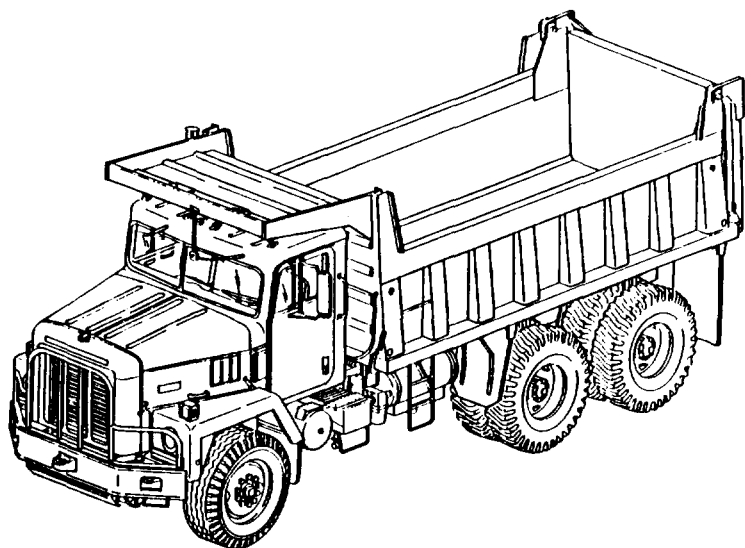


TECHNICAL MANUAL
ORGANIZATIONAL MAINTENANCE MANUAL
VOLUME 2 OF 2



**ORGANIZATIONAL
MAINTENANCE
INSTRUCTIONS -
CONTINUED
PAGE 2-664**

**MAINTENANCE
ALLOCATION
CHART (MAC)
PAGE B-1**

**INDEX
PAGE Index-1**

**TRUCK, DUMP, 20-TON, 6 x 4
ON-OFF HIGHWAY, 71,000 GVW
IHC MODEL F-5070 (CCE)
(NSN 3805-00-192-7249)**

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JANUARY 1988

HEADQUARTERS, DEPARTMENT OF THE ARMY

CHANGE
NO. 1

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington D.C., 25 February 1993

**ORGANIZATIONAL MAINTENANCE MANUAL
VOLUME 2 OF 2
TRUCK, DUMP: 20-TON, 6 X 4,
ON-OFF HIGHWAY, 71,000 GVW
(NSN 3805-00-192-7249)**

IHC MODEL F-5070 (CCE)

TM 5-3805-254-20-2, dated 20 January 1988, is changed as follows:

1. Remove old pages and insert new pages.
2. New or changed material is indicated by a vertical bar in the margin and by a vertical bar adjacent to the TA number.

Remove Pages	Insert Pages
<i>iii and 2-664</i>	<i>iii and 2-664</i>
<i>2-837 and 2-838</i>	<i>2-837 and 2-838</i>
<i>2-895 and 2-896</i>	<i>2-895 through 2-896</i>
<i>2-917 and 2-918</i>	<i>2-917 and 2-918</i>
<i>2-939 and 2-940</i>	<i>2-939 and 2-940</i>
<i>None</i>	<i>2-946.1 through 2-946.9/(2-946.10 blank)</i>
<i>2-947 and 2-948</i>	<i>2-947 and 2-948</i>
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<i>2-985 and 2-986</i>	<i>2-985 and 2-986</i>
<i>2-995 through 2-998</i>	<i>2-995 through 2-998</i>
<i>2-1001 and 2-1002</i>	<i>2-1001 and 2-1002</i>
<i>None</i>	<i>2-1024.1 and 2-1024.2</i>
<i>2-1025 through 2-1028</i>	<i>2-1025 through 2-1028</i>
<i>2-1031 through 2-1034</i>	<i>2-1031 through 2-1034</i>
<i>None</i>	<i>2-1034.1 and 2-1034.2</i>
<i>2-1045 through 2-1052</i>	<i>2-1045 through 2-1052</i>
<i>2-1067 through 2-1078</i>	<i>2-1067 through 2-1078</i>
<i>2-1081 through 2-1110</i>	<i>2-1081 through 2-1110</i>
<i>2-1113 through 2-1124</i>	<i>2-1113 through 2-1124</i>
<i>2-1127 through 2-1154</i>	<i>2-1127 through 2-1154</i>
<i>2-1157 through 2-1168</i>	<i>2-1157 through 2-1168</i>
<i>2-1171 and 2-1172</i>	<i>2-1171 and 2-1172</i>
<i>2-1201 and 2-1202</i>	<i>2-1201 and 2-1202</i>
<i>2-1237 and 2-1238</i>	<i>2-1237 and 2-1238</i>
<i>None</i>	<i>2-1238.1/(2-1238.2 blank)</i>
<i>2-1241 and 2-1242</i>	<i>2-1241 and 2-1242</i>
<i>2-1251 through 2-1254</i>	<i>2-1251 through 2-1254</i>
<i>2-1257 and 2-1258</i>	<i>2-1257 and 2-1258</i>
<i>2-1261 through 2-1272</i>	<i>2-1261/(2-1262 blank) and 2-1272</i>
<i>None</i>	<i>2-1274.1 through 2-1274.3/(2-1274.4 blank)</i>
<i>2-1275 through 2-1280</i>	<i>2-1275 and 2-1275.0, and 2-1280</i>

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Remove Pages (Con't)

None
2-1285 through 2-1290
None
A-1 and A-2
B-1 through B-29/(B-30 blank)
Index 1 and Index 2
Index 7 through Index 22
Index 27 through Index 38
Index 41 and Index 42

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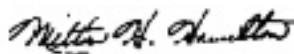
2-1284.1 through 2-1284.4
2-1290
2-1344.1 through 2-1344.3/(2-1344.4 blank)
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B-1 through B-22
Index-1 and Index-2
Index-7 through Index-22
Index-27 through Index-38
Index-41 and Index-42

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

By Order of the Secretary of the Army:

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General, United States Army
Chief of Staff

Official:


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03710

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WARNING**EXHAUST GAS CAN KILL YOU**

Exhaust gas is without color or smell, but can kill you. Breathing exhaust gas produces symptoms of headache, dizziness, loss of muscular control, a sleepy feeling, and coma. Brain damage or death can result from heavy exposure of exhaust fumes of fuel-burning internal combustion engines. Exhaust gases can become dangerously concentrated under conditions of no air movement. Precautions must be followed to ensure crew safety when the engine of any vehicle is operated for any purpose.

1. DO NOT operate vehicle engine inside building unless ample ventilation is available.
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; and, if necessary, give artificial respiration.
5. FOR ARTIFICIAL RESPIRATION, REFER TO FM 21-11.
6. BE AWARE; the field protective mask for chemical-biological-radiological (CBR) protection will not protect you from exhaust gas fumes.

THE BEST DEFENSE AGAINST ENGINE EXHAUST FUMES IS GOOD VENTILATION.

WARNING

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 100°F (38°C) and for type #2 is 138°F (59°C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

WARNING

Diesel fuel burns easily. Do not smoke or allow flames nearby. Disconnect batteries when working on fuel system. Failure to observe these precautions could cause serious injury or death to personnel.

WARNING

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

WARNING

Do not let positive wire touch metal surfaces at any time. Personal injury and equipment damage will occur.

WARNING

Edges of exhaust system components are sharp. Care must be taken to prevent personal injury.

WARNING

Metal edges of air cleaner housing are sharp. Care must be taken to prevent personal injury.

WARNING

Do not drain rear axle housing oil when hot. Hot oil can burn you.

WARNING

Do not drain interaxle differential oil when hot. Hot oil can burn you.

WARNING

Hot transmission oil can burn you. Care must be taken to prevent personal injury.

WARNING

Do not check rear axle housing oil level when hot. Hot oil can burn you.

WARNING

Support blocks must be used to support dump body weight. Death or serious injury could result if personnel fail to observe this warning.

WARNING

Make sure all personnel are clear of dump body before lowering, to prevent injury.

WARNING

Do not operate engine after removing turbocharger piping. Foreign matter could enter turbocharger air inlet pipe causing injury to personnel and damage to turbocharger.

WARNING

Do not touch heat shrinkable tubing for at least 30 seconds after heating. Hot tubing can burn you.

WARNING

Do not smoke or allow open flames or sparks into areas where alcohol is being used. Failure to observe this precaution could cause death or serious injury to personnel.

WARNING

Care must be taken when taking off canister to prevent spilling alcohol. Injury to personnel could occur.

WARNING

Electrical parts solvent cleaning compound is flammable, and reacts violently with certain metals. Boiling point is 114°F (46°C). Do not wear jewelry. Wear safety goggles, rubber gloves, and use only in well ventilated area. Avoid contact with skin, eyes, and clothes and don't breathe vapors. Do not use near open flame or excessive heat. If you become dizzy while using cleaning compound, get fresh air immediately and get medical aid. If contact with eyes is made, wash your eyes with water and get medical aid immediately.

WARNING

Improper cleaning methods and use of unauthorized cleaning liquids or solvents can injure personnel and cause damage to equipment. Refer to TM 9-247.

WARNING

Parts of brake assembly will be coated with asbestos dust. Breathing this dust may be hazardous to your health. Use filter mask approved for use against asbestos dust. Never use compressed air or dry brush to clean these assemblies. Dust shall be removed using industrial type vacuum cleaner equipped with high efficiency filter system. Clean dirt or mud from brake assemblies with bristle brush or cloth, and water.

WARNING

Due to excessive weight, assistance will be needed to prevent personal injury when lifting heavy parts.

WARNING

Due to excessive weight, assistance will be needed to lift and remove pintle hook assembly from rear chassis cross-member. Serious injury to personnel could result.

WARNING

Safety goggles must be worn when working under truck to prevent eye injury.

WARNING

Hot engine oil could burn you. Care must be taken to prevent personal injury.

WARNING

Safety goggles must be worn when working with air lines to prevent personal injury.

WARNING

Safety goggles must be worn, when using chisel or drill, to prevent eye injury caused by flying steel chips.

WARNING

Safety goggles must be worn to prevent eye injury from flying metal chips when using compressed air, or striking metal surfaces.

WARNING

Safety goggles must be worn when using wire brush. Flying rust or metal particles could cause eye injury.

WARNING

Safety goggles must be worn when using a portable electric drill. Flying metal particles could cause eye injury.

WARNING

Brake springs under tension can injure or kill. Use extreme care to prevent injury. Safety goggles must be worn.

WARNING

Disconnect battery ground cable before cleaning or replacing parts. This will keep you from getting shocked or damaging parts.

WARNING

Batteries must be disconnected before working near electrical components. Failure to observe this precaution could cause serious injury to personnel or damage to equipment.

WARNING

Drain air from airbrake system before removing lines or fittings to avoid injury to personnel from compressed air.

WARNING

Particles blown by compressed air are hazardous. Make certain the airstream is directed away from user and other personnel in the area. Compressed air used for cleaning purposes shall not exceed 30 psi (207 kPa). User must wear safety goggles or face shield to prevent personal injury.

WARNING

Stand to side of axle flange while striking to prevent injury from flying lock collars.

WARNING

Due to excessive weight and size, assistance will be needed when handling dry air reservoir. Failure to observe this precaution could cause injury to personnel.

WARNING

Assistant must support muffler to prevent falling and causing personal injury.

WARNING

Assistance will be needed to support hood panel to prevent falling and causing personal injury.

WARNING

Assistance will be needed to support air dryer to prevent injury to personnel.

WARNING

Assistant must support fuel tank support to prevent falling and causing injury.

WARNING

When jacking vehicle, be sure vehicle is on level ground. Put blocks in front and behind each wheel to prevent vehicle from moving, and support vehicle with trestle stands to prevent personnel injury.

WARNING

Do not operate engine after removing air cleaner housing. Foreign matter could enter turbocharger air inlet pipe causing injury to personnel and damage to turbocharger.

WARNING

Due to excessive weight, care must be taken to prevent front hub and brakedrum assembly from falling. Do not pull out too far on spindle. Serious injury to personnel could result.

WARNING

Due to excessive weight, assistance will be needed to lift hub and brakedrum assembly. Failure to observe this precaution could cause serious injury to personnel.

WARNING

Remove all jewelry, prior to performing any electrical troubleshooting, to prevent accidental short circuits and/or electric shock.

WARNING

Starter motor solenoid battery terminal is capable of delivering high voltage. Do not touch or let tools or metal parts touch starter motor solenoid battery terminal or ground. Severe personal injury or death could occur.

WARNING

Do not smoke, use open flame, or allow sparks near batteries. Mixture of oxygen and hydrogen gases released from batteries is highly flammable and can explode causing injury to personnel.

WARNING

Due to excessive weight, assistance will be needed to lift and take off exhaust diverter.

WARNING

When removing battery cables, disconnect ground cable first. When installing battery cables, connect ground cable last. When two ground cables are used, both cables must be disconnected prior to working on equipment where shorting of cables can occur. In correct cable replacement sequence is extremely dangerous. Accidental contact of tools with vehicle causes direct short, resulting in arcing and instant heating of tool and causing painful burns. Shorted battery may explode, causing injury to personnel.

WARNING

When removing battery cables, disconnect negative (-) cable first. Failure to observe this precaution could cause injury to personnel or damage to equipment.

WARNING

When installing battery cables, connect negative (-) cable last. Failure to observe this precaution could cause injury to personnel or damage to equipment.

WARNING

Do not operate engine after removing air filter element. Foreign matter could enter turbocharger air inlet pipe and could cause damage to turbocharger or injury to personnel.

WARNING

Do not touch heater coil of glow plug when testing. Severe personal injury could occur.

WARNING

Safety props and support blocks must be used to support dump body to prevent falling and causing injury to personnel.

WARNING

Be careful when removing radiator cap. If engine is hot, escaping steam could burn you. Use a rag to cover radiator cap. Unscrew cap just enough to allow any built-up pressure to escape. When all pressure has been relieved, unscrew cap and take off.

WARNING

Rubber apron, safety gloves, and safety goggles must be worn when working with batteries. Failure to observe this precaution could cause serious injury to personnel.

WARNING

Although KEY SWITCH must be on and battery ground cable connected to test electrical circuit voltage, turn off KEY SWITCH and disconnect battery ground cable before doing resistance tests or replacing parts. This will keep you from getting shocked and prevent damage to parts and equipment.

WARNING

Care must be taken when working under hood while engine is running. Hands must be kept away from belts, fan, and other moving parts. Failure to observe this precaution could cause serious injury to personnel.

WARNING

Do not attempt to disconnect hydraulic lines and fittings while engine is running or before hydraulic system pressure has been released. When engine is running, hydraulic system is under pressure. Hydraulic system pressure should be 0 psi (0 kPa) before lines are disconnected. A line or fitting disconnected under pressure will blow off with great force and can cause injury to personnel.

WARNING

When increasing air pressure in tires, be careful not to exceed recommended pressure, to prevent personal injury or damage to equipment.

WARNING

Draining hot cooling system is not recommended. If coolant must be drained with engine hot, use gloves to protect against hot coolant. Severe burns could result.

WARNING

Ensure that vehicle is on level ground and that rear wheels are chocked to prevent vehicle from moving or severe injury to personnel may result.

WARNING

When performing parking brake troubleshooting, follow procedure exactly. Release of trapped air inside brake chamber can cause brakes to apply suddenly, causing injury to personnel.

WARNING

Do not operate dump truck with tires of different construction. Injury to personnel and equipment could occur.

WARNING

No welding, grinding or use of heat producing devices permitted near fuel tank unless fuel tank has been cleaned and purged of all flammable liquids and vapors. Failure to observe these precautions could cause serious injury to personnel.

WARNING

Exhaust system parts become very hot when engine is running. Allow time for parts to cool before working on exhaust system. Hot exhaust system parts will cause serious burns.

WARNING

Be careful when bleeding torque converter cooler. Escaping steam and coolant could burn you. Open draincock just enough to allow any built up pressure to escape.

WARNING

Cab floor boards have sharp edges. Care must be taken to prevent injury to personnel.

WARNING

Use care when removing damaged headlight assembly, broken glass or sharp metal could cut you.

WARNING

Due to excessive weights, assistance will be needed to support battery box, to prevent personal injury.

WARNING

Care must be taken when removing lamp that is cracked or gray in color to prevent personal injury.

WARNING

Do not drain steering system when hot. Hot oil can burn you.

