TECHNICAL MANUAL

ORGANIZATIONAL MAINTENANCE MANUAL

(INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)

FOR

LAUNCHER, GRENADE, SMOKE: SCREENING, RP, M243
(1040-01-059-0560)
LAUNCHER, GRENADE, SMOKE: SCREENING, RP, M257
(1040-01-070-1213)

AND

LAUNCHER, GRENADE, SMOKE: SCREENING, RP, M259
(1040-01-107-7501)

HEADQUARTERS, DEPARTMENT OF THE ARMY

FEBRUARY 1984

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

FIRST AID

For first aid information, refer to FM 21-11 (TEST)

TECHNICAL MANUAL
NO. 9-1040-267-20&P

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC, 1 February 1984

Organizational Maintenance Manual
(Including Repair Parts and Special Tools List)
for
LAUNCHER, GRENADE, SMOKE: SCREENING, RP, M243
(1040-01-0590560)
LAUNCHER, GRENADE, SMOKE: SCREENING, RP, M257
(1040-01-070-1213)
AND
LAUNCHER, GRENADE, SMOKE: SCREENING, RP, M259
(1040-01-107-7501)

Current as of April 1987 for appendix **C.**

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual direct to: Commander, US Army Armament, Munitions and Chemical Command, ATTN: AMSMC-MAS, Rock Island, IL 61299-6000. A reply will be furnished to you.

* This manual supersedes TM 3-1040-267-20&P, dated 30 December 1981.

HOW TO USE THIS MANUAL

GENERAL

When using this manual, you should know:

a. The launchers are either being prepared for installation on vehicles or have been removed for maintenance.
b. The procedures for mounting or removing this equipment from vehicles are in the vehicles' organizational maintenance manuals.
c. You must familiarize yourself with the entire maintenance procedures before beginning the maintenance task.
d. References are to pages, paragraphs, or other publications.

INDEXES

For quick access to parts of this manual, there are four indexes.

a. *Front Cover Index.* Important sections and appendixes are tabbed. Tabs are keyed to page locations.
b. Table of Contents. Lists in order all chapters, sections, and appendixes. Gives page references.
c. *Maintenance Action Precise Symptom (MAPS) List (table 2-1).* Lists launcher parts and symptoms of faults that maybe detected and isolated by troubleshooting. Refers to pages of troubleshooting table 2-2.
d. *Alphabetical Index.* Lists page numbers for each paragraph and appendix.

INTRODUCTION

Chapter 1 describes the launchers and their principles of operation.

MAINTENANCE INSTRUCTIONS

Chapter 2 covers:

a. *Service Upon Receipt.* Gives procedures for servicing launchers upon receipt.
b. *Troubleshooting.* Provides detailed illustrated procedures for troubleshooting discharger and arming firing unit.
c. *Maintenance Procedures.* Provides initial setup and detailed procedures for performing maintenance functions authorized by the maintenance allocation chart (MAC), appendix B.
d. *Preparation for Storage or Shipment.* Gives criteria for storing or shipping launchers.

APPENDIXES

The appendixes contain:

a. A list of all references used
b. The MAC
c. The RPSTL with illustrations
d. A list of expendable supplies you'll need

EXAMPLE

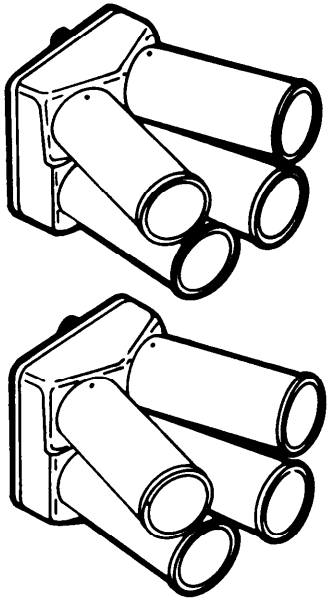
You have received a launcher or one of its major components for repair.

a. *How do you start?*
Look at the front cover of this manual. At the bottom you will find the listing "Troubleshooting," telling you to go to page 2-5. Below the page number is a black tab or bleed mark. A corresponding black mark is located on page 2-5.

b. *What symptom does your launcher have?*
Look at the Maintenance Action Precise Symptom (MAPS) List in table 2-1. If, for example, the discharger won't fire, the MAPS List refers you to Malfunction 1 in Table 2-2, Troubleshooting Procedures.

c. How do you fix a problem?
Follow the instructions in the troubleshooting table. The readings you get on your multi meter will help you to find the fault. If you get a faulty reading while doing a step, the instructions under *corrective action* tell you what maintenance procedure to follow and the paragraph number. Follow the procedures until the problem is fixed.

d. *What supplies and equipment will you need?*
Go to the alphabetical index in the back of the manual. Look for the major component you are going to fix, for example, *discharger maintenance instructions* which refers you to page 2-14. There you will find a list of test equipment, tools, and materials and mandatory parts that you will need.

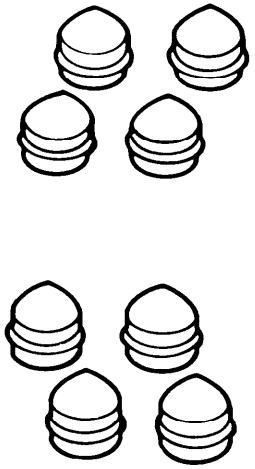


DISCHARGER, SMOKE: GRENADE

M243 LAUNCHER

M257 LAUNCHER

M259 LAUNCHER

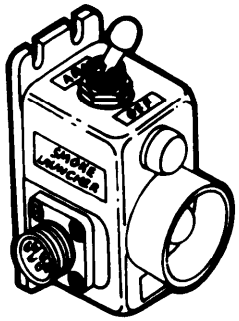


CAP-PLUG, PROTECTIVE, DUST AND MOISTURE SEAL: DISCHARGER

M243 LAUNCHER

M257 LAUNCHER

M259 LAUNCHER



ARMING FIRING UNIT: GRENADE DISCHARGER

M243 LAUNCHER

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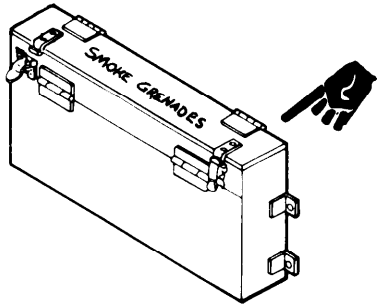
M259 LAUNCHER



BOX, STOWAGE: SMOKE GRENADE

M243 LAUNCHER

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LAUNCHER, GREANADE, SMOKE: Screening, RP, M243, M257, and M259 Components

CHAPTER 1
INTRODUCTION

Section I. GENERAL INFORMATION

1-1. SCOPE

a. Type *of Manual:* Organizational Maintenance Manual, including Repair Parts and Special Tools List.

b. Model *Numbers and Equipment Names:*

M243 RP screening smoke grenade launcher
M257 RP screening smoke grenade launcher
M259 RP screening smoke grenade launcher

c. *Purpose of Equipment:* To project smoke grenades from a combat vehicle. The smoke grenades airburst to produce a white smoke. The smoke screens the vehicle from enemy view.

1-2. MAINTENANCE FORMS, RECORDS, AND REPORTS. Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA PAM 738-750, The Army Maintenance Management System (TAMMS).

1-3. DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE. Destroy launcher components by using demolition or mechanical methods described in TM 43-0002-31.

1-4. PREPARATION FOR STORAGE OR SHIPMENT. Refer to paragraphs 2-11 through 2-14 for instructions on how to prepare launchers for storage or shipment.

1-5. NOMENCLATURE CROSS-REFERENCE LIST AND LIST OF ABBREVIATIONS. This listing includes nomenclature cross-references and **abbreviations** used in this manual.

Common Name	*Officia/ Nomenclature*
Discharger	DISCHARGER, SMOKE GRENADE
Discharger Cap	CAP-PLUG, PROTECTIVE, DUST AND MOISTURE SEAL
Discharger Tube	TUBE, CANNON
Electrical Receptacle Connector	CONNECTOR, RECEPTACLE, ELECTRICAL
Grenade Stowage Box	BOX, STOWAGE, SMOKE GRENADE
M243 Launcher or Launcher	LAUNCHER, GRENADE, SMOKE: Screening, RP, M243
M257 Launcher or Launcher	LAUNCHER, GRENADE, SMOKE: Screening, RP, M257
M259 Launcher or Launcher	LAUNCHER, GRENADE, SMOKE: Screening, RP, M259
Resistor	RESISTOR, NETWORK, FIXED, WIREWOUND

Abbreviation	*Explanation*
RP	Red phosphorous

1-6. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR). If your smoke grenade launcher needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design. Put it on an SF 368 (Quality Deficiency Report). Mail it to us at: Commander. US Army Armament, Munitions and Chemical Command, ATTN: AMSMC-QAD, Rock Island, IL 61299 -6000..

Section II. EQUIPMENT DESCRIPTION AND DATA

1-7. EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES.

a. *Tabulated Data.* Refer to the vehicle operator's manual for operator's tabulated data.

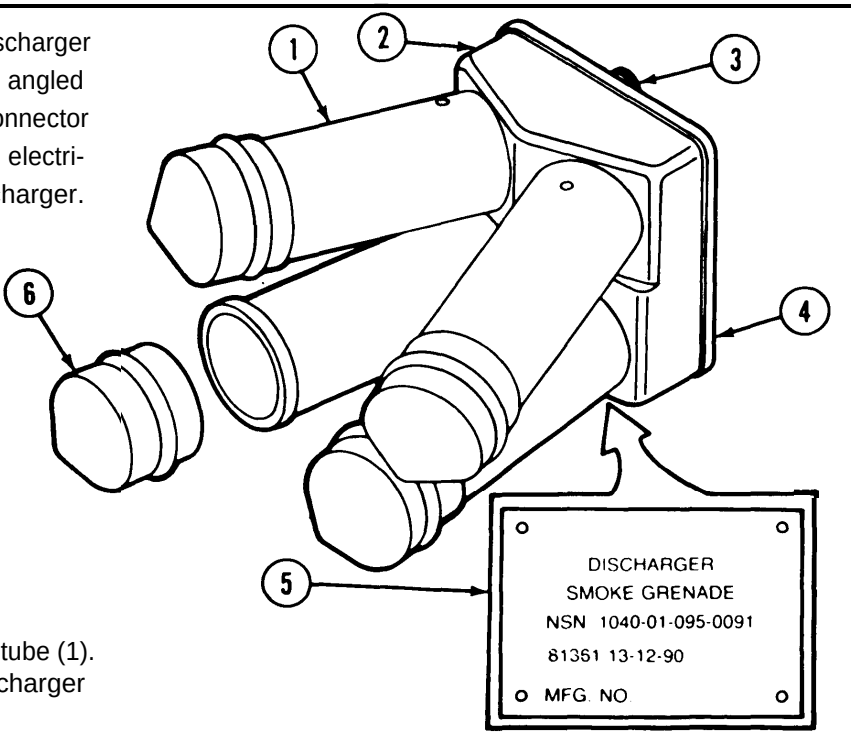
b. *Characteristics.* When mounted on a tactical vehicle:

- Launches screening smoke grenades by electrical ignition
- Fires salvo of eight grenades

c. Capabilities and *Features.*

- Modular design permits adaptation to more than one type of vehicle
- Durable components reduce maintenance workload
- Simple electrical circuits are easy to check and maintain
- Each major component can be maintained by itself
- Requires no special tools or TMDE for maintenance

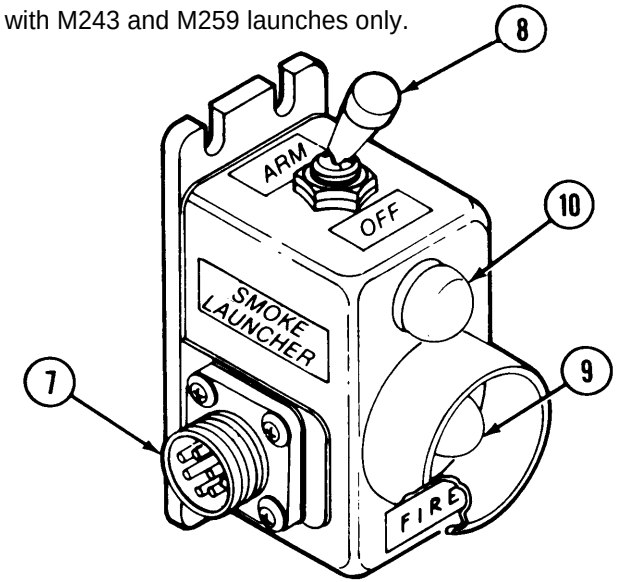
1-8. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS.

LOCATION	DESCRIPTION	REMARKS
DISCHARGER	Mounts on outside of tactical vehicle. Four aluminum discharger tuber (1) mounted on aluminum discharger base (2) are angled to launch grenades in an arc. An electrical receptacle connector (3) on the cover plate (4) connects discharge to vehicle electrical wiring system. Nameplate (5) identifies discharger.	
DISCHARGER CAP	Rubber discharger cap (6) covers muzzle of discharger tube (1). When installed, discharger cap protects inside of discharger tube from debris.	

ARMING FIRING UNIT

Mounts on inside of tactical vehicle. Electrical receptacle connector (7) connects to vehicle wiring. Toggle switch lever (8) arms push switch (9). Indicator light (10) goes on when push switch is armed. Pressing push switch (9) fires dischargers.

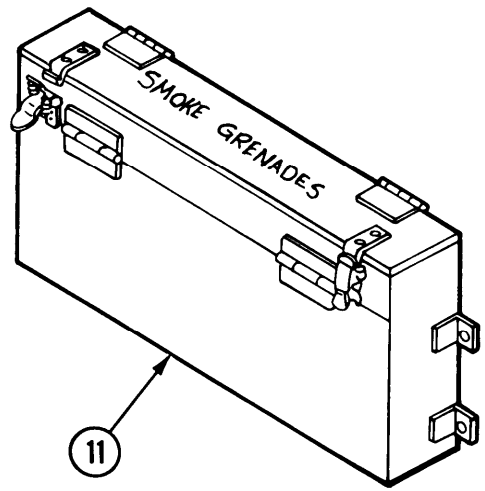
Used with M243 and M259 launches only.



GRENADE STOWAGE BOX

Mounts on outside of tactical vehicle. Steel box (11) holds four grenades.

Used with M243 launcher only.



1-9. DIFFERENCES BETWEEN MODELS.

Components	M243 *Launcher*	M257 *Launcher*	M259 *Launcher*
DISCHARGER	2 each	2 each	2 each
DISCHARGER CAP	8 each	8 each	8 each
ARMING FIRING UNIT	1 each	...	1 each
GRENADE STOWAGE BOX	2 each	...	...

1-10. EQUIPMENT DATA.

	US Customary	(Metric)
DISCHARGER		
Weight	11..2 lb	(5.1 kg)
Width	11.5 in.	(292 mm)
Height	9.5 in.	(241 mm)
Depth	6.31 in.	(160 mm)
Tubes: (4 each)		
Length	7.13 in.	(181 mm)
Inner diameter	2.62 in.	(67 mm)
DISCHARGER CAP (1 per discharger tube)		
Weight	0.1 lb	(0.05 kg)
Outer diameter	3.37 in.	(86 mm)
Depth	2.75 in.	(70 mm)
ARMING FIRING UNIT		
Weight	1 lb	(0.45 kg)
Width	3.06 in.	(78 mm)
Height	5.43 in.	(138 mm)
Depth	3.27 in.	(83 mm)
GRENADE STOWAGE BOX (compartments)		
Weight	40 lb	(18.1 kg)
Length	15.75 in.	(400 mm)
Width	4.25 in.	(108 mm)
Height	10.75 in.	(273 mm)

Section III. PRINCIPLES OF OPERATION

1-11. M243 LAUNCHER.

a. Electrical/Connections. Launcher uses vehicle's electrical system. Electrical receptacle connector on each discharger and on arming firing unit connects them to electrical cables in the vehicle.

b. *Loading Dischargers.* Smoke grenades are muzzle-loaded into discharger tubes.

c. *Arming.* Moving toggle switch lever on arming firing unit from OFF to ARM closes electrical circuit. Arming firing unit indicator light goes on to warn that launcher is armed for firing.

d. *Firing.* Pressing push switch on arming firing unit sends electrical charge to dischargers. A resistor in each discharger controls and directs flow of electricity. The charge flows through electrical contacts in each discharger tube to an electrical firing spring clip in grenade base.

1-12. M257 LAUNCHER. Operating principles are same as for M243 launcher (para 1-11). Arming firing unit is part of vehicle's controls.

1-13. M259 LAUNCHER. Operating principles are same as for M243 launcher (para 1-11).

CHAPTER 2
MAINTENANCE INSTRUCTIONS

Section I. REPAIR PARTS, SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

2-1. COMMON TOOLS AND EQUIPMENT. For authorized common tools and equipment, refer to the Modified Table of Organization and Equipment (MTOE) applicable to your unit. For tools and test equipment used to maintain launchers refer to appendix B, section III.

2-2. SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT. None needed.

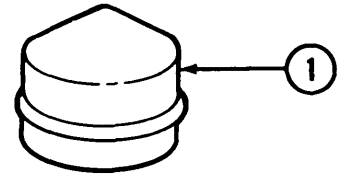
2-3. REPAIR PARTS AND MATERIALS. Repair parts to maintain launchers are listed and illustrated in appendix C. Expendable supplies and materials are listed in appendix D.

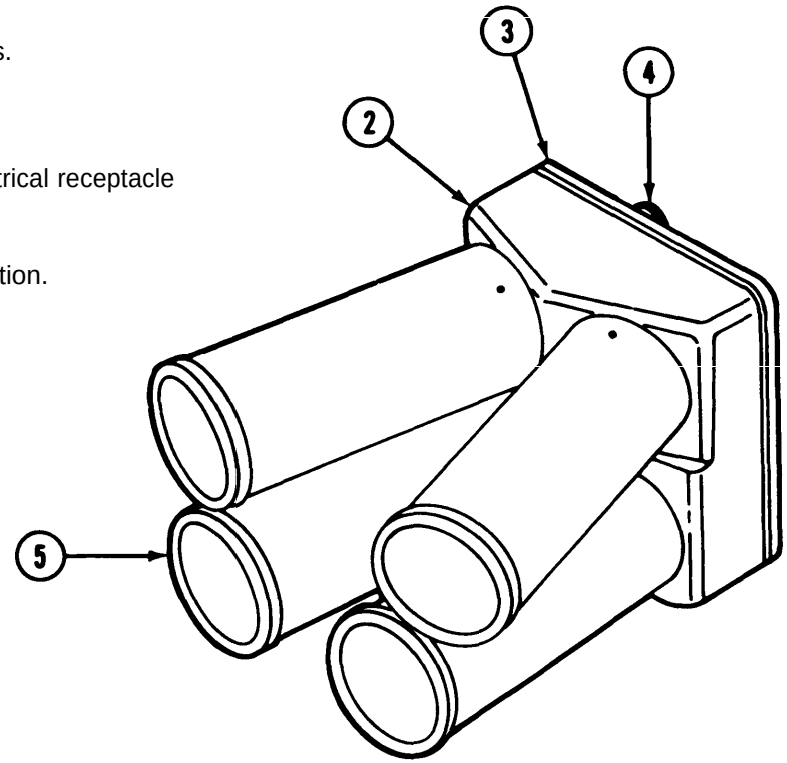
Section II. SERVICE UPON RECEIPT

2-4. SERVICE UPON RECEIPT - M243, M257, AND M259 LAUNCHERS.

LOCATION	ITEM	ACTION	REMARKS
1 Shipping Container	Launcher	Unpack.	
2 Launchers	Components	a. Inspect the equipment for damage incurred during shipment. If the equipment has been damaged, report the damge on SF Form 364, Report of Discrepancy.	
		b. Check the equipment against the packing slip to see if the shipment is complete. Report all discrepancies in accordance with the instructions in TM 38-750.	M243 launcher consists of two dischargers, eight discharger caps, one arming firing unit, and two grenade storage boxes. M257 launcher consists of two dischargers and eight discharger caps. M259 launcher consists of two dischargers, eight discharger caps, and one arming firing unit.
		c. Check to see whether the equipment has been modified.	Refer to DA Pamphlet 310-1.

2-4. SERVICE UPON RECEIPT - M243, M257, AND M259 LAUNCHERS (CONT).

LOCATION	ITEM	ACTION	REMARKS
3 Discharger Caps	Cap surfaces	a. Inspect cap (1) for cuts, tears, and punctures. b. Replace if damaged.	
4 Dischargers	a. Outer surfaces and parts	Inspect for dirt and grease. If dirty, wipe off grease and dirt with cloth (item 2, app D).	
	b. Discharger base (2) and cover plate (3)	a. Inspect for cracks. b. Replace discharger if cracked.	
	c. Electrical receptacle connector (4)	a. Inspect for bent or missing pins. b. Straighten pins if bent. c. If pins are missing, replace electrical receptacle connector (p 2-29).	
	d. Discharger tubes (5)	a. Inspect for cracks and deformation. b. Replace if damaged (p 2-35).	
	e. Electrical circuits	Test	Table 2-2, malfunction 1.



5 Arming Firing Unit	a. Outer surfaces and parts	a. Inspect for dirt or grease. If dirty, wipe off grease and dirt with cloth (item 2, app D).
		b. Inspect for cracks, missing boot (6), and missing or illegible identification labels (7). Check for missing toggle switch lever (8).
		c. Replace if damaged and if parts are missing.
	b. Lens (9) and lamp (10)	a. Check if cracked or missing. Ensure lamp is included.
		b. Replace lens and lamp if damaged or missing (p 2-49).
	c. Electrical receptacle connector (11)	a. Inspect for bent or missing pins.
		b. Straighten pins if bent.
		c. If pins are missing, replace arming firing unit.
	d. Electrical circuits	Test

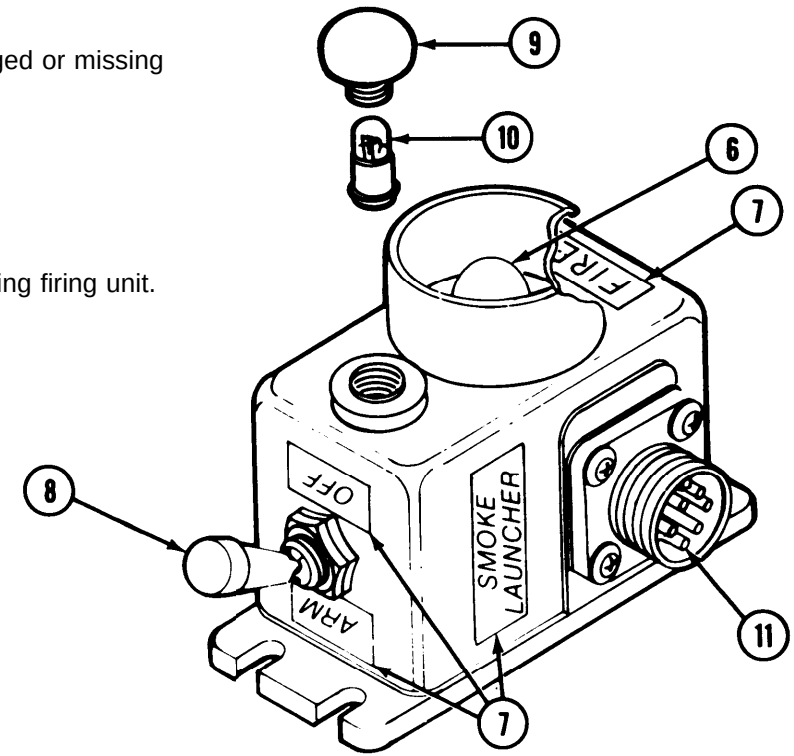
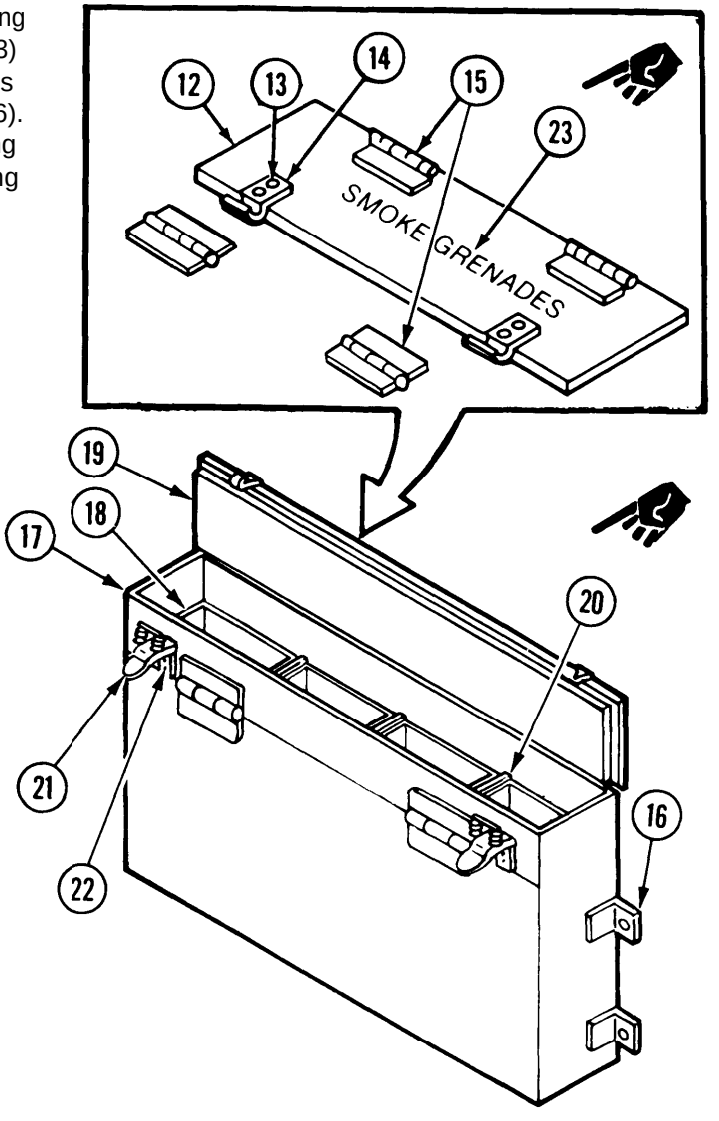


Table 2-2, malfunctions 2 and 3.

2-4. SERVICE UPON RECEIPT - M243, M257, AND M259 LAUNCHERS (CONT).

LOCATION	ITEM	ACTION	REMARKS
6 Grenade Stowage Box	a. Surfaces and parts	a. Inspect for: Bent, dented, cracked and missing lid (12). Broken, loose, and missing rivets (13) and strikes (14). Broken and missing hinges (15). Broken, cracked, and missing lugs (16). Bent, dented, and cracked box (17). Missing rubber pads (18 and 19). Loose and missing dividers (20).	
		b. Replace if the above conditions exist.	
	b. Clamp catches (21)	a. Check if broken or if missing.	
		b. Replace (p 2-52).	
	b. 1 Strikes (14)	a. Check if broken or if missing.	
		b. Replace (p 2-52).	
	c. Rivets (13) (22)	a. Check if loose or missing.	
		b. Tighten if loose.	
		c. Replace if missing (para 2-10).	
	d. Nomenclature (23)	a. Check if illegible or missing.	
		b. Restencil (p 2-53).	



Section III. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

2-5. PMCS PROCEDURES. PMCS for the launchers is performed only when they are mounted on vehicles as part of scheduled PMCS for the vehicles.

Section IV. TROUBLESHOOTING

2-6. SCOPE.

a. This section contains those checks and actions that will isolate defects that can be corrected by performing the maintenance functions authorized by the MAC in appendix B.

b. Table 2-1 indexes symptoms to precise troubleshooting procedures for the launcher components.

c. Table 2-2 lists the common malfunctions that may be found during the operation or maintenance of the launchers or their components. Test or inspections and corrective actions should be performed in the order listed.

