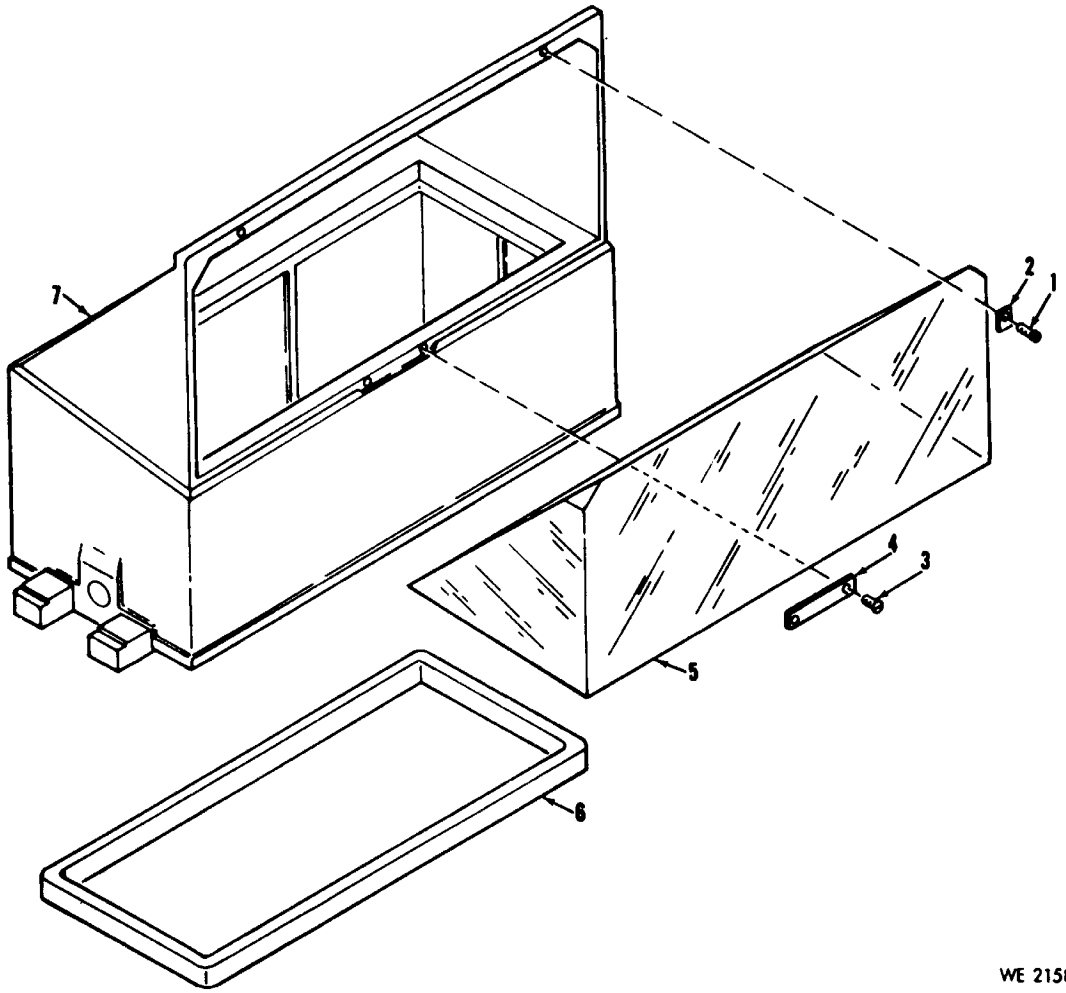


Figure 5-1. Head assembly 6650-906-7941 - exploded view.

1-Screw, machine no. 2-56 UNC-2A, 1/8 lg (8) MS51959-1
2-Frame 10513623
3-Window, optical instrument: 6650-902-9741
4-Screw, machine, no. 6-32 NC, 5/16 lg (4) 5305-054-665
5-Washer, lock; helical split, no. 6 (4) 5310-043-1754
6-Catch: (2) 1240-191-9213
7-Valve assembly 8201751
A-Cap, tire valve 2640-507-9260
B-Valve, inside air check: 1240-535-7706
C-Stem 8201752
8-Plug, machine thread: 5365-684-4401
9-Gasket: 5330-683-9573
10-Screw, machine, no. 2-56 UNC-2A. 1/8 lg (2) MS51959-1
11-Clip (2) 10513622-1
12-Screw, machine, no. 2-56 UNC-2A. 1/8 lg (2) MS51959-1
13-Clip 10513629
14-Prism 8599694
15-Screw, machine, pan hd cross recess no. 2 NC, 1/8 (2) MS35216-1
16-Plate, identification 10513621
17-Housing 10513617

Figure 5-2. Body assembly 10513620 - exploded view.

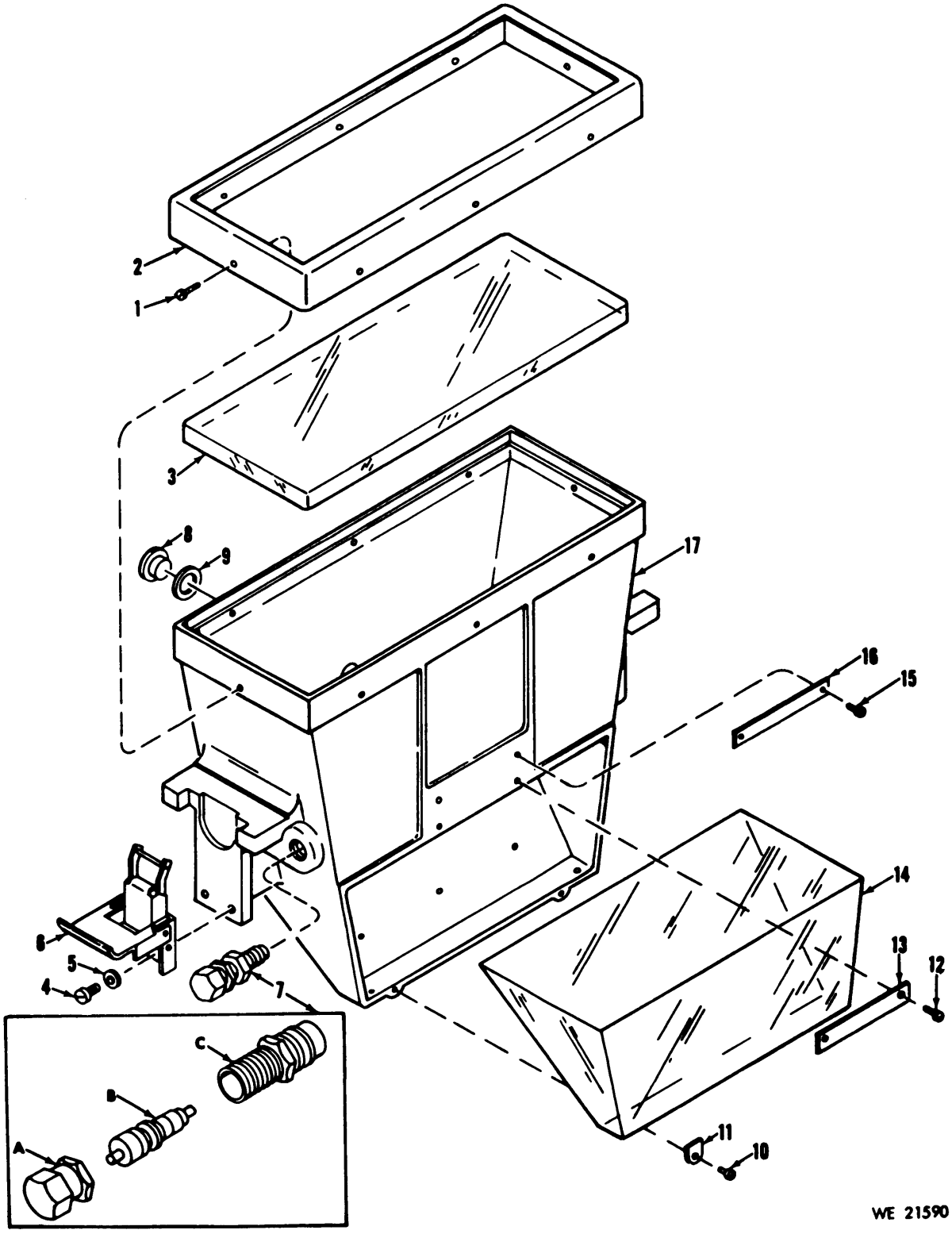


Figure 5-2. - Continued.

(2) Inspect for wear on the hinge pin and/or distortion of the latching member.

c. Installation. Assemble in sequence, items 6, 5, and 4 (fig. 5-2).

5-9. Repair of Valve Assembly 8201751

a. Removal. Remove item 7 (fig. 5-2).

b. Disassembly. *Disassemble in legend sequence.*

c. Inspection. Inspect the parts of the valve assembly for obvious wear, deterioration or other signs of unserviceability. Pay particular attention to the condition of the valve and insure that it operates smoothly, is free of corrosion, and the rubber seats are not worn. Inspect the valve stem and cap for worn threads or burrs on the threads.

d. Assembly. Assemble items in reverse legend sequence (7, fig. 5-2).

e. Installation. Install item 7 applying a small amount of sealing compound, MIL-S-10031, to the threads of the stem.

5-10. Replacement of Machine Thread Plug 5365-684-4401 and Gasket 5330-683-9573

a. Removal. Remove items 8 and 9 (fig. 5-2).

b. Inspection. Inspect the general condition of the gasket and the machine thread plug. Check the gasket for wear, cuts, breaks, or other signs of unserviceability that would result in leakage. Inspect the threads of the machine thread plug for excessive wear or burrs.

c. Installation. Install items 9 and 8 (fig. 5-2).

5-11. Test and Adjustment

a. Purging and Charging Body Assembly 1051-3599. Remove cap plug (7A fig. 5-2), plug and gasket (9). Purge and charge body assembly (fig. 5-3).

Note. The key numbers shown in parentheses refer to figure 5-3 unless otherwise indicated.

(1) Remove threaded protective cover from the valve outlet of the dry nitrogen tank (1) and momentarily open the valve to clear foreign matter from the valve seat.

(2) Check the nitrogen filling adapter (2) for cleanliness and proper sealing of gasket. Attach adapter to cylinder valve, and then attach helium pressure regulator (3) to adapter.

(3) Remove cap from the low pressure port of the regulator; connect hose assembly (4) to low pressure port of the regulator.

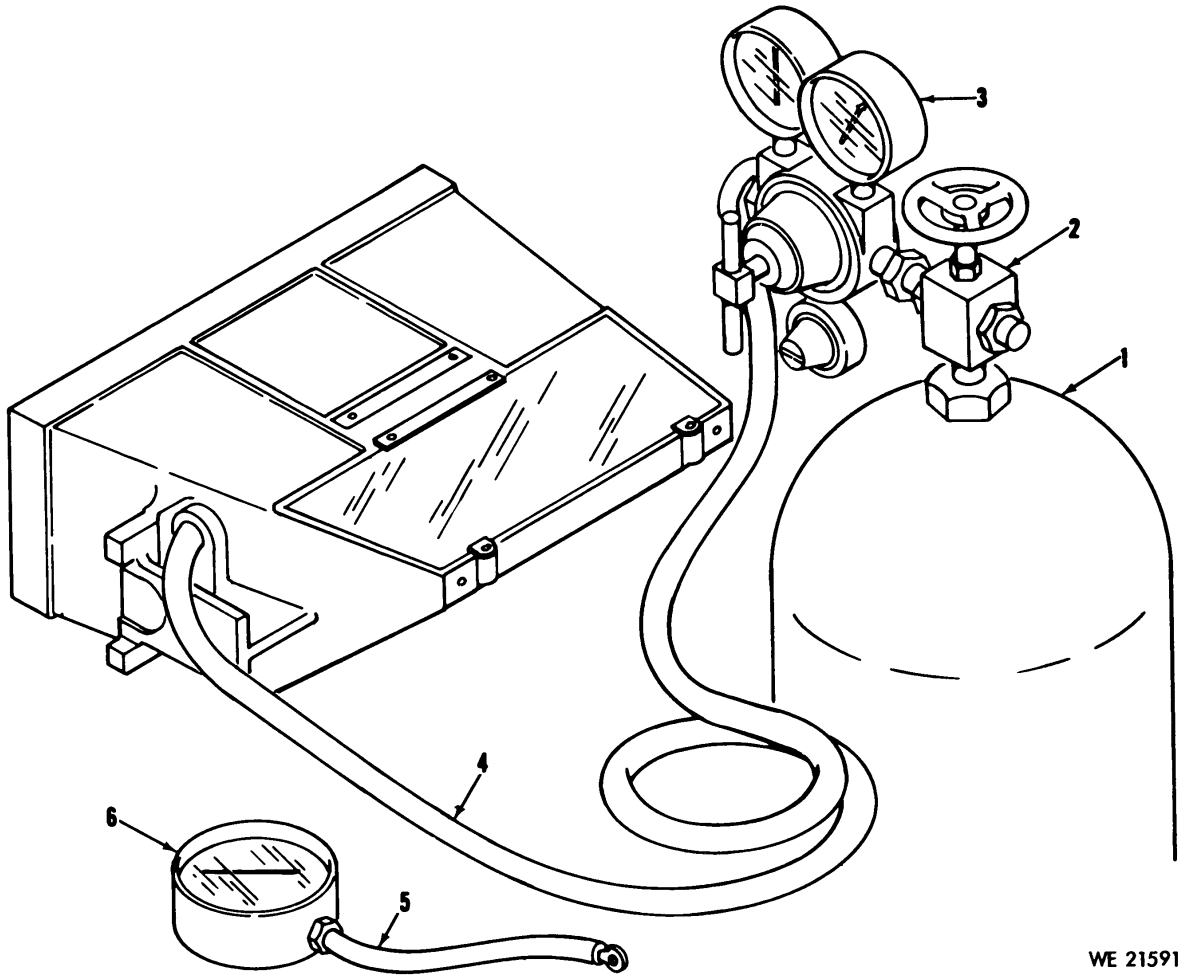
(4) Rotate valve of pressure regulator fully counterclockwise to close regulator.

(5) Open valve of nitrogen tank slowly until cylinder pressure is registered on high pressure gage; indication shall not be less than 100 psi.

***Note*. If pressure indicated is less than 100 psi, obtain and use a replacement tank.**

(6) Slowly rotate valve of pressure regulator clockwise until approximately 5 psi is registered on the low pressure gage. Check free end of hose assembly for free flow of nitrogen for approximately I/2-minute; then, rotate valve of pressure regulator fully counterclockwise to stop the flow of nitrogen.

(7) Connect free end of hose assembly to valve of body assembly.



1—Tank, nitrogen 6830–264–9086
2—Adapter, nitrogen filling: 4931–508–5453
3—Regulator, helium pressure: 4931–508–5795
4—Hose assembly, rubber: 4931–561–0713
5—Hose assembly: 4931–508–5546
6—Test gage assembly: 4931–546–9773

Figure 5-3. Typical setup for purging and charging periscope XM47.

(8) Slowly rotate valve of the pressure regulator clockwise until low pressure gage indicates 5 psi. Allow the nitrogen to flush the assembly for 5 minutes.

(9) Install gasket (9, fig. 5-2) and machine thread plug (8) securely in housing assembly.

(10) Apply a water and soap solution around optical elements, the valve, the plug and check for leaks.

(11) .Reduce the pressure to 1 psi by slowly rotating valve of the pressure regulator counterclockwise. Charge for two minutes.

b. Final Test.

(1) Rotate valve of pressure regulator fully counterclockwise to stop the flow of nitrogen. Close the valve of the nitrogen cylinder and remove the hose from the valve of the charged assembly.

(2) Connect hose assembly (5) to dial indicating pressure gage (6).

(3) Connect the free end of the hose with pressure gage to the valve of the charged assembly and check and record the pressure indicated on the test gage. The indicated pressure should be 0.5 to 1.0 psi. After approximately 30 minutes, the internal pressure should not drop more than 0.1 psi.

CHAPTER 6
EQUIPMENT ISSUED WITH TANK PERISCOPE XM47

Section I. DESCRIPTION

6-1. General
Equipment issued with periscope M47 includes mount assembly 6650-906-7944, seal assembly 10513439, washer, pump, and reservoir assembly 8589793 and wiper assembly 6650-906-7943. The relationship of this equipment on the M551 vehicle is shown in figure 6-1.

6-2. Specific
There are three mount assemblies, seal assemblies, and wiper assemblies, and one washer pump, and reservoir assembly provided for each M551 vehicle. Each combination of mount, seal, and wiper assembly accommodates one periscope. All three periscopes are serviced by the one washer, pump, and reservoir assembly.

a. The mount assemblies are secured to the inside of the vehicle turret beneath a cutout provided for mounting the periscope.

b. The seal assemblies are mounted on the outside of the turret and provides protection against the entry of water and other foreign matter.

c. The washer, pump and reservoir assembly is mounted completely inside the turret and serves the three wiper assemblies through tubing from the reservoir.

d. The wiper assemblies are electrically operated and drive wiper blades through 160° of sweep across the exposed optical surfaces.

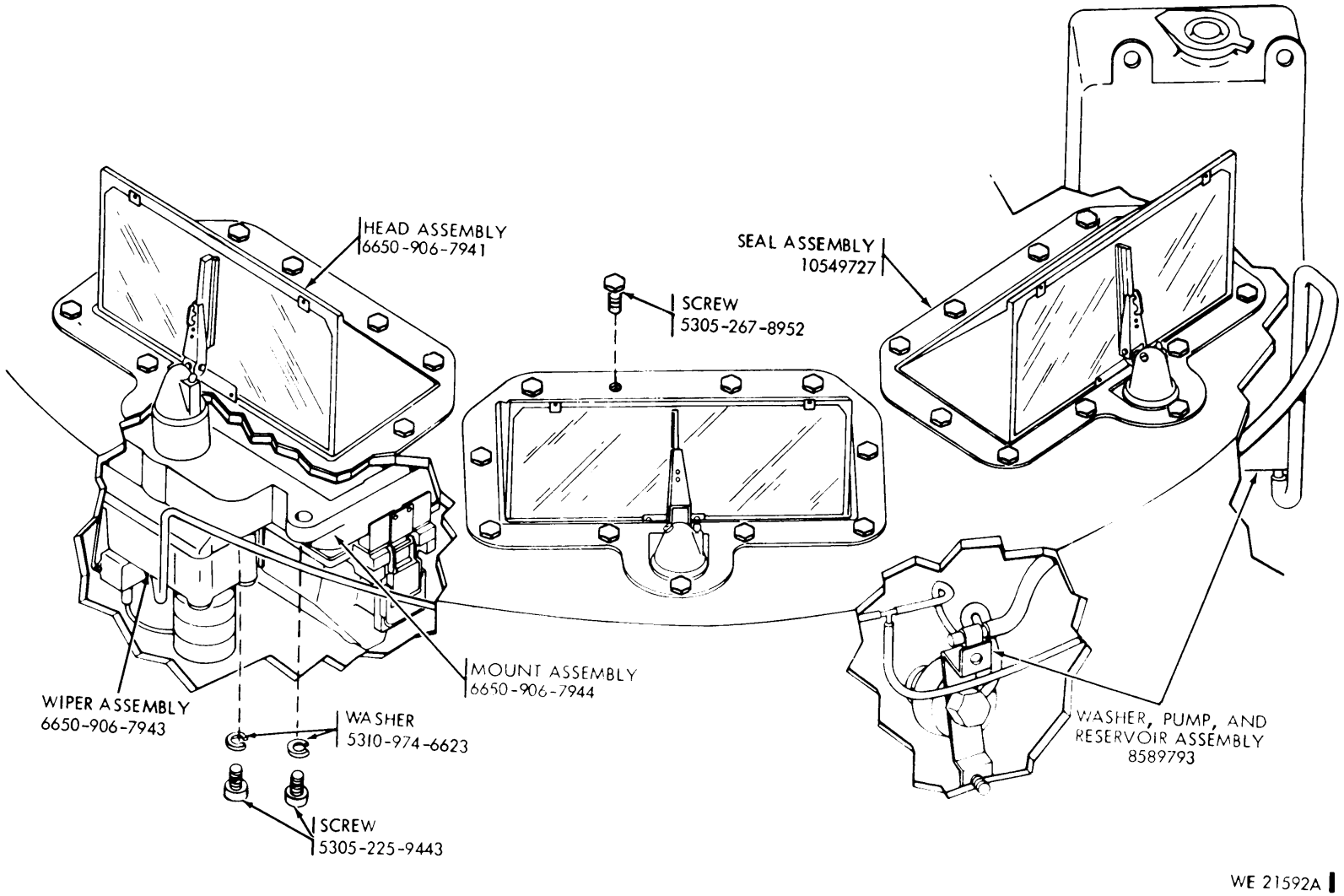


Figure 6-1. Equipment issued with periscope M47.