WARNING

Do not drain oil reservoir when hot. Hot oil can burn you.

WARNING

Seat belts must be positioned correctly for proper operation.

WARNING

To prevent injury, make sure all personnel are clear of tailgate when body is in raised position.

WARNING

Drain air from air tank system before removing lines or fittings to avoid injury to personnel from compressed air.

Organizational Maintenance Manual

**TRUCK, DUMP: 20-TON, 6 x 4,
ON-OFF HIGHWAY, 71,000 GVW,
IHC MODEL F-5070 (CCE)
(NSN 3805-00-192-7249)**

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes, or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual directly to: Commander, U.S. Army Tank-Automotive Command, ATTN: AMSTA-MBS, Warren, MI 48397-5000. A reply will be sent to you.

TABLE OF CONTENTS

VOLUME 2 OF 2

	Page
CHAPTER 2	
<u>ORGANIZATIONAL MAINTENANCE INSTRUCTIONS - CONTINUED</u>	
Section X. Electrical System Maintenance.....	2-664
Section XI. Transmission Maintenance.....	2-900
Section XII. Propeller Shafts and Universal Joint Maintenance.....	2-939
Section XIII. Rear Axle Maintenance.....	2-940
Section XIV. Brake System Maintenance.....	2-947
Section XV. Wheel, Tire, Hub and Brake Drum Maintenance.....	2-1168
Section XVI. Steering System Maintenance.....	2-1202
Section XVII. Frame and Towing Attachment Maintenance.....	2-1248
Section XVIII. Body, Cab and Hood Maintenance.....	2-1251
Section XIX. Body and Chassis Accessory Item Maintenance.....	2-1290
Section XX. Hydraulic and Fluid System Maintenance.....	2-1362
Section XXI. Gages, (Non-Electrical), Weighing and Measuring Device Maintenance.....	2-1408
APPENDIX A	
REFERENCES	A-1
APPENDIX B	
<u>MAINTENANCE ALLOCATION CHART</u>	B-1

* This manual supersedes organizational portion of TM 5-3805-254-14&P1 dated August 1980 and TM 5-3805-254-14&P2 dated June 1980 including all changes.

TABLE OF CONTENTS - CONTINUED

VOLUME 2 OF 2 - CONTINUED

APPENDIX C	EXPENDABLE SUPPLIES AND MATERIALS LIST.....	C-1
APPENDIX D	TORQUE LIMITS.....	D-1
<u>INDEX</u>	.....	Index-1

HOW TO USE THIS MANUAL

This manual is designed to help you maintain the IHC Model F-5070 (CCE) dump truck.

The front cover table of contents is provided for quick reference to important information. There is also an index, located in the back of this manual, for use in locating specific items of information.

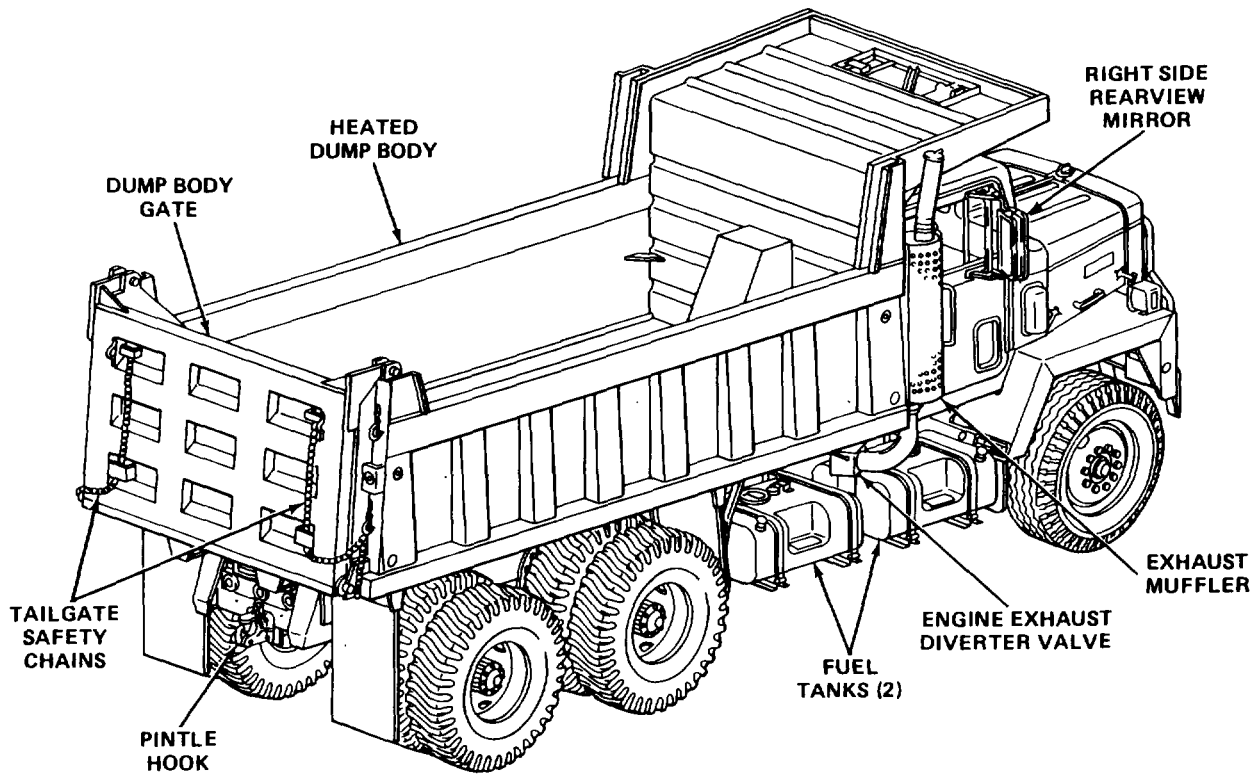
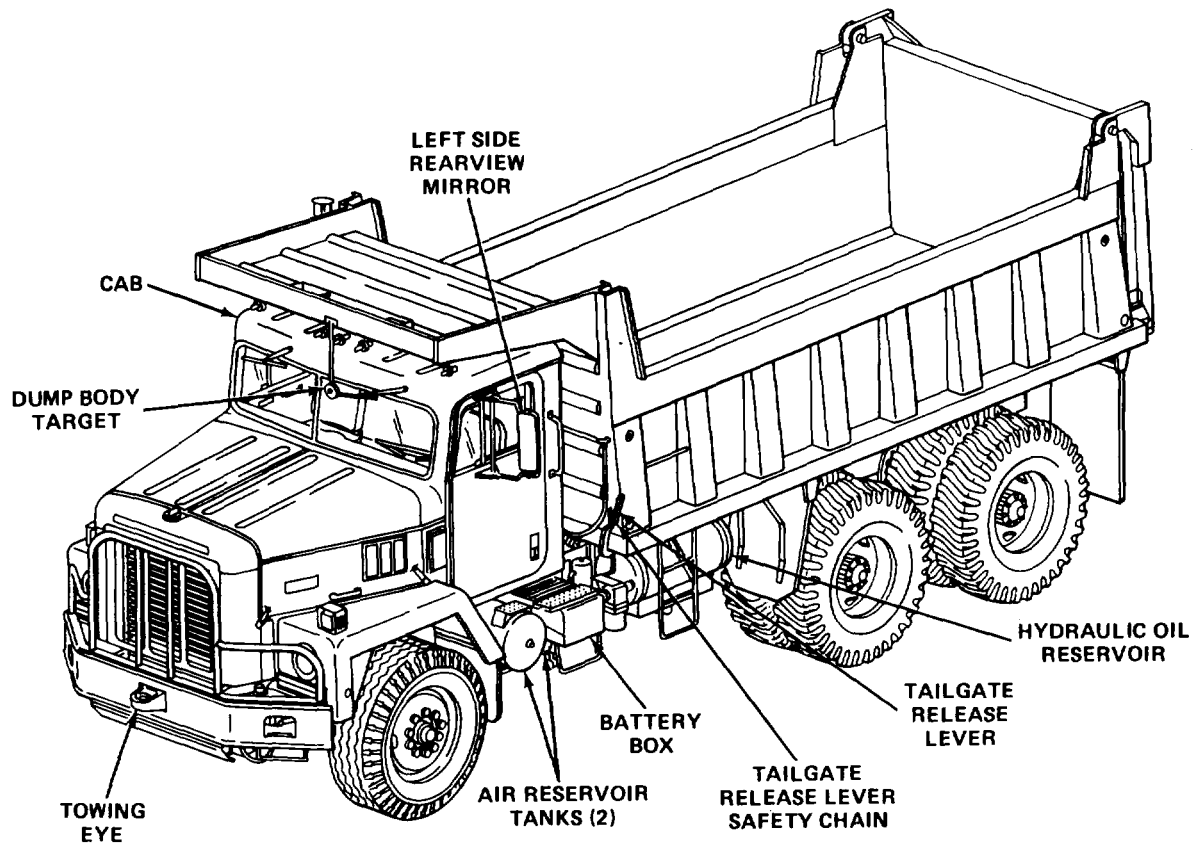
Measurements in this manual are given in both US standard and metric units. A metric to US standard conversion chart can be found on the inside back cover.

Read all preliminary information found at the beginning of each task. It has important information and safety instructions you must follow before beginning the task.

Equipment locator illustrations are also provided throughout the maintenance procedures. These illustrations are for use in locating components and assemblies of the overall equipment. It should be noted that the locator illustrations do not always reflect the equipment condition listed in the initial setup at the beginning of each task.

Warning pages are located in the front of this manual. You should read the warnings before operating or doing maintenance on the equipment.

A subject index appears at the beginning of each chapter listing sections that are included in that chapter. A more specific subject index is located at the beginning of each section to help you find the exact paragraph you're looking for.



Truck, Dump: 20-Ton, 6x4, On-Off Highway, 71,000 GVW, IHC Model F-5070 (CCE)

Section X. ELECTRICAL SYSTEM MAINTENANCE

Page	Page		
Alarm Bell	2-717	IGN System Starter Circuit	
Ammeter	2-730	Breaker	2-769
Automatic Override Module	2-877	Key Switch.....	2-740
Backup Light 20 Amp Circuit		Left Brake Light Switch	2-679
Breaker.....	2-750	Left Engine Side of Firewall	
Backup Light Switch	2-689	Junction Box	2-777
Battery Box.....	2-842	Left Instrument Panel Optical	
Battery Negative Cable.....	2-824	Ribbon.....	2-868
Battery Positive Cable	2-829	Left Side Lower Instrument Panel	
Battery Positive-to-Negative		Indicator Lamps	2-885
Connector Cable	2-819	Left Stoplight/Taillight.....	2-788
Cab Roof Marker Light and		Lights Switch.....	2-725
Clearance Light	2-801	Low Air-Pressure Warning	
Center Engine Side of Firewall		Buzzer.....	2-709
Junction Box.....	2-771	Low Air-Pressure Warning Buzzer	
Dome Light	2-719	Switch	2-699
Dome/Panel Lamp Switch	2-722	Low Air-Pressure Warning Light	
Dump Body Marker Light.....	2-806	Switch	2-697
Engine Compression Brake		Lower Center Instrument Panel	
15 Amp Circuit Breaker	2-748	Gage Lamps	2-887
Engine Compression Brake		Lower Instrument Panel Optical	
Pressure Switch	2-683	Ribbon.....	2-864
Engine Compression Brake Switch	2-735	Marker Light 30 Amp Circuit	
Engine Compression Brake		Breaker	2-764
Throttle Switch	2-695	Neutral Safety Switch.....	2-690
Engine Oil Pressure Switch	2-674	Optical Light Assembly.....	2-858
Engine Start Button	2-738	Optical Light Lamp	2-857
Engine Water Temperature Switch	2-675	Power Take Off Indicator Lamp	2-880
Frequency Sensing Relay Switch.....	2-706	Power Take Off Light Switch.....	2-692
Front Marker Light	2-799	Primary Magnetic Switch.....	2-701
Front Rear of Cab Junction Box	2-780	Rear of Cab Junction Box	2-784
Front Turn Signal.....	2-795	Right Brake Light Switch	2-681
Fuel Gage.....	2-727	Right Engine Side of Firewall	
Fuse Block.....	2-766	Junction Box	2-774
Generator Drivebelts	2-665	Right Instrument Panel Optical	
Generator Pulley.....	2-671	Ribbon.....	2-860
Generator and Regulator.....	2-667	Right Instrument Panel Gage	
Glow Plug and Cigar Lighter 40		Lamps	2-889
Amp Circuit Breaker	2-756	Right Instrument Panel Indicator	
Glow Plug Switch.....	2-734	Lamps	2-891
Headlight Assembly.....	2-807	Right Stoplight/Taillight	2-791
Headlight Beam Selector Switch	2-742	Secondary Magnetic Switch.....	2-703
Headlight 20 Amp Circuit		Slave Receptacle	2-895.0
Breaker.....	2-762	Starter Motor	2-896
Heater 40 Amp Circuit Breaker	2-752	Stop and Dome Light 30 Amp	
Horn.....	2-715	Circuit Breaker	2-758
Horn Button	2-713	Storage Batteries	2-838
Horn 20 Amp Circuit Breaker	2-754	Tail and Panel Light 20 Amp	
Horn Relay.....	2-707	Circuit Breaker	2-760
		Transmission Oil Pressure Switch	2-677

Page	Page
Transmission Oil Temperature Sender..... 2-685	Turn Signal Switch.....2-744
Transmission Oil Temperature Switch..... 2-687	Upper Instrument Panel Gage Lamps.....2-881
Transmission Position Indicator Lamp..... 2-894	Upper Instrument Panel Indicator Lamps.....2-883
Turn Signal and Hazard Flasher..... 2-711	Upper Instrument Panel Optical Ribbon.....2-872
Turn Signal Indicator Lamps 2-888	

GENERATOR DRIVEBELTS

This task covers:

- a. Removal (page 2-665)
- b. Installation (page 2-666)
- c. Adjustment (page 2-666)

INITIAL SETUP

Tools

- Bar, pry, 16-inch
- Gage, belt-tension, 30 to 180 lb (14 to 82 kg)
- Wrench, box-end, 3/4-inch (two required)

Personnel Required

One

Equipment Condition

Right side hood panel opened (page 2-424).