Table 2-1. MAINTENANCE ACTION PRECISE SYMPTOM (MAPS) LIST

Symptoms	Troubleshooting Procedures (table 2-2)
DISCHARGER	
Discharger Won't Fire	Malfunction 1
ARMING FIRING UNIT	
Arming Firing Unit Won't Fire Discharger	Malfunction 2
INDICATOR LIGHT	
Indicator Light Won't Light	Malfunction 3

Table 2-2. TROUBLESHOOTING PROCEDURES

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION

DISCHARGER

1. DISCHARGER WON'T FIRE.

Step 1. Position discharger with nameplate down. Inspect electrical receptacle connector (1) for broken shell and broken, bent or missing pins.

a. If no damage, go to step 2.
b. If pins are bent, straighten, then go to step 2.
c. If shell or pins are broken or pins are missing, replace electrical receptacle connector. Remove and install (p 2-29), then go to step 2.

NOTE

Check key on electrical receptacle connector to locate position of pins A, B, and C.

•

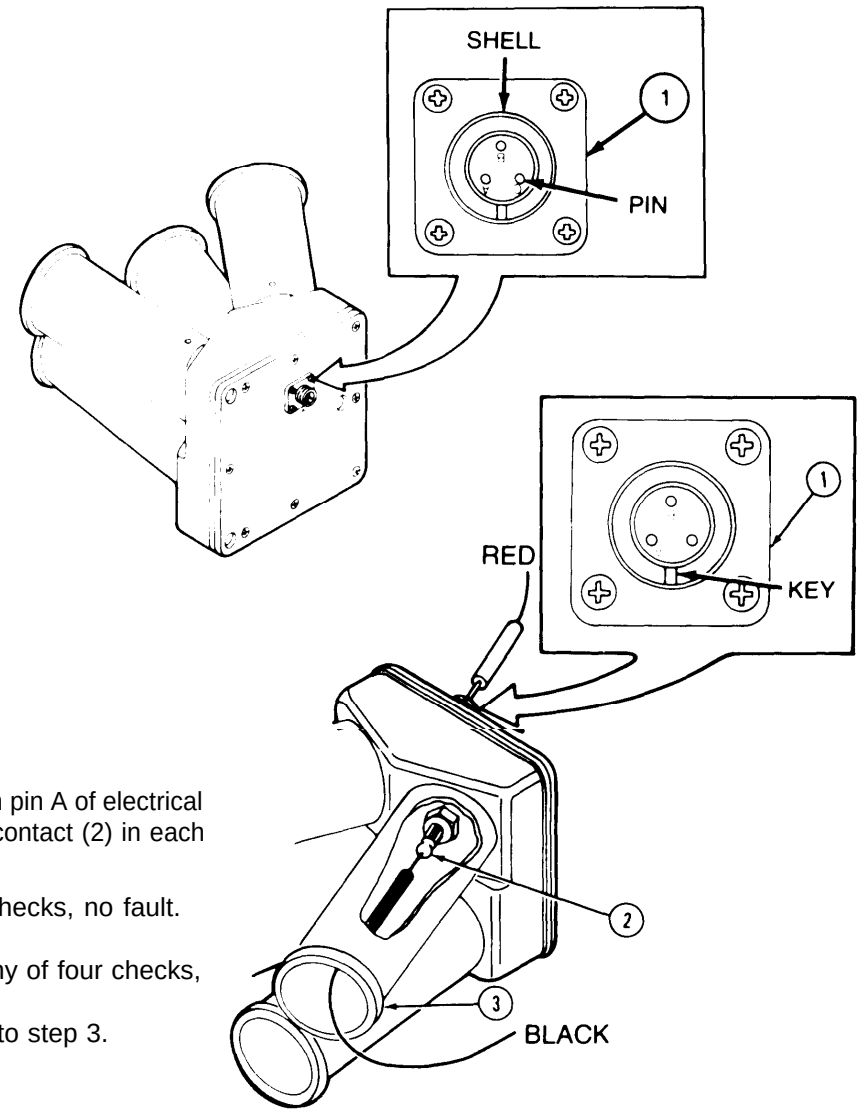
Do not let multimeter probe prod touch electrical receptacle connector shell. This will cause wrong meter reading.

•

Insure good contact by multimeter probe prod on test point. Poor contact will cause false meter reading.

Step 2. Set range switch on RX1 and zero multimeter. Touch red probe prod on pin A of electrical receptacle connector (1). Touch black probe prod on pin of electrical contact (2) in each discharger tube (3).

a. If meter reads from 13 to 18 on OHMS scale for all four checks, no fault. Go to step 3.
b. If meter reads below 13 or above 18 on OHMS scale for any of four checks, resistor is faulty.
Replace resistor. Remove and install (p 2-21), then go to step 3.



Step 3. Set range switch on RX1000 and zero multimeter. Touch red probe prod on pin A of electrical receptacle connector (1) and black probe prod on pin C (ground).

a. If meter reads infinity (∞) on OHMS scale, no fault.
Go to step 4.

b. If any other reading other than infinity (∞) on OHMS scale, shod circuit.
Replace electrical receptacle connector. Remove and install (p 2-29), then go to step 4.

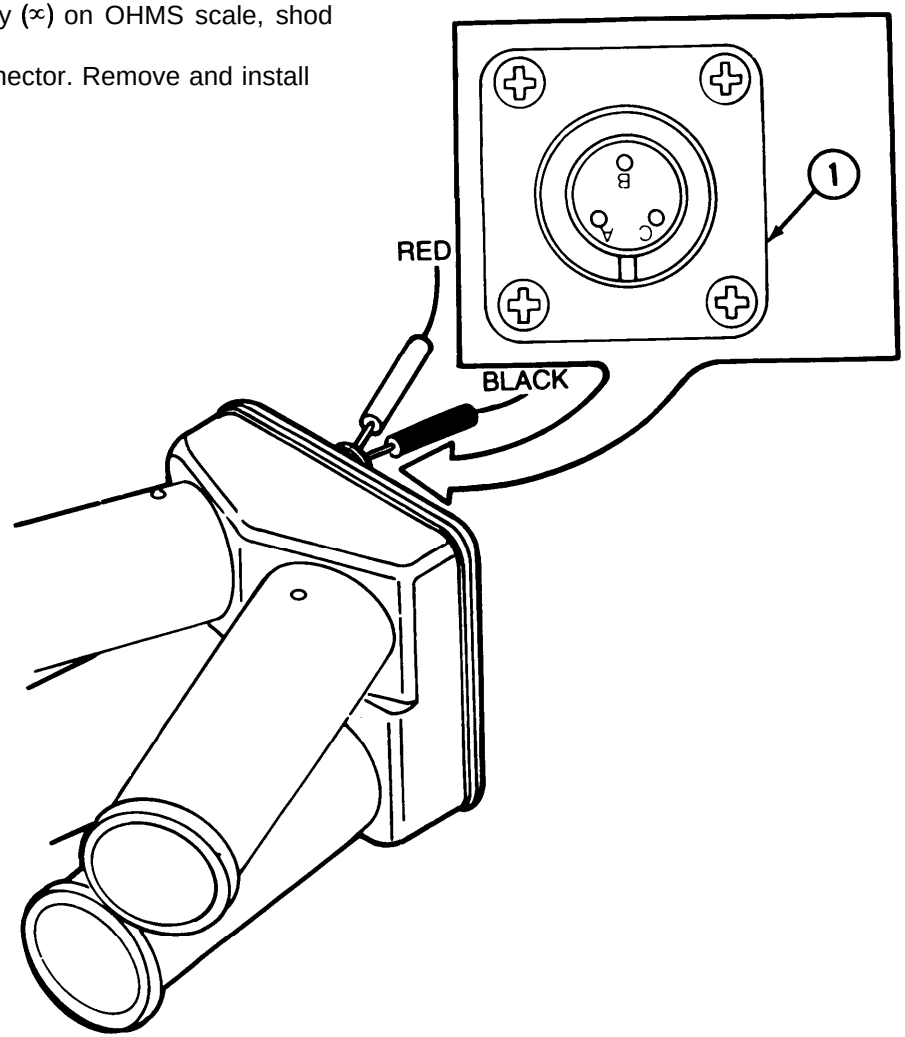
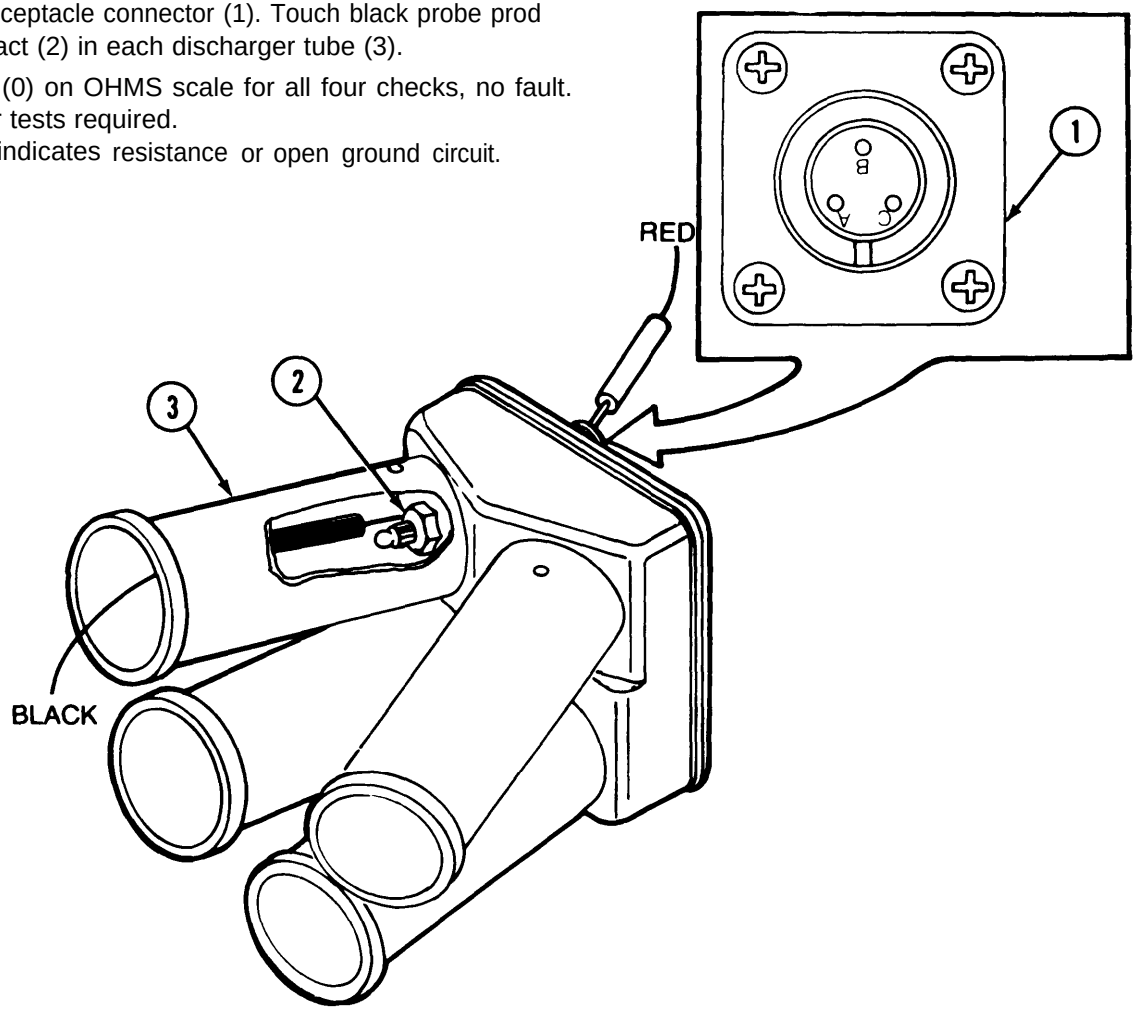


Table 2-2. TROUBLESHOOTING PROCEDURES (CONT).

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION	
1. DISCHARGER WON'T FIRE - Continued	
Step 4. Set range switch on RX1000 and zero multimeter. Touch red probe prod on pin C (ground) of electrical receptacle connector (1). Touch black probe prod on adapter of electrical contact (2) in each discharger tube (3). a. If meter reads zero (0) on OHMS scale for all four checks, no fault. None. No further tests required. b. Any other reading indicates resistance or open ground circuit. Go to step 5.	

Step 5. Remove cover plate from discharger base (p 2-15). Open discharger. With range switch on RX1000, touch red probe prod on pin C (ground) of electrical receptacle connector. Touch black probe prod on Unpainted" surface inside discharger base (4).

a. If meter reads zero (0) on OHMS scale, no fault.
Go to step 6.

b. If meter reads infinity (∞) on OHMS scale, ground circuit is open.
Replace ground wire. Remove and install (p 2-44), then go to step 6.

Step 6. With range switch on RX1000, touch red probe prod on each large nut (5). Touch black probe prod on unpainted surface inside discharger base (4).

a. If meter reads zero (0) on OHMS scale for all four checks, no fault.
None. No further tests required.

b. If meter reads infinity (∞) on OHMS scale for any of four checks, ground circuit is open.
Remove electrical contact (p 2-15).
Clean electrical contact and inside discharger tube, using cloth (item 2, app D) and RBC (item 1, app D).
Reinstall electrical contact (p 2-17) and go to step 7.

Step 7. With range switch on RX1000, touch red probe prod on each large nut (5). Touch black probe prod on unpainted surface inside discharger base (4).

a. If meter reads zero (0) on OHMS **scale** for all four checks, no fault.
None. No further tests required.

b. If meter reads infinity (∞) on OHMS scale, electrical contact is faulty.
Replace electrical contact.
Remove and install (p 2-15).

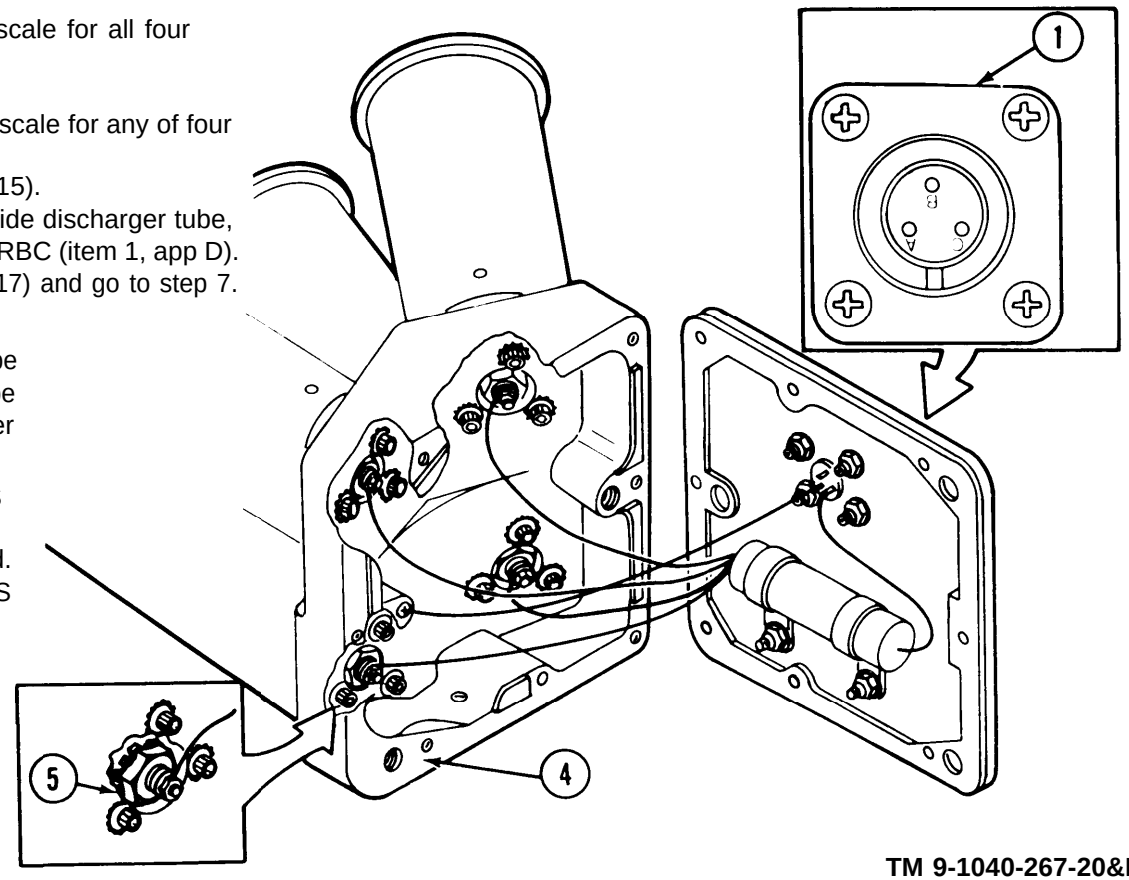


Table 2-2. TROUBLESHOOTING procedures (CO/VT).

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION
ARMING FIRE UNIT
2. ARMING FIRING UNIT WON'T FIRE DISCHARGERS

NOTE

Do not let multimeter probe prod touch electrical receptacle connector shell. This will cause wrong meter reading.

•

Insure good contact by multimeter probe prod on test point. Poor contact will cause false meter reading.

•

Check key on electrical receptacle connector to locate position of pins A through F.

Step 1. Set range switch on RX1 000 and zero multimeter. Move toggle switch lever (1) to OFF. Touch red probe prod on pin C and black probe prod on pin E of the electrical receptacle connector (2).

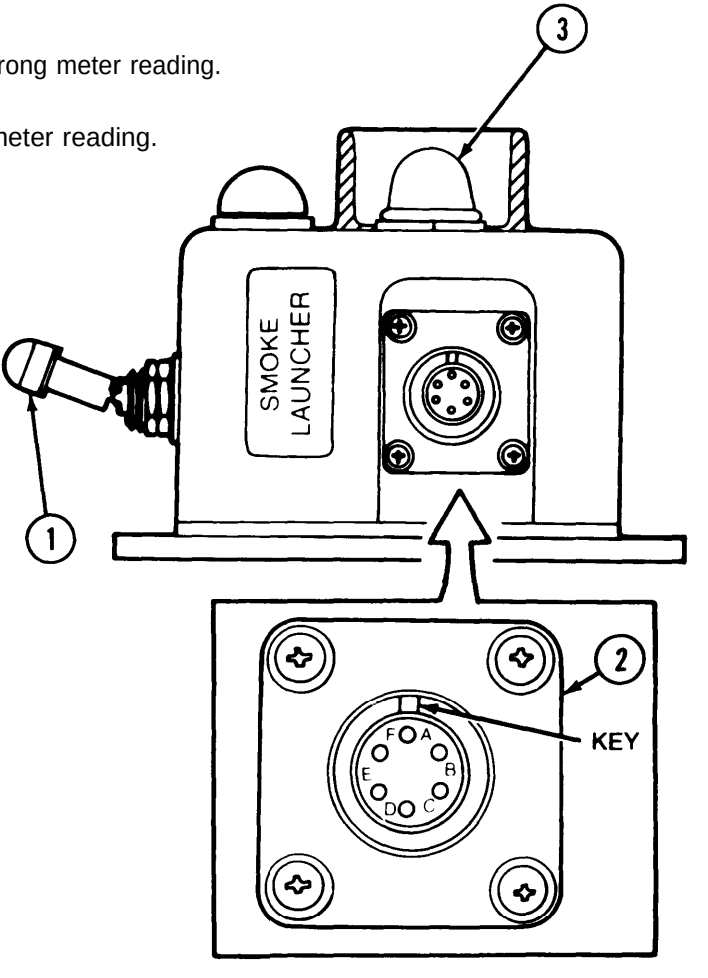
a. If meter reads zero (0) on OHMS scale, no fault.
Go to step 2.
b. If any other reading, faulty arming firing unit.
Replace arming firing unit.

Step 2. Touch red probe prod on pin D and black probe prod on pin F of electrical receptacle connector (2).

a. If meter reads zero (0) on OHMS scale, no fault.
Go to step 3.
b. If any other reading, faulty arming firing unit.
Replace aiming firing unit.

Step 3. Touch red probe prod on pin D and black probe prod on pin B of electrical receptacle connector (2).

a. If meter reads zero (0) on OHMS scale, no fault.
Go to step 4.
b. If any other reading, faulty arming firing unit.
Replace arming firing unit.



Step 4. Press push switch (3) with red probe prod on pin A and black probe prod on pin C of electrical receptacle connector (2).

a. If meter reads infinity (∞) on OHMS scale, no fault.
Go to step 5.

b. If any other reading, faulty arming firing unit.
Replace arming firing unit.

Step 5. Move toggle switch lever (1) to ARM, with red probe prod on pin A and black probe prod on pin C of electrical receptacle connector (2).

a. If meter reads infinity (∞) on OHMS scale, no fault.
Go to step 6.

b. If any other reading, faulty arming firing unit.
Replace arming firing unit.

Step 6. Press push switch (3) with red probe prod on pin A and black probe prod on pin C of electrical receptacle connector (2).

a. If meter reads zero (0) on OHMS scale, no fault.
Go to step 7.

b. If meter reads infinity (∞) or any other reading on OHMS scale, faulty arming firing unit.
Replace arming firing unit.

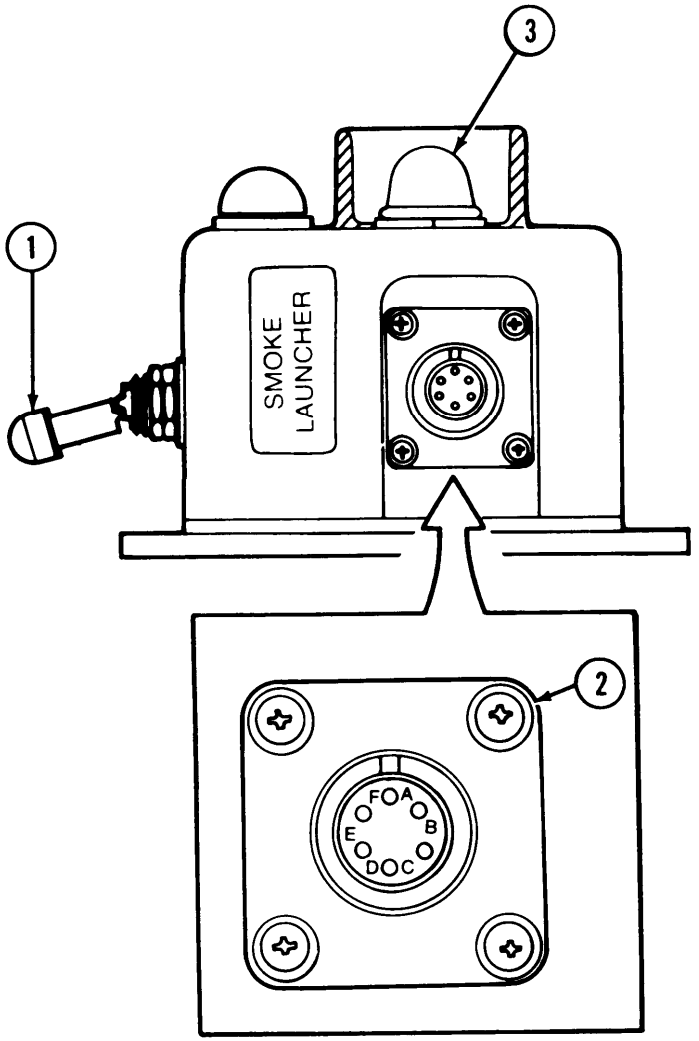
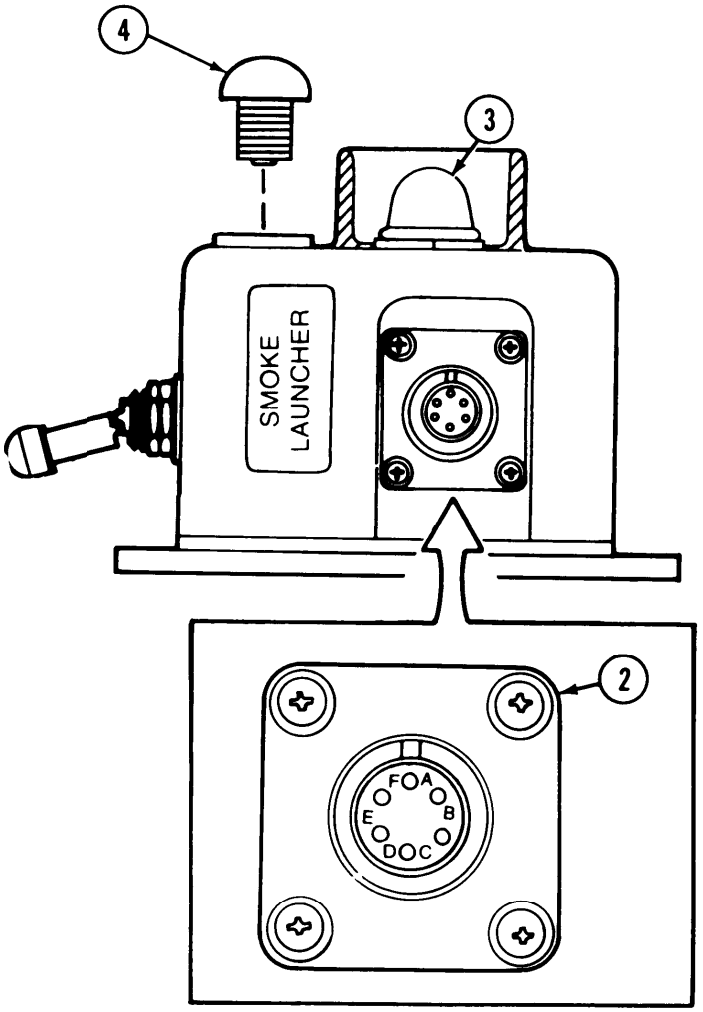


Table 2-2. TROUBLESHOOTING PROCEDURES (CONT).

MALFUNCTION TEST OR INSPECTION	CORRECTIVE ACTION
2. ARMING FIRING UNIT WON'T FIRE DISCHARGERS - Continued	
Step 7. Unscrew and remove lens (4) with preformed packing and lamp (p 2-49). Press push switch (3) with red probe prod on pin A and black probe prod on pin B of electrical receptacle connector (2). a. If meter reads infinity (∞) on OHMS scale, no fault.	None. Install same lens (4) with same preformed packing and lamp (p 2-49).
b. If any other reading, faulty arming firing unit.	Replace arming firing unit.



3. INDICATOR LIGHT WON'T LIGHT

NOTE

Do not let probe prod touch electrical receptacle connector shell. This will cause wrong meter reading.

•

Insure good contact by multimeter probe prod on test point. Poor contact will cause false meter reading.

•

Check key on electrical receptacle connector to locate position of pins A through F.

Step 1. Set range switch to RX1 and zero multimeter. Move toggle switch lever (1) to ARM. Touch red probe prod on pin A and black probe prod on pin D of electrical receptacle connector (2).

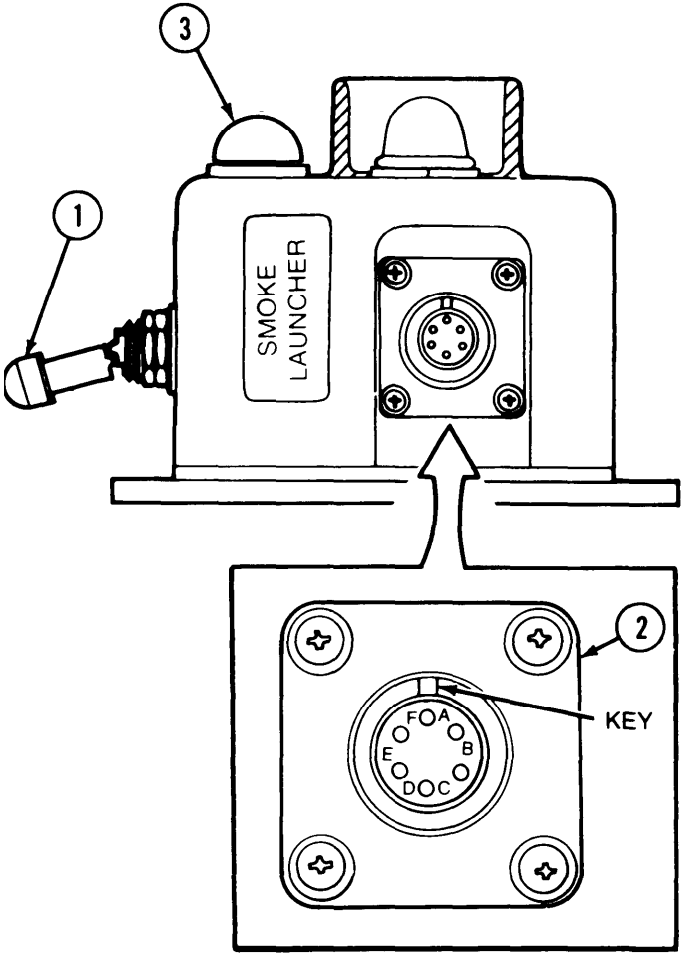
a. If meter reads any other reading than infinity (∞) on OHMS scale, lamp resistance in indicator light assembly (3) is good.
None. Indicator light is good.

b. If meter reads infinity(x) on OHMS scale, lamp is burned out or arming firing unit is faulty.
Replace lamp. Remove and install (p 2-49). Then go to step 2.