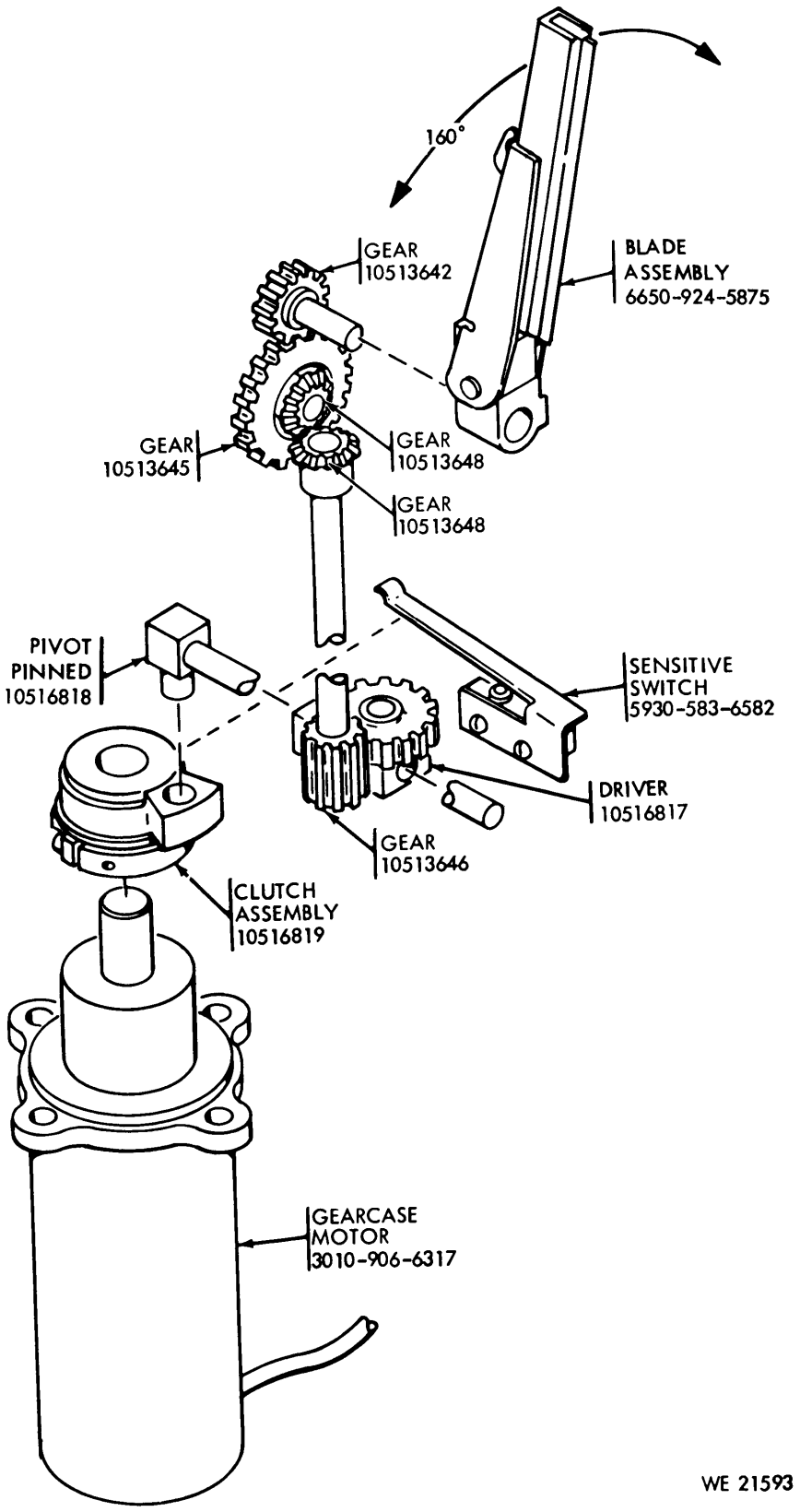


Figure 6-2. Wiper assembly 6650-906-7943 - gearing diagram.

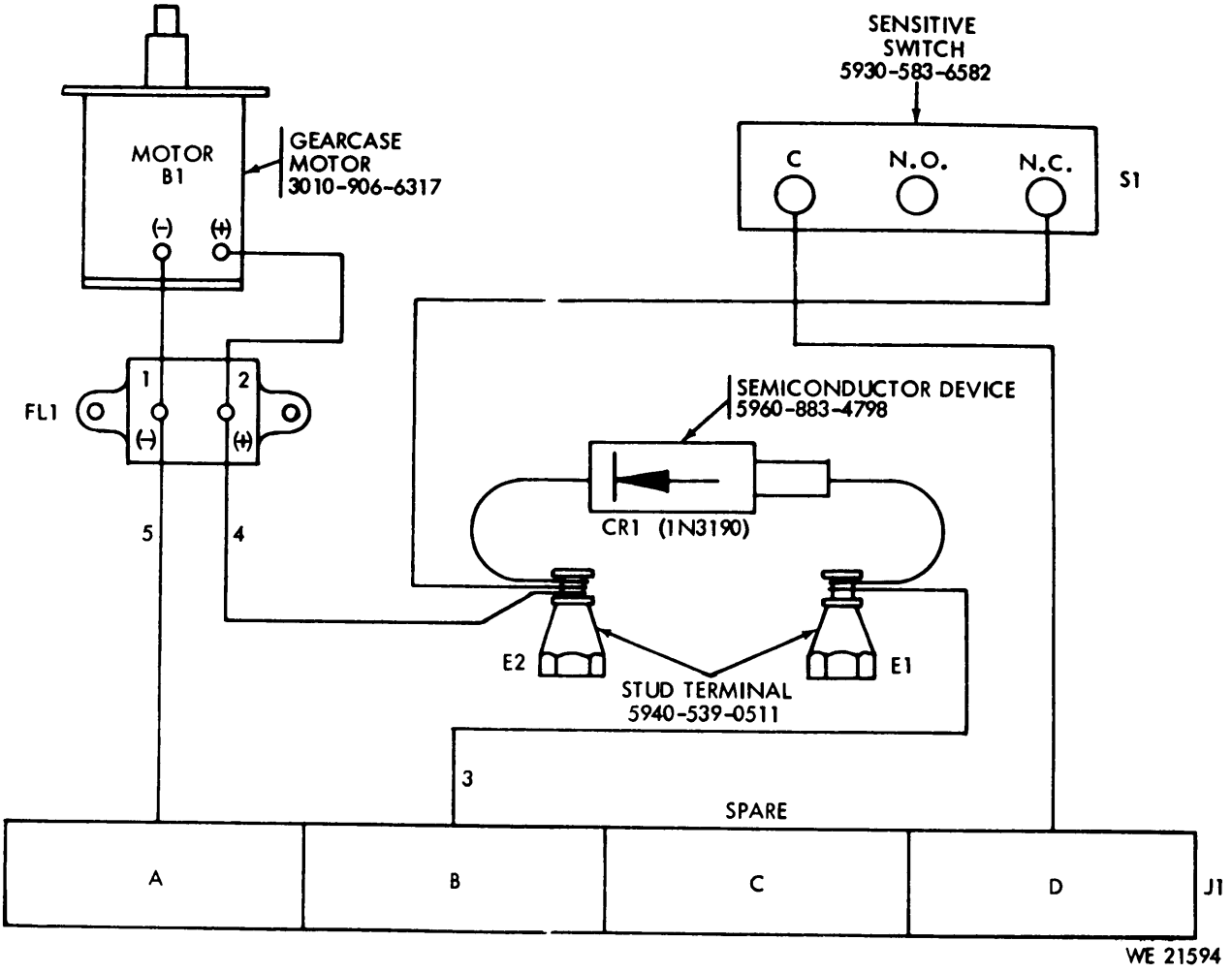


Figure 6-3. Wiper assembly 6650-906-7943-wiring diagram.

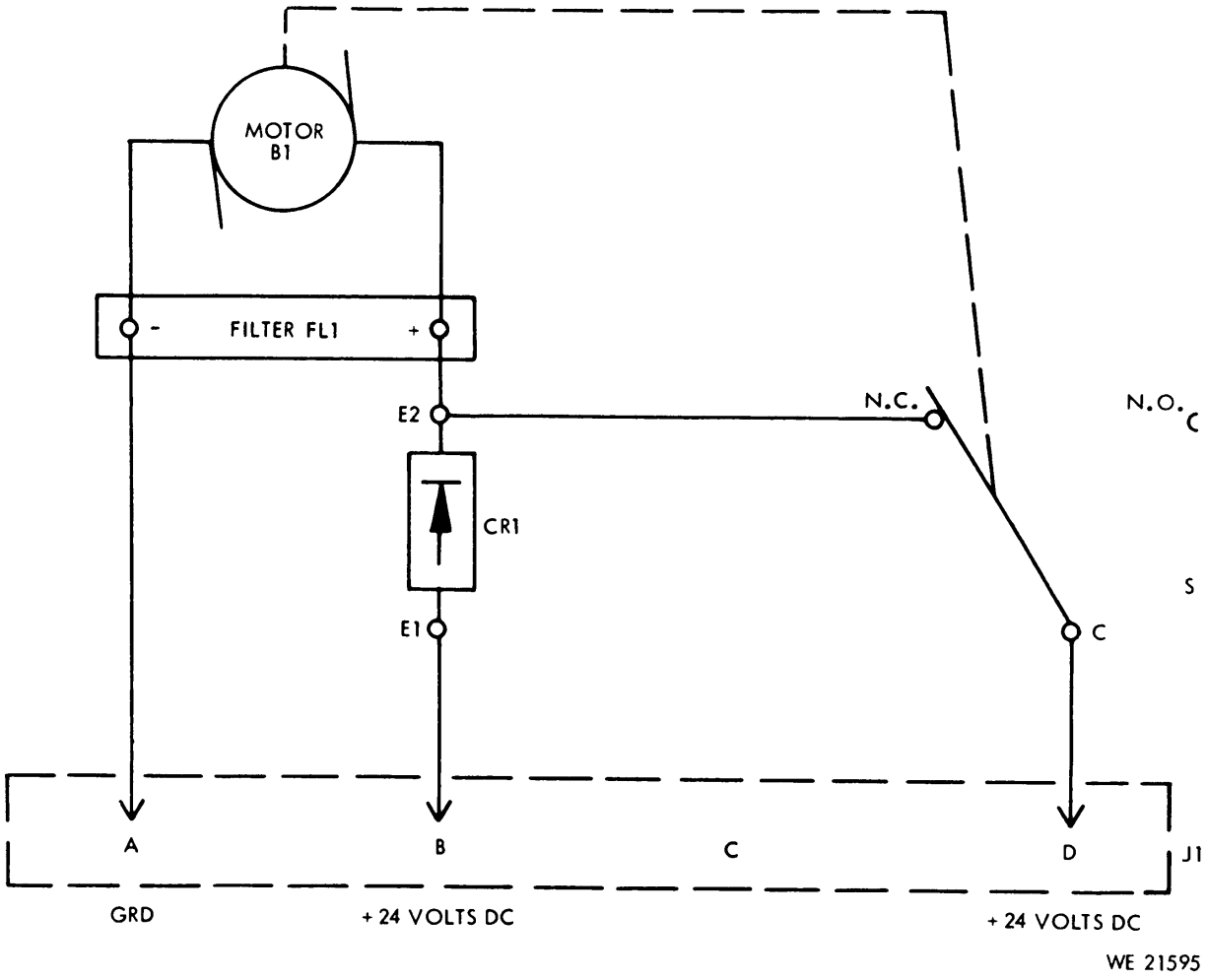


Figure 6-4. Wiper assembly 6650-906-7943-schematic diagram.

Section II. REPAIR OF MOUNT ASSEMBLY 6650-906-7944

6-3. Inspection

a. General.

(1) Note general appearance as an indication of the condition of the materiel and the type of treatment it has received.

(2) Check exterior of materiel and accessible parts for dents or breaks, missing parts or moisture or corrosion.

(3) The equipment must be clean and free from dirt.

(4) Refer to Basic Issue Items List in TM 9-2350-230-12 and check for completeness of repair parts, tools, and equipment.

b. Specific.

(1) Inspect plunger on each side of mount for ease of operation; there should be no burrs or obstruction.

(2) Inspect the junction of mount assembly and turret for bends, cracks, or breaks.

(3) Determine that strikes properly engage catches on head assembly.

6-4. Troubleshooting

Table 6-1 lists troubleshooting procedures for mount assembly 6650-906-7944. Refer to TM 9-2350-230-12

for operator's and organizational level troubleshooting procedures for the mount assembly.

Table 6-1. Mount Assembly Troubleshooting

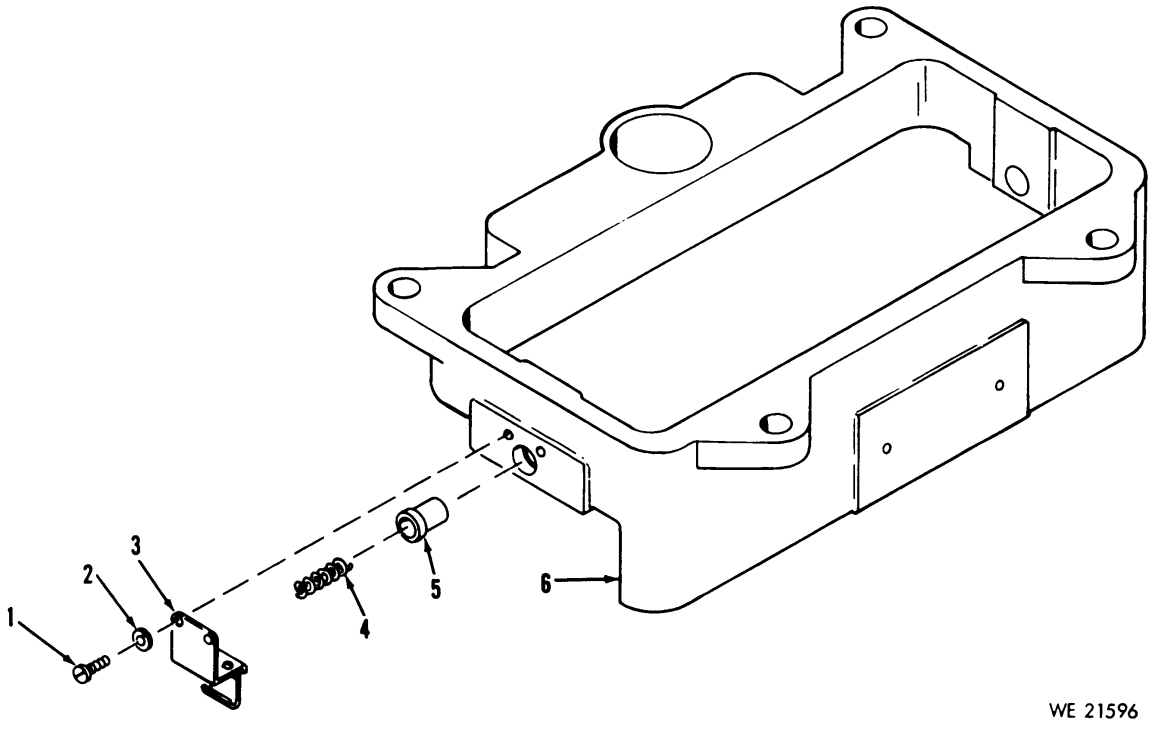
Malfunction	Probable cause	Corrective action	Lowest maintenance category
1. Plunger does not operate smoothly	a. Plunger 10513473 needs lubricating	a. Disassemble, clean, and lubricate the plunger (para 6-5).	DS
	b. Defective helical compression spring 5340-912-5826 (para 6-5).	b. Replace helical compression Spring (para 6-5).	DS
2. Body assembly does not securely fasten to mount	Bent strike 10513474 (3, fig. 6-5)	Replace strike.	DS

6-5. Replacement of Helical Compression Spring 5340-912-5826

a. Disassembly. Disassemble items 1 through 5 (fig. 6-5).

b. Inspection. Inspect the general condition of the disassembled parts. The plunger should fit firmly but be free to move smoothly in the mounting hole. The helical compression spring should be free from breaks or other damage.

c. Cleaning. Clean the plunger and mounting hole with solvent in accordance with TM 9-208-1 to remove all



1 Screw, machine: no. 6/0-40 UNF, 5/16 lg (8) 5305-057-0523
2 Washer, lock: helical split, no. 6 (8) 5310-933-6395
3 Strike (2) 10513474
4 Spring, helical compression: (2) 5340-912-5826
5 Plunger (2) 10513473
6 Mount 10513630

Figure 6-5. Mount assembly 6650-906-7944 - exploded view.

traces of lubricant. Wipe the mount down with a cloth moistened with dry cleaning solvent, 6850-336-8170.

d. Lubrication. Lubricate the plunger and mounting hole with a light coating of aircraft and instruction grease, MIL-G-23827, 9150-261-8298, prior to assembly.

e. Assembly. Assemble items in sequence 5 through 1 (fig. 6-5).

f. Testing. Test the assembled mount assembly by inserting it on a head assembly and checking for proper engagement of the plunger on each side.

Section III. REPAIR OF WASHER, PUMP, AND RESERVOIR ASSEMBLY 8589793

6-6. Inspection

a. General.

(1) Note general appearance as an indication of the condition of the materiel and the type of treatment it has received.

(2) Check exterior of materiel and accessible parts for dents, leaks or missing parts or corrosion.

(3) The equipment must be clean and free from dirt.

(4) Refer to Basic Issue Items List in TM 9-2350-230-12 and check for completeness of repair parts, tools and equipment.

b. Specific.

(1) Reservoir assembly 1260-944-5128. Inspect the reservoir for leaks at the outlet tube and for proper fitting of tubing over the outlet tube. Check the cap for proper fit on the filling port and insure that the cap has not been bent or otherwise distorted. Inspect the reservoir for secure mounting and ensure that all mounting hardware is used and in the proper place.

(2) Washer pump 1260-944-5127. Inspect the washer pump for leaks. Check the tubing connection to the pump to ensure that the tubing is not split and that it is secure over each fitting. Check the washer pump for proper and secure mounting.

(3) Check valve assembly 8589808. Inspect the check valve for leaks. Check the tubing connections to the valve to ensure that the tubing is not split and that each tube is securely fitted over its corresponding fitting. Check for proper and secure mounting.

(4) Tubing and tees. Inspect all tubing for breaks, splits, or other evidence of damage that would render it unserviceable. All connections should be secure and tight over the tees and component fittings.

6-7. Performance Test

a. Check to ensure that the reservoir is filled with liquid.

b. Depress the bellows to activate the washer pump and note that liquid is dispersed from the tubing of all washers.

c. There should be no erratic action from any of the washers and the pump should cycle each time it is depressed.

6-8. Troubleshooting

Table 6-2 lists troubleshooting procedures for washer, pump, and reservoir assembly 8589793. Refer to TM 9-2350-230-12 for operator's and organizational level troubleshooting procedures for the washer, pump, and reservoir assembly.

Table 6-2. Washer, Pump, and Reservoir Assembly Troubleshooting

Malfunction	Probable cause	Corrective action	Lowest maintenance category
1. Cleaning fluid is not distributed to individual washers or any of the washers when washer pump is activated.	a. Tubing defective, blocked or not properly connected between reservoir and malfunctioning washer(s).	a. Check tubing for proper connection to reservoir fitting and check valve assembly fitting. Tighten either connection if necessary. Inspect tubing for holes or a break. Replace tubing (para 6-9).	DS
	b. Stopped-up reservoir outlet	b. Disconnect tubing from reservoir outlet fitting and observe that liquid flows from the reservoir. Replace reservoir assembly (para 6-9).	DS
	c. Defective washer pump 1260-944-5127 (18, fig. 6-6).	c. Disconnect tubing 8589761-14 from check valve assembly 8589809 and tubing 8589761-12 from tee 4730-905-9796. Insert tubing 8589761-14 into a container of water by depressing the bellows. Water should flow from tubing 8589761-12 when the pump is operated. Replace pump (para 6-9).	DS
2. Bellows must be operated several times to obtain output from washers	a. Defective check valve assembly 8589809 (15, fig. 6-6).	a. Operate bellows of pump several times until liquid is being distributed by washers. Disconnect tubing from check valve and inspect check valve fitting for leakage. Replace check valve assembly.	Depot
	b. Defective washer pump 1260-944-5127 (18, fig. 6-6).	b. Proceed as specified in 1c above.	DS

1 Cap 8589803
2 Tubing, rubber 8589761-16
3 Tubing, rubber 8589761-14
4 Tubing, rubber 8589761-12
5 Tubing, rubber 8589761-10
6 Tee, hose: 4730-905-9796
7 Tubing, rubber 8589761-11
8 Tubing, rubber 8589761-9
9 Tee, pipe: 4730-905-9066
10 Tubing, rubber 8589761-3
11 Screw, cap, socket head: ¼-20 UNF-3A, ½ lg, 5305-052-9329
12 Washer, lock, no. ¼, 5310-582-5677
13 Washer, flat, no. 10, 5310-933-8121
14 Clip 8589915
15 Check valve assembly 8589808
16 Screw, cap, socket head: 1/4-20 UNF-3A, ½ lg 5305-052-9329
17 Washer; lock: no. 1/4, 5310-043-5862
18 Pump, washer 6650-944-5127
19 Nut, self-locking, 1/4-20 UNF-3A MSS51968-2
20 Washer, lock, no. 1/4 MS35337-82
21 Screw, cap, socket head: 1/4-20 UNF-3A, ½ lg 5305-958-7667
22 Washer, flat, no. 10 (2) MS15795-810
23 Bracket 10512002
24 Reservoir 10516814

Figure 6-6. - Continued.

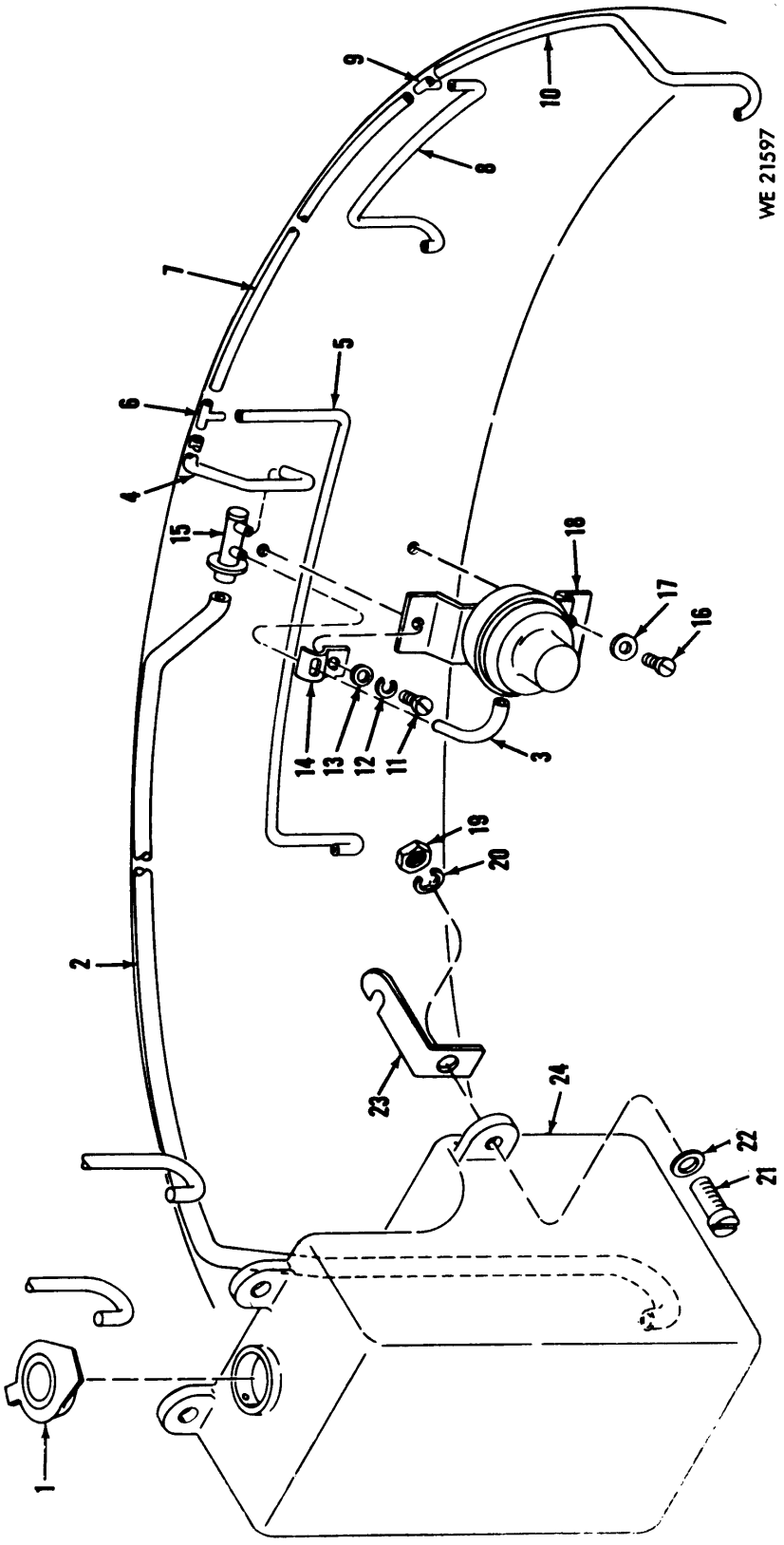


Figure 6-6. Washer, pump, and reservoir assembly 8589793 - exploded view.