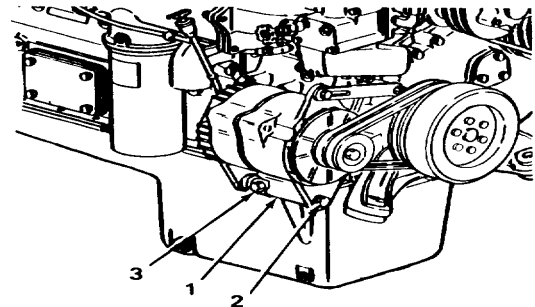
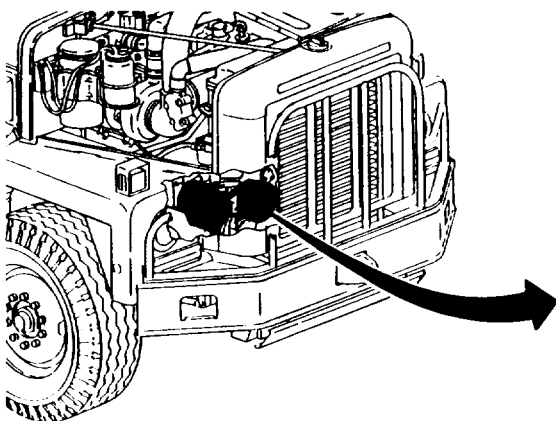
Materials/Parts

Drivebelt, V, matched set of two

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

REMOVAL

- | | | |
|-------------------------|-----------------------|---|
| 1. Mounting bracket (1) | Screw (2) and nut (3) | Using two 3/4-inch box-end wrenches, loosen one turn. |
|-------------------------|-----------------------|---|

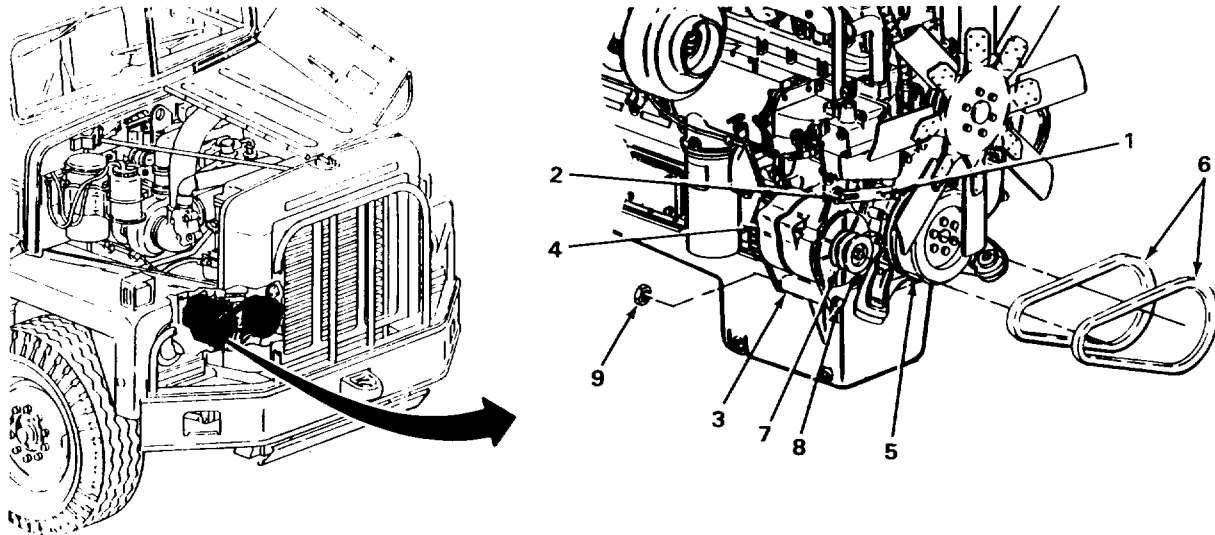


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GENERATOR DRIVEBELTS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED		
2. Adjusting strap (1)	Screw (2)	Using 3/4-inch box-end wrench, loosen one turn.
3. Mounting bracket (3)	Generator (4)	Using 16-inch pry bar, push generator toward crankshaft pulley (5) to loosen drivebelts (6).
4. Crankshaft pulley (5) and generator pulley (7)	Two drivebelts (6)	Take off.
INSTALLATION		
5.	Two new drivebelts (6)	Put in place in pulley grooves.
<u>CAUTION</u>		
Do not overtighten drivebelts, damage to generator could occur.		
6. Mounting bracket (3)	Generator (4)	Pull generator away from crankshaft pulley (5), to seat drivebelts (6) in pulley grooves, and hold.
7. Adjusting strap (1)	Screw (2)	Screw in until snug, using 3/4-inch box-end wrench, to hold drivebelts (6) in pulley grooves.
ADJUSTMENT		
8. Generator (4) and adjusting strap (1)	Two new drivebelts (6) and screw (2)	<ol style="list-style-type: none"> a. Loosen screw. b. Pull generator away from crankshaft pulley (5) until 110 pounds (50 kg) of tension is measured using 30 to 180 lb (14 to 82 kg) belt-tension gage and 16-inch pry bar. c. Screw in and tighten screw using 3/4-inch box-end wrench.
9. Mounting bracket (3)	Screw (8) and nut (9)	Screw in and tighten using two 3/4-inch box-end wrenches.

GENERATOR DRIVEBELTS - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE: Close right side hood panel (page 2-424).

TASK ENDS HERE

GENERATOR AND REGULATOR

This task covers:

- a. Removal (page 2-668)
- b. Installation (page 2-668)
- c. Adjustment (page 2-670)

INITIAL SETUP

Tools

- Wrench, box-end, 3/4-inch (two required)
- Wrench, open-end, 7/16-inch
- Wrench, open-end, 1/2-inch

Materials/Parts

- Lockwasher, clamp
- Lockwasher, generator harness
- Lockwashers, mounting screws (two required)

Personnel Required

One

Equipment Condition

Right side hood panel opened (page 2-424).
 Battery ground cable disconnected (page 2-424).

GENERATOR AND REGULATOR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
1. Generator pulley (1) and crankshaft pulley (2)	Two drivebelts (3)	Take off (page 2-665).
2. Generator (4)	Screw (5), lock-washer (6), and clamp (7)	a. Using 1/2-inch open-end wrench, unscrew and take out. b. Get rid of lockwasher.
3.	Rubber boot (12)	Slide back and take off.
4.	Nut (9), lockwasher (10), and wire connector (11)	a. Using 7/16-inch open-end wrench, unscrew and take off. b. Get rid of lockwasher.
5.	Push-on connector (8)	Pull off.
6. Adjusting strap (13)	Screw (14) and lockwasher (15)	a. Using 3/4-inch box-end wrench, unscrew and take out. b. Get rid of lockwasher.
7. Mounting bracket (16)	Screw (17), nut (18), and lockwasher (19)	a. Using two 3/4-inch box-end wrenches, unscrew and take out. b. Get rid of lockwasher.

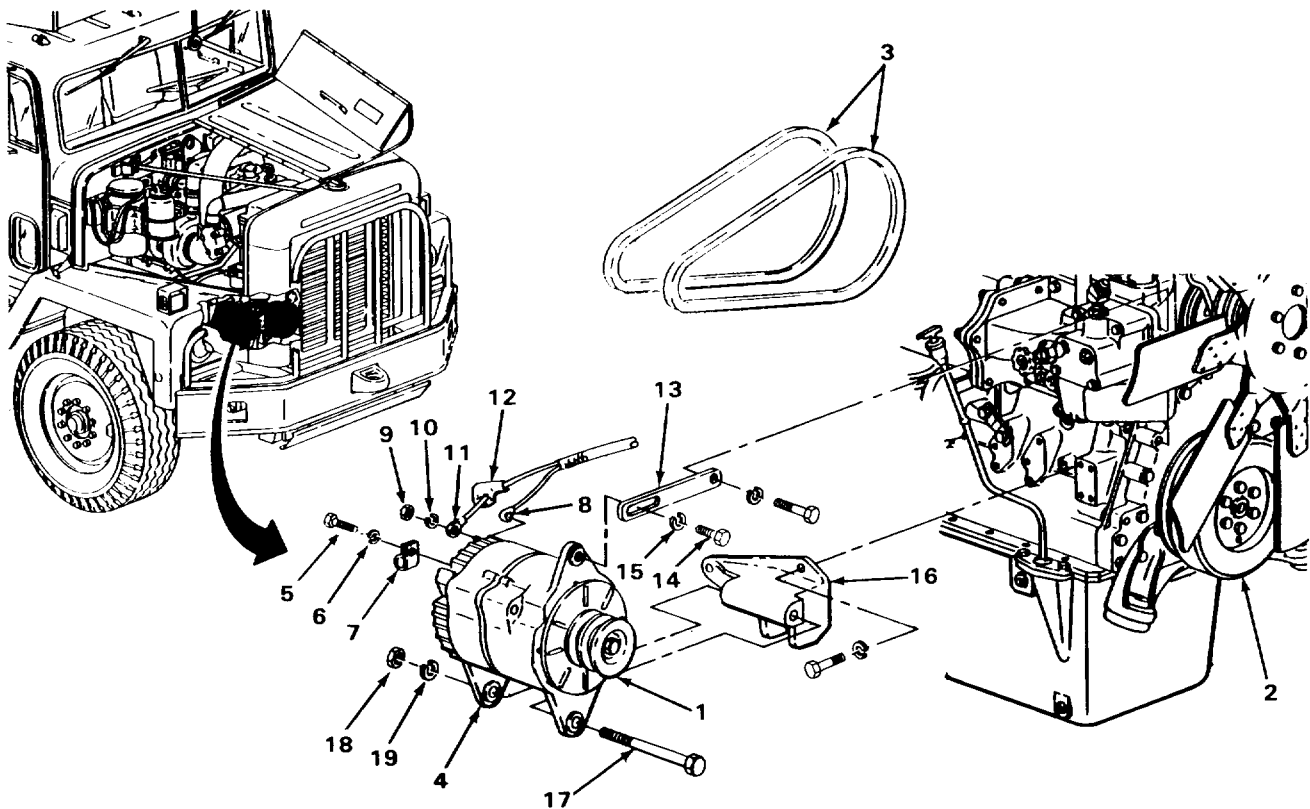
CAUTION

Use care when performing steps 8 and 9. Damage to generator could occur.

8.	Generator (4)	Carefully take out.
INSTALLATION		
9.	Generator (4)	Carefully put in.
10. Mounting bracket (16)	Screw (17), nut (18), and new lockwasher (19)	Screw in until snug using 3/4-inch box-end wrench.
11. Adjusting strap (13)	Screw (14) and new lockwasher (15)	Screw in until snug using 3/4-inch box-end wrench.

GENERATOR AND REGULATOR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
12. Generator (4)	Push-on connector (8)	Push on.
13.	Wire connector (11), new lockwasher (10), and nut (9)	Screw on and tighten using 7/16-inch open-end wrench.
14.	Rubber boot (12)	Put on.
15.	Screw (5), new lockwasher (6), and clamp (7)	Screw in and tighten using 1/2-inch open-end wrench.
16. Generator pulley (1) and crankshaft pulley (2)	Two drivebelts (3)	a. Put on (page 2-665). b. Adjust (page 2-665).



TA244129

GENERATOR AND REGULATOR - CONTINUED

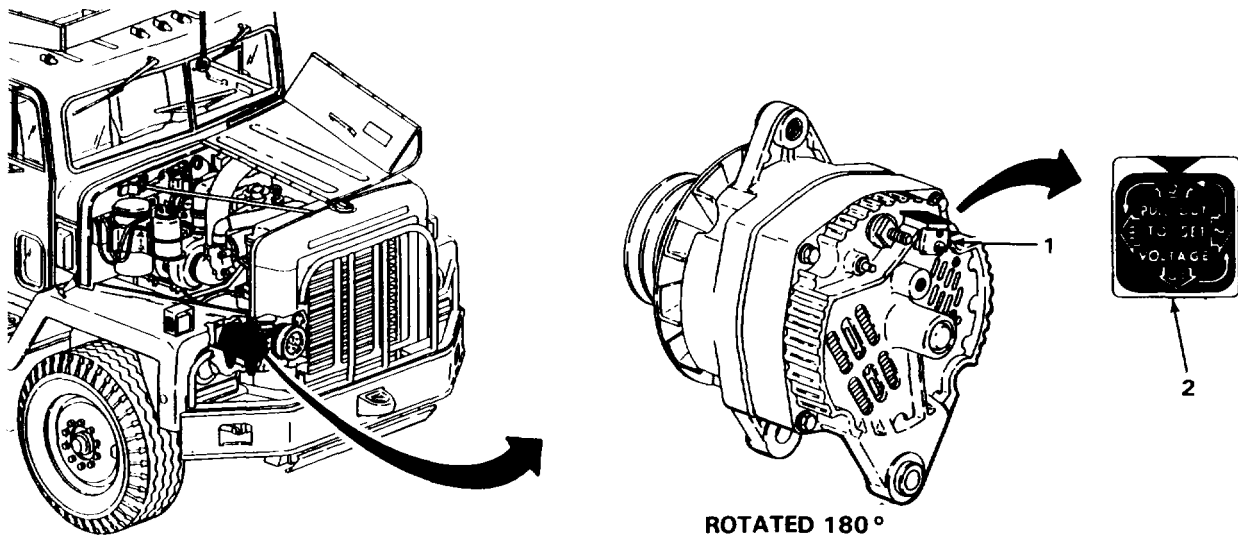
LOCATION	ITEM	ACTION REMARKS
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ADJUSTMENT

NOTE

Adjust generator if ampere output is not within 10 percent of rated output stamped on generator. Go to Troubleshooting (page 2-43).

- | | | |
|------------------------|----------------------------|---|
| 17. Connector body (1) | Voltage adjustment cap (2) | <ul style="list-style-type: none"> a. Take out. b. Rotate 90-degrees clockwise to raise ampere output, and counterclockwise to lower ampere output. c. Put in. |
|------------------------|----------------------------|---|



NOTE

FOLLOW-ON MAINTENANCE:

- 1. Connect battery ground cable (page 2424).
- 2. Close right side hood panel (page 2-424).

TASK ENDS HERE

GENERATOR PULLEY

This task covers:

- a. Removal (page 2-671)
- b. Cleaning (page 2-672)
- c. Inspection/Replacement (page 2-672)
- d. Installation (page 2-673)

INITIAL SETUP

Tools

- Gloves, safety
- Goggles, safety
- Gun, blow, air
- Handle, ratchet, 1/2-inch drive
- Hose, air, assembly
- Key, 5/16-inch screw, socket head
- Puller, mechanical
- Screwdriver, flat-tip, 1/8-inch
- Socket, flare, 15/16-inch, 1/2-inch drive
- Wrench, torque, 1/2-inch drive, 0 to 175 ft lb (0 to 245 N•m)

Materials/Parts

Solvent, drycleaning (item 19, appendix C)

Personnel Required

One

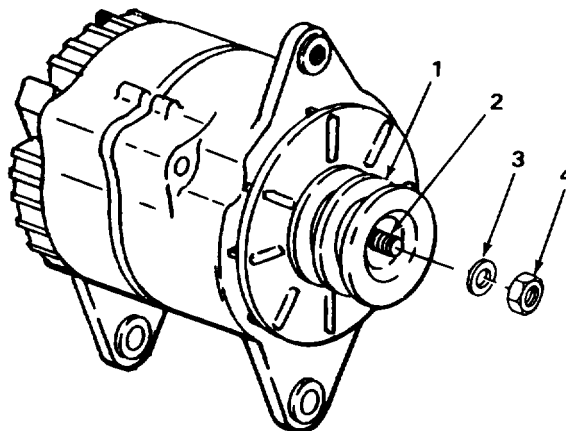
Equipment Condition

Generator removed (page 2-667).

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

REMOVAL

- | | | |
|---|------------------------------------|---|
| <p>1. Generator pulley (1) and armature (2)</p> | <p>Nut (3) and flat washer (4)</p> | <p>Using 5/16-inch socket head screw key, 15/16-inch 1/2-inch drive flare socket, and ratchet handle, unscrew and take off.</p> |
|---|------------------------------------|---|



TA244131

GENERATOR PULLEY - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED		
2.	Armature (1)	Generator pulley (2)
		Using mechanical puller, pull off.

CLEANING

WARNING

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 100°F (38°C) and for type #2 is 138°F (59°C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

NOTE

Parts must be cleaned thoroughly. For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

3.	All parts	Using drycleaning solvent, clean thoroughly.
----	-----------	--

WARNING

Particles blown by compressed air are hazardous. Make certain the air stream is directed away from user and other personnel in the area. Compressed air used for cleaning purposes shall not exceed 30 psi (207 kPa). User must wear safety goggles or face shield to prevent injury to personnel.

4.	All parts	Using air blow gun and air hose assembly, blow dry.
----	-----------	---

INSPECTION/REPLACEMENT

NOTE

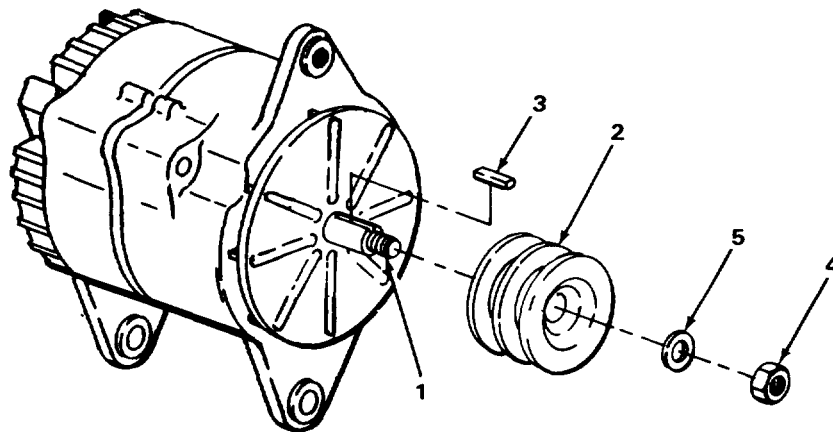
Replace all damaged or defective parts. For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

GENERATOR PULLEY - CONTINUED

LOCATION	ITEM	ACTION REMARKS
5.	Generator pulley (2)	Look for dents, cracks, or breaks in pulley groove.
6.	All threaded parts	Look for damaged threads or rounded heads.