Step 2. With range switch on RX1, zero multimeter. With toggle switch lever (1) on ARM, touch red probe prod on pin A and black probe prod on pin D of electrical receptacle connector (2).

a. If meter reads any other reading other than infinity (∞) on OHMS scale, lamp resistance in indicator light assembly (3) is good.
None. Indicator light is good.

b. If meter continues to read infinity (∞) on OHMS scale, arming firing unit is faulty.
Remove new lamp and replace arming firing unit.



Section V. MAINTENANCE PROCEDURES

2-7. INTRODUCTION. This manual covers all models of the launcher. If the maintenance task applies to all models, configurations will not be listed. No special environmental conditions are listed because none are required.

2-8. DISCHARGER-MAINTENANCE INSTRUCTIONS.

This task covers:

a. Removal
b. Cleaning
c. Installation
d. Testing
e. Inspection
f. Painting

INITIAL SETUP

Test Equipment
Multimeter TS-352B/U or equal

Tools
SC 5180-90-CL-N26
General Mechanic's Automotive Tool Kit NSN 5180-00-177-7033
SC 5180-95-CL-A51
Turret Mechanic's Tool Kit NSN 5180-00-695-0139
Paint Brush NSN 8020-00-297-6657
SC 5180-91-CL-R13
Socket Wrench Set NSN 5120-00-542-5799
Soldering Gun NSN 3439-00-004-0915
SC 4910-95-CL-A74
Soldering Torch Kit NSN 3439-00-542-0531
Tool Kit NSN 5180-00-876-9336
Wire Brush NSN 7920-00-291-5815

Materials/Parts
Cleaning compound (RBC) (item 1, app D)
Cloth (item 2, app D)
Enamel (item 3, app D)
Gasket NSN 5330-00-641-4338
Machine screw NSN 5305-00-006-9408
Preformed packing NSN 5330-00-248-3840
Preformed packing NSN 5330-00-252-6050
Primer (item 5, app D)
Primer coating (item 6, app D)
Sealing compound (item 7 or 8, app D)
Solder (item 9, app D)

References
SC 4910-95-CL-A74
SC 5180-91-CL-R13
SC 5180-95-CL-A51
TB SIG 222
TM 11-6625-366-10
TM 43-0139

Troubleshooting References
Table 2-2, malfunction 1
Discharger Won't Fire.

LOCATION	ITEM	ACTION	REMARKS

a. Electrical Contacts - Maintenance Instructions.

NOTE

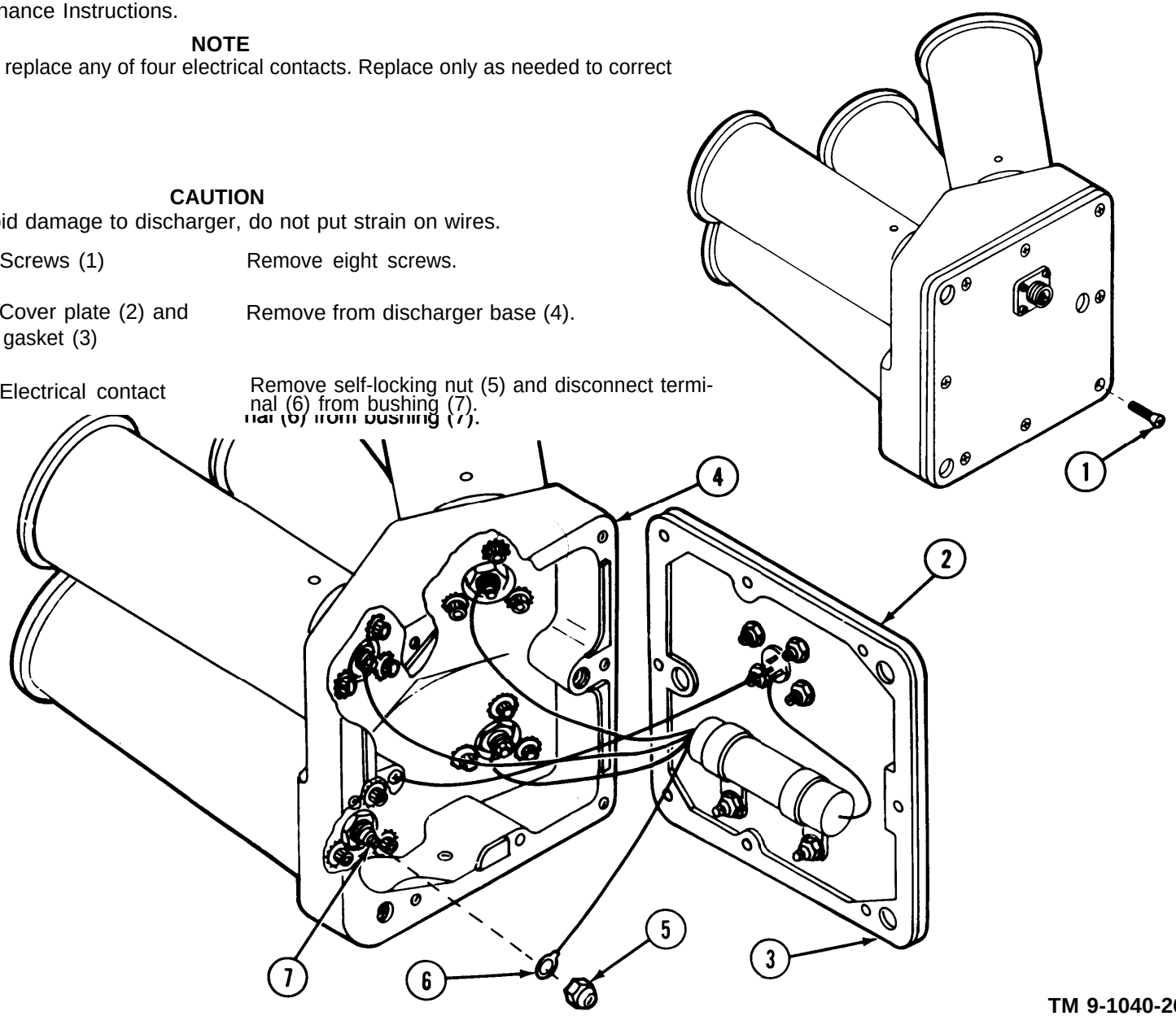
This procedure is used to replace any of four electrical contacts. Replace only as needed to correct faults.

REMOVAL

CAUTION

To avoid damage to discharger, do not put strain on wires.

1 Discharger Base	a. Screws (1)	Remove eight screws.	
	b. Cover plate (2) and gasket (3)	Remove from discharger base (4).	
	c. Electrical contact	Remove self-locking nut (5) and disconnect terminal (6) from bushing (7).	



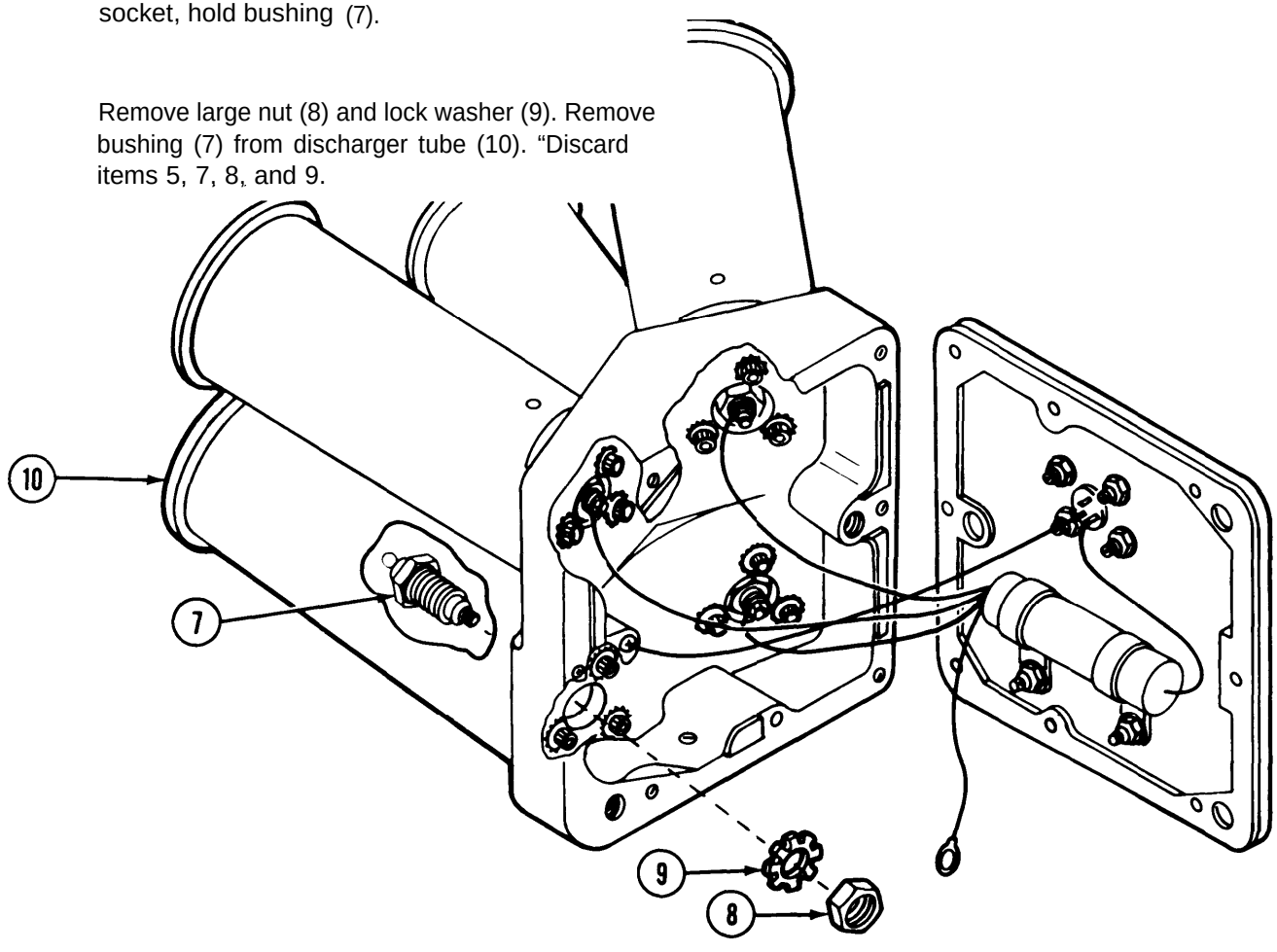
2-8. DISCHARGER - MAINTENANCE INSTRUCTIONS (CONT).

LOCATION	ITEM	ACTION	REMARKS

a. Electrical Contacts - Maintenance Instructions (Cont).

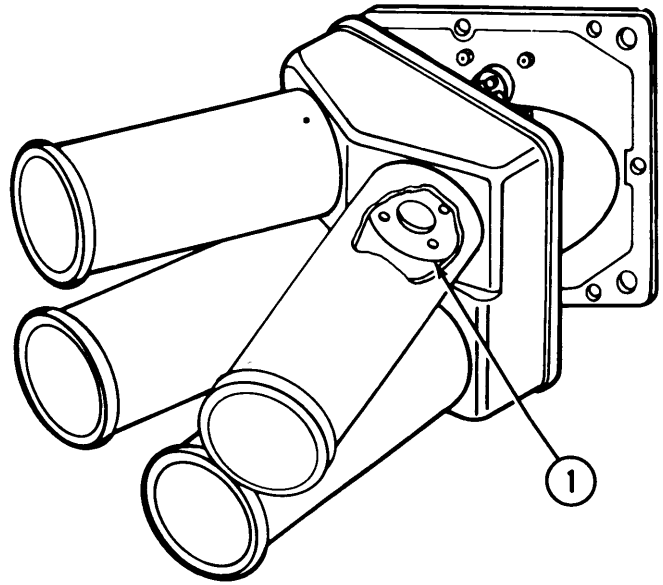
REMOVAL (Cont)

2 Discharger Tube	Electrical contact	Using socket wrench handle with extension and socket, hold bushing (7).	
3 Discharger Base	Electrical contact	Remove large nut (8) and lock washer (9). Remove bushing (7) from discharger tube (10). “Discard items 5, 7, 8, and 9.	



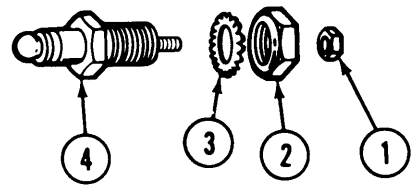
CLEANING

Discharger Tube	Tube base (1)	Clean with cleaning compound (RBC) (item 1, app D) on paint brush. Wipe dry with clean cloth (item 2, app D).



INSTALLATION

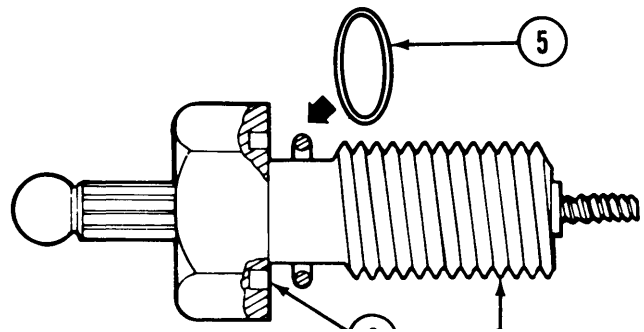
1 Electrical Contact	a. Self-locking nut (1), large nut (2), and lock washer (3)	Remove from new bushing (4).



CAUTION

For a tight seal, do not twist preformed packing when inserting into groove of bushing.

	b. Preformed packing (5)	Insert into groove (6).
2 Discharger Tube	Bushing (4)	Push through hole in tube base.



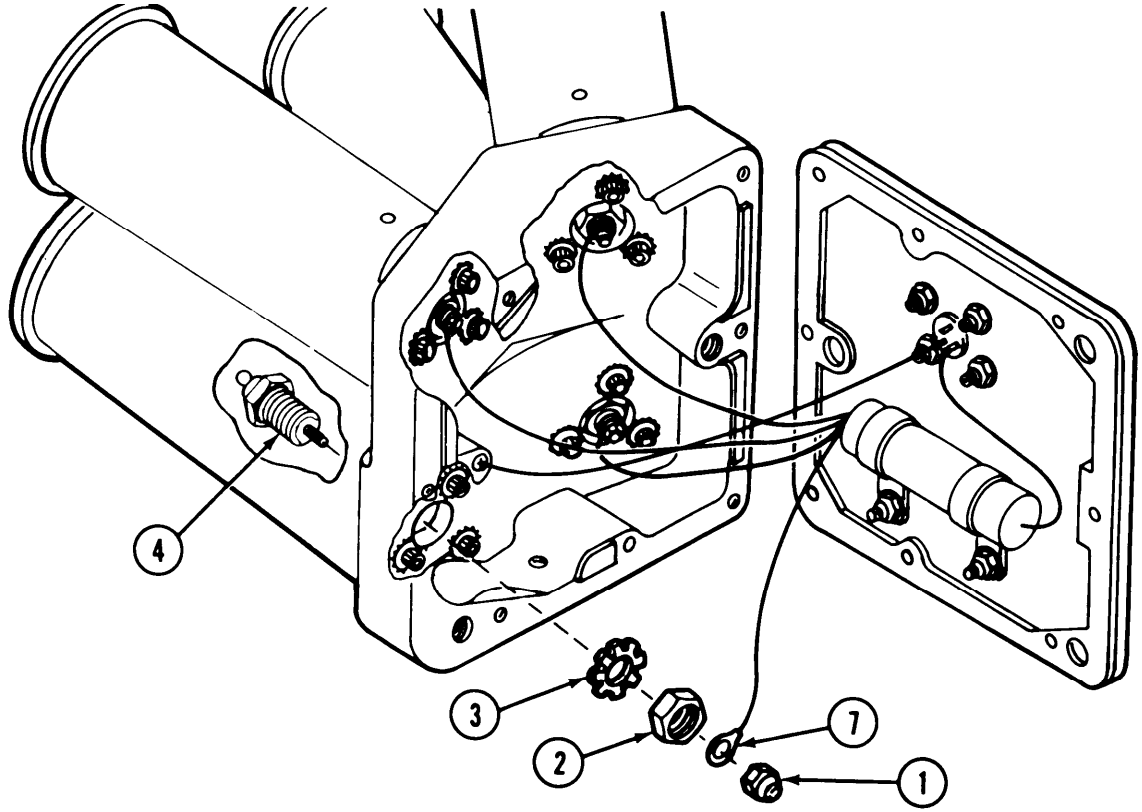
2-8. DISCHARGER - MAINTENANCE INSTRUCTIONS (CONT).

LOCATION	ITEM	ACTION	REMARKS

a. Electrical Contacts - Maintenance Instructions (Cont).

INSTALLATION (Cont)

3 Discharger Base	Bushing (4)	a. Hold bushing with socket wrench. Install lock washer (3) and large nut (2). b. Torque nut (2) to 120 to 144 inch-pounds. c. Connect terminal (7) and install self-locking nut (1). Tighten.	

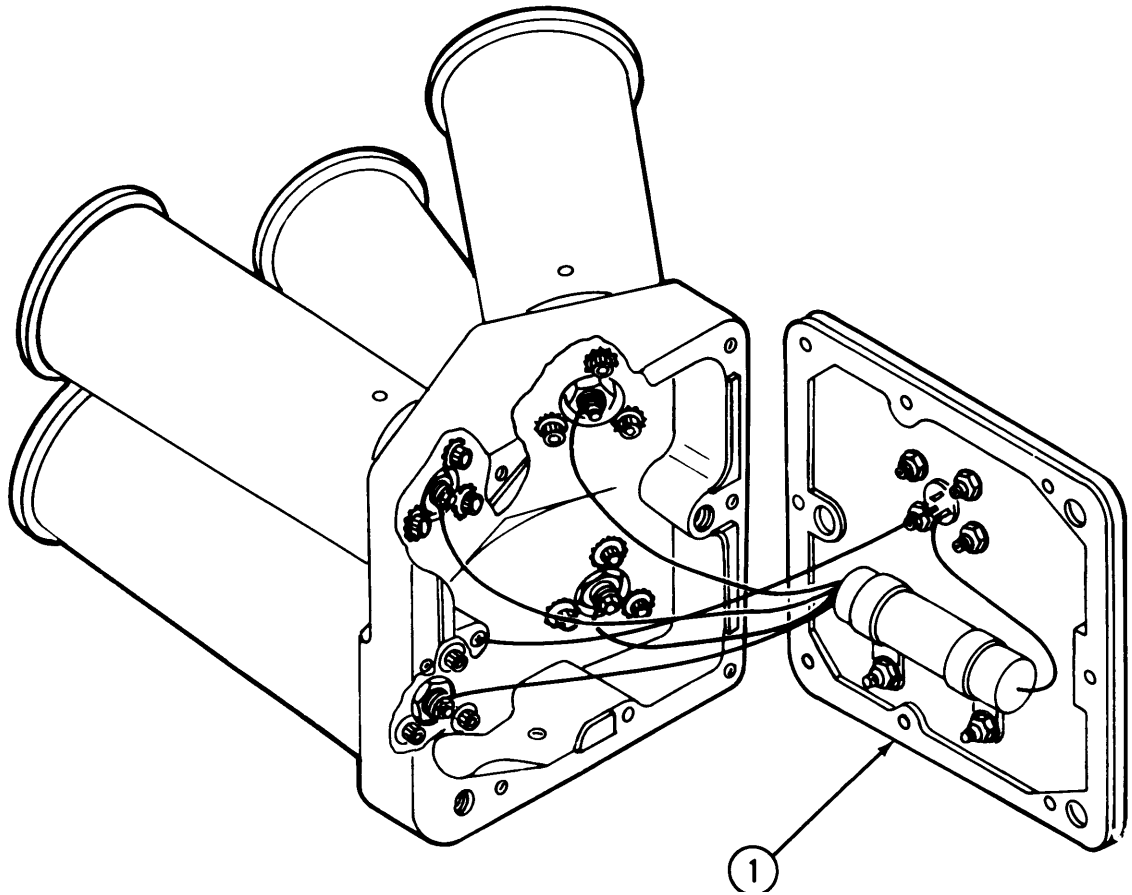


TESTING

Discharger	Electrical contact	Troubleshoot, using multimeter to do steps 2 and 6 under malfunction 1 in table 2-2 (p 2-5).

INSPECTION

Discharger	Gasket (1)	If brittle or torn, replace.



2-8. DISCHARGER - MAINTENANCE INSTRUCTIONS (CONT).

LOCATION	ITEM	ACTION	REMARKS

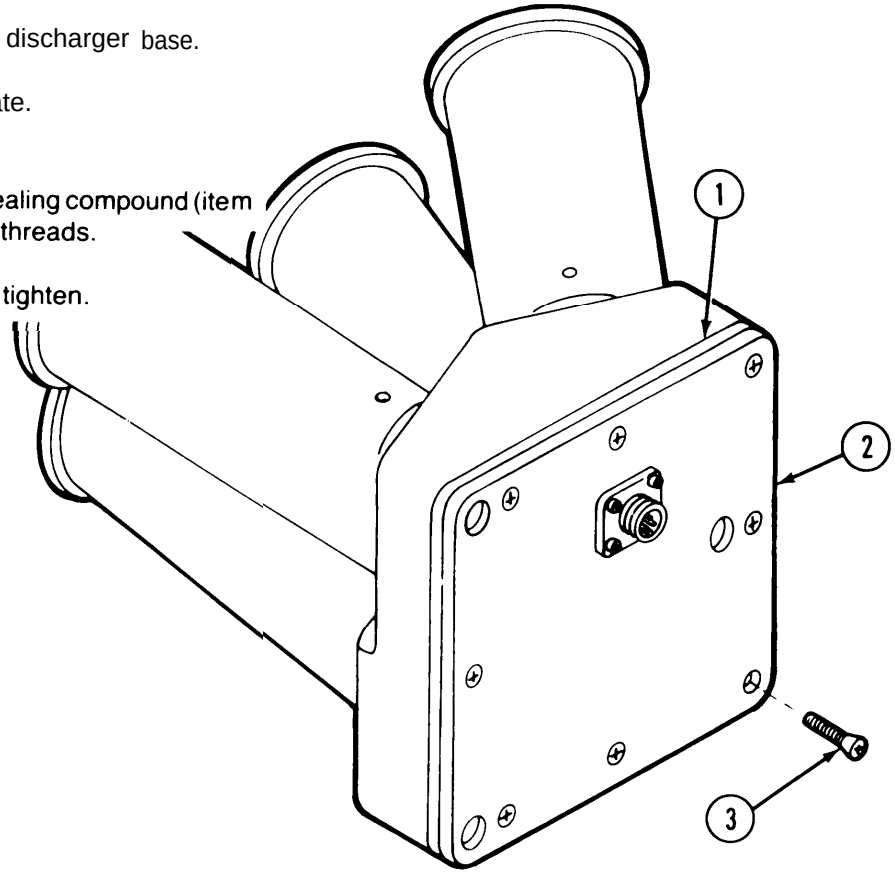
a. Electrical Contacts - Maintenance Instructions (Cont).

INSTALLATION

CAUTION

To avoid damage to discharger, do not pinch wires between cover plate and discharger base.

Discharger Base	a. Gasket (1) and cover plate (2)	Install gasket and cover plate.	
	b. Screws (3)	a. Apply heavy coating of sealing compound (item 7 or 8, app D) to screw threads. b. Install eight screws and tighten.	



PAINTING

NOTE

Do not paint electrical receptacle connector, electrical contacts, nameplate, or screws. Do not let paint clog mounting holes or drain holes.

Discharger	All outside surfaces	a. Remove burrs, corrosion, and chipped paint.	
		b. Touch up with primer (item 6, app D) and enamel (item 3, app D).	See TM 43-0139.

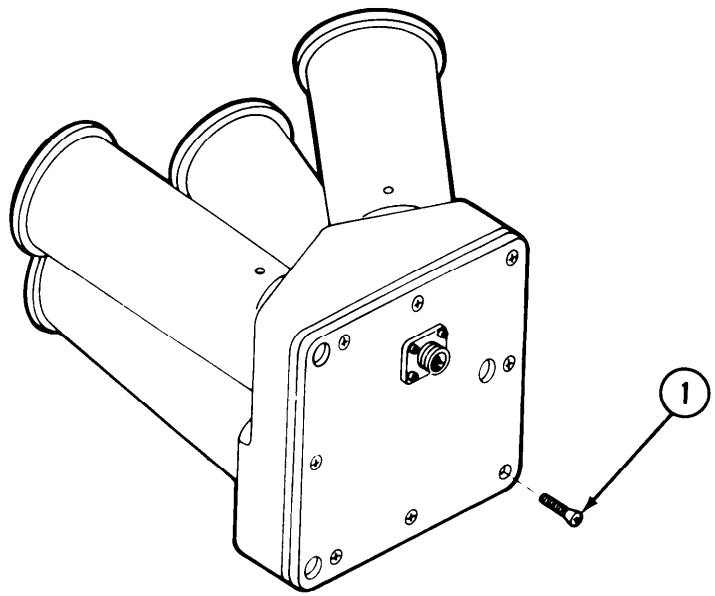
b. Resistor - Maintenance Instructions.

REMOVAL

CAUTION

To avoid damage to discharger, do not put strain on wires.

1 Discharger Base	a. Screws (1)	Remove eight screws.

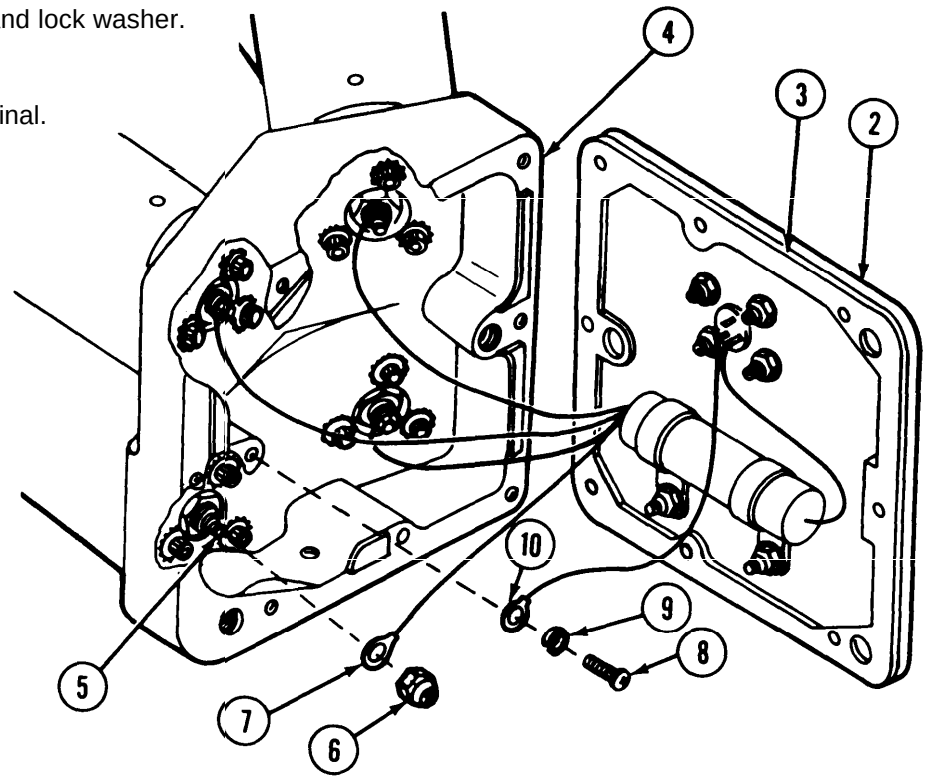


2-8. DISCHARGER - MAINTENANCE INSTRUCTIONS (CONT).