6-9. Repair of Washer, Pump and Reservoir Assembly 8589793

a. Removal. Disassemble items in legend sequence (fig. 6-6).

b. Inspection.

(1) Inspect the cap for dents, wear, or other signs of unserviceability. Inspect the seal inside the cap for excessive wear that will cause leakage.

(2) Inspect all rubber tubing for splits, breaks, or deterioration. Inspect the tees for breaks or dirt in the ports.

(3) Inspect the exterior of the pump checking the bellows for excessive wear, the outlet fitting for damage, and the body for bent mounting feet.

c. Installation. Assemble items in reverse legend sequence (fig. 6-6).

Section IV. REPAIR OF WIPER ASSEMBLY 6650-906-7943

6-10. Inspection

a. General.

(1) Note general appearance as an indication of the condition of the materiel and the type of treatment it has received.

(2) The equipment must be clean and free from dirt and grit.

(3) Refer to the Basic Issue Items List in TM 9-2350-230-12 and check for completeness of repair parts, tools and equipment.

b. Specific.

(1) Inspect the condition of the rubber on the wiper blade, checking for cracks, breaks, or other signs of deterioration.

(2) Ensure that the wiper blade assembly is securely mounted on the housing drive shaft.

(3) Check the spring tension of the arm assembly to. ensure that the wiper blade is properly pressed against the prism.

(4) Inspect the housings and cover assembly for cracks, breaks, or other faulty conditions.

(5) Check the condition of the motor wiring to ensure that the wires are not bare, loose, or broken.

(6) Check the receptacle for bent or broken pins and for secure mounting to the cover assembly.

6-11. Performance Test

a. Operate the assembly to insure that the blade operates through a full stroke of 160° and that it zeroes (returns to the end of the stroke) when shut off.

b. Check to insure that the blades do not smear or scrape the prism.

c. Insure that the washer output properly disperses cleaning fluid to the prism.

6-12. Troubleshooting

Table 6-3 lists troubleshooting procedures for -wiper assembly 6650-906-7943. Refer to TM 9-2350-230-12 for operator's and organizational level troubleshooting procedures for the wiper assembly.

Table 6-3. Wiper Assembly Troubleshooting

Malfunction	Probable cause	Corrective action	Lowest maintenance category
1. Wiper smears prism	Defective periscope wiper blade 6650-924-5876 (1, fig. 6-8).	Replace blade (para 6-13).	DS

Table 6-3. Wiper Assembly Troubleshooting - Continued

Malfunction	Probable cause	Corrective action	Lowest maintenance category
2. Wiper motion rough or	a. Defective ball bearing in erratic gear train.	a. Inspect ball bearing and make necessary replacement (para 6-14).	DS
	b. Defective gear in gear train.	b. Inspect components of the gear train and make any needed replacement.	Depot
	c. Clutch assembly 10516819(7, fig. 6-12) loose on motor shaft.	c. Tighten screw (1, fig. 6-13) to tighten clutch assembly on shaft.	DS
3. Wiper blade fails to zero	a. Faulty actuator 6650-904-5877 (4, fig. 6-12).	a. Replace actuator (para 6-15).	DS
	b. Faulty sensitive switch5930-583-6582, (5, fig..6-12).	b. Replace sensitive switch(para 6-16).	DS
4. Wiper motors does not operate	a. Faulty semiconductor de- vice 5960-883-4798 (6, fig. 6-12).	a. Replace semiconductor device (para 6-17).	DS
	b. Faulty gear case motor3010-906-6317 (15, fig. 6-12).	b. Replace gear case motor(para 6-19).	DS
	c Faulty connection or pin on electrical receptacle connector 5935-881-7775.	c. Check connections to connector and pins for damage. Replace connector(para 6-18).	DS

6-13. Replacement of Wiper Blade Assembly 6650-924-5875

a. Removal. Disassemble items 1 and 2 (fig. 6-7).

b. Inspection. Inspect the wiper blade for deteriorated rubber, cuts, or gouges. Check to ensure that the spring of the arm assembly is operable and that it exerts force against the wiper blade.

c. Installation. Assemble in sequence items 2 and 1 (fig. 6-7).

6-14. Replacement of Ball Bearings 8589768

a. Disassembly.

(1) Disassemble items 1 through 6 (fig. 6-7).

(2) Disassemble items 1 through 14 (fig. 6-10).

b. Inspection. Inspect the condition of each of the ball bearings for wear, damage, or other signs of unserviceability. Check each of the gears for missing teeth, excessive wear, or burrs. Check the fit of the bearing and gears on the shaft for excessive side play.

c. Installation.

(1) Assemble in sequence items 14 through 1 (fig. 6-10).

(2) Apply a light coating of aircraft and instrument grease. MIL-G-23827 9150-261-8298, to the teeth of each of the gears.

(3) Apply a small amount of instrument lubricating oil, MIL-L-6085 9150-223-4129, to each of the ball bearings.

(4) Assemble in sequence items 6 through 1 (fig. 6-7).

6-15. Replacement of Actuator 6650-924-5877

a. Removal.

(1) Disassemble items 7 through 10 (fig.6-7).

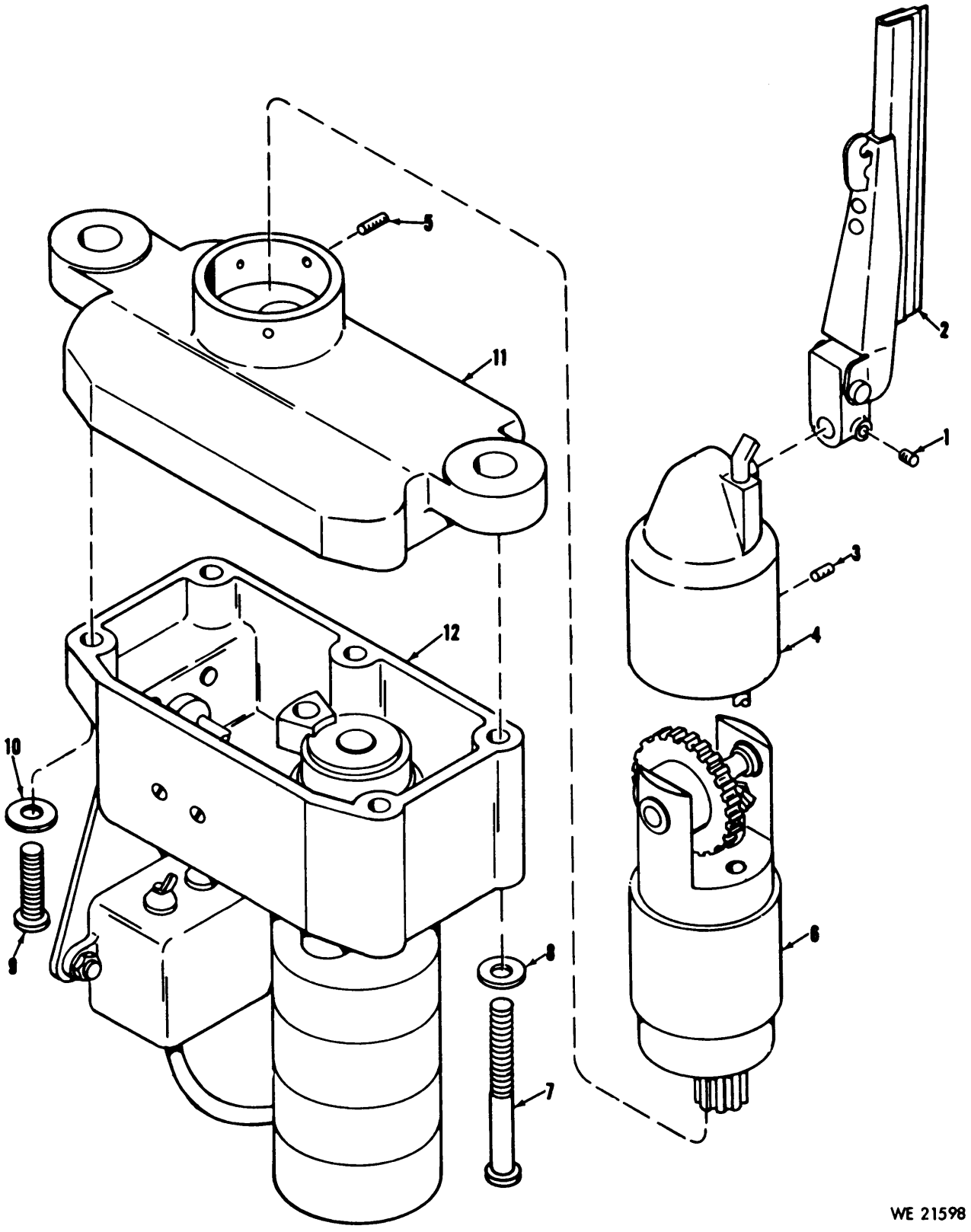
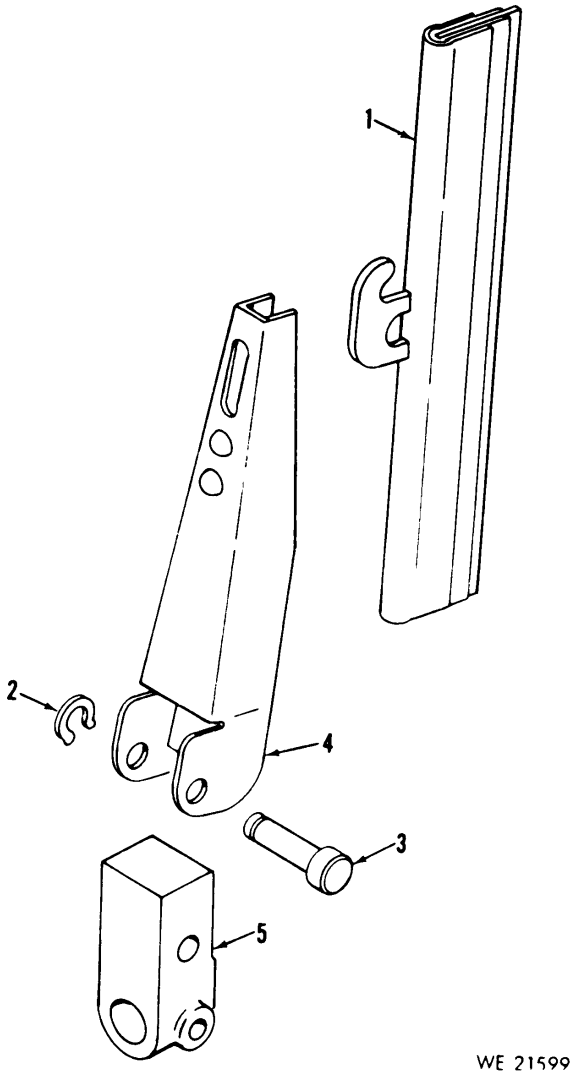


Figure 6-7. Wiper assembly 10513436 - partial exploded view.

1 Setscrew: no. 4 UNF-3A, 1/8 lg 5305851-2287
2 Wiper blade assembly: 6650-924-5875
3 Screw, machine, no. 2 UNC-2A, 3/16 lg MS51959-2
4 Housing assembly 8589901
5 Screw, machine, no. 2 UNC-2A, 1/4 lg (5) MS51959-3
6 Support assembly 10513487
7 Screw, machine, No. 6 UNC-2A, 1 /2 lg (3) MS51957-36
8 Washer, lock: no. 6 (4) 5310-043-1754
9 Screw, machine, no. 6, pan hd cross recess (2) MS51957-31
10 Washer, lock no. 6 (2) MS35337-31
11 Housing assembly 8589875
12 Cover assembly 10516820

Figure 6-7. - Continued.



1 Blade, wiper: 6650-924-5876
2 Ring, retaining MS16624-1012
3 Pin 10514634
4 Arm assembly 8589905
5 Pivot 8589861

Figure 6-8. Wiper blade assembly 6650-924-5875 - exploded view.

(2) Disassemble items 1 through 5 (fig. 6-12).

b. Inspection. Inspect the actuator for any distortion that would prevent correct mounting of the actuator for tripping of the sensitive switch.

c. Installation.

(1) Assemble, in sequence, items 5 through 1 (fig. 6-12).

(2) Assemble, in sequence, items 10 through 7 (fig. 6-7).

6-16. Replacement of Sensitive Switch 5930-583-6582

a. Removal.

(1) Disassemble items 7 through 10 (fig. 6-7).

(2) Disassemble items 1 through 5 (fig. 6-12).

b. Inspection. Depress the switch plunger and observe that it operates smoothly. Inspect the case for cracks, broken terminals, or damage that may render it unserviceable.

c. Installation.

(1) Assemble, in sequence, items 5 through 1 (fig. 6-12).

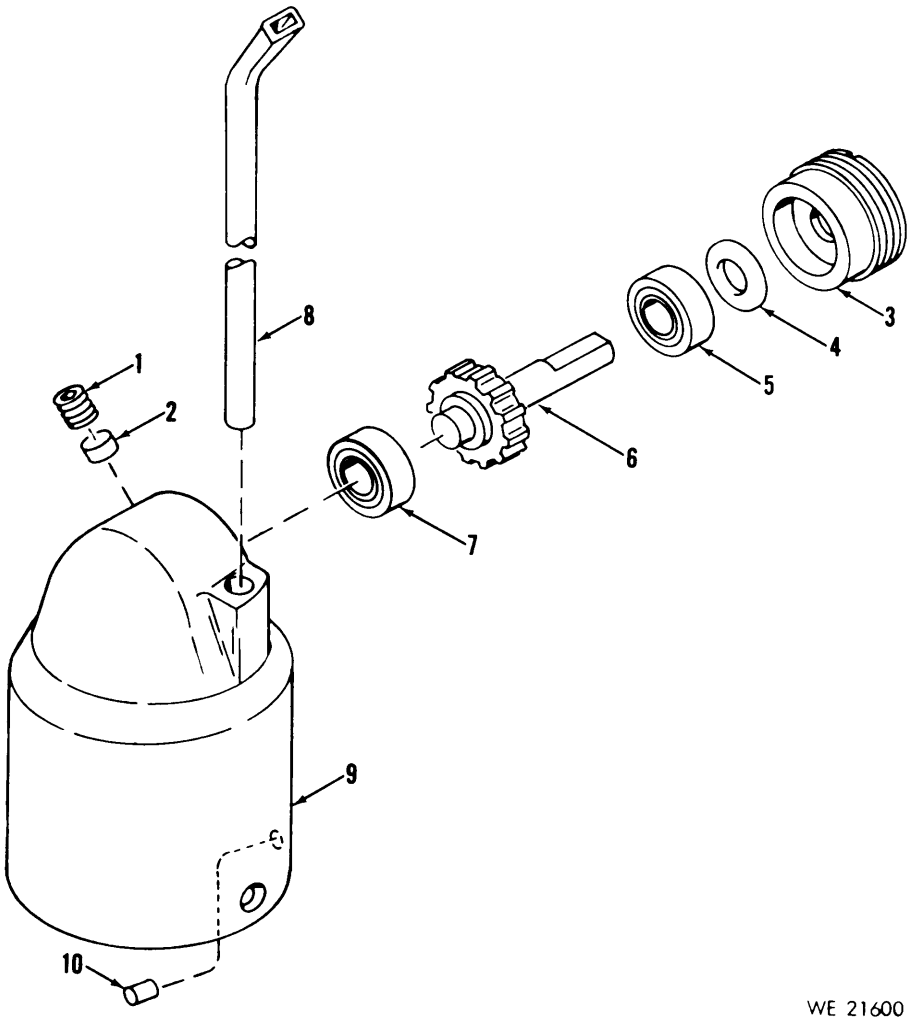
(2) Assemble, in sequence, items 10 through 7 (fig. 6-7).

6-17. Replacement of Semiconductor Device 5945-400-5256

a. Removal.

(1) Disassemble items 7 through 10 (fig. 6-7).

(2) Unsolder and remove item 6 (fig. 6-12).



1 Setscrew, no. 2-56 UNC-3A, 3/32 lg 10513511
2 Seat 8620836
3 Retainer 10513644
4 Packing, preformed: 5330-905-9175
5 Bearing 8689768
6 Gear 10513642
7 Bearing 8689768
8 Tube 8589925
9 Housing 10513476
10 Pin MS16555-601

Figure 6-9. Housing assembly 8589901 - exploded view.

b. Installation.

(1) Install item 6 (fig. 6-12) by soldering, carefully noting the polarity.

Note. **Refer to the wiring diagram (fig. 6-3) for determining the correct polarity of the semiconductor device.**

(2) Assemble in sequence, items 10 through 7 (fig. 6-7).

6-18. Replacement of Electrical Receptacle Connector 5935-881-7775

a. Removal.

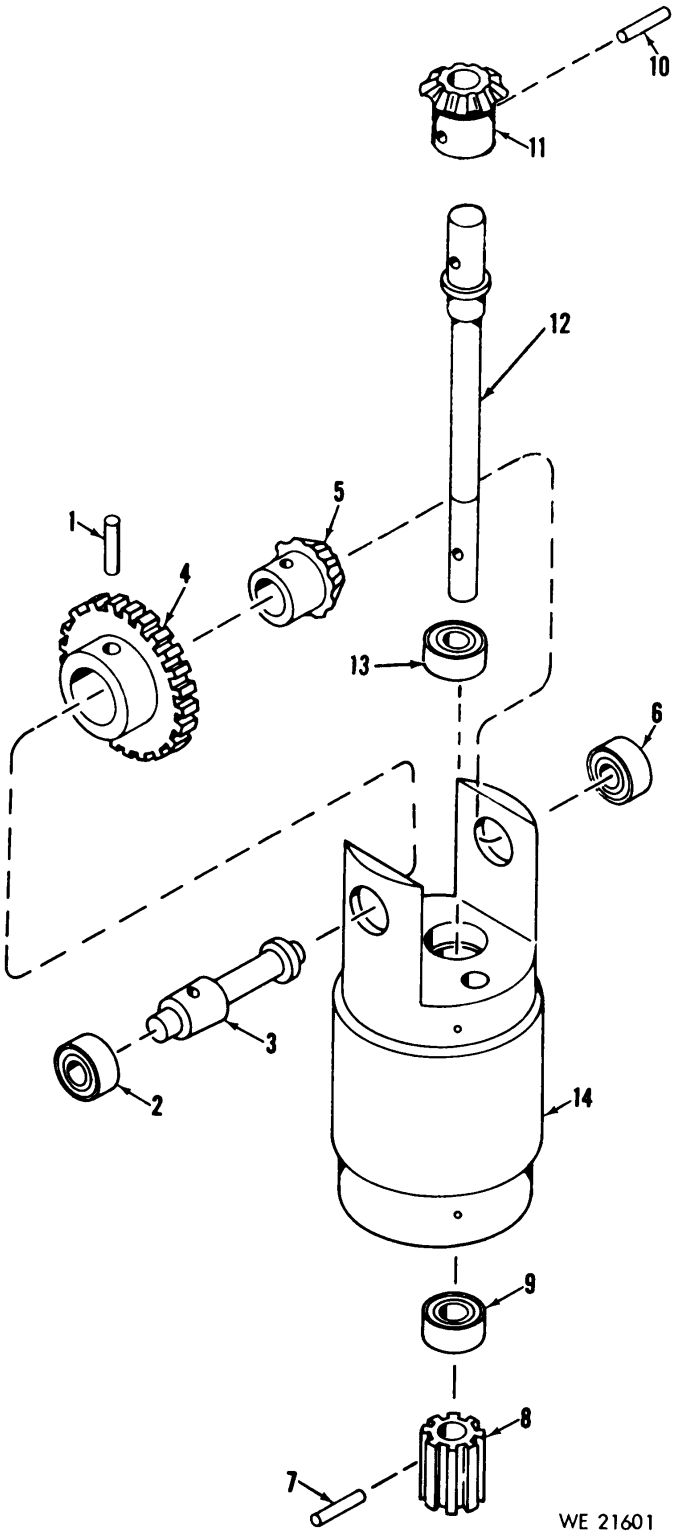
(1) Disassemble items 7 through 10 (fig. 6-7).

(2) Unsolder the wires from the connector, item 18 (fig. 6-12).

(3) Disassemble items 16 through 18 (fig. 6-12).