INSTALLATION

- | | | |
|--|-----------------------------|--|
| 7. Armature (1) | Generator pulley (2) | a. Aline slot in pulley with key (3) in armature.
b. Put on. |
| 8. Generator pulley (2) and armature (1) | Nut (4) and flat washer (5) | Screw on and torque to 40 to 60 ft lb (55 to 80 N•m) using 5/16-inch socket head screw key, 15/16-inch socket head screw key, 15/16-inch 1/2-inch drive flare socket, and 0 to 175 ft lb (0 to 245 N•m) torque wrench. |



NOTE

FOLLOW-ON MAINTENANCE: Install generator (page 2-667).

TASK ENDS HERE

TA244132

ENGINE OIL PRESSURE SWITCH

This task covers:

- a. Removal (page 2-674)
- b. Installation (page 2-674)

INITIAL SETUP

Tools

Screwdriver, flat-tip, 3/16-inch
Wrench, open-end, 7/16-inch

Materials/Parts

Rags, wiping (item 15, appendix C)
Tags, marker (item 21, appendix C)
Tape, antiseizing (item 22, appendix C)

Personnel Required

One

Equipment Condition

Left side hood panel opened (page 2-424).

LOCATION	ITEM	ACTION REMARKS
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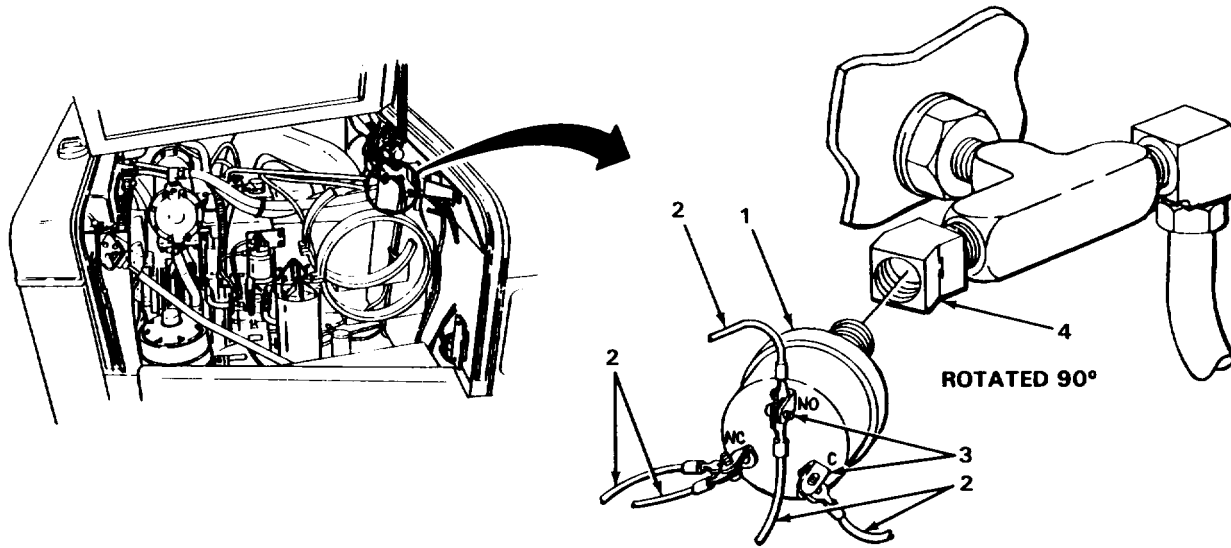
REMOVAL

- | | | |
|---|--|--|
| <p>1. Engine oil pressure switch (1)</p> | <p>Five wires (2) and three screws (3)</p> | <ul style="list-style-type: none"> a. Tag wires (page 2-424). b. Using 3/16-inch flat-tip screwdriver, unscrew and take out. c. Move wires aside. |
| <p>2. Elbow (4)</p> | <p>Engine oil pressure switch (1)</p> | <p>Using 7/16-inch open-end wrench, unscrew and take out.</p> |

INSTALLATION

- | | | |
|---|--|--|
| <p>3. Elbow (4)</p> | <p>Engine oil pressure switch (1)</p> | <ul style="list-style-type: none"> a. Wipe pipe threads clean using wiping rag. b. Wrap pipe threads with antiseizing tape (page 2-424). c. Screw in and tighten using 7/16-inch open-end wrench. |
| <p>4. Engine oil pressure switch (1)</p> | <p>Five wires (2) and three screws (3)</p> | <ul style="list-style-type: none"> a. Put wires in correct position. b. Screw in and tighten using 3/16-inch flat-tip screwdriver. c. Get rid of tags. |

ENGINE OIL PRESSURE SWITCH - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE: Close left side hood panel (page 2-424).

TASK ENDS HERE

ENGINE WATER TEMPERATURE SWITCH

This task covers:

- a. Removal (page 2-676)
- b. Installation (page 2-676)

INITIAL SETUP

Tools

- Wrench, box-end, 1/4-inch
- Wrench, open-end, 1-inch

Materials/Parts

- Lockwasher, wire (three required)
- Rags, wiping (item 15, appendix C)
- Tags, marker (item 21, appendix C)
- Tape, antiseizing (item 22, appendix C)

Personnel Required

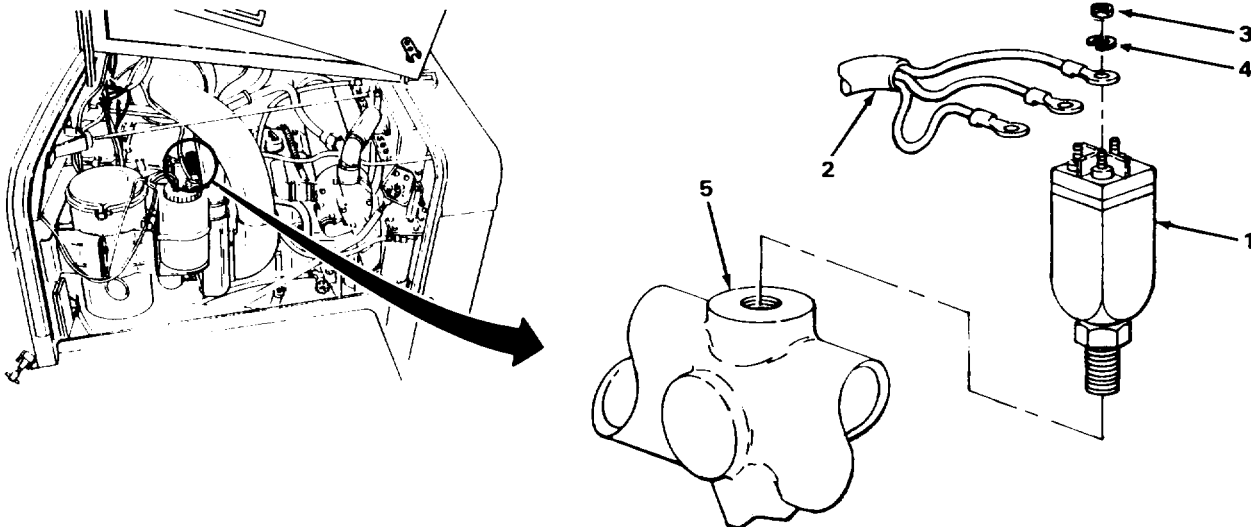
One

Equipment Condition

- Right side hood panel opened (page 2-424).
- Cooling system drained (page 2-628).

ENGINE WATER TEMPERATURE SWITCH - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
1. Engine water temperature switch (1)	Three wires (2), three nuts (3), and three lockwashers (4)	a. Tag wires (page 2-424). b. Using 1/4-inch box-end wrench, unscrew and take out. c. Move wires aside. d. Get rid of lockwashers.
2. Water manifold (5)	Engine water temperature switch (1)	Using 1-inch open-end wrench, unscrew and take out.
INSTALLATION		
3. Water manifold (5)	Engine water temperature switch (1)	a. Wipe pipe threads clean using wiping rag. b. Wrap pipe threads with antiseizing tape (page 2-424). c. Screw in and tighten using 1-inch open-end wrench.
4. Engine water temperature switch (1)	Three wires (2), three new lockwashers (4), and three nuts (3)	a. Put wires in correct position. b. Screw on and tighten using 1/4-inch box-end wrench. c. Get rid of tags.



TA244134

ENGINE WATER TEMPERATURE SWITCH - CONTINUED**NOTE****FOLLOW-ON MAINTENANCE:**

1. Fill cooling system (page 2-628).
2. Close right side hood panel (page 2-424).

TASK ENDS HERE**TRANSMISSION OIL PRESSURE SWITCH**

This task covers:

- a. Removal (page 2-678)
 - b. Installation (page 2-678)
-

INITIAL SETUP**Tools**

Container, 10-gallon
 Screwdriver, flat-tip, 3/16-inch
 Wrench, open-end, 5/8-inch
 Wrench, open-end, 11/16-inch

Personnel Required

One

References

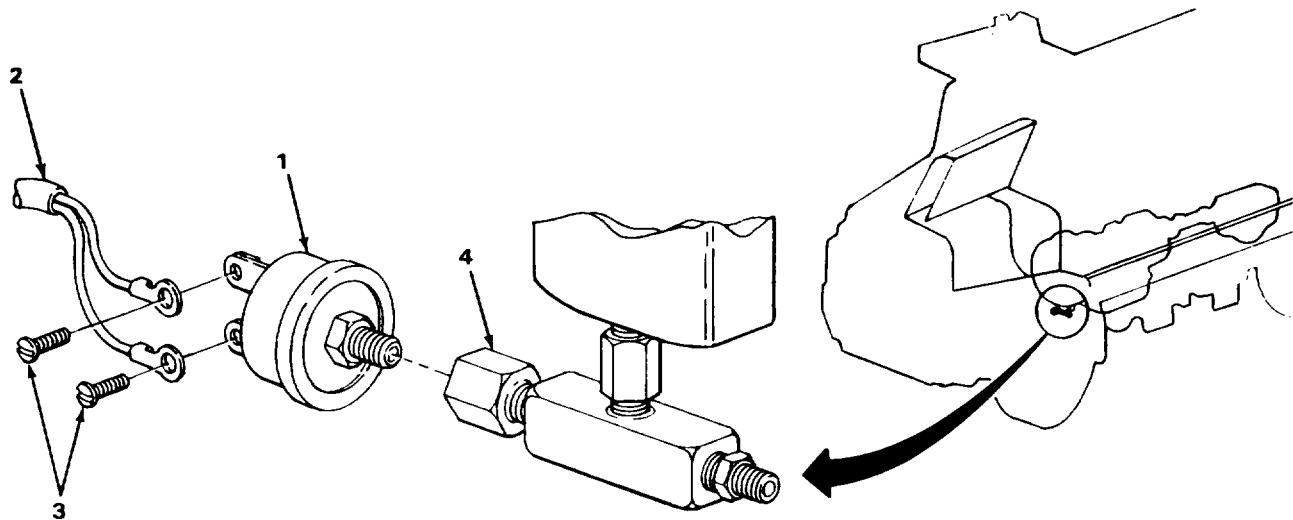
TM 5-3805-254-10 (Operator's Manual)

Materials/Parts

Rags, wiping (item 15, appendix C)
 Tags, marker (item 21, appendix C)
 Tape, antiseizing (item 22, appendix C)

ENGINE WATER TEMPERATURE SWITCH - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
1. Transmission oil pressure switch (1)	Two wires (2) and two screws (3)	a. Tag wires (page 2-424). b. Using 3/16-inch flat-tip screwdriver, unscrew and take out. c. Move wires aside.
2. Adapter (4)	Transmission oil pressure switch (1)	a. Place 10-gallon container underneath. b. Using 5/8-inch and 11/16-inch open-end wrenches, unscrew and take out.
INSTALLATION		
3. Adapter (4)	Transmission oil pressure switch (1)	a. Clean pipe threads using wiping rag. b. Wrap pipe threads with antiseizing tape (page 2-424). c. Screw in and tighten using 5/8-inch and 11/16-inch open-end wrenches.
4. Transmission oil pressure switch (1)	Two wires (2) and two screws (3)	a. Put wires in correct position. b. Screw in and tighten using 3/16-inch flat-tip screwdriver. c. Get rid of tags.



TA244135

TRANSMISSION OIL PRESSURE SWITCH - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE: Fill transmission (page 2-900).

TASK ENDS HERE

LEFT BRAKE LIGHT SWITCH

This task covers:

- a. Removal (page 2-680)
 - b. Installation (page 2-680)
-

INITIAL SETUP

Tools

- Screwdriver, flat-tip, 1/4-inch
- Wrench, open-end, 9/16-inch
- Wrench, open-end, 11/16-inch

Personnel Required

One

Equipment Condition

- Airbrake system drained (page 2-1034).
- Battery ground cable disconnected (page 2-424).
- Left cab door opened (page 2-424).

Materials/Parts

- Lockwasher, switch (two required)
- Rags, wiping (item 15, appendix C)
- Tags, marker (item 21, appendix C)
- Tape, antiseizing (item 22, appendix C)

2-679

LEFT BRAKE LIGHT SWITCH - CONTINUED

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

REMOVAL

CAUTION

Use care when working behind instrument panel to prevent breaking or disconnecting wires.

- | | | |
|---------------------------------------|---|---|
| <p>1. Left brake light switch (1)</p> | <p>Two screws (2), two lockwashers (3), and two wires (4)</p> | <ul style="list-style-type: none"> a. Tag wires (page 2-424). b. Using 1/4-inch flat-tip screwdriver, unscrew and take out. c. Get rid of lockwashers. d. Move wires aside. |
| <p>2. Adapter (5)</p> | <p>Left brake light switch (1)</p> | <p>Using 9/16-inch and 11/16-inch open-end wrenches, unscrew and take out.</p> |

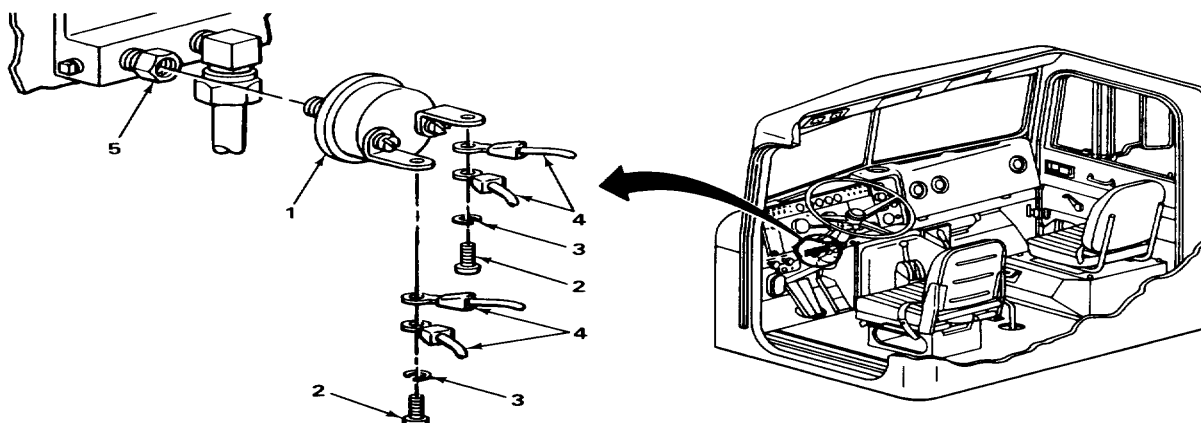
INSTALLATION

CAUTION

Use care when working behind instrument panel to prevent breaking or disconnecting wires.

- | | | |
|--------------------------------|--|---|
| 3. Adapter (5) | Left brake light switch (1) | a. Clean pipe threads with wiping rag.
b. Wrap pipe threads with antiseizing tape (page 2-424).
c. Screw in and tighten using 9/16-inch and 11/16-inch open-end wrenches. |
| 4. Left brake light switch (1) | Two wires (4), two new lockwashers (3), and two screws (2) | a. Put wires in correct position.
b. Screw in and tighten using 1/4-inch flat-tip screwdriver.
c. Get rid of tags. |

LEFT BRAKE LIGHT SWITCH - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE:

1. Close left cab door (page 2-424).
2. Connect battery ground cable (page 2-424).

TASK ENDS HERE

RIGHT BRAKE LIGHT SWITCH

This task covers:

- a. Removal (page 2-682)
- b. Installation (page 2-682)

INITIAL SETUP

Tools

Screwdriver, flat-tip, 1/4-inch
Wrench, open-end, 9/16-inch

Personnel Required

One

Equipment Condition

Materials/Parts

Lockwasher, switch (two required)
Rags, wiping (item 15, appendix C)
Tags, marker (item 21, appendix C)
Tape, antiseizing (item 22, appendix C)

Airbrake system drained (page 2-1034).
Battery ground cable disconnected
(page 2-424).
Left cab door opened (page 2-424).

