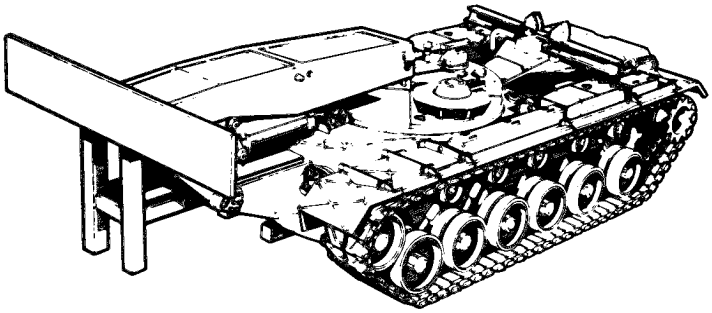
TM 5-5420-226-20-4

TECHNICAL MANUAL

ORGANIZATIONAL MAINTENANCE



M48A5 TANK CHASSIS, TRANSPORTING: FOR BRIDGE, ARMORED-VEHICLE-LAUNCHED SCISSORING TYPE, CLASS 60 (NSN 5420-01-076-6096)

This copy is a reprint which includes current pages from Changes 1 through 4.

HEADQUARTERS, DEPARTMENT OF THE ARM

20 NOVEMBER 1981

WARNING

CARBON MONOXIDE POISONING CAN BE DEADLY

Carbon monoxide is a colorless, odorless, deadly poisonous gas, which when breathed deprives the body of oxygen and causes suffocation. Exposure to air contaminated with carbon monoxide produces symptoms of headache, dizziness, loss of muscular control, apparent drowsiness, and/or coma. Permanent brain damage or death can result from severe exposure. Carbon monoxide occurs in the exhaust fumes of fuel-burning heaters and internal-combustion engines and becomes dangerously concentrated under conditions of inadequate ventilation. The following precautions must be observed to make sure of the safety of personnel whenever the personnel heater, main or auxiliary engine of any vehicle is operated for maintenance purposes or tactical use.

1. DO NOT operate heater or engine of vehicle in an enclosed area unless the area is ADEQUATELY VENTILATED.

2. DO NOT idle engine for long periods without maintaining ADEQUATE VENTILATION in personnel compartments.

3. DO NOT drive any vehicle with inspection plates, cover plates, or engine compartment doors removed unless necessary for maintenance purposes.

4. BE ALERT at all times during vehicle operation for exhaust odors and exposure symptoms. If either are present, IMMEDIATELY VENTILATE personnel compartments. If symptoms persist, remove affected personnel from vehicle and treat as follows: expose to fresh air; keep warm; DO NOT PERMIT PHYSICAL EXERCISE.

THE BEST DEFENSE AGAINST CARBON MONOXIDE POISONING IS ADEQUATE VENTILATION.

For artificial respiration, refer to FM 21-11.

CHANGE

NO. 5

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D.C., 2 AUGUST 1995

ORGANIZATIONAL

MAINTENANCE MANUAL

M48A5 TANK CHASSIS,

TRANSPORTING:

FOR BRIDGE,

ARMORED-VEHICLE-LAUNCHED

SCISSORING TYPE, CLASS 60

(NSN 5420-01-076-6096)

TM 5-5420-226-20-4, dated 20 November 1981, is changed as follows:

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Remove Pages	Insert Pages
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By Order of the Secretary of the Army:

DENNIS J. REIMER
General, United States Army
Chief of Staff

Official:

JOEL B. HUDSON
Acting Administrative Assistant to the Secretary of the Army
00544

To be distributed in accordance with DA Form 12-37-E, block 1221, requirements for TM 5-5420-226-20-4.

Approved for public release; distribution is unlimited.

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

CHANGE

NO. 4

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington D. C., *15 July 1992*

TECHNICAL MANUAL

ORGANIZATIONAL MAINTENANCE

M48A5 TANK CHASSIS,
TRANSPORTING:
FOR BRIDGE,
ARMORED-VEHICLE LAUNCHED
SCISSORING TYPE, CLASS 60
(NSN 5420-01=076-6096)

TM 5-5420-226-20-4, 20 November 1981, is changed as follows:

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Remove Pages	Insert Pages
18-1 and 18-2	18-1 and 18-2
18-5 and 18-6	18-5 and 18-6
18-7 thru 18-14	None
20-1 and 20-2	20-1 and 20-2
20-39 and 20-40	20-39 and 20-40
20-43 and 20-44	20-43 and 20-44
2053 and 20-54	20-53 and 20-54
20-57 and 20-58	20-57 and 20-58
20-63 thru 20-66	20-63 thru 20-66
20-73 and 20-74	20-73 and 20-74
20-83 and 20-84	20-83 and 20-84
2089 and 20-90	20-89 and 20-90
A-1 and A-2	A-1 and A-2
D-3/D-4 blank)	D-3/(D-4 blank)
F-3 thru F-6	F-3 thru F-6
Index I-11 and Index I-12	Index I-11 and Index I-12
Index II-13 and Index II-14	Index II-13 and Index II-14

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CHANGE

NO. 3

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D.C., *2 December 1987*

Organizational Maintenance Manual

M48A5 TANK CHASSIS, TRANSPORTING:
FOR BRIDGE, ARMORED-VEHICLE-LAUNCHED
SCISSORING TYPE, CLASS 60
(5420-01-076-6096)

TM 5-5420-226-20-4, 20 November 1981, is changed as follows:

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Remove Pages	Insert Pages
D-3/(D-4 blank)	D-3/(D-4 blank)
None	F-9/(F-10 blank)
Index I-17 and Index I-18	Index I-17 and Index I-18
Index II-19 and Index II-20	Index II-19 and Index II-20

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General, United States Army
Chief of Staff

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CHANGE

NO. 2

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D.C., *15 September 1986*

Organizational Maintenance Manual

M48A5 TANK CHASSIS, TRANSPORTING: FOR BRIDGE, ARMORED-VEHICLE-LAUNCHED SCISSORING TYPE, CLASS 60 (5420-01-076-6096)

TM 5-5420-226-20-4, 20 November 1981, is changed as follows:

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

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Remove Pages	Insert Pages
i and ii	i and ii
A-1 and A-2	A-1 and A-2
D-3/(D-4 blank)	D-3/(D-4 blank)
E-1/(E-2 blank)	E-1/(E-2 blank)
Index I-1 thru Index I-17/(Index I-18 blank)	Index I-1 thru Index I-18
None	FO-2

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Chief of Staff

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CHANGE

NO. 1

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D.C., *11 February 1986*

ORGANIZATIONAL MAINTENANCE

M48A5 TANK CHASSIS, TRANSPORTING: FOR BRIDGE,

ARMORED-VEHICLE-LAUNCHED SCISSORING TYPE, CLASS 60

(NSN 5420-01-076-6096)

TM 5-5420-226-20-4, 20 November 1981, is changed as follows:

1. Remove old pages and insert new pages as indicated below.
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3. New illustrations are indicated by a vertical bar adjacent to the illustration identification number.

Remove Pages	Insert Pages
i and ii	i and ii
None	18.1-1 thru 18.1-32
A-1 and A-2	A-1 and A-2
B-57 thru B-60	B-57 thru B-60
None	(B-60.1 blank)/B-60.2
Index I-13 thru Index I-17/ (Index I-18 blank)	Index I-13 thru Index I-17/ (Index I-18 blank)
Index II-17 thru Index II-21/ (Index II-22 blank)	Index II-17 thru Index II-21/ (Index II-22 blank)
DA Forms 2028-2	DA Forms 2028-2
FO-1 Sheet 1 of 3	FO-1 Sheet 1 of 3
FO-1 Sheet 2 of 3	FO-1 Sheet 2 of 3
FO-1 Sheet 3 of 3	FO-1 Sheet 3 of 3

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Brigadier General, United States Army
The Adjutant General

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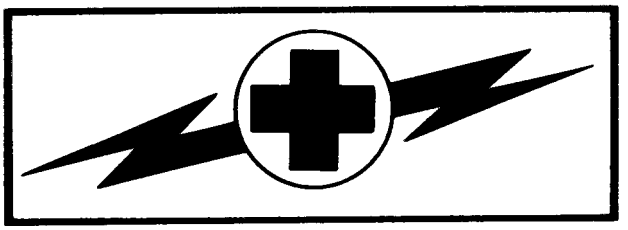


WARNING

WARNING

HIGH VOLTAGE
Used in the operation of this equipment

DEATH ON CONTACT
May result if personnel fail to observe safety precautions.

Never work on electronic equipment unless there is another person nearby who is familiar with the operation and hazads of the equipment and who is competent in administering first aid. When a technician is aided by operators, he must warn them about dangerous areas.

Whenever possible, the master battery switch and battery ground straps should be either turned off or disconnected before beginning work on the equipment.

Whenever the natue of the operation permits, keep one hand away from the equipment to reduce the hazad of current flowing through vital organs of the body.

Before you work around tracked vehicles, remove rings, bracelets, and wristwatches. These items may be caught on projections, and cause injury or may be shorted across an electrical circuit and cause severe burns and electrical shock.

For artificial respiration, refer to FM 21-11.

WARNING

HAZARDOUS NOISE

1. Hearing protection (helm et) required.

2. Double hearing protection (helmet and ear plugs) required on road marches at speeds over 15 mph.

WARNING

The following summary list is adapted from the warnings within this volume. However, all warnings should be observed as noted in the text.

Hold up rear drain valve seat when removing last screw attaching valve seat to hull floor. Valve seat is heavy and can cause injury if it falls.

Hold up front drain valve cage assembly when removing last screw attaching cage to hull. Valve assembly may fall and cause injury if cage is not held up.

Handle charged fire extinguisher cylinders with care. Do not jar or subject cylinders to temperature above 140 degrees F (60 degrees C).

Driver's hatch weights approximately 130 pounds. Do not try to lift it alone.

The unit commander or senior officer in charge of maintenance personnel assigned to remove and dispose of contaminated gas filters must prescribe necessary protective clothing to be worn when replacing gas particulate filters. He must also prescribe necessary safety measures to be performed before new gas filters are installed.

Contaminated gas particulate filters must be handled in accordance with FM 21-40 and must be disposed of by trained personnel.

Cleaning agent specified is flammable. Use only in well ventilated areas. Keep away from flames, sparks, or heat. Do not smoke while using. Prevent contact with eyes, mouth, and/or skin. Wear rubber gloves when performing cleaning procedures.

Compressed air used for cleaning purposes will not exceed 30 psi. Use only with effective chip guarding and personal protective equipment (goggles/shield, gloves, etc.)

TECHNICAL MANUAL

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D. C., 20 November 1981

Organizational Maintenance Manual

M48A5 TANK CHASSIS, TRANSPORTING: FOR BRIDGE, ARMORED-VEHICLE-LAUNCHED SCISSORING TYPE, CLASS 60
(5420-01-076-6096)

Volume 4 of 4

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, directly to: Commander, U.S. Army Tank-Automotive Command, ATTN: AMSTA-MB, Warren, MI 48397-5000. A reply will be furnished to you.

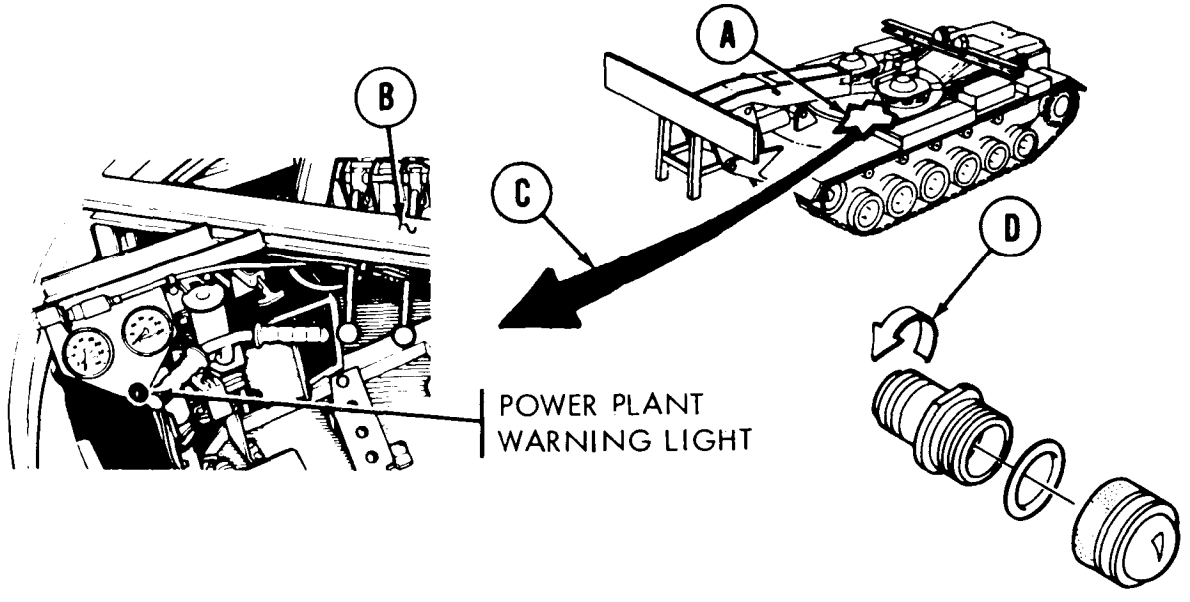
NOTE

Chapters 1 thru 4 are contained in Volume 1.
Chapters 5 thru 9 are contained in Volume 2.
Chapters 10 thru 16 are contained in Volume 3.
Chapters 17 thru 21, Appendixes, and Indexes are contained in this Volume.

TABLE OF CONTENTS
VOLUME 4

HOW TO USE THIS MANUAL:

- Manual is divided into chapters.
- Chapters are by functional group code and presented in same order as the RPSTL (Repair Parts and Special Tool List).
- Procedure indexes are on procedures that are four pages or more, and indicate how the procedure is set up, i.e., disassembly, removal, cleaning and inspection, etc.
- All references within this technical manual refer to page numbers.
- Steps are numbered and are to be performed in that order.
- Be sure to read all NOTES, WARNINGS, and CAUTIONS.
- Locator views are included wherever necessary. These will help you locate the item which the procedure is referencing.
- Jagged circle (✡) on locator (A) indicates a cutout and item is inside the vehicle.
- A (fu) symbol represents the outside surface (B) of a piece of equipment that cannot be shown in its entirety.
- Callouts are shown by a circle with a letter inside.
- Locator arrows (C) are black and mechanical motion arrows (D) are white.
- Broken leader arrow (- - →) indicates the item is either inside or under the tank and cannot be seen.



TA106604

HOW TO USE THIS MANUAL - Continued

- An illustrated list of manufactured items includes complete instructions for making items authorized to be manufactured or fabricated and used at organizational maintenance.
- A maintenance information index lists all parts subject to maintenance tasks. It provides the location of all maintenance tasks related to a component in this manual.
- Certain sections of the manual have detailed “how to use” instructions at the beginning of the section, for example troubleshooting.
- As a general maintenance practice, throw away all removed lockwashers and replace with new lockwashers at installation.

CHAPTER 17

HULL INTERIOR MAINTENANCE

INDEX

BULKHEAD ACCESS COVER REPLACEMENT (Sheet 1 of 3)

TOOLS: 9/16 in. socket with l/2 in. drive
Ratchet with 1/2 in. drive
Cross-tip screwdriver

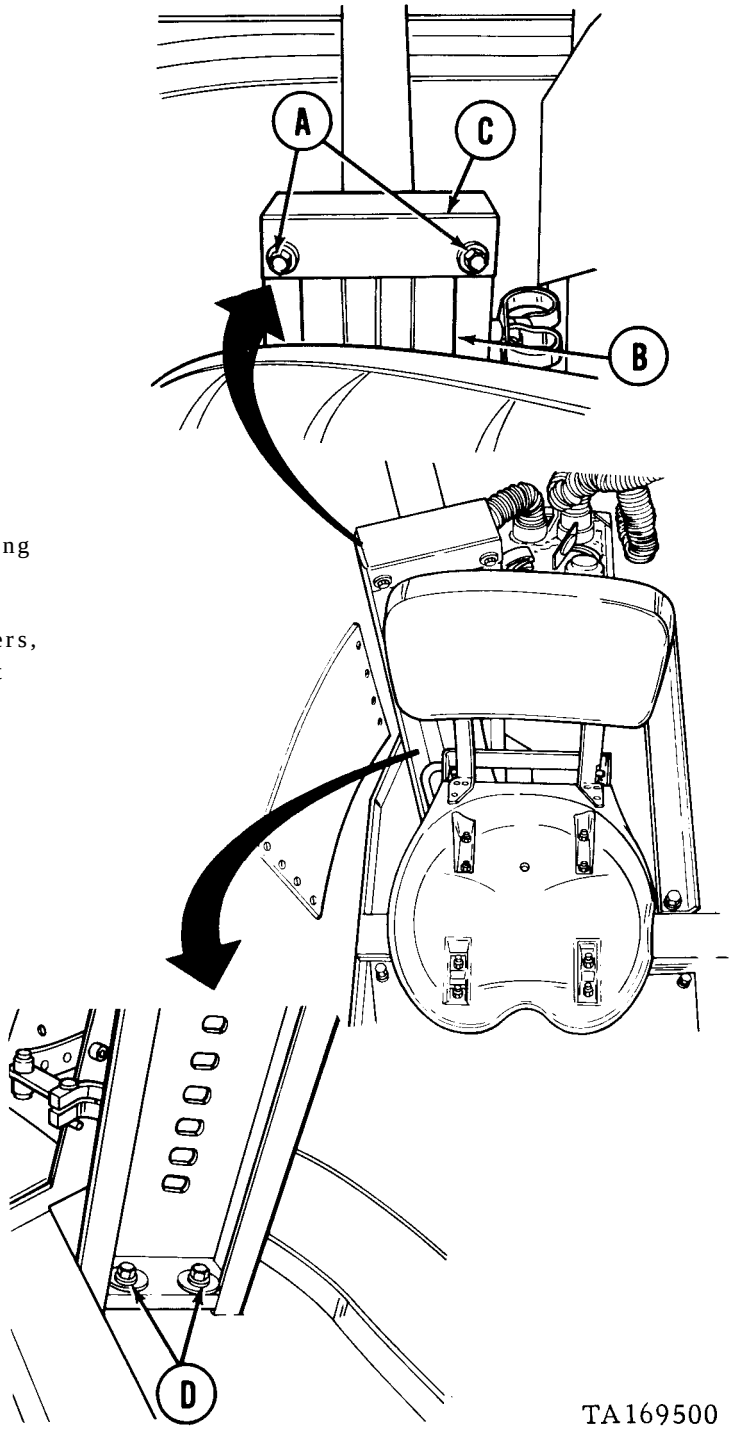
SUPPLIES: Gasket 8762244
Adhesive (Item 4, Appendix D)

NOTE

The following procedure is for replacement of the right bulkhead access cover. Replacement of the left bulkhead access cover is identical.

REMOVAL:

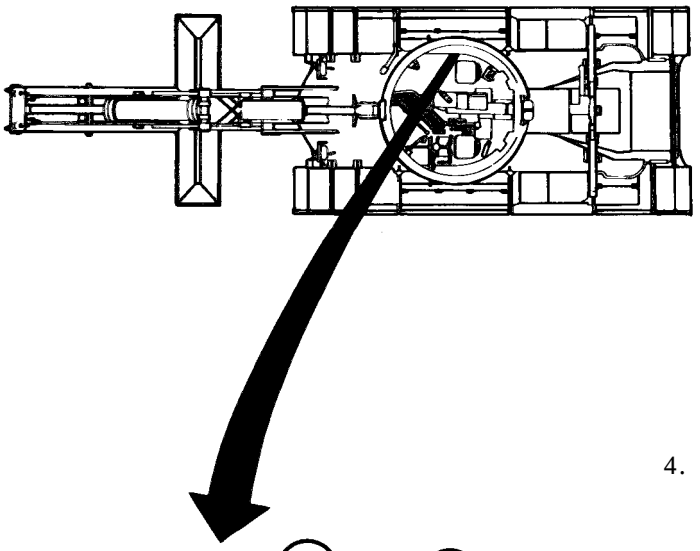
1. Using socket, remove two screws, nuts, lockwashers, and washers (A) securing seat mount assembly (B) to bracket (C).
2. Using socket, remove two screws, washers, and lockwashers (D) securing seat mount assembly (B) to floor.
3. Remove seat mount assembly with seat attached.



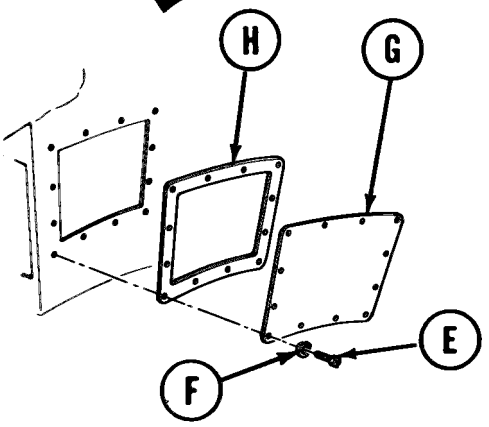
TA169500

Go on to Sheet 2

BULKHEAD ACCESS COVER REPLACEMENT (Sheet 2 0f 3)



QUADRANTS REMOVED FOR CLARITY



4. Using screwdriver, remove 12 screws (E) and lockwashers (F) securing cover (G) and gasket (H) to vehicle side wall.

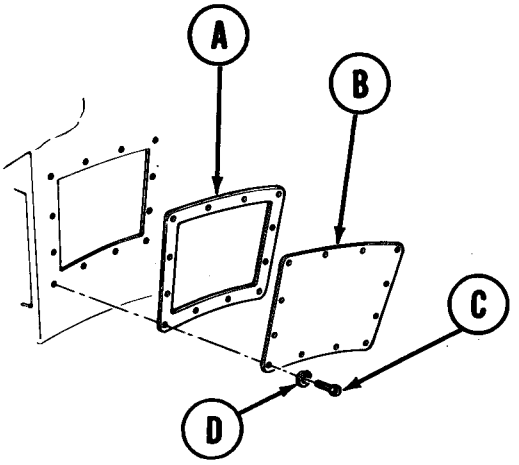
5. Remove cover (G) and gasket (H) from side wall. Throw away gasket.

INSTALLATION

1. Apply adhesive to new gasket (A).

2. Place gasket (A) and cover (B) in position over bulkhead opening in vehicle side wall.

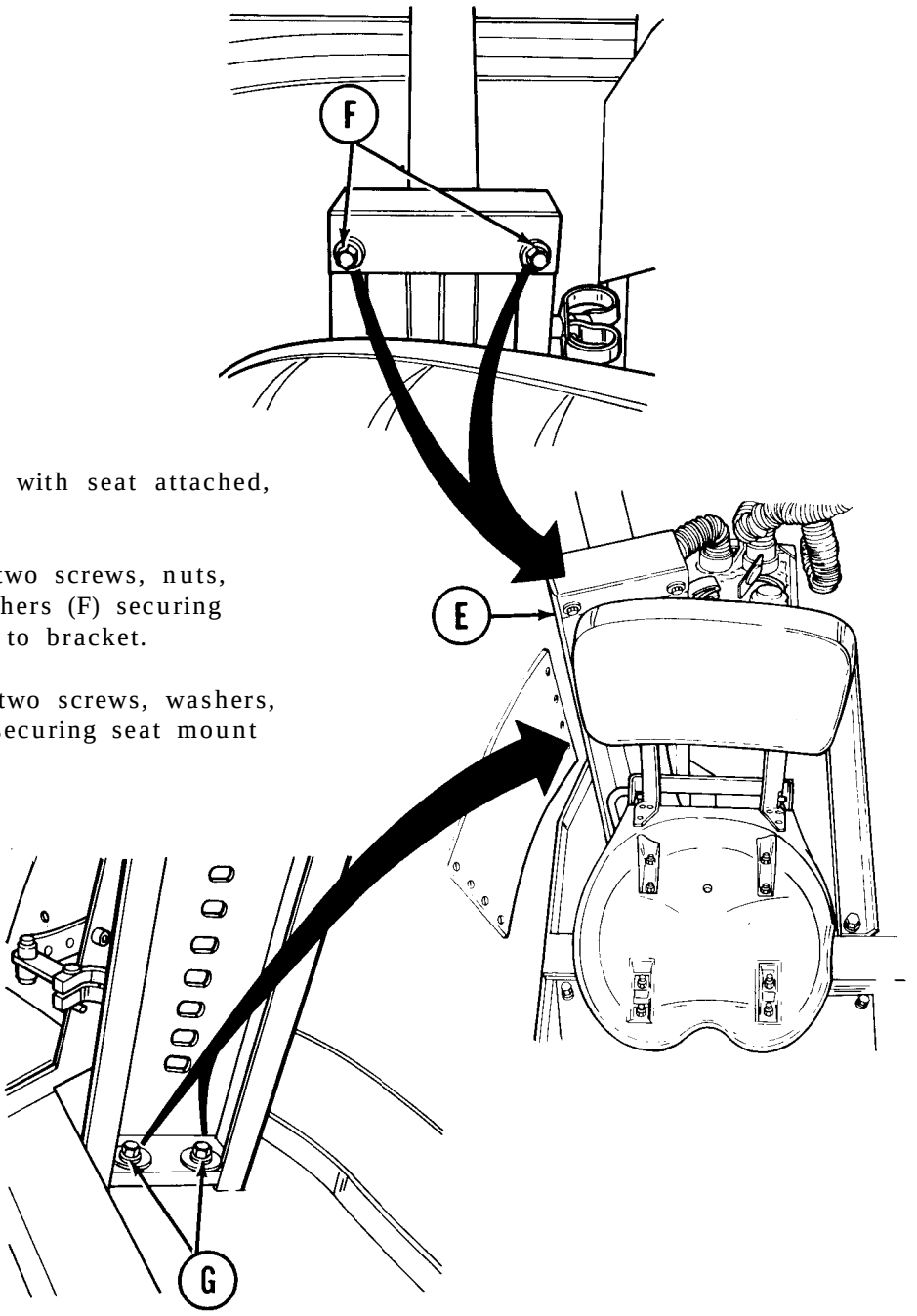
3. Using screwdriver, install 12 screws (C) and lockwashers (D) to secure cover and gasket to bulkhead.



Go on to Sheet 3

TA169501

BULKHEAD ACCESS COVER REPLACEMENT (Sheet 3 of 3)



4. Place seat mount (E), with seat attached, in installed position.

5. Using socket, install two screws, nuts, lockwashers, and washers (F) securing seat mount assembly to bracket.

6. Using socket, install two screws, washers, and lockwashers (G) securing seat mount to floor.

End of Task

TA169502

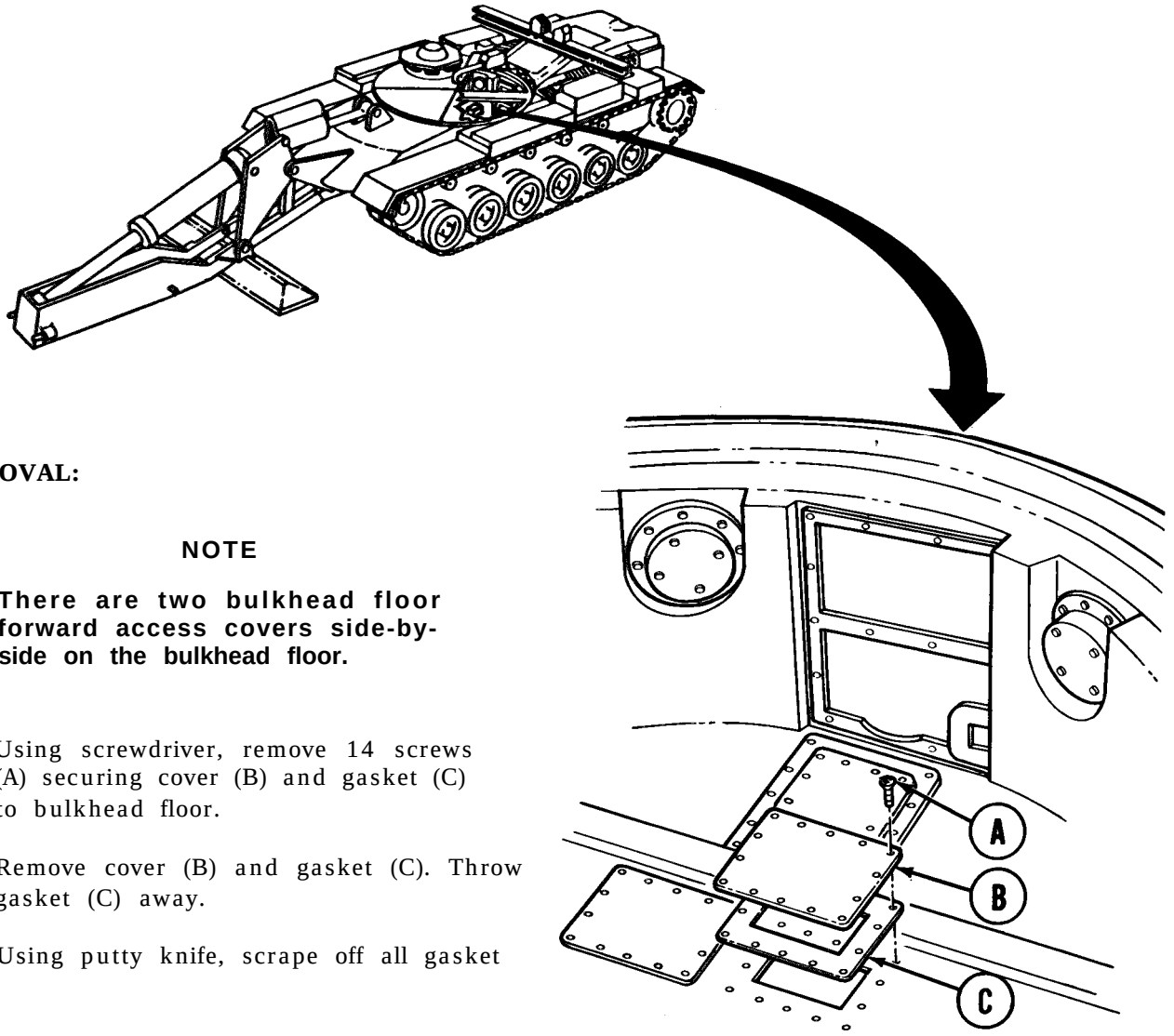
FLOOR FORWARD ACCESS COVERS REPLACEMENT (Sheet 1 of 2)

TOOLS: **Cross-tip Screwdriver**
Putty knife

REFERENCE: **TM 5-5420-227-24**

SUPPLIES: **Gasket 10864181**
Adhesive (Item 4, Appendix D)

PRELIMINARY PROCEDURE: **Remove clutch assembly (TM 5-5420-227-24)**



REMOVAL:

NOTE

There are two bulkhead floor forward access covers side-by-side on the bulkhead floor.

1. Using screwdriver, remove 14 screws (A) securing cover (B) and gasket (C) to bulkhead floor.
2. Remove cover (B) and gasket (C). Throw gasket (C) away.
3. Using putty knife, scrape off all gasket

Go on to Sheet 2

TA169503

FLOOR FORWARD ACCESS COVERS REPLACEMENT (Sheet 2 of 2)

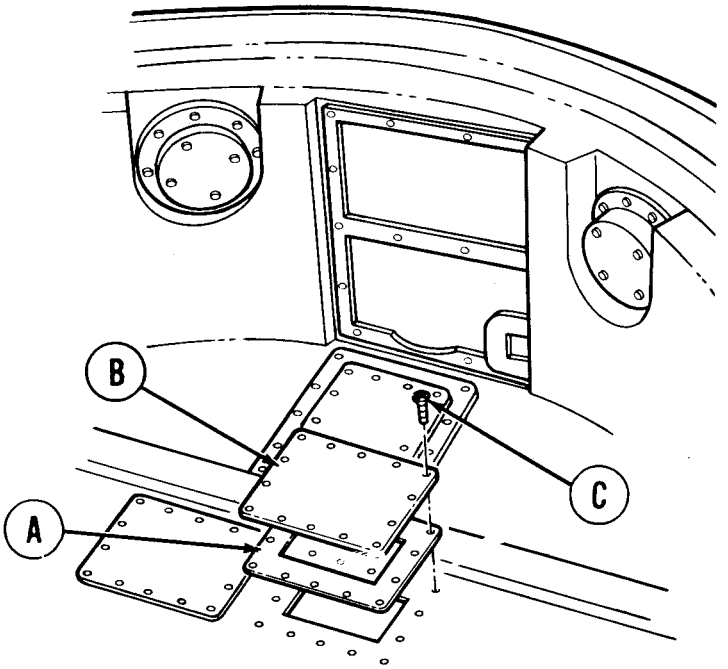
INSTALLATION:

Apply adhesive to new gasket (A).

2. Position gasket (A) and cover (B) on bulkhead floor opening with holes alined.

3. Using screwdriver, install 14 screws (C) securing cover to bulkhead floor.

4. Install clutch assembly (TM 5-5420-227-24).



End of Task

TA169504

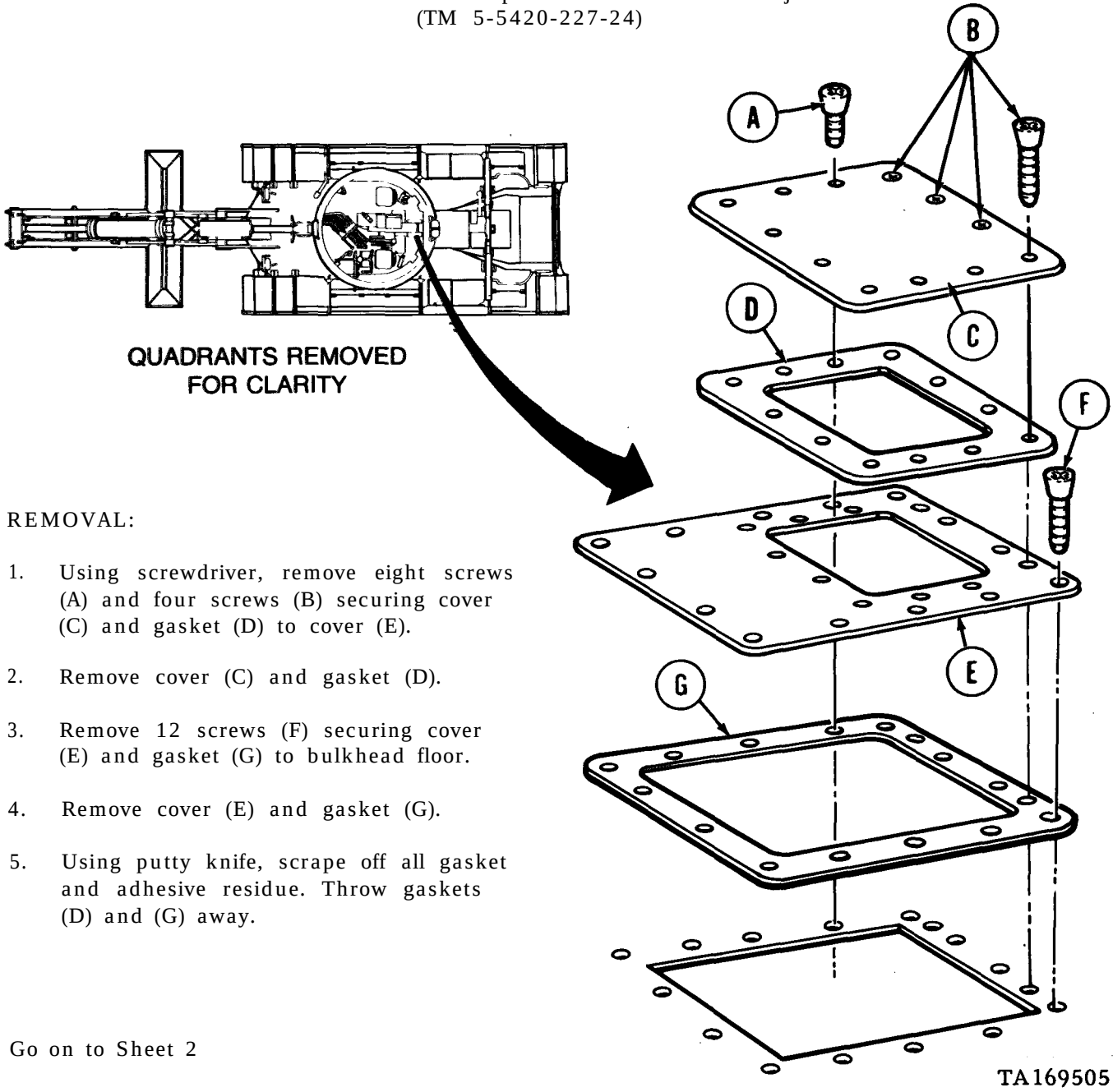
FLOOR REAR ACCESS COVERS REPLACEMENT (Sheet 1 of 2)

TOOLS: Cross-tip screwdriver
Putty knife

SUPPLIES: Gasket 12257411
Gasket 11590930
Adhesive (Item 4, Appendix D)

REFERENCES: TM 5-5420-227-24

PRELIMINARY PROCEDURE: Remove power takeoff universal joint cover (TM 5-5420-227-24)



REMOVAL:

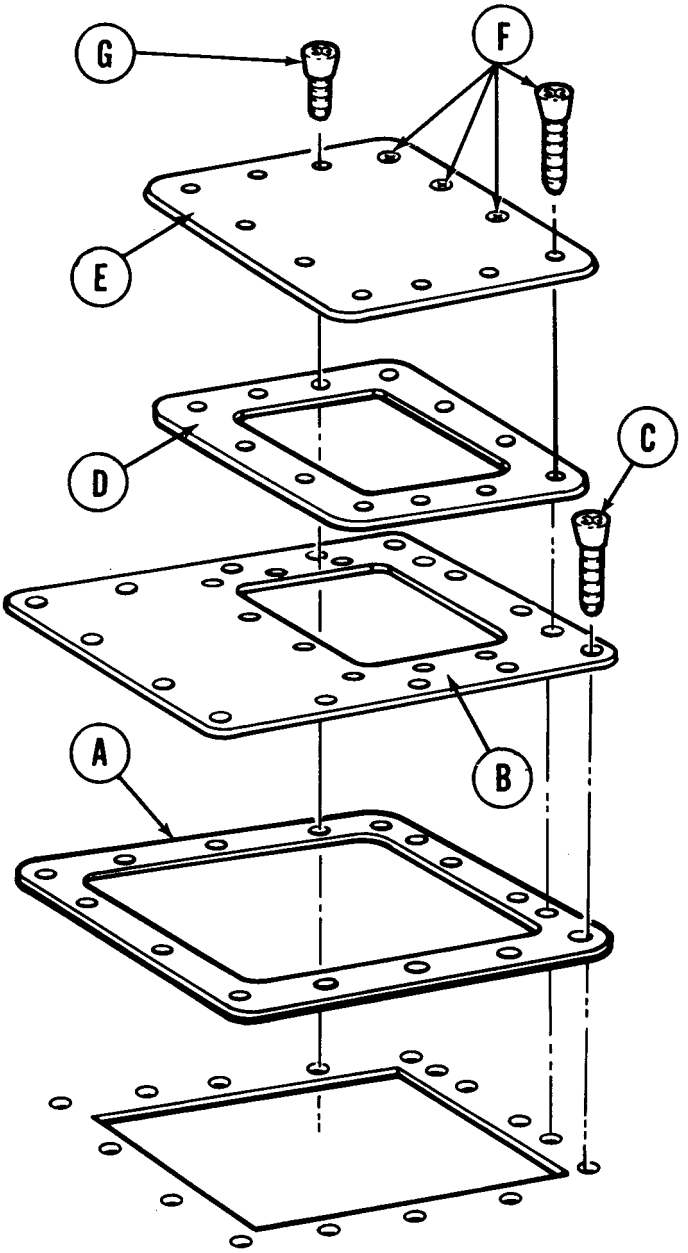
1. Using screwdriver, remove eight screws (A) and four screws (B) securing cover (C) and gasket (D) to cover (E).
2. Remove cover (C) and gasket (D).
3. Remove 12 screws (F) securing cover (E) and gasket (G) to bulkhead floor.
4. Remove cover (E) and gasket (G).
5. Using putty knife, scrape off all gasket and adhesive residue. Throw gaskets (D) and (G) away.

Go on to Sheet 2

FLOOR REAR ACCESS COVERS REPLACEMENT (Sheet 2 of 2)

INSTALLATION:

1. Apply adhesive to new gasket (A).
2. Position gasket (A) and cover (B) on bulkhead floor.
3. Using screwdriver, install 12 screws (C) securing cover (A) and gasket (B) to bulkhead floor.
4. Apply adhesive to new gasket (D).
5. Position gasket (D) and cover (E) on cover (B).
6. Using screwdriver, install four long screws (F) and eight shorter screws (G).
7. Install power takeoff universal joint cover (TM 5-5420-227-24).



End of Task

TA169506

COMMANDER'S FLOOR PLATE REPLACEMENT. (Sheet 1 of 1)

TOOLS: 7/16 in. socket with 1/2 in. drive
Ratchet with 1/2 in. drive

REFERENCES: TM 5-5420-227-24

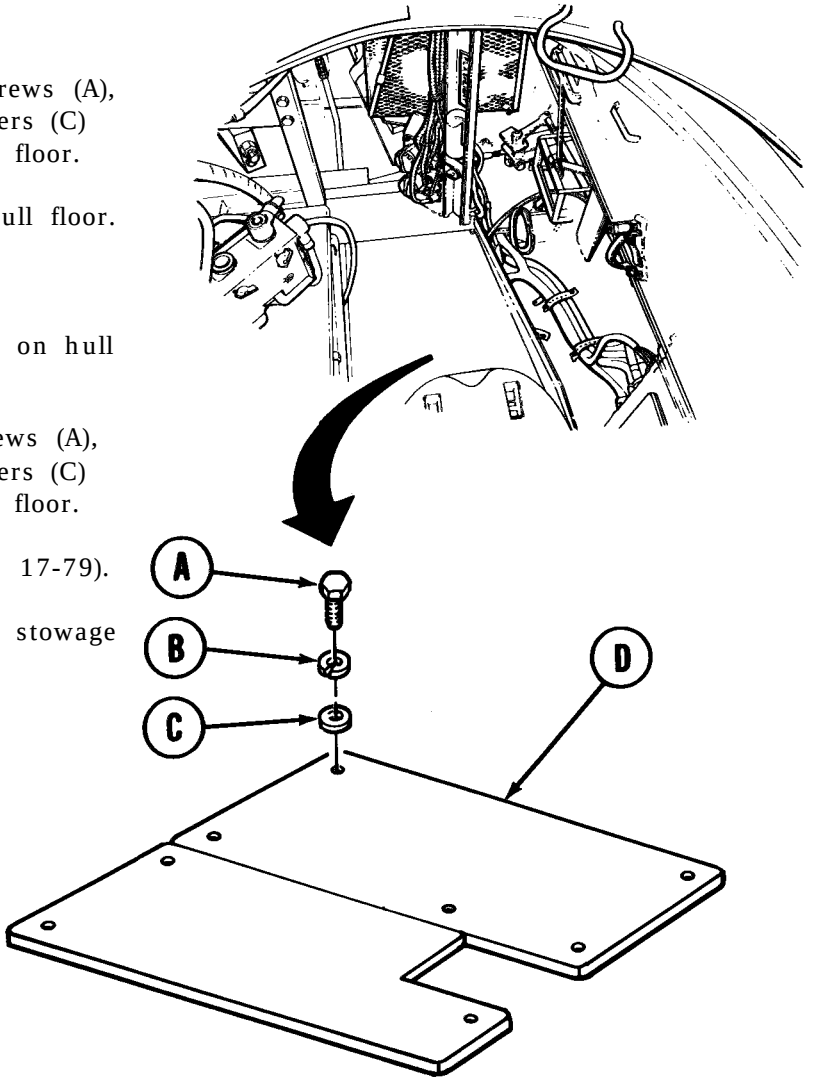
PRELIMINARY PROCEDURES: Remove commander's seat (page 17-78)
Remove commander's periscope stowage box (TM 5-5420-227-24)

REMOVAL:

1. Using socket, remove eight screws (A), lockwashers (B), and flat washers (C) securing two plates (D) to hull floor.
2. Remove two plates (D) from hull floor.

INSTALLATION:

1. Place two plates (D) in position on hull floor.
2. Using socket, install eight screws (A), lockwashers (B), and flat washers (C) securing two plates (D) to hull floor.
3. Install commander's seat (page 17-79).
4. Install commander's periscope stowage box (TM 5-5420-227-24).



End of Task

TA169507

OPERATOR'S FLOOR ACCESS PLATE REPLACEMENT (Sheet 1 of 1)

TOOLS: Flat-tip screwdriver

SUPPLIES: Gasket (10940167)

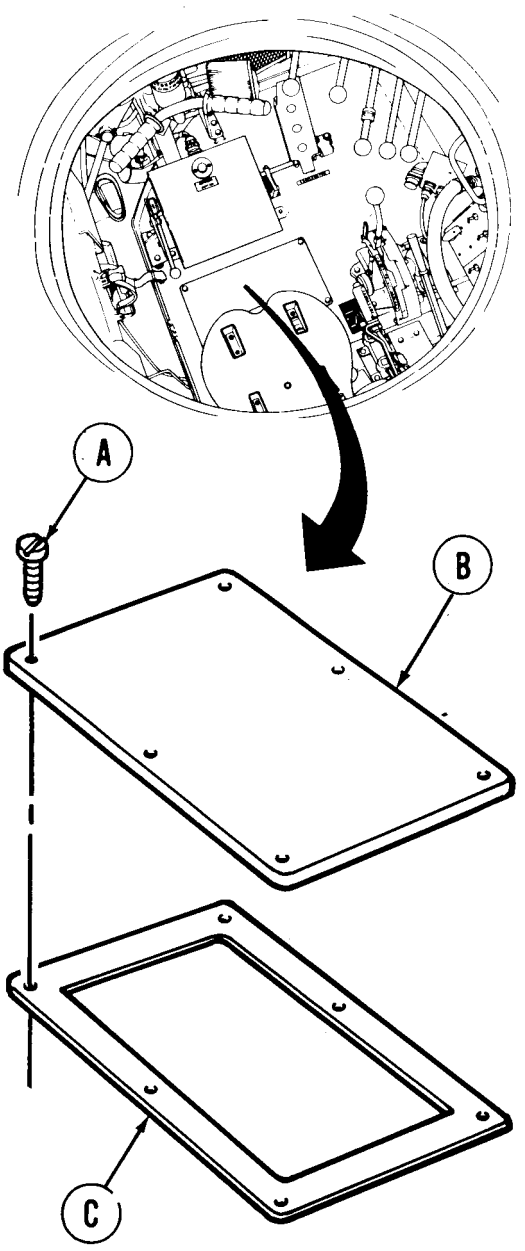
PRELIMINARY PROCEDURE: Remove operator's seat (page 17-2, steps 1 through 3)

REMOVAL:

1. Using screwdriver, remove six screws (A).
2. Remove plate (B) and gasket (C) from hull floor. Throw away gasket.

INSTALLATION:

1. Place new gasket (C) and plate (B) in position on hull floor.
2. Using screwdriver, install six screws (A).
3. Install operator's seat (page 17-4, steps 4 through 6).



End of Task

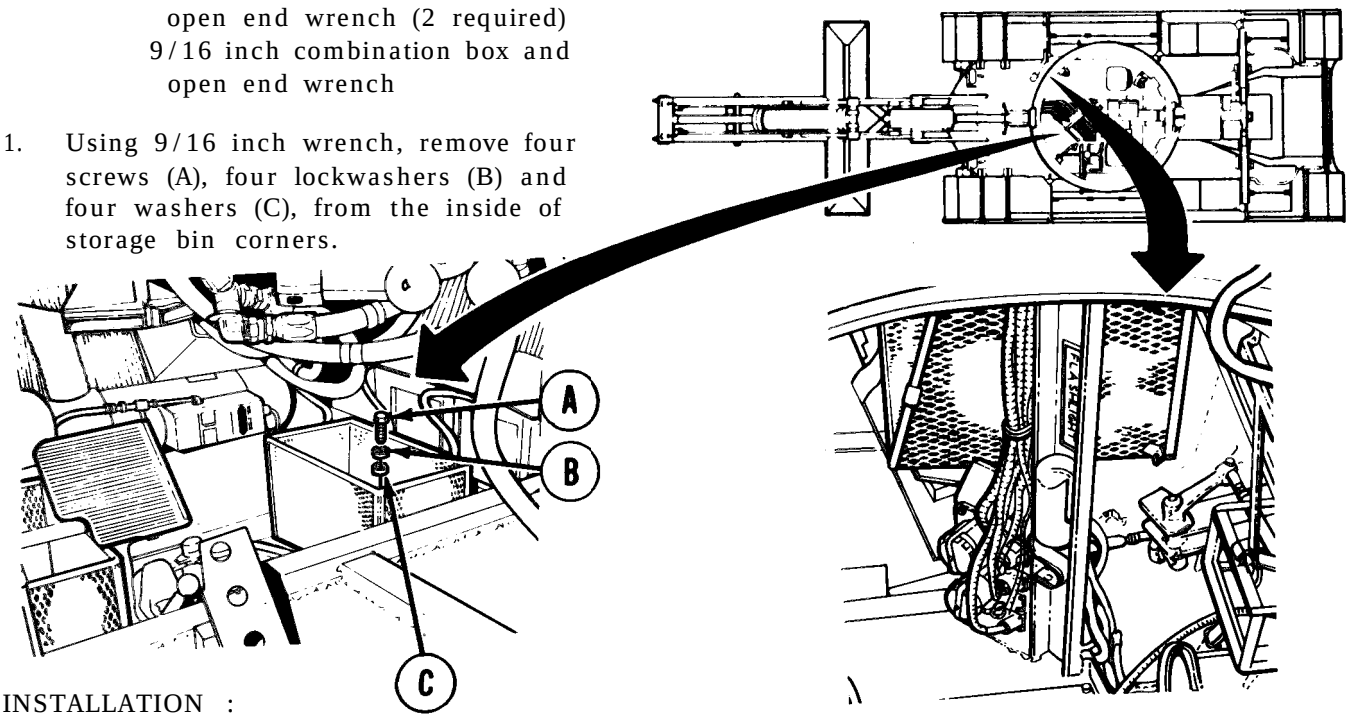
TA169508

STORAGE BINS AND FLASHLIGHT HOLDER REPLACEMENT (Sheet 1 of 1)

Storage Bin REMOVAL:

TOOLS: 7/16 inch combination box and open end wrench (2 required)
9/16 inch combination box and open end wrench

1. Using 9/16 inch wrench, remove four screws (A), four lockwashers (B) and four washers (C), from the inside of storage bin corners.

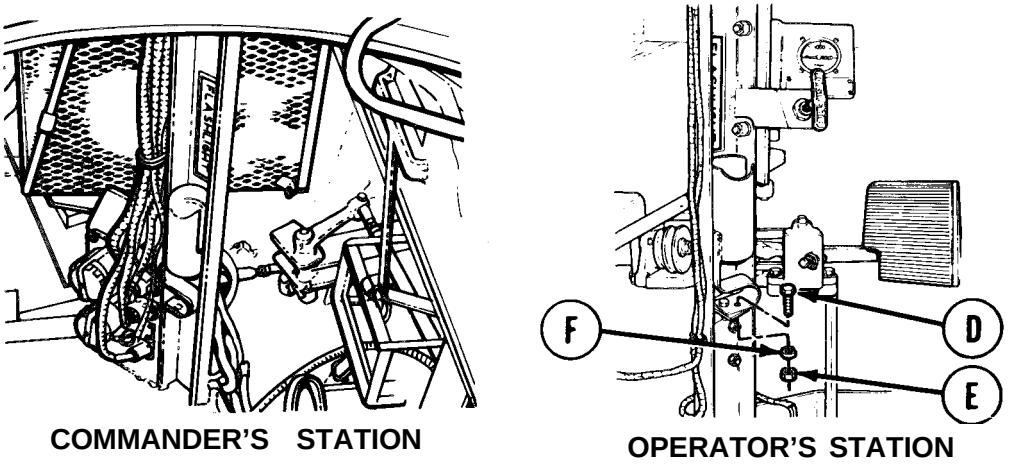


INSTALLATION :

1. Using fingers, install four screws (A), four lockwashers (B), and four washers (C) at each corner of the storage bin, finger tight.

2. Using 9/16 inch wrench, tighten screws (A).

Flashlight Holder REMOVAL:



COMMANDER'S STATION

OPERATOR'S STATION

Using two 7/16 inch wrenches, hold two screws (D) with one wrench and remove two nuts (E) and two lockwashers (F) with the other wrench.

INSTALLATION:

Using two 7/16 inch wrenches, hold two screws (D) with one wrench and install two nuts (E) and two lockwashers (F) with the other wrench.

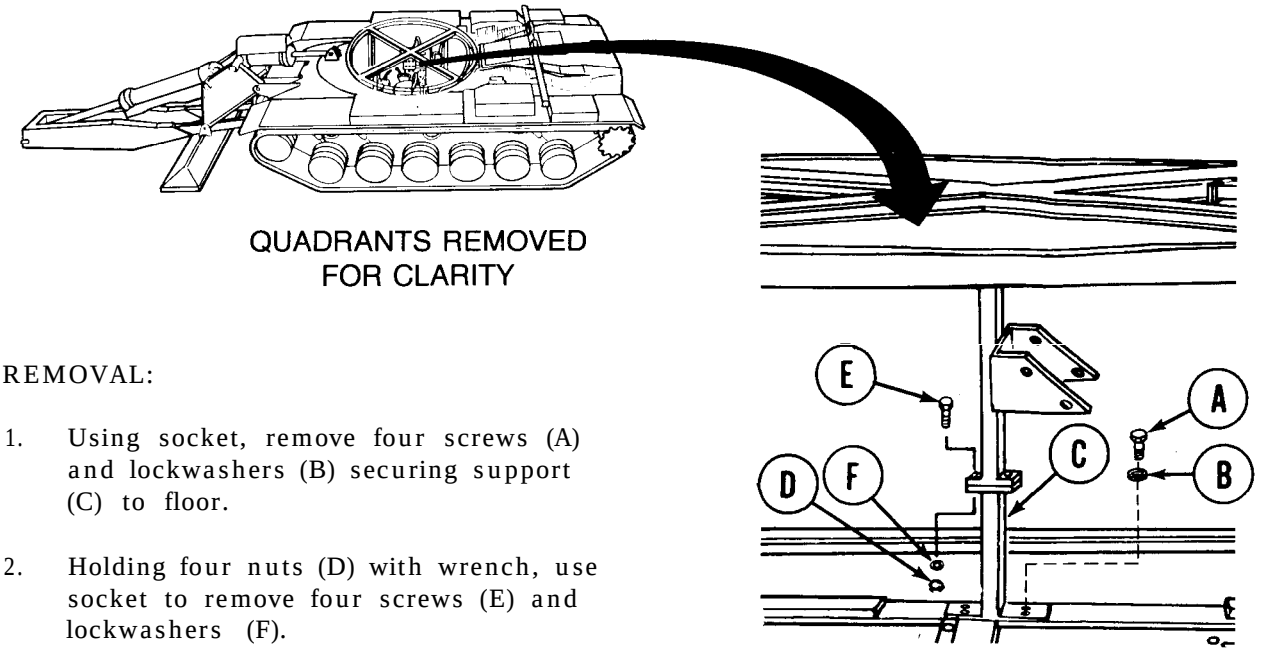
End of Task

TA169509

CENTER BRACKET SUPPORT REPLACEMENT (Sheet 1 of 1)

TOOLS: 9/16 in. socket with 1/2 in. drive
Ratchet with 1/2 in. drive
9/16 in. open end wrench

PRELIMINARY PROCEDURES: Displace master control panel (page 10-33)
Displace gage indicator panel (page 10-111)



REMOVAL:

1. Using socket, remove four screws (A) and lockwashers (B) securing support (C) to floor.
2. Holding four nuts (D) with wrench, use socket to remove four screws (E) and lockwashers (F).
3. Remove support (C).

INSTALLATION:

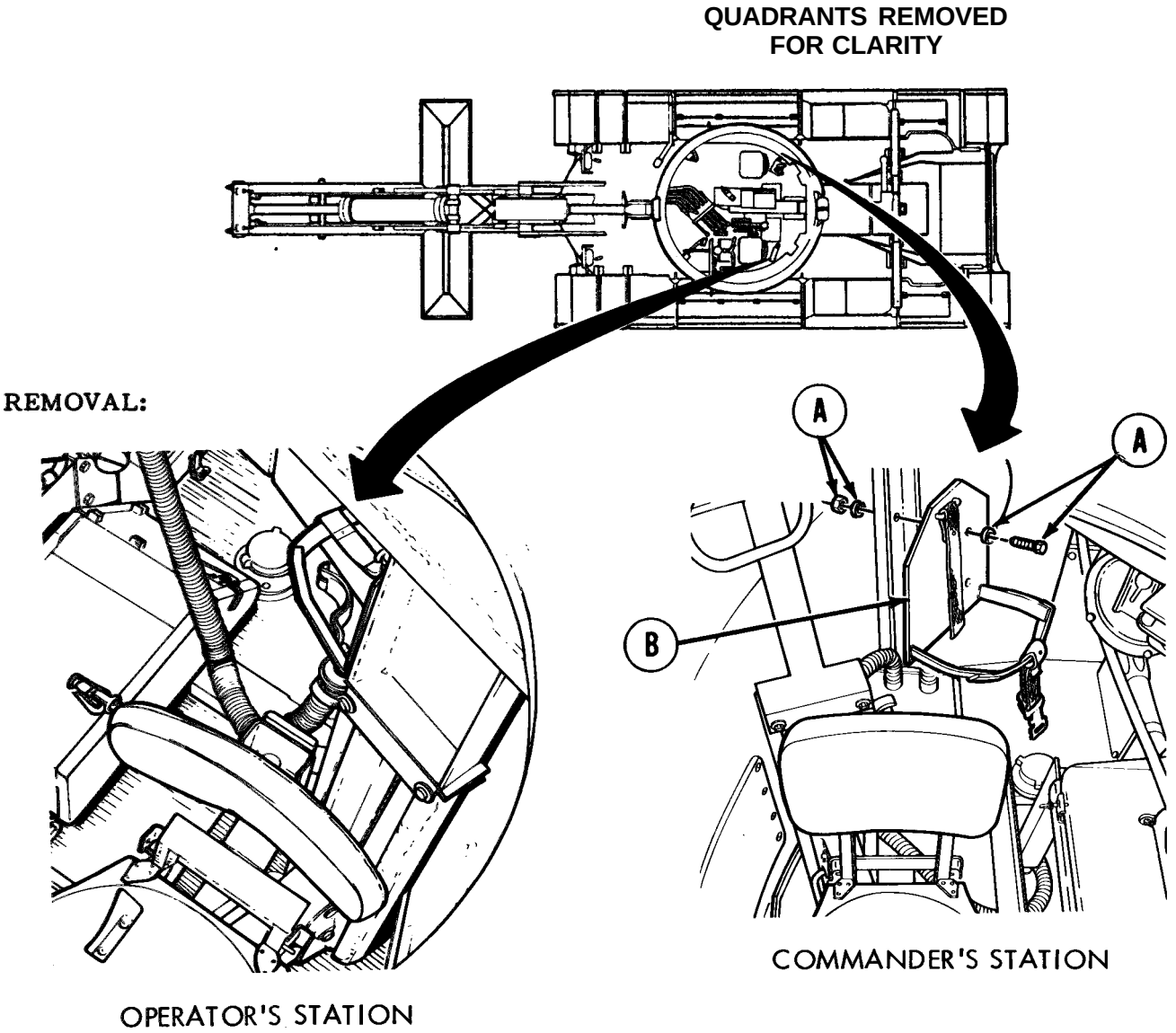
1. Place support (C) in position in vehicle.
2. Using fingers, install four screws (E), lockwashers (F), and nuts (D).
3. Using socket, install four screws (A) and lockwashers (B) securing support (C) to floor.
4. Holding four nuts (D) with wrench, use socket to tighten four screws (E).
5. Install master control panel (page 10-33).
6. Install gage indicator panel (page 10-112).

End of Task

TA169510

HELMET BRACKET REPLACEMENT (Sheet 1 of 1)

TOOLS: 7/16 in. open end wrench (2 required)



Using 7/16 inch wrenches, remove two screws, flatwashers, lockwashers, and nuts (A) securing helmet brackets (B).

INSTALLATION:

Using 7/16 inch wrenches, install two screws, flatwashers, lockwashers, and nuts (A) into helmet brackets (B).

End of Task

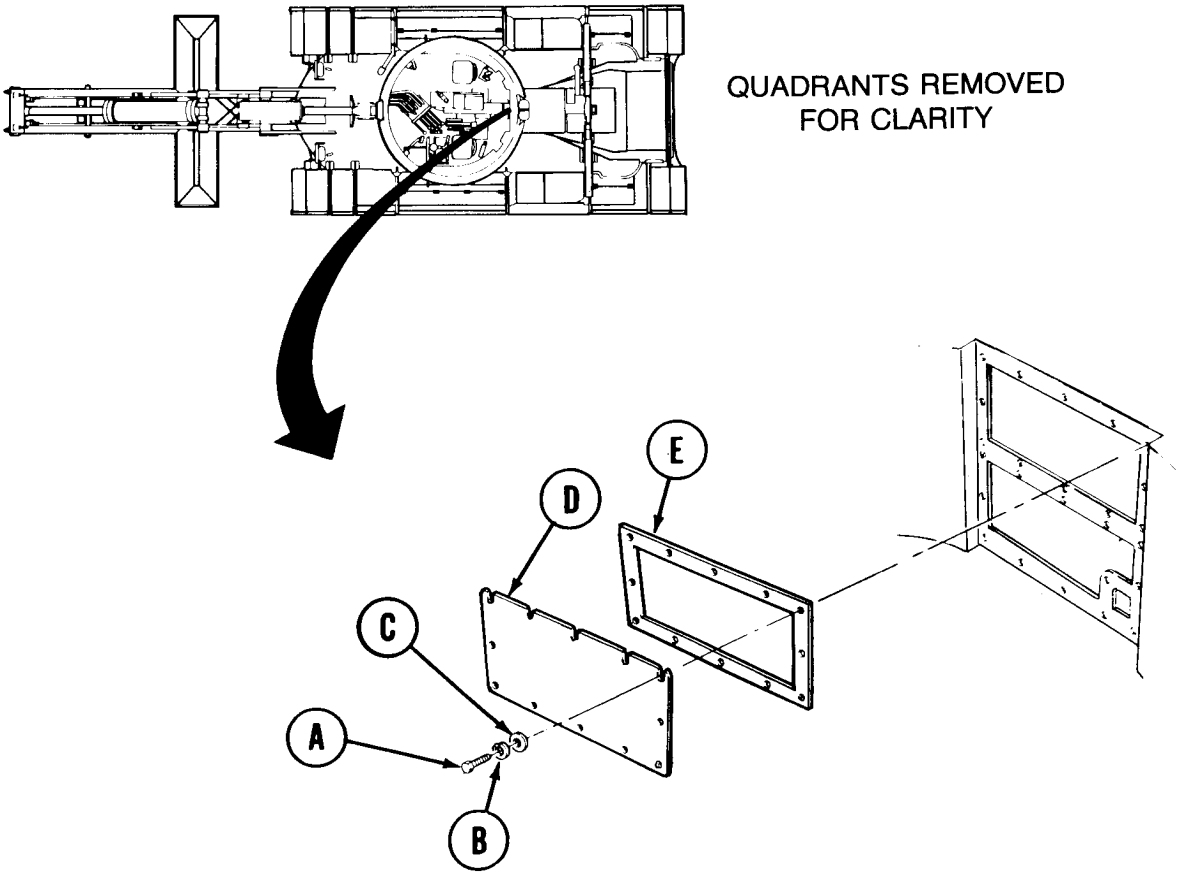
TA169511

ENGINE UPPER ACCESS COVER REPLACEMENT (Sheet 1 of 2)

TOOLS: 9/16 in. socket with 1/2 in. drive
Ratchet with 1/2 in. drive
Putty knife

SUPPLIES: Gasket 10916963
Adhesive (Item 4, Appendix D)

PRELIMINARY PROCEDURE: Remove engine lower access cover (page 17-16)



REMOVAL:

1. Using 9/16 inch socket, remove 12 screws (A), lockwashers (B) and five flat washers (C) securing cover (D) and gasket (E) to bulkhead.
2. Remove cover (D) and gasket (E). Throw gasket away.
3. Using putty knife, scrape off all gasket and adhesive residue from cover and bulkhead.

Go on to Sheet 2

TA169512

ENGINE UPPER ACCESS COVER REPLACEMENT (Sheet 2 of 2)

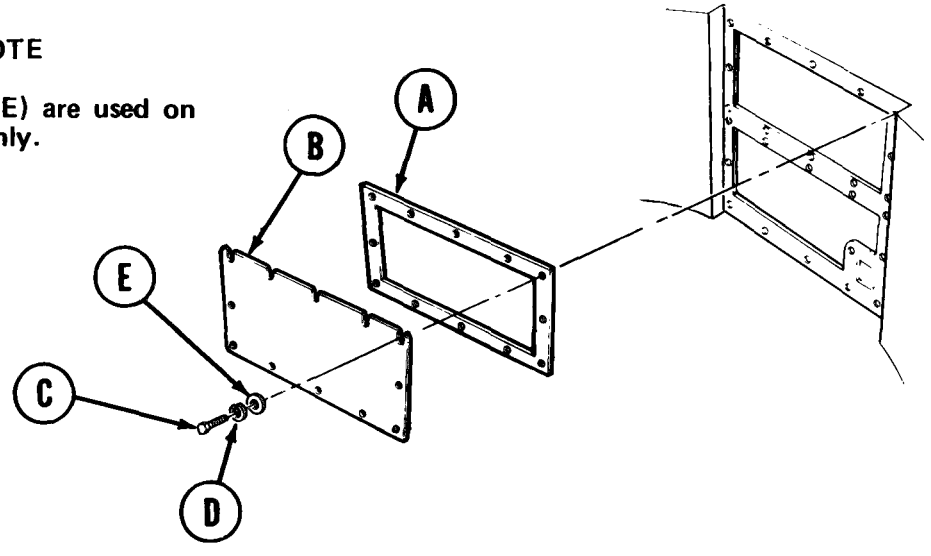
INSTALLATION:

1. Apply adhesive to new gasket (A).

2. Position new gasket (A) and cover (B) on bulkhead with holes alined. Slotted holes on cover (B) must be at top.

NOTE

Flat washers (E) are used on slotted holes only.



3. Using 9/16 inch socket, install 12 screws (C), lockwashers (D), and five flat washers (E) securing cover (B) and gasket (A) to bulkhead.
4. Install engine lower access cover (page 17-17).

End of Task

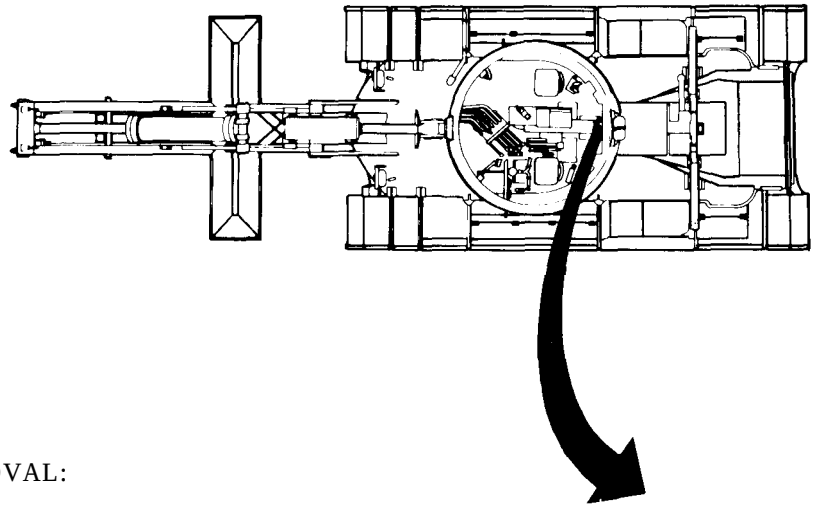
TA169513

ENGINE LOWE RACCESS COVER REPLACEMENT (Sheet 1 of 2)

TOOLS: 9/16 in. combination box and open end wrench
9/16 in. socket with 1/2 in. drive
5 in. extension with 1/2 in. drive
Ratchet with 1/2 in. drive
Putty knife

SUPPLIES: Gasket 10905553
Adhesive (Item 4, Appendix D)

PRELIMINARY PROCEDURE: Remove universal joint (TM 5-5420-227-24)



QUADRANTS REMOVED FOR CLARITY

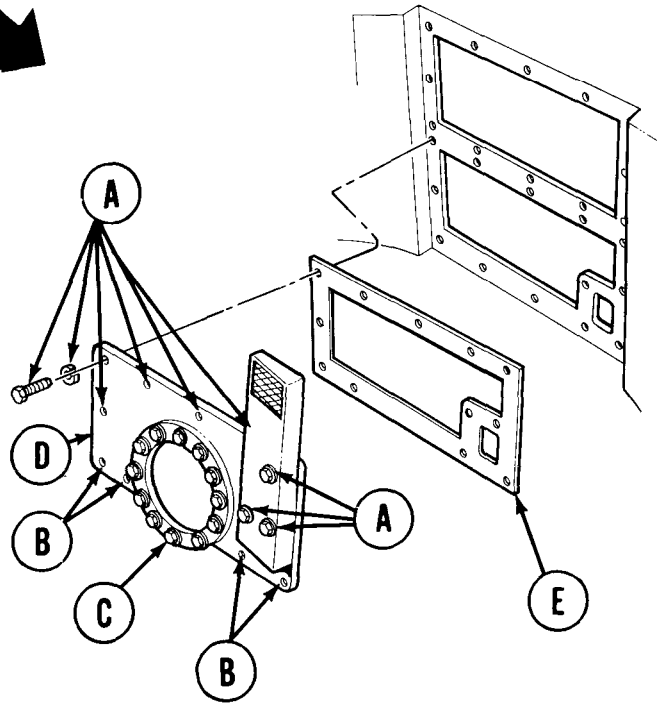
REMOVAL:

1. Using socket, remove eight screws and lockwashers (A).
2. Using socket and extension, remove four screws, lockwashers and flat washers (B).

NOTE

Screw and lockwasher (C) must be removed after cover (D) has been removed.

3. Using wrench, loosen screw (C).
4. Remove cover (D) and gasket (E).
5. Remove screw and lockwasher (C) from cover (D).
6. Using putty knife, scrape off all gasket and adhesive residue. Throw away gasket.



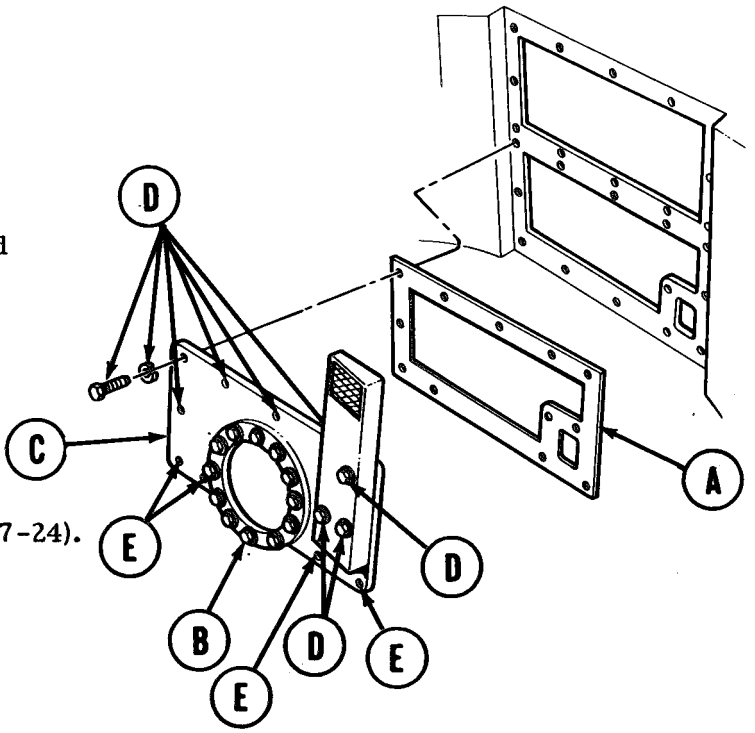
Go on to Sheet 2

TA169514

ENGINE LOWER ACCESS COVER REPLACEMENT (Sheet 2 of 2)

INSTALLATION

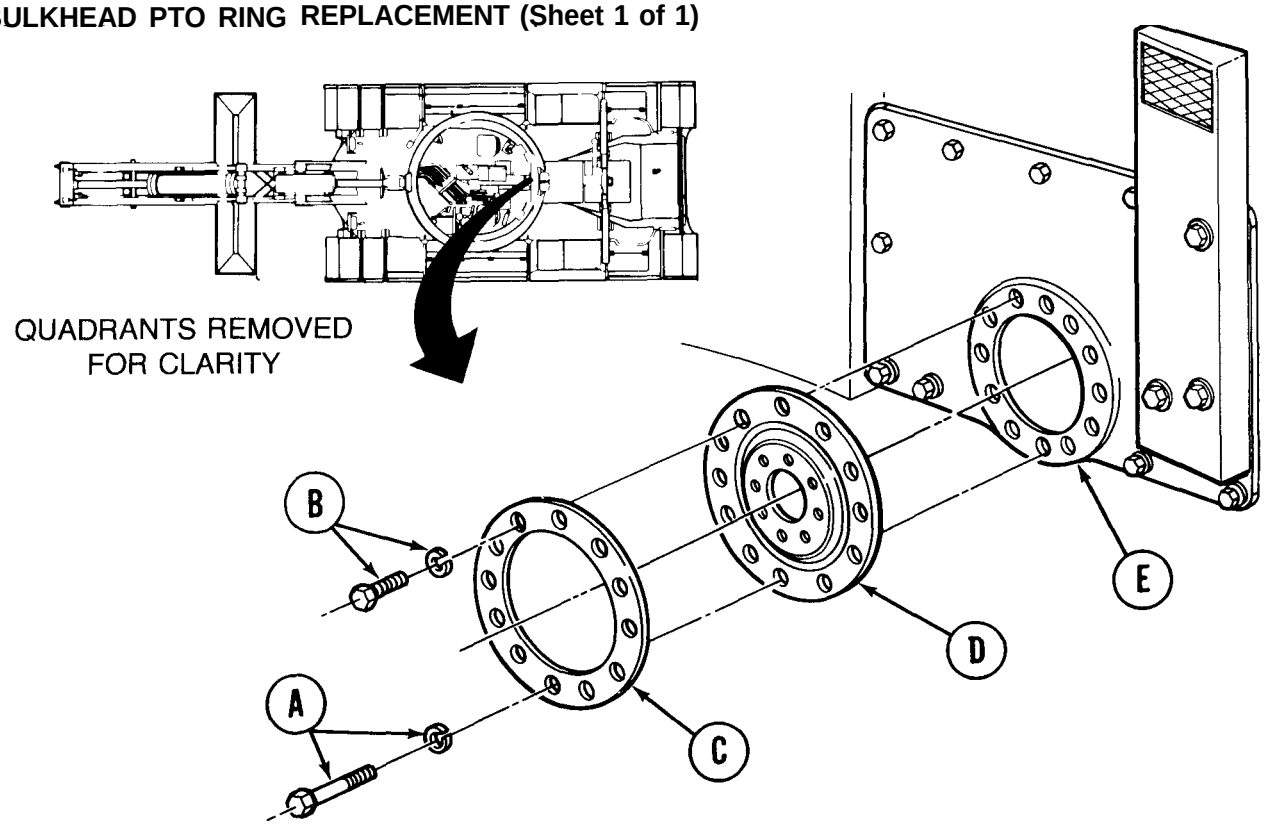
1. Apply adhesive to new gasket (A).
2. **Position screw and lockwasher (B) in cover (C).**
3. **Position new gasket (A) and cover (C) on bulkhead with holes alined.**
4. **Using socket, install eight screws and lockwashers (D).**
5. **Using socket with extension, install four screws, lockwashers, and flat washers (E).**
6. **Using wrench, tighten screw (B).**
7. **Install universal joint (TM 5-5420-227-24).**



End of Task

TA169515

BULKHEAD PTO RING REPLACEMENT (Sheet 1 of 1)



TOOLS: 9/16 in. socket with l/2 in. drive
Ratchet with 1/2 in. drive

SUPPLIES: Gasket
Adhesive (Item 4, Appendix D)

PRELIMINARY PROCEDURE: Remove universal joint (TM 5-5420-227-24)

REMOVAL:

1. Using 9/16 inch socket, remove screw and lockwasher (A), 11 screws and lockwashers (B), securing ring (C) and gasket (D) to cover (E).
2. Remove ring (C) and gasket (D). Throw gasket away.

INSTALLATION:

1. Apply adhesive to new gasket (D).
2. Position ring (C) and gasket (D) on cover (E) with holes alined.
3. Using 9/16 inch socket, install longer screw and lockwasher (A) and 11 shorter screws and lockwashers (B) securing ring (C) and gasket (D) to cover (E).
4. Install universal joint (TM 5-5420-227-24).

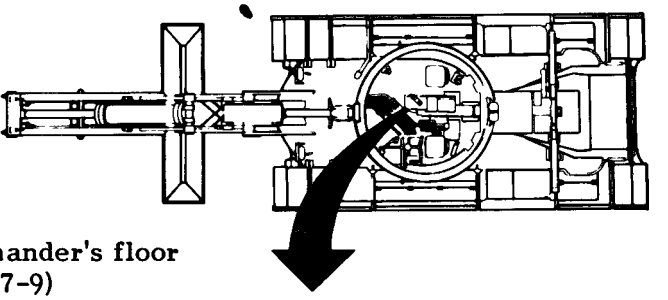
End of Task

TA169516

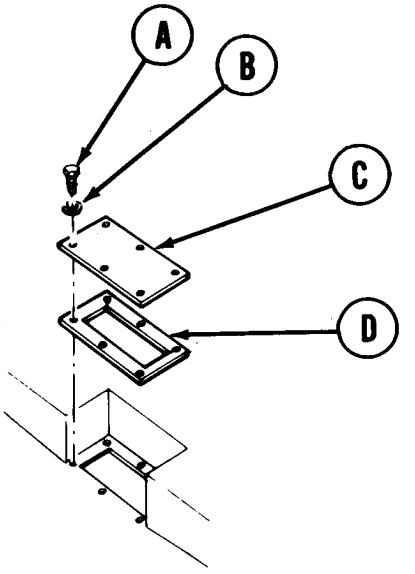
SLIP RING BOX ACCESS COVER REPLACEMENT (Sheet 1 of 1)

TOOLS: 9/16 in. combination box and open end wrench
Putty knife

SUPPLIES: Gasket 8721804
Adhesive (Item 4, Appendix D)



PRELIMINARY PROCEDURE: Remove commander's floor plate (page 17-9)



REMOVAL:

1. Use wrench to remove six screws (A) and lockwashers (B) securing cover (C) and gasket (D).
2. Remove cover (C) and gasket (D). Throw gasket away.
3. Using putty knife, remove all gasket and adhesive residue.

INSTALLATION:

1. Apply adhesive to new gasket (D).
2. Position gasket (D) and cover (C) with holes alined over opening in floor.
3. Reaching through floor plate access opening, use wrench to install six lockwashers (B) and screws (A).
4. Install commander's floor plate (page 17-9).

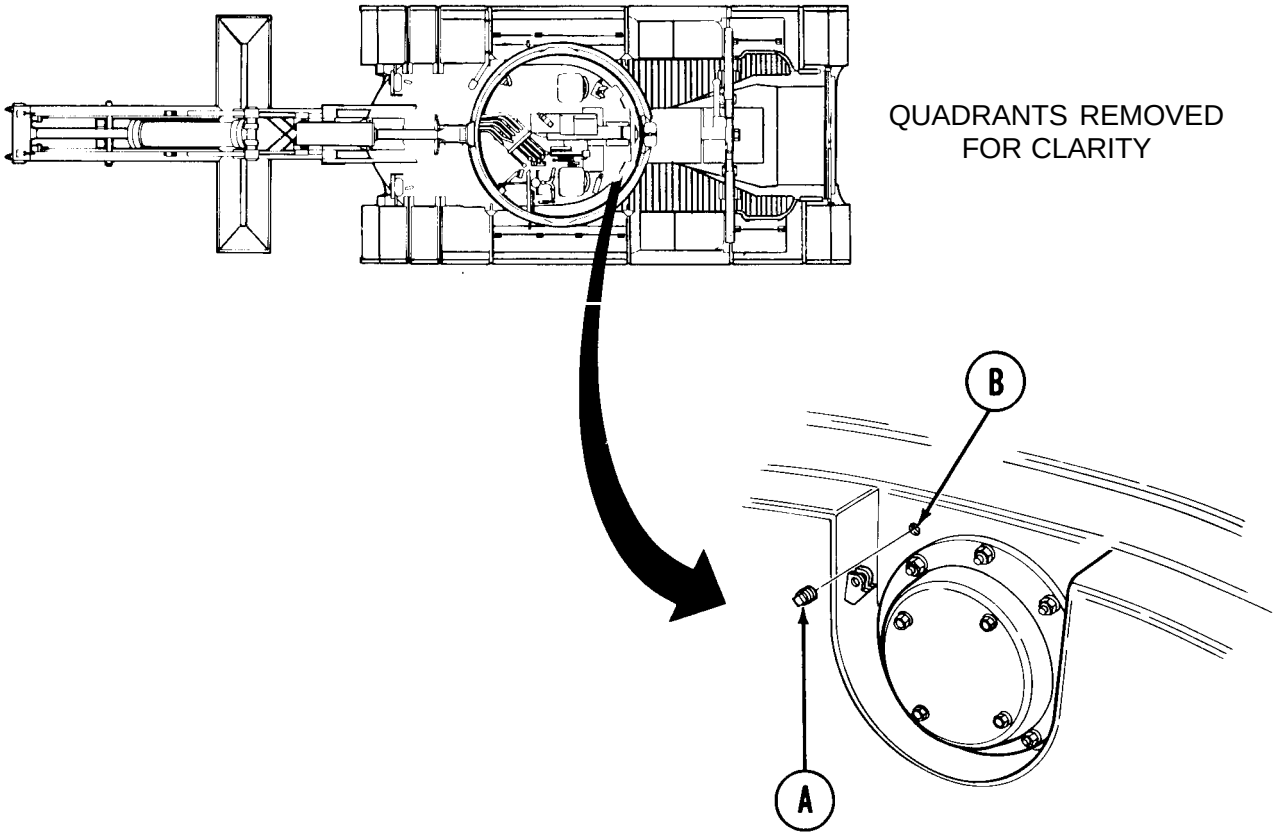
End of Task

TA169517

BULKHEAD PIPE PLUG REPLACEMENT (Sheet 1 of 1)

TOOL: 8 in. adjustable wrench

REMOVAL: Using wrench, remove pipe plug (A) from bulkhead mounting plate (B).



INSTALLATION: Using wrench, install pipe plug (A) in bulkhead mounting plate (B).

End of Task

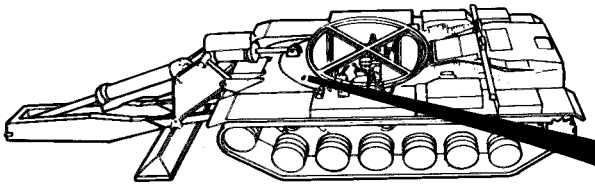
TA169518

FRONT DRAIN VALVE CONTROL LEVER REPLACEMENT (Sheet 1 of 3)

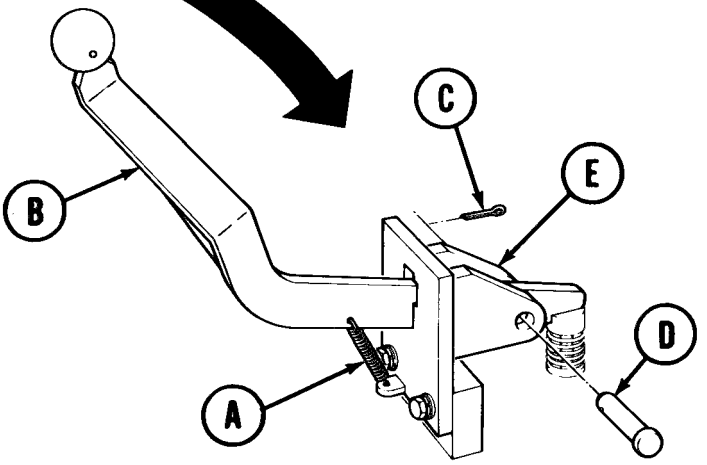
TOOLS: l/8 in. drive pin punch
Hammer
Slip joint pliers

SUPPLIES: Cotter pin
Cleaning solvent (Item 55, Appendix D)
Clean rags (Item 65, Appendix D)

REFERENCE: TM 5-5420-226-10

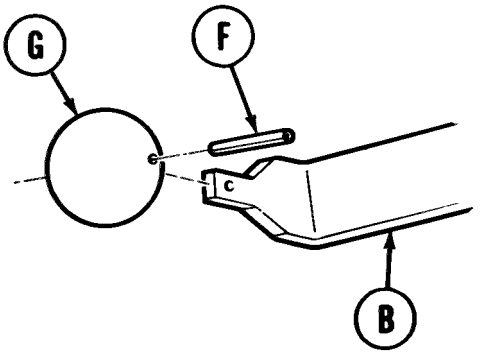


QUADRANTS REMOVED FOR CLARITY



REMOVAL:

1. Using pliers, unhook return spring (A) from front drain valve control lever (B).
2. Using pliers, remove cotter pin (C) from straight headed pin (D). Throw cotter pin (C) away.
3. Remove pin (D) from front drain valve control lever (B) and support (E).
4. Pull front drain control lever (B) out of support (E).



5. Using hammer and punch, drive spring pin (F) out of knob (G) on lever (B).
6. Remove knob (G) from lever (B).

Go on to Sheet 2

TA169519

FRONT DRAIN VALVE CONTROL LEVER REPLACEMENT (Sheet 2 of 3)

CLEANING AND INSPECTION:

1. Check straight pin, spring and front drain valve lever for accumulation of dirt, grease, oil or grime.

WARNING

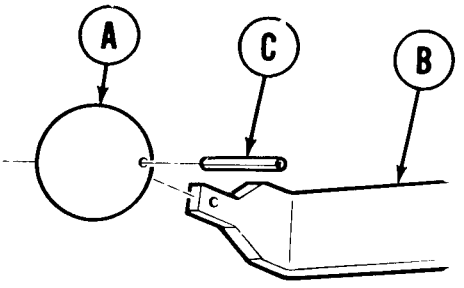
Cleaning agent specified is flammable. Use only in well ventilated areas. Keep away from flames, sparks, or heat. Do not smoke while using. Prevent contact with eyes, mouth, and/or skin. Wear rubber gloves when performing cleaning procedures.

2. Clean parts, if necessary, with dry cleaning solvent and rags.

3. Check straight pin and front drain valve lever for damage, defects or worn holes.

4. Check spring for signs of wear or stretching.

5. Replace parts, if necessary.



INSTALLATION:

1. Place knob (A) in position on lever (B).

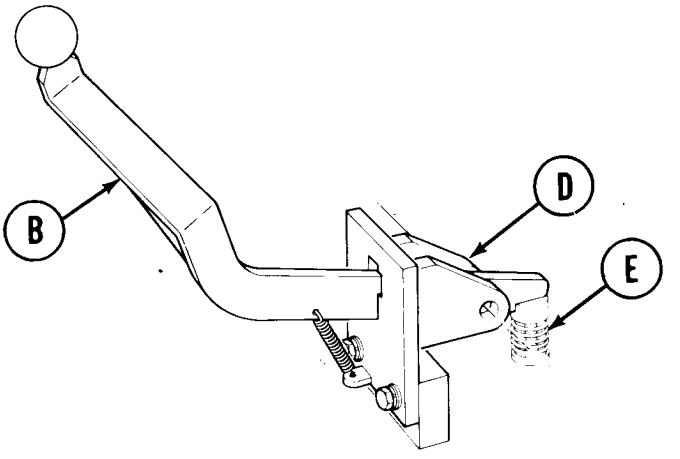
2. Using ham mer and punch, install spring pin (C) to secure knob (A) to lever (B).

3. Slide front drain control lever (B) into support (D).

4. Line up holes in support (D) and front drain control lever (B).

NOTE

Make sure lever (B) fits in center of groove in drain valve knob (E) when holes are alined.



Go on to Sheet 3

TA169520

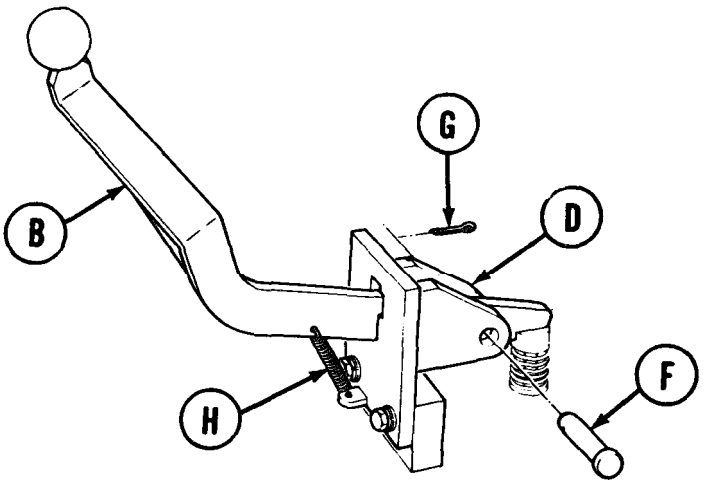
FRONT DRAIN VALVE CONTROL LEVER REPLACEMENT (Sheet 3 of 3)

5. Insert straight headed pin (F) through holes in support (D) and front drain control lever (B).

6. Using pliers, install new cotter pin (G) in straight headed pin (F).

7. Using pliers, insert return spring (H) through front drain control lever (B).

8. Check front drain valve for proper operation (TM 5-5420-226-10).



End of Task

TA106684

FRONT DRAIN VALVE ASSEMBLY REPAIR (Sheet 1 of 4)

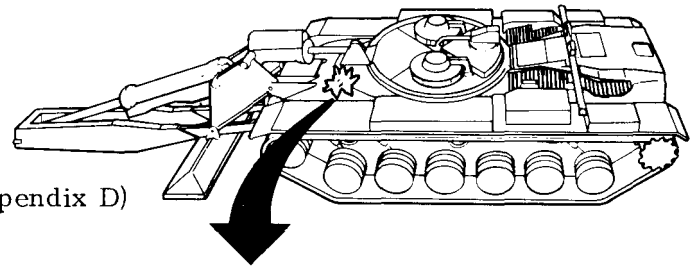
PROCEDURE INDEX

TOOLS: Vise
Hammer
1/8 in. drive pin punch
Flat screwdriver (2 required)
6 or 12 in. ruler
Slip joint pliers

SUPPLIES: Dry cleaning solvent (Item 55, Appendix D)
Clean Rags (Item 65, Appendix D)

PERSONNEL: Three

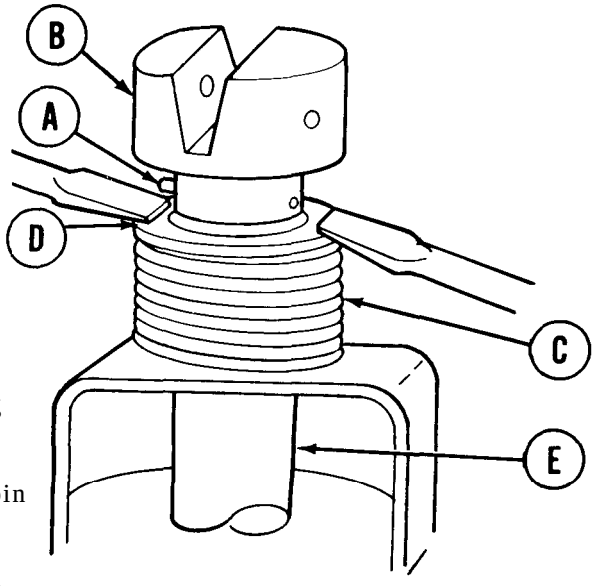
REFERENCE: TM 5-5420-226-10



DISASSEMBLY:

NOTE

Place suitable padded container beneath hull to catch front drain valve.



1. Using hammer and punch, drive spring pin (A) out of hole in knob (B) while second technician holds spring (C) down with two screwdrivers. Throw pin (A) away, if damaged.

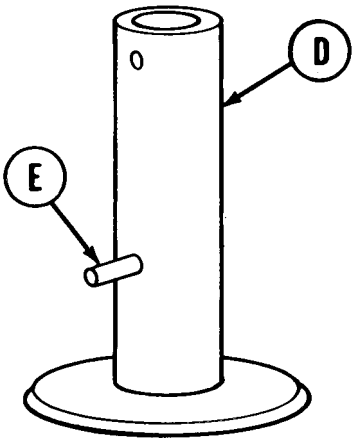
2. Remove knob (B), washer (D), and spring (C), and allow valve (E) to drop from vehicle.

Go on to Sheet 2

TA169521

FRONT DRAIN VALVE ASSEMBLY REPAIR (Sheet 2 of 4)

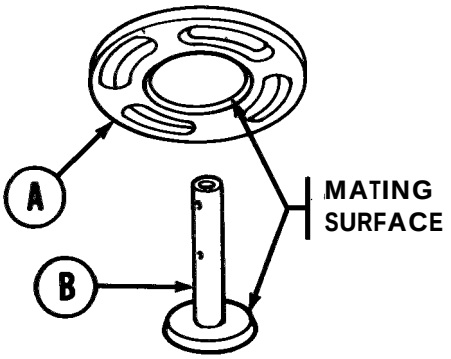
3. Clamp valve (D) in vise. Using hammer and punch, drive pin (E) out of hole in valve (D). Throw pin (E) away, if damaged.



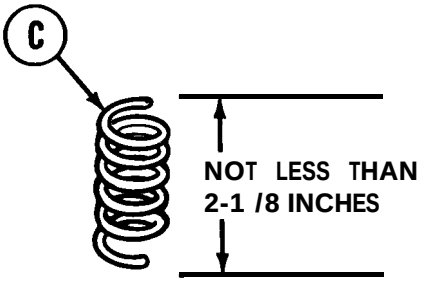
CLEANING AND INSPECTION:

WARNING

Cleaning agent specified is flammable. Use only in well ventilated areas. Keep away from flames, sparks, or heat. Do not smoke while using. Prevent contact with eyes, mouth, and/or skin. Wear rubber gloves when performing cleaning procedures.



1. Clean all parts using dry cleaning solvent and clean rags.
2. Inspect all parts for cracks, corrosion, damage, or other defects. Replace defective parts.
3. Inspect mating surface of cage (A) and valve (B) for cracks, corrosion, damage, or other defects.
4. Replace valve (B) if mating surface is defective.
5. Notify support maintenance if mating surface of cage (A) is defective.



6. Measure length of valve spring (C).
7. Replace spring (C) if less than 2-1/8 inches long.

Go on to Sheet 3

TA169522

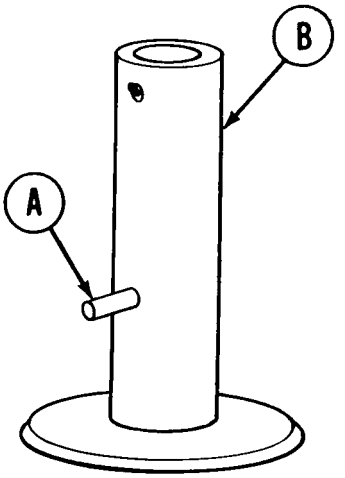
FRONT DRAIN VALVE ASSEMBLY REPAIR (Sheet 3 of 4)

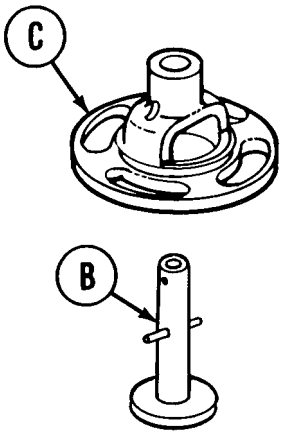
ASSEMBLY:

1. Using pliers, start pin (A) into lower hole of valve (B).

2. Clamp valve (B) in vise.

3. Using hammer and punch, drive pin (A) into hole until pin (A) sticks out an equal distance on each side of valve (B).





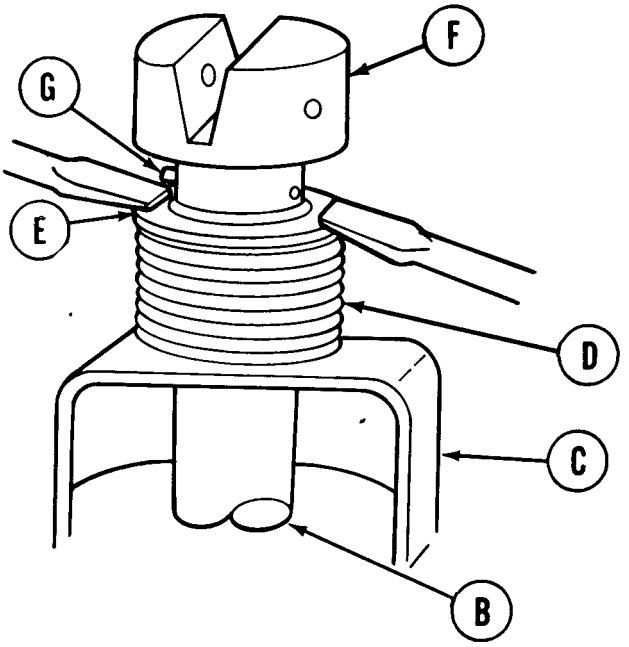
4. Have third technician push valve (B) up through opening in cage (C) welded to bottom of hull. Turn valve (B) so it fits all the way up into cage (C). Hold valve (B) in place.

5. Inside vehicle, place spring (D), washer (E), and knob (F) over stem of valve (B).

6. Using punch as a drift, line up holes in knob (F) and valve (B) while second technician holds spring (D) down with two screwdrivers.

7. Using pliers, start pin (G) into hole in knob (F).

8. Using hammer and punch, drive pin (G) all the way into hole.



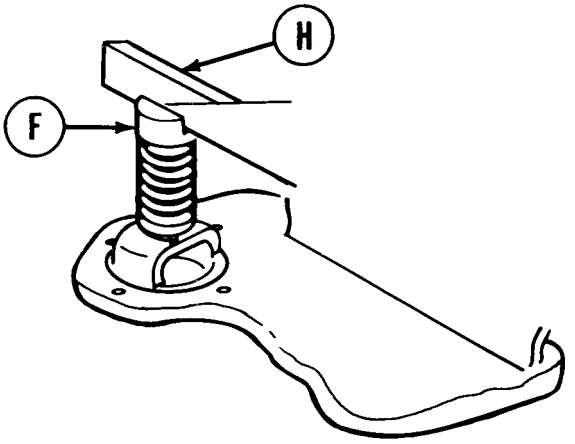
Go on to Sheet 4

TA169523

FRONT DRAIN VALVE ASSEMBLY REPAIR (Sheet 4 of 4)

NOTE

Make sure front drain valve control lever (H) fits into center of groove in knob (F).



9. Check front drain valve for proper operation. (TM 5-5420-226-10).

End of Task

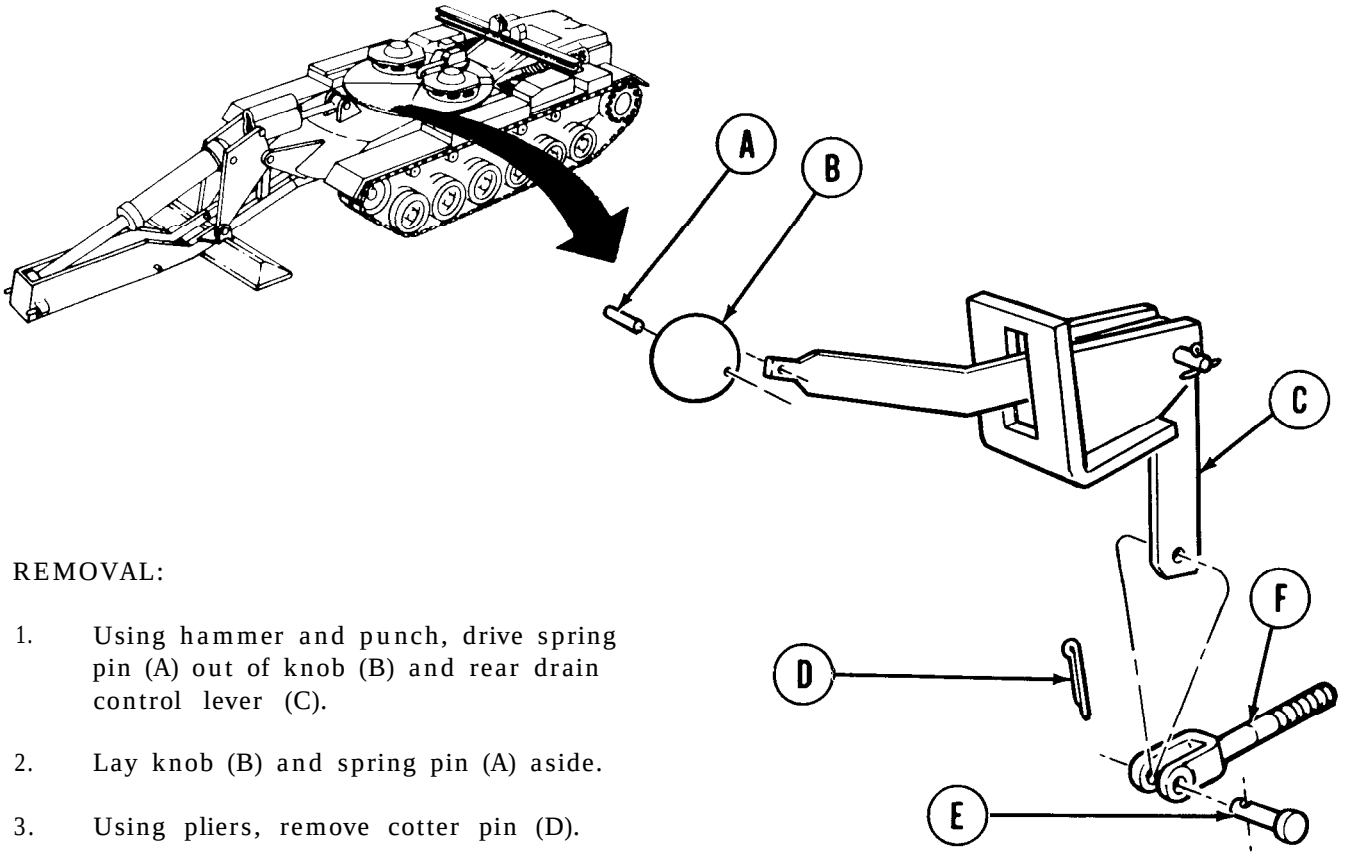
TA169524

REAR DRAIN CONTROL LEVER REPLACEMENT (Sheet 1 of 3)

TOOLS: Slip joint pliers
1/8 in. drive pin punch
Hammer

SUPPLIES: Cotter pin
Dry cleaning solvent (Item 55, Appendix D)
Clean rags (Item 65, Appendix D)

REFERENCE: TM 5-5420-226-10



REMOVAL:

1. Using hammer and punch, drive spring pin (A) out of knob (B) and rear drain control lever (C).
2. Lay knob (B) and spring pin (A) aside.
3. Using pliers, remove cotter pin (D).
4. Throw cotter pin (D) away.
5. Remove straight headed pin (E) from rear drain control lever (C) and rod end clevis (F).

Go on to Sheet 2

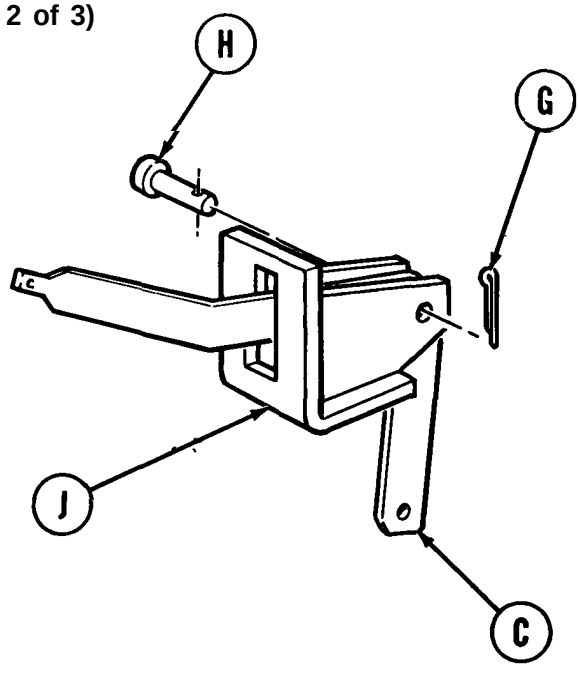
TA169525

REAR DRAIN CONTROL LEVER REPLACEMENT (Sheet 2 of 3)

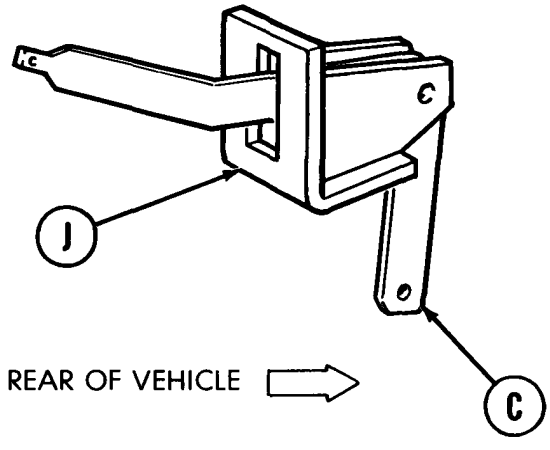
6. Using pliers, remove cotter pin (G).

7. Throw cotter pin (G) away.

8. Remove straight headed pin (H) from rear drain control lever (C) and support (J).



9. Remove rear drain control lever (C) by sliding through support (J) toward rear of vehicle.



CLEANING AND INSPECTION:

1. Check parts for accumulation of dirt, grease, oil, or grime.

WARNING

Cleaning agent specified is flammable. Use only in well ventilated areas. Keep away from flames, sparks, or heat. Do not smoke while using. Prevent contact with eyes. mouth, and/or skin. Wear rubber gloves when performing cleaning procedures.

2. Clean parts, if necessary, which dry cleaning solvent and rags.

3. Check parts for wear, cracks, or other damage.

4. Replace parts if necessary.

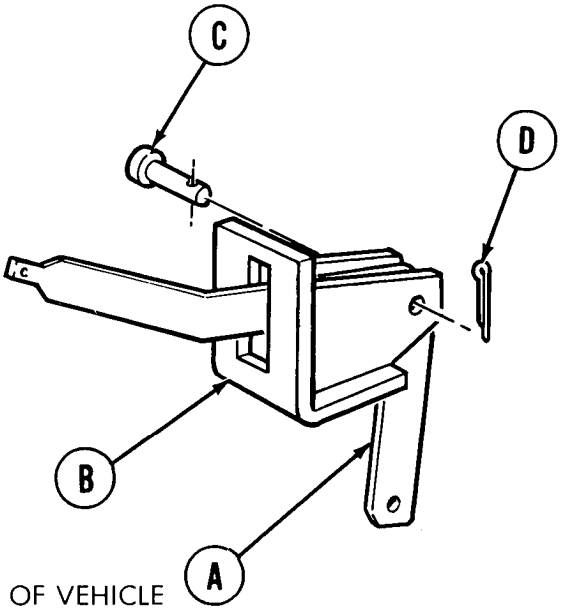
Go on to Sheet 3

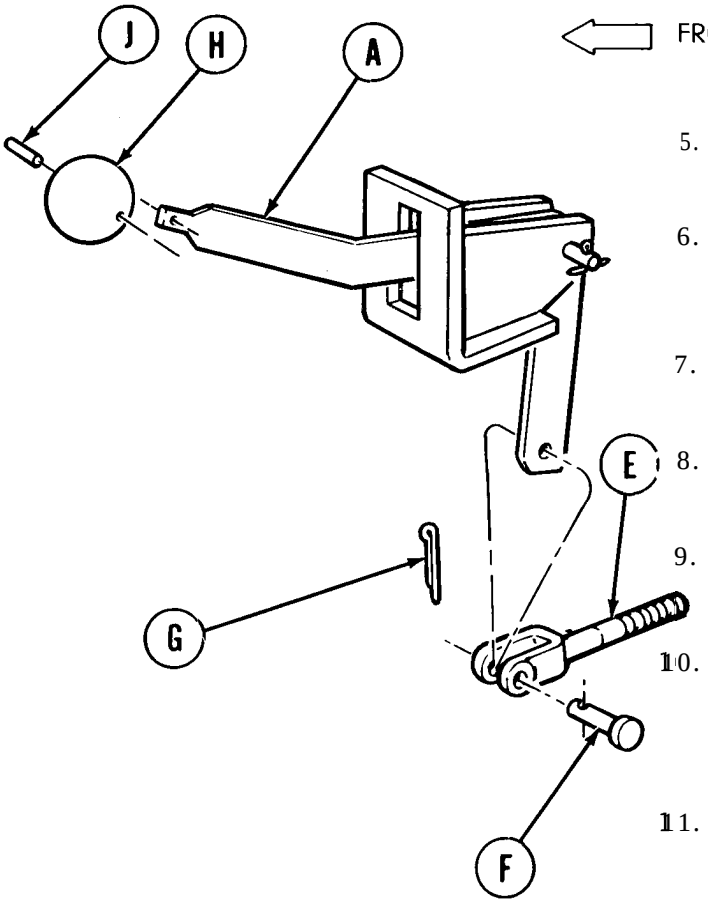
TA169526

REAR DRAIN CONTROL LEVER REPLACEMENT (Sheet 3 of 3)

INSTALLATION:

1. Slide rear drain control lever (A) through support (B) toward front of vehicle.
2. Line up holes in rear drain control lever (A) and support (B).
3. Put straight headed pin (C) through holes in rear drain control lever (A) and support (B).
4. Using pliers, install new cotter pin (D) in straight headed pin (C).





FRONT OF VEHICLE

5. Line up holes in rear drain control lever (A) and rod end clevis (E).
6. Put straight headed pin (F) through holes in rear drain control lever (A) and rod end clevis (E).
7. Using pliers, install new cotter pin (G) in straight headed pin (F).
8. Place knob (H) on rear drain control lever (A).
9. Using pliers, start spring pin (J) in hole in knob (H).
10. Using hammer and punch, drive spring pin (J) through holes in knob (H) and rear drain control lever (A) until spring pin (J) is flush with knob (H).
11. Operate lever to make sure it works correctly (TM 5-5420-226-20).

End of Task

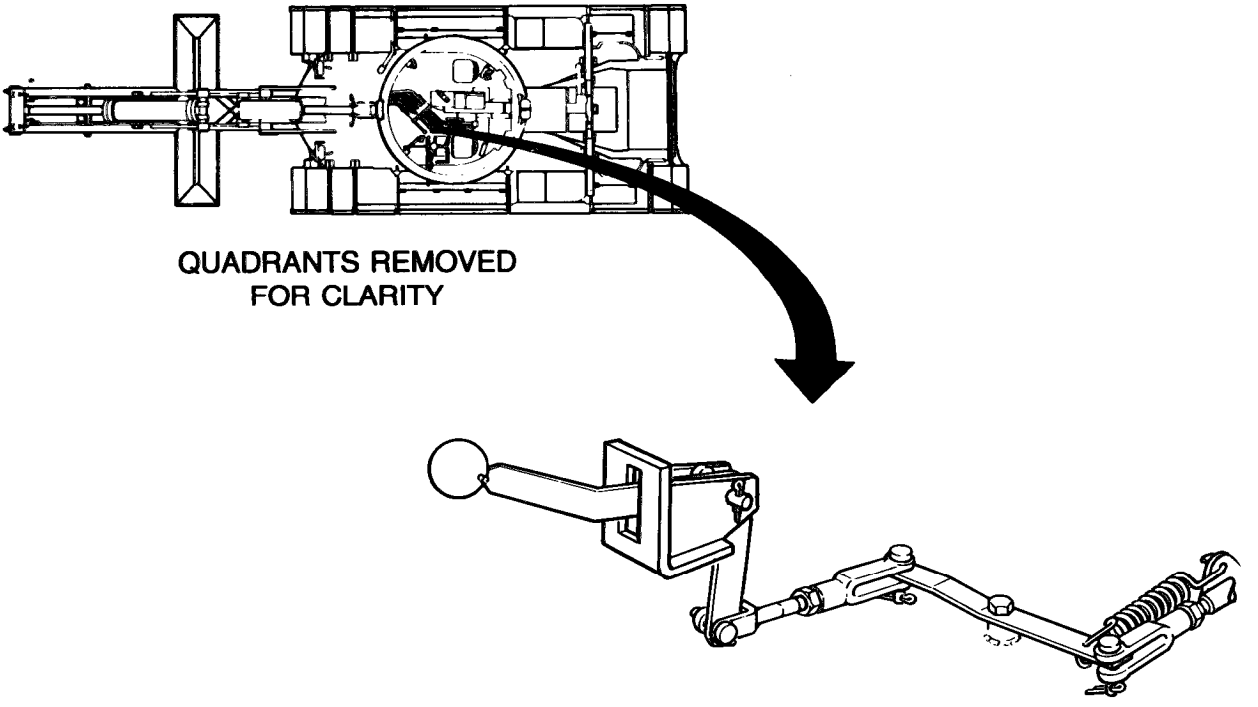
TA169527

REAR DRAIN VALVE CONTROL LEVER CLEVIS REPLACEMENT (Sheet 1 of 4)

PROCEDURE INDEX

TOOLS: 8 in. adjustable wrench (2 required)
Round nose pliers
9/16 in. open end wrench

SUPPLIES: Cotter pin (2)
Paper and pencil
Dry cleaning solvent (Item 55, Appendix D)
Clean rags (Item 65, Appendix D)



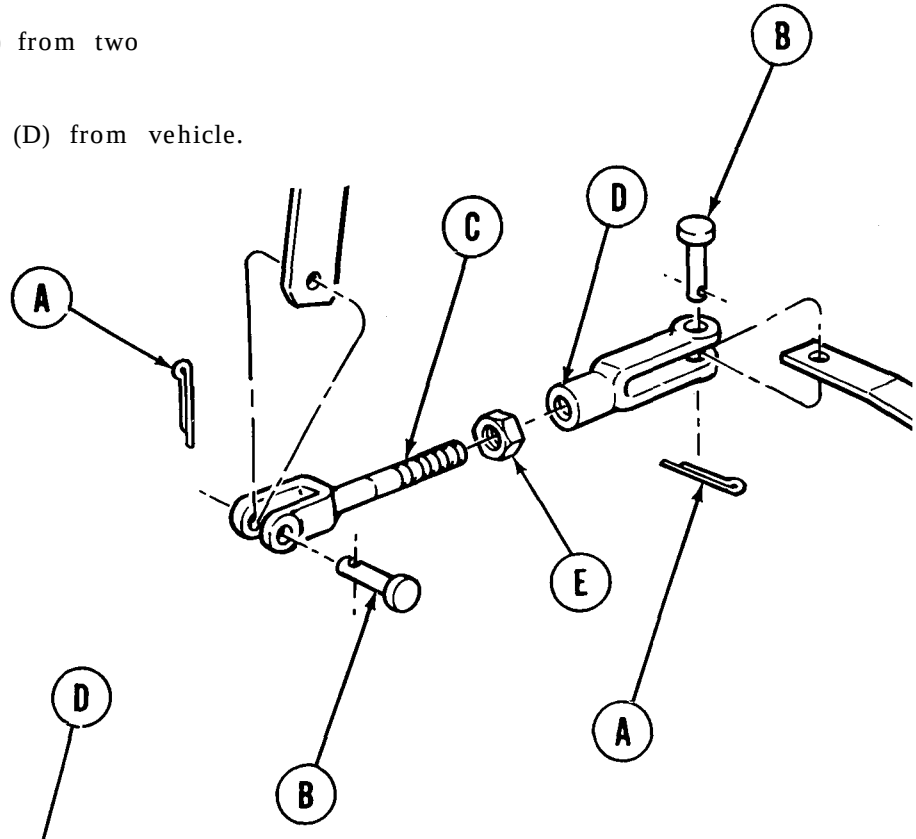
Go on to Sheet 2

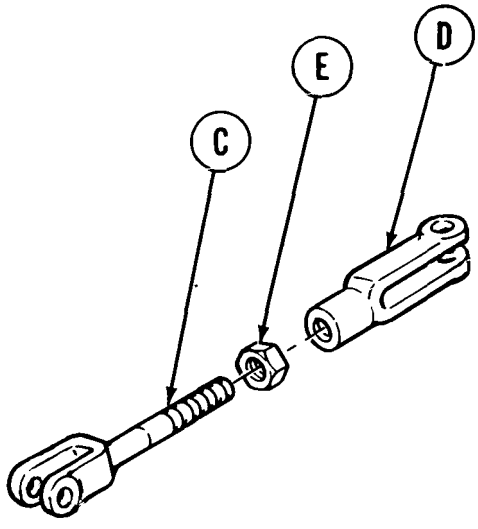
TA169528

REAR DRAIN VALVE CONTROL LEVER CLEVIS REPLACEMENT (Sheet 2 of 4)

REMOVAL:

1. Using pliers, remove two cotter pins (A) from two straight pins (B).
2. Throw cotter pins (A) away.
3. Remove straight pins (B) from two clevises (C) and (D).
4. Remove clevises (C) and (D) from vehicle.





5. Holding lever arm clevis (C) with adjustable wrench, use 9/16 inch open end wrench to loosen jamnut (E).

NOTE

Count and write down number of turns needed to unscrew clevis (C) from clevis (D).

6. Holding lever arm clevis (C) with adjustable wrench, use adjustable wrench to remove clevis (D).
7. Using 9/16 inch wrench, remove jamnut (E) from clevis (C).

Go on to Sheet 3

TA169529

REAR DRAIN VALVE CONTROL LEVER CLEVIS REPLACEMENT (Sheet 3 of 4)

CLEANING AND INSPECTION:

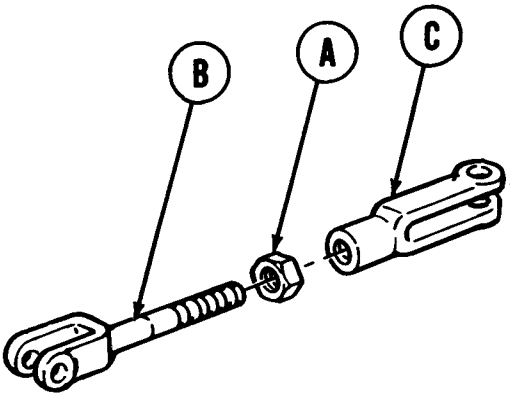
WARNING

Cleaning agent specified is flammable. Use only in well ventilated areas. Keep away from flames, sparks, or heat. Do not smoke while using. Prevent contact with eyes, mouth, and/or skin. Wear rubber gloves when performing cleaning procedures.

1. Check all parts for accumulation of dirt, grease, oil, or grime. Clean with dry cleaning solvent and rags, if necessary.
2. Check all parts for wear, cracks, or other damage.
3. Replace parts if necessary.

INSTALLATION:

1. Using fingers, screw jamnut (A) loosely onto clevis (B).
2. Using fingers, screw clevis (B) into clevis (C) the recorded number of turns.
3. Holding clevis (C) with adjustable wrench, use 9/16 inch open end wrench to tighten jamnut (A) against clevis (C).



TA169530

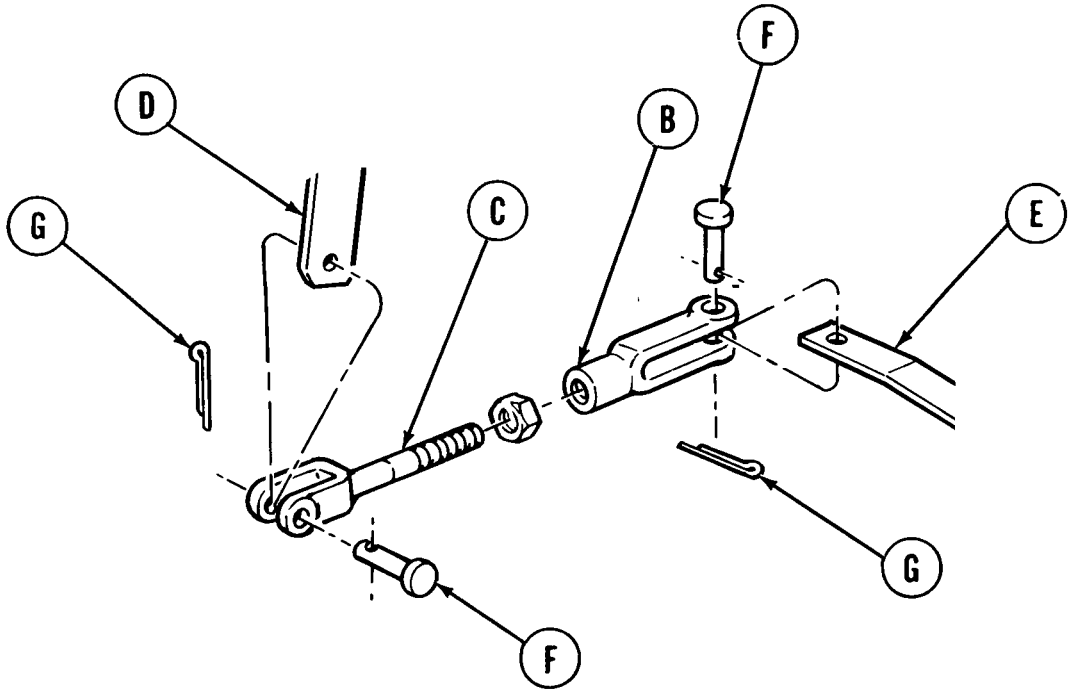
REAR DRAIN VALVE CONTROL LEVER CLEVIS REPLACEMENT (Sheet 4 of 4)

4. Place clevises (B) and (C) in position on control lever (D) and lever arm (E).

5. Insert two straight pins (F) securing clevises (B) and (C) in place.

6. Using pliers, install two new cotter pins (G) in two straight pins (F).

7. Operate rear drain valve to make sure it opens and closes properly (TM 5-5420-226-10).



End of Task

TA169531

REAR DRAIN VALVE CONTROL ROD GUIDES REPLACEMENT (Sheet 1 of 4)

PROCEDURE INDEX

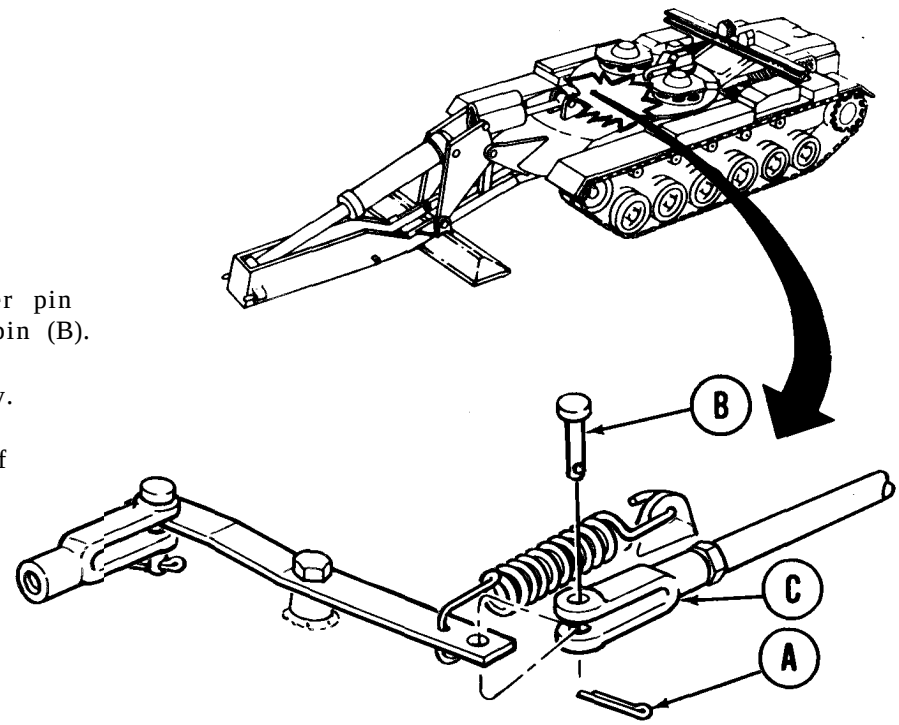
TOOLS: Ratchet with 1/2 in. drive
7/16 in. socket with 1/2 in. drive
8 in. adjustable wrench
9/16 in. combination box and open end wrench
Slip joint pliers

SUPPLIES: Cotter pin (2 required)
Dry cleaning Solvent (item 55, Appendix D)
Paper and Pencil
Clean rags (Item 65, Appendix D)

PRELIMINARY PROCEDURES: Remove rear drain valve rear rods, coupling and universal joint (page 17-51)
Remove floor plate in front of commander's seat (page 17-9)
Remove floor rear access covers (page 17-7)

REMOVAL:

1. Using pliers, remove cotter pin (A) from straight headed pin (B).
2. Throw cotter pin (A) away.
3. Pull straight pin (B) out of holes in clevis (C).



TA169532

Go on to Sheet 2

REAR DRAIN VALVE CONTROL ROD GUIDES REPLACEMENT (Sheet 2 of 4)

4. Using adjustable wrench to hold clevis (D), use 9/16 inch wrench to loosen jamnut (E).

NOTE

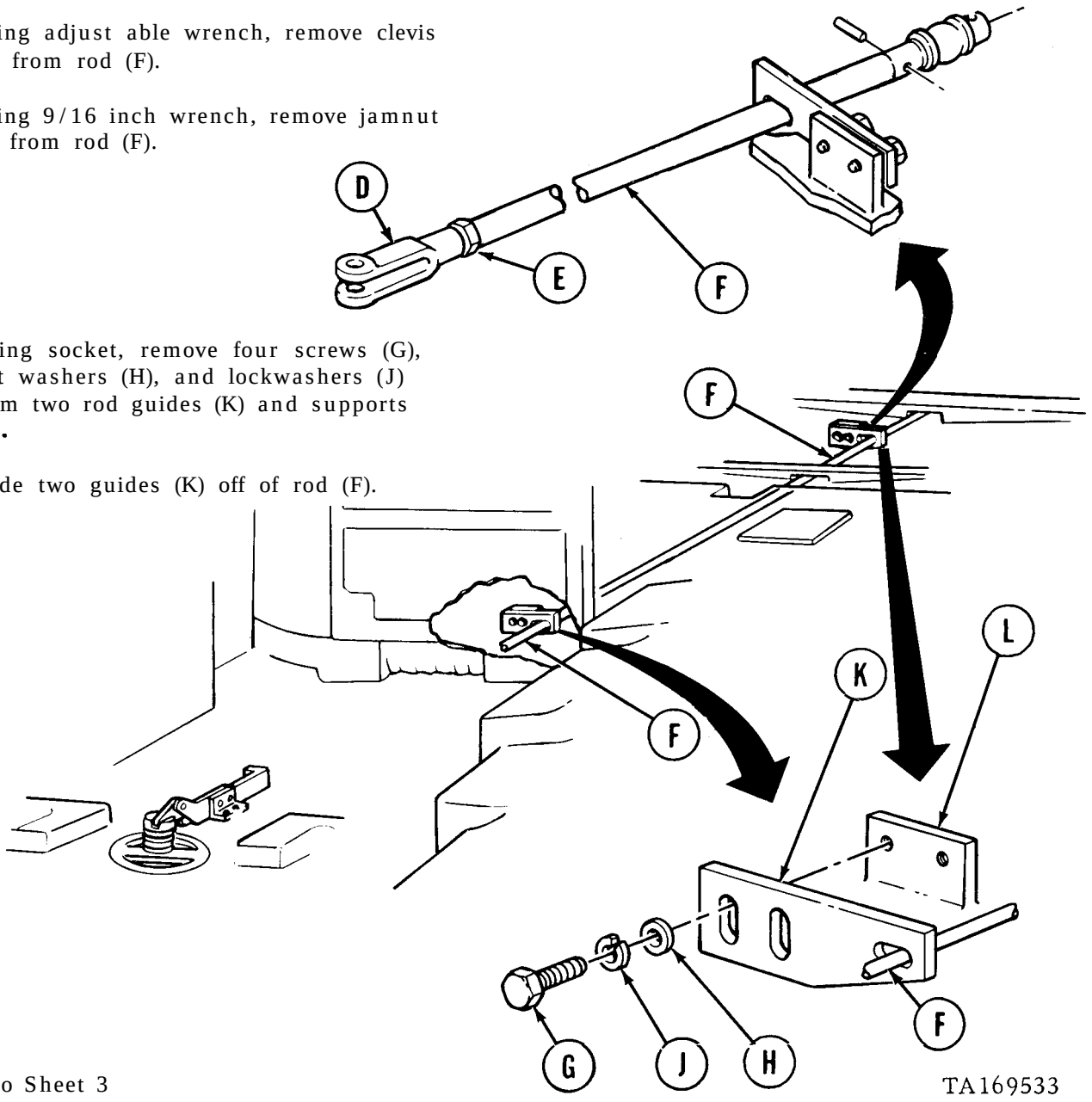
Count the number of turns needed to remove clevis (D) and write down number. The clevis must be installed the same number of turns during installation.

5. Using adjust able wrench, remove clevis (D) from rod (F).

6. Using 9/16 inch wrench, remove jamnut (E) from rod (F).

7. Using socket, remove four screws (G), flat washers (H), and lockwashers (J) from two rod guides (K) and supports (L).

8. Slide two guides (K) off of rod (F).



Go on to Sheet 3

REAR DRAIN VALVE CONTROL ROD GUIDES REPLACEMENT (Sheet 3 of 4)

CLEANING AND INSPECTION:

1. Check parts for accumulation of dirt, grease, oil or grime.

WARNING

Cleaning agent specified is flammable. Use only in well ventilated areas. Keep away from flames, sparks, or heat. Do not smoke while using. Prevent contact with eyes, mouth, and/or skin. Wear rubber gloves when performing cleaning procedures.

2. Clean parts, if necessary, with dry cleaning solvent and rags.

3. Check parts for wear, cracks, or other damage.

4. Replace parts, if necessary.

INSTALLATION:

1. Slide two rod guides (A) on rod (B).

2. Using hands, loosely install two screws (C), lockwashers (D), and flat washers (E) securing each rod guide (A) to supports (F).

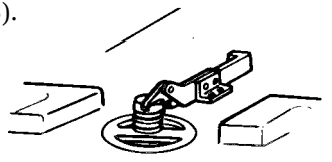
3. Using 9/16 inch wrench, install jamnut (G) on rod (B).

4. Using adjustable wrench, install clevis (H) on rod (B) the same number turns as counted during removal.

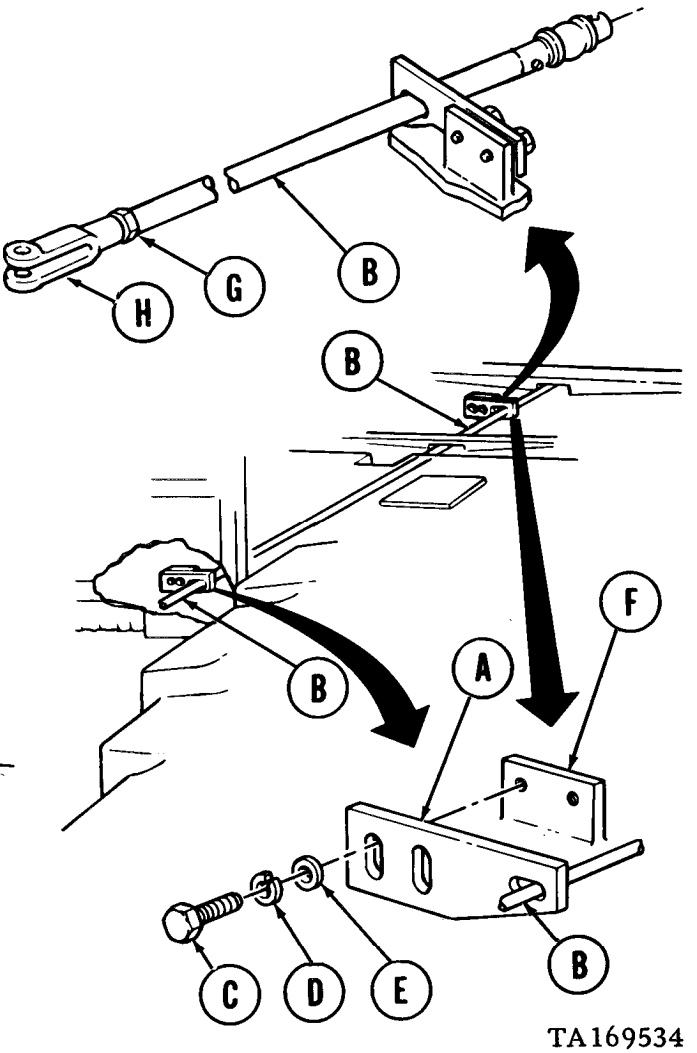
5. Using adjustable wrench to hold clevis, use 9/1 6 inch wrench to tighten jamnut (G).

6. Install rear rods, coupling, and universal joint (page 17-54).

7. Position rear rod guide (A) so that it does not touch rod (B).



8. Using socket, tighten two screws (C) in support (F).



REAR DRAIN VALVE CONTROL ROD GUIDES REPLACEMENT (Sheet 4 of 4)

9. Aline holes in lever arm (J) and clevis (H).

10. Insert straight headed pin (K) through holes in lever arm (J) and clevis (H).

11. Using pliers, install new cotter pin (L) through straight headed pin (K).

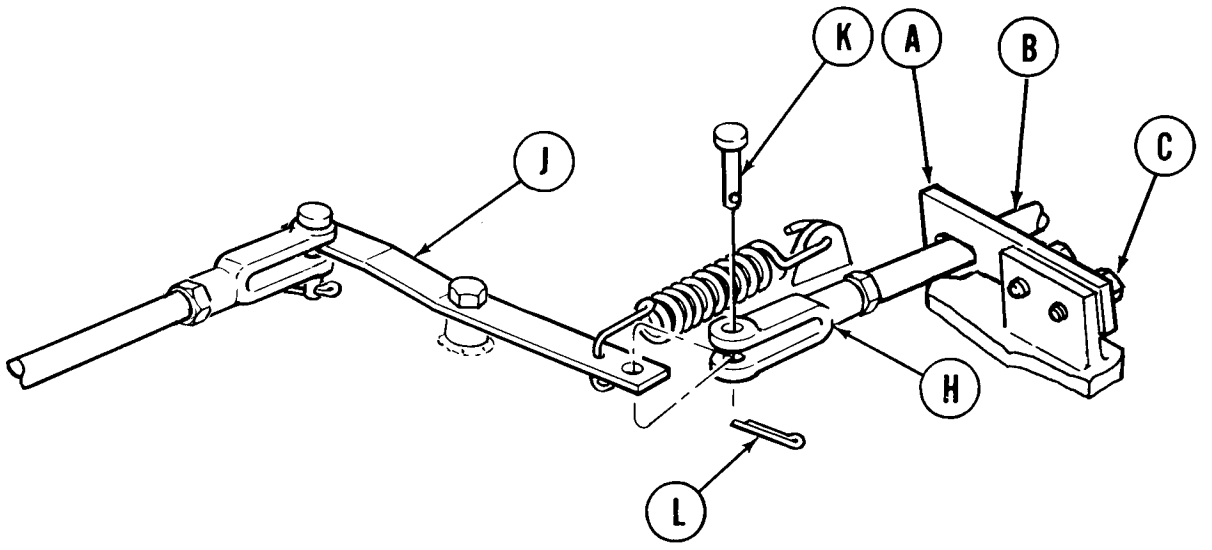
12. Position front rod guide (A) so that it does not touch rod (B).

13. Using socket, tighten two screws (C).

14. Operate rear drain valve lever to make sure rod works smoothly.

15. Install floor rear access cover (page 17-8).

16. Install commander's floor plate (page 17-9).



End of Task

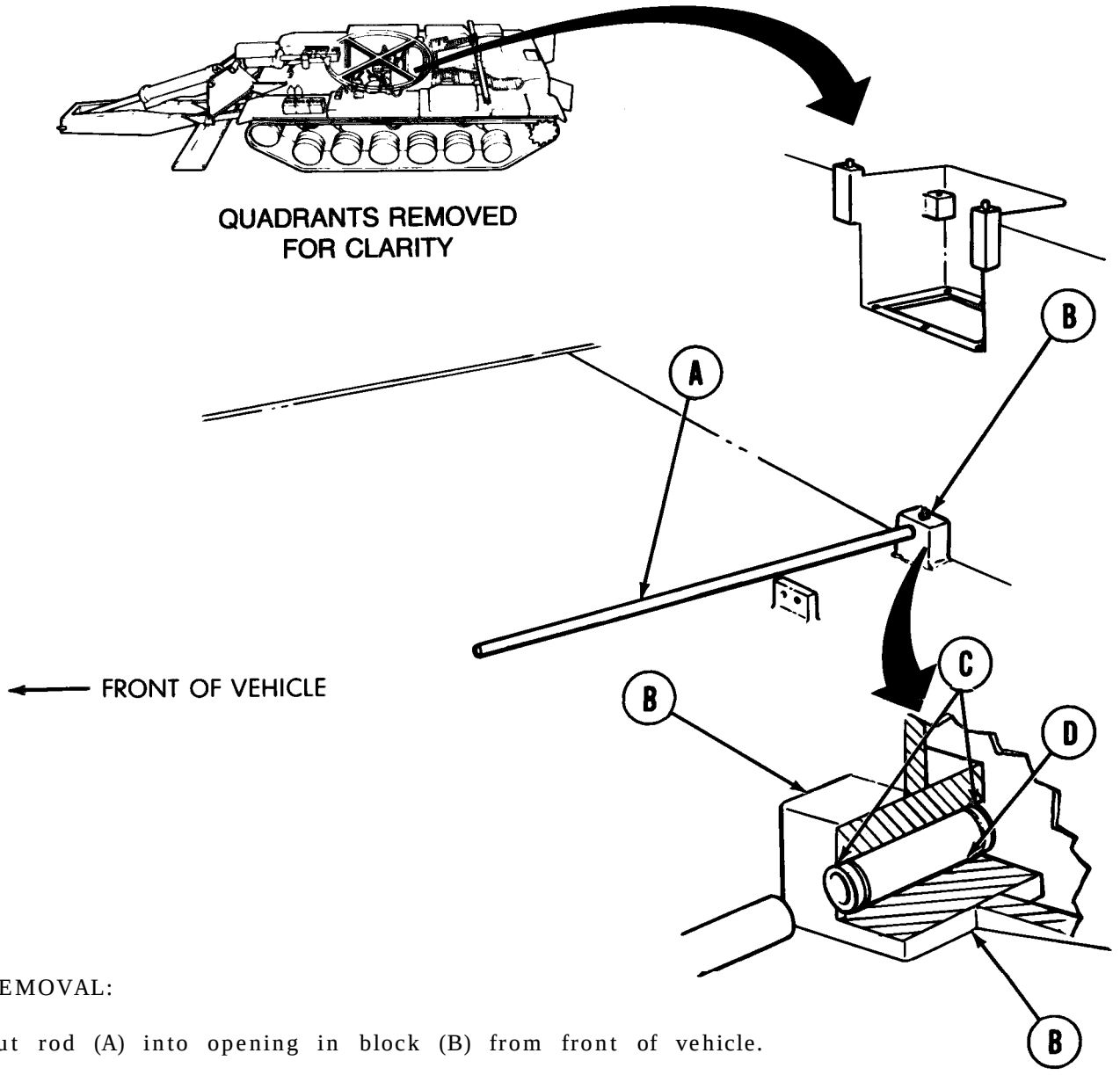
TA169535

REAR DRAIN VALVE CONNECTING ROD BUSHING AND SEALS REPLACEMENT (Sheet 1 of 3)

TOOLS: 3/4 in. dia. metal rod (approx. 28 in. long)
Hammer
Grease gun

PRELIMINARY PROCEDURES: Remove rod guides (page 17-35)
Remove rear drain rear rod (page 17-51)

REFERENCE: LO 5-5420-226-10
TM 5-5420-226-10



REMOVAL:

Put rod (A) into opening in block (B) from front of vehicle.

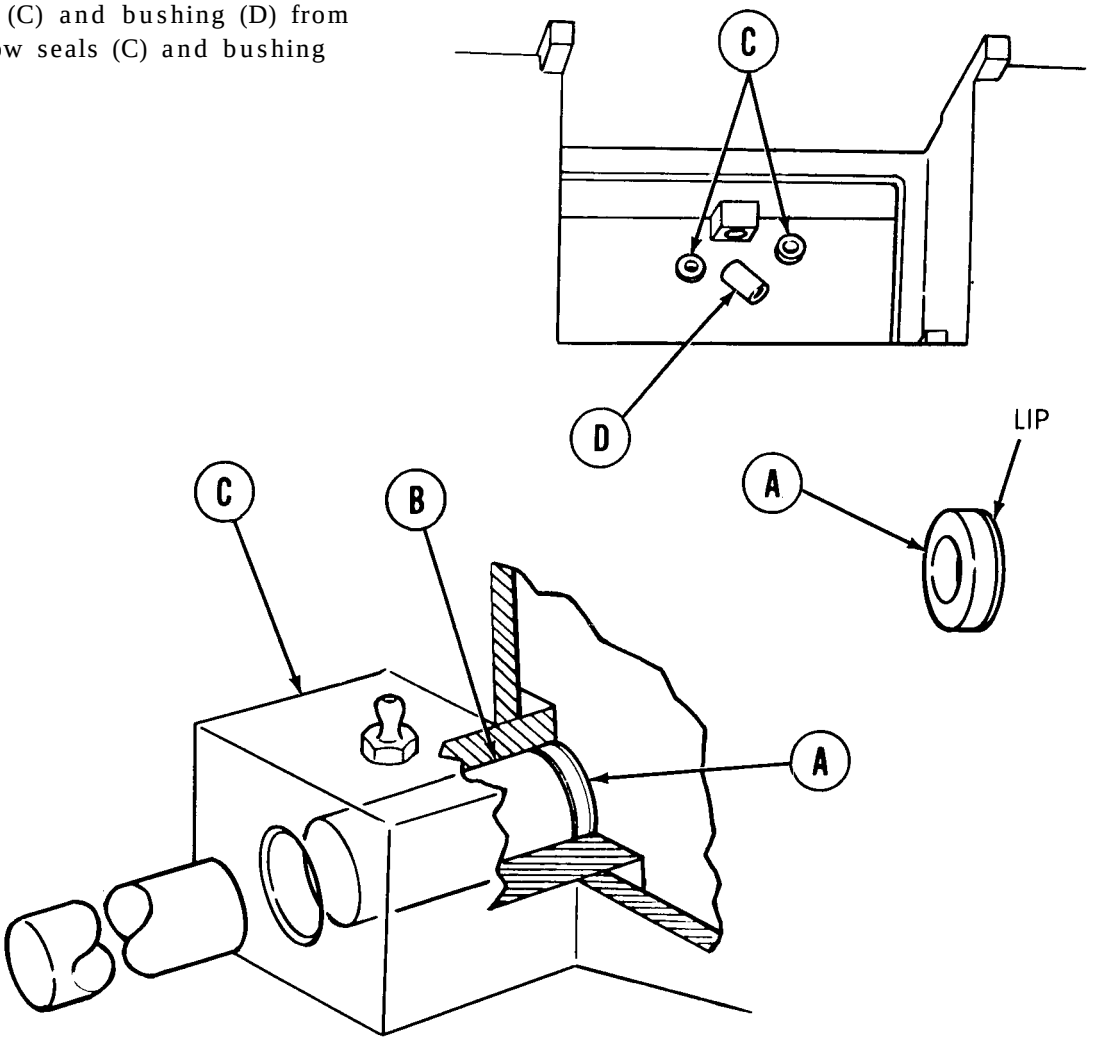
2. Using hammer and rod, drive seals (C) and bushing (D) out of hole in block (B).

Go on to Sheet 2

TA169536

REAR DRAIN VALVE CONNECTING ROD BUSHING AND SEALS REPLACEMENT (Sheet 2 of 3)

3. Remove seals (C) and bushing (D) from vehicle. Throw seals (C) and bushing (D) away.



NOTE

Make sure lip of seal (A) enters hole first.

INSTALLATION:

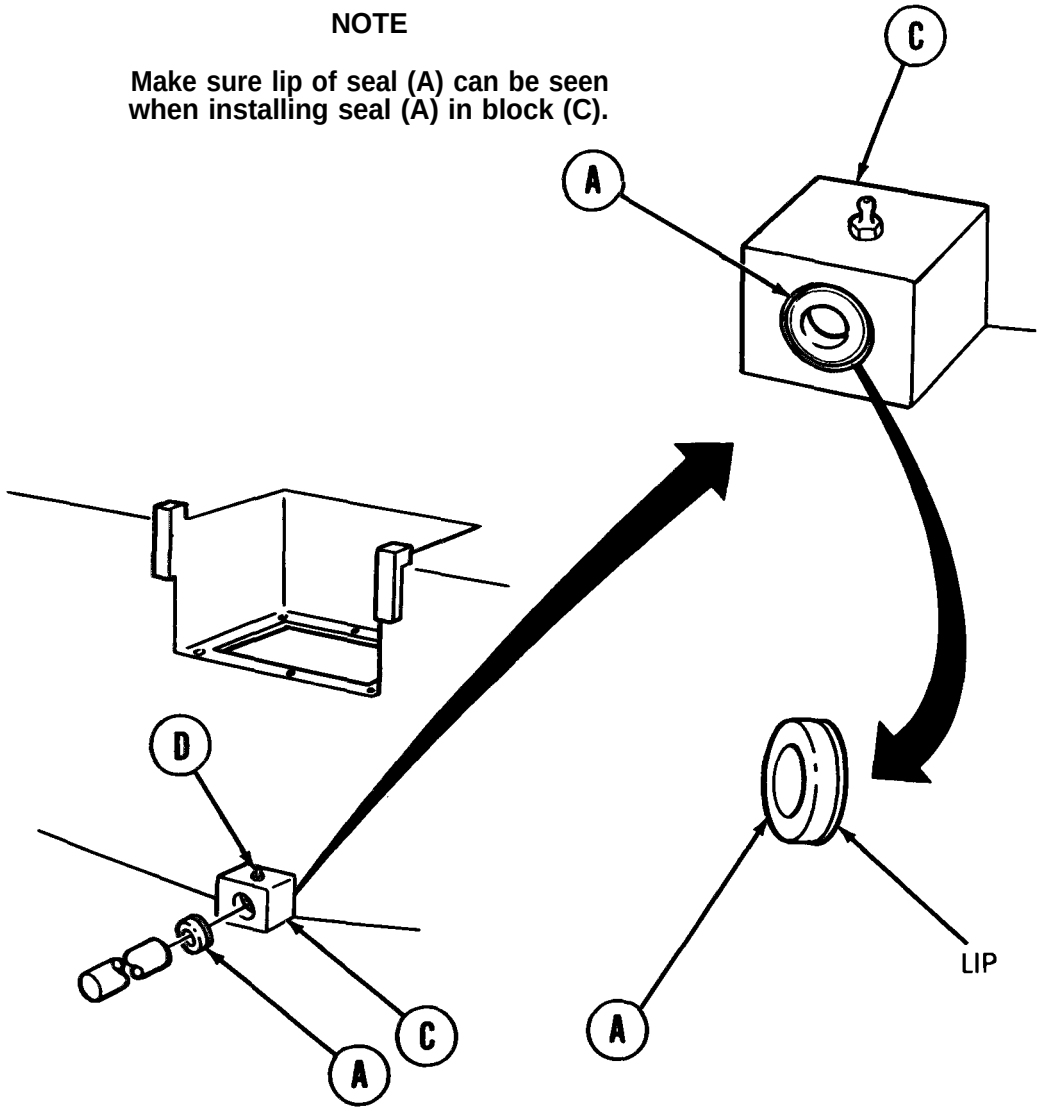
1. Using hammer and rod, drive one seal (A) and bushing (B) in hole in block (C) until lip of seal (A) is flush with block (C).

Go on to Sheet 3

REAR DRAIN VALVE CONNECTING ROD BUSHING AND SEALS REPLACEMENT (Sheet 3 of 3)

NOTE

Make sure lip of seal (A) can be seen when installing seal (A) in block (C).



2. Using hammer and rod, drive seal (A) in block (C) until lip of seal (A) is flush with block (c).
3. Remove rod from vehicle.
4. Install front rod guide (page 17-37).
5. Install rear drain rear rod (page 17-54).
6. Using grease gun, lubricate bushing through grease fitting (D) (LO 5-5420-226-10).
7. Make sure rear drain valve opens and closes smoothly (TM 5-5420-226-10).

End of Task

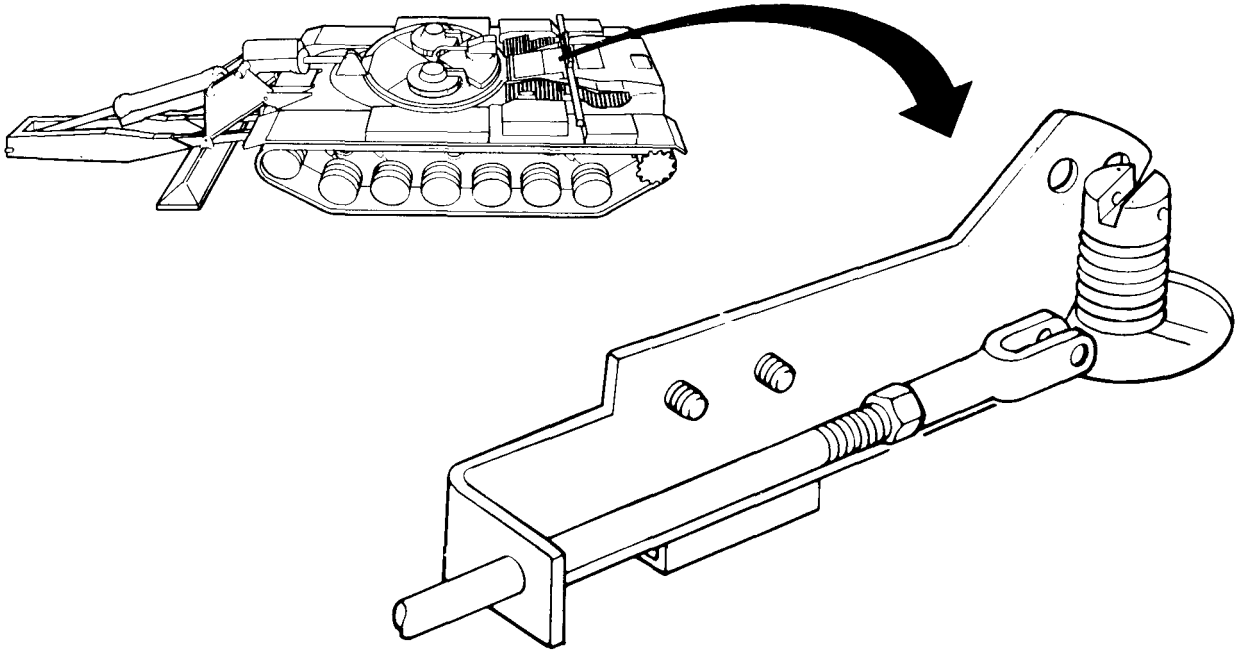
TA169538

REAR DRAIN VALVE ANGLE BRACKETS REPLACEMENT (Sheet 1 of 3)

TOOLS: 9/16 in. open end wrench
Slip joint pliers
1/2 in. drive ratchet
9/16 in. socket with 1/2 in. drive

SUPPLIES: Pencil and paper
Dry cleaning solvent (Item 55, Appendix D)
Clean rags (Item 65, Appendix D)

PRELIMINARY PROCEDURE: Remove rear drain valve actuating lever (page 17-60)

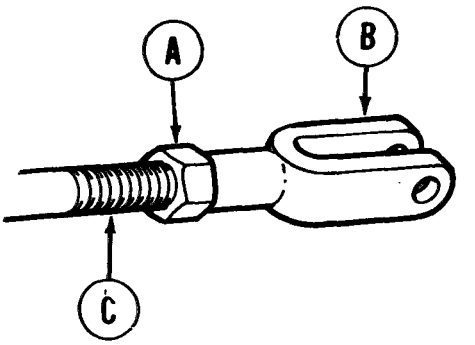


Go on to Sheet 2

TA169539

REAR DRAIN VALVE ANGLE BRACKETS REPLACEMENT (Sheet 2 of 3)

REMOVAL:

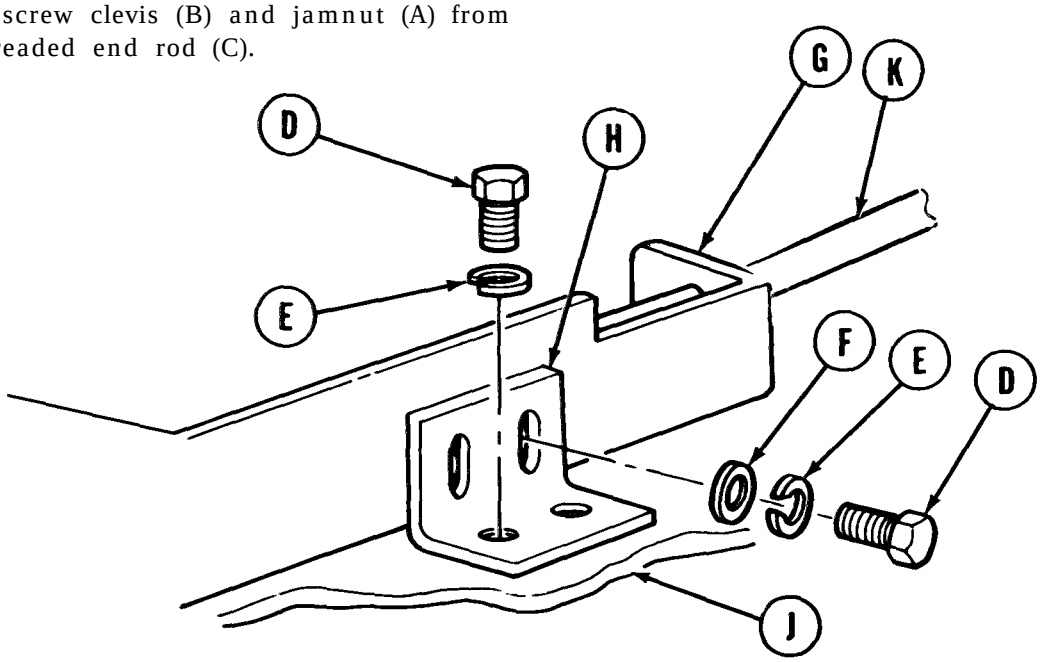


1. Using wrench, loosen jamnut (A) while holding clevis (B) with pliers.

NOTE

Count and write down the number of turns needed to unscrew clevis (B) from rod (c).

2. Unscrew clevis (B) and jamnut (A) from threaded end rod (C).



3. Using socket, remove four screws (D), four lockwashers (E), and two flat washers (F) attaching large angle bracket (G) to small angle bracket (H) and small angle bracket (H) to hull floor (J).