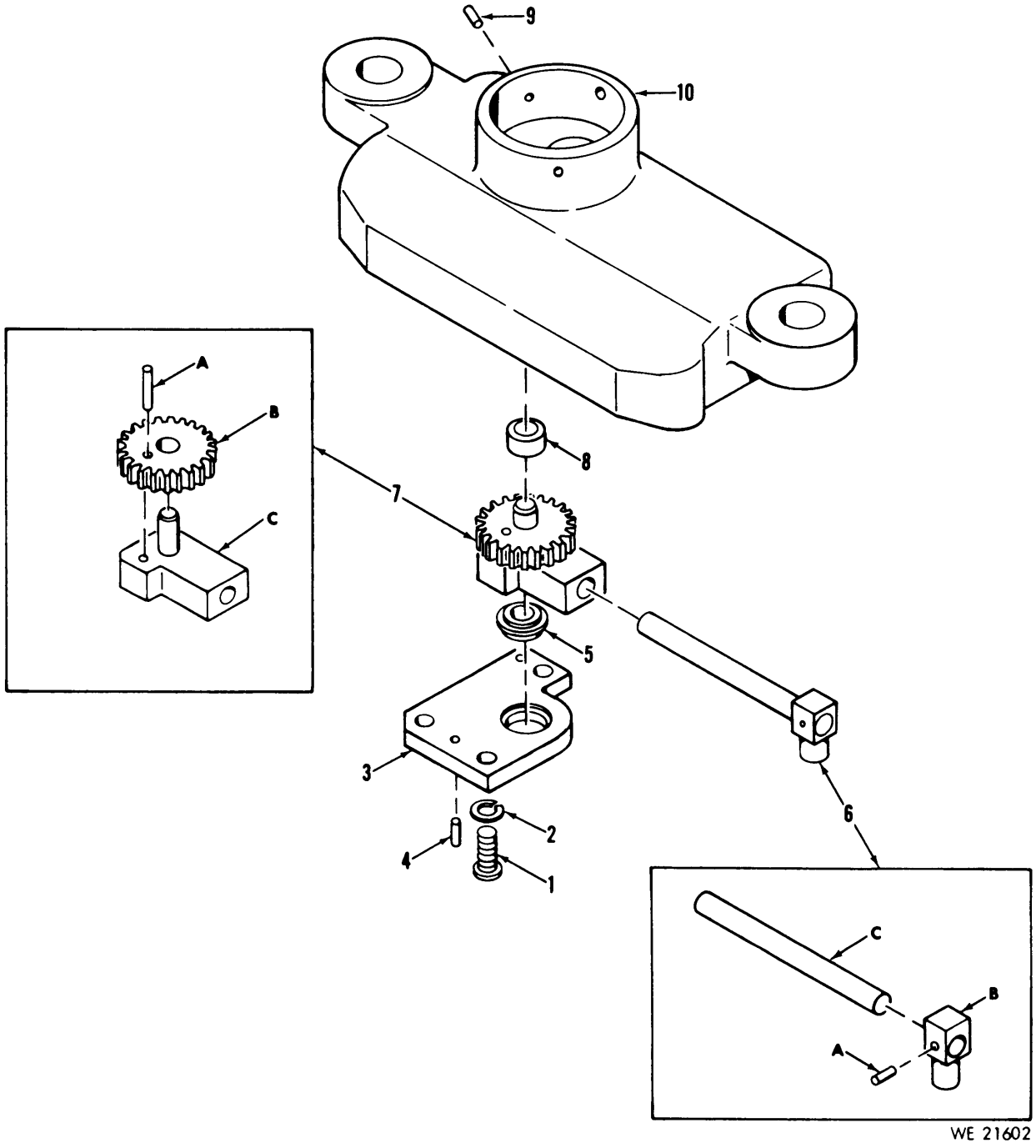
b. Inspection. Inspect the connector for bent or broken pins, cracked insulation, and defective threads.

c. Installation.



1 Pin, tapered, plain, no. 7/0 x 3/8 lg MS24692-3
2 Bearing, ball, annular 8589768
3 Shaft 10513477
4 Gear 10513645
5 Gear 10513648
6 Bearing, ball, annular 8589768
7 Pin 8620336
8 Gear 10513646
9 Bearing, ball, annular 8789768
10 Pin 8620336
11 Gear 10513648
12 Shaft 10513475
13 Bearing, ball, annular 8589768
14 Support 10513476

Figure 6-10. Support assembly 105134S7 - exploded view.



1 Screw, machine: no. 2 UNC-2A, 5/16 lg (3) 5305-054-5648
2 Washer, lock: no. 2 (3) 5310-933-8118
3 Support 8589870
4 Pin, straight, headless 1/16 x 1/4 lg (2) MS16555-602
5 Bearing 8589883
6 Pivot, pinned 10516818
A—Pin 10516178-2
B—Pivot 8589866
C—Shaft 8589867
7 Driver, pinned 10516817
A—Pin MS16555-604
B—Gear 8589906
C—Driver 8589868
8 Bearing 8589768
9 Pin MS16555-601
10 Housing 8589873

Figure 6-11. Housing assembly 85889875 - exploded view.

(1) Assemble, in sequence, items 18 through 16 (fig. 6-12).

(2) Connect the wiring to the connector in accordance with the wiring diagram (fig. 6-3).

(3) Assemble, in sequence, items 10 through 7 (fig. 6-7).

6-19. Replacement of Gear Case Motor 3010-906-6317

a. Removal.

(1) Disassemble items 7 through 10 (fig. 6-7).

(2) Unsolder and disconnect the two wires from the noise-suppression filter, item 12 (fig. 6-12).

(3) Disassemble items 7, 12, 13, 14, 15 (fig. 6-12).

b. Inspection. Inspect the motor for exterior damage, burned, broken, or bare wires, and a bent or broken shaft. Inspect the radio-suppression filter for similar exterior damage.

c. Installation.

(1) Assemble, in sequence, items 15, 14, 13, 12 and 7 (fig. 6-12).

(2) Attach and solder the two wires to the terminals of the radio-suppression filter, item 12 (fig. 6-12) in accordance with the wiring diagram (fig. 6-3).

(3) Assemble, in sequence, items 10 through 7 (fig. 6-7).

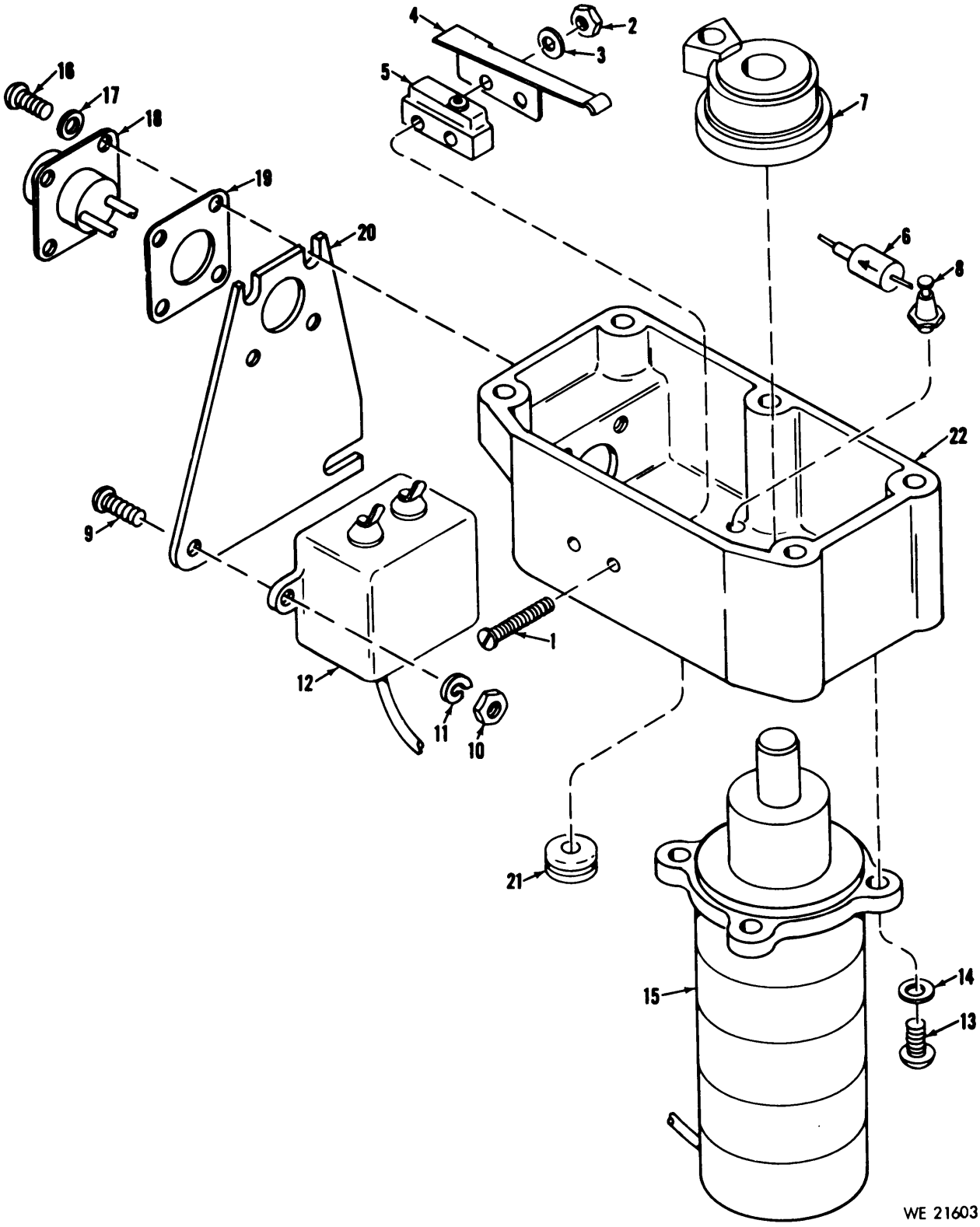
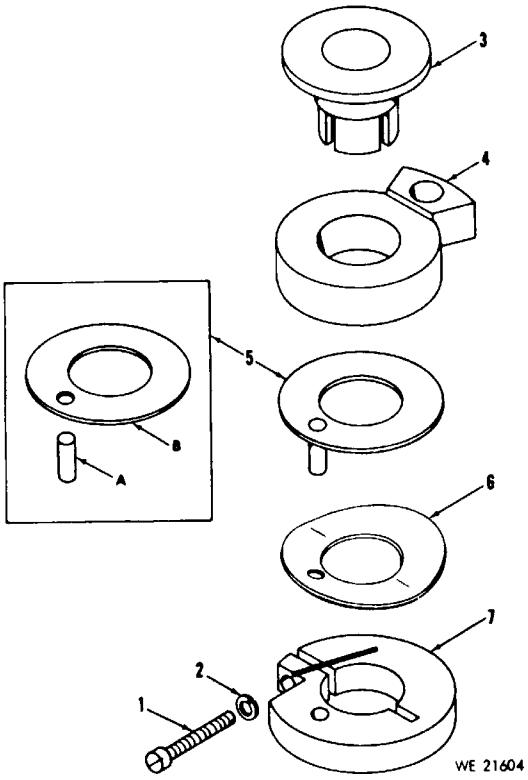


Figure 6-12. Cover assembly 10516820.

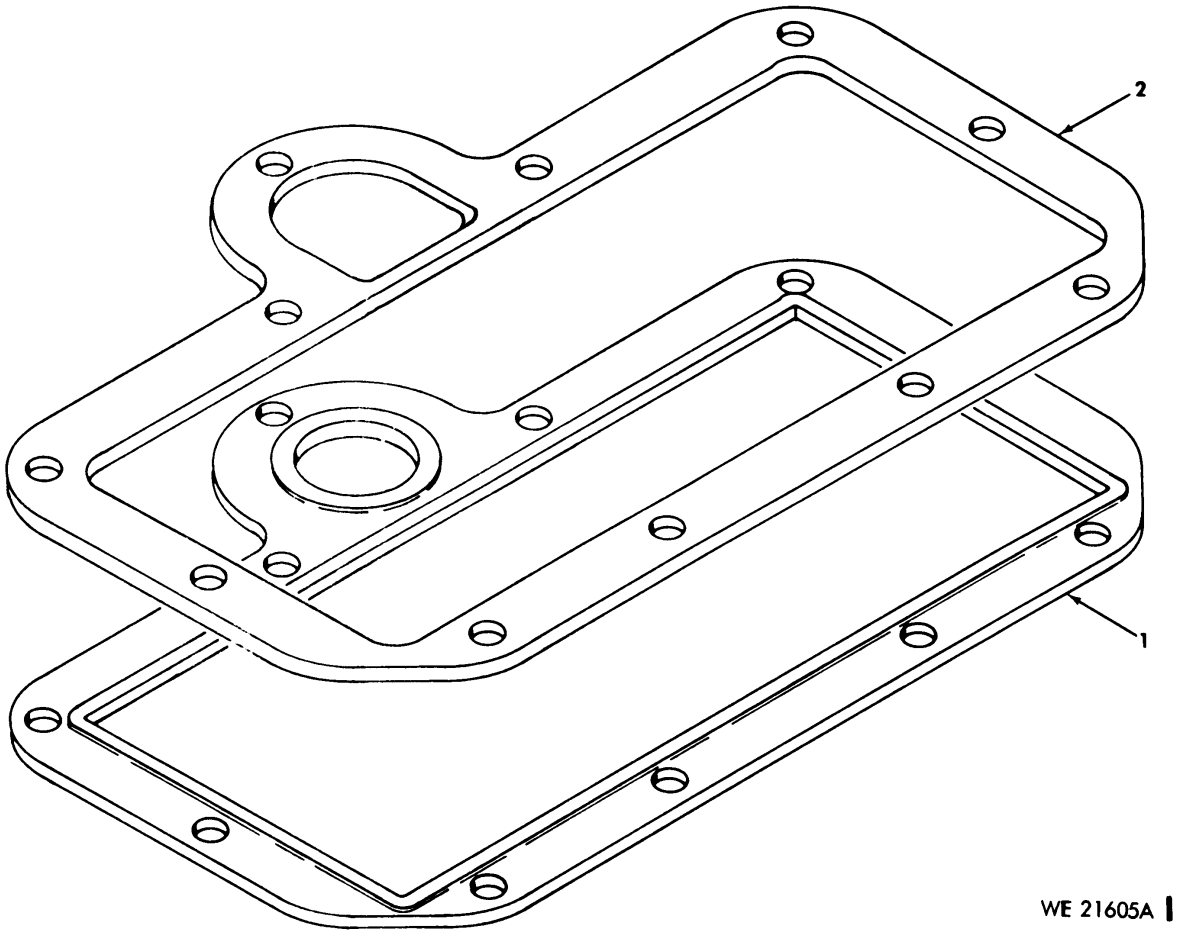
1 Screw, machine: no. 2 UNC-2A, 5/8 lg (2) 5305-054-5642
2 Nut: no. 2 NC-2B (2) 5310-938-2013
3 Washer, lock: no. 5/8 (2) 5310-543-
4 Actuator: 6650-924-5877
5 Switch, sensitive: 5930-583-6682
6 Semiconductor device: diode 5945-400-5256
7 Clutch assembly 10516819
8 Terminal (2) 5940-539-0511
9 Screw, machine: no. 2 UNC-2A, 5/8 lg (2) 5305-054-5648
10 Nut, no. 4 NC-2B (2) MS 35649-244
11 Washer, lock: no. 4 (2) 5310-058-2949
12 Noise suppression filter (vendor's item furnished with item 15)
13 Screw, machine: no. 6-32 UNC-2A, 5/ 16 lg (4) -0.54-6651
14 Washer, lock: no. 2 (4) 5310-043-1754
15 Motor, gear case: 3010-906-6317
16 Screw, machine: no. 4-40 UNC-2A, 5/16 lg (4) 5305-054-5648
17 Washer, lock: no. 2 (4) 5310-058-2949
18 Connector, receptacle, electrical: 5935-881-7775
19 Gasket 5330-905-9174
20 Plate 8589882
21 Grommet: rubber 5325-286-6047
22 Cover 8589874

Figure 6-12. - Continued.



1 Screw, machine no. 2-56 UNC-3A x 5/8 lg MS16995-4
2 Washer, lock: no. 2 5310-928-2690
3 Collar 10513448
4 Crank 8589864
5 Washer assembly 10513450
A—Pin, straight MS16555-603
B—Washer 10513449
6 Spring 10513363
7 Clamp 10513447

Figure 6-13. Clutch assembly 10516819-exploded view.



1 Seal 10513459
2 Plate 10549726

Figure 6-14. Seal assembly 6650-106-4461 - exploded view.

CHAPTER 7

PROCESSING AND PACKAGING

7-1. General

After the components of periscope XM47 have been repaired, inspected, declared serviceable and reassembled, the processing and packaging procedures of this chapter should be followed to assure that serviceability will be maintained.

7-2. Optical Components

Cover all prisms or optical elements with at least four thicknesses of neutral lens tissue and secure in place with water-resistant, pressure-sensitive adhesive tape. Cover the lens tissue with cellulosic cushioning materiel and secure in place with pressure-sensitive tape.

7-3. Final Packaging of Periscope XM47

Final packaging of periscope XM47 shall be in accordance with MIL-P-14232/P8589700, packaging level "A" and packing level "C."

7-4. Final Packaging of Mount Assembly and Seal Assembly

Final packaging and packing, level "C", shall be MIL-P-14232/P10513443 for the mount assembly and MIL-P-14232/P10513439 for the seal assembly.

7-5. Final Packaging of Washer, Pump and Reservoir Assembly and Wiper Assembly.

Final packaging and packing, level "C" shall be MIL-P-14232/P8589793 for the washer, pump and reservoir assembly and MIL-P-14232/P10513436 for the wiper assembly.

APPENDIX A

REFERENCES

A-1. Supply Manuals

The following Department of the Army Supply Manuals pertain to repair and overhaul of this materiel:

Brushes, Paint, Sealers, and Adhesives	SM 5-1-C5-1
Fire Control Maintenance and Repair Shop Specialized Equipment: Tool Set, Depot Maintenance, Supplementary Tools, Fixtures and Equipment (4931-798-7583).	SM 9-4-4931-J40
Fire Control Maintenance and Repair Shop Specialized Equipment Tool Set, Field and Depot Maintenance, General Purpose, Special Tools (4931-574-6433).	SM 9-4-4931-J51
Fire Control Maintenance and Repair Shop Specialized Equipment Tool Set, Special Depot Maintenance, Optical Cleaning, Coating Cementing and Decementing (4931-535-7827).	SM 9-4-4931-J48
Fire Control Maintenance and Repair Shop Specialized Equipment Wrench Set, Spanner, Field and Depot Maintenance: Tubr, Dble-End Concave Inserted Blade; Set of 76 Wrenches (4931-580-0012).	SM 9-4-4931-J52
Fuels, Lubricants, Oils, and Waxes	SM 10-1-C4-1
Hardware and Abrasives	SM 9-1-C5300
Shop Set Field Maintenance: Instrument and Fire Control Basic (5180-754-0740).	SM 9-4-5180-B06
Tool Kit, Fire Control Repairman (5180-357-7735)	SM 9-4-5180-A61
Tool Kit, Instrument Repairman's (5180-357-7743)	SM 9-4-5180-A62

A-2. Other Publications

a. General

Accident Reporting and Records	AR 385-40
Ordnance Direct Support Service	FM 9-3
Ordnance General and Depot Support Service	FM 9-4
The Army Equipment Record System and Procedures	TM 38-750

b. Maintenance.

Cleaning of Ordnance Materiel	TM 9-208-1
General Maintenance Procedures for Fire Control Materiel	TM 9-254
Grease, Aircraft and Instrument (For Low and High Temperature)	MIL-G-23827
Lubricating Oil, Instrument, Aircraft, Low Volatility	MIL-L-6085
Lubrication of Ordnance Materiel	TM 9-273
DS, GS and Depot Maintenance Manual Including Repair Parts and Special Tool Lists for Periscope, Tank: XM48 (6650-762-9336).	TM 9-6650-222-35
Operator's and Organizational Maintenance Manual Armored Reconnaissance-Airborne Assault Vehicle: FT, 153MM, XM651.	TM 9-2350-230-12

Organizational, DS, GS, and Depot Maintenance Repair Parts and Special Tool Lists for Turrent, Elevating and Traversing Systems, Cupola, Gun-Launcher and Fire Control For Armored Reconnaissance-Airborne Assault Vehicle: FT, 152MM, XM551 (2350-873-5408). TM 9-2350-230-25P/2

Painting Instructions for Field Use ..... TM 9-213
Sealing Compound, Adhesive Curing (Polysulfide Base)..... MIL-S-11031
Sealing Compound, Non-curing (Polysulfide Base) MIL-S-11030

c. Operations.

Auxiliary Sighting and-Fire Control Equipment ..... TM 9-575
Northern Operations..... FM 31-71
Operation and Maintenance of Ordnance Materiel in Extreme Cold Weather, 0 ° to -65 F. TM 9-207

d. Shipment and Storage.

Paper, Lens, Tissue, Antitarnish Wrapping..... MIL-P-13988
Parts, Equipment and Tools for Ordnance Materiel, Packaging of MIL-P-14232/8589700
MIL-P-14232/P10513443
MIL-P-14232/P10513439
MIL-P-14232/P8589793
MIL-P-14232/P10513436
Preservation, Methods of MIL-P-116
Preservation, Packaging and Packing ..... AR 700-15

APPENDIX B

REPAIR PARTS AND SPECIAL TOOLS LISTS

This Appendix is Current as of 28 June 1972

Section I. INTRODUCTION

B-1. Scope

This appendix lists repair parts, special tools, and support equipment required for the performance of direct support, general support, and depot maintenance of the periscope M47.

B-2. General

These repair parts and special tools lists are divided into the following sections:

a. Repair Parts List-Section II. A list of repair parts authorized at the direct support, general support, and depot maintenance levels for the performance of maintenance. This list also includes parts which must be removed for the replacement of the authorized parts. This list is composed of functional groups in ascending numerical sequence with parts in each group listed in figure and item number sequence.

b. Special Tools List-Section III. A list of test and support equipment authorized for the performance of maintenance at the direct support, general support, and depot levels.

c. Federal Stock Number and Reference Number Index-Section IV. A list, in ascending numerical sequence, of all Federal stock numbers appearing in the listings followed by a list, in alphanumeric sequence, of all reference numbers appearing in the listings. Federal stock numbers and reference numbers are cross-referenced to each illustration figure and item number.

