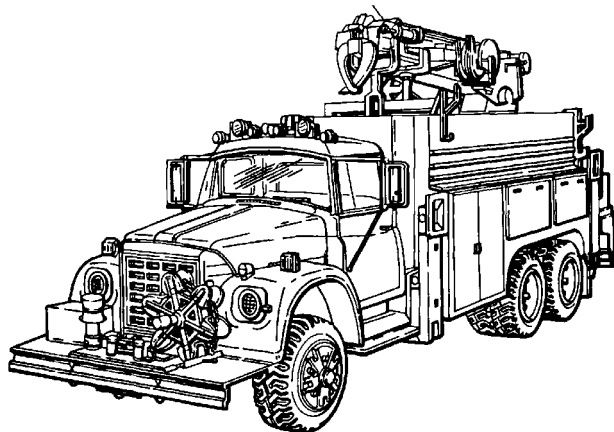

TECHNICAL MANUAL
Volume 2 of 2

ORGANIZATIONAL MAINTENANCE MANUAL



**MAINTENANCE
ALLOCATION
CHART
PAGE B-1**

**EXPENDABLE
SUPPLIES AND
MATERIALS LIST
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**M876 ELECTRICAL
SYSTEM FUNCTIONAL
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PAGE E-1**

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PAGE Index-1**

**TRUCK, TELEPHONE MAINTENANCE,
UTILITY, CIS, 36,000 GVW, 6 x 4, WIWN
W/E, M876 (NSN 2320-00-000-0114)**

DEPARTMENT OF THE ARMY

4 JUNE 1985

WARNING**CARBON MONOXIDE (EXHAUST GAS) CAN KILL YOU**

Carbon monoxide is without color or smell but can kill you. Breathing air with carbon monoxide produces symptoms of headache, dizziness, loss of muscular control, a sleepy feeling, and coma. Brain damage or death can result from heavy exposure. Carbon monoxide occurs in the exhaust fumes of fuel-burning heaters and internal combustion engines. Carbon monoxide can become dangerously concentrated under conditions of no air movement. Precautions must be followed to insure crew safety when the personnel heater, main, or auxiliary engine of any vehicle is operated for any purpose.

1. DO NOT operate personnel heater or engine of vehicle in a closed place unless the place has a lot of moving air.
2. DO NOT idle engine for long periods without ventilator blower operating.
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 is present, IMMEDIATELY VENTILATE personnel compartments. If symptoms persist, remove affected crew to fresh air; keep warm; DO NOT PERMIT PHYSICAL EXERCISE; if necessary, give artificial respiration.
5. FOR ARTIFICIAL RESPIRATION, REFER TO FM21-11.
6. BE AWARE; the field protective mask for chemical-biological-radiological (CBR) protection will not protect you from carbon monoxide poisoning.

THE BEST DEFENSE AGAINST CARBON MONOXIDE POISONING IS GOOD VENTILATION.

WARNING

After Nuclear, Biological, or Chemical (NBC) exposure of this vehicle, all air filters shall be handled with extreme caution. Unprotected personnel may experience injury or death if residual toxic agents or radioactive material are present. If vehicle is exposed to chemical or biological agents, servicing personnel shall wear protective mask, hood, protective overgarments, and chemical protective gloves and boots. All contaminated air filters shall be placed into double-lined plastic bags and moved to a segregation area away from the worksite swiftly. The same procedure applies for radioactive dust contamination, however, the Company NBC team should measure the radiation prior to filter removal to determine the extent of safety procedures required per the NBC Annex to the unit Standard Operating Procedures (SOP). The segregation area in which the contaminated air filters are temporarily stored shall be marked with appropriate NBC placards. Final disposal of contaminated air filters shall be in accordance with local SOP.

ORGANIZATIONAL MAINTENANCE MANUAL

**TRUCK, TELEPHONE MAINTENANCE,
UTILITY, CIS 36,000 GVW, 6 X 4, WI/WN,
WIE M876 (NSN 2320-00-000-01140)**

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can 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 2028-2 located in the back of this manual direct to: Commander, U.S. Army Tank-Automotive Command, ATTN: AMSTA-M B, Warren, Michigan 48397-5000. A reply will be furnished to you.

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*This manual together with TM 9-2320-269-20-1, 4 June 1985 supersedes TM 9-2320-269-20, 16 December 1977.

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CAB DOOR AND HINGES

This task covers:

- a. Removal (page 2-706)
- b. Repair (page 2-709)
- c. Installation (page 2-712)
- d. Adjustment (page 2-713)

INITIAL SETUP:

Tools

Extension, 3/8-inch drive, 5-inch
 Hammer, ball-peen, machinist's, i-lb
 Handle, ratchet, 3/8-inch drive
 Punch, drive-pin, straight, 118-inch
 Screwdriver, cross-tip, number two
 Screwdriver, cross-tip, number four
 Socket, 3/8-inch drive, 1/2-inch
 Vise, machinist's

Materials/Parts

Board, 2-in. x 4-in. x 8-ft
 (5 cm x 10 cm x 1.24 cm)
 Plywood, 3-in. x 3-in. x 5/16-in.
 (9.6 cm x 9.6 cm x 2 cm)

Personnel Required

Three

Equipment Condition

Cab door inner panel removed (page 2-730).
 Rear view mirror assembly removed
 (page 2-1309).

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

REMOVAL

WARNING

To prevent personnel injury, two people are required during door removal and installation.

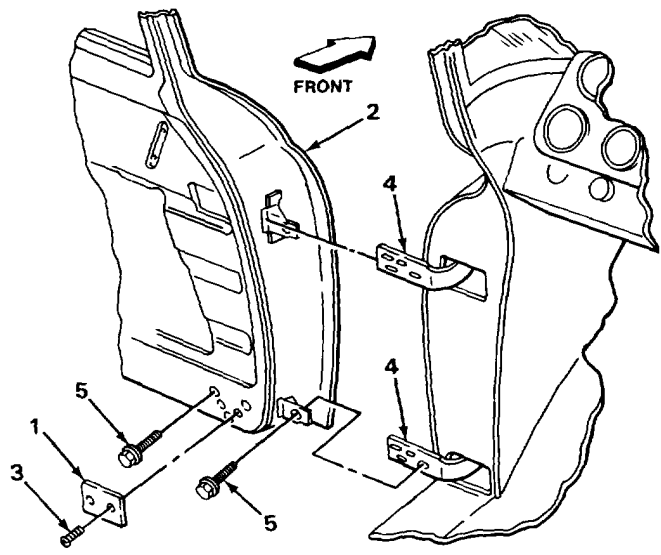
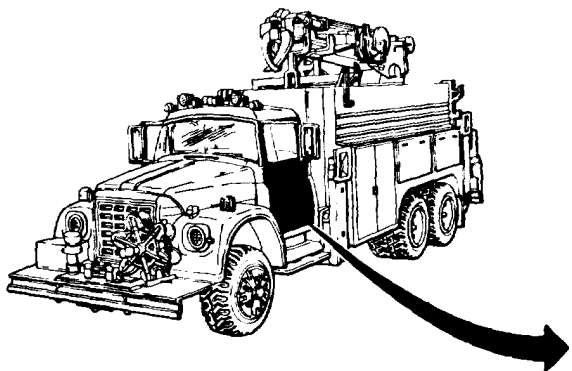
NOTE

The steps in this task are the same for both right and left cab door. The left door is used as the example.

If only adjusting door, go to step 28.

CAB DOOR AND HINGES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
1. Hinge access cover (1) to door (2)	Two screws (3) and hinge access cover (1)	Using number two cross-tip screwdriver, unscrew and take off.	
2.	Door (2)	Have two assistants support door (2).	
3. Door (2) to two hinges (4)	Seven screws (5)	Using 11/2-inch socket, extension, and handle, unscrew and take out.	
4. Two hinges (4)	Door (2)	Have two assistants take off.	



CAB DOOR AND HINGES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

REMOVAL - CONTINUED

NOTE

If there is no need to remove hinges, go to step 26.

- | | | |
|---|---|---|
| 5. Hinge access cover (1) to front fender (2) | Two screws (3) and hinge access cover (1) | Using number two cross-tip screwdriver, unscrew and take out. |
|---|---|---|

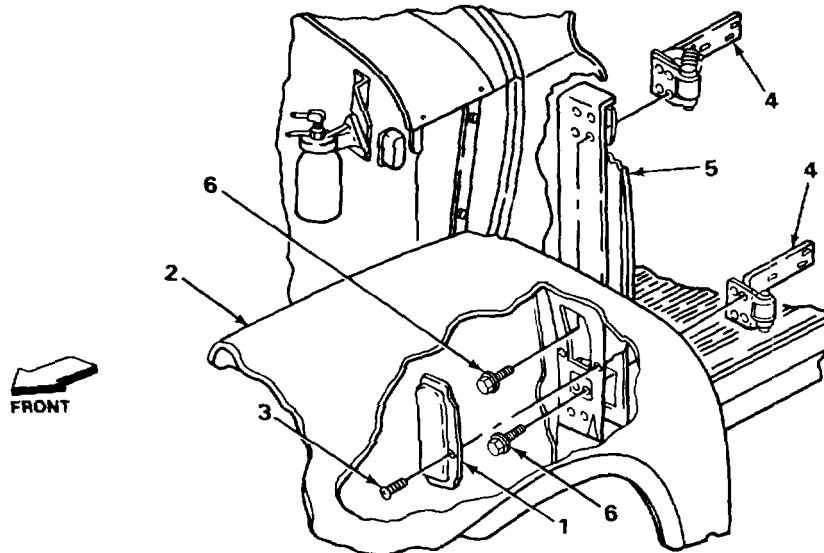
NOTE

Screws for top hinge are hidden, but there is enough room to reach up with hand and wrench.

- | | | |
|-------------------------------|--|------------------------------------|
| 6. Two hinges (4) to cowl (5) | Eight screws (6) unscrew and take out. | Using 11/2-inch socket and handle, |
|-------------------------------|--|------------------------------------|

NOTE

Top hinge must be in closed position to take out. Use a back-and-forth motion to take out.



TA229018

CAB DOOR AND HINGES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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REPAIR

NOTE

To repair door, replace defective component. See task for component. Notify Direct Support Maintenance for repair of collision damage.

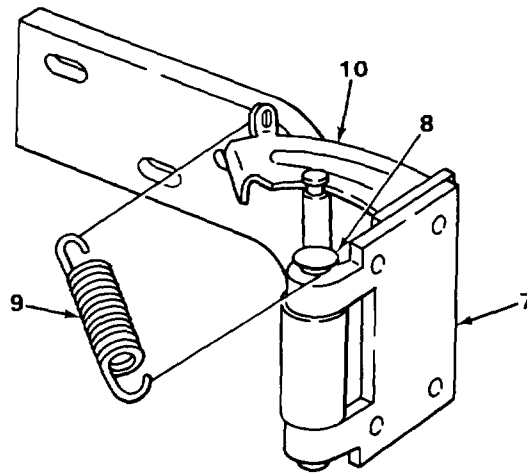
Only upper hinges have door check arms and springs. Steps 8 and 9, and 18 thru 21 are for upper hinge only. Otherwise, repair steps are the same for all four hinges.

- | | | |
|----|---------------------|-----------------|
| 8. | Hinge cowl half (7) | Secure in vise. |
|----|---------------------|-----------------|

WARNING

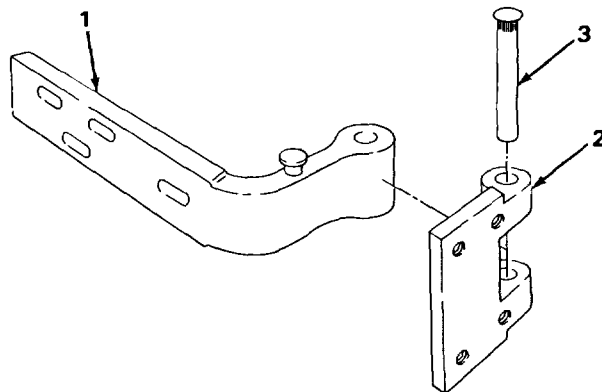
Eye protection must be worn while prying off check spring since spring may fly off hinge and cause serious injuries.

- | | | | |
|----|---------------|------------------|---|
| 9. | Hinge pin (8) | Check spring (9) | a Using number two cross-tip screwdriver, pry off hinge pin (8).
B Take out of hole in check arm (10). |
|----|---------------|------------------|---|



TA229019

LOCATION	ITEM	ACTION	REMARKS
REPAIR - CONTINUED			
10.	Hinge door half (1)	Secure upside down in vise.	
11. Hinge door half (1) and hinge cowl half (2)	Hinge pin (3)	Using hammer and punch, drive out.	
12. Hinge door half (1)	Hinge cowl half (2)	Take out.	
13. Hinge door half (1)	New hinge pin (3)	Insert in door half (1) to check for wear.	Pin should turn easily but there should be no side-to-side movement. If side-to-side movement, replace hinge.
14. Hinge cowl half (2)	New hinge pin (3)	Repeat steps 11 thru 13 for cowl half.	If side-to-side movement, replace hinge.
15.	Hinge door half (1)	Secure right side up in vise.	
16. Hinge door half (1)	Hinge cowl half (2)	Put on.	
17. Hinge cowl Half (2) to hinge Door half (1)	New hinge pin (3)	a. Push into hinge halves (1) and (2). b. Using hammer, drive into place. c. Remove from vise.	



TA229020

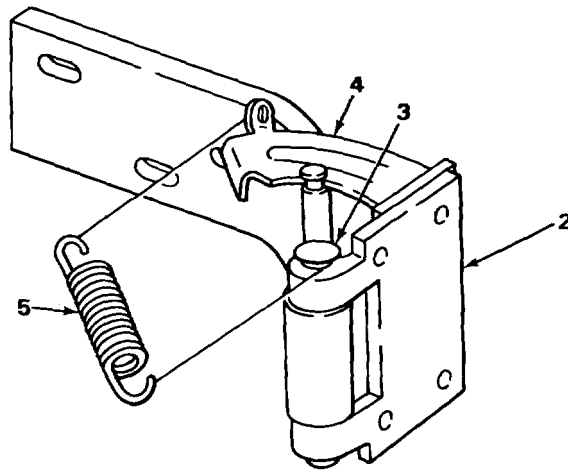
LOCATION	ITEM	ACTION	REMARKS
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REPAIR - CONTINUED

NOTE

Steps 18 thru 21 are for upper hinge only.

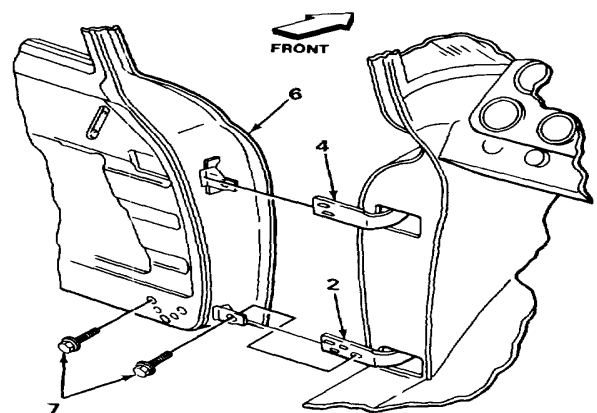
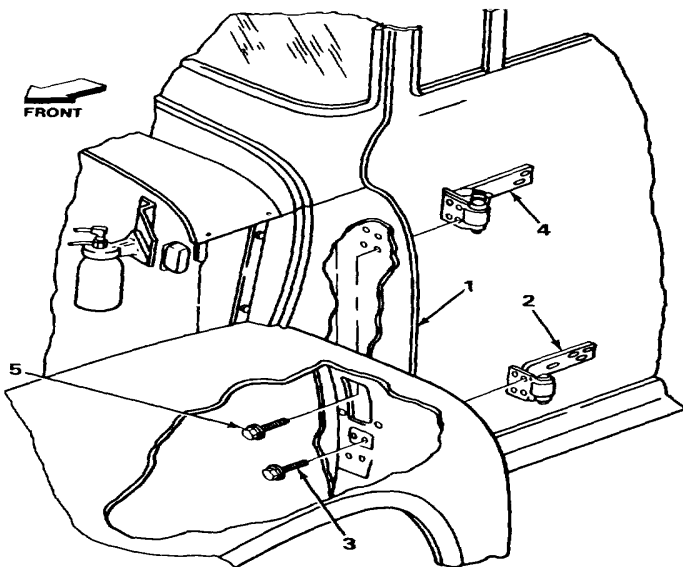
- | | | |
|-------------------------|---------------------|---|
| 18. | Hinge cowl half (2) | Secure in vise. |
| 19. Hinge check | Check spring (5) | Hook into hole in check arm (4). |
| 20. Hinge cowl half (2) | Check spring (5) | Using either cross-tip screwdriver, pry onto hinge pin (3). |
| 21. | Hinge cowl half (2) | Remove from vise. |



TA229021

CAB DOOR AND HINGES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
22. Cowl (1)	Lower hinge (2)	Put in place, and hold.	
23. Lower hinge (2) to cowl (1)	Four screws (3)	Screw in until snug using 112-inch socket and handle. Do not tighten.	
NOTE			
Upper hinge must be closed to put in.			
24. Cowl (1)	Upper hinge (4)	Put in place, and hold.	
25. Upper hinge (4) to cowl (1)	Four screws (5)	Screw in until snug using 112-inch socket and handle. Do not tighten.	
26. Upper hinge (4) and lower hinge (2)	Door (6)	Have assistants slide door onto hinges while you make sure hinges go into place.	
27. Upper hinge (4) and lower hinge (2) to door (6)	Seven screws (7)	Screw in until snug using 1/2-inch socket, extension, and handle. Do not tighten.	



LOCATION	ITEM	ACTION	REMARKS
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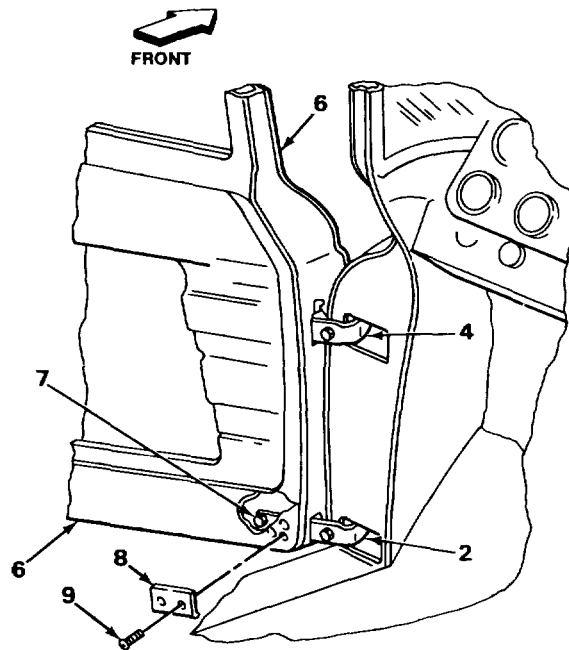
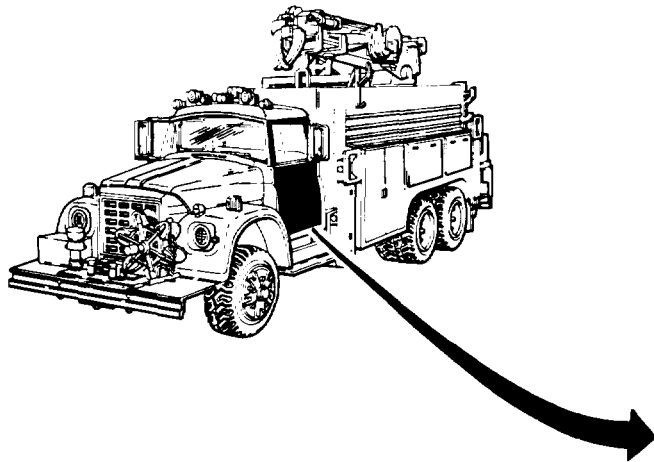
ADJUSTMENT

NOTE

Door hinge holes on cowl are slotted for moving door in and out. Holes on door are slotted to allow for moving door forward and backward.

For adjustment of door after installation, go to step 32.

- | | | |
|---|------------------------------|--|
| 28. Hinge access cover (8) to door (6) | Two screws (9) and cover (8) | Using number two cross-tip screwdriver, unscrew and take off. |
| 29. Upper hinge (4) and lower hinge (2) to door (6) | Seven screws (7) | a. Using 1/2-inch socket, extension, and handle, loosen.
b. Using 1/2-inch socket, extension, and handle, screw in.
Do not tighten. |



TA229023

LOCATION	ITEM	ACTION	REMARKS
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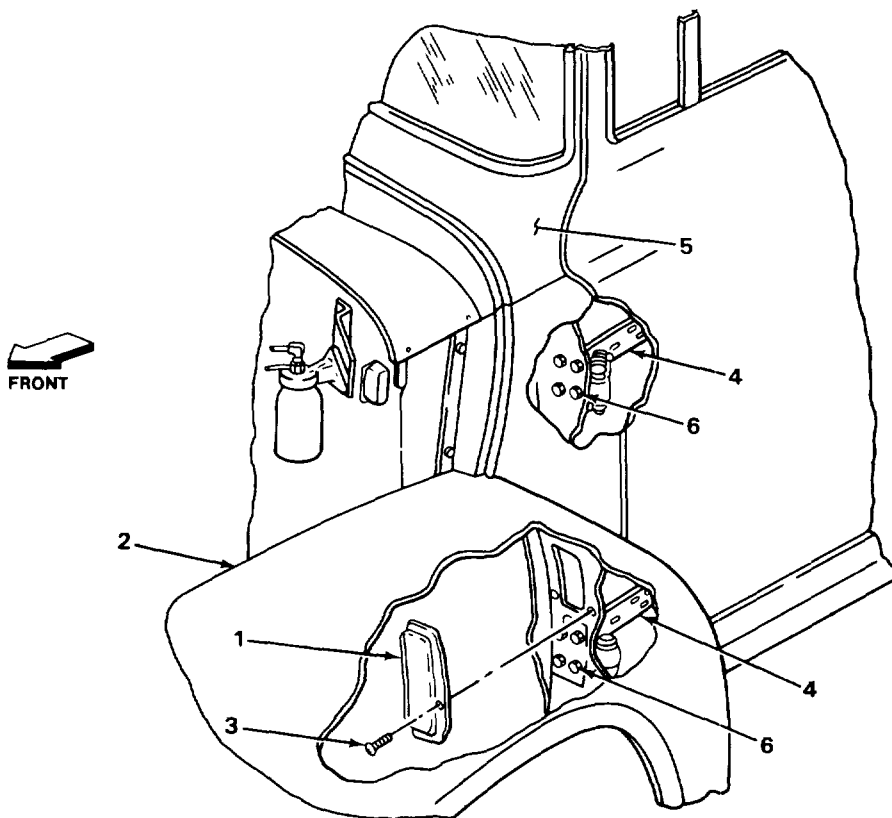
ADJUSTMENT - CONTINUED

30. Access cover (1) to front fender (2)	Two screws (3) and access cover (1)	Using number two cross-tip screwdriver, unscrew and take off.	
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NOTE

Screws for top hinge are hidden, but there is enough room to reach up with hand and wrench.

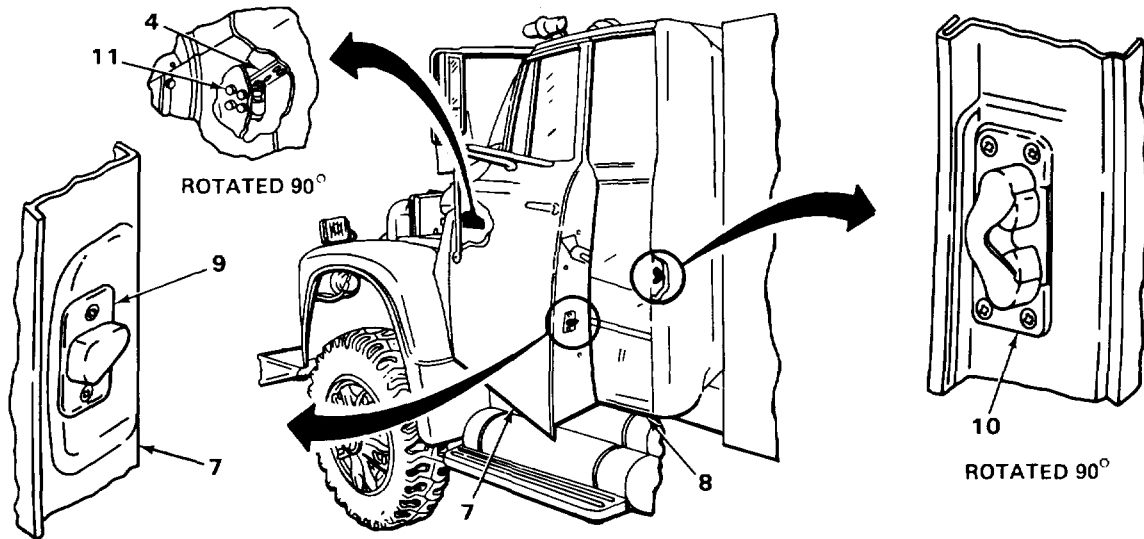
31. Two hinges (4) to cowl (5)	Eight screws (6)	a. Unscrew using 1/2-inch socket and handle. b. Using 1/2-inch socket and handle, screw on until snug. Do not tighten.	
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TA229024

CAB DOOR AND HINGES - CONTINUED

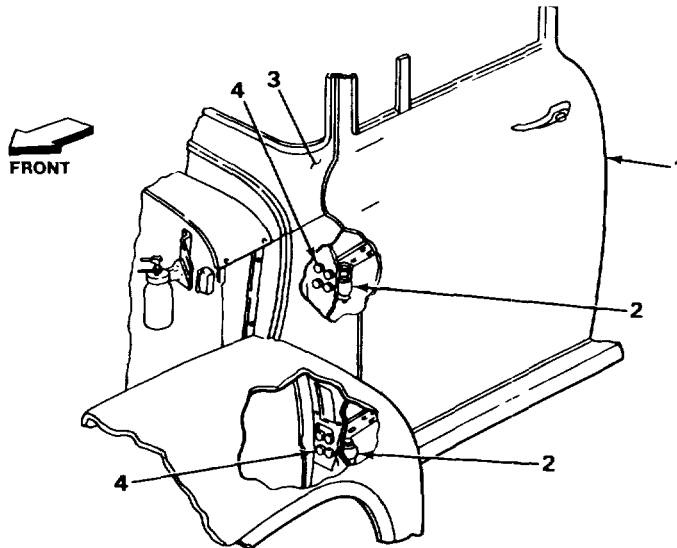
LOCATION	ITEM	ACTION	REMARKS
ADJUSTMENT - CONTINUED			
32.	Door (7)	Open.	
33.	Between door sill (8) and door (7)	Place plywood near front of door.	
34.	Door (7)	a. Close enough to be able to see if male dovetail (9) lines up with female dovetail (10). b. Open door enough to insert 2 x 4-inch board between door (7) and door sill (8). c. Pry up or down on door until dovetails (9) and (10) line up.	If necessary, further loosen hinge to door screws. Be careful not to bend door.
35. Two hinges (4) to door (7)	Eight screws (11)	Tighten using 1/2-inch socket, handle, and extension.	



TA229025

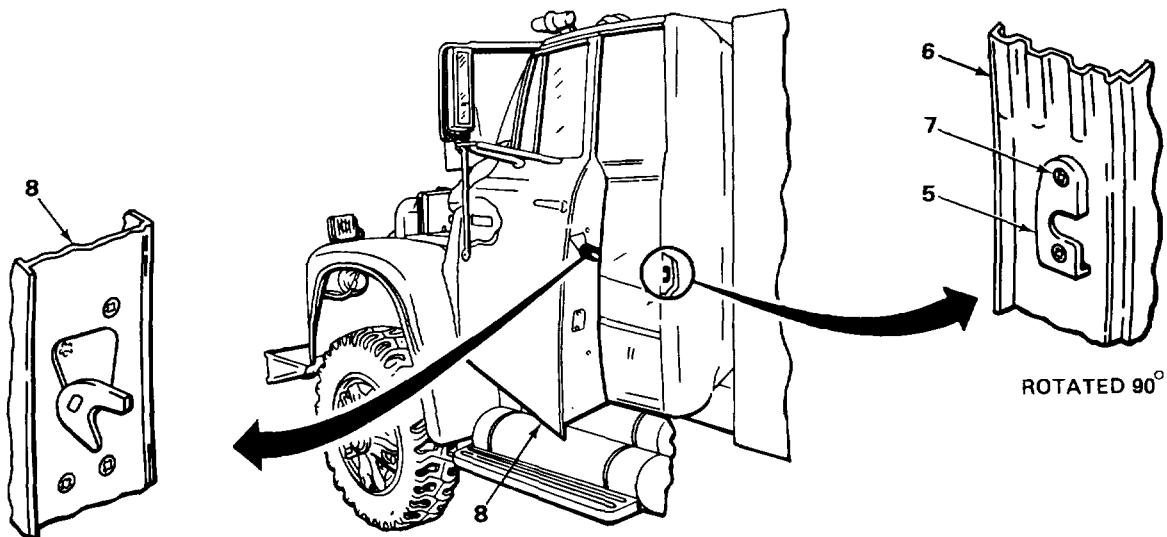
CAB DOOR AND HINGES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
ADJUSTMENT - CONTINUED			
36.	Door (1)	Close.	
37.	Two hinges (2) to cowl (3)	Eight screws (4)	Using 1/2-inch socket and handle, loosen.
38.	Door (1)	Have assistant push front of door against cowl (3).	
39.	Eight screws (4)	While assistant is pushing, tighten using 1/2-inch socket and handle	
40.	Door (1)	Check operation by opening and closing. If latch will not latch tightly, or door does not close tightly at rear, continue with step 41. Otherwise, go to step 44.	



TA229026

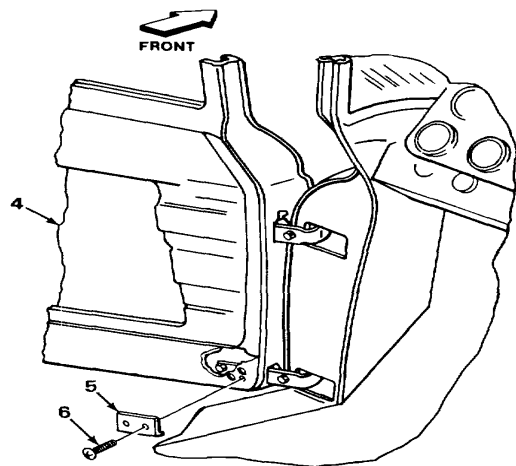
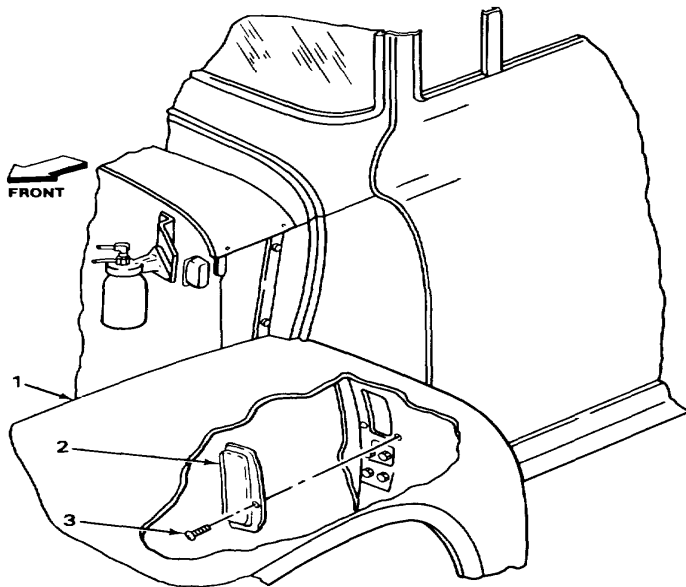
LOCATION	ITEM	ACTION	REMARKS
ADJUSTMENT- CONTINUED			
41. Striker (5) to lock pillar (6)	Two screws (7)	Using number four cross-tip screwdriver, loosen.	
42.	Striker (5)	Adjust in or out until door (8) closes tightly and latches firmly.	
43 s	Two screws (7)	Tighten using number four cross-tip Screwdriver.	



TA229027

CAB DOOR AND HINGES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
ADJUSTMENT - CONTINUED			
44. Fender (1)	Access cover (2)	Put in place, and hold.	
45. Access cover (2) to fender (1)	Two screws (3)	Screw in, and tighten using number two cross-tip screwdriver.	
46. Door (4)	Hinge access cover (5)	Put in place, and hold.	
47. Hinge access cover (5) to door (4)	Two screws (6)	Screw in, and tighten using number two cross-tip screwdriver.	



NOTE

FOLLOW-ON MAINTENANCE:

1. Install cab door inner panel (page 2-730).
2. Install rear view mirror assembly (page 2-1306).

TASK ENDS HERE

TA229028

CAB DOOR GLASS AND CHANNEL

This task covers:

- a. Removal (page 2-706)
- b. Replacement (page 2-724)
- c. Installation (page 2-712)

INITIAL SETUP:

Tools

Brush, wire, rotary wheel
 Grinder, bench
 Gun, oil
 Handle, ratchet, 1/4-inch drive
 Knife, craftsman's
 Knife, putty
 Pliers, long round-nose
 Pliers, slip-joint, straight-nose
 Screwdriver, cross-tip, number three
 Screwdriver, flat-tip, 3/16-inch
 Socket, 1/4-inch drive, 11/32-inch
 Wrench, box-end, 3/8-inch

Materials/Parts

Brush, paint (item 5, appendix C)
 Glass-setting tape, cork
 Oil, lubricating (item 22,
 appendix C)
 Lockwasher, channel retainer
 Lockwasher, screw assemblies
 (five required)
 Primer, rust-proofing, red oxide

Materials/Parts - Continued

Rags, wiping (item 24, appendix C)
 Lubricant, silicone grease
 (item 19, appendix C)

Personnel Required

One

Equipment Condition

Cab door inner panel removed (page 2-730).

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

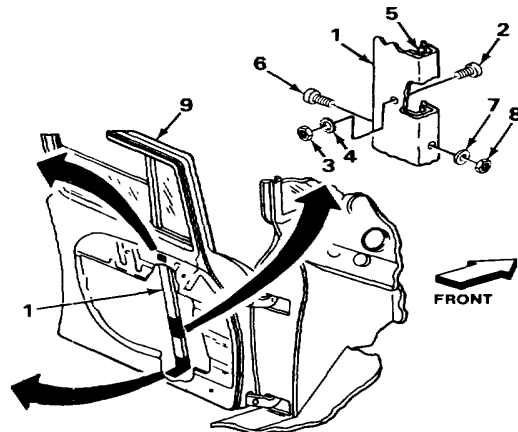
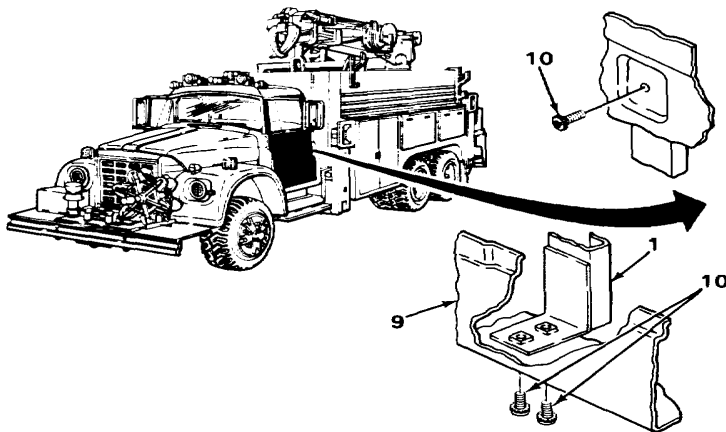
Eye protection must be worn while replacing door glass to avoid injury.

NOTE

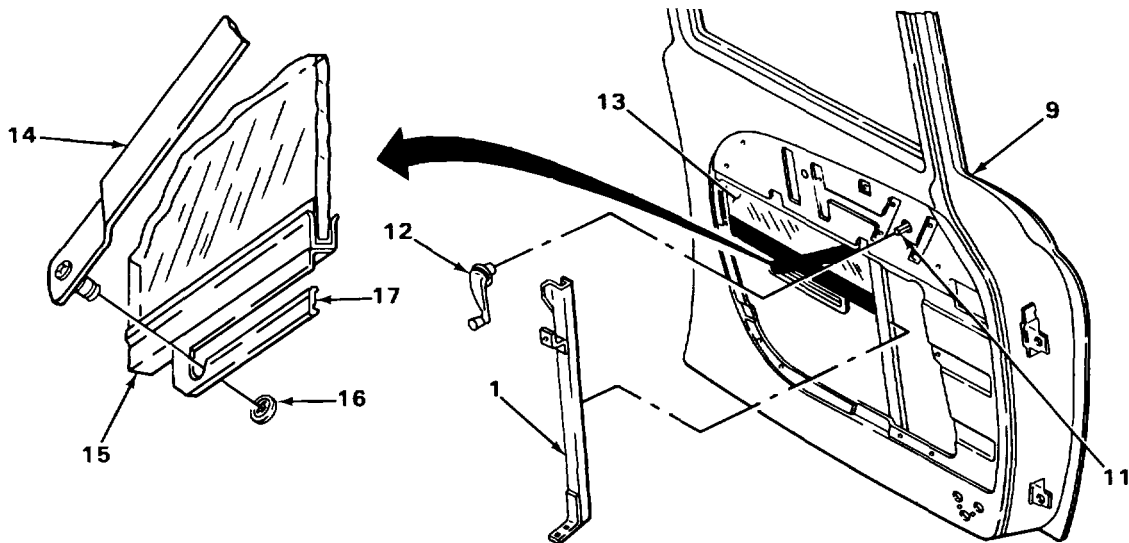
The steps in this task are the same for both right and left cab door glass. The left glass is used as the example.

Window must be closed half way before starting procedure.

- | | | |
|--|--|---|
| 1. Channel retainer (1) | Door glass bumper (2), nut (3), and lockwasher (4) | <ul style="list-style-type: none"> a. Using 11/32-inch socket, handle, and slip-joint pliers, unscrew and take out. b. Get rid of lockwasher (4). |
| 2. Run channel (5) to channel retainer (1) | Screw (6), washer (7), and nut (8) | Using cross-tip screwdriver and 3/8-inch wrench, unscrew and take out. |
| 3. Channel Retainer (1) to door(9) | Three screw and lockwasher assemblies (10) | <ul style="list-style-type: none"> a. Using cross-tip screwdriver, unscrew. b. Get rid of screw and lockwasher assemblies (10). |



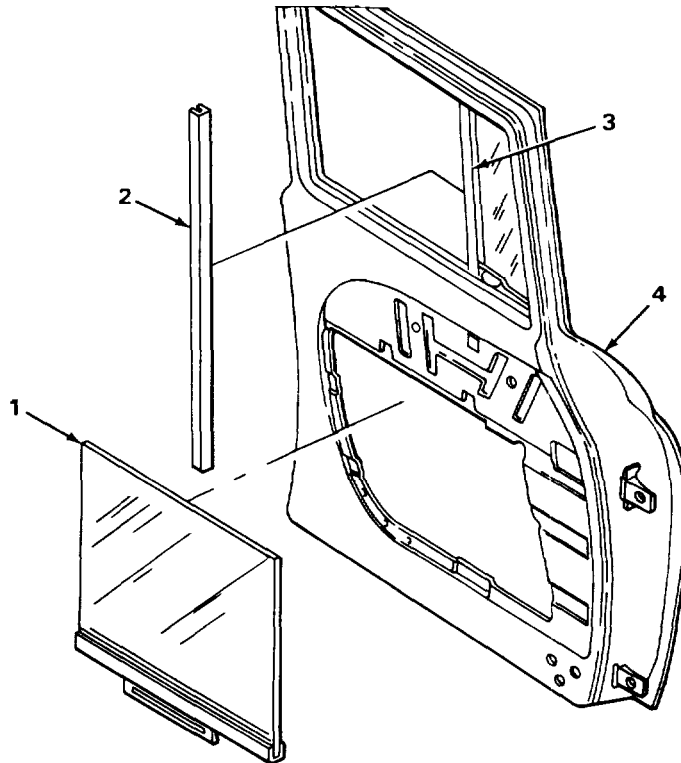
LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
4. Door (9)	Channel retainer (1)	Take out.	
5. Window regulator shaft (11)	Window handle (12)	Put onto shaft (11), and using window handle (12), lower window (13).	
6. Window regulator arm (14) to glass retainer channel (15)	Clip (16)	Using flat-tip screwdriver, push off.	
7. Glass retainer channel (15)	Window regulator arm (14)	Pull out of channel slide (17) while holding window (13) with other hand.	
8. Door (9)	Window (13)	Lower to bottom of door (9).	
9. Window regulator shaft (11)	Window handle (12)	Using handle (12), raise window regulator arm (14) all the way.	



TA229030

CAB DOOR GLASS AND CHANNEL - CONTINUED

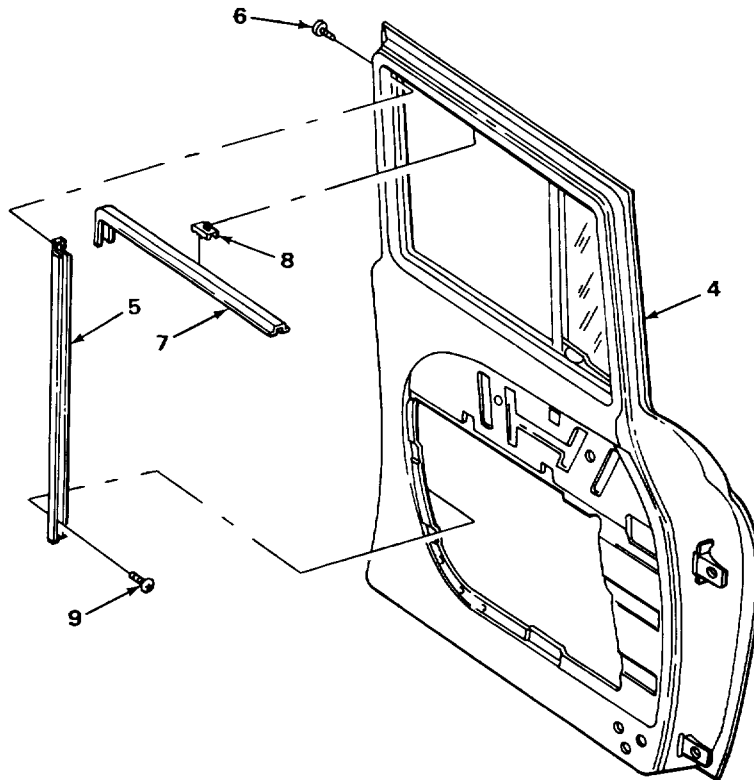
LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
10. Glass (1)	Run channel (2)	Take off of glass (1).	
11. Window post (3)	Run channel (2)	Using long round-nose pliers, pull out of post (3).	
12. Door (4)	Run channel (2)	Take out through window opening.	
13.	Glass (1)	Lift up glass (1) slightly, and take out of door (4).	



TA229031

CAB DOOR GLASS AND CHANNEL - CONTINUED

LOCATION	ITEM	ACTION REMARKS
14. Rear channel (5) to door (4)	Screw and lockwasher assembly (6)	a. Using cross-tip screwdriver, unscrew and take out.
15. Door (4)	Upper channel (7) and four clips (8)	Using flat-tip screwdriver, pry loose and take out.
16. Upper channel (7)	Four clips (8)	Take off.
17. Rear channel (5) to door (4)	Screw and lockwasher assembly (9)	a. Using cross-tip screwdriver, unscrew and take out. b. Get rid of.
18. Door (4)	Rear channel (5)	Take out.



TA229032

CAB DOOR GLASS AND CHANNEL - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REPLACEMENT			
NOTE			
Replacement steps are for broken window.			
19. Retainer channel (1)	Broken glass (2) and old glass-setting tape (3)	Scrape out using flat-tip screwdriver and putty knife.	
<u>WARNING</u>			
Eye and head protection must be worn when using rotary wire brush on bench grinder to prevent wires from being imbedded in eyes or hands, hands severely scraped, or other injuries.			
20.	Retainer channel (1)	<ul style="list-style-type: none"> a. Using rotary wire brush, clean all remaining dirt and rust from inside channel (1). b. Inspect for severe rust damage on channel (1) or badly bent slide (4). Replace damaged channel. c. Using brush, paint inside of channel (1) with rust-proofing primer, and let dry according to instructions on primer. 	
21 Replacement glass (2)	New glass-setting tape (3)	Wrap around bottom of glass (2).	
22. Replacement glass (2) and new glass-setting tape (3)	Retainer channel (1)	With glass setting on soft wood or rags, push channel (1) onto glass (2) until glass is firmly seated in channel.	

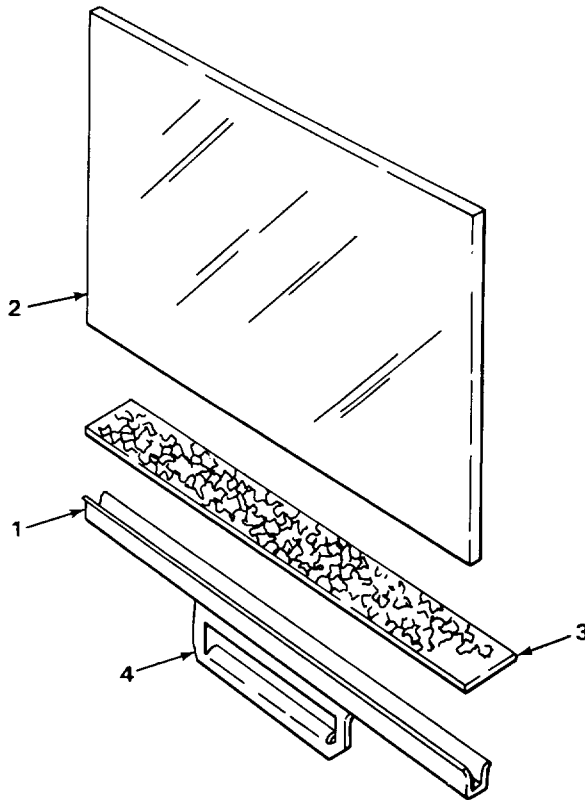
LOCATION	ITEM	ACTION	REMARKS
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REPLACEMENT - CONTINUED

NOTE

Water may also be used to swell glass-setting tape, but glass is more likely to come loose and retainer channel rust out.

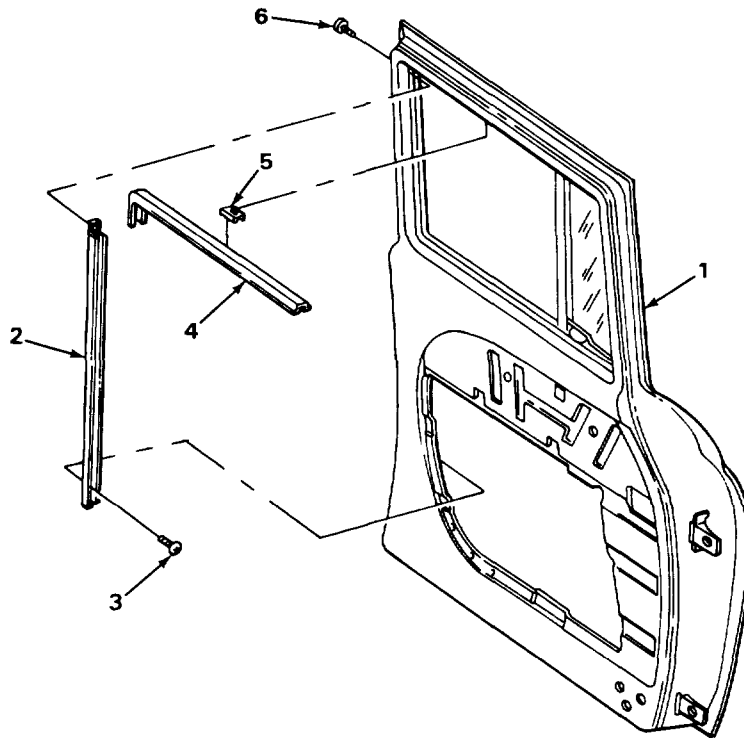
- | | | |
|-----|----------------------------|---|
| 23. | New glass-setting tape (3) | <ul style="list-style-type: none"> a. Soak tape with lubricating oil to swell cork tape (3) securing glass (2). b. Using craftsman's knife, cut off glass-setting tape (3) above channel. |
|-----|----------------------------|---|



TA229033

CAB DOOR GLASS AND CHANNEL - CONTINUED

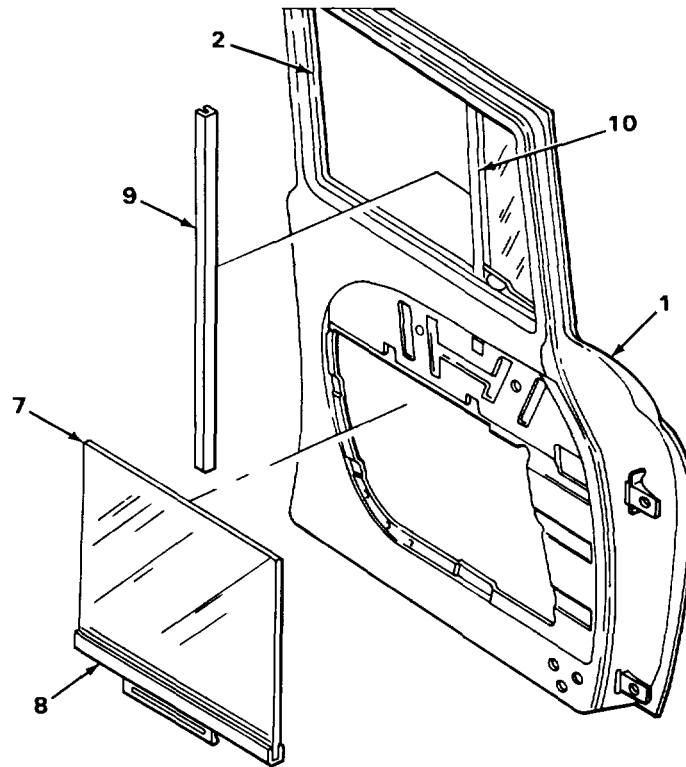
LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
24. Door (1)	Rear channel (2)	Push into place.
25. Rear channel (2) to door (1)	New screw and lockwasher assembly (3)	Screw in, and tighten using cross-tip screwdriver.
26. Upper channel (4)	Three clips (5)	Push into place.
27. Door (1)	Upper channel (4)	Snap into place.
28. Rear channel (2) to door (1)	New screw and lockwasher assembly (6)	Screw in, and tighten using cross-tip screwdriver.



TA229034

CAB DOOR GLASS AND CHANNEL - CONTINUED

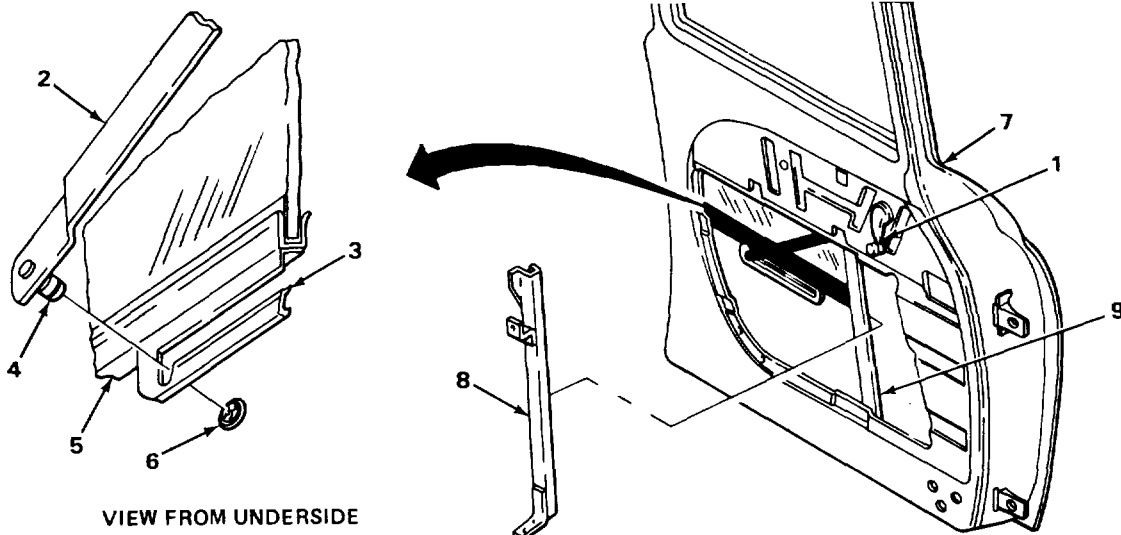
LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
29. Door (1)	Glass (7)	a. Put into door with channel (8) down. b. Seat glass in channel (2).	
30. Door (1)	Run channel (9)	Slide in through window opening.	
31. Glass (7)	Run channel (9)	Push on.	
32. Window post (10)	Run channel (9)	Snap in.	



TA229035

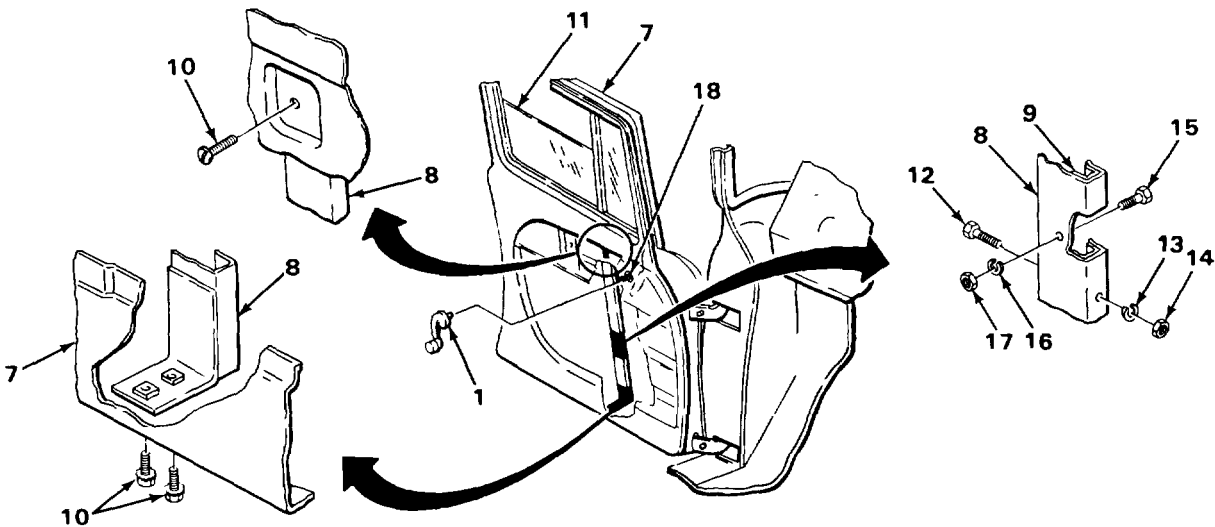
CAB DOOR GLASS AND CHANNEL - CONTINUED

LOCATION	ITEM	ACTION REMARKS	
INSTALLATION - CONTINUED			
33.	Window handle (1)	Using handle (1), lower window regulator arm (2) all the way.	
34.	Glass retainer channel slot (3) and window regulator arm stud (4)	Lubricate with silicone grease lubricant.	
35	Glass retainer channel (5)	Window regulator arm (2)	Lifting channel (5) up and down as needed, aline arm stud (4) with large hole at end of slot (3) on channel (5), and push through hole.
36.	Glass retainer channel (5) to window regulator arm (2)	Clip (6)	Push onto stud (4).
37.	Door (7)	Channel retainer (8)	Put in through lower opening in door (7), and seat on channel (9).



CAB DOOR GLASS AND CHANNEL - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
38. Channel retainer (8) to door (7) assemblies (10)	Three new screw and lockwasher screwdriver.	With retainer (8) pushed firmly against channel (9) and glass (11), screw in, and tighten using cross-tip	
39.	Glass (11)	Using window handle (1), roll up half way.	
40. Run channel (9) to channel retainer (8)	Screw (12), washer (13), and nut (14)	Screw on, and tighten using cross-tip screwdriver and 3/8-inch wrench.	
41. Channel retainer (8)	Door glass bumper (15), new lockwasher (16), and nut (17)	Screw on, and tighten using slip-joint pliers, 11/32-inch socket, and handle.	
42. Window regulator	Window handle (1)	Take off.	



NOTE

FOLLOW-ON MAINTENANCE: Install cab door inner panel (page 2-730).

TASK ENDS HERE

TA229037

CAB DOOR INNER PANEL

This task covers:

- a. Removal (page 2-706)
- b. Installation (page 2-731)

INITIAL SETUP:

Tools

Hammer, ball-peen, machinist's
 Punch, drive-pin, straight,
 1 8-inch
 Screwdriver, cross-tip, number two

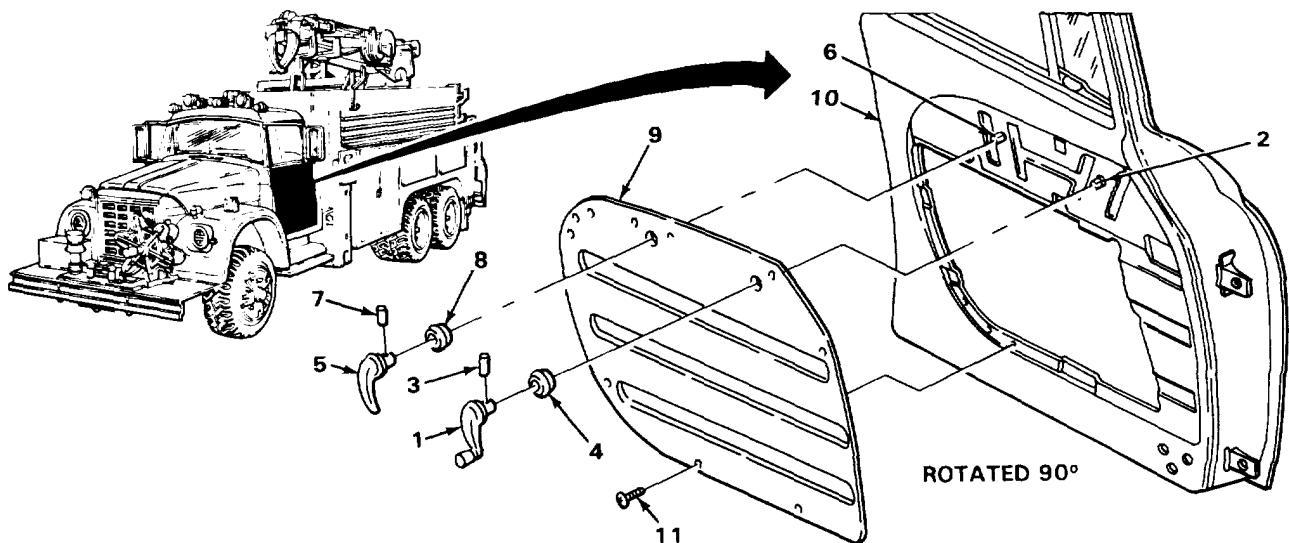
Personnel Required

One

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1.	Window regulator handle (1) to window regulator shaft (2)	Pin (3)	a. Push back escutcheon (4) by hand. b. Using punch and hammer, drive out pin (3).
2.	Window regulator shaft (2)	Window regulator handle (1) and escutcheon (4)	Take off.
3.	Door handle (5) to door lock remote control shaft (6)	Pin (7)	a. Push back escutcheon (8) by hand. b. Using punch and hammer, drive out pin (7).
4.	Door lock remote control shaft (6)	Door handle (5) and escutcheon (8)	Take off.
5.	Inner door panel (9) to door (10)	Nine screws (11)	Using cross-tip screwdriver, unscrew and take out. Lockwashers do not come off screws (11).
6.	Door (10)	Inner door panel (9)	Take off.

CAB DOOR INNER PANEL - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
7. Door (10)	Inner panel (9)	Put in place.	
8. Inner panel (9) to door (10)	Nine screws (11)	Screw in, and tighten using cross-tip screwdriver.	
9. Door lock remote control shaft (6)	Escutcheon (8) and door handle (5)	Put on.	
10. Door handle (5) to door lock remote control shaft (6)	Pin (7)	a. Push back escutcheon (8) by hand. b. Push in until flush on both sides. Screwdriver or punch may be needed.	
11. Window regulator shaft (2)	Escutcheon (4) and window regulator handle (1)	Put on.	
12. Window regulator handle (1) to shaft (2)	Pin (3)	a. Push back escutcheon (4) by hand. b. Push in until flush. Screwdriver or punch may be needed.	



TASK ENDS HERE

CAB DOOR WEATHERSEAL

This task covers:

- a. Removal (page 2-732)
 - b. Installation (page 2-733)
-

INITIAL SETUP:

Tools Personnel Required

Knife, craftsman's One

Materials/Parts

- Adhesive, liquid rubber (item 2, appendix C)
 - Rags, wiping (item 24, appendix C)
 - Solvent, drycleaning (item 28, appendix C)
 - Weatherseal, cab door
-

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

1. Door (1)	Weatherseal (2)		Using knife, pry weatherseal loose from door and peel off.
-------------	-----------------	--	--

WARNING

Drycleaning solvent is both toxic and flammable. Avoid prolonged breathing of vapors, and avoid skin contact. Do not use near open flame or excessive heat. Flashpoint of solvent is 1380F (590C). Dispose of solvent-soaked rags properly.

2.	Door (1)		Using drycleaning solvent and rags, clean all old cement, dirt, and bits of weather-seal from door.
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CAB DOOR WEATHERSEAL - CONTINUED

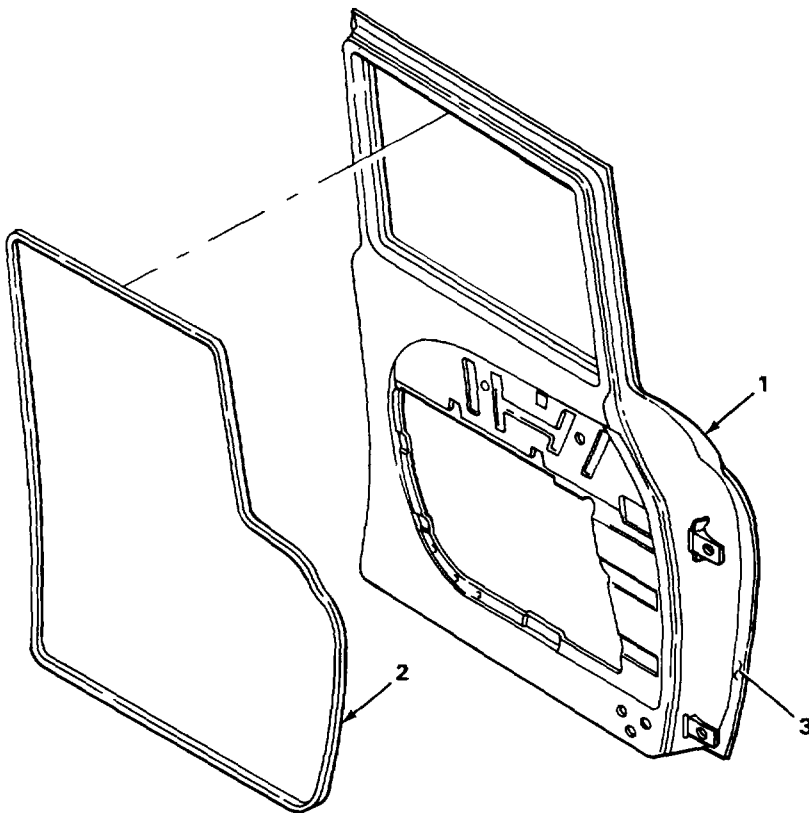
LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION

WARNING

Rubber cement adhesive and fumes from rubber cement burn easily. Do not smoke or have open flame nearby while using rubber cement.

- | | | |
|-------------|---------------------|--|
| 3. Door (1) | | Coat door flange (3) with liquid rubber adhesive, and let dry until tacky. |
| 4. Door (1) | New weatherseal (2) | Press into place. |



TASK ENDS HERE

CAB OUTSIDE DOOR HANDLE

This task covers:

- | | |
|--|--|
| <ul style="list-style-type: none"> a. Removal (page 2-734) b. Disassembly (page 2-736) | <ul style="list-style-type: none"> c. Assembly (page 2-736) d. Installation (page 2-737) |
|--|--|

INITIAL SETUP:

Tools

Extension, 3/8-inch drive, 5-inch
 Handle, ratchet, 3/8-inch drive
 Screwdriver, cross-tip, number two
 Socket, 3/8-inch drive, 3/8-inch

Materials/Parts

Lockwasher, door handle to door
 Lockwasher, screw assembly

Personnel Required

One
 Equipment Condition

Cab door inner panel removed (page 2-730).

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

REMOVAL

NOTE

The steps in this task are the same for both right and left outside door handles. The left door handle is used as the example.

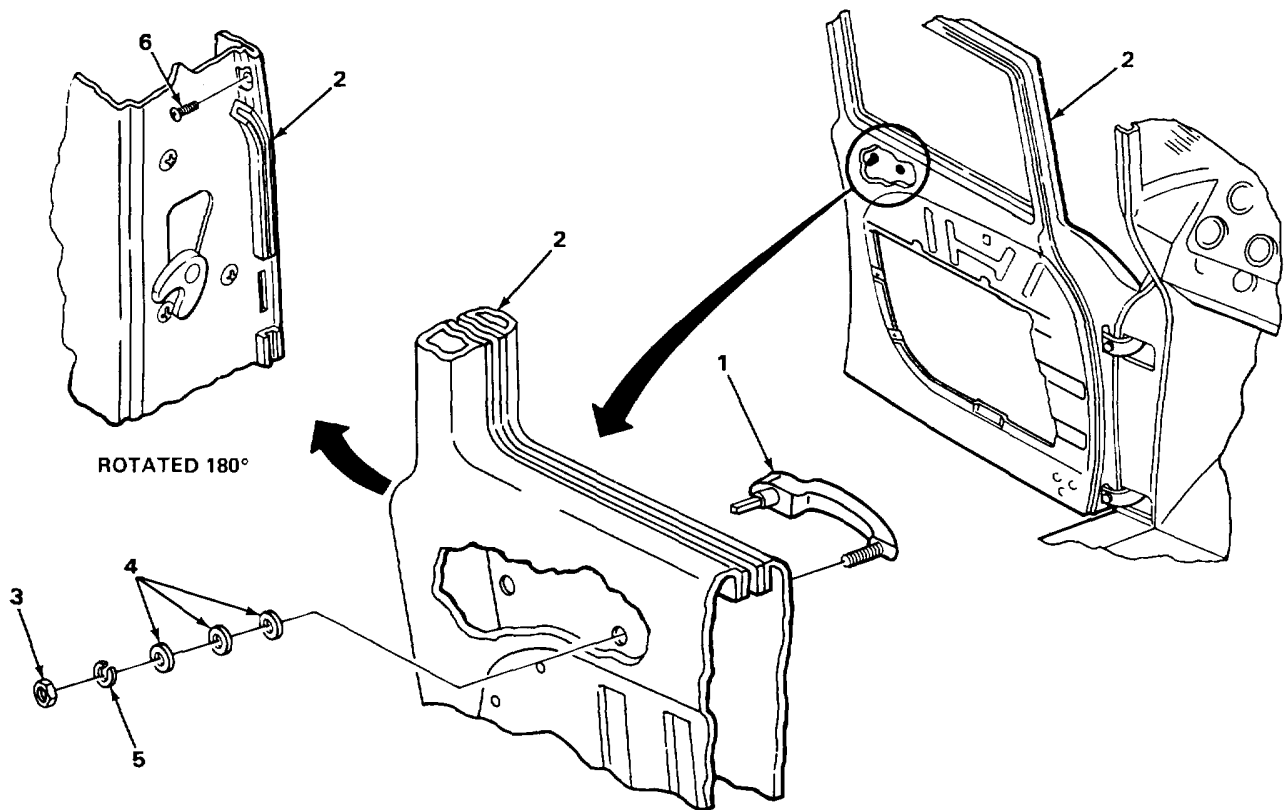
- | | | |
|---------------------------------------|---|---|
| <p>1. Door handle (1) to door (2)</p> | <p>Nut (3), three washers (4), and lockwasher (5)</p> | <ul style="list-style-type: none"> a. Using 3/8-inch socket, extension, and handle, unscrew and take out. b. Get rid of lockwasher (5). |
| <p>2. Screw and</p> | <p>lockwasher assembly (6)</p> | <ul style="list-style-type: none"> a. Using cross-tip screwdriver, unscrew and take out. b. Get rid of screw and lockwasher assembly (6). |

CAB OUTSIDE DOOR HANDLE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL - CONTINUED

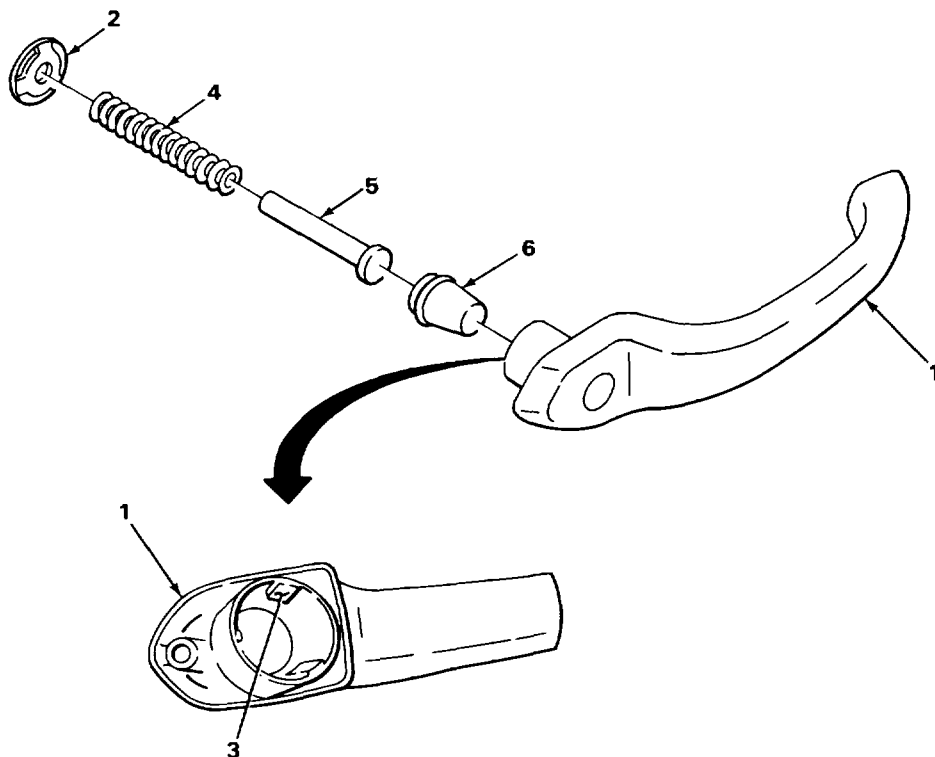
3. Door (2)	Door handle (1)	Take off.	
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2-735

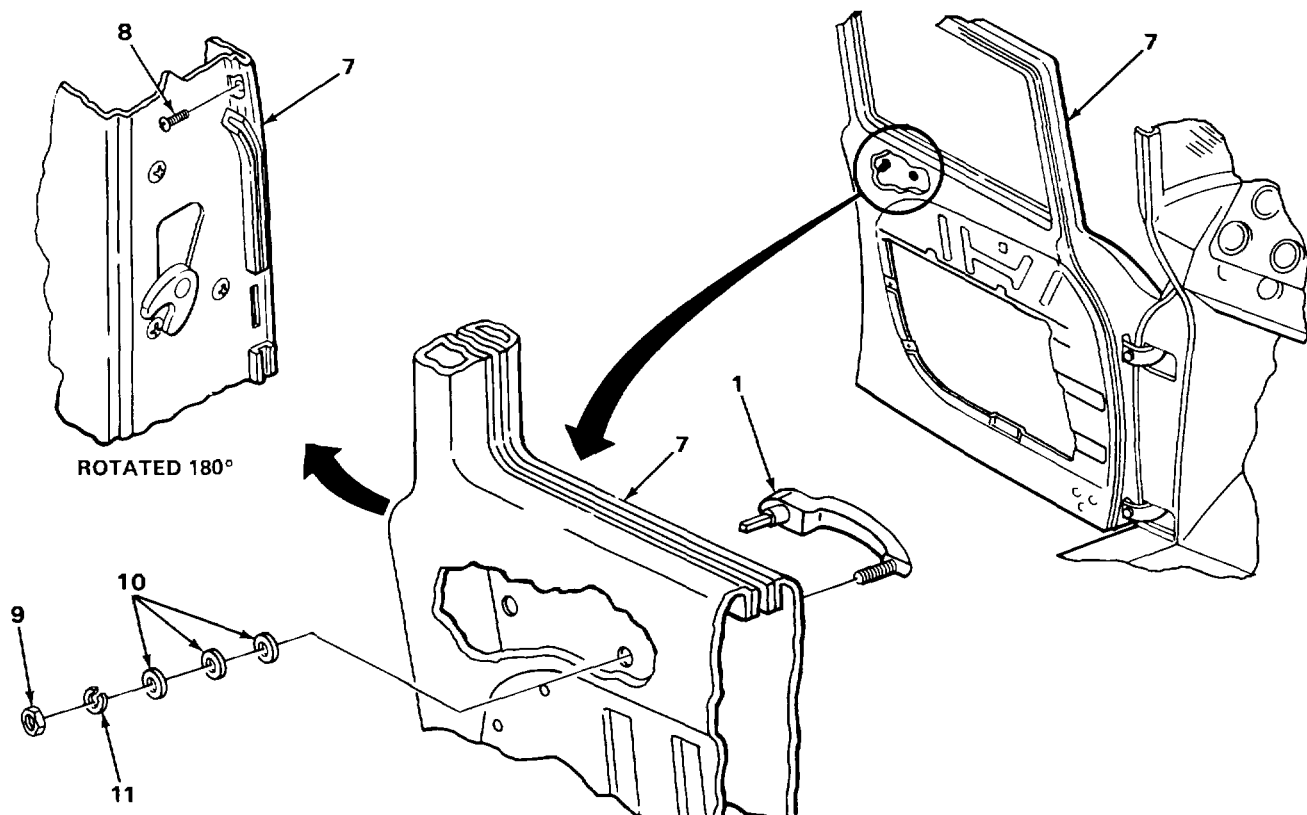
CAB OUTSIDE DOOR HANDLE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
DISASSEMBLY			
4. Door handle (1)	Retainer (2)	a. Push in, and turn one-third turn until retainer (2) clears tabs (3). b. Take out.	
5.	Spring (4), plunger (5), and button (6)	Take out.	
ASSEMBLY			
6. Door handle (1)	Button (6), plunger (5), spring (4)	Put in.	
7. Retainer (2)		a. Put on plunger (5). b. Line up notches in retainer (2) with tabs (3). c. Push into handle (1), turn one-third turn, and release.	



CAB OUTSIDE DOOR HANDLE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
8. Door (7)	Door handle (1)	Put in place.	
9. Door handle (1) to door (7)	New screw and lock-washer assembly (8)	Screw in, and tighten using cross-tip screwdriver.	
10.	Nut (9), three washers (10), and new lockerwasher (11)	Screw on, and tighten using 3/8-inch socket, extension, and handle.	



NOTE

FOLLOW-ON MAINTENANCE: Instal cab door inner panel (page 2-730)

TASK ENDS HERE

CAB DOOR LOCK CYLINDER

This task covers:

- a. Removal
- b. Installation

INITIAL SETUP:

Tools

- Brad
- Grinder, bench
- Pliers, diagonal cutting
- Pliers, long round-nose
- Screwdriver, flat-tip, 3/8-inch

Tools-Continued

Welding rod, steel, 1/16-inch diameter

Personnel Required

One

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

NOTE

The steps in this task are the same for right and left door lock cylinder assembly. The left door lock cylinder is used as the example.

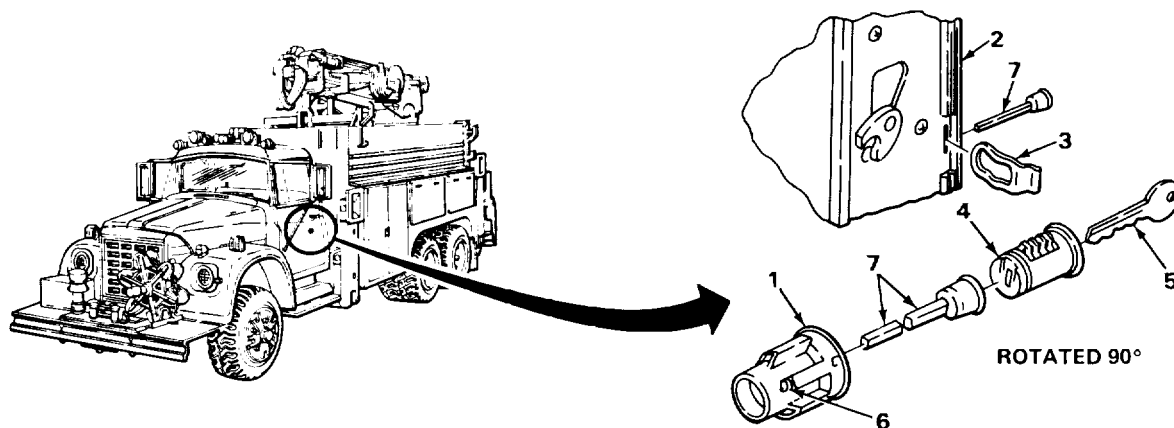
1. Lock cylinder assembly (1) to door (2)	Retaining spring (3)	Using flat-tip screwdriver, pry out part way.
2. Door (2)	Lock cylinder assembly (1)	Take out.
3.	Retaining spring (3)	Using long round-nose pliers, pull out.

DISASSEMBLY

4. Lockcylinder(4)	Key (5)	Put into cylinder (4).
5. Lock cylinder assembly (1)	Lock cylinder (4)	a. Using brad, pry up retainer (6). b. Pulling on key (5), pull out cylinder (4).
6.	Lock shaft (7)	Using brad, lift retainer (6) and take out.
7. Lock cylinder (4)	Key (5)	Take out.

CAB DOOR LOCK CYLINDER - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
ASSEMBLY			
8. Lock cylinder (4)	Key (5)	Put in.	
9. Lock shaft (7)	Put in place against back of cylinder		Tab on cylinder engages latch on shaft.
10. Lock cylinder assembly (1)	Lock shaft (7) and lock cylinder (4)	Push in until retainer (6) snaps into place on cylinder (4).	
11.	Key (5)	Take out.	
INSTALLATION			
12. Door (2)	Retaining spring (3)	Put in half way so large hole in spring (3) lines up with hole in door (2).	
13.	Lock cylinder assembly (1)	<ol style="list-style-type: none"> a. Cut welding rod to 6-inch length (15 cm) with diagonal cutting pliers. b. Using bench grinder, grind point on welding rod. c. Push rod through access hole. d. Put cylinder assembly (1) into door (2). e. Guide into place using welding rod inserted in end of lock shaft (7). f. Put cylinder assembly (1) into place. 	
14. Lock cylinder assembly (1)	Retaining spring (3)	Push in place	



TASK ENDS HERE

VENT WINDOW ASSEMBLY

This task covers:

- | | |
|---|---|
| <p>a. Removal (page 2-740)</p> <p>b. Disassembly (page 2-742)</p> | <p>c. Assembly (page 2-742)</p> <p>d. Installation (page 2-743)</p> |
|---|---|

INITIAL SETUP:

<p>Tools</p> <p>Brad Hammer, ball-peen, machinist's Screwdriver, offset, cross-tip, number two Screwdriver, flat-tip, 3/8-inch,</p> <p>Materials/Parts</p> <p>Detergent, liquid (item 11, appendix C) Weatherseal, window</p>	<p>Equipment Condition</p> <p>Cab door glass and channel removed (page 2-719).</p> <p>Cab door glass seals removed (page 2-758).</p>	<p>Personnel Required</p> <p>One</p>
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LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

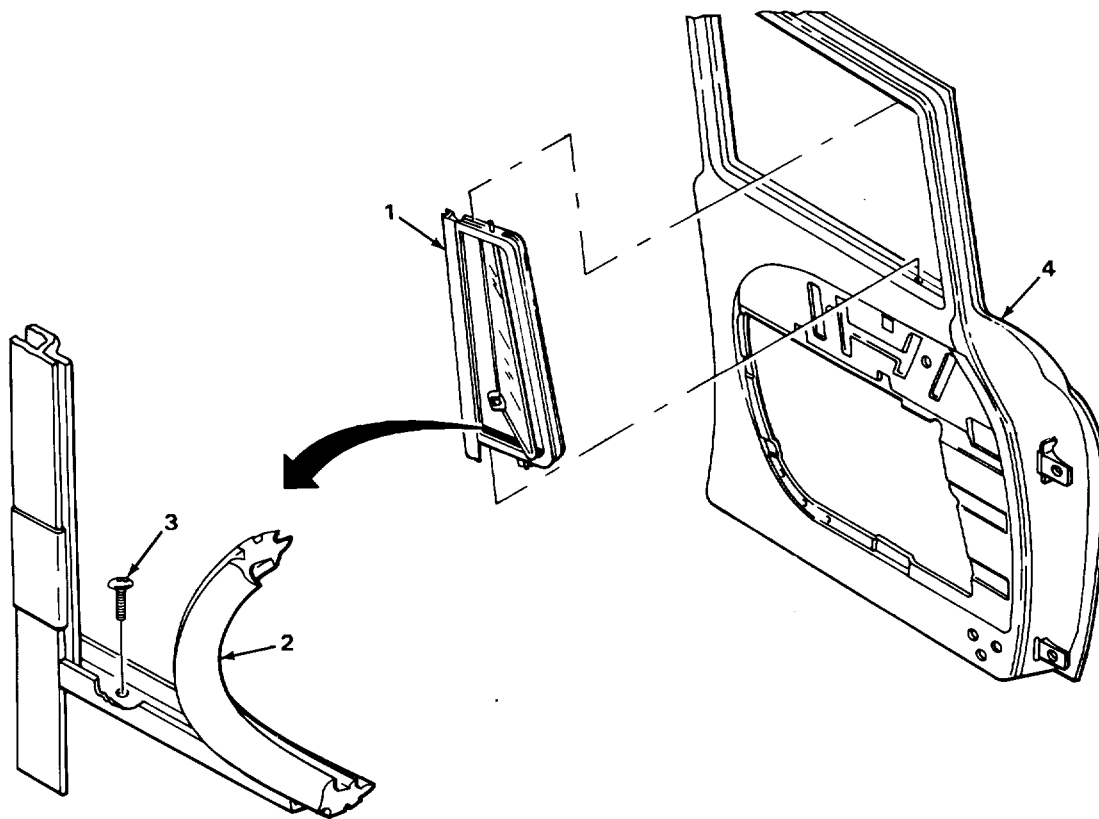
NOTE

The steps in this task are the same for either right or left vent window assembly. The left vent window assembly is used as the example.

2-740

VENT WINDOW ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
1. Vent window assembly (1)	Weatherseal (2)	With vent window open, using flat-tip screwdriver, pry out to uncover four screws (3).	
2. Vent window assembly (1) to door (4)	Four screws (3)	Using offset cross-tip screwdriver, unscrew and take out.	
3. Door (4)	Vent window assembly (1)	a. Tilt bottom of vent window (1) toward back of track until it clears window sill. b. Take out.	

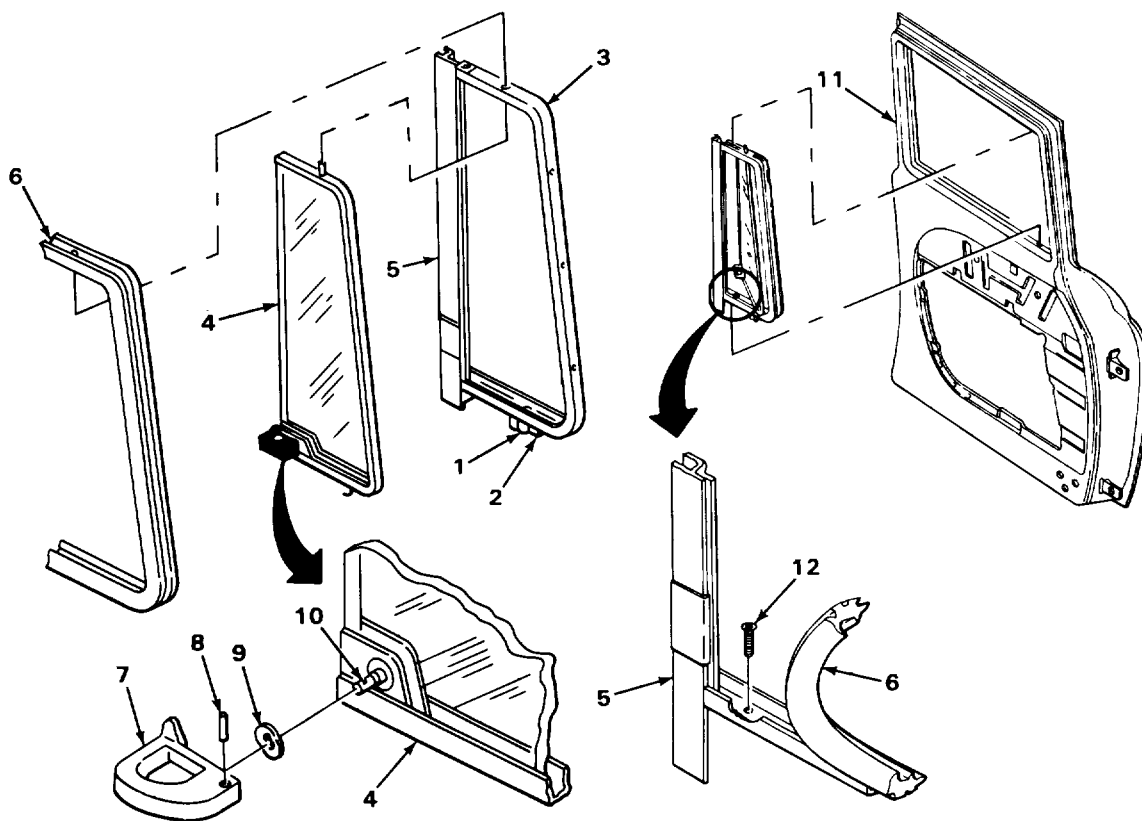


VENT WINDOW ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION REMARKS
DISASSEMBLY		
4. Tension spring (1)	Screw (2)	Using offset cross-tip screwdriver, loosen.
5. Vent window frame (3)	Glass assembly (4)	a. Push up. b. Tilt toward post (5) until pin is clear of frame (3) and weatherseal (6). c. Take out.
6.	Weatherseal (6)	a. Inspect to see if hard, rotted, torn, or weather-checked b. If damaged, pull out and replace.
7. Handle (7) to glass assembly (4)	Pin (8)	Using hammer and brad, drive out.
8. Glass assembly (4)	Handle (7) and spring washer (9)	Take off.
ASSEMBLY		
9. Glass assembly (4)	Handle (7) and spring washer (9)	Put onto pin (10).
10. Handle (7) to glass assembly (4)	Pin (8)	Using hammer, drive in.
11. Vent window frame (3)	Weatherseal (6)	If removed, lubricate with detergent, and using flat-tip screwdriver, push into place.
12. Glass assembly (4)		a. Tip into frame (3). b. Push top pin into top of frame. c. Push up. d. Push into frame until bottom pin goes into hole.
13. Tension spring (1)	Screw (2)	Using offset cross-tip screwdriver, tighten enough so glass (4) is hard to turn but not locked.

VENT WINDOW ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
14. Door (11)	Vent window frame (3)	a. Tilt bottom of vent window frame (3) toward back of truck. b. Put into window opening in door (11). c. Work into place.	
15. Vent window frame (3) to door (11)	Four screws (12) cross-tip screwdriver.	Screw in, and tighten using offset	
16. Vent window frame.	Weatherseal (6)	With window open, work into place using flat-tip screwdriver.	



NOTE

FOLLOW-ON MAINTENANCE:

1. Install cab door glass seals (page 2-758).
2. Install cab door glass and channel (page 2-719).

TASK ENDS HERE

CAB INSIDE DOOR AND WINDOW HANDLES

This task covers:

- a. Removal (page 2-744)
- b. Installation

INITIAL SETUP:

Tools

Personnel Required

Hammer, ball-peen, machinist's One
 Pliers, long round-nose
 Punch, drive-pin, straight,
 5/32-inch
 Screwdriver, flat-tip, 3/8-inch

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

NOTE

The steps in this task are the same for all cab inside door and window handles. The left window handle is used as the example.

1. Handle (1) to shaft (2)	Pin (3)	a. Using flat-tip screwdriver, pry back escutcheon (4). b. Using punch and hammer, push out pin (3).	
2. Shaft (2)	Handle (1)	Take off.	
3. Escutcheon (4)		Take off.	

INSTALLATION

4. Shaft (2)	Escutcheon (4)	Put on.	
5.	Handle (1)	Put on.	

CAB INSIDE DOOR AND WINDOW HANDLES

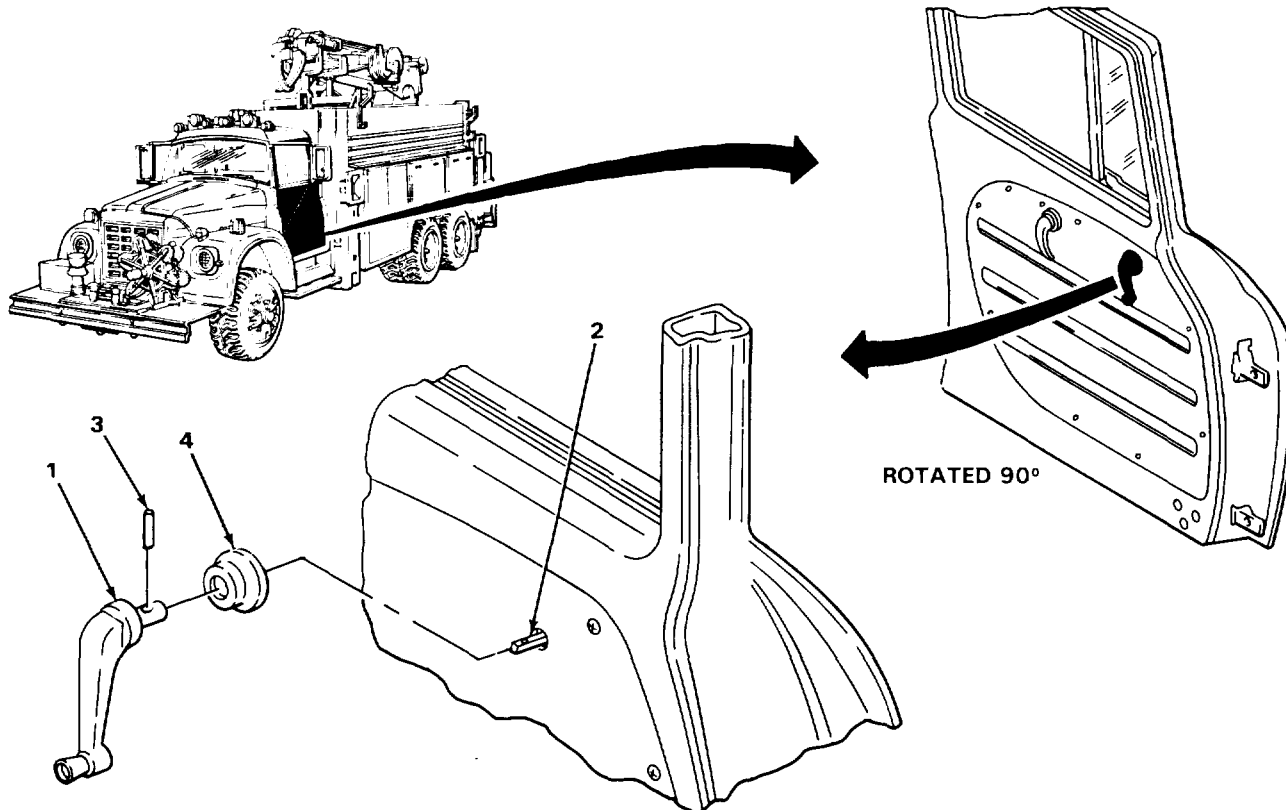
LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION - CONTINUED

6. Handle (1) to shaft (2)

Pin (3)

- a. Using punch, push back escutcheon (4), and push punch through bottom hole in handle (1) and shaft (2).
Escutcheon will hold punch in place.
- b. Using flat-tip screwdriver, pry back top of escutcheon (4) just enough to get to hole in handle (1).
- c. Using long round-nose pliers, push pin (3) into hole in handle (1) and shaft (2).
- d. Push out punch.
- e. Remove flat-tip screwdriver and long round-nose pliers.
- f. If pin does not go in all the way, use hammer and punch to drive it into



TASK ENDS HERE

WINDOW REGULATOR

This task covers:

- a. Removal
 - b. Installation
-

INITIAL SETUP:

Tools

Handle, ratchet, 1/4-inch drive
 Screwdriver, flat-tip, 3/8-inch
 Socket, 1/4-inch drive, 5/16-inch
 Wrench, box-end, 3/8-inch

Materials/Parts

Lockwasher, door bumper to
 channel retainer

Personnel Required

One

Equipment Condition

Cab door inner panel removed (page 2-730).

LOCATION	ITEM	ACTION	REMARKS
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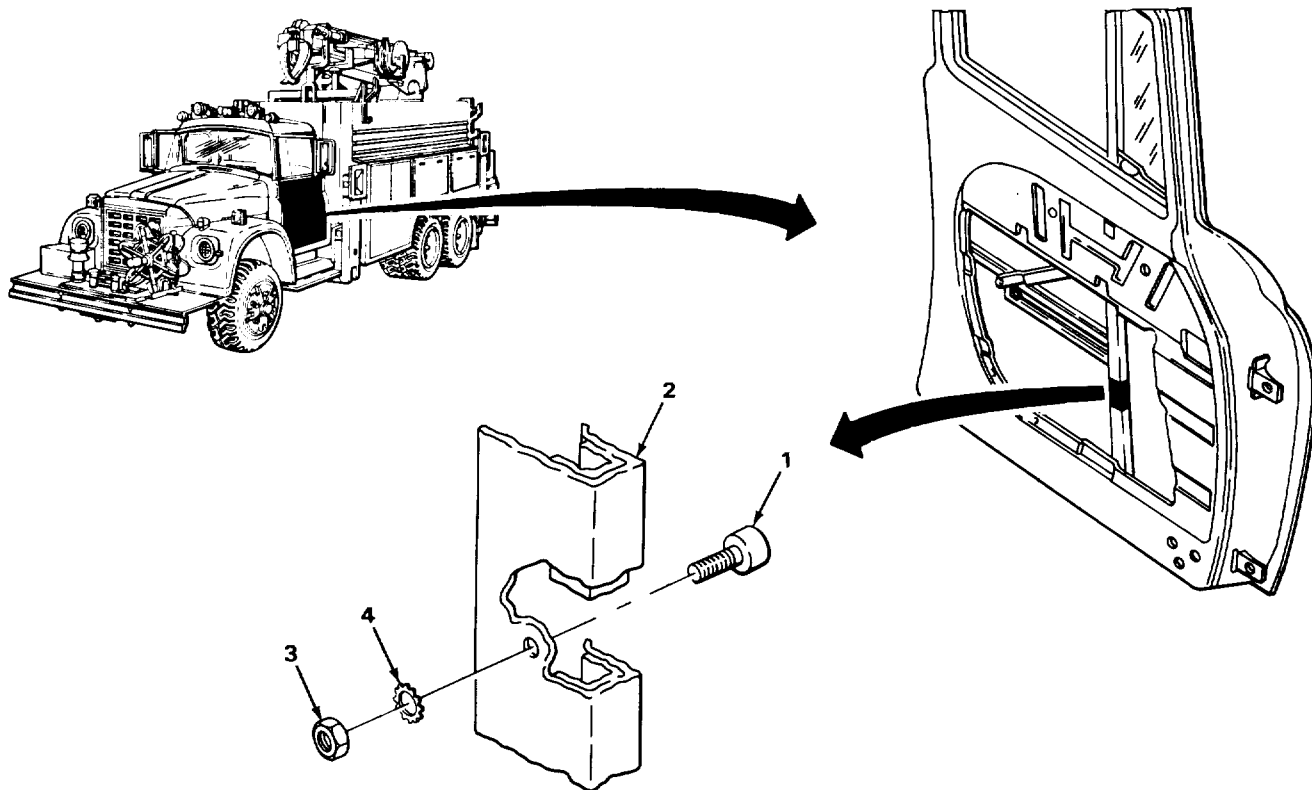
REMOVAL

NOTE

The steps in this task are the same for either right or left window regulator. The left window regulator is used as the example.

WINDOW REGULATOR - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
1. Door glass bumper (1) to channel retainer (2)	Nut (3) and lockwasher (4)	a. Using 3/8-inch wrench, unscrew and take off. b. Get rid of lockwasher (4).	
2. Channel retainer (2)	Door glass bumper (1)	Take out.	

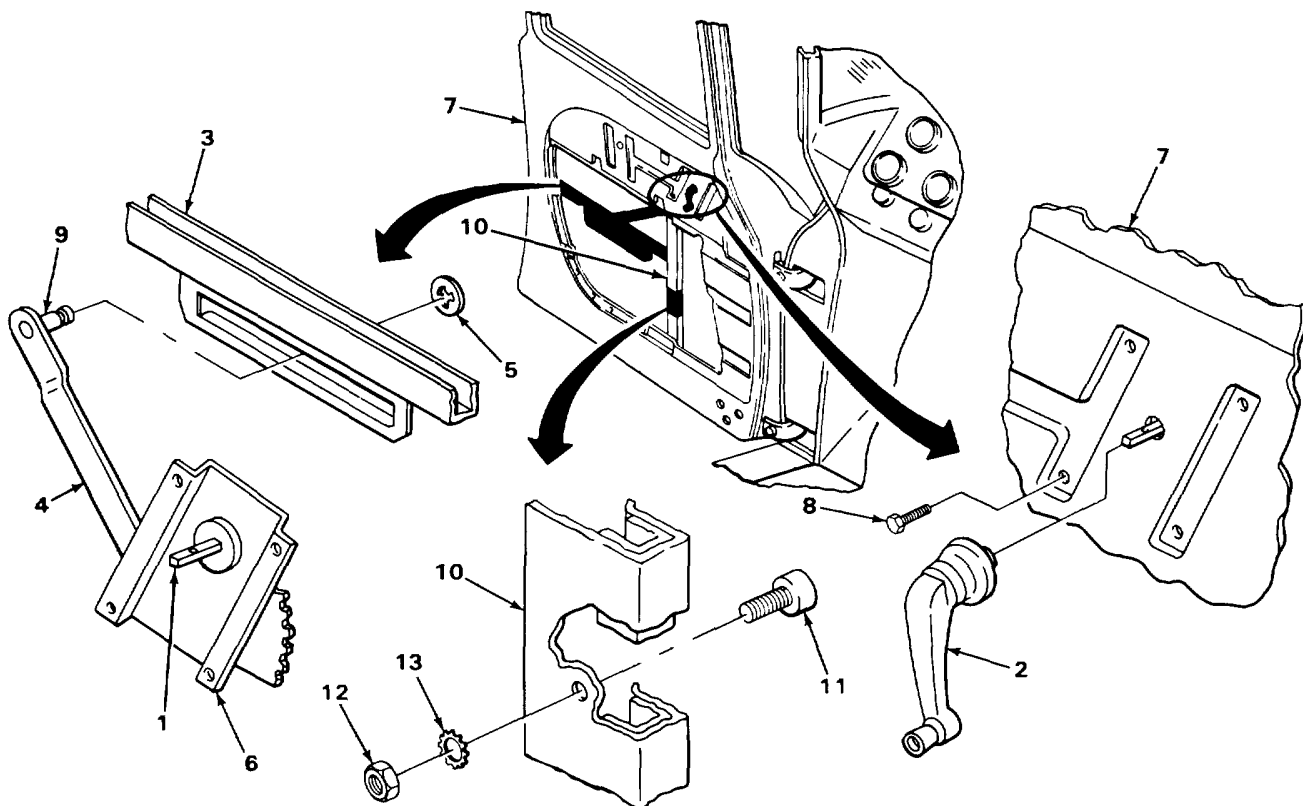


WINDOW REGULATOR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL- CONTINUED		
3. Regulator shaft (1)	Handle (2)	Put onto shaft and roll down all the way.
4. Retainer channel (3) to regulator arm (4)	Clip (5)	Using flat-tip screwdriver, push off.
5. Retainer channel (3)	Regulator arm (4)	Pull out of large hole at one end of retainer channel (3), and slide glass assembly to bottom of door.
6. Regulator shaft (1)	Handle (2)	Take off.
7. Regulator (6) to door (7)	Four screws (8)	Using 5/16-inch socket and handle, unscrew and take out.
8. Door (7)	Regulator (6)	Take out of door (7).
INSTALLATION		
9. Door (7)	Regulator (6)	Put into place inside door (7).
10. Regulator (6) to door (7)	Four screws (8)	Screw in, and tighten using 5/16-inch socket and handle.
11. Regulator shaft (1)	Handle (2)	Put onto regulator shaft, and roll down regulator arm (4) all the way.
12. Regulator arm (4)	Retainer channel (3)	Pull up, and push stud (9) on regulator arm (4) through large hole in retainer

WINDOW REGULATOR - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
13. Regulator arm (4) to retainer channel (3)	Clip (5)	Push onto stud (9) using flat-tip screwdriver.	
14. Regulator shaft (1)	Handle (2)	a. Roll up window all the way. b. Take off handle (2).	
15. Channel retainer (10)	Door glass bumper (11)	Put in place, and hold.	
16. Door glass bumper (11) to channel	Nut (12) and new lockwasher(13)	Screw on, and tighten using 3/8-inch wrench.	



WINDOW REGULATOR - CONTINUED

INSTALLATION - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE: Install cab door inner panel (page 2-730).

TASK ENDS HERE

CAB DOOR STRIKER PLATE

This task covers:

- | | |
|--|--|
| <ul style="list-style-type: none"> a. Removal (page 2-750) b. Installation (2-751) | <ul style="list-style-type: none"> c. Adjustment (page 2-751) |
|--|--|

INITIAL SETUP:

<p>Tools</p> <p>Bit, screwdriver, cross-tip, 3/8-inch drive, number four Handle, hinged, 3/8-inch drive</p>	<p>Personnel Required</p> <p>One</p>
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LOCATION	ITEM	ACTION REMARKS
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REMOVAL

NOTE

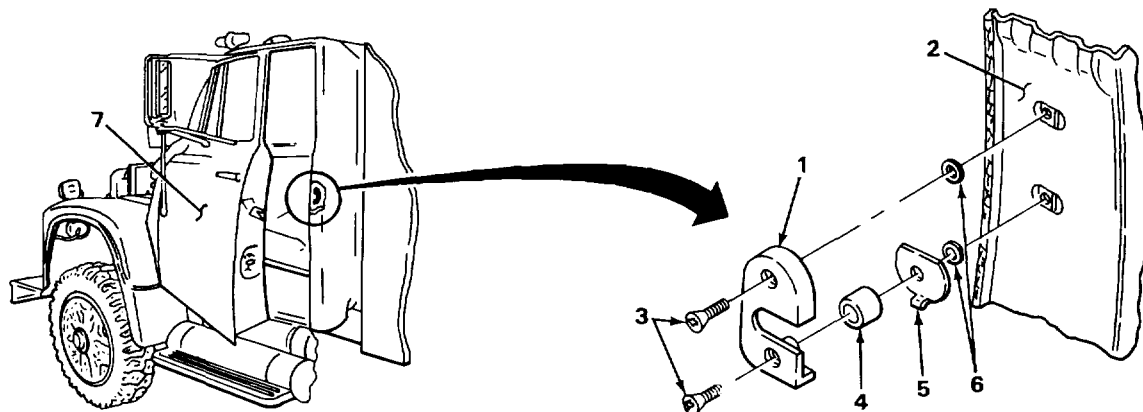
The steps in this task-are the same for both right and left door strikers. The left striker is used as the example.

<ul style="list-style-type: none"> 1. Striker (1) to door frame (2) 	<ul style="list-style-type: none"> Two screws (3), one spacer (4), one locking ring (5), and two plastic washers (6) 	<ul style="list-style-type: none"> Using bit and handle, unscrew and take off.
--	---	---

2-750

CAB DOOR STRIKER PLATE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
2. Striker (1)	Two screws (3)	Put into striker (1).	
3. Top screw (3)	One plastic washer (6)	Put onto screw (3).	
4. Bottom screw (3)	Spacer (4), locking ring (5), and plastic washer (6)	Put onto screw (3).	
5. Door frame (2)	Striker (1)	Screw on using bit and handle. Do not tighten.	
6.	Door (7)	Adjust hinges and striker (page 2-706).	



TASK ENDS HERE

CAB DOOR MALE DOVETAIL

This task covers:

Replacement (page 2-752)

INITIAL SETUP:

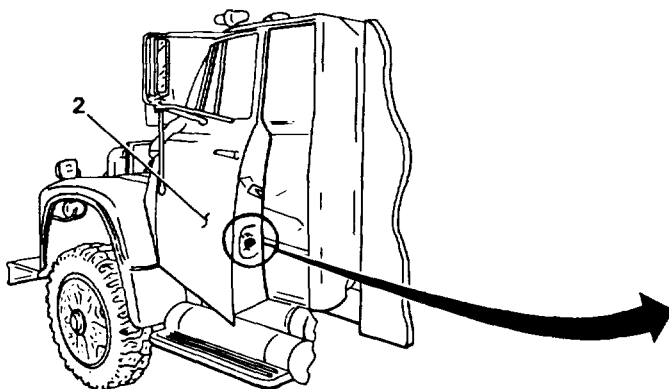
Tools

Personnel Required

Bit, screwdriver, cross-tip,
3/8-inch drive, number two
Handle, hinged, 3/8-inch drive

One

LOCATION	ITEM	ACTION	REMARKS
REPLACEMENT			
1. Dovetail (1) to door (2)	Two screws (3) and dovetail (1)	Using bit and handle, unscrew and take off.	
2. Door (2)	New dovetail (1)	Put in place, and hold.	
3. Dovetail (1) to door (9)tab	Two screws (3)	Screw in, and tighten using bit and handle	



TASK ENDS HERE

CAB DOOR FEMALE DOVETAIL

This task covers:

Replacement (page 2-753)

INITIAL SETUP:

Tools

Bit, screwdriver, cross-tip
 3/8-inch drive, number two
 Handle, hinged, 3/8-inch drive

Materials/Parts

Lockwasher, dovetail to door frame
 (four required)

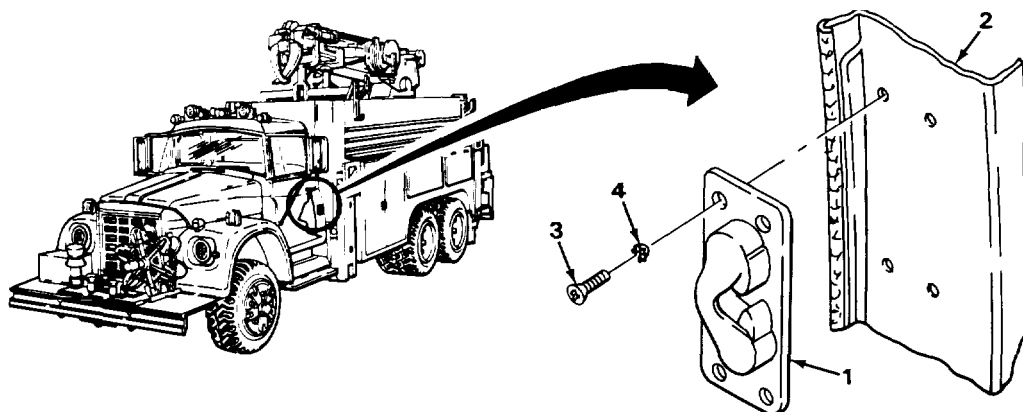
Personnel Required

One

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

REPLACEMENT

- | | | |
|--------------------------------------|--|--|
| 1. Dovetail (1) to door frame (2) | Four screws (3), lockwashers (4), and dovetail (1) | a. Using bit and handle, unscrew and take off.
b. Get rid of lockwashers (4). |
| 2. Door frame (2) | New dovetail (1) | Put in place, and hold. |
| 3. Dovetail (1) to door frame (2/tab | Four screws (3) and new lockwashers (4) | Screw in, and alternately tighten using bit and handle |



TASK ENDS HERE

CAB DOOR LOCK AND REMOTE CONTROL

This task covers:

- a. Removal (page 2-754)
- b. Installation (page 2-756)

INITIAL SETUP:

Tools

Bit, screwdriver, cross-tip One
 3/8-inch drive, number four
 Handle, hinged, 3/8-inch drive
 Handle, ratchet, 1/4-inch drive
 Socket, 11/16-inch drive, 5/16-inch

Personnel Required

Equipment Condition

Cab door glass and channel removed (page 2-719).

Materials/Parts

Lockwasher, door lock assembly to door (three required)
 Lockwasher, remote control to door (two required)

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

REMOVAL

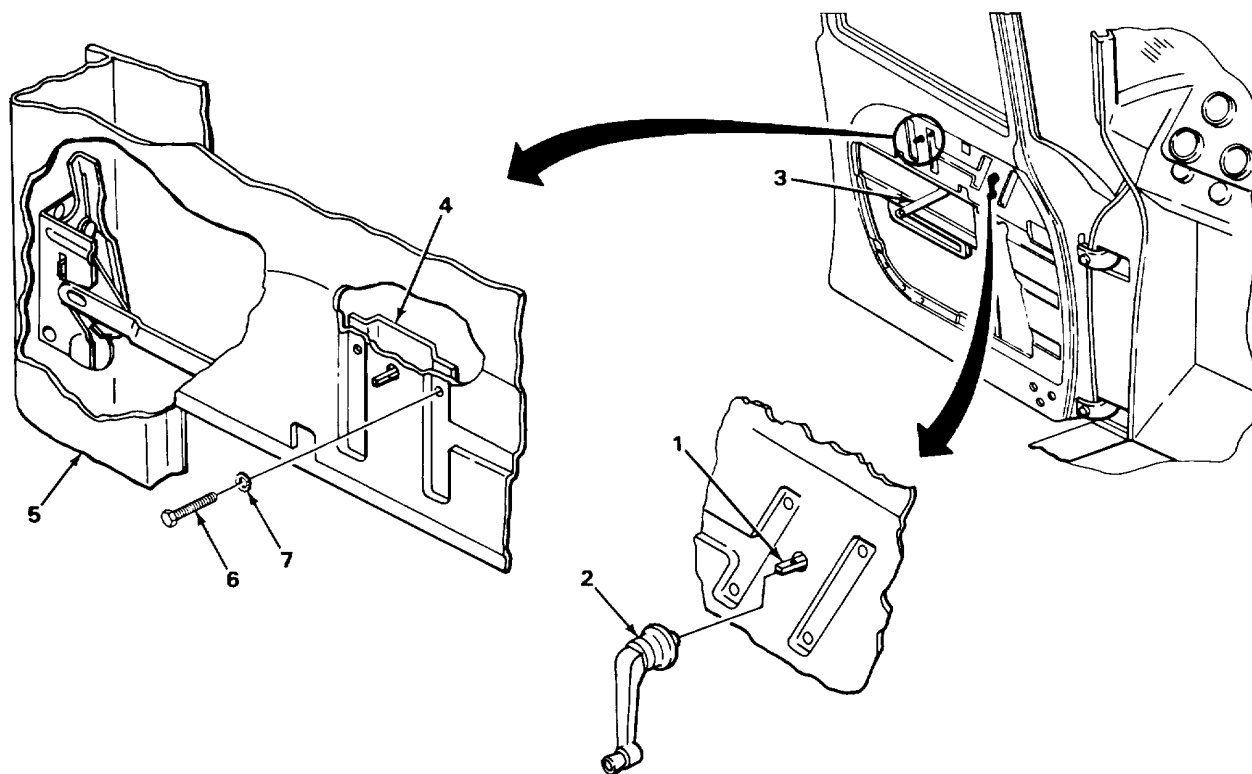
NOTE

The steps in this task are the same for either right or left door lock assembly. The left door lock assembly is used as the example.

2-754

CAB DOOR LOCK AND REMOTE CONTROL - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
1. Window regulator shaft (1)	Window handle (2)	a. Put onto window regulator shaft (1). b. Using handle, roll down regulator arm (3) all the way.	
2. Remote control assembly (4) to door (5)	Two screws (6) and lockwashers (7)	a. Using 5/16-inch socket and ratchet handle, unscrew and take out. b. Get rid of lockwashers (7).	



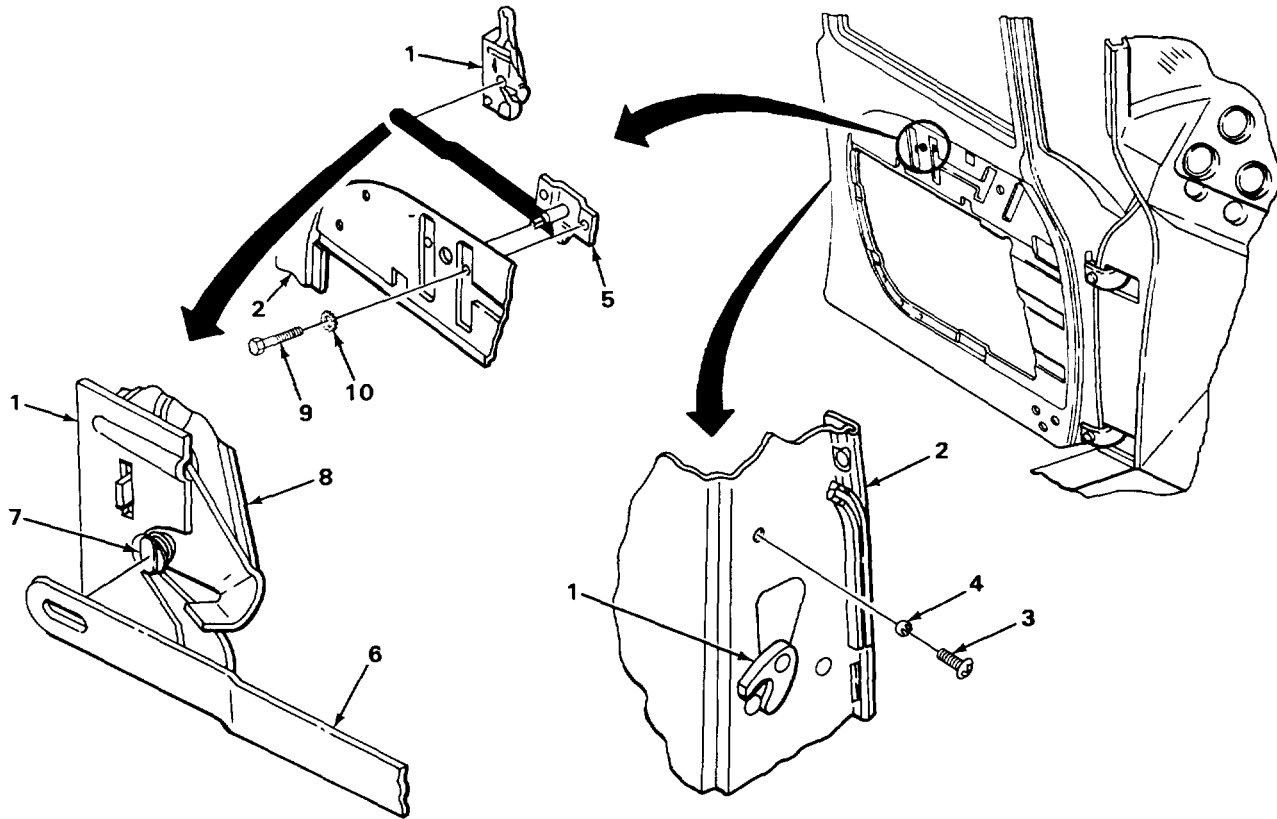
2-755

CAB DOOR LOCK AND REMOTE CONTROL - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED		
3. Lock assembly (1) to door (2)	Three screws (3) and lockwashers (4)	a. Using bit and hinged handle, unscrew and take out. b. Get rid of lockwashers (4).
4. Door (2)	Lock assembly (1)	Take out of door. and remote control (5)
5. Lock assembly (1)	Remote control (5)	Turn 90 degrees, and take off lock assembly (1).
INSTALLATION		
6. Lock assembly (1)	Remote control (5)	a. Put arm (6) onto lock assembly (1). b. Push onto stud (7), compressing spring (8), and turn 90 degrees.
7. Door (2)	Lock assembly (1) and remote control (5)	Put in place.
8. Lock assembly (1) to door (2)	Three screws (3) and new lockwashers (4)	Screw in.
9. Remote control (5) to door (2)	Two screws (9) and new lockwashers (10)	Screw in.
10. Lock assembly (1) to door (2)	Three screws (3)	Tighten using bit and hinged handle.
11. Remote control (5) to door (2)	Two screws (9) ratchet handle.	Tighten using 5/16-inch socket and

CAB DOOR LOCK AND REMOTE CONTROL - CONTINUED

INSTALLATION - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE: Install cab door glass and channel (page 2-719).

TASK ENDS HERE

CAB DOOR GLASS SEALS

This task covers:

Replacement (page 2-758)

INITIAL SETUP:

Tools

Screwdriver, flat-tip, 3/16-inch, One

Personnel Required

Materials/Parts

Glass seals (two required)

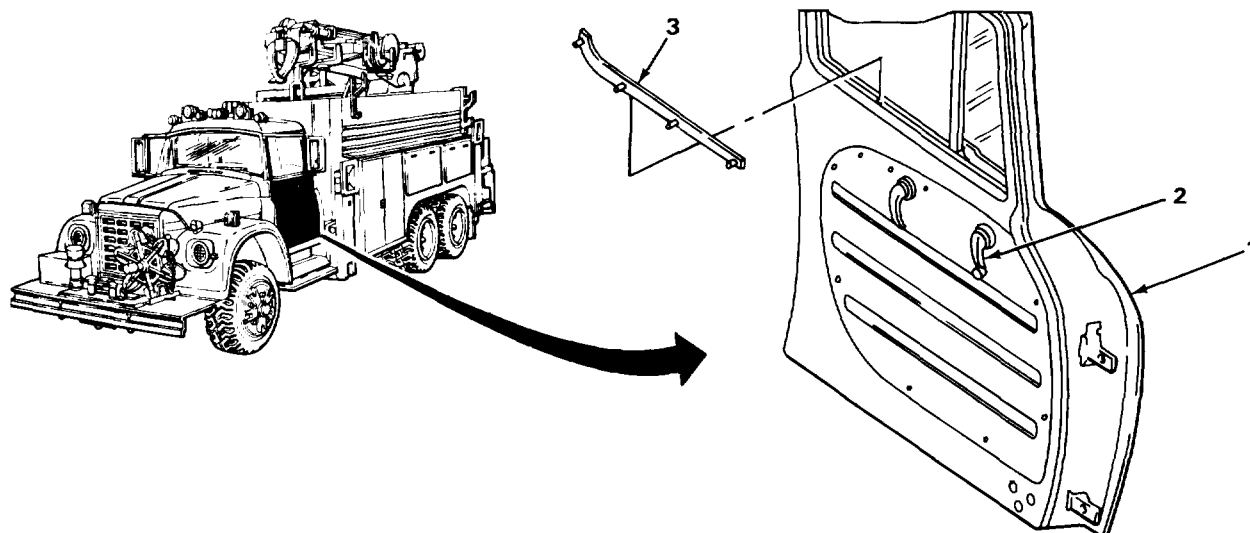
LOCATION	ITEM	ACTION	REMARKS
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REPLACEMENT

- | | | | |
|----|--------------------------|---|--|
| 1. | Door (1) Window (hidden) | Using window handle (2), roll down all the way. | |
| 2. | Two glass seals (3) | Using flat-tip screwdriver, pry loose and take out. | |
| 3. | Two new seals (3) | Snap into place using flat-tip screwdriver. | |

CAB DOOR GLAS SEALS - CONTINUED

REPLACEMENT - CONTINUED



TASK ENDS HERE

UPPER AND LOWER HINGE PILLAR DUST SEAL

This task covers:

- a. Removal (page 2-760)
 - b. Installation (page 2-760)
-

INITIAL SETUP:

Tools

- Awl
- Hammer, hand, rubber
- Knife, pocket
- Knife, putty
- Screwdriver, flat-tip, 3/16-inch

Materials/Parts

- Adhesive, liquid rubber (item 2, appendix C)
- Brush, paint, 1/2-inch wide (item 5, appendix C)
- Rags, wiping (item 24, appendix C)
- Seal, dust (upper and lower)
- Solvent, drycleaning (item 28, appendix C)

Personnel Required

One

UPPER AND LOWER HINGE PILLAR DUST SEAL - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

REMOVAL

NOTE

The steps in this task are the same for both right and left door opening dust seals.

- | | | |
|--|----------------|--------------------------------------|
| 1. Upper dust seal (1) to hinge pillar (2) | Four clips (3) | Using flat-tip screwdriver, pry out. |
|--|----------------|--------------------------------------|

WARNING

Drycleaning solvent burns easily. Do not smoke or have open flame nearby when using solvent. Dispose of solvent-soaked rags. If brush is used, clean properly.

- | | | |
|---------------------|---|--|
| 2. | Upper dust seal (1) and lower dust seal (4) to hinge pillar (2) | <ul style="list-style-type: none"> a. Using brush, apply drycleaning solvent sparingly to joint between seals (1) and (4) and pillar (2) to soften adhesive. b. Wipe off any excess solvent with rag to prevent possible damage to paint. Using putty knife, peel off. |
| 3. Hinge pillar (2) | Upper dust seal (1) and lower dust seal (4) | |
| 4. Hinge pillar (2) | | Using rag and drycleaning solvent, clean off any remaining adhesive. |

INSTALLATION

- | | |
|------------------------|---|
| 5. Upper dust seal (1) | <ul style="list-style-type: none"> a. Using pocket knife, cut to same length as old upper dust seal (1). b. Hold in place on hinge pillar (2) and using awl, punch holes in upper dust seal (1) in line with holes in hinge pillar (2). |
|------------------------|---|

UPPER AND LOWER HINGE PILLAR DUST SEAL - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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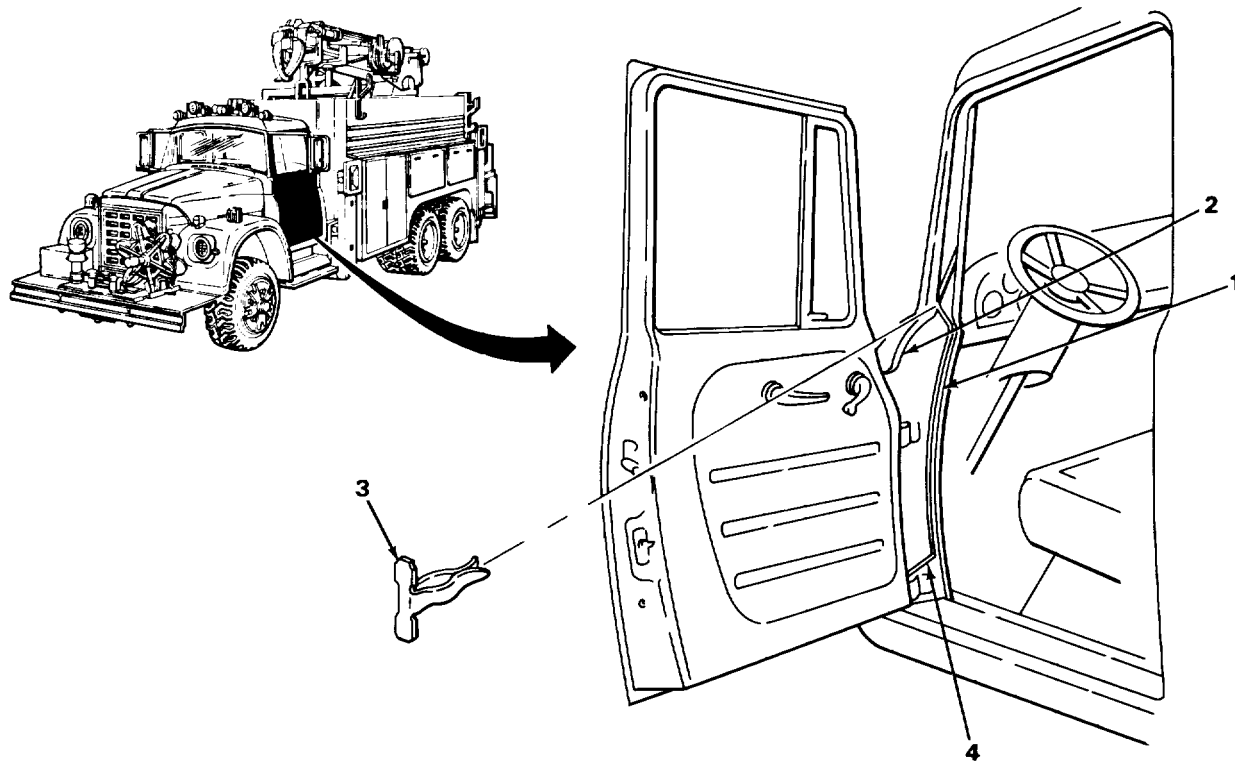
INSTALLATION - CONTINUED

6. Lower dust seal (4) Using pocket knife, cut to length.

WARNING

Rubber cement adhesive and its fumes burn easily. Do not smoke or have open flame nearby while using rubber cement.

7. Hinge pillar (2) Upper dust seal (1), lower dust seal (4), and
- a. Apply liquid rubber adhesive.
 b. Push into place.
Use hammer if necessary to seal clips (3).



TASK ENDS HERE

TA229055

CAB DOOR OPENING SEAL

This task covers:

Replacement (page 2-762)

INITIAL SETUP

Materials/Parts

Seal, cab door

Personnel Required

One

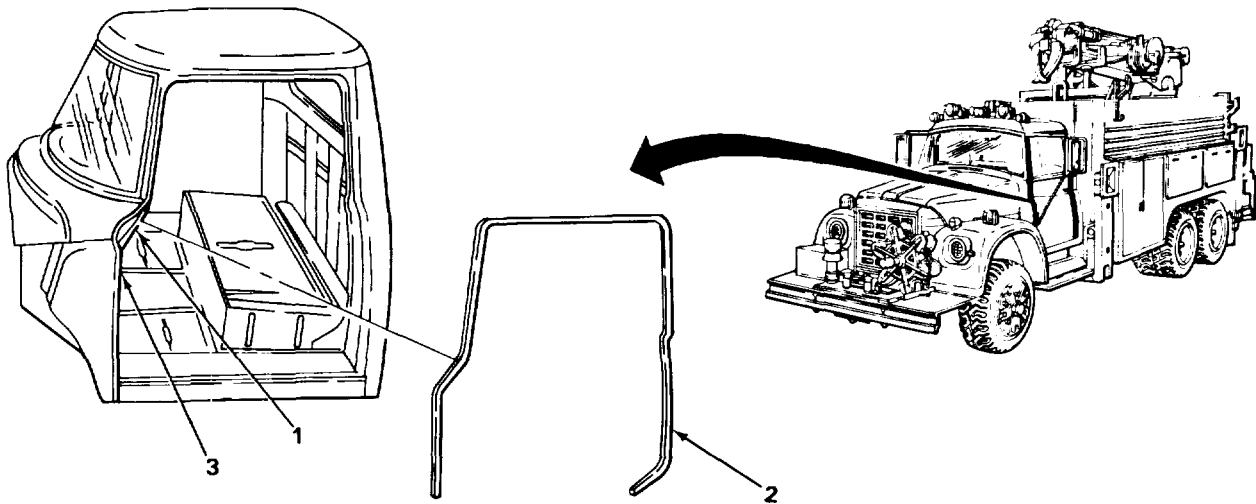
LOCATION	ITEM	ACTION	REMARKS
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REPLACEMENT

NOTE

The steps in this task are the same for both right and left door opening seals. The left seal is used as the example.

- | | | | |
|----|-------------------------|-----------------------|---|
| 1. | Door opening flange (1) | Door opening seal (2) | Starting at bottom of hinge pillar (3), peel off. |
| 2. | New door | | Snap onto flange (1). |



TASK ENDS HERE

TA229056

FENDERS, RADIATOR, AND GRILLE ASSEMBLY

This task covers:

- a. Removal (page 2-764)
 - b. Installation (page 2-768)
-

INITIAL SETUP

Tools

Extension, 3/8-inch drive, 6-inch
 Handle, ratchet, 3/8-inch drive
 Hoist, 2-ton lifting capacity
 Pan, drain, 3-qt
 Screwdriver, cross-tip, number two
 Screwdriver, flat-tip, 3/16-inch,
 three-inch
 Socket, 3/8-inch drive, 7/16-inch
 Socket, 3/8-inch drive, 11/2-inch
 Socket, 3/8-inch drive, 3/4-inch
 Wrench, box-end, 11/2-inch
 Wrench, box-end, 3/4-inch
 Wrench, open-end, 11/16-inch
 Wrench, open-end, 1 1/4-inch

Equipment Condition

Materials/Parts

Lockwasher, splash panel to bracket
 (three required)
 Nut, self-locking, radiator support
 to front frame crossmember
 Nut, self-locking, relay box bracket
 to firewall
 Oil, lubricating (item 22, appendix C)
 Rags, wiping (item 24, appendix C)

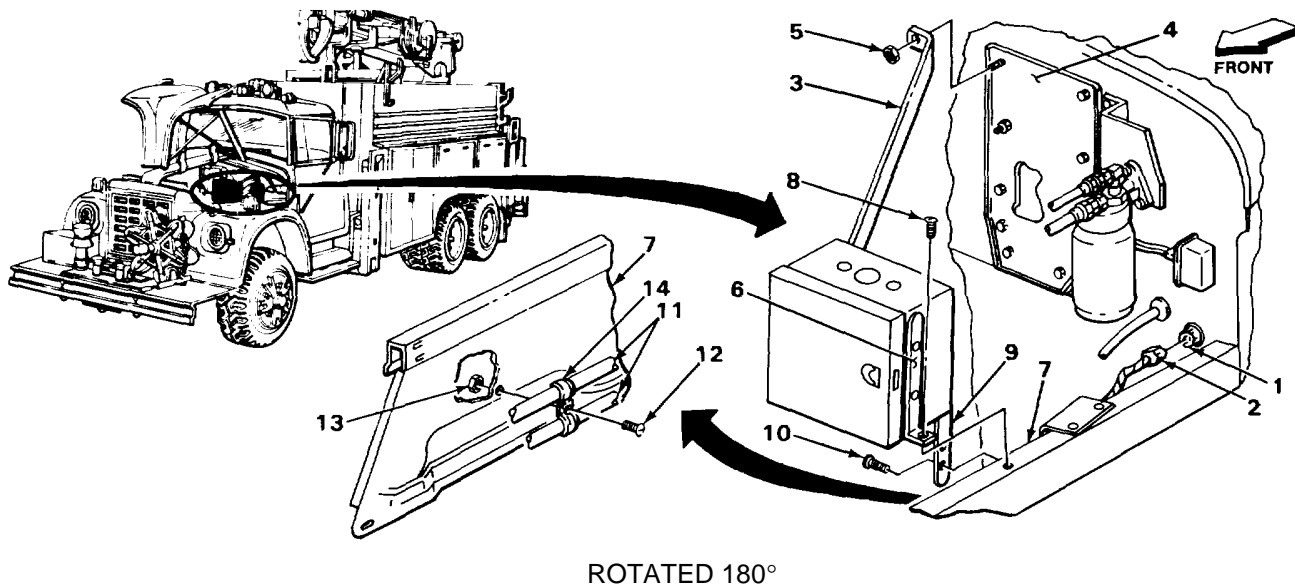
Personnel Required

Three

Rope winder removed (TM 9-2320-269-10).
 Battery cables disconnected (page 2-414).
 Cooling system drained (page 2-265).
 Hood assembly removed (page 2-774).
 Windshield washer reservoir and pump
 removed (page 2-1220).
 Surge tank and bracket removed
 (page 2-223).
 Winch, winch support, and rear bumper
 assembly removed (page 2-680).

FENDERS, RADIATOR, AND GRILLE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1. Junction block (1)	Wiring harness (2)	Unplug.	
2. Relay box right bracket (3) to firewall (4)	Self-locking nut (5) b. Get rid of nut (5).	a. Using 7/16-inch socket and handle, unscrew and take off.	
3. Relay box left bracket (6) to splash panel (7)	Self-tapping screw (8)	Using 7/16-inch socket and handle, unscrew and take off.	
4. Relay box bottom bracket (9) to splash panel (7)	Two self-tapping screws (10)	Using 7/16-inch socket and handle, unscrew and take out.	
5. Power steering hoses (11) to splash panel (7)	Screw (12), nut (13), and clip (14)	With help of assistant, using flat-tip screwdriver, 7/16-inch socket, and handle, unscrew and take out.	

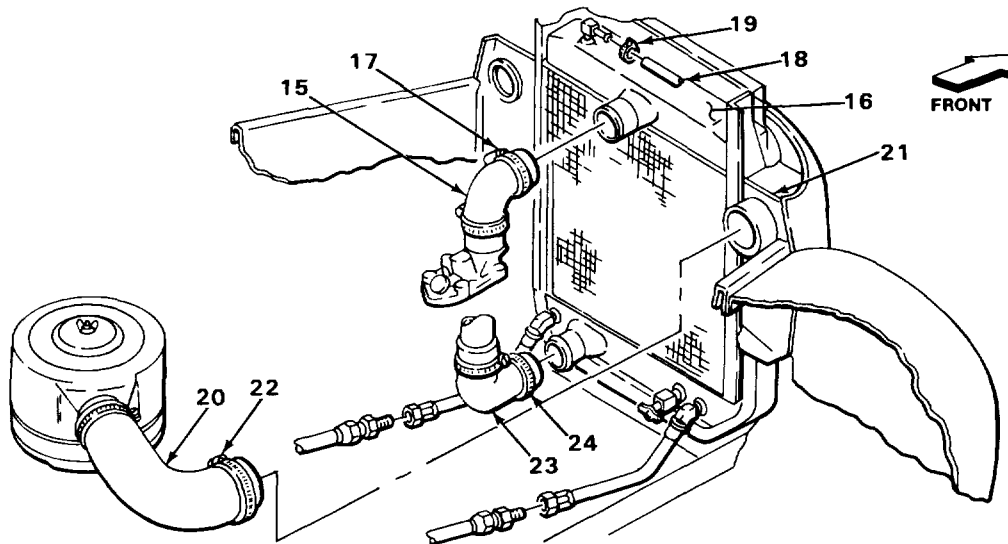


ROTATED 180°

TA229057

FENDERS, RADIATOR, AND GRILLE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
6.	Upper hose (15) to radiator (16)	Clamp (17)	Using flat-tip screwdriver, unscrew and pull back.
7.	Radiator (16)	Upper hose (15)	Pull off.
8.	Vent hose (18) to radiator (16)	Clamp (19)	Using flat-tip screwdriver, unscrew and pull back.
9.	Radiator (16)	Vent hose (18)	Pull off.
10.	Air intake hose (20) to radiator support (21)	Clamp (22)	Using flat-tip screwdriver, unscrew and pull back.
11.	Radiator support (21)	Air intake hose (20)	Pull off.
12.	Lower radiator hose (23) to radiator (16)	Clamp (24)	Using flat-tip screwdriver, unscrew and pull back.
13.	Radiator (16) R (16)	Lower radiator	Pull off.



TA229058

FENDERS, RADIATOR, AND GRILLE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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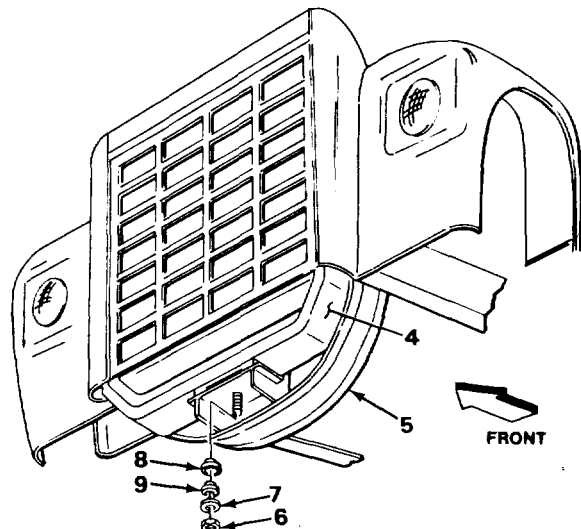
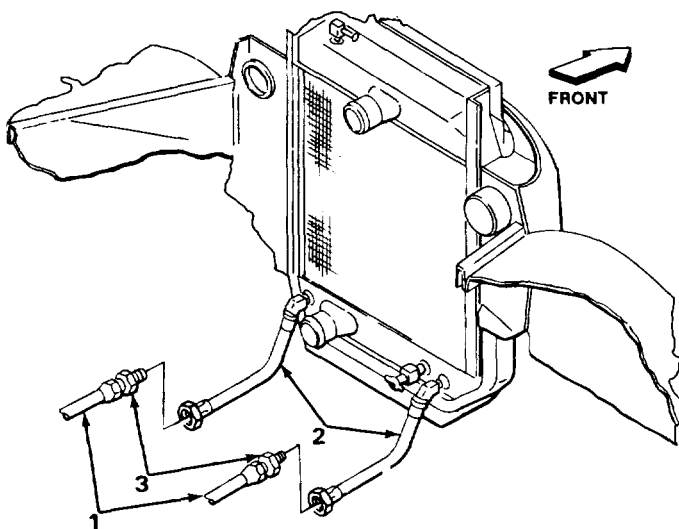
REMOVAL - CONTINUED

NOTE

Tag transmission coupling hoses and fittings for correct installation.

Transmission hoses and pipes will have fluid in them.

- | | | |
|---|---|---|
| 14. Two transmission cooling pipes (1) | Two transmission hoses (2) | <ul style="list-style-type: none"> a. Position drain pan under connection. b. Using 1 1/16-inch open-end wrench, hold connectors (3). c. Using 1 1/4-inch open-end wrench, unscrew and take off. d. Cover ends of hose and pipe to keep out dirt. e. Get rid of drained fluid. |
| 15. Radiator support (4) to front crossmember (5) | Self-locking nut (6), washer (7), retainer (8), and rebound | <ul style="list-style-type: none"> a. Using 3/4-inch box-end wrench, 3/4-inch socket, and handle, unscrew and take out. b. Get rid of self-locking nut (6), insulator (9~ |



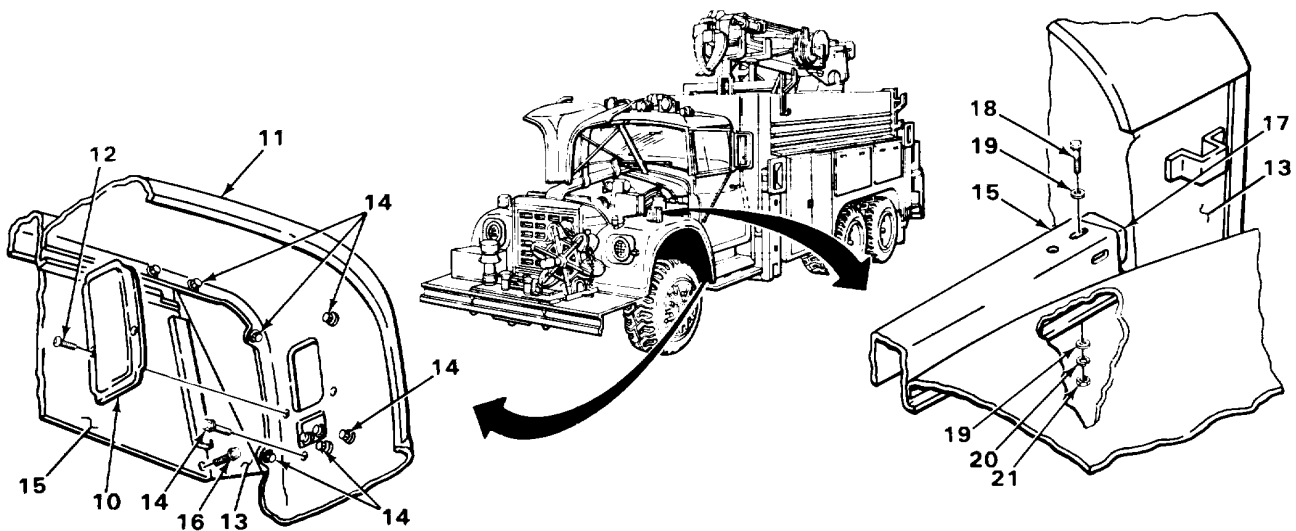
TA229059

FENDERS, RADIATOR, AND GRILLE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
16.	Left access panel (10) to left fender (11)	Two screws (12) and left access panel (10)	Using cross-tip screwdriver, unscrew and take out.
17.	Left fender (11) to cab (13)	Seven screws (14)	Using 1/2-inch socket, handle, and extension, unscrew and take out.
18.	Splash panel (15) to cab (13)	Screw (16)	Using 1/2-inch socket, handle, and extension, unscrew and take out.
19.	Splash panel (15) to bracket (17) three lockwashers (20), and nuts (21)	Three screws (18), six washers (19),	a. Using 1/2-inch wrench, 1/2-inch socket, handle, and extension, unscrew and take out. b. Get rid of lockwashers (20).

NOTE

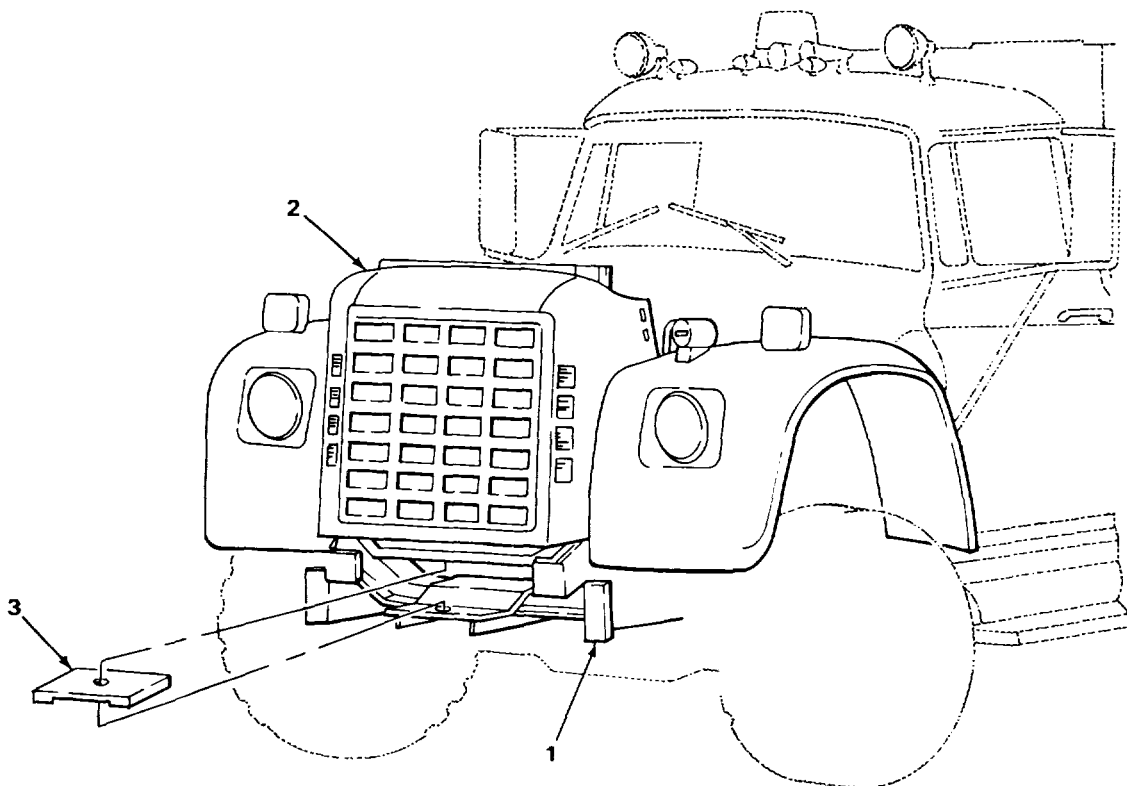
Repeat steps 12 thru 15 for right fender.



TA229060

FENDERS, RADIATOR, AND GRILLE ASSEMBLY - CONTINUED

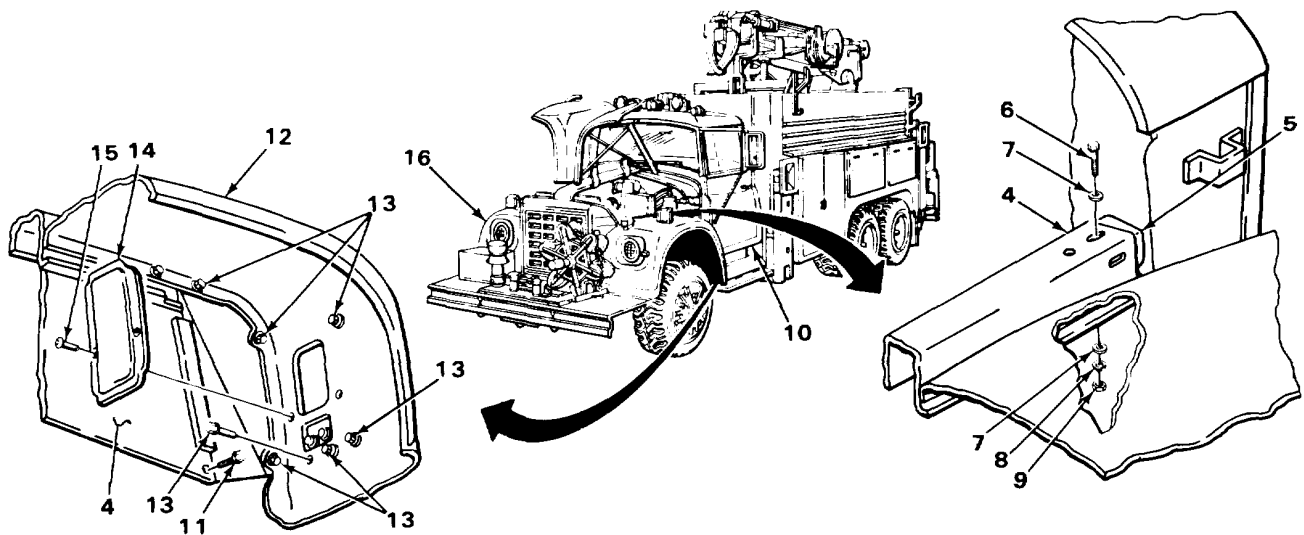
LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
20. Frame (1)	Front fenders, radiator, and grille assembly (2)	With help of two assistants, and using hoist, lift up and take off.	
21.	Insulator (3)	Take off.	
INSTALLATION			
22. Frame (1)	Insulator (3)	Put in place.	
23.	Front fenders, radiator, and grille assembly (2)	With help of two assistants, and using hoist, put in place.	



TA229061

FENDERS, RADIATOR, AND GRILLE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
24. Left splash panel (4) to bracket (5)	Three screws (6), six washers (7), three new lock-washers (8), and nuts (9)	Screw in, and tighten using 1/2-inch wrench, 1/2-inch socket, extension, and handle.	
25. Left splash panel (4) to cab (10)	Screw (11)	Screw in, and tighten using 1/2-inch socket, extension, and handle.	
26. Left fender (12) to cab (10)	Seven screws (13)	Screw in, and tighten using 1/2-inch socket, extension, and handle.	
27. Left fender (12) panel (14)	Left access	Put in place, and hold.	
28. Left access panel (14) to left fender (12)	Two screws (15)	Screw in, and tighten using cross-tip screwdriver.	
29. Right fender (16)		Repeat steps 24 thru 28.	



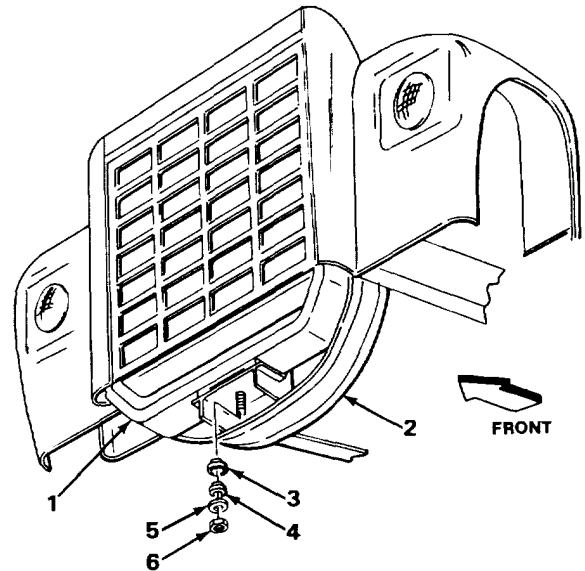
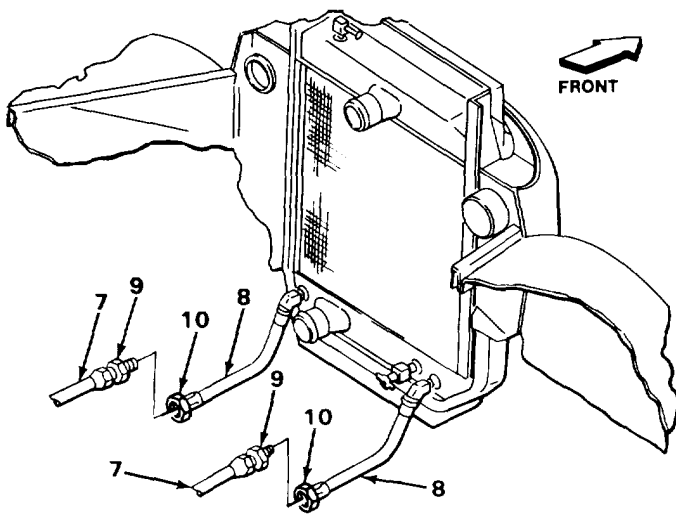
TA229062

FENDERS, RADIATOR, AND GRILLE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION - CONTINUED

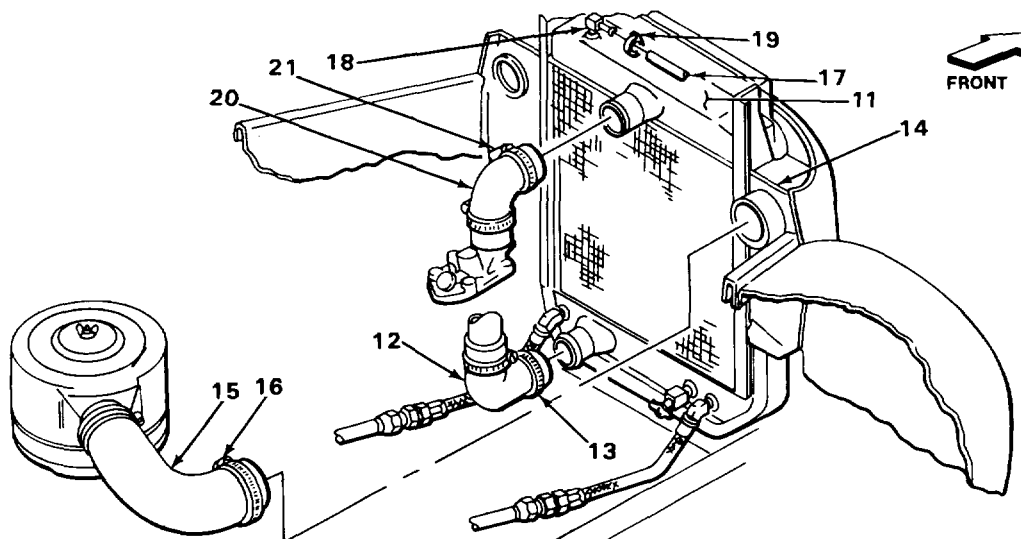
- | | | |
|---|--|---|
| <p>30. Radiator support (1) to front cross-member (2)</p> | <p>Retainer (3), rebound insulator (4), washer (5), and new self-locking nut (6)</p> | <p>Screw in, and tighten using 3/4-inch box-end wrench, 3/4-inch socket, and handle.</p> |
| <p>31. Two transmission cooling pipes (7)</p> | <p>Two transmission hoses (8)</p> | <p>Screw on, and tighten using 1 1/16-inch open-end wrench to hold connectors (9) and 1 1/4-inch open-end wrench on hose end fittings (10).</p> |



TA229063

FENDERS, RADIATOR, AND GRILLE ASSEMBLY -CONTINUED

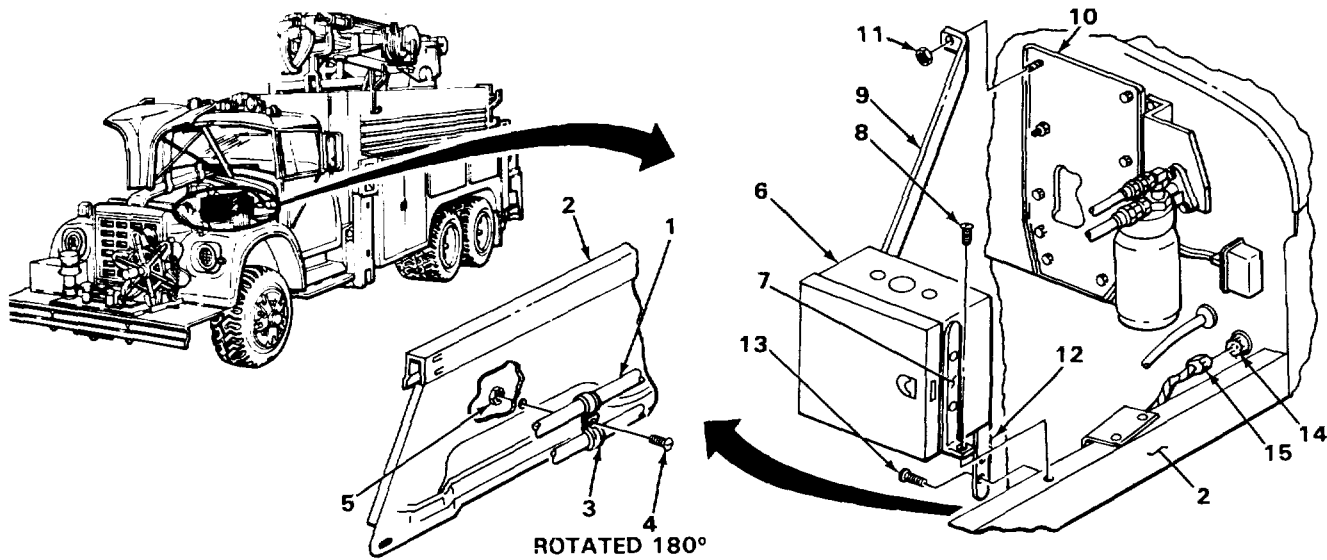
LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
32.	Radiator (11) hose (12)	Lower radiator	Push onto nipple.
33.	Lower radiator hose (12) to radiator (11)	Clamp (13)	Slide over nipple, and tighten using flat-tip screwdriver.
34.	Radiator support (14)	Air intake hose (15)	Push onto nipple.
35.	Air intake hose (15) to radiator support (14)	Clamp (16)	Slide over nipple, and tighten using flat-tip screwdriver.
36.	Radiator (11)	Vent hose (17)	Push onto elbow (18).
37.	Vent hose (17) to radiator (11)	Clamp (19)	Slide over elbow (18), and tighten using flat-tip screwdriver.
38.	Radiator (11)	Upper hose (20)	Push onto nipple.
39.	Upper hose (20) to radiator (11)	Clamp (21)	Slide over nipple, and tighten using flat-tip screwdriver.



TA229064

FENDERS, RADIATOR, AND GRILLE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
40.	Power steering hoses (1) to splash panel (2)	Clip (3), screw (4), and nut (5)	With help of assistant, screw on and tighten using flat-tip screwdriver, 7/16-inch socket, and handle.
41.	Splash panel (2)	Relay box (6)	Put in place.
42.	Relay box left bracket (77) to splash panel (2)	Self-tapping screw (8)	Screw in, and tighten using 7/16-inch socket and handle.
43.	Relay box rear bracket (9) to firewall I (10)	New self-locking nut (11)	Screw on, and tighten using 7/16-inch socket and handle.
44.	Relay box bottom bracket (12) to splash panel (2)	Two self-tapping screws (13)	Screw in, and tighten using 7/16-inch socket and handle.
45.	Junction	Wiring harness (15)	Plug in.



TA229065

FENDERS, RADIATOR, AND GRILLE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
-----------------	-------------	---------------	----------------

INSTALLATION - CONTINUED

- | | | | |
|------------|--------------|--|--|
| 46. | Transmission | a. Add fluid to bring level back up.
b. Dispose of drained fluid. | |
|------------|--------------|--|--|

NOTE

FOLLOW-ON MAINTENANCE:

1. Install windshield washer reservoir and pump (page 2-1220).
2. Refill cooling system (page 2-265).
3. Connect battery cables (page 2-414).
4. Install surge tank and bracket (page 2-223).
5. Install hood assembly (page 2-774).
6. Install winch, winch support, and rear bumper assembly (page 2-680).
7. Install rope winder (TM 9-2320-269-10).

TASK ENDS HERE**2-773**

HOOD ASSEMBLY

This task covers:

- | | |
|-----------------------------|------------------------------|
| a. Removal (page 2-775) | c. Assembly (page 2-779) |
| b. Disassembly (page 2-777) | d. Installation (page 2-781) |
-

INITIAL SETUP**Tools**

Bit, drill, 3/16-inch
 Board, support (two required)
 Drill, electric, portable
 Extension, 3/8-inch drive, 5-inch
 Hammer, ball-peen, machinist's
 Handle, ratchet, 3/8-inch drive
 Pliers, long round-nose
 Pliers, slip-joint, straight
 Punch, drive-pin, straight, 1/8-inch
 Riveter, blind, hand
 Socket, 3/8-inch drive, 3/8-inch
 Socket, 3/8-inch drive, 7/16-inch
 Socket, 3/8-inch drive, 1/2-inch
 Socket, 3/8-inch drive, 9/16-inch
 Wrench, box-end, 7/16-inch

Materials/Parts

Cement, rubber (item 6, appendix C)
 Cotter pins, hood hinge pin
 (four required)
 Lockwasher, hood center panel to radiator
 shell support (two required)
 Lockwasher, hood handle to hood latch
 Lockwasher, hood prop to hood
 Nut, self-locking, hood prop
 to bracket (two required)
 Rags, wiping (item 24, appendix C)
 Rivets, blind (eight required)
 Seal, hood ledge
 Solvent, drycleaning (item 28, appendix C)

Personnel Required

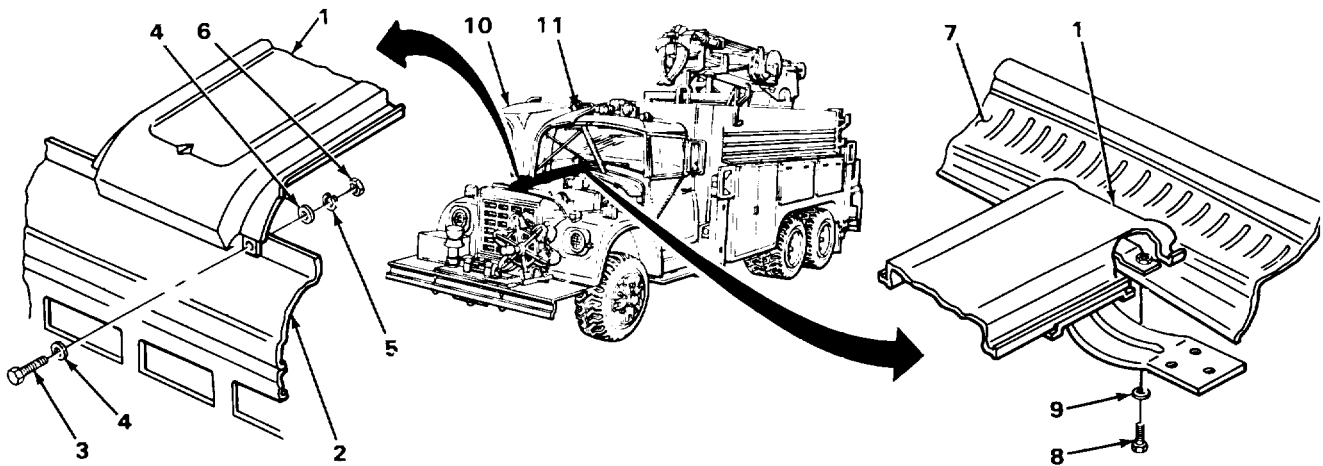
Two

Equipment Condition

Right and left side hoods open
(page 2-7).

HOOD ASSEMBLY - CONTINUED

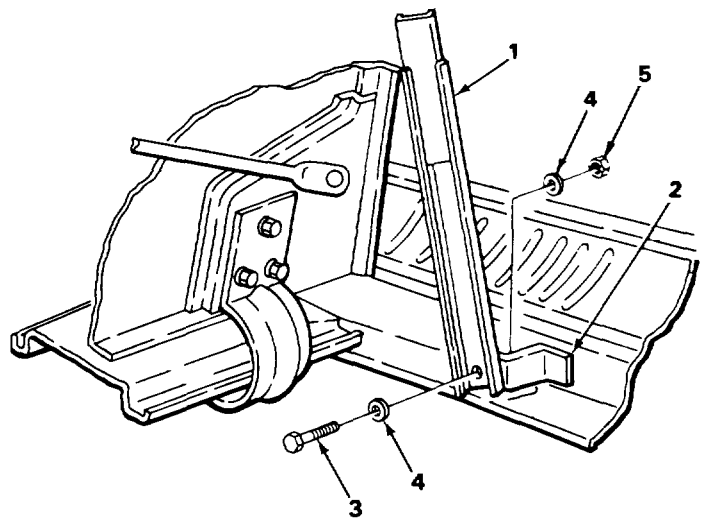
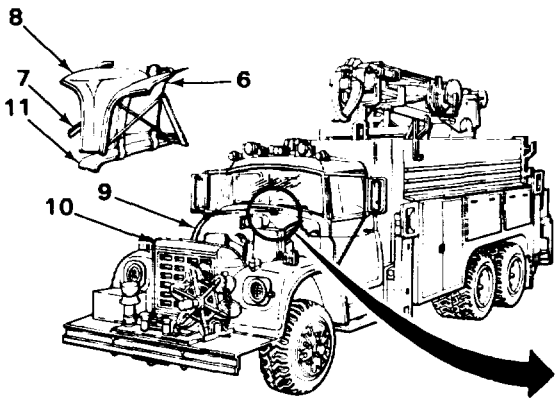
LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1. Hood center panel (1) to radiator shell top panel (2)	Two screws (3), four washers (4), two lockwashers (5), and two nuts (6)	a. Using 7/16-inch wrench, 7/16-inch socket, extension, and handle, unscrew and take out. b. Get rid of lockwashers (5).	
2. Hood center panel (1) to cowl (7)	Two screws (8) and washers (9)	Using 1/2-inch socket and handle, unscrew and take out.	
3.	Hood right (10) and left (11) panels	Using boards, support in open position.	



TA229066

HOOD ASSEMBLY - CONTINUED

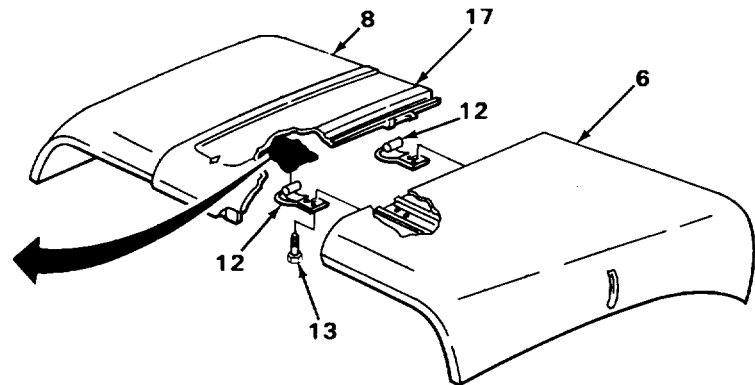
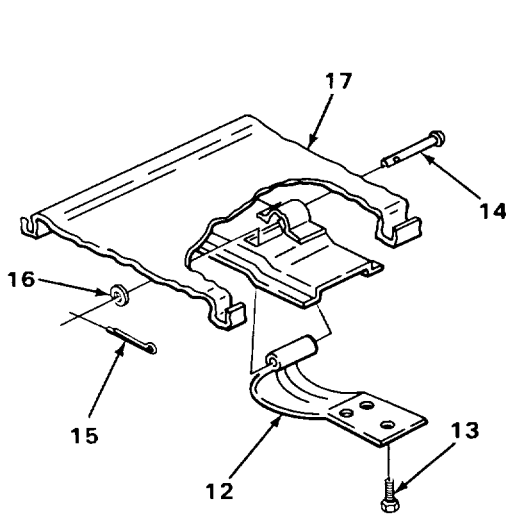
LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
4.	Left hood board prop(1) to bracket (2)	Screw (3), two washers (4), and self-locking nut (5)	a. Using 7/16-inch wrench, 7/16-inch socket, and handle, unscrew and take out. b. Get rid of self-locking nut (5).
5.	Hood left side (6)		Remove board and let close, but do not latch.
6.	Right hood prop (7) to bracket (2)	Screw (3), two washers (4), and self-locking nut (5)	a. Using 7/16-inch wrench, 7/16-inch socket, and handle, unscrew and take out. b. Get rid of self-locking nut (5).
7.	Hood right side (8)		Remove board and let close, but do not latch.
8.	Cowl (9) and radiator shell (10)	Hood center panel (11)	With help of two assistants, lift off.



TA229067

HOOD ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION REMARKS
DISASSEMBLY		
9. Hood right side (8) to two hinges (12)	Six screws (13) and hood right side (8)	Using 1/2-inch socket and handle, unscrew and take out.
10. Hood left side (6) to two hinges (12)	Six screws (13) and hood left side (6)	Using 1/2-inch socket and handle, unscrew and take out.
11. Four hinge pins (14) to two hinges (12)	Four cotter pins (15) and washers (16)	a. Using slip-joint and long round-nose pliers, take out. b. Get rid of pins (15).
12. Four hinges (12) to hood center	Four hinge pins (14) and two hinges (12)	a. Using hammer and punch, drive out pins (14) b. Take out with long round-nose pliers.



TA229068

HOOD ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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DISASSEMBLY - CONTINUED

NOTE

Steps 13 thru 29 are the same for both right and left hood panels. The left hood panel is used as the example.

13.	Hood prop (1) to hood panel (2) lockwasher (6),	Screw (3), nut (4), two washers (5), and prop (1)	a. Using 7/16-inch wrench, 7/16-inch socket, and handle, unscrew and take out. b. Get rid of lockwasher (6).
14.	Two hood braces (7) to hood panel (2)	Four screws (8) and two hood braces (7)	Using 3/8-inch socket and handle, unscrew and take out.
15.	Handle (9) to hood catch (10)	Nut (11) and lockwasher (12)	a. Using 9/16-inch socket and handle, unscrew and take out. b. Get rid of lockwasher (12).
16.	Hood panel (2)	Handle (9)	Take off.
17.	Hood catch (10) to hood panel (2)	Eight blind rivets (13)	a. Using drill and bit, drill out. b. Get rid of.
18.	Hood panel (2)	Hood catch (10)	Take off.
19.		Hood ledge seal (14)	a. Peel off. b. Get rid of.

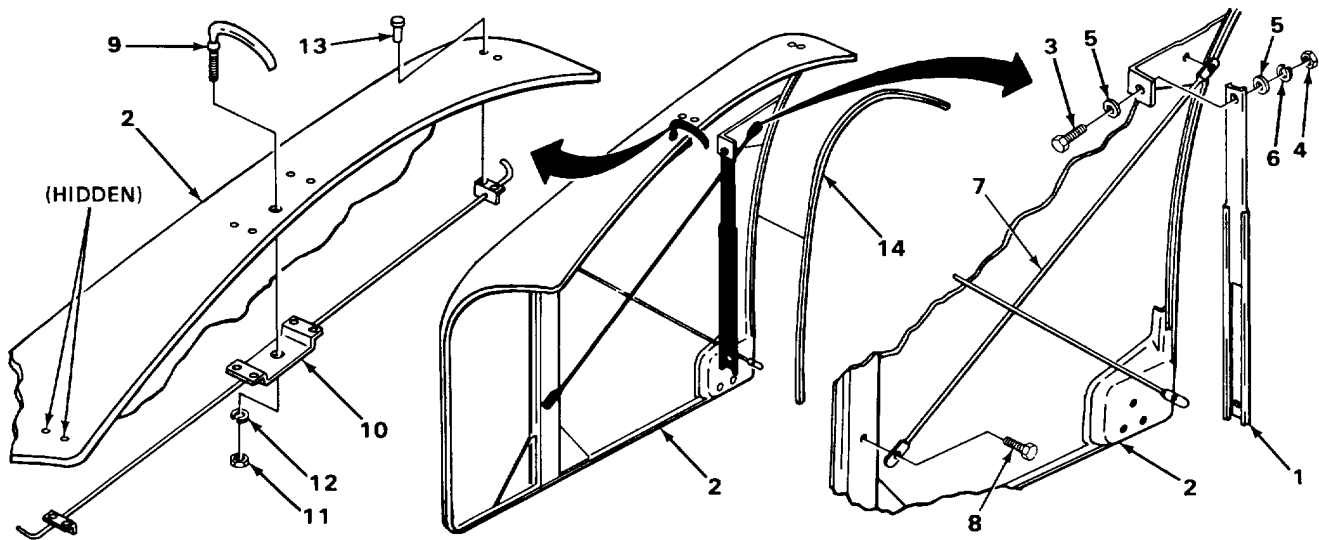
WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flames nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

20.	Hood panel (2)		Using drycleaning solvent and rags, wipe clean.
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HOOD ASSEMBLY - CONTINUED

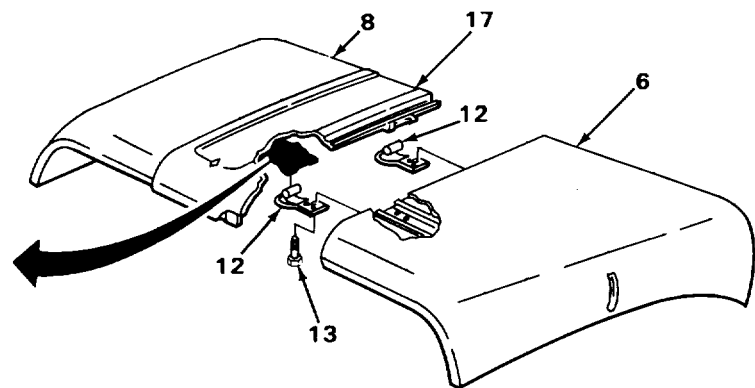
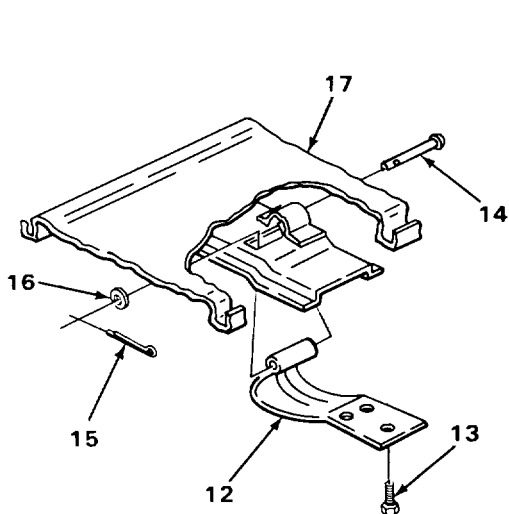
LOCATION	ITEM	ACTION	REMARKS
ASSEMBLY			
21. Hood panel (2)	New hood ledge seal (14)	Using rubber cement, glue on.	
22. Hood catch (10)	Put in place, and hold.		
23. Hood catch (10) to hood panel (2)	Eight new blind rivets (13)	Using riveter, put in.	
24. Hood panel (2)	Handle (9)	Put in place.	
25. Handle (9) to hood catch (10)	Nut (11) and new lockwasher (12)	Screw on, and tighten using 9/16-inch socket and handle.	
26. Hood panel (2)	Two hood braces (7)	Put in place.	
27. Two hood braces (7) to hood panel (2)	Four screws (8)	Screw in, and tighten using 3/8-inch socket and handle.	
28. Hood panel (2)	Hood prop (1)	Put in place, and hold.	
29. Hood prop (1) to hood panel (2)	Screw (3), two washers (5), new lockwasher (6), and nut (4)	Screw in, and tighten using 7/16-inch wrench, 7/16-inch socket, and handle.	



TA229069

HOOD ASSEMBLY - CONTINUED

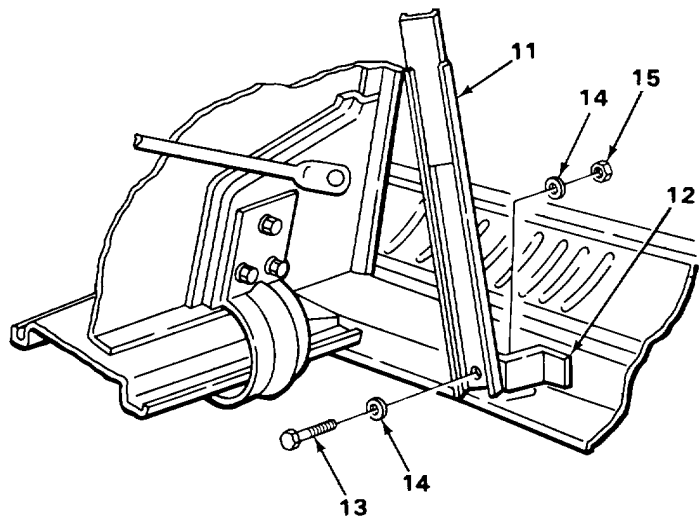
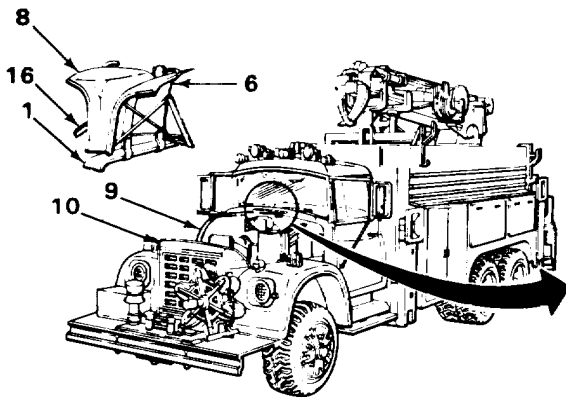
LOCATION	ITEM	ACTION	REMARKS
ASSEMBLY - CONTINUED			
30.	Hood center panel (1)	Four hinges (2)	Put in place.
31.	Four hinges (2) to hood center panel (1)	Four hinge pins (3)	Push into place.
32.	Four hinge pins (3) to hinges (2)	Four washers (4) and new cotter pins (5)	a. Put in. b. Using long round-nose pliers, separate ends and bend back.
33.	Two hinges (2) panel (6)	Left hood	Put in place, line up screw holes, and hold.
34.	Left hood panel (6) to two hinges (2)	Six screws (7)	Screw in, and tighten using 1/2-inch socket and handle.
35.	Two hinges (2)	Right hood panel (8)	Put in place, align screw holes, and hold.
36.	Right hood panel (8) to two Hinges (2)	Six screws (7)	Screw in, and tighten using 1/2-inch socket and handle.



TA229070

HOOD ASSEMBLY - CONTINUED

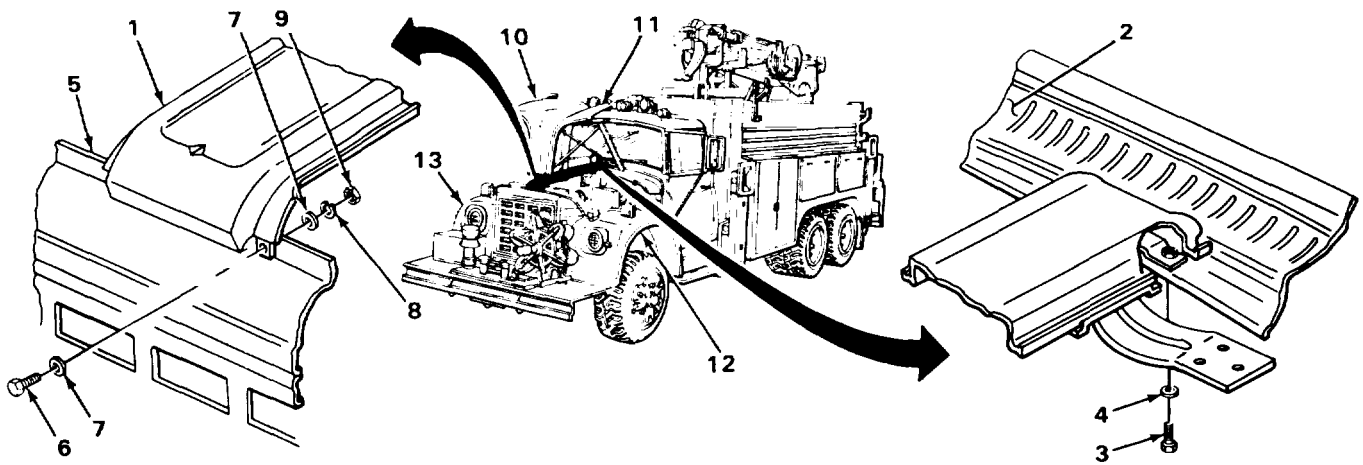
LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
37. Cowl (9) and radiator shell (10) panel (6), and right hood panel (8)	Hood center panel (1), left hood	With help of assistant, lift into place.	
38. Left hood prop (11) to bracket (12)	Screw (13), two washers (14), and new self-locking nut (15)	a. Open hood (6), and align hole in prop (11) with hole in bracket (12). b. Screw in and tighten using 7/16-inch wrench, 7/16-inch socket and handle.	
39. Right hood prop (16) to bracket (12)	Screw (13), two washers (14), and new self-locking nut (15)	a. Open hood (8), and align hole in prop (16) with hole in bracket (12). b. Screw in, and tighten using 7/16-inch wrench, 7/16-inch socket, and handle.	



TA229071

HOOD ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
40. Hood center panel (1) to cowl (2)	Two screws (3) and washers (4)	Screw in, but do not tighten.	
41. Hood center panel (1) to radiator shell top panel (5)	Two screws (6), four washers (7), two new lockwashers (8), and two nuts (9)	Screw in, but do not tighten.	
42.	Right hood panel (10) and left hood panel (11)	Close, and align with cowl (2), radiator shell top panel (5), and fenders (12) and (13).	
43. Hood center panel (1) to radiator shell top panel (5)	Two screws (6) and nuts (9)	Open hood panels (10) and (11), and tighten using 7/16-inch wrench, 7/16-inch socket, and handle.	
44. Hood center panel (1) to cowl (2)	Two screws (3)	Tighten using 11/2-inch socket and handle.	



TA229072

HOOD ASSEMBLY - CONTINUED

INSTALLATION - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE: Close hoods (page 2-7).

TASK ENDS HERE

HOOD LATCH ROD AND HOOD ROD LATCH BRACKET

This task covers:

- a. Removal (page 2-783)
 - b. Installation (page 2-784)
 - c. Adjustment (page 2-784)
-

INITIAL SETUP

Tools

Extension, 3/8-inch drive, 5-inch
 Handle, ratchet, 3/8-inch drive
 Socket, 3/8-inch drive, 3/8-inch
 Socket, 3/8-inch drive, 1/2-inch

Personnel Required

One

Equipment Condition

Right or left hood side panel open as
 needed (page 2-7).

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

NOTE

The steps in this task are the same for both right and left hood latch rod and hood latch rod bracket. The left hood latch rod and hood latch rod bracket are used as the example.

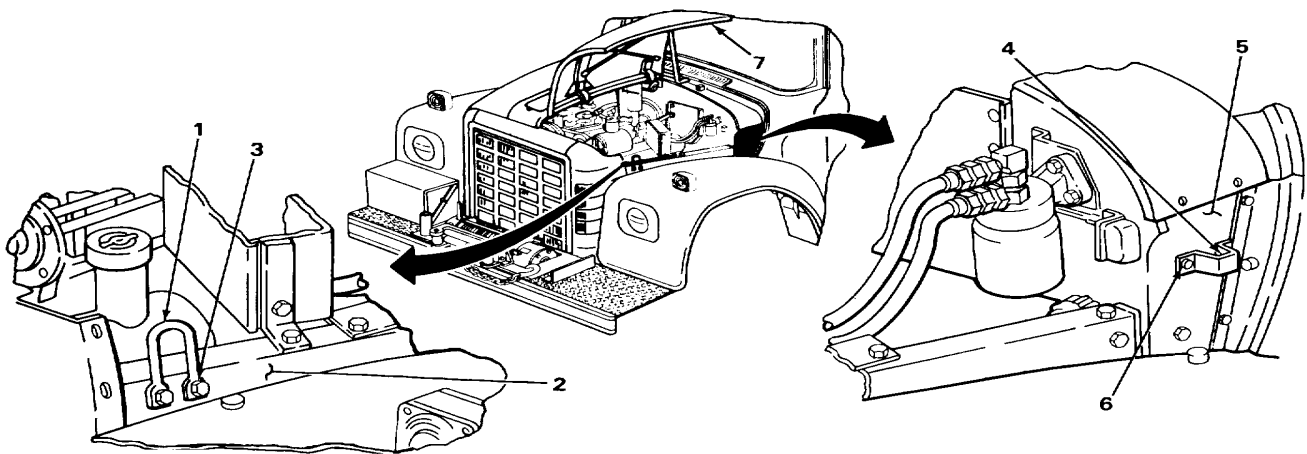
2-783

HOOD LATCH ROD AND HOOD LATCH ROD BRACKET - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL- CONTINUED			
1.	Hood latch rod (1) to splash panel (2)	Two screws (3) and hood latch rod (1)	Using 3/8-inch socket and handle, unscrew and take out.
2.	Hood latch rod bracket (4) to cowl (5)	Two screws (6) and hood latch rod bracket (4)	Using 1/2-inch socket, extension, and handle, unscrew and take off.
INSTALLATION			
3.	Cowl (5) bracket (4)	Hood latch rod	Put in place, and hold.
4.	Hood latch rod bracket (4) to cowl (5)	Two screws (6)	Screw in, and tighten using 1/2-inch socket, extension, and handle.
5.	Splash panel (2)	Hood latch rod (1)	Put in place, and hold.
6.	Hood latch rod (1) to splash panel (2)	Two screws (3)	Screw in, but do not tighten.
ADJUSTMENT			
NOTE			
For adjustment of hood latch rod after installation, go to step 8.			
7.	Hood latch rod (1) to splash panel (2)	Two screws (3)	Using 3/8-inch socket, extension, and handle, loosen.
8.		Hood latch rod (1)	Push down all the way.
9.	Hood latch rod (1) to splash panel (2)	Two screws (3)	Tighten using 3/8-inch socket, extension, and handle.

HOOD LATCH ROD AND HOOD LATCH ROD BRACKET - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
ADJUSTMENT - CONTINUED			
10.	Hood (7)	Close and latch using handle, making sure hood latches tightly.	If hood does not latch tightly, open, loosen latch rod, tighten, and check again. Repeat until adjusted properly.



TASK ENDS HERE

GRILLE

This task covers:

- a. Removal (page 2-786)
- b. Installation (page 2-786)

INITIAL SETUP

Tools

Extension, 3/8-inch drive, 5-inch
 Handle, ratchet, 3/8-inch drive
 Socket, 3/8-inch drive, 3/8-inch

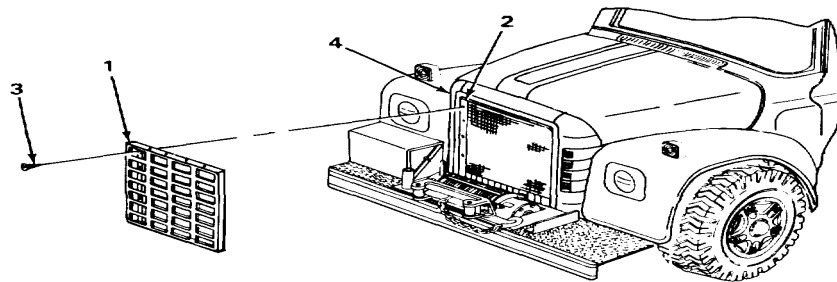
Personnel Required

One

TA229073

GRILLE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1. Grille (1) to radiator support (2)	Six screws (3)		Using 3/8-inch socket, handle, and extension, unscrew and take out.
2. Radiator shell (4)	Grille (1)		Pull out.
INSTALLATION			
3. Radiator shell (4)	Grille (1)		Put in place.
4. Grille (1) to radiator Support (2)	Six screws (3)		Screw in, and tighten using 3/8-inch socket, handle, and extension.



TASK ENDS HERE

RADIATOR SHELL TOP PANEL

This task covers:

- a. Removal (page 2-787)
- b. Installation (page 2-788)

INITIAL SETUP

Tools

Handle, ratchet, 3/8-inch drive
 Pliers, long round-nose
 Socket, 3/8-inch drive, 7/16-inch

Tools - Continued

Socket, 3/8-inch drive, 1/2-inch
 Wrench, box-end, 7/16-inch

TA229074

RADIATOR SHELL TOP PANEL - CONTINUED

INITIAL SETUP - CONTINUED

Materials/Parts

Lockwasher, radiator shell top panel to radiator support (four required)

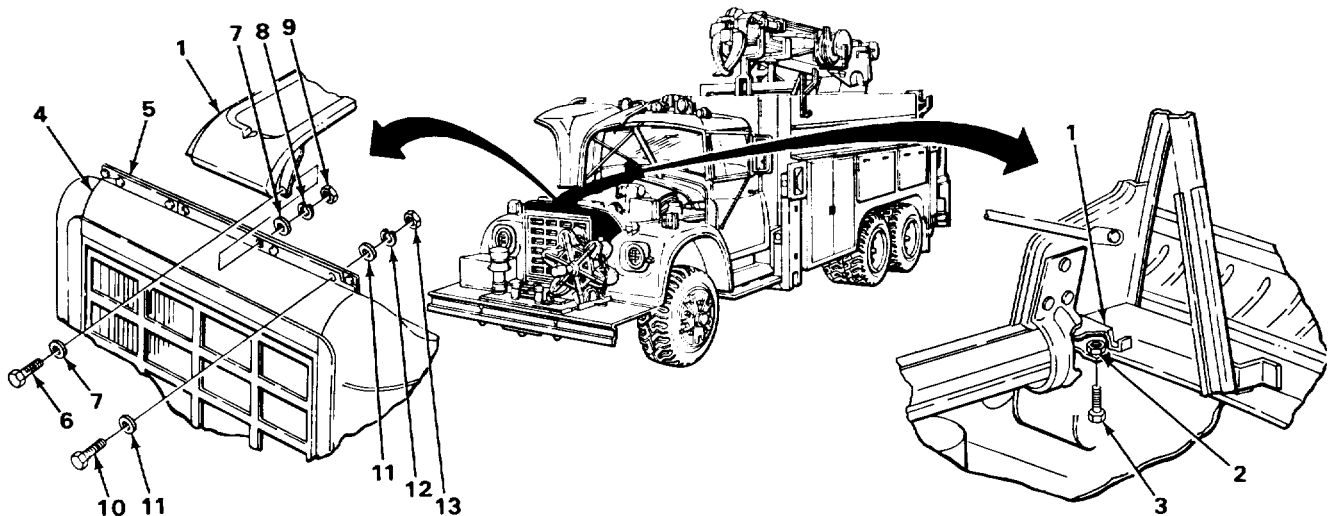
Personnel Required

One

Equipment Condition

Hood open (page 2-7).

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1. Hood center panel (1) to bracket (2)	Two screws (3)		Using 7/16-inch socket and handle, unscrew but do not take out.
2. Hood center panel (1) to radiator shell top panel (4) and radiator tie bar (5)	Two screws (6), four washers (7), two lockwashers (8), and nuts (9)	a. Using 7/16-inch wrench, 7/16-inch socket, and handle, unscrew and take out. b. Get rid of lockwashers (8).	
3.	Hood center panel (1)	Raise about one inch (2.54 mm), and support.	
4. Radiator shell top panel (4) to	Two screws (10), four washers (11),	a. Using 7/16-inch wrench, 7/16-inch socket, and handle, unscrew and	



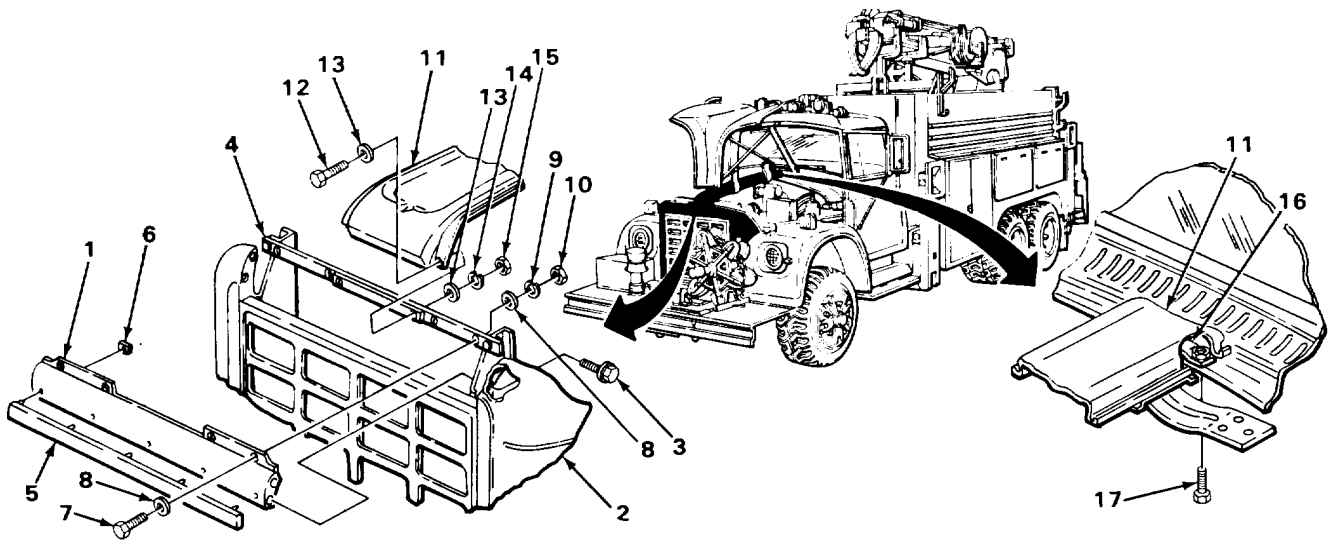
TA229075

RADIATOR SHELL TOP PANEL - CONTINUED

LOCATION	ITEM	ACTION REMARKS	
REMOVAL - CONTINUED			
5.	Radiator shell top panel (1) to two radiator shell side panels (2)	Four screws (3)	Using 1/2-inch socket and handle, unscrew and take out.
6.	Radiator tie bar (4)	Radiator shell top panel (1)	Take off.
7.	Emblem (5) to radiator shell top panel (1)	Five push nuts (6)	Using long round-nose pliers, take off.
8.	Radiator shell top panel (1)	Emblem (5)	Take off.
INSTALLATION			
9.	Radiator shell top panel (1)	Emblem (5)	Put in place.
10.	Emblem (5) to radiator shell top panel (1)	Five push nuts (6)	Push on.
11.	Radiator tie bar (4)	Radiator shell top panel (1)	Put in place.
12.	Radiator shell top panel (1) to two radiator shell side panels (2)	Four screws (3)	Screw in, and tighten using 1/2-inch socket and handle.
13.	Radiator shell top panel (1) to radiator tie bar (4) nuts (10)	Two screws (7), four washers (8), two new lockwashers (9), and two	Screw in, and tighten using 7/16-inch wrench, 7/16-inch socket, and handle.

RADIATOR SHELL TOP PANEL - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
14. Radiator shell top panel (1)	Hood center panel (11)	Remove support, and lower into place.	
15. Hood center panel (11) to radiator shell top panel (1) and radiator tie bar (4)	Two screws (12), four washers (13), two new lockwashers (14), and nuts (15)	Screw in, and tighten using 7/16-inch wrench, 7/16-inch socket, and handle.	
16. Hood center Panel (11) to bracket (16)	Two screws (17)	Tighten using 7/16-inch socket and handle.	



NOTE

FOLLOW-ON MAINTENANCE: Close hood (page 2-7).

TASK ENDS HERE

TA229076

RADIATOR SHELL SIDE PANELS

This task covers:

- a. Removal (page 2-790)
 - b. Installation (page 2-794)
-

INITIAL SETUP

Tools

Handle, ratchet, 3/8-inch drive
 Knife, putty
 Screwdriver, cross-tip, number two Solvent, drycleaning (item 28, appendix C)
 Socket, 3/8-inch drive,
 1/2-inch

Materials/Parts

Brush, paint, 1/2-inch (item 5, appendix C)
 Lockwasher, radiator shell side panel to radiator support (two required)
 Rag, wiping (item 24, appendix C)

Materials/Parts - Continued

Sealer, silicone rubber (item 26, appendix C)

Personnel Required

One

Equipment Condition

Hood open (page 2-7).
 Grille removed (page 2-785).

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

NOTE

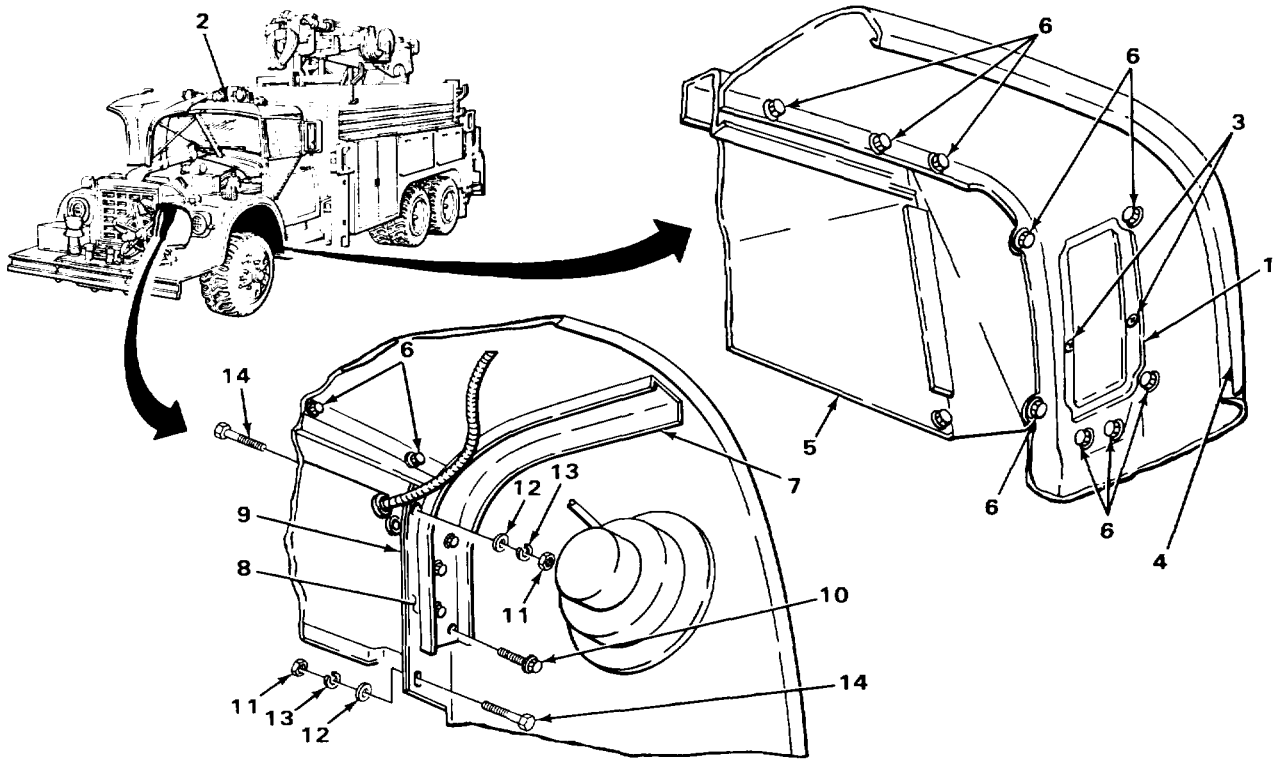
Except as noted, the steps in this task are the same for both right and left radiator shell side panels. The left side panel is used as the example.

To remove left radiator shell side panel, remove cable winder (TM 9-2320-269-10).