4. Slide large angle bracket (G) off threaded end rod (K).

CLEANING AND INSPECTION:

1. Check all parts for dirt, grease, or oil.

2. Clean parts, if necessary, with dry cleaning solvent and rags.

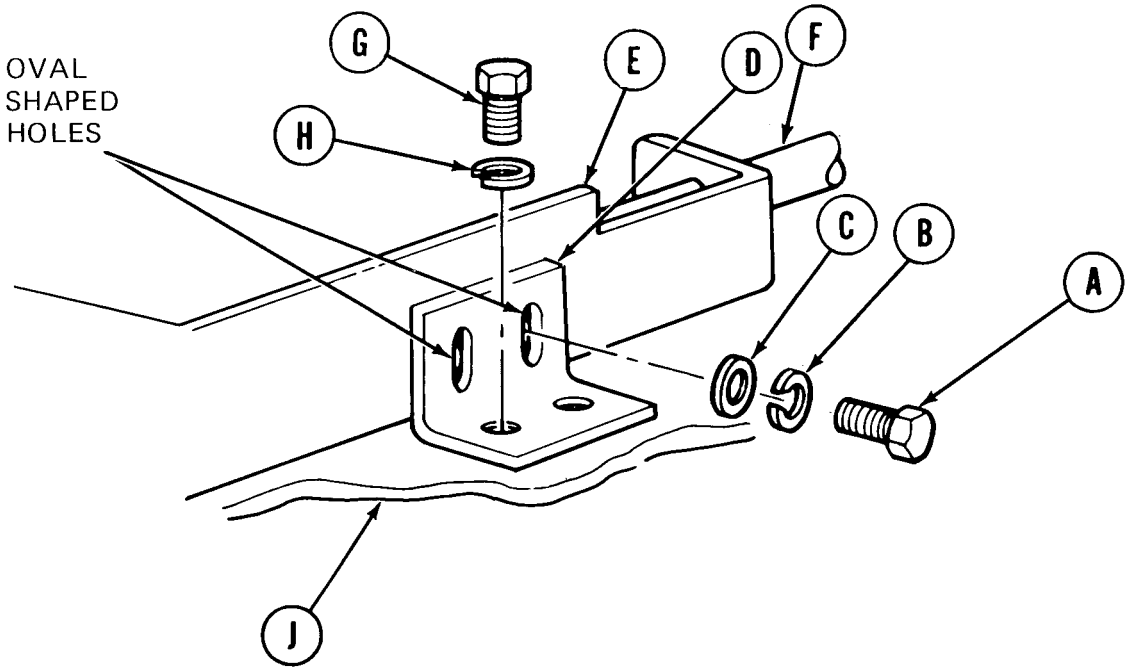
3. Check all parts for wear, cracks, or other damage.

4. Replace parts, if necessary.

Go on to Sheet 3

TA169540

REAR DRAIN VALVE ANGLE BRACKETS REPLACEMENT (Sheet 3 of 3)

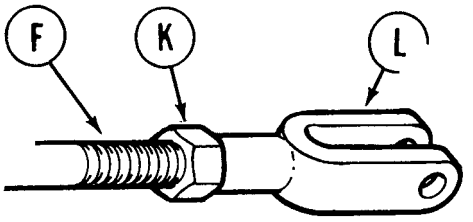


INSTALLATION:

1. Using socket, install two screws (A), lockwashers (B), and flat washers (C) through oval shaped holes in small angle bracket (D) into holes in large angle bracket (E).

2. Slide large angle bracket (E) on threaded end rod (F).

3. Using ratchet and socket, install two screws (G) and lockwashers (H) attaching small angle bracket (D) to hull floor (J).



4. Using wrench, if necessary, screw jamnut (K) all the way on threaded end rod (F).

5. Screw rod end clevis (L) on threaded end rod (F) the number of turns recorded during removal.

6. Using wrench, tighten jamnut (K) against rod end clevis (L) while holding rod end clevis (L) with pliers.

7. Install valve actuating lever (page 17-61).

End of Task

TA169541

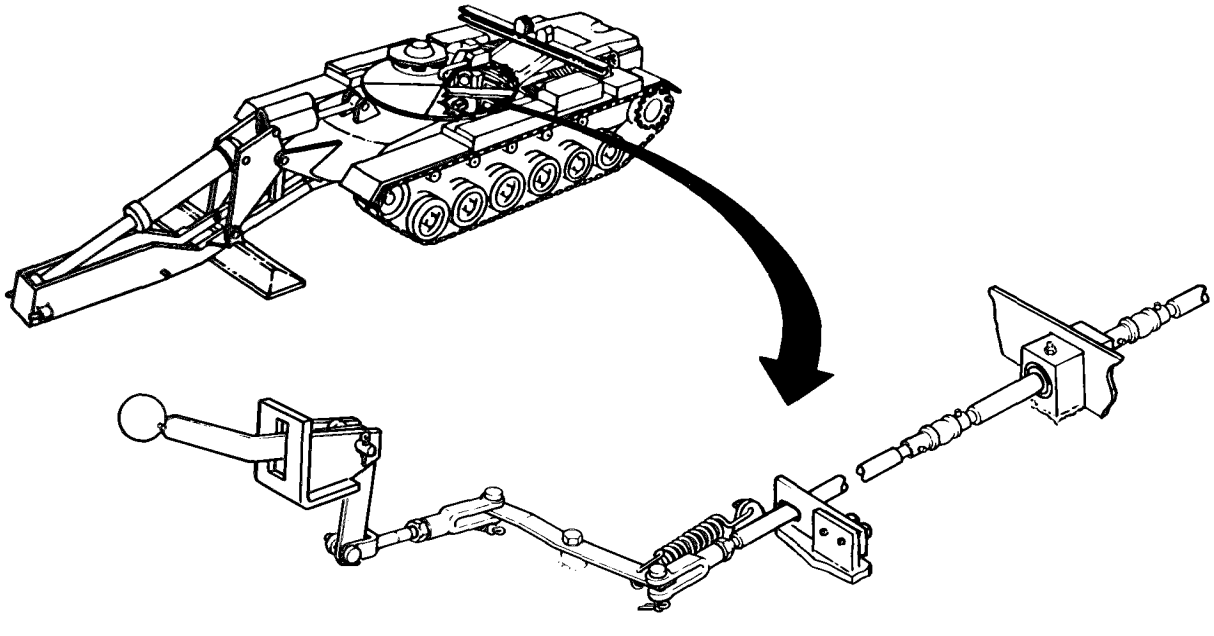
REAR DRAIN VALVE FRONT ROD AND UNIVERSAL JOINT REPLACEMENT (Sheet 1 of 6)

PROCEDURE INDEX

TOOLS: 1/16 in. drive pin punch
8 in. adjustable wrench
Hammer
Needle nose pliers
9/16 in. open end wrench
Ruler

SUPPLIES: Cotter pin (2)
Pencil and paper
Cleaning solvent (Item 55, Appendix D)
Clean rags (Item 65, Appendix D)

PRELIMINARY PROCEDURE: Remove commander's floor plate (page 17-9)
Remove powerplant (page 5-2)



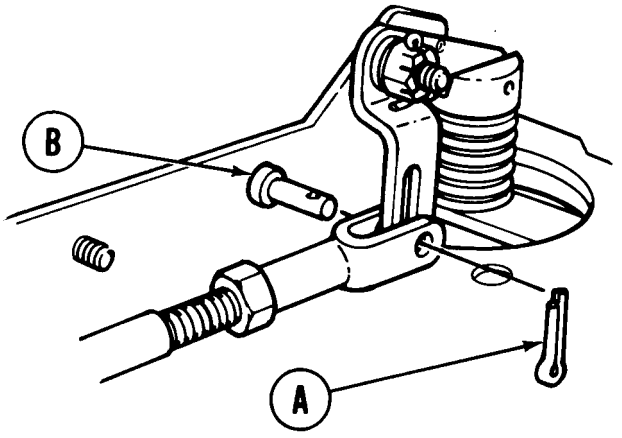
Go on to Sheet 2

TA169542

REAR DRAIN VALVE FRONT ROD AND UNIVERSAL JOINT REPLACEMENT (Sheet 2 of 6)

REMOVAL:

1. In engine compartment, use pliers to remove cotter pin (A) from straight pin (B).
2. Throw cotter pin (A) away.
3. Using fingers, remove straight pin (B).

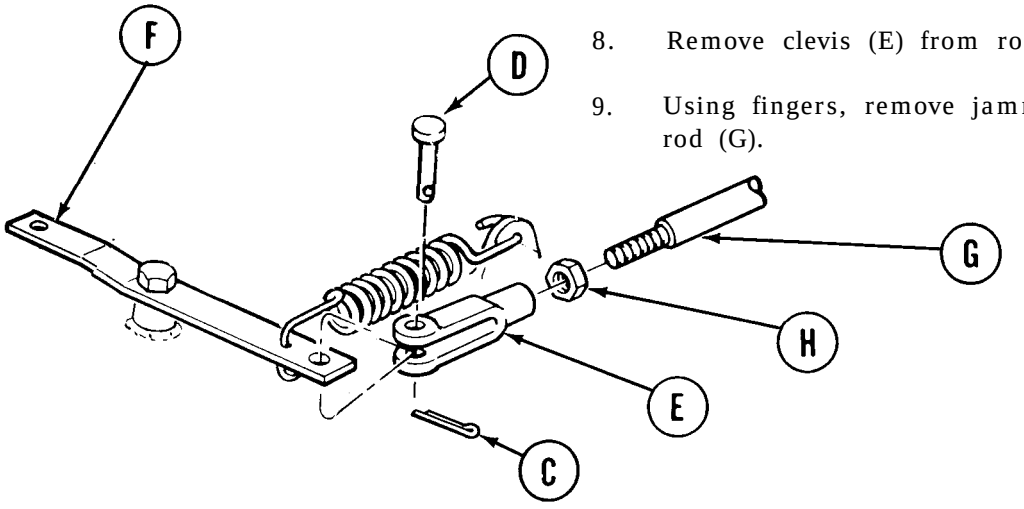


4. Reaching through access in front of commander's seat, use pliers to remove cotter pin (C) from straight pin (D).
5. Using fingers, remove straight pin (D) securing clevis (E) to lever arm (F).
6. Holding clevis (E) with adjustable wrench, use open end wrench to loosen jamnut (H).

NOTE

Before removing clevis from rod, use ruler to measure length of threads exposed Write this measurement down for use during installation.

7. Push rod (G) toward rear of vehicle.
8. Remove clevis (E) from rod (G).
9. Using fingers, remove jamnut (H) from rod (G).



Go on to Sheet 3

TA169543

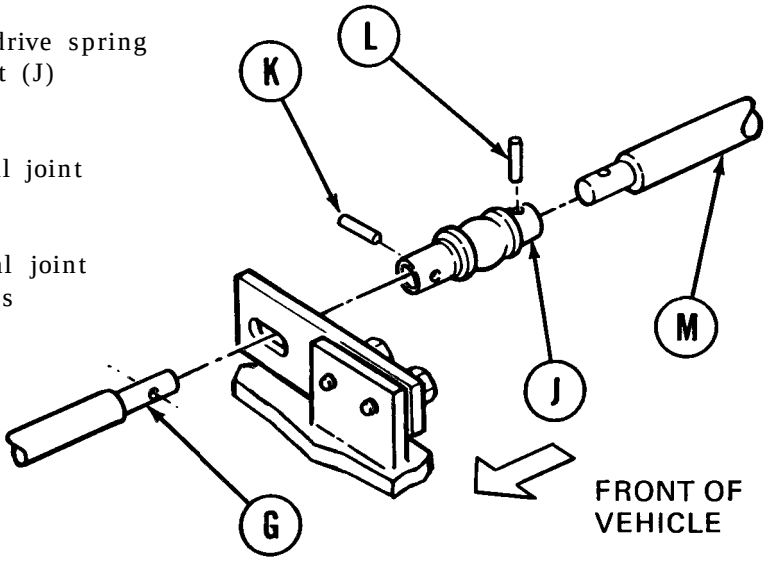
REAR DRAIN VALVE FRONT ROD AND UNIVERSAL JOINT REPLACEMENT (Sheet 3 of 6)

10. Reaching through access in front of commander's seat, use hands to pull rod (G) to front of vehicle and turn universal joint (J) until spring pin (K) points straight up. Then push rod (G) to rear of vehicle.

11. Using hammer and punch, drive spring pin (K) out of universal joint (J) and rod (G).

12. Pull rod (G) out of universal joint (J).

13. Using fingers, turn universal joint (J) until spring pin (L) points straight up.



14. Using hammer and punch, drive spring pin (L) out of universal joint (J) and connecting rod (M).

15. Remove universal joint (J) from connecting rod (M).

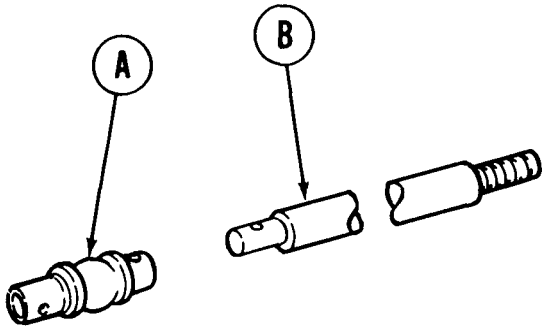
16. Remove rod (G) from vehicle by pulling up through access plate.

Go on to Sheet 4

TA169544

REAR DRAIN VALVE FRONT ROD AND UNIVERSAL JOINT REPLACEMENT (Sheet 4 of 6)

CLEANING AND INSPECTION:



1. Check parts for accumulated dirt, grease, oil, or grime.

WARNING

Cleaning agent specified is flammable. Use only in well ventilated areas. Keep away from flames, sparks, or heat. Do not smoke while using. Prevent contact with eyes, mouth, and/or skin. Wear rubber gloves when performing cleaning procedures.

2. Clean parts if necessary, with dry cleaning solvent and rags.

3. Check universal joint (A) for tears in rubber seal, wear, or other defects.

4. Replace universal joint (A) if necessary.

5. Check rear drain valve connecting rod (B) for wear or other defects.

6. Replace rear drain valve connecting rod (B), if necessary.

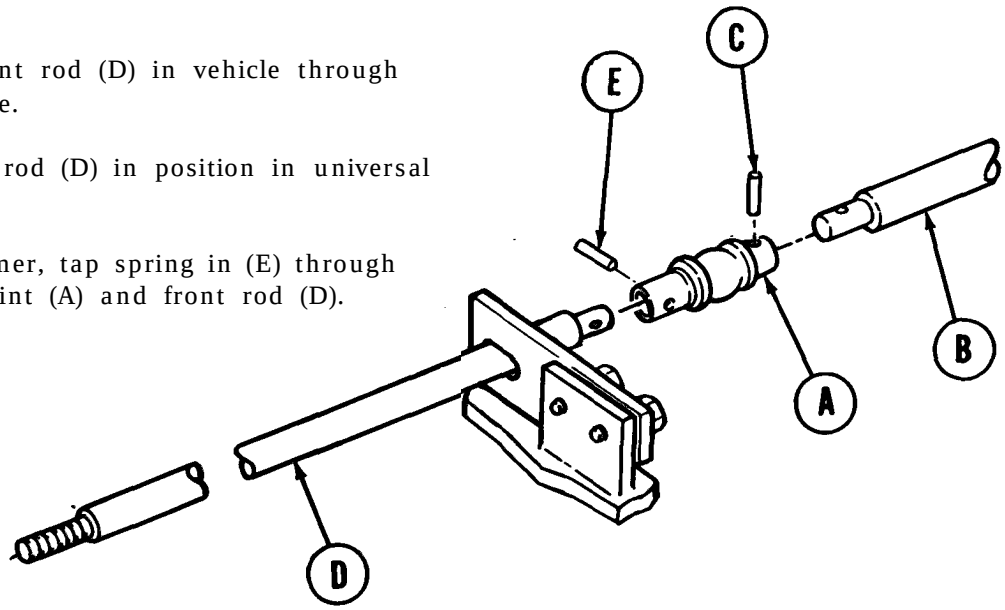
Go on to Sheet 5

TA169545

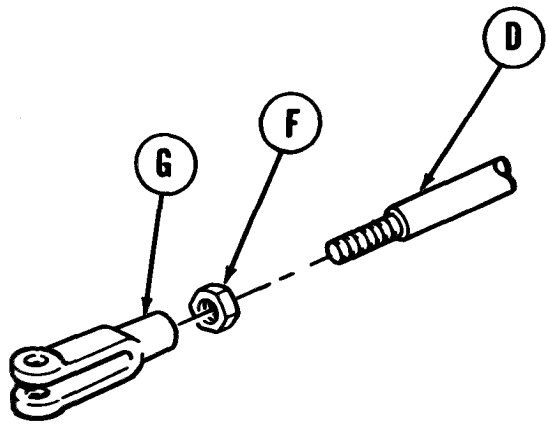
REAR DRAIN VALVE FRONT ROD AND UNIVERSAL JOINT REPLACEMENT (Sheet 5 of 6)

INSTALLATION:

1. Put universal joint (A) in position on connecting rod (B).
2. Using hammer, tap spring pin (C) through universal joint (A) and connecting rod (B).
3. Position front rod (D) in vehicle through access plate.
4. Place front rod (D) in position in universal joint (A).
5. Using hammer, tap spring in (E) through universal joint (A) and front rod (D).



6. Using fingers, install jamnut (F) loosely on front rod (D).
7. Using fingers, screw clevis (G) loosely onto front rod (D) until length of exposed threaded matches length recorded during removal.
8. Holding clevis (G) with adjustable wrench, use open end wrench to tighten jamnut (F) against clevis (G).

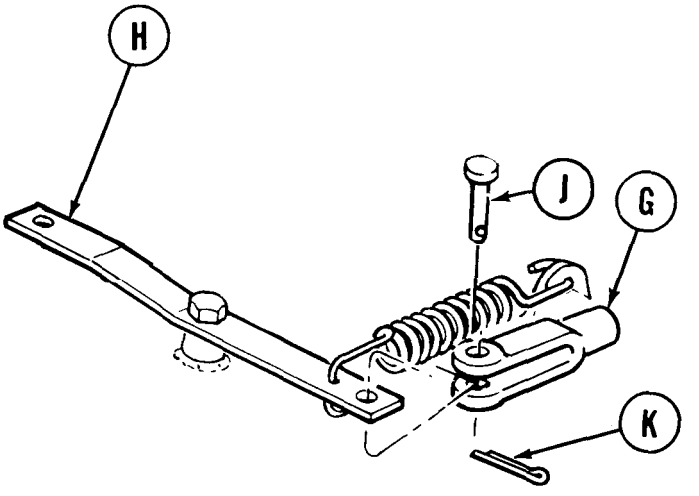


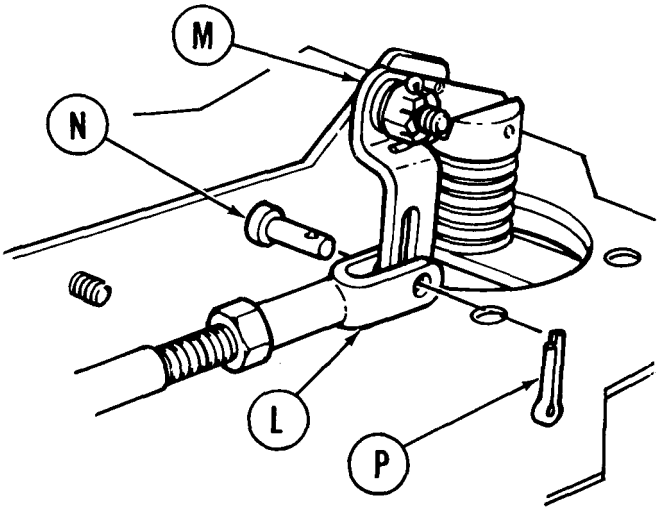
Go on to Sheet 6

TA169546

REAR DRAIN VALVE FRONT ROD AND UNIVERSAL JOINT REPLACEMENT (Sheet 6 of 6)

9. Place clevis (G) in position on lever arm (H).
10. Place straight pin (J) through clevis (G) and lever arm (H).
11. Using pliers, install new cotter pin (K) in straight pin (J).





12. Place engine compartment clevis (L) in position on lever (M).
13. Using fingers, insert straight pin (N) through clevis (L) and lever (M).
14. Using pliers, install new cotter pin (P) in straight pin (N).
15. Operate rear drain valve to make sure it opens and closes correctly.

16. Install commander's floor plate (page 17-9).
17. Install powerplant (page 5-14).

End of Task

TA169547

REAR DRAIN VALVE REAR RODS, COUPLING, AND UNIVERSAL JOINT REPLACEMENT (Sheet 1 of 7)

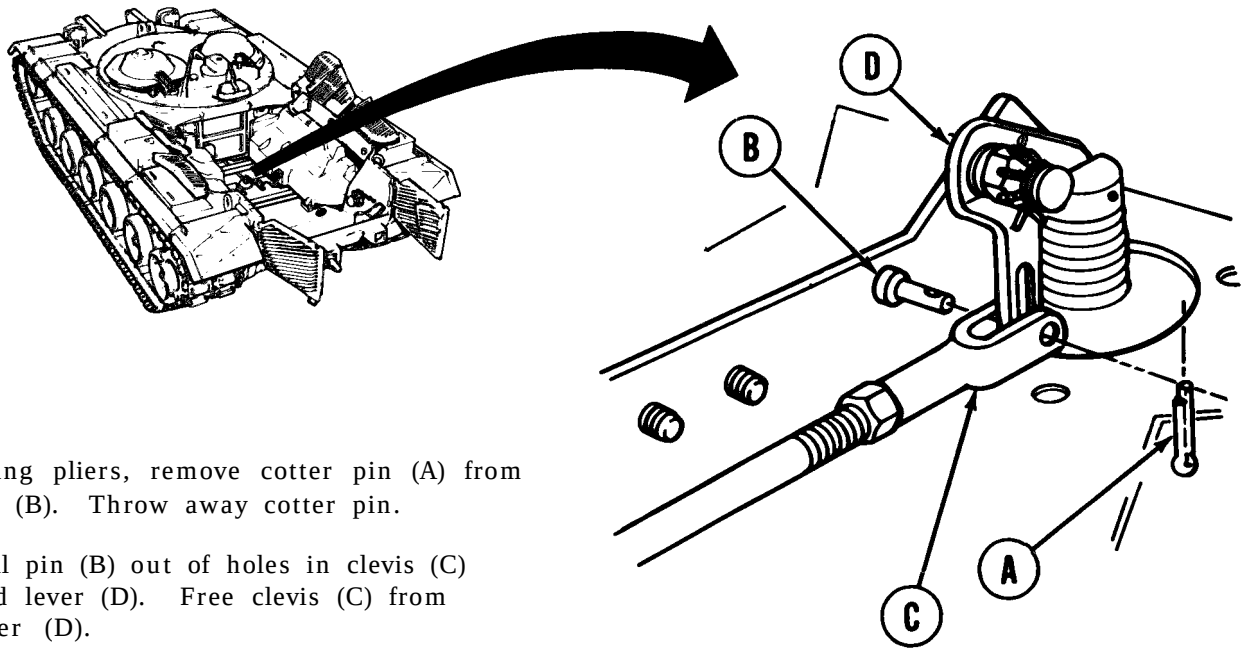
PROCEDURE INDEX

TOOLS:
- 9/16 in. open end wrench (2 required)
- Ruler
- Slipjoint pliers
- 9/16 in. socket with 1/2 in. drive
- l/16 in. drive pin punch
- Hammer
- Vise
- Ratchet with 1/2in. drive

SUPPLIES:
- Cotter pin
- Dry cleaning solvent (Item 55, Appendix D)
- Pencil and paper
- Clean rags (Item 65, Appendix D)

PRELIMINARY PROCEDURES:
- Remove commander's floor plate (page 17-9).
- Remove floor rear access cover (page 17-7).
- Remove powerplant (page 5-2).
- Remove slipring box access cover (page 17-19).

REMOVAL:



1. Using pliers, remove cotter pin (A) from pin (B). Throw away cotter pin.
2. Pull pin (B) out of holes in clevis (C) and lever (D). Free clevis (C) from lever (D).

Go on to Sheet 2

TA169548

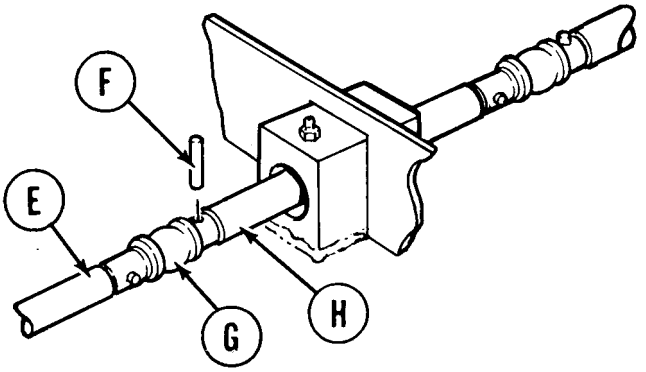
REAR DRAIN VALVE REAR RODS, COUPLING, AND UNIVERSAL JOINT REPLACEMENT (Sheet 2 of 7)

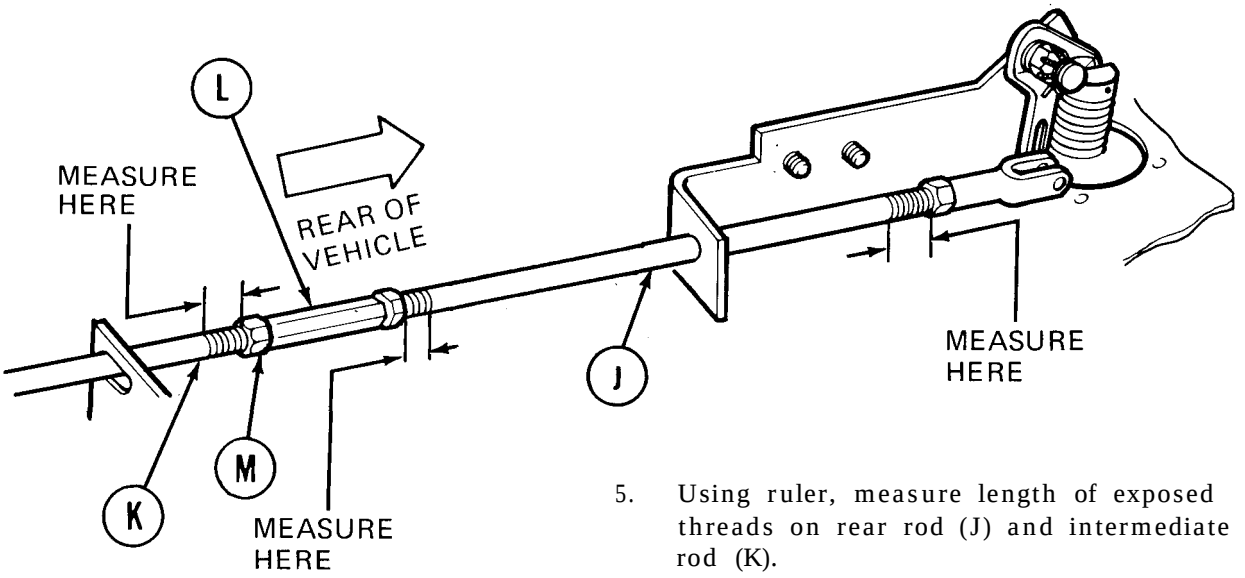
NOTE

It may be necessary to turn rod (E) to get to spring pin (F).

3. Using hammer and punch, drive spring pin (F) out of universal joint (G) and connecting rod (H).

4. Pull rear rod (J) toward rear of vehicle.





5. Using ruler, measure length of exposed threads on rear rod (J) and intermediate rod (K).

6. Using pencil and paper, write down measurements for use during installation.

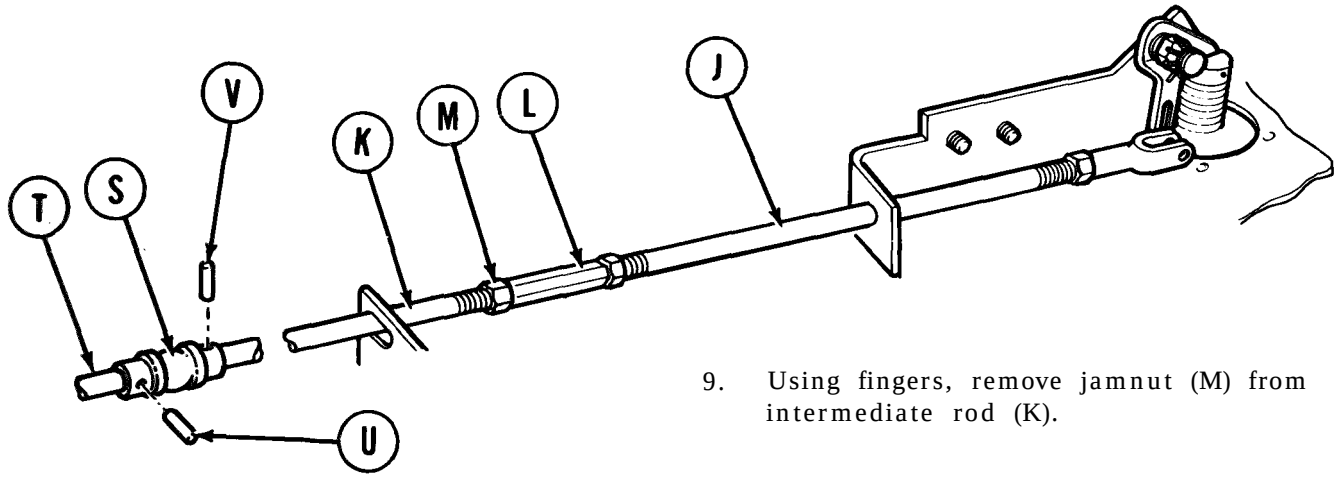
7. Holding coupling (L) with wrench, use second wrench to loosen jamnut (M).

8. Holding coupling (L) with wrench, use pliers to unscrew intermediate rod (K) from coupling (L).

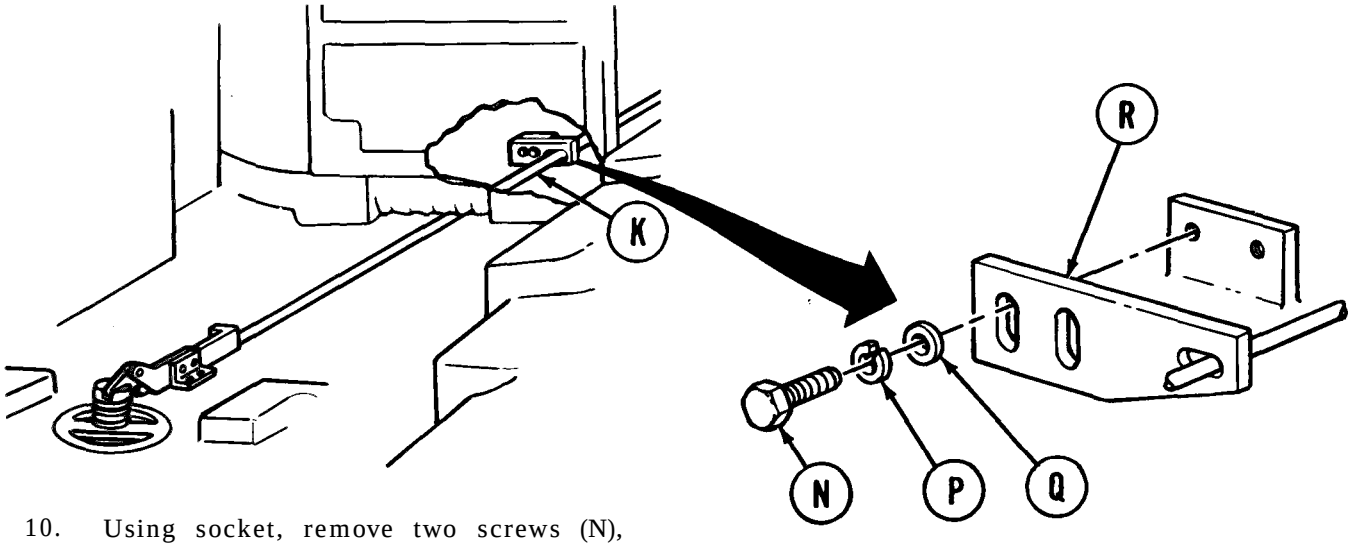
Go on to Sheet 3

TA169549

REAR DRAIN VALVE REAR RODS, COUPLING, AND UNIVERSAL JOINT REPLACEMENT (Sheet 3 of 7)



9. Using fingers, remove jamnut (M) from intermediate rod (K).



10. Using socket, remove two screws (N), lockwashers (P), and flat washers (Q) from rod guide (R).

11. Slide guide (R) off rod (K).

12. Pull intermediate rod (K), universal joint (S), and connecting rod (T) out of vehicle.

13. Using hammer and punch, remove spring pins (U and V).

14. Using hands, remove intermediate rod (K) and connecting rod (T) from universal joint (S).

Go on to Sheet 4

TA169550

REAR DRAIN VALVE REAR RODS, COUPLING, AND UNIVERSAL JOINT REPLACEMENT (Sheet 4 of 7)

15. Using wrench to hold coupling (L), use second wrench to loosen jamnut (W).

16. Holding coupling (L) with wrench, use pliers to unscrew rear rod (J) from coupling (L).

17. Using fingers, remove jamnut (W) from rear rod.

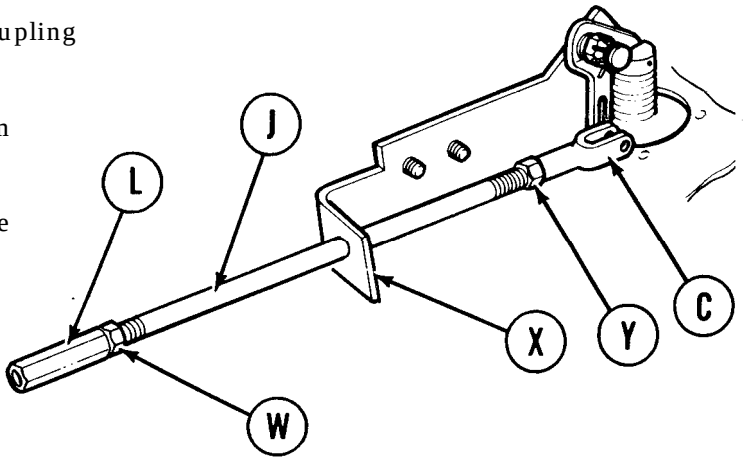
18. Pull rear rod (J) toward rear of vehicle and out of mounting bracket (X).

19. Clamp rear rod (J) in vise and using wrench, loosen jamnut (Y).

20. With rear rod (J) clamped in vise, use pliers to remove clevis (C).

21. Remove jamnut (Y) from rear rod (J).

22. Remove rear rod (J) from vise.



CLEANING AND INSPECTION:

1. Check parts for accumulation of dirt, grease, oil or grime.

WARNING

Cleaning agent specified is flammable. Use only in well ventilated areas. Keep away from flames, sparks, or heat. Do not smoke while using. Prevent contact with eyes, mouth, and/or skin. Wear rubber gloves when performing cleaning procedures.

2. Clean parts, if necessary, with dry cleaning solvent and rags.

3. Check parts for wear, cracks or other damage.

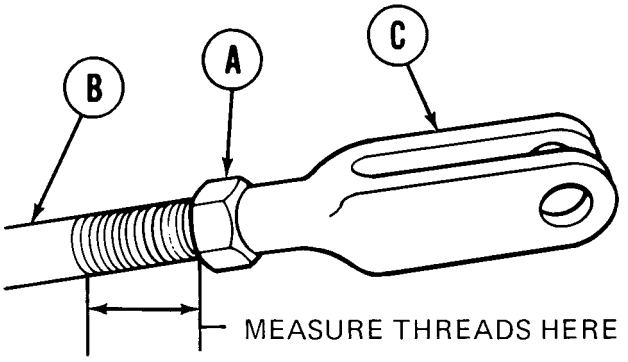
4. Replace parts, if necessary.

INSTALLATION:

1. Using fingers, screw jamnut (A) loosely onto rear rod (B).

2. Clamp rear rod (B) in vise and using pliers, install clevis (C) on rear rod (B).

3. With rear rod (B) clamped in vise, use wrench to tighten jamnut. (A) against clevis (C) so original length of threads is visible.



Go on to Sheet 5

TA169551

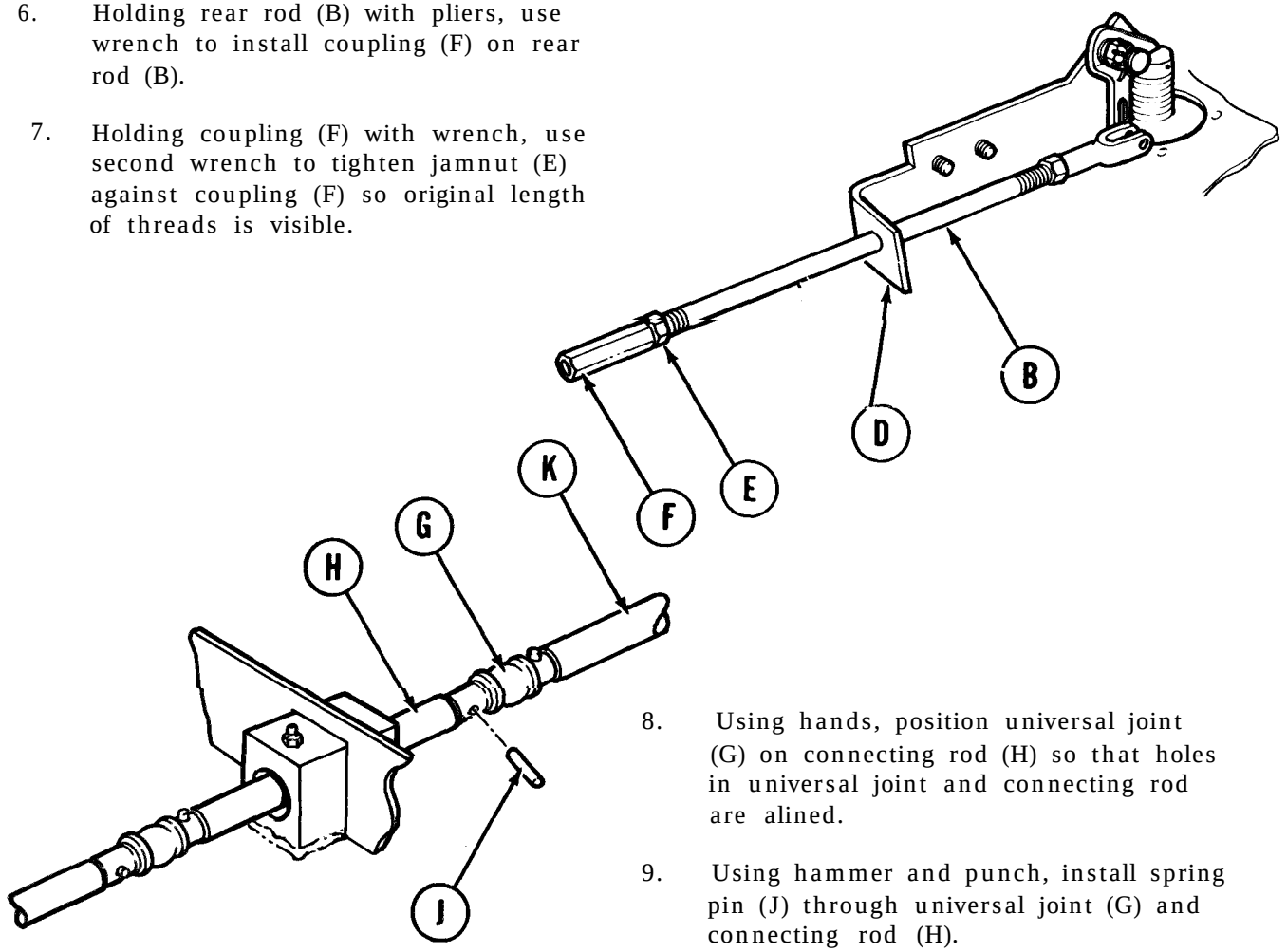
REAR DRAIN VALVE REAR RODS,COUPLING, AND UNIVERSAL JOINT REPLACEMENT
(Sheet 5 of 7)

4. Remove rear rod (B) from vise and insert it through mounting bracket (D), threaded end first, toward front of vehicle.

5. Using fingers, screw jamnut (E) loosely onto rear rod (B).

6. Holding rear rod (B) with pliers, use wrench to install coupling (F) on rear rod (B).

7. Holding coupling (F) with wrench, use second wrench to tighten jamnut (E) against coupling (F) so original length of threads is visible.



8. Using hands, position universal joint (G) on connecting rod (H) so that holes in universal joint and connecting rod are alined.

9. Using hammer and punch, install spring pin (J) through universal joint (G) and connecting rod (H).

10. Position intermediate rod (K) into universal joint (G) so that holes in universal joint and intermediate rod are alined.

Go on to Sheet 6

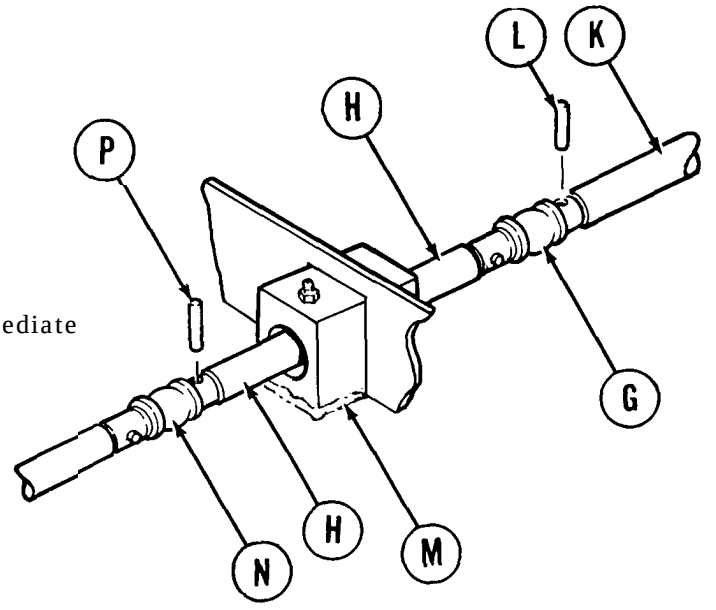
TA169552

REAR DRAIN VALVE REAR RODS, COUPLING, AND UNIVERSAL JOINT REPLACEMENT (Sheet 6 of 7)

11. Using hammer and punch, install pin (L) through universal joint (G) and intermediate rod (K).

NOTE

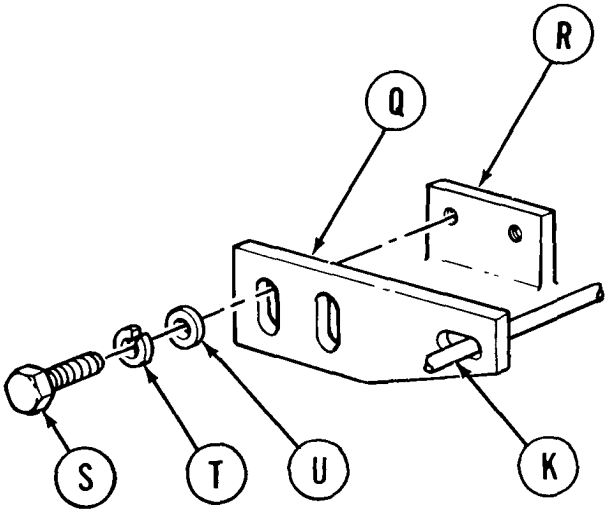
It may be necessary to reach into slip ring box opening to install connecting rod (H) through block (M).



12. Using hands, install assembled universal joint (G), connecting rod (H) and intermediate rod (K) in position so that connecting rod (H) is through block (M).

13. Using hands, position connecting rod (H) into universal joint (N) so that holes in universal joint and connecting rod are alined.

14. Using hammer and punch, install spring pin (P) through universal joint (N) and connecting rod (H).



15. Position guide (Q) on intermediate rod (K) and to hull bracket (R).

16. Using socket, install two screws (S), lockwashers (T), and flat washers (U) securing guide (Q) to hull bracket (R).

Go on to Sheet 7

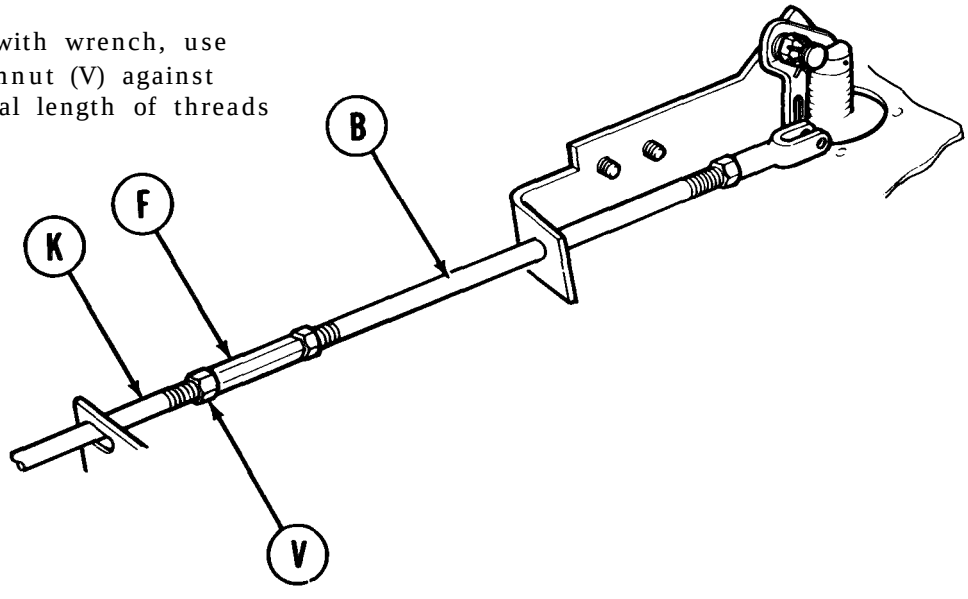
TA169553

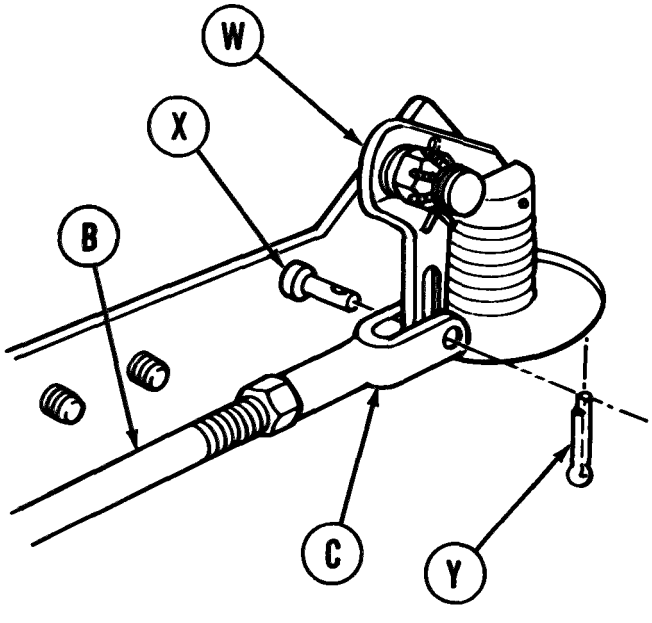
REAR DRAIN VALVE REAR RODS, COUPLING, AND UNIVERSAL JOINT REPLACEMENT (Sheet 7 of 7)

17. Using fingers, install jamnut (V) loosely on intermediate rod (K).

18. Holding coupling (F) with wrench, use pliers to install intermediate rod (K) in coupling (F).

19. Holding coupling (F) with wrench, use wrench to tighten jamnut (V) against coupling (F) so original length of threads is visible.





20. Pull rear rod (B) toward rear of vehicle to line up holes in clevis (C) and lever (W).

21. Install pin (X) through holes in clevis (C) and lever (W).

22. Using pliers, install new cotter pin (Y) in pin (X).

23. Operate rear drain valve to make sure it opens and closes smoothly (TM 5-5420-226-10).

24. Install powerplant (page 5-14).

25. Install floor rear access covers (page 17-8).

26. Install commander's floor plate (page 17-9).

27. Install slipring box access cover (page 17-19).

End of Task

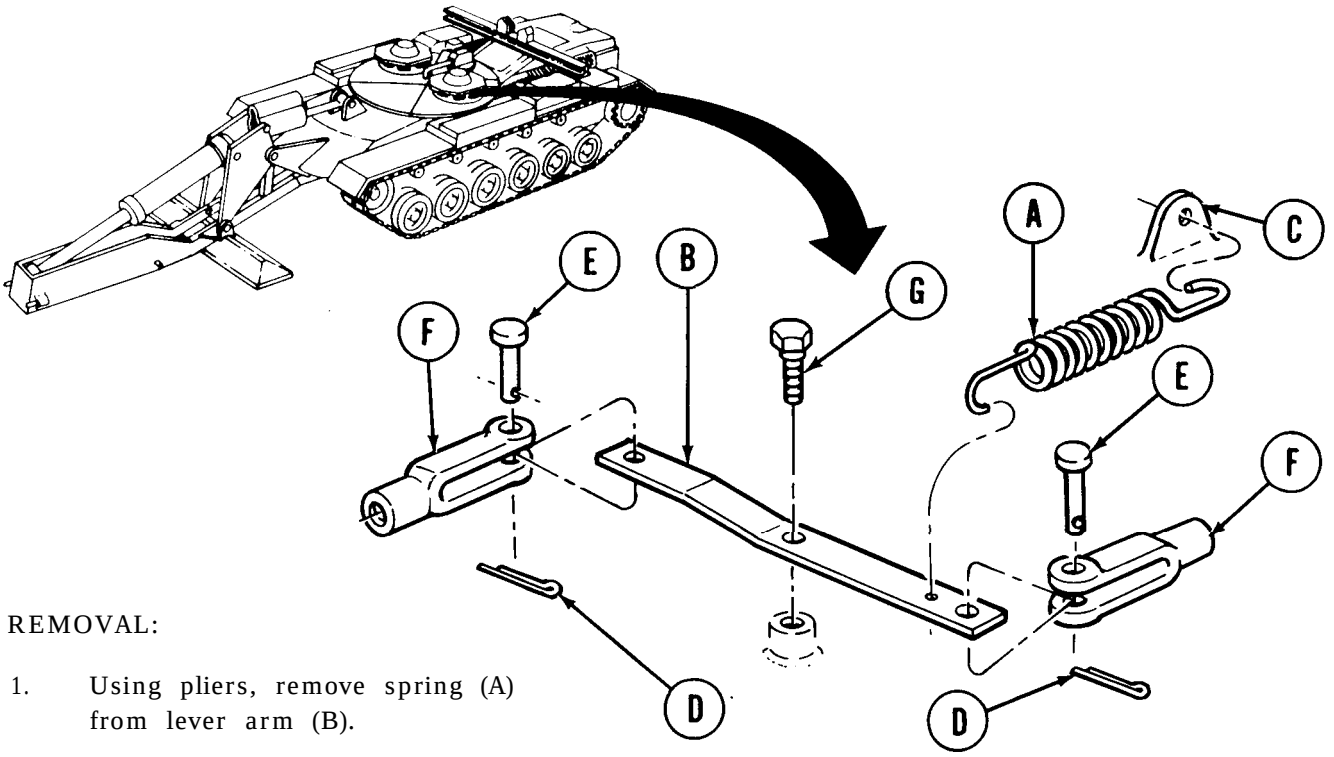
TA169554

REAR DRAIN VALVE CONTROL ROD LEVER ARM REPLACEMENT (Sheet 1 of 2)

TOOLS: 9/16 in. open end wrench
Needle nose pliers

SUPPLIES: Cotter pins (2)

PRELIMINARY PROCEDURE: Remove commander's floor plate (page 17-9)



REMOVAL:

1. Using pliers, remove spring (A) from lever arm (B).
2. Using fingers, remove spring (A) from ear (C).
3. Using pliers, remove two cotter pins (D) from two straight pins (E).
4. Throw away cotter pins (D).
5. Remove two straight pins (E) securing two clevises (F) to lever arm (B).
6. Using wrench, remove bolt (G) securing lever arm (B) to hull.
7. Remove lever arm (B).

Go on to Sheet 2

TA169555

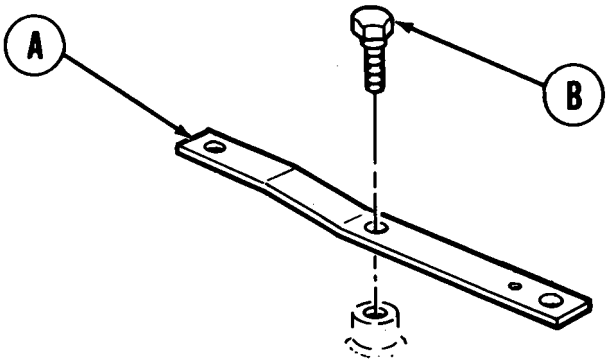
REAR DRAIN VALVE CONTROL ROD LEVER ARM REPLACEMENT (Sheet 2 of 2)

INSPECTION:

1. Check all parts for wear and damage.
2. Check spring for stretching.
3. Replace parts if necessary.

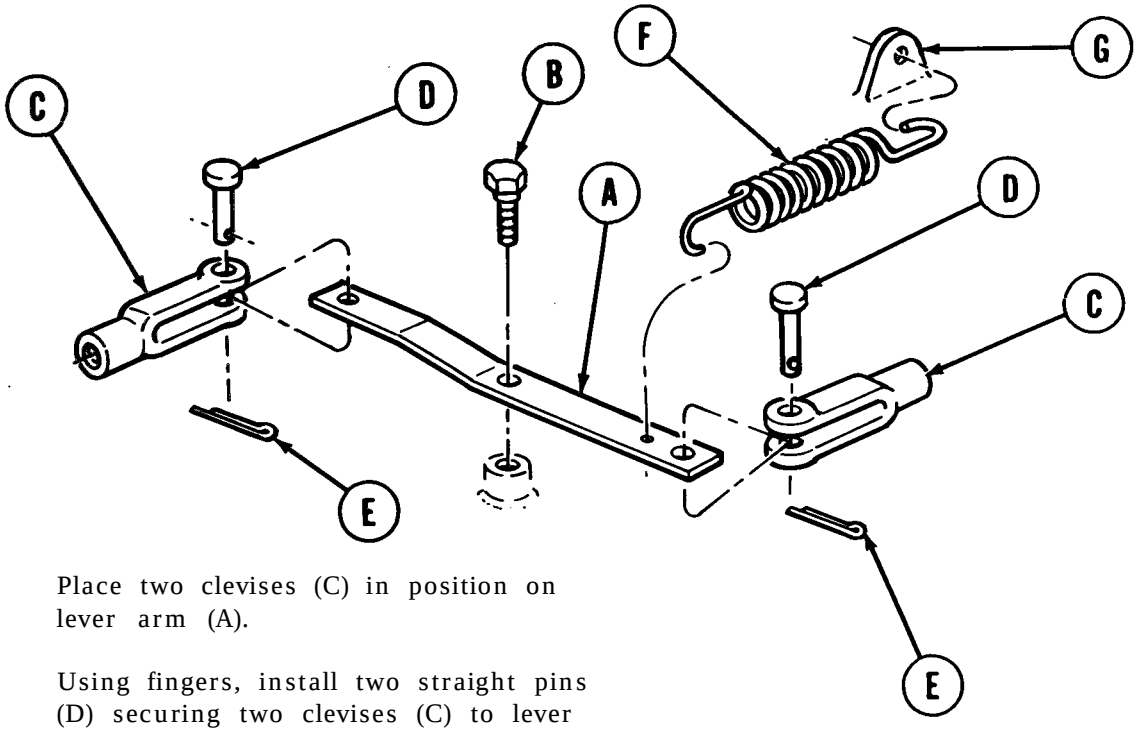
INSTALLATION:

1. Place lever arm (A) in position on hull floor.
2. Using wrench, install bolt (B) securing lever arm (A) to hull floor.



NOTE

Higher end of lever arm should be toward right.



3. Place two clevises (C) in position on lever arm (A).
4. Using fingers, install two straight pins (D) securing two clevises (C) to lever arm (A).
5. Using pliers, install two new cotter pins (E) in two straight pins (D).
6. Using fingers, install spring (F) in lever arm (A).
7. Using pliers, install spring (F) in ear (G).
8. Operate rear drain valve lever to make sure it opens and closes correctly.
9. Install commander's floor plate (page 17-9).

End of Task

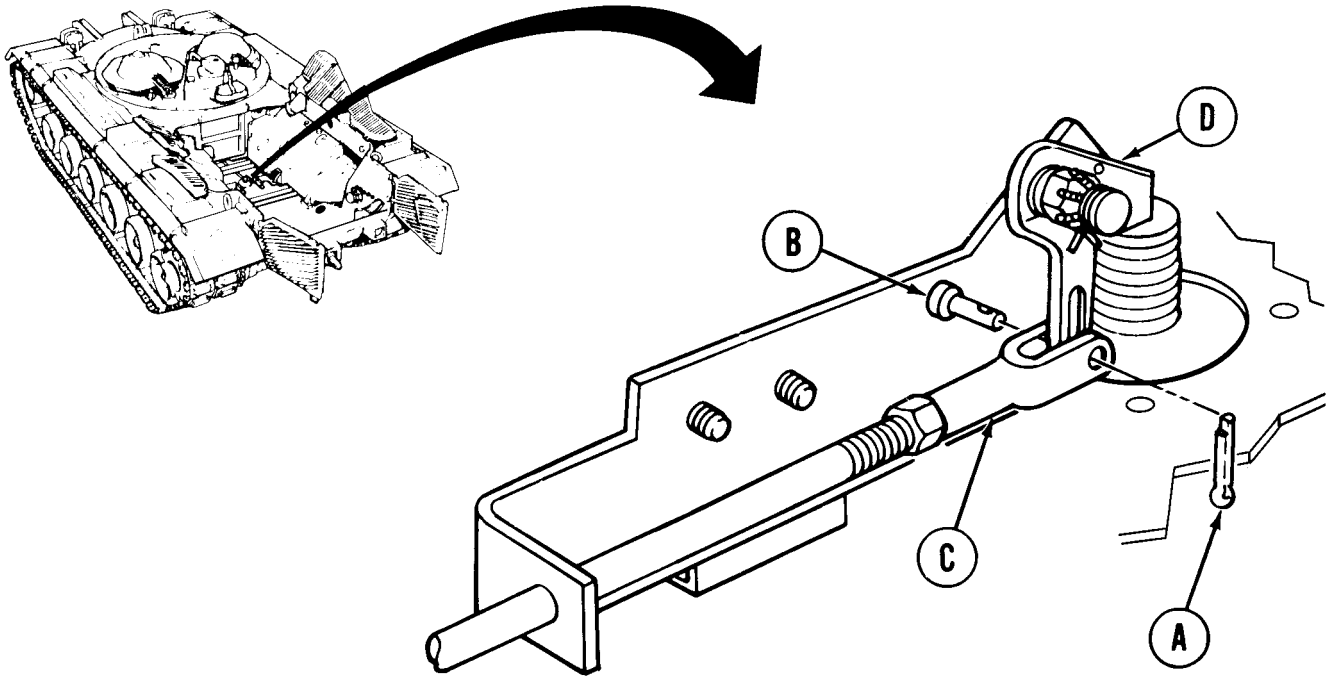
TA169556

REAR DRAIN VALVE ACTUATING LEVER REPLACEMENT (Sheet 1 of 3)

TOOLS: 1/2 in. box end wrench
7/16 in. box end wrench
Slip joint pliers

SUPPLIES: Cotter pin (2)

PRELIMINARY PROCEDURE: Remove powerplant (page 5-2)



REMOVAL:

1. Using pliers, remove cotter pin (A) from pin (B). Throw cotter pin away.
2. Pull pin (B) out of holes in clevis (C) and hole in actuating lever (D).

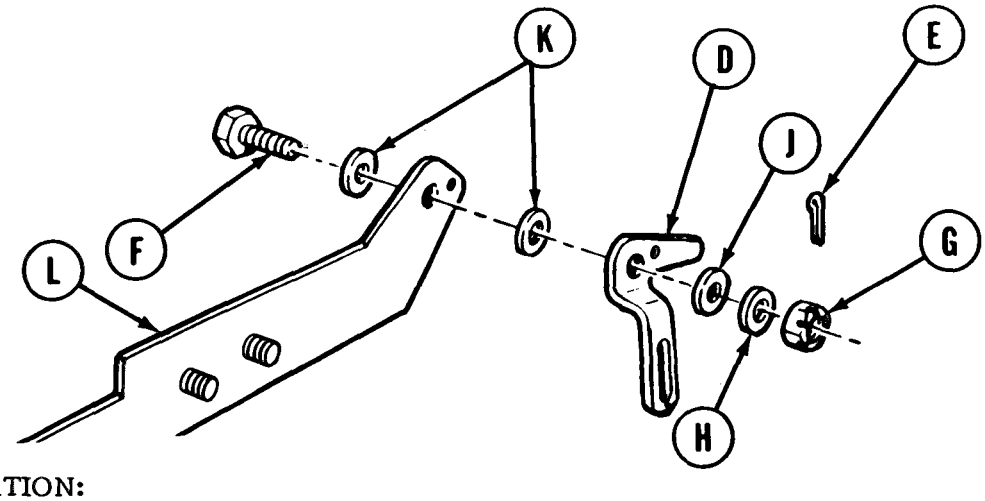
Go on to Sheet 2

TA169557

REAR DRAIN VALVE ACTUATING LEVER REPLACEMENT (Sheet 2 of 3)

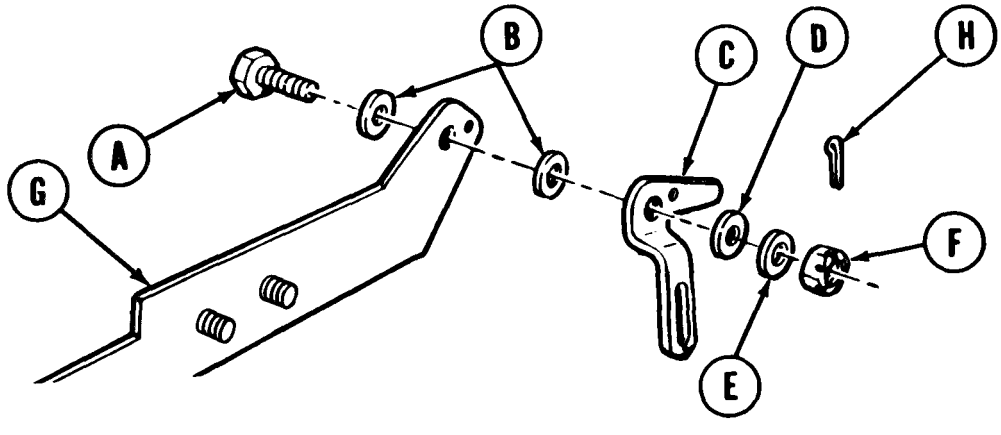
3. Using pliers, remove cotter pin (E) from bolt (F). Throw cotter pin away.

4. Using 1/2 inch wrench to hold bolt (F), use 7/16 inch wrench to remove nut (G), flat washer (H), shim (J), actuating lever (D), two flat washers (K), and bolt (F) from bracket (L).



INSTALLATION:

1. Install bolt (A), two flat washers (B), actuating lever (C), shim (D), flat washer (E), and nut (F) on bracket (G).



2. Finger tighten nut (F) on bolt (A).

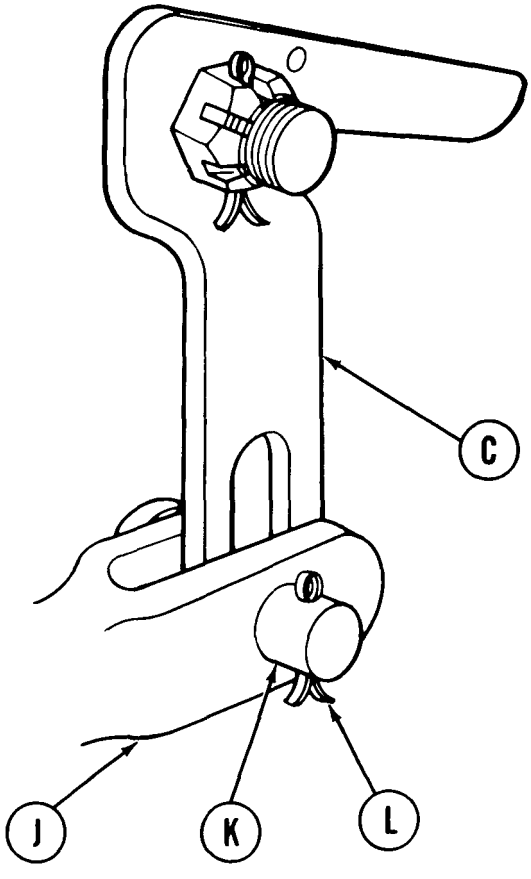
3. Line up hole in bolt (A) with slot in nut (F).

4. Using pliers, install new cotter pin (H) in bolt (A).

Go on to Sheet 3

TA169558

REAR DRAIN VALVE ACTUATING LEVER REPLACEMENT (Sheet 3 of 3)



5. Line up holes in clevis (J) with hole in actuating lever (C).

6. Put pin (K) in holes in clevis (J) and hole in actuating lever (C).

7. Using pliers, install new cotter pin (L) in hole in pin (K).

8. Operate rear drain valve and make sure it opens and closes smoothly.

9. Install powerplant (page 5-14).

End of Task

TA169559

REAR DRAIN VALVE ASSEMBLY REPLACEMENT (Sheet 1 of 4)

PROCEDURE INDEX

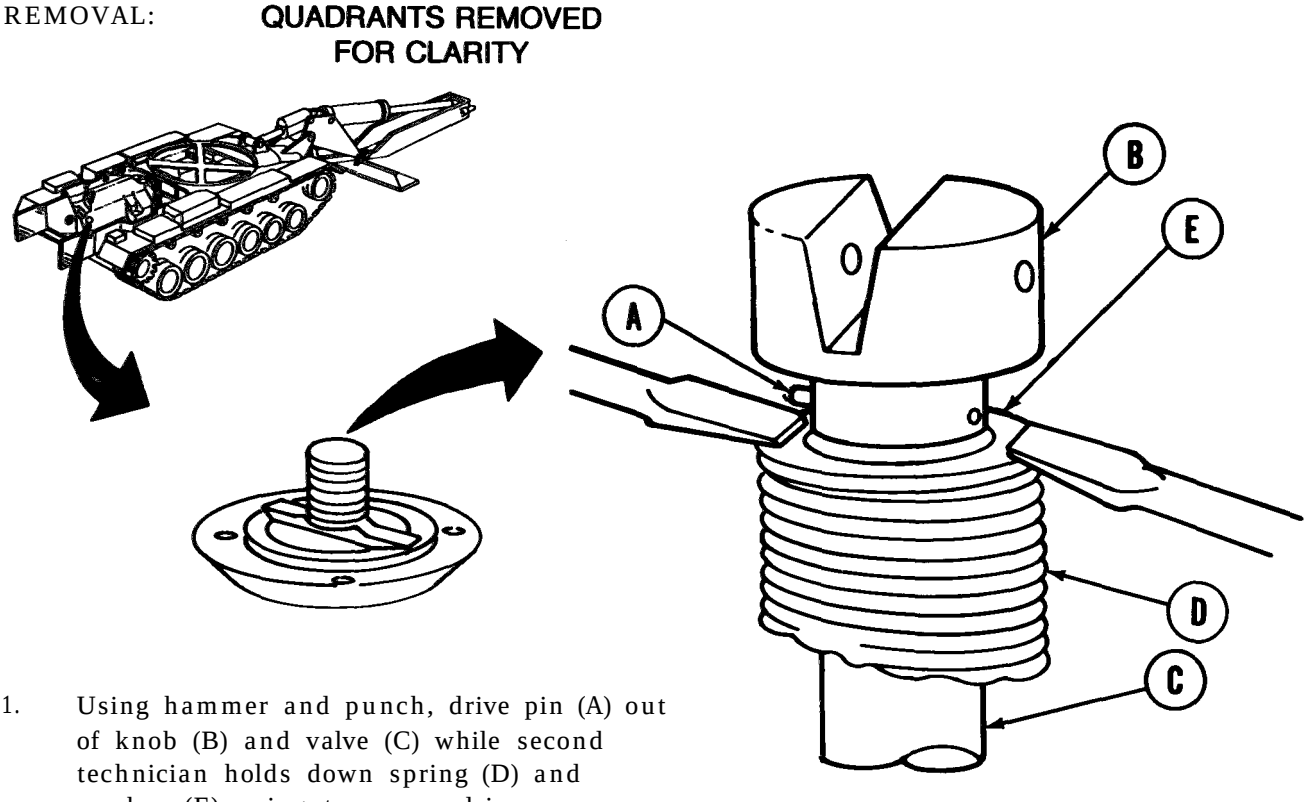
TOOLS: Slip joint pliers
3/4 in. socket with 1/2 in. drive
Ratchet with 1/2 in. drive
Hammer
1/8 in. drive pin punch
6 in. ruler
Putty knife
Flat-tip screwdriver (2 required)

SUPPLIES: Dry cleaning solvent (Item 55, Appendix D)
Clean rags (Item 65, Appendix D)
Valve seat gasket (10887680)

PERSONNEL: Three

PRELIMINARY PROCEDURES Remove powerplant (page 5-2)

REMOVAL:



1. Using hammer and punch, drive pin (A) out of knob (B) and valve (C) while second technician holds down spring (D) and washer (E) using two screwdrivers.

Go on to Sheet 2

TA169560

REAR DRAIN VALVE ASSEMBLY REPLACEMENT (Sheet 2 of 4)

CAUTION

Have third technician stationed beneath hull to catch valve as it drops out when pin, knob, washer and spring are removed.

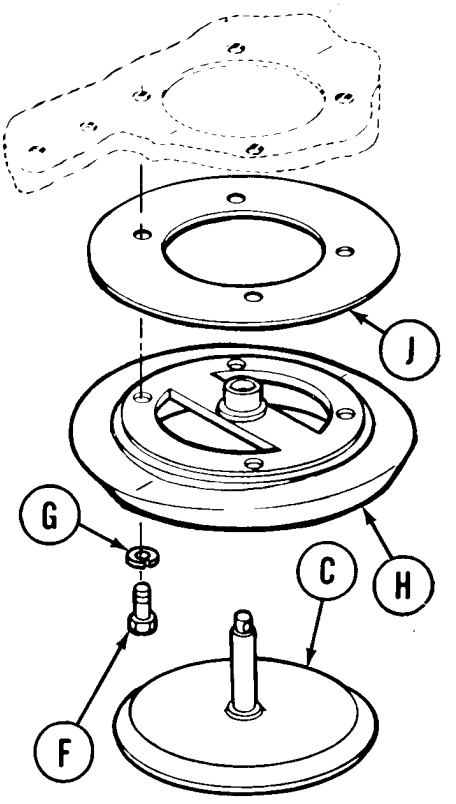
2. Using socket and ratchet, remove four screws (F) and lockwashers (G) holding valve seat (H) and gasket (J) to hull.

WARNING

Third technician hold up valve seat (H) when removing last screw (F), attaching valve seat (F) to hull. Valve seat (H) is heavy and can cause injury if it falls.

3. While holding valve seat (H), use screwdriver to pry valve seat (H) from hull, if necessary.

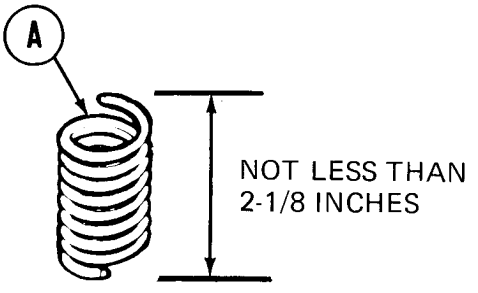
4. Using putty knife, scrape gasket (J) from hull and valve seat (H). Throw gasket away.



CLEANING AND INSPECTION:

WARNING

Cleaning agent specified is flammable. Use only in well ventilated areas. Keep away from flames, sparks, or heat. Do not smoke while using. Prevent contact with eyes, mouth, and/or skin. Wear rubber gloves when performing cleaning procedures.



1. Using dry cleaning solvent and clean rags, clean all parts.

2. Inspect removed parts for cracks, nicks, burrs or other defects. Replace defective parts.

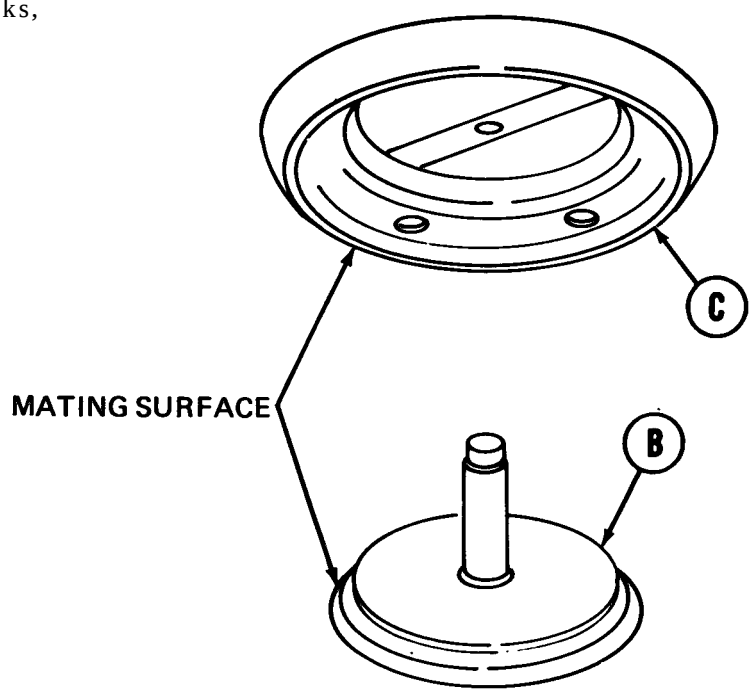
3. Measure length of spring (A). If spring (A) measures less than 2-1/8 inches, replace spring (A).

Go on to Sheet 3

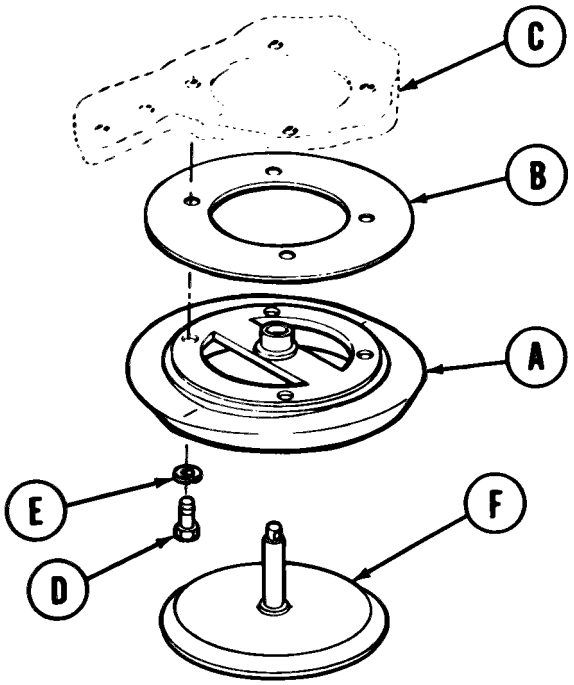
TA169561

REAR DRAIN VALVE ASSEMBLY REPLACEMENT (Sheet 3 of 4)

4. Inspect mating surface of valve (B) and valve seat (C) for nicks, cracks, burrs, or other defects. Replace defective parts.



INSTALLATION:



1 Line up four holes in valve seat (A), new gasket (B) and hull (C) under vehicle.

2. Using ratchet and socket, install four screws (D) and lockwashers (E) holding valve seat (A) and gasket (B) to hull (c).

Go on to Sheet 4

TA169562

REAR DRAIN VALVE ASSEMBLY REPLACEMENT (Sheet 4 of 4)

3. Have third technician insert valve (F) into opening in hull and hold in place.

4. Install spring (G), washer (H) and knob (J) on stem of valve (F).

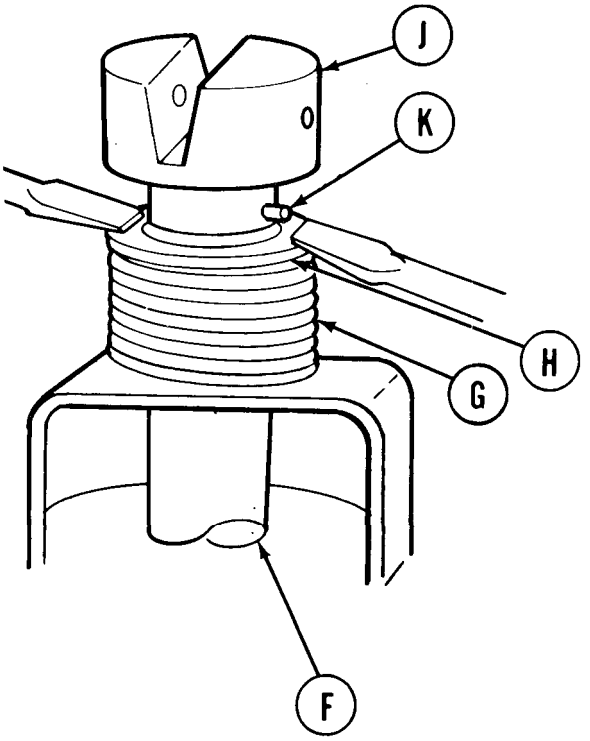
5. With second technician pressing down on washer (H) with two screwdrivers, use punch to line up holes in knob (J) and valve (F).

6. Using pliers, start pin (K) into hole in knob (J).

7. Using hammer drive pin (K) all the way into hole in knob (J).

8. Operate rear drain valve to make sure it opens and closes smoothly. If valve does not open or close properly, remove, inspect, and install valve assembly again.

9. Install powerplant (page 5-14).



End of Task

TA169563

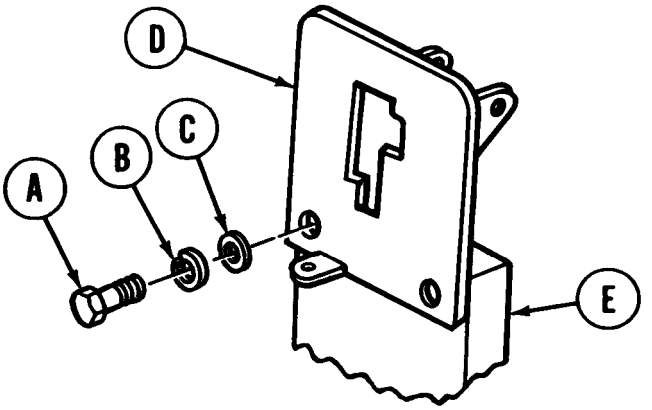
FRONT DRAIN VALVE LEVER SUPPORT REPLACEMENT(Sheet 1 of 1)

TOOLS: 9/16 in. socket with 1/2 in. drive
Ratchet with 1/2in. drive

PRELIMINARY PROCEDURE: Remove front drain valve control lever (page 17-21)

REMOVAL:

1. Using socket, remove two screws (A), washers (B), and lockwashers (C) securing support (D) to block (E).
2. Remove support (D) from block (E).



INSTALLATION:

1. Place support (D) in place on block, (E).
2. Using socket, install two screws (A), washers (B), and lockwashers (C) securing support (D) to block (E).
3. Install front drain valve control lever (page 17-22).

End of Task

TA169564

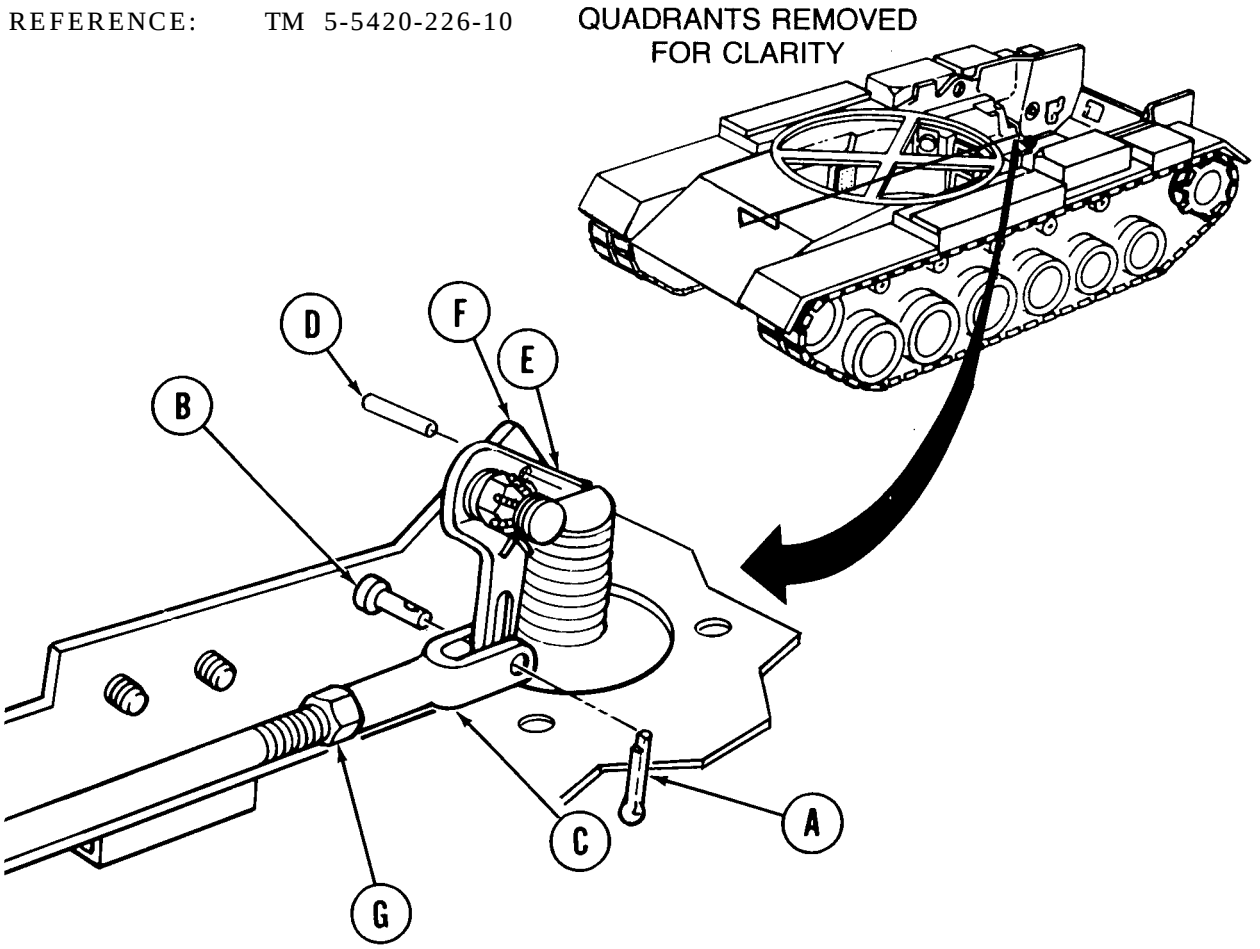
REAR DRAIN VALVE LINKAGE ADJUSTMENT (Sheet 1 of 7)

TOOLS: 9/16 in. open end wrench (2 required)
Slip joint pliers
1/8 in. (dia) alinement pin (2 in. long)
6 or 12 in. ruler

SUPPLIES: Cotter pin (2) required

PRELIMINARY PROCEDURE: Remove powerplant (page 5-2)

REFERENCE: TM 5-5420-226-10



ADJUSTMENT:

1. Using pliers, remove cotter pin (A) from straight headed pin (B). Throw cotter pin (A) away.
2. Pull straight headed pin (B) out of holes in clevis (C).
3. Put alinement pin (D) through hole in valve actuator lever (E) and hole in angle bracket (F).
4. Using wrench, loosen jamnut (G) all the way while holding clevis (C) with pliers.

Go on to Sheet 2

TA169565

REAR DRAIN VALVE LINKAGE ADJUSTMENT (Sheet 2 of 7)

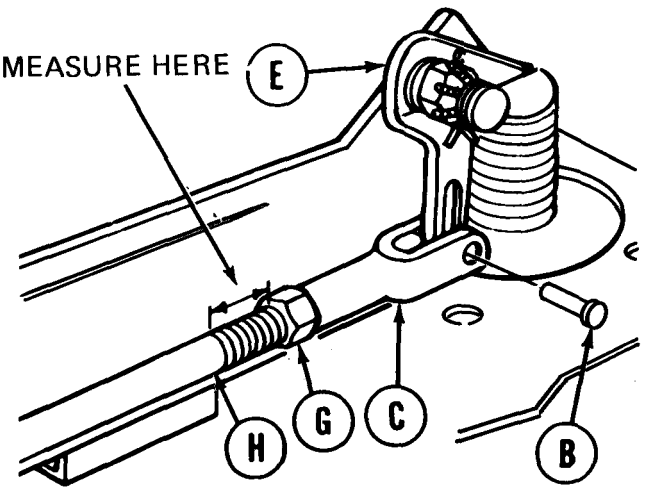
5. Adjust clevis (C) until holes in clevis and hole in valve actuator lever (E) can be lined up using straight headed pin (B).

6. Using fingers, tighten jamnut (G) against clevis (C).

7. Measure threads on rod (H).

   - If threads measure one inch or less, go to step 14.

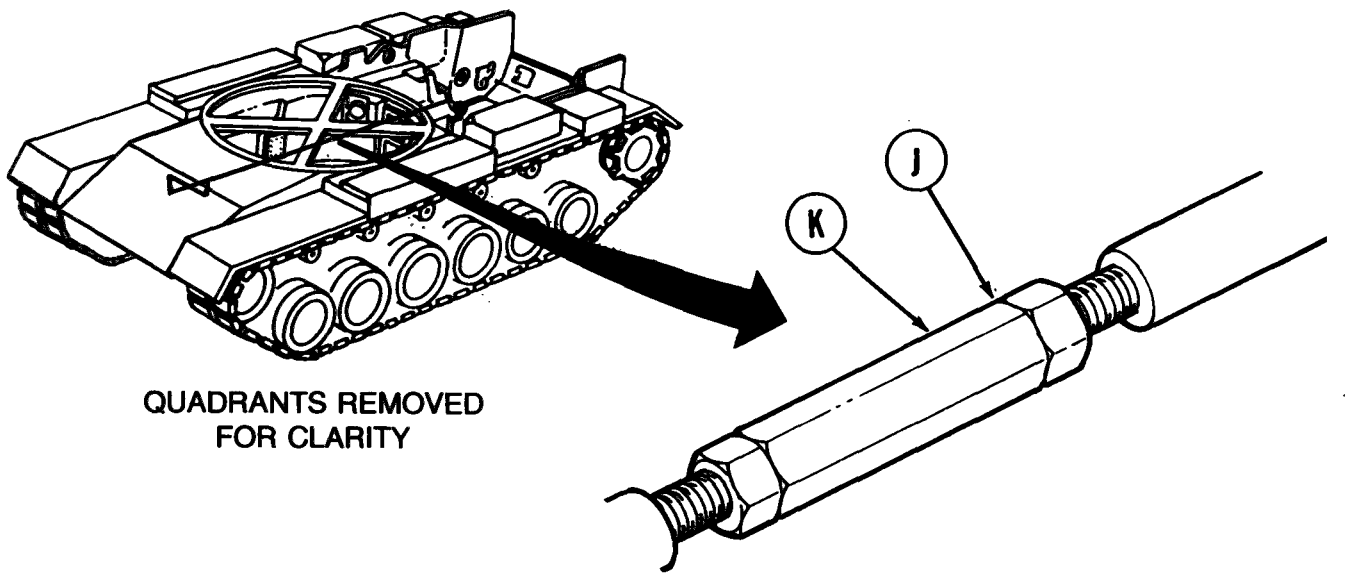
   - If threads are more than one inch, go to step 8.



NOTE

Coupling jamnut (J) can be reached from engine compartment. Open or close rear drain valve, if necessary, to put wrench on coupling jamnut (J).

8. Using wrench, loosen coupling jamnut (J) all the way while holding coupling (K) with wrench.



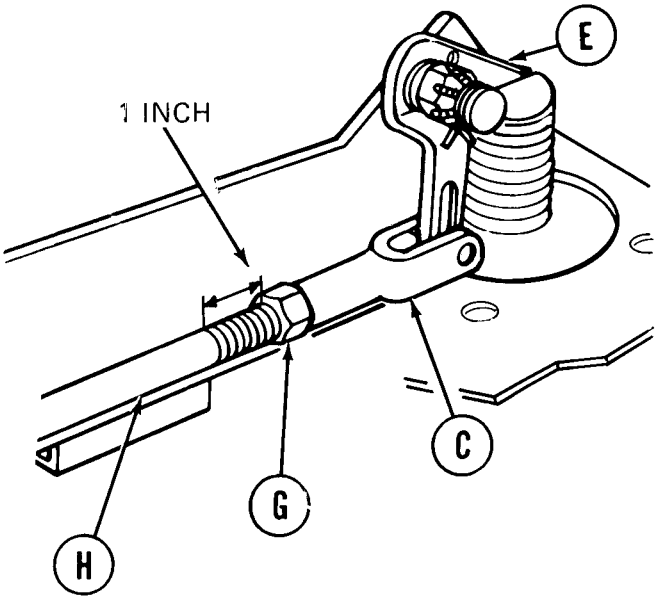
Go on to Sheet 3

TA169566

REAR DRAIN VALVE LINKAGE ADJUSTMENT (Sheet 3 of 7)

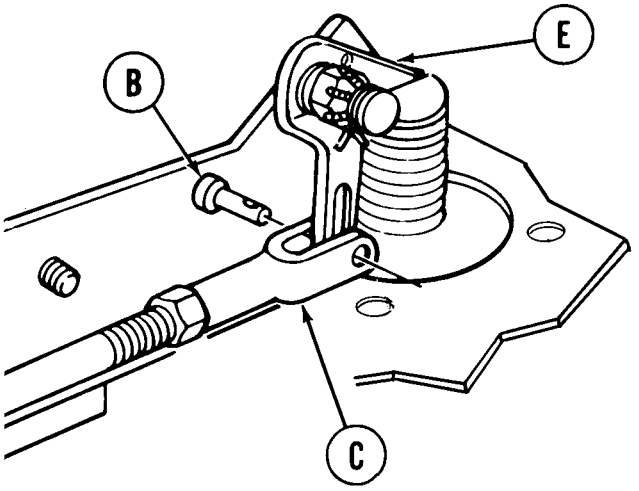
9. Adjust clevis (C) and jamnut (G) until one inch of threads can be measured on rod (H).

10. Using wrench, tighten jamnut (G) while holding clevis (C) with pliers.

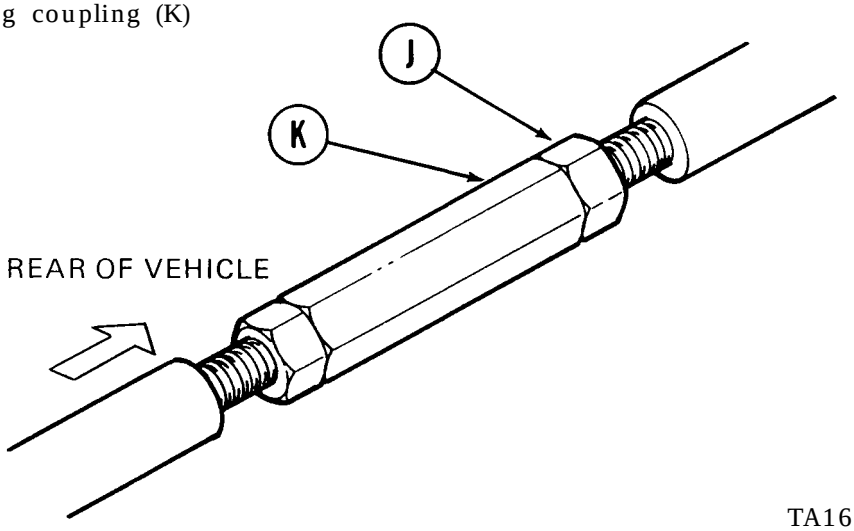


11. Turn rod (H) until holes in clevis (C) and hole in valve actuating lever (E) can be lined up using straight headed pin (B).

12. Using fingers, push straight headed pin (B) through holes in clevis (C) and hole in valve actuator lever (E).



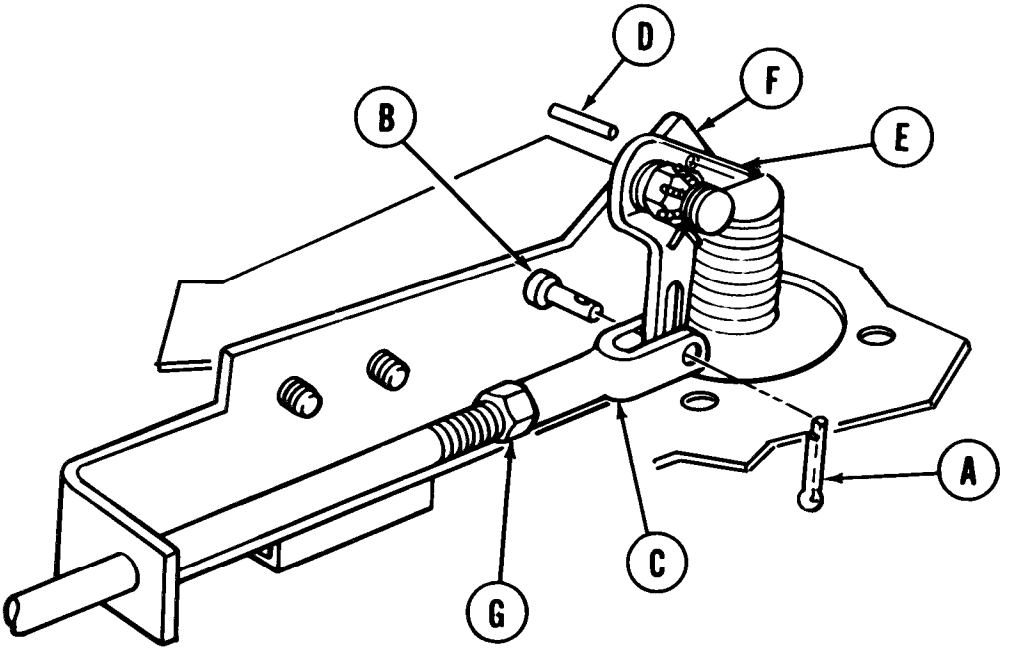
13. Using wrench, tighten rear coupling jamnut (J) while holding coupling (K) with wrench.



Go on to Sheet 4

TA169567

REAR DRAIN VALVE LINKAGE ADJUSTMENT (Sheet 4 of 7)



14. If straight headed pin (B) was not installed in clevis (C) in step 12, use fingers and install straight headed pin (B) in holes in clevis (C) and hole in valve actuator lever (E).

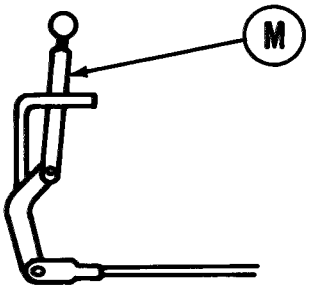
15. Using pliers, install new cotter pin (A) in straight headed pin (B).

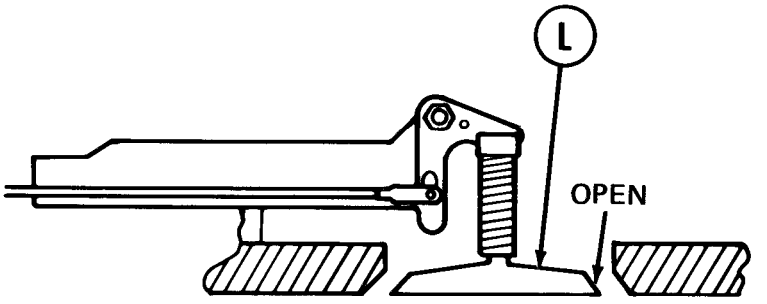
16. Pull alinement pin (D) out of hole in valve actuator lever (E) and hole in angle bracket (F).

17. If clevis jamnut (G) was not tightened against clevis (C) in step 10, use wrench and tighten jamnut (G) while holding clevis (C) with pliers.

18. Make sure rear drain valve (L) opens when control lever (M) is in the open position.

- If rear drain valve (L) does not open, perform steps 19 through 30.
- If rear drain valve (L) opens, go to step 31.

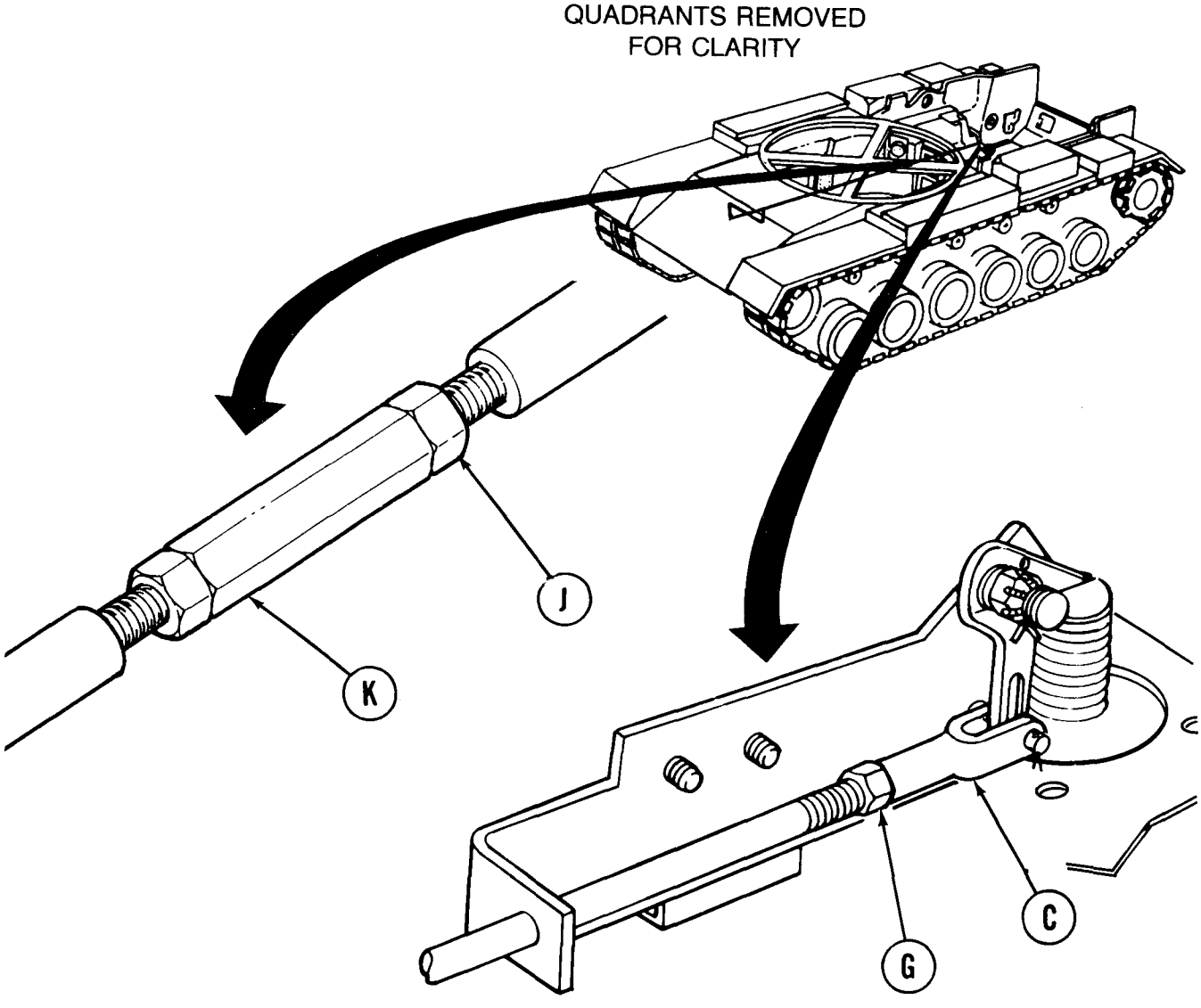




Go on to Sheet 5

TA169568

REAR DRAIN VALVE LINKAGE ADJUSTMENT (Sheet 5 of 7)



19. Close rear drain valve (TM 5-5420-226-10).

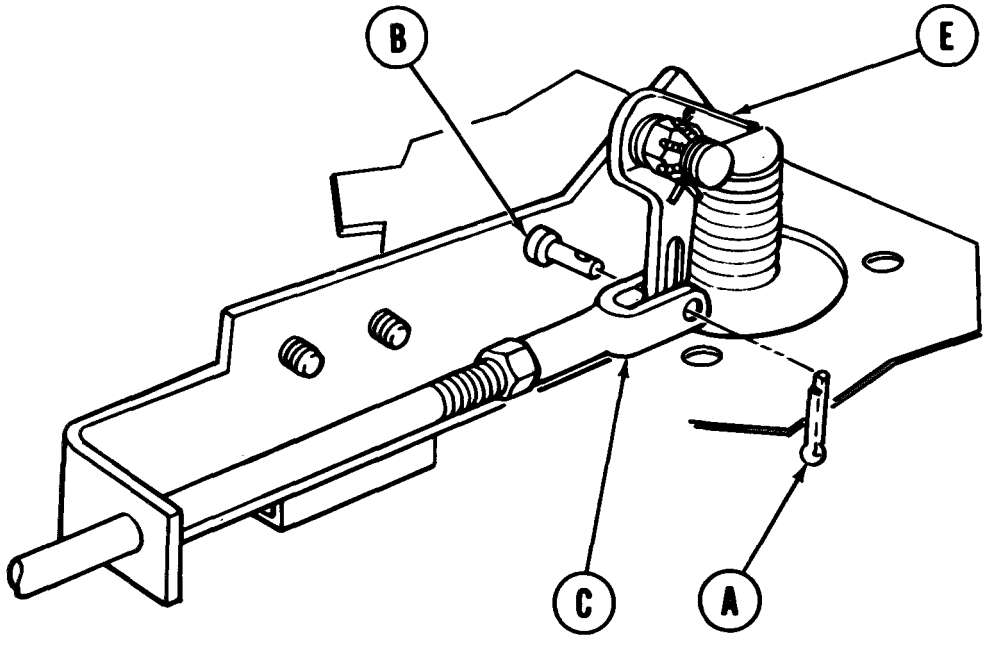
20. Using wrench, loosen rear coupling jamnut (J) all the way while holding coupling (K) with wrench.

21. Using wrench, loosen clevis jamnut (G) all the way while holding clevis (C) with pliers.

Go on to Sheet 6

TA169569

REAR DRAIN VALVE LINKAGE ADJUSTMENT (Sheet 6 of 7)



22. Using pliers, remove cotter pin (A) from pin (B). Throw cotter pin (A) away.

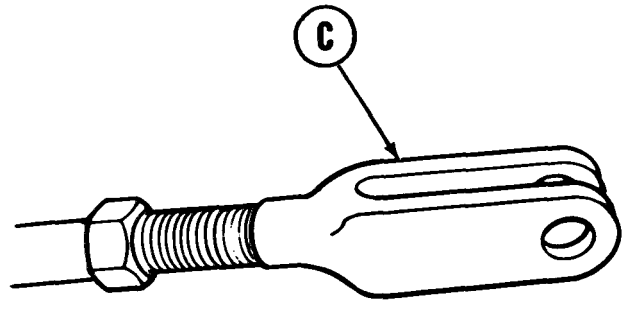
23. Using fingers, pull pin (B) from clevis (C).

24. Hold clevis (C) and turn right five complete turns.

25. Line up holes in clevis (C) with hole in actuator lever (E).

26. Using fingers, push pin (B) through holes in clevis (C) and hole in actuator lever (E).

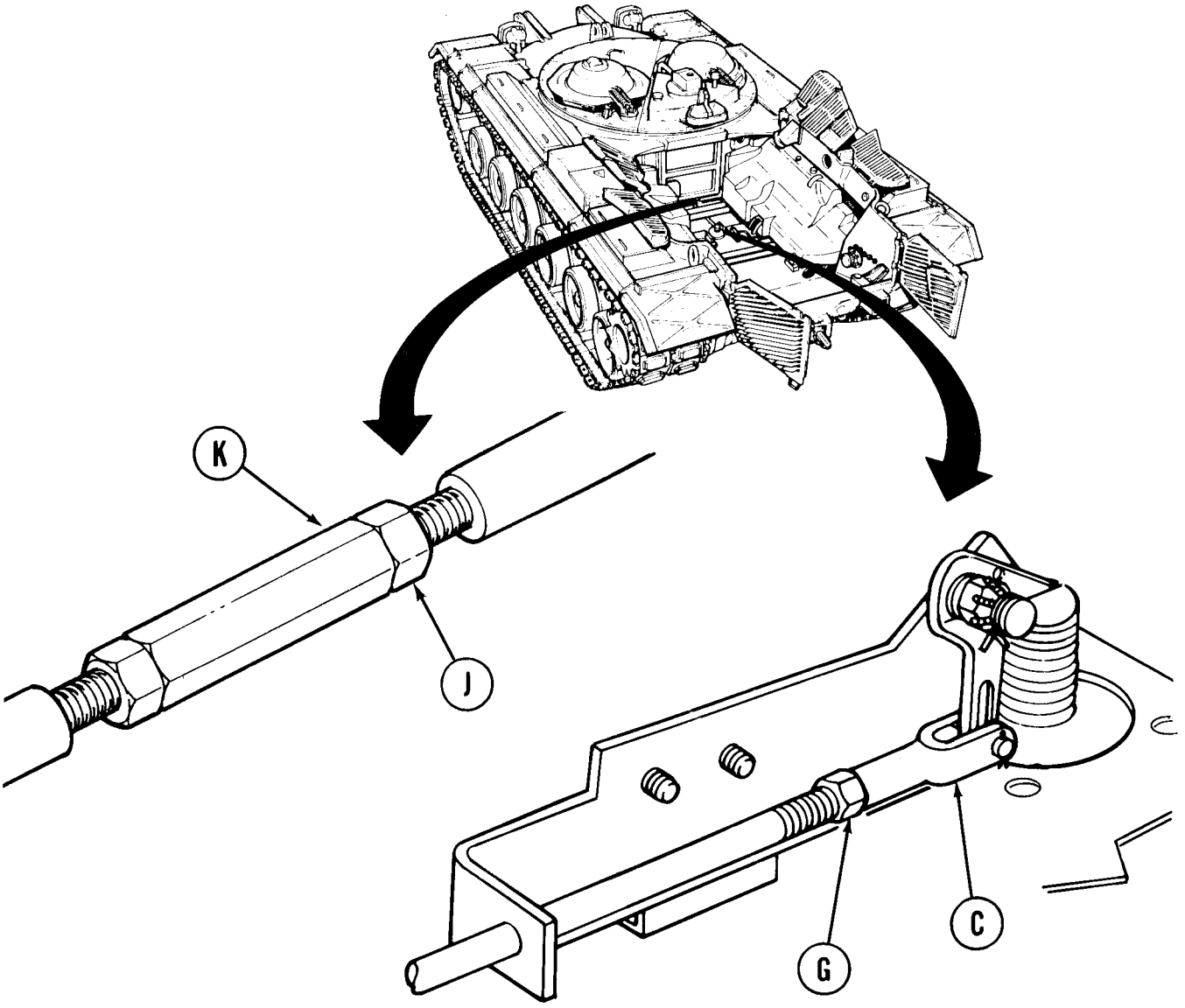
2-7. Using pliers, install new cotter pin (A) in hole in pin (B).



Go on to Sheet 7

TA169570

REAR DRAIN VALVE LINKAGE ADJUSTMENT (Sheet 7 of 7)



28. Using wrench, tighten rear coupling jamnut (J) while holding coupling (K) with wrench.

29. Using wrench, tighten clevis jamnut (G) while holding clevis (C) with pliers.

30. Operate rear drain valve to make sure it opens and closes correctly.

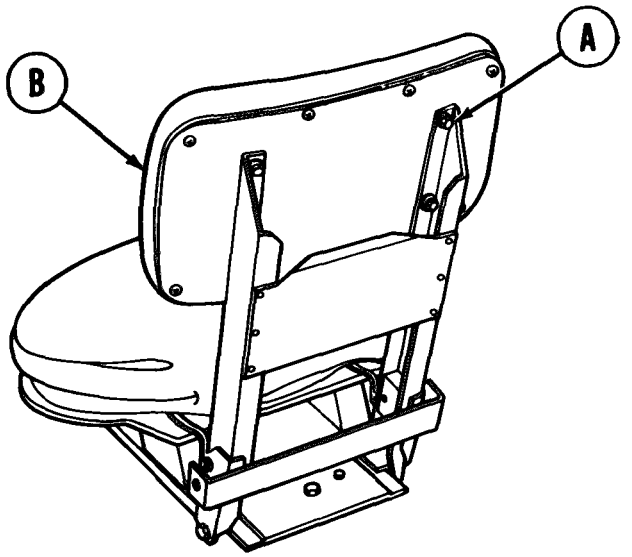
31. Install powerplant (page 5-14).

End of Task

TA169571

COMMANDER'S SEAT BACKREST REPLACEMENT (Sheet 1 of 1)

TOOLS: 7/16 in. combination box and open end wrench



REMOVAL:

1. Using wrench, remove four screws and flat washers (A) from backrest (B).
2. Remove backrest (B).

INSTALLATION:

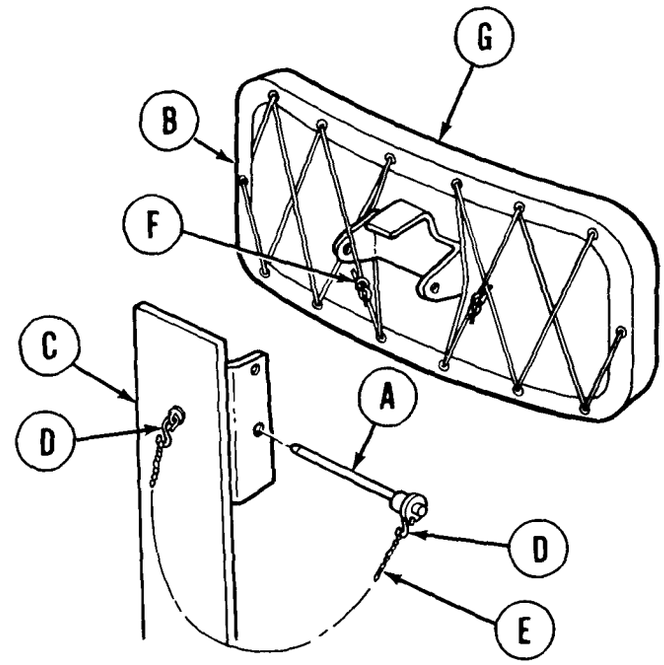
1. Position backrest (B) with holes alined.
2. Using wrench, install four flat washers and screws (A).

End of Task

TA169572

OPERATOR'S SEAT BACKREST REPLACEMENT (Sheet 1 of 1)

TOOLS: Slip joint pliers



REMOVAL:

1. Using fingers, pull pin (A) from backrest (B) and support (C).
2. Using pliers, remove two hooks (D) and chain (E).
3. Untie cord (F) and remove pad (G).

INSTALLATION:

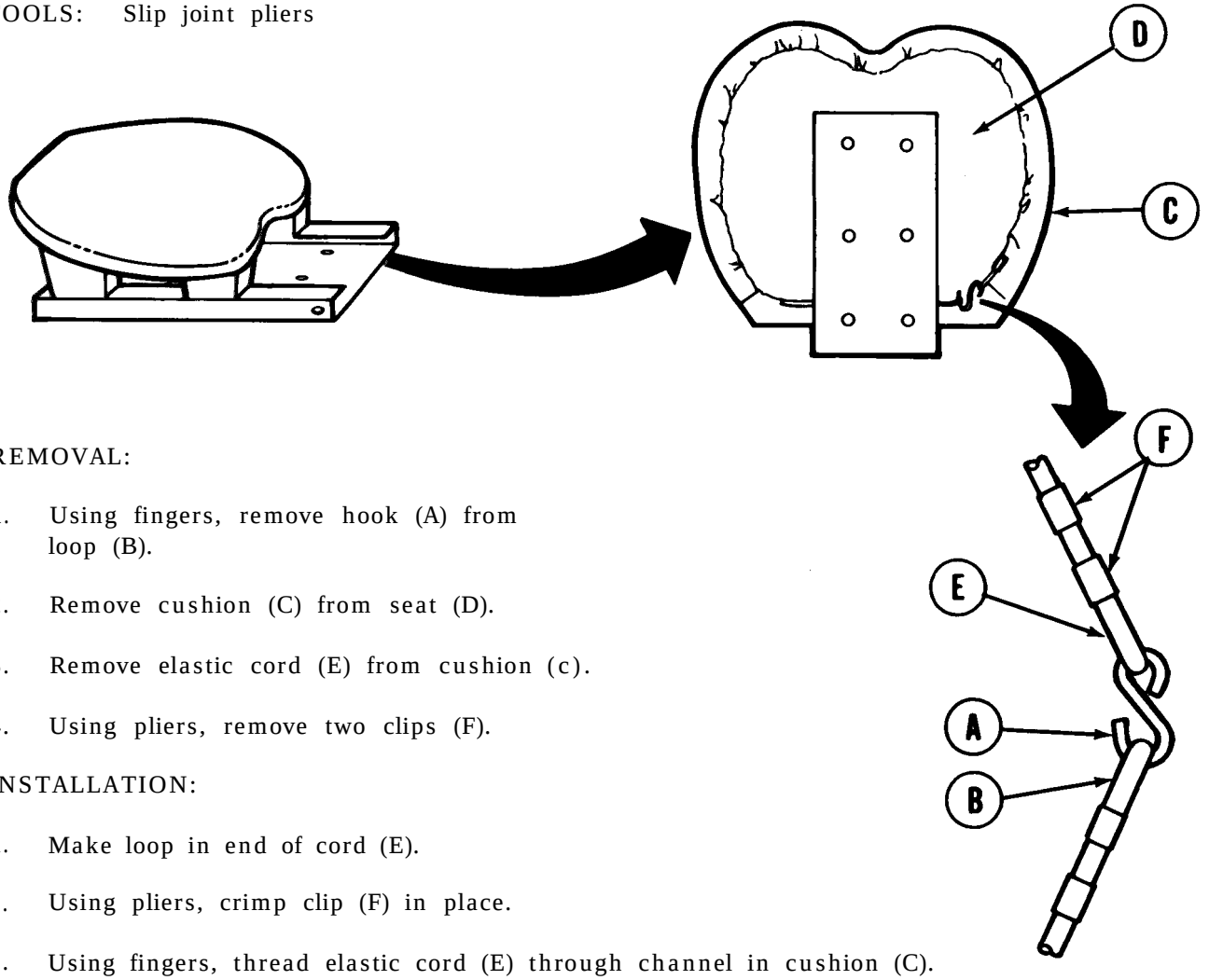
1. Place pad (G) in position on backrest (B).
2. Lace cord (F) through pad (G) and tie securely.
3. Using pliers, install two hooks (D) and chain (E) to support (C) and pin (A).
4. Place backrest (B) in position on support (C).
5. Push pin (A) into place

End of Task

TA169573

PERSONNEL SEAT CUSHION REPLACEMENT (Sheet 1 of 1)

TOOLS: Slip joint pliers



REMOVAL:

1. Using fingers, remove hook (A) from loop (B).
2. Remove cushion (C) from seat (D).
3. Remove elastic cord (E) from cushion (c).
4. Using pliers, remove two clips (F).

INSTALLATION:

1. Make loop in end of cord (E).
2. Using pliers, crimp clip (F) in place.
3. Using fingers, thread elastic cord (E) through channel in cushion (C).
4. Position cushion (C) on seat (D).
5. Using fingers, install hook (A) in loop (B).

End of Task

TA169574

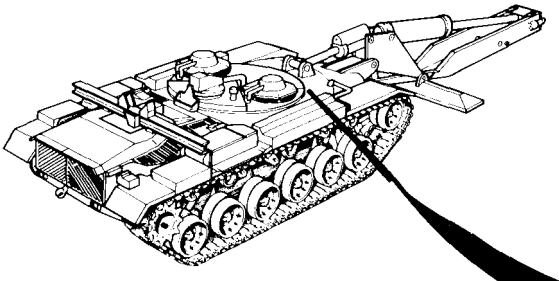
PERSONNEL SEAT AND SEAT MOUNT ASSEMBLY REPLACEMENT (Sheet 1 of 2)

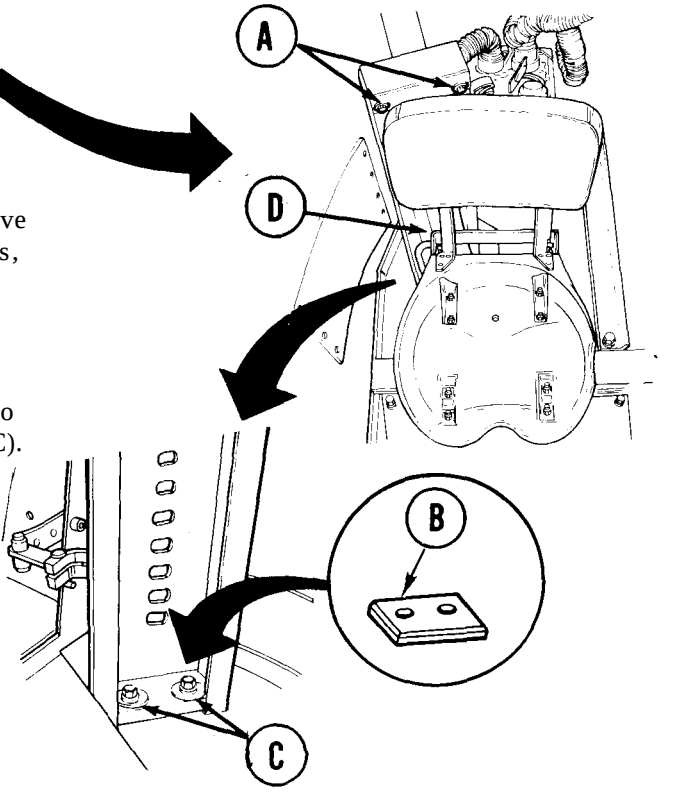
TOOLS: 7/16 in. combination box and open end wrench (2 required)
1/2 in. combination box and open end wrench (2 required)
9/16 in. open end wrench
7/16 in. socket with 1/2 in. drive
Ratchet with 1/2 in. drive
Putty knife

SUPPLIES: Adhesive (Item 4, Appendix D)

NOTE

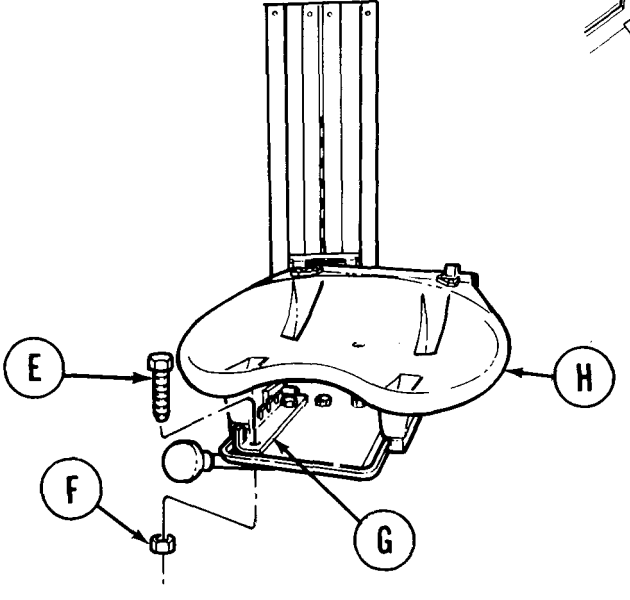
This procedure covers the replacement of the commander's seat and seat mount assembly. Repalcement of the driver's seat and seat mount assembly is similar.





REMOVAL:

1. Using two 1/2 inch wrenches, remove two bolts, flat washers, lockwashers, and nuts (A).
2. Using putty knife, remove pad (B).
3. Using 9/16 inch wrench, remove two screws, lockwashers and washers (C).



4. Remove seat and seat mount assembly (D) from vehicle.
5. Using 7/16 inch wrench and socket, remove two screws (E) and nuts (F) securing rack (G).
6. Remove rack (G) and seat (H).

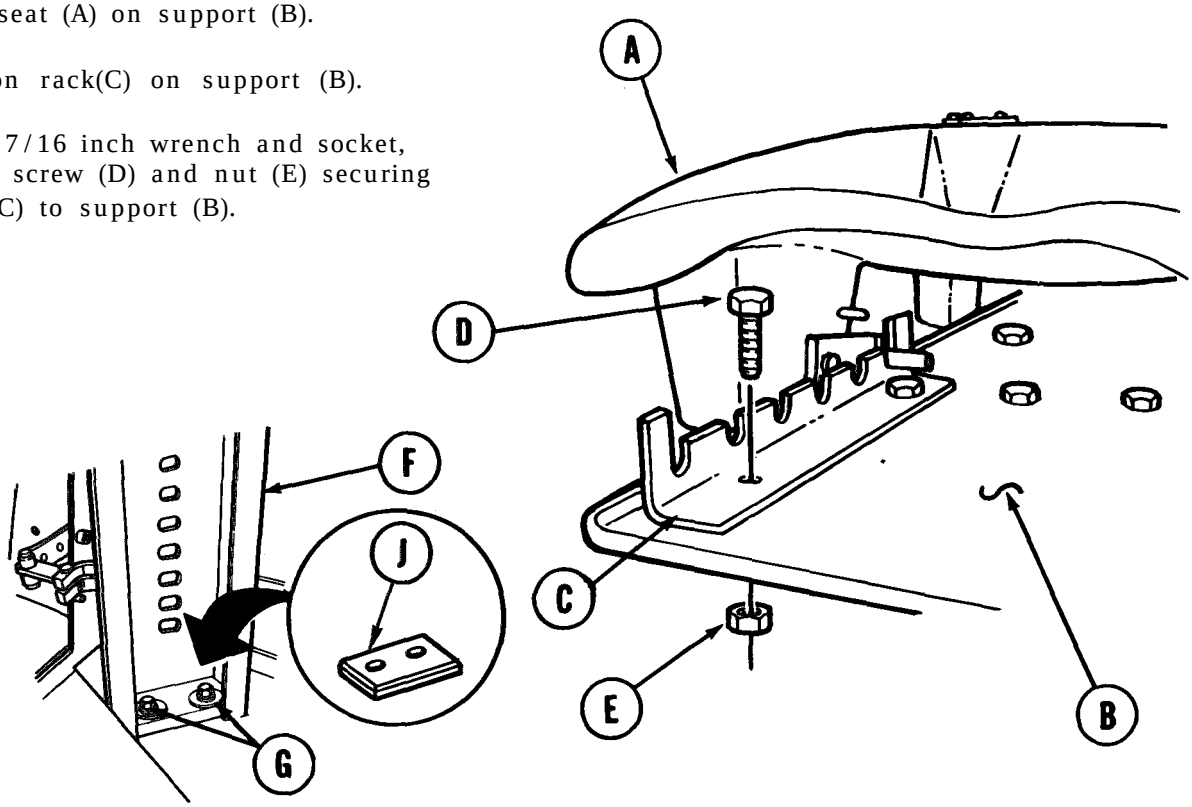
TA169575

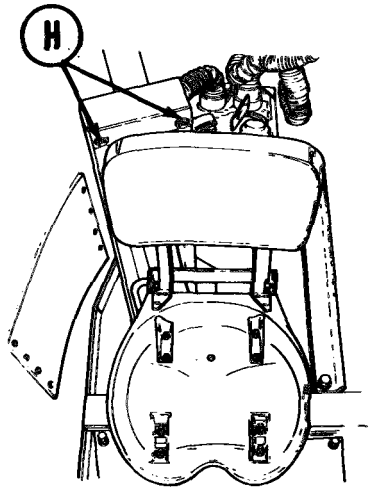
Go on to Sheet 2

PERSONNEL SEAT AND SEAT MOUNT ASSEMBLY REPLACEMENT (Sheet 2 of 2)

INSTALLATION:

1. Slide seat (A) on support (B).
2. Position rack(C) on support (B).
3. Using 7/16 inch wrench and socket, install screw (D) and nut (E) securing rack (C) to support (B).





4. Position seat and support (F) in vehicle with holes alined.
5. Using 9/16 inch wrench, install two screws, lockwashers, and washers (G).
6. Using two 1/2 inch wrenches, install two bolts, flat washers, lockwashers, and nuts (H).
7. Apply adhesive to pad (J) and install pad (J).

End of Task

TA169576

PERSONNEL SEAT ASSEMBLY REPAIR (Sheet 1 of 5)

PROCEDURE INDEX

TOOLS: Hammer, machinist's
Punch, drive pin, 1/8 in.
Screwdriver, flat-tip
Screwdriver, cross-tip
5/16 in. combination box and open end wrench
Punch, drive pin, 1/4 in.
7/16 in. socket with 1/2 in. drive
Ratchet wrench with 1/2 in. drive
Slip joint pliers
Punch, drive pin, 3/8 in.

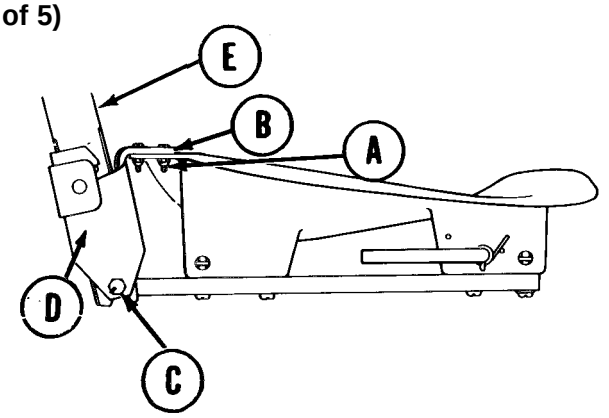
SUPPLIES: Short spring pins (2 required)
Long spring pin (2 required)

PRELIMINARY PROCEDURE: Remove seat assembly from vehicle (page 17-78)

Go on to Sheet 2

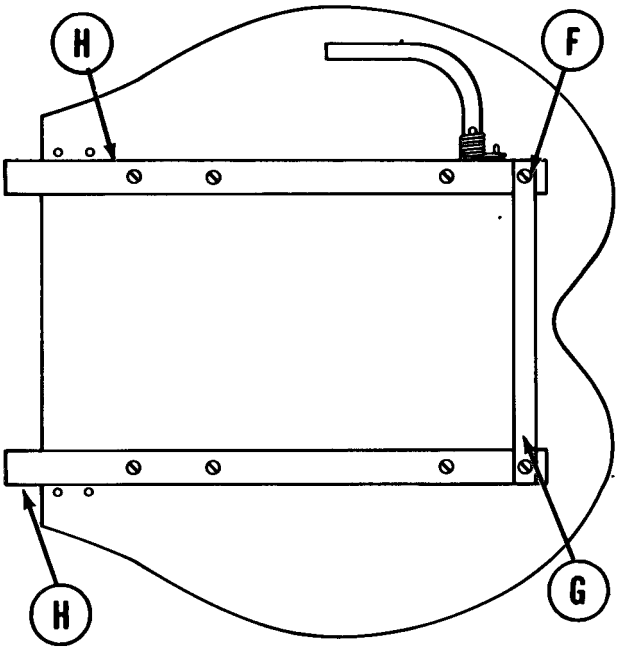
TA169577

PERSONNEL SEAT ASSEMBLY REPAIR (Sheet 2 of 5)

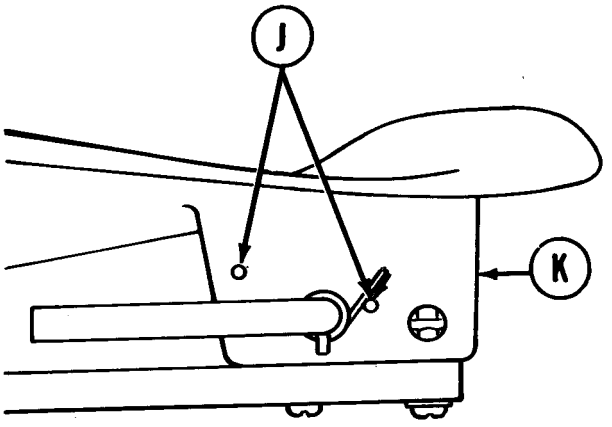


DISASSEMBLY:

1. Using cross-tip screwdriver and 5/1 6 inch wrench remove six screws, washers, and nuts (A) from clips (B).
2. Remove two clips (B).
3. Using 7/16 inch socket, remove two screws, washers, and spacers (C) from support (D).
4. Remove support (D) and back assembly (E).



5. Using flat-tip screwdriver, remove eight screws (F).
6. Remove brace (G).
7. Remove two rails (H).
8. Using hammer, 1/8 inch punch, and pliers, remove two long pins (J) from seat (K).
9. Throw pins (J) away.

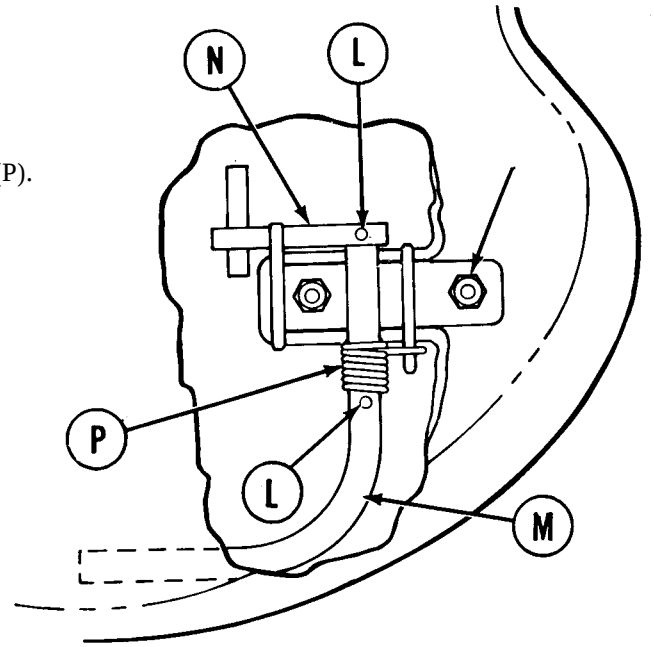


Go on to Sheet 3

TA169578

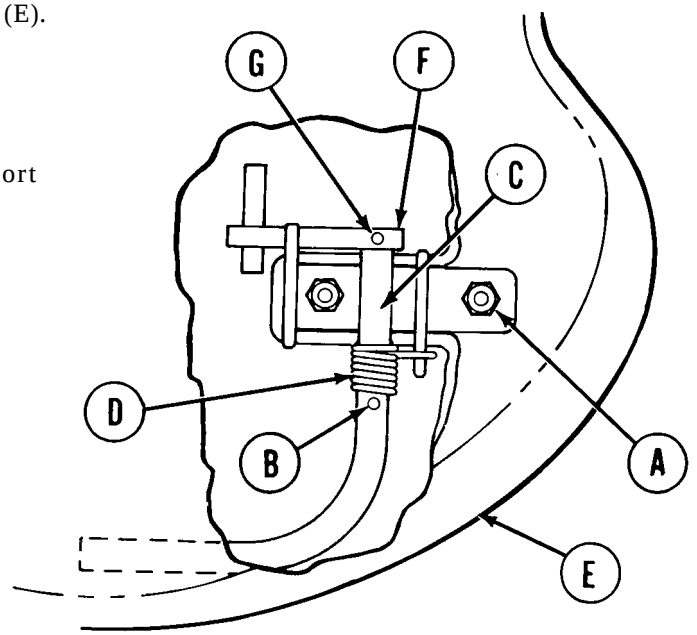
PERSONNEL SEAT ASSEMBLY REPAIR (Sheet 3 of 5)

10. Using hammer and 1/8 inch punch, remove two short pins (L) from handle (M).
11. Remove handle (M), latch (N), and spring (P).
12. Using hammer and 1/4 inch punch, drive out eight nuts (Q).
13. Inspect all parts for damage or wear, replace parts as required.



ASSEMBLY:

1. Using hammer and 1/8 inch punch, install eight nuts (A).
2. Using hammer, install new short pin (B) in handle (C).
3. Position spring (D) on handle (C).
4. Position handle (C) through hole in seat (E).
5. Position latch (F) on handle (C) with holes alined.
6. Using hammer and punch, install new short pin (G) in handle (C).



Go on to Sheet 4

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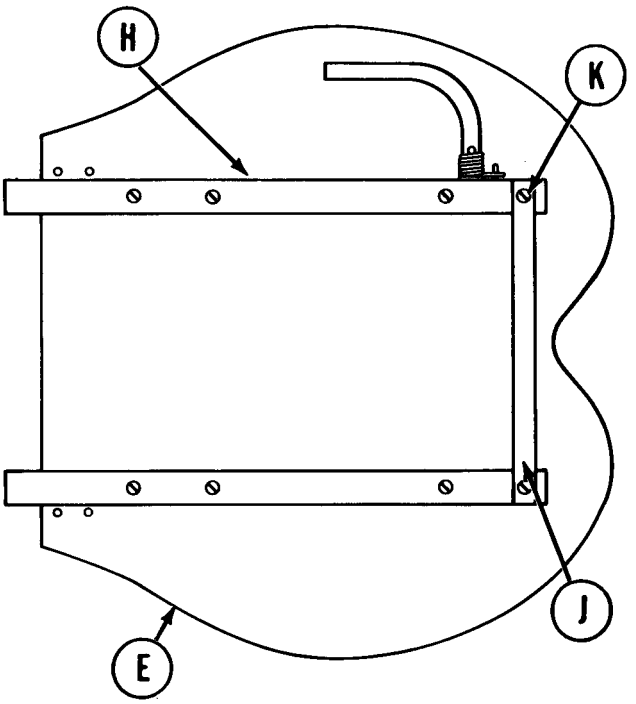
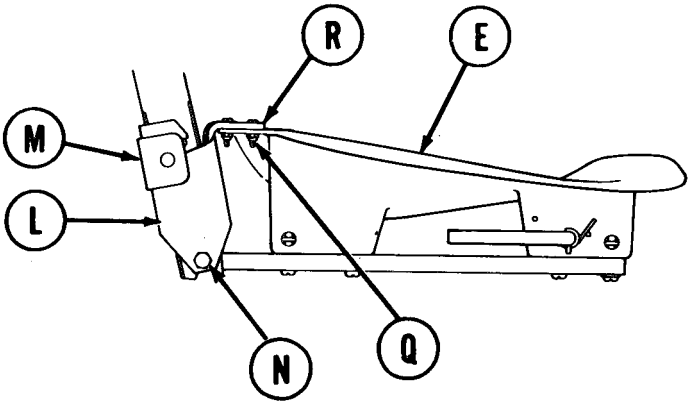
PERSONNEL SEAT ASSEMBLY REPAIR (Sheet 4 of 5)

7. Position rails (H) on seat (E) with holes alined.
8. Position brace (J) on rails (H) with holes alined.
9. Using flat-tip screwdriver, install eight screws (K).
10. Position support (L) and back assembly (M) to seat (E).
11. Using 7/16 inch socket, install two screws, washers, and spacers (N).
12. Position two clips (P) to seat (E) with holes alined.
13. Using cross-tip screwdriver and 5/16 inch wrench install six screws, washers, and nuts (Q).





Go on to Sheet 5

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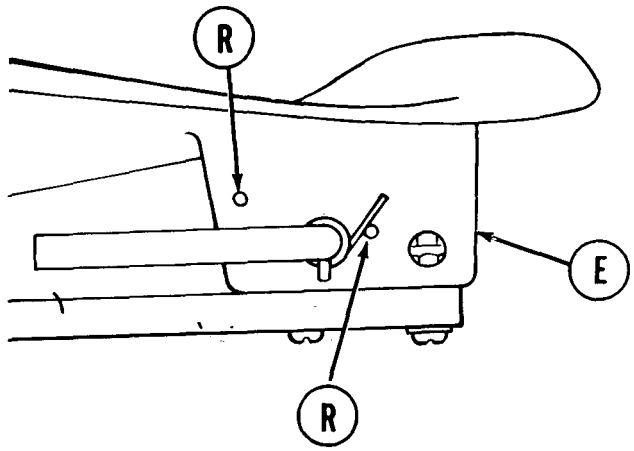
PERSONNEL SEAT ASSEMBLY REPAIR (Sheet 5 of 5)

14. Using hammer, install two long pins (R) in seat (E) as shown.

15. Install seat assembly in vehicle (page 17-79).



End of Task

TA169581

CHAPTER 18

PERSONNEL HEATER MAINTENANCE

INDEX

PERSONNEL HEATER ASSEMBLY REPLACEMENT (Sheet 1 of 5)

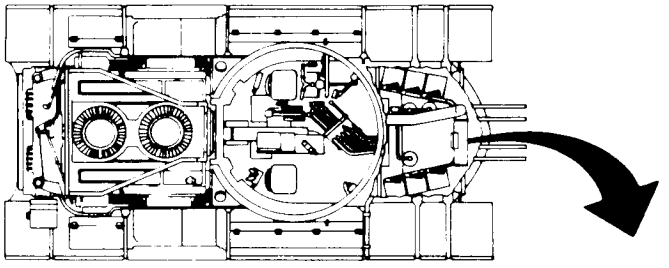
PROCEDURE INDEX

TOOLS: 7/16 in. socket with 1/2 in. drive
Torque wrench with 1/2 in. drive (0-175 lb-ft)
Adjustable pipe wrench
7/16 in. combination box and open end wrench
Cross-tip screwdriver
5 in. extension with 1/2 in. drive
Flat-tip screwdriver

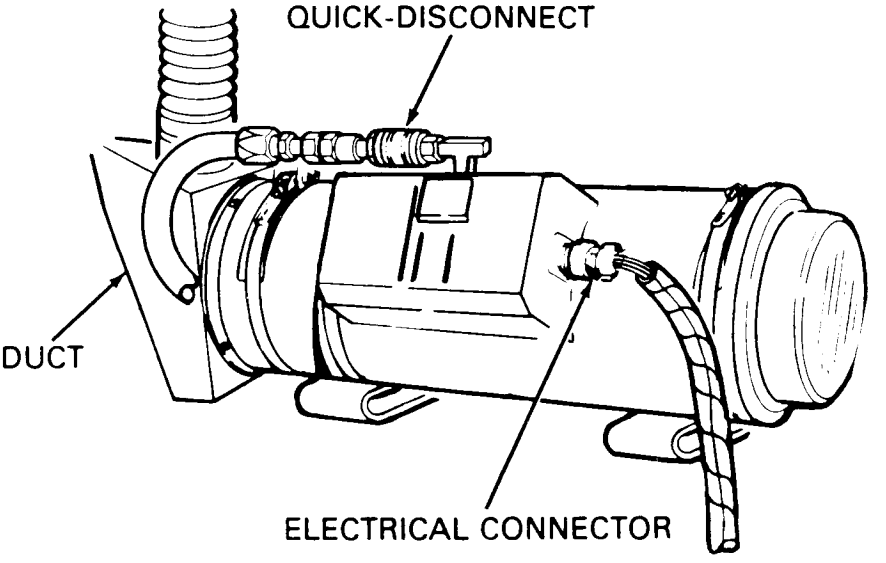
SUPPLIES: Rags, (Item 65, Appendix D)
Drain pan

REFERENCE: TM 5-5420-226-10

PRELIMINARY PROCEDURE: Close fuel shutoff valve (page 7-250, step 2)



QUADRANTS REMOVED FOR CLARITY



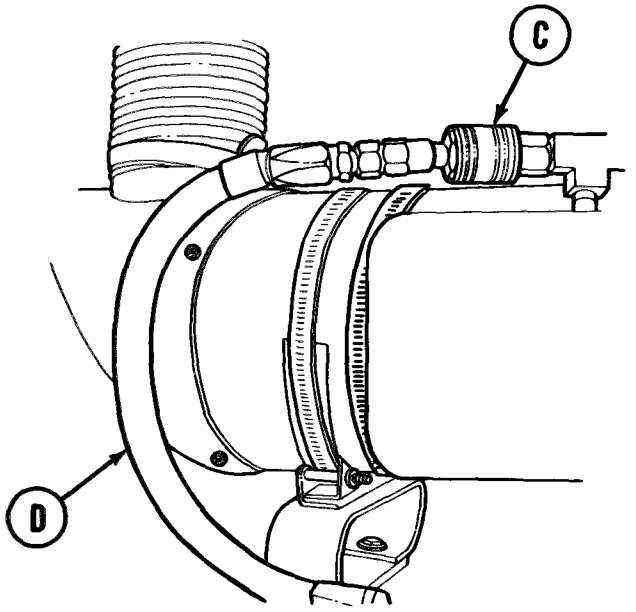
Go on to Sheet 2

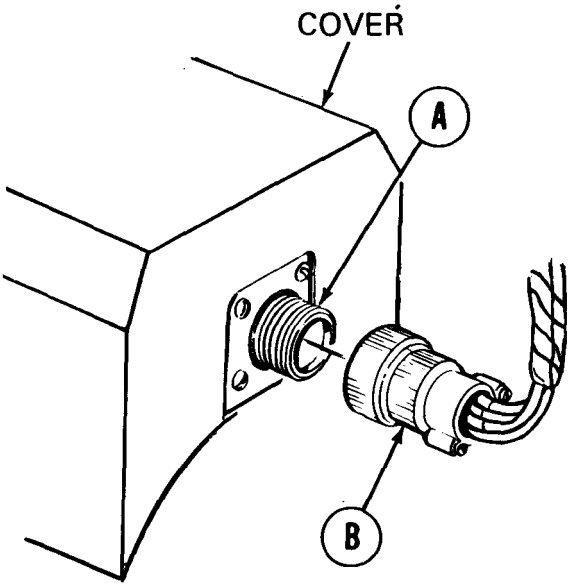
PERSONNEL HEATER ASSEMBLY REPLACEMENT (Sheet 2 of 5)

REMOVAL:

1. Locate electrical connection (A) at cover on personnel heater.

2. Disconnect cable (B).



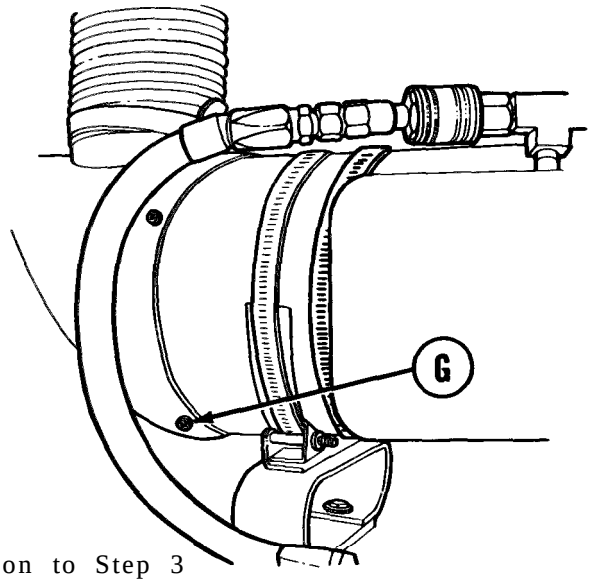


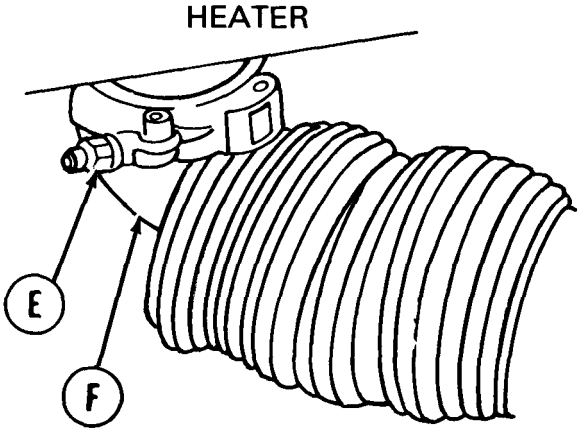
3. Push and pull quick-disconnect coupler (C) to disconnect hose (I)). Position drain pan to catch fuel from hose, if necessary.

4. Using wrench on nut, loosen clamp coupling (E) securing exhaust pipe (F).

5. Remove coupling (E).

6. Separate pipe (F) from heater.





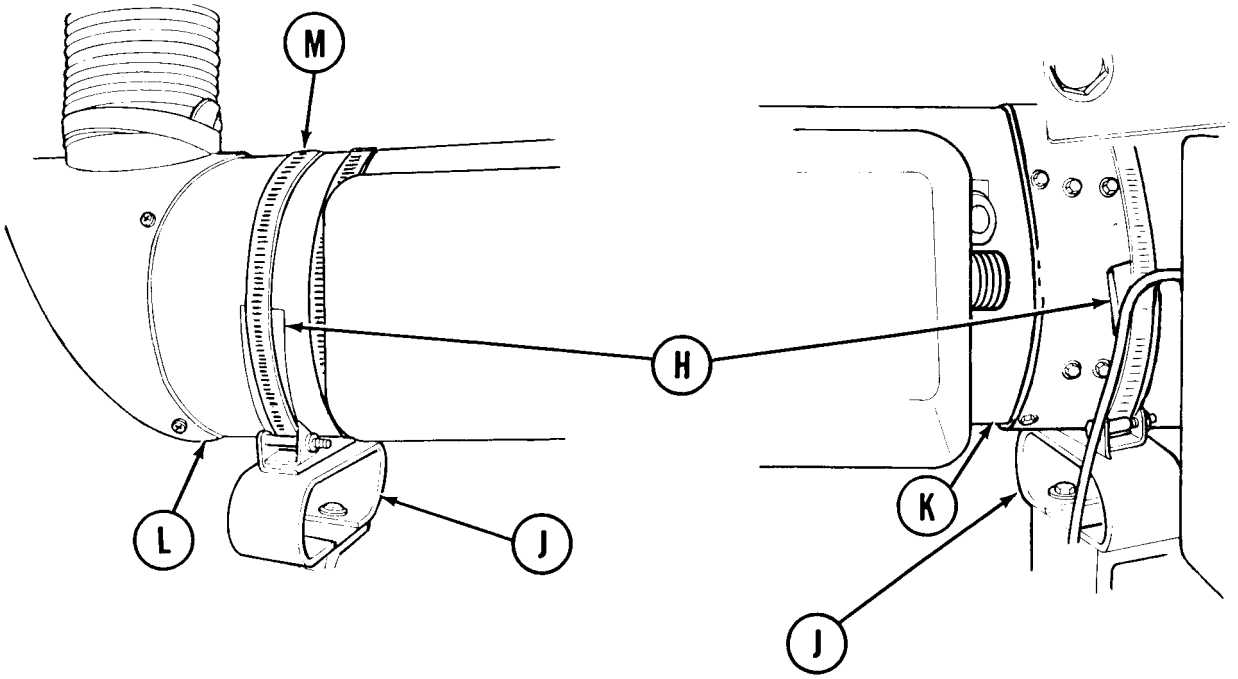
7. Using cross-tip screwdriver, remove four screws and lockwashers (G) securing heater to duct.

Go on to Step 3

TA169592

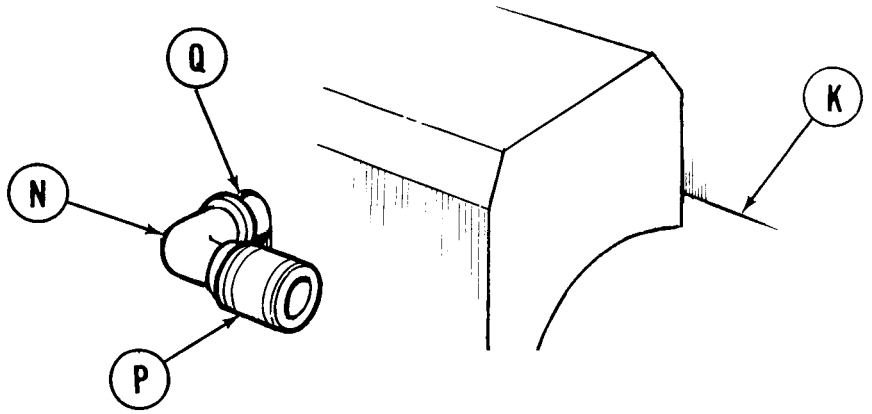
PERSONNEL HEATER ASSEMBLY REPLACEMENT (Sheet 3 of 5)

8. Using flat-tip screwdriver, remove clamps (H) from heater mounting bracket (J).



9. Separate heater (K) from duct (L).

10. Using flat-tip screwdriver, remove clamp and exhaust tube retainer (M).



11. Using pipe wrench, remove elbow (N), quick-disconnect (P), and nipple (Q).

12. Remove personnel heater (K) from vehicle.

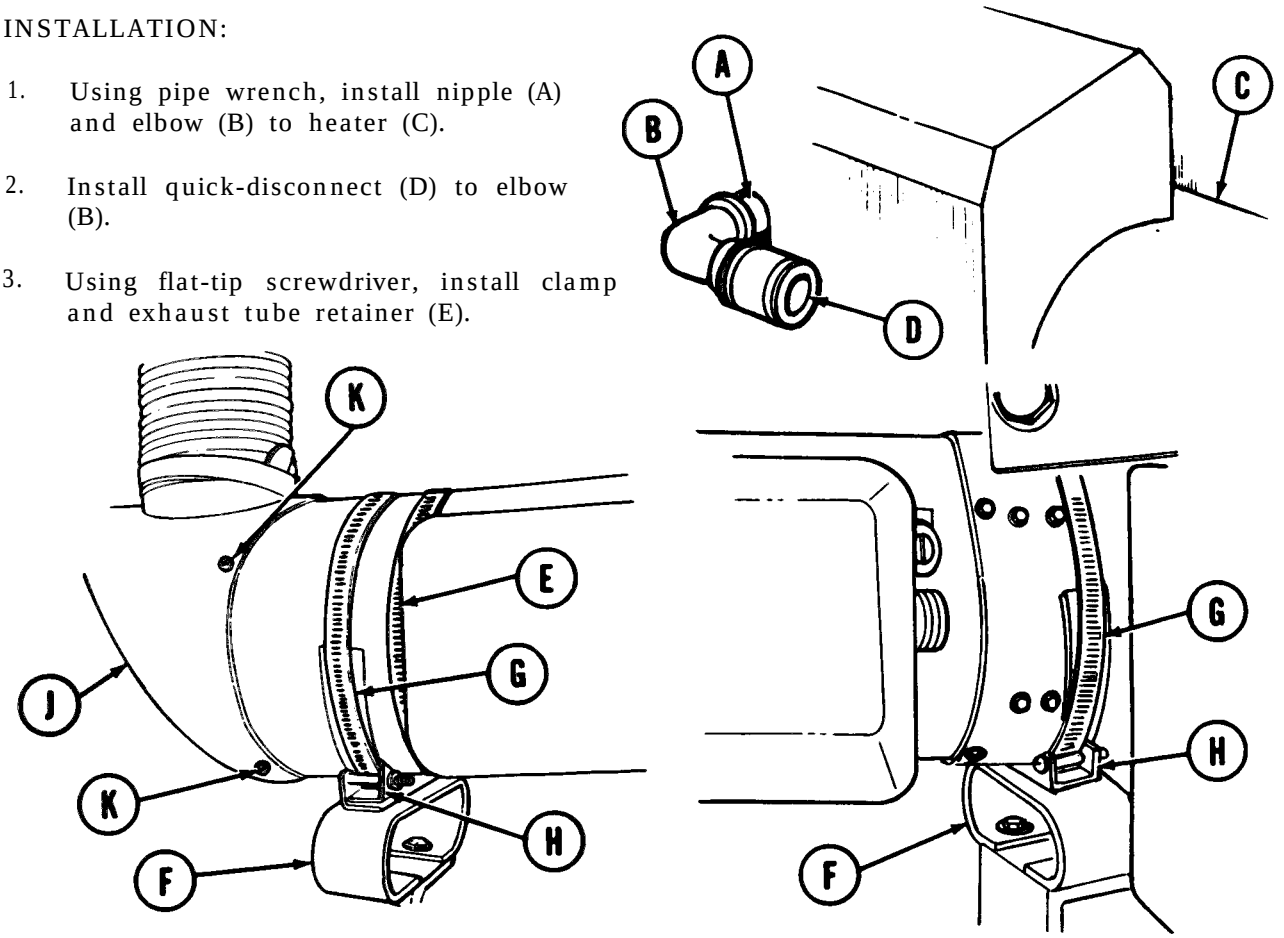
Go on to Sheet 4

TA169593

PERSONNEL HEATER ASSEMBLY REPLACEMENT (Sheet 4 of 5)

INSTALLATION:

1. Using pipe wrench, install nipple (A) and elbow (B) to heater (C).
2. Install quick-disconnect (D) to elbow (B).
3. Using flat-tip screwdriver, install clamp and exhaust tube retainer (E).



4. Position heater (C) on mounting brackets (F) and slide both clamps (G) thru bracket arms (H).
5. Using flat-tip screwdriver, tighten both clamps (G) to secure heater (C) to bracket (F).
6. Position heater (C) to duct (J) and aline screw holes.
7. Using cross-tip screwdriver, install bottom rear and top front screws and lockwashers (K). (Do not tighten screws completely down.)

NOTE

It may be necessary to move heater left or right to install remaining two screws and lockwashers.

8. Using cross-tip screwdriver, install top rear and bottom front screws and lockwashers (K).
9. Using cross-tip screwdriver, tighten four screws (K).

Go on to Sheet 5

TA169594

PERSONNEL HEATER ASSEMBLY REPLACEMENT (Sheet 5 of 5)

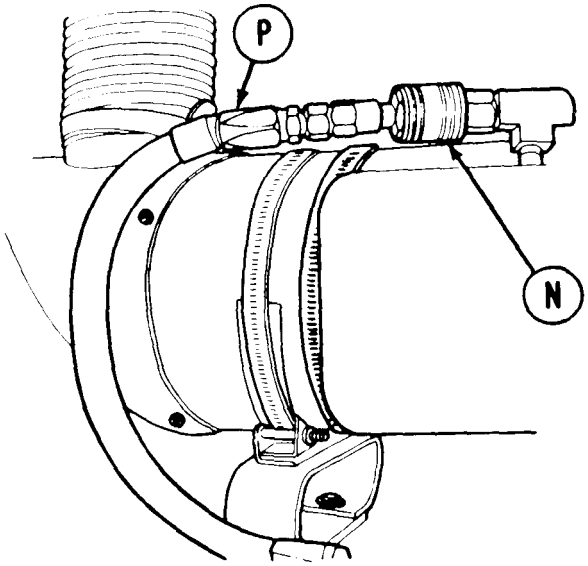
10. Position coupling (L) and clamp coupler (M) on heater (C).

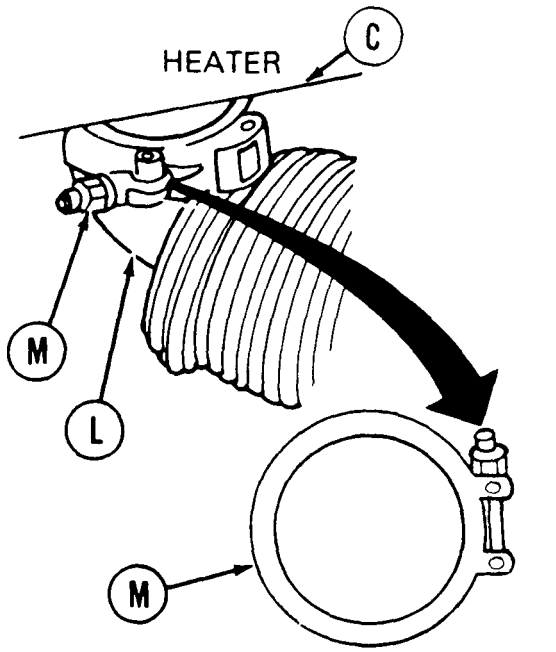
11. Close clamp coupler (M) and, using 7/16 inch wrench, tighten nut to secure exhaust pipe to heater (C).