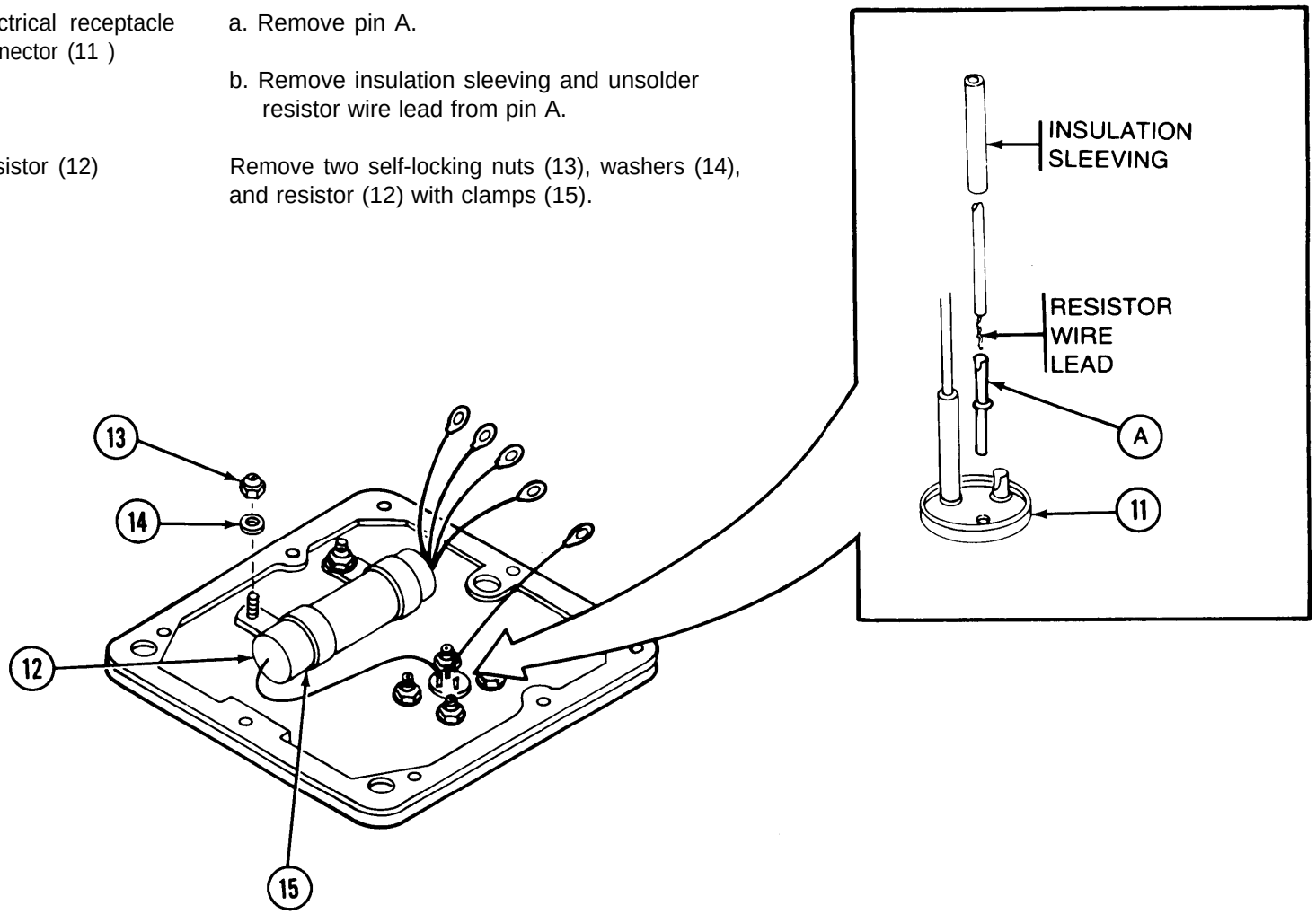
b. Resistor - Maintenance Instructions (Cont).

REMOVAL (Cont)

LOCATION	ITEM	ACTION	REMARKS
1 Discharger Base (Cont).	b. Cover plate (2) and gasket (3)	Remove from discharger base (4).	
	c. Electrical contact (5)	Remove four self-locking nuts (6) and disconnect four resistor wire terminals (7).	
	d. Ground screw (8) and lock washer (9)	Remove ground screw and lock washer.	
	e. Ground terminal (10).	Disconnect ground terminal.	



2 Cover Plate	a. Electrical receptacle connector (11)	a. Remove pin A. b. Remove insulation sleeving and unsolder resistor wire lead from pin A.
	b. Resistor (12)	Remove two self-locking nuts (13), washers (14), and resistor (12) with clamps (15).

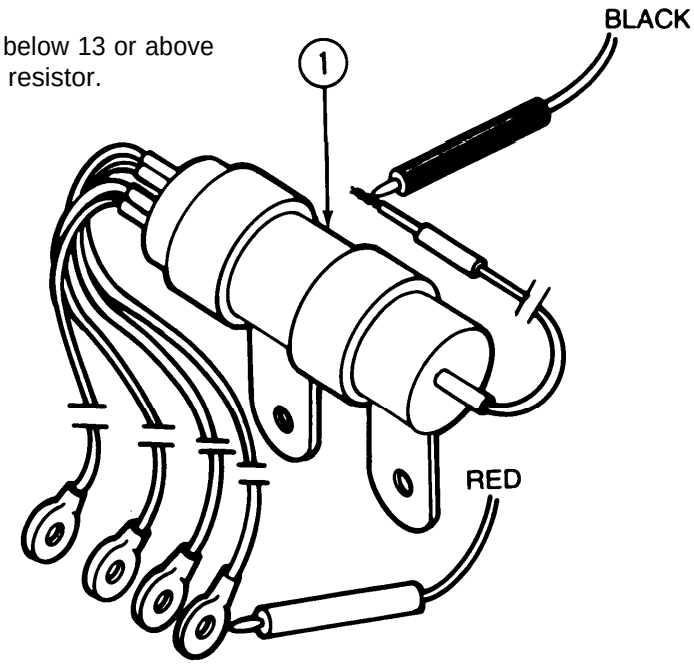


2-8. DISCHARGER - MAINTENANCE INSTRUCTIONS (CONT).

b. Resistor - Maintenance Instructions (Cont).

TESTING

LOCATION	ITEM	ACTION	REMARKS
1 Multimeter	Range switch and meter	Set range switch on RX1 and zero multimeter.	
2 Resistor	New resistor (1)	Touch black probe on single wire lead and place red probe on terminal for each of four wires, one at a time.	
3 Multimeter	Meter	a. If meter reads from 13 to 18 on OHMS scale, resistance is good. b. If any one of four readings is below 13 or above 18 on OHMS scale, replace resistor.	



INSTALLATION

1 Cover Plate

a. Resistor (1)

Install on studs with two washers (2) and two self-locking nuts (3). Tighten.

CAUTION

Do not break strands on wire when stripping insulation.

b. Electrical receptacle connector (4)

a. Strip wire insulation on single resistor wire to depth of solder well.

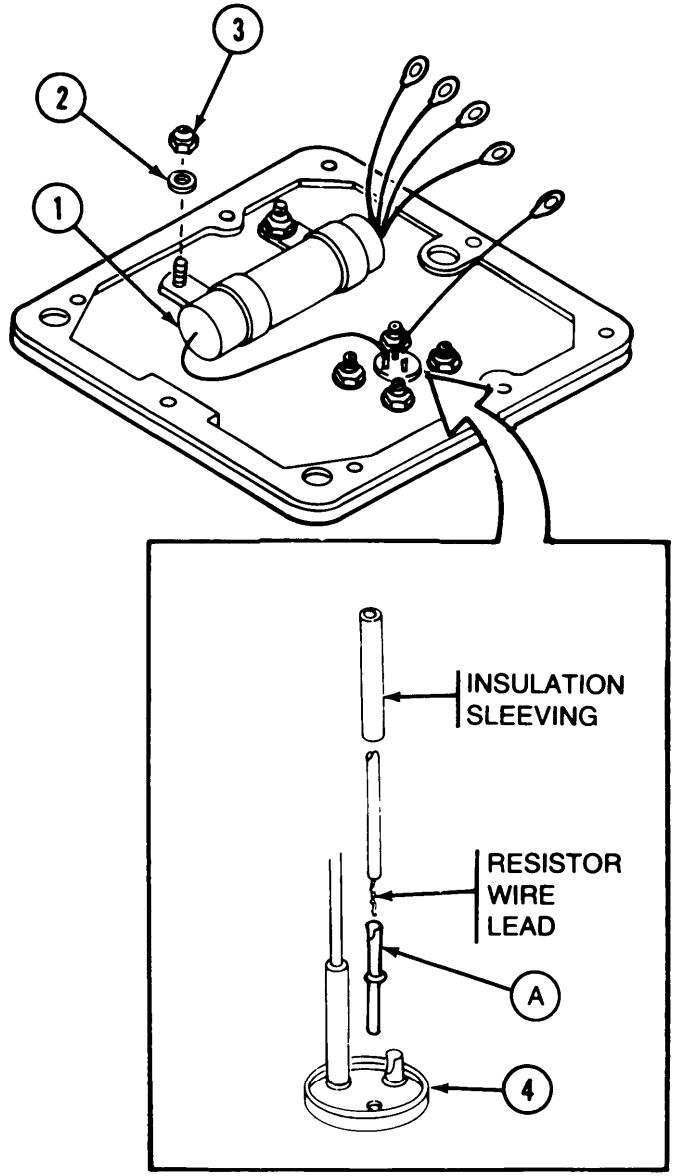
b. Cut a piece of insulation sleeving 3/4 inches long.

c. Slide new insulation sleeving on wire.

d. Insert wire lead into pin A and solder (item 9, app D). See TB SIG 222.

e. Slide insulation sleeving over soldered connection and heatshrink.

f. Insert pin A into electrical receptacle connector (4).



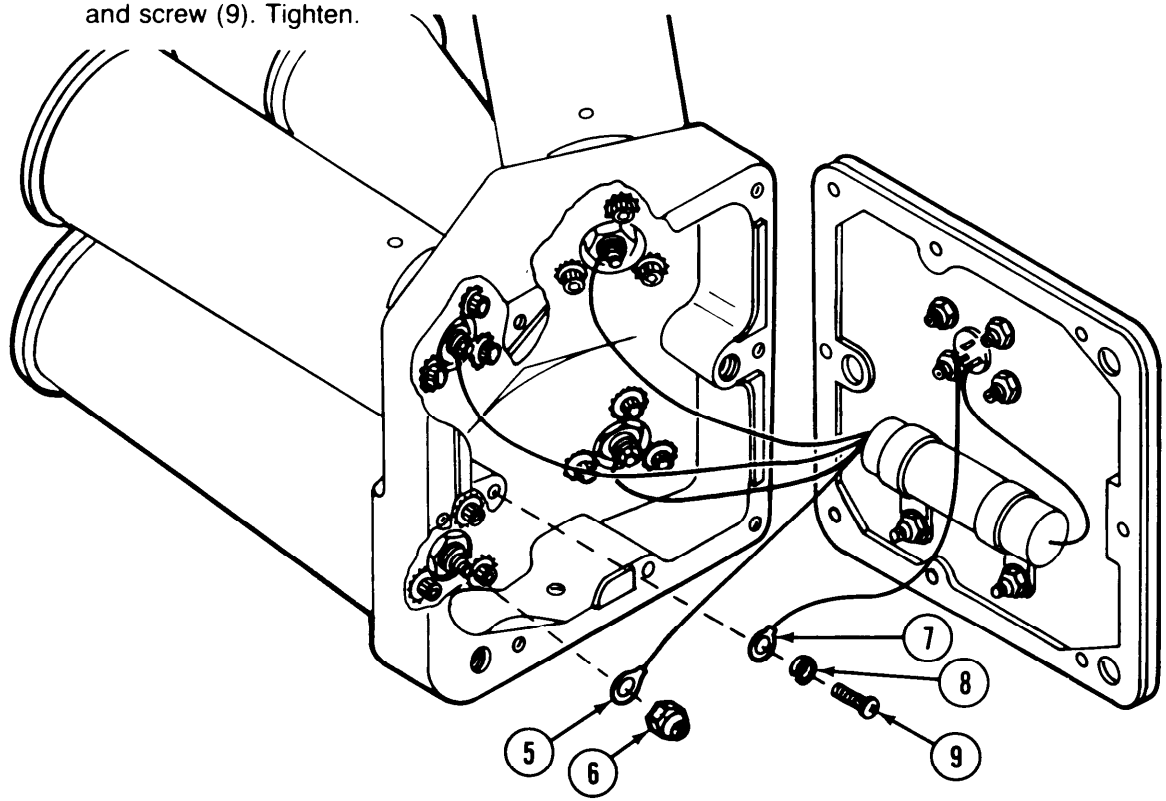
2-8. DISCHARGER - MAINTENANCE INSTRUCTIONS (CONT).

LOCATION	ITEM	ACTION	REMARKS

b. Resistor - Maintenance Instructions (Cont).

INSTALLATION (Cont)

2 Discharger Base	a. Electrical contacts	Connect four terminals (5) and install four self-locking nuts (6). Tighten.	
	b. Ground wire	Connect terminal (7) to base with lock washer (8) and screw (9). Tighten.	

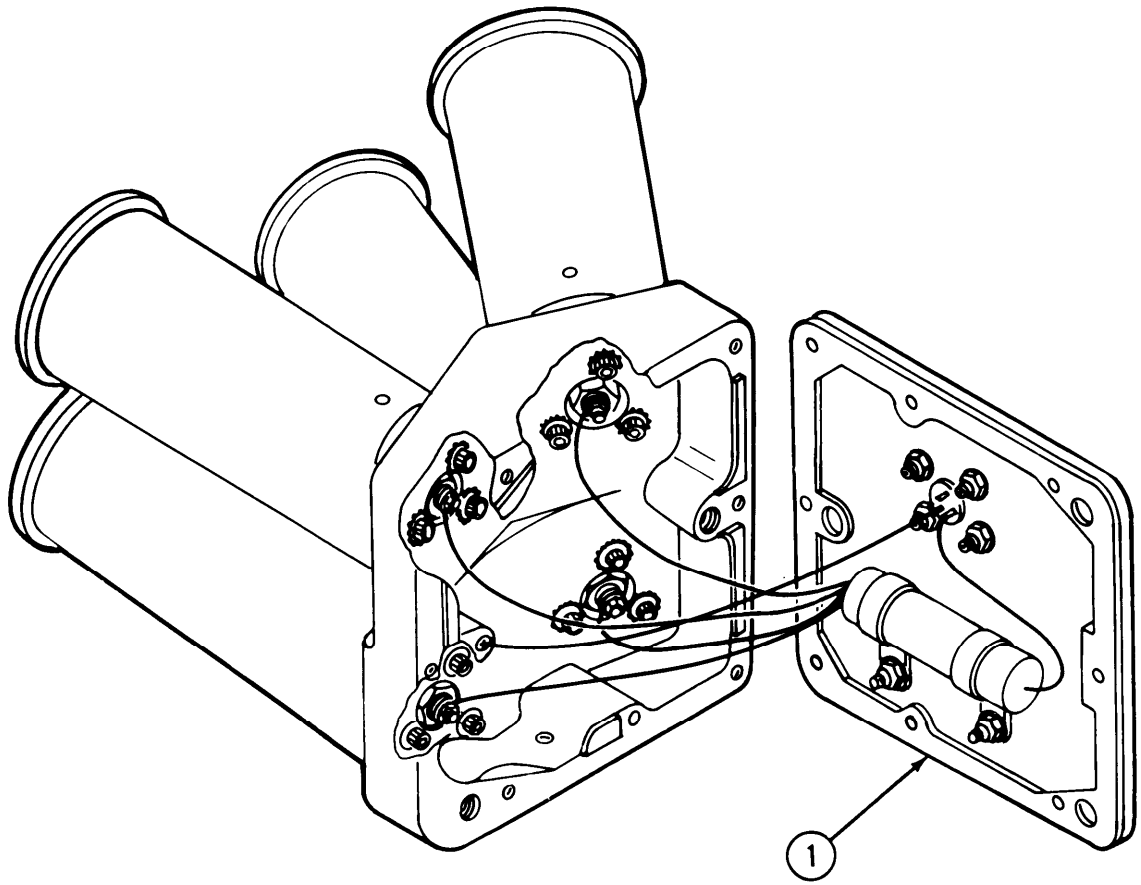


TESTING

Discharger	Electrical circuits	Troubleshoot, using multimeter to do steps 2 and 5 under malfunction 1 in table 2-2 (p 2-5).

INSPECTION

Discharger	Gasket (1)	If brittle or torn, replace.



2-8. DISCHARGER - MAINTENANCE INSTRUCTIONS (CONT).

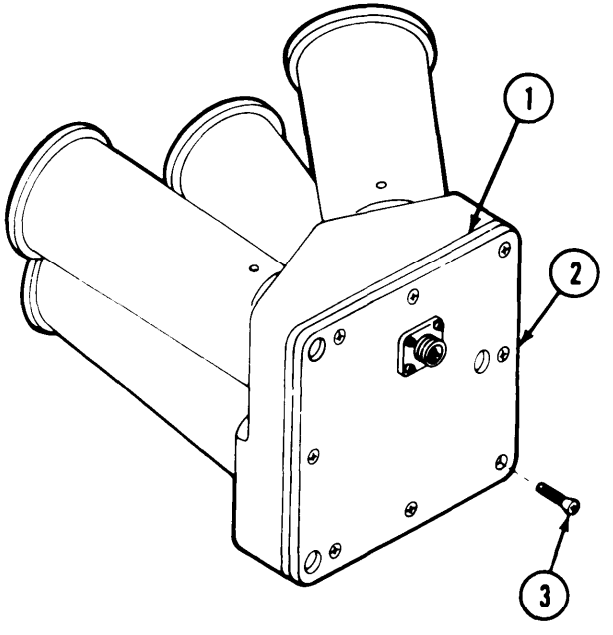
b. Resistor - Maintenance Instructions (Cont).

INSTALLATION

CAUTION

To avoid damage to discharger, do not pinch wires between cover plate and discharger base.

LOCATION	ITEM	ACTION	REMARKS
Discharger base	a. Gasket (1) and cover plate (2)	Install gasket and cover plate.	
	b. Screws (3)	a. Apply heavy coating of sealing compound (item 7 or 8, app D) to screw threads.	
		b. Install eight screws and tighten.	



PAINTING

NOTE

Do not paint electrical receptacle connector, electrical contacts, nameplate, or screws. Do not let paint clog mounting holes or drain holes.

Discharger	All outside surfaces	a. Remove burrs, corrosion, and chipped paint.	
		b. Touch up with primer (item 6, app D) and enamel (item 3, app D).	See TM 43-0139.

c. Electrical Receptacle Connector - Maintenance Instructions.

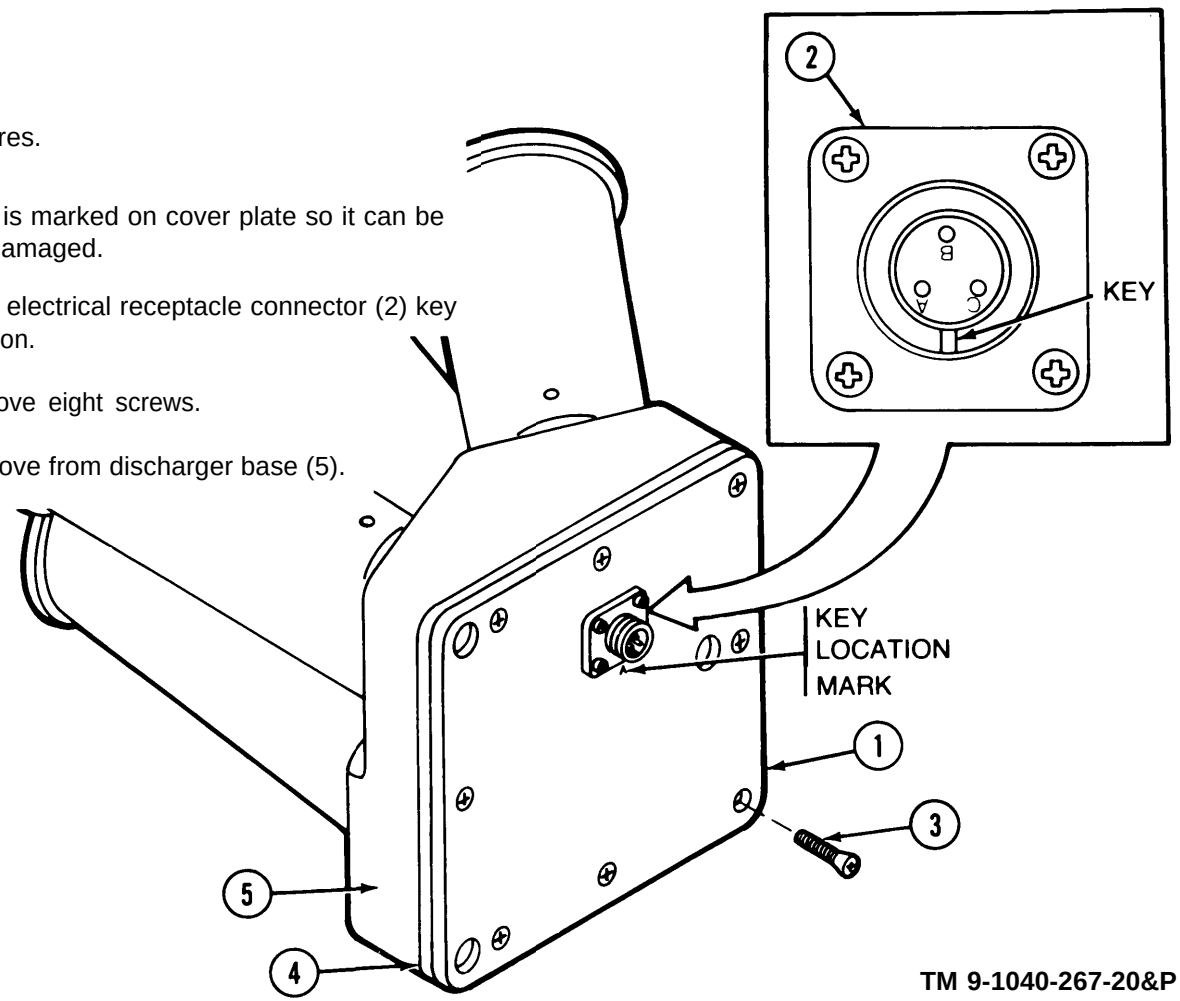
REMOVAL

CAUTION

To avoid damage to discharger, do not put strain on wires.

Make sure electrical receptacle connector key location is marked on cover plate so it can be installed in the same place. If not done, wires can be damaged.

1 Discharger Base	a. Cover plate (1)	Mark electrical receptacle connector (2) key location.
	b. Screws (3)	Remove eight screws.
	c. Cover plate (1) and gasket (4)	Remove from discharger base (5).



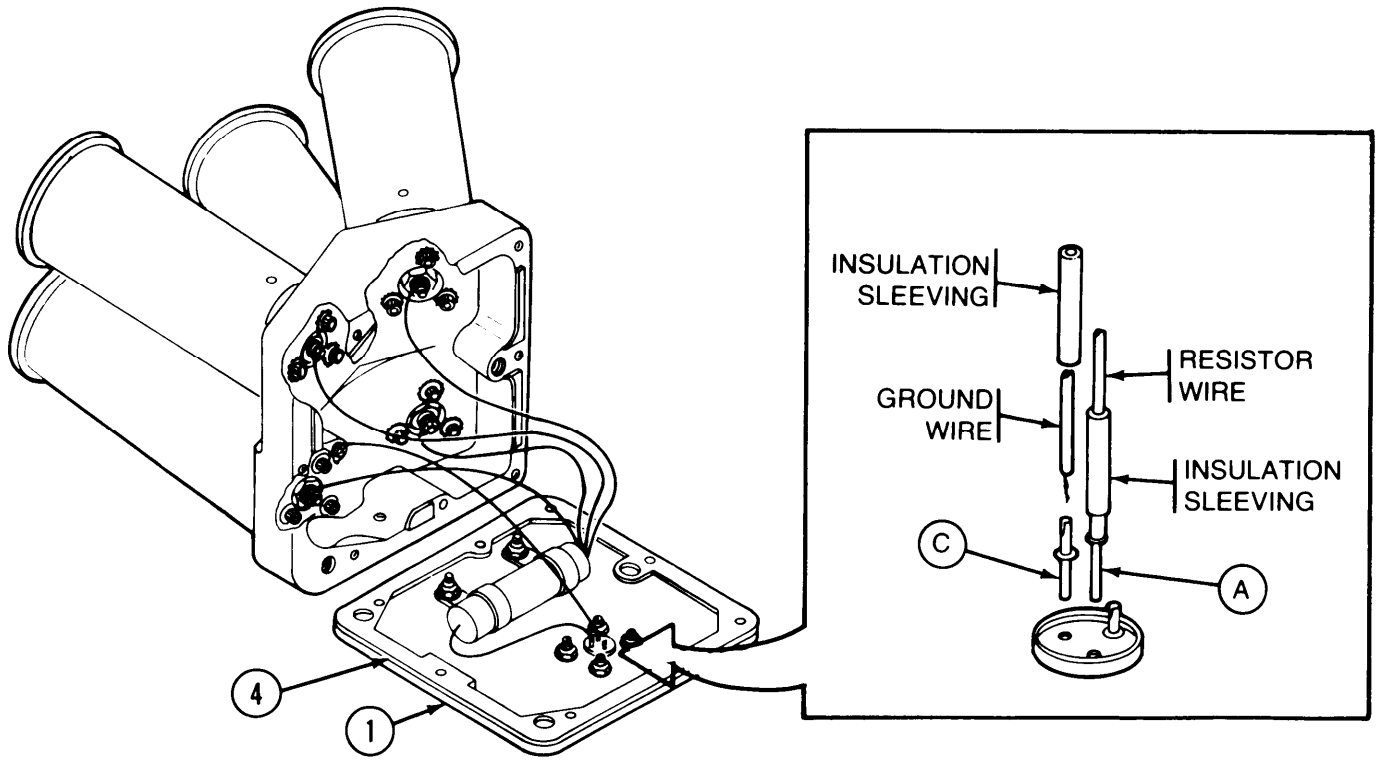
2-8. DISCHARGER - MAINTENANCE INSTRUCTIONS (CONT).

LOCATION	ITEM	ACTION	REMARKS

c. Electrical Receptacle Connector - Maintenance Instructions (Cont).

REMOVAL (Cont)

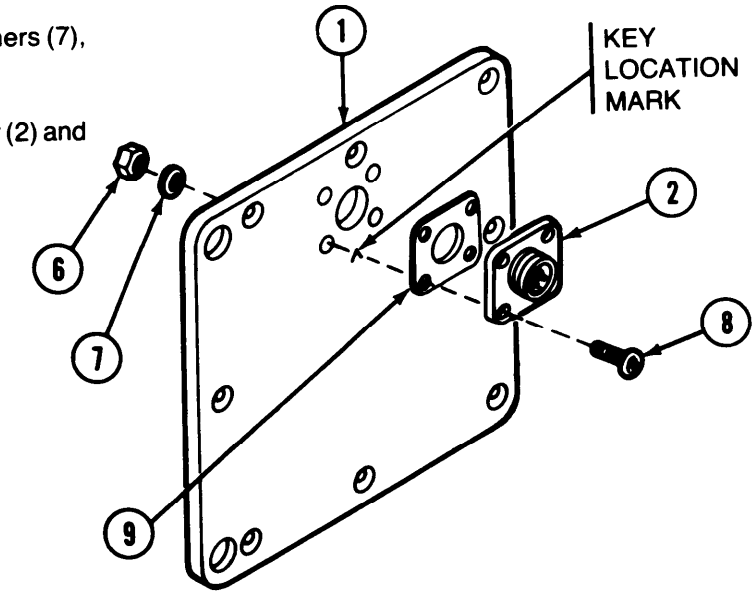
2 Cover Plate	a. Gasket (4)	Remove from cover plate (1).	
	b. Electrical receptacle connector (2)	a. Remove insulation sleeving and unsolder resistor wire from pin A and ground wire from pin C.	



b. Remove four self-locking nuts (6), washers (7), and screws (8).