- | | | | |
|----|--|-------------------------------------|--|
| 1. | Access cover (1) to cab (2) | Two screws (3) and access cover (1) | Using cross-tip screwdriver, unscrew and take out. |
| 2. | Fender (4) to cab (2) and splash panel (5) | Eleven screws (6) | Using 1/2-inch socket and handle, unscrew but do not take out. |

RADIATOR SHELL SIDE PANELS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
3. Fender brace (7), fender (4), and radiator shell side panel (8) to radiator support (9)	Four screws (10)	Using 1/2-inch socket and handle, unscrew and take out.	
4. Fender (4) and radiator shell side panel (8) to radiator support (9)	Two nuts (11), washers (12), and lockwashers (13)	a. Using 1/2-inch socket and handle, unscrew and take out. b. Get rid of lockwashers (13).	
5.	Lower carriage bolt (14)	Take out.	



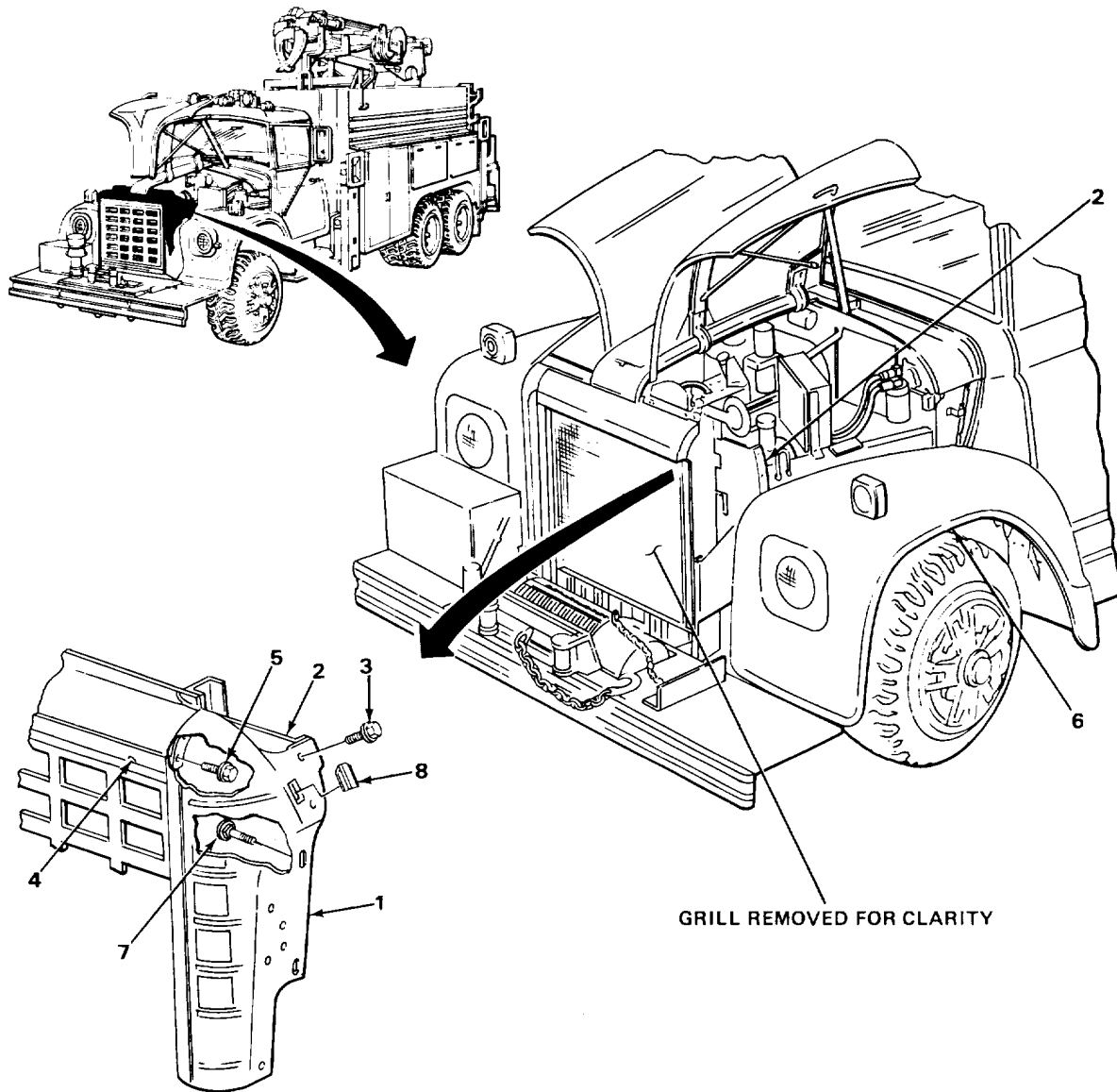
TA229077

RADIATOR SHELL SIDE PANELS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
6.	Radiator shell side panel (1) to radiator support (2)	Two screws (3)	Using 1/2-inch socket and handle, unscrew and take out.
7.	Radiator shell side panel (1) to top panel (4)	Two screws (5)	Using 1/2-inch socket and handle, unscrew and take out.
<u>WARNING</u>			
Drycleaning solvent burns easily. Do not smoke or have open flame nearby when using solvent. Dispose of solvent-soaked rags properly. Clean brush properly.			
<u>CAUTION</u>			
Use drycleaning solvent sparingly to soften sealer. If solvent gets on surface of radiator shell or fender, wipe off immediately. Solvent will damage or remove paint.			
8.	Fender (6)	Radiator shell side panel (1)	<ol style="list-style-type: none"> a. Using small brush, apply drycleaning solvent to sealer to soften it. b. separate fender (6) and panel (1). c. Take out radiator shell side panel (1). d. Using drycleaning solvent and rags, clean all old sealer off fender (6) and radiator shell side panel (1).
9.	Radiator shell side panel (1)	Upper carriage bolt (7)	Take out.
10.		Hood bumper (8)	Squeeze together, and take out.

RADIATOR SHELL SIDE PANELS - CONTINUED

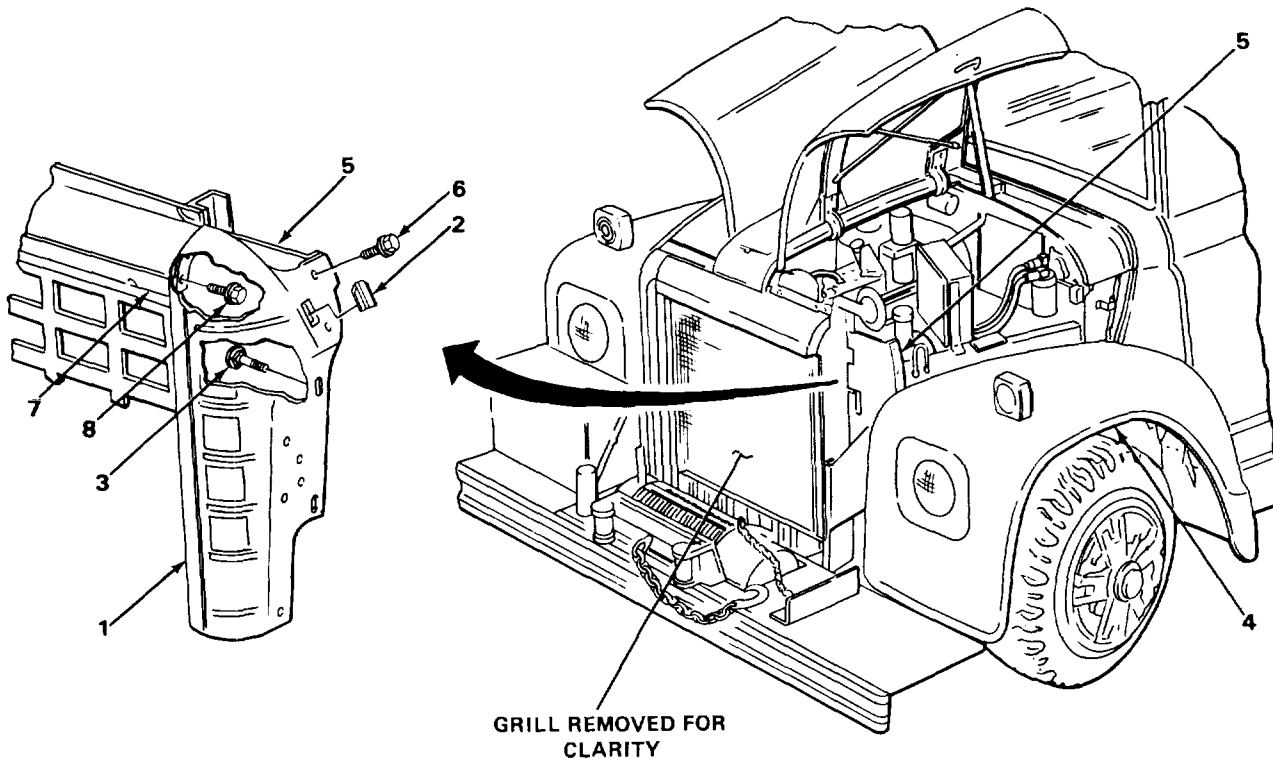
REMOVAL - CONTINUED



TA229078

RADIATOR SHELL SIDE PANELS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
11. Radiator shell side panel (1)	Hood bumper (2)	Push into place.	
12.	Carriage bolt (3)	Put in place.	
13. Fender (4) and radiator support (5)	Radiator shell side panel (1)	Push fender (4) out, approximately 3/4-inch (3.75 mm), and put in place.	
14. Radiator shell side panel (1) to radiator support (5)	Two screws (6)	Screw in, and tighten using 1/2-inch socket and handle.	
15. Radiator shell side panel (1) to top pane	Two screws (8)	Screw in, and tighten using 1/2-inch socket and handle	



TA229078

RADIATOR SHELL SIDE PANELS - CONTINUED

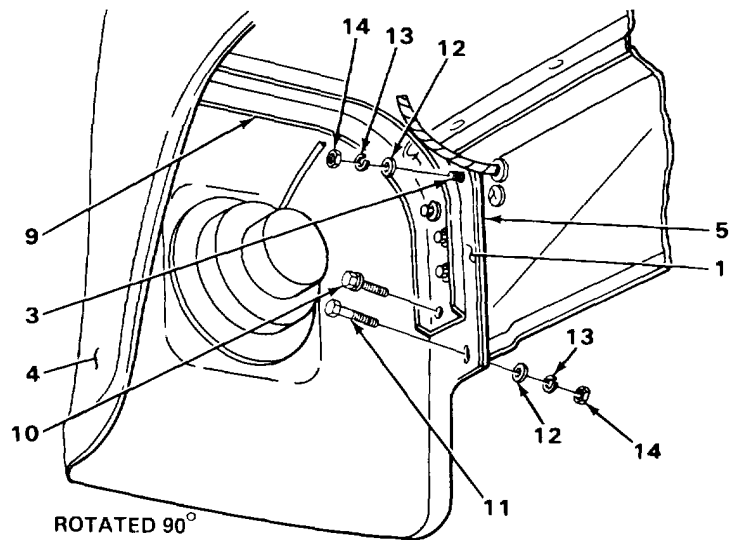
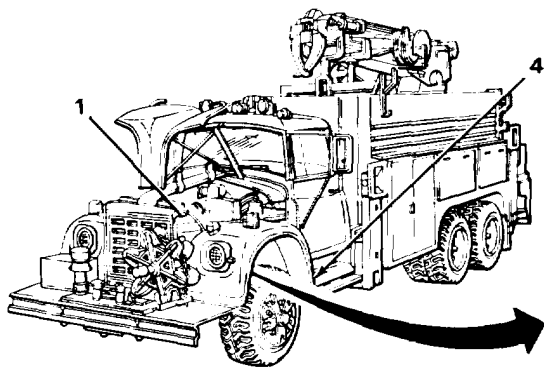
LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION - CONTINUED

WARNING

Silicone rubber sealer and its fumes burn easily. Do not smoke or have open flame nearby while using sealer.

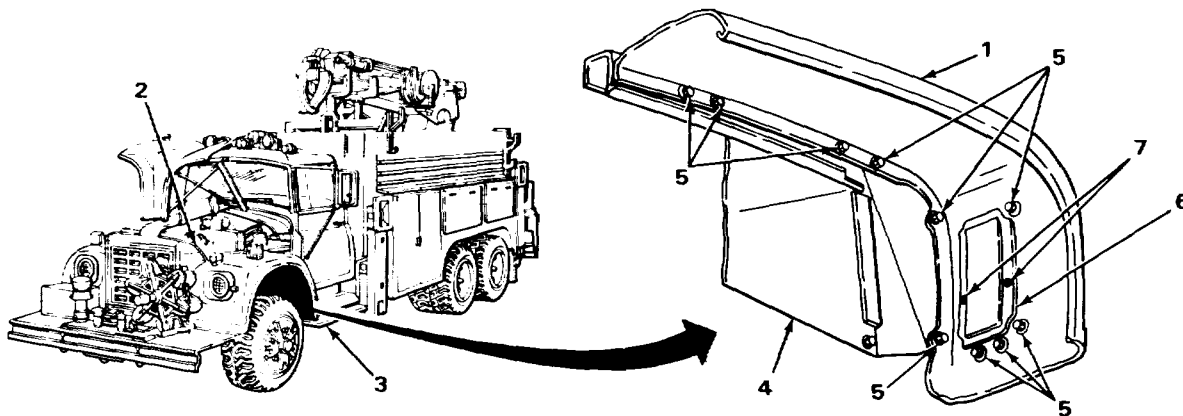
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|-----|-----------------------------------|--|
| 16. | Radiator shell side panel (1) | Apply bead of sealer where fender (4) meets radiator shell side panel (1). |
| 17. | Four screws (10) | Screw in, and tighten using 1/2-inch socket and handle. |
| 18. | Lower carriage bolt (11) | Put in place. |
| 19. | Two washers (12), new lockwashers | Screw on, and tighten using 1/2-inch socket and handle. |



TA229080

RADIATOR SHELL SIDE PANELS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
WARNING			
Drycleaning solvent burns easily. Do not smoke or have open flame nearby while using solvent. Dispose of solvent-soaked rags properly. If brush is used, clean properly.			
20.	Fender (1) and side panel (2)	Smooth sealer and clean off excess with rag dampened with drycleaning solvent.	Tighten using 1/2-inch socket and handle.
21. Fender (1) to cab (3) and splash panel (4)	Eleven screws (5)		
22. Fender (1)	Access cover (6)	Put in place, and hold.	
23. Access cover (6) to cab (3)	Two screws (7)	Screw in, and tighten using cross-tip screwdriver	



NOTE

FOLLOW-ON MAINTENANCE:

1. Close hood (page 2-7).
2. Stow cable winder (TM 9-2320-269-10).

TASK ENDS HERE

TA229081

FENDERS

This task covers:

- | | |
|---|---|
| <p>a. Removal (page 2-797)</p> <p>b. Disassembly (page 2-800)</p> | <p>c. Assembly (page 2-802)</p> <p>d. Installation (page 2-802)</p> |
|---|---|
-

INITIAL SETUP:

Tools

- Handle, ratchet, 3/8-inch drive
- Knife, putty
- Screwdriver, cross-tip, number two
- Socket, 3/8-inch drive, 7/16-inch
- Socket, 3/8-inch drive, 1/2-inch
- Socket, deep well, 112-inch drive, 3/8-inch
- Wrench, box-end, 1/2-inch

Materials/Parts - Continued

- Lockwasher, parking light to fender (two required)
- Rags, wiping (item 24, appendix C)
- Sealer, silicone rubber (item 26, appendix C)
- Solvent, drycleaning (item 28, appendix C)

Personnel Required

Two

Equipment Condition

Materials/Parts

- Brush, paint, 1/2-inch (item 5, appendix C)
- Lockwashers, fender brace to fender (two required)

Hood open (page 2-7).

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

NOTE

Except as noted, the steps in this task apply to both front fenders. The left fender is used as the example.

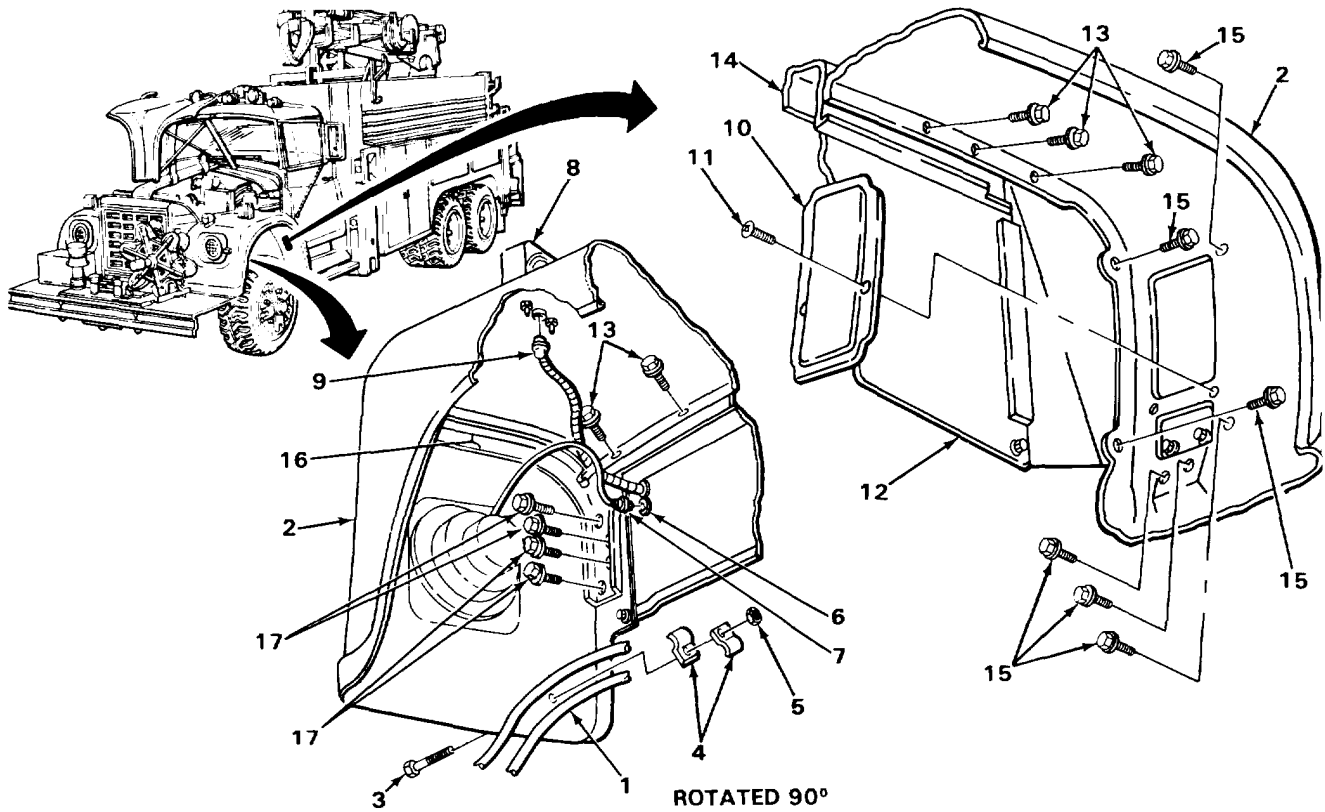
Step 1 applies to left front fender only.

FENDERS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
1.	Winch hose (1) to fender (2)	Screw (3), two clips (4), and nut (5)	Using 7/16-inch socket and handle, unscrew and take off.
2.	Junction block (6)	Headlight wiring harness (7)	Unplug.
3.	Parking light (8) harness (9)	Parking light compartment.	Unplug, and pull into engine
4.	Access cover (10) to fender (2)	Two screws (11) and access cover (10)	Using cross-tip screwdriver, unscrew and take out.
5.	Fender (2) to splash panel (12)	Four screws (13)	Using 1/2-inch socket and handle, unscrew and take out.
6.	Fender (2) to cab (14)	Seven screws (15)	Using 1/2-inch socket and handle, unscrew but do not remove.
7.	Fender brace (16) to radiator support (hidden)	Four screws (17)	Using 1/2-inch socket and handle, unscrew but do not remove. Leave one screw in brace extended approximately 1/2- inch (1.25 mm) above brace.

FENDERS - CONTINUED

REMOVAL - CONTINUED



WARNING

Drycleaning solvent burns easily. Do not smoke or have open flame nearby while using solvent. Dispose of solvent-soaked rags properly. If brush is used, clean properly.

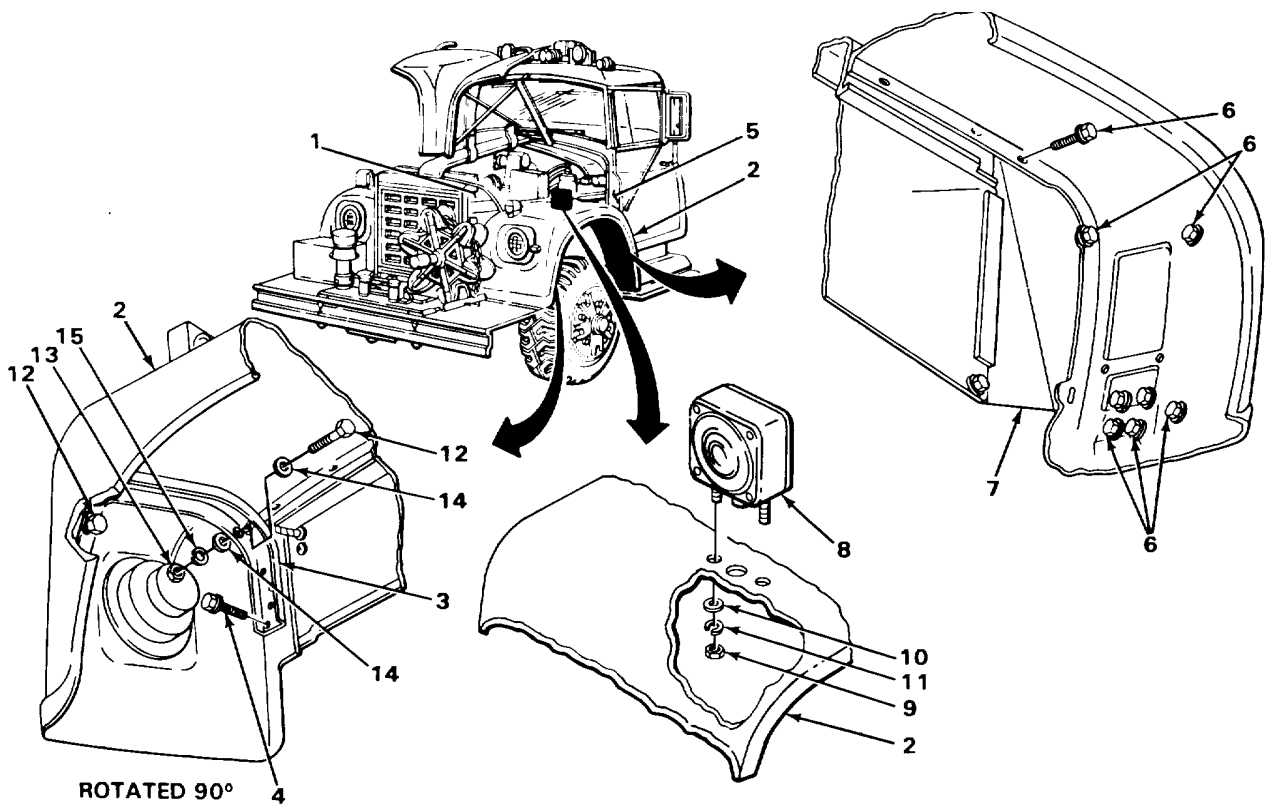
TA229082

FENDERS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
<u>CAUTION</u>			
Use solvent sparingly to soften sealer. If solvent gets on painted surface of fender or radiator shell, wipe off immediately. Solvent will damage or remove paint.			
8. Radiator shell side panel (1)	Fender (2)	a. Using small brush, apply drycleaning solvent to sealer to soften it. b. Using putty knife, cut sealer to separate fender (2) and panel (1).	
9. Fender brace (3) to radiator support (hidden)	Screw (4)	With assistant holding fender (2), unscrew and take out.	
10. Fender (2) to cab (5)	Seven screws (6)	With assistant holding onto fender (2), unscrew and take out.	
11. Splash panel (7) and cab (5)	Fender (2)	Take off.	
DISASSEMBLY			
B. Parking light (8) to fender (2)	Two nuts (9), washers (10), and lockwashers (11)	a. Using 1 1/2-inch deep well socket and handle, unscrew and take off. b. Get rid of lockwashers (11).	
13. Fender (2)	Parking light (8)	Take off.	
14. Fender brace (3) to fender (2)	Two screws (12), and nuts (13), four washers (14), lockwashers (15), and fender brace (3)	a. Using 1/2-inch wrench, socket, and handle, unscrew and take off. b. Get rid of lockwashers (15).	

FENDERS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
DISASSEMBLY - CONTINUED			
15. Fender (2)	Headlight assembly	Remove (page 2-366).	
16.	Fender (2) and radiator shell side panel (1)		Using drycleaning solvent and rags, clean off all old sealer.



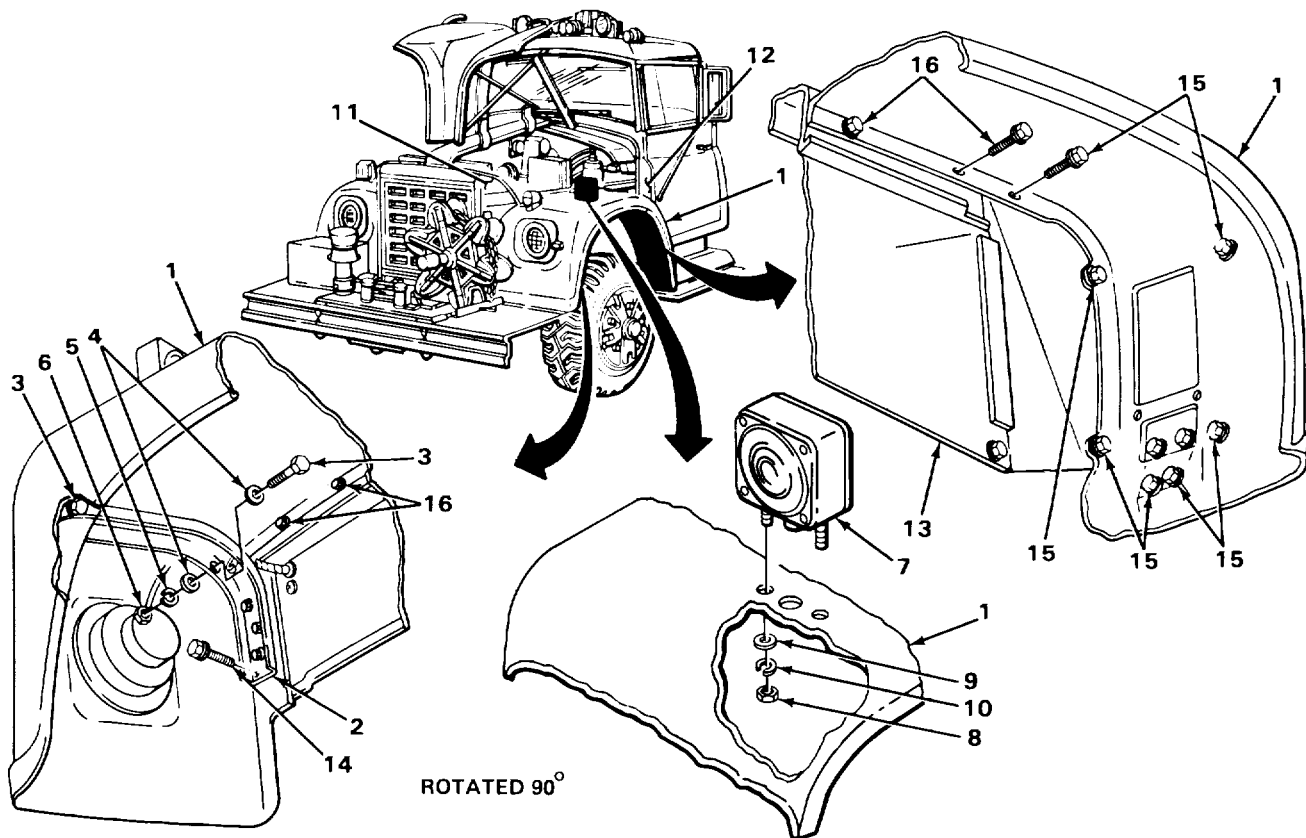
TA229083

FENDERS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
ASSEMBLY			
17.	Fender (1)	Headlight assembly	Install (page 2-366).
18.		Fender brace (2)	Put in place, and hold.
19.	Fender brace (2)	Two screws (3), four washers (4), two new lockwashers (5), and nuts (6)	Screw in, and tighten using 1/2-inch wrench, 112-inch socket, and handle.
20.	Fender (1)	Parking light (7)	Put in place.
21.	Parking light (7) to fender (1)	Two nuts (8), washers (9), and new lockwashers (10)	Screw on, and tighten using 1/2-inch deep well socket and handle.
INSTALLATION			
22.	Radiator shell side panel (11)	Fender (1)	Apply sealer to panel (11) where fender (1) contacts panel (11).
23.	Cab (12) and splash panel (13)	Fender (1)	Lift into place, and have assistant hold.
24.	Fender brace (2) to radiator support (hidden)	Four screws (14)	Screw in, but do not tighten.
25.	Fender (1) to cab (12)	Seven screws (15)	Screw in, but do not tighten.
26.	Fender (1) to splash panel (13)	Four screws (16)	Screw in, but do not tighten.

FENDERS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
27.	Fender (1)		Help assistant to aline fender properly with cab (12), splash panel (13), and radiator shell side panel (11).
28. Fender brace (2) to radiator support (hidden)	Four screws (14)		Tighten using 1/2-inch socket and handle.
29. Fender (1) to cab (12)	Seven screws (15)		Tighten using 1/2-inch socket and handle.
30. Fender (1) to splash panel (13)	Four screws (16)		Tighten using 1/2-inch socket and handle.



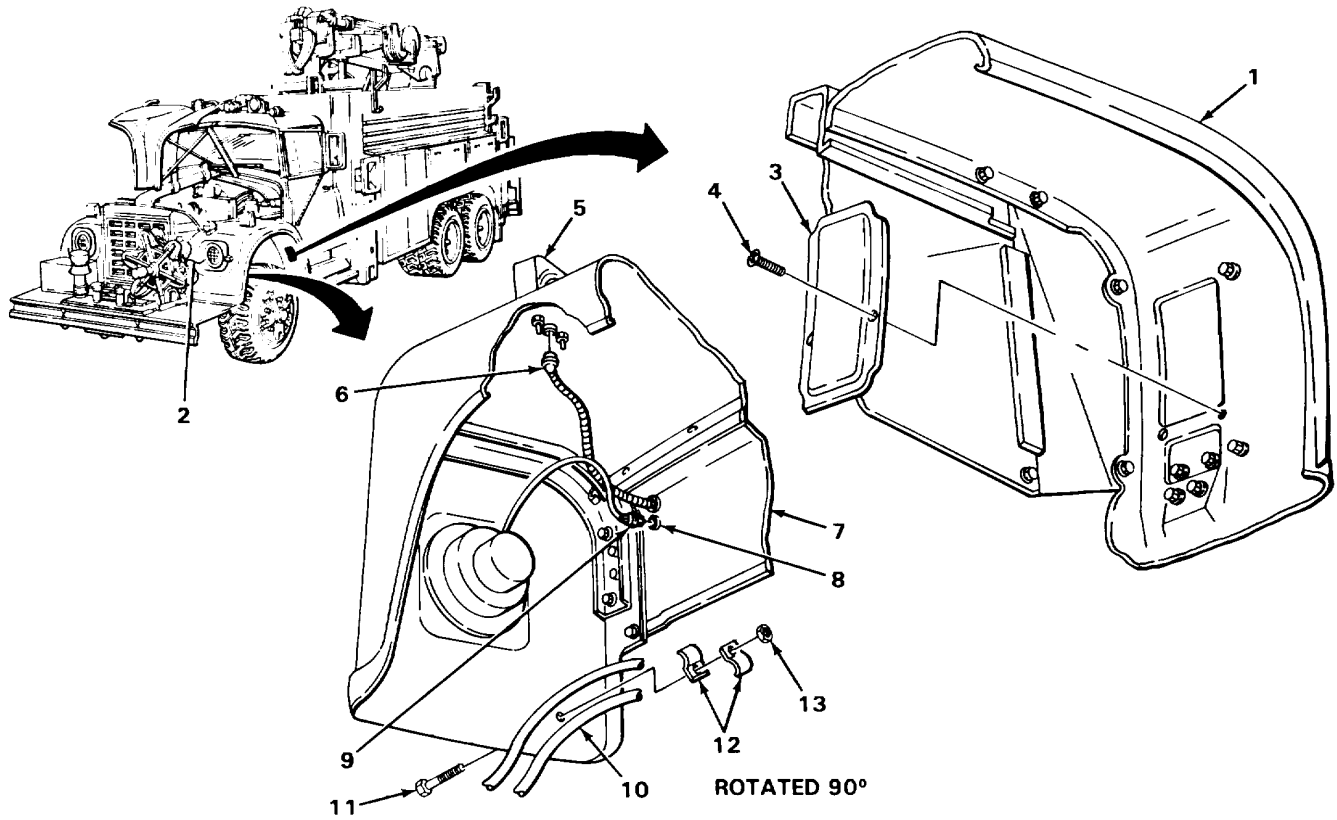
TA229084

FENDERS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
WARNING			
Drycleaning solvent burns easily. Do not smoke or have open flame nearby when using solvent. Dispose of solvent-soaked rags properly. If brush is used, clean properly.			
31.	Fender (1) and radiator shell side panel (2)		Using drycleaning solvent and rags, immediately wipe off extra sealer.
32. Access cover (3)	Fender (1)		Put in place, and hold.
33. Access cover (3) to fender (1)	Two screws (4)		Screw in, and tighten using cross-tip screwdriver.
34. Parking light (5)	Parking light harness (6)		Pull back through splash panel (7), and put plug into light (5).
35. Junction block (8)	Headlight harness (9)		Plug in.
NOTE			
Step 36 applies to left front fender only.			
36. Two winch hoses (10) to fender(1)	Screw (11), two clips (12), and nuts (13)		<ul style="list-style-type: none"> a. Put clips (12) over hoses (10). b. Put screw (11) through front side of fender (1). c. Screw on nut (13), and tighten using 7/16-inch socket and handle.

FENDERS - CONTINUED

INSTALLATION - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE: Close hood (page 2-7).

TASK ENDS HERE

TA229085

SPLASH PANEL

This task covers:

- a. Removal (page 2-807)
 - b. Installation (page 2-809)
-

INITIAL SETUP:

Tools

Extension, 3/8-inch drive,
5-inch
Handle, ratchet,
3/8-inch drive
Screwdriver, flat-tip,
3/16-inch
Socket, 3/8-inch drive,
7/16-inch
Socket, 3/8-inch drive,
1/2-inch
Wrench, box-end, 1/2-inch

Materials/Parts

Detergent, liquid (item 11, appendix C)
Lockwasher, splash panel to cab
(three required)
Nut, self-locking, relay box bracket
to firewall

Personnel Required

One

Equipment Condition

Hood open (page 2-7).
Fender removed (right or left depending
on splash panel) (page 2-797).
Hood latch rod removed (page 2-783).

SPLASH PANEL - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

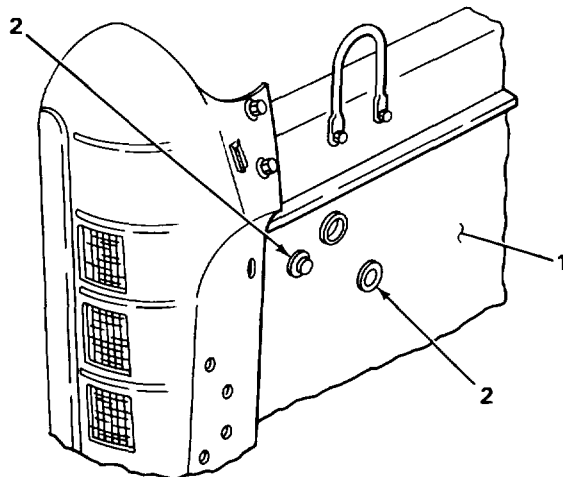
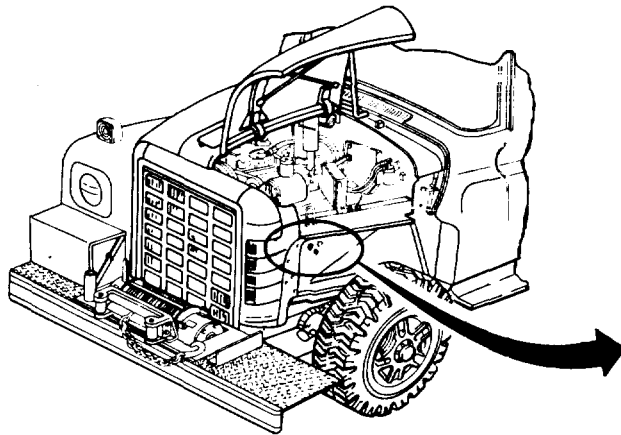
NOTE

Except as noted, the steps in this task are the same for both left and right splash panels. The left panel is used as the example.

For right splash panel, remove surge tank and bracket (page 2-223).

For left splash panel, remove windshield washer reservoir and pump (page 2-1220).

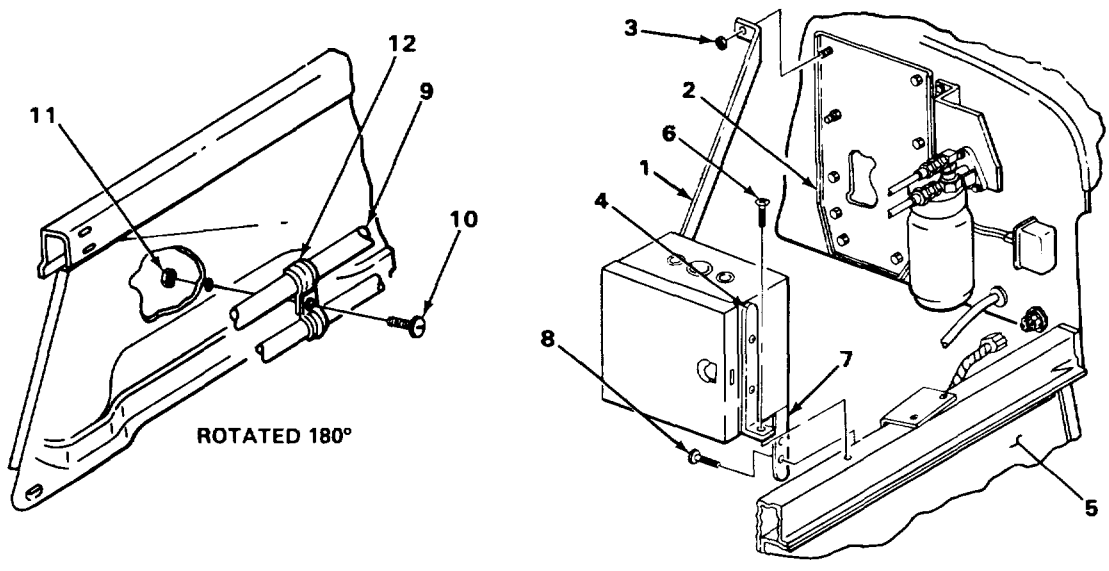
- | | | | |
|---------------------|------------------|--------------------------------------|---|
| 1. Splash panel (1) | Two grommets (2) | Using flat-tip screwdriver, pry out. | Turn signal wires have been pulled into engine area in fender removal procedure. |
|---------------------|------------------|--------------------------------------|---|



TA229086

SPLASH PANEL - CONTINUED

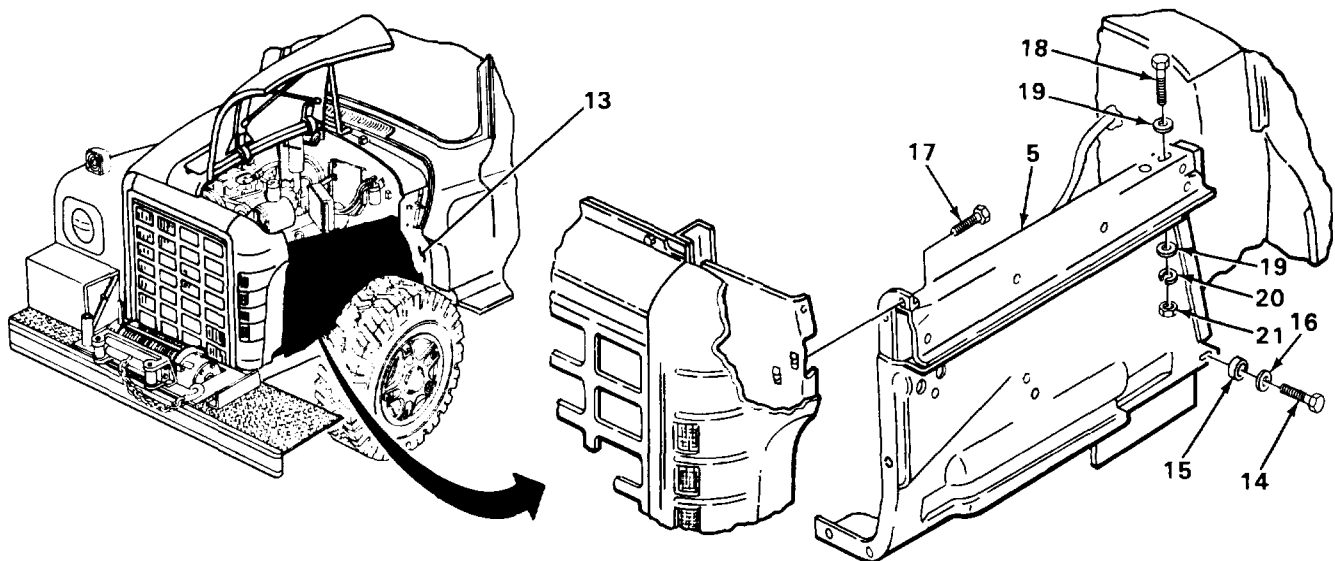
LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
2. Relay box bracket (1) to firewall (2)	Self-locking nut (3)	a. Using 7/16-inch socket and handle, unscrew and take off. b. Get rid of nut (3).	
NOTE			
Steps 3 thru 5 apply to left splash panel only.			
3. Relay box front bracket (4) to splash panel (5)	Self-tapping screw (6)	Using 7/16-inch socket and handle, unscrew and take off.	
4. Relay box bottom bracket (7) to splash panel (5)	Two self-tapping screws (8)	Using 7/16-inch socket and handle, unscrew and take out.	
5. Power steering hoses (9) to splash panel (5)	Screw (10), nut (11), and clip (12)	Using flat-tip screwdriver, 7/16-inch socket and handle, unscrew and take out.	



TA229087

SPLASH PANEL - CONTINUED

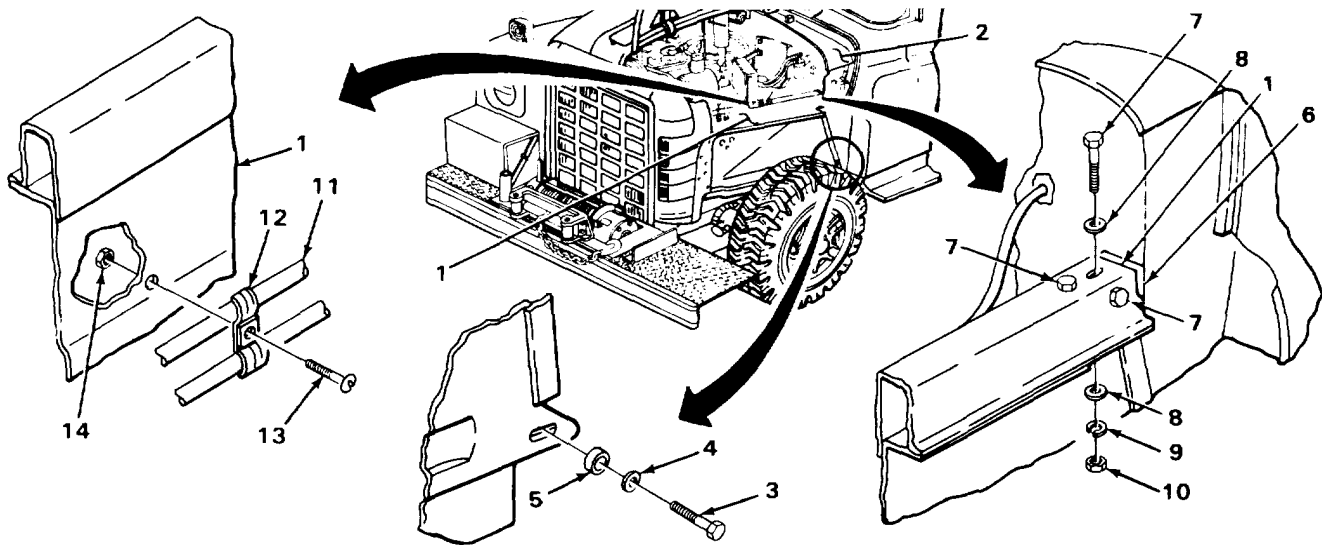
LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
6.	Splash panel (5) to cab (13)	Screw (14), insulator (15), and washer (16)	Using 1/2-inch socket and handle, unscrew and take out.
7.	Splash panel (5) to radiator support (hidden)	Five screws (17)	Using 1/2-inch socket and handle, unscrew and take out.
8.	Splash panel (5) to cab (13)	Three screws (18), six washers (19), three lockwashers (20), and nuts (21)	a. Using 1/2-inch wrench, 11/2-inch socket, and handle, unscrew and take out. b. Get rid of lockwashers (20).
9.	Splash panel (5)		Lift out.
INSTALLATION			
10.	Splash panel (5)		Put in place, and hold.
11.	Splash panel (5) to radiator support (hidden)	Five screws (17)	Screw in, and tighten using 11/2-inch socket and handle.



TA2290089

SPLASH PANEL - CONTINUED

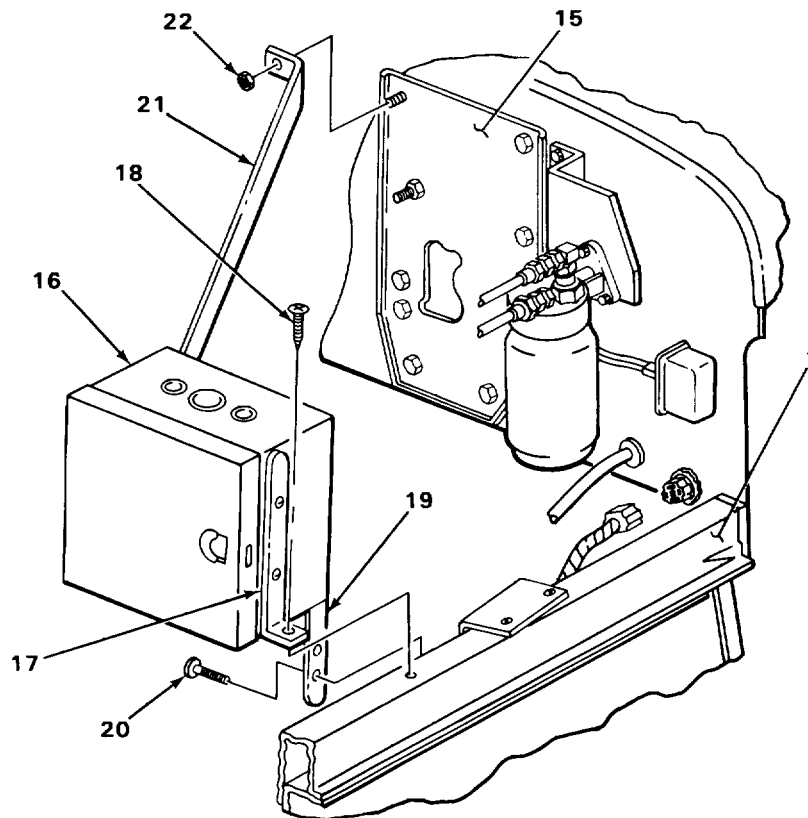
LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
12. Splash panel (1) to cab (2)	Screw (3), washer (4), and insulator (5)	Screw in, and tighten using 1/2-inch socket and handle.	
13. Splash panel (1) to bracket (6)	Three screws (7), six washers (8), three new lockwashers (9), and three nuts (10)	Screw in, and tighten using 1/2-inch wrench, 11/2-inch socket, handle and extension.	
NOTE			
Steps 14 thru 19 apply only to left splash panel.			
14. Two power steering hoses (11) to splash panel (1)	Clamp (12), screw (13), and nut (14)	Screw on, and tighten using flat-tip screwdriver, 7/16-inch socket, and handle.	



TA229089

SPLASH PANEL - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
15. Splash panel (1) and firewall (15)	Relay box (16)	Put in place.	
16. Relay box left bracket (17) to splash panel (1)	Self-tapping screw (18)	Screw in, and tighten using 7/16-inch socket and handle.	
17. Relay box bottom bracket (19) to splash panel (1)	Two self-tapping screws (20)	Screw in, and tighten using 7/16-inch socket and handle.	
18. Relay box bracket (21) to fire-	New self-locking nut (22)	Screw in, and tighten using 7/16-inch socket and handle.	



TA229090

SPLASH PANEL - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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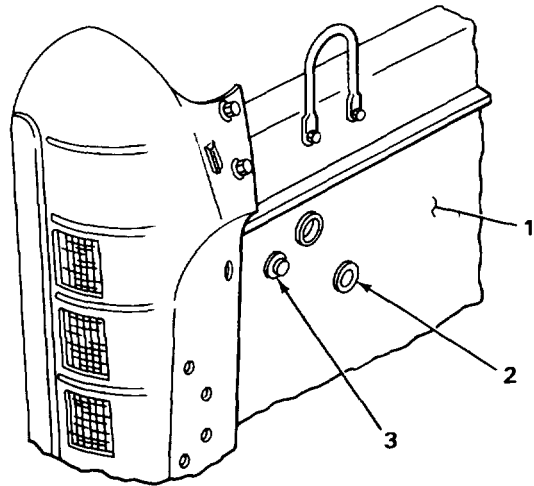
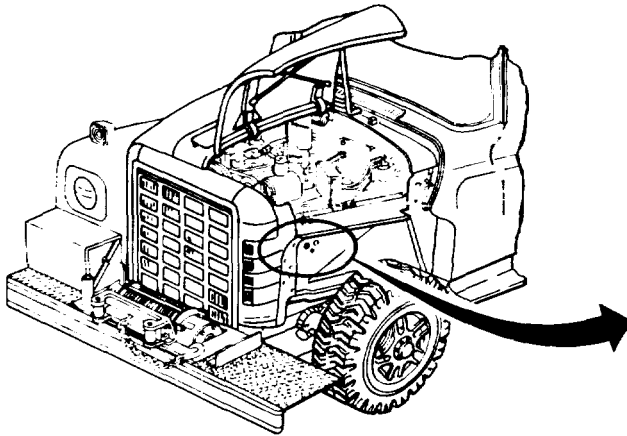
INSTALLATION - CONTINUED

19. Splash panel (1)	Grommets (2) and (3)	Using detergent and flat-tip screwdriver, put in.	
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NOTE

For right splash panel, install surge tank (page 2-223).

For left splash panel, install windshield washer reservoir and pump (page 2-1220).



NOTE

FOLLOW-ON MAINTENANCE:

1. Install right or left front fender (page 2-797).
2. Install, and adjust hood latch rod (page 2-783).

TASK ENDS HERE

TA229091

RUNNING BOARD

This task covers:

- a. Removal (page 2-813)
- b. Installation (page 2-813)

INITIAL SETUP:

Tools

Extension, 3/8-inch drive, 5-inch
 Handle, ratchet, 3/8-inch drive
 Socket, 3/8-inch drive, 11/2-inch

Personnel Required

Materials/Parts

Lockwasher, running board to
 bracket (four required)

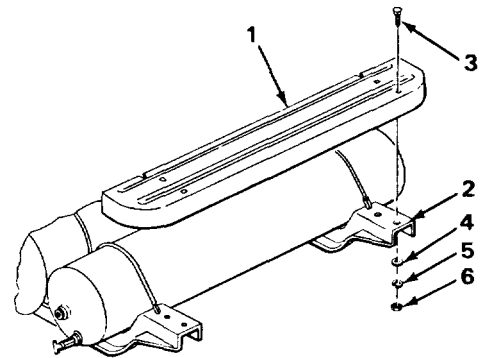
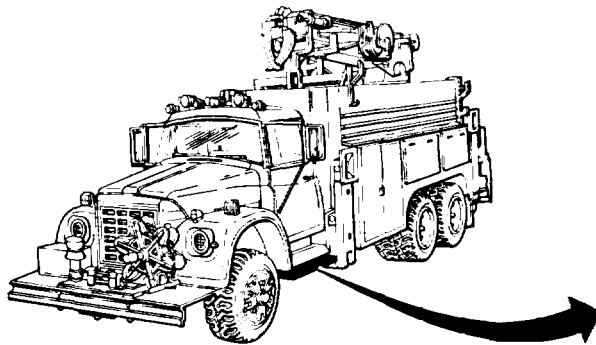
LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

- | | | | |
|----|---|---|---|
| 1. | Running board (1)
to two
brackets (2) | Four carriage
bolts (3),
washers (4),
lockwashers (5),
and nuts (6) | a. Using 1/2-inch socket, handle, and
extension, unscrew and take out.
b. Get rid of lockwashers (5). |
| 2. | Two brackets (2) | Running board (1) | Take off. |

INSTALLATION

- | | | | |
|----|------------------|-------------------|---------------|
| 3. | Two brackets (2) | Running board (1) | Put in place. |
|----|------------------|-------------------|---------------|



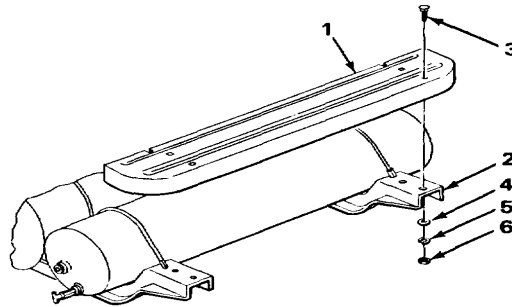
TA229092

RUNNING BOARD - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION - CONTINUED

4. Running board (1) to two brackets (2)	Four carriage bolts (3), washers (4), new lockwashers (5), and nuts	Screw in, and tighten using 1/2-inch socket, handle, and extension.	
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TASK ENDS HERE

WINDSHIELD

This task covers:

- a. Removal (page 2-815)
- b. Installation (page 2-817)

INITIAL SETUP:

Tools

- Knife, pocket
- Screwdriver, cross-tip, number one
- Screwdriver, flat-tip, 3/16-inch
- Tape, measuring

Materials/Parts - Continued

- Sealer, silicone rubber (item 26, appendix C)
- Solvent, drycleaning (item 28, appendix C)
- Tape, pressure sensitive (item 31, appendix C)

Personnel Required

Two

Materials/Parts

- Cord, binding (item 10, appendix C)
- Lubricant, silicone, spray (item 20, appendix C)
- Rags, wiping (item 24, appendix C)
- Retainer (rubber), glass-to-cab

Equipment Condition

Windshield wiper arms removed (page 2-1218).TA229093-

TA229093

WINDSHIELD - CONTINUED

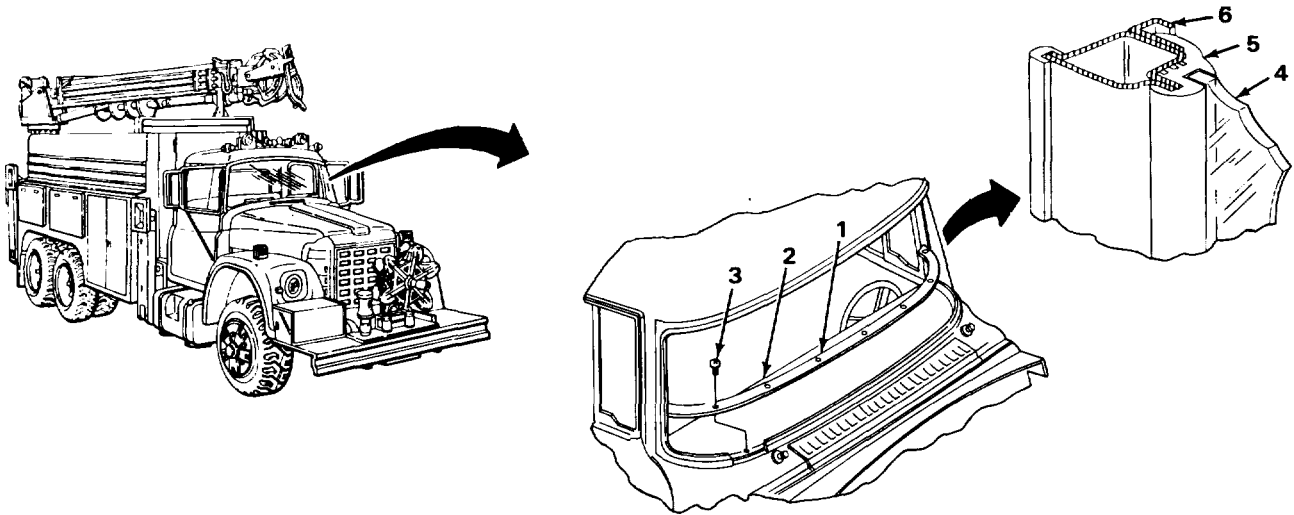
LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

Do not touch broken windshield glass without leather gloves. Clean away glass chips with shop vacuum before beginning task.

- | | | |
|---|---------------------|---|
| 1. Garnish molding (1) to dashboard (2) | Eight screws (3) | Using cross-tip screwdriver, unscrew and take out. |
| 2. Dashboard (2) | Garnish molding (1) | Using pocket knife, cut away any sealer, and pry off using flat-tip screwdriver. |
| 3. Glass (4) | Rubber retainer (5) | From inside cab, use pocket knife to cut sealer between glass (4) and rubber retainer (5) all the way around. |
| 4. Cab (6) | Rubber retainer (5) | From inside cab, use pocket knife to cut sealer between rubber retainer (5) and cab (6) all the way around. |



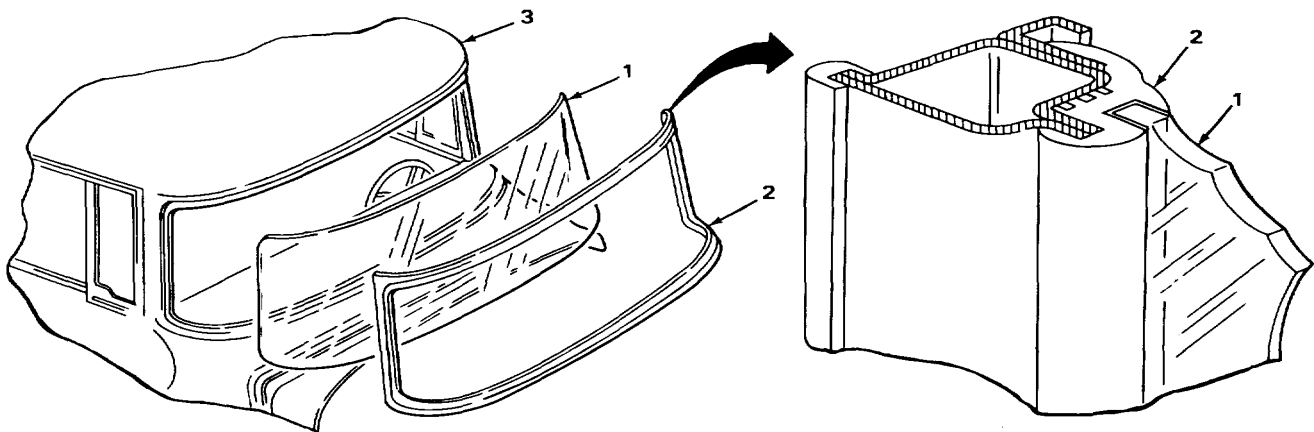
TA229094

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
5. Glass (1)	Rubber retainer (2)		From inside cab, use pocket knife to cut sealer between glass (1) and rubber retainer (2) all the way around.
6. Cab (3)	Rubber retainer (2)		From inside cab, use pocket knife to cut sealer between rubber retainer (2) and cab (3) all the way around.

WARNING

To prevent serious cuts and eye injury, leather gloves and eye protection must be worn by both you and assistant in case glass breaks.

7. Cab (3)	Rubber retainer (2) and glass (1)		With assistant, using flat-tip screwdriver and palm of hand, pry rubber retainer (2) off flange (4) until glass (1) and rubber retainer (2) are out.
8. Glass (1)	Rubber retainer (2)		Take off.



TA229095

WINDSHIELD - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION

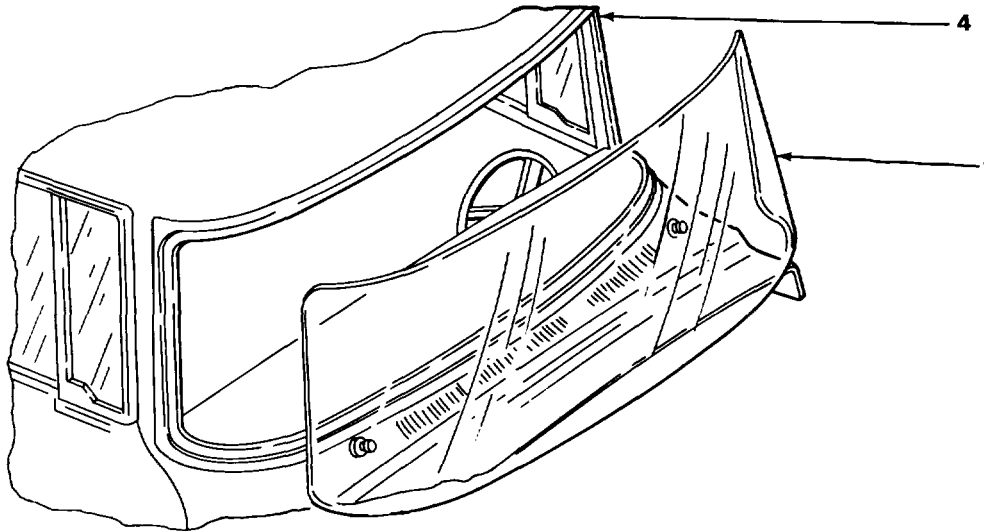
WARNING

Drycleaning solvent burns easily. Do not smoke or have open flame nearby while using solvent. Dispose of solvent-soaked rags. If brush is used, clean properly.

CAUTION

Do not allow solvent to stay on painted surfaces more than a few seconds as it will soften or remove paint.

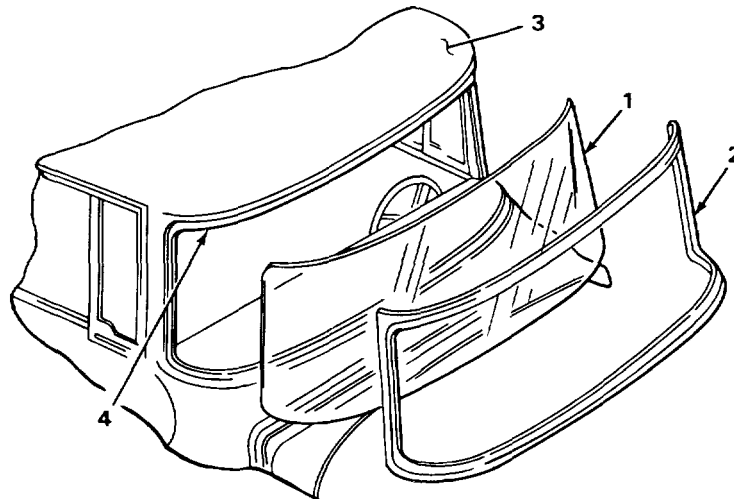
- | | | |
|-----|----------------|---|
| 9. | Glass (1) | If reusing glass(1), clean off old sealer using rags and drycleaning solvent. |
| 10. | Cab flange (4) | <ul style="list-style-type: none"> a. Clean off old sealer using rags and drycleaning solvent. b. Touch up any damage to paint with brush, primer, and enamel (see TM 43-0139). |



TA229096

WINDSHIELD - CONTINUED

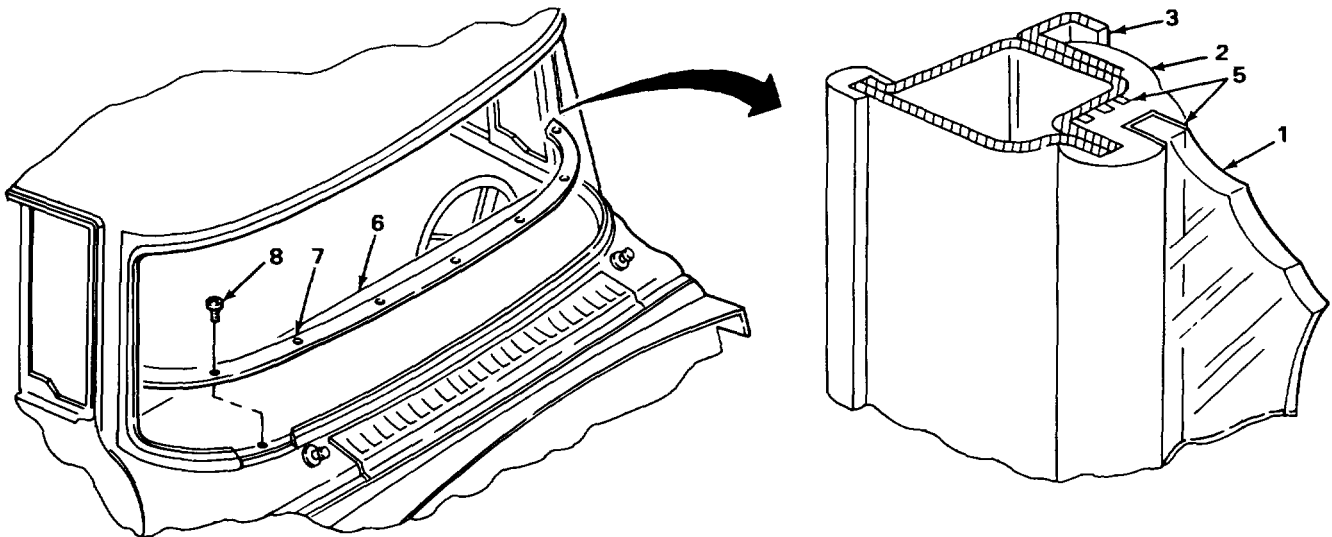
LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
11. Glass (1)	Rubber retainer (2)	<ul style="list-style-type: none"> a. Seat glass firmly in groove. b. Using pocket knife and measuring tape, cut length of cord at least 15-foot 2-inches (462 centimeters) long. c. Put cord into flange groove of rubber retainer (2) so ends of cord are at top center glass (1), and do not cross. d. Using tape, tape ends of cord to rubber retainer (2). 	
12. Cab (3)	Glass (1) and	<ul style="list-style-type: none"> a. Spray lips of rubber retainer (2) with silicone spray. b. With help of assistant, put in place. c. With assistant pushing on glass (1), pull out cord from inside cab (3) snapping rubber retainer (2) over cab flange (4). 	



TA229097

WINDSHIELD - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
13. Between cab (3) and rubber retainer (2)	Sealer (5)	Using tube of sealer, inject sealer (5) where shown all the way around.	
14. Between glass (1) and rubber retainer (2)	Sealer (5)	Using tube of sealer, inject sealer (5) where shown all the way around.	
15. Dashboard (6)	Garnish molding (7)	Put in place.	
16. Garnish molding (7) to dashboard (6)	Eight screws (8)	Screw in, and tighten using cross-tip screwdriver.	



NOTE

FOLLOW-ON MAINTENANCE: Windshield wiper arms installed (page 2-1218).

TASK ENDS HERE

TA229098

BACK WINDOW

This task covers:

- a. Removal (page 2-820)
 - b. Installation (page 2-822)
-

INITIAL SETUP

Tools

- Knife, pocket
- Screwdriver, flat-tip,
3/16-inch
- Tape, measuring

Materials/Parts

- Cord, binding (item 10,
appendix C)
- Personnel Required
- Lubricant, silicone spray
(item 20, appendix C)
- Rags, wiping (item 24,
appendix C)

Materials/Parts - Continued

- Retainer, rubber, glass-to-cab
- Sealer, silicone rubber (item 26,
appendix C)
- Solvent, drycleaning (item 28,
appendix C)
- Tape, pressure sensitive (item 31,
appendix C)

Three

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

Eye protection must be worn while replacing back window. If cracked or chipped, tempered glass may explode and glass particles may get into eyes.

Wear leather gloves while handling broken glass to prevent cuts.

NOTE

Step 1 only applies if glass is broken.

BACK WINDOW - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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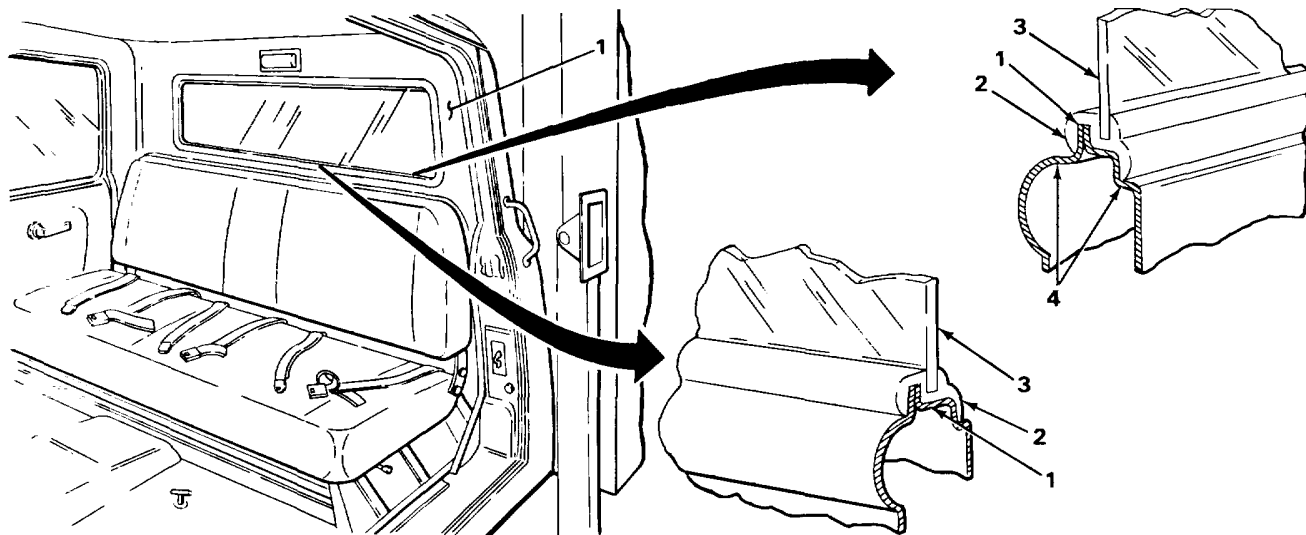
REMOVAL - CONTINUED

- | | | | |
|----|---------|---------------------|--|
| 1. | Cab (1) | Rubber retainer (2) | <ul style="list-style-type: none"> a. Pull off. b. Get rid of rubber retainer (2). |
|----|---------|---------------------|--|

NOTE

Steps 2 thru 5 apply if glass is being removed for reuse.

- | | | | |
|----|-----------|---------------------|--|
| 2. | Glass (3) | Rubber retainer (2) | From inside cab, use pocket knife to cut sealer between rubber retainer (2) and glass (3) so glass is loose. |
| 3. | Cab (1) | Rubber retainer (2) | From inside cab, use pocket knife to cut sealer between rubber retainer (2) and flange (4) so rubber is loose. |
| 4. | Glass (3) | Rubber retainer (2) | From inside cab, use pocket knife to cut sealer between rubber retainer (2) and glass (3) so glass is loose. |
| 5. | Cab (1) | Rubber | From inside cab, use pocket knife to cut |



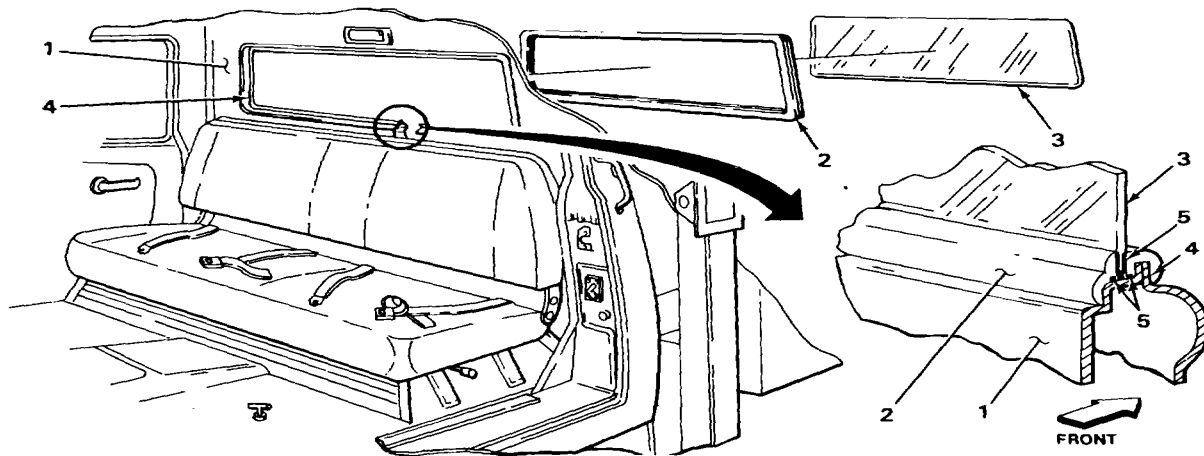
TA229099

BACK WINDOW - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED		
6. Cab (1)	Rubber retainer (2) and glass (3)	<ol style="list-style-type: none"> Have two assistants outside to support glass. With palm of hand on glass, use flat-tip screwdriver to pry rubber off flange, starting at one corner of window. Continue until rubber retainer (2) and glass (3) are out.
7. Glass (3)	Rubber retainer (2)	<ol style="list-style-type: none"> Take off. Get rid of rubber retainer (2).
INSTALLATION		
<u>WARNING</u>		
Drycleaning solvent burns easily. Do not smoke or have open flame nearby while using solvent. Dispose of solvent-soaked rags. If brush is used, clean properly.		
<u>CAUTION</u>		
Do not allow solvent to stay on painted surfaces as it will soften, blister, or remove paint.		
8.	Glass (3)	If reusing glass (3), clean off old sealer using rags and dry-cleaning solvent.
9.	Cab flange (4)	<ol style="list-style-type: none"> Clean off old sealer using rags and Touch up any damaged paint with brush, primer, and enamel (see TM 43-0139).
10. Glass (3)	Rubber retainer (2)	<ol style="list-style-type: none"> Put on so glass (3) is firmly seated in groove. Using pocket knife and measuring tape, cut length of cord at least 10 feet 7 inches (322.5 cm) long. Put cord into flange groove of rubber retainer (2) so ends of cord are at top center of glass (3), and do not cross. Tape ends of cord to rubber retainer (2) using tape.

BACKWINDOW - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
10. Continued		e. Spray lips of rubber retainer (2) using silicone spray.	
11. Cab (1)	Glass (3) and rubber retainer (2)	a. Have two assistants put in place. b. With assistants pushing on glass (3) from outside, pull out cord from inside cab (1), snapping rubber re- c. Push rubber retainer (2) firmly onto flange (4).	
12. Between cab (1) and rubber retainer (2)	Sealer (5)	Press in sealer (5) where shown.	
13. Between glass (3) and rubber retainer (2)	Sealer (5)	Press in sealer (5) where shown.	



TASK ENDS HERE

SEAT

This task covers:

- a. Removal (page 2-824)
- b. Installation (page 2-825)

TA229100

SEAT - CONTINUED

INITIAL SETUP

Tools

Handle, ratchet, 3/8-inch drive
 Pliers, long round-nose
 Socket, 3/16-inch drive, 9/16-inch
 Wrench, box-end, 11/2-inch

Materials/Parts - Continued

Lubricating stick

Personnel Required

Two

Materials/Parts

Lockwasher, adjuster to seat riser
 (four required)
 Lockwasher, bottom cushion
 to adjuster (four required)

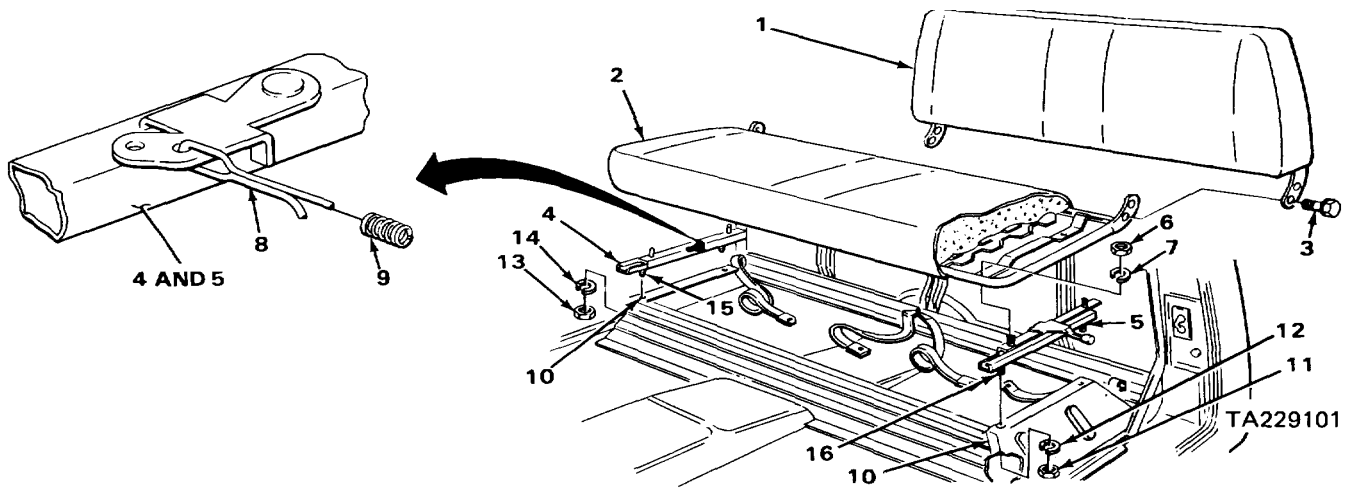
LOCATION	ITEM	ACTION	REMARKS
1.	Seat back cushion (1) to seat bottom cushion (2)		Using 9/16-inch socket and handle, unscrew and take out.
2.	Seat bottom cushion (2)		With assistant, take off and remove from cab.
3.	Seat bottom cushion (2) to right seat adjuster (4) and left seat adjuster (5)		a. Using 1/2-inch wrench, unscrew and take out. b. Get rid of lockwashers (7).
4.	Right seat adjuster (4) and left seat adjuster (5)		With assistant, take off and remove from cab.
5.	Left seat adjuster(5)		a. Squeeze wire end and wire (8) together. b. Work off retainer spring (9). c. Bend wire (8), and take off.
6.	Left seat adjuster (5) to seat riser (10)		a. Using 1/2-inch wrench, unscrew and take off. b. Get rid of lockwashers (12).

SEAT - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
7.	Seat riser (10)	Left seat adjuster (5)	Take off.
8.	Right seat adjuster (4)	wire (8)	a. Squeeze wire end and wire (8) together. b. Work off retainer spring (9). c. Bend wire (8), and take off.
9.	Right seat adjuster (4) to seat riser (10)	Two nuts (13) and lockwashers (14)	a. Using 1/2-inch wrench, unscrew and take off. b. Get rid of lockwashers (14).
10.	Seat riser (10)	Right seat adjuster (4)	Take off.

INSTALLATION

11.	Seat riser (10)	Right seat adjuster (4)	Put in place.
12.	Right seat adjuster (4) to seat riser (10)	Two new lockwashers (14) and nuts (13)	Screw onto weld bolts (15), and tighten using 1/2-inch wrench.
13.	Seat riser (10)	Left seat adjuster (5)	Put in place.
14.	Left seat adjuster (5) to seat	Two new lockwashers (12) and nuts (11)	Screw onto weld bolts (16), and tighten using 1/2-inch wrench.



SEAT - CONTINUED

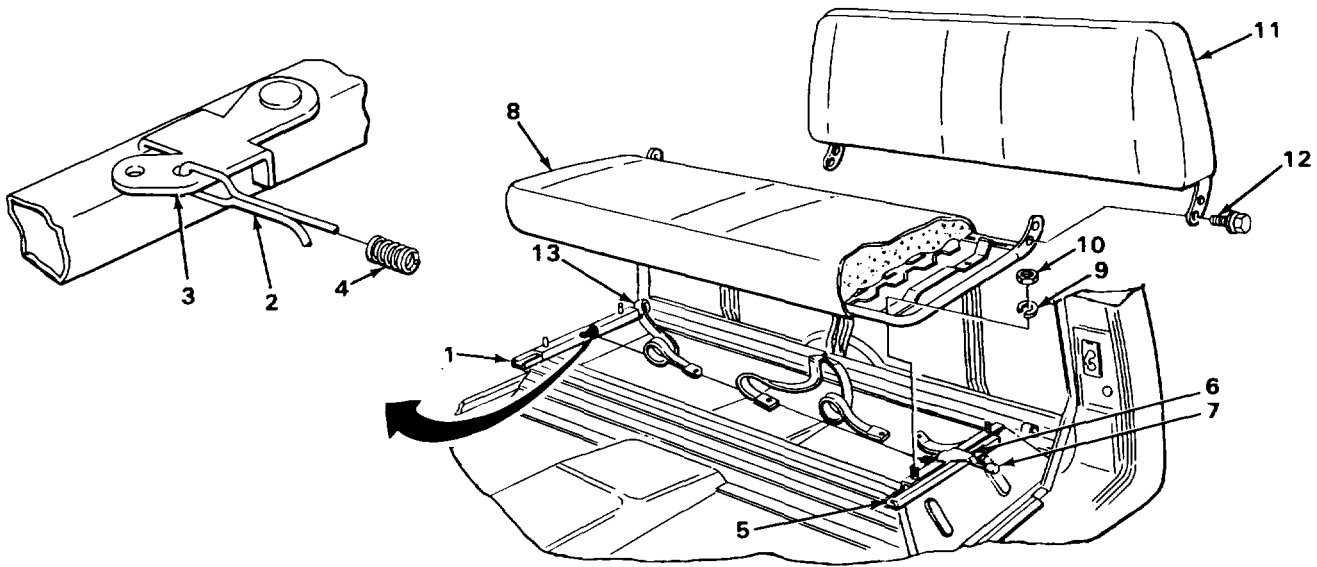
LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
15. Right seat	Wire (2) adjuster (1)	<ol style="list-style-type: none"> Hook onto adjuster pawl (3), and bend over. Squeeze ends of wire (2) together. Work on retainer spring (4). Pull tight, but do not pull out pawl (3) on right adjuster (1).
16. Left seat	Wire (2) adjuster (5)	<ol style="list-style-type: none"> Hook through left adjuster pawl (6) making sure wire (2) will remain tight. If it will not, use long round-nose pliers to re-bend so it will remain tight. Bend wires (2) over, and squeeze ends together. Work on spring (4), locking loop. Pull on adjuster handle (7) making sure both pawls (3) and (6) are working.
17. Right seat adjuster (1) and left seat adjuster (5)	Pawls (3) and (6) and adjusters (1) and (5)	With lubricating stick, lubricate where pawls (3) and (6) pivot and adjusters (1) and (5) slide.
18.	Seat bottom cushion (8)	With assistant, put in place on adjusters (1) and (5). Move adjusters (1) and (5) as needed position seat.
19. Seat bottom cushion (8) to adjusters (1) and (5)	Four new lockwashers (9) and nut (10)	Screw on, and tighten using 1/2-inch wrench.
20. Seat bottom cushion (8)	Seat back cushion (11)	With assistant, put in place.
21. Seat back cushion (11) to cushion (8) seat bottom cushion (8)	Four screws (12)	With help of assistant, screw in and tighten using 9/16-inch socket and handle.

SEAT - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION - CONTINUED

22. Between seat back cushion (11) and seat bottom	Seat belts (13)	Put into place.	
--	-----------------	-----------------	--



TASK ENDS HERE

SEAT BELTS

This task covers:

- a. Removal (page 2-828)
- b. Installation (page 2-828)

INITIAL SETUP

Tools

- Extension, 1/2-inch drive, 5-inch
- Handle, ratchet, 3/8-inch drive
- Handle, ratchet, 1/2-inch drive
- Socket, 3/8-inch drive, 9/16-inch
- Socket, 3/4-inch drive, 11/2-inch

Personnel Required

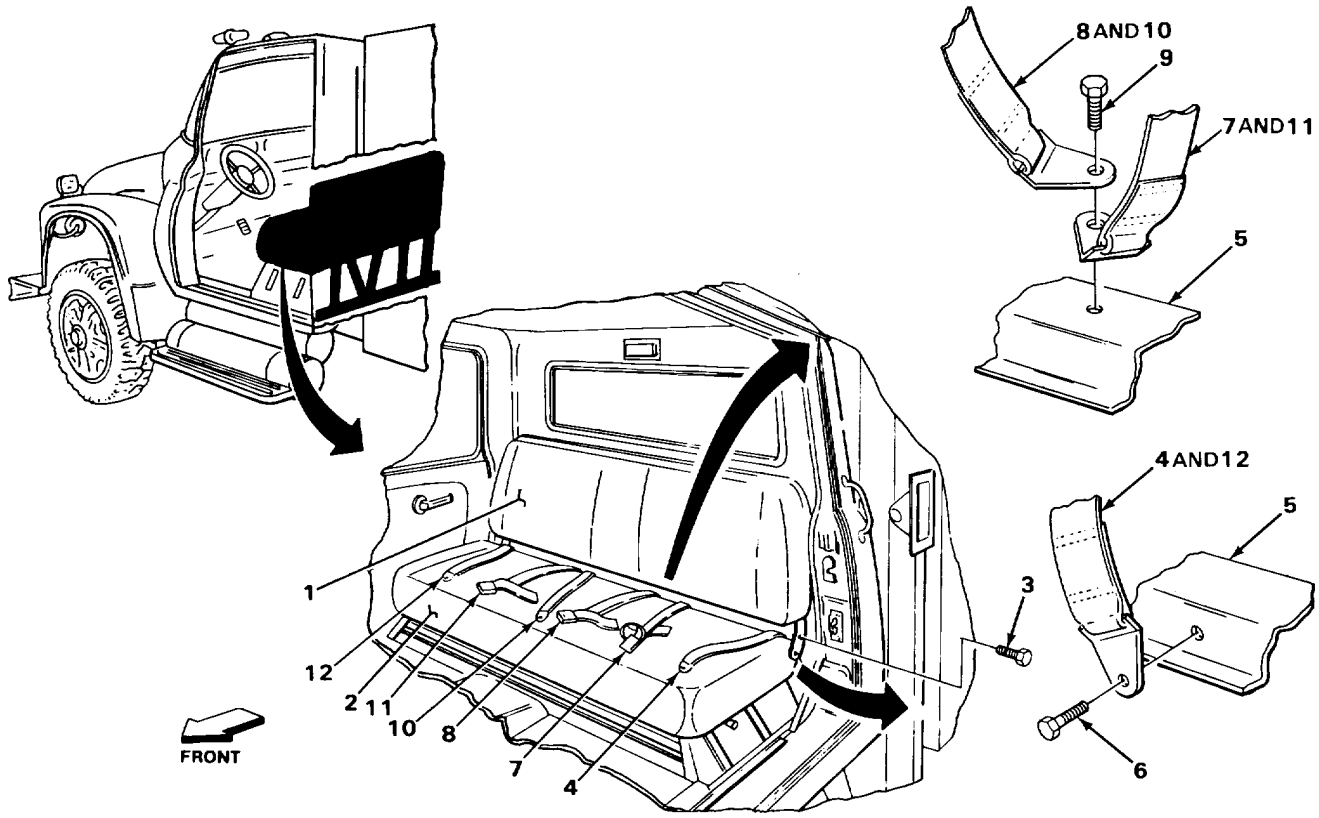
Two

SEAT BELTS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
1.	Seat back cushion (1) to seat bottom cushion (2)	Four screws (3) Using 9/16-inch socket and handle with 3/8-inch drive, unscrew and take out.
2.	Seat bottom cushion (2)	Seat back cushion (1) With assistant, take off and remove from cab.
3.	Left seat belt long half (4) to cab (5)	Screw (6) and left seat belt long half (4) Using 3/4-inch socket, extension, and handle with 1/2-inch drive, unscrew and take out.
4.	Left seat belt latch half (7) and center seat belt latch half (8) to cab (5)	Screw (9) Using 3/4-inch socket, extension, and handle with 1/2-inch drive, unscrew and take out.
5.	Cab(5)	Seat belt halves (7) and (8) Take out.
6.	Center seat belt long half (10) and right seat belt latch half (11) to cab (5)	Screw (9) Using 3/4-inch socket, extension, and handle with 1/2-inch drive, unscrew and take out.
7.	Cab (5)	Seat belt halves (10) and (11) Take out.
8.	Right seat belt long half (12) to cab (5)	Screw (6) Using 3/4-inch socket, extension, and handle with 1/2-inch drive, unscrew and take out.
INSTALLATION		
9.	Cab(5)	Right seat belt long half (12) Put in place.

SEAT BELTS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
10.	Right seat belt long half (12) to cab (5)	Screw (6)	Screw in, and tighten using 3/4-inch socket, extension, and handle with 1/2-inch drive.
11.	Cab (5)	Right seat belt latch half (11) and center seat belt long half (10)	Put in place.
12.	Right seat belt latch half (11) and center seat belt long half (10)	Screw (9)	Screw in, and tighten using 3/4-inch socket, extension, and handle with 112-inch drive.



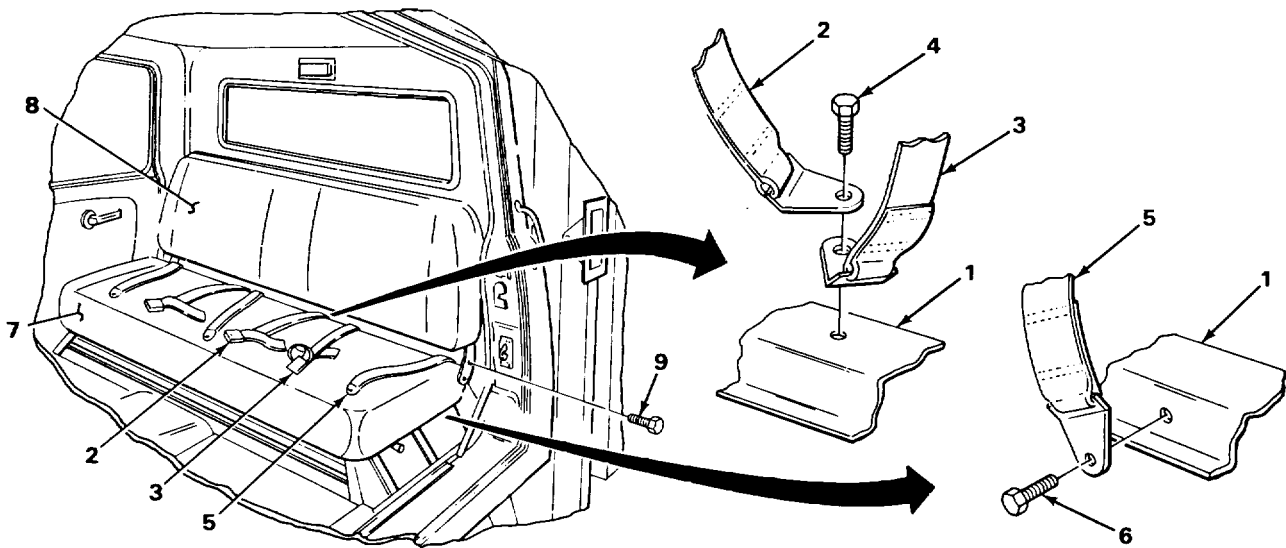
TA229103

SEAT BELTS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
13. Cab (1)	Center seat belt latch half (2) and left seat belt latch half (3)	Put in place.
14. Center seat belt latch half (2) and left seat belt latch half (3) to cab (1)	Screw (4)	Screw in, and tighten using 3/4-inch socket, extension and handle with 1/2-inch drive.
15. Cab (1)	Left seat belt long half (5)	Put in place, and hold.
16. Left seat belt long half (5) to cab (1)	Screw (6)	Screw in, and tighten using 3/4-inch socket, extension and handle with 1/2-inch drive.
17. Seat bottom cushion (7)	Seat belts	Put in place.
18. Seat bottom cushion (7)	Seat back cushion (8)	With help of assistant, put in place.
19. Seat back cushion (8) to seat bottom cushion (7)	Four screws (9)	With help of assistant, screw in and tighten using 9/16-inch socket and handle with 3/8-inch drive.

SEAT BELTS - CONTINUED

INSTALLATION - CONTINUED



TASK ENDS HERE

SUN VISORS

This task covers:

- a. Removal (page 2-831)
- b. Installation (page 2-832)

INITIAL SETUP

Tools

Screwdriver, cross-tip,
number one
Screwdriver, cross-tip,
number two

Personnel Required

One

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

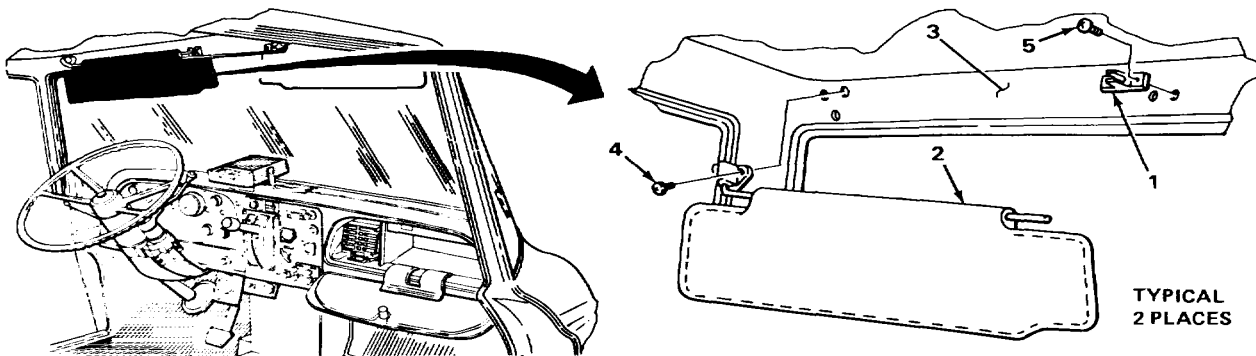
NOTE

The steps in this task are the same for both right and left sun visors. The left sun visor is given as the example.

TA229104

SUN VISORS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1.	Retainer clip (1)	Sun visor (2)	Pull out.
2.	Sun visor (2) to header (3)	Three screws (4) and sun visor (2)	Using number two cross-tip screwdriver, unscrew and take out.
3.	Retainer clip (1) to header (3)	Two screws (5) and clip (1)	Using number one cross-tip screwdriver, unscrew and take out.
INSTALLATION			
4.	Header (3)	Retainer clip (1)	Put in place, and hold.
5.	Retainer clip (1) to header (3)	Two screws (5)	Screw in, and tighten using number one cross-tip screwdriver.
6.	Header (3)	Sun visor (2)	Put in place, and hold.
7.	Sun visor (2) to header (3)	Three screws (4)	a. Screw in, and tighten using number two cross-tip screwdriver. b. Put visor (2) in retainer clip (1).



TASK ENDS HERE

FLOORMAT

This task covers:

- a. Removal (page 2-833)
- b. Installation (page 2-834)

FLOORMAT - CONTINUED

INITIAL SETUP

Tools

Pliers, snapping
Screwdriver, flat-tip

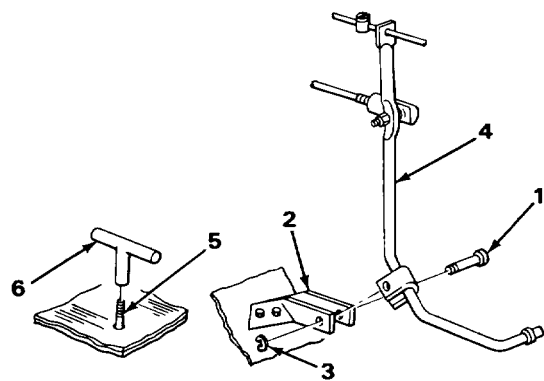
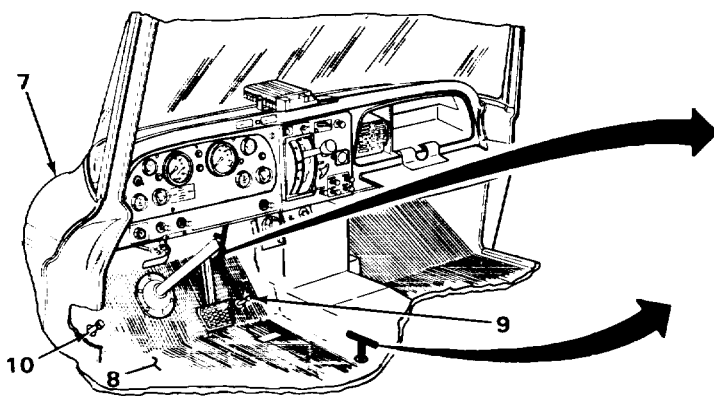
Personnel Required

One

Equipment Condition

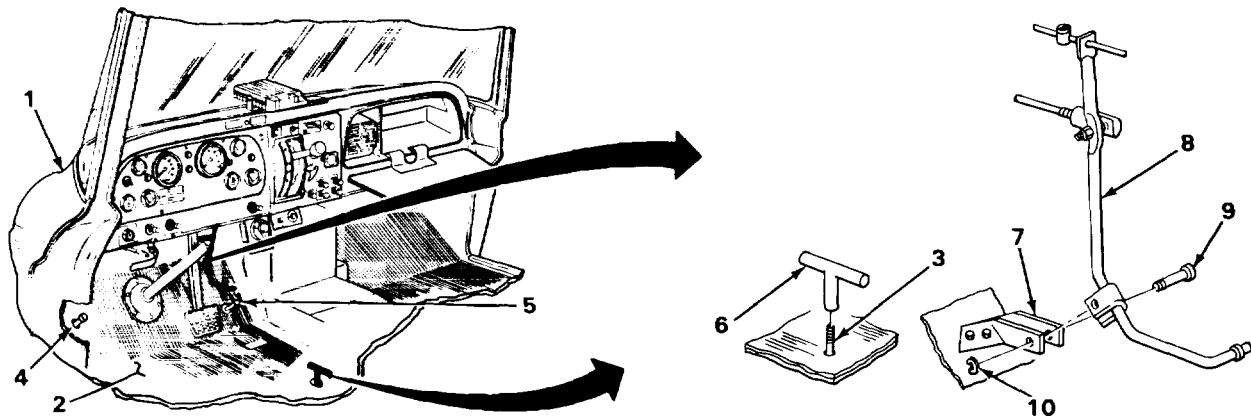
Accelerator pedal and bracket removed (page 2-180).

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
1. Accelerator pedal rod pin (1) to bracket (2)	E-clip (3)	Using flat-tip screwdriver, pry off.
2. Accelerator pedal rod (4) to bracket (2)	Accelerator rod pin (1)	Take out.
3. Bracket (2) rod (4)	Accelerator pedal	Take out, and push out of the way.
4. Power takeoff handle shaft (5)	Power takeoff handle (6)	Unscrew, and take off.
5. Cab (7)	Floormat (8)	a. Pull off of accelerator stop (9) dimmer switch (10). b. Fold down from top and in half from right to left. Do not crease. c. Take out.



FLOORMAT - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
6. Cab (1)	Floormat (2)	a. Put on left side of floor. b. Unfold. c. Shift into place and work power take-off handle shaft (3), dimmer switch (4), and accelerator stop (5) through holes.	
7. Power takeoff handle shaft (3)	Power takeoff handle (6)	Screw onto shaft (3).	
8. Bracket (7)	Accelerator pedal rod (8)	Untie, and put in place.	
9. Accelerator pedal rod (8)	Pedal rod pin (9)	Put in place through bracket (7) and rod (8).	
10. Pedal rod pin (9)	E-clip (10)	Expand and put into place in groove in pin, using snapping pliers.	



NOTE

FOLLOW-ON MAINTENANCE: Install accelerator pedal (page 2-180).

TASK ENDS HERE

TA229107

SCUFF PLATES

This task covers:

- a. Removal (page 2-835)
- b. Installation (page 2-836)

INITIAL SETUP

Tools

Screwdriver, cross-tip,
number one

Personnel Required

One

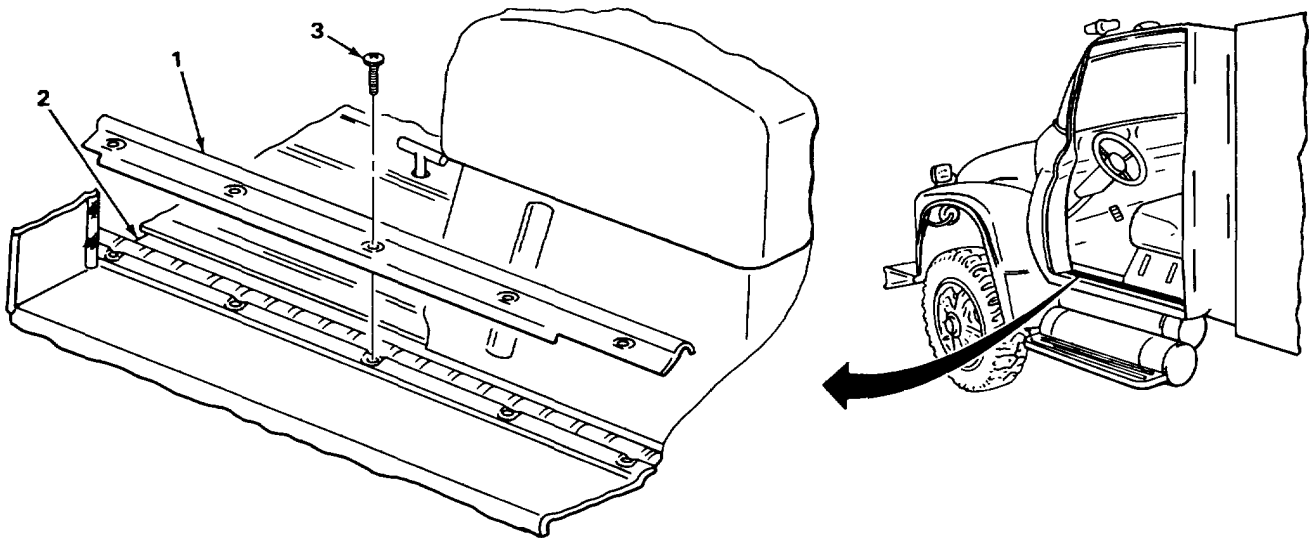
LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

NOTE

Except as noted, the steps in this task are the same for both right and left scuff plates. The left scuff plate is used as the example.

- | | | |
|------------------------------------|-----------------|--|
| 1. Scuff plate (1)
to floor (2) | Five screws (3) | Using cross-tip screwdriver, unscrew and take out. |
| 2. Floor (2) | Scuff Plate (1) | Take off. |



TA229108

SCUFF PLATES - CONTINUED

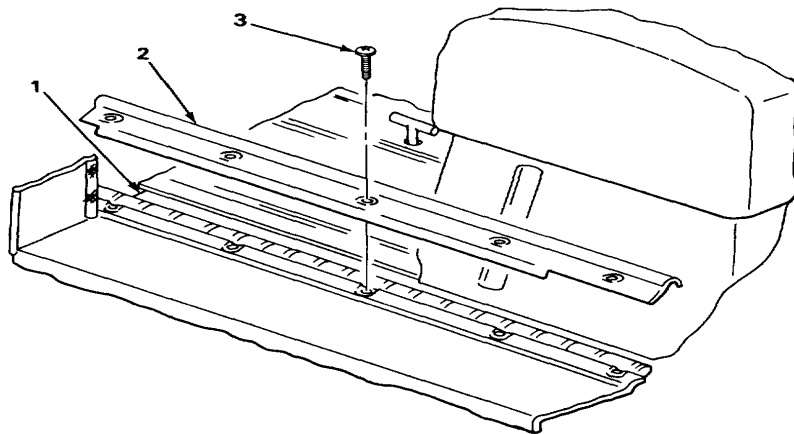
LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION

CAUTION

Do not pinch wires between left scuff plate and floor. Pinched wires could result in electrical failure.

- | | | | |
|----|---------------------------------|-----------------|---|
| 3. | Floor (1) | Scuff plate (2) | Put in place. |
| 4. | Scuff plate (2)
to floor (1) | Five screws (3) | Screw in, and tighten using cross-tip
screwdriver. |



TASK ENDS HERE

HOSE COVER PLATE

This task covers:

- a. Removal (page 2-837)
- b. Installation (page 2-837)

INITIAL SETUP

Tools

Screwdriver, cross tip,
number one

Personnel Required

One

Equipment Condition

Left scuff plate removed (page 2-835).
TA229109

HOSE COVER PLATE - CONTINUED

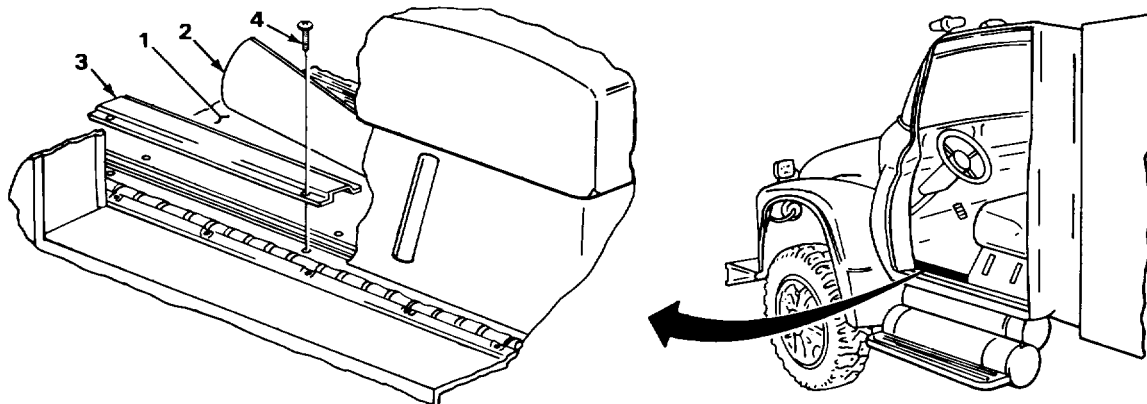
LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1. Floor (1)	Floormat (2)	Turn back enough to get at hose cover plate (3).	
2. Hose cover plate (3) to floor (1)	Four screws (4)	Using cross-tip screwdriver, unscrew and take out.	
3. Floor (1)	Hose cover plate (3)	Take off.	

INSTALLATION

CAUTION

Do not pinch hoses between cover and floor. Pinched hoses could cause air leak and brake failure.

4. Floor (1)	Hose cover plate (3)	Put in place.	
5. Hose cover plate (3) to floor (1)	Four screws (4)	Screw in, and tighten using cross-tip screwdriver.	



NOTE

FOLLOW-ON MAINTENANCE: Install left scuff plate (page 2-835).

TASK ENDS HERE

TA229110

HEADLINING PANELS

This task covers:

- a. Removal (page 2-838)
 - b. Installation (page 2-838)
-

INITIAL SETUP

Tools

Knife, craft
Scribe, machinist's

Personnel Required

One

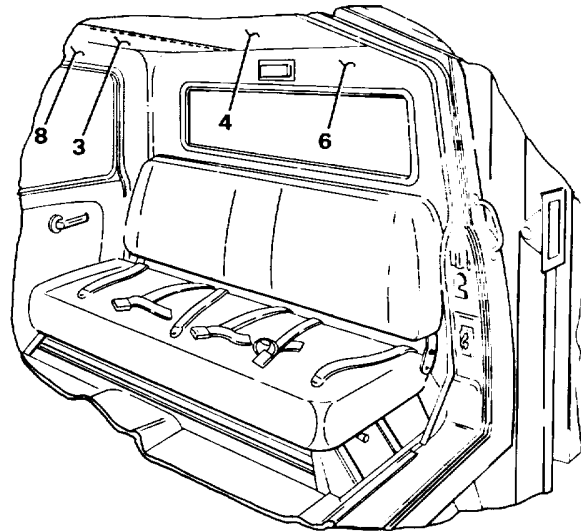
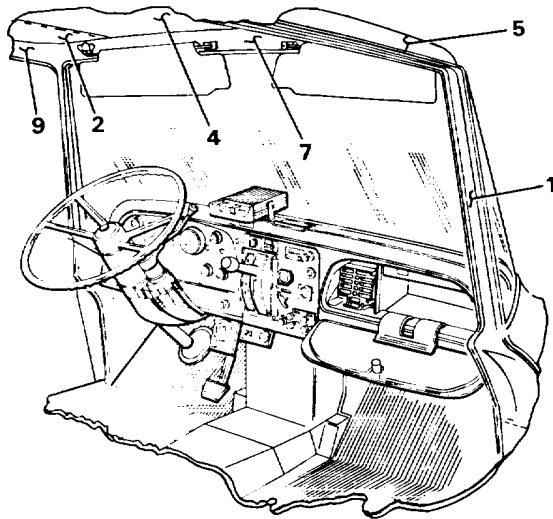
Equipment Condition

Both cab mounted spotlights removed
(page 2-386).

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
1. Cab (1)	Left headlining panel (2)	<ul style="list-style-type: none"> a. Pull front end toward middle of truck. b. Bend down middle of panel (2), and pull out.
2.	Right headlining panel (3)	<ul style="list-style-type: none"> a. Pull front end toward middle of truck. b. Bend down middle of panel (3), and pull out.
3.	Center headlining panel (4)	<ul style="list-style-type: none"> a. Pull down middle of panel (4), and pull out.
INSTALLATION		
4. Cab (1)	Center headlining panel (4)	<ul style="list-style-type: none"> a. Push back of panel into place between roof (5) and inner panel (6). b. Bend headlining panel (4) down in middle. c. Push front of headlining panel into place between roof (5) and windshield header panel (7).
5.	Right headlining panel (3)	<ul style="list-style-type: none"> a. Push back of panel into place underneath center headlining panel (4) between back inner panel (6) and roof (5).

HEADLINING PANELS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
5. Continued		b. Bend down right headlining panel (3) slightly in middle. c. Push into place between windshield header panel (7) and roof. d. Push into place between door header panel (8) and roof.	
6.	Left headlining panel (2)	a. Push back of panel (2) into place underneath center headliner panel (4) between back inner panel (6) and roof (5). b. Bend down left headlining panel (2) slightly in middle. c. Push into place between windshield header panel (7) and roof (5). d. Push into place between door header panel (9) and roof (5).	

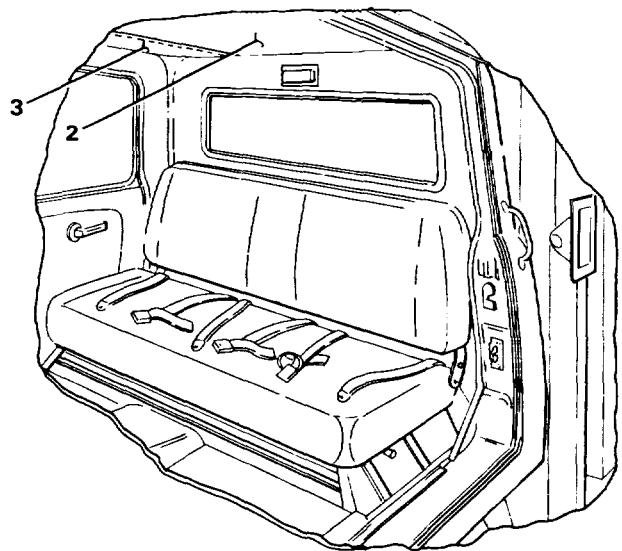
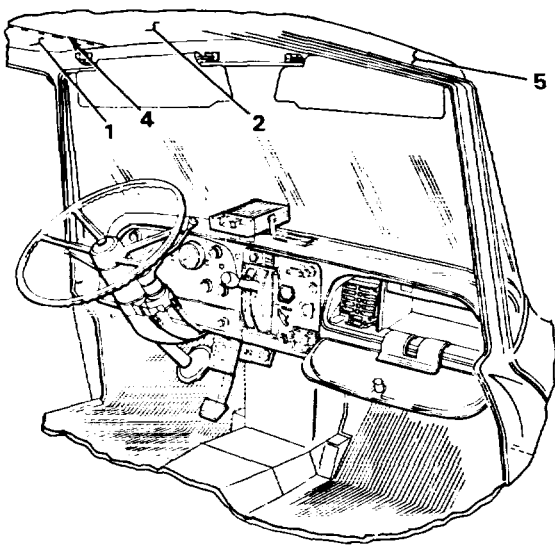


NOTE

Perform step 7 only if installing new headlining panels (1), (2), and (3).

HEADLINING PANELS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
7. Headlining panels (1), (2), and (3)	Two spotlight holes (4)	a. Using scribe, punch small holes from top of roof (5) through headlining panels (1), (2), and (3) to locate spotlight holes (4). b. Using craft knife, cut 1/2-inch diameter spotlight holes (4) in	



NOTE

FOLLOW-ON MAINTENANCE: Install cab mounted spotlight (page 2-386).

TASK ENDS HERE

ENGINE COVER

This task covers:

- a. Removal (page 2-841)
- b. Installation (page 2-842)

ENGINE COVER - CONTINUED

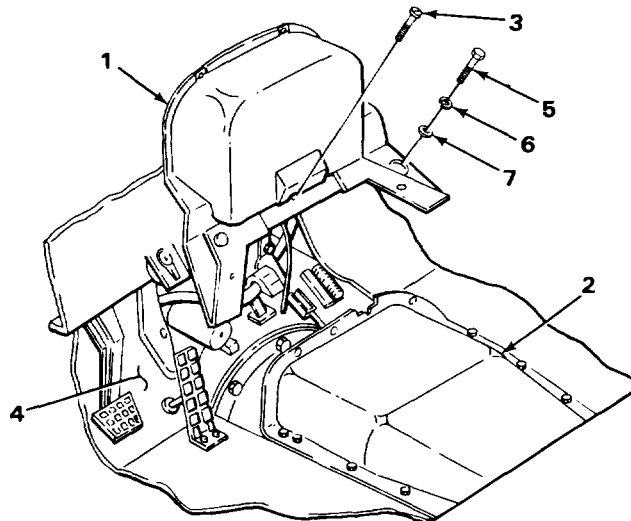
INITIAL SETUP

<p>Tools</p> <p>Extension, 3/8-inch drive, 5-inch Handle, ratchet, 3/8-inch drive Screwdriver, cross-tip, number two Socket, 3/8-inch drive, 7116-inch Universal joint, 318-inch drive</p> <p>Materials/Parts</p> <p>Lockwasher, engine cover to firewall (six required)</p>	<p>Personnel Required</p> <p>One</p> <p>Accelerator pedal and bracket removed (page 2-180). Floormat removed (page 2-832).</p>
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LOCATION	ITEM	ACTION REMARKS
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REMOVAL

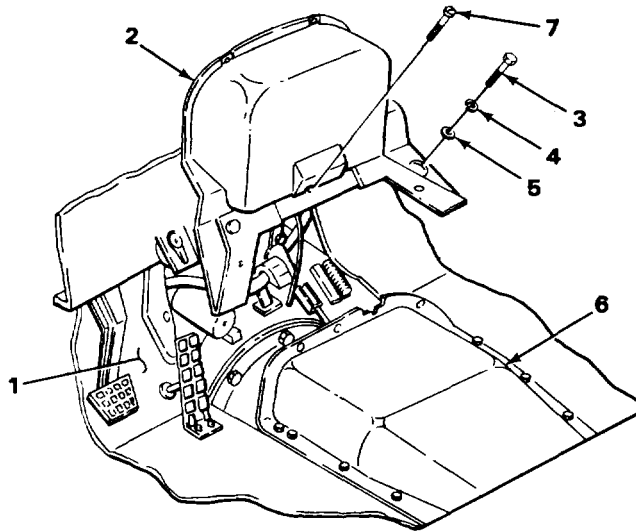
- | | | |
|--|---|--|
| <p>1. Engine cover (1)
to transmission
cover (2)</p> | <p>Three screws (3)</p> | <p>Using cross-tip screwdriver, unscrew
and take out.</p> |
| <p>2. Engine cover (1)
to firewall (4)
and washers (7)</p> | <p>Six screws (5),
lockwashers (6),</p> | <p>a. Using 7/16-inch socket, handle,
extension, and universal joint, un-
screw and take out.
b. Get rid of lockwashers (6).</p> |



TA229113

ENGINE COVER - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
4. Firewall (1)	Engine cover-(2)	Put in place.	
5. Engine cover (2) to firewall (1)	Six screws (3), new lockwashers (4), and washers (5)	Screw in, and tighten using 7/16-inch socket, handle, extension, and universal joint.	
6. Engine cover (2) to Transmission cover (6)	Three screws (7)	Screw in, and tighten using cross-tip screwdriver.	



NOTE

FOLLOW-ON MAINTENANCE:

1. Install floormat (page 2-832).
2. Install accelerator pedal (page 2-180).

TASK ENDS HERE

TRANSMISSION COVER

This task covers:

- a. Removal (page 2-843)
- b. Installation (page 2-844)

TA229114

TRANSMISSION COVER - CONTINUED

INITIAL SETUP

Tools

- Brush, wire
- Extension, 3/8-inch drive, 6-inch
- Handle, ratchet, 3/8-inch drive
- Knife, putty
- Socket, 3/8-inch drive, 7/16-inch

Materials/Parts

- Rags, wiping (item 24, appendix C)
- Sealer, silicone rubber (item 26, appendix C)
- Solvent, dry-cleaning (item 28, appendix C)

Personnel Required

One

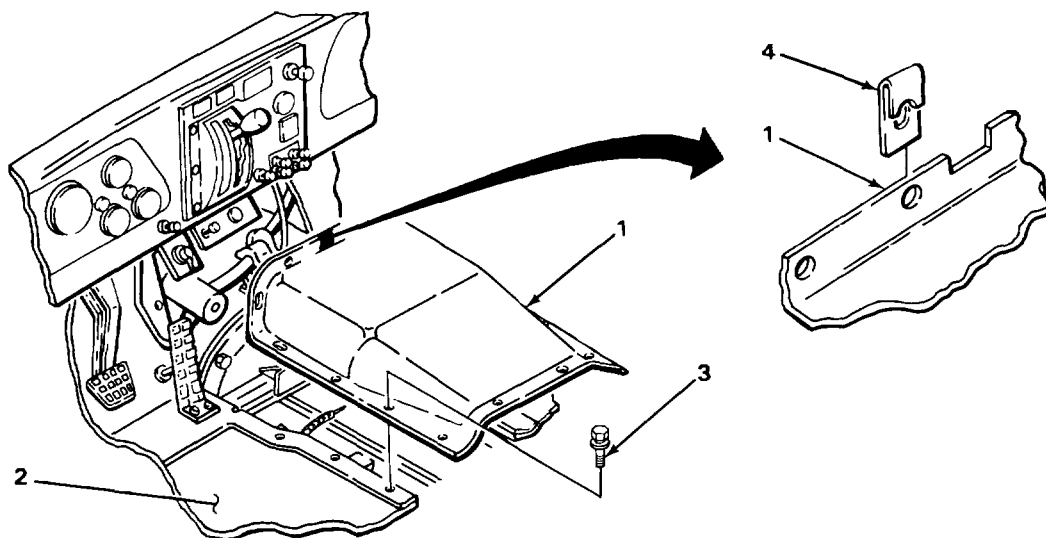
Equipment Condition

Engine cover removed (page 2-840).

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

- | | | | |
|----|-------------------------------------|------------------|--|
| 1. | Transmission cover (1) to floor (2) | Ten screws (3) | Using 7/16-inch socket, extension, and handle, unscrew and take out. |
| 2. | Floor (2) cover (1) | Transmission | Take off. |
| 3. | Transmission cover (1) | Three J-nuts (4) | Take off. |



TA229115

TRANSMISSION COVER - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL - CONTINUED

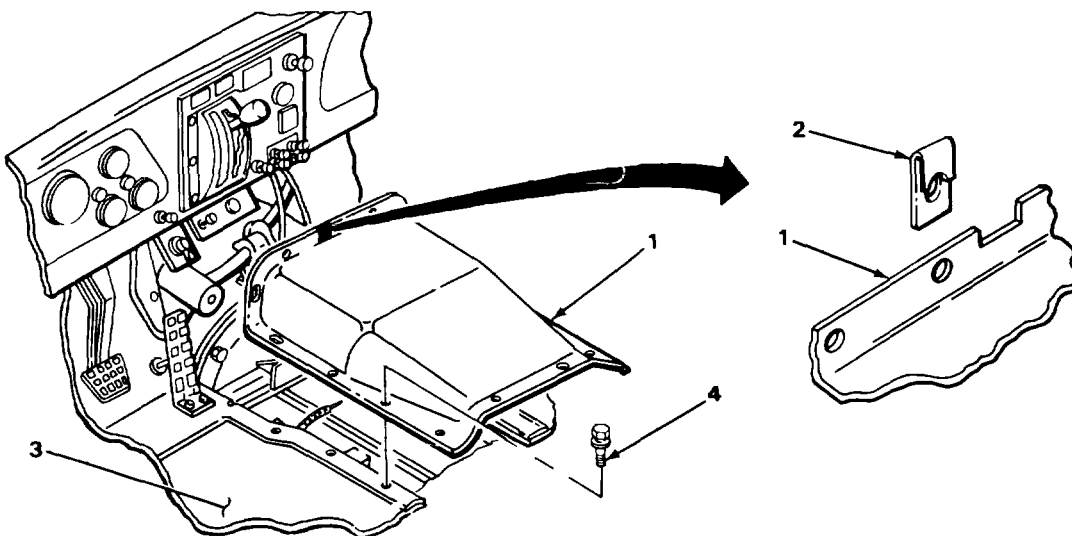
WARNING

Drycleaning solvent is both toxic and flammable. Avoid prolonged breathing of vapors and skin contact. Do not use near open flame or excessive heat. Flashpoint of solvent is 1380F (590 C). Dispose of solvent soaked rags properly.

4.	Transmission cover (1)	Using putty knife, brush, rags, and dry-cleaning solvent, remove old sealer from transmission cover.
----	------------------------	--

INSTALLATION

5.	Transmission cover (1)	Apply silicone sealer around flange where transmission cover (1) meets floor.	
6.	Transmission cover (1)	Three J-nuts (2)	Put on.
7.	Floor (3) cover (1)	Transmission	Put in place.
8.	Transmission floor (1) to	10 screws (4) socket, handle, and extension.	Screw in, and tighten using 7/16-inch



TA229116

TRANSMISSION COVER - CONTINUED

INSTALLATION - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE: Install engine cover (page 2-840).

TASK ENDS HERE

GLOVE COMPARTMENT

This task covers:

- a. Removal (page 2-845)
- b. Installation (page 2-846)

INITIAL SETUP

Tools

Screwdriver, cross-tip,
number two, 1 1/2-inch

Personnel Required

One

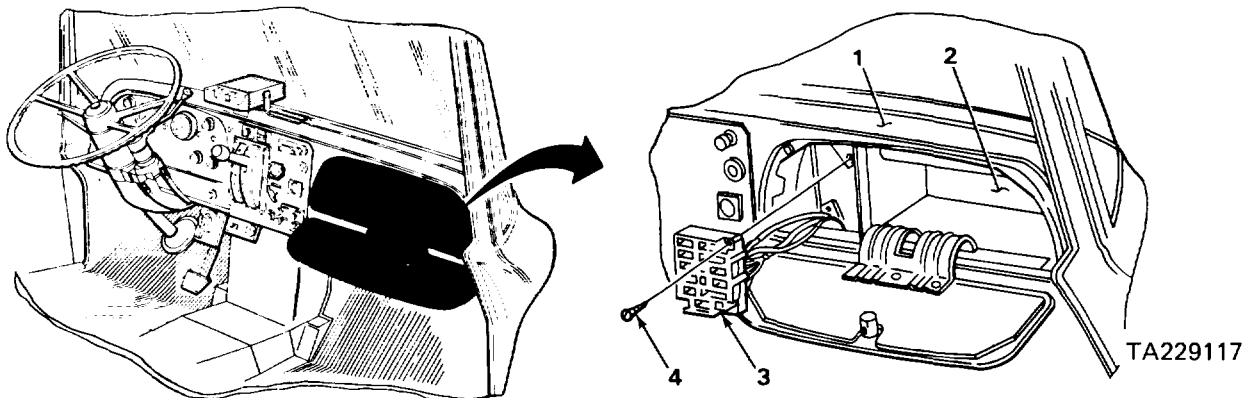
Equipment Condition

Battery ground cable disconnected
(page 2-414).
Defroster duct removed (page 2-1247).
Right defroster hose and outlet removed
(page 2-1257).

LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

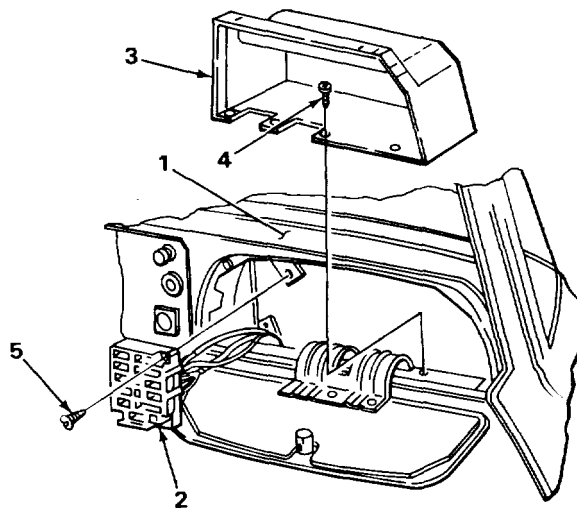
REMOVAL

- | | | |
|---------------------------------------|-----------------------------------|---|
| 1. Dashboard (1) | Glove | Open, and remove all loose items such as |
| 2. Fuse block (3)
to dashboard (1) | compartment (2)
Two screws (4) | log book and operator's manual.
Using cross-tip screwdriver, unscrew and |



GLOVE COMPARTMENT - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
3. Dashboard (1)	Fuse block (2)	Pull forward, and let hang by wires.	
4. Glove compartment (3) to dashboard (1)	Eight screws (4) and take out.	Using cross-tip screwdriver, unscrew and	
5. Dashboard (1) Compartment (3) down, and out.	Glove	a. Push toward front of truck. b. Take out by pushing it to the left,	
INSTALLATION			
6. Dashboard (1)	Glove compartment (3)	Push up into place from behind, and line up holes.	
7. Glove compartment (3) to dashboard (1)	Eight screws (4)	Screw in, and tighten using cross-tip screwdriver.	
8. Dashboard (1)	Fuse block (2)	Put in place, and hold.	
9. Fuse block (2) to dashboard (1)	Two screws (5)	Screw in, and tighten using cross-tip screwdriver.	



TA229118

GLOVE COMPARTMENT - CONTINUED

INSTALLATION - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Install right defroster hose and outlet (page 2-1257).
2. Install defroster duct (page 2-1247).
3. Connect battery ground cable (page 2-414).

TASK ENDS HERE

GLOVE COMPARTMENT DOOR, HINGE, AND STRIKER

This task covers:

- | | |
|---|--|
| <ul style="list-style-type: none"> a. Removal (page 2-848) b. Installation (page 2-848) | <ul style="list-style-type: none"> c. Adjustment (page 2-849) |
|---|--|
-

INITIAL SETUP

Tools

Screwdriver, cross-tip,
 number two
 Handle, ratchet, 114-inch
 drive
 Socket, 1/4-inch drive, 3/8-inch

Materials/Parts

Lockwashers, hinge (two required)
 Nuts, self-locking (three required)

Personnel Required
 One

Equipment Condition

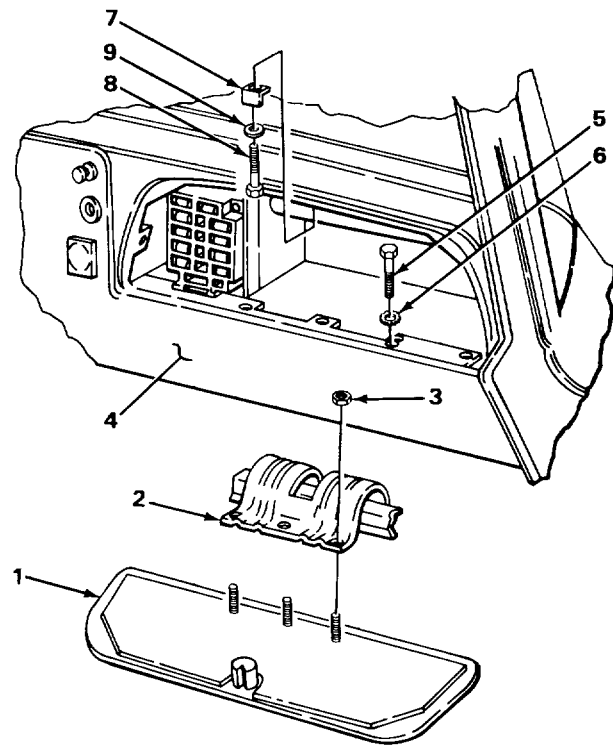
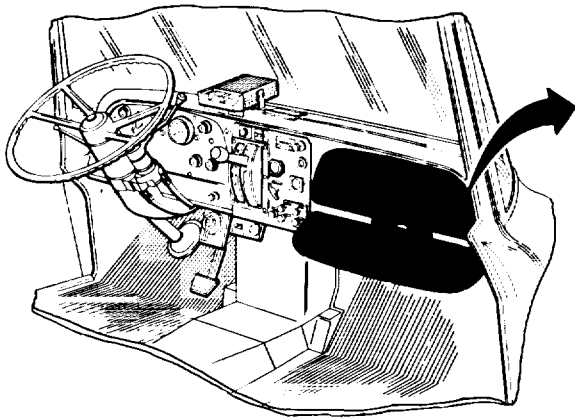
Glove compartment removed
 (page 2-845).

GLOVE COMPARTMENT DOOR, HINGE, AND STRIKER - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1.	Glove compartment door (1) to hinge (2)	Three self-locking nuts (3)	a. Using 3/8-inch socket and handle, unscrew and take off. b. Get rid of.
2.	Hinge (2)	Door (1)	Take off.
3.	Hinge (2) to dashboard (4)	Two screws (5) and lockwashers (6)	a. Using cross-tip screwdriver, unscrew and take out. b. Get rid of lockwashers (6).
4.	Dashboard (4)	Hinge (2)	Take out.
5.	Striker (7) to dashboard (4) and striker (7)	Two screws (8), washers (9), and striker (7)	Using cross-tip screwdriver, unscrew and take out.
INSTALLATION			
6.	Dashboard (4)	Striker (7)	Put in place, and hold.
7.	Striker (7) To dashboard (4)	Two screws (8) and washers (9)	a. Screw in by hand. b. Aline striker with nearest edge of dashboard (4). c. Tighten using cross-tip screwdriver.
8.	Dashboard (4)	Hinge (2)	Put in place.
9.	Hinge (2) to dashboard (4) lockwashers (6)	Two screws (5) and new	Screw in, and tighten using cross-tip screwdriver.
10.	Hinge (2)	Glove compartment door (1)	Put in place, and hold.
11.	Glove compartment door (1) to hinge (2)	Three new self-locking nuts (3)	Screw on, and tighten using 3/8-inch socket and handle.

GLOVE COMPARTMENT DOOR, HINGE, AND STRIKER - CONTINUED

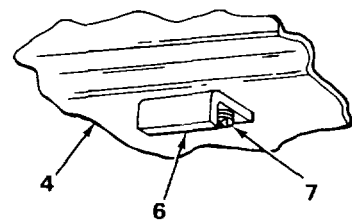
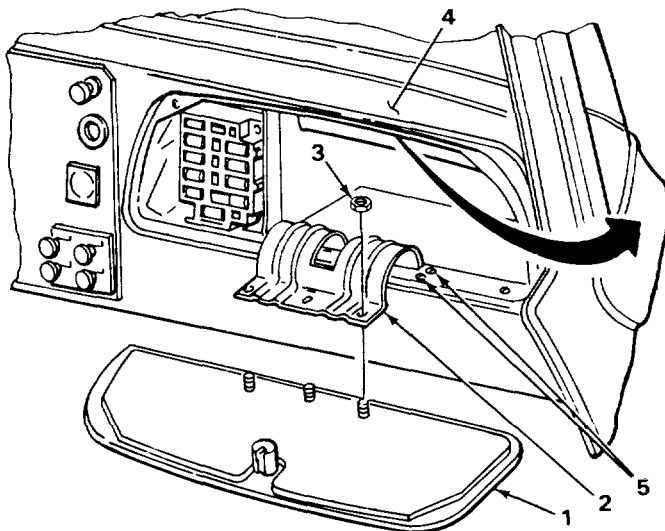
LOCATION	ITEM	ACTION	REMARKS
ADJUSTMENT			
12. Dashboard (4)	Glove compartment	Install (page 2-845).	
13.	Glove compartment door (1)	a. Close. b. Visually check alinement with dashboard (4) c. Open.	



TA229119

GLOVE COMPARTMENT DOOR, HINGE, AND STRIKER - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
ADJUSTMENT - CONTINUED			
14. Door (1) to hinge (2)	Three self-locking nuts (3)	a. Using <i>3/8-inch</i> socket and handle, b. Adjust door (1) as needed. c. Tighten using <i>3/8-inch</i> socket and handle.	<p>Repeat until door is properly aligned with dashboard according to visual inspection.</p>
15. Hinge (2) to dashboard (4)	Two screws (5)	a. Using cross-tip screwdriver, loosen. b. Adjust door (1) as needed. c. Tighten using cross-tip screwdriver.	<p>Repeat until door is properly aligned with dashboard according to visual inspection.</p>
16. Striker (6) To dashboard (4)	Two screws (7)	a. Using cross-tip screwdriver, loosen. b. Adjust striker (6) as needed. c. Tighten using cross-tip screwdriver.	<p>Repeat until door (1) closes firmly and easily but doesn't rattle.</p>



TASK ENDS HERE

GLOVE COMPARTMENT LOCK

This task covers:

- a. Removal (page 2-851)
- b. Installation (page 2-852)

INITIAL SETUP:

Tools

Screwdriver, flat-tip, 3/16-inch

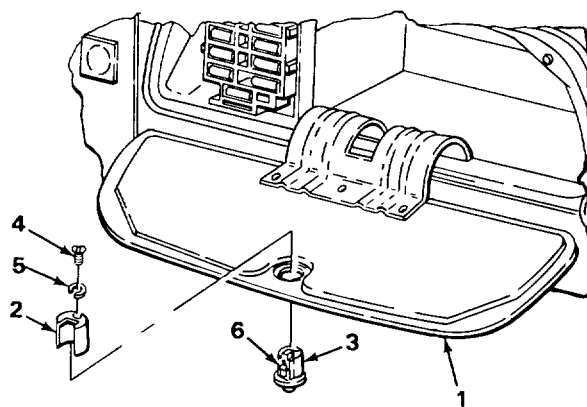
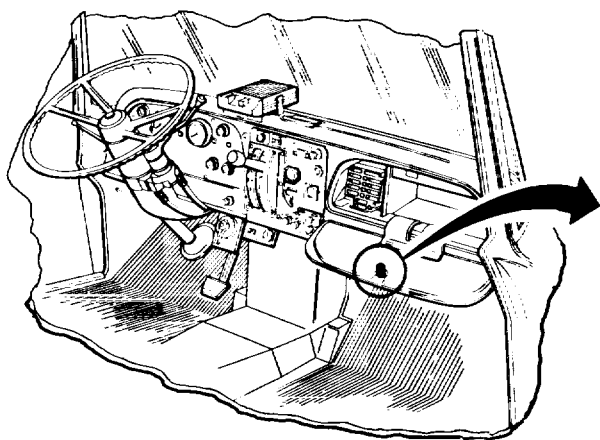
Materials/Parts

Lockwasher, lock cover to lock

Personnel Required

One

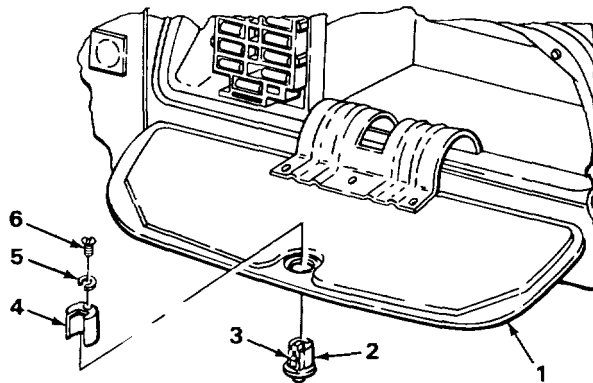
LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1.	Glove compartment door (1)	Open.	
2.	Lock cover (2) to lock (3)	Screw (4) and lockwasher (5) b.	a. Using flat-tip screwdriver, unscrew and take out. Get rid of lockwasher (5).
3.	Lock (3)	Lock cover (2)	Take off.
4.	Glove compartment door (1)	Lock (3)	Push down lock bolt (6), and take out.



TA229121

GLOVE COMPARTMENT LOCK - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
5.	Glove compartment	Lock (2)	Push down lock bolt (3), and put in. door (1)
6.	Lock (2)	Lock cover (4)	Put in place on lock (2).
7.	Lock cover (4) to lock (2)	New lockwasher (5) and screw (6)	Screw in, and tighten using flat-tip screwdriver.
8.	Glove compartment Door (1)	Close.	



TASK ENDS HERE

GLOVE COMPARTMENT FILLER

This task covers:

- a. Removal (page 2-853)
- b. Disassembly (page 2-853)

INITIAL SETUP:

Tools

Screwdriver, cross-tip,
number two, 1 ½-inch

Personnel Required

One
Equipment Condition

Battery ground cable disconnected
(page 2-414).

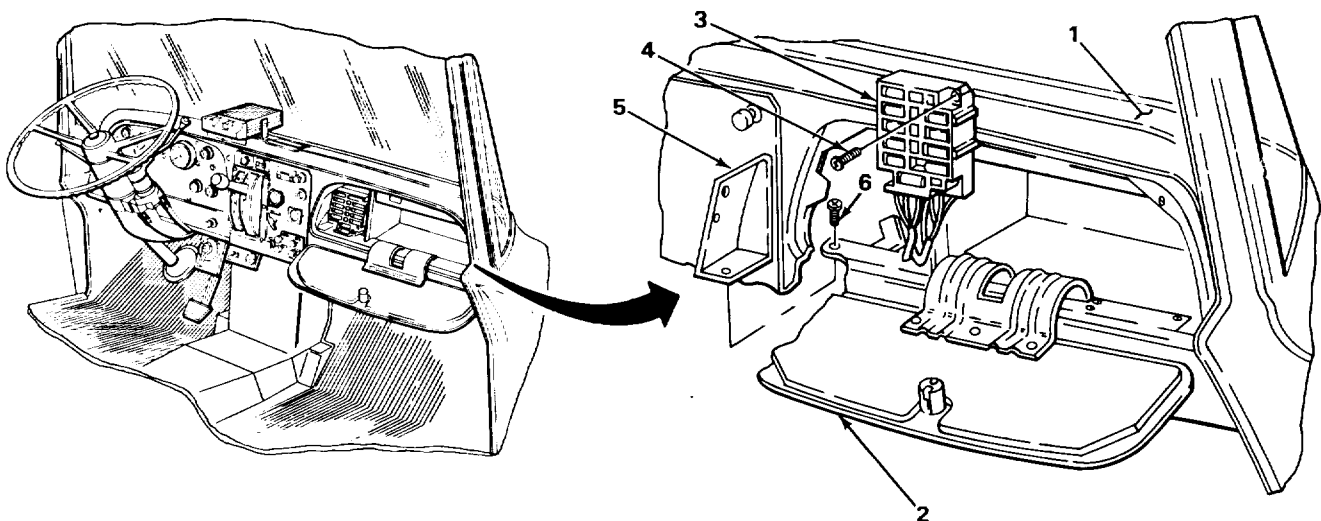
TA229122

GLOVE COMPARTMENT FILLER - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1. Dashboard (1) door (2)	Glove compartment	Open.	
2. Fuse block (3) to dashboard (1)	Two screws (4) take out.	Using cross-tip screwdriver, unscrew and	
3. Dashboard (1)	Fuse block (3)	Pull forward, and let hang by wires.	
4. Filler (5) to dashboard (1)	Three screws (6) take out.	Using cross-tip screwdriver, unscrew and	
5. Dashboard (1)	Filler (5) b.	a. Push back off flange. Take out from behind.	

INSTALLATION

6. Dashboard (1)	Filler (5)	Put in place from behind.	
7. Filler (5) to dashboard (1)	Three screws (6)	Screw in, and tighten using cross-tip screwdriver.	
8. Dashboard (1)	Fuse block (3)	Put in place, and hold.	
9. Fuse block (3) to dashboard (1)	Two screws (4)	Screw in, and tighten using cross-tip screwdriver.	
10. Dashboard (1) door (2)	Glove compartment	Close.	



TA229123

GLOVE COMPARTMENT FILLER - CONTINUED

INSTALLATION - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE: Connect battery ground cable (page 2-414).

TASK ENDS HERE

FRONT COMPARTMENT DOORS

This task covers:

- a. Removal (page 2-854)
 - b. Installation (page 2-856)
-

INITIAL SETUP:

Tools	Materials/Parts
Handle, ratchet, 114-inch drive	Grease, GAA (item 17, appendix C)
Pliers, slip-joint, straight-nose	Personnel Required
Screwdriver, flat-tip, 3/16-inch	Two
Socket, 1/4-inch drive, 5/16-inch	
Wrench, adjustable	
Wrench, pliers	

REMOVAL

NOTE

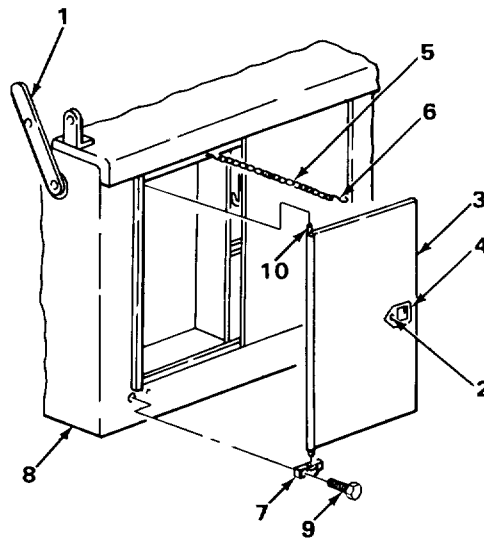
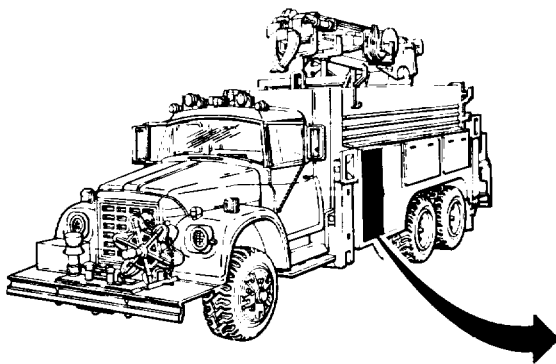
Except as noted, the steps in this task are the same for both right and left side front compartment doors. the left side doors are used as the example.

To replace door latches and locks, refer to Storage Door Latches and Locks (page 2-862).

To replace right door sliding door, see page 2-859.

FRONT COMPARTMENT DOORS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
1.	Door locking lever (1)	Make sure lever is in unlocked position toward center of truck.	
2.	Key lock (2)	Make sure key lock is unlocked by opening door (3) slightly by latches (4).	
3.	Chain (5)	S-hook (6)	Unhook from door (3). forward door (3)
4.	Forward door (3)	Close.	
5.	Hinge cap (7) to body (8)	Two sheet metal screws (9) and take off.	Have assistant hold up door, and using 5/16-inch socket and handle, unscrew
6.	Hinge rod (10)	Hinge cap (7)	Take off.
7.	Body (8)	Forward door (3)	a. Making sure you have a firm grip on door (3), open and lower door until hinge rod (10) is out of its hole. b. Take off.



2-855

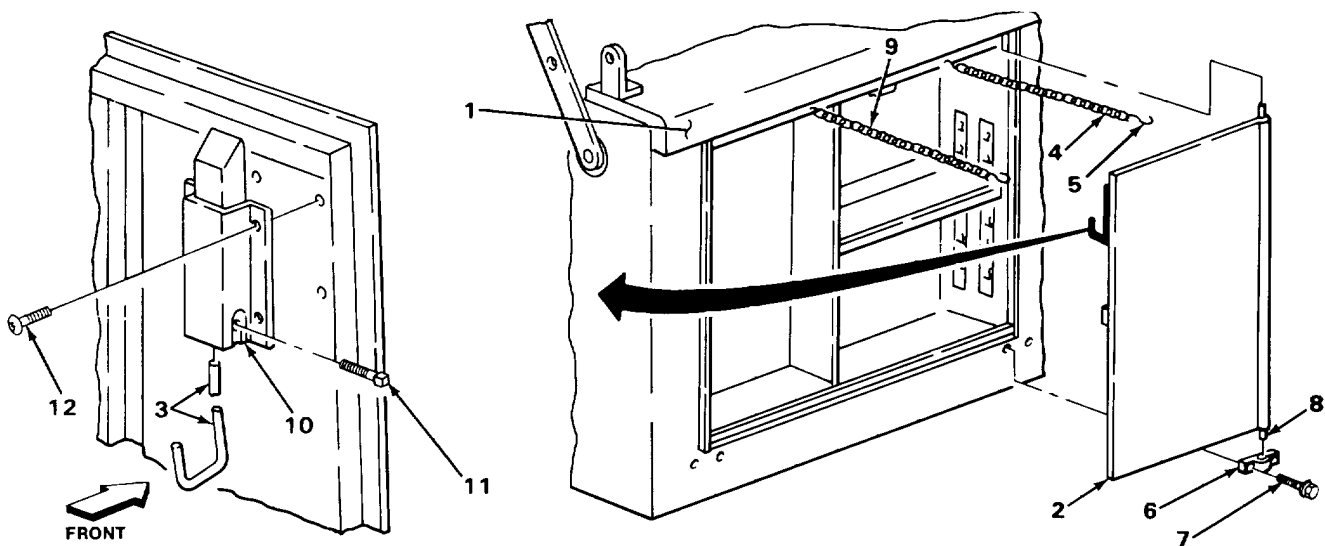
TA229124

FRONT COMPARTMENT DOORS - CONTINUED

LOCATION	ITEM	ACTION REMARKS		
REMOVAL - CONTINUED				
8.	Body (1)	Rear door (2)	Open by pulling down on pull rod (3).	
9.	Chain (4) to door (2)	S-hook (5)	Unhook from door (2).	
10.	Body (1)	Rear door (2)	Close.	
11.	Hinge cap (6) to body (1)	Two sheet metal screws (7)	a. Have assistant hold up door (2). b. Using 5/16-inch socket and handle, un-	
12.	Hinge rod (8)	Hinge cap (6)	Take off.	
13.	Body (1)	Rear door (2)	Taking a firm grip on door (2), open and lower until hinge rod (8) is out of its hole, and take off.	
14.	Two chains (4) and (9) to body (1)	Two S-hooks (5)	Using pliers wrench and slip-joint pliers, spread and take off body (1).	
15.	Pull rod (3) to pull latch (10)	Setscrew (11)	take out.	Using adjustable wrench, unscrew and
16.	Pull latch (10)	Pull rod (3)	Take out.	
17.	Pull latch (10) to door (2)	Four screws (12) and latch (10)	Using flat-tip screwdriver, unscrew and take off.	
INSTALLATION				
18.	Door (2)	Pull latch (10)	Put in place, and hold.	
19.	Pull latch (10) to door (2)	Four screws (12) screwdriver.	Screw in, and tighten using flat-tip	
20.	Pull latch (10)	Pull rod (3)	Push into place, and turn so it faces out at right angles to door (2).	

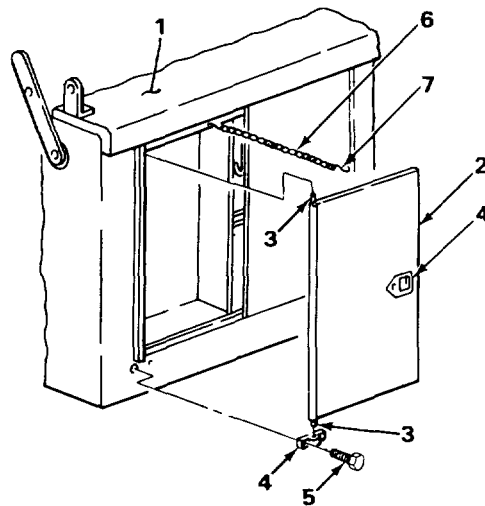
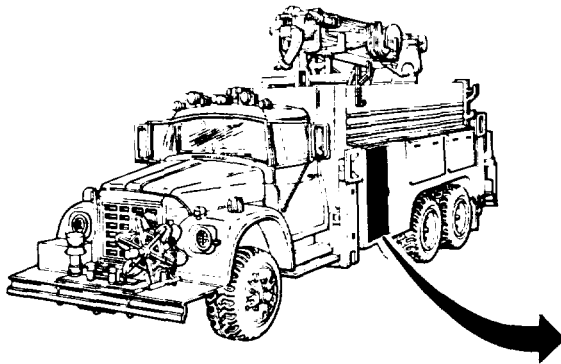
FRONT COMPARTMENT DOORS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
21.	Pull rod (3) to pull latch (10)	Set screw (11)	Screw in, and tighten using adjustable wrench.
22.	Body (1) (4) and (9)	Two chains	Hook in holes in body (1).
23.	Body (1)	Rear door (2)	a. Lubricate ends of hinge rod (8) with grease. b. Have assistant lift door (2) into place, push hinge rod (8) into hole in body (1), and hold.
24.	Hinge rod (8) and body (1)	Hinge cap (6)	Push into place.
25.	Hinge cap (6) to body (1)	Two sheet metal screws (7)	Screw in, and tighten using 5/16-inch socket and handle.
26.	Body (1)	Rear door (2)	Open.
27.	Chain (4)	Hook into door.	



FRONT COMPARTMENT DOORS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
28. Body (1)	Forward door (2) b.	a. Lubricate ends of hinge rod (3) Have assistant lift door (2) into place, push hinge rod (3) into hole in body (1), and hold.	
29. Hinge rod (3) and body (1)	Hinge cap (4)	Push into place.	
30. Hinge cap (4) to body (1)	Two sheet metal screws (5)	Screw in, and tighten using 5/16-inch socket and handle.	
31. Body (1)	Forward door (2)	Open.	
32. Forward door (2)	Chain (6)	Hook S-hook (7) into holes in door (2).	
33. Door (2)	Close.		



2-858

TA229126

SLIDING DOOR

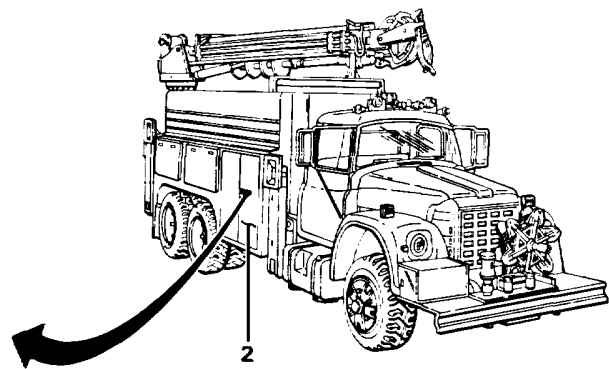
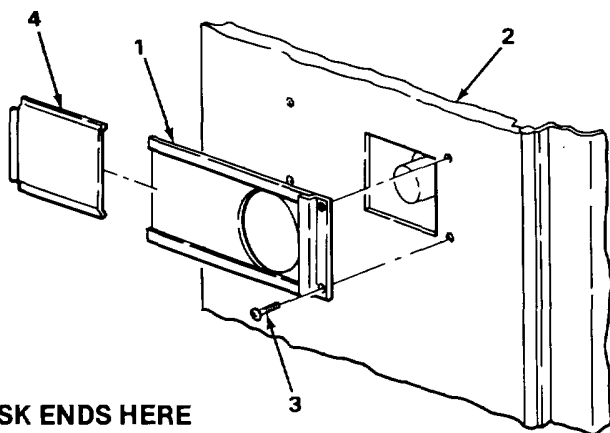
This task covers:

- a. Removal (page 2-859)
- b. Installation (page 2-859)

INITIAL SETUP:

Tools	Personnel Required	
Screwdriver, flat-tip, 3/16-inch		One

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1. Door track (1) to compartment door (2)	Four screws (3), track (1), and sliding door (4)		Using flat-tip screwdriver, unscrew and take off.
2. Door track (1)	Sliding door (4)	Slide out.	
INSTALLATION			
3. Door track (1)	Sliding door (4)	Slide into place.	
4. Compartment door (2)	Door track (1) and sliding door (4)	Put into place, and hold.	
5. Door track (1)	Four screws (3) screwdriver.	Screw in, and tighten using flat-tip	



TASK ENDS HERE

SIDE COMPARTMENT DOORS

This task covers:

- | | | |
|----------------|---------------|------------------------------|
| a. Removal | c. Inspection | e. Pre-Load Check of Bearing |
| b. Disassembly | d. Reassembly | f. Installation |

INITIAL SETUP:

Tools

Materials/Parts

Handle, ratchet, 1/4-inch drive
 Socket, 1/4-inch drive, 5/16-inch

Lubricant, silicone grease (item 19, appendix C)

Personnel Required

Two

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

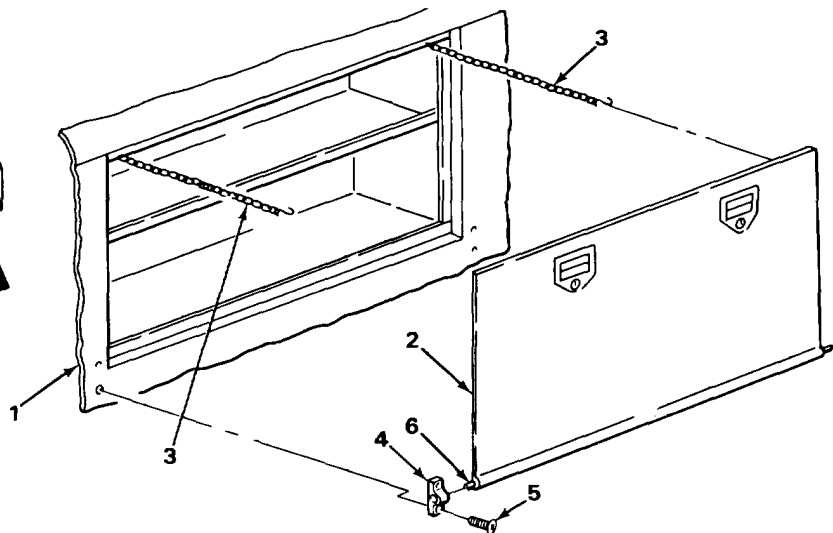
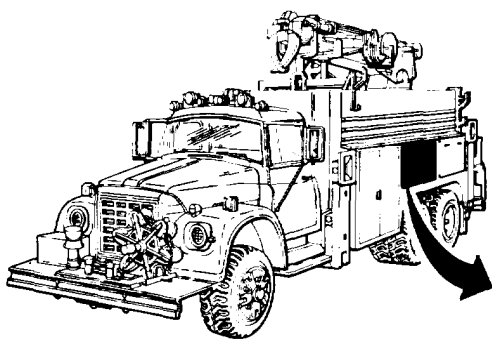
NOTE

The steps in this task are the same for all four side storage compartment doors. The left center door is used as the example.

1.	Body (1)	Door (2)	Open.
2.	Door (2)	Two chains (3)	Unhook from door (2).
3.	Body (1)	Door (2)	a. Close. b. Have assistant hold door (2).
4.	Two hinge caps (4) to body (1)	Four screws (5)	Using 5/16-inch socket and handle, unscrew and take off.
5.	Hinge rod (6) and body (1)	Two hinge caps (4)	Take off.
6.	Body (1)	Door (2)	Have assistant take off.

SIDE COMPARTMENT DOORS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED		
7. Body (1)	Two chains (3)	Unhook, and take off.
INSTALLATION		
8. Body (1)	Two chains (3)	Hook in chain holes in body (1).
9. Door (2)	b.	a. Lubricate ends of hinge rod (6) with silicone lubricant. With help from assistant, put in place, and hold.
10. Hinge rod (6) and body (1)	Two hinge caps (4)	Put in place.
11. Two hinge caps (4) to body (1)	Four screws (5)	Screw in, and tighten using 5/16-inch socket and handle.
12. Body (1)	Door (2)	Open.
13. Door (2)	Two chains (3)	Hook onto chain holes in door (2).
14. Body (1)	Door (2)	Close.



TASK ENDS HERE

STORAGE DOOR LATCHES AND LOCKS

This task covers:

- a. Removal (page 2-862)
- b. Installation (page 2-863)

INITIAL SETUP:

Tools

Materials/Parts

Bit, drill, 3/16-inch
 Drill, portable, electric
 Hammer, ball-peen,
 machinist's
 Punch, drive-pin, straight,
 3/16-inch
 Riveter, hand, blind
 Screwdriver, cross-tip, number two
 Wrench, box-end, 7/8-inch

Lockwasher, lock tab to lock
 Lockwasher, lock to door
 Rivet, blind (five required)

Personnel Required

One

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

REMOVAL

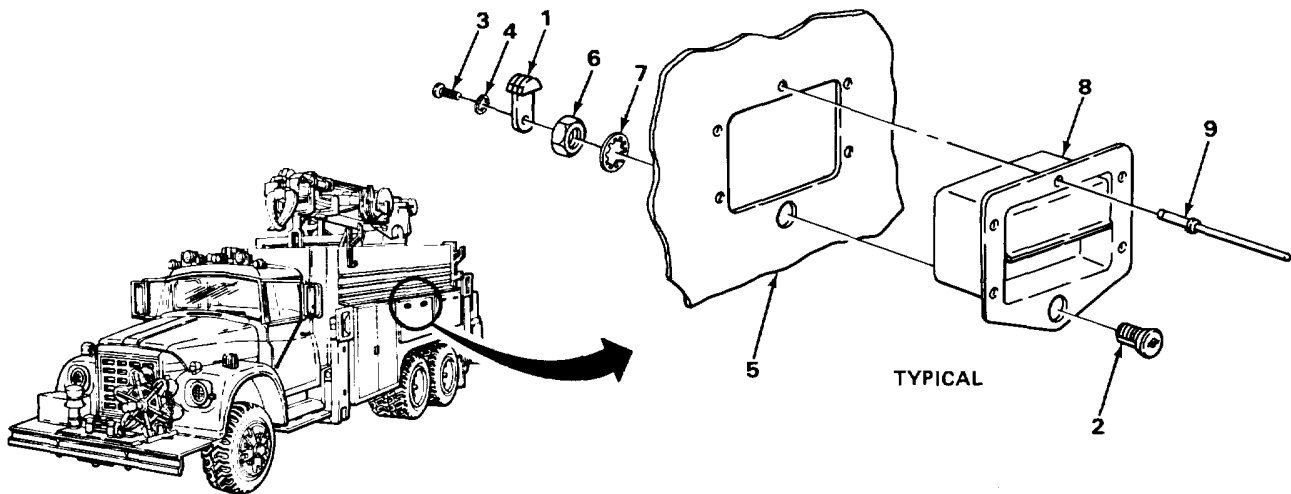
NOTE

The steps in this task are the same for all latches and locks on storage compartment doors except pull latches on the front compartment doors. One latch from left-front compartment door is used as the example.

1. Lock tab (1) to lock (2)	Screw (3) and lockwasher (4) b.	a. Open door (5), and using cross-tip screwdriver, unscrew and take out. Get rid of lockwasher (4).	
2. Lock (2)	Lock tab (1)	Take off.	
3. Lock (2) to door (5)	Nut (6) and lockwasher (7) b.	a. Using 7/8-inch wrench, unscrew and take off. Get rid of lockwasher (7).	

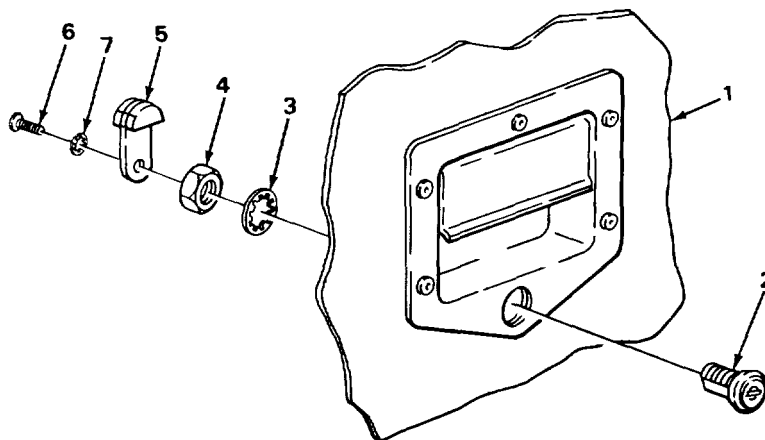
STORAGE DOOR LATCHES AND LOCKS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
4.	Door (5)	Lock (2)	Take out from outside.
5.	Door (5)	Close.	
6.	Latch (8) to door (5)	Five new blind rivets (9)	Using drill and bit, drill off heads of rivets (9).
7.	Door (5)	Latch (8)	Take out. If necessary, use hammer and punch from Inside to knock rivets (9) loose from door (5).
INSTALLATION			
8.	Door (5)	Latch (8)	Put in place, and hold.
9.	Latch (8) to door (5)	Five new blind rivets (9)	Using hand riveter, rivet to door.



STORAGE DOOR LATCHES AND LOCKS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
10. Door (1)	Lock (2)	Put in place from outside.
11. Lock (2) to door (1)	New lockwasher (3) and nut (4) wrench.	a. Open door (1). b. Screw on, and tighten using 7/8-inch
12. Lock (2)	Lock tab (5)	Put in place.
13. Lock tab (5) to lock (2)	Screw (6) and new lockwasher (7)	Screw in, and tighten using cross-tip screwdriver.
14. Lock (2)	Check operation of lock (2) with vehicle key.	



TASK ENDS HERE

SPLASH APRON

This task covers:
Replacement (page 2-865)

SPLASH APRON - CONTINUED

INITIAL SETUP

Tools	Materials/Parts	Personnel Required
Handle, ratchet, 3/8-inch drive, Socket, 3/8-inch drive, 1/2-inch Wrench, box-end, 1/2-inch	Apron, splash	One

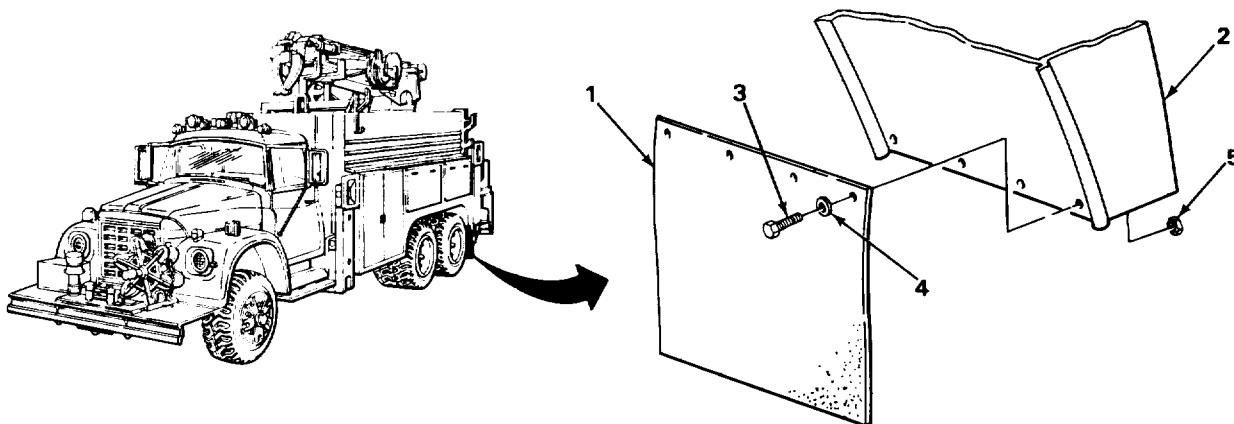
LOCATION	ITEM	ACTION	REMARKS
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REPLACEMENT

NOTE

The steps in this task are the same for both left and right splash aprons. the left apron is used as the example.

- | | | | |
|----|--|------------------------------------|---|
| 1. | Splash apron (1) to body (2) (5), and splash apron (1) | Four screws (3), washers (4), nuts | Using 1/2-inch wrench, 1/2-inch socket, and handle, unscrew and take off. |
| 2. | Body (2) | New splash | Put in place, and hold. apron (1) |
| 3. | Splash apron (1) to body (2) | Four screws (3), washers (4), and | Screw in, and tighten using 1/2-inch wrench, 1/2-inch socket, and handle. |



TASK ENDS HERE

REFLECTOR

This task covers:

Replacement (page 2-866)

INITIAL SETUP

Tools

Screwdriver, flat-tip, 3/16-inch

Materials/Parts

Reflector

Personnel Required

One

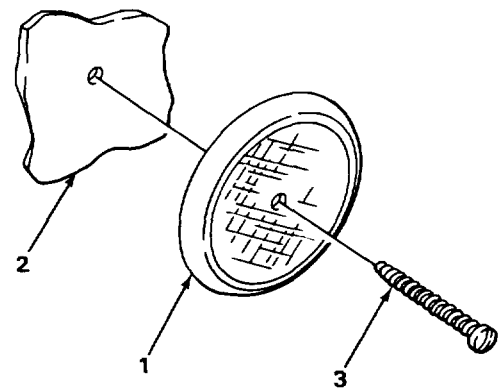
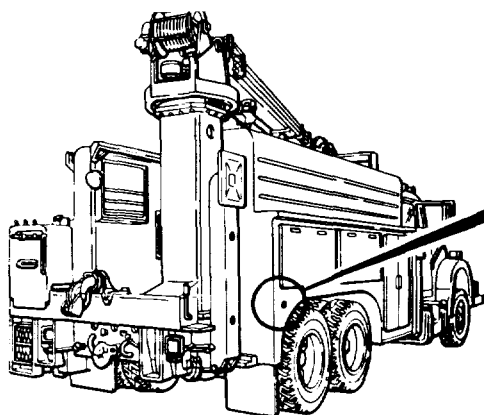
LOCATION	ITEM	ACTION	REMARKS
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REPLACEMENT

NOTE

The steps in this task apply to both right and left rear reflectors. The left reflector is used as the example.

- | | | |
|--|------------------------------|--|
| 1. Reflector (1)
to body (2)
reflector (1) | Sheet metal
screw (3) and | Using flat-tip screwdriver, unscrew
and take off. |
| 2. Body (2) | New reflector (1) | Put in place, and hold. |
| 3. Reflector (1)
to body (2) | Sheet metal
screw (3) | Screw in, and tighten using flat-tip
screwdriver. |



TASK ENDS HERE

FRONT COMPARTMENT SHELVES

This task covers:

Adjustment/Replacement (page 2-867)

INITIAL SETUP

Personnel Required

One

LOCATION	ITEM	ACTION	REMARKS
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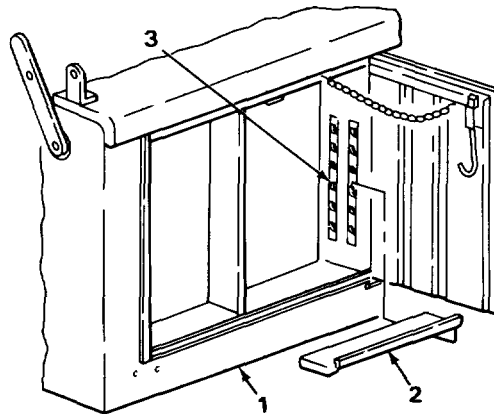
ADJUSTMENT/REPLACEMENT

NOTE

Use the following procedure for both right and left front storage compartment shelving.

Body (1) Shelf (2)

- a. With door open, push out of hooks (3) by pushing up on left bottom of shelf, then right bottom, and take out. **You may have to hit the bottom of the shelf with your fist to knock it loose.**
- b. Count hooks (3) from bottom of each side, and put shelf in evenly.
- c. Push down onto hooks (3).



TASK ENDS HERE

SIDE COMPARTMENT DIVIDERS

This task covers:

Adjustment/Replacement (page 2-868)

INITIAL SETUP

Personnel Required

One

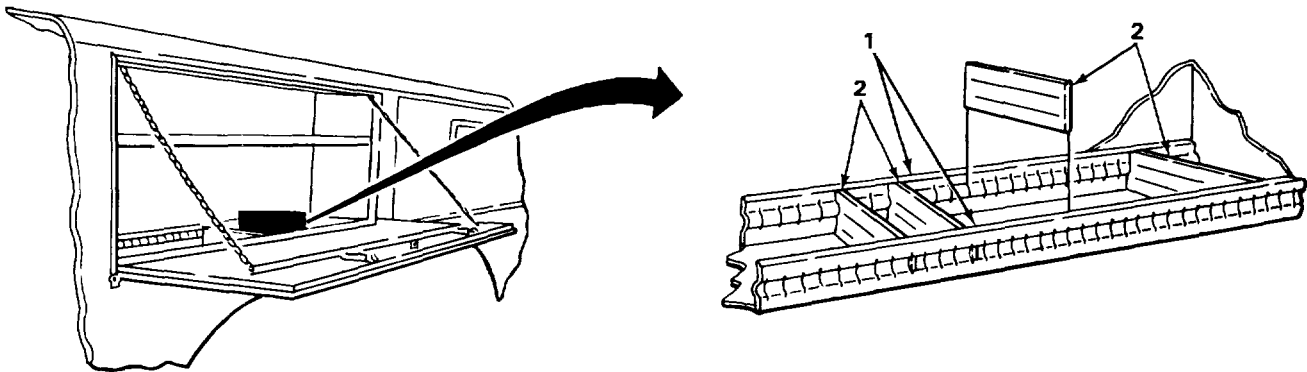
LOCATION	ITEM	ACTION	REMARKS
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ADJUSTING/REPLACEMENT

NOTE

Use the following procedure for both right and left front storage compartment shelving.

- | | | |
|----------------------|-------------------------------------|---|
| Body (1) Divider (2) | a. With door open, bend divider (2) | slightly in the middle. |
| | b. | Pull up and out. |
| | c. | Count number of slots on both sides to where divider (2) is to be placed. |
| | d. | Bend slightly in middle, and push into place. |



TASK ENDS HERE

INNER COMPARTMENT SHELVES

This task covers:

- a. Removal (page 2-869)
 - b. Installation (page 2-870)
-

INITIAL SETUP

Tools

Materials/Parts

Handle, ratchet,
 3/8-inch drive
 Socket, 3/8-inch drive,
 11/2-inch
 Wrench, box-end, 7/16-inch

Nuts, self-locking (six required)

Personnel Required

Two

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

REMOVAL

NOTE

Use the following procedure for both left and right inner storage compartment shelves.

INNER COMPARTMENT SHELVES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED		
1. Body (1)	Door (2) and (3)	Unlatch, and slide together in middle of track.
2. Shelf (4) to bracket (5)	Six screws (6) nuts (7)	a. Using 7/16-inch wrench, ½-inch socket, and handle, unscrew and take out. b. Get rid of nuts (7).
3. Body (1)	Front door (3)	Push forward leaving it open approx- imately six inches (15 cm).
4. Front door (2)	Push forward even with front door (3).	
5. Shelf (4)	a. Turn 90 degrees. b.	With help of assistant, take out.

INSTALLATION

NOTE

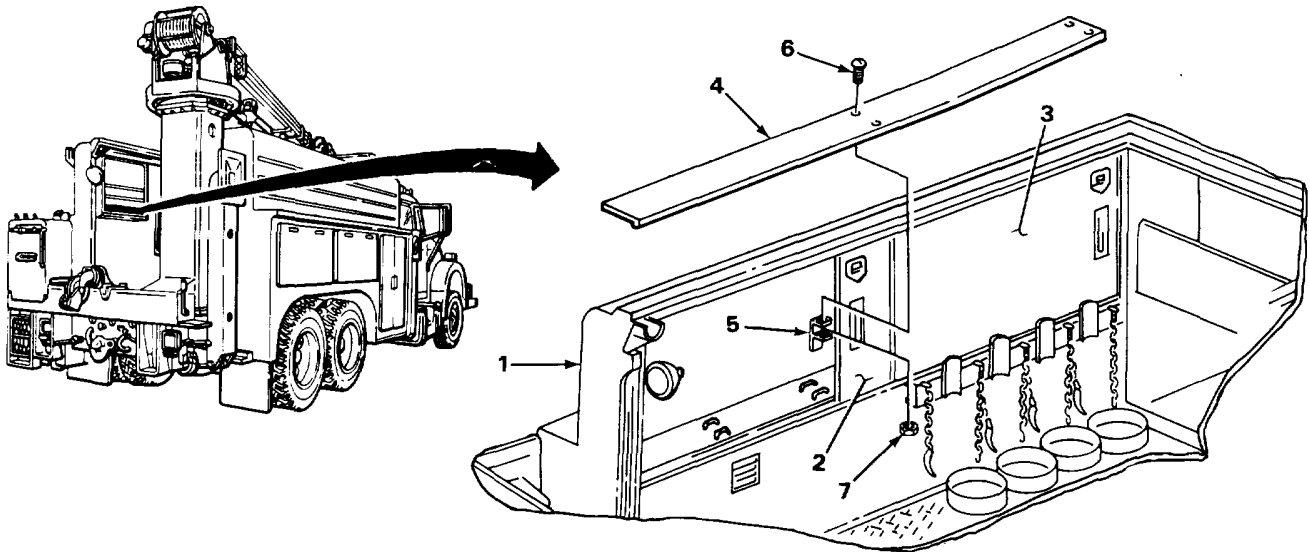
There are two sets of brackets so shelf can be adjusted to higher or lower level as needed.

6. Body (1)	Shelf (4)	a. With help of assistant, tip shelf on end, and push into place. b. With help of assistant, pick up, turn 90 degrees, and rest on brac- kets.
7. Shelf (4) to bracket (5)	Six screws (6) new nuts (7)	Screw in, and tighten using 112-inch socket, handle, and 7/16-inch wrench.

2-870

INNER COMPARTMENT SHELVES - Continued

INSTALLATION - CONTINUED



TASK ENDS HERE

INNER COMPARTMENT LINER

This task covers:

- a. Removal (page 2-872)
- b. Installation (page 2-872)

INITIAL SETUP

Tools

- Hammer, hand, ball-peen,
- machinist's, 2-oz
- Punch, drive pin, straight,
- Screwdriver, flat-tip, 3/16-inch
- Wrench, box-end, 3/18-inch

Materials/Parts

- Lockwashers, tie down brackets
- (eight required)

Personnel Required

Two

Equipment Condition

Inner compartment shelf removed
(page 2-869).

Side compartments open

(TM 9-2320-269-10).

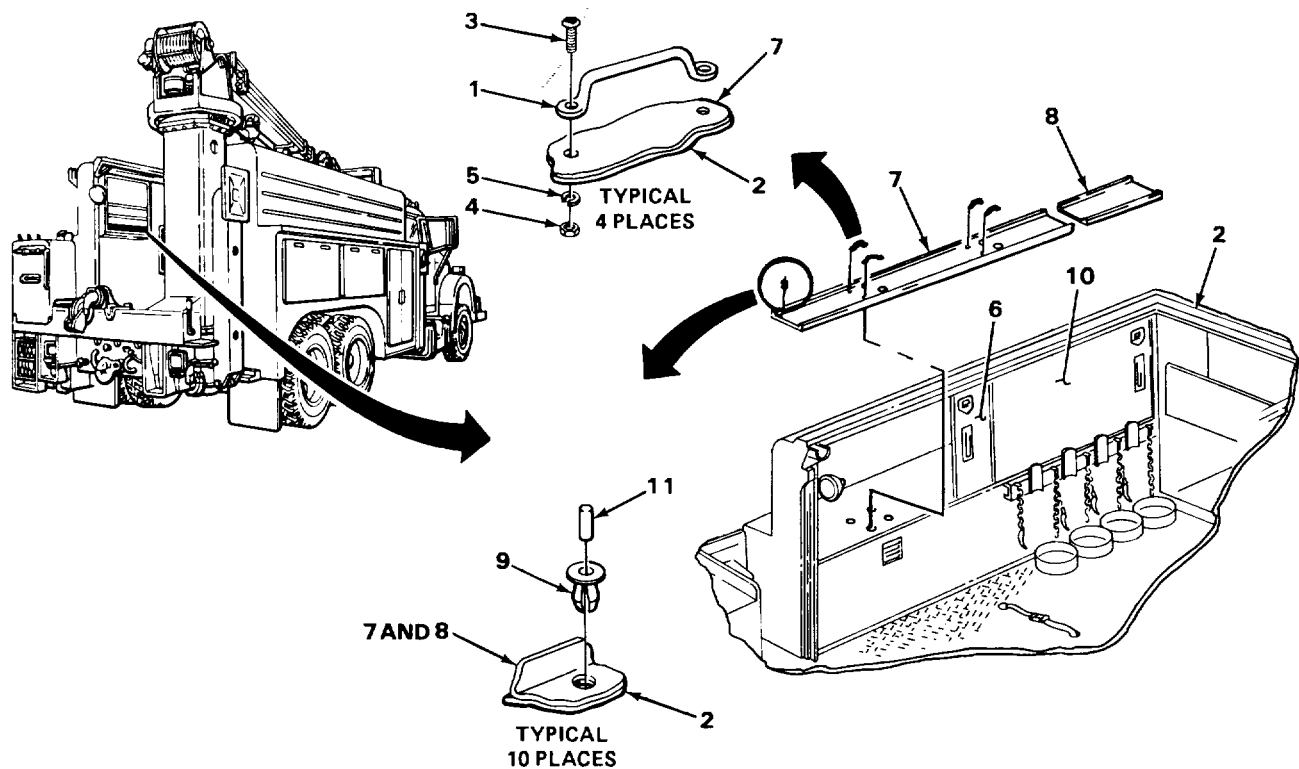
TA229135

INNER COMPARTMENT LINER - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1.	Four tie-down brackets (1) to body (2)	Eight screws (3), nuts (4) and lockwashers (5)	a. Using flat-tip screwdriver and 3/8-inch wrench, with help from assistant in side compartment, reach through rear door (6) and unscrew, and take out. Get rid of lockwashers (5).
		b.	
2.	Body (2) brackets (1)	Four tiedown	Take out.
3.	Liner (7) and (8) to body (2)	Ten punch rivets (9)	a. Moving inner compartment doors (6) and (10) as needed, use punch and hammer to drive out rivet pins (11). Have assistant in side compartment catch pins (11).
		b.	Take out rivets.
4.	Body (2) liner (7)	Back piece of and take out liner (7).	Push both doors (6) and (10) forward, tpr
5.	Body (2) liner (8)	Front piece of and take out liner (8).	Push both doors (6) and (10) backward,
INSTALLATION			
6.	Body (2) liner (8)	Front piece of	Put in place.
7.	Body (2) liner (7)	Back piece of and put in liner (7).	Push both doors (6) and (10) forward,
8.	Liner (7) and (8) to body (2)	Ten punch rivets (9)	Moving inner compartment doors (6) and (10) as needed, push rivets (9) into place.
9.	Ten punch rivets (9)	Ten rivet pins (11) rivets (9).	Push into center of rivets (9), and use hammer to tap flush with top of
10.	Body (2) brackets (1) to body (2)	Four tiedown	Put in place.
11.	Four tiedown brackets (1) to body (2)	Eight screws (3), new lockwashers (5), and nuts (4)	With help of assistant, screw in and tighten using flat-tip screwdriver and 3/8-inch wrench.

INNER COMPARTMENT LINER - CONTINUED

INSTALLATION - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE:

1. Install inner compartment shelf (page 2-869).
2. Close side compartments (TM 9-2320-269-10).

TASK ENDS HERE

INNER COMPARTMENT DOORS

This task covers:

- a. Removal (page 2-874)
- b. Installation (page 2-875)

INITIAL SETUP

Personnel Required

Two

INNER COMPARTMENT DOORS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

Assistant will be needed for removing and adjusting door to prevent injury. door is heavy, large, and unwieldy.

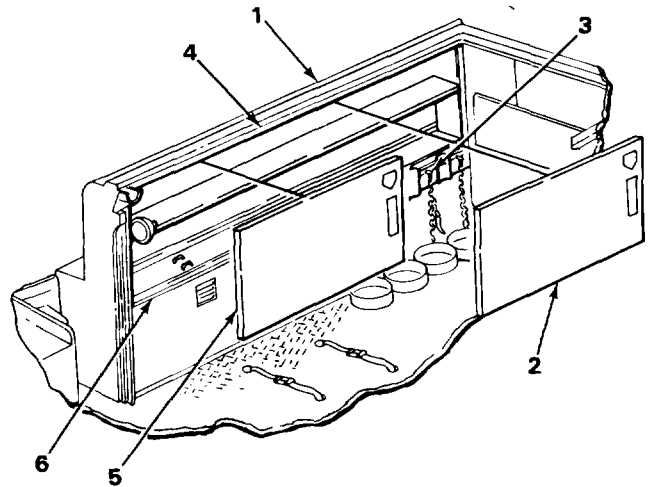
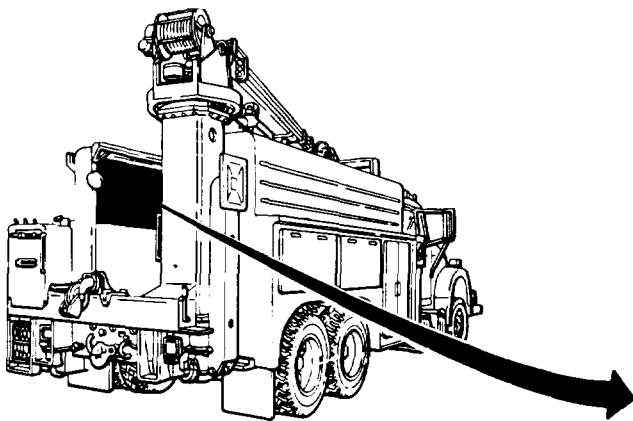
NOTE

Except as noted, the steps in this task are the same for both right and left side inner compartment doors. the left doors are used as the example.

1.Body (1)	Forward door (2)	a. Open, and push back past transformer tiedown pads (3). Tiedown pads (3) are on left side only. Right side door open six Inches (15 cm). b. With help of assistant, lift door (2) up into top track (4). c. Tilt out bottom of door (2). d. Lower door (2) out of top track (4). e. Take out.
2. Rear door (5)	b. c. d.	a. Open six inches (15 cm). With help of assistant, lift door (5) up into top track (4). Tilt out bottom of door (5). Take out.

INNER COMPARTMENT DOORS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
3. Body (1)	Rear door (5)	a. With help of assistant, push up into inner slot of top track (4). Inner slot is one toward inside of compartment. b. Tilt door (5) into inner slot of bottom track (6). c. Drop into place. d. Close.	
4. Forward door (2)		a. With help of assistant, push up into outer slot of top track (4). b. Tilt door into outer slot of bottom track (6). c. Drop into place.	



TASK ENDS HERE

TA229137

OPERATOR'S PLATFORM

This task covers:

- a. Removal (page 2-876)
- b. Installation (page 2-877)

INITIAL SETUP

Tools

Handle, ratchet,
3/8-inch drive
Key, screw, socket-head,
5/32-inch
Socket, 3/8-inch drive,

Materials/Parts

Nut, self-locking, operator's
platform-to-body (two required)
Nut, self-locking, operator's
platform back step-to-link and
link-to-main step (four required)

Trestle, motor vehicle
Wrench, box-end, 7/16-inch
Wrench, box-end, 3/4-inch

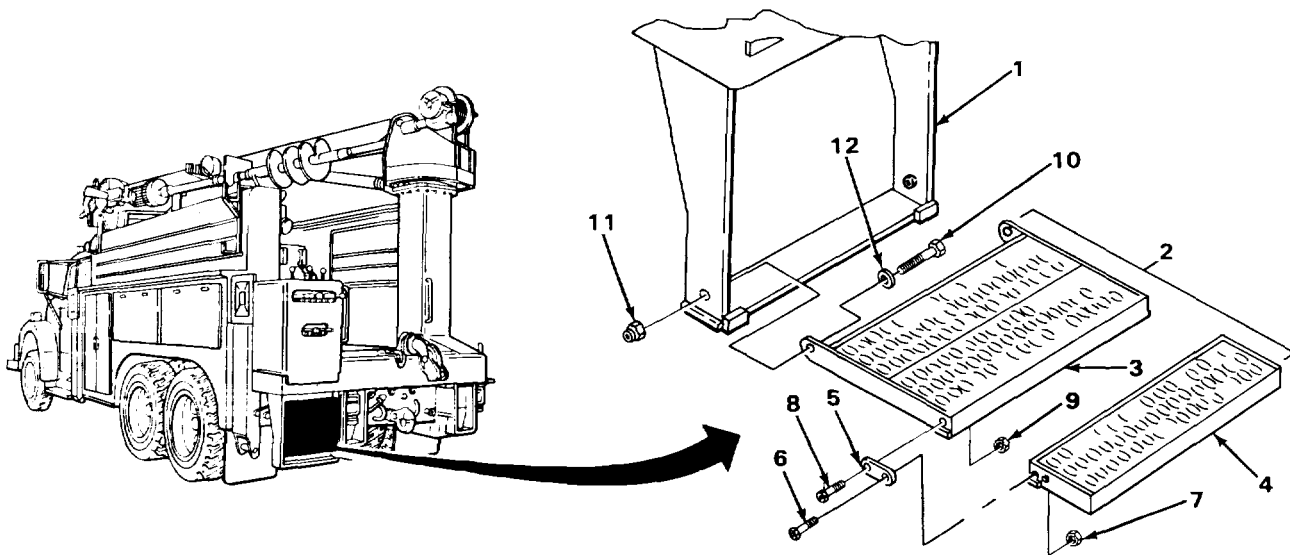
Personnel Required

One

LOCATION	ITEM	ACTION	REMARKS
1. Body (1) platform (2)	Operator's and fold out back step (4). b.	a. Release lock, fold down main step (3), Support back step (4) with trestle.	
2. Back step (4) to two links (5) step (4)	Two screws (6), self-locking nuts (7), and back b. Get rid of self-locking nuts (7).	a. Using 5/32-inch key and 7/16-inch wrench, unscrew and take off.	
3. Main step (3) to body (1) self-locking nuts (9)	Two links (5), screws (8), and wrench, unscrew and take off. c. Get rid of self-locking nuts (9).	a. Support main step (3) with trestle. b. Using 5/32-inch key and 7/16-inch	
4. Two screws (10), self-locking nuts (11), and washers (12)	a. Using 3/4-inch wrench and handle, unscrew and take out. b. Get rid of self-locking nuts (11).		
5. Body (1)	Main step (3)	Take off.	

OPERATOR'S PLATFORM - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
6.	Body (1)	Main step (3)	Put in place, and support with trestle.
7.	Main step (3) to body (1) new self-locking nuts (11)	Two screws (10), washers (12), and Do not over-tighten or step (3) will bind. Do not leave too loose or step (3) will rattle.	Screw in using 3/4-inch wrench and 3/4-inch socket and handle.
8.	Main step (3) links (5), and new self-locking nuts (9)	Two screws (8), inch wrench. Do not over-tighten or back step (4) will bind. Do not leave too or step (4) will rattle.	Screw in using 5/32-inch key and 7/16-inch wrench.
9.	Two links (5)	Back step (4)	Put in place, and support with trestle.
10.	Two links (5) to back step (4) nuts (7)	Two screws (6) and new self-locking will bind. Do not leave too loose b.	a. Screw in until snug using 5/32-inch key and 7/16-inch wrench. Do not over-tighten or back step or step (4) will rattle. b. Remove trestle.



AUGER HOLDDOWN STRAPS

This task covers:

- a. Removal (page 2-878)
- b. Installation (page 2-878)

INITIAL SETUP

Personnel Required

One

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

NOTE

The steps in this task are the same for both forward and rear auger holddown straps the rear auger holddown straps are used as the example.

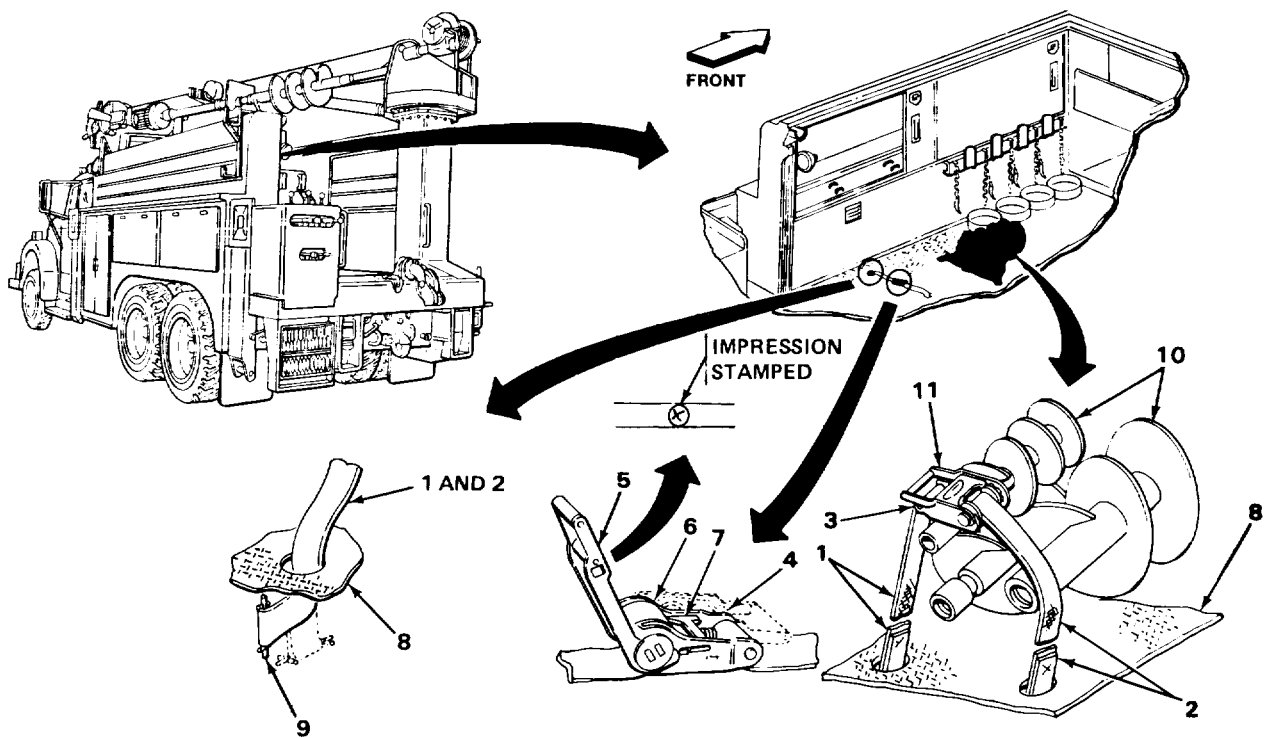
1. Holddown	Buckle (3) b. c. d. e.	a. Press down pawl (4) at point Lift handle (5) past pawl cams (6). straps (1) and (2) marked (x). c. Push handle (5) further until cams on handles (5) pass back latch (7). d. Unwind strap (1). e. Push as much strap (1) as needed through spool to get straps (1) and (2) completely slack.	
2. From under truck: deck plate (8)	Left strap (1) and stay rod (9) completely slack.	a. Pull down some strap (1). b. Twist stay rod (9) 90 degrees. c. Push stay rod (9) up through hole in deck plate (8).	
3. Deck plate (8) and stay rod (9)	Right strap (2)	Repeat step 2.	
4. From top of truck: deck plate (8)	Holddown straps (1) and (2)	Take off.	

INSTALLATION

5. From top of truck; deck plate (8)	L- Left strap (1) and stay rod (9)	a. Twist stay rod (9) 90 degrees so it pushes through hole in deck plate (8).	
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AUGER HOLDDOWN STRAPS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
5. Continued	c.	b. Release stay rod (9). Pull up on strap (2) to make sure stay rod (9) is secure.	
6. Deck plate (8) and stay rod (9)	Right strap (2)	Repeat step 5.	
7. Augers (10) to deck plate (8) to deck plate (8)	Buckle (3) and straps (1) and (2)	a. Pull strap (1) through buckle spool. b. Push down, and lift up handle (11) on buckle until straps (1) and (2) are tight securing augers (10).	



TASK ENDS HERE

2-879

TA229139

TM 9-2320-269-20-2

EXHAUST HEAT SHIELD

This task covers:

- a. Removal (page 2-881)
- b. Installation (page 2-883)

INITIAL SETUP

Tools

Cylinder, compressed gas, acetylene
Cylinder, compressed gas oxygen
Handle, ratchet, 1/2-inch drive
Socket, 1/2-inch drive, 9116-inch
Welding outfit, oxy-acetylene
Wrench, box-end, 9/16-inch

Materials/Part

Heat shield (as needed)
Lockwasher, rear muffler links to rear muffler support bracket
Lockwasher, rear spark arrestor links to spark arrestor support bracket
Lockwasher, tailpipe support bracket to frame

Materials/Parts - Continued

Rear muffler links (as needed)
Rear spark arrestor link (as needed)
Self-locking nut, rear muffler support bracket to frame (two required)
Self-locking nut, rear spark arrestor support bracket to frame (two required)
Tailpipe, support bracket (as needed)

Personnel Required

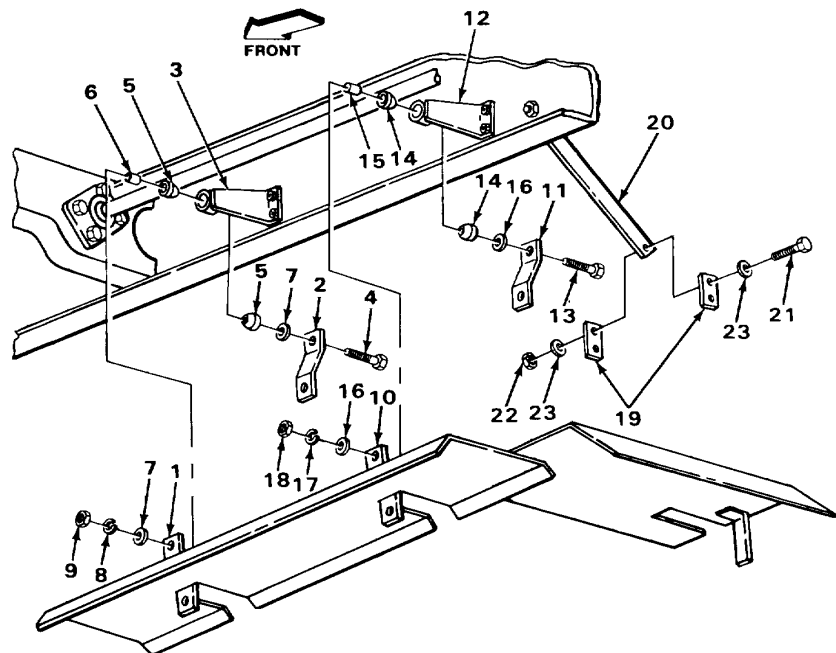
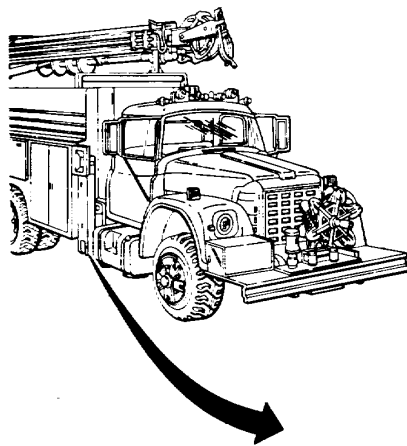
One

Equipment Condition

Tailpipe removed (page 2-202).
Spark arrestor removed (page 2-206).