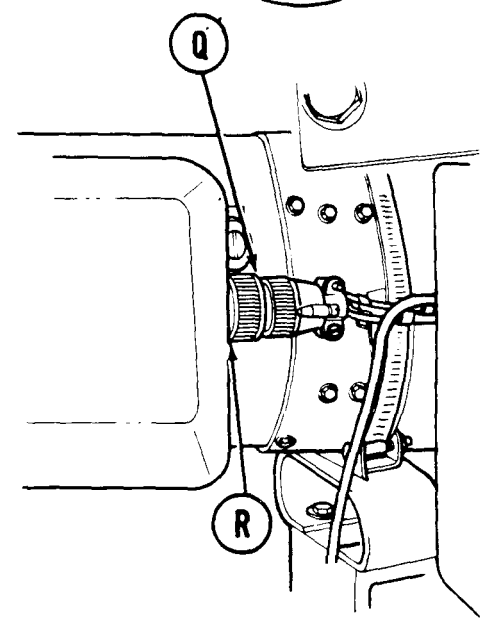
12. Using torque wrench with extension, tighten coupler (M) nut to 60 lb-ft (81 N

13. Make sure all personnel heater connections, especially exhaust pipe, are tight and secure.

14. Push quick-disconnect coupling (N) into fuel hose line (P) to connect line to heater.







15. Aline pins of electrical connector (Q) to holes.

16. Connect harness cable connector (Q) to heater connector (R).

17. Screw coupling (Q) over electrical connection.

18. Open fuel shutoff valve (page 7-252, step 5).

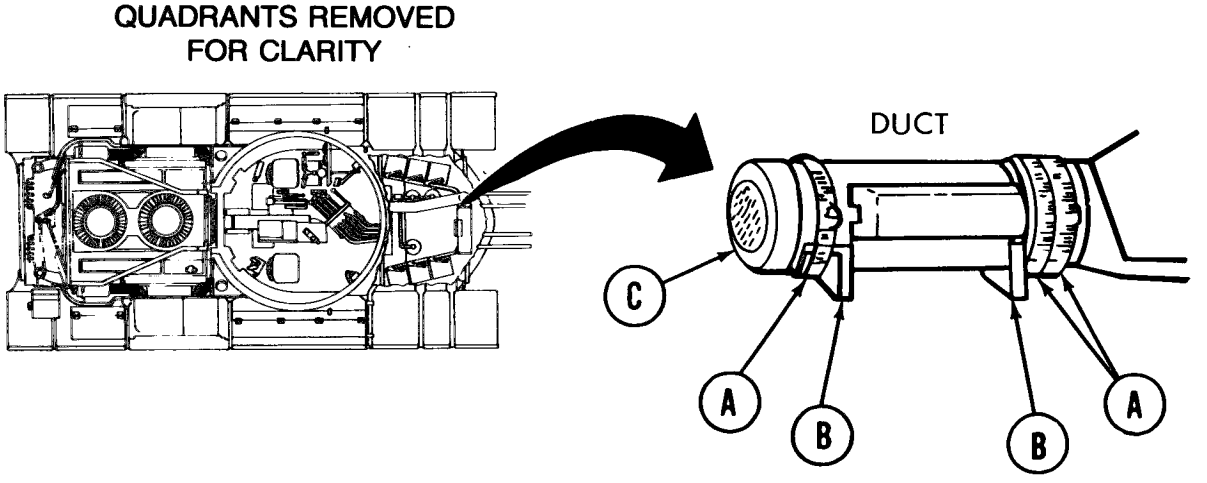
End of Task

All data on pages 18-7 thru 18-14 deleted.

PERSONNEL HEATER MOUNTING CLAMP REPLACEMENT (Sheet 1 of 1)

TOOLS: Flat-tip screwdriver
Metal cutting shears

PRELIMINARY PROCEDURE: Set MASTER HEATER switch to OFF (TM 5-5420-226-10)



REMOVAL:

1. Using screwdriver, remove either one or all three clamps (A), as necessary.
2. If clamps are too rusted or old to remove, use screwdriver and pry clamp away from mounting bracket (B) or heater (C). Then, using shears, cut clamp free.

INSTALLATION

1. Install new clamp (A) around mounting brackets (B) or heater (C), as necessary.
2. Using screwdriver, tighten clamp (A).

End of Task

TA169604

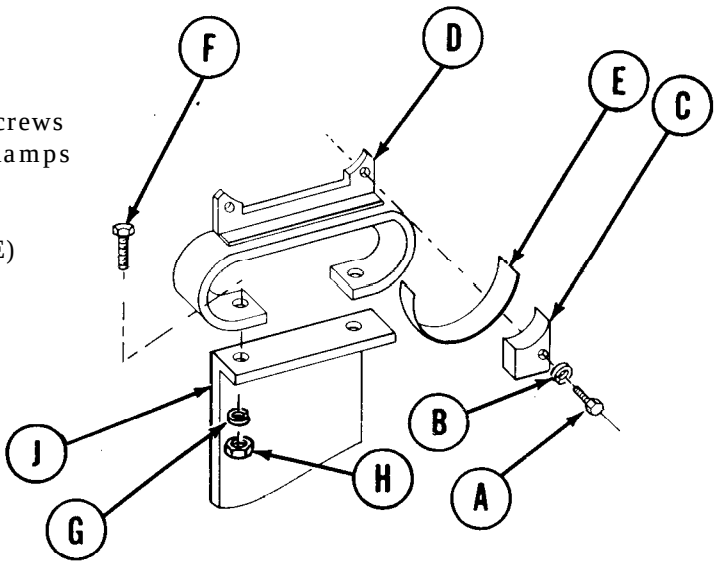
PERSONNEL HEATER MOUNT REPLACEMENT (Sheet 1 of 1)

TOOLS: 7/16 in. combination box and open end wrench
9/16 in. combination box and open end wrench (2 required)

PRELIMINARY PROCEDURE: Remove personnel heater assembly (page 18-2)

REMOVAL:

1. Using 7/16 inch wrench, remove two screws (A) and lockwashers (B) securing two clamps (C) to mount (D).
2. Remove two clamps (C) and segment (E) from mount (D).



3. Using two 9/16 inch wrenches, remove two screws (F), lockwashers (G) and nuts (H) securing mount (D) to support (J).
4. Remove mount (D).

INSTALLATION:

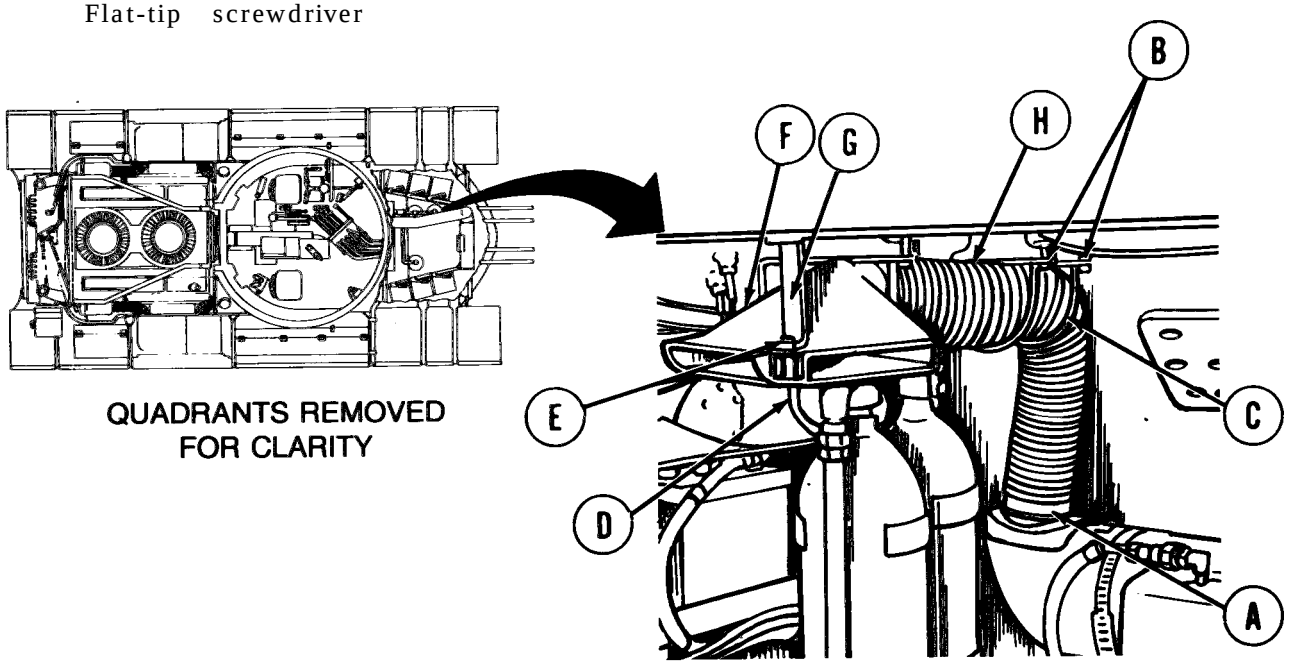
1. Place mount (D) in position on support (J).
2. Using two 9/16 inch wrenches, install two screws (F), lockwashers (G) and nuts (H) securing mount (D) to support (J).
3. Place two clamps (C) and segment (E) in position on mount (D).
4. Using fingers, install two screws (A) and lockwashers (B) securing clamps (C) to mount (D).
5. Using 7/16 inch wrench, tighten screw (A).
6. Install personnel heater assembly (page 18-5).

End of Task

TA169605

PERSONNEL HEATER AIR DUCT OUTLET HOSEANDDEFLECTOR REPLACEMENT (Sheet 1 of 3)

TOOLS: 9/16 in. combination box and open end wrench
9/16 in. socket with l/2 in. drive
7/16 in. socket with l/2 in. drive
Ratchet with l/2 in. drive
7/16 in. open end wrench
Flat-tip screwdriver



QUADRANTS REMOVED FOR CLARITY

REMOVAL:

1. Using screwdriver, loosen hose clamp (A).
2. Using 9/16 inch socket, remove two screws and lockwashers (B) securing clamp (C) to pads.
3. Remove clamp (C).
4. Hold nut (D) with 7/16 inch wrench. Use 7/16 inch socket to remove screw, lockwasher, flat washer, and spacer (E) securing deflector (F) to bracket (G).
5. Pull deflector (F) from hose (H).

Go on to Sheet 2

TA169606

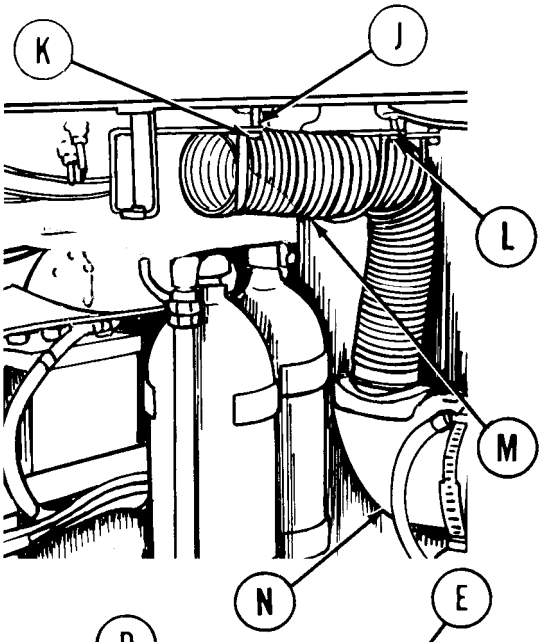
PERSONNEL HEATER AIR DUCT OUTLET HOSE AND DEFLECTOR REPLACEMENT (Sheet 2 of 3)

6. Holding nut (J) with 9/16 inch wrench, use 9/16 inch socket to remove four screws, lockwashers, and nuts (K) securing two clamps (L) to hull brackets.

7. Remove two clamps (L).

8. Gently pull hose (M) free of heater elbow (N).

9. Remove hose clamp (A) from hose (M).



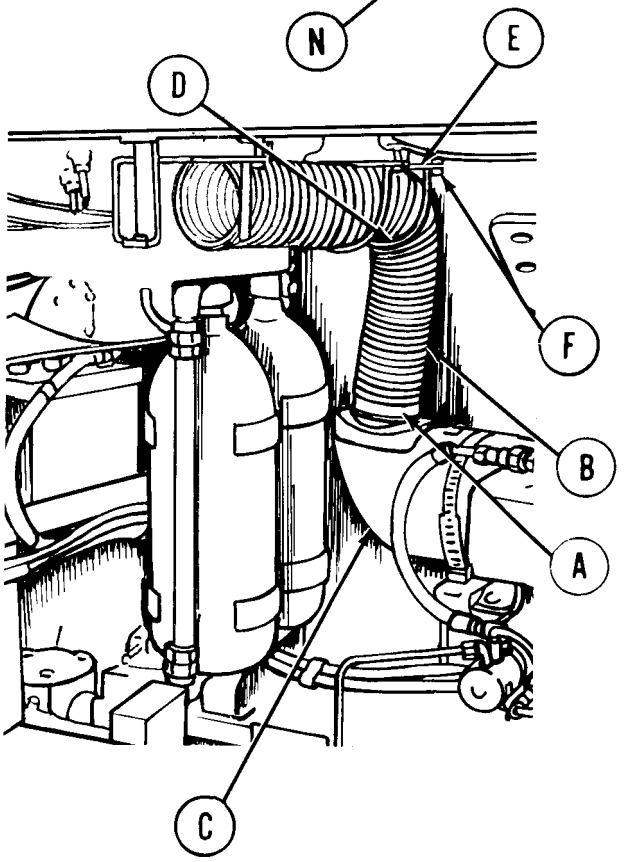
INSTALLATION:

1. Place clamp (A) loosely over hose (B).

2. Install hose (B) loosely on heater elbow (C).

3. Place clamp (D) over hose (B) and position on hull bracket (E).

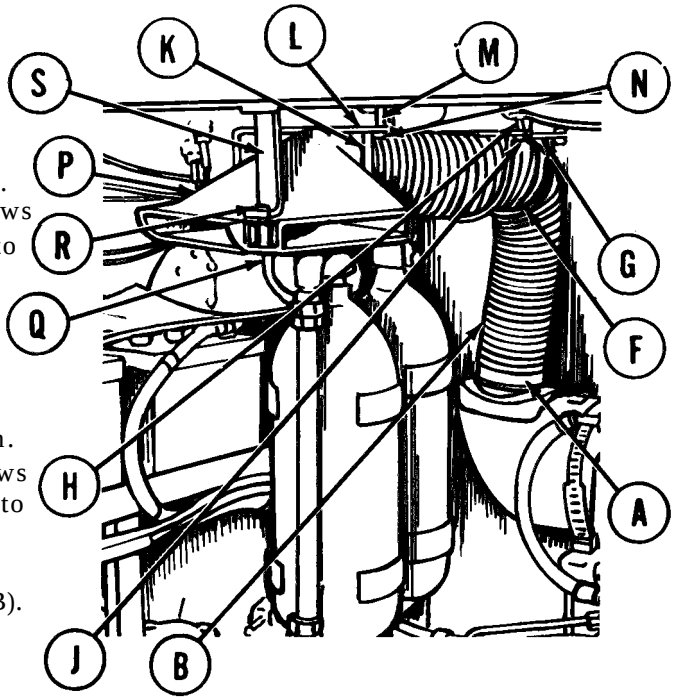
4. Using 9/16 inch socket, install two screws and lockwashers (F) securing clamp (D) to hull bracket (E).



Go on to Sheet 3

TA169607

PERSONNEL HEATER AIR DUCT OUTLET HOSE AND DEFLECTOR REPLACEMENT (Sheet 3 of 3)



5. Place clamp (F) in position on hose (B) and hull bracket (G).
6. Hold two nuts (H) with 9/16 inch wrench. Use 9/16 inch socket to install two screws and lockwashers (J) securing clamp (F) to hull bracket (G).
7. Place clamp (K) in position on hose (B) and hull bracket (L).
8. Hold two nuts (M) with 9/16 inch wrench. Use 9/16 inch socket to install two screws and lockwashers (N) securing clamp (K) to hull bracket (L).
9. Place deflector (P) in position on hose (B).
10. Hold nut (Q) with 7/16 inch wrench. Use 7/16 inch socket to install screw, lockwasher, flat washer, and spacer (R) securing deflector (P) to bracket (S).
11. Using screwdriver, tighten clamp (A).

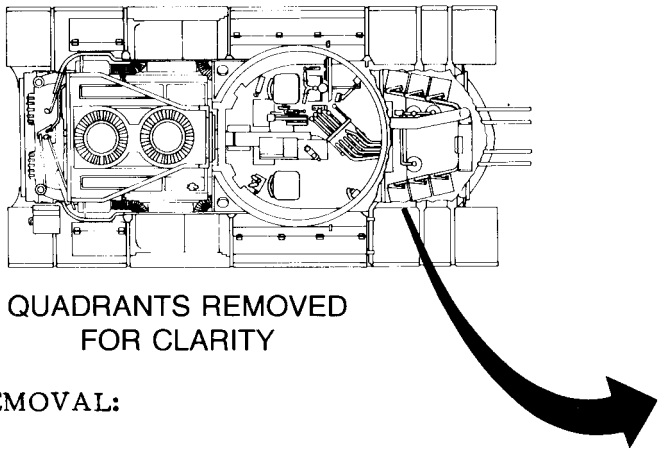
End of Task

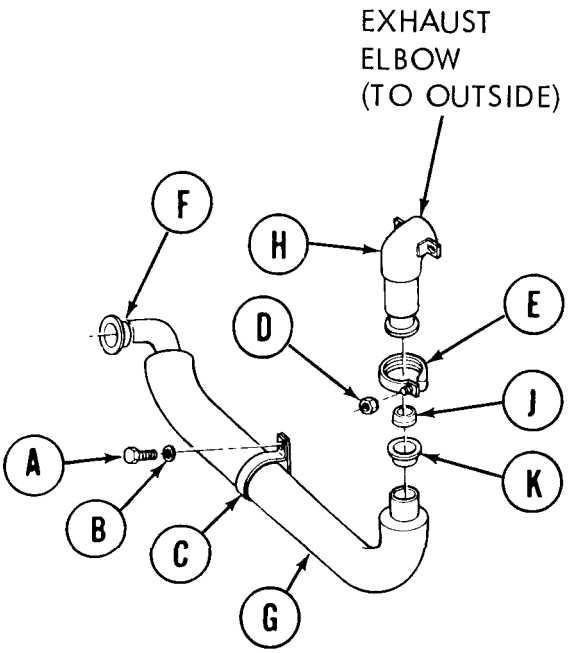
TA169608

INNER EXHAUST PIPE REPLACEMENT (Sheet 1 of 2)

TOOLS: 5 in. extension with 1/2 in. drive
Ratchet with 1/2 in. drive
7/16 in. combination box and open end wrench
Hammer
Chisel
9/16 in. socket with 1/2 in. drive

PRELIMINARY PROCEDURE: Remove personnel heater (page 18-2)





REMOVAL:

1. Using socket with extension, remove screw (A) and lockwasher (B) securing clamp (C) to hull.

2. Using wrench, remove nut (D) from clamp coupling (E). Remove clamp (E).

3. Remove pipe (F) with insulation (G) from elbow (H).

NOTE

If sleeve (J) and flange (K) "freeze" on pipes, throw entire assembly away.

4. Using hammer and chisel, drive sleeve (J) and flange (K) off exhaust elbow end of pipe (F).

5. Remove clamp (C) and insulation (G) from pipe (F).

Go on to Sheet 2

TA169609

INNER EXHAUST PIPE REPLACEMENT (Sheet 2 of 2)

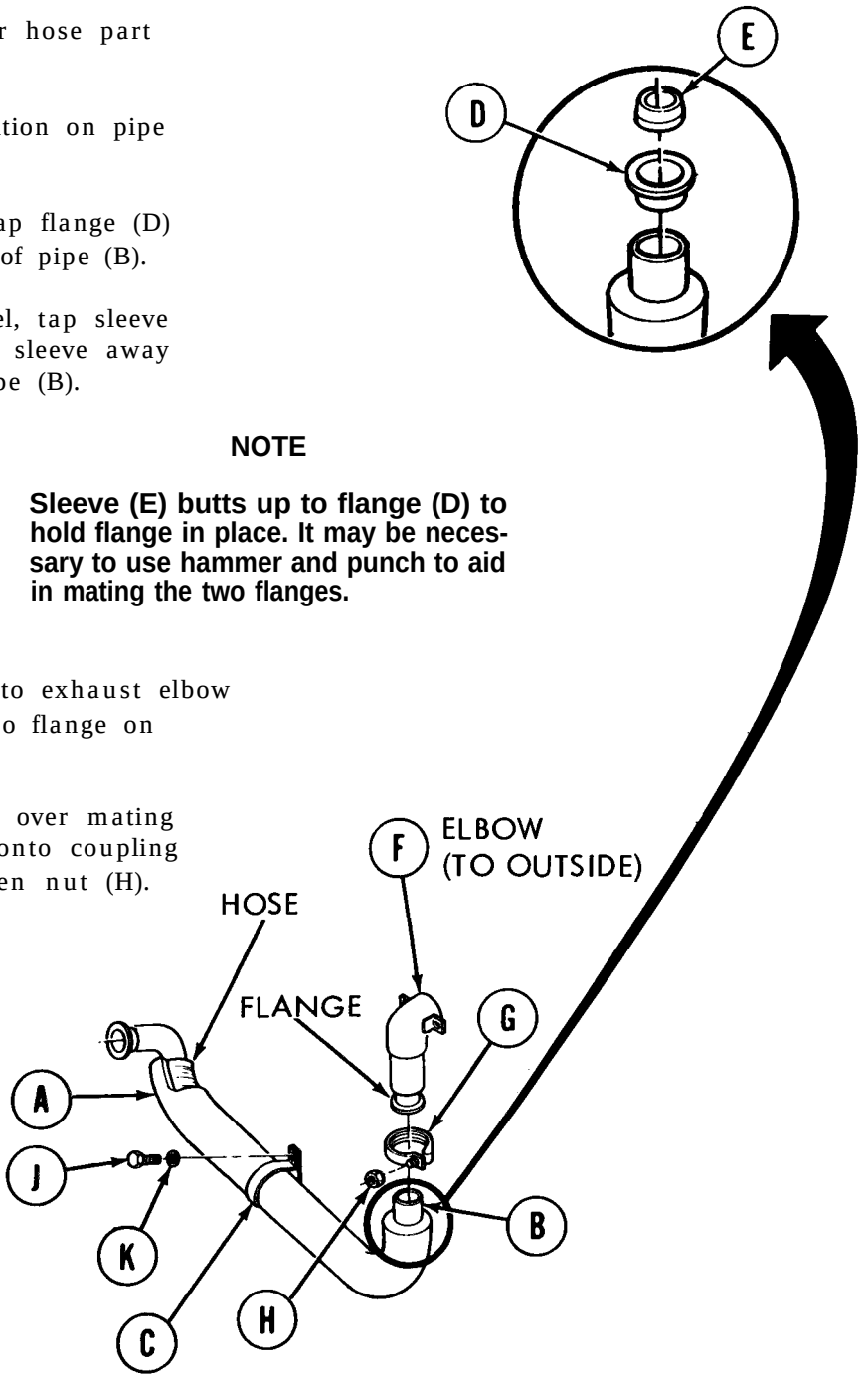
INSTALLATION

1. Install insulation (A) over hose part of pipe (B).
2. Slide clamp (C) into position on pipe (B).
3. Using hammer, lightly tap flange (D) onto exhaust elbow end of pipe (B).
4. Using hammer and chisel, tap sleeve (E), with tapered end of sleeve away from flange (D), onto pipe (B).

NOTE

Sleeve (E) butts up to flange (D) to hold flange in place. It may be necessary to use hammer and punch to aid in mating the two flanges.

5. Position heater pipe (B) to exhaust elbow (F) so flange (D) mates to flange on elbow.
6. Slide clamp coupling (G) over mating flanges. Install nut (H) onto coupling (G). Using wrench, tighten nut (H).



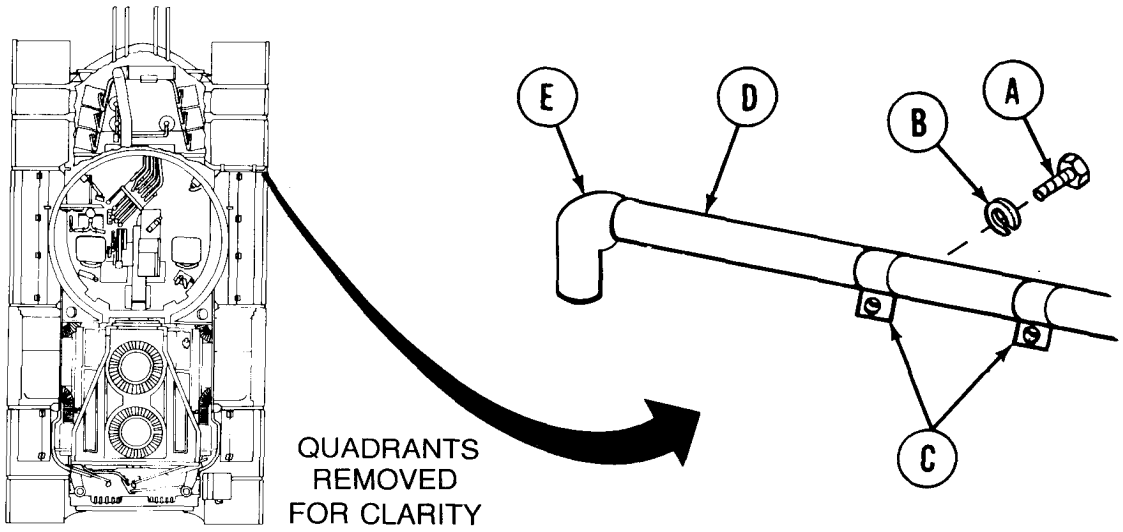
7. Using socket with extension, install screw (J) with lockwasher (K) securing clamp (C) to hull.
8. Install personnel heater (page 18-5).

End of Task

TA169610

OUTER EXHAUST TUBE REPLACEMENT (Sheet 1 of 1)

TOOLS: 9/16 in. socket with 1/2 in. drive
Ratchet with 1/2 in. drive
Hammer



REMOVAL:

1. Using socket, remove two screws (A) and lockwashers (B) securing two clamps (C) to hull. Throw lockwashers away.
2. Using hands, pull exhaust tube (D) from elbow (E).
3. Using hammer, tap two clamps (C) off exhaust tube (D).

INSTALLATION:

1. Using hammer, tap two clamps (C) into position on exhaust tube (D).
2. Using hands, push exhaust tube (D) into position in elbow (E).
3. Using socket, install two screws (A) and lockwashers (B) securing two clamps (C) to hull.

End of Task

TA169611

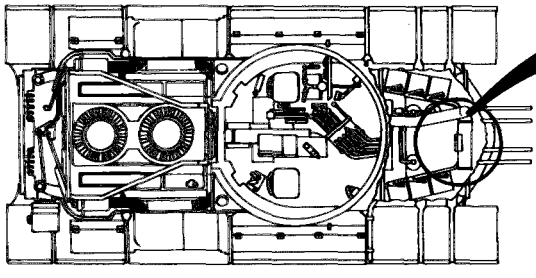
HEATER FUEL PUMP REPLACEMENT (Sheet 1 of 3)

TOOLS: 9/16 in. open end wrench
5/8 in. open end wrench
7/16 in. socket with 1/2 in. drive
Ratchet with 1/2 in. drive
5 in. extension with 1/2 in. drive
8 in. adjustable wrench

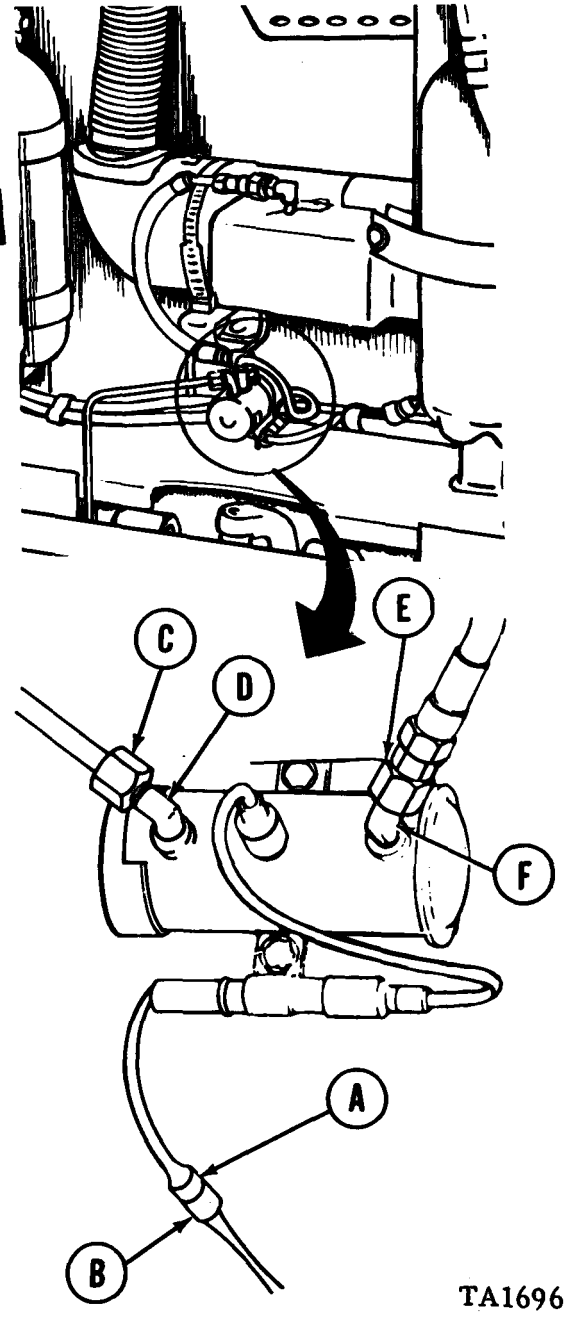
SUPPLIES: Plastic plugs
Container
Chalk

REFERENCE: TM 5-5420-226-10

PRELIMINARY PROCEDURE: Turn HEATER MASTER switch to OFF (TM 5-5420-226-10)



QUADRANTS REMOVED FOR CLARITY



TA169612

REMOVAL:

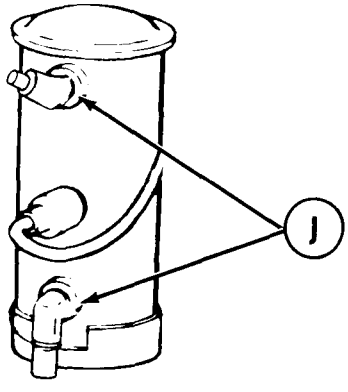
1. Pull electrical plug (A) from harness connector (B).
2. Using 9/16 inch open end wrench, loosen tube nut (C).
3. Disconnect tube (C) from elbow (D).
4. Catch any excess fuel in container.
5. Using 5/8 inch open end wrench, loosen hose nut (E).
6. Disconnect hose (E) from elbow (F).
7. Plug both fuel lines (C) and (E).

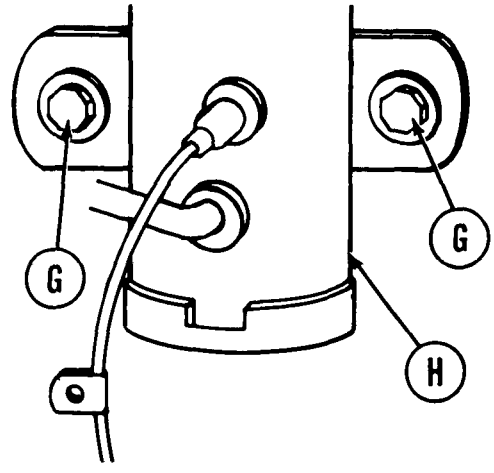
Go on to Sheet 2

HEATER FUEL PUMP REPLACEMENT (Sheet 2 of 3)

8. Using socket with extension, remove two screws, lockwashers, and flat washers (G) securing fuel pump (H) to hull.

9. Remove fuel pump (H) from vehicle.





10. Using adjustable wrench, remove elbows (J). Using chalk, mark on pump direction elbows are pointing.

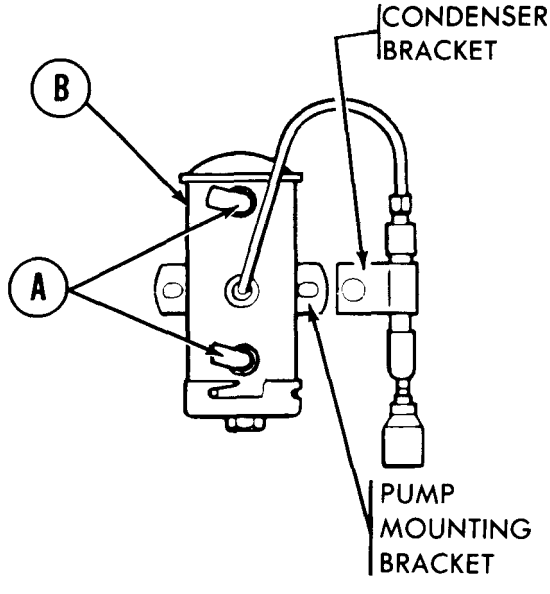
INSTALLATION:

1. Using adjustable wrench, install two elbows (A) to pump (B).

NOTE

When installing heater pump, make sure cable condenser bracket is secured with pump mounting bracket.

2. Mount condenser bracket and fuel pump (B) to hull.



Go on to Sheet 3

TA169613

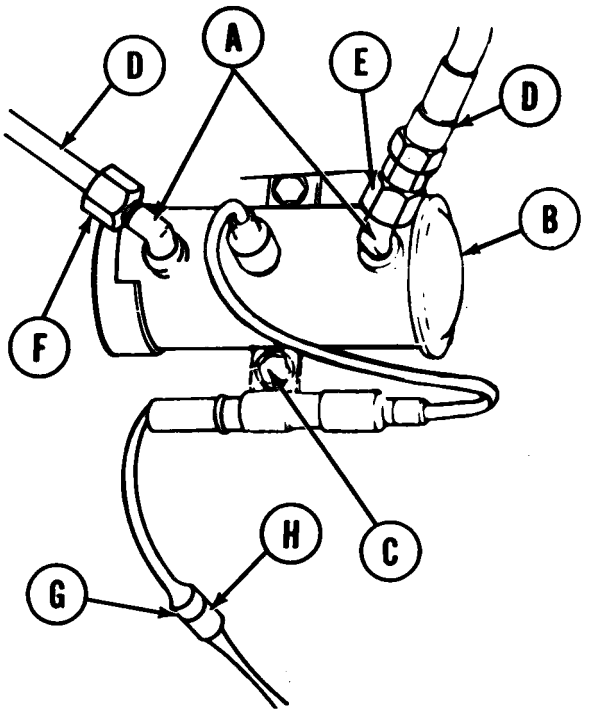
HEATER FUEL PUMP REPLACEMENT (Sheet 3 of 3)

3. Using socket and extension, install two screws, lockwashers, and flat washers (C) securing fuel pump (B) to hull.

4. Remove two plugs from fuel lines (D).

5. Using 5/8 inch wrench, install tube nut (E) to elbow (A).

6. Using 9/16 inch wrench, install tube nut (F) to elbow (A).



7. Connect electrical connector (G) to harness connector (H).

8. Test heater for operation (TM 5-5420-226-10).

End of Task

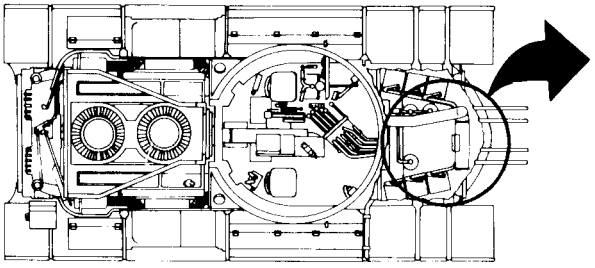
TA169614

PERSONNEL HEATER FUEL LINE HOSE AND QUICK-DISCONNECT COUPLING ASSEMBLY REPLACEMENT (Sheet 1 of 2)

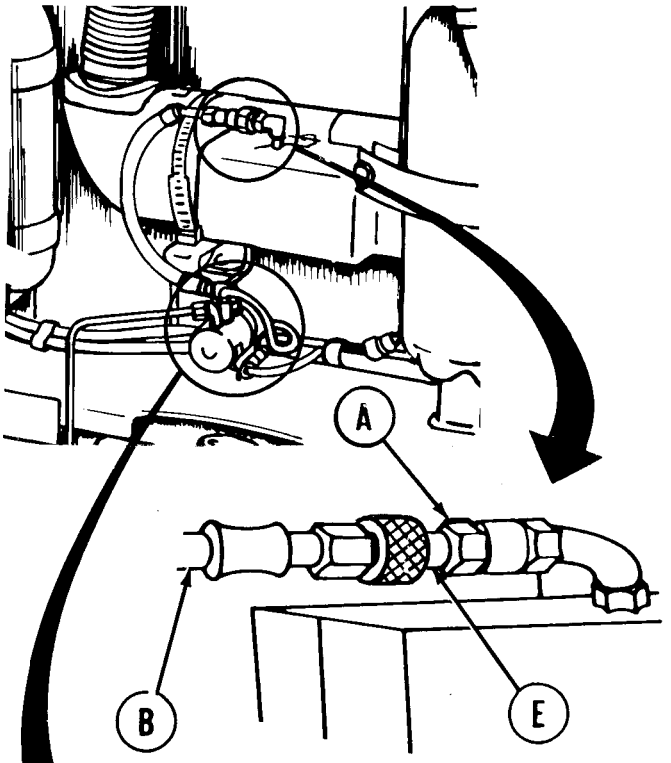
TOOLS: 5/8 in. open end wrench (2 required)

SUPPLIES: Plugs
Rags (Item 12, Appendix D)
Container

PRELIMINARY PROCEDURE: Close fuel shutoff valve (TM 5-5420-226-10)

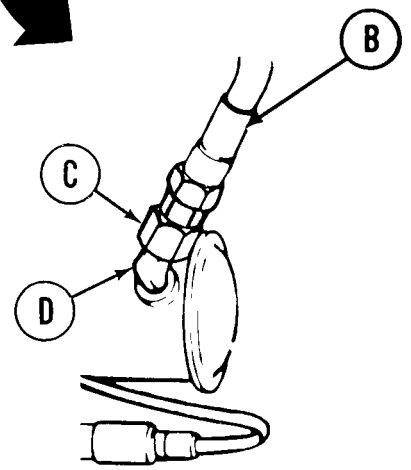


QUADRANTS REMOVED FOR CLARITY



REMOVAL:

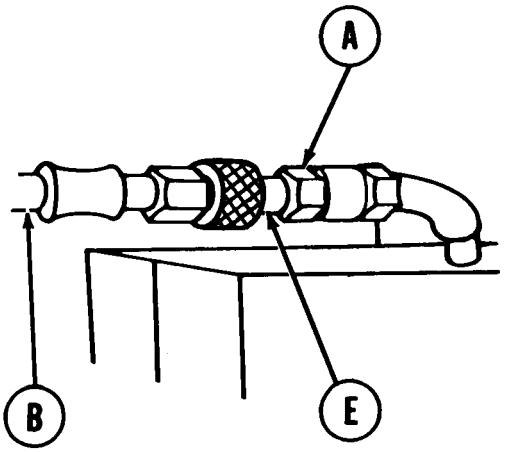
1. Push and pull in quick-disconnect coupler nut (A) to disconnect hose (B) at heater.
2. Using wrench, loosen nut (C) to disconnect hose (B) at fuel pump elbow (D). Plug elbow (D).
3. Using container to catch extra fuel, remove hose (B).
4. Using two wrenches, disconnect coupling assembly (E) from hose assembly (B). Plug hose (B).



Go on to Sheet 2

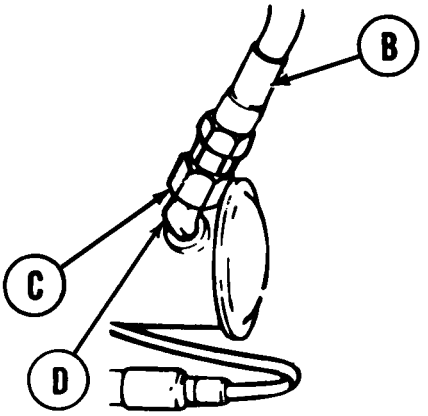
TA169615

PERSONNEL HEATER FUEL LINE HOSE AND QUICK-DISCONNECT COUPLING ASSEMBLY REPLACEMENT (Sheet 2 of 2)



INSTALLATION:

1. Using two wrenches, install coupling assembly (A) on hose (B).
2. Install hose nut (C) on fuel pump elbow (D).
3. Using wrench, tighten hose nut (C).
4. Push quick-disconnect coupling assembly (E) into elbow on heater assembly.
5. Open fuel shutoff valve (TM 5-5420-226-10).



End of Task

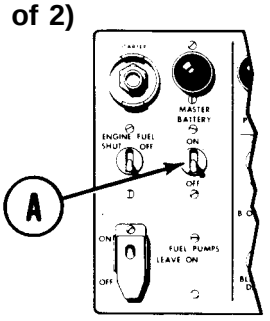
TA169616

CHAPTER 18.1

SMOKE GRENADE LAUNCHER MAINTENANCE

INDEX

SMOKE GRENADE POWER CONTROL BOX REPLACEMENT (Sheet 1 of 2)



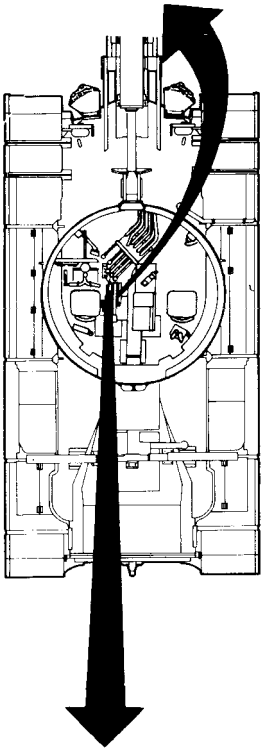
TOOLS: 7/16 in. combination box and open end wrench (2 required)
Slip joint pliers, conduit style, with plastic jaw inserts

SUPPLIES: Lockwashers (2 required)

REMOVAL:

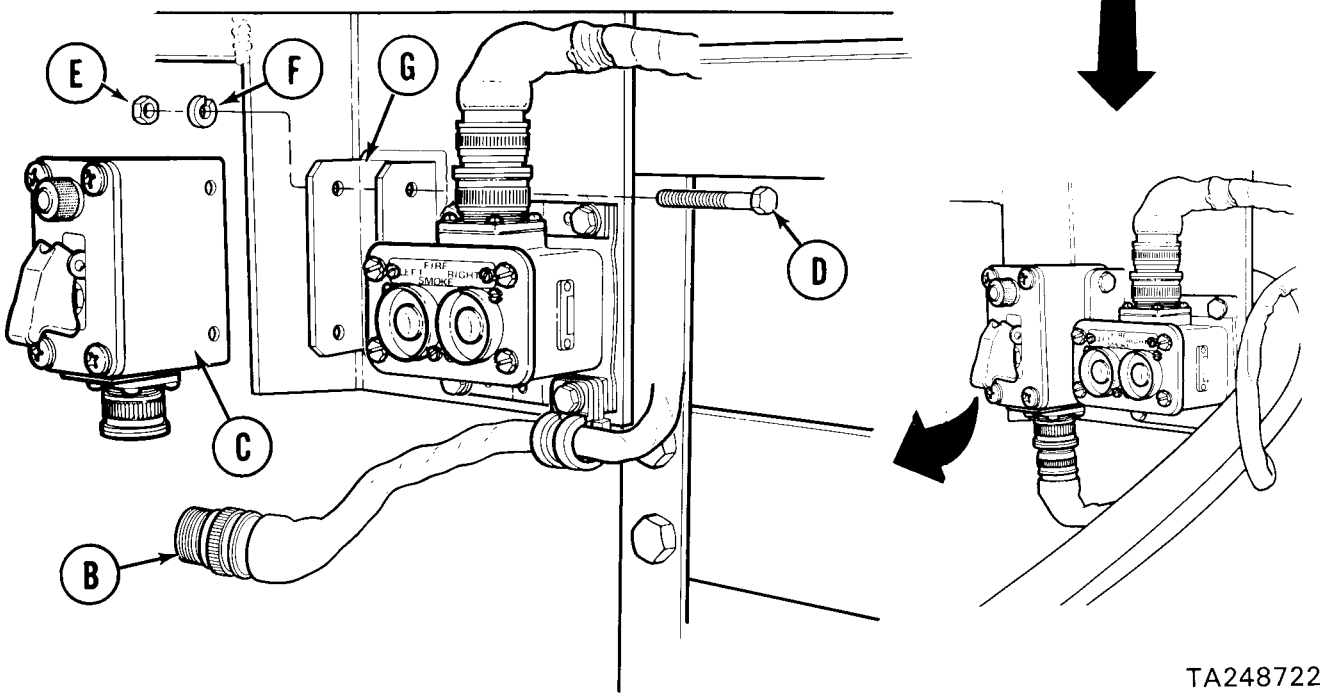
WARNING

Make sure there are no smoke grenades in dischargers. Accidental firing of grenade could hurt or kill you.



1. Set MASTER BATTERY switch (A) to OFF.
2. Using pliers, disconnect electrical connector (B) from power box (C).
3. Using one wrench to hold screw (D) and other wrench to turn nut (E), remove two screws (D), lockwashers (F), and nuts (E) securing box (C) to bracket (G).
4. Remove box (C) from bracket (G).

Go on to Sheet 2



TA248722

SMOKE GRENADE POWER CONTROL BOX REPLACEMENT (Sheet 2 of 2)

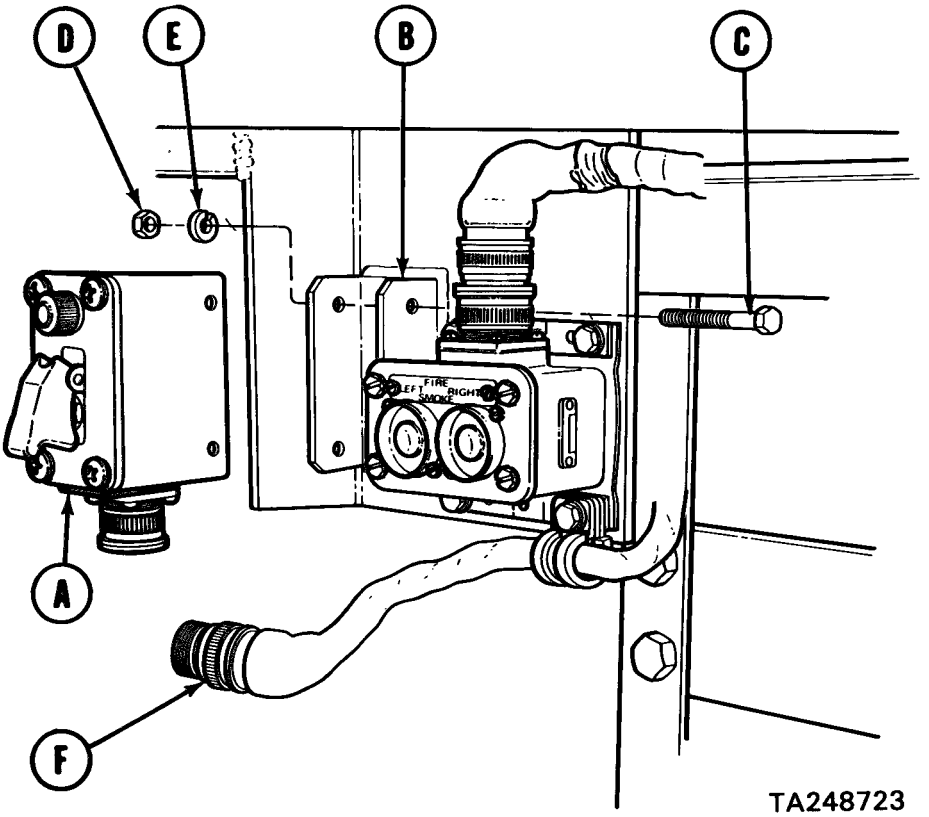
INSTALLATION:

WARNING

Make sure there are no smoke grenades in dischargers. Accidental firing of grenade could hurt or kill you.

1. Put box (A) in position on bracket (B). Aline holes in box (A) with holes in bracket (B).
2. Using one wrench to hold screw (C) and other wrench to turn nut (D), install and tighten two screws (C), lockwashers (E), and nuts (D).
3. Connect electrical connector (F) to box (A).
4. Perform smoke grenade launcher functional check (page 18.1-30).

End of Task



SMOKE GRENADE PUSHBUTTON UNIT REPLACEMENT AND REPAIR (Sheet 1 of 2)

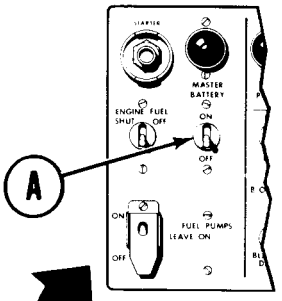
TOOLS: 7/16 in. socket with 3/8 in. drive
5 in. extension with 3/8 in. drive
Ratchet with 3/8 in. drive
Slip joint pliers, conduit style, with plastic jaw inserts

SUPPLIES: Lockwashers (4 required)

REMOVAL:

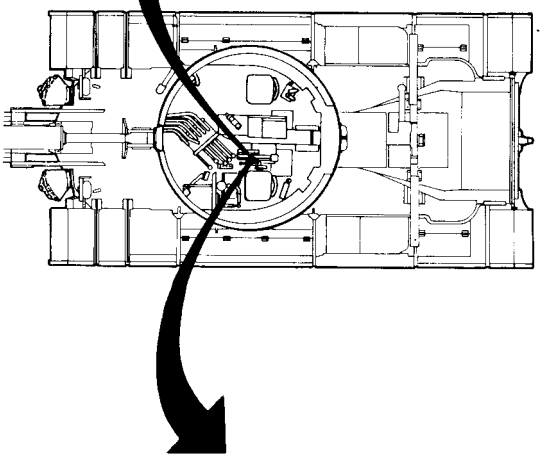
WARNING

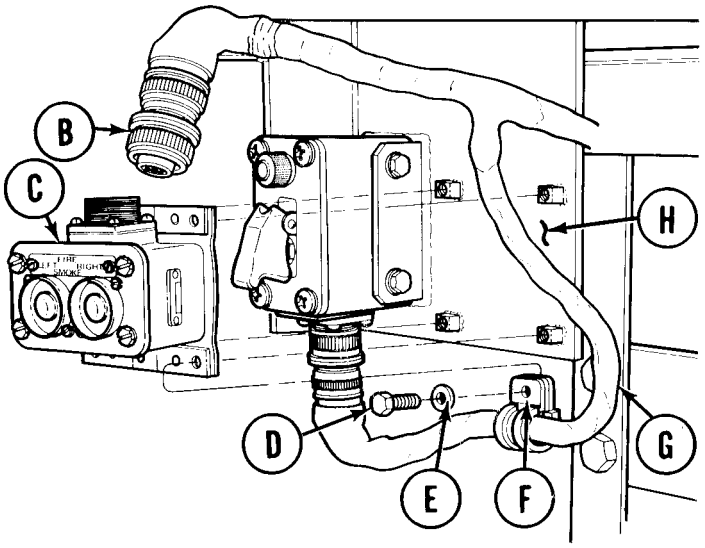
Make sure there are no smoke grenades in dischargers. Accidental firing of grenade could hurt or kill you.

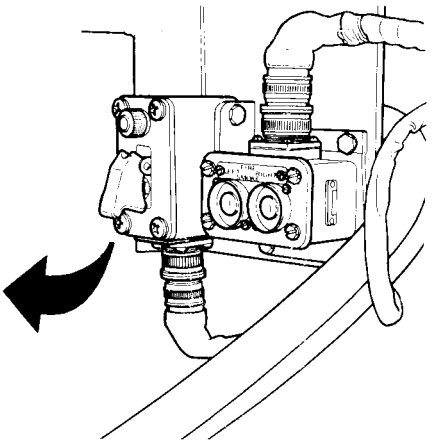


1. Set MASTER BATTERY switch (A) to OFF.
2. Using pliers, disconnect electrical connector (B) from pushbutton unit (C).
3. Using socket, extension, and ratchet, remove screw (D) and lockwasher (E) securing clamp (F) and harness lead (G) to pushbutton unit (C) and bracket (H). Remove three other screws (D) and lockwashers (E) securing unit (C) to bracket (H).
4. Remove unit (C) from bracket (H).

Go on to Sheet 2







TA248724

SMOKE GRENADE PUSHBUTTON UNIT REPLACEMENT AND REPAIR (Sheet 2 of 2)

REPAIR: Refer to TM 3-1040-266-20&P for procedure to repair Pushbutton Unit.

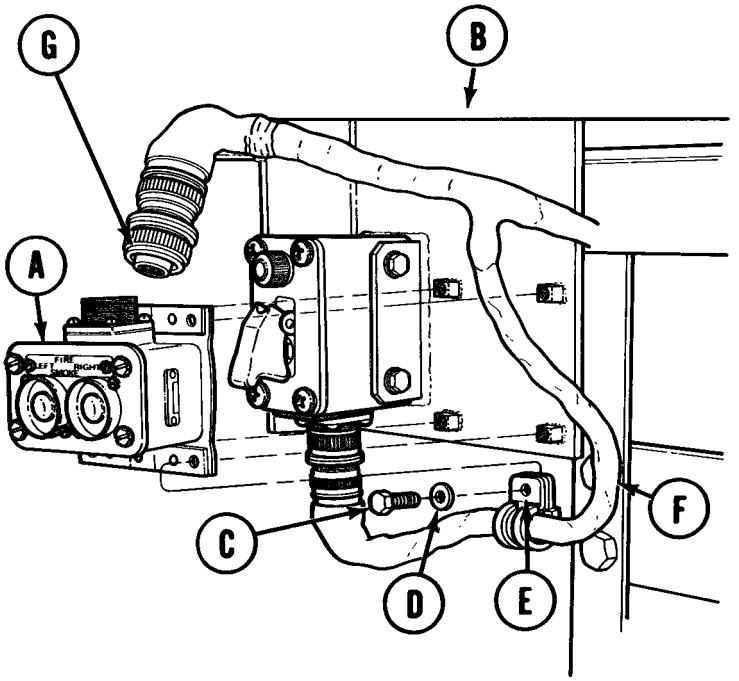
INSTALLATION:

WARNING

Make sure there are no smoke grenades in dischargers. Accidental firing of grenade could hurt or kill you.

1. Put pushbutton unit (A) in position on bracket (B). Aline unit mounting holes with bracket mounting holes.
2. Using socket, extension, and ratchet, put in but do not tighten screw (C) and lockwasher (D) securing clamp (E) and harness lead (F) to pushbutton unit (A) and bracket (B). Put in other three screws (C) and lockwashers (D). Tighten all four screws (C).
3. Connect electrical connector (G) to pushbutton unit (A).
4. Perform smoke grenade launcher functional check (page 18.1-30).

End of Task



TA248725

SMOKE GRENADE CREW COMPARTMENT WIRING HARNESS ASSEMBLY REPLACEMENT (Sheet 1 of 6)

PROCEDURE INDEX

TOOLS: 7/16 in. socket with 3/8 in. drive
5 in. extension with 3/8 in. drive
Ratchet with 3/8 in. drive
Slip joint pliers, conduit style, with plastic jaw inserts

SUPPLIES: Lockwashers (10 required)

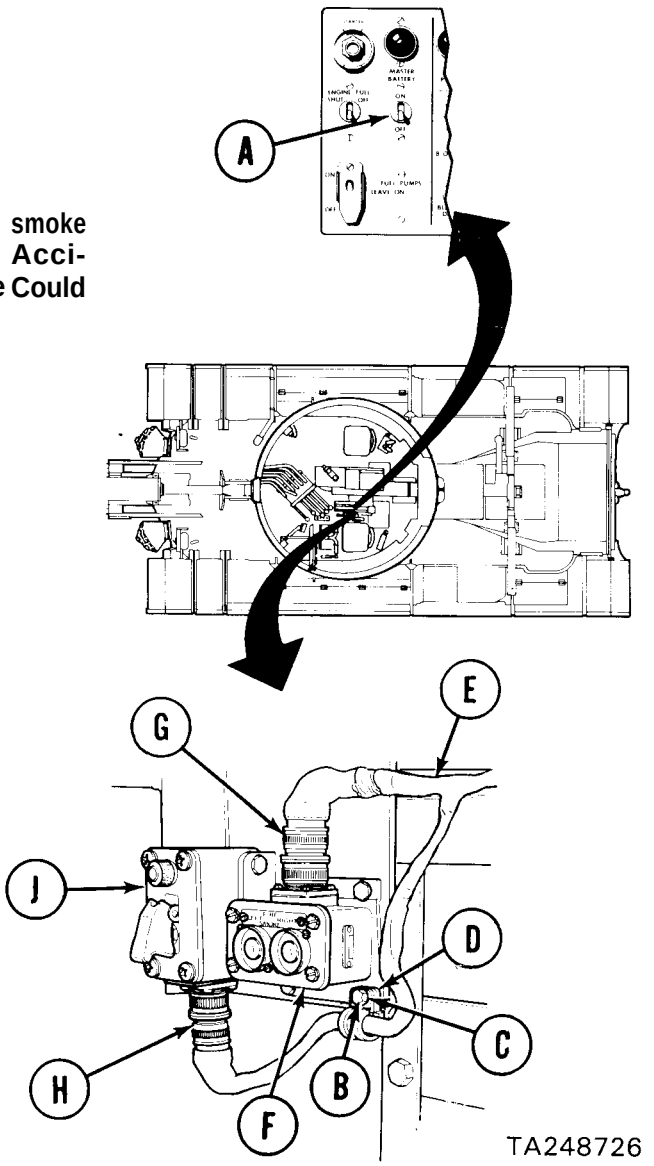
REMOVAL:

WARNING

Make sure there are no smoke grenades in dischargers. Accidental firing of grenade Could hurt or kill you.

1. Set MASTER BATTERY switch (A) to OFF.
2. Using socket, extension, and ratchet, remove screw (B) and lockwasher (C) securing clamp (D) and crew compartment harness assembly (E) to pushbutton unit (F).
3. Using pliers, disconnect electrical connector (G) from pushbutton unit (F) and electrical connector (H) from power control box (J).

Go on to Sheet 2



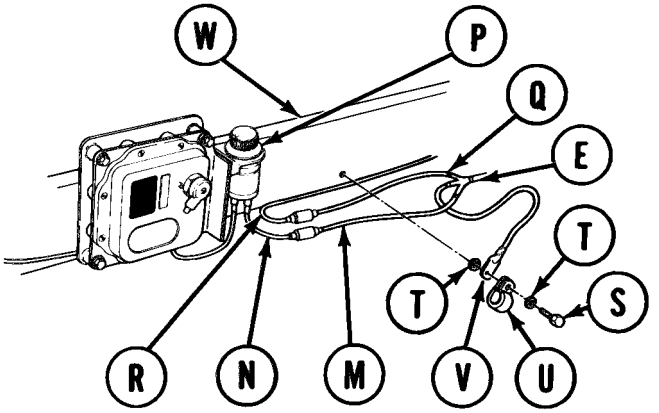
SMOKE GRENADE CREW COMPARTMENT WIRING HARNESS ASSEMBLY REPLACEMENT (Sheet 2 of 6)

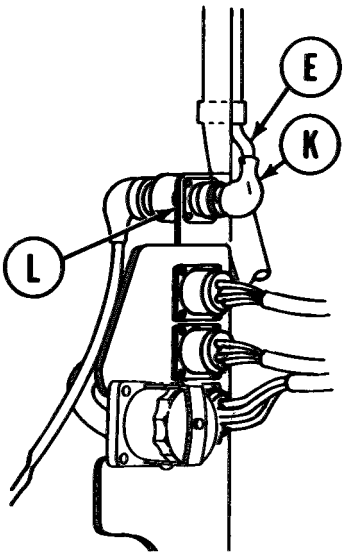
4. Using pliers, disconnect electrical connector (K) of' crew compartment harness assembly (E) from basket disconnect (L).

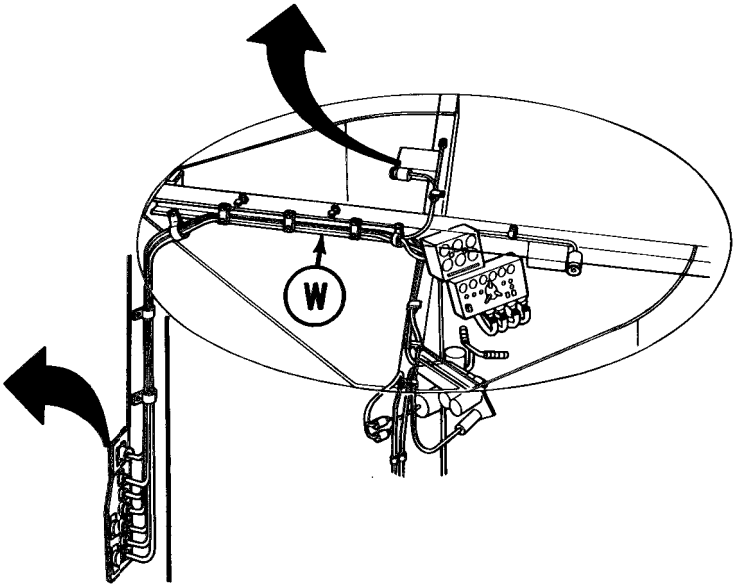
5. Using fingers, disconnect lead (M) of harness (E) from lead (N) of dome-light rheostat (P). Disconnect harness lead (Q) from CKT 138 power lead (R).

6. Using socket, extension, and ratchet remove screw (S) and two lockwashers (T) securing clamp (U), ground lead (V), and leads (M) and (Q) of harness (E) to overhead crossbeam (W).

Go on to Sheet 3







TA248727

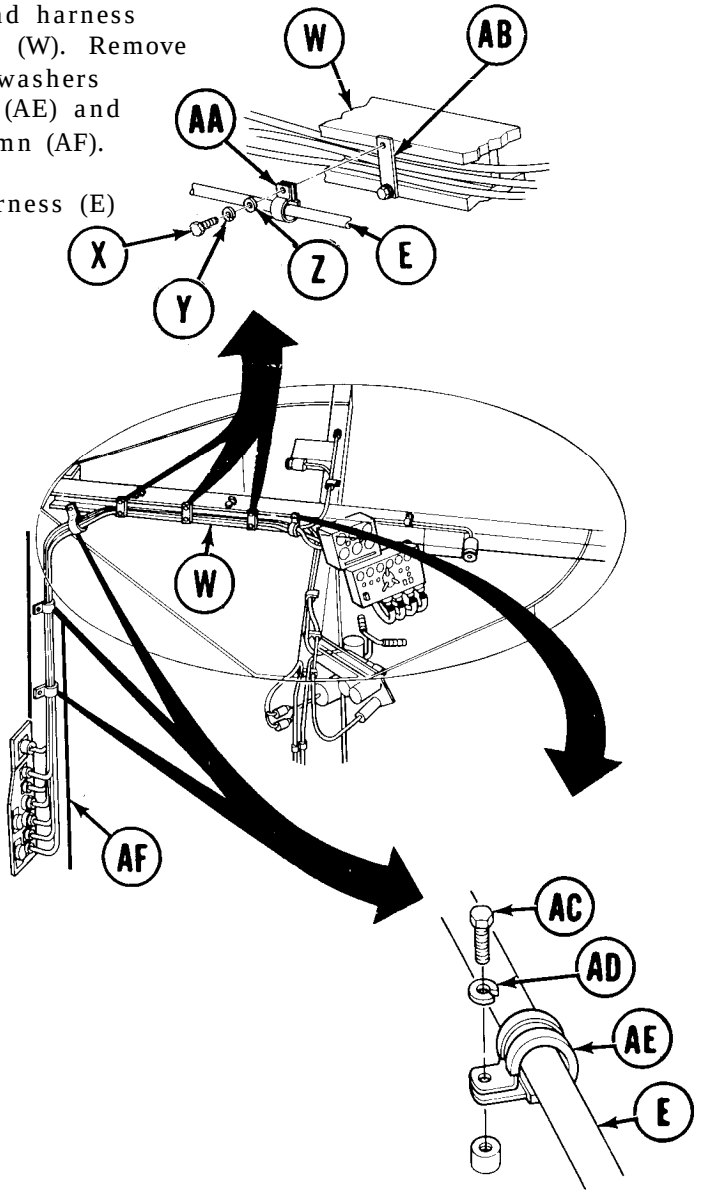
SMOKE GRENADE CREW COMPARTMENT WIRINGHARNESS ASSEMBLY REPLACEMENT (Sheet 3 of 6)

7. Using socket, extension, and ratchet, remove three screws (X), three lockwashers (Y), and three washers(Z) securing three clamps (AA) and harness (E) to overhead crossbeam (W) at three existing straps (AB).

8. Using socket, extension, and ratchet, remove one screw (AC) and lockwasher (AD) securing clamp (AE) and harness (E) to overhead crossbeam (W). Remove three screws (AC) and lockwashers (AD) securing three clamps (AE) and harness (E) to support column (AF).

9. Take crew compartment harness (E) out of vehicle.

Go on to Sheet 4



TA248728

SMOKE GRENADE CREW COMPARTMENT WIRING HARNESS ASSEMBLY REPLACEMENT (Sheet 4 of 6)

INSTALLATION:

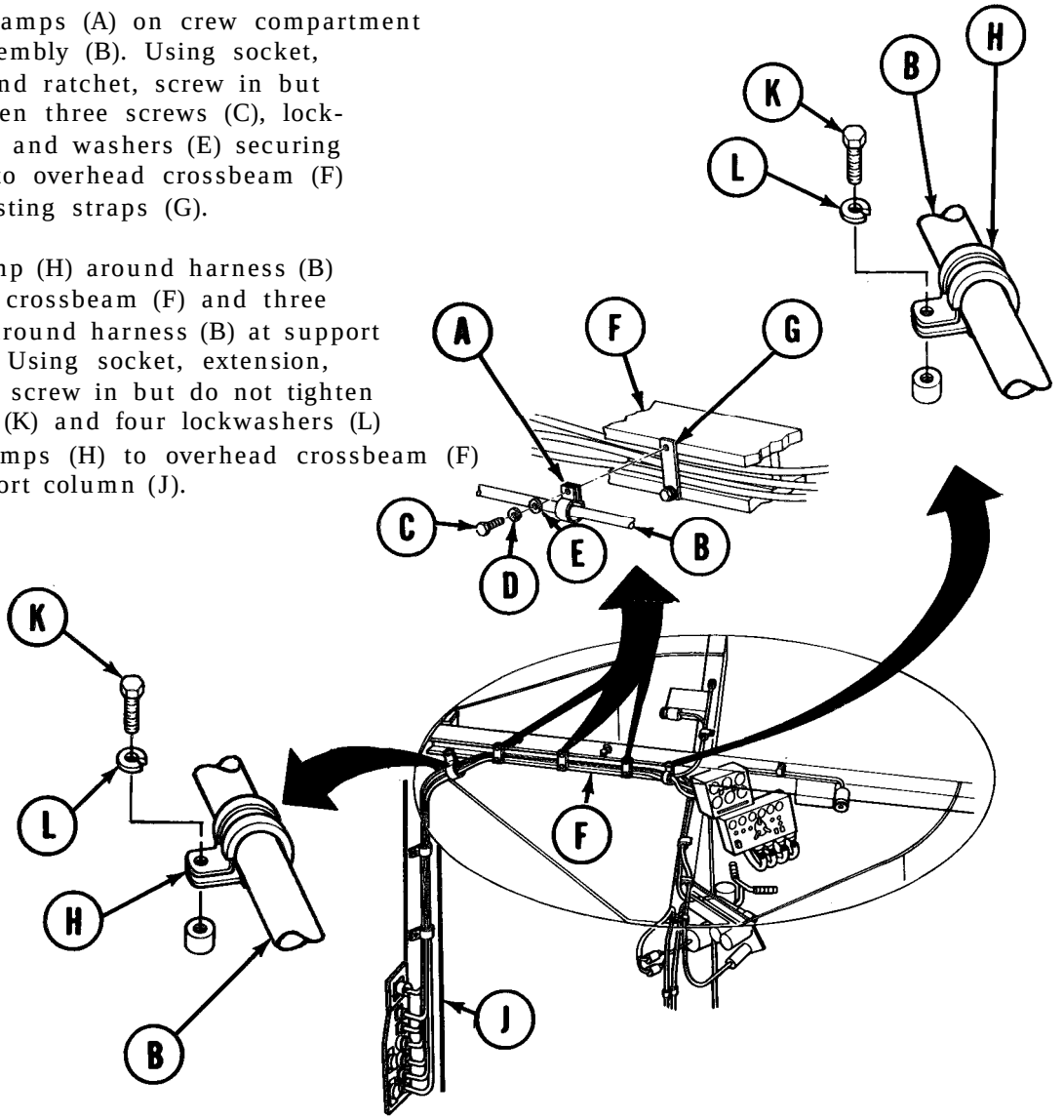
WARNING

Make sure there are no smoke grenades in dischargers. Accidental firing of grenade could hurt or kill you.

1. Put three clamps (A) on crew compartment harness assembly (B). Using socket, extension, and ratchet, screw in but do not tighten three screws (C), lockwashers (D), and washers (E) securing clamps (A) to overhead crossbeam (F) at three existing straps (G).

2. Put one clamp (H) around harness (B) at overhead crossbeam (F) and three clamps (H) around harness (B) at support column (J). Using socket, extension, and ratchet, screw in but do not tighten four screws (K) and four lockwashers (L) securing clamps (H) to overhead crossbeam (F) and to support column (J).

Go on to Sheet 5



TA248729

SMOKE GRENADE CREW COMPARTMENT WIRING HARNESS ASSEMBLY REPLACEMENT (Sheet 5 of 6)

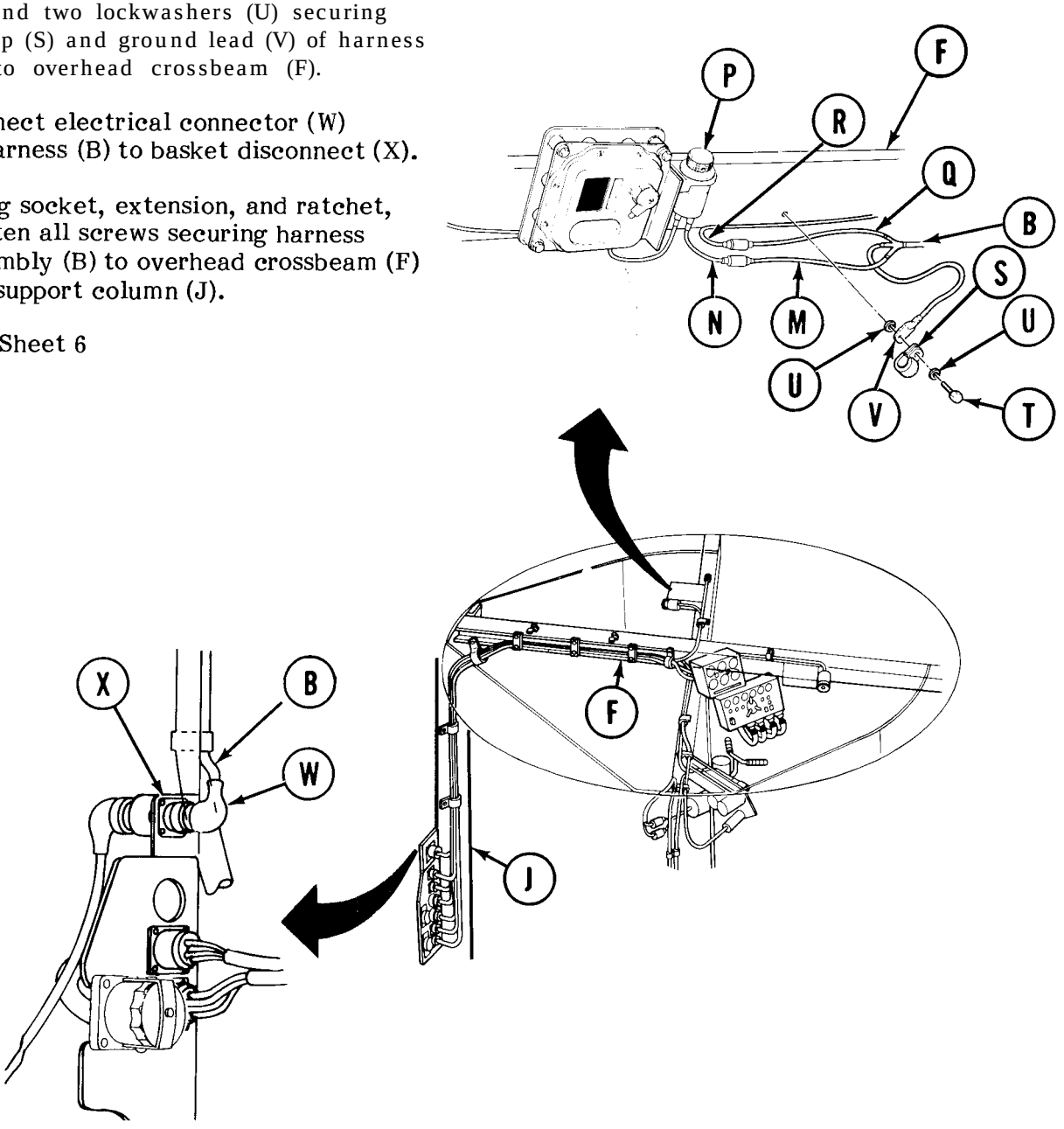
3. Connect lead (M) of harness (B) to lead (N) of domelight rheostat (P). Connect lead (Q) of harness (B) to CKT 138 power lead (R).

4. Put clamp (S) around leads (M) and (Q). Screw in but do not tighten screw (T) and two lockwashers (U) securing clamp (S) and ground lead (V) of harness (B) to overhead crossbeam (F).

5. Connect electrical connector (W) of harness (B) to basket disconnect (X).

6. Using socket, extension, and ratchet, tighten all screws securing harness assembly (B) to overhead crossbeam (F) and support column (J).

Go on to Sheet 6



TA248730

SMOKE GRENADE CREW COMPARTMENT WIRING HARNESS ASSEMBLY REPLACEMENT (Sheet 6 of 6)

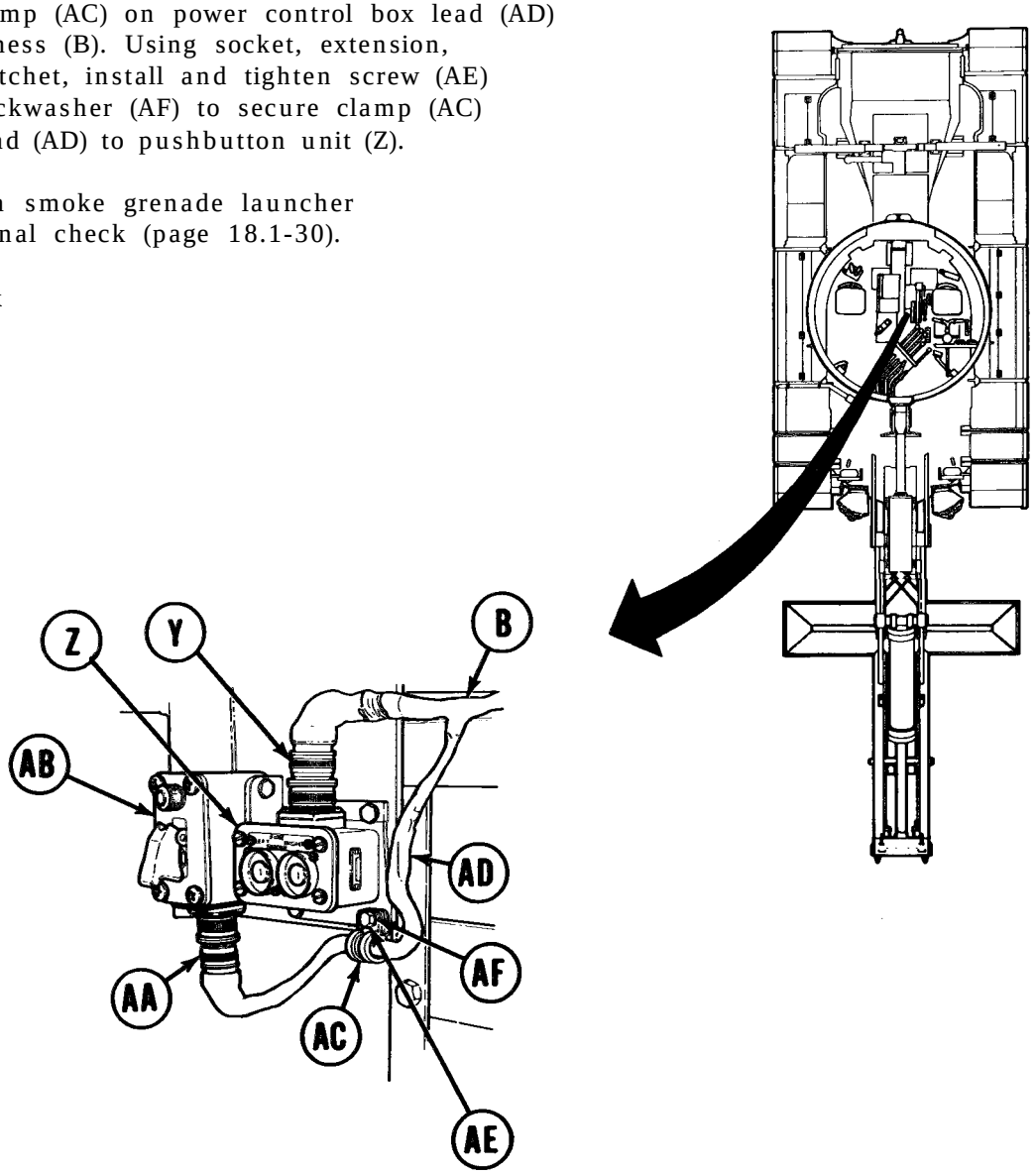
7. Connect electrical connector (Y) of harness (B) to pushbutton unit (Z).

8. Connect electrical connector (AA) of' harness (B) to power control box (AB).

9. Put damp (AC) on power control box lead (AD) of harness (B). Using socket, extension, and ratchet, install and tighten screw (AE) and lockwasher (AF) to secure clamp (AC) and lead (AD) to pushbutton unit (Z).

10. Perform smoke grenade launcher functional check (page 18.1-30).

End of Task

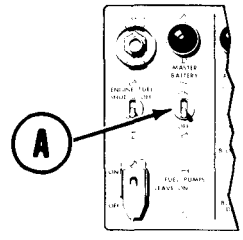


TA248731

SMOKE GRENADE HULL COMPARTMENT WIRING HARNESS ASSEMBLY REPLACEMENT (Sheet 1 of 11)

PROCEDURE INDEX

TOOLS: 7/16 in. socket with 3/8 in. drive
5 in. extension with 3/8 in. drive
Ratchet with 3/8 in. drive
Slip joint pliers, conduit style, with plastic jaw inserts
Flat-tip screwdriver
Insert/extract tool

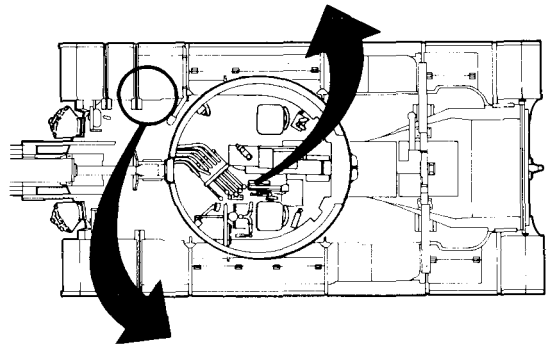


SUPPLIES: Lockwashers (22 required)
Gaskets
Silicone compound (Item 32, Appendix D)

REMOVAL:

WARNING

Make sure there are no smoke grenades in dischargers. Accidental firing of grenade could hurt or kill you.

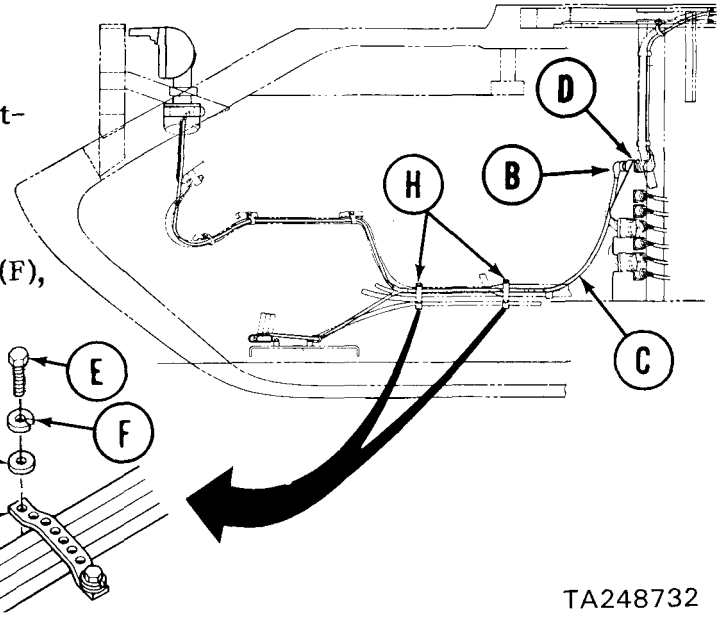


1. Set MASTER BATTERY switch (A) to OFF.

2. Using pliers, disconnect electrical connector (B) of smoke grenade hull compartment wiring harness (C) from back side of basket disconnect (D).

3. Using socket, extension, and ratchet, remove two top screws (E), lockwashers (F), and washers (G) securing two harness straps (H) to hull.

Go on to Sheet 2



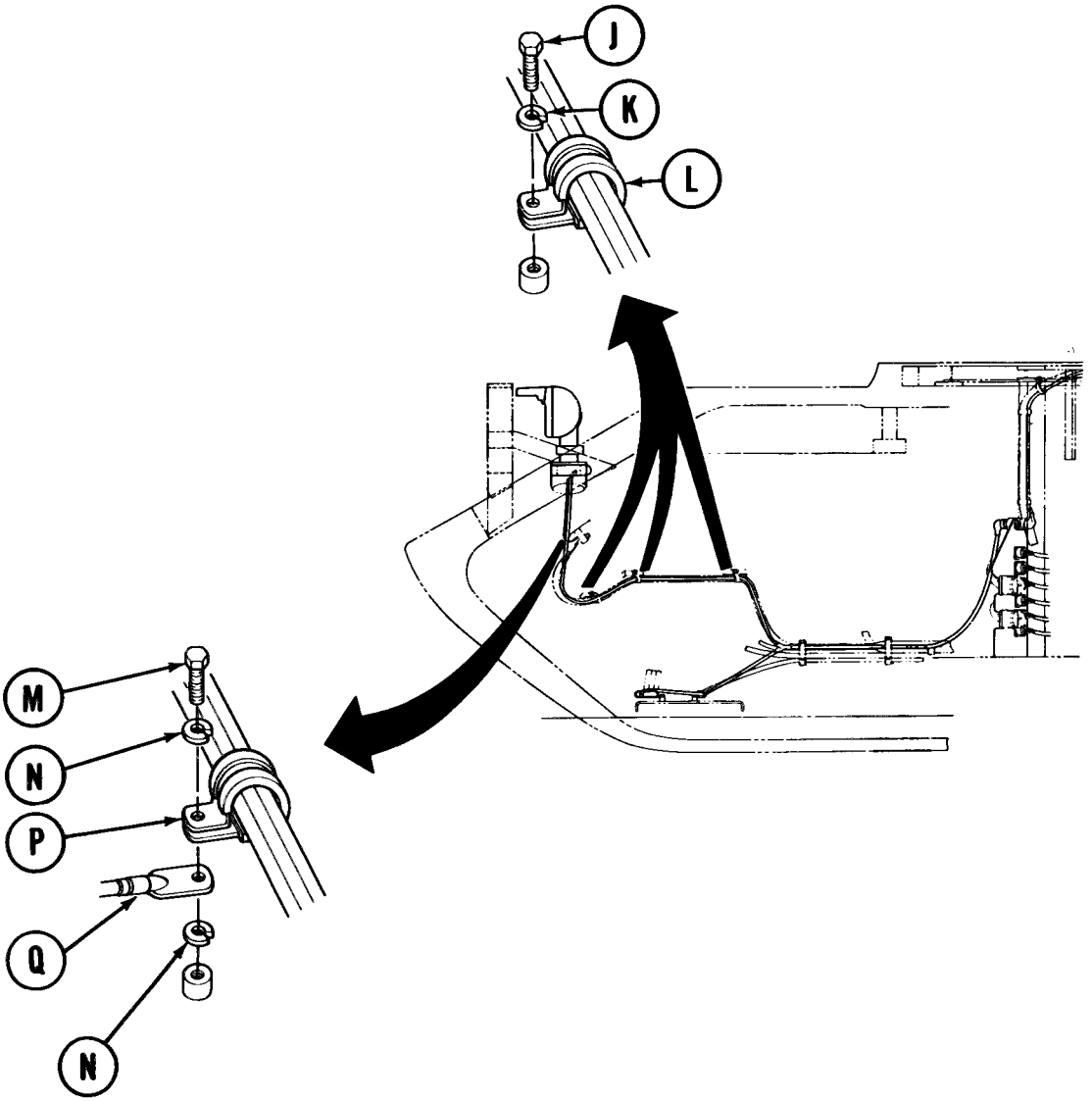
TA248732

SMOKE GRENADE HULL COMPARTMENT WIRING HARNESS ASSEMBLY REPLACEMENT (Sheet 2 of 11)

4. Using socket, extension, and ratchet, remove three screws (J) and lockwashers (K) securing three harness clamps (L) to hull.

5. Using socket, extension, and ratchet, remove screw (M) and two lockwashers (N) securing harness clamp (P) and right ground lead (Q) to hull.

Go on to Sheet 3



TA248733

SMOKE GRENADE HULL COMPARTMENT WIRING HARNESS ASSEMBLY REPLACEMENT (Sheet 3 of 11)

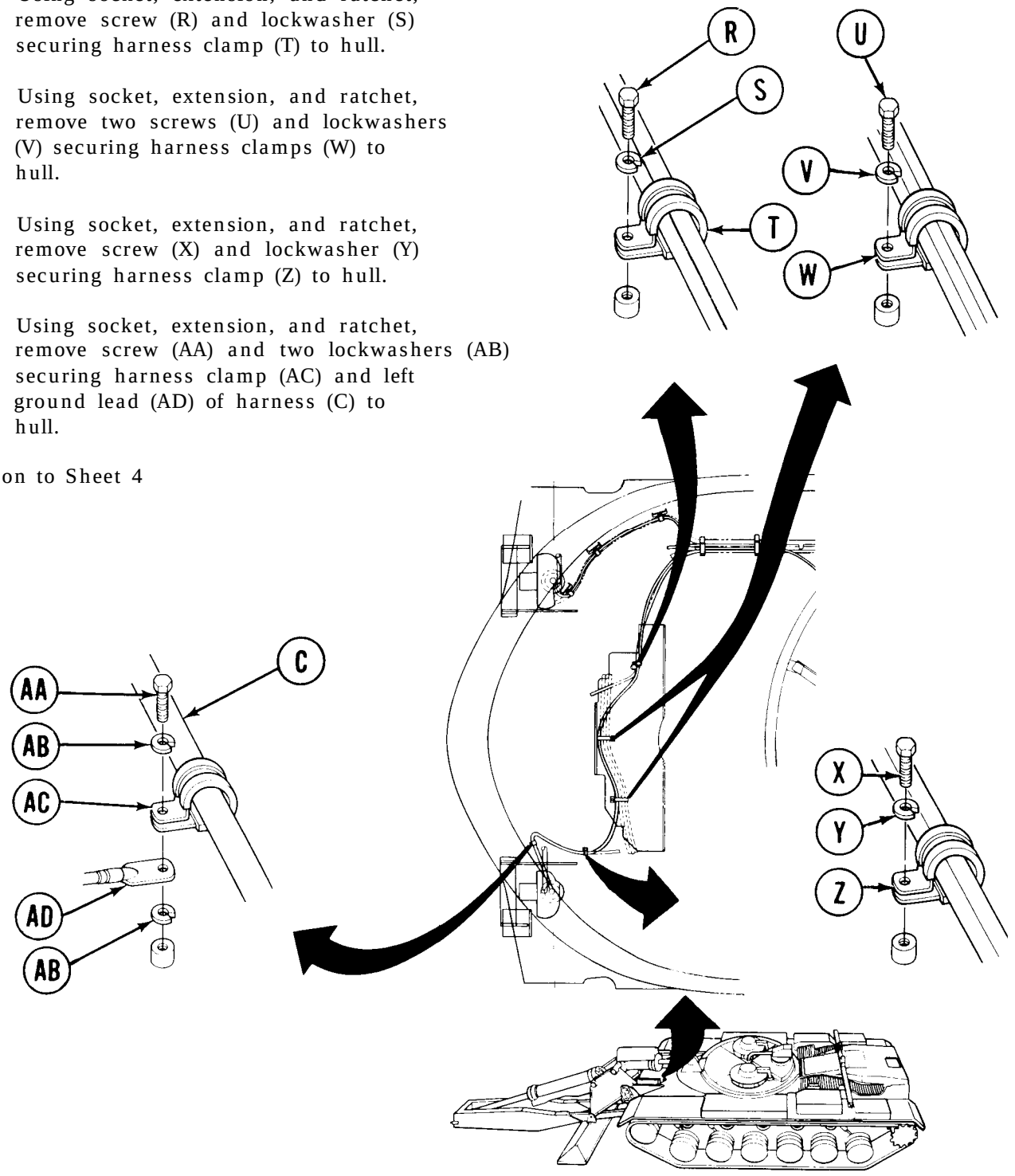
6. Using socket, extension, and ratchet, remove screw (R) and lockwasher (S) securing harness clamp (T) to hull.

7. Using socket, extension, and ratchet, remove two screws (U) and lockwashers (V) securing harness clamps (W) to hull.

8. Using socket, extension, and ratchet, remove screw (X) and lockwasher (Y) securing harness clamp (Z) to hull.

9. Using socket, extension, and ratchet, remove screw (AA) and two lockwashers (AB) securing harness clamp (AC) and left ground lead (AD) of harness (C) to hull.

Go on to Sheet 4



TA248734

SMOKE GRENADE HULL COMPARTMENT WIRING HARNESS ASSEMBLY REPLACEMENT (Sheet 4 of 11)

NOTE

The following steps (10 through 20) apply to removal of the harness from both the left and right headlight assemblies.

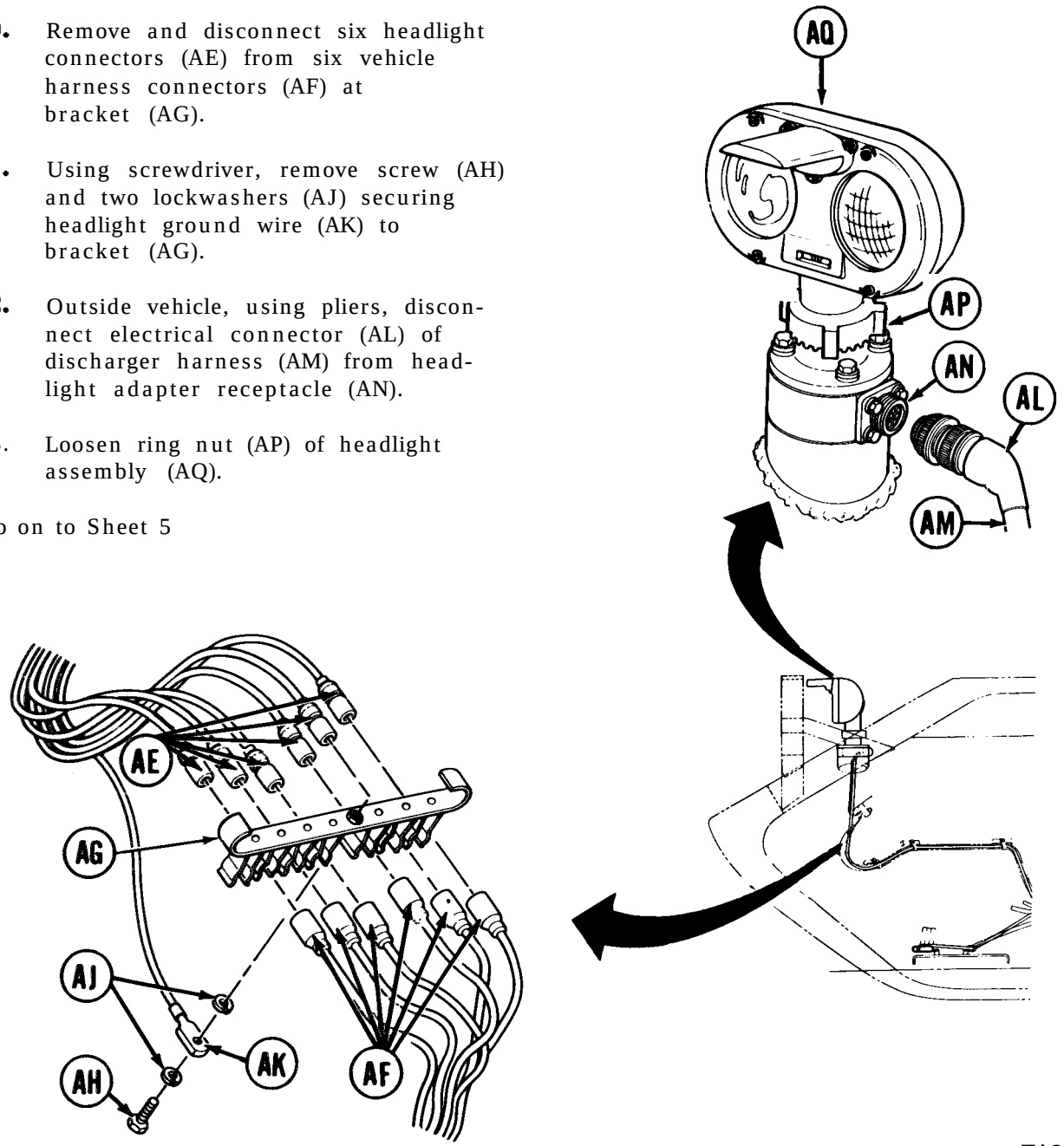
10. Remove and disconnect six headlight connectors (AE) from six vehicle harness connectors (AF) at bracket (AG).

11. Using screwdriver, remove screw (AH) and two lockwashers (AJ) securing headlight ground wire (AK) to bracket (AG).

12. Outside vehicle, using pliers, disconnect electrical connector (AL) of discharger harness (AM) from headlight adapter receptacle (AN).

13. Loosen ring nut (AP) of headlight assembly (AQ).

Go on to Sheet 5



TA248735

SMOKE GRENADE HULL COMPARTMENT WIRING HARNESS ASSEMBLY REPLACEMENT (Sheet 5 of 11)

14. Take headlight assembly (AQ) off base (AR).

15. Using socket, extension, and ratchet, remove three screws (AS), lockwashers (AT), and washers (AU) securing base (AR), two gaskets (AV), and adapter (AW) to headlight mounting boss (AX). Discard gaskets (AV).

16. Using screwdriver, remove four screws (AY) and lockwashers (AZ) securing receptacle (BA) and gasket (BB) to adapter (AW).

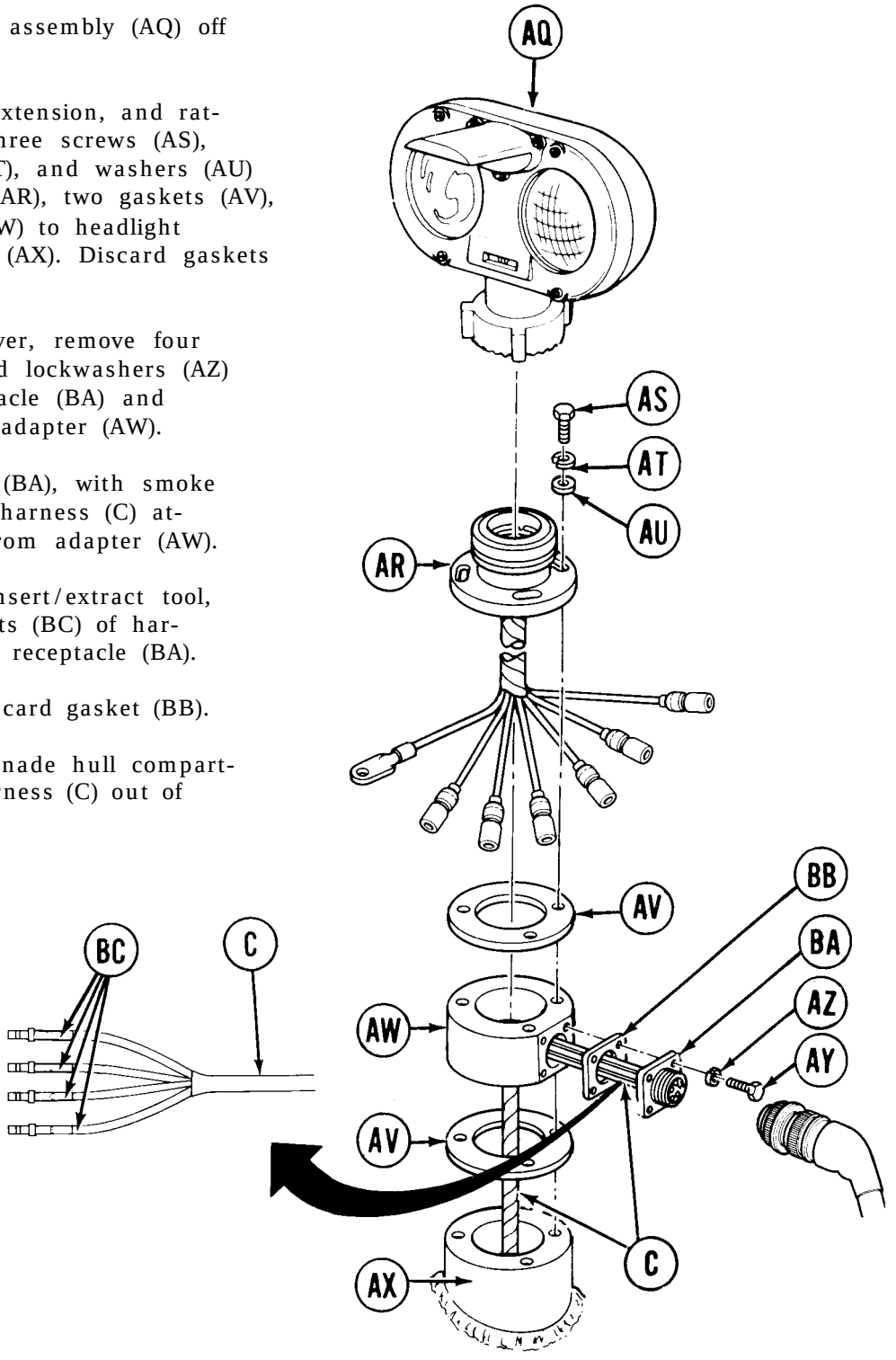
17. Pull receptacle (BA), with smoke grenade wiring harness (C) attached, away from adapter (AW).

18. Using socket insert/extract tool, take four sockets (BC) of harness (C) out of receptacle (BA).

19. Remove and discard gasket (BB).

20. Take smoke grenade hull compartment wiring harness (C) out of vehicle.

Go on to Sheet 6



TA248736

SMOKE GRENADE HULL COMPARTMENT WIRING HARNESS ASSEMBLY REPLACEMENT (Sheet 6 of 11)

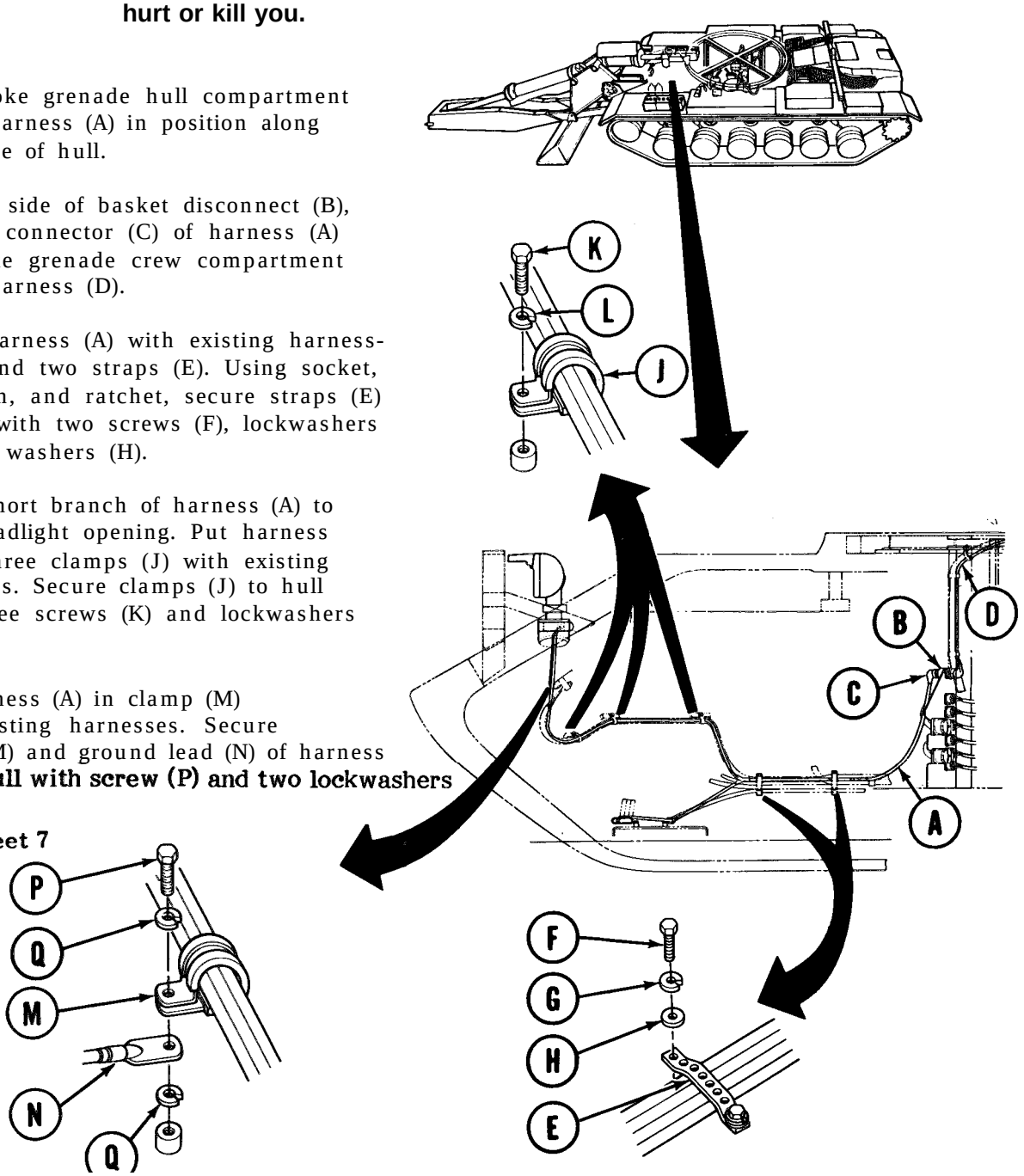
INSTALLATION :

WARNING

Make sure there are no smoke grenades in dischargers. Accidental firing of grenade could hurt or kill you.

1. Lay smoke grenade hull compartment wiring harness (A) in position along right side of hull.
2. At back side of basket disconnect (B), connect connector (C) of harness (A) to smoke grenade crew compartment wiring harness (D).
3. Route harness (A) with existing harnesses, behind two straps (E). Using socket, extension, and ratchet, secure straps (E) to hull with two screws (F), lockwashers (G), and washers (H).
4. Route short branch of harness (A) to right headlight opening. Put harness (A) in three clamps (J) with existing harnesses. Secure clamps (J) to hull with three screws (K) and lockwashers (L).
5. Put harness (A) in clamp (M) with existing harnesses. Secure clamp (M) and ground lead (N) of harness (A) to hull with screw (P) and two lockwashers (Q).

Go on to Sheet 7



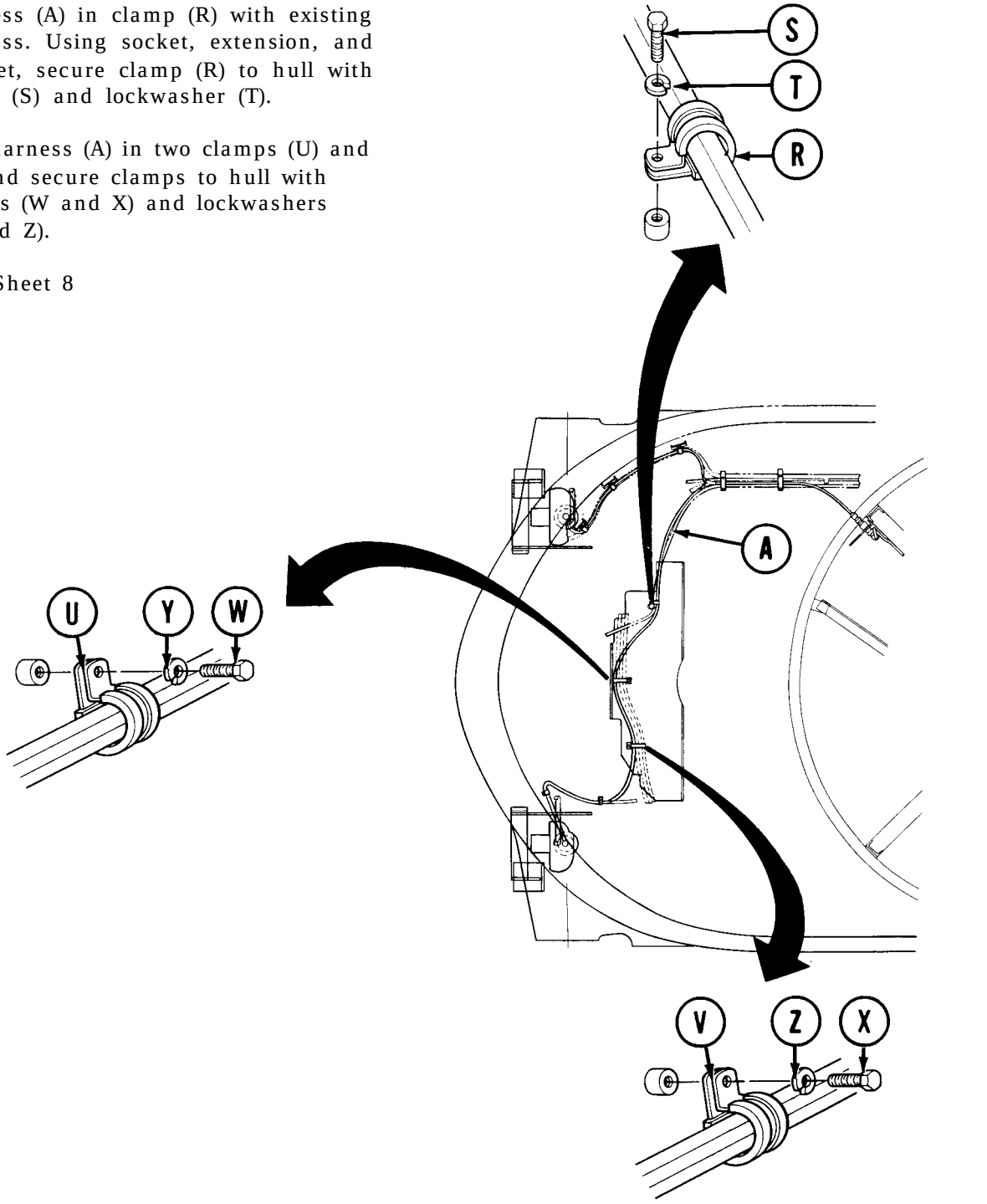
TA248737

SMOKE GRENADE HULL COMPARTMENT WIRING HARNESS ASSEMBLY REPLACEMENT (Sheet 7 of 11)

6. Route long branch of harness (A) across hull to left headlight opening. Put harness (A) in clamp (R) with existing harness. Using socket, extension, and ratchet, secure clamp (R) to hull with screw (S) and lockwasher (T).

7. Put harness (A) in two clamps (U) and (V) and secure clamps to hull with screws (W and X) and lockwashers (Y and Z).

Go on to Sheet 8



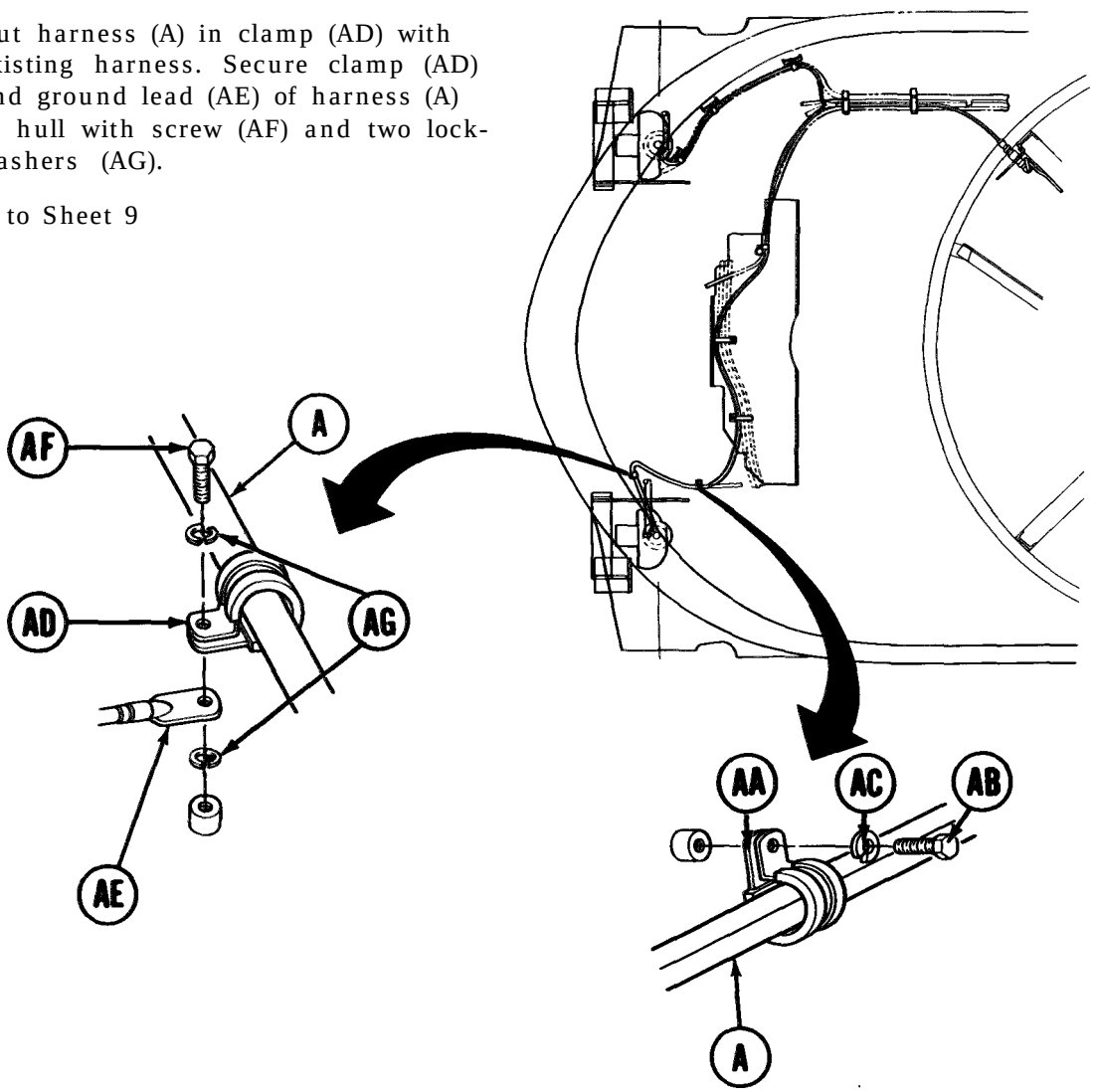
TA248738

SMOKE GRENADE HULL COMPARTMENT WIRING HARNESS ASSEMBLY REPLACEMENT (Sheet 8 of 11)

8. Put harness (A) in clamp (AA) with existing harness. Secure clamp (AA) to hull with screw (AB) and lockwasher (AC).

9. Put harness (A) in clamp (AD) with existing harness. Secure clamp (AD) and ground lead (AE) of harness (A) to hull with screw (AF) and two lockwashers (AG).

Go on to Sheet 9



TA248739

SMOKE GRENADE HULL COMPARTMENT WIRING HARNESS ASSEMBLY REPLACEMENT (Sheet 9 of 11)

NOTE

The following steps (10 through 20) apply to installation of both the left and right headlight assemblies.

10. Feed harness (A) through headlight mounting boss (AK). Put one new gasket (AH) and adapter (AJ) on headlight mounting boss (AK) with harness (A) routed through hole in sideof adapter.

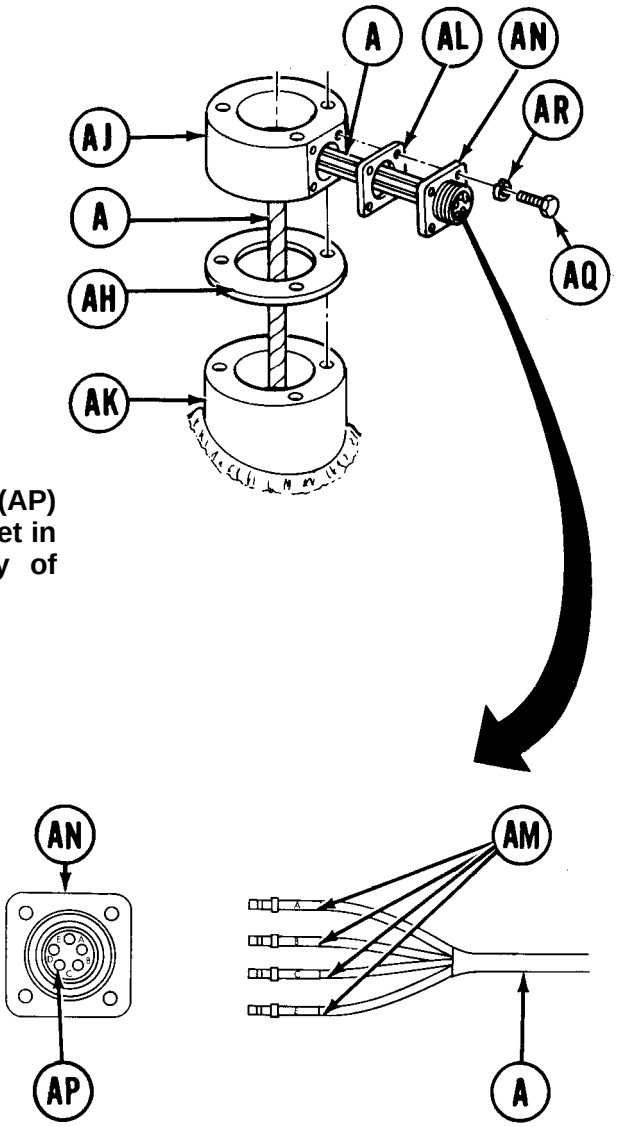
11. Put new receptacle gasket (AL) on harness (A). Using insert/extract tool, put four marked lead socket contacts (AM) of harness (A) in corresponding holes of receptacle (AN).

NOTE

Receptacle hole position D (AP) is not used. Put dummy socket in position D to prevent entry of water and dirt

12. Make sure hole in side of adapter (AJ) faces center of vehicle. Put receptacle (AN) and gasket (AL) on adapter (AJ) with receptacle keyway facing forward. Using screwdriver, secure receptacle (AN) and gasket (AL) to adapter (AJ) with four screws (AQ) and lockwashers (AR).

Go on to Sheet 10



TA248740

SMOKE GRENADE HULL COMPARTMENT WIRING HARNESS ASSEMBLY REPLACEMENT (Sheet 10 of 11)

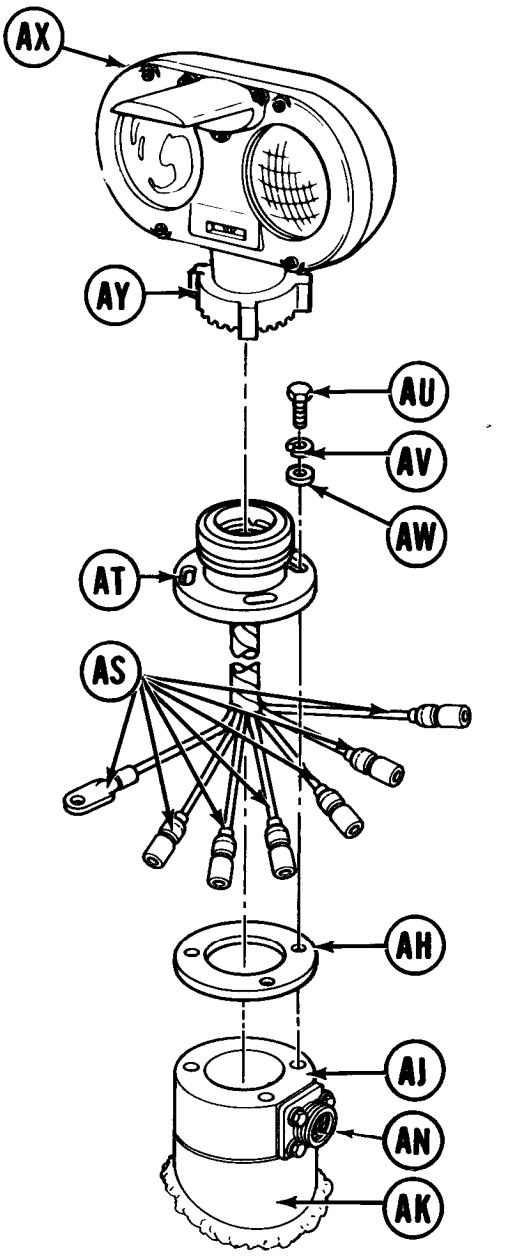
13. Put second new gasket (AH) in position on adapter (AJ).

14. Insert wires (AS) of headlight base (AT) through opening in adapter (AJ) and position headlight base (AT) on adapter (AJ) with headlight base keyway to the rear.

15. Using socket, extension, and ratchet, secure base assembly (AT) and adapter (AJ) to headlight mounting boss (AK) with three screws (AU), lockwashers (AV), and washers (AW). Make sure receptacle (AN) faces center of vehicle and that receptacle keyway is forward.

16. Put headlight assembly (AX) on base (AT) and, while pressing down on headlight, tighten ring nut (AY).

Go on to Sheet 11



TA248741

SMOKE GRENADE HULL COMPARTMENT WIRING HARNESS ASSEMBLY REPLACEMENT (Sheet 11 of 11)

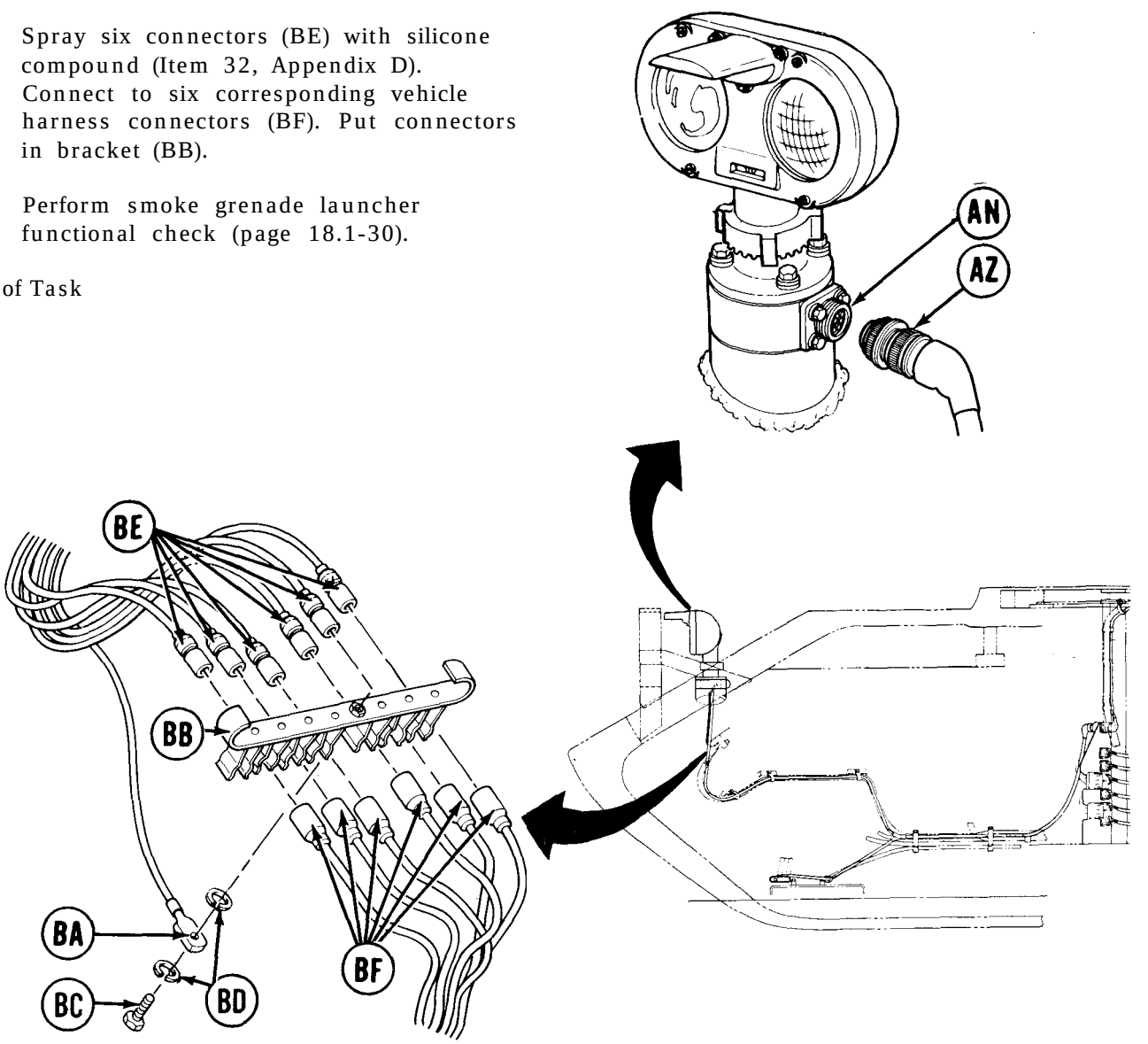
17. Connect electrical connector (AZ) of discharger harness to headlight adapter receptacle (AN).

18. Inside vehicle, using screwdriver, secure headlight ground wire (BA) to bracket (BB) with screw (BC) and two lockwashers (BD).

19. Spray six connectors (BE) with silicone compound (Item 32, Appendix D). Connect to six corresponding vehicle harness connectors (BF). Put connectors in bracket (BB).

20. Perform smoke grenade launcher functional check (page 18.1-30).

End of Task



TA248742

SMOKE GRENADE DISCHARGER WIRING HARNESS ASSEMBLY REPLACEMENT (Sheet 1 of 2)

TOOLS: 7/16 in. socket with 3/8 in. drive
Ratchet with 3/8 in. drive
Slip joint pliers, conduit style, with plastic jaw inserts

SUPPLIES: Lockwashers (2 required)

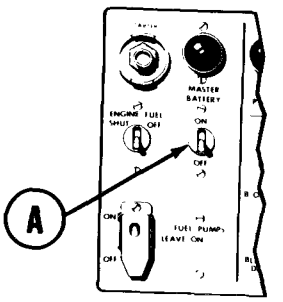
REMOVAL:

WARNING

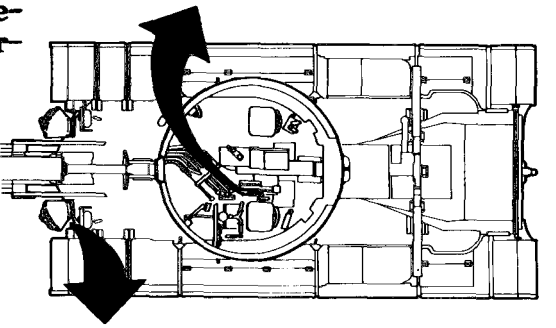
Make sure there are no smoke grenades in dischargers. Accidental firing of grenade could hurt or kill you.

NOTE

Replacement of the discharger wiring harness is the same for both the right and left sides. Replacement of the left side harness is shown.



DRIVER'S STATION



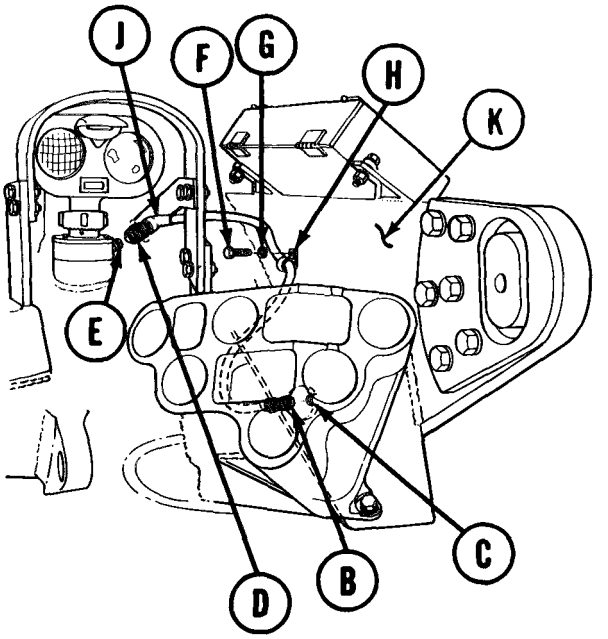
1. Set MASTER BATTERY switch (A) to OFF.

2. Using pliers, disconnect electrical connector (B) from discharger unit receptacle (C) and disconnect electrical connector (D) from headlight adapter receptacle (E).

3. Using socket and ratchet, remove screw (F) and lockwasher (G) securing clamp (H) and harness (J) to headlamp boom pivot mount (K).

4. Take clamp (H) off harness (J). Take harness (J) off vehicle.

Go on to Sheet 2



TA248743

SMOKE GRENADE DISCHARGER WIRING HARNESS ASSEMBLY REPLACEMENT (Sheet 2 of 2)

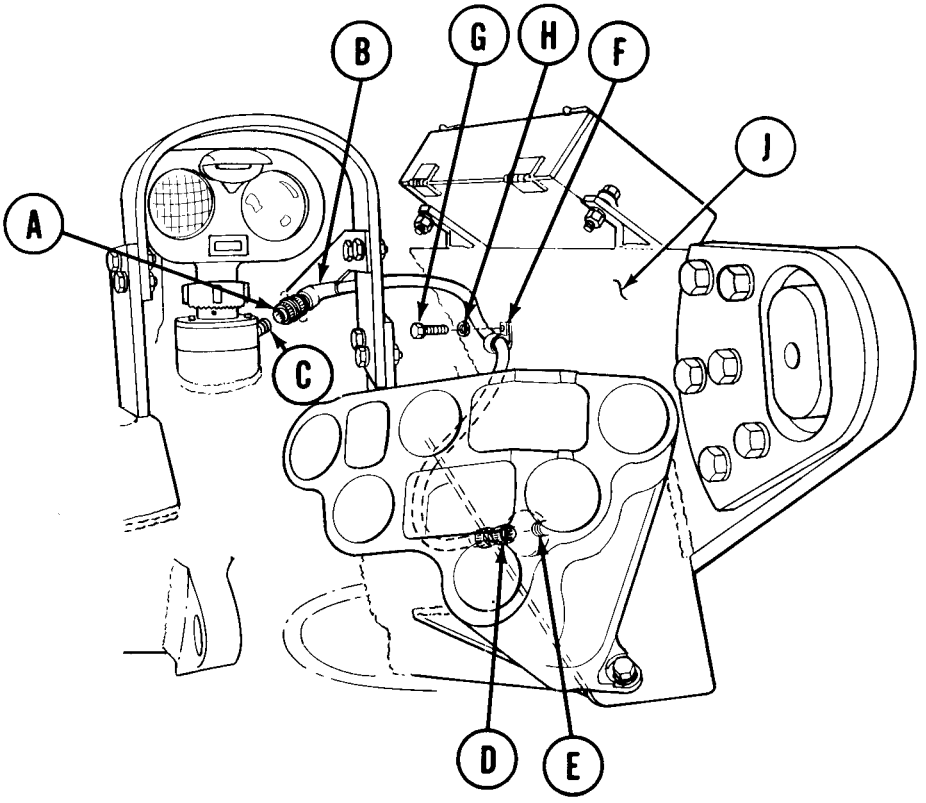
INSTALLATION:

WARNING

Make sure there are no smoke grenades in discharge Accidental firing of grenade Could hurt or kill you.

1. Connect electrical connector (A) of harness (B) to headlight adapter receptacle (C). Connect electrical connector (D) to discharger unit receptacle (E).
2. Put clamp (F) on harness (B).
3. Using socket and ratchet, install and tighten screw (G) and lockwasher (H) to secure clamp (F) and harness (B) to boom pivot mount (J).
4. Perform smoke grenade launcher functional check (page 18.1-30).

End of Task



TA248744

SMOKE GRENADE DISCHARGER REPLACEMENT (Sheet 1 of 2)

TOOLS: 3/4 in. socket with 1/2 in. drive
6 in. extension with l/2 in. drive
Ratchet with l/2 in. drive
Slip joint pliers, conduit style, with plastic jaw inserts
Torque wrench with 1/2 in. drive (0-175 lb-f t)

SUPPLIES: **Locking compound (Item 15, Appendix D)**
Lockwashers (3 required)

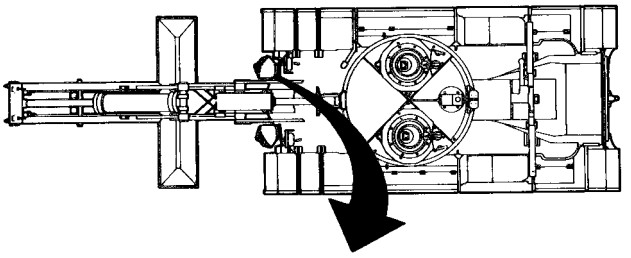
REMOVAL:

WARNING

Make sure there are no smoke grenades in dischargers. Accidental firing of grenade could hurt or kill you.

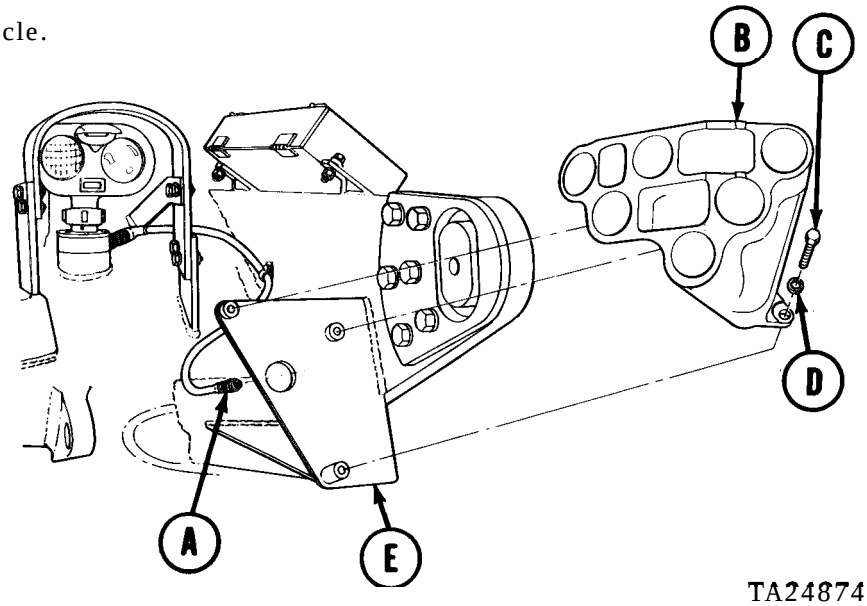
NOTE

Removal procedure is the same for both the right and left dischargers.



1. Using pliers, disconnect wiring harness connector (A) from receptacle on back of discharger (B).
2. Using socket, extension, and ratchet, remove three screws (C) and washers (D) securing discharger (B) to bracket (E).
3. Take discharger (B) off vehicle.

Go on to Sheet 2



TA248745

SMOKE GRENADE DISCHARGER REPLACEMENT (Sheet 2 of 2)

REPAIR: Refer to TM 3-1040-266-20&P for procedure to repair Smoke Grenade discharger.

INSTALLATION:

WARNING

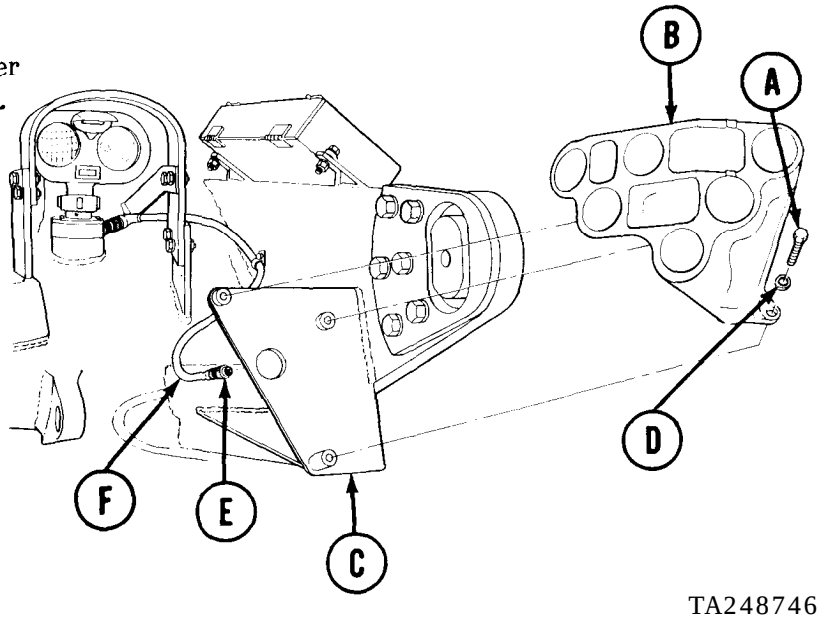
Make sure there are no smoke grenades in dischargers. Accidental firing of grenade could hurt or kill you.

NOTE

Installation procedure is the same for both the right and left dischargers

1. Apply two to three drops of locking compound (Item 15, Appendix D) to threads of three screws (A).
2. Put discharger (B) in position on bracket (C). Using socket, extension, and torque wrench, secure discharger (B) to bracket (C) with three screws (A) and washers (D). Tighten screws (A) to 55-74 lb-ft (75-100 N·m).
3. Connect electrical connector (E) of discharger harness to receptacle on back of discharger (B).
4. Perform smoke grenade launcher functional check (page 18.1-30).

End of Task



TA248746

SMOKE GRENADE DISCHARGER BRACKET DUMMY RECEPTACLE REPLACEMENT (Sheet 1 of 2)

TOOLS: Slip joint pliers, conduit style, with plastic jaw inserts
Flat-tip screwdriver

SUPPLIES: Lockwashers (4 required)
Gasket

REMOVAL:

WARNING

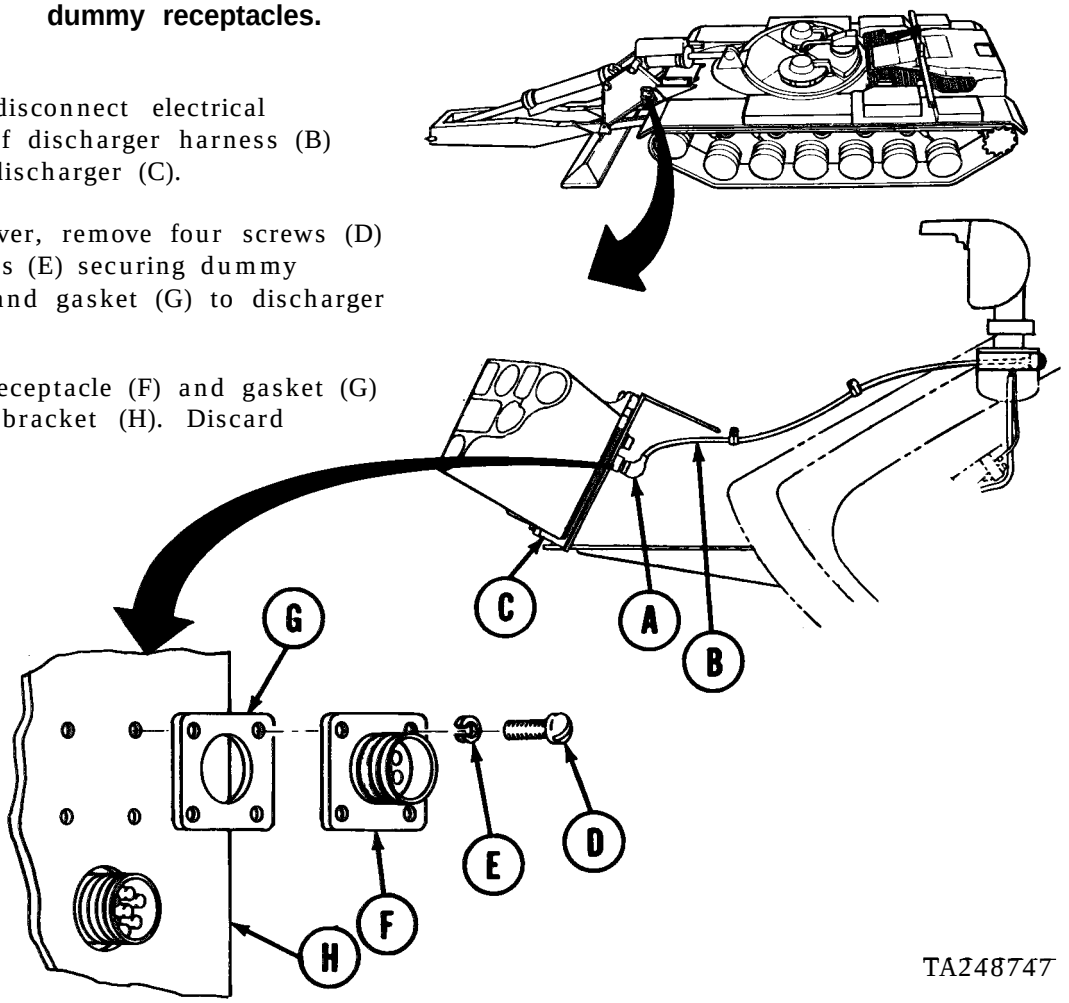
Make sure there are no smoke grenades in dischargers. Accidental firing of grenade could hurt or kill you.

NOTE

Removal procedures are the same for both the left and right dummy receptacles.

1. Using pliers, disconnect electrical connector (A) of discharger harness (B) from back of discharger (C).
2. Using screwdriver, remove four screws (D) and lockwashers (E) securing dummy receptacle (F) and gasket (G) to discharger bracket (H).
3. Take dummy receptacle (F) and gasket (G) off discharger bracket (H). Discard gasket.

Go on to Sheet 2



TA248747

SMOKE GRENADE DISCHARGER BRACKET DUMMY RECEPTACLE REPLACEMENT (Sheet 2 of 2)

INSTALLATION:

WARNING

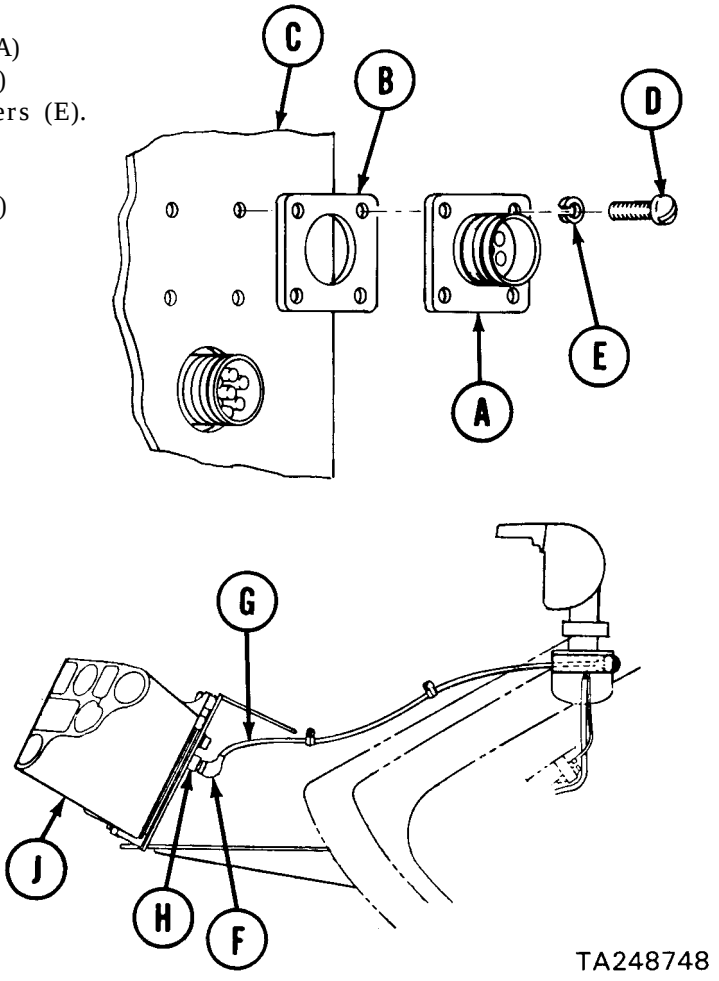
Make sure there are no smoke grenades in discharger Accidental firing of grenade could hurt or kill you.

NOTE

Installation procedures are the same for both the left and right dummy receptacles.

1. Put dummy receptacle (A) and new gasket (B) in position on back of discharger bracket (C).
2. Using screwdriver, secure receptacle (A) and gasket (B) to discharger bracket (C) with four screws (D) and new lockwashers (E).
3. Connect electrical connector (F) of discharger harness (G) to receptacle (H) at back of discharger (J).
4. Perform smoke grenade launcher functional check (page 18.1-30).

End of Task



SMOKE GRENADE STOWAGE BOX REPLACEMENT (Sheet 1 of 1)

TOOLS: 9/16 in. combination box and open end wrench (2 required)

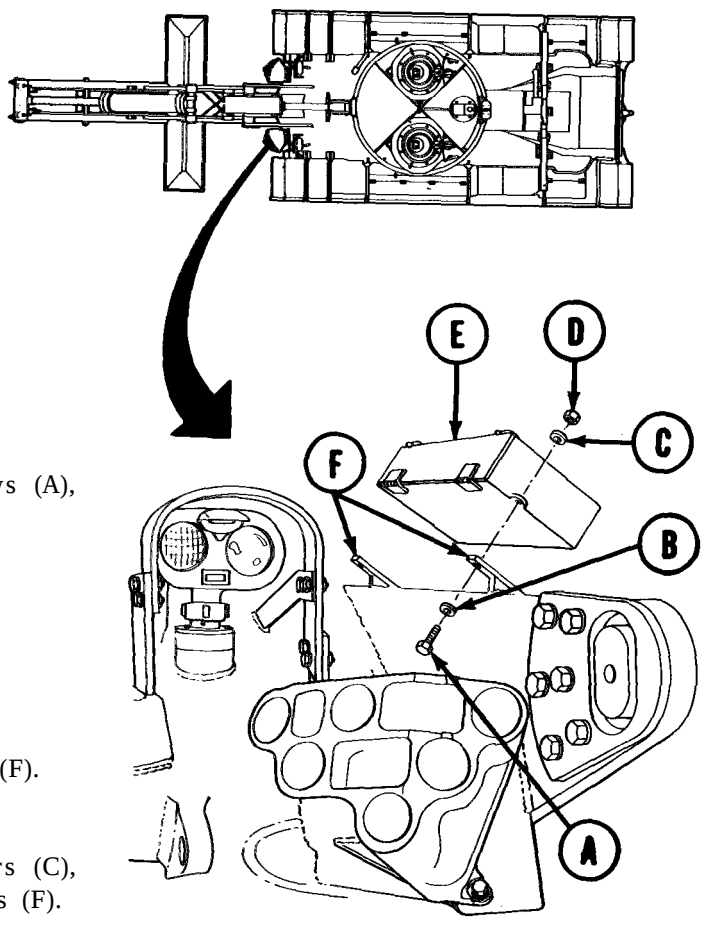
SUPPLIES: Lockwashers (4 required)

WARNING

Make sure smoke grenade stowage box is empty before you replace it. Accidental discharge of smoke grenades could hurt or kill you.

NOTE

Replacement procedure is the same for both the left and right stowage boxes.



REMOVAL:

1. Using two wrenches, remove four screws (A), washers (B), lockwashers (C), and nuts (D) securing stowage box (E) to brackets (F).
2. Take box (E) off brackets (F).

INSTALLATION:

1. Put box (E) in position on two brackets (F).
2. Using two wrenches, install and tighten four screws (A), washers (B), lockwashers (C), and nuts (D) securing box (E) to brackets (F).

End of Task

TA248749

SMOKE GRENADE LAUNCHER FUNCTIONAL CHECK (Sheet 1 of 3)

TEST EQUIPMENT: Multimeter

Personnel: Two

WARNING

Make sure grenade dischargers (A) are not loaded before you perform functional check. Be sure MASTER BATTERY switch (B) and grenade power switch (C) are in OFF position before you unload the dischargers. Never put your body in front of discharger while unloading. Accidental firing of grenades could hurt or kill you.

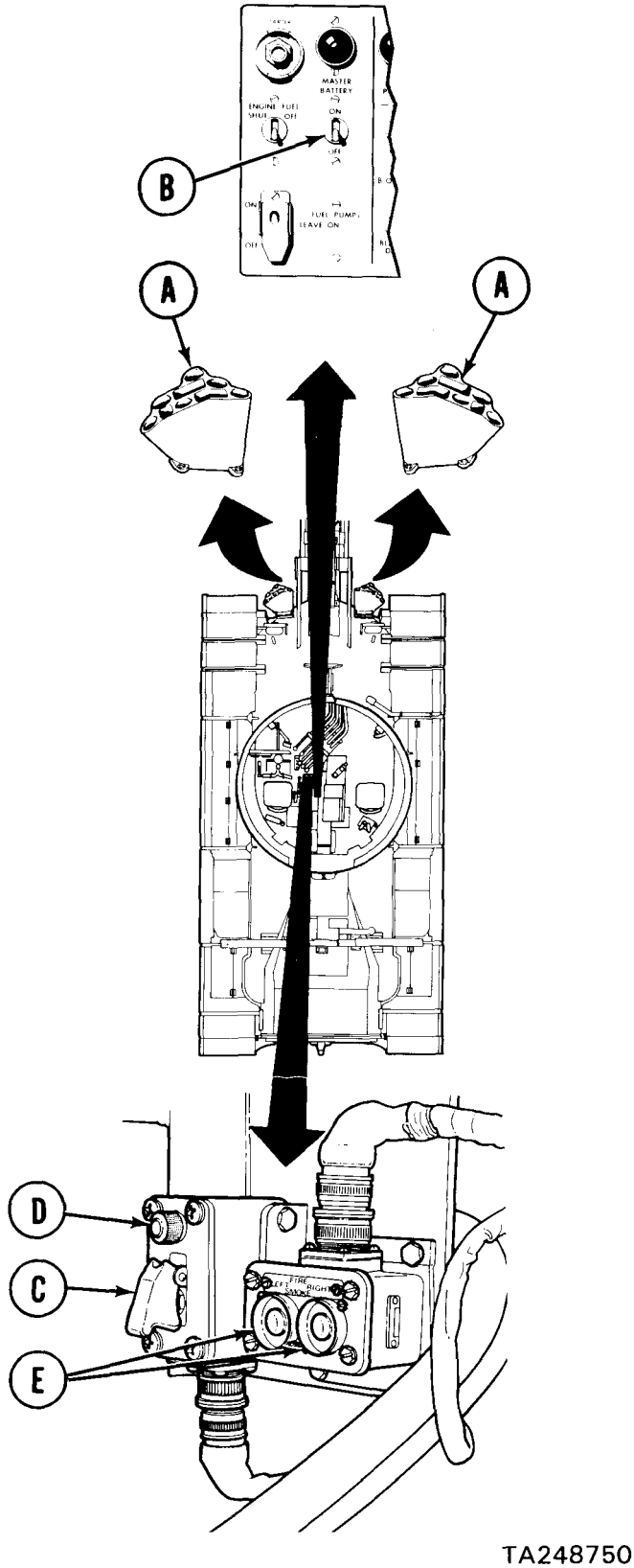
1. Set MASTER BATTERY switch (B) to ON.

2. Set grenade power switch (C) to ON. Indicator light (D) should come on.

NOTE

Have a helper inside crew compartment operate FIRE SMOKE LEFT RIGHT pushbutton switches (E) during functional check.

Go on to Sheet 2



TA248750

SMOKE GRENADE LAUNCHER FUNCTIONAL CHECK (Sheet 2 of 3)

3. Set multimeter to 0-50 VDC scale.

CAUTION

Do not short circuit multimeter probe from barrel contact to ground. Arcing will result.

NOTE

During following checks, hold multimeter negative test probe to gound (vehicle or discharger) and touch positive test probe to tip of plug (F) at bottom center of each discharger (G, H) barrel.

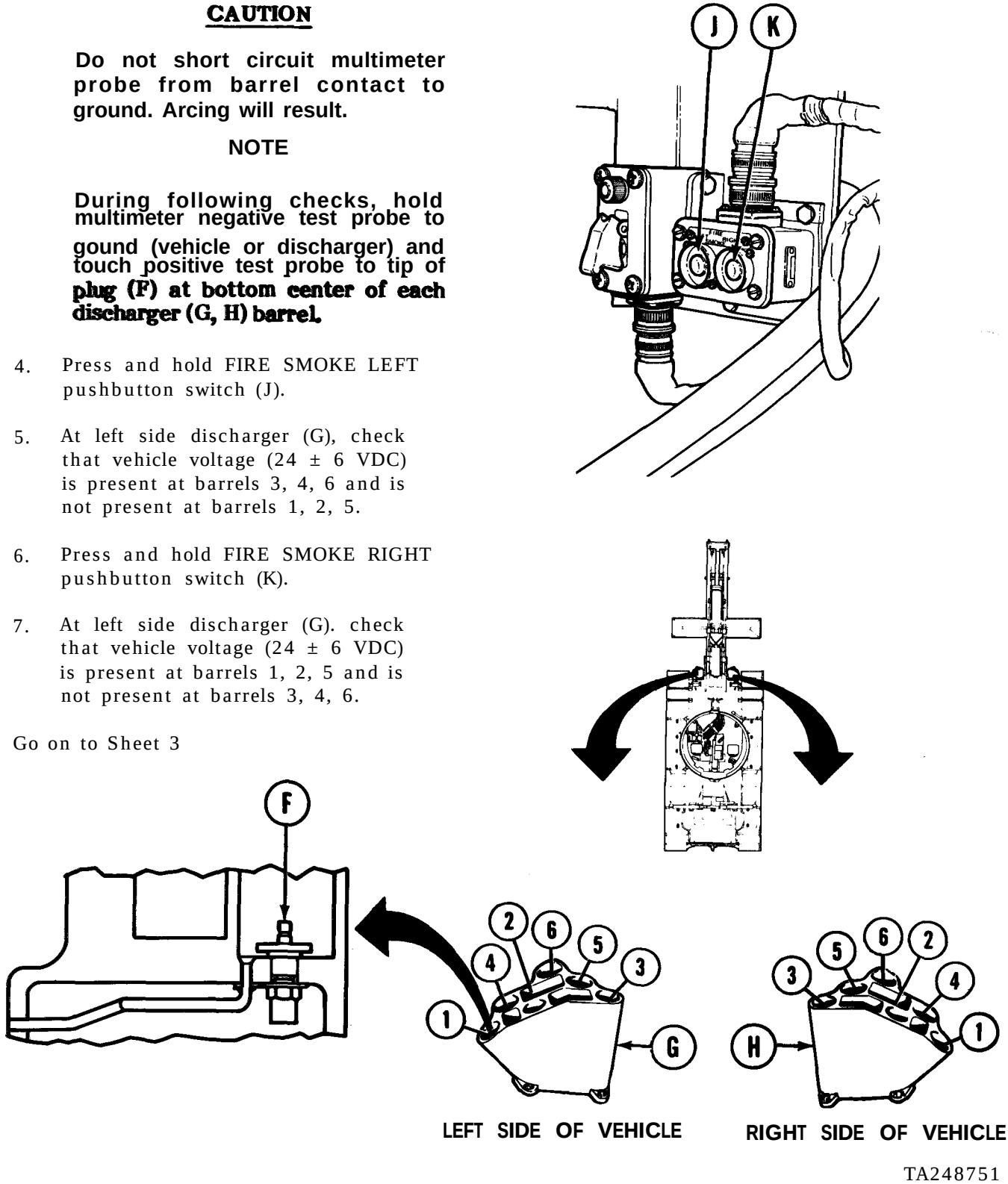
4. Press and hold FIRE SMOKE LEFT pushbutton switch (J).

5. At left side discharger (G), check that vehicle voltage (24 ± 6 VDC) is present at barrels 3, 4, 6 and is not present at barrels 1, 2, 5.

6. Press and hold FIRE SMOKE RIGHT pushbutton switch (K).

7. At left side discharger (G). check that vehicle voltage (24 ± 6 VDC) is present at barrels 1, 2, 5 and is not present at barrels 3, 4, 6.

Go on to Sheet 3



TA248751

SMOKE GRENADE LAUNCHER FUNCTIONAL CHECK (Sheet 3 of 3)

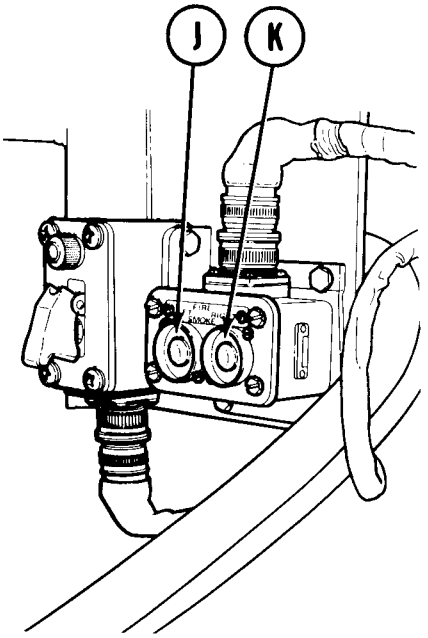
8. Press and hold FIRE SMOKE LEFT pushbutton switch (J).

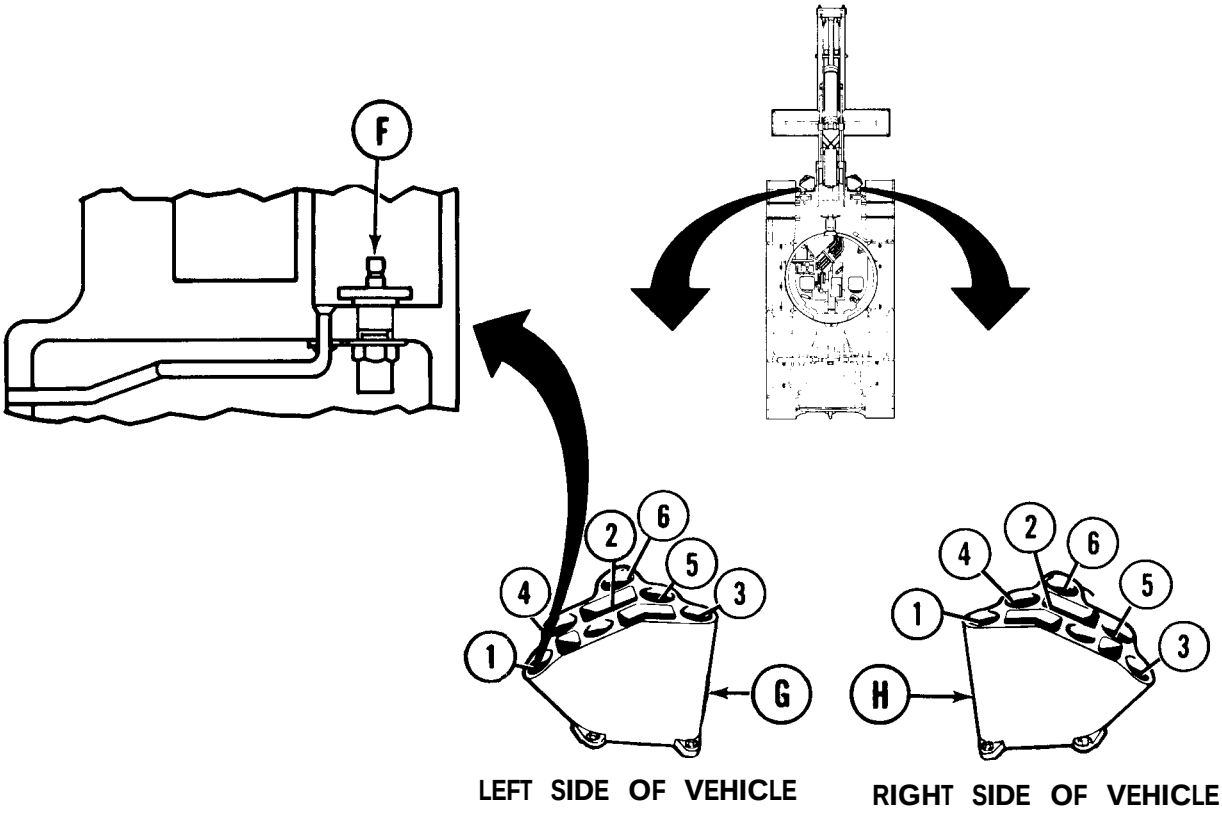
9. At right side discharger (H), check that vehicle voltage (24 ± 6 VDC) is present at barrels 1, 2, 5 and is not present at barrels 3, 4, 6.