RIGHT BRAKE LIGHT SWITCH - CONTINUED

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

REMOVAL

CAUTION

Use care when working behind instrument panel to prevent breaking or disconnecting wires.

1	Right brake light switch (1)	Two screws (2), two lockwashers (3), and two wires (4)	<ul style="list-style-type: none"> a Tag wires (page 2-424). b Using 1/4-inch flat-tip screwdriver, unscrew and take out.
c	Get rid of lockwashers.		
d	Move wires aside.		
2	Right manifold (5)	Right brake light switch (1)	Using 9/16-inch open-end wrench, unscrew and take out.

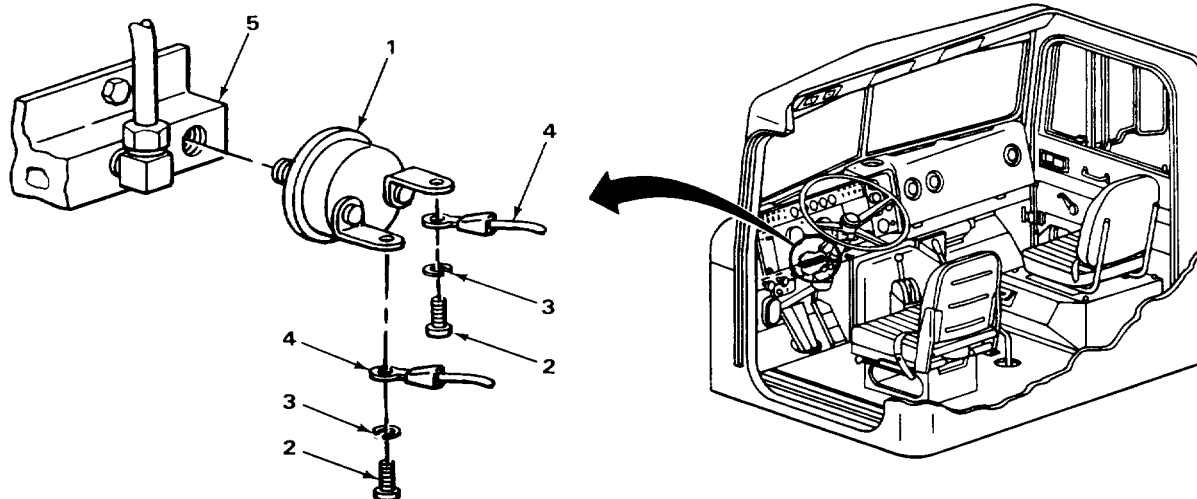
INSTALLATION

CAUTION

Use care when working behind instrument panel to prevent breaking or disconnecting wires.

3	Right manifold (5)	Right brake light switch (1)	<ul style="list-style-type: none"> a Clean pipe threads with wiping rag. b Wrap pipe threads with antiseizing tape (page 2-424). c Screw in and tighten using 9/16-inch open-end wrench.
4	Right brake light switch (1)	Two wires (4), two new lockwashers (3), and two screws (2)	<ul style="list-style-type: none"> a Put wires in correct position. b Screw in and tighten using 1/4-inch flat-tip screwdriver. c Get rid of tags.

RIGHT BRAKE LIGHT SWITCH - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE:

1. Connect battery ground cable (page 2-424).
2. Close left cab door (page 2-424).

TASK ENDS HERE

ENGINE COMPRESSION BRAKE PRESSURE SWITCH

This task covers:

- a. Removal (page 2-684)
- b. Installation (page 2-684)

INITIAL SETUP

Tools

- Container, 6-gallon
- Screwdriver, flat-tip, 3/16-inch
- Wrench, open-end, 7/16-inch

Personnel Required

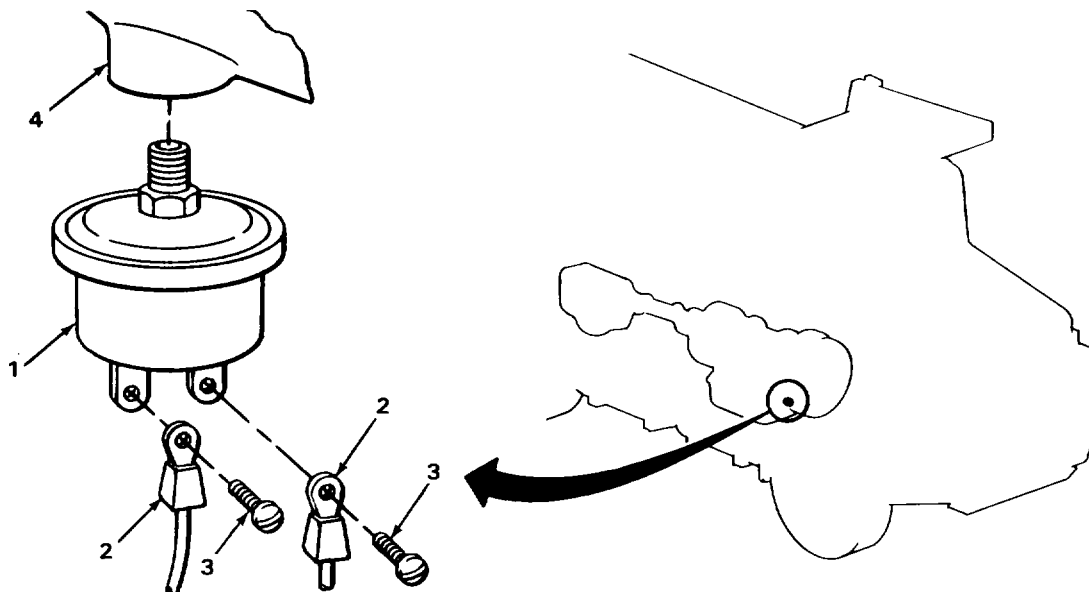
One

Materials/Parts

- Rags, wiping (item 15, appendix C)
- Tags, marker (item 21, appendix C)
- Tape, antiseizing (item 22, appendix C)

ENGINE COMPRESSION BRAKE PRESSURE SWITCH - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1	Engine Compression brake pressure switch (1)	Two wires (2) and two screws (3)	<ul style="list-style-type: none"> a Tag wires (page 2-424). b Using 3/16-inch flat-tip screwdriver, unscrew and take out. c Move wires aside.
2	Torque converter housing (4)	Engine Compression brake pressure switch (1)	<ul style="list-style-type: none"> a Place 6-gallon container underneath. b Using 7/16-inch open-end wrench, unscrew and take out.
INSTALLATION			
3	Torque converter housing (4)	Engine Compression brake pressure switch (1)	<ul style="list-style-type: none"> a Clean pipe threads using wiping rag. b Wrap pipe threads with antiseizing tape (page 2-424). c Screw in and tighten using 7/16-inch open-end wrench.
4	Engine Compression brake pressure	Two screws (3) and two wires (2) switch (1)	<ul style="list-style-type: none"> a Put wires in correct position. b Screw in and tighten using 3/16-inch flat-tip screwdriver. c Get rid of tags.



ENGINE COMPRESSION BRAKE PRESSURE SWITCH - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE: Fill transmission (page 2-900).

TASK ENDS HERE

TRANSMISSION OIL TEMPERATURE SENDER

This task covers:

- a Removal (page 2-685)
- b Installation (page 2-686)

INITIAL SETUP

Tools

- Container, 6-gallon
- Wrench, box-end, 3/8-inch
- Wrench, open-end, 15/16-inch

Personnel Required

One

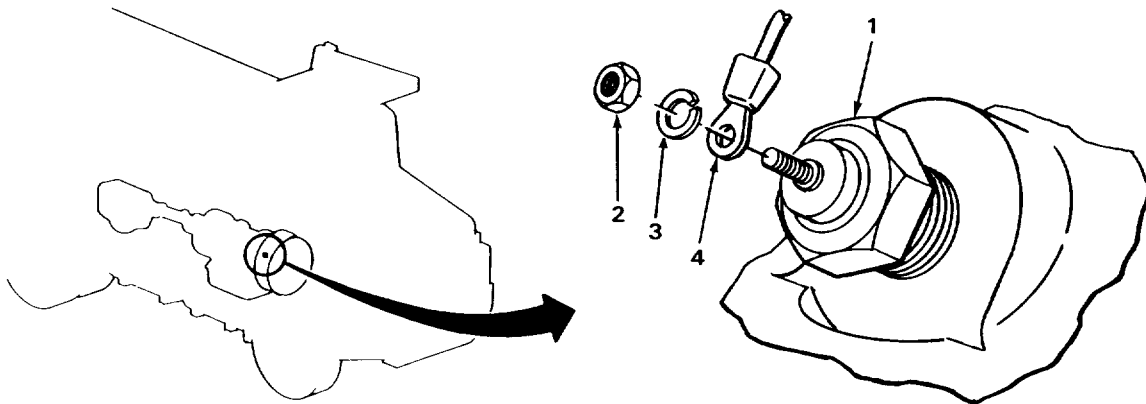
Materials/Parts

- Lockwasher, switch
- Rags, wiping (item 15, appendix C)

LOCATION	ITEM	ACTION REMARKS
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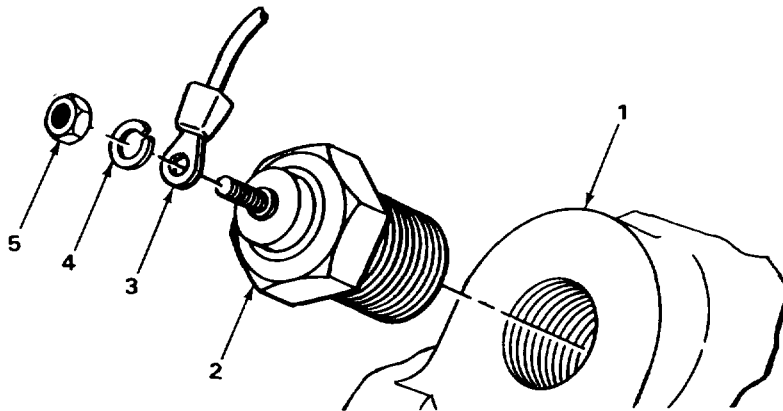
REMOVAL

- | | | | |
|---|---|---------------------------------------|--|
| 1 | Transmission oil temperature sender (1) | Nut (2), lockwasher (3), and wire (4) | <ul style="list-style-type: none"> a Using 3/8-inch box-end wrench, unscrew and take off. b Get rid of lockwasher. |
|---|---|---------------------------------------|--|



TRANSMISSION OIL TEMPERATURE SENDER - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED		
2. Torque converter housing (1) sender (2)	Transmission oil temperature unscrew and take out.	a. Place 6-gallon container underneath. b. Using 15/16-inch open-end wrench,
INSTALLATION		
3 Torque converter housing (1)	Transmission oil temperature sender (2)	a Clean pipe threads using wiping rag. b Screw in and tighten using 15/16-inch open-end wrench.
4 Transmission oil temperature sender (2)	Wire (3), new lock-washer (4), and nut (5)	a Put wire in place. b Screw in and tighten using 3/8-inch box-end wrench.



NOTE

FOLLOW-ON MAINTENANCE: Fill transmission (page 2-900).

TASK ENDS HERE

TA244140

TRANSMISSION OIL TEMPERATURE SWITCH

This task covers:

- a. Removal (page 2-687)
- b. Installation (page 2-688)

INITIAL SETUP

Tools

- Container, 6-gallon
- Wrench, box-end, 3/8-inch
- Wrench, open-end, 15/16-inch
- Wrench, open-end, 1-inch

Personnel Required

One

Materials/Parts

- Lockwasher, sender
- Rags, wiping (item 15, appendix C)

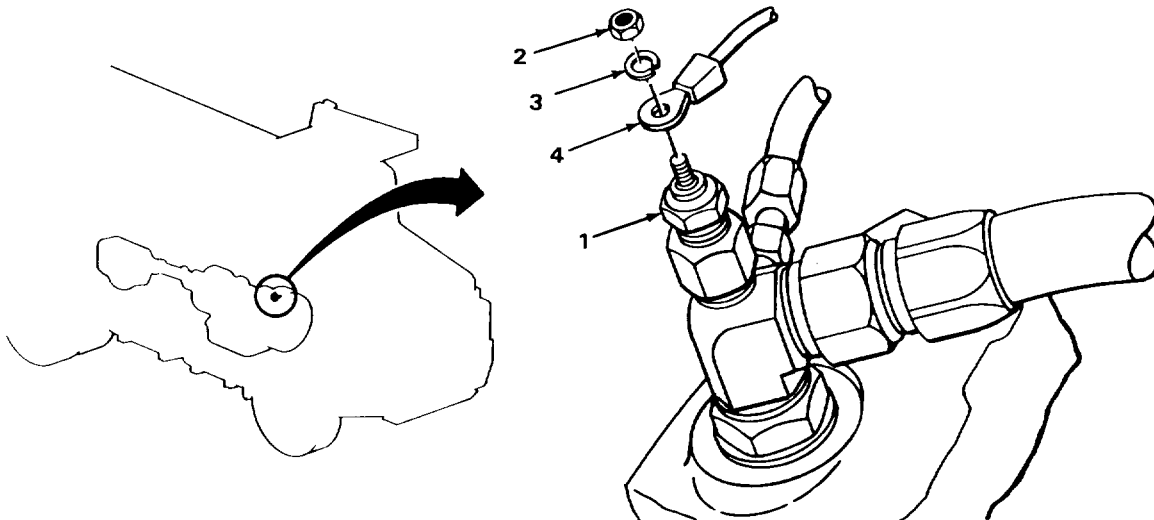
LOCATION	ITEM	ACTION REMARKS
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REMOVAL

1 Transmission oil temperature switch (1)

Nut (2), lockwasher (3), and wire (4)

- a Using 3/8-inch box-end wrench, unscrew and take off.
- b Get rid of lockwasher.



TA244141

TRANSMISSION OIL TEMPERATURE SWITCH - CONTINUED

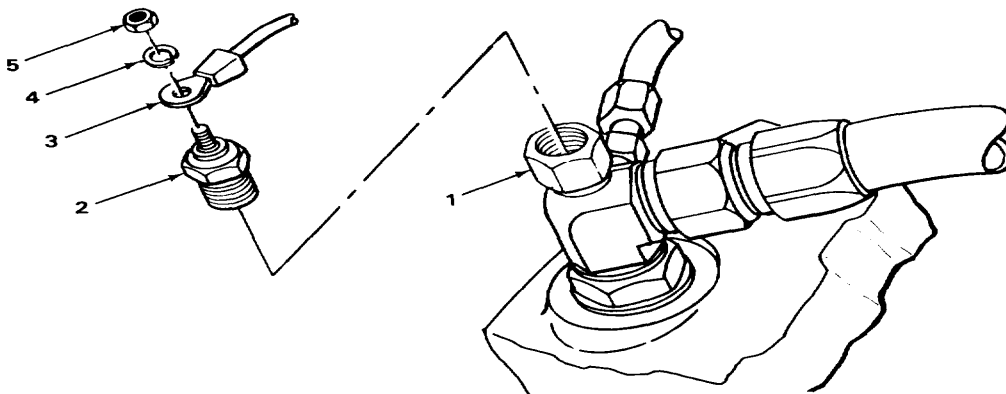
LOCATION	ITEM	ACTION REMARKS
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REMOVAL - CONTINUED

2	Adapter (1)	Transmission oil temperature switch (2)	a Place 6-gallon container underneath. b Using 15/16-inch and 1-inch open-end wrenches, unscrew and take out.
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INSTALLATION

3	Adapter (1)	Transmission oil temperature switch (2)	a Clean pipe threads using wiping rags. b Screw in and tighten using 15/16-inch and 1-inch open-end wrenches.
4	Transmission oil temperature switch (2)	Wire (3), new lock-washer (4), and nut (5)	a Put wire in place. b Screw on and tighten using 3/8-inch box-end wrench.