EXHAUST HEAT SHIELD - CONTINUED

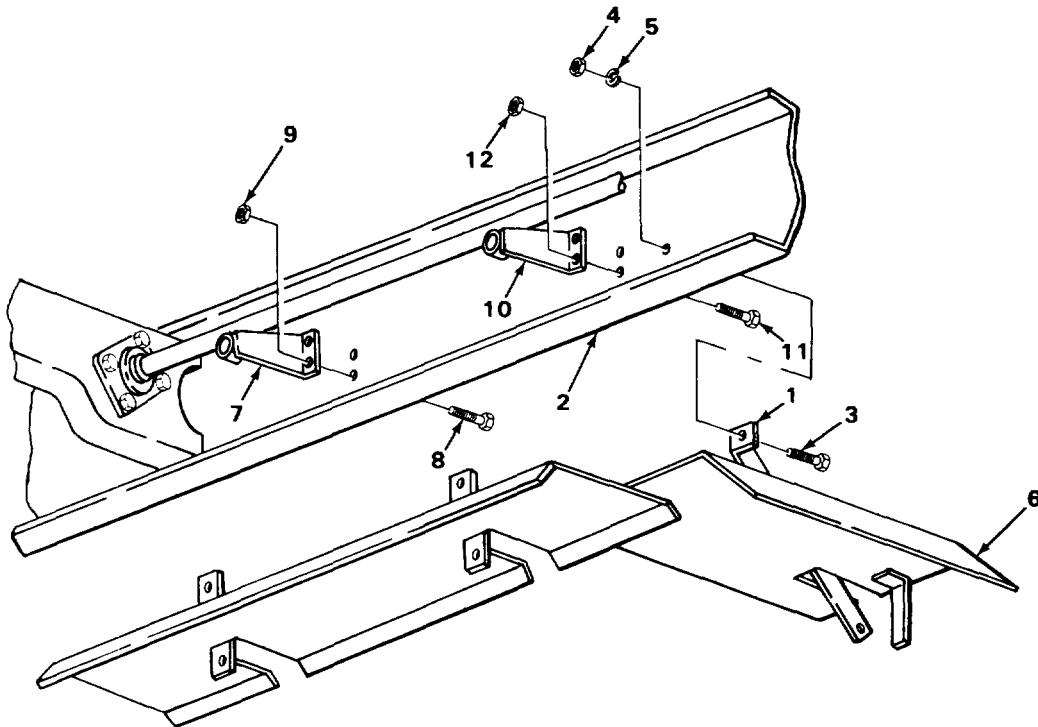
LOCATION	ITEM	ACTION REMARKS
REMOVAL		
1. Two rear muffler links (1) and (2) to rear muffler support bracket (3)	Screw (4), two insulators (5), spacer (6), two washers (7), lockwasher (8), nut (9), and links (2) and (3)	a. Using 9/16-inch wrench, 9/16-inch socket and handle, unscrew and take off. b. Get rid of lockwasher (7).
2. Two rear spark arrestor links (10) and (11) to rear spark arrestor support bracket (12)	Screw (13), two insulators (14), spacer (15), two washers (16), lockwasher (17), nut (18), and links (11) and (10)	a. Using 9/16-inch wrench, 9/16-inch socket and handle, unscrew and take off. b. Get rid of lockwasher (17).
3. Two tailpipe support straps (19) to tailpipe support (20)	Screw (21), nut (22), two washers (23), and two straps (19)	Using 9/16-inch wrench, 9/16-inch socket and handle, unscrew and take off.



TA229140

EXHAUST HEAT SHIELD - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED		
4. Tailpipe support bracket (1) to frame (2)	Screw (3), nut (4), and lockwasher (5)	a. Using 9/16-inch wrench, 9/16-inch socket, and handle, unscrew and take off. b. Get rid of lockwasher (5).
5.	Heat shield assembly (6)	Take out.
6. Rear muffler support bracket (7) to frame (2)	Two screws (8), self-locking nuts (9), and bracket (7)	a. Using 9/16-inch wrench, 9/16-inch socket, and handle, unscrew and take out. b. Get rid of self-locking nuts (9).
7. Rear spark arrestor support bracket (10) to frame (2)	Two screws (11), self-locking nuts (12), and bracket (10)	a. Using 9/16-inch wrench, 9/16-inch socket and handle, unscrew and take out. b. Get rid of self-locking nuts (12).



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EXHAUST HEAT SHIELD - COUNTINUED

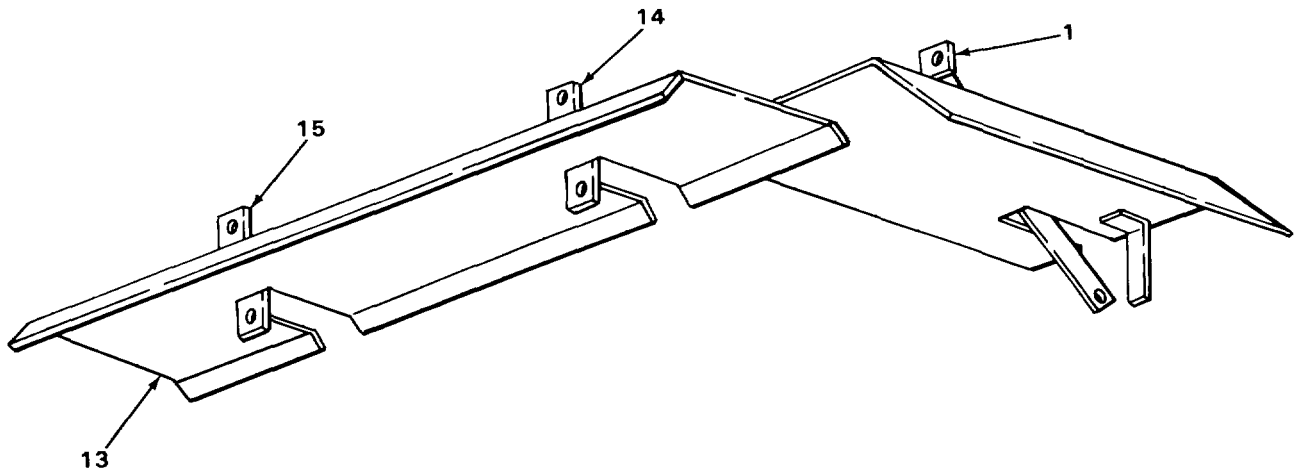
LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION

NOTE

If replacing heat shield: heat shield, tailpipe support bracket, rear spark arrestor link, and rear muffler bracket may come as separate pieces which will have to be welded together using old parts as patterns.

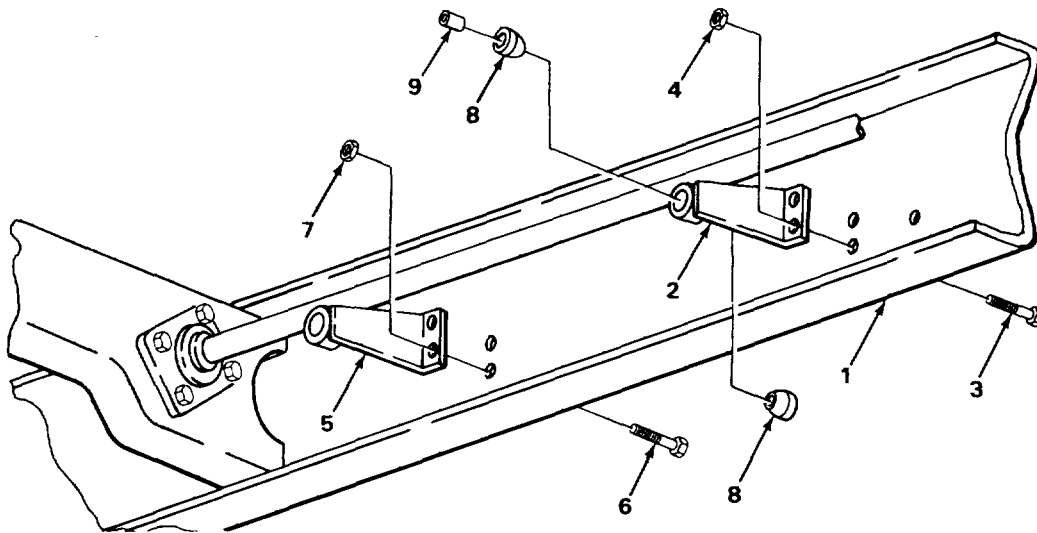
- | | | |
|----|---|---|
| 8. | New heat shield (13), tailpipe support bracket (1), rear spark arrestor link (14), and rear muffler link (15) | Using oxygen tank, acetylene tank, and welding outfit, weld together using old parts as patterns. (TM 9-237). |
|----|---|---|



TA229142

EXHAUST HEAT SHIELD - CONTINUED

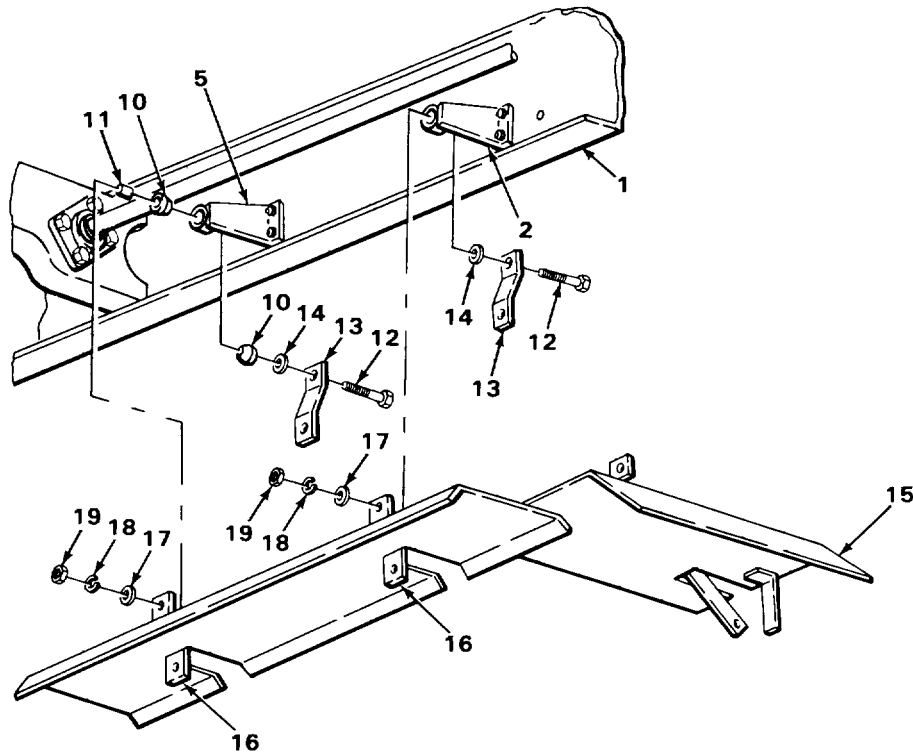
LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
9. Frame (1)	Rear spark arrestor support bracket (2)	Put in place, and hold.	
10. Rear spark arrestor support bracket (2) to frame (1)	Two screws (3) and new self-locking nuts (4)	Screw on, and tighten using 9/16-inch wrench, 9/16-inch socket, and handle.	
11. Frame (1) support bracket (5)	Rear muffler	Put in place, and hold.	
12. Rear muffler support bracket (5) to frame (1)	Two screws (6) and new self-locking nuts (7)	Screw on, and tighten using 9/16-inch wrench, 9/16-inch socket, and handle.	
13. Rear spark arrestor support bracket (2)	Two insulators (8) and spacer (9)	Put in place.	



TA229143

EXHAUST HEAT SHIELD - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
14. Rear muffler support bracket (5)	Two insulators (10) and spacer (11)	Put in place.	
15. Rear spark arrestor support bracket (2), rear muffler support bracket (5)	Two screws (12), two links (13), two washers (14)	Push in.	
16. Two screws (12)	Heat shield assembly (15)	Push welded links (16) onto screws (12).	
17.	Two washers (17), new lockwashers (18), and nuts (19)	Screw on, and tighten using 9/16-inch wrench, 9/16-inch socket, and handle.	

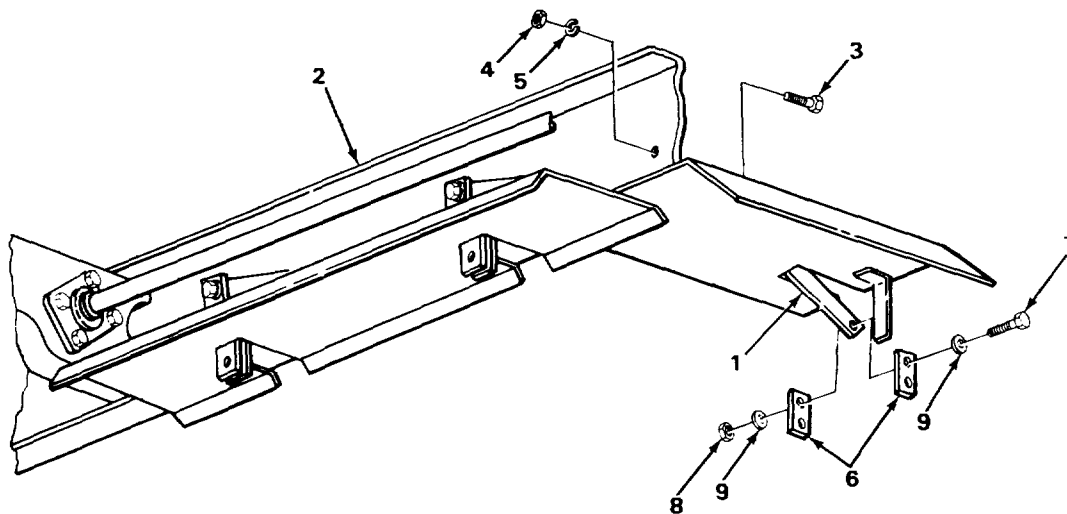


TA229144

LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION - CONTINUED

- | | | | |
|-----|---|--|---|
| 18. | Tailpipe support bracket (1) to frame (2) | Screw (3), nut (4), and new lockwasher (5) | Screw in, and tighten using 9/16-inch wrench, 9/16-inch socket and handle. |
| 19. | Tailpipe support bracket (1) | Two tailpipe support straps (6) | Put in place, and hold. |
| 20. | Tailpipe support straps (6) to tailpipe support bracket (1) | Screw (7), nut (8), and two washers (9) | Screw in, and tighten using 9/16-inch wrench, 9/16 inch socket, and handle. |



NOTE

FOLLOW-ON MAINTENANCE: Install spark arrestor and tailpipe (pages 2-202 and 2-206).

TASK ENDS HERE

2-886

TA229145

TRANSFORMER HOLDDOWN CHAINS

This task covers:

Repair (page 2-887)

INITIAL SETUP:

Tools

Grinding machine, utility
 Pliers, slip-joint, angle-nose
 Sander, disc, electric, portable
 Vise, machinist's
 Wrench, pliers
 Wrench, open-end, 3/8-inch

Materials/Parts

Link, chain repair (as needed)
 Paint, primer(TM 43-0139)
 Paint, forest green (TM 43-0139)
 Sanding disc, 7-inch, number 30 grit
 Spring, holddown chain (as needed)

Personnel

One

LOCATION	ITEM	ACTION	REMARKS
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REPAIR

NOTE

The steps in this task are the same for all four sets of transformer holddown chains. The second set from the rear is used as the example.

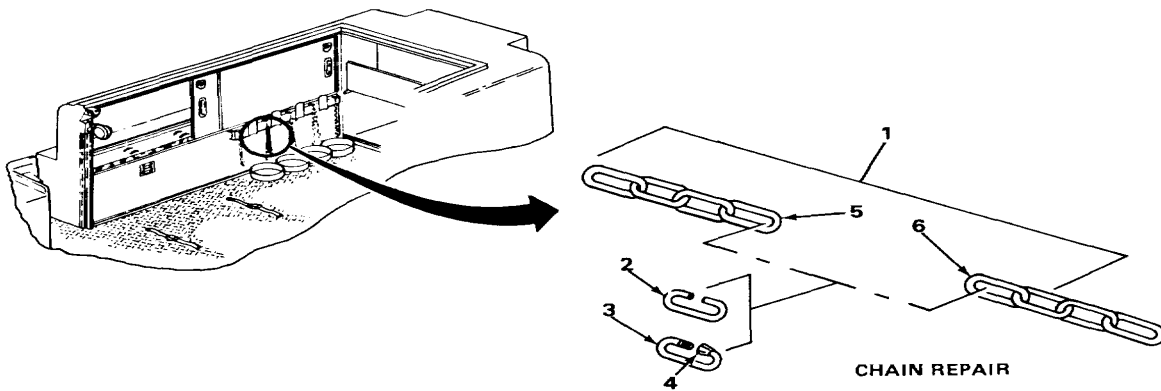
There are three repairs that can be made to chains:

1. Replace broken link (steps 1 and 2).
2. Replace broken spring (steps 3 thru 6).
3. Reweld links (steps 7 thru 10).

LOCATION	ITEM	ACTION	REMARKS
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REPAIR - CONTINUED

- | | | | |
|--------------|-----------------|---|--|
| 1. Chain (1) | Broken link (2) | Spread, using pliers wrench and slip-joint pliers, and take out broken link (2). | |
| 2. | Repair link (3) | a. Using 3/8 inch wrench, open nut (4) while screwing back along link.
b. Hook link (5) on spring onto repair link (3).
c. Hook other link (6) onto repair link (3).
d. Using 3/8-inch wrench, screw nut (4) and tighten, closing repair link (3). | |



- | | | | |
|--------------------|----------------|--|--|
| 3. Welded link(7) | Spring(8) | Using pliers wrench and slip-joint pliers, open eye of spring and take off. | |
| 4. Link (9) | Spring (8) | a. Secure link (9) in vise
b. Using pliers wrench and slip-joint pliers, open eye of spring and take off. | |
| 5. Link (9) | New spring (8) | a. Using pliers wrench and slip-joint pliers, open eye of spring and slip on.
b. Remove from vise. | |
| 6. Welded link (7) | New spring (8) | Using pliers wrench and slip-joint pliers, open eye of spring and snap onto link (7). | |

TRANSFORMER HOLDDOWN CHAINS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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REPAIR - CONTINUED

WARNING

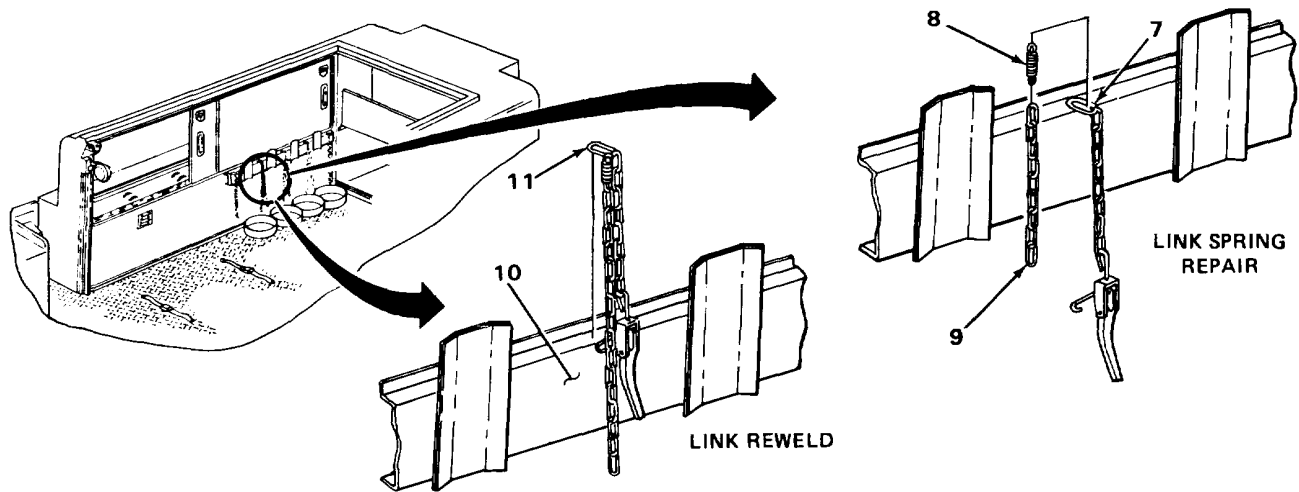
Eye protection must be worn while using disc sander and bench grinder to prevent eye injury.

- | | | |
|----|-----------|--|
| 7. | Body (10) | Using disc sander, grind off old weld and paint where link (11) was welded on. |
| 8. | Link (11) | Using bench grinder, clean off old weld and rust. |

CAUTION

Before beginning make sure all flammable items are removed from stowage compartment below where you are welding.

- | | | | |
|-----|-----------|-----------|------------------------------|
| 9. | Body (10) | Link (11) | Weld (TM 9-237). |
| 10. | Body (10) | | Touch up paint (TM 43-0139). |



TASK ENDS HERE

TA229147

TRANSFORMER HOLDDOWN CHAIN CLAMP

This task covers:

Replacement (page 2-890)

INITIAL SETUP:

Tools

Hacksaw
 Pliers, slip-joint
 Wrench, open-end, 3/8-inch
 Wrench, pliers

Materials/Parts

Clamp, holddown chain
 Link, chain repair

Personnel Required

One

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

REPLACEMENT

NOTE

The steps in this task are the same for all four transformer holddown chain clamps. The rear chain clamp is used as the example.

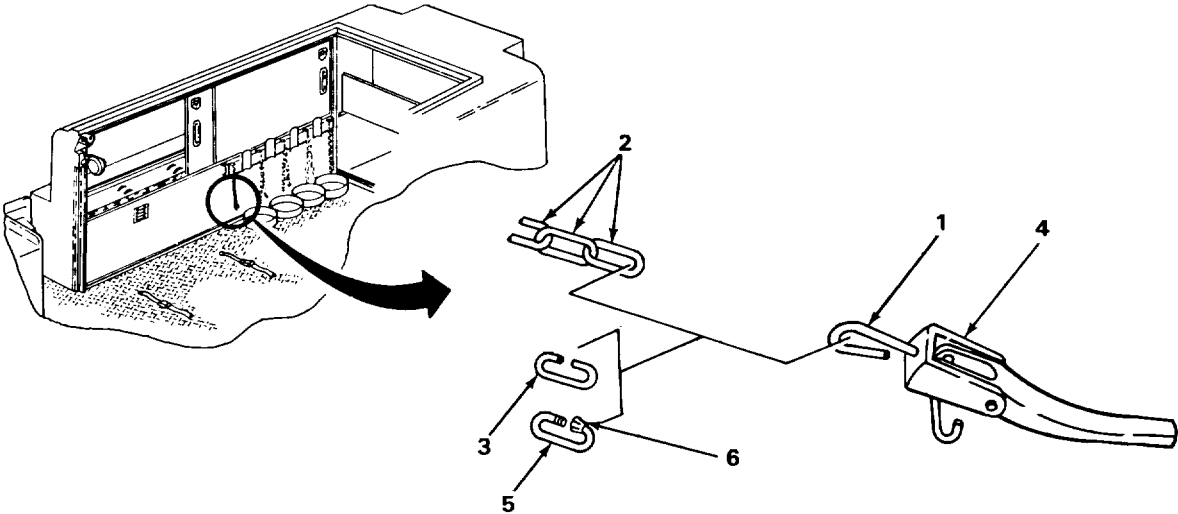
1	Clamp loop (1) to chain (2)	Link (3) and clamp (4)	a. Using hacksaw, cut. b. Using pliers wrench and slip-joint pliers, spread open. c. Take off link (3) and clamp (4).
2.	Clamp (4)	Link (3)	Take off, and get rid of.
3.	New clamp (4)	Repair link (5)	a. Using 3/8-inch wrench, screw nut (6) down onto link (5) opening link. b. Hook onto clamp loop (1).
4.	Chain (2)	New clamp (4) and repair link (5)	Hook onto chain (2).

TRANSFORMER HOLDDOWN CHAIN CLAMP - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

REPLACEMENT - CONTINUED

- | | | |
|----------------------------------|-----------------|--|
| 5. New clamp (4)
to chain (2) | Repair link (5) | Using 3/8-inch wrench on nut (6),
screw closed. |
|----------------------------------|-----------------|--|



TASK ENDS HERE

TA229148

TRANSFORMER HOLDDOWN PAD

This task covers:

Replacement(page 2-892)

INITIAL SETUP:

Tools	Materials/Parts - Continued
Knife, putty	Pad, transformer holddown
Materials/Parts	Personnel Required
Cement, rubber, (item 6, appendix C)	One
Naptha (item 21, appendix C)	
Rags, wiping (item 24, appendix C)	

LOCATION	ITEM	ACTION	REMARKS
-----------------	-------------	---------------	----------------

REPLACEMENT

WARNING

Naptha and its fumes are harmful and flammable. Do not use near open flame. Do not smoke while using. Use only in well-ventilated area. Naptha can catch fire, and fumes can explode causing serious injury.

NOTE

The steps in this task are the same for all four transformer holddown pads. The one second from the rear is used as the example.

TRANSFORMER HOLDDOWN PAD - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

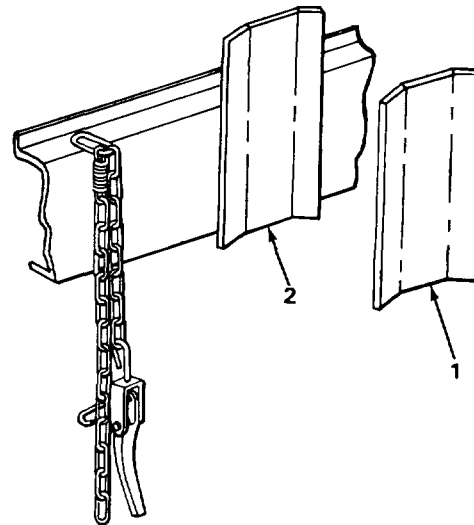
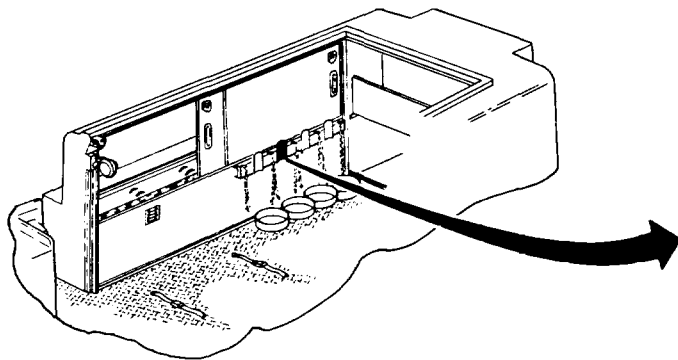
REPLACEMENT - CONTINUED

- | | | | |
|----|-----------------|---------|--|
| 1. | Pad support (1) | Pad (2) | Using naphtha and putty knife, dissolve cement and peel off pad (2).
Use rag to wipe up excess naphtha. |
| 2. | Pad support (1) | | Clean using naphtha and rag. |

WARNING

Rubber cement fumes are flammable. Do not smoke or have open flame nearby while using rubber cement. Rubber cement and fumes catching fire or exploding can cause injury.

- | | | | |
|----|-----------------|-------------|--|
| 3. | Pad support (1) | New pad (2) | Glue to pad support (1) using rubber cement. |
|----|-----------------|-------------|--|



TASK ENDS HERE

WATER JUG HOLDDOWN STRAPS

This task covers:

- a. Removal (page 2-894)
- b. Replacement (page 2-894)

INITIAL SETUP:

Tools

Screwdriver, flat-tip, 3/16-inch
 Screwdriver, flat-tip, offset,
 3/16-inch
 Wrench, open-end box, 3/8-inch

Personnel Required

Two

Equipment Condition

Water jug removed (TM 9-2320-269-10).

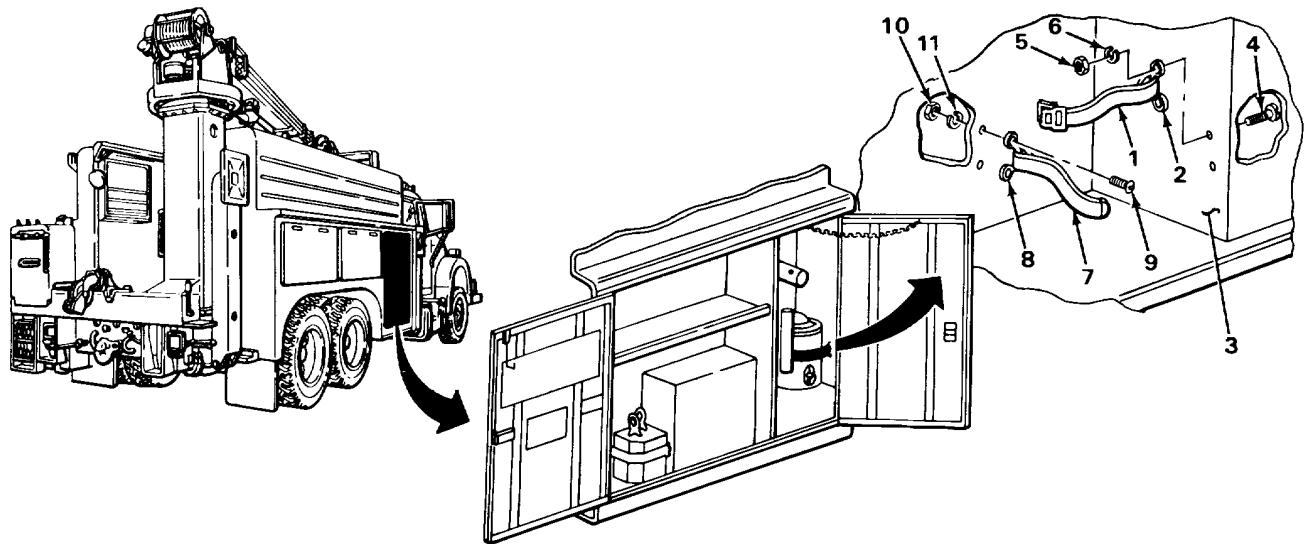
Materials/Parts

Lockwasher, strap brackets to body
 (four required)

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1.	Strap (1) and bracket (2) to body (3)	Two screws (4), nuts (5), lockwashers (6), strap (1), and bracket (2)	<ol style="list-style-type: none"> a. With assistant working between cab and body, use offset screwdriver and 3/8-inch wrench to unscrew and take out. b. Get rid of lockwashers (6).
2.	Strap (7) and bracket (8) to body (3)	Two screws (9), nuts (10), lockwashers (11), strap (7), and bracket (8)	<ol style="list-style-type: none"> a. With assistant working from under truck, using 3/8-inch wrench and flat-tip screwdriver, unscrew nuts and take out. b. Get rid of lockwashers (11).
INSTALLATION			
3.	Body (3)	Strap (7) and bracket (8)	Put in place, and hold.
4.	Strap (7) and bracket (8) to body (3)	Two screws (9)	Put in.

WATER JUG HOLDDOWN STRAPS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
5.	Two screws (9)	Two new lockwashers (11) and nuts (10)	a. Hold screws (9) with flat-tip screwdriver. b. With assistant working from under truck, screw on and tighten using 3/8-inch wrench.
6.	Body (3)	Strap (1) and bracket (2)	Put in place, and hold.
7.	Strap (1) and bracket (2) to body (3)	Two screws (4)	With assistant working between cab and body, put in.
8.	Two screws (4)	Two new lockwashers (6) and nuts (5)	With assistant holding screws (4) with offset screwdriver, screw on



NOTE

FOLLOW-ON MAINTENANCE: Stow water jug (TM 9-2320-269-10).

TASK ENDS HERE

TA229150

CHOCK HOLDDOWN STRAPS

This task covers:

- a. Removal (page 2-896)
- b. Installation (page 2-897)

INITIAL SETUP:

Tools

Screwdriver, flat-tip, 3/16-inch
Wrench, open-end, 3/8-inch

Materials/Parts

Lockwasher, strap brackets to body
(four required)

Personnel Required

Two

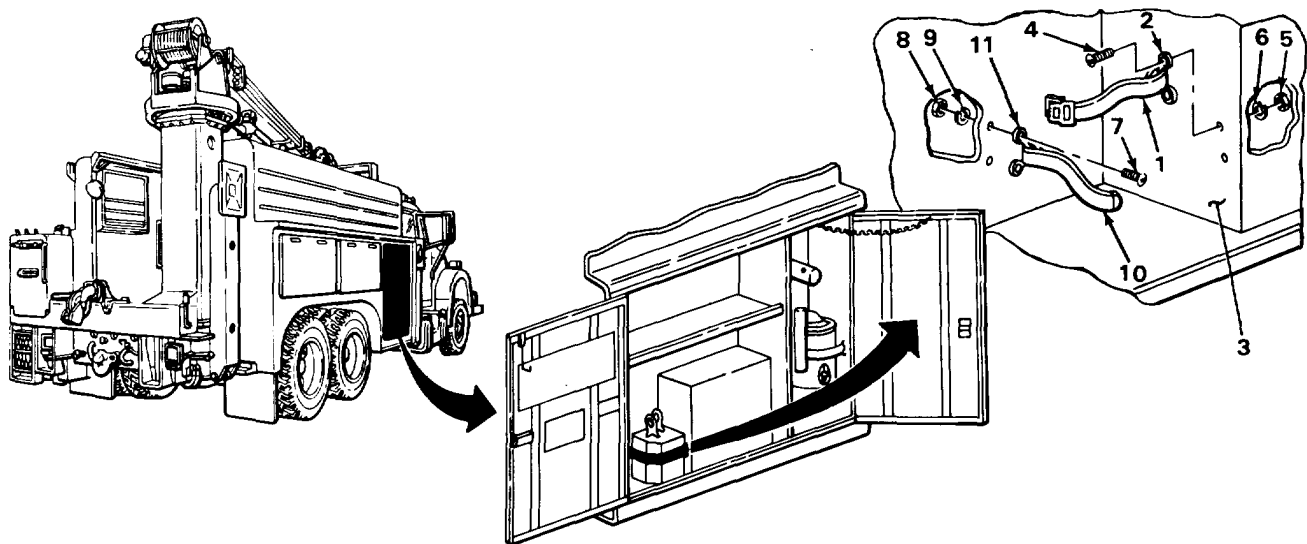
Equipment Condition

Remove chocks (TM 9-2320-269-10).

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1.	Strap (1) and bracket (2) to body (3)	Two screws (4), nuts (5), lockwashers (6), strap (1), and bracket (2)	<ul style="list-style-type: none"> a. With assistant working from under truck, use 3/8-inch wrench to hold nuts (5). b. Using flat-tip screwdriver, unscrew screws (4) and take out. c. Get rid of lockwashers (6).
2.	Two screws (7)	Two nuts (8) and lockwashers (9)	<ul style="list-style-type: none"> a. Using flat-tip screwdriver, hold screws (7). b. With assistant working from under truck, use 3/8-inch wrench to unscrew and take off. c. Get rid of lockwashers (9).
3.	Body (3)	Two screws (7), strap (10), and bracket (11)	Take out.
INSTALLATION			
4.	Body (3)	Strap (10) and bracket (11)	Put in place, and hold.
5.	Strap (10) and bracket (11) to body (3)	Two screws (7)	Put in, and hold using flat-tip screwdriver.

CHOCK HOLDDOWN STRAPS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
5. Two screws (7)	Two new lockwashers	a. Hold screws (9) with flat-tip screwdriver. b. With assistant working from under truck, screw on and tighten using 3/8-inch wrench.	
6. Body (3)	Strap (1) and bracket (2)	Put in place, and hold.	
7. Strap (1) and brac-	Two screws (4)	With assistant working between cab and body, put in.	
8. Two screws (4)	Two new lockwashers (6) and nuts (5)	With assistant holding screws (4) with offset screwdriver, screw on and tighten using 3/8-inch wrench.	



NOTE

FOLLOW-ON MAINTENANCE: Stow chocks (TM 9-2320-269-10).

TASK ENDS HERE

TA229151

BODY MOUNTED SPOTLIGHT

This task covers:

- a. Removal (page 2-898)
- b. Cleaning (page 2-898)
- c. Installation (page 2-901)

INITIAL SETUP:

Tools

- Brush, wire
- Handle, ratchet, 3/8-inch drive
- Screwdriver, cross-tip, number two
- Screwdriver, flat-tip
- Socket, 3/8-inch drive, 1/2-inch
- Socket, 3/8-inch drive, 5/8-inch
- Wrench, open-end, 1/4-inch
- Wrench, open-end, 1/2-inch
- Wrench, open-end, 9/16-inch

Materials/Parts

- Lockwasher, bracket and plate to clamp
- Rags, wiping (item 24, appendix C)

Personnel Required

One

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

NOTE

If only swivel bracket is being removed, go to step 6.

1.	Retaining ring (1)	Screw (2)	Using cross-tip screwdriver, unscrew and take out.
2.	Housing (3)	Retaining ring (1)	Unhook, and pull forward.
3.	Lamp (4)	Two screws (5) and two terminals (6)	<ul style="list-style-type: none"> a. Using flat-tip screwdriver, loosen screws (5) and take off terminals (6). b. Set lamp (4) aside.

BODY MOUNTED SPOTLIGHT - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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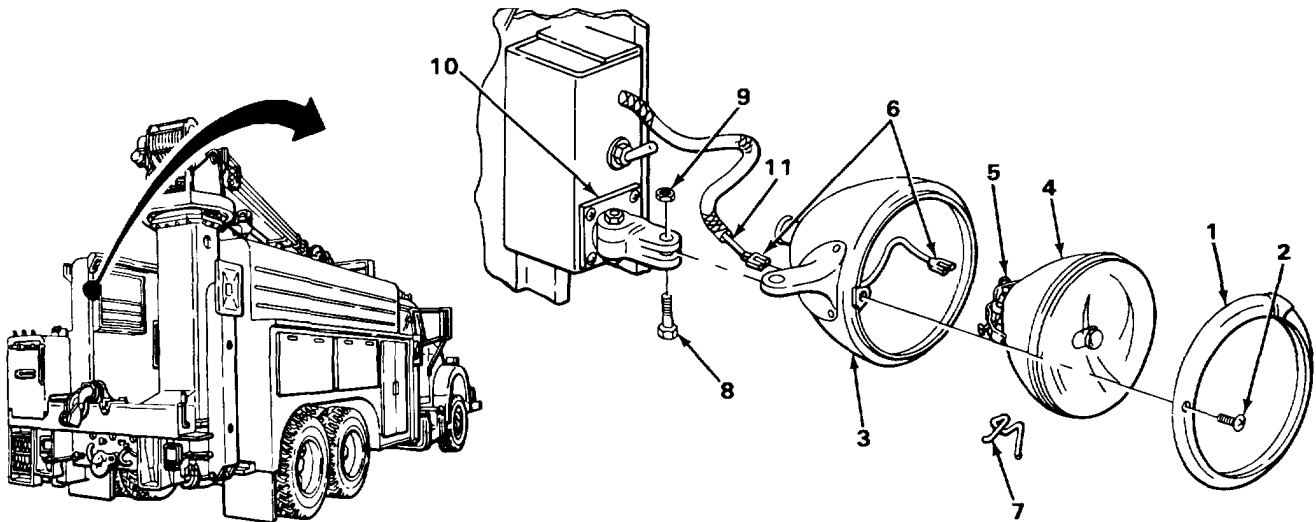
REMOVAL- CONTINUED

- | | | | |
|----|--------------------|----------------|--------------------------------------|
| 4. | Retaining ring (1) | Four clips (7) | Using flat-tip screwdriver, pry out. |
| 5. | Lamp (4) | Take out. | |

NOTE

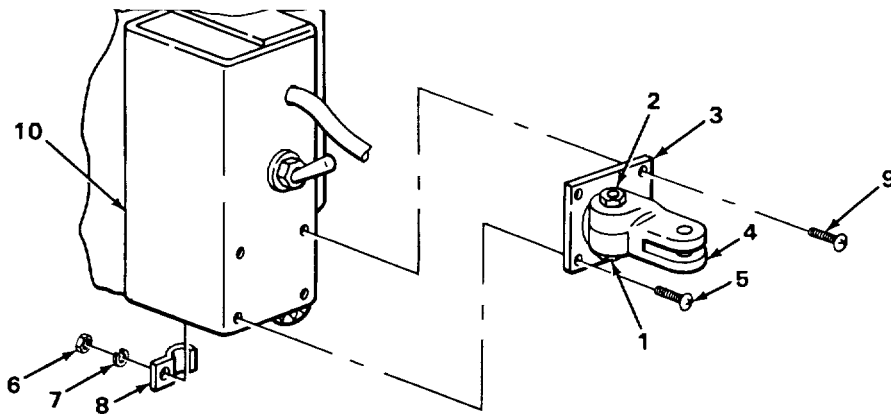
If only lamp is being removed, go to CLEANING.

- | | | | |
|----|--------------|---------------------------|---|
| 6. | Screw (8) | Nut (9) | Using 5/8-inch socket, handle, and |
| 7. | Bracket (10) | Screw (8) and housing (3) | a. Take out screw (8).
b. Take out housing (3).
c. Pull wire (11) through |



TA229152

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
8. Screw (1)	Nut (2)	Using 1/2-inch socket, handle, and 1/2-inch wrench, loosen if needed	
9. Plate (3)	Bracket (4)	Turn away from screw (5).	
10. Screw (5)	Nut (6)	Using flat-tip screwdriver and 1/4-inch wrench, unscrew and take off.	
11.	Lockwasher (7) and clamp (8)	a. Take off. b. Get rid of lockwasher (7). c. Take off clamp (8).	
12. Plate (3)	Screw (5)	Take off.	
13.	Three screws (9)	a. Hold bracket (4) in place. b. Using cross-tip screwdriver, unscrew and take out screws (9).	
14. Bracket (10)	Bracket (4)	Take off.	



CLEANING

15. Housing (11) and lamp (12)	Terminals (13)	Using wire brush, clean away dirt and corrosion and wipe clean with rag.	
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TA229153

LOCATION	ITEM	ACTION	REMARKS
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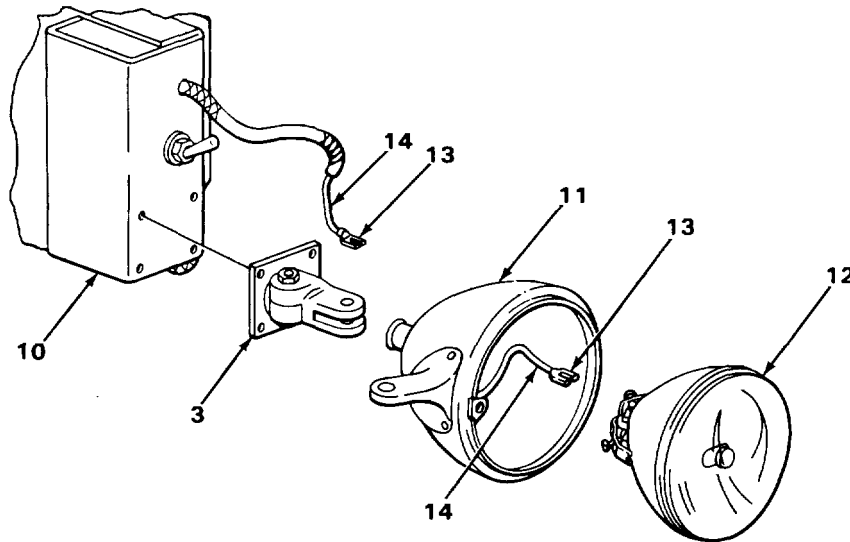
CLEANING - CONTINUED

16.	Wires (14)		If corroded or cracked, repair (page 2-433).
-----	------------	--	--

NOTE

If swivel bracket was not removed, go to INSTALLATION.

17	Bracket (10), plate (3), and housing (11)		Using wire brush, clean dirt and corrosion from mounting surfaces, and wipe clean with rags.
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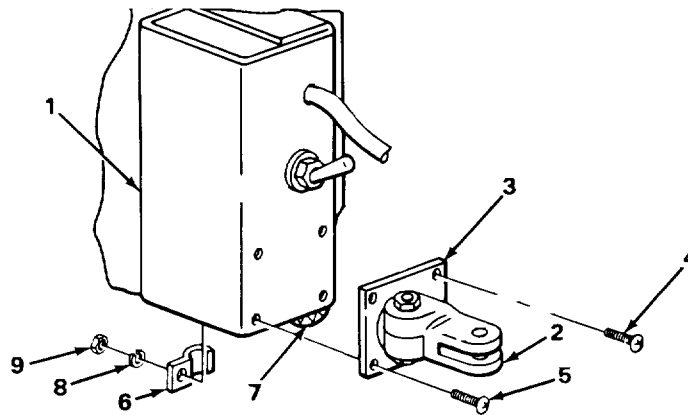
NOTE

If lamp only is being installed, go to step 27.

TA229154

BODY MOUNTED SPOTLIGHT - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
18. Bracket (1)	Bracket (2)	Hold in place.	
19. Plate (3)	Three screws (4)	Screw in part way.	
20.	Screw (5)	Put in.	
21. Screw (5)	Clamp (6)	Put on clamp (6) over wire (7).	
22.	New lockwasher (8) and nut (9)	a. Put on lockwasher (8). b. Screw on nut (9), and tighten using flat-tip screwdriver and 1/4-inch wrench.	
23. Plate (3)	Three screws (4)	Tighten using cross-tip screwdriver.	



24. Bracket (2)	Housing (10) and screw (11)	a. Hold housing (10) in place. b. Put in screw (11).
-----------------	--------------------------------	---

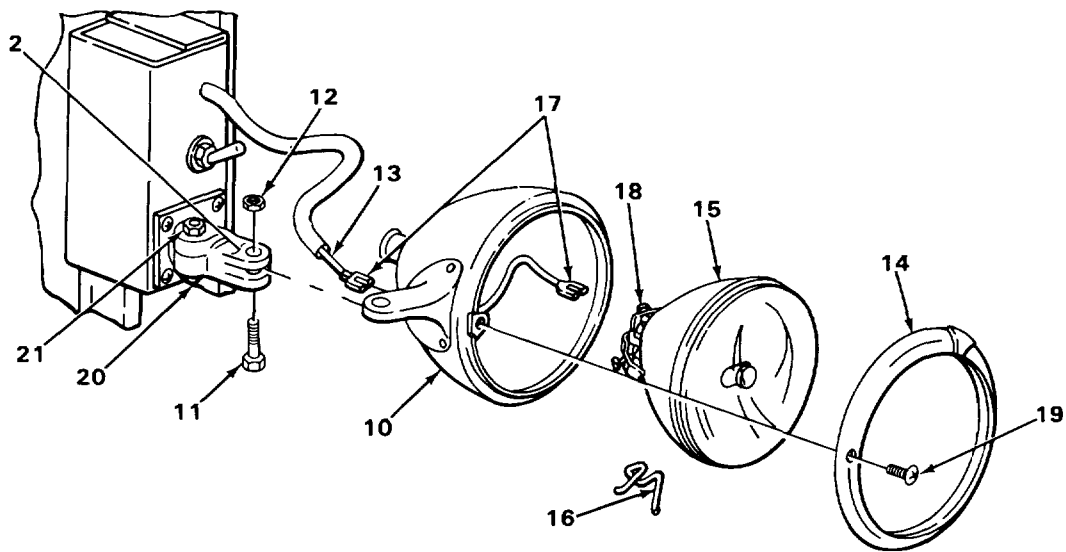
NOTE

If bracket only is being installed go to FOLLOW-ON MAINTENANCE.

TA229155

BODY MOUNTED SPOTLIGHT - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
25. Screw (11)	Nut (12)	Screw on, and tighten using 5/8-inch socket, handle, and 9/16-inch wrench.
26. Housing (10)	Wire (13)	Put through.
27. Retaining ring (14)	Lamp (15)	Put in.
28.	Four clips (16)	Put in, and press in place.
29. Lamp (15)	Two terminals (17) and two screws (18)	a. Put terminals(17)on screws(18). b. Tighten screws (18) using flat-tip screwdriver.
30. Housing (10)	Retaining ring (14)	Hook into housing (10), and push in.
31. Retaining ring (14)	Screw (19)	Screw in, and tighten using cross-tip screwdriver.
32. Screw (20)	Nut (21)	Tighten if loose, using 1/2-inch socket, handle, and 1/2-inch wrench.



TA229156

BODY MOUNTED SPOTLIGHT - CONTINUED

INSTALLATION - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Lubricate swivel bracket (LO 9-2320-269-12).
2. Check operation of spotlight.

TASK ENDS HERE

FLOODLIGHT

This task covers:

- | | |
|---|--|
| <ol style="list-style-type: none"> a. Removal (page 2-904) b. Cleaning (page 2-907) | <ol style="list-style-type: none"> c. Installation (page 2-908) |
|---|--|

INITIAL SETUP:

Tools

- Brush, wire
- Handle, ratchet, 3/8-inch drive
- Screwdriver, flat-tip
- Socket, 3/8-inch drive, 9/16-inch
- Wrench, open-end, 1/2-inch
- Wrench, open-end, 9/16-inch

Materials/Parts

- Lockwasher, bracket to housing (two required)
- Lockwasher, bracket to plate (two required)
- Rags, wiping (item 24, appendix C)

Personnel Required

One

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

REMOVAL

1. Retaining ring (1)	Screw (2)	Using flat-tip screwdriver, unscrew and take out.	
2. Housing (3)	Retaining ring (1) and lamp (4)	Unhook, and pull forward.	

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL - CONTINUED

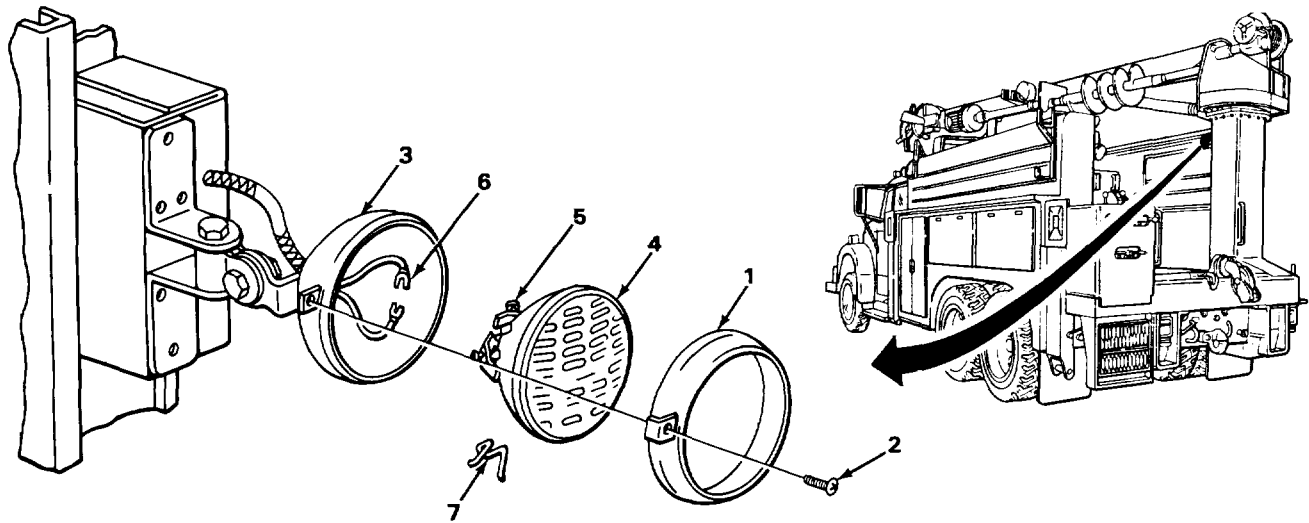
NOTE

If floodlight assembly is being removed, go to step 6.

- | | | |
|-----------------------|-------------------|--|
| 3. Two screws (5) | Two terminals (6) | a. Using flat-tip screwdriver, loosen screws (5) and take off terminals (6).
b. Set retaining ring (1) aside. |
| 4. Retaining ring (1) | Four clips (7) | Using flat-tip screwdriver, pry out. |

NOTE

If only lamp is being removed, go to CLEANING.

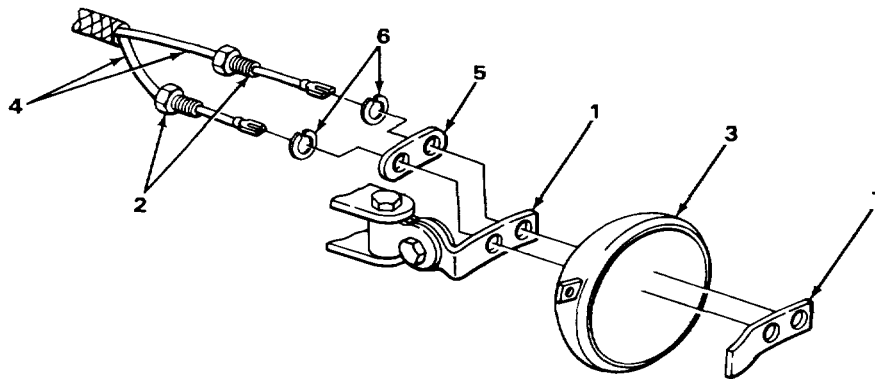


TA229157

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

REMOVAL - CONTINUED

- | | | |
|-----------------|--|---|
| 5. Bracket (1) | Two nuts (2), housing (3), and two wires (4) | a. Using 1/2-inch wrench, unscrew nuts (2).
b. Take off housing (3) pulling wires (4) through. |
| 6. Two nuts (2) | Bracket (5) and two lockwashers (6) | a. Take off pulling over wires (4).
b. Get rid of lockwashers (6). |



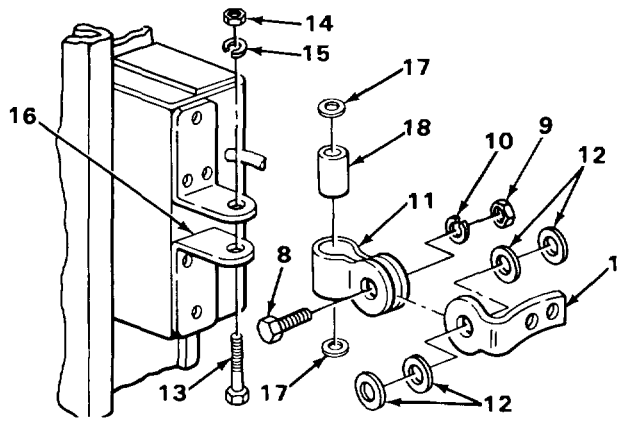
- | | | |
|-----------------|--|--|
| 8. Screw(8) | Nut(9) and Lockwasher (10) | a. Using 9/16-inch socket, handle, and 9/16-inch wrench, unscrew and take off.
b. Get rid of lockwasher (10). |
| 9. Bracket (11) | Screw (8), bracket (1), and four spacers (12) | a. Take out screw (8).
b. Take out bracket (1) and spacers (12). |
| 10. Screw (13) | Nut (14) and lockwasher (15) | a. Using 9/16-inch socket, handle, and 9/16-inch wrench, unscrew and take off.
b. Get rid of lockwasher (15). |
| 11. Plate (16) | Bracket (11), two spacers (17), and bushing (18) | Takeout. |

TA229158

FLOODLIGHT - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL - CONTINUED

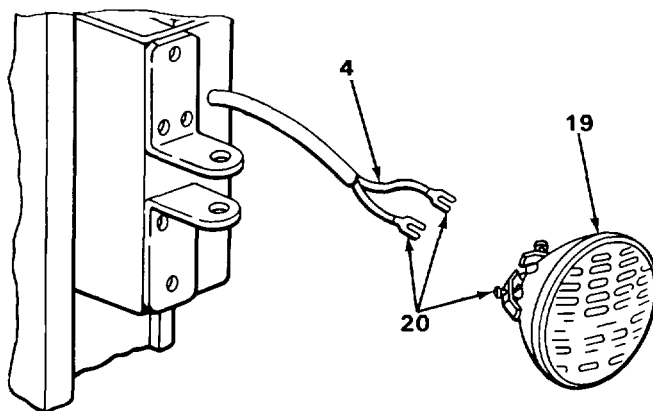


CLEANING

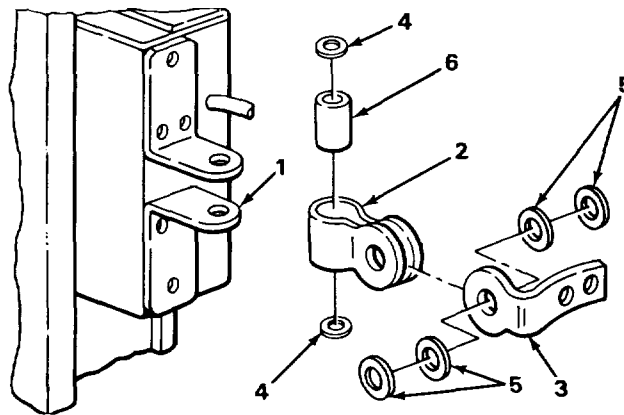
- | | | |
|-----------------------------|----------------|--|
| 12. Lamp (19) and wires (4) | Terminals (20) | Using wire brush, clean off dirt and corrosion and wipe clean with rags. |
| 13. | Wires (4) | If corroded or cracked, repair (page 2-433). |

NOTE

If floodlight assembly was not removed, go to INSTALLATION.



LOCATION	ITEM	ACTION REMARKS
CLEANING - CONTINUED		
14.	Plate (1) and brackets (2) and (3)	Using wire brush, clean off dirt and corrosion and wipe clean with rags.
15.	Spacers (4) and (5)	Wipe clean with rags, and replace if broken or grooved.
16.	Bushing (6)	Wipe clean with rags, and replace if cracked, or grooved.



17. Bracket (2)	Bushing (6) and two spacers (4)	a. Put bushing (6) in. b. Put in spacers (4), and hold in place.
18. Plate (1)	Bracket (2) and screw (7)	Put bracket (2) in, and put screw (7) through.
19. Screw (7)	New lockwasher (8) and nut (9)	a. Put lockwasher (8) on. b. Screw on nut (9), and tighten using 9/16-inch socket, handle, and 9/16-inch wrench.

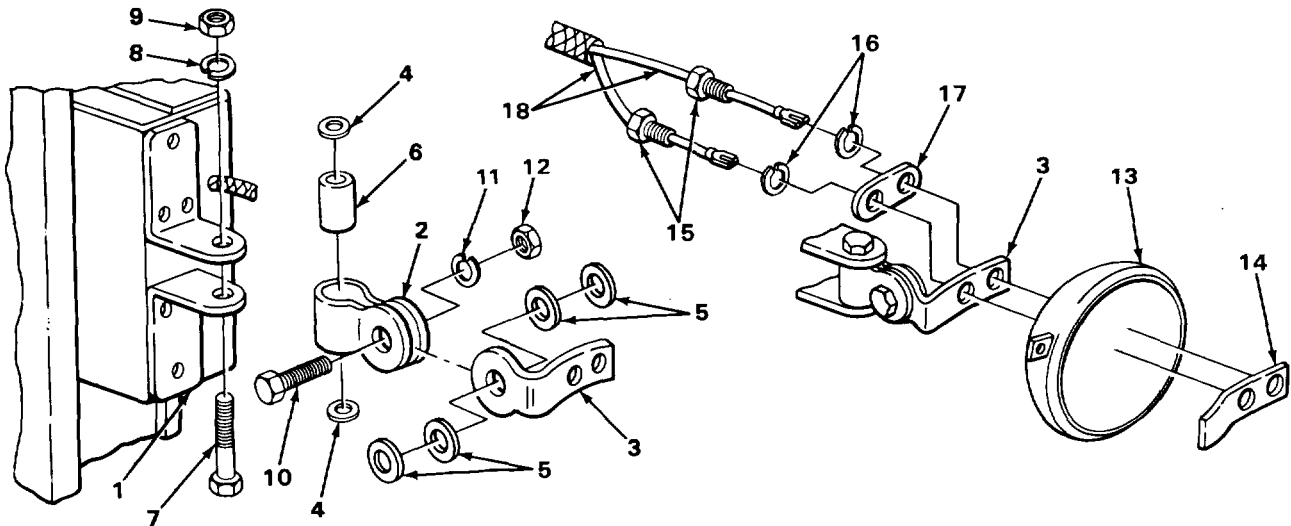
NOTE

If only lamp is being installed, go to step 25.

TA229160

FLOODLIGHT - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
20. Bracket (2)	Bracket (3), four spacers (5), and screw (10)		Put in bracket (3) and spacers (5), and put screw (10) through.
21. Screw (10)	New lockwasher (11) and nut (12)	a. Put lockwasher(11)on. b. Screw on nut (12), and tighten using 9/16-inch socket, handle, and 9/16-inch wrench.	
22. Housing (13)	Bracket (14)	Put in.	
23. Two nuts (15)	Two new lockwashers (16) and bracket (17)	Put on over wires (18).	
24. Bracket (3)	Housing (13), two wires (18), and two nuts (15)	a. Hold housing (13) in place, and put wires (18) through. b. Screw in nuts (15), and tighten using 1/2-inch wrench.	



TA229161

2-909

FLOODLIGHT - CONTINUED

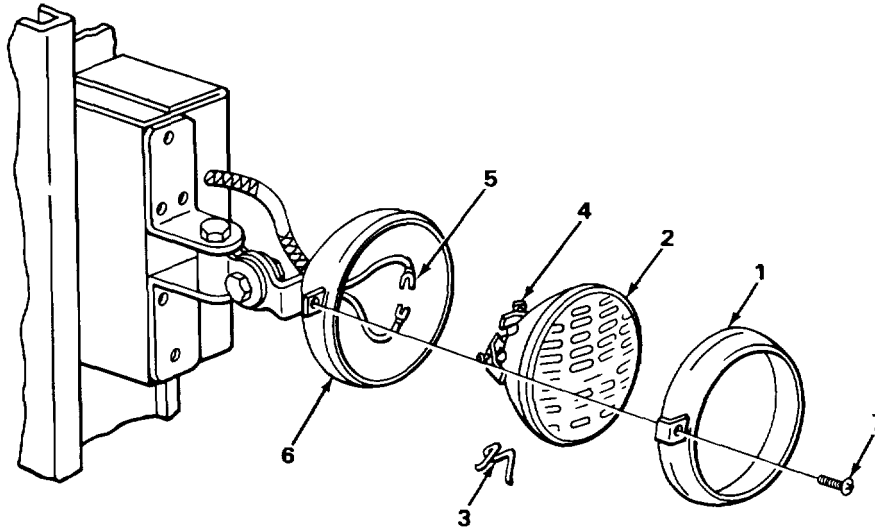
LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION - CONTINUED

NOTE

If floodlight assembly is being installed, go to step 28.

- | | | | |
|-----|--------------------|--------------------|---|
| 25. | Retaining ring (1) | Lamp (2) | Put in. |
| 26. | | Four clips (3) | Put in, and press in place. |
| 27. | Two screws (4) | Two terminals (5) | a. Put terminals (5) on.
b. Tighten screws (4) using flat-tip screwdriver. |
| 28. | Housing (6) | Retaining ring (1) | Hook on, and hold in place. |
| 29. | Retaining ring (1) | Screw (7) | Screw in, and tighten using flat-tip |



NOTE

FOLLOW-ON MAINTENANCE: Check operation of floodlight (TM 9-2320-269-10).

TASK ENDS HERE

TA229162

OUTRIGGER WARNING SWITCH

This task covers:

- a. Removal (page 2-911)
 - b. Cleaning (page 2-913)
 - c. Installation (page 2-914)
 - d. Adjustment (page 2-915)
-

INITIAL SETUP

Tools

Brush, wire
 Screwdriver, flat-tip, 3/8-inch
 Wrench, open-end, 5/16-inch

Materials/Parts

Chalk, carpenter's (item 7, appendix C)
 Rags, wiping (item 24, appendix C)
 Tags, marking (item 29, appendix C)

Personnel Required

Two

Equipment Condition

Outrigger lowered (TM 9-2320-269-10)
 for switch being serviced.

ACTION	ITEM	REMARKS
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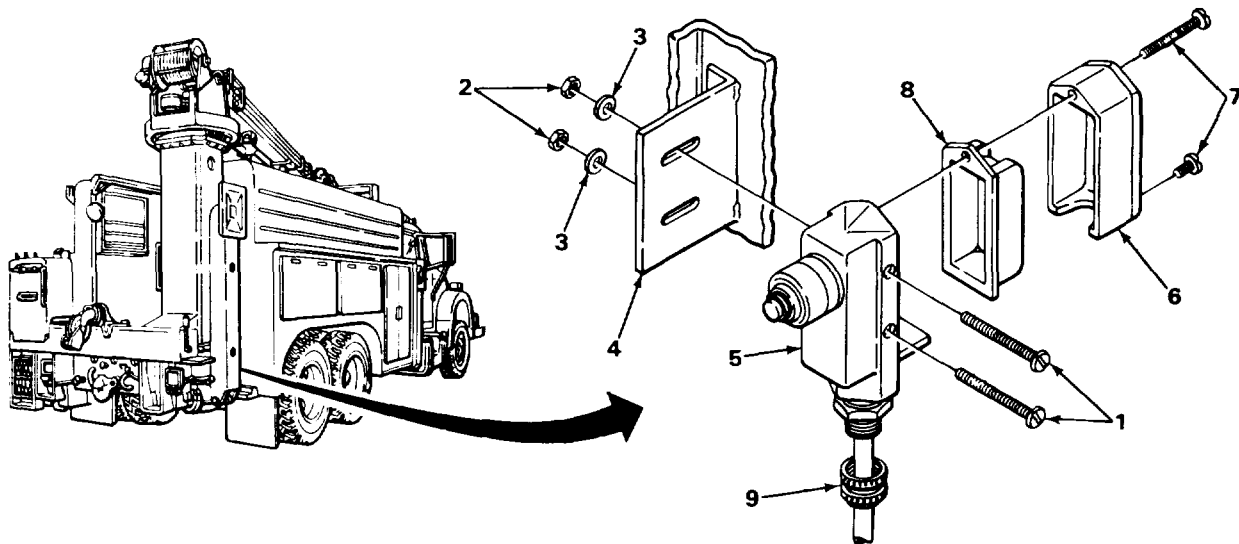
REMOVAL

NOTE

This procedure is for the right-rear outrigger switch. The procedure for the other outrigger switches is the same.

OUTRIGGER WARNING SWITCH - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
1.	Two screws (1)	Two nuts (2) and washers (3)	Using flat-tip screwdriver and 5/16-inch wrench, take off washers (3).
2.	Plate (4)	Switch (5)	Take off.
3.	Switch (5)	Two screws (1)	Take out.
4.	Cover (6)	Two screws (7)	Using flat-tip screwdriver, unscrew
5.	Switch (5)	Cover (6) and gasket (8)	a. Take off. b. Take out gasket (8).

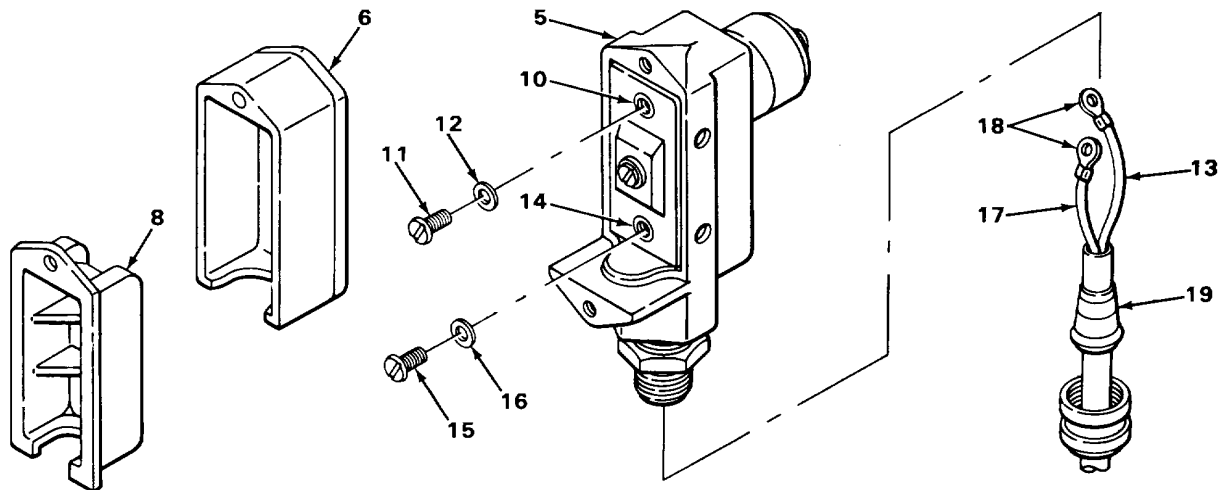


7.	Terminal (10)	Screw (11) and washer (12)	Using flat-tip screwdriver, unscrew and take out.
8.	Switch (5)	Wire (13)	Pull through and tag for installation.

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OUTRIGGER WARNING SWITCH - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
9. Terminal (14)	Screw (15) and washer (16)	Using flat-tip screwdriver, unscrew and take out.	
10. Switch (5)	Wire (17)	Pull through, and tag for installation.	
CLEANING			
11.	Terminals (10), (14), and (18)	Using wire brush, clean away dirt and corrosion and wipe with rags.	
12.	Wires (13) and (17)	Wipe clean with rags and repair if cracked or corroded (page 2-433).	
13.	Switch (5), cover (6), and gasket (8)	Wipe clean with rags, and replace gasket (8) if torn.	
14.	Grommet (19)	Wipe clean with rags, and replace if torn or grooved.	



TA229164

OUTRIGGER WARNING SWITCH - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
15. Switch (1)	Wire (2)	a. Check tag for proper position, and take off. b. Put wire (2) through.
16. Terminal (3) and wire (2)	Washer (4) and screw (5)	Screw in, and tighten using flat-tip screwdriver.
17. Switch (1)	Wire (6)	a. Check tag for proper position, and take off. b. Put wire (6) through.
18. Terminal (7) and wire (6)	Washer (8) and screw (9)	Screw in, and tighten using flat-tip screwdriver.
19. Switch (1)	Cap (10)	Screw on, and tighten.
20. Cover (11)	Gasket (12)	Put in.
21. Switch (1)	Cover (11) and two screws (13)	a. Put cover (11) on. b. Screw in screws (13), and tighten using flat-tip screwdriver.

OUTRIGGER WARNING SWITCH - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
22. Switch (1)	Two screws (14)	Put through.	
23. Plate (15)	Switch (1)	Put on, and hold in place.	
24. Two screws (14)	Two washers (16) and nuts (17)	Screw on part way.	

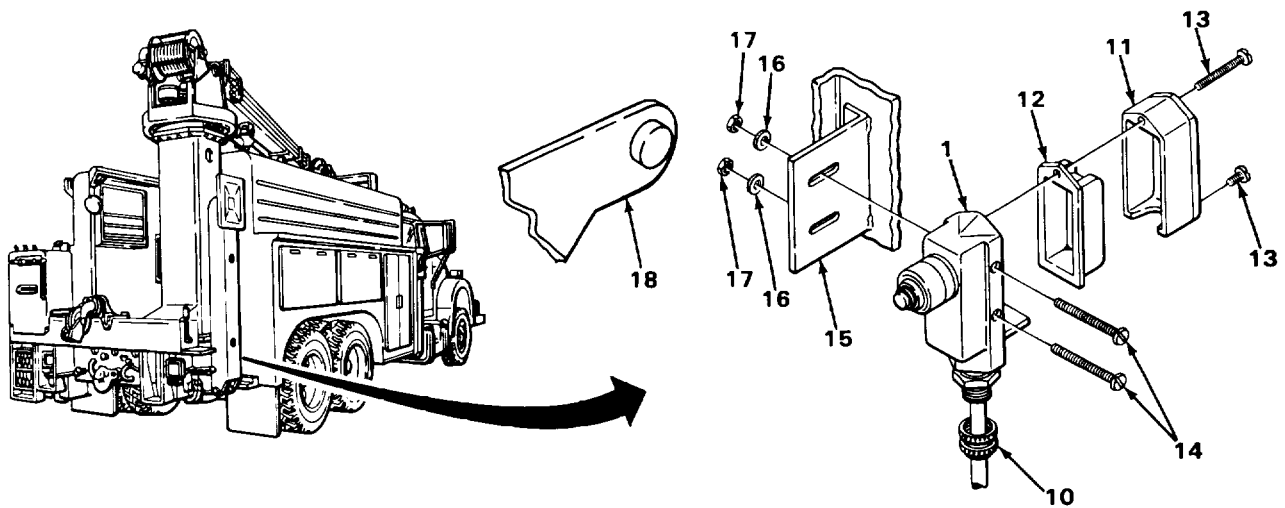
ADJUSTMENT

NOTE

This procedure is for right rear outrigger switch. Procedure for the other outrigger switches is the same.

If switch is being installed, go to step 27.

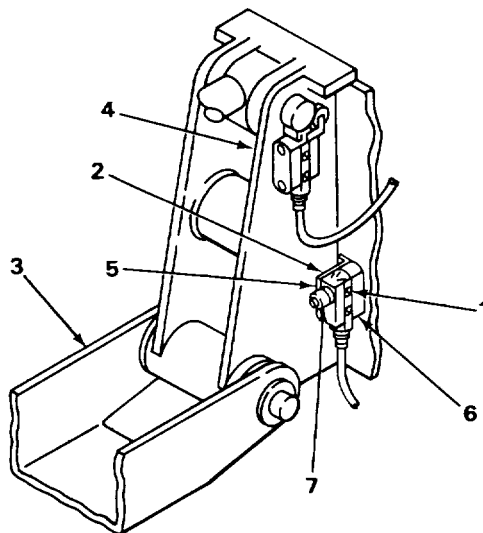
- | | | |
|-------------|----------------|---------------------------|
| 25. Vehicle | Outrigger (18) | Lower (TM 9-2320-269-10). |
|-------------|----------------|---------------------------|



TA229166

OUTRIGGER WARNING SWITCH - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
ADJUSTMENT - CONTINUED			
26. Two screws (1)	Two nuts (2)	Loosen using flat-tip screwdriver and 5/16-inch wrench.	
27. Vehicle	Outrigger (3)	Raise (M 9-2320-269-10).	
28.	Outrigger (3) and plate (4)	Using chalk, draw line on plate (4) along outrigger (3).	
29. Outrigger (3)	Lower (TM 9-2320-269-10).		
30. Plate (4)	Switch (5)	Move switch (5) until plunger (6) is over line 1/4-inch (6.37 cm), and have assistant hold in place.	
31. Two screws (1)	Two nuts (2)	Tighten using screwdriver and 5/16-inch wrench.	
32. Vehicle	Outrigger (3)	a. Raise (TM 9-2320-269-10). b. Check warning light on dash panel. c. If light is on, repeat adjustment for all switches (5).	



TASK ENDS HERE

TA229167

OUTRIGGER LOCKOUT SWITCH

This task covers:

- a. Removal (page 2-917)
 - b. Cleaning (page 2-920)
 - c. Installation (page 2-920)
-

INITIAL SETUP

Tools

- Brush, wire
- Pliers, slip-joint
- Screwdriver, flat-tip
- Wrench, open-end, 5116-inch

Materials/Parts

- Gasket, boot
- Packing, performed, boot
- Rags, wiping (item 24, appendix C)
- Tags, marking (item 29, appendix C)
- Personnel Required

One

Equipment Condition

Outrigger lowered (TM 9-2320-269-10)
for switch being serviced.

LOCATION	ITEM	ACTION	REMARKS
-----------------	-------------	---------------	----------------

REMOVAL

NOTE

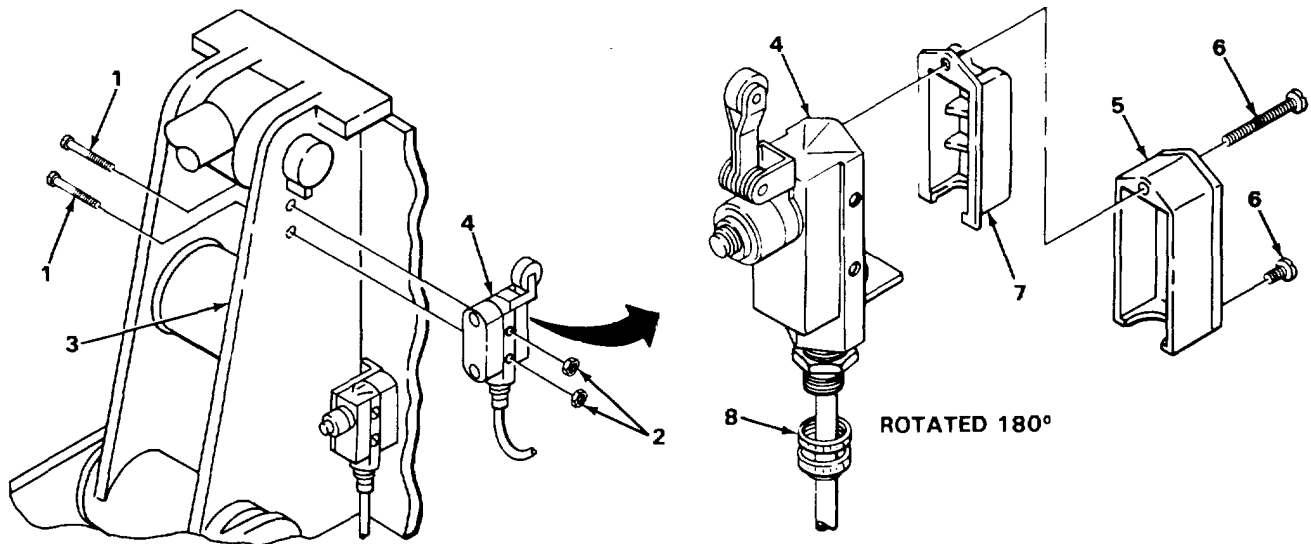
This procedure is for right rear outrigger switch. Procedure for the other outrigger switches is the same.

OUTRIGGER LOCKOUT SWITCH - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

REMOVAL- CONTINUED

- | | | | |
|----|----------------|--------------------------|---|
| 1. | Two screws (1) | Two nuts (2) | Using flat-tip screwdriver and 5/16- |
| 2. | Plate (3) | Switch (4) | Take off. |
| 3. | Two screws (1) | Take out. | |
| 4. | Cover (5) | Two screws (6) | Using flat-tip screwdriver, unscrew |
| 5. | Switch (4) | Cover (5) and gasket (7) | a. Take off.
b. Take out gasket (7). |
| 6. | | Cap (8) | Unscrew, and pull free. |

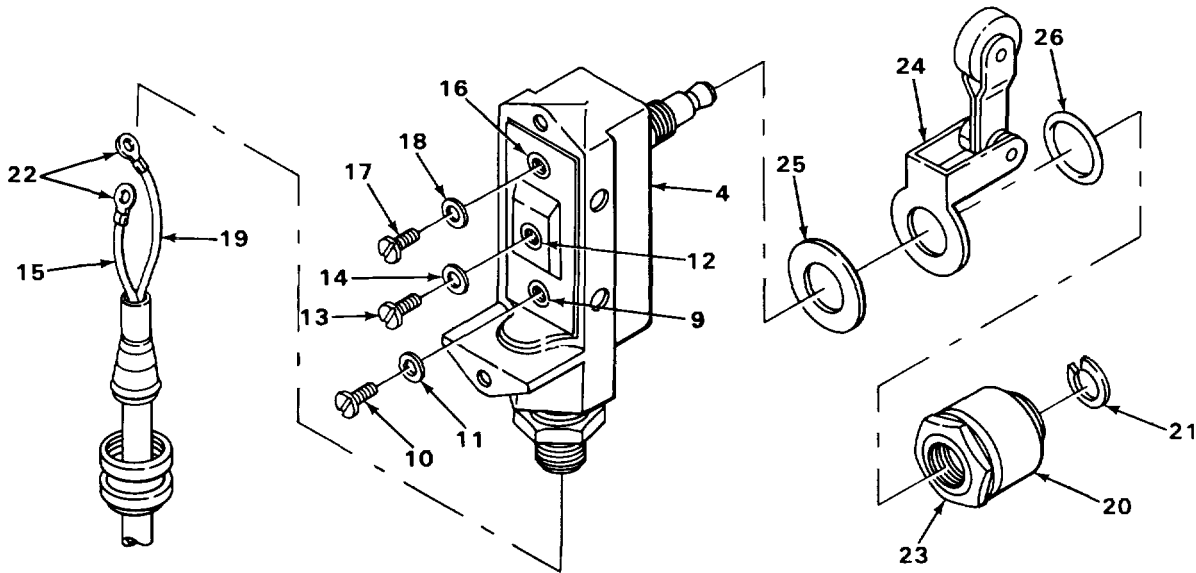


- | | | | |
|----|---------------|----------------------------|---|
| 7. | Terminal (9) | Screw (10) and washer (11) | Using flat-tip screwdriver, unscrew and take out. |
| 8. | Terminal (12) | Screw (13) and washer (14) | Using flat-tip screwdriver, unscrew and take out. |

TA229168

OUTRIGGER LOCKOUT SWITCH - CONTINUED

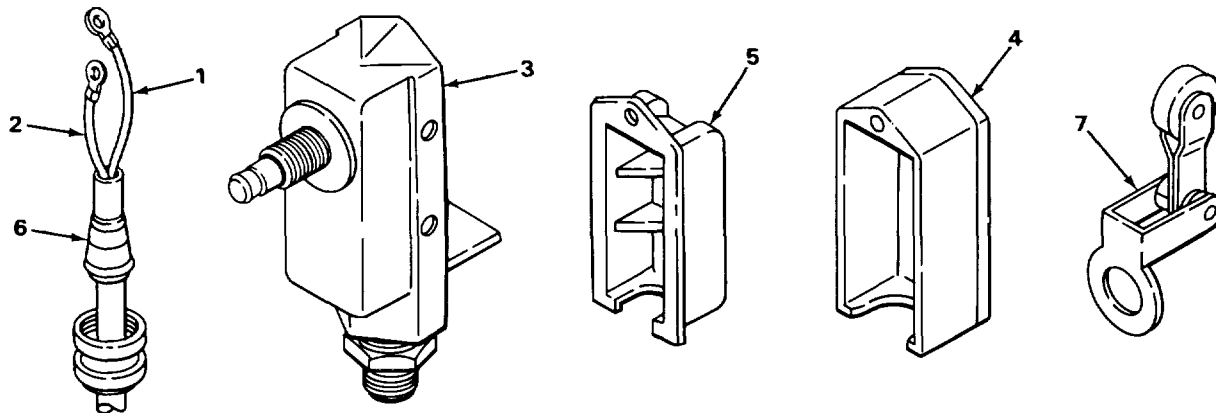
LOCATION	ITEM	ACTION	REMARKS
REMOVAL- CONTINUED			
9.	Switch (4)	Wire (15)	Pull through, and tag for installation.
10.	Terminal (16)	Screw (17) and washer (18)	Using flat-tip screwdriver, unscrew and take out.
11.	Switch (4)	Wire (19)	Pull through, and tag for installation.
12.	Boot (20)	Clip (21)	Using flat-tip screwdriver, take off.
13.		Terminals (9), (12), (16), and (22)	Using wire brush, clean away dirt and corrosion and wipe with rags.
14.	Switch (4)	Nut (23), boot (20), and arm (24)	Using slip-joint pliers, unscrew nut (23) and take off.
15.		Gasket (25)	a. Take off. b. Get rid of.
16.	Nut (23)	Packing (26)	a. Take out.



TA229169

OUTRIGGER LOCKOUT SWITCH - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
CLEANING			
17.	Wires (1) and (2)	Wipe clean with rags, and repair if broken or corroded (page 2-433).	
18.	Switch (3), cover (4), and gasket (5)	Wipe clean with rags, and replace gasket (5) if torn.	
19.	Grommet (6)	Wipe clean with rags, and replace if torn or grooved.	
20.	Arm (7)	Wipe clean with rags, and lubricate (LO 9-2320-269-12)	

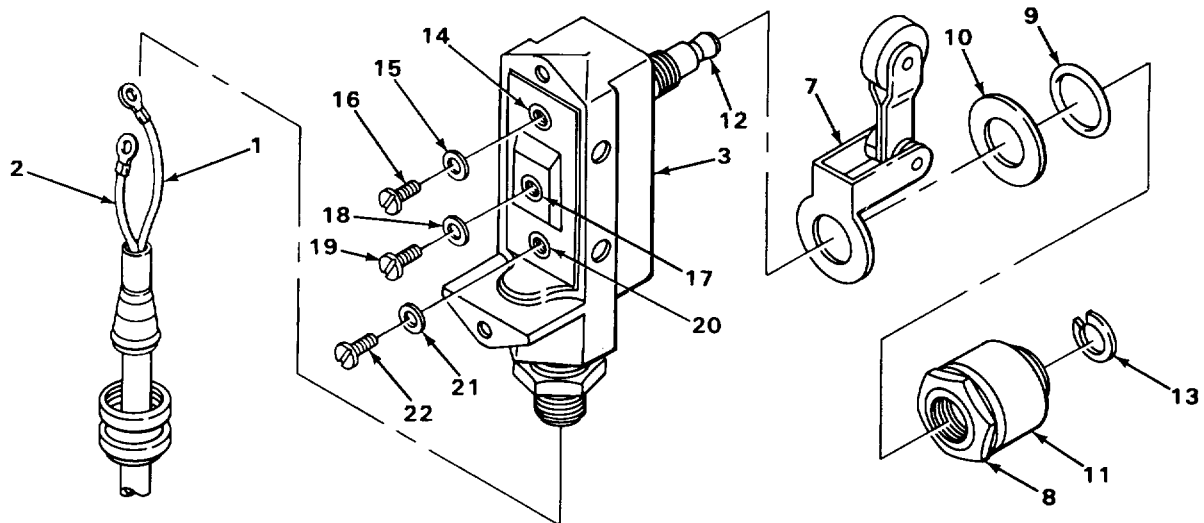


INSTALLATION

21. Nut (8)	New packing (9)	Put in.	
22. Switch (3)	New gasket (10)	Put on.	
23.	Nut (8), boot (11), and arm (7)	a. Put nut (8) in arm (7). b. Screw nut on, holding arm straight, and tighten using pliers.	
24. Plunger (12)	Boot (11) and clip (13)	Work boot (11) over plunger (12), and put clip (13) on using flat-tip screwdriver.	

OUTRIGGER LOCKOUT SWITCH - CONTINUED

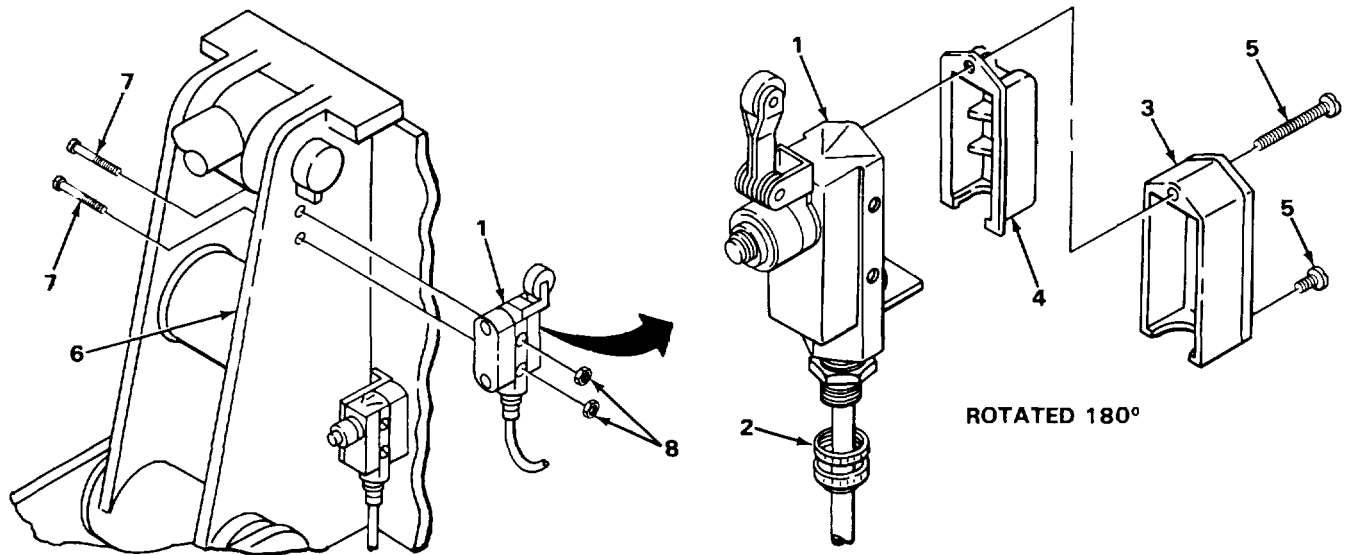
LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
25. Switch (3)	Wire (1)	a. Check tag for proper position, and take off. b. Put wire (1) through.	
26. Terminal (14) and wire (1)	Washer (15) and screw (16)	Screw in, and tighten using flat-tip screwdriver.	
27. Switch (3)	Wire (2)	a. Check tag for proper position, and b. Put wire (2) through.	
28. Terminal (17) and screw (19)	Washer (18) and screwdriver.	Screw in, and tighten using flat-tip	
29. Terminal (20) and wire (2)	Washer (21) and screw (22)	Screw in, and tighten using flat-tip screwdriver.	



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OUTRIGGER LOCKOUT SWITCH - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
30.	Switch (1)	Cap (2)	Screw on, and tighten.
31.	Cover (3)	Gasket (4)	Put in.
32.	Switch (1)	Cover (3) and two screws (5)	a. Put cover (3) on. b. Screw in screws (5), and tighten
33.	Plate (6)	Two screws (7)	Put through.
34.	Switch (1)	Put on, and hold in place.	
35.	Two screws (7)	Two nuts (8)	Screw on, and tighten using flat-tip screwdriver and 5/16-inch wrench.



NOTE

FOLLOW-ON MAINTENANCE:

1. Raise outrigger(TM 9-2320-269-10).
2. Check operation of switches (TM 9-2320-269-10).

TASK ENDS HERE

TA229172

Section XXI. DERRICK LEG, MAST, HOIST, WINCH, AND POWER CONTORL UNIT

	Page		Page
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Auxiliary Tools Hydraulic Drive Lines.....	2-947	Pump-to-Right Side Outrigger Control Valve Hose Assembly.....	2-1164
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Derrick Leg Elevation Hydraulic Drive Lines.....	2-975	Single Selector Valve-to-Derrick Operator's Control Valve Hose Assembly.....	2-1182
Derrick Leg Extension Hydraulic Drive Lines.....	2-986	Single Selector Valve-to-Return Line Filter Hose Assembly	2-1189
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Left Side Outrigger Control Valve- to-Solenoid Valve Return Hose Assembly	2-1156		

POLE GUIDE ASSEMBLY

This task covers:

- a. Removal (page 2-924)
- b. Cleaning (page 2-925)
- c. Inspection/Replacement (page 2-926)
- d. Installation (page 2-926)

INITIAL SETUP

Tools

Block, wood (two required)
 Handle, ratchet, 1/2-inch drive
 Key, screw, socket-head, 5/16-inch
 Pail, utility, 3-qt
 Socket, 1/2-inch drive, 3/4-inch
 Wrench, open-end, 5/8-inch
 Wrench, open-end, 11/16-inch
 Wrench, torque, 1/2-inch drive,
 0 - 150 ft-lb capacity

Personnel Required

Materials/Parts

Nut, elastic stop (four required)
 Lockwasher, pole guide assembly
 to arms (four required)
 Rags, wiping (item 24, appendix C)
 Solvent, drycleaning (item 28, appendix C)
 Tags, marking (item 29, appendix C)

One

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

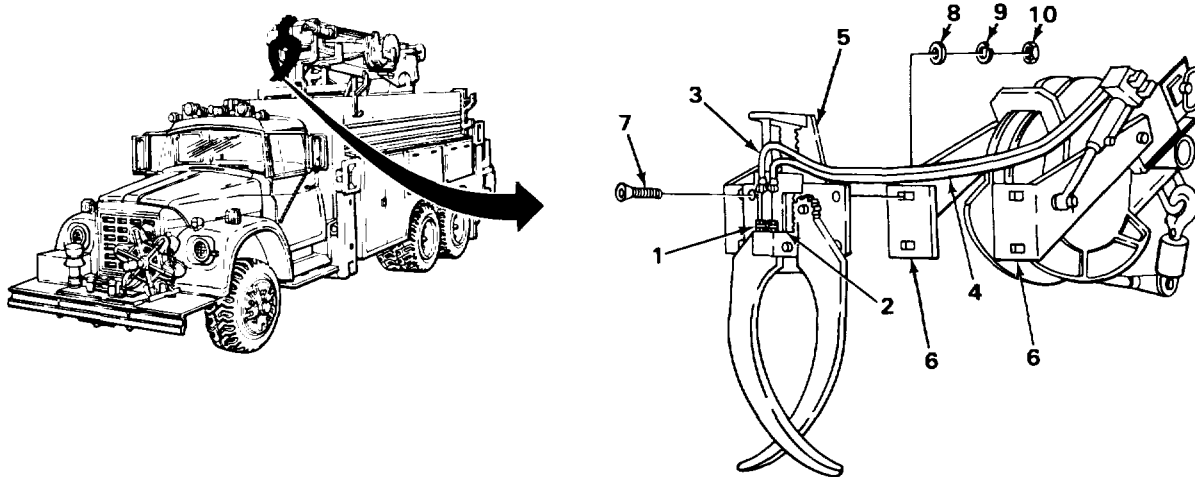
Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or eyes, can cause irritation.

1.	Two swivel adapters (1) and (2)	Two hose assemblies (3) and (4)	<ul style="list-style-type: none"> a. Position pail to catch hydraulic fluid. b. Tag lines. c. Using 5/8-inch and 11/16-inch wrenches, unscrew and take off. d. Move out of the way. e. Dispose of drained fluid.
2.	Pole guide assembly (5) and two arms (6)	Four screws (7), washers (8), lock-washers (9), and elastic stop nuts (10)	<ul style="list-style-type: none"> a. Move wooden blocks under one arm (6) for support. b. Using 5/16-inch key, 3/4-inch socket, and handle unscrew and take off. c. Get rid of lockwashers (9) and nuts (10).
3.	Two arms (6)	Pole guide assembly (5)	Take off.

POLE GUIDE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

REMOVAL - CONTINUED



WARNING

CLEANING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

- | | | |
|----|-----------------|---|
| 4. | All metal parts | <ul style="list-style-type: none"> a. Clean in drycleaning solvent. b. Wipe dry with clean, dry rags. |
|----|-----------------|---|

POLE GUIDE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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INSPECTION/REPLACEMENT

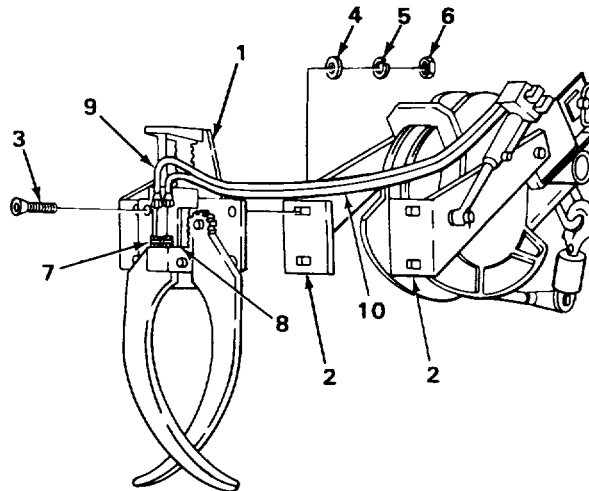
NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

5.	Pole guide assembly (1)	Look for cracks, breaks, bends, and chipped or broken teeth.
----	-------------------------	--

INSTALLATION

6.	Two arms (2)	Pole guide assembly (1)	Place in position.
7.	Pole guide assembly (1) and two arms (2)	Four screws (3), washers (4), new lockwashers (5), and elastic stop nuts (6)	<ol style="list-style-type: none"> a. Screw in until snug using 5/16-inch key, 3/4-inch socket, and handle. b. Tighten to 41 ft-lb (56 N m) using 5/16-inch key, 3/4-inch socket, and torque wrench. c. Take out wooden blocks.
8.	Two swivel adapters (7) and (8)	Two hose assemblies (9) and (10)	<ol style="list-style-type: none"> a. Note locations, and take off tags. b. Screw on, and tighten using 5/8-inch



TA229174

POLE GUIDE ASSEMBLY - CONTINUED

INSTALLATION - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Fill with hydraulic fluid (LO 9-2320-269-12).
2. Operate auxiliary equipment (TM 9-2320-269-10), and check for proper operation and leaks.

TASK ENDS HERE

AUGER HYDRAULIC DRIVE LINES

This task covers:

- | | |
|---|--|
| <ol style="list-style-type: none"> a. Removal (page 2-927) b. Cleaning (page 2-934) | <ol style="list-style-type: none"> c. Inspection/Replacement (page 2-934) d. Installation (page 2-935) |
|---|--|

INITIAL SETUP

Tools

- Fish tape, 50-ft reel
- Pail, utility, 3-qt
- Wrench, box-end, 9/16-inch
- Wrench, open-end, 11/4-inch
(two required)
- Wrench, open-end, 1 7/8-inch

Materials/Parts

- Detergent, non-sudsing (item 12, appendix C)
- Rags, wiping (item 24, appendix C)

Materials/Parts - Continued

- Solvent, drycleaning (item 28, appendix C)
- Tape, teflon (item 32, appendix C)
- Tags, marking (item 29, appendix C)

Personnel Required
Two

Equipment Condition

Console cover removed (page 2-1092).

LOCATION	ITEM	ACTION	REMARKS
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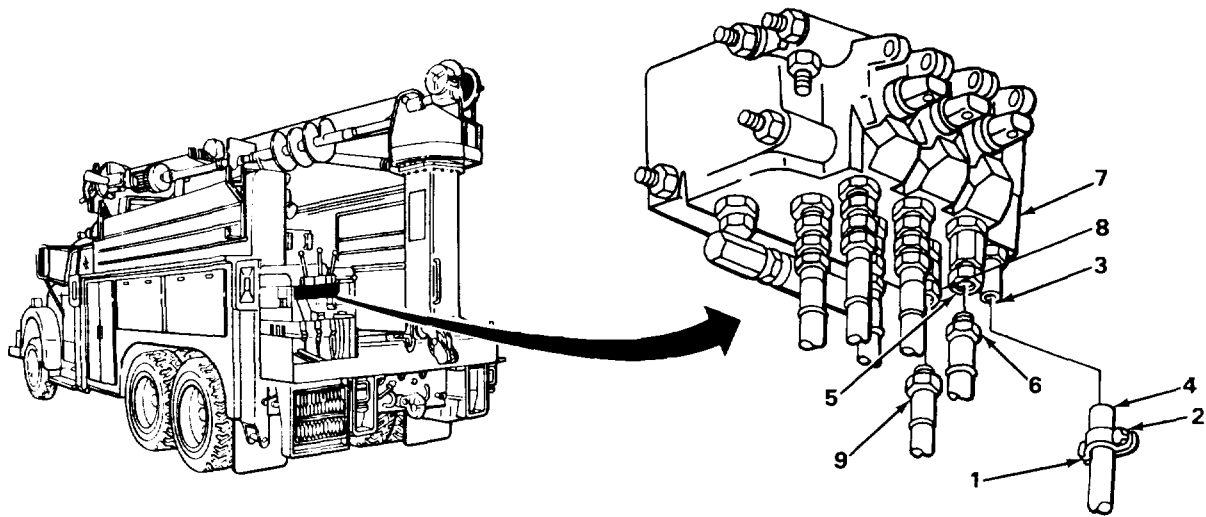
REMOVAL

WARNING

Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

AUGER HYDRAULIC DRIVE LINES - CONTINUED

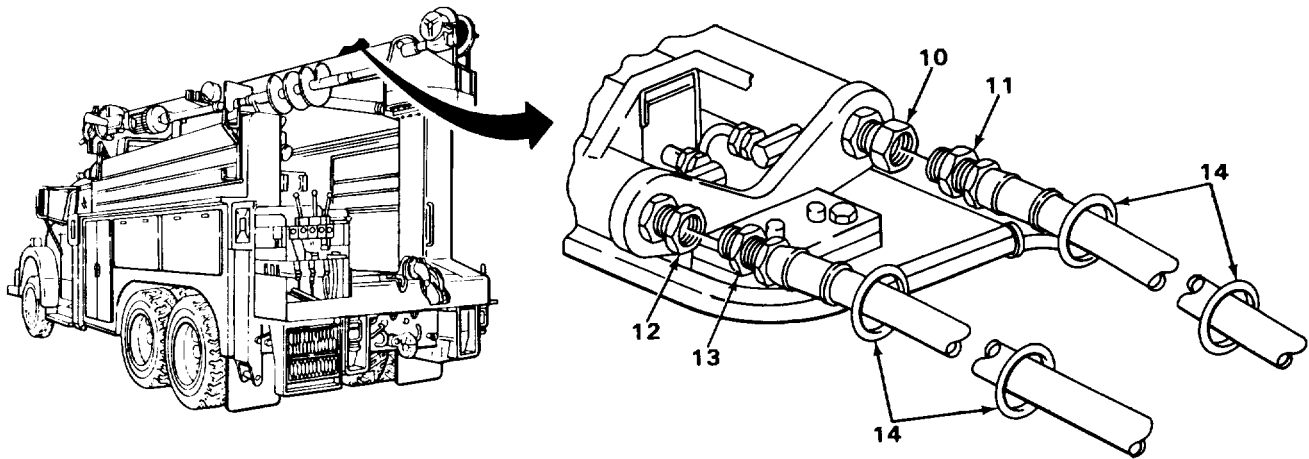
LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
1.	Hose clamp (1)	Screw (2)	Using 9/16-inch wrench, unscrew part way.
2.	Reducer	Return hose (4)	a. Position pail to catch fluid. b. Twist off. c. Dispose of drained fluid.
3.	Swivel adapter(5)	Valve-to-connector hose assembly (6)	a. Using two 1 1/4-inch wrenches, unscrew and take off. b. Tag hose (6).
4.	Valve (7)	Swivel adapter (5)	Using 1 1/4-inch wrench, unscrew and take off.
5.		Reducer bushing (3)	Using 1 7/8-inch wrench, unscrew and
6.	Swivel adapter(8)	Valve-to-connector hose assembly (9)	a. Using two 1 1/4-inch wrenches, unscrew and take off. b. Tag hose (9).



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AUGER HYDRAULIC DRIVE LINES - CONTINUED

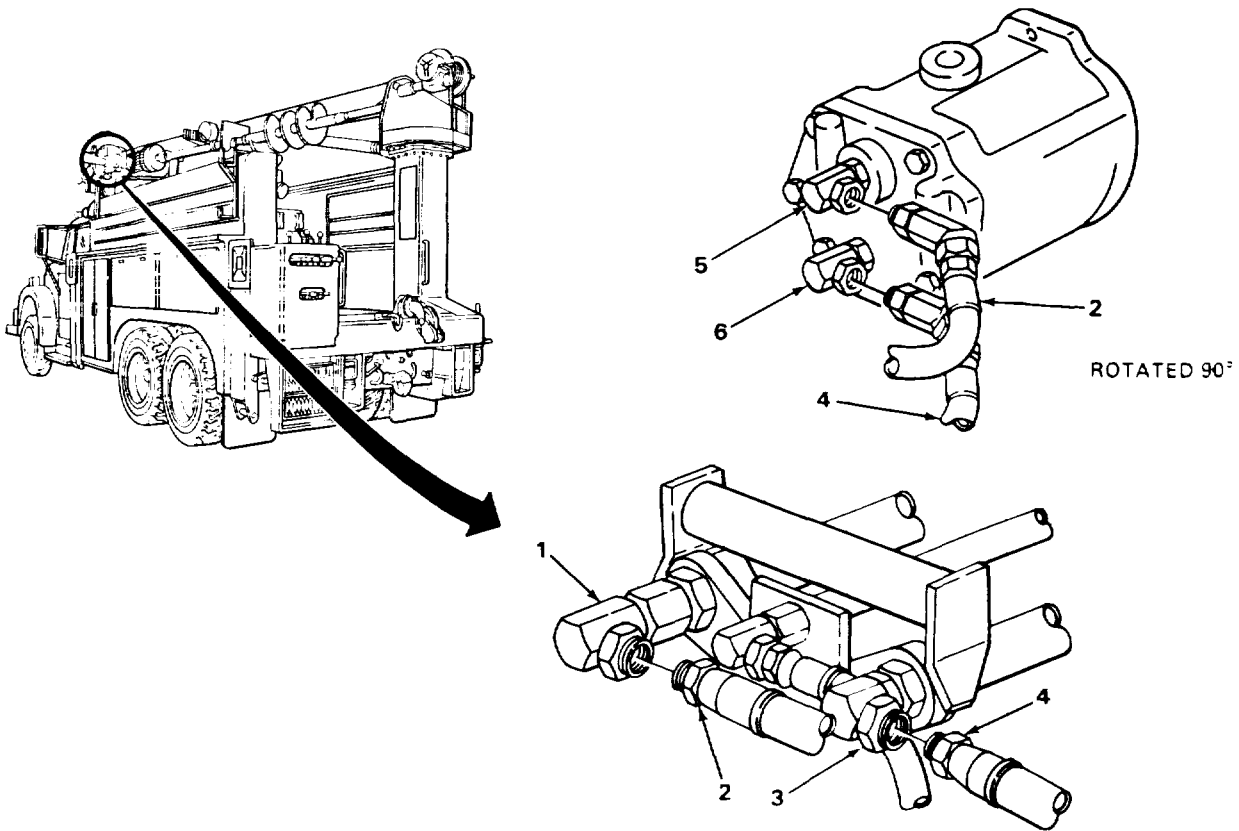
LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
7. Swivel adapter (10)	Connector-to-feed tube hose assembly (11)	a. Using two 1 1/4-inch wrenches, unscrew and take off. b. Tag hose (11).	
8. Swivel adapter (12)	Connector-to-feed tube hose assembly (13)	a. Using two 1 1/4-inch wrenches, unscrew and take off. b. Tag hose (13).	
9. Hose guide rings (14)	Two connector-to-feed tube hose assemblies (11) and (13)	Pass through rings toward rear of truck.	



TA229176

AUGER HYDRAULIC DRIVE LINES - CONTINUED

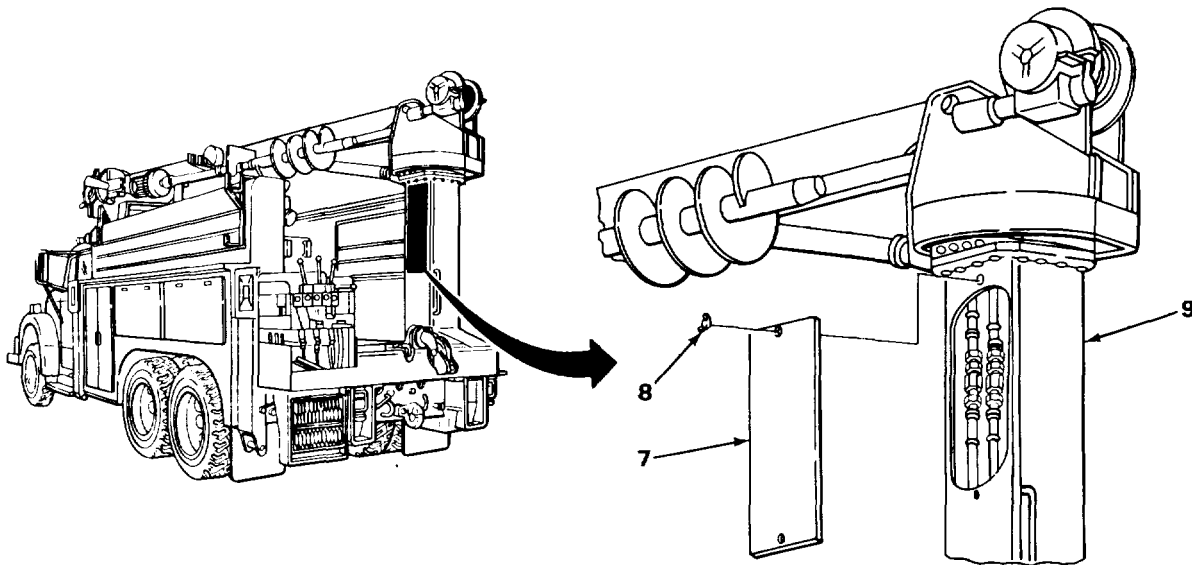
LOCATION	ITEM	ACTION	REMARKS
REMOVAL - COTINUED			
10. 900 swivel adapter (1)	Feed tube-to-auger motor hose assembly (2)	a. Using two 1 1/4-inch wrenches, unscrew and take off. b. Tag hose (2).	
11. 900 swivel adapter (3)	Feed tube-to-auger motor hose assembly (4)	a. Using two 1 1/4-inch wrenches, unscrew and take off. b. Tag hose (4).	
12. 450 swivel adapter (5)	Feed tube-to-auger motor hose assembly (2)	a. Using two 1 1/4-inch wrenches, unscrew and take off. b. Tag hose (2).	
13. 450 swivel adapter (6)	Feed tube-to-auger motor hose assembly (4)	a. Using two 1 1/4-inch wrenches, unscrew and take off. b. Tag hose (4).	



TA229177

AUGER HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
14. Access cover (7)	Two wing nuts (8)	Unscrew, and take off.	
15. Derrick mast (9)	Access cover (7)	a. Take off. b. Reach through opening, and locate two largest hose assemblies.	



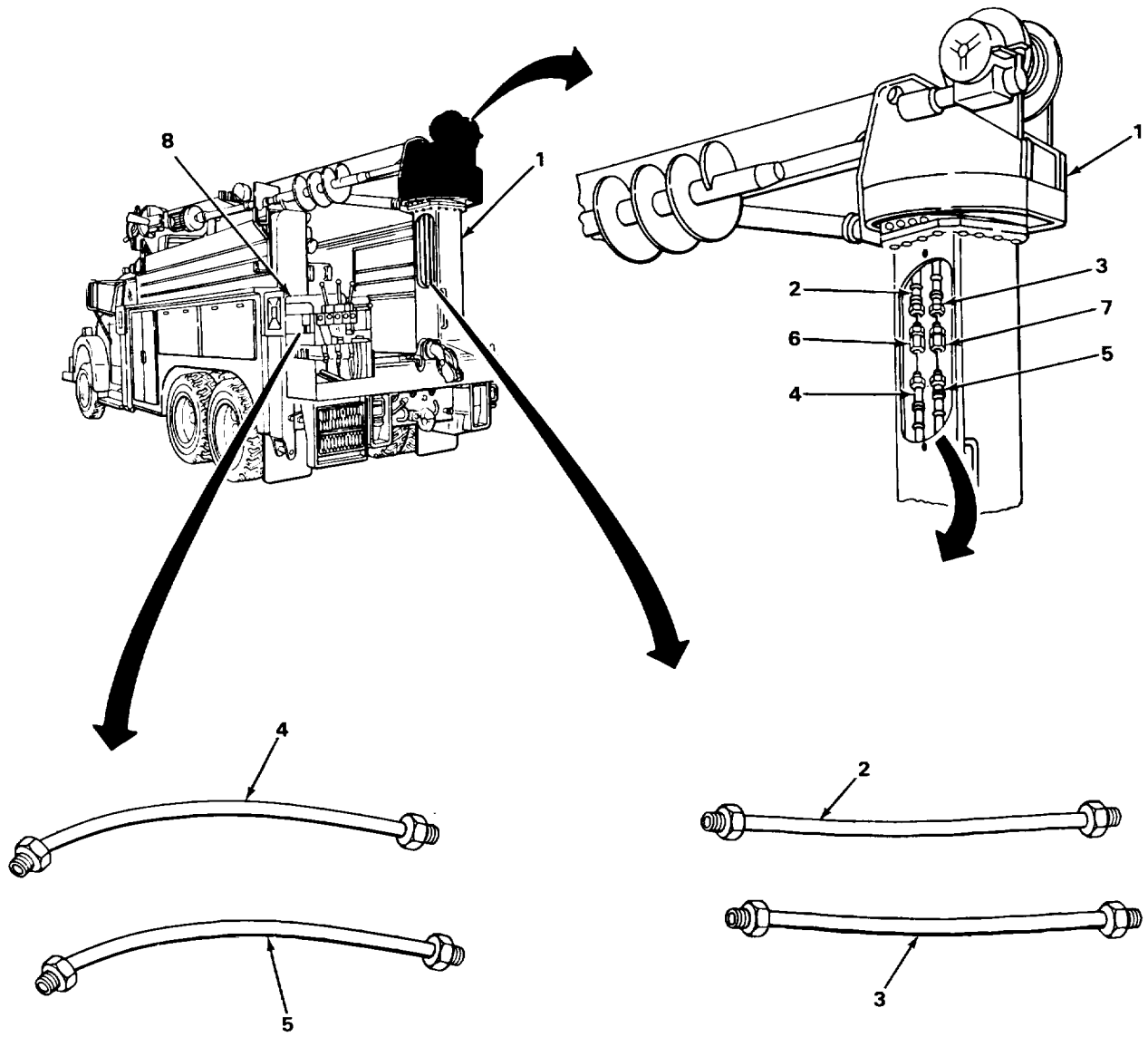
TA229178

AUGER HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL- CONTINUED			
16.	Derrick mast (1)	Two connector-to-feed tube hose assemblies (2) and (3) with two valve-to-connector hose assemblies (4) and (5)	Pull out.
17.	Swivel adapter (6)	Connector-to-feed tube hose assembly (2)	a. Using two 1 1/4-inch wrenches, unscrew and take off. b. Tag hose (2).
18.	Swivel adapter (7)	Connector-to-feed tube hose assembly (3)	a. Using two 1 1/4-inch wrenches, unscrew and take off. b. Tag hose (3).
19.	Valve-to-connector hose assembly (4)	Swivel adapter (6)	a. Note position of adapter (6). b. Using two 1 1/4-inch wrenches, c. Tag hose(4).
20.	Valve-to-connector hose assembly (5)	Swivel adapter (7)	a. Note position of adapter (7). b. Using two 1 1/4-inch wrenches, unscrew and take off. c. Tag hose (5).
21.	Derrick mast (1)	Two connector-to-feed tube hose assemblies (2) and (3)	With help from assistant, feed through and pull out.
22.	Derrick mast (1) and console (8)	Two valve-to-connector hose assemblies (4) and (5)	With help from assistant, feed through and pull out.

AUGER HYDRAULIC DRIVE LINES - CONTINUED

REMOVAL - CONTINUED



TA229179

AUGER HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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CLEANING

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

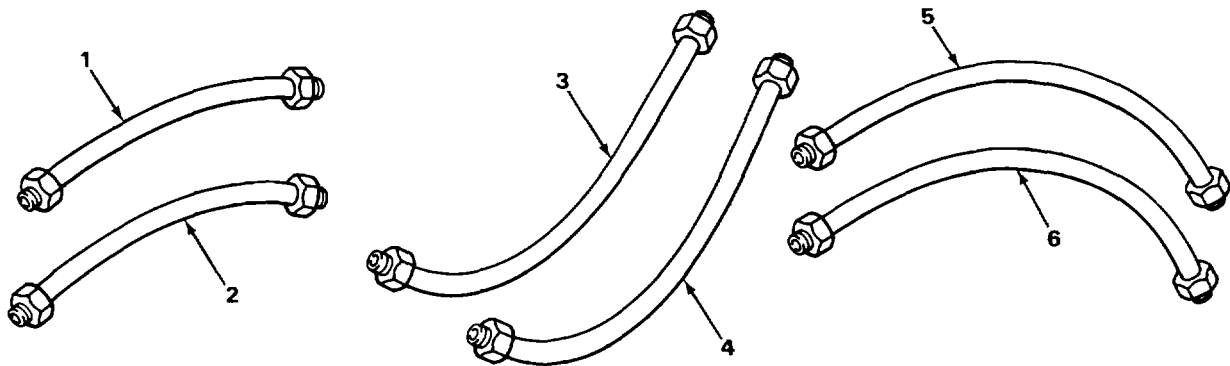
23.	Six hose assemblies (1), (2), (3), (4), (5), and (6)	<ul style="list-style-type: none"> a. Clean in clean, soapy water. b. Rinse in clean water. c. Wipe connectors clean with clean rags dampened in drycleaning solvent. d. Wipe dry with clean, dry rags.
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INSPECTION/REPLACEMENT

NOTE

For more information on how to Inspect parts, go to General Maintenance Instructions (page 2-142).

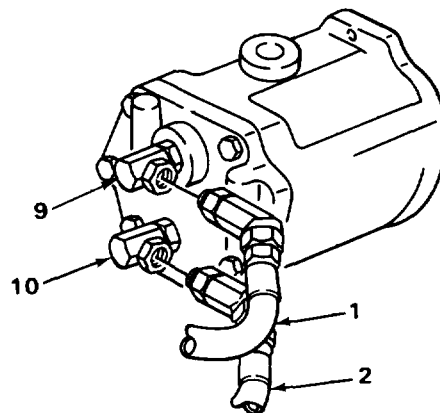
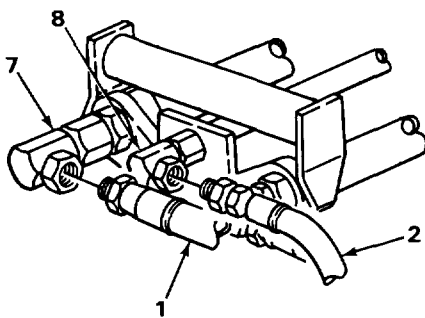
24.	Six hose assemblies (1), (2), (3), (4), (5), and (6)	<ul style="list-style-type: none"> a. Look for cracks, breaks, tears, and brittleness. b. Look for loose connectors.
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TA229180

AUGER HYDRAULIC DRIVE LINES - CONTINUED

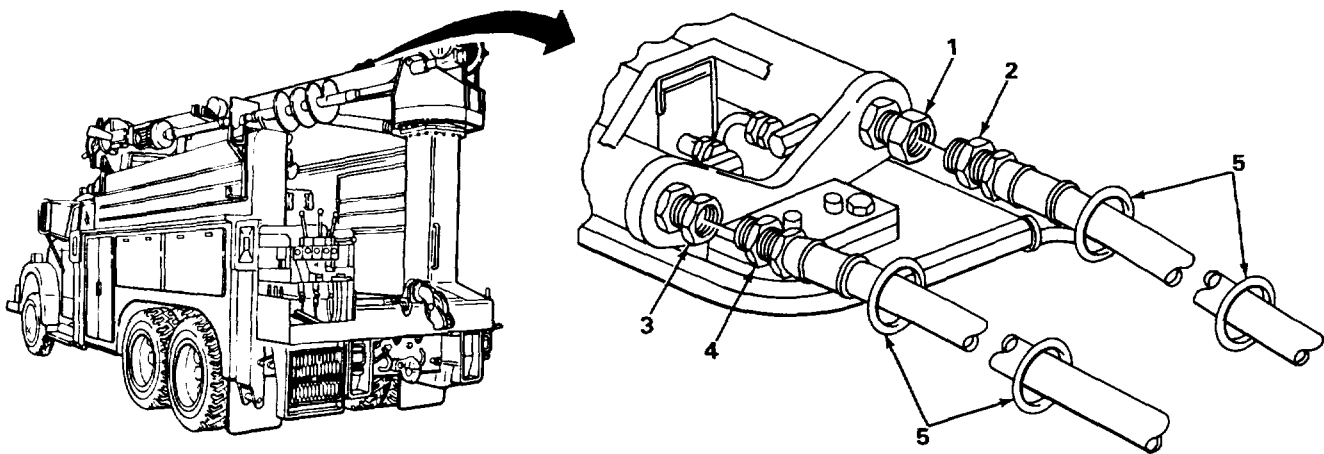
LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
NOTE			
Before installation, wrap all external threads with two turns of teflon tape (page 2-142).			
25. 90° swivel adapter (7)	Feed tube-to-auger motor hose assembly (1)	<ul style="list-style-type: none"> a. Check tag for proper location, and take off. b. Screw on, and tighten using two 1 1/4-inch wrenches. 	
26. 90°swivel adapter (8)	Feed tube-to-auger motor hose assembly (2)	<ul style="list-style-type: none"> a. Check tag for proper location, and take off. b. Screw on, and tighten using two 1 1/4-inch wrenches. 	
27. 45° swivel adapter (9)	Feed tube-to-auger motor hose assembly (1)	<ul style="list-style-type: none"> a. Check tag for proper location, and take off. b. Screw on, and tighten using two 1 1/4-inch wrenches. 	
28. 45° swivel adapter (10)	Feed tube-to-auger motor hose assembly (2)	<ul style="list-style-type: none"> a. Check tag for proper location, and take off. b. Screw on, and tighten using two 1 1/4-inch wrenches. 	



TA229181

AUGER HYDRAULIC DRIVE LINES - CONTINUED

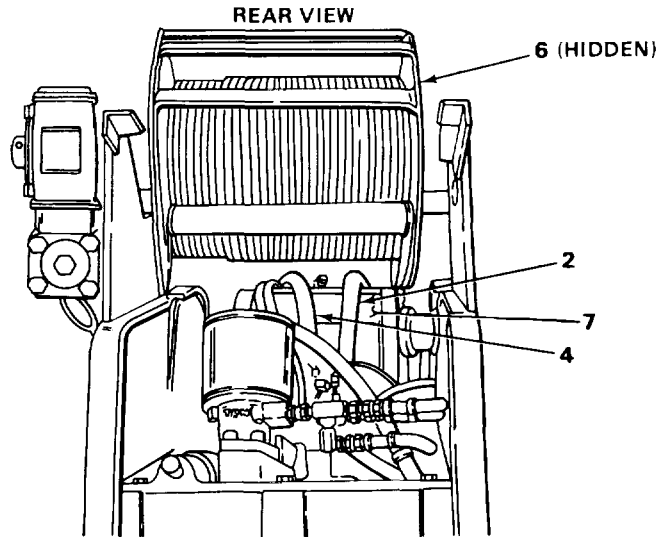
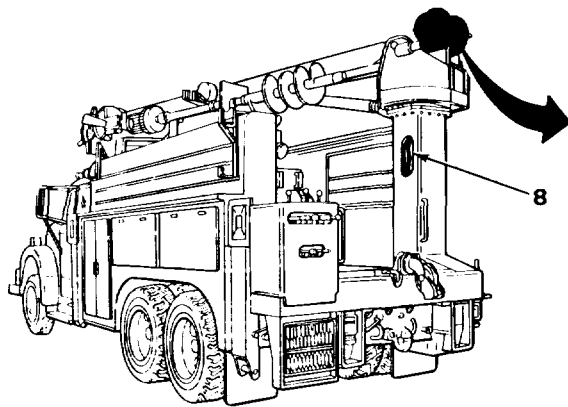
LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
29. Swivel adapter (1)	Feed tube-to-connector hose assembly (2)	a. Check tag for proper location, and take off. b. Screw on, but do not tighten.	
30. Swivel adapter (3)	Feed tube-to-connector hose assembly (4)	a. Check tag for proper location, and take off. b. Screw on, but do not tighten.	
31. Guide rings (5)	Two feed tube-to-connector hose assemblies (2) and (4)	Feed through toward back of truck until slack is taken up.	
32. Two swivel adapters (1) and (3)	Two feed tube-to-connector hose assemblies (2) and (4)	Tighten using two 1 1/4-inch wrenches.	



TA229182

AUGER HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
33. Derrick leg shaft (6)	Two feed tube-to-connector hose assemblies (2) and (4)	Pass under.	
34. Cross tube support (7)	Two feed tube-to-connector hose assemblies (2) and (4)	Pass over.	
35. Derrick mast (8)	Two feed tube-to-connector hose assemblies (2) and (4)	Pass into and out through mast access opening.	



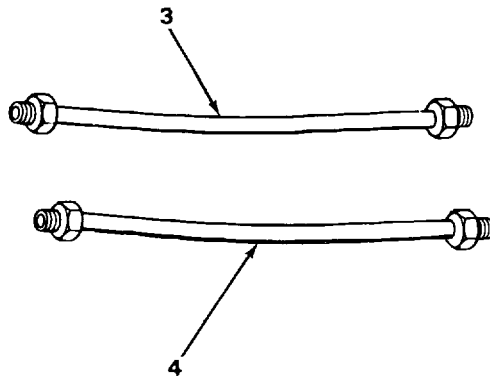
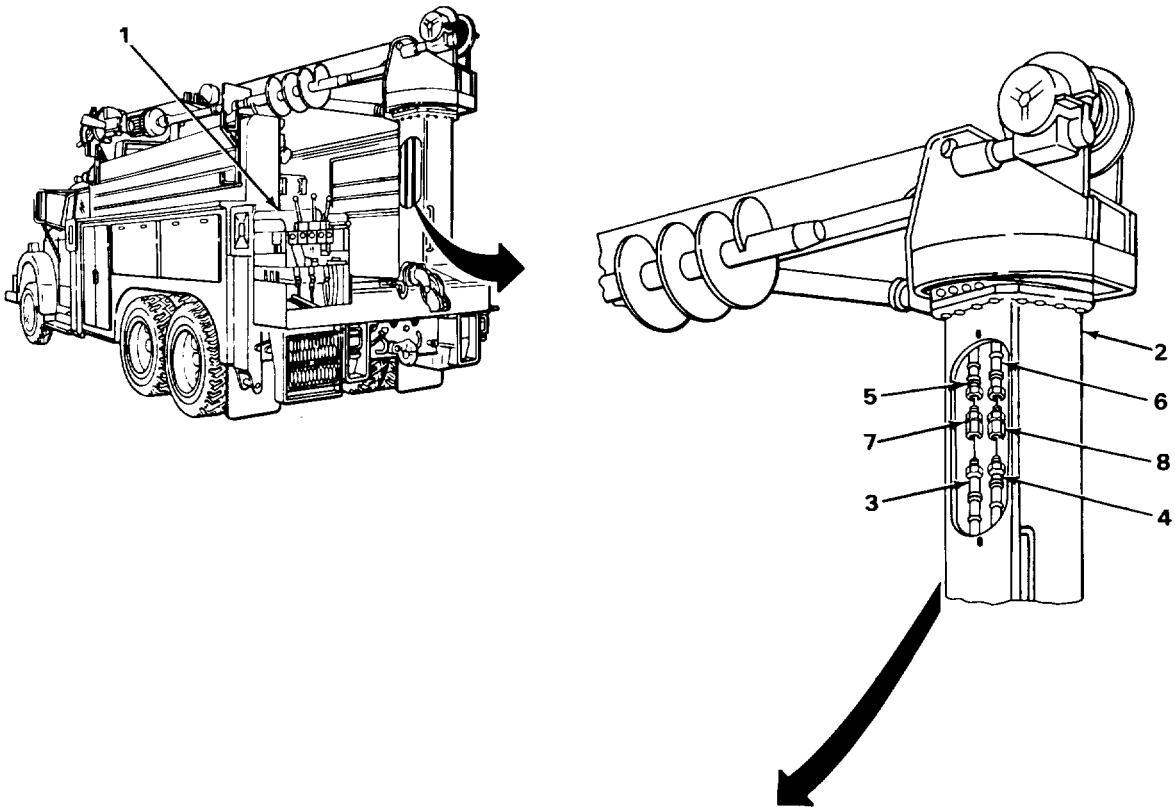
TA229183

AUGER HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
36.	Console (1) and derrick mast (2)	Two valve-to-connector hose assemblies (3) and (4)	With help from assistant, and using fish tape, pass hoses (3) and (4) from console (1) up through mast until positioned at feed tube-to-connector hose assemblies (5) and (6) in mast access opening.
37.	Feed tube-to-connector hose assembly (5)	Swivel adapter (7)	Screw on, and tighten using two 1 1/4-inch wrenches.
38.	Feed tube-to-connector hose assembly (6)	Swivel adapter (8)	Screw on, and tighten using two 1 1/4-inch wrenches.
39.	Swivel adapter (7)	Valve-to-connector hose assembly (3)	<ol style="list-style-type: none"> Check tag for proper location, and take off. Screw on, and tighten using two 1 1/4-inch wrenches.
40.	Swivel adapter (8)	Valve-to-connector hose assembly (4)	<ol style="list-style-type: none"> Check tag for proper location, and take off. Screw on, and tighten using two 1 1/4-inch wrenches.

AUGER HYDRAULIC DRIVE LINES - CONTINUED

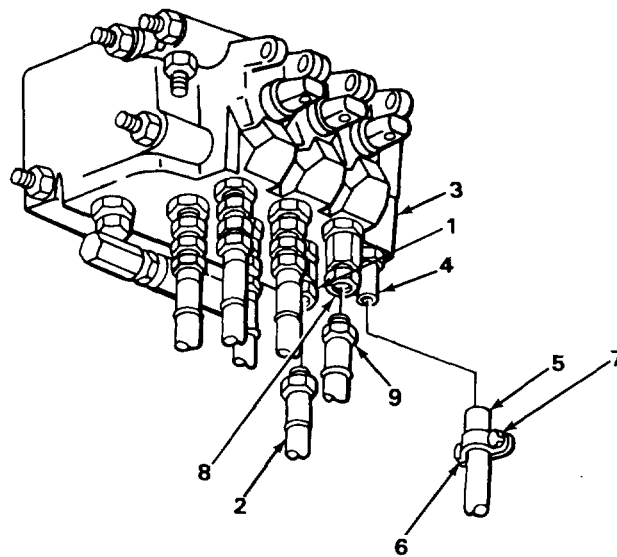
INSTALLATION - CONTINUED



TA229184

AUGER HYDRAULIC DRIVE LINES - CONTINUED

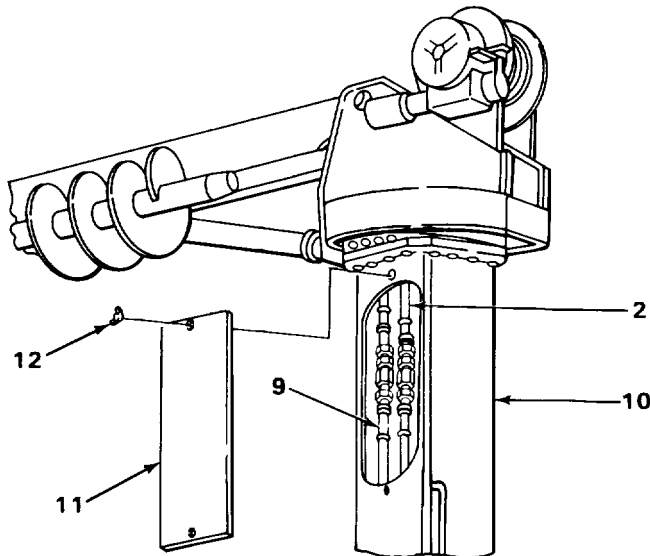
LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
41. Swivel adapter (1)	Valve-to-connector hose assembly (2)	a. Check tag for proper location, and take off. b. Screw on, and tighten using two 1 1/4-inch wrenches.
42. Valve (3)	Reducer bushing (4)	Screw in, and tighten using 1 7/8-inch wrench.
43. Reducer bushing (4)	Return hose (5)	Twist on.
44. Return hose (5)	Clamp (6)	Slide up.
45. Clamp (6)	Screw (7)	Screw in, and tighten using 9/16-inch
46. Swivel adapter (8)	Valve-to-connector hose assembly (9)	a. Check tag for proper location, and take off. b. Screw on, and tighten using two 1 1/4-inch wrenches.



TA229185

AUGER HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
47. Derrick mast (10)	Valve-to-connector hose assemblies (2) and (9)	Push into mast.	
48. Access cover (11)	Put in position.		
49. Access cover (11)	Two wing nuts (12)	Screw on, and tighten.	



NOTE

FOLLOW-ON MAINTENANCE:

1. Fill with hydraulic fluid (LO 9-2320-269-12).
2. Start engine, operate auxiliary equipment (TM 9-2320-269-10), and check for leaks.
3. Install console cover (page 2-1092).

TASK ENDS HERE

TA229186

AUGER LOCK HYDRAULIC DRIVE LINES

This task covers:

- | | |
|--|--|
| <ul style="list-style-type: none"> a. Removal (page 2-942) b. Disassembly (page 2-943) | <ul style="list-style-type: none"> c. Inspection/Replacement (page 2-944) d. Installation (page 2-945) |
|--|--|

INITIAL SETUP:

Tools

- Pail, utility, 3-qt
- Tape, fish, 50-ft reel
- Wrench, open-end, 9/16-inch
- Wrench, open-end, 11/16-inch

Materials/Parts

- Detergent, non-sudsing (item 12, appendix C)

- Rags, wiping (item 24, appendix C)

Materials/Parts - Continued

- Solvent, drycleaning (item 28, appendix C)
- Tags, marking (item 29, appendix C)
- Tape, teflon (item 32, appendix C)
- Personnel Required

Two

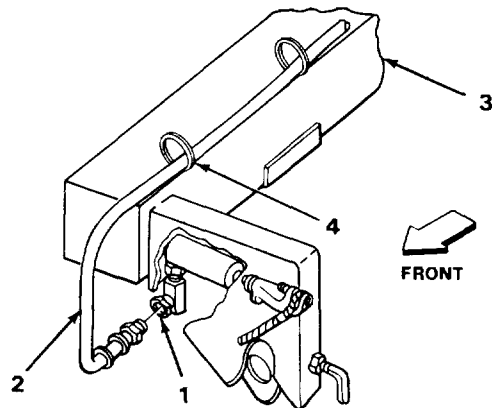
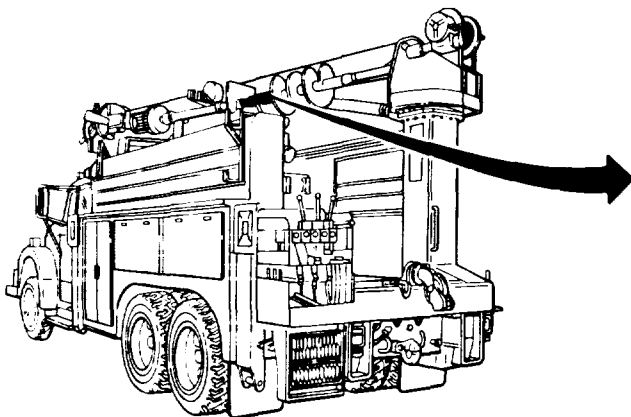
Equipment Condition

Console cover removed (page 2-1092).

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

- | | | |
|---|---|---|
| <p>1. 900 swivel adapter (1)</p> | <p>Valve-to-auger lock cylinder hose assembly (2)</p> | <p>a. Position pail to catch hydraulic fluid.</p> <p>b. Using 9/16-inch and 11/16-inch wrenches, unscrew and take off.</p> <p>c. Tag hose(2).</p> <p>d. Dispose of drained fluid.</p> |
| <p>2. Derrick leg (3) and guide rings (4)</p> | <p>Valve-to-anger lock cylinder hose assembly</p> | <p>Pull through toward back of truck.</p> |



TA229187

AUGER LOCK HYDRAULIC DRIVE LINES - CONTINUED

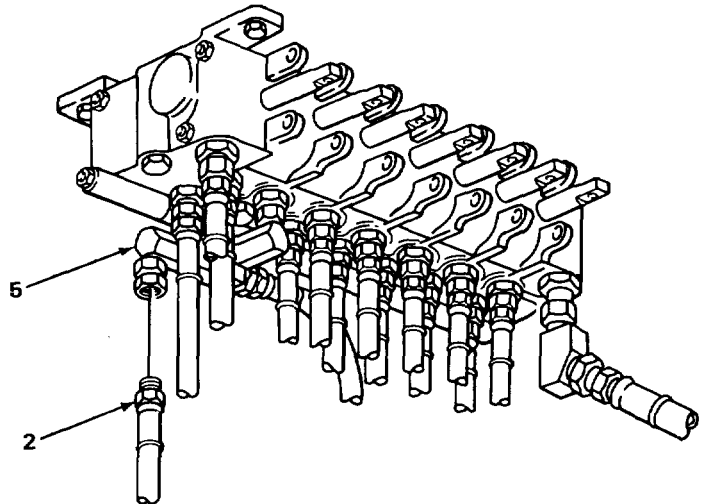
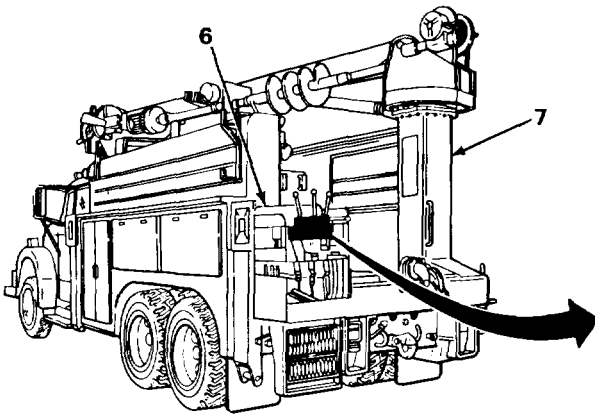
LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
3. 900 swivel adapter (5)	Valve-to-auger lock cylinder hose assembly (2)		Using 9/16-inch and 11/16-inch wrenches, unscrew and take off.
4. Console (6) and derrick mast (7)	Valve-to-auger lock cylinder hose assembly (2)		With help from assistant, pull out.

CLEANING

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

- | | | |
|----|-------------------|--|
| 5. | Hose assembly (2) | <ul style="list-style-type: none"> a. Wash in clean, soapy water. b. Rinse in clean water. c. Dry with clean, dry rags. |
|----|-------------------|--|



TA229188

AUGER LOCK HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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CLEANING - CONTINUED

WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could result in serious injury or death.

- | | | |
|----|-----------------|---|
| 6. | All metal parts | <ul style="list-style-type: none"> a. Wipe hose connectors clean with clean rags dampened with drycleaning solvent. b. Wipe dry with clean, dry rags. |
|----|-----------------|---|

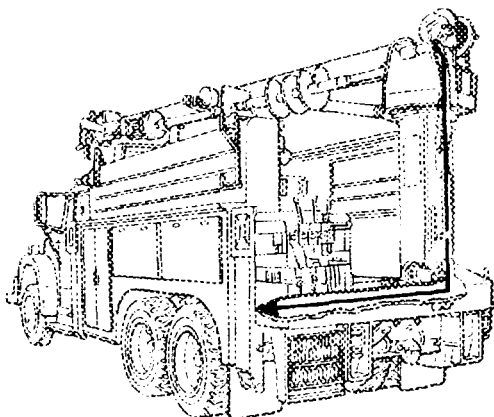
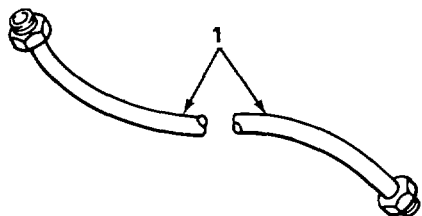
INSPECTION/REPLACEMENT

NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

Replace damaged or defective parts as necessary.

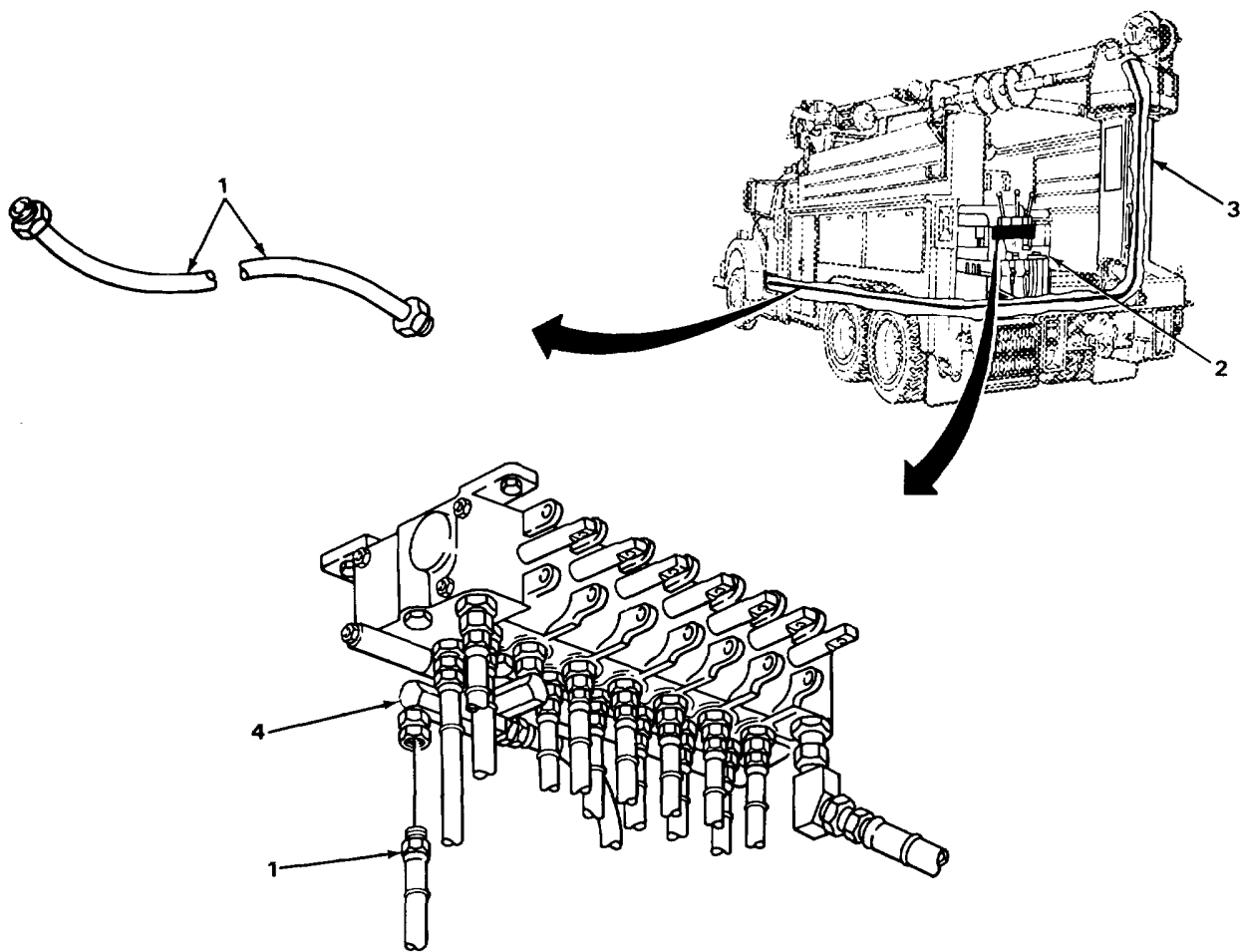
- | | | |
|----|-------------------|--|
| 7. | Hose assembly (1) | <ul style="list-style-type: none"> a. Look for cracks, breaks, tears, and brittleness. b. Look for loose connectors. c. Look for damaged threads. |
|----|-------------------|--|



TA229189

AUGER LOCK HYDRAULIC DRIVE LINES - CONTINUED

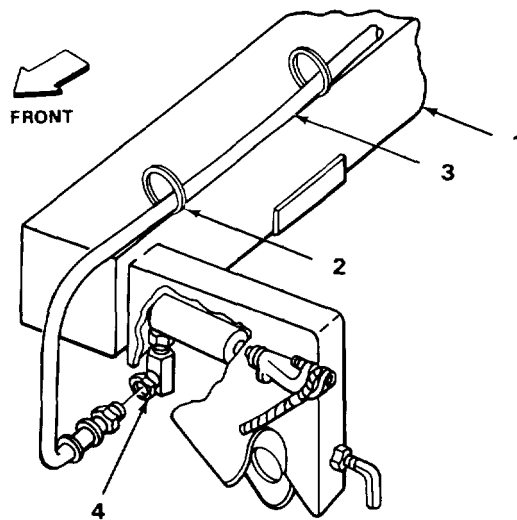
LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
8. Console (2) and derrick mast (3)	Valve-to-auger lock cylinder hose assembly (1)		With help from assistant, and using fish tape, feed hose (1) from console (2) up through mast (3), and let hang out.
9. 90° swivel adapter (4)	Valve-to-auger lock cylinder hose assembly (1)	a. Wrap threads with two turns of teflon tape (page 2-142). b. Screw on, and tighten using 9/16-inch	



TA229190

AUGER LOCK HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
10. Derrick leg (1) and guide rings (2)	Valve-to-auger lock cylinder hose assembly (3)	Pull through, and put in position.	
11. 90° swivel adapter (4)	Valve-to-auger lock cylinder	Screw on, and tighten using 9/16-inch and 11/16-inch wrenches.	



FOLLOW-ON MAINTENANCE:

1. Fill with hydraulic fluid (LO 9-2320-269-12).
2. Start engine, operate auxiliary equipment (TM 9-2320-269-10), and check for leaks.
3. Install console cover (page 2-1092).

TASK ENDS HERE

AUXILIARY TOOLS HYDRAULIC DRIVE LINES

This task covers:

- | | |
|--------------------------|--|
| a. Removal (page 2-947) | c. Inspection/Replacement (page 2-957) |
| b. Cleaning (page 2-957) | d. Installation (page 2-957) |

INITIAL SETUP

Tools

- Extension, 1/2-inch drive, 1/2-inch
- Handle, ratchet, 1/4-inch drive
- Handle, ratchet, 1/2-inch drive
- Pail, utility, 3-qt
- Socket, 11/4-inch drive, 3/8-inch
- Socket, 1/2-inch drive, 9/16-inch
- Socket, 1/2-inch drive, 3/4-inch
- Socket, open-end, 11/16-inch
- Socket, open-end, 3/4-inch
- Wrench, open-end, 13/16-inch
- Wrench, open-end, 7/8-inch
- Wrench, open-end, 1-inch

Materials/Parts

- Detergent, non-sudsing (item 12, appendix C)
- Nut, elastic stop (two required)
- Rags, wiping (item 24, appendix C)
- Solvent, drycleaning (item 28, appendix C)
- Tags, marking (item 29, appendix C)
- Tape, teflon, (item 32, appendix C)

Personnel Required

- Two
- Equipment Condition**

Console cover removed (page 2-1092).

LOCATION	ITEM	ACTION	REMARKS
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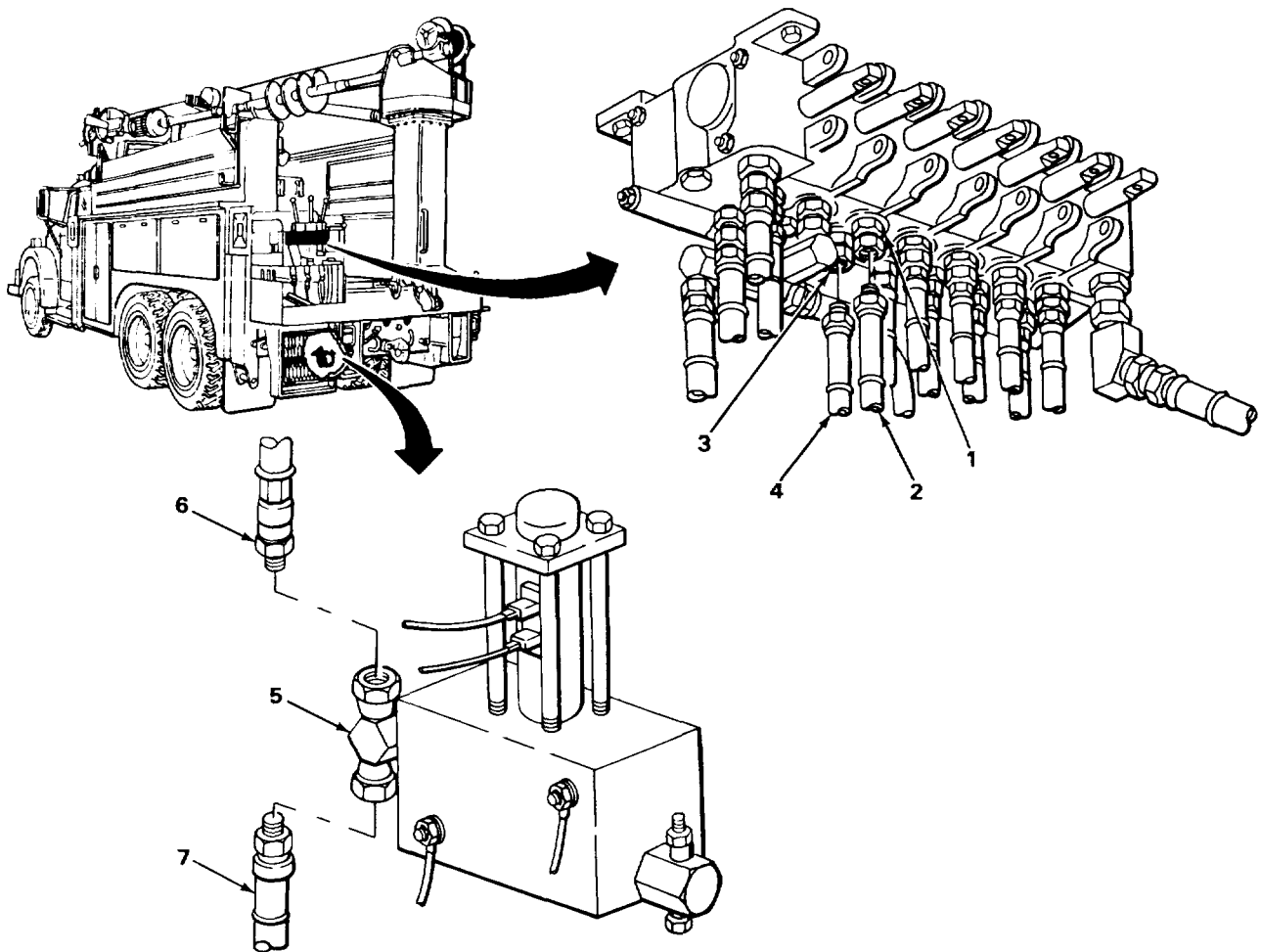
REMOVAL

WARNING

Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

AUXILIARY TOOLS HYDRAULIC DRIVE LINES - CONTINUED

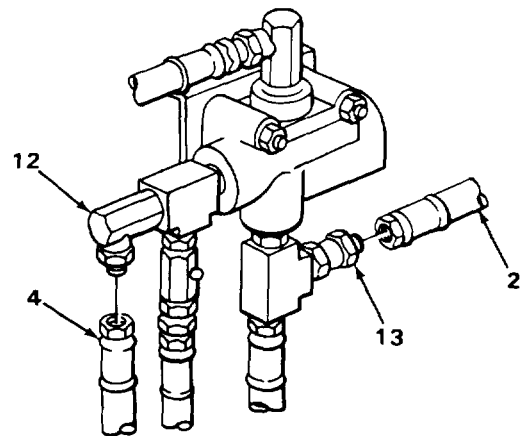
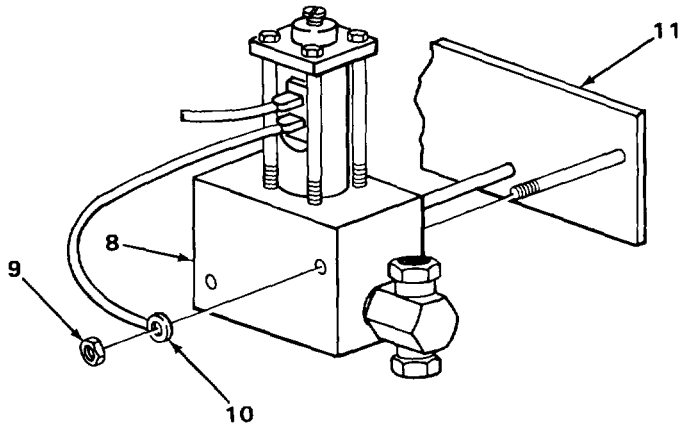
LOCATION	ITEM	ACTION	REMARKS
1. Swivel adapter (1)	Valve-to-quick disconnect hose assembly (2)	a. Position pail to catch hydraulic fluid. b. Using 7/8-inch and 11/16-inch wrenches, unscrew and take off. c. Tag hose (2). d. Dispose of drained fluid.	
2. Swivel adapter (3)	Valve-to-flow control valve hose assembly (4)	a. Using 7/8-inch and 11/16-inch wrenches, unscrew and take off. b. Tag hose (4).	
3. Swivel	Two hose assemblies	a. Using 7/8-inch and 1-inch wrenches,	



TA229192

AUXILIARY TOOLS HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
4. Solenoid valve (8)	Two nuts (9) and wire (10)		Using 9/16-inch socket and handle with 1/2-inch drive, unscrew and take off.
5. Valve bracket (11)	Solenoid valve (8) with attached parts		Pull away from bracket (11), and move up out of the way.
6. 90° swivel adapter (12) assembly (4)	Valve-to-flow control valve hose b. Tag hose (4).	a.	Using 11/16-inch and 7/8-inch wrenches, unscrew and take off.
7. Swivel adapter (13)	Valve-to-quick disconnect hose assembly (2)	a. b.	Using 11/16-inch and 7/8-inch wrenches, unscrew and take off. Tag hose (2).



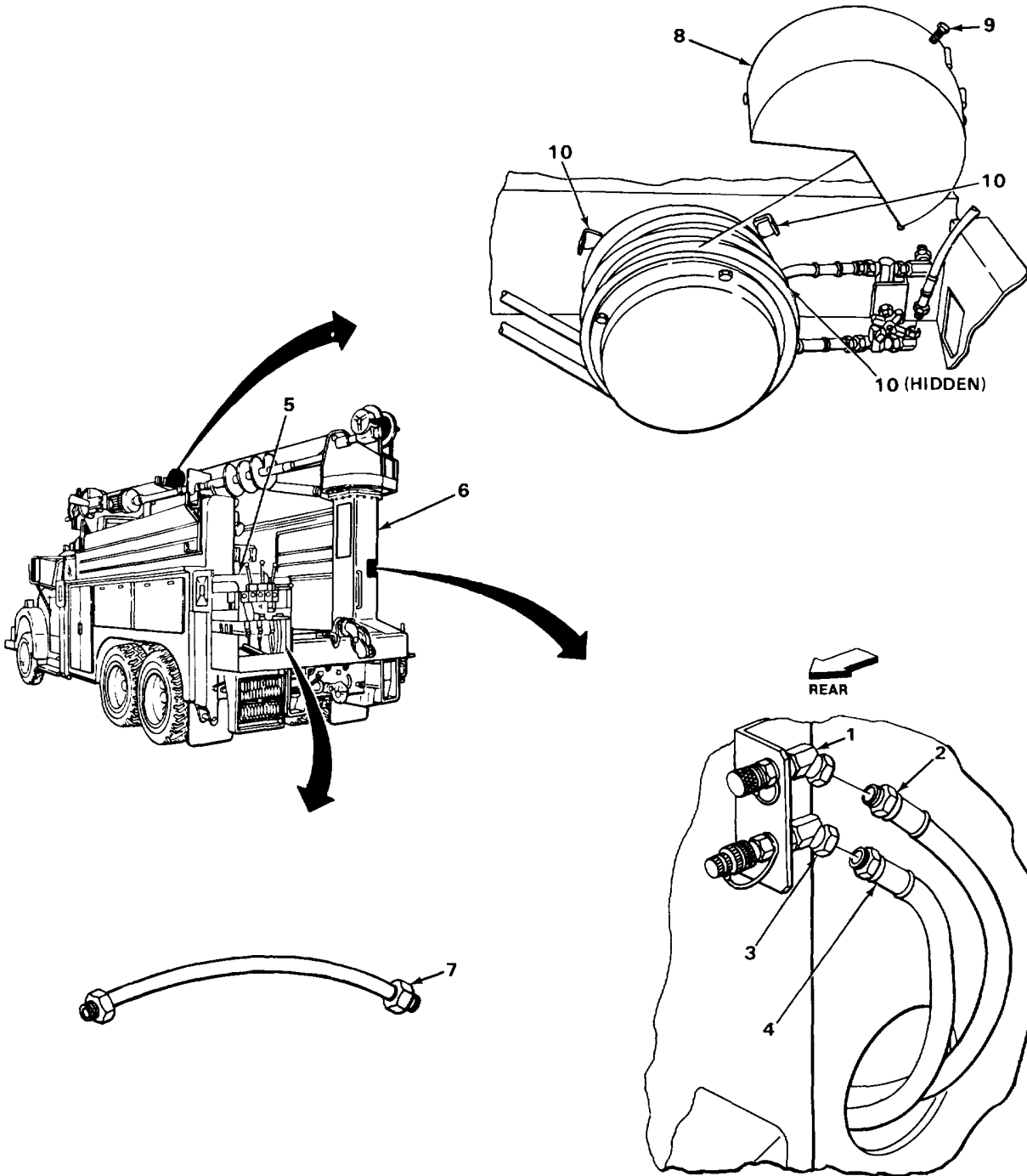
TA229193

AUXILIARY TOOLS HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL- CONTINUED			
8. 450 swivel adapter (1)	Valve-to-quick disconnect hose assembly (2)	a. Using 11/16-inch and 7/8-inch wrenches, unscrew and take off. b. Tag hose (2).	
9. 450 swivel adapter (3)	Flow control valve-to-quick disconnect hose assembly (4)	a. Using 11/16-inch and 7/8-inch wrenches, unscrew and take off. b. Tag hose (4).	
10. Console (5) and derrick mast (6) flow control valve-to-quick disconnect hose assembly (4), and valve-to-quick disconnect hose assembly (2)	Valve-to-flow control valve hose assembly (7),	With help from assistant, take out.	
11. Reel cover (8)	Three screws (9)	Using 3/8-inch socket and handle with 1/4-inch drive, unscrew and take off.	
12. Three brackets (10)	Reel cover (8)	Take off.	

AUXILIARY TOOLS HYDRAULIC DRIVE LINES - CONTINUED

REMOVAL - CONTINUED



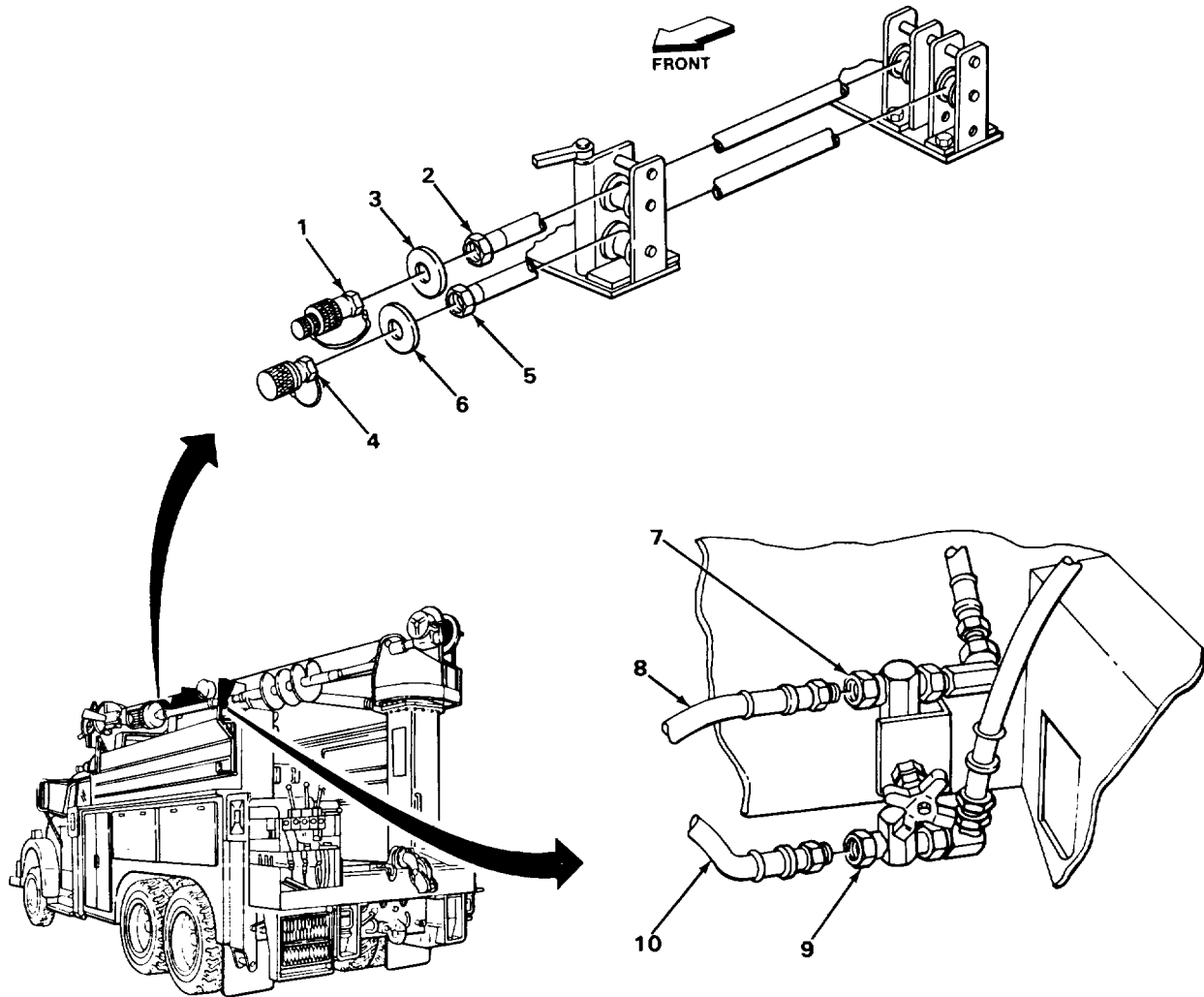
TA229194

AUXILIARY TOOLS HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
WARNING			
Hose assemblies are under spring tension. Do not allow hoses to snap back onto reel. Free ends of hoses can snap back violently causing injury to personnel.			
CAUTION			
Hold on to hoses while unscrewing from adapters. Adapter threads can be ruined if spring tension on hose is not relieved while unscrewing the hose.			
13. Adapter (1)	Quick disconnect-to-hose reel hose assembly (2) and washer (3)	<ol style="list-style-type: none"> a. Pull and hold about 12-inches (30.5 mm) of hose (2) from reel. b. Using 3/4-inch and 13/16-inch wrenches, unscrew and take off. c. Slowly release hose (2) and allow to wind up on reel. 	
14. Adapter (4)	Quick disconnect-to-hose reel hose assembly (5) and washer (6)	<ol style="list-style-type: none"> a. Pull and hold about 12-inches (30.5 mm) of hose (5) from reel. b. Using 3/4-inch and 13/16-inch wrenches, unscrew and take off. c. Slowly release hose (5) and allow to wind up on reel. 	
15. Swivel adapter (7)	Needle valve-to-hose reel hose assembly (8)	<ol style="list-style-type: none"> a. Using 7/8-inch and 1-inch wrenches, unscrew and take off. b. Tag hoses(8). 	
16. Swivel adapter (9)	Needle valve-to-hose reel hose assembly (10)	<ol style="list-style-type: none"> a. Using 7/8-inch and 11/16-inch wrenches, unscrew and take off. b. Tag hoses (10). 	

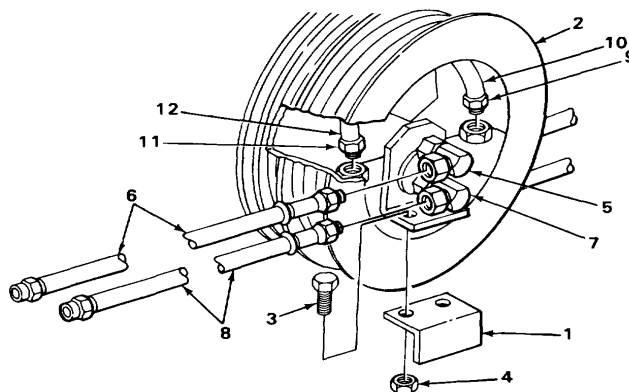
AUXILIARY TOOLS HYDRAULIC DRIVE LINES - CONTINUED

REMOVAL- CONTINUED



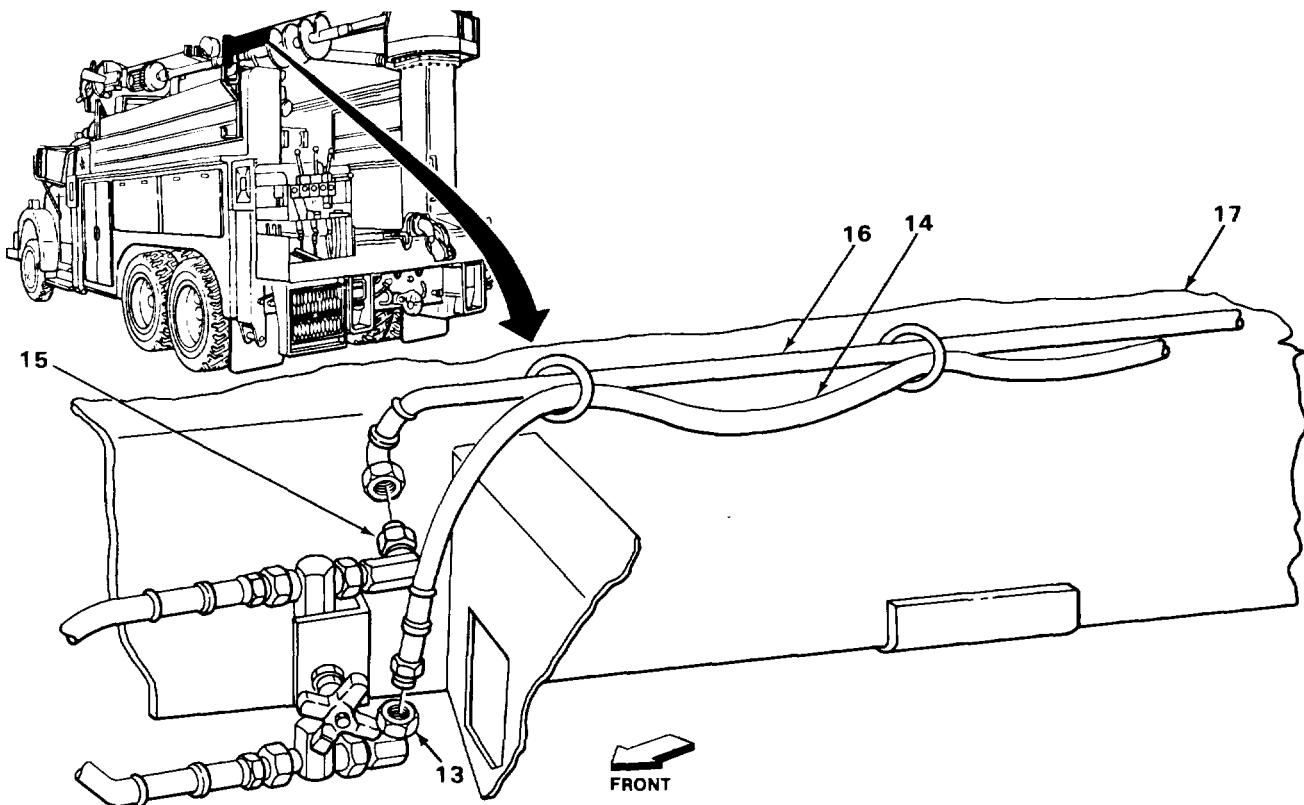
AUXILIARY TOOLS HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
17. Reel mounting bracket (1) and reel assembly (2)	Two screws (3) and elastic stop nuts (4)	a. Using 3/4-inch socket, extension, handle with 1/2-inch drive, and 3/4-inch wrench, unscrew and take out. b. Get rid of nuts (4).	
18. Reel mounting	Reel assembly (2)	Take off.	
19. 90° swivel adapter (5)	Quick disconnect-to-hose reel hose assembly (6)	a. Using 7/8-inch and 1-inch wrenches, unscrew and take out. b. Tag hose (6).	
20. 90° swivel adapter (7)	Quick disconnect-to-hose reel hose assembly (8)	a. Using 7/8-inch and 11/16-inch wrenches, unscrew and take out. b. Tag hose (8).	
21. Adapter (9)	Needle valve-to-hose reel hose assembly (10)	a. Using 3/4-inch and 7/8-inch wrenches, unscrew and take off. b. Tag hose (10).	
22. Adapter (11)	Needle valve-to-hose reel hose assembly (12)	a. Using 7/8-inch and 1-inch wrenches, unscrew and take off. b. Tag hose (12).	
22. Reel assembly (2)	Two needle valve-to-hose reel hose assemblies (10) and (12)	Take off.	



AUXILIARY TOOLS HYDRAULIC DRIVE LINES - CONTINUED

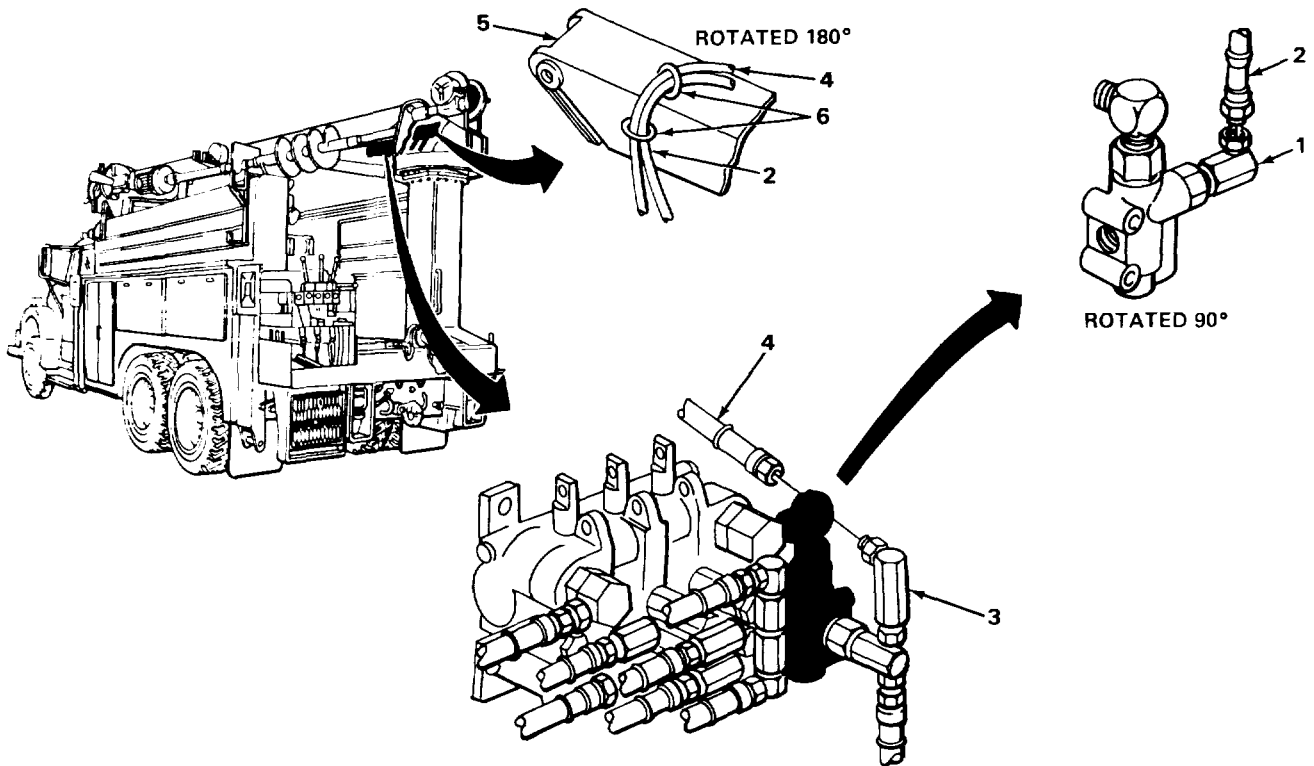
LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
23. Adapter (13)	Needle valve-to-derrick operator's flow control valve hose assembly (14)	a. Using 11/16-inch and 7/8-inch wrenches, unscrew and take off. b. Tag hose (14).	
24. Adapter(15)	Needle valve-to-derrick operator's flow control valve hose assembly (16)	a. Using 7/8-inch and 1-inch wrenches, unscrew and take off. b. Tag hose (16).	
25. Derrick leg (17)	Two needle valve-to-derrick operator's flow control valve hose	Pull back through guide rings toward back of truck.	



TA229197

AUXILIARY TOOLS HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
26. 90° swivel adapter (1)	Needle valve-to-derrick operator's flow control valve hose assembly (2)	a. Using 11/16-inch and 7/8-inch wrenches, unscrew and take off. b. Tag hose (2).	
27. 90° swivel adapter (3)	Needle valve-to-derrick operator's flow control	a. Using 1-inch and 7/8-inch wrenches, unscrew and take off. b. Tag hose (4). valve hose assembly (4)	
28. Derrick leg (5)	Two needle valve-to-derrick operator's flow control valve hose assemblies (2) and (4)	Pass through guide rings (6), and take off.	



TA229198

AUXILIARY TOOLS HYDRAULIC DRIVES LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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CLEANING

WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

29.	All metal parts	<ul style="list-style-type: none"> a. Clean in drycleaning solvent. b. Wipe dry with clean, dry rags.
30.	All hose assemblies	<ul style="list-style-type: none"> a. Clean in clean, soapy water. b. Rinse in clean water. c. Wipe connectors clean with clean rags dampened in drycleaning solvent. d. Wipe dry with clean, dry rags.

INSPECTION/REPLACEMENT

NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

Replace damaged or defective parts as necessary.

31.	All hose assemblies	<ul style="list-style-type: none"> a. Look for cracks, breaks, tears, and brittleness. b. Look for loose connectors. c. Look for damaged threads.
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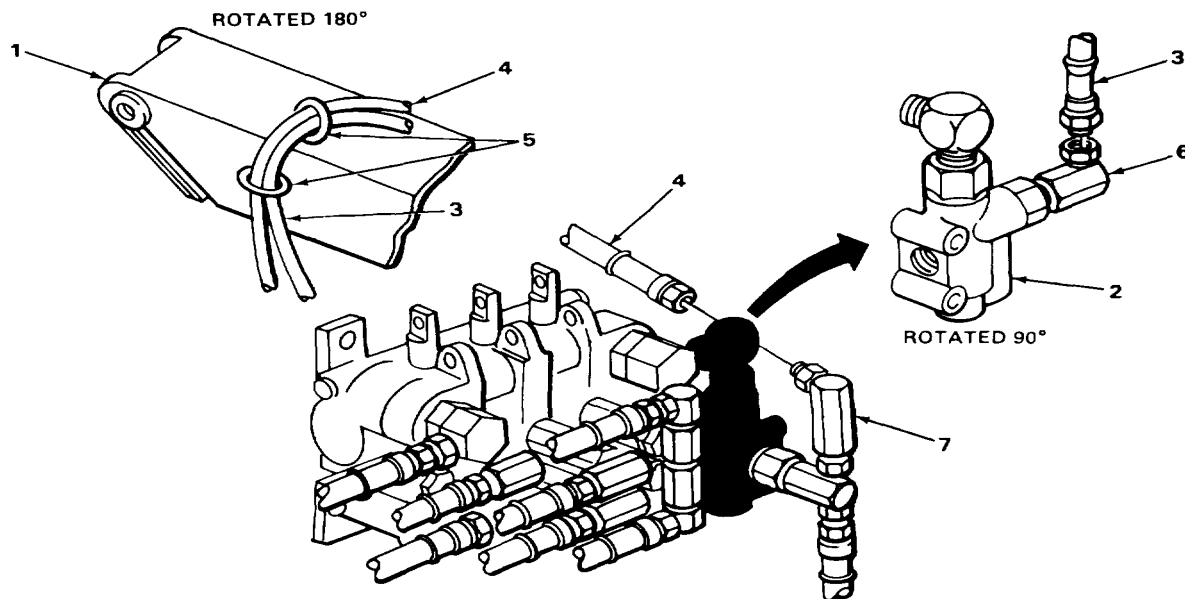
INSTALLATION

NOTE

Before installing hoses, wrap all clean external threads with two turns of teflon tape (page 2-142).

AUXILIARY TOOLS HYDRAULIC DRIVE LINES - CONTINUED

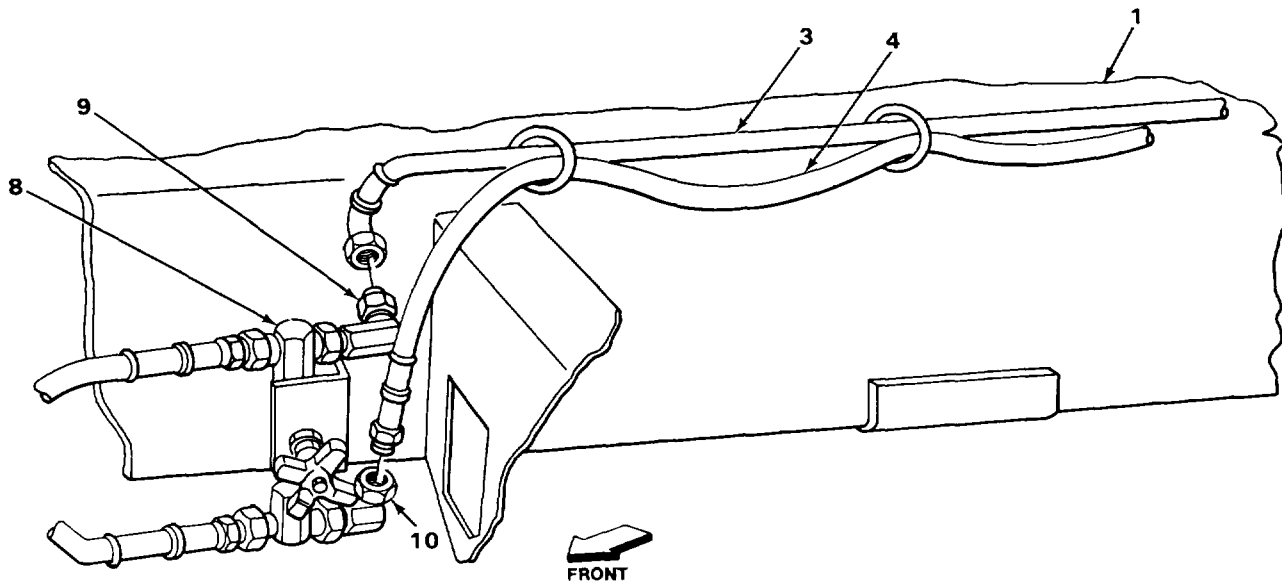
LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
32. Derrick leg (1) and derrick operator's flow control valve (2)	Two needle valve-to-derrick operator's flow control valve hose assemblies (3) and (4)	a. Check tag for correct location. b. Feed through guide rings (5), and put in position.	
33. 90° swivel adapter (6)	Needle valve-to-derrick operator's flow control valve hose assembly (3)	a. Take off tag. b. Screw on, and tighten using 11/16-inch and 7/8-inch wrenches.	
34. 90° swivel adapter (7)	Needle valve-to-derrick operator's flow control valve hose assembly (4)	a. Take off tag. b. Screw on, and tighten using 1-inch and 7/8-inch wrenches.	



TA229199

AUXILIARY TOOLS HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
35. Derrick leg (1) and needle valve (8)	Two needle valve-to- derrick operator's flow control valve hose assemblies (3) and (4)	Pull through guide rings (5) toward front of truck, and put in position at valve (8).	
36. Adapter (9)	Needle valve-to- derrick operator's flow control valve hose assembly (3)	a. Check tag for correct location, and take off. b. Screw on, and tighten using 7/8-inch and 1-inch wrenches.	
37. Adapter (10)	Needle valve-to- derrick operator's flow control valve hose assembly (4)	a. Check tag for correct location, and take off. b. Screw on, and tighten using 11/16-inch and 7/8-inch wrenches.	



TA229200

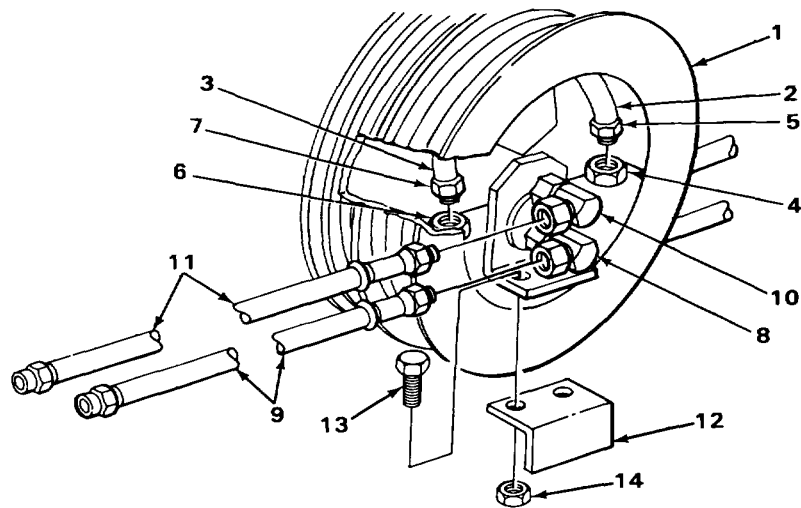
AUXILIARY TOOLS HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
38. Reel assembly (1)	Two needle valve-to-hose reel hose assemblies (2) and (3)	a. Check tags for correct location. b. Put in position, but do not wrap around reel at this time.	
39. Fitting (4)	Adapter (5) and needle valve-to-hose reel hose assembly (3)	a. Takeoff tag. b. Screw on, and tighten using 7/8-inch and 3/4-inch wrenches.	
40. Fitting (6)	Adapter (7) and needle valve-to-hose reel hose assembly (3)	a. Take off tag. b. Screw on, and tighten using 1-inch and 7/8-inch wrenches.	
41. 90° swivel adapter (8)	Quick disconnect to-hose reel hose assembly (9) 7/8-inch	a. Check tag for proper location. b. Screw on, and tighten using and 11/16-inch wrenches.	
42. 90°swivel adapter (10)	Quick disconnect to-hose reel hose assembly (11)	a. Check tag for proper location. b. Screw on, and tighten using 7/8-inch and 1-inch wrenches.	
43. Reel assembly (1)	Two needle valve-to-hose reel hose assemblies (2) and (3)	Wrap around reel.	
44. Reel mounting bracket (12)	Reel assembly (1)	Put on.	
45. Reel mounting bracket (12) and reel assembly (1)	Two screws (13) and new elastic stop nuts (14)	Screw in, and tighten using 3/4-inch socket, extension, handle with 1/2-inch drive, and 3/4-inch wrench.	

AUXILIARY TOOLS HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION-CONTINUED



46. Swivel adapter (15)

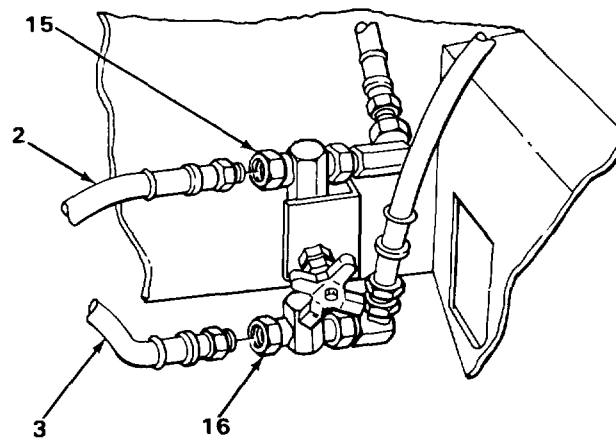
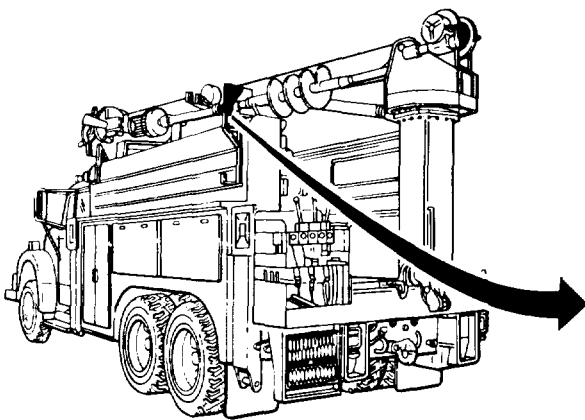
Needle valve-to-hose reel hose assembly (2)

- a. Check tag for proper location, and take off.
- b. Screw in, and tighten using 7/8-inch and 1-inch wrenches.

47. Swivel adapter (16)

Needle valve-to-hose reel hose assembly (3)

- a. Check tag for proper location, and take off.
- b. Screw in, and tighten using 7/8-inch



TA229201

AUXILIARY TOOLS HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION - CONTINUED

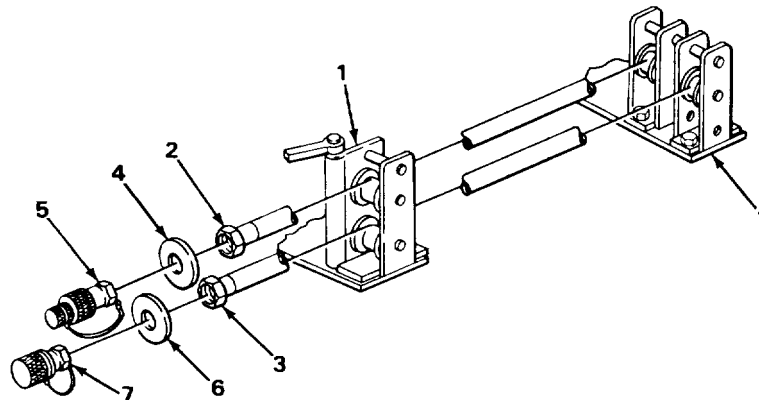
WARNING

Hose assemblies are under spring tension. Do not allow hoses to spring back on reel. Free ends of hoses can snap back violently causing serious injury to personnel.

CAUTION

Hold on to hoses while screwing them on to adapter. Adapter threads can be ruined if spring tension on hose is not relieved while screwing on hose.

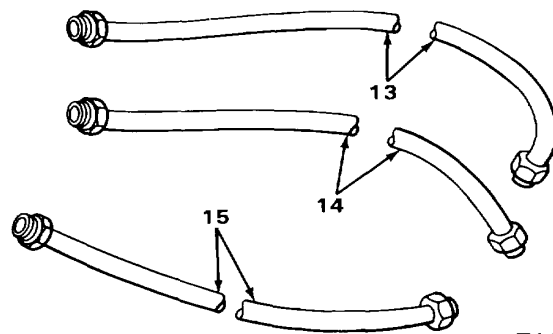
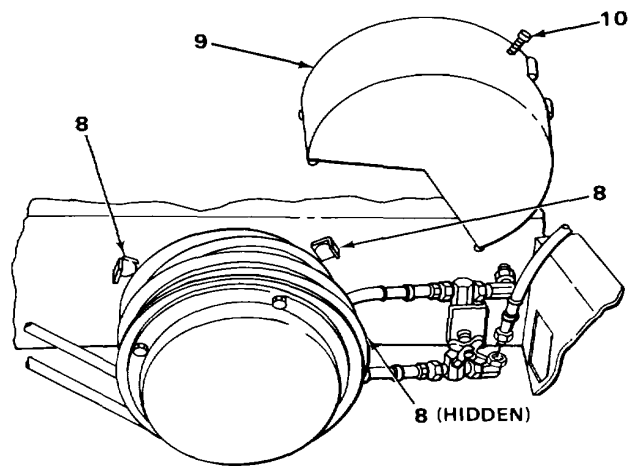
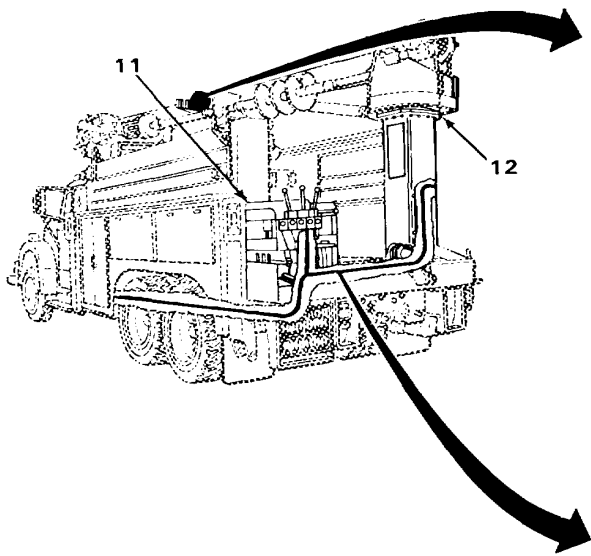
48. Hose brackets (1)	Two quick disconnect-to-hose reel hose assembly (2) and (3)	Feed through.	
49. Quick disconnect-to-hose reel hose assembly (2)	Washer (4) and adapter (5)	<ol style="list-style-type: none"> Pull and hold about 12-inches (30.5 mm) of hose (2). Screw on, and tighten using 3/4-inch and 13/16-inch wrenches. Slowly release hose (2). 	
50. Quick disconnect-to-hose reel hose assembly (3)	Washer (6) and adapter (7)	<ol style="list-style-type: none"> Pull and hold about 12-inches (30.5 mm) of hose (3). Screw on, and tighten using 3/4-inch and 11/16-inch wrenches. Slowly release hose(3) 	



TA229202

AUXILIARY TOOLS HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION-CONTINUED			
51. Three brackets (8)	Reel cover (9)	Put in position.	
52. Reel cover (9)	Three screws (10)	Screw in, and tighten using 3/8-inch socket and handle with 1/4-inch drive.	
53. Console (11) and derrick mast (12)	Valve-to-flow control valve hose assembly (13), flow control valve-to-quick disconnect hose assembly (14), and valve-to quick disconnect hose assembly (15)	<ul style="list-style-type: none"> a. Check all tags for proper location. b. With help from assistant, put hose assemblies (13), (14), and (15) in position. 	

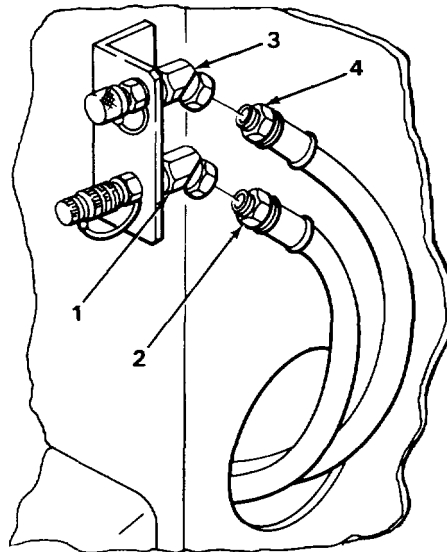


TA229203

TA229203

AUXILIARY TOOLS HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
54. 45° swivel adapter (1)	Flow control valve-to-quick disconnect hose assembly (2)	<ul style="list-style-type: none"> a. Check tag for proper location, and take off. b. Screw on, and tighten using 7/8-inch and 11/16-inch wrenches. 	
55. 45° swivel adapters (3)	Valve-to-quick disconnect hose assembly (4)	<ul style="list-style-type: none"> a. Check tag for proper location, and take off. b. Screw on, and tighten using 	

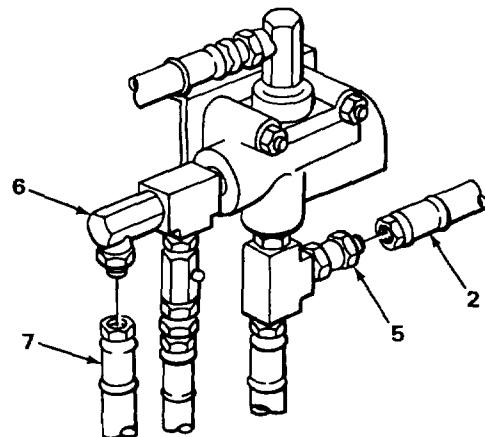
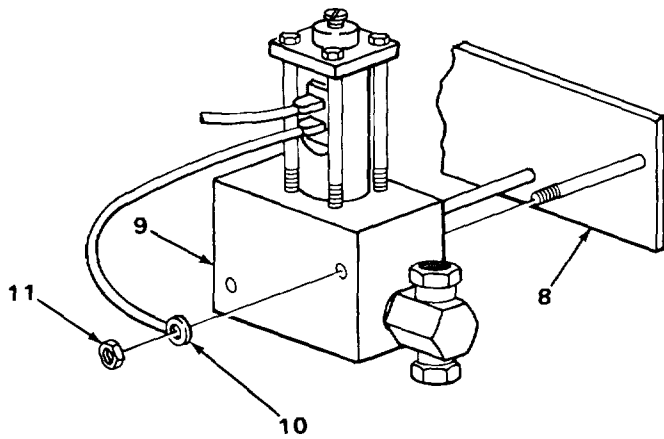


56. Swivel adapter (5)	Flow control valve-to-quick disconnect hose assembly (2)	<ul style="list-style-type: none"> a. Check tag for correct location and take off. b. Screw on, and tighten using 11/16-inch and 7/8-inch wrenches.
57. 90° swivel adapter (6)	Valve-to-flow control valve hose assembly (7)	<ul style="list-style-type: none"> a. Check tag for correct location, and take off. b. Screw on, and tighten using 11/16-inch and 7/8-inch wrenches.

TA229204

AUXILIARY TOOLS HYDRAULIC DRIVE LINES - CONTINUED

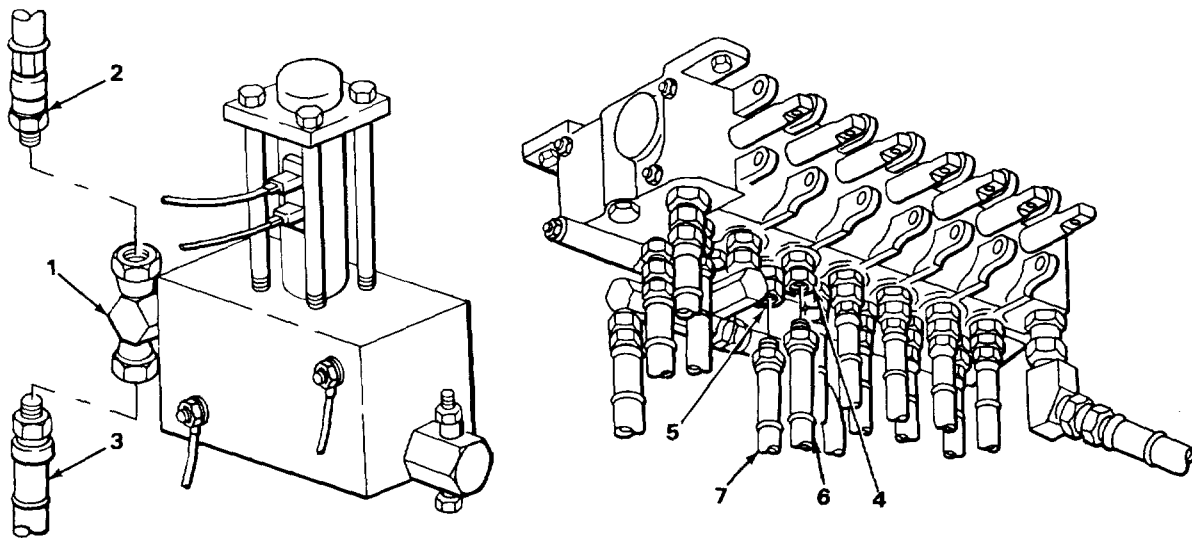
LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
58. Valve bracket (8)	Solenoid valve (9) with attached parts	Put in place.	
59. Solenoid valve (9)	Wire (10) and two nuts (11)	Screw on, and tighten using 9/16-inch socket and handle with 1/2-inch drive.	



TA229206

AUXILIARY TOOLS HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
60. Swivel adapter (1)	Two hose assemblies (2) and (3)	a. Check tags for proper location, and take off. b. Screw on, and tighten using 1-inch and 7/8-inch wrenches.	
61. Two swivel adapters (4) and (5)	Two valve-to-flow control valve hose assemblies (6) and 7/8-inch wrenches.	a. Check tags for locations, and take off. b. Screw on, and tighten using 11/16-inch	



NOTE

FOLLOW-ON MAINTENANCE:

1. Fill with hydraulic fluid (LO 9-2320-269-12).
2. Start engine, operate auxiliary equipment, and check for leaks (TM 9-2320-269-10).
3. Install console cover (page 2-1092).

TASK ENDS HERE

TA229206

BODY WINCH HYDRAULIC DRIVE LINES

This task covers:

- | | |
|--------------------------|--|
| a. Removal (page 2-968) | c. Inspection/Replacement (page 2-971) |
| b. Cleaning (page 2-971) | d. Installation (page 2-972) |
-

INITIAL SETUP**Tools**

Fish tape, 50-ft reel
 Pail, utility, 3-qt
 Wrench, open-end, 7/8-inch
 Wrench, open-end, 1-inch
 Wrench, open-end, 1 1/2-inch

Personnel Required

Two

Equipment Condition

Console cover removed (page 2-1092).