B-3. Explanation of Columns

The following provides an explanation of columns found in the tabular columns.

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

(1) Source code. This code indicates the manner of acquiring support items for maintenance, repair, or overhaul of end items. Source codes are:

Code	*Explanation*
PA	Item procured and stocked for anticipated or known usage.
PB	Item procured and stocked for insurance purposes because essentiality dictates that a minimum quantity be available in the supply systems.
PC	Item procured and stocked for anticipated or known usage 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.
MO	Item to be manufactured or fabricated at organizational level.
MF	Item to be manufactured or fabricated at direct support level.
MH	Item to be manufactured or fabricated at general support level.
MD	Item to be manufactured or fabricated at depot maintenance level.

Code	*Explanation*
AO	Item to be assembled at organizational level.
AF	Item to be assembled at direct support.
AH	Item to be assembled at general support.
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 intended for procurement and is not stocked. If not available through salvage, requisition it.
XC	Installation drawing, diagram, instruction sheet, or field service drawing, that is identified by a manufacturer's part number.

(2) *Maintenance codes.* Indicates the levels of maintenance authorized to use and repair support items.

(a) *Use code.* This code indicates the lowest maintenance level authorized to remove, replace, and use the support item. Use codes are:

Code	*Explanation*
C	Used to denote crew or operator maintenance performed within organizational maintenance.
O	Support item is removed, replaced, and used at the organizational level of maintenance.
F	Support item is removed, replaced, and used at direct support.
H	Support item is removed, replaced, and used at general support.
D	Support item is removed, replaced, and used at depot only.

(b) *Repair code.* This code 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). Repair codes are:

Code	*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 Direct Support.
H	The lowest maintenance level capable of complete repair of the support item is General Support.
D	The lowest maintenance level capable of complete repair of the support item is the Depot level.
Z	Nonrepairable.

(3) *Recoverability Codes.* This code indicates the disposition action on unserviceable items. Recoverability codes are:

Code	*Explanation*
Z	Nonrepairable item. When unserviceable, condemn and dispose at the level authorized to replace the item.
F	Repairable item. When uneconomically repairable, condemn and dispose at (direct support level.
H	Repairable item. When uneconomically repairable, condemn and dispose at general support level.
D	Repairable item. When beyond lower level repair capability, return to depot. Condemnation and disposal not authorized below depot level.
L	Repairable item. Repair, condemnation and disposal not authorized below depot/specialized repair activity level.
A	Item requires special handling or condemnation procedure 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.

b. Federal Stock Number. This column lists the Federal stock number assigned to the item and will be used for requisitioning purposes.

c. Description. This column lists the Federal item name and a minimum description required to identify the item. The last line indicated the reference number followed by the applicable Federal Supply Code for Manufacturer (FSCM) in parentheses. The FSCM is used as an element in item identification to designate manufacturer or distributor or Government Agency; etc., and is identified in SB 708-42.

d. Unit of Measure (U/M). This column lists the standard or basic quantity by which the listed item is used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation; e.g., ea, in., pr; etc., and is the basis used to indicate quantities and allowances in subsequent columns. When the unit of measure differs

differs from the unit of issue, the lowest unit of issue that will satisfy the required units of measure will be requisitioned.

e. Quantity Incorporated in Unit. This column lists the quantity of the item used in the breakout shown in 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.

f. 30-Day DS/GS Maintenance Allowances.

(1) The repair parts, indicated by asterisk (*) entries in separate allowance column(s), for DS and GS represents those parts authorized for use at that category of maintenance and will be requisitioned on an as required basis.

(2) Allowance quantities are indicated in the special tools list section for special tools, TMDE, and other support equipment.

g. Depot Maintenance Allowances Per 100 Equipments. This column indicates that the item identified with an asterisk (*) are authorized to be requisitioned as required.

h. Illustration. This column is divided as follows:

(*1) Figure Number*. This column indicates the figure number of the illustration on which the item is shown.

(*2) Item Number.* This column indicates the callout number used to reference the item on the illustration.

B-4. Special Information

a. Action change codes indicated in the left-hand margin of the listing page denote the following:

N-Indicates an added item.
C-Indicates a change in data.
R-Indicates a change in FSN only.

b. To maintain disassembly sequence in this manual, a number in parentheses will be displayed immediately to the right of the callout number on the illustration.

B-5. How to Locate Repair Parts

a. When Federal stock number or reference number is unknown:

(1) First. Using the table of contents, determine the functional or subfunctional group within which the repair part belongs; i.e., head assembly, body assembly, mount assembly; etc. This is necessary since illustrations are prepared for functional and subfunctional groups, and listings are divided into the same groups.

(2) Second. Find the illustration covering the functional or subfunctional group to which the repair part belongs.

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

(4) Fourth. Using the repair parts listing, find the functional or subfunctional group to which the repair part belongs and locate the illustration figure and item number noted on the illustration.

b. When Federal stock number or reference number is known:

(1) First. Using the index of Federal stock numbers and reference numbers find the pertinent Federal stock number or reference number. This index is in ascending FSN sequence followed by a list of reference numbers in ascending alphanumeric sequence, cross-referenced to the illustration figure number and item number.

(2) Second. Using the repair parts listing, find the functional or subfunctional group of the repair part and the illustration figure number and item number referenced in the index of Federal stock numbers and reference numbers.

6. Abbreviations

Abbreviations	*Explanation*
amp	amperage
blt	bolt
cres	corrosion-resistant steel
dp	depth
ea	each
fl	flat
gl	glass

Abbreviations	*Explanation*
h	high
hdw	hardware
hex	hexagon
hex soch	hexagonal socket head
hlel	helical
id	inside diameter
intl	internal
l	long
lkg	locking
mscr	machine screw
mtg	mounting
muw	music wire
NEF	National extra fine (thread)
oa	over-all
od	outside diameter
plstc	plastic
pnh	pan head
psvt fnsh	passivated finish
r	right
rbr	rubber
rec	recessed
rnd	round
scr	screw
skt	socket
stl	steel
synth	synthetic
t	teeth
thk	thick
UNC	Unified coarse thread
UNF	Unified fine thread
w	wide
v	voltage

B-7. Reporting of Equipment Publication Improvements

The reporting of errors, omissions, and recommendations for improving this publication by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to Publications) and forwarded direct to: Commanding Officer, Frankford Arsenal, ATTN: AMSWE-MAF-W3100,
Philadelphia, PA 19137.

Section II. REPAIR PARTS LIST

Actn ch code	(1) SMR code	(2) Federal stk number	(3) Description Ref. No. & FSCM	(4) Unit of meas	(5) Qty inc. in unit	(6) 30-Day DS maint alw (a) 1-20	(6) (b) 21-50	(6) (c) 51-100	(7) 30-Day GS maint alw (a) 1-20	(7) (b) 21-50	(7) (c) 51-100	(8) Dep maint alw per 100 equip	(9) Illust (a) Fig. No.	(9) (b) Itm No.
			HEAD ASSEMBLY 10513625											
C	PA-OZ-Z	6650-906-7941	HEAD ASSEMBLY: Tank periscope 10513625 (19200).	ea	1	*	*	*	*	*	*	*	B-1	1
XA			SCREW: Machine MS51957-2 (96906).		4								B-1	2
XA			CLIP: 10513622-2 (19200).		2								B-1	3
XA			CLIP: 10513628 (19200).		1								B-1	5
XA			PRISM: Head assembly 8599693 (19200).		1								B-1	6
XA			GASKET: 10513627 (19200).		1								B-1	7
XA			HOUSING: Head 10513626 (19200).		1								B-1	8

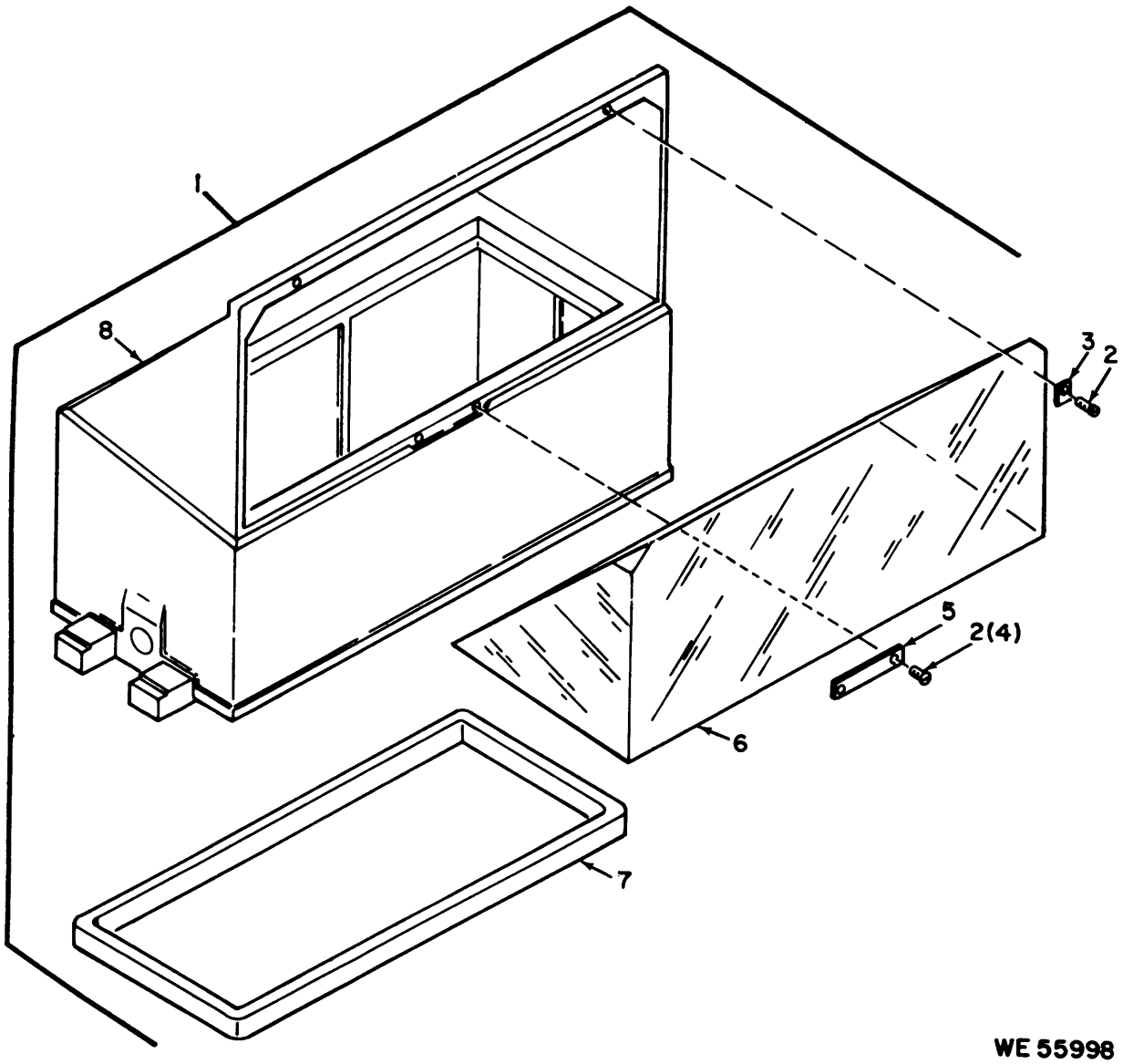


Figure B-1. Head assembly 10513625 - exploded view.

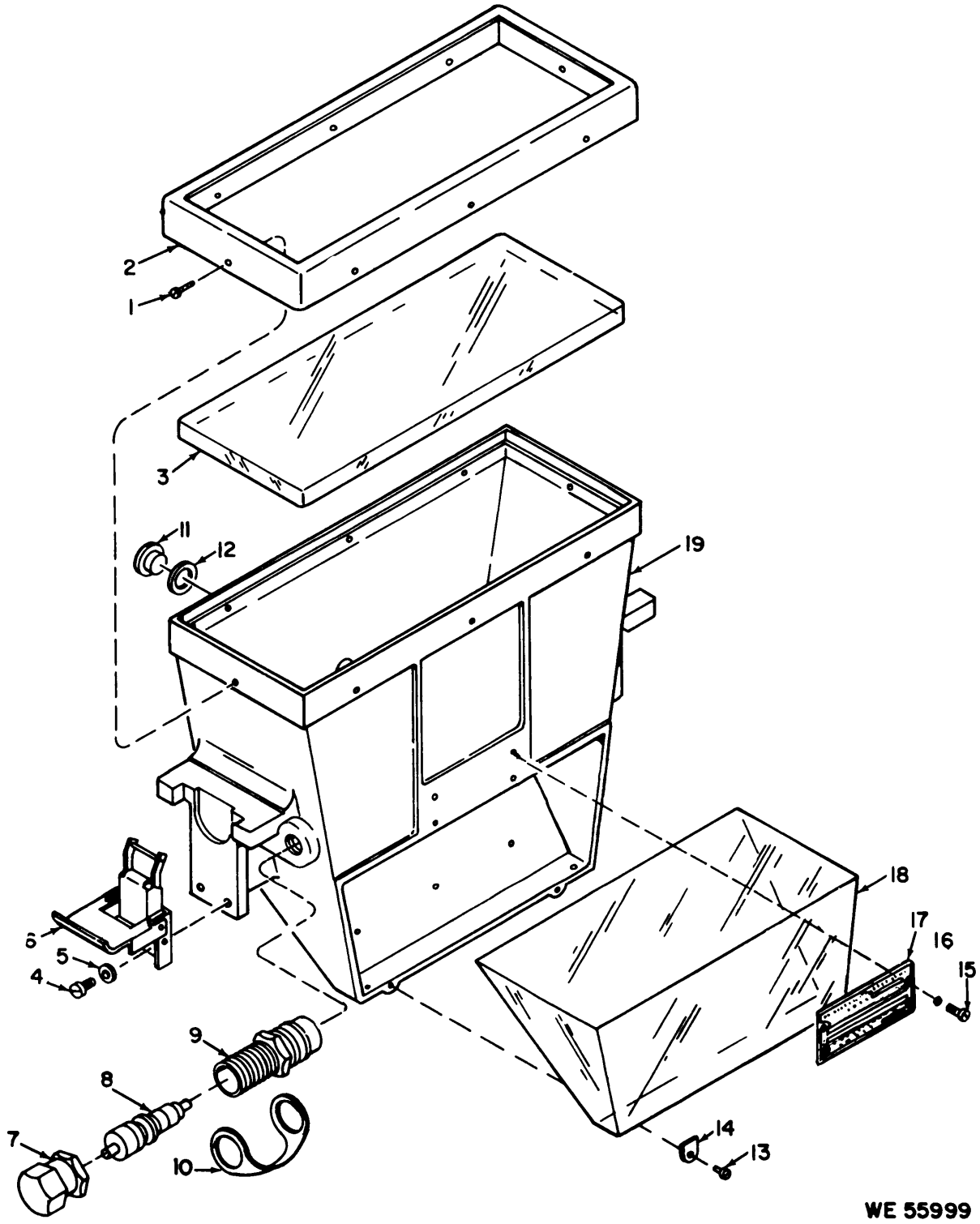


Figure B-2. Body assembly 10518620-exploded view.

Section II. REPAIR PARTS LIST

Actn ch code	(1) SMR code	(2) Federal stk number	(3) Description Ref. No. & FSCM	(4) Unit of meas	(5) Qty inc. in unit	(6) 30-Day DS maint alw (a) 1-20	(6) (b) 21-50	(6) (c) 51-100	(7) 30-Day GS maint alw (a) 1-20	(7) (b) 21-50	(7) (c) 51-100	(8) Dep maint alw per 100 equip	(9) Illust (a) Fig. No.	(9) (b) Itm No.
			BODY ASSEMBLY 10513620											
	XA		SCREW: Machine MS51959-1 (96906).		10								B-2	1
	XA		FRAME: 10513623 (19200).		1								B-2	2
C	PA-FZ-Z	6650-902-9741	WINDOW: Optical instrument gl, 0.332 thk 2.645 w, 7.051 l 8599692 (19200).	ea	1	*	*	*	*	*	*	*	B-2	3
C	PA-FZ-Z	5305-054-651	SCREW: Machine pnh, cres, psvt fnsh, NO. 6-32UNC-2A, 5/16 l MS51957-27 (96906).	ea	4	*	*	*	*	*	*	*	B-2	4
C	PA-FZ-Z	5310-929-6395	WASHER: Lock split, hlcl r lkg, cres, psvt fnsh, No. 6 scr size MS35338-136 (96906).	ea	4	*	*	*	*	*	*	*	B-2	5
C	PA-FZ-Z	1240-191-9213	CATCH: 10516029-3 (19200).	ea	2	*	*	*	*	*	*	*	B-2	6
C	PA-FZ-Z	2640-507-9260	CAP: Tire valve 8200055 (19200).	ea	1	*	*	*	*	*	*	*	B-2	7
N	PA-FZ-Z	2640-060-3543	VALVE CORE: MS51377-2 (96906).	ea	1	*	*	*	*	*	*	*	B-2	8
C	PA-FZ-Z	2640-114-1096	VALVE STEM: MS51607-1 (96906).	ea	1	*	*	*	*	*	*	*	B-2	9
N	PA-FZ-Z	1240-464-4792	STRAP: 10516567 (19200).	ea	1	*	*	*	*	*	*	*	B-2	10
C	PA-FZ-Z	4730-684-4401	PLUG: Machine thread cres, psvt fnsh, 3/8-32NEF-2B, 0.166 thk 0.270 oal 8574881 (19200).	ea	1	*	*	*	*	*	*	*	B-2	11
C	PA-FZ-Z	5330-683-9573	GASKET: Synth rbr, 0.370 id, 3/16 od, 0.625 thk 8574642 (19200).	ea	1	*	*	*	*	*	*	*	B-2	12
	XA		CLIP: 10513622-2 (19200).		2								B-2	14
	XA		SCREW: Machine MS51957-2 (96906).		4								B-2	15

Section II. REPAIR PARTS LIST

Actn ch code	(1) SMR code	(2) Federal stk number	(3) Description Ref. No. & FSCM	(4) Unit of meas	(5) Qty inc. in unit	(6) 30-Day DS maint alw (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-Day GS maint alw (a) 1-20	(b) 21-50	(c) 51-100	(8) Dep maint alw per 100 equip	(9) Illust (a) Fig. No.	(b) Itm No.
			BODY ASSEMBLY 10513620-Continued											
	XA		WASHER: Lock MS35338-134 (96906).		4								B-2	16
	MD-FZ-Z		PLATE: Identification 11727687 (19200).	ea	1							*	B-2	17
	XA		PRISM: Body assembly 8589694 (19200).		1								B-2	18
	XA		HOUSING: Body 10513617 (19200).		1								B-2	19

Section II. REPAIR PARTS LIST

Actn ch code	(1) SMR code	(2) Federal stk number	(3) Description Ref. No. & FSCM	(4) Unit of meas	(5) Qty inc. in unit	(6) 30-Day DS maint alw (a) 1-20	(6) (b) 21-50	(6) (c) 51-100	(7) 30-Day GS maint alw (a) 1-20	(7) (b) 21-50	(7) (c) 51-100	(8) Dep maint alw per 100 equip	(9) Illust (a) Fig. No.	(9) (b) Itm No.
			MOUNT ASSEMBLY 10513443											
C	PA-FZ-Z	5305-057-0523	SCREW: Machine pnh, cross-rec, cres, psvt fnsh No. 6-40UNF-2A, 5/16 1 MS51958-27 (96906).	ea	8	*	*	*	*	*	*	*	B-3	1
C	PA-FZ-Z	5310-929-6395	WASHER: Lock split, hlcl, r lkg, cres, psvt fnsh 0.250 od, 0.031 thk, No. 6 scr size MS35338-136 (96906).	ea	8	*	*	*	*	*	*	*	B-3	2
N	PA-FZ-Z	5340-111-5289	STRIKE: 10542040 (19200).	ea	2	*	*	*	*	*	*	*	B-3	3
C	PA-FZ-Z	5340-912-5826	SPRING: Helical compression mum 0.033 diam, 0.781 1, 14 coil 10513456 (19200).	ea	2	*	*	*	*	*	*	*	B-3	4
N	PA-FZ-Z	5340-903-7157	PLUNGER: Cres, 0.218 id, 0.540 1 10513473 (19200).	ea	2	*	*	*	*	*	*	*	B-3	5
C	PA-FZ-Z	5305-225-9443	SCREW: Cap, socket head hex skt, cres, psvt fnsh, 5/16 24UNF-3A, 11 (mtg hdw) MS16996-32 (96906).	ea	4	*	*	*	*	*	*	*	B-3	6
C	PA-FZ-Z	5310-974-6623	WASHER: Lock split hlcl r lkg, cres, psvt fnsh, 0.151 id, 0.239 od, 0.031 thk, 5/16 blt size (mtg hdw) MS35338-140 (96906).	ea	4	*	*	*	*	*	*	*	B-3	7
	XA-		MOUNT: 10513630 (19200).		1								B-3	8

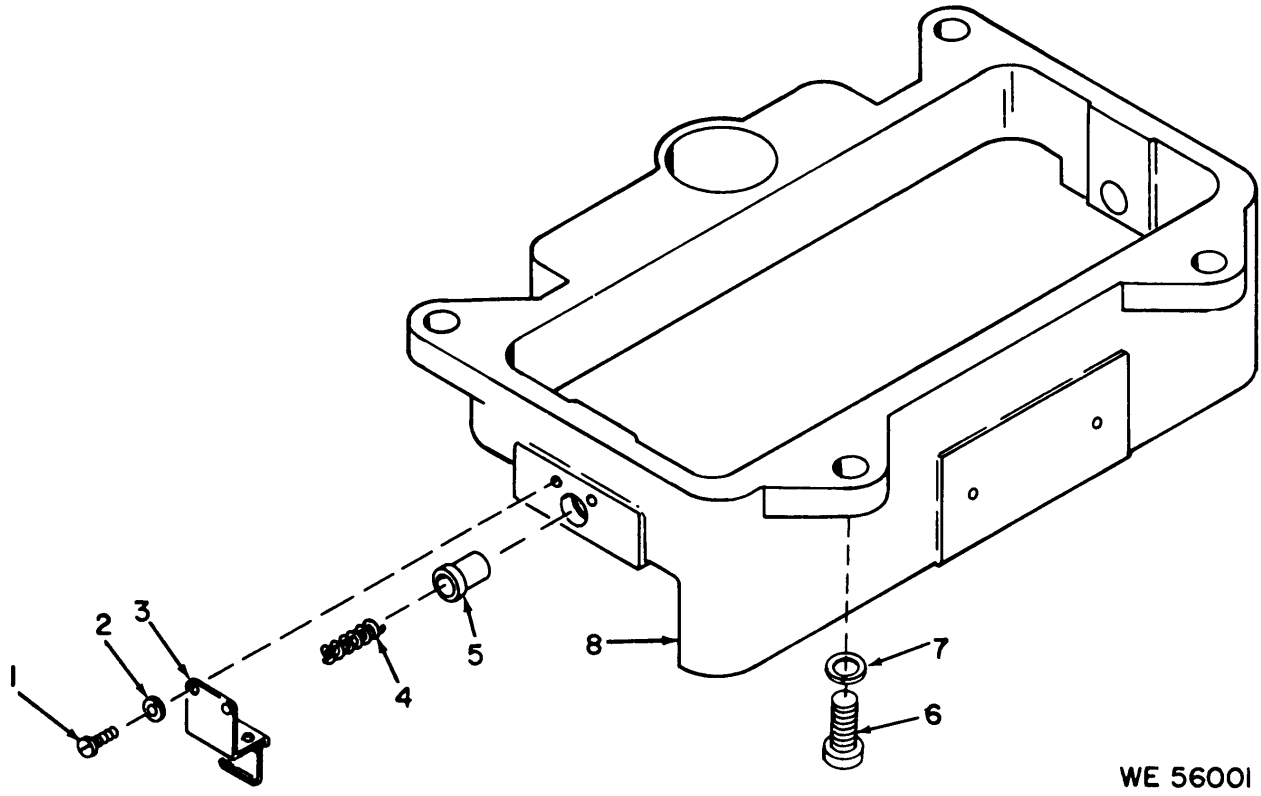


Figure B-3. Mount assembly 10513443 - exploded view.