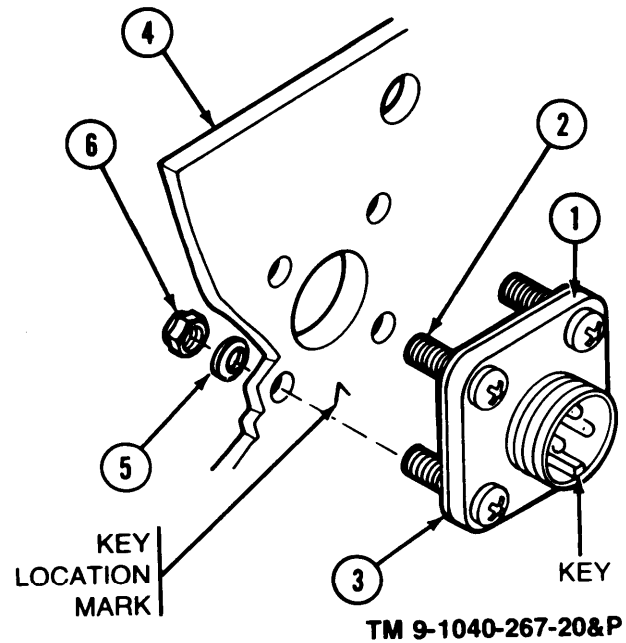
c. Remove electrical receptacle connector (2) and gasket (9) from cover plate (1).

d. Discard items 2, 8, and 9.



INSTALLATION

Cover Plate	Electrical receptacle connector (1)	a. Insert four screws (2) in electrical receptacle connector. b. Place gasket (3) on electrical receptacle connector (1). c. Aline key with location mark on outside of cover plate (4). d. Install on cover plate (4) with four washers (5) and four self-locking nuts (6). Tighten.



TM 9-1040-267-20&P

2-8. DISCHARGER - MAINTENANCE INSTRUCTIONS (CONT).

LOCATION	ITEM	ACTION	REMARKS

c. Electrical Receptacle Connector - Maintenance Instructions (Cont).

INSTALLATION (Cont)

Cover Plate (Cont).

Electrical receptacle connector (1) (Cont).

e. Cut two pieces of insulation sleeving 3/4 inches long.

f. Slide insulation sleeving on wires.

g. Remove pins A and C.

h. Solder (item 9, app D) one pin to resistor wire and one pin to ground wire. See TB SIG 222.

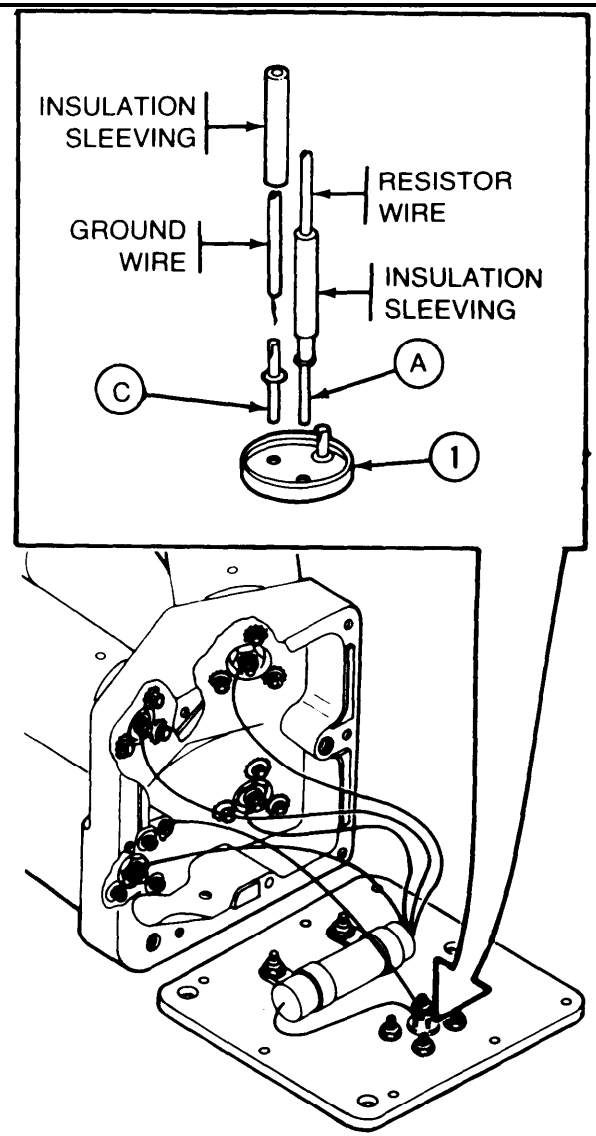
CAUTION

Be sure that pins are inserted into correct holes of electrical receptacle connector or discharger will not fire.

i. Insert resistor wire pin into hole A.

j. Insert ground wire pin into hole C.

k. Slide insulation sleeving over soldered connections and heatshrink.



TESTING

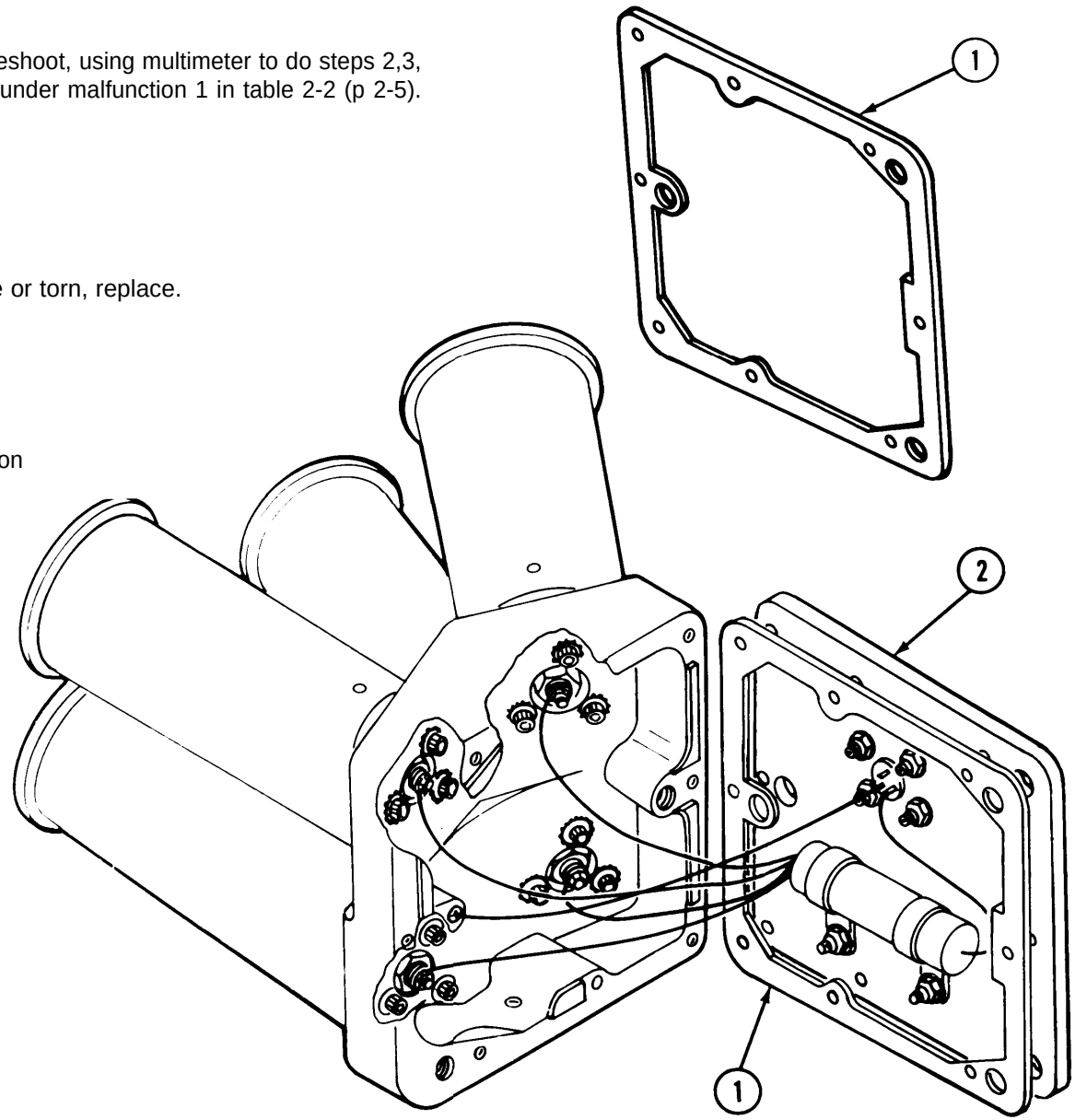
Discharger	Electrical circuits	Troubleshoot, using multimeter to do steps 2,3, and 5 under malfunction 1 in table 2-2 (p 2-5).

INSPECTION

Gasket	Gasket material (1)	If brittle or torn, replace.

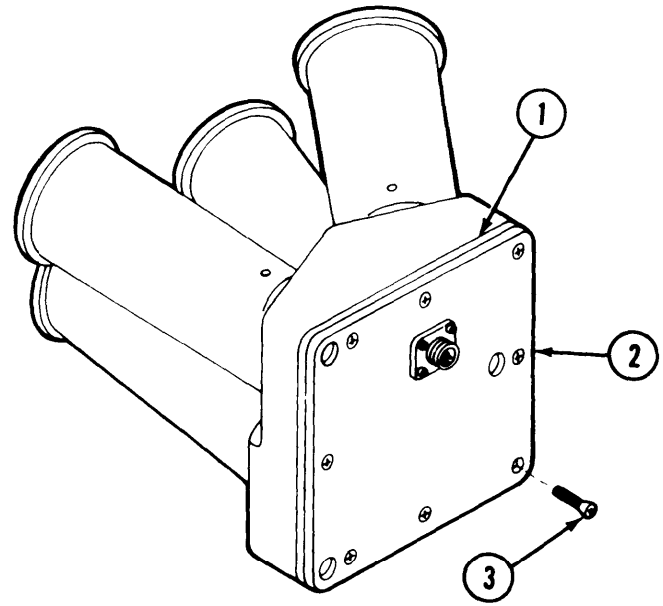
INSTALLATION

1 Cover Plate	Gasket (1)	Install on



2-8. DISCHARGER - MAINTENANCE INSTRUCTIONS (CONT).

c. Electrical Receptacle Connector - Maintenance Instructions (Cont).



INSTALLATION (Cont)

CAUTION

To avoid damage to discharger, do not pinch wires between cover plate and discharger base.

LOCATION	ITEM	ACTION	REMARKS
2 Discharger Base	a. Gasket (1) and cover plate (2)	Install gasket and cover plate.	
	b. Screws (3)	a. Apply heavy coating of sealing compound (item 7 or 8, app D) to screw threads.	
		b. Install eight screws and tighten.	

PAINTING

NOTE

Do not paint electrical receptacle connector, electrical contacts, nameplate, or screws. Do not let paint clog mounting holes or drain holes.

Discharger	All outside surfaces	a. Remove burrs, corrosion, and chipped paint.	
		b. Touch up with primer (item 6, app D) and enamel (item 3, App D).	See TM 43-0139.

d. Discharger Tubes - Maintenance Instructions.

NOTE

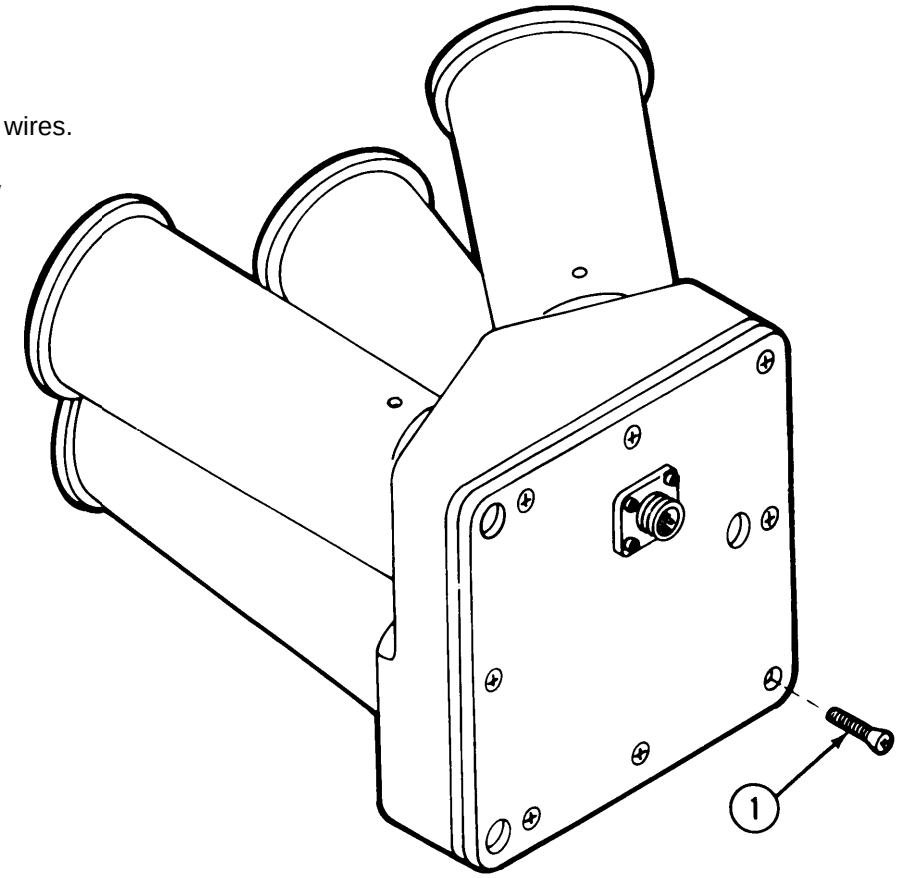
This procedure is used to replace any one of four discharger tubes. Replace only as needed to correct faults.

REMOVAL

CAUTION

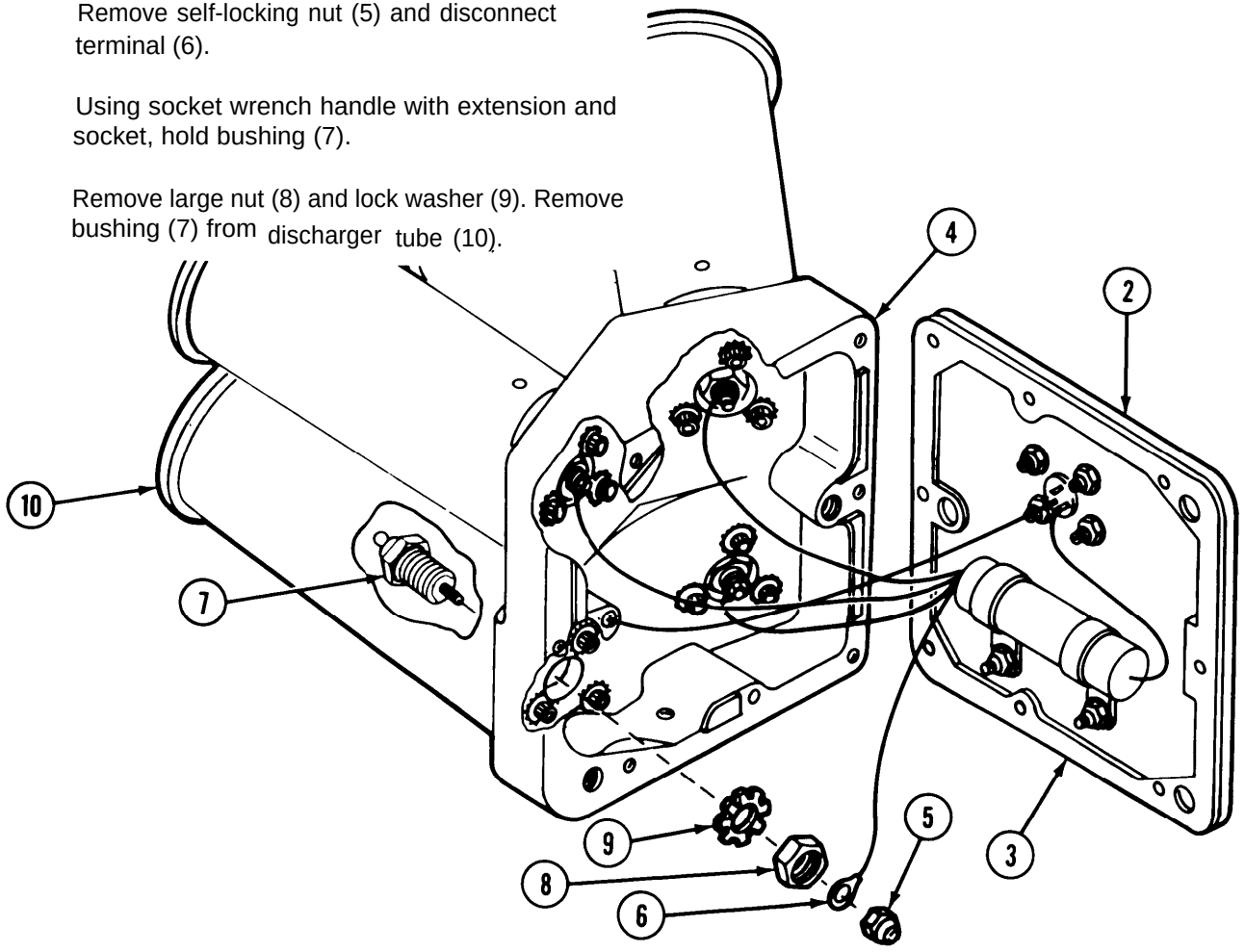
To avoid damage to discharger, do not put strain on wires.

1 Discharger Base	a. Screws (1)	Remove eight screw

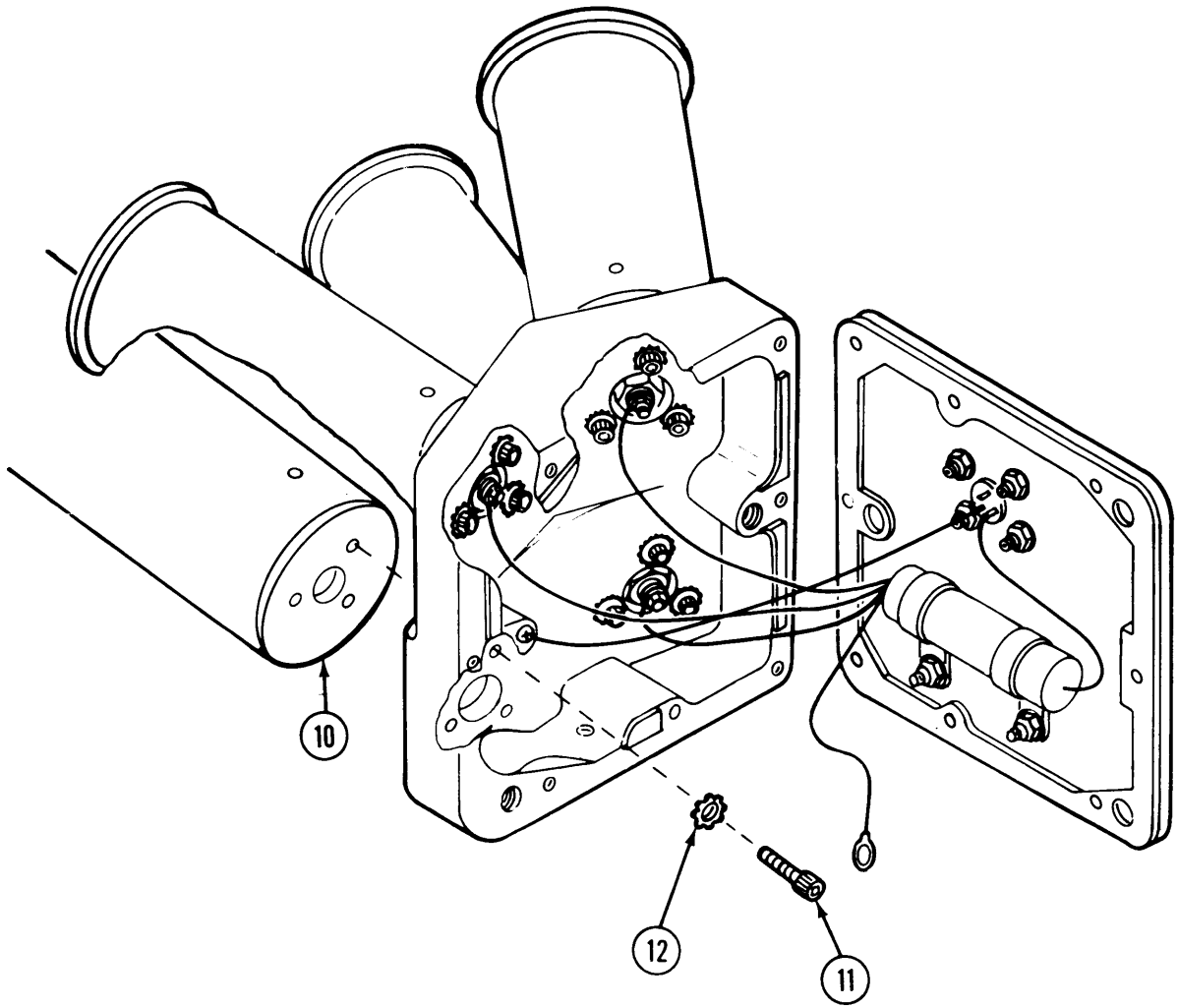


2-8. DISCHARGER - MAINTENANCE INSTRUCTIONS (CONT).

LOCATION	ITEM	ACTION	REMARKS
d. Discharger Tubes - Maintenance Instructions (Cont)			
REMOVAL (Cont)			
1 Discharger Base (Cont).	b. Cover plate (2) and gasket (3)	Remove from discharger base (4).	
	c. Electrical contact	Remove self-locking nut (5) and disconnect terminal (6).	
2 Discharger Tube	Electrical contact	Using socket wrench handle with extension and socket, hold bushing (7).	
3 Discharger Base	a. Electrical contact	Remove large nut (8) and lock washer (9). Remove bushing (7) from discharger tube (10).	



b. Screws (11), lock washers, and discharger tube (10)	Remove three screws, three lock washers, and discharger tube.



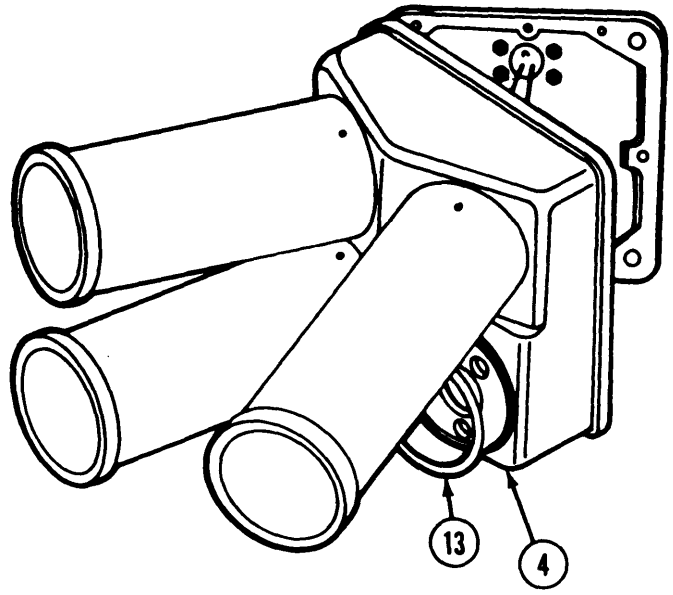
2-8. DISCHARGER - MAINTENANCE INSTRUCTIONS (CONT).

LOCATION	ITEM	ACTION	REMARKS

d. Discharger Tubes - Maintenance Instructions (Cont).

REMOVAL (Cont)

3	Discharger Base (Cont).	c. Preformed packing (13)	Remove from groove in discharger base (4) and discard.



CLEANING AND INSPECTION

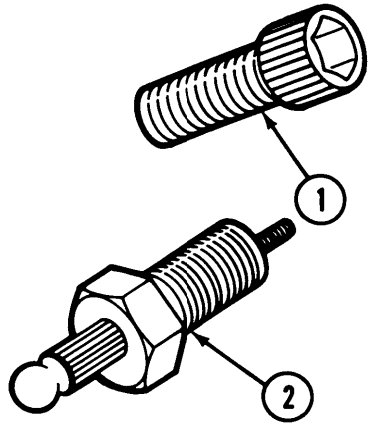
a. Screws (1)

Clean sealing compound from threads with wire brush.

b. Bushing (2)

a. Inspect for crossed or deformed threads. Replace if damaged.

b. If corroded, clean with cleaning compound (RBC) (item 1, app D) and cloth (item 2, app D).

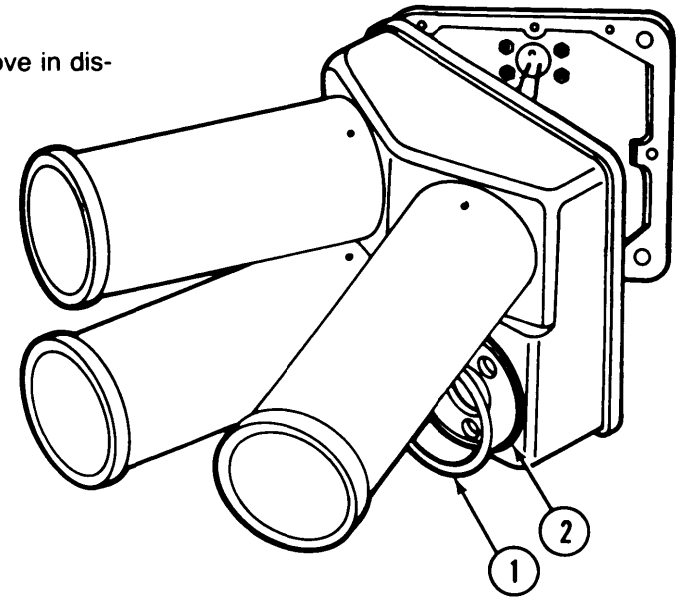


INSTALLATION

1 Discharger Base

a. Preformed packing (1)

Install new preformed packing into groove in discharger base (2).



2-8. DISCHARGER - MAINTENANCE INSTRUCTIONS (CONT).

LOCATION	ITEM	ACTION	REMARKS

d. Discharger Tubes - Maintenance Instructions (Cont).

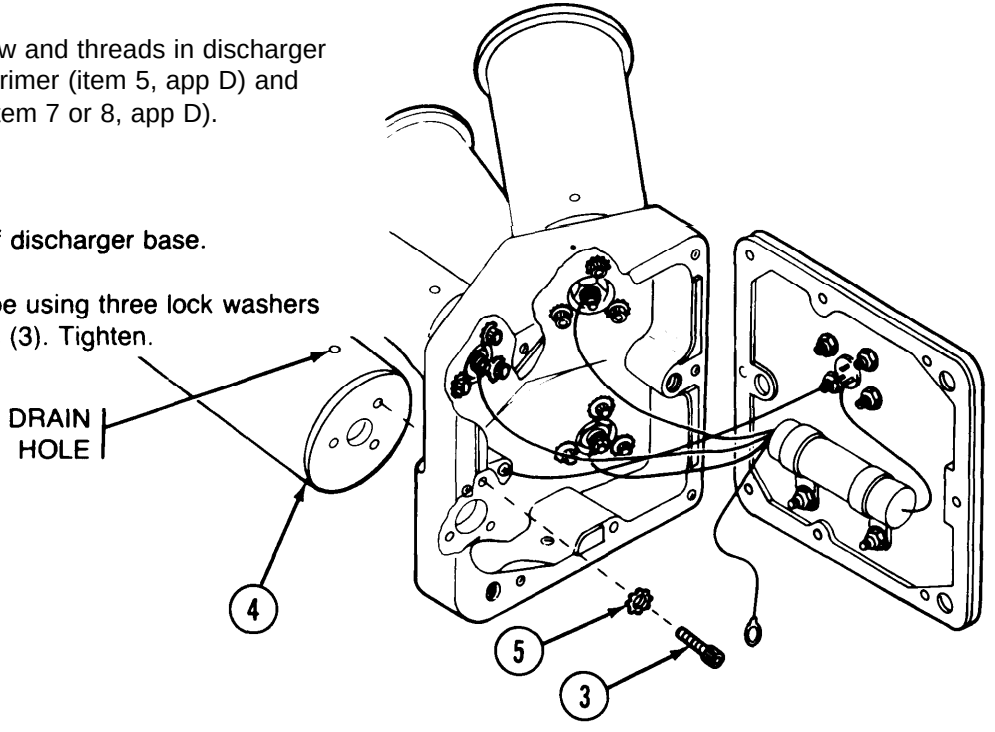
INSTALLATION (Cont)

1. Dischager Base (Cont).

b. Screw (3) and discharger tube (4) — Coat threads of screw and threads in discharger tube with adhesive primer (item 5, app D) and sealing compound (item 7 or 8, app D).