Materials/Parts

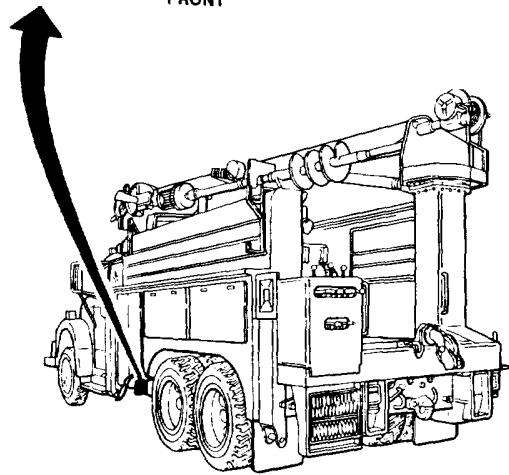
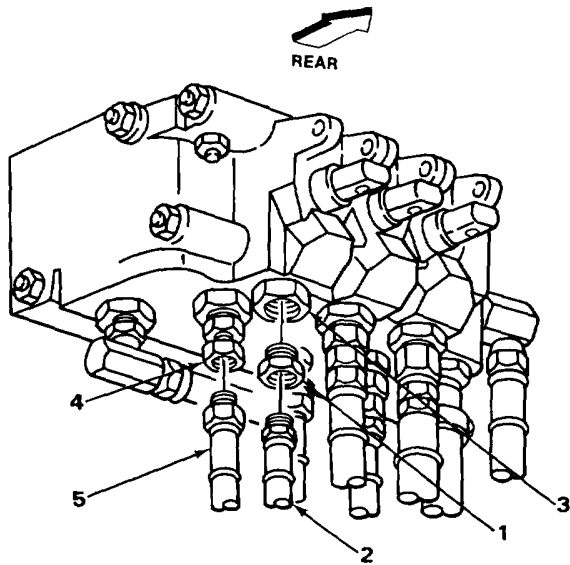
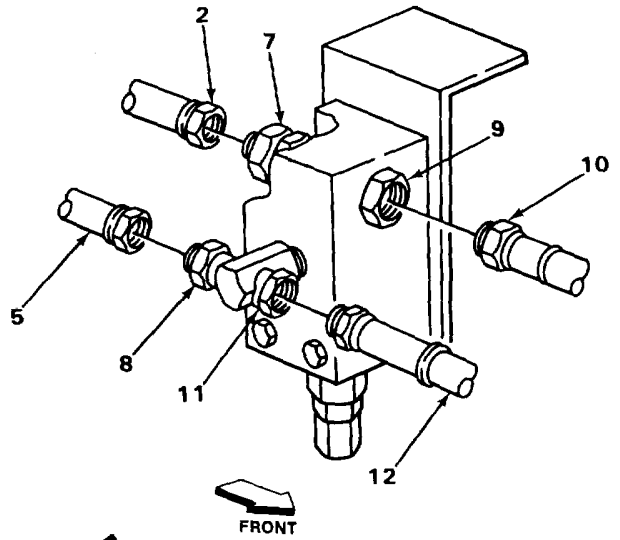
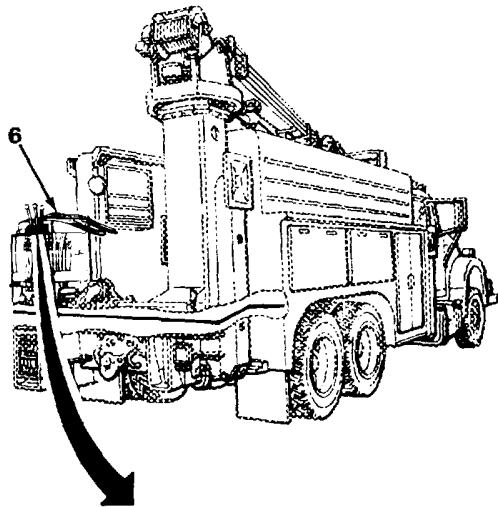
Detergent, non-sudsing (item 12, appendix C)
 Rags, wiping (item 24, appendix C)
 Solvent, drycleaning (item 28, appendix C)
 Tags, marking (item 29, appendix C)
 Tape, teflon (item 32, appendix C)

BODY WINCH HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
WARNING			
Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation			
1. Swivel adapter (1)	Valve-to-body winch relief valve hose assembly (2)	<ul style="list-style-type: none"> a. Position pail to catch hydraulic fluid. b. Using 7/8-inch and 1-inch wrenches, unscrew and take off. c. Tag hose (2). d. Dispose of drained fluid. 	
2. Adapter (3)	Swivel adapter (1)		Using 1-inch and 1 1/2-inch wrenches, unscrew and take out.
3. Swivel adapter (4)	Valve-to-body which relief valve hose assembly (5)	<ul style="list-style-type: none"> a. Using 7/8-inch and 1-inch wrenches, unscrew and take off. b. Tag hose (5). 	
4. Console (6)	Two valve-to-body winch relief valve hose assemblies (2) and (5)		Pull down to clear console.
5. Swivel adapter (7)	Valve-to-body winch relief valve hose assembly (2)	<ul style="list-style-type: none"> a. Using 7/8-inch and 1-inch wrenches, unscrew and take off. b. Tag hose (2). 	
6. Swivel adapter (8)	Valve-to-body winch relief valve hose assembly (5)	<ul style="list-style-type: none"> a. Using 7/8-inch and 1-inch wrenches, unscrew and take off. b. Tag hose (5). 	
7. Swivel adapter (9)	Body winch relief valve-to-body winch motor hose assembly (10)	<ul style="list-style-type: none"> a. Using 7/8-inch and 1-inch wrenches, unscrew and take off. b. Tag hose (10). 	
8. Swivel adapter (11)	Body winch relief valve-to-body winch motor hose assembly (12)	<ul style="list-style-type: none"> a. Using 7/8-inch and 1-inch wrenches, unscrew and take off. b. Tag hose (12). 	

BODY WINCH HYDRAULIC DRIVE LINES - CONTINUED

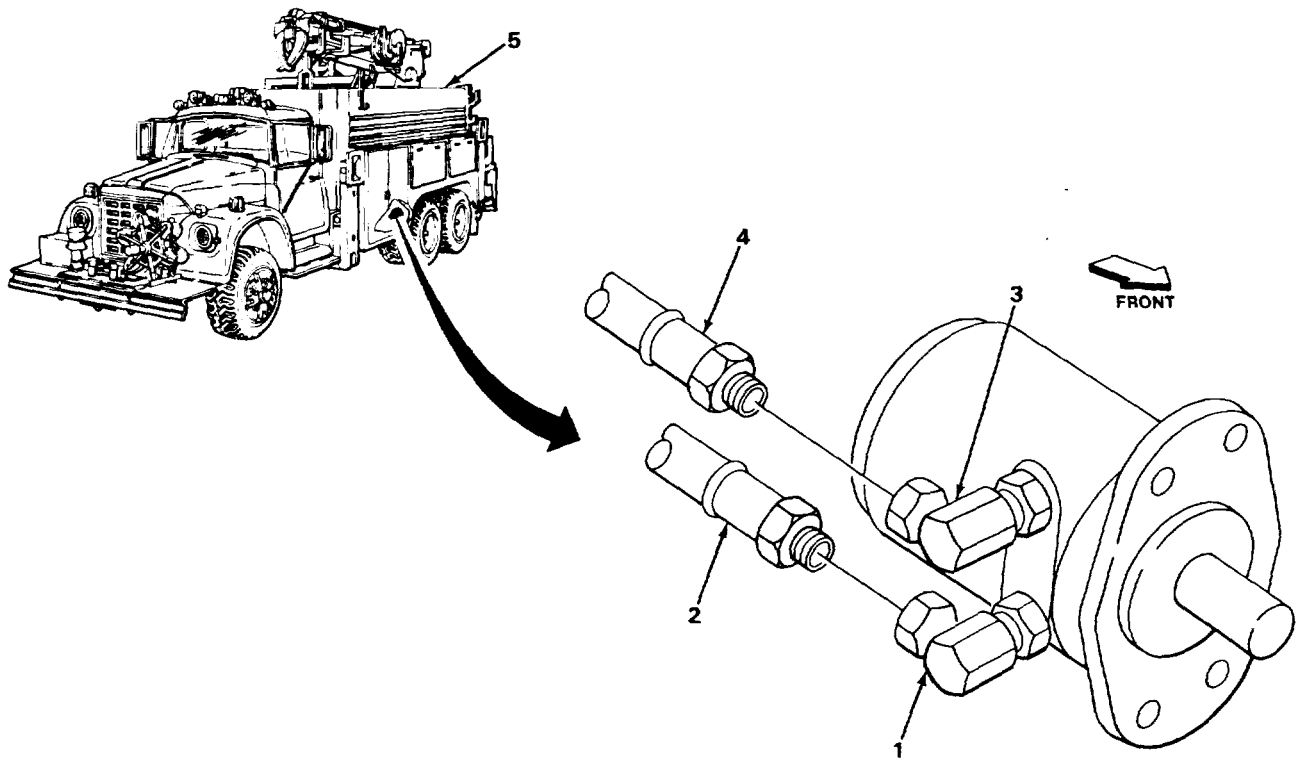
REMOVAL - CONTINUED



TA229201

BODY WINCH HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
9. 90° swivel adapter (1)	Body winch relief valve-to-body winch motor hose assembly (2)	a. Using 7/8-inch and 1-inch wrenches, unscrew and take off. b. Tag hose (2).	
10. 90°swivel adapter (3)	Body winch relief valve-to-body winch motor hose assembly (4)	a. Using 7/8-inch and 1-inch wrenches, unscrew and take off. b. Tag hose (4).	
11. Truck(5)	Two body winch relief valve-to-body winch motor hose assemblies (2) and (4)		With help from assistant, take all hoses out from under truck.



TA229208

BODY WINCH HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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CLEANING

WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

12.	All hose assemblies	a. Clean in clean, soapy water. b. Rinse in clean water. c. Wipe connectors clean with clean rags dampened in drycleaning solvent. d. Wipe dry with clean, dry rags.	
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INSPECTION/REPLACEMENT

NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

Replace damaged or defective parts as necessary.

13.	All hose assemblies	a. Look for cracks, breaks, tears, and brittleness. b. Look for loose connectors. c. Look for damaged threads.	
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BODY WINCH HYDRAULIC DRIVE LINES - CONTINUED

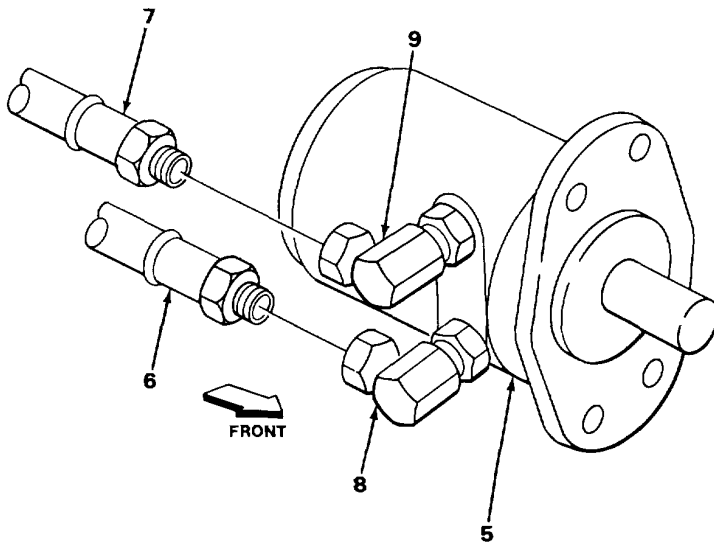
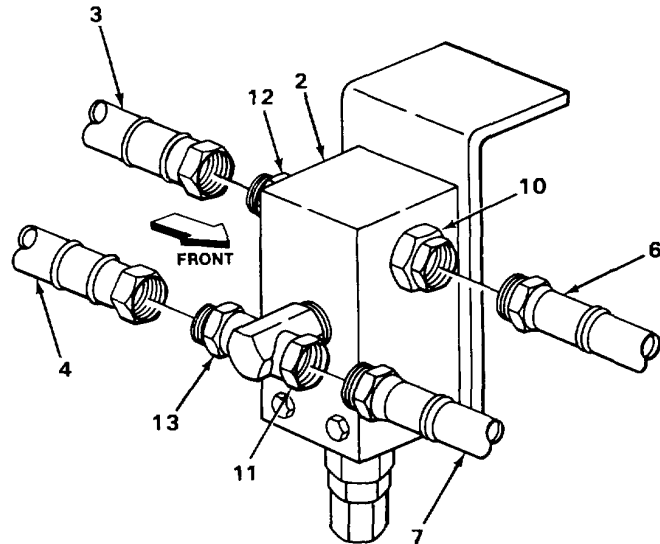
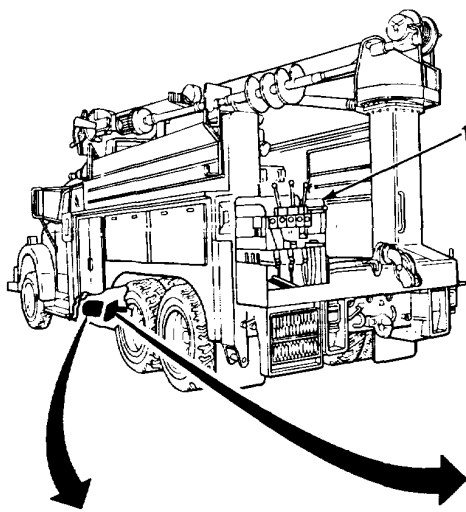
LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
NOTE			
Before installing hoses, wrap all external threads with two turns of teflon tape (page 2-142).			
14. Console (1) and body winch relief valve (2)	Two valve-to-body winch relief valve hose assemblies (3) and (4)		With help from assistant, and using fish tape, put in position.
15. Body winch relief valve (2) and body winch motor (5)	Two body winch relief valve-to-body winch motor hose assemblies (6) and (7)		Put in position.
16. Swivel adapter (8)	Body winch relief valve-to-body winch motor hose assembly (6)	a. Check tag for proper location, and take off.	b. Screw in, and tighten using 7/8-inch and 1-inch wrenches.
17. Swivel adapter (9)	Body winch relief valve-to-body winch motor hose assembly (7)	a. Check tag for proper location, and take off.	b. Screw in, and tighten using 7/8-inch and 1-inch wrenches.
18. Swivel adapter (10)	Body winch relief valve-to-body winch motor hose assembly (6)	a. Check tag for proper location, and take off.	b. Screw in, and tighten using 7/8-inch and 1-inch wrenches.
19. Swivel adapter (11)	Body winch relief valve-to-body winch motor hose assembly (7)	a. Check tag for proper location, and take off.	b. Screw in, and tighten using 7/8-inch and 1-inch wrenches.
20. Swivel adapter (12)	Valve-to-body winch relief valve hose assembly (3)	a. Check tag for proper location, and take off.	b. Screw on, and tighten using 7/8-inch and 1-inch wrenches.

BODY WINCH HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION - CONTINUED

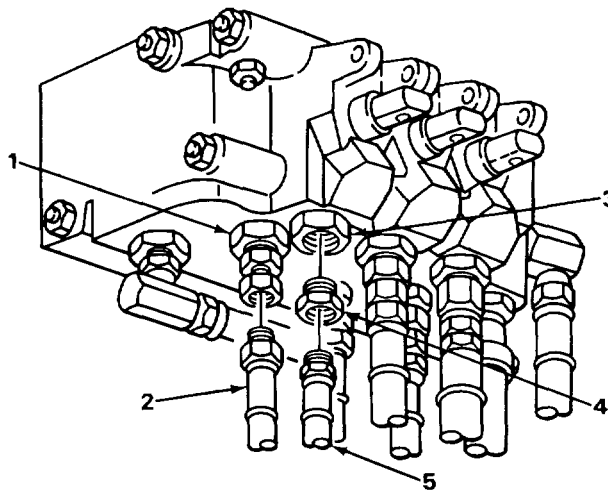
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|-------------------------|--|--|
| 21. Swivel adapter (13) | Valve-to-body winch relief valve hose assembly (4) | a. Check tag for proper location, and take off.
b. Screw on, and tighten using 7/8-inch |
|-------------------------|--|--|



TA229209

BODY WINCH HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
22. Swivel adapter (1)	Valve-to-body winch relief valve hose assembly (2) and 1-inch wrenches.	a. Check tag for proper location, and take off. b. Screw on, and tighten using 7/8-inch and 1-inch wrenches.	
23. Adapter (3)	Swivel adapter (4)	Screw in, and tighten using 1-inch and 1 1/2-inch wrenches.	
24. Swivel adapter (4)	Valve-to-body winch relief valve hose assembly (5)	a. Check tag for proper location, and take off. b. Screw on, and tighten using 7/8-inch and 1-inch wrenches.	



NOTE

FOLLOW-ON MAINTENANCE:

1. Fill with hydraulic fluid (LO 9-2320-269-12).
2. Start engine, operate auxiliary equipment (TM 9-2320-269-10), and check for proper operation and leaks.
3. Install console cover (page 2-1092).

TASK ENDS HERE

TA229210

DERRICK LEG ELEVATION HYDRAULIC DRIVE LINES

This task covers:

- a. Removal (page 2-976)
 - b. Cleaning (page 2-980)
 - c. Inspection/Replacement (page 2-980)
 - d. Installation (page 2-981)
-

INITIAL SETUP

Tools

- Fish tape, 50-ft reel
- Pail, utility, 3-qt
- Wrench, open-end, 9/16-inch
- Wrench, open-end, 11/16-inch
- Wrench, open-end, 7/8-inch

Personnel Required

Two

Materials/Parts

- Detergent, non-sudsing (item 12, appendix C)
- Rags, wiping (item 24, appendix C)
- Solvent, drycleaning (item 28, appendix C)
- Tags, marking (item 29, appendix C)
- Tape, teflon (item 32, appendix C)

Equipment Condition

Console cover removed (page 2-1092).

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

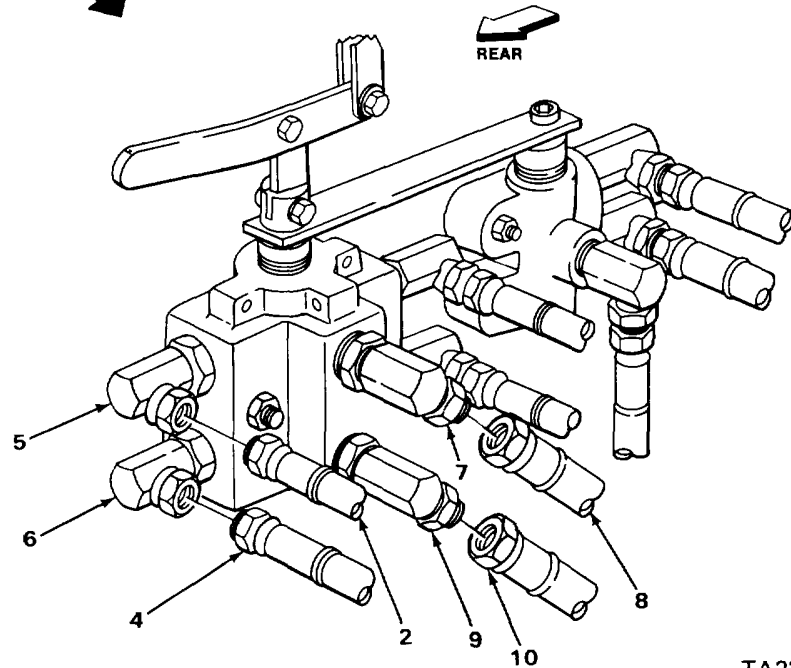
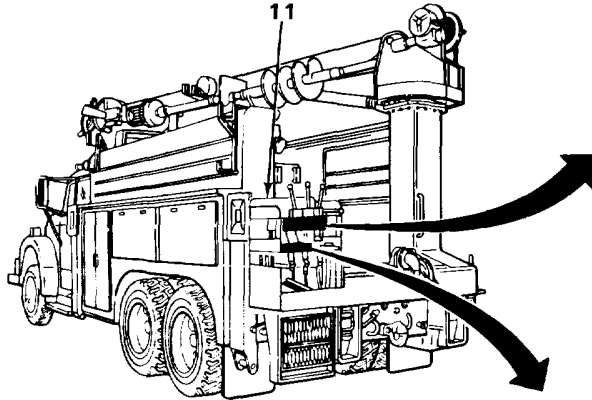
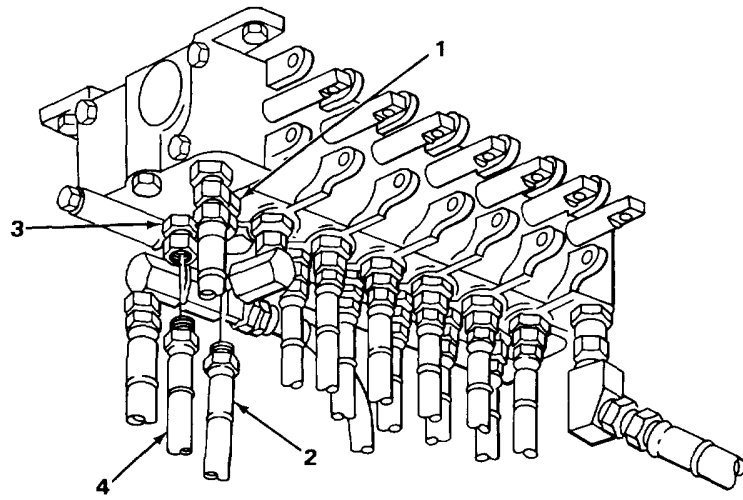
Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

DERRICK LEG ELEVATION HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
1. Swivel adapter (1)	Valve-to-selector valve hose assembly (2) c.	a. Position pail to catch hydraulic fluid. b. Using 11/16-inch and 7/8-inch wrenches, unscrew and take off. Tag hose (2). d. Dispose of drained fluid.	
2. Swivel adapter (3)	Valve-to-selector valve hose assembly (4)	a. Using 11/16-inch and 7/8-inch wrenches, unscrew and take off. b. Tag hose (4).	
3. 900 swivel adapter (5)	Valve-to-selector valve hose assembly (2)	a. Using 11/16-inch and 7/8-inch wrenches, unscrew and take off. b. Tag hose (2).	
4. 900 swivel adapter (6)	Valve-to-selector valve hose assembly (4)	a. Using 11/16-inch and 7/8-inch wrenches, unscrew and take off. b. Tag hose (4).	
5. 900° swivel adapter (7)	Selector valve-to-elevation cylinder hose assembly (8)	a. Using 11/16-inch and 7/8-inch wrenches, unscrew and take off. b. Tag hose (8).	
6. 900 swivel adapter (9)	Selector valve-to-elevation cylinder hose assembly (10)	a. Using 11/16-inch and 7/8-inch wrenches, unscrew and take off. b. Tag hose (10).	
7. Console (11)	Two valve-to-selector valve hose assemblies (2) and (4)	Take out.	

DERRICK LEG ELEVATION HYDRAULIC DRIVE LINES - CONTINUED

REMOVAL - CONTINUED



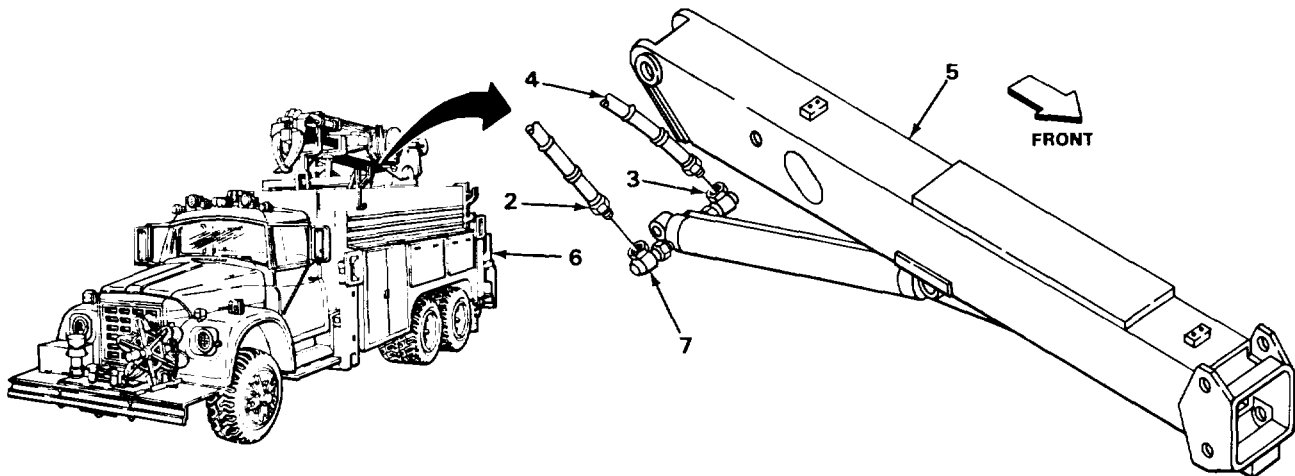
TA229211

DERRICK LEG ELEVATION HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL - CONTINUED

- | | | | |
|-----|--|--|--|
| 8. | 900 swivel adapter (1) | Selector valve-to-elevation cylinder hose assembly (2) | a. Using 11/16-inch and 7/8-inch wrenches, unscrew and take off.
b. Tag hose (2). |
| 9. | 900 swivel adapter (3) | Selector valve-to-elevation cylinder hose assembly (4) | a. Using 11/16-inch and 7/8-inch wrenches, unscrew and take off.
b. Tag hose (4). |
| 10. | Derrick mast (5) and console (6) cylinder hose | Two selector valve-to-elevation | With help from assistant, take out. |



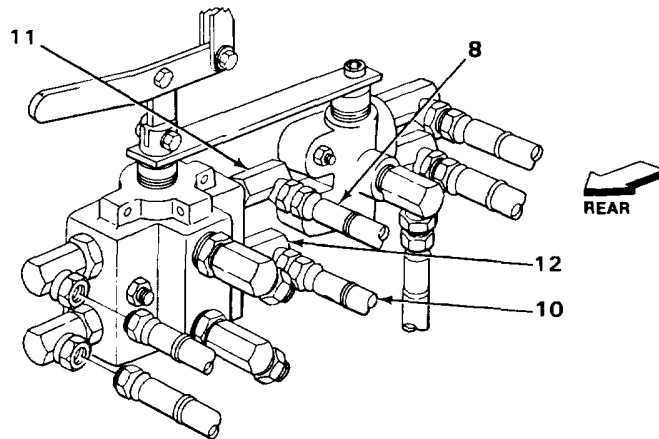
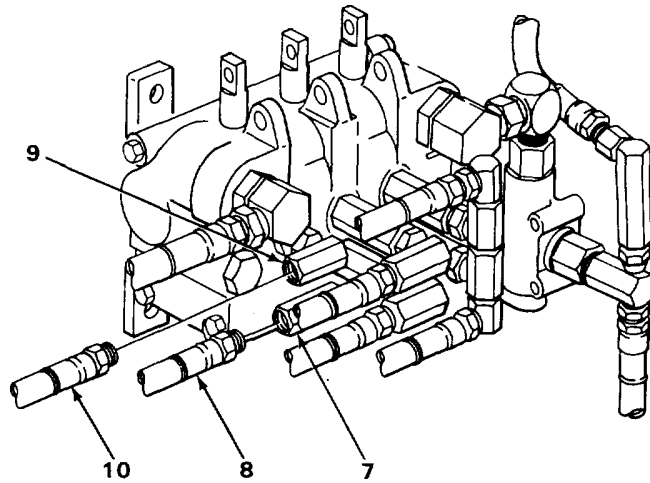
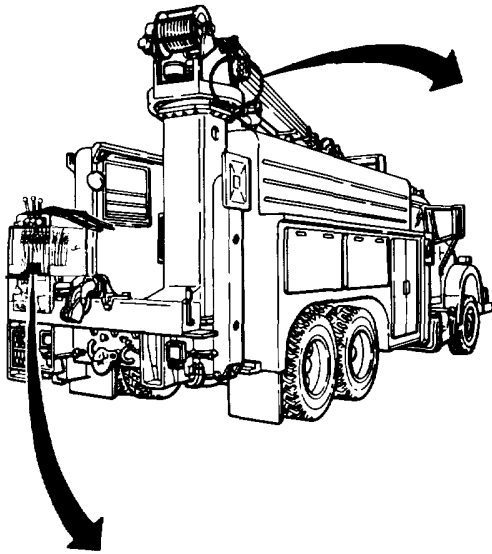
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|-----|------------------------|---|--|
| 11. | 900 swivel adapter (9) | Derrick operator's adapter (7) valve hose assembly (8) | a. Using 9/16-inch and 7/8-inch wrenches, unscrew and take off.
b. Tag hose(8). |
| 12. | 900 swivel adapter (9) | Derrick operator's valve-to-selector valve hose assembly (10) | a. Using 9/16-inch and 7/8-inch wrenches, unscrew and take off.
b. Tag hose (10). |

DERRICK LEG ELEVATION HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL - CONTINUED

- | | | |
|---|---|---|
| <p>13. Two 900 swivel adapters (11w and (12</p> | <p>Derrick operator's valve-to-selector valve hose assemblies</p> | <p>a. Using 11/16-inch and 9/16-inch wrenches, unscrew and take off.
b. Tag hoses (8) and (10).</p> |
|---|---|---|



TA229213

DERRICK LEG ELEVATION HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL - CONTINUED

14. Derrick mast (1)	Two derrick and console (2) to-selector valve hose assemblies (3) and (4)	With help from assistant, operator's valve- take out.	
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CLEANING

WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

15.	All hose assemblies	<ul style="list-style-type: none"> a. Clean in clean, soapy water. b. Rinse in clean water. c. Wipe connectors clean with clean rags dampened in drycleaning solvent. d. Wipe dry with clean, dry rags. 	
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INSPECTION/REPLACEMENT

NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

Replace damaged or defective parts as necessary.

DERRICK LEG ELEVATION HYDRAULIC DRIVE LINES - CONTINUED

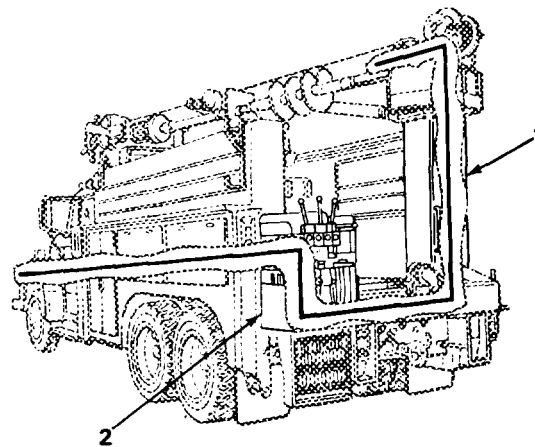
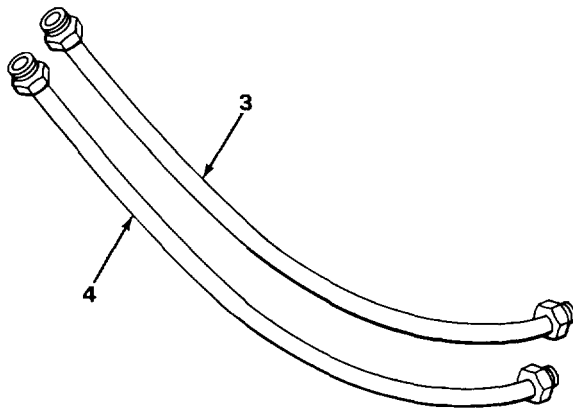
LOCATION	ITEM	ACTION REMARKS
INSPECTION/REPLACEMENT - CONTINUED		
16.	All hose assemblies	a. Look for cracks, breaks, tears, and brittleness. b. Look for loose connectors. c. Look for damaged threads.

INSTALLATION

NOTE

Before installation, wrap all hose assembly external threads with two turns of teflon tape (page 2-142).

17. Derrick mast (1) and console (2)	Two derrick operator's valve-to-selector valve hose assemblies (3) and (4)	With help from assistant, and using fish tape, put in position.
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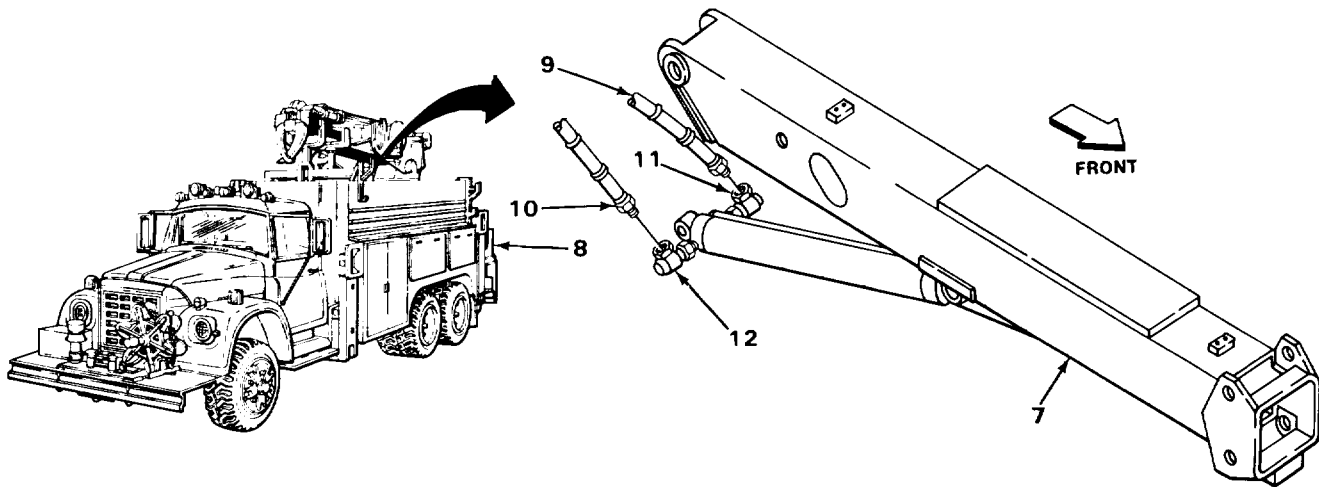


DERRICK LEG ELEVATION HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
18. 90° swivel	Derrick operator's valve hose assembly (2)	a. Check tag for correct location, and b. Screw on, and tighten using 11/16-inch and 9/16-inch wrenches.
19. 90°swivel adapter (3)	Derrick operator's valve-to-selector valve hose assembly (4)	a. Check tag for correct location, and take off. b. Screw on, and tighten using 9/16-inch and 11/16-inch wrenches.
20. 90° swivel adapter (5)	Derrick operator's valve-to-selector valve hose assembly (2)	a. Check tag for proper location, and take off. b. Screw in, and tighten using 9/16-inch and 11/16-inch wrenches.
21. 90° swivel adapter(6)	Derrick operator's valve -to-selector valve hose assembly (4)	a. Check tag for proper location, and take off. b. Screw in, and tighten using 11/16-inch and 9/16-inch wrenches

DERRICK LEG ELEVATION HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
22. Derrick mast (7) and console (8) der hose assemblies (9) and (10)	Two selector valve-to-elevation cylin-	With help from assistant, and using fish tape, put in position.	
23. Two 900 swivel adapters (11) and (12) (9) and (10)	Two selector valve-to-elevation cylinder hose assemblies and 7/8-inch wrenches.	a. Check tag for proper location, and take off. b. Screw in, and tighten using 11116-inch	



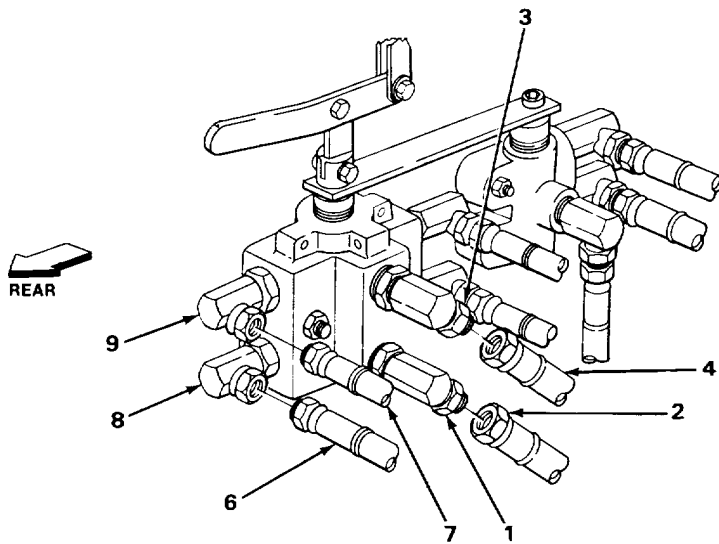
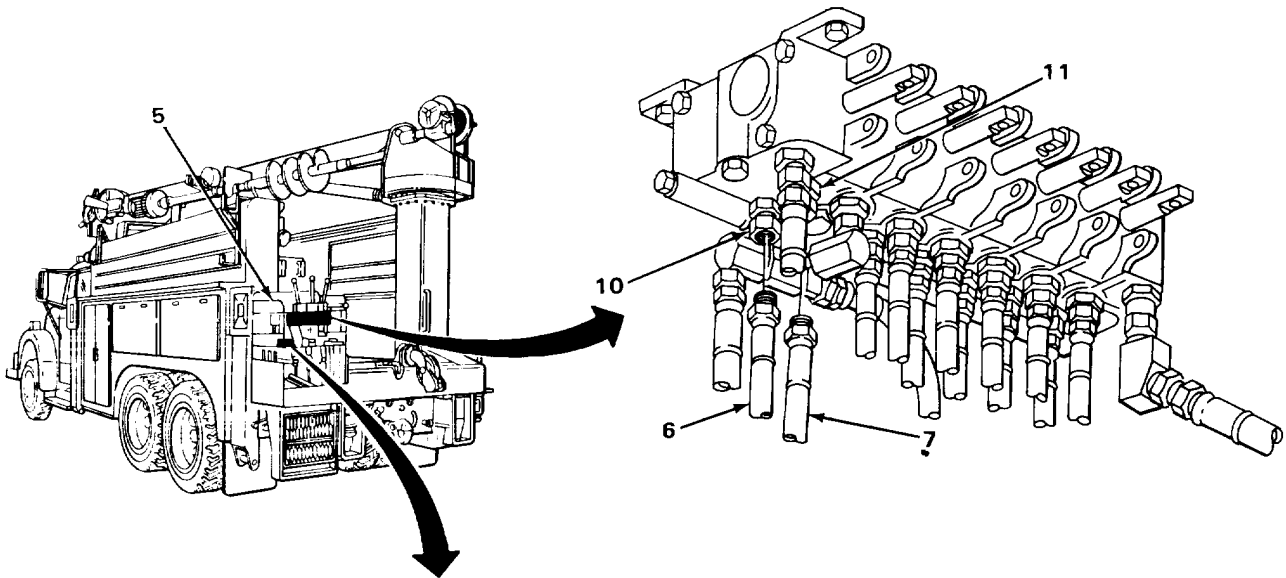
TA229216

DERRICK LEG ELEVATION HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
24.	90° swivel adapter (1)	Selector valve-to-elevation cylinder hose assembly (2)	<ul style="list-style-type: none"> a. Check tag for proper location, and take off. b. Screw on, and tighten using 11/16-inch and 7/8-inch wrenches.
25.	90° swivel adapter (3)	Selector valve-to-elevation cylinder hose assembly (4)	<ul style="list-style-type: none"> a. Check tag for proper location, and take off. b. Screw on, and tighten using 11/16-inch and 7/8-inch wrenches.
26.	Console (5)	Two valve-to-selector valve hose assemblies (6)and(7)	With help from assistant, put in position.
27.	90° swivel adapter (8)	Valve-to-selector valve hose assembly (6)	<ul style="list-style-type: none"> a. Check tag for proper location, and take off. b. Screw on, and tighten using 11/16-inch and 7/8-inch wrenches.
28.	90° swivel adapter (9)	Valve-to-selector valve hose assembly (7)	<ul style="list-style-type: none"> a. Check tag for proper location, and take off. b. Screw on, and tighten using 11/16-inch and 7/8-inch wrenches.
29.	Swivel adapter (10)	Valve-to-selector valve hose assembly (6)	<ul style="list-style-type: none"> a. Check tag for proper location, and take hose b. Screw on, and tighten using 11/16-inch and 7/8-inch wrenches.
30.	Swivel adapter (11)	Valve-to-selector valve hose assembly (7)	<ul style="list-style-type: none"> a. Check tag for proper location, and take off. b. Screw on, and tighten using 11/16-inch and 7/8-inch wrenches.

DERRICK LEG ELEVATION HYDRAULIC DRIVE LINES - CONTINUED

INSTALLATION - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE:

1. Fill with hydraulic fluid (LO 9-2320-269-12).
2. Start engine, operate auxiliary equipment (TM 9-2320-269-10), and check for leaks.
3. Install console cover (page 2-1092).

TASK ENDS HERE

DERRICK LEG EXTENSION HYDRAULIC DRIVE LINES

This task covers:

- a. Removal (page 2-986)
- b. Cleaning (page 2-989)
- c. Inspection/Replacement (page 2-989)
- d. Installation (page 2-989)

INITIAL SETUP

Tools

- Fish tape, 50-ft reel
- Pail, utility, 3-qt
- Wrench, open-end, 9/16-inch
- Wrench, open-end, 11/16-inch
- Wrench, open-end, 7/8-inch
- Wrench, open-end, 1-inch

Materials/Parts - Continued

- Solvent, drycleaning (item 28, appendix C)
- Tags, marking (item 29, appendix C)
- Tape, teflon (item 32, appendix C)

Personnel Required

Two

Materials/Parts

- Detergent, non-sudsing (item 12, appendix C)
- Rags, wiping (item 24, appendix C)

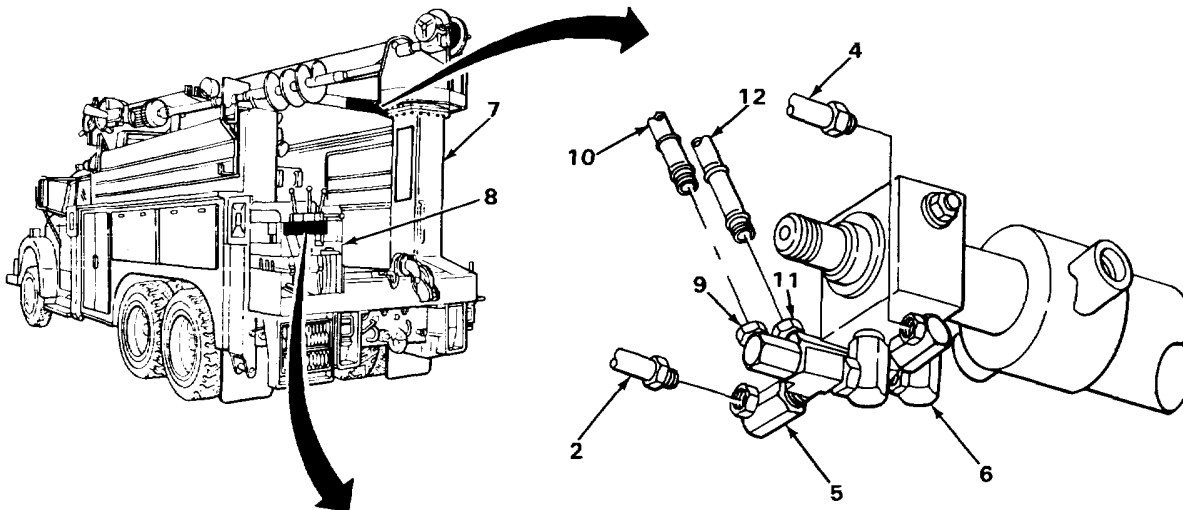
Equipment Condition

Console cover removed (page 2-1092).

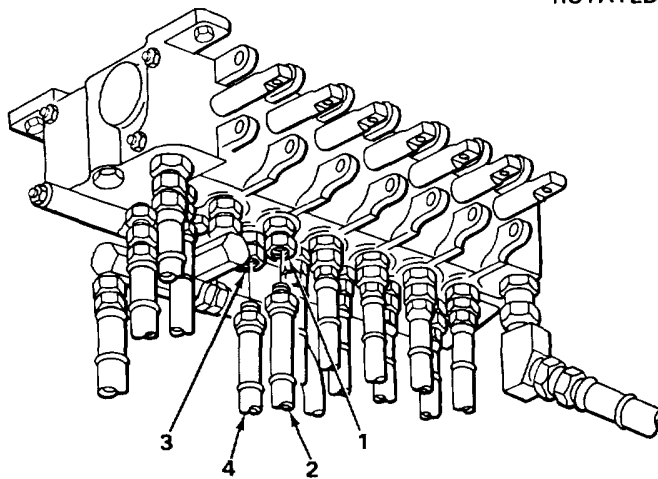
LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1.	Swivel adapter (1)	Valve-to-extension cylinder hose assembly (2)	<ul style="list-style-type: none"> a. Position pail to catch hydraulic fluid. b. Using 11/16-inch and 7/8-inch wrenches, unscrew and take off. c. Tag hose (2). d. Dispose of drained fluid.
2.	Swivel adapter (3)	Valve-to-extension cylinder hose assembly (4)	<ul style="list-style-type: none"> a. Using 11/16-inch and 7/8-inch wrenches, unscrew and take off. b. Tag hose (4).
3.	90° swivel adapter (5)	Valve-to-extension cylinder hose assembly (2)	<ul style="list-style-type: none"> a. Using 11/16-inch and 7/8-inch wrenches, unscrew and take off. b. Tag hose (2).
4.	90° swivel adapter (6)	Valve-to-extension cylinder hose assembly (4)	<ul style="list-style-type: none"> a. Using 11/16-inch and 7/8-inch wrenches, unscrew and take off. b. Tag hose (4).
5.	Derrick mast (7) and console (8)	Two valve-to-extension cylinder hose assemblies (2) and (4)	With help from assistant, take out.

DERRICK LEG EXTENSION HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
6. 45° swivel adapter (9)	Derrick operator's valve-to-extension cylinder hose assembly (10)	a. Using 9/16-inch and 11/16-inch wrenches, unscrew and take out. b. Tag hose (10).	
7. 45° swivel adapter (11)	Derrick operator's valve-to-extension cylinder hose	a. Using 9/16-inch and 11/16-inch wrenches, unscrew and take out. b. Tag hose (12).	



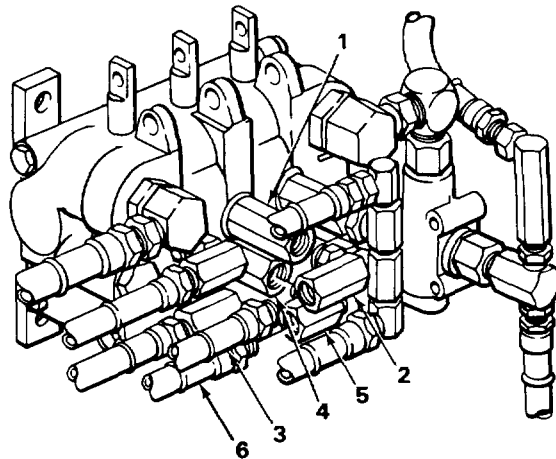
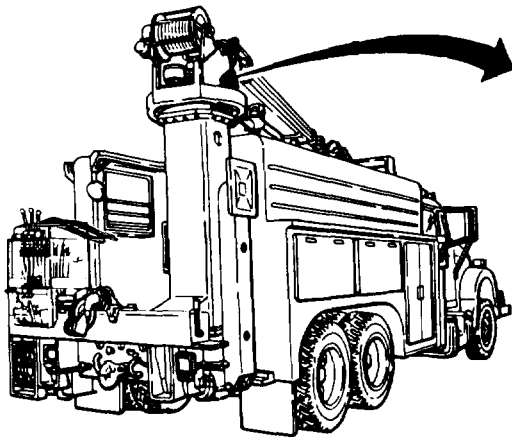
ROTATED 90°



TA229218

DERRICK LEG EXTENSION HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
8. Adapter (1)	90° swivel adapter (2) with derrick operator's valve-to-extension cylinder hose assembly (3)		Using 7/8-inch and 1-inch wrenches, unscrew and take off.
9. Derrick operator's valve-to-extension cylinder hose assembly (3)	90° swivel adapter (2)	a. Using 9/16-inch and 7/8-inch wrenches, unscrew and take off. b. Tag hose(3).	
10. Adapter (4)	90° swivel adapter (5) with derrick operator's valve-to-extension cylinder hose assembly (6)		Using 7/8-inch and 1-inch wrenches, unscrew and take off.
11. Derrick operator's valve-to-extension cylinder hose Assembly (6).	90° swivel adapter (5)	a. Using 9/16-inch and 7/8-inch wrenches, unscrew and take off. Tag hose (6).	



TA229219

DERRICK LEG EXTENSION HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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CLEANING

WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

Replace damaged or defective parts as necessary.

- | | | | |
|-----|---------------------|---|--|
| 12. | All hose assemblies | <ul style="list-style-type: none"> a. Clean in clean, soapy water. b. Rinse in clean water. c. Wipe connectors clean with clean d. Wipe dry with clean, dry rags. | |
|-----|---------------------|---|--|

INSPECTION/REPLACEMENT

NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

Replace damaged or defective parts as necessary.

- | | | | |
|-----|---------------------|--|--|
| 13. | All hose assemblies | <ul style="list-style-type: none"> a. Look for cracks, breaks, tears, and brittleness. b. Look for loose connectors. c. Look for damaged threads. | |
|-----|---------------------|--|--|

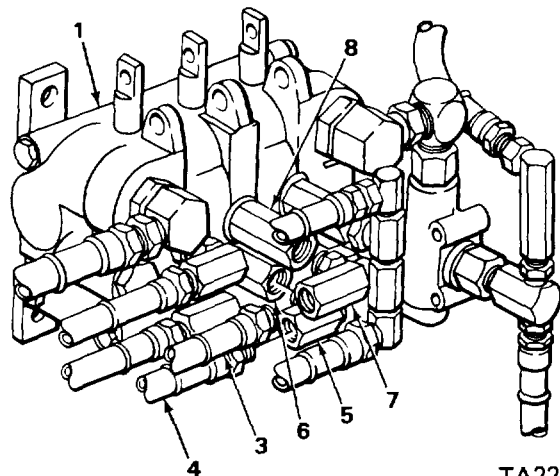
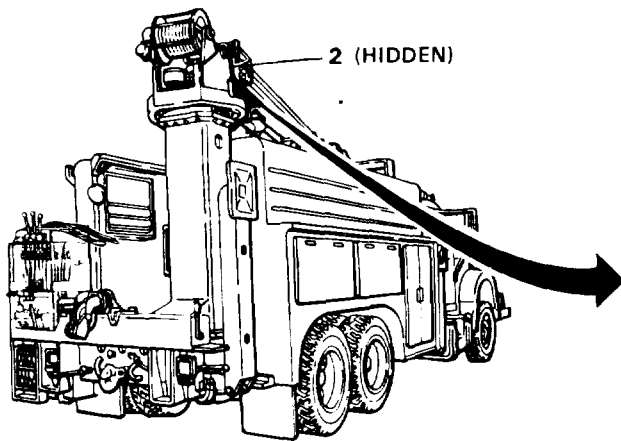
INSTALLATION

NOTE

Before installing hose assemblies, wrap all external threads with two turns of teflon tape (page 2-142).

DERRICK LEG EXTENSION HYDRAULIC DRIVE LINES - CONTINUED

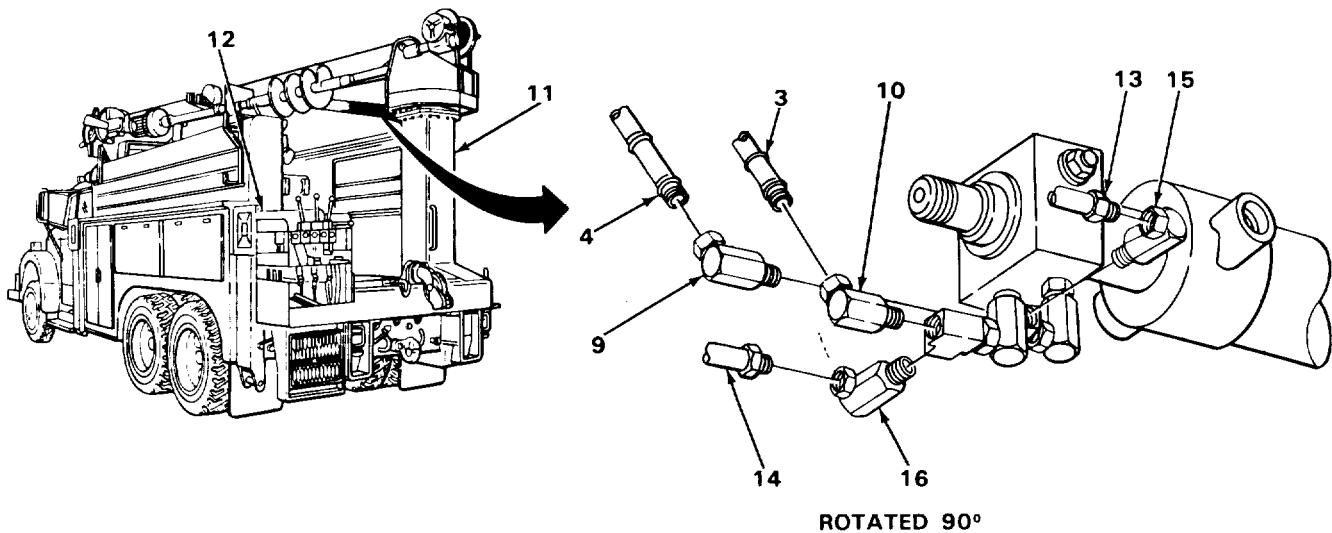
LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
14. Derrick operator's valve (1) and extension cylinder (2)	Two derrick operator's valve-to-extension cylinder hose assemblies (3) and (4)	a. Place in position. b. Check tags for proper locations.	
15. Derrick operator's valve-to-extension cylinder hose assembly (4)	90° swivel adapter (5)	a. Take tag off hose (4). b. Screw on, and tighten using 9/16-inch and 7/8-inch wrenches.	
16. Adapter (6)	90° swivel adapter (5) with derrick operator's valve-to-extension cylinder hose assembly (4)	Screw on, and tighten using 7/8-inch and 1-inch wrenches.	
17. Derrick operator's valve-to-extension cylinder hose assembly (3)	90° swivel adapter (7)	Screw on, and tighten using 9/16-inch and 7/8-inch wrenches. V	
18. Adapter (8)	90° swivel adapter (7) with derrick operator's valve-to-extension cylinder hose assembly (3).	Screw on, and tighten using 7/8-inch and 1-inch wrenches.	



TA229220

DERRICK LEG EXTENSION HYDRAULIC DRIVE LINES - CONTINUED

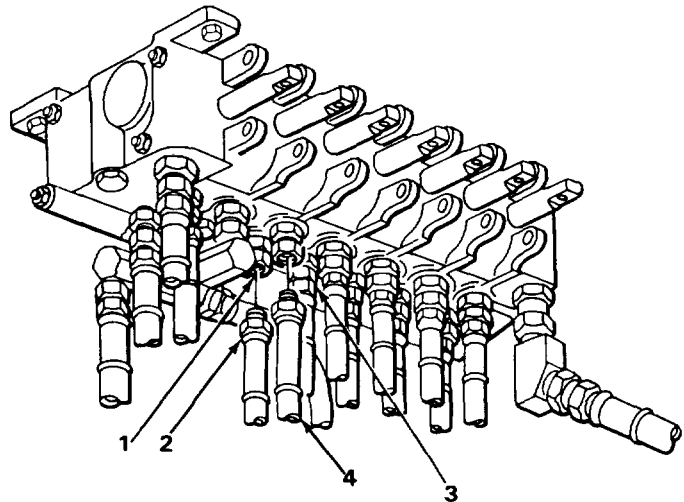
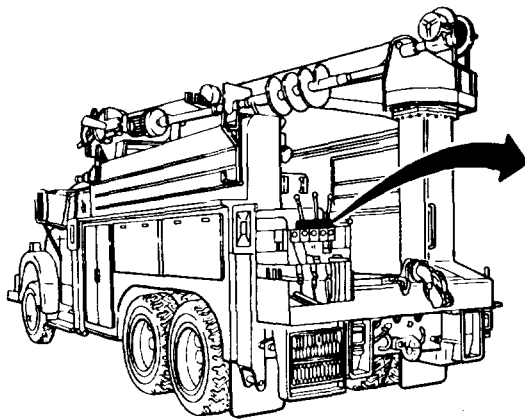
LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
19. 45° swivel adapter (9)	Derrick operator's valve-to-extension cylinder hose assembly (4)	a. Take off tag. b. Screw on, and tighten using 9/16-inch and 11/16-inch wrenches.	
20. 45° swivel adapter (10)	Derrick operator's valve-to-extension cylinder hose assembly (3)	a. Take off tag. b. Screw on, and tighten using 9/16-inch and 11/16-inch wrenches.	
21. Derrick mast (11) and console (12)	Two valve-to-extension cylinder hose assemblies (13) and (14)	With help from assistant, and using fish tape, put in position.	
22. 90° swivel adapter (15)	Valve-to-extension cylinder hose assembly (13) and 11/16-inch wrenches.	a. Check tag for proper location, and take off. b. Screw on, and tighten using 7/8-inch and 11/16-inch wrenches.	
23. 90° swivel adapter (16) assembly (14)	Valve-to-extension cylinder hose	a. Check tag for proper location, and take off. b. Screw on, and tighten using 7/8-inch and 11/16-inch wrenches.	



TA229221

DERRICK LEG EXTENSION CYLINDER DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
24. Swivel adapter (1)	Valve-to-extension cylinder hose assembly (2)	a. Check tag for proper location, and take off. b. Screw on, and tighten using 11/16-inch and 7/8-inch wrenches.	
25. Swivel adapter (3)	Valve-to-extension cylinder hose assembly (4)	a. Check tag for proper location, and take off. b. Screw on, and tighten using 11/16-inch and 7/8-inch wrenches.	



NOTE

FOLLOW-ON MAINTENANCE:

1. Fill with hydraulic fluid (LO 9-2320-269-12).
2. Operate auxiliary equipment (TM 9-2320-269-10), and check for proper operation, and leaks.
3. Install console cover (page 2-1092). . .

TASK ENDS HERE

FRONT WINCH HYDRAULIC DRIVE LINES

This task covers:

- a. Removal (page 2-993)
 - b. Cleaning (page 2-997)
 - c. Inspection/Replacement (page 2-998)
 - d. Installation (page 2-998)
-

INITIAL SETUP

Tools

- Handle, ratchet, 3/8-inch drive
- Pail, utility, 3-qt
- Socket, 3/8-inch drive, 7/16-inch
- Wrench, open-end, 7/16-inch
- Wrench, open-end, 7/8-inch
- Wrench, open-end, 1-inch (two required)
- Wrench, open-end, 1 1/16-inch
- Wrench, open-end, 1 1/8-inch
- Wrench, open-end, 1 1/4-inch
- Wrench, pipe, adjustable jaw
1-to 2-inch (two required)

Materials/Parts

- Detergent, non sudsing (item 12, appendix C)
- Lockwasher, hose clamp (two required)
- Rags, wiping (item 24, appendix C)
- Solvent, drycleaning (item 28, appendix C)
- Tags, marking (item 29, appendix C)
- Tape, teflon (item 32, appendix C)

Personnel Required

Two

Equipment Condition

- Console cover removed (page 2-1092).
 - Left side engine compartment hood
open (page 2-7).
-

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

FRONT WINCH HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
1.	90° swivel adapter (1) assembly (2)	CM2 valve-to-CM11 valve hose wrenches, unscrew and take off.	a. Position pail to catch hydraulic fluid. b. Using 1 1/16-inch and 1 1/4-inch wrenches, unscrew and take off. c. Tag hose (2). d. Dispose of drained fluid.
2.	90° swivel adapter (3)	CM2 valve-to-CM11 valve hose assembly (4)	a. Using 1 1/16-inch and 1 1/4-inch wrenches, unscrew and take off. b. Tag hose (4).
3.	90° swivel adapter (5)	CM11 valve-to-coupling hose assembly (6)	a. Using 7/8-inch and 1-inch wrenches, unscrew and take off. b. Tag hose (6).
4.	90° swivel adapter (7)	CM11 valve-to-coupling hose assembly (8)	a. Using 7/8-inch and 1-inch wrenches, unscrew and take off. b. Tag hose (8).
5.	Console (9), CM11 valve (10) and frame (11)	CM2 valve-to-CM11 valve hose assembly (4)	With help from assistant, take out.
6.	Coupling (12)	Coupling-to-front winch motor hose assembly (13)	a. Using 7/8-inch wrench and pipe wrench, unscrew and take off. b. Tag hose (13) and coupling (12).
7.	Coupling (14)	Coupling-to-front winch motor hose assembly (15)	a. Using 7/8-inch wrench and pipe wrench, unscrew and take off. b. Tag hose (15) and coupling (14).
8.	Frame (11) coupling hose assemblies (6) and (8)	Two CM11 valve-to-	Take out.
9.	Two hose clamps (16)	Screw (17), lock-washer (18), and nut (19)	a. Using 7/16-inch socket, handle and 7/16-inch wrench, unscrew and take off. b. Get rid of lockwasher (18).

FRONT WINCH HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL - CONTINUED

10. Two coupling-to-front winch motor hose assemblies (13) and (15) and support bracket (20)

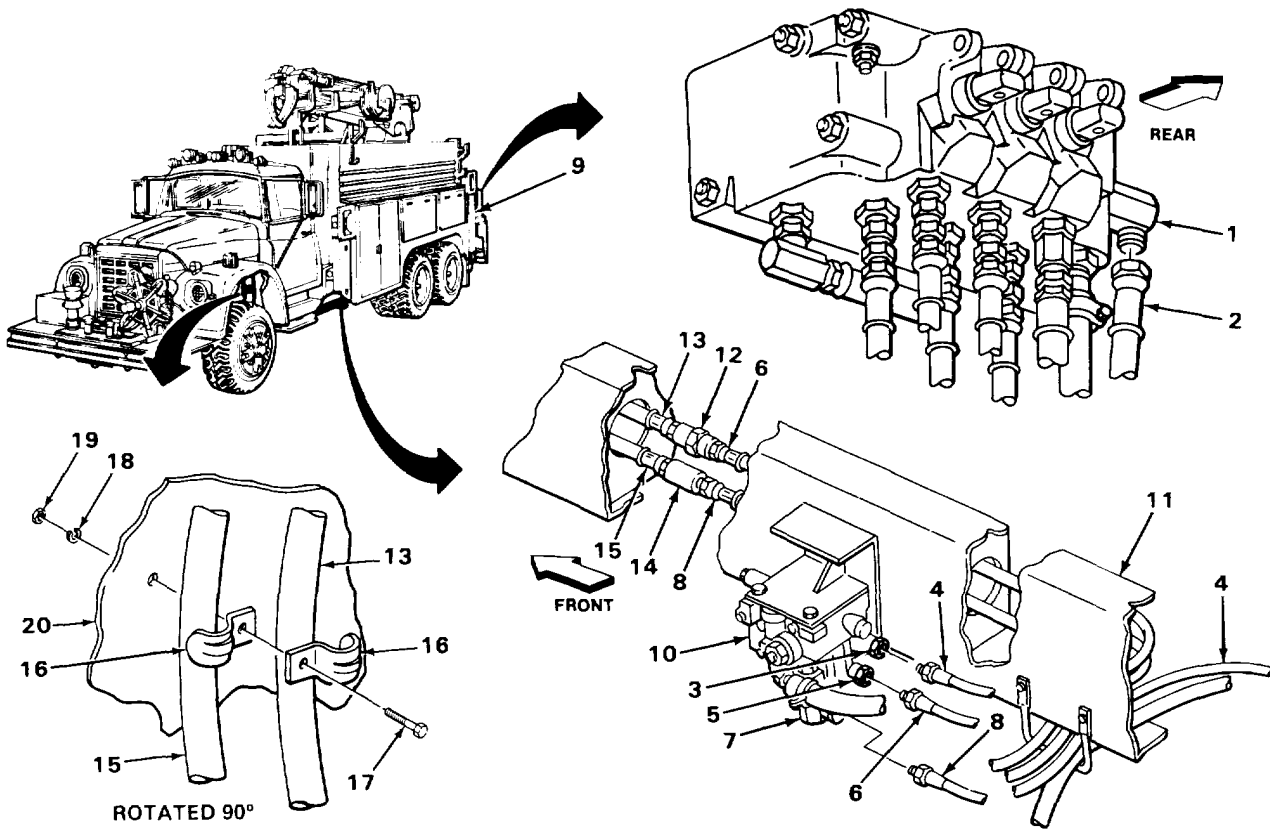
Two hose clamps (16)

Take off.

11. Support bracket (20)

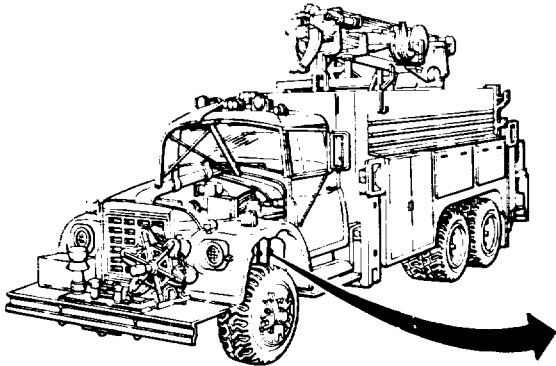
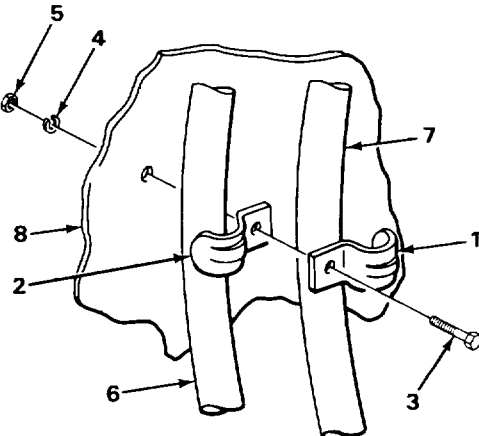
Two coupling-to-front winch motor hose assemblies

Move away from.



TA229223

FRONT WINCH HYDRAULIC DRIVE LINES - CONTINUED

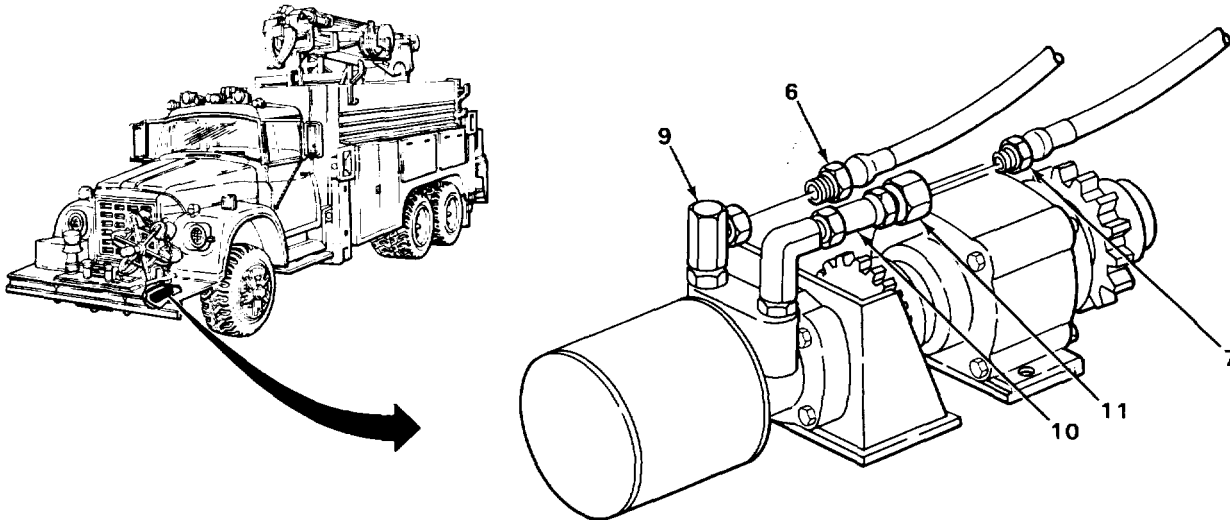
LOCATION	ITEM	ACTION	REMARKS
REMOVAL- CONTINUED			
12. Two clamps (1) and (2)	Screw (3), lock-washer (4), and nut (5)	a. Using 7/16-inch socket, handle and 7/16-inch wrench, unscrew and take off. b. Get rid of lockwasher (4).	
13. Two coupling-to-front winch motor hose assemblies (6) and (7) and firewall (8)	Two clamps (1) and (2)	Take off.	
14. Firewall (8)	Two coupling-to-front winch motor hose assemblies	Move away from.	
			
		ROTATED 90°	
15. 90° swivel adapter (9) hose assembly (6)	Coupling-to-front winch motor b. Tag hose (6).	a. Using 7/8-inch wrench and 1-inch pipe wrench, unscrew and take off.	
16. Adapter (10) nut (11)	Coupling lock-unscrew part way to loosen.	Using two 1-inch pipe wrenches,	
17. Coupling locknut (11)	Coupling-to-front winch motor hose assembly (7)	a. Using 1 1/8-inch wrench and 1-inch pipe wrench, unscrew and take off. b. Tag hose (7).	

TA229224

FRONT WINCH HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL - CONTINUED



CLEANING

WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

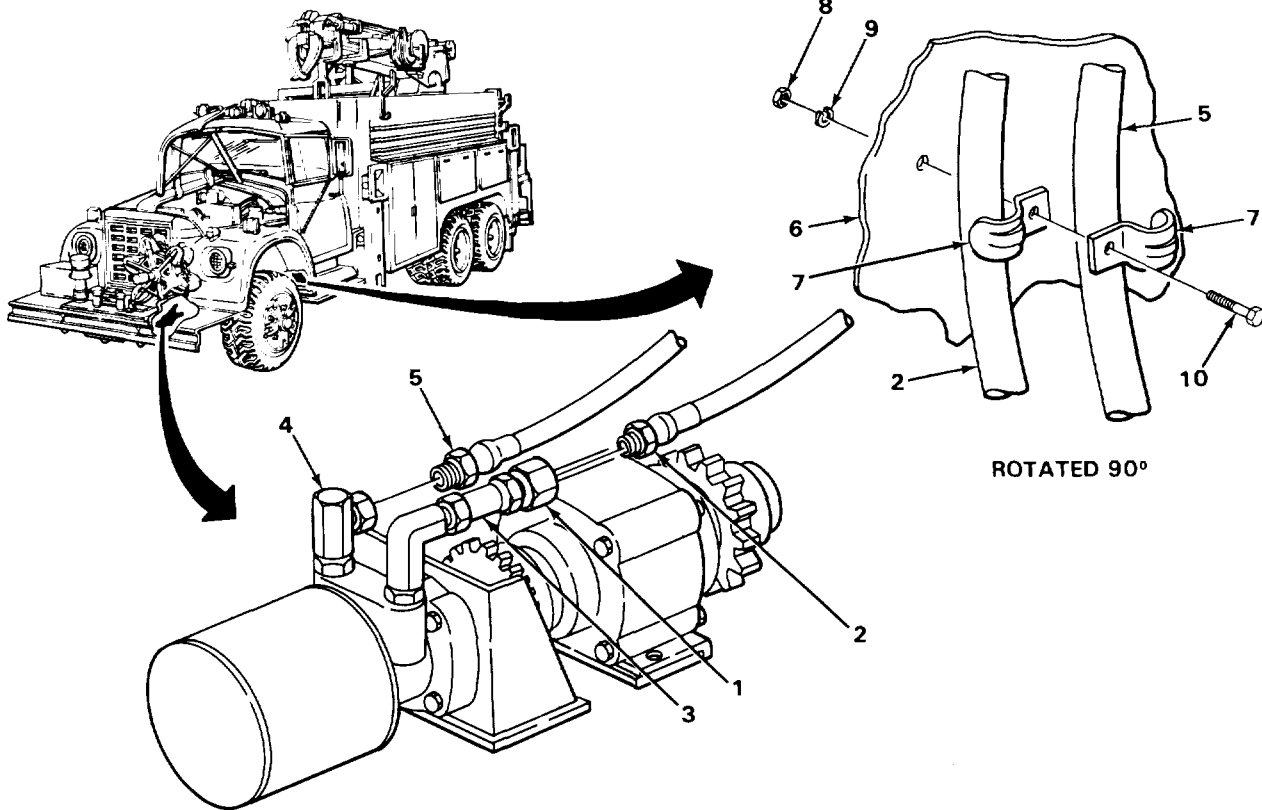
- | | | |
|------------|---------------------|---|
| 18. | All metal parts | <ul style="list-style-type: none"> a. Clean in drycleaning solvent. b. Wipe dry with clean, dry rags. |
| 19. | All hose assemblies | <ul style="list-style-type: none"> a. Clean in clean, soapy water. b. Rinse in clean water. c. Wipe connectors clean with clean rags dampened in drycleaning solvent. d. Wipe dry with clean, dry rags. |

FRONT WINCH HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSPECTION/REPLACEMENT			
NOTE			
For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).			
Replace damaged or defective parts as necessary.			
20.	All hose assemblies	<ul style="list-style-type: none"> a. Look for cracks, breaks, tears, and brittleness. b. Look for loose connectors. c. Look for damaged threads. 	
INSTALLATION			
NOTE			
Before installing hose assemblies, wrap all clean, external threads with two turns of teflon tape (page 2-142).			
21. Coupling locknut (1)	Coupling-to-front winch motor hose assembly (2)	<ul style="list-style-type: none"> a. Check tag for proper location, and take off. b. Screw on, and tighten using 1-inch and 1 1/8-inch wrenches. 	
22. Adapter (3)	Coupling locknut (1)	Tighten using two 1-inch pipe wrenches.	
23. 90° swivel adapter (4)	Coupling-to-front winch motor hose assembly (5)	<ul style="list-style-type: none"> a. Check tag for proper location, and take off. b. Screw on, and tighten using 1-inch pipe wrench and 7/8-inch wrench. 	

FRONT WINCH HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
24. Firewall (6)	Two coupling-to-front winch motor hose assemblies (2) and (5)	Place in position.	
25. Two coupling-to-front winch motor hose assemblies (2) and (5) and firewall (6)	Two clamps (7)	Put in place.	
26. Two clamps (7)	Nut (8), new lock-washer (9), and washer (, and screw (10)	Screw in, and tighten using 7/16-inch socket, handle, and 7/16-inch wrench.	



TA229226

FRONT WINCH HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
27.	Support bracket (1)	Two coupling-to-front winch motor hose assemblies (2) and (3)	Place in position.
28.	Two coupling-to-front winch motor hose assemblies (2) and (3) and support bracket (1)	Two hose clamps (4)	Put in place.
29.	Two hose clamps (4)	Screw (5), new lockwasher (6), and nut (7)	Screw in, and tighten using 7/16-inch socket, handle, and 7/16-inch wrench.
30.	Frame (8)	Two coupling-to-front winch motor hose assemblies (2) and (3) and two CM11 valve-to-coupling hose assemblies (9) and (10)	Feed through, and put in position.
31.	Coupling (11)	Coupling-to-front winch motor hose assembly (2) wrench and pipe wrench.	a. Check tag for proper location, and take off. b. Screw on, and tighten using 7/8-inch
32.	Coupling (12)	Coupling-to-front winch motor hose assembly (3)	a. Check tag for proper location, and take off. b. Screw on, and tighten using 7/8-inch wrench and pipe wrench.
33.	CM11 valve (13) console (14) and frame (8)	CM2 valve-to-CM11 valve hose assembly (15)	a. Check tags for proper locations. b. With help from assistant, place in position.

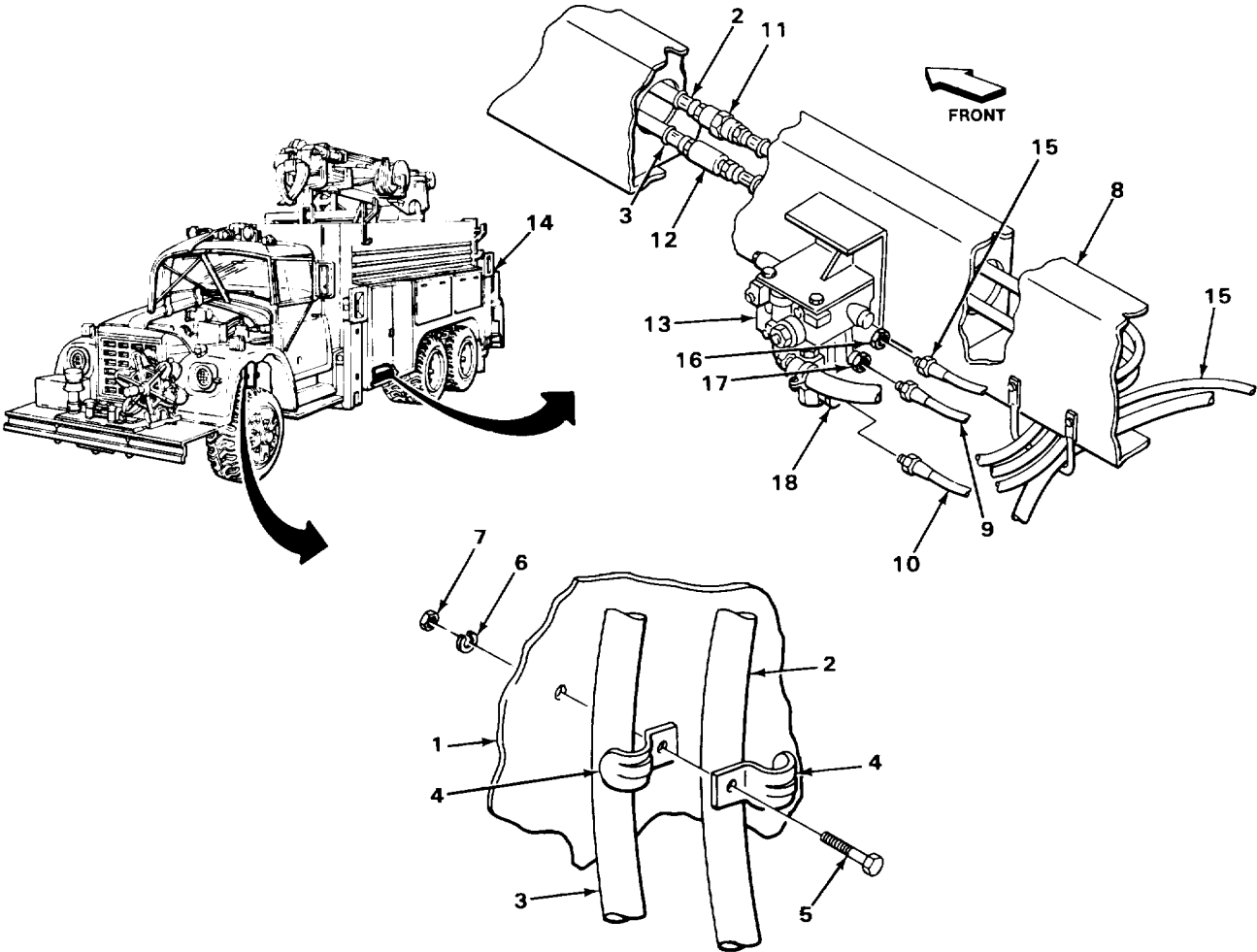
FRONT WINCH HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION - CONTINUED

- 34. 90° swivel adapter (16)
CM2 valve-to-CM11 valve hose assembly (15)
 - a. Take off tag.
 - b. Screw on, and tighten using 1 1/16-inch and 1 1/4-inch wrenches.

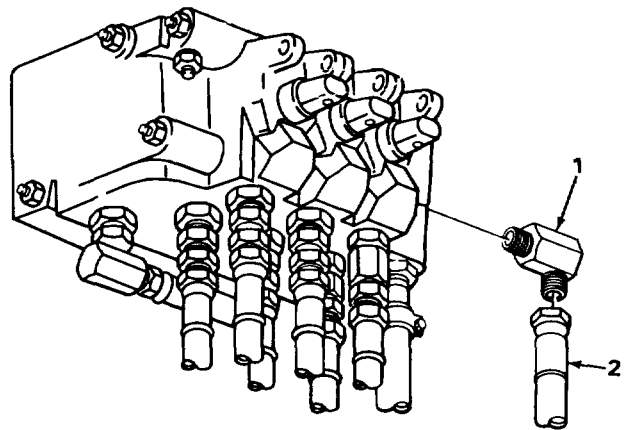
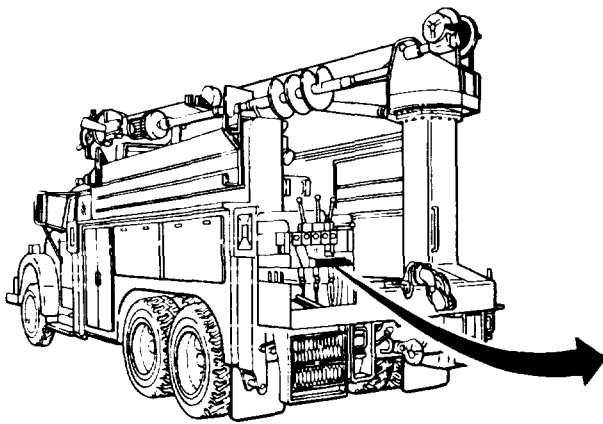
- 35. Two 90° swivel adapters (17) and (18)
Two CM1 1 valve-to-coupling hose assemblies (9) and (10)
 - a. Check tags for proper location, and take off.
 - b. Screw on, and tighten using 1-inch pipe wrench and 7/8-inch wrench.



LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION - CONTINUED

36. 900 swivel adapter (1)	CM2 valve-to-CM11 valve hose assembly (2)	a. Check tag for proper location, and take off. b. Screw on, and tighten using 1 1116-	
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NOTE

FOLLOW-ON MAINTENANCE:

1. Fill with hydraulic fluid (LO 9-2320-269-12).
2. Start engine, operate auxiliary equipment (TM 9-2320-269-10), and check for leaks.
3. Close left side engine compartment hood (page 2-7).
4. Install console cover (page 2-1092).

TASK ENDS HERE

TA229228

LEFT OUTRIGGERS HYDRAULIC DRIVE LINES

This task covers:

- a. Removal (page 2-1003)
 - b. Cleaning (page 2-1008)
 - c. Inspection/Replacement (page 2-1008)
 - d. Installation (page 2-1009)
-

INITIAL SETUP:

Tools

- Fish tape, 50-ft reel
- Handle, ratchet, 3/8-inch drive
- Pail, utility, 6-qt
- Socket, 3/8-inch drive, 7/16-inch
- Wrench, open-end, 9/16-inch
- Wrench, open-end, 11/16-inch
- Wrench, open-end, 7/8-inch
- Wrench, open-end, 1-inch

Materials/Parts

- Detergent, non-sudsing (item 12, appendix C)
- Rags, wiping (item 24 appendix C)

Materials/Parts - Continued

- Solvent, drycleaning (item 28, appendix C)
- Tags, marking (item 29, appendix C)
- Tape, teflon (item 32, appendix C)

Personnel Required

Two

Equipment Condition

Console cover removed (page 2-1092).
Hydraulic tank shutoff valve off (TM 9-2320-269-10).

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

LEFT OUTRIGGERS HYDRAULIC DRIVE LINES - CONTINUED

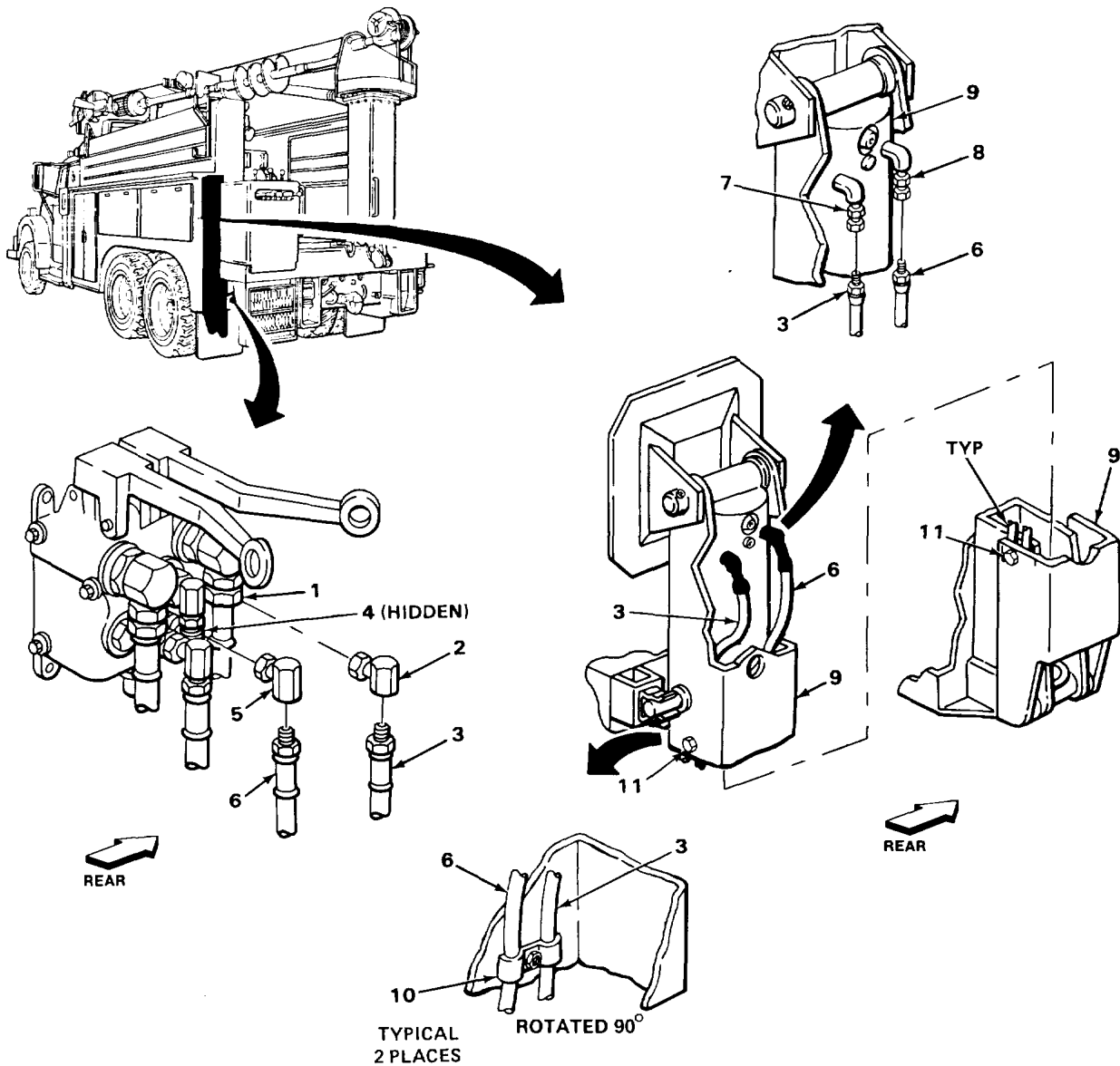
LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED		
1. Adapter (1)	Swivel adapter (2)	<ol style="list-style-type: none"> Place pail underneath to catch draining fluid. Using 1-inch and 7/8-inch wrenches, unscrew and take off. Dispose of drained fluid.
2. Swivel adapter (2)	Outrigger control valve-to-left rear outrigger hose assembly (3)	<ol style="list-style-type: none"> Using 9/16-inch and 11/16-inch wrenches, unscrew and take off. Tag hose (3).
3. Adapter (4)	Swivel adapter (5)	Using 1-inch and 7/8-inch wrenches, unscrew and take off.
4. 900 swivel adapter (5)	Outrigger control valve-to-left rear outrigger hose assembly (6)	<ol style="list-style-type: none"> Using 9/16-inch and 11/16-inch wrenches, unscrew and take off. Tag hose (6).
5. Swivel adapter (7)	Outrigger control valve-to-left rear outrigger hose assembly (3)	<ol style="list-style-type: none"> Using 9/16-inch and 11/16-inch wrenches, unscrew and take off. Tag hose (3).
6. Swivel adapter (8)	Outrigger control valve-to-left rear outrigger hose assembly (6)	<ol style="list-style-type: none"> Using 9/16-inch and 11/16-inch wrenches, unscrew and take off. Tag hose (6)
7. Outrigger link (9) and two hose clamps (10)	Two screws (11)	Using 7/16-inch socket and handle, unscrew part way until hoses (3) and (6) can be pulled free.

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL - CONTINUED

8. Outrigger link (9)
- Two outrigger control valve-to-left rear outrigger hose assemblies (3) and (6)

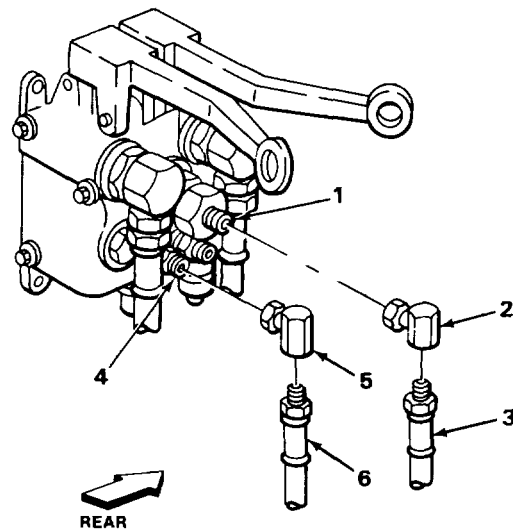
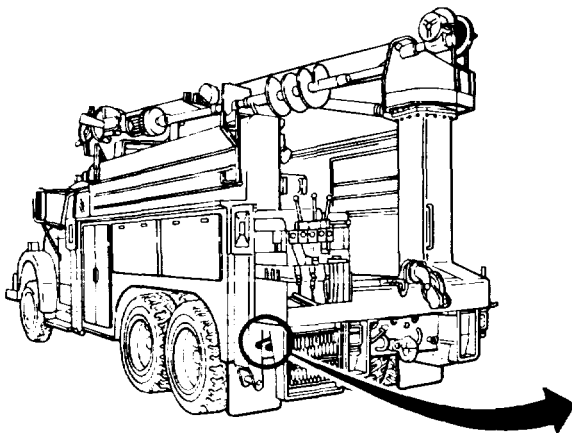
Pull out.



TA229229

LEFT OUTRIGGERS HYDRAULIC DRIVE LINES - CONTINUED

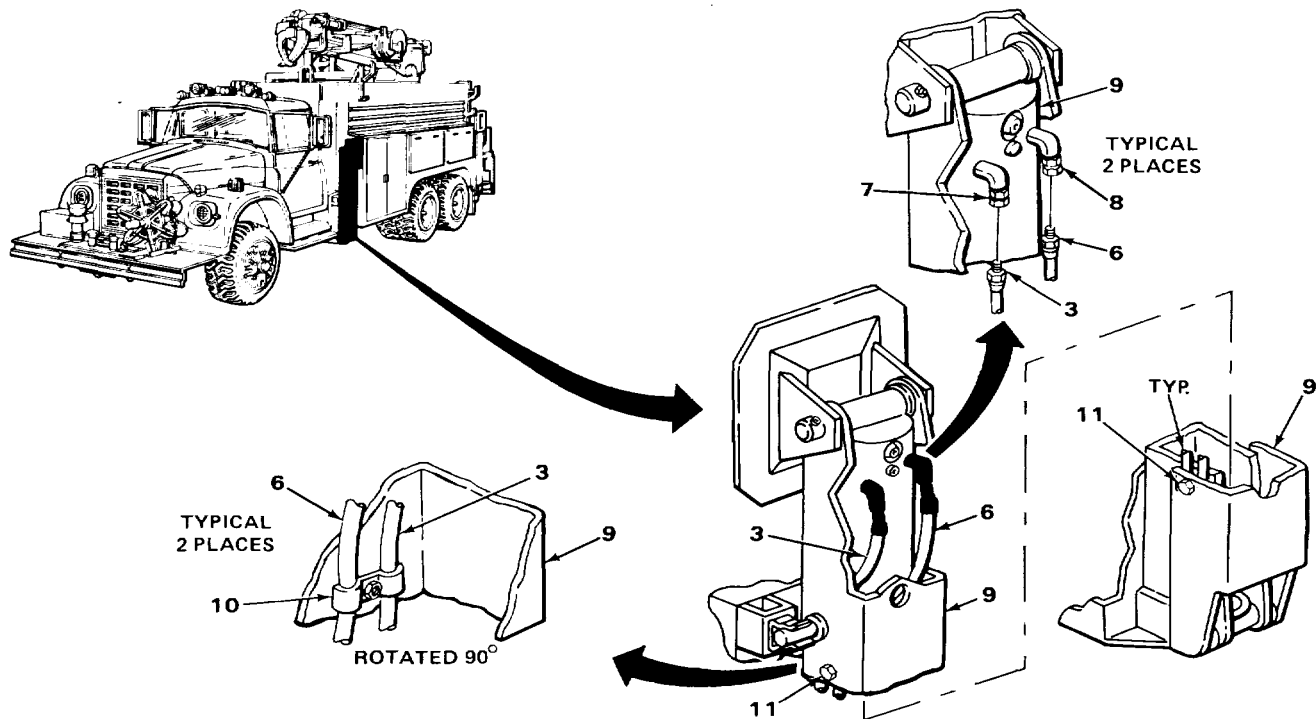
LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
9.	Adapter (1)	900 swivel adapter (2)	Using 1-inch and 7/8-inch wrenches, unscrew and take off.
10.	900 swivel adapter (2)	Outrigger control valve-to-left front outrigger hose assembly (3)	a. Using 9/16-inch and 11/16-inch wrenches, unscrew and take off. b. Tag hose (3).
11.	Adapter (4)	900 swivel adapter (5)	Using 1-inch and 7/8-inch wrenches, unscrew and take off.
12.	90° swivel adapter (5)	Outrigger control valve-to-left front outrigger hose assembly (6)	a. Using 9/16-inch and 11/16-inch wrenches, unscrew and take off. b. Tag hose(6).



TA229230

LEFT OUTRIGGERS HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
13.	Swivel adapter (7) Outrigger control valve-to-left front outrigger hose assembly (3)	a. Using 9/16-inch and 11/16-inch wrenches, unscrew and take off. b. Tag hose(3).	
14.	Swivel adapter (8) Outrigger control valve-to-left front outrigger hose assembly (6)	a. Using 9/16-inch and 11/16-inch wrenches, unscrew and take off. b. Tag hose (6).	
15.	Outrigger link (9) Two screws (11) and two hose clamps (10)	Using 7/16-inch socket and handle, unscrew part way until hoses (3) and (6) can be pulled free.	
16.	Outrigger link (9) Two outrigger control valve-to-left front outrigger hose assemblies (3) and (6)	Pull out.	



TA229231

LEFT OUTRIGGERS HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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CLEANING

WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

- | | | | |
|-----|---------------------|---|--|
| 17. | All metal parts | a. Clean in drycleaning solvent.
b. Wipe dry with clean, dry rags. | |
| 18. | All hose assemblies | a. Clean in clean, soapy water.
b. Rinse in clean water.
c. Wipe connectors clean with clean rags dampened in drycleaning solvent.
d. Wipe dry with clean, dry rags. | |

INSPECTION/REPLACEMENT

NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

Replace damaged or defective parts as necessary.

- | | | | |
|-----|---------------------|--|--|
| 19. | All hose assemblies | a. Look for cracks, breaks, tears, and brittleness.
b. Look for loose connectors. | |
|-----|---------------------|--|--|

LEFT OUTRIGGERS HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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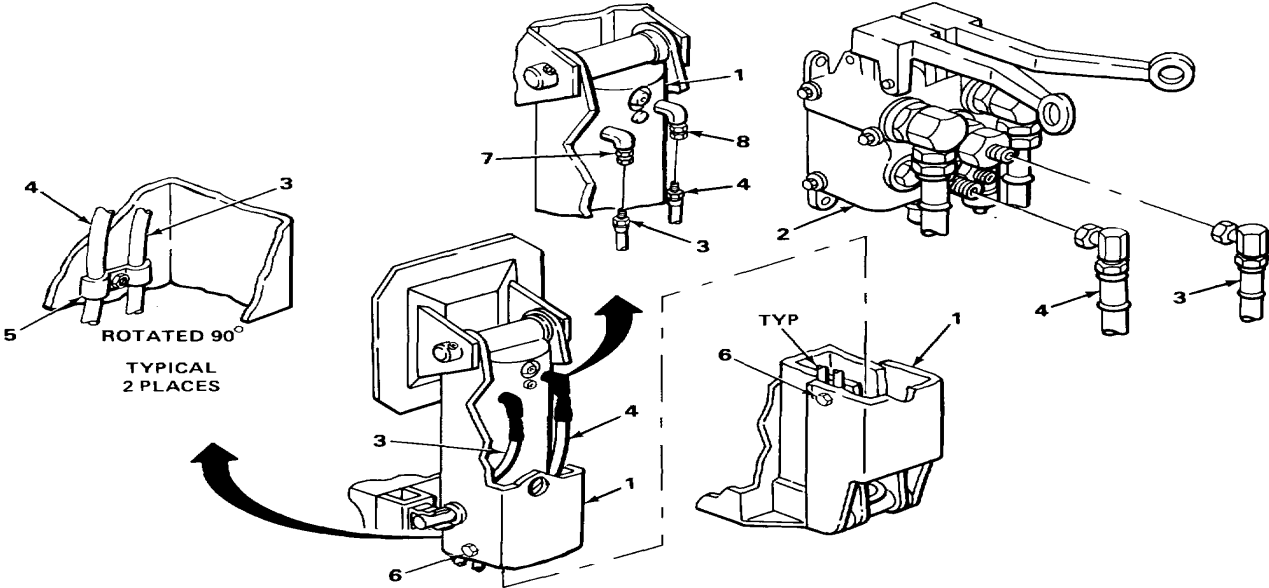
INSTALLATION

NOTE

Before installing hose assemblies wrap all external threads with two turns of teflon tape (page 2-142).

- | | | |
|--|--|---|
| 20. Outrigger link (1) and outrigger control valve (2) | Two outrigger control valve-to-left front hose assemblies (3) and (4) | a. Check all tags for correct locations.
b. With help from an assistant, and using fish tape, put in position. |
| 21. Outrigger link (1) and two hose clamps (5) | Two screws (6)

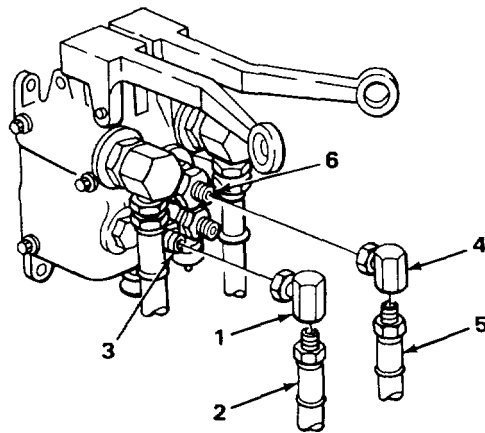
screw in, and tighten using 7/16-inch socket and handle. | a. Take off tags.
b. With hoses (3) and (4) positioned at adapters (7) and (8) and clamps (5), |
| 22 Two swivel adapters (7) and (8) | Two outrigger control valve-to-left front hose assemblies (3) and (4) | a. Take off tags.
b. Screw on, and tighten using 9/16-inch |



TA229232

LEFT OUTRIGGERS HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
23. 90° swivel adapter (1)	Outrigger Control valve-to-left front outrigger hose assembly (2)	a. Check tag for proper location. b. Screw on, and tighten using 9/16-inch and 11/16-inch wrenches.	
24. Adapter (3)	900 swivel adapter (1) with hose assembly (2)	Screw on, and tighten using 1-inch and 7/8-inch wrenches.	
25. 900 swivel adapter (4)	Outrigger control valve-to-left front outrigger hose assembly (5)	a. Check tag for proper location. b. Screw on, and tighten using 9/16-inch and 11/16-inch wrenches.	
26. Adapter (6)	Swivel adapter (4) with hose assembly (5)	Screw on, and tighten using 1-inch and 7/8-inch wrenches.	

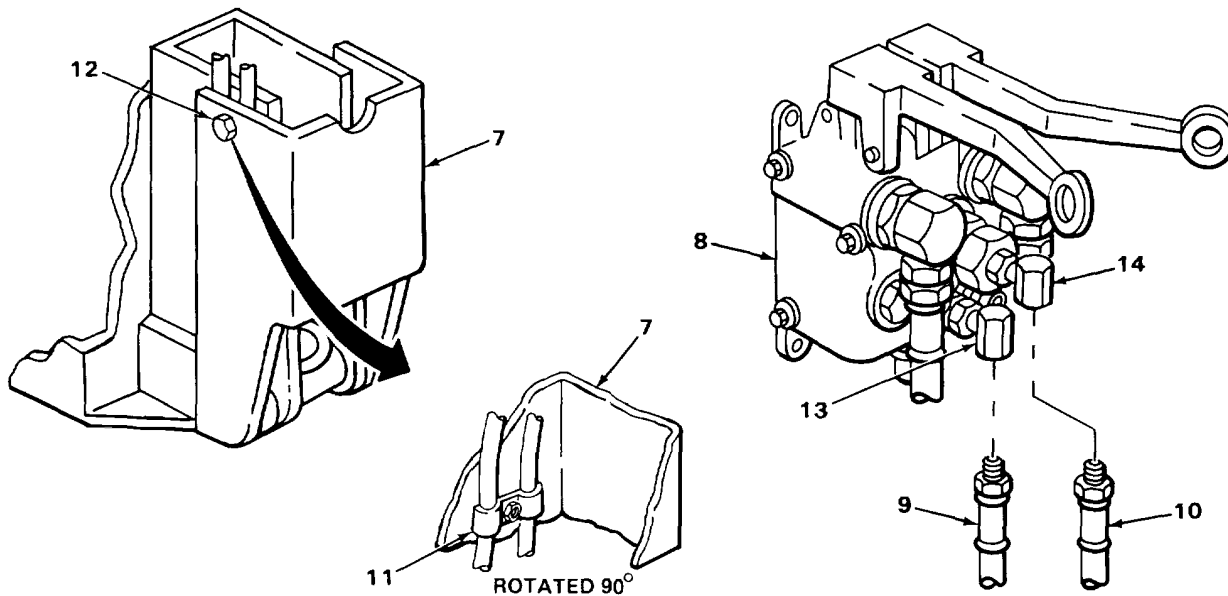


27. Outrigger link (7) and outrigger control valve (8)	Two outrigger control valve-to-left rear outrigger hose assemblies (9) and (10)	a. Check all tags for correct location. b. With help from assistant, and using fish tape, put in position.	
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TA229233

LEFT OUTRIGGERS HYDRAULIC DRIVE LINES - CONTINUED

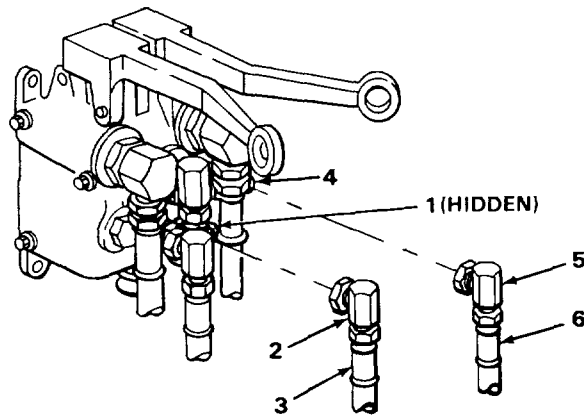
LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
28. Outrigger link (7) and two clamps (11)	Two screws (12)		With hoses (9) and (10) positioned at adapters (13) and (14) and clamps (11), screw in, and tighten using 7/16-inch socket and handle.
29. 900 swivel adapter (13)	Outrigger control valve-to-left rear outrigger hose assembly (9)	a. Take off tag. b. Screw on, and tighten using 9/16-inch and 11/16-inch wrenches.	
30. 900 swivel adapter (14)	Outrigger control valve-to-left rear outrigger hose assembly (10)	a. Take off tag. b. Screw on, and tighten using 9/16-inch and 11/16-inch wrenches.	



TA229234

LEFT OUTRIGGERS HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
31. Adapter (1)	900 swivel adapter (2) with hose assembly (3)	Screw on, and tighten using 1-inch and 7/8-inch wrenches.	
32. Adapter (4)	900 swivel adapter (5) with hose assembly (6)	Screw on, and tighten using 1-inch and 7/8-inch wrenches.	



NOTE

FOLLOW-ON MAINTENANCE:

1. Fill with hydraulic fluid (LO 9-232-269-12).
2. Turn on hydraulic shutoff valve (TM 9-23320-269-10).
3. Start engine, operate auxiliary equipment (TM 9-2320-269-10), and check for leaks.
4. Install console cover (page 2-1092).

TASK ENDS HERE

TA229235

RIGHT OUTRIGGERS HYDRAULIC DRIVE LINES

This task covers:

- | | |
|---|--|
| <ul style="list-style-type: none"> a. Removal (page 2-1013) b. Cleaning (page 2-1018) | <ul style="list-style-type: none"> c. Inspection/Replacement (page 2-1018) d. Installation (page 2-1018) |
|---|--|

INITIAL SETUP:

Tools

- Fish tape, 50-ft reel
- Handle, ratchet, 3/8-inch drive
- Pail, utility, 6-qt
- Socket, 3/8-inch drive, 7/16-inch
- Wrench, open-end, 9/16-inch
- Wrench, open-end, 11/16-inch
- Wrench, open-end, 7/8-inch
- Wrench, open-end, 1-inch

Materials/Parts

- Detergent, non-sudsing (item 12, appendix C)
- Rags, wiping (item 24, appendix C)

Materials/Parts - Continued

- Solvent, drycleaning (item 28, appendix C)
- Tags, marking (item 29, appendix C)
- Tape, teflon (item 32, appendix C)

Personnel Required

Two

Equipment Condition

Console cover removed (page 2-1092).
Hydraulic tank shutoff valve off (TM 9-2320-269-10).

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

RIGHT OUTRIGGERS HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED		
1. Adapter~)	Swivel adpter (2)	a. Place pail underneath to catch draining b. Using 1-inch and 7/8-inch wrenches, unscrew and take off. c. Dispose of drained fluid.
2. Swivel adapter (2)	Outrigger control valve-to-right rear outrigger	a. Using 9/16-inch and 11/16-inch wrenches, unscrew and take off. b. Tag hose (3). hose assembly (3)
3. Adapter (4)	Swivel adapter (5)	Using 1-inch and 7/8-inch wrenches, unscrew and take off.
4. Swivel adapter (5)	Outrigger control valve-to-right rear outrigger hose assembly (6)	a. Using 9/16-inch and 11/16-inch wrenches, unscrew and take off. b. Tag hose (6).
5. 900 swivel adapter (7)	Outrigger control valve-to-right rear outrigger hose assembly (3)	a. Using 9/16-inch and 11/16-inch wrenches, unscrew and take off. b. Tag hose (3).
6. 900 swivel adapter (8)	Outrigger control valve-to-right rear outrigger hose assembly (6)	a. Using 9/16-inch and 11/16-inch wrenches, unscrew and take off. b. Tag hose (6).
7. Outrigger link (9) and two hose clamps (10)	Two screws (11)	Using 7/16-inch socket and handle, unscrew part-way until hoses (3) and (6) can be pulled free.

RIGHT OUTRIGGERS HYDRAULIC DRIVE LINES - CONTINUED

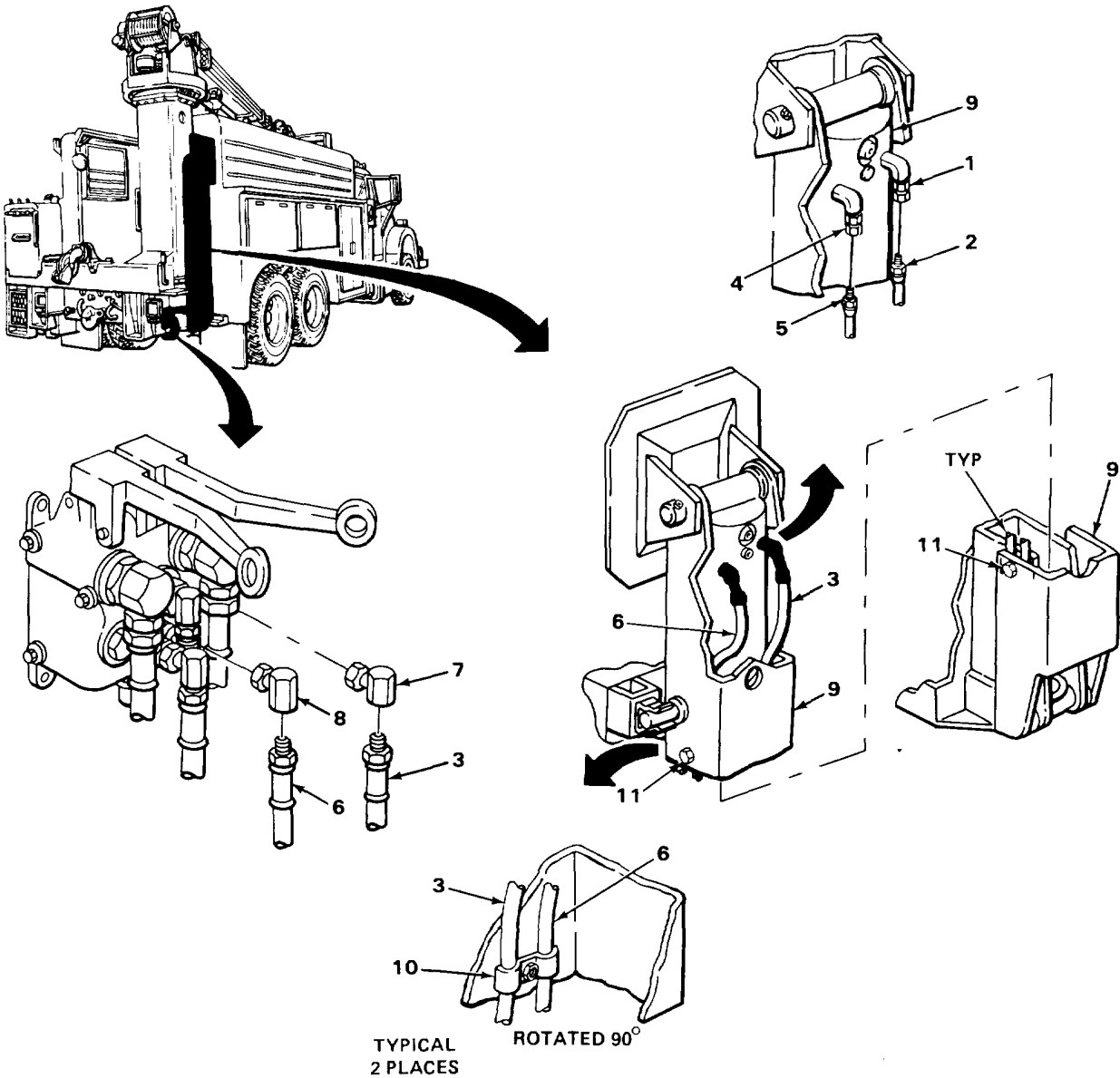
LOCATION	ITEM	ACTION	REMARKS
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REMOVAL - CONTINUED

8. Outrigger link (9)

Two outrigger - control valve-to-right rear outrigger hose assemblies (3) and (6)

Pull out.



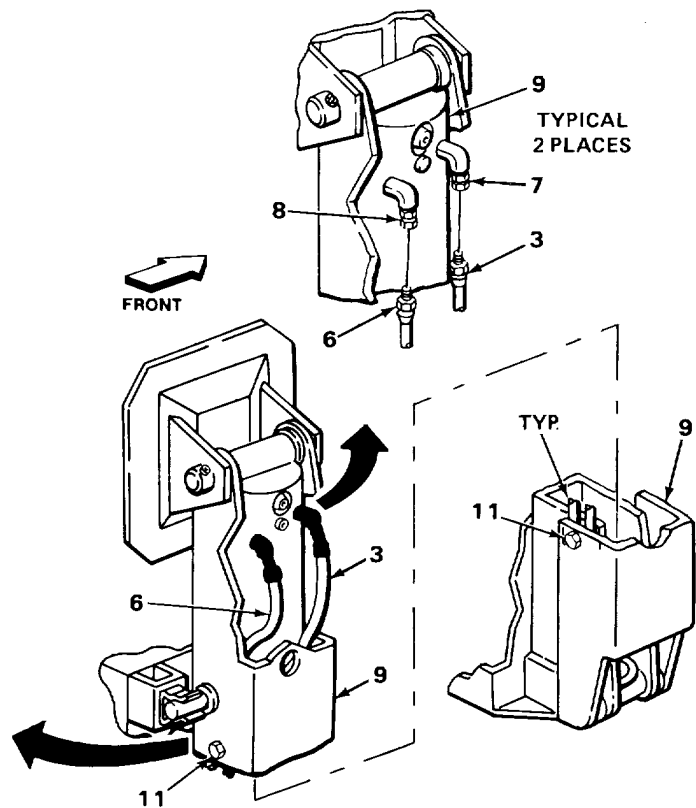
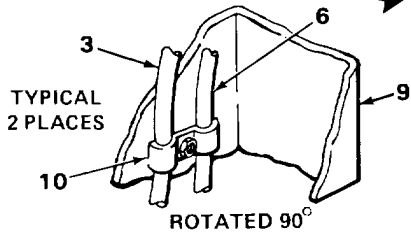
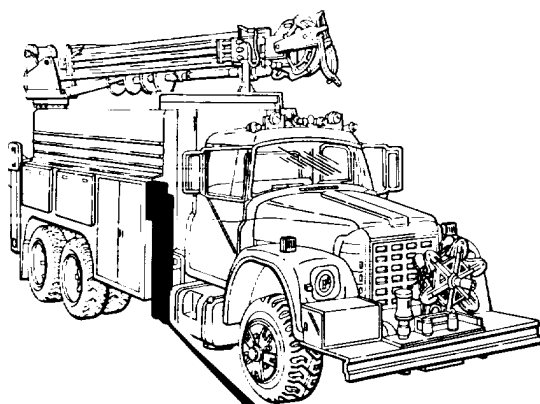
RIGHT OUTRIGGERS HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
9.	Adapter (1)	900 swivel adapter (2)	Using 1-inch and 7/8-inch wrenches, unscrew and take off.
10.	900 swivel adapter (2)	Outrigger control valve-to-right front outrigger hose assembly (3)	a. Using 9/16-inch and 11/16-inch wrenches, unscrew and take off. b. Tag hose (3).
11.	Adapter(4)	Swivel adapter (5)	Using 1-inch and 7/8-inch wrenches,
12.	900 swivel adapter (5)	Outrigger control valve-to-right front outrigger	a. Using 7/8-inch and 9/16-inch wrenches, unscrew and take off. b. Tag hose (6).
13.	Swivel adapter (7)	Outrigger control valve-to-right front outrigger hose assembly (3)	a. Using 9/16-inch and 11/16-inch wrenches, unscrew and take off. b. Tag hose(3).

TA229237

RIGHT OUTRIGGERS HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
14. Swivel adapter (8)	Outrigger control valve-to-right Front outrigger hose assembly (6)	a. Using 9/16-inch and 11/16-inch wrenches, unscrew and take off. b. Tag hose (6).	
15. Outrigger link (9) and two hose clamps (10)	Two screws (11)	Using 7/16-inch socket and handle, unscrew part-way until hoses (3) and (6) can be pulled free.	
16. Outrigger link (9)	Two outrigger control valve-to-right front outrigger hose assemblies (3) and (6)	Pull out.	



TA229238

RIGHT OUTRIGGERS HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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CLEANING

WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

- | | | | |
|-----|---------------------|---|--|
| 17. | All metal parts | <ul style="list-style-type: none"> a. Clean in drycleaning solvent. b. Wipe dry with clean, dry rags. | |
| 18. | All hose assemblies | <ul style="list-style-type: none"> a. Clean in clean, soapy water. b. Rinse in clean water. c. Wipe connectors clean with clean rags dampened in drycleaning solvent. d. Wipe dry with clean, dry rags. | |

INSPECTION/REPLACEMENT

NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

- | | | | |
|-----|---------------------|--|--|
| 19. | All hose assemblies | <ul style="list-style-type: none"> a. Look for cracks, breaks, tears, and brittleness. b. Look for loose connectors. c. Look for damaged threads. | |
|-----|---------------------|--|--|

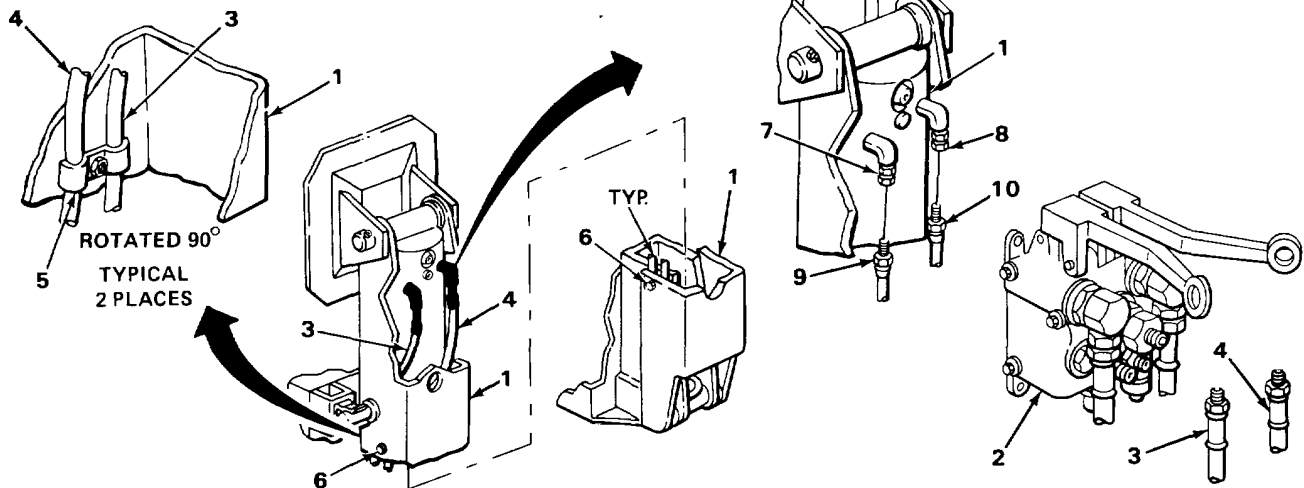
INSTALLATION

NOTE

Before installing hose assemblies, wrap all external threads with two turns of teflon tape (page 2-142).

RIGHT OUTRIGGERS HYDRAULIC DRIVE LINES - CONTINUED

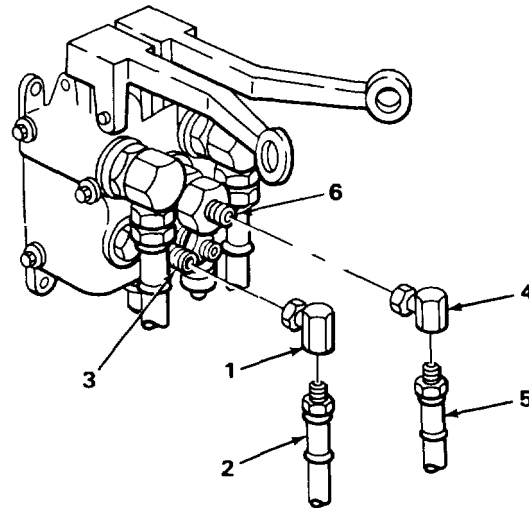
LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
20.	Outrigger link (1) and outrigger control valve (2)	Two outrigger control valve-to-right front hose assemblies (3) and (4)	a. Check all tags for correct locations. b. With help from assistant, and using fish tape, put in position.
21.	Outrigger link (1) and two hose clamps (5)	Two screws (6)	a. Take off tags. b. With hoses (3) and (4) positioned at adapters (7) and (8) and clamps (5), screw in, and tighten using 7/16-inch socket and handle.
22.	Two adapters (7) and (8)	Two swivel adapters (9) and (10)	Screw in, and tighten using 9/16-inch and 11/16-inch open-end wrenches.
23.	Two swivel adapters (7) and (8)	Two outrigger control valve-to-right front hose assemblies (3) and (4)	a. Take off tags. b. Screw on, and tighten using 9/16-inch and 11/16-inch wrenches.



TA229239

RIGHT OUTRIGGERS HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
24.	900 swivel adapter (1) Outrigger control valve-to-right front outrigger hose assembly (2)	a. Check tag for proper location. b. Screw on, and tighten using 9/16-inch and 11/16-inch wrenches.	
25.	Adapter (3) 90° swivel adapter (1) with hose assembly (2)	Screw on, and tighten using 1-inch and 7/8-inch wrenches.	
26.	90° swivel adapter (4) Outrigger control valve-to-right front outrigger hose assembly (5)	a. Check tag for proper location. b. Screw on, and tighten using 9/16-inch and 11/16-inch wrenches.	
27.	Adapter (6) 900 swivel adapter (4) with hose Assembly (5)	Screw on, and tighten using 1-inch and 7/8-inch wrenches.	

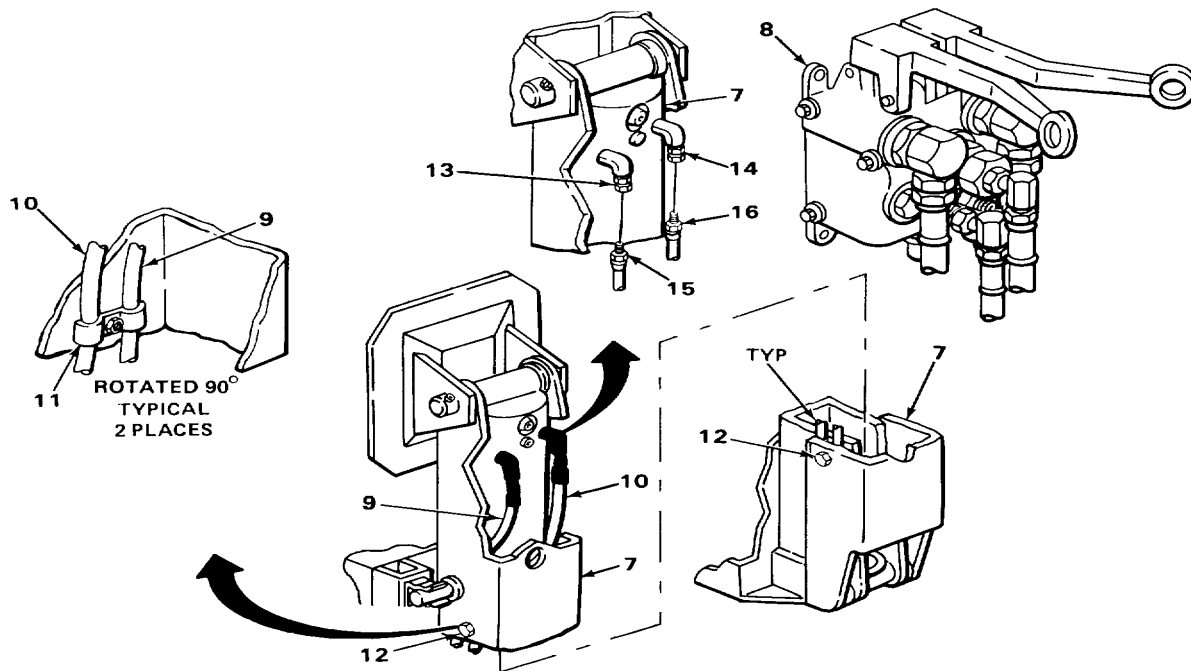


28.	Outrigger link (7) and outrigger control valve (8) Two outrigger control valve-to-right rear outrigger hose assemblies (9) and (10)	a. Check all tags for correct location. b. With help from assistant, and using fish tape, put in position.	
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TA229240

RIGHT OUTRIGGERS HYDRAULIC DRIVE LINES - CONTINUED

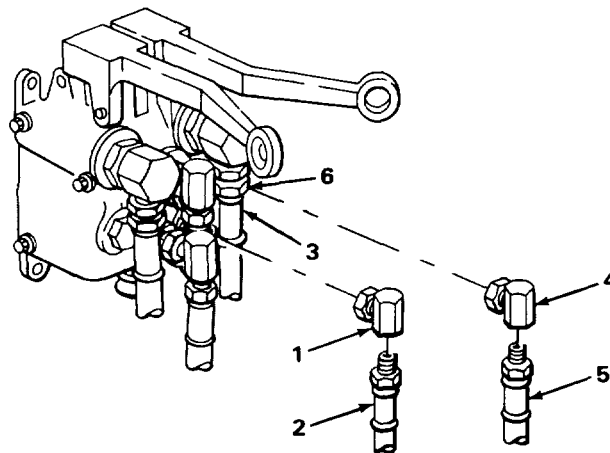
LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
29. Outrigger link (7) and two clamps (11)	Two screws (12)	With hoses (9) and (10) positioned at adapters (13) and (14) and clamps (11), screw in, and tighten using 7/16-inch socket and handle.	
30. Swivel adapter (15)	Outrigger control valve-to-right rear outrigger hose assembly (9)	Screw on, and tighten using 9/16-inch and 11/16-inch wrenches.	
31. Swivel adapter (16)	Outrigger control valve-to-right rear outrigger hose assembly (10)	Screw on, and tighten using 9/16-inch and 11/16-inch wrenches.	
32. Two adapters (13) and (14)	Two swivel adapters (15) and (16) and hose assemblies (9) and (10)	<ul style="list-style-type: none"> a. Take off tags. b. Screw on, and tighten using 1-inch and 7/8-inch open-end wrenches. 	



TA229241

RIGHT OUTRIGGERS HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
33. Swivel adapter (1)	Hose assembly (2)	a. Check tag for proper location. b. Screw on, and tighten using 9/16-inch and 11/16-inch wrenches.	
34. Adapter (3)	Swivel adapter (1) with hose assembly (2)	Screw on, and tighten using 1-inch and 7/8-inch wrenches.	
35. Swivel adapter (4)	Hose assembly (5)	a. Check tag for proper location. b. Screw on, and tighten using 9/16-inch and 11/16-inch wrenches.	
36. Adapter (6)	Swivel adapter (4) with hose assembly (5)	Screw on, and tighten using 1-inch and 7/8-inch wrenches.	



NOTE

FOLLOW-ON MAINTENANCE:

1. Fill with hydraulic fluid (LO 9-2320-269-12).
2. Turn on hydraulic tank shutoff valve (TM 9-2320-269-10).
3. Start engine, operate auxiliary equipment (TM 9-2320-269-10), and check for leaks.
4. Install console cover (page 2-1092).

TASK ENDS HERE

TA229242

POLE GUIDE ARMS HYDRAULIC DRIVE LINES

This task covers:

- a. Removal (page 2-1024)
 - b. Cleaning (page 2-1029)
 - c. Inspection/Replacement (page 2-1029)
 - d. Installation (page (page 2-1030))
-

INITIAL SETUP:

Tools

- Fish tape, 50-ft reel
- Handle, ratchet, 3/8-inch drive
- Pail, utility, 3-qt
- Socket, 3/8-inch drive, 7/16-inch
- Socket, 3/8-inch drive, 9/16-inch
- Wrench, open-end, 1/2-inch
- Wrench, open-end, 9/16-inch
- Wrench, open-end, 5/8-inch
- Wrench, open-end, 11/16-inch
- Tape, teflon (item 32, appendix C)

Materials/Parts

- Detergent, non-sudsing (item 12, appendix C)
- Lockwashers, housing cover (12 required)
- Nuts, elastic stop, hose bracket (two required)
- Rags, wiping (item 24, appendix C)
- Solvent, drycleaning (item 28, appendix C)
- Tags, marking (item 29, appendix C)

Personnel Required

Two

Equipment Condition

- Console cover removed (page 2-1092).
- Telescopic tubes removed (page 2-1094).

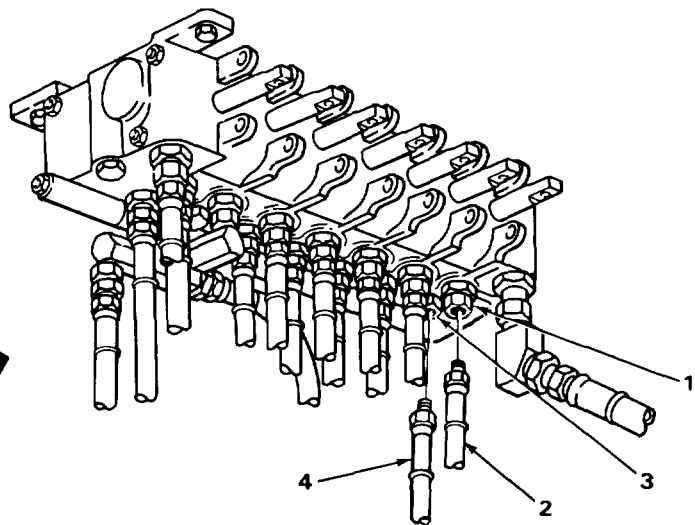
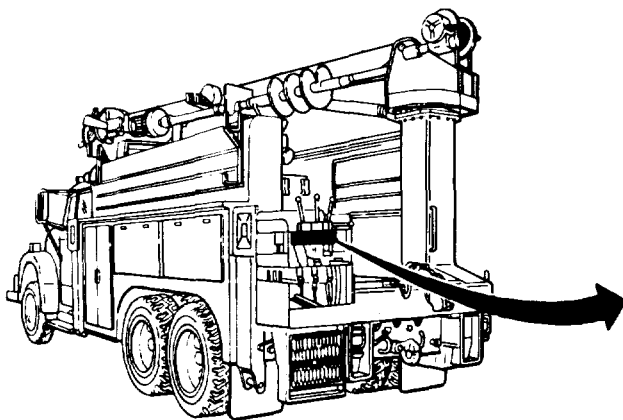
LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

- | | | |
|----------------|---|---|
| 1. Adapter (1) | Valve-to-molded hoses hose assembly (2) | <ul style="list-style-type: none"> a. Position pail to catch hydraulic fluid. b. Using 9/16-inch and 11/16-inch wrenches, unscrew and take off. c. Tag hose (2). d. Dispose of drained fluid. |
| 2. Adapter (3) | Valve-to-molded hoses hose assembly (4) | <ul style="list-style-type: none"> a. Using 9/16-inch and 11/16-inch wrenches, unscrew and take off. b. Tag hose (4). |

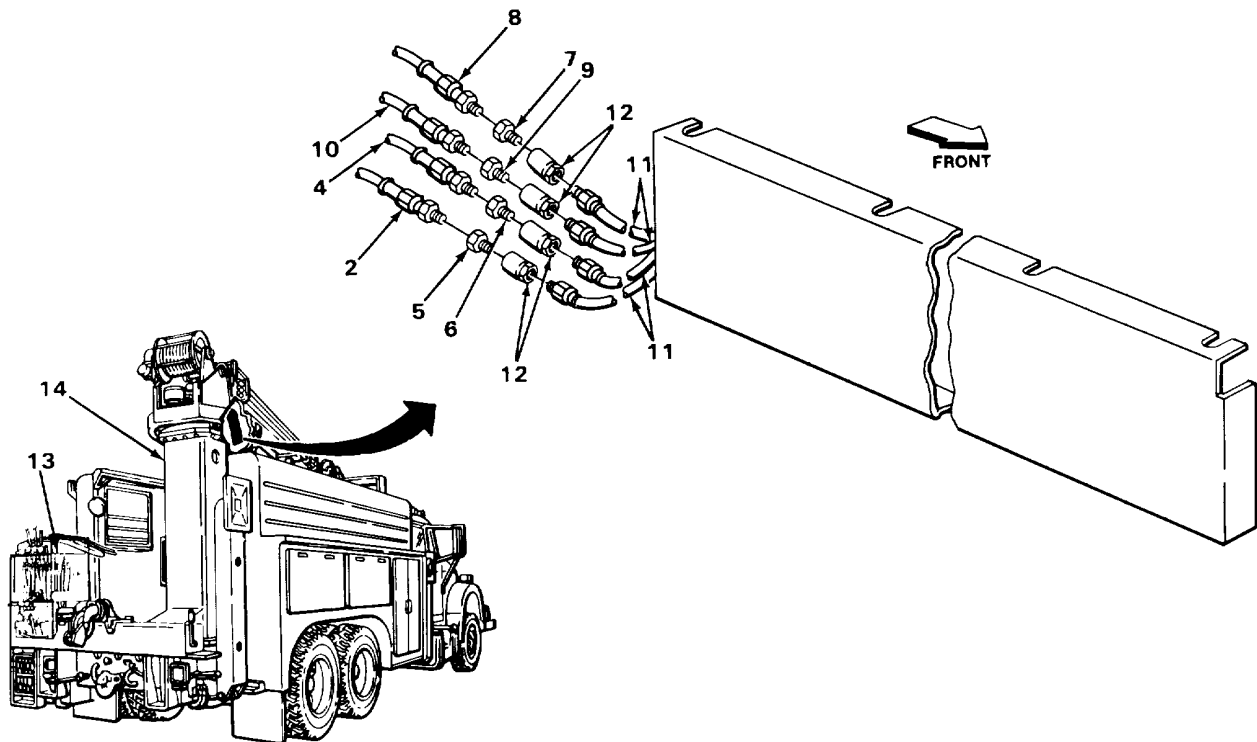


- | | | |
|-----------------------|---|---|
| 3. Swivel adapter (5) | Valve-to-molded hoses hose assembly (2) | <ul style="list-style-type: none"> a. Using 9/16-inch and 11/16-inch wrenches, unscrew and take off. b. Tag hose (2). |
| 4. Swivel adapter (6) | Valve-to-molded hoses hose | <ul style="list-style-type: none"> a. Using 9/16-inch and 11/16-inch wrenches, unscrew and take off. |

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POLE GUIDE ARMS HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
5. Swivel adapter (7)	Hose assembly (8)	a. Using 9/16-inch and 1 1/16-inch wrenches, unscrew and take off. b. Tag hose (8).	
6. Swivel adapter (9)	Hose assembly (10)	a. Using 9/16-inch and 1 1/16-inch wrenches, unscrew and take off. b. Tag hose (10).	
7. Molded hose assembly (11)	Four swivel adapters (12) with couplings	a. Tag hose assembly (11). b. Using 1 1/2-inch and 5/8-inch wrenches, unscrew and take off.	
8. Operator's console (13) and derrick mast (14)	Two valve-to-molded hoses hose assemblies (2) and (4)	With help from assistant, pull out.	

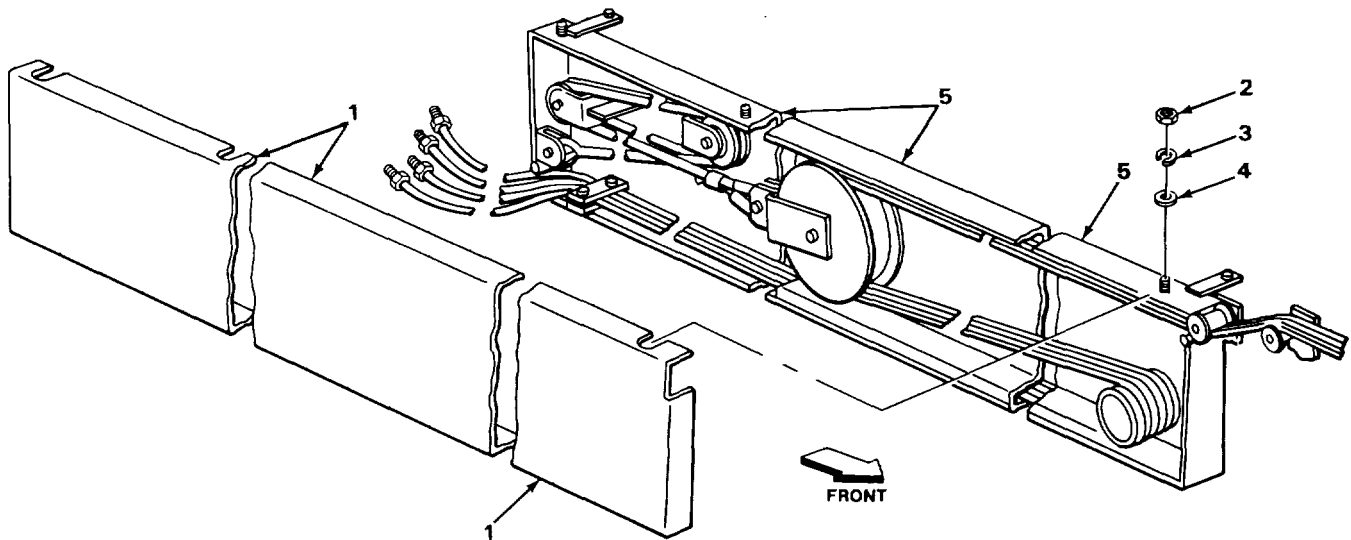


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LOCATION	ITEM	ACTION	REMARKS
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REMOVAL - CONTINUED

- | | | | |
|-----|-------------------|---|--|
| 9. | Housing cover (1) | 12 nuts (2),
lockwashers (3),
and washers (4) | a. Using 7/16-inch socket and handle,
unscrew and take off.
b. Get rid of lockwashers (3). |
| 10. | Housing (5) | Housing cover (1) | With help from assistant, take off. |

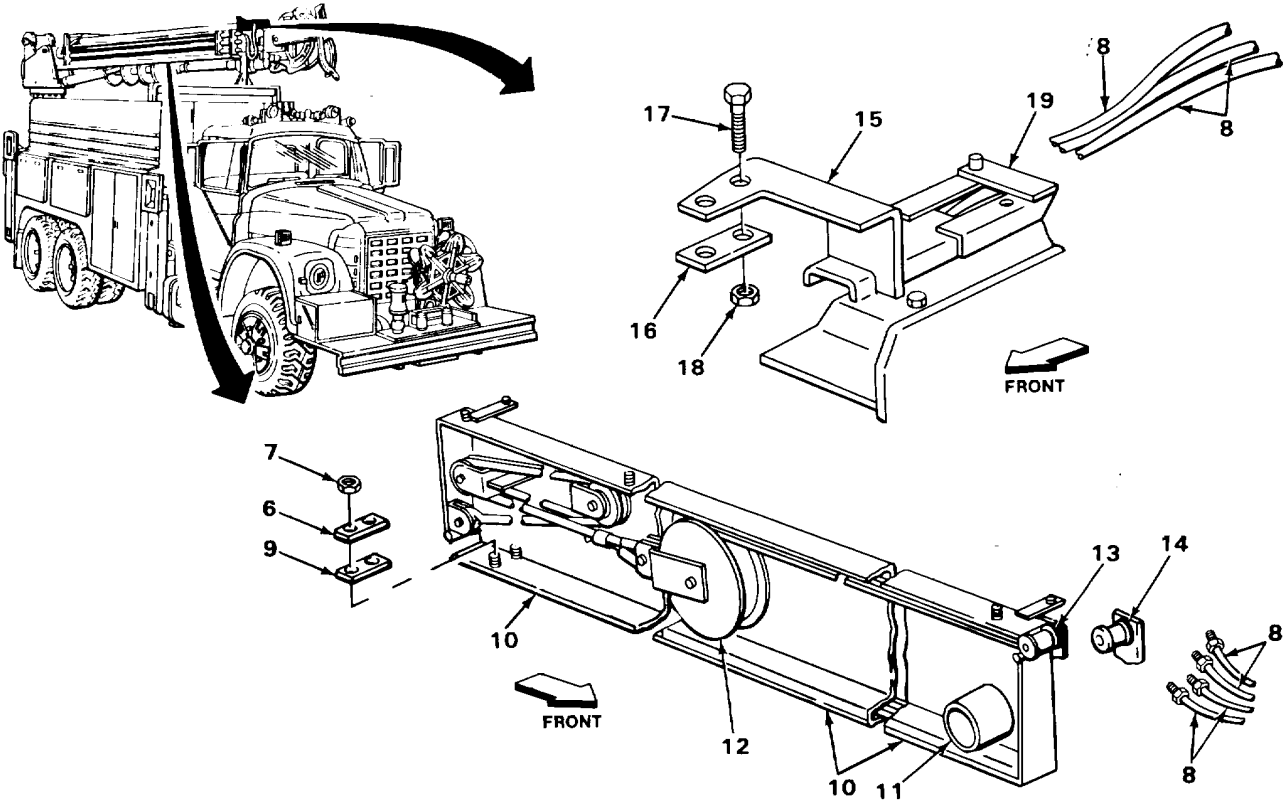


- | | | | |
|-----|--|--|---|
| 11. | Locking bar (6) | Two nuts (7) | Using 9/16-inch socket and handle,
unscrew and take off. |
| 12. | Molded hose
assembly (8) | Locking bar (6)
and hose retainer (9) | Take off. |
| 13. | Hose guard (10),
hose support (11),
sheave (12), and
two hose guides
(13) and (14) | Molded hose
assembly (8) | Slowly pull off. |

TA229245

POLE GUIDE ARMS HYDRAULIC DRIVE LINES - CONTINUED

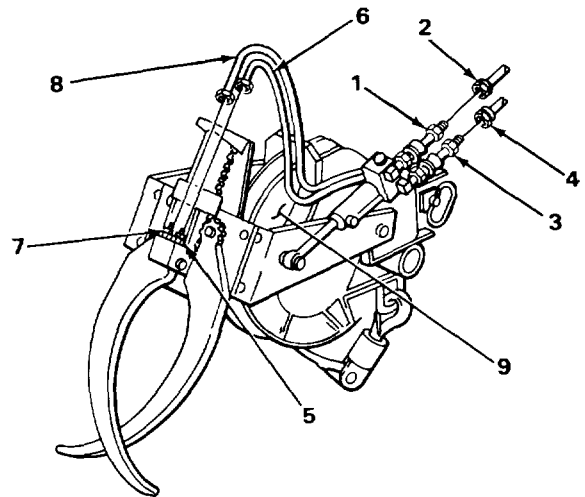
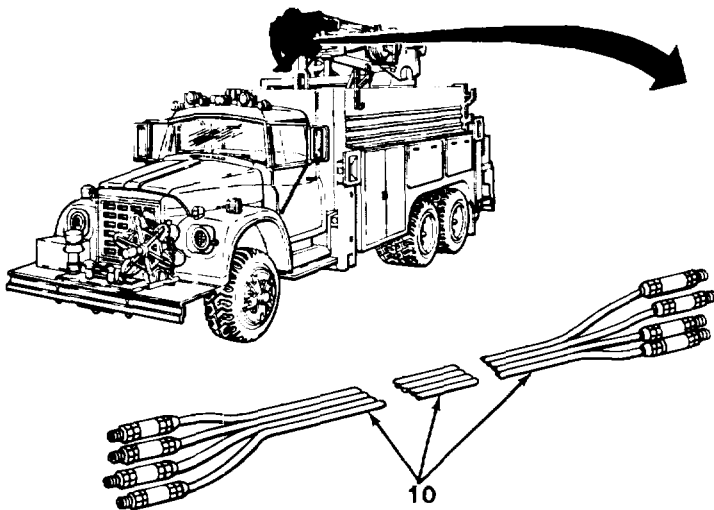
LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
14. Bracket (15) and locking plate (16)	Two screws (17) and elastic stop nuts (18)	a. Using 9/16-inch socket, handle, and 9/16-inch wrench, unscrew and take off. b. Get rid of nuts (18).	
15. Bracket (15)	Locking plate (16) and molded hose assembly (8)	Take off.	
16. Bracket (19)	Molded hose assembly (8)	Pull through	



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POLE GUIDE ARMS HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
17. Swivel adapter (1)	Pole guide tilt cylinder hose assembly (2)	a. Using 5/8-inch and 11/16-inch wrenches, unscrew and take off. b. Tag hose (2).	
18. Swivel adapter (3)	Pole guide tilt cylinder hose assembly (4)	a. Using 5/8-inch and 11/16-inch wrenches, unscrew and take off. b. Tag hose (4).	
19. Swivel adapter (5)	Pole guide arms cylinder hose assembly (6)	a. Using 5/8-inch and 11/16-inch wrenches, unscrew and take off. b. Tag hose (6).	
20. Swivel adapter (7)	Pole guide arms cylinder hose assembly (8)	a. Using 5/8-inch and 11/16-inch wrenches, unscrew and take off. b. Tag hose (8).	
21. Pole guide	Molded hose assembly (9)	Remove from truck assembly (10)	



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POLE GUIDE ARMS HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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CLEANING

WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

- | | | | |
|-----|---------------------|---|--|
| 22. | All metal parts | <ul style="list-style-type: none"> a. Clean in drycleaning solvent. b. Wipe dry with clean, dry rags. | |
| 23. | All hose assemblies | <ul style="list-style-type: none"> a. Clean in clean, soapy water. b. Rinse in clean water. c. Wipe connectors clean with clean rags dampened in drycleaning solvent. d. Wipe dry with clean, dry rags. | |

INSPECTION/REPLACEMENT

NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

Replace damaged or defective parts as necessary.

- | | | | |
|-----|---------------------|--|--|
| 24. | All hose assemblies | <ul style="list-style-type: none"> a. Look for cracks, breaks, tears, and brittleness. b. Look for loose connectors. c. Look for damaged threads. | |
|-----|---------------------|--|--|

POLE GUIDE ARMS HYDRAULIC DRIVE LINES - CONTINUED

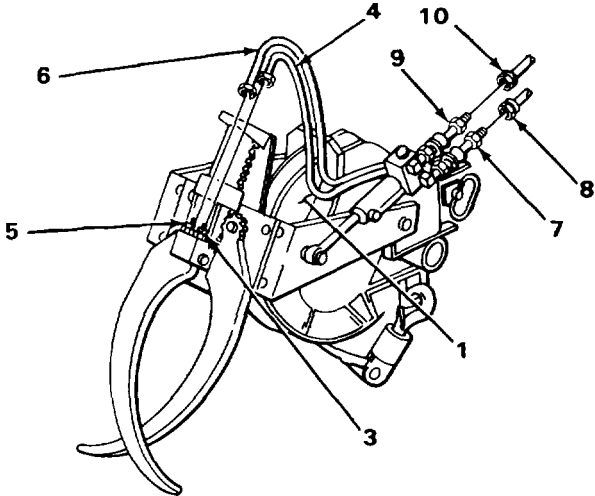
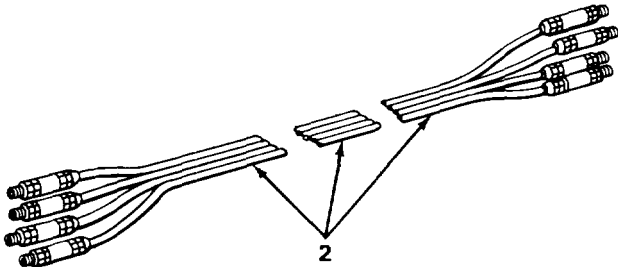
LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION

NOTE

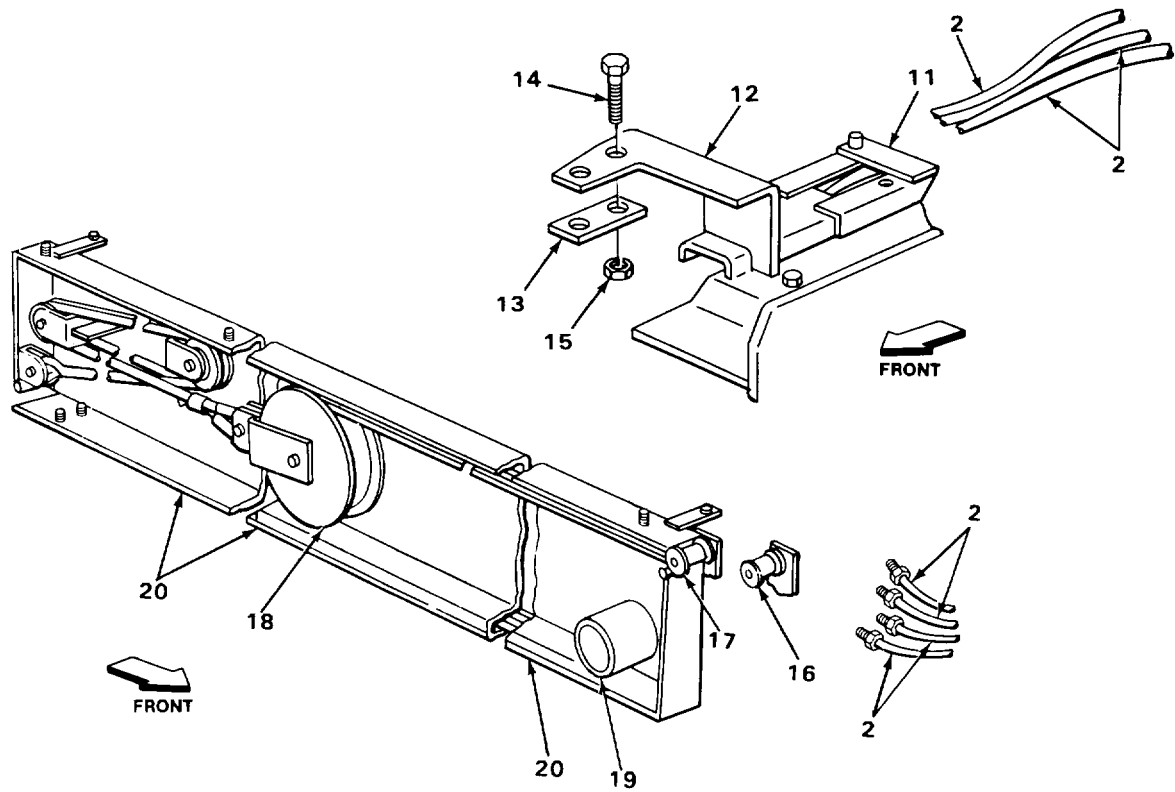
Before installing hose assemblies, wrap all clean external threads with two turns of teflon tape (page 2-142).

25. Pole guide assembly (1)	Molded hose assembly (2)	a. Check tags for proper locations. b. Put in position.
26. Swivel adapter (3)	Pole guide arms cylinder hose assembly (4)	a. Take off tag. b. Screw on, and tighten using 5/8-inch and 11/16-inch wrenches.
27. Swivel adapter (5)	Pole guide arms cylinder hose assembly (6)	a. Take off tag. b. Screw on, and tighten using 5/8-inch and 11/16-inch wrenches.
28. Swivel adapter (7)	Pole guide tilt cylinder hose assembly (8)	a. Take off tag. b. Screw on, and tighten using 5/8-inch and 11/16-inch wrenches.
29. Swivel adapter (9)	Pole guide tilt	a. Take off tag.



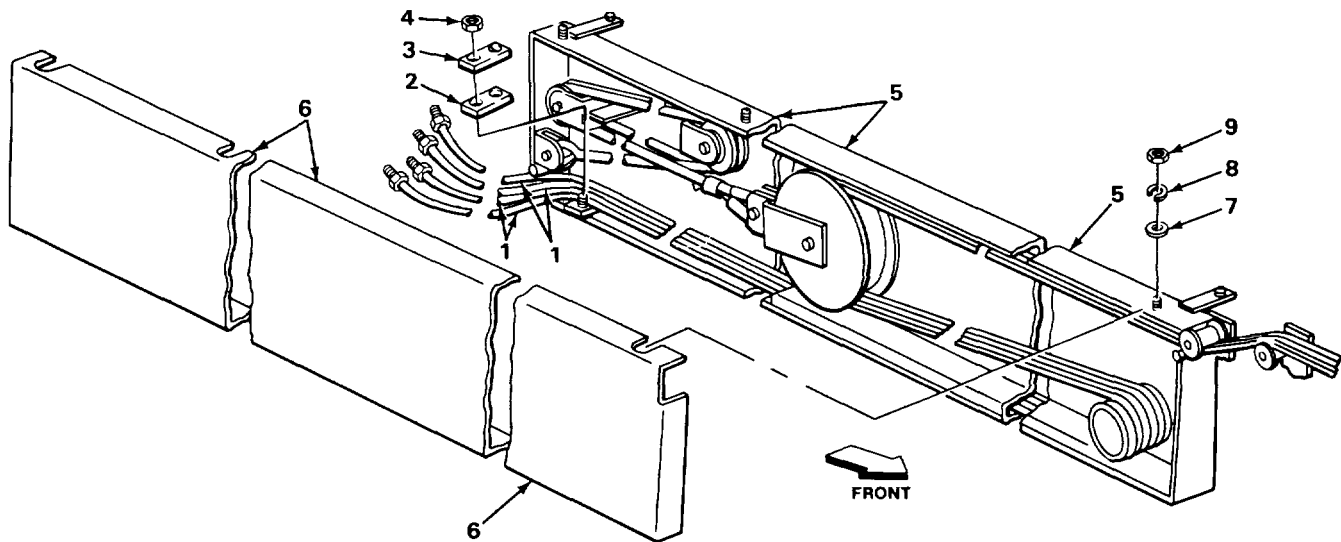
POLE GUIDE ARMS HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
30.	Bracket (11)	Molded hose	Feed through. assembly (2)
31.	Bracket (12) assembly (2) and locking plate (13)	Molded hose	Put in position.
32.	Bracket (12) and locking plate (13) stop nuts (15)	Two screws (14) and new elastic	Screw in, and tighten using 9/16-inch socket, handle, and 9/16-inch wrench.
33.	Two hose guides (16) and (17), sheave (18), hose support (19), and hose guard (20)	Molded hose assembly (2)	Place in position.



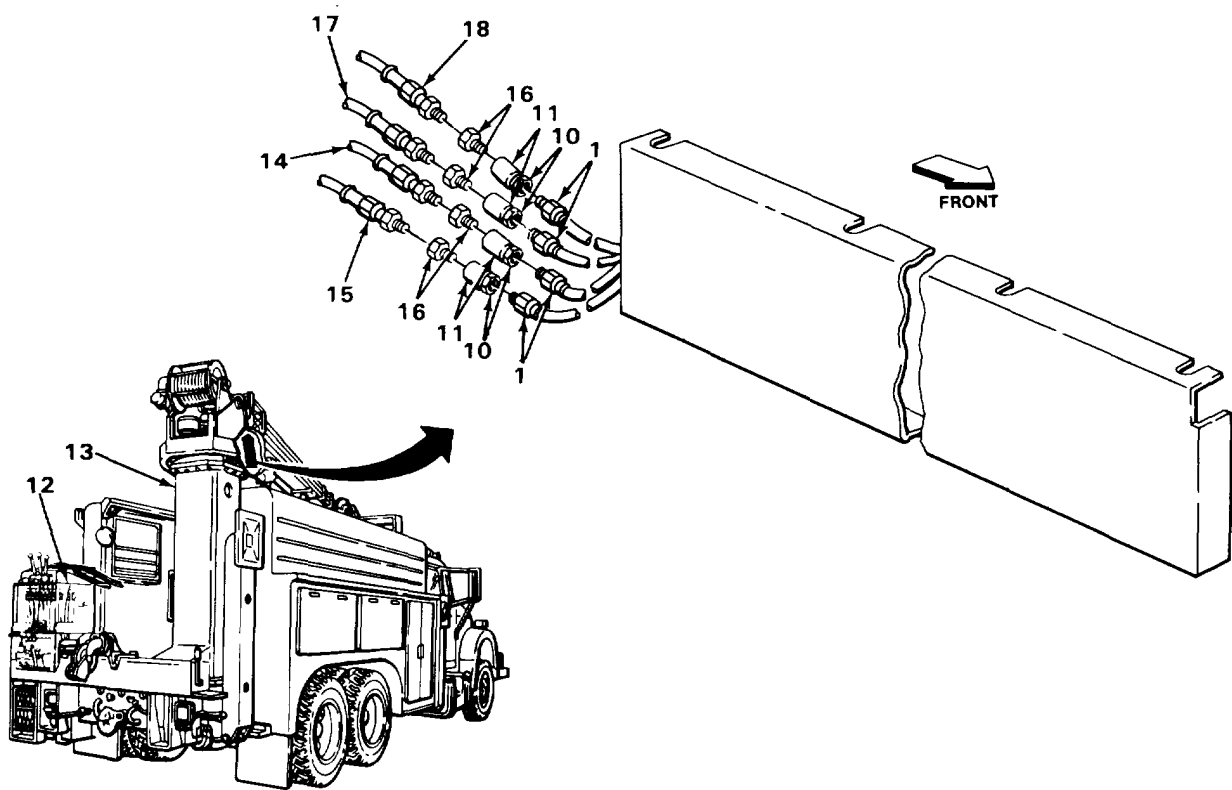
POLE GUIDE ARMS HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
34.	Molded hose assembly (1) plate (3)	Hose retainer (2) and locking	Place in position.
35.	Locking plate (3)	Two nuts (4) socket and handle.	Screw on, and tighten using 9/16-inch
36.	Housing (5) assembly (1)	Molded hose then slowly release to check hose payout and takeup. b.	a. Slowly pull on hose assembly (1), then slowly release to check hose payout and takeup. If hose assembly does not retract, check brackets for binding, and adjust as necessary.
37.	Housing cover (6)	With help from assistant, put in position and hold.	
38.	Housing cover (6) new lockwashers (8), and nuts (9)	Twelve washers (7), socket and handle.	Screw on, and tighten using 7/16-inch



POLE GUIDE ARMS HYDRAULIC DRIVE LINES - CONTINUED

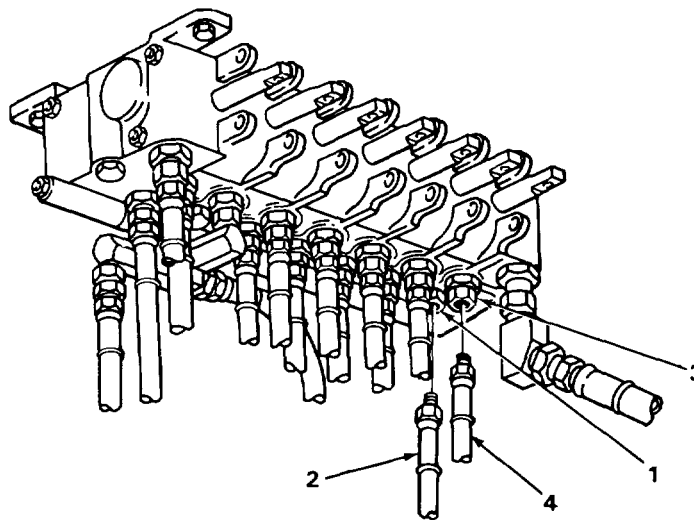
LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
39. Molded hose assembly (1) couplings (11)	Four swivel adapters (10) with	Screw on, and tighten using 11/2-inch and 5/8-inch wrenches.	
40. Operator's console (12) and derrick mast (13) and (15)	Two valve-to-molded hoses and hose assembly (14)	With help from assistant, and using fish tape, put in position.	
41. Four swivel adapters (16) (17), and (18)	Four hose assemblies (14), (15), b. Screw on, and tighten using 9/16-inch and 11/16-inch wrenches.	a. Check tags for correct locations, and take off. b. Screw on, and tighten using 9/16-inch and 11/16-inch wrenches.	
42. Four couplings (11) with swivel adapters (10) (17), and (18)	Four swivel adapters (16) with hose assemblies (14), (15), and 11/16-inch wrenches.	a. Check tags for correct locations, and take off. b. Screw on, and tighten using 9/16-inch	



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POLE GUIDE ARMS HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
43. Adapter (1) hoses hose assembly (2)	Valve-to-molded b. Screw on, and tighten using 9/16- inch and 11/16-inch wrenches.	a. Check tags for correct locations. b. Screw on, and tighten using 9/16- inch and 11/16-inch wrenches.	
44. Adapter (3) hoses hose assembly (4)	Valve-to-molded b. Screw on, and tighten using 9/16- inch and 11/16-inch wrenches.	a. Check tags for correct location. b. Screw on, and tighten using 9/16- inch and 11/16-inch wrenches.	



NOTE

FOLLOW-ON MAINTENANCE:

- 1.
2. check for leaks.
- 3.
- 4.

Fill with hydraulic fluid (LO 9-2320-269-12).
Start engine, operate auxiliary equipment (TM 9-2320-269-10), and
Install console cover (page 2-1092).
Install telescopic tubes (page 2-1094).

TASK ENDS HERE

POLE GUIDE ELEVATION HYDRAULIC DRIVE LINES

This task covers:

- a. Removal (page 2-1035)
- b. Cleaning (page 2-1041)
- c. Inspection/Replacement (page 2-1041)
- d. Installation (page 2-1042)

INITIAL SETUP

Tools

- Fish tape, 50-ft reel
- Handle, ratchet, 3/8-inch drive
- Pail, utility, 3-qt
- Socket, 3/8-inch drive, 7/16-inch
- Socket, 3/8-inch drive, 9/16-inch
- Wrench, open-end, 1/2-inch
- Wrench, open-end, 9/16-inch
- Wrench, open-end, 5/8-inch
- Wrench, open-end, 11/16-inch

Materials/Parts - Continued

- Rags, wiping (item 24, appendix C)
- Solvent, drycleaning (item 28, appendix C)
- Tags, marking (item 29, appendix C)
- Tape, teflon (item 32, appendix C)

Personnel Required

Two

Materials/Parts

- Detergent, non-sudsing (item 12, Appendix C)
- Lockwashers, housing cover (12 required)
- Nuts, elastic stop, hose bracket (two required)

Equipment Condition

- Console cover removed (page 2-1092).
- Telescopic tubes removed (page 2-1094).

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

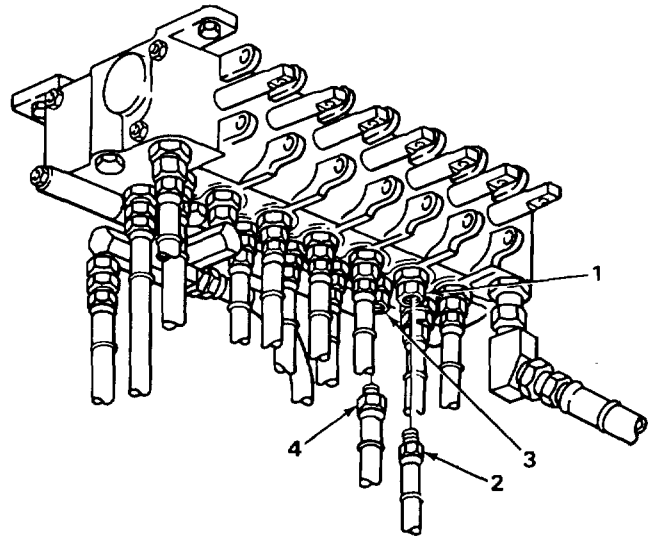
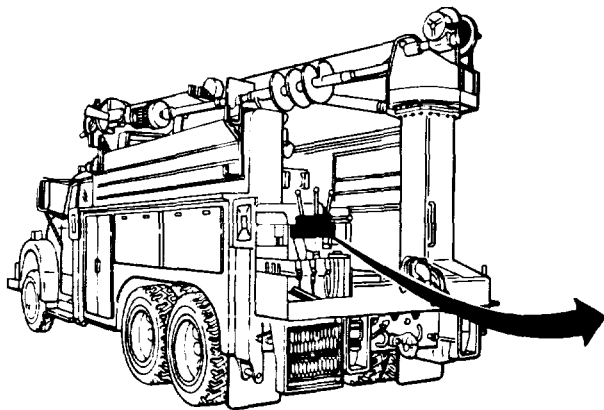
Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

POLE GUIDE ELEVATION HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL - CONTINUED

- | | | |
|--|--|--|
| 1. Adapter (1)
hoses hose
assembly (2) | Valve-to-molded
fluid.
b. Using 9/16-inch and 11/16-inch
c.
d. | a. Position pail to catch hydraulic
wrenches, unscrew and take off.
Tag hose (2).
Dispose of drained fluid. |
| 2. Adapter (3)
hoses hose
assembly (4) | Valve-to-molded
wrenches, unscrew and take off.
b. Tag hose (4). | a. Using 9/16-inch and 11/16-inch
wrenches, unscrew and take off. |

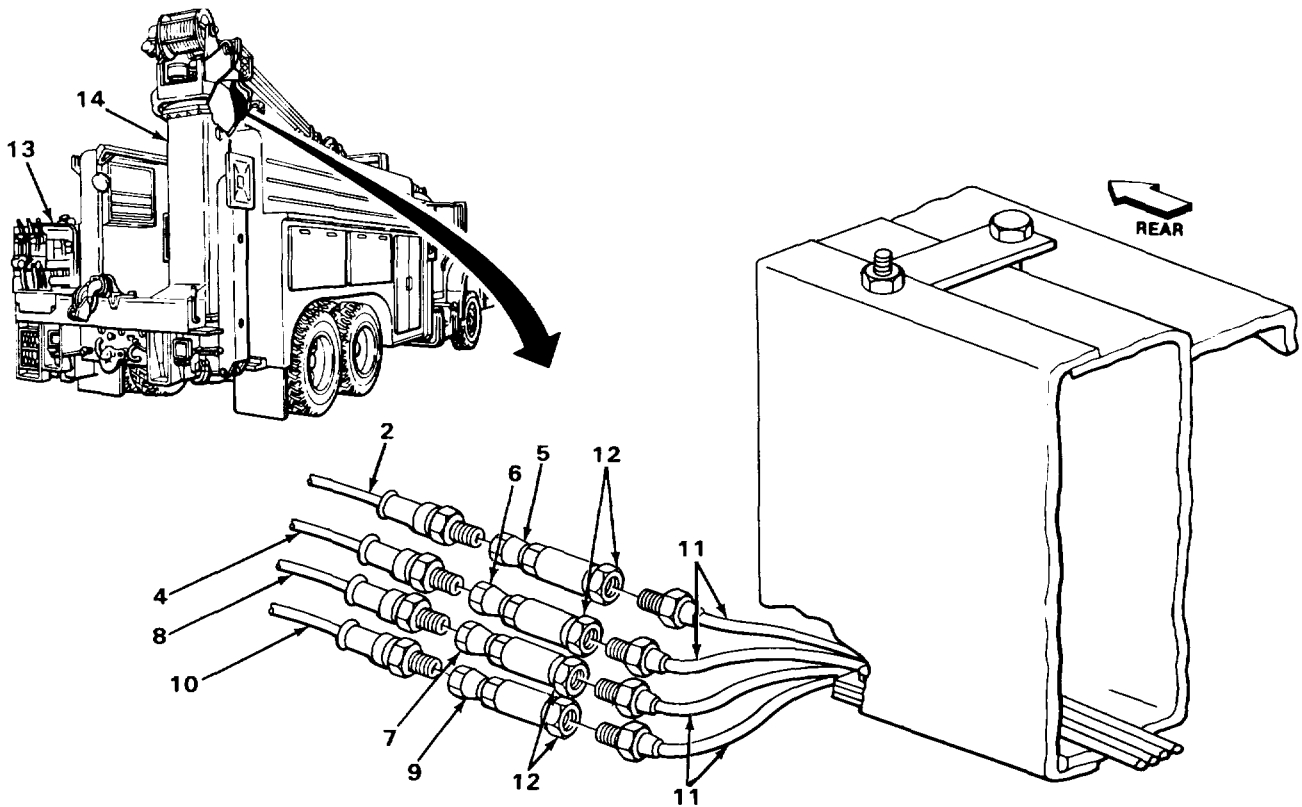


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- | | | |
|---|--|---|
| 3. Swivel adapter (5)
hoses hose
assembly (2) | Valve-to-molded
wrenches, unscrew and take off.
b. Tag hose (2). | a. Using 9/16-inch and 11/16-inch
wrenches, unscrew and take off. |
| 4. Swivel adapter (6)
hoses hose
assembly (4) | Valve-to-molded
wrenches, unscrew and take off.
b. Tag hose (4). | a. Using 9/16-inch and 11/16-inch
wrenches, unscrew and take off. |
| 5. Swivel adapter (7)
hoses hose
assembly (8) | Valve-to-molded
wrenches, unscrew and take off.
b. Tag hose (8). | a. Using 9/16-inch and 11/16-inch
wrenches, unscrew and take off. TA229253 |

POLE GUIDE ELEVATION HYDRAULIC DRIVE LINES -CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
6. Swivel adapter (9) hoses hose assembly (10)	Valve-to-molded wrenches, unscrew and take off. b. Tag hose (10).	a. Using 9/16-inch and 11/16-inch wrenches, unscrew and take off. b. Tag hose (10).	
7. Molded hose assembly (11) with couplings	Four swivel adapters (12)	Using 1/2-inch and 5/8-inch wrenches, unscrew and take off.	
8. Operator's console (13) and derrick mast (14)	Two valve-to- molded hoses hose assemblies (2) and (4)	With help from assistant, pull out.	

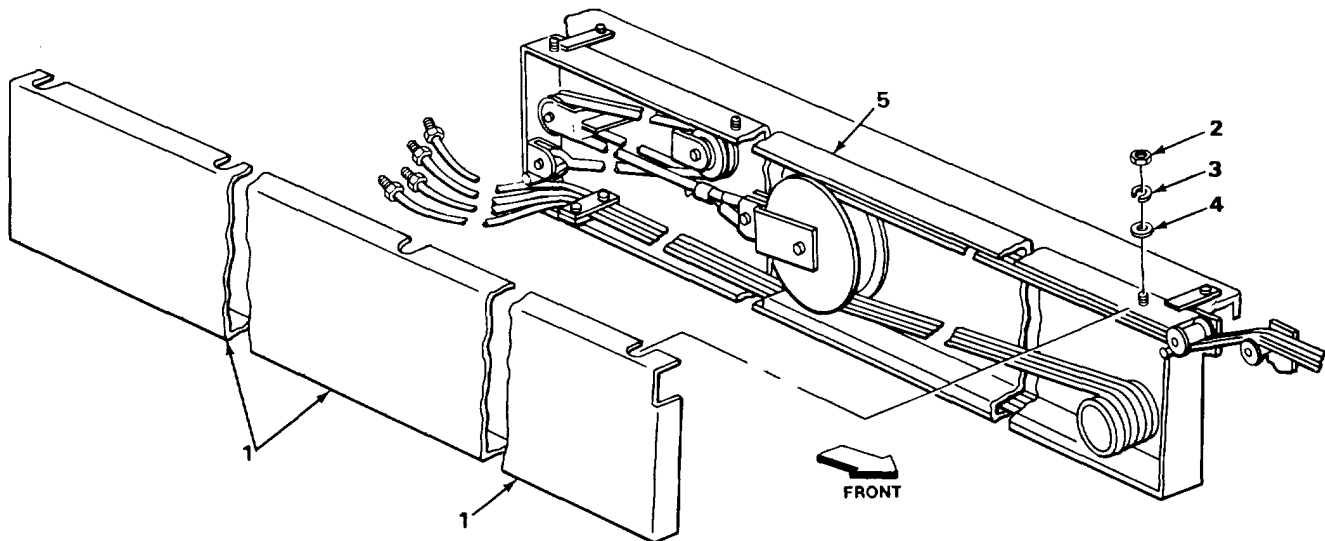


POLE GUIDE ELEVATION HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL - CONTINUED

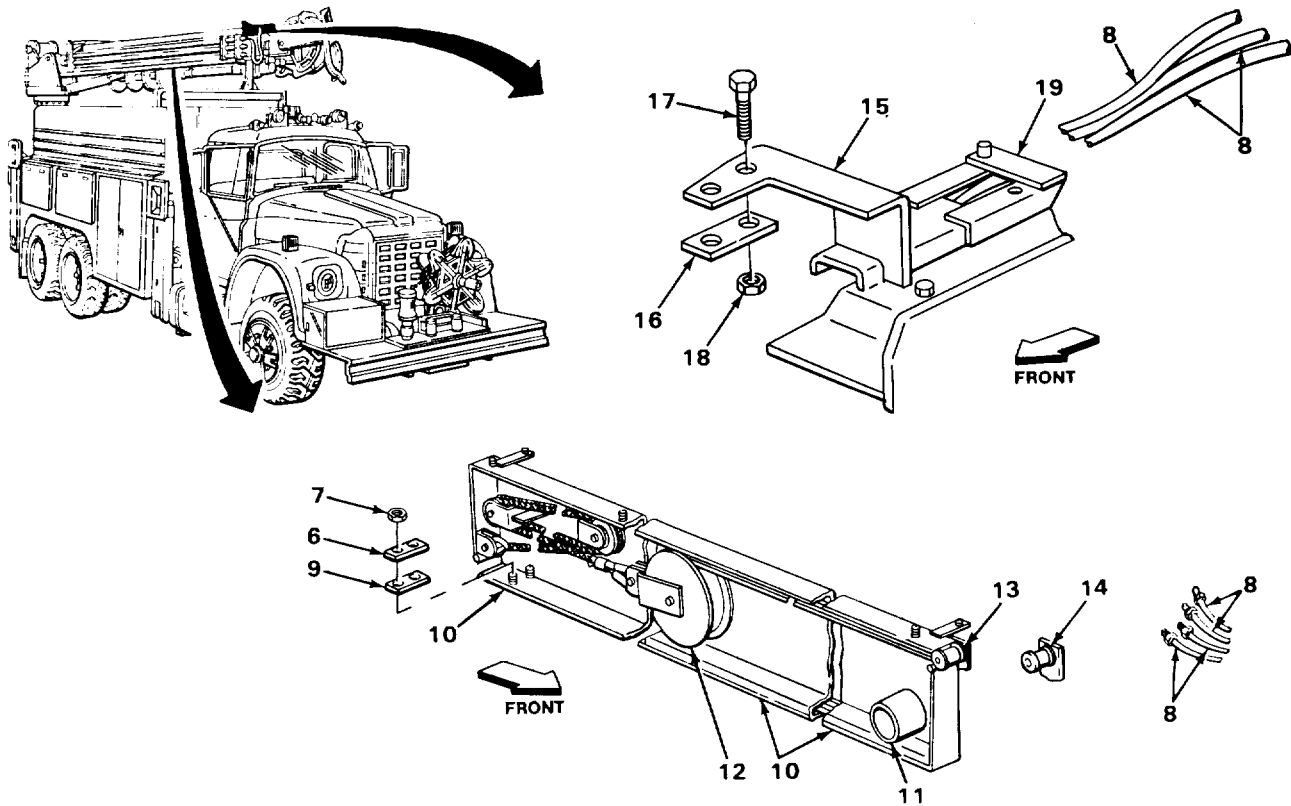
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|-----|--|---|--|
| 9. | Housing cover (1)
lockwashers (3),
and washers (4) | Twelve nuts (2),
unscrew and take off.
b. Get rid of lockwashers (3). | a. Using 7/16-inch socket and handle,
unscrew and take off.
b. Get rid of lockwashers (3). |
| 10. | Housing (5) | Housing cover (1) | With help from assistant, take off. |



- | | | | |
|-----|--|--|---|
| 11. | Locking bar (6)
unscrew and take off. | Two nuts (7) | Using 9/16-inch socket and handle,
unscrew and take off. |
| 12. | Molded hose
assembly (8) | Locking bar (6)
and hose retainer (9) | Take off. |
| 13. | Hose guard (10),
hose support (11),
sheave (12), and
two hose assemblies
(13) and (14) | Molded hose
assembly (8) | Slowly pull off. |

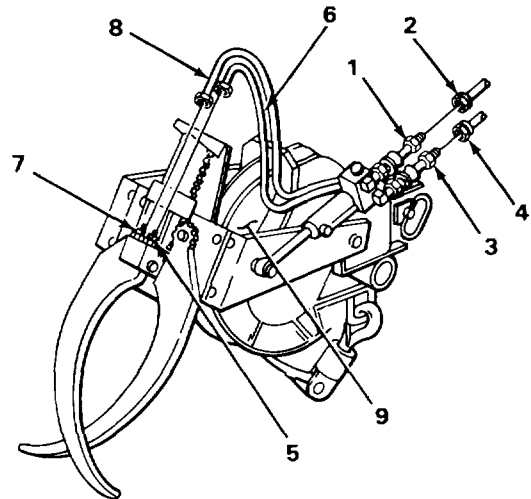
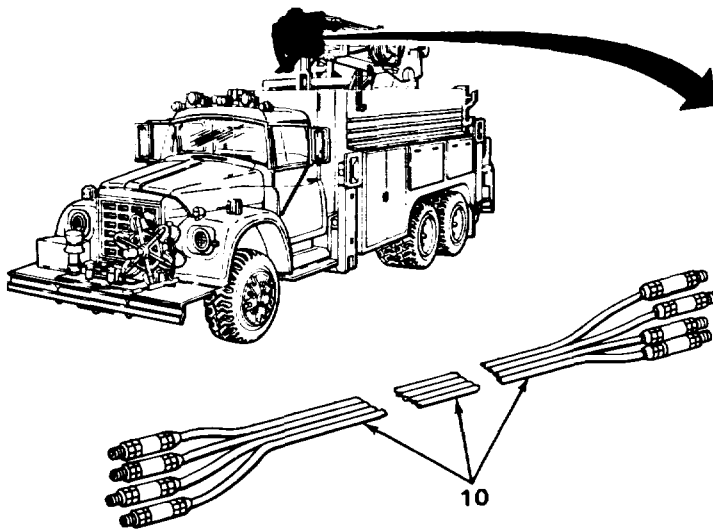
POLE GUIDE ELEVATION HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
14. Bracket (15) and locking plate (16) nuts (18)	Two screws (17) and elastic stop off.	a. Using 9/16-inch socket, handle, and 9/16-inch wrench, unscrew and take off.	Get rid of nuts (18).
15. Bracket (15) and molded hose assembly (8)	Locking plate (16)	Take off.	
16. Bracket (19) Assembly (8)	Molded hose	Pull through.	



POLE GUIDE ELEVATION HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
17. Swivel adapter(1) cylinder hose assembly (2)	Pole guide tilt	a. Using 11/16-inch and 5/8-inch wrenches, unscrew and take off. b. Tag hose (2).	
18. Swivel adapter(3) cylinder hose assembly (4)	Pole guide tilt	a. Using 11/16-inch and 5/8-inch wrenches, unscrew and take off. b. Tag hose (4).	
19. Swivel adapter (5) cylinder hose assembly (6)	Pole guide arms	a. Using 11/16-inch and 5/8-inch wrenches, unscrew and take off. b. Tag hose(6).	
20. Swivel adapter (7) cylinder hose assembly (8)	Pole guide arms	a. Using 11/16-inch and 5/8-inch wrenches, unscrew and take off. b. Tag hose (8).	
21. Pole guide assembly	Molded hose assembly (10)	Remove from truck.	



POLE GUIDE ELEVATION HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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CLEANING

WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

- | | | | |
|------------|---------------------|---|--|
| 22. | All metal parts | <ul style="list-style-type: none"> a. Clean in dry cleaning solvent. b. Wipe dry with clean dry rags. | |
| 23. | All hose assemblies | <ul style="list-style-type: none"> a. Clean in clean, soapy water. b. Rinse in clean water. c. Wipe connectors clean with clean rags dampened in drycleaning solvent. d. Wipe dry with clean, dry rags. | |

INSPECTION/REPLACEMENT

NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

Replace damaged or defective parts as necessary.

- | | | | |
|------------|---------------------|--|--|
| 24. | All hose assemblies | <ul style="list-style-type: none"> a. Look for cracks, breaks, tears, and brittleness. b. Look for loose connectors. c. Look for damaged threads. | |
|------------|---------------------|--|--|

POLE GUIDE ELEVATION HYDRAULIC DRIVE LINES - CONTINUED

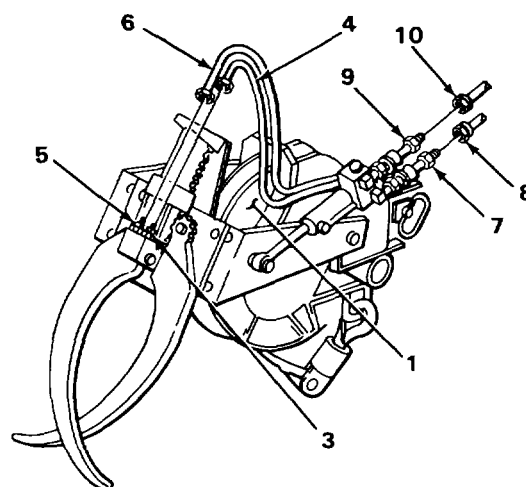
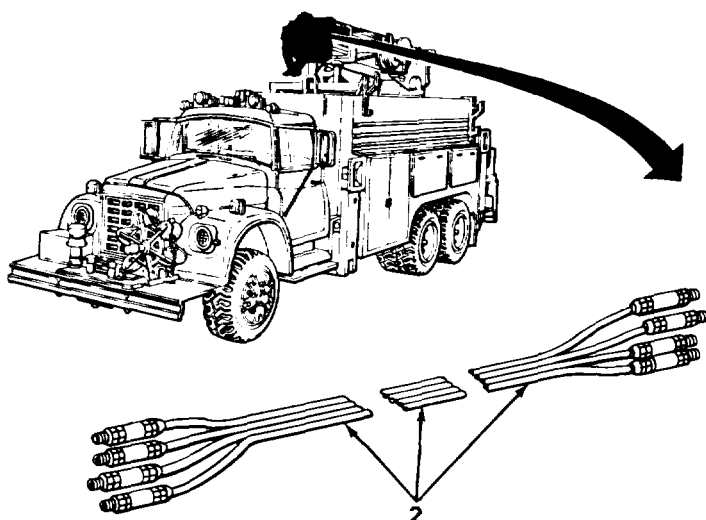
LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION

NOTE

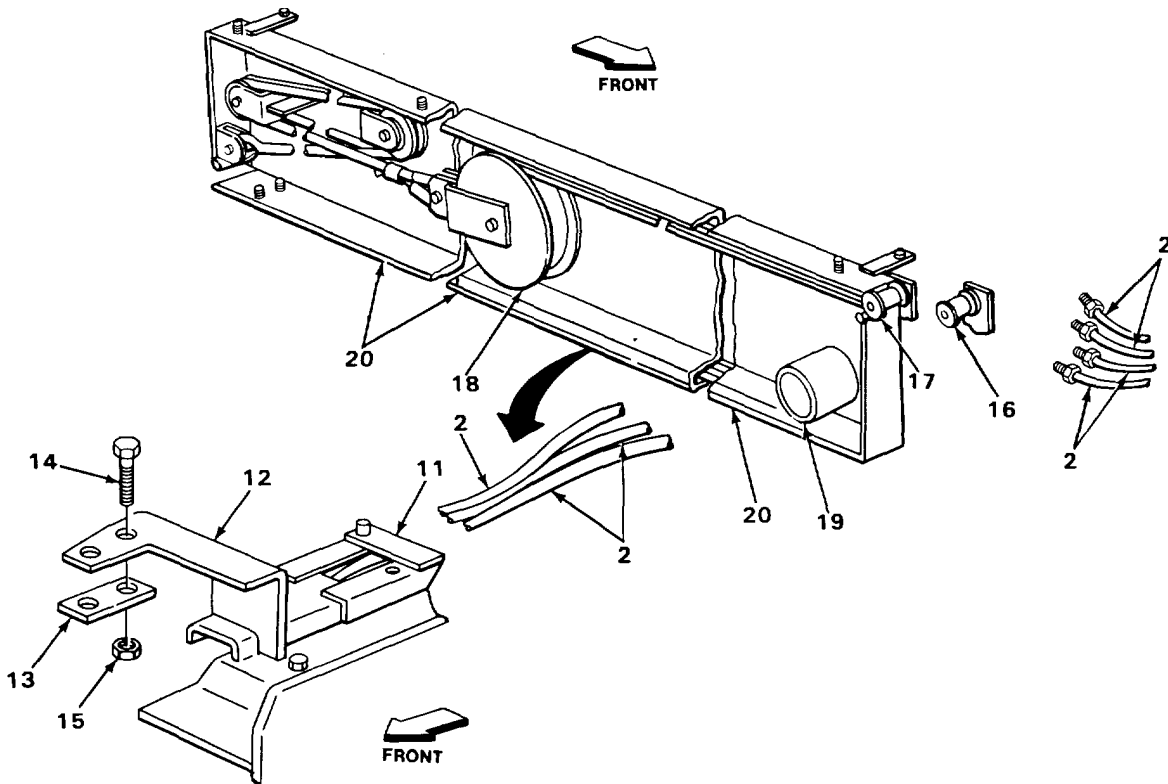
Before installing hose assemblies, wrap all clean external threads with two turns of teflon tape (page 2-142).

25. Pole guide assembly (1)	Molded hose assembly (2)	a. Check tags for proper locations. b. Put in position.
26. Swivel adapter (3) cylinder hose assembly (4)	Pole guide arms	a. Take off tag. b. Screw on, and tighten using 11/16-inch and 5/8-inch wrenches.
27. Swivel adapter (5) cylinder hose assembly (6)	Pole guide arms	a. Take off tag. b. Screw on, and tighten using 11/16-inch and 5/8-inch wrenches.
28. Swivel adapter (7) Cylinder hose assembly (8)	Pole guide tilt	a. Take off tag. b. Screw on, and tighten using 11/16-inch and 5/8-inch wrenches.
29. Swivel adapter (9) cylinder hose assembly (10)	Pole guide tilt	a. Take off tag. b. Screw on, and tighten using 11/16-inch and 5/8-inch wrenches.



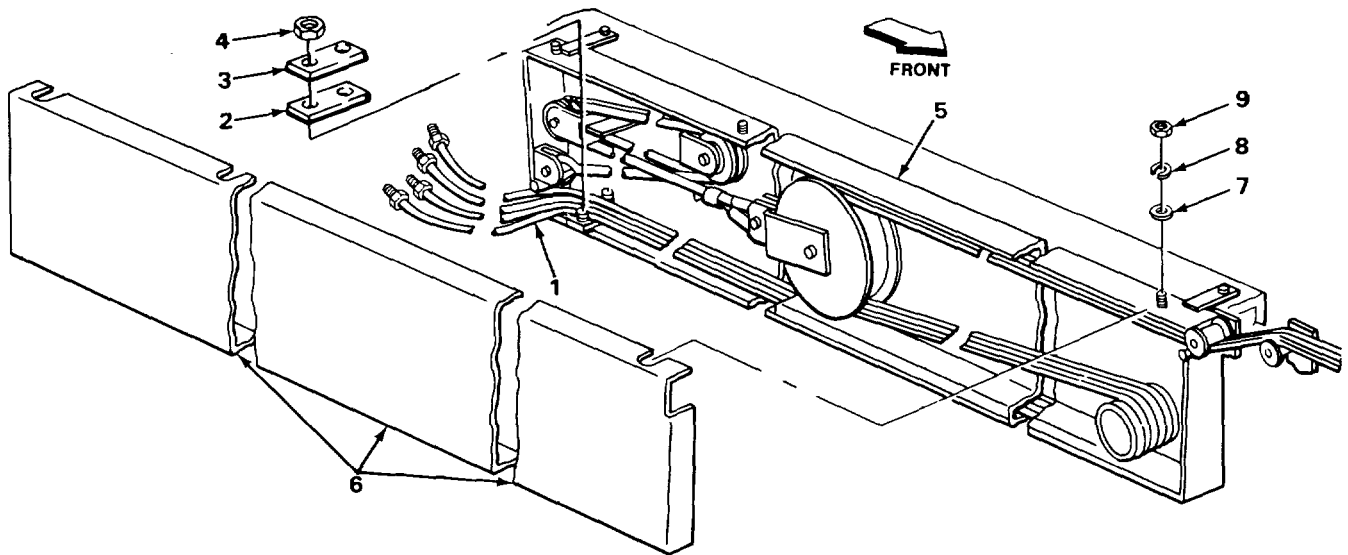
POLE GUIDE ELEVATION HYDRAULIC DRIVE LINES -CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
30.	Bracket (11)	Molded hose	Feed through. assembly (2)
31.	Bracket (12) assembly (2) and locking plate (13)	Molded hose	Put in position.
32.	Bracket (12) and locking plate (13) stop nuts (15)	Two screws (14) and new elastic	Screw in, and tighten using 9/16-inch socket, handle, and 9/16-inch wrench.
33.	Two hose guides (16) and (17), sheave (18), hose support (19), and hose guard (20)	Molded hose assembly (2)	Place in position.



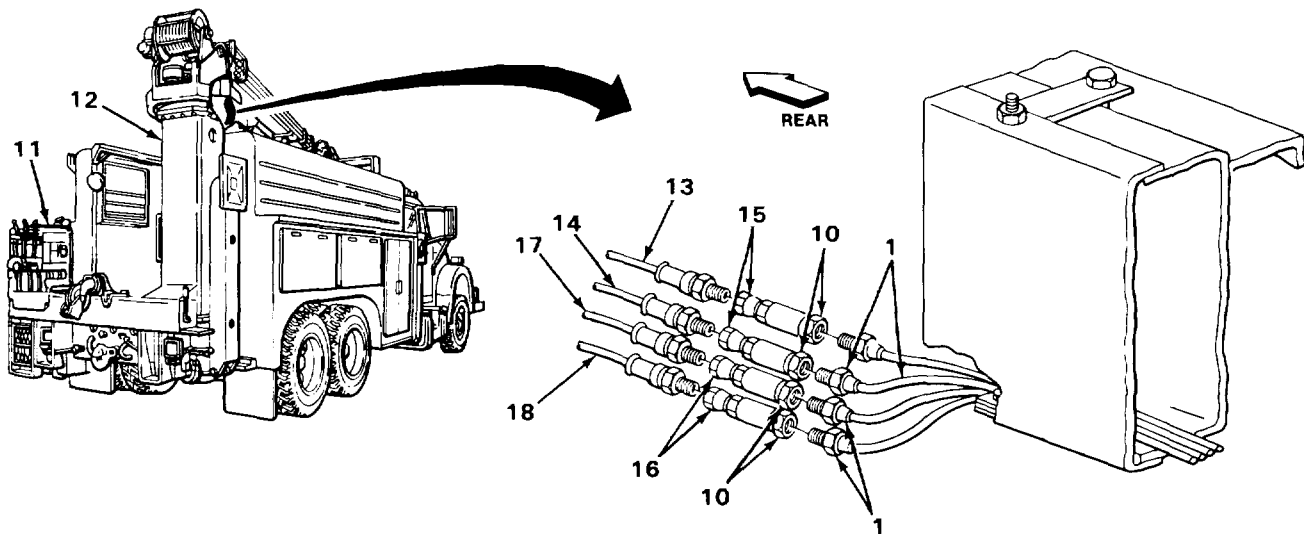
POLE GUIDE ELEVATION HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
34.	Molded hose assembly (1) plate (3)	Hose retainer (2) and locking	Place in position.
35.	Locking plate (3)	Two nuts (4) and handle.	Screw on, and tighten using 9/16-inch socket
36.	Housing (5) assembly (1)	Molded hose then slowly release it to check hose payout and takeup.	Slowly pull on hose assembly (1), and
37.	Housing cover (6)	With help from assistant, put in	
38.	Hosing cover (6) new lockwashers (8), and nuts (9)	Twelve washers (7), socket and handle.	Screw on, and tighten using 7/16-inch



POLE GUIDE ELEVATION HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
39. Molded hose assembly (1) with couplings	Four swivel adapters (10)	a. Check tags for proper location, and take off. b. Screw on, and tighten using 1/2-inch and 5/8-inch wrenches.	
40. Operator's console (11) and derrick mast (12) (13) and (14)	Two valve-to-molded hoses hose assemblies		With help from assistant, and using fish tape, put in position.
41. Two swivel adapters (15) hose assemblies (13) and (14)	Two valve-to-molded hoses	a. Check tags for correct location, and take off. b. Screw on, and tighten using 9/16-inch and 11/16-inch wrenches.	
42. Two swivel adapters (16) assemblies (17) and (18)	Two valve-to-molded hose	a. Check tags for correct location, and take off. b. Screw on, and tighten using 9/16-inch and 11/16-inch wrenches.	

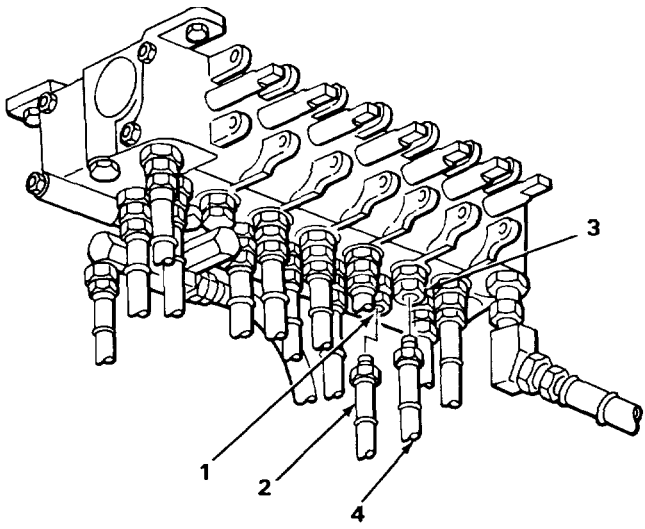
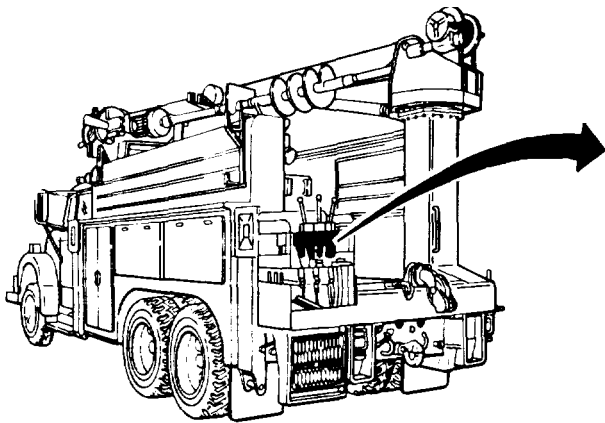


2-1045

TA229261

POLE GUIDE ELEVATION HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
43. Adapter (1) hoses hose assembly (2)	Valve-to-molded and 11/16-inch wrenches.	Screw on, and tighten using 9/16-inch	
44. Adapter (3) hoses hose assembly (4)	Valve-to-molded and 11/16-inch wrenches.	Screw on, and tighten using 9/16-inch	



NOTE

FOLLOW ON MAINTENANCE:

1. Fill with hydraulic fluid (LO-9-2320-269-12).
2. Start engine, operate auxiliary equipment (TM 9-2320-269-10), and check for leaks.
3. Install console cover (page 2-1092).
4. Install telescopic tubes (page 2-1094).

TASK ENDS HERE

TA229262

TURRET ROTATION HYDRAULIC DRIVE LINES

This task covers:

- a. Removal (page 2-1047)
 - b. Cleaning (page 2-1052)
 - c. Inspection/Replacement (page 2-1053)
 - d. Installation (page 2-1053)
-

INITIAL SETUP

Tools

- Fish tape, 50-ft reel
- Pail, utility, 3-qt
- Wrench, open-end, 9/16-inch
- Wrench, open-end, 11/16-inch
- Wrench, open-end, 3/4-inch
- Wrench, open-end, 7/8-inch (two required)

Materials/Parts - Continued

- Solvent, drycleaning (item 28, appendix C)
- Tags, marking (item 29, appendix C)
- Tape, teflon (item 32, appendix C)

Personnel Required

Two

Materials/Parts

- Detergent, non-sudsing (item 12, appendix C)
- Rags, wiping (item 24, appendix C)

Equipment Condition

Console cover removed (page 2-1092).