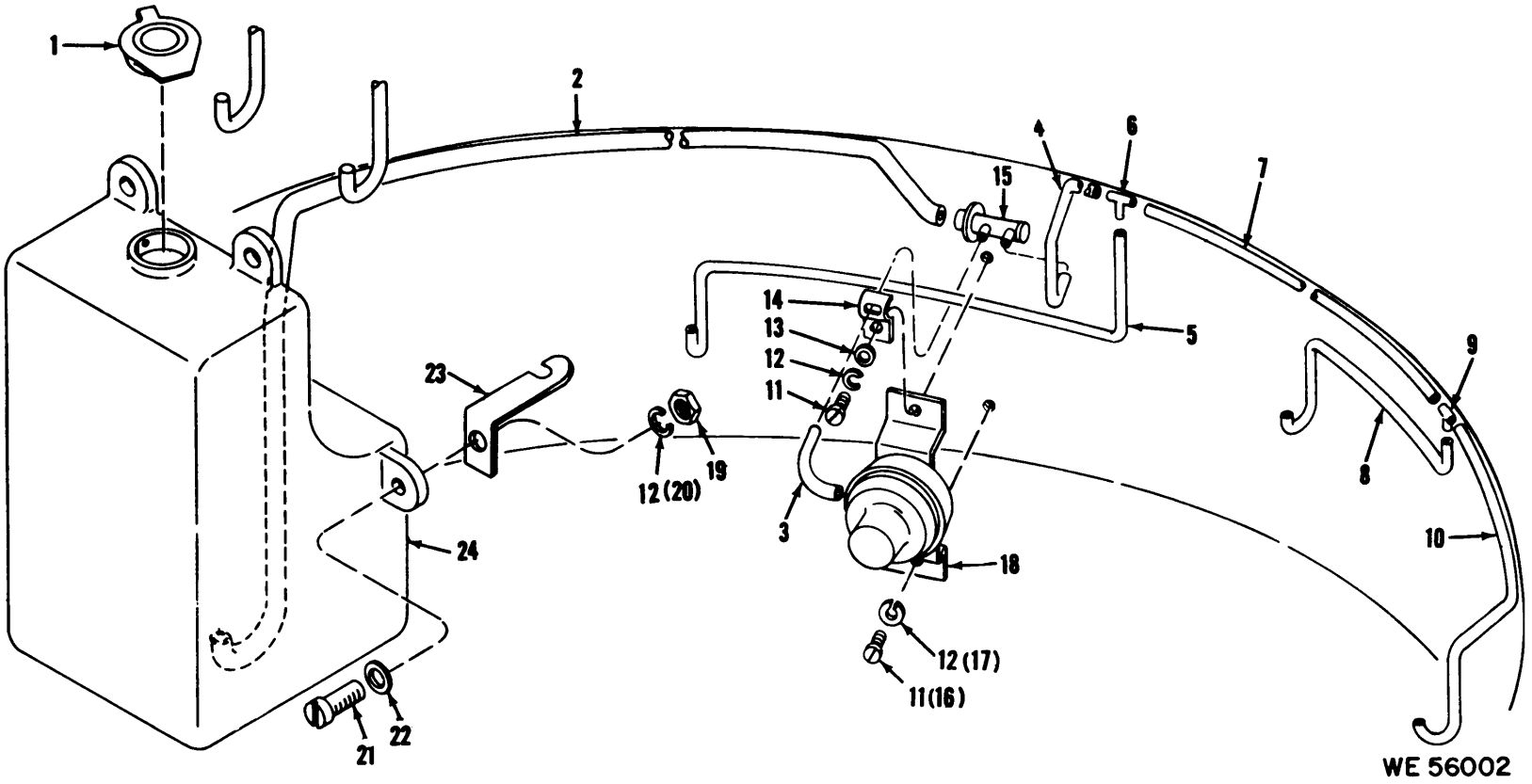


Figure B-4. Washer, pump, and reservoir assembly 8589793 - exploded view.

Section II. REPAIR PARTS LIST

Actn ch code	(1) SMR code	(2) Federal stk number	(3) Description Ref. No. & FSCM	(4) Unit of meas	(5) Qty inc. in unit	(6) 30-Day DS maint alw (a) 1-20	(6) (b) 21-50	(6) (c) 51-100	(7) 30-Day GS maint alw (a) 1-20	(7) (b) 21-50	(7) (c) 51-100	(8) Dep maint alw per 100 equip	(9) Illust (a) Fig. No.	(9) (b) Itm No.
			WASHER, PUMP, AND RESER- VOIR ASSEMBLY 8589793											
	XA		CAP: Reservoir 8589803 (19200).		1								B-4	1
	XA		TUBING: Rubber 8589761-16 (19200).		1								B-4	2
	XA		TUBING: Rubber 8589761-14 (19200).		1								B-4	3
	XA		TUBING: Rubber 8589761-12 (19200).		1								B-4	4
	XA		TUBING: Rubber 8589761-10 (19200).		1								B-4	5
C	PA-FZ-Z	4730-905-9796	TEE: Hose 10513618 (19200).	ea	1	*	*	*	*	*	*	*	B-4	6
	XA		TUBING: Rubber 8589761-11 (19200).		1								B-4	7
	XA		TUBING: Rubber 8589761-9 (19200).		1								B-4	8
N	PA-OZ-Z	4730-115-3741	TEE: Pipe 10542166 (19200).	ea	1	*	*	*	*	*	*	*	B-4	9
	XA		TUBING: Rubber 8589761-3 (19200).		1								B-4	10
C	PA-OZ-Z	5305-052-9329	SCREW CAP: Socket Head hex skt, cres, No. 1/4-28UNF- 3A, 1/2 1 (mtg hdw) MS16996-21 (96906).	ea	2	*	*	*	*	*	*	*	B-4	11
C	PA-FZ-Z	5310-933-8121	WASHER: Lock split hlcl, r lkg, cres psvt, 0.489 od, 0.057 thk, 1/4 blt size (mtg hdw) MS35338-139 (96906).	ea	3	*	*	*	*	*	*	*	B-4	12
C	PA-FZ-Z	5310-582-5677	WASHER: Flat rnd, 1/4 scr size (mtg hdw) MS15795-810 (96906).	ea	2	*	*	*	*	*	*	*	B4	13
	PA-OZ-Z		CLIP: 8589915 (19200).	ea	1	*	*	*	*	*	*	*	B-4	14
N	PA-OZ-Z	4820-836-7555	CHECK VALVE ASSEMBLY: 8589808 (19200).	ea	1	*	*	*	*	*	*	*	B-4	15

Section II. REPAIR PARTS LIST

Actn ch code	(1) SMR code	(2) Federal stk number	(3) Description Ref. No. & FSCM	(4) Unit of meas	(5) Qty inc. in unit	(6) 30-Day DS maint alw (a) 1-20	(6) (b) 21-50	(6) (c) 51-100	(7) 30-Day GS maint alw (a) 1-20	(7) (b) 21-50	(7) (c) 51-100	(8) Dep maint alw per 100 equip	(9) Illust (a) Fig. No.	(9) (b) Itm No.
			WASHER, PUMP, AND RESERVOIR ASSEMBLY 8589793-Continued											
C	PA-OZ-Z	1260-944-5127	PUMP: Washer 8589809 (19200).	ea	1	*	*	*	*	*	*	*	5	18
N	PA-OZ-Z	5310-768-0319	NUT: Self-locking No. 1/4-28 UNF-2B, 7/16 w MS51968-2 (96906).	ea	1	*	*	*	*	*	*	*	5	19
C	PA-FZ-Z	5305-958-7667	SCREW CAP: Socket head hex skt, cres, No. 1/4-28UNF-3A, 3/4 l (mtg hdw) MS16996-23 (96906).	ea	3	*	*	*	*	*	*	*	5	21
	XA		BRACKET: 10542244 (19200).		1								5	23
C	PA-OZ-Z	1260-944-5128	RESERVOIR ASSEMBLY: 10516821 (19200).	ea	1	*	*	*	*	*	*	*	5	24

Section II. REPAIR PARTS LIST

Actn ch code	(1) SMR code	(2) Federal stk number	(3) Description Ref. No. & FSCM	(4) Unit of meas	(5) Qty inc. in unit	(6) 30-Day DS maint alw (a) 1-20	(6) (b) 21-50	(6) (c) 51-100	(7) 30-Day GS maint alw (a) 1-20	(7) (b) 21-50	(7) (c) 51-100	(8) Dep maint alw per 100 equip	(9) Illust (a) Fig. No.	(9) (b) Itm No.
			WIPER ASSEMBLY 10549760											
C	PA-FZ-Z	5305-225-9443	SCREW: Cap, socket head hex cres, psvt fnsh, 5/16-24UNF-3A, 11 (mtg hdw) MS16996-32 (96906).	ea	2	*	*	*	*	*	*	*	B-5	1
C	PA-FZ-Z	5310-974-6623	WASHER: Lock split hlcl lt, r lkg, cres, psvt, 0.575 od, 0.066 thk, No. 5/16 scr size (mtg hdw) MS35338-140 (96906).	ea	2	*	*	*	*	*	*	*	B-5	2
N	PA-OZ-Z	5305-068-8139	SETSCREW: hex skt, 1/2 op, cres, psvt fnsh No. 4-48UNF-3A, 3/16 1 MS510474 (96906).	ea	1	*	*	*	*	*	*	*	B-5	3
C	PA-OO-Z	6650-924-5875	WIPER BLADE ASSEMBLY: 10516816 (19200).	ea	1	*	*	*	*	*	*	*	B-5	4
			XA SCREW: Machine MS51959-2 (96906).		1								B-5	5
	XA		SCREW: Machine MS51959-3 (96906).		5								B-5	6
	XA		HOUSING ASSEMBLY: 10549752 (19200).		1								B-5	7
	XA		SUPPORT ASSEMBLY: 10549753 (19200).		1								B-5	9
	XA		SCREW: Machine MS51957-36 (96906).		3								B-5	10
C	PA-FZ-Z	5310-929-6395	WASHER: Lock split hlcl lt, r lkg, cres, psvt fnsh 0.141 id, 0.250 od, 0.031 thk, No. 6 scr size MS35338-136 (96906).	ea		*	*	*	*	*	*	*	B-5	11
	XA		SCREW: Machine MS51957-31 (96906).		2								B-5	12
	XA		HOUSING ASSEMBLY: 8589875 (19200).		1								B-5	14
	XA		COVER ASSEMBLY: 10549762 (19200).		1								B-5	15

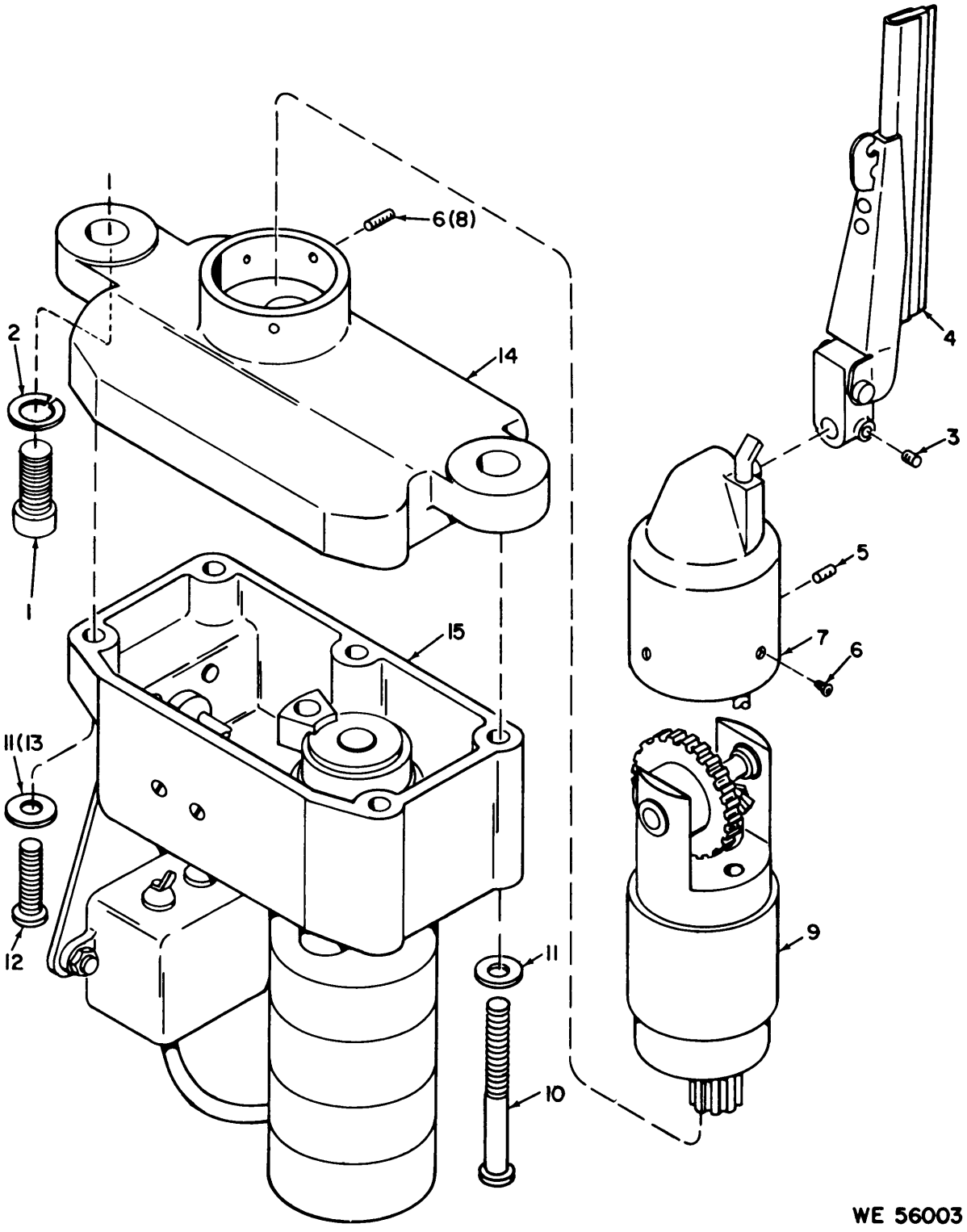


Figure B-5. Wiper assembly 10549760-partial - exploded view.

Section II. REPAIR PARTS LIST

Actn ch code	(1) SMR code	(2) Federal stk number	(3) Description Ref. No. & FSCM	(4) Unit of meas	(5) Qty inc. in unit	(6) 30-Day DS maint alw (a) 1-20	(6) (b) 21-50	(6) (c) 51-100	(7) 30-Day GS maint alw (a) 1-20	(7) (b) 21-50	(7) (c) 51-100	(8) Dep maint alw per 100 equip	(9) Illust (a) Fig. No.	(9) (b) Itm No.
			WIPER BLADE ASSEMBLY 10516816											
C	PA-OZ-Z	6650-924-5876	WIPER BLADE: Periscope 8589833 (19200)	ea	1	*	*	*	*	*	*	*	B-6	1
	XA		RING: Retaining MS16624-1012 (96906).		1								B-6	2
	XA		PIN: Grooved headed 10513634 (19200).		1								B-6	3
	XA		ARM ASSEMBLY: 8589905 (19200).		1								B-6	4
	XA		PIVOT: 8589861 (19200).		1								B-6	5

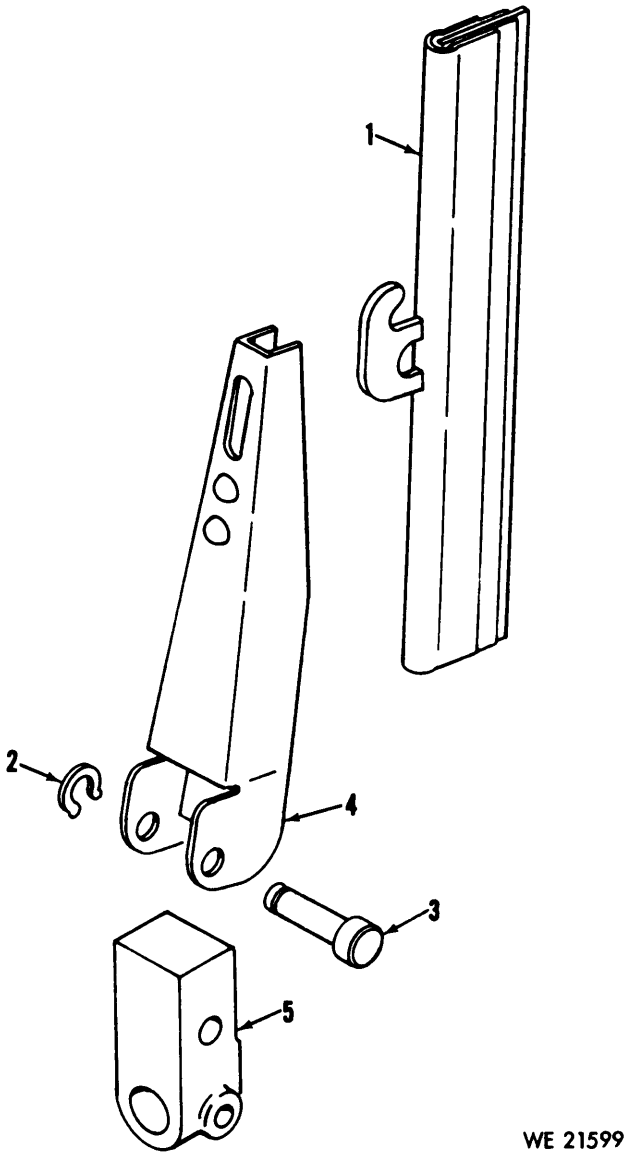


Figure B-6. Wiper blade assembly 10516816 - exploded view.

Section II. REPAIR PARTS LIST

Actn ch code	(1) SMR code	(2) Federal stk number	(3) Description Ref. No. & FSCM	(4) Unit of meas	(5) Qty inc. in unit	(6) 30-Day DS maint alw (a) 1-20	(6) (b) 21-50	(6) (c) 51-100	(7) 30-Day GS maint alw (a) 1-20	(7) (b) 21-50	(7) (c) 51-100	(8) Dep maint alw per 100 equip	(9) Illust (a) Fig. No.	(9) (b) Itm No.
			HOUSING ASSEMBLY 10549752											
N	PA-FZZ	5305-843-2841	SETSCREW: No. 2-56UNC-3A, 3/321 MS51021-1 (96906).	ea	1	*	*	*	*	*	*	*	B-7	1
	XA		SEAT: 8620836 (19200).		1								B-7	2
	XA		RETAINER: 10513644 (19200).		1								B-7	3
C	PA-FZ-Z	5330-905-9175	PACKING: Preformed synth rbr, 0.144 id, 0.070 thk 8589770 (19200).	ea	1	*	*	*	*	*	*	*	B-7	4
	XA		BEARING: Ball, annular 8589769 (19200).		2								B-7	5
	XA		GEAR: 10549758 (19200).		1								B-7	6
	XA		TUBE: 8589925 (19200).		1								B-7	8
	XA		HOUSING: 10549739 (19200).		1								B-7	9
N	PA-FZ-Z	5315-817-0889	PIN: Straight, headless MS16555-601 (96906).	ea	1							*	B-7	10

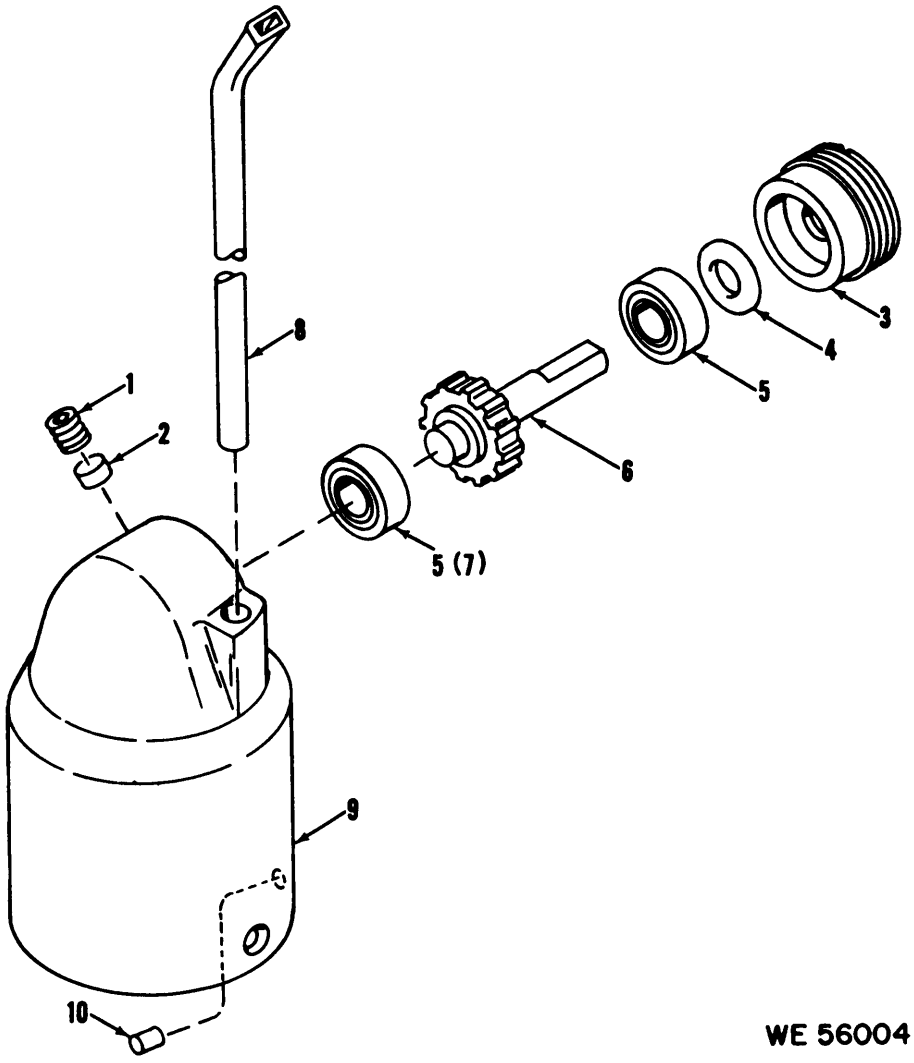


Figure B-7. Housing assembly 10549752 - exploded view.