10. Press and hold FIRE SMOKE RIGHT pushbutton switch (K).

11. At right side discharger (H), check that vehicle voltage (24 ± 6 VDC) is present at barrels 3, 4, 6 and is not present at barrels 1, 2, 5.

End of Task





TA248752

CHAPTER 19

SPEEDOMETER AND TACHOMETER MAINTENANCE

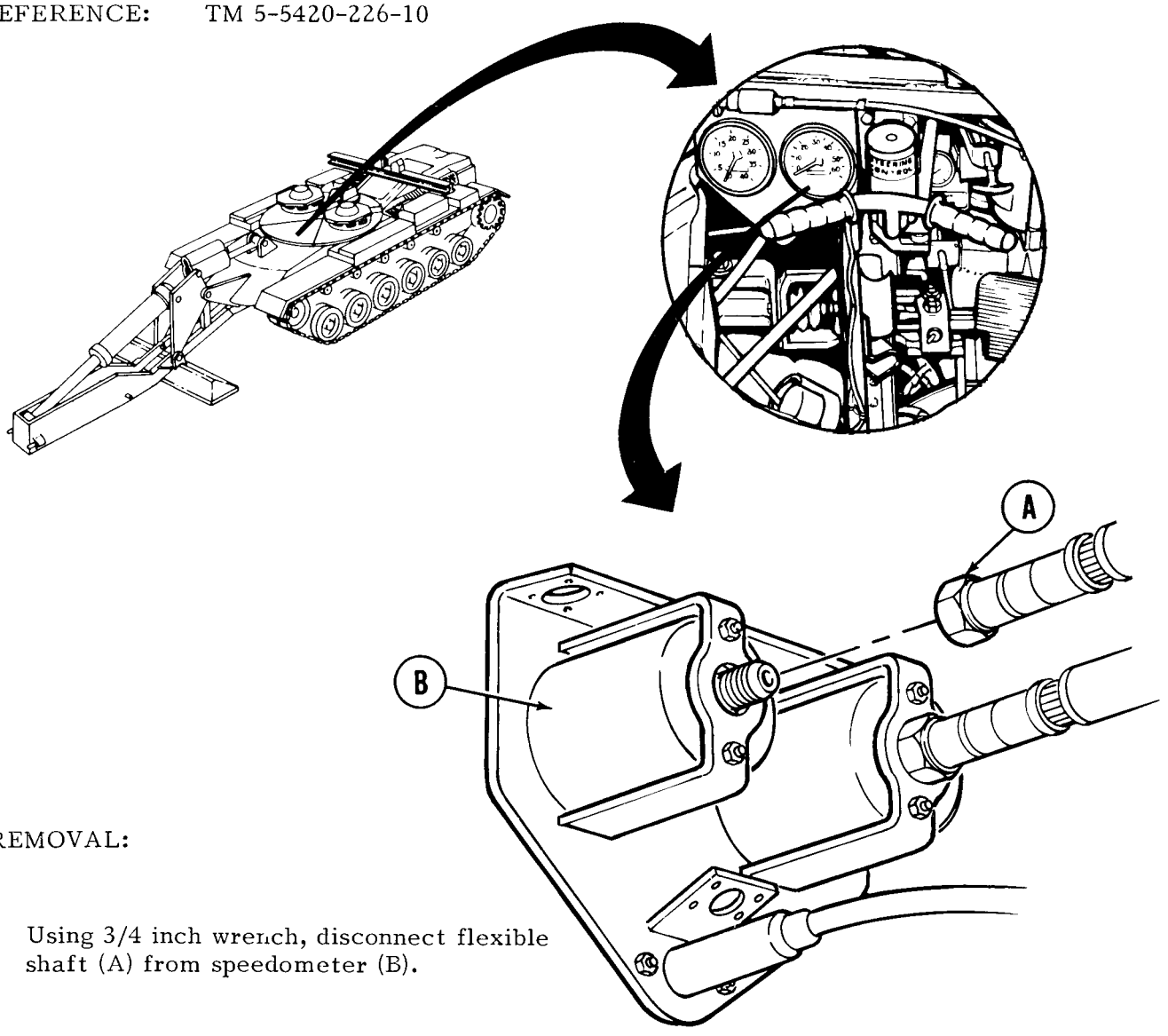
INDEX

SPEEDOMETER REPLACEMENT (Sheet 1 of 3)

PROCEDURES INDEX

TOOLS: 3/8 in. combination box and open end wrench
3/4 in. combination box and open end wrench

REFERENCE: TM 5-5420-226-10



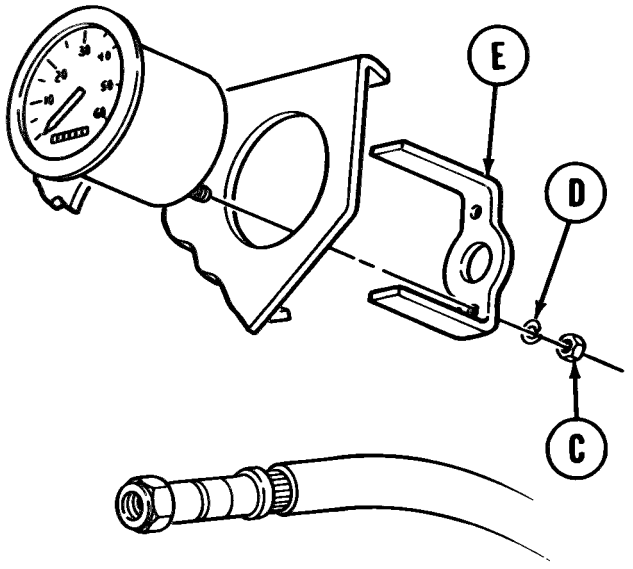
REMOVAL:

1. Using 3/4 inch wrench, disconnect flexible shaft (A) from speedometer (B).

Go on to Sheet 2

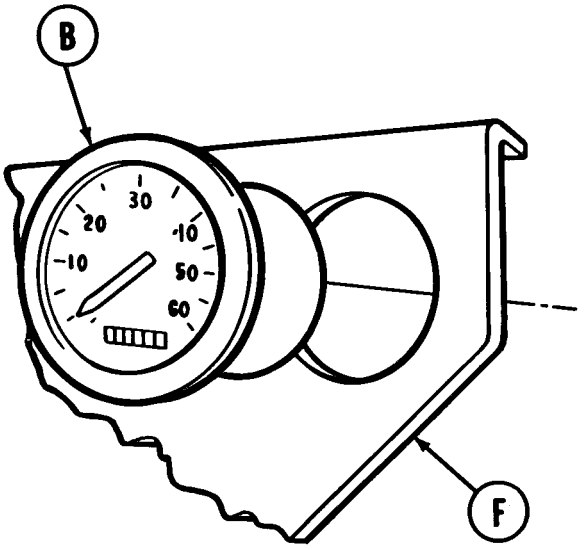
TA169618

SPEEDOMETER REPLACEMENT (Sheet 2 of 3)



2. Using 3/8 inch wrench, remove two nuts (C) and lockwashers (D) securing retainer (E).

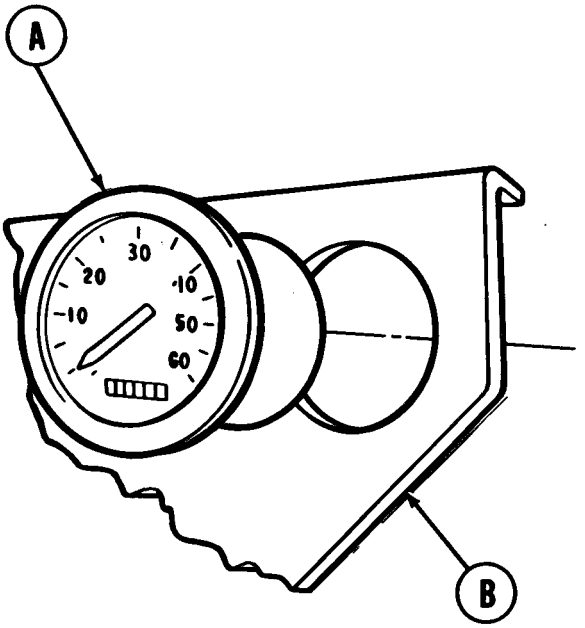
3. Remove retainer (E).



4. Remove speedometer (B) from mounting bracket (F).

INSTALLATION:

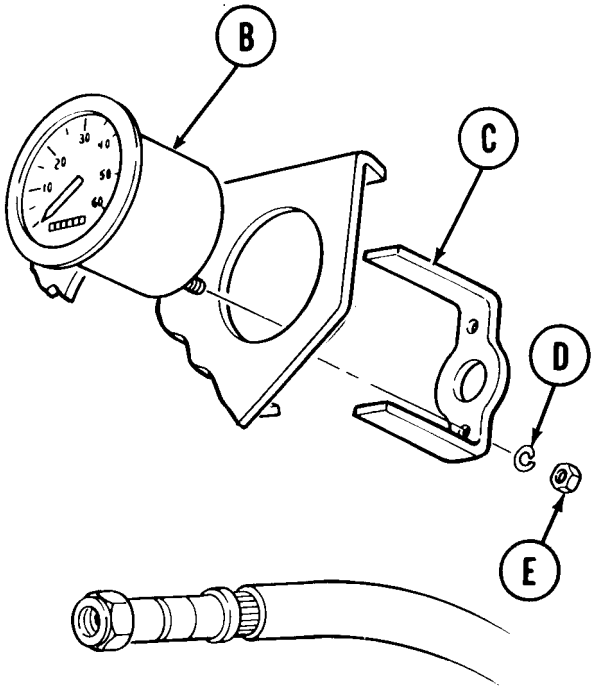
1. Place speedometer (A) in position in mounting bracket (B).



TA169619

Go on to Sheet 3

SPEEDOMETER REPLACEMENT (Sheet 3 of 3)



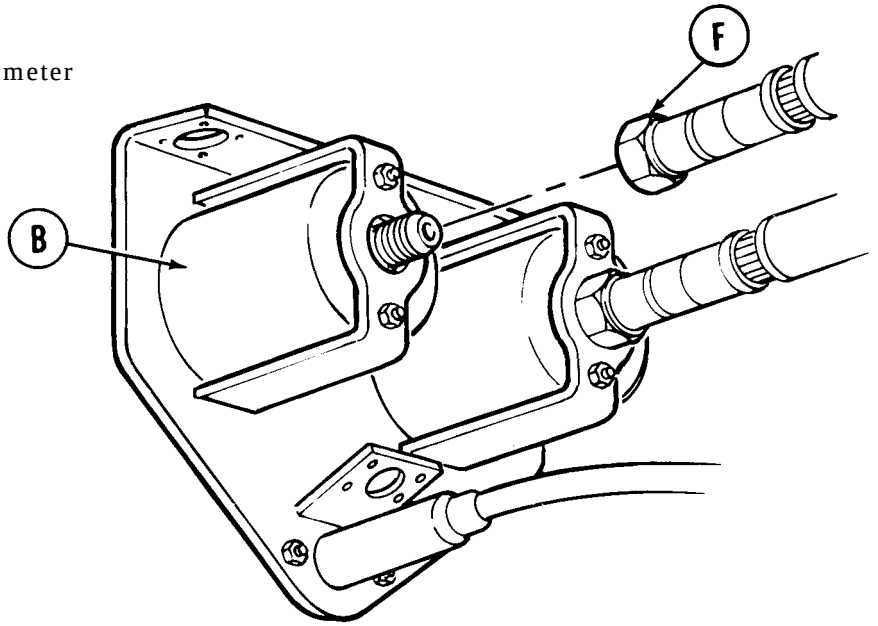
2. Place retainer (C) in position on speedometer (B).

3. Position two lockwashers (D).

4. Using 3/8 inch wrench, install two nuts (E).

5. Using 3/4 inch wrench, install flexible cable (F) on speedometer (B).

6. Check operation of speedometer (TM 5-5420-226-10).

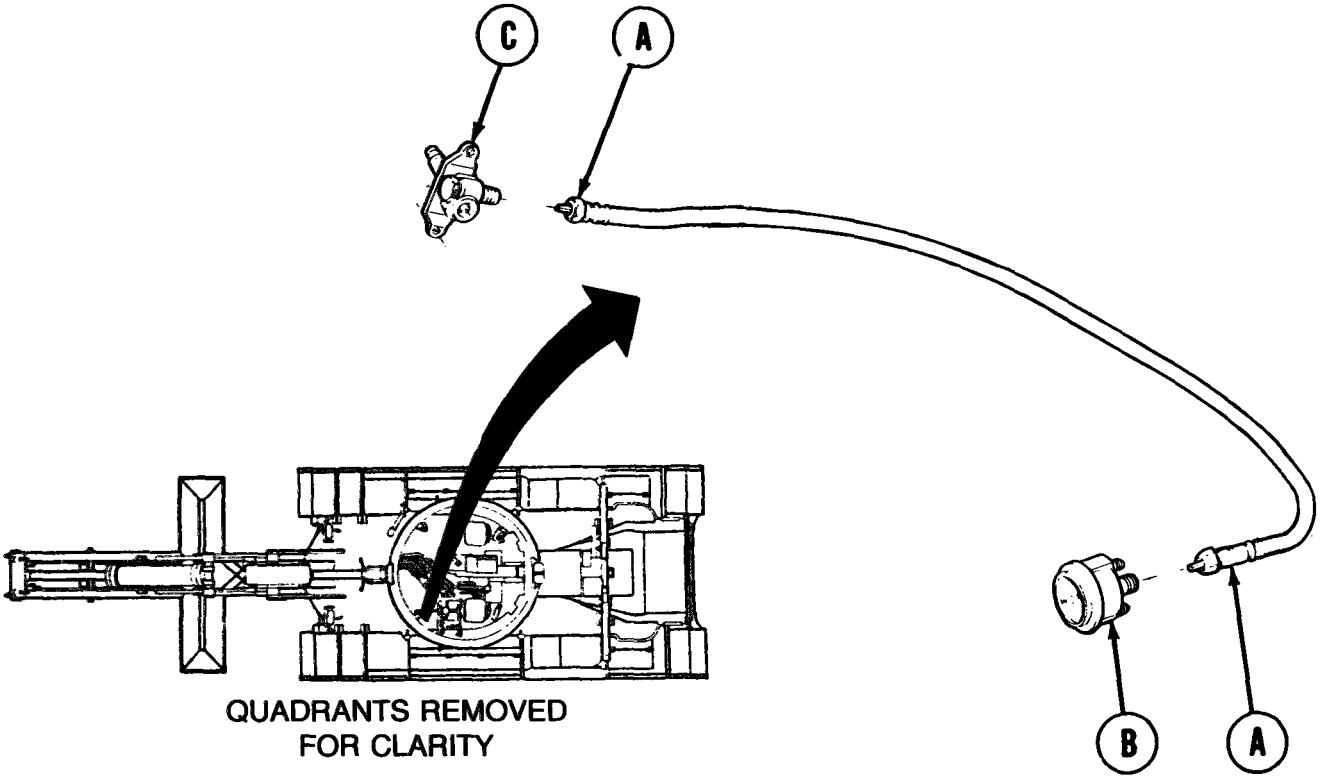


End of Task

TA169620

SPEEDOMETER FLEXIBLE SHAFT ASSEMBLY REPLACEMENT (Sheet 1 of 2)

TOOLS: 3/4 in. open end wrench
1 in. open end wrench
REFERENCE: TM 5-5420-226-10



REMOVAL:

1. Using 3/4 inch wrench, remove end of flexible shaft (A) from speedometer (B).

2. Using 1 inch wrench, remove end of flexible shaft (A) from adapter assembly (C).

Go on to Sheet 2

TA169621

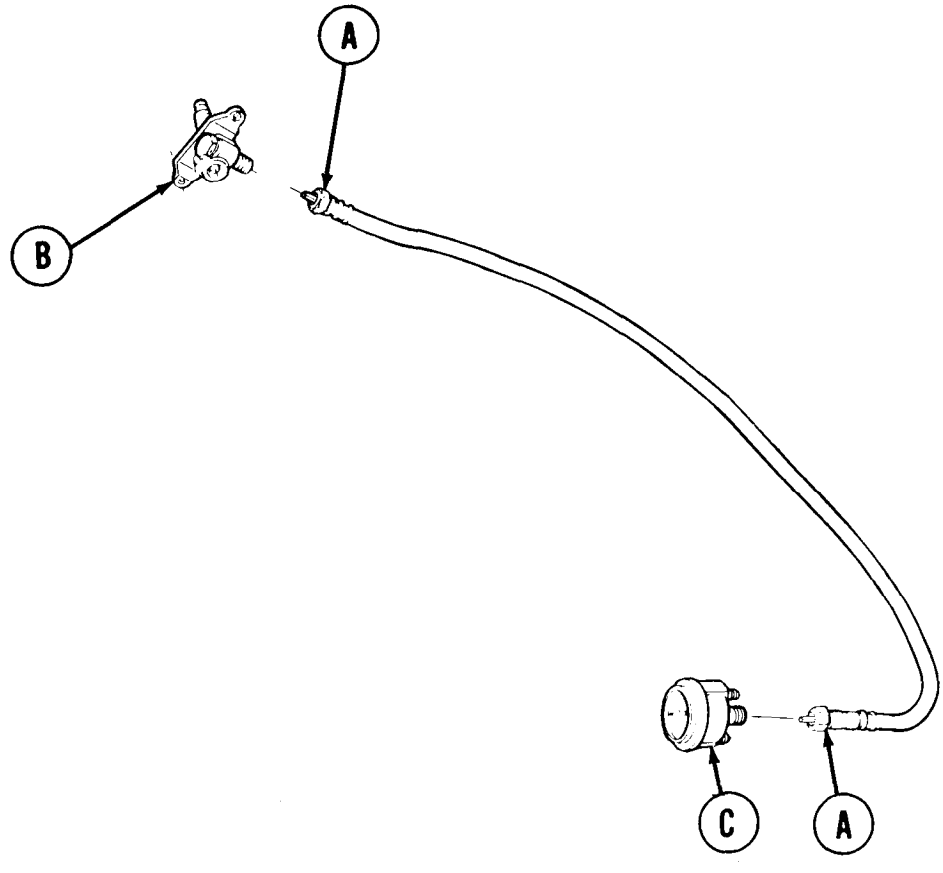
SPEEDOMETER FLEXIBLE SHAFT ASSEMBLY REPLACEMENT (Sheet 2 of 2)

INSTALLATION:

NOTE

Be sure to aline flexible shaft key with speedometer and adapter.

1. Place flexible shaft (A) in position.
2. Using 1 inch wrench, install end of flexible shaft (A) on adapter (B).



3. Using 3/4 inch wrench, install other end of flexible shaft (A) to speedometer (C).
4. Check operation of speedometer (TM 5-5420-226-10).

End of Task

TA169622

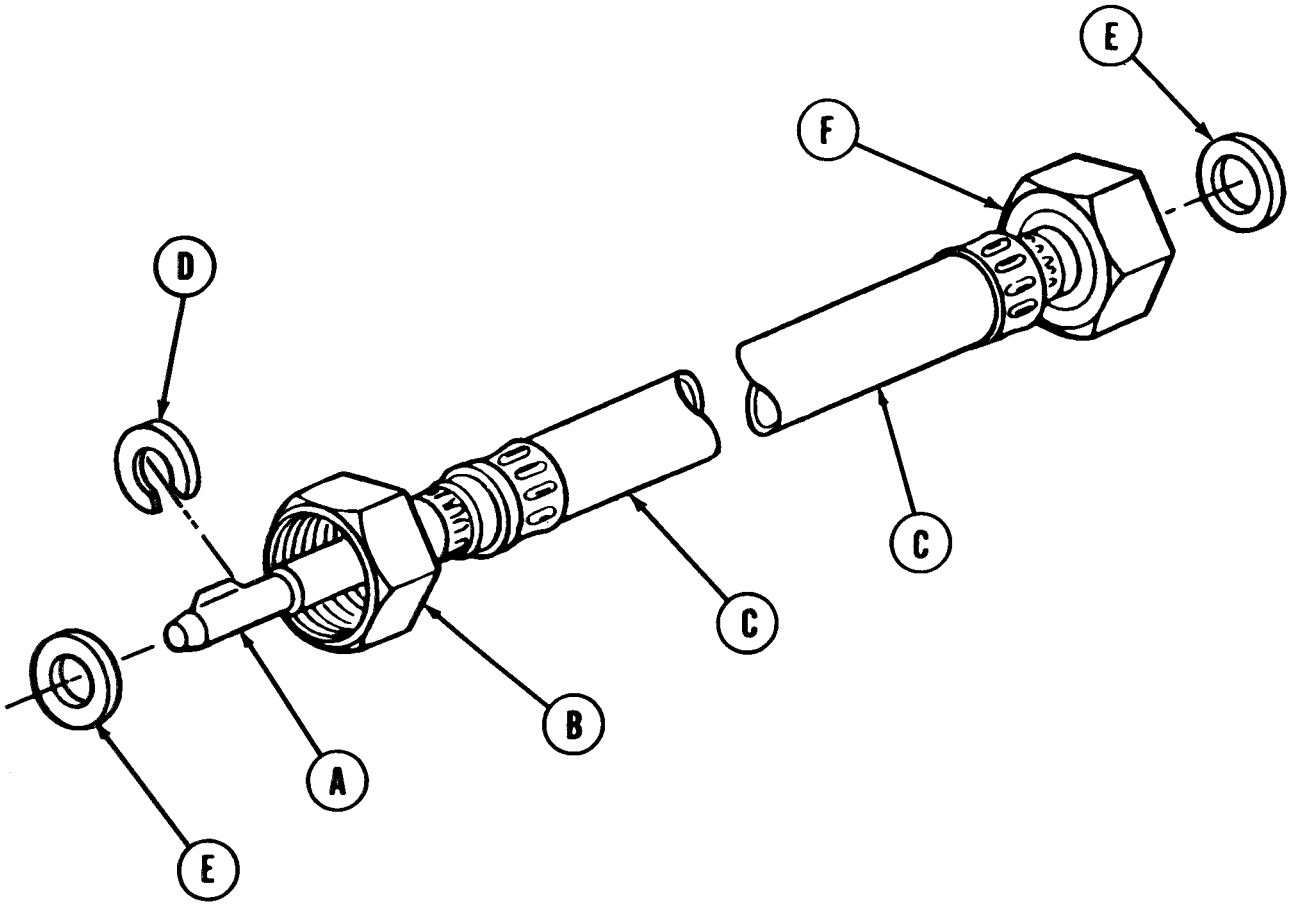
SPEEDOMETER FLEXIBLE SHAFT ASSEMBLY REPAIR (Sheet 1 of 2)

TOOLS: Slip joint pliers
Long round nose pliers (needle nose)

PRELIMINARY PROCEDURE: Remove speedometer flexible shaft assembly (page 19-5)

DISASSEMBLY:

1. Using slip joint pliers, pull out core (A) as far as possible from right angle drive adapter end (B) of flexible shaft (C).
2. Using needle nose pliers, remove slotted washer (D).
3. Remove one gasket (E) from each end of shaft (C).
4. Using pliers, pull out core (A) from speedometer end (F) of shaft (C).



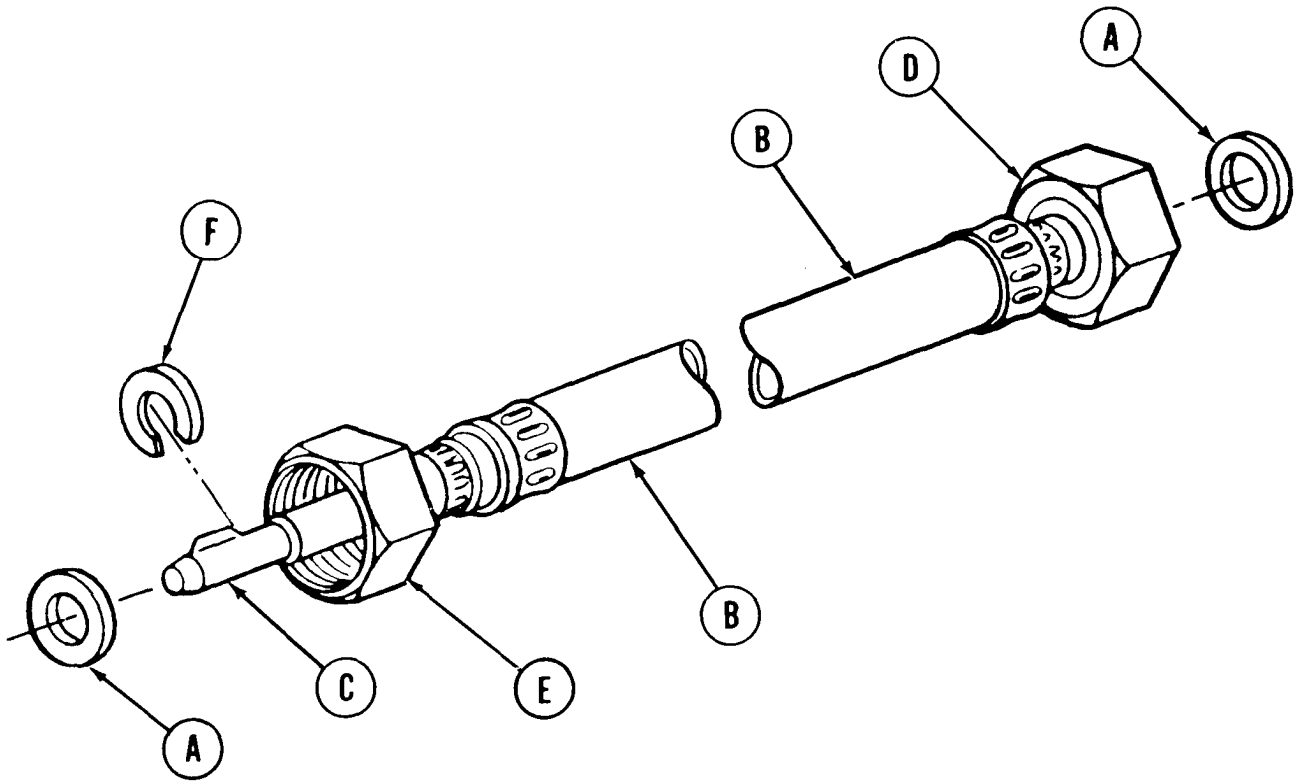
Go on to Sheet 2

TA169623

SPEEDOMETER FLEXIBLE SHAFT ASSEMBLY REPAIR (Sheet 2 of 2)

ASSEMBLY:

1. Install one gasket (A) onto each end of shaft (B).
2. Install core (C) in speedometer end (D) of flexible shaft (E).
3. Using slip joint pliers, pull out core (C) as far as possible from right angle drive adapter end (E) of shaft (B).
4. Using needle nose pliers, install slotted washer (F) on core (C).
5. Push core (C) back into flexible shaft (B) until seated.
6. Install speedometer flexible shaft assembly (page 19-6).



End of Task

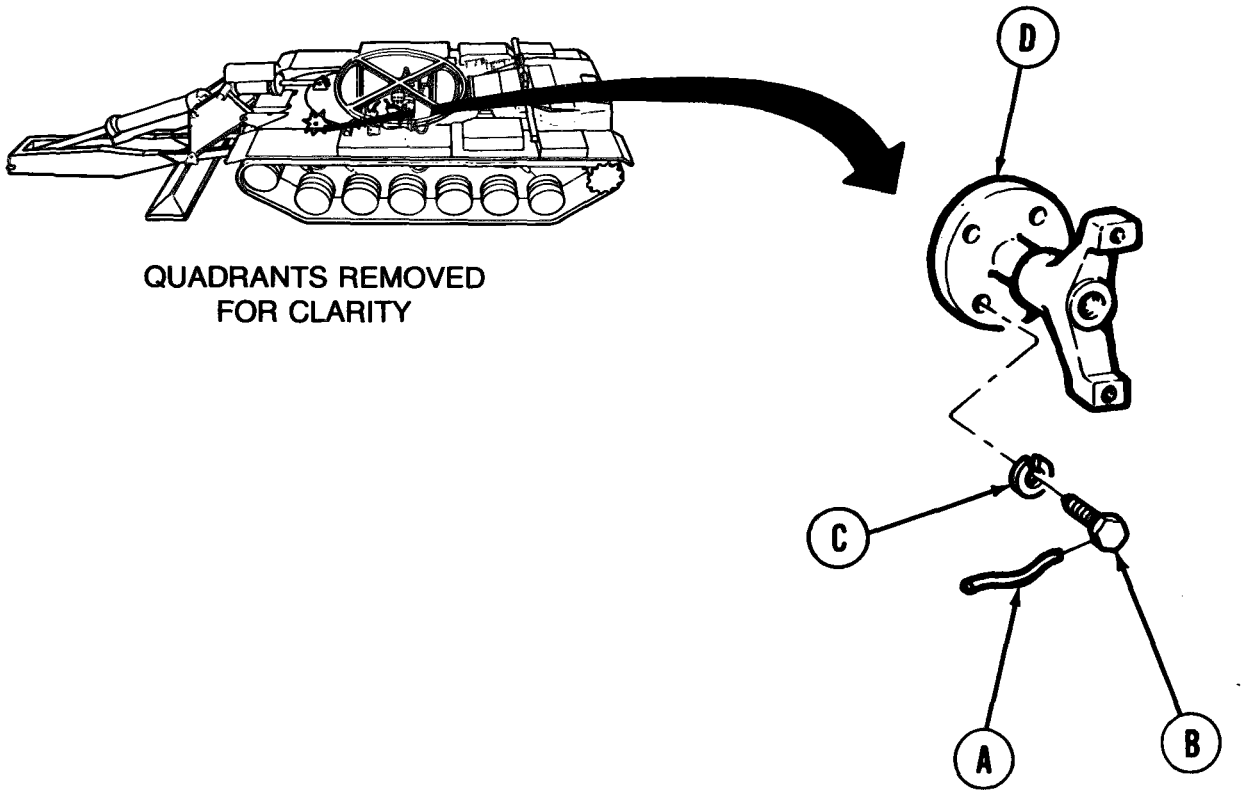
TA169624

SPEEDOMETER ADAPTER ROTATING BRACKET ASSEMBLY REPLACEMENT (Sheet 1 of 2)

TOOLS: Diagonal cutting pliers
Slip joint pliers
Ratchet with l/2 in. drive
7/16 in. socket with l/2 in. drive
5 in. extension with l/2 in. drive

SUPPLIES: Lock wire (Item 61, Appendix D)

PRELIMINARY PROCEDURE: Remove speedometer shaft adapter assembly (page 19-11)



REMOVAL:

1. Using cutting pliers, remove lockwire (A) from four screws (B). Throw lockwire away.
2. Using socket and extension, remove four screws (B) and lockwashers (C).
3. Remove rotating bracket assembly (D).

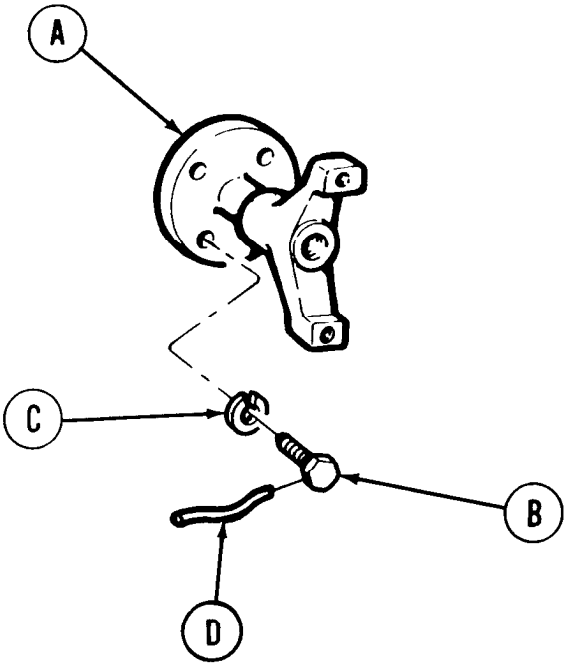
Go on to Sheet 2

TA169625

SPEEDOMETER ADAPTER ROTATING BRACKET ASSEMBLY REPLACEMENT (Sheet 2 of 2)

INSTALLATION:

1. Place rotating bracket (A) in position on hull wall.
2. Using socket and extension, install four screws (B) and lockwasher (C).
3. Using slip joint pliers, install new lockwire (D).
4. Install speedometer shaft adapter assembly (page 19-12).



End of Task

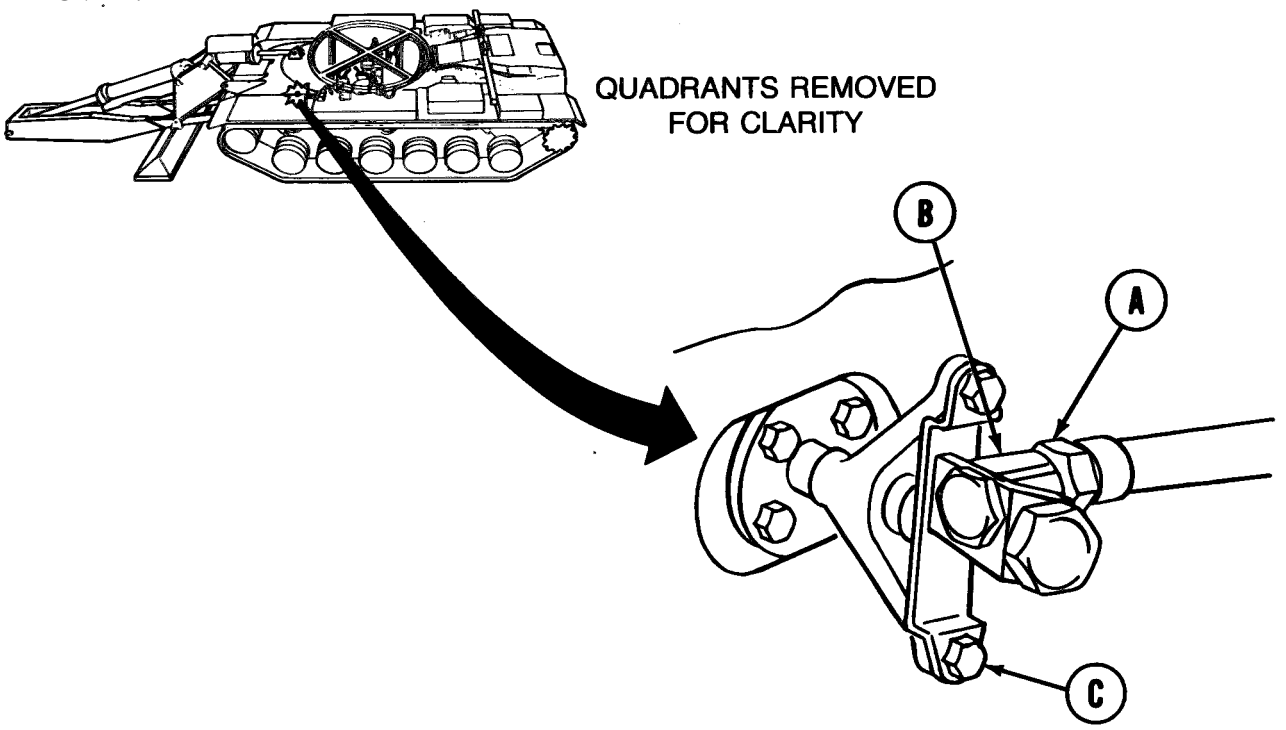
TA169626

SPEEDOMETER SHAFT ADAPTER ASSEMBLY REPLACEMENT (Sheet 1 of 2)

TOOLS: 7/16 in. socket with 1/2 in. drive
1 in. combination box and open end wrench
Ratchet with 1/2 in. drive
5 in. socket extension with 1/2 in. drive

REFERENCE: TM 5-5420-226-10

REMOVAL:



1. Using 1 inch wrench, disconnect flexible shaft assembly (A) from speedometer shaft adapter (B).
2. Using 7/16 inch socket and extension, remove two screws and lockwashers (C).
3. Remove speedometer shaft adapter assembly (B).

Go on to Sheet 2

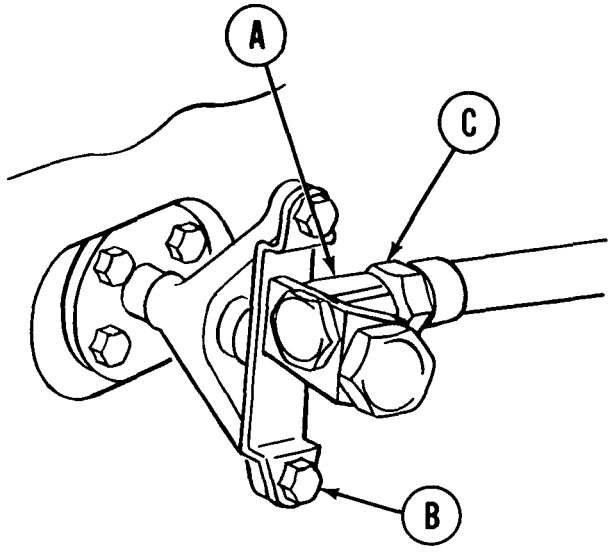
TA169627

SPEEDOMETER SHAFT ADAPTER ASSEMBLY REPLACEMENT (Sheet 2 of 2)

INSTALLATION:

NOTE

When placing shaft adapter in position, make sure to aline adapter and cable.



1. Place speedometer shaft adapter (A) in position.
2. Using 7/16 inch socket and extension, install two screws and lockwasher (B).
3. Using 1 inch wrench, connect flexible shaft assembly (C) to shaft adapter (A).
4. Check operation of speedometer (TM 5-5420-226-10).

End of Task

TA169628

SPEEDOMETER SHAFT ADAPTER ASSEMBLY REPAIR (Sheet 1 of 1)

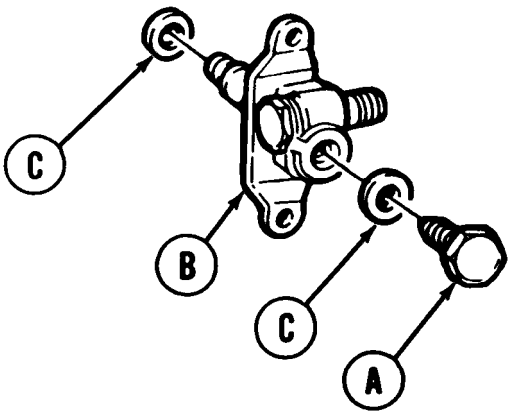
TOOLS: 1-1/4 in. box end wrench
Flat-tip screwdriver

SUPPLIES: Grease (Item 37, Appendix D)
Preformed packing (MS28775-212)
Preformed packing (MS28775-21O)

PRELIMINARY PROCEDURE: Remove speedometer shaft adapter assembly (page 19-11)

DISASSEMBLY:

1. Using wrench, remove adapter plug (A) from speedometer shaft adapter assembly (B).
2. Using screwdriver, remove two preformed packings (C).
3. Throw preformed packings away.



ASSEMBLY:

1. Lightly grease two new preformed packings (C).
2. Place two preformed packings (C) in position on speedometer shaft adapter assembly [B).
3. Using wrench, install adapter plug (A) in speedometer shaft adapter assembly (B).
4. Install speedometer shaft adapter assembly in vehicle (page 19-12).

End of Task

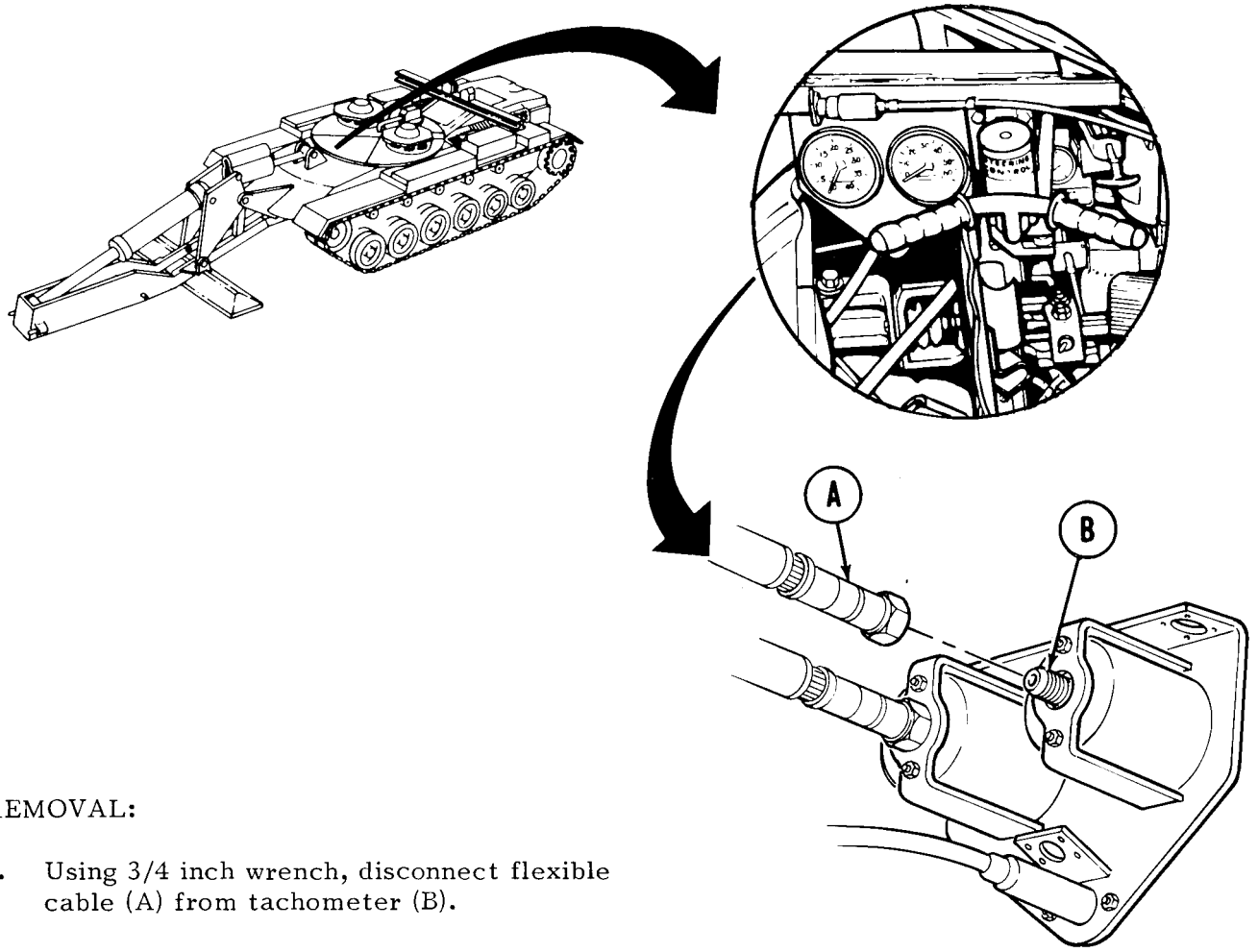
TA169629

TACHOMETER REPLACEMENT (Sheet 1 of 3)

PROCEDURES INDEX

TOOLS: 3/8 in. combination box and open end wrench
3/4 in. combination box and open end wrench

REFERENCE: TM 5-5420-226-10



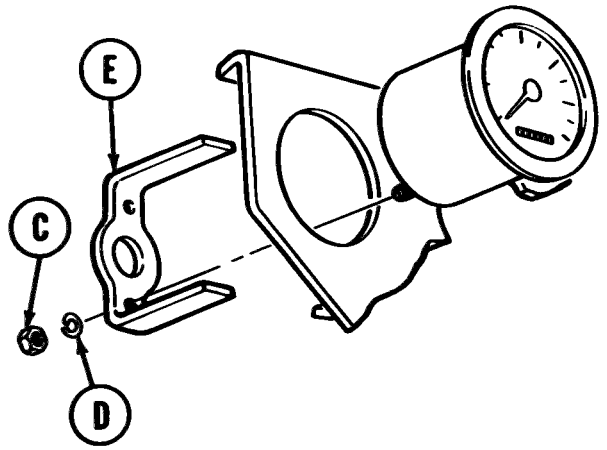
REMOVAL:

1. Using 3/4 inch wrench, disconnect flexible cable (A) from tachometer (B).

Go on to Sheet 2

TA169630

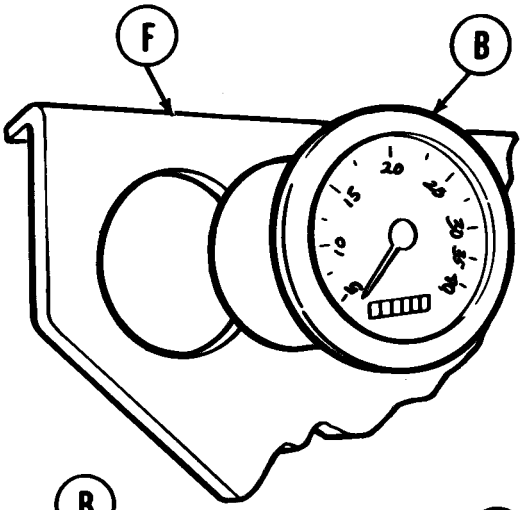
TACHOMETER REPLACEMENT (Sheet 2 of 3)



2. Using 3/8 inch wrench, remove two nuts (C) and lockwashers (D) securing retainer (E).

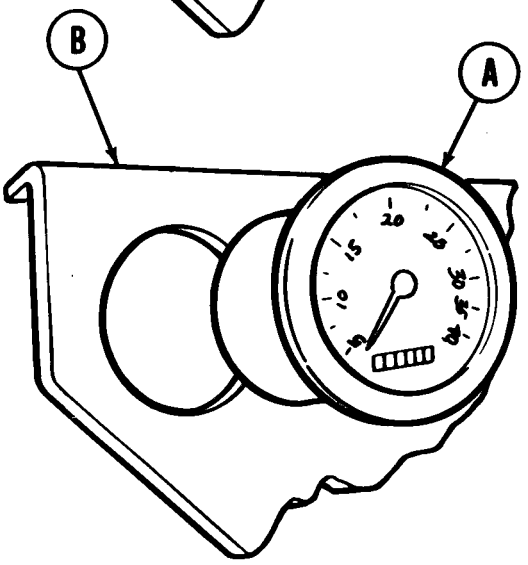
3. Remove retainer (E).

4. Remove tachometer (B) from mounting bracket (F).



INSTALLATION:

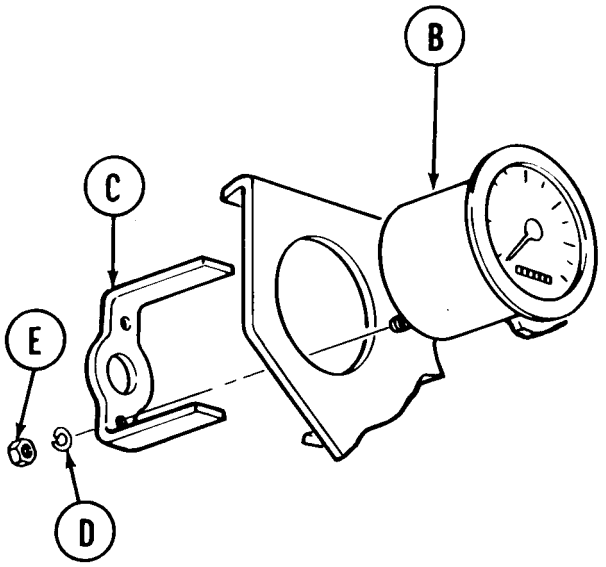
1. Place tachometer (A) in position in mounting bracket (B).



Go on to Sheet 3

TA169631

TACHOMETER REPLACEMENT (Sheet 3 of 3)

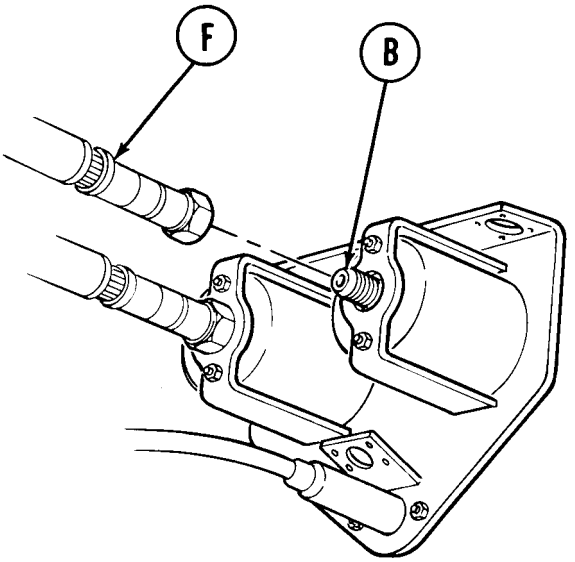


2. Place retainer (C) in position on tachometer (B).

3. Position two lockwashers (D).

4. Using 3/8 inch wrench, install two nuts (E).

5. Using 3/4 inch wrench, install flexible cable (F) on tachometer (B).



6. Start engine (TM 5-5420-226-10).

7. Make sure tachometer operates.

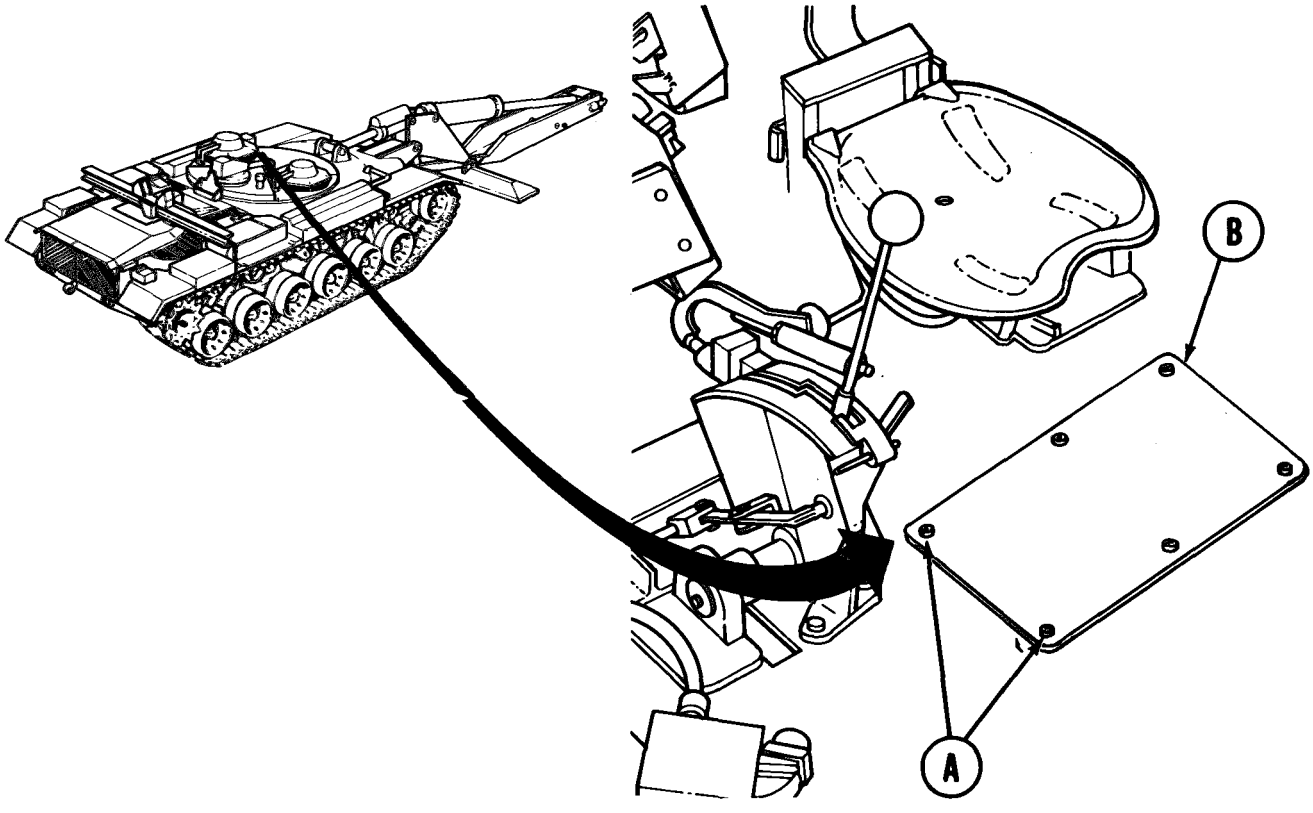
End of Task

TA169632

TACHOMETER BULKHEAD SHAFT ADAPTER REPLACEMENT (Sheet 1 of 3)

TOOLS: Adjustable wrench, 10 in.
Screwdriver, cross-tip

REFERENCE: TM 5-5420-226-10



REMOVAL:

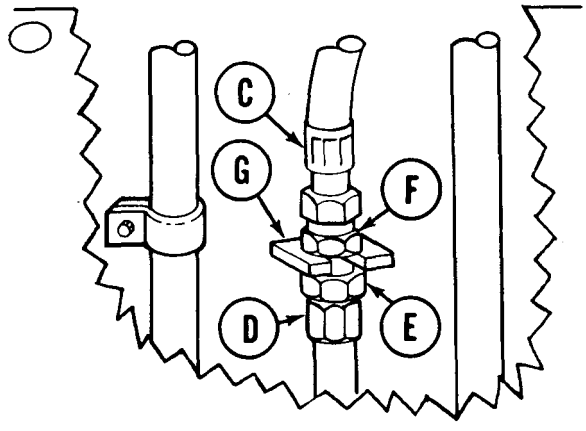
1. Using screwdriver, remove six screws (A) from floor plate (B) in driver's compartment floor.
2. Remove floor plate (B).

Go on to Sheet 2

TA169633

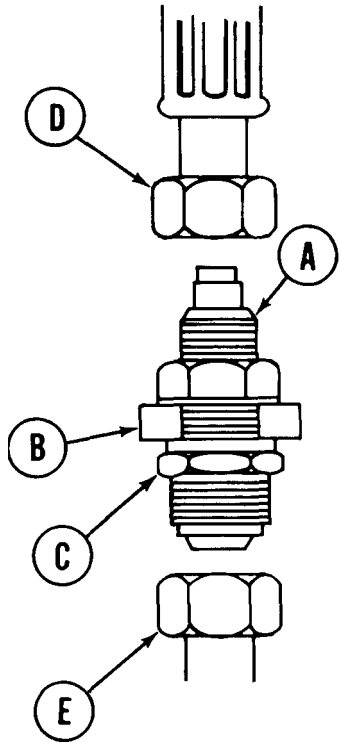
TACHOMETER BULKHEAD SHAFT ADAPTER REPLACEMENT (Sheet 2 of 3)

3. Using wrench, remove front flexible shaft assembly (C) from underside of floor plate.
4. Using wrench, remove rear flexible shaft assembly (D).
5. Using wrench, loosen nut (E).
6. Remove adapter (F) from mounting bracket (G).



INSTALLATION:

1. Place adapter (A) in position on mounting bracket (B).
2. Using wrench, tighten nut (C).
3. Using fingers, install front flexible shaft (D) and rear flexible shaft (E).
4. Using wrench, tighten shafts (D) and (E).

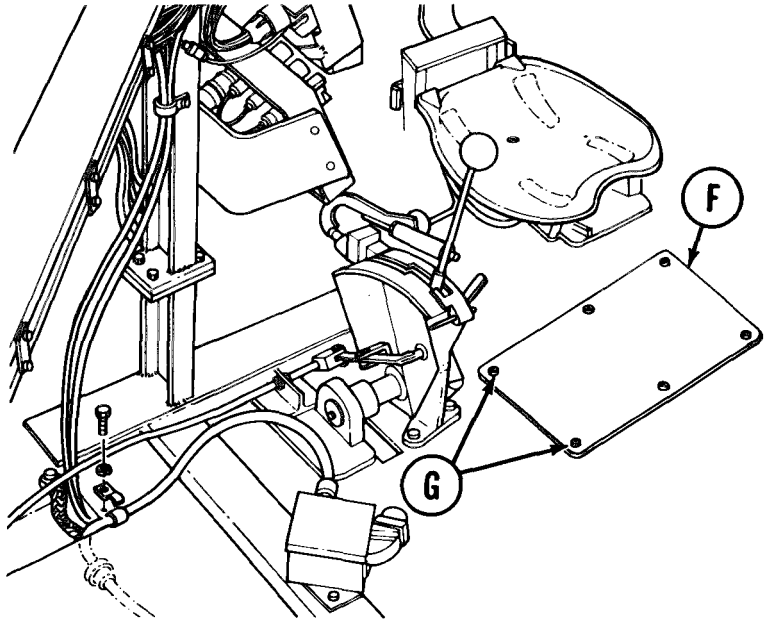


Go to Sheet 3

TA169634

TACHOMETER BULKHEAD SHAFT ADAPTER REPLACEMENT(Sheet 3 of 3)

5. Position floor plate (F) with holes alined.
6. Using screwdriver, install six screws (G).
7. Start engine (TM 5-542O-226-10).
8. Make sure tachometer works.

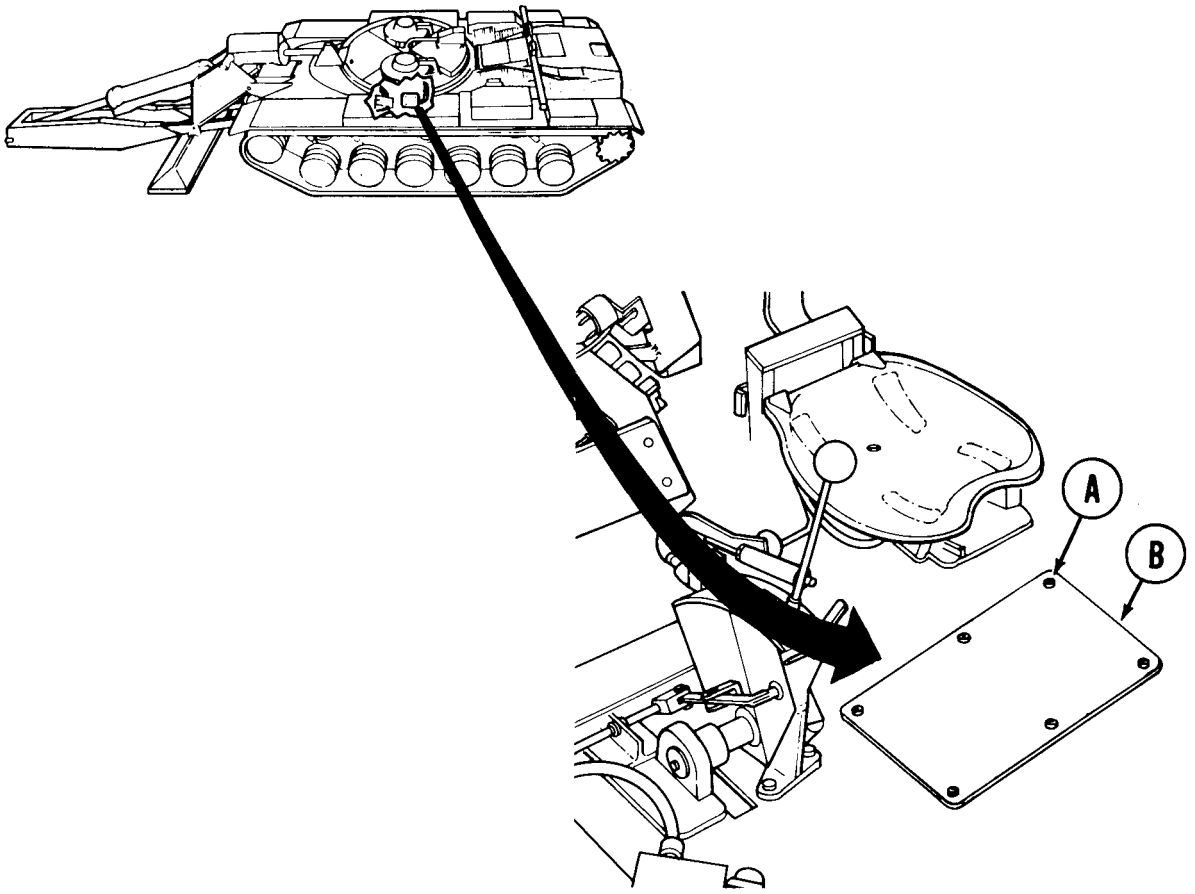


TA169635

TACHOMETER FRONT FLEXIBLE SHAFT ASSEMBLY REPLACEMENT (Sheet 1 of 3)

TOOLS: 7/16 in. combination box and open end wrench
3/4 in. combination box and open end wrench
1 in. combination box and open end wrench
Screwdriver, cross-tip

REFERENCE: TM 5-5420-226-10



REMOVAL:

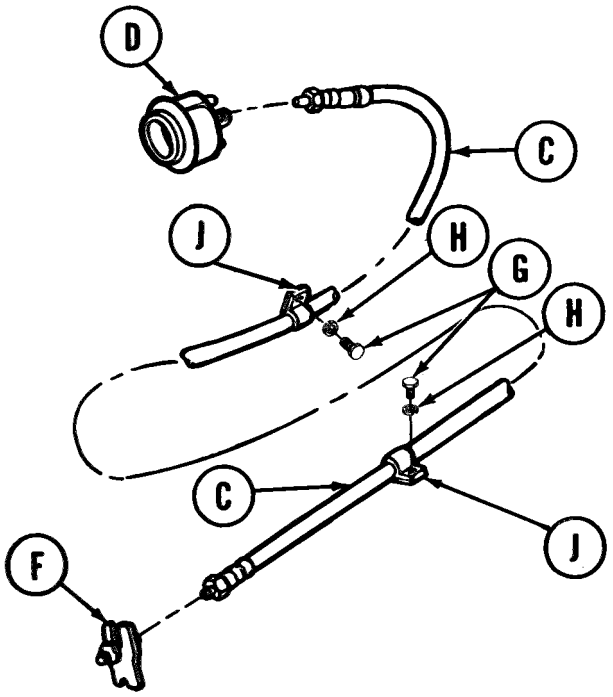
1. Using screwdriver, remove six screws (A) from floor plate (B).
2. Remove floor plate (B).

Go on to Sheet 2

TA169636

TACHOMETER FRONT FLEXIBLE SHAFT ASSEMBLY REPLACEMENT (Sheet 2 of 3)

3. Using 3/4 inch wrench, remove end of shaft (C) from tachometer (D) in driver's compartment.



4. Using 1 inch wrench, remove end of shaft (C) from tachometer shaft adapter (F) under floor plate.

5. Using 7/16 inch wrench, remove two screws (G), and lockwashers (H), and clamps (J).

6. Remove front flexible shaft (C).

INSTALLATION:

NOTE

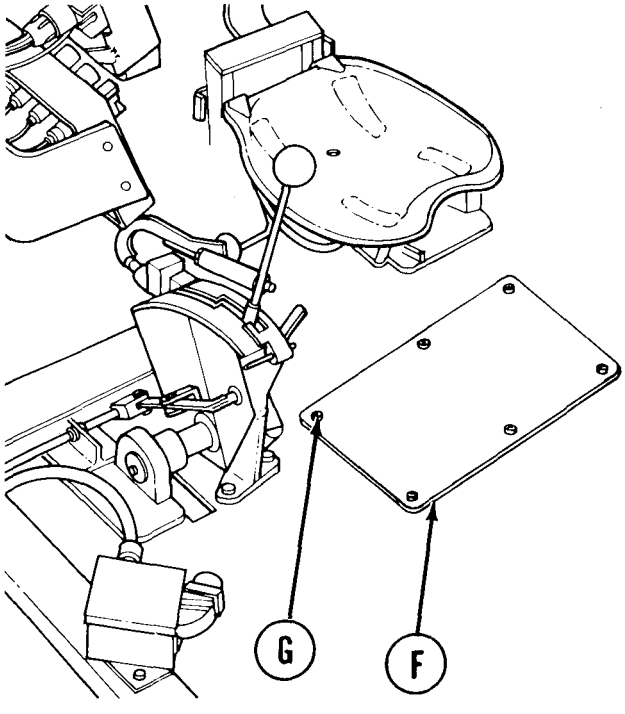
Be sure to aline flexible shaft key with slot in adapter.

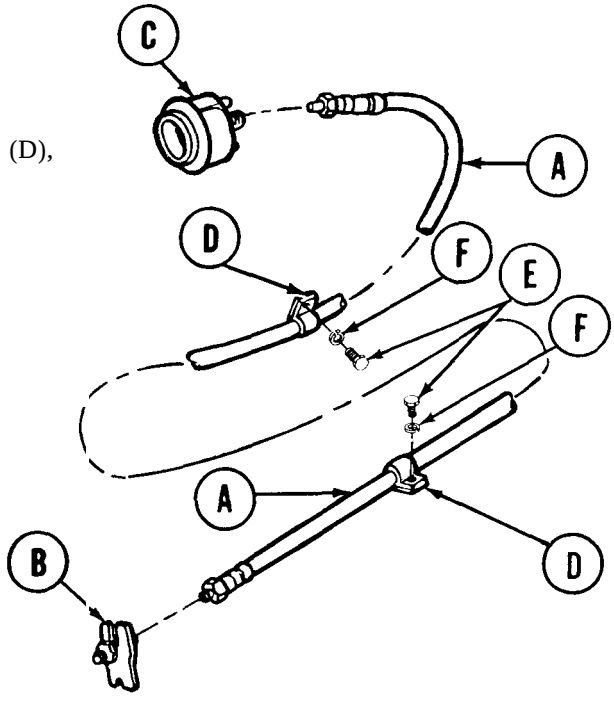
Go on to Sheet 3

TA169637

TACHOMETER FRONT FLEXIBLE SHAFT ASSEMBLY REPLACEMENT (Sheet 3 of 3)

1. Place shaft (A) in position.
2. Using 1 inch wrench, install end of shaft (A) on tachometer shaft adapter (B).
3. Using 3/4 inch wrench, install other end of shaft (A) to tachometer (C).
4. Using 7/16 inch wrench, install two clamps (D), screws (E), and lockwashers (F).
5. Position floor plate (F) with holes alined.
6. Using screwdriver, install six screws (G).





7. Start engine (TM 5-5420-226-10).
8. Make sure tachometer works.

End of Task

TA169638

TACHOMETER FRONT FLEXIBLE SHAFT REPAIR (Sheet 1 of 2)

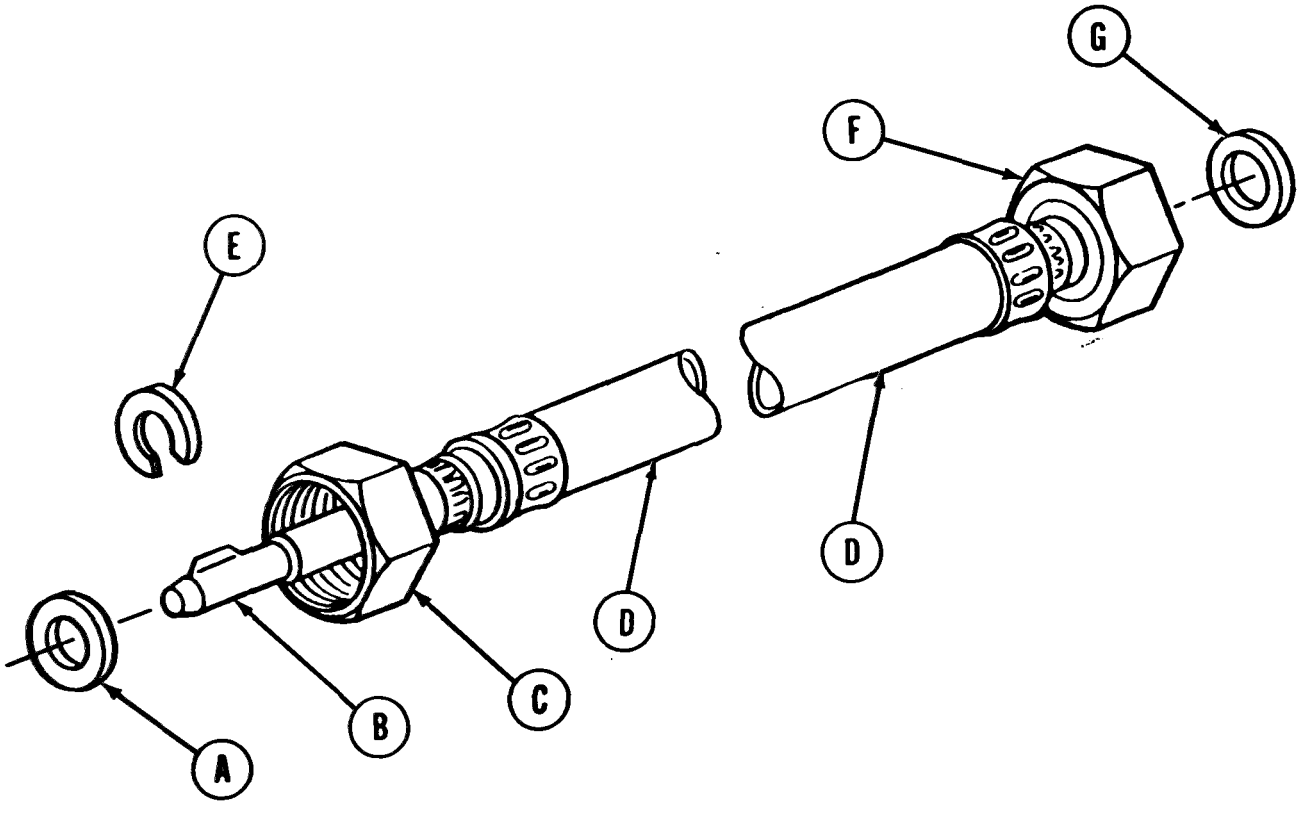
TOOLS: Slip joint pliers
Long round nose pliers (needle nose)

REFERENCE: TM 5-5420-226-10

PRELIMINARY PROCEDURE: Remove tachometer shaft assembly from vehicle (page 19-21)

DISASSEMBLY:

1. Using needle nose pliers, remove gasket (A).
2. Using slip joint pliers, pull out core (B) from tachometer shaft adapter end (C) of flexible cable (D) as far as possible.
3. While holding core (B) with pliers, use needle nose pliers to remove slotted washer (E).
4. Using slip joint pliers, pull out core (B) from tachometer end (F) of flexible shaft (C).
5. Using needle nose pliers, remove flat washer (G) from shaft end.



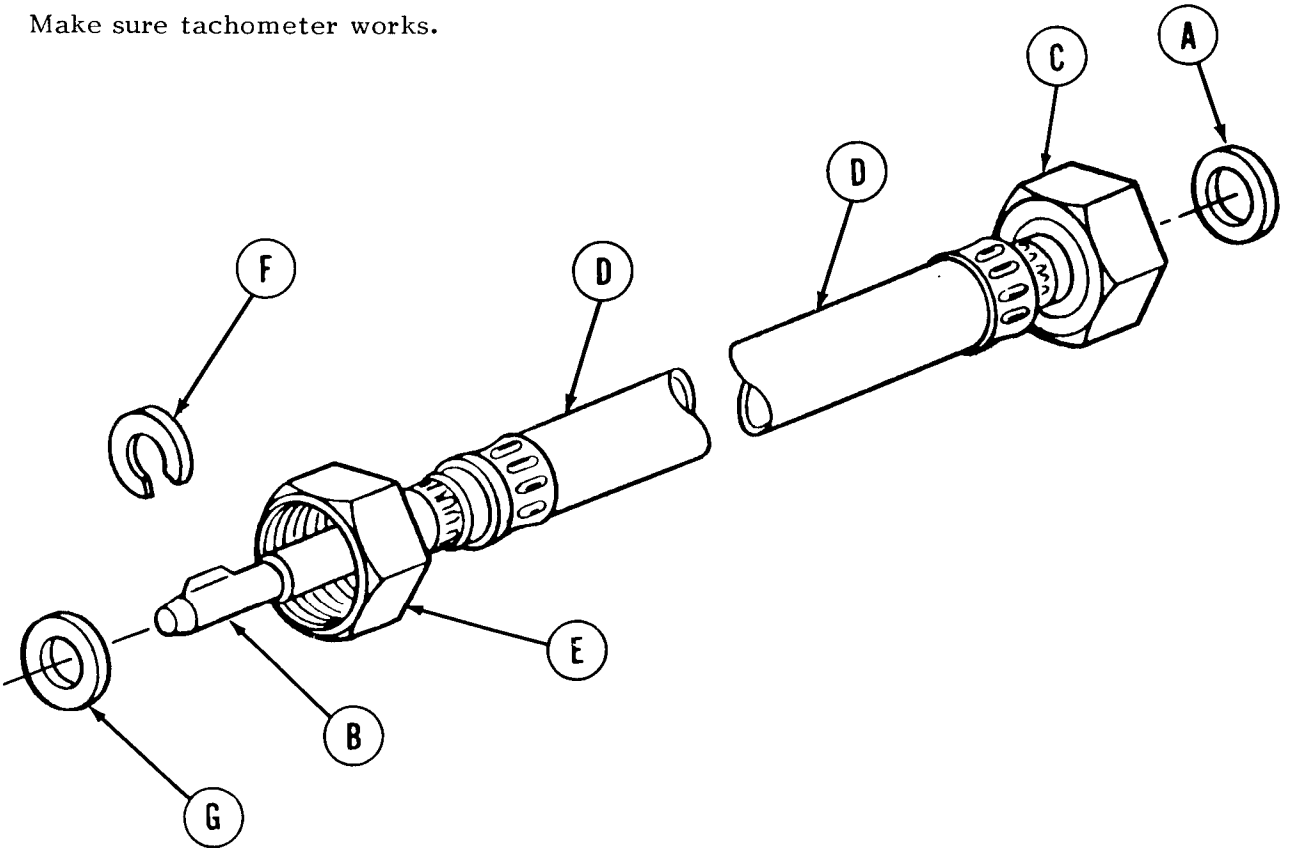
Go on to Sheet 2

TA169639

TACHOMETER FRONT FLEXIBLE SHAFT REPAIR (Sheet 2 of 2)

ASSEMBLY:

1. Install flat washer (A) onto shaft end.
2. Install core (B) through tachometer end (C) of flexible shaft (D).
3. Using slip joint pliers, pull out core (B) from tachometer shaft adapter end (E) as far as it will go.
4. Using needle nose pliers, install slotted washer (F).
5. Using needle nose pliers, install gasket (G) onto end of shaft (D).
6. Push core (B) back into flexible shaft (D) until seated.
7. Install shaft in vehicle (page 19-21).
8. Start engine (TM 5-5420-226-10).
9. Make sure tachometer works.



End of Task

TA169640

TACHOMETER REAR FLEXIBLE SHAFT REPLACEMENT (Sheet 1 of 6)

PROCEDURE INDEX

TOOLS: 12 in. adjustable wrench
Slip joint pliers
Flat-tip screwdriver
6 in. steel rule
Long round nose. pliers
Cross-tip screwdriver

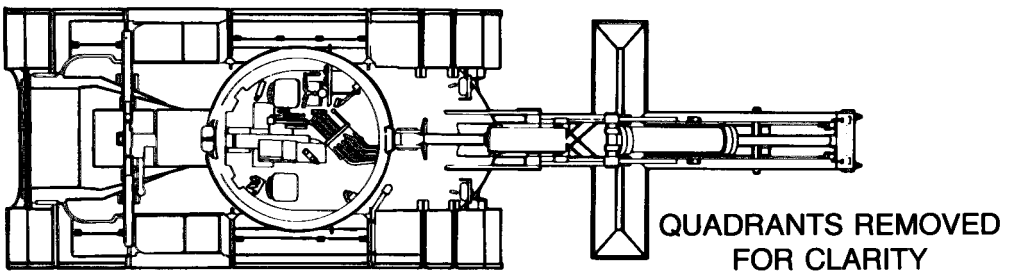
SPECIAL TOOLS: Heat gun (Item 35, Chapter 3, Section I)

SUPPLIES: Shrink tubing (Item 60, Appendix D)
Adhesive (Item 4, Appendix D)
Electrical tape (Item 59, Appendix D)
8 ft. wire (Item 61, Appendix D)
Dry cleaning solvent (Item 55, Appendix D)
Rags (Item 65, Appendix D)

PERSONNEL: Two

REFERENCE: TM 5-5420-226-10

PRELIMINARY PROCEDURES: Remove engine upper access cover (page 17-14).
Remove powerplant (page 5-2).



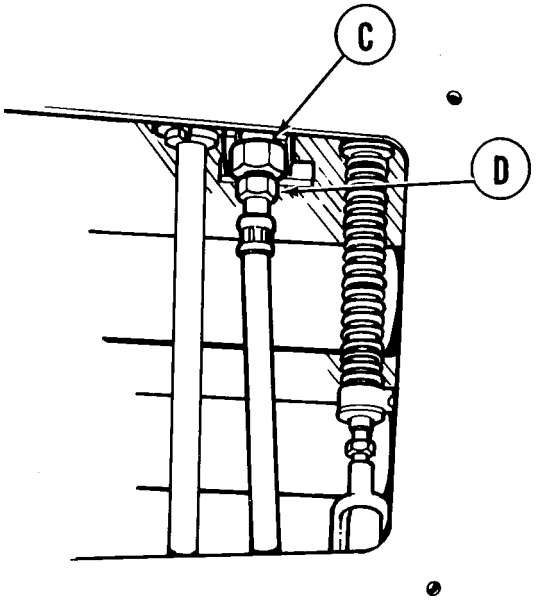
Go on to Sheet 2

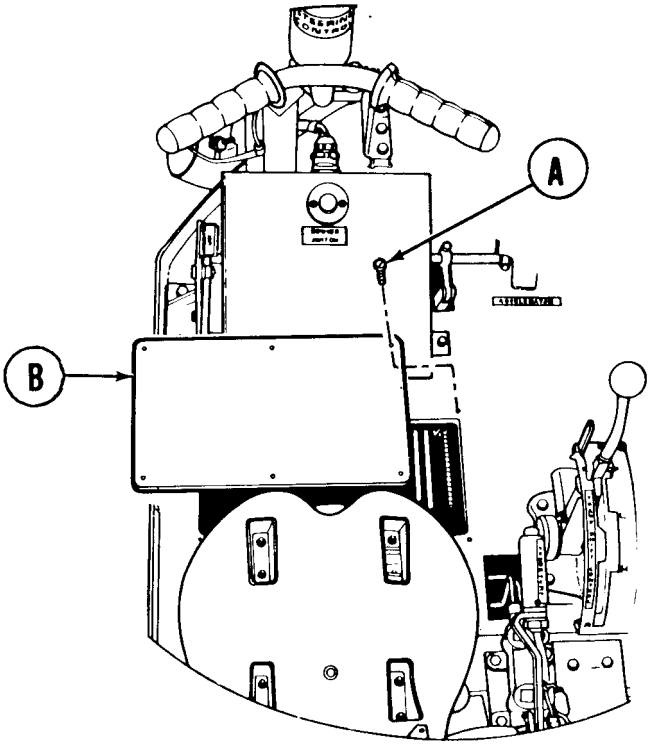
TA169641

TACHOMETER REAR FLEXIBLE SHAFT REPLACEMENT (Sheet 2 of 6)

REMOVAL:

1. Using cross-tip screwdriver, remove six screws (A) from floor plate (B).
2. Remove floor plate (B).
3. Using wrench, disconnect rear tachomet shaft (C) from adapter (D).

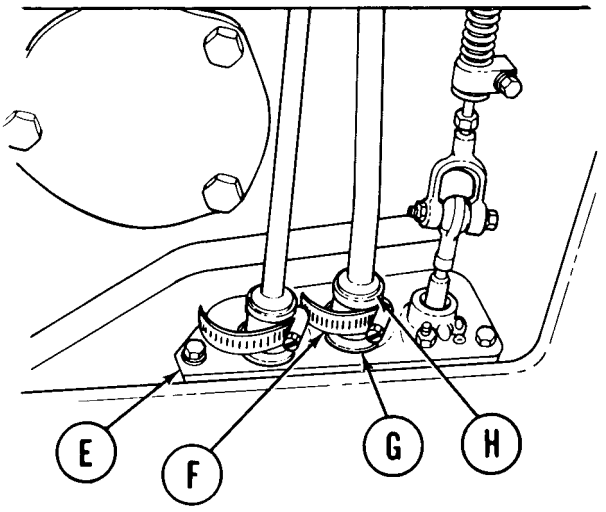




4. Locate where shaft (C) goes into bulkhead (E).
5. Using flat-tip screwdriver, loosen clamp (F) on grommet (G), slip off clamp.
6. Using flat-tip screwdriver and pliers, pry out rubber bushing (H) from under grommet (E). Remove bushing from shaft assembly.

NOTE

Grommet (G) is bonded to bulkhead. If the grommet does not have to be replaced, go to step 8.



7. Using screwdriver and pliers, pry out grommet (G) from bulkhead (E).

Go on to Sheet 3

TA169642

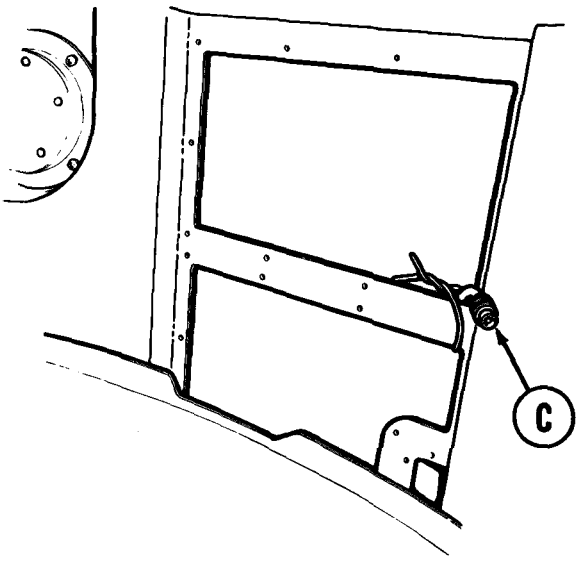
TACHOMETER REAR FLEXIBLE SHAFT REPLACEMENT (Sheet 3 of 6)

8. While one person holds shaft (C) in crew compartment, other person locates other end of shaft (C) through engine upper access opening.

9. Attach wire to crew compartment end of shaft (C).

10. Person at engine upper access opening remove shaft (C) by pulling out.

11. Remove wire from shaft (C) leaving wire in place for installation.



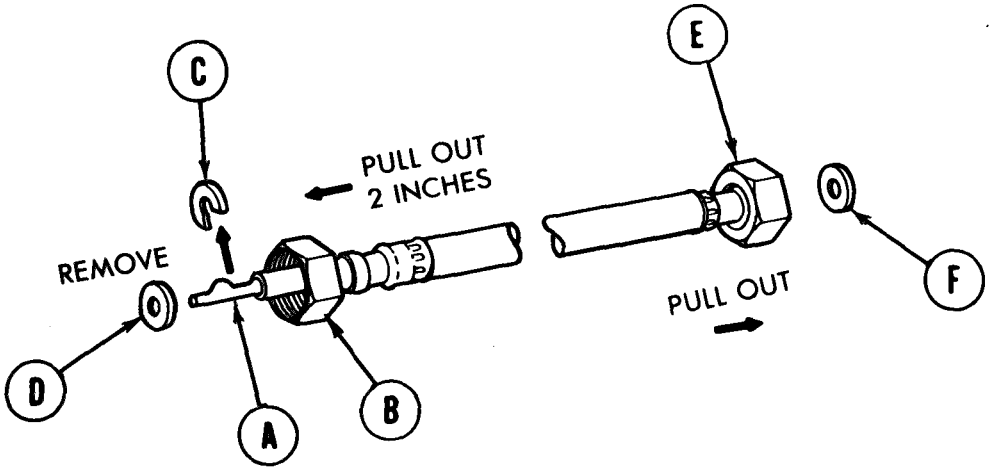
DISASSEMBLY:

1. Using slip joint pliers, pull out core (A) approximately 2 inches from tachometer drive adapter end (B).

2. Using long round nose pliers, remove slotted washer (C) and gasket (D).

3. Using slip joint pliers, pull out core (A) from tachometer adapter end (E).

4. Remove flat washer (F) from adapter end (E).



Go on to Sheet 4

TA169643

TACHOMETER REAR FLEXIBLE SHAFT REPLACEMENT (Sheet 4 of 6)

CLEANING AND INSPECTION:

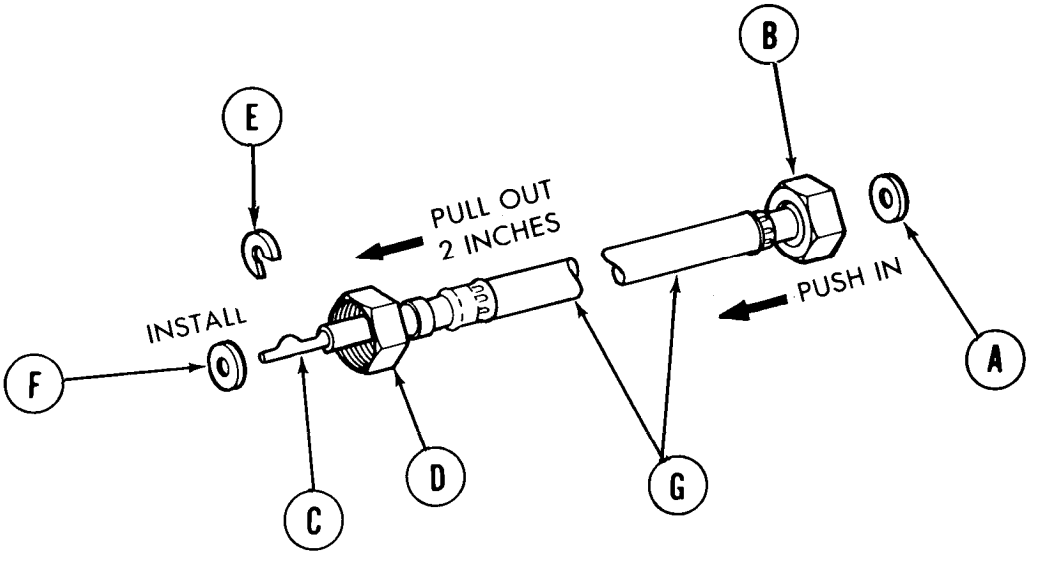
WARNING

Cleaning agent specified is flammable. Use only in well ventilated areas. Keep away from flames, sparks, or heat. Do not smoke while using. Prevent contact with eyes, mouth, and/or skin. Wear rubber gloves when performing cleaning procedures.

1. Using dry cleaning solvent and rags, clean all component parts.
2. Inspect all component parts for damage or wear, replace as required.

ASSEMBLY:

1. Install flat washer (A) into tachometer adapter end (B).
2. Install core (C) through adapter end (B).
3. Using slip joint pliers, pull core (C) approximately 2 inches from tachometer drive end (D).
4. Install slotted washer (E) and gasket (F).
5. Push core (C) back into flexible shaft (G) until seated.



NOTE

If replacing or installing plastic tubing on flexible shaft (G), do steps 6 thru 9 below. If not, go directly to installation.

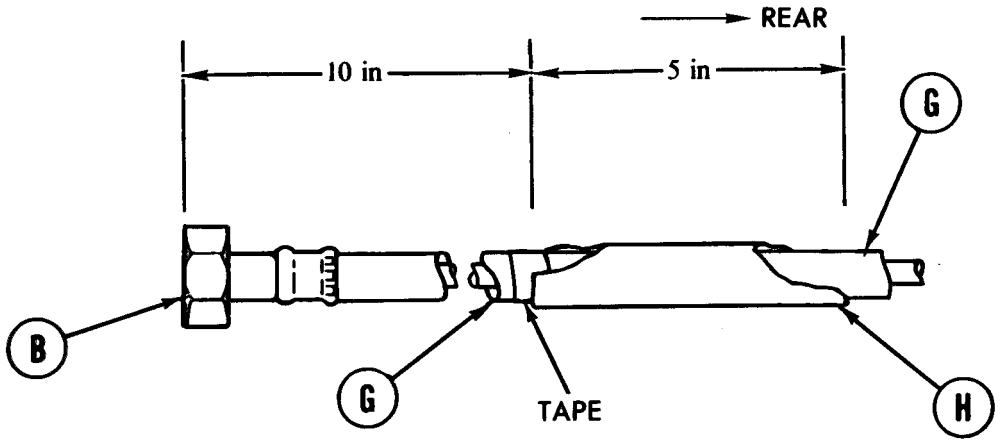
Go on to Sheet 5

TA169644

TACHOMETER REAR FLEXIBLE SHAFT REPLACEMENT (Sheet 5 of 6)

6. Using steel rule, measure back approximately 10 inches from tachometer adapter end (B).

7. From 10 inch mark, wrap shaft (G) with tape 5 inches to the rear until shaft (G) is approximately 5/8 inch in diameter.



8. Place heat shrink plastic tubing (H) over tape.

NOTE

Avoid overheating in one spot as plastic tubing melts easily.

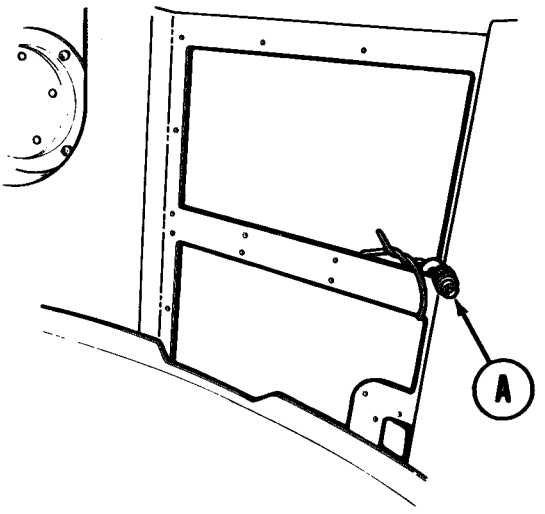
9. Using heat gun, shrink tubing by moving hot air back and forth over entire length of tubing.

INSTALLATION :

1. Person in powerplant compartment, attach wire to powerplant end of shaft (A).

2. Person in crew compartment, pull on wire to thread shaft (A) back into position.

3. Remove wire from shaft (A).



Go on to Sheet 6

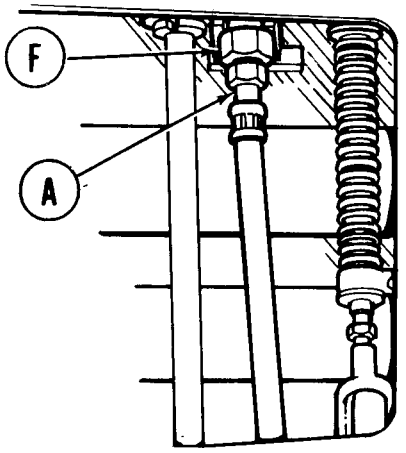
TA169645

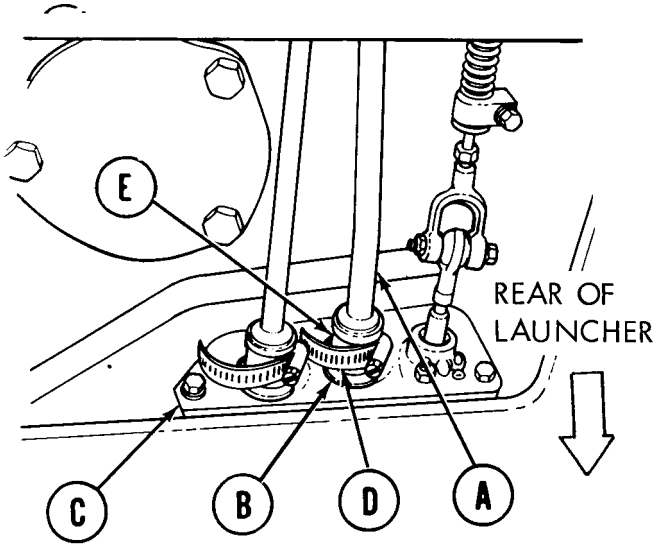
TACHOMETER REAR FLEXI BLESHAFT REPLACEMENT (Sheet 6 of 6)

NOTE

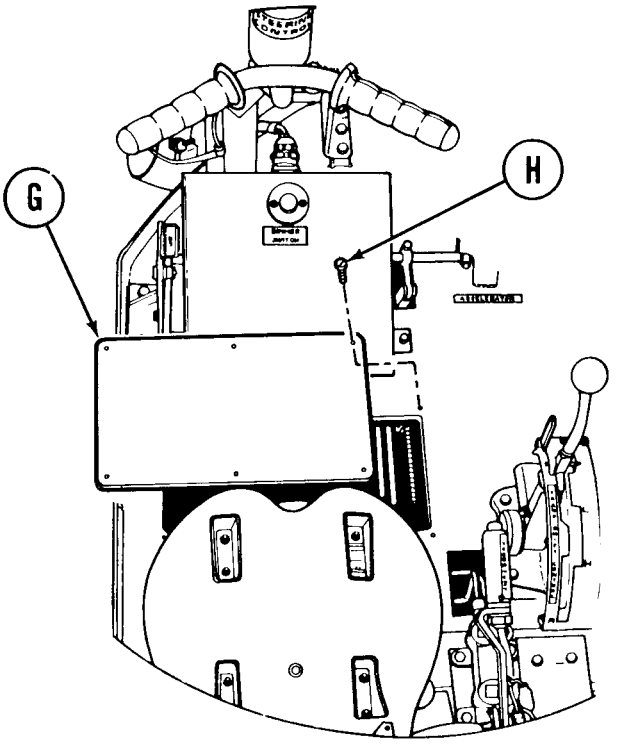
If grommet (B) was not removed from bulkhead, go to step 6.

4. Slide grommet (B) over shaft (A).
5. Apply adhesive to grommet (B).
6. Install grommet (B) in position in bulkhead (c).
7. Slide clamp (D) over shaft (A) in position on grommet (B).
8. Install rubber bushing (E) in position.





9. Locate tachometer shaft adapter (F) under driver's compartment floor plate (G).
10. Using fingers, connect shaft (A) to shaft adapter (F).
11. Using screwdriver, tighten clamp (D) on grommet (B).



12. Using wrench, tighten shaft (A) to tachometer shaft adapter (F).
13. Position floor plate (G) with holes alined.
14. Using screwdriver, install six screws (H).
15. Install powerplant (page 5-14).
16. Start engine (TM 5-5420-226-10).
17. Make sure tachometer works.
18. Install engine upper access cover (page 17-15).

End of Task

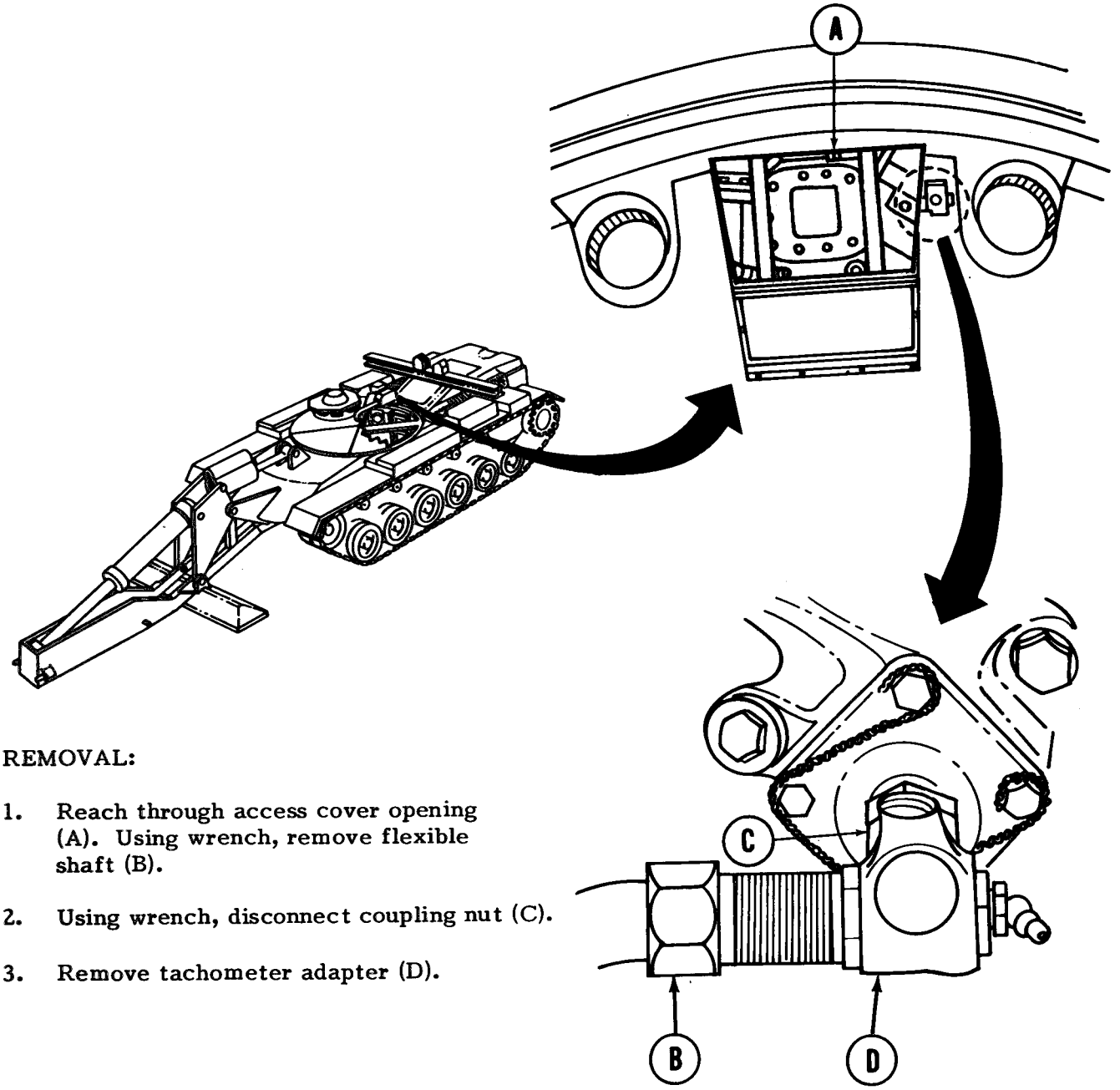
TA169646

TACHOMETER REAR FLEXIBLE SHAFT ADAPTER REPLACEMENT (Sheet 1 of 2)

TOOL: 1 in. combination box and open end wrench

REFERENCE: TM 5-542O-226-10

PRELIMINARY PROCEDURE: Remove engine upper access cover (page 17-14).



REMOVAL:

1. Reach through access cover opening (A). Using wrench, remove flexible shaft (B).
2. Using wrench, disconnect coupling nut (C).
3. Remove tachometer adapter (D).

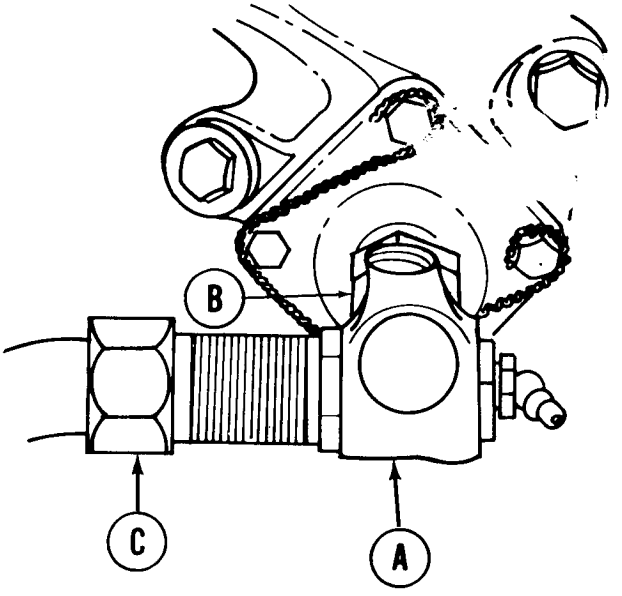
Go onto Sheet 2

TA169647

TACHOMETER REAR FLEXIBLE SHAFT ADAPTER REPLACEMENT (Sheet 2 of 2)

INSTALLATION:

1. Reach through access cover opening and place tachometer drive adapter (A) in position.
2. Using wrench, install coupling nut (B).
3. Using wrench, install flexible shaft (C).



4. Start engine (TM 5-5420-226-10).
5. Make sure tachometer operates.
6. Install engine upper access cover (page 17-15).

End of Task

TA169648

TACHOMETER REAR FLEXIBLE SHAFT ADAPTER REPAIR (Sheet 1 of 1)

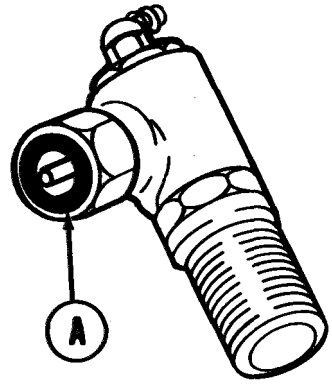
TOOL: Long round nose pliers

SUPPLIES: Gasket 7539688

PRELIMINARY PROCEDURE: Remove tachometer rear flexible shaft adapter (page 19-31)

DISASSEMBLY:

Using pliers, remove gasket (A). Throw gasket away.



ASSEMBLY:

1. Using fingers, install new gasket (A).
2. Install shaft adapter (page 19-32).

End of Task

TA169649

SPEEDOMETER - TACHOMETER MOUNTING BRACKET REPLACEMENT (Sheet 1 of 1)

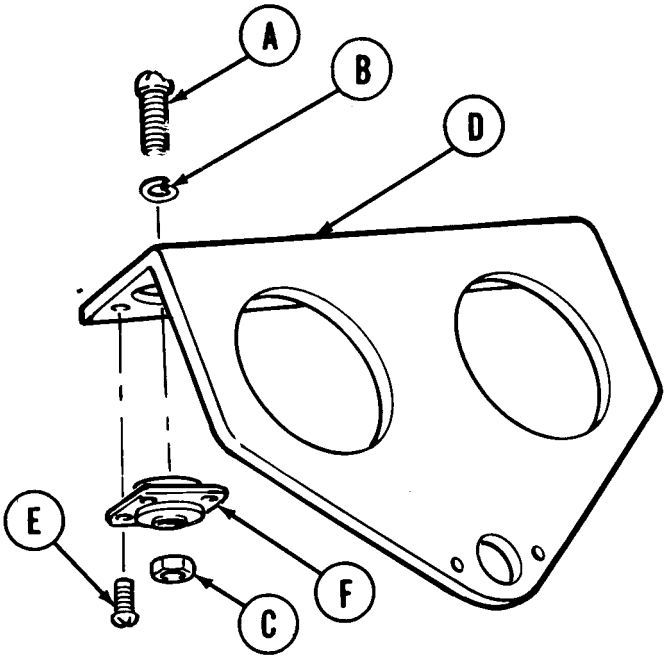
TOOLS: Cross-tip screwdriver
5/16 in. open end wrench
Flat-tip screwdriver

PRELIMINARY PROCEDURES: Remove speedometer (page 19-2)
Remove tachometer (page 19-14)
Remove powerplant warning light (page 10-189)

REMOVAL:

1. Using cross-tip screwdriver and wrench, remove three screws (A), lockwashers (B), and nuts (C) securing bracket (D) to mount.

2. Using flat-tip screwdriver, remove 12 lockwasher screws (E) securing 3 cushions (F) to bracket (D).



INSTALLATION:

1. Place three cushions (F) in position on bracket (D).

2. Using flat-tip screwdriver, install 12 lockwasher screws (E) securing 3 cushions (F) to bracket (D).

3. Place bracket (D) in position in vehicle.

4. Using cross-tip screwdriver and wrench, insta three screws (A), lockwashers (B), and nuts (C) securing bracket (D) to mounts.

5. Install speedometer (page 19-3).

6. Install tachometer (page 19-15).

7. Install powerplant warning light (page 10-190).

End of Task

TA169650

CHAPTER 20

FIRE EXTINGUISHER SYSTEM

INDEX

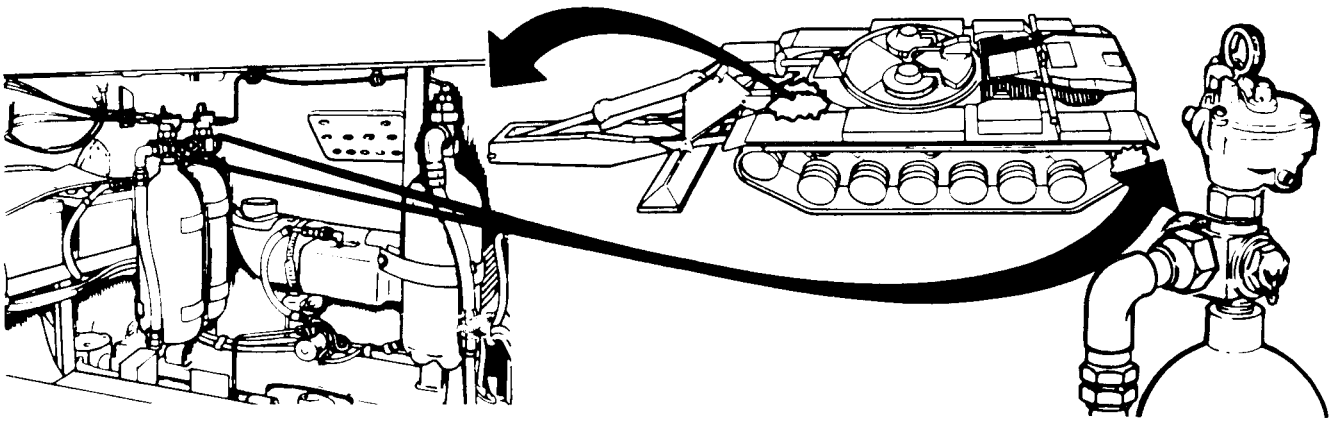
FIXED FIRE EXTINGUISHER CONTROL VALVE REPLACEMENT (Sheet 1 of 15)

PROCEDURE INDEX

TOOLS:
- Spring scale (150 lb.)
- Ratchet with 1/2 in. drive
- 7/16 in. open end wrench
- 9/16 in. open end wrench
- 1-1/2 in. open end wrench
- Flat-tip screwdriver
- 3/32 in. socket head screw key (allen wrench)
- 1/16 in. socket head screw key (allen wrench)
- 1-1/2 in. crowfoot wrench
- 7/16 in. crowfoot wrench
- Torque wrench with 3/8 in. drive (0-200 lb-ft)
- 7/16 in. socket with 1/2 in. drive
- Torque wrench with 1/2 in. drive (0-175 lb-ft)
- 5 in. extension with 1/2 in. drive
- 10 in. adjustable wrench
- Diagonal cutting pliers
- Long round nose pliers
- 9/16 in. crowfoot wrench

SUPPLIES:
- Zinc chromate primer (Item 51, Appendix D)
- Sealant (Item 24, Appendix D)
- Lead seal (MS51938-6)
- 1/16 in. rod
- Dry cleaning solvent (Item 55, Appendix D)
- Sealant (Item 30, Appendix D)
- Rags (Item 65, Appendix D)

PRELIMINARY PROCEDURE: Remove personnel heater air duct (page 18-17)



Go on to Sheet 2

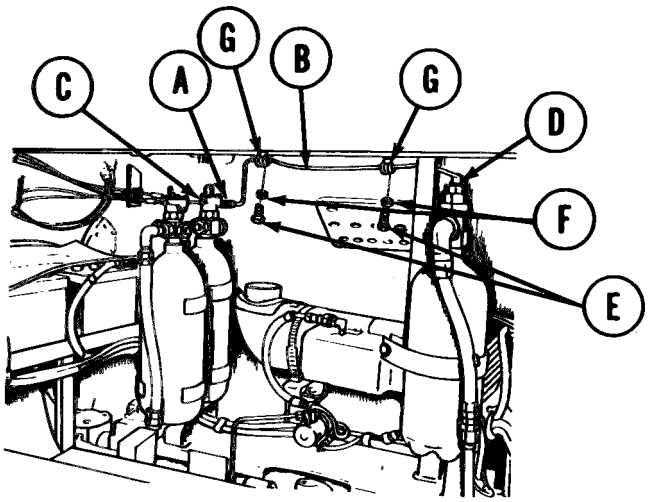
FIXED FIRE EXTINGUISHER CONTROL VALVE REPLACEMENT (Sheet 2 of 15)

REMOVAL:

CAUTION

You must remove both control valves to prevent accidental discharge, even if only one control valve is to be replaced.

Do not pull on control cables as valves are being removed or cylinder will discharge.



1. Using 7/16 inch wrench to hold adapter (A), use 9/16 inch wrench to remove tube (B) from adapter (A).

2. Using 7/16 inch wrench, remove adapter (A) from control valve (C).

3. Using 9/16 inch wrench, remove tube (B) from elbow (D).

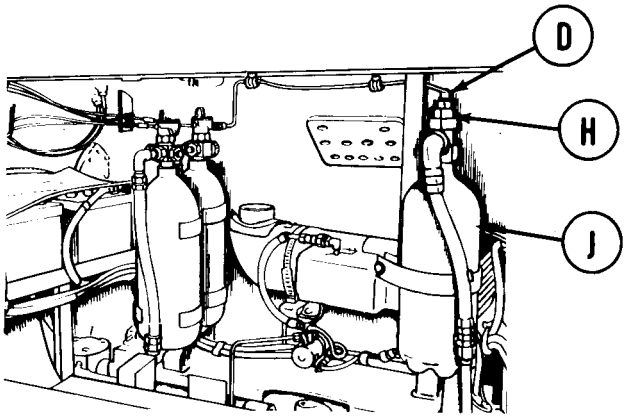
4. Using socket, remove two screws (E) and lockwashers (F) securing two clamps (G) and tube (B) to hull.

Go on to Sheet 3

TA169653

FIXED FIRE EXTINGUISHER CONTROL VALVE REPLACEMENT (Sheet 3 of 15)

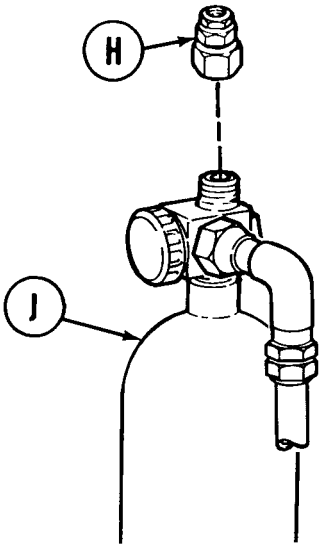
5. Using adjustable wrench, remove elbow (D) from pressure head (H).

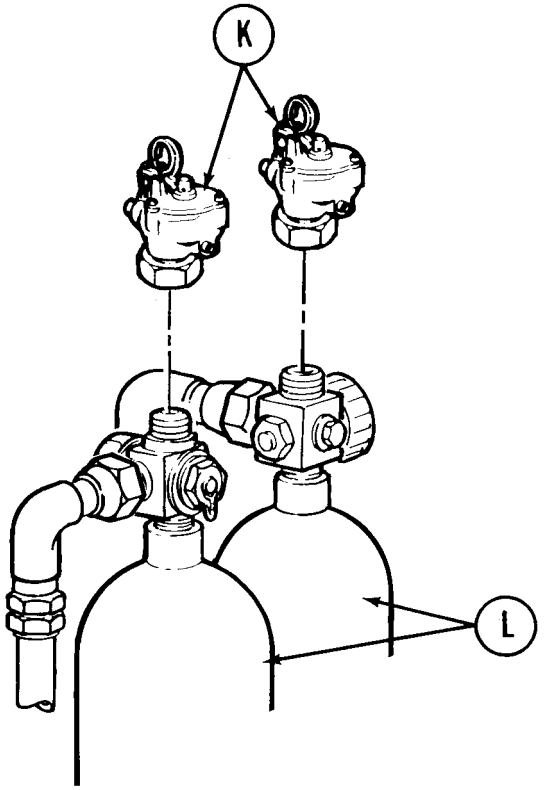


NOTE

Pressure head (H) must be removed as one part even though it can be disassembled.

6. Using 1-1/2 inch wrench, remove pressure head (H) from cylinder (J).





CAUTION

Make sure bottle does not turn and pull on discharge cable. Fire extinguisher will discharge.

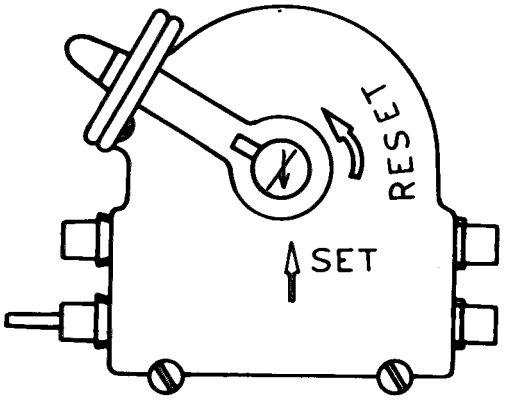
7. Using 1-1/2 inch wrench, remove two control valves (K) from two cylinders (L).

Go on to Sheet 4

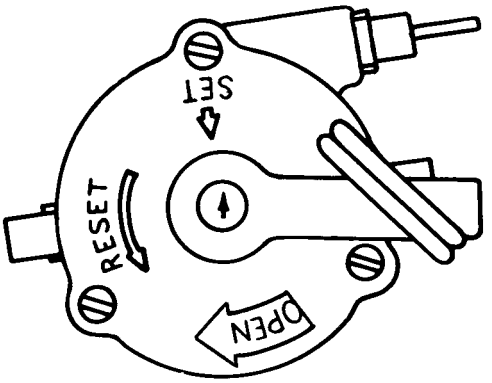
TA169654

FIXED FIRE EXTINGUISHER CONTROL VALVE REPLACEMENT (Sheet 4 of 15)

DISASSEMBLY:



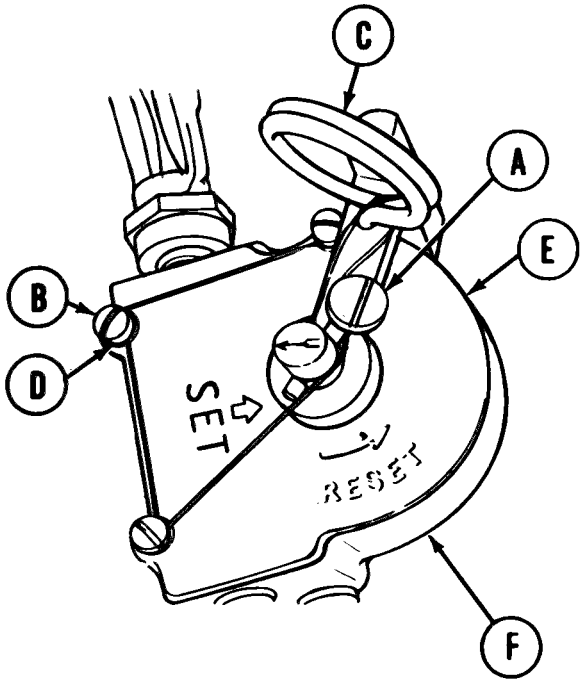
FOUR-PORT VALVE



THREE-PORT VALVE

NOTE

Steps 1 through 9 describe the disassembly of four-port valve. Steps 10 through 17 describe the disassembly of three-port valve. Although the four-port valve is the latest model, there are some three-port valves on current vehicles.

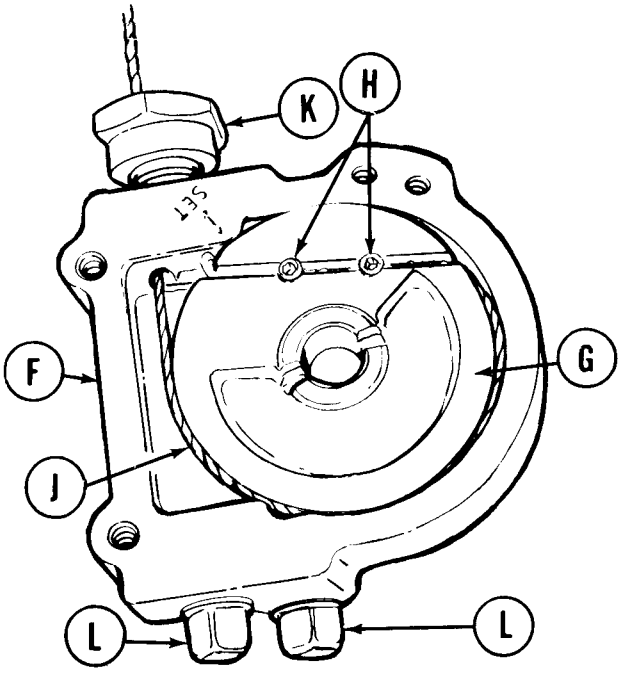


1. Using diagonal cutting pliers, remove lead seal (A).
2. Using fingers, remove wire from three screws (B) and pin (C).
3. Using screwdriver, remove three screws (B) and washers (D) securing cover (E) to housing (F).
4. Remove cover (E) from housing (F).

Go on to Sheet 5

TA169655

FIXED FIRE EXTINGUISHER CONTROL VALVE REPLACEMENT (Sheet 5 of 15)



5. Remove sheave (G) from housing (F).

6. Using 1/16 inch allen wrench, remove two screws (H) securing cable (J) to sheave (G).

7. Pull cable (J) out of housing (F) through hole in plug (K).

8. Using adjustable wrench, remove plug (K) from housing (F).

9. Using adjustable wrench, remove two plugs (L) from housing (F).

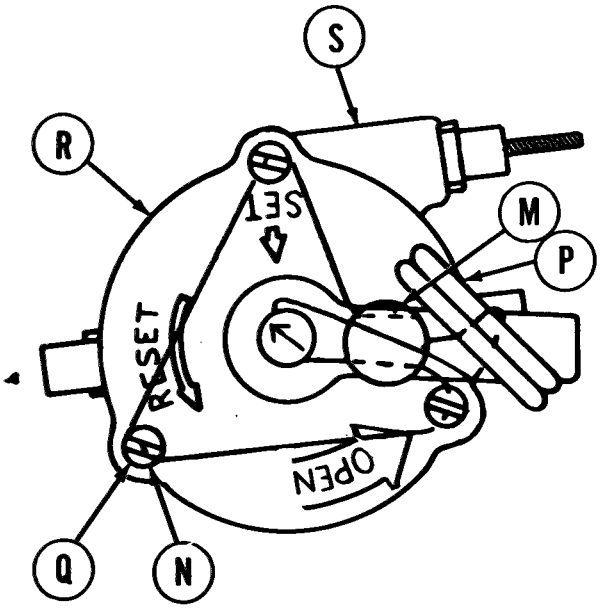
NOTE

The following steps describe assembly of three-port valve.

Go on to Sheet 6

TA169656

FIXED FIRE EXTINGUISHER CONTROL VALVE REPLACEMENT (Sheet 6 of 15)



10. Using diagonal cutting pliers, remove lead seal (M).

11. Using fingers, remove wire from three screws (N) and pin (P).

12. Using screwdriver, remove three screws (N) and washers (Q) securing cover (R) to housing (S).

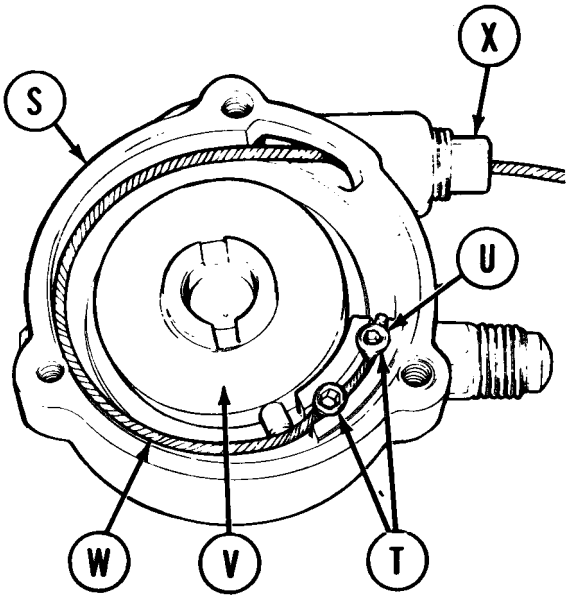
13. Remove cover (R) from housing (S).

14. Using 3/32 inch allen wrench, remove two screws (T) from retainer (U).

15. Remove sheave (V) and retainer (U) from housing (S).

16. Remove cable (W) from housing (S) through hole in plug (X).

17. Using adjustable wrench, remove plug (X) from housing (S).



Go on to Sheet 7

TA169657

FIXED FIRE EXTINGUISHER CONTROL VALVE REPLACEMENT (Sheet 7 of 15)

CLEANING AND INSPECTION:

WARNING

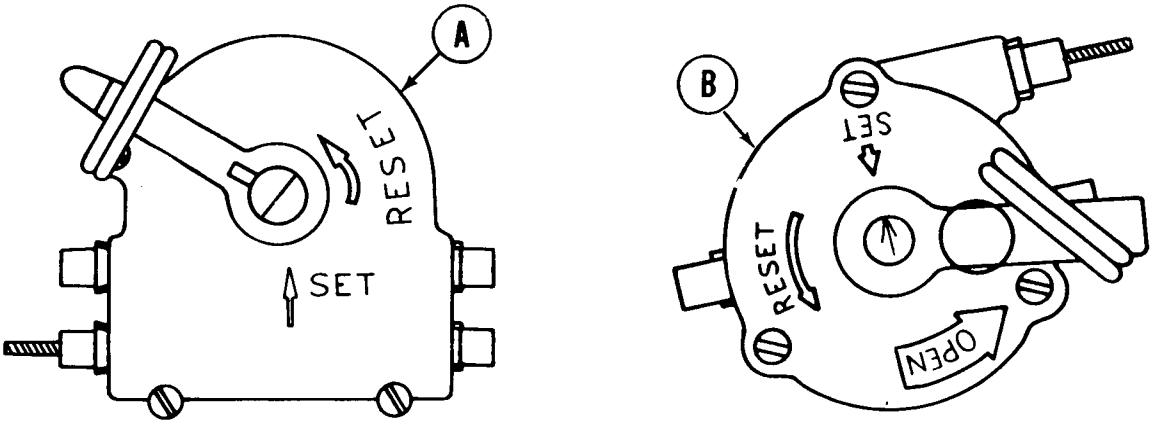
Cleaning agent specified is flammable. Use only in well ventilated areas. Keep away from flames, sparks, or heat. Do not smoke while using. Prevent contact with eyes, mouth, and/or skin. Wear rubber gloves when performing cleaning procedures.

1. Using rags and dry cleaning solvent, clean all parts.
2. Inspect valves and related parts for nicks, burrs, and cracks.
3. Replace damaged parts.

ASSEMBLY:

NOTE

Apply primer to all threads before installing threadad parts.



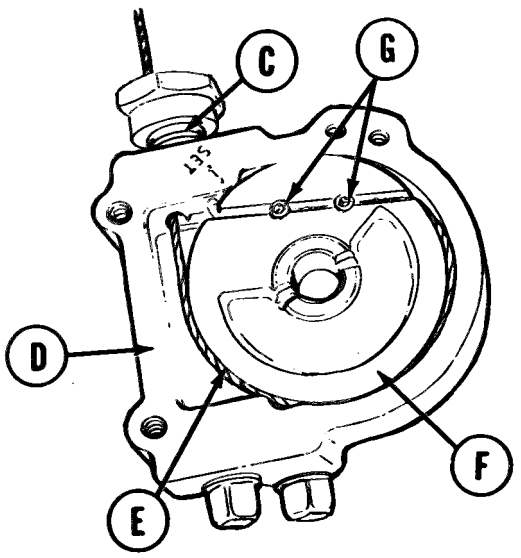
NOTE

Steps 1 through 18 describe assembly of four-port valve (A). Steps 19 through 35 describe assembly of three-port valve (B). Although the four-port valve is the latest model, both valves are used on current vehicles. If three-port valve is used in system, proceed to step 19.

Go on to Sheet 8

TA169658

FIXED FIRE EXTINGUISHER CONTROL VALVE REPLACEMENT (Sheet 8 of 15)

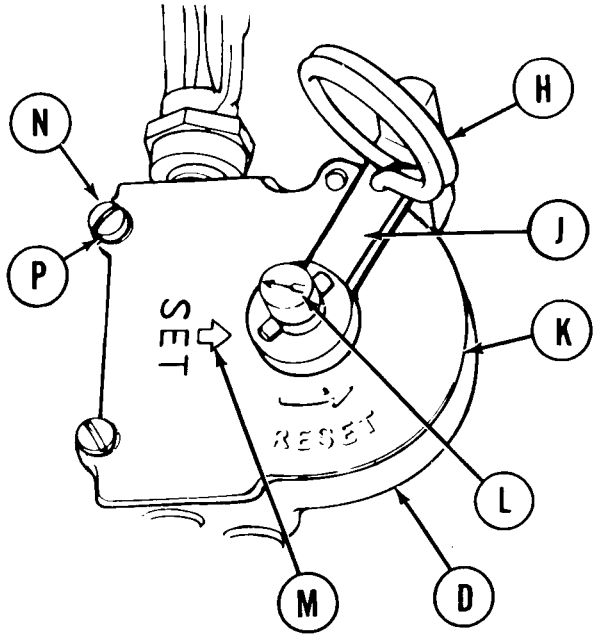


1. Using adjustable wrench, install plug (C) in housing (D).
2. Using fingers, push cable (E) through plug (C) and around sheave (F).
3. Lay cable (E) in groove around sheave (F) and lay in slot.
4. Extend cable (E) full length of slot and no further.
5. Coat threads of two screws (G) with sealant.
6. Using 1/16 inch allen wrench, install two screws (G) in sheave (F).
7. Using spring scale, pull valve against cable (E) with about 150 pounds of force to make sure cable (E) is secured by screws (G).
8. Place sheave (F) in housing (D).
9. Wind cable (E) around sheave (F) until stop on bottom of sheave is behind peg in housing (D).

Go on to Sheet 9

TA169659

FIXED FIRE EXTINGUISHER CONTROL VALVE REPLACEMENT (Sheet 9 of 15)



10. Install pin (H) through handle (J) and cover (K).

11. Using rod, turn cover shaft (L) until arrow points at SET arrow (M) on cover (K).

12. Place cover (K) on housing (D).

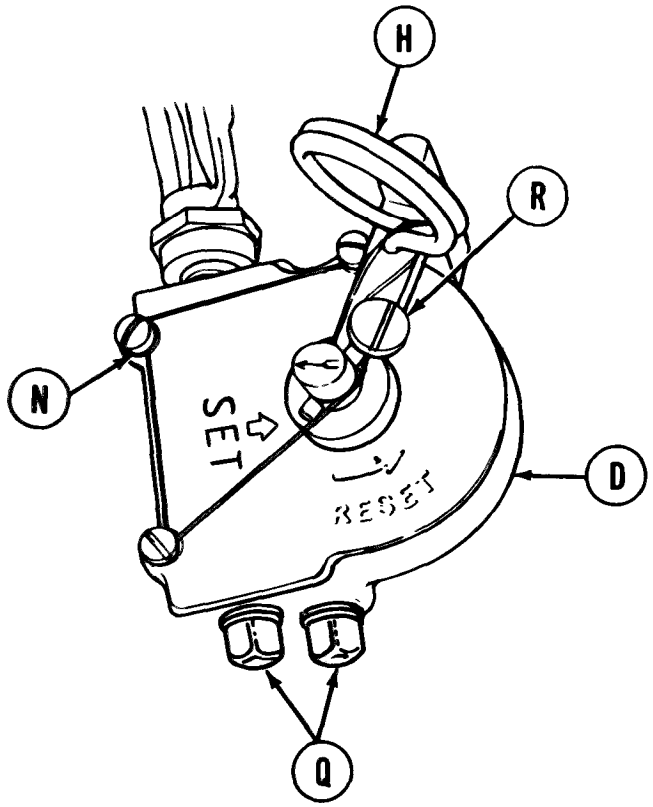
13. Using screwdriver, install three screws (N) and washers (P) securing cover (K) to housing (D).

14. Using rod, reset valve by turning shaft (L) counterclockwise to aline arrow on shaft (L) with SET arrow (M) on cover.

Go on to Sheet 10

TA169660

FIXED FIRE EXTINGUISHER CONTROL VALVE REPLACEMENT (Sheet 10 of 15)



15. Check operation of valve by releasing with cable, resetting with handle, releasing with handle, and resetting several times. Verify that pin in bottom of valve is released and retracted each time. Leave in SET condition.

16. Coat plugs (Q) with sealant.

17. Using adjustable wrench, install plugs (Q) in housing (D).

18. Using long round nose pliers, install lead seal (R) through three screws (N) and pin (H).

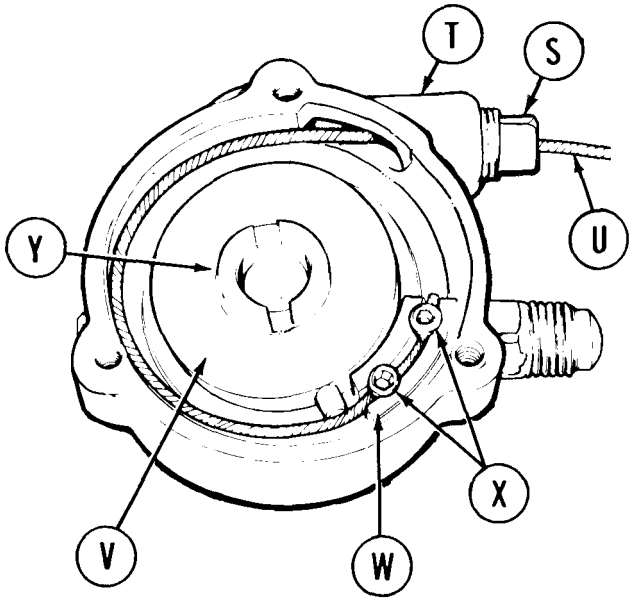
NOTE

Steps 19 through 35 apply to three-port valve.

Go on to Sheet 11

TA169661

FIXED FIRE EXTINGUISHER CONTROL VALVE REPLACEMENT (Sheet 11 of 15)



19. Using adjustable wrench, install plug (S) in housing (T).

20. Push cable (U) through plug (S) and around sheave (V).

21. Lay cable (U) in retainer (W).

22. Extend cable (U) full length of retainer (W) and no further.

23. Coat threads of two screws (X) with sealant.

24. Using 3/32 inch allen wrench, install two screws (X) securing cable (U) in retainer (W).

25. Place sheave (V) in housing (T).

26. Aline arrow on sheave (V) with SET on housing (T).

27. Using spring scale, pull valve against cable (U) with about 150 pounds of force to make sure cable (U) is secured by screws (X).

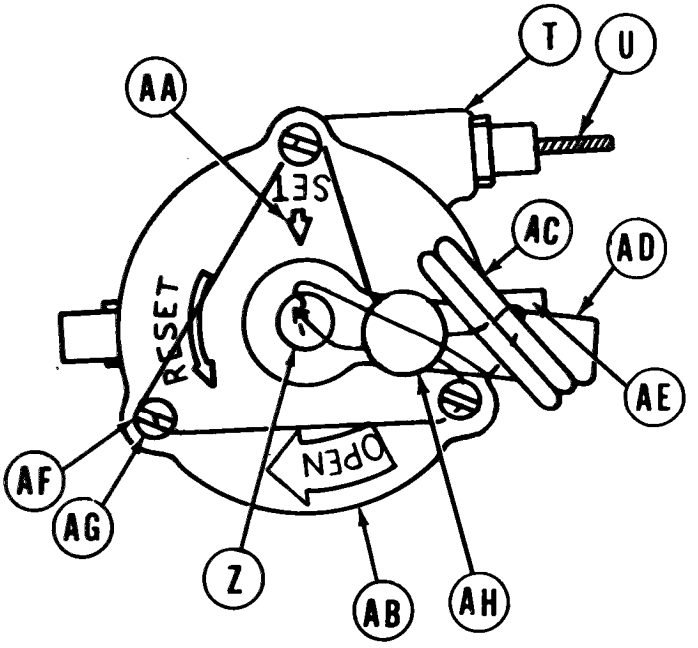
28. Place retainer (W) in housing (T) with cable end of retainer (W) against stop pin on sheave (v).

29. Install nylon washer (Y) on sheave (V).

Go on to Sheet 12

TA169662

FIXED FIRE EXTINGUISHER CONTROL VALVE REPLACEMENT (Sheet 12 of 15)



30. Aline arrow on shaft (Z) with SET arrow (AA) on cover (AB).

31. Install pin (AC) through handle (AD) and cover (AB).

32. Position cover (AB) on housing (T) with handle (AD) over adapter (AE).

33. Using screwdriver, install three screws (AF) and washers (AG) securing cover (AB) to housing (T).

34. Check operation of valve by pulling cable (U) and making sure pin releases and retracts with movement of cable (U).

35. Using rod, reset valve by turning counterclockwise and alining arrow on shaft (Z) with SET arrow (AA) on cover (AB).

36. Using long round nose pliers, install lead seal (AH) through three screws (AF) and pin (AC).

Go on to Sheet 13

TA169663

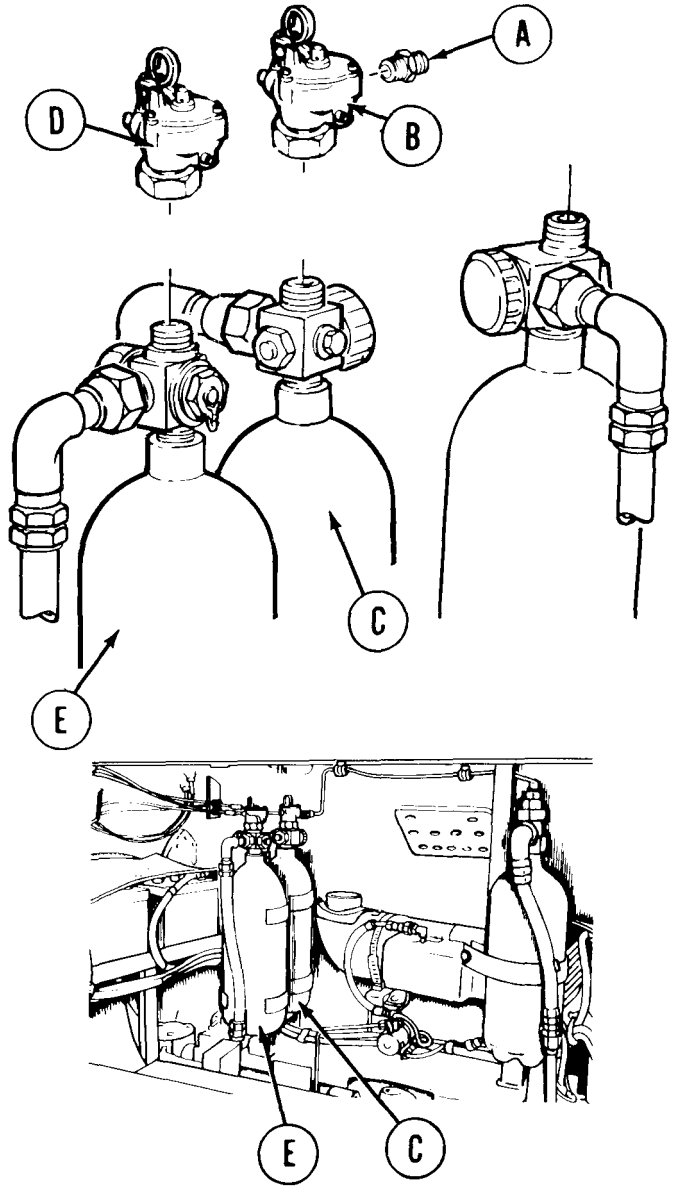
FIXED FIRE EXTINGUISHER CONTROL VALVE REPLACEMENT (Sheet 13 of 15)

INSTALLATION:

NOTE

Actuating pins on bottoms of valves must be fully retracted before valves are installed on cylinders or cylinders will discharge during installation.

Do not pull on cables as valves are being installed or cylinders will discharge.



1. Using 7/16 inch wrench, install adapter (A) on valve (B).
2. Using 3/8 inch drive torque wrench and 7/16 inch crow foot, tighten adapter (A) to 10-12 lb-ft (13.5-17.0 N·m).
3. Using 1-1/2 inch wrench, install valve (B) on cylinder (C).
4. Using 1-1/2 inch wrench, install valve (D) on cylinder (E).
5. Using 1/2 inch drive torque wrench, extension, and 1-1/2 inch crow foot, tighten valves (B) and (D) to 105-130 lb-ft (142-176 N·m).

Go on to Sheet 14

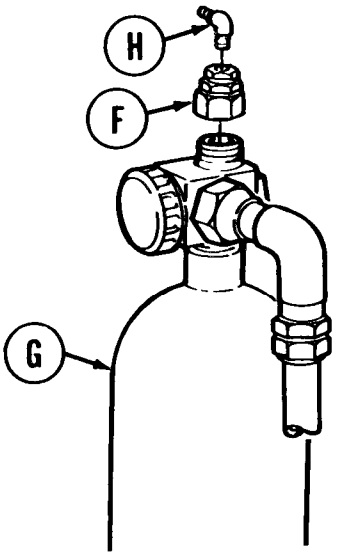
TA169664

FIXED FIRE EXTINGUISHER CONTROL VALVE REPLACEMENT (Sheet 14 of 15)

6. Using 1-1/2 inch wrench, install pressure head (F) on cylinder (G).

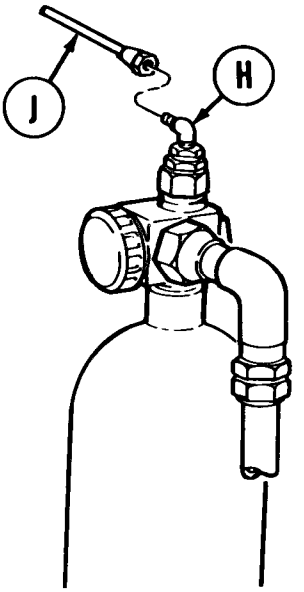
7. Using 1/2 inch drive torque wrench and 1-1/2 inch crow foot, tight en pressure head (F) to 105-130 lb-ft (142-176 N•m).

8. Using adjustable wrench, install elbow (H) tightly on pressure head (F).



9. Using 9/16 inch wrench, install tube (J) on elbow (H).

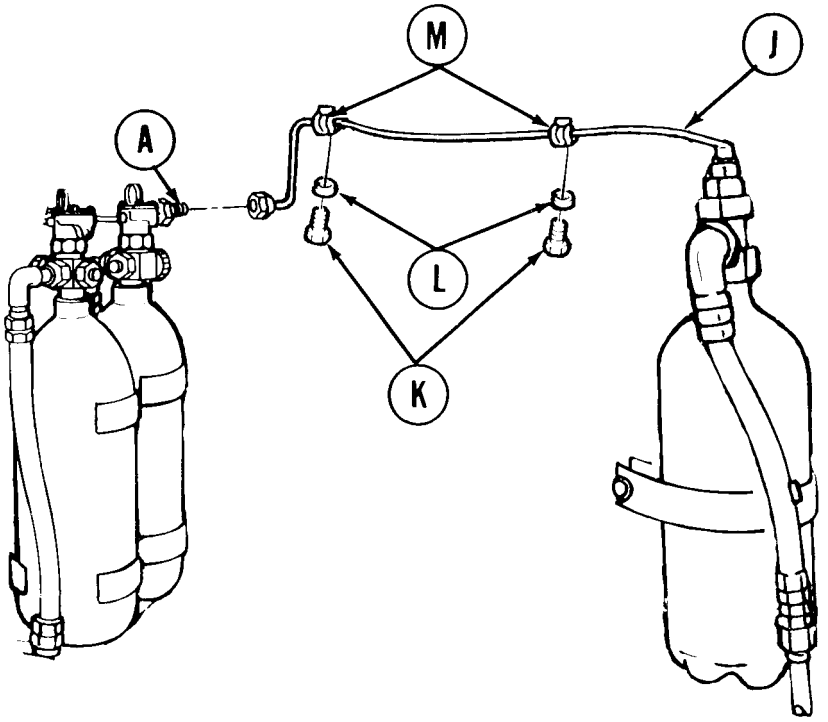
10. Using 3/8 inch drive torque wrench and 9/1 6 inch crow foot, tighten tube (J) to 10-12 lb-ft (13.5-17.0 N+m).



Go on to Sheet 15

TA169665

FIXED FIRE EXTINGUISHER CONTROL VALVE REPLACEMENT (Sheet 15 of 15)



11. Using 9/16 inch wrench, install tube (J) on adapter (A).

12. Using 3/8 inch drive torque wrench and 9/16 inch crowfoot, tighten tube (J) to 10-12 lb-ft (13.5 -17.0 N•m).

13. Using socket and ratchet, install two screws (K) and new lockwashers (L) securing tube (J) and two clamps (M) to hull.

14. Do semiannual check (page 3-52).

15. Install personnel heater air duct (page 18-18).

End of Task

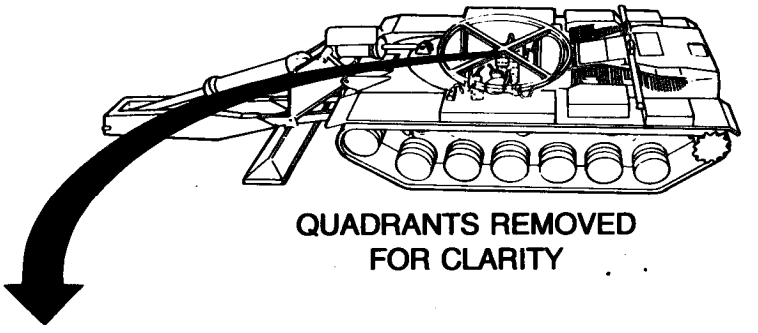
TA169666

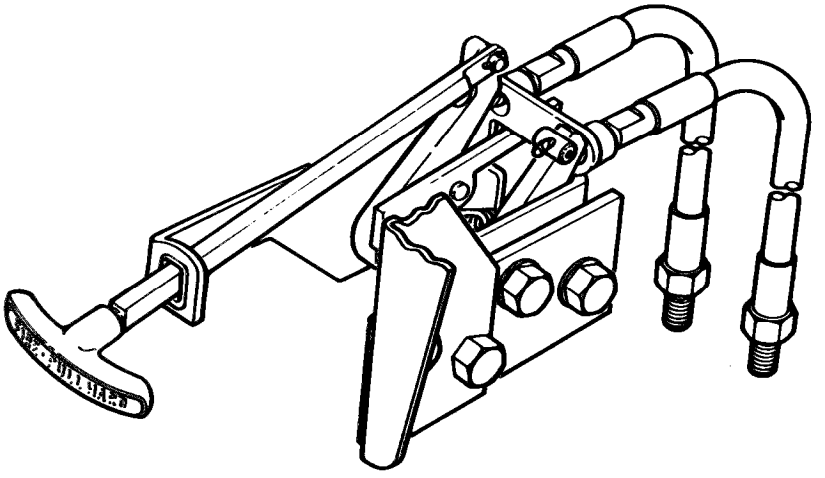
FIXED FIRE EXTINGUISHER INTERIOR RELEASE MECHANISM CONTROL ASSEMBLY REPLACEMENT (Sheet 1 of 7)

PROCEDURE INDEX

TOOLS: 9/16 in. open end wrench
3/8 in. open end wrench
5/16 in. flat-tip screwdriver
3/32 in. hex socket key
7/16 in. socket with 1/2 in. drive
Ratchet with 1/2 in. drive
Spring scale (150 lbs.)

PRELIMINARY PROCEDURE: Remove control valve (page 20-2).



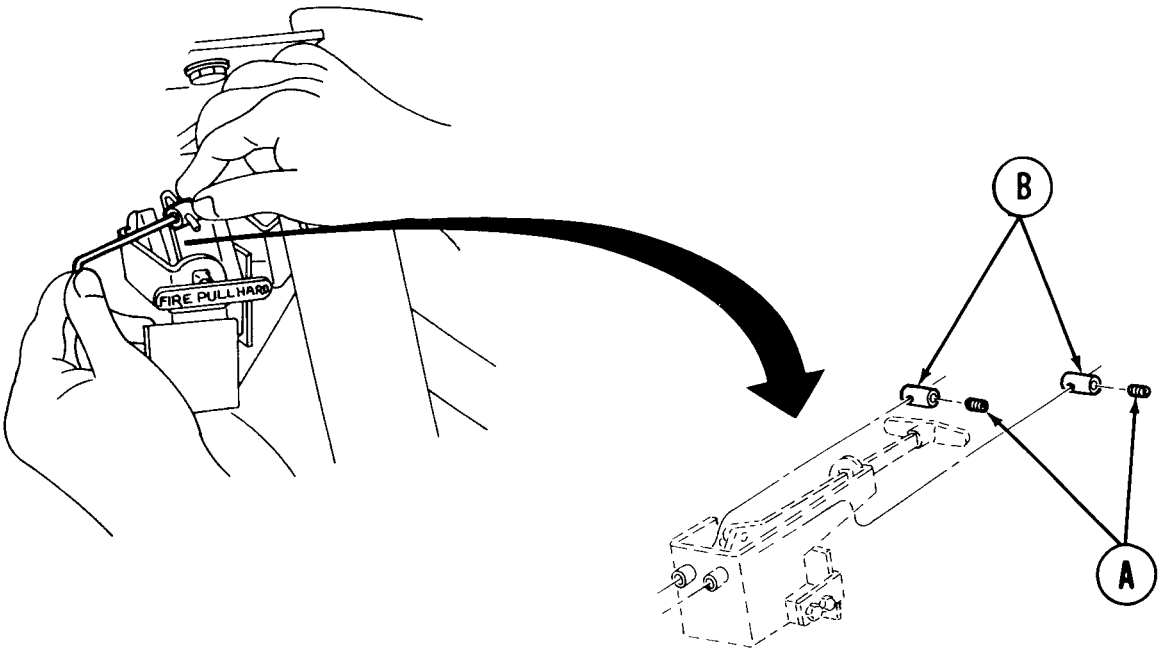


Go on to Sheet 2

TA169667

FIXED FIRE EXTINGUISHER INTERIOR RELEASE MECHANISM CONTROL ASSEMBLY REPLACEMENT (Sheet 2 of 7)

REMOVAL:

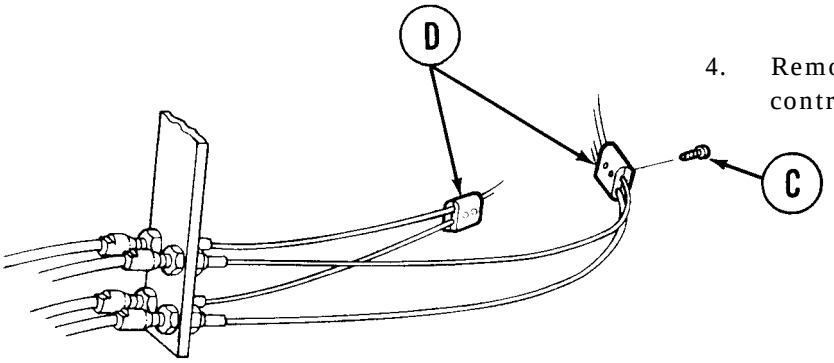


1. Using hex socket key, loosen two setscrews (A) in cable stops (B) until cable is free.

2. Remove two stops (B) and setscrews (A).

3. Using screwdriver, remove four screws (C) securing clamps (D) to control assemblies on end closest to fire extinguisher cylinders.

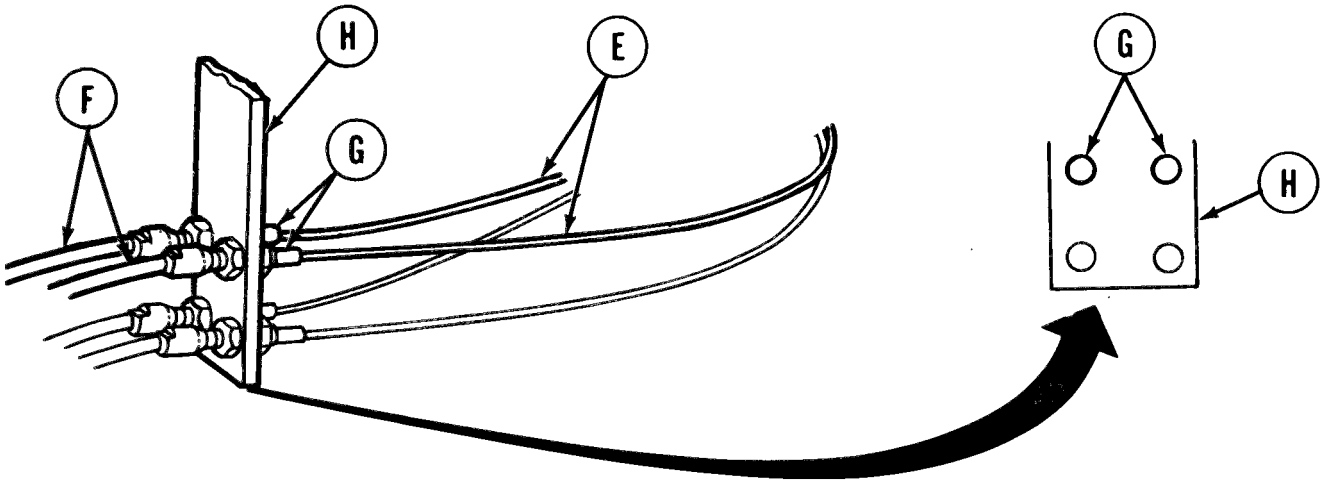
4. Remove two sets of clamps (D) from control assemblies.



Go on to Sheet 3

TA169668

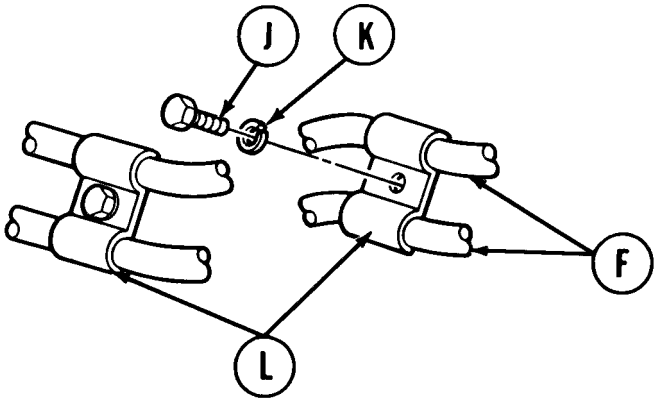
FIXED FIRE EXTINGUISHER INTERIOR RELEASE MECHANISM CONTROL ASSEMBLY REPLACEMENT (Sheet 3 of 7)



5. Using fingers, grasp two cables (E) and pull out of control assemblies (F).

6. Using 9/16 inch wrench, remove two nuts (G) from bracket (H).

7. Using socket and ratchet, remove two screws (J) and lockwashers (K) securing remaining clamps (L) and two control assemblies (F) to hull. Remove clamps (L) from two control assemblies (F).



8. Using fingers, grasp two control assemblies (F) on side of bracket (H) away from fire extinguisher cylinders and pull out of bracket (H).

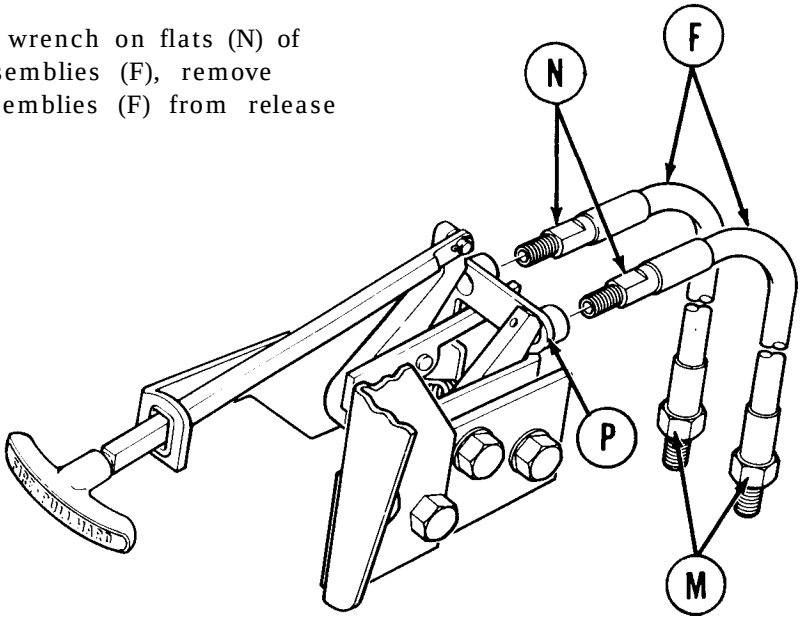
Go on to Sheet 4

TA169669

FIXED FIRE EXTINGUISHER INTERIOR RELEASE MECHANISM CONTROL ASSEMBLY REPLACEMENT (Sheet 4 of 7)

9. Using 9/16 inch wrench, remove two remaining nuts (M) from two control assemblies (F).

10. Using 3/8 inch wrench on flats (N) of two control assemblies (F), remove two control assemblies (F) from release mechanism (P).



INSPECTION:

1. Check all parts for signs of wear or damage.

2. Replace all worn or damaged parts.

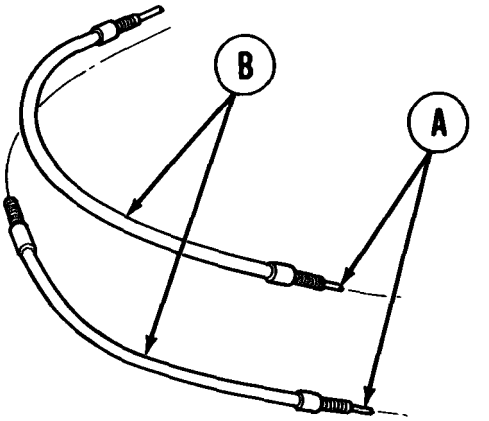
Go on to Sheet 5

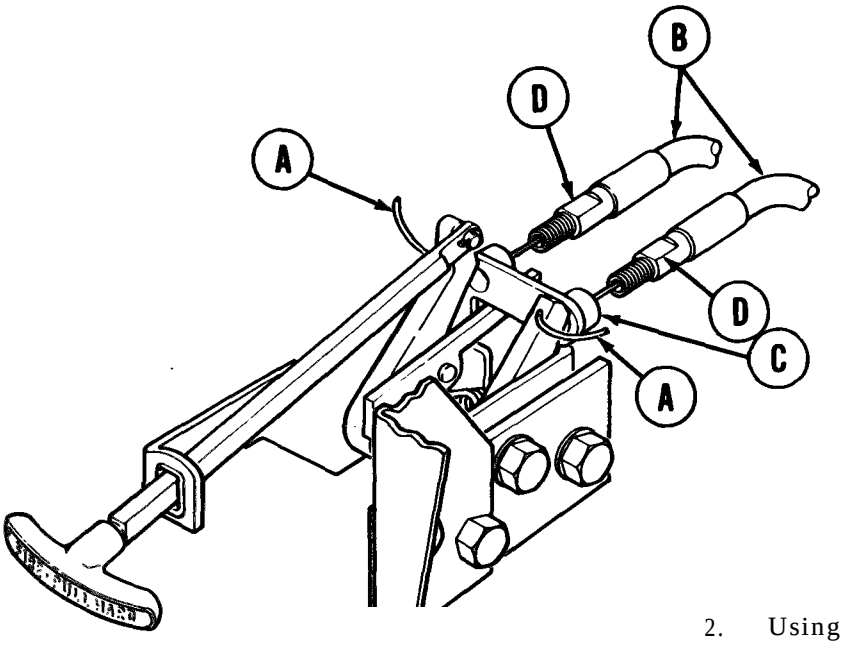
TA169670

FIXED FIRE EXTINGUISHER INTERIOR RELEASE MECHANISM CONTROL ASSEMBLY REPLACEMENT (Sheet 5 of 7)

INSTALLATION:

1. Thread cables (A) through two control assemblies (B).





2. Using fingers, place two control assemblies (B) in position on release mechanism (C), making sure two cables (A) are threaded through holes in release mechanism (C).

3. Using 3/8 inch wrench on flats (D) of two control assemblies (B), tighten two control assemblies (B) into place on release mechanism (C).