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

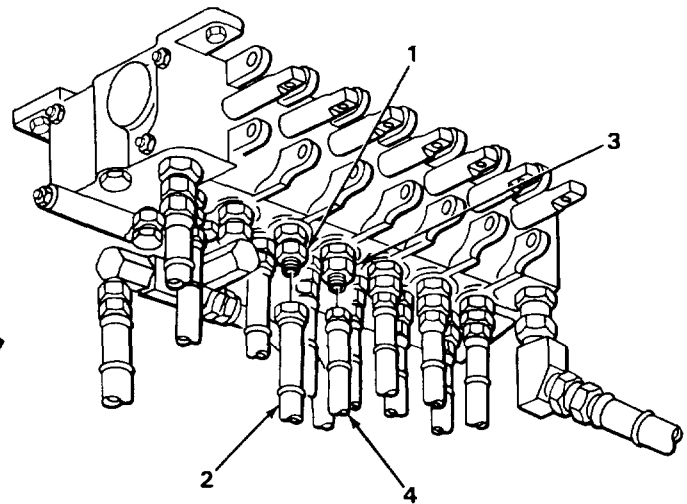
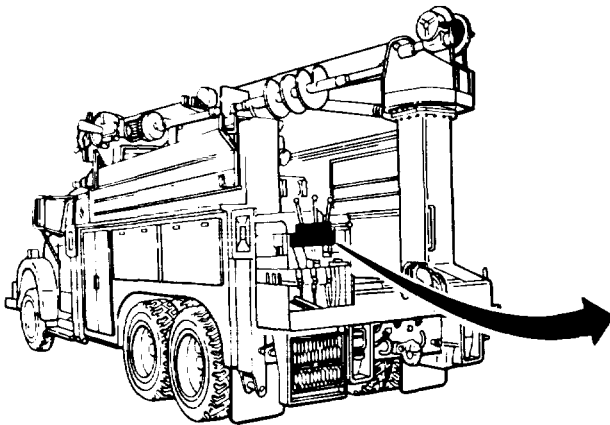
2-1047

TURRET ROTATION HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL - CONTINUED

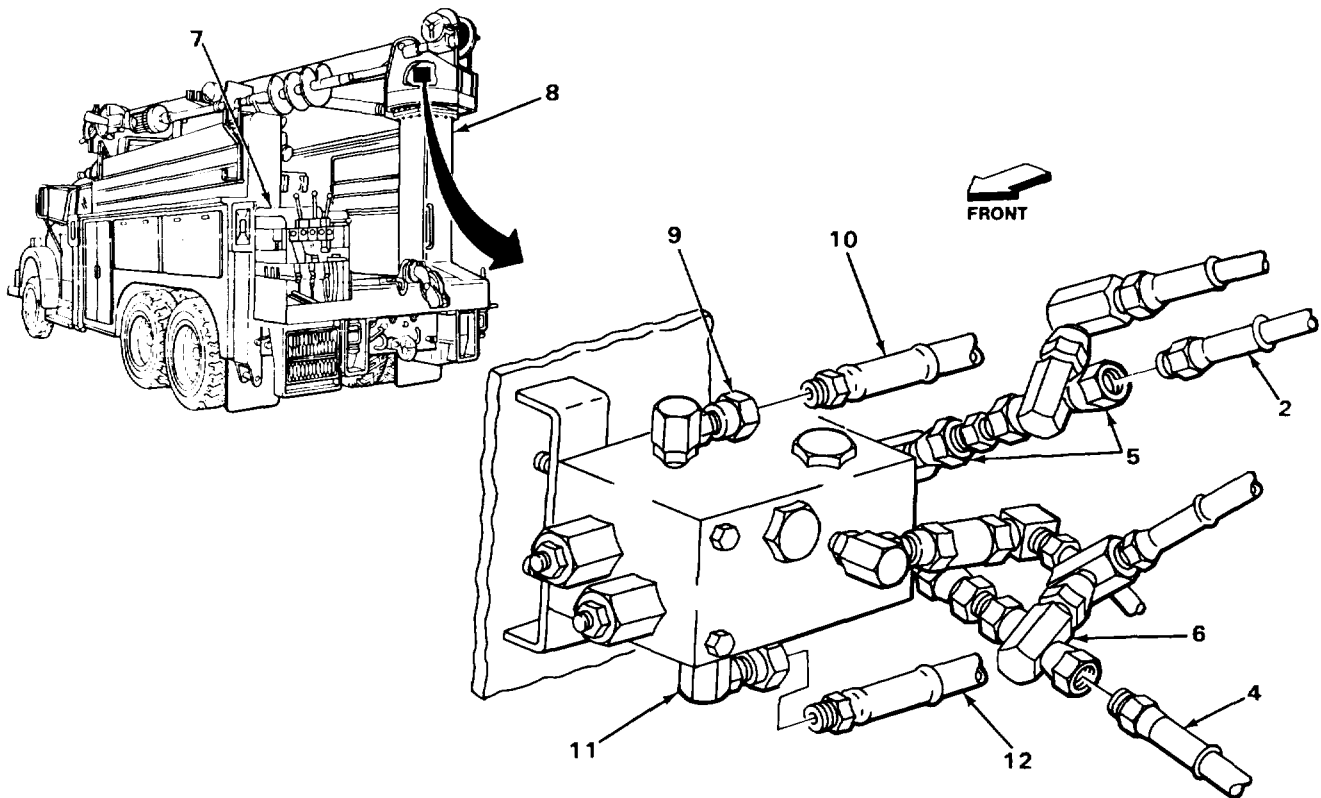
- | | | |
|--|---|---|
| 1. Adapter (1)
modrock valve hose
assembly (2) | Control valve-to
fluid.
b. Using 7/8-inch and 11/16-inch
wrenches, unscrew and take off.
c.
d. | a. Position pail to catch hydraulic
fluid.
Tag hose (2).
Dispose of drained fluid. |
| 2. Adapter (3)
modrock valve hose | Control valve-to
wrenches unscrew an take off | a. Using 7/8-inch and 11/16-inch |



- | | | |
|--|--|---|
| 3. 900 swivel
adapter (5)
assembly (2) | Control valve-to
modrock valve hose
b. Tag hose (2). | a. Using 3/4-inch and 7/8-inch
wrenches, unscrew and take off. |
| 4. 900 swivel
adapter (6)
assembly (4) | Control valve-to
modrock valve hose
b. Tag hose (4). | a. Using 3/4-inch and 7/8-inch
wrenches, unscrew and take off. |

TURRET ROTATION HYDRAULIC DRIVE LINES - CONTINUED

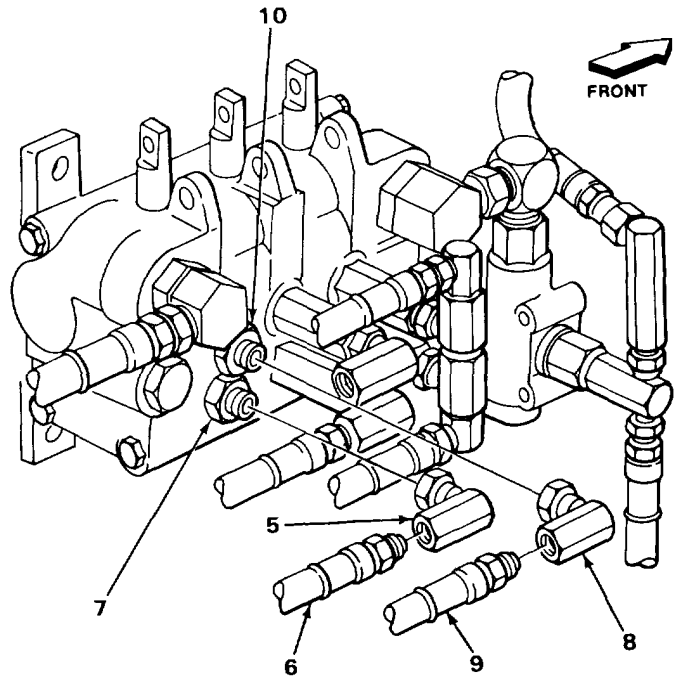
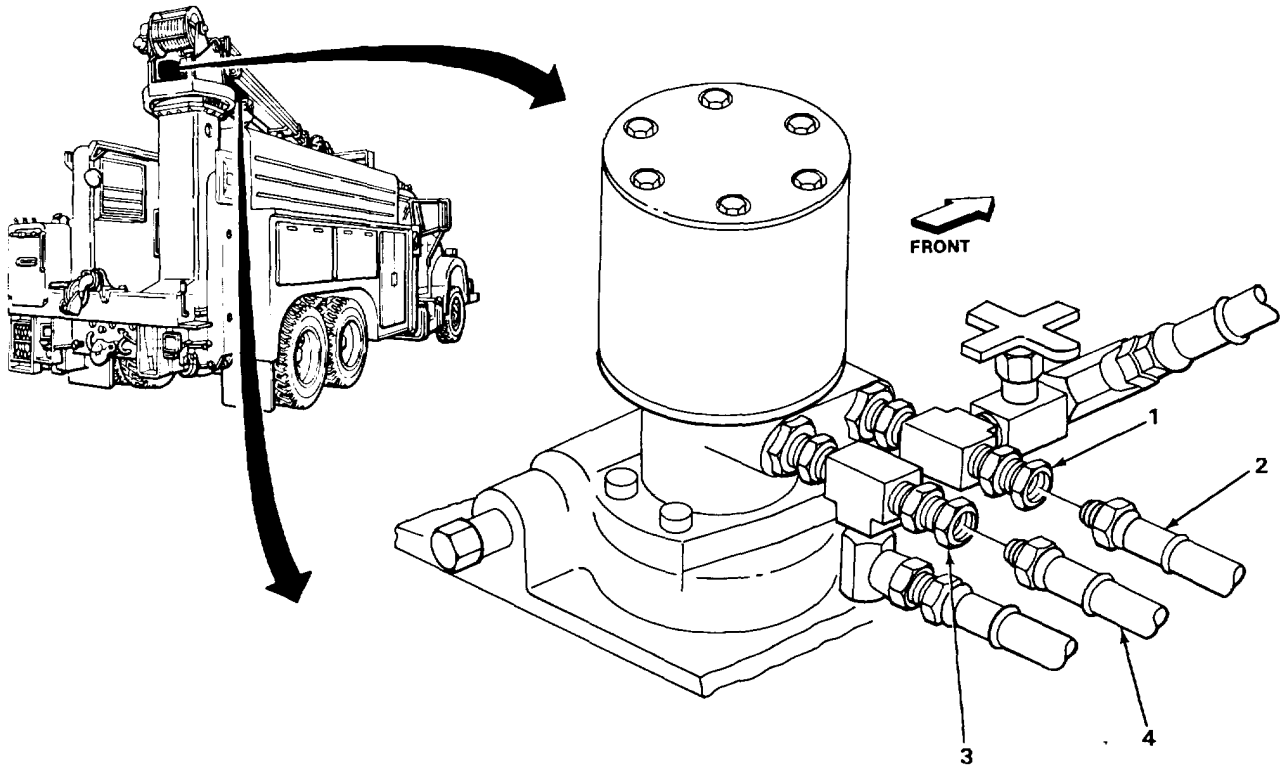
LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
5. Operator's console (7) and derrick mast (8)	Two control valve-to-modrock valve hose assemblies (2) and (4)	With help from assistant, pull out.	
6. 900 swivel adapter (9) motor hose assembly (10)	Modrock valve-to-turret rotation b. Tag hose (10).	a. Using 3/4 inch and 7/8-inch wrenches, unscrew and take off.	
7. 90% swivel adapter (11)	Modrock valve-to-turret rotation	a. Using 3/4 inch and 7/8-inch wrenches, unscrew and take off.	



TURRET ROTATION HYDRAULIC DRIVE LINES - CONTINUED

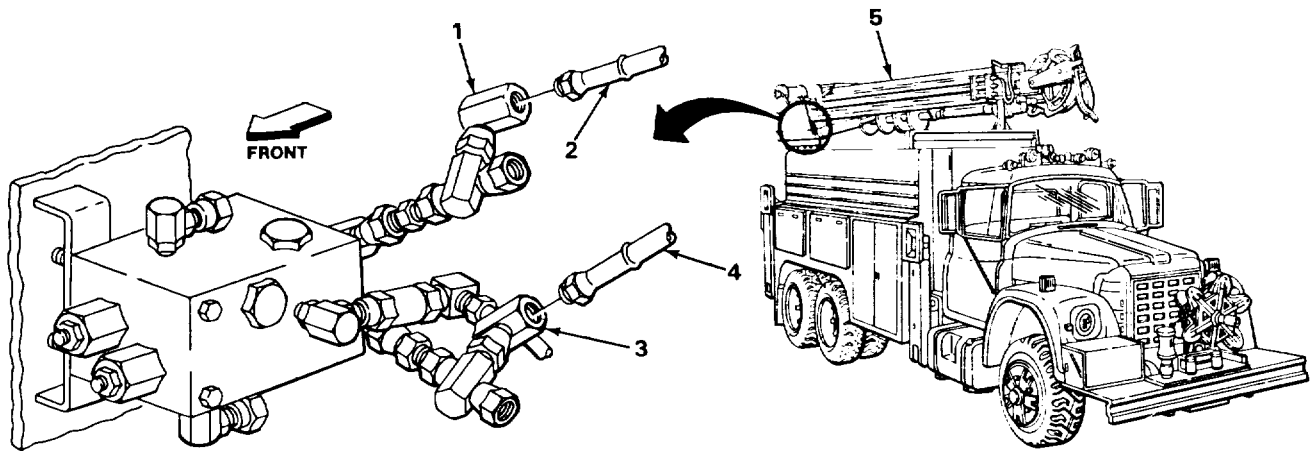
LOCATION	ITEM	ACTION	REMARKS
REMOVAL- CONTINUED			
8. Swivel adapter (1) turret rotation motor hose assembly (2)	Modrock valve-to- wrenches, unscrew and take off. b. Tag hose (2).	a. Using 7/8-inch and 11/16-inch	
9. Swivel adapter (3) turret rotation motor hose assembly (4)	Modrock valve-to- wrenches, unscrew and take off. b. Tag hose (4).	a. Using 7/8-inch and 11/16-inch	
10. 900 swivel adapter (5) modrock valve hose assembly (6)	Derrick operator's control valve-to-	Using 9/16-inch and 7/8-inch wrenches, unscrew part way.	
11. Adapter (7) adapter (5)	900 swivel and take off.	Using two 7/8-inch wrenches, unscrew	
12. 900 swivel adapter (5) modrock valve hose assembly (6)	Derrick operator's control valve-to-	a. Unscrew, and take off. b. Tag hose (6).	
13. 900 swivel adapter (8) modrock valve hose assembly (9)	Derrick operator's control valve-to-	Using 11/16-inch and 7/8-inch wrenches, unscrew part way.	
14. Adapter (10) adapter (8)	900 swivel and take off.	Using two 7/8-inch wrenches, unscrew	
15. 90% swivel adapter (8) modrock valve hose assembly (9)	Derrick operator's control valve-to-	a. Unscrew, and take off. b. Tag hose (9).	

REMOVAL - CONTINUED



TURRET ROTATION HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
16. 90% swivel adapter (1) modrock valve hose assembly (2)	Derrick operator's control valve-to- b. Tag hose (2).	a. Using 9/16-inch and 7/8-inch wrenches, unscrew and take off.	
17. 90% swivel adapter (3) modrock valve hose assembly (4)	Derrick operator's control valve-to- b. Tag hose (4).	a. Using 9/16-inch and 7/8-inch wrenches, unscrew and take off.	
18. Derrick leg (5)	All hose assemblies	Take off.	



CLEANING

WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

TURRET ROTATION HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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CLEANING - CONTINUED

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

- | | | | |
|-----|---------------------|---|--|
| 19. | All metal parts | a. Clean in drycleaning solvent.
b. | Wipe dry with clean, dry rags. |
| 20. | All hose assemblies | a. Clean in clean, soapy water.
b. Rinse in clean water.
c.
d. | Wipe connectors clean with clean rags dampened in drycleaning solvent.
Wipe dry with clean, dry rags. |

INSPECTION/REPLACEMENT

NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

Replace damaged or defective parts as necessary.

- | | | | |
|-----|---------------------|---|---------------------------|
| 21. | All hose assemblies | a. Look for cracks, breaks, and tears.
b. Look for loose connectors.
c. | Look for damaged threads. |
|-----|---------------------|---|---------------------------|

INSTALLATION

NOTE

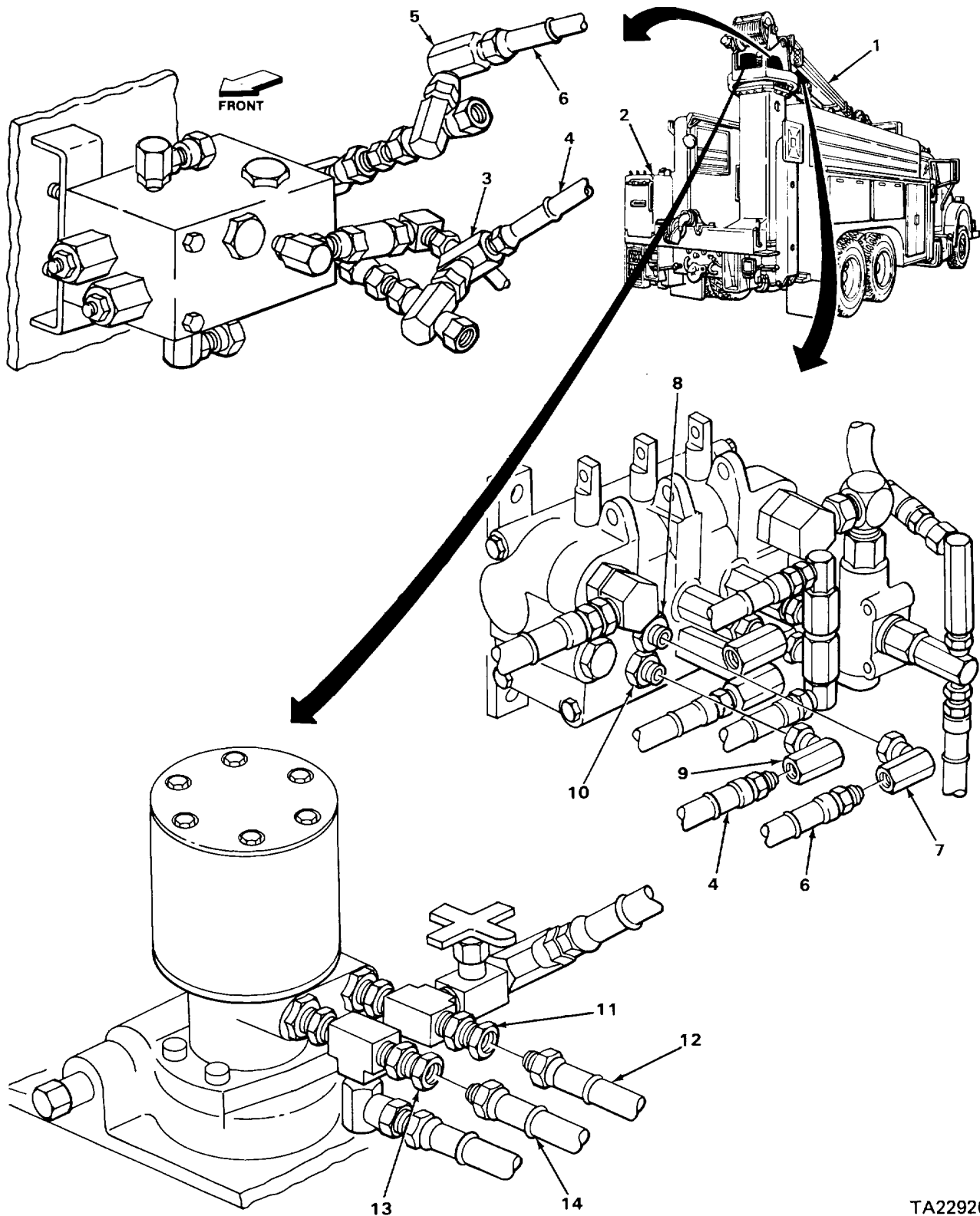
Before installing hose assemblies, wrap all clean external threads with two turns of teflon tape (page 2-142).

TURRET ROTATION HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
22.	Derrick leg (1) and operator's console (2)	All hose assemblies fish tape, put in position.	a. Check tags for correct location. b. With help from assistant, and using
23.	90% swivel adapter (3) modrock valve hose assembly (4)	Derrick operator's control valve-to- b. Screw on, and tighten using 9/16- inch and 7/8-inch wrenches.	a. Check tag for correct location, and take off.
24.	90% swivel adapter (5) modrock valve hose assembly (6)	Derrick operator's control valve-to- b. Screw on, and tighten using 9/16- inch and 7/8-inch wrenches.	a. Check tag for correct location, and take off.
25.	90% swivel adapter (7) modrock valve hose assembly (6)	Derrick operator's control valve-to- b. Screw on, and tighten using 11/16- inch and 7/8-inch wrenches.	a. Check tag for proper location, and take off.
26.	Adapter (8) adapter (7)	90% swivel 7/8-inch wrenches.	Screw on, and tighten using two
27.	90% swivel adapter (9) modrock valve hose assembly (4)	Derrick operator's control valve-to- b. Screw on, and tighten using 11/16- inch and 7/8-inch wrenches.	a. Check tag for proper location, and take off.
28.	Adapter (10) adapter (9)	90% swivel 7/8-inch wrenches.	Screw on, and tighten using two
29.	Swivel adapter (11) turret rotation motor hose assembly (12)	Modrock valve-to- take off. b. Screw on, and tighten using 11/16-inch and 7/8-inch wrenches.	a. Check tag for proper location, and
30.	Swivel adapter(13) turret rotation motor hose assembly (14)	Modrock valve-to- take off. b. Screw on, and tighten using 11/16-inch and 7/8-inch wrenches.	a. Check tag for proper location, and

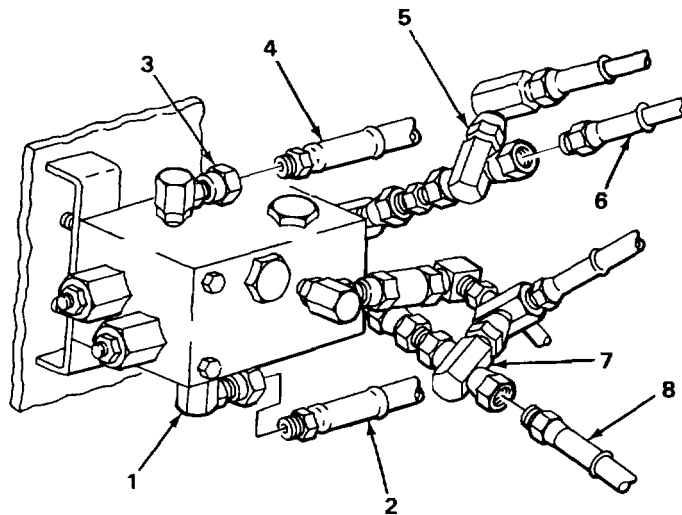
TURRET ROTATION HYDRAULIC DRIVE LINES - CONTINUED

INSTALLATION - CONTINUED



TURRET ROTATION HYDRAULIC DRIVE LINES - CONTINUED

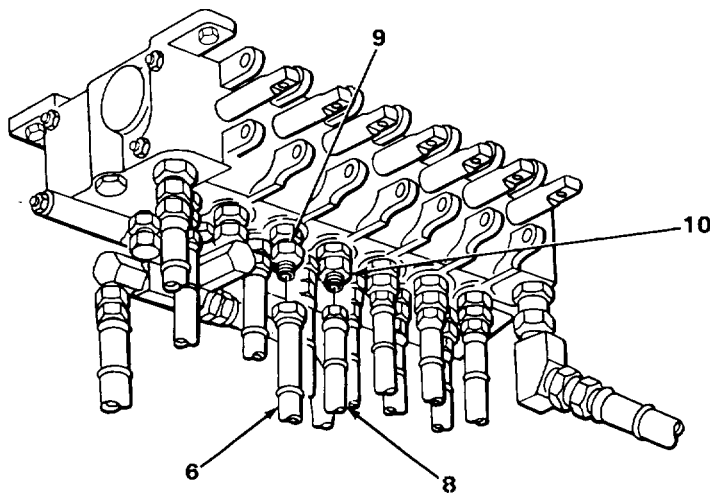
LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
31. 90% swivel adapter (1) motor hose assembly (2)	Modrock valve-to-turret rotation	a. Check tag for proper location, and take off. b. Screw on, and tighten using 3/4-inch and 7/8-inch wrenches.	
32. 90% swivel adapter (3) motor hose assembly (4)	Modrock valve-to-turret rotation	a. Check tag for proper location, and take off. b. Screw on, and tighten using 3/4-inch and 7/8-inch wrenches.	
33. 90% swivel adapter (5) hose assembly (6)	Control valve-to-modrock valve	a. Check tag for proper location, and take off. b. Screw on, and tighten using 1 1/16-inch and 7/8-inch wrenches.	
34. 90% swivel adapter (7) hose assembly (8)	Control valve-to-modrock valve	a. Check tag for proper location, and take off. b. Screw on, and tighten using 1 1/16-inch and 7/8-inch wrenches.	



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TURRET ROTATION HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
35. Swivel adapter (9) modrock valve hose assembly (6)	Control valve-to- take off.	a. Check tag for proper location, and b. Screw on, and tighten using 11116-inch and 718-inch wrenches.	
36. Swivel adapter (10) modrock valve	Control valve-to- take off.	a. Check tag for proper location, and	



NOTE

FOLLOW-ON MAINTENANCE:

1. Fill with hydraulic fluid (LO 9-2320-269-12).
2. Start engine, operate auxiliary equipment (TM 9-2320-269-10), and check for leaks.
3. Install console cover (page 2-1092).

TA229269

TASK ENDS HERE

TURRET WINCH HYDRAULIC DRIVE LINES

This task covers:

- a. Removal (page 2-1058)
- b. Cleaning (page 2-1061)
- c. Inspection/Replacement (page 2-1062)
- d. Installation (page 2-1063)

INITIAL SETUP

Tools

- Fish tape, 50-ft reel
- Pail, utility, 3-qt
- Wrench, open-end, 7/8-inch
- Wrench, open-end, 1-inch

Materials/Parts - Continued

- Tags, marking (item 29, appendix C)
- Tape, teflon (item 32, appendix C)

Personnel Required

Two

Materials/Parts

- Detergent, non-sudsing (item 12,
- Rags, wiping (item 24, appendix C)
- Solvent, drycleaning (item 28, (page 2-1092) appendix C)

Equipment Condition

Console cover removed

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

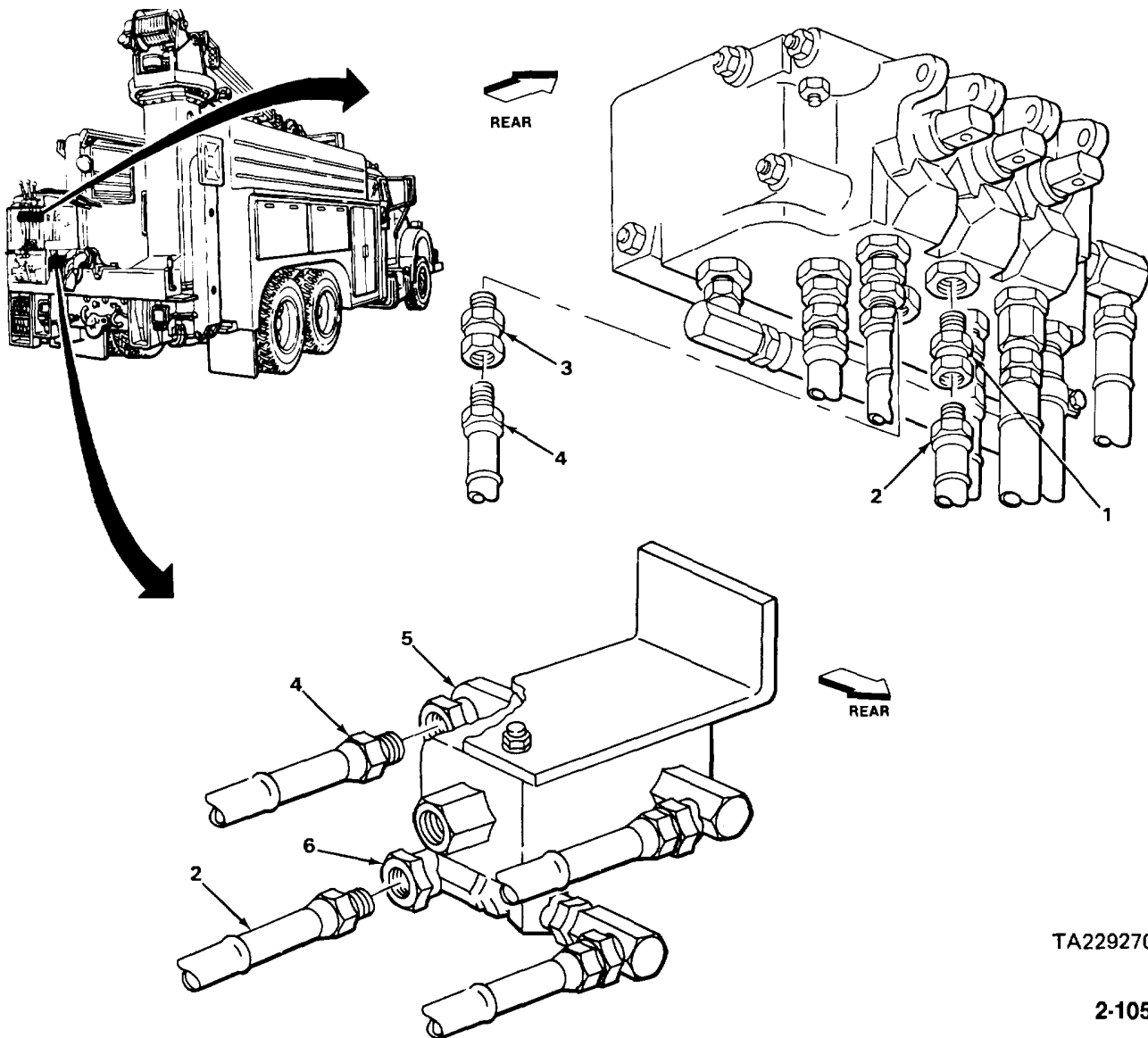
- | | | |
|---|--|--|
| <p>1. Adapter (1)
control valve-to-turret winch relief valve hose assembly (2)</p> | <p>Turret winch fluid.</p> <p>b. Using 7/8-inch and 1-inch wrenches, take off.</p> <p>c. Tag hose (2).</p> <p>d.</p> | <p>a. Position pail to catch hydraulic fluid.</p> <p>Dispose of drained fluid.</p> |
| <p>2. Adapter (3)
control valve-to-turret winch relief valve hose assembly (4)</p> | <p>Turret winch take off.</p> <p>b. Tag hose (4).</p> | <p>a. Using 7/8-inch and 1-inch wrenches,</p> |

TURRET WINCH HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL - CONTINUED

- | | | | |
|--|--|---|--|
| <p>3. 90% swivel adapter (5)
turret winch relief valve hose assembly (4)</p> | <p>Turret winch control valve-to-
b. Tag hose (4).</p> | <p>a. Using 7/8-inch and 1-inch wrenches,
take off.</p> | |
| <p>4. 90% swivel adapter (6)
turret winch</p> | <p>Turret winch control valve-to-
b. Tag hose (2).</p> | <p>a. Using 7/8-inch and 1-inch wrenches,
take off.</p> | |



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2-1059

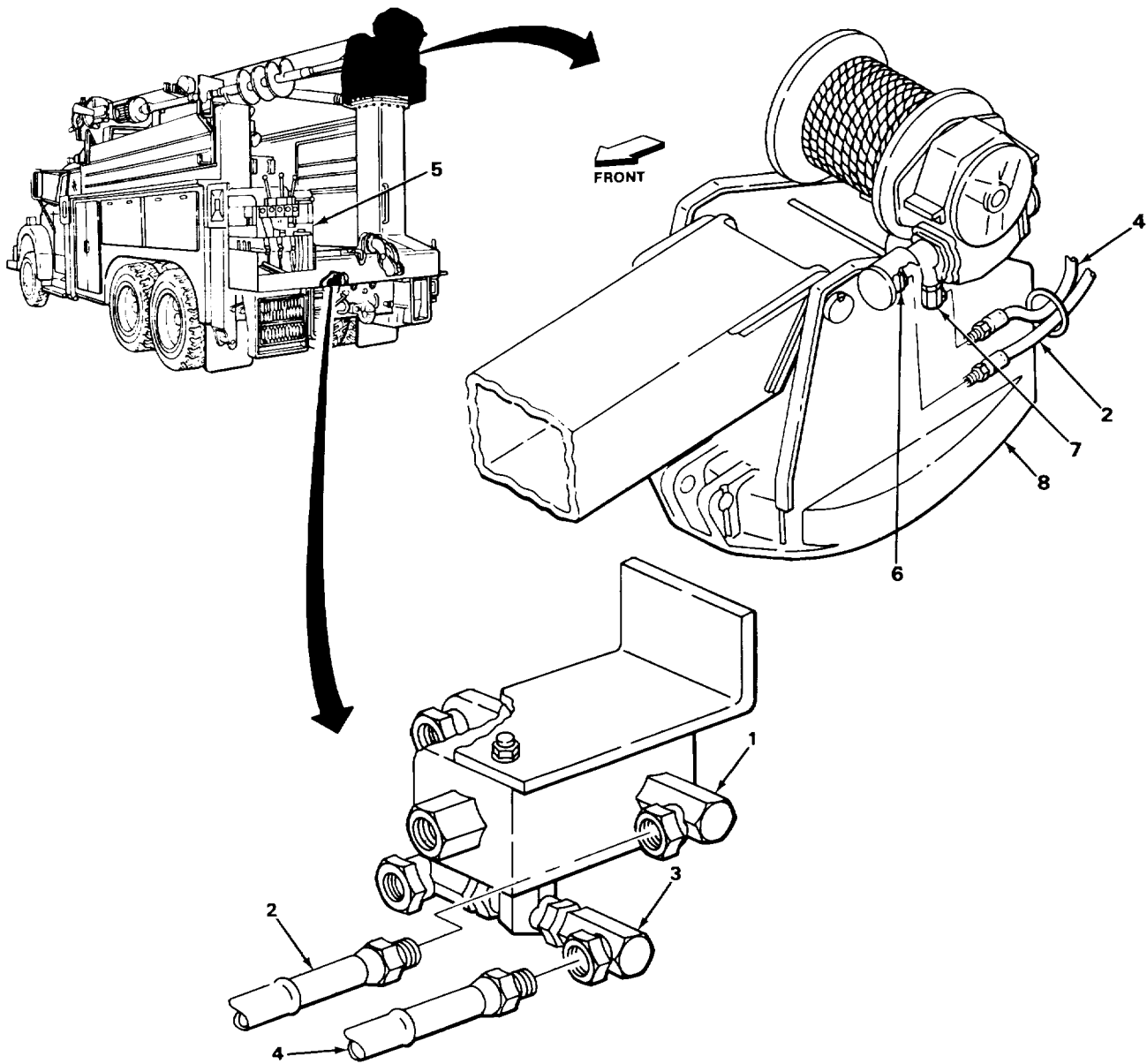
TURRET WINCH HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL- CONTINUED			
5.	90% swivel adapter (1) turret winch motor hose assembly (2)	Turret winch relief valve-to- b. Tag hose (2).	a. Using 7/8-inch and 1-inch wrenches, unscrew and take off.
6.	90% swivel adapter (3) turret winch motor hose assembly (4)	Turret winch relief valve-to- b. Tag hose(4).	a. Using 7/8-inch and 1-inch wrenches, take off.
7.	Console (5) and 90% swivel adapter (1) relief valve hose assemblies (2) and (4)	Two turret winch control valve-to-turret winch	With help from assistant, take out.
8.	90% swivel adapter (6) winch motor hose assembly (2)	Turret winch relief valve-to-turret b. Tag hose (2).	a. Using 7/8-inch and 1-inch wrenches, take off.
9.	90% swivel adapter (7) winch motor hose assembly (4)	Turret winch relief valve-to-turret b. Tag hose (4).	a. Using 7/8-inch and 1-inch wrenches, unscrew take off.
10.	Derrick mast (8) and operator's console (5) motor hose assemblies (2) and (4)	Two turret winch relief valve-to-turret winch	With help from assistant, take off.

TURRET WINCH HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL - CONTINUED



CLEANING

WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

TURRET WINCH HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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CLEANING - CONTINUED

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

11.	All metal parts	<ul style="list-style-type: none"> a. Clean in drycleaning solvent. b. Wipe dry with clean, dry rags. 	
12.	All hose assemblies	<ul style="list-style-type: none"> a. Clean in clean, soapy water. b. Rinse in clean water. c. Wipe connectors clean with clean rags dampened in drycleaning solvent. d. Wipe dry with clean, dry rags. 	

INSPECTION/REPLACEMENT

NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

Replace damaged or defective parts as necessary.

13.	All hose assemblies	<ul style="list-style-type: none"> a. Look for cracks, breaks, tears, and brittleness. b. Look for loose connectors. c. Look for damaged threads. 	
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TURRET WINCH HYDRAULIC DRIVE LINES - CONTINUED

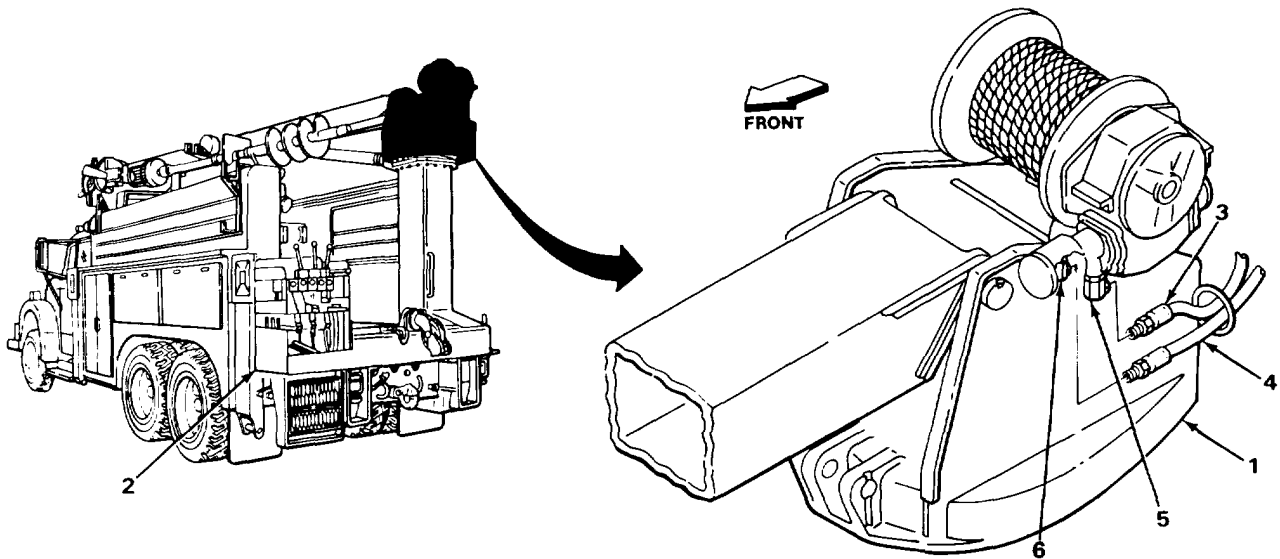
LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION

NOTE

Before installing hose assemblies, wrap all clean external threads with two turns of teflon tape (page 2-142).

- | | | |
|--|--|--|
| <p>14. Derrick mast (1) and operator's console (2)</p> | <p>Two turret winch relief valve-to-turret winch motor hose assemblies (3) and (4)</p> | <p>a. Check all tags for proper location.
b. With help from assistant, and using fish tape, put in position.</p> |
| <p>15. 90° swivel adapter (5)</p> | <p>Turret winch relief valve-to-turret winch motor hose assembly (3)</p> | <p>a. Take off tag.
b. Screw on, and tighten using 1-inch and 7/8-inch wrenches.</p> |
| <p>16. 90° swivel adapter (6) winch motor hose</p> | <p>Turret winch relief valve-to-turret and 7/8-inch wrenches.</p> | <p>a. Take off tag.
b. Screw on, and tighten using 1-inch and 7/8-inch wrenches.</p> |

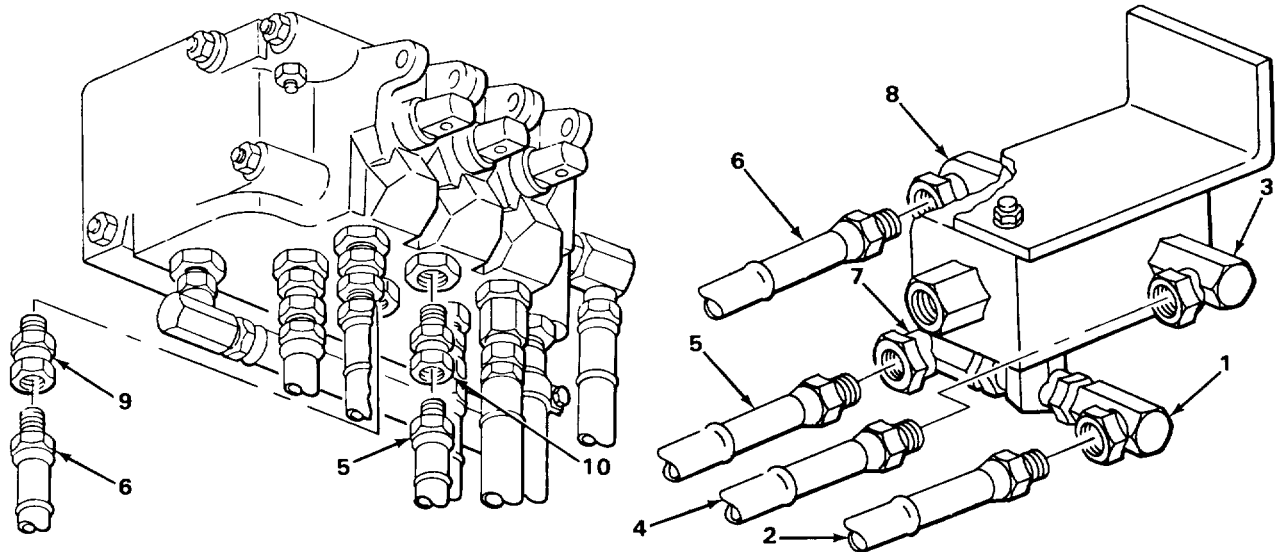


TURRET WINCH HYDRAULIC DRIVE LINES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
17. 90° swivel adapter (1)	Turret winch relief valve-to-turret winch motor hose assembly (2)	a. Take off tag. b. Screw on, and tighten using 7/16-inch and 1-inch wrenches.
18. 90° swivel adapter (3)	Turret winch relief valve-to-turret winch motor hose assembly (4)	a. Take off tag. b. Screw on, and tighten using 7/8-inch and 1-inch wrenches.
19.	Two turret winch control valve-to-turret winch relief valve hose assemblies (5) and (6)	a. Check all tags for proper location. b. With help from assistant, put in position.
20. 90° swivel adapter (7)	Turret winch control valve-to-turret winch relief valve hose assembly (5)	a. Take off tag. b. Screw on, and tighten using 7/8-inch and 1-inch wrenches.
21. 90° swivel adapter (8)	Turret winch control valve-to-turret winch relief valve hose assembly (6)	a. Take off tag. b. Screw on, and tighten using 7/8-inch and 1-inch wrenches.
22. Adapter (9)	Turret winch control valve-to-turret winch relief valve hose assembly (6)	a. Take off tag. b. Screw in, and tighten using 7/8-inch and 1-inch wrenches.
23. Adapter (10)	Turret winch control valve-to-turret winch relief valve hose assembly (5)	a. Take off tag. b. Screw in, and tighten using 7/8-inch and 1-inch wrenches.

TURRET WINCH HYDRAULIC DRIVE LINES - CONTINUED

INSTALLATION - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE:

1. Fill with hydraulic fluid (LO 9-2320-269-12).
2. Start engine, operate auxiliary equipment (TM 9-2320-269-10), and check for leaks.
3. Install console cover (page 2-1092).

TASK ENDS HERE

SWIVEL SHEAVE

This task covers:

- | | | |
|----------------|---------------|------------------------------|
| a. Removal | c. Inspection | e. Pre-Load Check of Bearing |
| b. Disassembly | d. Reassembly | f. Installation |

INITIAL SETUP

Tools

Drift, brass, 1 1/2-inch
 Hammer, ball-peen, machinist's
 Handle, ratchet, 3/8-inch drive
 Key, socket-head screw, 5/16-inch
 Pliers, slip-joint, angle-nose

Tools - Continued

Retrieving tool, magnetic
 Socket, 3/8-inch drive, 9/16-inch
 Wrench, adjustable
 Wrench, open-end, 7/16-inch

TA229273

SWIVEL SHEAVE - CONTINUED

INITIAL SETUP - Continued

Materials/Parts

Personnel Required

Rags, wiping (item 24, appendix C)
Solvent, drycleaning (item 28, appendix C)

Two

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

REMOVAL

- | | | | |
|----|--|----------------------------|--|
| 1. | Swivel sheave assembly (1) and take out. | Two screws (2) | a. Set handle (3) down.
b. Using adjustable wrench, unscrew |
| 2. | Rear crossmember (4) | Swivel sheave assembly (1) | Move away from crossmember (4) until guide studs (5) clear it, and take off. |

DISASSEMBLY

- | | | | |
|----|---------------------------|--------------------|---|
| 3. | Swivel sheave bracket (6) | Grease fitting (7) | Using 7/16-inch wrench, unscrew and take off. |
|----|---------------------------|--------------------|---|

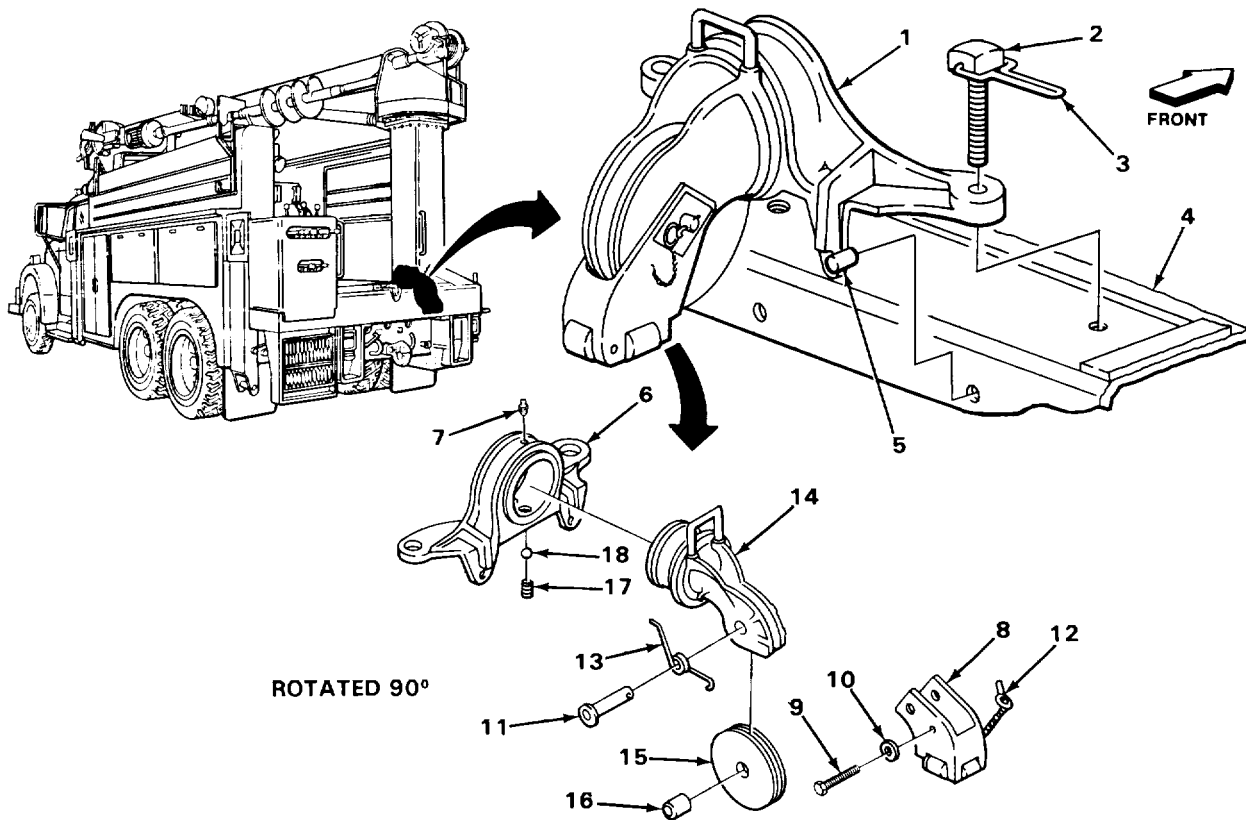
WARNING

Be careful when removing screw and washer holding roller guide spring. Spring is under tension and can pop off and strike you causing injury.

- | | | | |
|----|----------------------------------|--|---|
| 4. | Roller guide arm (8) washer (10) | Screw (9) and unscrew slowly and take off. | Using 9/16-inch socket and handle, |
| 5. | Pin assembly (11) | Pin with chain (12) | Using slip-joint pliers, pull out. |
| 6. | Roller guide arm (8) | Pin assembly (11) and roller guide spring (13) | a. With help from assistant and using hammer and drift, drive out assembly (11).
b. At the same time, using slip-joint pliers, pull out spring (13). |
| 7. | Swivel sheave arm (14) | Roller guide arm (8) | Take off. |
| 8. | Sheave wheel (15) | Sleeve (16) | Using hammer and drift, tap out. |

SWIVEL SHEAVE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
DISASSEMBLY - CONTINUED			
9.	Swivel sheave arm (14)	Take off.	
10.	Swivel sheave bracket (6)	Two plugs (17) take off.	Using 5/16-inch key, unscrew and
11.	62 ball bearings (18)		Using retrieving tool, take out through plug (17) holes, moving arm (14) and bracket (6) as necessary.
12.	Swivel sheave	Take out.	



SWIVEL SHEAVE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

CLEANING

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

- | | | | |
|-----|-----------------|----------------------------------|-----------------------------------|
| 13. | All metal parts | a. Clean in drycleaning solvent. | b. Wipe dry with clean, dry rags. |
|-----|-----------------|----------------------------------|-----------------------------------|

INSPECTION/REPLACEMENT

NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

Replace damaged or defective parts as necessary.

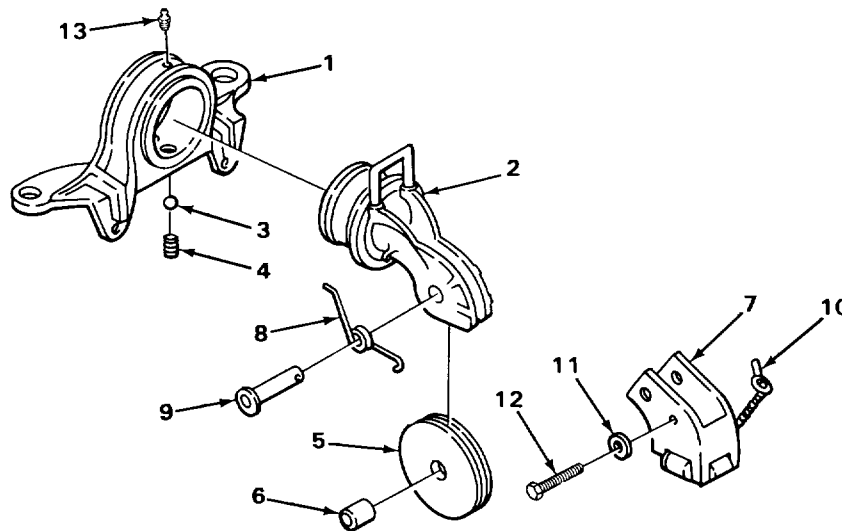
- | | | | |
|-----|-----------|---|--|
| 14. | All parts | Look for cracks, breaks, dents, and distortion. | |
|-----|-----------|---|--|

ASSEMBLY

- | | | | |
|-----|---------------------------|-----------------------|--|
| 15. | Swivel sheave bracket (1) | Swivel sheave arm (2) | Put in position. |
| 16. | 62 ball bearings (3) | | Put in one at a time through plug holes. |
| 17. | Two plugs (4) | | Screw in, and tighten using 5/16-inch key. |
| 18. | Swivel sheave arm (2) | Sheave wheel (5) | Put in position. |
| 19. | Sheave wheel (5) | Sleeve (6) | a. Line up holes.
b. Drive in using drift and hammer. |

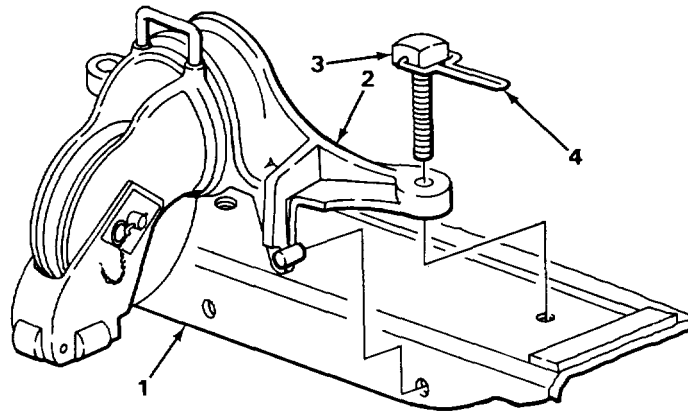
SWIVEL SHEAVE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
ASSEMBLY - CONTINUED			
20.	Swivel sheave arm (2)	Roller guide arm (7)	Put in position.
21.		Roller guide spring (8)	Put in position.
22.		Pin assembly (9)	Using hammer, tap through.
23.	Pin assembly (9)	Pin with chain (10)	Put in.
24.	Roller guide arm (7)	Washer (11) and screw (12)	Screw in, and tighten using 9/16-inch socket and handle.
25.	Swivel sheave bracket (1)	Grease fitting (13)	Screw in, and tighten using 7/16-inch wrench.



SWIVEL SHEAVE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
26. Rear cross-member (1)	Swivel sheave assembly (2)	Put in position.	
27. Swivel sheave	Two screws (3)	a. Set handle (4) upright. b. Screw in, and tighten using adjustable wrench	



TASK ENDS HERE

RETURN LINE FILTER

This task covers:

- | | | |
|----------------|---------------|------------------------------|
| a. Removal | c. Inspection | e. Pre-Load Check of Bearing |
| b. Disassembly | d. Reassembly | f. Installation |

INITIAL SETUP

Tools

- Key, socket-head screw, 3/8-inch
- Pail, utility, 3-qt
- Wrench, open-end, 7/16-inch

Personnel Required

One

Materials/Parts

- Filter element
- Packing, preformed
- Rags, wiping (item 24, appendix C)
- Tape, teflon (item 32, appendix C)

Hydraulic oil tank shutoff valve turned off (TM 9-2320-269-10).

RETURN LINE FILTER - CONTINUED

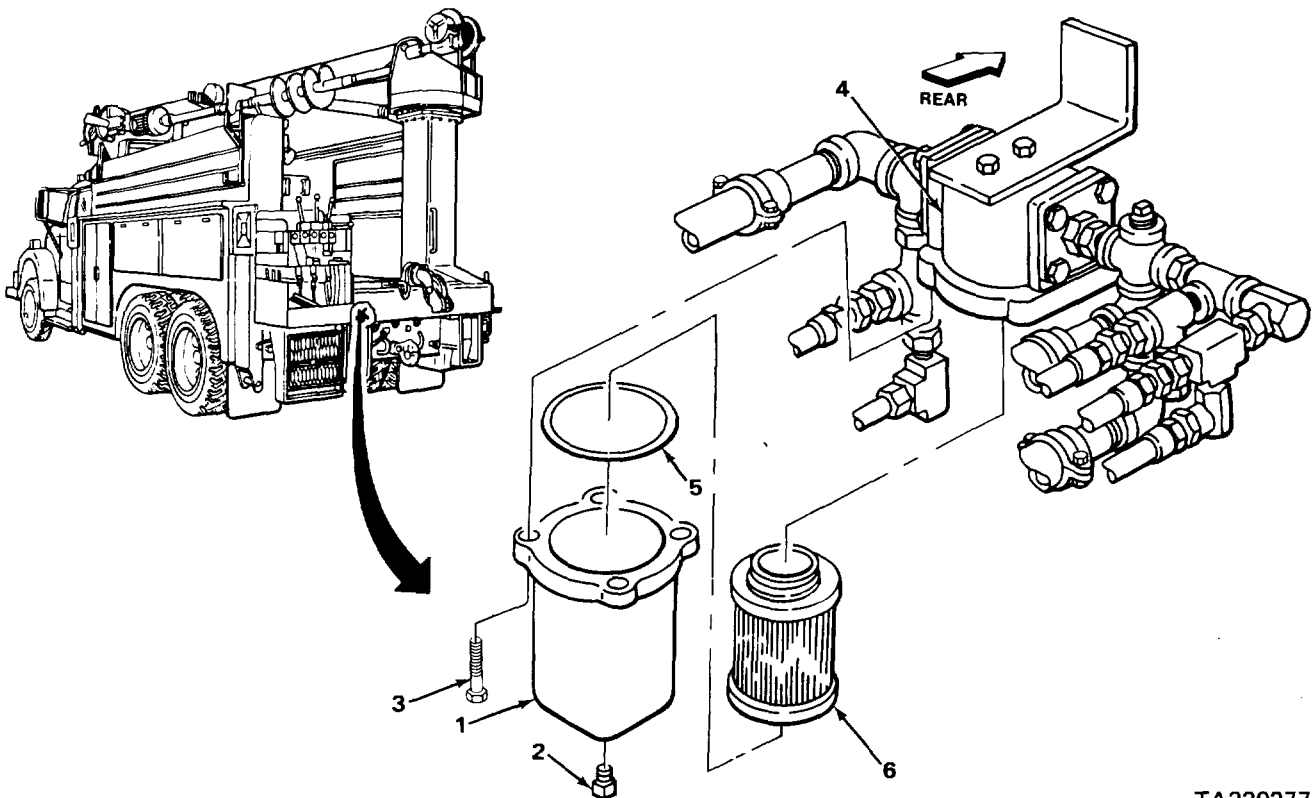
LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

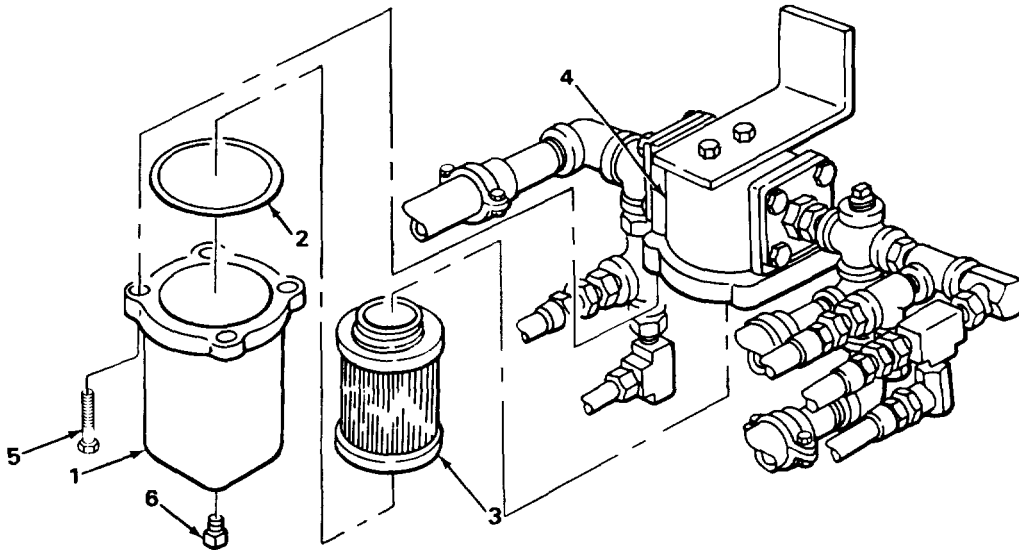
- | | | |
|---|--|---|
| <p>1. Filter housing (1)
and take out.
c. Dispose of drained fluid.</p> | <p>Drain plug (2)</p> | <p>a. Place pail underneath to catch draining fluid.
b. Using 7/16-inch wrench, unscrew</p> |
| <p>2. Four screws (3)
out.</p> | <p>Using 3/8-inch key, unscrew and take</p> | |
| <p>3. Filter body (4)
and packing (5)</p> | <p>Filter housing (1)
b. Get rid of packing (5).</p> | <p>a. Take off.</p> |



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RETURN LINE FILTER - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
5.	Filter housing (1)	New packing (2)	a. Wipe housing (1) clean with clean, dry rags. b. Put packing (2) in groove.
6.		New filter element (3)	Put in.
7.	Filter	Filter housing (1)	Place in position.
8.	Filter	Four screws (5)	Screw in, and tighten using 3/8-inch key.
9.		Drain plug (6)	a. Wrap threads with two turns of teflon tape (page 2-142). b. Screw in, and tighten using 7/16-inch wrench.



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TA229278

RETURN LINE FILTER - CONTINUED

INSTALLATION - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Turn on hydraulic oil tank shutoff valve (TM 9-2320-269-10).
2. Start engine, operate auxilliary equipment (TM 9-2320-269-10), and check for leaks.

TASK ENDS HERE

BODY WINCH RELIEF VALVE

This task covers:

- | | | |
|----------------|---------------|------------------------------|
| a. Removal | c. Inspection | e. Pre-Load Check of Bearing |
| b. Disassembly | d. Reassembly | f. Installation |
-

INITIAL SETUP

Tools

- Caps, jaw, vise
- Handle, ratchet, 3/8-inch drive
- Key, screw, socket-head, 3/16-inch
- Pail, utility, 3-qt
- Pressure gage with hoses and hand shutoff valve, 5000 psi capacity
- Socket, 3/8-inch drive, 1/2-inch
- Vise, machinist's
- Wrench, open-end, 1/2-inch
- Wrench, open-end, 9/16-inch
- Wrench, open-end, 7/8-inch
- Wrench, open-end, 1-inch

Materials/Parts

- Lockwasher, valve and bracket (two required)
- Plugs, dust
- Rags, wiping (item 24, appendix C)
- Solvent, drycleaning (item 28, appendix C)
- Tags, marking (item 29, appendix C)
- Tape, teflon (item 32, appendix C)

Personnel Required

Two

LOCATION	ITEM	ACTION	REMARKS
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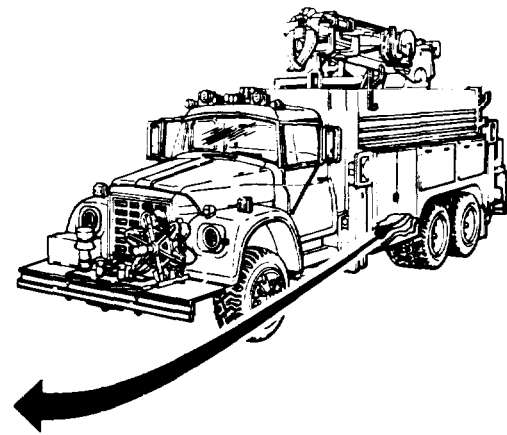
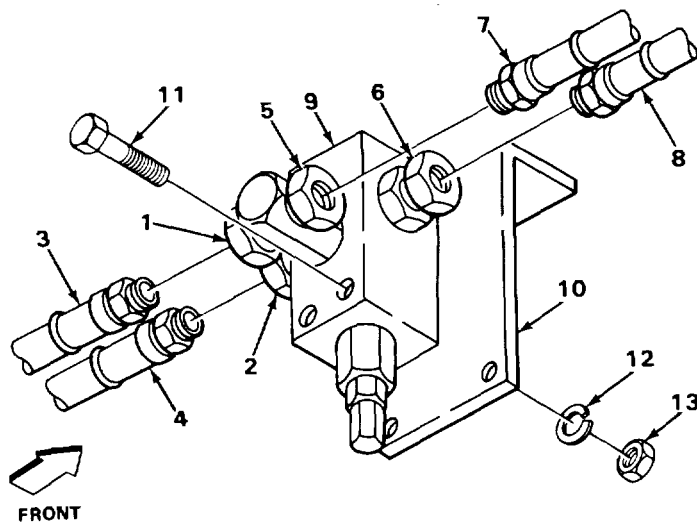
REMOVAL

WARNING

Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

BODY WINCH RELIEF VALVE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
1. Two swivel adapters (1) and (2)	Two hose assemblies (3) and (4)	a. Place pail underneath to catch draining fluid. b. Using 7/8-inch and 1-inch wrenches, c. Tag hoses (3) and (4). d. Allow fluid to drain.	
2. Two swivel adapters (5) and (6)	Two hose assemblies (7) and (8)	a. Using 7/8-inch and 1-inch wrenches, unscrew and take off. b. Tag hoses (7) and (8). c. Allow fluid to drain. d. Remove pail, and get rid of fluid.	
3. Body winch relief valve (9) and bracket (10)	Two screws (11), lockwashers (12), and nuts (13)	a. Using 1/2-inch socket, handle, and 1/2-inch wrench, unscrew and take off. b. Get rid of lockwashers (12).	
4. Bracket (10)	Body winch	Take off.	



BODY WINCH RELIEF VALVE -CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
5. Body winch relief valve (9)	Four swivel adapters (1), (2), (5), and (6)	a. Secure valve (9) in vise with jaw caps. b. Using 1-inch wrench, unscrew and take out. c. Plug openings with dust plugs. d. Take valve (9) out of vise.	

CLEANING

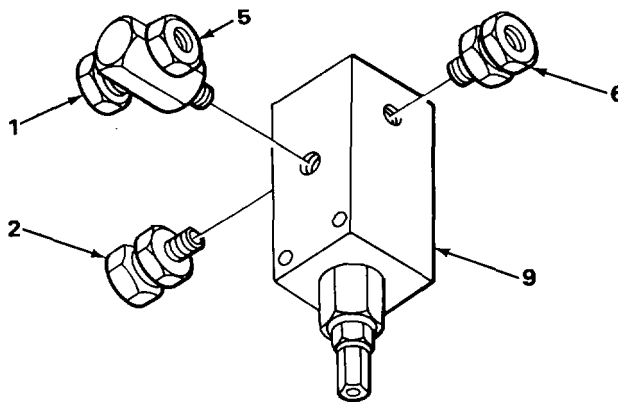
WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

- | | | |
|----|-----------------|---|
| 6. | All metal parts | a. Clean in drycleaning solvent.
b. Wipe dry with clean, dry rags. |
|----|-----------------|---|



2-1075

TA229280

BODY WINCH RELIEF VALVE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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INSPECTION/REPLACEMENT

NOTE

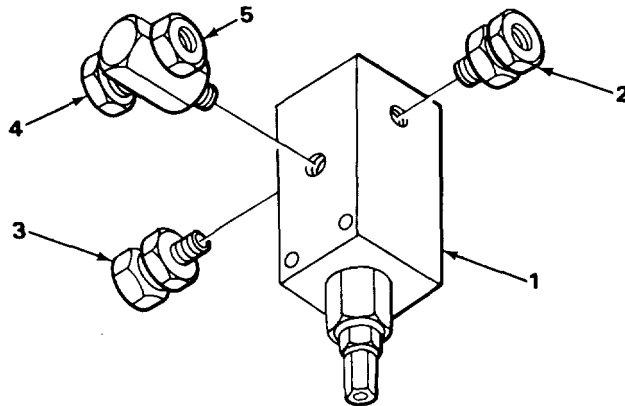
For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

Replace damaged or defective parts as necessary.

7.	Body winch relief valve (1)	Check for cracks, breaks, dents, and stripped threads.
8.	All threaded parts	Look for stripped and gouged threads.

INSTALLATION

9. Body winch relief valve (1)	Four swivel adapters (2), (3), (4), and (5)	<ol style="list-style-type: none"> a. Take out dust plugs. b. Wrap threads with two turns of teflon tape (page 2-142). c. Secure valve (1) in vise with jaw caps. d. Screw in, and tighten using 1-inch wrench. e. Take valve (1) out of vise.
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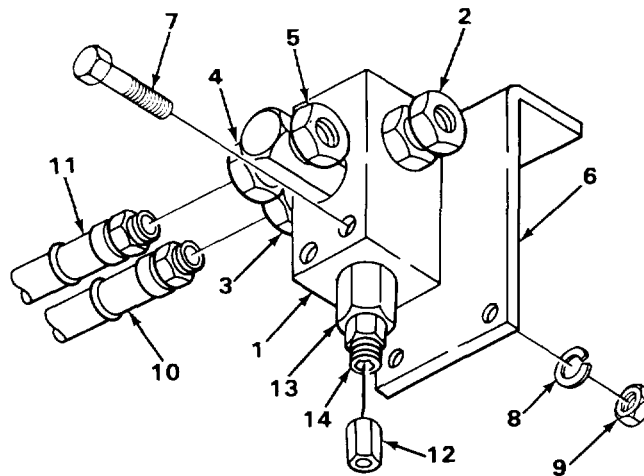


10. Bracket (6)	Body winch relief valve (1)	Put in position.
11. Body winch relief valve (1) and bracket (6)	Two screws (7), new lockwashers (8), and nuts(9)	Screw in, and tighten using 11/2-inch wrench, 1/2-inch socket, and handle.

TA229281

BODY WINCH RELIEF VALVE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
12. Two adapters (3) and (4)	Two hose assemblies (10) and (11)	a. Check tags for correct location, and take off. b. Screw on, and tighten 7/8-inch and 1-inch wrenches.	
ADJUSTMENT			
13. Body winch relief valve (1)	Two adapters (2) and (5)	a. Connect inlet hose of pressure gage and shutoff valve to adapter (5) and outlet hose to adapter (2). b. Start engine, and engage PTO (TM 9-2320-269-10).	
14.	Cap (12)	a. Using 9/16-inch wrench, unscrew and take off. b. Slowly close shutoff valve part way to build up pressure.	
15. Jamnut (13)	Adjusting screw (14)	Using 3/16-inch key and 9/16-inch wrench, unscrew part way.	

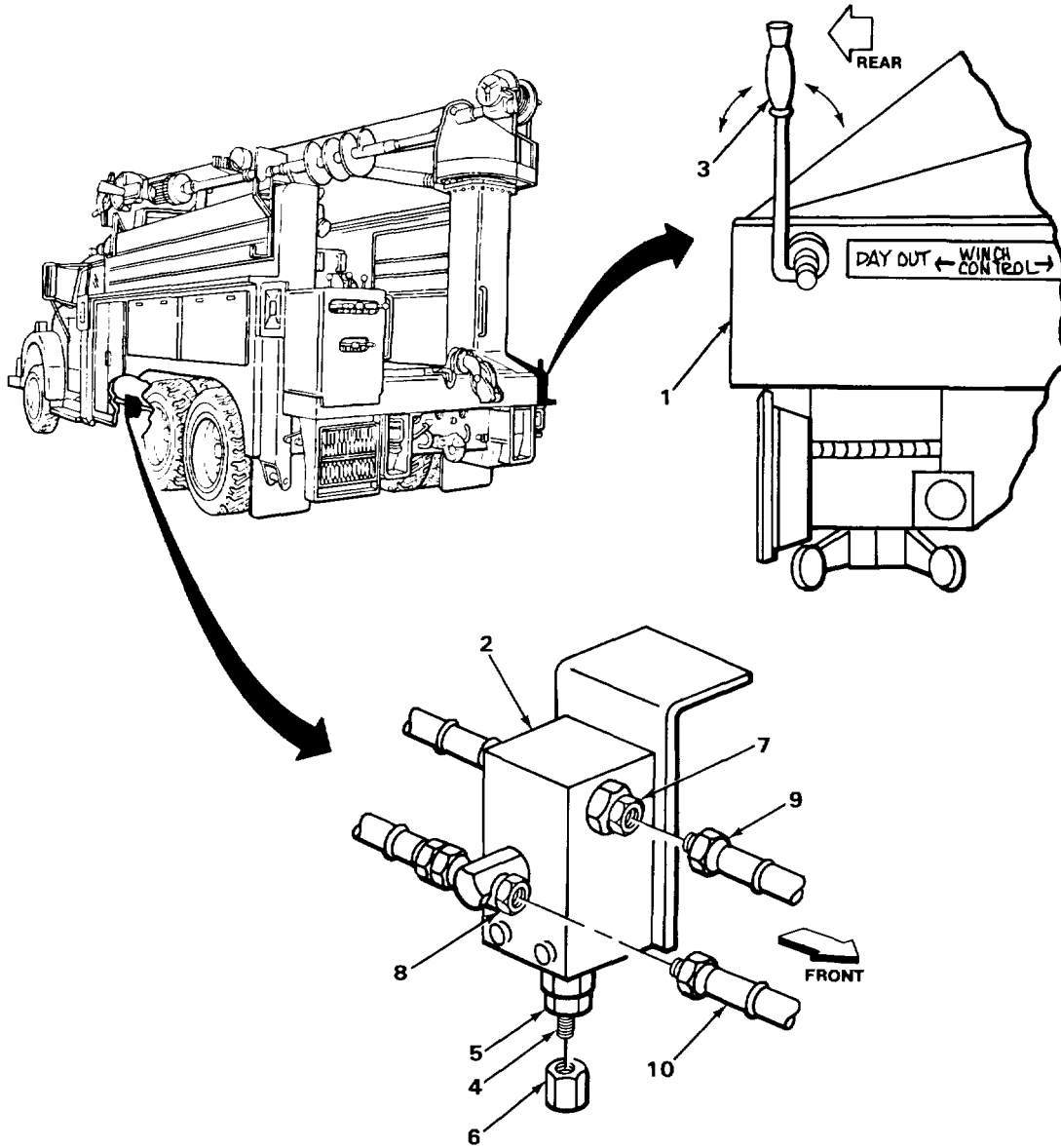


BODY WINCH RELIEF VALVE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
ADJUSTMENT - CONTINUED			
<u>WARNING</u>			
Stay clear of pressure gage, shutoff valve, and hoses as assistant moves winch levers. Pressure could cause gage or valve to burst causing injury to you or others.			
NOTE			
Turning adjusting screw clockwise will increase relief valve holding pressure. Turning adjusting screw counterclockwise will decrease pressure.			
16. Frame (1) and body winch relief valve (2)	Body winch control lever (3) and adjusting screw (4)	<ul style="list-style-type: none"> a. While assistant shifts lever (3) in three second intervals from PAYOUT to TAKEUP and TAKEUP to PAYOUT, watch pressure gage. b. Using 3/16-inch key, turn screw (4) until pressure gage reading remains steady. 	Pressure gage reading should be 2800 psi, +/- 50 psi (19306 kPa, +/- 344 kPa).
17. Body winch relief valve (2)	Jamnut (5) and adjusting screw (4)	Tighten using 9/16-inch wrench while holding screw (4) with 3/16-inch wrench and 3/16-inch key.	
18. Adjusting screw (4)	Cap (6)	<ul style="list-style-type: none"> a. Screw on, and tighten using 9/16-inch wrench. b. Disengage PTO, and shut down engine (TM 9-2320-269-10). 	
19. Body winch relief valve (2)	Two adapters (7) and (8)	Remove test equipment.	
20. Two adapters (7) and (8)	Two hose assemblies (9) and (10)	<ul style="list-style-type: none"> a. Check tags for correct location. b. Screw on, and tighten using 7/8-inch and 1-inch wrenches. 	

BODY WINCH RELIEF VALVE - CONTINUED

ADJUSTMENT - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE:

1. Fill with hydraulic fluid (LO 9-2320-269-12).
2. Operate winch (TM 9-2320-269-10), and check for proper operation and leaks.

TASK ENDS HERE

TA229283

TURRET WINCH RELIEF VALVE

This task covers:

- | | | |
|----------------|---------------|------------------------------|
| a. Removal | c. Inspection | e. Pre-Load Check of Bearing |
| b. Disassembly | d. Reassembly | f. Installation |

INITIAL SETUP

Tools

- Caps, jaw, vise
- Gage, pressure, 5000 psi capacity with hoses and hand shutoff valve
- Handle, ratchet, 3/8-inch drive
- Key, socket-head, 3/16-inch drive
- Pail, utility, 3-qt
- Socket, 3/8-inch drive, 1/2-inch
- Vise, machinist's
- Wrench, open-end, 1/2-inch
- Wrench, open-end, 9/16-inch
- Wrench, open-end, 7/8-inch
- Wrench, open-end, 1-inch

Materials/Parts

- Lockwasher, valve and bracket (two required)
- Plugs, dust
- Rags, wiping (item 24, appendix C)
- Solvent, drycleaning (item 28, appendix C)
- Tags, marking (item 29, appendix C)
- Tape, teflon (item 32, appendix C)

Personnel Required

Two

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

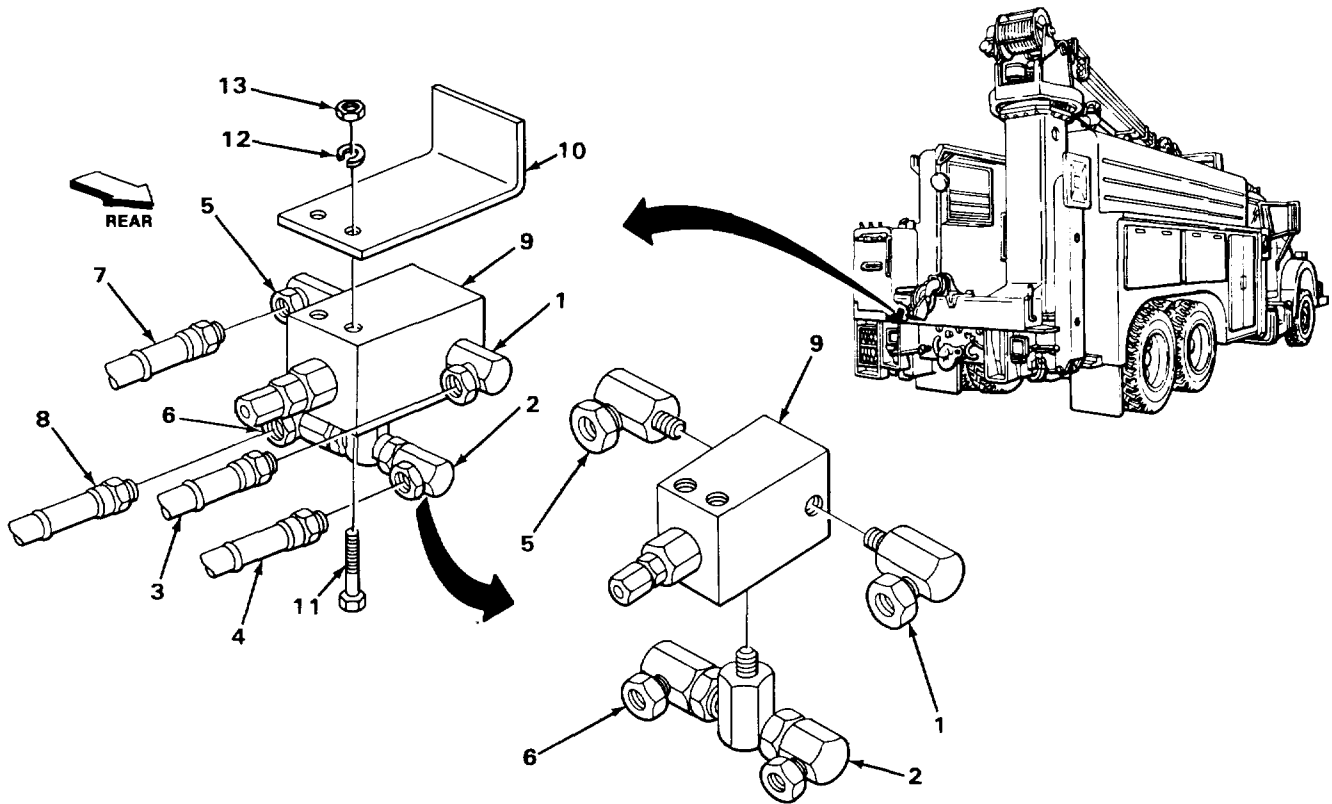
WARNING

Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

- | | | |
|--|--|--|
| <p>1. Two 90° swivel adapters (1) and (2)</p> | <p>Two hose assemblies (3) and (4)</p> | <p>a. Place pail underneath to catch draining fluid.
b. Using 7/8-inch and 1-inch wrenches, unscrew and take off.
c. Allow fluid to drain.
d. Tag hoses (3) and (4).</p> |
| <p>2. Two 90° swivel adapters (5) and (6)</p> | <p>Two hose assemblies (7) and (8)</p> | <p>a. Using 7/8-inch, and 1-inch wrenches, unscrew and take off.
b. Tag hoses (7) and (8).
c. Allow fluid to drain.
d. Remove pail, and get rid of fluid.</p> |

TURRET WINCH RELIEF VALVE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL- CONTINUED			
3.	Turret winch relief valve (9) and bracket (10)	Two screws (11), lockwashers (12), and nuts (13)	<ol style="list-style-type: none"> Using 1/2-inch socket, handle, and 1/2-inch wrench, unscrew and take off. Get rid of lockwashers (12).
4.	Bracket (10)	Turret winch relief valve (9)	Take off.
5.	Turret winch relief valve (9)	Two swivel adapters (1) and (5) and adapters (2) and (6)	<ol style="list-style-type: none"> Secure valve (9) in vise with jaw caps. Using 1-inch wrench, unscrew and take off. Plug holes with dust plugs.



TURRET WINCH RELIEF VALVE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

CLEANING

WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

- | | | | |
|----|-----------------|---|--|
| 6. | All metal parts | a. Clean in drycleaning solvent.
b. Wipe dry with clean, dry rags. | |
|----|-----------------|---|--|

INSPECTION/REPLACEMENT

NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

Replace damaged or defective parts as necessary.

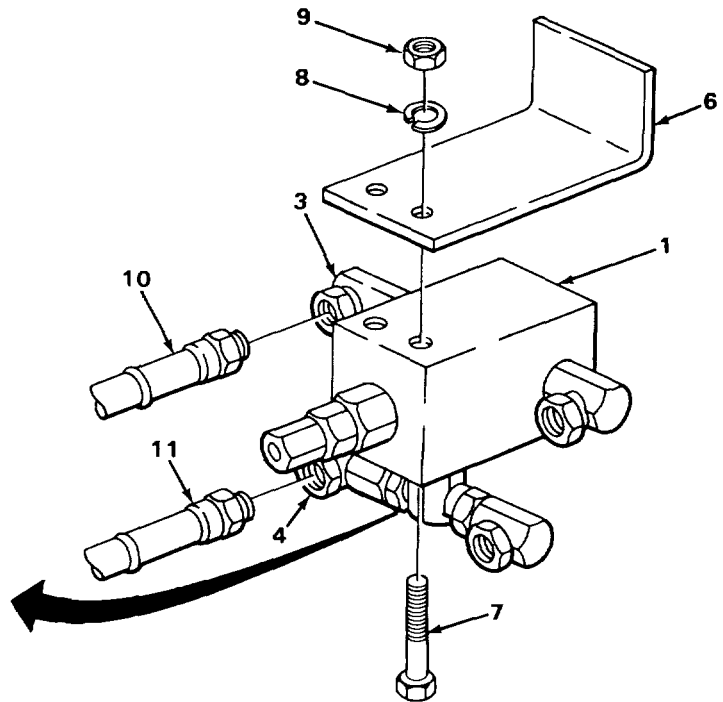
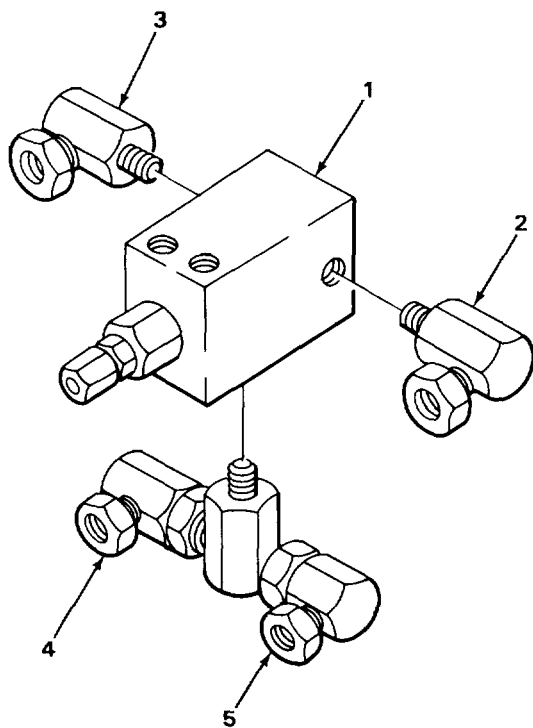
- | | | | |
|----|-------------------------------|--|--|
| 7. | Turret winch relief valve (1) | Check for cracks, breaks, dents, and stripped threads. | |
| 8. | All threaded parts | Look for stripped and gouged threads. | |

INSTALLATION

- | | | | |
|----|-------------------------------|--|--|
| 9. | Turret winch relief valve (1) | Two 90° swivel adapters (2) and (3) and adapters (4) and (5) | a. Take out dust plugs.
b. Wrap threads with two turns of teflon tape (page 2-142).
c. Secure valve (1) in vise with soft jaws.
d. Screw in, and tighten using 1-inch wrench.
e. Take valve (1) out of vise. |
|----|-------------------------------|--|--|

TURRET WINCH RELIEF VALVE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
10. Bracket (6)	Turret winch relief valve (1)	Put in position.
11. Turret winch relief valve (1) bracket (6)	Two screws (7), new lockwashers (8), and nuts (9)	Screw in, and tighten using 1/2-inch wrench, 1/2-inch socket, and handle.
12. Two adapters (3) and (4)	Two hose assemblies (10)	a. Check tags for correct locations, and take off.

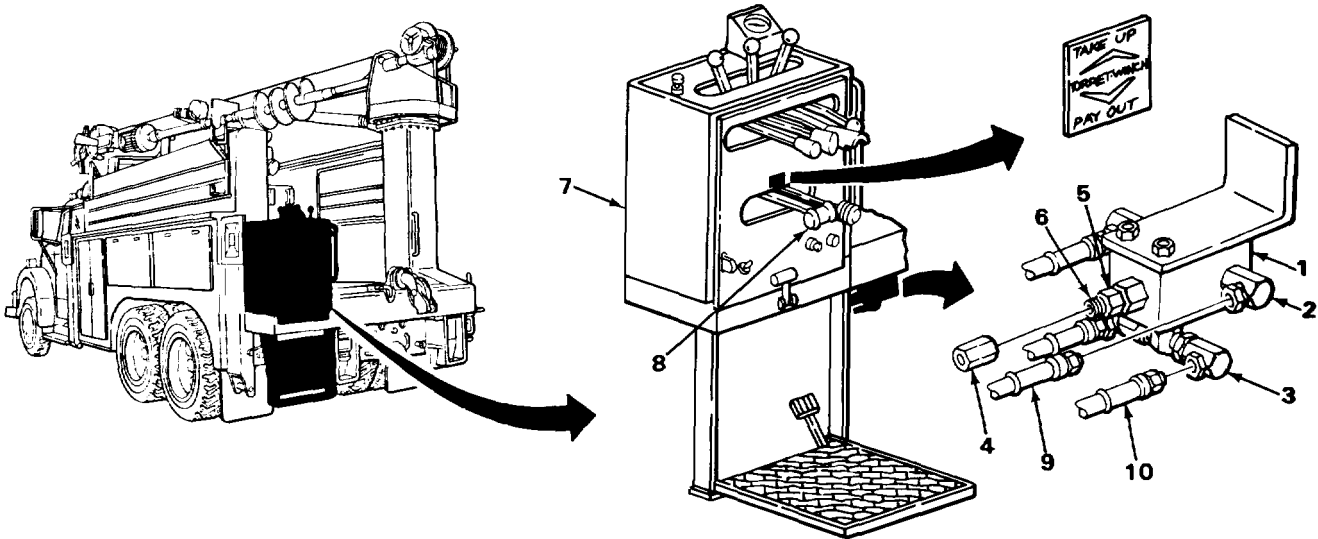


TURRET WINCH RELIEF VALVE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
ADJUSTMENT			
13.	Turret winch relief valve (1)	Two 900 swivel adapters (2) and (3)	<ol style="list-style-type: none"> Connect inlet hose of pressure gage, shut off valve to adapter (2), and outlet hose to adapter (3). Start engine (TM 9-2320-269-10). Engage PTO (TM 9-2320-269-10).
14.		Cap (4)	<ol style="list-style-type: none"> Using 9/16-inch wrench, unscrew and take off. Slowly close shutoff valve part way to build up pressure.
15.	Jamnut (5)	Adjusting screw (6)	Using 3/16-inch key and 9/16-inch wrench, unscrew part way.
<u>WARNING</u>			
Stay clear of pressure gage, shutoff valve, and hoses as assistant moves winch levers. Pressure could cause gage or valve to burst causing injury to you or others.			
NOTE			
Turning adjusting screw clockwise will increase relief valve holding pressure. Turning adjusting screw counterclockwise will decrease pressure.			
16.	Console (7) and turret winch relief valve (1)	Turret winch control lever (8) and adjusting screw (6)	<ol style="list-style-type: none"> While assistant shifts lever (8) in three second intervals from PAYOUT to TAKEUP and TAKEUP to PAYOUT, watch pressure gage. Using 3/16-inch key, turn screw (6) until pressure gage reading remains steady. Pressure gage reading should be 2800 psi, + 50 psi (19306 kPa \pm 344 kPa).
17.	Turret winch relief valve (1)	Jamnut (5) and adjusting screw (6)	Tighten using 9/16-inch wrench, while holding screw (6) with 3/16-inch key.

TURRET WINCH RELIEF VALVE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
ADJUSTMENT - CONTINUED			
18.	Adjusting screw (6)	Cap (4)	a. Screw on, and tighten using 9/16-inch wrench. b. Disengage PTO, and shut down engine (TM 9-2320-269-10).
19.	Turret winch relief valve (1)	Two 90° swivel adapters (2) and (3)	Remove test equipment.
20.	Two 90° swivel adapters (2) and (3)	Two hose assemblies (9) and (10)	a. Check tags for correct location. b. Screw on, and tighten using 7/8-inch



NOTE

FOLLOW-ON MAINTENANCE:

1. Fill with hydraulic fluid (LO 9-2320-269-12).
2. Operate turret winch (TM 9-2320-269-20), and check for proper operation and leaks.

TASK ENDS HERE

TA229286

ELEVATION HYDRAULIC CYLINDER

This task covers:

- | | | |
|----------------|---------------|------------------------------|
| a. Removal | c. Inspection | e. Pre-Load Check of Bearing |
| b. Disassembly | d. Reassembly | f. Installation |

INITIAL SETUP

Tools

- Anchor, dead man, 2,000 lb
- Board, support, 8-in x 8-in x 8-ft (two required)
- Drift, brass, 3/4-inch
- Gage, pressure, 5000 psi capacity
- Hammer, ball-peen, machinist's
- Hoist, overhead with lifting chains
- Key, socket-head screw, 3/16-inch
- Key, socket-head screw, 1/4-inch
- Punch, drive pin, 3/8-inch
- Socket, deep well, 1/2-inch drive, 9/16-inch
- Wrench, open-end, 9/16-inch

Tools - Continued

- Wrench, open-end, 7/8-inch
- Wrench, torque, 1/2-inch drive, 0 - 150 ft-lb capacity

Materials/Parts

- Plugs, dust
- Rags, wiping (item 24, appendix C)
- Solvent, drycleaning (item 28, appendix C)
- Tags, marking (item 29, appendix C)

Personnel Required

Two

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

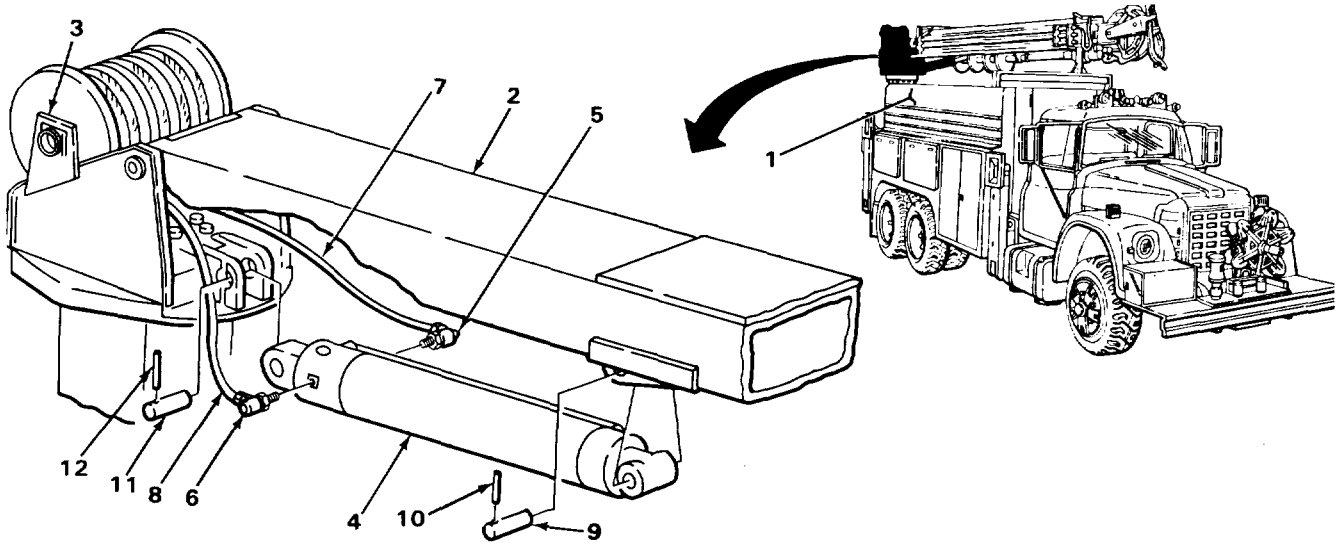
Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

1.	Two body compartments (1)	Derrick leg (2)	Using two support boards, support leg (2) by laying wood underneath leg and across body compartments.
2.	Turret assembly (3) and derrick leg (2)	Elevation cylinder (4)	Support with overhead hoist and chains.
3.	Elevation cylinder (4)	Two swivel adapters (5) and (6) with hose assemblies (7) and (8)	<ul style="list-style-type: none"> a. Using 7/8-inch wrench, unscrew and take off. b. Tag hoses (7) and (8). c. Plug adapters (5) and (6) with dust plugs.

ELEVATION HYDRAULIC CYLINDER - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
4. Two pins (9)	Two roll pins (10)	Using punch and hammer, drive out.	
5. Derrick leg (2) and elevation cylinder (4)	Two pins (9)	Using drift and hammer, drive out.	
6. Two pins (11)	Two roll pins (12)	Using punch and hammer, drive out.	
7. Turret assembly (3) and elevation cylinder (4)	Two pins (11)	Using drift and hammer, drive out.	
8. Derrick leg (2) and turret	Elevation	a. Using hoist and chain, lift off and b. Take off lifting equipment	

CLEANING



WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

ELEVATION HYDRAULIC CYLINDER - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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CLEANING - CONTINUED

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

9.	Elevation cylinder (1)	a. Wipe clean with clean rag dampened with drycleaning solvent. b. Wipe dry with clean, dry rags.	
10.	Four pins (2) and (3)	a. Clean in drycleaning solvent. b. Wipe dry with clean, dry rags.	

INSPECTION/REPLACEMENT

NOTE

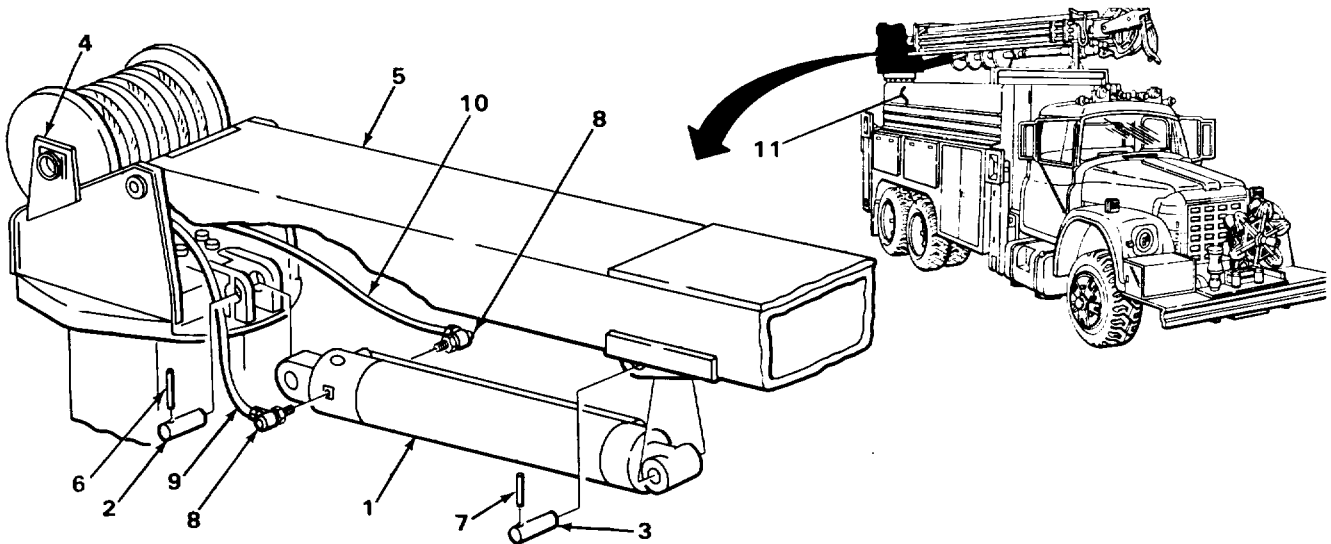
For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

Replace damaged or defective parts as necessary.

11.	Elevation cylinder (1) and four pins (2) and (3)	Look for cracks, breaks, and dents.	
12. Turret assembly (4) and derrick leg (5)	Elevation cylinder (1)	Using overhead hoist and chain, place in position.	
13. Elevation cylinder (1) and turret assembly (4)	Two pins (2)	a. Line up holes in pins (2) with slots in turret assembly (4). b. Using hammer, tap in.	
14. Two pins (2)	Two roll pins (6)	Using hammer, tap in.	
15. Derrick leg (5) and elevation cylinder (1)	Two pins (3)	a. Line up holes in pins (3) with slots in derrick leg (5). b. Using hammer, tap in.	

ELEVATION HYDRAULIC CYLINDER - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
16. Two pins (3)	Two roll pins (7)	Using hammer, tap in.	
17. Elevation cylinder (1)	Two adapters (8) with hose assemblies (9) and (10)	<ul style="list-style-type: none"> a. Take out dust plugs. b. Check tags for proper location. c. Screw in, and tighten using 7/8-inch wrench. d. Take off lifting equipment. 	
18. Two body compartments (11)	Derrick leg (5)	Remove support boards.	

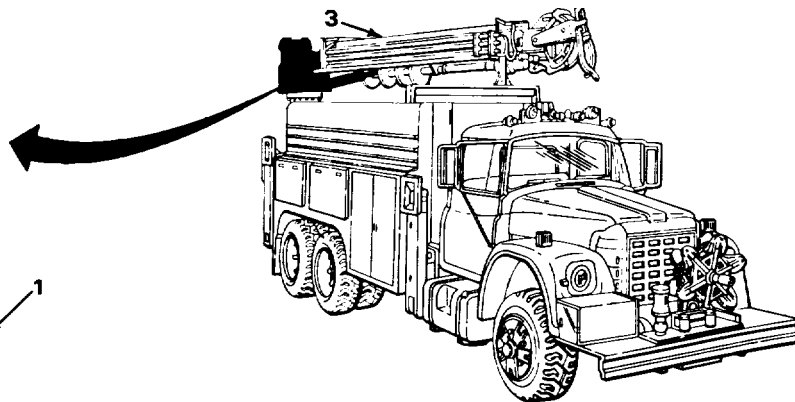
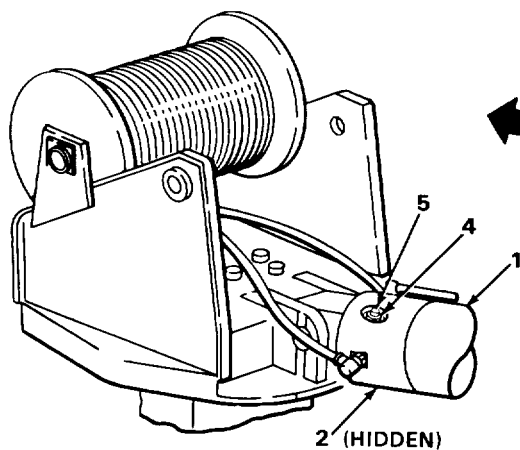


ELEVATION HYDRAULIC CYLINDER - CONTINUED

LOCATION	ITEM	ACTION REMARKS
ADJUSTMENT		
19. Elevation cylinder (1)	Plug (2)	a. With derrick leg (3) in its rest, engine off, and using 114-inch key, unscrew and take off. b. Install 5000 psi pressure gage in plug hole.
20. Vehicle	Derrick leg (3)	a. Start engine (TM 9-2320-269-10). b. Position leg (3) to rear of vehicle and extend leg as far as possible. c. Maneuver truck until turret winch line is directly above dead man anchor. d. Attach turret winch line to anchor (TM 9-2320-269-10).
21. All outriggers	Lower (TM 9-2320-269-10).	
NOTE		
Turning setscrew clockwise will decrease pressure. Turning counterclockwise will increase pressure.		
22. Elevation cylinder (1)	Jamnut (4) and setscrew (5)	a. Using 9/16-inch wrench and 3/16-inch key, tighten screw (5) until leg leg (3) starts to drift. b. When leg (3) starts to drift, loosen screw (5) until drifting stops. c. While holding screw (5) with 3/16-inch key, tighten nut (4) with 9/16-inch wrench. d. With truck still idling, slowly wind in turret winch line (TM 9-2320-269-10), and watch gage pressure at which leg (3) starts to drift. e. If the pressure gage reading is below 2800 psi (19306 kPa), repeat steps b. and c. turning screw (5) 1/8-turn at a time until pressure is 2800 psi (19306 kPa) and leg (3) does not drift.

ELEVATION HYDRAULIC CYLINDER - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
ADJUSTMENT - CONTINUED			
22. (Continued)		f. Tighten nut (4) to 30-40 ft-lb (41-54 N.m) using 9/16-inch socket and torque wrench. g. Pull on turret winch line again (TM 9-2320-269-10), and check pressure gage reading.	If necessary, re-adjust setscrew and retorque jamnut following steps a thru f until reading is correct.
23. Vehicle	Derrick leg (3)	a. Lower anchor, and unhook anchor (TM 9-2320-269-10). b. Stow winch line, retract leg (3), and position in stowed position (TM 9-2320-269-10). c. Shut down engine (TM 9-2320-269-10).	
24. Elevation cylinder (1)	Plug (2)	a. Remove pressure gage. b. Screw in, and tighten using 1/4-inch key	



NOTE

FOLLOW-ON MAINTENANCE: Test operation of elevation hydraulic cylinder (TM 9-2320-269-10).

TASK ENDS HERE

TA229289

CONSOLE COVER

This task covers:

- a. Removal (page 2-1092)
- b. Installation (page 2-1093)

INITIAL SETUP

Tools

Handle, ratchet, 3/8-inch drive
 Socket, 3/8-inch drive, 7/16-inch
 Wrench, open-end, 7/16-inch

Materials/Parts

Tags, marking (item 29, appendix C)

Personnel Required

Three

Equipment Condition

Battery ground cable disconnected
 (page 2-414).

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

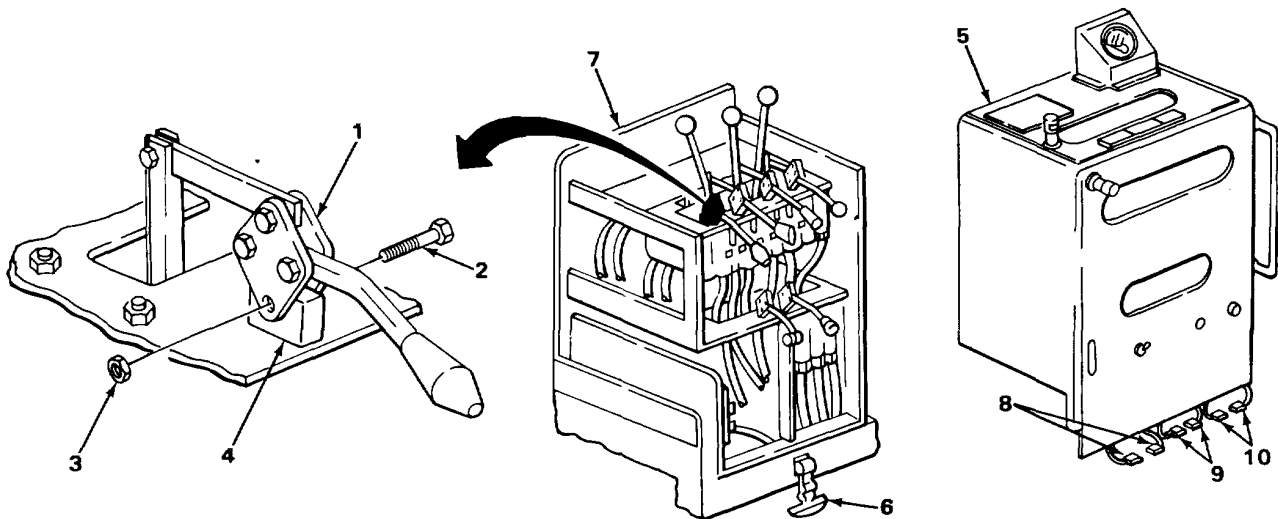
NOTE

All lever links are disconnected the same way. Repeat steps 1 and 2 for all six levers.

1.	Two links (1)	Screw (2) and nut (3)	Using 7/16-inch socket, handle , and 7/16-inch wrench, unscrew and take out.
2.	Bracket (4)	Two links (1)	Move away from.
3.	Cover (5)	Handle (6)	Unlatch.
4.	Console assembly (7)	Cover (5)	With help from assistants, lift up and out, but not off.
5.	Cover (5)Light switch	connectors (8), connectors (9), and emergency power switch connectors (10)	a. Pull apart. b. Tag wires. stop start switch

CONSOLE COVER - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
6. Console assembly (7)	Cover (5)		With help from assistants, maneuver around levers, and take off.
INSTALLATION			
7. Console assembly (7)	Cover (5)		With help from assistants, put in position, but do not seat firmly.
8. Cover (5)	Light switch connectors (8), stop-start switch connectors (9), and emergency power switch connectors (10)		a. Match tags, and take off. b. Push together.
9. Console assembly (7)	Cover (5)		With help from assistant, put firmly in place.
10. Cover (5)	Handle (6)		Latch.
11. Bracket (4)	Two links (1)		Put in position.
12. Two links (1)	Screw (2) and nut (3)		a. Screw in, and tighten using 7/16-inch wrench 7/16-inch socket and handle. b. Repeat steps 11 and 12 for all six levers.



CONSOLE COVER - CONTINUED

INSTALLATION - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE: Connect battery ground cable (page 2-414).

TASK ENDS HERE

TELESCOPIC TUBES

This task covers:

- a. Removal (page 2-1094)
- b. Installation (page 2-1095)

INITIAL SETUP

Tools

Handle, ratchet, 1/2-inch drive
Pliers, slip-joint, angle-nose
Wrench, open-end, 9/16-inch

Materials/Parts

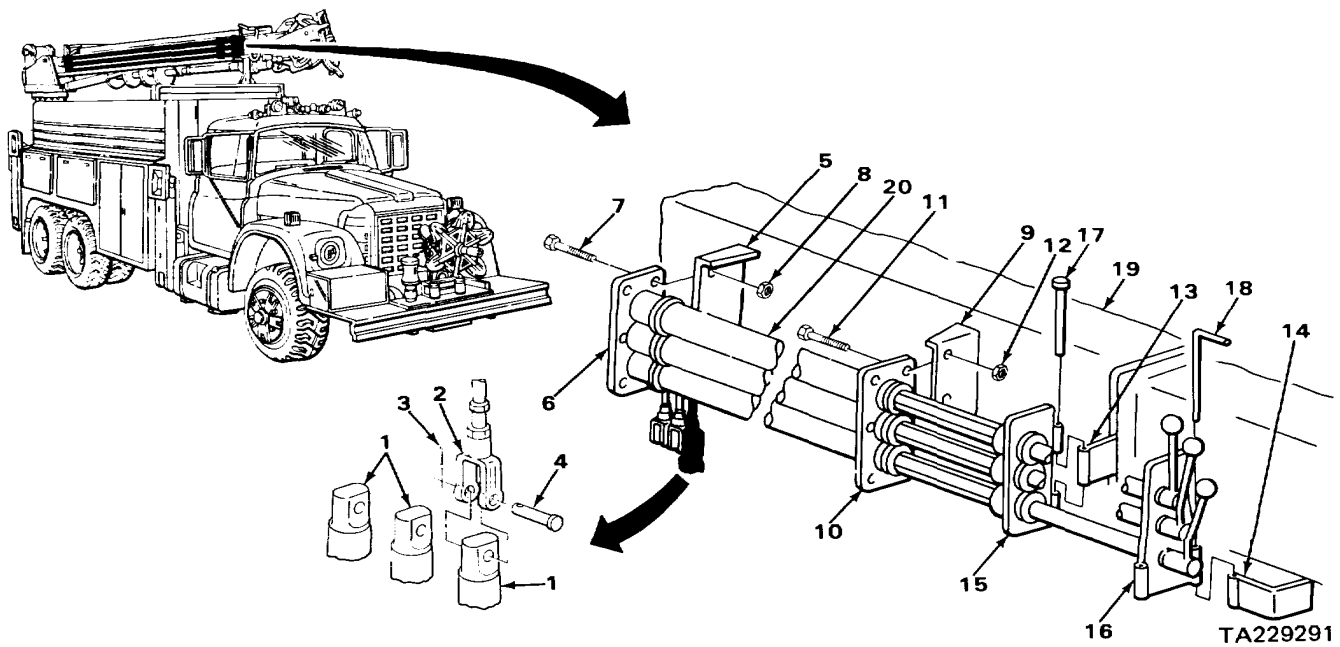
Nuts, elastic stop (six required)
Pins, cotter (three required)
Personnel Required

Two

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1.	Three derrick operator's valve spools (1) and yokes (2) pins (4).	Three cotter pins (3) and pins (4)	<ul style="list-style-type: none"> a. Using slip-joint pliers, straighten pin (3) ends, and pull out. b. Get rid of cotter pins (3). c. Using slip-joint pliers, pull out
2.	Three derrick operator's valve spools (1)	Three yokes (2)	Move away from.
3.	Bracket (5) and tube bracket (6) nuts (8)	Three screws (7) and elastic stop	<ul style="list-style-type: none"> a. Using 9/16-inch socket, handle, and 9/16-inch wrench, unscrew and take out. b. Get rid of nuts (8).

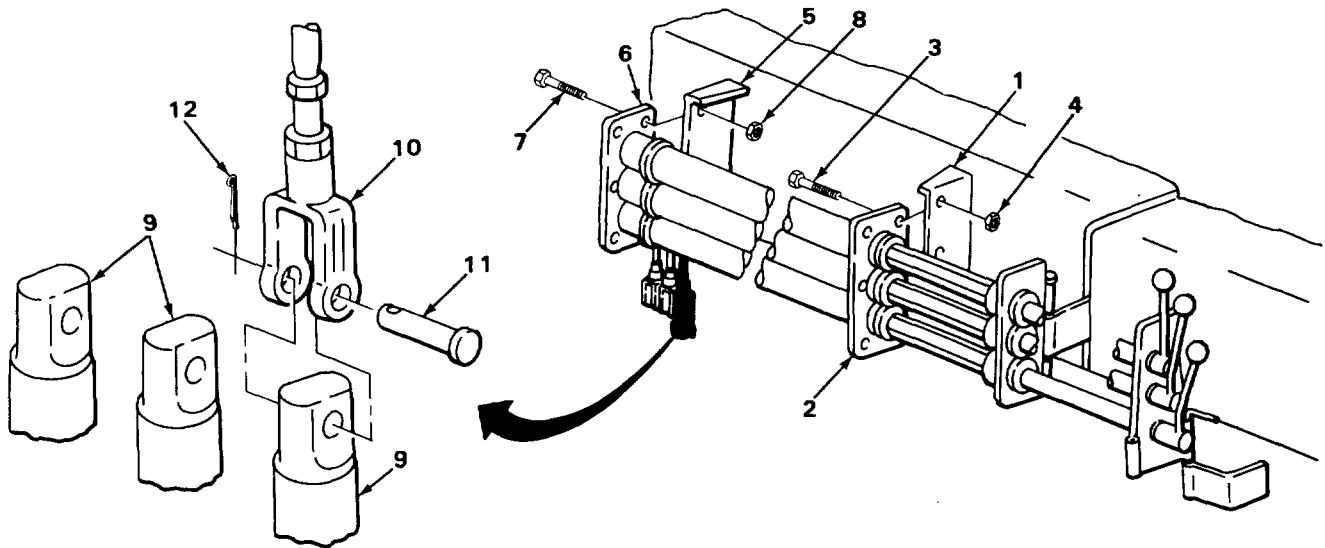
TELESCOPIC TUBES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
4.	Bracket (9) and tube bracket (10)	Three screws (11) and elastic stop nuts (12)	a. Using 9/16-inch socket, handle, and 9/16-inch wrench, unscrew and take out. b. Get rid of nuts (12).
5.	Two lock pin supports (13) and (14) and two tube brackets (15) and (16)	Two lock pins (17) and (18)	Pull out.
6.	Derrick leg (19)	Telescopic tubes assembly (20)	With help from assistant, take off and set aside.
INSTALLATION			
7.	Derrick leg (19)	Telescopic tubes assembly (20)	With help from assistant, put in position.
8.	Two lock pin supports (13) and (14) and two tube brackets (15) and (16)	Two lock pins (17) and (18)	Put in.



TELESCOPIC TUBES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
9.	Bracket (1) and tube bracket (2)	Three screws (3) and new elastic stop nuts (4)	Screw in, and tighten using 9/16-inch socket, handle, and 9/16-inch wrench.
10.	Bracket (5) and tube bracket (6)	Three screws (7) and new elastic stop nuts (8)	Screw in, and tighten using 9/16-inch socket, handle, and 9/16-inch wrench.
11.	Three derrick operator's valve spools (9)	Three yokes (10)	Put in position.
12.	Three derrick operator's valve spools (9) and yokes (10)	Three pins(11) and new cotter pin (12)	a. Push through. b. Using slip-joint pliers, separate pin (12) ends and bend back over pins (11).



NOTE

FOLLOW-ON MAINTENANCE: Operate telescopic tubes (TM 9-2320-269-10), and check for proper operation and leaks.

TASK ENDS HERE

AUGER DRAIN LINE - TO - RETURN LINE HOSE ASSEMBLY

This task covers:

- a. Removal (page 2-1097)
- b. Cleaning (page 2-1098)
- c. Inspection/Replacement (page 2-1098)
- d. Installation (page 2-1099)

INITIAL SETUP

Tools

- Fish tape, 50-ft reel
- Pail, utility, 3-qt
- Wrench, open-end, 11/16-inch
- Wrench, open-end, 7/8-inch
- Wrench, open-end, 1-inch

Materials/Parts

- Detergent, non-sudsing (item 12, appendix C)
- Rags, wiping (item 24, appendix C)
- Solvent, drycleaning (item 28, appendix C)
- Tape, teflon (item 32, appendix C)

Personnel Required

One

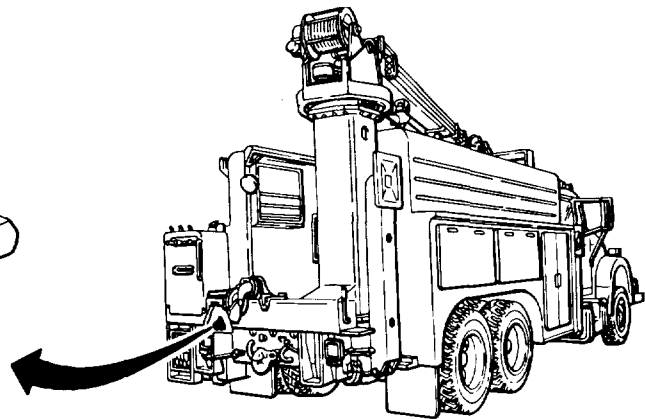
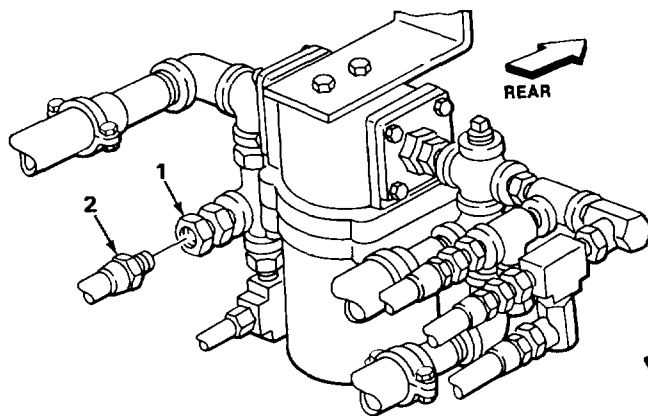
LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

- | | | |
|---------------------------------------|---|---|
| <p>1. Straight swivel adapter (1)</p> | <p>Auger drain line-to-return line hose (2)</p> | <ul style="list-style-type: none"> a. Position pail to catch hydraulic fluid. b. Using 7/8-inch and 11/16-inch c. Dispose of drained fluid |
|---------------------------------------|---|---|



AUGER DRAIN LINE - TO - RETURN LINE HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
2. Access cover (1)	Two wingnuts (2)		Unscrew, and take off.
3. Derrick mast (3)	Access cover (1)		Take off.
4. Straight swivel adapter (4)	Auger drain line-to-return line hose assembly (5)	<ul style="list-style-type: none"> a. Using 7/8-inch and 1-inch wrenches, unscrew and take off. b. Pull out of truck. 	

CLEANING

WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame near by when using solvent. Failure to observe these precautions could cause serious injury or death.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

5.	All metal parts	<ul style="list-style-type: none"> a. Clean in drycleaning solvent. b. Wipe dry with clean, dry rags.
6.	Hose assembly (5)	<ul style="list-style-type: none"> a. Clean in clean, soapy water. b. Rinse in clean water. c. Wipe connectors clean with clean rags dampened in drycleaning solvent. d. Wipe dry with clean, dry rags.

INSPECTION/REPLACEMENT

NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

Replace damaged or defective parts as necessary.

AUGER DRAIN LINE - TO - RETURN LINE HOSE ASSEMBLY - CONTINUED

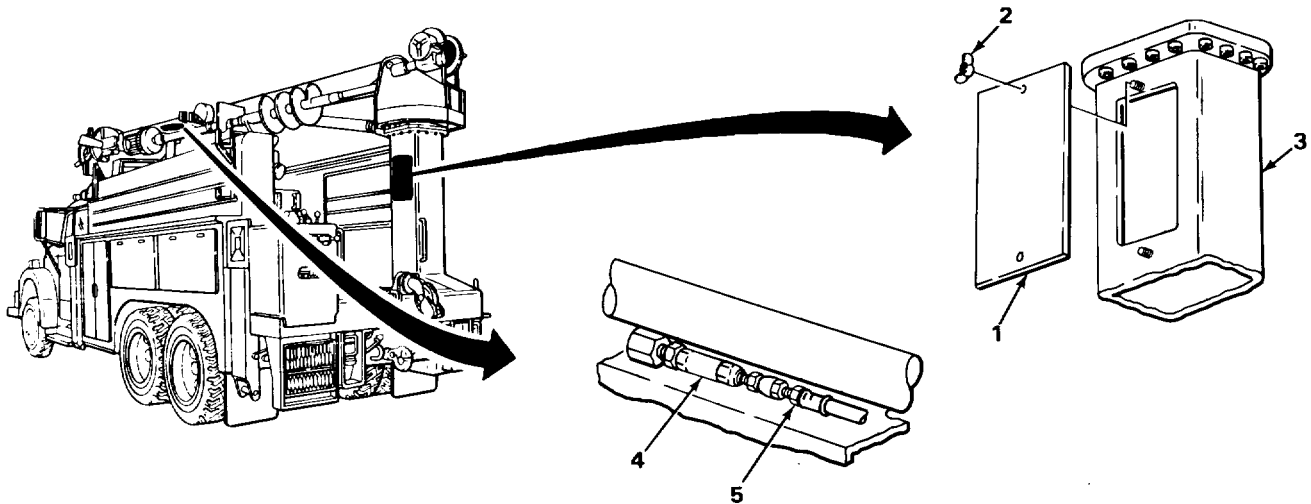
LOCATION	ITEM	ACTION	REMARKS
INSPECTION/REPLACEMENT - CONTINUED			
7.	Hose assembly (5)	a. Look for cracks, breaks, tears, and britleness b. Look for loose connectors. c. Look for damaged threads.	
8.	All threaded parts		Look for stripped and gouged threads.

INSTALLATION

NOTE

Before installing hose assembly, wrap all clean, external threads with two turns of teflon tape (page 2-142).

9.	Straight swivel adapter (4)	Auger drain line-to-return line hose assembly (5)	a. Put in position using fish tape. b. Screw on, and tighten using 7/8-inch and 1-inch wrenches.
10.	Derrick mast (3)	Access cover (1)	Put on.
11.	Access cover (1)	Two wingnuts (2)	Screw on, and tighten.

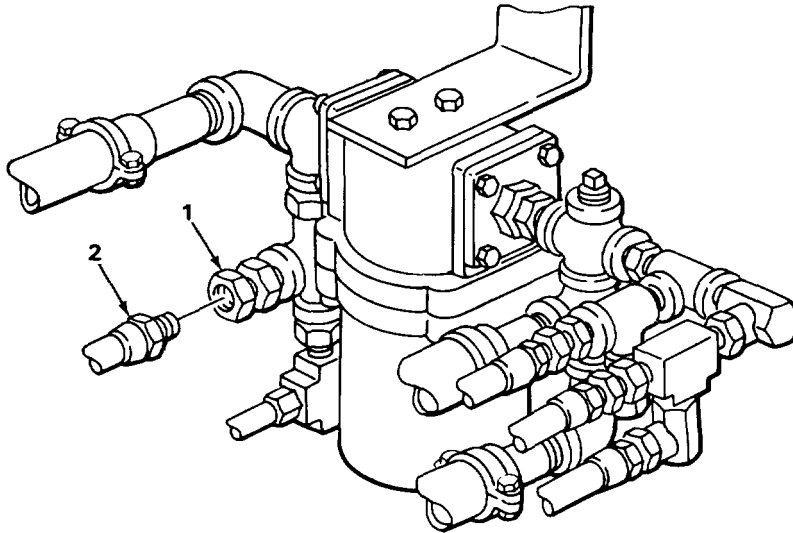


2-1099

TA229294

AUGER DRAIN LINE - TO - RETURN LINE HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
12. Straight swivel adapter	Auger drain line-to return line hose assembly (2)	Screw on, and tighten using 7/8-inch and 11/16-inch wrenches.	



NOTE

FOLLOW-ON MAINTENANCE:

1. Fill with hydraulic fluid (LO 9-2320-269-12).
2. Operate auxiliary equipment (TM 9-2320-269-10), and check for proper operation and leaks.

TASK ENDS HERE

AUGER FEED TUBES BYPASS HOSE ASSEMBLY

This task covers:

- a. Removal (page 2-1101)
- b. Cleaning (page 2-1102)
- c. Inspection/Replacement (page 2-1102)
- d. Installation (page 2-1103)

INITIAL SETUP

Tools

- Pail, utility, 3-qt
- Wrench, open-end, 9/16-inch
- Wrench, open-end, 11/16-inch

Materials/Parts

- Detergent, non-sudsing (item 12, appendix C)
 - Rags, wiping (item 24, appendix C)
 - Solvent, drycleaning (item 28, appendix C)
 - Tape, teflon (item 32, appendix C)
- Personnel Required

One

LOCATION	ITEM	ACTION	REMARKS
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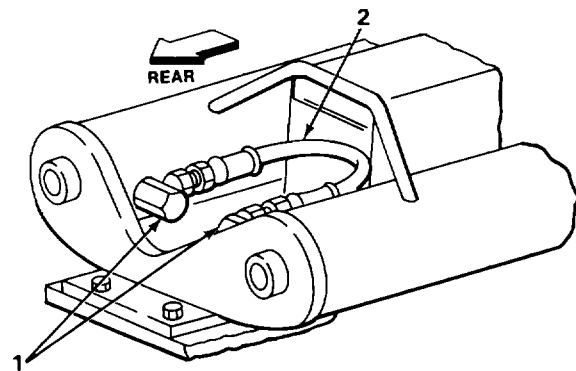
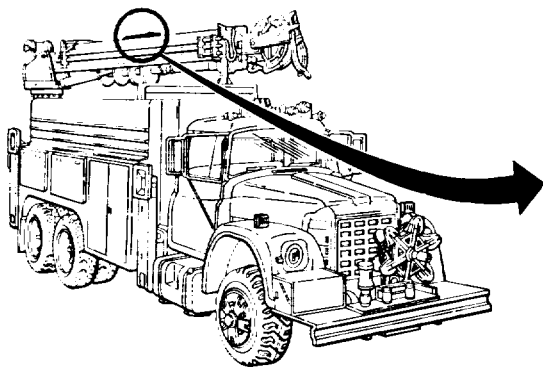
REMOVAL

WARNING

Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

- 1. Two 90° swivel adapters (1) Auger feed tubes by-pass hose

- a. Position pail to catch hydraulic fluid.
- b. Using 9/16-inch and 11/16-inch



AUGER FEED TUBES BYPASS HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
CLEANING			
<u>WARNING</u>			
Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.			
NOTE			
For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).			
2	All metal parts	a. Clean in drycleaning solvent. b. Wipe dry with clean, dry rags.	
3.	Hose assembly (1)	a. Clean in clean, soapy water. b. Rinse in clean water. c. Wipe connectors clean with clean rags dampened in drycleaning solvent. d. Wipe dry with clean, dry rags.	
INSPECTION/REPLACEMENT			
NOTE			
For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).			
Replace damaged or defective parts as necessary.			
4.	Auger feed tubes bypass hose assembly (1)	a. Look for cracks, breaks, tears, and brittleness. b. Look for loose connectors. c. Look for damaged threads.	
5	All threaded parts	Look for stripped and gouged threads.	

AUGER FEED TUBES BYPASS HOSE ASSEMBLY - CONTINUED

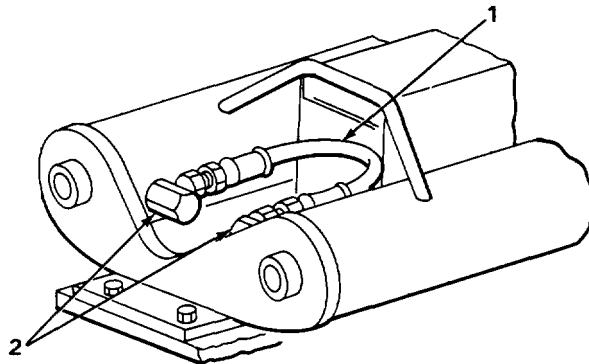
LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION

NOTE

Before installing hose assembly, wrap all clean, external threads with two turns of teflon tape (page 2-142).

- | | | |
|--------------------------------|---|---|
| 6. Two 90° swivel adapters (2) | Auger feed tubes bypass hose assembly (1) | <ul style="list-style-type: none"> a. Put in position. b. Screw on, and tighten using 9/16-inch and 11/16-inches wrenches |
|--------------------------------|---|---|



NOTE

FOLLOW-ON MAINTENANCE:

1. Fill with hydraulic fluid (LO 9-2320-269-12).
2. Operate auxiliary equipment (TM 9-2320-269-10), and check for proper operation and leaks.

TASK ENDS HERE

AUGER LOCK - TO - RETURN LINE HOSE ASSEMBLY

This task covers:

- a. Removal (page 2-1104)
- b. Cleaning (page 2-1105)
- c. Inspection/Replacement (page 2-1106)
- d. Installation (page 2-1106)

INITIAL SETUP

Tools

- Fish tape, 50-ft reel
- Pail, utility, 3-qt
- Wrench, open-end, 9/16-inch
- Wrench, open-end, 5/8-inch
(two required)
- Wrench, open-end, 7/8-inch

Materials/Parts - Continued

- Rags, wiping (item 24 appendix C)
- Solvent, drycleaning (item 28, appendix C)

Personnel Required

One

Material/Parts

- Detergent, non-sudsing (item 12, appendix C)

Equipment Condition

Console cover removed (page 2-1092).

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

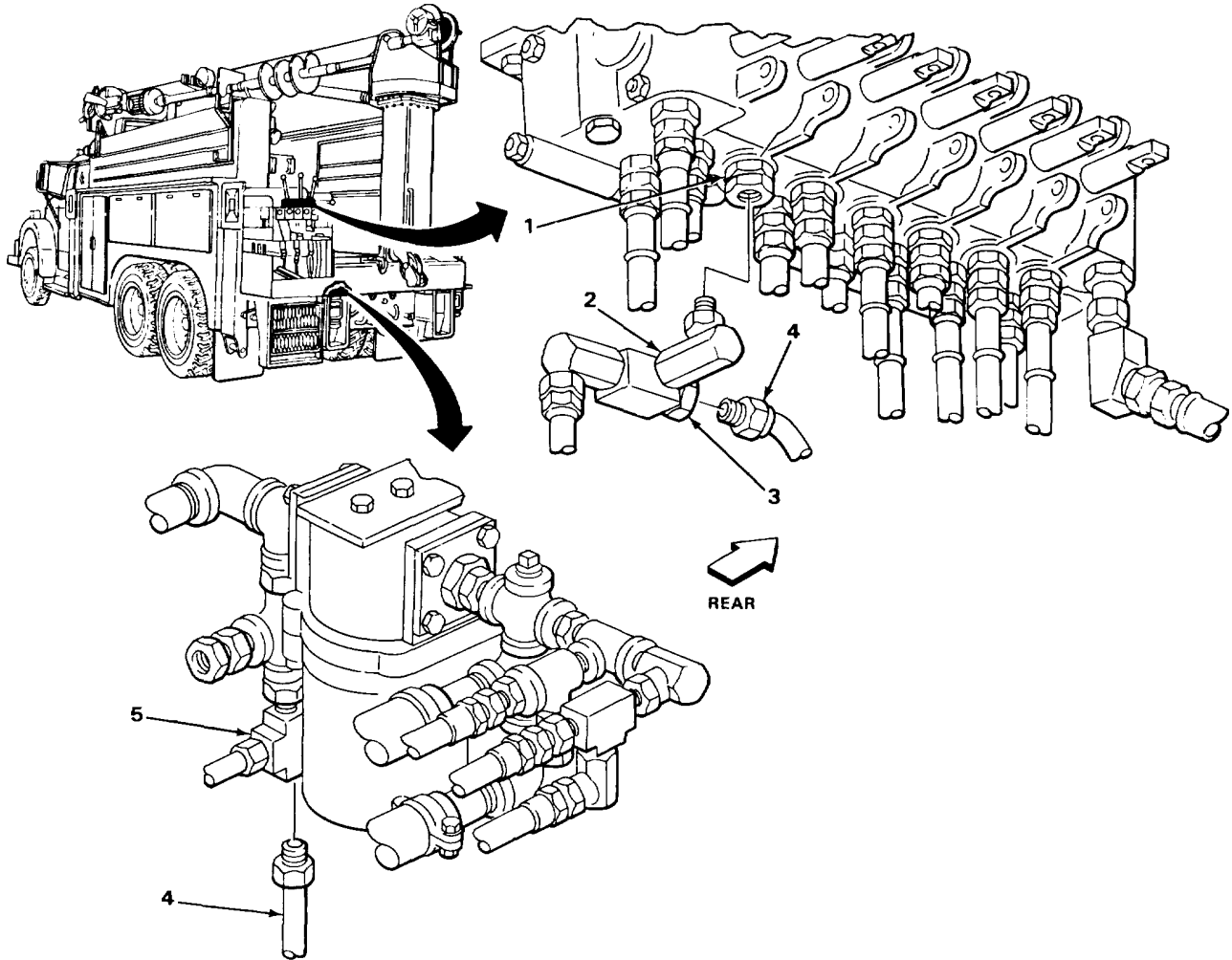
Avoid contact with hydraulic fluid. Hydraulic fluid if splashed on skin or in eyes, can cause irritation.

- | | | | |
|----|-------------|---|---|
| 1. | Adapter (1) | 90° swivel adapter (2) | <ul style="list-style-type: none"> a. Position pail to catch hydraulic fluid. b. Using 7/8-inch wrench, unscrew and take off. c. Dispose of drained fluid. |
| 2. | Nipple (3) | Auger lock-to-return line hose assembly (4) | Using 9/16-inch and 5/8-inch wrenches, unscrew and take off. |
| 3. | Tee (5) | Auger lock-to-return line hose assembly (4) | <ul style="list-style-type: none"> a. Using two 5/8-inch wrenches, unscrew and take off. b. Pull out of truck. |

AUGER LOCK - TO - RETURN LINE HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL - CONTINUED



CLEANING

WARNING

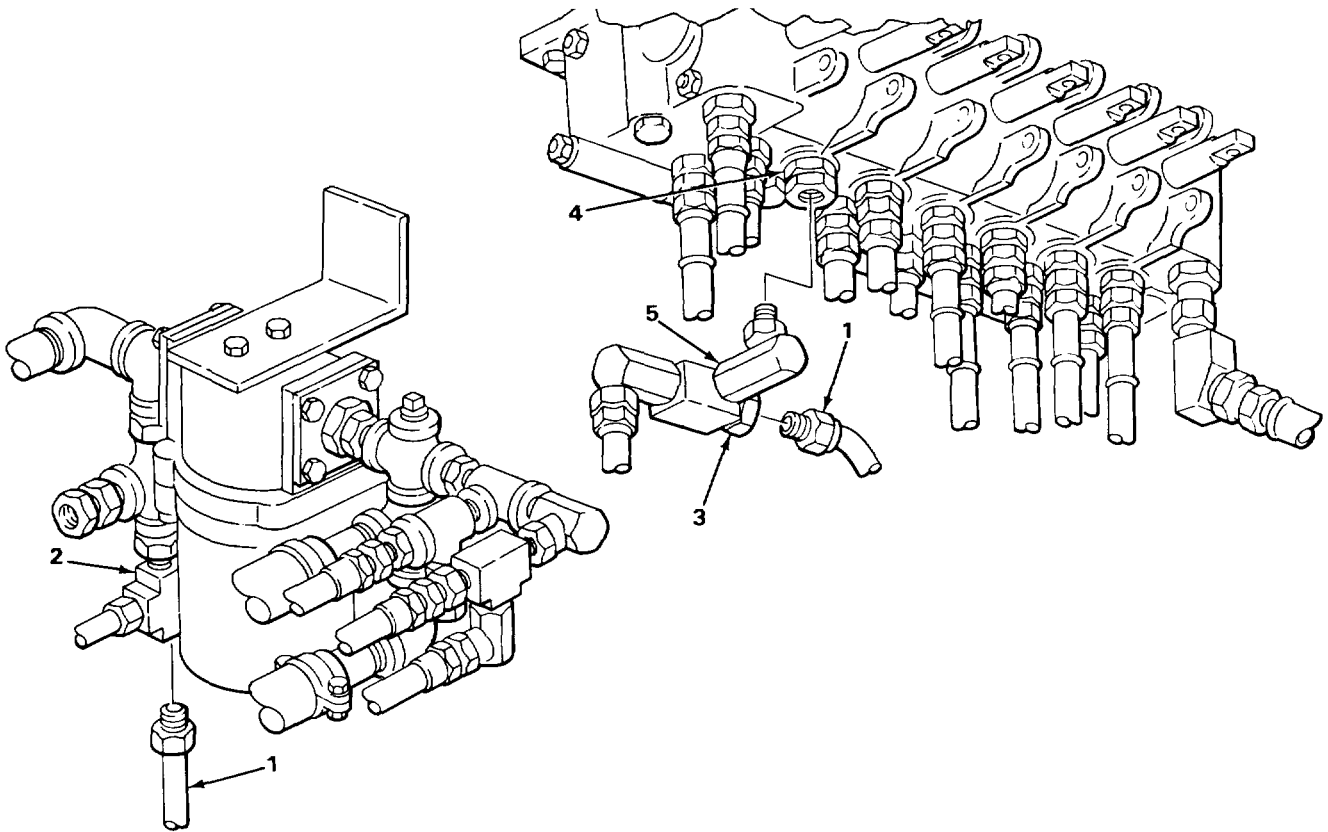
Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

AUGER LOCK - TO - RETURN LINES HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
CLEANING - CONTINUED			
NOTE			
For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).			
4.	All metal parts	a. Clean in drycleaning solvent. b. Wipe dry with clean, dry rags.	
5.	Hose assembly (1)	a. Clean in soapy water. b. Rinse in clean water. c. Wipe connectors clean with clean rags dampened with drycleaning solvent. d. Wipe dry with clean, dry rags.	
INSPECTION/REPLACEMENT			
NOTE			
For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).			
Replace damaged or defective parts as necessary.			
6.	Hose assembly (1)	a. Look for cracks, breaks, tears, and brittleness. b. Look for loose connectors. c. Look for damaged threads.	
7.	All threaded parts.	Look for stripped and gouged threads.	
INSTALLATION			
8.	Tee (2)	a. Using fish tape, put in position. b. Screw on, and tighten using two 5/8-inch wrenches.	
9.	Nipple (3)	Screw on, and tighten using 9/16-inch and 5/8-inch wrenches.	
10.	Adapter (4)	Screw on, and tighten using 7/8-inch wrench.	

AUGER LOCK - TO - RETURN LINE HOSE ASSEMBLY - CONTINUED

INSTALLATION - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE:

1. Fill with hydraulic fluid (LO 9-2320-269-12).
2. Install console cover (page 2-1092).
3. Operate auxiliary equipment (TM 9-2320-269-10), and check for proper operation and leaks.

TASK ENDS HERE

CHECK VALVE - TO - FLOW CONTROL VALVE TEE HOSE ASSEMBLY

This task covers:

- a. Removal (page 2-1108)
 - b. Cleaning (page 2-1109)
 - c. Inspection/Replacement (page 2-1110)
 - d. Installation (page 2-1110)
-

INITIAL SETUP

Tools

- Pail, utility, 3-qt
- Wrench, open-end, 7/8-inch
- Wrench, open-end, 1-inch

Material/Parts - Continued

- Solvent, drycleaning (item 28, appendix C)
- Tape, teflon (item 32, appendix C)

Materials/Parts

- Detergent, non-sudsing (item 12, appendix C)
- Rags, wiping (item 24, appendix C)

Personnel Required

One

Equipment Condition

Operator's platform down (TM 9-2320-269-10).

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

Avoid contact with hydraulic fluid. Hydraulic fluid if splashed on skin or in eyes can cause irritation.

- | | | |
|--|---|--|
| <ol style="list-style-type: none"> 1. Solenoid valve tee (1) unscrew, take off, and push aside. | <ol style="list-style-type: none"> Hose assembly (2) | <ol style="list-style-type: none"> a. Position pail to catch hydraulic fluid. b. Using 7/8-inch and 1-inch wrenches, c. Dispose of drained fluid. |
|--|---|--|

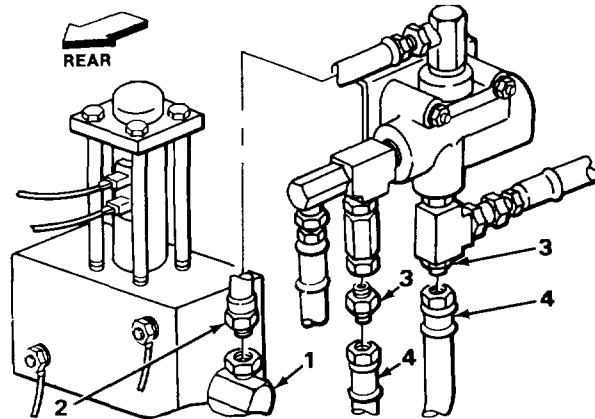
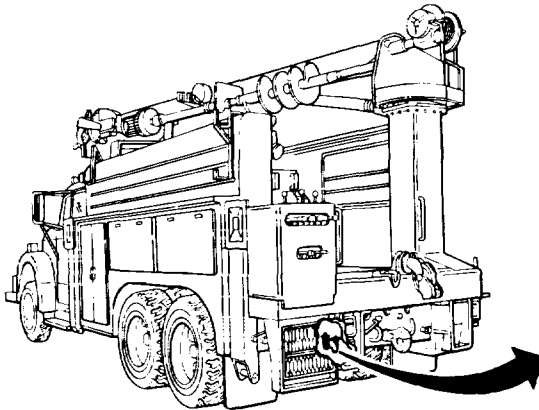
2-1108

CHECK VALVE - TO - FLOW CONTROL VALVE TEE HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL - CONTINUED

- | | | |
|----------------------------|--|---|
| 2. Two swivel adapters (3) | Check valve-to-flow control valve tee hose | a. Using 7/8-inch and 1-inch wrenches, unscrew and take off.
b. Take out of truck. |
|----------------------------|--|---|



CLEANING

WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

CHECK VALVE - TO - FLOW CONTROL VALVE TEE HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
CLEANING- CONTINUED			
3.	All metal parts	a. Clean in drycleaning solvent. b. Wipe dry with clean, dry rags.	
4.	Hose assembly (1)	a. Clean in clean soapy water. b. Rinse in clean water. c. Wipe connectors clean with clean rags dampened in drycleaning solvent. d. Wipe dry with clean, dry rags.	

INSPECTION/REPLACEMENT

NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

Replace damaged or defective parts as necessary.

5.	Hose assembly (1)	a. Look for cracks, breaks, tears, and brittleness. b. Look for loose connectors. c. Look for damaged threads.	
6.	All threaded parts	Look for stripped and gouged threads.	

INSTALLATION

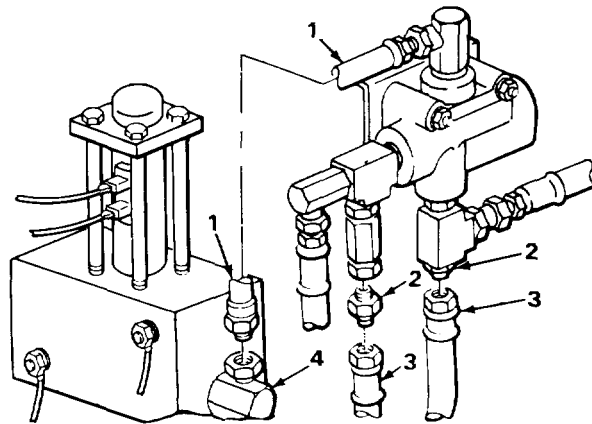
NOTE

Before installing hose assemblies, wrap all clean, external threads with two turns of teflon tape (page 2-142).

2-1110

CHECK VALVE - TO - FLOW CONTROL VALVE TEE HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
7. Two swivel adapters (2)	Check valve-to-flow control valve tee hose assembly (3)		Screw on, and tighten using 7/8-inch and 1-inch wrenches.
8. Solenoid valve tee (4)	Hose assembly (1)		Screw on, and tighten using 7/8-inch and 1-inch wrenches.



NOTE

FOLLOW-ON MAINTENANCE:

1. Fill with hydraulic fluid (LO 9-2320-269-12).
2. Operate auxiliary equipment (TM 9-2320-269-10), and check for proper operation and leaks.
3. Raise operator's platform (TM 9-2320-269-10).

TASK ENDS HERE

CONSOLE CM2 VALVE - TO - RETURN LINE FILTER HOSE

This task covers:

- a. Removal (page 2-1112)
- b. Cleaning (page 2-1114)
- c. Inspection/Replacement (page 2-1115)
- d. Installation (page 2-1116)

INITIAL SETUP

Tools

- Fish tape, 50-ft reel
- Handle, ratchet, 3/8-inch drive
- Pail, utility, 3-qt
- Screwdriver, 3/8-inch, flat-tip, 8-inch
- Socket, 3/8-inch drive, 9/16-inch
- Wrench, open-end, 9/16-inch
- Wrench, open-end, 1 7/8-inch

Materials/Parts

- Detergent, non-sudsing (item 12, appendix C)
- Packing, preformed

Materials/Parts - Continued

- Rags, wiping (item 24, appendix C)
- Solvent, drycleaning (item 28, appendix C)

Personnel Required

One

Equipment Condition

Console cover removed (page 2-1092).

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

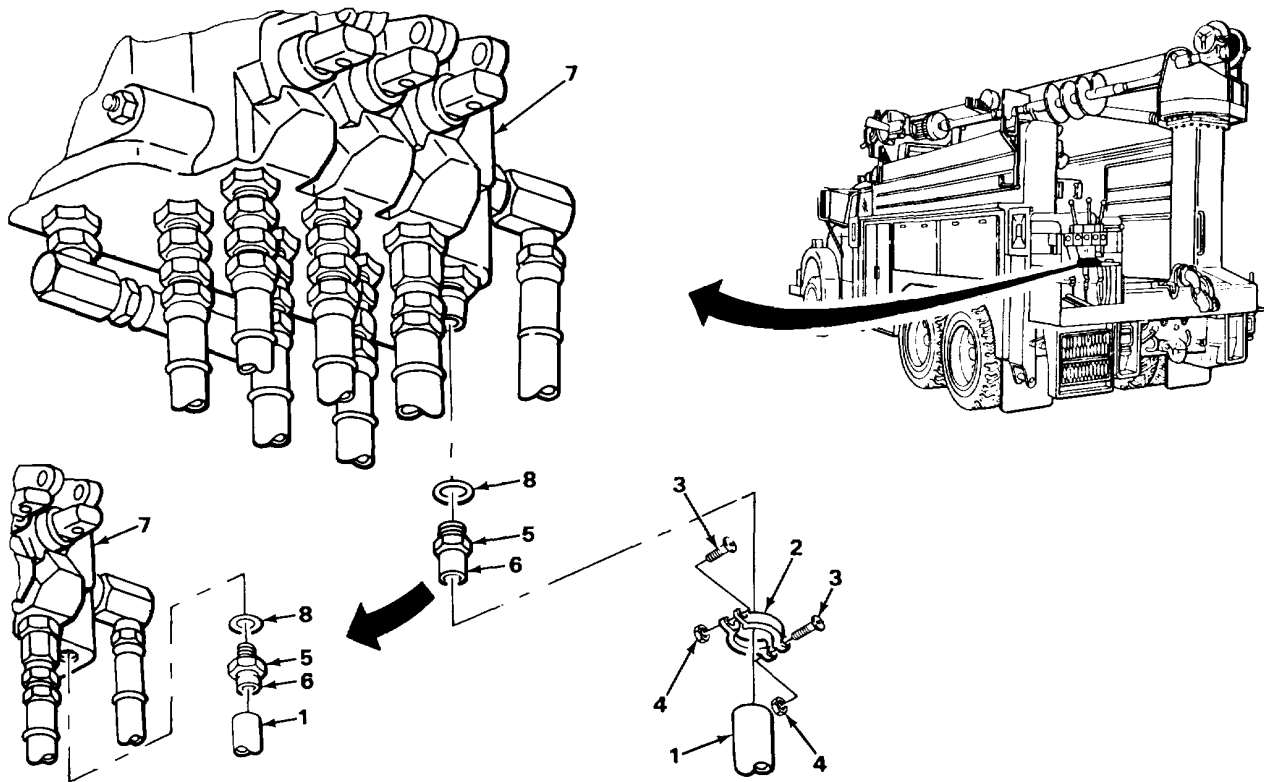
Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

1. Hose (1)	Clamp (2), two screws (3), and nuts (4)	a. Position pail to catch hydraulic fluid. b. Using 9/16-inch wrench, 9/16-inch socket, and handle, unscrew and take off. c. Dispose of drained fluid.	
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2-1112

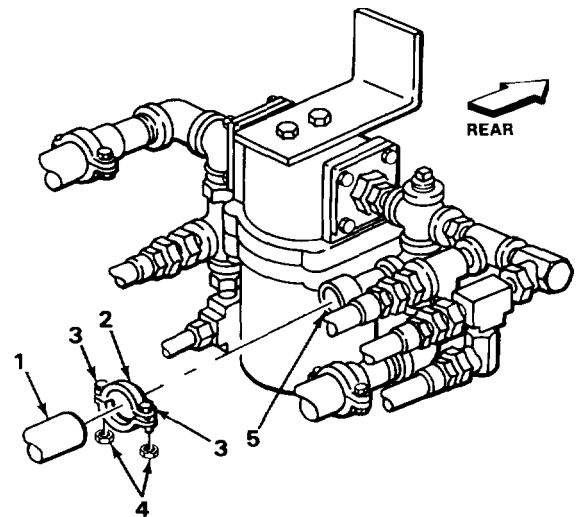
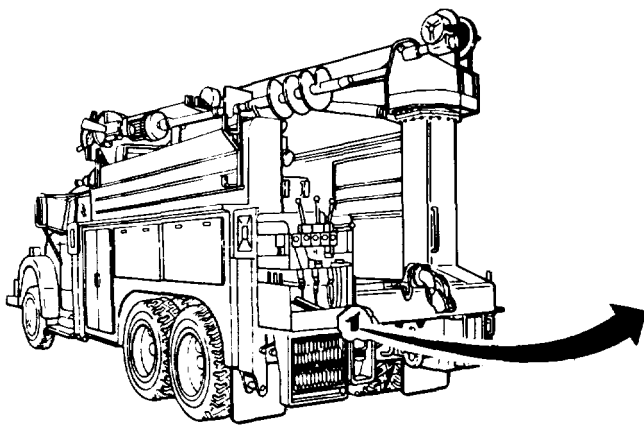
CONSOLE CM2 VALVE - TO - RETURN LINE FILTER HOSE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
2. Adapter (5) and dixon insert (6)	Hose (1)	a. Using flat-tip screwdriver, pry loose b. Twist to loosen.	
3. ConsoleCM2 valve (7)	Adapter (5) and preformed packing (8)	a. Using 1 7/8-inch wrench, unscrew and take off. b. Get rid of packing (8).	
4. Hose (1)	Adapter (5) and dixon insert (6)	a. Twist, and take off. b. Set aside	



CONSOLE CM2 VALVE - TO - RETURN LINE FILTER HOSE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
5.	Hose (1)	Clamp (2), two screws (3), and two nuts (4)	Using 9/16-inch wrench, 9/16-inch socket, and handle unscrew and take off.
6.	Dixon insert (5)	Hose (1)	a. Using flat-tip screwdriver, pry to loosen. b. Twist, and take off.
7.	Hose (1)		Pull out of truck



WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

CONSOLE CM2 VALVE - TO - RETURN LINE FILTER HOSE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
CLEANING - CONTINUED			
8.	Adapters (6), and dixon insert (7), two clamps (8)	a. Clean in drycleaning solvent. b. Wipe dry with clean, dry rags.	
9.	Hose (1)	a. Clean in clean soapy water. b. Rinse in clean water. c. Wipe dry with clean, dry rags.	

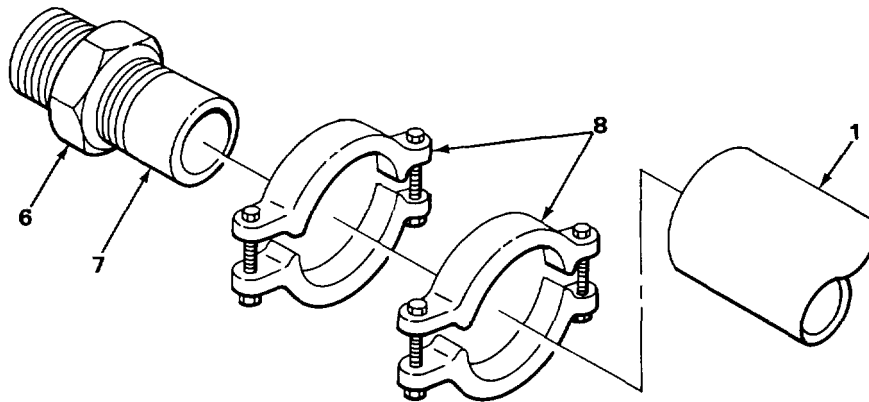
INSPECTION/REPLACEMENTNOTE

NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

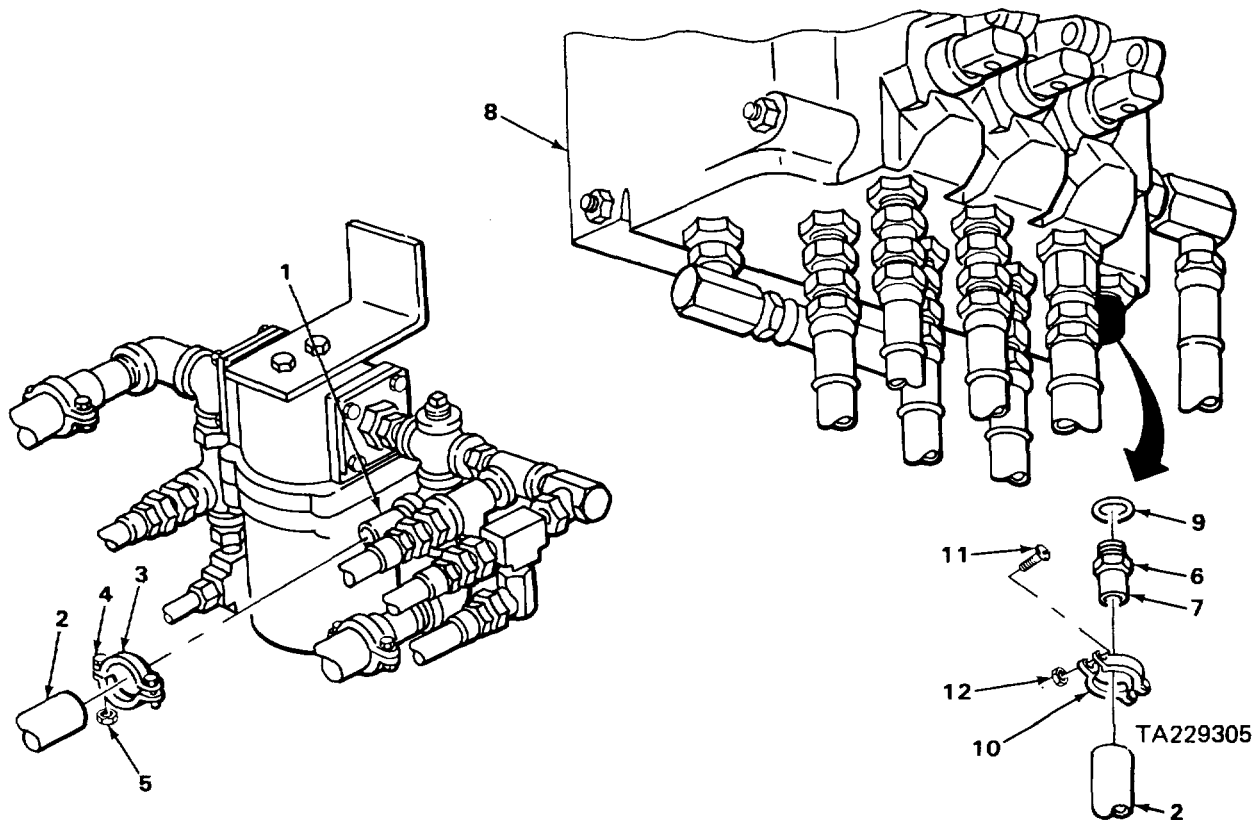
Replace damaged or defective parts as necessary.

10.	Hose (1)	Look for cracks, breaks, tears, and brittleness
11.	All treaded parts	Look for stripped and gouged threads.



CONSOLE CM2 VALVE - TO - RETURN LINE FILTER HOSE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
12. Dixon insert (1)	Hose (2)	Put on.	
13. Hose (2)	Clamp (3), two screws (4), and two nuts (5)	a. Put in position. b. Screw on, and tighten using 9/16-inch socket, handle, and 9/16-inch wrench.	
14.	Adapter (6) and dixon insert (7)	a. Using fish tape, route hose (2) into position. b. Put on.	
15. Console CM2 valve (8)	Adapter (6) and new preformed packing (9)	Screw in, and tighten using 1 7/8-inch wrench.	
16. Hose (1)	Clamp (10), two screws (11), and two nuts (12)	a. Put in position. b. Screw on, and tighten using 9/16-inch socket, handle, and 9/16-inch wrench.	



CONSOLE CM2 VALVE - TO - RETURN LINE FILTER HOSE - CONTINUED

INSTALLATION - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Install console cover (page 2-1092).
2. Fill with hydraulic fluid (LO 9-2320-269-12).
3. Operate auxiliary equipment (TM 9-2320-269-10), and check for proper operation and leaks (page 2-118).

TASK ENDS HERE

CONSOLE CM11 VALVE - TO - RETURN LINE FILTER HOSE ASSEMBLY

This task covers:

- | | |
|---------------------------|---|
| a. Removal (page 2-1118) | c. Inspection/Replacement (page 2-1119) |
| b. Cleaning (page 2-1118) | d. Installation (page 2-1120) |
-

INITIAL SETUP

Tools

- Fish tape, 50-ft reel
- Pail, utility, 3-qt
- Wrench, open-end, 7/8-inch
- Wrench, open-end, 1-inch

Materials/Parts

- Detergent, non-sudsing (item 12,
- Rags, wiping (item 24, appendix C)

Materials/Parts - Continued

- Solvent, drycleaning (item 28, appendix C)
- Tape, teflon (item 32, appendix C)

Personnel Required

One

Equipment Condition

Console cover removed (page 2-1092).

2-1117

CONSOLE CM11 VALVE - TO - RETURN LINE FILTER HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
<u>WARNING</u>			
Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.			
1. Tee (1)	CM11 valve-to-return line filter hose assembly (2)	<ul style="list-style-type: none"> a. Position pail to catch hydraulic fluid. b. Using 7/8-inch and 1-inch wrenches, unscrew and take off. c. Dispose of drained fluid. 	
2. Straight swivel adapter (3)	CM11 valve-to-return line filter hose assembly (2)	<ul style="list-style-type: none"> a. Using 7/8-inch and 1-inch wrenches, unscrew and take off. b. Pull out of truck. 	
CLEANING			
<u>WARNING</u>			
Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.			
NOTE			
For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).			
3.	All metal parts	<ul style="list-style-type: none"> a. Clean in drycleaning solvent. b. Wipe dry with clean, dry rags. 	
4.	Hose assembly (2)	<ul style="list-style-type: none"> a. Clean in clean, soapy water. b. Rinse in clean water. c. Wipe connectors clean with clean rags dampened in drycleaning solvent. d. Wipe dry with clean, dry rags. 	

CONSOLE CM11 VALVE - TO - RETURN LINE FILTER HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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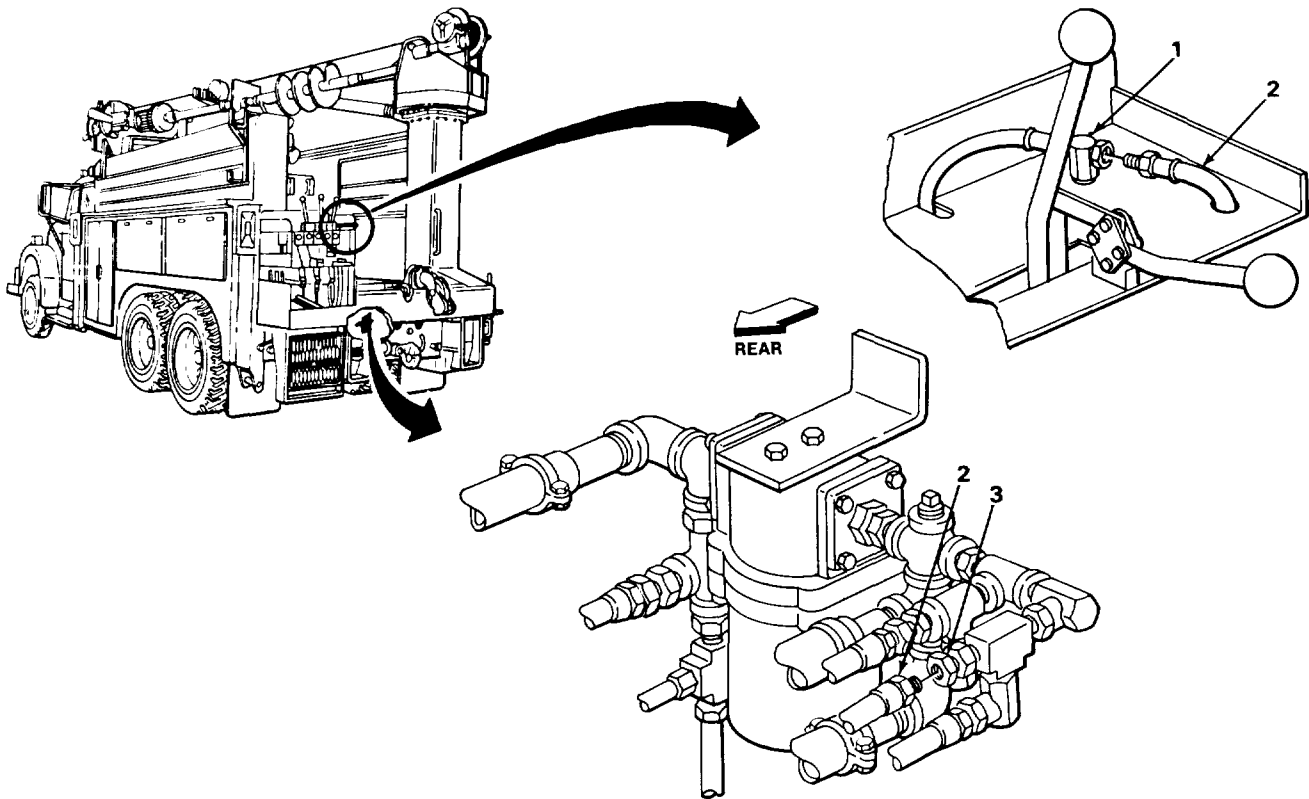
INSPECTION/REPLACEMENT

NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

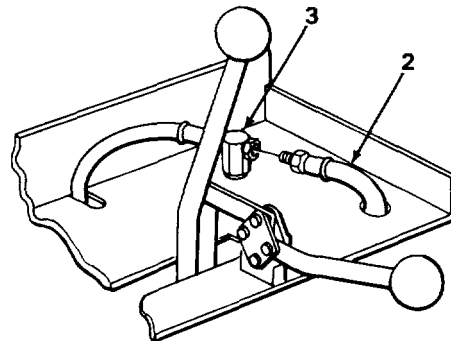
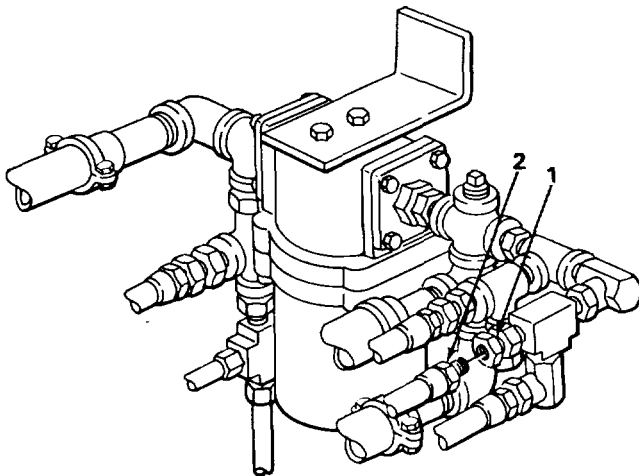
Replace damaged or defective parts as necessary.

- | | | |
|----|--------------------|---|
| 5. | All threaded parts | Look for stripped and gouged threads. |
| 6. | Hose assembly (2) | a. Look for cracks, breaks, tears,
c. Look for damaged threads |



CONSOLE CM11 VALVE - TO - RETURN LINE FILTER HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
NOTE			
Before installing hose assembly, wrap all clean, external threads with two turns of teflon tape (page 2-142).			
7. Straight swivel adapter (1)	CM11 valve-to-return line filter hose assembly (2)	a. Put in position using fish tape. b. Screw on, and tighten using 7/8-inch and 1-inch wrenches.	
8. Tee (3)	CM11 valve-to-return line filter hose assembly (2)	Screw on, and tighten using 7/8-inch and 1-inch wrenches.	



NOTE

FOLLOW-ON MAINTENANCE:

1. Install console cover (page 2-1092).
2. Fill with hydraulic fluid (LO 9-2320-269-12).
3. Operate auxiliary equipment (TM 9-2320-269-10), and check for proper operation and leaks.

TASK ENDS HERE

TA229307

CONSOLE CM11 VALVE - TO - SINGLE SELECTOR VALVE HOSE ASSEMBLY

This task covers:

- a. Removal(page 2-1121)
 - b. Cleaning(page2-1122)
 - c. Inspection/Replacement(page 2-1122)
 - d. Installation(page 2-1123)
-

INITIAL SETUP:

Tools

Pail, utility, 3-qt
 Wrench, open-end, 7/8-inch
 Wrench, open-end, 1-inch

Materials/Parts

Detergent, non-sudsing (item 12, apendix C)
 Rags, wiping (item 16, appendix C)
 Solvent, drycleaning (item 28, appendix C)
 Tape, teflon (item 32, appendix C)

Personnel Required

One

Equipment Condition

Console cover removed (page 2-1092).

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

2-1121

CONSOLE CM11 VALVE - TO - SINGLE SELECTOR VALVE HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
1.	450 swivel adapter (1) valve hose assembly (2)	Console CM11 valve-to-single selector b. Using 7/8-inch and 1-inch wrenches, unscrew and take off. c.	a. Position pail to catch hydraulic fluid. Dispose of drained fluid.
2.	900 swivel adapter (3) valve hose assembly (2)	Console CM11 valve-to-single selector b. Pull out of truck.	a. Using 7/8-inch and 1-inch wrenches, unscrew and take off.

CLEANING

WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

3.	Hose assembly (2)	a. Clean in clean, soapy water. b. c. d.	Rinse in clean water. Wipe connectors clean with clean rags dampened with drycleaning solvent. Wipe dry with clean, dry rags.
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INSPECTION/REPLACEMENT

NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

Replace damaged or defective parts as necessary.

4.	Hose assembly (2)	a. Look for cracks, breaks, tears, and brittleness. b. Look for loose connectors. c. Look for damaged threads.	
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CONSOLE CM11 VALVE - TO - SINGLE SELECTOR VALVE HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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INSPECTION/REPLACEMENT - CONTINUED

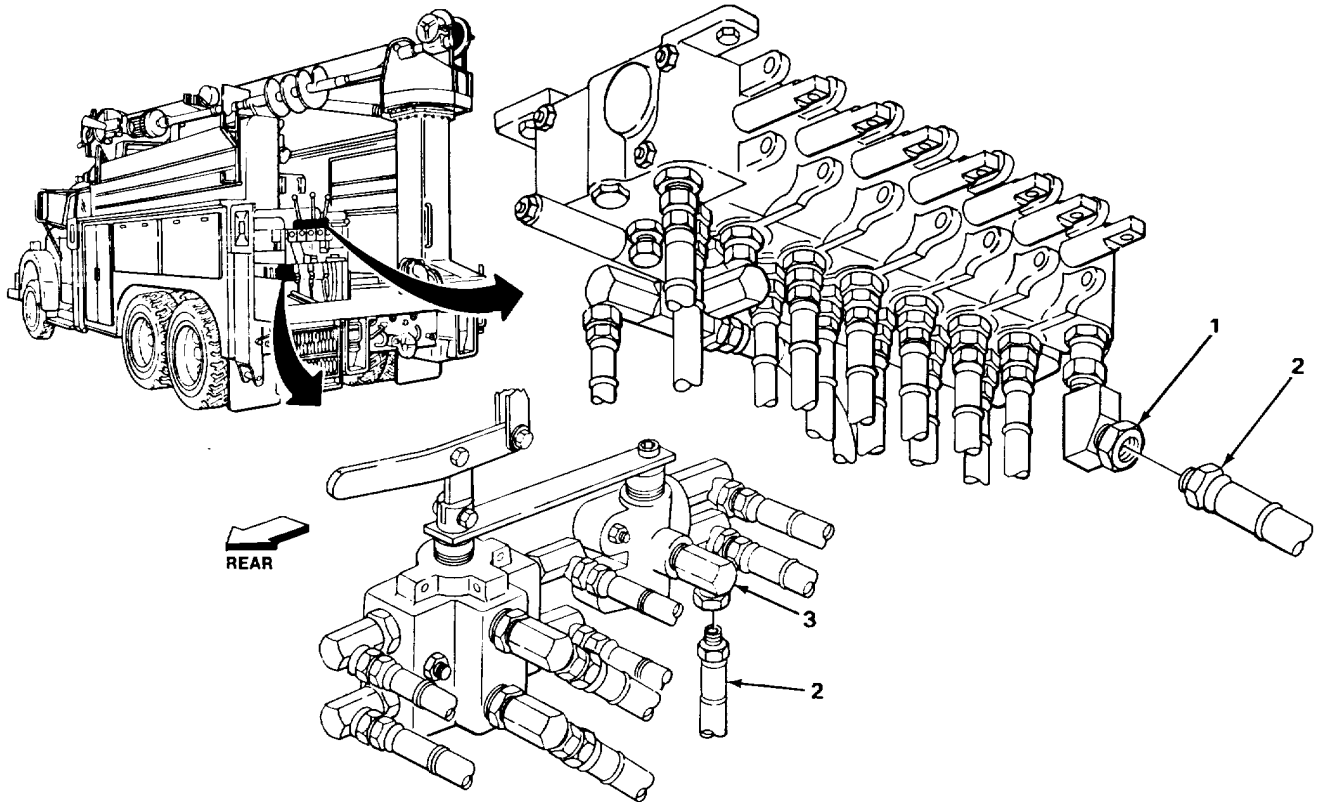
5. All threaded parts Look for stripped or gouged threads.

INSTALLATION

NOTE

Before installing hose assemblies, wrap all clean, external threads with two turns of teflon tape (page 2-142).

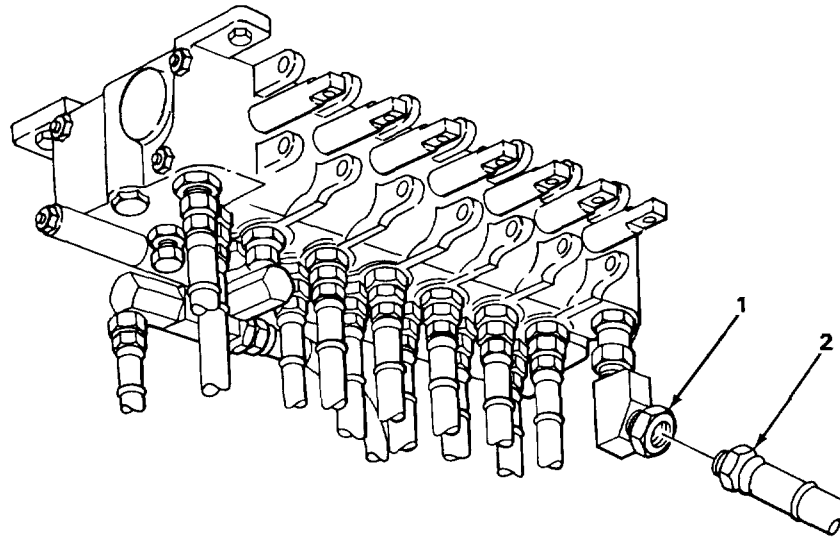
- | | | |
|--|---|--|
| 6. 900 swivel adapter (3)
valve hose Assembly (2) | Console CM11 valve-to-single selector
and 1-inch wrenches. | a. Put in position.
b. Screw on, and tighten using 7/8-inch |
|--|---|--|



TA229308

CONSOLE CM11 VALVE - TO - SINGLE SELECTOR VALVE HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
7. 450 swivel adapter (1) valve hose	Console CM11 valve-to-single selector	a. Put in position. b. Screw on, and tighten using 7/8-inch and 1-inch wrenches.	



NOTE

FOLLOW-ON MAINTENANCE:

1. Install console cover (page 2-1092).
2. Fill with hydraulic fluid (LO 9-2320-269-20).
3. Operate auxiliary equipment (TM 9-2320-269-10), and check for proper operation and leaks.

TASK ENDS HERE

TA229309

DERRICK OPERATOR’S CONTROL VALVE - TO - RETURN LINE FILTER HOSE ASSEMBLY

This task covers:

- a. Removal(page 2-1125)
- b. Cleaning(page2-1126)
- c. Inspection/Replacement(page 2-1126)
- d. Installation(page 2-1128)

INITIAL SETUP:

Tools

- Fish tape, 50-ft reel
- Pail, utility, 3-qt
- Wrench, open-end, 7/8-inch
- Wrench, open-end, 1-inch

Materials/Parts

- Detergent, non-sudsing (item 12, appendix C)

Materials/Parts - Continued

- Rags, wiping (item 24, appendix C)
- Solvent, drycleaning (item 28, appendix C)
- Tape, teflon (item 32, appendix C)

Personnel Required

One

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

2-1125

DERRICK OPERATOR'S CONTROL VALVE - TO - RETURN LINE FILTER HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
1.	900 swivel adapter (1) hose assembly (2)	Control valve-to-return line filter unscrew and take off. c.	a. Position pail to catch hydraulic fluid. b. Using 7/8-inch and 1-inch wrenches, Dispose of drained fluid.
2.	Access cover (3)	Two wing nuts (4)	Unscrew, and take off.
3.	Derrick mast (5)	Access cover (3)	Take off.
4.	900 swivel adapter (6) hose assembly (2)	Control valve-to-return line filter	Using 7/8-inch and 1-inch wrenches, unscrew and take off.

CLEANING

WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

5.	All metal parts	a. Clean in drycleaning solvent. b.	Wipe dry with clean, dry rags.
6.	Hose assembly (2)	a. Clean in clean, soapy water. b. c. d.	Rinse in clean water. Wipe connectors clean with clean rags dampened in drycleaning solvent. Wipe dry with clean, dry rags.

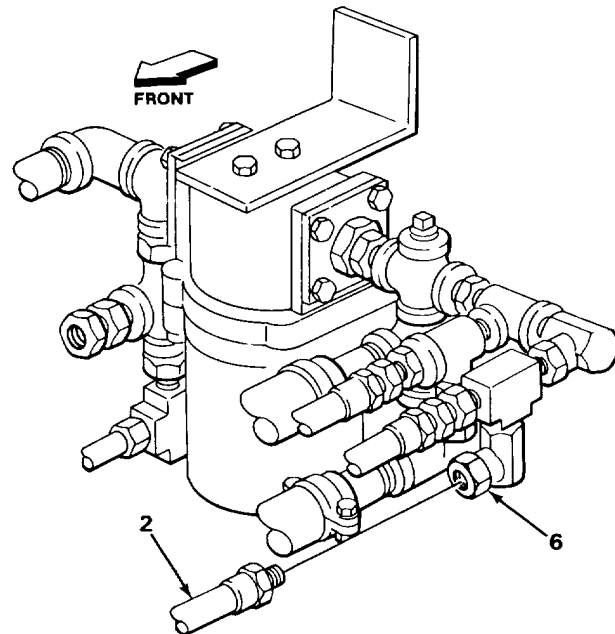
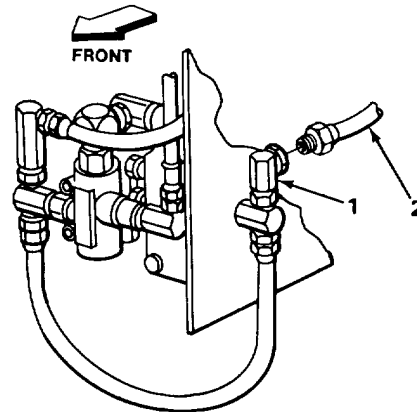
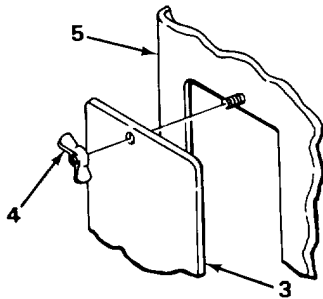
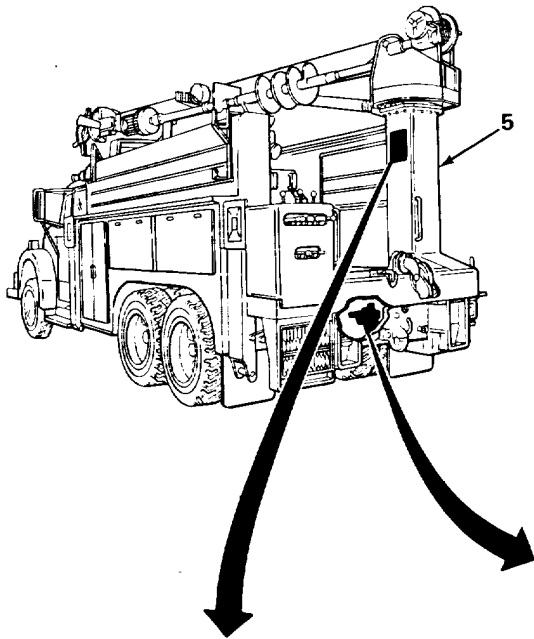
NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

Replace damaged or defective parts as necessary.

DERRICK OPERATOR'S CONTROL VALVE - TO - RETURN LINE FILTER HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSPECTION/REPLACEMENT - CONTINUED			
7.	Hose assembly (2)	a. Look for cracks, breaks, tears, and brittleness. b. Look for loose connectors. c. Look for damaged threads.	
8.	All threaded parts	Look for stripped and gouged threads.	



DERRICK OPERATOR'S CONTROL VALVE - TO - RETURN LINE FILTER HOSE ASSEMBLY - CONTINUED

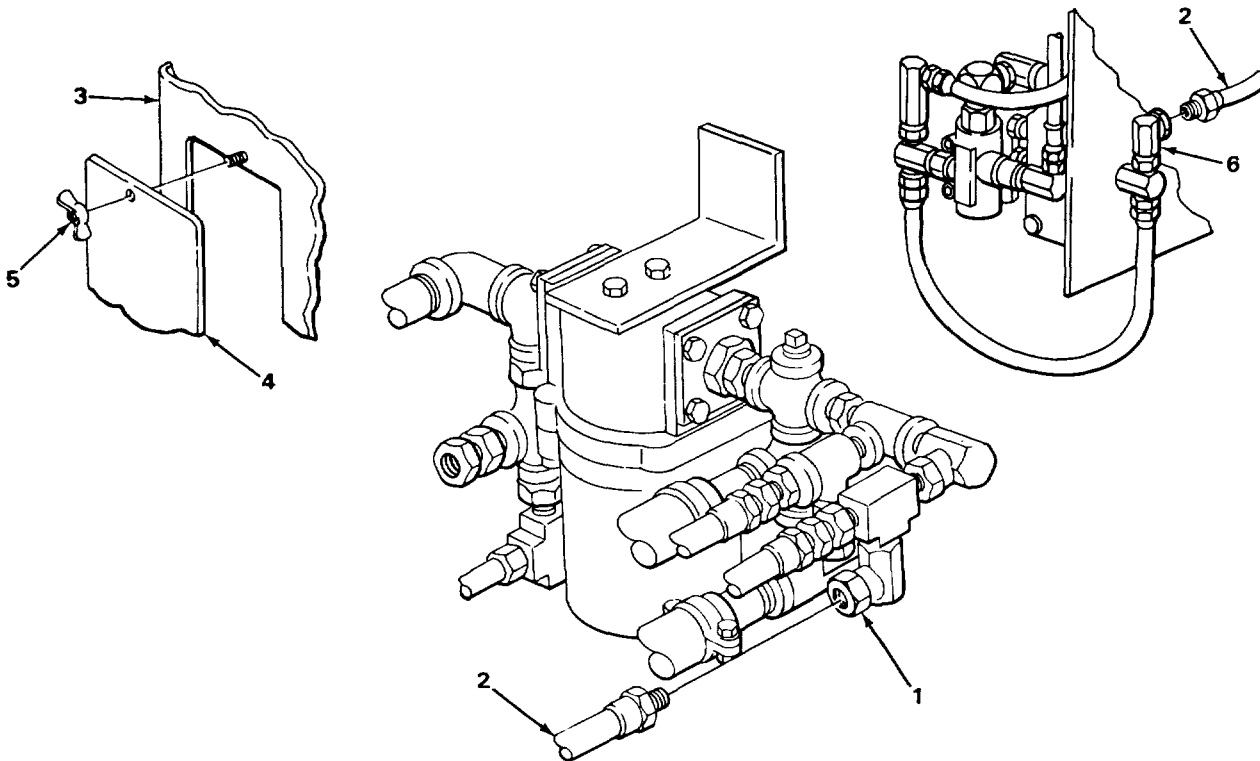
LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION

NOTE

Before installing hose assembly, wrap all clean, external threads with two turns of teflon tape (page 2-142).

9. 900 swivel adapter (1) hose assembly (2)	Control valve-to-return line filter and 1-inch wrenches.	a. Put in position using fish tape. b. Screw on, and tighten using 7/8-inch
10. Derrick mast (3)	Access cover (4)	Put on.
11. Access cover (4)	Two wing nuts (5)	Screw on, and tighten.
12. 900 swivel adapter (6) hose assembly (2)	Control valve-to-return line filter	Screw on, and tighten using 7/8-inch and 1-inch wrenches



TA229311

DERRICK OPERATOR'S CONTROL VALVE - TO - RETURN LINE FILTER HOSE ASSEMBLY - CONTINUED

INSTALLATION - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Fill with hydraulic fluid (LO 9-2320-269-12).
2. Operate auxiliary equipment (TM 9-2320-269-10), and check for proper operation and leaks (page 2-118).

TASK ENDS HERE

DERRICK OPERATOR'S FLOW CONTROL VALVE - TO - DERRICK OPERATOR'S CONTROL VALVE HOSE ASSEMBLY

This task covers:

- | | |
|--|---|
| <ol style="list-style-type: none"> a. Removal(page 2-1129) b. Cleaning(page2-1130) | <ol style="list-style-type: none"> c. Inspection/Replacement(page 2-1130) d. Installation(page 2-11331) |
|--|---|

INITIAL SETUP:

Tools

Pail, utility, 3-qt
 Wrench, open-end, 7/8-inch
 Wrench, open-end, 1-inch

Materials/Parts

Detergent, non-sudsing (item 12, appendix C)
 Rags, wiping (item 24, appendix C)
 Solvent, drycleaning (item 28, appendix C)
 Tape, teflon (item 32, appendix C)

Personnel Required

One

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			

WARNING

Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

DERRICK OPERATOR'S FLOW CONTROL VALVE - TO - DERRICK OPERATOR'S CONTROL VALVE HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL CONTINUED		
1.	Flow control valve tee (1) to control valve tee (2)	Tee-to-tee hose assembly (3) unscrew and take off. c.
		a. Position pail to catch hydraulic fluid. b. Using 7/8-inch and 1-inch wrenches, Dispose of drained fluid.

CLEANING

WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

2.	All metal parts	a. Clean in drycleaning solvent. b. Wipe dry with clean, dry rags.
3.	Hose assembly (3)	a. Clean in clean soapy water. b. Rinse in clean water. c. Wipe connectors clean with clean rags dampened in drycleaning solvent. d. Wipe dry with clean, dry rags.

INSPECTION/REPLACEMENT

NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

Replace damaged or defective parts as necessary.

4.	Hose assembly (3)	a. Look for cracks, breaks, tears, and brittleness. b. Look for loose connectors. c. Look for damaged threads.
5.	All threaded parts	Look for stripped and gouged threads.

DERRICK OPERATOR'S FLOW CONTROL VALVE - TO - DERRICK OPERATOR'S CONTROL VALVE HOSE ASSEMBLY - CONTINUED

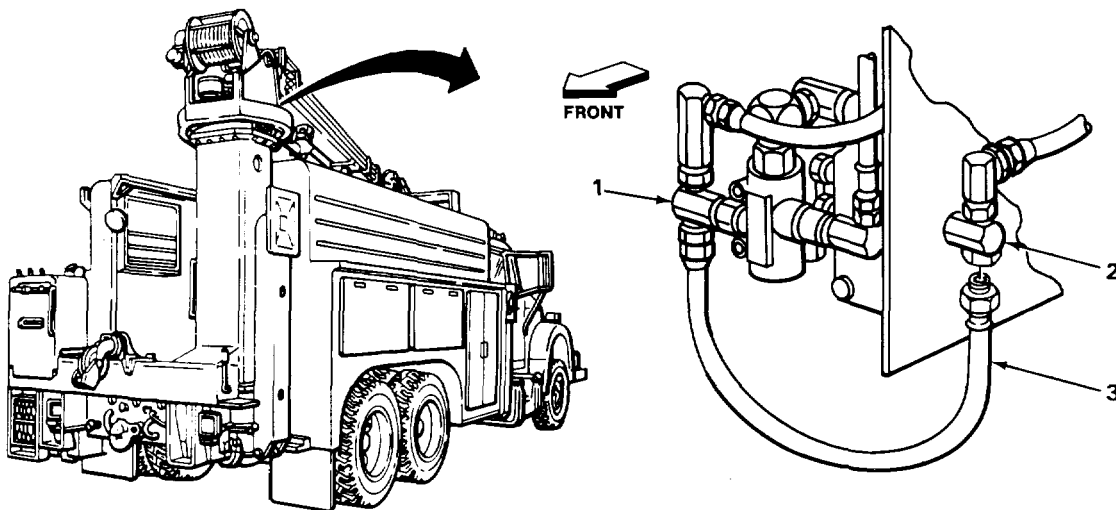
LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION

NOTE

Before installing hose assembly, wrap all clean, external threads with two turns of teflon tape (page 2-142).

- | | | |
|--|------------------------------|---|
| 6. Flow control valve tee (1) to control valve tee (2) | Tee-to-tee hose assembly (3) | Screw on, and tighten using 7/8-inch and 1-inch wrenches. |
|--|------------------------------|---|



NOTE

FOLLOW-ON MAINTENANCE:

1. Fill with hydraulic fluid (LO 9-2320-269-12).
2. Operate auxiliary equipment (TM 9-2320-269-10), and check for proper operation and leaks.

TASK ENDS HERE

EMERGENCY PUMP - TO - OUTRIGGER LINE HOSE ASSEMBLY

This task covers:

- | | |
|--|---|
| <ul style="list-style-type: none"> a. Removal(page 2-1132) b. Cleaning(page2-1133) | <ul style="list-style-type: none"> c. Inspection/Replacement(page 2-1134) d. Installation(page 2-11334) |
|--|---|

INITIAL SETUP:

Tools

- Pail, utility, 3-qt
- Wrench, open-end, 7/8-inch
- Wrench, open-end, 1-inch
- Wrench, open-end, 1 1/16-inch

Materials/Parts

Materials/Parts - Continued

- Solvent, drycleaning (item 28, appendix C)
- Tape, teflon (item 32, appendix C)

Personnel Required

- One
- Detergent, non-sudsing (item 12, appendix C)
- Rags, wiping (item 24, appendix C)

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

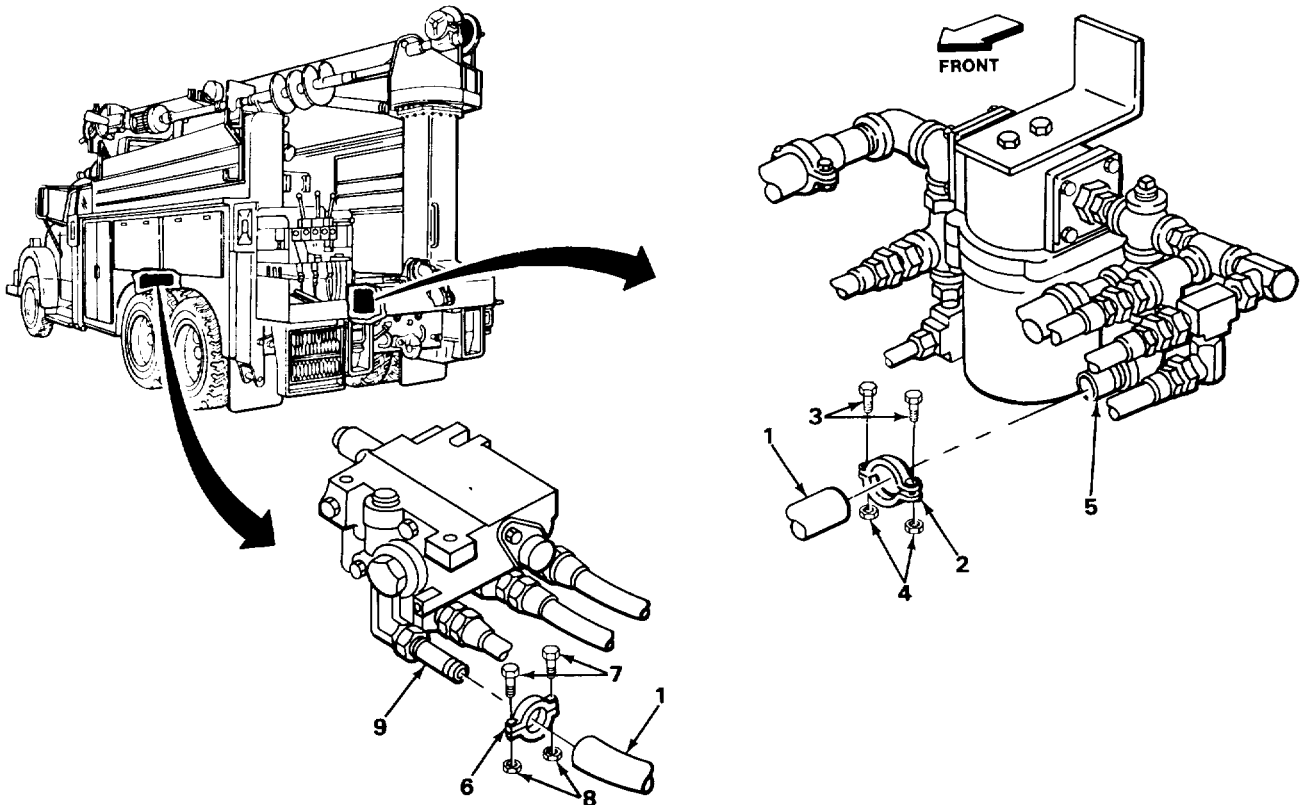
- | | | | |
|----|--|---|--|
| 1. | Tank (1) | Shutoff valve (2) | Using 1 1/16-inch wrench, close. |
| 2. | Two 900 swivel adapters (3) assembly (4) | Emergency pump-to-outrigger line hose unscrew and take off. | <ul style="list-style-type: none"> a. Position pail to catch hydraulic fluid. b. Using 1-inch and 7/8-inch wrenches, c. Dispose of drained fluid. |

2-1132

EMERGENCY PUMP - TO - OUTRIGGER LINE HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL - CONTINUED



CLEANING

WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

TA229313

EMERGENCY PUMP - TO - OUTRIGGER LINE HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

CLEANING - CONTINUED

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

- | | | | |
|----|-------------------|--|--|
| 3. | All metal parts | a. Clean in drycleaning solvent.
b. | Wipe dry with clean, dry rags. |
| 4. | Hose assembly (1) | a. Clean in clean, soapy water. | b. Rinse in clean water.
c. Wipe connectors clean with clean rags dampened in drycleaning solvent.
d. Wipe dry with clean, dry rags. |

INSPECTION/REPLACEMENT

NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

Replace damaged or defective parts as necessary.

- | | | | |
|----|--|--|---------------------------|
| 5. | Emergency pump-to-outrigger line hose assembly (1) | a. Look for cracks, breaks, tears, and brittleness.
b. Look for loose connectors.
c. | Look for damaged threads. |
| 6. | All threaded parts | Look for stripped and gouged threads. | |

INSTALLATION

NOTE

Before installing hose assembly, wrap all clean, external threads with two turns of teflon tape (page 2-142).

- | | | | |
|----|--|----------------------------------|---|
| 7. | Two 900 swivel adapters (2)
hose assembly (1) | Emergency pump-to-outrigger line | Screw on, and tighten using 1-inch and 7/8-inch wrenches. |
|----|--|----------------------------------|---|

FRONT WINCH CM2 VALVE - TO - RETURN LINE FILTER HOSE

This task covers:

- | | |
|--|--|
| <ul style="list-style-type: none"> a. Removal(page 2-1136) b. Cleaning(page2-1137) | <ul style="list-style-type: none"> c. Inspection/Replacement(page 2-1138) d. Installation(page 2-1138) |
|--|--|

INITIAL SETUP:

Tools

- Handle, ratchet, 1/2-inch drive
- Pail, utility, 3-qt
- Screwdriver, flat-tip, 3/8-inch
- Socket, 1/2-inch drive, 11116-inch

Materials/Parts

- Detergent, non-sudsing (item 12, appendix C)
- Rags, wiping (item 24, appendix C)
- Solvent, drycleaning (item 28, appendix C)

Personnel Required

One

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

REMOVAL

WARNING

Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

1.	CM2 valve-to-return line filter hose (1) nuts (4)	Clamp (2), two screws (3), and two	Using 11116-inch socket and handle unscrew and take off.
2.	Dixon insert (5)	Hose (1) pull off.	Using flat-tip screwdriver, loosen and
3.	CM2 valve-to-return line filter hose (1) nuts (8)	Clamp (6), two screws (7), and two unscrew and take off.	<ul style="list-style-type: none"> a. Position pail to catch hydraulic fluid. b. Using 11116-inch socket and handle
4.	Dixon insert (9) line filter hose (1)	CM2 valve-to-return b. Twist, and pull off.	<ul style="list-style-type: none"> a. Using flat-tip screwdriver, pry loose.

FRONT WINCH CM2 VALVE - TO - RETURN LINE FILTER HOSE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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CLEANING

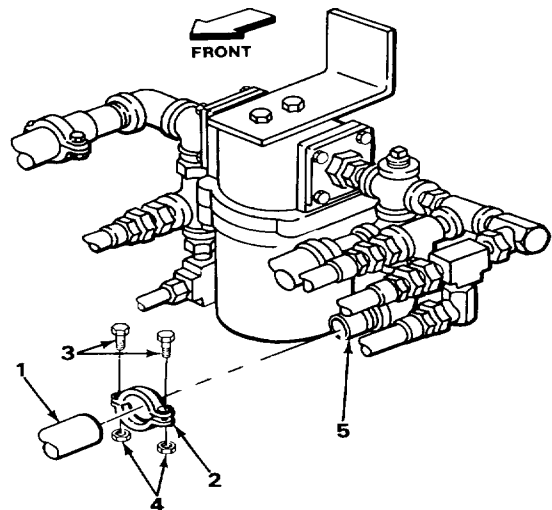
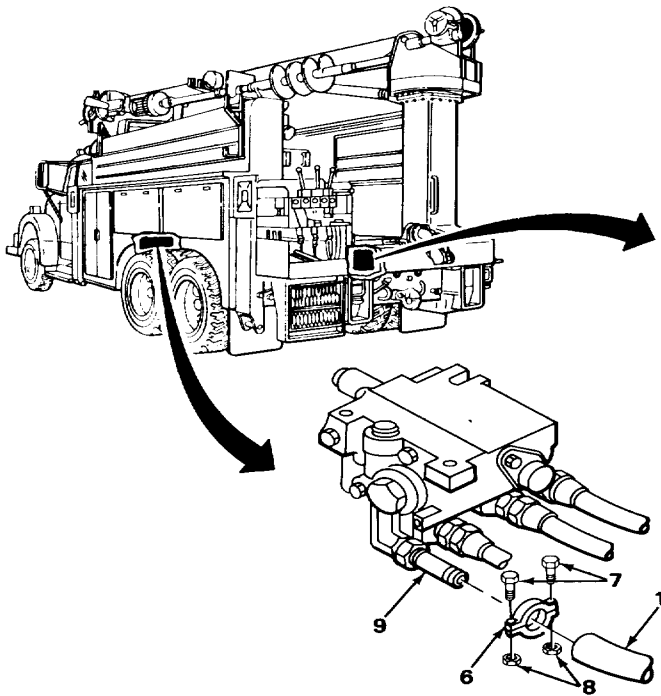
WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

- | | | |
|----|---|--|
| 5. | All metal parts | a. Clean in drycleaning solvent.
b. Wipe dry with clean, dry rags. |
| 6. | CM2 valve-to-
return line filter
Hose (1) | a. Clean in clean, soapy water.
b. Rinse in clean water.
c. Wipe dry with clean, dry rags. |



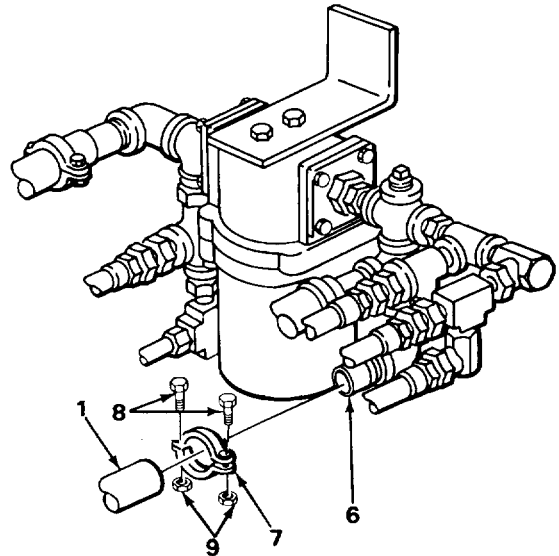
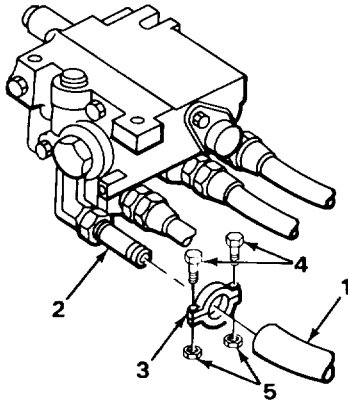
TA229315

FRONT WINCH CM2 VALVE - TO - RETURN LINE FILTER HOSE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSPECTION/REPLACEMENT			
NOTE			
For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).			
Replace damaged or defective parts as necessary.			
7.	CM2 valve-to-return line filter hose (1)		Look for cracks, breaks, tears, or brittleness.
8.	All threaded parts		Look for stripped and gouged threads.
INSTALLATION			
9.	Dixon insert (2) line filter hose (1)	CM2 valve-to-return	Push on.
10.	CM2 valve-to-return line filter hose (1) nuts (5)	Clamp (3), two screws (4), and two inch socket and handle.	a. Place in position. b. Screw on, and tighten using 11/16-
11.	Dixon insert (6) line filter hose (2)	CM2 valve-to-return b. Push on.	a. Put in position.
12.	CM2 valve-to-return line filter hose (1) nuts (9)	Clamp (7), two screws (8), and two inch socket and handle.	a. Place in position. b. Screw on, and tighten using 11/16-

FRONT WINCH CM2 VALVE - TO - RETURN LINE FILTER HOSE - CONTINUED

INSTALLATION - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE:

1. Fill with hydraulic fluid (LO 9-2320-269-12).
2. Operate auxiliary equipment (TM 9-2320-269-10), and check for proper operation and leaks.

TASK ENDS HERE

MODROCK VALVE - TO - RETURN LINE HOSE ASSEMBLY

This task covers:

- | | |
|--|--|
| <ol style="list-style-type: none"> a. Removal(page 2-1140) b. Cleaning(page2-1140) | <ol style="list-style-type: none"> c. Inspection/Replacement(page 2-1141) d. Installation(page 2-1142) |
|--|--|

INITIAL SETUP:

Tools

- Fish tape, 50-ft reel
- Pail, utility, 3-qt
- Wrench, open-end, 7/8-inch

Materials/Parts

- Detergent, non-sudsing (item 12 appendix C)
- Rags, wiping (item 24, appendix C)
- Solvent, drycleaning (item 28, appendix C)

TA229316

MODROCK VALVE - TO. RETURN LINE HOSE ASSEMBLY - CONTINUED

INITIAL SETUP - Continued

Materials/Parts - Continued

Personnel Required

Tape, teflon (item 32, appendix C)

One

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

REMOVAL

WARNING

Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

- | | | | |
|----|---|---|--|
| 1. | Access cover (1) | Two wing nuts (2) | Unscrew, and take off. |
| 2. | Derrick mast (3) | Access cover (1) | Take off. |
| 3. | Elbow (4)
return line hose
assembly (5) | Modrock valve-to-
b.
c. | a. Position pail to catch hydraulic fluid.
Using 7/8-inch wrench, unscrew and
take off.
Dispose of drained fluid. |
| 4. | Service tee (6)
return line hose
assembly (5) | Modrock valve-to-
and take off.
b. Pull out of truck. | a. Using 7/8-inch wrench, unscrew |

CLEANING

WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

- | | | | |
|----|-----------------|--|--------------------------------|
| 5. | All metal parts | a. Clean in drycleaning solvent.
b. | Wipe dry with clean, dry rags. |
|----|-----------------|--|--------------------------------|

MODROCK VALVE - TO - RETURN LINE HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
CLEANING - CONTINUED			
6.	Hose assembly (5)	a. Clean in clean, soapy water. b. c.	Rinse in clean water. Wipe connectors clean, with clean rags dampened with drycleaning solvent.