NOTE
Be sure drain hole in discharger tube is in direction of bottom of discharger base.

c. Discharger tube (4) — Install discharger tube using three lock washers (5) and three screws (3). Tighten.

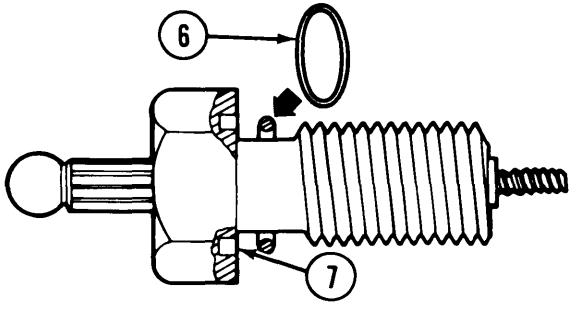


2 Bushing

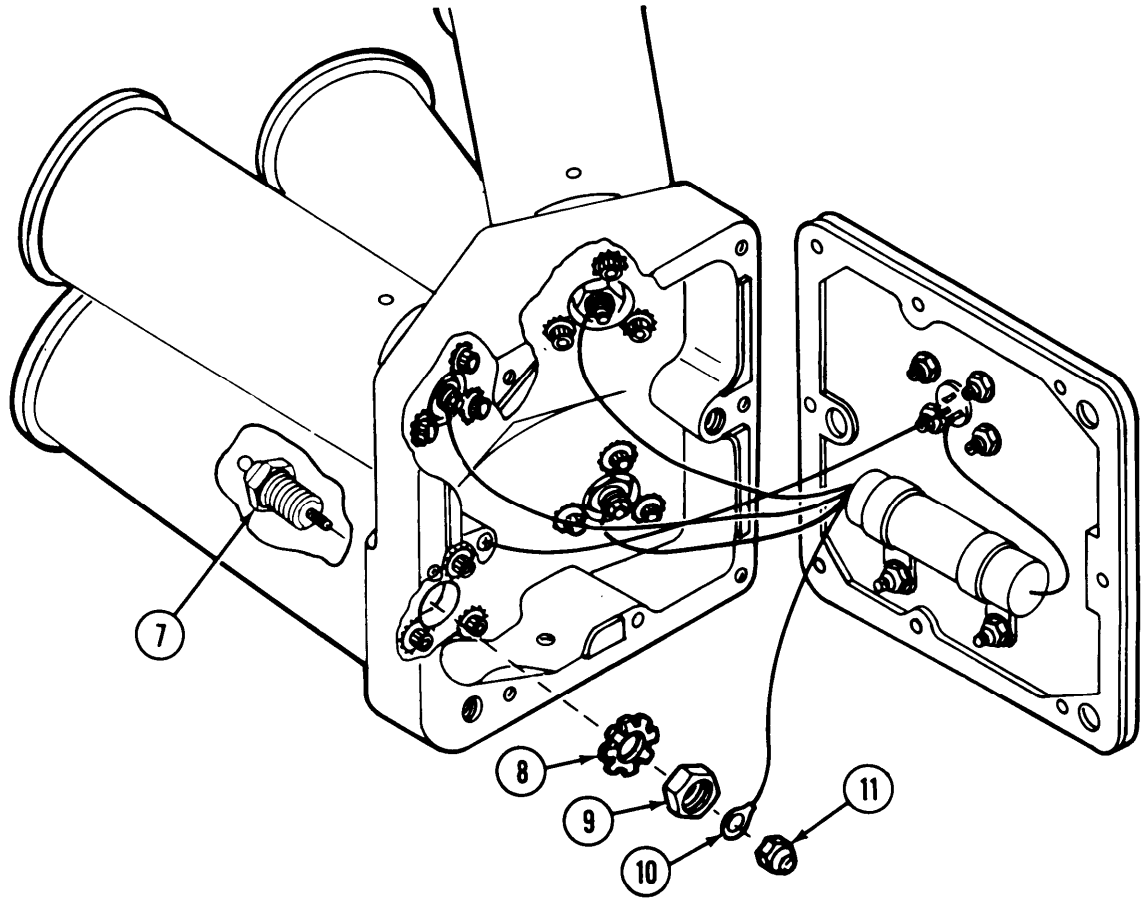
Preformed packing (6) — a. Remove from groove in bushing (7).

CAUTION
For a tight seal, do not twist preformed packing when inserting into groove.

b. Insert new preformed packing into groove in bushing (7).



3 Discharger Tube	Bushing (7)	Push through hole in tube base.
4 Discharger Base	Electrical contact	a. Hold bushing (7) with socket wrench. Install lock washer (8) and large nut (9). b. Torque large nut (9) to 120 to 144 inch-pounds. c. Connect terminal (10) and install self-locking nut (11). Tighten.



2-8. DISCHARGER - MAINTENANCE INSTRUCTIONS (CONT).

LOCATION	ITEM	ACTION	REMARKS

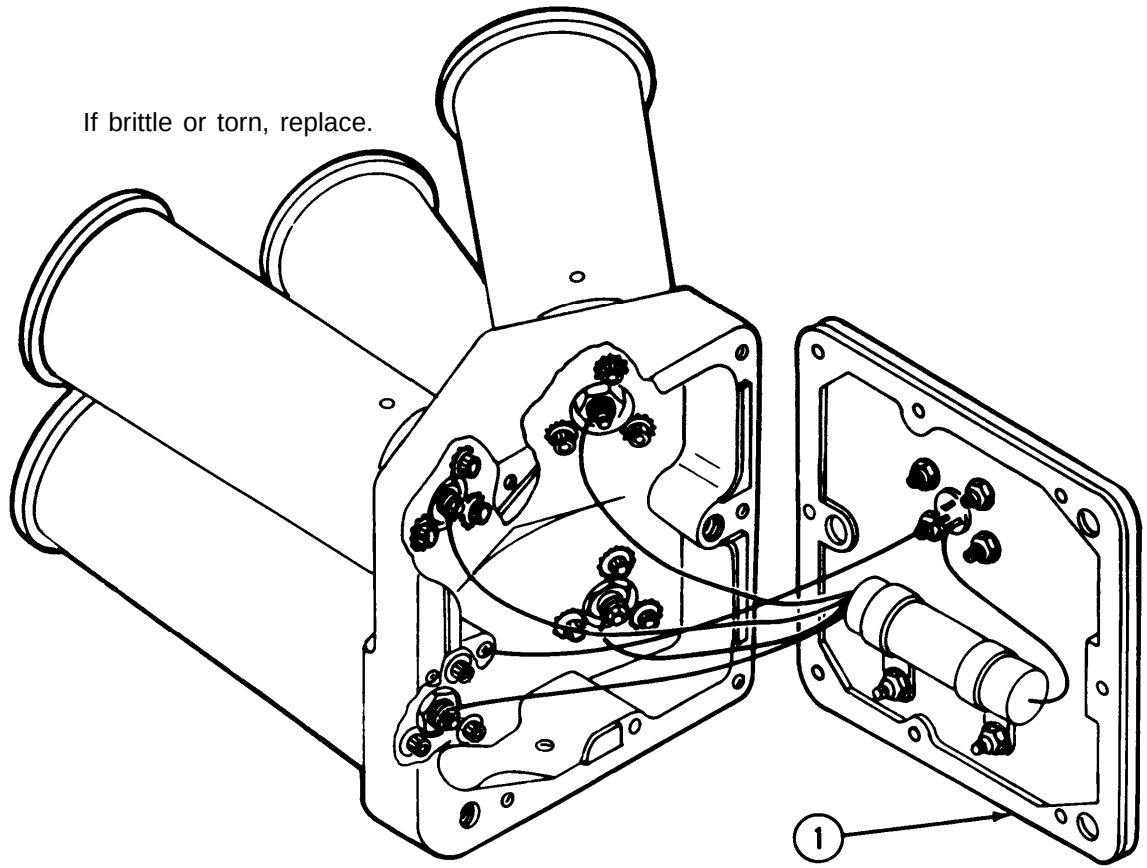
d. Discharger Tubes - Maintenance Instructions (Cont).

TESTING

Discharger	Electrical contact	Troubleshoot, using multimeter to do steps 2 and 6 under malfunction 1 in table 2-2 (p 2-5)	

INSPECTION

Discharger	Gasket (1)	If brittle or torn, replace.	

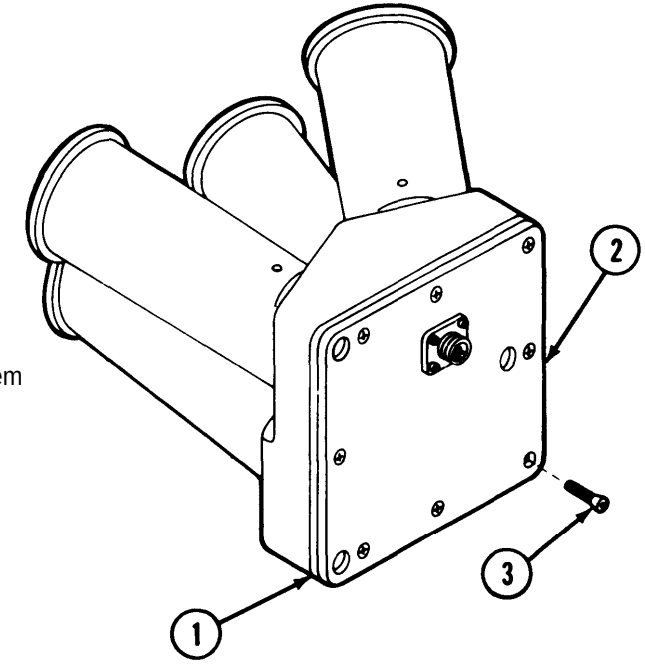


INSTALLATION

CAUTION

To avoid damage to discharger, do not pinch wires between cover plate and discharger base.

Discharger Base	a. Gasket (1) and cover plate (2)	Install gasket and cover plate.
	b. Screws (3)	a. Apply heavy coating of sealing compound (item 7 or 8, app D) to screw threads. b. Install eight screws and tighten.



PAINTING

NOTE

Do not paint electrical receptacle connector, electrical contacts, nameplate, or screws. Do not let paint clog mounting holes or drain holes.

Discharger	All outside surfaces	a. Remove burrs, corrosion, and chipped paint. b. Touch up with primer (item 6, app D) and enamel (item 3, app D).	See TM 43-0139.

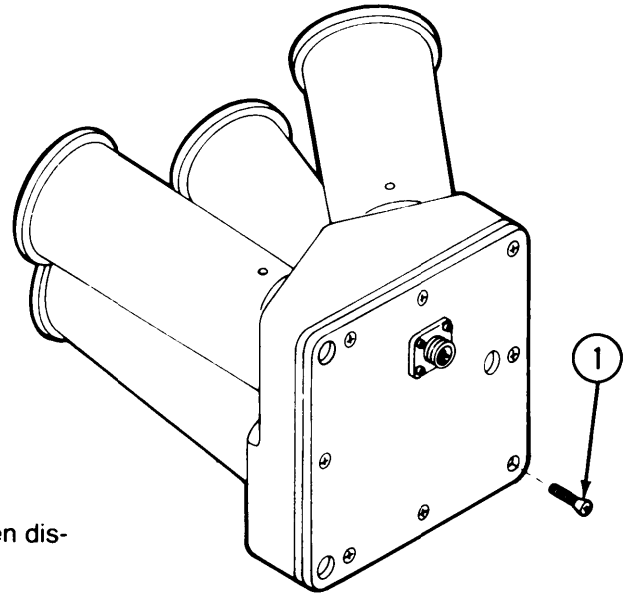
2-8. DISCHARGER - MAINTENANCE INSTRUCTIONS (CONT).

LOCATION	ITEM	ACTION	REMARKS

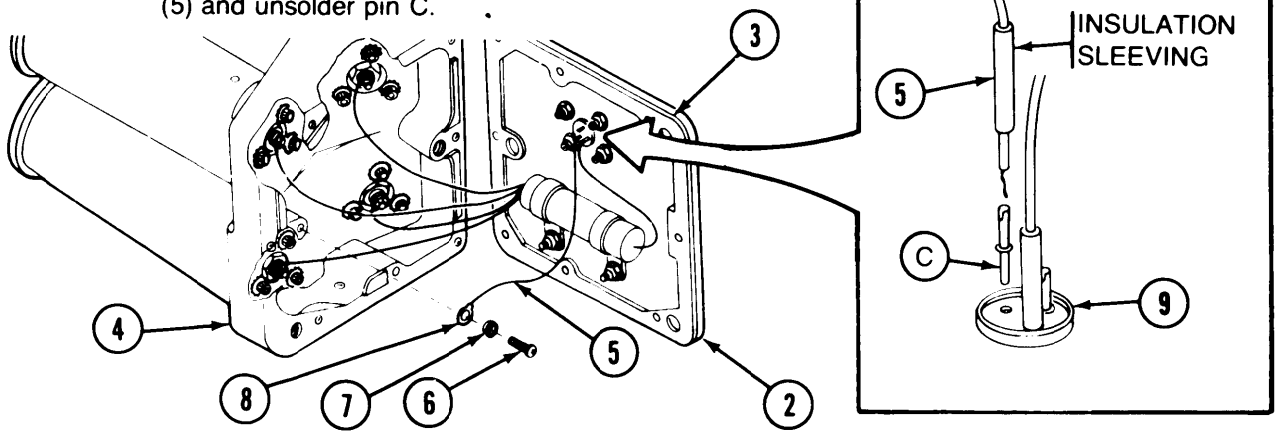
e. Ground Wire - Maintenance Instructions.

REMOVAL

CAUTION
To avoid damage to discharger, do not put strain on wires.



1 Discharger Base	a. Screws (1)	Remove eight screws.
	b. Cover plate (2) and gasket (3)	Remove from discharger base (4).
	c. Ground wire (5)	Remove screw (6) and lock washer (7). Then disconnect terminal (8).
2 Cover Plate	Electrical receptacle connector (9)	a. Remove pin C. b. Remove insulation sleeving from ground wire (5) and unsolder pin C.



INSTALLATION

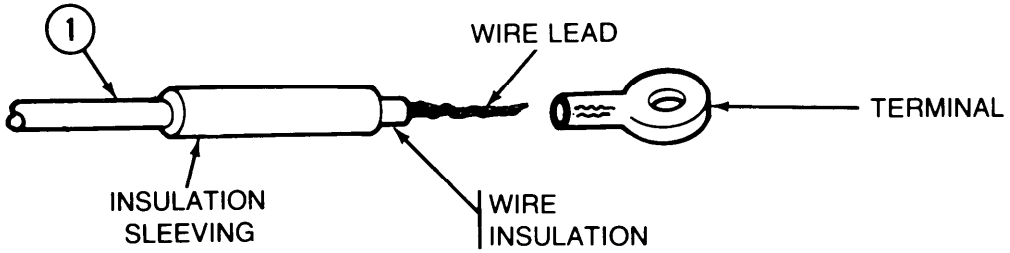
CAUTION

Do not break strands on wire when stripping insulation.

1 Discharger

Ground wire (1)

a. Cut new wire about 8 inches long.



b. Strip insulation to length of terminal sleeve. insert wire into terminal. Crimp terminal and solder (item 9, app D). See TB SIG 222.

c. Cut two pieces of insulation sleeving 3/4 inches long and slide to center of wire.

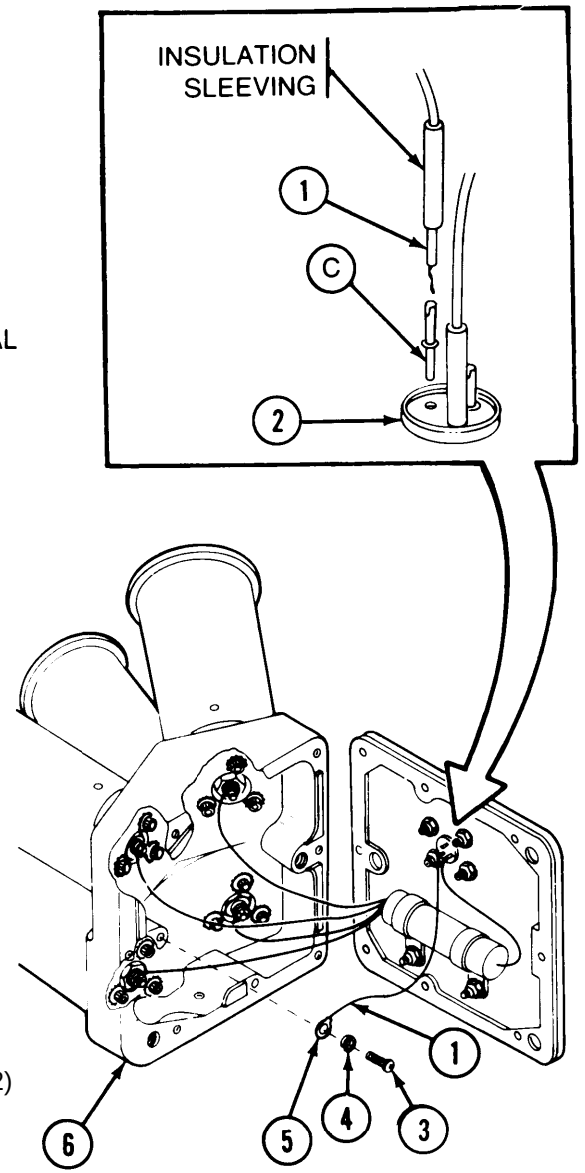
d. Slide one insulation sleeving over terminal sleeve and heatshrink.

e. Strip insulation to depth of solder well of pin C. Insert ground wire into solder well and solder (item 9, app D) to pin C. See TB SIG 222.

f. Slide insulation sleeving over soldered connection and heatshrink.

g. Insert pin C into electrical receptacle connector (2)

h. Use screw (3) and lock washer (4) to connect terminal (5) to discharger base (6) and tighten.



2-8. DISCHARGER - MAINTENANCE INSTRUCTIONS (CONT).

LOCATION	ITEM	ACTION	REMARKS

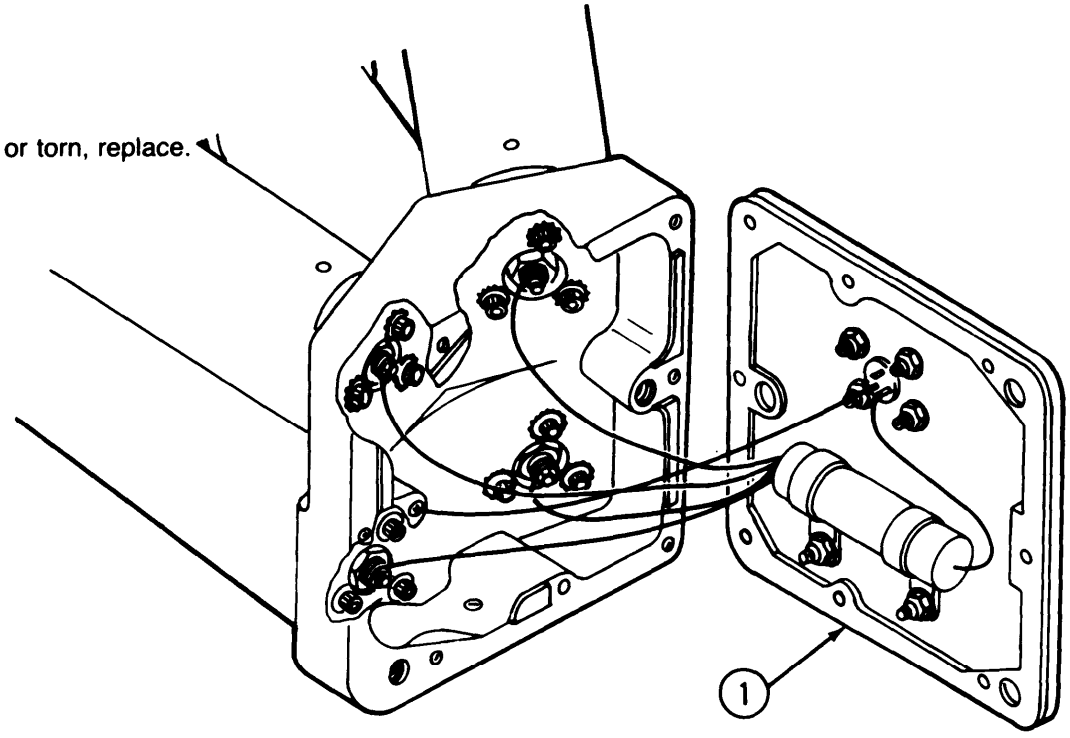
e. Ground Wire - Maintenance Instructions (Cont).

TESTING

Discharger	Ground wire	Troubleshoot, using multimeter to do step 5 under malfunction 1 in table 2-2 (p 2-5).	

INSPECTION

Discharger	Gasket (1)	If brittle or torn, replace.	

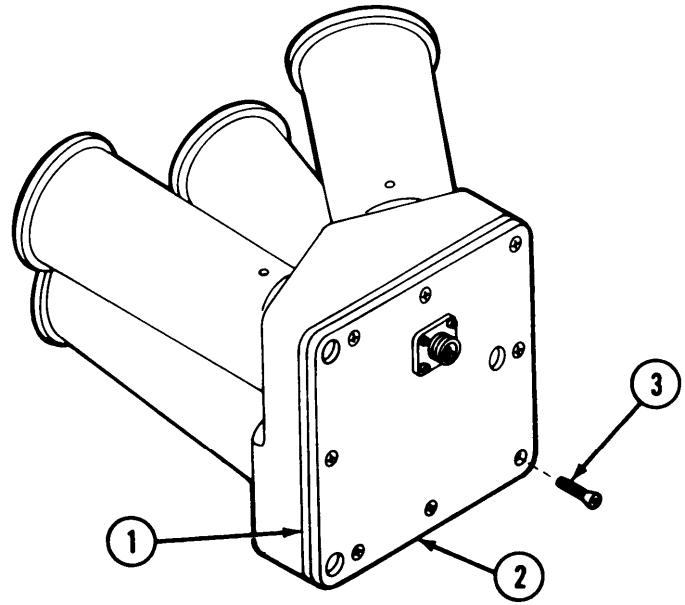


INSTALLATION

CAUTION

To avoid damage to discharger, do not pinch wires between cover plate and discharger base.

Discharger Base	a. Gasket (1) and cover plate (2)	Install gasket and cover plate.
	b. Screws (3)	a. Apply heavy coating of sealing compound (item 7 or 8, app D) to screw threads. b. Install eight screws and tighten.



PAINTING

NOTE

Do not paint electrical receptacle connector, electrical contacts, nameplate, or screws. Do not let paint clog mounting holes or drain holes.

Discharger	All outside surfaces	a. Remove burrs, corrosion, and chipped paint. b. Touch up with primer (item 6, app D) and enamel (item 3, app D).	See TM 43-0139.

2-9. ARMING FIRING UNIT - MAINTENANCE INSTRUCTIONS.

This task covers:

a. Cleaning and Inspection
b. Testing
c. Repair

INITIAL SETUP

Applicable Configuration
M243 launcher NSN 1040-01-059-0560
M259 launcher NSN 1040-01-107-7501

Test Equipment
Multimeter TS-352B/U or equal

Tools
SC 5180-90-CL-N26
General Mechanic's Automotive Tool Kit NSN 5180-00-177-7033
SC 5180-95-CL-A51
Turret Mechanic's Tool Kit NSN 5180-00-695-0139

Materials/Parts
Cloth (item 2, app D)

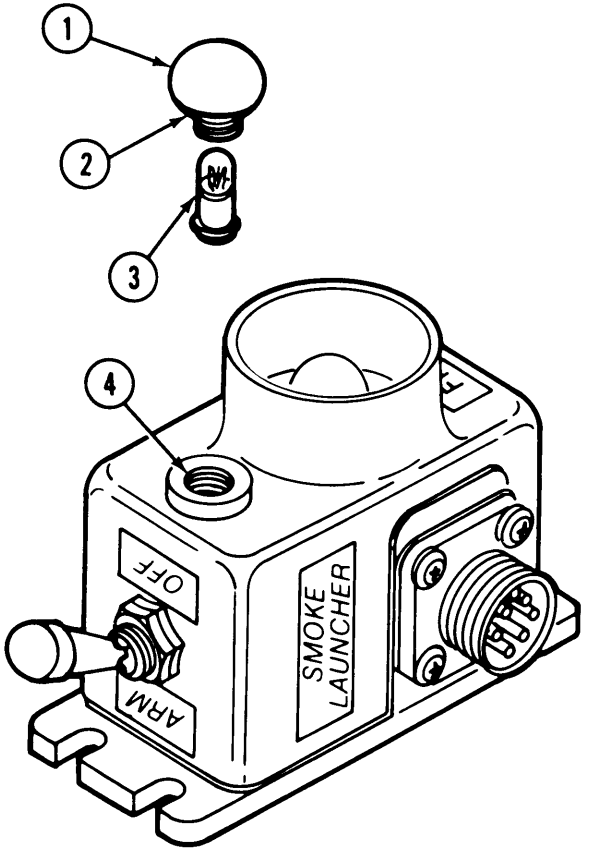
References
SC 5180-95-CL-A51
TM 11-6625-366-10

Troubleshooting References
Table 2-2, malfunction 2 Arming Firing Unit Won't Fire Dischargers
Table 2-2, malfunction 3 Indicator Light Won't Light

LOCATION	ITEM	ACTION	REMARKS
CLEANING AND INSPECTION			
Arming Firing Unit Exterior	All parts	Clean and inspect (para 2-3).	
TESTING			
Arming Firing Unit	Electrical receptacle connector	Troubleshoot, using multimeter to do tests under malfunctions 2 and 3 in table 2-2 (p 2-5).	

REPAIR

Arming Firing Unit	d. Lens (1)	Unscrew and remove lens with preformed packing (2) and lamp (3).
	b. Socket (4)	If corroded, clean socket.
	c. Lens (1)	a. Check preformed packing (2). If cut, torn, or missing, replace lens which includes preformed packing. b. Pry lamp (3) from lens and replace if burned out. c. Replace lens if cracked or if chipped. d. Install new lamp (3) in lens. e. Screw lens with preformed packing (2) and lamp (3) into socket (4).



TESTING

Arming Firing Unit	Indicator light assembly	Troubleshoot, using multimeter to do steps 1 and 2 under malfunction 3 in table 2-2 (p 2-5).

2-10. GRENADE STORAGE BOX - MAINTENANCE INSTRUCTIONS.