NOTE

FOLLOW-ON MAINTENANCE: Fill transmission (page 2-900).

TASK ENDS HERE

TA244142

BACKUP LIGHT SWITCH

This task covers:

- a. Removal (page 2-689)
- b. Installation (page 2-690)

INITIAL SETUP

Tools

Container, 6-gallon
Wrench, open-end, 1-inch

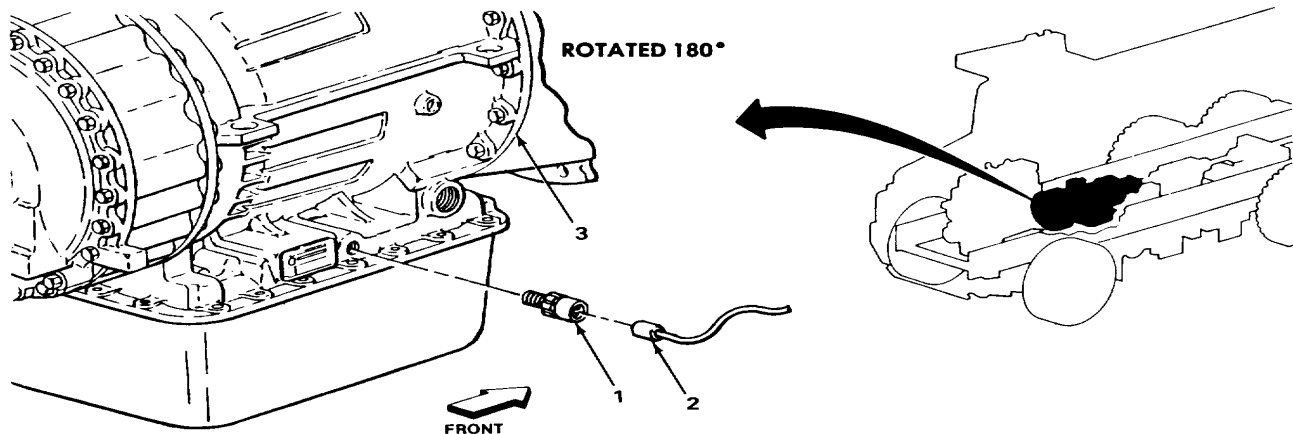
Personnel Required

One

Materials/Parts

Rags, wiping (item 15, appendix C)
Tape, antiseizing (item 22, appendix C)

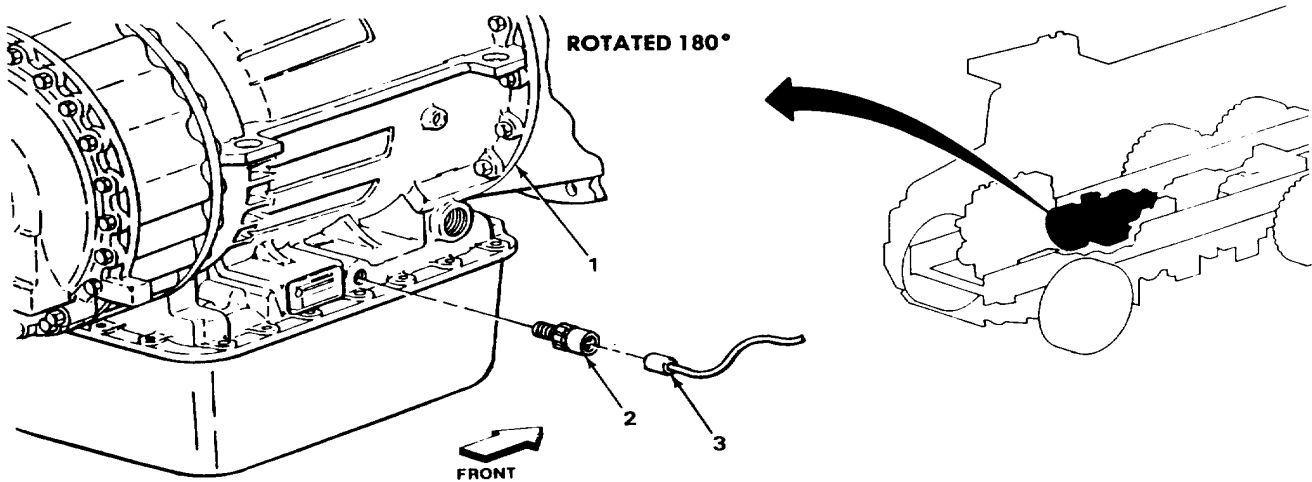
	LOCATION	ITEM	ACTION REMARKS
REMOVAL			
1	Backup light switch (1)	Wire (2)	Pull off.
2	Transmission (3)	Backup light switch (1)	a Place 6-gallon container underneath. b Using 1-inch open-end wrench, unscrew and take out.



TA244143

BACKUP LIGHT SWITCH - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
3. Transmission (1)	Backup light switch (2)	a Clean pipe threads with wiping rag. b Wrap pipe threads with antiseizing tape (page 2-424). c Screw in and tighten using 1-inch open-end wrench.
4. Backup light switch (2)	Wire (3)	Push on.



NOTE

FOLLOW-ON MAINTENANCE: Fill transmission (page 2-900).

TASK ENDS HERE

NEUTRAL SAFETY SWITCH

This task covers:

- a. Removal (page 2-691)
- b. Installation (page 2-692)

NEUTRAL SAFETY SWITCH - CONTINUED

INITIAL SETUP

Tools

Container, 6-gallon
Wrench, open-end, 7/8-inch

Personnel Required

One

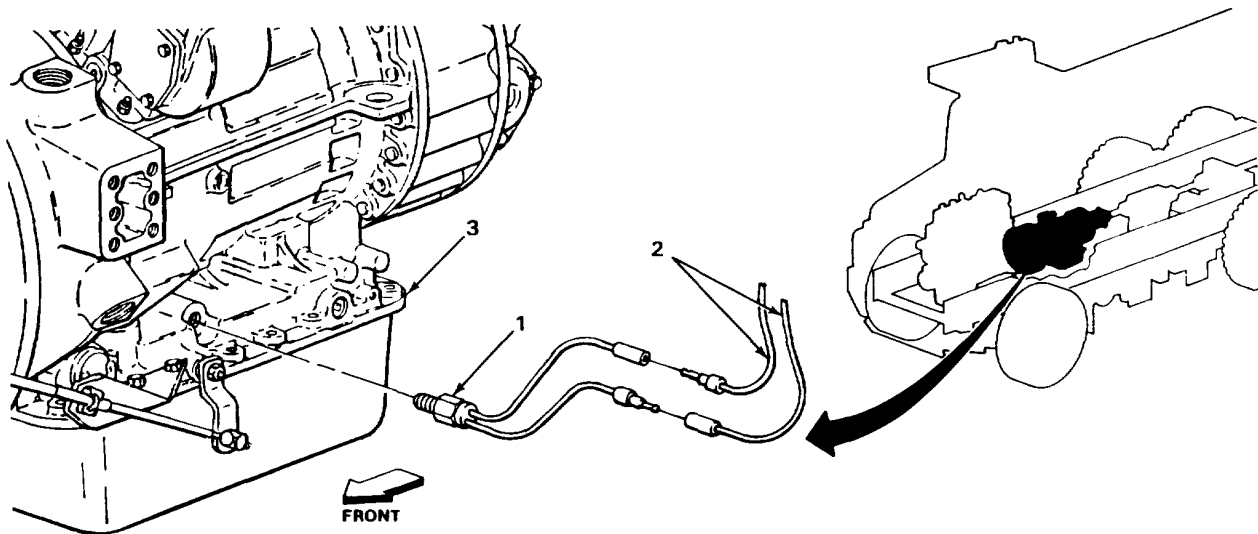
Materials/Parts

Rags, wiping (item 15, appendix C)
Tape, antiseizing (item 22, appendix C)

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

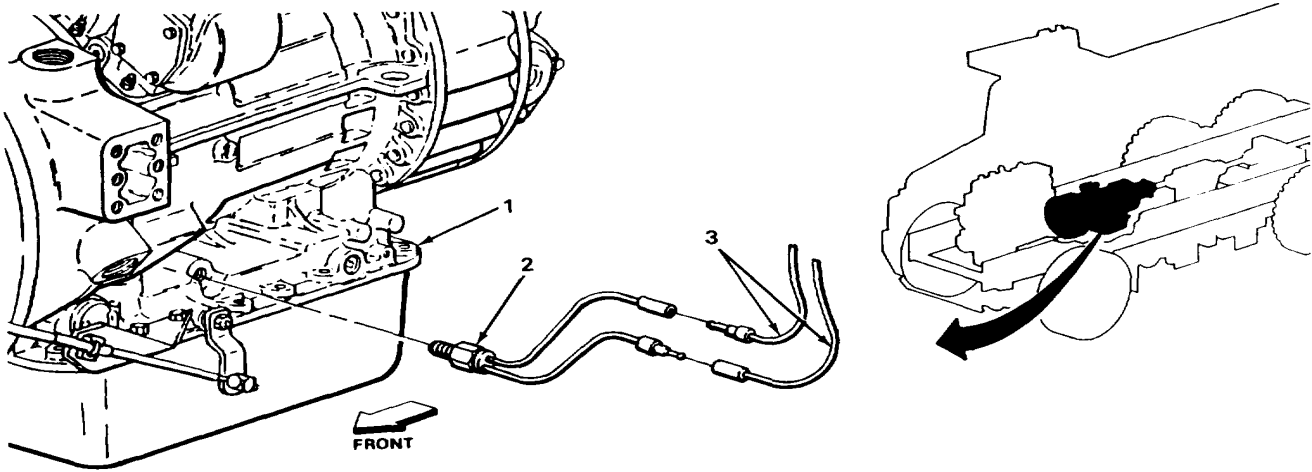
- | | | | |
|---|---------------------------|---------------------------|---|
| 1 | Neutral safety switch (1) | Two wires (2) | Pull apart. |
| 2 | Transmission (3) | Neutral safety switch (1) | a Place 6-gallon container underneath.
b Using 7/8-inch open-end wrench, unscrew and take out. |



TA244145

NEUTRAL SAFETY SWITCH - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
3. Transmission (1)	Neutral safety switch (2)	a Clean pipe threads with wiping rag. b Wrap pipe threads with antiseizing tape (page 2-424). c Screw in and tighten using 7/18-inch open-end wrench.
4. Neutral safety switch (2)	Two wires (3)	Push together.



NOTE

FOLLOW-ON MAINTENANCE: Fill transmission (page 2-900).

TASK ENDS HERE

POWER TAKE OFF LIGHT SWITCH

This task covers:

- a Removal (page 2-693)
- b Installation (page 2-694)

TA244146

POWER TAKE OFF LIGHT SWITCH - CONTINUED

INITIAL SETUP

Tools

- Flashlight
- Screwdriver, cross-tip, number one
- Screwdriver, flat-tip, 3/16-inch
- Wrench, open-end, 7/8-inch

Personnel Required

One

Equipment Condition

Left cab door opened (page 2-424).

Materials/Parts

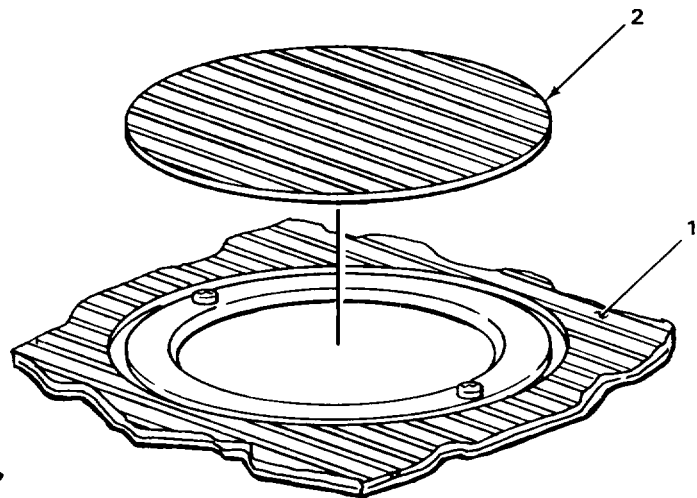
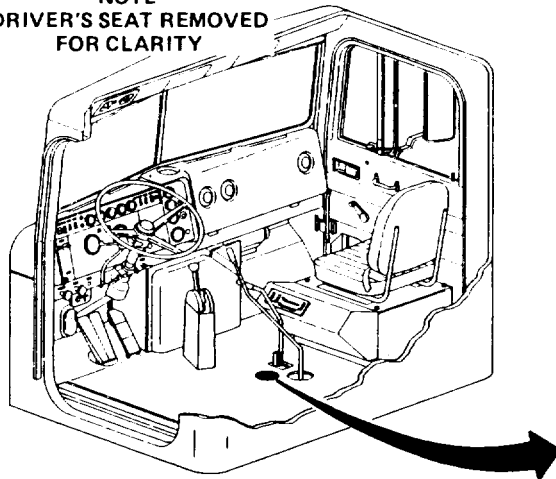
- Lockwasher, switch
- Rags, wiping (item 15, appendix C)

LOCATION	ITEM	ACTION REMARKS
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REMOVAL

1	Cab floor (1) Floor mat insert (2)	Take out.
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**NOTE
DRIVER'S SEAT REMOVED
FOR CLARITY**



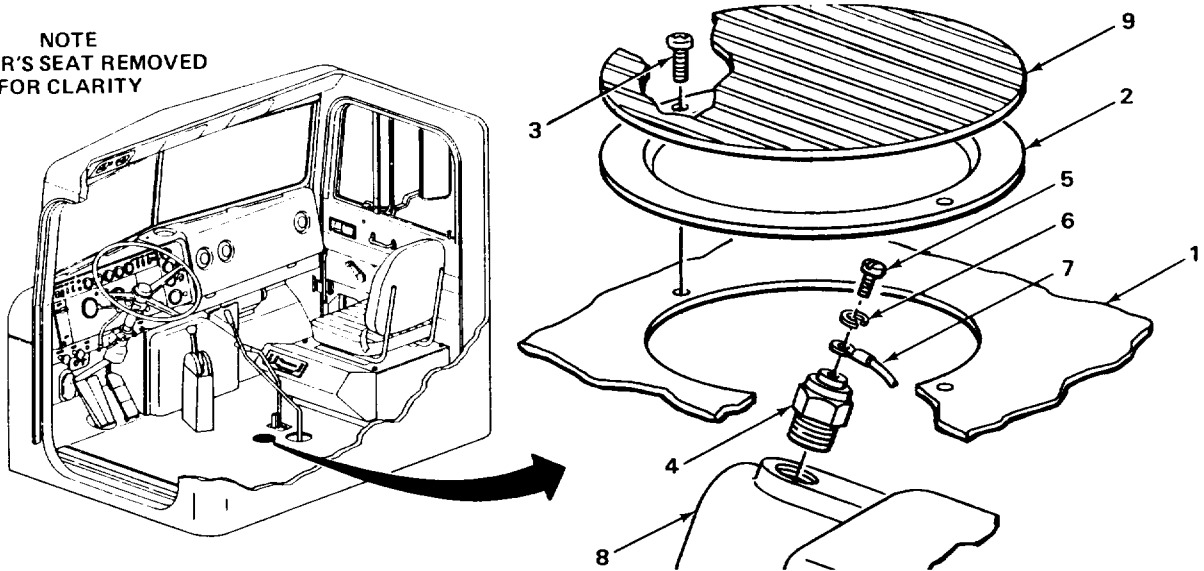
TA244147

POWER TAKE OFF LIGHT SWITCH - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
2	Cab floor (1)	Power take off cover plate (2) and two screws (3)	Using number one cross-tip screwdriver, unscrew and take out.
<u>WARNING</u>			
Cab floor boards have sharp edges Care must be taken to prevent injury to personnel.			
3	Power take off light switch (4)	Screw (5), lock-washer (6), and wire (7)	a Using 3/16-inch flat-tip screwdriver and flashlight, unscrew and take out. b Get rid of lockwashers.
4	Power take off (8)	Power take off light switch (4)	Using 7/8-inch open-end wrench and flashlight, unscrew and take out.
INSTALLATION			
<u>WARNING</u>			
Cab floor boards have sharp edges Care must be taken to prevent injury to personnel.			
5	Power take off (8)	Power take off light switch (4)	a Clean pipe threads with wiping rag. b Screw in and tighten using 7/8-inch open-end wrench and flashlight.
6	Power take off light switch (4)	Wire (7), new lock-washer (6), and screw (5)	Screw in and tighten using 3/16-inch flat-tip screwdriver.
7	Cab floor (1)	Power take off cover plate (2) and two screws (3)	a Put in place. b Screw in and tighten using number one cross-tip screwdriver.
8		Floor mat insert (9)	Put in place

POWER TAKE OFF LIGHT SWITCH - CONTINUED

NOTE
DRIVER'S SEAT REMOVED
FOR CLARITY



NOTE

FOLLOW-ON MAINTENANCE: Close left cab door (page 2-424).