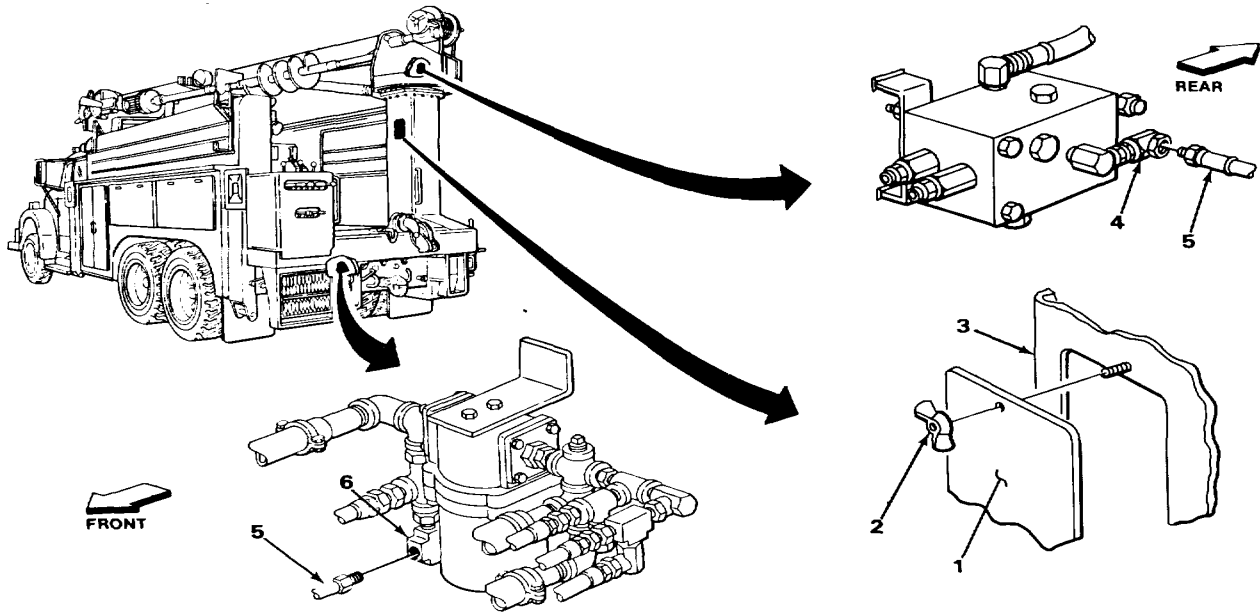
INSPECTION/REPLACEMENT

NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

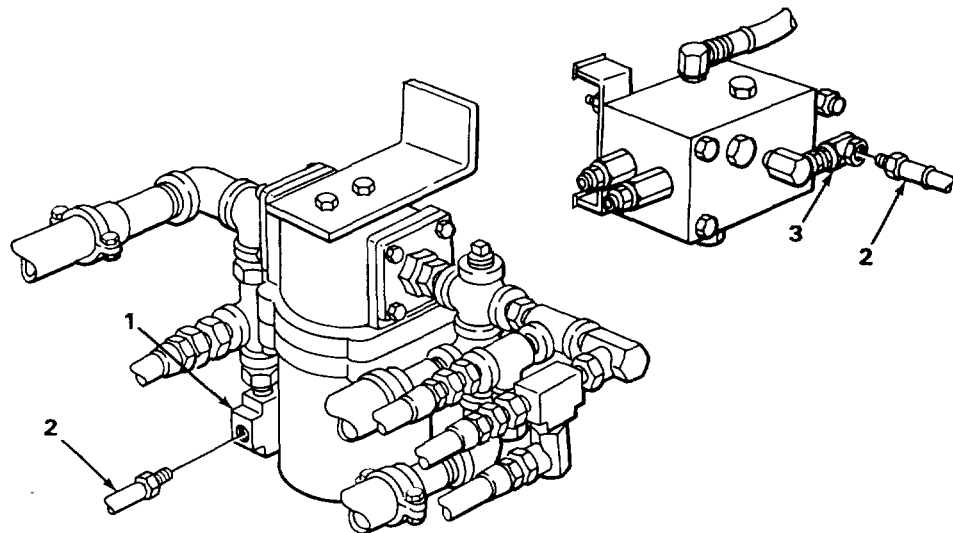
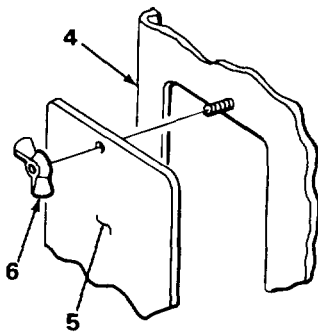
Replace damaged or defective parts as necessary.

- | | | |
|----|--------------------|--|
| 7. | All threaded parts | Look for stripped and gouged threads and brittleness. |
| 8. | Hose assembly (5) | a. Look for cracks, breaks, tears
b. Look for loose connectors.
c. Look for damaged threads. |



MODROCK VALVE - TO - RETURN LINE HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
NOTE			
Before installing hose assembly, wrap all clean, external threads with two turns of teflon tape (page 2-142).			
9. Service tee (1) return line hose assembly (2)	Modrock valve-to-	a. Using fish tape, put in position. b. crew on, and tighten using 7/8-inch wrench.	
10. Elbow (3) return line hose assembly (2)	Modrock valve-to-	a. Using fish tape, put in position. b. Screw on, and tighten using 7/8-inch wrench.	
11. Derrick mast (4)	Access cover (5)	Put on.	
12. Access cover (5)	Two wingnuts (6)	Screw on, and tighten.	



TA229318

MODROCK VALVE - TO - RETURN LINE HOSE ASSEMBLY - CONTINUED

INSTALLATION - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Fill with hydraulic fluid (LO 9-2320-269-12).
2. Operate auxiliary equipment (TM 9-2320-269-10), and check for proper operation and leaks.

TASK ENDS HERE

RIGHT SIDE OUTRIGGER CONTROL VALVE - TO - LEFT SIDE OUTRIGGER CONTROL VALVE HOSE ASSEMBLY

This task covers:

- | | |
|--|--|
| <ol style="list-style-type: none"> a. Removal(page 2-1143) b. Cleaning(page2-1144) | <ol style="list-style-type: none"> c. Inspection/Replacement(page 2-1144) d. Installation(page 2-1145) |
|--|--|

INITIAL SETUP:

Tools

- Fish tape, 50-ft reel
- Pail, utility, 3-qt
- Wrench, open-end, 7/8-inch
- Wrench, open-end, 1-inch

Materials/Parts

- Detergent, non-sudsing (item 12, appendix C)
- Rags, wiping (item 24, appendix C)
- Solvent, drycleaning (item 28, appendix C)
- Tape, teflon (item 32, appendix C)

Personnel Required

One

Equipment Condition

Hydraulic oil tank shutoff valve turned off (TM 9-2320-269-10).
Console cover removed (page 2-1092).

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

REMOVAL

WARNING

Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

2-1143

RIGHT SIDE OUTRIGGER CONTROL VALVE - TO - LEFT SIDE OUTRIGGER CONTROL VALVE HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
1.	Two 900 swivel adapters (1) control valve hose assembly (2)	Outrigger control valve-to-outrigger unscrew and take off. c. Dispose of drained fluid.	a. Position pail to catch hydraulic fluid. b. Using 7/8-inch and 1-inch wrenches,
2.	Console (3)	Hose assembly (2)	Pull out.

CLEANING**WARNING**

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

- | | | |
|----|-------------------|---|
| 3. | All metal parts | a. Clean in drycleaning solvent.
b. Wipe dry with clean, dry rags. |
| 4. | Hose assembly (2) | a. Clean in clean, soapy water.
b. Rinse in clean water.
c. Wipe connectors clean with clean rags dampened with drycleaning solvent.
d. Wipe dry with clean, dry rags. |

INSPECTION/REPLACEMENT**NOTE**

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

Replace damaged or defective parts as necessary.

- | | | |
|----|-------------------|---|
| 5. | Hose assembly (2) | a. Look for cracks, breaks, tears,
b. Look for loose connectors.
c. Look for damaged threads. |
|----|-------------------|---|

RIGHT SIDE OUTRIGGER CONTROL VALVE - TO - LEFT SIDE OUTRIGGER CONTROL VALVE HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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INSPECTION/REPLACEMENT- CONTINUED

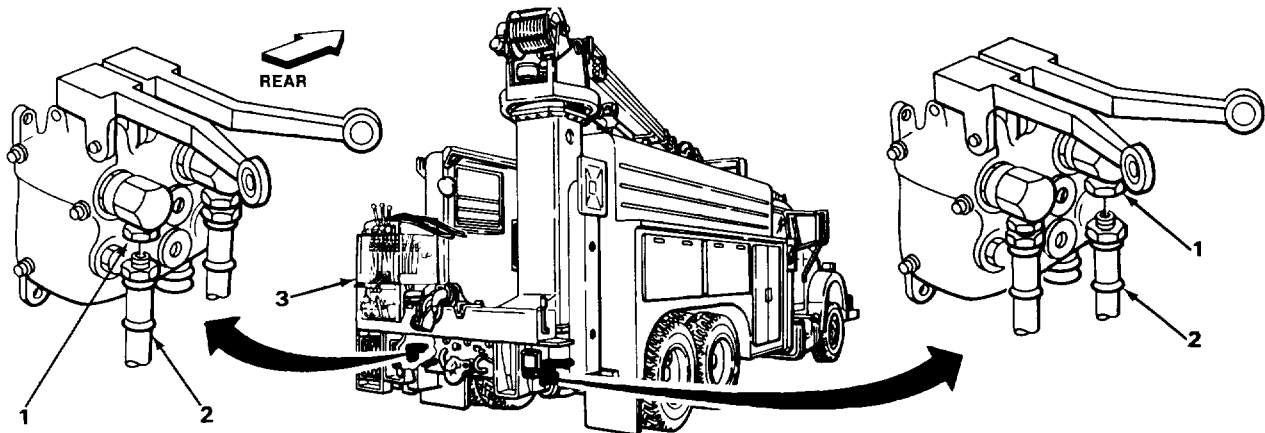
- | | | | |
|----|--------------------|---------------------------------------|--|
| 6. | All threaded parts | Look for stripped and gouged threads. | |
|----|--------------------|---------------------------------------|--|

INSTALLATION

NOTE

Before installing hose assembly, wrap all clean, external threads with two turns of teflon tape (page 2-142).

- | | | | |
|----|--|--|---|
| 7. | Two 900 swivel adapters (1)
control valve hose assembly (2) | Outrigger control valve-to-outrigger
b. Put in position.
c. Screw on , and tighten using 7/8-inch and 1-inch wrenches. | a. Pass into console (3), and pull through using fish tape. |
|----|--|--|---|



NOTE

FOLLOW-ON MAINTENANCE:

1. Fill with hydraulic fluid (LO 9-2320-269-12).
2. Turn on hydraulic tank shutoff valve (TM 9-2320-269-10).
3. Install console cover (page 2-1092).

TASK ENDS HERE

RIGHT SIDE OUTRIGGER CONTROL VALVE - TO - RETURN LINE FILTER HOSE ASSEMBLY

This task covers:

- a. Removal(page 2-1146)
 - b. Cleaning(page2-1146)
 - c. Inspection/Replacement(page 2-1147)
 - d. Installation(page 2-1147)
-

INITIAL SETUP:

Tools

- Fish tape, 50-ft reel
- Pail, utility, 3-qt
- Wrench, open-end, 7/8-inch
- Wrench, open-end, 1-inch

Materials/Parts - Continued

- Rags, wiping (item 24, appendix C)
- Solvent, drycleaning (item 28, appendix C)
- Tape, teflon (item 32, appendix C)

Personnel Required

Materials/Parts

One

- Detergent, non-sudsing (item 12, appendix C)
-

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

REMOVAL

WARNING

Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

- | | | | |
|----|---|---|---|
| 1. | Swivel adapter (1)
return line filter
hose assembly (2) | Outrigger valve-to-
b. Using 7/8-inch and 1-inch wrenches
unscrew and take off.
c. | a. Position pail to catch hydraulic fluid.

Dispose of drained fluid. |
| 2. | Swivel adapter (3)
return line filter
hose assembly (2) | Outrigger valve-to-
unscrew and take off.
b. Pull out of truck. | a. Using 7/8-inch and 1-inch wrenches, |

CLEANING

WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

RIGHT SIDE OUTRIGGER CONTROL VALVE - TO - RETURN LINE FILTER HOSE ASSEMBLY - CONTINUED

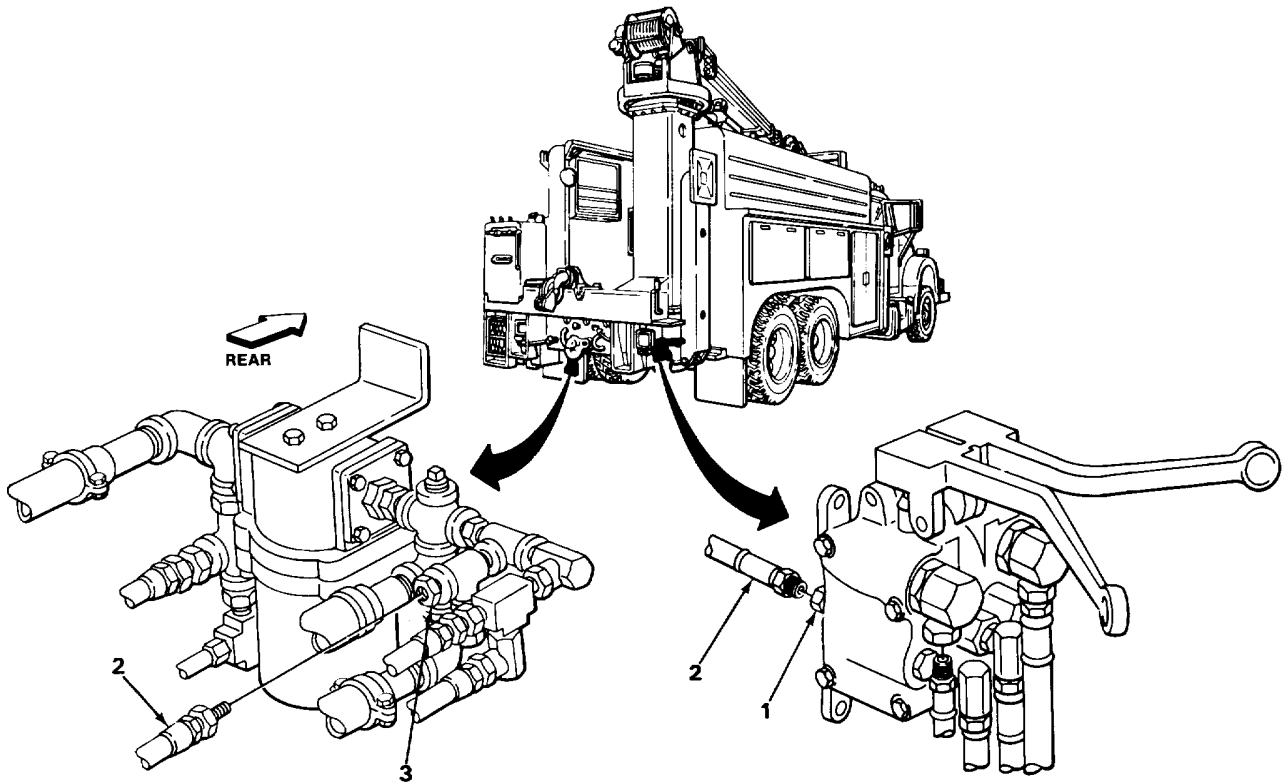
LOCATION	ITEM	ACTION	REMARKS
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CLEANING - CONTINUED

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

- | | | | |
|----|-------------------|--|--|
| 3. | All metal parts | a. Clean in drycleaning solvent.
b. | Wipe dry with clean, dry rags. |
| 4. | Hose assembly (2) | a. Clean in clean, soapy water. | b. Rinse in clean water.
c. Wipe connectors clean with clean rags dampened in drycleaning solvent.
d. Wipe dry with clean, dry rags. |



TA229320

RIGHT SIDE OUTRIGGER CONTROL VALVE - TO - RETURN LINE FILTER HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

INSPECTION/REPLACEMENT

NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

Replace damaged or defective parts as necessary.

- | | | | |
|----|--------------------|---|--|
| 5. | Hose assembly (1) | a. Look for cracks, breaks, tears, and
brittleness.
b. Look for loose connectors.
c. Look for damaged threads. | |
| 6. | All threaded parts | Look for stripped and gouged threads. | |

INSTALLATION

NOTE

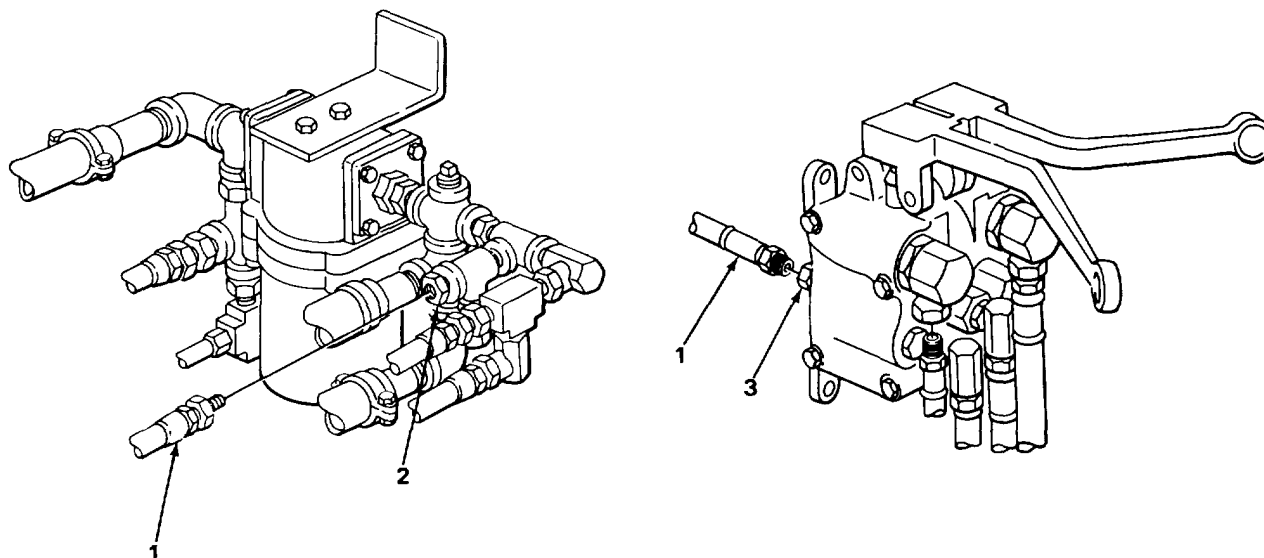
Before installing hose assembly, wrap all clean external threads with two turns of teflon tape (page 2-142).

- | | | | |
|----|--------------------|---------------------------------------|---|
| 7. | Swivel adapter (2) | Hose assembly (1)
b. | a. Using fish tape, put in place.
Screw on, and tighten using 7/8-inch
and 1-inch wrenches. |
| 8. | Swivel adapter (3) | Hose assembly (1)
1-inch wrenches. | Screw on, and tighten using 7/8-inch and |

2-1148

RIGHT SIDE OUTRIGGER CONTROL VALVE - TO - RETURN LINE FILTER HOSE ASSEMBLY - CONTINUED

INSTALLATION - CONTINUED

**NOTE****FOLLOW-ON MAINTENANCE:**

1. Fill with hydraulic fluid (LO 9-2320-269-12).
2. Operate outrigger (TM 9-2320-269-10), and check for proper operation and leaks.

TASK ENDS HERE**LEFT SIDE OUTRIGGER CONTROL VALVE - TO - CONSOLE CM11 VALVE HOSE ASSEMBLY**

This task covers:

- | | |
|-------------------------|--|
| a. Removal(page 2-1150) | c. Inspection/Replacement(page 2-1152) |
| b. Cleaning(page2-1150) | d. Installation(page 2-1152) |

LEFT SIDE OUTRIGGER CONTROL VALVE - TO - CONSOLE CM11 VALVE HOSE ASSEMBLY - CONTINUED

INITIAL SETUP

Tools

- Pail, utility, 3-qt
- Wrench, open-end, 7/8-inch
- Wrench, open-end, 1-inch

Personnel Required

One

Equipment Condition

Materials/Parts

- Detergent, non-sudsing (item 12, appendix C)
- Rags, wiping (item 24, appendix C)
- Solvent, drycleaning (item 28, appendix C)
- Tape, teflon (item 32, appendix C)

Console cover removed (page 2-1092).
Operator's platform down
(TM 9-2320-269-10).

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

REMOVAL

WARNING

Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

- | | | | |
|----|---|--|---|
| 1. | Tee (1)
console valve hose
assembly (2) | Outrigger valve-to-
b. Using 7/8-inch and 1-inch wrenches,
unscrew and take off.
c. | a. Position pail to catch hydraulic fluid.

Dispose of drained fluid. |
| 2. | Tee (3)
console valve hose
assembly (2) | Outrigger valve-to-
unscrew and take off.
b. Take out of truck. | a. Using 7/8-inch and 1-inch wrenches, |

CLEANING

WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

LEFT SIDE OUTRIGGER CONTROL VALVE - TO - CONSOLE CM11 VALVE HOSE ASSEMBLY - CONTINUED

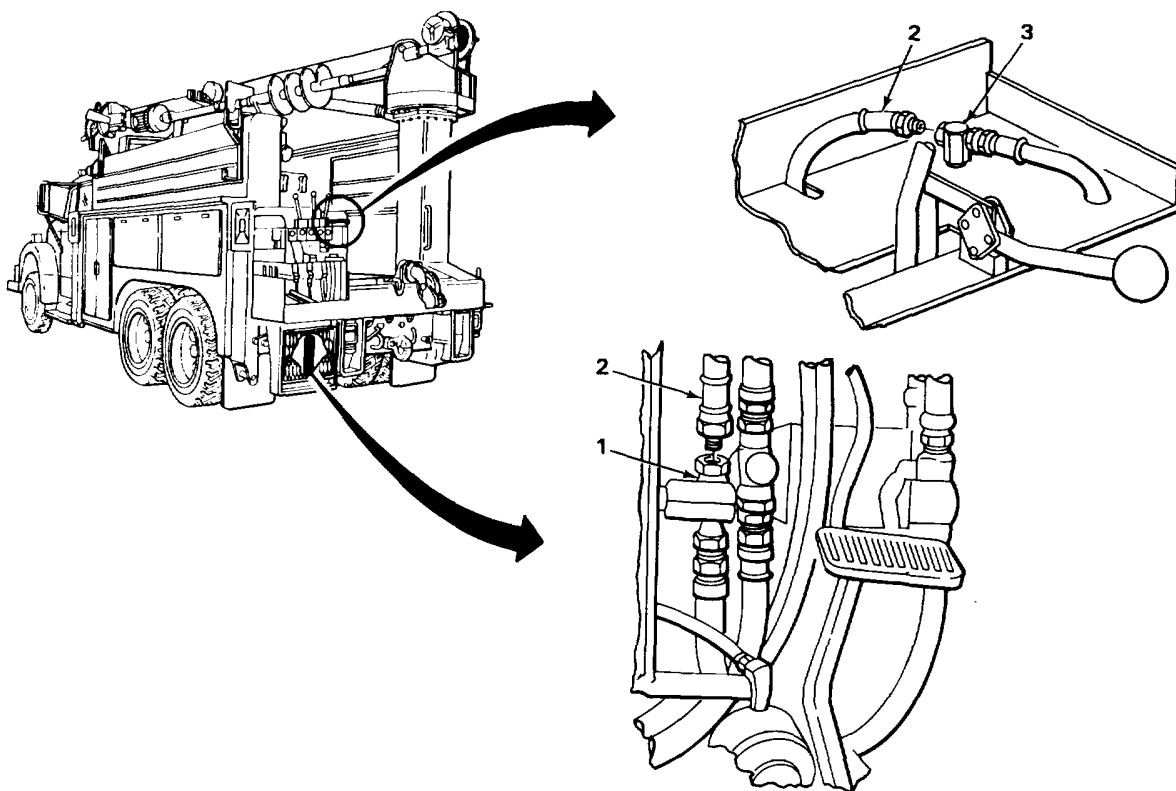
LOCATION	ITEM	ACTION	REMARKS
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CLEANING - CONTINUED

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

- | | | |
|----|-------------------|--|
| 3. | Hose assembly (2) | <ul style="list-style-type: none"> a. Clean in clean, soapy water. b. Rinse in clean water. c. Wipe connectors clean with clean rags dampened with drycleaning solvent. d. Wipe dry with clean dry rag |
|----|-------------------|--|



TA229322

LEFT SIDE OUTRIGGER CONTROL VALVE - TO - CONSOLE CM11 VALVE HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

INSPECTION/REPLACEMENT

NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

Replace damaged or defective parts as necessary.

- | | | | |
|----|---|--|--|
| 4. | Left side outrigger valve-to-console CM11 valve hose assembly (1) | a. Look for cracks, breaks, tears, and brittleness.
b. Look for loose connectors.
c. Look for damaged threads. | |
| 5. | All threaded parts | Look for stripped or gouged threads. | |

INSTALLATION

NOTE

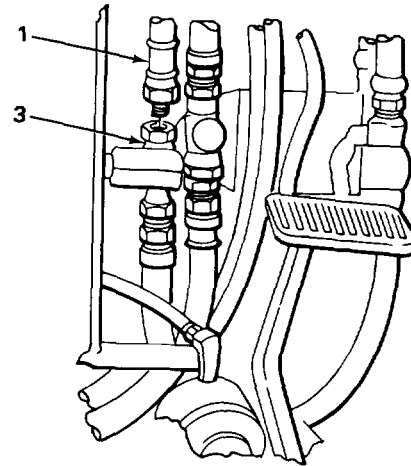
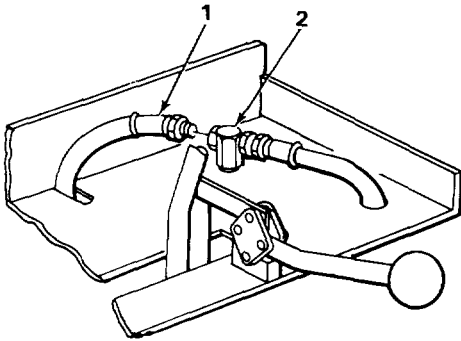
Before installing hose assembly, wrap all clean, external threads with two turns of teflon ½ tape (page 2-142).

- | | | | |
|------------|--|---|--|
| 6. Tee (2) | Outrigger valve-to-console valve hose assembly (1) | a. Put in position.
b. Screw on, and tighten using 7/8-inch and 1-inch wrenches. | |
| 7. Tee (3) | Outrigger valve-to-console valve hose assembly (1) | Screw on, and tighten using 7/8-inch and 1-inch wrenches. | |

2-1152

LEFT SIDE OUTRIGGER CONTROL VALVE - TO - CONSOLE CM11 VALVE HOSE ASSEMBLY - CONTINUED

INSTALLATION -CONTINUED



NOTE

FOLLOW-ON MAINTENANCE:

1. Fill with hydraulic fluid (LO 9-2320-269-12).
2. Install console cover (page 2-1092).
3. Raise operator's platform (TM 9-2320-269-10).

TASK ENDS HERE

LEFT SIDE OUTRIGGER CONTROL VALVE - TO - SOLENOID VALVE HOSE ASSEMBLY

This task covers:

- | | |
|---|--|
| <ol style="list-style-type: none"> a. Removal (page 2-1154) b. Cleaning (page 2-1154) | <ol style="list-style-type: none"> c. Inspection/Replacement (page 2-1154) d. Installation (page 2-1155) |
|---|--|

INITIAL SETUP

Tools

- Pail, utility, 3-qt
- Wrench, open-end, 7/8-inch
- Wrench, open-end, 1-inch

Materials/Parts

- Detergent, non-sudsing (item 12, appendix C)
- Rags, wiping (item 24, appendix C)

Materials/Parts - Continued

- Solvent, drycleaning (item 28, appendix C)
- Tape, teflon (item 32, appendix C)

Personnel Required

One

Equipment Condition

Operator's platform down (TM 9-2320-269-10).

TA229323

LEFT SIDE OUTRIGGER CONTROL VALVE - TO - SOLENOID VALVE HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

REMOVAL

WARNING

Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

- | | | |
|---------------------------------------|---|---|
| 1. 90% swivel adapter (1) and tee (2) | Left side outrigger control valve-to-solenoid hose assembly (3) | <ul style="list-style-type: none"> a. Position pail to catch hydraulic fluid. b. Using 7/8-inch and 1-inch wrenches, unscrew and take off. c. Take out of truck. d. Dispose of drained fluid. |
|---------------------------------------|---|---|

CLEANING

WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

- | | | |
|----|-------------------|---|
| 2. | All metal parts | <ul style="list-style-type: none"> a. Clean in drycleaning solvent. b. Wipe dry with clean, dry rags. |
| 3. | Hose assembly (3) | <ul style="list-style-type: none"> a. Clean in clean, soapy water. b. Rinse in clean water. c. Wipe connectors clean with clean rags dampened in drycleaning solvent. d. Wipe dry with clean, dry rags. |

INSPECTION/REPLACEMENT

NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

Replace damaged or defective parts as necessary.

LEFT SIDE OUTRIGGER CONTROL VALVE -TO - SOLENOID VALVE HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSPECTION/REPLACEMENT- CONTINUED			
4.	Hose assembly (3)	a. Look for crack, breaks, tears, and brittleness b. Look for loose connectors. c. Look for damaged threads.	
5. All threaded parts	Look for stripped and gouged threads.		

INSTALLATION

NOTE

Before installing hose assembly, wrap all clean, external threads with two turns of teflon tape (page 2-142).

6. 90% swivel adapter (1) and tee (2) to-solenoid hose	Left side outrigger control valve-	Screw on, and tighten using 7/8-inch and 1-inch wrenches.	
--	------------------------------------	---	--

NOTE

FOLLOW-ON MAINTENANCE:

1. Fill with hydraulic fluid (LO 9-2320-269-12).
2. Raise operator's platform (TM 9-2320-269-10).

TASK ENDS HERE

TA229324

2-1155

LEFT SIDE OUTRIGGER CONTROL VALVE-TO-SOLENOID VALVE RETURN HOSE ASSEMBLY

This task covers:

- | | |
|---|---|
| <ul style="list-style-type: none"> a. Removal (page 2-1156) b. Cleaning (page 2-1156) | <ul style="list-style-type: none"> c. Inspection/Replacement (2-1158) d. Installation (page 2-1158) |
|---|---|

INITIAL SETUP

Tools

Pail, utility, 3-qt
 Wrenches, open-end, 7/8-inch
 Wrenches, open-end, 1-inch

Materials/Parts - Continued

Solvent, drycleaning (item 28, appendix C)
 Tape, teflon (item 32, appendix C)

Personnel Required

One

Equipment Condition

Operator's platform down
 (TM 9-2320-269-10).

Materials/Parts

Detergent, non-sudsing (item 12,
 appendix C)
 Rags, wiping (item 24,
 appendix C)

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

REMOVAL

WARNING

Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

- | | | | |
|---|---|--|---|
| <p>1. Outrigger tee (1)
to solenoid valve
tee (2)</p> | <p>Return hose
assembly (3)
unscrew and take off.</p> | <ul style="list-style-type: none"> a. Position pail to catch hydraulic fluid. b. Using 7/8-inch and 1-inch wrenches, | <ul style="list-style-type: none"> c. Take out of truck. d. Dispose of drained fluid. |
|---|---|--|---|

CLEANING

WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

LEFT SIDE OUTRIGGER CONTROL VALVE-TO-SOLENOID VALVE RETURN HOSE ASSEMBLY - CONTINUED

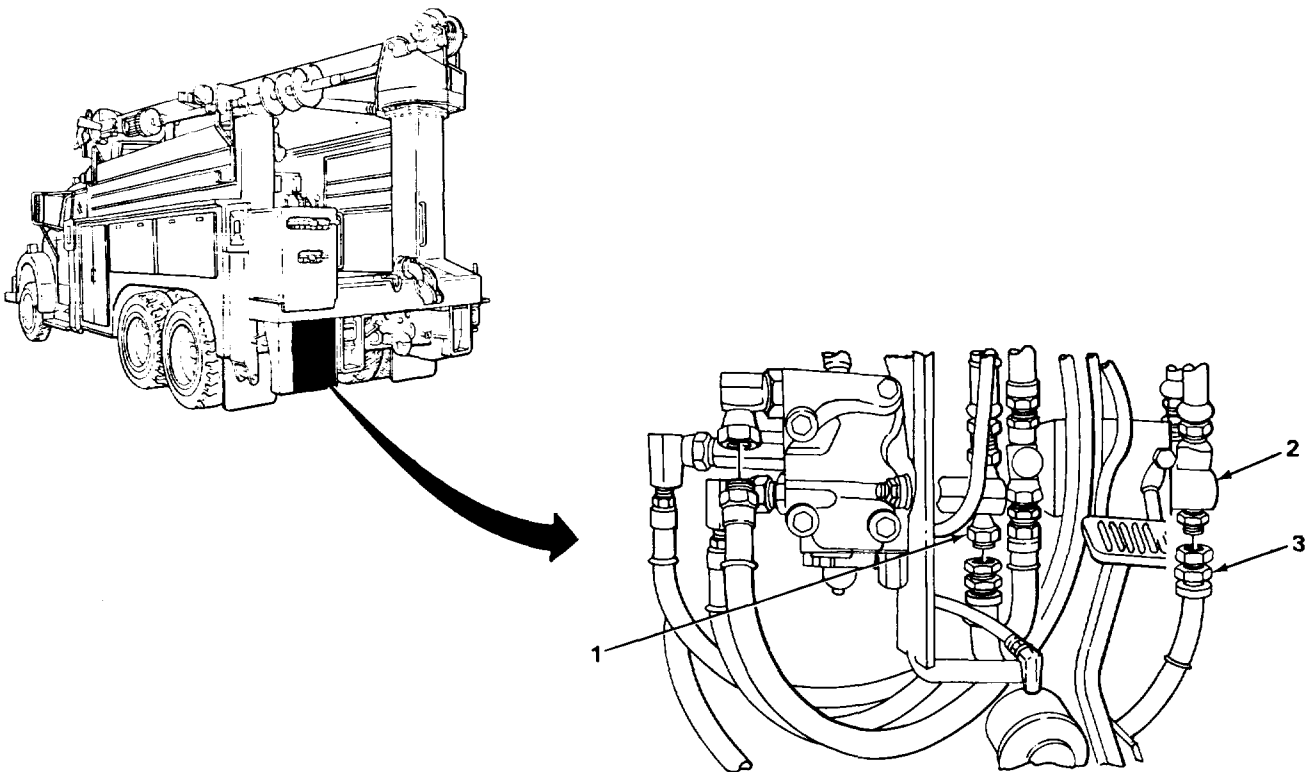
LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

CLEANING - CONTINUED

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

- | | | |
|----|--------------------------|---|
| 2. | All metal parts | <ul style="list-style-type: none"> a. Clean in drycleaning solvent. b. Wipe dry with clean, dry rags. |
| 3. | Return hose assembly (3) | <ul style="list-style-type: none"> a. Clean in clean, soapy water. b. Rinse in clean water. c. Wipe connectors clean with clean d. Wipe dry with clean, dry rags. |



LEFT SIDE OUTRIGGER CONTROL VALVE-TO-SOLENOID VALVE RETURN HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

INSPECTION/REPLACEMENT

NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

Replace damaged or defective parts as necessary.

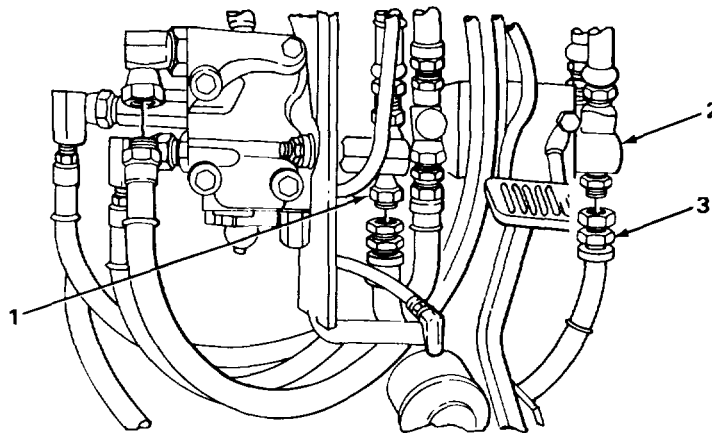
- | | | |
|----|--------------------------|--|
| 4. | Return hose assembly (1) | <ul style="list-style-type: none"> a. Look for cracks, breaks, tears, and brittleness. b. Look for loose connectors. c. Look for damaged threads. |
| 5. | All threaded parts | Look for stripped and gouged threads. |

INSTALLATION

NOTE

Before installing hose assembly, wrap all clean, external threads with two turns of teflon tape (page 2-142).

- | | | |
|--|--------------------------|--|
| 6. Outrigger control valve tee (2) to solenoid valve tee (3) | Return hose assembly (1) | <ul style="list-style-type: none"> a. Put in position. b. Screw on, and tighten using 7/8-inch and 1-inch wrenches |
|--|--------------------------|--|



TA229326

LEFT SIDE OUTRIGGER CONTROL VALVE-TO-SOLENOID VALVE RETURN HOSE ASSEMBLY - CONTINUED

INSTALLATION - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Fill with hydraulic fluid (LO 9-2320-269-12).
2. Raise operator's platform (TM 9-2320-269-10).

TASK ENDS HERE

PUMP - TO - CONSOLE CM2 VALVE HOSE ASSEMBLY

This task covers:

- | | |
|---------------------------|---|
| a. Removal (page 2-1159) | c. Inspection/Replacement (page 2-1161) |
| b. Cleaning (page 2-1160) | d. Installation (page 2-1162) |

INITIAL SETUP

Tools

- Fish tape, 50-ft reel
- Pail, utility, 3-qt
- Wrench, open-end, 7/8-inch
- Wrench, open-end, 1-inch
- Wrench, open-end, 11/16-inch
- Wrench, open-end, 1 ¼-inch
(two required)
- Wrench, open-end, 1 ½-inch One

Materials/Parts

- Detergent, non-sudsing (item 12, appendix C)
- Rags, wiping (item 24, appendix C)
- Solvent, drycleaning (item 28, appendix C)
- Tape, teflon (item 32, appendix C)

Personnel Required

Equipment Condition

Console cover removed (page 2-1092).

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

REMOVAL

WARNING

Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

PUMP - TO - CONSOLE CM2 VALVE HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION REMARKS	
REMOVAL - CONTINUED			
1.	Hydraulic tank (1)	Shutoff valve (2)	Using 1 1/16-inch wrench, turn off.
2.	Swivel adapter (3)	Pump-to-console CM2 valve hose assembly (4)	a. Position pail to catch hydraulic fluid. b. Using two 1 1/4-inch wrenches, unscrew and take off. c. Dispose of drained fluid.
3.	Two swivel adapters (5)	Two hose assemblies (6)	a. Tag adapters (5) and hoses (6). b. Using 7/8-inch and 1-inch wrenches,
4.	Two adapters (7) adapters (5)	Two swivel unscrew and take off.	Using 1-inch and 1 1/2-inch wrenches,
5.	Adapter(8)	90% swivel adapter (9)	Using 1 1/4-inch and 1 1/2-inch wrenches, unscrew and take off.
6.	90% swivel adapter (9)	Pump-to-console CM2 valve hose assembly (4)	Using two 1 1/4-inch wrenches, unscrew and take off.

CLEANING

WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

NOTE

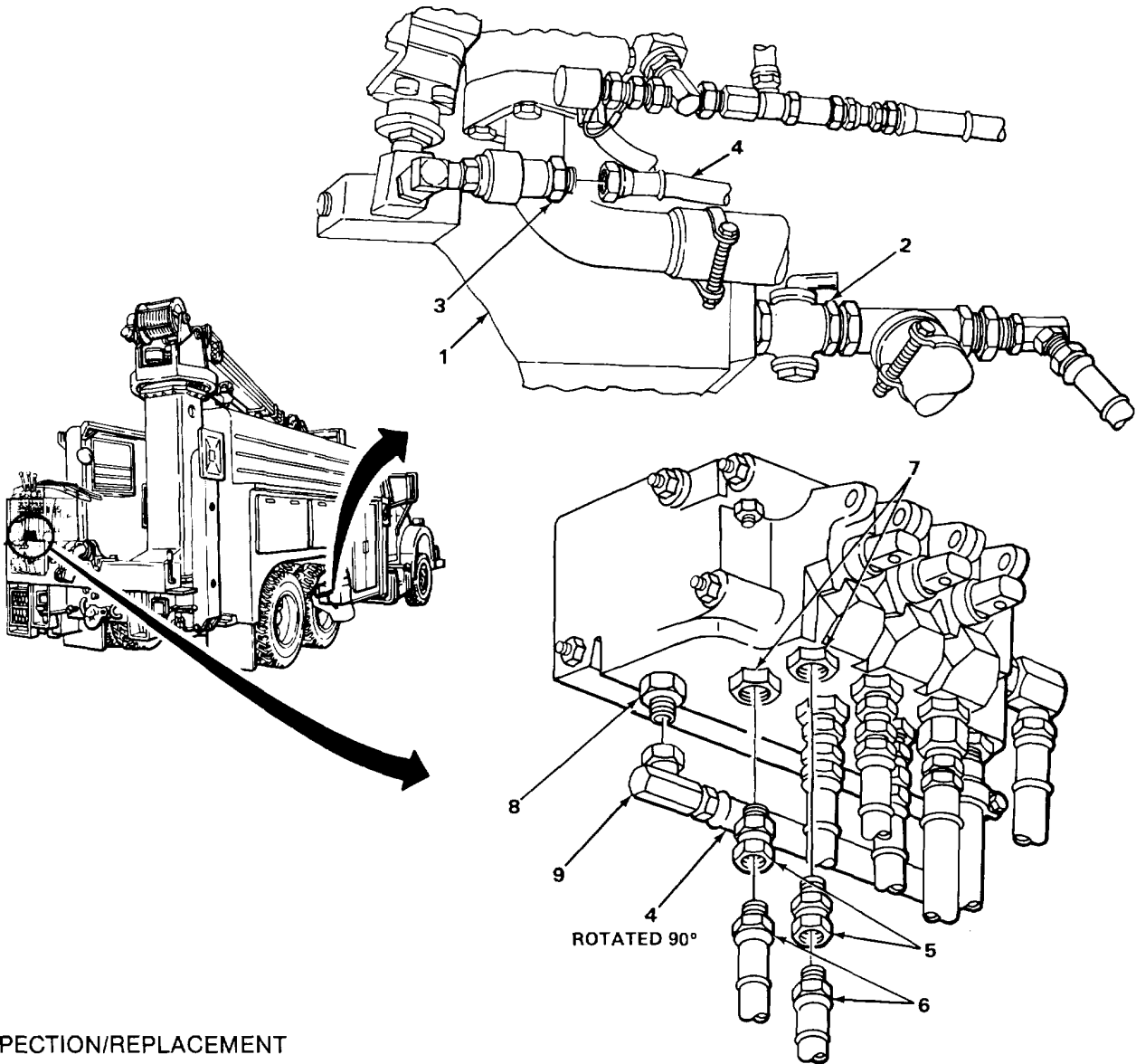
For more information on how to clean parts, go to General Maintenance Instructions (page 2-142)..

7.	All metal parts	a. Clean in drycleaning solvent. b. Wipe dry with clean, dry rags
8.	Hose assembly (4)	a. Clean in clean, soapy water. b. Rinse in clean water. c. Wipe connectors clean with clean rags dampened with drycleaning solvent. d. Wipe dry with clean, dry rags.

PUMP - TO - CONSOLE CM2 VALVE HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

CLEANING - CONTINUED



INSPECTION/REPLACEMENT

NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

Replace damaged or defective parts as necessary.

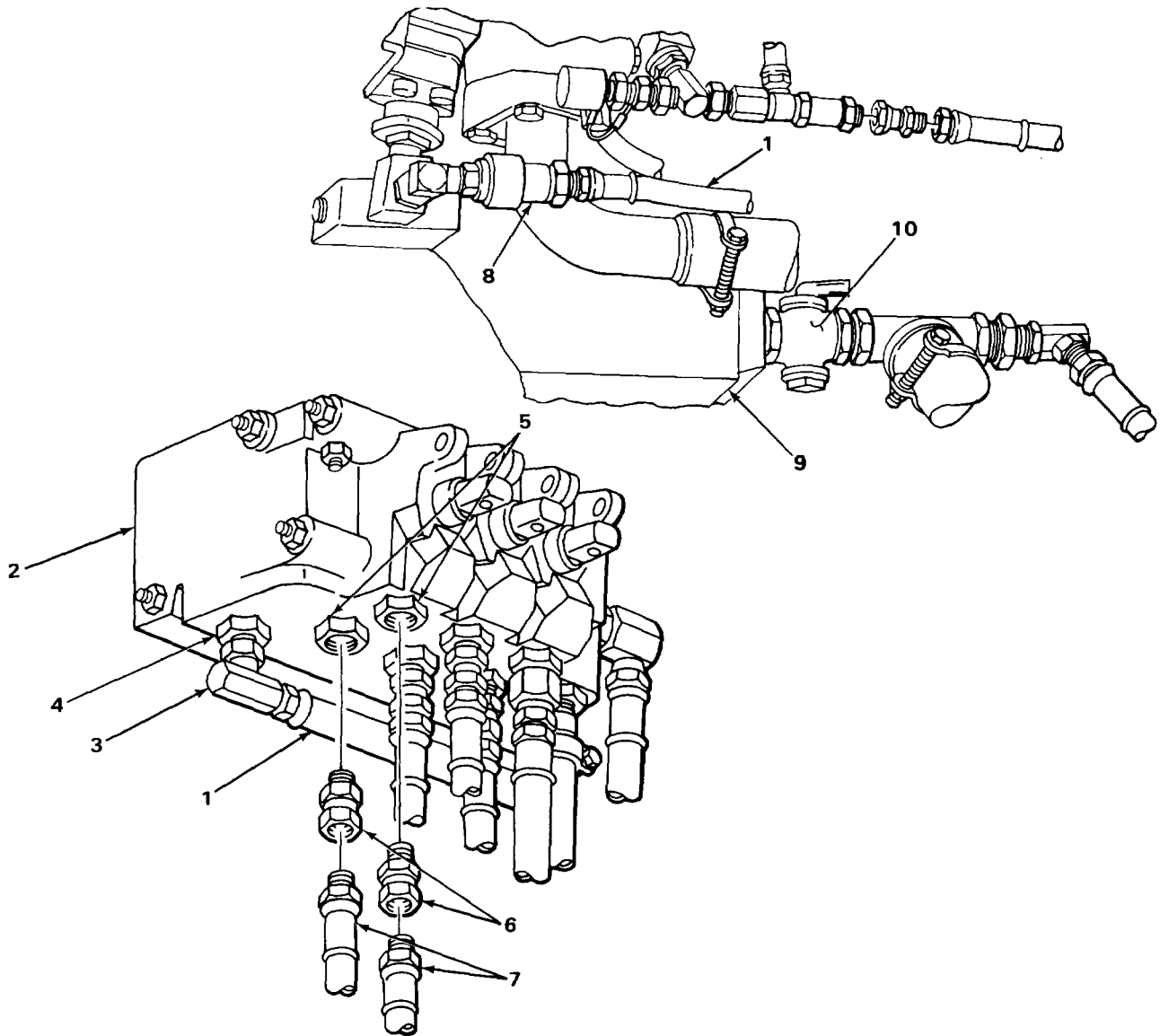
TA229327

PUMP - TO - CONSOLE CM2 VALVE HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSPECTION/REPLACEMENT- CONTINUED			
9.	Hose assembly (1)	a. Look for cracks, breaks, tears, b. Look for loose connectors. c. Look for damaged threads.	
10.	All threaded parts	Look for stripped and gouged threads.	
INSTALLATION			
NOTE			
Before installing hose assemblies, wrap all clean, external threads with two turns of teflon tape (page 2-142).			
11.	Console CM2 valve (2)	Pump-to-console CM2 valve hose assembly (1)	Put in position using fish tape.
12.	Pump-to-console CM2 valve hose assembly (1)	900 swivel adapter (3)	Screw on, and tighten using two 1 ¼-inch wrenches.
13.	Adapter (4)	900 swivel adapter (3)	Screw on, and tighten using 1 1¼-inch and 1 ½-inch wrenches.
14.	Two adapters (5)	Two swivel adapters (6)	Screw in, and tighten using 1-inch and 1 ½-inch wrenches.
15.	Two swivel adapters (6)	Two hose assemblies (7)	Screw on, and tighten using 7/8-inch and 1-inch wrenches.
16.	Swivel adapter (8)	Pump-to-console CM2 valve hose assembly (1)	Screw on, and tighten using 7/8-inch and 1 ¼-inch wrenches.
17.	Hydraulic tank (9)	Shutoff valve (10)	Using 1 1/16-inch wrench, turn on.

PUMP - TO - CONSOLE CM2 VALVE HOSE ASSEMBLY - CONTAINED

INSTALLATION - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE

1. Fill with hydraulic fluid (LO 9-2320-269-12).
2. Install console cover (page 2-1092).
3. Operate auxiliary equipment (TM 9-2320-269-10), and check for proper operation and leaks.

TASK ENDS HERE

TA229328

PUMP - TO - RIGHT SIDE OUTRIGGER CONTROL VALVE HOSE ASSEMBLY

This task covers:

- | | | | |
|----|------------------------|----|--------------------------------------|
| a. | Removal (page 2-1164) | c. | Inspection/Replacement (page 2-1166) |
| b. | Cleaning (page 2-1164) | d. | Installation (page 2-1166) |

INITIAL SETUP

Tools

Fish tape, 50-ft reel
 Pail, utility, 3-qt
 Wrench, open-end, 7/8-inch
 Wrench, open-end, 1 1/16-inch
 Wrench, open-end, 1 1/16-inch,

Materials/Parts

Detergent, non-sudsing (item 12, appendix C)
 Rags, wiping (item 24, appendix C)
 Solvent, drycleaning (item 28, appendix C)
 Tape, telfon (item 32, appendix C)

Personnel Required

One

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
<u>WARNING</u>			
Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.			
1.	Hydraulic tank (1)	Shutoff valve (2)	Using 1 1/16-inch wrench, turn off.
2.	Swivel adapter (3)	Pump-to-outrigger control valve hose assembly (4)	a. Position pail to catch hydraulic fluid. b. Using 7/8-inch and 1-inch wrenches, unscrew and take off. c. Dispose of drained fluid.
3.	90% swivel adapter (5)	Pump-to-outrigger control valve hose assembly (2)	a. Using 7/8-inch and 1-inch wrenches, unscrew and take off. b. Pull out of truck.

CLEANING

WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

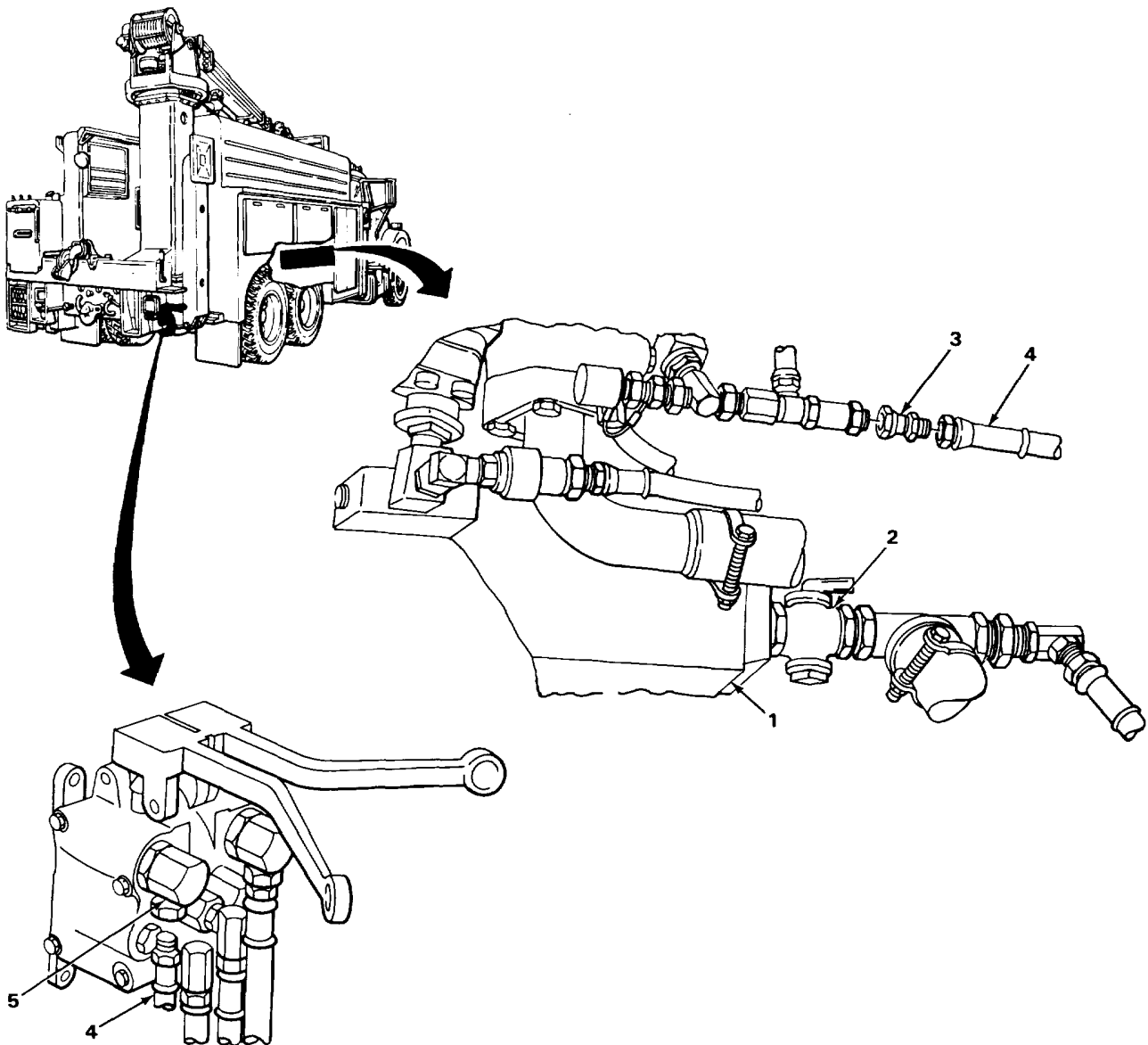
PUMP - TO - RIGHT SIDE OUTRIGGER CONTROL VALVE HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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CLEANING - CONTINUED

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).



TA229329

PUMP - TO - RIGHT SIDE OUTRIGGER CONTROL VALVE HOSE ASSEMBLY - CONTINUED

CLEANING - CONTINUED

- | | | |
|----|-------------------|---|
| 4. | All metal parts | a. Clean in drycleaning solvent.
b. Wipe dry with clean, dry rags. |
| 5. | Hose assembly (1) | a. Clean in clean, soapy water.
b. Rinse in clean water.
c. Wipe connectors clean with clean rags dampened with drycleaning solvent.
d. Wipe dry with clean, dry rags. |

INSPECTION/REPLACEMENT

NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

Replace damaged or defective parts as necessary.

- | | | |
|----|--------------------|---|
| 6. | Hose assembly (1) | a. Look for cracks, breaks, tears,
b. Look for loose connectors.
c. Look for damaged threads. |
| 7. | All threaded parts | Look for stripped or gouged threads. |

INSTALLATION

NOTE

Before installing hose assemblies, wrap all clean, external threads with two turns of teflon tape (page 2-142).

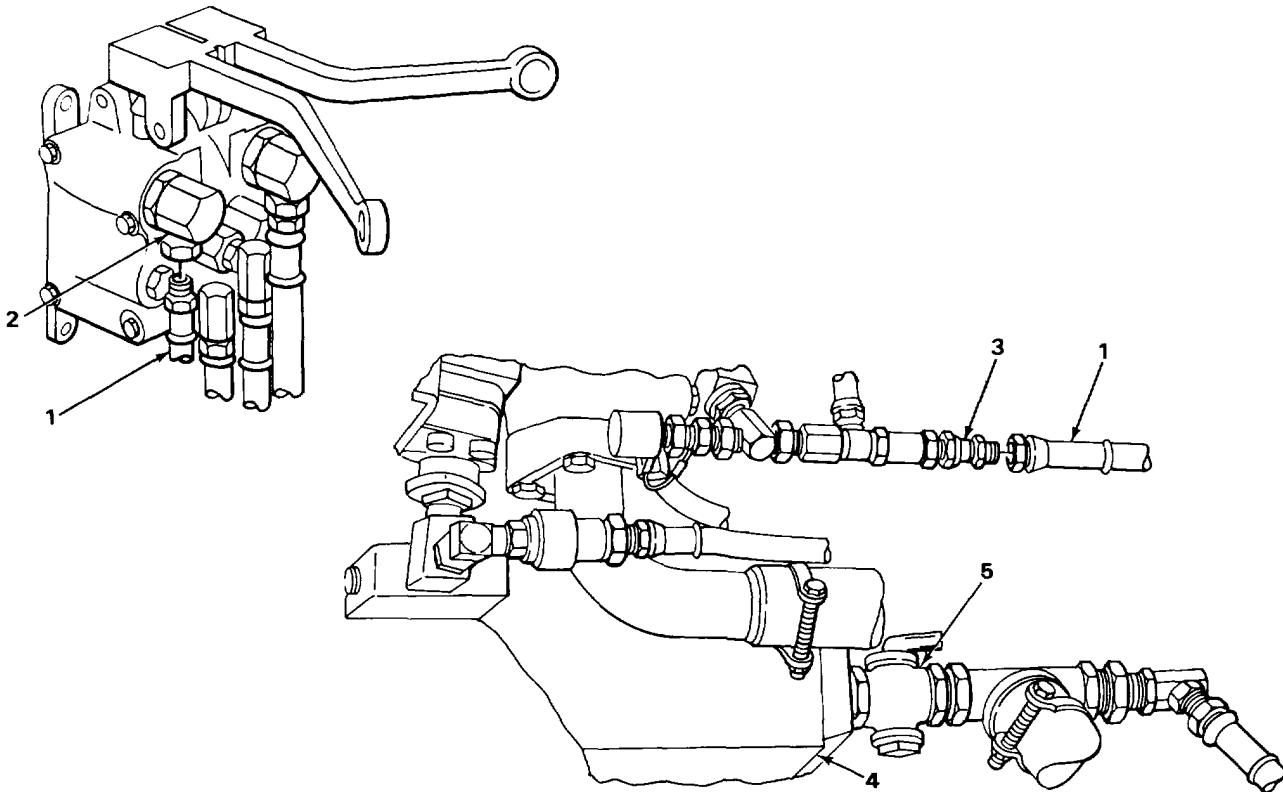
- | | | | |
|----|------------------------|---|---|
| 8. | 90% swivel adapter (2) | Pump-to-outrigger control valve hose assembly (1) | Screw on, and tighten using 7/8-inch and 1-inch wrenches. |
| 9. | Swivel adapter (3) | Pump-to-outrigger control valve hose assembly (1) | a. Put in position.
b. Screw on, and tighten using 7/8-inch and 1-inch wrenches. |

PUMP - TO - RIGHT SIDE OUTRIGGER CONTROL VALVE HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

INSTALLATION - CONTINUED

- | | | | |
|------------------------|-------------------|------------------------------------|--|
| 10. Hydraulic tank (4) | Shutoff valve (5) | Using 1 1/16-inch wrench, turn on. | |
|------------------------|-------------------|------------------------------------|--|



NOTE

FOLLOW-ON MAINTENANCE

1. Fill with hydraulic fluid (LO 9-2320-269-12).
2. Operate outrigger (TM 9-2320-269-10) and check for proper operation and leaks.

TASK ENDS HERE

PUMP FLOW CONTROL VALVE - TO - RETURN LINE HOSE ASSEMBLY

This task covers:

- | | | | |
|----|------------------------|----|--------------------------------------|
| a. | Removal (page 2-1168) | c. | Inspection/Replacement (page 2-1170) |
| b. | Cleaning (page 2-1168) | d. | Installation (page 2-1170) |
-

INITIAL SETUP

Tools

- Pail, utility, 3-qt
- Wrench, open-end, 7/8-inch
- Wrench, open-end, 1-inch
- Wrench, open-end, 11/16-inch
- Tape, teflon (item 32, Appendix C)

Materials/Parts

- Detergent, non-sudsing (item 12, appendix C)
- Rags, wiping (item 24, appendix C)
- Solvent, drycleaning (item 28, appendix C)

Personnel Required

One

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

REMOVAL

WARNING

Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

- | | | | |
|----|---|--|---|
| 1. | Tank (1) | Shut-off valve (2) | Using 1 1/16-inch wrench, turn off. |
| 2. | Straight swivel adapter (3), and 45% swivel adapter (4) | Pump flow control valve-to-return line hose assembly (5) | <ul style="list-style-type: none"> a. Position pail to catch hydraulic fluid. b. Using 7/8-inch and 1-inch wrenches, unscrew and take off. c. Take out of truck. d. Dispose of drained fluid. |

CLEANING

WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

PUMP FLOW CONTROL VALVE - TO - RETURN LINE HOSE ASSEMBLY - CONTINUED

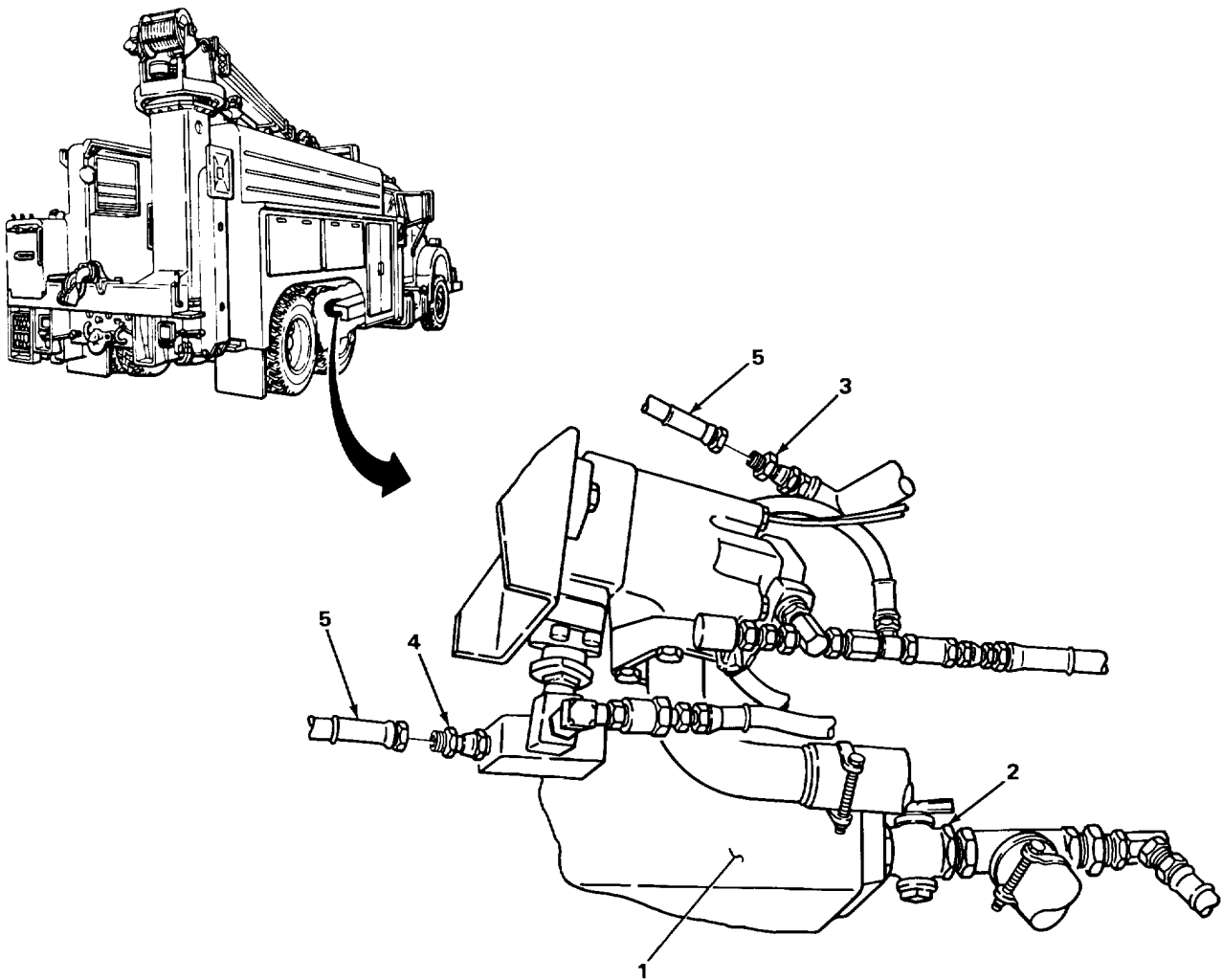
LOCATION	ITEM	ACTION	REMARKS
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CLEANING

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

- | | | |
|----|-----------------|---|
| 3. | All metal parts | <ul style="list-style-type: none"> a. Clean in drycleaning solvent. b. Wipe dry with clean, dry rags. |
|----|-----------------|---|



PUMP FLOW CONTROL VALVE - TO - RETURN LINE HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
CLEANING - CONTINUED			
4.	Hose assembly (1)	a. Clean in clean, soapy water. b. Rinse in clean water. c. Wipe connectors clean with clean rags dampened in drycleaning solvent.	

INSPECTION/REPLACEMENT

NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142.)

Replace damaged or defective parts as necessary.

5.	Hose assembly (1)	a. Look for cracks, breaks, tears, and brittleness. b. Look for loose connectors.	
c.	Look for damaged threads.		
6.	All threaded parts	Look for stripped and gouged threads.	

INSTALLATION

NOTE

Before installing hose assembly, wrap all clean, external threads with two turns of teflon tape (page 2-142).

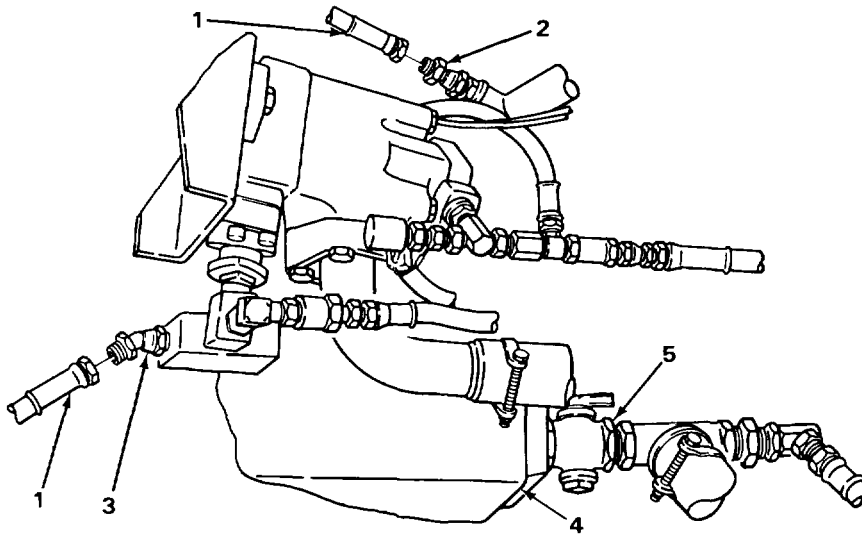
7.	Straight swivel adapter (2) and 45° swivel adapter (3)	Pump flow control valve-to-return line hose assembly (1)	Screw on, and tighten using 7/8-inch and 1-inch wrenches.
----	--	--	---

PUMP FLOW CONTROL VALVE - TO - RETURN LINE HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

INSTALLATION - CONTINUED

- | | | | |
|-----------------------|--------------------|------------------------------------|--|
| 8. Hydraulic tank (4) | Shut-off valve (5) | Using 1 1/16-inch wrench, turn on. | |
|-----------------------|--------------------|------------------------------------|--|



NOTE

FOLLOW-ON MAINTENANCE:

1. Fill with hydraulic fluid (LO 9-2320-269-12).
2. Operate auxiliary equipment (TM 9-2320-269-10), and check for proper operation and leaks.

TASK ENDS HERE

TA229332

PUMP FLOW CONTROL VALVE - TO - QUICK DISCONNECT HOSE ASSEMBLY

This task covers:

- | | | | |
|----|------------------------|----|--------------------------------------|
| a. | Removal (page 2-1172) | c. | Inspection\Replacement (page 2-,175) |
| b. | Cleaning (page 2-1174) | d. | Installation (page 2-1176) |

INITIAL SETUP

Tools

- Pail, utility, 3-qt
- Handle, ratchet, 3/8-inch drive
- Extension, 3/8-inch drive, 5-inch
- Socket, 3/8-inch drive, 7/16-inch
- Wrench, open-end, 7/16-inch
- Wrench, open-end, 7/8-inch
- Wrench, open-end, 1-inch
- Wrench, open-end, 1 1/16-inch
- Wrench, open-end, 1 1/4-inch
- Wrench, pipe

Materials/Parts

- Detergent, non-sudsing (item 12, appendix C)
- Rags, wiping (item 24, appendix C)
- Solvent, drycleaning (item 28, appendix C)
- Tape, teflon (item 32, appendix C)

Personnel Required

One

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

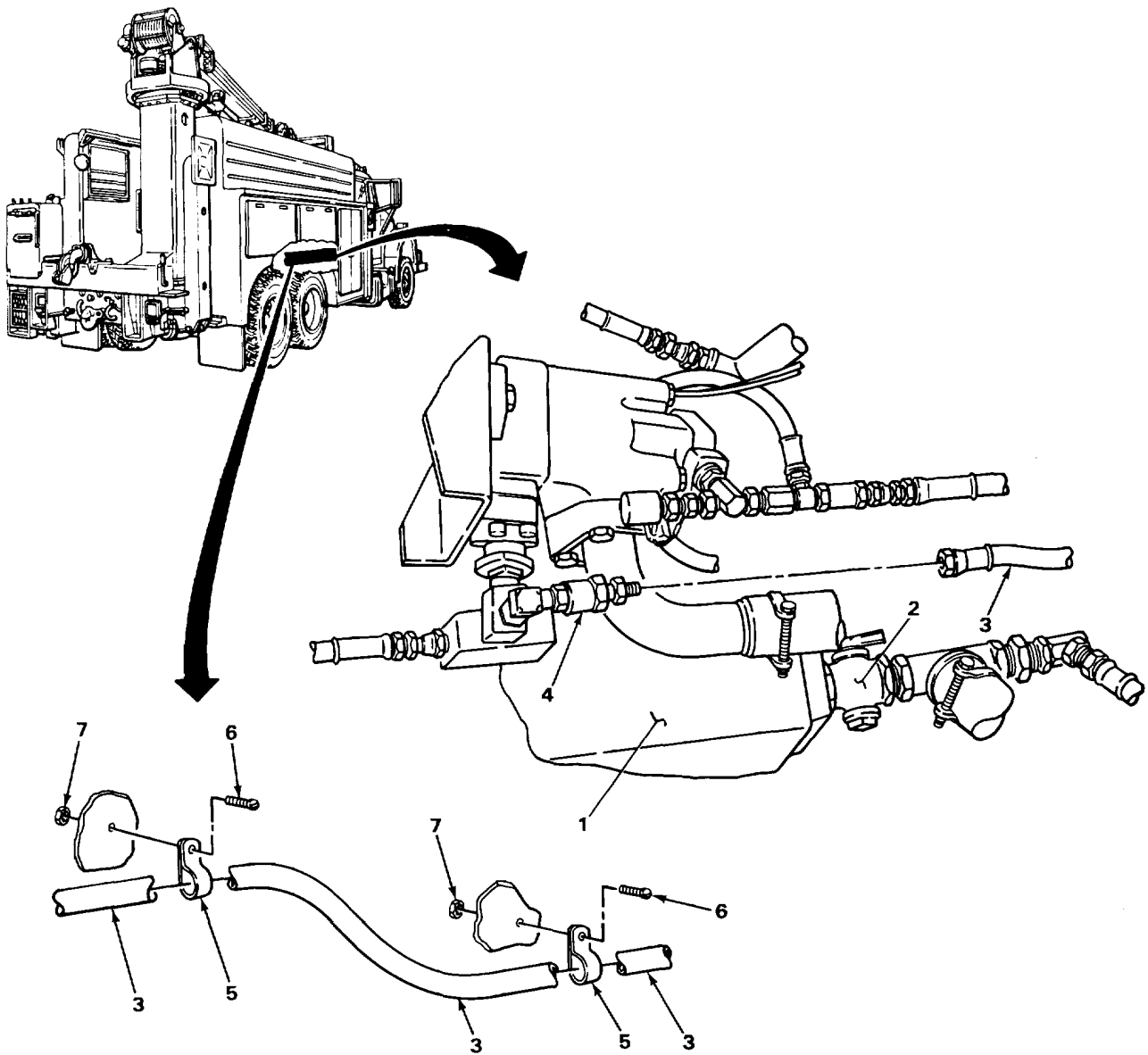
WARNING

Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

1.	Tank (1)	Shutoff valve (2)	Using 1 1/16-inch wrench, turn off.
2.	Quick-disconnect hose assembly (3)	Quick-disconnect body (4)	<ul style="list-style-type: none"> a. Position pail to catch hydraulic fluid. b. Disconnect, and take off. c. Dispose of drained fluid.
3.	Quick-disconnect hose assembly (3)	Two clamps (5), screws (6), and nuts (7)	Using 7/16-inch socket, extension, handle, and 7/16-inch wrench, unscrew and take off.

PUMP FLOW CONTROL VALVE - TO - QUICK DISCONNECT HOSE ASSEMBLY - CONTINUED

REMOVAL - CONTINUED



PUMP FLOW CONTROL VALVE - TO - QUICK DISCONNECT HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
4.	Quick-disconnect hose assembly (1) and nuts (4)	Two clamps (2), screws (3), and take off.	Using 7/16-inch socket, extension, handle, and 7/16-inch wrench, unscrew
5.	Quick-disconnect hose assembly (1)		Pull off of frame channel (5) and out of truck.
6.	Quick-disconnect body (6)		Using 7/8-inch and 1 1/4-inch wrenches, unscrew and take off.
7.	Straight swivel adapter (7)	Quick-disconnect hose assembly (1)	Using 7/8-inch and 1-inch wrenches, unscrew and take off.
8.	Two couplings (8)	Quick-disconnect hose assembly (1)	Using 1 1/4-inch wrench and pipe wrench, unscrew and take off.

CLEANING

WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

9.	All metal parts	a. Clean in drycleaning solvent. b. Wipe dry with clean, dry rags.
10.	Hose assembly (1)	a. Clean in clean, soapy water. b. Rinse in clean water. c. Wipe connectors clean with clean rags dampened in drycleaning solvent. d. Wipe dry with clean, dry rags.

PUMP FLOW CONTROL VALVE - TO - QUICK DISCONNECT HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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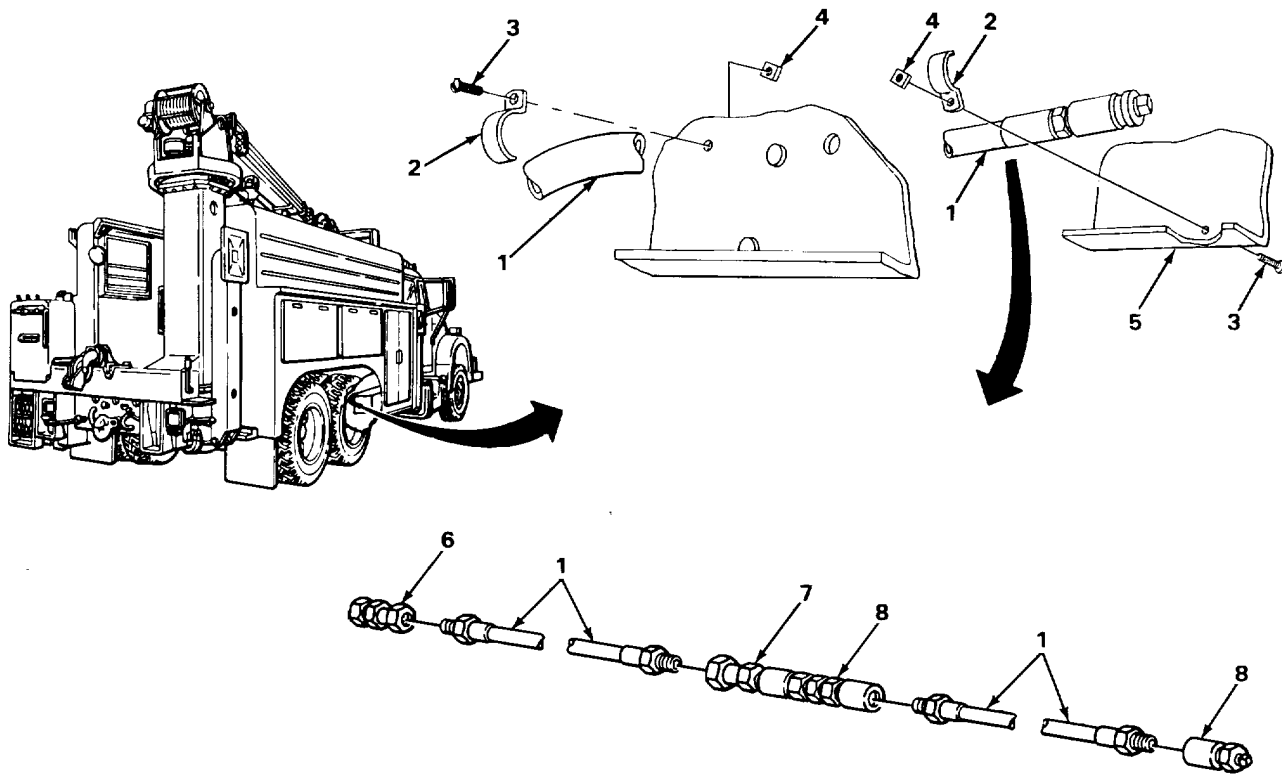
INSPECTION/REPLACEMENT

NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

Replace damaged or defective parts as necessary.

- | | | |
|-----|-------------------|--|
| 11. | Hose assembly (1) | <ul style="list-style-type: none"> a. Look for cracks, breaks, tears, and brittleness. b. Look for loose connectors. c. Look for damaged threads. |
|-----|-------------------|--|

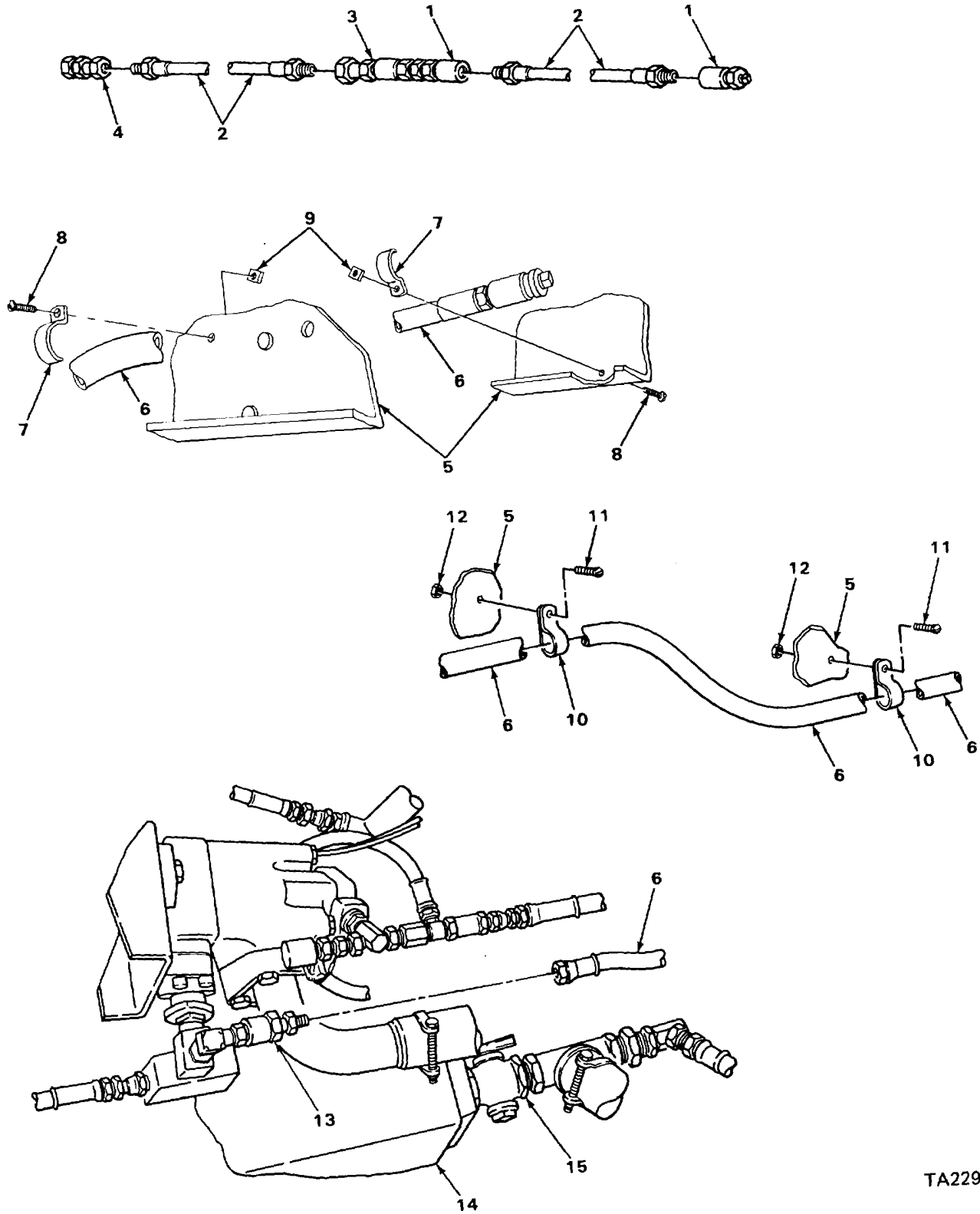


PUMP FLOW CONTROL VALVE - TO - QUICK - DISCONNECT HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
NOTE			
Before installing hose assemblies, wrap all clean, external threads with two turns of teflon tape (page 2-142).			
13.	Two couplings (1)	Quick-disconnect hose assembly (2)	Screw on using 1 1/4-inch wrench and pipe wrench.
14.	Straight swivel adapter (3)	Quick-disconnect hose assembly (2)	Screw on, and tighten using 7/8-inch and 1-inch wrenches.
15.	Quick-disconnect hose assembly (2)	Quick-disconnect body (4)	Screw on, and tighten using 7/8-inch and 1 1/4-inch wrenches.
16.	Frame channel (5)	Quick-disconnect hose assembly (6)	Put in position.
17.	Quick-disconnect hose assembly (6)	Two clamps (7), screws (8), and nuts (9)	a. Place in position. b. Screw on, and tighten using 7/16-inch socket, extension, handle, and 7/16-inch wrench.
18.	Quick-disconnect hose assembly (6)	Two clamps (10), screws (11), and nuts (12)	a. Place in position. b. Screw on, and tighten using 7/16-inch socket, extension, handle, and 7/16-inch wrench.
19.	Quick-disconnect hose (6)	Quick-disconnect body (13)	Connect.
20.	Hydraulic tank (14)	Shutoff valve (15)	Using 1 1/16-inch wrench, turn on.

PUMP FLOW CONTROL VALVE - TO - QUICK DISCONNECT HOSE ASSEMBLY - CONTINUED

INSTALLATION - CONTINUED



TA229335

PUMP FLOW CONTROL VALVE - TO - QUICK DISCONNECT HOSE ASSEMBLY - CONTINUED

INSTALLATION - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Fill with hydraulic fluid (LO 9-2320-269-12).
2. Operate auxiliary equipment (TM 9-2320-269-10), and check for proper operation and leaks.

TASK ENDS HERE

RETURN LINE - TO - TANK HOSE

This task covers:

- | | |
|---|--|
| <ol style="list-style-type: none"> a. Removal (page 2-1178) b. Cleaning (page 2-1180) | <ol style="list-style-type: none"> c. Inspection/Replacement (page 2-1180) d. Installation (page 2-1180) |
|---|--|
-

INITIAL SETUP

Tools

Fish tape, 50-ft reel
 Handle, ratchet, 11/2-inch drive
 Pail, utility, 6-qt
 Screwdriver, 3/8-inch, flat-tip
 Socket, 1/2-inch drive,

11/16-inch

Materials/Parts

Detergent, non-sudsing (item 12, appendix C)
 Rags, wiping (item 24, appendix C)
 Solvent, drycleaning (item 28, appendix C)

Personnel Required

One

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

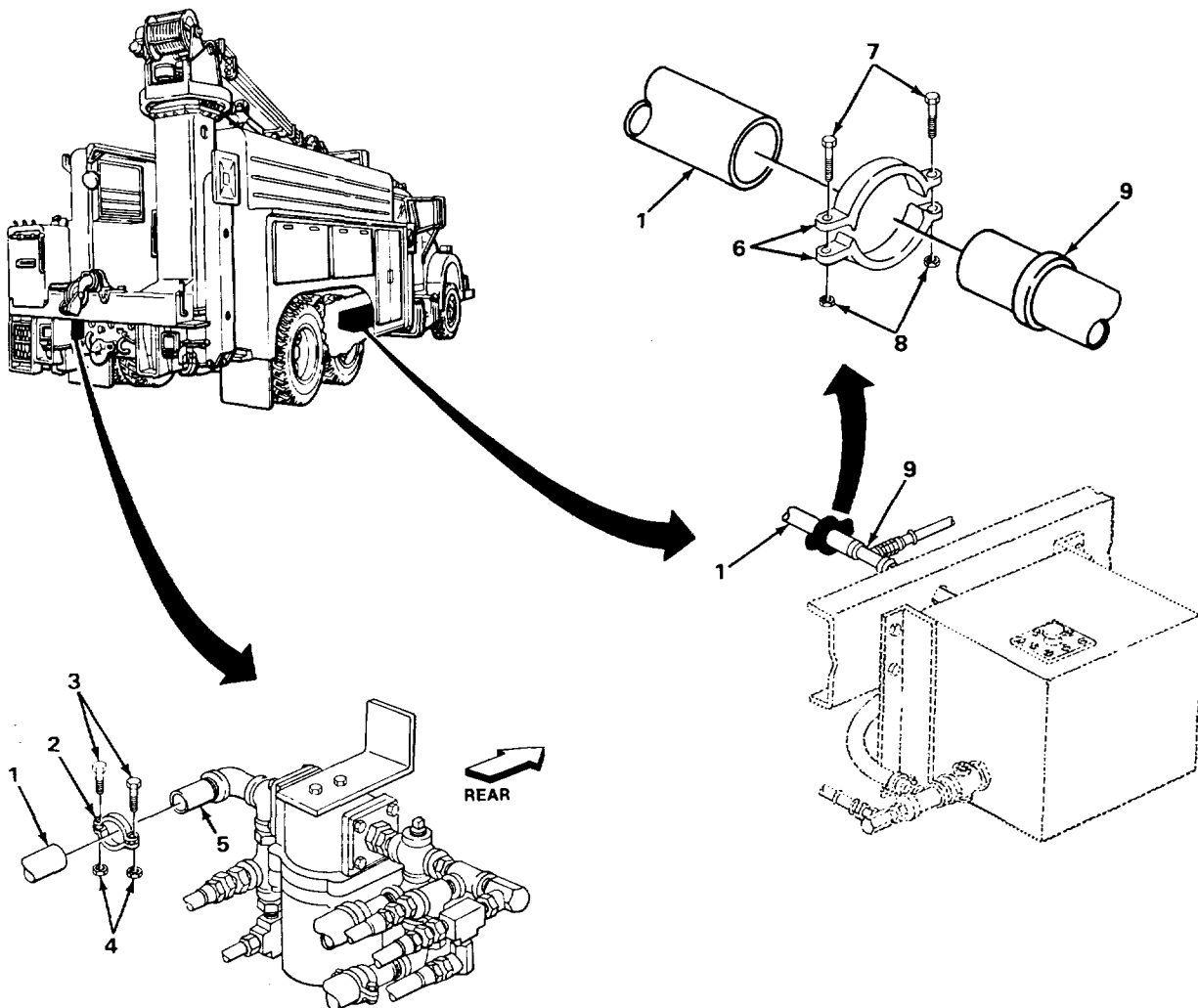
- | | | |
|---|--|--|
| <ol style="list-style-type: none"> 1. Return line-to-tank hose (1) | <p>Clamp (2), two screws (3), and nuts (4)</p> | <ol style="list-style-type: none"> a. Position pail to catch hydraulic fluid. b. Using 11/16-inch socket and handle, unscrew and take off. c. Dispose of drained fluid. |
|---|--|--|

RETURN LINE - TO - TANK HOSE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL - CONTINUED

- | | | | |
|----|------------------------------|--|---|
| 2. | Dixon insert (5) | Hose (1) | Using flat-tip screwdriver, pry loose and pull off. |
| 3. | Return line-to-tank hose (1) | Clamp (6), two screws (7) and nuts (8) | Using 11/16-inch socket and handle, unscrew and take off. |
| 4. | Dixon insert (9) | Take off. | |

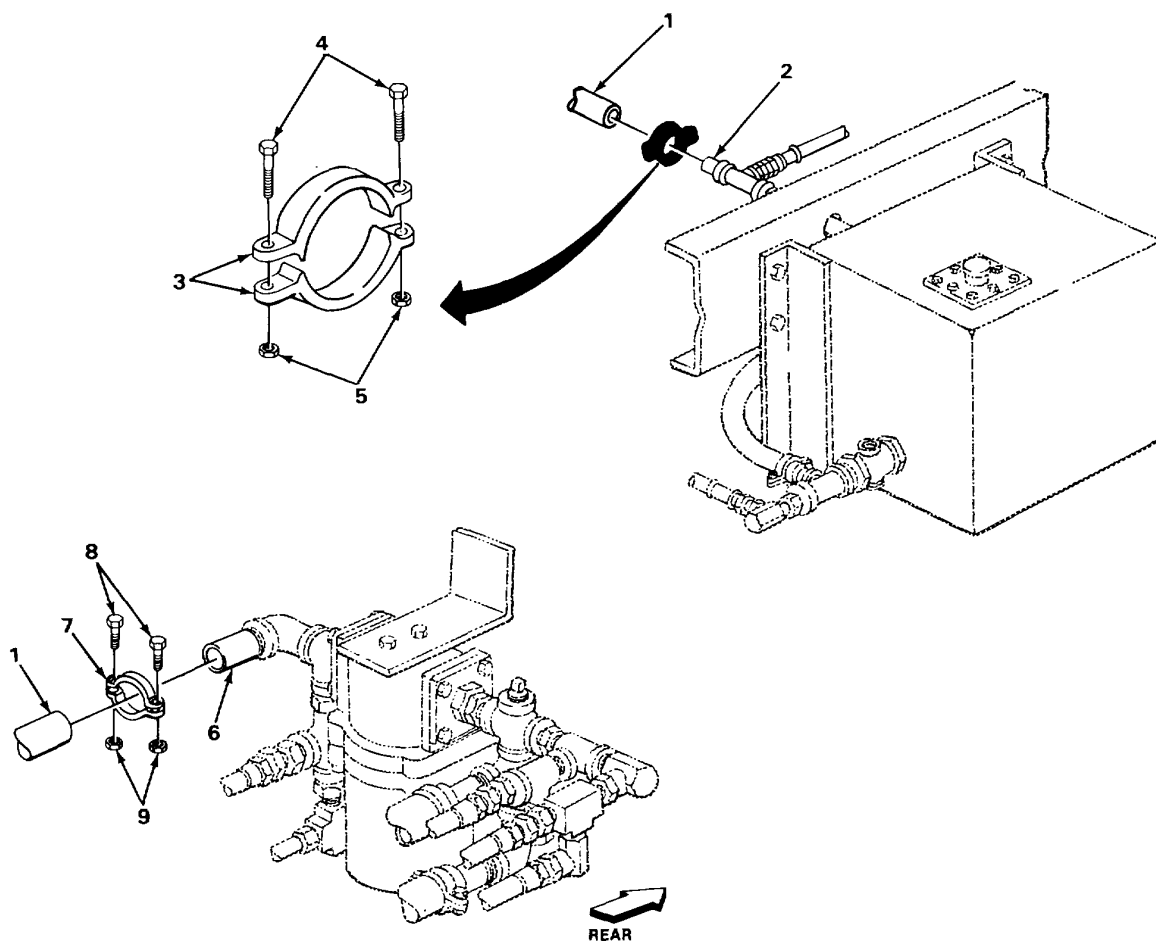


RETURN LINE - TO - TANK HOSE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
CLEANING			
<u>WARNING</u>			
Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flames nearby when using solvent. Failure to observe these precautions could cause serious injury or death.			
NOTE			
For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).			
5.	All metal parts	a. Clean in drycleaning solvent. b. Wipe dry with clean, dry rags.	
6.	Return line-to-tank hose (1)	a. Clean in clean, soapy water. b. Rinse in clean water. c. Wipe connectors clean with clean rags dampened with drycleaning solvent. d. Wipe dry with clean, dry rags.	
INSPECTION/REPLACEMENT			
NOTE			
For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).			
Replace damaged or defective parts as necessary.			
7.	Return line-to-tank hose (1)	Look for cracks, breaks, tears, and brittleness.	
8.	All threaded parts	Look for stripped and gouged threads.	
INSTALLATION			
9. Dixon insert (2)	Return line-to-tank hose (1)	Push on.	
10. Return line-to-tank hose (1)	Clamp (3), two screws (4), and nuts (5)	a. Place in position. b. Screw on, and tighten using handle and 11/16-inch socket.	

RETURN LINE - TO - TANK HOSE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
11. Dixon insert (6)	Return line-to-tank hose (1)	a. Using fish tape, put in position. b. Push on.	
12. Return line-to-tank hose (1)	Clamp (7), two screws (8), and nuts (9)	a. Place in position. b. Screw on, and tighten using handle and 11/16-inch socket.	



RETURN LINE - TO - TANK HOSE - CONTINUED

INSTALLATION - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Fill with hydraulic fluid (LO 9-2320-269-12).
2. Operate auxiliary equipment (TM 9-2320-269-10), and check for proper operation and leaks.

TASK ENDS HERE

SINGLE SELECTOR VALVE - TO - DERRICK OPERATOR'S CONTROL VALVE HOSE ASSEMBLY

This task covers:

- | | | |
|----------------|---------------|------------------------------|
| a. Removal | c. Inspection | e. Pre-Load Check of Bearing |
| b. Disassembly | d. Reassembly | f. Installation |
-

INITIAL SETUP:

Tools

Fish tape, 50-ft reel
 Pail, utility, 6-qt
 Wrench, open-end, 9/16-inch
 Wrench, open-end, 11/16-inch
 Wrench, open-end, 7/8-inch,
 Wrench, open-end, 1-inch

Materials/Parts

Detergent, non-sudsing (item 12, appendix C)
 Rags, wiping (item 24, appendix C)
 Solvent, drycleaning (item 28, appendix C)
 Tags, marking (item 29, appendix C)
 Tape, teflon (item 32, appendix C)

Personnel Required

One

Equipment Condition

Console cover removed (page 2-1092).

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

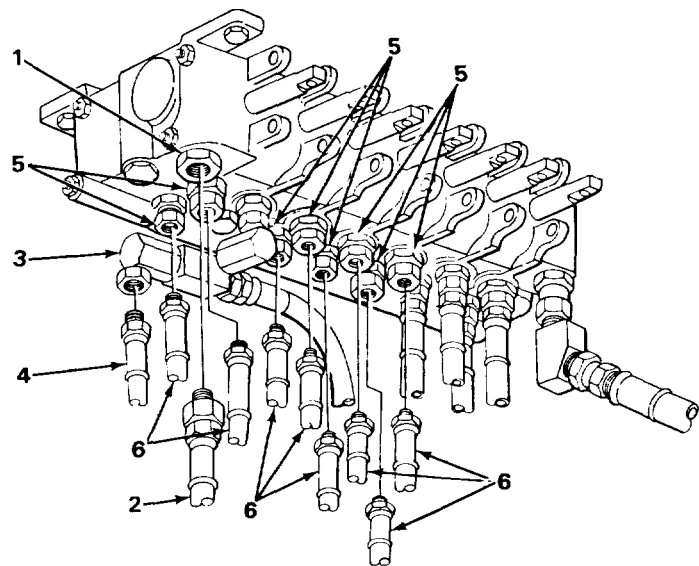
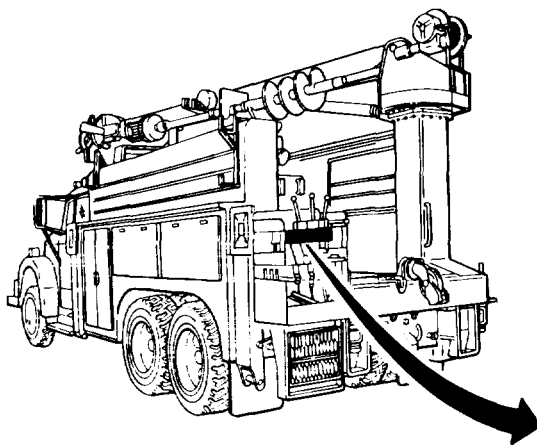
Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

SINGLE SELECTOR VALVE - TO - DERRICK OPERATOR'S CONTROL VALVE HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
1. Straight swivel	Hose assembly (2)	a. Position pail to catch hydraulic fluid. b. Tag line. c. Using 7/8-inch and 1-inch wrenches, unscrew and take off. d. Dispose of drained fluid.	
2. 900 swivel	Hose assembly (4) adapter (3)	a. Tag line. b. Using 9/16-inch and 11/16-inch wrenches, unscrew and take off.	
3. Eight straight swivel adapters (5)	Eight hose assemblies (6)	a. Tag lines. b. Using 7/8-inch and 11/16-inch wrenches, unscrew and take off.	

NOTE

To gain access to selector valve hose assembly, move all tagged lines down and aside in console



SINGLE SELECTOR VALVE - TO - DERRICK OPERATOR'S CONTROL VALVE HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
4.	90 swivel adapter (1) assembly (2)	Selector valve-to-control valve hose	Using 7/8-inch and 1-inch wrenches, unscrew and take off.
5.	Access cover (3)	Two wingnuts (4)	Unscrew, and take off.
6.	Derrick mast (5)	Access cover (3)	Take off.
7.	900 swivel adapter (6) assembly (2)	Selector valve-to-control valve hose b. Pull out of truck.	a. Using 7/8-inch and 1-inch wrenches, unscrew and take off.

CLEANING

WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

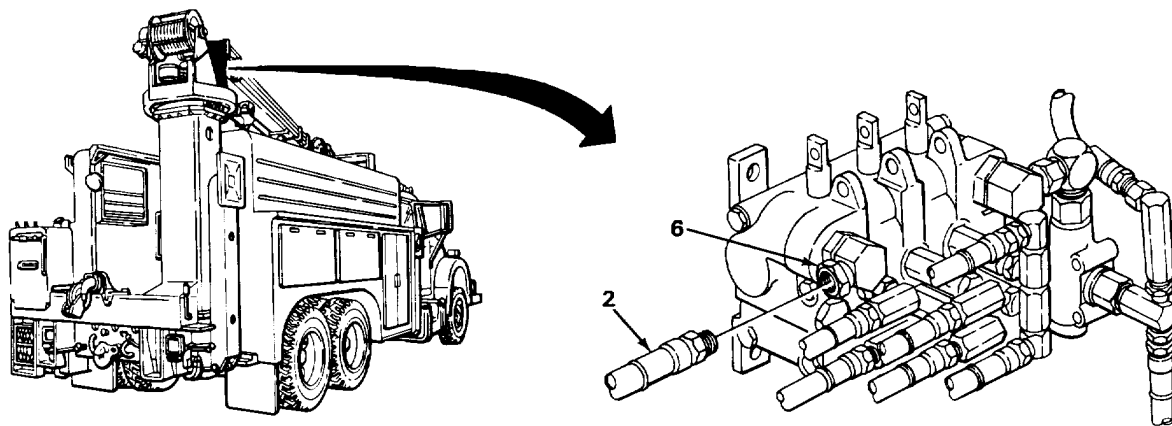
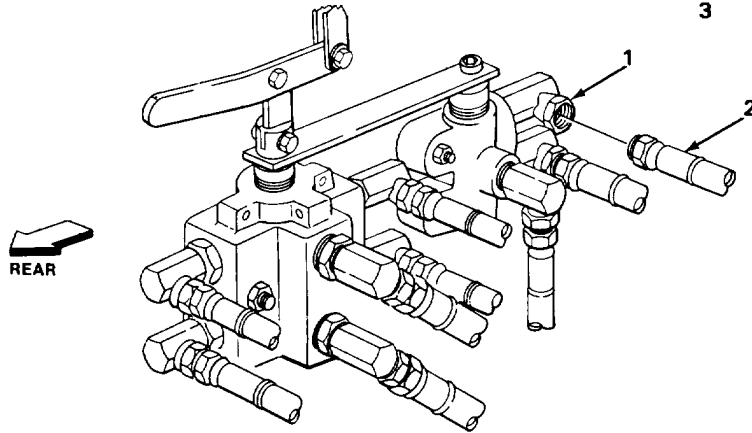
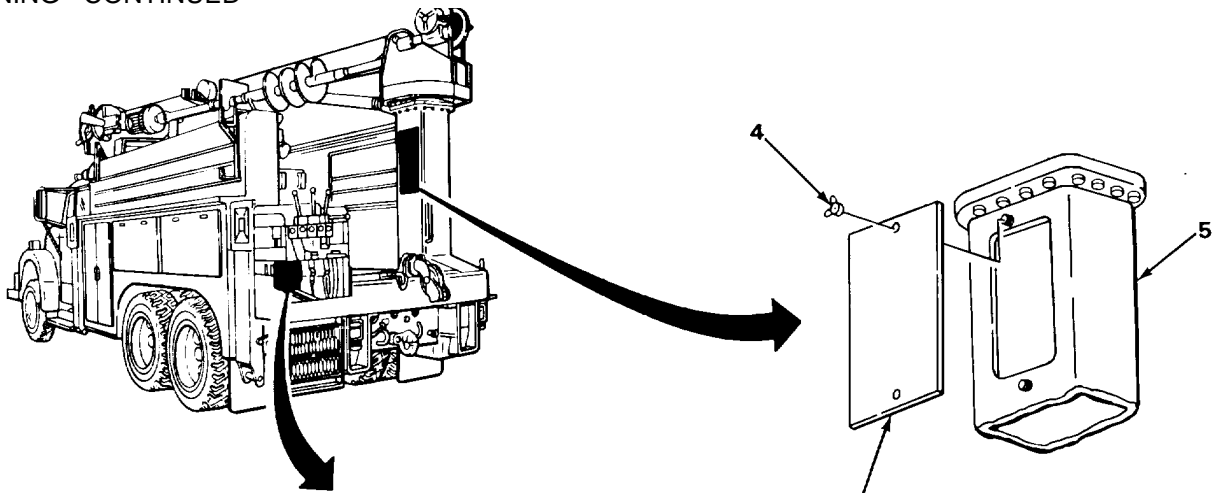
NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

8.	All metal parts	a. Clean in drycleaning solvent. b. Wipe dry with clean, dry rags.
9.	Hose assembly (2)	a. Clean in clean, soapy water. b. Rinse in clean water. c. Wipe connectors clean with clean rags dampened with drycleaning solvent. d. Wipe dry with clean, dry rags.

SINGLE SELECTOR VALVE - TO - DERRICK OPERATOR'S CONTROL VALVE HOSE ASSEMBLY - CONTINUED

CLEANING - CONTINUED



SINGLE SELECTOR VALVE - TO - DERRICK OPERATOR'S CONTROL VALVE HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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INSPECTION/REPLACEMENT

NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

Replace damaged or defective parts as necessary.

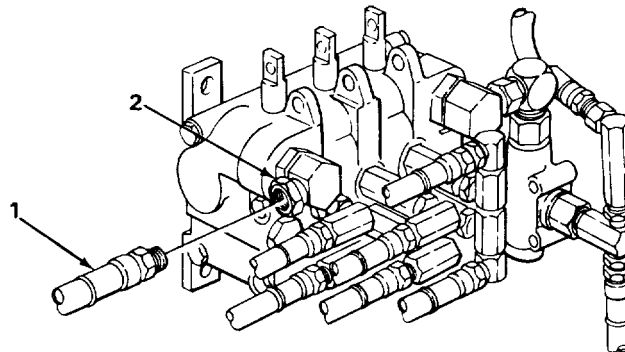
10.	Selector valve-to-control valve hose assembly (1)	<ul style="list-style-type: none"> a. Look for cracks, breaks, tears, and brittleness. b. Look for loose connectors. c. Look for damaged threads.
11. All threaded parts	Look for stripped and gouged threads.	

INSTALLATION

NOTE

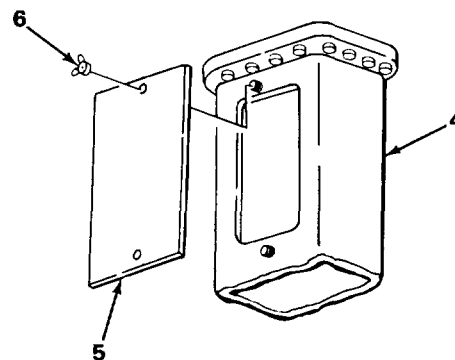
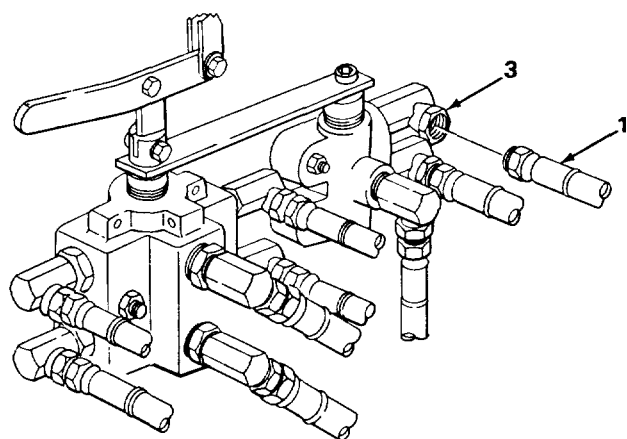
Before installing hose assemblies, wrap all clean, external threads with two turns of teflon tape (page 2-142).

12. 90 swivel adapter (2)	Selector valve-to-control valve hose assembly (1)	<ul style="list-style-type: none"> a. Put in position using fish tape. b. Screw on, and tighten using 7/8-inch and 1-inch wrenches.
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SINGLE SELECTOR VALVE - TO - DERRICK OPERATOR'S CONTROL VALVE HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
13. 90° swivel adapter (3)	Selector valve-to-control valve hose assembly (1)	Screw on, and tighten using 7/8-inch and 1-inch wrenches.	
14. Derrick mast (4)	Access cover (5)	Put on.	
15. Access cover (5)	Two wingnuts (6)	Screw on, and tighten.	

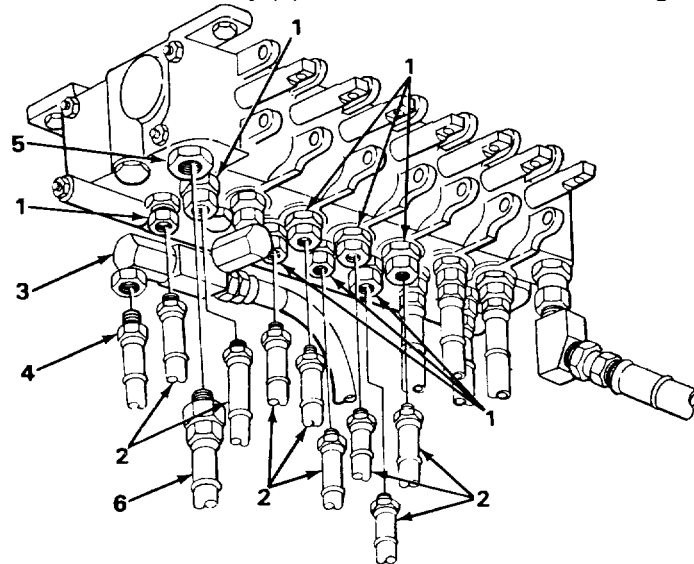


2-1187

TA229341

SINGLE SELECTOR VALVE - TO - DERRICK OPERATOR'S CONTROL VALVE HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
16. Eight straight swivel adapters (1)	Eight hose assemblies (2)	a. Check tags for proper location, and take off. b. Screw on, and tighten using 11/16-inch and 7/8-inch wrenches.	
17. 900 swivel adapter	Hose assembly (4)	a. Check tags for proper location, and take off. b. Screw on, and tighten using 9/16-inch and 11/16-inch wrenches.	
18. Straight swivel	Hose assembly (6)	Screw on, and tighten using 7/8-inch	



FOLLOW-ON MAINTENANCE:

1. Fill with hydraulic fluid (LO 9-2320-269-12).
2. Install console cover (page 2-1092).
3. Operate auxiliary equipment (TM 9-2320-269-10), and check for proper operation and leaks.

TASK ENDS HERE

TA229342

SINGLE SELECTOR VALVE - TO - RETURN LINE FILTER HOSE ASSEMBLY

This task covers:

- | | | |
|----------------|---------------|------------------------------|
| a. Removal | c. Inspection | e. Pre-Load Check of Bearing |
| b. Disassembly | d. Reassembly | f. Installation |
-

INITIAL SETUP:

Tools

- Fish tape, 50-ft reel
- Pail, utility, 3-qt
- Wrench, open-end, 9/16-inch
- Wrench, open-end, 11/16-inch
- Wrench, open-end, 7/8-inch
- Wrench, open-end, 1-inch

Material/Parts

- Detergent, non-sudsing (item 18, appendix C)
- Rags, wiping (item 24, appendix C)

Materials/Parts - Continued

- Solvent, drycleaning (item 28, appendix C)
- Tags, marking (item 29, appendix C)
- Tape, teflon (item 32, appendix C)

Personnel Required

One

Equipment Condition

Console cover removed (page 2-1092).

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

SINGLE SELECTOR VALVE - TO - RETURN LINE FILTER HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
1.	Straight swivel Adapter (1)	Hose assembly (2)	a. Position pail to catch hydraulic fluid. b. Tag line. c. Using 7/8-inch and 1-inch wrenches, unscrew and take off. d. Dispose of drained fluid.
2.	90swivel adapter (3)	Hose assembly (4)	a. Tag line. b. Using 9/16-inch and 11/16-inch wrenches, unscrew and take off.
3..	Eight straight swivel adapters (5)	Eight hose assemblies (6)	a. Tag lines. b. Using 7/8-inch and 11/16-inch wrenches, unscrew and take off.

NOTE

To gain access to selector valve hose assembly, move all tagged lines down and aside in console.

4.	90 swivel adapter (7)	Selector valve-to-return line filter hose assembly (4)	Using 7/8-inch and 1-inch wrenches, unscrew and take off.
5.	Straight swivel adapter (8)	Selector valve-to-return line filter hose assembly (2)	a. Using 7/8-inch and 1-inch wrenches, unscrew and take off. b. Take out of truck.

CLEANING

WARNING

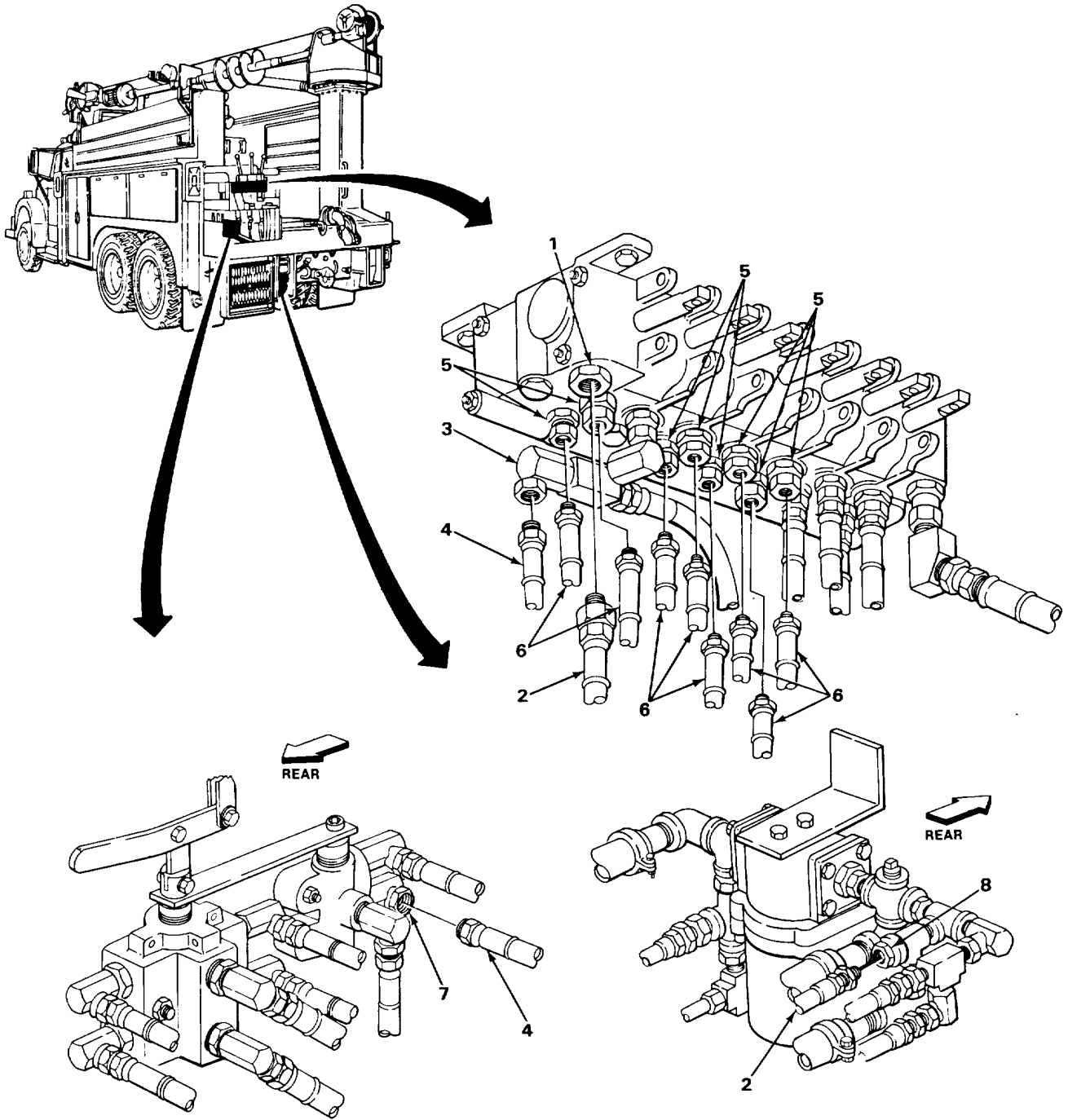
Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

SINGLE SELECTOR VALVE - TO - RETURN LINE FILTER HOSE ASSEMBLY - CONTINUED

CLEANING - CONTINUED



SINGLE SELECTOR VALVE - TO - RETURN LINE FILTER HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
CLEANING - CONTINUED			
6.	All metal parts	a. Clean in drycleaning solvent. b. Wipe dry with clean, dry rags.	
7.	Hose assembly (1)	a. Clean in clean, soapy water. b. Rinse in clean water. c. Wipe connectors clean with clean rags dampened with drycleaning solvent. d. Wipe dry with clean, dry rags.	

INSPECTION/REPLACEMENT

NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

Replace damaged or defective parts as necessary.

8.	Hose assembly (1)	a. Look for cracks, breaks, tears, and brittleness. b. Look for loose connectors. c. Look for damaged threads.	
9.	All threaded parts	Look for stripped and gouged threads.	

INSTALLATION

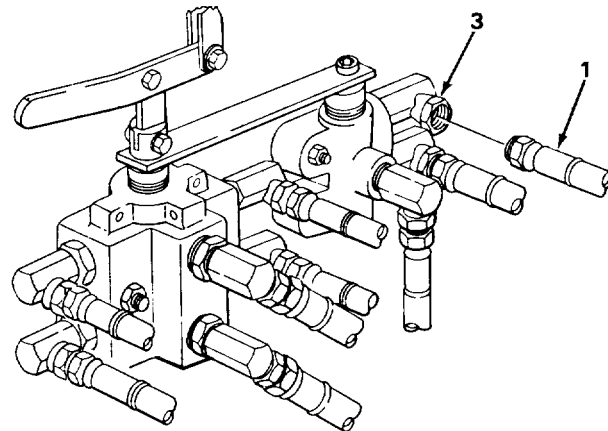
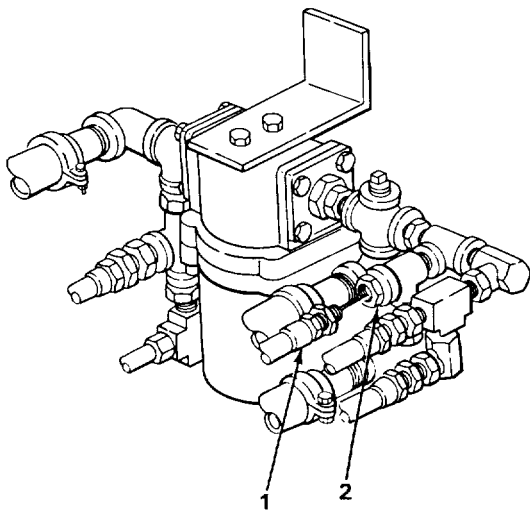
NOTE

Before installing hose assemblies, wrap all clean, external threads with two turns of teflon tape (page 2-142).

2-1192

SINGLE SELECTOR VALVE - TO - RETURN LINE FILTER HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
10. Straight swivel adapter (2)	Selector valve-to-return line filter hose assembly (1)	a. Using fish tape, put in position. b. Screw on, and tighten using 7/8-inch and 1-inch wrenches.	
11. 90° swivel adapter (3)	Selector valve-to-return line filter hose assembly (1)	Screw on, and tighten using 7/8-inch and 1-inch wrenches.	



2-1193

TA229344

SINGLE SELECTOR VALVE - TO - RETURN LINE FILTER HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
12.	Eight straight swivel adapters (1)	Eight hose assemblies (2)	<ul style="list-style-type: none"> a. Match up tagged lines. b. Screw on, and tighten using 7/8-inch and 11/16-inch wrenches.
13.	90 swivel adapter (3)	Hose assembly (4)	<ul style="list-style-type: none"> a. Match up tagged line. b. Screw on, and tighten using 9/16-inch and 11/16-inch wrenches.
14.	Straight swivel adapter (5)	Hose assembly (6)	<ul style="list-style-type: none"> a. Match up tagged line. b. Screw on, and tighten using 7/8-inch

FOLLOW-ON MAINTENANCE:

1. Fill with hydraulic fluid (LO 9-2320-269-12).
2. Install console cover (page 2-10 92).
3. Operate auxiliary equipment (TM 9-2320-269-10), and check for proper operation and leaks.

TASK ENDS HERE

TA229345

SOLENOID VALVE - TO - CONSOLE CM11 VALVE HOSE ASSEMBLY

This task covers:

- | | | |
|----------------|---------------|------------------------------|
| a. Removal | c. Inspection | e. Pre-Load Check of Bearing |
| b. Disassembly | d. Reassembly | f. Installation |
-

INITIAL SETUP:

Tools

- Pail, utility, 4-qt
- Wrench, open-end, 7/8-inch
- Wrench, open-end, 1-inch

Materials/Parts

- Detergent, non-sudsing (item 12, appendix C)
- Rags, wiping (item 24, appendix C)

Materials/Parts-Continued

- Solvent, drycleaning (item 28, appendix C)
- Tape, teflon (item 32, appendix C)

Personnel Required

One

Equipment Condition

Console cover removed (page 2-1092).

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			

WARNING

Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

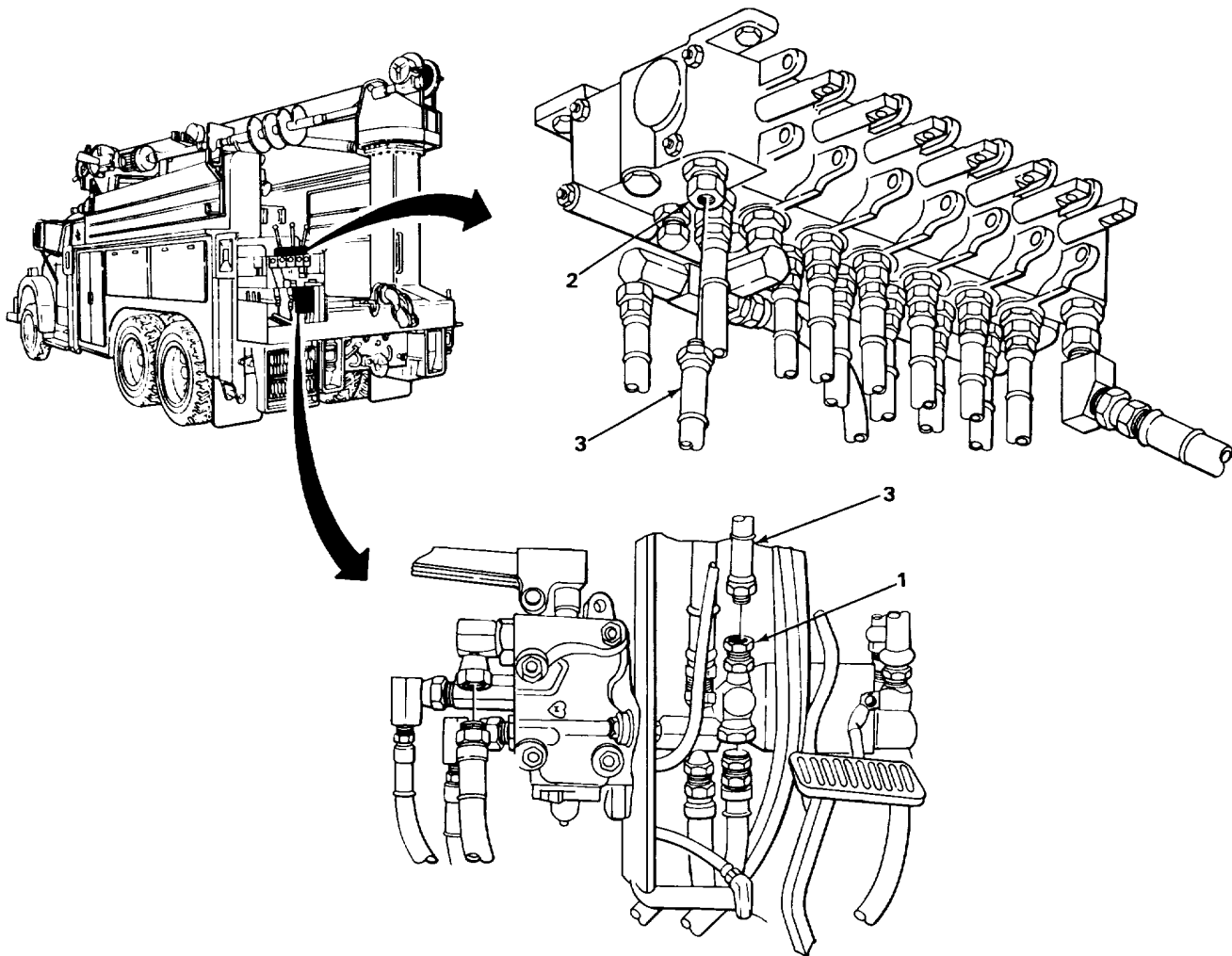
2-1195

SOLENOID VALVE - TO - CONSOLE CM11 VALVE HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

REMOVAL - CONTINUED

- | | | |
|--------------------------------|--|--|
| 1. Tee (1) and straight Swivel | Solenoid valve-to-console CM11 valve hose assembly (3) | <ol style="list-style-type: none"> a. Position pail to catch hydraulic fluid. b. Using 7/8 inch and 1-inch wrenches unscrew and take out. c. Pull out of truck. |
|--------------------------------|--|--|



CLEANING

WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

TA229346

SOLENOID VALVE - TO - CONSOLE CM11 VALVE HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

CLEANING - CONTINUED

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

- | | | |
|----|-----------------|--|
| 2. | All metal parts | <ul style="list-style-type: none"> a. Clean in drycleaning solvent. b. Wipe dry with clean, dry rags. |
| 3. | Hose assembly | <ul style="list-style-type: none"> a. Clean in clean soapy water. b. Rinse in clean water. c. Wipe connectors clean with clean rags dampened with drycleaning solvent. d. Wipe dry with clean, dry rags. |

INSPECTION/REPLACEMENT

NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

Replace damaged or defective parts as necessary.

- | | | |
|----|--------------------|---|
| 4. | Hose assembly | <ul style="list-style-type: none"> a. Look for cracks, breaks, tears, and b. Look for loose connectors. c. Look for damaged threads. |
| 5. | All threaded parts | Look for stripped and gouged threads. |

2-1197

SOLENOID VALVE - TO - CONSOLE CM11 VALVE HOSE ASSEMBLY - CONTINUED

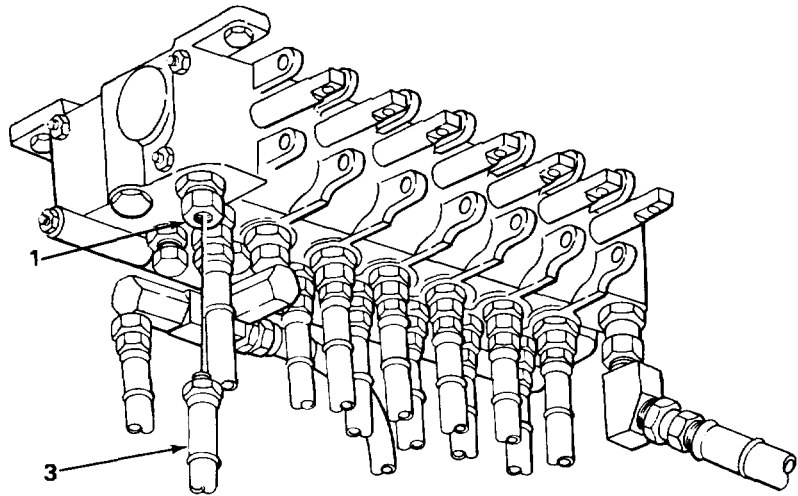
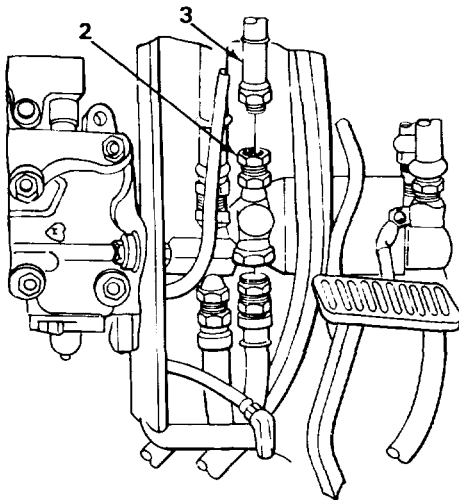
LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

INSTALLATION

NOTE

Before installing hose assembly, wrap all clean, external threads with two turns of teflon tape (page 2-142).

- | | | |
|--------------------------------|--------------------------------|---|
| 6. Straight swivel adapter (1) | Solenoid valve-to-console CM11 | Screw on, and tighten using 7/8-inch and 1-inch wrenches. |
|--------------------------------|--------------------------------|---|



FOLLOW-ON MAINTENANCE:

1. Fill with hydraulic fluid (LO 9-2320-269-12).
2. Install console cover (page 2-1092).
3. Operate auxiliary equipment (TM 9-2320-269-10), and check for proper operation and leaks.

TASK ENDS HERE

TA229347

SOLENOID VALVE - TO - FLOW CONTROL VALVE HOSE ASSEMBLY

This task covers:

- | | |
|----------------|---------------|
| a. Removal | c. Inspection |
| b. Disassembly | d. Reassembly |

INITIAL SETUP:

Tools

- Pail, utility, 6-qt
- Wrench, open-end, 7/8-inch
- Wrench, open-end. 1-inch

Materials/Parts

- Detergent, non-sudsing (item 12, appendix C)
- Rags, wiping (item 24, appendix C)

Materials/Parts - Continued

- Solvent, drycleaning (item 28, appendix C)
- Tape, teflon (item 32, appendix C)

Personnel Required

One

Equipment Condition

Operator's platform down (TM 9-2320-269-10).

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

REMOVAL

WARNING

Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

SOLENOID VALVE - TO - FLOW CONTROL VALVE HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL-CONTINUED			
1.	Swivel tee adapter (1) to swivel adapter (2)	Solenoid valve-to-flow control valve hose assembly (3)	<ul style="list-style-type: none"> a. Position pail to catch hydraulic fluid. b. Using 7/8-inch and 1-inch wrenches, c. Take out of truck. d. Get rid of fluid.

CLEANING

WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

2.	All metal parts		<ul style="list-style-type: none"> a. Clean in drycleaning solvent. b. Wipe dry with clean, dry rags.
3.	Hose assembly (3)		<ul style="list-style-type: none"> a. Clean in clean, soapy water. b. Rinse in clean water. c. Wipe connectors clean with clean rags dampened with drycleaning solvent. d. Wipe dry with clean, dry rags.

INSPECTION/REPLACEMENT

NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

Replace damaged or defective parts as necessary.

4.	Hose assembly (3)		<ul style="list-style-type: none"> a. Look for cracks, breaks, tears, and brittleness. b. Look for loose connectors. c. Look for damaged threads.
5.	All threaded parts		Look for stripped and gouged threads.

SOLENOID VALVE - TO - FLOW CONTROL VALVE HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

INSTALLATION

NOTE

Before installing hose assembly, wrap all clean, external threads with two turns of teflon tape (page 2-142).

- | | | |
|---|--|---|
| 6. Swivel adapter (2) to swivel tee adapter (1) | Solenoid valve-to-flow control valve hose assembly (3) | <ul style="list-style-type: none"> a. Put in position. b. Screw on, and tighten using 7/8-inch and 1-inch wrenches. |
|---|--|---|

NOTE

FOLLOW-ON MAINTENANCE:

1. Raise operator's platform (TM 9-2320-269-10).
2. Operate auxiliary equipment (TM 9-2320-269-10), and check for proper operation and leaks.

TASK ENDS HERE

TA229348

2-1201

TANK - TO - PUMP HOSE

This task covers:

- | | | |
|----------------|---------------|------------------------------|
| a. Removal | c. Inspection | e. Pre-Load Check of Bearing |
| b. Disassembly | d. Reassembly | f. Installation |

INITIAL SETUP:

Tools

- Handle, ratchet, 1/2-inch drive
- Pail, utility, 6-qt
- Screwdriver, flat-tip, 3/8-inch
- Socket, 1/2-inch drive, 11/16-inch
- Wrench, open-end, 1 1/16-inch

Materials/Parts

- Detergent, non-sudsing (item 12, appendix C)
- Rags, wiping (item 24, appendix C)
- Solvent, drycleaning (item 28, appendix C)

Personnel Required

One

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

REMOVAL

WARNING

Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

1.	Hydraulic tank (1)	Shutoff valve (2)	Using 1 1/16-inch wrench, turn off.
2.	Tank-to-pump hose (3)	Two clamps (4), four screws (5), and nuts (6)	<ul style="list-style-type: none"> a. Position pail to catch hydraulic fluid. b. Using 11116-inch socket and handle, unscrew and take off.
3.	Dixon insert (7) hydraulic pump inlet (8)	Tank-to-pump hose (3)	<ul style="list-style-type: none"> a. Using flat-tip screwdriver, pry loose and pull off. b. Take out from under truck. c. Get rid of fluid.

TANK - TO - PUMP HOSE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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CLEANING

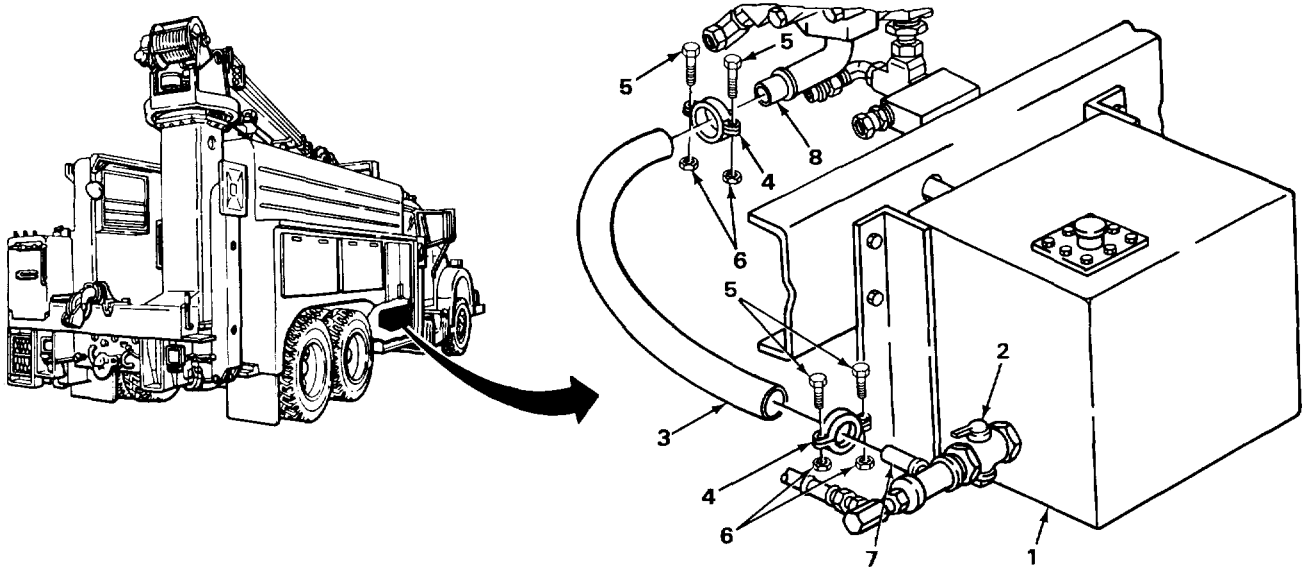
WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

- | | | |
|----|-----------------------|--|
| 4. | All metal parts | <ul style="list-style-type: none"> a. Clean in drycleaning solvent. b. Wipe dry with clean, dry rags. |
| 5. | Tank-to-pump hose (3) | <ul style="list-style-type: none"> a. Clean in clean, soapy water. b. Rinse in clean water. c. Wipe dry with clean, dry rags. |



TANK - TO - PUMP HOSE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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INSPECTION/REPLACEMENT

NOTE

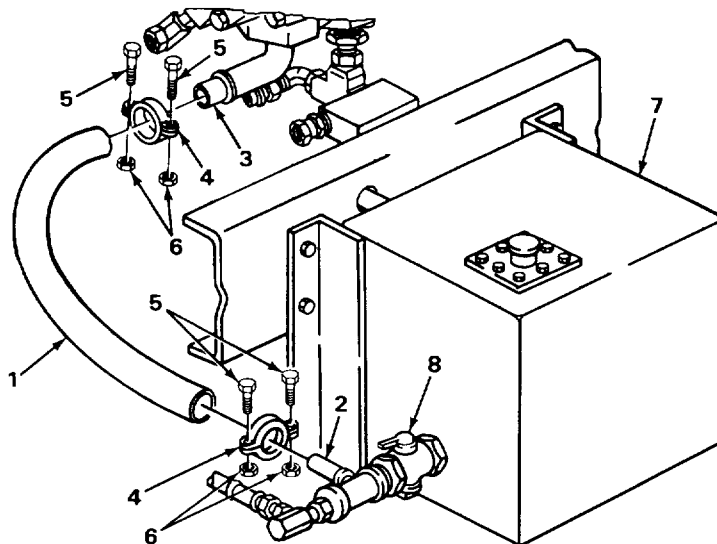
For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142.)

Replace damaged or defective parts as necessary.

- | | | |
|----|-----------------------|--|
| 6. | Tank-to-pump hose (1) | Look for cracks, breaks, tears, and brittleness. |
| 7. | All metal parts | Look for stripped or gouged threads. |

INSTALLATION

- | | | | |
|----|--|---|---|
| 8. | Dixon insert (2)
hydraulic pump inlet (3) | Tank-to-pump hose (1) | Push on. |
| 9. | Tank-to-pump hose (1) | Two clamps (4),
four screws (5),
and nuts (6) | a. Place in position.
b. Screw on, and tighten using 11/16 -inch socket and handle. |
| 10 | Hydraulic | shutoff valve(8) | Using 1 1/16-inch wrench, turn on. |



TANK - TO - PUMP HOSE - CONTINUED

INSTALLATION - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Fill with hydraulic fluid (LO 9-2320-269-12).
2. Operate auxiliary equipment (TM 9-2320-269-10), and check for proper operation and leaks.

TASK ENDS HERE

TANK - TO - EMERGENCY PUMP HOSE ASSEMBLY

This task covers:

- | | | |
|----------------|---------------|------------------------------|
| a. Removal | c. Inspection | e. Pre-Load Check of Bearing |
| b. Disassembly | d. Reassembly | f. Installation |
-

INITIAL SETUP:

Tools

Pail, utility, 6-qt
 Wrench, open-end, 7/8-inch
 Wrench, open-end, 1-inch
 Wrench, open-end, 1 1/16-inch

Materials/Parts

Detergent, non-sudsing (item 12, appendix C)
 Rags, wiping (item 24, appendix C)
 Solvent, drycleaning (item 28, appendix C)
 Tape, teflon (item 32, appendix C)

Personnel Required

One

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

TANK - TO - EMERGENCY PUMP HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
1.	Hydraulic tank (1)	Shutoff valve (2)	Using 1 1/16-inch wrench, turn and close.
2.	Two 90° swivel adapters (3)	Tank-to-emergency pump hose assembly (4)	<ol style="list-style-type: none"> Position pail to catch hydraulic fluid. Using 1-inch and 7/8-inch wrenches, unscrew and take off. Take out of truck. Dispose of drained fluid.

CLEANING

WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

3.	All metal parts		<ol style="list-style-type: none"> Clean in drycleaning solvent. Wipe dry with clean, dry rags.
4.	Hose assembly (4)		<ol style="list-style-type: none"> Clean in clean, soapy water. Rinse in clean water. Wipe connectors clean with clean rags dampened with drycleaning solvent. Wipe dry with clean, dry rags.

INSPECTION/REPLACEMENT

NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

Replace damaged or defective parts as necessary.

5.	Hose assembly (4)		<ol style="list-style-type: none"> Look for cracks, breaks, tears, and brittleness. Look for loose connectors. Look for damaged threads.
----	-------------------	--	---

TANK - TO - EMERGENCY PUMP HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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INSPECTION/REPLACEMENT - CONTINUED

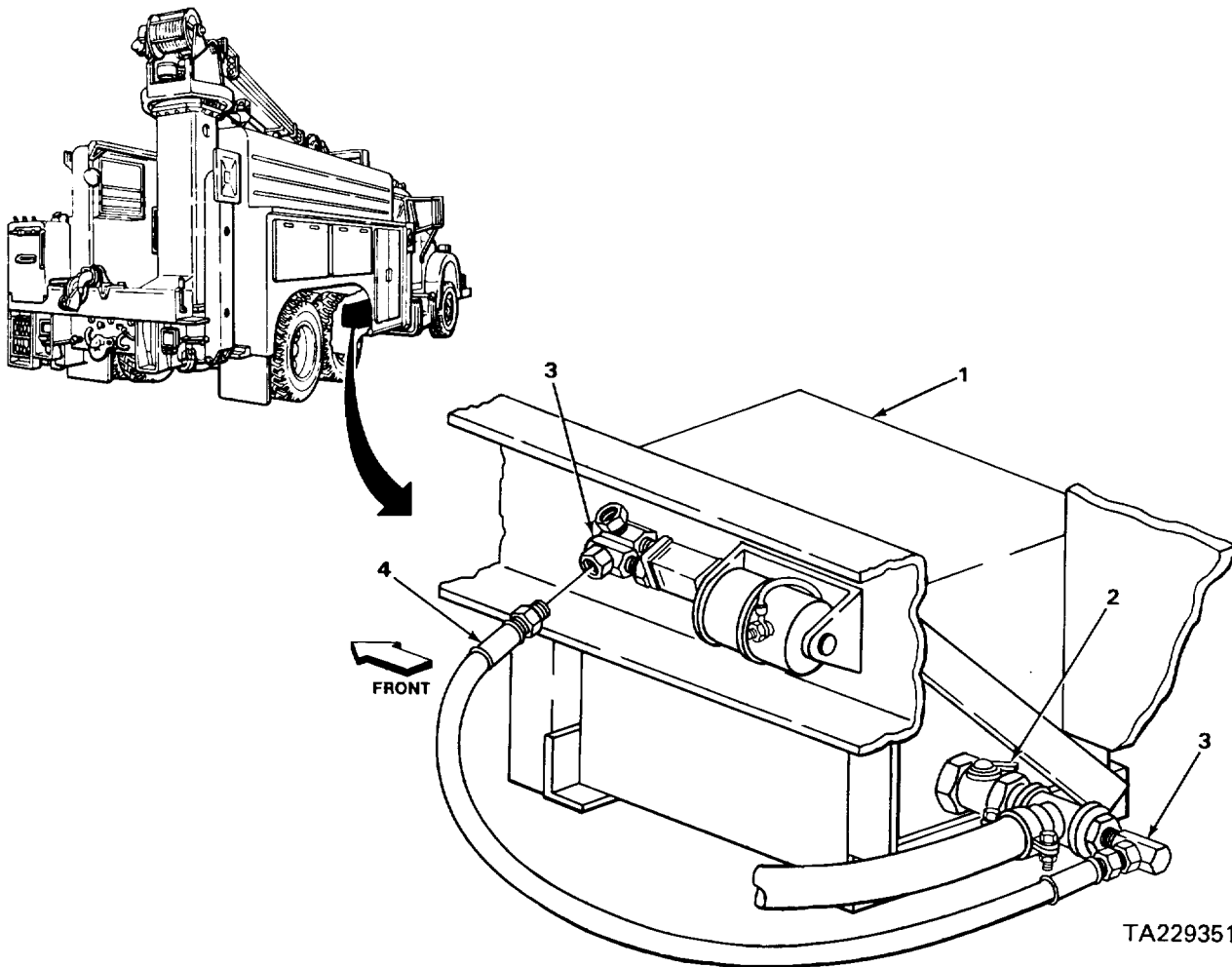
- | | | | |
|----|--------------------|--|---------------------------------------|
| 6. | All threaded parts | | Look for stripped and gouged threads. |
|----|--------------------|--|---------------------------------------|

INSTALLATION

NOTE

Before installing hose assemblies, wrap all clean, external threads with two turns of teflon tape (page 2-142).

- | | | | |
|----|-----------------------------|--|---|
| 7. | Two 900 swivel adapters (3) | Tank-to-emergency pump hose assembly (4) | Screw on, and tighten using 7/8-inch and 1-inch wrenches. |
|----|-----------------------------|--|---|



TANK - TO - EMERGENCY PUMP HOSE ASSEMBLY - CONTINUED

INSTALLATION - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Fill with hydraulic fluid (LO 9-2320-269-12).
2. Operate auxiliary equipment (TM 9-2320-269-10), and check for proper operation and leaks.

TASK ENDS HERE

TURRET WINCH MOTOR BYPASS HOSE ASSEMBLY

This task covers:

- | | | |
|----------------|---------------|------------------------------|
| a. Removal | c. Inspection | e. Pre-Load Check of Bearing |
| b. Disassembly | d. Reassembly | f. Installation |

INITIAL SETUP:

Tools

Pail, utility, 6-qt
 Wrench, open-end, 11/16-inch
 Wrench, open-end, 7/8-inch
 Tape, teflon (item 32, appendix C)

Materials/Parts

Detergent, non-sudsing (item 12, appendix C)
 Rags, wiping (item 24, appendix C)
 Solvent, drycleaning (item 28, appendix C)

Personnel Required

One

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

Avoid contact with hydraulic fluid. Hydraulic fluid, if splashed on skin or in eyes, can cause irritation.

- | | | |
|--|--|---|
| <ol style="list-style-type: none"> 1. Two 900 swivel adapters (1) | <p>Turret winch motor bypass hose assembly (2)</p> | <ol style="list-style-type: none"> a. Position pail to catch hydraulic fluid. b. Using 11/16-inch and 7/8-inch wrenches, unscrew and take off. c. Take out of truck. d. Dispose of drained fluid, |
|--|--|---|

TURRET WINCH MOTOR BYPASS HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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CLEANING

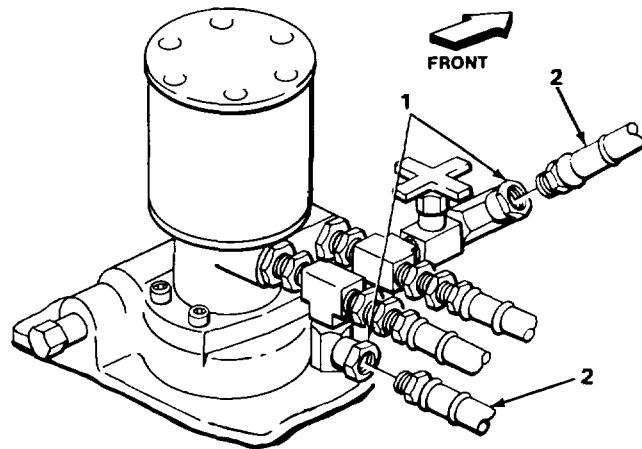
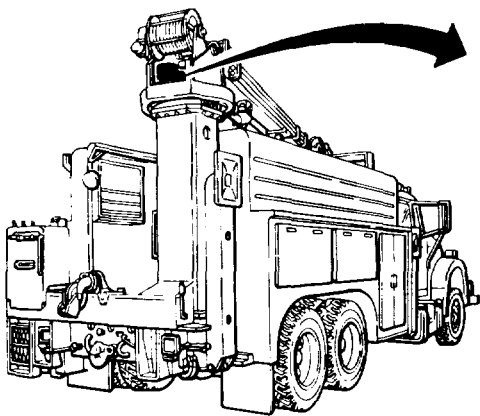
WARNING

Solvent burns easily. Solvent fumes can explode. Do not smoke or allow open flame nearby when using solvent. Failure to observe these precautions could cause serious injury or death.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-142).

- | | | |
|----|-------------------|---|
| 2. | All metal parts | <ul style="list-style-type: none"> a. Clean in drycleaning solvent. b. Wipe dry with clean, dry rags. |
| 3. | Hose assembly (2) | <ul style="list-style-type: none"> a. Clean in clean, soapy water. b. Rinse in clean water. c. Wipe connectors clean with clean rags dampened with drycleaning solvent. d. Wipe dry with clean, dry rags. |



2-2109

TA229352

TURRET WINCH MOTOR BYPASS HOSE ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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INSPECTION/REPLACEMENT

NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-142).

Replace damaged or defective parts as necessary.

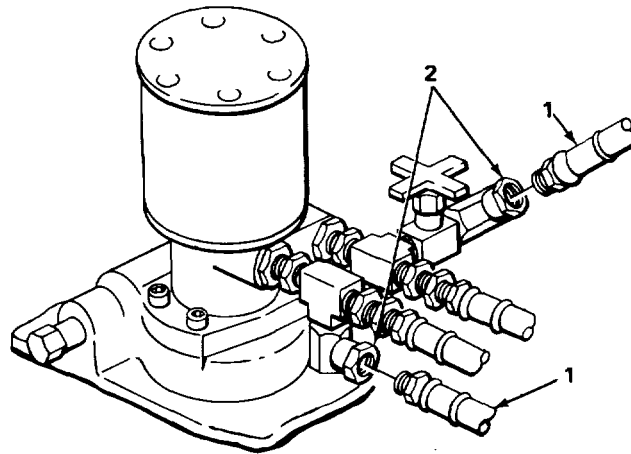
4.	Hose assembly (1)	a. Look for cracks, breaks, tears, and brittleness. b. Look for loose connectors. c. Look for damaged threads.	
----	-------------------	--	--

INSTALLATION

NOTE

Before installing hose assemblies, wrap all clean, external threads with two turns of teflon tape (page 2-142).

5.	Two 90° swivel adapters (2)	Turret winch motor bypass hose assembly (1)	Screw on, and tighten using 11/16-inch and 7/8-inch wrenches.	JU
----	-----------------------------	---	---	----



2-1210

TA229353

TURRET WINCH MOTOR BYPASS HOSE ASSEMBLY - CONTINUED

INSTALLATION - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Fill with hydraulic fluid (LO 9-2320-269-12).
2. Operate auxiliary equipment (TM 9-2320-269-10), and check for proper operation and leaks.

TASK ENDS HERE

HYDRAULIC MAIN RESERVOIR TANK

This task covers:

- a. Removal(page 2-1212)
 - b. Installation(page 2-1212)
-

INITIAL SETUP:

Tools

Extension, 1/2-inch drive, 4-inch
 Handle, ratchet, 1/2-inch drive
 Jack, dolly type
 Socket, 1/2-inch drive, 15116-inch
 Wrench, open-end, 15116-inch

Materials/Parts

Lockwasher, tank to frame
 (four required)

Personnel Required

Two

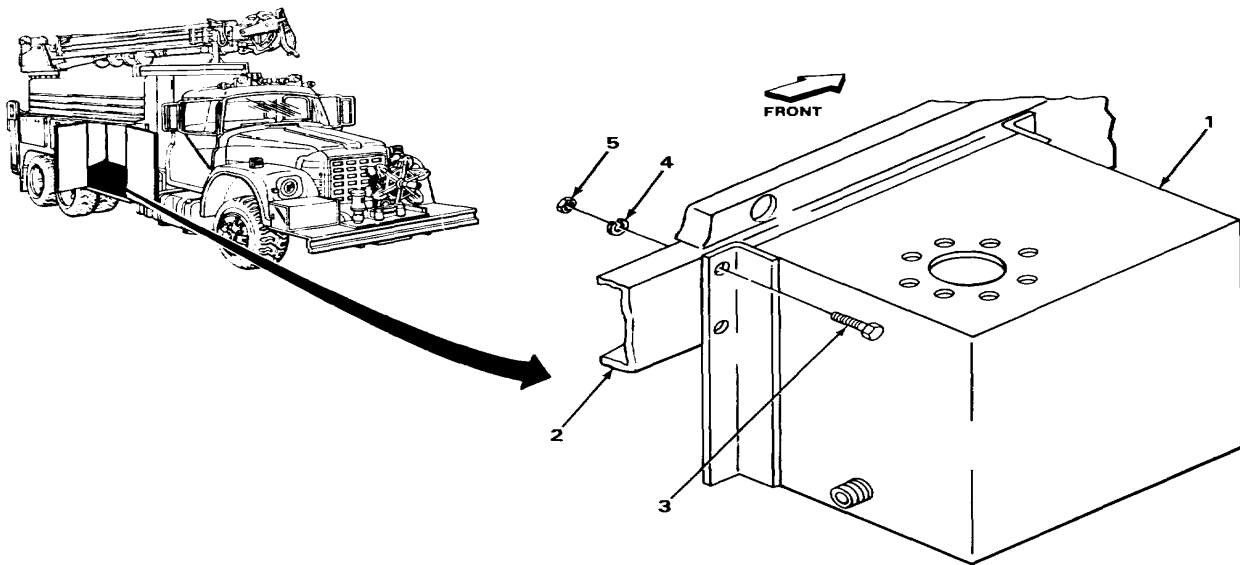
Equipment Condition

Hydraulic main reservoir tank filter
 element removed (page 2-1213).
 Lines and fittings removed at tank
 (pages 2-1205 and 2-1178).

2-1211

HYDRAULIC MAIN RESERVOIR TANK - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1. Hydraulic tank(1) and frame (2)	Four screws (3) lockwashers (4), and	a. Support tank with jack. b. Using 15/16-inch socket, extension, handle, and 15/16-inch wrench, unscrew and take off. c. Get rid of lockwashers (4).	
2. Frame (2)	Hydraulic tank (1)	Using jack, and with help from assistant, take out.	
INSTALLATION			
3. Frame (2)	Hydraulic tank (1)	Using jack, and with help from assistant, put in position.	
4. Hydraulic tank(1) and frame (2)	Four screws(3), new lockwashers (4), and nuts (5)	a. Screw in, and tighten using 15/16 socket, extension, and handle, and 15/16-inch wrench b. Remove jack.	



TA229354

HYDRAULIC MAIN RESERVOIR TANK - CONTINUED

INSTALLATION - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Install lines and fittings at tank (pages 2-1205 and 2-1178).
2. Install hydraulic main reservoir tank filter element (page 2-1213).
3. Operate auxiliary equipment (TM 9-2320-269-10), and check for proper operation and leaks.

TASK ENDS HERE

HYDRAULIC MAIN RESERVOIR TANK FILTER ELEMENT

This task covers:

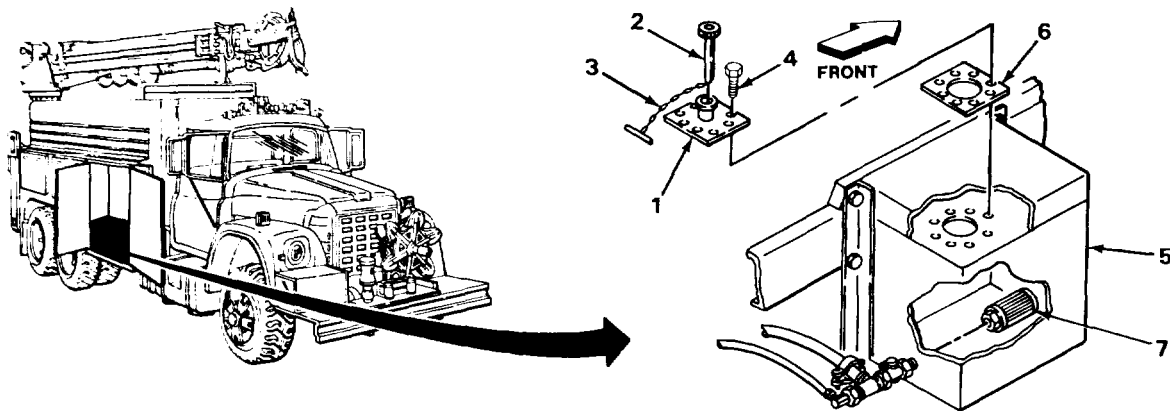
- a. Removal(page 2-1214)
 - b. Installation(page 2-1214) .
-

INITIAL SETUP:

<p>Tools</p> <p>Handle, ratchet, 3/8-inch drive Socket, 3/8-inch drive, 3/8-inch Wrench, adjustable</p> <p>Materials/Parts</p> <p>Filter element, hydraulic main reservoir tank Gasket, tank cover</p>	<p>Personnel Required</p> <p>One</p> <p>Equipment Condition</p> <p>Right front compartment doors open (TM 9-2320-269-10). Hydraulic tank drained (LO 9-2320-269-12).</p>
--	--

HYDRAULIC MAIN RESERVOIR TANK FILTER ELEMENT - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1. Tank cover (1)	Filler cap (2) with chain (3)	a. Unscrew, and pull out part way. b. Reach through opening, and turn chain retaining pin to clear opening. c. Pull out.	
2.	Eight screws (4)	Using 3/8-inch socket and handle, unscrew and take out.	
3. Hydraulic Tank (5)	Tank cover (1) and gasket (6)	a. Take off. b. Get rid of gasket (6).	
4.	Filter element (7)	a. Using adjustable wrench, unscrew and take out. b. Get rid of.	
INSTALLATION			
5.	New filter element (7)	Screw in, and tighten using adjustable wrench.	
6.	New gasket (6) and tank cover (1)	Put in position.	
7. Tank cover (1)	Eight screws (4)	Screw in, and tighten using 3/8-inch socket and handle.	
8.	Chain (3) and filler cap (2)	a. Put in. b. Screw on, and tighten.	



HYDRAULIC MAIN RESERVOIR TANK FILTER ELEMENT - CONTINUED

INSTALLATION - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Fill hydraulic tank (LO 9-2320-269-12).
2. Close right front compartment doors (TM 9-2320-269-10).
3. Operate auxiliary equipment (TM 9-2320-269-10), and check for proper operation and leaks.

TASK ENDS HERE

Section XXII. BODY, CHASSIS, OR HULL ACCESSORY ITEMS

	Page		Page
Air Horn	2-1324	Heater Shutoff Valves	2-1306
Air Horn Valve	2-1319	Lower Heater Hose and Temperature Control Valve.....	2-1300
Blower Assembly	2-1261	Rear View Mirror Assembly.....	2-1308
Data Plates and Decals.....		Slide-in Data Plates.....	2-1336
Attached with Adhesive	2-1330	Upper Heater Hose	2-1297
Data Plates Attached with		Windshield Washer Hose	2-1224
Drive Screws	2-1332	Windshield Washer Reservoir and Pump.....	2-1220
Data Plates Attached with		Windshield Wiper Arm and Blade	2-1218
Self-Tapping Screws	2-1334	Windshield Wiper Linkage	2-1237
Defrost Cable	2-1289	Windshield Wiper Motor	2-1228
Defroster Duct	2-1247	Windshield Wiper Refill	2-1216
Defroster Duct Bracket.....	2-1255	Windshield Wiper Switch	2-1242
Defroster Hoses and Outlets	2-1257		
FAN,TEMP Switch and Cable	2-1292		
Heater Assembly, HEAT Control, and VENT Control	2-1269		

WINDSHIELD WIPER REFILL

This task covers:

- a. Inspection (page 2-1216)
- b. Removal (page 2-1216)
- c. Installation (page 2-1217)

INITIAL SETUP:

Tools	Personnel Required
Screwdriver, flat-tip, 1/8-inch,	One

LOCATION	ITEM	ACTION	REMARKS
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INSPECTION

NOTE

The steps in this task are the same for both left and right windshield wiper refills. The left windshield wiper refill is used as the example.

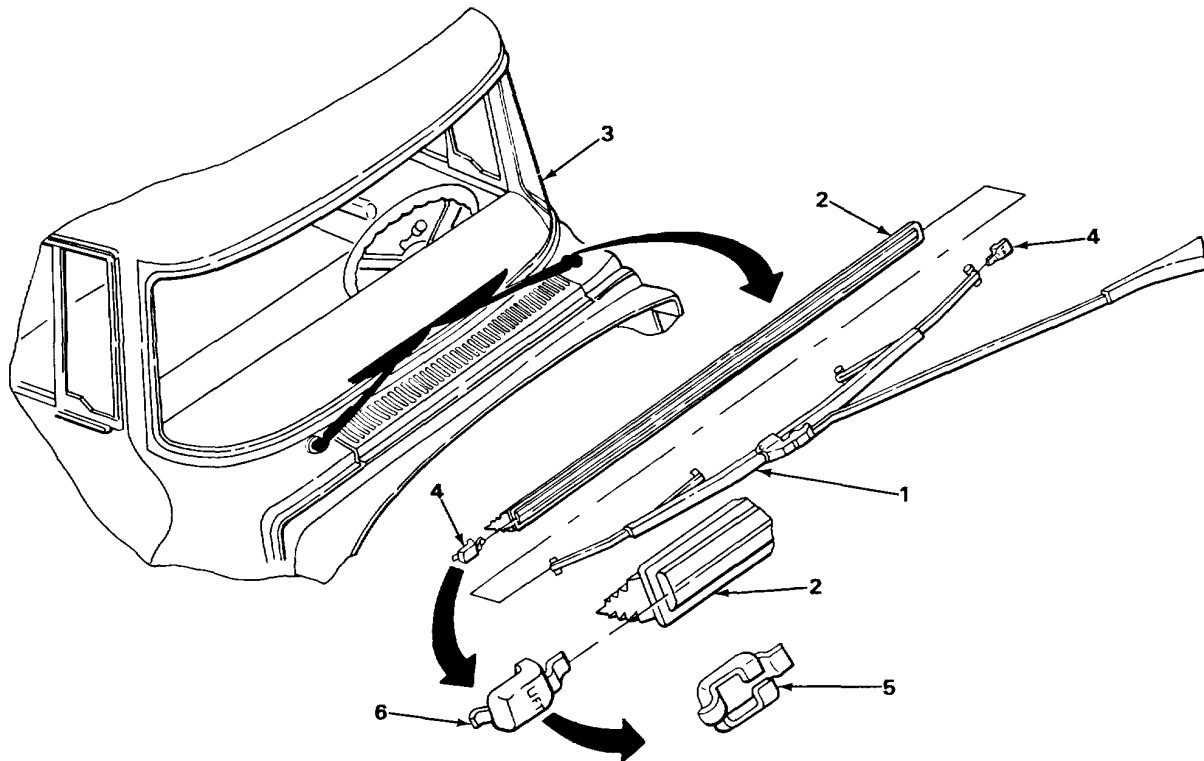
1.	Windshield wiper blade (1)	Refill (2)	<ul style="list-style-type: none"> a. Inspect for cracked, chipped, torn, or worn rubber. b. Pull out slightly from windshield (3), and flick your thumb across the refill (2) at right angles in two or three places. Rubber should spring back. c. Squeeze to see if refill (2) is hard. If cracked, chipped, torn, worn, hardened, or if rubber fails to spring back, replace refill.
----	----------------------------	------------	---

REMOVAL

2.	Refill (2) to blade (1)	End clip (4)	Using flat-tip screwdriver on either end, pry up and pull off of refill (2).
3.	Blade (1)	Refill (2)	Slide out.
4.	Refill (2)	Other end clip (4)	Using flat-tip screwdriver, pry up and pull off.

WINDSHIELD WIPER REFILL - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
5. New refill (2)	End clip (4)	a. Take one of two end clips (4) and slide it onto refill (2) so tabs (5) are in grooves in rubber.	You may have to pull up rubber
			to get clip in groove.
		b. Push onto refill (2) until hooked tab (6) snaps into small slot in metal part of refill (2).	
slightly			
6. Blade (1)	Refill (2)	Slide into blade (1) making sure metal part of refill (2) is in all hooks on blade (1).	
7. Refill (2)	End clip(4)	Repeat step 5 for other end clip (4).	



TASK ENDS HERE

WINDSHIELD WIPER ARM AND BLADE

This task covers:

- a. Removal(page 2-1218)
- b. Installation(page 2-1219)

INITIAL SETUP:

Tools

Screwdriver, flat-tip, 1/8-inch
Wrench, pliers

Materials/Parts

Rags, wiping (item 24, appendix C)

Personnel Required

One

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

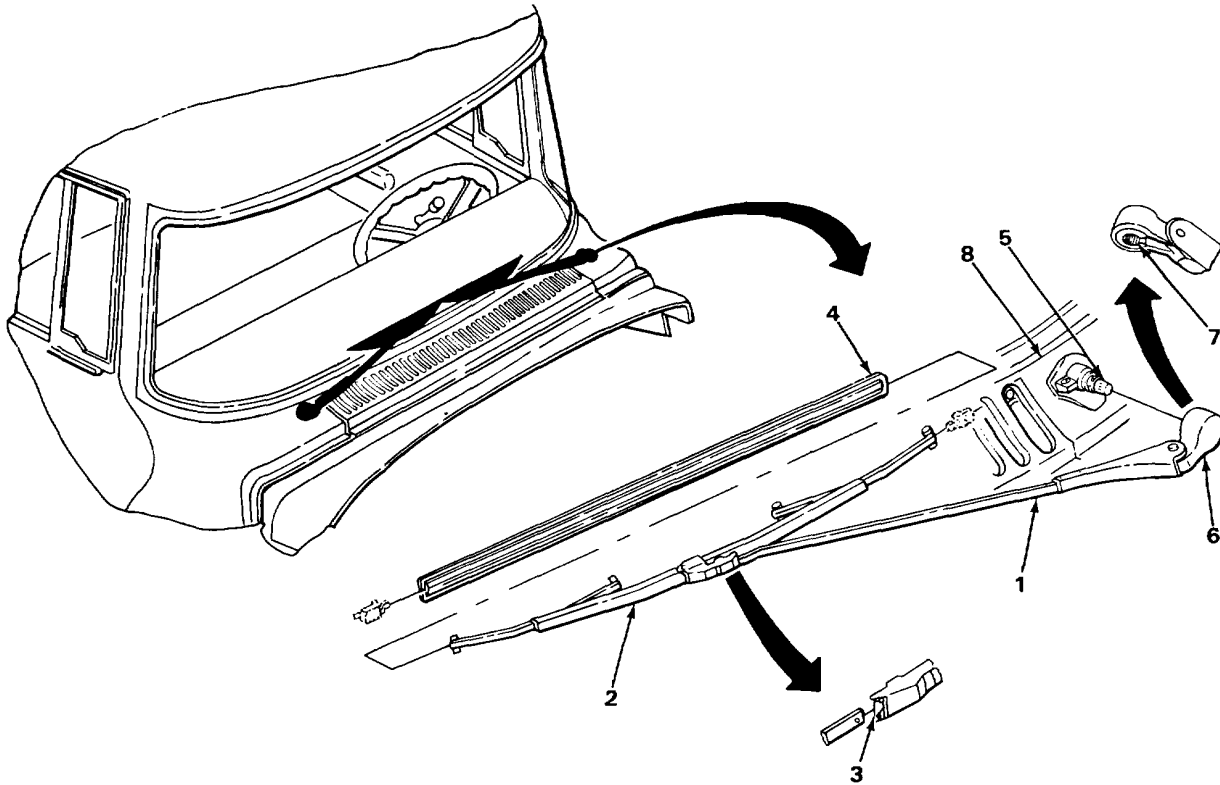
NOTE

The steps in this task are the same for either right or left wiper arm and blade. The left wiper arm and blade is used as the example.

It is not necessary to remove wiper arm to replace blade.

1.	Wiper arm (1)	Blade (2)	<ul style="list-style-type: none"> a. Using flat-tip screwdriver, pry up tab (3). b. Take off blade.
2.	Blade (2)	Refill (4)	Remove (page 2-1216).
3.	Pivot (5)	Arm (6)	<ul style="list-style-type: none"> a. Cover pivot end of arm (6) with rag. b. Clamp pivot end of arm (6) with pliers wrench. c. Using flat-tip screwdriver, pry back tab (7). d. Remove arm (6) using pliers wrench. e. Take pliers wrench and rag off arm (6).

LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
4. Blade (2)	Refill (4)	Install (page 2-1216).
5. Wiper arm (1)	Blade (2)	Push onto end of arm (1) until it snaps into place securely.
6. Pivot (5)	Arm (6)	a. Place loosely on pivot (5), and aline so blade rests on top of windshield gasket (8) with wiper mechanism in parked position. b. Push onto pivot (5).



TASK ENDS HERE

WINDSHIELD WASHER RESERVOIR AND PUMP

This task covers:

- a. Removal (page 2-1220)
- b. Disassembly (page 2-1221)
- c. Assembly (2-1222)
- d. Installation (page 2-1222)

INITIAL SETUP:

Tools

- Container, 1-qt
- Extension, 3/8-inch drive, 5-inch
- Finger, mechanical
- Handle, ratchet, 3/8-inch drive
- Knife, pocket
- Screwdriver, cross-tip, number two
- Screwdriver, flat-tip, 3/16-inch,
- Socket, 3/8-inch drive, 7/16-inch
- Socket, 3/8-inch drive, 13/16-inch
- Wrench, box-end, 7/16-inch

Materials/Parts

- Detergent, liquid (item 11, appendix C)
- Fluid, windshield washer (item 14, appendix C)
- Lockwasher, ground wire terminal-to-bracket (four required)
- Rags, wiping (item 24, appendix C)

Personnel Required

One

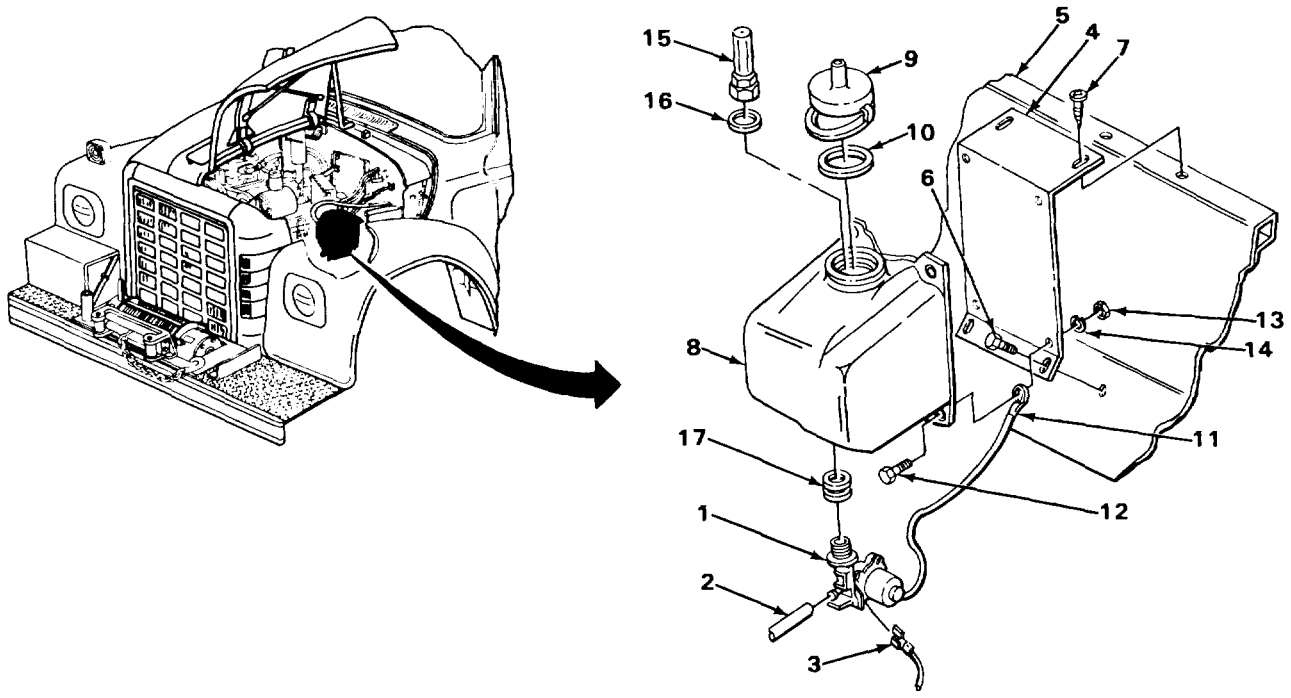
Equipment Condition

Left side of hood open (TM 9-2320-269-20-1).

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1.	Pump assembly (1)	Hose (2)	<ul style="list-style-type: none"> a. Place container underneath to catch fluid. b. Pull off. c. Get rid of fluid.
2.		Wire (3)	Unplug.
3.	Reservoir bracket bracket (4) to splash panel (5)	Two screws (6)	Using 7/16-inch wrench, unscrew and take out.
4.		Two screws (7)	Using cross-tip screwdriver, unscrew and take out.
5.	Splash panel (5)	Reservoir (8) and pump assembly (1)	Take off.

WINDSHIELD WASHER RESERVOIR AND PUMP - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
DISASSEMBLY			
6.	Reservoir (8)	Cap (9)	a. Snap open. b. Snap off retainer ring to cap, and take off.
7.	Cap (9)	Gasket (10)	Using pocket knife, pry out.
8.	Reservoir (8) and ground wire terminal (11) to bracket (4)	Four screws (12), nuts (13), lockwashers (14), and bracket (4)	a. Using 7/16-inch wrench, 7/16-inch socket, and handle, unscrew and take off. b. Get rid of lockwashers (14).
9.	Pump assembly (1) reservoir (8)	Filter (15) and nylon washer (16)	Using 13/16-inch socket, extension, and handle, unscrew and take out.
10.	Reservoir (8)	Pump (1)	Take out.
11.		Grommet (17)	Using flat-tip screwdriver, pry out.



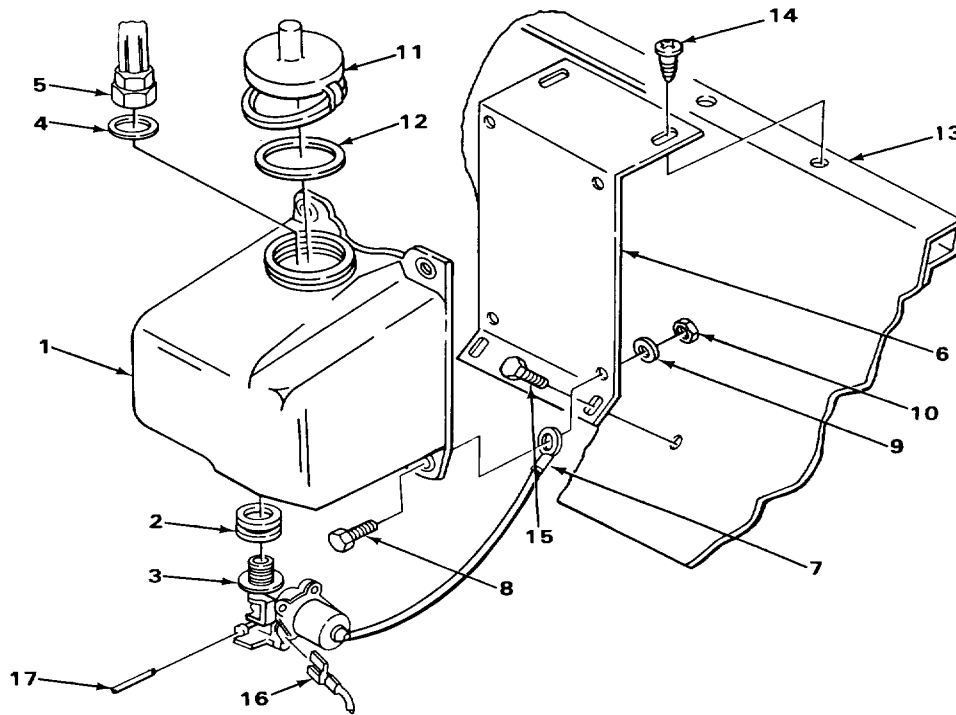
TA229358

WINDSHIELD WASHER RESERVOIR AND PUMP - CONTINUED

LOCATION	ITEM	ACTION REMARKS
ASSEMBLY		
12. Reservoir (1)	Grommet (2)	a. Lubricate lightly with soap. b. Using flat-tip screwdriver, work into place.
13.	Pump assembly (3)	Put into place.
14. Pump assembly (3)	Nylon washer (4)	Using mechanical finger, put in place.
15.	Filter (5)	a. Using mechanical finger, put in place. b. Screw on, and tighten using 13/16-inch socket, extension, and handle. Do not overtighten. Filter and pump are plastic, and threads strip easily.
16. Bracket (6)	Reservoir (1) and ground wire terminal (7)	Put in place.
17. Reservoir (1) and ground wire terminal (7) to bracket (6)	Four screws (8), and lockwasher(9), and nuts (10)	Screw on, and tighten using 7/16-inch wrench, 7/16-inch socket, and handle.
18. Cap (11)	Gasket (12)	Push into place.
19. Reservoir (1)	Cap (11)	a. Snap retainer ring of cap (11) onto reservoir (1). b. Snap cap shut.
INSTALLATION		
20. Splash panel (13)	Windshield washer reservoir (1) and bracket (6)	Put in place.
21. Bracket (6) to splash panel (13)	Two screws (14)	Screw in, but do not tighten.
22.	Two screws (15)	Screw in, and tighten using 7/16-inch wrench.

WINDSHIELD WASHER RESERVOIR AND PUMP - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
23.	Two screws (14)	Using cross-tip screwdriver, tighten.	
24. Pump assembly (3)	Wire (16)	Plug in.	
25.	Hose (17)	Push onto nipple.	
26.	Reservoir(1)	Fill (LO 9-2320-269-12).	



NOTE

FOLLOW-ON MAINTENANCE: Close left side of hood (TM 9-2320-269-20-1).

TASK ENDS HERE

TA229359

WINDSHIELD WASHER HOSE

This task covers:

- a. Removal (page 2-1224)
- b. Inspection/Replacement (page 2-1226)
- c. Installation (2-1226)

INITIAL SETUP:

Tools

- Container, 1-qt
- Knife, putty
- Pliers, diagonal cutting
- Pliers, slip-joint, straight-nose
- Screwdriver, flat-tip, 3/16-inch

Materials/Parts

- Detergent, liquid (item 11, appendix C)
- Sealer, silicone rubber (item 26, appendix C)

Materials/Parts - Continued

- Ties, plastic
- Hose, nozzle tube (as required)

Personnel Required

One

Equipment Condition

- Defroster duct removed (page 2-1247).
- Defroster hoses removed (page 2-1257).
- Left side of hood open (page 2-7).

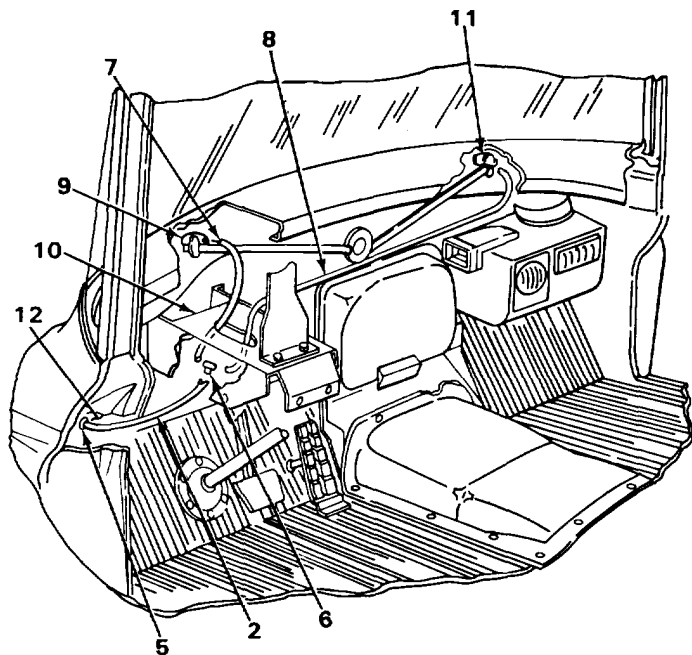
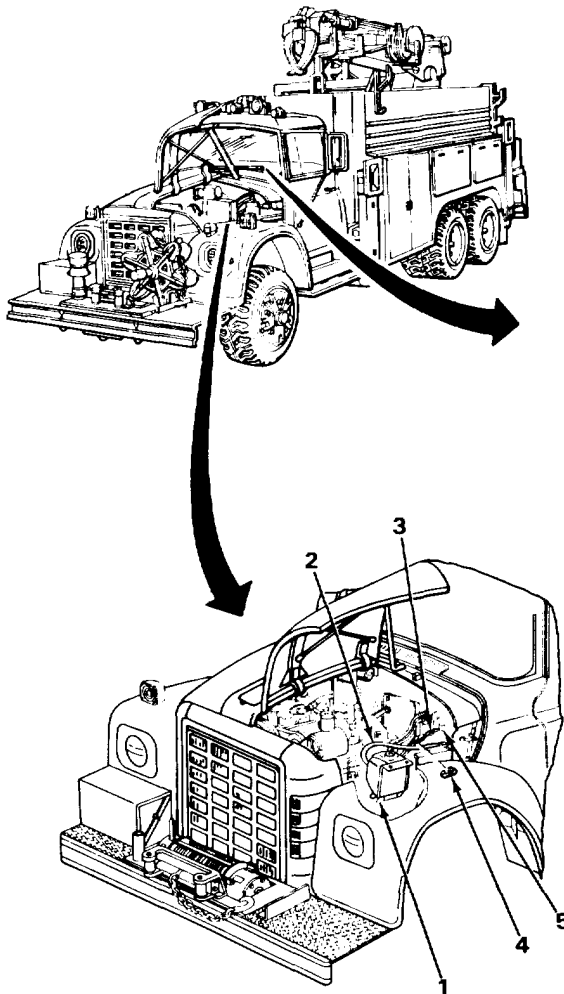
LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

1.	Windshield washer reservoir and pump (1)	Hose (2)	a. Put container underneath. b. Pull off.
2.	Hose (2) to wires and hoses (3)	Plastic tie (4)	a. Using diagonal cutting pliers, cut and take off. b. Get rid of.
3.	Grommet (5)	Hose (2)	Pull through.
4.	Tee (6)	Hose (2)	Pull off.
5.		Hose to left nozzle (7)	Pull off.
6.	Hose to right nozzle (8)	Tee (6)	Pull out.

WINDSHIELD WASHER HOSE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
7. Left nozzle and pivot assembly (9)	Hose to left nozzle (7)	a. Pull off. b. Pull out through steering column	
8. Right nozzle and pivot assembly (11)	Hose to right nozzle (8)	a. Pull off. b. Pull out through steering column	
9. Inside engine compartment: fire-wall (2)	Grommet (5)	a. Using flat-tip screwdriver, pry out. b. Using putty knife, scrape off old sealer.	



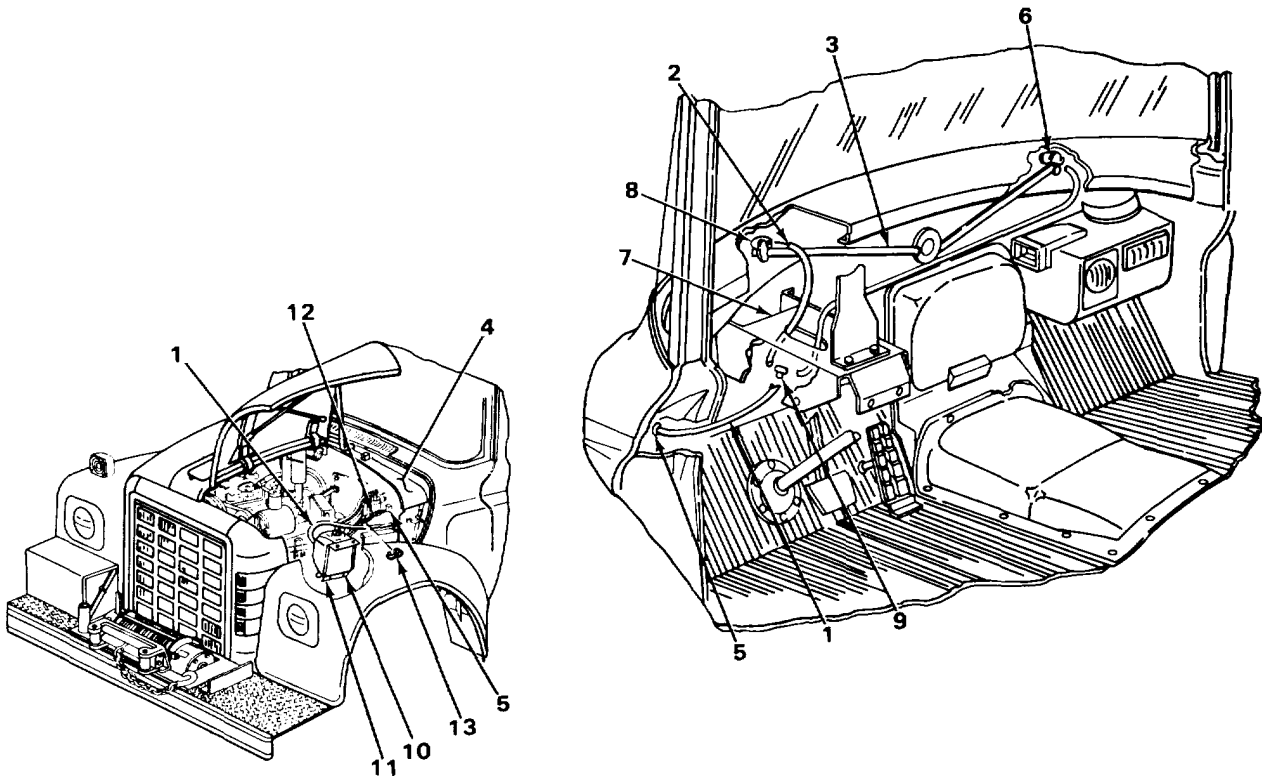
WINDSHIELD WASHER HOSE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSPECTION/REPLACEMENT		
10.	Hoses (1), (2), and (3)	a. Inspect for out-of-round condition. b. If found to be out-of-round, cut new length of hose using old hose for measurement.
INSTALLATION		
11. Engine compartment: firewall (4)	Grommet (5)	a. Apply sealer as required. b. Work into place using flat-tip
12. Inside cab: right nozzle and pivot Assembly (6)	Hose (3)	Push onto nozzle tube, and route through steering column bracket (7).
13. Left nozzle and pivot assembly (8)	Hose (3)	Push onto nozzle tube, and route through steering column bracket (7).
14. Hose (2) to pivot assembly (8)	Tee (9)	a. Lubricate with detergent if necessary. b. Push on.
15. Tee (9)	Hose (3)	a. Lubricate with detergent if necessary. b. Push on.
16. Grommet (5)	Hose (1)	Push through.
17. Tee (9)	Hose (1)	a. Lubricate with detergent if necessary. b. Push on.
18. Engine compartment: grommet (5)	Hose (1)	Pull through enough hose to reach reservoir (10).
19. Windshield washer reservoir pump (11)	Hose (1)	Push on.

LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION - CONTINUED

- | | | | |
|--------------------------------------|----------------------|----------------------------------|--|
| 20. Hose (1) to wires and hoses (12) | New plastic tie (13) | Using slip-joint pliers, put on. | |
| 21. | Reservoir (10) | Fill (LO 9-2320-269-12). | |



NOTE

FOLLOW-ON MAINTENANCE:

1. Install defroster duct (page 2-1247).
2. Install defroster hoses (page 2-1257).
3. Close left side of hood (page 2-7).

TASK ENDS HERE

WINDSHIELD WIPER MOTOR

This task covers:

- a. Removal (page 2-1228)
- b. Installation (page 2-1232)

INITIAL SETUP:

Tools

Chisel, cold, hand, 3/8-inch
 Hammer, ball-peen, machinist's, 2-oz
 Handle, ratchet, 3/8-inch drive
 Key, socket-head screw, 5/64-inch
 Screwdriver, flat-tip, 3/16-inch
 Screwdriver, flat-tip, 3/8-inch
 Socket, 3/8-inch drive, 3/8-inch
 Socket, deep well, 3/8-inch drive,
 7116-inch

Materials/Parts

Detergent, liquid (item 11, appendix C)
 Grease, GAA (item 17, appendix C)
 (as required)
 Lockwasher, bracket-to-motor
 (three required)
 Lockwasher, pivot plate-to-wiper motor
 Tags, marking (item 29, appendix C)

Personnel Required

One

Equipment Condition

Battery ground cable disconnected
 (page 2-414).
 Left side of hood open (page 2-7).
 Defroster duct removed (page 2-1247).

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

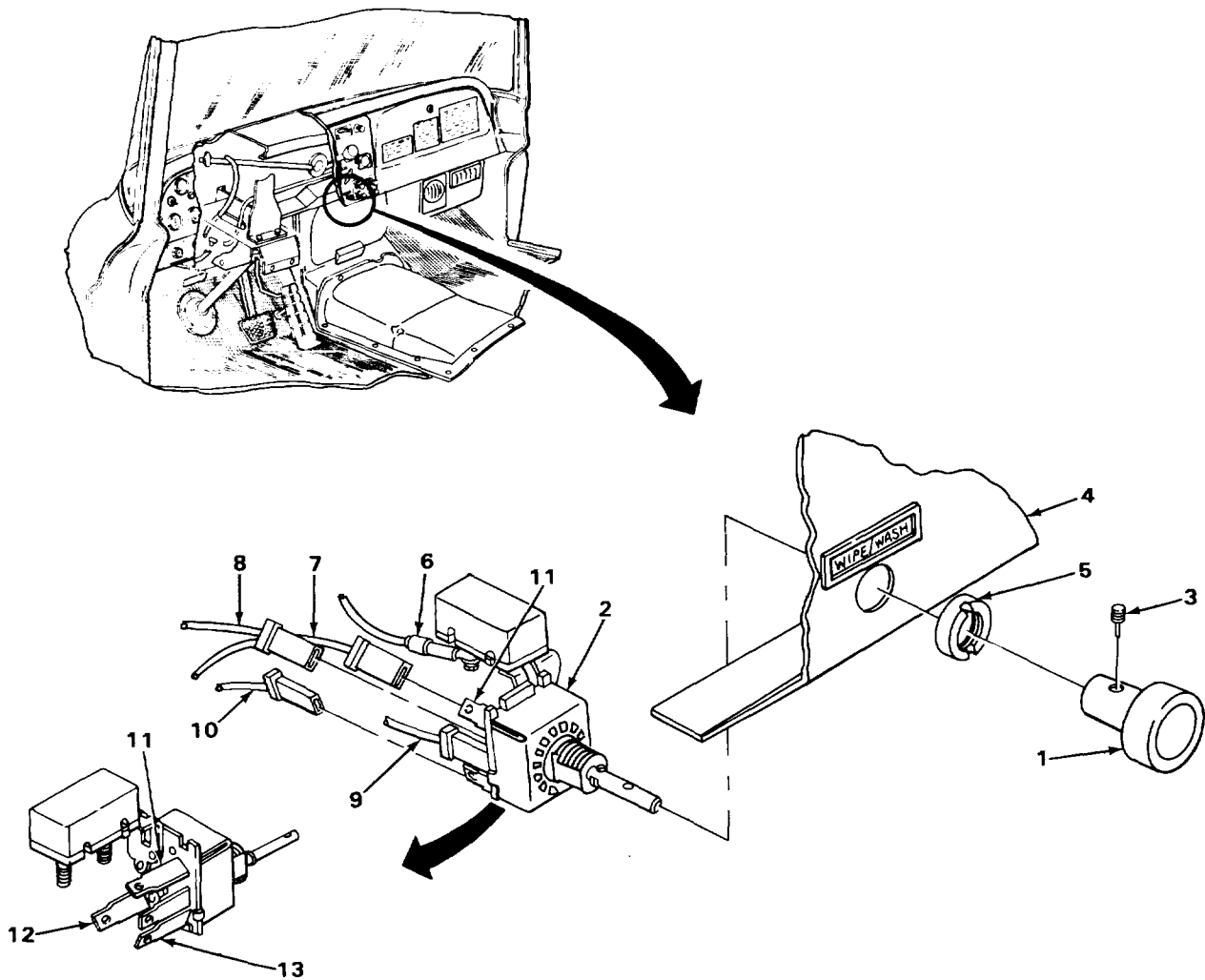
1.	Inside cab: windshield wiper knob (1) to switch (2)	Setscrew (3)	Using key, unscrew and take out.
2.	Switch (2)	Knob (1)	Take off.
3.	Switch (2) to dashboard (4)	Nut (5)	a. Using chisel and hammer, loosen. b. Unscrew, and take off.
4.	Dashboard (4)	Switch (2)	Push through, and pull down.

WINDSHIELD WIPER MOTOR - CONTINUED

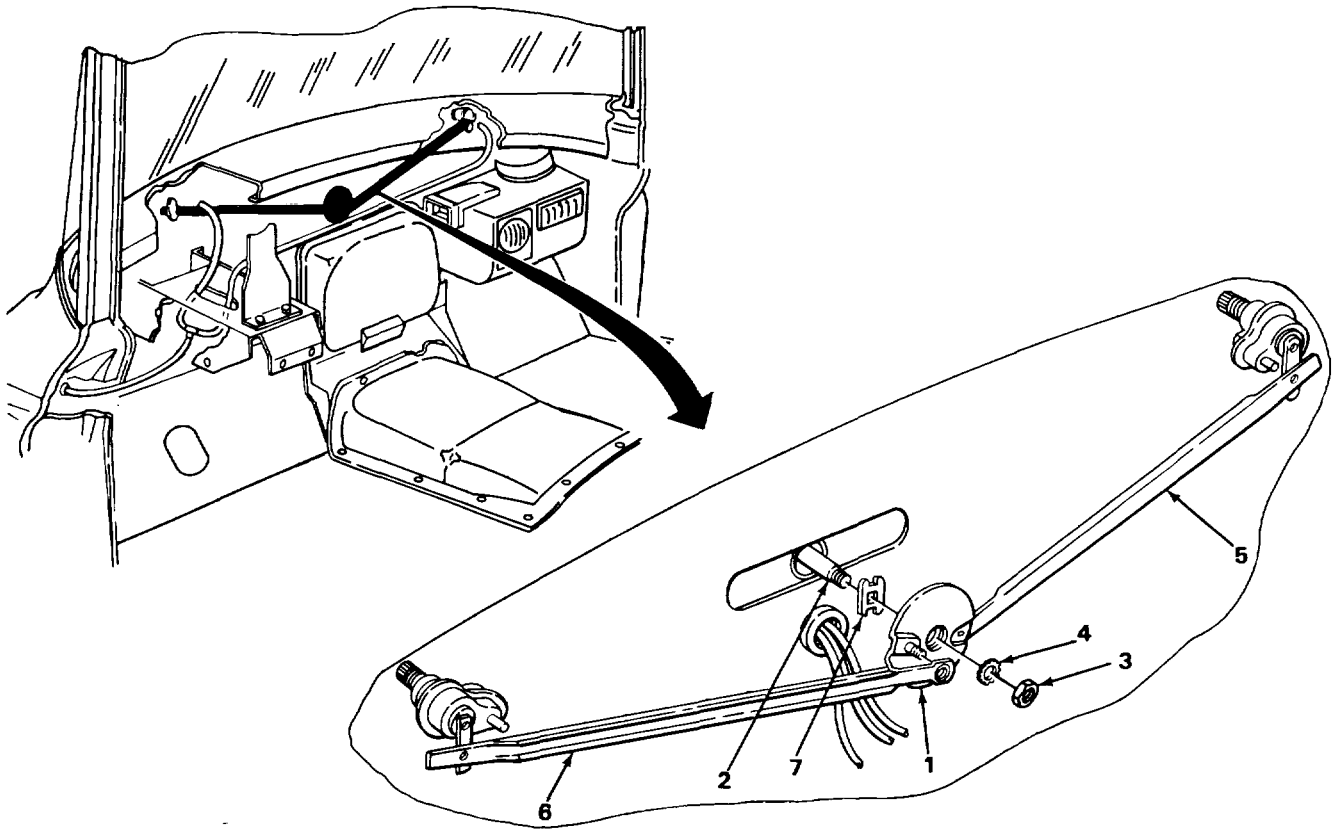
LOCATION	ITEM	ACTION	REMARKS
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REMOVAL- CONTINUED

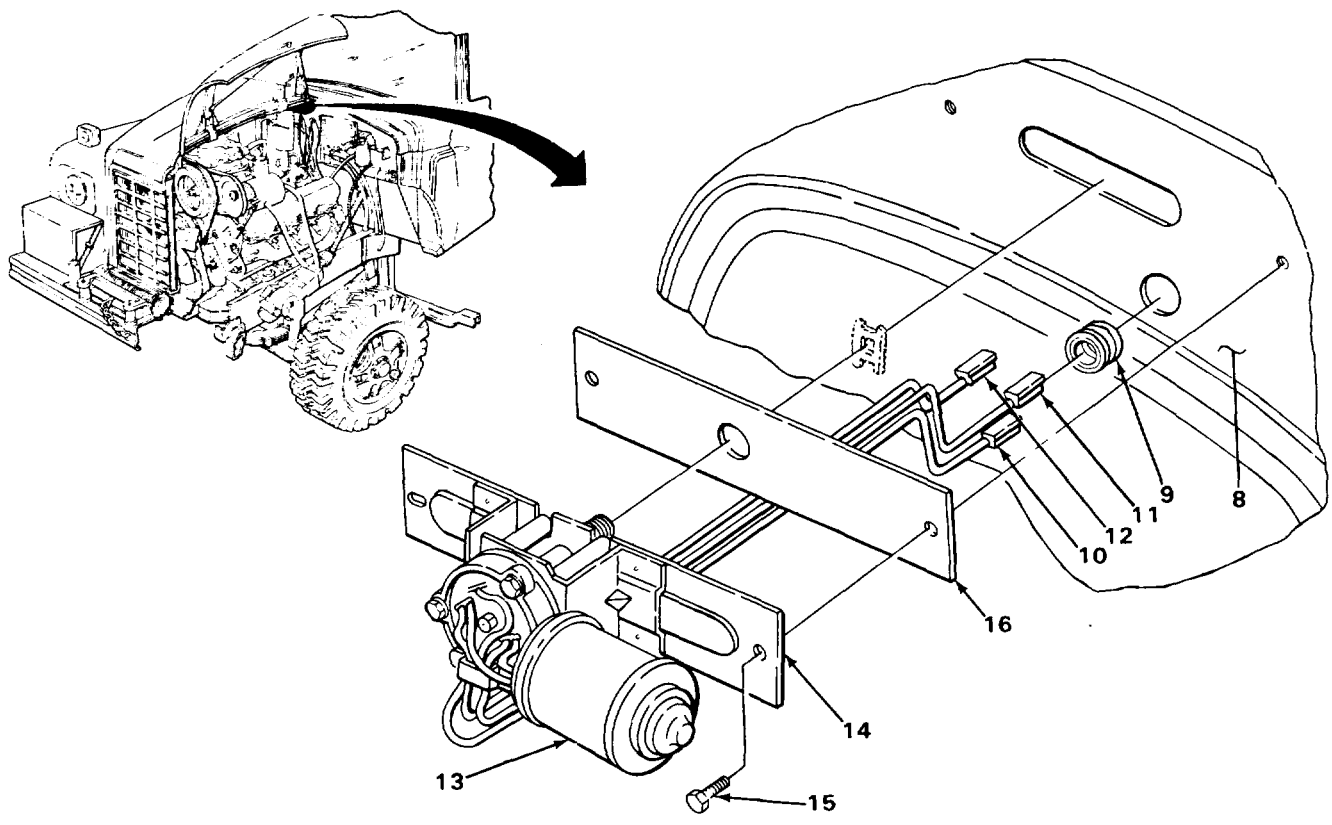
- | | | | |
|----|-----------------|---|---|
| 5. | Switch (2) | Five wires (6), (7), (8), (9), and (10) | Tag wires. |
| 6. | Terminal P(11) | Green wire (7) | Unplug. |
| 7. | Terminal H (12) | Black wire (8) | Unplug. |
| 8. | Terminal L (13) | Red wire (10) | Unplug.
Leave wires (6) and (9) connected. |



LOCATION	ITEM	ACTION	REMARKS
REMOVAL- CONTINUED			
9. Pivot plate (1) to motor shaft (2)	Nut (3) and lockwasher (4)	a. Using 7/16-inch socket and handle, unscrew and take off. b. Get rid of lockwasher (4).	
10. Motor shaft (2)	Pivot plate (1)	Take off, and let hang by pivot links (5) and (6).	
11.	Drive clip(7)	Take off.	DASH REMOVED FOR CLARITY



LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
12. Engine compartment: firewall (8)	Grommet (9)	Using 3/8-inch flat-tip screwdriver, pry out.	
13.	Three wires (10), (11), and (12)	Pull through hole in firewall (8).	
14. Motor (13) and bracket (14) to firewall (8)	Two screws (15)	Using 3/8-inch socket and handle, unscrew and take out.	
15. Firewall (8)	Motor (13) and bracket (14)	Take off.	
16. Bracket (14)	Seal (16)	Take off.	