Section II. REPAIR PARTS LIST

Actn ch code	(1) SMR code	(2) Federal stk number	(3) Description Ref. No. & FSCM	(4) Unit of meas	(5) Qty inc. in unit	(6) 30-Day DS maint alw (a) 1-20	(6) (b) 21-50	(6) (c) 51-100	(7) 30-Day GS maint alw (a) 1-20	(7) (b) 21-50	(7) (c) 51-100	(8) Dep maint alw per 100 equip	(9) Illust (a) Fig. No.	(9) (b) Itm No.
			SUPPORT ASSEMBLY 10549753											
	XA		PIN: Tapered, plain MS24692-3 (96906)		1								B-8	1
	XA		BEARING: Ball, annular 8589768 (19200). ’		4								B-8	2
	XA		SHAFT: 10513477 (19200).		1								B-8	3
	XA		GEAR: 10549750 (19200).		1								B-8	4
N	PA-FZ-Z	3020-783-7659	GEAR: 10513648 (19200).	ea	2	*	*	*	*	*	*	*	B-8	5
	XA		PIN: 10516178-4 (19200).		2								B-8	7
	XA		GEAR: 10513646 (19200).		1								B-8	8
	XA		SHAFT: 10549737 (19200).		1								B-8	12
	XA		SUPPORT: 10513476 (19200).		1								B-8	14

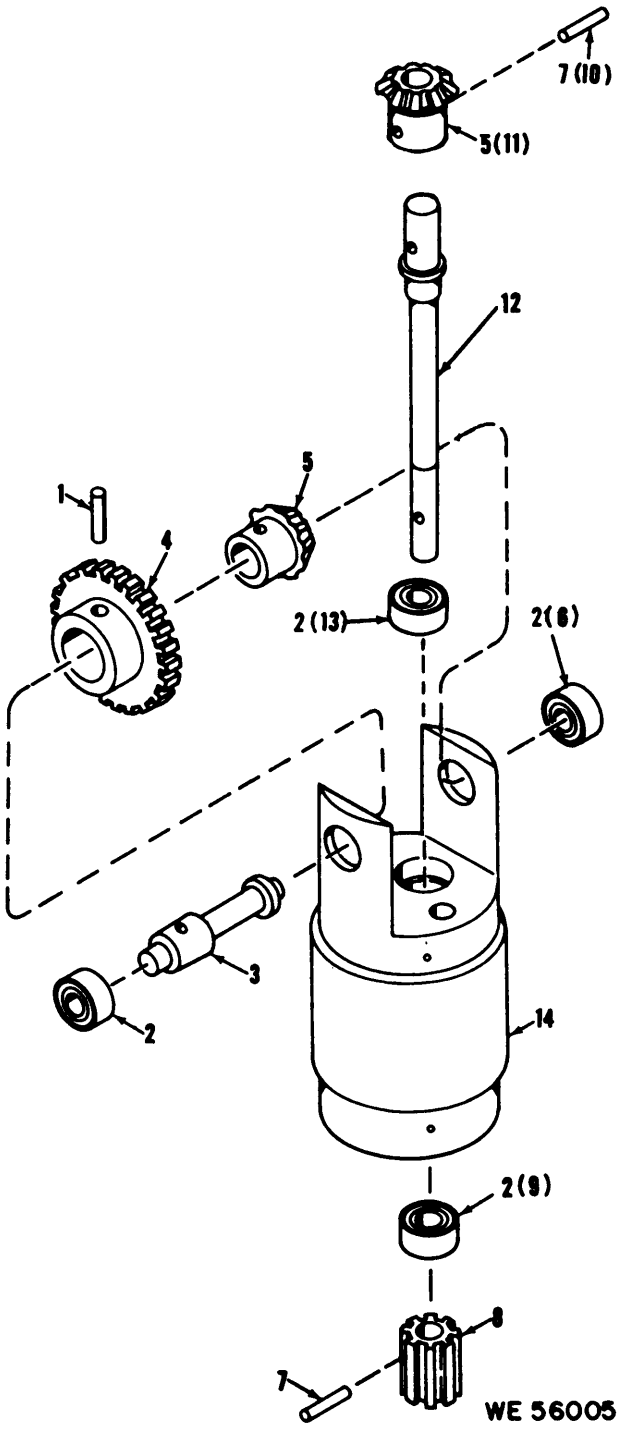


Figure B-8. Support assembly 10549753 - exploded view.

Section II. REPAIR PARTS LIST

Actn ch code	(1) SMR code	(2) Federal stk number	(3) Description Ref. No. & FSCM	(4) Unit of meas	(5) Qty inc. in unit	(6) 30-Day DS maint alw (a) 1-20	(6) (b) 21-50	(6) (c) 51-100	(7) 30-Day GS maint alw (a) 1-20	(7) (b) 21-50	(7) (c) 51-100	(8) Dep maint alw per 100 equip	(9) Illust (a) Fig. No.	(9) (b) Itm No.
			HOUSING ASSEMBLY 8589875											
C	PA-FZZ	5305-054-5648	SCREW: Machine pnh, cross-rec, cres, psvt fnsh No. 4-40UNC-2A, 5/16 1 MS51957-14 (96906).	ea	3	*	*	*	*	*	*	*	B-9	1
C	PA-FZ-Z	5310-933-8118	WASHER: Lock split hlcl lt, r lkg, cres, psvt fnsh, 0.204 od, 0.025 thk, No. 4 scr size MS35338-135 (96906).	ea	3								B-8	2
	XA		SUPPORT: 8589870 (19200).		1								B-9	3
N	PA-FZ-Z	5315-702-9650	PIN: Straight, headless 1/16x1/4 1 MS16555-602 (96906).	ea	2	*	*	*	*	*	*	*	B-9	4
	XA		BEARING: Ball, annular 8589883 (19200).		1								B-9	5
	XA		PIVOT: Pinned 10516818 (19200).		1								B-9	6
	XA		PIN: 10516178-2 (19200).		1								B-9	7
	XA		PIVOT: 8589866 (19200).		1								B-9	8
	XA		SHAFT: 8589867 (19200).		1								B-9	9
	XA		DRIVER: Pinned 10516817 (19200).		1								B-9	10
N	PA-FZ-Z	5315-806-7039	PIN: Straight, headless MS16555-604 (96906).	ea	1	*	*	*	*	*	*	*	B-9	11
	XA		GEAR: 8589906 (19200).		1								B-9	12
	XA		DRIVER: 8589868 (19200).		1								B-9	13
	XA		BEARING: Ball, annular 8589768 (19200).		1								B-9	14
N	PA-FZ-Z	5315-817-0889	PIN: Straight, headless MS16555-601 (96906).	ea	1	*	*	*	*	*	*	*	B-9	15
	XA		HOUSING: 8589873 (19200).		1								B-9	16

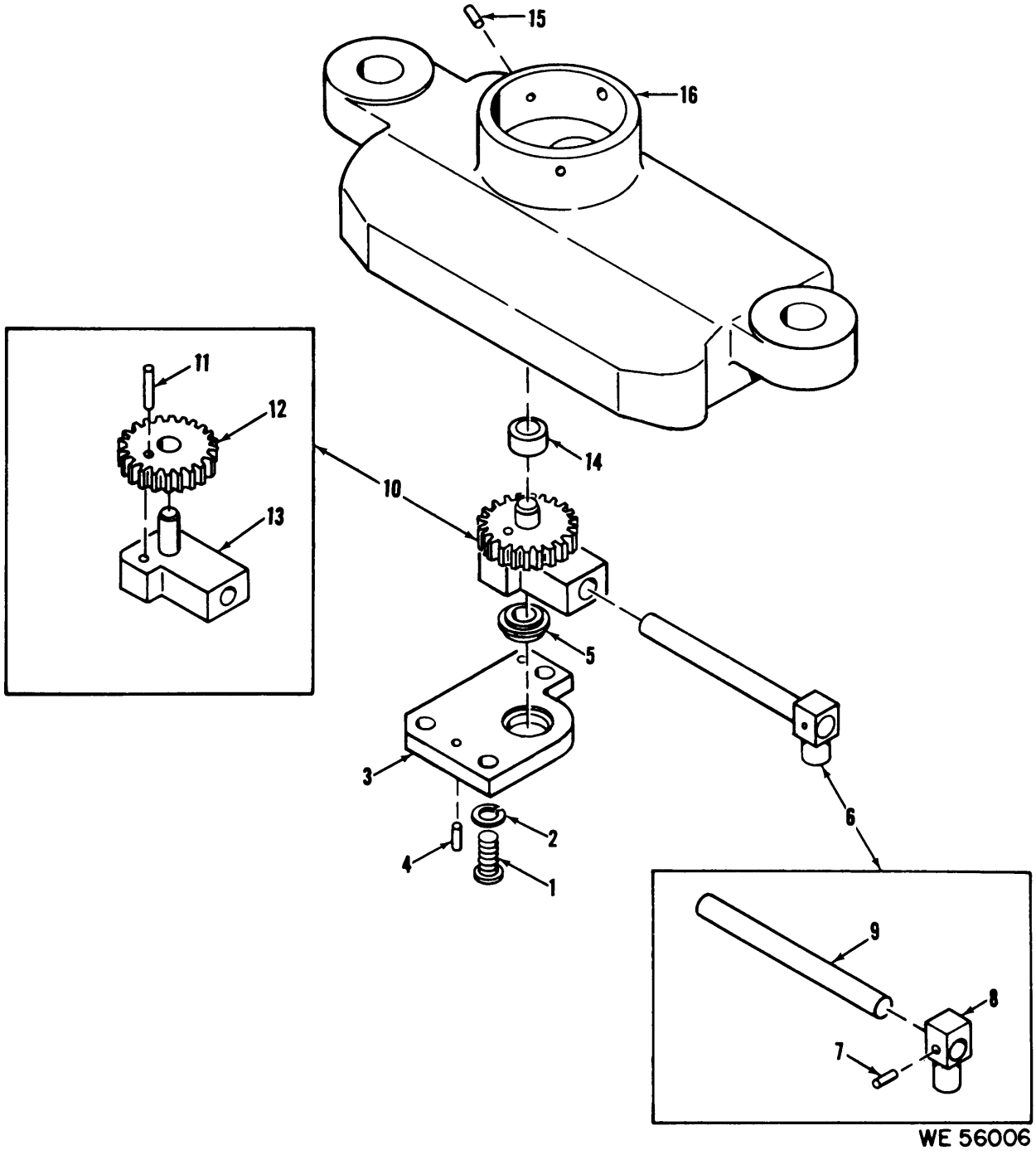


Figure B-9. Housing assembly 8589875 - exploded view.

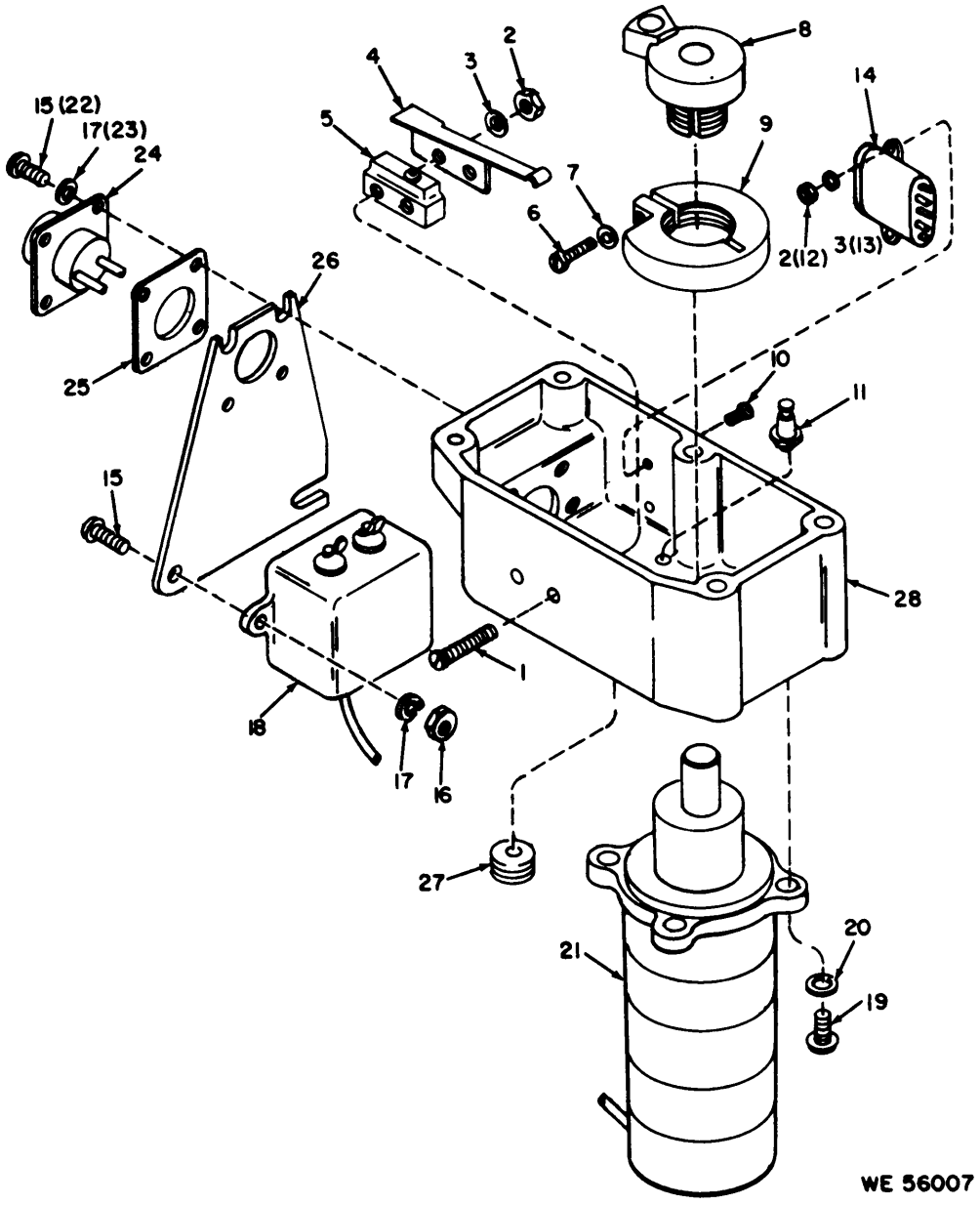


Figure B-10. Cover assembly 10549762 - exploded view.

Section II. REPAIR PARTS LIST

Actn ch code	(1) SMR code	(2) Federal stk number	(3) Description Ref. No. & FSCM	(4) Unit of meas	(5) Qty inc. in unit	(6) 30-Day DS maint alw (a) 1-20	(6) (b) 21-50	(6) (c) 51-100	(7) 30-Day GS maint alw (a) 1-20	(7) (b) 21-50	(7) (c) 51-100	(8) Dep maint alw per 100 equip	(9) Illust (a) Fig. No.	(9) (b) Itm No.
			COVER ASSEMBLY 10549762											
C	PA-FZ-Z	5305-054-5642	SCREW: Machine pnh, cross-rec, cres, psvt fnsh, No. 2-56UNC-2A, 5/8 1 MS51957-8 (96906).	ea	2	*	*	*	*	*	*	*	B-10	1
C	PA-FZ-Z	5310-938-2013	NUT: Plain, hexagon mscr cres, psvt fnsh No. 2-56UNC-2B, 3/16 w MS35649-224 (96906).	ea	4	*	*	*	*	*	*	*	B-10	2
C	PA-FZ-Z	5310-543-4652	WASHER: Lock fl intl t, cres, psvt fnsh, 0.200 od, 0.015 thk, No. 2 blt size MS35333-69 (96906).	ea	4	*	*	*	*	*	*	*	B-10	3
C	PA-FZ-Z	6650-924-5877	ADAPTER: Switch actuator stl, 7/32 h, 21/23 w, 1 11/16 1 8589869 (19200).	ea	1	*	*	*	*	*	*	*	B-10	4
C	PA-FZ-Z	5930-583-6582	SWITCH: Sensitive plstc, 250 v. 5 amp, 23/64 h, 1/4 w, 25/32 1 8602590 (19200).	ea	1	*	*	*	*	*	*	*	B-10	5
N	PA-FZ-Z	5305-068-5412	SCREW: Cap, socket head hex hd, cres, psvt fnsh, No. 2-56UNC-3A, 1/2 1 MS16995-4 (96906).	ea	1	*	*	*	*	*	*	*	B-10	6
C	PA-FZ-Z	5310-928-2690	WASHER: Lock split hlcl, lt, r lkg, cres, psvt fnsh, 0.094 id, 0.172 od, 0.020 thk, No. 2 scr size MS35338-134 (96906).	ea	1	*	*	*	*	*	*	*	B-10	7
8	XA		RANK: 10549745 (19200).			1								B-10
	XZ		CLAMP: 10513447 (19200).		1								B-10	9
C	PA-FZ-Z	5940-539-0511	TERMINAL: Stud 10513438 (19200).	ea	1	*	*	*	*	*	*	*	B-10	10
N	PA-FZ-Z	5305-054-5638	SCREW: Machine pnh, cross-rec, cres, psvt fnsh, No. 2-56UNC-2A, 5/161 i 40 MS51957-4 (96906). o	ea	2	*	*	*	*	*	*	*	B-10	11

Section II. REPAIR PARTS LIST

Actn ch code	(1) SMR code	(2) Federal stk number	(3) Description Ref. No. & FSCM	(4) Unit of meas	(5) Qty inc. in unit	(6) 30-Day DS maint alw (a) 1-20	(6) (b) 21-50	(6) (c) 51-100	(7) 30-Day GS maint alw (a) 1-20	(7) (b) 21-50	(7) (c) 51-100	(8) Dep maint alw per 100 equip	(9) Illust (a) Fig. No.	(9) (b) Itm No.
			COVER ASSEMBLY 10549762- Continued											
N	PA-FZ-Z	5945-872-0571	RELAY: Armature 10549795 (19200).	ea	1	*	*	*	*		*	*	B-10	14
C	PA-FZ-Z	5305-054-5648	SCREW: Machine phh, cross-rec, cres, psvt fnsh, No. 4-40UNC-2A, 5/16 1 MS51957-14 (96906).	ea	*	*	*	*	*	*	*	*	B-10	15
C	PA-FZ-Z	5310-934-9748	NUT: Plain, hexagon cres, psvt fnsh, No. 4-40UNC-2B MS35649-244 (96906).	ea	2	*	*	*	*	*	*	*	B-10	16
C	PA-FZ-Z	5310-933-8118	WASHER: Lock split hlcl, lt, r lkg, cres, psvt fnsh 0.204 od, 0.025 thk, No. 4 scr size MS35338-135 (96906).	ea	6	*	*	*	*	*	*	*	B-10	17
	XA		NOISE SUPPRESSION FILTER: (furnished with Motor, 3010-906-6317).		1								B-10	18
C	PA-FZ-Z	5305-054-6651	SCREW: Machine pnh, cross-rec, cres, psvt fnsh No. 6-32UNC-2A, 5/16 1 MS51957-27 (96906).	ea	4	*	*	*	*	*	*	*	B-10	19
C	PA-FZ-Z	5310-929-6395	WASHER: Lock split, hlcl, lt, r lkg, cres, psvt fnsh 0.141 ID, 0.250 od, 0.031 thk, No. 6 scr size MS35338-136 (96906).	ea	4	*	*	*	*	*	*	*	B-10	20
C	PA-FZ-Z	3010-906-6317	GEARCASE: Motor 10513631 (19200).	ea	1	*	*	*	*	*	*	*	B-10	21
C	PA-FZ-Z	5935-846-2175	CONNECTOR: Receptacle electrical MS3112-E-8-4P (96906).	ea	1	*	*	*	*	*	*	*	B-10	24
C	PA-FZ-Z	5305-905-9174	GASKET: synth rbr, 0.031 thk, 0.875 w, oa, 0.875 1, 4 blt holes MS51007-1 (96906).	ea	1	*	*	*	*	*	*	*	B-10	25
	XA		PLATE: 8589882 (19200).		1								B-10	26

C	PA-FZ-Z	5325-286-6047	GROMMET: rbr, 1/8 id MS35489-1 (96906).	ea	1	*	*	*	*	*	*	*	B-10	27
	XA		COVER: 8589874 (19200).		1								B-10	28