TASK ENDS HERE

ENGINE COMPRESSION BRAKE THROTTLE SWITCH

This task covers:

- a. Removal (page 2-696)
- b. Installation (page 2-696)
- c. Adjustment (page 2-696)

INITIAL SETUP

Tools

- Wrench, box-end, 7/16-inch
- Wrench, open-end, 1/2-inch (two required)

Materials/Parts

- Lockwasher, switch (two required)
- Tags, marker (item 21, appendix C)

Personnel Required

One

Equipment Condition

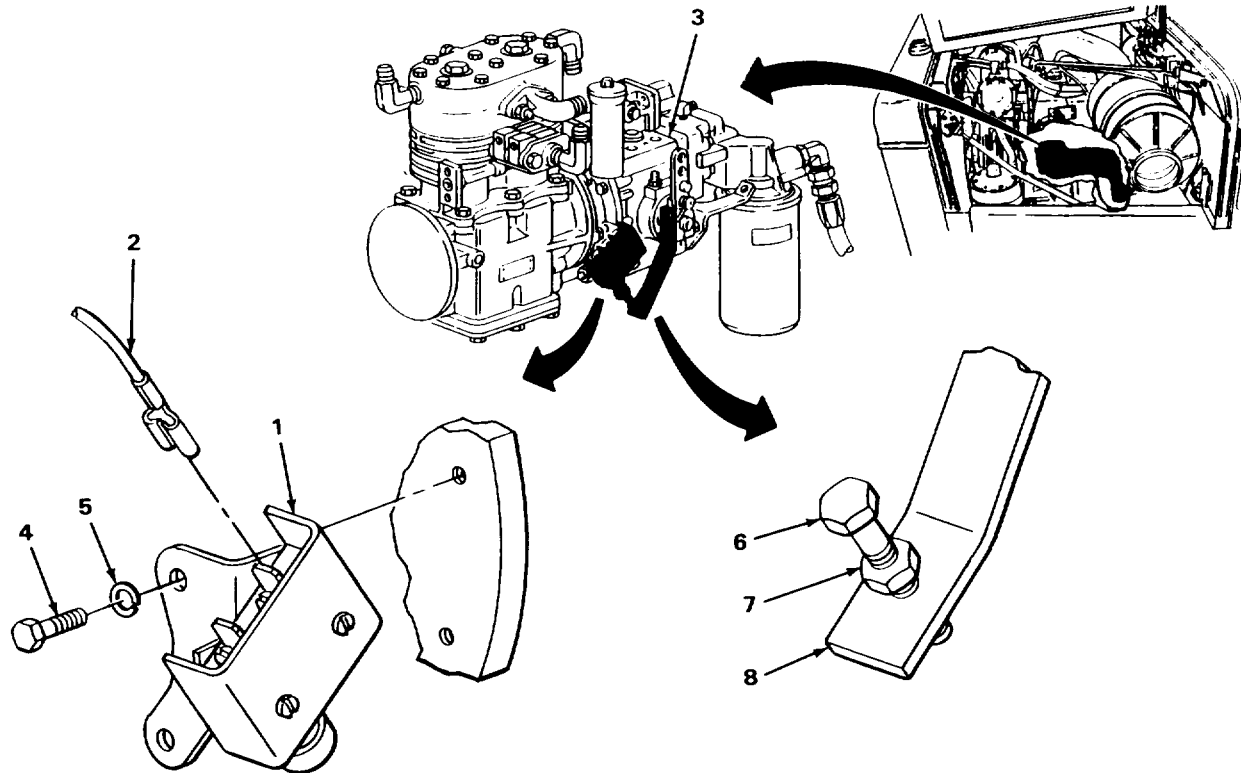
Left side hood panel opened (page 2-424).

TA244148

ENGINE COMPRESSION BRAKE THROTTLE SWITCH - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1.	Engine compression brake throttle switch (1)	Two wires (2)	a. Tag (page 2-424). b. Take off.
2.	Fuel pump (3)	Engine compression brake throttle switch (1), two screws (4), and two lockwashers (5)	a. Using 7116-inch box-end wrench, unscrew and take out. b. Get rid of lockwashers.
INSTALLATION			
3.	Fuel pump (3)	Engine compression brake throttle switch (1), two new lockwashers (5), and two screws (4)	Screw in and tighten using 7116-inch box-end wrench.
4.	Engine compression brake throttle switch (1)	Two wires (2)	a. Put on. b. Get rid of tags.
ADJUSTMENT			
NOTE			
Engine compression brake throttle switch adjustment must be performed with throttle control pedal in idle position.			
5.	Adjusting screw (6)	Jamnut (7)	Using two 1/2-inch open-end wrenches, loosen one turn.
6.	Actuator arm (8) brake	Adjusting screw (6)	a. Screw in until engine compression throttle switch button (9) opens. Listen for click to open. b. Screw out until engine compression brake throttle switch button (9) closes. Listen for click to close.
7.	Adjusting screw (6)	Jamnut (7)	Screw on and tighten using two 1/2-inch open-end wrenches.

ENGINE COMPRESSION BRAKE THROTTLE SWITCH - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE: Close left side hood panel (page 2-424).

TASK ENDS HERE

LOW AIR-PRESSURE WARNING LIGHT SWITCH

This task covers:

- a. Removal (page 2-698)
- b. Installation (page 2-698)

INITIAL SETUP

Tools

Pliers, slip-joint, 8inch
Screwdriver, flat-tip, 3/16-inch

Materials/Parts

Lockwasher, switch
Rags, wiping (item 15, appendix C)

LOW AIR-PRESSURE WARNING LIGHT SWITCH - CONTINUED

INITIAL SETUP - CONTINUED

Personnel Required

One

Equipment Condition

Airbrake system drained
(page 2-1034).

Equipment Condition - Continued

Battery ground cable disconnected
(page 2-424).
Left cab door opened (page 2-424).

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

REMOVAL

CAUTION

Use care when working behind instrument panel to prevent breaking or disconnecting wires.

- | | | | |
|----|--|---|---|
| 1. | Low air-pressure warning light switch (1) | Screw (2), lock-washer (3), and two wires (4) | a. Using 3/16-inch flat-tip screwdriver, unscrew and take out.
b. Get rid of lockwasher. |
| 2. | Left manifold (5) warning light switch (1) | Low air-pressure take out. | Using 8-inch slip-joint pliers, unscrew and |

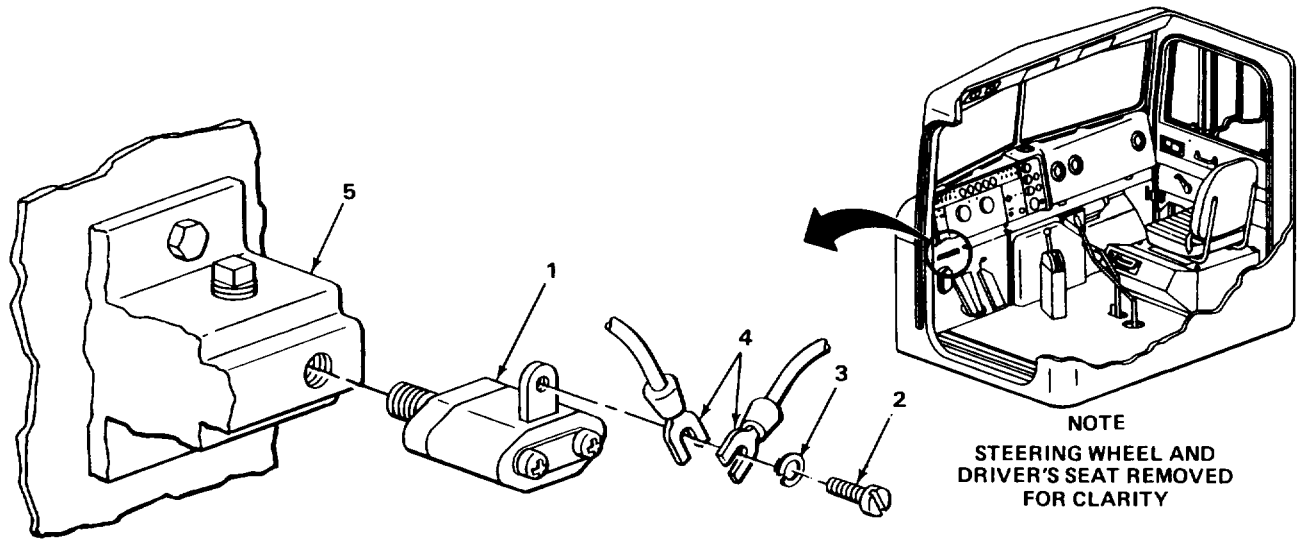
INSTALLATION

CAUTION

Use care when working behind instrument panel to prevent breaking or disconnecting wires.

- | | | | |
|----|---|--|---|
| 3. | Left manifold (5) | Low air-pressure warning light switch (1) | a. Clean pipe threads with wiping rag.
b. Screw in and tighten using 8-inch slip-joint pliers. |
| 4. | Low air-pressure warning light switch (1) | Two wires (4), new lockwasher (3), and screw (2) | a. Put wires in place.
b. Screw in and tighten using 3/16-inch flat-tip screwdriver. |

LOW AIR-PRESSURE WARNING LIGHT SWITCH - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE:

1. Connect battery ground cable (page 2-424).
2. Close left cab door (page 2-424).

TASK ENDS HERE

LOW AIR-PRESSURE WARNING BUZZER SWITCH

This task covers:

- a. Removal (page 2-700)
- b. Installation (page 2-700)

INITIAL SETUP

Tools

- Pliers, slip-joint, 8inch
- Screwdriver, flat-tip, 3/16-inch

Personnel Required

One

Materials/Parts

- Lockwasher, switch
- Rags, wiping (item 15, appendix C)

Equipment Condition

Airbrake system drained (page 2-1034).

TA244150

LOW AIR-PRESSURE WARNING BUZZER SWITCH - CONTINUED**INITIAL SETUP - CONTINUED**

Equipment Condition - Continued

Battery ground cable disconnected (page 2-424).
Left cab door opened (page 2-424).

LOCATION	ITEM	ACTION REMARKS
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REMOVAL**CAUTION**

Use care when working behind instrument panel to prevent breaking or disconnecting wires.

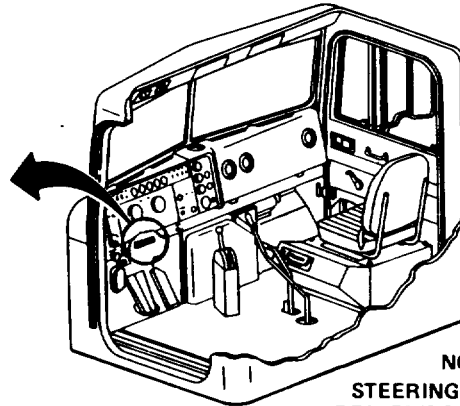
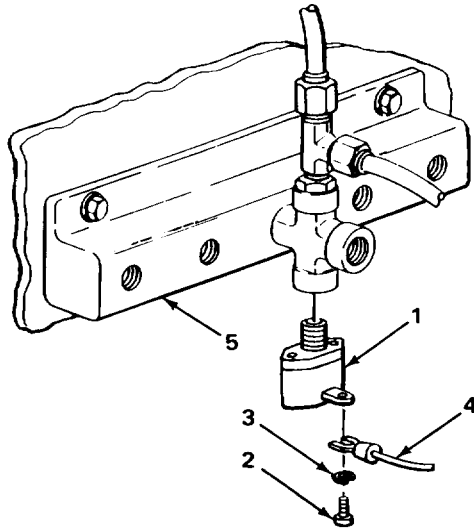
- | | | | |
|----|--|--|---|
| 1. | Low air-pressure warning buzzer switch (1) | Screw (2), lock-washer (3), and wire (4) | <ul style="list-style-type: none"> a. Using 3/16-inch flat-tip screwdriver, unscrew and take out. b. Get rid of lockwasher. |
| 2. | Right manifold (5) | Low air-pressure warning buzzer switch (1) | Using 8-inch slip-joint pliers, unscrew and take out. |

INSTALLATION**CAUTION**

Use care when working behind instrument panel to prevent breaking or disconnecting wires.

- | | | | |
|----|--|--|---|
| 3. | Right manifold (5) | Low air-pressure warning buzzer switch (1) | <ul style="list-style-type: none"> a. Clean pipe threads with wiping rag. b. Screw in and tighten using 8-inch slip-joint pliers. |
| 4. | Low air-pressure warning buzzer switch (1) | Wire (4), new lock-washer (3), and screw (2) | <ul style="list-style-type: none"> a. Put wire in place. b. Screw in and tighten using 3/16-inch flat-tip screwdriver. |

LOW AIR-PRESSURE WARNING BUZZER SWITCH - CONTINUED



NOTE
STEERING WHEEL AND
DRIVER'S SEAT REMOVED
FOR CLARITY

NOTE

FOLLOW-ON MAINTENANCE:

1. Connect battery ground cable (page 2-424).
2. Close left cab door (page 2-424).

TASK ENDS HERE

PRIMARY MAGNETIC SWITCH

This task covers:

- a. Removal (page 2-702)
- b. Installation (page 2-702)

INITIAL SETUP

Tools

- Screwdriver, cross-tip, number two
- Wrench, box-end, 3/8-inch
- Wrench, box-end, 11/2-inch

Materials/Parts

- Lockwasher, mounting screw (two required)

Materials/Parts - Continued

- Lockwasher, large (two required)
- Lockwasher, small (two required)
- Tags, marker (item 21, appendix C)

Personnel Required

One

PRIMARY MAGNETIC SWITCH - CONTINUED

INITIAL SETUP - CONTINUED

Equipment Condition

Left side hood panel opened
(page 2-424).

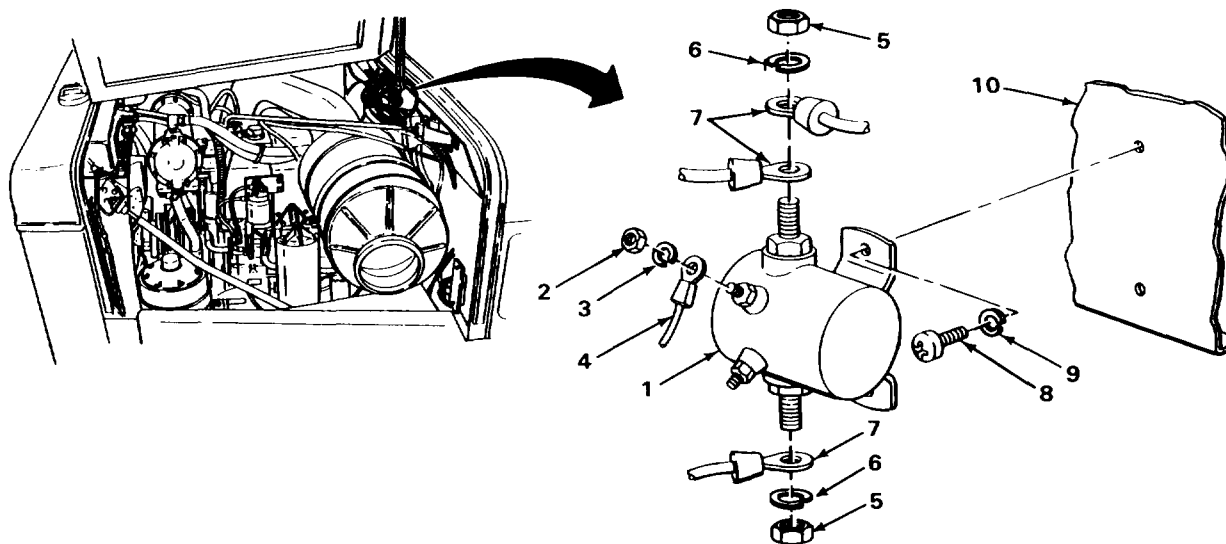
Battery ground cable disconnected
(page 2-424).