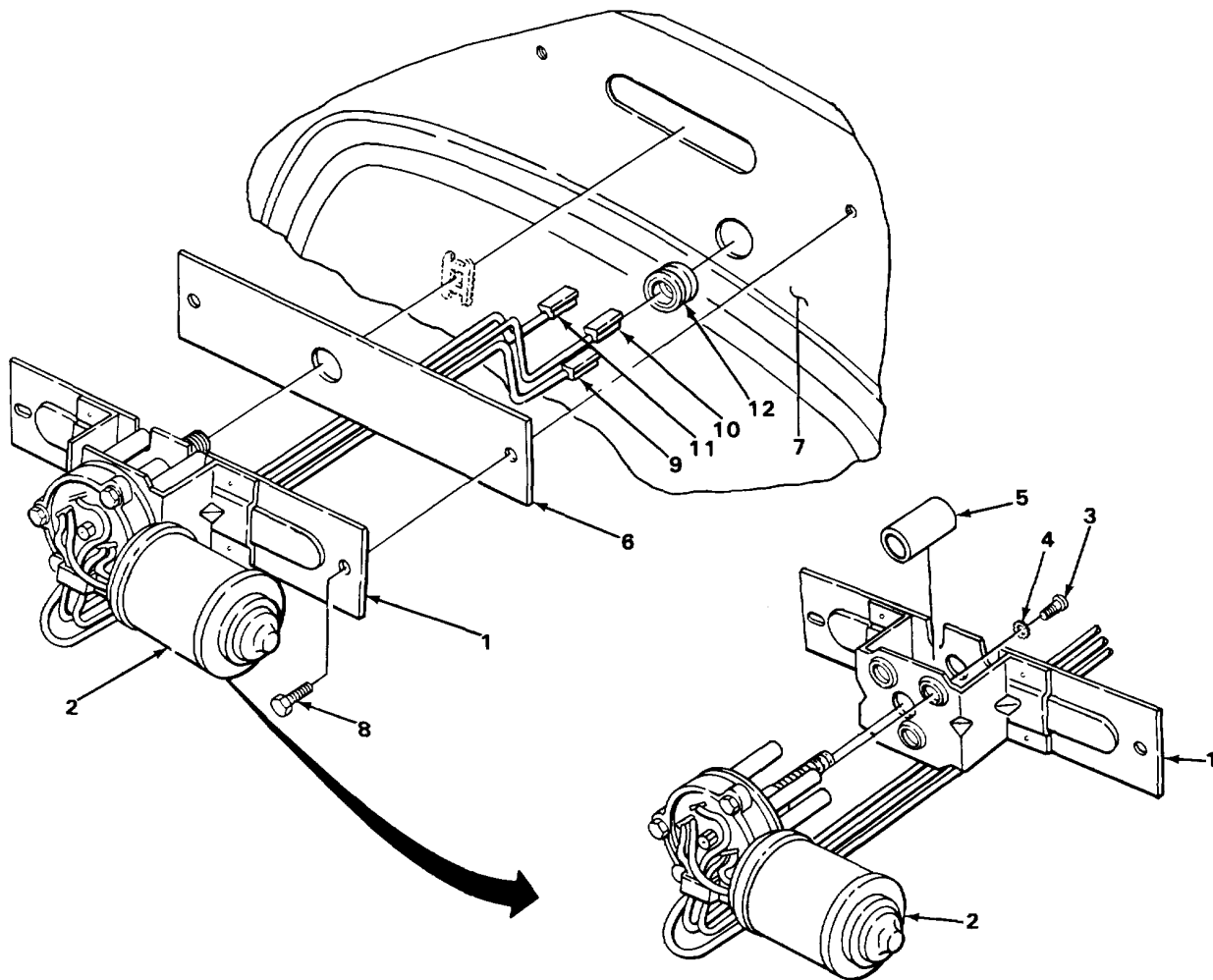
WINDSHIELD WIPER MOTOR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED		
17. Bracket (1) to motor (2)	Three screws (3) and lockwashers (4)	a. Using 3/8-inch flat-tip screwdriver, unscrew and take out. b. Get rid of lockwashers (4).
18. Motor (2)	Bracket (1) and rubber spacer (5)	Take off.
19. Bracket (1)	Rubber spacer (5)	Take out.
INSTALLATION		
20. Bracket (1)	Rubber spacer (5)	Put in place inside bracket (1).
21. Motor (2)	Bracket (1) and rubber spacer (5)	Put onto motor (2).
22. Bracket (1) to motor (2)	Three screws (3) and new washers (4)	Screw in, and tighten using 3/8-inch flat-tip screwdriver.
23. Bracket (1)	Seal (6)	Put small amount of grease on seal to hold in place, and put onto bracket (1).
24. Firewall (7)	Motor (2) and bracket (1)	Put in place, and hold.
25. Motor (2) and bracket to firewall (7)	Two screws (8)	Screw in, and tighten using 3/8-inch socket and handle.
26. Firewall (7)	Three wires (9), (10), and (11)	Feed through hole in firewall (7).

LOCATION	ITEM	ACTION	REMARKS
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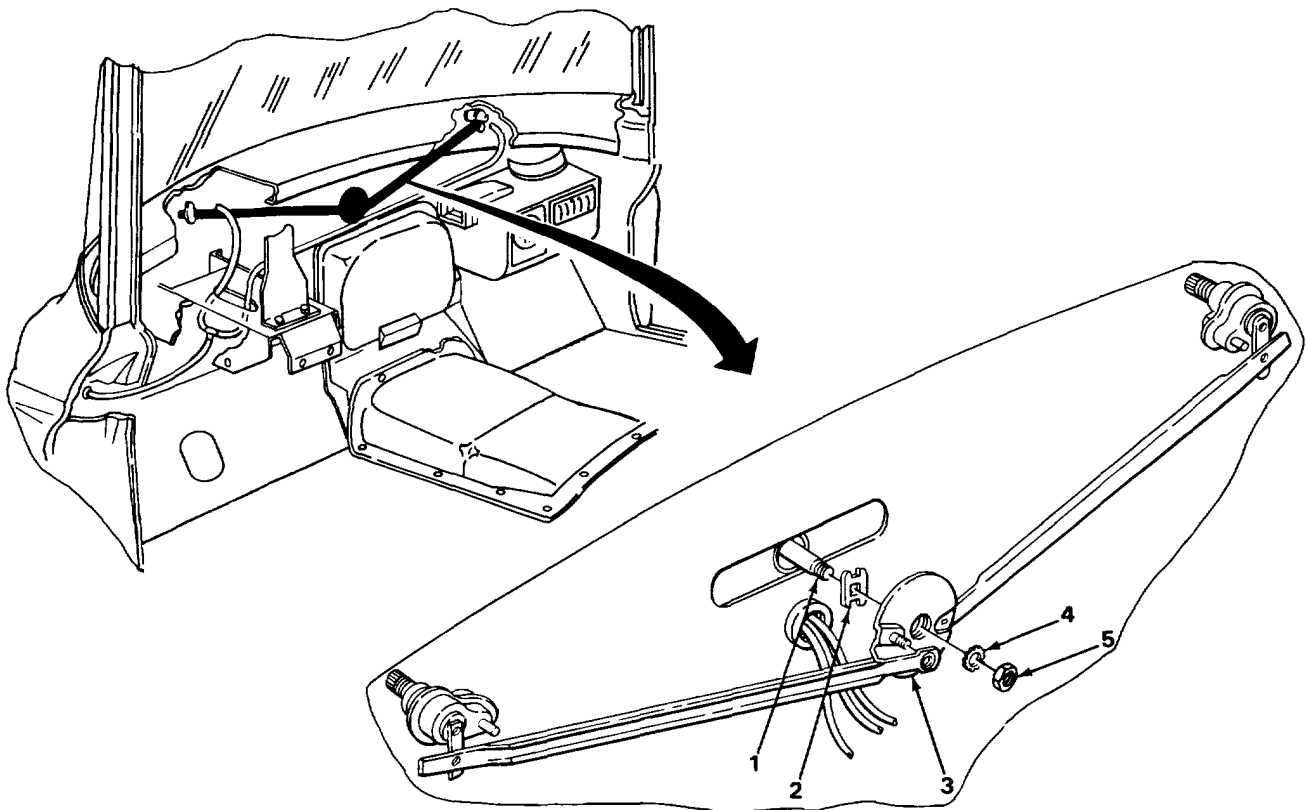
INSTALLATION - CONTINUED

- | | | | |
|-----|--------------|--|--|
| 27. | Grommet (12) | a. If necessary, lubricate grommet with liquid detergent.
b. Using 3/16-inch flat-tip screwdriver, work into place. | |
|-----|--------------|--|--|

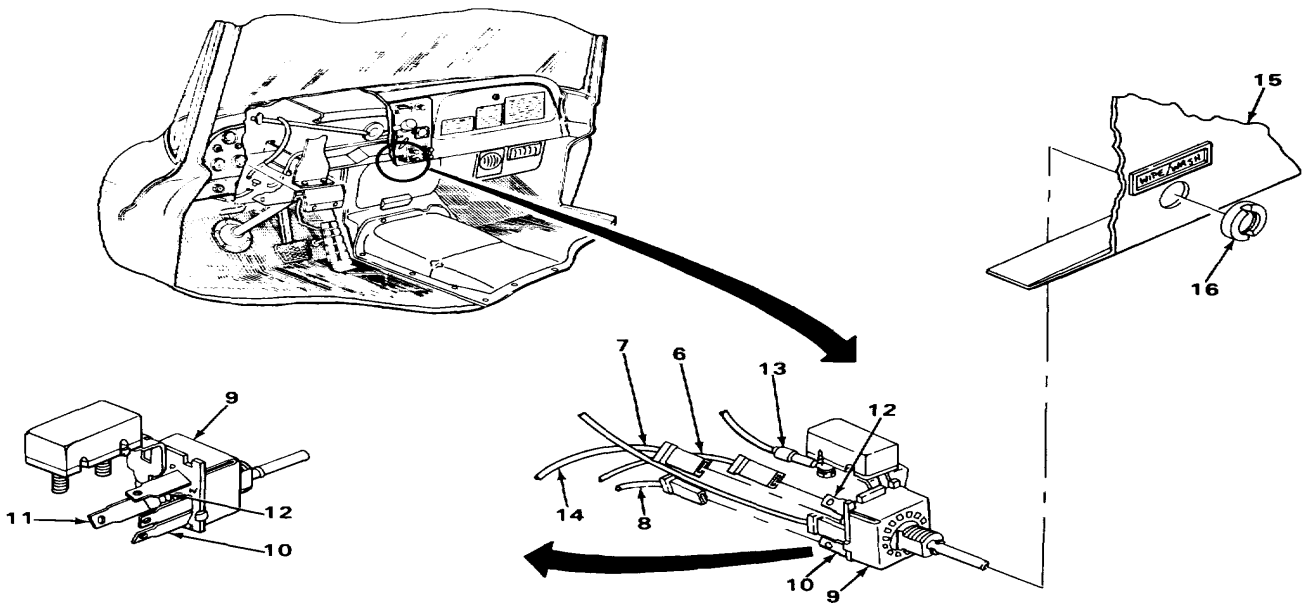


LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
28. Inside cab: motor shaft (1)	Drive clip (2)	Put in place. Clip is flat on both sides of hole matching flat surface on one side of shaft.
29.	Pivot plate (3)	Line up, and put in place so drive clip (2) engages plate (3).
31. Pivot plate (3) to motor shaft (1)	New lockwasher (4) and nut (5)	Screw on, and tighten using 7/16-inch socket and handle.

DASH REMOVED FOR CLARITY



LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
31.	Three wires (6), (7), and (8)	Route to switch (9).	
32.	Switch (9) to terminal L (10)	Plug in.	
33.	Terminal H (11)	Black wire (7)	Plug in.
34.	Terminal P (12)	Green wire (6)	Plug in.
35.		Five wires (6), (7), (8), (13), and (14)	Remove tags.
36.	Dashboard (15)	Switch (9)	Push into place.
37.	Switch (9) to dashboard (15)	Nut (16)	Screw on, and tighten using hammer and chisel.



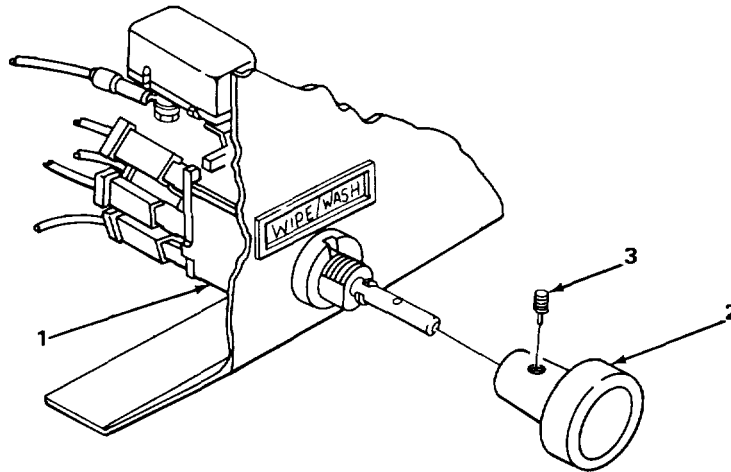
2-1235

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LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION - CONTINUED

38. Switch (1)	Knob (2)	Put on.	
39 Knob (2) to switch (1)	Set screw (3)	Screw in, and tighten using 5/64-inch key.	



NOTE

FOLLOW-ON MAINTENANCE:

1. Install defroster duct (page 2-1247).
2. Close left side of hood (page 2-7).
3. Connect battery ground cable (page 2-414).

TASK ENDS HERE

2-1236

TA229368

WINDSHIELD WIPER LINKAGE

This task covers:

- a. Removal (page 2-1237)
- b. Installation (page 2-1240)

INITIAL SETUP:

Tools

Chisel ,cold, hand
 Hammer, ball-peen, machinist's, 2-oz
 Handle, ratchet, 3/8-inch drive
 Pliers, long-nose
 Socket, deep-well, 3/8-inch drive,
 7/16-inch

Materials/Parts

Lockwasher, pivot plate-to-wiper
 motor shaft

Personnel Required

Two

Equipment Condition

Battery ground cable disconnected
 (page 2-414).
 Windshield wiper arms and blades removed
 (page 2-1218).
 Defroster hoses and duct removed
 (pages 2-1257 and page 2-1247).

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

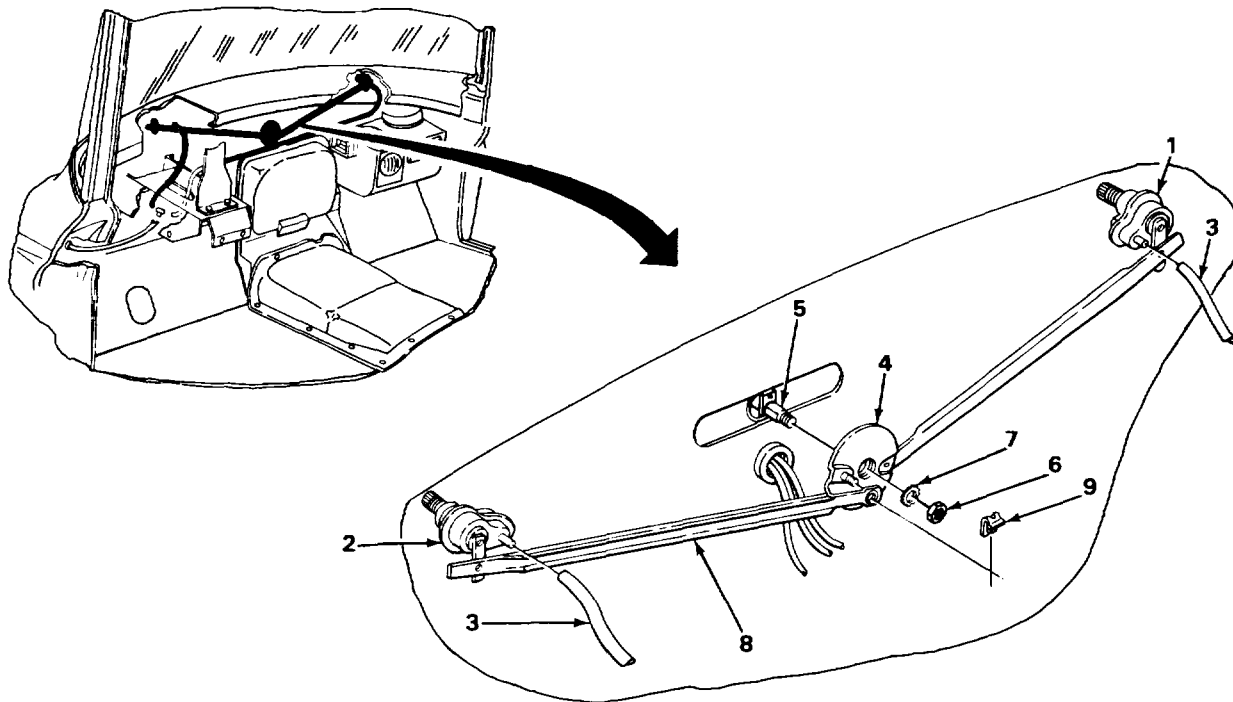
Make sure battery is disconnected before starting to remove wiper linkage to avoid injury to personnel.

NOTE

Assistant is only needed for steps 12 thru 17.

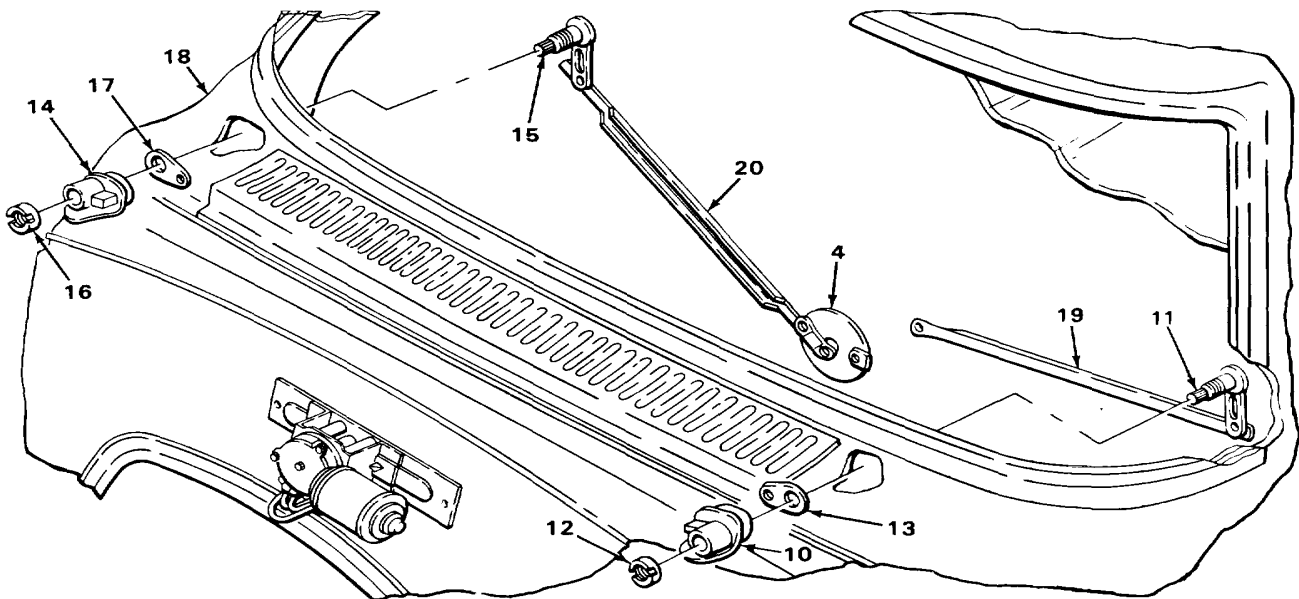
LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
1.	Two spacers (1) and (2)	Two windshield washer hoses (3)	Pull off.
2.	Pivot plate (4) to motor shaft (5)	Nut (6) and lockwasher (7)	a. Using 7/16-inch socket and handle, unscrew and take off. b. Get rid of lockwasher (7).
3.	Motor shaft (5)	Pivot plate (4)	Take off, and let down.
4.	Left link arm (8) to pivot plate (4)	Clip (9)	Using long-nose pliers, pull off.
5.	Pivot plate (4)	Left link arm (8)	Take off.

DASH REMOVED FOR CLARITY



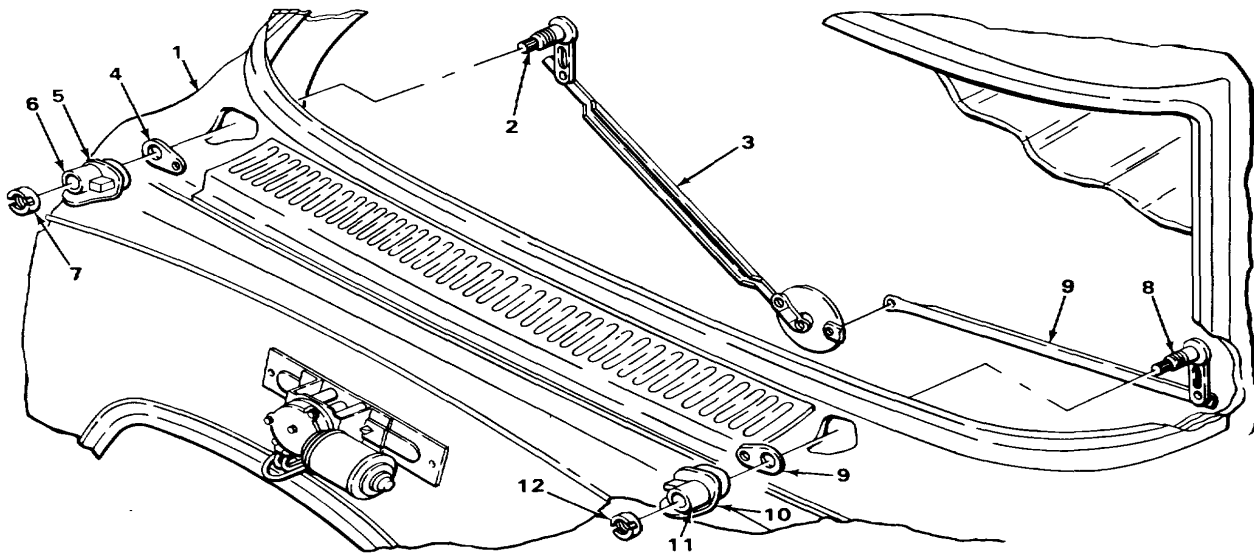
WINDSHIELD WIPER LINKAGE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
6.	Left spacer (10) to left pivot body (11)	Nut (12)	a. Using hammer and chisel against slot, break loose. b. Unscrew, and take off.
7.	Left pivot body (11)	Left spacer (10) and seal (13)	Take off.
8.	Right spacer (14) to right pivot body (15)	Nut (16) Right spacer (14) and seal (17)	Using hammer and chisel against slot, break loose.
9.	Right pivot body (15)	Left pivot body (11) and link arm (19) (as an assembly)	Take off.
10.	Cowl (18)	Left pivot body (11) and link arm (20) (as an assembly)	Take out.
11.		Right pivot body (15), link arm (20), and pivot plate (4)	Take out.



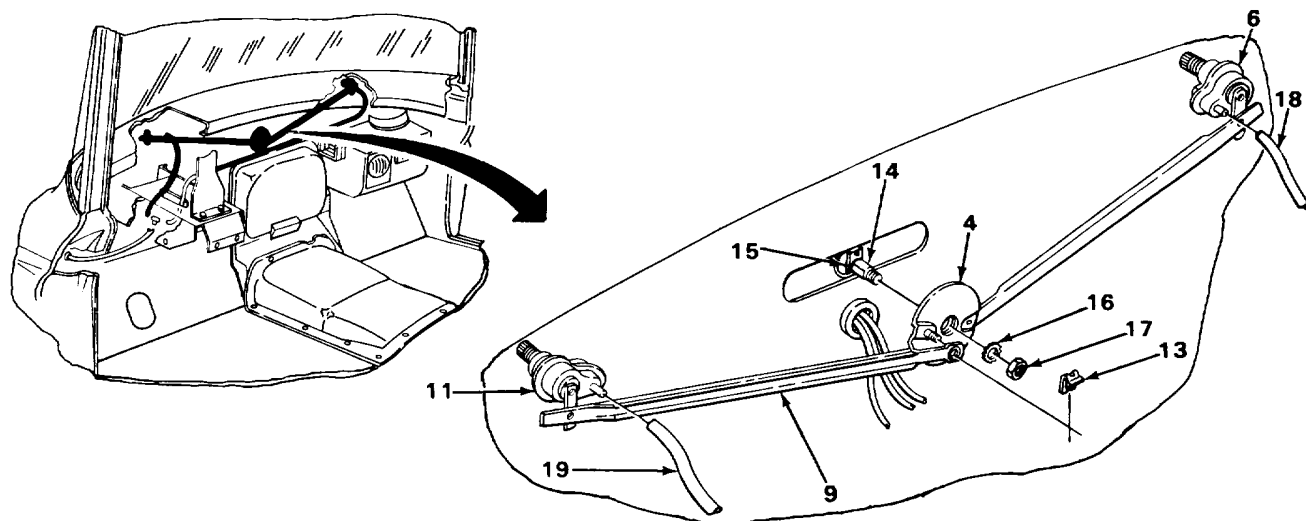
WINDSHIELD WIPER LINKAGE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
NOTE			
Assistant only needed for steps 12 thru 17.			
12. Cowl (1)	Right pivot body (2), link arm (3), and pivot plate (4)		With assistant working from inside cab, put in place and hold.
13. Right pivot body (2)	Right seal (5) and right spacer (6)		Put onto pivot body (2).
14. Right spacer (6) to right pivot body (2)	Nut (7)		Screw on, and tighten using hammer and chisel on slot.
15. Cowl (1)	Left pivot body (8) and left link arm (9)		Have assistant put in place and hold.
16. Left pivot body (8)	Left seal (10) and left spacer (11)		Put onto pivot body (8).
17. Left spacer (11) to left pivot body (8)	Nut (12)		Screw on, and tighten using hammer and chisel on slot.



WINDSHIELD WIPER LINKAGE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
18. Pivot plate (4)	Left link arm (9)	Put onto pivot pin.
19. Left link arm (9) to pivot plate (4)	Clip (13)	Using long-nose pliers, push on.
20. Motor shaft (14)	Pivot plate (4)	Push up, and put on making sure tabs engage clip (15).
21. Pivot plate (4) to motor shaft (14)	New lockwasher (16) and nut (17)	Screw on, and tighten using 7/16-inch socket and handle.
22. Two spacers (6) and (11)	Two windshield washer hoses (18) and (19)	Push on.



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WINDSHIELD WIPER LINKAGE - CONTINUED

INSTALLATION - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:A

1. Install defroster hoses (page 2-1257) and defroster duct (page 2-1247).
2. Install windshield wiper arms and blades (page 2-1218).
3. Connect battery ground cable (page 2-414).

TASK ENDS HERE

WINDSHIELD WIPER SWITCH

This task covers:

- a. Removal (page 2-1242)
 - b. Installation (page 2-1244)
-

INITIAL SETUP

Tools

Chisel, cold, hand, 3/8-inch
 Hammer, ball-peen, machinist's, 2-oz
 Handle, ratchet, 1/4-inch drive
 Key, socket-head screw, 5/64-inch
 Socket, 1/4-inch drive, 3/8-inch

Materials/Parts

Lockwasher, wire-to-switch
 Lockwasher, circuit breaker-to switch

Personnel Required

One

Equipment Condition

Battery ground cable disconnected
 (page 2-414).

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

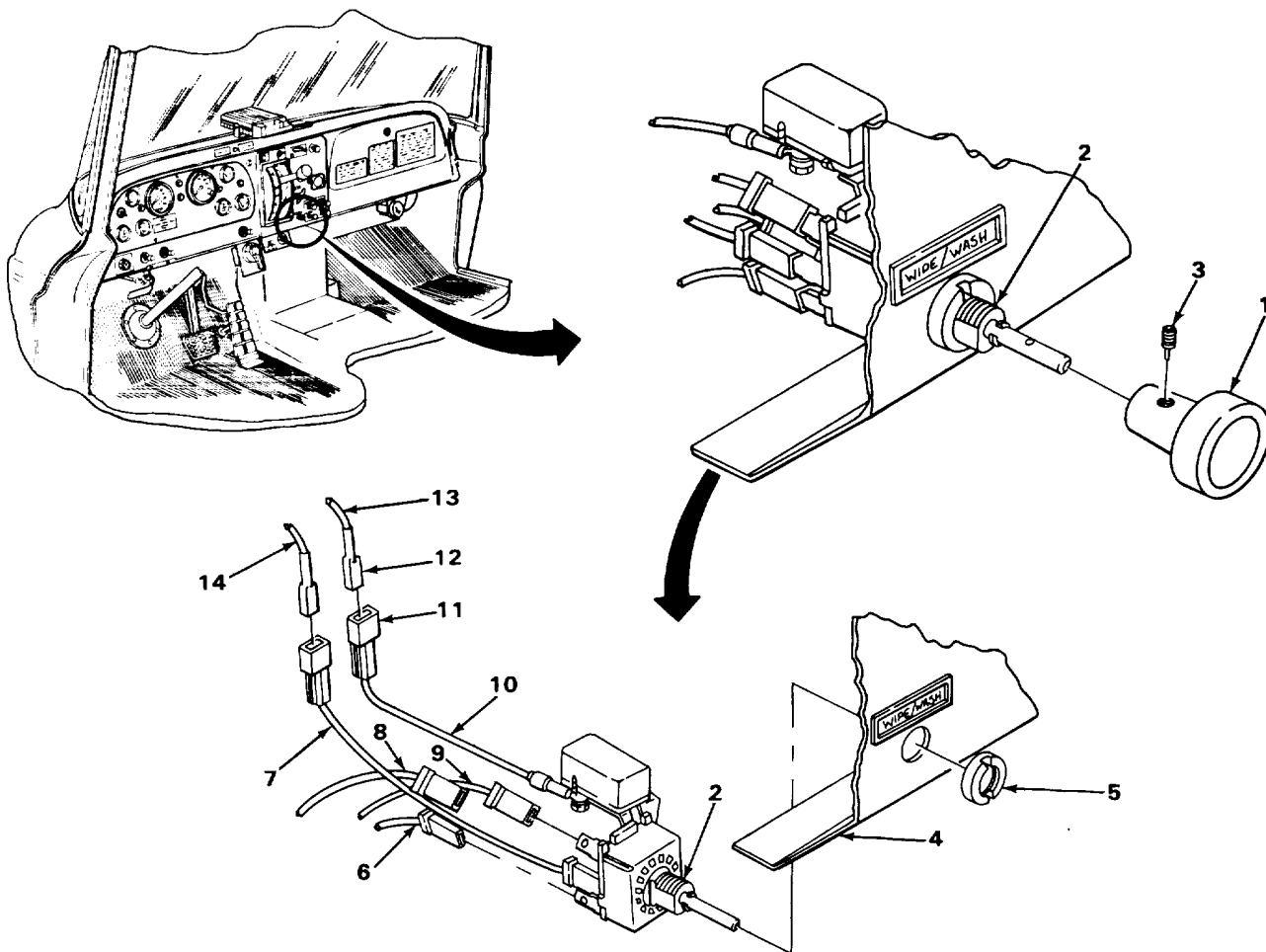
- | | | | |
|----|--|----------|--|
| 1. | Knob (1) to Set screw (3)Using key, unscrew and take out. switch (2) | | |
| 2. | Switch (2) | Knob (1) | Take off. |
| 3. | Switch (2) to | Nut (5) | a. Loosen using chisel and hammer on dashboard (4)slot to drive counterclockwise.
b. Unscrew, and take off. |

WINDSHIELD WIPER SWITCH - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

REMOVAL - CONTINUED

- | | | | |
|----|--------------------------|---|--|
| 4. | Dashboard (4) | Switch (2) | Push through, and pull down to get at wires. |
| 5. | Switch (2) | Five wires (6), (7), (8), (9), and (10) | Tag wires. |
| 6. | Connectors (11) and (12) | Wires (13) and (14) | a. Tag wires. |



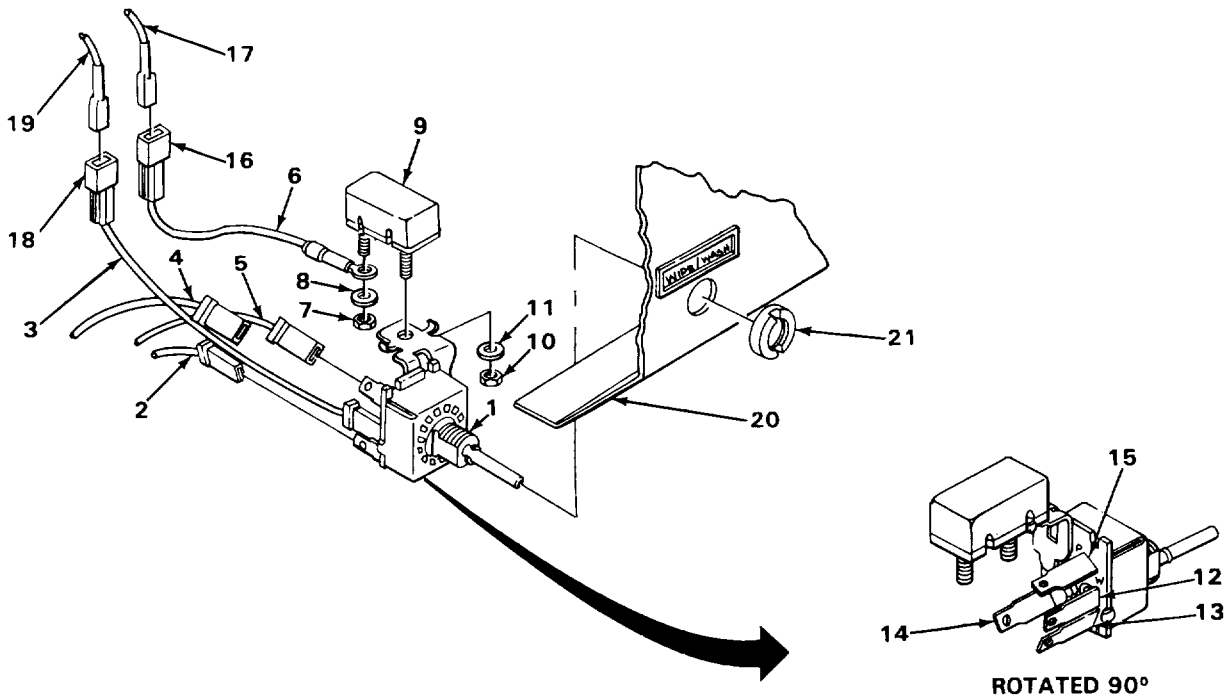
TA229373

WINDSHIELD WIPER SWITCH - CONTINUED

LOCATION	ITEM	ACTION REMARKS	
REMOVAL - CONTINUED			
7.	Switch (1)	Four wires (2), (3), (4), and (5)	Unplug.
8.		Switch (1)	Take out.
9.	Wire (6) to switch (1)	Nut (7) and lockwasher (8)	unscrew and take off. a. Using 3/8-inch socket and handle, b. Get rid of lockwasher (8).
10.	Switch (1)	Wire (6)	Take off.
11.	Circuit breaker (9) to switch (1)	Nut (10) and lockwasher (11)	a. Using 3/8-inch socket and handle, unscrew and take off. b. Get rid of lockwasher (11).
12.	Switch (1)	Circuit breaker (9)	Take off.
INSTALLATION			
13.	Switch (1)	Circuit breaker (9)	Put in place.
14.	Circuit breaker (9) to switch (1)	New lockwasher (11) and nut (10)	Screw on, and tighten using 3/8-inch socket and handle.
15.	Circuit breaker (9)	Wire (6)	Put onto terminal.
16.	Wire (6) to circuit breaker (9)	New lockwasher (8) and nut (7)	Screw on, and tighten using 3/8-inch socket and handle.
17.	Switch (1) to terminal W (12)	Black wire (3)	Plug in.
18.	Terminal L (13)	Red wire (2)	Plug in.

WINDSHIELD WIPER SWITCH - CONTINUED

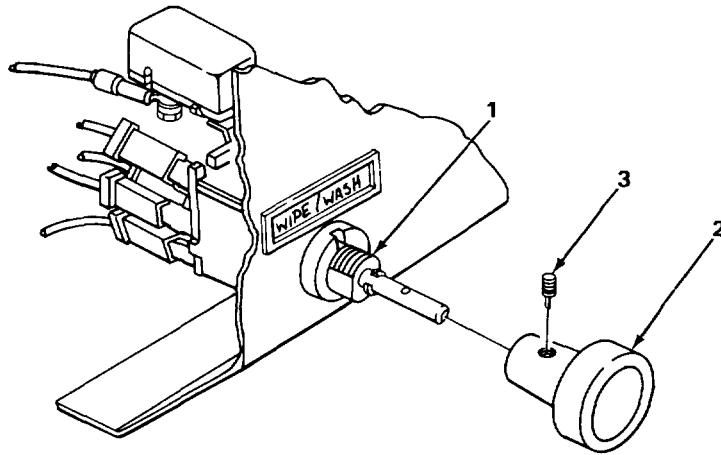
LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
19.	Terminal H (14)	Black wire(4)	Plug in.
20.	Terminal P (15)	Green wire(5)	Plug in.
21.	Black wire (6) to circuit breaker (9)	Connector (16) and wire (19)	Plug in.
22.	Black wire (3) to	Connector (18)	Plug in.
23.	Dashboard (20)	Switch (1)	Put in place from behind dashboard (20).
24.	Switch (1) to dashboard (20)	Nut (21)	Screw on, and tighten using hammer and chisel to drive nut (21) clockwise.



TA229374

WINDSHIELD WIPER SWITCH - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
25. Switch (1)	Knob (2)	Put onto switch (1).	
26. Knob (2) to switch (1)	Set screw (3)	a. Line up hole in knob and hole in switch shaft. b. Screw in, and tighten using key.	



NOTE

FOLLOW-ON MAINTENANCE: Connect battery ground cable (page 2-414).

TASK ENDS HERE

TA229631

DEFROSTER DUCT

This task covers:**a. Removal (page 2-1248)****b. Disassembly (page 2-1251)****c. Assembly (page 2-1251)****d. Installation (page 2-1252)**

INITIAL SETUP

Tools

Handle, ratchet, 3/8-inch drive
 Pliers, long-nose
 Screwdriver, cross-tip, number two,
 4-inch
 Screwdriver, flat-tip, 1/8-inch
 Screwdriver, flat-tip, 3/16-inch
 Socket, 3/8-inch drive, 1/2-inch
 Wrench, box-end, 1/2-inch

Materials/Parts

Lockwasher, double check valve
 Nut, push, defroster cable-to-
 defroster door arm
 Screw, defroster duct (two required)
 Tags, marking (item 29, appendix C)

Personnel Required

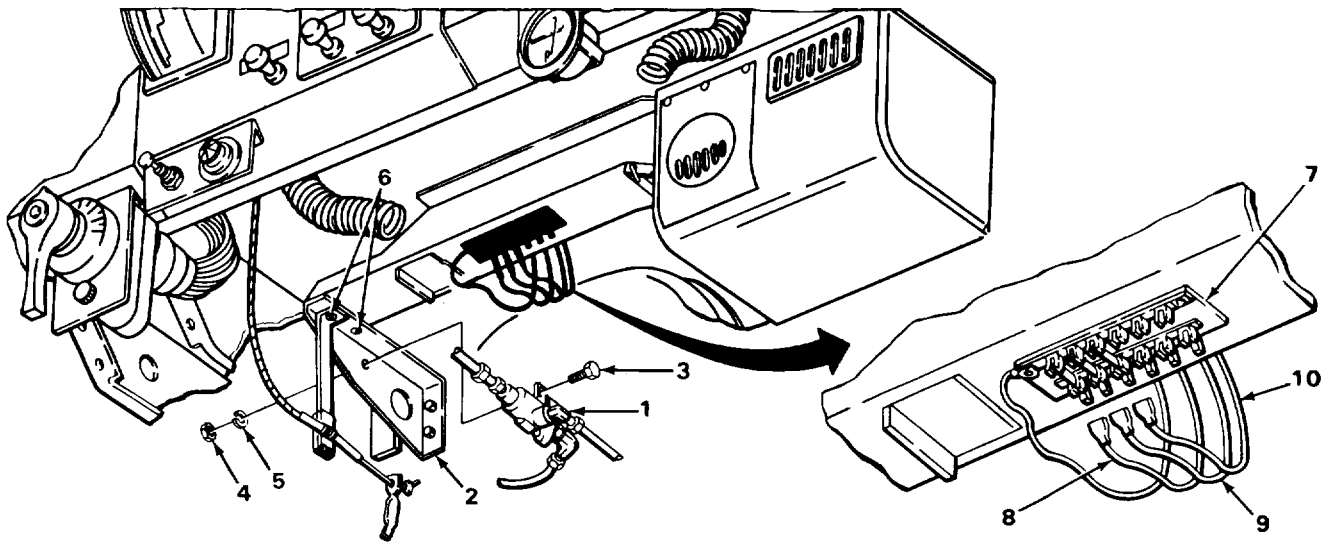
One

Equipment Condition

Battery ground cable disconnected
 (page 2-414).
 Air system drained of pressure
 (page 2-106).

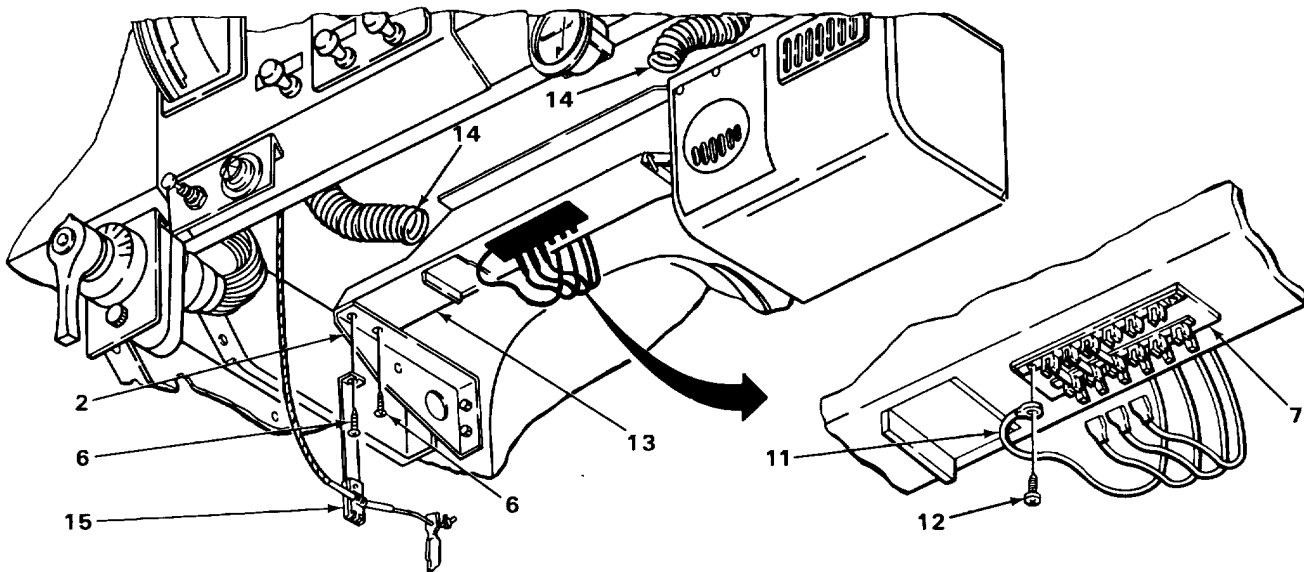
DEFROSTER DUCT - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1. Double check valve (1) to defroster duct bracket (2)	Screw (3), nut (4), and lock-washer (5)	a. Using 1/2-inch wrench, 1/2-inch socket, and handle, unscrew and take out. b. Get rid of lockwasher (5).	
2. Double check valve (1)	Pull down so you can get to defroster duct bracket (2) screws (6).		
3. Fuse block (7)	Three wires (8), (9), and (10)	Tag wires.	



DEFROSTER DUCT - CONTINUED

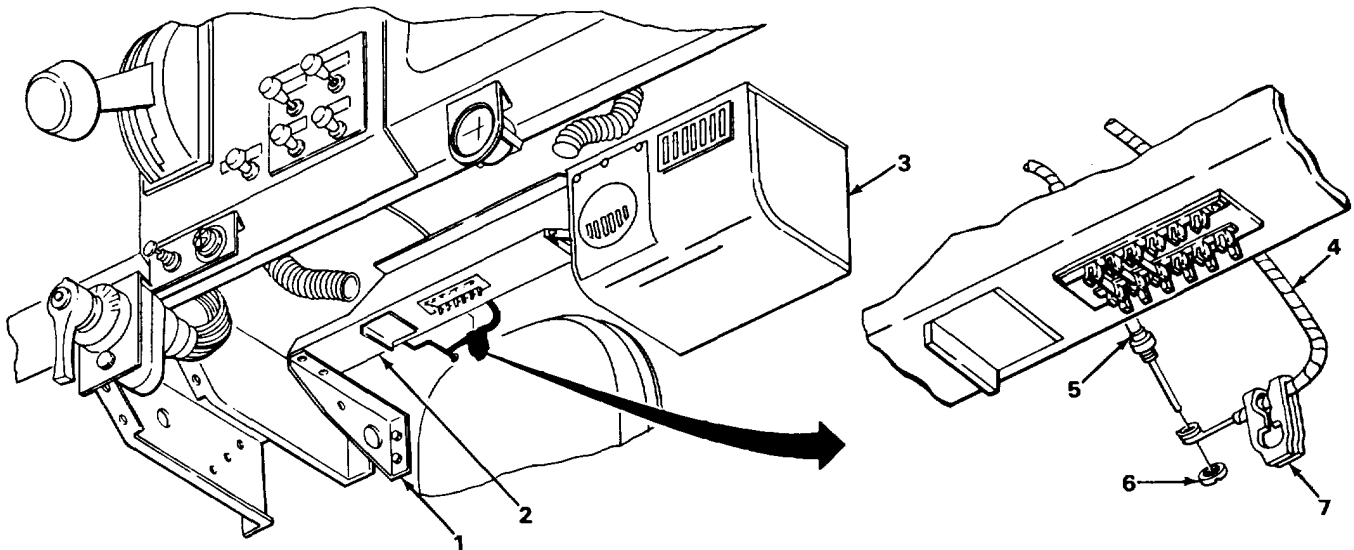
LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
4. Brown wire (11) to fuse block (7) unscrew and take off.	Screw (12) and brown wire (11)	a. Tag wire. b. Using 1/8-inch flat-tip screwdriver,	
5. Defroster duct (13) to fuse block (7)	Two defroster hoses (14)	Pull off of duct (13).	
6. Defroster duct (13) and throttle cable bracket (15) to defroster duct bracket (2)	Two screws (6)	a. Using cross-tip screwdriver, unscrew and take off. b. Get rid of screws (6).	



TA229633

DEFROSTER DUCT - CONTINUED

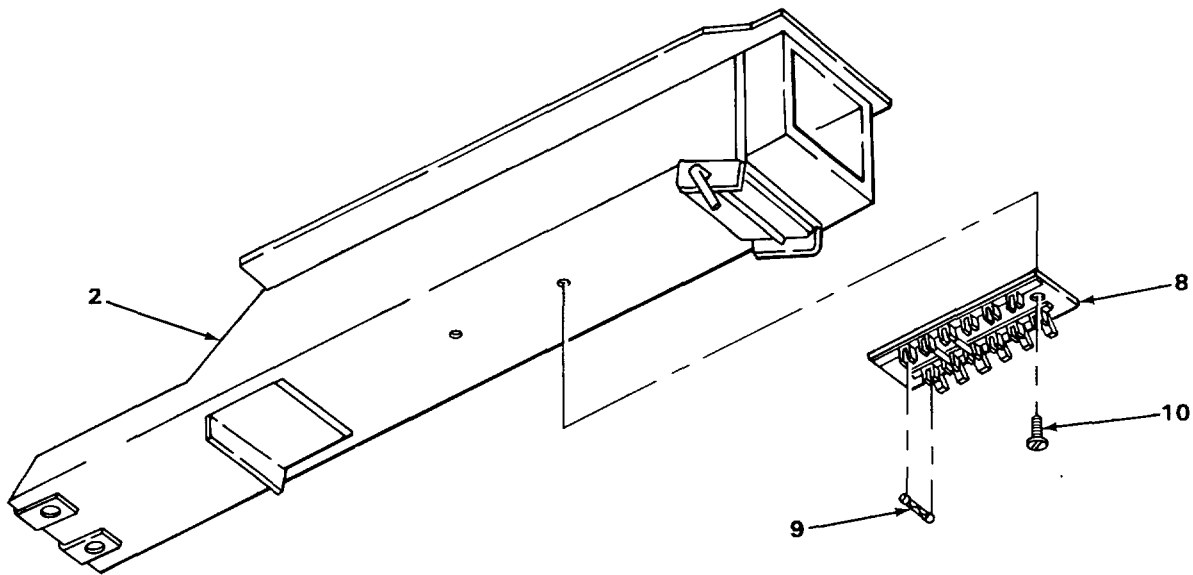
LOCATION	ITEM	ACTION	REMARKS
REMOVAL- CONTINUED			
7. Bracket (1)	Defroster duct (2)	Push up off bracket (1).	
8. Heater (3)	Defroster duct (2)	Pull off heater (3), and carefully route duct out through wires and hoses.	
9. Defroster cable (4) to defroster door arm (5)	Push nut (6)	a. Using long-nose pliers, squeeze and pull off. b. Get rid of push nut (6).	
10. Defroster cable (4) to defroster duct (2)	Clip (7)	Using 3/16-inch flat-tip screwdriver, pry out of defroster duct (2).	
11. Defroster door arm (5)	Defroster cable (4)	Take off.	
12.	Defroster duct (2)	Take out of truck.	



TA229634

DEFROSTER DUCT - CONTINUED

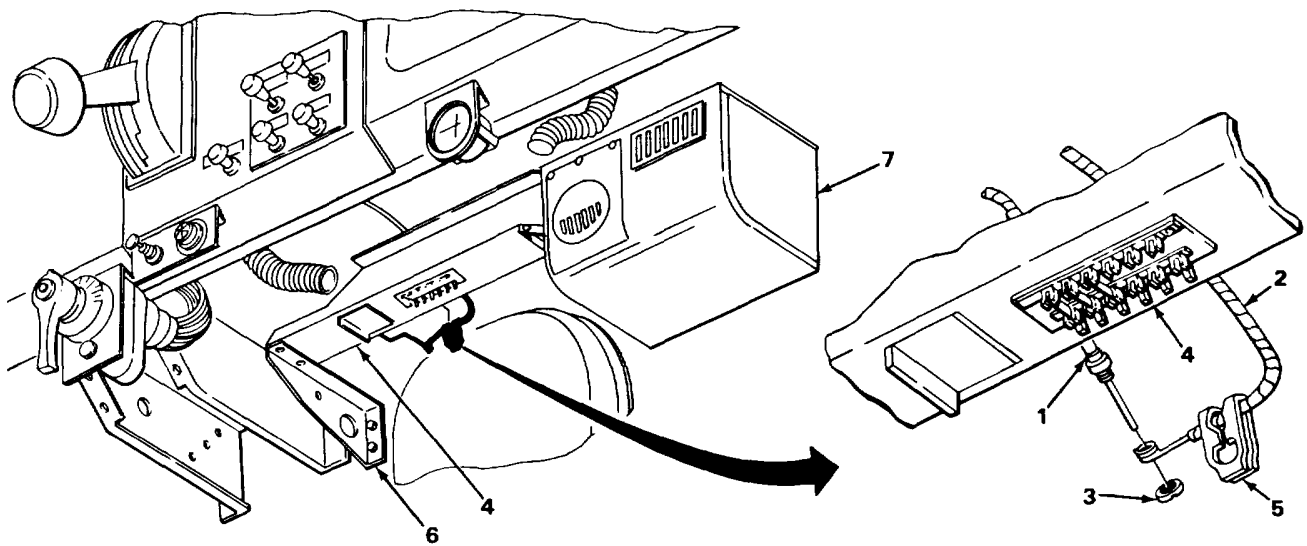
LOCATION	ITEM	ACTION	REMARKS
DISASSEMBLY			
13. Fuse block (8)	Left fuse (9)	Pull out.	
14. Fuse block (8) to defroster duct (2)	Two screws (10) unscrew and take out.	Using 1/8-inch flat-tip screwdriver,	
ASSEMBLY			
15. Defroster duct (2)	Fuse block (8)	Put in place.	
16. Fuse block (8) to defroster duct (2)	Two screws (10) flat-tip screwdriver.	Screw in, and tighten using 1/8-inch	
17. Fuse block (8)	Left fuse (9)	Snap in.	



TA229635

DEFROSTER DUCT - CONTINUED

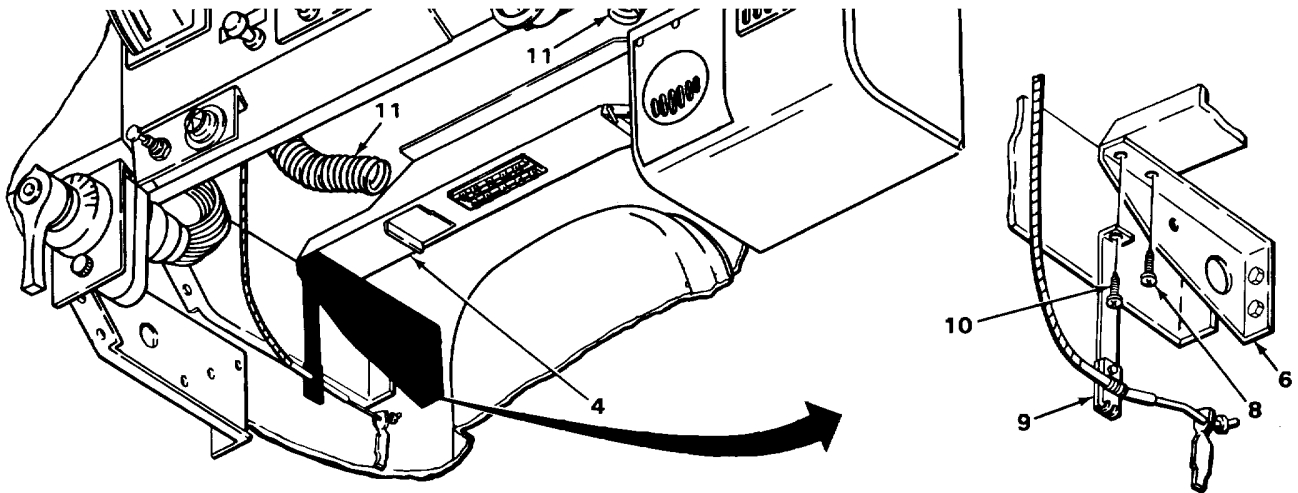
LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
18. Defroster door arm (1)	Defroster cable (2)	Put loop end of cable (2) onto arm (1).	
19. Defroster cable (2) to defroster door arm (1)	New push nut (3)	Using long-nose pliers, push onto defroster door arm (1).	
20. Defroster cable (2) to defroster duct (4)	Clip (5)	Push into place on duct.	
21.	Defroster duct (4)	Route through wires and hoses so duct (4) is above bracket (6).	
22. Heater (7)	Defroster duct (4)	Push into place.	
23. Bracket (6)	Defroster duct (4)	Put in position	



TA229636

DEFROSTER DUCT - CONTINUED

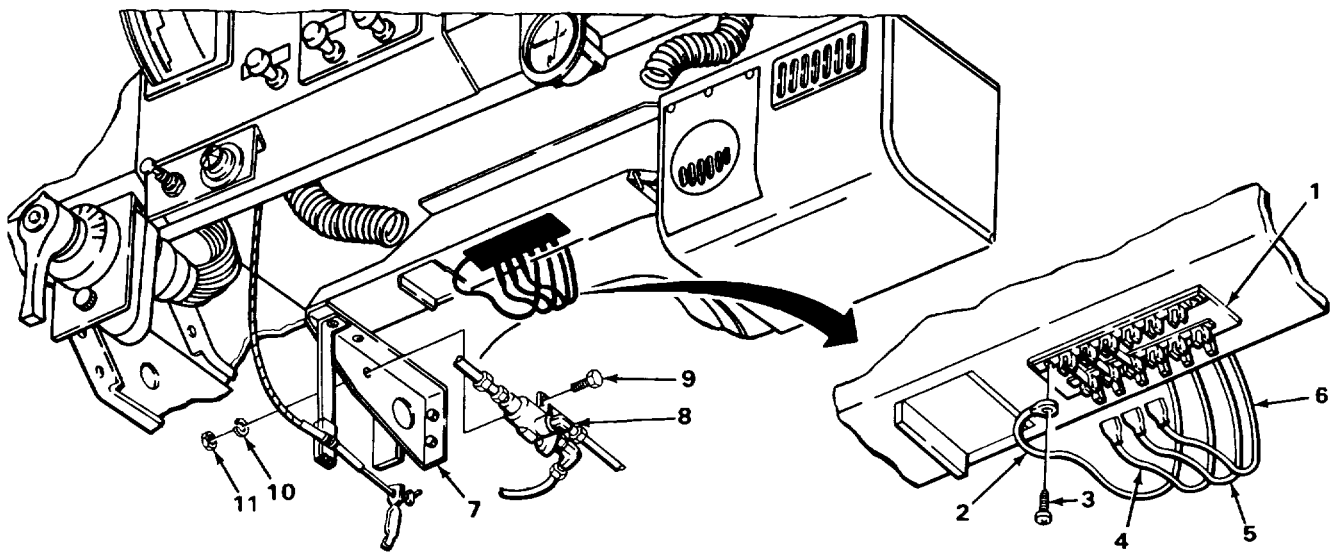
LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
24. Defroster duct (4) to bracket (6)	New screw (8)	Screw in using cross-tip screwdriver. Do not tighten.	
25.	Throttle cable clip bracket (9)	Put in place, and hold.	
26. Throttle cable clip bracket (9) to defroster duct (4)	New screw (10)	Screw in, and tighten using cross-tip screwdriver.	
27. Defroster duct (4) to bracket (6)	Screw (8)	Tighten using cross-tip screwdriver.	
28. Defroster duct4	Two defroster hoses (11)	Push into place on nipples.	



TA229637

DEFROSTER DUCT - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
29. Fuse block (1)	Brown wire (2)	Put in place, and hold.	
30. Brown wire (2) to fuse block (1)	Screw (3)	a. Screw in, and tighten using 1/8-inch flat-tip screwdriver. b. Remove tag from wire (2).	
31. Fuse block (1)	Three wires (4), (5), and (6)	a. Plug in according to tags. b. Remove tags from wires (4), (5), and (6).	
32. Defroster duct bracket (7)	Double check valve (8)	Push up into place.	
33. Double check valve (8) to defroster duct bracket (7)	Screw (9), new lockwasher (10), and nut (11)	Screw in, and tighten using 1/2-inch wrench, socket, and handle.	



TA229638

DEFROSTER DUCT - CONTINUED

INSTALLATION - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Connect battery ground cable (page 2-414).
2. Close air system drain valves (page 2-106).
3. Check operation of defroster duct (TM 9-2320-269-10).

TASK ENDS HERE

DEFROSTER DUCT BRACKET

This task covers:

- a. Removal (page 2-1256)
 - b. Installation (page 2-1256)
-

INITIAL SETUP

Tools

Extension, 3/8-inch drive, 6-inch
 Handle, ratchet,
 3/8-inch drive
 Socket, deep-well
 3/8-inch drive, 1/2-inch

Personnel Required

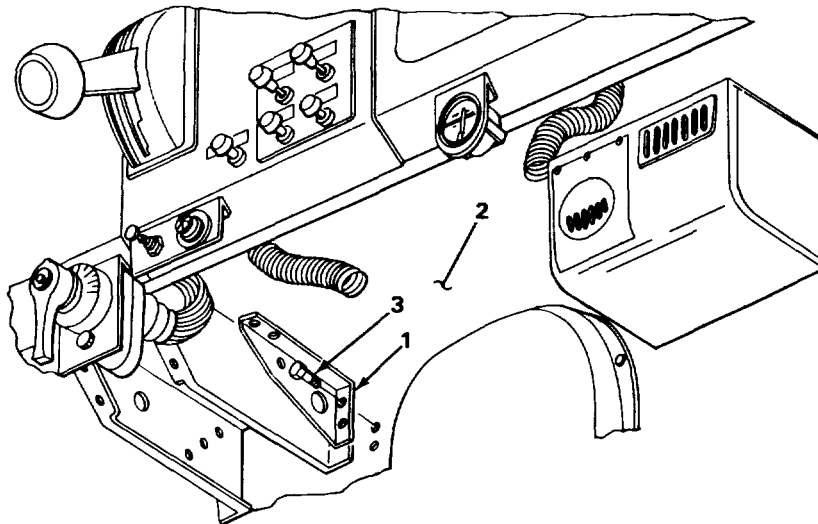
One

Equipment Condition

Left side of hood open (page 2-7).
 Defroster duct removed (page 2-1247).

DEFROSTER DUCT BRACKET - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1. Defroster duct bracket (1) to firewall (2)	Two screws (3)	Using 1/2-inch socket, handle, and extension, unscrew and take out.	
2. Firewall (2)	Bracket (1) and two screws (3)	Take out.	
INSTALLATION			
3. Firewall (2)	Bracket (1)	Put in place, and hold.	
4. Bracket (1) to firewall (2)	Two screws (3) socket, handle, and extension.	Screw in, and tighten using 1/2-inch	



TA229639

DEFROSTER DUCT BRACKET - CONTINUED

INSTALLATION - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Install defroster duct (page 2-1247).
2. Close left side hood (page 2-7).

TASK ENDS HERE

DEFROSTER HOSES AND OUTLETS

This task covers:

- | | |
|---|---|
| <p>a. Removal (page 2-1257)</p> <p>b. Disassembly (page 2-1259)</p> | <p>c. Assembly (page 2-1259)</p> <p>d. Installation (page 2-1260)</p> |
|---|---|
-

INITIAL SETUP

Tools

- Knife, pocket
- Screwdriver, cross-tip, number two, 1 1/2-inch
- Screwdriver, flat-tip, 3/16-inch, 3-inch

Personnel Required

Two

Equipment Condition

Defroster duct removed (page 2-1247).

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

REMOVAL

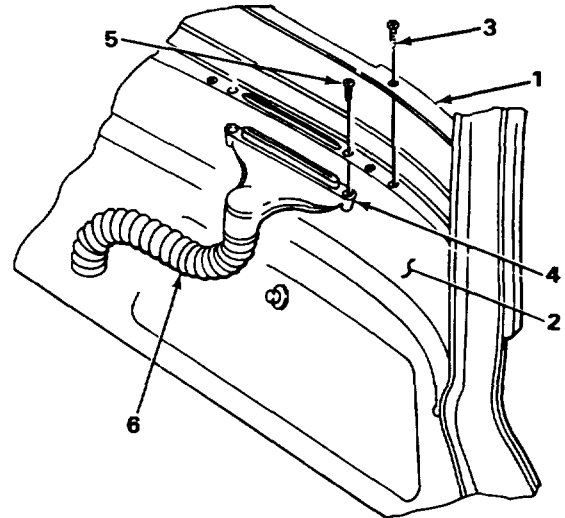
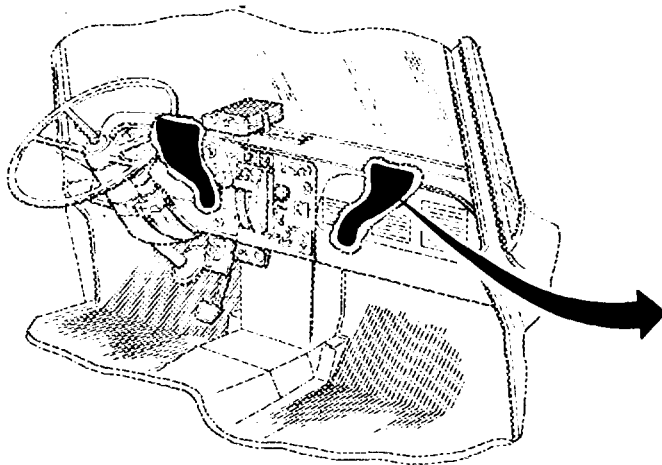
NOTE

Assistant is only needed for installation.

The steps in this task are the same for both right and left defroster hose and outlet. The right hose and outlet is used as the example.

DEFROSTER HOSES AND OUTLETS - CONTINUED

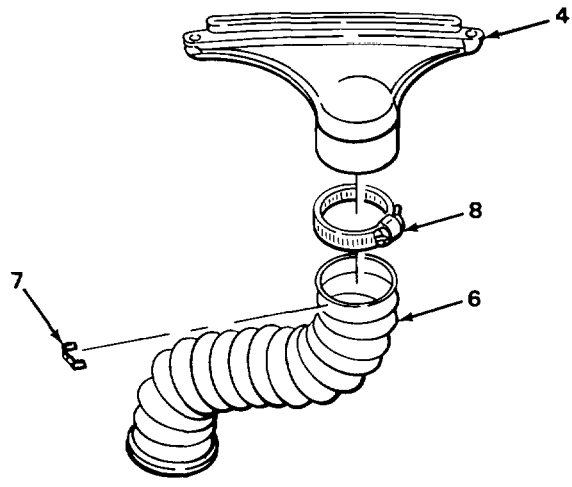
LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
1. Garnish molding (1) to dashboard (2)	Eight screws (3) unscrew and take out.	Using cross-tip screwdriver,	
2. Dashboard (2) molding (1)	Garnish	Take off.	
3. Defroster outlet (4) to dashboard (2)	Two screws (5) unscrew and take out.	Using cross-tip screwdriver,	
4. Dashboard (2)	Defroster outlet	Take out.	



TA229640

DEFROSTER HOSES AND OUTLETS - CONTINUED

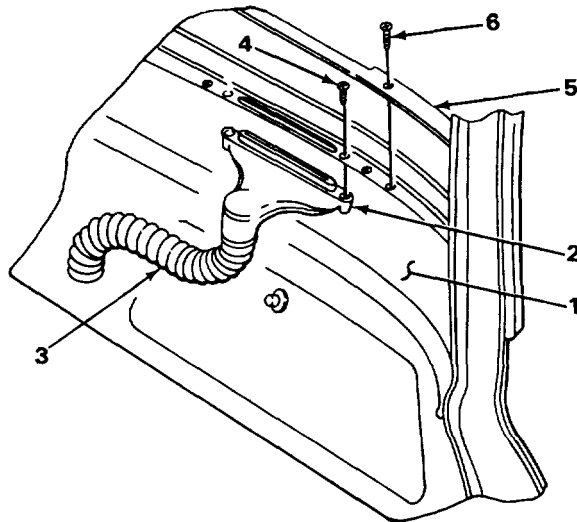
LOCATION	ITEM	ACTION	REMARKS
DISASSEMBLY			
5.	Defroster hose (6) to outlet (4)	Staple (7)	Using pocket knife, pry out.
6.	Defroster outlet (4)	Defroster hose (6) with clamp (8)	Take off.
ASSEMBLY			
7.	Defroster outlet (4)	Defroster hose (6)	Twist on until there is at least 3/4-inch of hose (6) on outlet (4).
CAUTION			
Do not overtighten clamp on assembly. Outlet could be damaged.			
8.	Defroster hose (6) to outlet (4)	Clamp (8)	<ul style="list-style-type: none"> a. Slide onto hose (6) where hose is over outlet (4). b. Tighten using flat-tip screwdriver.



TA229641

DEFROSTER HOSES AND OUTLETS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
9. Dashboard (1)	Defroster outlet (2) and hose (3)	Put up into place with help of assistant watching from above dashboard (1).
10. Defroster outlet (2) to dashboard (1)	Two screws (4) using cross-tip screwdriver.	Have assistant screw in and tighten
11. Dashboard (1) molding (5)	Garnish	Put in place.
12. Garnish molding (5) to dashboard (1)	Eight screws (6) screwdriver.	Screw in, and tighten using cross-tip



TA229642

DEFROSTER HOSES AND OUTLETS - CONTINUED

INSTALLATION - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE: Install defroster duct (page 2-1247).

TASK ENDS HERE**BLOWER ASSEMBLY**

This task covers:

- | | |
|-------------------------------------|--------------------------------------|
| a. Removal (page 2-1262) | c. Assembly (page 2-1264) |
| b. Disassembly (page 2-1264) | d. Installation (page 2-1266) |
-

INITIAL SETUP

Tools

Chisel, cold, hand, 3/8-inch
 Hammer, ball-peen, machinist's, 2-oz
 Key, screw, socket-head, 5/64-inch
 Key, screw, socket-head,
 1/8-inch
 Punch, drive-pin, straight,
 5/32-inch
 Screwdriver, cross-tip,
 1 1/2-inch
 Screwdriver, flat-tip, 3/16-inch,
 3-inch
 Wrench, box-end, 3/8-inch

Personnel Required

One

Equipment Condition

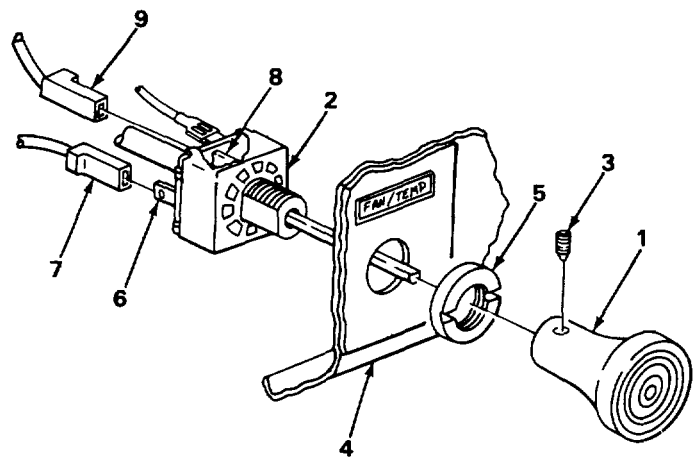
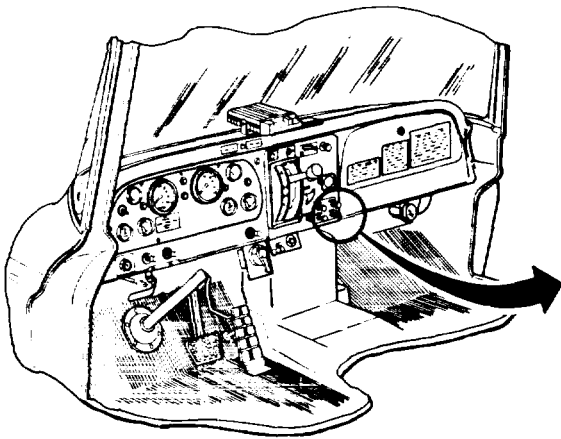
Battery ground cable disconnected
 (page 2-414).

Materials/Parts

Lockwasher, mounting plate-to-
 motor (two required)
 Tags, marking (item 29, appendix C)

BLOWER ASSEMBLY - CONTINUED

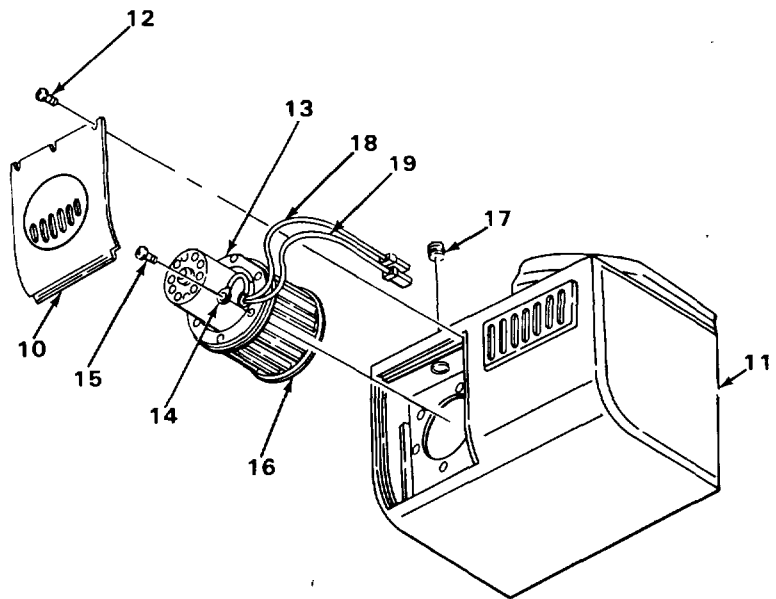
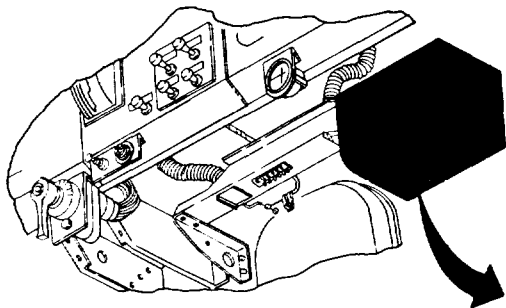
LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1.	Knob (1) to FAN/TEMP switch (2)	Setscrew (3) take out.	Using 5/64-inch key, unscrew and
2.	FAN/TEMP switch (2)	Knob (1)	Take off.
3.	FAN/TEMP switch (2) to dashboard (4)	Nut (5)	a. Using hammer and chisel, drive counterclockwise to loosen. b. Unscrew, and take off.
4.	Dashboard (4)	FAN/TEMP switch (2)	Take out from behind.
5.	FAN/TEMP switch (2) to terminal H (6)	Red wire (7)	a. Tag wire. b. Unplug.
6.	FAN/TEMP	Orange wire (9)	a. Tag wire.



7.	Motor cover (10) to heater (11)	Three sheet metal screws (12)	Using cross-tip screwdriver, unscrew and take out.
8.	Heater (11)	Motor cover (10)	Take off.

BLOWER ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
9. Motor mounting plate (13) and ground wire (14) to heater (11)	Six sheet metal screws (15)	Using cross-tip screwdriver, unscrew and take out.	
10. Heater (11)	Blower assembly (16)	Let drop to bottom of heater (11).	
11.	Grommet (17)	Using flat-tip screwdriver, pry out.	
12.	Red wire (18)	Pull into heater (11) through hole.	
13.	Orange wire (19)	Pull into heater through hole..	
14.	Blower assembly (16)	Lift, and take out.	



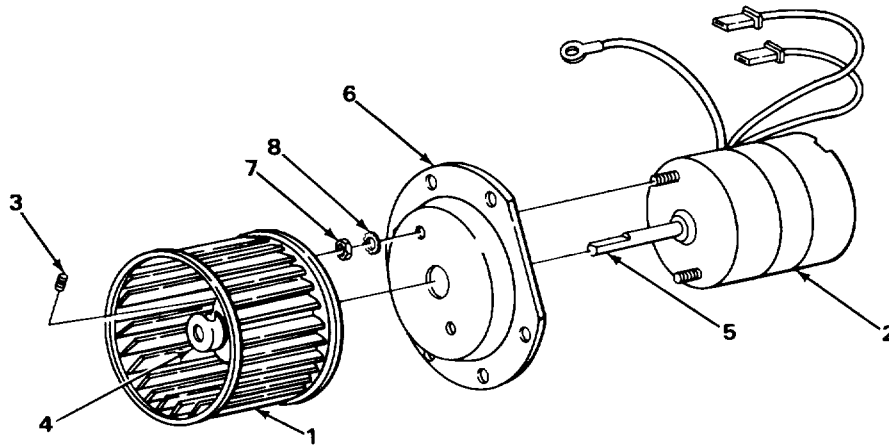
TA229644

BLOWER ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
DISASSEMBLY			
15.	Blower wheel (1) to motor (2)	Setscrew (3)	Using 1/8-inch key, unscrew and take out.
CAUTION			
If blower wheel sticks on motor shaft, do not strike or pull against outside rim of blower wheel or you will bend wheel.			
16.	Motor (2)	Blower wheel (1)	Take off. You may have to tap hub (4) of blower wheel (1) several times using hammer and punch to break it loose from motor shaft (5).
17.	Mounting plate (6) to motor (2)	Two nuts (7) and lockwashers (8)	a. Using 3/8-inch wrench, unscrew and take off. b. Get rid of lockwashers (8).
18.	Motor (2)	Mounting plate (6)	Take off.
ASSEMBLY			
19.	Motor (2)	Mounting plate (6)	Put in place.
20.	Mounting plate (6) to motor (2)	Two new lockwashers (8) and nuts (7)	Screw on, and tighten using 3/8-inch wrench.

BLOWER ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
ASSEMBLY - CONTINUED			
CAUTION			
Putting bent blower wheel onto motor will cause noisy operation and rapid wear of motor bearings.			
If blower wheel is put on too far, it will bind against mounting plate causing possible motor burnout.			
21. Motor (2)	Blower wheel (1)	a. Put onto motor shaft (5) so hole in hub (4) faces flat spot on shaft (5) and end of hub (4) is flush with end of shaft (5). b. Turn blower wheel by hand, watching to see if it is bent. If blower wheel is bent, replace it.	
22. Blower wheel (1) to motor (2)	Setscrew (3)		Screw on, and tighten using 1/8-inch key.



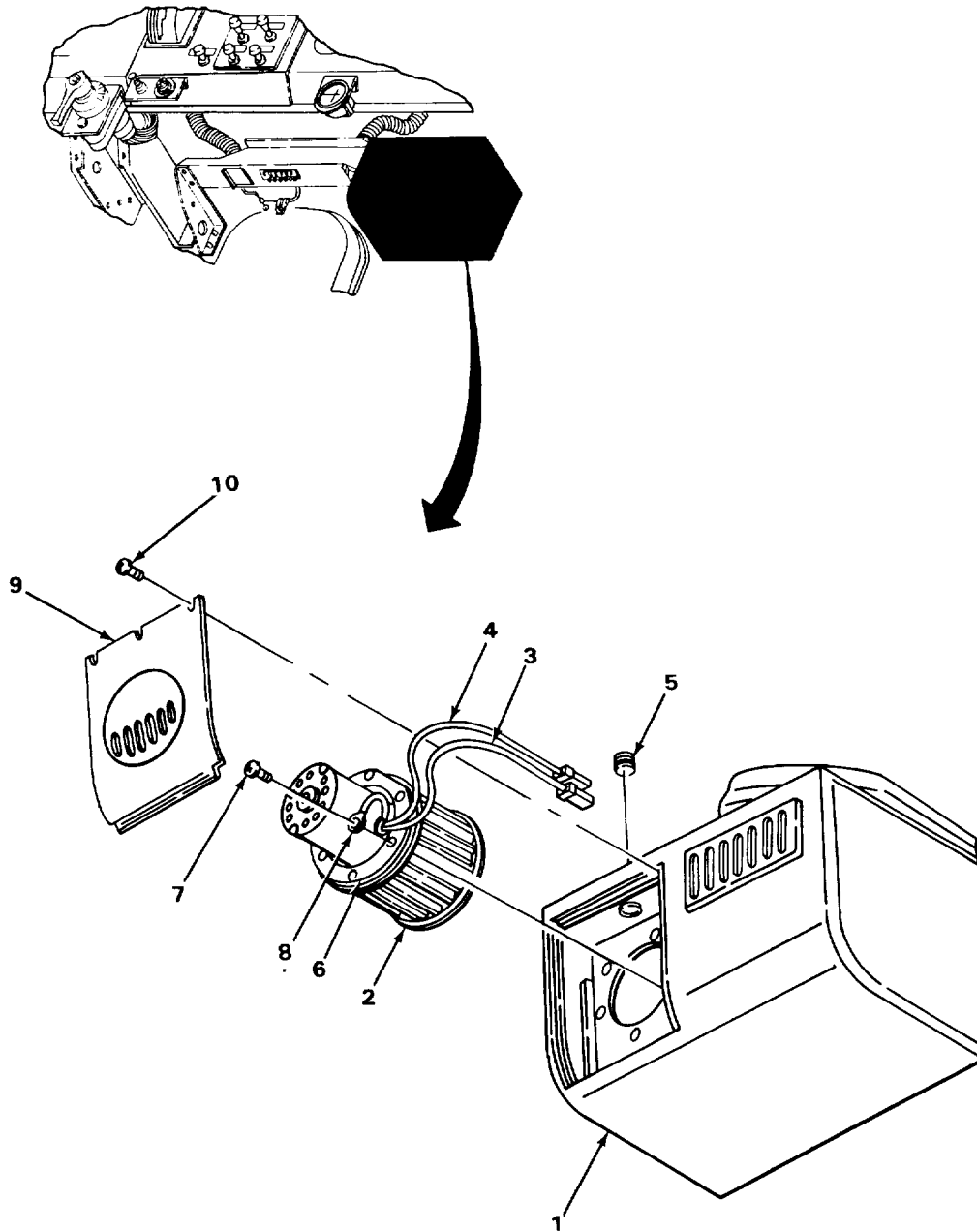
TA229645

BLOWER ASSEMBLY - CONTINUED

LOCATION	ITEM	REMARKS	ACTION
INSTALLATION			
23. Heater (1)	Blower assembly (2)	Put in, and let assembly (2) sit on floor of heater (1).	
24.	Orange wire (3)	Thread through hole in heater (1), and pull through as far as possible without lifting blower (2).	
25.	Red wire (4)	Thread through hole in heater (1), and pull through as far as possible without lifting blower (2).	
26.	Grommet (5)	Using flat-tip screwdriver, work into hole in heater around wires (3) and (4).	
27. Motor mounting plate (6) to heater (1)	Five of six sheet metal screws (7)	a. Lift blower assembly (2) into place. b. Screw in, and tighten using cross-tip screwdriver.	
28. Motor mounting plate (6)	Ground wire (8)	Put in place, and hold.	
29. Ground wire (8) and motor mounting plate (6) to heater (1)	One of six sheet metal screws (7)	Screw in, and tighten using cross-tip screwdriver.	
30. Heater (1)	Motor cover (9)	Put in place, and hold.	
31. Motor cover (9) to heater (1)	Three sheet metal screws (10)	Screw in, and tighten using cross-tip screwdriver.	

BLOWER ASSEMBLY - CONTINUED

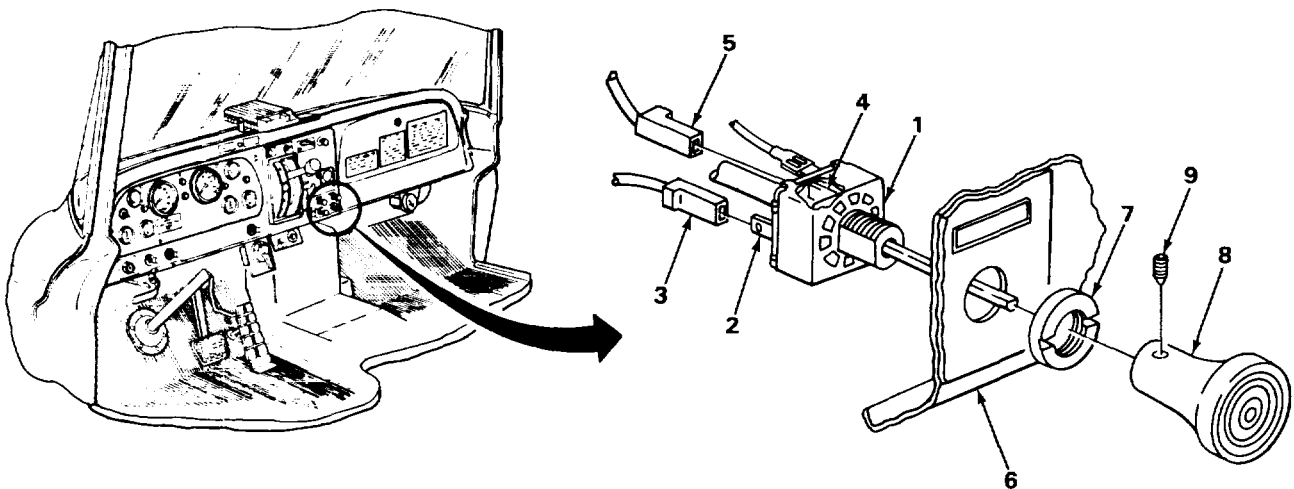
INSTALLATION - CONTINUED



TA229646

BLOWER ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
32. FAN/TEMP switch (1) terminal L(2)	Red wire (3)	a. Check tag for location. b. Plug in.	
33. FAN/TEMP switch (1) terminal H (4)	Orange wire (5)	a. Check tag for location. b. Plug in.	
34. Dashboard (6)	FAN/TEMP switch (1)	Put into place from behind.	
35. FAN/TEMP switch (1) to dashboard (6)	Nut (7)	Screw on, and tighten using hammer and chisel. Do not overtighten.	
36. FAN/TEMP switch	Knob (8)	Put onto switch shaft.	
37. Knob (8) to FAN/TEMP switch (1)	Setscrew (9)	a. Screw into hole in knob and switch shaft. b. Tighten using 5/64-inch key.	



TA229647

BLOWER ASSEMBLY - CONTINUED

INSTALLATION - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE: Connect battery ground cable (page 2-414).

TASK ENDS HERE**HEATER ASSEMBLY, HEAT CONTROL, AND VENT CONTROL**

This task covers:

- a. Removal (page 2-1270)
- b. Disassembly (page 2-1275)
- c. Repair (page 2-1278)

- d. Installation (page 2-1284)
 - e. Assembly (page 2-1278)
-

INITIAL SETUP**Tools**

Brush, parts cleaning
 Chisel, cold, hand, 3/8-inch
 Hammer, ball-peen, machinist's,
 2-oz
 Handle, ratchet, 3/8-inch drive
 Key, socket-head screw, 5/64-inch
 Knife, pocket
 Pliers, long-nose
 Screwdriver, cross-tip, number two,
 1 1/2-inch
 Screwdriver, cross-tip, number two,
 4-inch
 Screwdriver, flat-tip, 3/16-inch
 Socket, deep well, 3/8-inch drive,
 9/16-inch

Materials/Parts

Cement, rubber (item 6, appendix C)
 Lockwasher, heater-to-firewall
 (three required)
 Nuts, self-locking, heater-to-
 firewall (three required)
 Pushnut, heat cable-to-heater door
 Pushnut, vent cable-to-vent door

Materials/Parts - Continued

Rags, wiping (item 24, appendix C)
 Solvent, drycleaning (item 28, appendix C)
 Tags, marking (item 29, appendix C)
 Wire, safety (item 36, appendix C)

Personnel Required

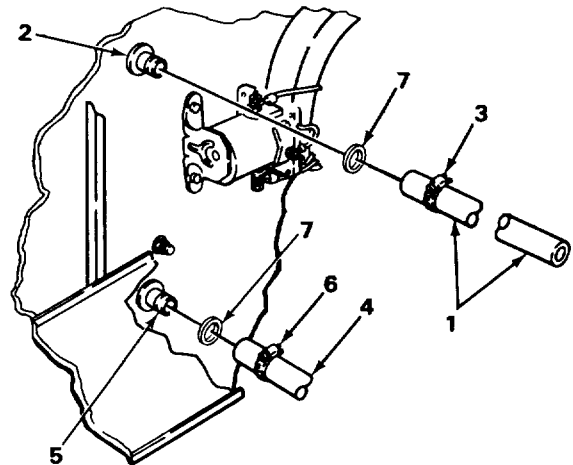
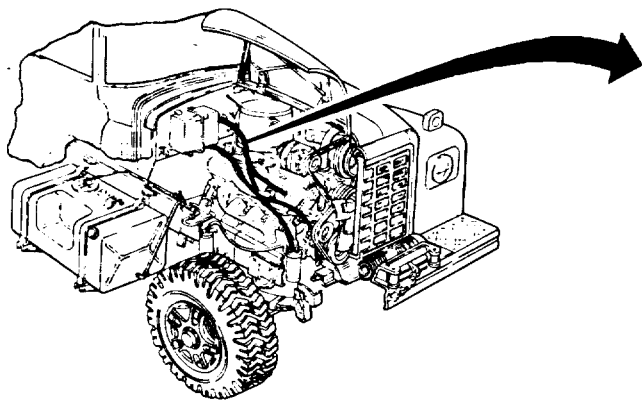
One

Equipment Condition

Battery ground cable disconnect (page 2-414)
 Right side of hood open (page 2-7)
 Cooling system drained (page 2-265)
 Surge tank removed (page 2-223)
 Defroster duct removed (page 2-1247)

HEATER ASSEMBLY, HEAT CONTROL, AND VENT CONTROL - CONTINUED

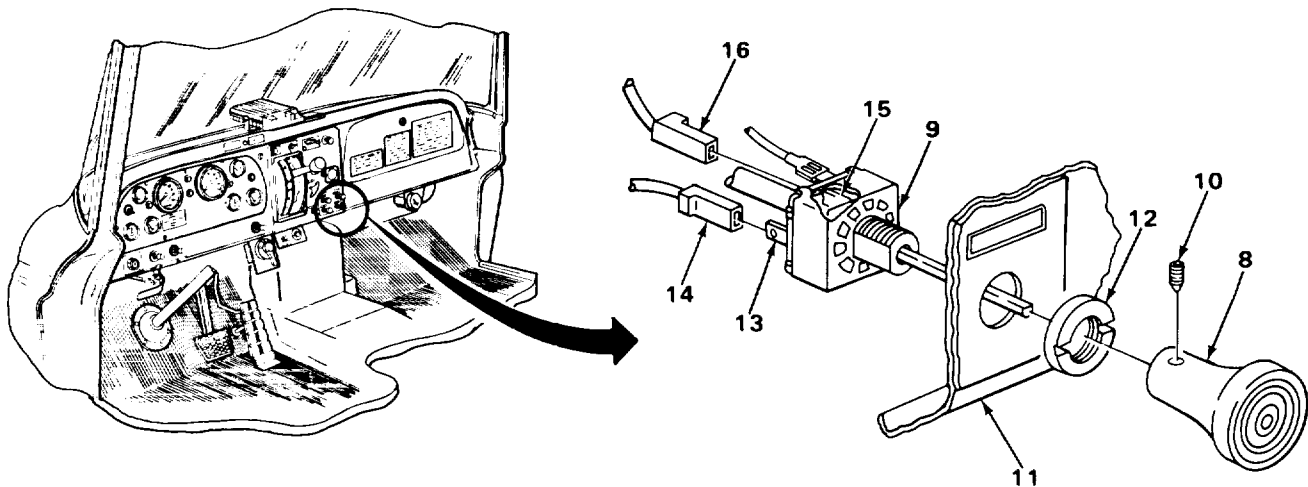
LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1. Upper heater hose (1) to heater nipple (2)	Clamp (3)	Using flat-tip screwdriver, unscrew and slide back.	
2. Heater nipple (2)	Upper heater hose (1)	Twist, and pull off.	
3. Lower heater hose (4) to heater nipple (5)	Clamp (6)	Using flat-tip screwdriver, unscrew and slide back.	
4. Heater nipple (5)	Lower hose (4)	Twist, and pull off.	
5. Heater nipples (2) and (5)	Two foam grommets (7)	Pull off.	



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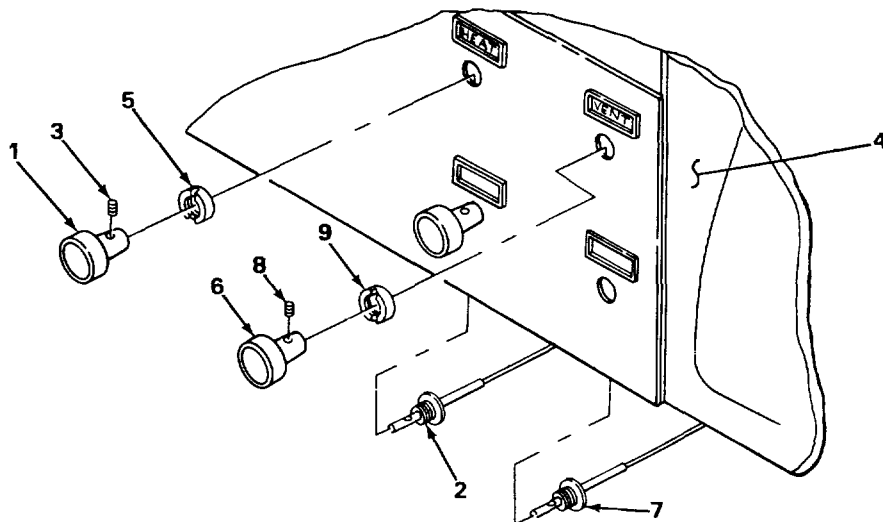
HEATER ASSEMBLY, HEAT CONTROL, AND VENT CONTROL - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
6.	Knob (8) to FAN/TEMP switch (9)	Setscrew (10)	Using key, unscrew and take out.
7.	FAN/TEMP switch (9)	Knob (8)	Take off.
8.	FAN/TEMP switch (9) to dashboard (11)	Nut (12)	a. Using hammer and chisel, drive counterclockwise to loosen. b. Unscrew, and take off.
9.	Dashboard (11)	FAN/TEMP switch (9)	Take out from behind.
10.	FAN/TEMP switch (9) terminal H (13)	Red wire (14)	a. Tag wire. b. Unplug.
11.	FAN/TEMP switch (9) terminal L (15)	Orange wire (16)	a. Tag wire. b. Unplug.



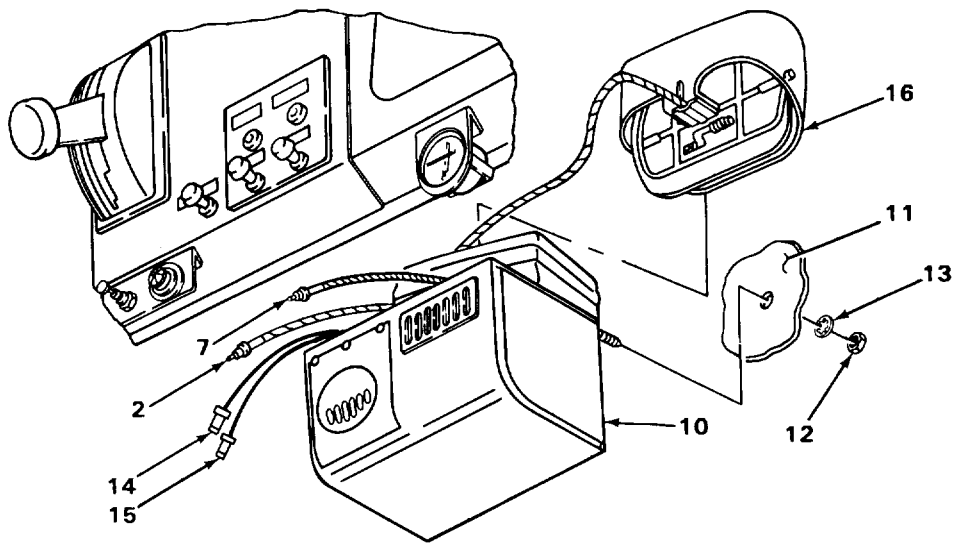
HEATER ASSEMBLY, HEAT CONTROL, AND VENT CONTROL - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
12.	Knob (1) to Heat control cable (2)	Set screw (3)	Using key, unscrew and take out.
13.	Heat control	Knob (1)	Take off.
14.	Heat control cable (2) to dashboard (4)	Nut (5)	a. Using hammer and chisel, drive counterclockwise to loosen. b. Unscrew, and take off.
15.	Dashboard (4)	Heat control cable (2)	Pull out from behind.
16.	Knob (6) to Vent control cable (7)	Set screw (8)	Using key, unscrew and take out.
17.	Vent control	Knob (6)	Take off.
18.	Vent control cable (7) to dashboard (4)	Nut (9)	a. Using hammer and chisel, drive counterclockwise to loosen. b. Unscrew and take off.
19.	Dashboard (4)	Vent control Cable (7)	Pull out.



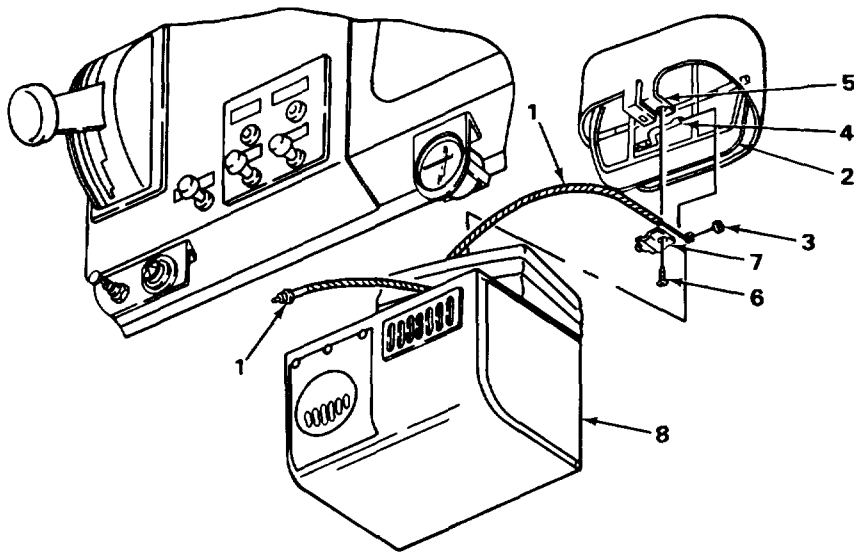
HEATER ASSEMBLY, HEAT CONTROL, AND VENT CONTROL - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
20. Engine compartment: heater (10) to firewall (11)	Three self-locking nuts (12) and lockwashers (13)	a. Using 9/16-inch socket and handle, unscrew and take off. b. Get rid of.	
21. Heater (10)	Control cables (2) and (7) and wires (14) and (15)	Pull down, making sure they are not snagged.	
22. Firewall (11) and Vent (16)	Heater (10)	Pull toward rear of truck, and take off.	



HEATER ASSEMBLY, HEAT CONTROL, AND VENT CONTROL - CONTINUED

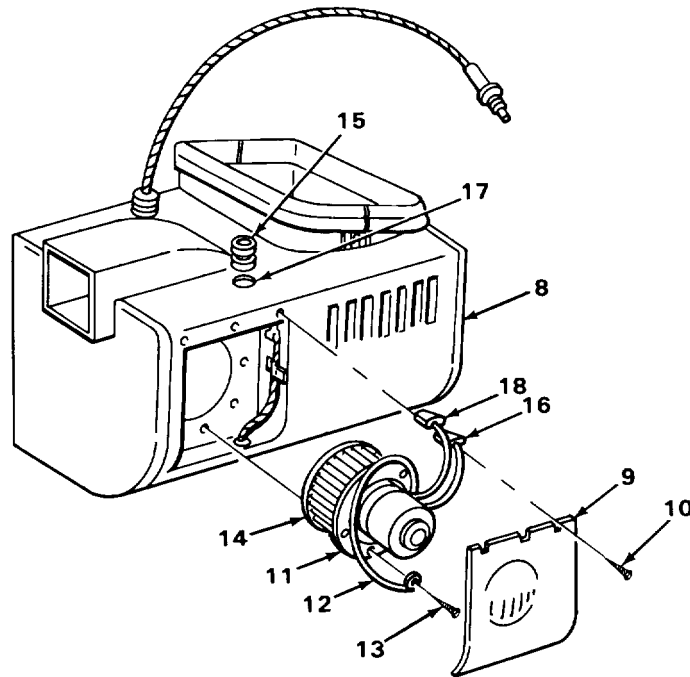
LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
23. VENT cable (1) to vent door (2)	Push nut (3)	a. Using long-nose pliers, squeeze and take off of door arm (4). b. Get rid of	
24. VENT cable (1) to clip support (5)	Screw (6) and clip (7)	Using 1 1/2-inch cross-tip screwdriver, unscrew and take out.	
25. Vent door (2)	VENT cable (1)	Take off of door arm (4).	
26. Heater assembly (8)	VENT cable (1)	Pull out through slot.	
27. Heater assembly (8)	Take out.		



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HEATER ASSEMBLY, HEAT CONTROL, AND VENT CONTROL - CONTINUED

LOCATION	ITEM	ACTION REMARKS
DISASSEMBLY		
28. Motor cover (9) to heater assembly (8)	Three sheet metal screws (10)	Using 4-inch cross-tip screwdriver, unscrew and take out.
29. Heater assembly (8)	Motor cover (9)	Take off.
30. Motor mounting plate (11) and ground wire (12) to heater assembly (8)	Six sheet metal screws (13)	Using 1 1/2-inch cross-tip screwdriver, unscrew and take out.
31. Heater assembly (8)	Blower assembly (14)	Let drop to bottom of heater (8).
32.	Grommet (15)	Using flat-tip screwdriver, pry out.
33.	Red wire (16)	Pull into heater (8) through hole (17).
34.	Orange wire (18)	Pull into heater through hole (17).
35.	Blower assembly (14)	Lift, and take out.



HEATER ASSEMBLY, HEAT CONTROL, AND VENT CONTROL - CONTINUED

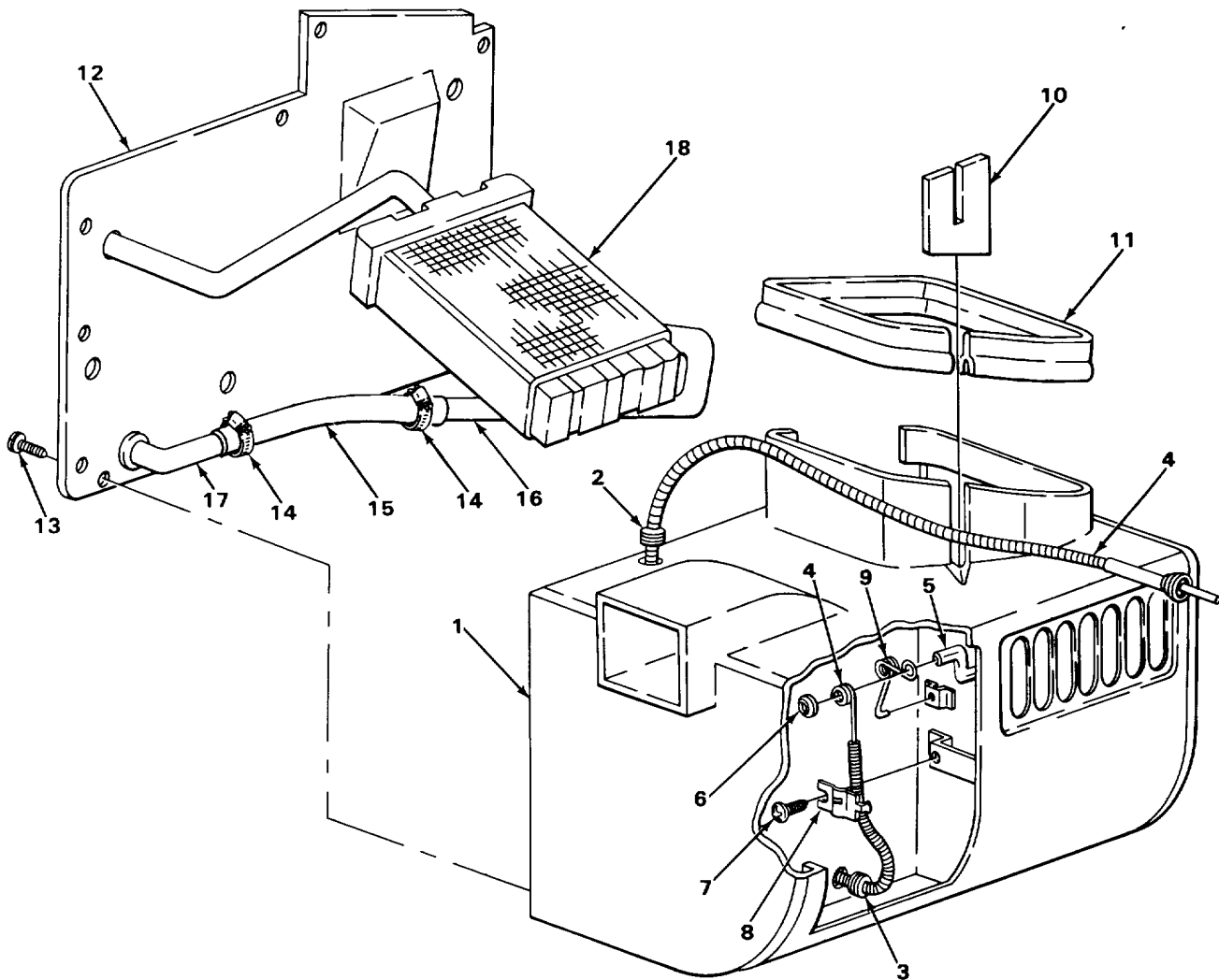
LOCATION	ITEM	ACTION	REMARKS
DISASSEMBLY - CONTINUED			
NOTE			
For disassembly of blower assembly, see page 2-1261.			
36.	Heater assembly (1)	Grommets (2) and (3)	Using flat-tip screwdriver, pry out and slide up cable (4).
37.	HEAT cable (4) to heater door arm (5)	Pushnut (6)	a. Using pliers, squeeze push nut. b. Take off. c. Get rid of pushnut (6).
38.	HEAT cable (4) to door arm (5)	Screw (7) clip (8)	Using 1 1/2-inch cross-tip screwdriver, unscrew and take out.
39.	Door arm (5) and spring (9)	HEAT cable (4)	Take off.
40.	HEAT cable (4)	Grommet (3)	Take off.
41.	Heater assembly (1)	HEAT cable (4)	Take out.
42.	HEAT cable (4)	Grommet (2)	Take off.
43.			
<u>WARNING</u>			
Drycleaning solvent burns easily. Do not smoke or have open flame nearby while using solvent. Dispose of solvent soaked rags. If brush is used, clean properly.			
43.	Heater assembly (1)	Vent cable seal (10) and air inlet seal (11)	a. With parts cleaning brush and rag, use solvent to dissolve glue. b. Peel off.
44.	Backplate (12) to heater assembly (1)	Eleven screws (13)	Using 4-inch cross-tip screwdriver, unscrew and take out.
45.	Heater assembly (1)	Two clamps (14) and backplate (12)	Using flat-tip screwdriver, raise up high enough to get at clamps (14).

HEATER ASSEMBLY, HEAT CONTROL, AND VENT CONTROL - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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DISASSEMBLY - CONTINUED

- | | | |
|--|------------------------------|--|
| 46. Hose (15) | Two clamps (14) | Using flat-tip screwdriver, unscrew and pull back along hose (15). |
| 47. Core hose (16) and backplate (12)
Nipple (17) | Hose (15) and backplate (12) | a. Twist, and pull off.
b. Take out backplate (12) and core (18). |



HEATER ASSEMBLY, HEAT CONTROL, AND VENT CONTROL - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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DISASSEMBLY - CONTINUED

48.	Backplate (1)	Core (2)	Take off.
49.	Hose (3)	Clamps (4)	Take off.

REPAIR**NOTE**

To repair heater core, see FM 43-2.

ASSEMBLY

50.	Hose (3)	Two clamps (4)	Slide on.
51.	Backplate (1) nipple (5)	Hose (3)	Push on.
52.	Hose (3) to nipple (5)	Clamp (4)	a. Put in position. b. Tighten using flat-tip screwdriver.
53.	Backplate (1)	Core (2) and backplate (1)	Put in position so upper nipple (6) of core (2) goes through hole in backplate (1).
54.	Core (2)	Hose (3)	Push on.
55.	Hose (3) to core (2)	Clamp (4)	a. Put in position. b. Tighten using flat-tip screwdriver.
56.	Heater (7)	Core (2) and backplate (1)	Put in position so core (2) rests on core gasket (hidden).
57.	Backplate (1) to heater (7)	Eleven screws (8)	Screw in, and tighten using 4-inch cross-tip screwdriver.

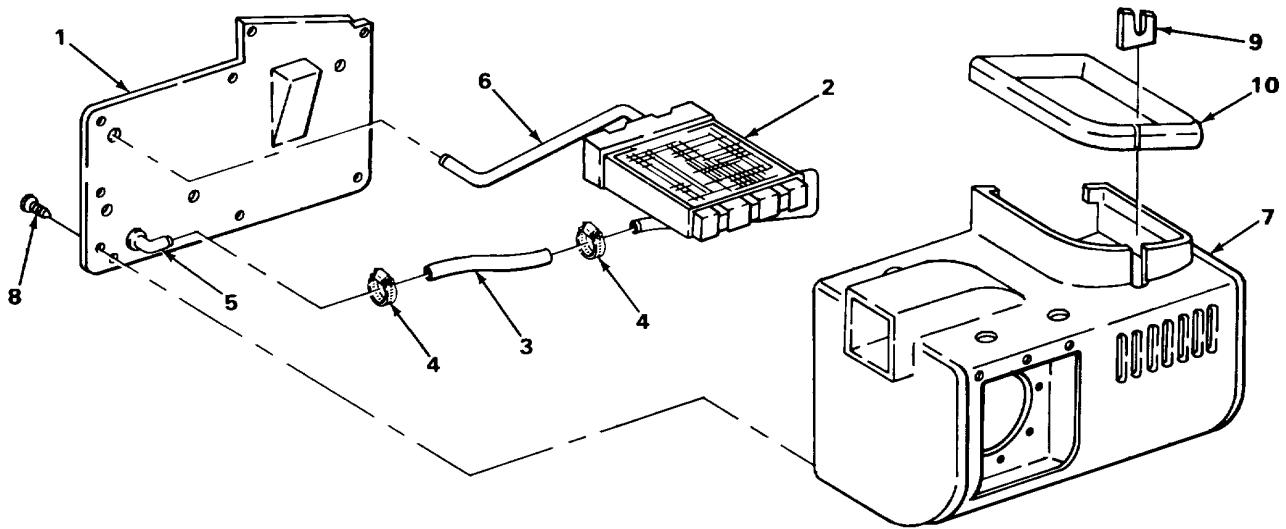
LOCATION	ITEM	ACTION	REMARKS
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ASSEMBLY - CONTINUED

WARNING

Rubber cement adhesive and fumes from rubber cement burn easily. Do not smoke or have open flame nearby while using rubber cement.

- | | | |
|-------------------------|---|---------------------------------------|
| 58. Heater assembly (7) | Vent cable seal (9) and air inlet seal (10) | Using rubber cement, glue into place. |
|-------------------------|---|---------------------------------------|



HEATER ASSEMBLY, HEAT CONTROL, AND VENT CONTROL - CONTINUED

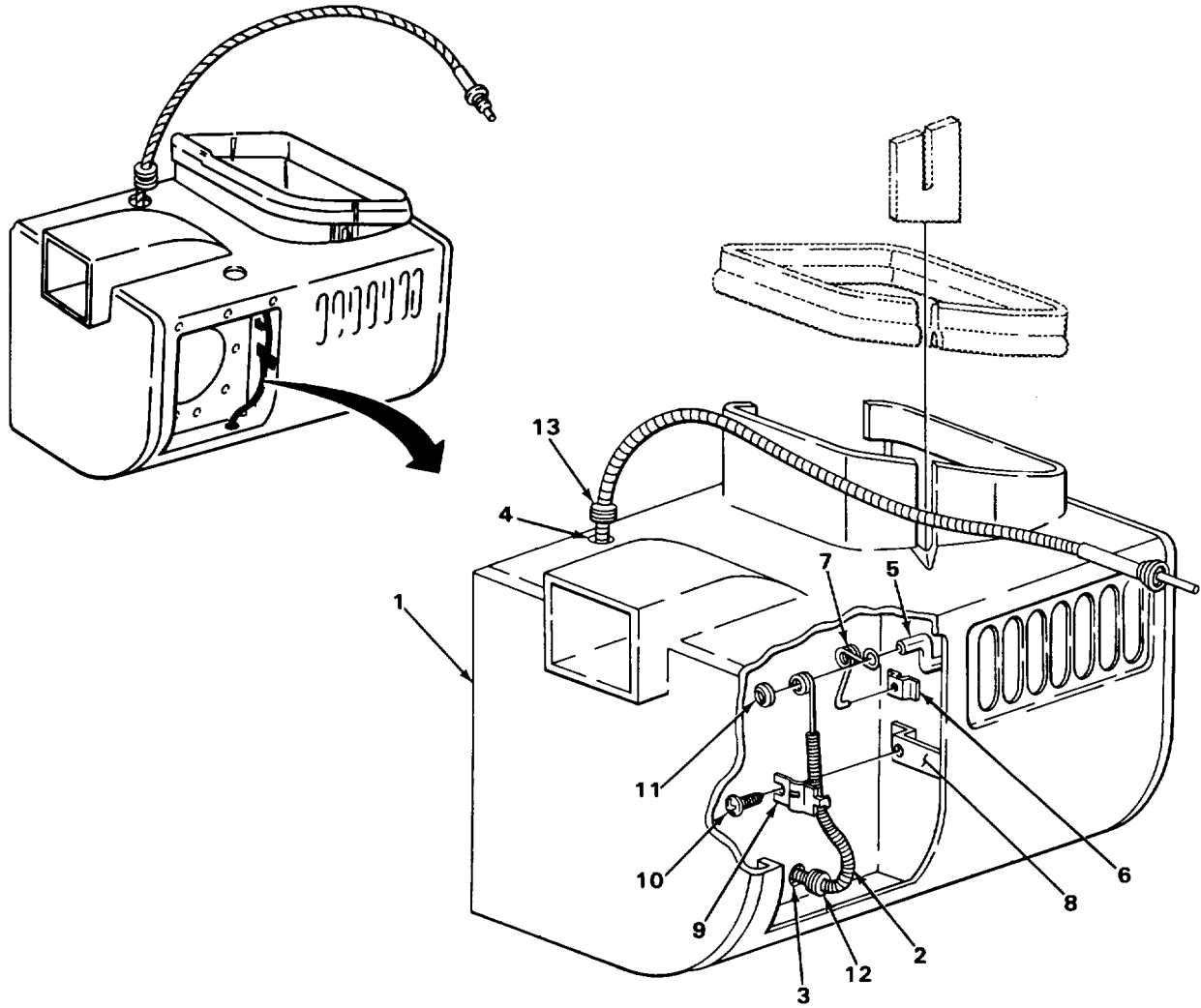
LOCATION	ITEM	ACTION REMARKS
ASSEMBLY - CONTINUED		
59. Heater assembly (1)	HEAT cable (2)	<ul style="list-style-type: none"> a. Route a piece of wire through hole (3) under blower housing. b. Work through blower holes up through hole (4) in top of heater. c. Tie wire onto door end of cable (2). d. Using wire, pull cable (2) into place.
60. Heater door arm (5) and spring stop (6)	Spring (7)	Put in place so door (hidden) is held shut.
61. Heater door arm (5)	HEAT cable (2)	Put loop end onto arm (5).
62. Clip support (8)	HEAT cable (2)	Put in place, and hold.
63. HEAT cable (2) to clip support (8)	Clip (9) and screw (10)	Screw in, and tighten using 1 1/2-inch cross-tip screwdriver.
64. HEAT cable (2) to heater door arm (5)	New push nut (11)	Using long-nose pliers, push on.
65. Heater assembly (1)	Grommets (12) and (13)	Push in using flat-tip screwdriver.

NOTE

For assembly of blower, see page 2-1261.

HEATER ASSEMBLY, HEAT CONTROL, AND VENT CONTROL - CONTINUED

ASSEMBLY - CONTINUED

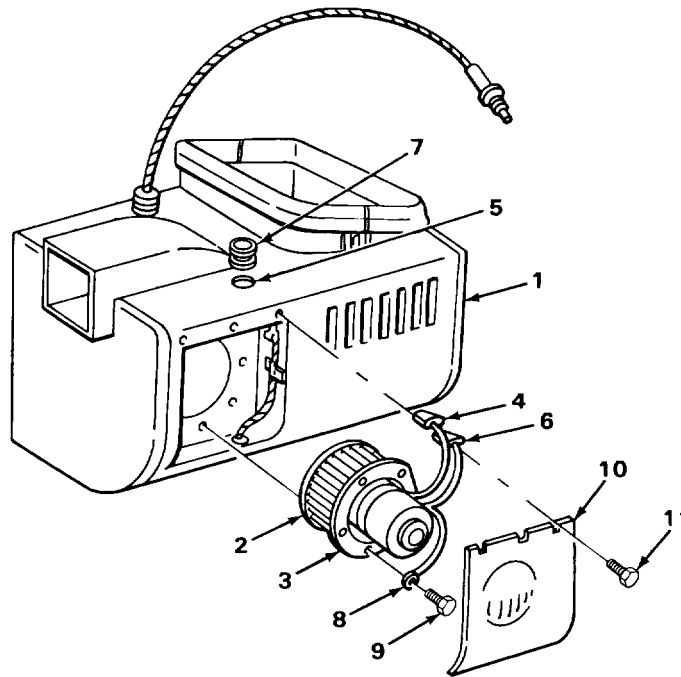


HEATER ASSEMBLY, HEAT CONTROL, AND VENT CONTROL - CONTINUED

LOCATION	ITEM	ACTION REMARKS
ASSEMBLY - CONTINUED		
66. Heater assembly (1)	Blower assembly (2)	<ol style="list-style-type: none"> Turn flat cut-out on blower mounting plate (3) so it is on the right side. Put blower assembly (2) into place. Turn mounting plate (3) so flat cut-out is at two-o'clock position. Let blower assembly (2) down so it rests on floor of heater (1).
67.	Orange wire (4)	Push up through hole (5) in top of heater (1), and pull through until all of wire (4) is outside heater except enough to get from hole (5) to blower (2).
68.	Red wire (6)	Push up through hole (5) in top of heater (1), and pull through until all of wire (6) is outside heater (1) except enough to get from hole (5) to blower (2).
69.	Grommet (7)	Push into hole (5) around wires (4) and (6) using flat-tip screwdriver.
70. Heater assembly (1)	Blower assembly (2)	Pick up, and align holes in heater (1) with holes in blower mounting plate (3).
71. Mounting plate (3) to heater assembly (1)	Ground wire (8)	Put in place, and hold.
72. Ground wire (8) to heater assembly (1) and mounting plate (3)	One screw of six (9)	Screw in, and tighten using 1 1/2-inch cross-tip screwdriver.

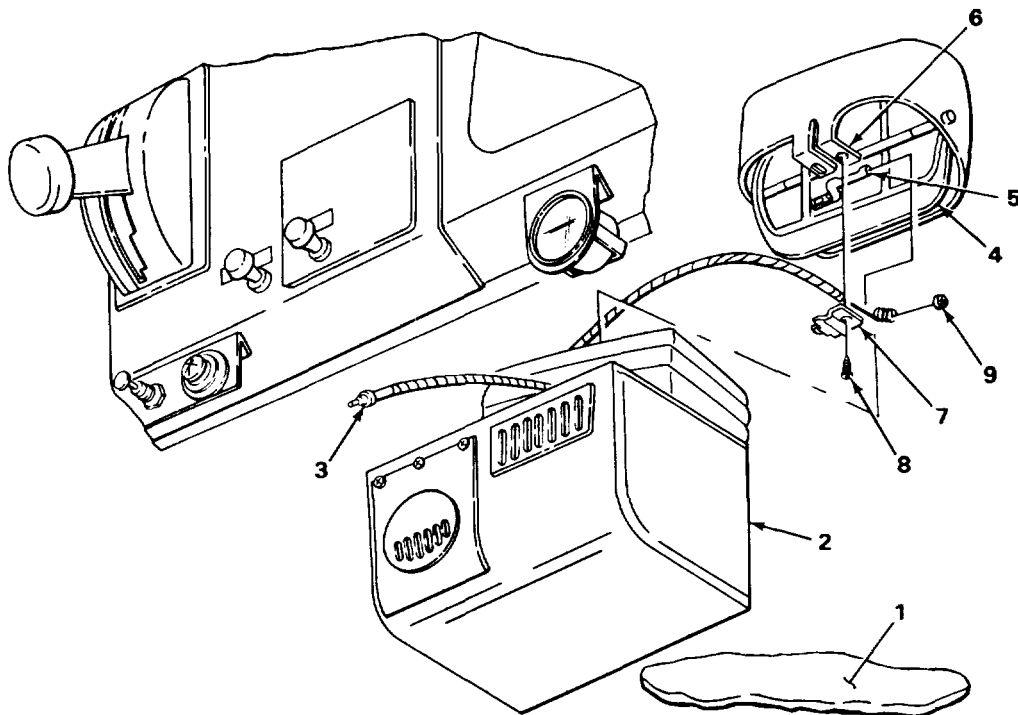
HEATER ASSEMBLY, HEAT CONTROL, AND VENT CONTROL - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
ASSEMBLY - CONTINUED			
73. Mounting plate (3) to heater assembly (1)	Five of six screws (9)	Screw in, and tighten using 4-inch cross-tip screwdriver.	
74. Heater assembly (1)	Motor cover (10)	Put in place, and hold.	
75. Motor cover (10) to heater assembly (1)	Three screws (11)	Screw in, and tighten using 4-inch cross-tip screwdriver.	



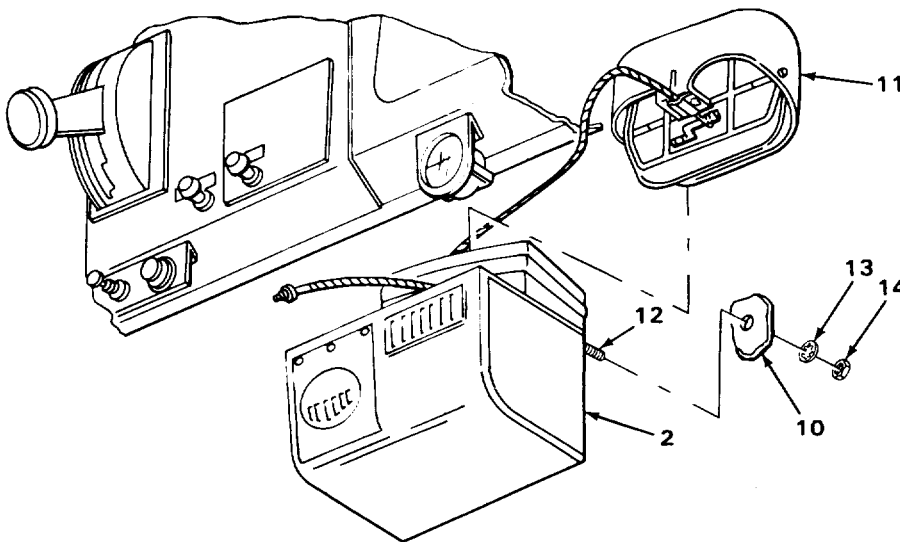
HEATER ASSEMBLY, HEAT CONTROL, AND VENT CONTROL - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
76. Cab floor (1)	Heater assembly (2)	Set on cab floor directly below where heater (2) will be mounted.	
77. Heater assembly (2)	VENT cable (3)	Push loop end through slot in heater (2).	
78. Vent door (4)	VENT cable (3)	Put loop end onto arm (5).	
79. Clip support (6)	VENT cable (3)	Put in place on support (6), and hold.	
80. VENT cable (3) to clip support (6)	Clip (7) and screw (8)	Screw on, and tighten using 1 1/2-inch cross-tip screwdriver.	
81. VENT cable (3) to vent door (4)	New pushnut (9)	Use pliers. push onto arm (5)	



HEATER ASSEMBLY, HEAT CONTROL, AND VENT CONTROL - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
82. Firewall (10) and vent (11)	Heater assembly (2)	a. Push upon to vent(11). b. Work studs (12) and nipples (hidden) through holes in firewall (10).	
83. Heater (2) to firewall (10)	Three new lockwashers (13) and three new self- locking nuts (14)	Screw on, and tighten using 9/16-inch socket and handle.	



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HEATER ASSEMBLY, HEAT CONTROL, AND VENT CONTROL - CONTINUED

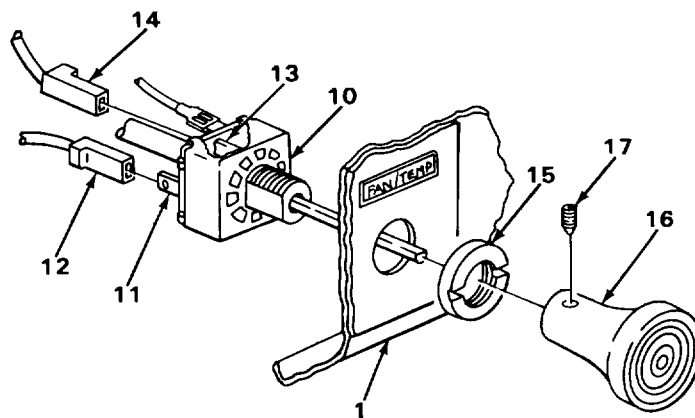
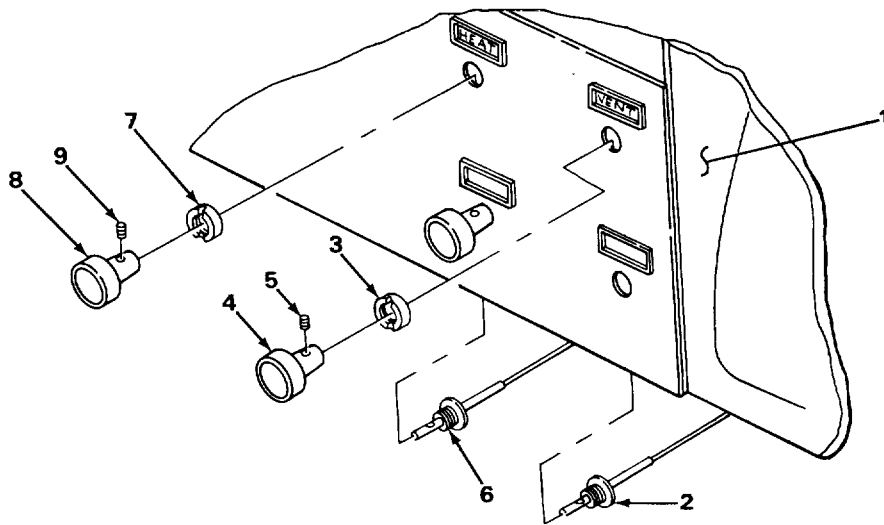
LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
84. Dashboard (1)	Vent control cable (2)	Route into place, and push in.
85. Vent control cable (2) to dashboard (1)	Nut (3)	Screw on, and tighten using hammer and chisel to drive clockwise.
86. Vent control cable (2)	Knob (4) in knob with hole in shaft.	Put onto cable shaft, and line up hole
87. Knob (4) to Vent control cable (2)	Setscrew (5)	Screw in, and tighten using key.
88. Dashboard (1) cable (6)	Heat control	Route into place, and push in.
89. Heat control cable (6) to dashboard (1)	Nut (7)	Screw on, and tighten using hammer and chisel to drive clockwise.
90. Heat control cable (6)	Knob (8)	Put onto cable shaft, and line up hole in knob with hole in shaft.
91. Knob (8) to Heat control cable (6)	Setscrew (9)	Screw in, and tighten using key.
92. FANITEMP switch (10) to terminal L(11)	Red wire (12)	a. Check tag for location. b. Route into place, and plug in.
93. FAN/TEMP switch (10) to terminal H (13)	Orange wire (14)	a. Check tag for location. b. Route into place, and plug in.
94. Dashboard (1)	FAN/TEMP switch (10)	Put into place from behind.

HEATER ASSEMBLY, HEAT CONTROL, AND VENT CONTROL - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION - CONTINUED

- | | | | |
|-----|---------------------------------------|----------------|---|
| 95. | FAN/TEMP switch (10) to dashboard (1) | Nut (15) | Screw on, and tighten using hammer and chisel. |
| 96. | FANITEMP switch (10) | Knob (16) | Aline hole in knob with hole in switch shaft, and put on. |
| 97. | Knob (16) to | Set screw (17) | Screw in. and tighten using kev. |

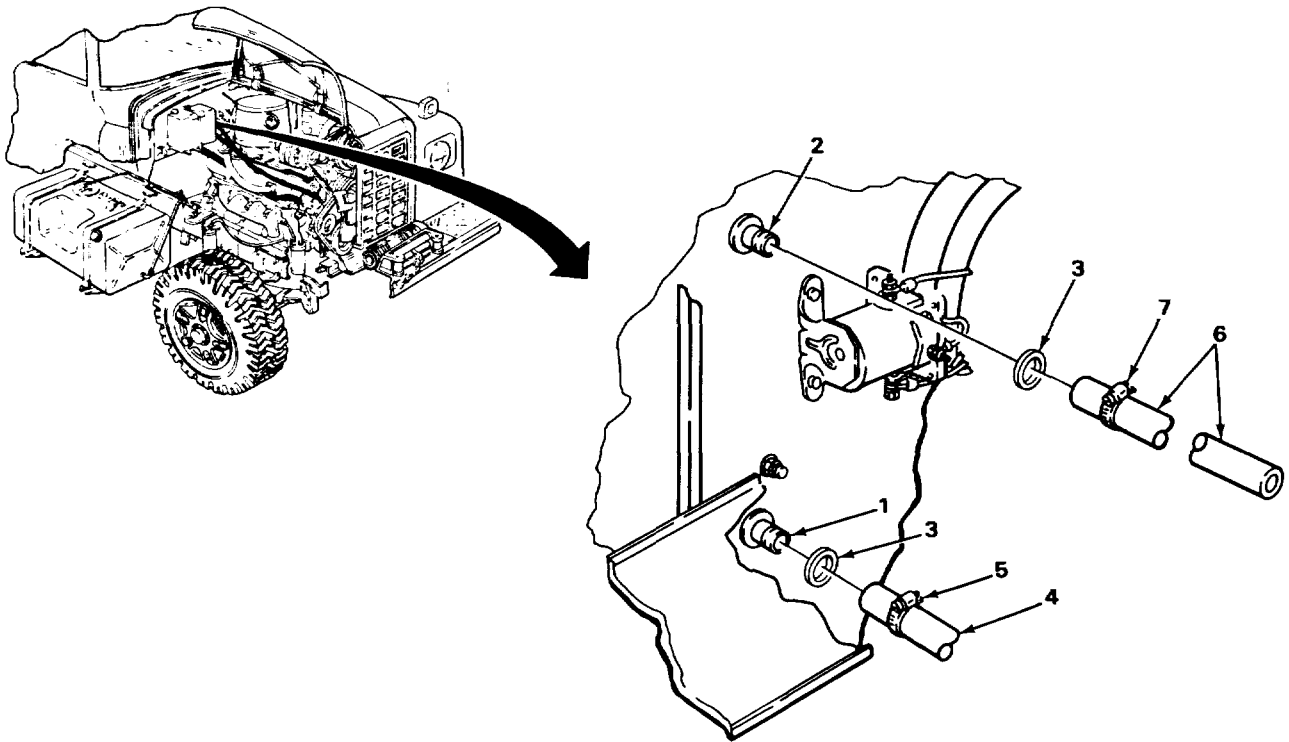


2-1287

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HEATER ASSEMBLY, HEAT CONTROL, AND VENT CONTROL - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
98. Heater nipples (1) and (2)	Two foam grommets (3)	Push on.	
99. Heater nipple (1)	Lower hose (4)	Push on.	
100. Lower hose (4) to nipple (1)	Clamp (5)	a. Put into position. b. Tighten using flat-tip screwdriver.	
101. Heater nipple (2)	Upper hose (6)	Push on.	
102. Upper hose (6) to nipple (2)	Clamp (7)	a. Put in position. b. Tighten using flat-tip screwdriver.	



HEATER ASSEMBLY, HEAT CONTROL, AND VENT CONTROL - CONTINUED

INSTALLATION - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Install defroster duct (page 2-1247).
2. Install surge tank (page 2-223).
3. Fill cooling system (page 2-265).
4. Close left side of hood (page 2-7).
5. Connect battery ground cable (page 2-414).

TASK ENDS HERE

DEFROST CABLE

This task covers:

- a. Removal (page 2-1290)
- b. Installation (page 2-1290)

INITIAL SETUP:

Tools

Chisel, cold, hand, 3/8-inch
 Hammer, hand, ball-peen,
 machinist's
 Key, screw, socket-head, 5/64-inch
 Pliers, long-nose
 Screwdriver, flat-tip,
 3/16-inch

Materials/Parts

Pushnut, defrost cable-to-
 defroster door arm

Personnel Required

One

2-1289

DEFROST CABLE - CONTINUED

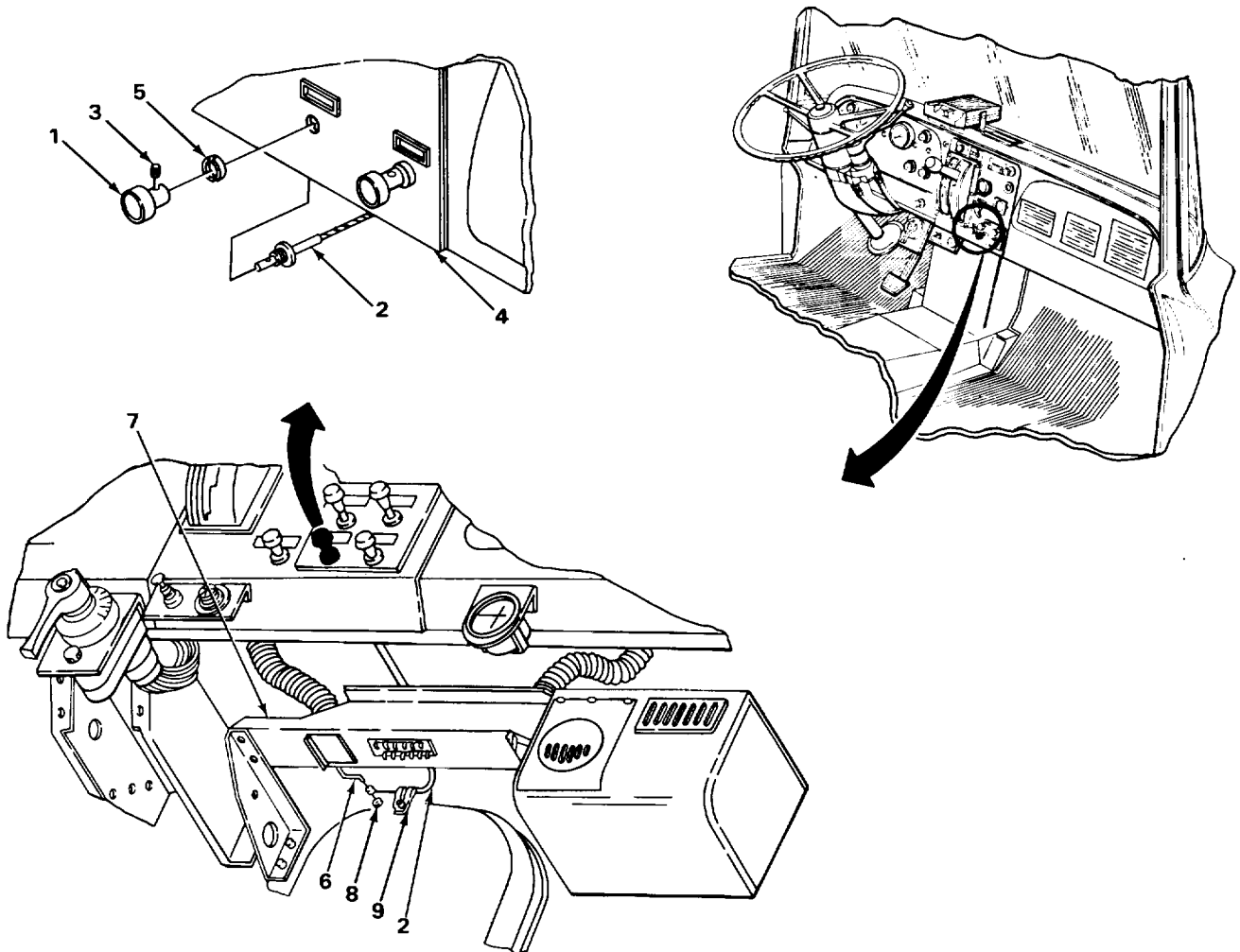
LOCATION	ITEM	ACTION REMARKS
REMOVAL		
1. Knob (1) to DEFROST cable (2)	Setscrew (3)	Using key, unscrew and take out.
2. DEFROST cable (2)	Knob (1)	Take off.
3. DEFROST cable (2) to dashboard (4)	Nut (5)	a. Using hammer and chisel, drive counterclockwise to loosen. b. Unscrew, and take off.
4. Dashboard (4)	DEFROST cable (2)	Take out.
5. DEFROST cable (2) to defroster door arm (6) on defroster duct (7)	Pushnut (8)	a. Using long-nose pliers, squeeze and pull off. b. Get rid of.
6. DEFROST cable (2) to defroster	Clip (9)	Using flat-tip screwdriver, pry out.
7. Defroster door arm (6)	DEFROST cable (2)	Take out, being careful not to snag any wires.
INSTALLATION		
8. Above defroster duct (7)	DEFROST cable (2)	Route into place.
9. Defroster door arm (6)	DEFROST cable (2)	Put loop end of cable (2) onto arm (6).
10. DEFROST cable (2) to defroster door arm (6)	New pushnut (8)	Using long-nose pliers, push on.
11. DEFROST cable (2) to defroster duct (7)	Clip (9)	Push into place.
12. Dashboard (4)	DEFROST cable (2)	Push into place.
13. DEFROST cable (2) to dashboard (4)	Nut (5)	a. Screw on. b. Tighten using hammer and chisel to drive clockwise.

DEFROST CABLE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION - CONTINUED

- | | | |
|-----------------------------------|--------------|----------------------------------|
| 14. DEFROST cable (2) | Knob (1) | Put in place alining holes. |
| 15. Knob (1) to DEFROST cable (2) | Setscrew (3) | Screw in, and tighten using key. |



TASK ENDS HERE

FAN/TEMP SWITCH AND CABLE

This task covers:

- a. Removal (page 2-1292)
- b. Installation (page 2-1292)

INITIAL SETUP:

Tools

Chisel, hand, cold, 3/8-inch
 Hammer, hand, ball-peen,
 machinist's
 Handle, ratchet, 1/4-inch drive
 Key, screw, socket-head, 5/64-inch
 Pliers, slip-joint, straight-nose
 Screwdriver, flat-tip, 3/16-inch
 Socket, 1/4-inch drive, 1/4-inch

Materials/Parts

Pushnut, FAN/TEMP cable-to-
 temperature valve
 Tags, marking (item 29, appendix C)

Personnel Required

One
 Equipment Condition

Battery ground cable disconnected
 (page 2-414).
 Open right side of hood
 (page 2-7).

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

1.	FAN/TEMP cable (1) to valve (2)	Pushnut (3)	a. Using pliers, squeeze and take off. b. Get rid of.
2.	FAN/TEMP cable (1) to pin of valve lever (4)	Clip (5) and screw (6)	Using 1/4-inch socket and handle, unscrew and take off.
3.	Valve (2)	Cable (1)	Take off.

CAUTION

Do not tear or damage grommet when removing from firewall.

FANITEMP SWITCH AND CABLE - CONTINUED

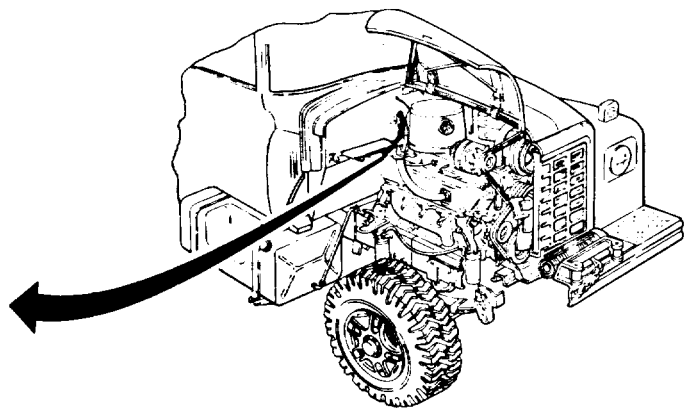
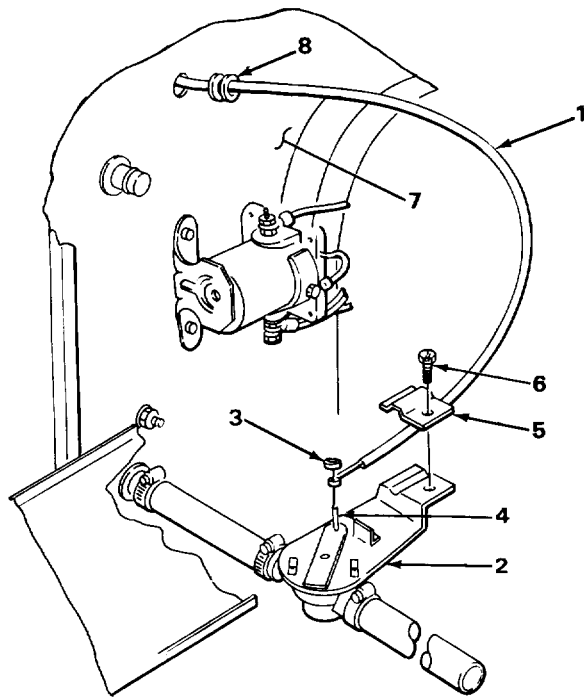
LOCATION	ITEM	ACTION	REMARKS
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REMOVAL - CONTINUED

4. FAN/TEMP cable (1) and firewall (7)

Grommet (8)

a. Using screwdriver, pry out.
b. Take off.

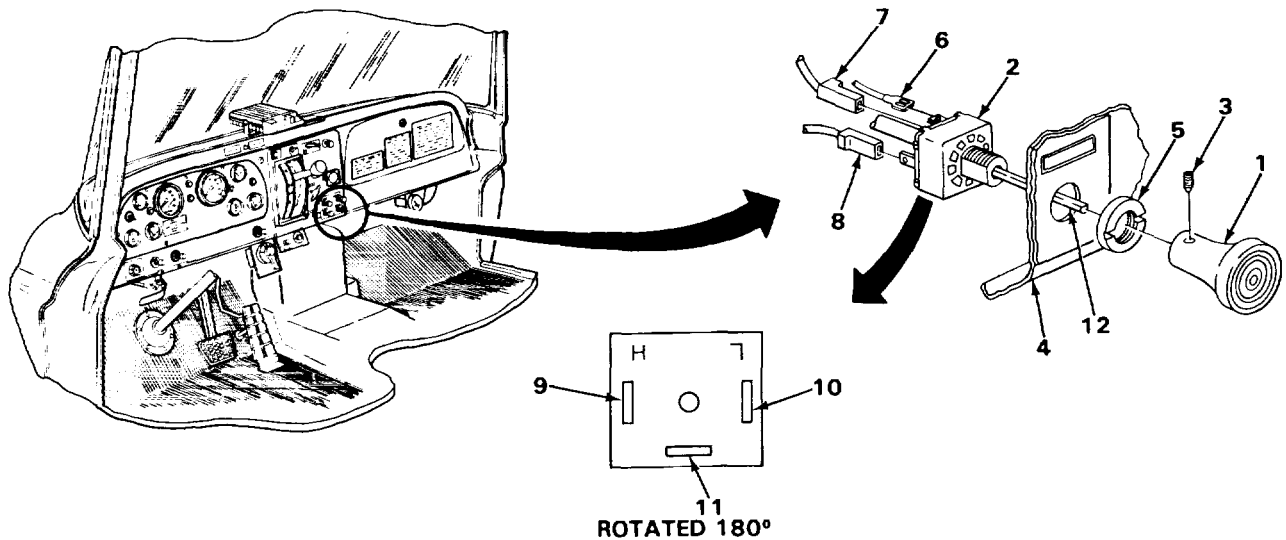


FAN/TEMP SWITCH AND CABLE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
5.	Knob (1) to FAN/TEMP switch (2)	Setscrew (3)	Using key, unscrew and take out.
6.	FAN/TEMP	Knob (1)	Take off.
7.	FAN/TEMP switch (2) to dashboard(4)	Nut (5)	a. Using hammer and chisel, drive counterclockwise to loosen, b. Unscrew, and take off.
8.	Dashboard (4) switch (2)	FAN/TEMP	Take out from behind.
9.	FAN/TEMP switch (2)	Wires (6), (7), and (8)	Tag.
10.	FAN/TEMP switch (2): terminal H (9)	Red wire (6)	Unplug.
11.	Terminal L(10)	Orange wire (7)	Unplug.
12.	Unmarked terminal (11)	Black wire (8)	Unplug.
13	.	FAN/TEMP switch (2)	Take out.
INSTALLATION			
14.		FAN/TEMP switch (2)	a. Route into place over defroster duct and b. Leave switch out of dashboard.
15.	FAN/TEMP switch (2): unmarked terminal (11)	Black wire (8)	Plug in.

FAN/TEMP SWITCH AND CABLE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
16	Terminal L (10)	Orange wire (7)	Plug in.
17	Terminal H (9)	Red wire (6)	Plug in.
18.	FAN/TEMP switch (2)	Wires (6), (7), and (8)	Remove tags.
19.	Dashboard (4)	FAN/TEMP switch (2)	Put into place.
20.	FAN/TEMP switch (2) to dashboard (4)	Nut (5)	a. Screw on. b. Tighten using hammer and chisel to drive clockwise.
21.	FAN/TEMP switch (2)	Knob (1)	Put on alining holes.
22.	Knob (1) to FAN/TEMP switch (2)	Set screw (3)	Screw in, and tighten using key.

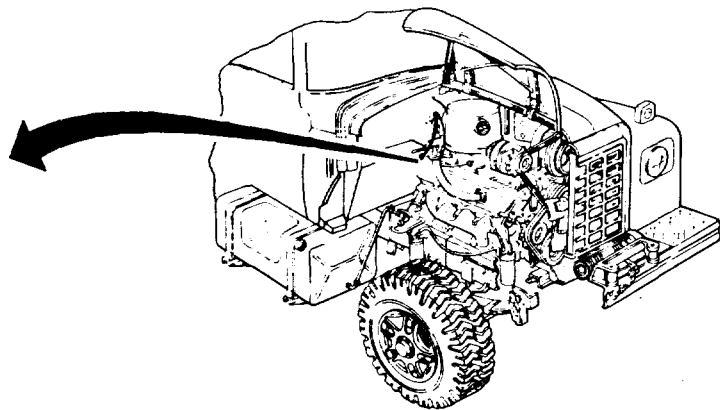
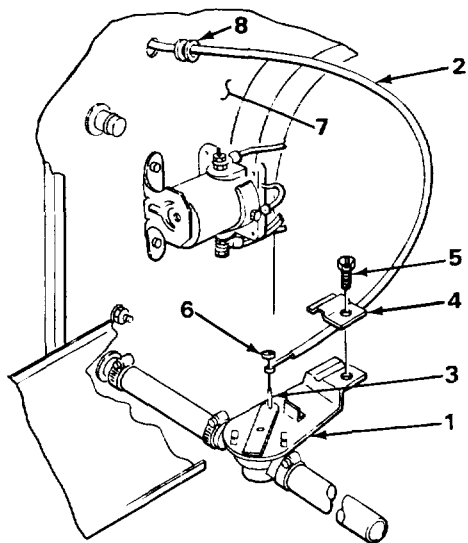


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FANITEMP SWITCH AND CABLE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
23. Valve (1) cable (2)	FAN/TEMP	Put in place with loop on end of cable on pin of valve lever (3).	
24. Cable (2) to valve (1)	Clip (4)	Put over cable (2) and onto valve (1) so cable (2) is in groove.	
25. Clip (4) to valve (1)	Screw (5)	Screw in, and tighten using 1/4-inch socket and handle.	
26. Cable (2) to valve (1)	Push nut (6)	Using pliers, push onto pin of valve lever (3).	
27. Firewall (7) and cable (2)	Grommet (8)	Push into place using screwdriver.	



NOTE

FOLLOW-ON MAINTENANCE:

1. Close right side of hood (page 2-7).
2. Connect battery ground cable (page 2-414).

TASK ENDS HERE

UPPER HEATER HOSE

This task covers:

- a. Removal (page 2-1297)
- b. Installation (page 2-1298)

INITIAL SETUP:

Tools

Pliers, diagonal cutting
 Pliers, slip-joint, straight-nose
 Screwdriver, flat-tip, 3/16-inch

Materials/Parts

Ties, wire, plastic (as required)

Personnel Required

One

Equipment Condition

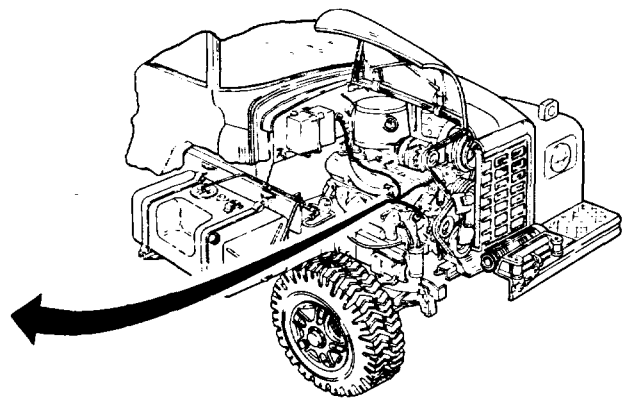
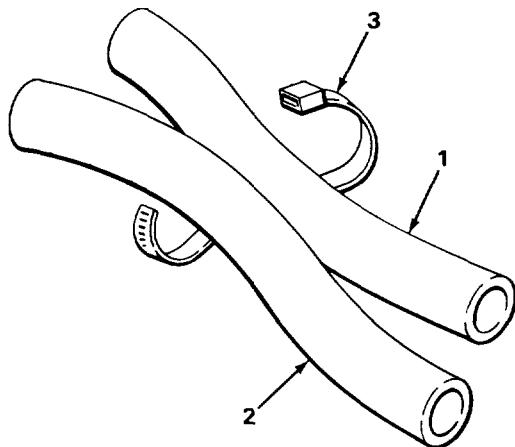
Right side of hood open (page 2-7).
 Air intake hose removed (page 2-247).
 Cooling system drained (page 2-265).

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

REMOVAL

- | | |
|--|------------------|
| 1. Upper heater hose (1) to other hose (2) | Plastic ties (3) |
|--|------------------|

- a. Using diagonal cutting pliers, cut and take off.
- b. Get rid of.



UPPER HEATER HOSE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
2.	Upper heater hose (1) to valve (2)	Clamp (3)	Using screwdriver, unscrew and slide back.
3.	Valve (2) hose (1)	Upper heater	Twist, and pull off.
4.	Upper heater hose (1)	Clamp (3)	Slide off.
5.	Upper heater hose (1) to heater nipple (4)	Clamp (5)	Using screwdriver, unscrew and slide back.
6.	Heater nipple (4) hose (1)	Upper heater	Twist, pull off, and take out.
7.	Upper heater hose (1)	Clamp (5)	Slide off.
INSTALLATION			
8.		Clamp (5)	Slide on.
9.	Heater nipple (4) hose (1)	Upper heater	Push on until seated.
10.	Upper heater hose (1) to nipple (4)	Clamp (5)	a. Put in position. b. Tighten using screwdriver.
11.	Upper heater hose (1)	Clamp (3)	Slide on.
12.	Valve (2) hose (1)	Upper heater	Push on until seated.
13.	Upper heater hose (1) to valve (2)	Clamp (3)	a. Put in position. b. Tighten using screwdriver.

CAUTION

Heater hose must be tied away from exhaust manifold. Hot manifold will damage heater hose causing loss of coolant.

UPPER HEATER HOSE - CONTINUED

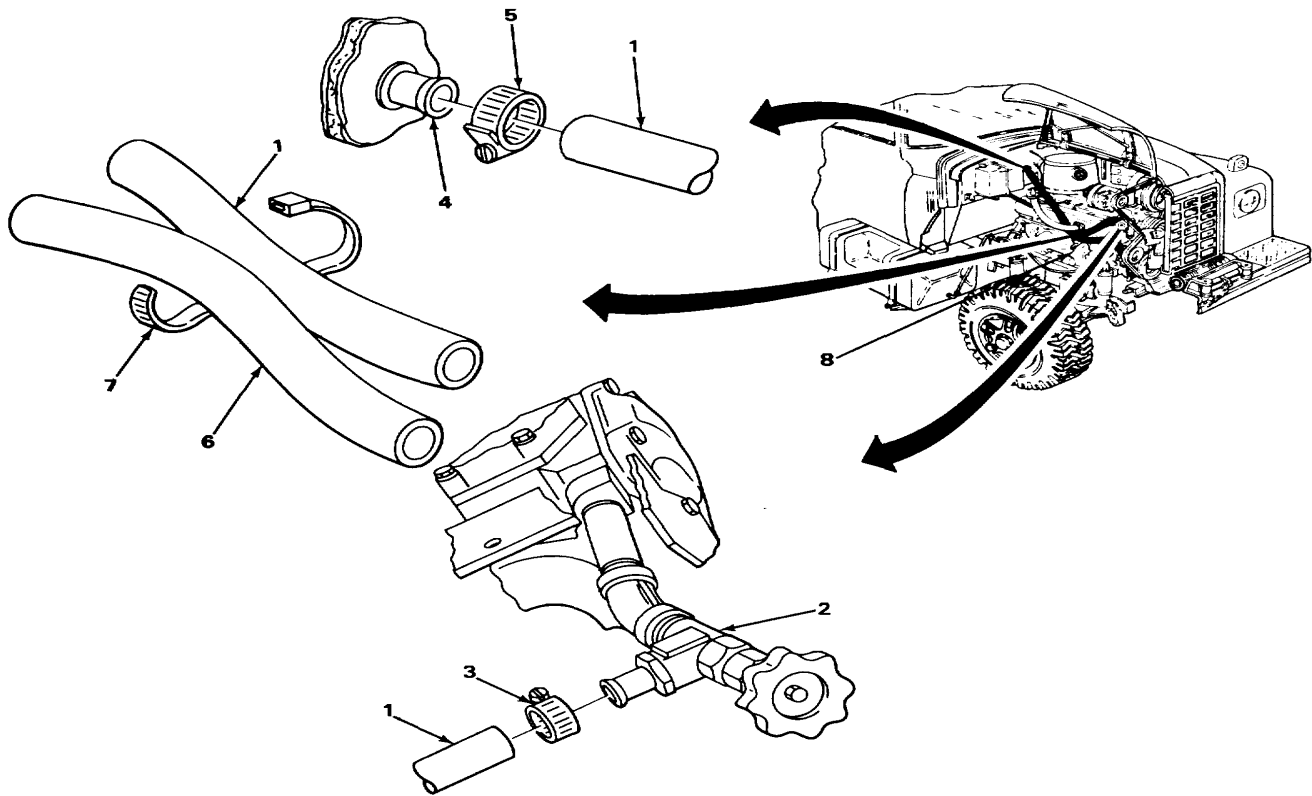
LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION - CONTINUED

14. Heater hose (1) to other hoses (6)

Plastic ties (7)

Using slip-joint pliers, install plastic ties (6) as needed to tie heater hose away from exhaust manifold (8) (page 2-142).



NOTE

FOLLOW-ON MAINTENANCE:

1. Fill cooling system (page 2-265).
2. Install air intake hose (page 2-247).
3. Close right side of hood (page 2-7).

TASK ENDS HERE

LOWER HEATER HOSE AND TEMPERATURE CONTROL VALVE

This task covers:

- a. **Removal (page 2-1300)**
 - b. **Disassembly (page 2-1302)**
 - c. **Assembly (page 2-1303)**
 - d. **Installation (page 2-1304)**
-

INITIAL SETUP:

Tools

- Handle, ratchet, 1/4-inch drive
- Pliers, diagonal cutting
- Pliers, slip-joint, straight-nose
- Screwdriver, flat-tip, 3/16-inch
- Socket, 1/4-inch drive
- Vise, machinist's

Personnel Required

One

Equipment Condition

- Right side of hood open (page 2-7).
- Air intake hose removed (page 2-247).
- Cooling system drained (page 2-265).

Materials/Parts

- Pushnut, FAN/TEMP cable-to-temperature control valve
 - Ties, wire, plastic (as required)
-

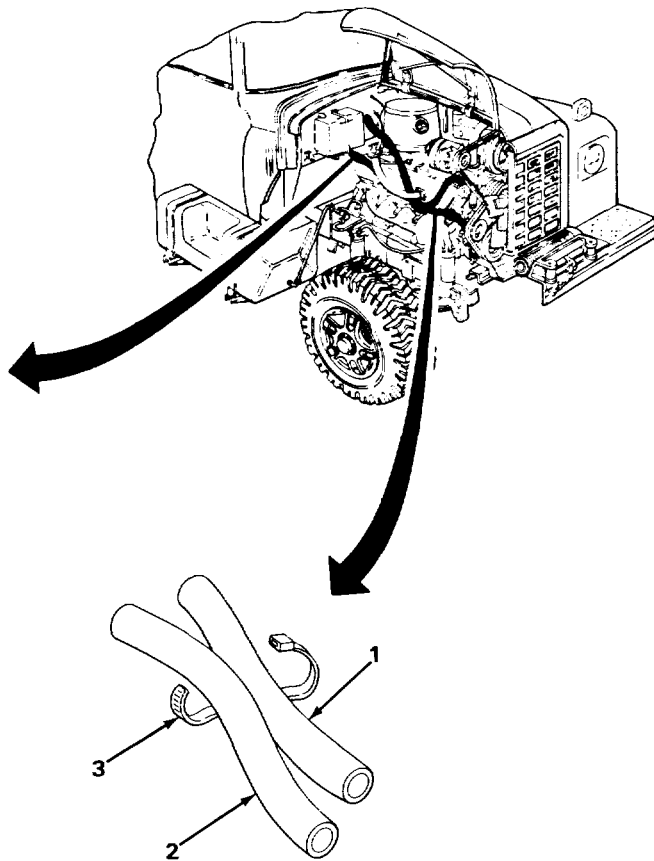
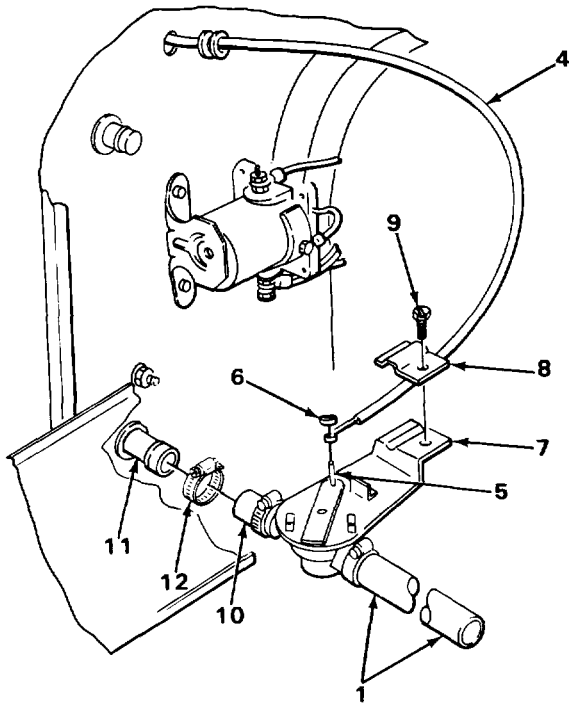
LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

1.	Lower heater hose (1) to hose (2)	Plastic ties (3)	<ul style="list-style-type: none"> a. Using diagonal cutting pliers, cut and take off. b. Get rid of.
2.	FAN/TEMP cable (4) to lever (5)	Pushnut (6)	<ul style="list-style-type: none"> a. Using diagonal cutting pliers, squeeze and take off. b. Get rid of.
3.	Temperature control valve (7)	Clip (8) and screw (9)	Using 1/4-inch socket and handle, unscrew and take off.
4.	Lever (5)	Cable (4)	Take off.

LOWER HEATER HOSE AND TEMPERATURE CONTROL VALVE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
5. Lower heater hose (10) to heater nipple (11)	Clamp (12)	Using flat-tip screwdriver, unscrew and slide back.	
6. Heater nipple (11) hose (10)	Lower heater	Twist, and pull off.	
7. Lower heater	Clamp (12)	Take off.	

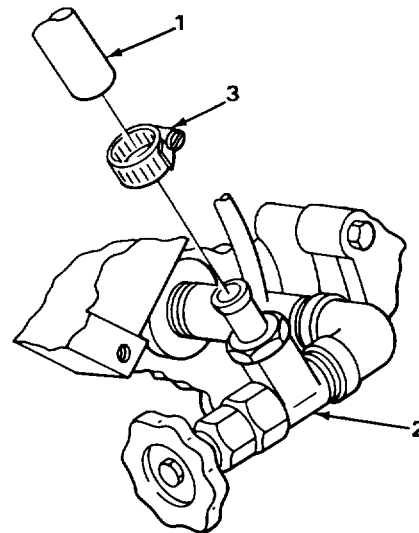
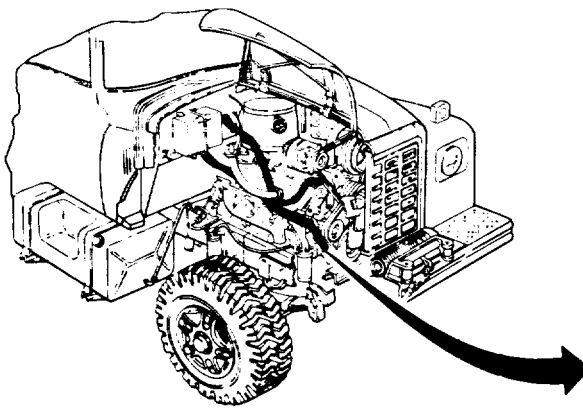


LOWER HEATER HOSE AND TEMPERATURE CONTROL VALVE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL - CONTINUED

- | | | | |
|----|--|-----------------------|---|
| 8. | Lower heater hose (1) to shutoff valve (2) | Clamp (3) slide back. | Using flat-tip screwdriver, unscrew and |
| 9. | Shutoff valve (2) | Lower heater hose (1) | a. Twist, and pull off.
b. Take out. |
| 10 | Lower heater | Clamp (3) | Slide off. |



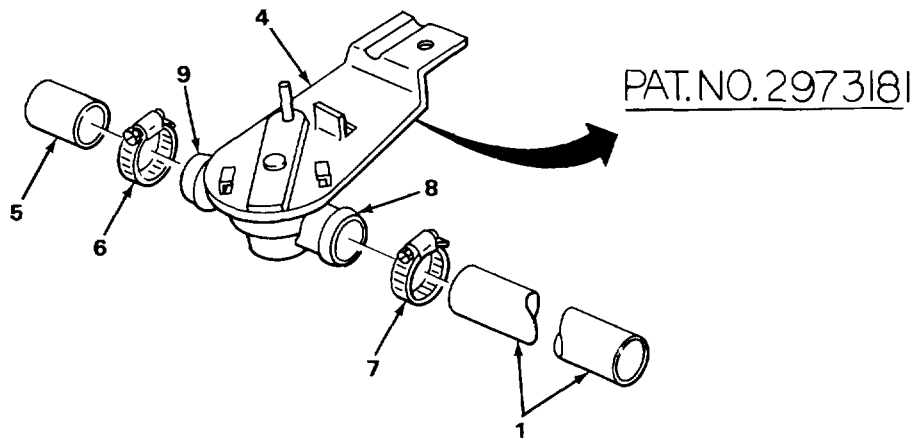
DISASSEMBLY

- | | | | |
|-----|--|-------------------------------|---|
| 11. | | Temperature control valve (4) | Secure in vise. |
| 12. | Lower heater hose (5) to temperature control valve (4) | Clamp (6) slide off. | Using flat-tip screwdriver, unscrew and |
| 13. | Temperature control valve (4) | Lower heater hose (5) | Twist, and pull off. |
| 14. | Lower heater hose (1) to temperature control valve | Clamp (7) slide off. | Using flat-tip screwdriver, unscrew and |

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LOWER HEATER HOSE AND TEMPERATURE CONTROL VALVE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
DISASSEMBLY - CONTINUED			
15.	Temperature control valve (4)	Lower heater hose (1)	Twist, and pull off.
16.	Temperature control valve (4)		Remove from vise.
ASSEMBLY			
17.	Temperature control valve (4)		Secure in vise.
18.	Temperature control valve (4)	Lower heater hose (1)	Push onto valve nipple (8). Use patent number for valve side location.
19.	Lower heater hose (1) to temperature control valve (4)	Clamp (7)	a. Slide onto hose until hose (1) is over valve nipple. b. Tighten using flat-tip screwdriver.
20.	Temperature control valve (4)	Lower heater hose (5)	Push onto valve nipple (9) opposite patent number.
21.	Lower heater hose (5) to temperature control valve (4)	Clamp (6)	a. Slide on. b. Tighten using flat-tip screwdriver.
22.	Temperature control valve (4)		Remove from vise.



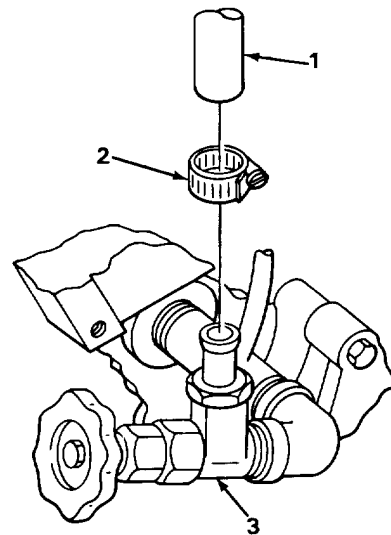
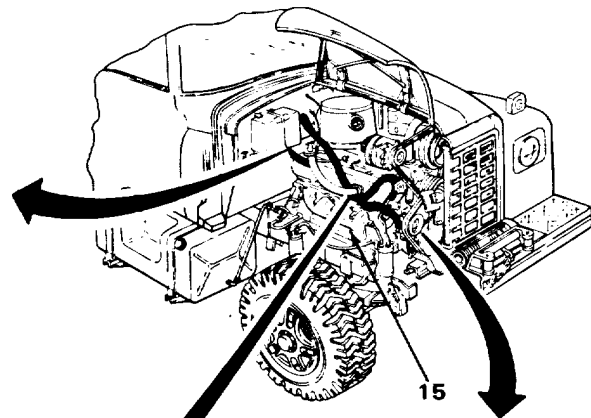
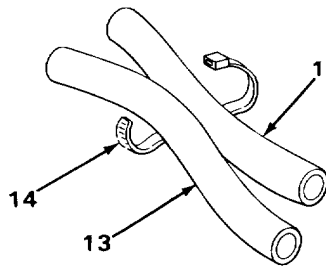
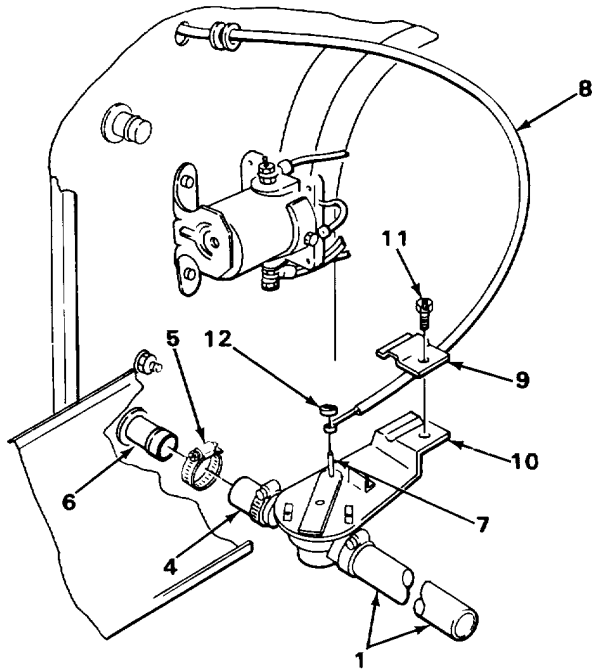
LOWER HEATER HOSE AND TEMPERATURE CONTROL VALVE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
23. Lower heater hose assembly (1)	Clamp (2)	Slide on.
24. Shutoff valve (3)	Lower heater hose (1)	Push on.
25. Lower heater hose (1) to shutoff valve (3)	Clamp (2)	a. Slide into place. b. Tighten using screwdriver.
26. Lower heater hose (4)	Clamp (5)	Slide on.
27. Heater nipple (6) hose (4)	Lower heater	Push on until seated.
28. Lower heater hose (4) to heater nipple (6)	Clamp (5)	a. Slide on. b. Tighten using flat-tip screwdriver.
29. Valve arm pin (7) cable (8)	FAN/TEMP pin (7).	Put loop end onto valve arm
30. FAN/TEMP cable (8) to valve arm pin (7)	Clip (9)	Put in place over cable (8) and on valve arm pin (7), and hold.
31. Clip (9) to temperature control valve (10)	Screw (11)	Screw in, and tighten using 1/4-inch socket and handle.
32.	Pushnut (12)	Push onto valve arm pin (7) using slip-joint pliers.
<u>CAUTION</u>		
Heater hose must be tied away from exhaust manifold as manifold heat will damage hose and cause it to fail.		
33. Lower heater hose (1) to other hose (13)	Plastic ties (14)	Tie hoses (1) and (13) away from exhaust manifold (15) installing plastic ties.

LOWER HEATER HOSE AND TEMPERATURE CONTROL VALVE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION - CONTINUED



FOLLOW-ON MAINTENANCE:

1. Refill cooling system (page 2-265).
2. Install air intake hose (page 2-247).
3. Close right side of hood (page 2-7).

TASK ENDS HERE

TA229671

HEATER SHUTOFF VALVES

This task covers:

- a. Removal (page 2-1036)
- b. Installation (page 2-1307)

INITIAL SETUP:

Tools

Brush, scratch, wire
 Screwdriver, flat-tip, 3/16-inch
 Vise, machinist's
 Wrench, adjustable,
 Wrench, pipe, 1 1/4 to 1-inch

Materials/Parts

Tape, teflon (item 32, appendix C)

Personnel Required

One

Equipment Condition

Right side of hood open (page 2-7).
 Air intake hose removed (page 2-247).
 Cooling system drained (page 2-265).

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LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

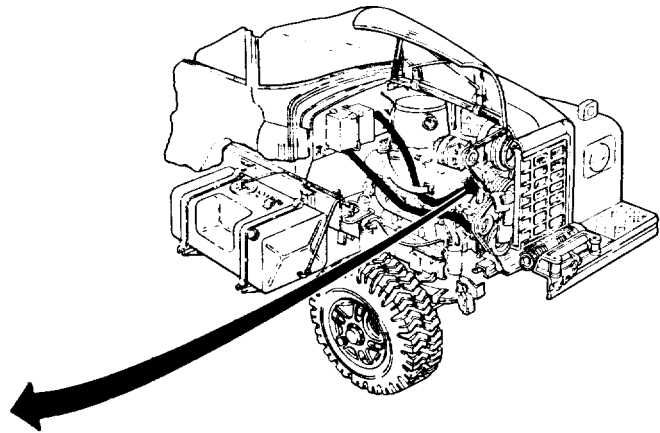
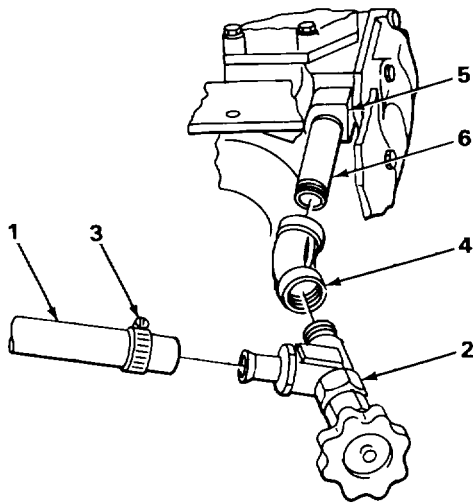
NOTE

The steps in this task are the same for both upper and lower valves, except upper valve uses a 45 degree elbow and lower valve a 90 degree elbow. Upper valve is the example.

1.	Heater hose (1) to valve (2)	Clamp (3)	Using flat-tip screwdriver, unscrew and slide back.
2.	Valve (2)	Hose (1)	Twist, and pull off.
3.	Elbow (4)	Valve (2)	Using pipe wrench and adjustable wrench, unscrew and take out.
4.	Engine (5) elbow (4)	Pipe (6)	Using pipe wrench, unscrew and take out.
5.	Pipe(6)	Elbow (4)	<ul style="list-style-type: none"> a. Secure pipe (6) in vise. b. Using pipe wrench, unscrew elbow (4) and take off. c. Remove pipe (6) from vise.

HEATER SHUTOFF VALVES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
6.	Pipe (6)	a. Clean all old sealer off threads using b. Inspect for stripped or damaged threads and other damage. Replace damaged parts.	
7. Engine (5)	Pipe (6)	a. Wrap inner threads of pipe (6) with b. Screw in, and tighten.	
8. Pipe (6)	Elbow (4)	a. Wrap outer threads of pipe (6) with teflon tape (page 2-142), and screw on. b. Tighten both elbow (4) and pipe (6) with pipe wrench.	
9. Elbow (4)	Valve (2)	a. Wrap threads with teflon tape (page 2-142). b. Screw in, and tighten using adjustable wrench.	
10. Valve (2)	Hose (1)		Push onto valve (2) until seated.



2-1307

TA229672

HEATER SHUTOFF VALVES - CONTINUED

INSTALLATION - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Fill cooling system (page 2-265).
2. Install air intake hose (page 2-247).
3. Close right side of hood (page 2-7).

TASK ENDS HERE

REAR VIEW MIRROR ASSEMBLY

This task covers:

- | | |
|---|---|
| <ol style="list-style-type: none"> a. Removal (page 2-1309) b. Installation (page 2-1312) | <ol style="list-style-type: none"> c. Adjustment (page 2-1316) |
|---|---|
-

INITIAL SETUP:

Tools

- Handle, ratchet, 3/8-inch drive
- Screwdriver, flat-tip, 3/8-inch
- Socket, deep well, 3/8-inch drive, 7/16-inch
- Socket, deep well, 3/8-inch drive, 1/2-inch
- Wrench, box-end, 7/16-inch
- Wrench, box-end, 1/2-inch

Materials/Parts

- Lockwasher, convey mirror-to-mirror head
- Lockwasher, mirror brackets-to-cab (five required)
- Lockwasher, mirror holder bracket-to-upper support bracket
- Lockwasher, mirror holder bracket-to-lower support bracket
- Lockwasher, mirror head to mounting screw
- Lockwasher, mirror holder bracket-to-upper and lower support brackets (two required)

Personnel Required

One

REAR VIEW MIRROR ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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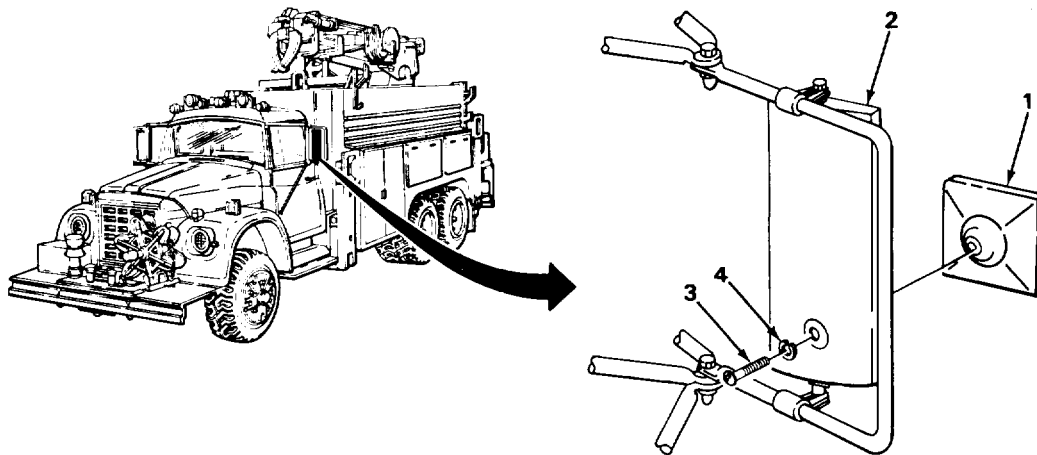
REMOVAL

NOTE

Assistant is not needed except for ADJUSTMENT.

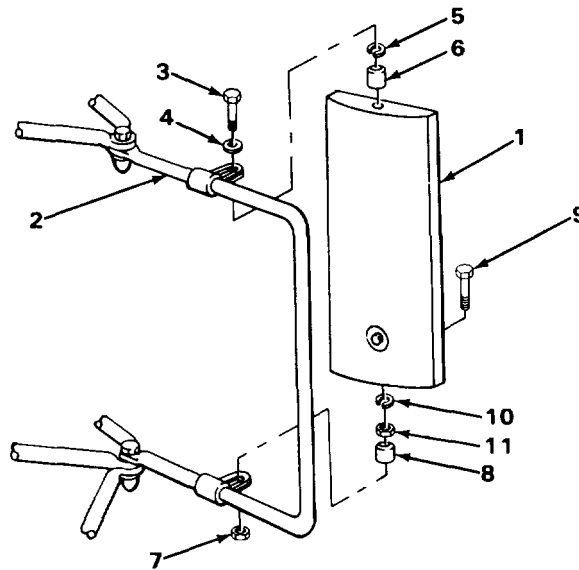
Except as noted, the steps in this task are the same for both right and left rear view mirror assemblies. The left rear view mirror assembly is used as the example.

- | | | |
|---|------------------------------|---|
| 1. Convey mirror (1) to mirror head (2) | Screw (3) and lockwasher (4) | a. Using flat-tip screwdriver, unscrew and take out.
b. Get rid of lockwasher (4). |
| 2. Mirror head (2) | Convey mirror (1) | Take out. |



REAR VIEW MIRROR ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
3.	Mirror head (1) to mirror holder bracket (2)	Screw (3) and washer (4)	Holding mirror (1), using 7/16-inch socket and handle, unscrew and take out.
4.	Between mirror head (1) and mirror holder bracket (2)	Lockwasher (5) and spacer (6)	Holding mirror (1), take out.
5.	Mirror head (1) to mirror holder bracket (2)	Nut (7)	Holding mirror (1), using 7/16-inch socket and handle, unscrew and take off.
6.	Mirror holder bracket (2)	Mirror (1) and spacer (8)	Take out together.
7.	Screw (9)	Spacer (8)	Take off.
8.	Mirror head (1) and lockwasher (10)	Screw (9), nut (11),	a. Using 7/16-inch wrench, 7/16-inch socket, and handle, unscrew and take

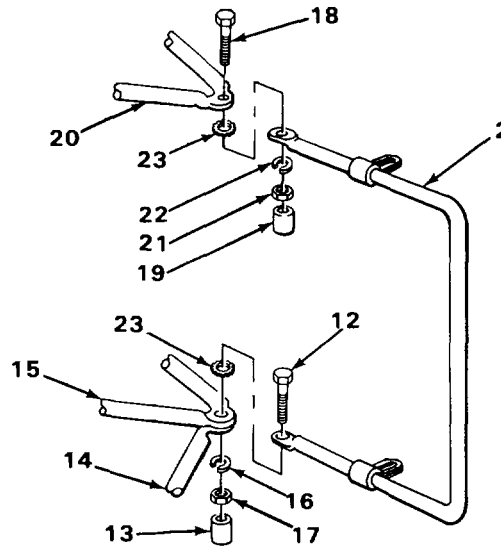


2-1310

TA229674

REAR VIEW MIRROR ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
9.	Screw (12)	Dome nut (13)	Unscrew, and take off by hand.
10.	Mirror holder bracket (2) to brace (14) and lower support bracket (1 5)	Screw (12), small lockwasher (16), and nut (17)	a. Using 1/2-inch wrench, 1/2-inch socket, and handle, unscrew and take out. b. Get rid of lockwasher (16).
11.	Screw (18)	Dome nut (19)	Unscrew, and take off by hand.
12.	Mirror holder bracket (2) to uppersupport bracket (20)	Screw (18), nut (21), and small lockwasher (22)	a. Using 1/2-inch wrench, 1/2-inch socket, and handle, unscrew and take out. b. Get rid of lockwasher (22).
13.	Upper support bracket (20) and lower support	Mirror holder bracket (2) and two big lockwashers (23)	a. Take out. b. Get rid of lockwashers (23).

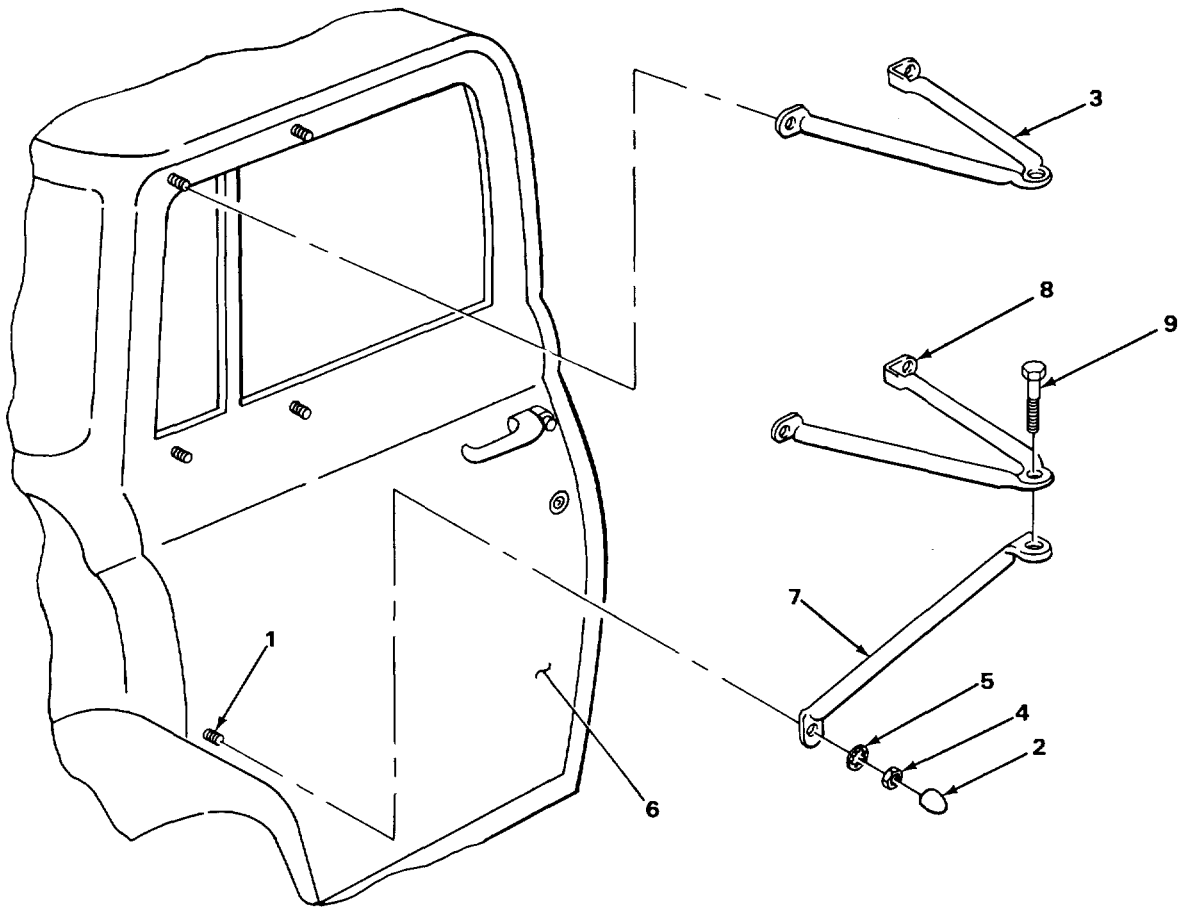


REAR VIEW MIRROR ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION REMARKS	
REMOVAL - CONTINUED			
14.	Five weld screws (1)	Five dome nuts (2)	Unscrew by hand, and take off.
15.	Upper support bracket (3)	Two nuts (4) and lockwashers (5)	a. Using 7/16-inch socket and handle, unscrew and take off. b. Get rid of lockwashers (5).
16.	Door (6)	Upper support bracket (3)	Take off.
17.	Brace (7) to door (6)	Nut (4), lockwasher (5), and brace (7)	a. Using 7/16-inch socket and handle, unscrew and take off. b. Get rid of lockwasher (5).
18.	Lower support bracket (8) to door (6)	Two nuts (4) and lockwasher (5)	a. Using 7/16-inch socket and handle, unscrew and take off. b. Get rid of lockwashers (5).
19.	Door (6)	Lower support bracket (8)	Take off.
INSTALLATION			
20.		Lower support bracket (8)	Put in place, and hold.
21.	Lower support bracket (8) to door (6)	Two new lockwashers (5) and nuts (4)	Screw on, and tighten using 7/16-inch socket and handle.
22.	Door (6)	Brace (7)	Put in place.
23.		Brace (7) and lower support bracket (8)	Use support bracket-to-mirror holder bracket screw (9) to aline brace (7) and bracket (8).
24.	Brace (7) to door (6)	New lockwasher (5) and nut (4)	Screw on, and tighten using 7/16-inch socket and handle.

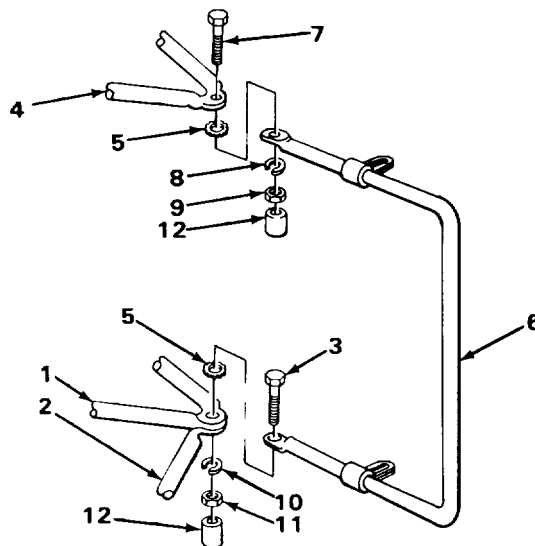
REAR VIEW MIRROR ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
25. Door (6)	Upper support bracket (3)	Put in place, and hold.	
26. Upper support bracket (3) to door (6)	Two new lockwashers (5) and nuts (4)	Screw on, and tighten using 7/16-inch socket and handle.	
27. Five weld	Five dome nuts (2)	Screw on, and tighten.	



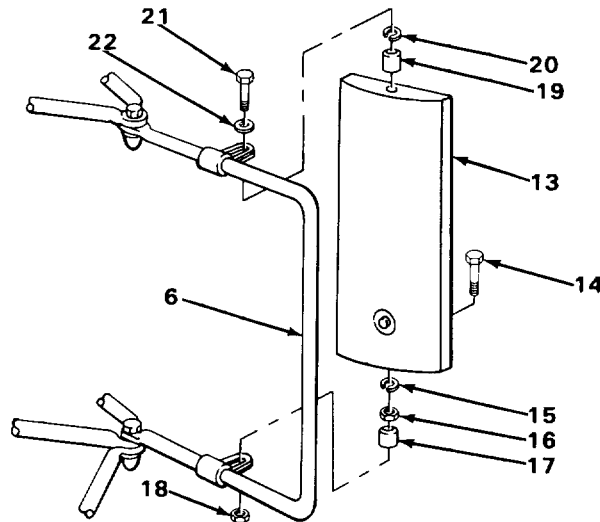
REAR VIEW MIRROR ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
28. Lower support bracket (1) and brace (2)	Screw (3)	Take out.	
29. Upper support (4) and lower support bracket (1)	Two new big lockwashers (5) and mirror holder bracket (6)	Put in place.	
30. Mirror holder bracket (6) to upper support bracket (4)	Screw (7), new lockwashers (8), and nut (9)	Screw in, and tighten using 1/2-inch wrench, 1/2-inch socket, and handle.	
31. Mirror holder bracket (6) to lower support (1) and brace (2)	Screw (3), new small lockwasher (10), and nut (11)	Screw in, and tighten using 1/2-inch wrench, 1/2-inch socket, and handle.	



REAR VIEW MIRROR ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
33. Mirror head (13)	Screw (14), new lockwasher (15), and nut (16)	Screw in, and tighten using 7/16-inch socket, handle, and 7/16-inch wrench.
34. Screw (14)	Spacer (17)	Put on, and hold.
35. Mirror holder bracket (6)	Mirror head (13) and spacer (17)	Put in place, and hold.
36. Mirror head (13) to mirror holder bracket (6)	Nut (18)	Screw on, and tighten using 7/16-inch socket and handle.
37. Between mirror head (13) and bracket (6)	Spacer (19) and washer (20)	Holding mirror (13) upright, put in place and hold.
38. Mirror head (13) to bracket (6)	Screw (21) and washer (22)	Screw in, and tighten using 7/16-inch socket and handle.



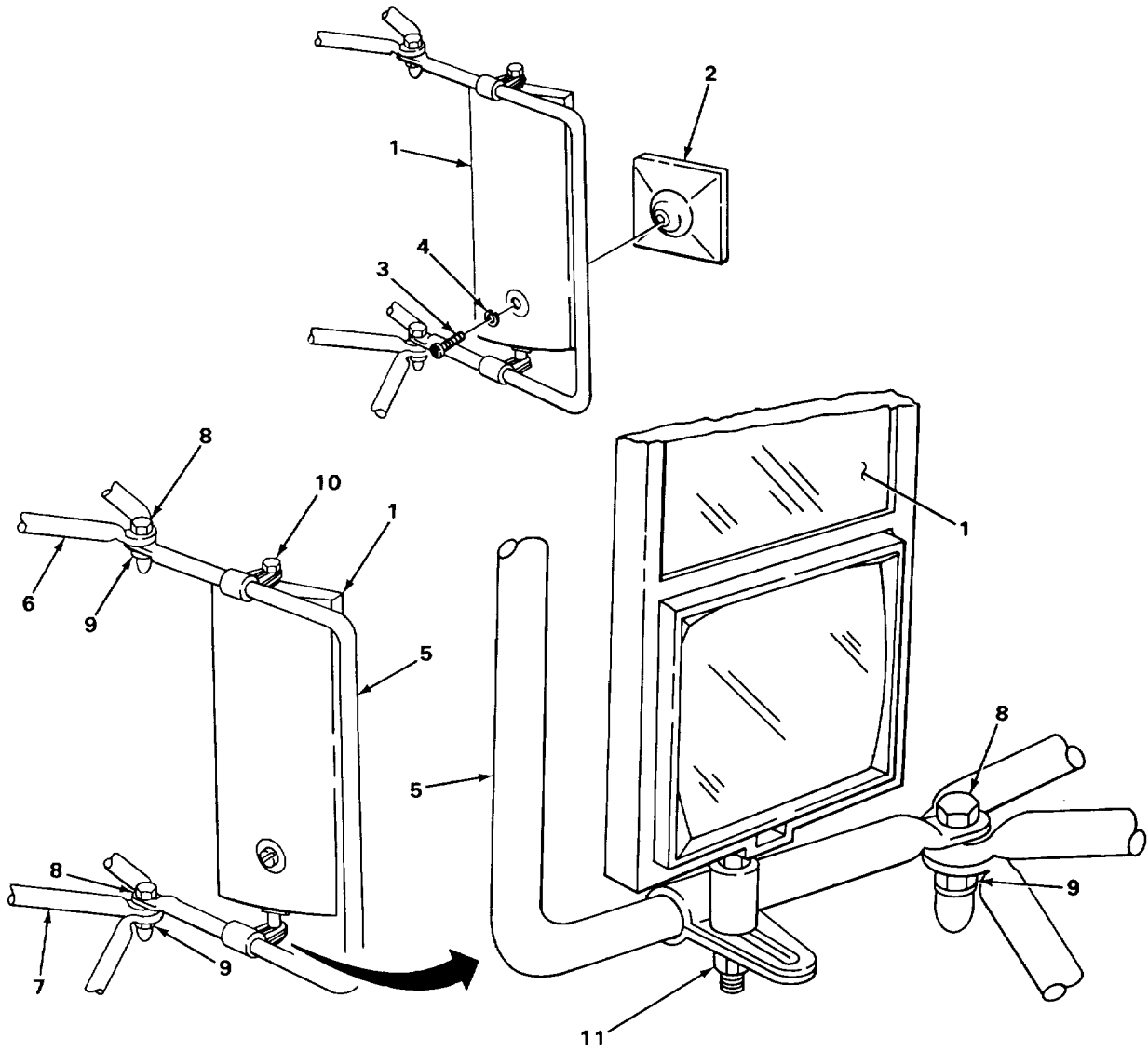
REAR VIEW MIRROR ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
39. Mirror head (1)	Convey mirror (2)	Put in place.	
40. Convey mirror (2) to mirror head (1)	Screw (3) and new lockwasher (4)	Screw in, and tighten using flat-tip screwdriver.	
NOTE			
If possible, have regular operator help in adjustment of mirrors from driver's seat.			
ADJUSTMENT			
41. Left mirror holder bracket (5) to support brackets (6) and (7)	Two screws (8) and nuts (9)	Loosen using 1/2-inch wrench, 1/2-inch socket, and handle.	
42. Mirror head (1) to mirror holder bracket (5)	Screw (10)	Loosen using 7/16-inch socket and handle.	
43.	Nut (11)	Loosen using 7/16-inch socket and handle.	
44.	Mirror head (1) and mirror holder bracket (5)	Adjust as necessary.	

2-1316

REAR VIEW MIRROR ASSEMBLY - CONTINUED

ADJUSTMENT - CONTINUED



2-1317

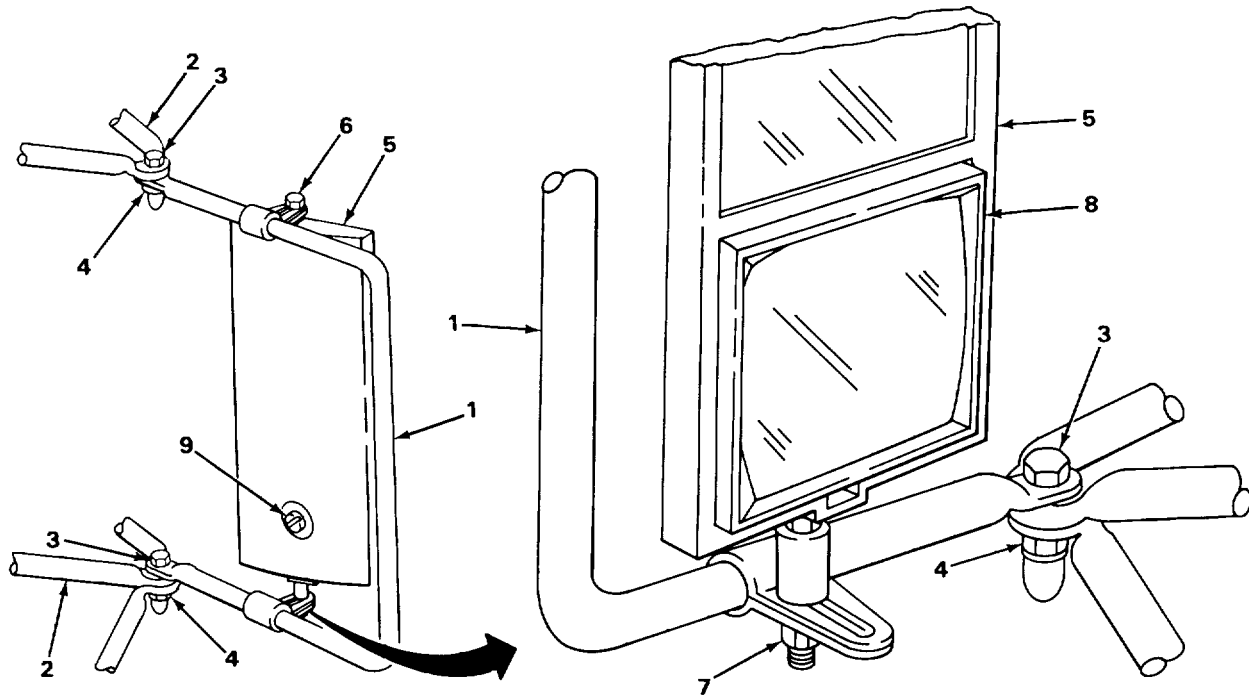
TA229679

REAR VIEW MIRROR ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
ADJUSTMENT - CONTINUED			
45. Mirror holder bracket (1) to support brackets (2)	Two screws (3) and nuts (4)	Tighten using 1/2-inch wrench, 1/2-inch socket, and handle, making sure not to change adjustment.	
46. Mirror head (5) to mirror holder bracket (1)	Screw (6)	Tighten using 7/16-inch socket and handle, making sure not to change adjustment.	
47.	Nut (7)	Tighten using 7/16-inch socket and handle, making sure not to change adjustment.	
48. Convey mirror (8) to mirror head (5)	Screw (9)	Using flat-tip screwdriver, loosen.	
49.	Convey mirror (8)	Adjust to operator's satisfaction.	
50.	Screw (9)	Tighten using flat-tip screwdriver, making sure not to change adjustment.	
51.	Right mirror Assembly	Repeat steps 41 to 46.	