Go on to Sheet 6

TA169671

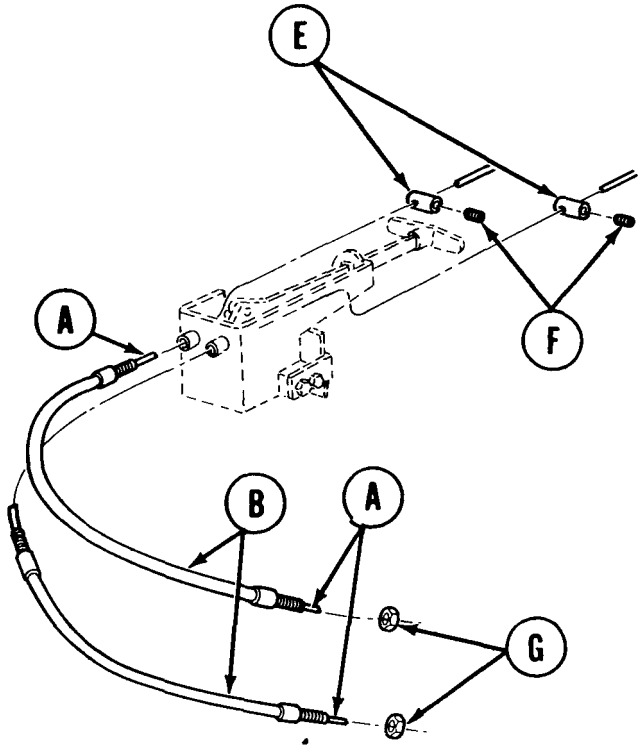
FIXED FIRE EXTINGUISHER INTERIOR RELEASE MECHANISM CONTROL ASSEMBLY REPLACEMENT (Sheet 6 of 7)

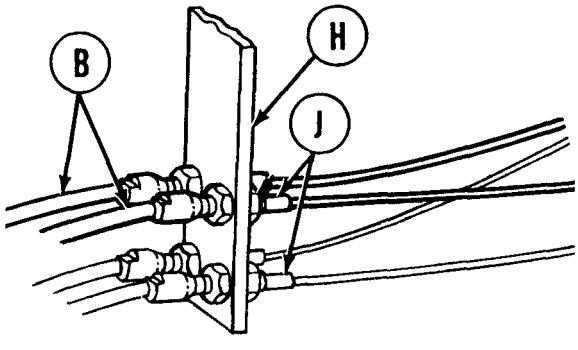
4. Insert two cables (A) into cable stops (E).

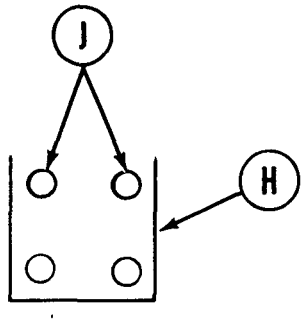
5. Using hex socket, tighten setscrews (F) into two cable stops (E).

6. Using spring scale, check that cable (A) in stops (E) can withstand 150 lbs. of force.

7. Using 9/16 inch wrench, install two nuts (G) on ends of two interior control assemblies (B).







8. Using fingers, insert ends of two control assemblies (B) in bracket (H) from left to right, making sure cable (A) extends through bracket (H).

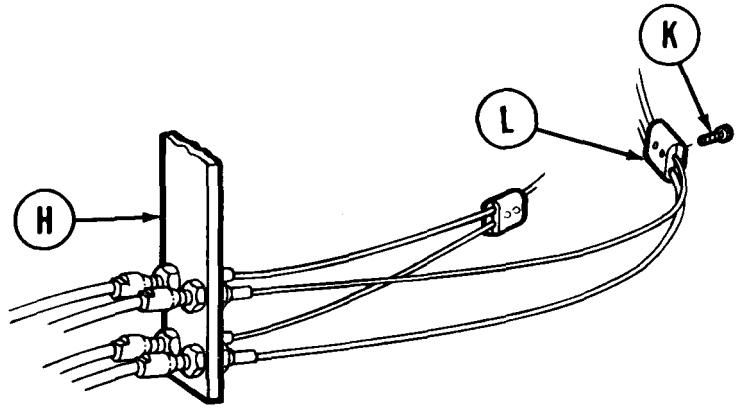
9. Using 9/16 inch wrench, tighten two nuts (J) securing two control assemblies (B) to bracket (H).

Go on to Sheet 7

TA169672

FIXED FIRE EXTINGUISHER INTERIOR RELEASE MECHANISM CONTROL ASSEMBLY REPLACEMENT (Sheet 7 of 7)

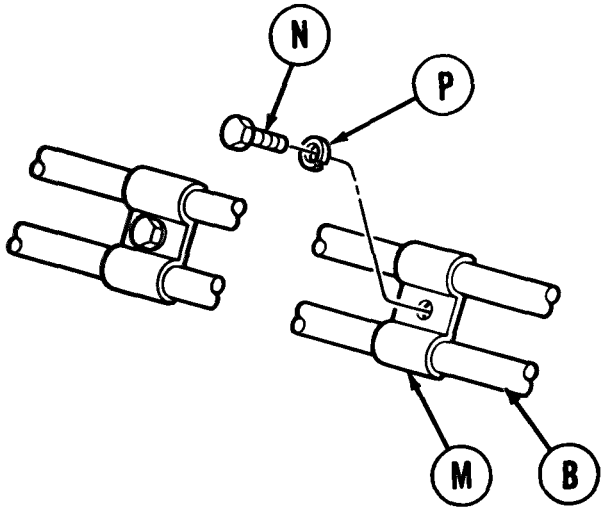
10. Using screwdriver, install four screws (K) in block clamps (L) on right side of bracket (H).



11. Position four clamps (M) on two control assemblies (B).

12. Using socket and ratchet, install two screws (N) and new lockwashers (P) securing control assemblies (B) in clamps (M) to hull.

13. Install control valves (page 20-14).



End of Task

TA169673

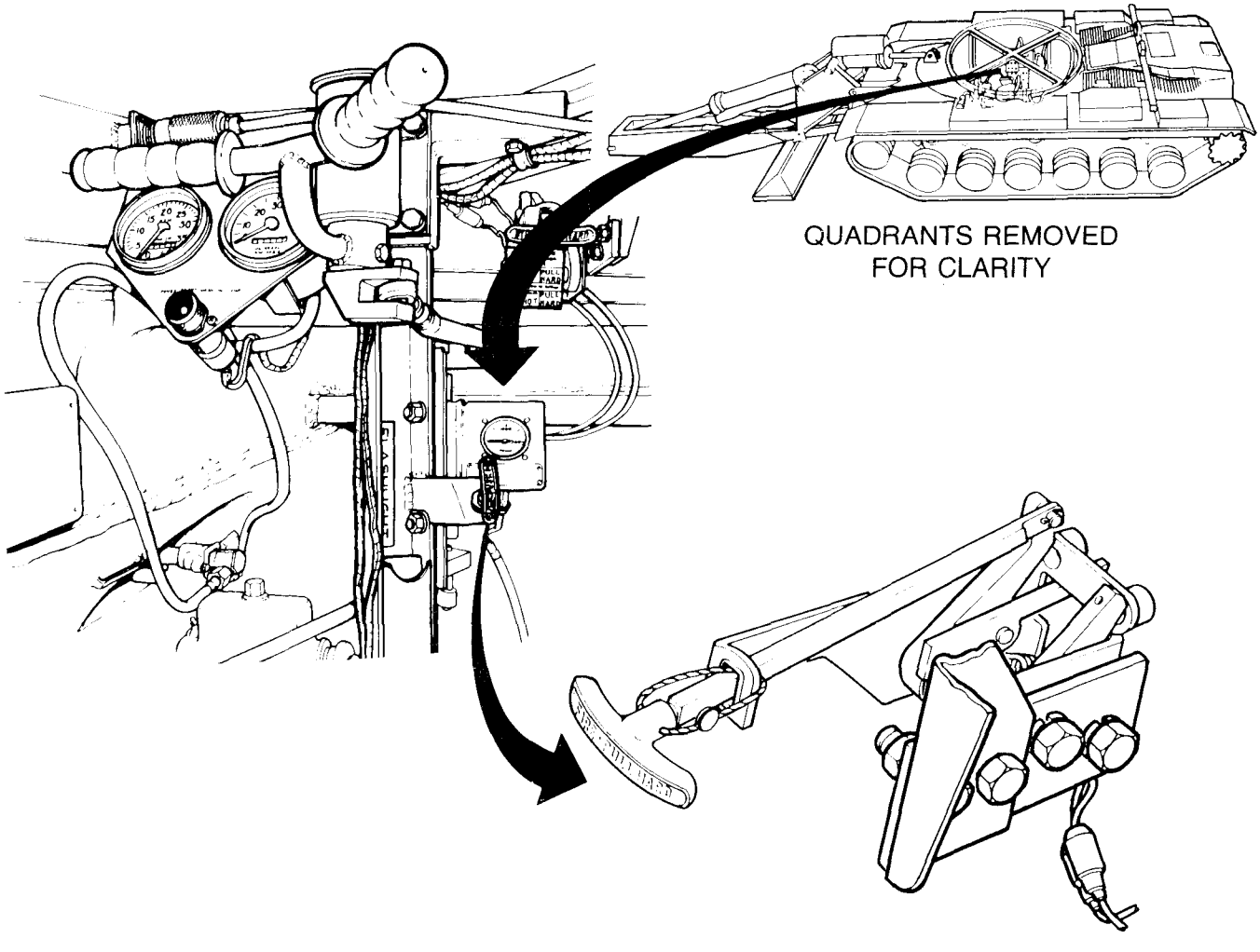
FIXED FIRE EXTINGUISHER INTERIOR RELEASE MECHANISM AND MOUNTING BRACKET REPLACEMENT (Sheet 1 of 5)

PROCEDURE INDEX

TOOLS: 1/2 in. open end wrench (2 required)
Diagonal cutting pliers

SUPPLIES: Lead seal MS51938-6

PRELIMINARY PROCEDURE: Remove interior release mechanism control assemblies (page 20-17).



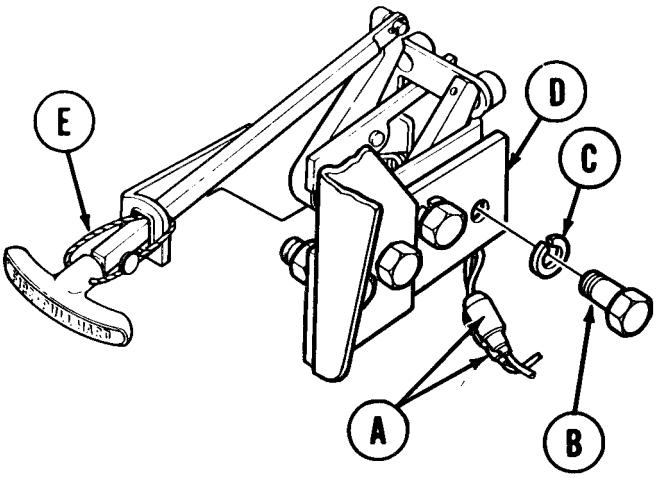
Go on to Sheet 2

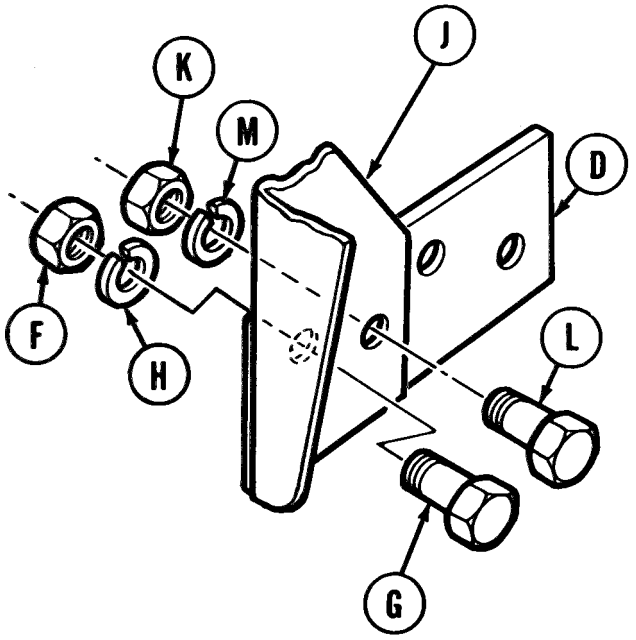
TA169674

FIXED FIRE EXTINGUISHER INTERIOR RELEASE MECHANISM AND MOUNTING BRACKET REPLACEMENT (Sheet 2 of 5)

REMOVAL:

1. Disconnect two fuel shutoff electrical connectors (A) by pulling apart.
2. Using wrench, remove two bolts (B) and lockwashers (C) securing mechanism to bracket (D).
3. Remove mechanism from bracket (D).
4. Using pliers, remove safety wire (E).





5. Using one wrench to hold nut (F), use other wrench to remove screw (G) and lockwasher (H) securing bracket (D) to bracket (J).
6. Using one wrench to hold nut (K), use other wrench to remove screw (L) and lockwasher (M) securing bracket (D) to bracket (J).
7. Remove bracket (D).

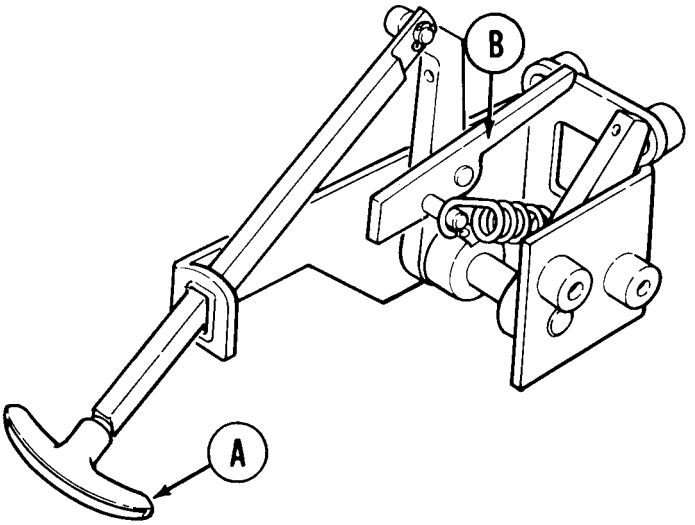
Go on to Sheet 3

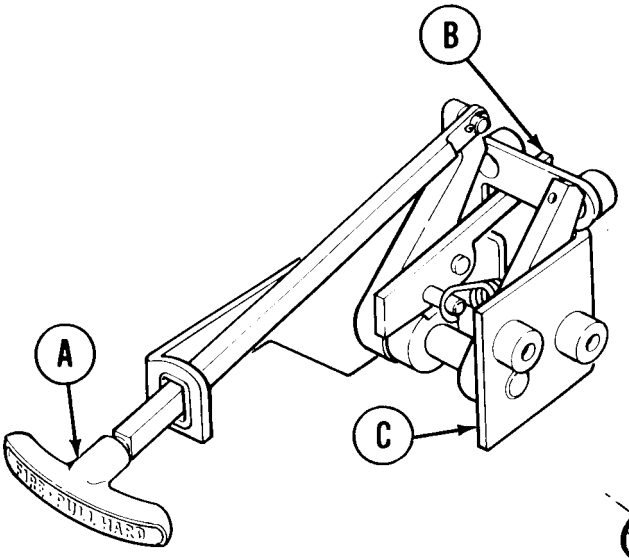
TA169675

FIXED FIRE EXTINGUISHER INTERIOR RELEASE MECHANISM AND MOUNTING BRACKET REPLACEMENT (Sheet 3 of 5)

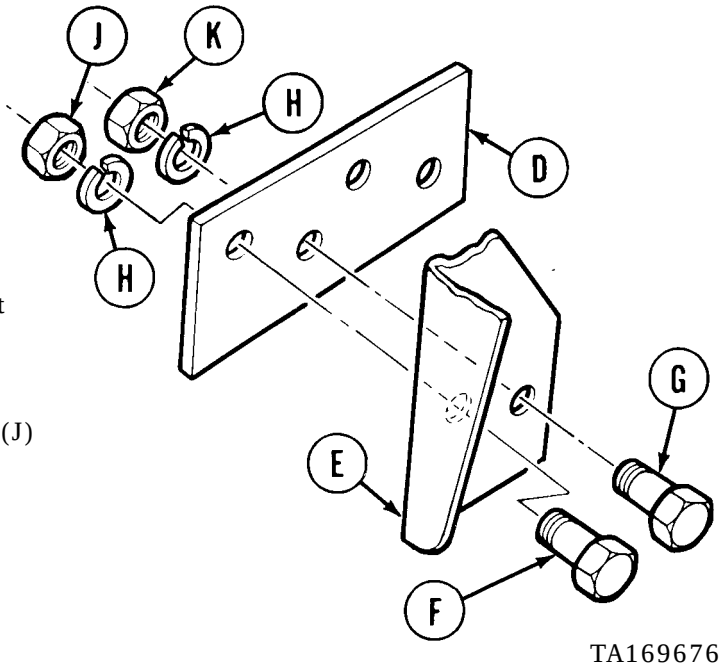
INSTALLATION:

1. Pull handle (A) of release mechanism forward.
2. Push pawl (B) downward.





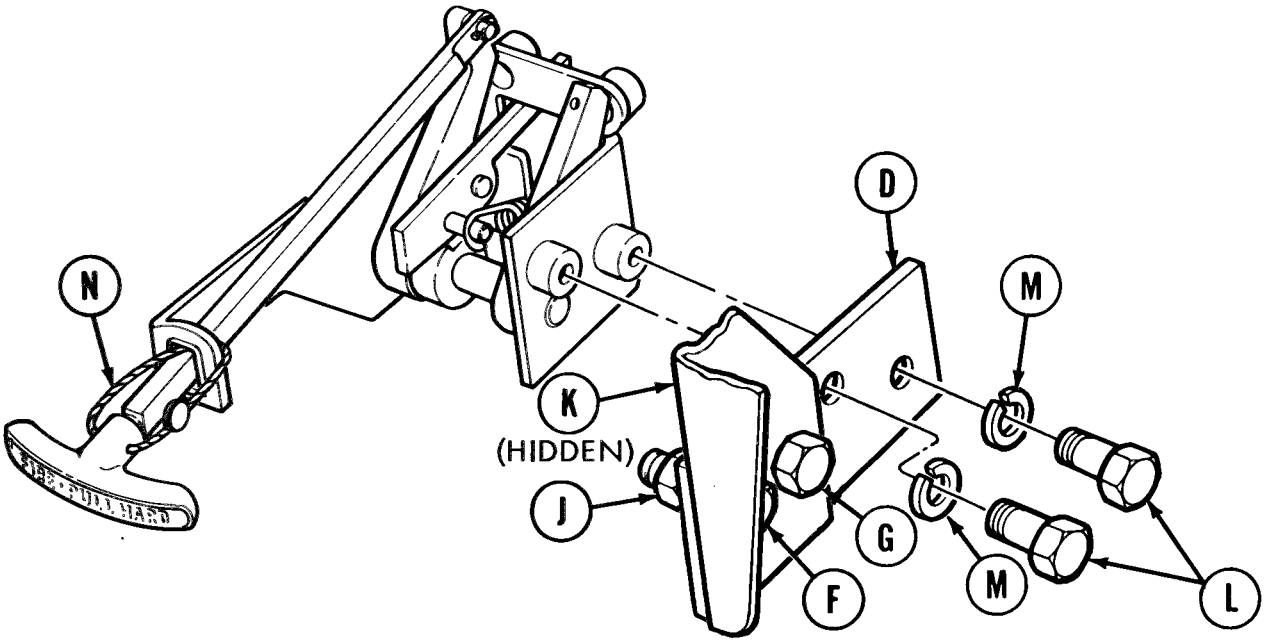
3. While pushing handle (A) rearward, guide pawl (B) into rear opening on bracket (c).
4. Place bracket (D) in position on bracket (E).
5. Using fingers, install two screws (F) and (G), new lockwashers (H), and nuts (J) and (K) securing bracket (D) to bracket (E).



Go on to Sheet 4

TA169676

FIXED FIRE EXTINGUISHER INTERIOR RELEASE MECHANISM AND MOUNTING BRACKET REPLACEMENT (Sheet 4 of 5)



6. Holding nut (J) with wrench, use other wrench to tighten screw (F).
7. Holding nut (K) with wrench, use other wrench to tighten screw (G).
8. Place mechanism in position on bracket (D).
9. Using wrench, install two screws (L) and new lockwashers (M) securing mechanism to bracket (D).
10. Install lead seal (N) as shown.

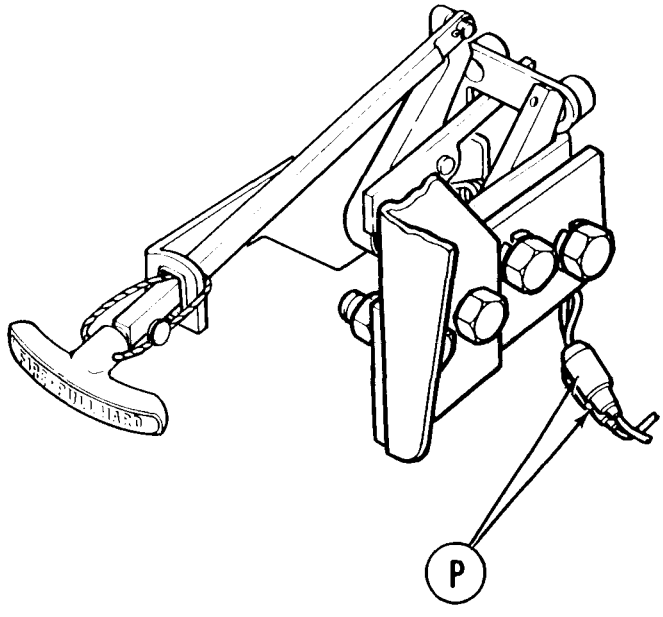
Go on to Sheet 5

TA169677

FIXED FIRE EXTINGUISHER INTERIOR RELEASE MECHANISM AND MOUNTING BRACKET REPLACEMENT (Sheet 5 of 5)

11. Connect two fuel shutoff electrical connectors (P) by pushing together.

12. Install interior release mechanism control assemblies (page 20-21).



End of Task

TA169678

INTERIOR RELEASE MECHANISM REPAIR (Sheet 1 of 11)

PROCEDURE INDEX

TOOLS: Pliers
5/16 in. combination box and open end wrench
Flat-tip screwdriver
Long round nose pliers (needle nose)
Ball peen hammer
3/32 in. drive punch
3/16 in. drive punch
Vise

SUPPLIES: Spring pins (five)
Dry cleaning solvent (item 55, Appendix D)
Cleaning fluid (Item 36, Appendix D)
Cooking stove
Water

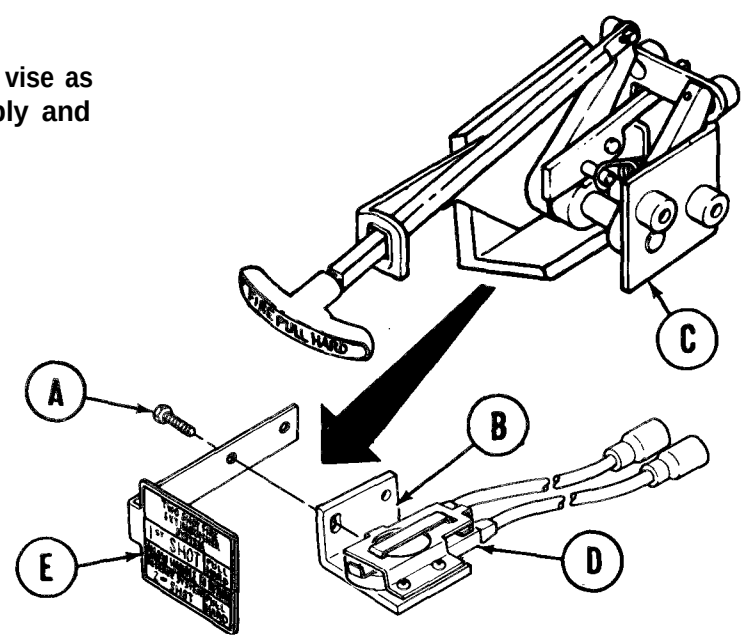
PRELIMINARY PROCEDURES: Remove interior release mechanism and mounting bracket (page 20-24).

NOTE

Position interior release mechanism in vise as necessary to accomplish disassembly and assembly.

DISASSEMBLY:

1. Using wrench, remove two screws (A) holding bracket (B) to release mechanism (C). Remove bracket (B), fuel shutoff switch (D), and instruction plate (E) from release mechanism (C).

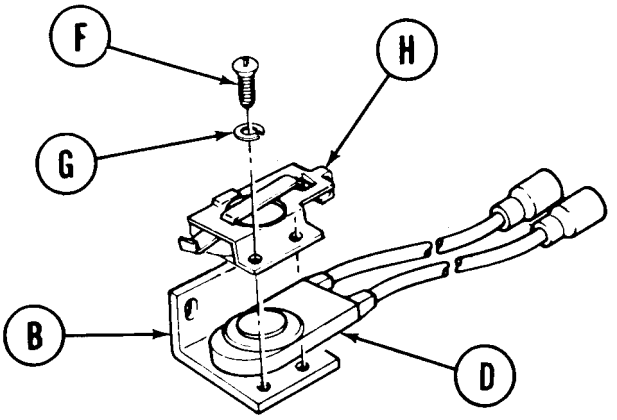


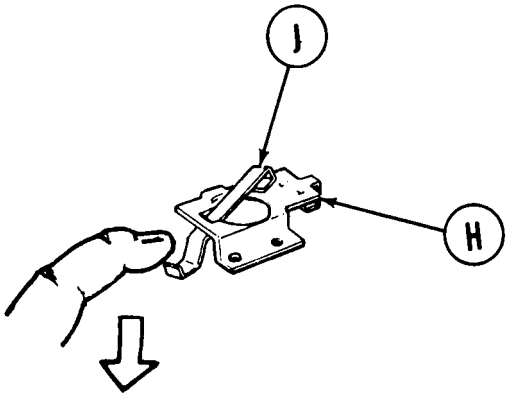
TA169679

Go on to Sheet 2

INTERIOR RELEASE MECHANISM REPAIR (Sheet 2 of 11)

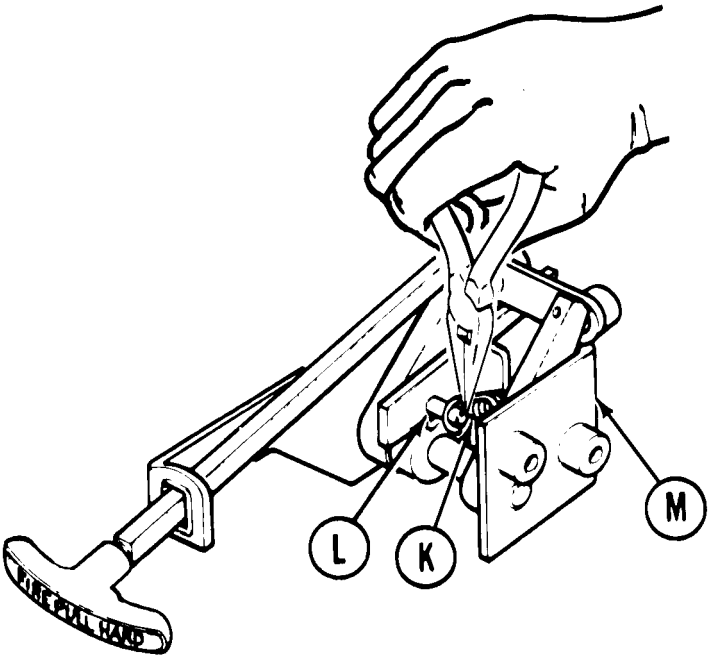
2. Using screwdriver, remove two screws (F) and lockwashers (G) from bracket (B). Separate retainer (H) from switch assembly (D).





3. Using finger, push down and separate switch guard (J) from retainer (H).

4. Using pliers, remove spring (K) from pawl (L) and rear of bracket (M).



Go on to Sheet 3

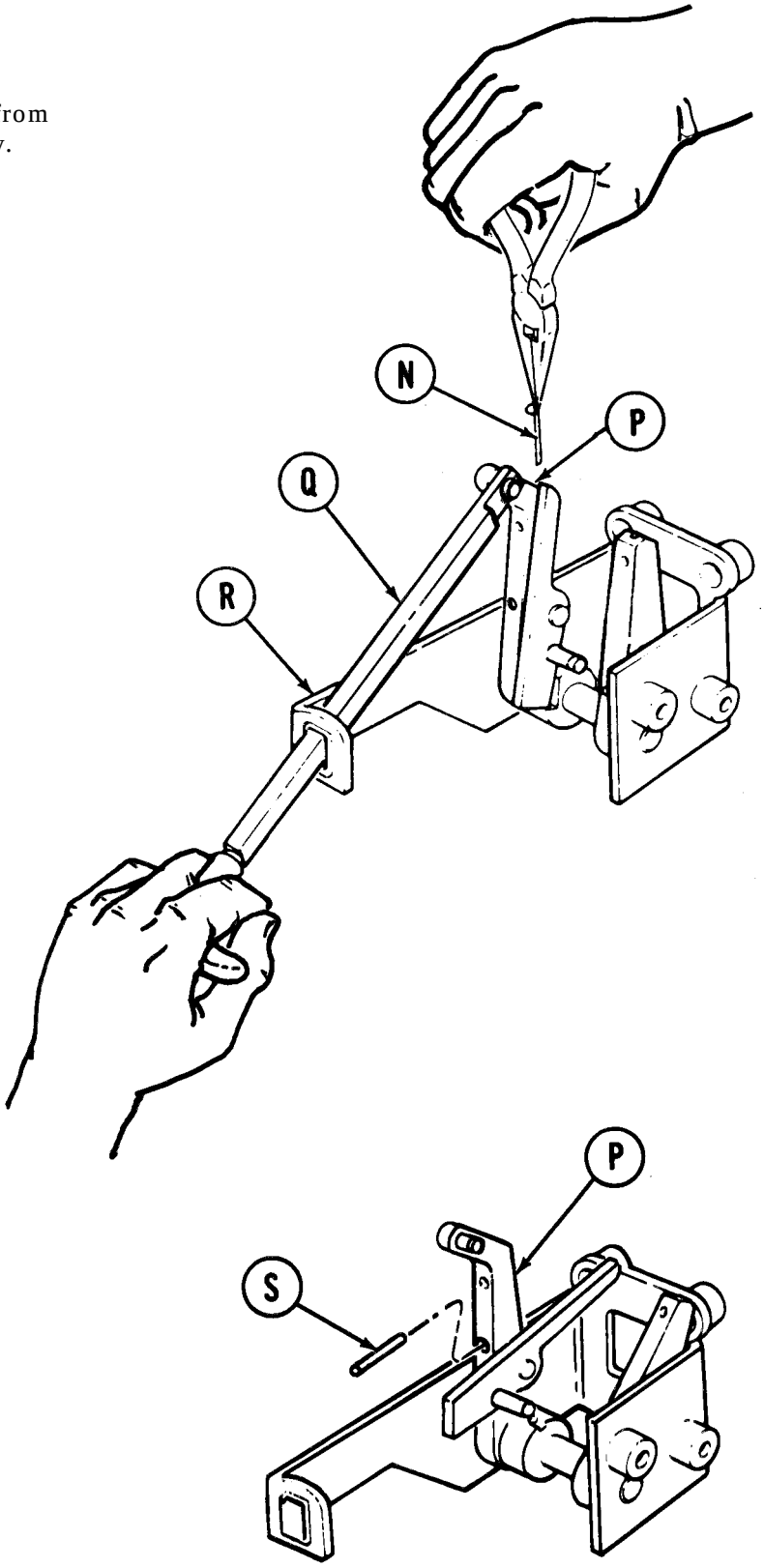
TA169680

INTERIOR RELEASE MECHANISM REPAIR (Sheet 3 of 11)

5. Using pliers, remove cotter pin (N) from lever (P). Throw cotter pin (N) away.

6. Push shaft (Q) off lever (P) and pull out of bracket (R).

7. Using 3/32 inch punch and hammer, remove spring pin (S) from lever (P). Throw spring pin (S) away.



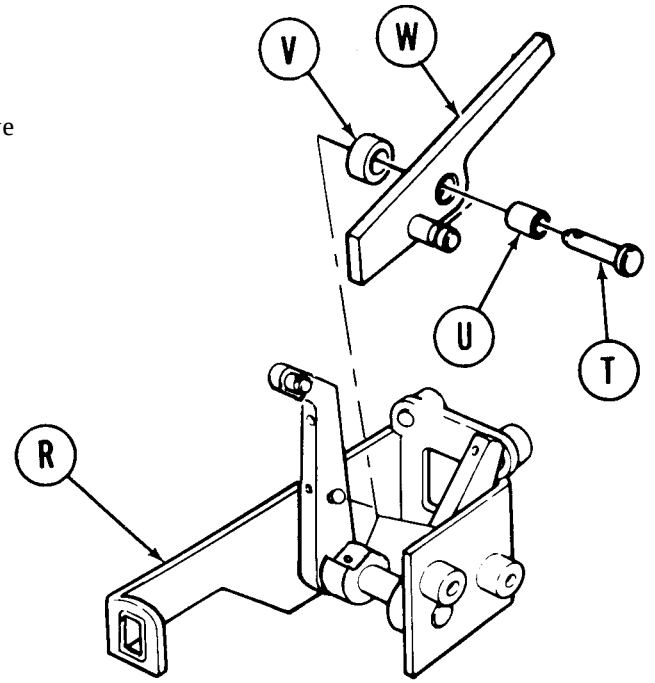
TA169681

Go on to Sheet 4

INTERIOR RELEASE MECHANISM REPAIR (Sheet 4 of 11)

8. Using 3/16 inch punch and hammer, remove straight pin (T), bushing (U), spacer (V), and pawl (W) from bracket (R).

9. Using 3/16 inch punch and hammer, drive spring pin (X) out of cam (Y). Throw spring pin (X) away.

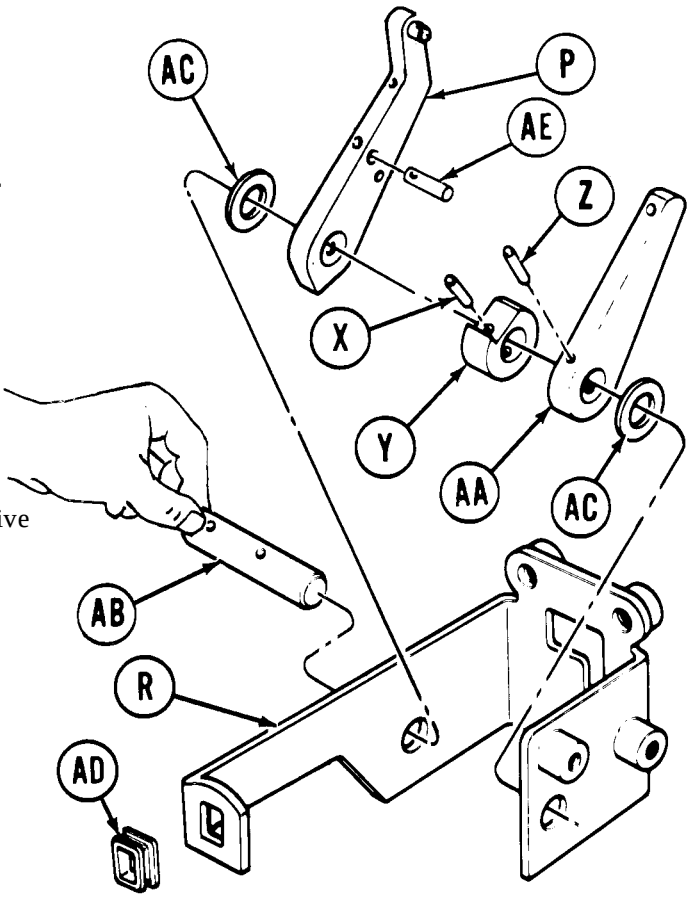


10. Using 3/16 inch punch and hammer, drive spring pin (Z) out of lever (AA). Throw spring pin (Z) away.

11. Pull lever pin (AB) out of bracket (R). Remove two thrust washers (AC), lever (AA), cam (Y), and lever (P).

12. Remove plastic grommet (AD) from bracket (R) if cracked or worn or does not fit properly.

13. Using hammer and 3/16 inch punch, drive spring pin (AE) out of lever (P). Throw spring pin (AE) away.



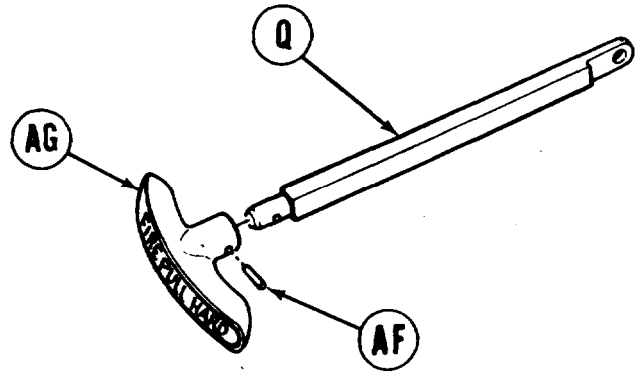
Go on to Sheet 5

TA169682

INTERIOR RELEASE MECHANISMREPAIR (Sheet 5 of 11)

14. Using 3/32 inch punch and hammer, drive spring pin (AF) out of shaft (Q). Throw spring pin (AF) away.

15. Pull handle (AG) off shaft "(Q).



CLEANING AND INSPECTION:

1. Using dry cleaning solvent, clean metal parts.

2. Using cleaning fluid, clean switch assembly and switch connectors.

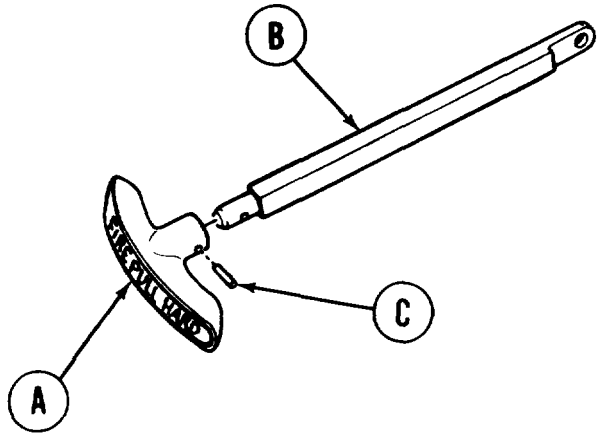
3. Check metal parts for cracks.

4. Check levers, pins, pawl, and handle shaft for bends or breaks.

5. Check brackets for bends, elongated holes, or damaged points.

6. Check spring wire for nicks and grooves at cent act points.

7* Replace all defective parts.



ASSEMBLY:

1. Push handle (A) onto shaft (B). Aline spring pin hole of handle (A) with hole of shaft (B).

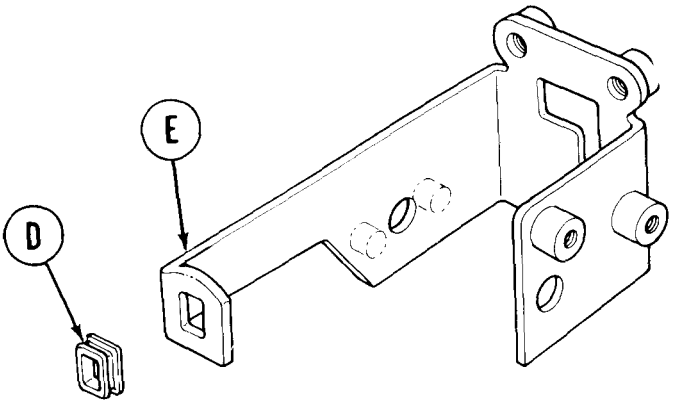
2. Using hammer, install new spring pin (C) into handle (A) and shaft (B).

Go on to Sheet 6

TA169683

INTERIOR RELEASE MECHANISM REPAIR (Sheet 6 of 11)

3. If grommet (D) was removed, install new grommet (D) into bracket (E).



NOTE

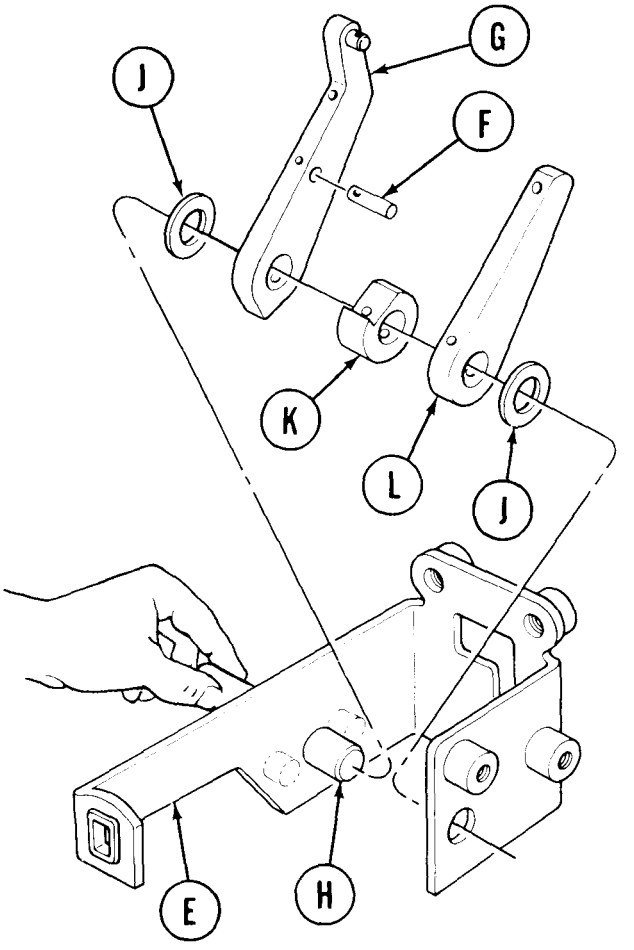
Before installing new grommet (D) into bracket (E), it will be necessary to place grommet (D) in boiling water, using cooking stove, for 2-3 minutes. Using pliers and wearing rubber gloves, quickly remove grommet (D) from boiling water and snap it in place into bracket (E).

4. Using hammer, install new spring pin (F) into lever (G).

5. Position lever pin (H) partially into hole in left side of bracket (E).

6. Position thrust washer (J), lever (G), cam (K), lever (L), and another thrust washer (J) onto lever pin (H).

7. Push lever pin (H) through right hole of bracket (E) so that both ends of pin (H) are flush with outside of bracket (E).



Go on to Sheet 7

TA169684

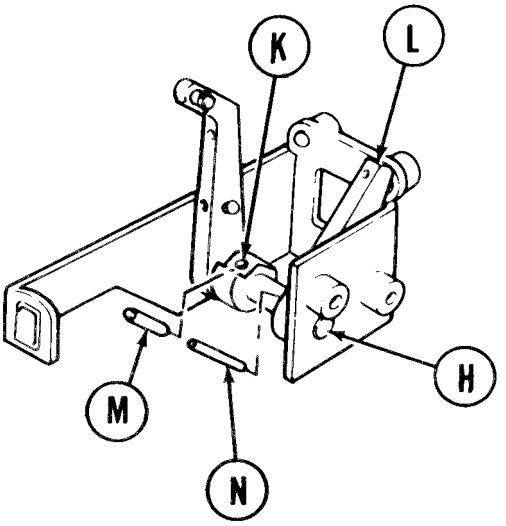
INTERIOR RELEASE MECHANISM REPAIR (Sheet 7 of 11)

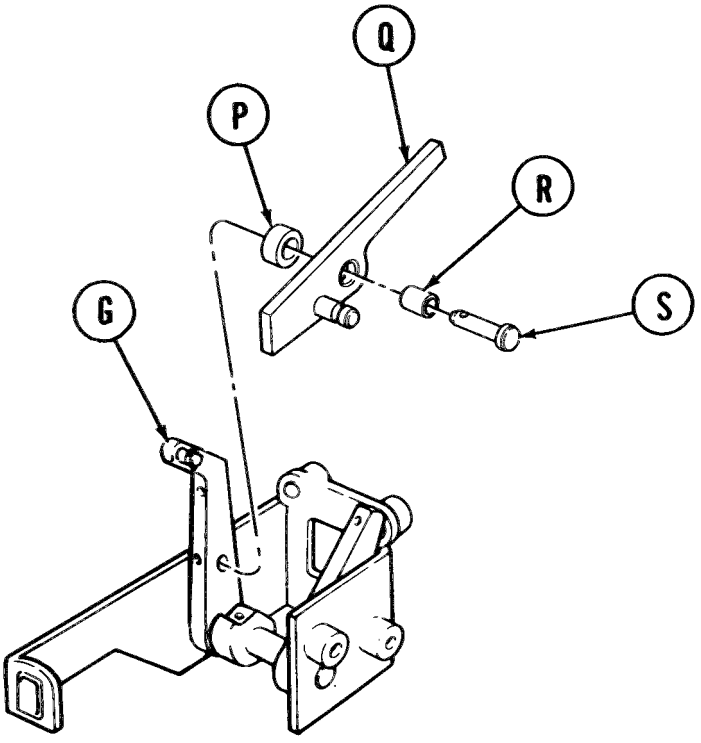
8. Aline pin hole of cam (K) with pin hole of lever pin (H).

9. Using hammer and 3/16 inch punch, tap new short spring pin (M) into cam (K) and lever pin (H).

10. Aline pin hole of lever (L) with pin hole of lever pin (H).

11. Using hammer and punch, tap new long spring pin (N) into lever (L) and lever pin (H).





12. Install spacer (P), pawl (Q), bushing (R), and straight pin (S) onto lever (G).

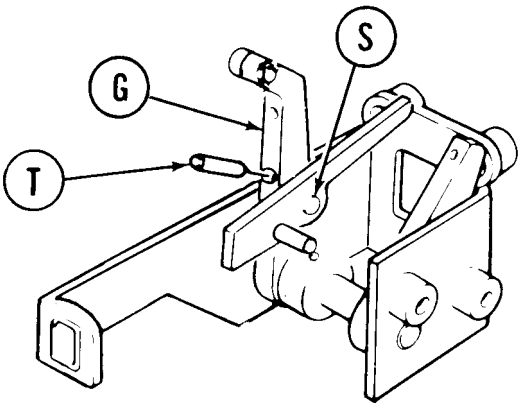
Go on to Sheet 8

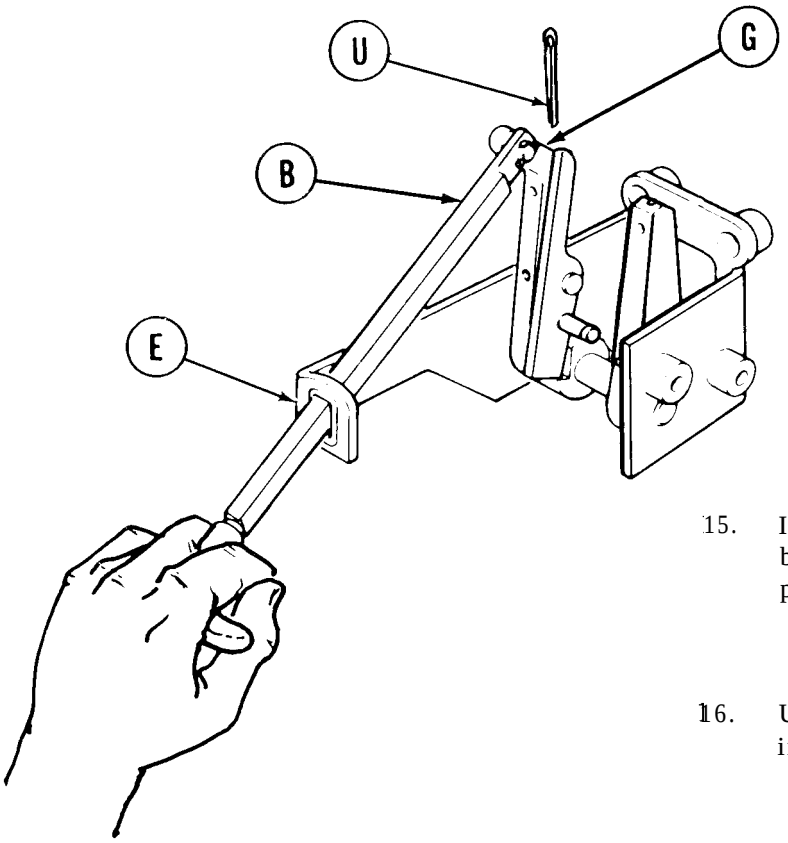
TA169685

INTERIOR RELEASE MECHANISM REPAIR (Sheet 8 of 11)

13. Using pliers, aline pin hole of straight pin (S) with pin hole of lever (G).

14. Using hammer and 3/16 inch punch, tap new spring pin (T) into lever (G) and pin (S).





15. Insert shaft (B) through front hole of bracket (E). Push end of shaft (B) onto pin of lever (G).

16. Using pliers, install new cotter pin (U) into retaining pin of lever (G).

Go on to Sheet 9

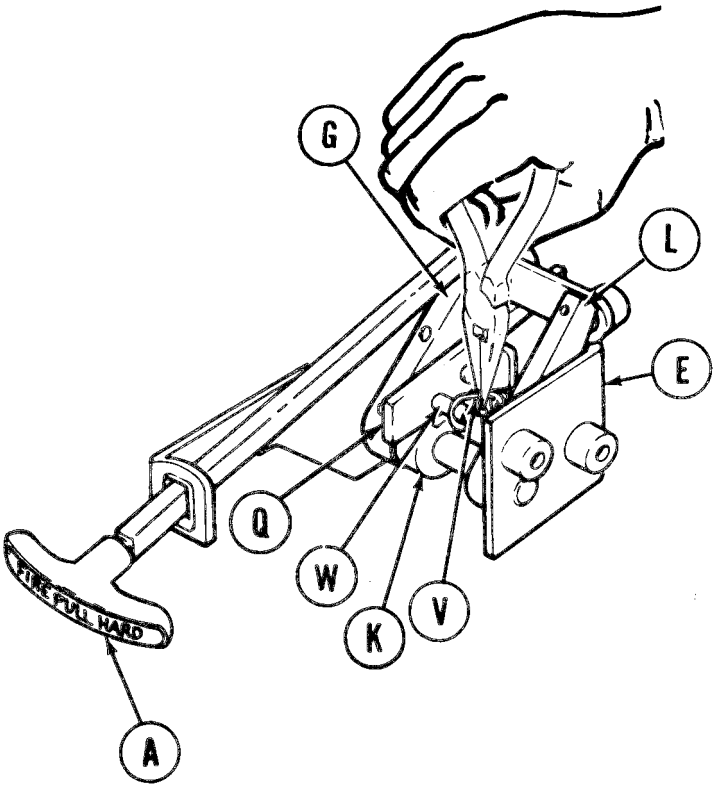
TA169686

INTERIOR RELEASE MECHANISM REPAIR (Sheet 9 of 11)

17. Insert end of spring (V) through hole in rear of bracket (E).

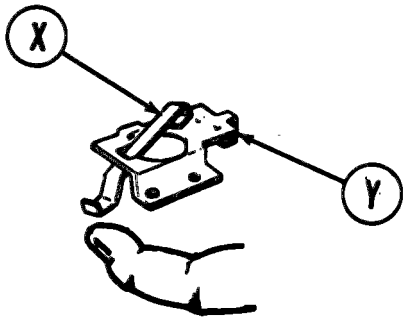
18. Using pliers, connect and seat other end of spring (V) onto connecting pin (W) of pawl (Q).

19. Move handle (A) forward and rearward to check for proper operation.



NOTE

Make sure pawl lever (Q) snaps downward on forward stroke and engages cam (K) on rearward stroke. Also, this check will cause lever (L) to move at same time as lever (G) when activated.



20. Insert switch guard (X) up through center hole of retainer (Y) and connect to retainer (Y).

Go on to Sheet 10

TA169687

INTERIOR RELEASE MECHANISM REPAIR (Sheet 10 of 11)

21. Place fuel shutoff switch (Z) on mounting bracket (AA).

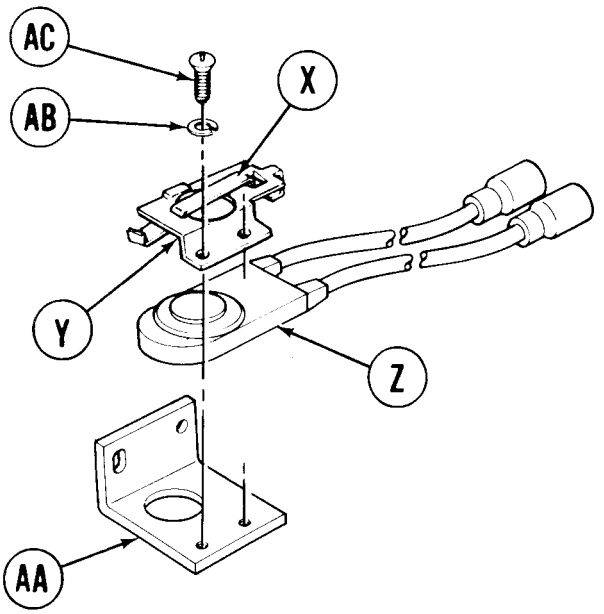
22. Place retainer (Y) on top of switch (Z) on bracket (AA).

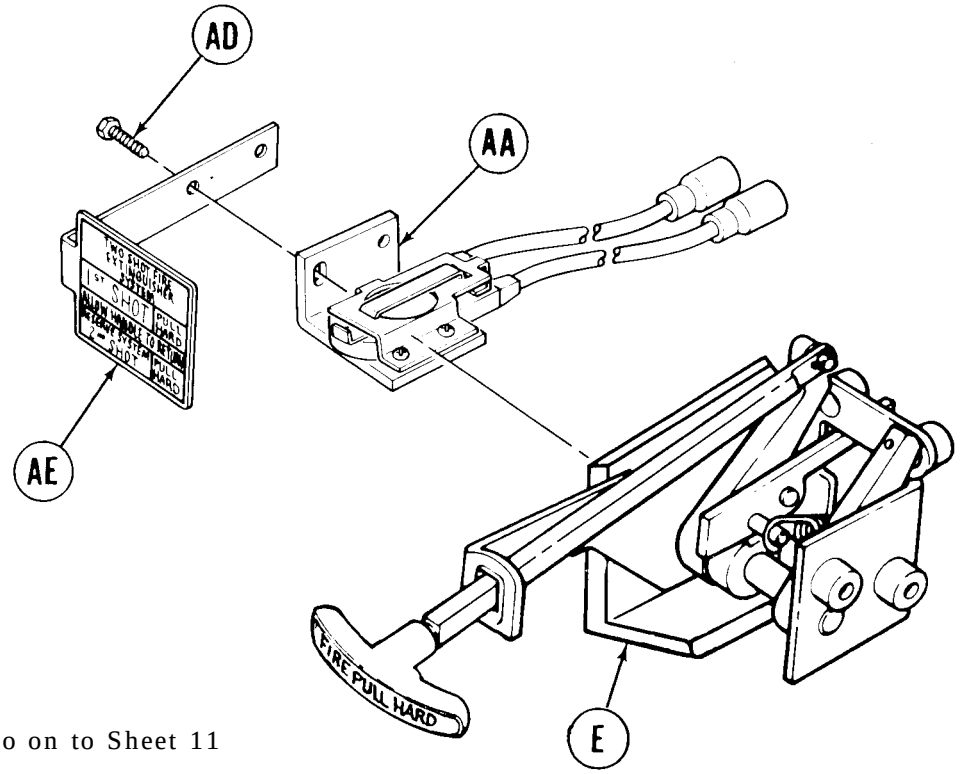
23. Insert two new lockwashers (AB) and screws (AC) through retainer (Y) and bracket (AA). Do not tighten screws (AC) completely.

24. Make sure fuel shutoff switch (Z) touches switch guard (X). Using screwdriver, tighten screws (AC) to bracket (AA).

25. Insert two screws (AD) through instruction plate (AE) into bracket (AA) and secure in mounting holes on left side of bracket (E).

26. Using wrench, tighten screws (AD).



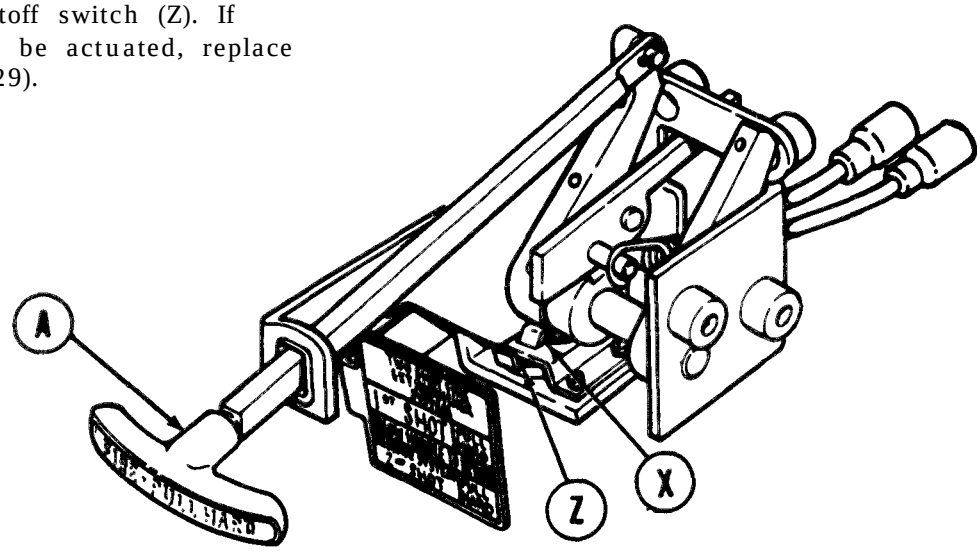


Go on to Sheet 11

TA169688

INTERIOR RELEASE MECHANISM REPAIR (Sheet 11 of 11)

27. Pull handle (A) forward to check fuel shutoff switch for clicking sound. If clicking sound is not heard, adjust fuel shutoff switch guard (X) to make sure it touches fuel shutoff switch (Z). If switch (Z) cannot be actuated, replace switch (page 20-29).



28. Install interior release mechanism and mounting bracket assembly (page 20-26).

TA169689

End of Task

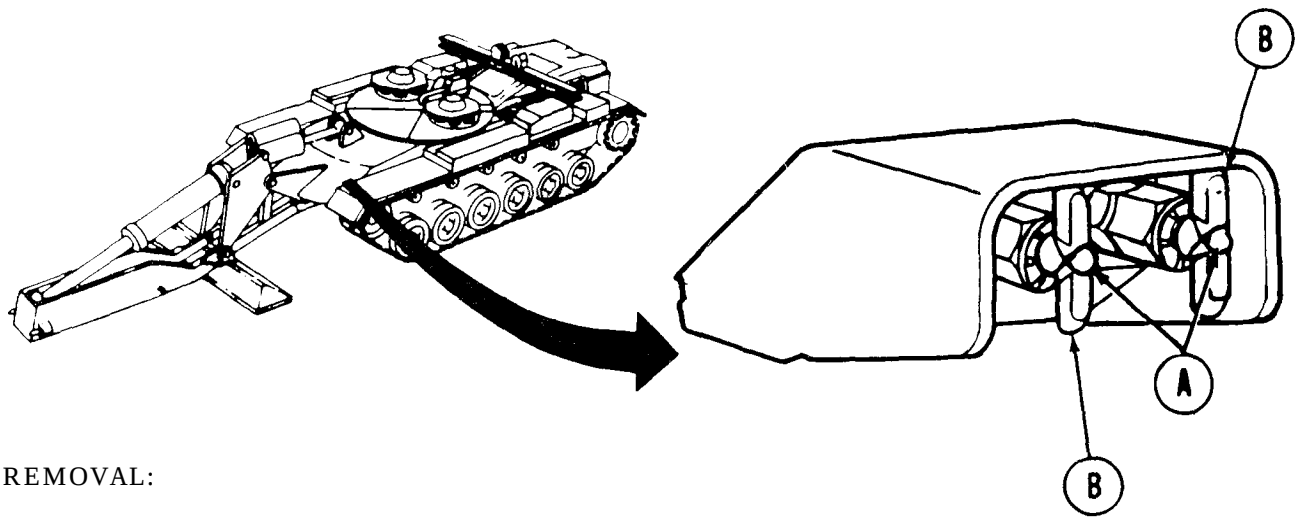
EXTERIOR RELEASE HANDLE BODY ASSEMBLY REPLACEMENT (Sheet 1 of 4)

PROCEDURE INDEX

TOOLS: Diagonal cutting pliers
1/2 in. combination box and open end wrench
Slip joint pliers

SUPPLIES: Antipilferage seal

PRELIMINARY PROCEDURE: Remove control valves (page 20-2).



REMOVAL:

1. Using cutting pliers, remove lead seals (A) from body assemblies (B).

NOTE

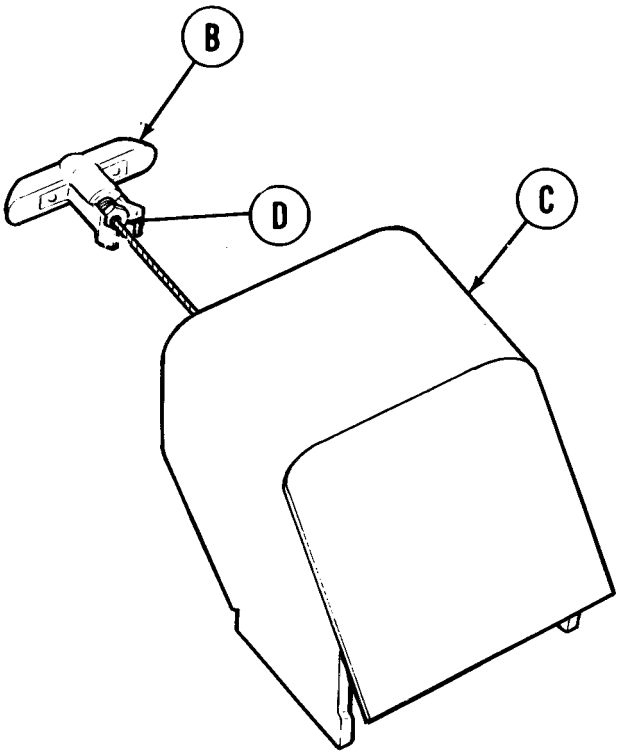
These instructions describe removal of either body assembly.

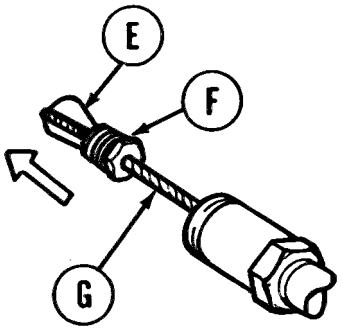
Go on to Sheet 2

EXTERIOR RELEASE HANDLE BODY ASSEMBLY REPLACEMENT (Sheet 2 of 4)

2. Pull body assembly (B) out of mounting bracket (C) until fastener (D) is exposed.

3. Using 1/2 inch wrench, unscrew fastener (D) from body assembly (B).





NOTE

Plug (E) does not separate from socket (F) in step 4.

4. Using pliers, push plug (E) out of socket (F) until cable (G) is unlocked and can be removed from plug (E).

5. Remove cable (G) from plug (E).

Go on to Sheet 3

TA169691

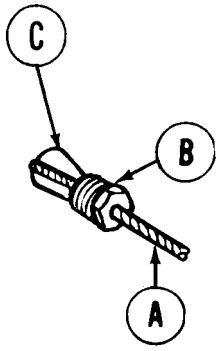
EXTERIOR RELEASE HANDLE BODY ASSEMBLY REPLACEMENT (Sheet 3 of 4)

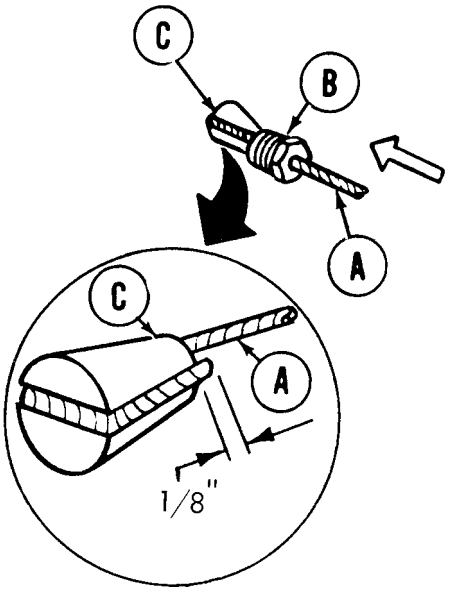
NOTE

These instructions describe installation of either body assembly.

INSTALLATION:

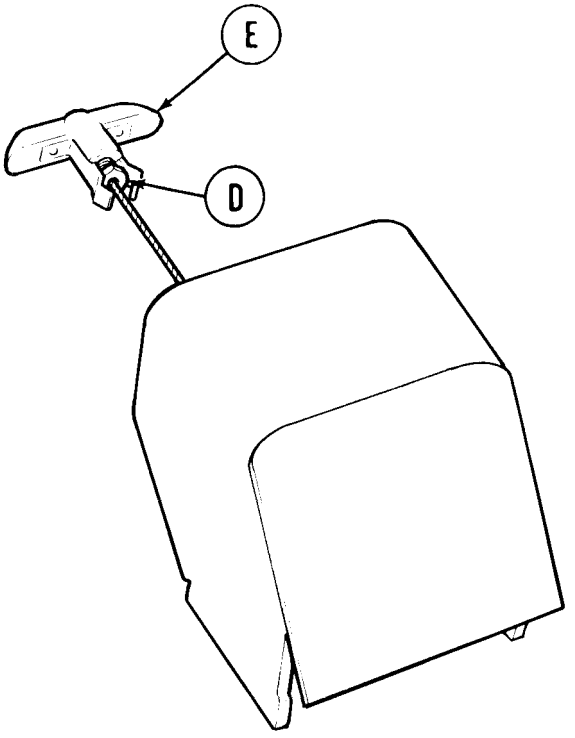
1. Thread cable (A) into socket B).
2. Lay cable (A) in groove around plug (C). Allow a minimum of 1/8 inch of cable extending beyond plug (C).





3. Using pliers, seat plug (C) into socket (B).

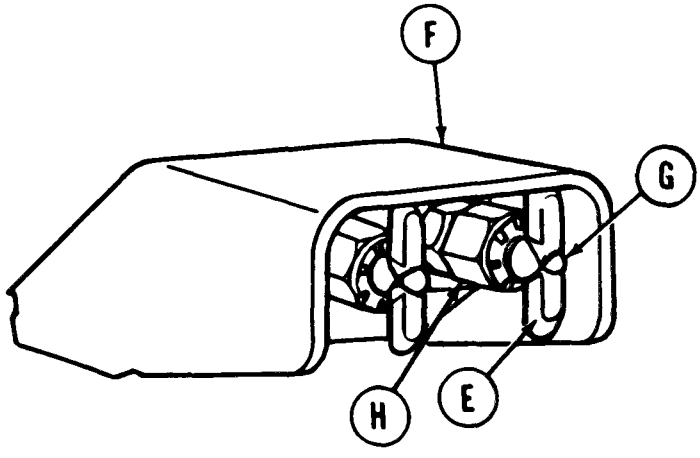
4. Install fastener assembly (D) into body assembly (E).
5. Using 1/2 inch wrench, tighten fastener assembly (D) into body assembly (E).



Go on to Sheet 4

TA169692

EXTERIOR RELEASE HANDLE BODY ASSEMBLY REPLACEMENT (Sheet 4 of 4)

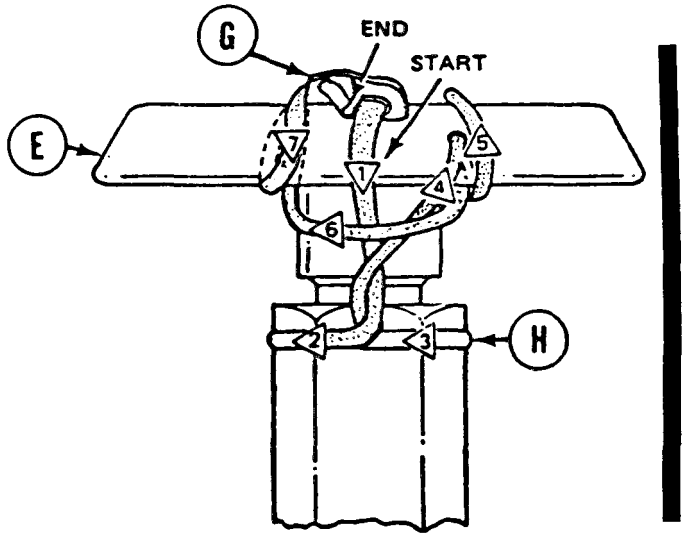


6. Squeeze spring clips on body assembly (E) and insert body assembly (E) into bracket (F).

7. Install antipilferage seal (G) as shown. Position seal (G). Wrap wire from seal (G) around coupling (H), cross over body assembly handle (E), and thread end of wire through seal (G).

8. Using slip joint pliers, crimp seal (G) onto wire.

9. Replace control valves (page 20-14).



End of Task

EXTERIOR RELEASE HANDLE BODY ASSEMBLY REPAIR (Sheet 1 of 1)

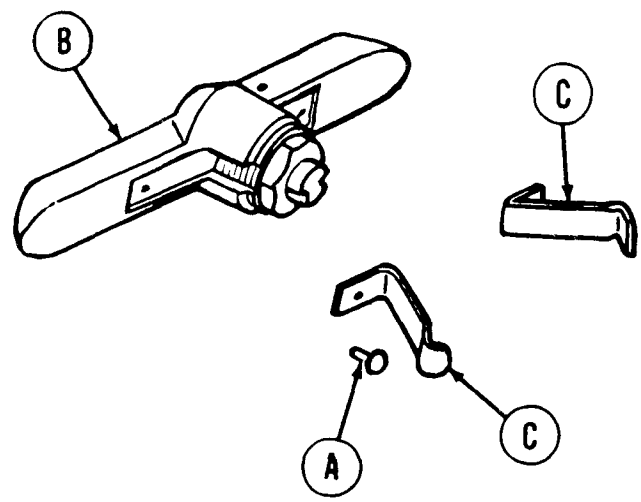
TOOLS: Ball peen hammer
1/8 in. flat-tip screwdriver (pocket screwdriver)
1/2 inch drive punch

SUPPLIES: Drive screws (2 required)

PRELIMINARY PROCEDURE: Remove release handle body assembly (Page 20-40).

DISASSEMBLY:

1. Using screwdriver, pry two drive screws (A) from body (B).
2. Remove two clip springs (C).
3. Replace defective parts as required.



ASSEMBLY:

1. Place body (B) on flat surface.
2. Position clip springs (C) onto body (B).
3. Using hammer and punch, tap new drive screws (A) into body (B).
4. Install release handle body assembly (page 20-42).

End of Task

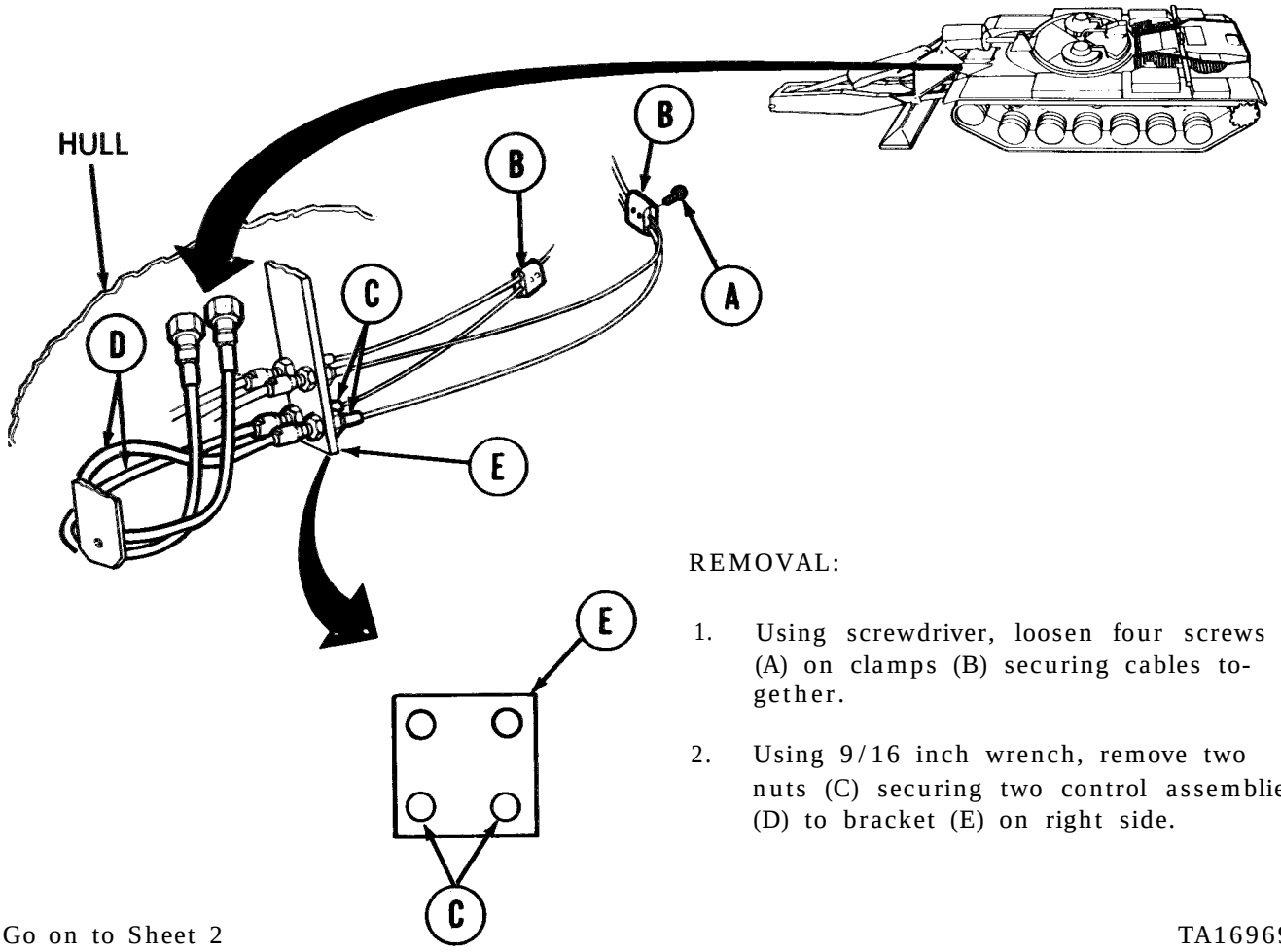
TA169694

FIXED FIRE EXTINGUISHER OUTSIDE RELEASE HANDLE CONTROL ASSEMBLY REPLACEMENT (Sheet 1 of 4)

PROCEDURE INDEX

TOOLS: 5/16 in. flat-tip screwdriver
3/8 in. open end wrench
9/1 6 in. open end wrench
7/1 6 in. socket with 1/2 in. drive
Ratchet with 1/2 in. drive

PRELIMINARY PROCEDURE: Remove release handle body assembly (page 20-40).



REMOVAL:

1. Using screwdriver, loosen four screws (A) on clamps (B) securing cables together.
2. Using 9/16 inch wrench, remove two nuts (C) securing two control assemblies (D) to bracket (E) on right side.

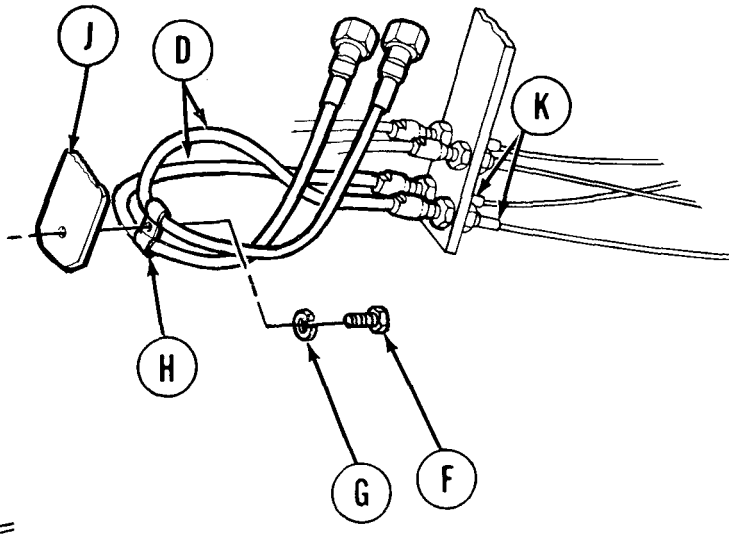
Go on to Sheet 2

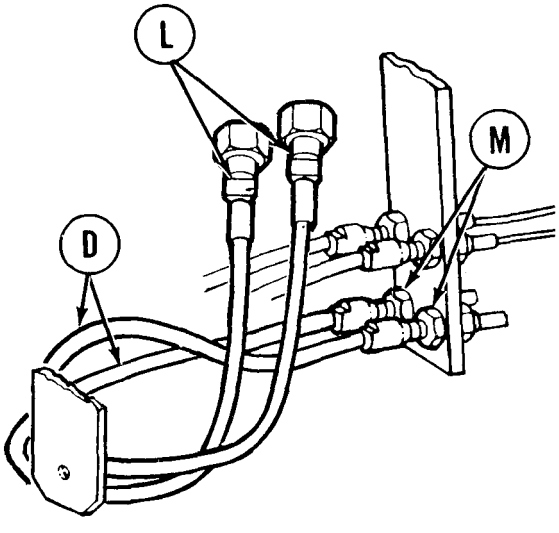
TA169695

FIXED FIRE EXTINGUISHER OUTSIDE RELEASE HANDLE CONTROL ASSEMBLY REPLACEMENT (Sheet 2 of 4)

3. Using socket and ratchet, remove screw (F) and lockwasher (G) securing two clamps (H) and two control assemblies (D) to hull bracket (J).

4. Pull two cables (K) out of two control assemblies (D).





5. Using 3/8 inch wrench on flats (L) of two control assemblies (D), remove two control assemblies (D) from hull.

6. Using 9/16 inch wrench, remove two nuts (M) from two control assemblies (D).

7. Remove two clamps (H) from two control assemblies (D).

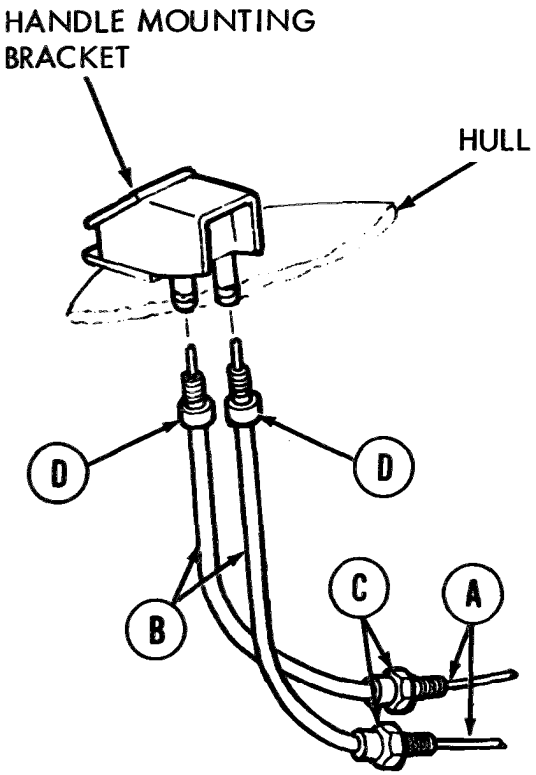
Go on to Sheet 3

TA169696

FIXED FIRE EXTINGUISHER OUTSIDE RELEASE HANDLE CONTROL ASSEMBLY REPLACEMENT (Sheet 3 of 4)

INSPECTION:

1. Inspect cables (A) for kinks and frayed areas.
2. Replace cables if kinked or frayed.
3. Examine exterior control assembly (B) for cracks.
4. Replace exterior control assembly (B) if damaged.



INSTALLATION:

1. Using 9/16 inch wrench, screw two nuts (C) onto two control assemblies (B).
2. Using 3/8 inch wrench on flats (D) of two control assemblies (B), install two control assemblies (B) on hull.
3. Thread cables (A) from outside of vehicle, through handle mounting bracket and through two control assemblies (B).

Go on to Sheet 4

TA169697

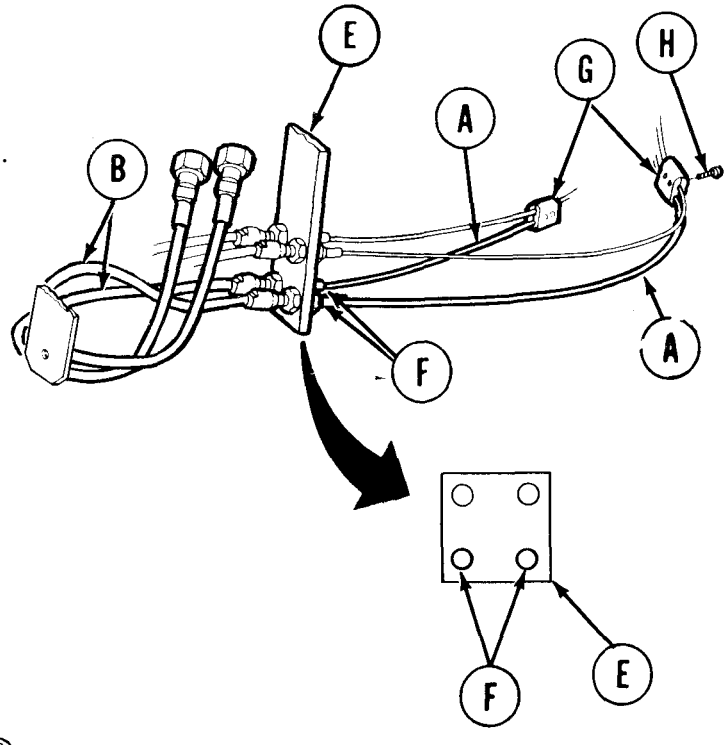
FIXED FIRE EXTINGUISHER OUTSIDE RELEASE HANDLE CONTROL ASSEMBLY REPLACEMENT (Sheet 4 of 4)

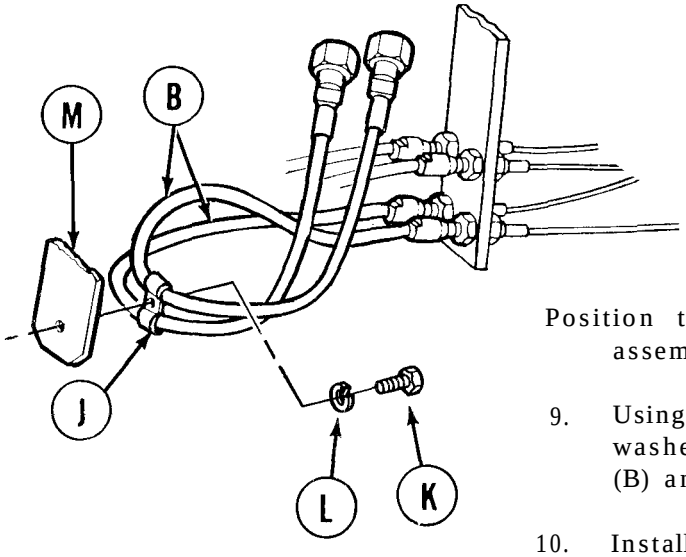
4. Place two control assemblies (B) in position on bracket (E) from left to right.

5. Using 9/16 inch wrench, install two nuts (F) securing two control assemblies (B) to bracket (E).

6. Insert two cables (A) in clamps (G).

7. Using screwdriver, install screws (H) securing two cables (A) in clamps (G).





Position two clamps (J) on two cable assemblies (B).

9. Using socket, install screw (K) and new lockwasher (L) securing two cable assemblies (B) and clamp (J) to bracket (M).

10. Install release handle body assembly (page 20-42).

End of Task

TA169698

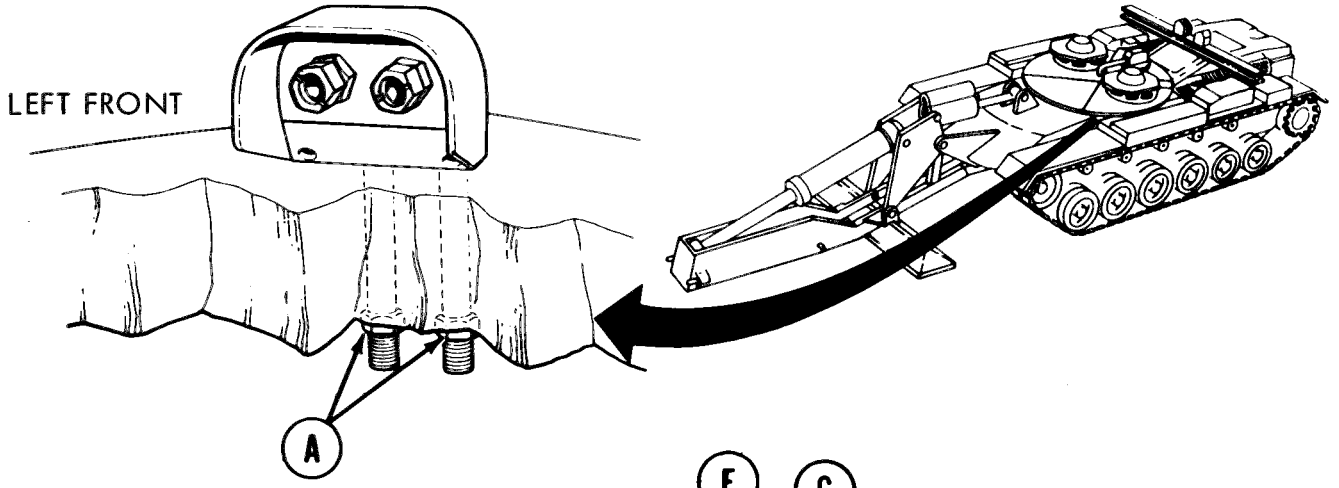
EXTERIOR RELEASE HANDLE MOUNTING BRACKET REPLACEMENT (Sheet 1 of 2)

TOOLS: 1-1/8 in. combination box and open end wrench
1 in. combination box and open end wrench
Flat-tip screwdriver with 5/16 in. blade

SUPPLIES: Preformed packing (two)

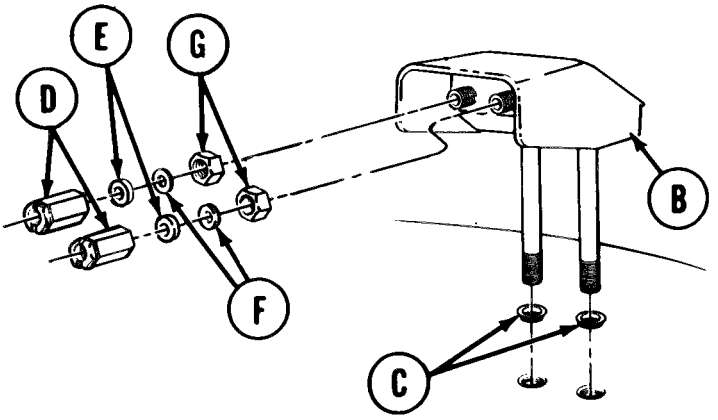
PRELIMINARY PROCEDURES:

Remove exterior release handle body assemblies (page 20-40)
Remove outside release handle control assemblies (page 20-45)



REMOVAL:

1. Using 1-1/8 inch wrench, remove two. nuts (A) from inside hull.
2. Remove mounting bracket (B) from vehicle.
3. Using hands, remove preformed packings (C). Throw packings away.



NOTE

When removing couplings (D) in next step, bushings (E) and washers (F) will remain with couplings (D).

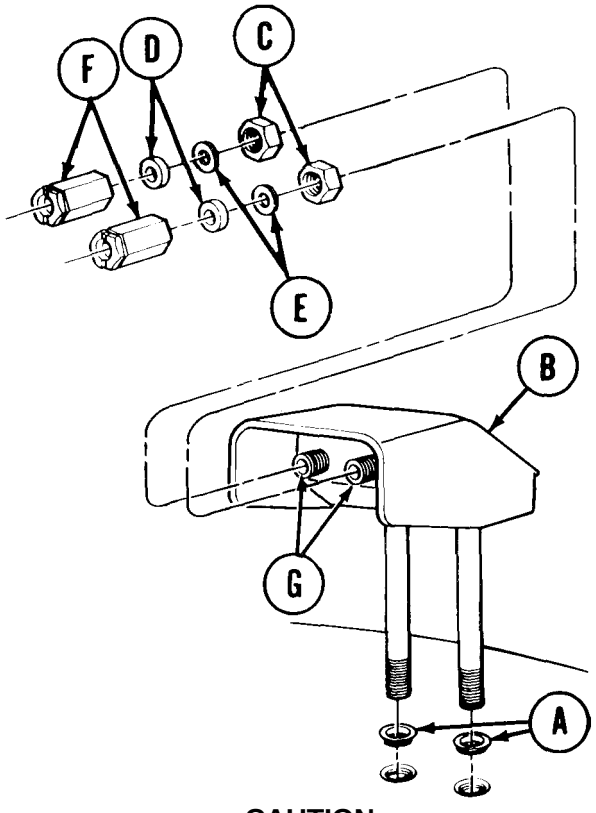
4. Using 1 inch wrench, remove couplings (D) from mounting bracket (B).
5. Using 1-1/8 inch wrench, remove nuts (G) from mounting bracket (B).
6. Using screwdriver, remove washers (F) and bushings (E) from couplings (D).

Go on to Sheet 2

TA169699

EXTERIOR RELEASE HANDLE MOUNTING BRACKET REPLACEMENT (Sheet 2 of 2)

INSTALLATION:

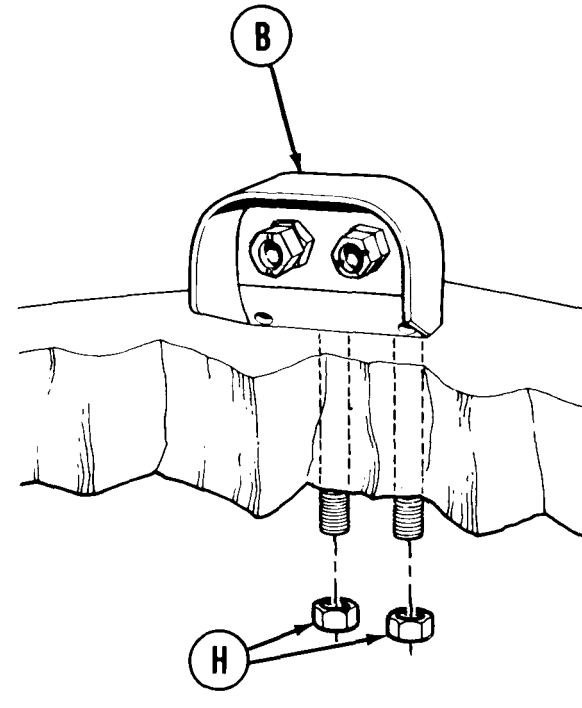


1. Using hands, install new preformed packings (A) onto bracket (B).
2. Using 1-1/8 inch wrench, screw nuts (C) all the way down onto bracket (B).
3. Press bushings (D) and washers (E) into couplings (F).
4. Tighten couplings (F) finger tight to bracket (B).

CAUTION

Be sure not to overtighten couplings (F) or tubes (G) will collapse.

5. Using 1 inch wrench to hold coupling (F), use 1-1/8 inch wrench and tighten nuts (C) against coupling (F).
6. Place mounting bracket (B) onto vehicle.
7. Screw two nuts (G) to mounting bracket (B) (inside hull).
8. Using 1-1/8 inch wrench, tighten two nuts (H).
9. Install outside release handle control assemblies (page 20-47).
10. Install exterior release handle body assemblies (page 20-42).



End of Task

TA169700

CONTROL VALVE ASSEMBLY REPAIR (Sheet 1 of 2)

TOOLS: Bench vise
8 in. adjustable wrench

SUPPLIES: Plug

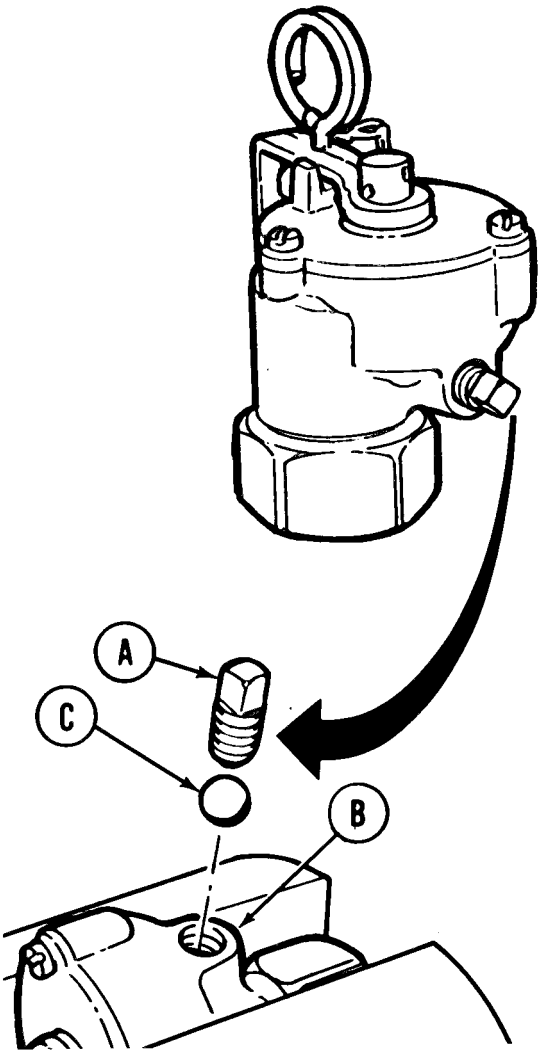
PRELIMINARY PR0CEDURE: Remove control valve (page 20-2)

DISASSEMBLY:

1. Secure control valve in vise with vent plug (A) up.
2. Using adjustable wrench, remove vent plug (A) from valve (B) and throw plug away.
3. Holding hand over hole where plug (A) was removed, remove valve (B) from vise. Turn plug hole down and remove ball (C) from valve (B).

INSPECTION:

Inspect plug hole and ball (C) for nicks and burrs. If damaged, replace damaged part.



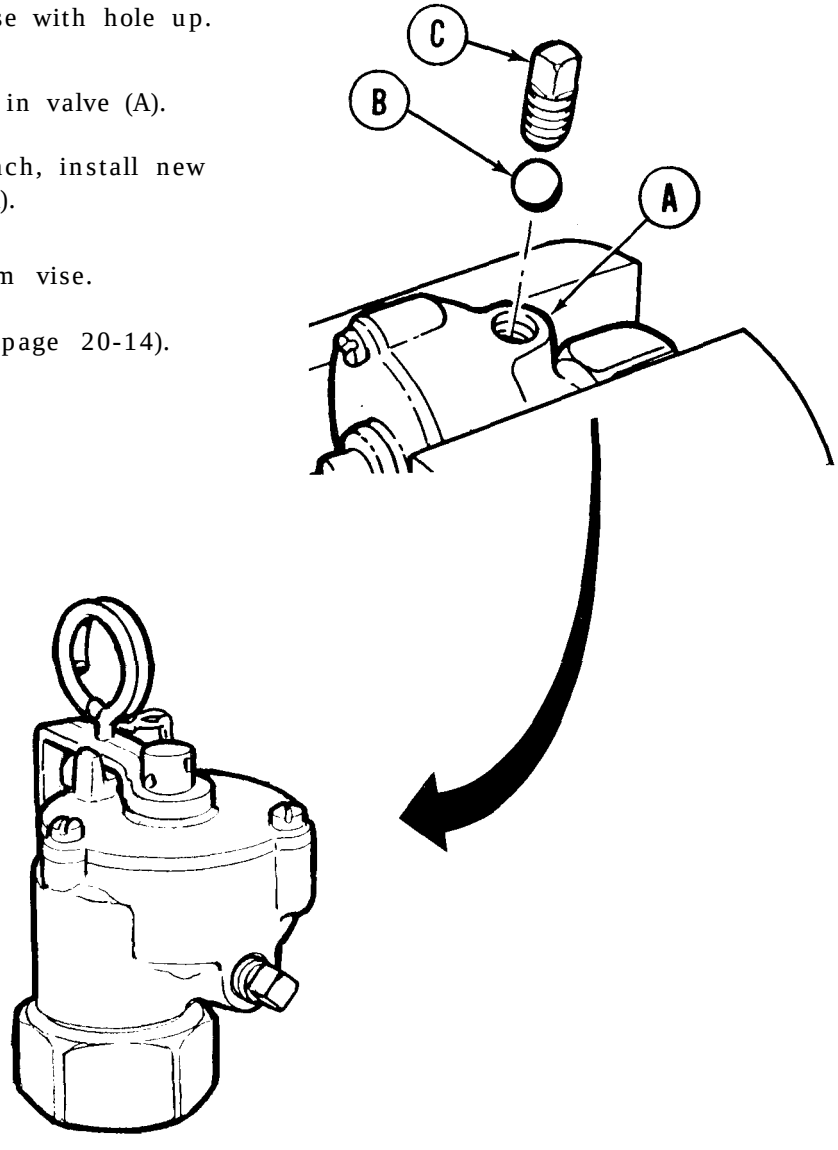
Go on to Sheet 2

TA169701

CONTROL VALVE ASSEMBLY REPAIR (Sheet 2 of 2)

ASSEMBLY:

1. Secure valve (A) in vise with hole up.
2. Place ball (B) in hole in valve (A).
3. Using adjustable wrench, install new plug (C) into valve (A).
4. Remove valve (A) from vise.
5. Install control valve (page 20-14).



End of Task

TA169702

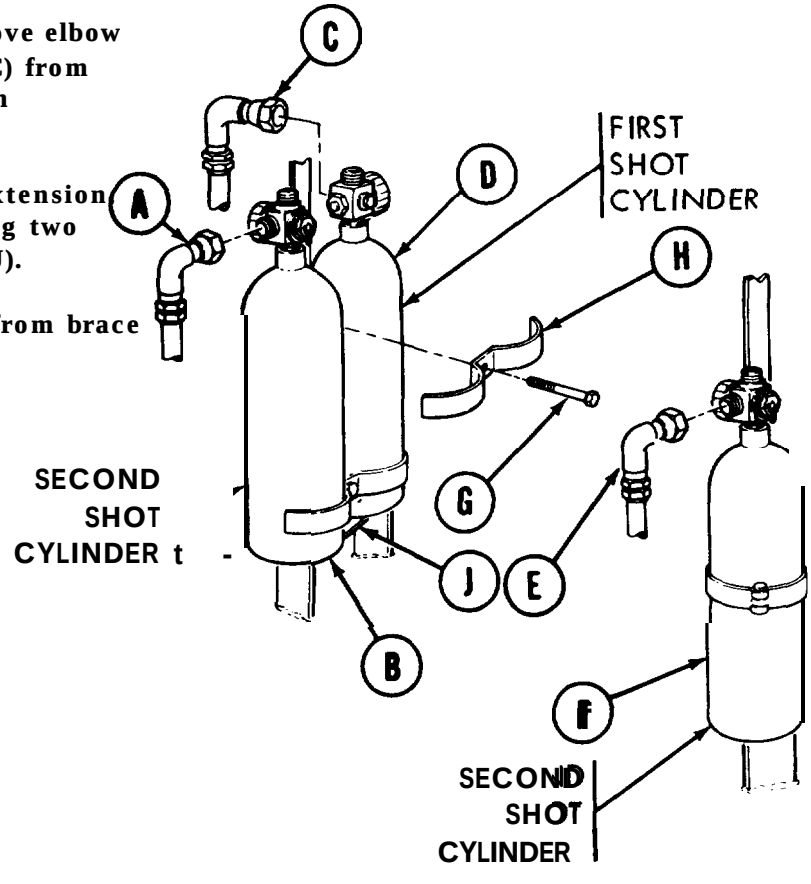
FIXED FIRE EXTINGUISHER CYLINDER REPLACEMENT (Sheet 1 of 4)

PROCEDURE INDEX

TOOLS: 1-5/8 in. open end wrench
3/4 in. socket with 1/2 in. drive
5 in. extension with 1/2 in. drive
Ratchet with 1/2 in. drive
3/4 in. open end wrench
Torque wrench with 1/2 in. drive (0-175 lb-f t)
Scale (0-50 lb)
1-5/8 in. crowfoot wrench

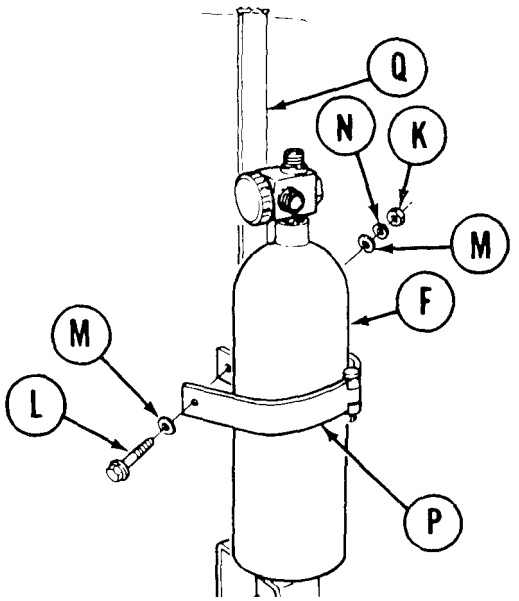
PRELIMINARY PROCEDURE Remove control valves (page 20-2)

1. Using 1-5/8 inch wrench, remove elbow (A) from cylinder (B), elbow (C) from cylinder (D) and elbow (E) from cylinder (F).
2. Using socket, ratchet, and extension remove two screws (G) securing two straps (H) to brace assembly (J).
3. Remove cylinders (B) and (D) from brace assembly (J).



Go on to Sheet 2

FIXED FIRE EXTINGUISHER CYLINDER REPLACEMENT (Sheet 2 of 4)

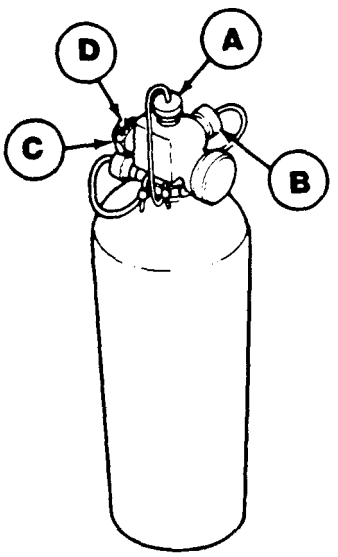


4. Holding nut (K) with 3/4 inch wrench, use socket and ratchet to remove screw (L), two washers (M), and lockwasher (N) securing clamp (P) to bracket (Q).
5. Swing clamp (P) open.
6. Remove cylinder (F) from bracket (Q).

INSPECTION

WARNING

Protective caps (A and B) must be installed whenever cylinder ports are exposed. Inadvertent cylinder discharge could cause injury to personnel or damage to equipment.



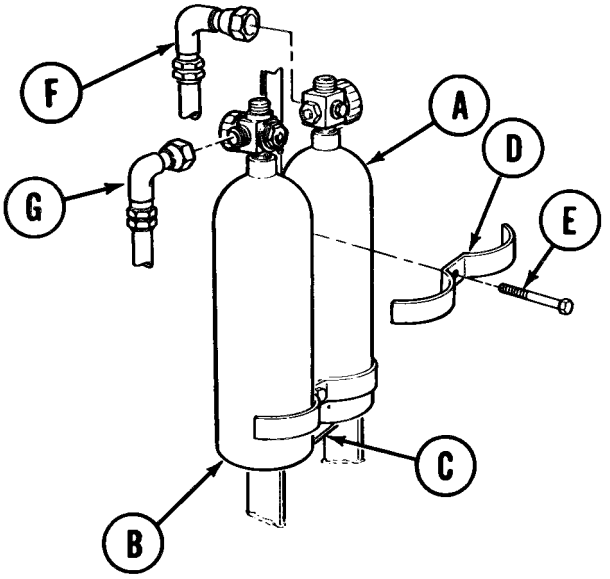
1. Install protective caps (A and B) on cylinder ports. If protective caps (A and B) are missing or damaged, replace caps.
2. Check hydrostatic test date (stamped on cylinder neck). If date exceeeds five years, replace cylinder
3. Subtract cylinder empty weight from full weight (marked on cylinder) and record difference. Weigh cylinder. If cylinder weight is more than ten percent of the recorded difference, notify support maintenance to charge cylinder.
4. Inspect cylinder for plastic safety release indicator (C). If damaged or missing, notify support maintenance.

Go on to Sheet 3

FIXED FIRE EXTINGUISHER CYLINDER REPLACEMENT (Sheet 3 of 4)

INSTALLATION:

1. Place cylinders (A) and (B) in position on brace assembly (C).
2. Using hands, secure two straps (D) to brace assembly (C) loosely with two screws (E).
3. Using 1-5/8 inch wrench, install elbow (F) on cylinder (A) and elbow (G) on cylinder (B).
4. Using socket, extension, and ratchet, tighten two screws (E).

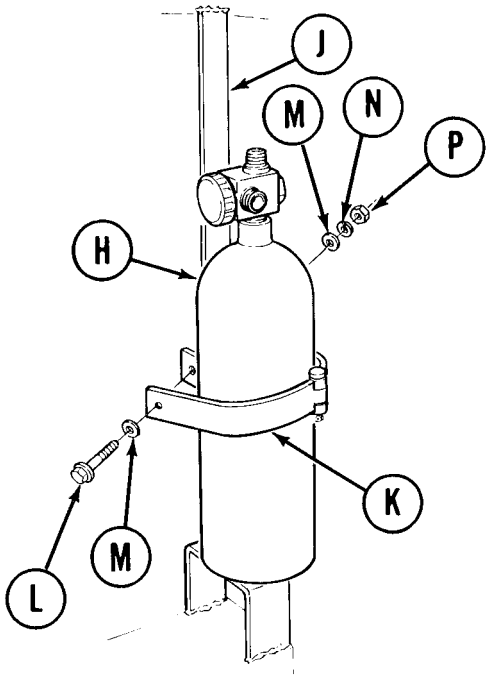


5. Using crowfoot and torque wrench, tighten elbows (F) and (G) to 105-130 lb-ft (142-176 N·m).

Go on to Sheet 4

TA169705

FIXED FIRE EXTINGUISHER CYLINDER REPLACEMENT (Sheet 4 of 4)

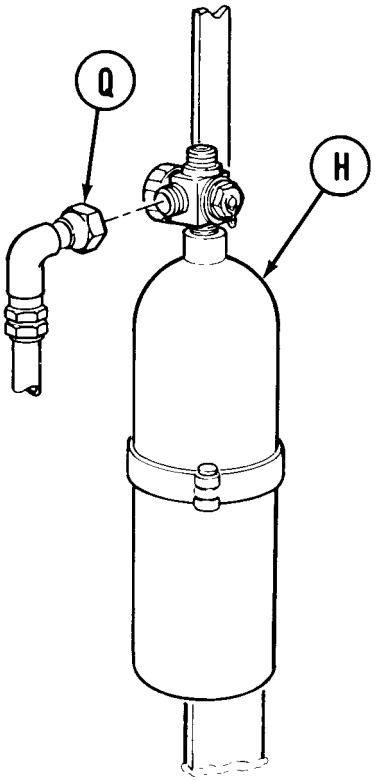


6. Place cylinder (H) in position on bracket (J).

7. Close clamp (K) securing cylinder (H) in place.

8. Using fingers, install screw (L), two washers (M), new lockwasher (N), and nut (P) securing clamp (K) to bracket (J).

9. Using 1-5/8 inch wrench, install elbow (Q) on cylinder (H).



10. Holding nut (P) with 3/4 inch wrench, use socket to tighten screw (L) until cylinder (H) is held firmly in place.

11. Using torque wrench and crowfoot wrench, tighten elbow (Q) to 105-130 lb-ft (142-176 N·m).

12. Install control valves (page 20-14).

End of Task

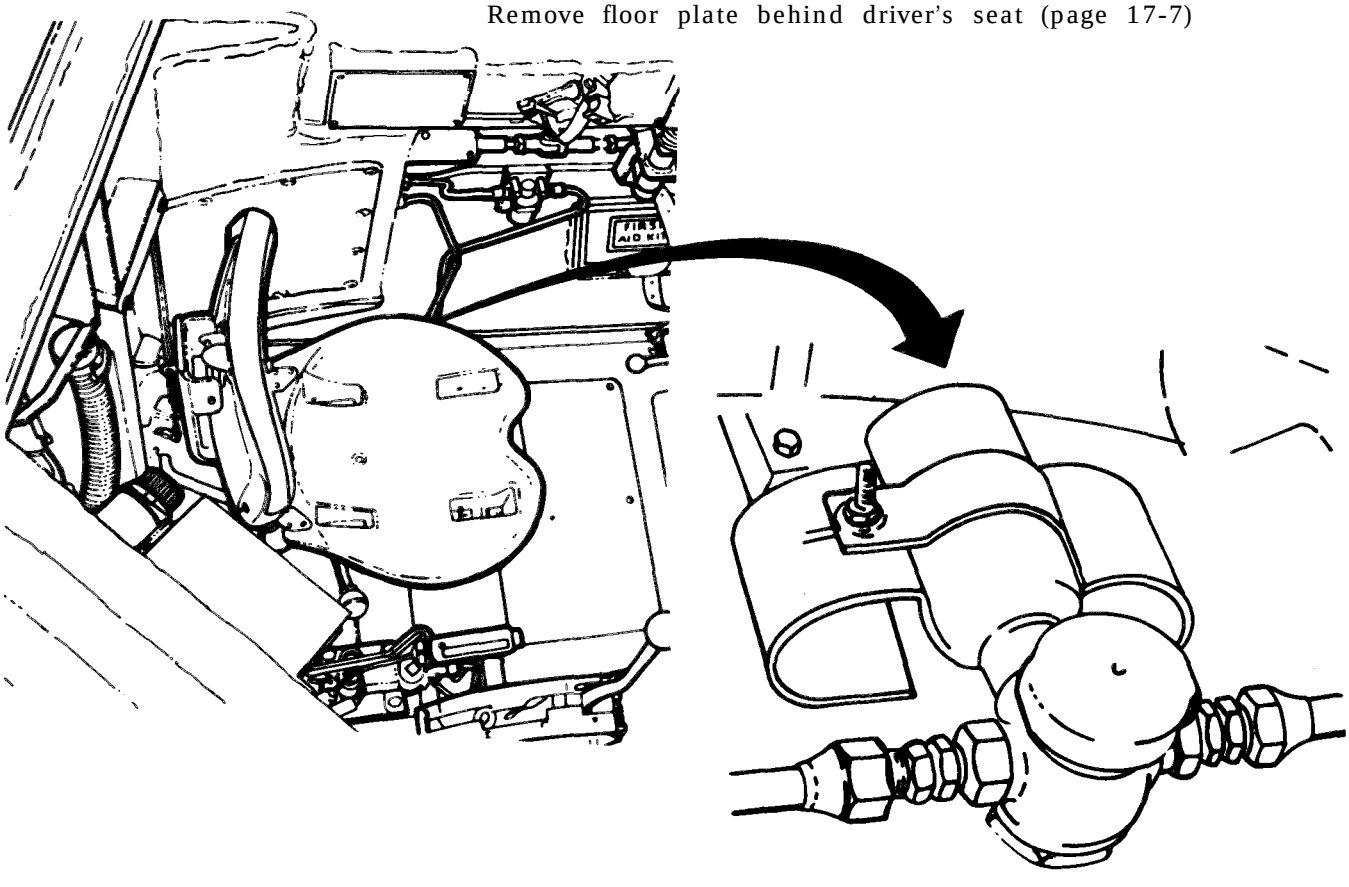
TA169706

FIXED FIRE EXTINGUISHER DELAY BOTTLE AND TUBES REPLACEMENT (Sheet 1 of 5)

PROCEDURE INDEX

TOOLS: l-1/4 in. open end wrench
1-1/16 in. open end wrench (2 required)
9/16 in. open end wrench
Torque wrench with 1/2 in. drive (0-175 lb-ft)
1-1/4 in. crowfoot wrench

PRELIMINARY PROCEDURE: Remove control valves (page 20-3)
Remove floor plate (page 17-10)
Remove floor plate behind driver's seat (page 17-7)

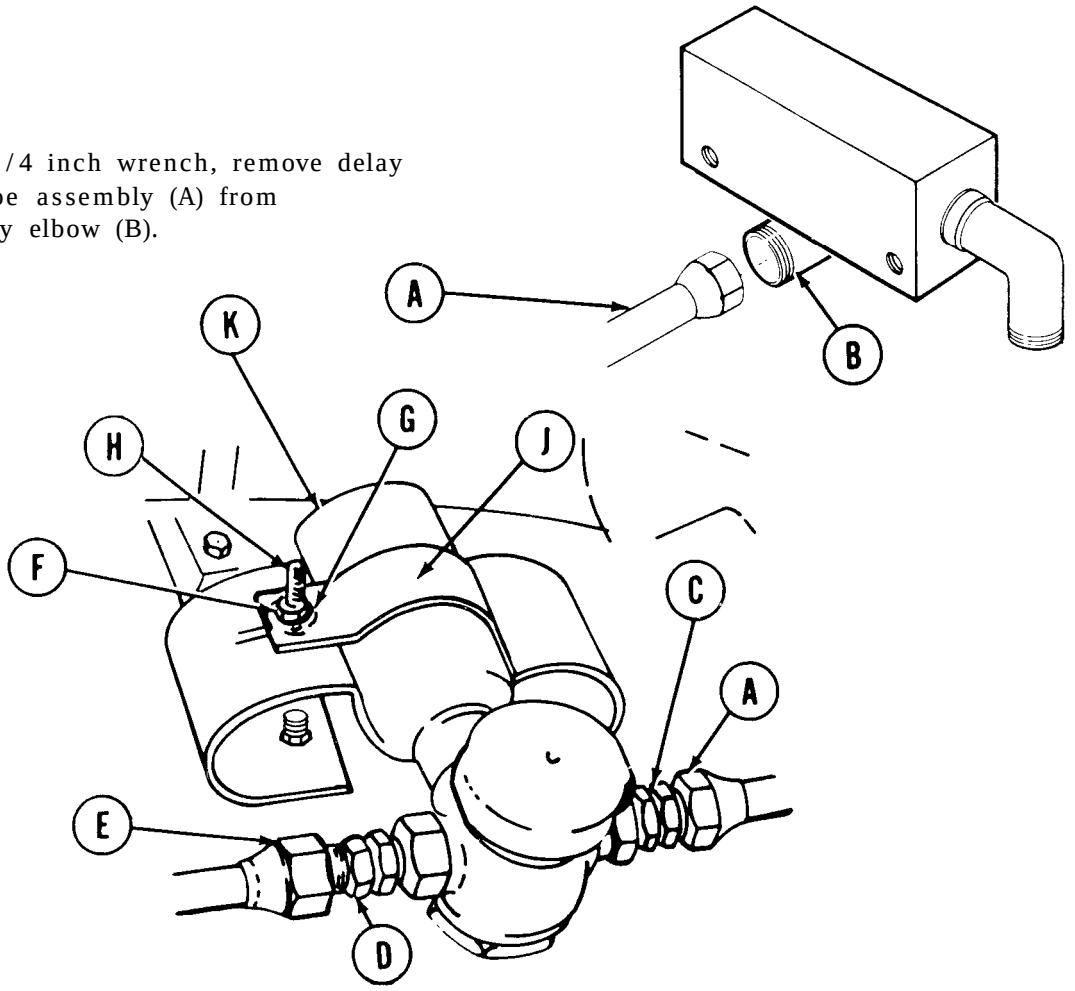


Go on to Sheet 2

FIXED FIRE EXTINGUISHER DELAY BOTTLE AND TUBES REPLACEMENT (Sheet 2 of 5)

REMOVAL:

1. Using 1-1/4 inch wrench, remove delay bottle tube assembly (A) from valve body elbow (B).



2. Holding adapter (C) with 1-1/16 inch wrench, use 1-1/4 inch wrench to remove tube assembly (A).

3. Holding adapter (D) with 1-1/16 inch wrench, use 1-1/4 inch wrench to remove rear tube assembly (E).

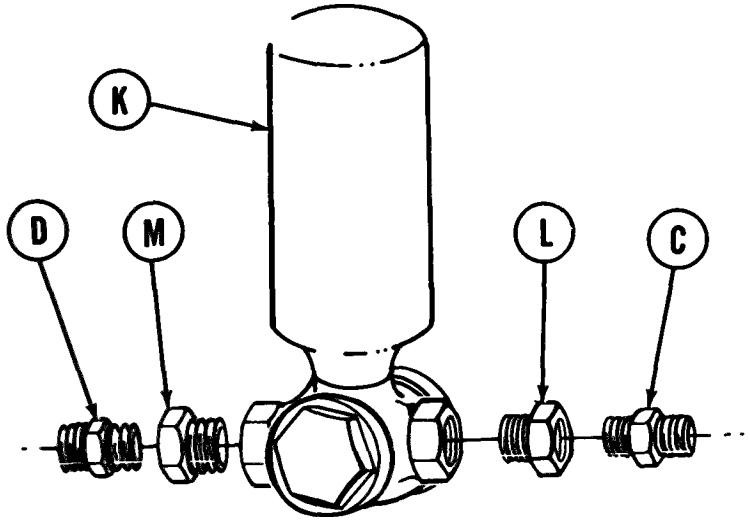
4. Using 9/16 inch wrench, remove nut (F) securing washer (G) and bolt (H) to strap (J).

5. Remove delay bottle (K) from strap (J).

Go on to Sheet 3

TA169708

FIXED FIRE EXTINGUISHER DELAY BOTTLE AND TUBES REPLACEMENT (Sheet 3 of 5)

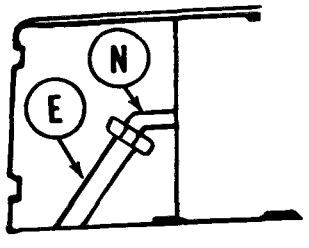


6. Holding bushing (L) with 1-1/16 inch wrench, use another 1-1/16 inch wrench to remove adapter (C).

7. Holding bushing (M) with 1-1/16 inch wrench, use another 1-1/16 inch wrench to remove adapter (D).

8. Using 1-1/16 inch wrench, remove two bushings (L) and (M) from delay bottle (K).

9. Using 1-1/4 inch wrench, remove rear tube assembly (E) from elbow (N).



10. Remove rear tube assembly (E) by pulling through from driver's compartment.

Go on to Sheet 4

TA169709

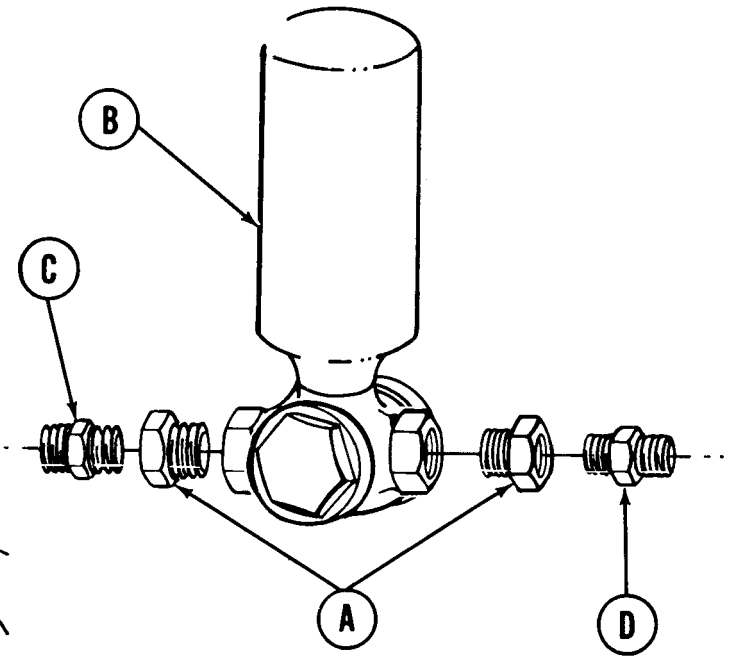
FIXED FIRE EXTINGUISHER DELAY BOTTLE AND TUBES REPLACEMENT (Sheet 4 of 5)

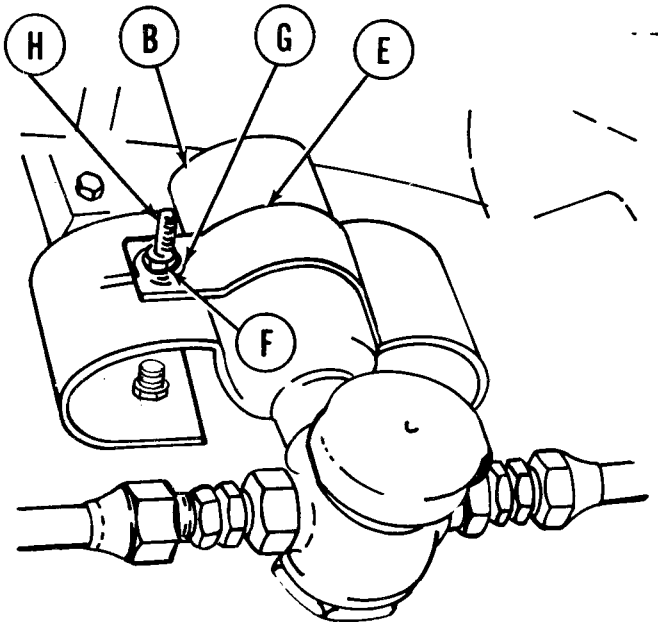
INSPECTION:

1. Check all parts for wear and damage.
2. Replace damaged of worn parts.

INSTALLATION:

1. Using 1-1/16 inch wrench, install two bushings (A) in delay bottle (B).
2. Using 1-1/1 6 inch wrench, install two adapters (C) and (D) in two bushings (A).





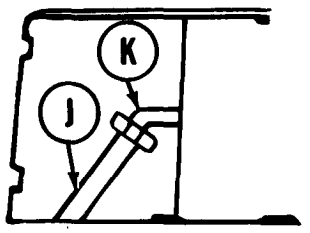
3. Place delay bottle (B) in position.
4. Place strap (E) in position on delay bottle (B).
5. Place nut (F), washer (G), and bolt (H) in place on strap (E).
6. Using 9/16 inch wrench, tighten nut (F).

Go on to Sheet 5

TA169710

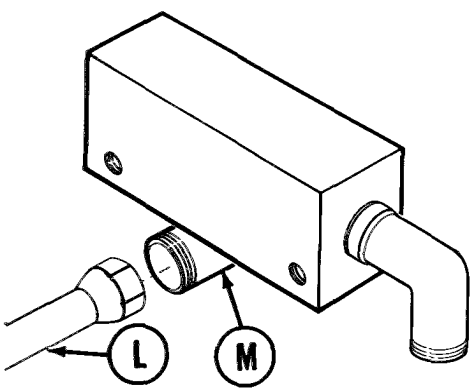
FIXED FIRE EXTINGUISHER DELAY BOTTLE AND TUBES REPLACEMENT (Sheet 5 of 5)

7. Place rear tube assembly (J) in position under subfloor by pushing through from driver's compartment.



8. Using 1-1/4 inch wrench, install rear tube assembly (J) on elbow (K).

9. Using torque wrench and 1-1/4 inch crowfoot, tighten nut on rear tube assembly (J) to 40-55 lb-ft (54.2-74.5 **N•m).**



10. Using 1-1/4 inch wrench, install tube (L) on valve body elbow (M).

11. Using torque wrench and 1-1/4 inch crowfoot, tighten nut on tube assembly (J) to 40-55 lb-ft (54.2-74.5 **N•m).**

12. Using 1-1/4 inch wrench, install two tubes (J) and (L) on adapters (C) and (D).

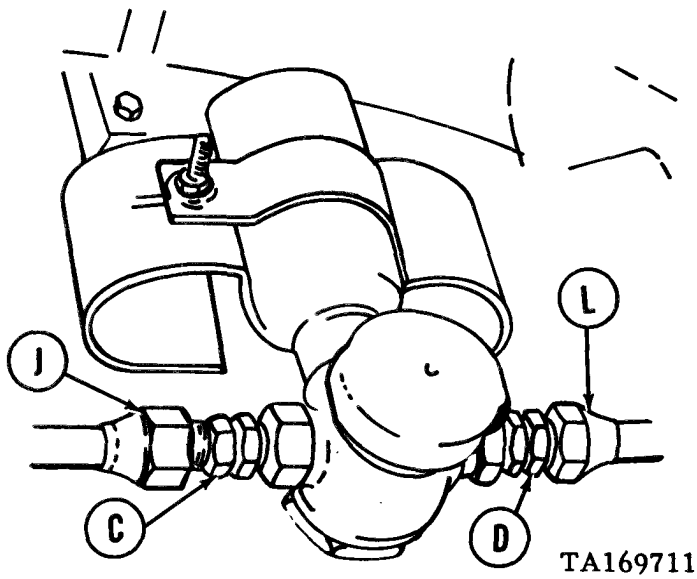
13. Using torque wrench and crowfoot wrench, tighten nuts on two tubes (J) and (L) to 40-55 lb-ft (54.2-74.5 **N•m).**

14. Install control Valves (page 20-14).

15. Install floor plate (page 17-10).

16. Install floor plate behind driver's seat (page 17-8).

End of Task



TA169711

FIXED FIRE EXTINGUISHER MOUNTING BRACKET REPAIR (Sheet 1 of 1)

TOOLS: Needle nose pliers

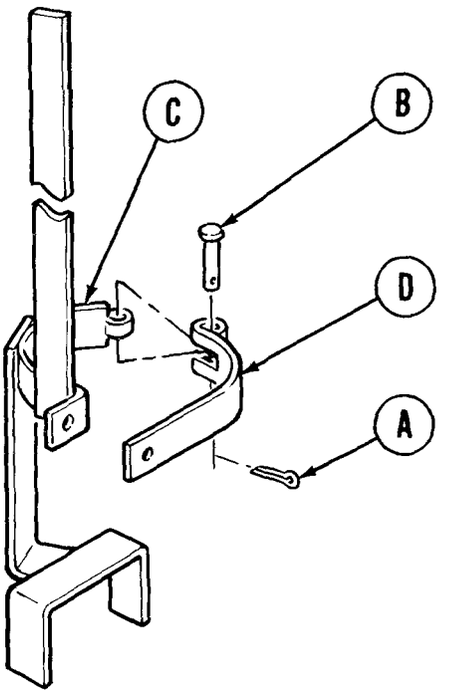
PRELIMINARY PROCEDURE: Remove right cylinder assembly (page 20-53)

DISASSEMBLY:

1. Using pliers, remove cotter pin (A) holding straight pin (B) in mounting bracket (C).
2. Using fingers, remove straight pin (B) securing clamp (D) to mounting bracket (C).
3. Remove clamp (D) from mounting bracket (C).

ASSEMBLY:

1. Place clamp (D) in position on mounting bracket (C).
2. Insert straight pin (B) through clamp (D) and mounting bracket (C).
3. Using pliers, install new cotter pin (A) through straight pin (B).
4. Install right cylinder assembly (page 20-55).



TA169712

End of Task

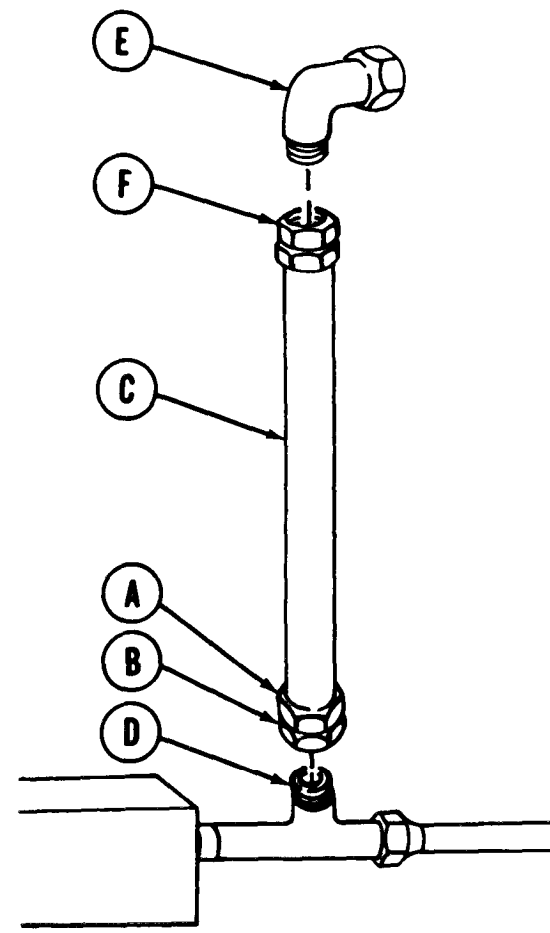
FIXED FIRE EXTINGUISHER 1ST SHOT CYLINDER HOSE ASSEMBLY REPLACEMENT (Sheet 1 of 2)

TOOLS:
1-1/4 in. open end wrench
l-1/2 in. open end wrench
8 in. pipe wrench
Torque wrench with 1/2 in. drive
10 in. extension with 1/2 in. drive
1-1/4 in. crowfoot wrench

PRELIMINARY PROCEDURE: Remove 1st shot cylinder (page 20-53)

REMOVAL:

1. Holding fitting (A) with 1-1/2 inch wrench, use 1-1/4 inch wrench on nut (B) to remove hose assembly (C) from tee (D).
2. Holding elbow (E) with pipe wrench, use 1-1/4 inch wrench on nut (F) to remove hose assembly (C) from elbow (E).



INSPECTION:

1. Check hose assembly (C) for cracks or wear.
2. Check threads on elbow (E) for wear.
3. Replace necessary parts.

Go on to Sheet 2

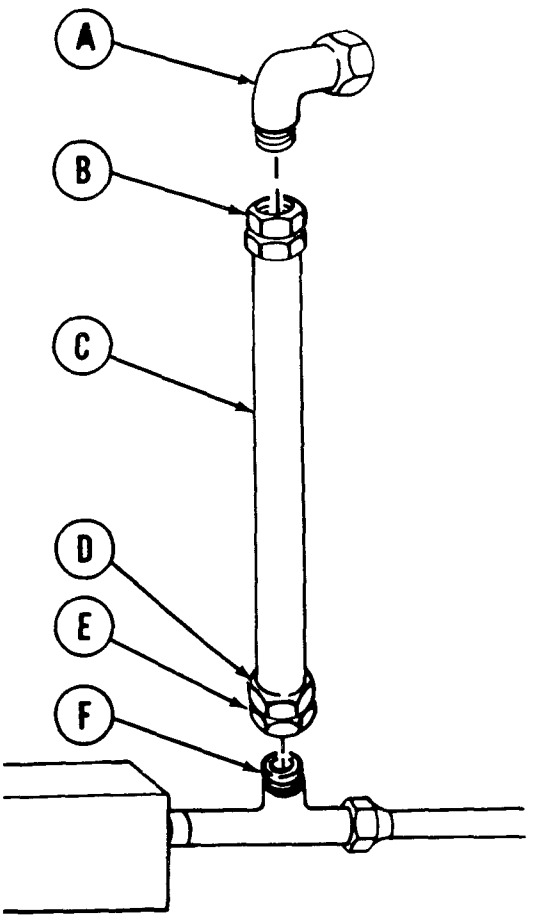
FIXED FIRE EXTINGUISHER 1ST SHOT CYLINDER HOSE ASSEMBLY REPLACEMENT (Sheet 2 of 2)

INSTALLATION:

1. Holding elbow (A) with pipe wrench, use 1-1/4 inch wrench on nut (B) to install hose assembly (C) on elbow (A). Using crowfoot wrench, extension and torque wrench, torque nut (B) to 35-50 lb-ft (47-68 N m).

2. Holding fitting (D) with 1-1/2 inch wrench, use 1-1/4 inch wrench on nut (E) to install hose assembly (C) on tee (F). Using crowfoot wrench, extension and torque wrench, torque nut (E) to 35-50 lb-ft (47-68 N•m).

3. Install 1st shot cylinder (page 20-55).



TA169714

End of task

FIXED FIRE EXTINGUISHER 2ND SHOT CYLINDERS HOSE AND TUBE REPLACEMENT (Sheet 1 of 5)

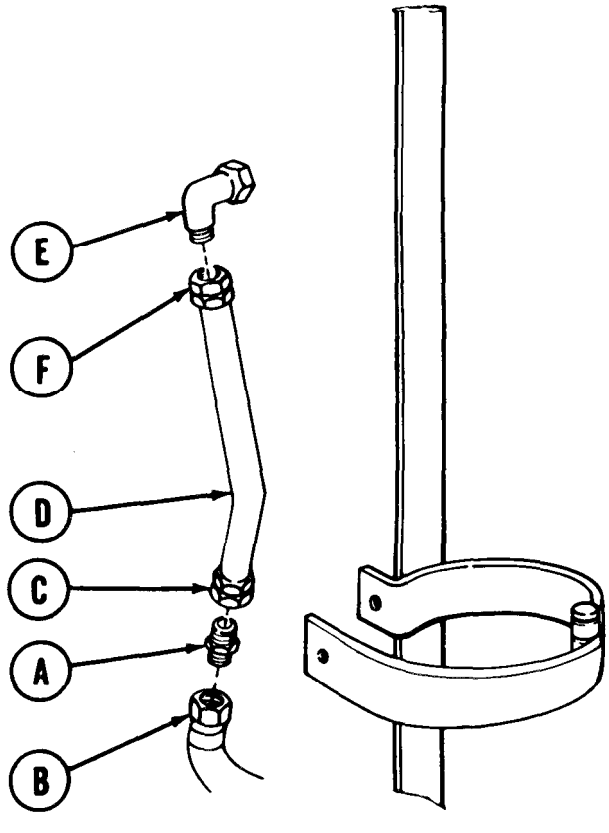
PROCEDURE INDEX

TOOLS: 8 in. pipe wrench
1-1/4 in. open end wrench
1-1/16 in. open end wrench
Ratchet with 1/2 in. drive
9/16 in. socket with 1/2 in. drive
Torque wrench with 1/2 in. drive (0-175 ft-lb)
1-1/4 in. crowfoot wrench
1-1/16 in. crowfoot wrench

PRELIMINARY PROCEDURE Remove 2nd shot cylinders (page 20-53)

REMOVAL:

1. Holding nipple (A) with 1-1/16 inch wrench, use 1-1/4 inch wrench to remove tube (B) from nipple (A).
2. Holding nut (C) with 1-1/4 inch wrench, use 1-1/16 inch wrench to remove nipple (A) from hose (D).
3. Holding elbow (E) with pipe wrench, use 1-1/4 inch wrench on nut (F) to remove tube (D) from elbow (E).



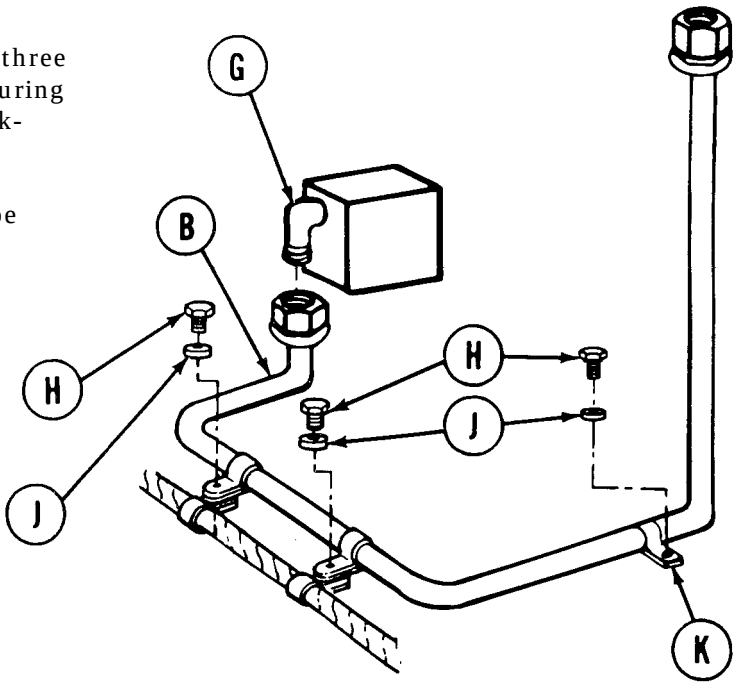
Cm on to Sheet 2

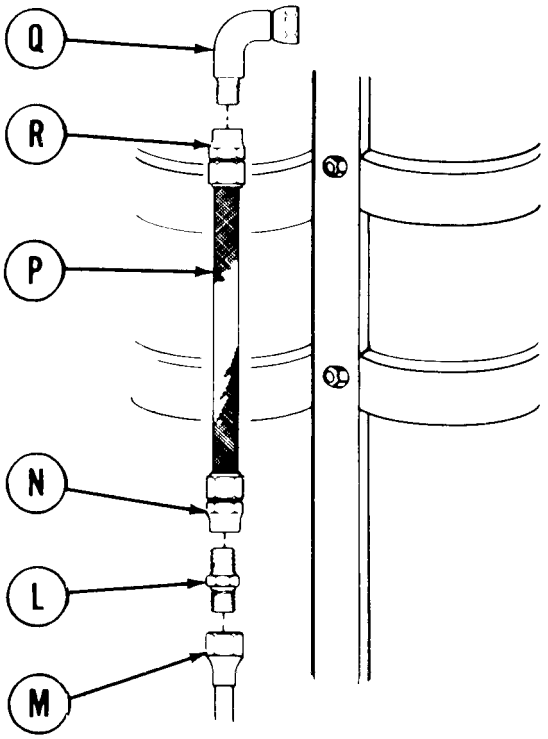
FIXED FIRE EXTINGUISHER 2ND SHOT CYLINDERS HOSE AND TUBE REPLACEMENT (Sheet 2 of 5)

4. Using 1-1/4 inch wrench, remove tube (B) from elbow (G).

5. Using socket and ratchet, remove three screws (H) and lockwashers (J) securing five clamps (K) to hull. Throw lockwashers (J) away.

6. Remove three clamps (K) from tube (B).





7. Holding nipple (L) with 1-1/16 inch wrench, use 1-1/4 inch wrench to remove tube (M) from nipple (L).

8. Holding nut (N) with 1-1/4 inch wrench, use 1-1/16 inch wrench to remove nipple (L) from hose (P).

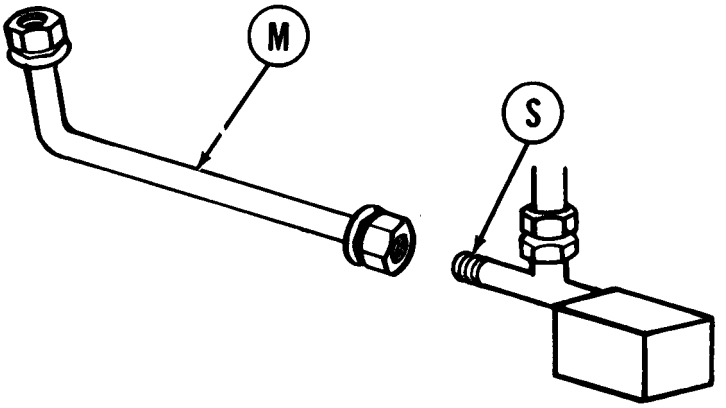
9. Holding elbow (Q) with pipe wrench, use 1-1/4 inch wrench on nut (R) to remove tube (P) from elbow (Q).

Go on to Sheet 3

TA169716

FIXED FIRE EXTINGUISHER 2ND SHOT CYLINDERS HOSE AND TUBE REPLACEMENT (Sheet 3 of 5)

10. Using 1-1/4 inch wrench, remove tube (M) from tee (S).

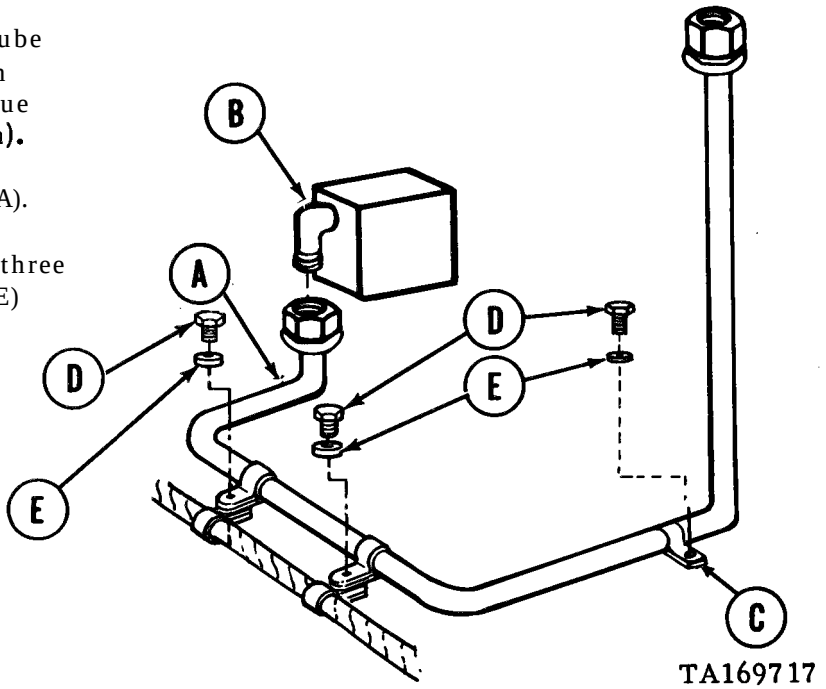


INSPECTION

1. Check all hoses, tubes, and connecting parts for damage or wear.
2. Replace necessary parts.

INSTALLATION:

1. Using 1-1/4 inch wrench, install tube (A) on elbow (B). Using 1-1/4 inch crowfoot and torque wrench, torque tube (A) to 35-50 lb-ft (47-68 N•m).
2. Install three clamps (C) on tube (A).
3. Using socket and ratchet, install three screws (D) and new lockwashers (E) securing five clamps (C) to hull.



TA169717

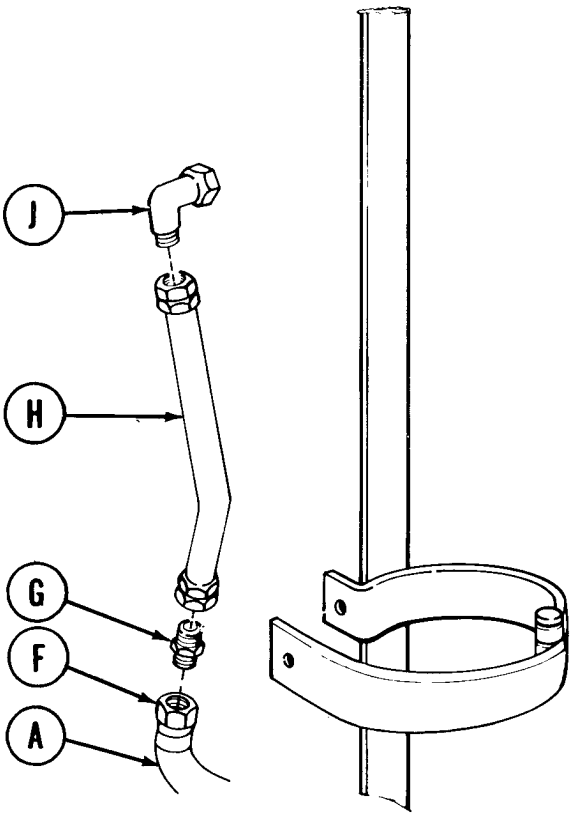
Go on to Sheet 4

FIXED FIRE EXTINGUISHER 2ND SHOT CYLINDERS HOSE AND TUBE REPLACEMENT (Sheet 4 of 5)

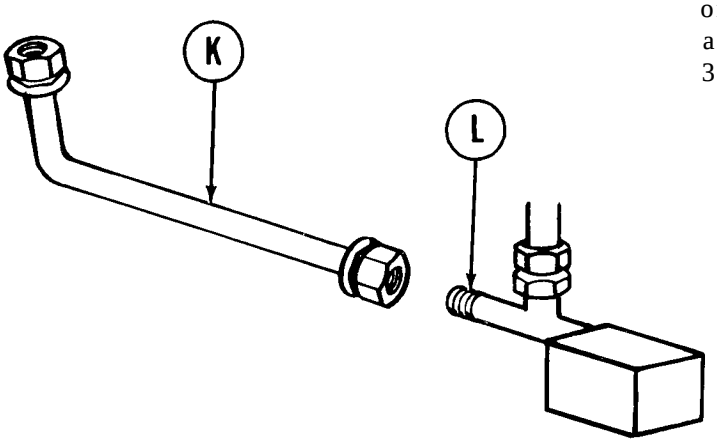
4. Holding tube nut (F) with 1-1/4 inch wrench, use 1-1/16 inch wrench to install nipple (G) in tube (A).

5. Holding nipple (G) with 1-1/16 inch wrench, use 1-1/4 inch wrench to install hose (H) on nipple (G). Using 1-1/4 inch crow foot and torque wrench, torque hose (H) to 35-50 lb-ft (47-68 N•m).

6. Holding elbow (J) with pipe wrench, use 1-1/4 inch wrench to install hose (H) on elbow (J). Using 1-1/4 inch crow foot and torque wrench, torque hose (H) to 35-50 lb-ft (47-68 N•m).



7. Using 1-1/4 inch wrench, install tube (K) on tee (L). Using 1-1/4 inch crowfoot and torque wrench, torque tube (K) to 35-50 lb-ft (47-68 N•m).



Go on to Sheet 5

TA169718

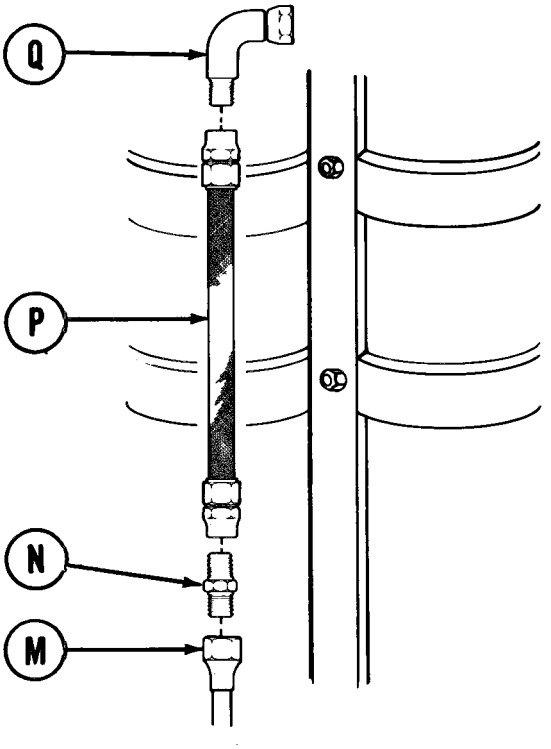
FIXED FIRE EXTINGUISHER 2ND SHOT CYLINDERS HOSE AND TUBE REPLACEMENT (Sheet 5 of 5)

8. Holding tube nut (M) with l-1/4 inch wrench, use 1-1/16 inch wrench to install nipple (N) on tube (M). Using 1-1/16 inch crowfoot and torque wrench, torque nipple (N) to 35-50 lb-ft (47-68 N•m).

9. Holding nipple (N) with 1-1/1 6 inch wrench, use 1-1/4 inch wrench to install hose (P) on nipple (N). Using 1-1/4 inch crow foot and torque wrench, torque hose (P) to 35-50 lb-ft (47-68 N•m).

10. Holding elbow (Q) with pipe wrench, use 1-1/4 inch wrench to install hose (P) on elbow (Q). Using 1-1/4 inch crow foot and torque wrench, torque hose (P) to 35-50 lb-ft (47-68 N•m).

11. Install 2nd shot cylinders (page 20-55).



End of Task

TA169719

FIXED FIRE EXTINGUISHER VALVE BODY REPLACEMENT (Sheet 1 of 3)

TOOLS: 1-1/4 in. open end wrench
8 in. adjustable wrench (2 required)
7/16 in. socket with 1/2 in. drive
Ratchet with 1/2 in. drive
Torque wrench with 1/2 in. drive (0-175 lb-ft)
Torque wrench with 3/8 in. drive (0-200 lb-in)

SPECIAL TOOLS: 7/16 in. crowfoot wrench (Item 37, Chapter 3, Section I)
1-1/4 in. crowfoot wrench (Item 46, Chapter 3, Section I)

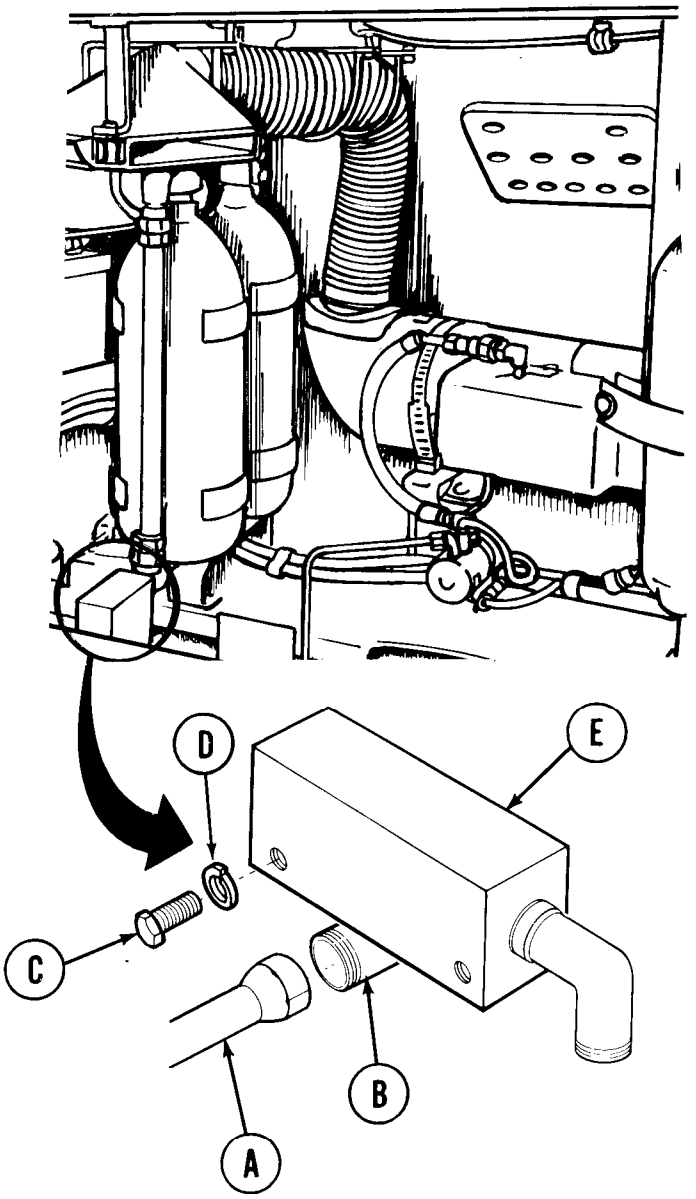
PRELIMINARY PROCEDURES: Remove 1st shot cylinder hose assembly (page 20-63)
Remove 2nd shot cylinders hose and tube assemblies (page 20-65)

REMOVAL:

1. Using 1-1/4 inch wrench, remove delay bottle tube assembly (A) from elbow (B).

2. Using socket and ratchet, remove two screws (C) and lockwashers (D) securing valve body (E) to hull.

3. Remove valve body (E) from vehicle.



Go on to Sheet 2

TA169720

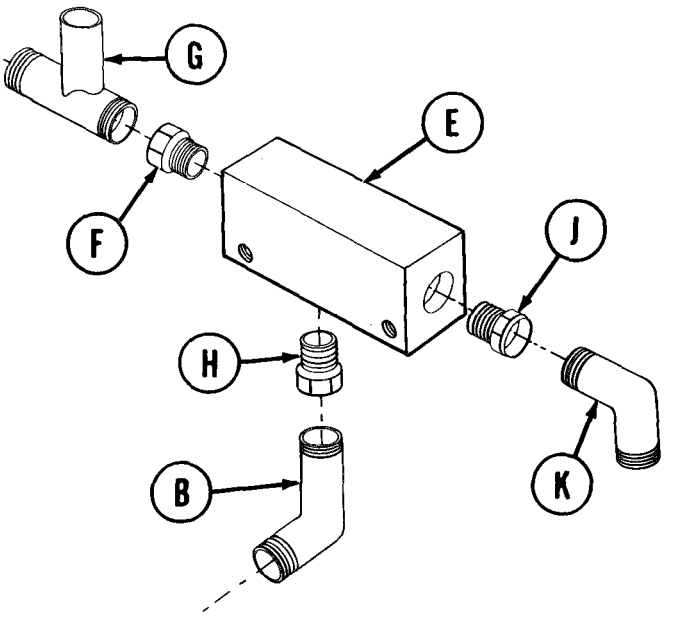
FIXED FIRE EXTINGUISHER VALVE BODY REPLACEMENT (Sheet 2 of 3)

4. Holding bushing (F) with one adjustable wrench, use other adjustable wrench to remove tee (G) from bushing (F).

5. Holding bushing (H) with one adjustable wrench use other adjustable wrench to remove elbow (B) from bushing (H).

6. Holding bushing (J) with one adjustable wrench, use other adjustable wrench to remove elbow (K) from bushing (J).

7. Using adjustable wrench, remove three bushings (F), (H), and (J) from valve body (E).



INSPECTION:

1. Check valve body, bushings, tee, and elbows for cracks and wear.

2. Replace worn or damaged parts.

Go on to Sheet 3

TA169721

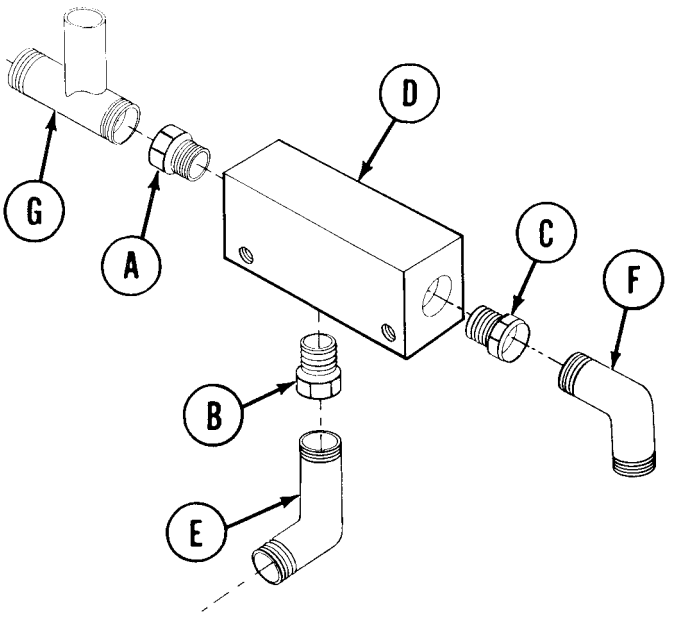
FIXED FIRE EXTINGUISHER VALVE BODY REPLACEMENT (Sheet 3 of 3)

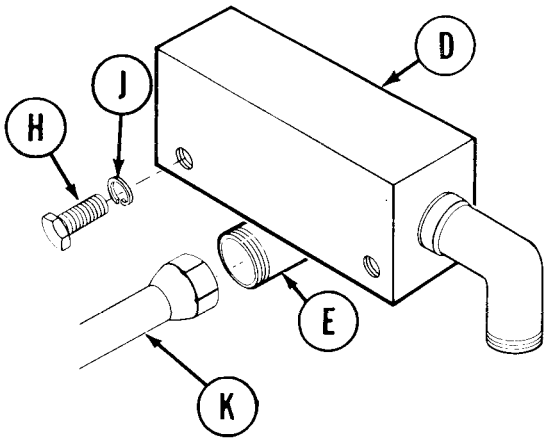
INSTALLATION:

1. Using adjustable wrench, install three bushings (A), (B), and (C) in valve body (D).

2. Using adjustable wrench, install two elbows (E) and (F) in two bushings (B) and (C).

3. Using adjustable wrench, install tee (G) in bushing (A).





4. Place valve body (D) in position on hull.

5. Install two screws (H) and new lockwashers (J) securing valve body (D) to hull. Using 7/16 inch crow foot and torque wrench, torque screws (H) to 120-180 lb-in (redo N

6. Install delay bottle tube assembly (K) to elbow (E). Using 1-1/4 inch crowfoot and torque wrench, torque tube assembly (K) to 35-50 lb-ft (47-68 N·m).