This task covers:

a. Cleaning
b. Inspection
c. Removal
d. Installation
e. Painting

INITIAL SETUP

Applicable Configuration
M243 launcher NSN 1040-01-059-0560

Tools
SC 4910-95-CL-A74
Hammer NSN 5120-00-900-6103
Marking Stencil Set NSN 7520-00-298-7043
Wire Brush NSN 7920-00-291-5815
SC 5180-95-CL-A51
Turret Mechanic's Tool Kit NSN 5180-00-695-0139
Paint Brush NSN 8020-00-297-6657

MaterialslParts
Cloth (item 2, app D)
Enamel (item 3, app D)
Pressure sensitive adhesive tape (item 10, app D)
Primer coating (item 6, app D)
Stencil marking ink (item 4, app D)

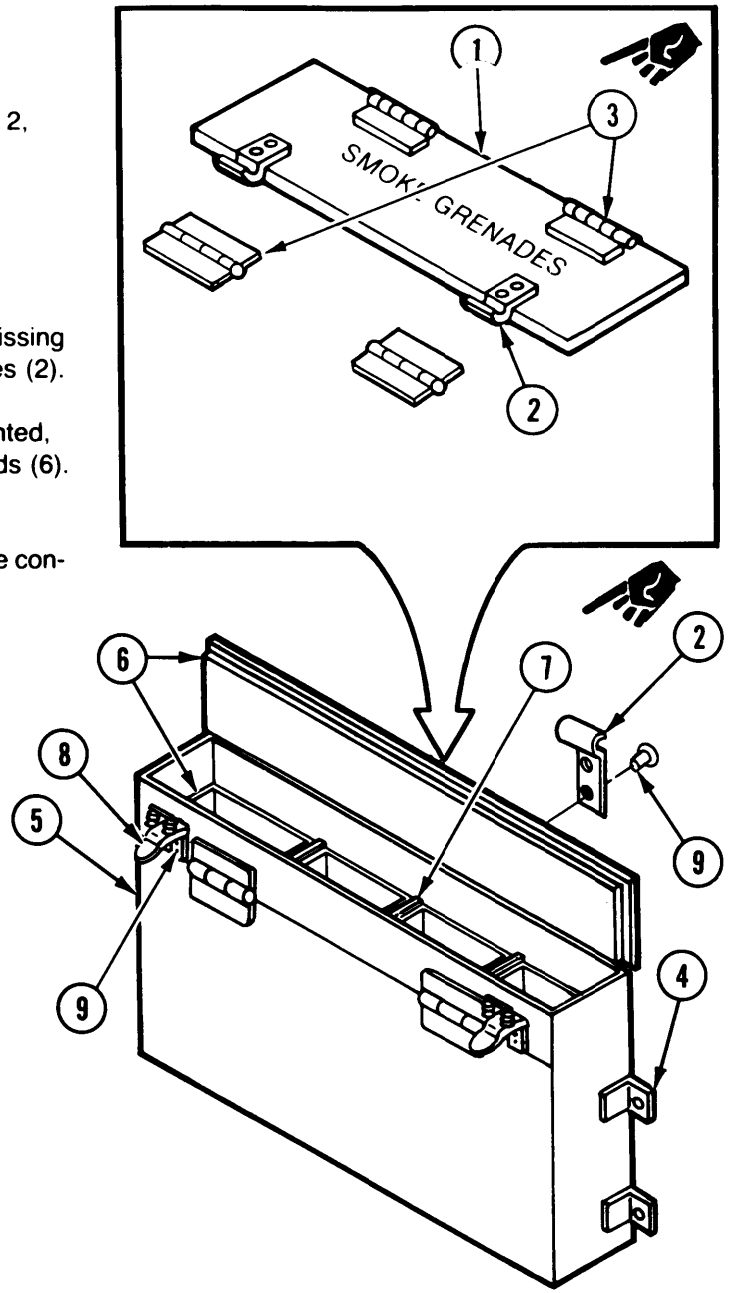
References
SC 4910-95-CL-A74
SC5180-95-CL-A51
TM 43-0139

CLEANING

Grenade Stowage Box	All surfaces	Wipe off dirt and grime with damp cloth (item 2, app D).

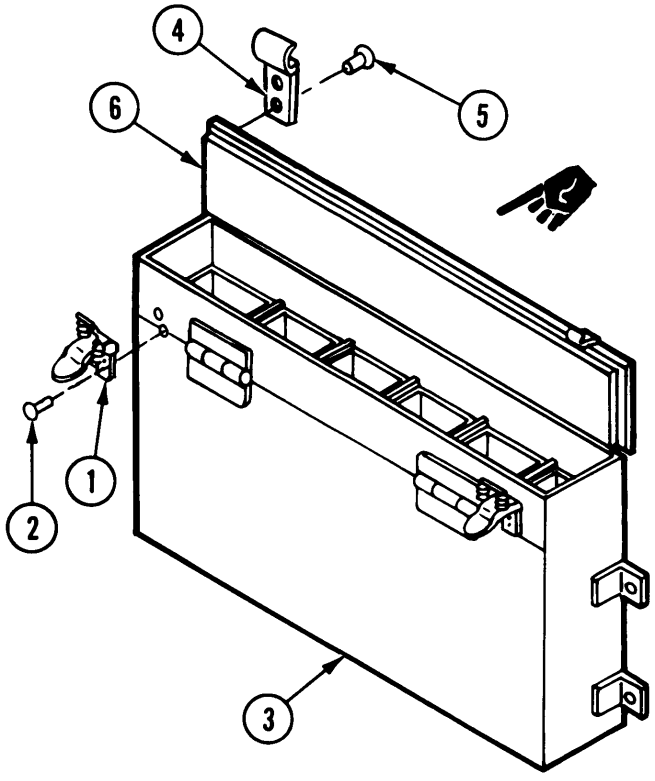
INSPECTION

Grenade Stowage Box	a. Surfaces and parts	a. Inspect for: bent, dented, cracked, and missing lid (1). Broken, loose, and missing strikes (2). Broken and missing hinges (3). Broken, cracked, and missing lugs (4). Bent, dented, and cracked box (5). Missing rubber pads (6). Loose and missing dividers (7).
		b. Replace grenade storage box if the above conditions exist.
	b. Clamping catches (8)	a. Check if broken or if missing.
		b. Replace if broken or if missing.
	b.1. Strikes (2)	a. Check if broken or if missing.
		b. Replace if broken or if missing.
	c. Rivets (9)	a. Check for loose rivets.
		b. If loose, tighten.



2-10. GRENADE STORAGE BOX - MAINTENANCE INSTRUCTIONS (CONT).

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
Grenade Stowage Box	a. Clamping catches (1)	a. Cut off head of rivets (2) flush from inside box (3) with chisel. b. Separate clamping catch (1) from box (3) with chisel. c. Pry clamping catch (1) and rivets (2) from box (3) with pry bar.	
	b. Strike (4)	a. Carefully peel back pad (6) inside lid to expose rivets (5). b. Cut off rivets (5) flush from inside box (3) with chisel. c. Separate strike (4) from lid with chisel. d. Pry strike (4) and rivets (5) from lid with pry bar.	

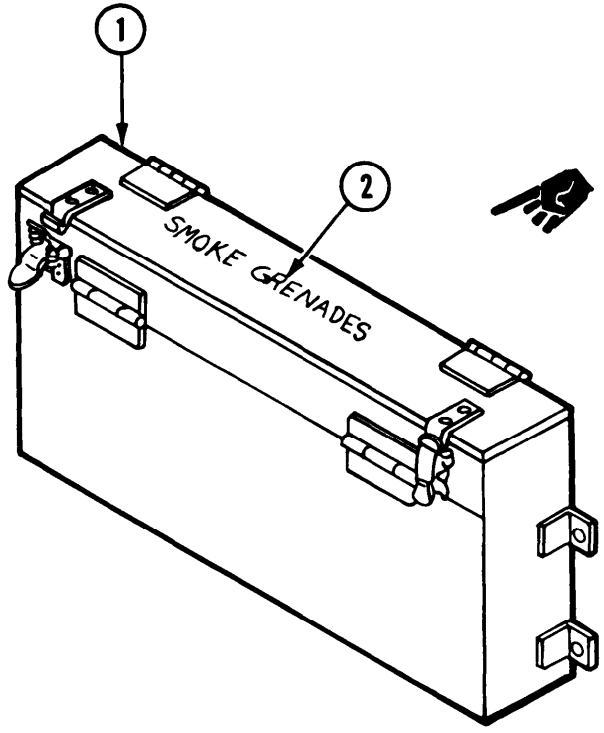


INSTALLATION

Grenade Stowage Box	a. Clamping catches (1)	a. Push rivets (2) through holes from inside of box (3). b. Place clamping catch (1) on rivets (2). c. Place heavy hammer behind head of rivet (2). d. Peen end of rivet (2) with another hammer.
	b. Strike (4)	a. Push rivets (5) through holes from inside box (3). b. Place strike (4) on rivets (5). c. Place heavy hammer behind head of rivet (5). d. Peen end of rivet (5) with another hammer. e. Replace pad (6).

PAINTING

Grenade Stowage Box	a. All outside surfaces	a. Remove burrs, chipped paint, and rust. b. Paint with primer (item 6, app D) and enamel (item 3, app D) as needed. See TM 43-0139.
	b. Lid (1)	Stencil marking “Smoke Grenades” (2) in 1 inch high letters with stencil marking ink (item 4, app D). Mask unpainted surfaces with tape (item 10, app D).



SECTION VI. PREPARATION FOR STORAGE OR SHIPMENT

2-11. SECURITY PROCEDURES. The launchers are non-sensitive items and may be stored or shipped, using standard storage and transportation handling procedures.

2-12. PRESERVATION, PACKAGING, PACKING, MARKING, AND SHIPPING REQUIREMENTS. Prior to being installed on the armored vehicles, the launchers will be stored in their original shipping containers, using the same preservation and packing materials described in Section II. Service Upon Receipt.

2-13. PRESERVATION MATERIALS. No special preservation materials are required for storage or shipment of the launcher.

2-14. TYPE OF STORAGE. Usually, the launchers will require only short term storage of 1 to 45 days before being installed on the armored vehicles. This equipment will be placed in administrative storage (TM 740-90-1) where it can be readied for mission performance within 24 hours. The administrative storage site should protect the launchers from the elements and allow access for visual inspection. No special storage facilities are needed.

APPENDIX A
REFERENCES

A-1. TECHNICAL MANUALS.

TM 740-90-1 . . . . . Administrative Storage of Equipment
TM 43-0002-31 . . . . . Destruction of Chemical Weapons and Defense Equipment to Prevent Enemy Use
TM 11-6625-366-10 . . . . . Operator's Manual for Multimeter TS-352 B/U (NSN 6625-00-552-0142)
TM 43-0139 . . . . . Painting Instructions for Field Use

A-2. TECHNICAL BULLETINS.

TBSIG 222 . . . . . Solder and Soldering

A-3. PAMPHLETS.

DA PAM310-1 . . . . . Consolidated Index of Army Publications and Blank Forms
DA PAM 738-750 . . . . . The Army Maintenance Management System (TAMMS)

A-4. FIELD MANUALS.

FM21-11 (TEST) . . . . . First Aid for Soldiers

A-5. SUPPLY CATALOGS.

SC4910-95-CL-A74	Shop Equipment, Automotive Maintenance and Repair: Organizational Maintenance, Common No. 1, Less Power (NSN 4910-00-754-0654) (LIN W32593) and MAP only (NSN 4910-00-919-0098)
SC 5180-91-CL-R13	Tool Kit, Electronic Equipment, TK-101/G(NSN5180-00-064-51 78) (LIN W 37483)
SC 5180-95-CL-A51	Tool Kit, Turret Mechanics: (5180-00-695-01 39) (W57801)
SC 5180-90-CL-N26	Tool Kit, General Mechanic's Automotive (NSN 5180-00-177-7033) (LIN W33004)

A-6. SUPPLY BULLETINS.

SB 708-42	Federal Supply Code for Manufacturers'; United States and Canada-Code to Name. (Cataloging Handbook H4-2) (GSA-FSS-H4-2)

A-7. COMMON TABLE of ALLOWANCES.

CTA 50-970	Expendable Items: (Except: Medical Class V, Repair Parts and Heraldic Items)

A-8. BLANK FORMS.

DA Form 2028	Recommended Changes to Publications and Blank Forms
DA Form 2028 -2	Recommended Changes to Equipment Technical Publications
SF 364	Report of Discrepancy (ROD)
SF 368	Quality Deficiency Report (Category 11)

APPENDIX B
MAINTENANCE ALLOCATION CHART

Section I. INTRODUCTION

B1. GENERAL.

a. This section provides a general explanation of all maintenance and repair functions authorized at various maintenance categories.

b. The Maintenance Allocation Chart (MAC) in section II designates overall authority and responsibility for the performance of maintenance functions on the identified end item or component. The application of the maintenance functions to the end item or component will be consistent with the capacities and capabilities of the designated maintenance categories.

c. Section Ill lists the tools and test equipment (both special tools and common tool sets) required for each maintenance function as referenced from section II.

d. Section IV contains supplemental instructions and explanatory notes for a particular maintenance function.

B-2. MAINTENANCE FUNCTIONS. Maintenance functions will be limited to and defined as follows: (except for ammunition MAC[1]).

a. inspect. To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination (e.g., by sight, sound, or feel).

b. Test. To verify serviceability by measuring the mechanical, pneumatic, hydraulic, or electrical characteristics of an item and comparing those characteristics with prescribed standards.

c. Service. Operations required periodically to keep an item in proper operating condition, i.e., to clean (includes decontaminate, when required), to preserve, to drain, to paint, or to replenish fuel, lubricants, chemical fluids, or gases.

d. *Adjust.* To maintain or regulate, within prescribed limits, by bringing into proper or exact position, or by setting the operating characteristics to specified parameters.

e. *Aline.* To adjust specified variable elements of an item to bring about optimum or desired performance.

f. *Calibrate.* To determine and cause corrections to be made or to be adjusted on instruments or test, measuring and diagnostic equipments used in precision measurements. Consists of comparisons of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.

g. *Remove/Install.* To remove and install the same item when required to perform service or other maintenance functions. Install may be the act of emplacing, seating, or fixing into position a spare, repair part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.

h. *Replace.* To remove an unserviceable item and install a serviceable counterpart in its place. “Replace” is authorized by the MAC and is shown as the 3d position code of the SMR code.

i. *Repair.* The application of maintenance services[2], including fault location/troubleshooting[3]; removal/installation, and disassembly/assembly[4] procedures and maintenance actions[5] to identify troubles and restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component of assembly), end item, or system.

[1] Exception is authorized for ammunition MAC to permit the redesignation/redefinition of maintenance function headings to more adequately identify ammunition maintenance functions. The heading designations and definitions will be included in the appropriate technical manual for each category of ammunition.

[2] Services - inspect, test, service, adjust, aline, calibrate, and/or replace.

[3] Fault locate/troubleshoot - The process of investigating and detecting the cause of equipment malfunctioning; the act of isolating a fault within a system or unit under test (UUT).

[4] Disassemble/assemble - encompasses the Step-by-step taking apart (or breakdown) of a spare/functional group coded Item to the level of lts least componency identified as maintenance significant (i.e., assigned as SMR code) for the category of maintenance under consideration.

[5] Actions - welding, grinding, riveting, straightening, facing, remachinery, and/or resurfacing.

j. *Overhaul.* That maintenance effort (service/action) prescribed to restore an item to a completely serviceable/operational condition as required by maintenance standards in appropriate technical publications (i.e., DMWR). Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like new condition.

k. *Rebuild.* Consists of those services/actions necessary for the restoration of unserviceable equipment to a like new condition in accordance with original manufacturing standards. Rebuild is the highest degree of materiel maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (hours/miles, etc.) considered in classifying Army equipment/components.

B-3. EXPLANATION OF COLUMNS IN THE MAC, SECTION II.

a. *Column 1, Group Number.* Column 1 lists functional group code numbers, the purpose of which is to identify maintenance significant components, assemblies, subassemblies, and modules with the next higher assembly. End item group number shall be "00."

b. *Column 2, Component/Assemb/y.* Column 2 contains the names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

c. *Column 3, Maintenance Function.* Column 3 lists the functions to be performed on the item listed in Column 2. (For detailed explanation of these functions, see paragraph B-2.)

d. *Column* 4, *Maintenance Category.* Column 4 specifies, by the listing of a work time figure in the appropriate subcolumn(s), the category of maintenance authorized to perform the function listed in column 3. This figure represents the active time required to perform that maintenance function at the indicated category of maintenance. If the number or complexity of the tasks within the listed maintenance function vary at different maintenance categories, appropriate work time figures will be shown for each category. The work time figure represents the average time required to restore an item (assembly, subassembly, component, module, end item, or system) to a serviceable condition under typical field operating conditions. This time includes preparation time (including any necessary disassembly/assembly time), troubleshooting/fault location time, and quality assurance/quality control time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the maintenance allocation chart. The symbol designations for the various maintenance categories are as follows:

C . . . . . Operator or Crew
O . . . . . Organizational Maintenance
F . . . . . Direct Support Maintenance
H . . . . . General Support Maintenance
L . . . . . Specialized Repair Activity (SRA6)
D . . . . . Depot Maintenance

e. *Column 5, Took and Equipment.* Column 5 specifies, by code, those common tool sets (not individual tools) and special tools, TMDE, and support equipment required to perform the designated function.

f. *Column 6, Remarks.* This column shall, when applicable, contain a letter code, in alphabetic order, which shall be keyed to the remarks contained in section IV.

B-4. EXPLANATION OF COLUMNS IN TOOL AND TEST EQUIPMENT REQUIREMENTS, SECTION III.

a. *Column* 7, *Reference Code.* The tool and test equipment reference code correlates with a code used in the MAC, section II, Column 5.

b. *Column* 2, *Maintenance* Category. The lowest category of maintenance authorized to use the tool or test equipment.

c. *Column 3, Nomenclature.* Name or identification of the tool or test equipment.

d. *Column* 4, National Stock *Number.* The National stock number of the tool or test equipment.

e. *Column* 5, *Tool Number.* The manufacturer's part number.

B-5. EXPLANATION OF COLUMNS IN REMARKS, SECTION IV.

a. *Column 7, Reference Code.* The code recorded in column 6, Section II.

b. *Column 2, Remarks.* This column lists information pertinent to the maintenance function being performed as indicated in the MAC, section II.

This maintenance category IS not included m Section 11, column (4) of the Maintenance Allocation Chart. To Identtfy funchons to this category of maintenance, enter a work time figure In the "H" column of SectIon II, column (4), and use an associated reference code in the Remarks column (6). Key the code to SectIon IV, Remarks, and explain the SRA complete repair application there. The explanatory remark(s) shall reference the specific Repair Parts and Special Tools List (RPSTL) TM whtch contains additional SRA crkerla and the authorized spare/repair parts.

Section II. MAINTENANCE ALLOCATION CHART

FOR

LAUNCHER, GRENADE, SMOKE: SCREENING, RP, M243, M257, and M259

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY					(5) TOOLS AND EQUIPMENT	(6) REMARKS
			C	O	F	H	D		
00	LAUNCHER, GRENADE, SMOKE: M243, M257, and M259								
01	DISCHARGER, SMOKE: GRENADE	Inspect		0.1				1 and 2 or 1 and 3	
		Test		0.5					
		Repair		1.5				2 or 3	
02	ARMING FIRING UNIT: GRENADE DISCHARGER	Inspect		0.1				1 and 2 or 1 and 3	
		Test		0.1					
		Repair						2 or 3	
03	BOX, STOWAGE, SMOKE GRENADE	Inspect		0.1				2 or 3	
		Repair		1.0					

Section III. TOOL AND TEST EQUIPMENT REQUIREMENTS

FOR
LAUNCHER, GRENADE SMOKE: SCREENING RP, M243, M257, AND M259

(1) TOOL AND TEST EQUIPMENT REFERENCE CODE	(2) MAINTENANCE CATEGORY	(3) NOMENCLATURE	(4) NATIONAL STOCK NUMBER	(5) TOOL NUMBER
1	O	Multimeter	PAOZZ	AN/USM-223 or equal
2	O	Tool Kit, Turret Mechanic's	PAOZZ	SC 5180-95-CL-A51
3	O	Tool Kit, General Mechanic's Automotive	PAOZZ	SC 5180-90-CL-N26

Section IV. REMARKS

(1) REFERENCE CODE	(2) REMARKS
	Not applicable.

APPENDIX C
ORGANIZATIONAL MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST

Section I. INTRODUCTION

C-1. SCOPE. This appendix lists and authorizes spares and repair parts; special tools; special test, measurement, and diagnostic equipment (TMDE); and other special support equipment required for performance of organizational, maintenance of the grenade launchers. It authorizes the requisitioning, issue, and disposition of spares, repair parts and special tools as indicated by the Source, Maintenance and Recoverability (SMR) codes.

C-2. GENERAL. This Repair Parts and Special Tools List is divided into the following sections:

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

b. *Section* ///. *Special Tools List.* A list of special tools, special TMDE, and other special support equipment authorized by this RPSTL for the performance of maintenance.

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

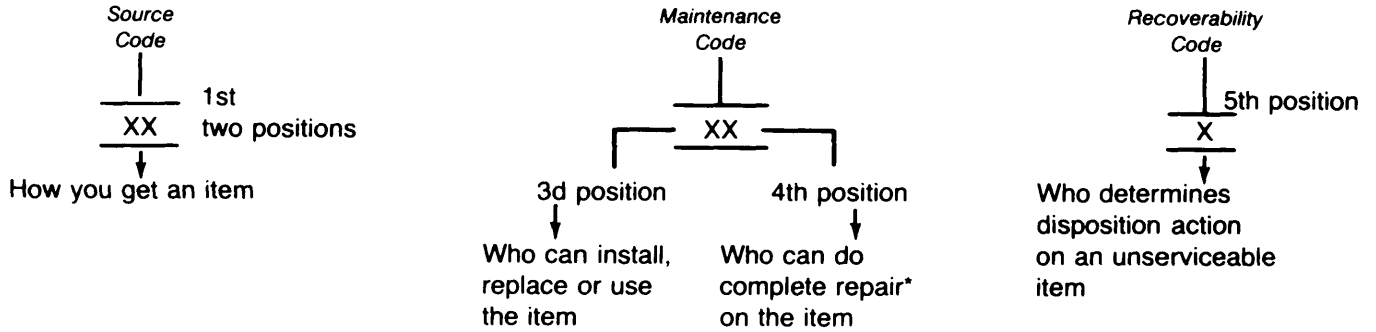
C-3. EXPLANATION OF COLUMNS.

a. *ILLUSTRATION (Column (1)).* This column is divided as follows:

(1) ((a) FIG NO.) Figure Number. Indicates the figure number illustrating an exploded view of a functional group.

(2) ((b) ITEM NO.). Indicates the number used to identify items called out in the illustration.

b. *SMR CODE (Column (2)).* The Source, Maintenance, and Recoverability (SMR) code is a 5-position code containing supply/requisitioning information, maintenance category authorization criteria, and disposition instructions, as shown in the following breakout:



* Complete Repair: Maintenance capacity, capability, and authority to perform all the corrective maintenance tasks of the "Repair" function in a use/user environment in order to restore serviceability to a failed item.

(1) Source Code. The source code tells you how you get an item needed for maintenance, repair, or overhaul of an end item/equipment. Source codes are always the first two positions of the SMR code, Explanations of source codes follow:

Code	*Explanation*
PA PB PC PD PE PF PG	Stocked items; use the applicable NSN to request/requisition items with these source codes. They are authorized to the category indicated by the code entered in the 3d position of the SMR code.
KD KF KB	Items with these codes are not to be requested/requisitioned individually. They are part of a kit which is authorized to the maintenance category indicated in the 3d position of the SMR code. The complete kit must be requisitioned and applied.

Code	Explanation
MO-(Made at Org/ AVUM Category) MF-(Made at DS/AVIM Category) MH-(Made at GS Category) MD-(Made at Depot)	Items with these codes are not to be requested/requisitioned individually. They must be made from bulk material which is identified by NSN in the Description column and listed in the Bulk Material group in the repair parts list in this appendix. If the item is authorized to you by the 3d position code of the SMR code, but the source code indicates it is made at a higher category, order the item from the higher category of maintenance.
AO-(Assembled by Org/ AVUM Category) AF-(Assembled by DS/ AVIM Category) AH-(Assembled by GS Category) AD-(Assembled by Depot)	Items with these codes are not to be requested/requisitioned individually. The parts that makeup the assembled item must be requisitioned or fabricated and assembled at the category of maintenance indicated by the source code. If the 3d position code of the SMR code authorizes you to replace the item, but the source code indicates the item is assembled at a higher category, order the item from the higher category of maintenance.

XA - Do not requisition an “XA’’-coded item. Order its next higher assembly. (Also, refer to the NOTE below.)

XB - If an “X6” item is not available from salvage, order it using the FSCM and part number given.

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

XD - Item is not stocked. Order an “XD’’-coded item through normal supply channels using the FSCM and part number given, if no NSN is available.

NOTE

Cannibalization or controlled exchange, when authorized, maybe used as a source of supply for items with the above source codes, except for those source coded “XA” or those aircraft support items restricted by requirements of AR 700-42.

(2) Maintenance Code. Maintenance codes tell you the category(s) of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third and fourth positions of the SMR Code as follows:

(a) The maintenance code entered in the third position tells you the lowest maintenance category authorized to remove, replace, and use an item. The maintenance code entered in the third position will indicate authorization to one of the following categories of maintenance.

Code	*Application/Explanation*
C	- Crew or operator maintenance done within organizational or aviation unit maintenance.
O	- Organizational or aviation unit category can remove, replace, and use the item.
F	- Direct support or aviation intermediate category can remove, replace, and use the item.
H	- General support category can remove, replace, and use the item.
L	- Specialized repair activity can remove, replace, and use the item.
D	- Depot category can remove, replace, and use the item.

(b) The maintenance code entered in the fourth position tells you whether or not the item is to be repaired and identifies the lowest maintenance category with the capability to do complete repair (i.e., perform all authorized repair functions). (NOTE: Some limited repair may be done on the item at a lower category of maintenance, if authorized by the Maintenance Allocation Chart (MAC) and SMR codes.) This position will contain one of the following maintenance codes.

Code	*Application/Explanation*
O	- Organizational or aviation unit is the lowest category that can do complete repair of the item.
F	- Direct support or aviation intermediate is the lowest category that can do complete repair of the item.
H	- General support is the lowest category that can do complete repair of the item.
L	- Specialized repair activity (designate the specialized repair activity) is the lowest category that can do complete repair of the item.
D	- Depot is the lowest category that can do complete repair of the item.
Z	- Nonreparable. No repair is authorized.
B	- No repair is authorized. (No parts or special tools are authorized for the maintenance of a “B’’ -coded item.) However, the item maybe reconditioned by adjusting, lubricating, etc., at the user level.

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

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

c. NATIONAL STOCK NUMBER (Column (3)). Lists the National stock number (NSN) assigned to the item. Use the NSN for requests/requisitions.

d. *FSCM (Column (4)).* The Federal Supply Code for Manufacturer (FSCM) is a 5-digit numeric code which is used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

e. *PART NUMBER (Column (5)).* Indicates the primary number used by the manufacturer (individual, company, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications standards, and inspection requirements to identify an item or range of items.

NOTE

When you use an NSN to requisition an item, the item you receive may have a different part number from the part ordered, but go ahead and use or furnish it as the replacement part.

f. *DESCRIPTION (Column (6)).* This column includes the following information:

(1) The Federal item name and, when required, a minimum description to identify the item.

(2) Items that are included in kits and sets are listed below the name of the kit or set.

(3) Spare/repair parts that make up an assembled item are listed immediately following the assembled item line entry.

(4) NSN'S for bulk materials are referenced in the description column in the line item entry for the item to be manufactured/fabricated.

(5) When the part to be used differs between serial numbers of the same model, the effective serial numbers are shown as the last line of the description.

(6) The USABLE ON CODE, when applicable (see paragraph 4, SPECIAL INFORMATION).

g. *U/M (Column* (7)). The Unit of Measure (UM) indicates the measure (e.g., foot, gallon, pound) or count (e.g., each, dozen, gross) of a listed item. A two-character alpha code (e.g., FT, GL, LB, EA, DZ, GR) appears in this column to indicate the measure or count. If the U/M code appearing in this column differs from the Unit of Issue (U/I) code listed in the Army Master Data File (AMDF), request the lowest UI that will satisfy your needs.

h. *QTY INC IN UNIT (Column (8)).* The Quantity Incorporated in Unit (QTY INC IN UNIT) indicates the quantity of the item used in the breakout shown on the illustration figure, which is prepared for a functional group, subfunctional group, or an assembly. A "V" appearing in this column in lieu of a quantity indicates that no specific quantity is applicable (e.g., shims, spacers).