REAR VIEW MIRROR ASSEMBLY - CONTINUED

ADJUSTMENT - CONTINUED



TASK ENDS HERE

AIR HORN VALVE

This task covers:

- a. Removal (page 2-1320)
- b. Installation (page 2-1322)

INITIAL SETUP:

Tools

Hammer, plastic
 Pliers, long-nose
 Pliers, slip-joint, straight-nose
 Screwdriver, cross-tip,
 number two
 Wrench, open-end, 7/16-inch
 Wrench, open-end, 9/16-inch

Materials/Parts

Detergent, liquid (item 11, appendix C)

Personnel Required

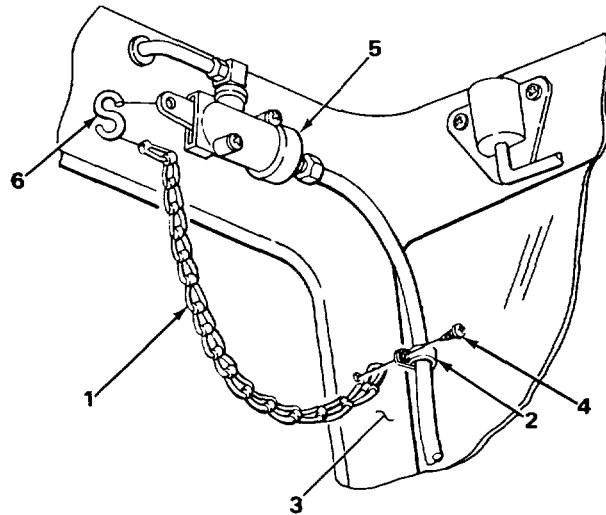
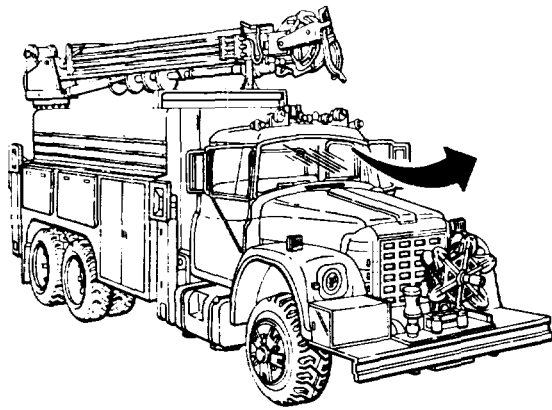
One

Equipment Condition

Air reservoirs drained (page 2-106).

AIR HORN VALVE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1. Chain (1) and air line clip (2) to pillar (3)	Screw (4) and chain (1)	Using cross-tip screwdriver, unscrew and take off.	
2. Chain (1) to valve (5)	S-hook (6) and chain (1)	a. Using slip-joint pliers, hold S-hook (6) b. Using long-nose pliers, spread S-hook (6). c. Take off valve (5).	
3. Chain (1)	S-hook (6)	a. Using slip-joint pliers, hold S-hook (6) b. Using long-nose pliers, spread S-hook (6).	



AIR HORN VALVE - CONTINUED

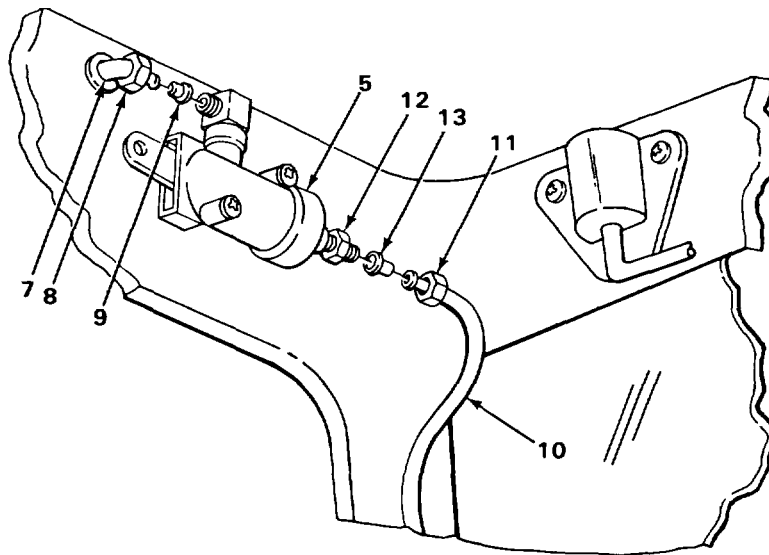
LOCATION	ITEM	ACTION	REMARKS
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REMOVAL - CONTINUED

NOTE

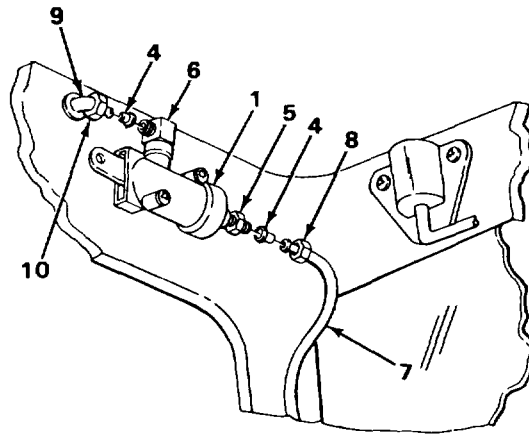
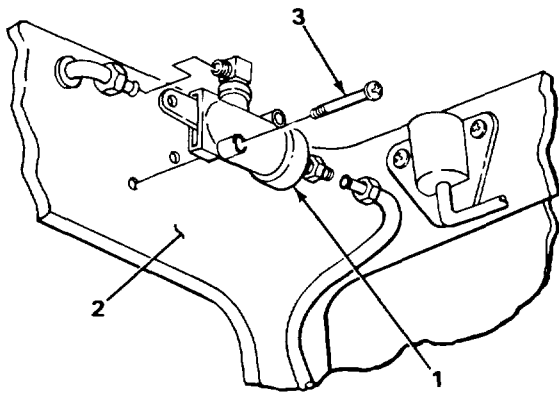
Air line inserts may stay in either hose or valve.

- | | | | |
|----|----------------------------------|---------------------|--|
| 4. | Upper air line (7) to valve (5) | Nut (8) | Using 9/16-inch open-end wrench, unscrew and pull back. |
| 5. | Valve (5) | Upper air line (7) | Pull out. |
| 6. | Valve (5) or upper air line (7) | Insert (9) | Using long-nose pliers, pull out. |
| 7. | Front air line (10) to valve (5) | Nut (11) | a. Using 7/16-inch wrench, hold fitting (12).
b. Using 9/16-inch wrench, unscrew nut and pull back. |
| 8. | Valve (5) | Front air line (10) | Pull out. |
| 9. | Valve (5) or front | Insert (13) | Using long-nose pliers, pull out. |



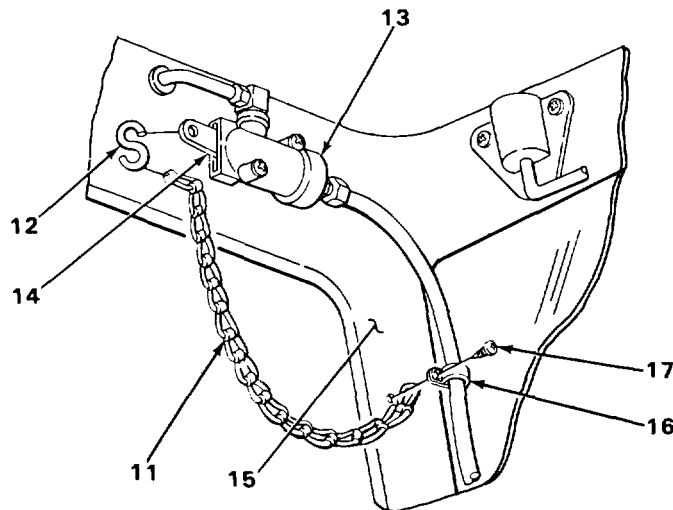
AIR HORN VALVE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
10. Valve (1) to cab (2)	Two screws (3) and valve (1)	Using cross-tip screwdriver, unscrew and take out.	
11. Valve (1)	Two screws (3)	Take out.	
INSTALLATION			
12. Cab (2)	Valve (1)	Put in place, and hold.	
13. Valve (1) to cab (2)	Two screws (3) screwdriver.	Screw in, and tighten using cross-tip	
14. Valve (1)	Two inserts (4)	a. Push into fittings (5) and (6). b. Seat using hammer.	
15.	Front air line (7)	Rub lightly with detergent, and push into fitting (5) until seated.	
16. Front air line (7) to valve (1)	Nut (8)	Screw on, and tighten using 9/16-inch wrench.	
17. Valve (1)	Upper air line (9)	Rub lightly with detergent, and push into fitting (6) until seated.	



AIR HORN VALVE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
19. Chain (11)	S-hook (12)	a. Put onto end of chain (11). b. Hold S-hook (12) with slip joint pliers. c. Using long-nose pliers, close end of S-hook on chain.
20. Valve (13)	S-hook (12) and chain (11)	a. Hook onto valve arm (14). b. Hold S-hook (12) with slip-joint pliers. c. Using long-nose pliers, close S-hook on valve arm.
21. Windshield pillar (15)	Chain (11) and air line clip (16)	Put in place, and hold.
22. Chain (11) and air line clip (16) to windshield pillar (15)	Screw (17)	Screw in, and tighten using cross-tip screwdriver.



AIR HORN VALVE - CONTINUED

INSTALLATION - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE: Pressurize air system (TM9-2320-269-10), and check for leaks.

TASK ENDS HERE

AIR HORN

This task covers:

- a. Removal (page 2-1325)
- b. Repair (page 2-1326)

- c. Installation (page 2-1328)
-

INITIAL SETUP:

Tools

- Brush, scratch, wire
- Hammer, plastic
- Handle, ratchet, 3/8-inch drive
- Pliers, long-nose
- Screwdriver, cross-tip, number two
- Screwdriver, flat-tip, 3/8-inch 7/16-inch
- Wrench, box-end, 7/16-inch
- Wrench, box-end, 5/8-inch
- Wrench, box-end, 9/16-inch
- Wrench, pipe, 1/4 to 1-inch

Materials/Parts

- Detergent, liquid (item 11, appendix C)
- Gasket, bell pedestal-to-cab
- Gasket, horn-to-cab
- Lockwasher, bell pedestal-to-cab
- Tape, teflon (item 32, appendix C)

Personnel Required

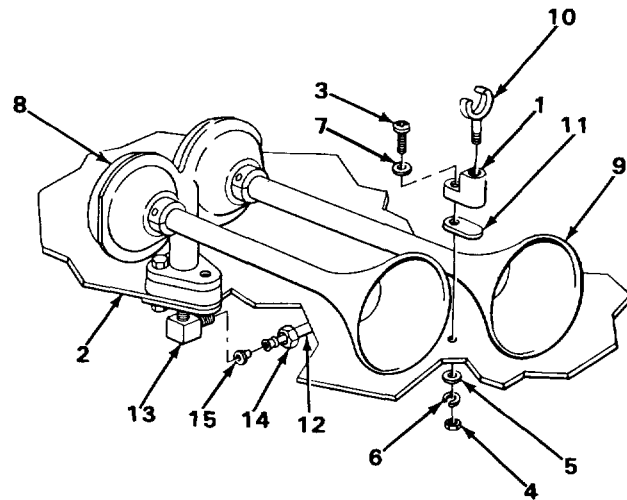
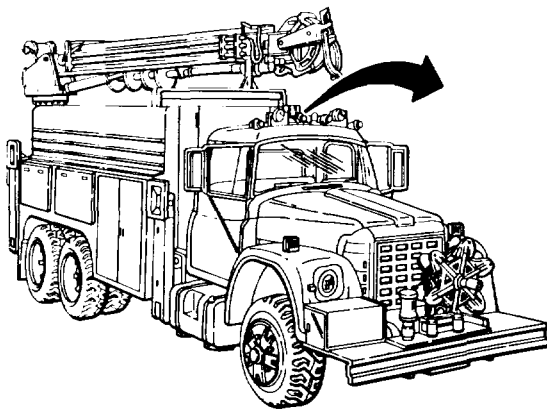
Two

Equipment Condition

- Headlining panels removed (page 2-838).
- Air reservoirs drained (page 2-106).

AIR HORN - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1. Pedestal (1) to cab (2)	Screw (3)	Have assistant hold screw (3) using cross-tip screwdriver.	
2. Screw (3)	Nut (4), washer (5), and lockwasher (6)	a. Using 7/16-inch socket and handle, unscrew and take off. b. Get rid of lockwasher (6).	
3. Pedestal (1) washer (7)	Screw (3) and	Have assistant take out.	
4. Horn (8)	Pedestal (1)	Have assistant slide back along long bell (9), and take off.	
5. Pedestal (1)	Grommet (10)	Take out.	
6. Cab roof (2)	Gasket (11)	Have assistant peel off.	
7. Air line (12) to elbow (13)	Nut (14)	Using 9/16-inch wrench, unscrew and pull back.	
8. Air line (12) or elbow (13)	Insert (15)	Using long-nose pliers, pull out.	



AIR HORN - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL- CONTINUED			
9.	Nipple (1)	Elbow (2)	Using 5/8-inch wrench, unscrew and take off.
10.	Horn (3) to cab (4)	Three screws (5)	Have assistant use 7/16-inch wrench, to hold.
11.	Three screws (5) reinforcement (7)	Three nuts (6) and unscrew and take off.	Using 7/16-inch socket and handle,
12.	Horn (3) and cab (4)	Three screws (5)	Have assistant take out.
13.	Gasket (8)	Horn (3)	Have assistant take off.
14.	Cab roof (4)	Gasket (8)	a. Have assistant take off. b. Get rid of.
15.	Horn (3)	Nipple (1)	a. Using pipe wrench, unscrew and take off. b. Using wire brush, clean threads.

REPAIR

NOTE

Air horn is repaired by replacing damaged bell. Bells may be replaced either with horn installed or removed. On truck, long bell is supported by pedestal, short bell is not. Otherwise, steps are the same for both long and short bell, on or off truck. Long bell, used as the example.

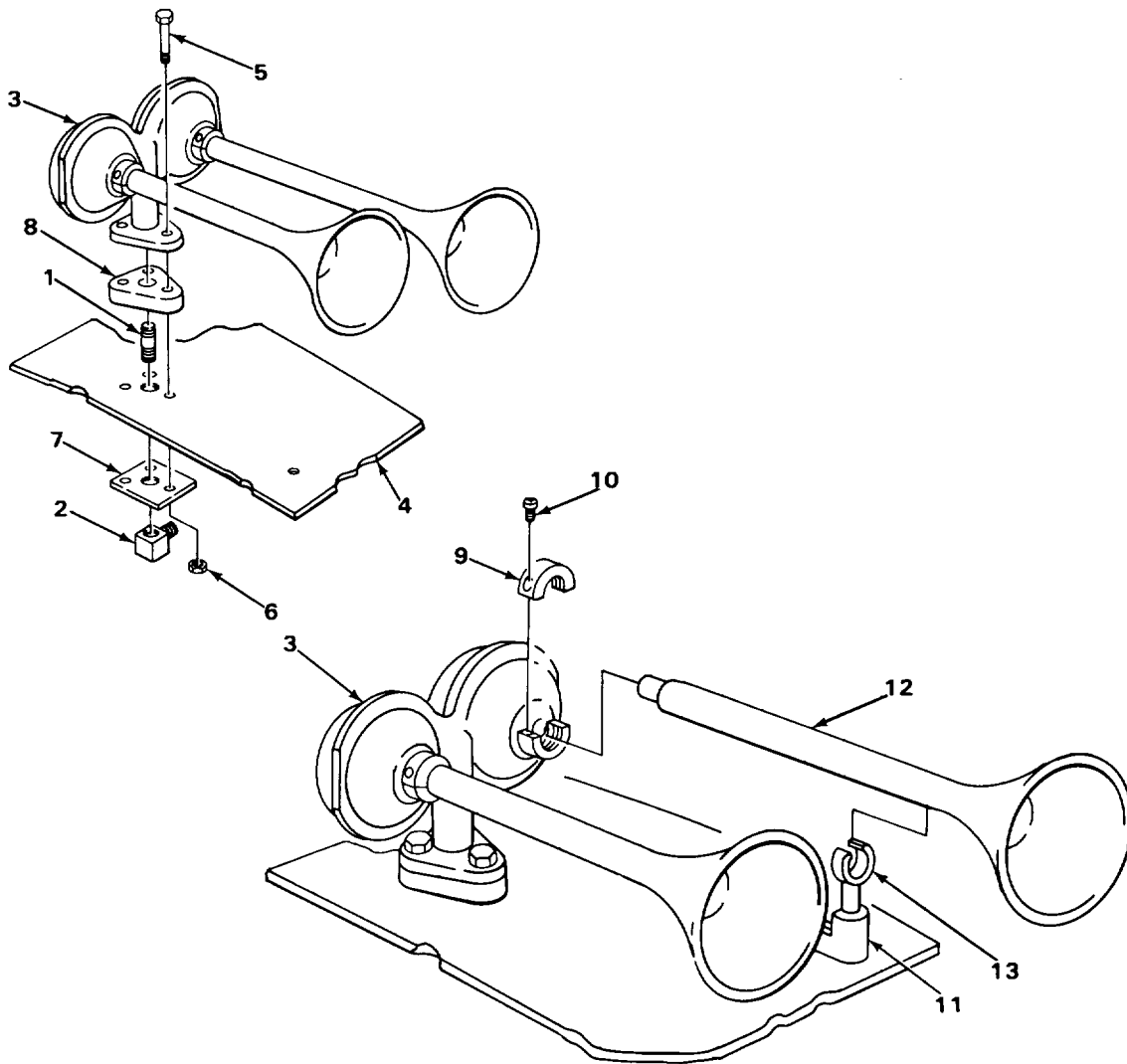
16.	Bell clamp (9) to horn (3)	Two screws (10)	Using flat-tip screwdriver, unscrew and take out.
17.	Horn (3)	Bell clamp (9)	Take off.
18.	Horn (3) and pedestal (11)	Bell (12)	Pull out.
19.	Bell (12)		Making sure grommet (13) is in place, push bell into place in horn (3) and pedestal (11).

AIR HORN - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

REPAIR - CONTINUED

- | | | | |
|--------------------|-----------------|---|--|
| 20. Horn (3) | Bell clamp (9) | Put into place. | |
| 21. Bell clamp (9) | Two screws (10) | Screw in, and tighten using flat-tip screwdriver. | |



AIR HORN - CONTINUED

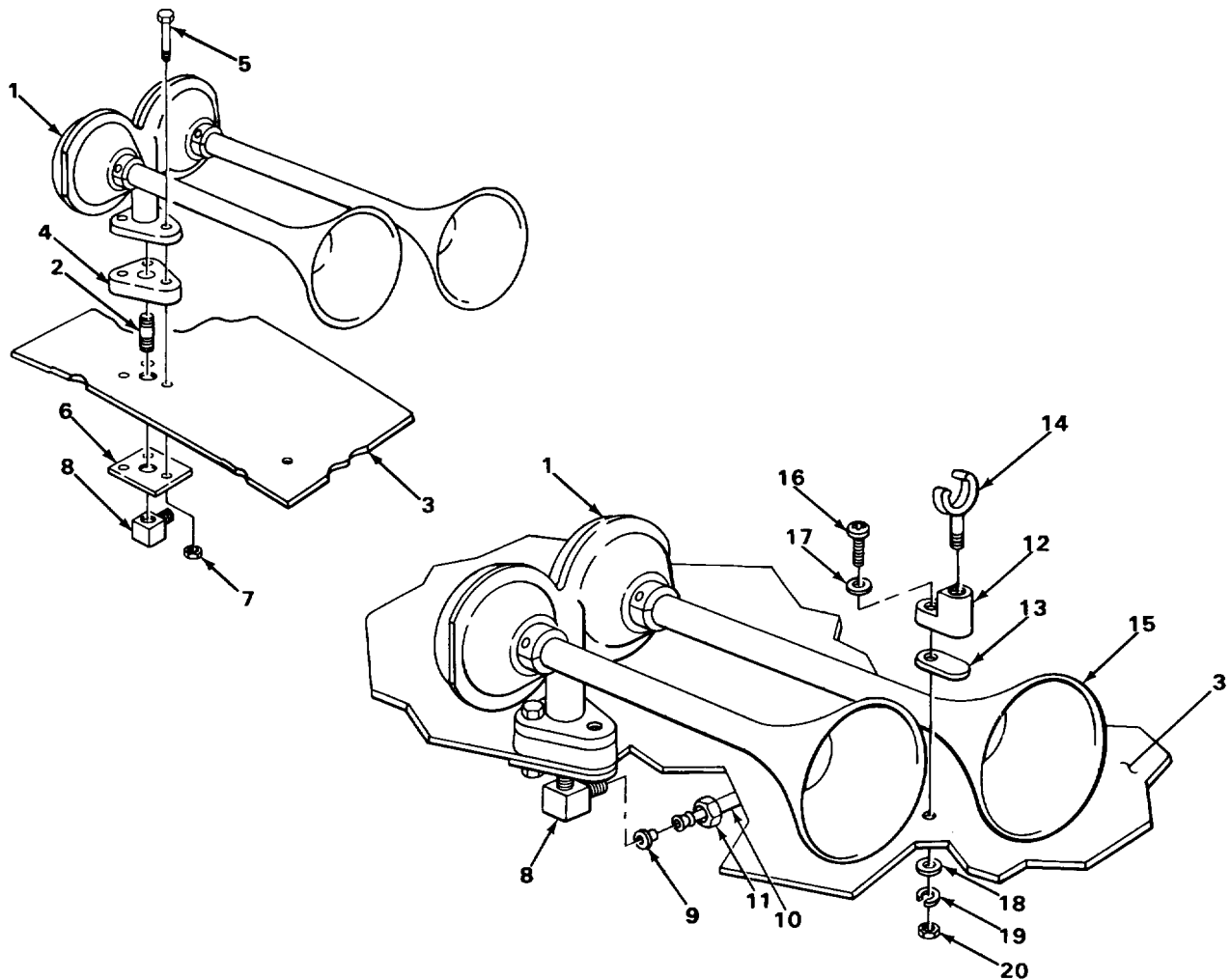
LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
22. Horn (1)	Nipple (2)	a. Wrap upper threads of nipple (2) with teflon tape. b. Screw into horn (1), and tighten using pipe wrench.
23. Cab roof (3)	New gasket (4)	Have assistant put in place.
24. Gasket (4) and roof (3)	Horn (1)	Have assistant put in place.
25. Horn (1)	Three screws (5)	Have assistant put in place and, using 7/16-inch wrench, hold.
26. Three screws (5)	Reinforcement (6)	Put in place, and hold.
27.	Three nuts (7)	Screw on, and tighten using 7/16-inch socket and handle
28. Nipple (2)	Elbow (8)	Screw in, and tighten using 5/8-inch Mu wrench.
29. Elbow (8)	Insert (9)	Put in, and seat using hammer.
30.	Air line (10)	Apply detergent, and push into elbow until seated.
31. Air line (10) to elbow (8)	Nut (11)	Screw onto elbow (8), and tighten using 9/16-inch wrench.
32. Pedestal (12)	New gasket (13)	Have assistant put together.
33.	Grommet (14)	Have assistant put in place.
34. Horn (1)	Pedestal (12)	Have assistant slide onto long bell (15) and into place.

AIR HORN - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION - CONTINUED

- | | | |
|---------------------------------|--|---|
| 35. Pedestal (12)
to cab (3) | Screw (16) and
washer (17) | Have assistant put into place and
hold with cross-tip screwdriver. |
| 36. Screw (16) | Washer (18), new
lockwasher (19),
and nut (20) | Screw on, and tighten using 1/2-inch
socket and handle. |



AIR HORN - CONTINUED

INSTALLATION - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Install cab headlining panels (page 2-838).
2. Pressure air system (TM 9-2320-269-10), and check for leaks.

TASK ENDS HERE

DATA PLATES AND DECALS ATTACHED WITH ADHESIVE

This task covers:
Replacement (page 2-1330)

INITIAL SETUP:

<p>Tools</p> <p>Putty knife</p>	<p>Materials/Parts - Continued</p> <p>Rags, wiping (item 24, appendix C) 11</p> <p>Personnel Required</p>
<p>Materials/Parts</p> <p>Data plate or decal Naptha (item 21, appendix C)</p>	<p>One</p>

LOCATION	ITEM	ACTION	REMARKS
-----------------	-------------	---------------	----------------

REPLACEMENT

NOTE

Except as noted, the steps in this task are the same for all data plates and decals attached with adhesive. HANGER BEARING LOW/HIGH metal decal is used as the example.

2-1330

DATA PLATES AND DECALS ATTACHED WITH ADHESIVE - CONTINUED

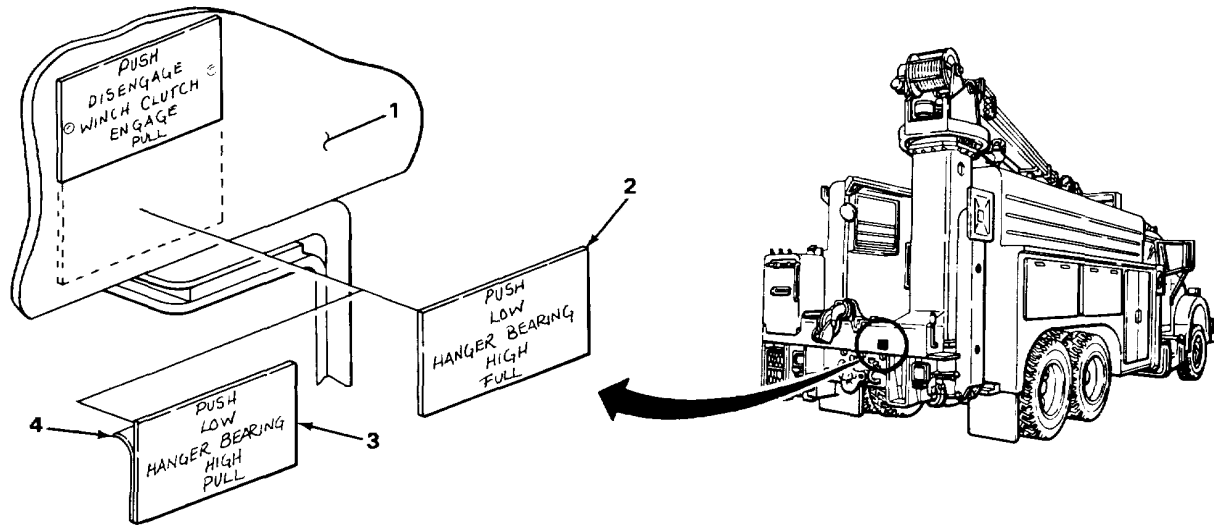
LOCATION	ITEM	ACTION	REMARKS
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REPLACEMENT - CONTINUED

WARNING

Naptha and its fumes are harmful and flammable. Do not use near open flame. Do not smoke while using. Use only in well-ventilated area. Naptha can catch fire, and fumes can explode causing serious injury.

- | | | | |
|----|----------|--------------------|--|
| 1. | Body (1) | Data plate (2) | Using putty knife, scrape off using naptha to dissolve glue if necessary. |
| 2. | | Body (1) | Using naptha and rag, clean off all old adhesive on body (1). |
| 3. | | New data plate (3) | <ol style="list-style-type: none"> Peel off paper backing (4). Stick onto body (1). If thin vinyl decal, work out air bubbles with fingers, working |



TA229688

DATA PLATES ATTACHED WITH DRIVE SCREWS

This task covers:

Replacement (page 2-1332)

INITIAL SETUP

Tools

- Bit, drill, 1/8-inch
- Chisel, cold, hand, 1/2-inch
- Drill, portable electric
- Hammer, ball-peen, machinist's
- Punch, center, solid

Materials/Parts

- Data plate (as required)
- Drive screws (as required)
- Tape, pressure sensitive (item 31, appendix C)
- Personnel Required

One

LOCATION	ITEM	ACTION	REMARKS
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NOTE

The steps in this task are the same for all data plates secured with drive screws. The rear winch ENGAGE/DISENGAGE data plate is used as the example.

REPLACEMENT

WARNING

Eye protection must be worn while chiseling off heads of drive screws to avoid personnel injury.

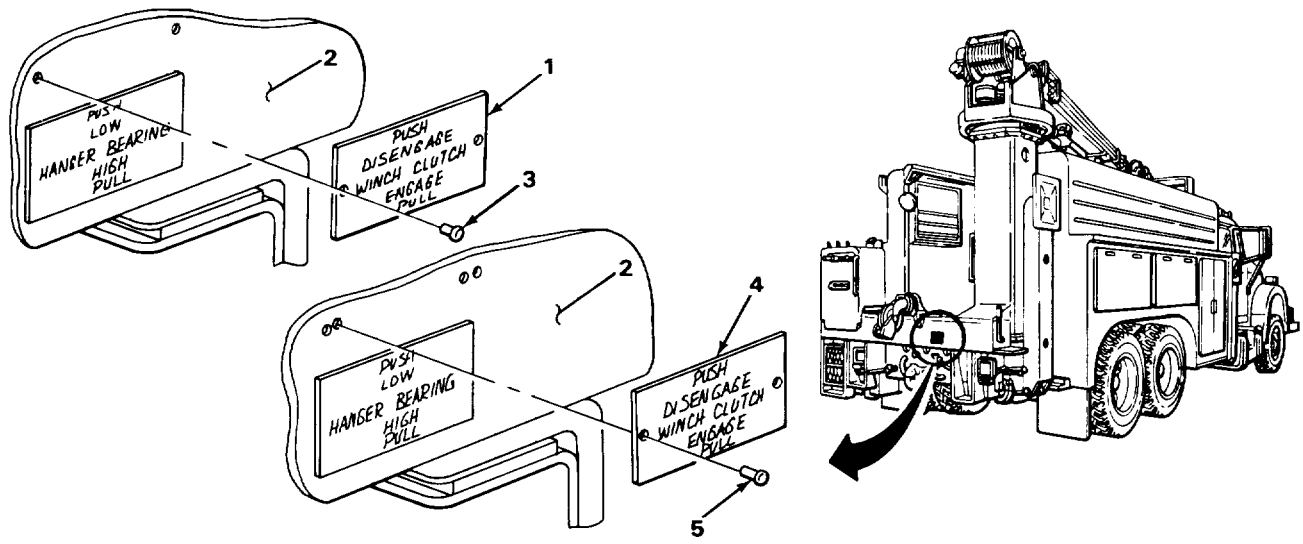
NOTE

It will not be possible to drive or drill out shanks of old drive screws.

- | | | | |
|----|-------------------------------|-------------------------|--|
| 1. | Data plate (1)
to body (2) | Two drive
screws (3) | a. Using hammer and chisel, chisel
off heads. |
| 2. | Body (2) | Data plate (1) | a. Take off.
b. Get rid of. |

DATA PLATES ATTACHED WITH DRIVE SCREWS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REPLACEMENT - CONTINUED			
3.	New data plate (4)	a. Put on as close as possible to location of old data plate. b. Use new data plate (4) as a template, and using hammer and punch mark starting point for screw holes. c. Take off.	Do not line up holes of new data plate with broken drive screws (3).
CAUTION			
Some data plates are mounted on winches or other mechanical parts. Do not drill completely through, or equipment damage may occur.			
4.	Body (2)	a. Put length of tape on drill bit equal to length of new drive screw shaft. b. Using drill and bit, drill holes.	
5.	New data plate (4)	Put in place, and hold.	
6.	New data plate (4) to body (2)	Two new drive screws	Using hammer, drive in.



TASK ENDS HERE

TA229689

DATA PLATES ATTACHED WITH SELF-TAPPING SCREWS

This task covers:

Replacement (page 2-1334)

INITIAL SETUP

Tools

Hammer, hand, ball-peen,
 machinist's
 Screwdriver, cross-tip, number one
 Screwdriver, flat-tip, 1/4-inch
 Stamps, numbering

Materials/Parts

Data plate (as required)
 Screw, self-tapping (as required)

Personnel Required
 One

LOCATION	ITEM	ACTION	REMARKS
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REPLACEMENT

NOTE

Except as noted, the steps in this task are the same for all data plates attached with self-tapping screws. The manufacturer's identification plate is used as the example.

The manufacturer's identification plate uses cross-tip screws while all others use slotted screws.

- | | | | |
|----|-------------------------------|---------------------------------------|---|
| 1. | Data plate (1)
to door (2) | Four screws (3)
and data plate (1) | Using cross-tip screwdriver, unscrew
and take out. |
|----|-------------------------------|---------------------------------------|---|

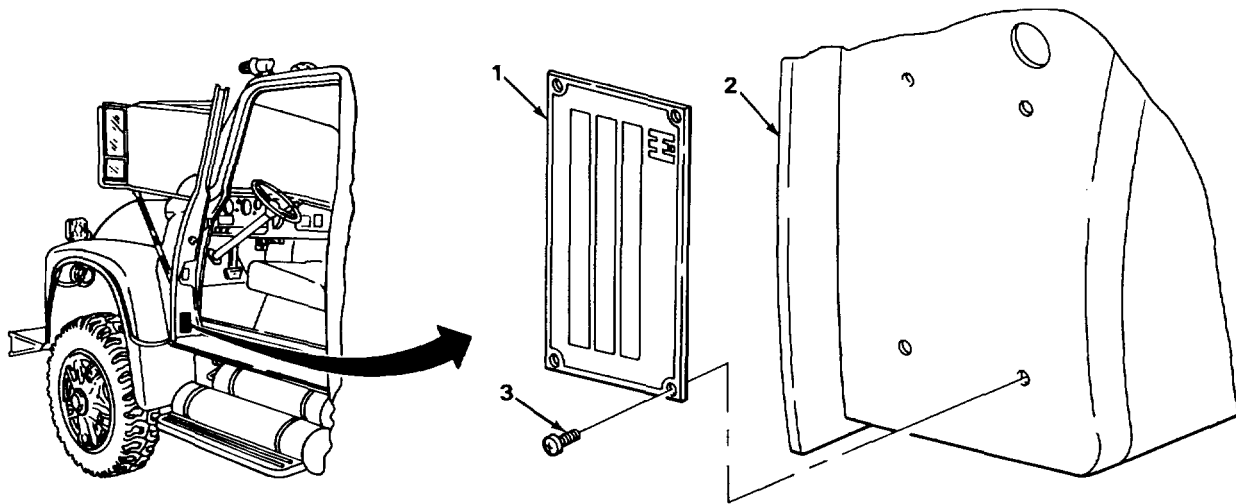
NOTE

If data plate has stamped-in numbers, go to step 3.

2-1334

DATA PLATES ATTACHED WITH SELF-TAPPING SCREWS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REPLACEMENT - CONTINUED			
2.	New data plate (1)	Using hammer and numbering stamps, copy number from old data plates (1) onto new one.	
3. Door (2)	New data plate (1)	Put in place, and hold.	
4. Data plate (1) to door (2)	Four screws (3)	Screw in, and tighten using cross-tip screwdriver.	



TASK ENDS HERE

TA229690

SLIDE-IN DATA PLATES

This task covers:

Replacement (page 2-1336)

INITIAL SETUP

Tools

Screwdriver, flat-tip, 1/16-inch

Materials/Parts

Data plate (as required)

Personnel Required

One

LOCATION	ITEM	ACTION	REMARKS
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REPLACEMENT

NOTE

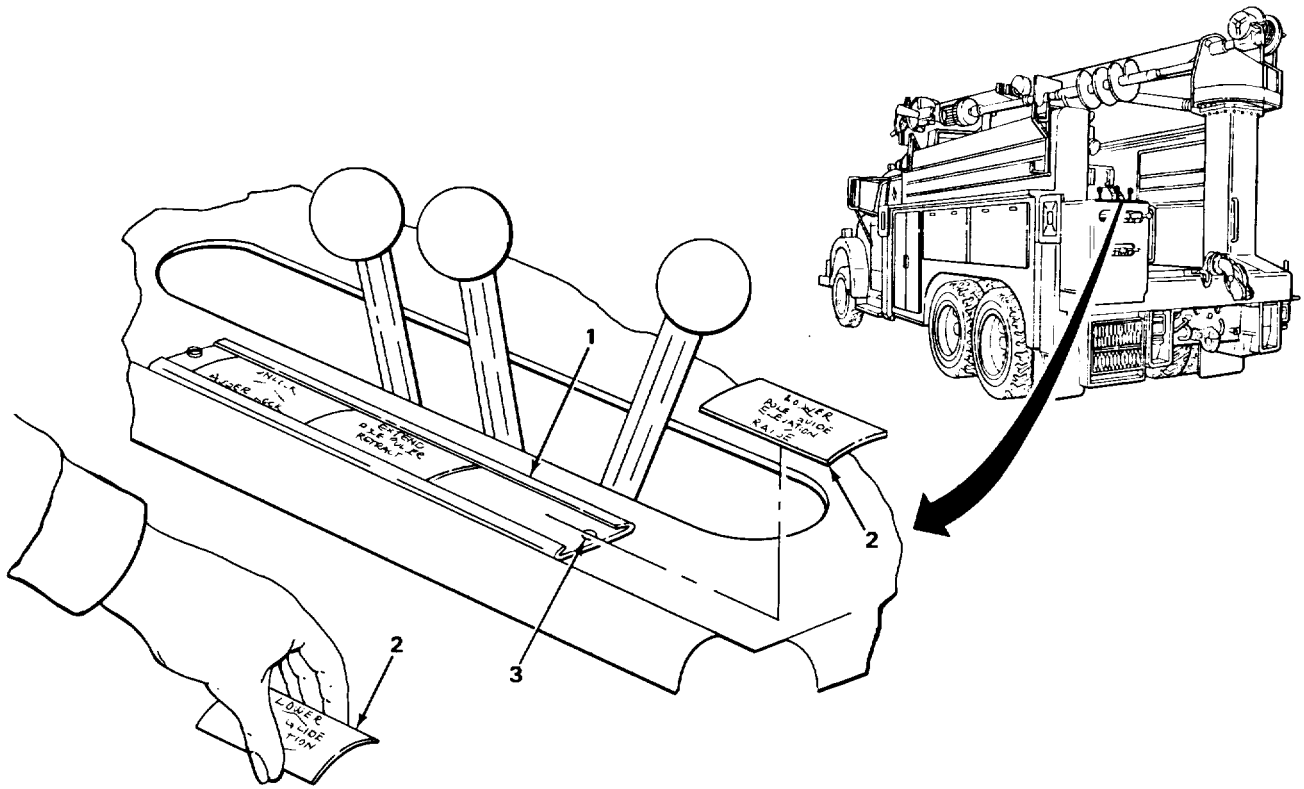
Except as noted, the steps in this task are the same for all slide-in data plates. The POLE GUIDE ELEVATION data plate is used as the example.

- | | | | |
|----|------------------------------|--------------------|--|
| 1. | Data plate
slide rail (1) | Data plate (2) | a. Slide up to screw (3).
b. Using flat-tip screwdriver, pry up
and slide out. |
| 2. | | New data plate (2) | a. Slide past screw (3) and into place.
b. Push flat. |

2-1336

SLIDE IN DATA PLATES - CONTINUED

REPLACEMENT - CONTINUED



TASK ENDS HERE

Section XXIII. GAGES (NON - ELECTRICAL) AND MEASURING DEVICES

	Page		Page
Air Pressure Gages	2-1354	Tachometer and Cable	2-1345
Speedometer Cable and Adapter	2-1338	Tachometer Adapter and Cable	2-1350

SPEEDOMETER CABLE AND ADAPTER

This task covers:

- a. Removal (page 2-1338)**
 - b. Installation (page 2-1342)**
-

INITIAL SETUP

Tools

Handle, ratchet, 3/8-inch drive
 Socket, 3/8-inch drive, 7/16-inch
 Wrench, open-end. 3/8-inch drive
 Wrench, open-end, 7/16-inch
 Wrench, open-end, 1-inch,
 (two required)

Personnel Required

One

Equipment Condition

Battery ground cable disconnected
 (page 2-414).
 Engine left side hood panel raised

Materials/Parts (page 2-7).

Lockwasher, cable bracket
 (three required)
 Lockwasher, speedometer (two required)

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

CAUTION

Be careful when working behind dash panel not to break or disconnect any wires.

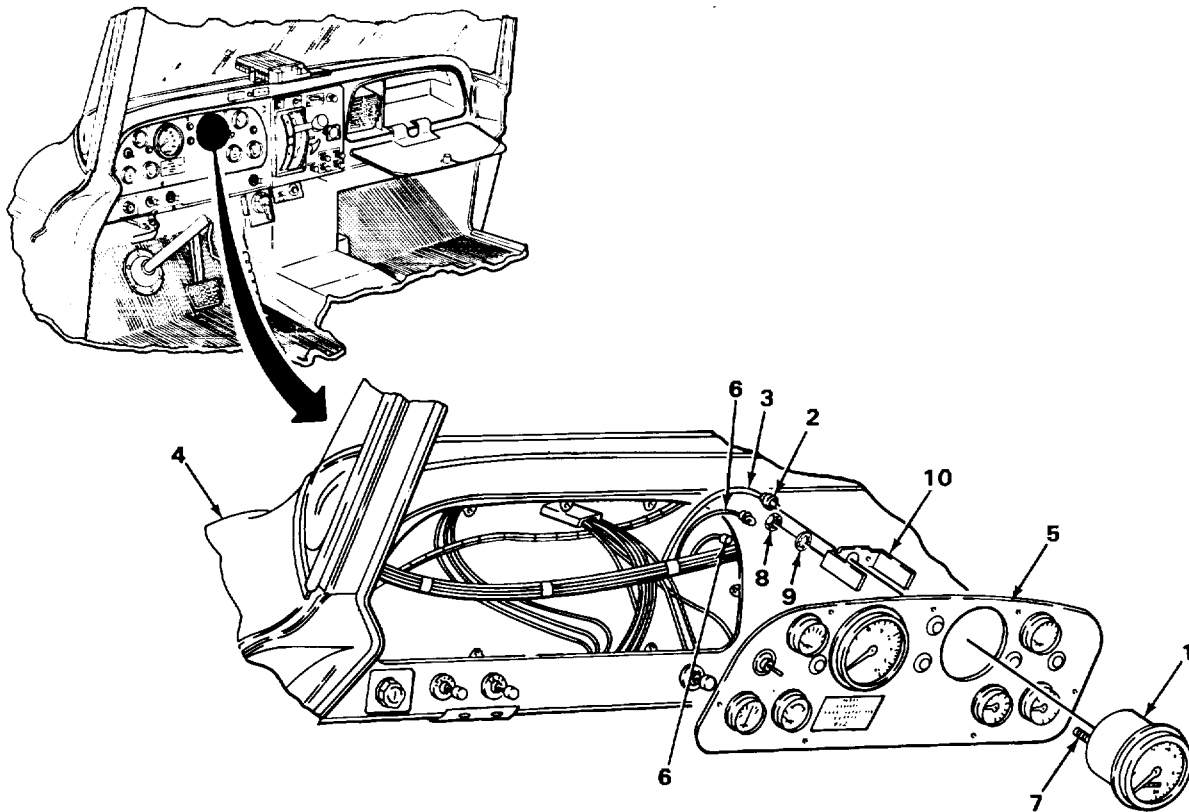
NOTE

If speedometer is being disconnected for instrument panel removal, only do step 1. If only adapter is being removed, go to step 11.

2-1338

SPEEDOMETER CABLE AND ADAPTER - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
1.	Speedometer (1)	Nut (2) and cable (3)	Unscrew, and pull free.
2.	Cab (4)	Instrument panel (5)	Remove (page 2-326).
3.		Two light sockets (6)	Unplug.
4.	Two studs (7)	Two nuts (8) and lockwashers (9)	a. Using 3/8-inch end wrench, unscrew and take out. b. Get rid of lockwashers (9).
5.	Instrument panel (5)	Bracket (10)	Take out.
6.		Speedometer(1)	Take out.



TA229692

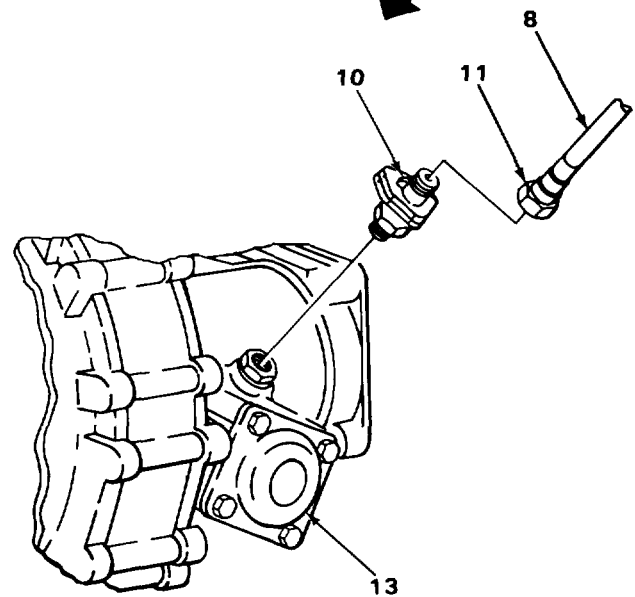
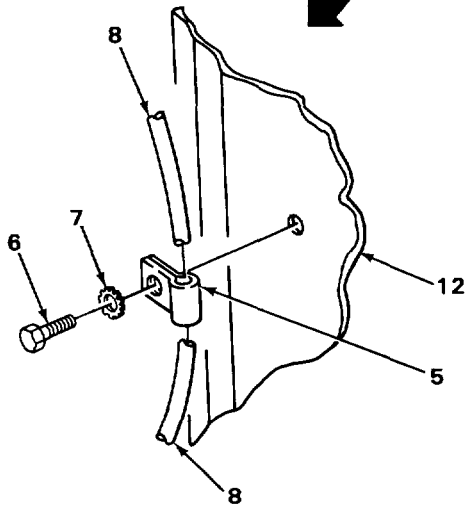
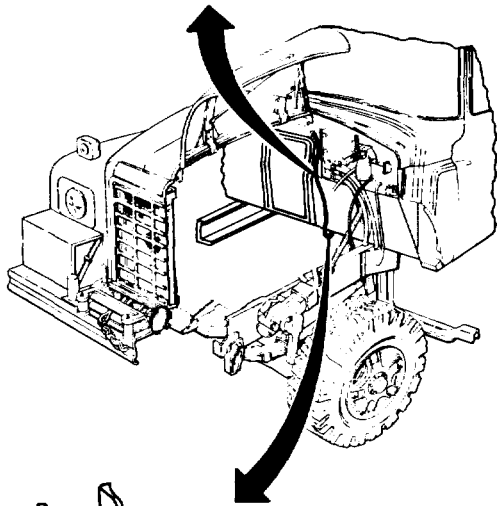
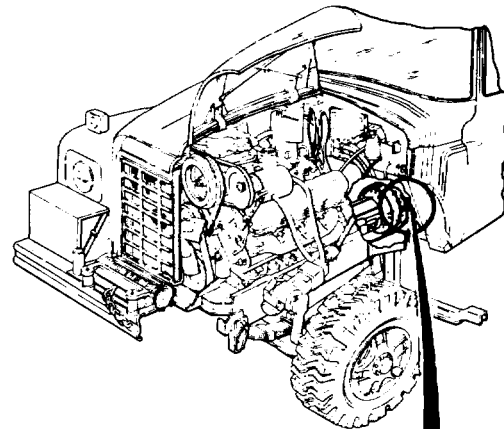
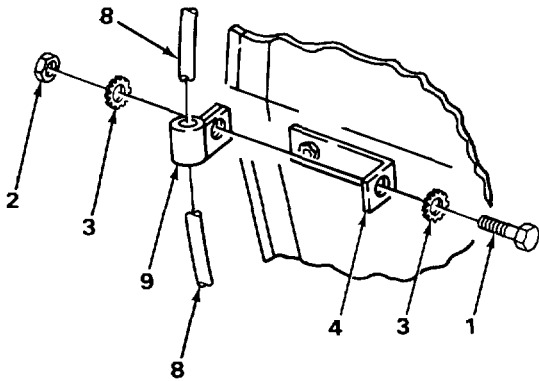
SPEEDOMETER CABLE AND ADAPTER - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
NOTE			
If only speedometer is being removed, go to INSTALLATION.			
7.	Screw (1)	Nut (2) and two lockwashers (3)	a. Using 7/16-inch socket, handle, and 7/16-inch wrench, unscrew and take off. b. Get rid of lockwashers (3).
8.	Bracket (4)	Screw (1)	Take out.
9.	Clamp (5)	Screw (6) and lockwasher (7)	a. Using 7/16-inch wrench, unscrew and take out. b. Get rid of lockwasher.
10.	Cable (8)	Clamps (5) and (9)	Spread apart, and take off.
11.	Adapter (10)	Nut (11) and cable (8)	Using two 1-inch wrenches, unscrew and pull free.
NOTE			
If only adapter is being removed, go to step 12.			
12.	Firewall (12)	Cable (8)	Pull through firewall (12) and take out.
13.	Transmission (13)	Adapter (10)	Using 1-inch wrench, unscrew and take out.

2-1340

SPEEDOMETER CABLE AND ADAPTER - CONTINUED

REMOVAL - CONTINUED



SPEEDOMETER CABLE AND ADAPTER - CONTINUED

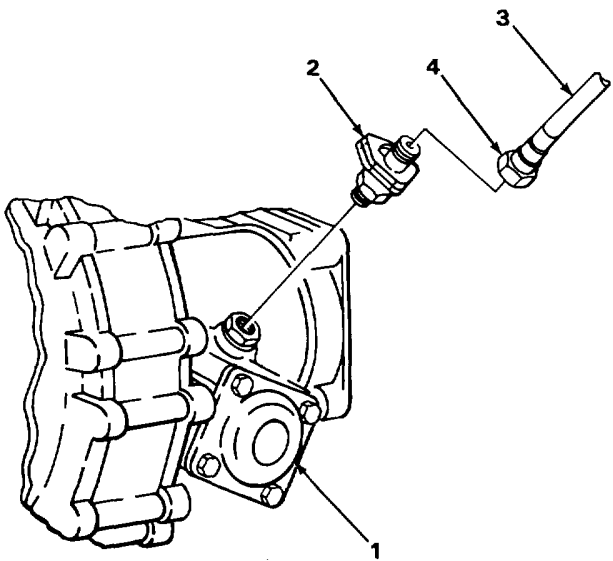
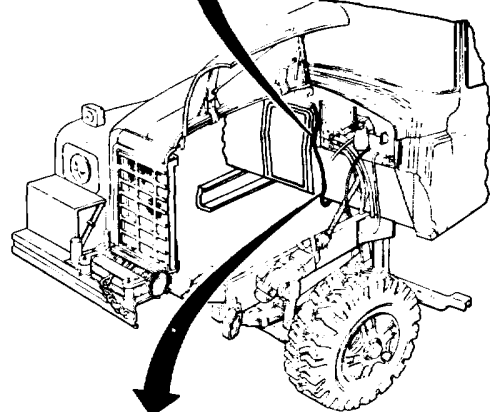
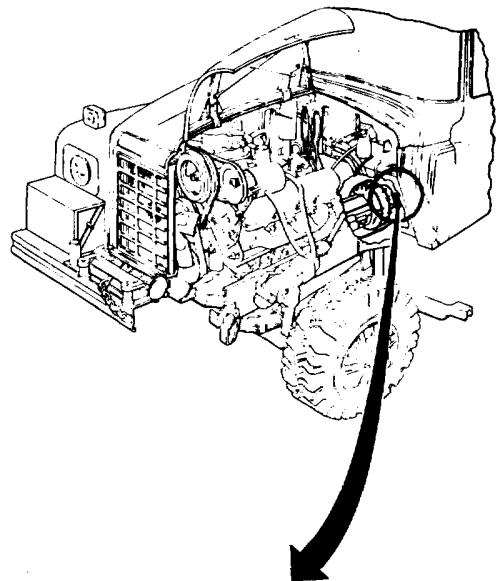
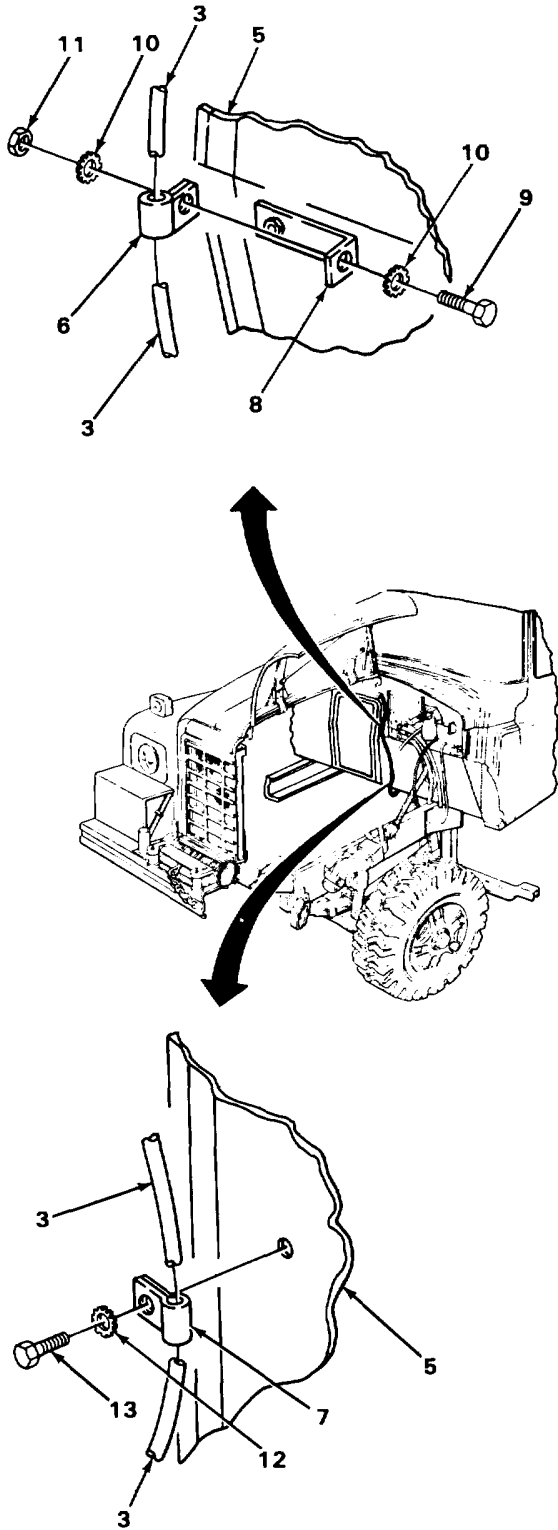
LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
NOTE			
If only cable was disconnected for dash panel removal, go to step 26.			
If only cable is being removed, go to INSTALLATION.			
If only speedometer was removed, go to step 24.			
14.	Transmission (1)	Adapter (2)	Screw in, and tighten using two 1-inch wrenches.
15.	Adapter (2)	Cable (3) and nut (4)	Screw in, and tighten using two 1-inch wrenches.
NOTE			
If only adapter was installed, go to FOLLOW-ON MAINTENANCE.			
16.	Firewall (5)	Cable (3)	Slide through into place.
17.	Cable (3)	Clamps (6) and (7)	Put on, and press together.
18.	Bracket (8) and clamp (6)	Screw (9) and one of two lockwashers (10)	Put through, and hold in place.
19.	Screw (9)	One of two new lockwashers (10) and nut (11)	Screw on, and tighten using 7/16-inch socket, handle, and 7/16-inch wrench.
NOTE			
If only cable is being installed, go to step 23.			
20.	Clamp (7) and firewall (5)	New lockwasher (12) and screw (13)	crew in, and tighten using 7/16-inch

CAUTION

Be careful when working behind dash panel not to break or disconnect any wires.

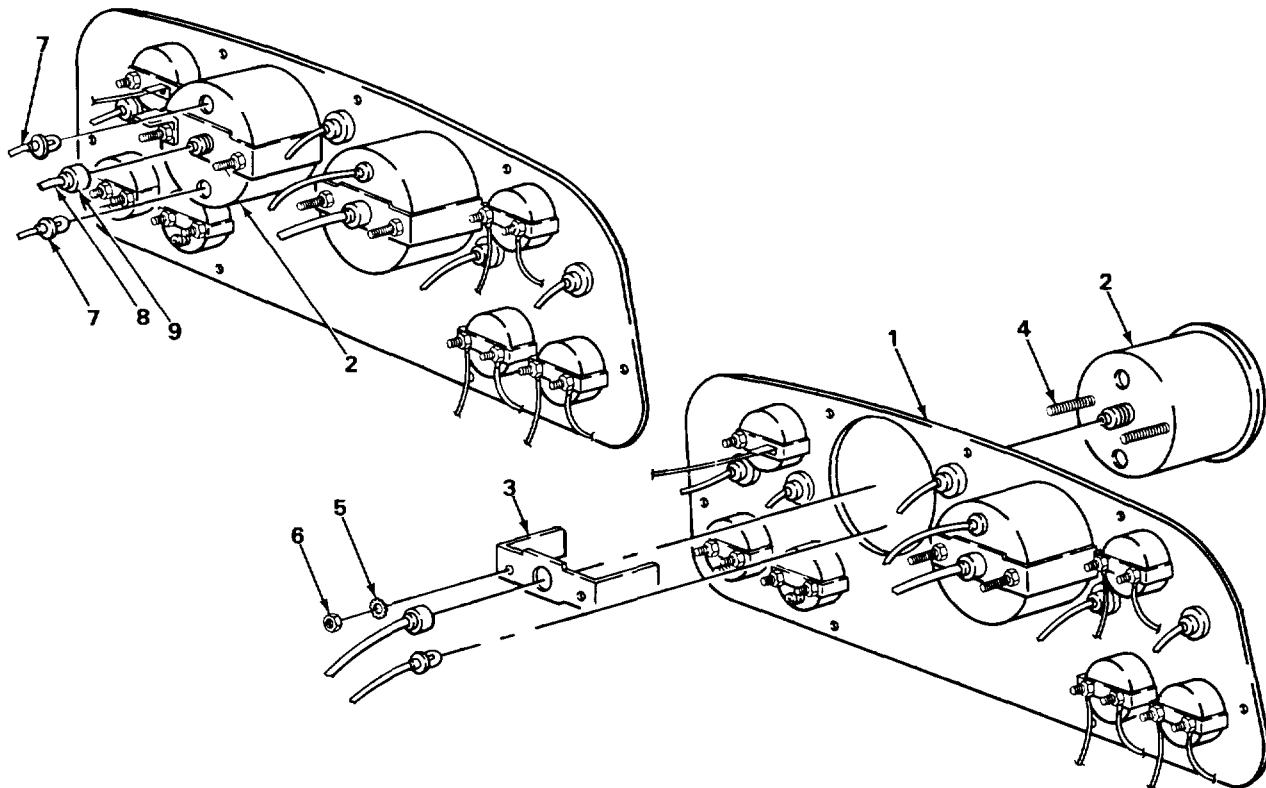
SPEEDOMETER CABLE AND ADAPTER - CONTINUED

INSTALLATION - CONTINUED



SPEEDOMETER CABLE AND ADAPTER - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
21.	Instrument panel (1)	Speedometer (2)	Put in, and hold in place.
22.		Bracket (3)	Put in, and hold in place.
23.	Two studs (4) washers (5) and	Two new lock- wrench nuts (6)	Screw in, and tighten using 3/8-inch
24.	Speedometer (2)	Two light sockets (7)	Plug in.
25.	Cab	Instrument Panel (1)	Install (page 2-326).
26.		Cable (8) and nut	Screw in, and tighten.



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SPEEDOMETER CABLE AND ADAPTER - CONTINUED

INSTALLATION - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Connect battery ground cable (page 2-414).
2. Close left side engine hood panel (page 2-7).

TASK ENDS HERE

TACHOMETER AND CABLE

This task covers:

- a. Removal (page 2-1345)
 - b. Installation (page 2-1348)
-

INITIAL SETUP

Tools

Wrench, open-end, 3/8-inch
 Wrench, open-end, 1-inch

Equipment Condition

Battery ground cable disconnected
 (page 2-414).
 Engine left side hood panel raised (page 2-7).

Personnel Required

One

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

REMOVAL

NOTE

If tachometer is disconnected for Instrument removal, only do step 1.

2-1345

TACHOMETER AND CABLE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

REMOVAL - CONTINUED

CAUTION

Be careful when working behind dash panel not to break or disconnect any wires.

- | | | | |
|----|----------------|-----------------------|--|
| 1. | Tachometer (1) | Nut (2) and cable (3) | Reach up under dashboard and unscrew, and pull free. |
| 2. | Cab | Instrument panel | Remove (page 2-326). |

NOTE

If only cable is being removed, go to step 7.

- | | | | |
|----|----------------------|---|--|
| 3. | Light socket (4) | Unplug. | |
| 4. | Two studs (5) | Two nuts (6), flat washers (7), and bracket (8) | Using 3/8-inch wrench, unscrew and take off. |
| 5. | Instrument panel (9) | Bracket (10) | Take out. |
| 6. | Tachometer (1) | Take out. | |

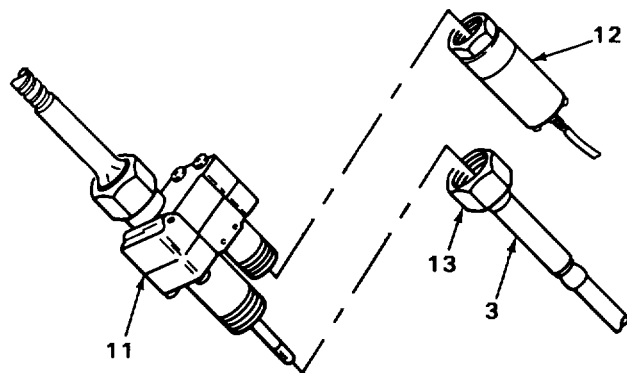
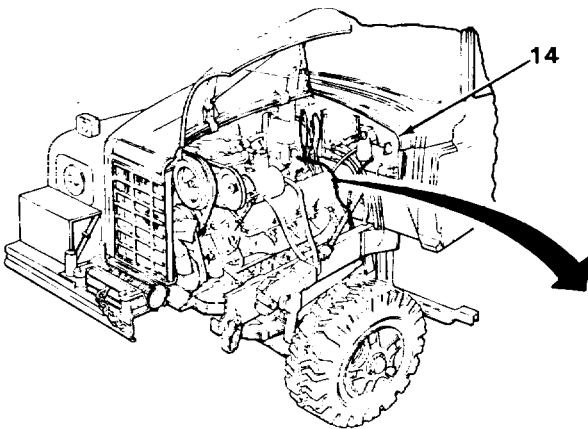
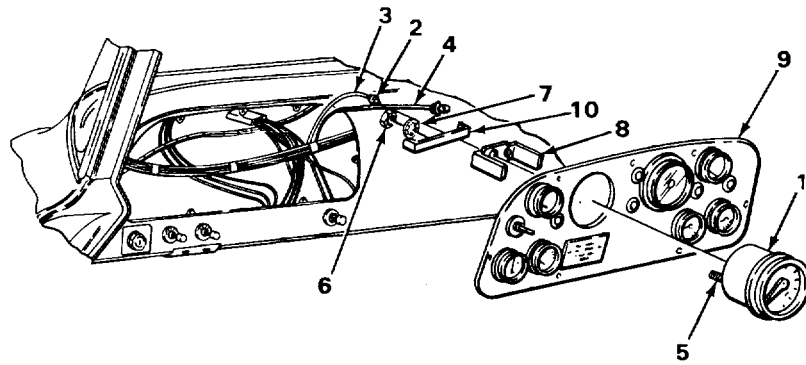
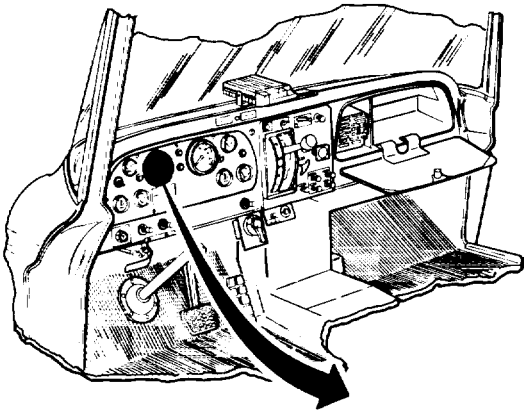
NOTE

If only tachometer is being removed, go to INSTALLATION.

- | | | | |
|----|------------------------|---|--|
| 7. | Adapter(11) | Sensor (12) | Using 1-inch wrench, unscrew and take off. |
| 8. | Nut (13) and cable (3) | Using 1-inch wrench, unscrew and pull free. | |
| 9. | Firewall (14) | Cable (3) | Pull through, and take out. |

TACHOMETER AND CABLE - CONTINUED

REMOVAL - CONTINUED

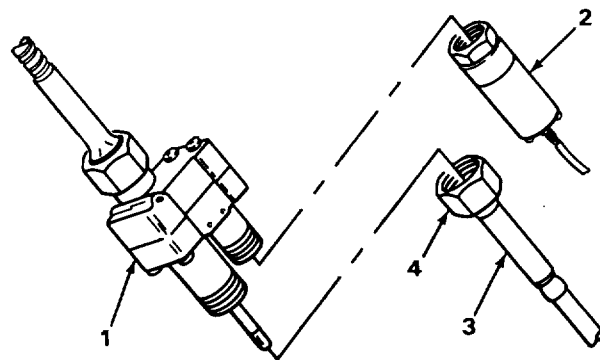
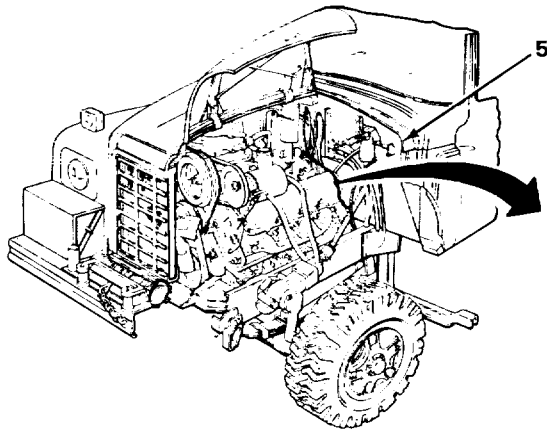
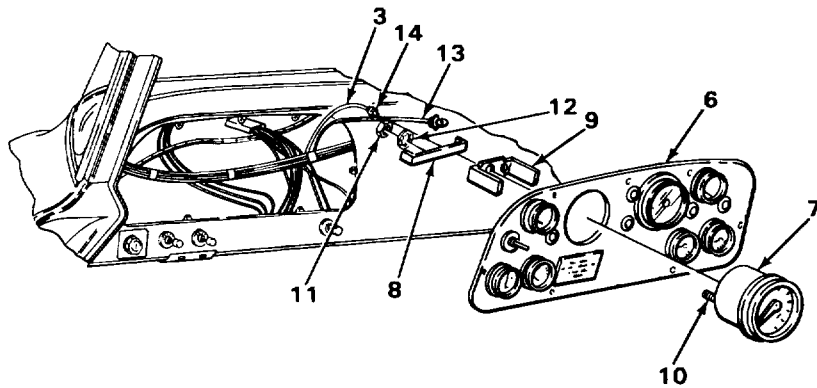


TACHOMETER AND CABLE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
NOTE			
If tachometer was disconnected for instrument panel removal, go to step 18.			
10. Adapter (1)	Sensor (2)		Screw in, and tighten using 1-inch wrench
11.	Cable (3) and nut (4)		Screw in, and tighten using 1-inch wrench.
12. Firewall (5)	Cable (3)		Push through.
NOTE			
If only cable is being installed, go to step 17.			
13. Instrument panel (6)	Tachometer (7)		Put in, and hold in position.
14.	Brackets (8) and (9)		Put in, and hold in position.
15. Two studs (10)	Two nuts (11) and flat washers (12)		Screw on and tighten, using 3/8-inch wrench.
16. Tachometer (7)	Light socket (13)		Push in place.
17. Cab	Instrument panel		Install (page 2-326).
18.	Cable (3) and nut (14)		Screw in, and tighten.

TACHOMETER AND CABLE - CONTINUED

INSTALLATION - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE:

1. Close engine left hood panel (page 2-7).
2. Connect battery ground cable (page 2-414).

TASK ENDS HERE

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TACHOMETER ADAPTER AND CABLE

This task covers:

- a. Removal (page 2-1350)**
 - b. Installation (page 2-1352)**
-

INITIAL SETUP

Tools

Handle, ratchet, 3/8-inch drive
 Pliers, slip-joint
 Socket, 3/8-inch drive, 7/16-inch
 Wrench, open-end, 7/16-inch
 Wrench, open-end, 1-inch

Materials/Parts

Lockwasher, clamp-to-cable

Personnel Required

One

Equipment Condition

Battery ground cable disconnected
 (page 2-414).
 Engine left side hood panel raised
 (page 2-7).
 Engine cover removed for cable removal
 (page 2-840).

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

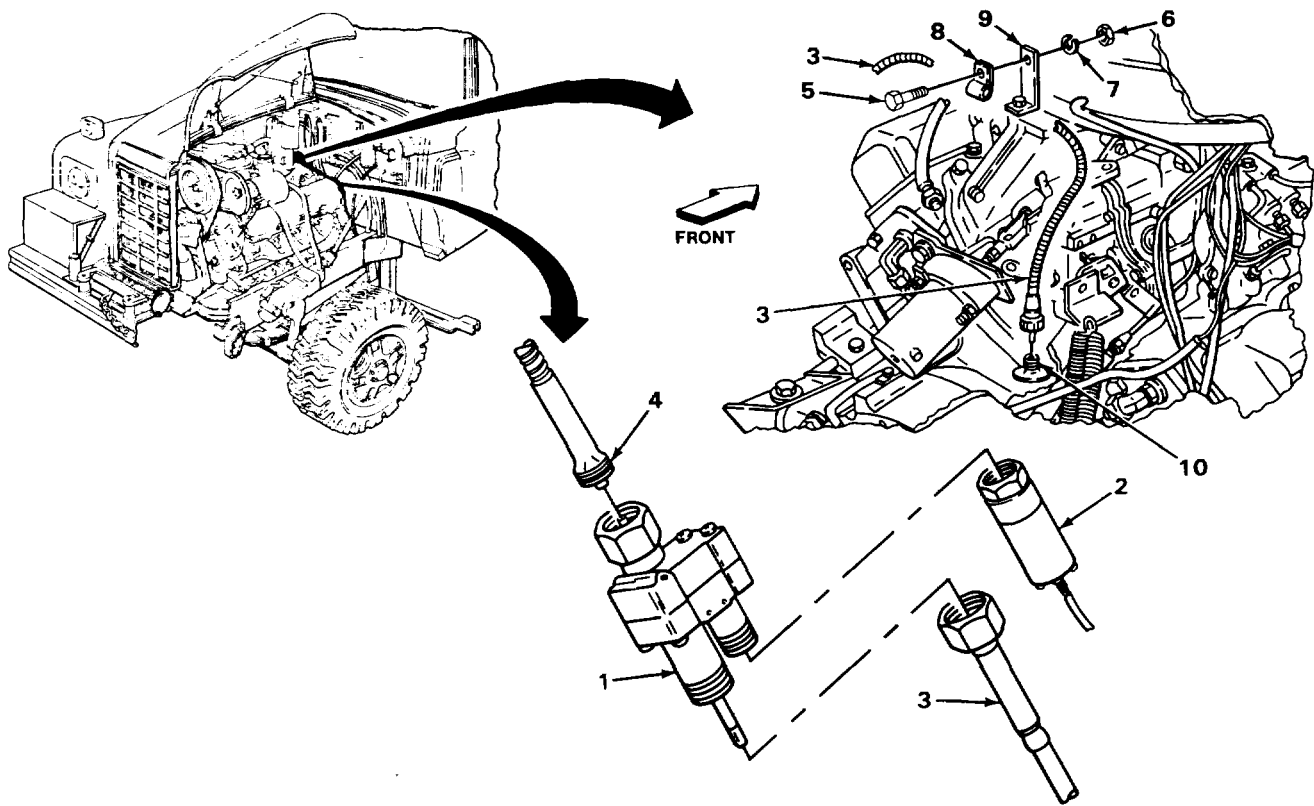
NOTE

If only cable is being removed, go to step 3.

1.	Adapter (1)	Sensor (2)	Using 1-inch wrench, unscrew and take off.
2.		Cable (3)	Using 1-inch wrench, unscrew and take off.
3.		Cable (4)	Using 1-inch wrench, unscrew and take off.
4.	Cables (3) and (4)	Adapter (1)	a. If removing adapter (1), take out. b. If removing cable (4), set adapter (1) aside.

TACHOMETER ADAPTER AND CABLE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
5.	Screw (5)	Nut (6) and lockwasher (7)	a. Using 7/16-inch socket, handle, and 7/16-inch wrench, unscrew and take off. b. Get rid of lockwasher (7).
6.	Clamp (8) and bracket (9)	Screw (5)	Take out.
7.	Cable (3)	Clamp (8)	Spread apart, and take off.
8.	Cable mount (10)	Cable (3)	Using pliers, unscrew and take off.



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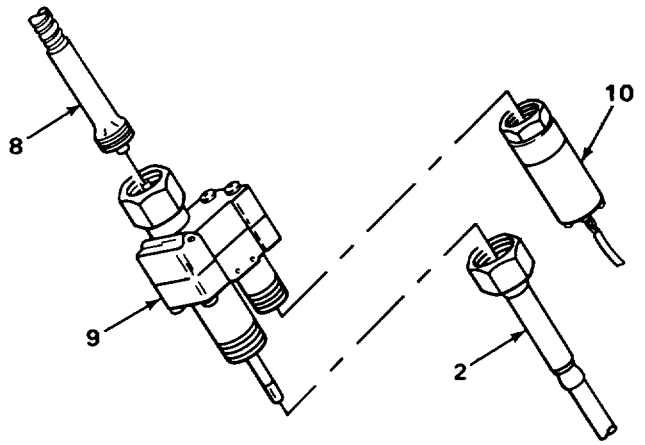
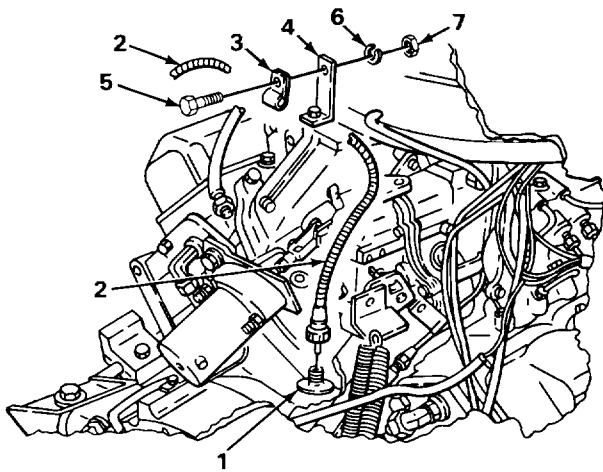
TACHOMETER ADAPTER AND CABLE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
NOTE			
If only adapter was removed, go to step 13.			
9.	Cable mount (1)	Cable (2)	Put in, and tighten.
10.	Cable (2)	Clamp (3)	Put on, and press together.
11.	Clamp (3) and bracket (4)	Screw (5)	a. Hold clamp (3) against bracket (4). b. Put screw (5) through clamp (3) and bracket (4).
12.	Screw (5)	New lockwasher (6) and nut (7)	Screw in, and tighten using 7/16-inch socket, handle, and 7/16-inch wrench.
13.	Cable (8)	Adapter (9)	Put in, and tighten using 1-inch wrench.
NOTE			
If only cable is being installed, go to FOLLOW-ON MAINTENANCE.			
14.	Adapter (9)	Sensor (10)	Screw in, and tighten using 1-inch wrench.
15.	Adapter (9)	Cable (2)	Put in, and tighten using 1-inch wrench.

2-1352

TACHOMETER ADAPTER AND CABLE - CONTINUED

INSTALLATION - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE:

1. Install engine cover (page 2-840).
2. Close left side engine hood panel (page 2-7).
3. Connect battery ground cable (page 2-414).

TASK ENDS HERE

TA229699

AIR PRESSURE GAGES

This task covers:

- a. Removal (page 2-1354)
 - b. Installation (page 2-1356)
-

INITIAL SETUP

<p>Tools</p> <p>Wrench, open-end, 3/8-inch Wrench, open-end, 9/16-inch (two required)</p> <p>Materials/Parts</p> <p>Lockwasher, gage-to-bracket (two required) Tags, marking (item 29, appendix C) Tape, teflon (item 32, appendix C)</p>	<p>Personnel Required</p> <p>One</p> <p>Equipment Condition</p> <p>Air reservoirs drained (page 2-106). Battery ground cable disconnected (page 2-414).</p>
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LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

Drain air from system before removing lines or fittings to avoid personnel injury from compressed air.

CAUTION

Be careful when working behind instrument panel not to disconnect or break any wires.

NOTE

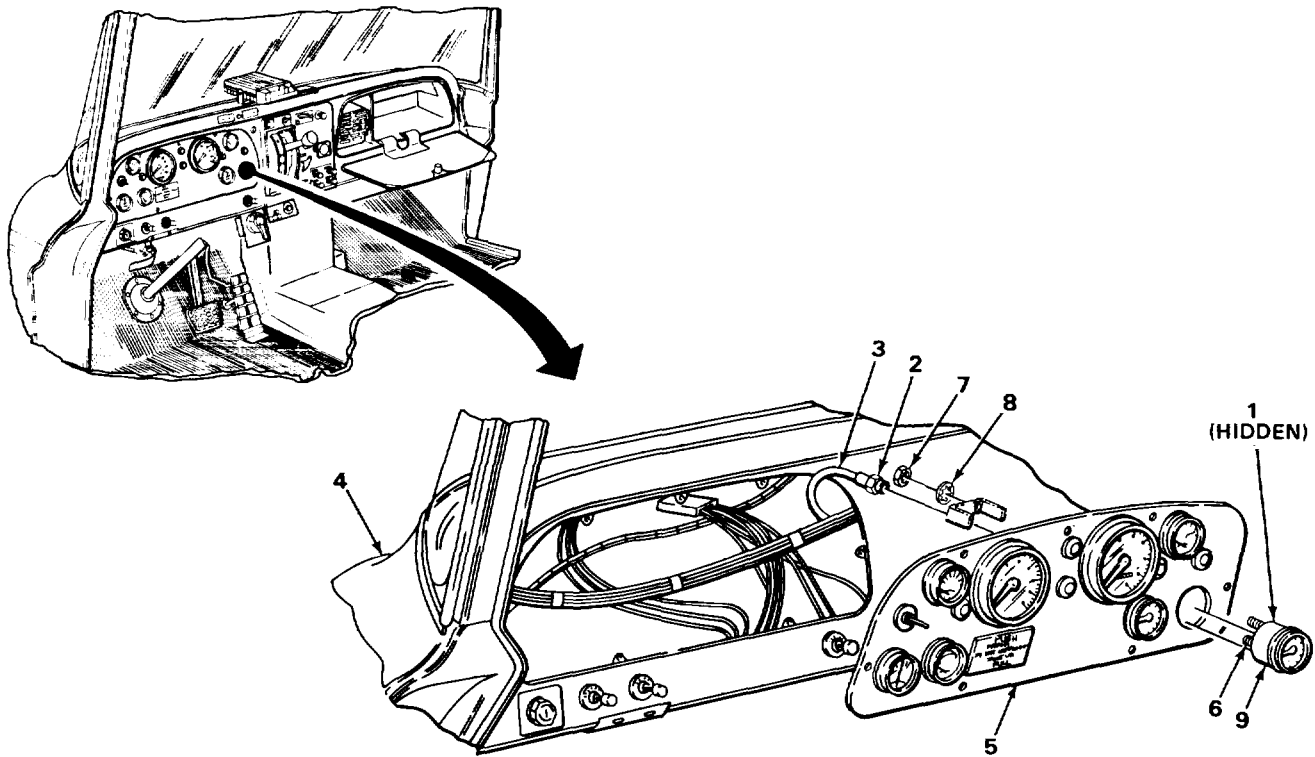
There are two air pressure gages mounted in the instrument panel. The procedure for removing both of them is the same.

If both gages are being removed, tag lines and fittings to aid in installation.

If gages are being disconnected for instrument panel removal, only do step 1.

AIR PRESSURE GAGES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
1. Fitting (1)	Line nut (2) and line (3)	Using two 9/16-inch wrenches, unscrew and pull free.	
2. Cab (4)	Instrument panel (5)	Remove (page 2-326).	
3. Two studs (6)	Two nuts (7) and lockwashers (8)	a. Using 3/8-inch wrench, unscrew and take off. b. Get rid of lockwashers (8).	



TA229700

AIR PRESSURE GAGES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
4. Instrument panel (1)	Bracket (2)	Take out.	
5. Gage (3)	Take out.		
NOTE			
If gages are being removed for access to other components, go to INSTALLATION.			
6. Gage (3)	Fitting (4)		Using 9/16-inch wrench, unscrew and take out.
INSTALLATION			
NOTE			
If gages were removed for access to other components, go to step 7.			
7. Gage (3)	Fitting (4)		a. Wrap clean threads with teflon tape (page 2-142). b. Screw in, and tighten using 9/16-inch wrench.
8. Instrument panel (1)	Gage (3)		Put in place.
9.	Bracket (2)		Put in.
10. Cab (5)	Instrument panel (1)		Install (page 2-326).

AIR PRESSURE GAGES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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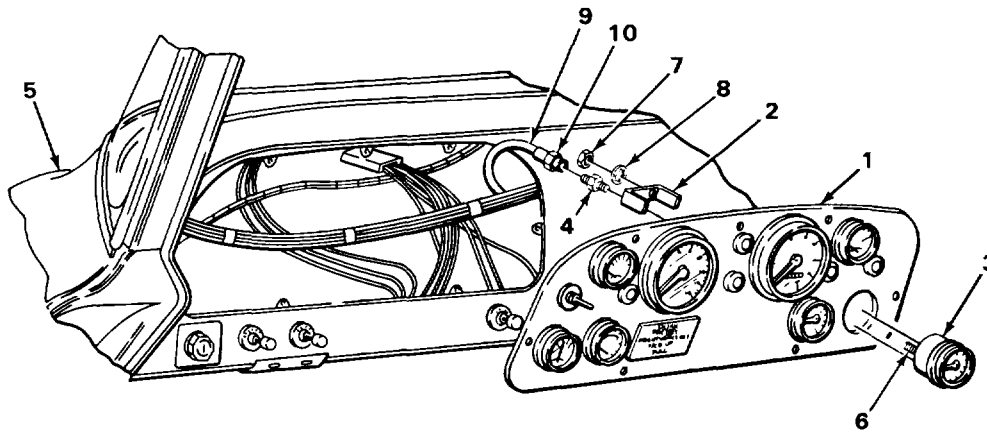
INSTALLATION - CONTINUED

11. Two studs (6)	Two nuts (7) and new lockwashers (8)	Screw on, and tighten using 3/8-inch wrench.	
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NOTE

If both gages were removed, check tag markings from removal to insure proper hookup.

12. Fitting (4)	Line (9) and line nut (10)	Screw on. and tighten using two 9/16-wrenches	
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NOTE

FOLLOW-ON MAINTENANCE:

1. Connect battery ground cable (page 2-414).
2. Close reservoir draincocks (page 2-106).
3. Check gages for proper operation (TM 9-2320-269-10).

TASK ENDS HERE

TA229701

2-13571(2-1358 blank)

APPENDIX A

REFERENCES

A-1. PUBLICATION INDEXES AND GENERAL REFERENCES

Indexes should be consulted frequently for latest changes or revisions to references given in this appendix and for new publications relating to material covered in this publication.

Consolidated Index of Army Publications and Forms..... DA PAM 310-1

A-2. FORMS

Refer to DA PAM 738-750, The Army Maintenance Management Systems (TAMMS), for instructions on the use of maintenance forms pertaining to this material.

A-2. PUBLICATIONS.

The following publications contain information pertinent to the major item material and associated equipment.

a. Vehicle.

Lubrication Order, Truck Telephone Maintenance, Utility, C/S, 36,000 GVW, 6X4, W/WN, W/E, M876 (NSN 2320-00-000-0114)	LO 9-2320-269-12
Technical Manual, Operator's Manual, Truck Telephone Maintenance, Utility, C/S, 36000 GVW, 6 x 4, W/WN, W/E, M876 (NSN 2320-00-000-0114).....	TM 9-2320-269-10
Technical Manual; Organizational, Maintenance, Repair Parts and Special Tools Lists; Truck Telephone Maintenance, Utility, C/S, 36,000 GVW, 6 x 4 W/WN, WIE, Army Model M876, (NSN) 2320-00-000-0114)	TM 9-2320-269-20P

b. Decontamination.

Chemical, Biological, and Radiological (CBR) Decontamination	TM 3-220
Chemical, Biological, Radiological, and Nuclear Defense.....	FM 21-40

c. General.

Certified Table of Allowances.....	CTA 50-970
Cooling Systems: Tactical Vehicles	TM 750-254
Northern Operations.....	FM 31-71
Procedures for Destruction of Tank-Automotive Equipment to Prevent Enemy Use.....	TM 750-244-6

d. Maintenance and Repair.

A-2. PUBLICATIONS - CONTINUED

Elimination of Combustables from Interiors of Metal or Plastic Gasoline and Diesel Fuel Tanks.....	TB 750-1047
Organizational Maintenance of Pneumatic Tires and Tubes.....	TM 9-2610-200-24
Inspection, Care, and Maintenance of Antifriction Bearings.....	TM 9-214
Materials Used for Cleaning, Preserving, Abrading, and Cementing, Ordnance Materiel, and Related Materiels Including Chemicals	TM 9-247
Metal Body Repair and Related Operations.....	TM 9-450
Operator and Organizational Maintenance Manual for Lead-Acid Storage Batteries.....	TM 9-6140-200-12
Painting Instructions for Field Use.....	TM 9-43-0139
Quality Deficiency Report.....	SF-368
Welding Theory and Application.....	TM 9-237

APPENDIX B**MAINTENANCE ALLOCATION CHART****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. The 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.
- c. 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 on 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 detect incipient failure by measuring the mechanical or electrical characteristics of an item and comparing those characteristics with prescribed standards.
- c. **Service.** Operations required periodically to keep an item in proper operating condition, i.e., to clean (decontaminate), to preserve, to drain, to paint, or to replenish fuel, lubricants, hydraulic fluids, or compressed air supplies.
- d. **Adjust.** To maintain, within prescribed limits, by bringing into proper or exact position, or by setting the operating characteristics to specified parameters.
- e. **Aline.** To adjust specified variable elements of an item to bring about optimum or desired performance.
- f. **Calibrate.** To determine and cause corrections to be made or to be adjusted on instruments or test measuring and diagnostic equipments used in precision 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 a serviceable like type part, subassembly, or module (component or assembly) for an unserviceable counterpart.

B-2. Maintenance Functions-CONTINUED

i. Repair. The application of maintenance services¹ or other maintenance actions² to restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), and item, or system.

j. Overhaul. That maintenance effort (services/actions) 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 Army. Overhaul does not normally return an item to like new condition.

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

B.3. Column Entries Used in the MAC.

a. Column 1, Group Number. Column 1 lists group numbers, the purpose of which is to identify components, assemblies, subassemblies, and modules with the next higher assembly.

b. Column 2, Component/Assembly. Column 2 contains the 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. (For detailed explanation of these functions, see para B-2.)

d. Column 4, Maintenance Level. 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 the maintenance function at the indicated level of maintenance. If the number or complexity of the tasks within the listed maintenance function vary at different maintenance levels, an appropriate "work time" figure will be shown for each level. The number of manhours specified by the "work time" figure represents the average time required to restore an item (assembly, subassembly, component, module, end item, or system) to a serviceable condition under typical field operating conditions. This time includes preparation time, 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. The symbol designations for the various maintenance levels are as follows:

- C - Operator or Crew
- O - Organizational Maintenance
- F - Direct Support Maintenance
- H - General Support Maintenance
- D - Depot Maintenance

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

¹Services - inspect, test, service, adjust, align, calibrate, or replace.

²Action - welding, grinding, riveting, straightening, facing, remachining, or resurfacing.

B-3. Column Entries Used in the MAC-CONTINUED

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

B.4. Column Entries Used in Tool and Test Equipment Requirements.

a. Column 1, Tool or Test Equipment Reference Code. The tool and test equipment reference code correlates with a 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 Section IV.

a. Reference Code. The code scheme recorded in Column 6, Section II.

b. Remarks. This column lists information pertinent to the maintenance function being performed as indicated on the MAC, Section II.

Section II. MAINTENANCE ALLOCATION CHART

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY					(5) TOOLS AND EQUIPMENT	(6) REMARKS
			C	O	F	H	D		
01	ENGINE								
0100	Engine Assembly,	Inspect	0.1	0.4					
		Test			1.0				
		Service		1.0					
		Adjust			1.5				
		Repair			*	*			
		Replace			12				
		Overhaul				50			
	Mount, Engine	Replace,			3.8				
	Block, Cylinder	Inspect				2.5			
		Replace				*			
		Repair				35			
	Head, Cylinder,	Inspect			1.1				
		Repair			*				
		Replace			8.9				
0102	Crankshaft	Inspect				0.5			
		Replace				6.1			
	Seals, Main	Inspect			0.3	0.3			
		Replace			8.1	8.1			
	Pulley, Crankshaft,	Replace			4.5				
0103,	Flywheel	Inspect			0.6				
		Replace			6.9				
	Gear, Ring,	Inspect			0.6				
	Flywheel	Replace			6.9				
	Housing, Flywheel	Inspect			0.1				
		Replace			9.1				

*In this category, no specific times can be established.

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		
01	ENGINE - Continued								
0104	Piston	Inspect Replace				0.9 11.7			
	Bearing, Connect- ing Rod	Inspect Replace				1.2 2.3			
	Pins and Bushings, Piston	Inspect Replace				0.9 9.1			
	Rings	Inspect Replace				0.9 9.1			
0105,	Guides, Valve	Inspect Replace			1.1		9.8		
	Spring, Valve	Inspect Test Replace			0.6 0.4 9.2				
	Valve, Intake and Exhaust	Inspect Adjust Replace			1.5 1.1 9.2				
	Arm, Rocker,	Inspect Replace			0.6 1.7				
	Rods, Push,	Inspect Replace			1.9 1.9				
	Valve, Tappet,	Inspect Replace			1.1 2.9				
	Shaft, Rocker Arm,	Inspect Replace			0.6 1.7				
	Bearing, Camshaft,	Inspect Replace				0.6 7.1			
	Camshaft,	Inspect Replace				0.6 7.1	0.6 7.1	5,9,14	
	Gear, Timing,	Inspect,				0.8			

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		
01,	ENGINE - Continued								
0105,	Gear, Timing	Replace			2.2				
	Seal, Oil, Timing	Inspect			0.1				
	Gear Cover	Replace			6.9				
	Cover, Front	Inspect			0.1				
	Crankcase	Replace			6.9				
0106,	Pump, Oil, Repair, Replace	Inspect			0.4	1.1			
	Filter, Oil, Replace	Inspect		0.2	1.9				
	Element, Oil Cooler	Inspect		0.2	0.2				
		Replace			0.2				
					1.1				
0108,	Manifold, Intake	Inspect			0.2				
		Replace			6.1				
	Manifold, Exhaust	Inspect			0.2				
		Replace			1.2				
	Swirl Destroyer	Replace			6.2				
03	FUELSYSTEM								
0301	Nozzle, Injection	Test			0.6				
		Adjust			0.6				
		Repair			0.7				
		Replace			0.3				
	Lines, Pump to Injection	Inspect			0.2				
		Replace			0.6				
	Valve, Emergency Shutoff	Inspect			0.1				
		Replace			1.1				

*In this category, no specific times can be established.

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		
03,	FUELSYSTEM - Continued								
0302,	Pump, Injection, Fuel	Inspect Test Calibrate, Repair,			0.2 0.6	1.2 2.9		6,7,11,12, 13,16,18	
		Replace,			3.6				
0304,	Cleaner, Air, Replace Repair	Inspect		0.2 0.5 0.5					
0306,	Tank, Fuel, Service Repair,	Inspect		0.1 0.1	*				
		Replace		0.8					
	Pump, In-Tank, Electric	Test Replace		0.5 1.1	1.1				
	Fuel Tank Lines and Connec- tions, Hoses, and Clamps	Inspect Replace		0.2 0.4					
0308,	Governor	Inspect Adjust Repair Replace			0.5 1.5	1.0 0.8			
0309	Filters, Fuel	Inspect Replace		0.1 0.7					
0311	Starting Aid, Ether Replace,	Inspect Service		0.1 0.4	0.6				
0312	Accelerator and Throttle Controls	Inspect Adjust Replace		0.1 1.1 *					

*In this category, no specific times can be established.

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		
04	EXHAUST SYSTEM								
0401	Pipe, Exhaust and Tail	Inspect Replace		0.1 0.9					
	Muffler	Inspect Replace		0.1 0.9					
	Shield, Exhaust,	Inspect Replace		0.1 0.3					
05	COOLING SYSTEM								
0501	Radiator	Inspect Test Service Replace		0.1 0.1 3.6					
	Hose, Radiator,	Inspect Replace		0.1 0.6					
	Surge Tank	Replace		1.9					
0502	Shroud, Radiator Fan	Replace		3.6					
0503	Thermostat	Test Replace	0.2 0.9						
0504	Pump, Water,	Inspect Repair Replace	1.0	1.2 4.1					
	Belt, Drive, Water Pump	Inspect Adjust Replace Replace	1.0	0.4 0.4 0.4					

*In this category, no specific times can be established.

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		
05	COOLING SYSTEM - Continued								
0505	Modulated Fan, Assembly Pulley, Idler,	Replace, Inspect Repair Replace		3.7 0.1 0.2 1.2					
06	ELECTRICAL SYSTEM								
0601	Alternator	Test Repair Replace		0.4 0.7	1.3				
	Belt, Drive, Bracket, Mounting Pulley	Inspect Adjust Replace Replace	0.1	0.4 0.7 0.9					
0602	Regulator	Inspect Test Replace			0.4 0.4 0.9			Integral part of alternator	
0603	Starting Motor,	Test Repair Replace		0.4 1.8	1.1				
	Cable	Replace		0.3					
0607	Switch, Oil Pressure Lockout Light, Antilock Warning	Test Replace Inspect Replace		0.2 0.3 0.1 0.1					

*In this category, no specific times can be established.

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		
06	ELECTRICAL SYSTEM - Continued								
	Instruments	Inspect Test Replace		0.1 0.5 0.2					
0609	Fuses	Inspect Test Replace		0.1 0.1 0.1					
	Fuse Box	Inspect Test Repair		0.1 0.1 *					
	Switches	Inspect Test Replace		0.1 0.2 0.5					
0609	Headlights	Inspect Adjust Replace,	0.1						
	Lights, Tail and Park, Turn Signal, and Marker	Inspect, Test Replace	0.1						
0609	Mounting, Tail and Backup	Inspect Replace		0.1 0.2					
	Light, Dome	Inspect, Replace,	0.1						
	Light, Spot,	Inspect, Replace,	0.1						

*In this category, no specific times can be established.

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		
06	ELECTRICAL SYSTEM - Continued								
0610	Flasher	Test Replace		0.2 0.2					
	Switch, Dimmer	Test Replace		0.2 0.3					
	Units, Sending	Test Replace		0.2 0.4					
	Control, Directional Turn Indicator	Replace		1.4					
0611	Horns	Inspect, Test, Replace	0.1	0.2 0.5					
0612	Battery	Inspect, Test Service Replace	0.1	0.2 0.2 0.6					
	Cables, Battery,	Test Replace		0.1 0.5					
	Box	Replace Repair		1.0		*	20 thru 48		
0613	Harness, Wiring, Hull or Chassis	Inspect Test Repair Replace		* * *	*				
	24-Volt Converter,	Test Replace		1.0 0.8					

*In this category, no specific times can be established.

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		
06	ELECTRICAL SYSTEM - Continued								
	Harness, Antilock Assembly	Inspect Replace			0.2 2.0				
	Module, Computer Assembly	Inspect Replace			0.2 1.1				
07	TRANSMISSION								
0705	Linkage	Replace		*					
0705	Transmission Assembly	Inspect Test Service Adjust			0.5 1.1 1.6 0.9				
0710	Shift Linkage	Inspect Adjust Replace			0.1 0.6 1.1				
	Torque Converter	Inspect Test Repair, Replace			6.1 1.1 6.1	2.5			
0710	Oil Seal Rear Cover	Inspect Replace			0.1 1.6,		37,38,46		
0713	Intermediate Clutches	Adjust Replace Repair				0.5 2.0, 2.5	22,23		
0720	Drive Gear, Speedometer	Inspect Replace			0.1 1.6	0.1 1.6			

*In this category, no specific times can be established.

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		
07	TRANSMISSION - Continued								
0j721	Seal, Input, Front, Oil, Pump	Inspect Replace			1.1 6.2			35,43	
	Lines,	Replace		*					
09	PROPELLER SHAFT								
	Shaft, Propeller,	Inspect Service Replace		0.1 0.1 0.6					
	Joint, Universal,	Inspect Service Replace		0.1 0.1 0.9					
	Bearing, Center,	Inspect Service Replace		0.1 0.9 0.9					
10	FRONT AXLE								
1000	Axle Assembly,	Inspect Service Repair Replace		0.1 0.2	2.9 2.1				
1004	Steering Knuckle, Kingpin, and Bushing Spindle	Inspect Service, Replace, Inspect, Replace,		0.1 0.4	0.1 2.9 2.9				

*In this category, no specific times can be established.

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		
11	REAR AXLE								
1100	Axle Assemblies, Forward and Rear	Inspect Service Repair Replace		0.1 0.8		9.1			
	Valve, Breather,	Inspect Replace		0.1 0.2					
	Differentials,	Inspect Repair Replace			0.6 3.9	7.1			
	Shaft, Axle,	Inspect Replace		0.6 0.9					
	Bearing, Axle,	Inspect Adjust Replace		0.6 0.6 0.9					
	Flange, Drive,	Inspect Replace			0.1 0.9				
1102	Seal, Pinion	Replace			1.1				
1103	Final Drive	Replace			0.8				
1105	Valve Control Power Divider Lockout	Test, Repair, Replace, Assembly		0.1		1.1			
					0.6				
12	BRAKES								
1202	Brake Assembly	Adjust Repair Replace		0.7 0.5 2.1					
	Brakeshoe	Inspect Repair, Replace		2.5 2.5	0.5				

*In this category, no specific times can be established.

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		
11	BRAKES - Continued								
1206	Camshaft	Replace		3.5					
	Slack Adjuster	Adjust		0.5					
		Replace		3.5					
1208	Chamber, Air Brake Assembly	Repair			1.5				
		Replace		1.0					
	Valve, Brake Pedal and Control Assembly	Test		0.1					
		Repair			1.1				
		Replace		0.7					
	Valve, Double Check Assembly	Test		0.1					
		Repair			1.1				
		Replace		0.7					
	Valve, Control Trailer Emer- gency Assembly	Test		0.1					
		Repair			1.1				
		Replace		0.7					
	Valve, Quick- Release	Test		0.1					
		Repair			1.1				
		Replace		0.7					
	Valve, Relay Quick- Release	Test		0.1					
		Repair			1.1				
		Replace		0.7					
	Valve, Inversion	Test		0.1					
		Repair			1.1				
		Replace		0.7					
	Valve, Air Control	Test		0.1					
		Repair			1.1				
		Replace		0.7					

*In this category, no specific times can be established.

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		
12	BRAKES - Continued								
	Hose, Tubing, Rigid Piping, and Fittings	Test Replace		0.3 0.6					
	Reservoir Air	Service Replace	0.1	0.9					
1208	Valve, Safety,	Test Adjust Repair, Replace		0.1 0.1 0.7	1.1				
	Draincock Assembly	Test Replace		0.1 0.2					
	Evaporator, Alcohol	Inspect, Service Replace	0.1	0.1 0.8					
	Valve, Drain, Automatic Reservoir Assembly	Test Service Repair, Replace		0.1 0.2 0.7	1.1				
	Valve, One-Way Check Assembly	Test Repair, Replace		0.1 0.7	1.1				
	Valve, Tractor Protection Assembly	Test Repair, Replace		0.1 0.7	1.1				
	Switch, Stoplight Assembly	Inspect Replace		0.1 0.5					
	Indicator, Low Pressure	Test Replace		0.1 0.6					
	Sensor, Wheel Assembly	Inspect, Test Replace			0.9				
				1.0 1.2					
*In this category, no specific times can be established.									

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		
12	BRAKES - Continued Ring, Exciter Assembly	Inspect Replace		0.9 1.2					
1209	Compressor, Air,	Service Repair Replace		0.2 1.1	2.5				
	Governor, Air Compressor	Adjust Repair, Replace		0.9 0.9	0.9				
1211	Valve, Control, Hand Assembly	Test Repair Replace		0.1 0.7	1.1				
13	WHEEL, HUB, AND DRUM								
1311	Bearings, Wheel,	Inspect Service Adjust Replace		0.6 0.6 0.6 0.9					
	Drum	Inspect Repair Replace		0.6 0.6	0.9				
	Hub, Wheel	Inspect Replace		0.6 0.9					
	Seals	Inspect Replace		0.1 0.6					
1313	Tires	Inspect Service Repair Replace	0.1 0.1	 0.5 0.5					

*In this category, no specific times can be established.

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		
14	STEERING SYSTEM								
1401	Controls, Steering	Inspect Adjust, Align	0.1	0.3 0.6					
	Link, Drag	Inspect Replace		0.1 0.9					
	Rod, Tie	Inspect Replace		0.1 0.9					
	Wheel, Steering	Replace		0.8					
1407	Gear, Steering	Inspect Adjust, Repair Replace		0.1	1.0 2.4 1.1				
1410	Pump, Hydraulic	Test Service Repair Replace		0.1	0.1	1.5			
	Belt, Pump,	Inspect Adjust Replace		0.1 0.4 0.4	0.9				
1411	Lines and Fittings, Hydraulic	Inspect Replace		0.1 0.4					
15	FRAME AND TOWING ATTACHMENTS								
1501	Frame Assembly,	Inspect	0.1		*	*			

*In this category, no specific times can be established.

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		
15	FRAME AND TOWING ATTACHMENTS - Continued								
1501	Bumpers	Repair Replace		0.9	*				
1503	Pintle	Inspect Adjust Replace		0.1 0.6 0.6					
1504	Spare Wheel Carrier	Replace			2.0				
1507	Outriggers	Inspect Repair Replace	0.1		*				
16	SPRINGS	Repair			2.0				
1601	Spring, Front	Inspect Repair Replace		0.1	2.0 0.9				
	Shackle and Bolts	Inspect Replace		0.1	0.9				
	Seat, Spring	Inspect Replace			0.1 0.9				
	Spring, Rear	Inspect Replace			0.1 0.9				
	Rod, Torque	Inspect Replace		0.1 1.2					
	Beam, Equalizer,	Inspect Repair Replace		1.2	6.1 6.1				

*In this category, no specific times can be established.

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		
18	BODY, CAB, AND HOOD								
1801	Door Assembly	Inspect Adjust Repair Replace	0.1	0.2 *					
	Grille Assembly and Radiator Shell Panels	Replace		0.4					
	Hood, Latch, Rest, and Seal	Inspect Replace		0.1 0.4					
	Ventilating System, Cab	Inspect Service		0.3 0.1					
1802	Fender	Repair Replace		0.9					
	Board, Running	Repair Replace		0.4					
	Windshield and Cab Rear Window	Inspect Replace	0.1	1.0					
1805	Transmission and Engine Covers	Replace		0.5					
1806	Cushion, Seat	Inspect Replace	0.1	0.9					
	Seat Adjusters, Replace	Inspect	0.1	0.9					

*In this category, no specific times can be established.

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		
18	BODY, CAB, AND HOOD - Continued								
1808	Storage Boxes, Straps, and Mounting	Inspect, Repair	0.1		*				
1812	Console, Operator's	Repair Replace		1.5	3.1				
	Body Side Doors	Replace		1.5					
1812	Floodlights	Inspect Replace	0.1	0.6					
	Extension, Bumper and Platform	Replace		3.5					
	Splash Aprons	Replace		0.2					
	Reflectors	Replace		0.2					
22	BODY, CHASSIS, OR HULL ACCESSORY ITEMS								
2202	Windshield Wiper Blades	Inspect Replace	0.1	0.1					
	Washer Pump	Test Service Replace	0.1	0.1 0.2					
	Mirror Assembly	Replace		0.6					
	Air Horn	Replace		0.5					

*In this category, no specific times can be established.

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		
22	BODY, CHASSIS, OR HULL ACCESSORY ITEMS - Continued								
2207	Heater	Repair Replace		*	*				
2210	Data Plates	Replace		4.1					
24	HYDRAULIC AND FLUID SYSTEMS			0.3					
2401	Turret Assembly, Rotation Gear Case	Inspect Service Repair Replace	0.1	0.1	4.6	2.9			
	Derrick Leg, Hydraulic and Manual Extension	Inspect Test Service Adjust Repair Replace	0.3	0.5 0.8 1.0	*	12.1			
	Pole Guide Assembly	Repair Replace		0.1		1.2			
	Pumps, Hydraulic	Inspect Test, Repair Replace		0.1	0.4 1.5	1.5			
	Motors, Hydraulic,	Inspect Replace	0.1	0.1 0.9					
	Tank, Hydraulic, Oil,	Service Repair Replace	0.1	*	1.3				

*In this category, no specific times can be established.

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		
24	HYDRAULIC AND FLUID SYSTEMS - Continued								
	Digger Assembly,	Inspect Service Repair Replace	0.1	0.2	* 0.9				
2401	Lines, Hydraulic Drive	Inspect Repair Replace		0.1 0.7 0.7					
	Swivel Sheave	Repair Replace	0.5	*					
	Power Takeoff (PTO)	Repair Replace		2.0 1.1					
	Cylinder, Hydraulic Extension	Inspect Repair Replace		0.1	1.2	*			
	Winches, Body Front, and Turret	Inspect, Service, Repair Replace,	0.1	0.8	* 5.2				
	Valve, Control,	Inspect Repair Replace		0.1	0.7	1.1			
	Filter, Return Line	Inspect Service Replace		0.2 0.2 0.2					
	Valve, Relief,	Inspect Adjust Repair, Replace,		0.1 0.5 0.7	1.1				

*In this category, no specific times can be established.

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		
24	HYDRAULIC AND FLUID SYSTEMS - Continued								
	Cylinder, Hydraulic Elevation	Inspect Repair Replace Replace		0.1 0.7 0.2	1.1				
47	GAGES (NON- ELECTRICAL) AND MEASUR- ING DEVICES								
4702	Speedometer	Inspect Replace	0.1	0.9					
	Cable and Housing	Inspect Replace		0.1 0.6					
	Gear, Cable,	Inspect Replace		0.6 0.6					
	Tachometer,	Inspect Replace,	0.1	0.9					
4702	Air Pressure	Inspect Test Replace		0.1 0.7	0.2				
4703	Hourmeter,	Inspect		0.1					

*In this category, no specific times can be established.

Section III. SPECIAL TOOLS AND TEST EQUIPMENT

(1) REFERENCE CODE	(2) MAINTENANCE CATEGORY	(3) NOMENCLATURE	(4) NATIONAL STOCK NUMBER	(5) TOOL NUMBER
CHASSIS TOOLS, ENGINE				
1	0	Automotive Mechanics Tool Set,	5180-00-754-0641	
2	0	General Mechanics Automotive Tool Kit,	5180-00-177-7033	
3	0	Number 1 Common Organizational Maintenance Automotive Repair Shop Equipment	4910-00-754-0654	
4	0	Number 1 Supplemental Auto Maintenance Set	4910-00-754-0653	
5	F	Gage, Camshaft Protrusion		SE2342
6	F	Governor Spring Adjusting Tool		SE2348
7	F	Holder, Dial Indicator		SE2343
8	F	Installer, Front Oil Seal		SE2096
9	F	Installer Set		SE2092
10	F	Peening Tool, Valve Seat Insert		SE2094
11	F	Pump, Tappet Holder		SE2341
12	F	Remover, Governor Flyweight Damper		SE2340
13	F	Remover/Installer, Barrel Plunger,		SE2346
14	F	Remover/Installer, Camshaft Nut Governor End,		SE2344
15	F	Remover/Installer, Governor Flyweight,		SE2349
16	F	Remover/Installer, Tappet		SE2345
17	F	Remover, Main Bearing Caps		SE2093
18	F	Wrench, Holder, Pump Drives Flange		SE2339
19	F	Wrench, Tappet Adjusting,	SE2347	
TRANSMISSION				
20	F	Adapter, Plate		SE2478
21	F	Centering Bank		SE2460
22	F	Compressor, Forward and Fourth Clutch Spring		SE2454
23	F	Compressor, Low and First Clutch Spring		SE2458
24	F	Compressor, Main Regulator and Valve Spring		SE2459
25	F	Drive Handle		SE2469
B-25				

Section III. SPECIAL TOOLS AND TEST EQUIPMENT - CONTINUED

(1) REFERENCE CODE	(2) MAINTENANCE CATEGORY	(3) NOMENCLATURE	(4) NATIONAL STOCK NUMBER	(5) TOOL NUMBER
CHASSIS TOOLS,				
TRANSMISSION - Continued				
26	F	Fixture, Snapping Selective		SE2462
27	F	Gage, Converter End Plug		SE2479
28	F	Gage, First Clutch		SE2466
29	F	Gage, Forward Clutch Pack Clearance		SE2463
30	F	Gage, Fourth Clutch Pack Clearance,		SE2464
31	F	Gage, Second and Third Clutch		SE2465
32	F	Installer, Dust Shield and Front Seal		SE2452
33	F	Installer, Lockring		SE2475
34	F	Installer, Needle Bearing		SE2474
35	F	Installer, Oil Pump Seal		SE2457
36	F	Installer, Output Shaft Orifice Plug		SE2471
37	F	Installer, Output Shaft Seal		SE2453
38	F	Installer, Output Shaft Seal		SE2456
39	F	Installer, Rear Bearing		SE2473
40	F	Installer, Sun Gear Bushing		SE2461
41	F	Installer, Valve Pin		SE2477
42	F	Lifter, Center Support		SE2476
43	F	Lifter, Front Support Assembly		SE2480
44	F	Lifter, Gear		SE2481
45	F	Remover, In-Vehicle Rear Bearing		SE2467
46	F	Remover, Seal and Dust Shield		SE2468
47	F	Remover, Valve Pin		SE2472
48	F	Roller, Retainer Ring		SE2470

Section IV. REMARKS

REFERENCE CODE	REMARKS
A	Direct Support will replace phenolic connector and pot for moisture. All repair and replacement of parts performed by Organizational Maintenance are limited to authorized items listed in TM 9-2320-269-20P.

APPENDIX C**EXPENDABLE SUPPLIES AND MATERIALS LIST****Section I. INTRODUCTION****SCOPE**

This appendix lists expendable supplies and materials you will need to operate and maintain the Telephone Maintenance Truck M876. 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 cleaning compound, item 5, appendix C).
- b. Column (2) - Level. This column identifies the lowest level of maintenance that required 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 Federal Supply Code for Manufacturer (FSCM) in parentheses followed by the part number.
- e. Column (5) - Unit of Measure (*U/M*). Indicates the measure used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., 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

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION	(5) U/M
1	0	6810-00-249-9354	Acid, Sulfuric, Electrolyte	gal
2	0	8040-00-893-1882	Adhesive, Liquid Rubber, MMM-A-1617, Type II, 3-ounce	oz
3	0	6810-00-687-8056	Alcohol, Methanol (94480)	
4	0	7920-00-514-2417	Brush, Acid Swabbing, HB-643 (81348) Box of 144,	ea
5	0		Brush, Paint, ½-inch	
6	0		Cement, Rubber	
7	0	7510-00-223-6704	Chalk, Carpenter's (81348)	cn
8	0	6850-00-935-1082,	Compound, Cleaning, Trichloroethylene (MIL-C-81302) 55-gal drum	dr
9	0	6850-00-243-1992	Coolant, Antifreeze, Permanent, Glycol, Inhibited (MIL-A-46153),	gal
10	0	4020-00-689-5658	Cord, Binding, 314-inch (TR-605),	ft
11	0	7930-00-282-9699	Detergent, Liquid, GP Liq Ws, A (MIL-D-16791) (81349) 1-gal (3.785-liter) can	
12	0		Detergent, Non-Sudsing	

Section II. EXPENDABLE SUPPLIES AND MATERIALS LIST - CONTINUED








(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION	(5) U/M
13	O	9150-00-111-6256	Fluid, Hydraulic (MIL-H-46170) (81349)	gal
14	O		Fluid, Windshield Washer	
15	O		Flux, Rosin, Soldering,	pt
16	O		Fuel, Diesel, No. 2, DF-2 Regular (VVF 800)	
		9140-00-286-5294	Bulk	gal
		9140-00-286-5295	5-gal can	gal
		9140-00-286-5296	55-gal drum, 16 gage	gal
		9140-00-286-5297	55-gal drum, 18 gage	gal
17	0	8150-00-190-0904	Grease, GAA, Automotive and Artillery (MIL-G-10924) (81349)1 pound (0.454-kg) can	lb
18	0		Kit, Transmission, Oil Filter	
19	0		Lubricant, Silicone Grease	
20	O		Lubricant, Silicone Spray	
21	0	6810-00-238-8119	Naptha, Alipnat IGL(81348)	gal
22	0,	9151-00-189-6727	Oil, Lubricating, OEIHDO 10, MIL-L 2104 (81349) 1-quart (0.946-liter) can	qt
23	O		Oil, Penetrating	
24	0	7920-00-205-1711	Rags, Wiping, A-A-531 (58536) 50-pound (22.7-kg) bale	lb

Section II. EXPENDABLE SUPPLIES AND MATERIALS LIST - CONTINUED
SECTION 11. EXPENDABLE SUPPLIES AND MATERIALS LIST

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION	(5) U/M
25	O		Sandpaper, Number 4/0	sh
26	O	8040-00-225-4548	Sealer, Silicone Rubber (81384)	pt
27	O	3439-00-003-8601	Solder, Non-Acid, Lead Tin Alloy (81384)	lb
28	O		Solvent, Drycleaning, Type II PD-680 (81348)	
		6850-00-664-5685	1-quart (0.946-liter) can	qt
		6850-00-281-8011	1-gallon (3.785-liter) can	gal
		6850-00-285-8011	55-gallon (208-liter) drum	gal
29	0	9905-00-537-8954	Tags, Marking (MIL-T-12755) (81439) Box of 50,	ea
30	0	5970-00-184-2002,	Tape, Electrical, Insulation, Grade A, Spec HH-T-0011, 1132-inch thick, 2-inch wide,	rl
31	0	7510-00-973-9513	Tape, Pressure Sensitive, Adhesive, 2-inch (MIL-T-23397) (81349),	rl
32	0		Tape, Teflon, Antisiezing, (MIL-T-27730) (81349) ¼-inch wide x 260-inch long roll,	ft
33	0		Tubing, Heat Shrinkable	
34	0	6810-00-682-6867	Water, Distilled, Batterly (24774),	gal
35	0		Wire Fasteners	
36	0		Wire, Safety	

**APPENDIX D
TORQUE LIMITS**

CAPSCREW MARKING

Current Usage	Much Used	Much Used	Used at Times	Used at times
Quality of Material	Indeterminate	Minimum Commercial	Medium Commercial	Best Commercial
SAE Grade Number	1 or 2	5	6 or 7	8
Capscrew Head Markings			6 	
Manufacturer's marks may vary			7 	
These are all SAE Grade 5 (3 line)				

TORQUE VALUES

CAUTION

If replacement capscrews are of a higher grade than originally supplied, use torque specifications for the original. This will prevent equipment damage due to over torquing

Capscrew Body Size (Inches) - (Thread)		Torque Ft Lb (N.m)		Torque Ft Lb (N.m)		Torque Ft Lb (N.m)		Torque Ft Lb (N.m)	
1/4	20	5	(7)	8	(11)	10	(14)	12	(16)
	28	6	(8)	10	(14)			14	(19)
5/16	18	11	(15)	17	(23)	19	(26)	24	(33)
	24	13	(18)	19	(26)			27	(37)
3/8	16	18	(24)	31	(42)	34	(46)	44	(60)
	24	20	(27)	35	(47)			49	(66)
7/16	14	28	(38)	49	(66)	55	(75)	70	(95)
	20	30	(41)	55	(75)			78	(106)
1/2	13	39	(53)	75	(102)	85	(115)	105	(142)
	20	41	(56)	85	(115)			120	(163)
9/16	12	51	(69)	110	(149)	120	(163)	155	(210)
	18	55	(75)	120	(163)			170	(231)
5/8	11	83	(113)	150	(203)	167	(226)	210	(285)
	18	95	(129)	170	(231)			240	(325)
3/4	10	105	(142)	270	(366)	280	(380)	375	(508)
	16	115	(156)	295	(400)			420	(569)
7/8	9	160	(217)	395	(536)	440	(597)	605	(820)
	14	175	(237)	435	(590)			675	(915)
1	8	235	(319)	590	(800)	660	(895)	910	(1234)
	14	250	(339)	660	(895)			990	(1342)

TORQUE VALUES - CONTINUED**NOTE**

Always use the torque values listed when specific torque values are not available.

Do not use listed values in place of those specified in other sections of this manual; special attention should be observed when using SAE Grade 6,7, and 8 capscrews.

The above is based on use of clean, dry threads.

Reduce torque by 10 percent when engine oil is used as a lubricant.

Reduce torque by 20 percent if new plated capscrews are used.

Capscrews threaded into aluminum may require reductions in torque of 30 percent or more of Grade 5 capscrews torque and must attain two capscrew diameters of thread engagement.

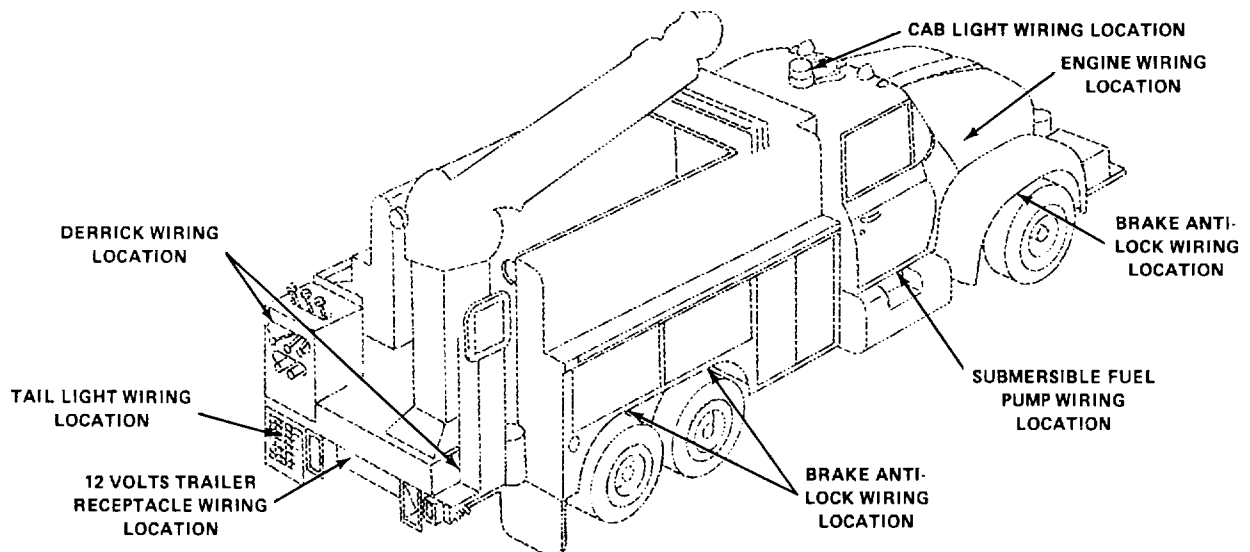
**APPENDIX E
M876 ELECTRICAL SYSTEMS FUNCTIONAL DIAGRAMS**

The M876 electrical systems functional diagrams shown in this appendix are provided to perform troubleshooting and maintenance procedures.

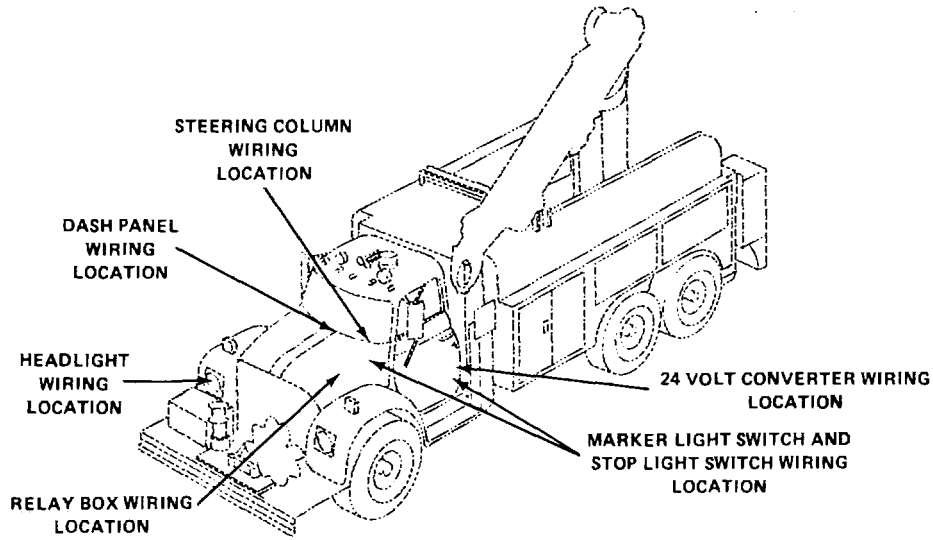
Each functional diagram shows related components and harnesses and basic wire routing. Due to the complexity of some of the circuits in the M876 electrical system, it is necessary to use more than one diagram to identify all components present in the circuits.

Each functional diagram is keyed to a major component locator to aid in locating the components in each circuit.

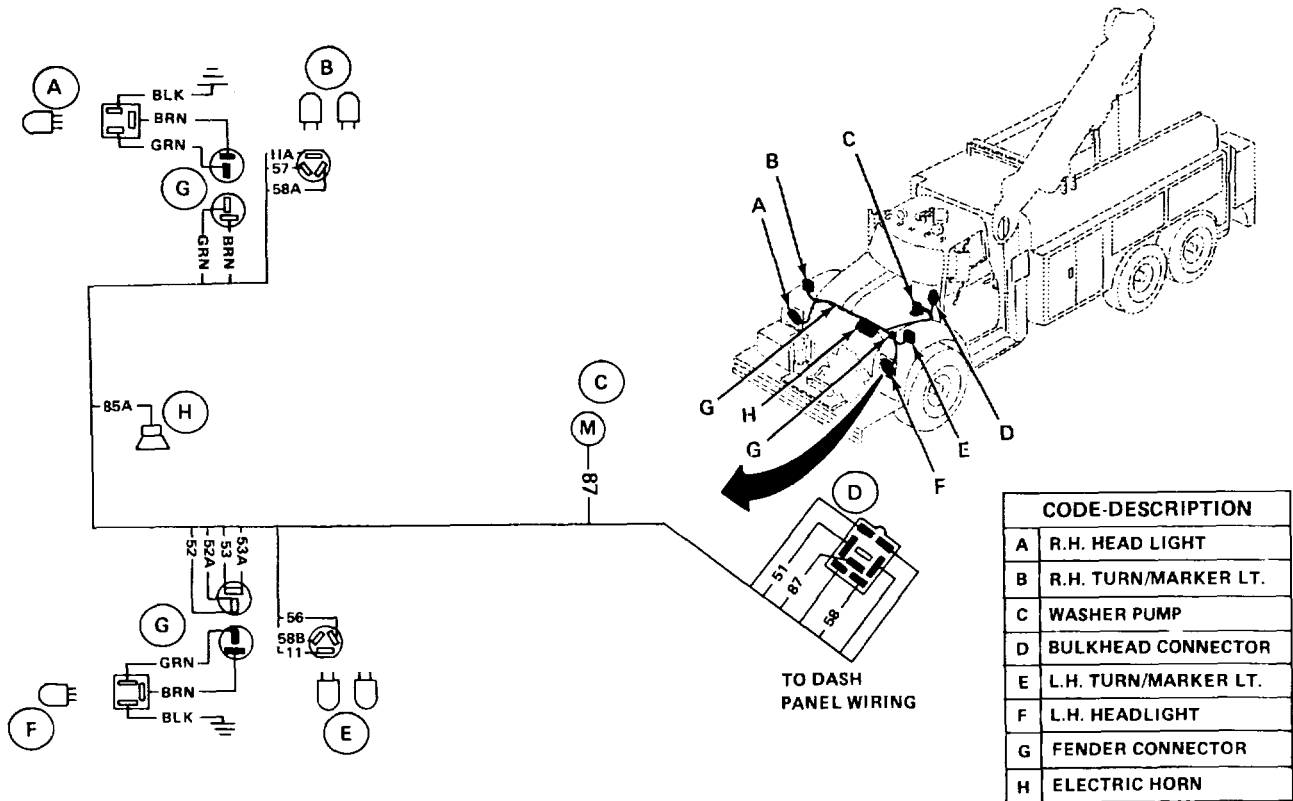
	Page		Page
Brake Anti-Lock Wiring	E-14	Relay Box Wiring.....	E-4
Cab Lights Wiring	E-5	Steering Column Wiring	E-12
Dash Panel Wiring.....	E-8	Submersible Fuel Pump	
Derrick Wiring.....	E-15	Wiring.....	E-7
Engine Wiring	E-3	Taillight Wiring	E-18
Headlight Light Wiring	E-2	12-Volt Trailer Receptacle.....	E-13
Marker Light Switch and.....		Wiring.....	E-19
Stoplight Switch Wiring.....	E-6	24-Volt Converter Wiring.....	E-13



M876 ELECTRICAL SYSTEMS FUNCTIONAL DIAGRAMS CONTINUED

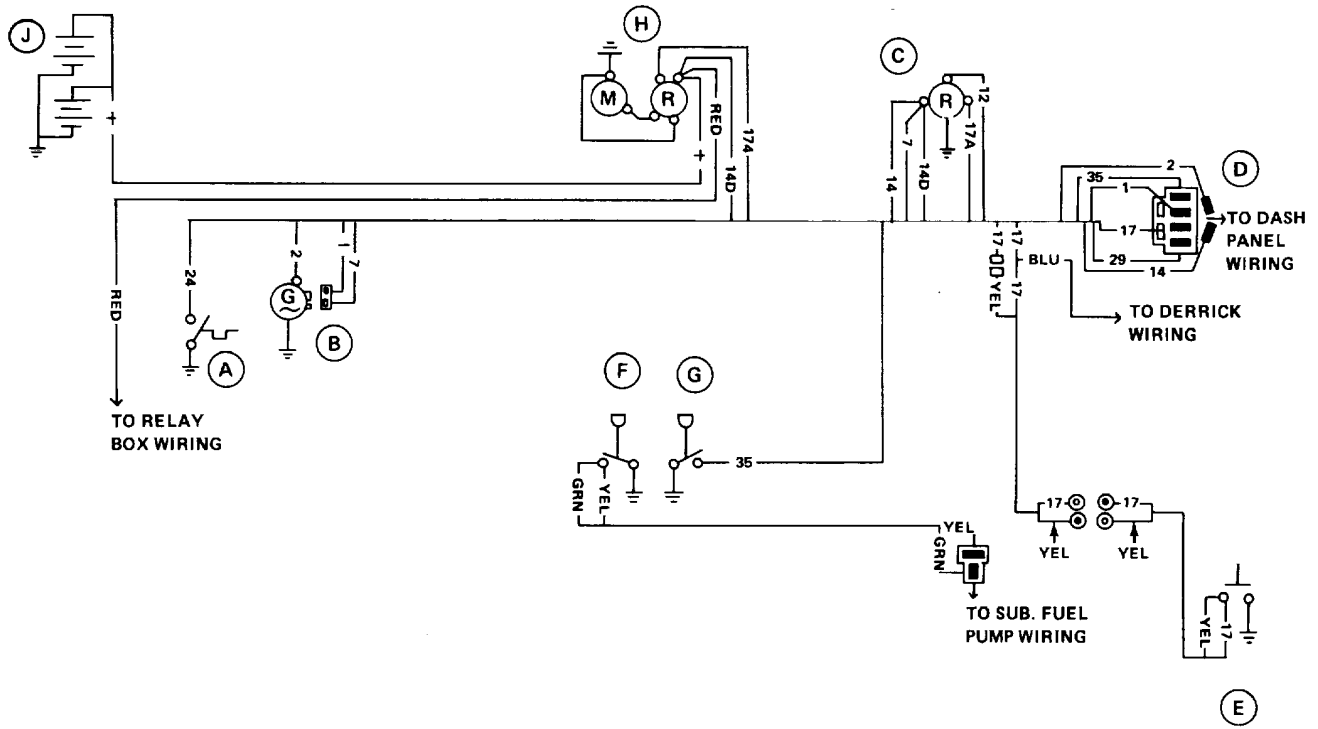


HEADLIGHT WIRING

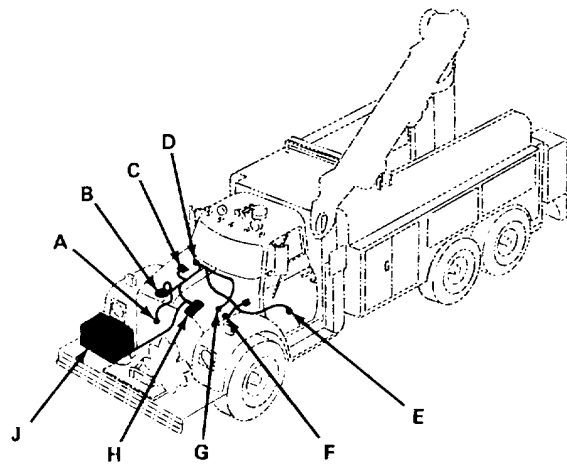


M876 ELECTRICAL SYSTEMS FUNCTIONAL DIAGRAMS - CONTINUED

ENGINE WIRING

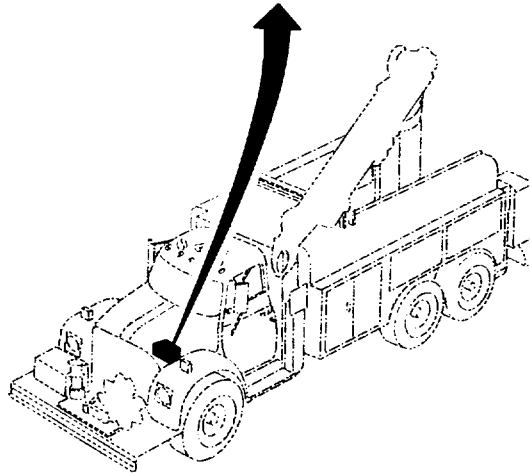
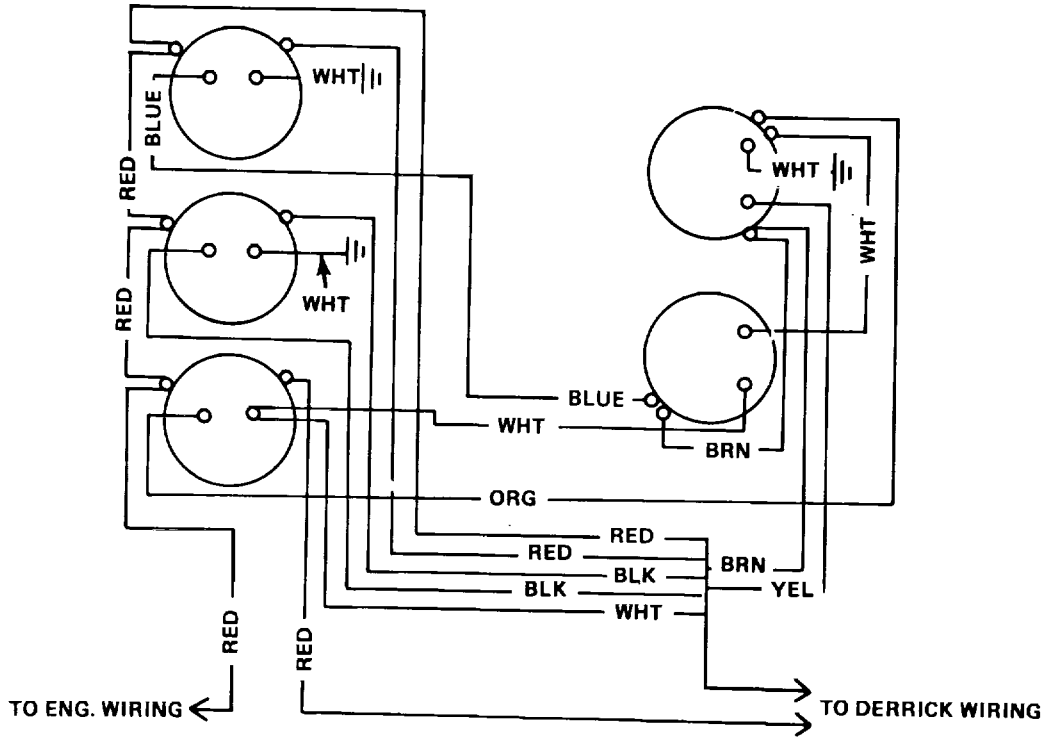


CODE-DESCRIPTION	
A	WTR TEMP. SENSOR
B	ALTERNATOR
C	MAGNETIC SWITCH
D	BULKHEAD CONNECTOR
E	TRANS. NEUTRAL SWITCH
F	OIL PRESS. LOCKOUT SWITCH
G	OIL PRESS. SENSOR
H	STARTER/SOLENOID
J	BATTERIES



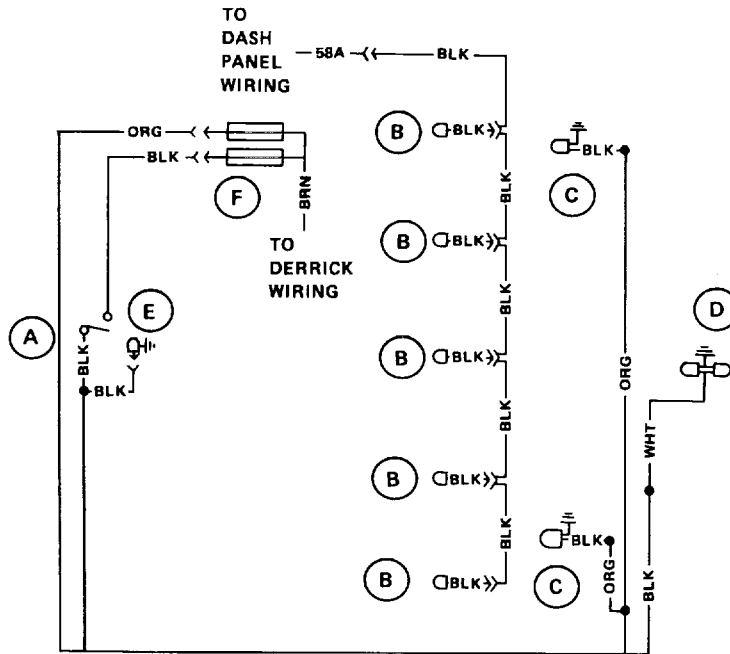
M876 ELECTRICAL SYSTEMS FUNCTIONAL DIAGRAMS - CONTINUED

RELAY BOX WIRING

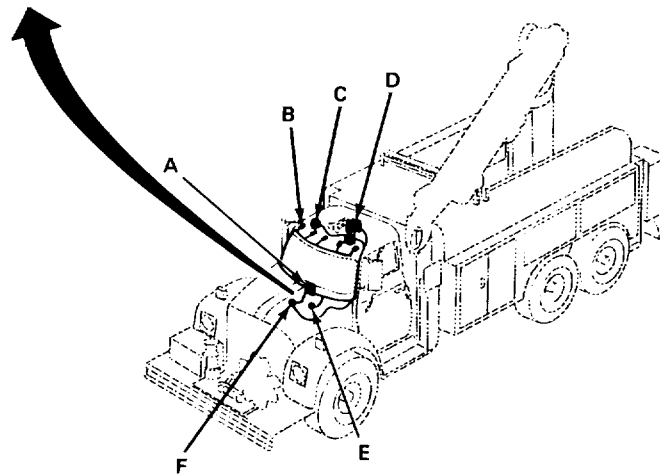


M876 ELECTRICAL SYSTEMS FUNCTIONAL DIAGRAMS - CONTINUED

CAB LIGHTS WIRING

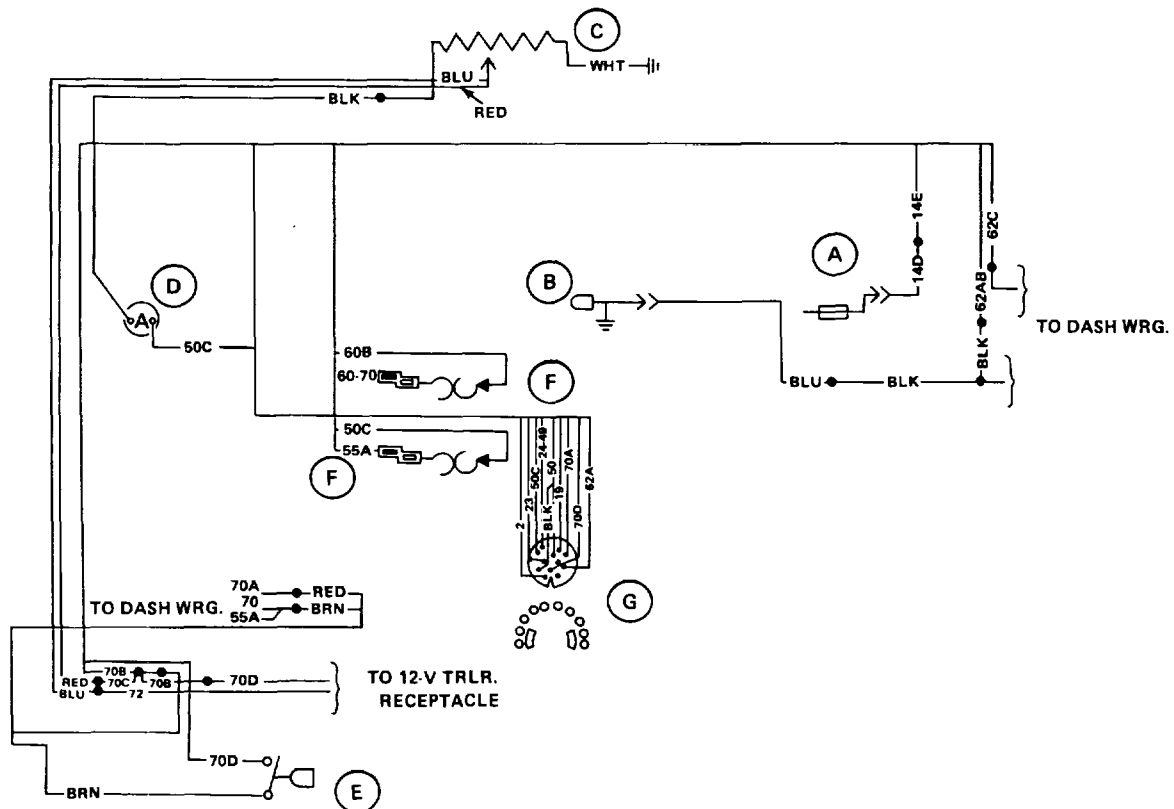


CODE-DESCRIPTION	
A	ROTATING LIGHT SWITCH
B	CLEARANCE LIGHTS
C	SPOTLIGHTS
D	ROTATING LIGHT
E	ROT. LIGHT WARNING LIGHT
F	FUSE PANEL

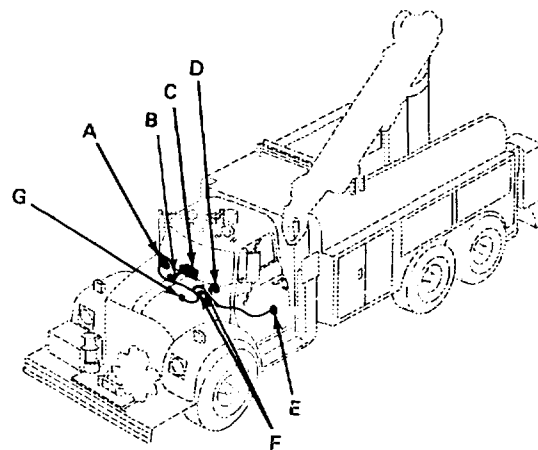


M876 ELECTRICAL SYSTEMS FUNCTIONAL DIAGRAMS - CONTINUED

MARKER LIGHT SWITCH AND STOPLIGHT SWITCH WIRING

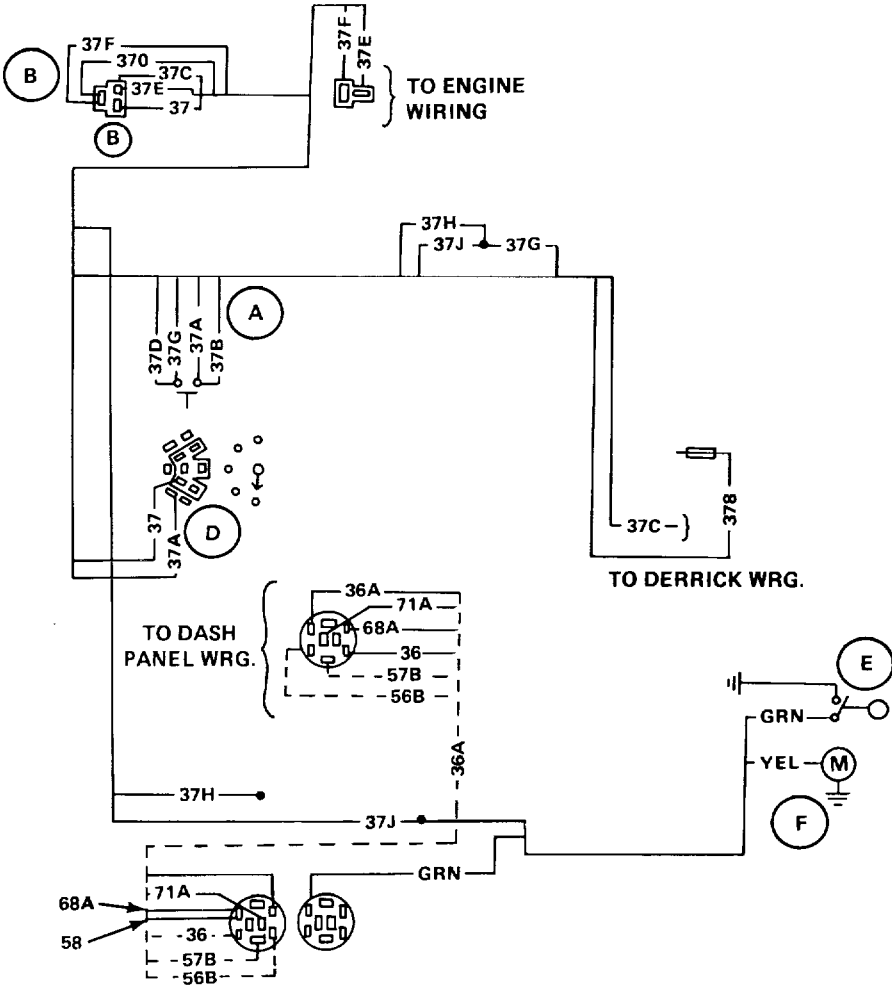


CODE-DESCRIPTION	
A	FUSE BOX
B	TRANSMISSION SELECTOR
C	TRAILER BRAKE CONTROL
D	AMP METER
E	STOPLIGHT SWITCH
F	FLASHERS
G	MASTER LIGHT SWITCH

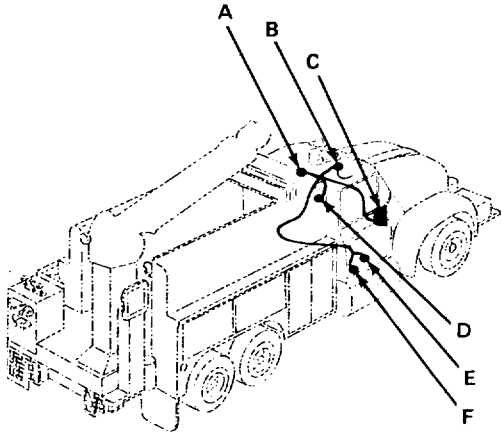


M876 ELECTRICAL SYSTEMS FUNCTIONAL DIAGRAMS - CONTINUED

SUBMERSIBLE FUEL PUMP WIRING



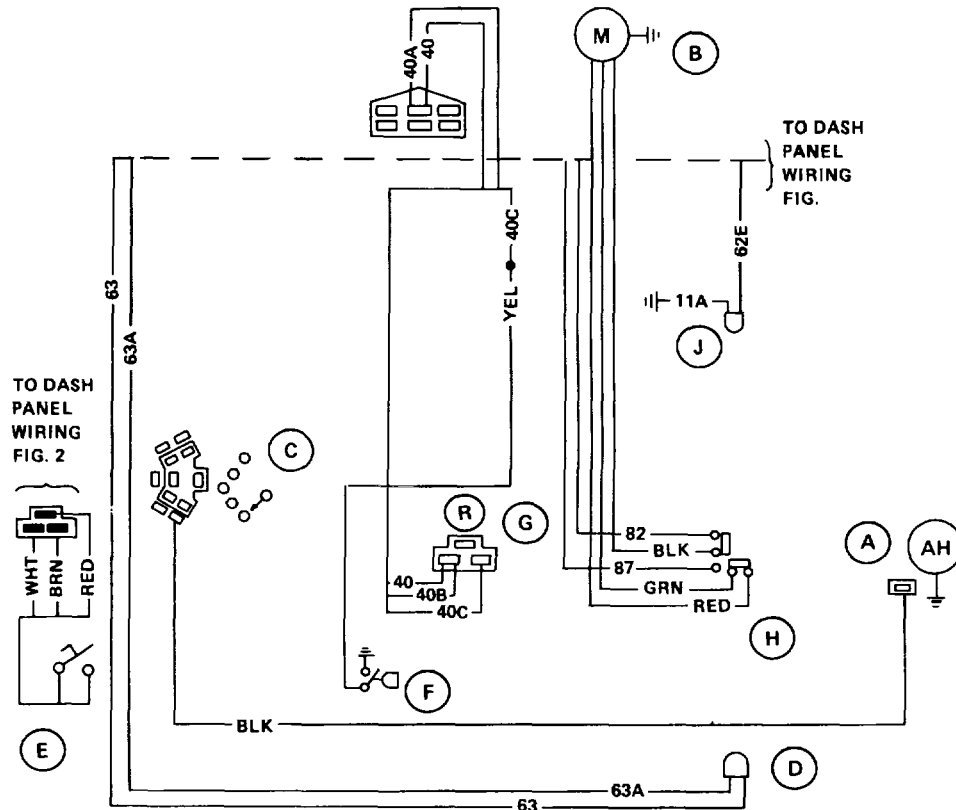
CODE-DESCRIPTION	
A	PRIMER SWITCH
B	FUEL PUMP RELAY
C	FUSE BOX
D	KEY SWITCH
E	FUEL LEVEL SENDING UNIT
F	SUBMERSABLE FUEL PUMP



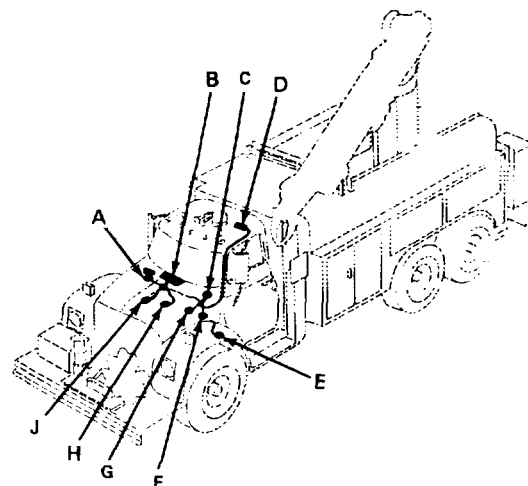
M876 ELECTRICAL SYSTEMS FUNCTIONAL DIAGRAMS - CONTINUED

DASH PANEL WIRING

FIGURE 1 OF 4



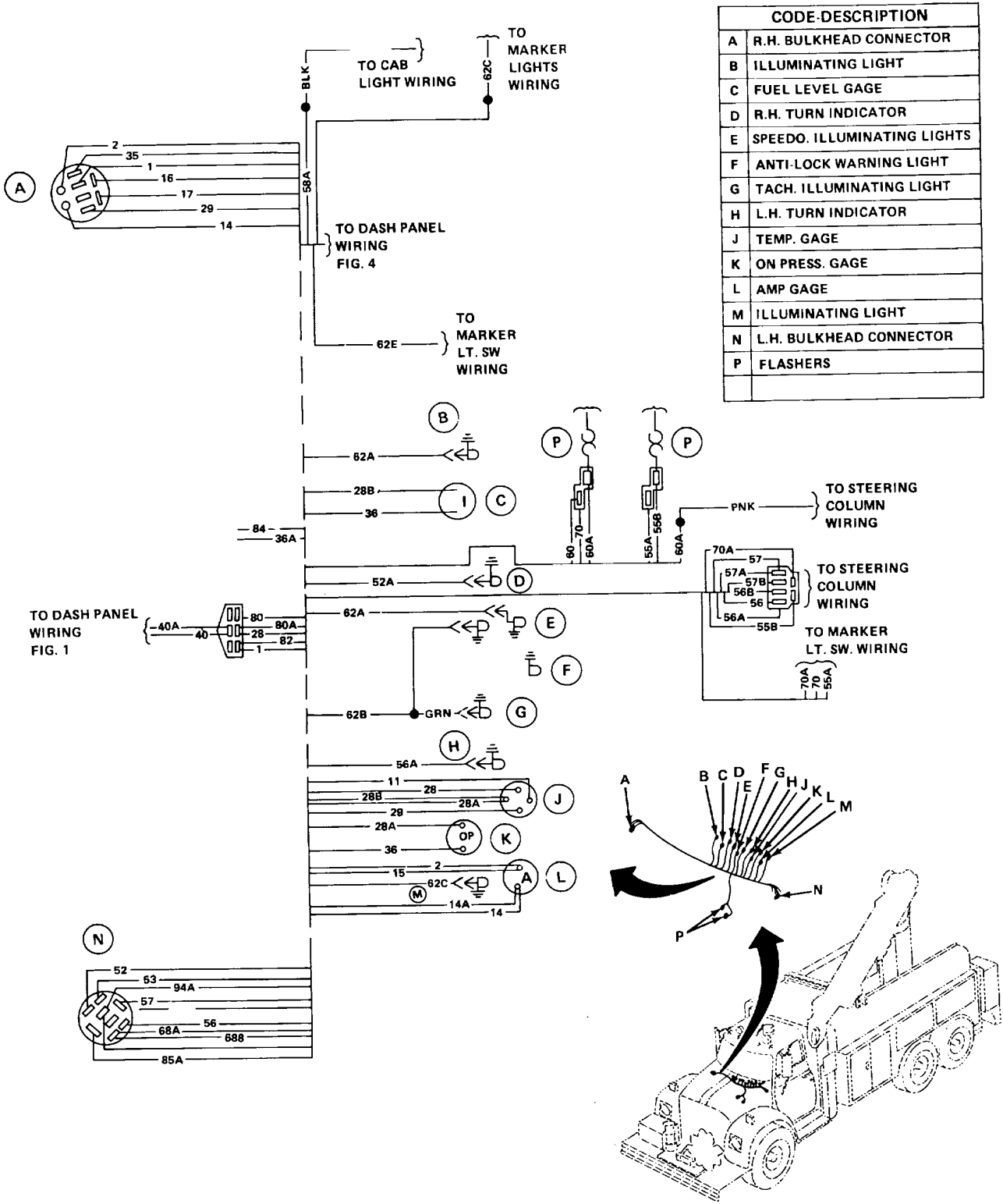
CODE-DESCRIPTION	
A	HOURMETER
B	WNDSHLD. WIPER MOTOR
C	KEY SWITCH
D	DOMELIGHT
E	HDLT. DIMMER SWITCH
F	AIR PRESSURE SENDING UNIT
G	AIR PRESSURE RELAY
H	WNDSHLD. WIPER SWITCH
J	ILLUMINATING LIGHT



M876 ELECTRICAL SYSTEMS FUNCTIONAL DIAGRAMS - CONTINUED

DASH PANEL WIRING - CONTINUED

FIGURE 2 OF 4

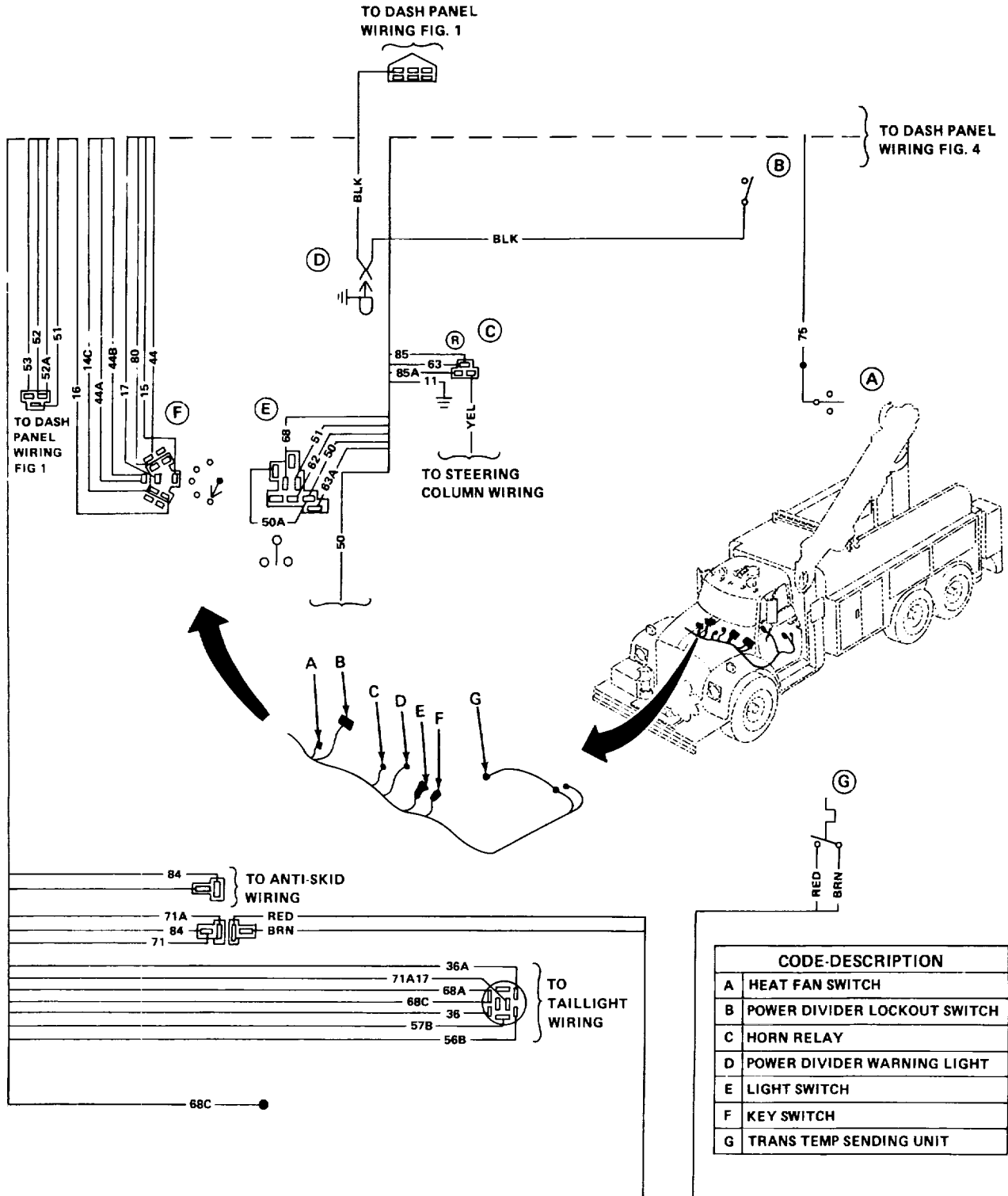


CODE-DESCRIPTION	
A	R.H. BULKHEAD CONNECTOR
B	ILLUMINATING LIGHT
C	FUEL LEVEL GAGE
D	R.H. TURN INDICATOR
E	SPEEDO. ILLUMINATING LIGHTS
F	ANTI-LOCK WARNING LIGHT
G	TACH. ILLUMINATING LIGHT
H	L.H. TURN INDICATOR
J	TEMP. GAGE
K	ON PRESS. GAGE
L	AMP GAGE
M	ILLUMINATING LIGHT
N	L.H. BULKHEAD CONNECTOR
P	FLASHERS

M876 ELECTRICAL SYSTEMS FUNCTIONAL DIAGRAMS - CONTINUED

DASH PANEL WIRING - CONTINUED

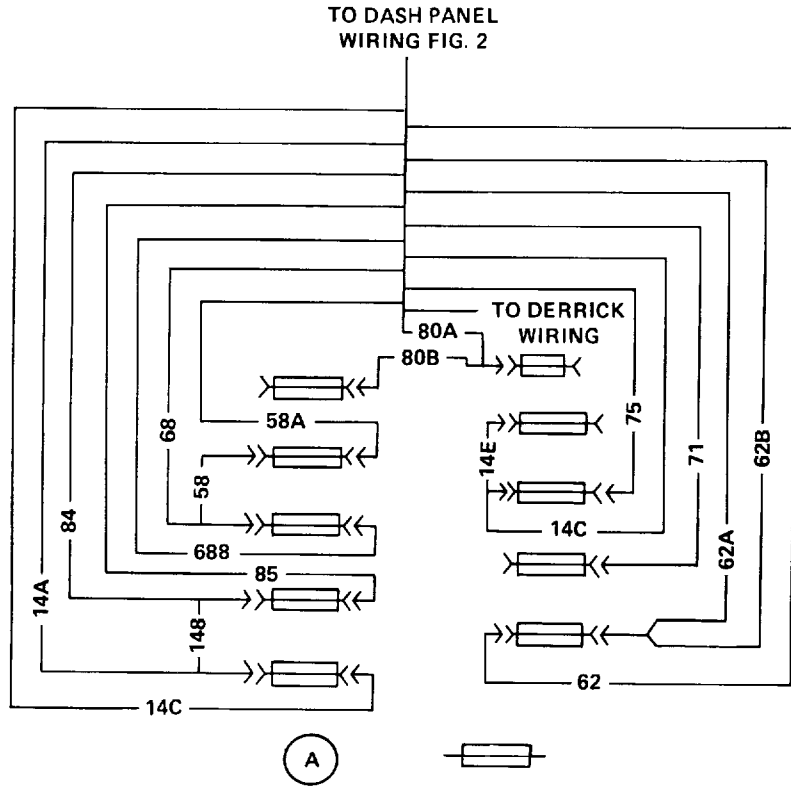
FIGURE 3 OF 4



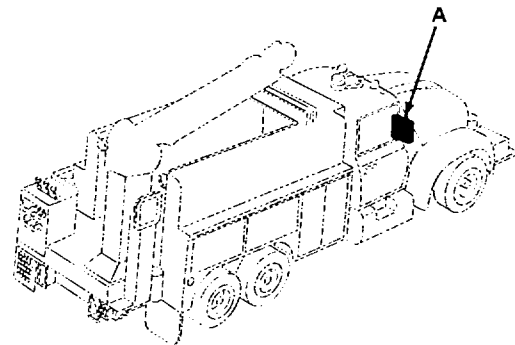
M876 ELECTRICAL SYSTEMS FUNCTIONAL DIAGRAMS - CONTINUED

DASH PANEL WIRING - CONTINUED

FIGURE 4 OF 4

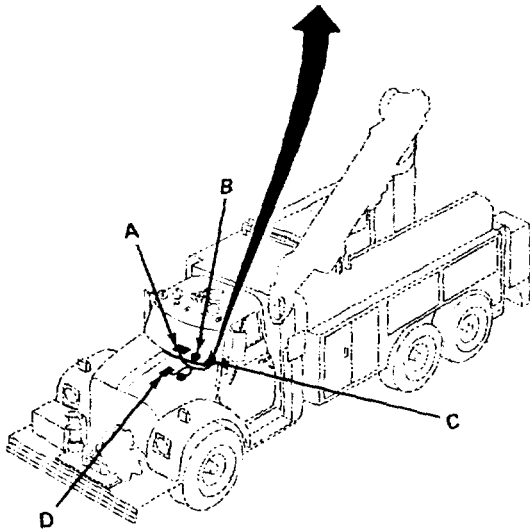
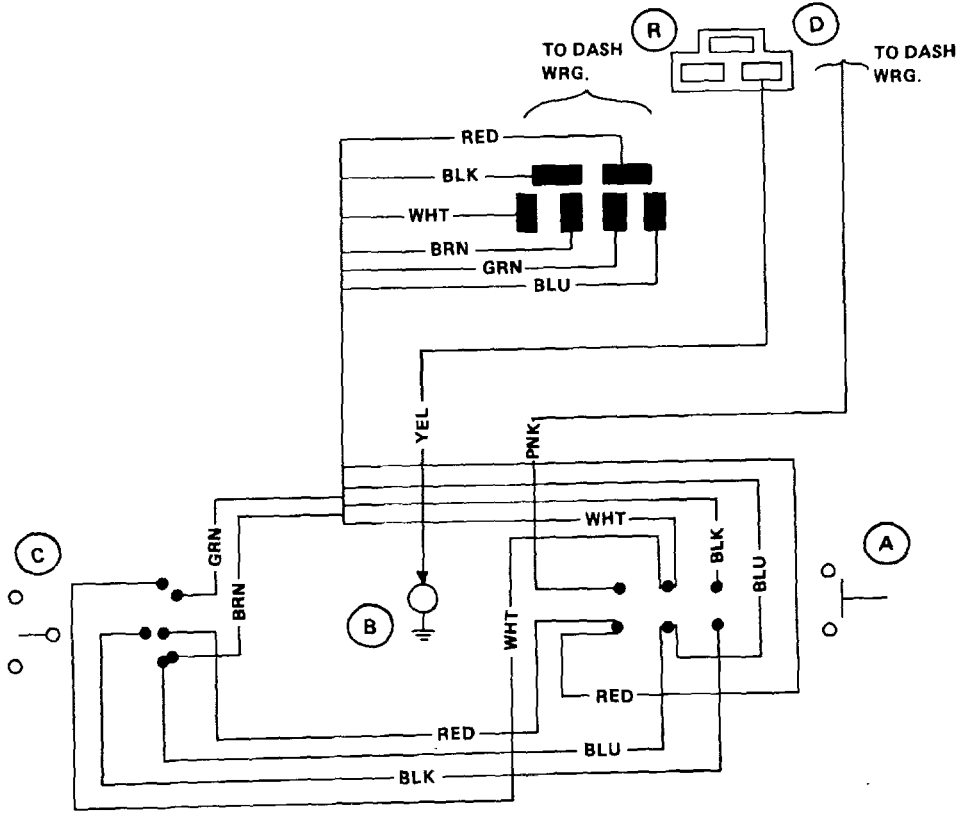


CODE-DESCRIPTION	
A	FUSE BOX



M876 ELECTRICAL SYSTEMS FUNCTIONAL DIAGRAMS - CONTINUED

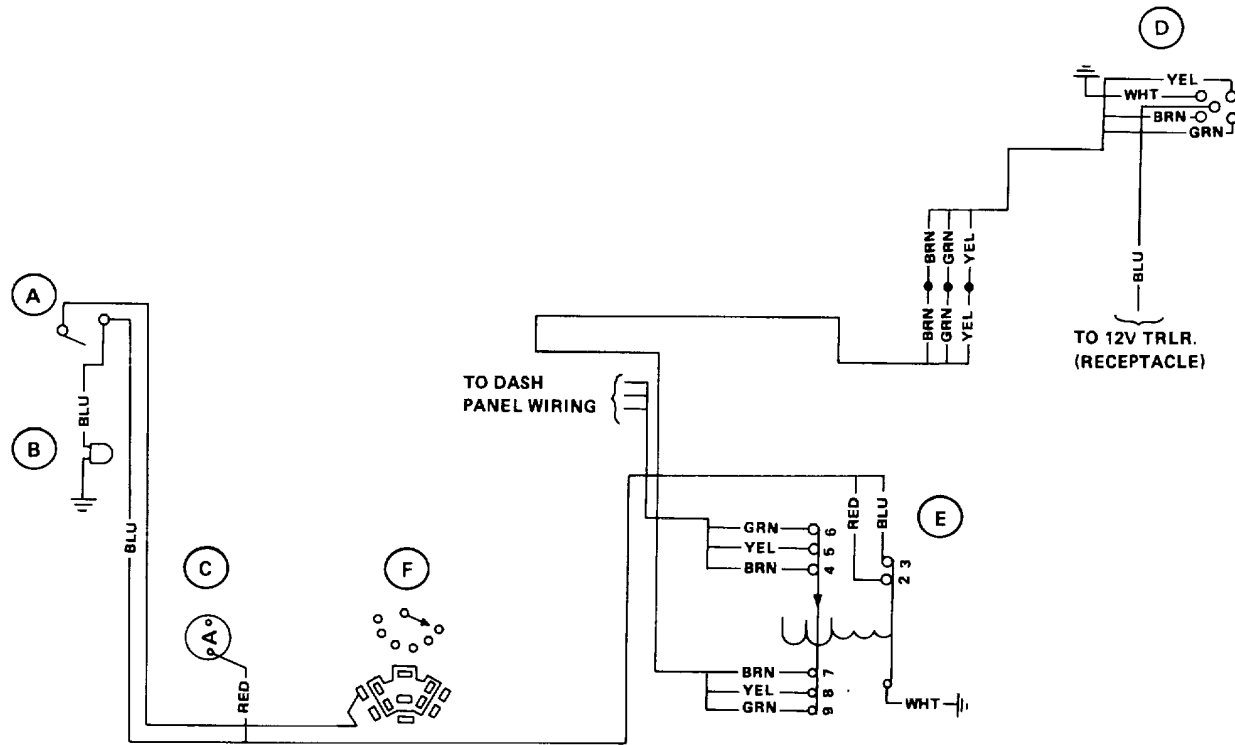
STEERING COLUMN WIRING



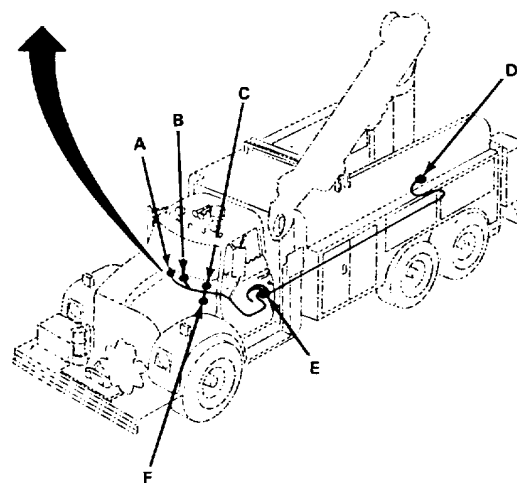
CODE-DESCRIPTION	
A	HAZARD LT. SWITCH
B	HORN CONTACT
C	TURN INDICATOR SWITCH
D	HORN RELAY

M876 ELECTRICAL SYSTEMS FUNCTIONAL DIAGRAMS - CONTINUED

24-VOLT CONVERTER WIRING

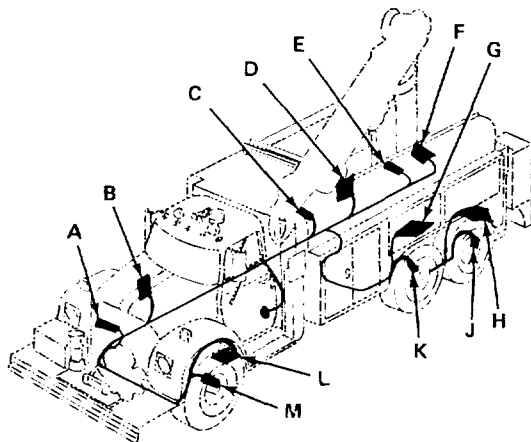
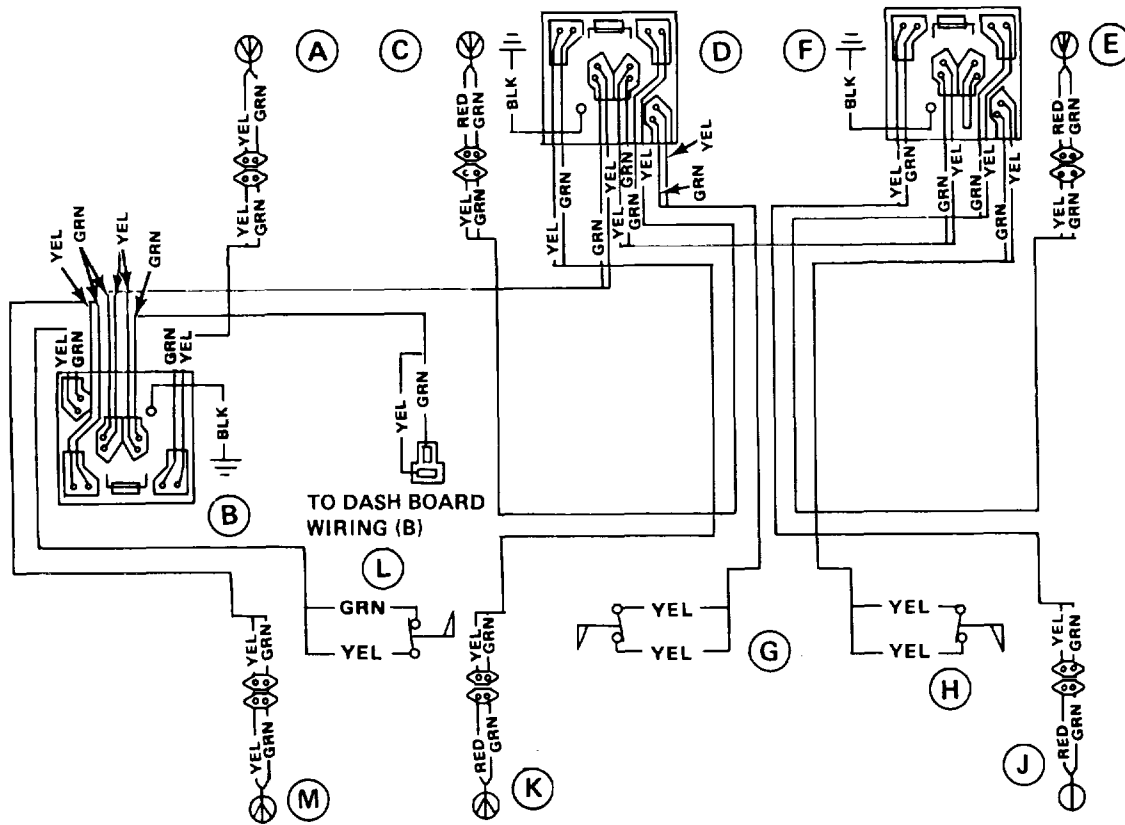


CODE-DESCRIPTION	
A	24 VOLT CONVERTER SWITCH
B	TRAILER LIGHT WARNING LIGHT
C	AMP GAGE
D	24 VOLT TRAILER RECEPTACLE
E	24 VOLT CONVERTER
F	KEY SWITCH



M876 ELECTRICAL SYSTEMS FUNCTIONAL DIAGRAMS - CONTINUED

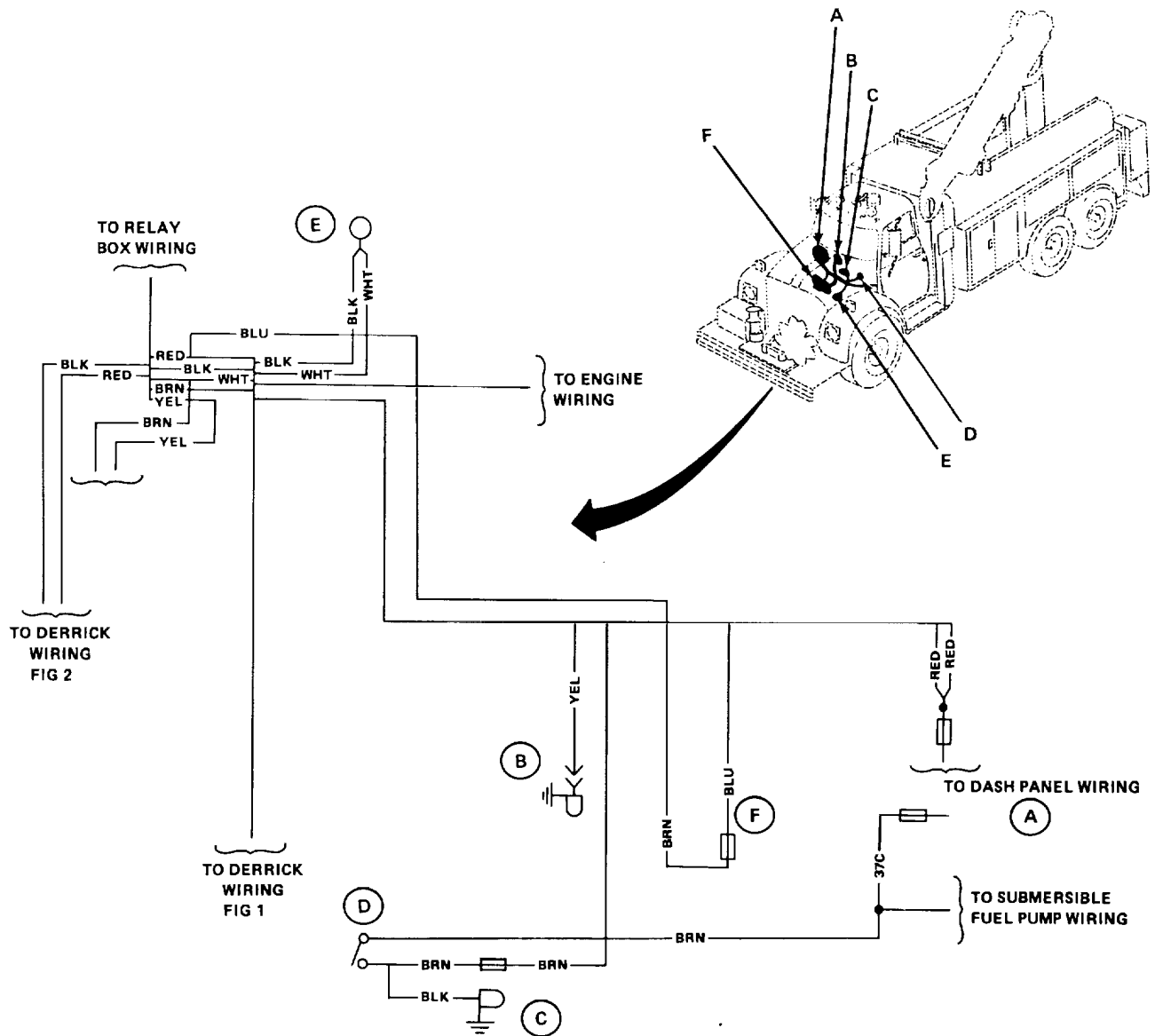
BRAKE ANTI-LOCK WIRING



CODE-DESCRIPTION	
A	R.H. FRONT WHEEL SENSOR
B	FRONT AXLE COMPUTER MODULE
C	R.H. FORWARD-REAR WHEEL SENSOR
D	FORWARD-REAR AXLE COMPUTER MODULE
E	R.H. REAR-REAR WHEEL SENSOR
F	REAR-REAR AXLE COMPUTER MODULE
G	FORWARD-REAR AIR VALVE
H	REAR-REAR AIR VALVE
J	L.H. REAR-REAR WHEEL SENSOR
K	L.H. FORWARD REAR WHEEL SENSOR
L	FRONT AIR VALVE
M	L.H. FRONT WHEEL SENSOR

M876 ELECTRICAL SYSTEMS FUNCTIONAL DIAGRAMS - CONTINUED

DERRICK WIRING FIGURE 1 OF 3

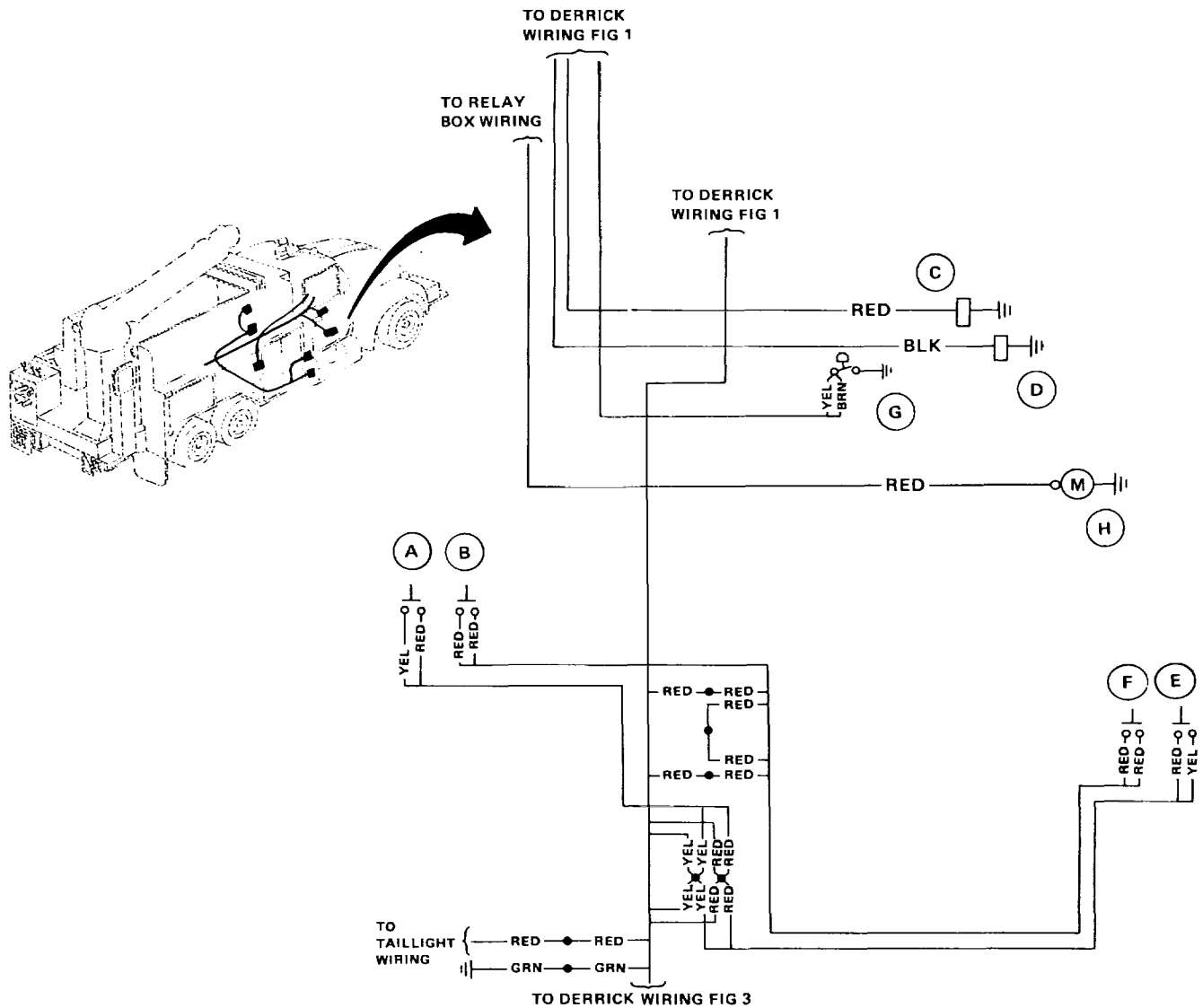


CODE-DESCRIPTION	
A	FUSE BOX
B	OUTRIGGER WARNING LIGHT
C	EMERGENCY POWER LIGHT
D	EMERGENCY POWER SWITCH
E	TACHOMETER SENDING UNIT
F	FUSE PANEL

M876 ELECTRICAL SYSTEMS FUNCTIONAL DIAGRAMS - CONTINUED

DERRICK WIRING - CONTINUED

FIGURE 2 OF 3

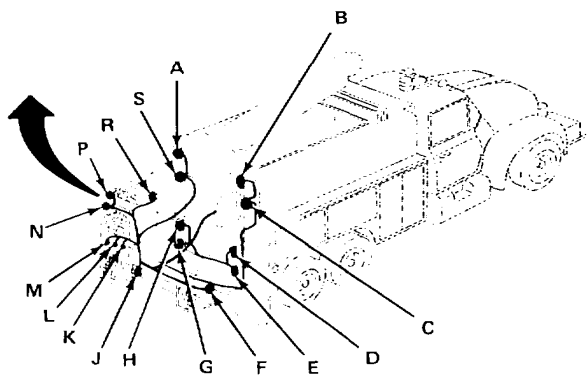
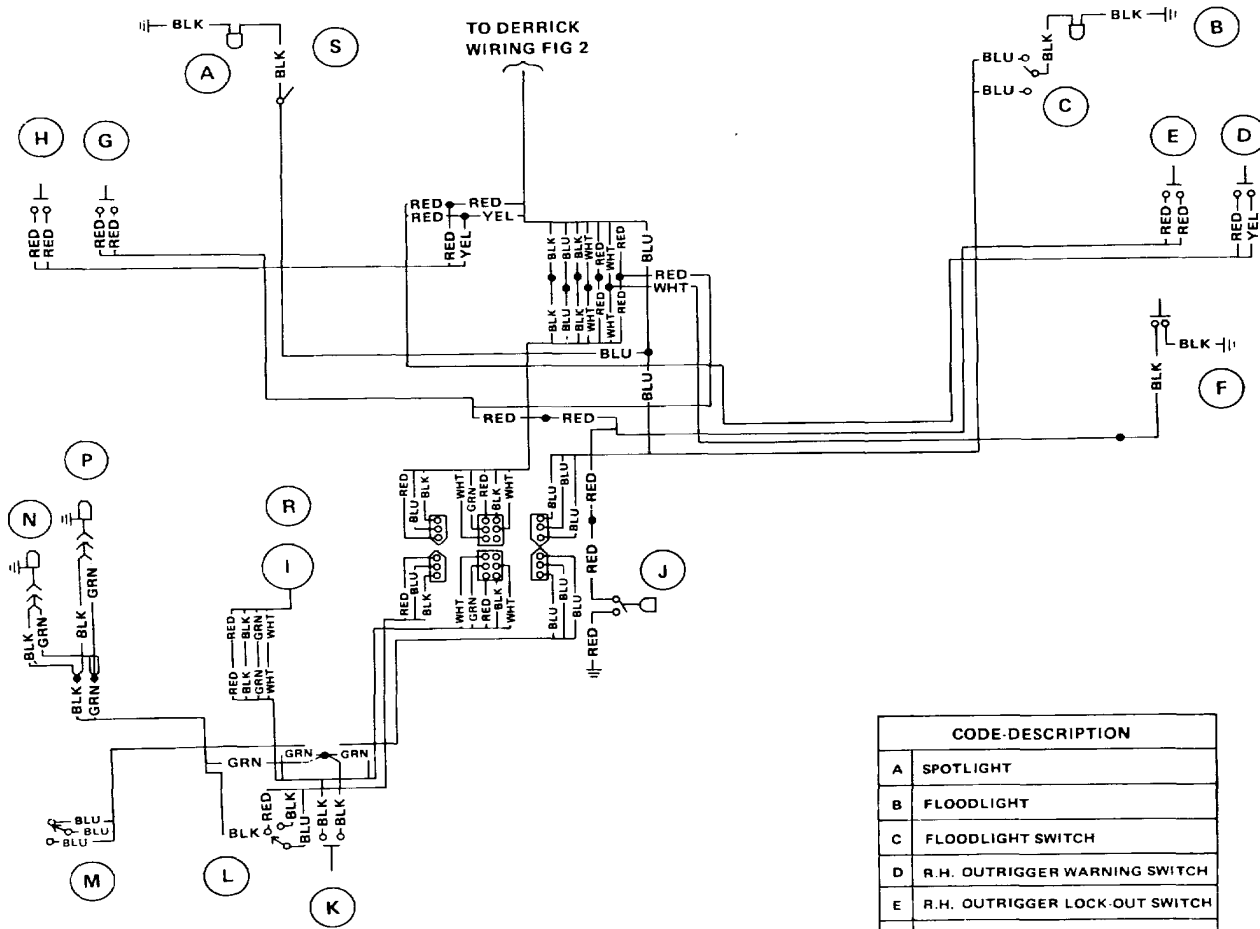


CODE-DESCRIPTION	
A	LH. OUTRIGGER WARNING SWITCH
B	LH. OUTRIGGER LOCKOUT SWITCH
C	EMERGENCY STOP SOLENOID
D	EMERGENCY POWER SOLENOID
E	RH. OUTRIGGER WARNING SWITCH
F	RH. OUTRIGGER LOCKOUT SWITCH
G	TRANS. OIL PRESS. SENDING UNIT
H	AUXILIARY HYDRAULIC PUMP

M876 ELECTRICAL SYSTEMS FUNCTIONAL DIAGRAMS - CONTINUED

DERRICK WIRING - CONTINUED

FIGURE 3 OF 3



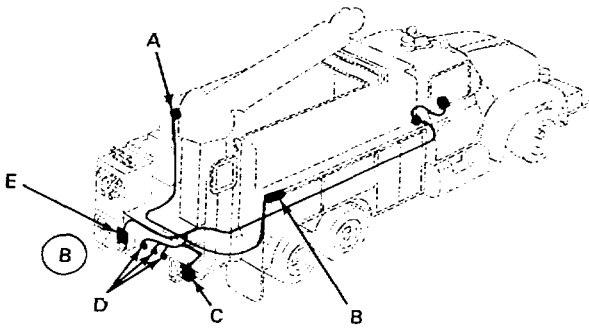
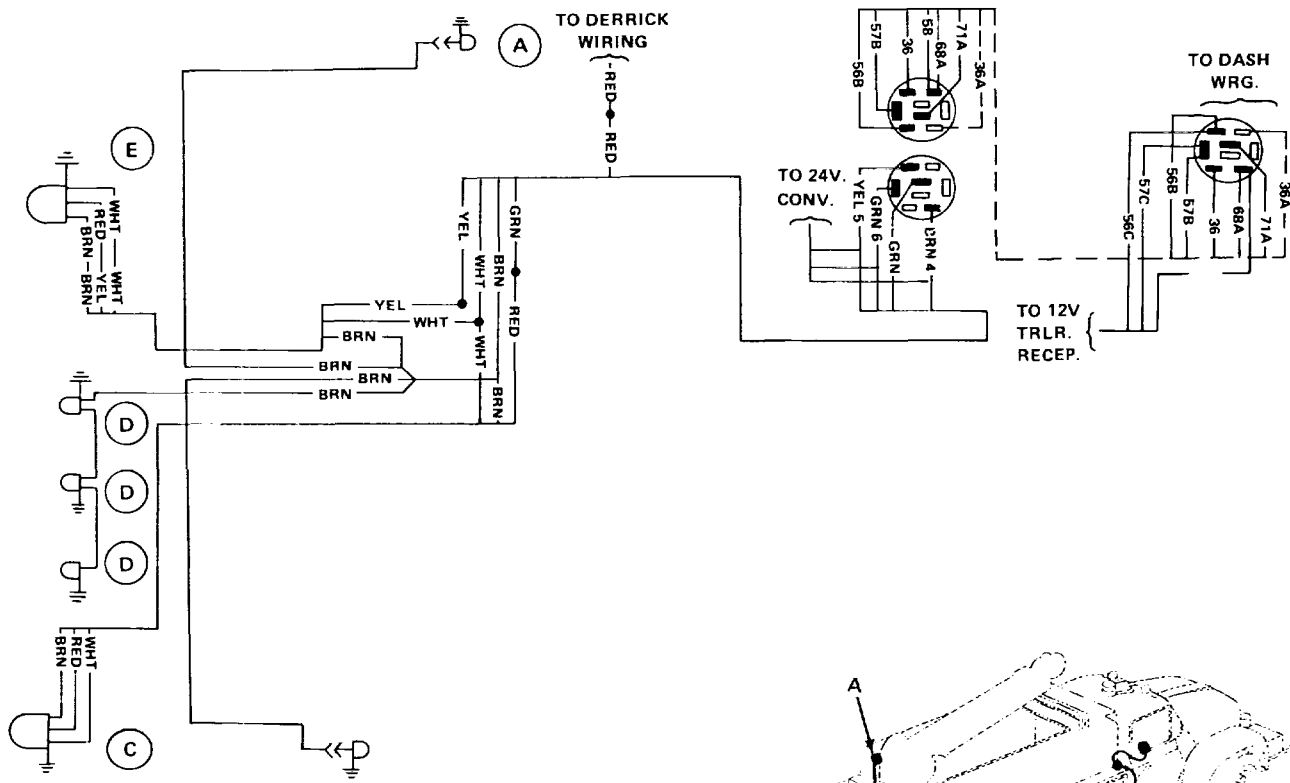
CODE-DESCRIPTION	
A	SPOTLIGHT
B	FLOODLIGHT
C	FLOODLIGHT SWITCH
D	R.H. OUTRIGGER WARNING SWITCH
E	R.H. OUTRIGGER LOCK-OUT SWITCH
F	EMERGENCY START SWITCH
G	L.H. OUTRIGGER LOCK-OUT SWITCH
H	L.H. OUTRIGGER WARNING SWITCH
J	SOLENOID VALVE
K	EMERGENCY START SWITCH
L	KEY SWITCH
M	CONSOLE LIGHT SWITCH
N	ILLUMINATING LIGHT
P	ILLUMINATING LIGHT
R	TACHOMETER
S	SPOTLIGHT SWITCH

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M876 ELECTRICAL SYSTEMS FUNCTIONAL DIAGRAMS - CONTINUED

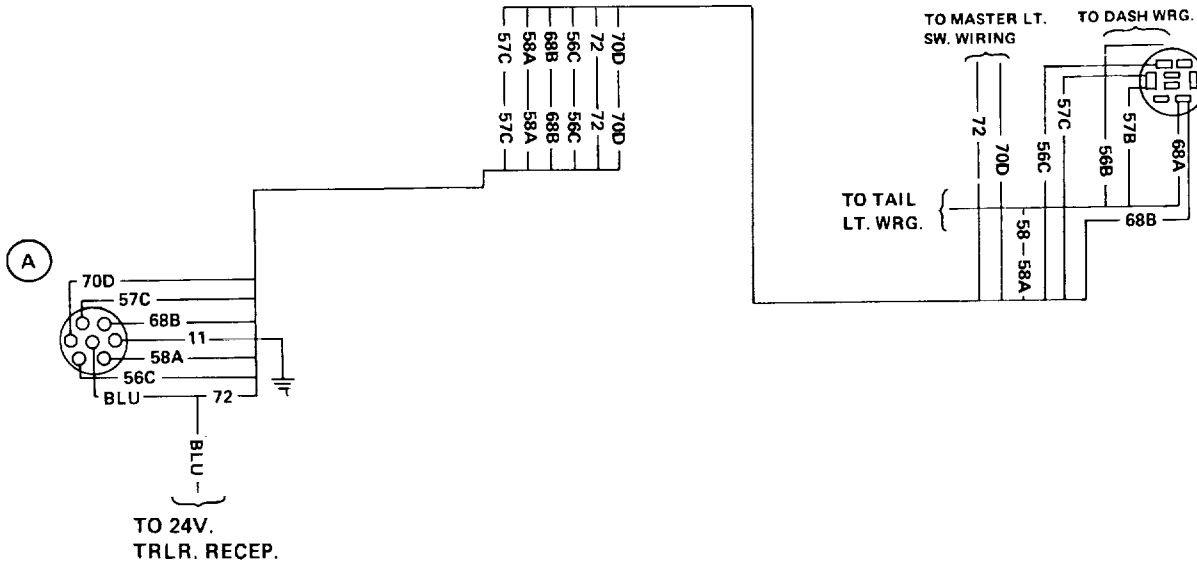
TAILLIGHT WIRING



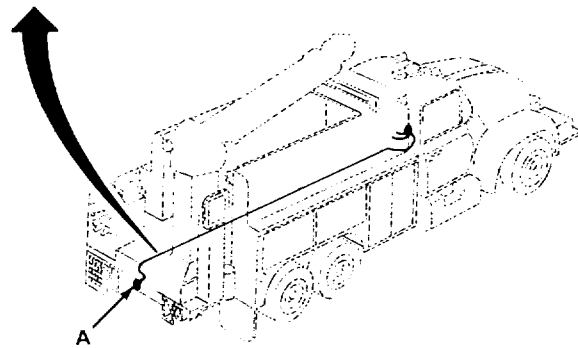
CODE-DESCRIPTION	
A	L.H. MARKER LIGHT
B	R.H. MARKER LIGHT
C	R.H. STOP/TAIL/BACKUP LIGHT
D	RUNNING LIGHTS
E	L.H. STOP/TAIL/BACKUP LIGHTS

M876 ELECTRICAL SYSTEMS FUNCTIONAL DIAGRAMS - CONTINUED

12-VOLT TRAILER RECEPTACLE WIRING



	CODE-DESCRIPTION
A	12 VOLT TRAILER RECEPTACLE



E-19/(E-20 blank)

TA229721

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By Order of the Secretary of the Army:

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

Official:

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Brigadier General, United States Army
The Adjutant General

To be distributed in accordance with DA Form 1 2-38, Organizational Maintenance requirements for Truck, Telephone Maintenance, Utility, 36,000 GVWR, M876.

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THE METRIC SYSTEM AND EQUIVALENTS

LINEAR MEASURE

- 1 Centimeter = 10 Millimeters = 0.01 Meters = 0.3937 Inches
- 1 Meter = 100 Centimeters = 1,000 Millimeters = 39.37 Inches
- 1 Kilometer = 1,000 Meters = 0.621 Miles

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 = 1,000 Cu Millimeters = 0.06 Cu Inches
- 1 Cu Meter = 1,000,000 Cu Centimeters = 35.31 Cu Feet

LIQUID MEASURE

- 1 Milliliter = 0.001 Liters = 0.0338 Fluid Ounces
- 1 Liter = 1,000 Milliliters = 33.82 Fluid Ounces

TEMPERATURE

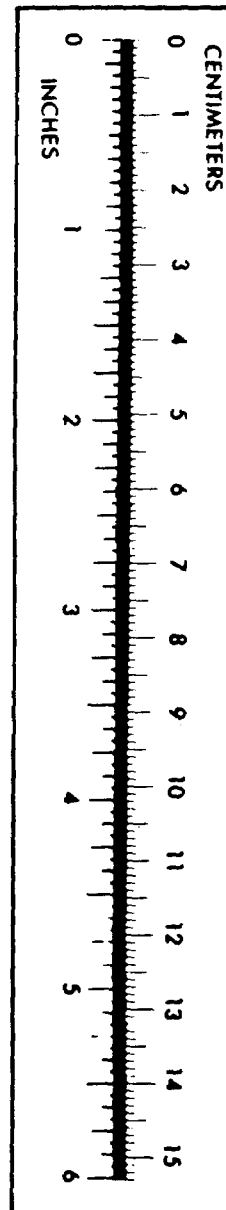
- $5/9 (^{\circ}\text{F} - 32) = ^{\circ}\text{C}$
- 212° Fahrenheit is equivalent to 100° Celsius
- 90° Fahrenheit is equivalent to 32.2° Celsius
- 32° Fahrenheit is equivalent to 0° Celsius
- $9/5 \text{ C}^{\circ} + 32 = \text{F}^{\circ}$

WEIGHTS

- 1 Gram = 0.001 Kilograms = 1,000 Milligrams = 0.035 Ounces
- 1 Kilogram = 1,000 Grams = 2.2 lb.
- 1 Metric Ton = 1,000 Kilograms = 1 Megagram = 1.1 Short Tons

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



PIN : 057953-000