7. Install 1st shot cylinder hose assembly (page 20-64).

8. Install 2nd shot cylinders hose and tube assemblies (page 20-67).

End of Task

TA169722

UPPER DISCHARGE VALVE, TUBES, AND RELATED PARTS REPLACEMENT (FIXED FIRE EXTINGUISHER) (Sheet 1 of 6)

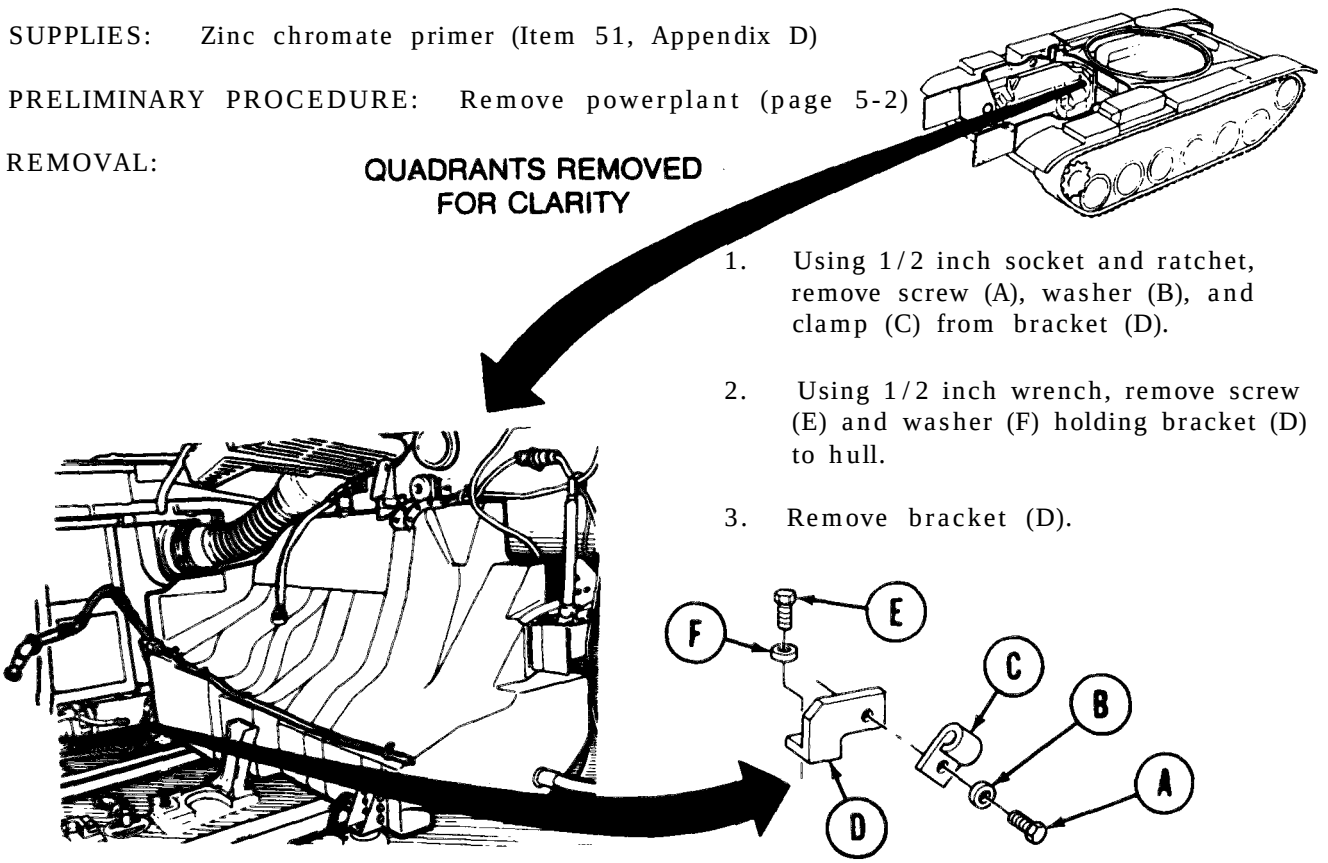
PROCEDURE INDEX

TOOLS:
- 1 in. combination box and open end wrench
- 7/8 in. combination box and open end wrench (2 required)
- 3/4 in. combination box and open end wrench
- 1/2 in. combination box and open end wrench
- Ratchet with 1/2 in. drive
- 1/2 in. socket with 1/2 in. drive
- 7/8 in. crowfoot with 1/2 in. drive
- 10 in. pipe wrench (2 required)
- 1-1/8 in. socket with 1/2 in. drive
- 15/16 in. socket with 1/2 in. drive
- 1-1/8 in. combination box and open end wrench
- 15/1 6 in. combination box and open end wrench
- Vise
- Torque wrench with 1/2 in. drive (0-175 lb-ft)
- 3/4 in. deep well socket with 1/2 in. drive

SUPPLIES: Zinc chromate primer (Item 51, Appendix D)

PRELIMINARY PROCEDURE: Remove powerplant (page 5-2)

REMOVAL:



1. Using 1/2 inch socket and ratchet, remove screw (A), washer (B), and clamp (C) from bracket (D).
2. Using 1/2 inch wrench, remove screw (E) and washer (F) holding bracket (D) to hull.
3. Remove bracket (D).

Go on to Sheet 2

UPPER DISCHARGE VALVE, TUBES, AND RELATED PARTS REPLACEMENT (FIXED FIRE EXTINGUISHER) (Sheet 2 of 6)

4. Using 3/4 inch wrench to hold adapter (G), use 7/8 inch wrench to remove connector on tube (H) from adapter (G). Lay tube (H) aside.

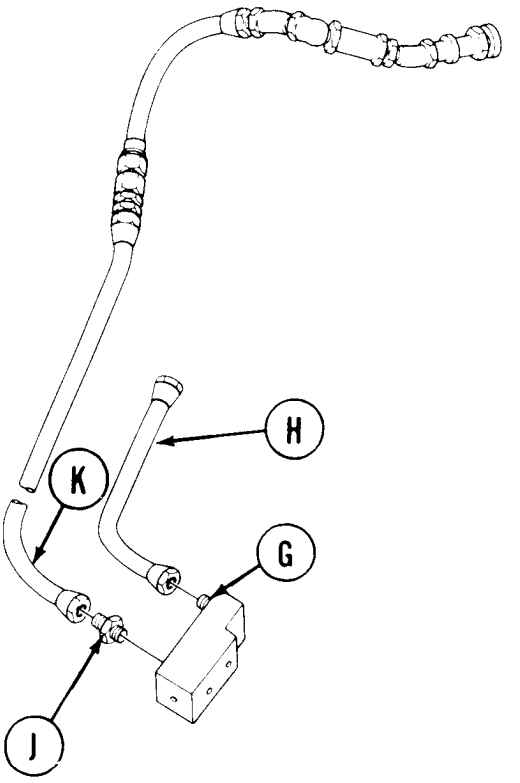
NOTE

Tag tube (K) during removal for proper installation.

5. Using 3/4 inch wrench to hold adapter (J), use 7/8 inch wrench to remove connec tor on tube (K) from adapter (J).

6. Using 3/4 inch wrench, remove adapter (J).

7. Remove assembled line (K) from vehicle to bench.



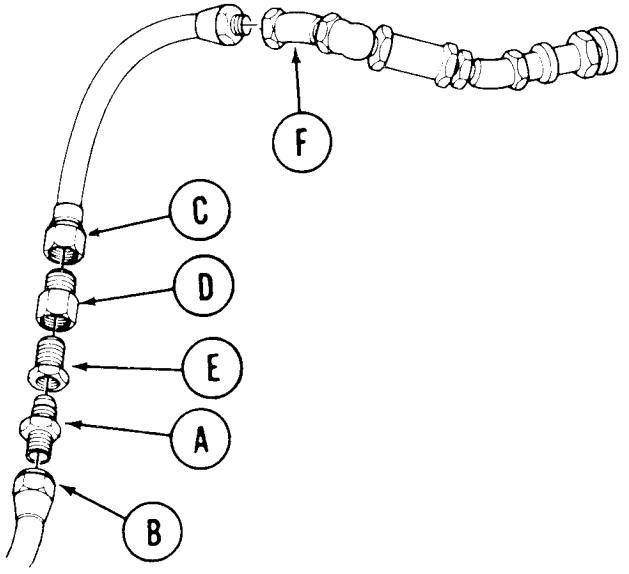
DISASSEMBLY:

NOTE

Position assembled line in vise as necessary for disassembly.

1. Using 3/4 inch wrench to hold adapter (A) and 7/8 inch wrench on tube (B), remove tube (B) from adapter (A).

2. Using 1 inch wrench to hold tube (C) and 1-1/8 inch wrench on bushing (D), remove bushing (D), bushing (E), and adapter (A) from tube (C).



3. Using 15/16 inch wrench to hold bushing (E), use 3/4 inch wrench to remove adapter (A) from bushing (E).

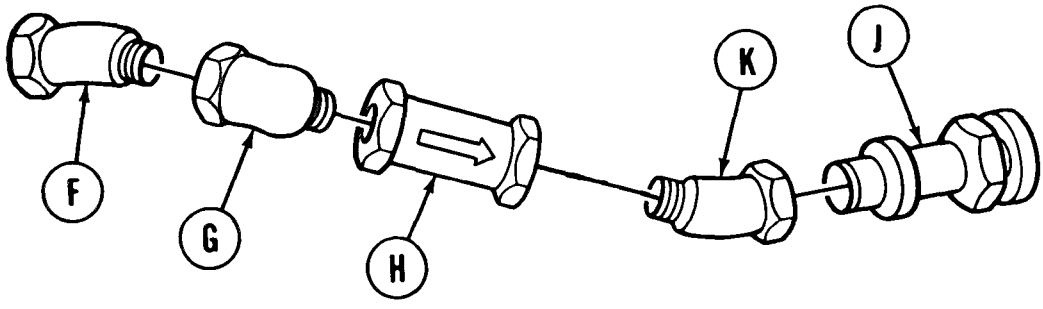
4. Using 1-1/8 inch wrench to hold adapter (D), use 15/16 inch wrench to remove bushing (E) from adapter (D).

5. Using pipe wrench to hold elbow (F) and 7/8 inch wrench on tube (C), remove tube (C) from elbow (F).

Go on to Sheet 3

TA169724

UPPER DISCHARGE VALVE, TUBES, AND RELATED PARTS REPLACEMENT (FIXED FIRE EXTINGUISHER) (Sheet 3 of 6)



6. Using one pipe wrench to hold elbow (G), use other pipe wrench to remove elbow (F) from elbow (G).

7. Using pipe wrench, remove elbow (G) from valve (H).

8. Using pipe wrench to hold elbow (K), use 1 inch wrench to remove self-sealing socket (J) from elbow (K).

9. Place valve (H) in a vise.

10. Using pipe wrench, remove elbow (K) from valve (H).

INSPECTION:

Make sure all confections and seating surfaces are free of nicks, burrs, or other defects that could cause leakage. Replace any damaged parts.

ASSEMBLY:

NOTE

Apply zinc chromate primer to all threads prior to installation of threaded tube/hose connections.

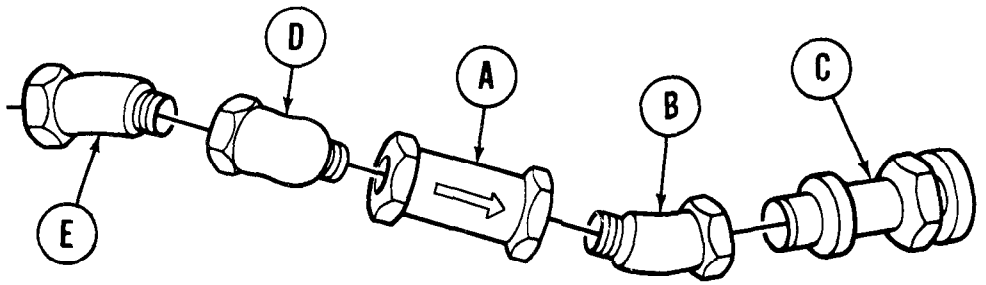
NOTE

Secure tubes and related parts in vise as necessary to accomplish assembly.

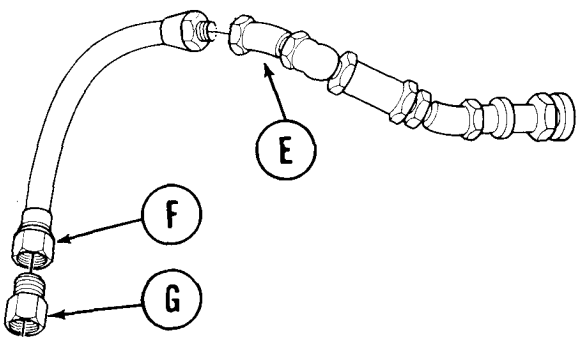
Go on to Sheet 4

TA169725

UPPER DISCHARGE VALVE, TUBES, AND RELATED PARTS REPLACEMENT (FIXED FIRE EXTINGUISHER) (Sheet 4 of 6)



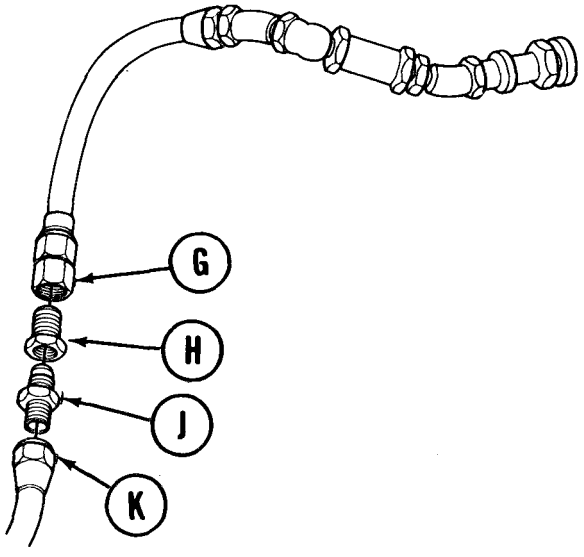
1. Install valve (A) in vise.
2. Using pipe wrench, install elbow (B) into valve (A), making sure that arrow on valve (A) is pointed towards elbow (B).
3. Using 1 inch wrench, install self-sealing socket (C) into elbow (B).
4. Using pipe wrench, install elbow (D) into valve (A).
5. Using pipe wrench, install elbow (E) into elbow (D).
6. Remove valve (A) and connecting parts from vise.
7. Using 7/8 inch wrench, install tube (F) into elbow (E). Using pipe wrench to hold elbow (E), use torque wrench and crowfoot wrench to tighten tube (F) to 40-50 lb-ft (54-75 N m).
8. Using 1 inch wrench to hold tube (F) and 1-1/8 inch wrench on bushing (G), install bushing (G) into tube (F). Using 1 inch wrench to hold tube (F), use torque wrench and 1-1/8 inch socket to tighten bushing (G) to 40-50 lb-ft (54-75 N m).



Go on to Sheet 5

TA169726

UPPER DISCHARGE VALVE, TUBES, AND RELATED PARTS REPLACEMENT (FIXED FIRE EXTINGUISHER) (Sheet 5 of 6)



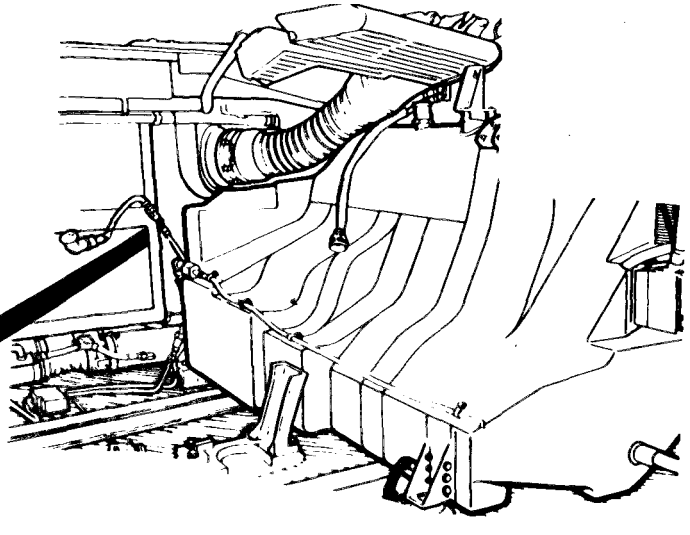
9. Using 1-1/8 inch wrench to hold bushing (G) and 15/16 inch wrench on bushing (H), install bushing (H) into bushing (G). Using 1-1/8 inch wrench to hold bushing (G), use torque wrench and 15/16 inch socket to tighten bushing (H) to 40-50 lb-ft (54-75 N m).

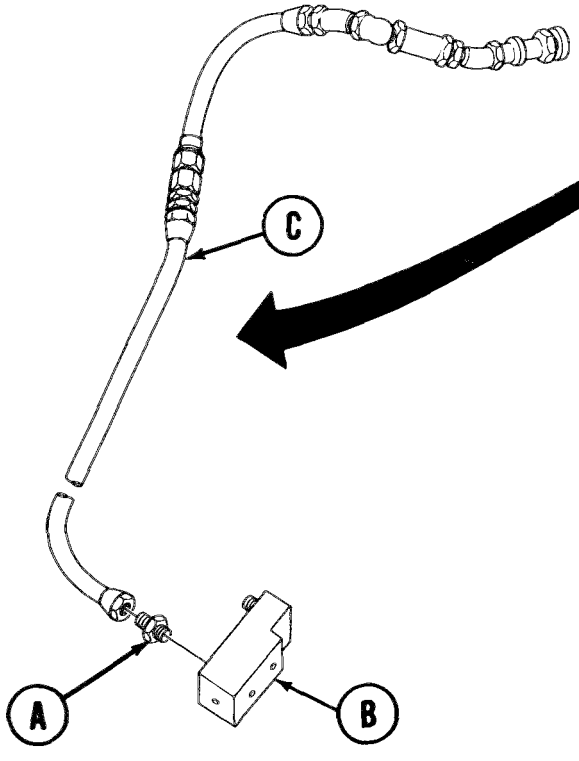
10. Using 15/16 inch wrench to hold bushing (H) and 3/4 inch wrench on adapter (J), install adapter (J) into bushing (H). Using 15/16 inch wrench to hold bushing (H), use torque wrench and 3/4 inch deep well socket to tighten adapter (J) to 40-50 lb-ft (54-75 N m).

11. Using 3/4 inch wrench to hold adapter (J) and 7/8 inch wrench on tube (K), install tube (K) on adapter (J). Do not tighten tube (K) on adapter (J).

INSTALLATION:

1. Position assembled line in installation location in vehicle.





2. Using 3/4 inch wrench, install adapter (A) into manifold (B). Using torque wrench and 3/4 inch deep well socket, tighten adapter (A) to 40-50 lb-ft (54-75 N m).

3. Using 7/8 inch wrench, install connector on tube (C) to adapter (A). Using 3/4 inch wrench to hold adapter (A), use torque wrench and 7/8 inch crowfoot to tighten tube (C) to 40-50 lb-ft (54-75 N m).

Go on to Sheet 6

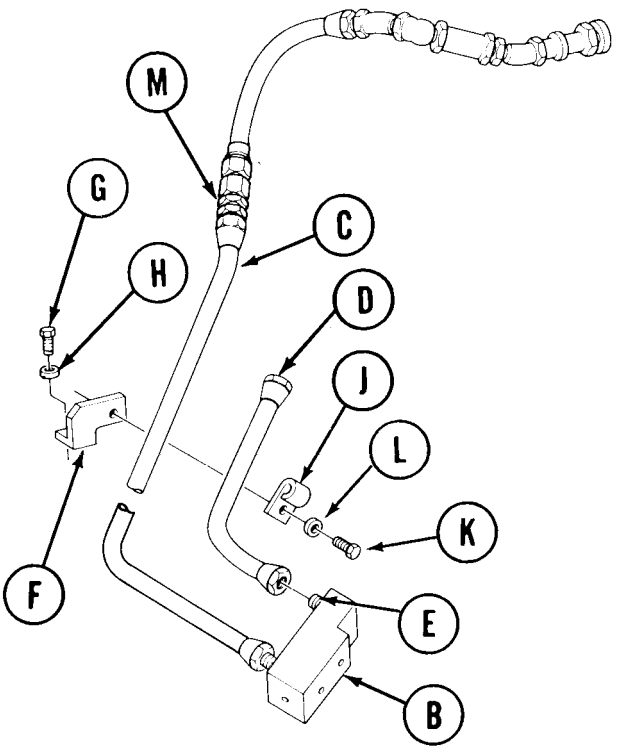
TA169727

UPPER DISCHARGE VALVE, TUBES, AND RELATED PARTS REPLACEMENT (FIXED FIRE EXTINGUISHER) (Sheet 6 of 6)

4. Using 7/8 inch wrench, install connector on tube (D) to adapter (E). Using 3/4 inch wrench to hold adapter (E), use torque wrench and 7/8 inch crowfoot to tighten tube (D) to 40-50 lb-ft (54-75 N m).

5. Using 1/2 inch wrench, install bracket (F) to hull of vehicle with screw (G) and washer (H).

6. Using 1/2 inch socket, secure tube (C) to bracket (F) with clamp (J), screw (K), and washer (L).



7. Position assembled line as needed.

8. Using 3/4 inch wrench to hold adapter (M), use torque wrench and 7/8 inch crowfoot to tighten tube (C) to 40-50 lb-ft (54-75 N m).

9. Install powerplant (page 5-14).

End of Task

TA169728

RIGHT DISCHARGE VALVE, TUBES, AND RELATED PARTS REPLACEMENT (FIXED FIRE EXTINGUISHER) (Sheet 1 of 5)

PROCEDURE INDEX

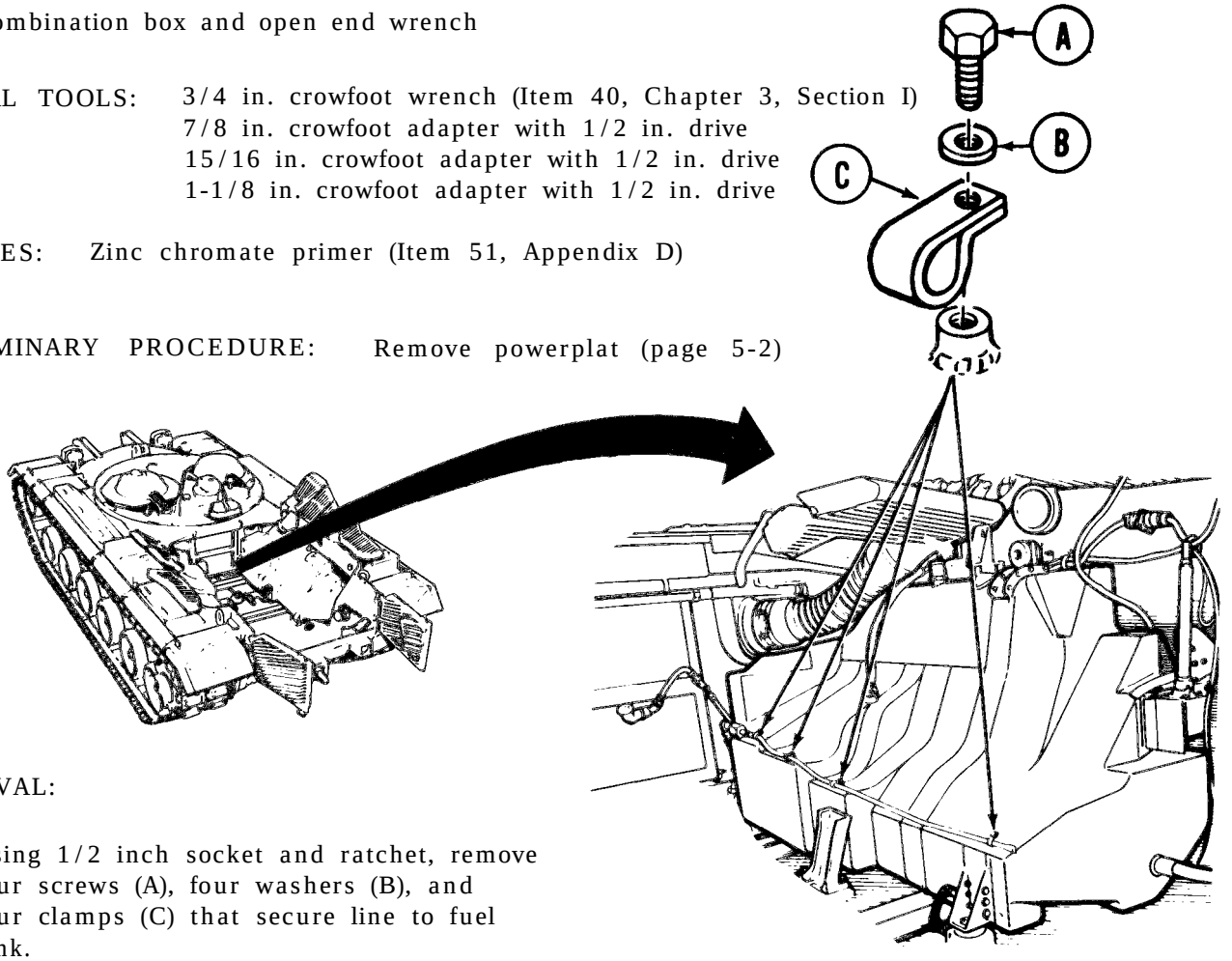
TOOLS:

3/4 in. combination box and open end wrench
7/8 in. combination box and open end wrench
1/2 in. socket with 1/2 in. drive
Ratchet with 1/2 in. drive
10 in. pipe wrench (2 each)
Bench vise
1 in. combination box and open end wrench
1-1/8 in. combination box and open end wrench
3/4 in. deep well socket
15/16 in. combination wrench
Torque wrench with 1/2 in. drive (0-175 lb-ft)

SPECIAL TOOLS: 3/4 in. crowfoot wrench (Item 40, Chapter 3, Section I)
7/8 in. crowfoot adapter with 1/2 in. drive
15/16 in. crowfoot adapter with 1/2 in. drive
1-1/8 in. crowfoot adapter with 1/2 in. drive

SUPPLIES: Zinc chromate primer (Item 51, Appendix D)

PRELIMINARY PROCEDURE: Remove powerplat (page 5-2)



REMOVAL:

1. Using 1/2 inch socket and ratchet, remove four screws (A), four washers (B), and four clamps (C) that secure line to fuel tank.

Go on to Sheet 2

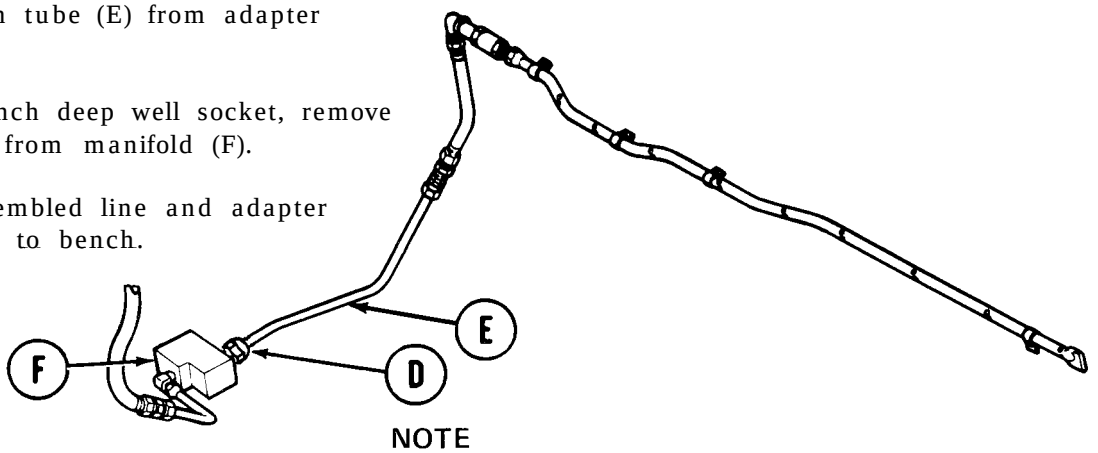
TA169729

RIGHT DISCHARGE VALVE, TUBES, AND RELATED PARTS REPLACEMENT (FIXED FIRE EXTINGUISHER) (Sheet 2 of 5)

NOTE

Tag adapter (D) during removal for proper installation.

2. Using 3/4 inch wrench to hold adapter (D), use 7/8 inch wrench to remove connector on tube (E) from adapter (D).
3. Using 3/4 inch deep well socket, remove adapter (D) from manifold (F).
4. Remove assembled line and adapter from vehicle to bench.

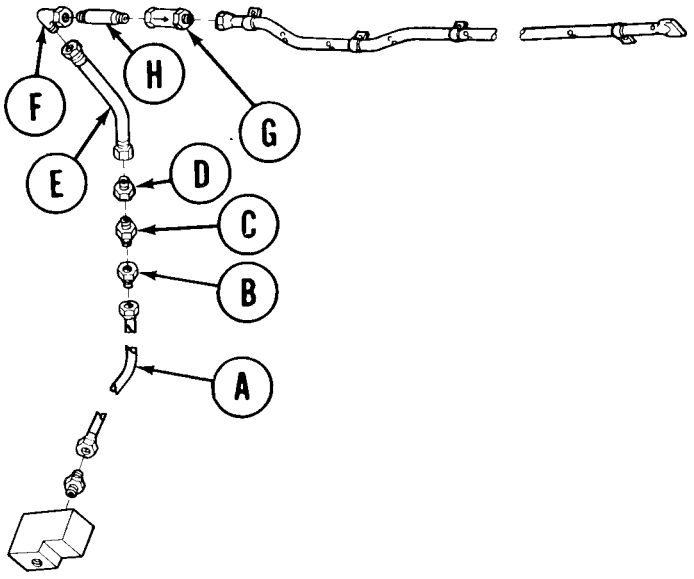


NOTE

Place assembled line in vise as necessary to accomplish disassembly.

DISASSEMBLY:

1. Using 7/8 inch wrench on tube (A) and 3/4 inch wrench on adapter (B), remove tube (A) from adapter (B).



2. Using 15/16 inch wrench on bushing (C) and 3/4 inch wrench on adapter (B), remove adapter (B) from bushing (C).
3. Using 1-1/8 inch wrench on adapter (D) and 15/16 inch wrench on bushing (C), remove bushing (C) from adapter (D).
4. Using 1 inch wrench on tube (E) and 1-1/8 inch wrench on adapter (D), remove adapter (D) from tube (E).
5. Position elbow (F) in vise and, using 7/8 inch wrench on tube (E), remove tube (E) from elbow (F).
6. Using pipe wrench, remove nipple (H) and valve (G) from elbow (F).

Go on to Sheet 3

TA169730

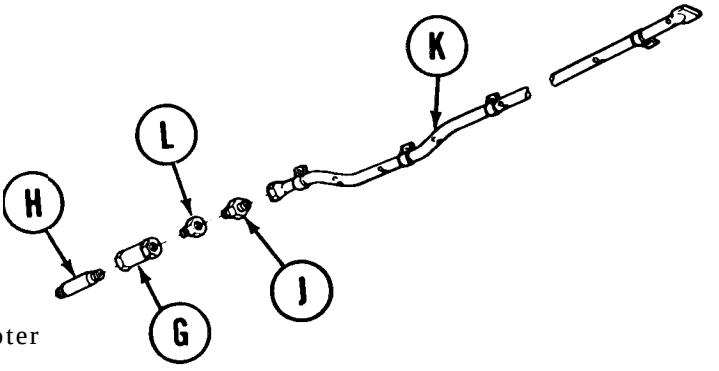
RIGHT DISCHARGE VALVE, TUBES, AND RELATED PARTS REPLACEMENT (FIXED FIRE EXTINGUISHER) (Sheet 3 of 5)

7. Position valve (G) in vise.

8. Using pipe wrench, remove nipple (H) from valve (G).

9. Using 3/4 inch wrench to hold adapter (J), use 7/8 inch wrench to remove tube (K) from adapter (J).

10. Using 15/16 inch wrench to hold bushing (L), use 3/4 inch wrench to remove adapter (J) from bushing (L).



11. Using 15/16 inch wrench, remove bushing (L) from valve (G).

12. Remove valve (G) from vise.

INSPECTION:

Make sure that all connections and seating surfaces are free of nicks, burrs, or other defects that could cause leakage. Replace any damaged parts.

NOTE

Apply zinc chromate primer to all threads prior to installation of threaded connections.

Go on to Sheet 4

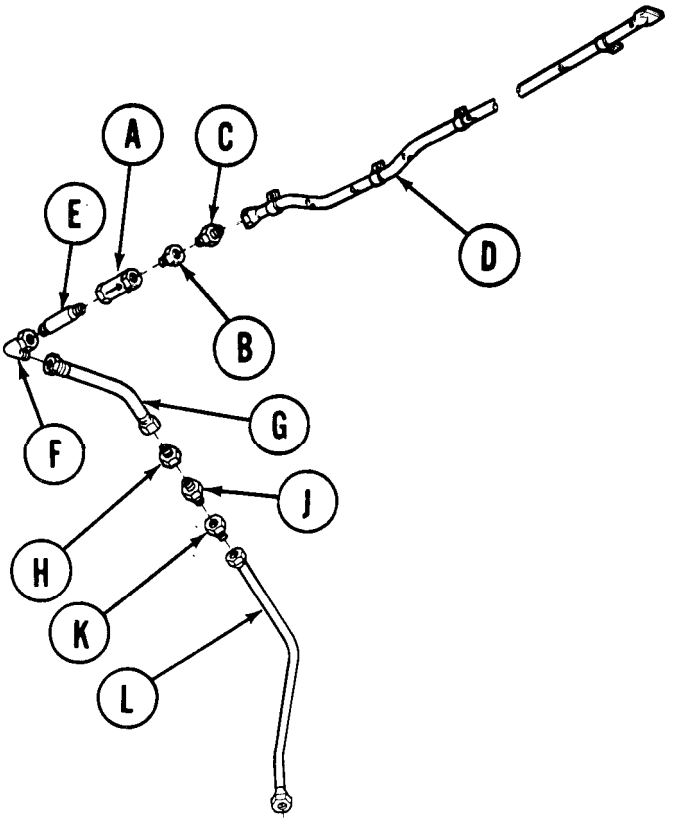
TA169731

RIGHT DISCHARGE VALVE, TUBES, AND RELATED PARTS REPLACEMENT (FIXED FIRE EXTINGUISHER) (Sheet 4 of 5)

ASSEMBLY:

NOTE

Position tubes, valves, and related parts in vise as necessary to accomplish assembly.



1. Using vise, secure new valve (A).
2. Using 15/16 inch wrench, install bushing (B) into valve (A), making sure that arrow on valve (A) is pointing toward bushing (B).
3. Using 3/4 inch wrench, install adapter (C) into bushing (B).
4. Using torque wrench and 3/4 inch crowfoot, tighten adapter (C) to 45-50 lb-ft (61-68 N•m).
5. Using 7/8 inch wrench, install tube (D) onto adapter (C). Do not tighten at this time.
6. Using pipe wrench, install nipple (E) into valve (A).
7. Using pipe wrench, install elbow (F) onto nipple (E).
8. Using 7/8 inch wrench, install tube (G) onto elbow (F).
9. Using torque wrench and 7/8 inch crowfoot, tighten tube (G) to 45-50 lb-ft (61-68 N•m).
10. Using 1 inch wrench on tube (G) and 1-1/8 inch wrench on adapter (H), install adapter (H) onto tube (G).
11. Using 1 inch wrench to hold tube (G), use torque wrench and 1-1/8 inch crowfoot to tighten adapter (H) to 45-50 lb-ft (61-68 N•m).
12. Using 1-1/8 inch wrench on adapter (H) and 15/16 inch wrench on bushing (J), install bushing (J) into adapter (H).
13. Using 1-1/8 inch wrench to hold adapter (H), use torque wrench and 15/16 inch crowfoot to tighten bushing (J) to 45-50 lb-ft (61-68 N•m).
14. Using 15/16 inch wrench on bushing (J) and 3/4 inch wrench on adapter (K), install adapter (K) into bushing (J).
15. Using 15/16 inch wrench to hold bushing (J), use torque wrench and 3/4 inch crowfoot to tighten adapter (K) to 45-50 lb-ft (61-68 N•m).
16. Using 3/4 inch wrench on adapter (K) and 7/8 inch wrench on tube (L), install tube (L) onto adapter (K). Do not tighten at this time.

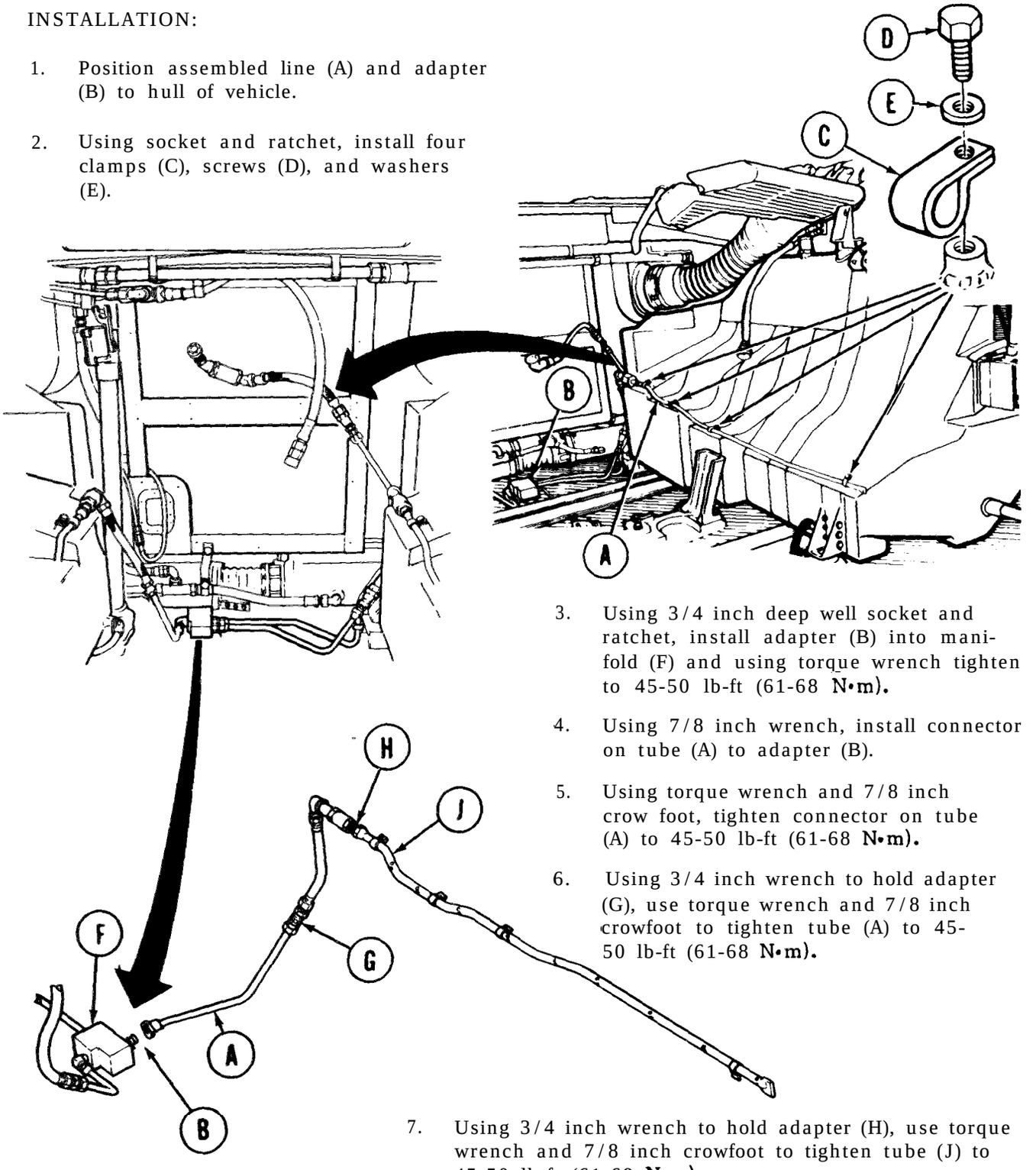
Go on to Sheet 5

TA169732

RIGHT DISCHARGE VALVE, TUBES, AND RELATED PARTS REPLACEMENT (FIXED FIRE EXTINGUISHER) (Sheet 5 of 5)

INSTALLATION:

1. Position assembled line (A) and adapter (B) to hull of vehicle.
2. Using socket and ratchet, install four clamps (C), screws (D), and washers (E).



3. Using 3/4 inch deep well socket and ratchet, install adapter (B) into manifold (F) and using torque wrench tighten to 45-50 lb-ft (61-68 N•m).
4. Using 7/8 inch wrench, install connector on tube (A) to adapter (B).
5. Using torque wrench and 7/8 inch crow foot, tighten connector on tube (A) to 45-50 lb-ft (61-68 N•m).
6. Using 3/4 inch wrench to hold adapter (G), use torque wrench and 7/8 inch crowfoot to tighten tube (A) to 45-50 lb-ft (61-68 N•m).
7. Using 3/4 inch wrench to hold adapter (H), use torque wrench and 7/8 inch crowfoot to tighten tube (J) to 45-50 lb-ft (61-68 N•m).
8. Install powerplant (page 5-14).

End of Task

TA169733

LEFT DISCHARGE VALVE, TUBES, AND RELATED PARTS REPLACEMENT (FIXED FIRE EXTINGUISHER) (Sheet 1 of 5)

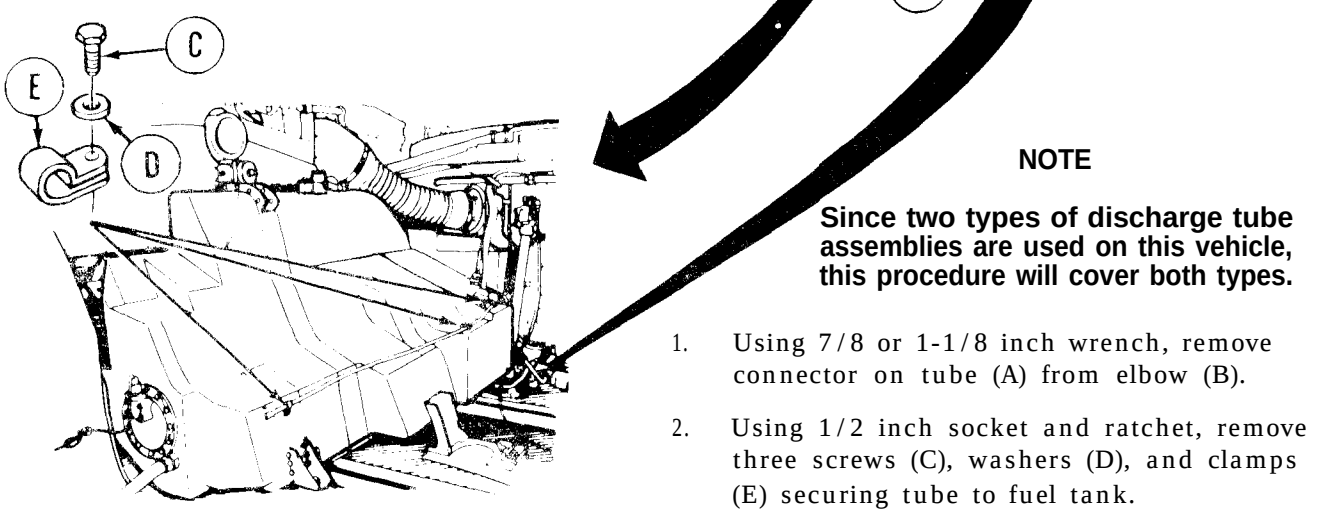
PROCEDURE INDEX

TOOLS: Torque wrench with 1/2 in. drive (0-175 lb-ft)
15/16 in. socket with 1/2 in. drive
3/4 in. socket with 1/2 in. drive
3/4 in. combination box and open end wrench
7/8 in. combination box and open end wrench (2 required)
10 in. pipe wrench
1/2 in. socket with 1/2 in. drive
Ratchet with 1/2 in. drive
Bench vise
1-1/8 in. combination box and open end wrench
15/16 in. combination box and open end wrench
4 in. flat-tip screwdriver
5 in. extension with 1/2 in. drive
1 in. combination box and open end wrench
7/8 in. crow foot with 1/2 in. drive
1-1/8 in. crow foot with 1/2 in. drive

SUPPLIES: Zinc chromate primer (Item 51, Appendix D)

PRELIMINARY PROCEDURE: Remove powerplant (page 5-2)

REMOVAL:



NOTE

Since two types of discharge tube assemblies are used on this vehicle, this procedure will cover both types.

1. Using 7/8 or 1-1/8 inch wrench, remove connector on tube (A) from elbow (B).
2. Using 1/2 inch socket and ratchet, remove three screws (C), washers (D), and clamps (E) securing tube to fuel tank.

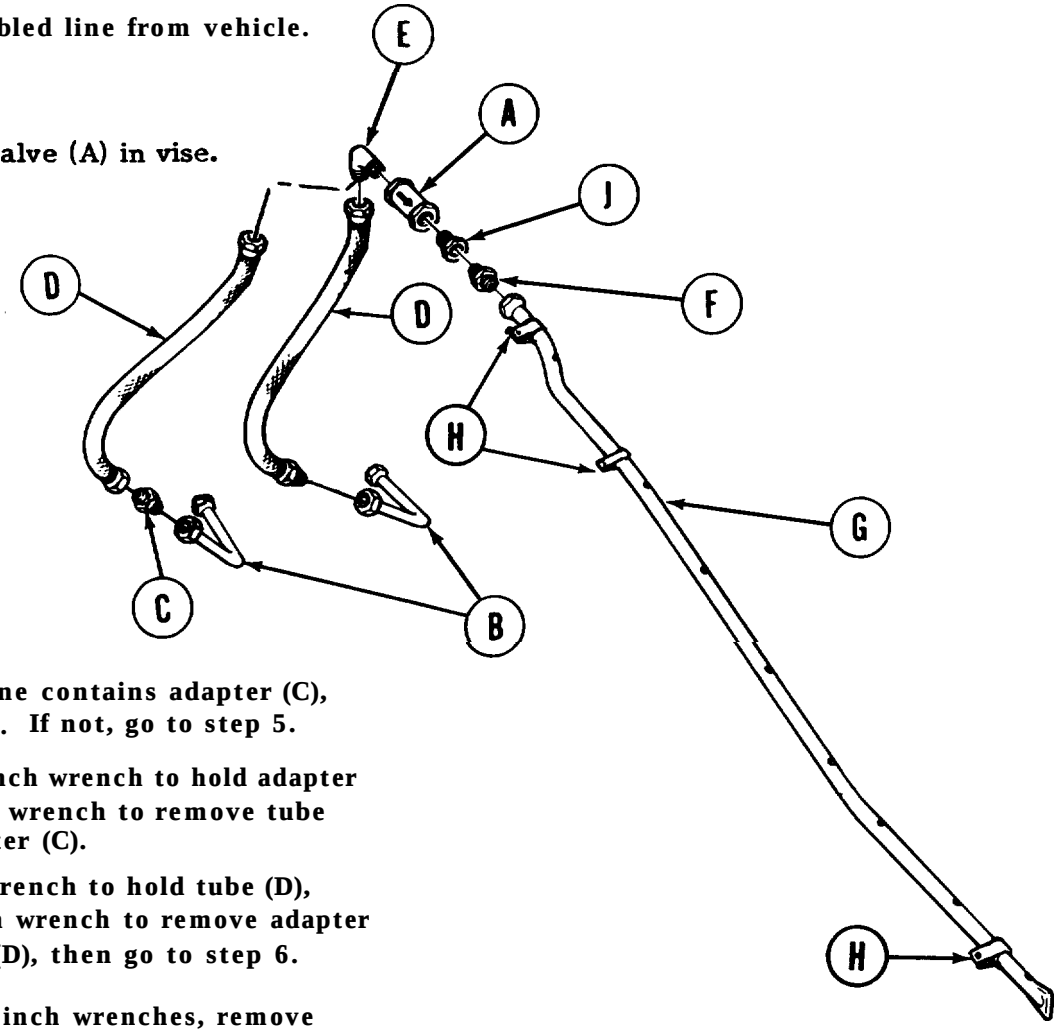
Go on to Sheet 2

LEFT DISCHARGE **VALVE, TUBES,** ANDRELATEDPARTS REPLACEMENT
(FIXED FIRE EXTINGUISHER) (Sheet 2 **of 5)**

3. **Remove assembled line from vehicle.**

DISASSEMBLY:

1. Secure **check valve (A) in vise.**



2. **If assembled line contains adapter (C), go on to step 3. If not, go to step 5.**
3. **Using 15/1 6 inch wrench to hold adapter (C), use 1 inch wrench to remove tube (B) from adapter (C).**
4. **Using 1 inch wrench to hold tube (D), use 15/16 inch wrench to remove adapter (C) from tube (D), then go to step 6.**
5. **Using two 7/8 inch wrenches, remove tube (B) from tube (D).**
6. **Using 7/8 inch wrench, remove tube (D) from elbow (E).**
7. **Using pipe wrench, remove elbow (E) from check valve (A).**
8. **Using 3/4 inch wrench to hold adapter (F), use 7/8 inch wrench to remove tube (G) from adapter (F).**
9. **Using screwdriver, remove three clamps (H) from tube (G).**
10. **Using 15/1 6 inch wrench to hold bushing (J), use 3/4 inch wrench to remove adapter (F) from bushing (J).**
11. **Using 15/16 inch wrench, remove bushing (J) from check valve (A).**

Go on to Sheet 3

TA169735

LEFT DISCHARGE VALVE, TUBES, AND RELATED PARTS REPLACEMENT (FIXED FIRE EXTINGUISHER) (Sheet 3 of 5)

INSPECTION:

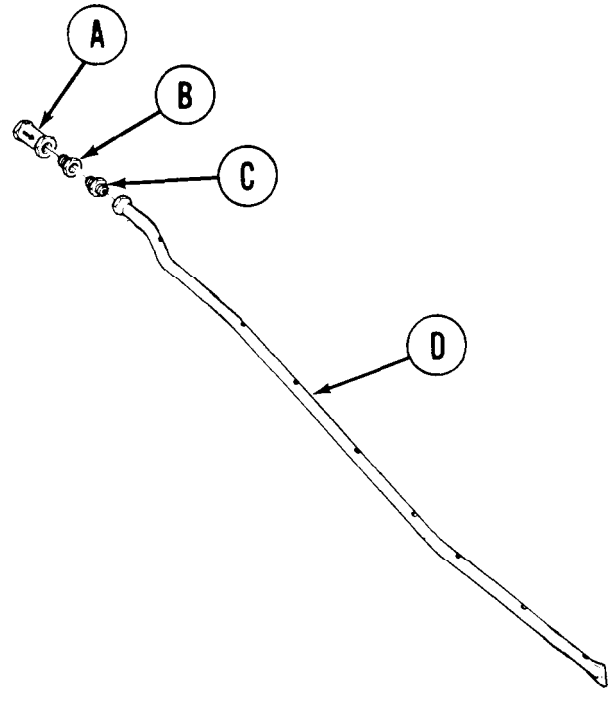
Make sure all connections and seating surfaces are free of nicks, burrs, or other defects that could cause leakage. Replace any damaged part.

NOTE

Apply zinc chromate primer to all threads prior to installation of threaded tube/hose connectors.

ASSEMBLY:

1. Secure check valve (A) in vise.
2. Using 15/16 inch wrench, install bushing (B) into free flow end of check valve (A). Using 15/16 inch socket, ratchet, and torque wrench, tighten bushing (B) to 40-50 lb-ft (54-75 N•m).
3. Using 3/4 inch wrench, install adapter (C) into bushing (B). Using 3/4 inch socket, ratchet, and torque wrench, tighten adapter (C) to 40-50 lb-ft (54-75 N•m).
4. Using 7/8 inch wrench, install tube (D) loosely onto adapter (C). Tube (D) must remain loose for positioning during installation.



Go on to Sheet 4

TA169736

LEFT DISCHARGE VALVE, TUBES, AND RELATED PARTS REPLACEMENT (FIXED FIRE EXTINGUISHER) (Sheet 4 of 5)

5. Using pipe wrench, install elbow (E) into check valve (A).

6. If line assembly contains adapter (F), go on to step 7. If not, go to step 9.

7. Using 15/16 inch wrench on adapter (F) and 1 inch wrench on tube (G), install adapter (F) into tube (G). Using 1 inch wrench to hold tube (G), use 15/16 inch socket, ratchet, and torque wrench to tighten adapter (F) to 40-50 lb-ft (54-75 N•m).

8. Using 15/16 inch wrench on adapter (F) and 1 inch wrench on tube (H), install tube (H) loosely onto adapter (F). Tube (H) must remain loose for positioning during installation; then go to step 11.

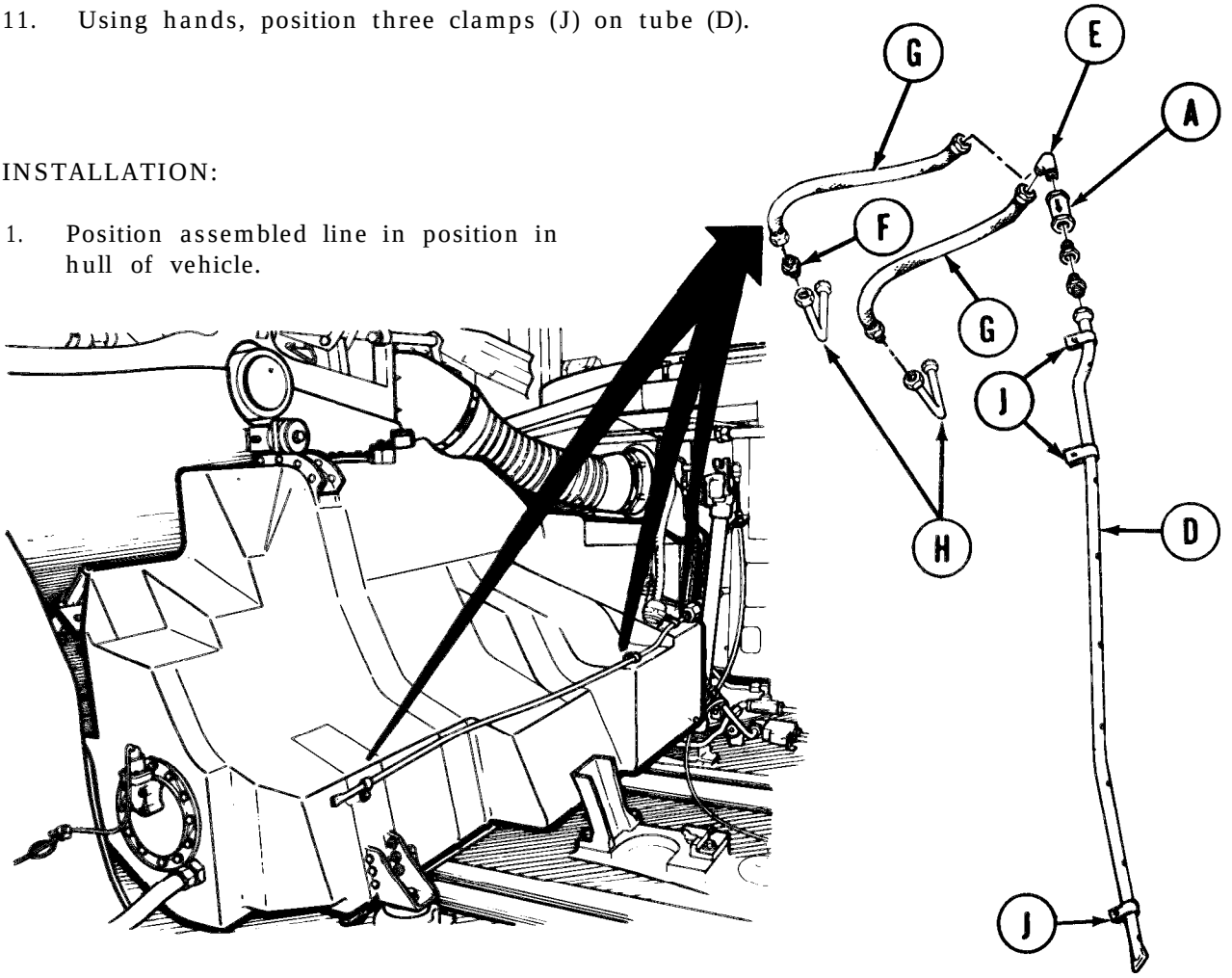
9. Using 7/8 inch wrench, install tube (G) onto elbow (E). Using 7/8 inch crowfoot and torque wrench, tighten tube (G) to 40-50 lb-ft (54-75 N•m).

10. Using two 7/8 inch wrenches, install tube (H) loosely onto tube (G). Tube (H) must remain loose for positioning during installation.

11. Using hands, position three clamps (J) on tube (D).

INSTALLATION:

1. Position assembled line in position in hull of vehicle.



Go on to Sheet 5

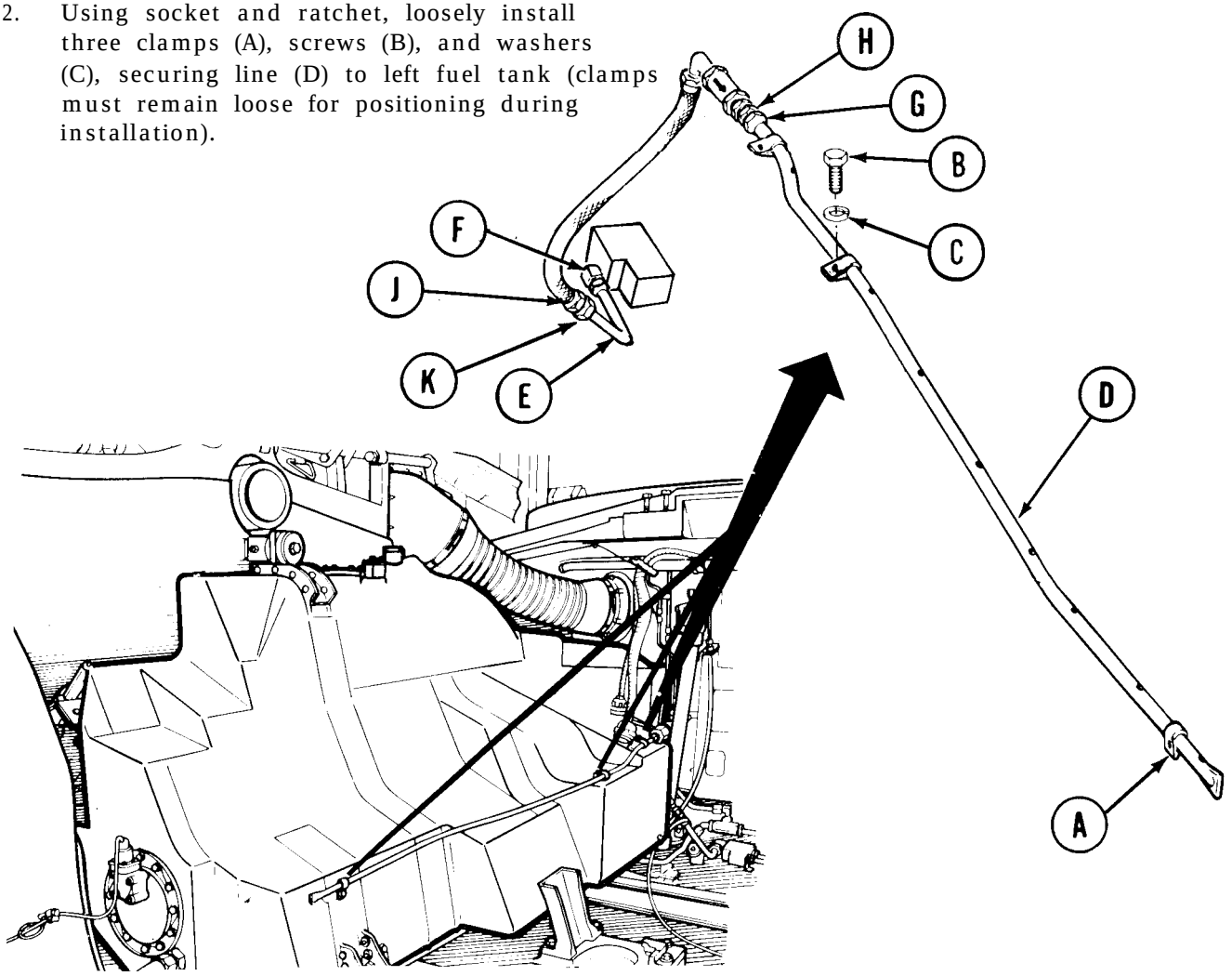
TA169737

LEFT DISCHARGE VALVE, TUBES, AND RELATED PARTS REPLACEMENT (FIXED FIRE EXTINGUISHER) (Sheet 5 of 5)

NOTE

When installing clamps in step 2, position clamps down.

2. Using socket and ratchet, loosely install three clamps (A), screws (B), and washers (C), securing line (D) to left fuel tank (clamps must remain loose for positioning during installation).



3. Using 7/8 or 1-1/8 inch wrench, install connector on tube (E) to elbow (F). Using 7/8 or 1-1/8 inch crowfoot, extension and torque wrench, tighten tube (E) to 40-50 lb-ft (54-75 N m).

4. Using socket and ratchet, tighten three screws (B) securing clamps (A) to fuel tank.

5. Holding adapter (G) with 3/4 inch wrench and using 7/8 inch crowfoot adapter and torque wrench, tighten connector (G) onto adapter (H) to 40-50 lb-ft (54-75 N m).

6. Using 7/8 or 1-1/8 inch wrench to hold connector (J), use torque wrench and 7/8 or 1-1/8 inch crowfoot to tighten connector (K) to 40-50 lb-ft (54-75 N m).

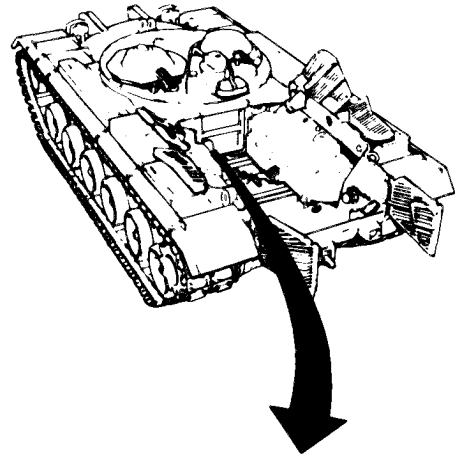
7. Install powerplant (page 5-14).

End of Task

ENGINE COMPARTMENT DISCHARGE MANIFOLD REPLACEMENT (FIXED FIRE EXTINGUISHER) (Sheet 1 of 4)

PROCEDURE INDEX

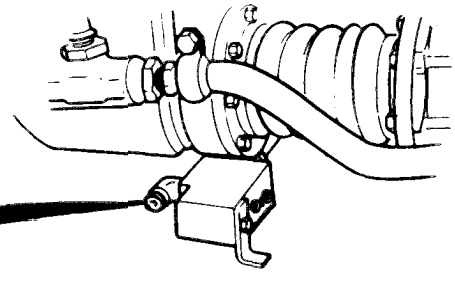
TOOLS: 1/2 in. box end wrench
3/4 in. deep style socket with 1/2 in. drive
3/4 in. combination box and open end wrench
7/8 in. combination box and open end wrench
Bench vise
5 in. extension with 1/2 in. drive
1-1/4 in. combination box and open end wrench
1-1/16 in. combination box and open end wrench
Torque wrench with 1/2 in. drive (0-175 lb-ft)
l-l/8 in. combination box and open end wrench
1-1/16 in. deep style socket with 1/2 in. drive
1-1/4 in. crowfoot wrench
7/8 in. crowfoot wrench
1-1/8 in. crowfoot wrench



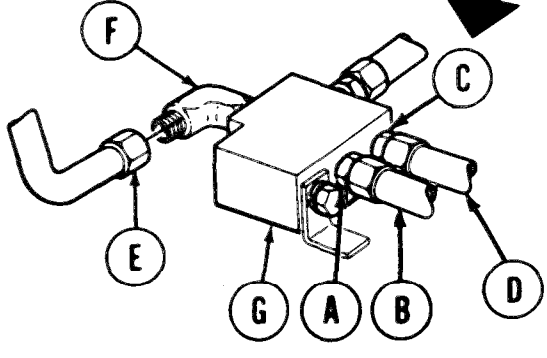
SUPPLIES: Zinc chromate primer (Item 51, Appendix D)

PRELIMINARY PROCEDURES:
Remove powerplant (page 5-2)
Remove crew compartment rear floor access plate (page 17-7)

REMOVAL:



1. Using 3/4 inch wrench to hold adapter (A), use 7/8 inch wrench and loosen connector on tube (B) from adapter (A).



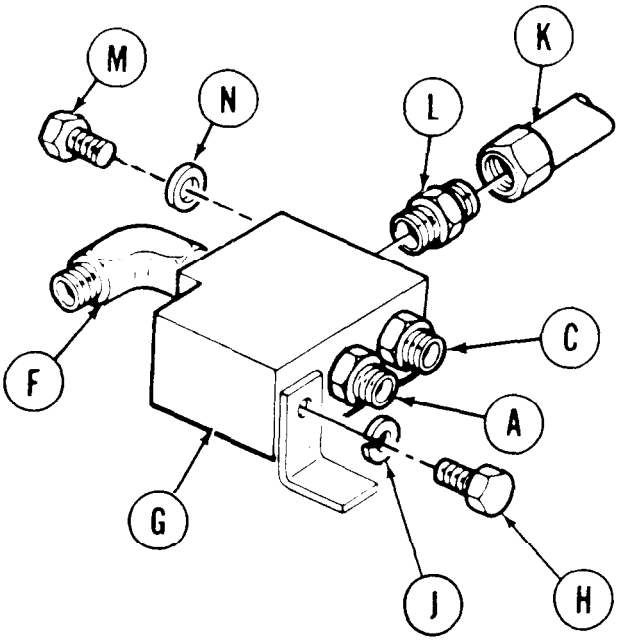
2. Using 3/4 inch wrench to hold adapter (C), use 7/8 inch wrench and loosen connector on tube (D) from adapter (C).

3. Using 1-1/8 inch wrench, remove connector (E) from elbow (F) on manifold (G).

Go on to Sheet 2

ENGINE COMPARTMENT DISCHARGE MANIFOLD REPLACEMENT (FIXED FIRE EXTINGUISHER) (Sheet 2 of 4)

4. Using 1/2 inch wrench, remove screw (H) and washer (J) from manifold (G).
5. Go to crew compartment for the following steps.
6. Locate manifold (G) and tube (K) through center subfloor access plate.
7. Using 1-1/16 inch wrench to hold adapter (L), use 1-1/4 inch wrench and loosen connector (K) from adapter (L).
8. Using 1/2 inch wrench, remove screw (M) and washer (N) from manifold (G).
9. Remove manifold (G) from vehicle.
10. Secure manifold (G) in vise.
11. Using 7/8 inch wrench, remove elbow (F) from manifold (G).
12. Using 3/4 inch wrench, remove adapters (A) and (C) from manifold (G).
13. Using 1-1/16 inch wrench, remove adapter (L) from manifold (G).



Go on to Sheet 3

TA169740

ENGINE COMPARTMENT DISCHARGE MANIFOLD REPLACEMENT (FIXED FIRE EXTINGUISHER) (Sheet 3 of 4)

INSPECTION:

Make sure that all connections and seating surfaces are free of nicks, burrs, or other defects that could cause leakage. Replace any damaged parts.

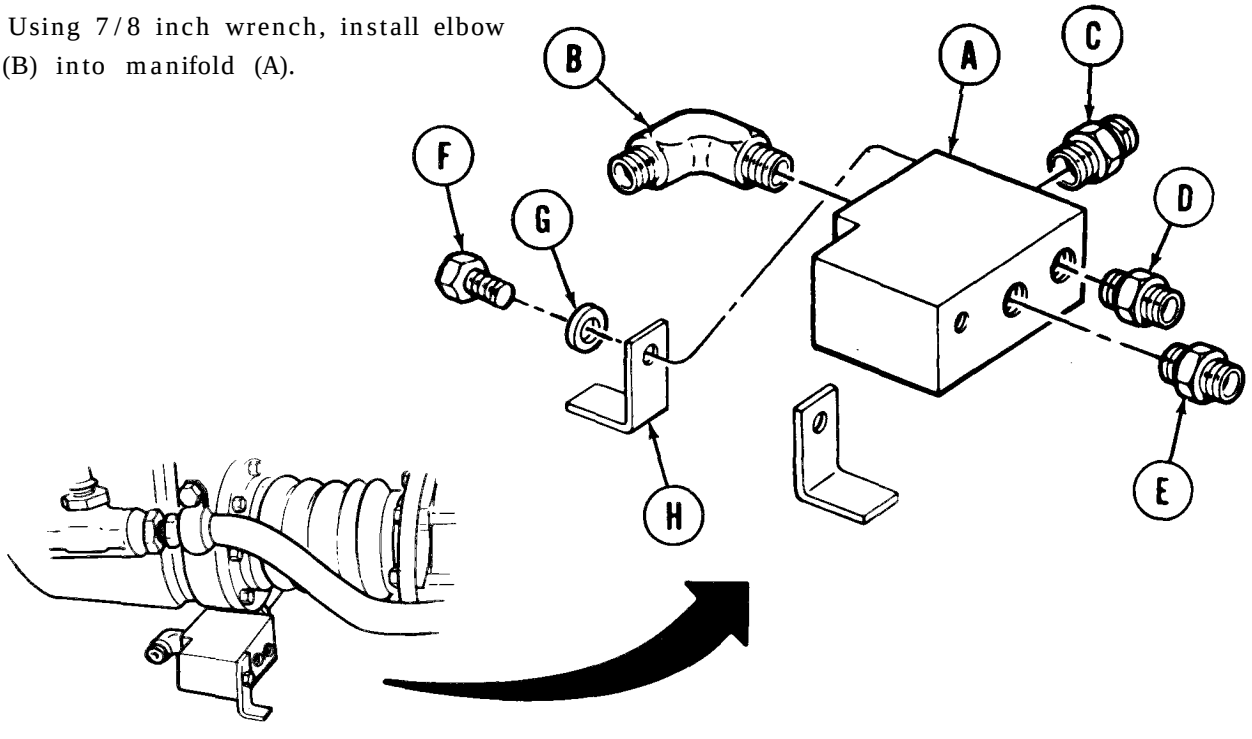
NOTE

Apply zinc chromate primer to all threads prior to installation of threaded tube/hose connections.

INSTALLATION:

Secure manifold (A) in vise.

2. Using 7/8 inch wrench, install elbow (B) into manifold (A).



3. Using 1-1/16 inch wrench, install adapter (C) into manifold (A). Using torque wrench and 1-1/16 inch socket, tighten adapter (C) to 40-50 lb-ft (54-75 N·m).

4. Using 3/4 inch wrench, install adapters (D) and (E) into manifold (A). Using torque wrench and 3/4 inch socket, tighten adapters (D) and (E) to 40-50 lb-ft (54-75 N·m).

NOTE

When manifold (A) is positioned in vehicle, make sure tubes are positioned onto adapters (C) and (D).

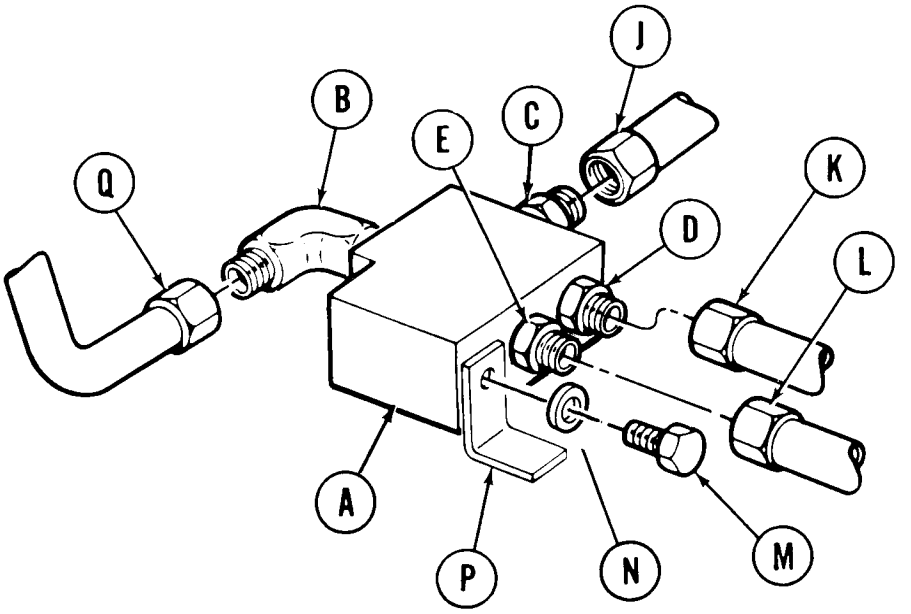
5. Remove manifold (A) from vise and position in vehicle.

6. Using 1/2 inch wrench, install screw (F) and washer (G) through bracket (H) into manifold (A).

Go on to Sheet 4

TA169741

ENGINE COMPARTMENT DISCHARGE MANIFOLD REPLACEMENT (FIXED FIRE EXTINGUISHER) (Sheet 4 of 4)



7. Using 1-1/4 inch wrench, install connector (J) to adapter (C). Using 1-1/16 inch wrench to hold adapter (C), use torque wrench and 1-1/4 inch crow foot to tighten connector (J) to 40-50 lb-ft (54-75 N•m).

8. Using 7/8 inch wrench, install connector (K) onto adapter (D). Using 3/4 inch wrench to hold adapter (D) and 7/8 inch crowfoot and torque wrench on connector (K), tighten connector (K) to 40-50 lb-ft (54-75 N•m).

9. Go to engine compartment and position connector (L) onto adapter (E).

10. Using 7/8 inch wrench, install connector (L) onto adapter (E). Using 3/4 inch wrench to hold adapter (E) and 7/8 inch crowfoot and torque wrench on connector (L), tighten connector (L) to 40-50 lb-ft (54-75 N•m).

11. Using 1/2 inch wrench, install screw (M) and washer (N) through bracket (P) into manifold (A).

12. Using 1-1/8 inch wrench, install connector (Q) onto elbow (B). Using 1-1/8 inch crowfoot and torque wrench, tighten connector (Q) to 40-50 lb-ft (54-75 N•m).

13. Install crew compartment rear floor access plate (page 17-8).

14. Install powerplant (page 5-14).

End of Task

TA169742

CHAPTER 21

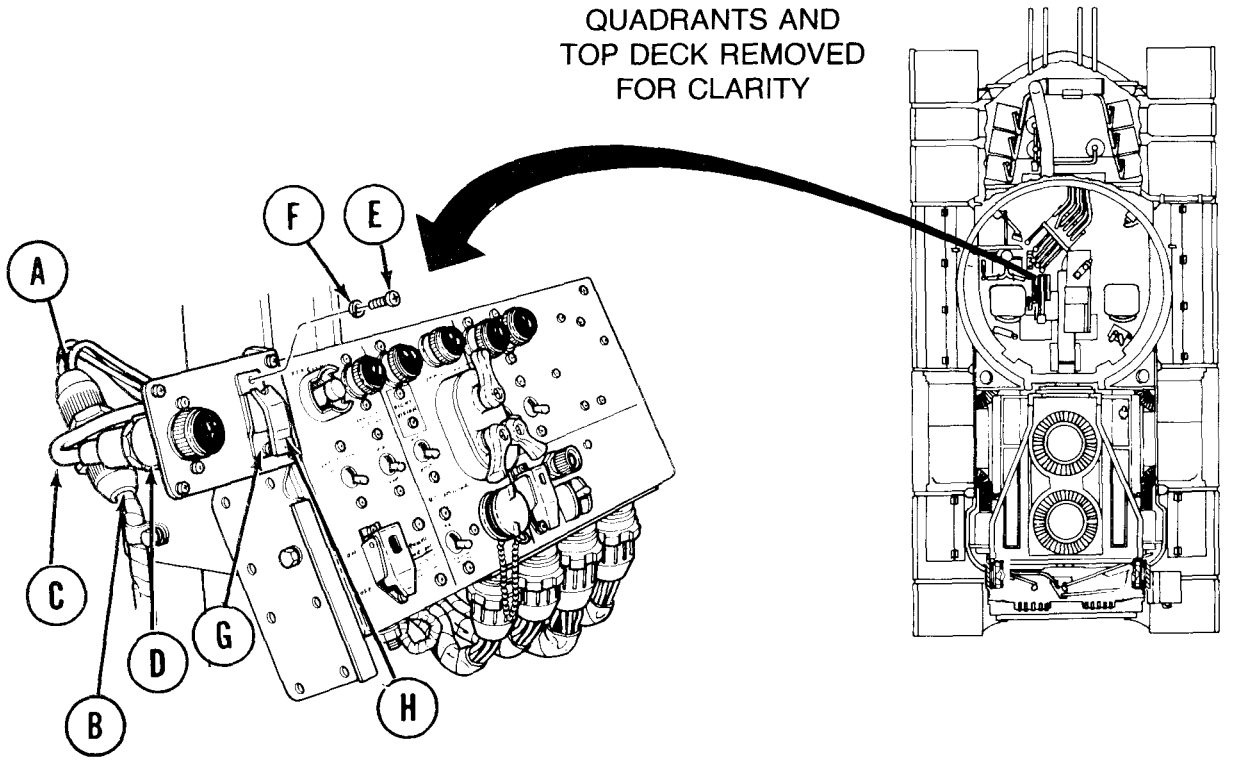
SMOKE GENERATOR MAINTENANCE

INDEX

SMOKE GENERATOR SWITCH OR GUARD REPLACEMENT (Sheet 1 of 2)

TOOL: Cross-tip screwdriver

REFERENCE: TM 5-5420-226-10



REMOVAL:

1. Make sure MASTER BATTERY switch is set to OFF (TM 5-5420-226-10).
2. Disconnect switch connector (A) from wiring harness connector (B).
3. Disconnect switch-to-indicator light lead (C) from indicator light (D).
4. Using screwdriver, remove two screws (E) and lockwashers (F) from switch (G) and guard (H).
5. Remove switch (G) and guard (H).
6. Replace switch (G) or guard (H) as required.

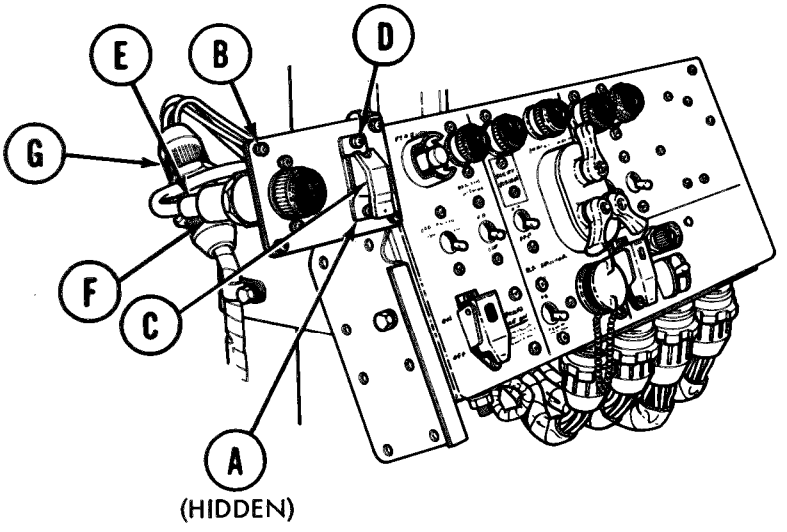
Go on to Sheet 2

TA169744

SMOKE GENERATOR SWITCH OR GUARD REPLACEMENT (Sheet 2 of 2)

INSTALLATION:

1. Be sure ON position is up and position switch (A) to backside of mounting bracket (B).
2. Position guard (C) over switch (A). Be sure toggle lever on switch is down.
3. Using screwdriver, install two screws and lockwashers (D) to secure guard (C) and switch (A) to bracket (B).
4. Connect switch-to-light indicator lead (E) to light indicator connector (F).



5. Connect switch connector (G) to harness connector.
6. Start engine (TM 5-5420-226-10) and run until normal operating temperatures are attained. Run engine at 1600 rpm.
7. Place SMOKE GENERATOR switch (A) to ON.
8. Observe operation of smoke generator.
9. Place SMOKE GENERATOR switch (A) to OFF.
10. Shut down engine (TM 5-5420-226-10).

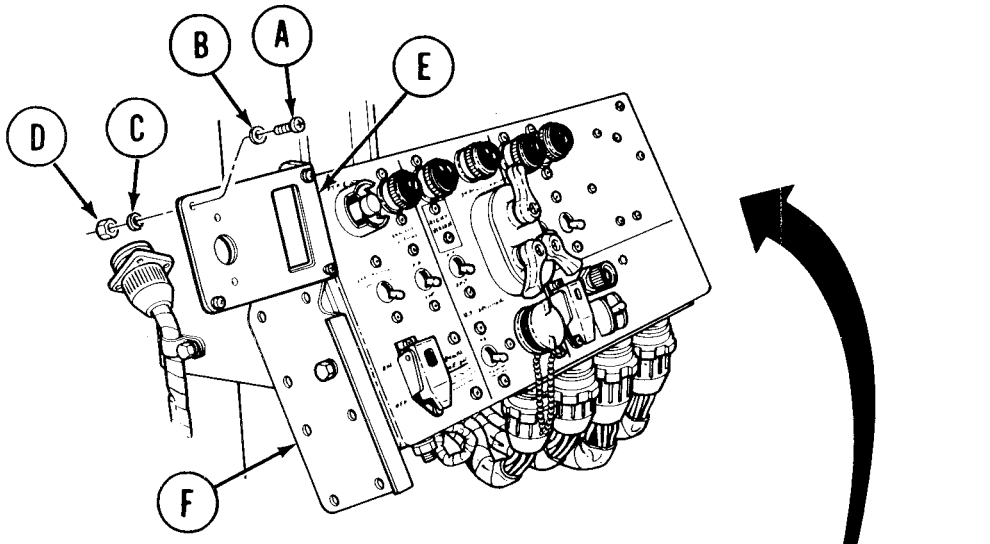
End of Task

TA169745

SMOKE GENERATOR SWITCH COVER REPLACEMENT (Sheet 1 of 1)

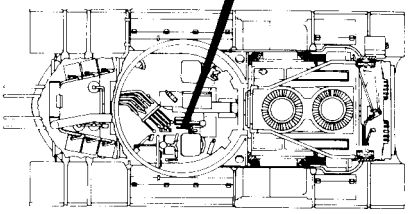
TOOLS: Cross-tip screwdriver
11/32 in. open end wrench

PRELIMINARY PROCEDURE: Remove smoke generator switch and guard (page 21-2)
Remove smoke generator indicator light (page 21-5)



REMOVAL:

1. Using screwdriver and 11/32 inch wrench, remove four screws (A), flat washers (B), lockwashers (C), and nuts (D) securing cover (E) to mounting bracket (F).
2. Remove cover (E).



QUADRANTS AND TOP DECK REMOVED FOR CLARITY

INSTALLATION:

1. Position cover (E) on mounting bracket (F).
2. Using screwdriver and 11/32 inch wrench, install and tighten four screws (A), flat washers (B), lockwashers (C), and nuts (D) securing cover (E) to mounting bracket (F).
3. Install smoke generator indicator light (page 21-7).
4. Install smoke generator switch and guard (page 21-3).

End of Task

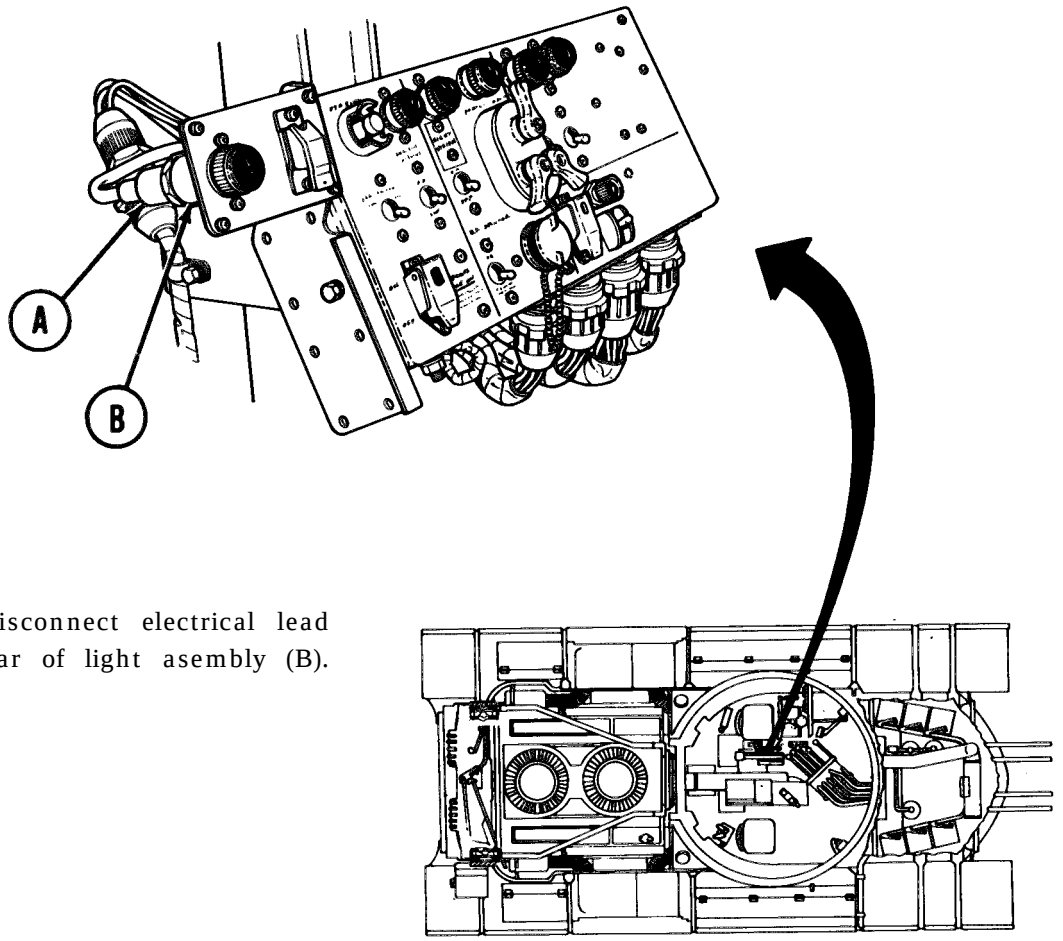
TA169746

SMOKE GENERATOR INDICATOR LIGHT REPLACEMENT (Sheet 1 of 3)

TOOLS: l-1/8 in. open end wrench
Cross-tip screwdriver

SUPPLIES: Lint-free cloth (Item 12, Appendix D)
Steel wool (Item 56, Appendix D)
Silicone compound (Item 32, Appendix D)
Preformed packing (MS28775-119)

REMOVAL:



1. Manually disconnect electrical lead (A) from rear of light asembly (B).

Go on to Sheet 2

SMOKE GENERATOR INDICATOR LIGHT REPLACEMENT (Sheet 2 of 3)

2. Unscrew and Remove lens (C).

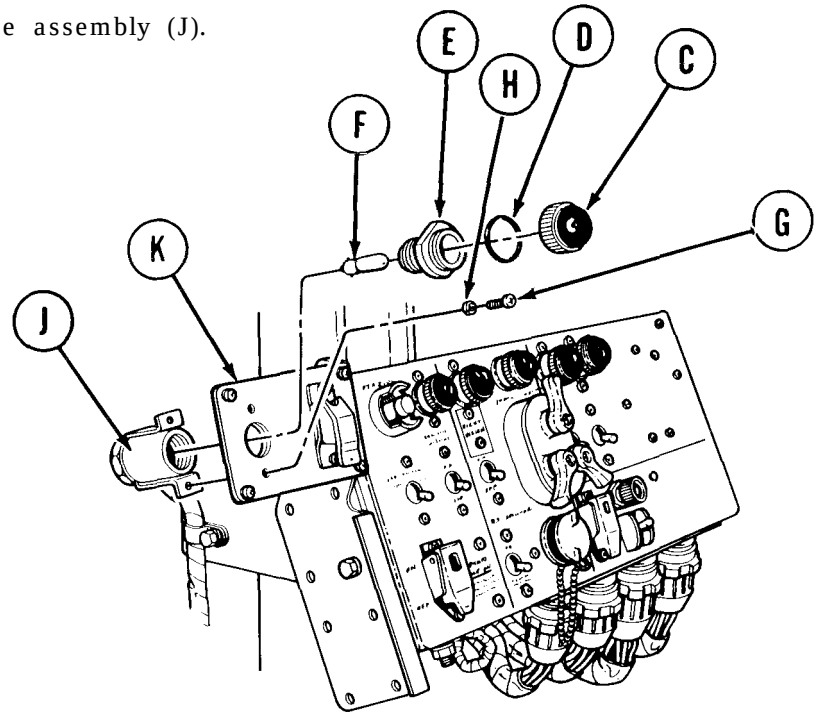
3. Remove preformed packing (D) from adapter (E). Throw preformed packing (D) away.

4. Using wrench, remove adapter (E).

5. Push in and turn lamp (F) counterclockwise. Remove lamp.

6. Using screwdriver, remove two screws (G) and lockwashers (H) securing base assembly (J) to mounting bracket (K).

7. Remove base assembly (J).



CLEANING AND INSPECTION:

1. Clean lens (C) with moist, lint-free cloth.

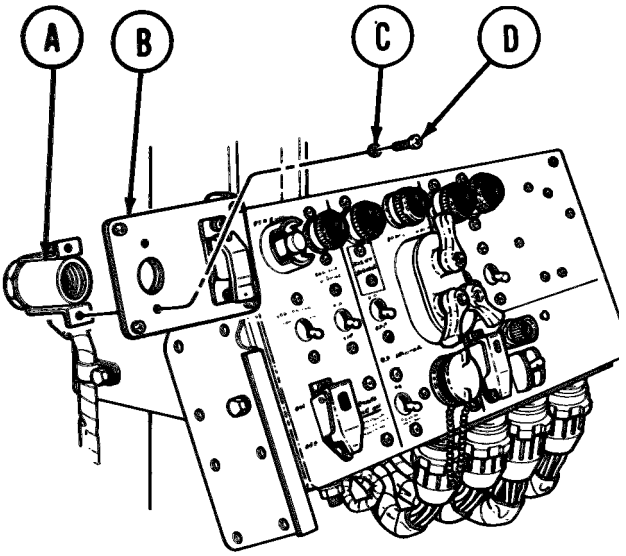
2. Using steel wool, remove any corrosion from connector terminals and lamp socket of base assembly (J).

3. Inspect lens for cracks or deep scratches. Replace if any are found.

Go on to Sheet 3

TA169748

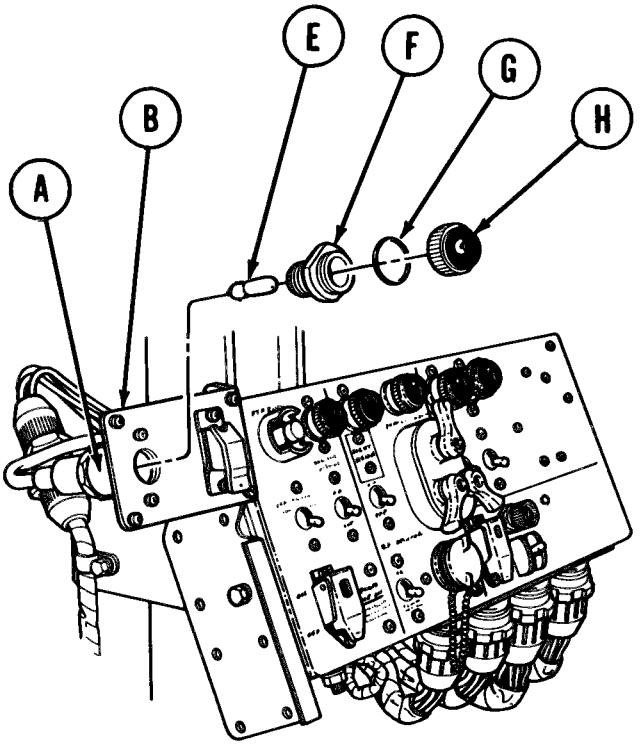
SMOKE GENERATOR INDICATOR LIGHT REPLACEMENT (Sheet 3 of 3)



INSTALLATION:

1. Position base assembly (A) to rear of mounting bracket (B).

2. Using screwdriver, install two lockwashers (C) and screws (D) to secure base assembly (A) to mounting bracket (B).

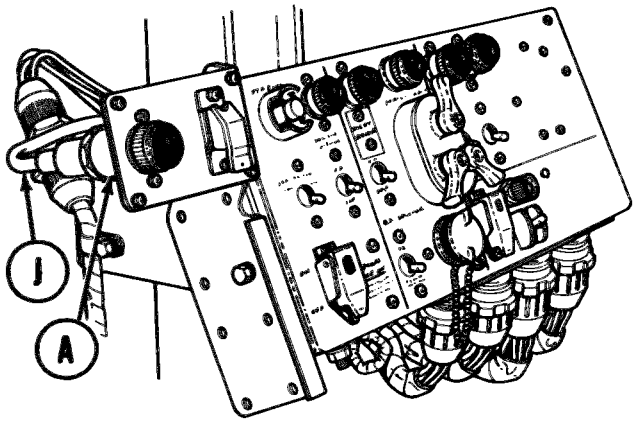


3. Insert lamp (E) into base assembly (A). Push lamp in and turn clockwise and release.

4. Install adapter (F) into base assembly (A). Using wrench, tighten adapter (F).

5. Install new preformed packing (G) onto adapter (F).

6. Install lens (H) onto adapter (F) and tighten.



7. Connect electrical lead (J) from switch to base assembly (A) connector.

End of Task

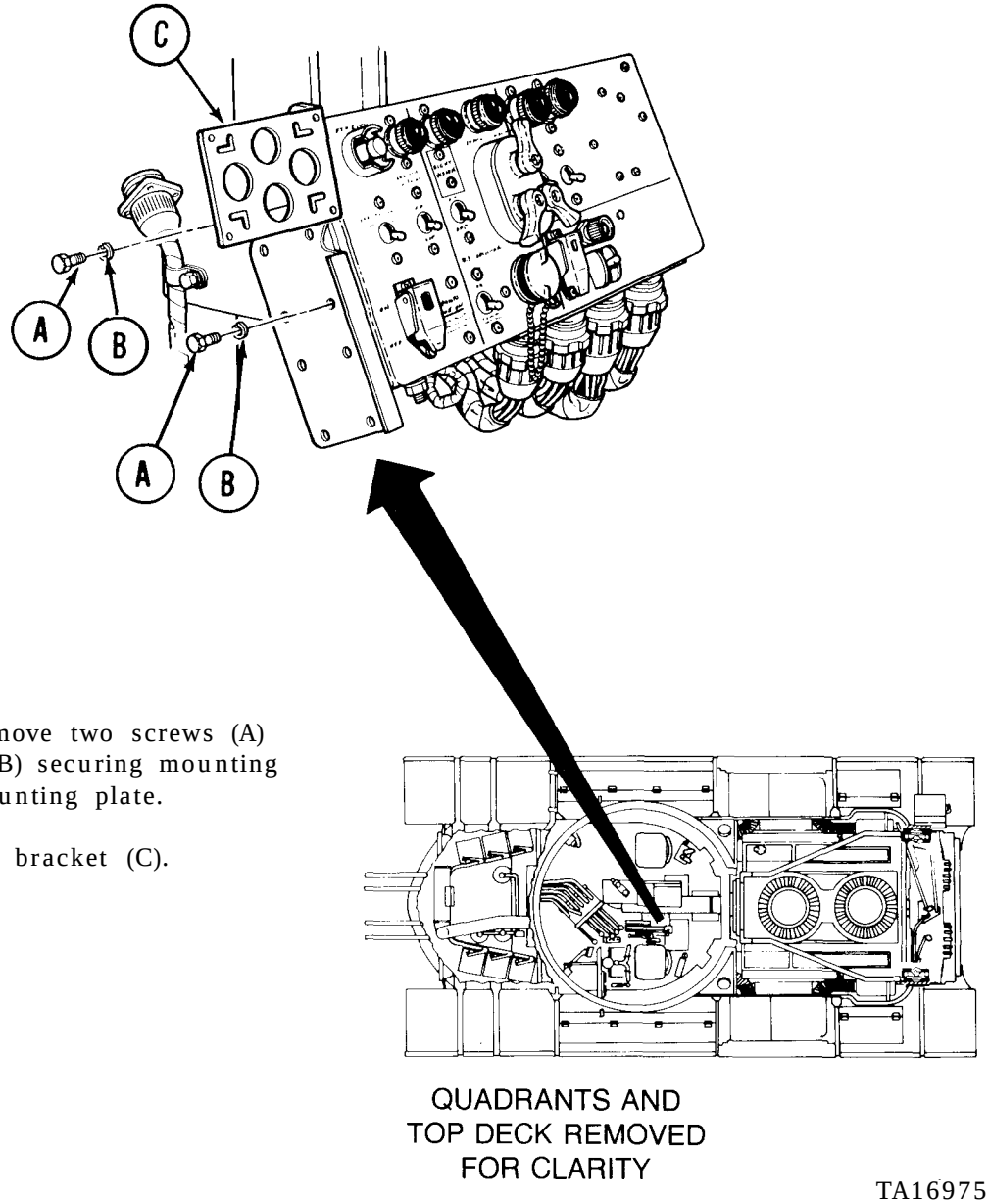
TA169749

SMOKE GENERATOR SWITCH AND INDICATOR LIGHT MOUNTING BRACKET REPLACEMENT (Sheet 1 of 2)

TOOL: 7/16 in. combination box and open end wrench

PRELIMINARY PROCEDURES: Remove switch and guard (page 21-2)
Remove indicator light (page 21-5)
Remove cover (page 21-4)

REMOVAL:



1. Using wrench, remove two screws (A) and lockwashers (B) securing mounting bracket (C) to mounting plate.
2. Remove mounting bracket (C).

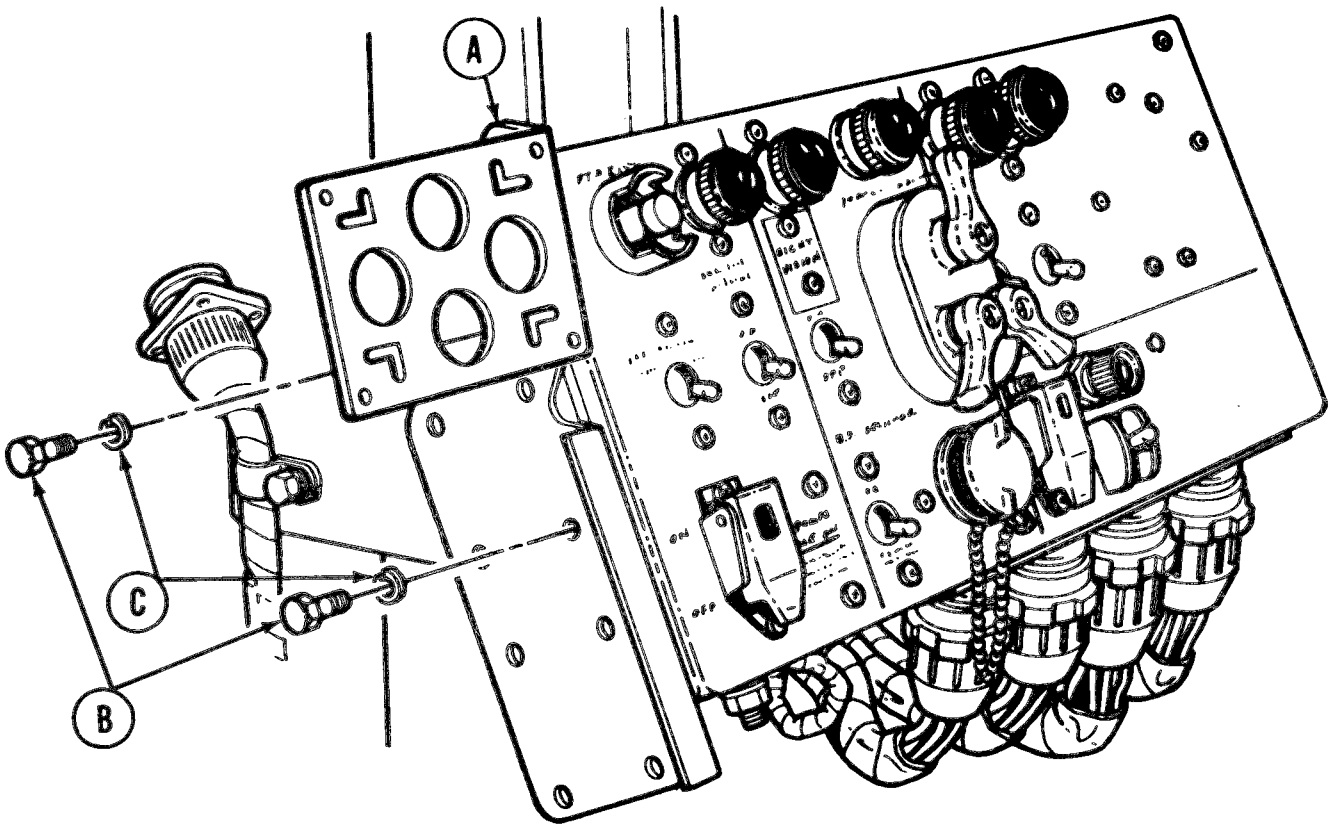
Go on to Sheet 2

TA169750

SMOKE GENERATOR SWITCH AND INDICATOR LIGHT MOUNTING BRACKET REPLACEMENT (Sheet 2 of 2)

INSTALLATION:

1. Position mounting bracket (A) to mounting plate.
2. Using wrench, install and tighten two screws (B) and lockwashers (C) securing mounting bracket (A) to mounting plate.
3. Install cover (page 21-4).
4. Install indicator light (page 21-7).
5. Install switch and guard (page 21-3).



End of Task

TA169751

SMOKE GENERATOR WIRING HARNESS TO BULKHEAD LEAD REPLACEMENT (Sheet 1 of 1)

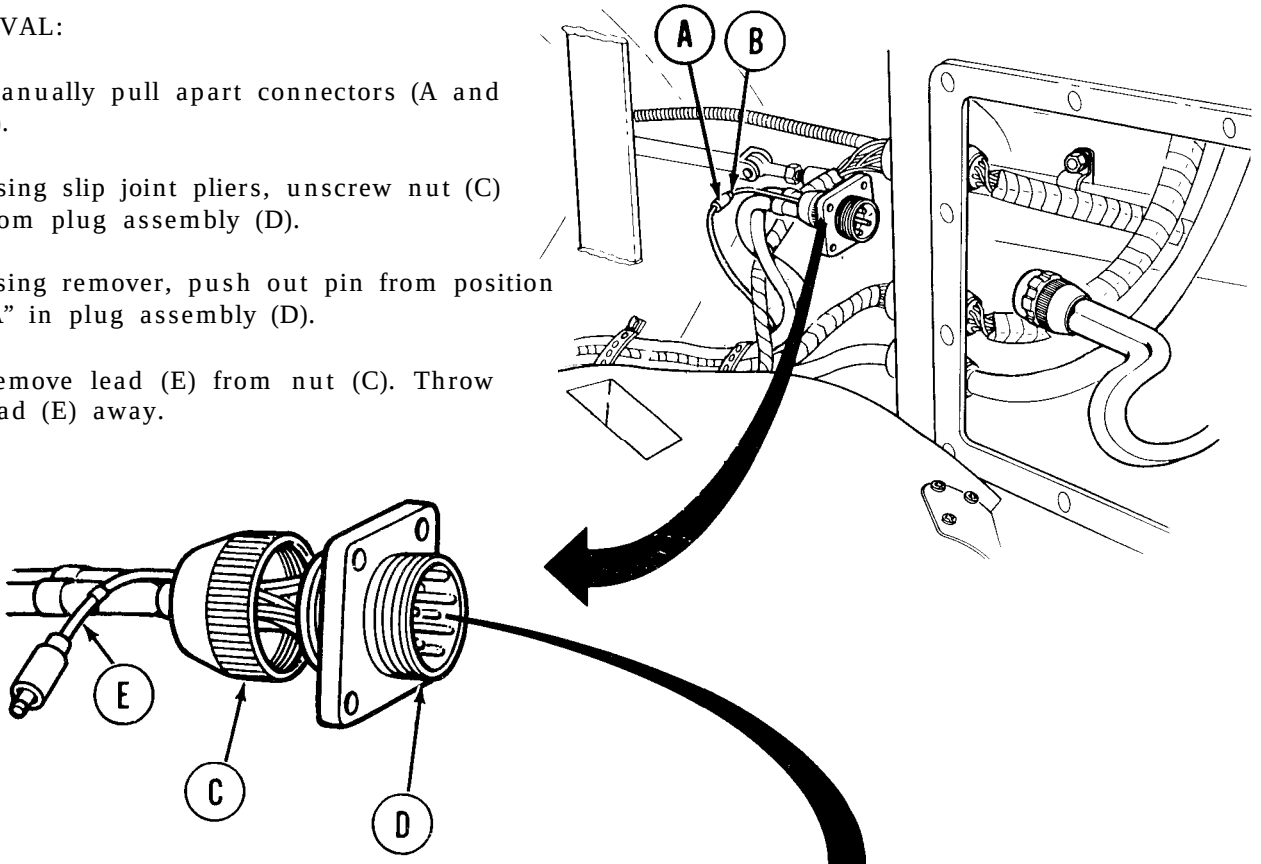
TOOLS: Electrical connector repair tool kit
Long nosed pliers (needle nose)
Slip joint pliers

REFERENCE: TM 5-5420-226-10

PRELIMINARY PROCEDURES: Remove ground terminals from batteries (page 10-268)
Remove starter harness bulkhead cable disconnect (page 10-269).

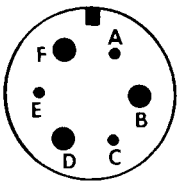
REMOVAL:

1. Manually pull apart connectors (A and B).
2. Using slip joint pliers, unscrew nut (C) from plug assembly (D).
3. Using remover, push out pin from position "A" in plug assembly (D).
4. Remove lead (E) from nut (C). Throw lead (E) away.



INSTALLATION:

1. Thread new lead (E) through nut (C).
2. Using needle nose pliers, insert lead (E) pin into position "A" in plug assembly (D).
3. Using slip joint pliers, tighten nut (C) onto plug assembly (D).



4. Install starter harness bulkhead cable disconnect (page 10-270).
5. Connect ground terminals to batteries (page 10-268).

End of Task

TA169752

SMOKE GENERATOR HULL WIRING HARNESS REPLACEMENT (Sheet 1 of 5)

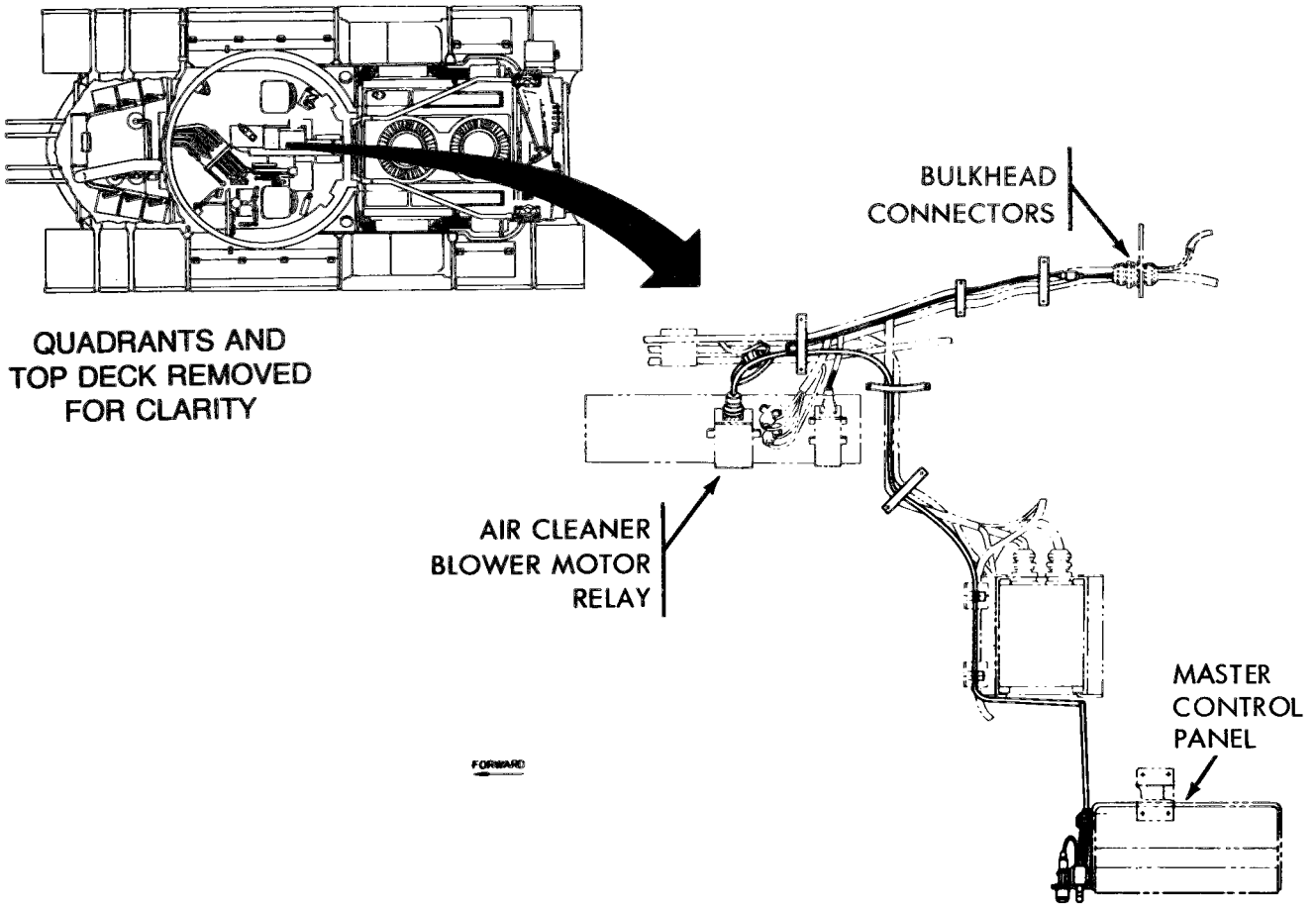
PROCEDURE INDEX

TOOLS: 7/16 in. socket with l/2 in. drive
3 in. extension with 1/2 in. drive
Ratchet with 1/2 in. drive
Spanner wrench
7/16 in. combination wrench

REFERENCE: TM 5-5420-226-10

PRELIMINARY PROCEDURE: Remove hull interior floor plate (page 17-7)

REMOVAL:

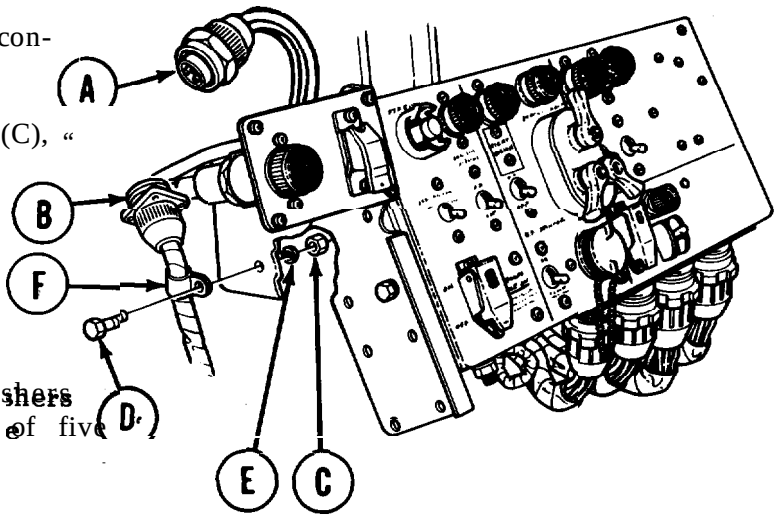


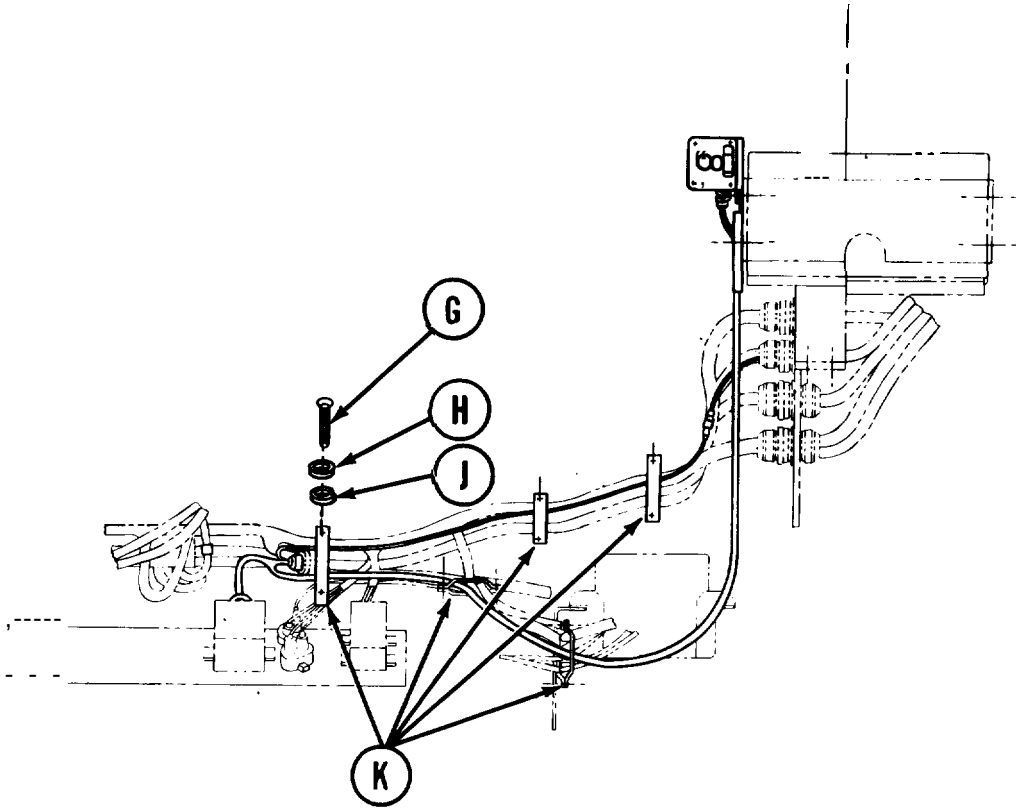
TA169753

Go on to Sheet 2

SMOKE GENERATOR HULL WIRING HARNESS REPLACEMENT(Sheet 2 of 5)

1. Disconnect smoke generator switch connector (A) from wiring harness connector (B).
2. Using 7/16 inch wrench to hold nut (C), use socket to remove screw (D) and lockwasher (E).
3. Remove clamp (F) from wiring harness (B).
4. Using socket and extension, remove screws (G), washers (H), and lock washers (J) to release one end on each of five straps (K).





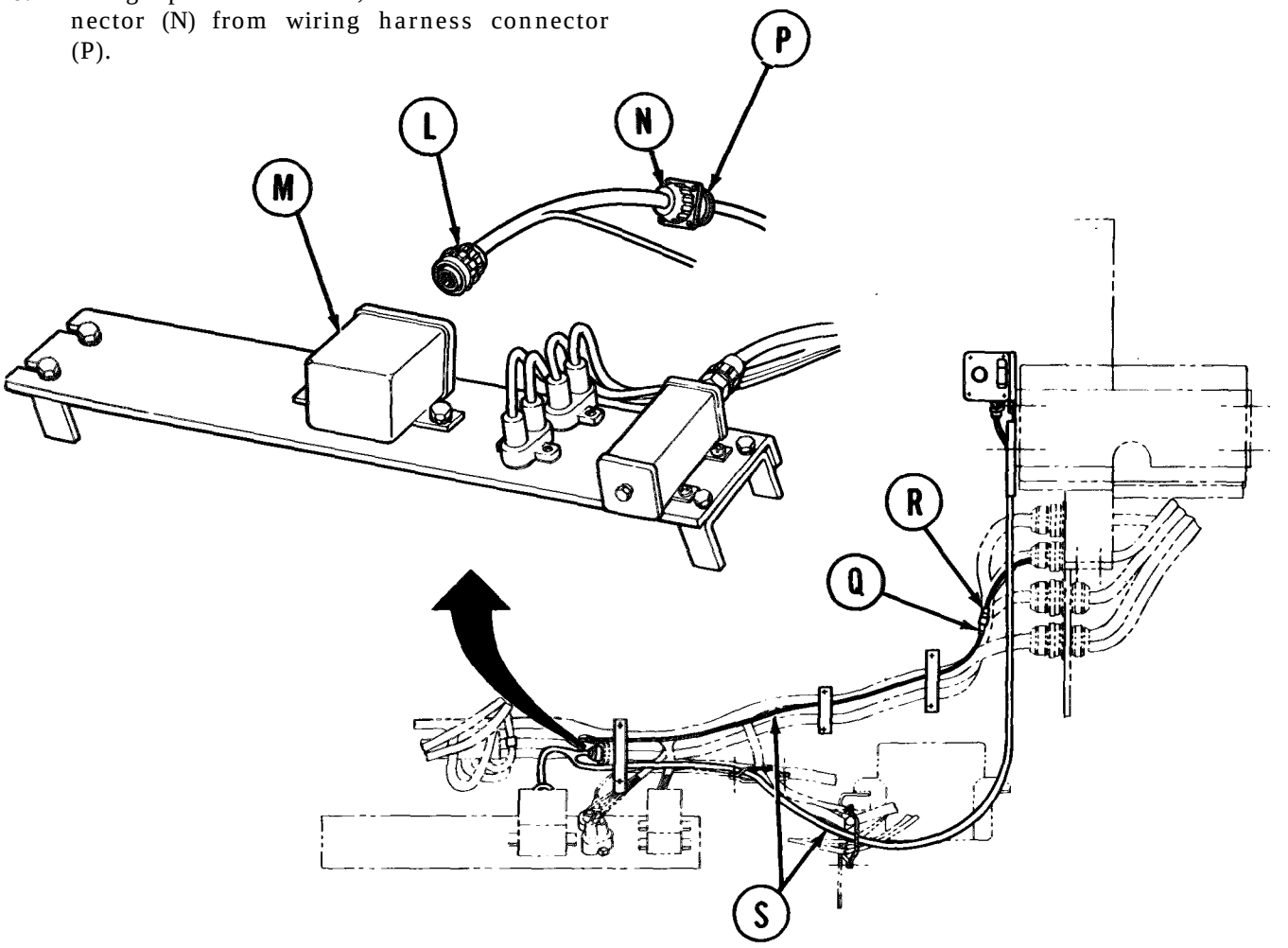
Go on to Sheet 3

TA169754

SMOKE GENERATOR HULL WIRING HARNESS REPLACEMENT (Sheet 3 of 5)

5. Using spanner wrench, disconnect connector (L) from air cleaner blower motor relay (M).

6. Using spanner wrench, disconnect connector (N) from wiring harness connector (P).



7. Disconnect wiring harness connector (Q) from lead connector (R).

8. Note routing and remove wiring harness (S) from hull.

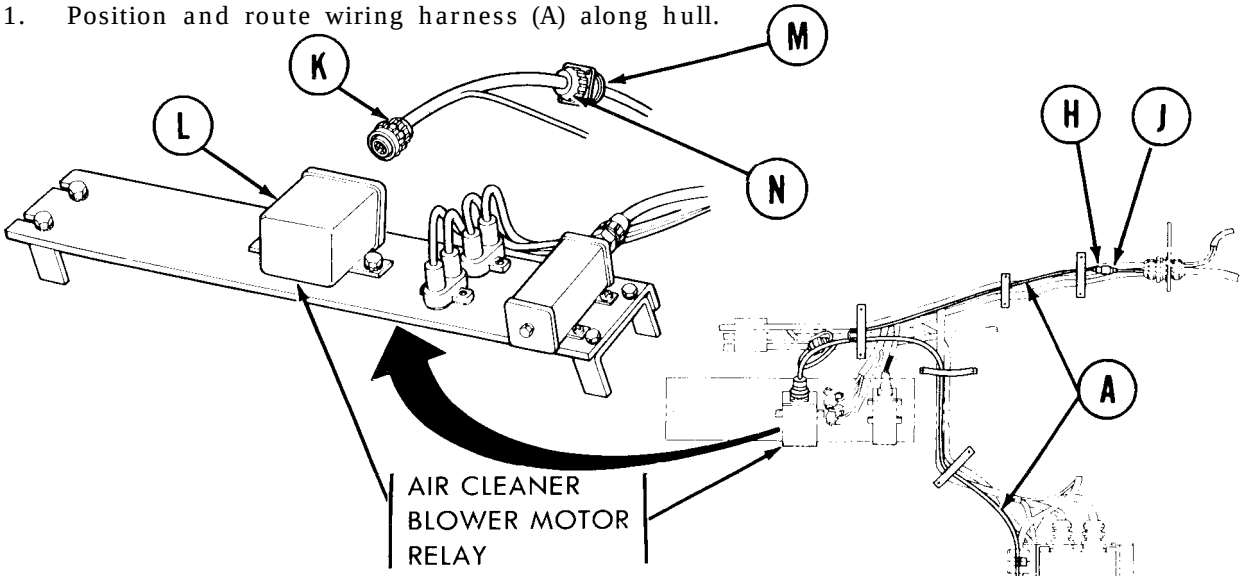
Go on to Sheet 4

TA169755

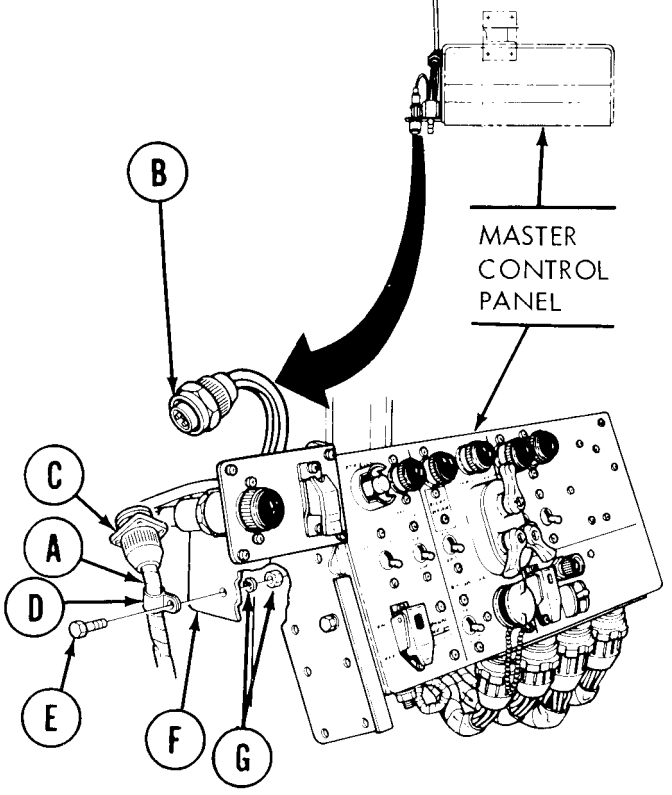
SMOKE GENERATOR HULL WIRING HARNESS REPLACEMENT (Sheet 4 of 5)

INSTALLATION:

1. Position and route wiring harness (A) along hull.



2. Connect smoke generator switch connector (B) to wiring harness connector (C).
3. Place clamp (D) on wiring harness (A).
4. Manually install screw (E) through clamp (D) and support (F).
5. Install lockwasher and nut (G) on screw (E).
6. Using socket and 7/16 inch wrench, tighten screw (E).
7. Connect wiring harness connector (H) to lead connector (J).
8. Manually connect connector (K) to air cleaner blower motor relay (L).
9. Use spanner wrench to tighten connector (K).
10. Connect connector (M) to wiring harness connector (N).



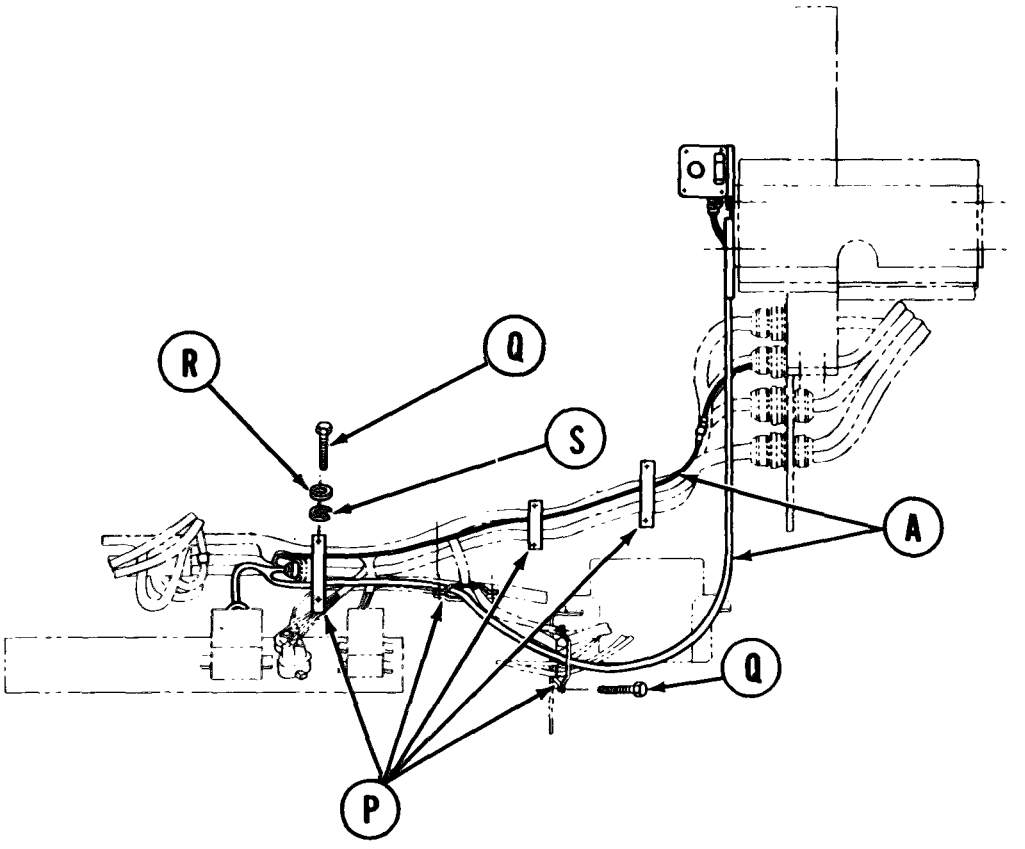
TA169756

Go on to Sheet 5

SMOKE GENERATOR HULLWIRINGHARNESS REPLACEMENT (Sheet 5 of 5)

11. Position wiring harness (A) under five straps(P).

12. Using socket, install and tighten five screws (Q), washers (R), and lockwashers (S) to secure ends of straps (P).



13. Start engine (TM 5-5420-226-10) and run until normal operating temperatures are attained. Run engine at 1600 rpm and activate smoke generator. Observe operation. Shut off smoke generator. Shut down engine.

14. Install hull interior floor plate (page 17-8).

End of Task

TA169757

SMOKE GENERATOR INTERMEDIATE FUEL HOSE REPLACEMENT (Sheet 1 of 5)

PROCEDURE INDEX

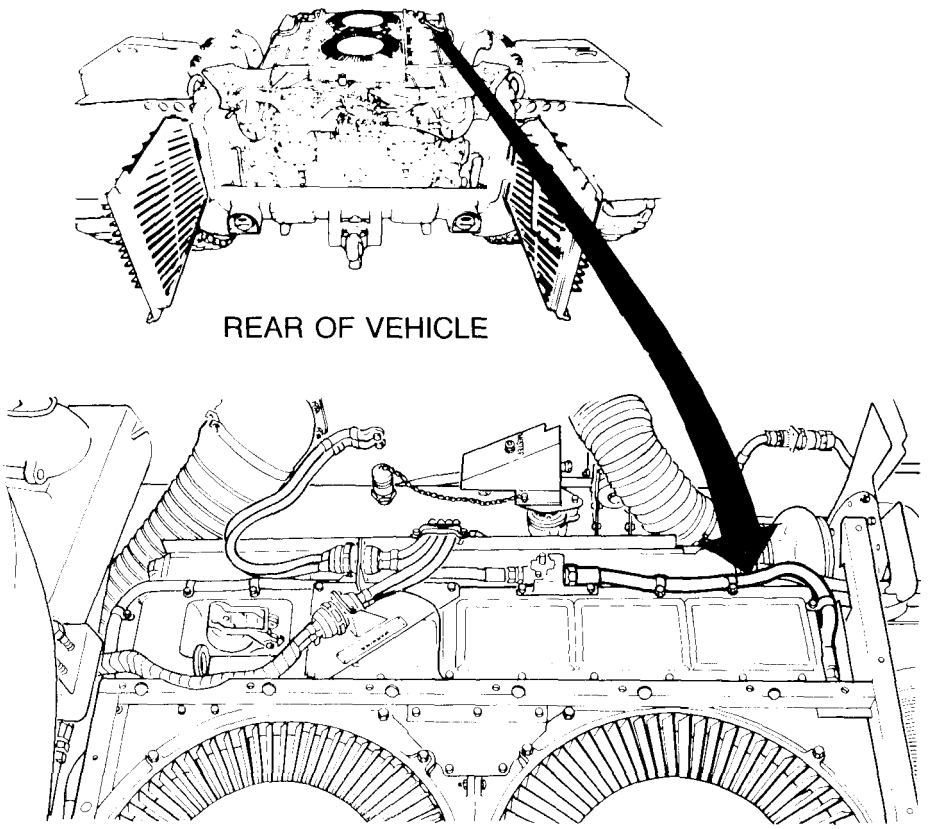
TOOLS: 7/8 in. combination box and open end wrench
1/2 in. socket with 1/2 in. drive
Ratchet with 1/2 in. drive
3/4 in. combination box and open end wrench
1 in. combination box and open end wrench

SUPPLIES: Container
Lint-free cloth (Item 12, Appendix D)

REFERENCE: TM 5-5420-226-10

PRELIMINARY PROCEDURE: Remove engine shroud (page 9-30)

REMOVAL:



Go on to Sheet 2

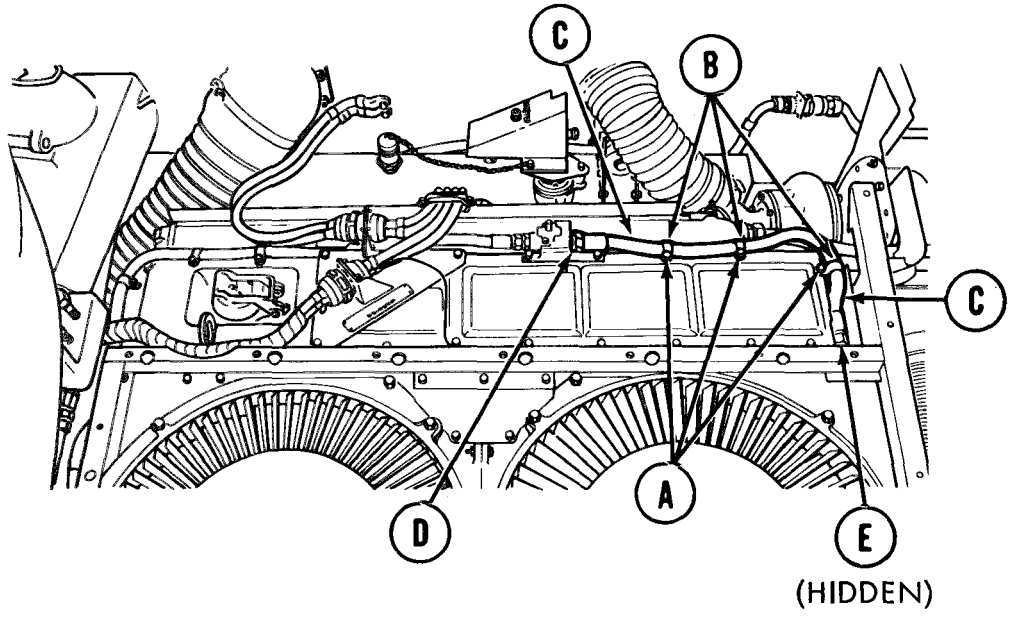
TA169758

SMOKE GENERATOR INTERMEDIATE FUEL HOSE REPLACEMENT (Sheet 2 of 5)

NOTE

use suitable container to catch fuel whenever any fuel line connection is loosened or disconnected. Cap all openings to prevent contamination of fuel.

1. Using socket, remove three assembled washer screws (A) securing clamps (B) to engine.
2. Using 7/8 inch wrench, disconnect intermediate fuel hose (C) from output port of fuel shut-off valve (D).
3. Using 7/8 inch wrench, disconnect intermediate fuel hose (C) from elbow (E) in shroud.

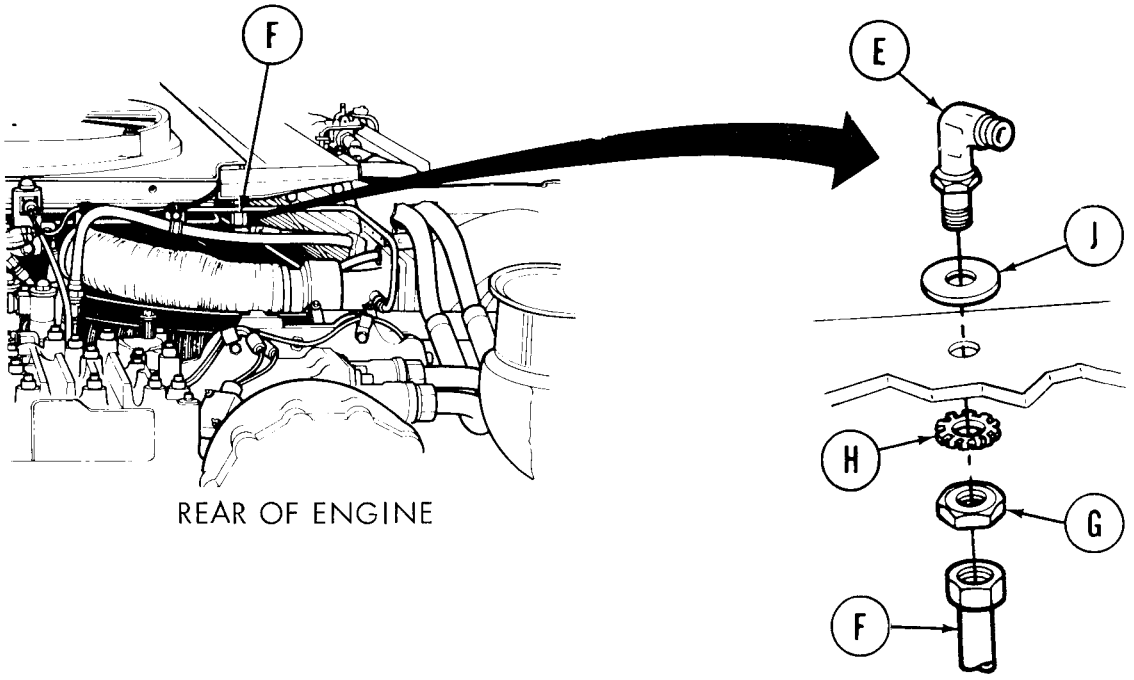


4. Remove intermediate fuel hose (C) and clamps (B) from engine.
5. Remove clamps (B) from intermediate fuel hose (C).

Go on to Sheet 3

TA169759

SMOKE GENERATOR INTERMEDIATE FUEL HOSE REPLACEMENT (Sheet 3 of 5)



6. Using 7/8 inch wrench, disconnect elbow-to-solenoid fuel hose (F) from elbow (E) in shroud.

7. Using 3/4 inch wrench to hold elbow (E) and 1 inch wrench on nut (G), remove nut (G) and lockwasher (H).

8. Remove elbow (E) and flat washer (J).

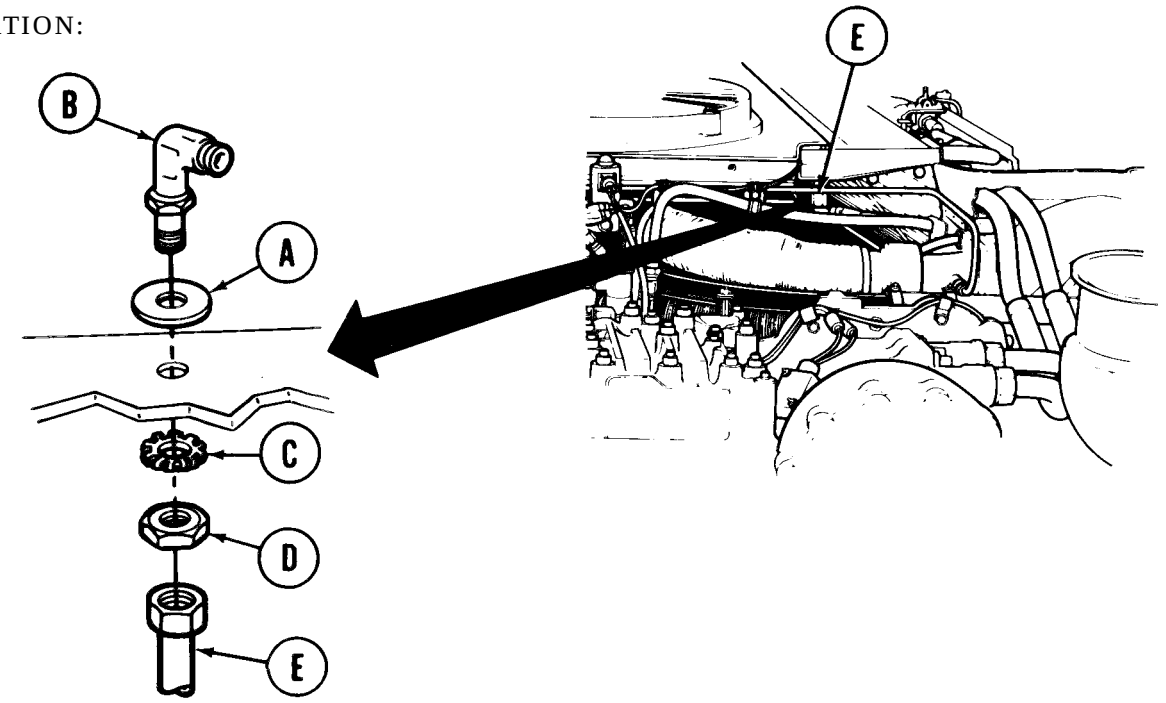
9. Inspect elbow (E) for cracks and damage to threads. If elbow is cracked or threads damaged, replace elbow.

Go on to Sheet 4

TA169760

SMOKE GENERATOR INTERMEDIATE FUEL HOSE REPLACEMENT (Sheet 4 of 5)

INSTALLATION:



1. Install flat washer (A) and elbow (B) into shroud.
2. Install lockwasher (C) and nut (D) onto elbow (B) to secure elbow to shroud.
3. Position elbow (B) to face toward right side of engine. Using 3/4 inch wrench to hold elbow (B), use 1 inch wrench and tighten nut (D).
4. Connect elbow-to-solenoid fuel hose (E) to elbow (B). Using 7/8 inch wrench, tighten hose (E) connector to elbow (B).

Go on to Sheet 5

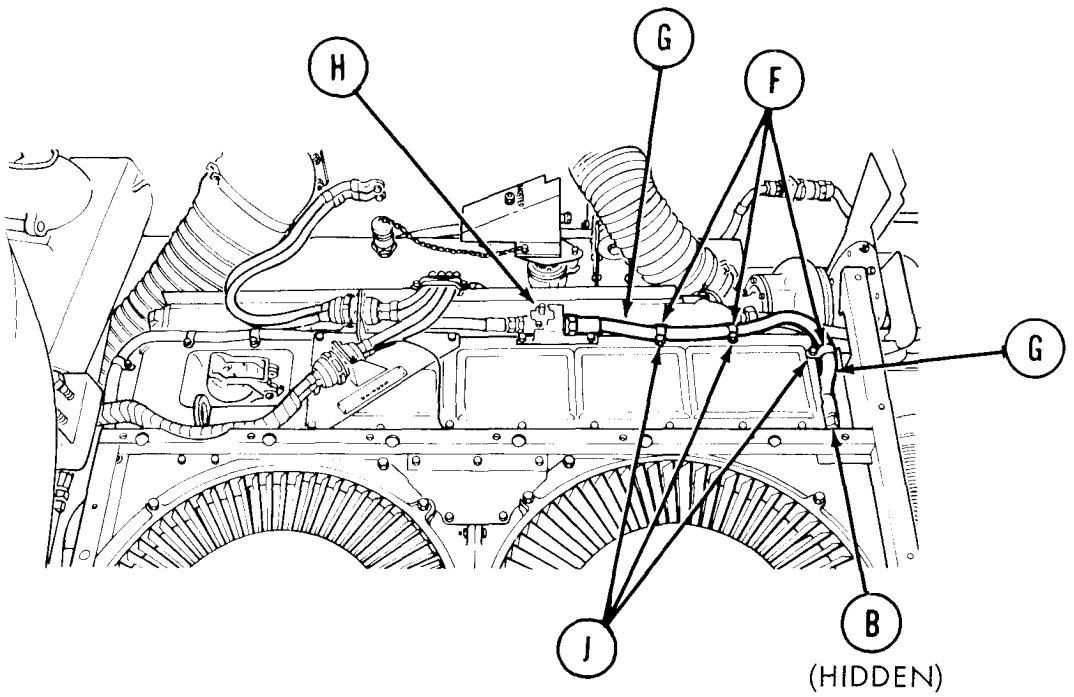
TA169761

SMOKE GENERATOR INTERMEDIATE FUEL HOSE REPLACEMENT (Sheet 5 of 5)

5. Install three clamps (F) onto intermediate fuel hose (G).

6. Position intermediate fuel hose (G) along top right side of engine and connect to output port of fuel shut-off valve (H) and elbow (B) in shroud.

7. Using 7/8 inch wrench, tighten hose connections.



8. Using socket, install and tighten three assembled washer screws (J) to secure clamps (F) to engine.

WARNING

Do not activate smoke generator in a building or closed area or with personnel near.

CAUTION

Always be aware of wind direction and speed when using smoke generator.

9. Start engine (TM 5-5420-226-10) and run until normal operating temperatures are attained. Run engine at 1600 rpm and activate smoke generator. Observe operation. Shut off smoke generator. Shut down engine.

10. Check smoke generator lines for leaks. Correct as necessary.

11. Install engine shroud (page 9-31).

End of Task

TA169762

SMOKE GENERATOR FUEL SHUT-OFF VALVE REPLACEMENT (Sheet 1 of 4)

PROCEDURE INDEX

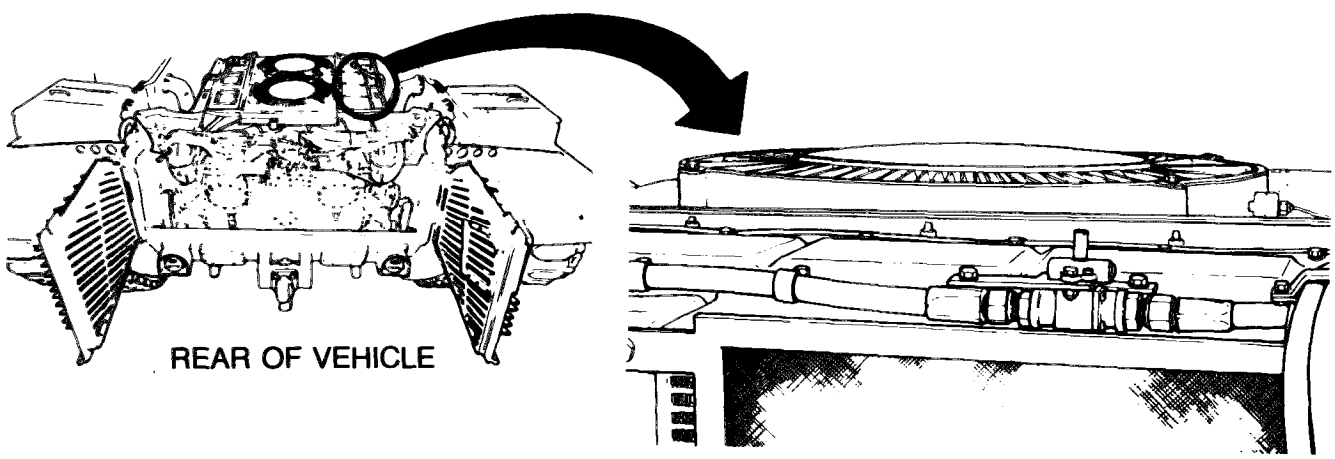
TOOLS: l/2 in. socket with l/2 in. drive
7/16 in. socket with 1/2 in. drive
Ratchet with l/2 in. drive
7/8 in. combination boxand open end wrench
7/16 in. combination box and open end wrench
1 in. combination box and open end wrench
1-1/4 in. open end wrench

SUPPLIES Container
Lint-free cloth (item 12, Appendix D)
Self-locking nuts (MS21045-4) (2 required)
Preformed packings (MS28778-10) (2 required)

REFERENCE: TM 5-5420-226-10

PRELIMINARY PROCEDURE: Remove engine shroud (page 9-30)

REMOVAL:



NOTE

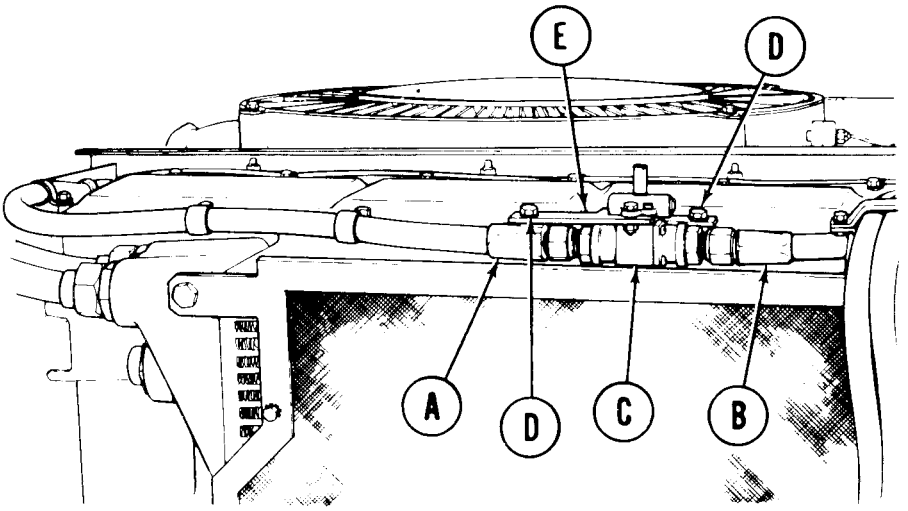
Use suitable container to catch fuel whenever any fuel line connection is loosened or disconnected. Cap all openings to prevent contamination of fuel.

Go on to Sheet 2

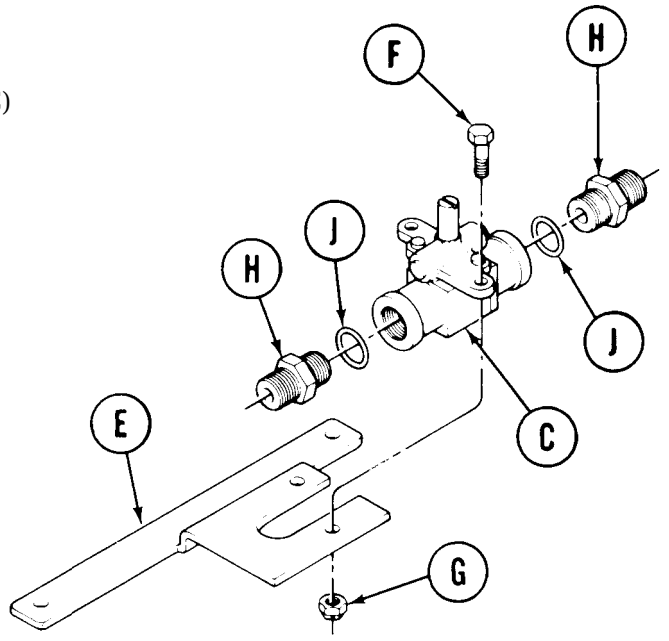
TA169763

SMOKE GENERATOR FUEL SHUT-OFF VALVE REPLACEMENT (Sheet 2 of 4)

1. Using 7/8 inch wrench, disconnect fuel hoses (A and B) from fuel shut-off valve (C).
2. Using 1/2 inch socket, remove two assembled washer screws (D) securing mounting bracket (E) with fuel shut-off valve (C) to engine.
3. Remove mounting bracket (E) and fuel shut-off valve (C) as a unit.



4. Using 7/16 inch wrench to hold nuts, use 7/16 inch socket and remove two screws (F) and nuts (G) securing shutoff valve (C) to mounting bracket (E). Throw nuts (G) away.
5. Using 1-1/4 inch wrench to hold shut-off valve (C), use 1 inch wrench and remove two adapters (H) and preformed packings (J) from valve.
6. Throw preformed packings (J) and valve (C) away.



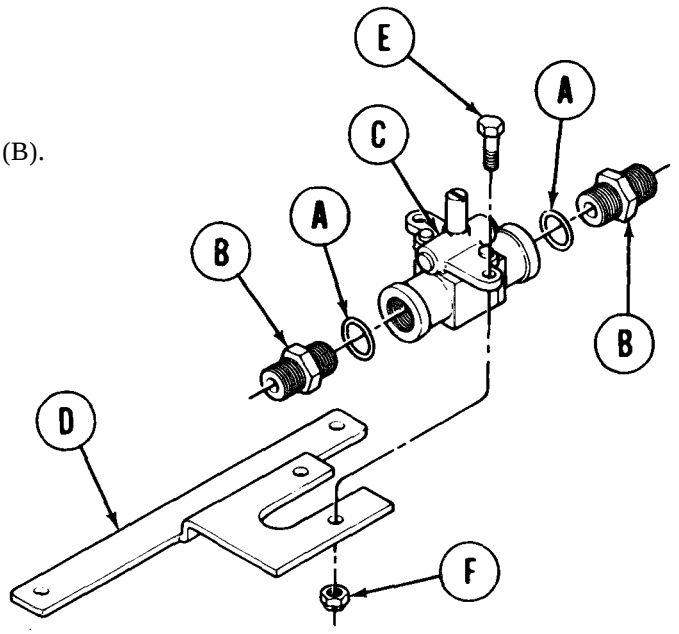
Go on to Sheet 3

TA169764

SMOKE GENERATOR FUEL SHUT-OFF VALVE REPLACEMENT (Sheet 3 of 4)

INSTALLATION:

1. Install new preformed packings(A) on two adapters (B).
2. Using 1-1/4 inch wrench to hold fuel shut-off valve (C), manually install adapters (B) with preformed packings (A) into ports of fuel shut-off valve.
3. Using 1 inch wrench, tighten adapters. (B).



4. Position assembled fuel shut-off valve (C) to mounting bracket (D) and install two screws (E) and new nuts (F).
5. Using 7/16 inch wrench to hold nuts (F), use 7/16 inch socket and tighten screws (E).

Go on to Sheet 4

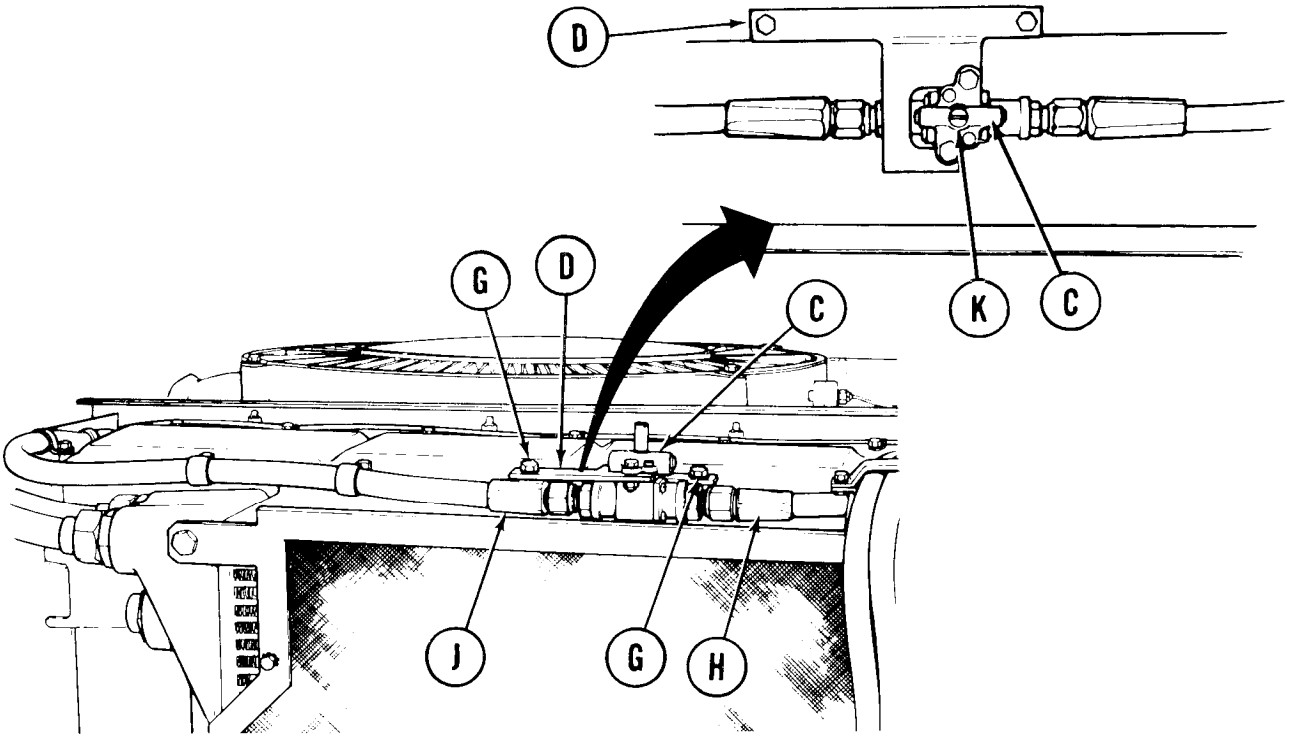
TA169765

SMOKE GENERATOR FUEL SHUT-OFF VALVE REPLACEMENT (Sheet 4 of 4)

6. Position assembled fuel shut-off valve (C) and mounting bracket (D) onto engine.

7. Using 1/2 inch socket, install and tighten two assembled washer screws (G) to secure mounting bracket (D) to engine.

8. Connect fuel hose (H and J) to fuel shut-off valve (C). Using 7/8 inch wrench, tighten hose connectors to shut-off valve.



9. Be sure that fuel shut-off valve is in open position. (Index line (K) atop shaft of fuel shut-off valve (C) will be in line with two ports of valve.)

WARNING

Do not activate smoke generator in a building or closed area or with personnel near.

CAUTION

Always be aware of wind direction and speed when using smoke generator.

10. Start engine (TM 5-5420-226-10) and run until normal operating temperatures are attained. Run engine at 1600 rpm and activate smoke generator. Observe operation. Shut off smoke generator. Shut down engine.