Section II. REPAIR PARTS LIST

Actn ch code	(1) SMR code	(2) Federal stk number	(3) Description Ref. No. & FSCM	(4) Unit of meas	(5) Qty inc. in unit	(6) 30-Day DS maint alw (a) 1-20	(6) (b) 21-50	(6) (c) 51-100	(7) 30-Day GS maint alw (a) 1-20	(7) (b) 21-50	(7) (c) 51-100	(8) Dep maint alw per 100 equip	(9) Illust (a) Fig. No.	(9) (b) Itm No.
			SEAL ASSEMBLY 10549727											
N	PA-OZ-Z	5305-267-8952	SCREW: Cap, hexagon head cres, psvt fnsh, No. 1/4-28UNF-2A, 1/21 MS90727-3 (96906).	ea	11	*	*	*	*	*	*	*	B-11	1
	XA		PLATE: 10549726 (19200)		1								B-11	2
	XA		SEAL: 10513459 (19200).		1								B-11	3

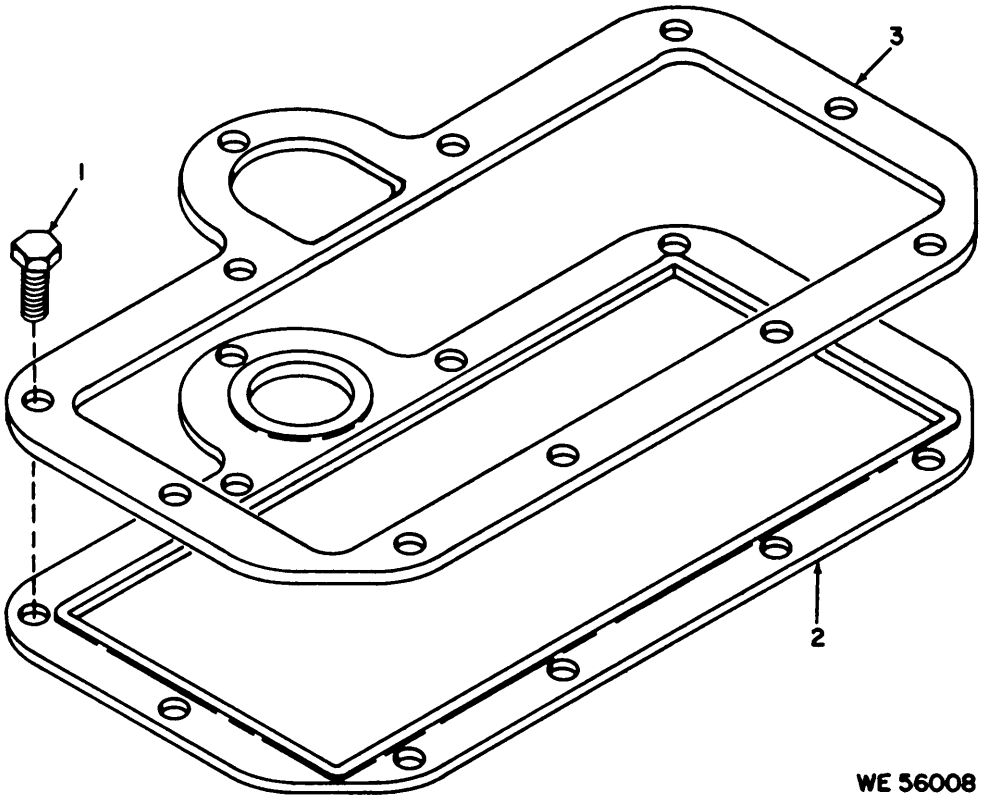


Figure B-11. Seal assembly 10549727 - exploded view.

Section II. REPAIR PARTS LIST

Actn ch code	(1) SMR code	(2) Federal stk number	(3) Description Ref. No. & FSCM	(4) Unit of meas	(5) Qty inc. in unit	(6) 30-Day DS maint alw (a) 1-20	(6) (b) 21-50	(6) (c) 51-100	(7) 30-Day GS maint alw (a) 1-20	(7) (b) 21-50	(7) (c) 51-100	(8) Dep maint alw per 100 equip	(9) Illust (a) Fig. No.	(9) (b) Itm No.
			TOOLS AND EQUIPMENT EQUIPMENT											
C	PA-OF-F	6650-906-7944	MOUNT: Telescope assembly 10513443 (19200).	ea	3	*	*	*	*	*	*	*	B-12	1
N	PA-OZ-Z	6650-059-3675	SEAL ASSEMBLY: 10549727 (19200).	ea	3	*	*	*	*	*	*	*	B-12	2
		AO	WASHER, PUMP, AND RESER-VOIR ASSEMBLY: 8589793 (19200).	ea	1								B-12	3
N	PA-FF-F	6650-135-9044	WIPER ASSEMBLY: 10549760 (19200).	ea	1	*	*	*	*	*	*	*	B-12	4

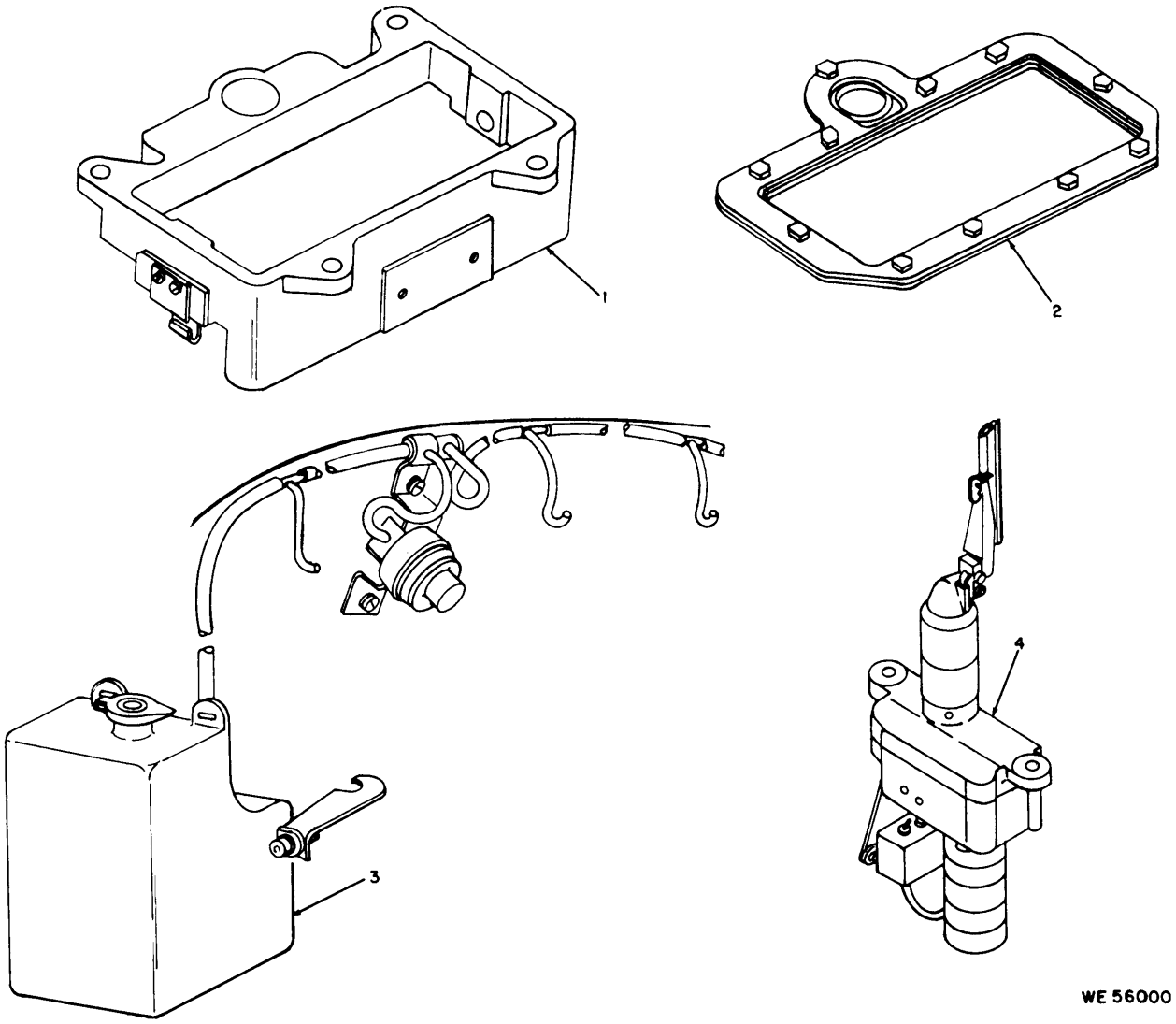


Figure B-12. Tools and equipment.

Section IV. FEDERAL STOCK NUMBER AND REFERENCE NUMBER INDEX

Federal stock number cross-reference to figure number and item number

STOCK NUMBER	*FIG.*	*ITEM*
1240-191-9213	2	6
1240-464-4792	2	10
1260-944-5127	5	18
1260-944-5128	5	24
2640-060-3543	2	8
2640-507-9260	2	7
3010-906-6317	11	21
3020-783-7659	9	5
4730-115-3741	5	9
4730-684-4401	2	11
4730-905-9796	5	6
4820-836-7555	5	15
5305-052-9329	5	11
5305-054-5638	11	11
5305-054-5642	11	1
5305-054-5648	10	1
5305-054-5648	11	15
5305-054-6651	2	4
5305-054-6651	11	19
5305-057-0523	4	1
5305-068-5412	11	6
5305-068-8139	6	3
5305-225-9443	4	6
5305-225-9443	6	1
5305-267-8952	12	1
5305-843-2841	8	1
5305-905-9174	11	25
5305-958-7667	5	21
5310-543-4652	11	3
5310-582-5677	5	13
5310-768-0319	5	19
5310-928-2690	11	7
5310-929-6395	2	5
5310-929-6395	4	2
5310-929-6395	6	11
5310-929-6395	11	20
5310-933-8118	10	2
5310-933-8118	11	17
5310-933-8121	5	12
5310-934-9748	11	16
5310-938-2013	11	2
5310-974-6623	4	7
5310-974-6623	6	2
5315-702-9650	10	4
5315-806-7039	10	11
5315-817-0889	8	10
5315-817-0889	10	15
5325-286-6047	11	27
5330-683-9573	2	12
5330-905-9175	8	4
5340-111-5289	4	3
5340-903-7157	4	5
5340-912-5826	4	4
5930-583-6582	11	5
5935-846-2175	11	24
5940-539-0511	11	10
5945-872-0571	11	14
6650-059-3675	3	2
6650-135-9044	3	4
6650-902-9741	2	3
6650-906-7941	1	1
6650-906-7944	3	1
6650-924-5875	6	4
6650-924-5876	7	1
6650-924-5877	11	4

Reference number cross-reference to manufacturer's code, figure number, and item number

Reference No.	*FSCM*	*Figure No.*	*Item No.*
MS15795-810	96906	5	13
MS16565-601	96906	8	10
MS16555-601	96906	10	15
MS16555-602	96906	10	4
MS16555-604	96906	10	11
MS16624-1012	96906	7	2
MS16995-4	96906	11	6
MS16996-21	96906	5	11
MS16996-23	96906	5	21
MS16996-32	96906	4	6
MS16996-32	96906	6	1
MS24692-3	96906	9	1
MS3112-E-8-4P	96906	11	24
MS35333-69	96906	11	3
MS35338-134	96906	2	16
MS35338-134	96906	11	7
MS35338-135	96906	10	2
MS35338-135	96906	11	17
MS35338-136	96906	2	5
MS35338-136	96906	4	2
MS35338-136	96906	6	11
MS35338-136	96906	11	20
MS35338-139	96906	5	12
MS35338-140	96906	4	7
MS35338-140	96906	6	2
MS35489-1	96906	11	27
MS35649-224	96906	11	2
MS35649-244	96906	11	16
MS51007-1	96906	11	25
MS51021-1	96906	8	1
MS51047-8	96906	6	3
MS51377-2	96906	2	8

Reference No.	FSCM	Figure No.	Item No.
MS51957-14	96906	10	1
MS51957-14	96906	11	15
MS51957-2	96906	1	2
MS51957-2	96906	2	15
MS51957-27	96906	2	4
MS51957-27	96906	11	19
MS51957-31	96906	6	12
MS51957-36	96906	6	10
MS51957-4	96906	11	11
MS51957-8	96906	11	1
MS51958-27	96906	4	1
MS51959-1	96906	2	1
MS51959-2	96906	6	5
MS51959-3	96906	6	6
MS51968-2	96906	5	19
MS90727-3	96906	12	1
10513438	19200	11	10
10513443	19200	3	1
10513447	19200	11	9
10513456	19200	4	4
10513473	19200	4	5
10513476	19200	9	14
10513477	19200	9	3
10513617	19200	2	19
10513618	19200	5	6
10513622-2		1	3
10513622-2	19200	2	14
10513623	19200	2	2
10513625	19200	1	1
10513626	19200	1	8
10513627	19200	1	7
10513628	19200	1	5
10513630	19200	4	8
10513631	19200	11	21
10513634	19200	7	3
10513644	19200	8	3
10513646	19200	9	8
10513648	19200	9	5
10516029-3	19200	2	6
10516178-2	19200	10	7
10516178-4	19200	9	7
10516567	19200	2	10
10516816	19200	6	4
10516817	19200	10	10
10516818	19200	10	6
10516821	19200	5	24
10542040	19200	4	3
10542166	19200	5	9
10542244	19200	5	23
10549727	19200	3	2
10549737	19200	9	12
10549739	19200	8	9
10549745	19200	11	8
10549750	19200	9	4
10549752	19200	6	7
10549753	19200	6	9
10549758	19200	8	6
10549760	19200	3	4
10549762	19200	6	15
10549795	19200	11	14
11727687	19200	2	17
8200055	19200	2	7
8574642	19200	2	12
8574881	19200	2	11
8589694	19200	2	18
8589761-10	19200	5	5
8589761-11	19200	5	7
8589761-12	19200	5	4
8589761-14	19200	5	3
8589761-16	19200	5	2
8589761-3	19200	5	10
8589761-9	19200	5	8
8589768	19200	8	5
8589768	19200	9	2
8589768	19200	10	14
8589770	19200	8	4
8589793	19200	3	3
8589803	19200	5	1
8589808	19200	5	15
8589809	19200	5	18
8589833	19200	7	1
8589861	19200	7	5
8589866	19200	10	8
8589867	19200	10	9
8589868	19200	10	13
8589869	19200	11	4
8589870	19200	10	3
8589873	19200	10	16
8589874	19200	11	28
8589875	19200	6	14
8589882	19200	11	26
8589883	19200	10	5
8589905	19200	7	4
8589906	19200	10	12
8589915	19200	5	14
8589925	19200	8	8
8599692	19200	2	3
8599693	19200	1	6
8602590	19200	11	5
8620836	19200	8	2

INDEX

	Paragraph	Page
Accident reports (*See* Report of accidents)		
Actuator:		
Inspection	6-15*b*	6-13
Installation	6-15*e*	6-13
Removal	6-15*a*	6-11
Adapter, nitrogen filling 4931-508-5453	5-11	5-4
Adjustment and test (*See* Test and adjustment)		
Armored Reconnaissance Airborne Assault Vehicle: XM551	1-*1b*	1-1
Authorized forms	1-4*a*	1-1
Ball bearings:		
Inspection	6-14*b*	6-11
Installation	6-14*c*	6-11
Disassembly	6-14*a*	6-11
Bearings, ball (*See* Ball bearings)		
Blade assembly:		
Inspection	6-13*b*	6-11
Installation	6-13*c*	6-11
Removal	6-13*a*	6-11
Catch:		
Inspection	5-8*b*	5-4
Installation	5-8*c*	5-4
Removal	5-8*a*	5-4
Characteristics, optical (*See* Optical characteristics).		
Cleaning	5-5	5-1
Comments, technical manual	1-2	1-1
Common tools and equipment	2-1	2-1
Compression spring, helical (*See* Helical compression spring)		
Data	1-6	1-5
Depot Maintenance Work Requirements (DMWR)	1-1*a*	1-1
Description of periscope:		
Body assembly	1-5*d*	1-3
General	1-5*a*	1-1
Head assembly	1-5*c*	1-1
Optical scheme	1-5*b*	1-1
Electrical receptacle connector:		
Inspection	6-18*b*	6-14
Installation	6-18*c*	6-14
Removal	6-18*a*	14
Equipment Improvement Recommendations EIR)	1-4*c*	1-1
Equipment issued with tank periscope:		
General description	6-1	6-1
Specific description	6-2	6-1
Mount assembly	6-2*a*	6-1
Seal assembly	6-2*b*	6-1
Washer, pump and reservoir assembly	6-2*e*	6-1
Wiper assembly	6-2*d*	6-1
Forms, authorized (*See* authorized forms)		
Forms, records, and reports:	1-4	1-1
Gear case motor:		
Inspection	6-19*b*	6-17
Installation	6-19	6-17
Removal	6-19*a*	6-17
General inspection of periscope	3-6	3-1
Gun, injection hydraulic 4931-508-5428	5-7*e*(1)	5-1
Helical compression spring:		
Assembly	6-5*e*	6-7
Cleaning	6-5*c*	6-6
Disassembly	6-5*a*	6-6
Inspection	6-5*b*	6-6
Lubrication	6-5*d*	6-7
Testing	6-5*f*	6-7
Helium pressure regulator (*See* Regulator; helium pressure)		
Hose assembly 4931-508-5546	5-11	5-4
Hose assembly rubber 4931-561-0713	5-11	5-4
Inspection:		
Scope	3-1	3-1
Using position	3-4	3-1
Inspection, shop	3-9	3-2
Inspection, optical components:	3-7	3-1
Body assembly	3-11*b*	3-2
Head assembly	3-11*a*	3-2
Instrument window, optical (*See* Optical instrument window)		
Machine thread plug:		
Inspection	5-10*b*	5-4
Installation	5-10*c*	5-4
Removal	5-10*a*	5-4
Maintenance allocation and parts	1-3	1-1
Maintenance, organizational (*See* Organizational maintenance)		

	Paragraph	Page
Modification Work Orders (MWO)	3-5	3-1
Motor, gear case (*See* Gear case motor).		
Mount assembly:		
General inspection	6-3*a*	6-5
Specific inspection	6-3*b*	6-5
Troubleshooting	6-4	6-5
Nitrogen filling adapter (*See* Adapter, nitrogen filling).		
Nitrogen tank (*See* Tank, nitrogen)		
Optical characteristics	1-6*a*	1-5
Optical component inspection (*See* Inspection, optical component).		
Optical instrument window:		
Assembly	5-7*e*	5-1
Cleaning	5-7*c*	5-1
Inspection	5-7*b*	5-1
Removal	5-7*a*	5-1
Repair and reclamation	5-7*d*	5-1
Organizational maintenance	4-2	4-1
Packaging and processing (*See* processing and packaging)		
Painting	5-4	5-1
Parts replacement	5-2	5-1
Processing and packaging:		
Final packaging of mount assembly and seal assembly	7-4	7-1
Final packaging of periscope	7-3	7-1
Final packaging of washer, pump and reservoir assembly and wiper assembly	7-5	7-1
General	7-1	7-1
Optical Components	7-2	7-1
Receptacle connector, electrical (*See* Electrical receptacle connector)		
Records, forms and reports (*See* Forms, records and reports)		
Regulator, helium pressure 1240-558-0922	5-11	5-4
Repair (*See* Also specific items):		
Scope	5-1	5-1
Replacement, parts (*See* Parts replacement)		
Report of accidents	1-4*b*	1-1
Reports, records and forms (*See* Forms, records and reports)		
Scope of technical manual	1-1	1-1
Sealing	3-10, 3-2, 5-5 5-11*a*(10)	
Semiconductor device:		
Installation	6-*17b*	6-14
Removal	6-17*a*	6-13
Sensitive switch:		
Inspection	6-16*b*	6-13
Installation	6-16*c*	6-13
Removal	6-16*a*	6-13
Serviceability standards	3-3	3-1
Shop inspection (*See* inspection, shop)		
Size	1-6	1-5
Special tools and equipment	2-2	2-1
Standards, serviceability (*See* Serviceability standards)		
Switch, sensitive (*See* Sensitive switch)		
Tables:		
Mount assembly troubleshooting (table 6-1)	6-4	6-6
Special tools and equipment (table 2-1)	2-2	2-1
Troubleshooting (table 4-1)	4-4	4-1
Washer, pump, and reservoir assembly troubleshooting (table6-2)	6-8	6-8
Wiper assembly troubleshooting (table 6-3)	6-12	6-10
Tank, nitrogen 6830-264-9086	5-11	5-4
Technical manual comments (*See* Comments, technical manual)		
Technique, maintenance (*See* Maintenance technique)		
Test and adjustment:		
Final test	5-11*b*	5-5
Purging and charging body assembly	5-11*a*	5-4
Test, gage assembly 4931-546-9773	5-11	5-4
Thread plug, machine (*See* Machine thread plug)		
Tools and equipment, common (*See* Common tools and equipment)		
Tools and equipment, special (*See* Special tools and equipment)		
Troubleshooting:		
Procedure	4-4	4-1
Purpose	4-1, 4-3	4-1
Valve assembly:		
Assembly	5-9d	5-4
Disassembly	5-9b	5-4
Inspection	5-9c	5-4
Installation	5-9e	5-4
Removal	5-9*a*	5-4
Washer, pump and reservoir assembly:		
General inspection	6-6*a*	6-7
Installation	6-9*c*	6-10
Performance test	6-7	6-7
Removal	6-9*a*	6-7
Specific inspection	6-6*b*, 6-9*b*	6-7
Troubleshooting	6-8	6-7
Weight	1-6b	1-5
Wiper assembly:		
General inspection	6-10*a*	6-10
Performance test	6-11	6-10
Specific inspection	6-10*b*	6-10
Troubleshooting	6-12	6-10

By Order of the Secretary of the Army:

HAROLD K. JOHNSON,
General, United States Army,
Chief of Staff.

Official:

J. C. LAMBERT,
Major General, United States Army,
The Adjutant General.

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

☆ U.S. GOVERNMENT PRINTING OFFICE : 1985 0 - 461-202 (20058)

TEAR ALONG PERFORATED LINE

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

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.

PIN: 028037-000