C-4. SPECIAL INFORMATION.

a. The "USABLE ON CODE" title appears in the lower right corner of column(6), Description. Usable on codes are shown in the right-hand margin of the description column. Uncoded items are applicable to all models. Identification of the usable on codes used in this publication are:

Code	*Used On*
R39	Model M259
R69	Model M243
R73	Model M257

b. Bulk materials required to manufacture items are listed in the Bulk Material Group of this appendix. NSN's for bulk materials are also referenced in the description column of the line item entry for the item to be manufactured/fabricated. Detailed manufacturing instructions for items source coded to be manufactured or fabricated are found in chapter 2.

c. Items which have the word BULK in the figure number column will have an index number shown in the item number column. This index number is furnished for use as a cross-reference between the National Stock Number/Part Number Index and the bulk material list in Section II.

C-5. HOW TO LOCATE REPAIR PARTS.

a. *When National Stock Number or Part Number is not Known:*

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

(2) Second. Find the figure covering the functional group or subfunctional group to which the item belongs.

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

(4) Fourth. Refer to the Repair Parts List for the figure to find the line item entry for the item number noted on the figure.

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

(1) First. Using the Index of National Stock Numbers and Part Numbers, find the pertinent National stock number or part number. The NSN index is in National Item Identification Number (NIIN) sequence. The part numbers in the Part Number index are listed in ascending alphanumeric sequence. Both indexes cross-reference you to the illustration figure and item number of the item you are looking for.

* The NIIN consists of the last 9 digits of the NSN (i.e., 5305-01-674-1467).

NSN

NIIN

(2) Second. After finding the figure and item number, verify that the item is the one you're looking for, then locate the item number in the repair parts list for the figure.

C-6. ABBREVIATIONS.

Abbreviation	*Explanation*
CAD-PLTD	cadmium-plated
AWG	American wire gage
CARE S	corrosion-resistant steel
HD	head
IN	inch
LG	long
LO	left-hand
MAD	manufactured
NO	number
RH	right-hand
S	steel
THE	thick
UNF	Unified fine thread
UNC	Unified coarse thread

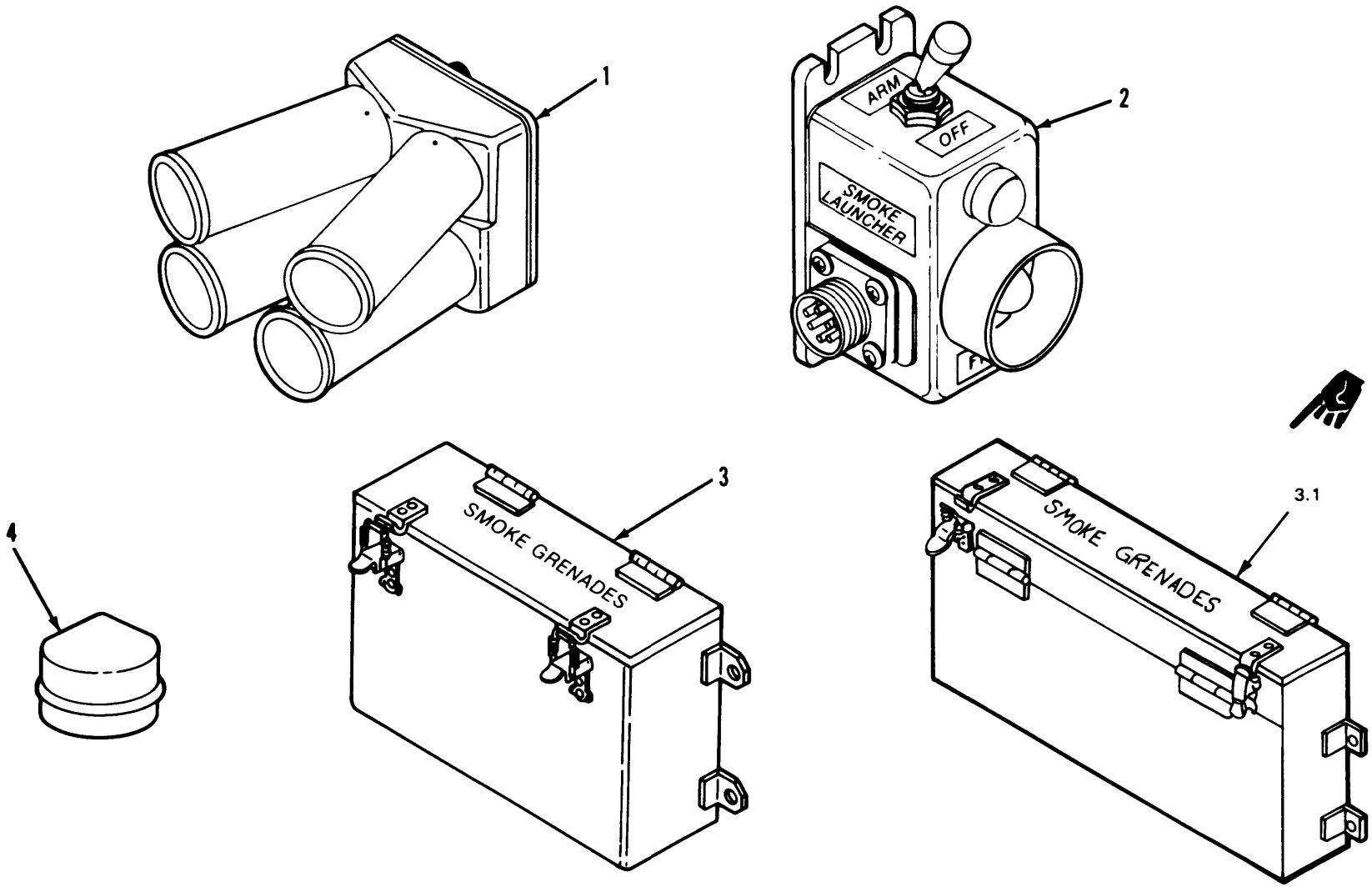


Figure C-1. M243, M257, and M259 RP Screening Smoke Grenade Launcher Components

(1) ILLUSTRATION (a) FIG NO	(b) ITEM NO	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION	USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 00 LAUNCHER, GRENADE, SMOKE: M243, M257, AND M259			
C-1	1	PAOOO	1040-01-095-0091	81361	E13-12-90	DISCHARGER, SMOKE GRENADE		EA	2
C-1	2	PAOOO	1040-01-095-0092	B1361	E13-12-111	ARMING FIRING UNIT GRENADE DISCHARGER	R39, R69	EA	1
C-1	3	PAOOO	2540-01-096-4559	81361	D13-12-40	BOX, STOWAGE, SMOKE GRENADE	R69	EA	2
C-1	3.1	PAOOO	1040-01-208-7116	81361	E 13-12-165	BOX, STOWAGE, SMOKE GRENADE	R69	EA	2
C-1	4	PAOZZ	5340-01-095-0297	81361	C13-12-65	CAP-PLUG, PROTECTIVE , DUST AND MOISTURE SEAL: DISCHARGER		EA	8

Section II. REPAIR PARTS LIST (CONT).

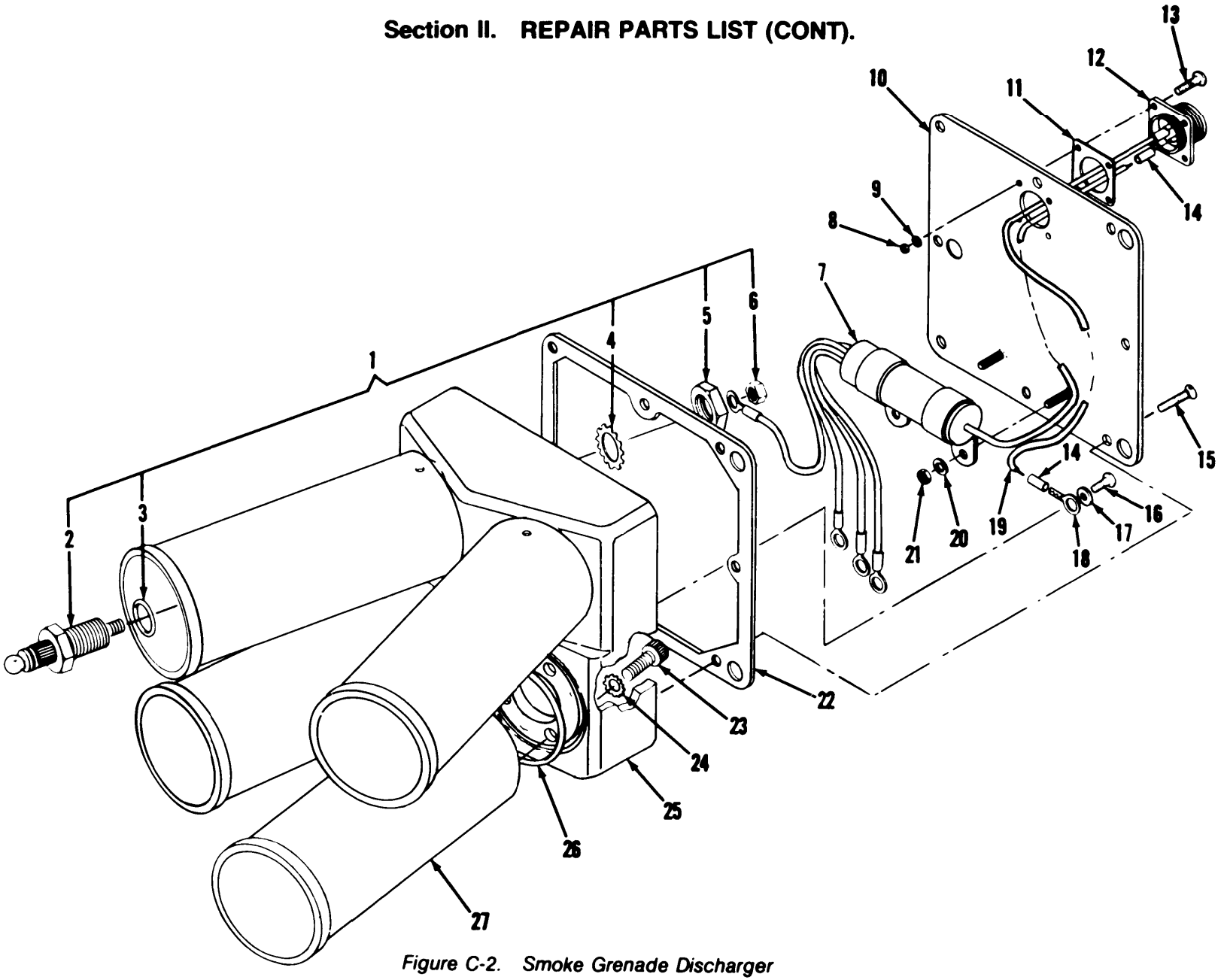


Figure C-2. Smoke Grenade Discharger

(1) ILLUSTRATION (a) FIG NO	(b) ITEM NO	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 01 DISCHARGER, SMOKE: GRENADE		
C-2	1	PAOZZ	5999-01-096-2017	81361	C13-12-99	CONTACT, ELECTRICAL	EA	4
C-2	2	XAOZZ		81361	B13-12-63,C13-12 -64, C13-12-96	BUSHING, CONTACT PIN AND ADAPTER ASSEMBLY	EA	4
C-2	3	PAOZZ	5330-00-248-3840	96906	MS29513-014	PACKING, PREFORMED SYNTHETIC RUBBER	EA	4
C-2	4	XDOZZ		96906	MS35335-65	WASHER, LOCK EXTERNAL TOOTH, CRES. HOLE DIA 0.530 MAX, OD 0. 900 MAX	EA	4
C-2	5	XDOZZ	5310-00-989-5525	96906	MS35691-39	NUT, PLAIN, HEXAGON CRES, 0.500-20 UNF-2B	EA	4
C-2	6	XDOZZ	5310-00-176-6341	96906	MS17830-06C	NUT, SELF-LOCKING, HEXAGON, CRES, PLASTIC LOCKING INSERT, 0. 138-32UNC-3B	EA	4
C-2	7	PAOZZ	5905-01-094-9838	81361	C13-12-86	RESISTOR NETWORK. FIXED WIREWOUND	EA	1
C-2	8	PAOZZ	5310-00-177-1332	96906	MS17830-04C	NUT, SELF-LOCKING, HEXAGON, CRES, NO.4-4OUNC-3B	EA	4
C-2	9	PAOZZ	5310-00-595-6211	96906	MS15795-803	WASHER, FLAT S, 0.125 ID, 0.250.OD	EA	4
C-2	10	XAOZZ		81361	D13-12-78	COVER PLATE	EA	1
C-2	11	PAOZZ	5330-00-641-4338	96906	MS52000-4	GASKET RUBBER	EA	1
C-2	12	PAOZZ	5935-00-801-6616	96906	MS3102R14S7P	CONNECTOR, RECEPTACLE, ELECTRICAL, BOX MOUNTING	EA	1
C-2	13	PAOZZ	5305-00-006-9408	96906	MS3212-5	SCREW, MACHINE CROSS-RECESS-PAN-HD, SELF SEALING, S, NO. 4-4OUNC-2A X 0.500 LG	EA	4
C-2	14	MOOZZ		81349	M23053/5-104-4	INSULATION SLEEVING ELECTRICL, 3/4 IN LG MFD FROM 5970-00-787-2325	IN	3

SECTION II. REPAIR PARTS LIST (CONT)

(1) ILLUSTRATION (a) FIG NO	(b) ITEM NO	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) USABLE ON CODE	USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
C-2	15	PAOZZ	5305-00-071-1322	96906	MS51960-65	SCREW, MACHINE FLAT COUNTERSUNK CROSS-RECESS ND, CRES, NO. 10-32UNF-2A X O.500 LG		EA	8
C-2	16	PAOZZ	5305-00-054-6652	96906	MS51957-28	SCREW, MACHINE CROSS-RECESS-PAN-HD, CRES, NO. 6.32UNC-2A X O.375 LG		EA	1
C-2	17	PAOZZ	5310-00-933-8119	96906	MS35338-137	WASHER, LOCK S, 0.250 OD		EA	1
C-2	18	PAOZZ	5940-00-512-1019	96906	MS77074-2	TERMINAL, LUG		EA	1
C-2	19	MOOZZ		81361	MIL-W-81044/12	WIRE, ELECTRICAL 16 AWG WIRE SIZE, WHITE 2 FT LG, FABRICATE FROM BULK WIRE NSN 6145-00-144-0083		EA	1
C-2	20	PAOZZ	5310-00-619-1148	96906	MS15795-808	WASHER, FLAT S, 0.227 ID, 0.453 OD		EA	2
C-2	21	PAOZZ	5310-00-059-9263	96906	MS21046C3	NUT, SELF-LOCKING, HEXAGON, S, NO. 10-32UNF-3B		EA	2
C-2	22	PAOZZ	5330-01-096-4551	81361	C13-12-77	GASKET		EA	1
C-2	23	PAOZZ	5305-00-988-7840	96906	MS16995-66	SCREW, CAP, SOCKET HEAD, CRES. 5/16-18UNC-3A X 1 IN LG		EA	12
C-2	24	PAOZZ	5310-00-184-9562	96906	MS35335-62	WASHER, LOCK FLAT, EXTERNAL TOOTH,S, 5/16 NOM SIZE		EA	12
C-2	25	XAOZZ		81361	E13-12-94	DISCHARGE BASE		EA	1
C-2	26	PAOZZ	5330-00-252-6050	96906	MS29513-138	PACKING, PREFORMED SYNTHETIC RUBBER, 2.122 IN CENTER HOLE DIA		EA	4
C-2	27	PAOZZ	1010-01-246-9930	81361	D13-12-187	TUBE, CANNON: DISCHARGER		EA	4

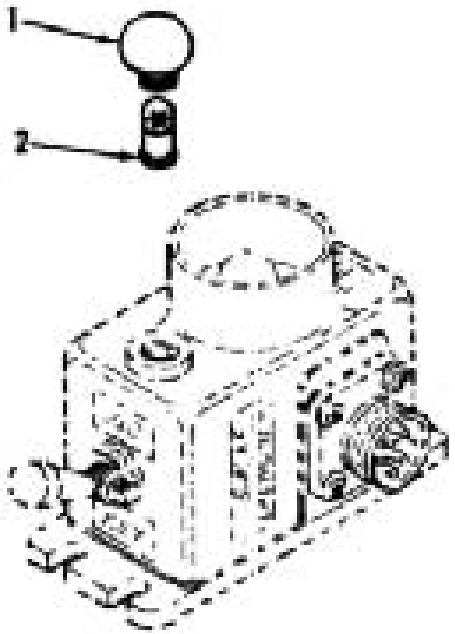


Figure C-3. Grenade discharger arming firing unit

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6)	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	FSCM	PART NUMBER	DESCRIPTION USABLE ON CODE	U/M	QTY INCR IN UNIT
						GROUP 02 ARMING FIRING UNIT.		
						GRENADE DISCHARGER		
PAO2	1	PAOZZ	6210-00-176-4954	81349	LC35RT2	LENS, LIGHT LENS, WATERTIGHT, STYLE LC35RT2.....R3Y, R&Y	EA	1
PAOZ	2	PAOZZ	6240-00-763-7744	81348	W-L-00111/7	LAMP, INCANDESCENT WHITE.....R3Y, R&Y	EA	1

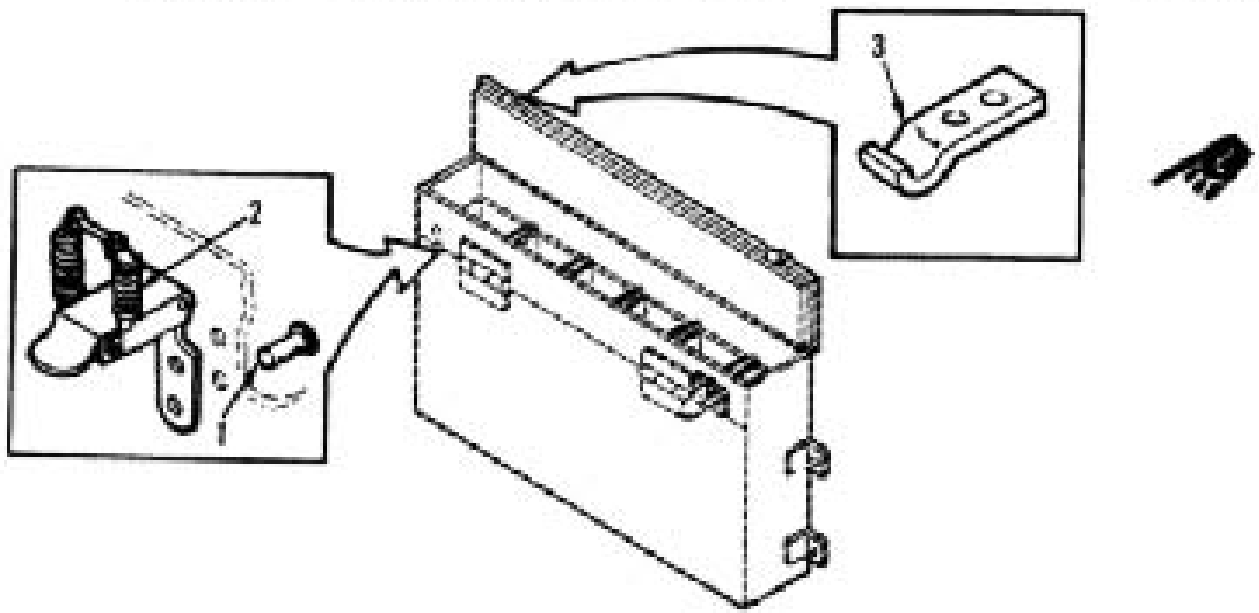


Figure C-4. Smoke grenade stowage box

(1) ILLUSTRATION (a) FIG NO	(1) ILLUSTRATION (b) ITEM NO	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 03 BOX, STOWAGE: SMOKE GRENADE		
1	1	PAOZZ	5320-00-883-8271	96906	MS20613-4P8	RIVET, SOLID.....RAP	EA	8
2	2	PAOZZ	5340-00-860-3862	98003	SCD220648	CATCH, CLAMPING: STEEL, PHOSPHATE COATED.....RAP	EA	2
3	3	PAOZZ	5340-01-255-2814	81361	SC-D-20650-13X-ZE	STRIKE, STEEL.....RAP	EA	2

(1) ILLUSTRATION (a) FIG NO	(b) ITEM NO	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION	USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 9999 BULK MATERIAL			
BULK	1	PAOZZ	5970-00-787-2325	81349	M23053/5-104-4	INSULATION SLEEVING ELECTRICAL		FT	V
BULK	2	PAOZZ	6145-00-144-0083	81349	M81044/12-16-9	WIRE, ELECTICAL		FT	V

SECTION III. SPECIAL TOOLS LIST

NOT APPLICABLE

SECTION IV. NATIONAL STOCK NUMBER AND PART NUMBER INDEX

STOCK NUMBER	FIGURE NO.	ITEM NO.
5305-00-006-9408	C-2	13
5305-00-054-6652	C-2	16
5310-00-059-9263	C-2	21
5305-00-071-1322	C-2	15
6145-00-144-0083	BULK	2
6210-00-176-4954	C-3	1
5310-00-176-6341	C-2	6
5310-00-177-1332	C-2	8
5310-00-184-9562	C-2	24
5330-00-248-3840	C-2	3
5330-00-252-6050	C-2	26
5940-00-512-1019	C-2	18
5310-00-595-6211	C-2	9
5310-00-619-1148	C-2	20
5330-00-641-4338	C-2	11
6240-00-763-7744	C-3	2
5970-00-787-2325	BULK	1
5935-00-801-6616	C-2	12
5340-00-860-3862	C-4	2
5320-00-883-8271	C-4	1
5310-00-933-8119	C-2	17
5305-00-988-7840	C-2	23
5310-00-989-5525	C-2	5
5905-01-094-9838	C-2	7
1040-01-095-0091	C-1	1
1040-01-095-0092	C-1	2
1010-01-246-9930	C-2	27
5340-01-095-0297	C-1	4
5999-01-096-2017	C-2	1
5330-01-096-4551	C-2	22
2540-01-096-4559	C-1	3
1040-01-208-7116	C-1	3.1

FSCM	PART NUMBER	FIGURE NO.	ITEM NO.
81361	B13-12-63,C13-12-64,C13-12-96	C-2	2
81361	C13-12-65	C-1	4
81361	C13-12-77	C-2	22
81361	C13-12-86	C-2	7
81361	C13-12-99	C-2	1
81361	D13-12-40	C-1	3
81361	D13-12-78	C-2	10
81361	D13-12-187	C-2	27
81361	E13-12-111	C-1	2
81361	E13-12-165	C-1	3.1
81361	E13-12-90	C-1	1
81361	E13-12-94	C-2	25
81349	LC35RT2	C-3	1
81361	MIL-W-81044/12	C-2	19
96906	MS15795-803	C-2	9
96906	MS15795-808	C-2	20
96906	MS16995-66	C-2	23
96906	MS17830-04C	C-2	8
96906	MS17830-06C	C-2	6
96906	MS20613-4PB	C-4	1
96906	MS21046C3	C-2	21
96906	MS29513-014	C-2	3
96906	MS29513-138	C-2	26
96906	MS3102R14S7P	C-2	12
96906	MS3212-5	C-2	13
96906	MS35335-62	C-2	24
96906	MS35335-65	C-2	4
96906	MS35338-137	C-2	17
96906	MS35691-39	C-2	5
96906	MS51957-28	C-2	16
96906	MS51960-65	C-2	15
96906	MS52000-4	C-2	11
96906	MS77074-2	C-2	18
81349	M23053/5-104-4	C-2	14
81349	M23053/5-104-4	BULK	1
81349	M81044/12-16-9	BULK	2
98003	SCD20648	C-4	2
81361	SC-D-20650-13X-ZE	C-4	3
81348	W-L-00111/7	C-3	2

APPENDIX D
EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST

Section I. INTRODUCTION

D-1. SCOPE. This appendix lists expendable supplies and materials you will need to operate and maintain the launchers. This listing is for informational purposes only and is not authority to requisition the listed items. These items are authorized to you by CTA 50-970, Expendable/Durable Items (Except Medical, Class V, Repair parts, and Heraldic Items) or CTA 8-100, Army Medical Department Expendable/Durable Items.

D-2. EXPLANATION OF COLUMNS.

a. *Column 1- Item Number.* This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the material (e.g., "Use cleaning compound, item 1, app D.").

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

O . . . . . Organizational Maintenance.

c. *Column 3- National Stock Number.* This is the National stock number assigned to the item; use it to request or requisition the item.

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

e. *Column 5- Unit of Measure (U/M).* Indicates the measure used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., bt, gl, qt, sl, yd). If the unit of measure differs from the unit of issue, requisition the lowest unit of issue that will satisfy your requirements.

Section II. EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION	(5) U/M
1	O	6850-00-224-6663	CLEANING COMPOUND, RIFLE BORE: (RBC), 1-gal (3.785 liters) can (81349) MIL-C-372	GL
2	O	8305-00-222-2423	CLOTH, CHEESECLOTH: cotton, 38-1/2 in. (97.790 cm) w (81348) FED SPEC CCC-C-440, type 1 class 1	YD *
3	O	8010-00-111-7937	ENAMEL, FOREST GREEN, (81349) MIL-E-52798	GL
4	O		ENAMEL, FOREST GREEN	GL

SECTION II.EXPENDABLE SUPPLIES AND MATERIALS LIST(Continued)

(1) ITEM NUMBER	LEVEL	(2) NATIONAL STOCK NUMBER	(4) DESCRIPTION	(5) U/M
4	0	7510-00-469-7910	INK, MARKING, STENCIL: BLACK, PRESSURIZED CAN (81348) TT-1-1795	PT
5	0	8040-00-082-2508	PRIMER, ADHESIVE: GRADE T, (81349) MIL-S-22473	OZ
6	0	8010-00-161-7425	PRIMER COATING: 1 GAL. CAN (81348) TT-P-636	GL
7	0	8030-00-823-9116	SEALING COMPOUND: GRADE HV, (81349) MIL-S-22473	CC
8	0	8030-01-096-5299	SEALING COMPOUND: GRADE HVV, (81349) MIL-S-22473	QT
9	0	3439-00-555-4629	SOLDER, TIN ALLOY: ROSEN CORE, SN 60, TYPE SNGOWRP2 1 LB (81348) QQ-S-571	SL
10	0	7510-00-290-2027	TAPE, PRESSURE SENSITIVE ADHESIVE: 1-1/2 IN. WIDE, 60 YD ROLL (81348) PPP-T-42	RO

ALPHABETICAL INDEX

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PAGE NO.	PARA-GRAPH	FIGURE NO.	TABLE NO.
2-36	2-9A		

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REASON: PREFORMED PACKING IS SUPPLIED WITH THE LENS.

NOTE TO THE READER:

Your comments will go directly to the writer responsible for this manual,and he will prepare the reply that is returned to you. To help him in his evaluation of your recommendations, please explain the reason for each of your recommendations, unless the reason is obvious.

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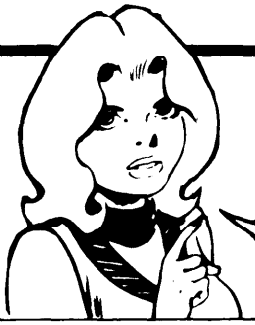

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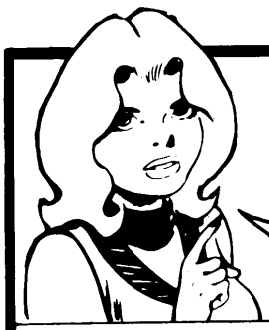

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DEPARTMENT OF THE ARMY
Washington, DC 9 December 1987

TECHNICAL MANUAL
ORGANIZATIONAL MAINTENANCE MANUAL
(INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)
FOR
LAUNCHER, GRENADE, SMOKE: SCREENING, RP, M243
(1040-01-059-0560)
LAUNCHER, GRENADE, SMOKE: SCREENING, RP, M257
(1040-01-070-1213)
AND
LAUNCHER, GRENADE, SMOKE: SCREENING, RP, M259
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