11. Check smoke generator lines for leaks. Correct as necessary.

12. Install engine shroud (page 9-31).

End of Task TA169766

SMOKE GENERATOR SOLENOID REPLACEMENT (Sheet 1 of 5)

PROCEDURE INDEX

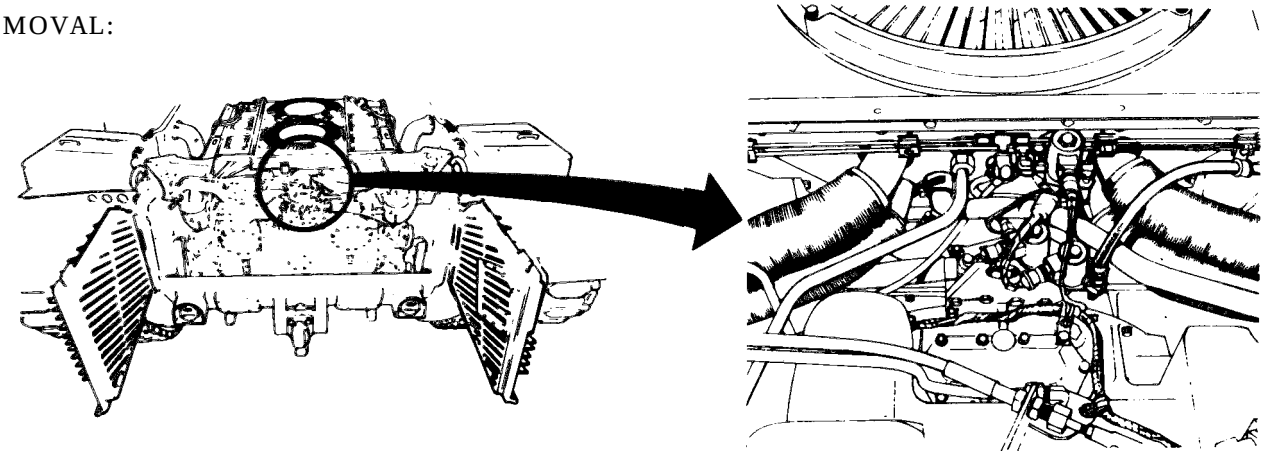
TOOLS: 5/16 in. combination box and open end wrench
7/16 in. combination box and open end wrench
9/16 in. combination box and open end wrench
5/8 in. combination box and open end wrench
3/4 in. combination box and open end wrench
7/8 in. combination box and open end wrench
7/16 in. socket with 1/2 in. drive
3/4 in. socket with 1/2 in. drive
Ratchet with 1/2 in. drive
Diagonal cutting pliers
5 in. extension with 1/2 in. drive
3/4 in. socket with 3/8 in. drive
11/16 in. combination box and open end wrench
Torque wrench 0-200 in-lb with 3/8 in. drive

SUPPLIES: Container
Lint-free cloth (Item 12, Appendix D)
Lockwire (Item 61, Appendix D)
Oil (Item 44, Appendix D)

REFERENCE: TM 5-5420-226-10

PRELIMINARY PROCEDURE: Remove engine shroud (page 9-30)

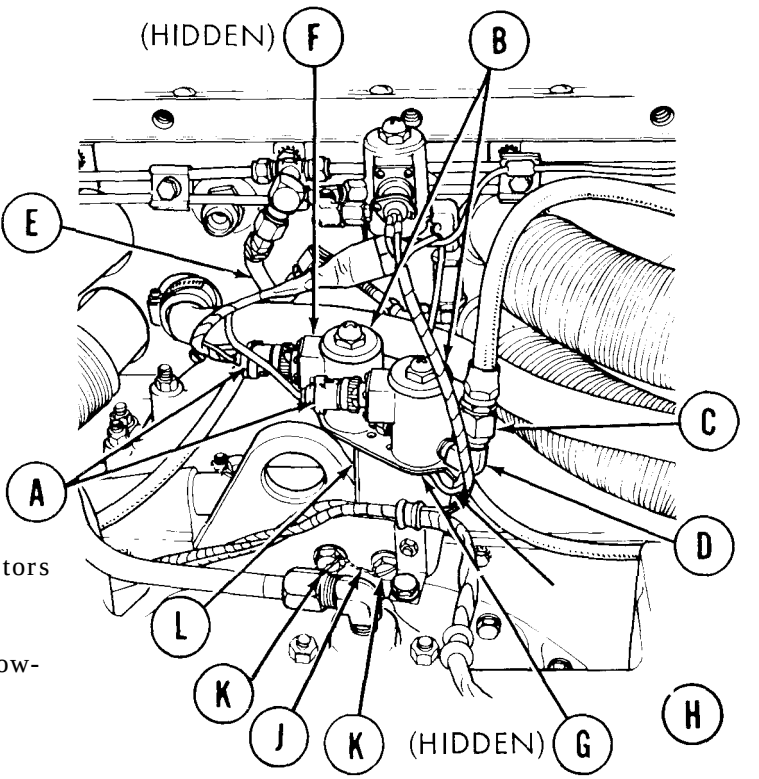
REMOVAL:



Go on to Sheet 2

TA169767

SMOKE GENERATOR SOLENOID REPLACEMENT (Sheet 2 of 5)

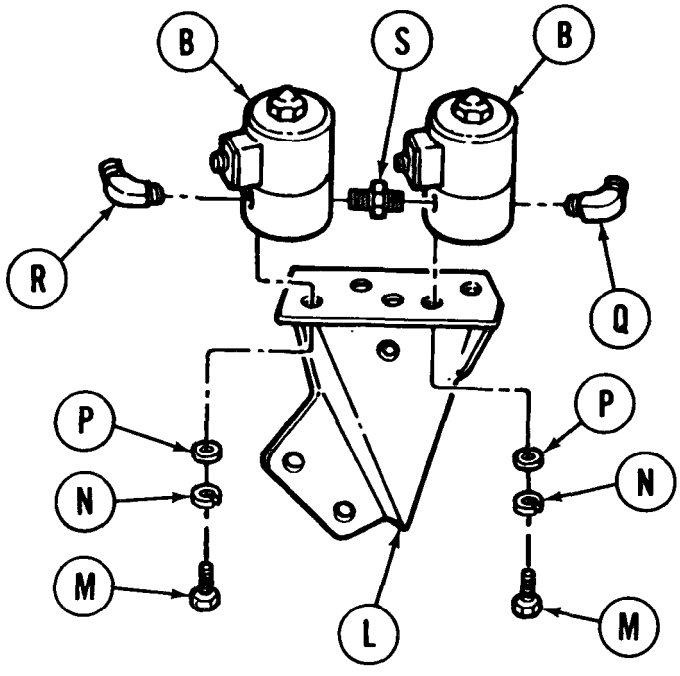


1. Manually disconnect electrical connectors (A) from solenoids.
2. Using 7/8 inch wrench, disconnect elbow-to-solenoid hose (C) from 90-degree elbow (D).
3. Using 11/16 inch wrench, disconnect output fuel hose (E) from 45-degree elbow (F).
4. Using 7/16 inch wrench to hold screw and 7/16 inch socket and extension on nut, remove nut and screw (G) and remove ground wire (H) from bracket.
5. Using pliers, cut and remove lockwire (J). Throw lockwire away.
6. Using 3/4 inch socket, remove two screws (K) securing bracket (L) to engine.
7. Remove bracket (L) and attached solenoids (B) with fittings as a unit.

Go on to Sheet 3

TA169768

SMOKE GENERATOR SOLENOID REPLACEMENT (Sheet 3 of 5)



8. Using 5/16 inch wrench, remove four screws (M), lockwashers (N), and flat washers (P) securing solenoid valves (B) to bracket (L).

9. Remove solenoid valves (B) with fittings as a unit.

10. Using 3/4 inch wrench, remove 90-degree elbow (Q) from input port of solenoid (B).

11. Using 9/16 inch wrench, remove 45-degree elbow (R) from output port of solenoid (B).

12. Using 5/8 inch wrench, remove nipple (S) from solenoid valves (B).

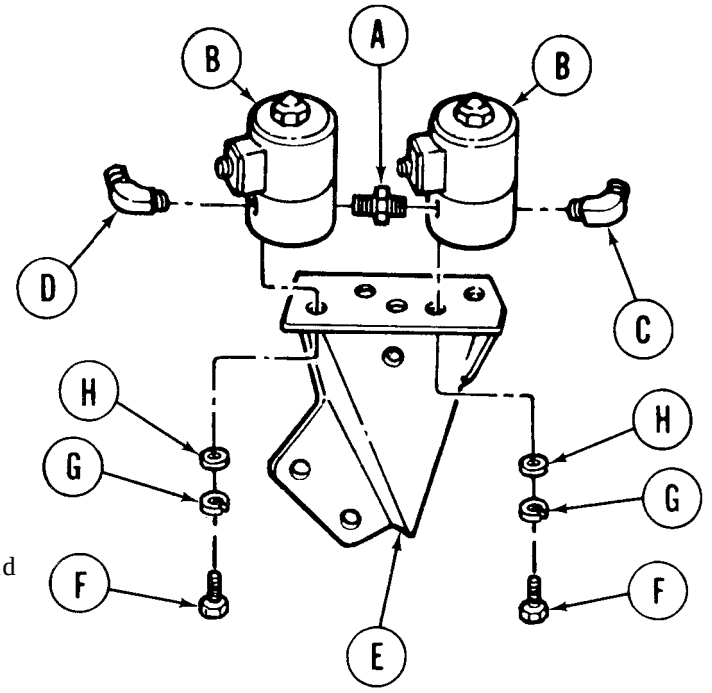
INSTALLATION:

1. Check position of electrical connector on solenoid valves. Hold valve with outlet port to your left. Electrical connector must be 45 degrees from outlet port and pointing toward you. If connector must be repositioned, place valve in soft-jawed vise. Loosen acorn nut on top of valve and rotate connector to correct position. Using 3/4 inch socket and torque wrench, tighten acorn nut to 50 in-lb (5-6 N·m).

Go on to Sheet 4

TA169769

SMOKE GENERATOR SOLENOID REPLACEMENT (Sheet 4 of 5)



2. Lightly coat threads of nipple (A) with oil.

3. Using 5/8 inch wrench, install nipple (A) into input port of one solenoid (B) and into outlet port of the other solenoid (B).

4. Tighten valves securely onto nipple and adjust valves (B) so their bottoms are even with each other.

5. Lightly coat threads of 90-degree elbow (C) and 45-degree elbow (D) with oil.

6. Holding solenoids (B) and nipple (A) assembly in your hand with connector facing toward you, install 90-degree elbow (C) into inlet port of the solenoid (B) on your right. Using 3/4 inch wrench, tighten 90-degree elbow (C) to the approximate one o'clock position.

7. Install 45-degree elbow (D) into outlet port of the solenoid on your left. Using 9/16 inch wrench, tighten 45-degree elbow (D) to the approximate eight o'clock position.

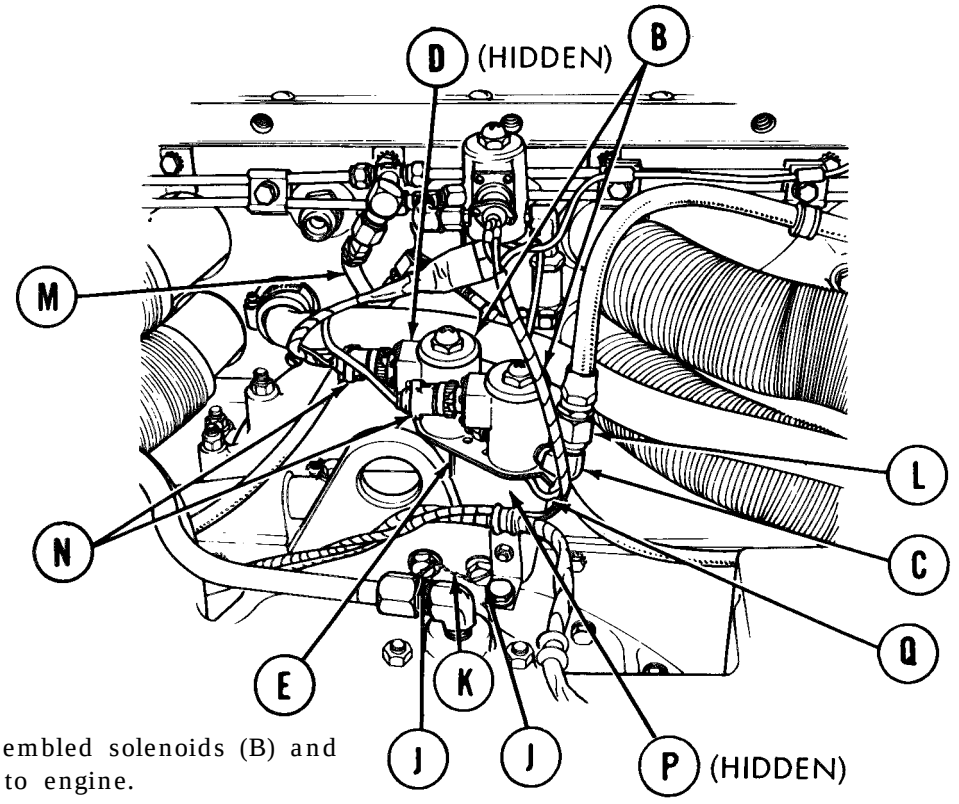
8. Position assembled solenoids (B) and fittings onto bracket (E) with connectors facing toward you.

9. Using 5/16 inch wrench, install and tighten four screws (F), lockwashers (G), and flat washers (H) to secure solenoids (B) to bracket (E).

Go on to Sheet 5

TA169770

SMOKE GENERATOR SOLENOID REPLACEMENT (Sheet 5 of 5)



10. Position assembled solenoids (B) and bracket (E) to engine.

11. Using 3/4 inch socket, install and tighten two screws (J) to secure bracket (E) to engine.

12. Install lockwire (K).

13. Using 7/8 inch wrench, connect elbow-to-solenoid hose (L) to 90-degree elbow (C).

14. Using 11/16 inch wrench, connect output fuel hose (M) to 45-degree elbow (D).

15. Manually connect electrical connectors (N) to solenoids (B).

16. Using 7/16 inch wrench and 7/16 inch socket, install nut and screw (P) to secure ground wire (Q) to bracket (E).

17. Start engine (TM 5-5420-226-10). Run engine until normal operating temperatures are reached. Run engine at 1600 rpm and activate smoke generator. Observe operation. Shut down smoke generator. Shut down engine.

18. Check system for any possible fuel leaks. Correct leaks as necessary.

19. Install engine shroud (page 9-31).

End of Task

TA169771

SMOKE GENERATOR ELBOW-TO-SOLENOID FUEL HOSE REPLACEMENT (Sheet 1 of 2)

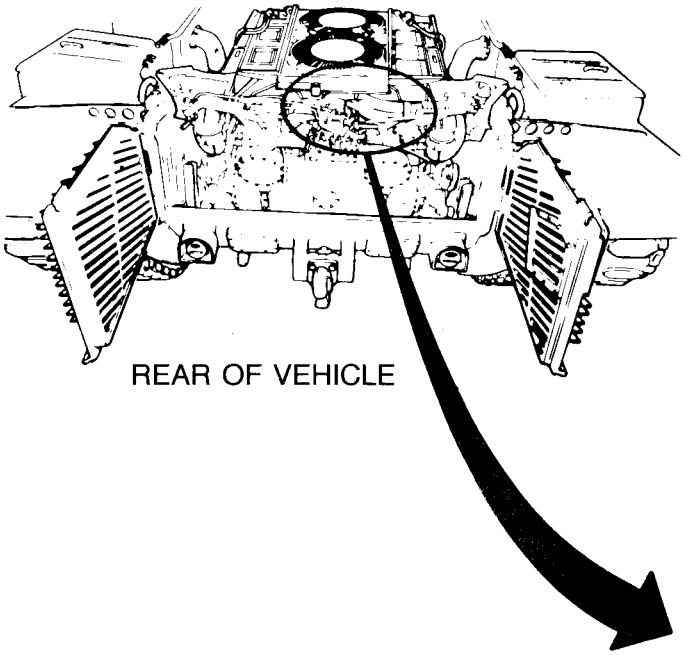
TOOLS: 7/16 in. combination box and open end wrench (2 required)
7/8 in. combination box and open end wrench

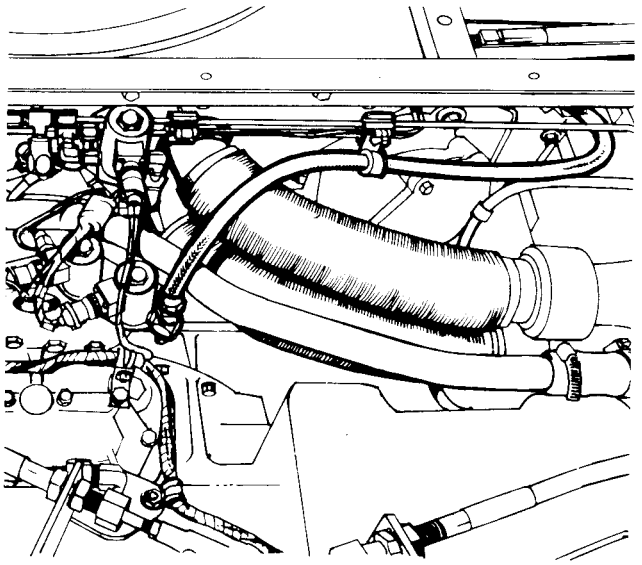
SUPPLIES: Container
Lint-free cloth (Item 12, Appendix D)

REFERENCE: TM 5-5420-226-10

PRELIMINARY PROCEDURE: Remove engine shroud (page 9-30)

REMOVAL:





NOTE

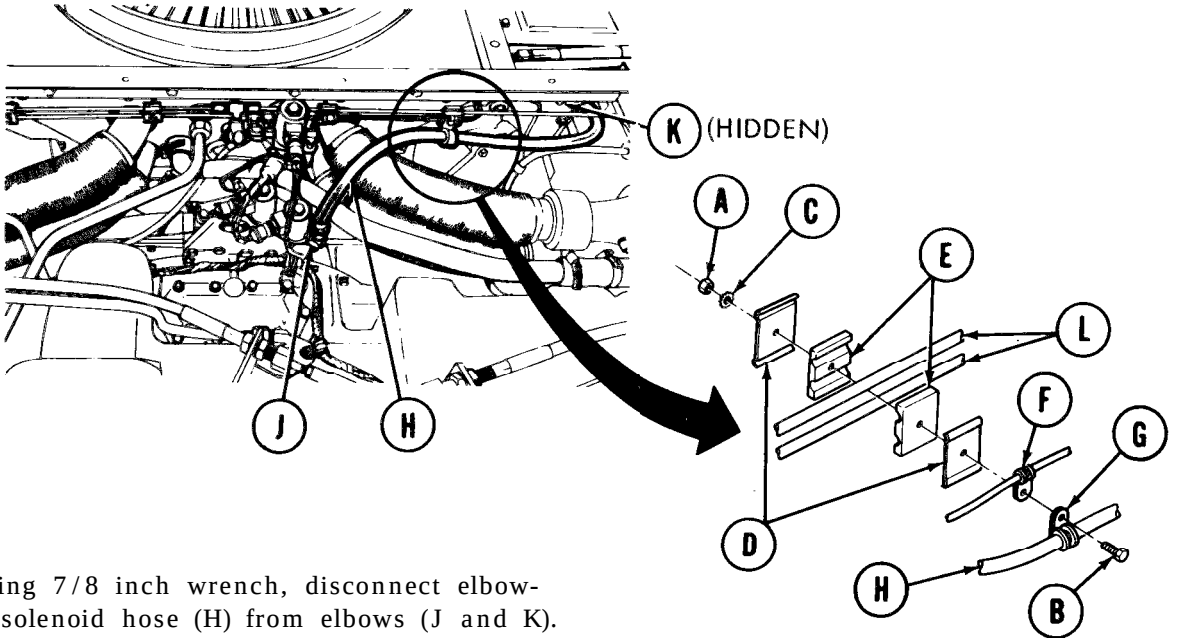
Use suitable container to catch fuel whenever any fuel line connection is loosened or disconnected. Cap all openings to prevent contamination of fuel.

Go on to Sheet 2

TA169772

SMOKE GENERATOR ELBOW-TO-SOLENOID FUEL HOSE REPLACEMENT (Sheet 2 of 2)

1. Using 7/16 inch wrench to hold nut (A) and 7/16 inch wrench on screw (B), remove nut (A), lockwasher (C), and screw (B) securing retaining straps(D), pads (E), and clamps (F and G).
2. Remove retaining straps (13), pads (E), and clamps (F and G).



3. Using 7/8 inch wrench, disconnect elbow-to-solenoid hose (H) from elbows (J and K).
4. Remove elbow-to-solenoid hose (H). Remove clamp (G) from hose (H).

INSTALLATION:

1. Install clamp (G) onto elbow-to-solenoid hose (H).
2. Position and connect elbow-to-solenoid hose (H) to elbows (J and K). Using 7/8 inch wrench, tighten hose (H) connections to elbows (J and K).
3. Install pads (E), retaining straps (D), and clamps (F and G) to tube assemblies (L).
4. Install screw (B), lockwashers (C), and nut (A) to tube assemblies. Using 7/16 inch wrench to hold nut (A) and 7/16 inch wrench on screw, tighten screw (B).

WARNING

Do not activate smoke generator in a building or closed area or with personnel near.

CAUTION

Always be aware of wind direction and speed when using smoke generator.

5. Start engine (TM 5-5420-226-10) and run until normal operating temperatures are attained. Run engine at 1600 rpm and activate smoke generator. Observe operation. Shut off smoke generator. Shut down engine.
6. Check smoke generator lines for leaks. Correct as necessary.
7. Install engine shroud (page 9-31).

End of Task

TA169773

SMOKE GENERATOR SOLENOID OUTPUT FUEL HOSE REPLACEMENT (Sheet 1 of 2)

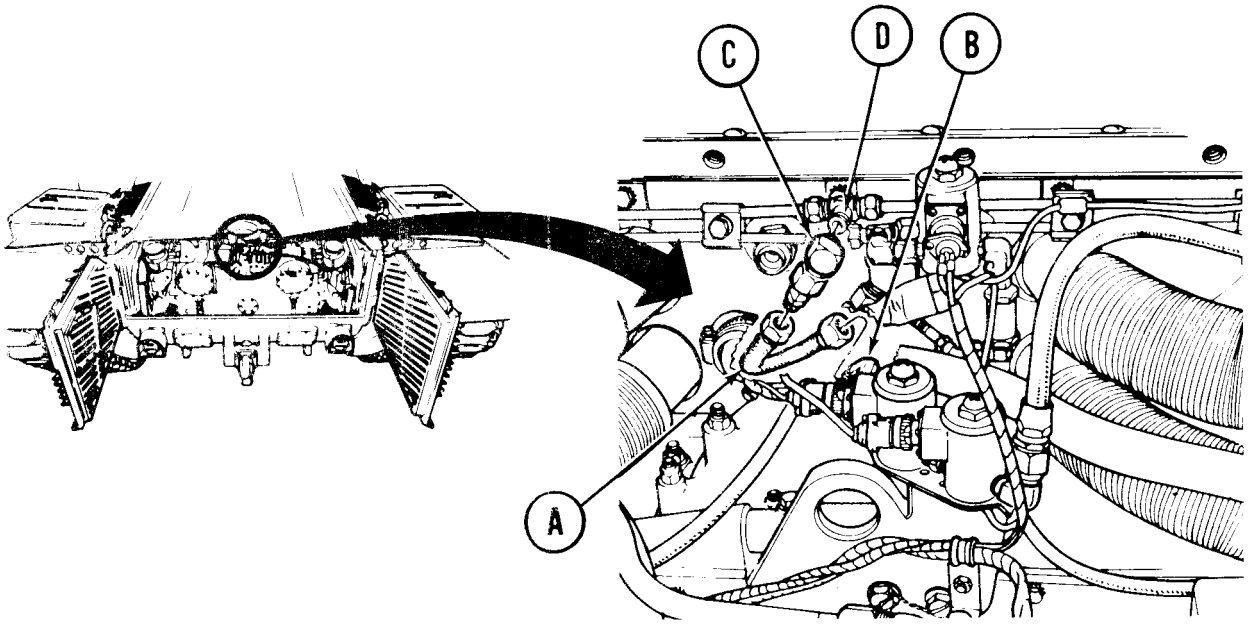
TOOLS: 11/16 in. combination box and open end wrench
3/4 in. combination box and open end wrench

SUPPLIES: Container
Lint-free cloth (Item 12, Appendix D)

REFERENCE: TM 5-5420-226-10

PRELIMINARY PROCEDURE: Remove engine shroud (page 9-30)

REMOVAL:



1. Using 11/16 inch wrench, disconnect output fuel hose (A) from 45-degree elbow (B) and 90-degree elbow (C).
2. Remove hose (A).
3. Inspect 90-degree elbow (C) for cracks or damaged threads.
4. If damaged or defective, using 3/4 inch wrench, remove 90-degree elbow (C) from tee (D) and throw it away.

Go on to Sheet 2

TA169774

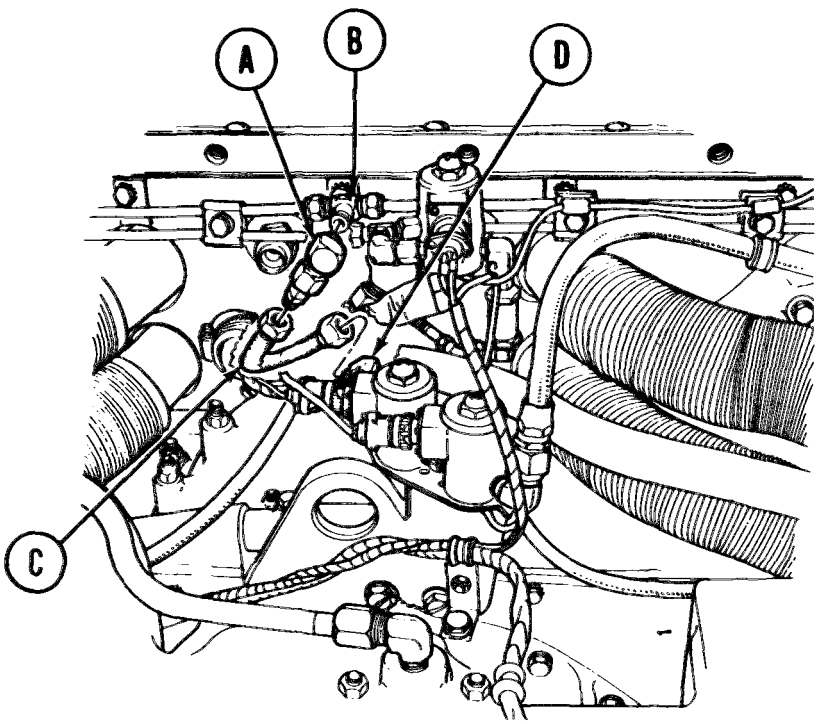
SMOKE GENERATOR SOLENOID OUTPUT FUEL HOSE REPLACEMENT (Sheet 2 of 2)

INSTALLATION:

1. Using 3/4 inch wrench, install 90-degree elbow (A) to tee (B). Adjust elbow to face engine.

2. Position and manually connect hose (C) to 90-degree elbow (A) and 45-degree elbow (D).

3. Using 11/16 inch wrench, tighten hose (C) connectors to elbows (A) and (D).



WARNING

Do not activate smoke generator in a building or closed area or with personnel near.

CAUTION

Always be aware of wind direction and speed when using smoke generator.

4. Start engine (TM 5-5420-226-10) and run until normal operating temperatures are attained. Run engine at 1600 rpm and activate smoke generator. Observe operation. Shut off smoke generator. Shut down engine.

5. Check smoke generator lines for leaks. Correct as necessary.

6. Install engine shroud (page 9-31).

End of Task

TA169775

SMOKE GENERATOR TEE-TO-TURBOSUPERCHARGER TUBE ASSEMBLY REPLACEMENT (Sheet 1 of 5)

PROCEDURE INDEX

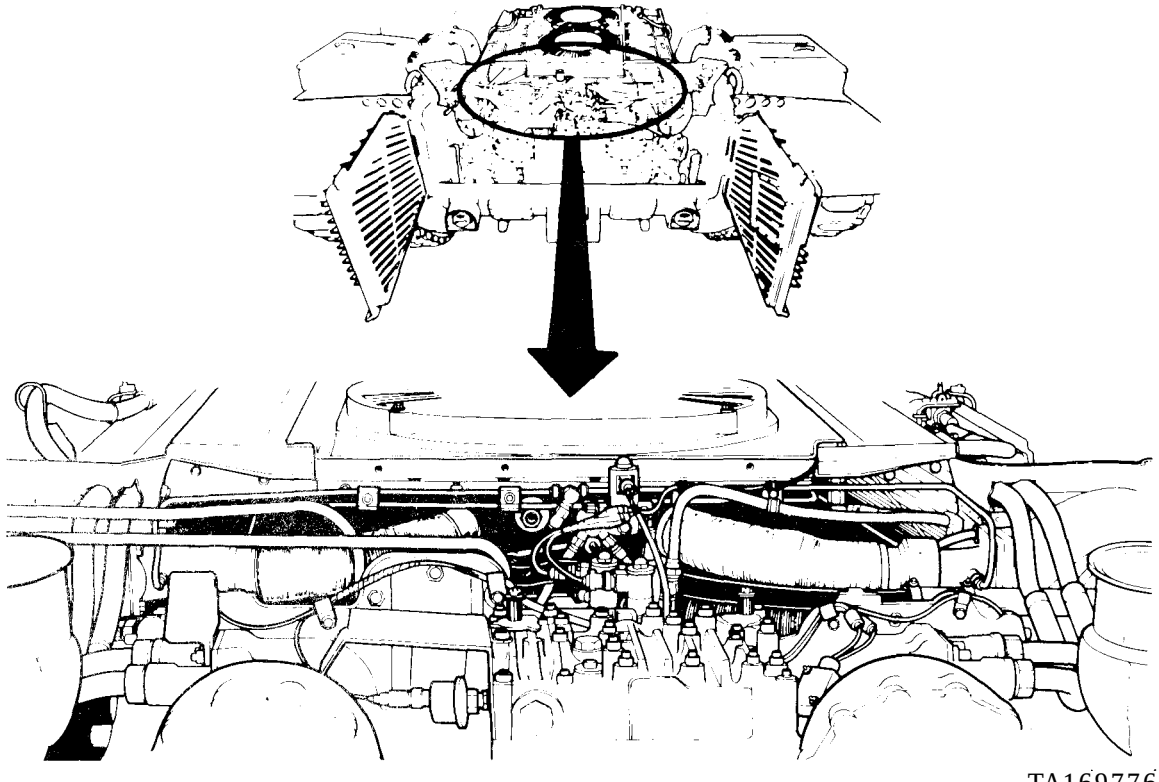
TOOLS: 7/16 in. combination boxand open end wrench (2 required)
1/2 in. combination box and open end wrench
9/16 in. combination boxandopen end wrench (2 required)
11/16 in. combination box and open end wrench
3/4 in. combination box and open end wrench

SUPPLIES: Container
Lint-free cloth (Item 12, Appendix D)

REFERENCE: TM 5-5420-226-10

PRELIMINARY PROCEDURE: Remove engine shroud (page 9-30)

REMOVAL:



TA169776

Go on to Sheet 2

SMOKE GENERATOR TEE-TO-TURBOSUPERCHARGER TUBE ASSEMBLY REPLACEMENT

(Sheet 2 of 5)

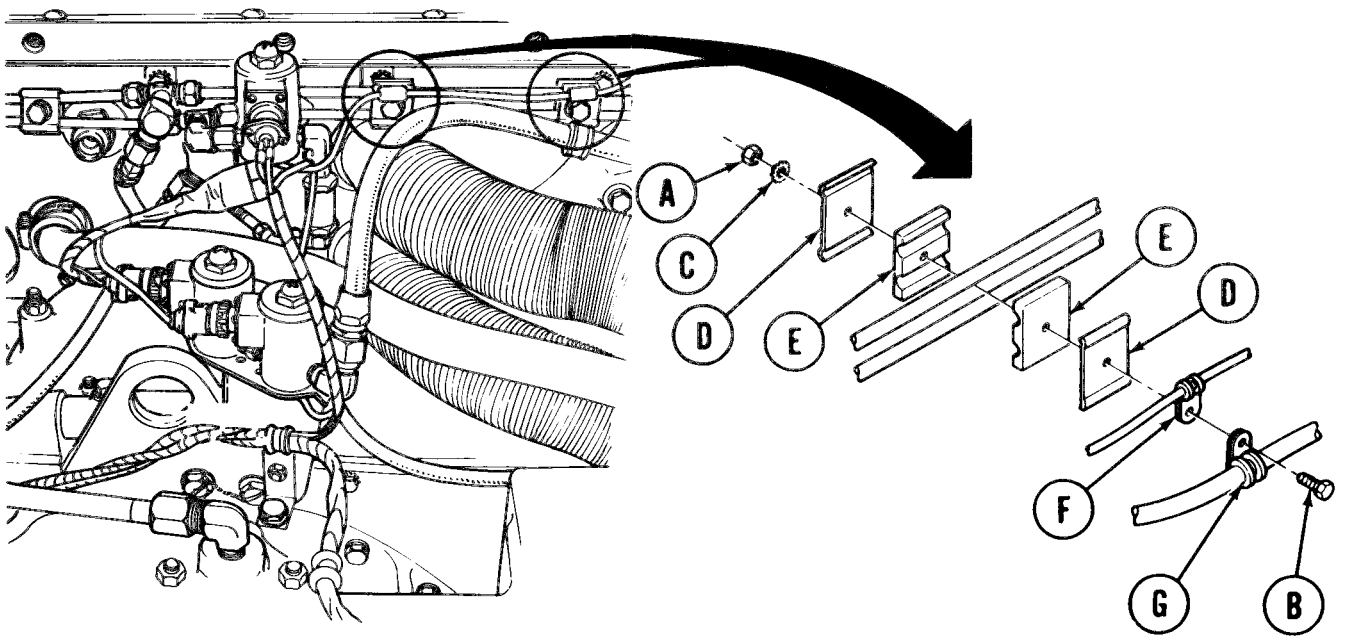
NOTE

Replacement of left or right tube assembly is similar, except as noted. Replacement of right tube assembly is shown.

NOTE

Use suitable container to catch fuel whenever any fuel line connection is loosened or disconnected.

1. Using 7/16 inch wrench to hold nut (A) and 7/16 inch wrench on screw (B), remove screw (B), washer (C), and nut (A) securing retaining straps (D), cushions (E), and clamps (F and G) (two places).



2. Remove two retaining straps (D), two cushions (E), and clamps (F and G) if present.

NOTE

One clamp is used at inner position, two clamps at outer position for right tube installation. No clamps are used on left tube installation.

Go on to Sheet 3

TA169777

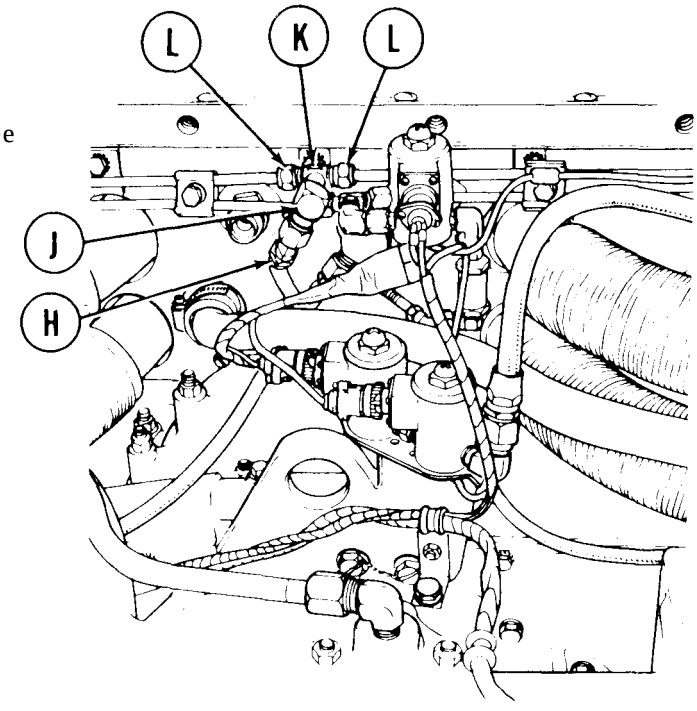
SMOKE GENERATOR TEE-TO-TURBOSUPERCHARGER TUBE ASSEMBLY REPLACEMENT (Sheet 3 of 5)

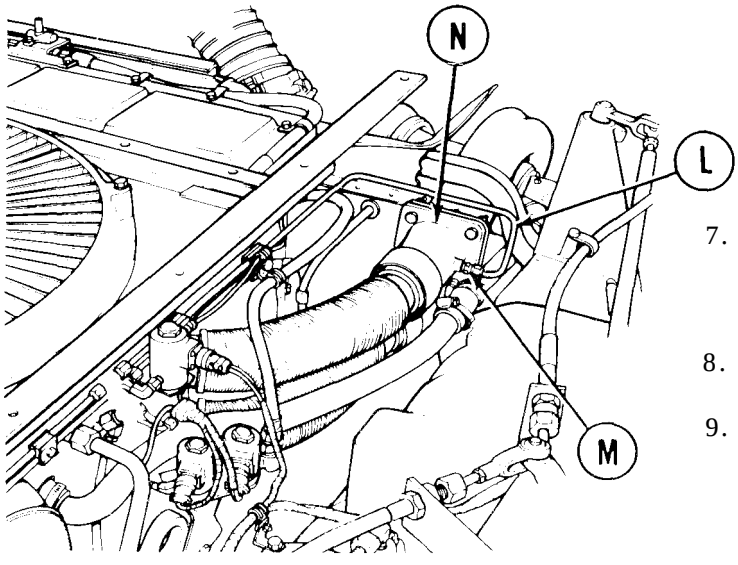
3. Using 11/16 inch wrench, disconnect solenoid output fuel hose (H) from 90-degree elbow (J).

4 Using 3/4inch wrench, remove 90-degree elbow (J) from tee (K).

5. Using 9/16 inch wrench to hold tee (K), use 9/16 inch wrench and disconnect tubes(L) from tee (K).

6. Remove tee (K).





7. Using 1/2 inch wrench to hold adapter (M), use 9/16 inch wrench and disconnect tube (L) from adapter (M).

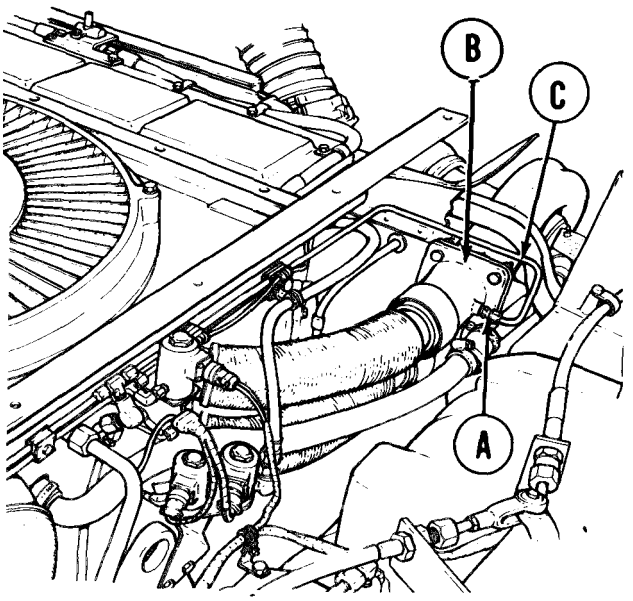
8. Remove tube (L).

9. Inspect adapter (M) in turbosupercharger elbow (N) for cracks or damaged threads. If defective, use 1/2 inch wrench and remove adapter (M) and throw it away.

Go on to Sheet 4

TA169778

SMOKE GENERATOR TEE-TO-TURBOSUPERCHARGER TUBE ASSEMBLY REPLACEMENT (Sheet 4 of 5)

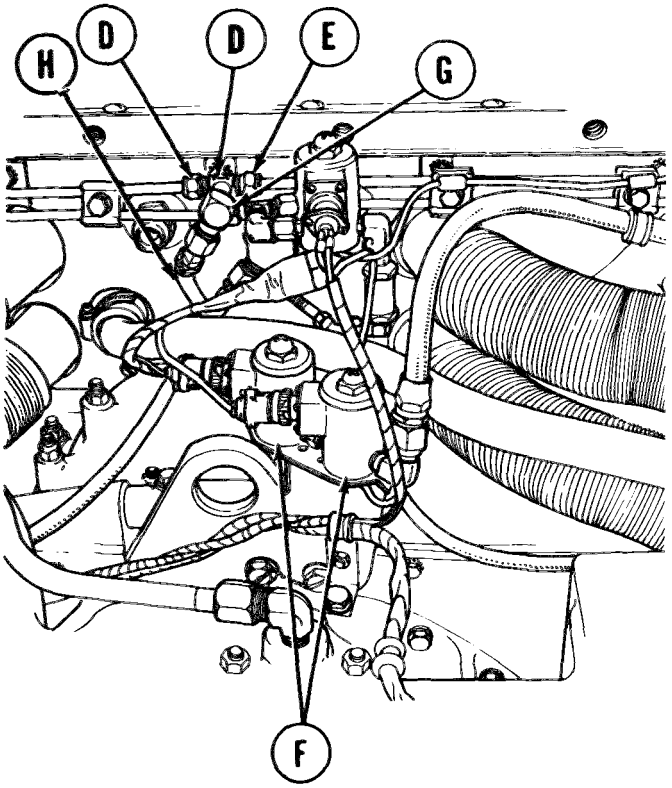


INSTALLATION:

1. If adapter (A) was removed from turbosupercharger elbow (B), remove adapter (A) from replacement tube and, using 1/2 inch wrench, install adapter (A) to turbosupercharger elbow (B).

2. If adapter (A) was not removed from turbosuperchager elbow, remove adapter (A) from replacement tube and return adapter to supply.

3. Position tube (C) to engine and manually connect it to adapter (A).



4. Position tee (D) and manually connect tube nuts (E) to tee (D).

5. Position tee (D) so the open port points toward solenoid valves (F).

6. Using 9/16 inch wrench, tighten tube nuts (E) onto tee (D).

7. Using 3/4 inch wrench, install 90-degree elbow (G) to tee (D). Position elbow open port down.

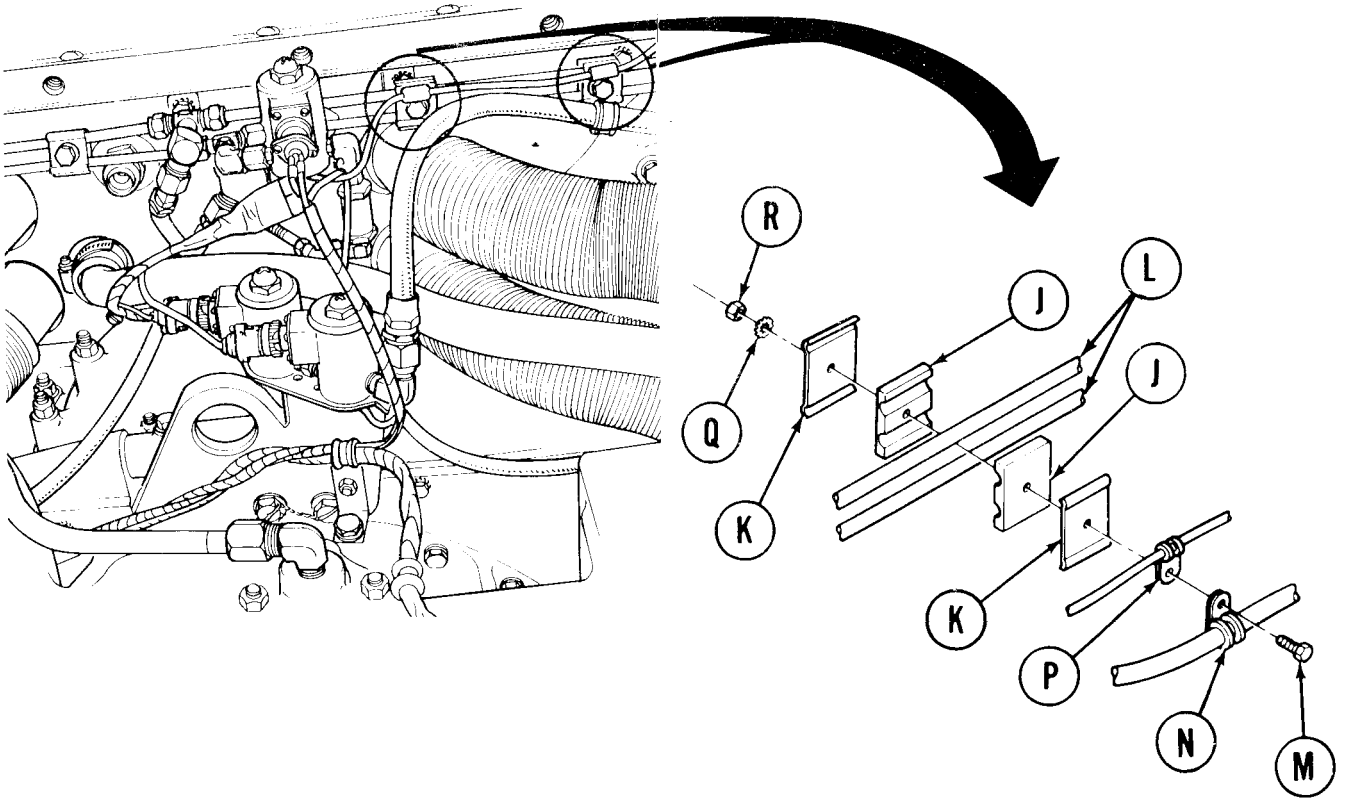
8. Using 11/16 inch wrench, connect solenoid output fuel hose (H) to 90-degree elbow (G).

9. Using 1/2 inch wrench to hold adapter (A) in turbosupercharger elbow (B), use 9/16 inch wrench to tighten tube (C) onto adapter (A).

Go on to Sheet 5

TA169779

SMOKE GENERATOR TEE-TO-TURBOSUPERCHARGER TUBE ASSEMBLY REPLACEMENT (Sheet 5 of 5)



10. Position two cushions (J) and two retaining straps (K) over tubes (L) (two places).

11. Install screw (M) through clamps (N and P), cushions (J), retaining straps (K), washer (Q), and nut (R).

12. Using 7/16 inch wrench to hold nut (R), use 7/16 inch wrench to tighten screw (M) to secure clamps, cushions, and retaining straps.

WARNING

Do not activate smoke generator in a building or closed area or with personnel near.

CAUTION

Always be aware of wind direction and speed when using smoke generator.

13. Start engine (TM 5-5420-226-10) and run until normal operating temperatures are attained. Run engine at 1600 rpm and activate smoke generator. Observe operation. Shut off smoke generator. Shut down engine.

14. Check smoke generator lines for leaks. Correct as necessary.

15. Install engine shroud (page 9-31).

End of Task

TA169780

SMOKE GENERATOR FRONT ENGINE FUEL HOSE REPLACEMENT (Sheet 1 of 4)

PROCEDURE INDEX

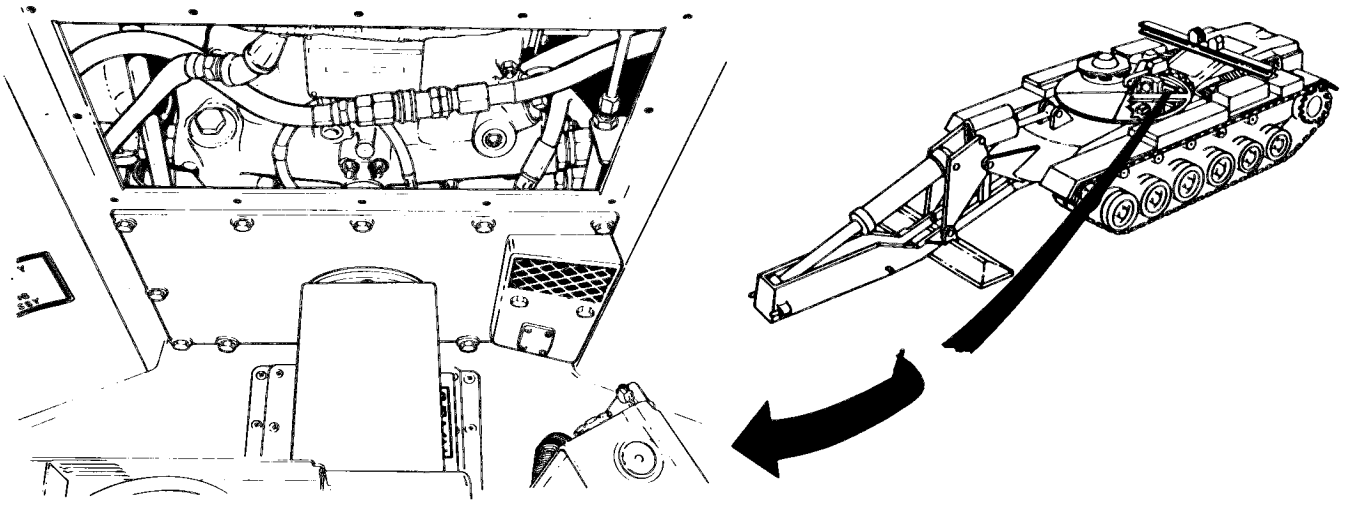
TOOLS: 7/8 in. combination box and open end wrench
1/2 in. socket with 1/2 in. drive
Ratchet with 1/2 in. drive

SUPPLIES: Container
Lint-free cloth (Item 12, Appendix D)

REFERENCE: TM 5-5420-226-10

PRELIMINARY PROCEDURES: Remove upper engine access cover (page 17-14)
Remove engine shroud (page 9-30)

REMOVAL:



NOTE

Use suitable container to catch fuel whenever any fuel line connection is loosened or disconnected. Cap all openings to prevent contamination of fuel.

NOTE

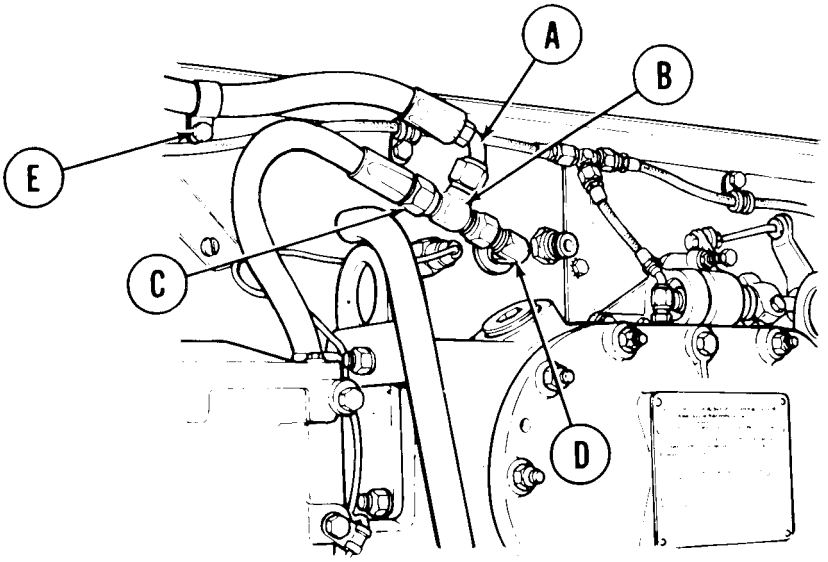
Steps 1 thru 5 are performed from inside of crew compartment.

Go on to Sheet 2

TA169781

SMOKE GENERATOR FRONT ENGINE FUEL HOSE REPLACEMENT (Sheet 2 of 4)

1. Using wrench, disconnect smoke generator fuel hose (A) from tee (B).
2. Using wrench, disconnect fuel water separator hose (C) from tee (B).
3. Using wrench, disconnect tee (B) from bulkhead elbow (D).



4. Inspect threads on tee (B). If damaged in any way, replace.
5. Using socket, remove assembled washer screw (E).

NOTE

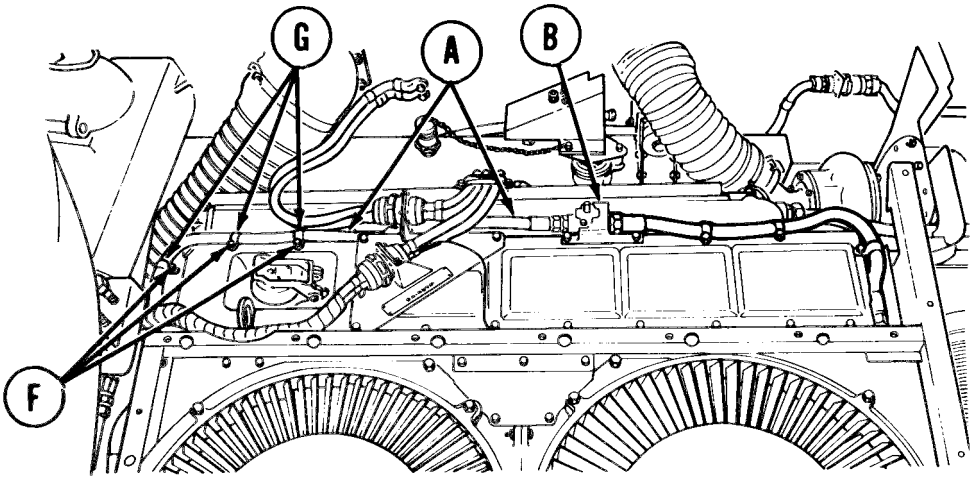
Steps 6 thru 9 are performed from outside and atop engine.

Go on to Sheet 3

TA169782

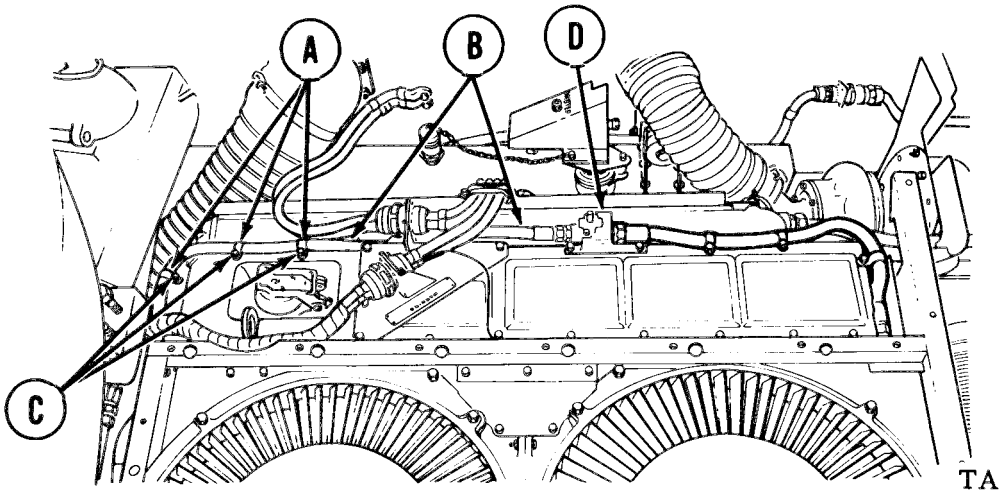
SMOKE GENERATOR FRONT ENGINE FUEL HOSE REPLACEMENT (Sheet 3 of 4)

6. Using socket, remove three assembled washer screws (F) securing clamps (G) to engine.
7. Using wrench, disconnect smoke generator fuel hose (A) from fuel shut-of f valve (B).
8. Remove smoke generator fuel hose (A) from engine.
9. Remove three clamps from hose (G) and throw hose away.



INSTALLATION:

1. Install three clamps (A) onto smoke generator fuel hose (B).
2. Position smoke generator fuel hose (B) under electrical cables and along edge of shroud as indicated.
3. Position clamps (A) along hose (B) and, using socket, install assembled washer screws (C).
4. Remove cap from inlet port of fuel shut-off valve (D) and manually connect smoke generator fuel hose (B) to inlet port of fuel shut-off valve (D). Using wrench, tighten hose (B) to fuel shut-off valve (D).

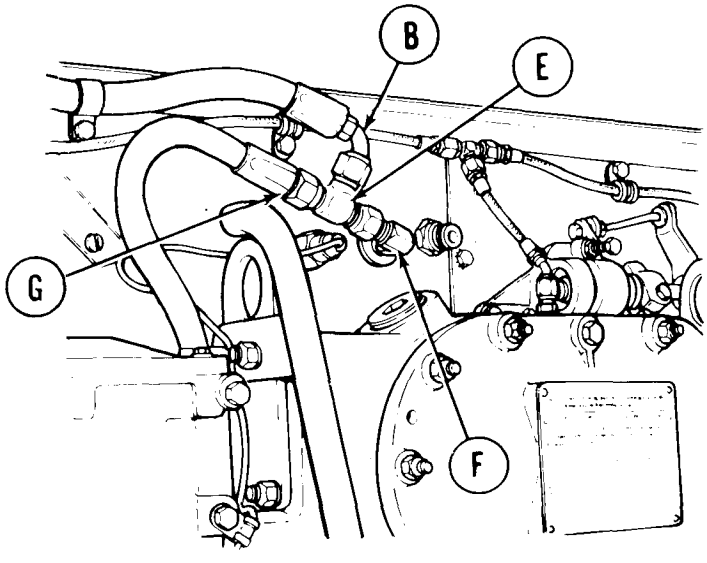


TA169783

Go on to Sheet 4

SMOKE GENERATOR FRONT ENGINE FUEL HOSE REPLACEMENT (Sheet 4 of 4)

5. Manually install tee (E) onto bulkhead elbow (F).
6. Manually connect fuel water separator hose (G) onto tee (E).
7. Manually connect smoke generator fuel hose (B) to tee (E).
8. Adjust positions of tee (E) and hoses (B and G) to avoid interference with other parts. Using wrench, tighten tee (E) to elbow (F) and hoses (B and G) to tee (E).



WARNING

Do not activate smoke generator in a building or closed area or with personnel near.

CAUTION

Always be aware of wind direction and speed when using smoke generator.

9. Start engine (TM 5-5420-226-10) and run until normal operating temperatures are attained. Run engine at 1600 rpm and activate smoke generator. Observe operation. Shut off smoke generator. Shut down engine.
10. Check smoke generator fuel lines for leaks. Correct as necessary.
11. Install upper bulkhead engine access cover (page 17-15).
12. Install engine shroud (page 9-31).

End of Task

TA169784

APPENDIX A

REFERENCES

A-1 Publication Index

The following index should be consulted frequently for latest changes or revisions of references given in this Appendix and for new publications relating to material covered in this Technical Manual:

DA PAM 25-30	Consolidated Index of Army Publications and Blank Forms

A-2 Maintenance Forms and Records

DA Form 2028	Recommended Changes to Publications and Blank Forms
DA Form 2404	Equipment Inspection and Maintenance Worksheet
DA Form 2407	Maintenance Request
DA Form 2407-1	Maintenance Request - Continuation Sheet
DA PAM 738-750	The Army Maintenance Management System (TAMMS)
DD Form 1397	Processing and Reprocessing Record for Shipment, Storage and Issue of Vehicles and Spare Engines
SF368	Quality Deficiency Report

A-3 Regulations

AR 75-1	Malfunctions Involving Ammunition and Explosives
AR 385-40	Accident Reporting and Records
AR 746-1	Color, Marking, and Preparation of Equipment for Shipment

A-4 Lubrication

LO 5-5420-226-12	Launcher and M48A5 Tank Chassis, Transporting for Bridge, Armored-Vehicle-Launched, Scissoring Type, Class 60 (NSN 5420-01-076-6096)

A-5 Technical Manuals

TB 43-0213	Corrosion Prevention and Control Including Rustproofing Procedures for Tactical Vehicles and Trailers
TB 746-93-1	Color and Marking of Military Vehicles, Construction Equipment, and Materials Handling Equipment

TB MED 269	Carbon Monoxide: Symptoms, Etiology, Treatment and Prevention of Overexposure
TB MED 524	Occupational and Environmental Health Control of Hazards to Health from Laser Radiation
TM 3-1040-266-20&P	Organizational Maintenance Manual (Including Repair Parts and Special Tools Lists): Launcher, Grenade, Smoke: Screening, RP, M239 (NSN 1040-01-015-0874)
TM 9-214	Inspection, Care, and Maintenance of Antifriction Bearings
TM 9-237	Operator's Manual: Welding Theory and Application
TM 9-238	Deepwater Fording of Ordnance Materiel
TM 9-243	Use and Care of Handtools and Measuring Tools
TM 9-247	Materials Used for Cleaning, Preserving, Abrading, and Cementing Ordnance Materiel and Related Materials Including Chemicals
TM 9-2530-200-24	Standards for Inspection and Classification of Tracks, Track Components and Solid-Rubber Tires (FSC 2530)
TM 9-1375-215-14&P	Operator, Unit, Direct Support & General Support Maintenance Manual Including Repair Parts and Special Tools List for Demolition Kit, Mine Clearing Line Charge (MICLIC)
TM 9-2540-205-24&P	Organizational, Direct Support and General Support Maintenance Manual (Including Repair Parts and Special Tools) for Heaters, Vehicular Compartment (Stewart Warner Model 10560M) (NSN 2540-01-071-0651), (Model 10560M24B1) (2540-01-169-5159), (Model 10560C) (2540-01-083-0691) and (Model 8460C24) (2540-00-854-4449); (Hupp Model MF510A) (2540-00-930-8938), (model MF510B) (2540-01-071-0652) and (Model MF510C (2540-01-162-3834) and (Espar Model V7S) (2540-01-114-7688)
TM 9-4910-571-12&P	Operator's and Organizational Maintenance Manual Including Repair Parts and Special Tools List: Simplified Test Equipment for Internal Combustion Engines - Reprogrammable (STE/ICE-R)
TM 9-6140-200-14	Operator and Organizational Maintenance Manual for Lead-Acid Storage Batteries
TM 10-277	Chemical, Toxicological, and Missile Fuel Handlers Protective Clothing
TM 11-5820-401-12	Operator's and Organizational Maintenance Manual (Including Repair Parts and Special Tools List): Radio Set AN/VRC-12, AN/VRC-43, AN/VRC-44, AN/VRC-45, AN/VRC-46, AN/VRC-47, AN/VRC-48, AN/VRC-49, AN/VRC-54, and AN/VRC-55 MOUNTING MT-1029/VRC and MT-1898/VRC; ANTENNA AT-912/VRC; Control Frequency Selector C-2742/VRC and Control Radio Set C-2299/VRC
TM 11-5855-249-10	Operator's Manual for Viewer, Driver's Night Vision AN/VV-2(V) 1

TM 11-5855-249-23	Organizational and Direct Support Maintenance Manual - Viewer, Driver's Night Vision AN/VVS-2(V) 1
TM 11-5855-249-23P	Organizational and Direct Support Maintenance Repair Parts and Special Tools List (Including Depot Maintenance Repair Parts and Special Tools) for Viewer, Driver's Night Vision AN/VVS-2(V) 1
TM 43-0139	Painting Instructions for Field Use
TM 55-2350-215-10-15	Transportability Guidance Tank, Combat, Full-Tracked, M60 Series
TM 740-90-1	Administrative Storage of Equipment
TM 750-244-6	Procedures for Destruction of Tank - Automotive Equipment to Prevent Enemy Use (U.S. Army Tank-Automotive Command)

A-5 Vehicle Manuals

TM 5-5420-226-10	Operator's Manual Launcher and M48A5 Tank Chassis, Transporting: for Bridge, Armored-Vehicle-Launched, Scissoring Type, Class 60 (5420-01-076-6096)
TM 5-5420-226-24P	Unit, Direct Support and General Support Maintenance Repair Parts and Special Tools List (Including Depot Maintenance Repair Parts) for Launcher and M48A5 Tank Chassis, Transporting: for Bridge, Armored-Vehicle-Launched, Scissoring Type, Class 60 (5420-01-076-6096)
TM 5-5420-227-24	Organizational, Direct Support and General Support Maintenance Instructions for Launcher, M48A5 Tank Chassis, Transporting: for Bridge, Armored-Vehicle-Launched, Scissoring Type, Class 60 (NSN 5420-01-076-6096)

A-6 Supply Catalogs

SC 4910-95-CL-A31	Shop Equipment, Automotive Maintenance and Repair: Field Maintenance, Basic, Less Power (4910-754-0705) (Line Item T24660) and Shop Equipment, Automotive Maintenance and Repair: Field Maintenance, Basic, MAP only (4910-919-0076)
SC 4940-95-CL-A21	Shop Set, Contact and Emergency Repair: Field Maintenance, Less Power (NSN 4940-00-754-0737) (LIN T26030) and Map Only (4940-00-919-0111)

A-7 Field Manuals

FM 3-5	NBC Decontamination
FM 5-20	Camouflage
FM 5-25	Explosives and Demolitions
FM 9-207	Operation and Maintenance of Ordnance Materiel in Cold Weather (0° to -65°F) (-18° to -54°C)
FM 21-11	First Aid for Soldiers
FM 21-40	Chemical, Biological, Radiological and Nuclear Defense

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APPENDIX B

MAINTENANCE ALLOCATION CHART

FOR

M48A5 TANK CHASSIS, TRANSPORTING: FOR BRIDGE, ARMORED-VEHICLE-LAUNCHED SCISSORING TYPE, CLASS 60

Section I. INTRODUCTION

B-1. General.

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

b. Tbe Maintenance Allocation Chart (MAC) in section II designates overall responsibility for the performance of maintenance functions on the identified end item or component. The implementation of the maintenance functions upon the end item or component will be consistent with the assigned maintenance functions.

Section III lists the special tools and test equipment 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.

a. INSPECT. To determine the serviceability of an item by comparing its physical, mechanical and/or electrical characteristics with established standards through examination.

b. TEST. To verify serviceability and comparing those characteristics with prescribed standards.

c. SERVICE. Operations required periodically to keep an item in proper operating condition i.e., to clean (decontaminate) to preserve, to drain, to paint, or to replenish fuel, lubricants, hydraulic fluids, or compressed air supplies.

d. ADJUST. To maintain, within prescibed limits, by bringing into proper or exact position, or by setting the operating characteristics to specified parameters.

e. ALIGN. 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 diagostic equipments used in precision measurement. 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. INSTALL. The act of emplacing, seating, or fixing into position an item, part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system .

h. REPLACE. The act of substituting of a serviceable like type part, subassembly, or module (component or assembly) for an unserviceable counterpart.

i. REPAIR. The application of maintenance service or other maintenance actions to restore serviceability to an item by correcting specific damage, fault, malfuction, or failure in a part, subassembly, module (component or assembly), end item, or system.

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

k. REBUILD. Consists of those service/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 equipments/components.

B-3. Column entries. Columns used in the maintenance allocation chart will be limited to those shown. Entries for these columns are explained below:

. COLUMN 1. Group Number, Column 1 list group numbers, the purpose of which is to identify components, assemblies, subassemblies, and modules with the next higher assembly.

b. COLUMN 2. Component/Assemblv. Column 2 contains the noun names of components, assemblies, subassemblies and modules for which maintenance is authorized.

c. COLUMN 3. Maintenance Functions. Column 3 lists the functions to be performed on the item listed in Column 2.

d. COLUMN 4. Maintenance Categorv. Column 4 specifies, by the listing of a "work time" figure in the appropriate subcolumn(s), the lowest level 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 varies at different maintenance categories, appropriate "work time" figures will be shown for each category. The number of man-hours specified by the "work time" figure represents the average time required to restore an item to a serviceable condition under tvpical field operating conditions. This time includes preparation time, troubleshooting 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.

e. COLUMN 5. Tools and Equipment. Column five (5) specifies by code, those common tool sets and special tools, test, and" support equipment required to perform the designated function.

f. COLUMN 6. Remarks. Column six (6) contains an alphabetic code which leads to the remark in section IV, Remarks, which is pertinent to the item opposite the particular code.

B-4. Column Entries Used in Tool and Test Equipment Requirements.

a. COLUMN 1. Tool or Test Equipment Reference Code. The tool or test equipment reference code correlates with maintenance function on the identified end item or component.

b. COLUMN 2. Maintenance Level. The lowest level 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/NATO Stock Number. The National or NATO 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 1. Reference Code. The code recorded in column 4, section II.

b. COLUMN 2. Remarks. This column lists information pertinent to the maintenance level being performed as indicated in the MAC, section II, column 4.

Section II. MAINTENANCE ALLOCATION CHART

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category* C	O	F	H	D	(5) Tools and equipment	(6) Remarks
	Power Plant Pack), Engine Transmission Assy.	Inspect	.1	).5				134,162,163,165	
		Test		).4				68,125,126,127,128 129,130,132,133 134,162,163,165	
		Service	.2	).8				131,134,162	
		Adjust		).4				85,134,162,163,165	
		Replace		3.0				134,162,163,165	
		Repair		3.5	24.			134,162,163,166, 177,178	A
0100	Engine Assy, Diesel Models AVDS-1790-2D	Inspect		1.0				134,162	
		Test			0.3			1,15,26,42,49,51, 53,127-130,132-134,162,171,177, 178	
		Adjust			2.0			134,162,177,178	
		Replace			24.			134,162,177	
		Repair			8.0	0.0		1-9,12-16,18-38, 40-46,48,49-55, 58,59,127-130, 132-134,136-139, 140-148,162,177, 178,182	B
		Overhaul					297	1-59,127-130,132-134,136-139,140-148,162,182	
0100	Guide Assy, Power Plant Rear-Left and Right	Inspect		).1					
		Replace		).3				162,163	
		Repair		).8				135,162,163	
0106	Frame Assy, Engine, Engine Oil Cooler Support Right	Replace		1.0				162,163	
		Repair			3.0			162,170,177	

*The subcolumns are as follows: C-operator/crew, O-organizational, F-direct support, H-general support, D-Depot

**Indicates WT/MH required

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Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category * C	O	F	H	D	(5) Tools and equipment	(6) Remarks
0106	Frame Assy, Engine Oil Cooler Support Left	Replace		4.0				162,163	
		Repair			3.0			162,170,177	
0106	Oil Cooler Assy, Engine	Inspect	.1	0.3				131,134,162	C
		Service		0.5				131,134,162,163	
		Replace		2.0				134,162,163	
		Repair				3.0		162,177,182	
0106	Valve Assy, Thermostatic Engine Oil Cooler	Inspect		0.3				162	
		Test		0.3				162,163,166	
		Replace		0.5				162	
0106	Filter Assy, Engine, Oil	Inspect		0.5				162	
		Service		0.8				162	
		Replace		1.6				162	
		Repair		2.5				162,163,166	
0106	Oil Pan Assy, Engine Crankcase	Inspect		0.1				134,162	
		Replace				3.0		134,162,177	
		Repair				4.0		162,167,170,177	
0106	Breather Assy, Crankcase Lines	Inspect		0.1				134,162	
		Service		0.3				134,162	
		Replace		2.0				134,162	
0106	Fluid Cooler Assy, Transmission	Inspect	.1	0.1				131,134,162	C
		Service		0.5				131,134,162,163	
		Replace		2.0				134,162,163	
		Repair				3.0		162,177,182	

* The sub columns are as follows: C-operator/crew, O-organizational, F-direct support, H-general support, D-Depot

** Indicates WT/MH required

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Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category * C	O	F	H	D	(5) Tools and equipment	(6) Remarks
0106	Cover Assy, Engine Access (Upper Shroud Left Bank)	Replace		0.				134,162	
		Repair			1.0			162,170	
0106	Cover Assy, Engine Access (Upper Shroud Right Bank	Replace		0.				134,162	
		Repair			1.0			162,170	
0108	Pipe Assy, Exhaust #1,2,3 Left Bank	Inspect		0.				134,162	
		Replace			2.5			134,162,177	
		Repair			3.0			134,162,170,177	
0108	Pipe Assy, Exhaust #4,5,6 Left Bank	Inspect		0.				134,162	
		Replace			2.5			134,162,177	
		Repair			3.0			134,162,170,177	
0108	Pipe Assy, Exhaust #1,2,3, Right Bank	Inspect		0.				134,162	
		Replace			2.5			134,162,177	
		Repair			3.0			134,162,170,177	
0108	Pipe Assy, Exhaust #4,5,6 Right Bank	Inspect		0.				134,162	
		Replace			2.5			134,162,177	
		Repair			3.0			134,162,170,177	
0108	Exhaust Manifold Assy, #1,2,3, Left Bank	Inspect		0.				134,162	
		Replace			2.5			134,162,177	
		Repair			3.0			134,162,170,177	

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot

**Indicates WT/MH required

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Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category* C	O	F	H	D	(5) Tools and equipment	(6) Remarks
0108	Exhaust Manifold Assy, #4,5,6, Left Bank	Inspect		0.1				134,162	
		Replace			2.5			134,162,177	
		Repair			3.0			134,162,170,177	
0108	Exhaust Manifold Assy, #1,2,3, Right Bank	Inspect		0.1				134,162	
		Replace			2.5			134,162,177	
		Repair			3.0			134,162,170,177	
0108	Exhaust Manifold Assy, #4,5,6 Right Bank	Inspect		0.1				134,162	
		Replace			2.5			134,162,177	
		Repair			3.0			134,162,170,177	
0301	Nozzle and Holder Assy, Fuel Injector	Inspect		1.0	1.0			134,162	
		Test			1.0			49,134,171,178	
		Service			**			49,171,178,181	
		Adjust			**			171,178,181	
		Replace			3.0			24,26,42,49,51 134,171	
		Repair			1.0			24,26,42,49,51 134,171,178,181	D
0302	Pump Assy, Fuel Injector	Inspect			1.0			134,162	
		Test				4.0		48,134,171,178, 179,181	
		Calibrate				2.0		48,171,178,179, 181	
		Replace			10.			134,171,178	
		Repair				5.0		48,140-148,171, 178,179,181	
		Overhaul					15.	48,140-148,171, 178,179,181	

*The subcolumns are as follows:
C-operator/crew
O-organizational
F-direct support
H-general support
D-Depot

**Indicates WT/MH required

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Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category* C	O	F	H	D	(5) Tools and equipment	(6) Remarks
0302	Pump Assy, Engine Fuel	Inspect		.3				134,162	
		Test		.3	).5			134,162,163,166	
		Adjust		.1				134,162,163,166	
		Replace		.5				134,162	
0302	Cover Assy, Tank Fuel Pump	Inspect	.5						
		Replace		.0				134,162	
		Repair		.5				134,162,163,166	
0302	Pump Assy, Fuel Tank	Inspect		.3				134,162,163,166	
		Replace		.0				134,162,163,166	
0302	Pump Assy, Fuel (Personnel Heater)	Inspect		.3					
		Test		.3				162,163	
		Service		.3				162,163	
		Replace		.0				162	
		Repair			).0			171,178	
0304	Air Cleaner Assy, Left and Right Armored Top Loader	Inspect	.1	.5				162	E
		Service	.5	.5				162,163	F
		Replace		.0				162,163	G
		Repair		.0	).0			123,162,163,167, 170,171,178	
0304	Filter Assy, Air Cleaner	Inspect	.3	.4				162	E
		Service	.5	.0				162,163	F
		Replace		.0				162	
0304	Blower Assy, Air Cleaner	Inspect		.1				162,163	
		Replace		.7				162	
		Repair			.0			162,171,178	

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot **Indicates WT/MH required

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Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category * C	O	F	H	D	(5) Tools and equipment	(6) Remarks
0304	Lead Assy, Power-Blower Motor	Inspect		).8				162,163	
		Test		).2				163	
		Replace		1.0				162	
		Repair		1.5				162,163	
0304	Lead Assy, Ground-Blower Motor	Inspect		).8				162,163	
		Test		).2				163	
		Replace		1.0				162	
		Repair		..5				162,163	
0304	Door Assy, Armored Top Loading A/C	Inspect		).2				162	
		Replace		).5				162	
		Repair		).8				162,163,167, 170,175	H
0304	Plug Assy, Restriction Indicator Replacement Top Loading A/C (Late Production)	Inspect	0.1						
		Replace		).3				162	
		Repair		).5				162	
0305	Turbo Super-charger Assy, Diesel Eng., Right and Left Bank	Inspect		).3				134,162	
		Replace			3.0			134,162,177	
		Repair				4.0		136-139,162,	
		Overhaul					10.	136-139,162	
0306	Plug Assy, Fuel Tank Relief	Inspect	0.1						
		Replace		).6				162	
		Repair		.0				162,163,166	

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot

**Indicates WT/MH required

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Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Catego C	O	F	H	* D	(5) Tools and equipment	(6) Remarks
0306	Seal Assy, Filler Neck-Right Fuel Tank	Inspect	.1						
		Replace		0.5				162	
		Repair		1.0				162,163,166	
0306	Fuel Tank Assy, Right	Inspect		0.3				134,162	
		Service	.5						
		Replace			18.0			134,162,177	
		Repair		4.0	12.0			134,162,163,167, 170,177	I
0306	Fuel Tank Assy, Left	Inspect		0.3				134,162	
		Service	.5						
		Replace			18.			134,164,162,177	
		Repair		4.0	12.			134,162,163,167 170,177	I
0306	Handle Assy, Fuel Shutoff	Inspect	.1						
		Replace		0.3				162	
		Repair		0.5				162,163,166	
0309	Filter Assy, Fluid Pressure - Fuel Inlet	Inspect		0.2					
		Service		0.7				134,162	
		Replace		5.0				134,162,163	
		Repair		6.0				134,162,163,166	
0309	Filter Assy, Primary Fuel	Inspect		1.0				162	
		Service	.3						
		Replace		9.0				134,162,163	
		Repair		0.3				134,162,163	
0309	Filter Assy, Fuel Water Separator	Inspect		1.0				162	
		Test		0.2				162,163	
		Service	.4	0.4				162	
		Replace		9.0				134,162,163	
		Repair		0.3				134,162,163	

*The subcolumns are as follows: C-operator/crew, O-organizational, F-direct support, H-general support, D-Depot

**Indicates WT/MH required

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Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Categor C	O	F	H	D	(5) Tools and equipment	(6) Remarks
0309	Filter Assy, Intake Manifold	Inspect		0.1				162	
		Service		0.3				162	
		Replace		2.0				162	
		Repair		0.3				162	
0311	Heater Assy, Manifold Air Right Bank	Inspect		0.3				134,162	
		Service		0.3				134,162	
		Replace		8.0				134,162,163	
		Repair		9.0				134,162,163,166	
0311	Heater Assy, Manifold Air Left Bank	Inspect		0.3				134,162	
		Service		0.3				134,162	
		Replace		8.0				134,162,163	
		Repair		9.0				134,162,163,166	
0311	Plug, Ignition Manifold Heater	Inspect		0.3				134,162	
		Service		0.3				134,162,163	
		Replace		8.3				134,162,163	
0311	Fuel Nozzle Assy, Manifold Heater	Inspect		0.3				134,162	
		Service		0.3				134,162	
		Replace		9.0				134,162,163	
		Repair		1.0				134,162,163	
0311	Pump Assy, Fuel Primer Purge)	Inspect		0.3				162,163	
		Replace		1.0				162,163	
		Repair			2.0			162,171,178	
0311	Valve Assy, Inlet Fuel Primer Pump	Replace			6.0				
		Repair			6.0			162,171,178	
0311	Valve Assy, Outlet Fuel Primer Pump	Replace			6.0				
		Repair			6.0			162,171,178	

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot

**Indicates WT/MH required

TA169793

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maint enance function	(4) Maintenance Category* C	O	F	H	D	(5) Tools and equipment	(6) Remarks
0311	Rod Assy, Pump Piston-Fuel Primer	Replace			6.0				
		Repair			6.0			162,171,178	
0311	Rod Sub-Assy, Fuel Primer Pump	Inspect			5.0			171,178	
		Repair			6.0			171,178	
0312	Housing Assy, Bearing Unit Accelerator and Throttle	Inspect		0.3					
		Replace		1.5				162	
		Repair		5.5				162,163	
0312	Lever Assy, Control Rod-Accelerator	Inspect		0.2					
		Replace		0.5				162	
		Repair		1.0				162,163	
0312	Flange Assy, Bulkhead, Accelerator control	Inspect		0.2					
		Replace		2.0				162	
		Repair		2.0					
0312	Linkage Assy, Accelerator Control Engine Compartment	Inspect			0.3			134,162	
		Repair			1.0			134,162,163	
0312	Tube Assy, Linkage Assy to Clevis	Inspect			0.2			134,162	
		Replace			1.0			134,162	
		Repair			1.0			134,162,163	
0312	Tube Assy, Rear Riser Linkage Assy	Inspect			0.2			134,162	
		Replace			1.0			134,162	
		Repair			1.0			134,162,163	

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot

**Indicates WT/MH required

TA169794

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Categ* C	O	F	H	D	(5) Tools and equipment	(6) Remarks
0401	Exhaust Pipe Assy, Engine	Inspect		).3				134,162	
		Service		).3				134,162,163	
		Replace		).5				134,162,163	
		Repair		2.0				134,162,163,168	
0401	Cover (Cap) Assy, Engine Exhaust Outlet Protector	Inspect		.1				162	
		Replace		.5				162	
		Repair		.5				162,163	
0502	Support Assy, Front Engine Shroud	Inspect		).2				134,162	
		Replace		2.6				134,162	
		Repair		4.0				134,162,163,166	
0502	Support Assy, Rear Engine Shroud	Inspect		).2				134,162	
		Replace		2.6				134,162	
		Repair		4.0				134,162,163,166	
0502	Shroud Assy, Engine	Inspect		).3				134,162	
		Replace		.0				134,162	
		Repair		2.5				134,162,163,166	
0502	Cover Assy, Engine Access-Left	Inspect		).1				134,162	
		Replace		).4				134,162	
		Repair		).8				134,162,163,166	
0502	Cover Assy, Engine Access-Right	Inspect		).1				134,162	
		Replace		).4				134,162	
		Repair		).8				134,162,163,166	

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot

**Indicates WT/MH required

TA169795

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Catego * C	O	F	H	D	(5) Tools and equipment	(6) Remarks
0502	Shroud Assy, Engine Cooling Fan	Inspect		0.				134,162	
		Replace		3.				134,162	
		Repair			4.0			134,162,167,170	
0502	Shroud Plate Assy, Engine Left Bank Damper End	Inspect		0.				134,162	
		Replace			4.0			134,162	
		Repair			4.5			134,162,167,170	
0502	Shroud Plate Assy, Turbocharger - Left Bank Inner	Inspect		0.				134,162	
		Replace			4.0			134,162	
		Repair			4.5			134,162,167,170	
0502	Shroud Plate Assy, Turbocharger - Right Bank Inner	Inspect		0.				134,162	
		Replace			4.0			134,162	
		Repair			4.5			134,162,167,170	
0502	Shroud, Cooling Left Bank Lower	Inspect		0.				134,162	
		Replace			4.0			134,162	
		Repair			4.5			134,162,167,170	
0505	Fan Tower Assy, Engine Cooling	Inspect		0.				134,162	
		Test		0.				43,134,162	
		Repair		4.	5.0	5.(		31,41,43,48,63, 162,166,173,177	
0505	Housing Assy, Mech. Drive Cooling Fan Base Forward	Inspect		0.				134,162	
		Test		0.				43,134,162	
		Replace				4.(		31,41,43,48,134, 162,173,177	
		Repair				6.(		31,41,43,48,134, 162,173,177	

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot

**Indicates WT/MH required

TA169796

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category * C	O	F	H	D	(5) Tools and equipment	(6) Remarks
0505	Clutch Assy, riction an Drive	Inspect		.0				134,162,163	
		Replace			1.0			63,134,173,177	
		Repair			).0			63,134,173,177	
0505	Retainer and Oil eal Assy, Fan)rive	Inspect		.0				134,162	
		Replace		.0				31,134,162	
		Repair		:.0				31,43,134,162, 163,166	
0601	Generator, Engine Accessory 300 amp (10889713)	Inspect		).3				134,162,163	
		Test		).3	).8			134,162,163,171, 178,181	
		Replace		.0.(				125-130,132-134, 162,163	
		Repair			2.0			171,178,179,181	
		Overhaul				**	**	162,171,178,179, 181	
0601	Generator Assembly 10898795)	Inspect			).3			178	
		Replace			2.0			171,178	
		Repair			1.5			171,178,181	
0601	Filter, Radio nterference 8745469)	Inspect			0.3			178	
		Replace			0.8			171,178	
		Repair			0.8			171,178,181	
0601	End Bell, Electrical Brush and Bearing Holder Assembly 8344709)	Replace			0.5			171,178	
		Repair			0.6			171,178	

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot

**Indicates WT/MH required

TA169797

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category* C	O	F	H	D	(5) Tools and equipment	(6) Remarks
0601	Brush Holder Assembly (G22-44)	Replace			0.2			171,178	
		Repair			0.3			171,178	
0601	Fan, Tube Axial (10898759)	Replace			0.3			171,178	
		Repair			0.3			171,178	
0601	Motor, Fan (10898760)	Replace			0.3			171,178	
		Repair			0.3			171,178,181	
0602	Regulator Assy, Voltage Control 300A (Carbon Pile)	Inspect		).1				162,163	
		Test		).3				162,163,164	
		Replace		:.0				162	
0602	Control Box Assy, Voltage (With Carbon Pile Reg)	Inspect		).1				162,163	
		Test		).3				162,163,164	
		Adjust		).5				162,163,164	
		Replace		:.0				162	
0602	Regulator Assy, Voltage Control-300A Solid State	Inspect		).3				162,163	
		Test		).3	0.5			162,163,171, 178,179	
		Replace		:.0				162	
		Repair					1.0	171,178,179,181	
0603	Starter Assy, Engine Electric (8712242)	Inspect		).3				134,162,163	
		Test			0.3			162,163,171,178	
		Replace		10.(				52,125-130,132-134,162,163	
		Repair			2.4			171,178,179,181	
		Overhaul							

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot

* *Indicates WT/MH required

TA169798

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category* C	O	F	H	D	(5) Took and equipment	(6) Remarks
0603	Relay/Solenoid Assy, Starter (7748640)	Replace			3.0			171	
		Repair			1.5			171,178	
0603	Plate, Commutator End (1953226)	Replace			2.0			171	
		Repair			2.0			171,178	
0603	Plate, Commutator End (1953227)	Replace			2.0			171	
		Repair			2.0			171,178	
0603	Plate, Commutator (1953228)	Replace			1.0			171	
		Repair			1.0			171,178	
0603	Holder Assembly, Electrical (7748633)	Replace			2.0			171	
		Repair			2.0			171,178	
0603	Housing, Engine Drive Starter	Replace			3.0			171	
		Repair			3.5			171,178	
0603	Housing Assy, Lever Starter	Replace			3.0			171	
		Repair			3.5			171,178	
0607	Panel Assembly, Gage, Indicator (10915377)	Inspect	0.3						
		Test		0.3				162,163	
		Replace		0.3				162	
		Repair		4.0				162,163,166	
0607	Wiring Harnesses Assy, Instrument Panel (10915380)	Replace		1.5				162,163	
		Repair		2.5				162,163	

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot

**Indicates WT/MH required

TA169799

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category* C	O	F	H	D	(5) Took and equipment	(6) Remarks
0607	Connector Assembly, Panel, Gage Instrument Panel Wiring Harness (7722353)	Replace		1.5				162,163	
		Repair		1.5				162,163	
0607	Cable Assy, Fuel Tank Selector Switch-Instrument Panel (8762440)	Replace		1.0				162,163	
		Repair		1.5				162,163	
0607	Lamp Assy, Indicator Panel (8376500)	Replace		1.0				162,163	
		Repair		1.5				162,163	
0607	Panel Assy, Master Control (12251968)	Inspect	0.3						
		Test		0.3				163	
		Repair	0.1	4.0				162,163	
0607	Lamp Assy, Personnel Heater Indicator (10883766)	Replace		1.0				162	
		Repair	0.5	1.5				162,163	
0607	Utility Outlet Assy, Master Control Panel (10905682)	Replace		1.0					
		Repair		1.0				162,163	
0607	Base Assy, Indicator Bilge Pump, CBR, IR Pwr, Master Battery, Master Control Panel (10933573)	Inspect	0.3						
		Replace		0.3				162	
		Repair		4.0				162,163	

*The subcolumns are as follows:

C-operator/crew
O-organizational
F-direct support
H-general support
D-Depot

**Indicates WT/MH required

TA169800

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category* C	O	F	H	D	(5) Tools and equipment	(6) Remarks
0607	Wiring Harness (Lead) Assy, Fuel (Pump) Shut-off Master Control Panel (10911164)	Test		0.5				162,163	
		Replace		0.7				162,163	
		Repair		1.5				162,163	
0607	Wiring Harness (Cable) Assy, Personnel Heater Master Control Panel (10911158)	Test		0.5				162,163	
		Replace		0.5				162,163	
		Repair		1.0				162,163	
0607	Cable Assy, Gas Particulate Switch, Master Control Panel (10933669)	Test		0.5				162,163	
		Replace		0.5				162	
		Repair		1.0				162,163	
0607	Lamp Assy, High Beam Indicator, Master Control Panel (8737689)	Replace		1.0				162	
		Repair		1.5				162,163	
0607	Guard Assy, Switch, Master Control Panel (10883897)	Replace		0.5				162,163	
		Repair		0.7				162,163	
0607	Wiring Harness, Power, Master Control Panel (11655748)	Replace		1.0				162	
		Repair		1.5				162,163	
0607	Connector Assembly, Receptacle, Panel, Power Wiring Harness (7971515)	Replace		1.0				162,163	
		Repair		1.0				162,163	

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot

**Indicates WT/MH required

TA169801

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category * C	O	F	H	D	(5) Took and equipment	(6) Remarks
0607	Wiring Harness, Starting, Master Control Panel (10911166)	Replace Repair		1.0 1.5				162 162,163	
0607	Connector Assembly, Receptacle, Panel, Starting Wiring Harness (7722354)	Replace Repair		1.0 1.0				162,163 162,163	
0607	Wiring Harness, Accessories, Master Control Panel (11655749)	Replace Repair		1.0 1.5				162 162,163	
0607	Connector Assembly, Receptacle, Panel, Accessories, Wiring Harness (7716794)	Replace E&lair		1.0 1.0				162,163 162,163	
0607	Wiring Harness, Heater, Master Control Panel (10911163)	Replace Repair		1.0 1.5				162 162,163	
0607	Connector Assembly, Panel Heater Wiring Harness (7716785)	Replace Repair		1.0 1.0				162,163 162,163	
0608	Power Supply Asy, IR High Voltage Drivers	Inspect Test Replace Repair		0.5 0.5 0.5	 2.0			163 163 162 162,163	

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot

**Indicates WT/MH required

TA169802

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category* C	O	F	H	D	(4) Tools and equipment	(6) Remarks
0608	Power Supply Sub Assy, High Voltage	Replace		1.0				162	
		Repair			2.0			171,178	
0608	Base Lamp Holder Assy, Spare Headlamp Stowage	Replace		0.3				162	
		Repair		0.5				162,163	
0609	Domelight Assy, Driver's	Inspect	0.1						
		Replace		0.7				162	
		Repair	0.2	1.5				162,163	
0609	Headlight Assy, Left and Right (7972325)	Inspect	0.3						
		Service		0.3				162	
		Adjust		0.5				162,163	
		Replace		1.5				162	
		Repair		2.0				162,163	
0609	Base Assembly, Headlight Left and Right (7972347)	Replace		1.5				162,163	
		Repair		1.5				162,163	
0609	Base Assembly, Headlight Left and Right (7972352)	Replace		1.5				162,163	
		Repair		1.5				162,163	
0609	Lamp Assembly, Left Taillight - Stop Light (8378785)	Inspect	0.3						
		Service		0.3				162	
		Replace		1.5				162	
		Repair		2.0				162,163	
0609	Door Assy, Left Taillight - Stop Light (7526020)	Replace		0.5				162	
		Repair		0.7				162	

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot

**Indicates WT/MH required

TA169803

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category * C	O	F	H	D	(5) Tools and equipment	(6) Remarks
0609	Lamp Assembly, Right Taillight-Stop Light (8378786)	Inspect	0.3						
		Service		0.3				162	
		Replace		1.5				162	
		Repair		2.0				162,163	
0609	Door Assy, Right Taillight - Stop Light (7526018)	Replace		0.5				162	
		Repair		0.7				162	
0610	Units, Sending, Engine and Transmission	Inspect		0.5				125-130,132-134 162	
		Test		0.3				125-130,132-134 162,163	
		Replace		0.8				125-130,132-134 162	
0612	Battery, Vehicle 12V Type	Inspect	0.4						
		Test		0.3				163	
		Service	0.4						
		Replace		1.5				162,163	
0612	Frame Assembly, Battery	Inspect		0.3					
		Service		2.0				162	
		Replace		3.0				162	
		Repair		2.0				162,165,167	J
0612	Lead Assy, Battery Jumper (12257348)	Inspect		0.1					
		Replace		0.3				162	
		Repair		0.6				162,163	
0613	Wiring Harness, Starter Feed, Bulkhead to Engine Disconnect (11655652)	Inspect		2.0				162	
		Test		0.5				162,163	
		Replace			2.5			134,162,171,178	
		Repair		1.0	3.5			134,162,163,171 178	R

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot **Indicates WT/MH required

TA169804

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category * C	O	F	H	D	(5) Tools and equipment	Remarks
0613	Connector Assembly, Plug, Bulkhead, Starter Feed, Wiring Harness (8395480)	Replace		1.0				162,163	
		Repair		1.0				162,163	
0613	Connector Assembly, Shell, Engine Disconnect, Starter Feed Wiring Harness (8724404)	Replace		1.0				162,163	
		Repair		1.0				162,163	
0613	Wiring Harness, Starter Feed, Engine Disconnect to Starter (11655450)	Inspect		3.0				134,162,163	
		Test		0.5				162,163	
		Replace		2.5				134,162,163	
		Repair		3.5				134,162,163,164	
0613	Connector, Receptacle, Wiring Harness, Starter Feed, Engine Disconnect (7388353)	Replace		2.5				134,162,163	
		Repair		2.7				134,162,163,164	
0613	Wiring Harness, Heater Control, Heater-to-Basket Disconnect (12257347)	Inspect		0.2				162,163	
		Test		0.3				162,163	
		Replace			8.0			162,171,177,178	
		Repair		0.5	1.5			162,163,171,178	R
0613	Wiring Harness Assy, Rear Accessory (10916916)	Inspect		2.0				162	
		Test		0.3				162,163	
		Replace			8.0			134,162,171,178	
		Repair		1.5	2.5			134,162,163,171, 178	R

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot **Indicates WT/MH required

TA169805

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category * C	O	F	H	D	(5) Tools and equipment	(6) Remarks
0613	Connector Assembly, Shell, Bulkhead, Rear Accessory Harness (8724258)	Replace		1.0				162,163	
		Repair		1.0				162,163	
0613	Wiring Harness Assy, Front Accessory (12257280)	Inspect		2.0				162	
		Test		0.3				162,163	
		Replace			3.0			162,171,178	
		Repair		1.5	2.5			162,163,171,178	R
0613	Connector Assembly, Basket, Indicator Panel, Front Accessory Harness (8724244	Replace		1.0				162,163	
		Repair		1.0				162,163	
0613	Connector Assembly, Basket, Accessory Contro Panel, Front Accessory Harnes (8724257)	Replace		1.0				162,163	
		Repair		1.0				162,163	
0613	Connector Assembly, Basket, Light Switch, Front Accessory Harness (8724258	Replace		1.0				162,163	
		Repair		1.0				162,163	
0613	Connector Assembly, Basket, Starting, Control Panel, Front Accessory Harnes (8724243)	Replace		1.0				162,163	
		Repair		1.0				162,163	

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot **Indicates WT/MH required

TA169806

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Categ * C	O	F	H	D	(5) Tools and equipment	(6) Remarks
0613	Connector Assembly, Foot Dimmer Switch, Front Accessory Harness (8724244)	Replace		1.0				162,163	
		Repair		1.0				162,163	
0613	Connector Assembly, Bulkhead, Rear Accessories, Front Accessory Harness (7716793)	Replace		1.0				162,163	
		Repair		1.0				162,163	
0613	Connector Assembly, Bulkhead, Engine Accessories, Front Accessory Harness (7716794)	Replace		1.0				162,163	
		Repair		1.0				162,163	
0613	Connector Assembly, Voltage Regulator, Front Accessory Harness (8724405)	Replace		1.0				162,163	
		Repair		1.0				162,163	
0613	Connector Assembly, Fire Extinguisher and Fuel Shutoff Relay, Front Accessory Harness (8724231)	Replace		1.0				162,163	
		Repair		1.0				162,163	
0613	Connector Assembly, Air Cleaner Blower Motor Relay, Front Accessory Harness (8724238)	Replace		1.0				162,163	
		Repair		1.0				162,163	

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot **Indicates WT/MH required

TA169807

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Numbe	(2) Component/ Assembly	(3) Maintenanc function	(4) Maintenance Category * C	O	F	H	D	(5) Tools and equipment	(6) Re marks
0613	Connector Assembly, Bulkhead, Power Relay, Front Accessory Harness (7716780	Replace		1.0				162,163	
		Repair		1.0				162,163	
0613	Wiring Harness Assy, Hull Power (11676288)	Inspect		0.3				162	
		Test		0.3				162,163	
		Replace			8.(			162,171,178	
		Repair		1.5	3.5			162,163,171,178	R
0613	Connector Assembly, Shell, Hull Power-to-Interconnecting Box Cable (8724242)	Replace		1.0				162,163	
		Repair		1.0				162,163	
0613	Connector Assembly, Voltage Regulator, Hull Power Wiring Harness (8724406)	Replace		1.0				162,163	
		Repair		1.0				162,163	
0613	Connector Assembly, Master Relay, Hull Power Wiring Harness (8724242)	Replace		1.0				162,163	
		Repair		1.0				162,163	
0613	Connector Assembly, Basket Disconnect, Hull Power Wiring Harness (8724240)	Replace		1.0				162,163	
		Repair		1.0				162,163	

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot **Indicates WT/MH required

TA169808

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Numbe	(2) Component/ Assembly	(3) Maintenanc function	(4) Maintenance Category * C	O	F	H	D	(5) Tools and equipment	(6) Remarks
0613	Cable Assy, Battery Slave (12257278)	Inspect		0.2				162	
		Test		0.3				162,163	
		Replace			8.0			162,171,178	
		Repair		0.5	1.5			162,163,171,178	R
0613	Connector Assembly, Receptacle, Bulkhead Disconnect, Battery Slave Cable (8395481)	Replace		0.5				162,163	
		Repair		0.5				162,163	
0613	Connector Assembly, Receptacle, Slave Connector (MS75058-1)	Replace		0.5				162,163	
		Repair		0.5				162,163	
0613	Connector Assembly, Master Relay, Battery Slave Cable (8724242)	Replace		0.5				162,163	
		Repair		0.5				162,163	
0613	Wiring Harness Assy, Engine Electrical (Power Plant) (11682726)	Inspect		2.0				134,162	
		Test		0.3				162,163	
		Replace		8.0				134,162,163	
		Repair		3.0				162,163	
0613	Connector Receptacle, Engine Disconnect Engine Electrical (7716793)	Replace		2.5				162,163	
		Repair		3.0				162,163	

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot **Indicates WT/MH required

TA169809

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category * C	O	F	H	D	(5) Tools and equipment	(6) Remarks
0613	Connector Plug, Electrical: Starter, Low Voltage Protection, Engine Electrical (8724240)	Replace		1.(				162,163	
		Repair		1.!				162,163	
0613	Connector Plug, Fuel Shut-off Cable, Engine Electrical (8724199)	Replace		1.(				162,163	
		Repair		1.!				162,163	
0613	Connector Receptacle, Transmission Disconnect Engine Electrical (7722353)	Replace		1.(				162,163	
		Repair		1.!				162,163	
0613	Wiring Harness Assy, Transmission (11655457)	Inspect		1.(				162	
		Test		0.3				162,163	
		Replace		8.(				134,162,163	
		Repair		2.!				134,162,163	
0613	Connector Plug, Transmission Disconnect (8724244)	Replace		1.(				162,163	
		Repair		1.!				162,163	
0613	Lead Assembly, Electrical, Generator-to-Engine Disconnect (11682723)	Inspect		2.(				162,163	
		Test		1.(				162,163	
		Replace		8.(				134,162,163	
		Repair		2.(				134,162,163	

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot **Indicates WT/MH required

TA169810

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Numbe:	(2) Component/ Assembly	(3) Maintenanc function	(4) Maintenance Category * C	O	F	H	D	(5) Tools and equipment	(6) Remarks
0613	Connector Assem bly, Receptacle, Engine Disconnect, Generator Lead Assembly (7716781)	Replace		1.0				162,163	
		Repair		1.0				162,163	
0613	Lead Assembly, Electrical, Generator Blowe (11682724)	Inspect		2.0				162,163	
		Test		1.0				162,163	
		Replace		8.0				134,162,163	
		Repair		2.0				134,162,163	
0613	Connector Plug, Electrical, Generator Blowe (8724233)	Replace		1.0				162,163	
		Repair		1.0				162,163	
0613	Wiring Harness, Starter Ground, Starter-to-Engine Disconnect (11655454)	Inspect		2.0				162,163	
		Test		1.0				162,163	
		Replace		8.0				134,162,163	
		Repair		2.0				134,162,163	
0613	Connector, Rece tacle, Starter Ground, Engine Disconnect (7971717)	Replace		1.0				162,163	
		Repair		1.0				162,163	
0613	Wiring Harness, Basket Disconnect-to-Indicator Panel (10934286)	Inspect		1.0				162,163	
		Test		1.0				162,163	
		Replace			5.0			162,171,178	
		Repair		3.0	4.0			162,163,171,178	R
0613	Connector Assem bly, Basket, Basket-to-Indicator Panel Wiring Harness (7722353)	Replace		3.0				162,163	
		Repair		3.0				162,163	

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot **Indicates WT/MH required

TA169811

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Numbe	(2) Component/ Assembly	(3) Maintenanc function	(4) Maintenance Categ y * C	O	F	H	D	(5) Tools and equipment	(6) Remarks
0613	Connector Assem bly, Panel, Basket-to-Indi- cator Panel Wiring Harness (8724244)	Replace		2.0				162,163	
		Repair		2.0				162,163	
0613	Wiring Harness, Heater, Basket- to Master Contro Panel (10934300)	Inspect		1.0				162,163	
		Test		1.0				162,163	
		Replace			5.0			162,171,178	
		Repair		2.0	4.0			162,163,171,178	R
0613	Connector Assem bly, Basket, Basket-to-Master Control Panel Heater Wiring Harness (7716785	Replace		2.0				162,163	
		Repair		2.0				162,163	
0613	Connector Assem bly, Panel, Basket-to-Master Control Panel Heater Wiring Harness (8724245	Replace		2.0				162,163	
		Repair		2.0				162,163	
0613	Wiring Harness, Accessories, Basket-to-Master Control Panel (10934322)	Inspect		1.0				162,163	
		Test		1.0				162,163	
		Replace			5.0			162,171,178	
		Repair		3.0	4.0			162,163,171,178	R
0613	Connector Assem bly, Basket, Accessories, Basket-to- Master Control Panel Wiring Harness (7716794	Replace		3.0				162,163	
		Repair		3.0				162,163	

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot

**Indicates WT/MH required

TA169812

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Numbe:	(2) Component/ Assembly	(3) Maintenanc function	(4) Maintenance Category * C	O	F	H	D	(5) Tools and equipment	(6) Remarks
0613	Connector Assembly, Panel, Accessories, Basket-to-Master Control Panel Wiring Harness (8724251)	Replace		2.0				162,163	
		Repair		2.0				162,163	
0613	Wiring Harness, Basket-to-Light Switch (10934323)	Inspect		1.0				162,163	
		Test		1.0				162,163	
		Replace			5.0			162,171,178	
		Repair		2.0	4.0			162,163,171,178	R
0613	Connector Assembly, Basket, Basket-to Light Switch Wiring Harness (7716793)	Replace		2.0				162,163	
		Repair		2.0				162,163	
0613	Connector Assembly, Light Switch, Basket-to-Light Switch Wiring Harness (8724258)	Replace		2.0				162,163	
		Repair		2.0				162,163	
0613	Wiring Harness, Basket-to-Master Control Panel, Starting (10934301)	Inspect		1.0				162,163	
		Test		1.0				162,163	
		Replace			5.0			162,171,178	
		Repair		2.0	4.0			162,163,171,178	R
0613	Connector Assy, Basket, Basket-to-Master Contro Panel, Starting Wiring Harness (7722354)	Replace		2.0				162,163	
		Repair		2.0				162,163	

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot **Indicates WT/MH required

TA169813

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category * C	T	F	E	D	(5) Took and equipment	(6) Remarks
0613	Connector Assy, Panel, Basket-to-Master Control Panel, Starting Wiring Harness (8724243)	Replace		2.0				162,163	
		Repair		2.0				162,163	
0613	Wiring Harness, Basket-to-Master Control Panel, Power (10934308)	Inspect		1.0				162,163	
		Test		1.0				162,163	
		Replace			5.0			162,171,178	
		Repair		2.0	4.0			162,163,171,178	R
0613	Connector Assembly, Basket, Basket-to-Master Control Panel, Power Wiring Harness (7971515)	Replace		2.0				162,171,178	
		Repair		2.0				162,171,178	
0613	Connector Assembly, Panel, Basket-to-Master Control Panel, Power Wiring Harness (8724240)	Replace		2.0				162,163	
		Repair		2.0				162,163	
0613	Cable Assembly, Interconnecting Box-to-Hull Power Wiring Harness (10952058)	Inspect		1.0				162,163	
		Test		1.0				162,163	
		Replace		4.0				162,163	
		Repair		2.0				162,163	
0613	Connector Assembly, Box Assembly, Interconnecting Box-to Hull Power Wiring Harness (8724242)	Replace		2.0				162,163	
		Repair		2.0				162,163	

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot

**Indicates WT/MH required

TA169814

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category * C	O	F	H	D	(5) Tools and equipment	(6) Remarks
0613	Connector Assembly, Harness Connection, Interconnecting Box-to-Hull Power Wiring Harness (7716780	Replace		2.0				162,163	
		Repair		2.0				162,163	
0613	Wiring Harness, Bulkhead-to-Engine Disconnect, Engine Accessory (11655653)	Inspect		2.0				162,163	
		Test		0.5				162,163	
		Replace			8.0			134,162,171	
		Repair		2.5	1.5			134,162,163,171 178	R
0613	Connector Assembly, Bulkhead, Bulkhead-to-Engine Disconnect, Engine Accessory Harnes (8724257)	Replace		2.5				162,163	
		Repair		2.5				162,163	
0613	Connector Assembly, Engine Disconnect, Bulkhead-to-Engine Disconnect, Engine Accessory Harness (8724258)	Replace		2.5				162,163	
		Repair		3.0				162,163	
0613	Cable Assembly, Generator Power, Engine Disconnect-to-Bulkhead (11655654)	Inspect		2.0				162,163	
		Test		0.5				162,163	
		Replace			3.0			134,162,171	
		Repair		2.5	1.5			134,162,163,171 178	R

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot

**Indicates WT/MH required

TA169815

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category * C	O	F	H	D	(5) Tools and equipment	(6) Remarks
0613	Connector Assembly, Bulkhead, Bulkhead-to-Engine Disconnect, Generator Power Cable Assembly (87 24242)	Replace		2.				162,163	
		Repair		2.				162,163	
0613	Connector Assembly, Engine Disconnect, Bulkhead-to-Engine Disconnect, Generator Power Cable Assembly (8724241)	Replace		2.				162,163	
		Repair		2.				162,163	
0613	Lead Assembly, Starter Ground, Hull-to-Engine Disconnect (10863699)	Inspect		1.				162,163	
		Test		0.				162,163	
		Replace		1.				162,163	
		Repair		1.				162,163	
0613	Connector Assembly, Engine Disconnect, Starter Ground Lead Assembly (87 24403)	Replace		1.				162,163	
		Repair		1.				162,163	
0613	Interconnecting Box, Ventilation Blower and Radio (10940180)	Inspect		2.				162,163	
		Test		1.				162,163	
		Replace		4.				162,163	
		Repair		4.				162,163	
0613	Receptacle Assembly, Power, Interconnecting Box (7751500-1)	Replace		2.				162,163	
		Repair		2.				162,163	

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot

**Indicates WT/MH required

TA169816

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category * C	O	F	H	D	(5) Tools and equipment	(6) Remarks
0613	Receptacle Assembly, Power, Interconnecting Box (7388320)	Replace Repair		2. 2.				162,163 162,163	
0613	Receptacle Assembly, Blower, Interconnecting Box (7972770)	Replace Repair		2. 2.				162,163 162,163	
0613	Receptacle Assembly, Blower, Interconnecting Box (7722225)	Replace Repair		2. 2.				162,163 162,163	
0613	Lead Assembly, Radio, Interconnecting Box (10940176)	Replace Repair		2. 2.				162,163 162,163	
0613	Harness Assembly Engine Smoke Generator Sys. Tem.	Inspect Replace Repair		0. 1. 1.				163 162 162,163	
0613	Receptacle Assy, Smoke, Generator Switch	Replace Repair		0. 0.				162,163 162,163	
0613	Receptacle Assy, Smoke Generator Harness Interconnect	Replace Repair		0. 0.				162,163 162,163	

*The subcolumns are as follows: C-operator/crew, O-organizational, F-direct support, H-general support, D-Depot

**Indicates WT/MH required

TA169817

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Numbe	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Categ ry * C	O	F	H	D	(5) Tools and equipment	(6) Remarks
0613	Shell Assy, Smoke Generator Harnes Interconnect	Replace		0.				162,163	
		Repair		0.				162,163	
0615	Capacitor and Housing Assy, Fuel Tank Radio Interference Suppression	Replace		2.				134,162,163	
		Repair		3.				134,162,163	
0615	Connector Assy, Capacitor	Replace		2.				134,162,163	
		Repair		3.				134,162,163	
0615	Cable and Adapter Assy, Fuel Tank Pump Powe Left	Replace		2.				134,162,163	
		Repair		3.				134,162,163	
0615	Cable and Adapter Assy, Fuel Tank Pump Powe Right	Replace		2.				162,163	
		Repair		3.				162,163	

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot

**Indicates WT/MH required

TA169818

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category * C	O	F	H	D	(5) Took and equipment	(6) Remarks
0705	Controls and Linkage, Gear Shifting	Inspect		0.3				162	
		Service		0.5				162,163	
		Adjust		1.5				162,163	
		Repair		3.0	8.0			134,162,163,177	
0705	Seal Assy, Engine Compartment Link Assy Shield (10864295)	Replace		2.5				134,162	
		Repair		3.0				134,162,163	
0705	Bell Crank Assy, Intermediate Shifting Control (10870167)	Replace		2.5				162	
		Repair			8.0			162,177	
0705	Rod Assy, Rear Engine Compartment (10870275)	Replace			3.5			134,162,177	
		Repair			3.5			134,162,177	
0705	Rod Assy, Shift Link Rod to Intermediate Rod (10870498)	Replace		2.5				162	
		Repair		3.0				162	
0705	Connecting Link, Bulkhead Intermediate Rod (10870423)	Replace			8.0			162	
		Repair			8.0			162	
0705	Rod Assy, Shifting Control (11615314)	Replace		3.0				162	
		Repair		3.0				162	
0705	Bracket Assy, Shift and Shift Link Assy, Mounting (10934254)	Replace		2.5				162	
		Repair		3.0				162	

*The subcolumns are as follows: C-operator/crew 0-organizational F-direct support H-general support D-Depot

**Indicates WT/MH required

TA169819

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category* C	O	F	H	D	(5) Tools and equipment	(6) Remarks
0705	Bracket Assy, Transmission Control Rod (10887630)	Replace Repair		2 3				162 162,166,167	
0705	Connecting Link, Shifting Control Engine Compartment, Rear Control Rod to Rod (10912028)	Replace Repair		2. 3.				134,162 134,162,166,167	
0705	Bracket Assy, Engine Compartment, Link Mounting (10915269)	Replace Repair		2. 3.				134,162 134,162,166,167	
0705	Pivot Assy, Shifting Control Hand Lever (10915822)	Replace Repair		1. 1.				162 162,166,167	
0705	Base Assy, Hand Lever Pivot (12290520)	Replace Repair		1. 2.				162 162,166,167	
0705	Shield Assy, Engine Compartment, Rear Control Rod (11654810)	Replace Repair			8.0 8.0			134,162 134,162	
0708	Housing Assembly, Converter	Replace Repair				8.(8.(		84,88,90,162, 169 84,88,90,162, 169	

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot **Indicates WT/MH required

TA169820

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category* C	O	F	H	D	(5) Tools and equipment	(6) Remarks
0708	Stator Assembly, Converter, first and second stages	Replace				3.0		88,162,169	
		Repair				3.0		88,162,169	
0708	Stator Assembly, second	Replace				3.0		88,162,169	
		Repair				3.0		88,162,169	
0708	Stator Assembly, first	Replace				3.0		88,162,169	
		Repair				3.0		88,162,169	
0708	Cover Assembly, Converter turbine	Replace				3.0		88,90,162,169	
		Repair				3.0		88,90,162,169	
0710	Transmission Assy, CD850-6A	Inspect			0.3			82	
		Test			0.3			68,162,177	
		Adjust			3.5			82,85,162,177	
		Replace			0.0			62,71,82,85,89, 162,177	
		Repair			0.0	0.0		61,62,65,66,68-72,75-78,81,82	
		Overhaul					94.	60-90,162,169	
0710	Housing Assembly, Front and Rear, Studding	Replace				0.0		61,65,66,69-72, 81-85,162,169	
		Repair				0.0		61,65,66,69-72, 81-85,162,169	
0710	Housing Assembly, Front and Rear, Machined	Replace				0.0		61,65,66,69-72, 81-85,162,169	
		Repair				0.0		61,65,66,69-72, 81-85,162,169	
0710	Housing Assembly, Transmission Front Subassembly, Studding	Replace				0.0		61,65,66,69-72, 81-85,162,169	
		Repair				1.0		162,169	

*The subcolumns are as follows: C-operator/crew, O-organizational, F-direct support, H-general support, D-Depot

**Indicates WT/MH required

TA169821

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category * C	O	F	H	D	(5) Tools and equipment	(6) Remarks
0710	Screen Assembly, Center, Oil	Replace				1.0		162,169	
		Repair				1.0		162,169	
0710	Unit Assembly, Input Gear, Converter and Steering	Replace				11.0		60-67,69-73,81-84,87-89,162,169	
		Repair				18.0		60-67,69-73,81-84,87-89,162,169	
0710	Plate Assembly, Reaction	Replace				2.0		60,67,73,83,84, 87,162,169	
		Repair				2.0		60,67,73,83,84, 87,162,169	
0710	Bushing Assembly	Replace				2.0		60,67,73,83,84, 87,162,169	
		Repair				2.0		60,67,73,83,84, 87,162,169	
0710	Gear Set, Bevel, Matched, Input Gear	Replace				1.0		84,162,169	
		Repair				1.0		84,162,169	
0710	Gear Assembly, Input Drive Level	Replace				1.0		84,162,169	
		Repair				1.0		84,162,169	
0710	Bearing, Roller, Tapered	Replace				1.0		84,162,169	
		Repaired				1.0		84,162,169	
0710	Carrier Assembly, Bevel Gear (7710933)	Replace				1.5		84,162,169	
		Repair				1.5		84,162,169	
0710	Carrier Assembly, Bevel Gear (8355736)	Replace				1.0		84,162,169	
		Repair				1.0		84,162,169	

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot

**Indicates WT/MH required

TA169822

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category * C	O	F	H	D	(5) Tools and equipment	(6) Remarks
0710	Carrier Assembly, Bevel Gear (7710934)	Replace Repair				1.0 1.0		84,162,169 84,162,169	
0710	Hub Assembly, Steering, Clutch Bearing	Replace Repair				1.0 1.0		84,162,169 84,162,169	
0710	Carrier Assembly, Steering Differential Planetary	Replace Repair				1.0 1.0		84,162,169 84,162,169	
0710	Pinion Assembly, Differential	Replace Repair				1.0 1.0		84,162,169 84,162,169	
0710	Gear Assembly, Reverse, Sun	Replace Repair				1.0 1.0		84,162,169 84,162,169	
0710	Carrier Assembly, Reverse, Planetary (7767597)	Replace Repair				1.0 1.0		84,162,169 84,162,169	
0710	Carrier, Reverse	Replace Repair				1.0 1.0		84,162,169 84,162,169	
0710	Hub Assembly, Reverse and Output Ring Gear	Replace Repair				1.0 1.0		84,162,169 84,162,169	
0710	Shaft Assembly, Main Crossdrive	Replace Repair				0.2 1.0		162 69,74,162,169	
0710	End Cover Assembly, Right and Left	Inspect Replace Repair			2.0 4.0 4.0	 8.0		61,81,82,162,177 61,81,82,162,177 61,70,76,78,79, 81,82,84,86,162, 169,177	

*The subcolumns are as follows

C-operator/crew
O-organizational
F-direct support
H-general support
D-Depot

**Indicates WT/MH required

TA169823

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category * C	O	F	H	D	(5) Tools and equipment	(6) Remarks
0710	Carrier Assembly Output Planetary (7709550)	Replace Repair			3.0	 4.0		66,162,177 66,162,169	
0710	Carrier, Output Planetary (7709695)	Replace Repair				2.0 3.0		66,162,169 66,162,169	
0710	Piston Assembly	Replace Repair			2.0 2.0			66,162,169 66,162,169	
0710	Cover Assembly, Left or Right	Replace Repair			4.0 4.0	 8.0		61,81,82,162,177 61,70,76,78,79, 81,82,84,86,162, 169,177	
0710	Bracket Assembly Cam Return	Replace Repair			1.0 1.0			61,81,162,177 61,81,162,177	
0710	Linkage Assembly Kit, Brake Cooling Valve	Replace Repair			1.0 1.0			61,81,162,177 61,81,162,177	
0710	Valve Assembly, Brake Cooling Oil	Replace Repair			1.0 1.0			61,81,162,177 61,81,162,177	
0710	Seat Assembly, Return Spring	Replace Repair			0.5 0.5			162 162	
0710	Bracket Assembly Brake Apply	Replace Repair			0.5 0.5			162,177 162,177	
0710	Lever Assembly, Brake Apply	Replace Repair			0.5 0.5			162,177 162,177	
0710	Bracket Assembly Brake Shaft	Replace Repair			0.5 0.5			162,177 162,177	
0710	Bolt Assembly, Brake Adjustment	Replace Repair			0.5 0.5			162,177 162,177	

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot **Indicates WT/MH required

TA169824

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category* C	O	F	H	D	(5) Tools and equipment	(6) Remarks
0710	Carrier Assembly, Low Range Planetary (7767647)	Replace				3.5		61,65,66,69-72,81 85,162,169	
		Repair				4.0		61,65,66,69-72,81 85,162,169	
0710	Carrier Assembly, Low Range Planetary (7767643)	Replace				2.5		61,65,66,69-72,81 85,162,169	
		Repair				3.0		61,65,66,79-72,81 85,162,169	
0710	Gear Assembly, Low Range Ring	Replace				2.5		61,65,66,69-72,81 85,162,169	
		Repair				2.5		61,65,66,69-72,81 85,162,169	
0710	Piston Assembly, High Range Clutch	Replace				1.0		60-67,73,83,84,87 162,169	
		Repair				3.0		60-67,73,83,84,87 162,169	
0710	Drum Assembly, Low Range	Replace				2.5		61,65,66,69-72,81 85,162,169	
		Repair				2.5		61,65,66,69-72,81 85,162,169	
0713	Housing Assembly, Steering Clutch	Replace				1.0		60-67,73,83,84,87 162,169	
		Repair				3.0		60-67,73,83,84,87 162,169	
0713	Cover Assembly, Steering Clutch Housing	Replace				1.0		60-67,73,83,84,87 162,169	
		Repair				3.0		60-67,73,83,84,87 162,169	
0713	Hub Assembly, Steering Clutch	Replace				1.0		60-67,73,83,84,87 162,169	
		Repair				2.0		60-67,73,83,84,87 162,169	

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot

**Indicates WT/MH required

TA169825

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Catego C	O	F	H	* D	(5) Tools and equipment	(6) Remarks
0714	Band Assembly, Reverse	Replace				3.(		61,65,66,69-72, 81-85,162,169	
		Repair				3.(		61,65,66,69-72, 81-85,162,169	
0714	Band Assembly, Low Range	Replace			3.0			61,65,66,69-72, 81-85,162,169	
		Repair				3.(		61,65,66,69-72, 81-85,162,169	
0714	Valve Assembly, Control (8355809)	Replace			2.0			75,162,177	
		Repair				3.5		75,162,169	
0714	Body Assembly, Control Valve (7708258)	Replace				2.(		75,162,169	
		Repair				3.(		75,162,169	
0721	Pump Assembly, Input Oil	Replace				10.(		61,65,66,69-72, 81-85,162,169	
		Repair				2.(		162,171	
0721	Base Assembly	Replace				2.(		162,171	
		Repair				2.(		162,171	
0721	Strainer Assembly, Side Oil	Inspect		0.:				134,162	
		Service		1.(				134,162	
		Replace		1.(				134,162	
		Repair			1.0			134,162,167,170	
0721	Filler Assembly, Top Oil Filler	Inspect		.:				162	
		Replace			1.0			134,162,177	
		Repair			1.5			134,162,177	
0721	Body Assembly, Top Oil Filler	Inspect		0.:				162	
		Replace			1.0			134,162,177	
		Repair			1.5			134,162,177	

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot

**Indicates WT/MH required

TA169826

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category * C	O	F	H	D	(5) Tools and equipment	(6) Remarks
0721	Pump Assembly, Output Oil	Replace				10.(		61,65,66,69-72, 81-85,162,169	
		Repair				2.(		162,169	
0721	Filler, Side Oil	Inspect		0.3				162	
		Replace		2.5				134,162,163	
		Repair			2.			134,162,178	
0721	Indicator Assembly, Oil Level	Inspect		0.1				162	
		Replace		0.1				162	
		Repair		0.2				162	
0721	Tube Assembly, Oil Filter Vent	Replace			0.			162,177	
		Repair			0.·			162,177	
0721	Fluid Cooler Assy, Transmission	Inspect	).1	0.3				134,162	
		Service		0.5				131,134,162	
		Replace		12.(				134,162,163	
		Repair				3.(		162,167,182	
0721	Filter Assy, Main Oil	Inspect		0.3				134,162	
		Service		1.(				134,162	
		Replace		1.(				134,162	
		Repair			1.			134,162,177	
0721	Thermostat, Flow Control: Transmission	Inspect		0.3				134,162	
		Test		1.(				162,163	
		Replace		0.5				134,162	
0801	Drive Assy, Final	Inspect		0.3				162	
		Service		0.5				162	
		Replace		11.(				95,100,102,112, 134,162,163	
		Repair		5.0	12.			95,100,102,112, 114,116,117,134, 162,163	
		Overhaul						95,100,102,112, 114,116,117,162, 169	

* The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot

** Indicates WT/MH required

TA169827

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category* C	O	F	H	D	(5) Tools and equipment	(6) Remarks
0801	Shaft Assy, Final Drive Output	Replace			13			112,114,116,162, 177	
		Repair			14			114,116,162,177	
0801	Case and Carrier Assy, Final Drive	Replace			13			112,114,116,162, 177	
		Repair			14			112,114,116,162, 177	
0900	Joint, Universal Final Drive	Inspect		0.3				162	
		Service		0.5				162,165	
		Replace		1.5				134,162,163	
		Repair		0.5				134,162,163	
1204	Lever, Brake Pedal: Linkage Guide (Hydraulic Brake)	Inspect		0.3				162	
		Service		0.5				162,163	
		Adjust		0.5				162	
		Repair		1.0				162,163	
1204	Lever, Brake Pedal: Linkage Cam (Hydraulic Brake)	Inspect		0.3				162	
		Service		0.5				162,163	
		Adjust		0.5				162	
		Repair		1.0				162,163	
1204	Cylinder Assy, Master Brake (Hydraulic Brake)	Inspect		0.3				162	
		Service		0.5				162,163	
		Replace		2.0				162,163	
		Repair			0.			162,173,177	
1204	Cylinder Assy, (Hydraulic Brake) Slave Tube	Inspect		0.3				162	
		Replace		9.5				134,162,163	
		Repair			1			162,173,177	

*The subcolumns are as follows: C-operator/crew, O-organizational, F-direct support, H-general support, D-Depot

**Indicates WT/MH required

TA169828

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Numbe	(2) Component/ Assembly	(3) Maintenanc function	(4) Maintenance Category * C			H	D	(5) Tools and equipment	(6) Remarks
1206	Housing Assy, Engine Compart-ment, Brake Lever, Left	Inspect Replace Repair						134,162 134,162 134,162,163	
1206	Housing Assy, Engine Compart-ment, Brake Lever, Right	Inspect Replace Repair						134,162 134,162 134,162,163	
1206	Lever Assy, Parking Brake Lock, Left	Inspect Replace Repair						134,162 134,162,163 134,162,163	
1206	Lever Assy, Parking Brake Lock, Right	Inspect Replace Repair						134,162 134,162,163 134,162,163	
1206	Bell Crank Brake Control SPRT BRKT	Inspect Replace Repair						162 162 162,163	
1301	Roadwheel (Disc) Assembly, (Compensating Idler) Left and Right	Inspect Replace Repair Overhaul	0.3				** **	99,162 99,162	L
1301	Hub and Arm Assembly No. 1 Left and Right Roadwheel	Inspect Service Adjust Repair	0.3					162,163 94,97-99,115 162,163 93,94,97-99,101, 104,109,115,119, 162,163	

*The subcolumns are as follows: C-operator/crew, O-organizational, F-direct support, H-general support, D-Depot

**Indicates WT/MH required

TA169829

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category *					(5) Tools and equipment	(6) Remarks
			C	O	F	H	D		
1301	Arm Assy, NO. 1 Left and and Right Road-wheel	Inspect	0.3	0.3					
		Service		0.5				149,150	
		Replace		5.0				93,94,97-99,101, 109,115,119,162, 163	
		Repair		3.0	5.5			93,94,97-99,101, 109,115,119,162, 163,177	A
1301	Seal Assy, Hub and Arm	Replace		4.0				99,120,162,163	
		Repair		4.5				99,120,162,163	
1301	Hub Assy, Hub and Arm Assy.	Replace		4.0				99,120,162,163	
		Repair		4.5	2.5			98,99,104,105, 120,162,163,177	A
1301	Hub and Arm Assy, No. 6 Left and Right Roadwheel	Inspect	0.3						
		Service		0.5				162,163	
		Adjust		0.5				94,97-99,115,162 163	
		Repair		3.0				115,119,162,163	
1301	Arm Assy, No. 6 Left and Right Roadwheel	Inspect	0.2	0.3					
		Service		0.5				162,163	
		Replace		3.0				93,94,97-99,101, 109,115,119,162, 163	
		Repair		3.0	5.5			93,94,97-99,101, 109,115,119,162, 163,177	A
1301	Cover Assy, Left and Right Torsion Bar No. 1 thru 6 Roadwheels	Inspect	0.2						
		Replace		5.0				162	
		Repair		6.0				162,163	

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot **Indicates WT/MH required

TA169830

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category * C	O	F	H	D	(5) Tools and equipment	(6) Remarks
1301	Housing Assy, Roadwheel-No. 2 thru 5 Torsion Bar, Left and Right	Inspect	0.5	0.5					
		Replace		5.0				93,94,97,99,101, 108,119,120,162, 163	
		Repair		5.0				93,94,97,99,101, 108,119,120,162, 163	
1301	Housing Assy, Roadwheel No. 1 Torsion Bar Left and Right	Inspect	0.5	0.5					
		Replace		5.0				93,94,97,99,101, 108,119,120,162, 163	
		Repair		5.0				93,94,97,99,101, 108,119,120,162, 163	
1301	Housing Assy, Roadwheel No. 6 Torsion Bar Right and Left	Inspect	0.5	0.5					
		Replace		5.0				93,94,97,99,101, 108,119,120,162, 163	
		Repair		5.0				93,94,97,99,101, 108,119,120,162, 163	
1301	Hub and Arm Assy No. 2 thru 5 Right and Left	Inspect	0.3						
		Service		0.5				149,150	
		Adjust		0.5				94,97-99,115,162 163	
		Repair		3.0				93,94,97-99,101, 104,106,109,115, 119,162,163	
1301	Arm Assy, No. 2 thru 5 Right and Left	Inspect	0.2	0.3					
		Service		0.5				162,163	
		Replace		3.0				93,94,97-99,101, 109,115,119,162, 163	
		Repair		3.0	5.5			93,94,97-99,101, 109,115,119,162, 163,177	A

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot **Indicates WT/MH required

TA169831

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Numbe	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category * C	O	F	H	D	(5) Tools and equipment	(6) Remarks
1302	Roller Assembly, Track Support Roller No. 1 Left	Inspect	0.1						
		Service		.2				162,163	
		Adjust		.0				120,162,163	
		Replace		.0				110,120,162,163	
		Repair		.5				98,104,106,110, 120,162,163	
1302	Wheel and Hub Assy, Track Support Roller	Inspect	0.1						
		Replace		.0				110,120,162,163	
		Repair		.5				98,104,106,110, 120,162,163	
		Overhaul					**		L
1302	Hub Assy, Track Support Roller	Inspect		.1					
		Replace		.0				110,120,162,163	
		Repair		.5				98,104,106,110, 120,162,163	
1302	Roller Assy, Track Support: Left No. 2 thru No. 5, Right No. 1 thru No. 5	Inspect	0.1						
		Service		.2				162,163	
		Adjust		.0				120,162,163	
		Replace		.0				110,120,162,163	
		Repair		.5				98,104,106,110, 120,162,163	

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot **Indicates WT/MH required

TA169832

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Numbe	(2) Component/ Assembly	(3) Maintenanc function	(4) Maintenance Category * C	O	F	H	D	(5) Tools and equipment	(6) Remarks
1303	Hub and Arm Assy, Compensating Idler Left and Right	Inspect	0.2						
		Service	0.3						
		Adjust		0.5				120,162,163	
		Repair		2.5	3.0			93,98,101,103-105,107,115,120 162,163,177	A
		Overhaul					3.(		L
1303	Arm Assy, Compensating Idler	Inspect	0.3						
		Service	0.1						
		Adjust		0.5				93,98,101,103-105,107,115,120 162,163	
		Repair		2.5	2.5			93,98,101,103-105,107,115,120 162,163,177	A
1303	Seal Assy, Compensating Idler	Inspect	0.3						
		Service	0.3						
		Replace		2.5				98,104,105,120, 162,163	
		Repair		3.0				98,104,105,120, 162,163	
1303	Hub Assy, Compensating Idler	Inspect	0.3						
		Service	2.0						
		Replace		2.0				98,104,105,120, 162,163	
		Repair			2.5			98,104,105,120, 162,177	
1303	Link Assy, Track Adjusting	Inspect	0.3						
		Service	2.5						
		Replace		2.0				93,98,101,103-105,107,120,162	
		Repair		2.0				93,98,101,103-105,107,120,162	

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot **Indicates WT/MH required

TA169833

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category *					(5) Tools and equipment	(6) Remarks
			C	O	F	H	D		
1304	Sprocket, Drive								
		Inspect	0.1	0.3				124	M
		Replace		3.5				102,112,124,162, 163	
1305	Track Assembly, Left and Right								
		Inspect	0.4						
		Adjust	0.5						
		Replace	4.0	4.0				96,162,163	
		Repair	0.4	2.5				96,162,163	
1305	Track Shoe Assy, 8 Link Section								
		Inspect	0.1						
		Replace		1.0				96,162,163	
		Repair		1.0				96,162,163	
1305	Track Shoe, Vehicular, Type T142								
		Inspect	0.1						
		Replace	0.3	0.3				96,162,163	
		Repair	0.5	0.5				96,162,163	
1401	Controls and Linkages, Steering								
		Inspect		0.5					
		Service		1.0				162,163	
		Adjust		1.0				134,162,163	
		Repair		2.0	10.0			134,162,163,177	A
1401	Shaft Assy, Intermediate Rod To Engine Compartment Front Rod (10864129)								
		Inspect			0.2			134,162	
		Repair			1.0			134,162,177	
1401	Sleeve Assy, Steering Control Bulkhead (10864132)								
		Inspect			0.2			134,162	
		Replace			0.7			134,162,177	
		Repair			1.0			134,162,177	

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot **Indicates WT/MH required

TA169834

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category * C	O	F	H	D	(5) Tools and equipment	(6) Remarks
1401	Link Assy, Steering Control Intermediate (8762127)	Replace			1.0			134,162,177	
		Repair			1.5			134,162,177	
1401	Handle Assembly, Steering Control (11590653)	Replace		2.5				162	
		Repair		2.5				162,163	
1401	Link Assy, Steering Control Engine Compartment Riser to XMSN Conn. Link (8762291)	Service		0.5				162,163	
		Replace		4.0				134,162,163	
		Repair		4.5				134,162,163	
1401	Connecting Link Assy, Engine Compartment Rod to Riser Rod (10864081)	Replace		1.0				134,162,163	
		Repair		1.5				134,162,163	
1401	Mount Assy, Steering Control Sleeve (11676078)	Replace		1.0				162,163	
		Repair			8.0			162,177	
1503	Pintle and Sleeve Assy.	Inspect	.3						
		Service	.5						
		Replace		1.5				162,163	
		Repair		2.5				162,163	
1503	Pintle Assy.	Replace		1.5				162,163	
		Repair		2.5				162,163	
1601	Bumper Assy, Volute Spring - No. 1 Left and Right	Inspect	.1	0.2					
		Replace		0.5				162,163	
		Repair		0.5					

*The subcolumns are as follows: C-operator/crew, O-organizational, F-direct support, H-general support, D-Depot

**Indicates WT/MH required

TA169835

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Catego C	O	F	H	* D	(5) Tools and equipment	(6) Remarks
1601	Bumper Assy, Volute Spring - No. 2 thru 5 Left and Right	Inspect	.1	.2					
		Replace		.5				162,163	
		Repair		.5					
1601	Bumper Assy, Volute Spring - No. 6 Left and Right	Inspect	.1	.2					
		Replace		.5				162,163	
		Repair		.5					
1604	Shock Absorber Assy, Direct Action	Inspect	.1	.2					
		Replace		.5				162,163	
		Repair		.5				113,162,163	
1604	Bracket Assy, Shock Absorber - No. 1, Upper, Left and Right	Inspect	.1	.2					
		Replace		.5				162,163	
		Repair		.5				162,163	
1604	Bracket Assy, Shock Absorber - No. 1, Lower Left and Right	Inspect	.1	.2					
		Replace		.3				162,163	
		Repair		.5				162,163	
1604	Bracket Assy, Shock Absorber - No. 2, Upper, Left and Right	Inspect	.1	.2					
		Replace		.3				162,163	
		Repair		.5				162,163	
1604	Bracket Assy, Shock Absorber - No. 2, Lower, Left and Right	Inspect	.1	.2					
		Replace		.3				162,163	
		Repair		.5				162,163	
1604	Bracket Assy, Shock Absorber - No. 6, Upper, Left and Right	Inspect	.1	.2					
		Replace		.3				162,163	
		Repair		.5				162,163	

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot

**Indicates WT/MH required

TA169836

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Numbe	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category* C	O	F	H	D	(5) Tools and equipment	(6) Remarks
1604	Bracket Assy, Shock Absorber - No. 6, Lower Left and Right	Inspect	.1	0.					
		Replace		0.				162,163	
		Repair		0.				162,163	
1801	Screw Assy, Rear Exh. Doors Top Deck Grille	Inspect		0.				162,163	
		Repair		0.				162,163	
1801	Cover Assy, Fuel Filler, Hull	Replace		0.				162	
		Repair		1.				162,163	
1801	Cover Assy, Engine Access Upper	Replace		0.				162	
		Repair		0.				162,163	
1801	Cover Assy, Engine Access Lower	Replace		0.				162	
		Repair		0.				162,163	
1801	Retainer, Fuel Tank Cap	Replace		0.				162	
		Repair		1.				162,163	
1802	Fenders, Bracket, and Outriggers	Inspect	.5						
		Replace		2.				164,165	
		Repair		3.				164,165	
1803	Cover (Door) Assy, Driver's Escape Hatch	Inspect	.3						
		Service	.3	0.				163	
		Adjust		**				162	
		Replace		2.				162	
		Repair		1.				162,163	

* The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot

** Indicates WT/MH required

TA169837

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category * C	O	F	H	D	(5) Tools and equipment	(6) Remarks
1803	Handle Assy, Escape Hatch Door	Inspect	0.3						
		Service	0.3	0.5				150,163	
		Replace		2.0				162,163	
		Repair		3.0				162,163	
1804	Drain Valve and Linkage Assy (Front)	Inspect	0.3						
		Service		0.8				162,163	
		Adjust		0.5				162,163	
		Repair		2.0				162,163	
1804	Drain Valve and Linkage Assy (Rear, Engine Compartment)	Inspect	0.2	0.3				134,162	
		Service		0.8				134,162,163	
		Adjust		0.5				134,162,163	
		Repair		2.0	8.0			134,162,163,177	A
1806	Seat Assy, Driver's (10952286)	Inspect	0.3						
		Service	0.1						
		Repair		3.0				162	
1806	Back Assy, Driver's Seat	Replace		0.5				162	
		Repair		1.5				162	
1806	Backrest Assy, Cushion, Driver's Seat	Replace		1.0				162	
		Repair		1.5				162	
1806	Mount Assembly, Driver's Seat (10934367-1)	Inspect	0.3						
		Service	0.1						
		Replace		3.0				162	
		Repair		3.0					
1806	Seat Assembly, Commander's (10865725 or 11645325)	Inspect	0.3						
		Service	0.1						
		Repair		3.0				162	

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot

**Indicates WT/MH required

TA169838

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Catego * C	O	F	H	D	(5) Tools and equipment	(6) Remarks
1806	Back Rest Assembly, Commander's Seat (10865882 or 11645301)	Replace		0.5					
		Repair		1.0				162	
1806	Mount Assembly, Commander's Seat (10934367-2)	Inspect	.3						
		Service	.1						
		Replace		3.0				162	
		Repair		3.0					
1808	Fender Box Assemblies and Brackets	Inspect	.5						
		Service	.2						
		Replace		1.0				162,163	
		Repair		1.5				162,163,165	N
1808	Cover, Fender Box, Rear, Right and Left (11615310)	Inspect	.1						
		Replace		0.5				162	
		Repair		1.0				162,163,165	N
1808	Cover, Fender Box, Front, Right and Left (8364731)	Inspect	.2						
		Replace		1.5				162	
		Repair		2.0				162,163,165	N
1808	Latch Assy, Stowage Box, Cover Locking (6312712)	Inspect	.1						
		Replace		0.3				162	
		Repair		0.5				162	
1808	Latch Assy, Stowage Box, Cover Locking (7324021)	Inspect	.1						
		Replace		0.3				162	
		Repair		0.5				162	
1808	Stowage Bin (11626508)	Replace		1.0				162	
		Repair		2.0				162,163,165	O

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot

**Indicates WT/MH required

TA169839

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maint enance function	(4) Maintenance Category* C	O	F	H	D	(5) Tools and equipment	(6) Remarks
1808	Stowage Bin (11676497)	Replace		1.0				162	
		Repair		2.0				162,163,165	O
1808	Bracket Assembly, (11626509)	Replace		1.0				162	
		Repair		1.5				162,163,165	O
1808	Platform Assembly, (10934265)	Repair			5.0			162,167,170,177	P
1808	Strap Assy, Fender Stowage Box	Inspect		0.1					
		Replace		0.2				162	
		Repair		0.3				162,163	
2002	Power Take-off Assembly, Hydraulic Pump Driving	Inspect		0.2					
		Replace			8.0			134,162,177	
		Repair			8.0			134,162,177	
2202	Heater Assy, Personnel (Combustion Multifuel)	Inspect	.3						
		Test		0.5				162,163	
		Replace		2.0				162,163	
		Repair		4.5				162,163	
		Overhaul					**	91,92,162,169	
4701	Speedometer and Drive Components	Inspect	.3						
		Repair		4.0				162	
4701	Shaft Assy, Flexible Speedometer	Replace		0.4				162	
		Repair		1.0				162	
4701	Adapter Assy, Speedometer Shaft Assy.	Replace		0.6				162	
		Repair		1.0				162	

*The subcolumns are as follows: C-operator/crew, O-organizational, F-direct support, H-general support, D-Depot

**Indicates WT/MH required

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Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance Category * C	O	F	H	D	(5) Tools and equipment	(6) Remarks
4701	Tachometer and Drive Components	Inspect	.3						
		Repair		4.				162	
4701	Adapter Assy, Tachometer Rear Flexible Shaft	Replace		5.				162	
		Repair		5.				162	
4701	Shaft Assy, Tachometer Front Drive	Replace		1.				162	
		Repair		1.				162	
4701	Shaft Assy, Tachometer Rear	Repair		5.				162	
4701	Shaft Assy, Flexible, Tachometer, Rear	Replace		5.				162	
		Repair		5.				162	
7639	Cylinder Assy, First and Second Shot, Fixed Fire Extinguisher	Inspect	.5						
		Test		1.				162	
		Service			3.0			162,177	
		Replace		3.				151,152,153,159, 160,161,162,163	
		Repair				**			Q
7639	Body Assy, Outside Release Handle, Fixed Fire Extinguisher	Inspect	.1						
		Test		1.				162	
		Adjust		1.				162	
		Replace		0.				162,163	
		Repair		0.				162,163	
7639	Control Assy, Exterior Release Mechanism Fixed Fire Extinguisher	Inspect	.4						
		Test		**				162	
		Adjust		**				162	
		Replace		3.				162,163	
		Repair		3.				162,163	

* The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot

** Indicates WT/MH required

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Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance level C	O	F	H	D	(5) Tools and equipment	(6) Remarks
7639	Body Assy, Outside Release Handle, Fixed Fire Extinguisher	Inspect	0.1						
		Test		1.5				162	
		Adjust		1.5				162	
		Replace		0.5				162,163	
		Repair		0.8				162,163	
7639	Control Assy, Exterior Release Mechanism Fixed Fire Extinguisher	Inspect	0.4						
		Test		**				162	
		Adjust		**				162	
		Replace		3.0				162,163	
		Repair		3.0				162,163	
7639	Release Mechanism Assy, Inside Control - Fixed Fire Extinguisher	Inspect	0.2						
		Test		1.5				162	
		Adjust		1.5				162	
		Replace		4.5				162,163	
		Repair		5.0				162,163	
7639	Valve Assy, Control - Fixed Fire Extinguisher	Inspect		0.1				162	
		Replace		0.5				149-163	
		Repair		1.0				149-163	
7639	Clamp Assy, Cylinder Assy- Fixed Fire Extinguisher	Inspect		0.1					
		Replace		0.5				162	
		Repair		0.5				162,163	
9111	Filter (Purifier) Assy, Gas Particulate Tank - M8A3	Inspect	0.1						
		Test		0.1	0.1			162,163,177	
		Replace		0.5				162	
		Repair			0.5			162,177	
		Overhaul					5.0		
9111	Lead Assy, Electrical, Precleaner Motor Ground	Inspect	0.1						
		Replace		0.5				162,163	
		Repair		0.5				162,163	

*The subcolumns are as follows: C-operator/crew, O-organizational, F-direct support, H-general support, D-Depot

**Indicates WT/MH required

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance function	(4) Maintenance level					(5) Tools and equipment	(6) Remarks
			C	O	F	H	D		
9111	Frame Assy, (for Air Purifier)	Inspect	0.1						
		Service		0.3					
		Replace		0.5				162	
		Repair		0.5				162,163	

*The subcolumns are as follows: C-operator/crew O-organizational F-direct support H-general support D-Depot

**Indicates WT/MH required

SECTION III. SPECIAL TOOL AND TEST EQUIPMENT REQUIREMENTS

(1) Reference code	(2) Maintenance level	(3) Nomenclature	(4) National/NATO stock number	(5) Tool number
		CHASSIS TOOLS, Engine		
1	F,H,D	Adapter: (used w/compression checking gage 4910-00-870-6283 to engine)	4910-00-795-7961	8743025
2	H,D	Adapter, Mechanical Puller: Crankshaft Main Bearing: (used w/puller 5120-00-310-4668 and spreader 5120-00-575-7767) and Accessory Drive Second Idler Gear Spindle: (used w/5120-00-473-7372 puller)	5120-00-837-5091	8375091
3	F,H,D	Blade, Thickness Gage: Valve Tappet Adjusting (.010 gap)	5210-00-793-7898	10882615
4	F,H,D	Blade, Thickness Gage: Valve Tappet Adjusting (.025 gap)	5210-00-793-7899	10882616
5	F,H,D	Blade, Thickness Gage: Valve Tappet Adjusting (.100 gap)	5210-00-793-7897	10882617
6	F,H,D	Bolt, Eye: Flywheel lifting	5306-00-017-6143	MS51937-7
7	H,D	Bushing, Reamer: Pilot Bushing for Reaming Intake Valve Guide: (used w/5110-00-708-3698 reamer and 5110-00-708-3699 reamer)	5110-00-460-5831	11642088
8	H,D	Bushing, Reamer: Pilot Bushing for Reaming Exhaust Valve Guide: (used w/5110-00-708-3696 reamer and 5110-00-708-3697 reamer)	5110-00-003-1010	11642089

SECTION III. SPECIAL TOOL AND TEST EQUIPMENT REQUIREMENTS - Continued

(1) Reference code	(2) Maintenance level	(3) Nomenclature	(4) National/NATO stock number	(5) Tool number
9	H,D	Compressor and Gage: Piston Ring	4910-00-795-795(	10882888
10	D	Compressor and Gage: Piston Ring (0.010 and 0.020 oversize)	5120-00-005-300'	10882888-1
11	D	Compressor and Gage: Piston Ring (0.030 and 0.040 oversize)	5120-00-005-300(	10882888-2
12	F,H,D	Cutter, Carbon, Nozzle Seat: Removing Tool	4910-00-795-795:	10882949
13	H,D	Extractor, Coil Thread Insert: Cylinder to Crankcase (7/16 in. to 1 in. diameter inserts)	5120-00-251-152'	7751056
14	H,D	Extractor, Coil Thread Insert: Cylinder Heat to Valve Rocker Cover (No. 10 to 3/8 in. diameter inserts)	5120-00-723-683:	MIL-T-21309A Table VIII, Type 5, Size 2
15	F,H,D	Gage Assembly, Compression Testing: (used w/4910-00-795-7961 adapter)	4910-00-870-628:	10899180
16	H,D	Gage, Ring, Plain: Piston Ring (standard and 0.020 oversize)	5220-00-988-877'	10912589
17	D	Gage, Ring, Plain: Piston Ring (0.010 and 0.030 oversize)	5220-01-005-300:	10912589-1
18	H,D,	Gage, Ring, Plain: Piston Ring (standard and 0.040 oversize)	5220-01-005-300'	10912589-2

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SECTION III. SPECIAL TOOL AND TEST EQUIPMENT REQUIREMENTS - Continued

(1) Reference code	(2) Maintenance level	(3) Nomenclature	(4) National/NATO stock number	(5) Tool number
19	H,D	Inserter, Coil Thread Insert: (screwlock 5/16-24)	5120-00-797-2405	MIL-T-21309A Type III, Class I, Style A
20	H,D	Inserter, Coil Thread Insert: (screwlock 3/8-24)	5120-00-710-7437	8375324
21	H,D	Inserter, Coil Thread Insert: (screwlock 7/16-20)	5120-00-797-2407	MIL-T-21309A Type III, Class I, Style A
22	H,D	Inserter, Coil Thread Insert: (screwlock 1/2-20)	5120-00-672-8897	8761582
23	H,D	Lifter Assembly: Valve Spring, (used w/49 10-00-554-1317 stand)	5120-00-678-5285	8761535
24	H,D	Pliers Retaining Ring: Fan Drive Retaining Ring	5120-00-752-9755	GGG-P-480A, Type II, Class 3, Style B, Size 22
25	H,D	Protector Crankcase Bore: Cylinder Mounting Pads (1 required per cylinder)	4910-00-795-7951	10882790
26	F,H,D	Puller, Fuel Injector Nozzle	5120-00-873-6943	11610150
27	H,D	Puller, Mechanical: Camshift Drive Quill	5120-00-678-5282	8761297
28	H,D	Puller, Mechanical: Exhaust Valve Guide	5120-00-448-0401	10882954

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SECTION III. SPECIAL TOOL AND TEST EQUIPMENT REQUIREMENTS - Continued

(1) Reference code	(2) Maintenance level	(3) Nomenclature	(4) National/NATO stock number	(5) Tool number
29	H,D	Puller, Mechanical: Generator and Starter Idler Gear Shaft or Crankshaft Main Bearing: (used w/5 120-00-837-5091 Adapter and 5120-00-575-7767 Spreader:	5120-00-310-466	8708712
30	H,D	Puller, Mechanical: Intake Valve Guide	5120-00-448-040	10882953
31	O,F,H,D	Puller, Screw: Fan Drive Oil Seal Retainer or Vibration Damper	5120-00-473-722	5379997
32	H,D	Reamer, Hand: Finishing, Exhaust Valve Guide: (used w/5110-00-003-1010 bushing)	5110-00-708-369	7083697
33	H,D	Reamer, Hand: Intake Valve Guide: (used w/5110-00-460-5831 bushing)	5110-00-708-369	7083699
34	H,D	Reamer, Hand: Roughing Exhaust Valve Guide (used w/5110-00-003-1010 bushing)	5110-00-708-369	7083696
35	H,D	Reamer, Hand: Roughing, Intake Valve Guide (used w/5110-00-460-5831 bushing)	5110-00-708-369	7083698
36	H,D	Remover and Replacer, Piston Ring	5120-00-494-184	7950177
37	H,D	Replacer, Valve Guide: Intake	5120-00-448-040	10883052
38	H,D	Replacer, Valve Guide: Exhaust	5120-00-448-799	10883053

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SECTION III. SPECIAL TOOL AND TEST EQUIPMENT REQUIREMENTS - Continued

(1) Reference code	(2) Maintenance level	(3) Nomenclature	(4) National/NATO stock number	(5) Tool number
39	D	Reset Device, Hourmeter	5999-00-294-2332	11668287
40	H,D	Sling, Crankshaft and Connecting Rods	4910-00-795-7955	10882958
41	H,D	Sling, Fan Drive and Advance Unit Hsg.	4910-00-795-7954	10882945
42	F,H,D	Socket Wrench, Fuel Injector Nozzle	5120-00-875-9556	11610171
43	O,F,H,D	Spacer, Fan Rotor Hub	4910-00-795-7952	10882651
44	H,D	Spreading Tool, Crankcase	5120-00-575-7767	8708361
45	H,D	Stand, Valve, Removing & Inserting, Cylinder Assembly:(used w/lifter 5120-00-678-5285)	4910-00-554-1317	8708419
46	H,D	Stand, Maintenance, Automotive Engine	4910-00-856-4137	10912260
47	D	Stone and Holder Set, Cylinder Hone	3460-00-689-3368	5704380
48	H,D	Test Stand (Advance Unit) Fuel Injector Pump	4910-00-986-9873	10898928
49	F,H,D	Tube, Attaching Nozzle: Fuel Injector Nozzle Connector (used w/tester 4910-00-255-8641)	4910-00-795-7953	10882963
50	H,D	Wrench, Box: Torquing, Cylinder Hold-down Nuts	5120-00-475-5414	8761562
51	F,H,D	Crowfoot Attachment, Wrench, Fuel Injector Nozzle	5120-00-871-7198 or 5120-01-039-2809	11610167 or 12254244

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SECTION III. SPECIAL TOOL AND TEST EQUIPMENT REQUIREMENTS - Continued

(1) Reference code	(2) Maintenance level	(3) Nomenclature	(4) National/NATO stock number	(5) Tool number
52	O,F,H,D	Wrench, Open End Fixed: Starter Mounting Nuts	5120-00-678-5288	8761568
53	F,H,D	Wrench, Splined: Engine Turning	5120-00-793-7895	10882747
54	H,D	Wrench, Box: Torquing No. 1 Left and Right Cylinder, Hold-down Nuts	5120-00-466-5948	11684130-1
55	H,D	Wrench, Box: Torquing No. 1 Left and Right Cylinder, Hold-down Nuts	5120-01-018-8640	11684130-2
56	D	Tester, Cylinder Barrel: (check cracks in cylinder barrel)	4910-00-937-4261	10935532
57	O,F,H,D	Wrench, Box: Generator Mounting Nuts	5120-00-789-4881	10935476
58	H,D	Wrench, Box: Torquing Cylinder Hold-down Nuts	5120-00-678-5287	8761561
59	H,D	Wrench, Spanner: Cooling Fan, Rotor Clutch	5120-00-793-7896	10882653
		CHASSIS TOOLS, Transmission		
60	D	Adapter, Hoisting Front Housing Unit Assembly: (lifting package unit into front housing)	4910-00-473-7035	7081501
61	F,H,D	Adapter,Hoisting Transmission End Cover: (lifting right hand end cover assy.)	4910-00-610-5963	8350448

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SECTION III. SPECIAL TOOL AND TEST EQUIPMENT REQUIREMENTS - Continued

(1) Reference code	(2) Maintenance level	(3) Nomenclature	(4) National/NATO stock number	(5) Tool number
62	F,H,D	Adapter, Mechanical Puller: Input Shaft: (used w/5120-00-473-7352 Puller)	5120-00-708-2774	7082774
63	D	Adapter, Remover: Package Unit to Rear Housing Locating Dowel Pin: (used w/5120-00-473-7352 Puller)	5120-00-708-3673	7083673
64	D	Adapter, Mech. Puller: Accessory Drive Second Idler Gear Spindle: (used w/5120-00-473-7352 Puller)	5120-00-837-5091	8375091
65	F,H,D	Bolt, Machine: Front & Rear Housing	5306-00-773-7292	7737292
66	F,H,D	Eye, Lifting, Output Planetary Assy. & Brake Drum	4910-00-708-1573	7081573
67	D	Fixture, Backlash Setting: Input Drive Bevel Gears	4910-00-084-0797	8355779
68	O,F,H,D	Gage, Pressure, Dial Indicating: Transmission Oil Pressure	6620-00-795-0330	7950330
69	F,H,D	Handle, Remover and Replacer	5120-00-473-7121	7082881
70	F,H,D	Handle, Remover and Replacer	5120-00-708-2196	7082196
71	F,H,D	Puller, Attachment, Mechanical: Slide Hammer Type (used w/adapter)	5120-00-473-7352	7082201
72	F,H,D	Puller, Screw: End Cover	5120-00-708-3894	7083894
73	D	Puller assembly: Low Drum	4910-00-070-4888	8356051

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SECTION III. SPECIAL TOOL AND TEST EQUIPMENT REQUIREMENTS - Continued

(1) Reference code	(2) Maintenance level	(3) Nomenclature	(4) National/NATO stock number	(5) Tool number
74	D	Remover and Replacer, Main Shaft Needle Bearing: (used w/5120-00-473-7121 handle)	5120-00-473-7388	7082426
75	F,H,D	Remover, Lead Seal: Control Valve Body Stud Lead Washers	5120-00-708-3514	7083514
76	F,H,D	Replacer, Bearing: Brake Apply Shaft Bracket Assembly	5120-00-708-2980	7082980
77	F,H,D	Replacer, Bearing: Brake Apply Outer Lever Trunion Bearing	5120-00-708-2981	7082981
78	F,H,D	Replacer Bearing: Brake Apply Shaft Bearing into End Cover	5120-00-708-2982	7082982
79	D	Replacer, Bushing, Cover: Output Flange Bushing or End Cover to Output Shaft Bushing	5120-00-658-2256	8350746
80	D	Replacer, Gear: Rear Housing Servo Lever Needle Bearing	5120-00-473-7460	7082480
81	F,H,D	Sling, Lifting: Left End Cover Assembly	4910-00-708-1580	7081580
82	F,H,D	Sling, Lifting: Transmission Assembly	4910-00-473-7556	7081593
83	D	Sling, Lifting: Package Unit	4910-00-708-2787	7082787
84	D	Sling, Lifting: Front Housing, Steering, Clutch Housing Reaction Plate Assembly, Torque Converter Housing Driving Bevel Gear Carrier Assembly	4910-00-708-3778	7083778

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SECTION III. SPECIAL TOOL AND TEST EQUIPMENT REQUIREMENTS - Continued

(1) Reference code	(2) Maintenance level	(3) Nomenclature	(4) National/NATO stock number	(5) Tool number
85	O,F,H,D	Socket, Socket Wrench: Band Adjusting Screw Locknut	5120-00-626-1842	7003946
86	F,H,D	Thimble, Installing, Parking Brake Oil Seal	4910-00-708-1614	7081614
87	D	Socket Wrench, Face Spanner: Transfer Driver Gear Locknut or Input Driving Bevel Gear Locknut	5120-00-658-2257	8350702
88	D	Socket Wrench, Face Spanner: Torque Converter Input Shaft Nut	5120-00-658-2258	8350703
89	F,H,D	Wrench, Pinion Turning: Holding Input Driving Bevel Gear or Turning Engine thru Transmission Input Driving Bevel Gear	5120-00-708-1564	7081564
90	D	Wrench, Spanner: Converter Output Shaft Flange	5120-00-092-9069	8390286
		CHASSIS TOOLS, Heater		
91	H,D	Remover, Fuel Valve Screen: Heater	5120-00-735-5871	7355871
92	H,D	Scraper, Carbon: Igniter Housing Heater	5110-00-735-5872	7355872
		CHASSIS TOOLS, Suspension		
93	O,F,H,D	Adapter, Mechanical Puller: Torsion Bar and Track Adjusting Pin (used w/5120-00-557-3615 Puller)	5120-01-017-5328	12251805

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SECTION III. SPECIAL TOOL AND TEST EQUIPMENT REQUIREMENTS - Continued

(1) Reference code	(2) Maintenance level	(3) Nomenclature	(4) National/NATO stock number	(5) Tool number
94	O,F,H,D	Adapter, Roadwheel Arm: (used w/5120-00-557-3615 Puller)	5120-00-473-6927	7080285
95	F,H,D	Fixture, Track Connecting Full Tracked Vehicle (used w/5120-00-632-5797 Adapter, Socket Wrench)	5120-01-016-2149	12252120
96	O,F,H,D	Gage, Wear: End Connector	4910-00-795-7960	10873933
97	O,F,H,D	Handle, Remover and Replacer	5120-00-473-7121	7082881
98	O,F,H,D	Handle, Remover and Replacer	5120-00-708-3883	7083883
99	O,F,H,D	Lifter, Roadwheel Arm	5120-00-611-7137	7010355
100	F,H,D	Puller, Mechanical Two Leg Type: Track End Connector	5120-01-040-9318	12252143
101	O,F,H,D	Puller, Slide Hammer Type: (used w/adapter 5120-00-322-5953)	5120-00-557-3615	5573615
102	O,F,H,D	Remover, Final Drive: Sprocket Hub Split Tapered Dowel	5120-00-034-8445	8390335
103	O,F,H,D	Remover and Replacer Assy., Compensating Link Bearing	5120-00-614-1454	7027414
104	O,F,H,D	Remover and Replacer: Roadwheel Track Support Roller Wheel, and Compensating Idler Wheel Hub Outer Bearing Cups (used w/5120-00-708-3883 Handle)	5120-00-473-7374	7082834

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SECTION III. SPECIAL TOOL AND TEST EQUIPMENT REQUIREMENTS - Continued

(1) Reference code	(2) Maintenance level	(3) Nomenclature	(4) National/NATO stock number	(5) Tool number
105	O,F,H,D	Remover and Replacer: Road-wheel or Compensating Idler Hub Inner Bearing Cup (used w/5120-00-708-3883 Handle)	5120-00-473-7373	7082876
106	O,F,H,D	Remover and Replacer: Track Support Roller Wheel Hub Inner Bearing Cup (used w/ 5120-00-708-3883 Handle)	5120-00-473-7372	7082863
107	O,F,H,D	Remover and Replacer Tool, Track Adjusting Link Pin: (used w/5120-00-557-3615)	5120-00-113-5265	11645917
108	O,F,H,D	Replacer, Oil Seal: Compensating Arm Spindle, Road-wheel Arm Spindle, Inner Bearing Oil Seal (used w/ 5120-00-473-7121 Handle)	5120-00-473-7494	7078977
109	O,F,H,D	Replacer, Oil Seal: Road-wheel Arm Support Spindle Outer Bearing Oil Seal (used w/5120-00-473-7121 Handle)	5120-00-473-7475	7078973
110	O,F,H,D	Replacer, Oil Seal: Track Support Roller Wheel Inner Bearing Oil Seal	5120-00-473-7471	7082882
111	O,F,H,D	Replacer, Oil Seal and Retainer: Compensating Arm Oil Seal and Retainer Assy.	5120-00-592-3672	8708188
112	O,F,H,D	Sling Assembly, Single Leg: Final Drive Hub and Sprocket Assy.	4010-00-383-3681	8366458

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SECTION III. SPECIAL TOOL AND TEST EQUIPMENT REQUIREMENTS - Continued

(1) Reference code	(2) Maintenance level	(3) Nomenclature	(4) National/NATO stock number	(5) Tool number
113	O,F,H,D	Tool Assembly, Shock Absorber Bearing	5120-00-279-8325	11654533
114	F,H,D	Tool and Case Assy, Bearing: Final Drive Output Shaft Bearing Seal and Inner Bearing	4910-00-906-1065	10933875
115	O,F,H,D	Wrench, Hook Spanner: used on Roadwheel Arm Assy. Retaining Nut	5120-00-473-7761	7078980
116	F,H,D	Thimble, Final Drive Output Shaft Seal Installing	5120-00-977-5581	8355822
117	F,H,D	Wrench, Box, Final Drive Output Shaft Nut	5120-01-050-2070	12251988
118	F,H,D	Wrench, Open End, Fixed: Track Tension Adjusting	5120-00-563-7342	8708683
119	O,F,H,D	Wrench, Plug: Roadwheel Arm Torsion Bar End Plug	5120-00-473-7716	7078976
120	O,F,H,D	Wrench, Spanner: Roadwheel Track Support Roller, or Compensating Idler Wheel Bearing Adjusting Nut	5120-00-588-4808 or 5120-01-048-8640	8708459 or 12257561
121	O,F,H,D	Adapter, Torque Wrench	1025-00-215-8200	11663358-2
122	O,F,H,D	Torque Adapter, Driver's Hatch Hinge	2510-00-010-1644	11655766
123	F,H,D	Installation Tool, Captive Screw	5120-01-051-5016	11668990
124	O,F,H,D	Gage, Sprocket	5210-00-563-7320	8708388

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SECTION III. SPECIAL TOOL AND TEST EQUIPMENT REQUIREMENTS - Continued

(1) Reference code	(2) Maintenance level	(3) Nomenclature	(4) National/NATO stock number	(5) Tool number
		CHASSIS TOOLS, Powerplant		
125	O,F,H,D	Brake Applicator Tool, Powerplant Test Run (PPTR)	5120-00-570-7486	10933755
126	O,F,H,D	Hose Assembly, Used to Stall Check Powerplant While Out of Vehicle		12258071
127	O,F,H,D	Cable Assembly, Ground: PPTI	2590-00-674-8738	10864170
128	O,F,H,D	Cable Assembly, Accessories: PPTR	2590-00-674-8736	10864166
129	O,F,H,D	Cable Assembly, Starter: PPTR	2590-00-674-8737	10864169
130	O,F,H,D	Cable Assembly, Generator Armature PPTR	4910-00-092-9131	8366463
131	O	Cleaner, Oil Cooler: (cleaning oil cooler/soluble cleaning solution)	2815-00-494-8257	11641959
132	O,F,H,D	Hose Assembly, Non-Metallic: Engine Primer (Powerplant Test Run)	5130-00-891-7865	11591102
133	O,F,H,D	Hose Assembly, Non-Metallic: Main Fuel Line and Fuel Injector Return (Powerplant Test Run)	5130-00-891-7864	11591103
134	O,F,H,D	Sling, Lifting: Powerplant or Grille Cover	4910-01-048-8706	12257229
135	O,F,H,D	Tool Assy, Mechanical, To Remove Resilient Mount from Transmission Mounting Brackets	5120-00-463-7302	10933782

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SECTION III. SPECIAL TOOL AND TEST EQUIPMENT REQUIREMENTS - Continued

(1) Reference code	(2) Maintenance level	(3) Nomenclature	(4) National/NATO stock number	(5) Tool number
		CHASSIS TOOLS, Turbosupercharger		
136	H,D	Gage: Ring Groove Width	4910-00-793-5030	10882675
137	H,D	Pliers, Retaining Ring	5120-00-792-8624	10935598
138	H,D	Sleeve, Installing	4910-00-870-2122	10899149
139	H,D	Wrench, Box: Bearing Housing	5120-00-323-4875	8708189
		CHASSIS TOOLS, Fuel Injector Pump		
140	H,D	Compressor, Spring Seat	5120-00-793-5049	10882862
141	H,D	Fixture, Positioning Plunger	4910-00-793-5039	10882859
142	H,D	Gage, Spring Governor: Weight and Spider Springs	4910-00-793-5040	10882854
143	H,D	Puller, Mechanical: Weight and Spider Assy.	5120-00-793-5048	10882818
144	H,D	Remover and Replacer: Weight and Spider Assy.	5120-00-793-5055	10882856
145	H,D	Wrench, Shaft Turning and Holding	5120-00-793-5057	10882894
146	H,D	Wrench, Spanner: Access Plug	5120-00-793-5045	10882851
147	H,D	Wrench, Spanner: Clutch Torque Checking	5120-00-230-6380	10882857
148	H,D	Wrench, Turning and Holding: Pronged Type, Clutch Torque	5120-00-793-5046	10882889

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SECTION III. SPECIAL TOOL AND TEST EQUIPMENT REQUIREMENTS - Continued

(1) Reference code	(2) Maintenance level	(3) Nomenclature	(4) National/NATO stock number	(5) Tool number
		CHASSIS TOOLS - Miscellaneous		
149	O,F,H,D	Vacuum Cleaner: Clean Air Cleaner Housing	7910-00-807-3704	A1625
150	O,F,H,D	Puller Kit, End Connector, Hydraulic Powered	5120-01-052-5642	11669394-1
151	O,F,H,D	Crowfoot Attachment, Socket Wrench, 7/16 in., Flat, 3/8 dr.	5120-00-184-8383	GGG-C-001507 Type II
152	O,F,H,D	Crowfoot Attachment, Socket Wrench, 1/2 in., Flat, 3/8 dr.	5120-00-184-8384	GGG-C-001507 Type II
153	O,F,H,D	Crowfoot Attachment, Socket Wrench, 9/16 in., Flat, 3/8 dr.	5120-00-184-8397	GGG-C-001507 Type II
154	O,F,H,D	Crowfoot Attachment, Socket Wrench, 3/4 in., Flat, 3/8 dr.	5120-00-184-8400	GGG-W-641 Type IV, Class I
155	O,F,H,D	Crowfoot Attachment, Socket Wrench, 3/4 in., HEX, 3/8 dr.	5120-00-189-7898	GGG-C-001507 Type I
156	O,F,H,D	Crowfoot Attachment, Socket Wrench, 7/8 in., Flat, 3/8 dr.	5120-00-541-4071	GGG-C-001507 Type II
157	O,F,H,D	Crowfoot Attachment, Socket Wrench, 1 in., Flat, 1/2 dr.	5120-00-293-1282	GGG-C-001507 Type II
158	O,F,H,D	Crowfoot Attachment, Socket Wrench, 1-1/16 in., HEX, 3/8 dr.	5120-00-181-6764	GGG-C-001507 Type I

SECTION III. SPECIAL TOOL AND TEST EQUIPMENT REQUIREMENTS - Continued

(1) Reference code	(2) Maintenance level	(3) Nomenclature	(4) National/NATO stock number	(5) Tool number
159	O,F,H,D	Crowfoot Attachment, Socket Wrench, 1-1/8 in., Flat, 3/8 dr.	5120-00-517-7021	GGG-C-001507 Type II
160	O,F,H,D	Crowfoot Attachment, Socket Wrench, 1-1/4 in., HEX, 1/2 dr.	5120-00-181-6759	GGG-C-001507 Type I
161	O,F,H,D	Crowfoot Attachment, Socket Wrench, 1-1/2 in., Flat, 1/2 dr.	5120-00-293-1284	GGG-C-001507 Type II
		COMMON TOOL SETS		
162	O,F,H	Tool Kit, General	5180-00-177-7033	
163	O	Shop Equipment, Automotive Maintenance, OM, Common #1	4910-00-754-0654	
164	O	Shop Equipment, Automotive Maintenance, OM, Supplement #1	4910-00-754-0653	
165	O	Shop Equipment, Automotive Maintenance, OM, Supplement #2	4940-00-754-0743	
166	O	Shop Equipment, Automotive Maintenance, OM, Common #2	4910-00-754-0650	
167	O,F,H	Tool Kit, Welder's	5180-00-754-0661	
168	F,H	Shop Equipment, Machine Shop, FM	3470-00-754-0708	
169	H	Shop Equipment, General	4940-00-287-4894	
170	F,H	Shop Equipment, Welding, FM	3470-00-357-7268	

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SECTION III. SPECIAL TOOL AND TEST EQUIPMENT REQUIREMENTS - Continued

(1) Reference code	(2) Maintenance level	(3) Nomenclature	(4) National/NATO stock number	(5) Tool number
171	F,H	Tool Kit, Automotive, Fuel & Electric	4910-00-754-0655	
172	O	Tool Kit, Electronic Equipment	5180-00-064-5178	
173	F,H	Shop Equipment, Automotive Repair FM, Supplement #1	4910-00-754-0706	
174	F	Tool Kit, Body & Fender Repair, FM	5180-00-754-0643	
175	F,H	Shop Equipment, Contact Maint.	4940-00-294-9518	
176	F	Shop Equipment, Electric Repair	4940-00-294-9542	
177	F,H	Shop Equipment, Automotive Maintenance, FM, Basic	4910-00-754-0705	
178	F,H	Shop Set, Fuel & Electric System, FM	4910-00-754-0714	
179	F,H	Shop Set, Fuel & Electric System, FM, Supplemental #2	4910-00-390-7775	
180	H	Shop Equipment, Electrical Repair, Semitrailer-MTD	3470-00-754-0738	
181	F,H	Shop Set, Fuel & Electric System, FM, Supplemental #1	4910-00-390-7774	
182	F,H	Shop Equipment, Radiator Test and Repair, Field Maintenance, Composite, Shop A	4910-00-071-0746	

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SECTION IV. REMARKS

Reference code	Remarks
A	All repair and replacement of parts performed by Organizational Maintenance is limited to authorized items in TM 5-5420-226-20P.
B	All repair and replacement of parts performed by Direct Support Maintenance is limited to authorized items listed in TM 9-2815-220-34P.
C	Inspection by crew level personnel is limited to a visual inspection.
D	Repair at Organizational Maintenance level is limit ed to tightening hold-down only.
E	Inspection at Organizational Maintenance level is identified by the PMCS.
F	Service at crew level is limited to emergency servicing only.
G	Use sling, cupola lifting, P/N 11658914, turret special tool used with M48/M60 series tanks.
H	Repair at organizational Maintenance level is limited to replacement of door gasket or seal.
I	Repair at Organizational Maintenance level is limited to procedures in TM 5-5420-226-20 and. does not include welding.
J	Repair of battery holding frame is limited to welding cracks.
K	To replace and repair the bulkhead to engine disconnect (left side) wiring harness it is necessary to remove the powerplant.
L	Depot overhaul involves vulconizing new rubber to the wheel disc.
M	Inspection by crew personnel is limited to those vehicles equipped with undercut sprocket teeth.
N	Repair fender boxes and covers by welding minor cracks and loose hinges to cover.
O	Repair of stowage boxes and bracket (11625609) is limited to welding cracks and replacement of straps.
P	Repair of platform assembly is limited to welding of cracks.
Q	Repair of cylinder assembly limited to specialized repair shop (TM 55-1680-246-40).
R	Repair at Direct Support Maintenance is for complete repair and requires removal of the harness before it can be accomplished.

TA169860

APPENDIX C

GENERAL MAINTENANCE

INDEX

GENERAL MAINTENANCE (Sheet 1 of 33)

Inspection and Repair of Welds (Sheet 1 of 1)

1. Inspect and repair welds in accordance with TM 9-237.
2. Military specifications referenced in this manual will be used as mandatory guidelines beyond the scope of TM 9-237 during welding processes.
3. When welding requirements are beyond organizational capabilities, notify support maintenance personnel.

End of Task

Inspection, Care, and Maintenance of Antifriction Bearings. Refer to TM 9-214

End of Task

GENERAL MAINTENANCE (Sheet 2 of 33)

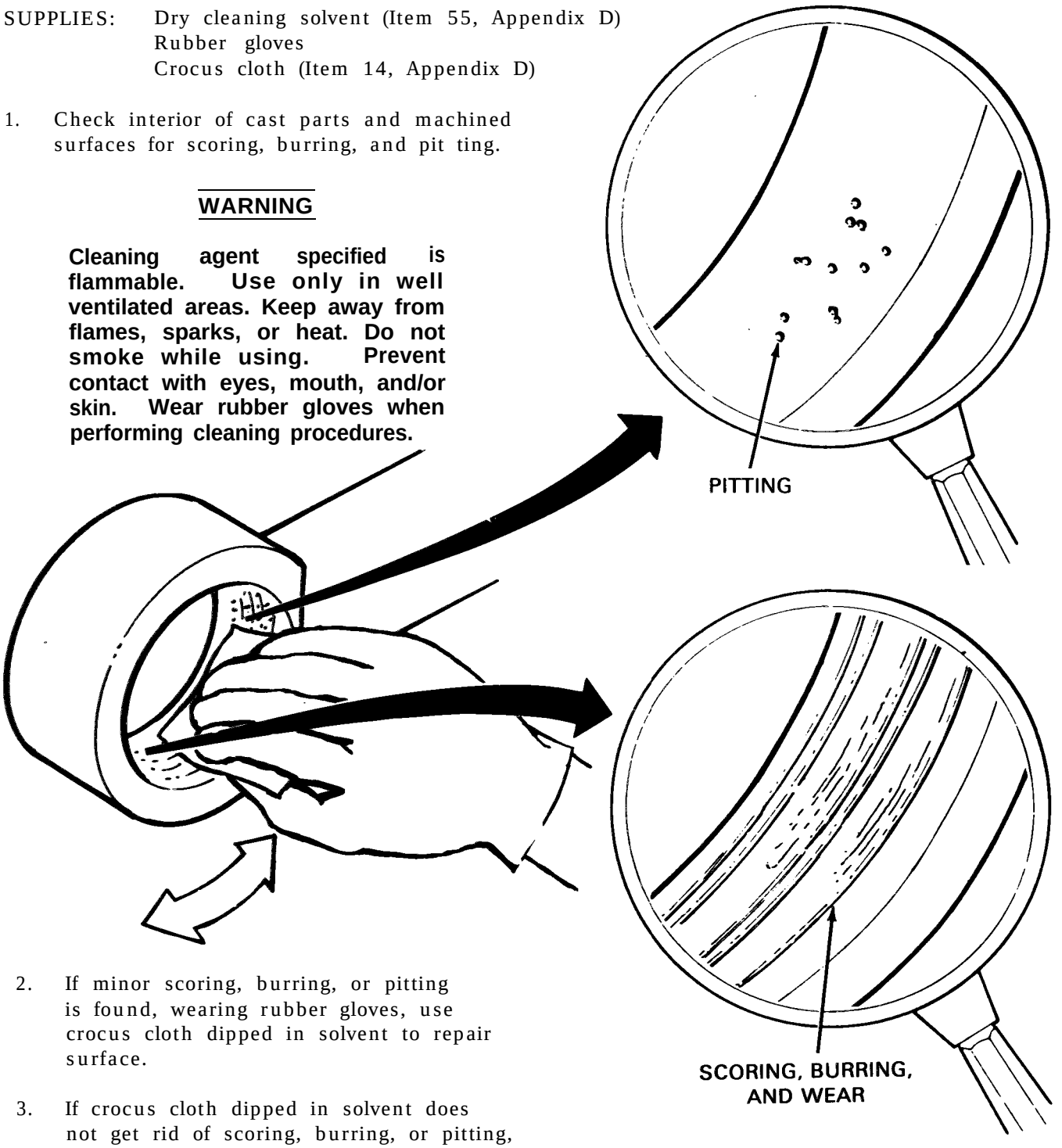
Inspection and Repair of Cast Parts and Machined Surfaces (Sheet 1 of 2)

SUPPLIES: Dry cleaning solvent (Item 55, Appendix D)
Rubber gloves
Crocus cloth (Item 14, Appendix D)

1. Check interior of cast parts and machined surfaces for scoring, burring, and pit ting.

WARNING

Cleaning agent specified is flammable. Use only in well ventilated areas. Keep away from flames, sparks, or heat. Do not smoke while using. Prevent contact with eyes, mouth, and/or skin. Wear rubber gloves when performing cleaning procedures.



2. If minor scoring, burring, or pitting is found, wearing rubber gloves, use crocus cloth dipped in solvent to repair surface.

3. If crocus cloth dipped in solvent does not get rid of scoring, burring, or pitting, or if part is excessively scored, worn, pitted, or burred, throw part away.

Go on to Sheet 2

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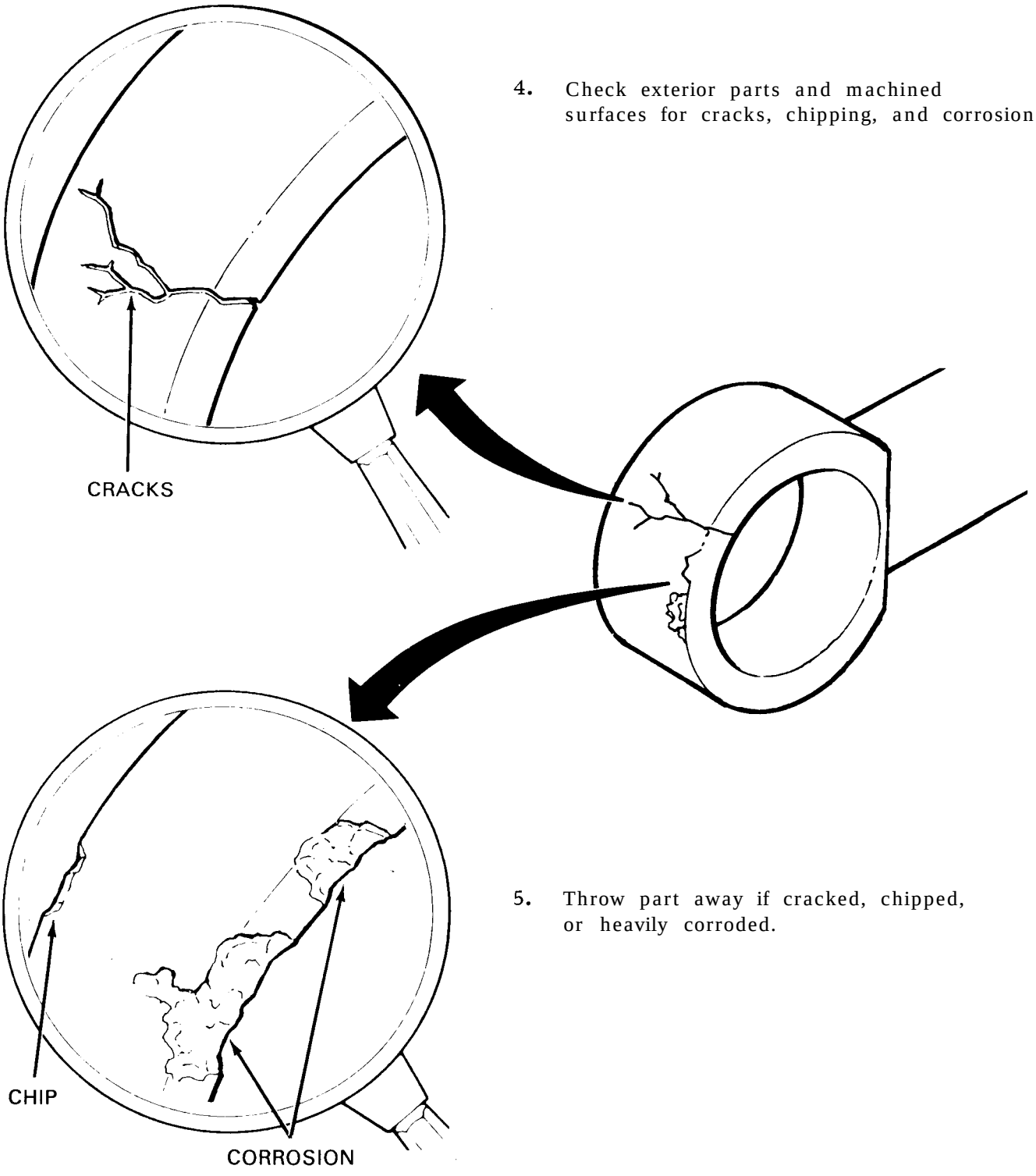
GENERAL MAINTENANCE (Sheet 3 of 33)

Inspection and Repair of Cast Parts and Machined Surfaces (Sheet 2 of 2)



4. Check exterior parts and machined surfaces for cracks, chipping, and corrosion.

5. Throw part away if cracked, chipped, or heavily corroded.

End of Task

TA169864

GENERAL MAINTENANCE (Sheet 4 of 33)

Inspection and Repair of Splines (Sheet 1 of 2)

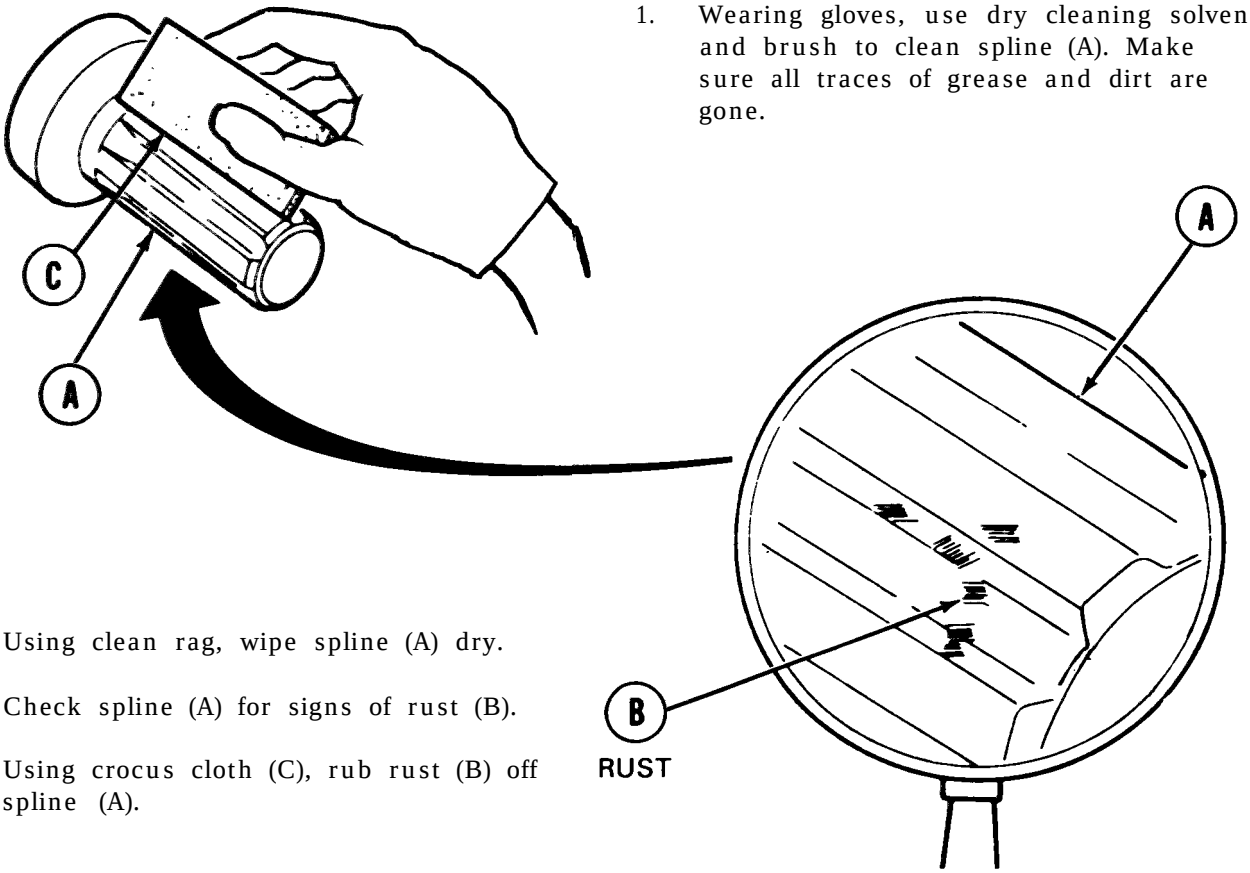
TOOLS: Hand file
Hand oiler
l/4 in. paint brush

SUPPLIES: Dry cleaning solvent (Item 55, Appendix D)
Rubber gloves
Crocus cloth (Item 14, Appendix D)
Clean rags
Lubricating oil (Item 44, Appendix D)
Protective wrapping (if required)

WARNING

Cleaning agent specified is flammable. Use only in well ventilation areas. Keep away from flames, sparks, or heat. Do not smoke while using. Prevent contact with eyes, mouth, and/or skin. Wear rubber gloves when performing cleaning procedures.

1. Wearing gloves, use dry cleaning solvent and brush to clean spline (A). Make sure all traces of grease and dirt are gone.



2. Using clean rag, wipe spline (A) dry.
3. Check spline (A) for signs of rust (B).
4. Using crocus cloth (C), rub rust (B) off spline (A).

Go on to Sheet 2

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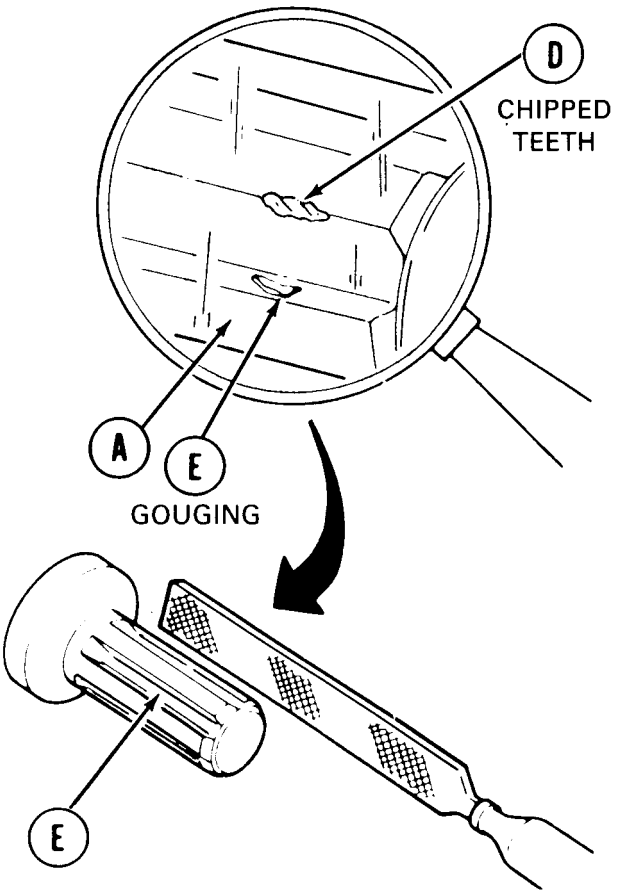
GENERAL MAINTENANCE (Sheet 5 of 33)

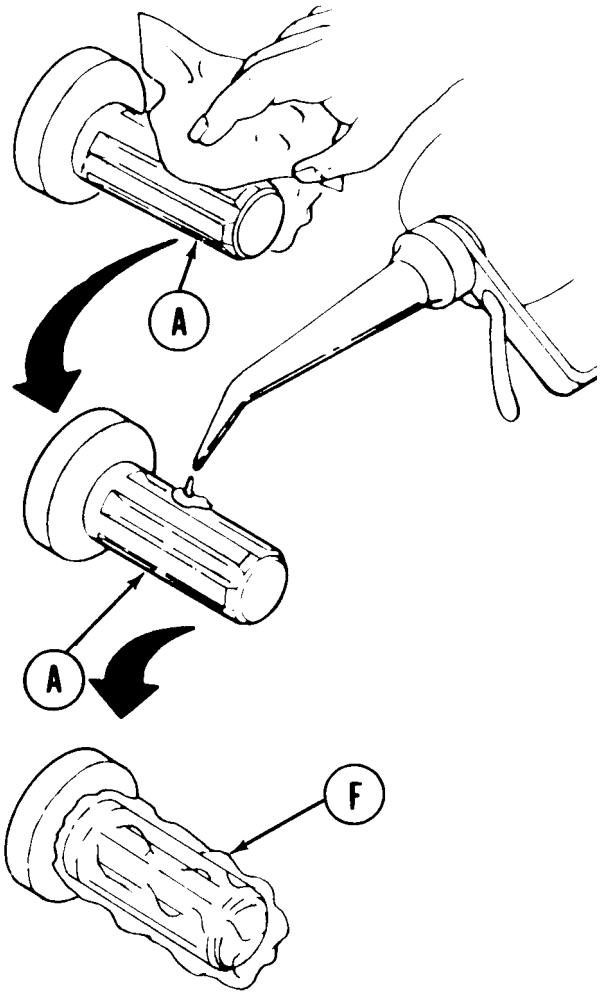
Inspection and Repair of Splines (Sheet 2 of 2)

5. Check for chipped teeth (D) and gouging (E) on face of spline (A).

6. Using hand file, get rid of sharp edges or light gouging (E).

7. Using rag dampened with dry cleaning solvent, wipe metal chips and metal dust from spline (A).





NOTE

Only if spline (A) will not be used right away, do steps 8 and 9.

8. Using oil, coat spline (A).

9. Using protective wrapping (F), wrap spline (A).

End of Task

TA169866

GENERAL MAINTENANCE (Sheet 6 of 33)

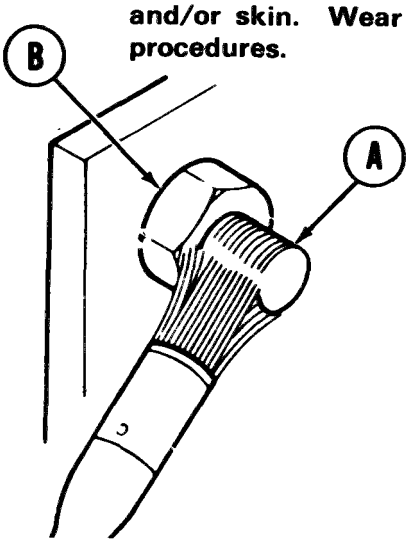
Cleaning Threads and Nuts (Sheet 1 of 1)

TOOLS: Wire brush
1/4 in. paint brush
Hand oiler

SUPPLIES: Dry cleaning solvent (Item 55, Appendix D)
Penetrating oil (Item 43, Appendix D)
Rubber gloves

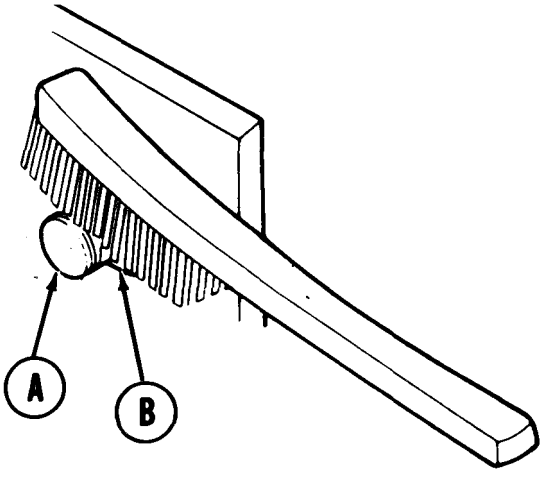
WARNING

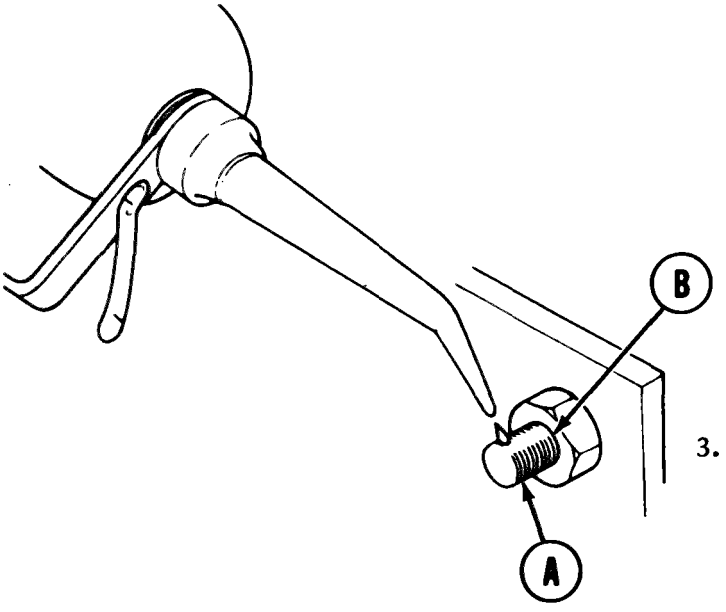
Cleaning agent specified is flammable. Use only in well ventilated areas. Keep away from flames, sparks, or heat. Do not smoke while using. Prevent contact with eyes, mouth, and/or skin. Wear rubber gloves when performing cleaning procedures.



1. Wearing gloves, use dry cleaning solvent and brush to clean threads (A) and nut (B).

2. Using wire brush, clean threads (A) and nut (B). Make sure all traces of rust and dirt are removed.





3. Using penetrating oil, lube threads (A) and nut (B). Let oil seep between threads (A) and nut (B).

End of Task

TA169867

GENERAL MAINTENANCE (Sheet 7 of 33)

Loosening and Removing Nuts (Sheet 1 of 1)

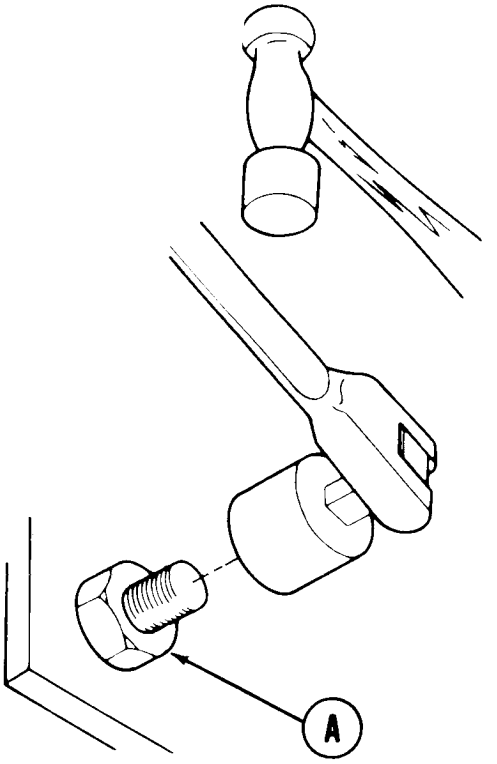
TOOLS: Ball peen hammer
Wire Brush
Socket

1. Using socket, try to remove nut (A).
2. If nut (A) will not turn, clean threads and nut (page C-7).
3. Using hammer, gently tap nut (A).
4. Using socket wrench handle with socket attempt to free nut.

NOTE

If nut (A) cannot be freed by step 3 above, go to page C-9.

4. Take off and throw away nut (A). If nut (A) was attached to a bolt, replace bolt.



End of Task

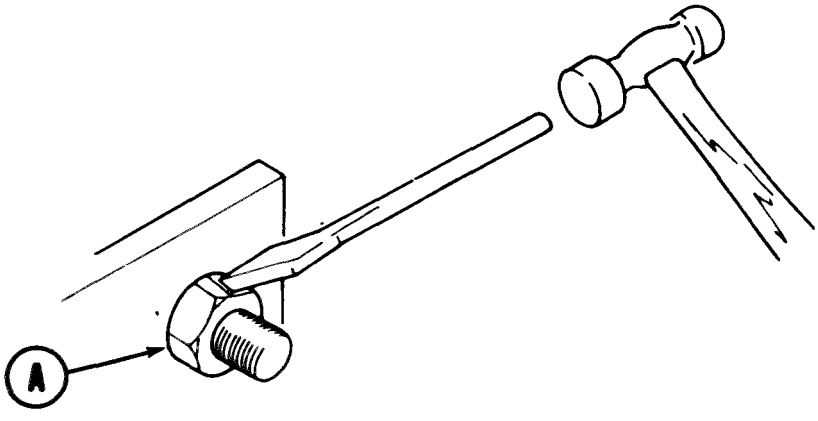
TA169868

GENERAL MAINTENANCE (Sheet 8 of 33)

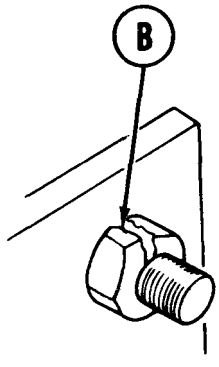
Cutting Nuts (Sheet 1 of 1)

TOOLS: Cape chisel
Screw threading set
Ball peen hammer
Adjustable wrench

1. Using hammer and cape chisel, cut flat side of nut (A).



2. Stop cutting when nut (A) spreads apart (B).

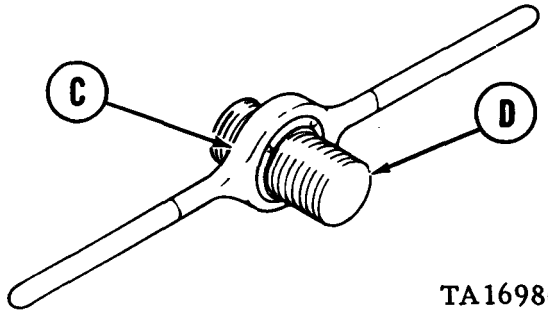


3. Using adjustable wrench remove nut (A).

NOTE

If nut (A) was removed from end of a bolt, throw bolt away if damaged. If nut (A) was removed from a stud or threaded shaft, do step 4.

4. Using die (C) from screw threading set, clean up threads (D).



TA169869

End of Task

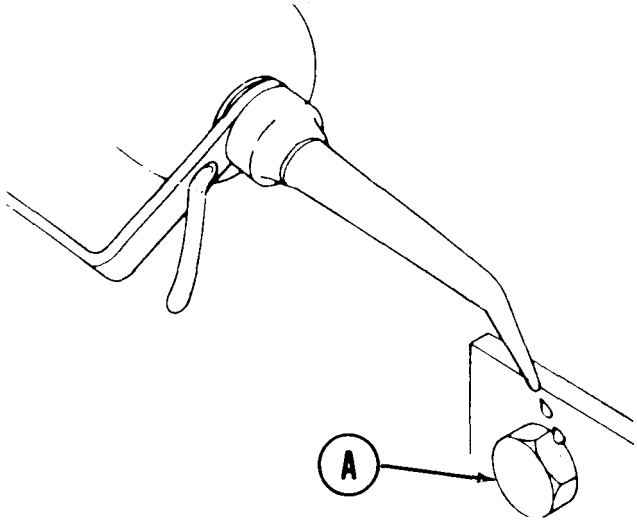
GENERAL MAINTENANCE (Sheet 9 of 33)

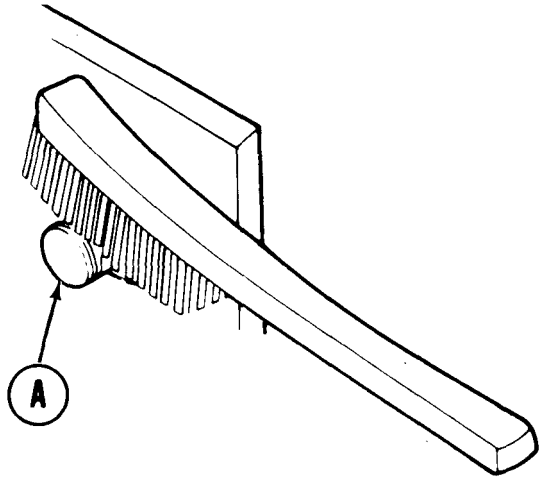
Bolt Removal (Sheet 1 of 1)

TOOLS: Ball peen hammer
Wire brush
Hand oiler

SUPPLIES: Penetrating oil (Item 43, Appendix D)

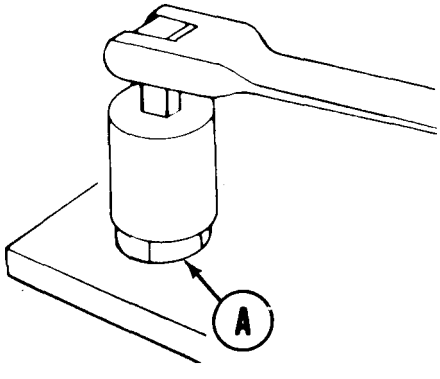
1. Using wire brush, clean head of bolt (A) and nearby area.

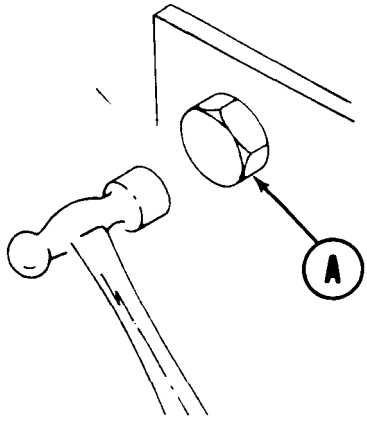




2. Using penetrating oil around head of bolt (A), allow oil to seep into threads.

3. Using hammer, lightly tap head of bolt (A).





4. Using socket wrench handle with socket, remove bolt (A). Throw away bolt (A) if damaged.

End of Task

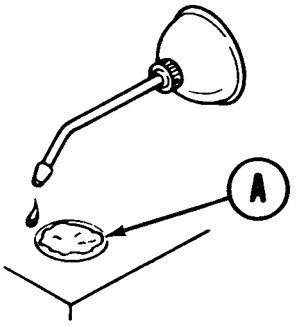
TA169870

GENERAL MAINTENANCE (Sheet 10 of 33)

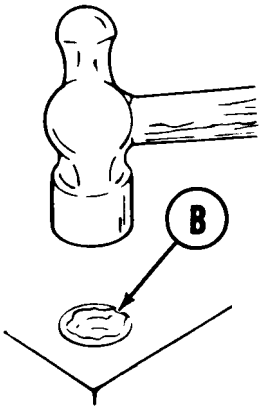
Removal of Studs Broken at Surface (Sheet 1 of 3)

TOOLS: Screw threading set
Portable electric drill
Twist drill set
Screw extractor set
Ball peen hammer
Prick punch
Hand oiler

SUPPLIES: Penetrating oil (Item 43, Appendix D)
Clean rags
Safety glasses



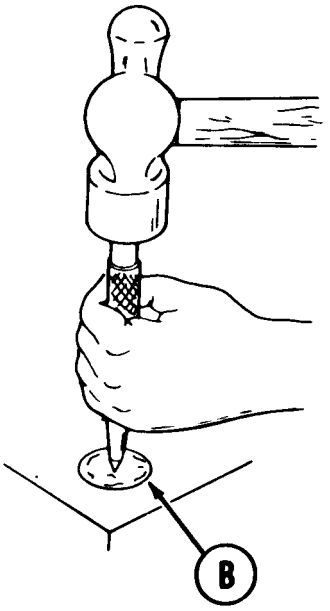
1. Using penetrating oil, lube thread area (A).



2. Using hammer, lightly tap stud (B).

NOTE

It is very important to drill out broken stud on exact center line.



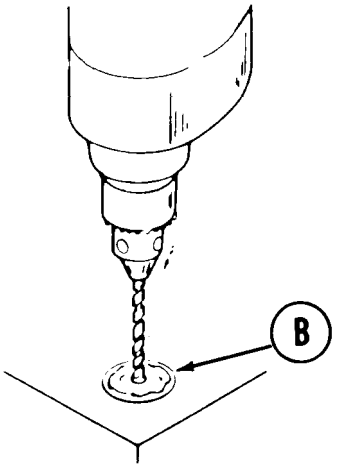
3. Using punch and hammer, punch center of broken stud (B).

Go on to Sheet 2

TA169871

GENERAL MAINTENANCE (Sheet 11 of 33)

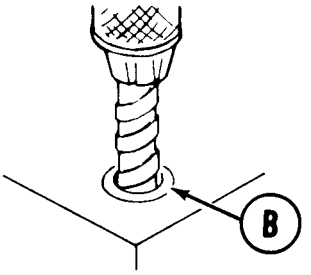
Removal of Studs Broken at Surface (Sheet 2 of 3)



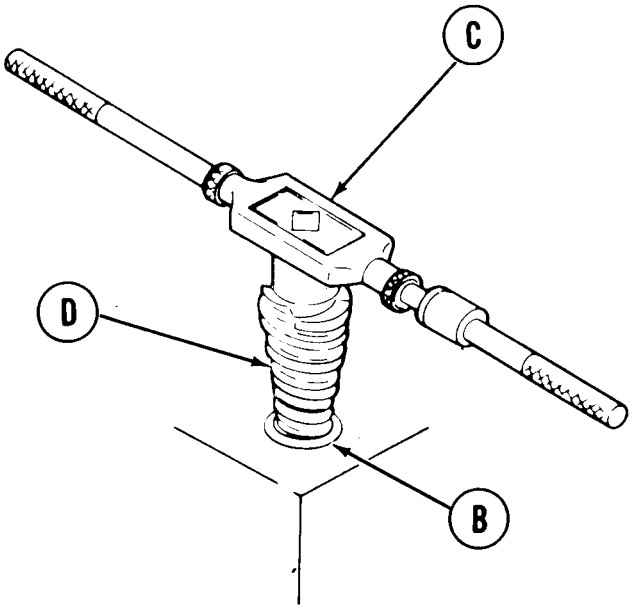
WARNING

Safety glasses must be worn when using drill to prevent injury to eyes.

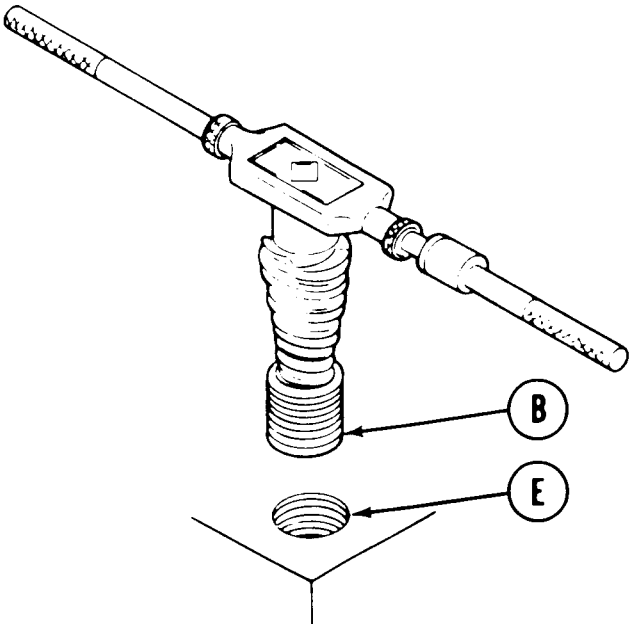
4. Using electric drill with pilot twist drill, drill center of stud (B).



5. Using electric drill with twist drill slightly smaller than extractor, drill into stud (B).



6. Using tap wrench handle (C) with screw extractor (D), turn tap wrench handle (C) counterclockwise to screw extractor (D) into stud (B).

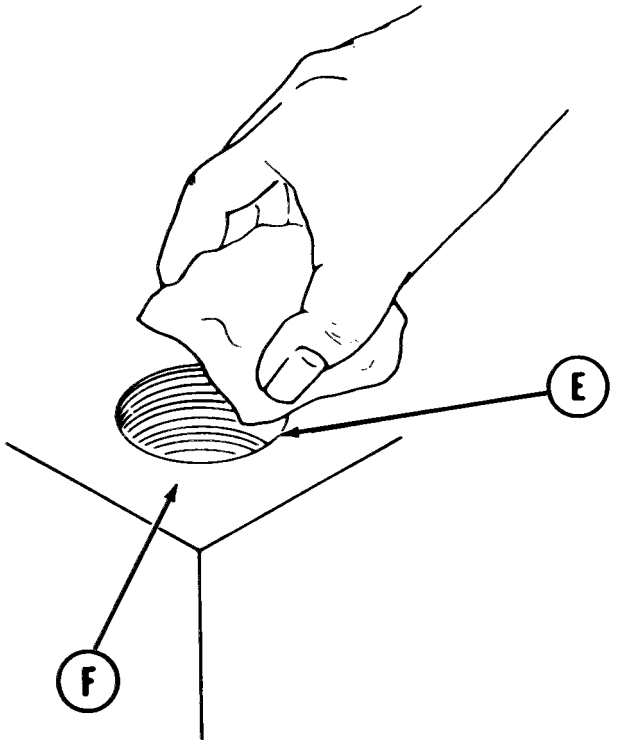


Go on to Sheet 3

TA169872

GENERAL MAINTENANCE (Sheet 12 of 33)

Removal of Studs Broken at Surface (Sheet 3 of 3)



7. Keep turning extractor counterclockwise until stud (B) is removed from threaded hole (E).

8. Using clean rag, wipe out threaded hole (E) and surface (F).

9. Using bottoming tap, chase internal threads.

End of Task

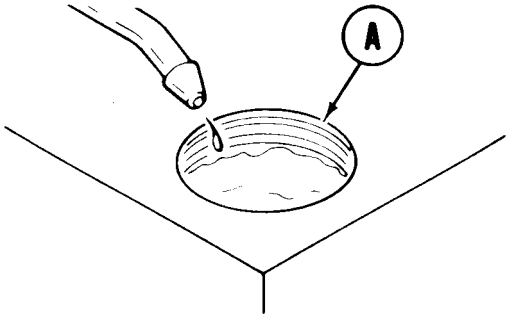
TA169873

GENERAL MAINTENANCE (Sheet 13 of 33)

Removal of Studs Broken Below Surface (Sheet 1 of 3)

TOOLS: Screw extractor set
Portable electric drill
Twist drill set
Hand oiler
Ball peen hammer

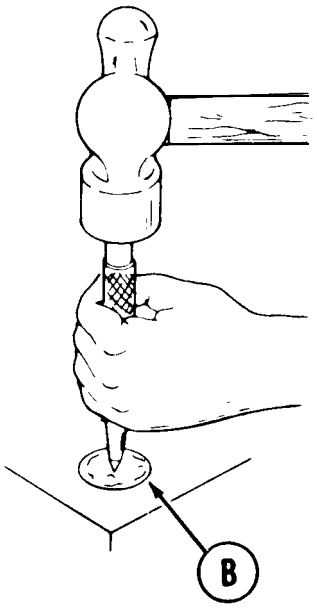
SUPPLIES: Penetrating oil (Item 43, Appendix D)
Clean rags
Safety glasses



1. Using penetrating oil, lube thread area (A).

NOTE

It is very important to drill out broken stud on exact center line.



2. Using punch and hammer, punch center of broken stud (B).

Go on to Sheet 2

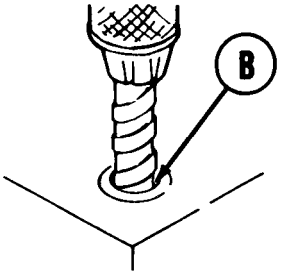
TA169874

GENERAL MAINTENANCE (Sheet 14 of 33)

Removal of Studs Broken Below Surface (Sheet 2 of 3)

WARNING

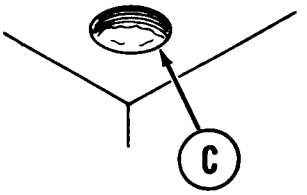
Safety glasses must be worn when using drill to prevent injury to eyes.

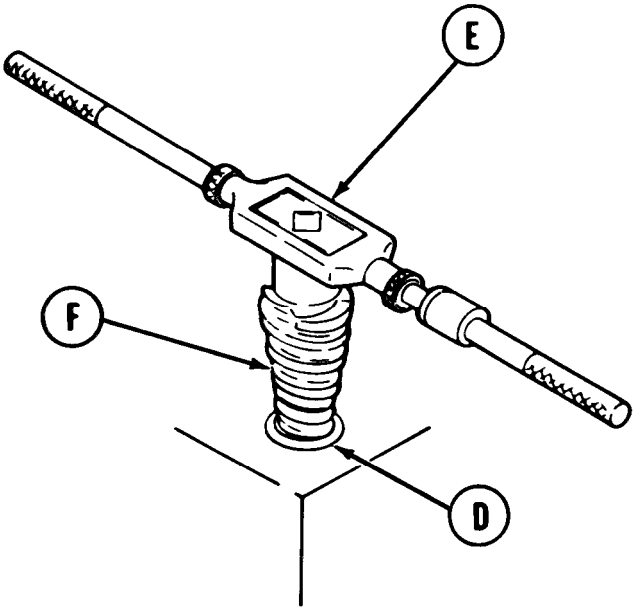


.3. Using electric drill with twist drill slightly smaller than extractor, drill into stud (B).

NOTE

Make sure all metal chips are removed from hole (C) before using extractor.





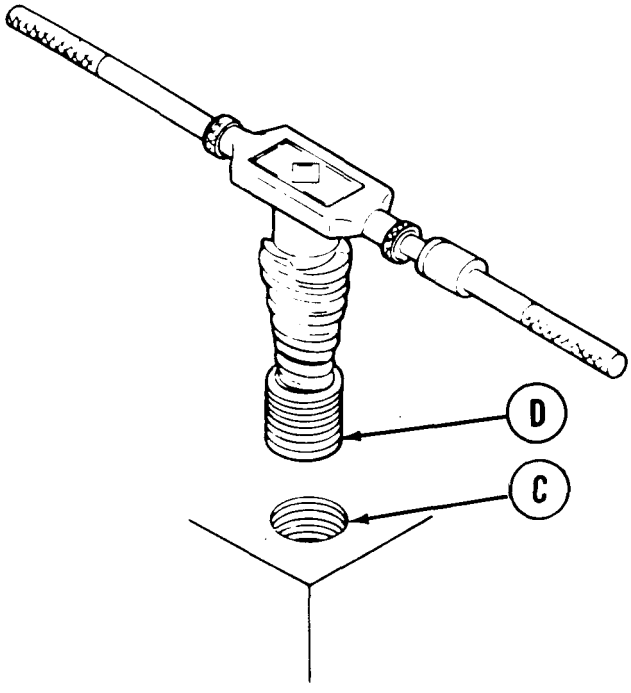
4. Using tap wrench handle (E) with screw extractor (F), turn tap wrench handle (E) counterclockwise to screw extractor (F) into stud (D).

Go on to Sheet 3

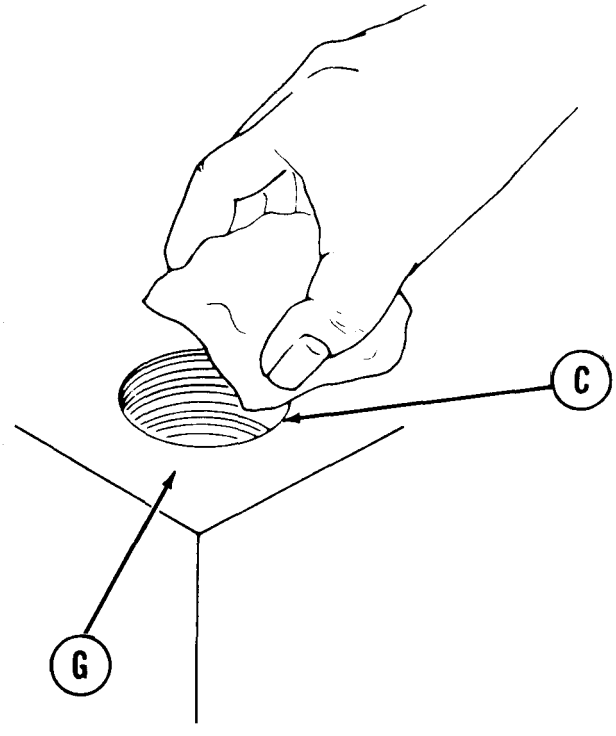
TA169875

GENERAL MAINTENANCE (Sheet 15 of 33)

Removal of Studs Broken Below Surface (Sheet 3 of 3)



5. Keep turning extractor counterclockwise until stud (D) is removed from threaded hole (C).



6. Using clean rag, wipe out threaded hole (C) and surface (G).

7. Using a bottoming tap, chase internal threads.

End of Task

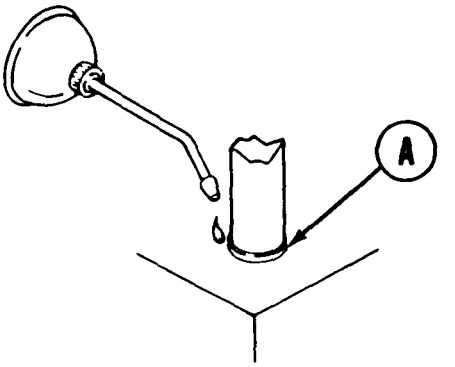
TA169876

GENERAL MAINTENANCE (Sheet 16 of 33)

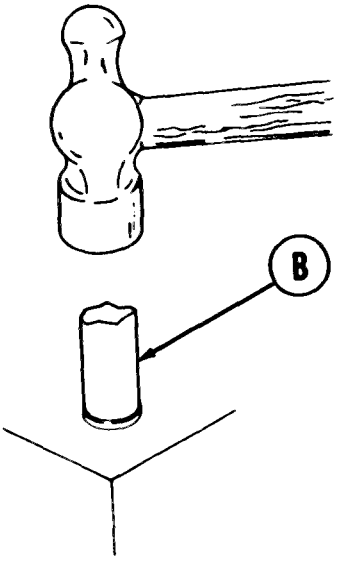
Removal of Studs Broken Above Surface (Sheet 1 of 1)

TOOLS: Ball peen hammer
Screw extractor set
Hand oiler
Wrench

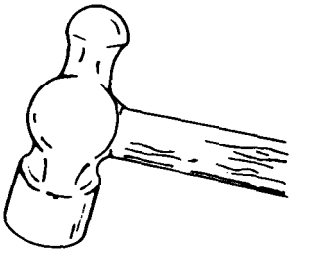
SUPPLIES: Penetrating oil (Item 43, Appendix D)
Clean rags



1. Using penetrating oil, lube threaded area (A).

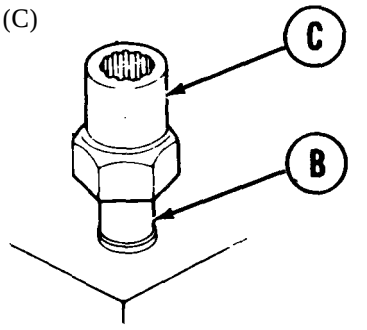


2. Using hammer, lightly tap stud (B).

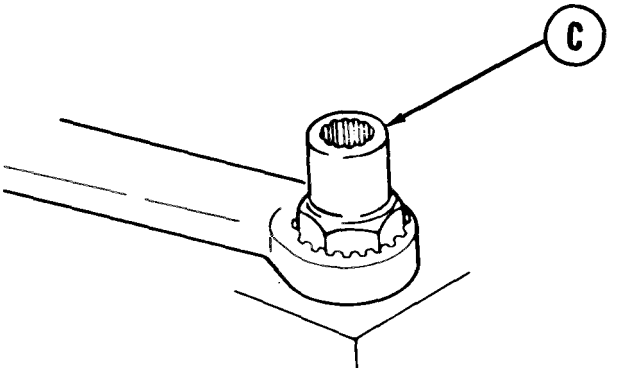


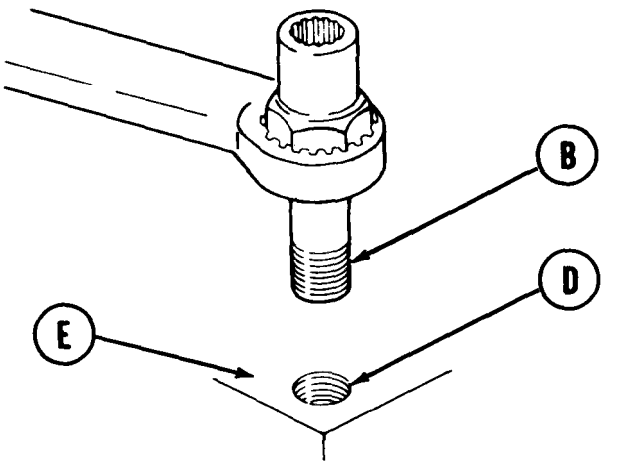
3. Using hammer, tap stud remover (C) onto stud (B).

4. Using wrench, turn stud remover (C) to the left.



5. Using wrench, keep turning stud remover (C) to the left until stud (B) is removed from threaded hole (D).





6. Using clean rag, wipe out threaded hole (D) and surface (E).

7. Using a bottoming tap, chase internal threads.

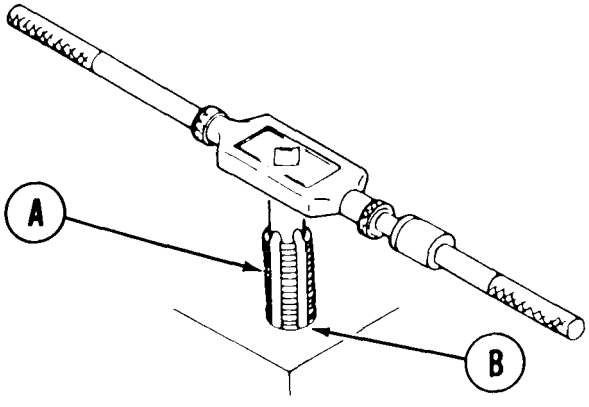
End of Task

TA169877

GENERAL MAINTENANCE (Sheet 17 of 33)

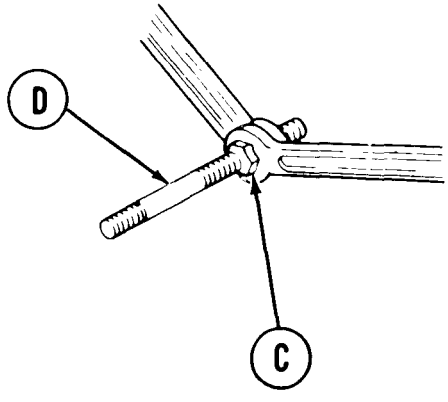
Installation of New Studs (Sheet 1 of 1)

TOOLS: Wrench, torque
Screw threading set
Combination box and open end wrench (2 required)
Socket

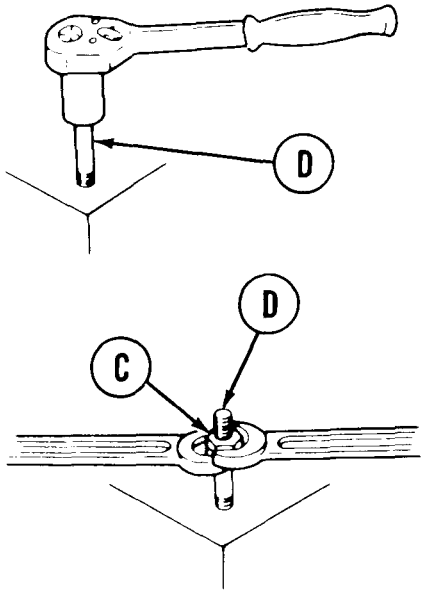


1. Using bottoming tap (A), clean out threads in hole (B).

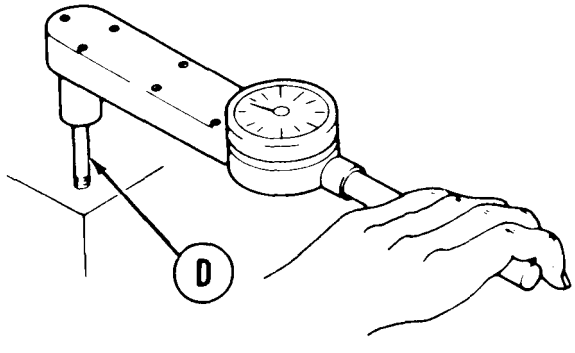
2. Using two wrenches, install and jam two nuts (C) onto end of new stud (D).



3. Using socket, install new stud (D) into hole (B).



4. Using torque wrench, tighten new stud (D) to required value (refer to specific maintenance procedure).



5. Using two wrenches, remove two nuts (C) from new stud (D).

End of Task

TA169878

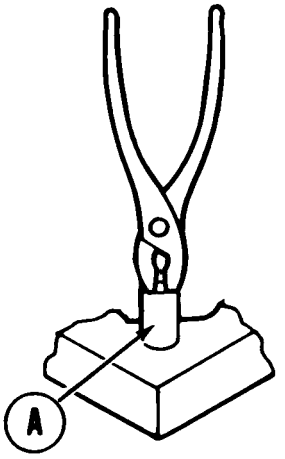
GENERAL MAINTENANCE (Sheet 18 of 33)

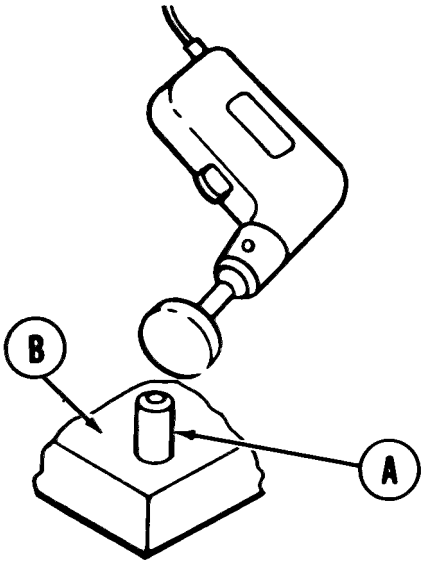
Dowel Pin Removal (Sheet 1 of 1)

TOOLS: Slip joint pliers
Portable electric hand grinder (if required)
Portable electric drill (if required)
Twist drill set

1. Using pliers, grip pin (A).

2. Using pliers, pull out pin (A) with twisting motion.

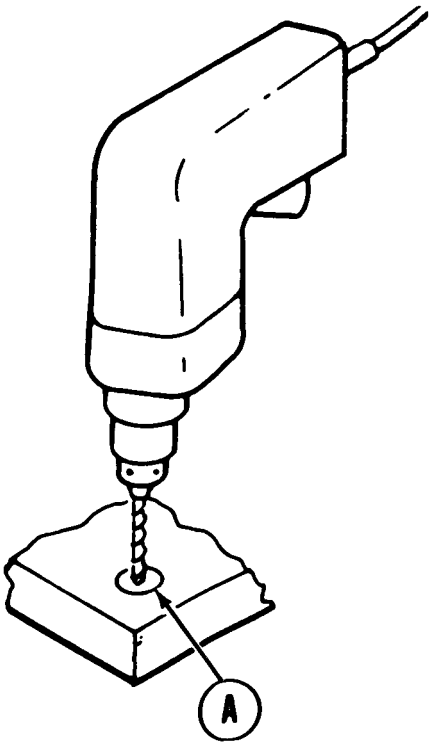




WARNING

Safety glasses must be worn when using grinder or drill to prevent injury to eyes.

3. If unable to pull out pin (A) with pliers, using hand grinder, grind pin (A) off flush with surface (B).



4. Using electric drill and twist drill, drill out rest of pin (A).

End of Task

TA169879

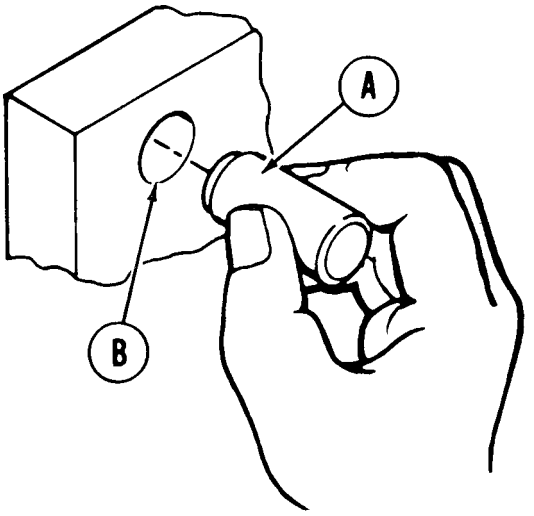
GENERAL MAINTENANCE (Sheet 19 of 33)

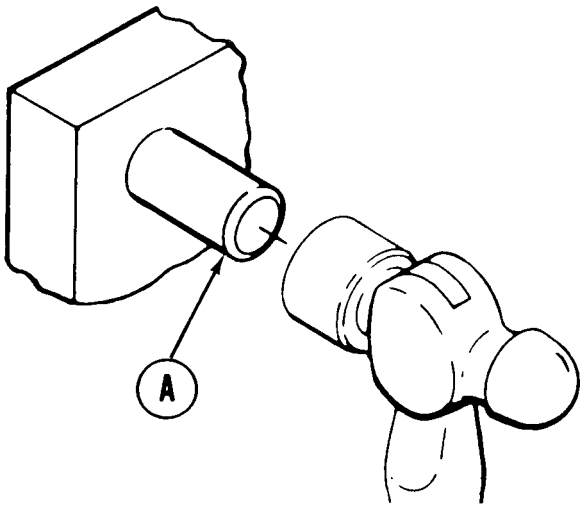
Dowel Pin Installation (Sheet 1 of 1)

TOOLS: Ball peen hammer

SUPPLIES: Hard wood block

1. Place pin (A) into hole (B), keeping pin (A) as straight as possible.



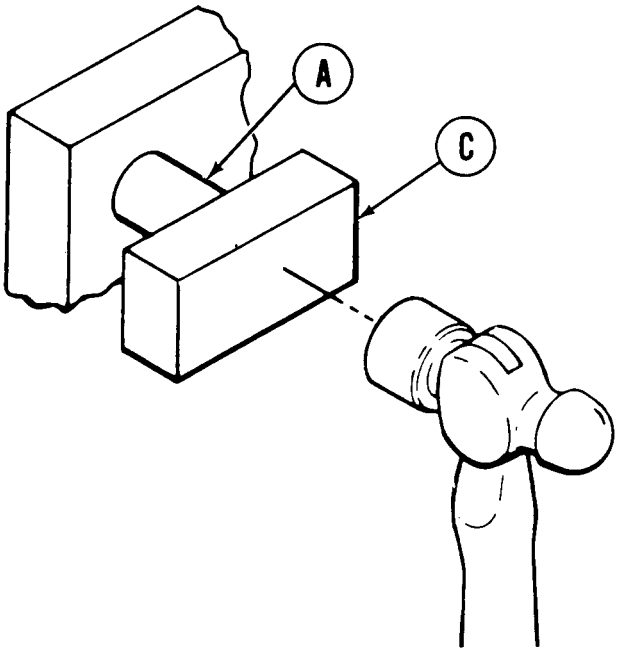


CAUTION

If pin (A) is tapped too hard, end will flatten out and pin (A) will not properly seat.

2. Using hammer, lightly tap in pin (A) until seated.

3. If pin (A) cannot be driven by lightly tapping with hammer, put wooden block (C) against pin (A) and hit with hammer until pin (A) is seated.



End of Task

TA169880

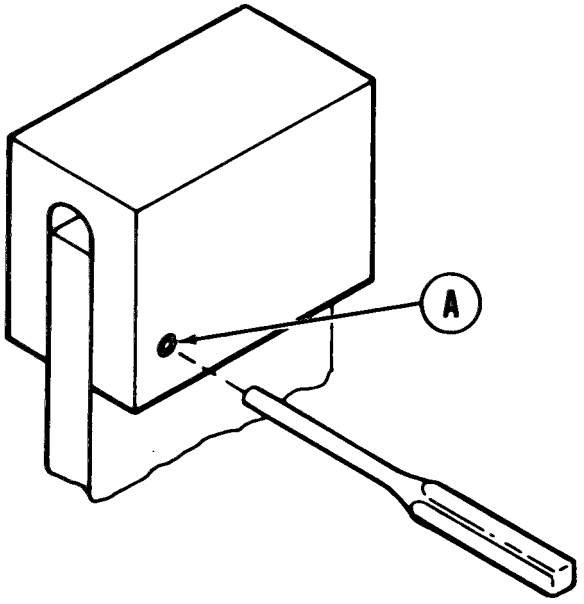
GENERAL MAINTENANCE (Sheet 20 of 33)

Spring Pin Removal (Sheet 1 of 1)

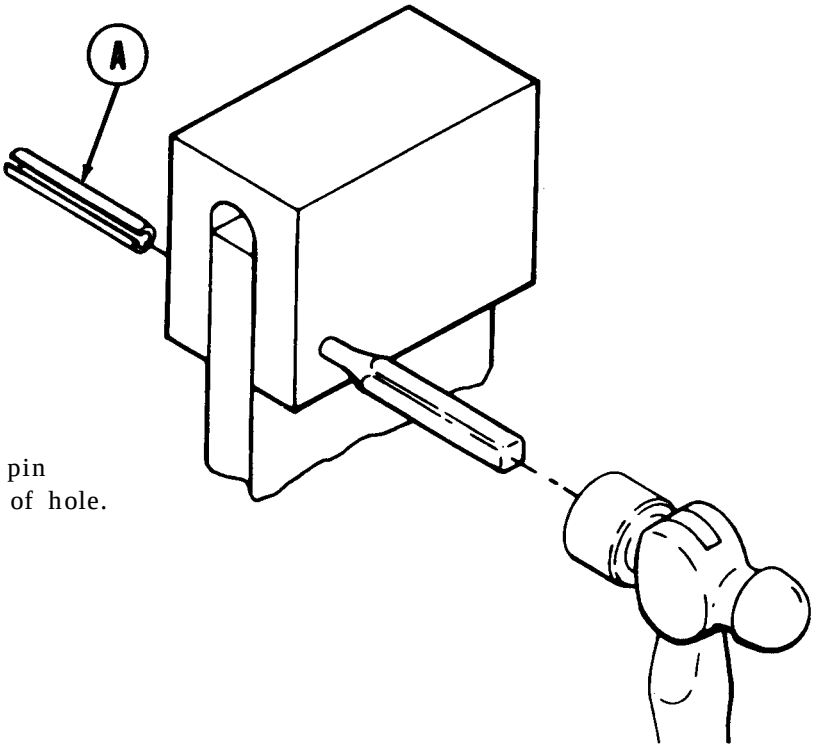
TOOLS: Ball peen hammer
Drive pin punch

NOTE

Drive pin punch used to remove spring pin must be about 1/32 inch smaller than pin hole.



1. Put drive pin punch into spring hole and center on pin (A).



2. Using hammer, lightly tap drive pin punch until pin (A) is driven out of hole.

End of Task

TA169881

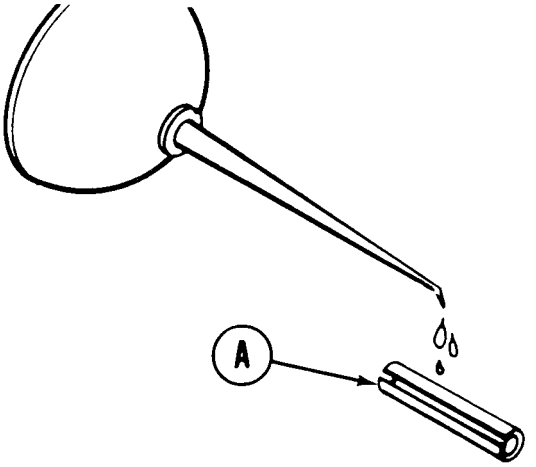
GENERAL MAINTENANCE (Sheet 21 of 33)

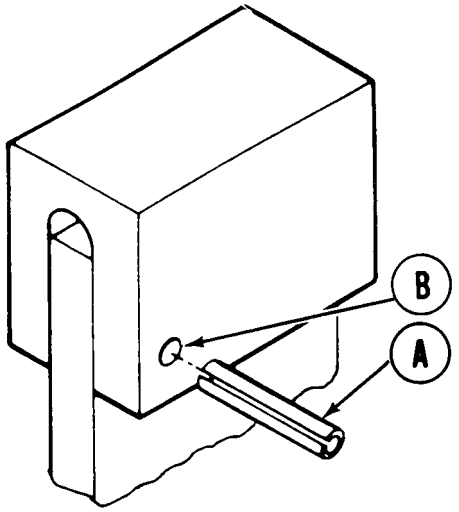
Spring Pin Installation (Sheet 1 of 1)

TOOLS: Ball peen hammer
Hand oiler

SUPPLIES: Lubricating oil (Item 44, Appendix D)
Hard wood block

1. Using oil , lightly lube pin (A).



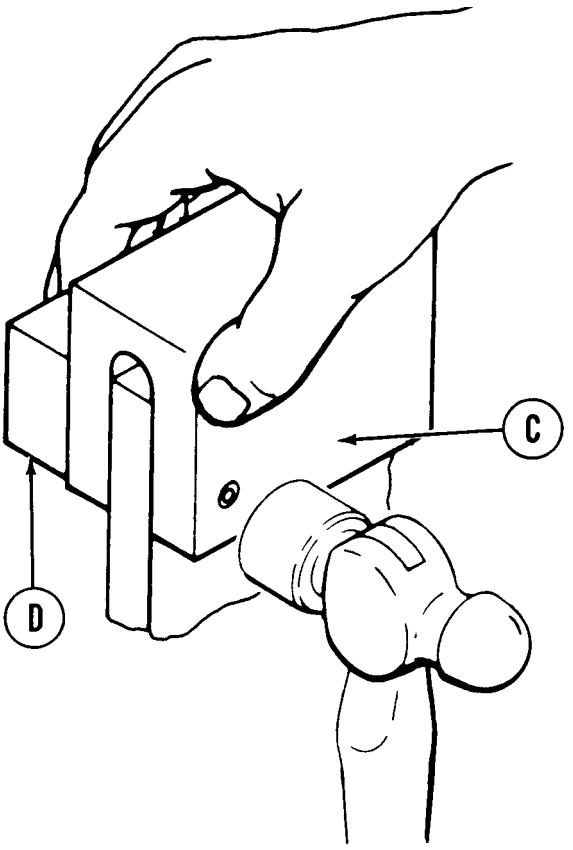


2. Putting spring pin (A) into hole (B), keep it as straight as possible.

3. Using hammer, tap pin (A) until flush with surface (C).

NOTE

If structure is not sturdy, support opposite end of hole with wooden block (D) while tapping pin (A) into place.



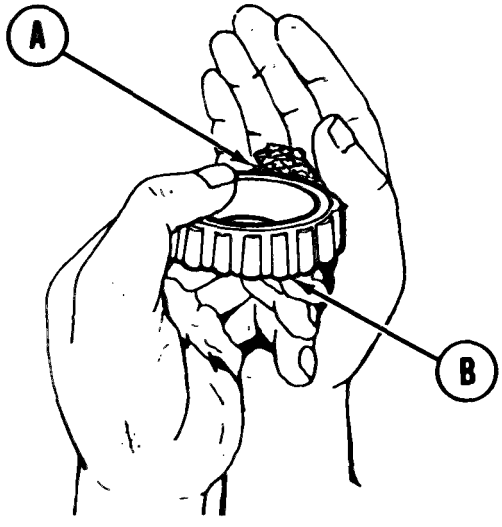
End of Task

TA169882

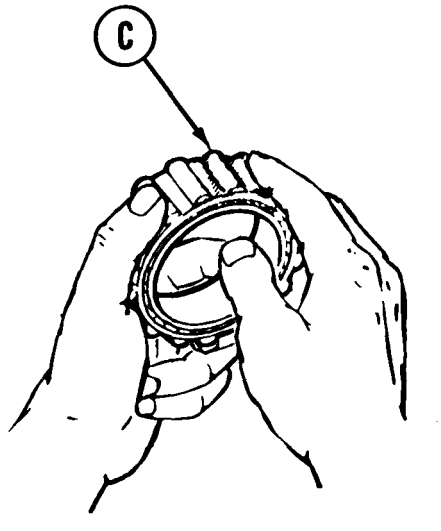
GENERAL MAINTENANCE (Sheet 22 of 33)

Hand Lubrication of Bearings (Sheet 1 of 1)

SUPPLIES: Grease (Item 37, Appendix D)
Clean rags



1. Place about 1 ounce of grease (A) into palm of one hand.
2. Holding bearing (B) in other hand, force grease (A) between inner race and cage.
3. Press bearing (B) into grease until grease (A) appears on other side of bearing (B).



4. Turning bearing (B) over, repeat steps 1, 2, and 3.
5. Using light film of grease (A), lube rollers (C).
6. Using clean rags, cover bearing (B) until ready for assembly.

End of Task

TA169883

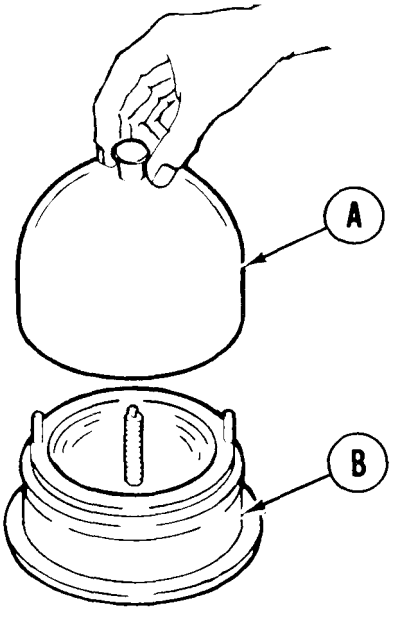
GENERAL MAINTENANCE (Sheet 23 of 33)

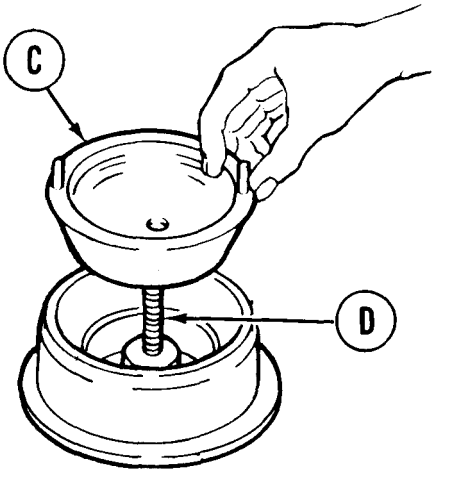
Wheel Bearing Packer Lubrication of Bearings (Sheet 1 of 3)

TOOLS: Wheel bearing packer
Hand grease gun

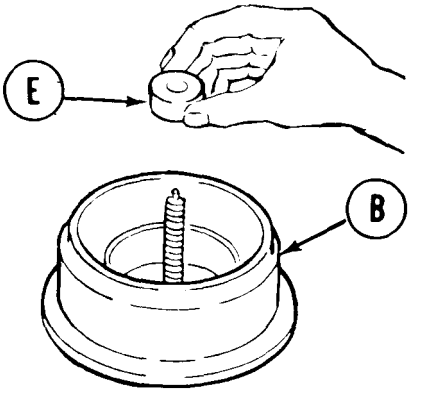
SUPPLIES: Grease (Item 37, Appendix D)
Clean rags

1. Take cover (A) off base (B).



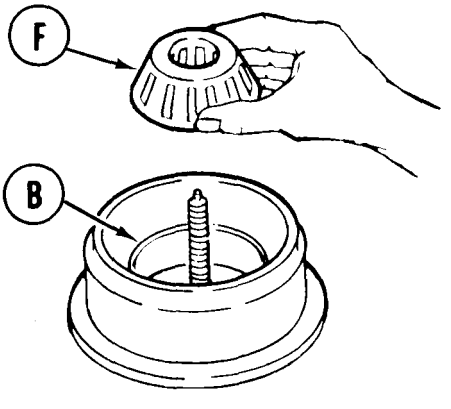


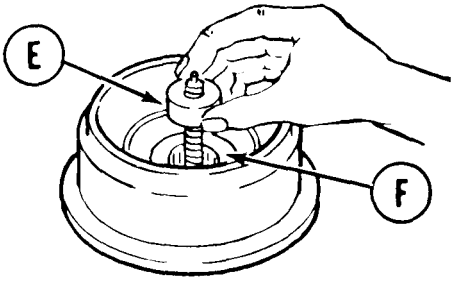
2. Unscrew cap (C) from center post (D).



3. Take insert (E) from base (B).

4. Put bearing (F) into base (B).





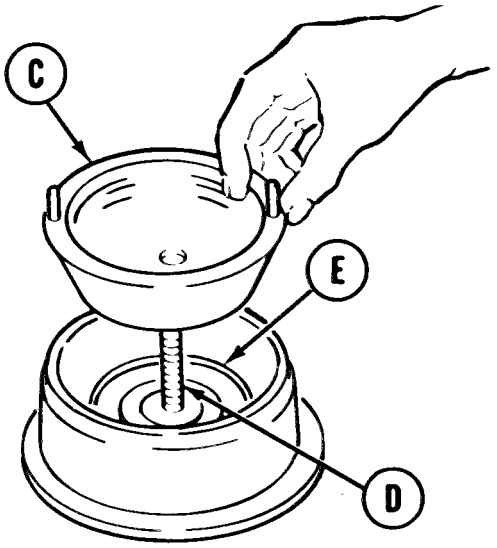
5. Put insert (E) in center of bearing (F) to act as filler.

Go on to Sheet 2

TA169884

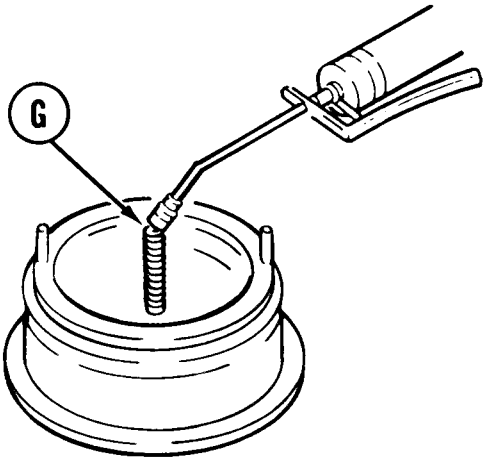
GENERAL MAINTENANCE (Sheet 24 of 33)

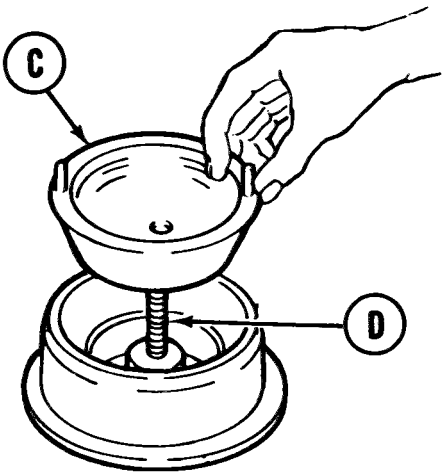
Wheel Bearing Packer Lubrication of Bearings (Sheet 2 of 3)



6. Screw cap (C) onto center post (D) to hold bearing (E) in position.

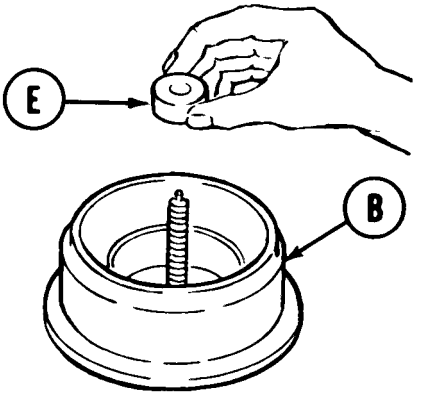
7. Using grease gun, pump grease into fitting (G) until resistance is felt.

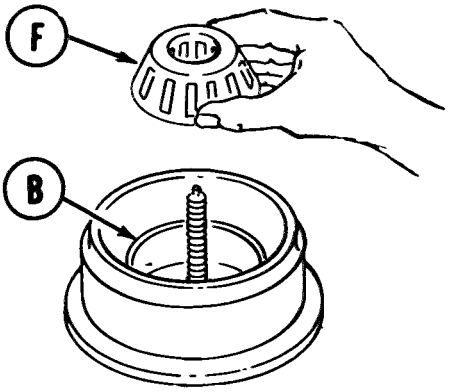




8. Unscrew cap (C) from center post (D).

9. Take insert (E) from base (B).





10. Remove bearing (F) from base (B).

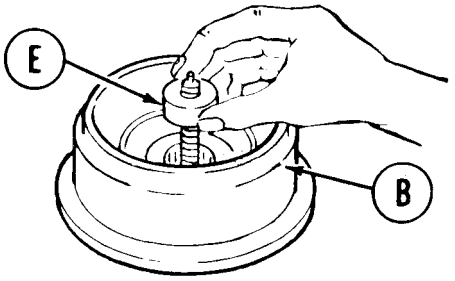
Go on to Sheet 3

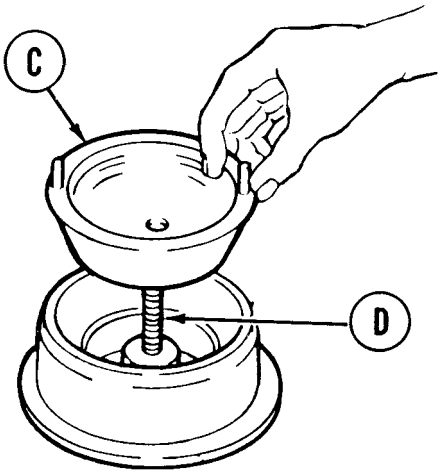
TA169885

GENERAL MAINTENANCE (Sheet 25 of 33)

Wheel Bearing Packer Lubrication of Bearings (Sheet 3 of 3)

11. Put insert (E) into base (B).

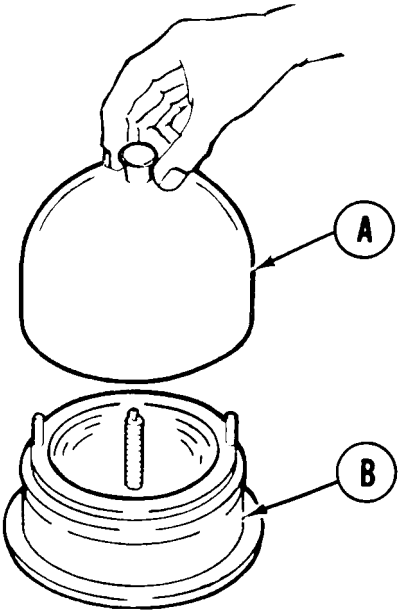




12. Screw cap (C) onto center post (D).

13. Put cover (A) onto base (B).

14. Place clean rags over bearing until ready for assembly.



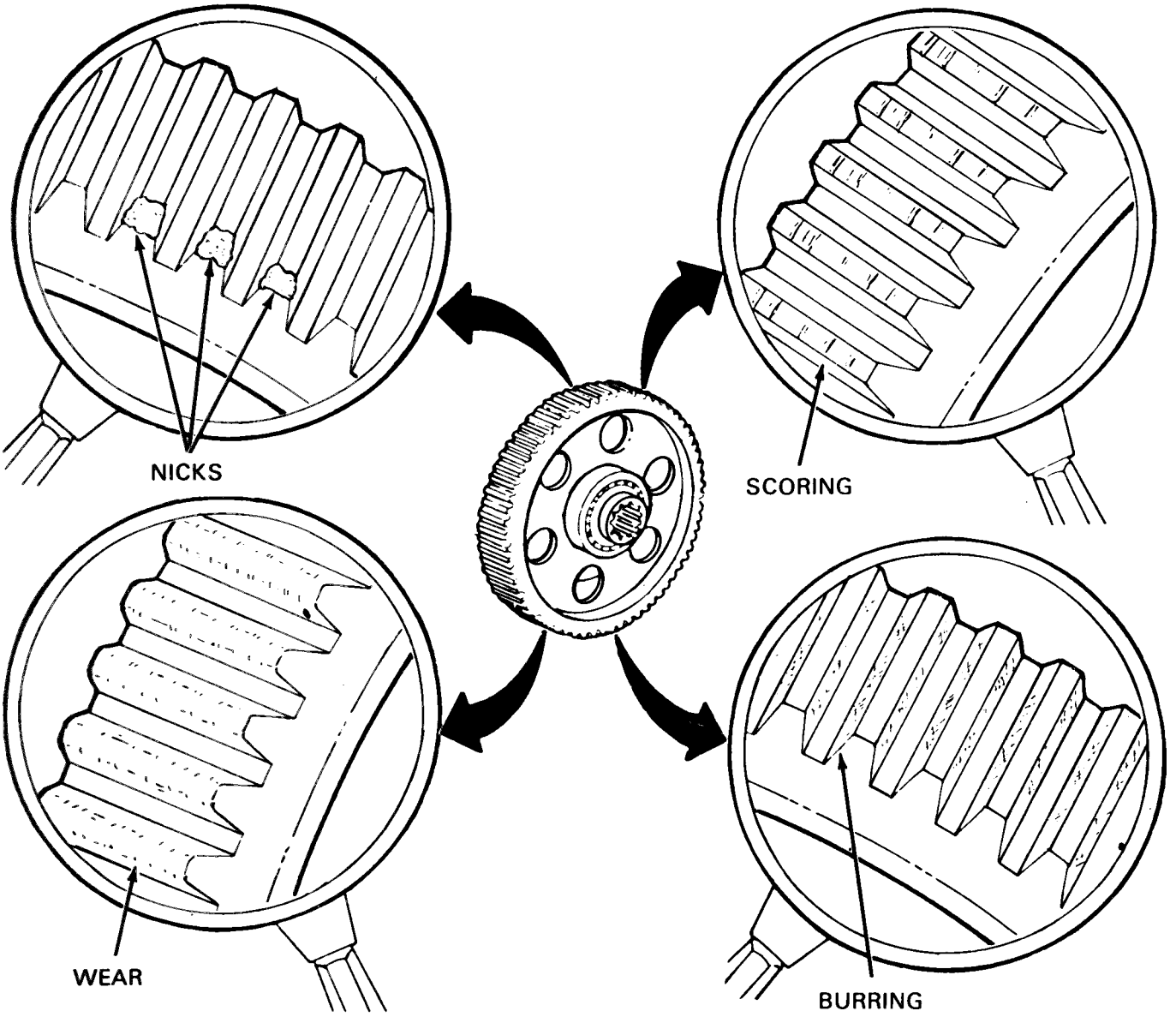
End of Task

TA169886

GENERAL MAINTENANCE (Sheet 26 of 33)

Inspection and Repair of Gears (Sheet 1 of 1)

SUPPLIES: Crocus cloth (Item 14, Appendix D)



1. Check gears for wear, nicks, scoring, and burring.
2. Using crocus cloth, try to get rid of minor nicks or burring.
3. If minor nicks or burring cannot be removed with crocus cloth, or if any other damage is seen, replace gears.

End of Task

TA169887

GENERAL MAINTENANCE (Sheet 27 of 33)

Safety Wiring Procedures (Sheet 1 of 2)

NOTE

The double-twist method of safety wiring is used as the common method of safety wiring. Use the double-twist method for screws in closed geometric patterns which secure hydraulic or air seals, hold hydraulic pressure, or are used in critical areas of clutch mechanisms.

NOTE

When safety wiring widely spaced multiple groups (fastenings from 4 to 6 inches apart) by the double-twist method, three units are the maximum number that may be wired in series. When safety wiring multiple groups, the maximum number of units that may be safety wired is limited to the number that can be wired with a 24 inch length of wire.

NOTE

The single-wire method is used in a closely spaced (maximum of 2 inches between centers), closed geometric pattern (triangle, square, rectangle, circle, etc.) on parts in electrical systems and in similar places that would make the single-wire method more feasible. Use the single wire method for shear and seal wiring applications.

NOTE

Use copper wire only for securing emergency devices and install so that it can be easily broken when required.

Go on to Sheet 2

GENERAL MAINTENANCE (Sheet 28 of 33)

Safety Wiring Procedures (Sheet 2 of 2)

NOTE

Always use new lockwire.

NOTE

Drilled head bolts and screws installed with self-locking nuts or lockwashers usually do not require safety wiring.

NOTE

Do not use lockwire to secure fasteners or fittings together that are spaced more than 6 inches appart.

NOTE

Use care when installing lockwire to be sure it is tight but not over-stressed.

NOTE

When safety wiring castellated nuts on drilled studs, tighten nut to low side of torque range (unless otherwise specified) and continue tightening until a slot alines with hole.

NOTE

Safety wire drain plugs and cocks to adjacent (less than 6 inches away) bolts, nuts, or parts having a free lockhole.

NOTE

Safety wire electrical connectors which have threaded coupling rings or plugs which have screws to fasten the individual parts of the plug together. Safety wire connectors and plugs individually.

End of Task

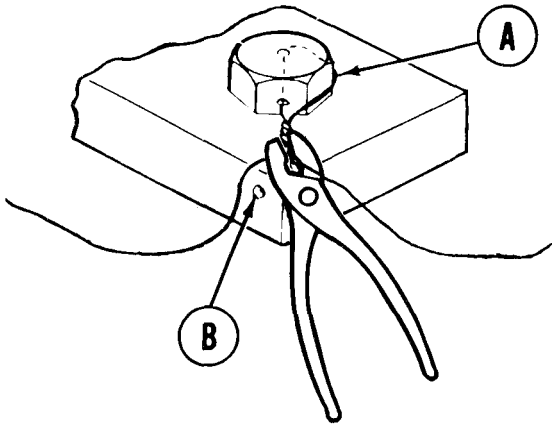
GENERAL MAINTENANCE (Sheet 29 of 33)

Single Fastener Double-Twist Safety Wiring (Sheet 1 of 1)

TOOLS: Slip joint pliers
Diagonal cutting pliers

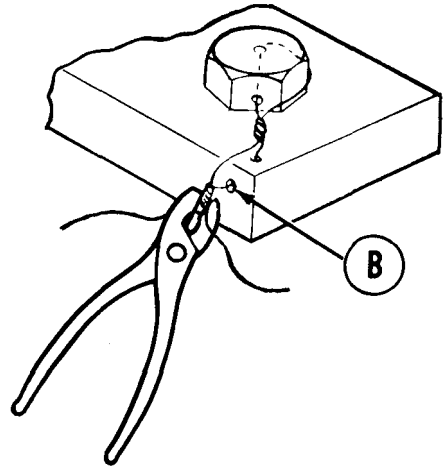
SUPPLIES: Lockwire

1. Using diagonal cutting pliers, cut piece of lockwire about 24 inches long.



2. Run wire through drilled bolt head (A), keeping length of free wire ends the same.

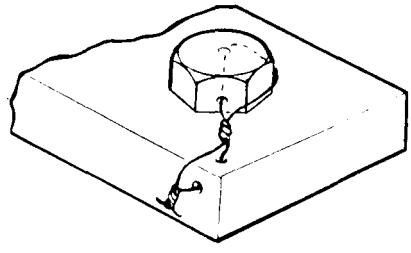
3. Using slip joint pliers, twist wire until wire twist almost reaches drilled hole (B) in plate.



4. Run one leg of wire through drilled hole (B) in plate.

5. Using slip joint pliers, twist wire at least six times.

6. Using diagonal cutting pliers, cut wire leaving a pigtail from 1/4 to 1/2 inch long.



7. Bend pigtail back under to prevent it from becoming a snag.

End of Task

TA169888

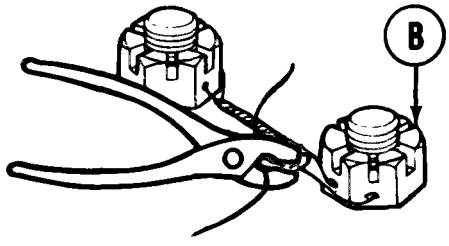
GENERAL MAINTENANCE (Sheet 30 of 33)

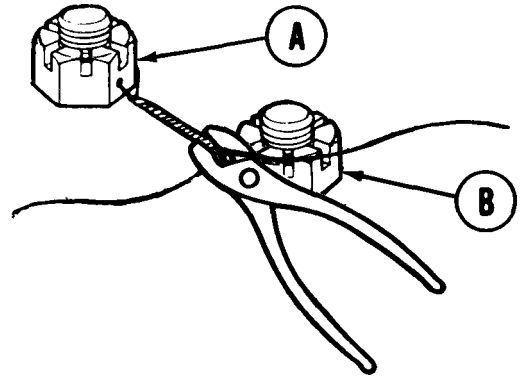
Castellated Nuts on Undrilled Stud Double-Twist Safety Wiring (Sheet 1 of 1)

TOOLS: Slip joint pliers
Diagonal cutting pliers

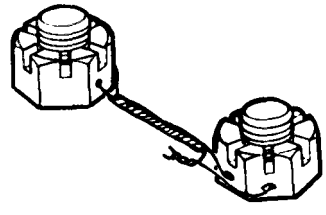
SUPPLIES: Lockwire

1. Using diagonal cutting pliers, cut piece of lockwire about 24 inches long.
2. Run wire through nut (A), keeping length of free wire ends the same.
3. Using slip joint pliers, twist wire until wire twist almost reaches next nut (B).
4. Run one leg of wire through nut (B).





5. Using slip joint pliers, twist wire at least six times.
6. Using diagonal cutting pliers, cut wire leaving a pigtail from 1/4 to 1/2 inch long.
7. Bend pigtail back under to prevent it from becoming a snag.



End of Task

TA169889

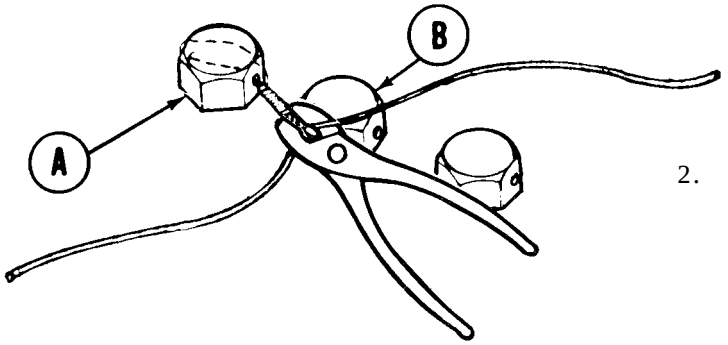
GENERAL MAINTENANCE (Sheet 31 of 33)

Multiple Fastener Double-Twist Safety Wiring (Sheet 1 of 1)

TOOLS: Slip joint pliers
Diagonal cutting pliers

SUPPLIES: Lockwire

1. Using diagonal cutting pliers, cut piece of lockwire about 24 inches long.



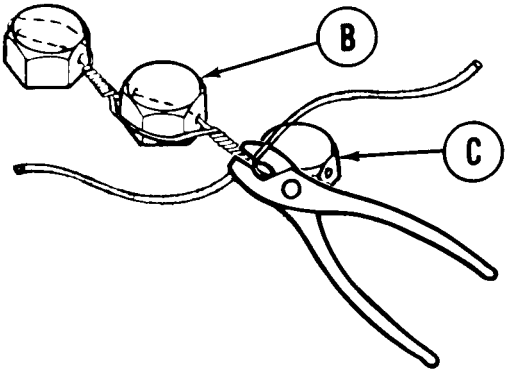
2. Run wire through drilled bolt (A), keeping length of free wire ends the same.

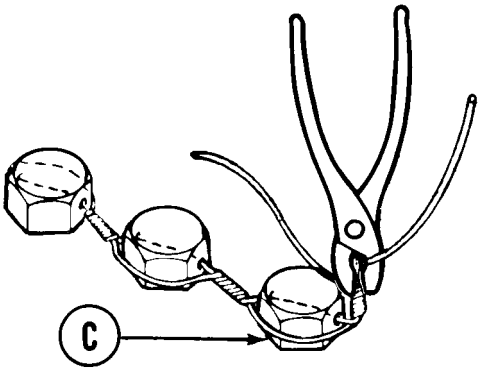
3. Using slip joint pliers, twist wire until wire twist almost reaches next bolt head (B).

4. Run one leg of wire through bolt head (B).

5. Using slip joint pliers, twist wire until wire twist almost reaches next bolt head (C).

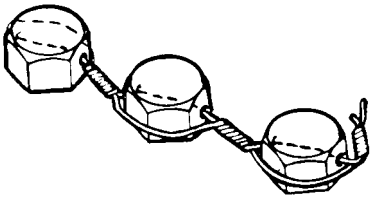
6. Run one leg of wire through bolt head (C).





7. Using slip joint pliers, twist wire at least six times.

8. Using diagonal cutting pliers, cut wire leaving a pigtail from 1/4 to 1/2 inch long.



9. Bend pigtail back under to prevent it from becoming a snag.

End of Task

TA169890

GENERAL MAINTENANCE (Sheet 32 of 33)

External Snap Ring Single Wire Safety Wiring (Sheet 1 of 1)

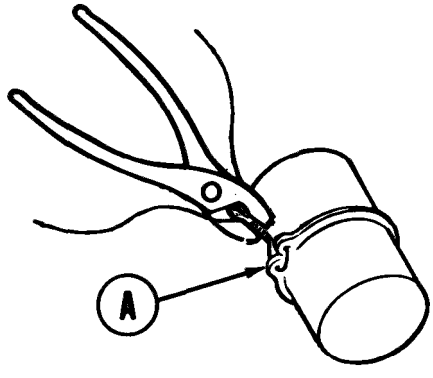
TOOLS: Slip joint pliers
Diagonal cutting pliers

SUPPLIES: Lockwire

NOTE

Do not safety wire internal snap rings.

1. Using diagonal cutting pliers, cut piece of lock wire about 12 inches long.

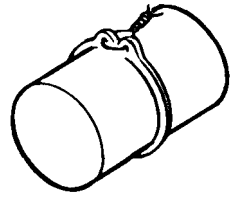


2. Run wire through two holes in external snap ring (A), keeping length of free wire ends the same.

3. Using slip joint pliers, twist wire at least six times.

4. Using diagonal cutting pliers, cut wire leaving a pigtail from 1/4 to 1/2 inch long.

5. Bend pigtail back under to prevent it from becoming a snag.



End of Task

TA169891

GENERAL MAINTENANCE (Sheet 33 of 33)

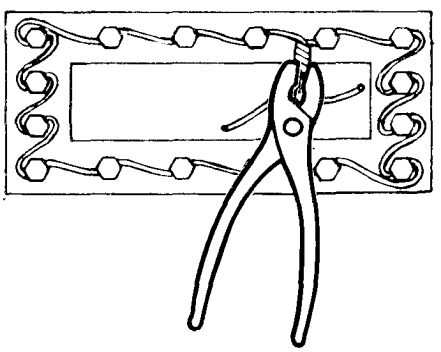
Small Screws in Closely Spaced, Closed Geometrical Pattern Single Wire Safety Wiring (Sheet 1 of 1)

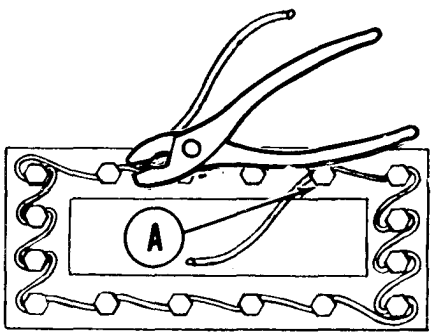
TOOLS: Slip joint pliers
Diagonal cutting pliers

SUPPLIES: Lockwire

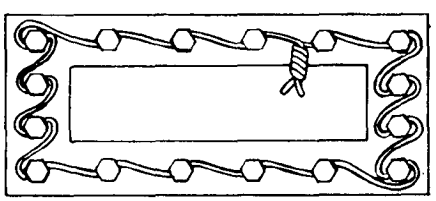
1. Using diagonal cutting pliers, cut piece of lockwire long enough to hold the screws in the pattern being wired.

2. Using slip joint pliers, run wire through nuts, leaving enough wire pigtailing from nut (A) so completed lacing may be secured by twisting.





3. Using slip joint pliers, twist wire at least six times.



4. Using diagonal cutting pliers, cut wire leaving a pigtail from 1/4 to 1/2 inch long.

5. Bend pigtail back under to prevent it from becoming a snag.

TA169892

End of Task

APPENDIX D

EXPENDABLE SUPPLIES AND MATERIALS LIST

Section I. INTRODUCTION

Scope.

This appendix lists expendable supplies and materials you will need to operate and maintain the M48A5 AVLB chassis. These items are authorized to you by CTA 50-970, Expendable Items (Except Medical, Class V, Repair Parts, and Heraldic Items).

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 sealer compound, (Item 15, Appendix D).

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

C - Operator/Crew
O - Organizational Maintenance
F - Direct Support Maintenance
H - General Support Maintenance

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

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

e. *Column 5 - Unit of Measure (U/M).* Indicates the measure used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea., in., pr.). 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 SUPPLIES AND MATERIALS LIST

ITEM	LEVEL	NATIONAL STOCK NUMBER	DESCRIPTION	U/M
1	O	8040-01-027-4900	Adhesive (MIL-A-25457)	PT
2	O	8040-00-262-9025	Adhesive (MIL-A-5092, Type II)	PT
3	O		Adhesive (MIL-A-1154)	PT
4	O	8040-00-664-4318	Adhesive (MMM-A-1617, Type II), Rubber	PT
5	O	8040-00-118-2695	Adhesive (MIL-A-46146, Type I)	PT
6	O		Adhesive, Sealing (MIL-A-3562)	OZ
7	O	8040-00-149-0136	Adhesive, Silicone (SR-529)	OZ
8	O	6810-00-286-5435	Alcohol (TT-I-735, Grade A)	QT
9	O		Asbestos, Sheet	FT
10	O		Brush, Paint	EA
11	O	7510-00-223-6701	Chalk, White	EA
12	C	8305-00-286-5451	Cloth, Lint Free	YD

TA169907

EXPENDABLE SUPPLIES AND MATERIALS LIST- Continued

ITEM	LEVEL	NATIONAL STOCK NUMBER	DESCRIPTION	U/M
13	C		Cloth, Soft, Lens Cleaning	LB
14	C	5350-00-221-0872	Cloth, Crocus (P-C-458)	SH
15	O	8030-00-148-9833	Compound, Locking (MIL-S-46163, Type II, Grade N)	CC
16	O	8030-01-014-5869	Compound, Locking (MIL-S-46163, Type II, Grade O)	PT
17	O		Compound, Locking (MIL-S-46163, Type II, Grade M)	PT
18	O		Compound, Locking (MIL-S-46164)	PT
19	O		Compound, Sealing (MIL-A-1617)	PT
20	O		Compound, Sealing (MIL-A-1617, Type II)	PT
21	O		Compound, Sealing (MIL-A-l2274, Type III)	PT
22	O	9150-01-018-8960	Compound, Sealing (MIL-G-4343)	PT
23	O	8030-00-088-7818	Compound, Sealing (MIL-S-7916)	OZ
24	O	8030-00-275-8110	Compound, Sealing (MIL-S-11031)	PT
25	O	8030-00-081-2340	Compound, Sealing (MIL-S-22473, Grade AA)	PT
26	O	8030-00-081-2337	Compound, Sealing (MIL-S-22473, Grade AY)	QT
27	O	8030-00-964-7537	Compound, Sealing (MIL-S-22473, Grade C)	OZ
28	O	8030-00-081-2330	Compound, Sealing (MIL-S-22473, Grade CV)	BT
29	O	8030-00-081-2327	Compound, Sealing (MIL-S-22473, Grade E)	PT
30	O	8030-00-081-2325	Compound, Sealing (MIL-S-22473, Grade HV)	BT
31	O	8030-01-067-6198	Compound, Sealing (MIL-S-22473, Grade N, Form R)	PT
32	C	6850-00-880-7616	Compound, Silicone (MIL-S-8660)	OZ
33	O	7390-00-990-7391	Detergent, Liquid	DR
34	C	9150-00-190-0932	Fluid, Brake (W-B-680)	GA
35	C	9150-00-265-9407	Fluid, Brake Hydraulic (MIL-H-13919) (Arctic Conditions)	QT
36	O		Fluid, Cleaning (MIL-C-8130B, Type II)	BT
37	C	9150-00-935-1017	Grease, GAA (MIL-G-10924)	LB
38	C	9150-00-965-2003	Grease, GMD (MIL-G-21164)	LB
39	O	8010-00-823-8046	Glyptol (MIL-E-22118)	OZ
40	C	9150-00-190-0932	Hydraulic Fluid, HB, Non Petroleum Base (VV-B-680)	GA
41	C	9150-00-231-2361	Lubricant (MIL-L-3150)	QT
42	O		Material, Plastic, Barrier	
43	O	9150-00-223-4119	Oil, Penetrating (W-P-216)	QT
44	O	9150-00-265-9425	Oil, Lubricating, Grade 10 (OE/HDO10) (MIL-S-2104)	QT
45	O	8030-01-041-1602	Paint, Acid Resistant, Black (MIL-P-20689)	
46	O	8030-01-041-1600	Paint, Acid, Resistant (MIL-P-22750)	QT
47	O	8010-01-050-2555	Paint, Forest Green (MIL-E-52798)	QT
48	O	8010-00-286-7725	Paint, White (TT-E-489)	QT

TA169908

EXPENDABLE SUPPLIES AND MATERIALS LIST - Continued

ITEM	LEVEL	NATIONAL STOCK NUMBER	DESCRIPTION	U/M
49	O	Deleted		
50	O		Primer, Paint (TT-P-646)	QT
51	O	8010-00-899-0931	Primer, Zinc Chromate (TT-P-1757)	QT
52	O	5350-00-264-3489	Paper, Abrasive	SH
53	O	8040-01-148-1509	Adhesive (MIL-A-46146, Type I)	OZ
54	O	8030-00-849-0071	Sealant (MIL-S-45180, Type II)	OZ
55	C	6850-00-281-1985	Solvent, Dry Cleaning (PD-680, Type II, SD-2)	GA
56	C	5350-00-242-4405	Steel Wool	LB
57	C	7510-00-266-6713	Tape, Pressure 1/4 inch	RL
58	C	7510-00-290-2023	Tape, Pressure 1/2 inch	RL
59	C	5970-00-419-3164	Tape, Insulation (MIL-I-24391)	RL
60	O	5970-00-489-0512	Insulation Sleeve (MIL-R-46846)	FT
61	O	9505-00-191-3680	Wire, Nonelectrical	LB
62	O	9505-00-248-9849	Wire, Steel, Carbon (MS-20995-F41)	LB
63	O	9505-00-293-4208	Wire, Nonelectric (safety wire)	LB
64	O	8030-00-275-8110	Sealing Compound	EA
65	C	7920-00-205-1711	Rag, Wiping, Cotton, White (DDR-30 GB)	BE
66	O	8040-00-851-0211	Adhesive, Loctite, 593-45	OZ
67	O	9920-00-292-9946	Cleaner, Pipe	PK
68	O	8415-00-634-4658	Gloves, Leather	PR
69	O	4240-00-542-2048	Shield, Face	EA
70	O	4720-00-964-1433	Tubing, Nonmetallic	FT
71	O	4240-00-816-3819	Goggles, Industrial	EA
72	O	8415-00-641-4601	Gloves, Chemical	PR
73	O	8020-00-297-6657	Brush, Paint	EA
74	O	3439-22-204-2555	Brazing Alloy, Copper	LB
75	O	3439-00-255-4577	Flux, Welding	LB
76	O	8030-00-244-1293	Corrosion, Preventative (MILC-16173)	CN
77	O	9150-00-948-6912	Lubricant, Solid Film	QT
78	C	4020-00-689-5688	Rope, Manila, 3/4 inch (81348) TR605	FT
79	O	7510-00-189-7881	Pencil, Writing (SS-P-1605)	EA
80	O	7530-00-285-5836	Paper, Writing (UU-P-121)	EA

APPENDIX E

ELECTRICAL SCHEMATICS

Refer to FO-1 and FO-2 in the back of this manual for the hull electrical system schematic diagrams.

APPENDIX F

ILLUSTRATED LIST OF MANUFACTURED ITEMS

This appendix includes complete instructions for making items authorized to be manufactured or fabricated at organizational maintenance.

MATERIAL		
STOCK SIZE	**DESCRIPTION**	**FABRICATING REQUIREMENT**
11 to 16 Gauge	Sheet Metal	1. Bend 90 degrees 2. Tolerance +0 -1/4 Inch

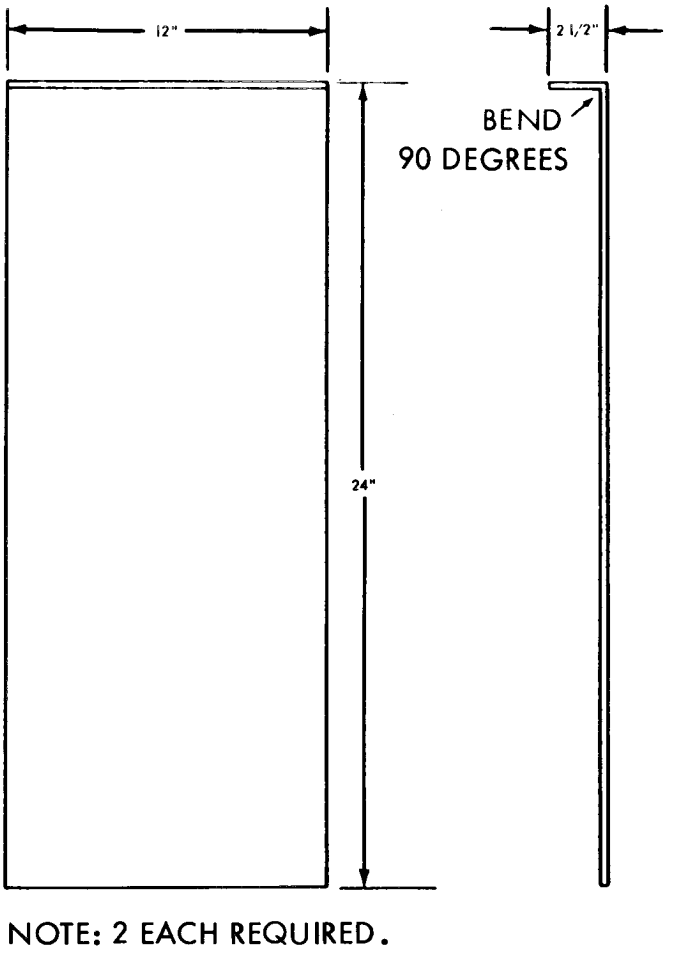


Figure F-1. Final drive guide shield.

TA169910

MATERIAL		
STOCK	**DESCRIPTION**	**FABRICATING REQUIREMENT**
MS35916	Tachometer	Assembly Shaft
MS52116-1	Shaft Assembly	Assembly to Tachometer

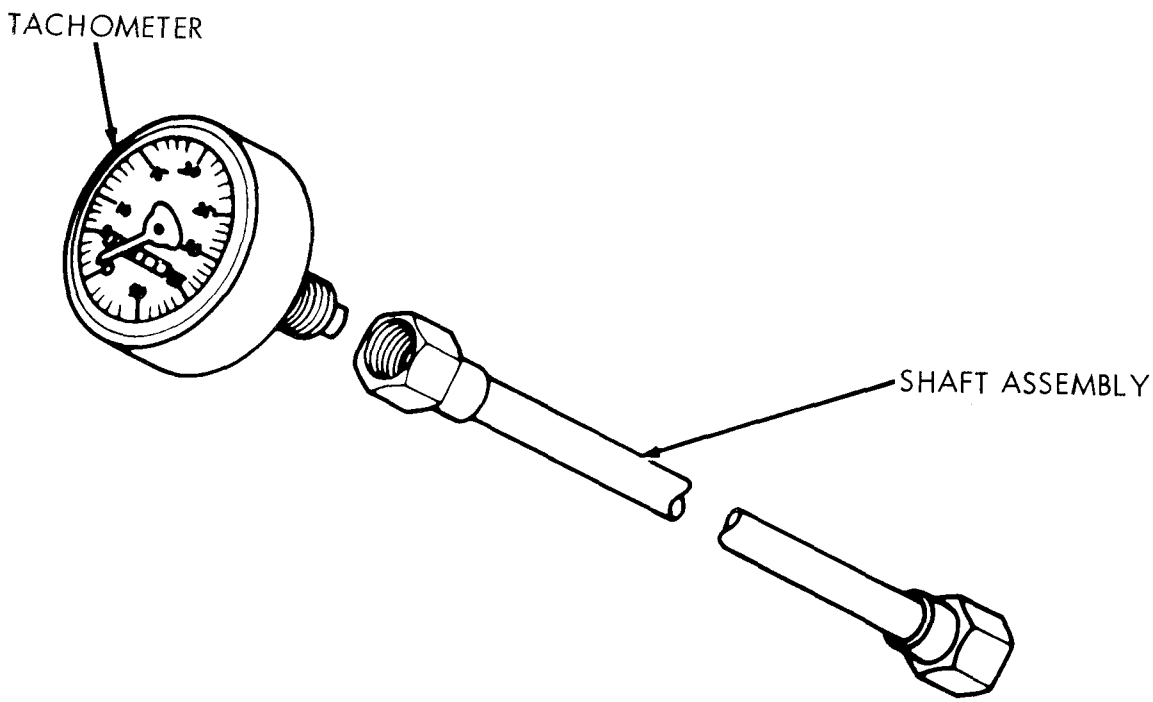


Figure F-2. Tachometer assembly.

TA169911

MATERIAL		
STOCK SIZE	**DESCRIPTION**	**FABRICATING REQUIREMENT**
1010 to 1025	Steel Rod, 3/16 in. dia.	1. Grind one end as shown. 2. Bend rod as shown. 3. Remove burrs and break sharp edges. 4. Tolerance: +1/16 inch

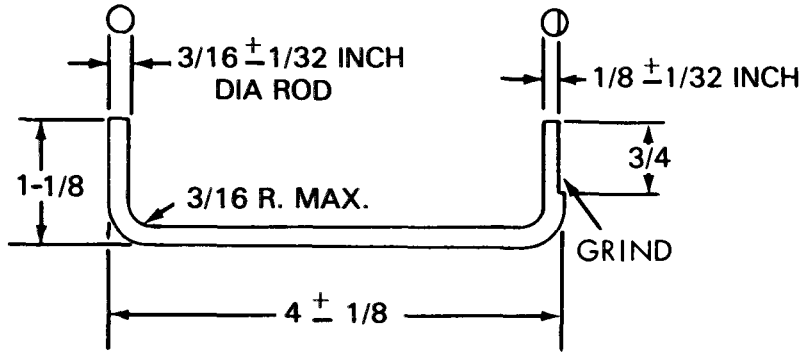


Figure F-3. Throttle linkage adjusting go-no go gage.

MATERIAL		
STOCK	**DESCRIPTION**	**FABRICATING REQUIREMENT**
P/N 7379233 NSN: 2520-00-737-9233 NOTE: MAY BE SALVAGED FLANGE P/N: 10904402 NSN: 5340-00-020-2331 NOTE: CLIPS MAY BE MADE FROM ANGLE IRON OR FORMED FROM 1/4" STEEL	1 EA QUICK DISCONNECT FLANGE 6 EA DECK CLIP	1. CUT EARS OFF QUICK DISCONNECT FLANGE 1/4" OUTSIDE LIP (6.5" DIA) 2. MACHINE FLAT SIDE UNTIL TOOL THICKNESS IS APPROXIMATELY 1" TO 1-5/32". (THIS STEP OPTIONAL IF MACHINE SHOP SERVICES ARE NOT AVAILABLE.) 3. CUT RING IN THREE PLACES SO THAT EACH LARGE PIECE HAS 14 SPLINE TEETH 4. DE BURR SPLINE TEETH EDGES WITH WIRE BRUSH OR WIRE WHEEL IF NECESSARY. 5. USING BENCH GRINDER OR EQUIVALENT, GRIND APPROXIMATELY 3" RADIUS INTO SHORT ARM OF DECK CLIP. DEBURR EDGES. 6. CUT OFF DECK CLIP TO A LENGTH OF 1-5/16". 7. IF USING ANGLE IRON, FABRICATE GUIDE CLIPS GRIND AS IN STEP 4.

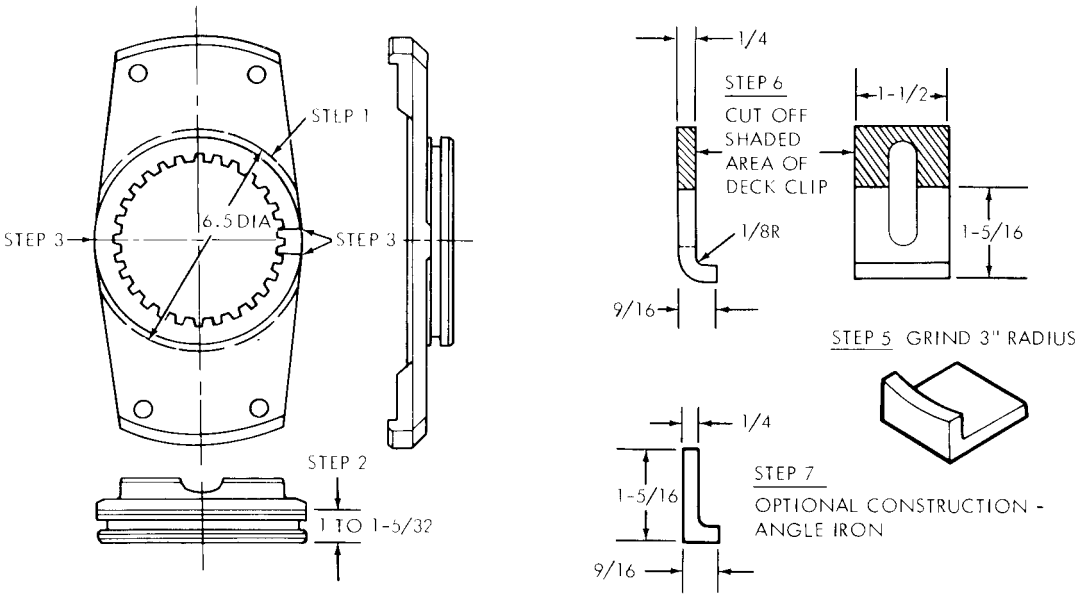


Figure F-4. Final drive adapter hook-up tool (Sheet 1 of 2).

MATERIAL		
STOCK	**DESCRIPTION**	**FABRICATING REQUIREMENT**
		8. GRIND OR FILE APPROXIMATELY 1/8" OFF THE TWO INSIDE CORNERS OF THE CLIPS AT EACH END, TO AID TOOL ENGAGEMENT. 9. WELD THREE GUIDE CLIPS TO EACH SEMI,CIRCULAR FLANGE PIECE. NOTE THE TWO CLIPS ON THE ENDS SHOULD BE ANGLEI OUT SLIGHTLY. 10. WELD APPROXIMATELY 48" OF SMALL LINK CHAIN (WITH AN EYE AT THE FREE END) TO THE CENTER CLIP.

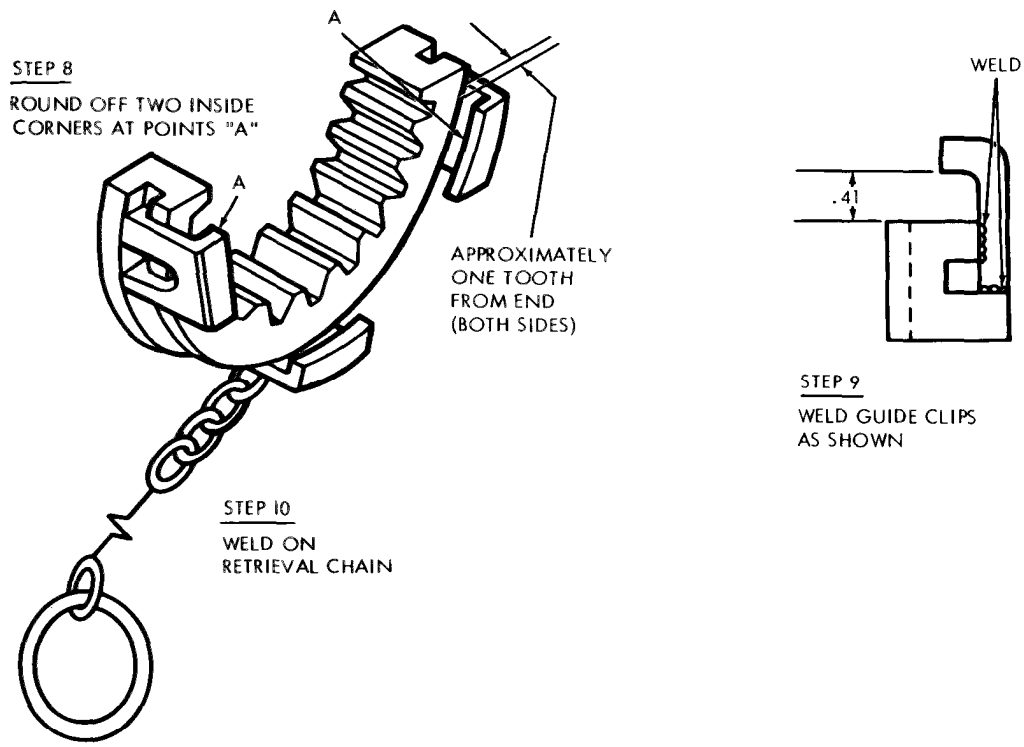


Figure F-4. Final drive adapter hook-up tool (Sheet 2 of 2).

MATERIAL		
STOCK	**DESCRIPTION**	**FABRICATING REQUIREMENT**
1010 to 1025 Steel	Bar stock: 1 x 1-1/8 x 3/4 (New) 1 x 15/16 x 3/4 } (Old) 1 x 3/16 x 3/4 }	1. Remove burrs and sharp edges. 2. Tolerance: ± 1/32 in.

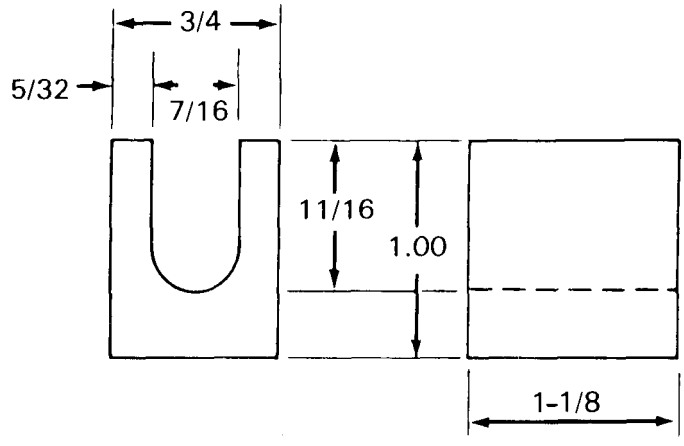


Figure F-5. Parking brake adjusting tool.

MATERIAL		
STOCK	**DESCRIPTION**	**FABRICATING REQUIREMENT**
1 x 8 N.C. 2 in. I.D. MS27183-28 5146158	A. Nut, 1-1/2 in. flats B. Pipe, 3-1/2 in. lg. C. Flat washer 1-1/4 I.D. x 2-1/2 O.D. x 3/16 in. D. Nut, 2-1/2 in. flats	Weld parts as shown.

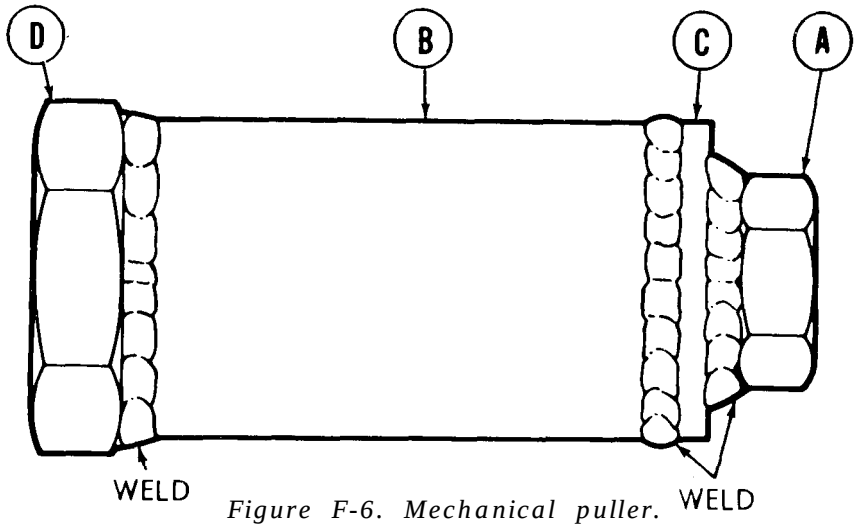


Figure F-6. Mechanical puller.

MATERIAL		
STOCK SIZE	**DESCRIPTION**	**FABRICATING REQUIREMENT**
MS3106R10SL4SC	Connector, electrical	1. If using 20 ft. wire, cut in 10 ft. lengths and connect to connector
M13486/1-3	Wire, black, electrical 16 ga., 20 ft. lg	
(OPT) M22759/16-16-0	Wire, black, electrical 16 ga., 10 ft. lg	2. If using optional wire, connect one black wire and one red wire to connector.
(OPT) M22759/16-16-2	Wire, red, electrical 16 ga., 10 ft. lg	
(OPT) M81044/12-16-0	Wire, black, electrical 16 ga., 10 ft. lg	3. Wrap electrician's tape around both wires at connector.
(OPT) M81044/12-16-2	Wire, red, electrical 16 ga., 10 ft. lg	4. Cut two 3 inch long pieces of heat shrink tubing and slide one
W-C-440B Type PC4	Power clip (2 required)	piece onto each wire.
8/32 UNC-2A x 1/4 lg	Screw (2 required)	5. Solder one lug terminal to each wire.
MIL-R-46846, Type V	Heat shrink tubing, 1 ft. lg	
7056709	Lug Terminal	6. Connect lug terminals to power clips with screws and bend ears of power clips over wires.
NSN 3439-00-307-7333	Solder (Item 64, Appendix D)	
NSN 5970-00-419-3164	Electricians tape (Item 59, Appendix D)	7. Slide heat shrink tubing onto power clip connection and using heat gun, shrink tubing.

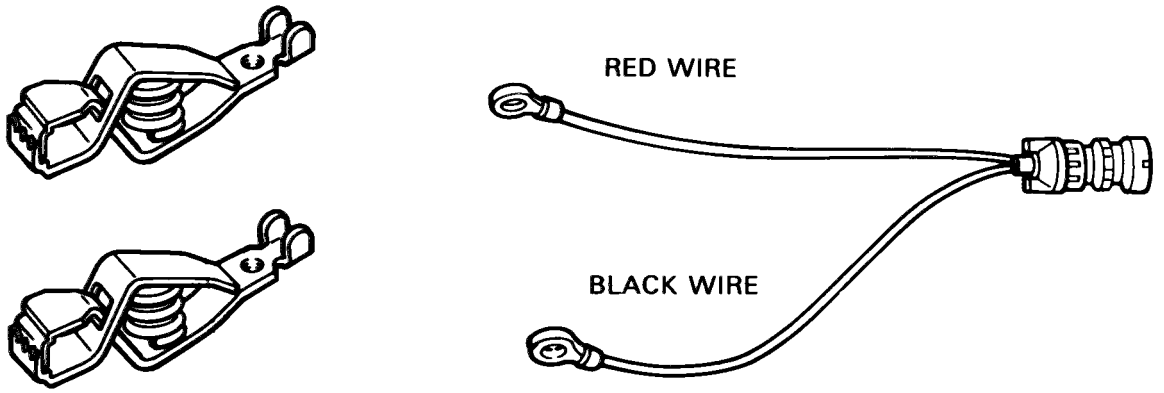


Figure F-7. Fuel-Water Separator Test Cable TA169893

MATERIAL		
STOCK	DESCRIPTION	FABRICATING REQUIREMENT
M13486/1-3	Wire, electrical 16 gage, 3-5 ft. lg	1. Cut heat shrink tubing into two equal lengths and slide onto wire.
W-C-440B Type PC4	Power clip (2 required)	
7056709	Lug Terminal (2 required)	2. Solder lug terminals to each end of wire.
8/32 UNC-2A x 1/4 lg.	Screw (2 required)	
NSN 3439-00-307-7333	Solder (Item 64, Appendix D)	3. Connect lug terminals to power clips with screws. Bend tabs of power clips over wire.
MIL-R-46846, Type V	Heat shrink tubing, 6 in. lg	
		4. Shrink tubing over ends of lug terminal and wire connections.

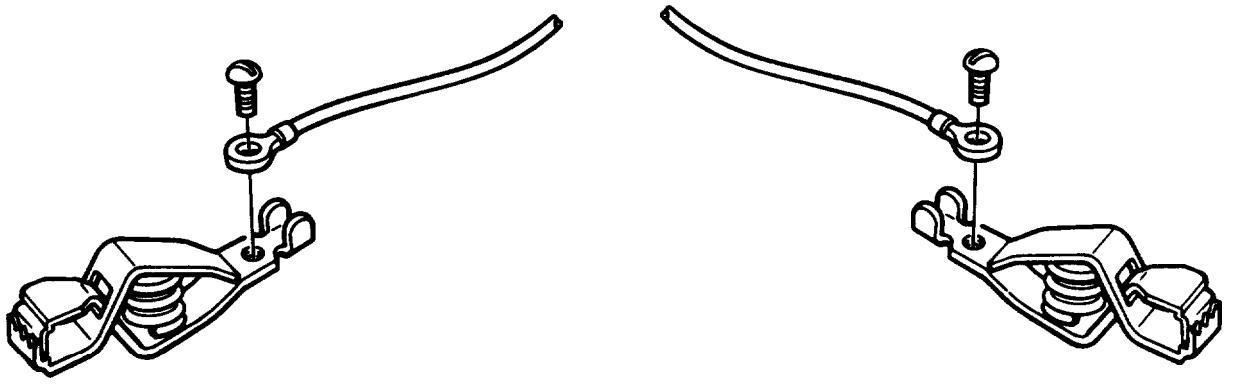


Figure F-8. Fuel- Water Separator Test Cable TA 169894

MATERIAL		
STOCK	**DESCRIPTION**	**FABRICATING REQUIREMENTS**
5120-00-293-3509	Center punch	Grind point as shown.

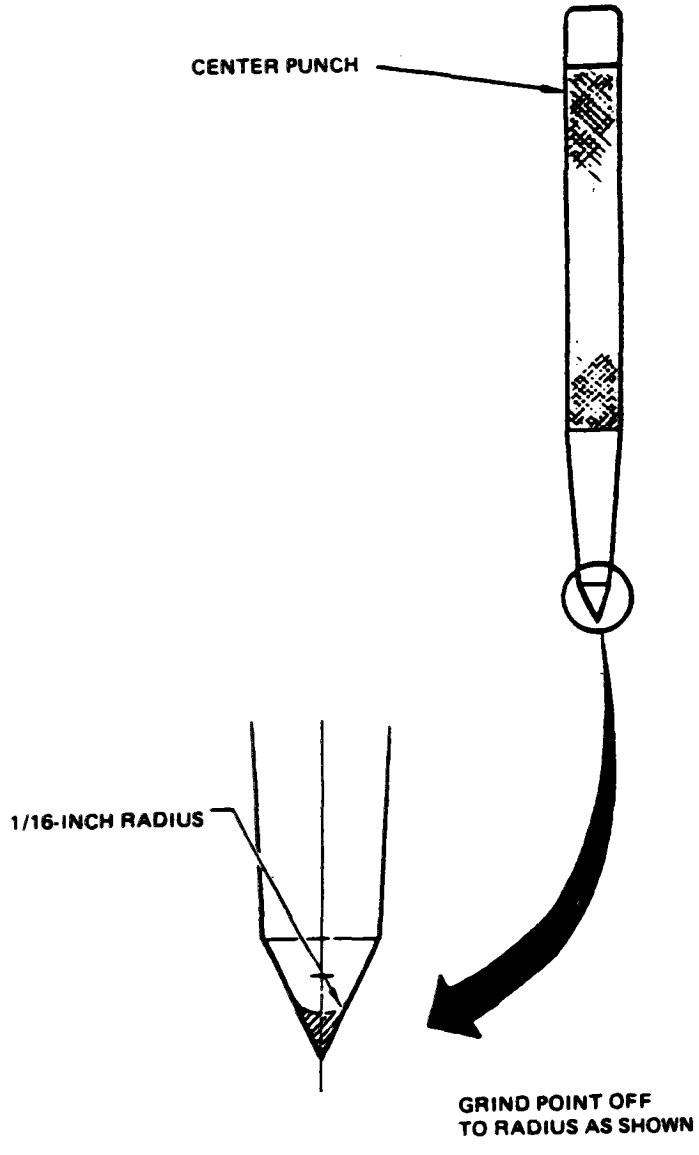


Figure F-9. Center Punch

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DISCHARGER 6A3

WIRING HARNESS 12304141

MS3452-L-14S-5B

E1

HI SERVICE

B/O DRIVE

B/O MARKER

HI B/O SERVICE LOW

19
17
18
514
515
20
91

400
459
975

81

68

CABLE ASSY 12290741

49

RELAY AND HOUSING ASSY-10894808

81-5

459A

PROTECTIVE DEVICE REVERSE POLARITY-12251772

LEAD 12257348

HEATER ASSY-11668862

SHUT-OFF SOLENOID

RESTRICTION SOLENOID

TERMINAL STRIP

OVERHEAT SWITCH

407
405
401
402
GND

FLAME SWITCH IN START POSITION

IGNITION CONTROL

IGNITER

VOLTAGE LIMITER

BLOWER ASSEMBLY

WIRING HARNESS-12259347

HEATER FUEL PUMP-MS51321-1

BILGE PUMP INTERMEDIATE CONNECTOR

321
40
36
324
30
31
33
27

402
401
405
407

14
514-515
19
516
519
519
27
451

20-24
40
22
23
21
16

486
54A
76
459A

WIRING HARNESS 12304158

400-459

BASKET DISCONNECT

50
49

SLAVE 2-RECEPTACLE 7321899

P1 J1

WIRING HARNESS 12304139

2-BASE ASSY-7972347

2-HEADLAMP ASSY-7978305

E2

MS3452-L-14S-5B

WIRING HARNESS 12304140

DISCHARGER 6A4

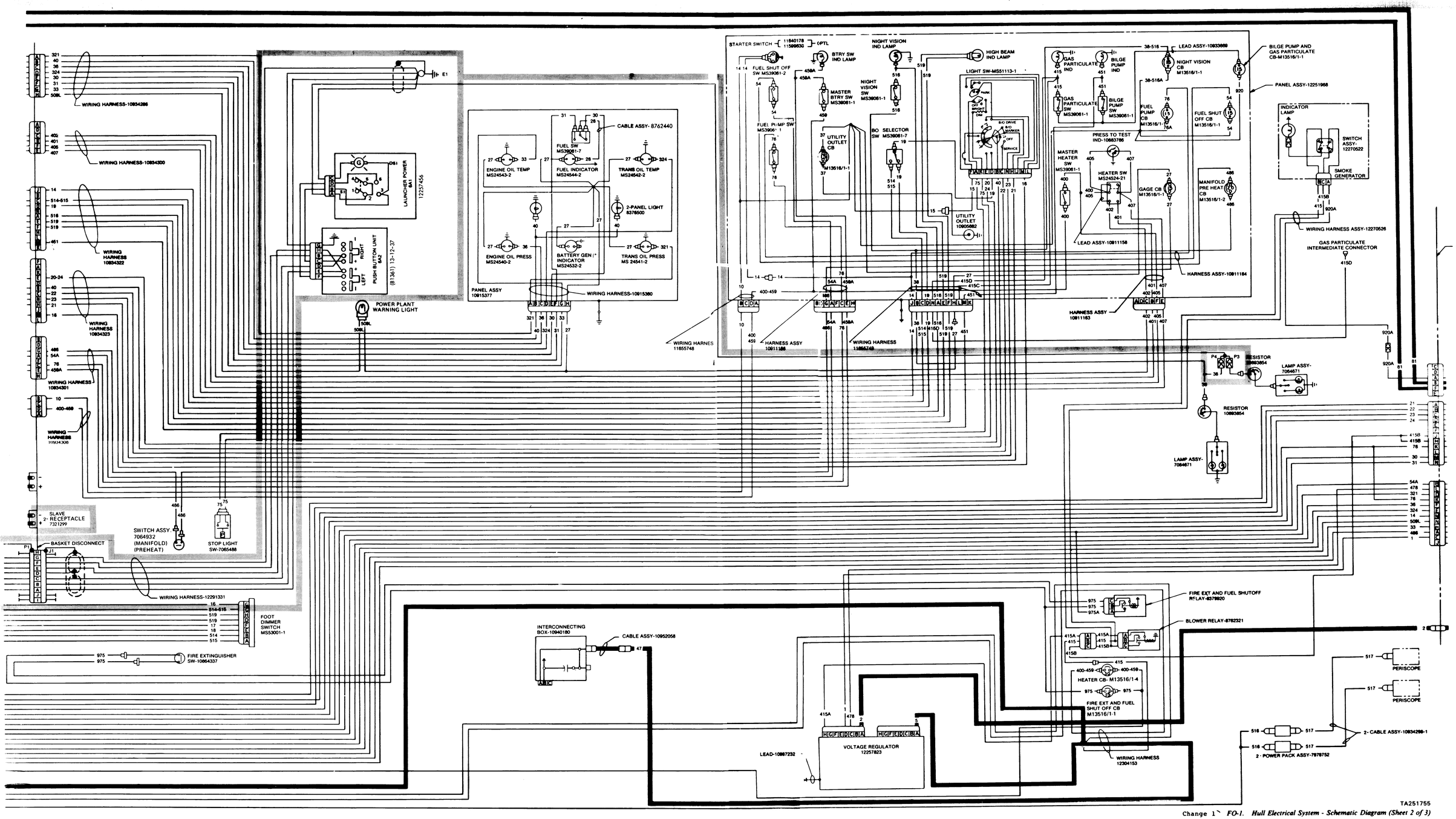
(81361) 13-12-35

6-BATTERY-MS35000-3

3-STRAP-7724127

TA251754

Change 1 *FO-1. Hull Electrical System - Schematic Diagram (Sheet 1 of 3)*



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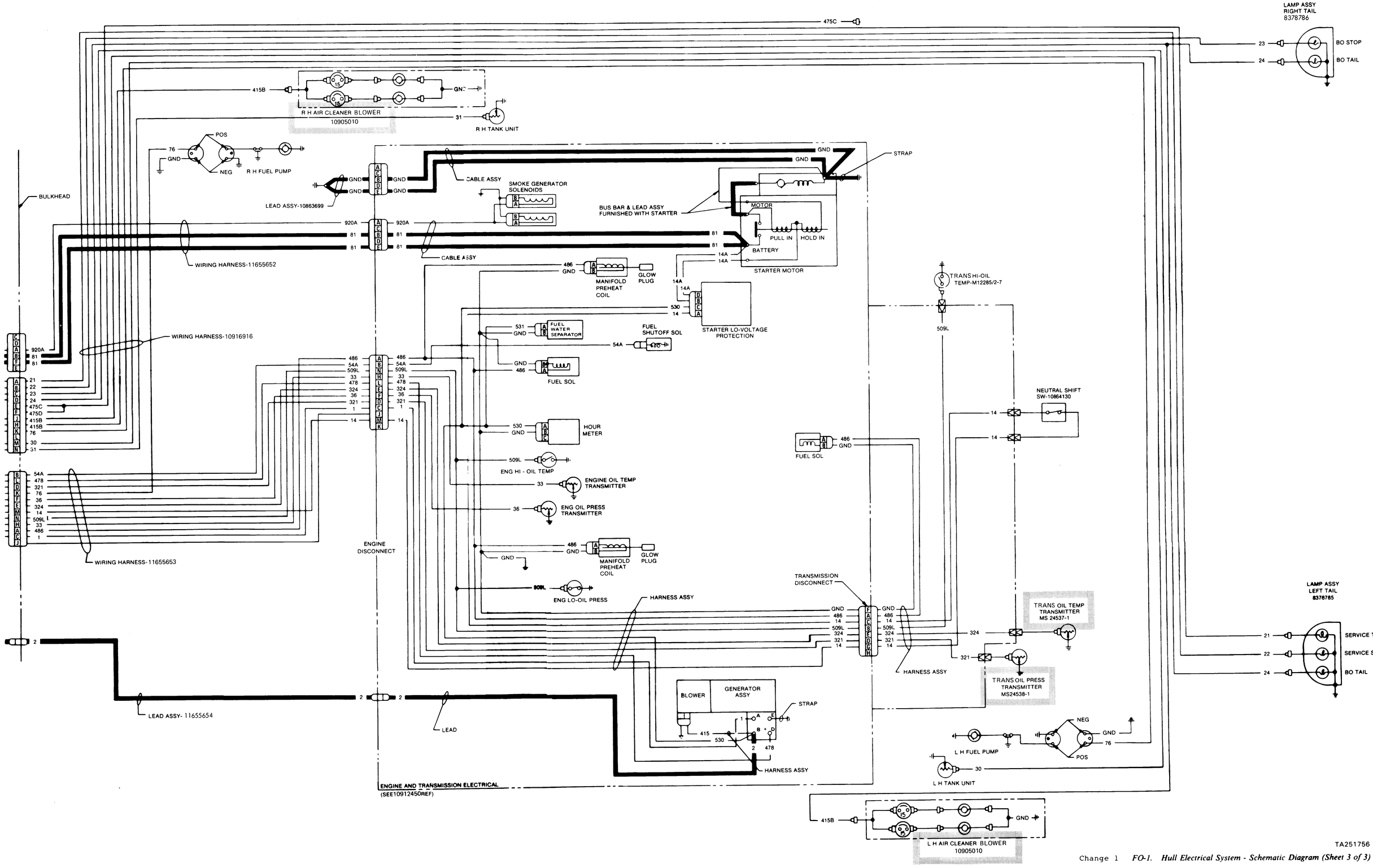
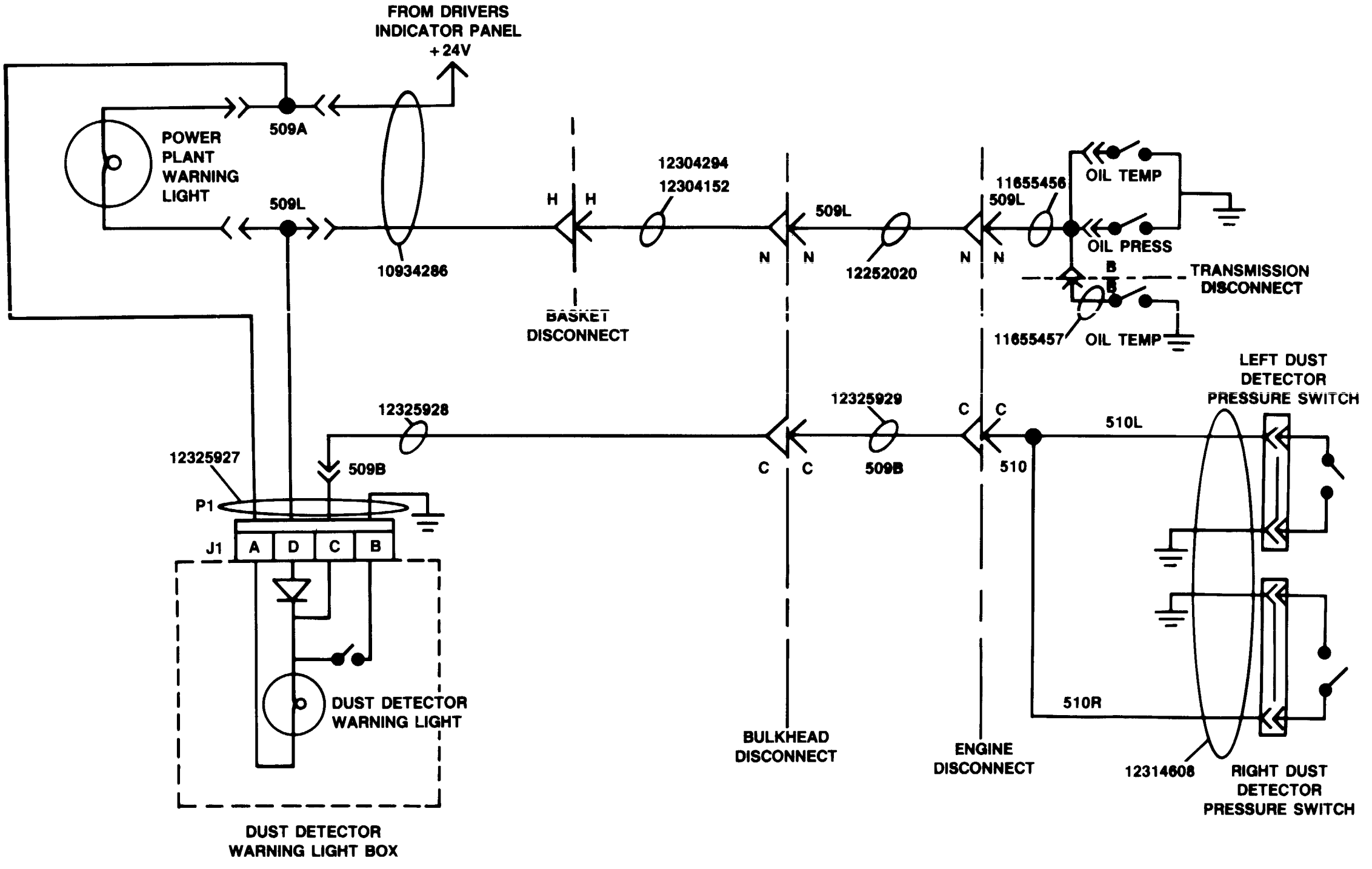
Change 1 *FO-1. Hull Electrical System - Schematic Diagram (Sheet 2 of 3)*



TA251756

Change 1 *FO-1. Hull Electrical System - Schematic Diagram (Sheet 3 of 3)*



FO-2. Dust Detector Schematic Diagram For Vehicles Equipped With 2DA Engine.

By Order of the Secretary of the Army:

E. C. MEYER
General, United States Army
Chief of Staff

Offical:

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

Distribution:
To be distributed in accordance with DA Form 12-37, Organizational Maintenance requirements for Tank, Bridge, Launcher, M48A5 (AVLB).

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3		2	
109		51	
2-8			2-1
12	1-6a		

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

Item 10. Change illustration. Reason: Tube end shown assembled on wrong side of lever cam.

Item 3. The NSN and P/N are not listed on the AMDF nor the MCRL. Request correct NSN and P/N be furnished.

Preventive Maintenance Checks and Services. Item 7 under "Items to be inspected" should be changed to read as follows: Firing linkage and firing mechanism pawl.

Since there are both 20- and 30- round magazines for this rifle, data on both should be listed.

SAMPLE

PRINTED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER
JOHN DOE SP/4 XXX-XXXX

SIGN HERE
John Doe

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

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TEAR ALONG PERFORATED LINE

THE METRIC SYSTEM AND EQUIVALENTS

LINEAR MEASURE

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

WEIGHTS

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

LIQUID MEASURE

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

SQUARE MEASURE

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

CUBIC MEASURE

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

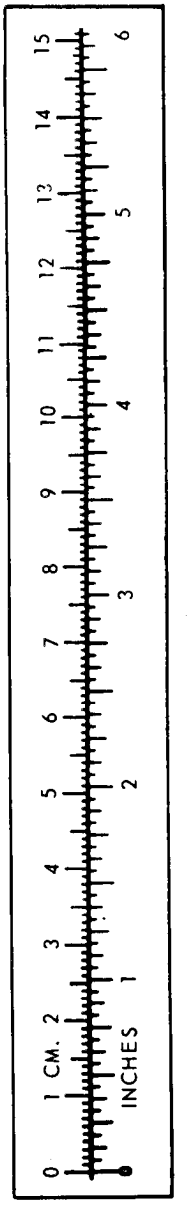
TEMPERATURE

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

APPROXIMATE CONVERSION FACTORS

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

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



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