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
1. Primary magnetic switch (1)	Two nuts (2), two lockwashers (3), and two wires (4)	a. Tag wires (page 2-424). b. Using 3/8-inch box-end wrench, unscrew and take out. c. Get rid of lockwashers.
2.	Two nuts (5), two lockwashers (6), and three wires (7)	a. Tag wires (page 2-424). b. Using 1/2-inch box-end wrench, unscrew and take out. c. Get rid of lockwashers.
3.	Two screws (8) and two lockwashers (9)	a. Using number two cross-tip screwdriver, unscrew and take out. b. Get rid of lockwashers.
INSTALLATION		
4. Firewall (10)	Primary magnetic switch (1)	Put in place and hold.
5. Primary magnetic switch (1)	Two screws (8) and two new lockwashers (9)	Screw in and tighten using number two cross-tip screwdriver.
6.	Three wires (7), two new lockwashers (6), and two nuts (5)	a. Put wires in place. b. Screw in and tighten using 112-inch box-end wrench. c. Get rid of tags.

PRIMARY MAGNETIC SWITCH - CONTINUED

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

- | | | |
|----|--|---|
| 7. | Two wires (4), two new lockwashers (3), and two nuts (2) | a. Put wires in place.
b. Screw in and tighten using 3/8-inch box-end wrench.
c. Get rid of tags. |
|----|--|---|



NOTE

FOLLOW-ON MAINTENANCE:

1. Connect battery ground cable (page 2-424).
2. Close left side hood panel (page 2-424).

TASK ENDS HERE

SECONDARY MAGNETIC SWITCH

This task covers:

- a. Removal (page 2-704)
- b. Installation (page 2-704)

SECONDARY MAGNETIC SWITCH - CONTINUED

INITIAL SETUP

Tools

- Wrench, box-end, 11/32-inch
- Wrench, box-end, 7/16-inch
- Wrench, box-end, 5/8-inch
- Wrench, open-end, 7/16-inch

Personnel Required

One

Equipment Condition

- Battery ground cable disconnected (page 2-424).
- Right cab door opened (page 2-424).
- Instrument panel pad removed (page 2-424).

Materials/Parts

- Lockwasher, mounting (two required)
- Lockwasher, small (two required)
- Lockwasher, large (two required)
- Tags, marker (item 21, appendix C)

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

REMOVAL

CAUTION

Use care when working behind instrument panel pad to prevent breaking or disconnecting wires.

1.	Secondary magnetic switch (1)	Nut (2), wire (3), and two lockwashers (4)	<ul style="list-style-type: none"> a. Tag wire (page 2-424). b. Using 11/32-inch box-end wrench, unscrew and take out. c. Get rid of lockwashers.
2.		Two nuts (5), four wires (6), and two lockwashers (7)	<ul style="list-style-type: none"> a. Tag wires (page 2-424). b. Using 5/8-inch box-end wrench, unscrew and take out. c. Get rid of lockwashers.
3.		Two screws (8), two lockwashers (9), and two nuts (10)	<ul style="list-style-type: none"> a. Using 7/16-inch box-end and 7/16-inch open-end wrenches, unscrew and take out. b. Get rid of lockwashers.

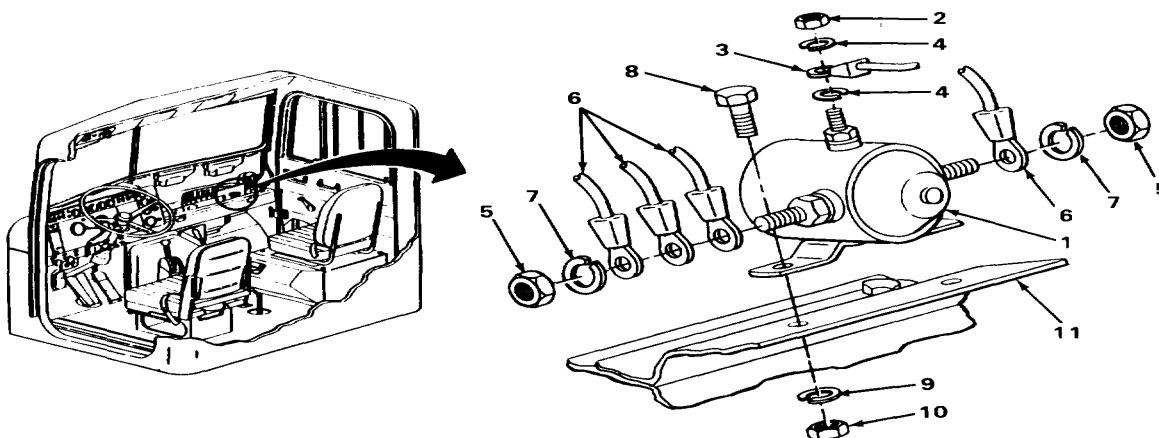
INSTALLATION

CAUTION

Use care when working behind instrument panel pad to prevent breaking or disconnecting wires.

SECONDARY MAGNETIC SWITCH - CONTINUED

LOCATION	ITEM	ACTION REMARKS
4. Firewall (11)	Secondary magnetic switch (1)	Put in place and hold.
5. Secondary magnetic switch (1)	Two screws (8), two new lockwashers (9), and two nuts (10)	Screw in and tighten using 7/16-inch box-end and 7/16-inch open-end wrenches.
6.	Two new lockwashers (7), four wires (6), and two nuts (5)	a. Put wires in place. b. Screw on and tighten using 5/8-inch box-end wrench. c. Get rid of tags.
7.	Two new lockwashers (4), wire (3), and nut (2)	a. Put wire in place. b. Screw on and tighten using 11/32-inch box-end wrench. c. Get rid of tags.



NOTE

FOLLOW-ON MAINTENANCE:

1. Connect battery ground cable (page 2-424) TA244153
2. Install instrument panel pad (page 2-424) 2-705
3. Close right cab door (page 2-424).

TASK ENDS HERE

TA244153

FREQUENCY SENSING RELAY SWITCH

This task covers:

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

INITIAL SETUP

Tools

Screwdriver, flat-tip, 3/16-inch
Wrench, box-end, 7/16-inch

Materials/Parts

Tags, marker (item 21, appendix C)

Personnel Required

One

Equipment Condition

Battery ground cable disconnected (page 2-424).
Left side hood panel opened (page 2-424).

LOCATION	ITEM	ACTION REMARKS
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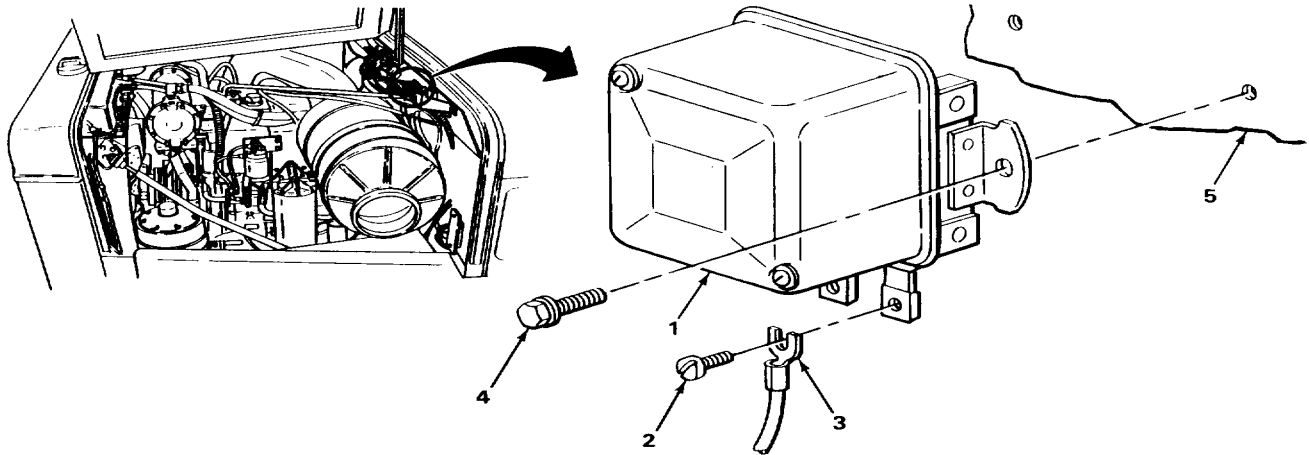
REMOVAL

1.	Frequency sensing relay switch (1)	Two screws (2) and two wires (3)	a. Tag wires (page 2-424). b. Using 3/16-inch flat-tip screwdriver, unscrew and take off.
2.		Two screws (4)	Using 7/16-inch box-end wrench, unscrew and take out.

INSTALLATION

3.	Firewall (5) and frequency sensing relay switch (1)	Two screws (4) end wrench.	Screw in and tighten using 7/16-inch box-
4.		Two wires (3) and two screws (2)	a. Screw in and tighten using 3/16-inch flat-tip screwdriver. b. Get rid of tags.

FREQUENCY SENSING RELAY SWITCH - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE:

1. Connect battery ground cable (page 2-424).
2. Close left side hood panel (page 2-424).

TASK ENDS HERE

HORN RELAY

This task covers:

- a. Removal (page 2-708)
- b. Installation (page 2-708)

INITIAL SETUP

Tools

- Wrench, box-end, 7/16-inch
- Wrench, open-end, 7/16-inch

Materials/Parts

- Lockwasher, mounting (two required)

Personnel Required

One

Equipment Condition

- Battery ground cable disconnected (page 2-424).
- Instrument panel pad removed (page 2-424)
- Right cab door opened (page 2-424).

TA244154

HORN RELAY - CONTINUED

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

REMOVAL

CAUTION

Use care when working behind instrument panel pad to prevent breaking or disconnecting wires.

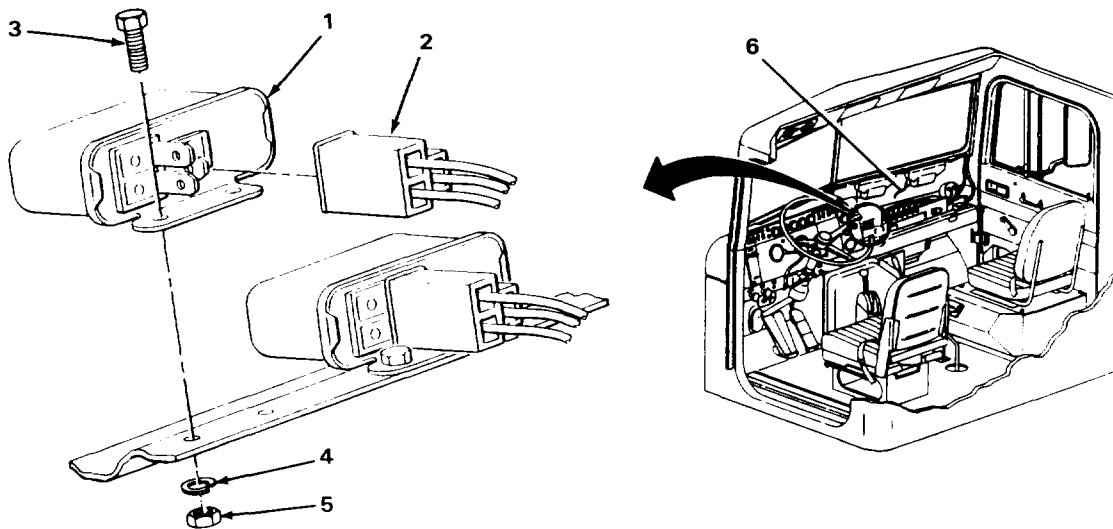
- | | | | |
|----|----------------|---|--|
| 1. | Horn relay (1) | Three wires (2) | Pull off. |
| 2. | | Two screws (3), two lockwashers (4), and two nuts (5) | Using 7/16-inch box-end and 7/16-inch open-end wrenches, unscrew and take out. |

INSTALLATION

CAUTION

Use care when working behind instrument panel pad to prevent breaking or disconnecting wires.

- | | | | |
|----|---------------------------------|---|---|
| 3. | Firewall (6) and horn relay (1) | Two screws (3), two new lockwashers (4), and two nuts (5) | Screw in and tighten using 7/16-inch box-end and open-end wrenches. |
| 4. | | Three wires (2) | Push on. |



TA244155

HORN RELAY - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Connect battery ground cable (page 2-424).
2. Install instrument panel pad (page 2-424).
3. Close right cab door (page 2-424).

TASK ENDS HERE

LOW AIR-PRESSURE WARNING BUZZER

This task covers:

- a. Removal (page 2-710)
 - b. Installation (page 2-710)
-

INITIAL SETUP

Tools

Wrench, box-end, 7/16-inch One
 Wrench, open-end, 7/16-inch

Personnel Required

Equipment Condition

Materials/Parts

Lockwasher, mounting (two required)

Battery ground cable disconnected
 (page 2-424).
 Instrument panel pad removed (page 2-424).
 Right cab door opened (page 2-424).

LOW AIR-PRESSURE WARNING BUZZER - CONTINUED

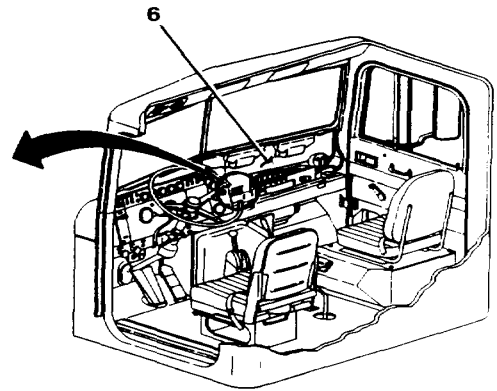
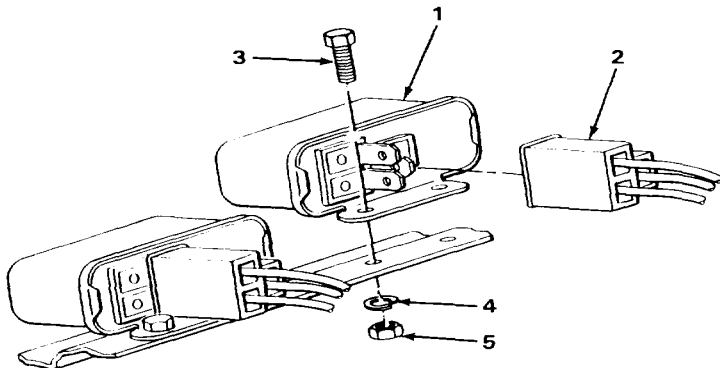
LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
<u>CAUTION</u>			
Use care when working behind instrument panel pad to prevent breaking or disconnecting wires.			
1.	Low air-pressure warning buzzer (1)	Three wires (2)	Pull off.
2.		Two screws (3), two lockwashers (4), and two nuts (5)	Using 7/16-inch box-end and 7/16-inch open-end wrenches, unscrew and take out.

INSTALLATION

CAUTION

Use care when working behind instrument panel pad to prevent breaking or disconnecting wires.

- | | | | |
|----|--|---|---|
| 3. | Firewall (6) and low air-pressure warning buzzer (1) | Two screws (3), two new lockwashers (4), and two nuts (5) | Screw in and tighten using 7/16-inch open-end and 7/16-inch box-end wrenches. |
| 4 | | Three wires (2) | Push on. |



TA244156

LOW AIR-PRESSURE WARNING BUZZER - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Connect battery ground cable (page 2-424).
2. Install instrument panel pad (page 2-424).
3. Close right cab door (page 2-424).

TASK ENDS HERE

TURN SIGNAL AND HAZARD FLASHER

This task covers:

- a. Removal (page 2-712)
 - b. Disassembly (page 2-712)
-

INITIAL SETUP:

Tools

Screwdriver, cross-tip, number two

Personnel Required

One

Equipment Condition

Battery ground cable disconnected
(page 2-424).

Instrument panel pad removed (page 2-424).
Right cab door opened (page 2-424).

2-711

TURN SIGNAL AND HAZARD FLASHER - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

CAUTION

Use care when working behind instrument panel pad to prevent breaking or disconnecting wires.

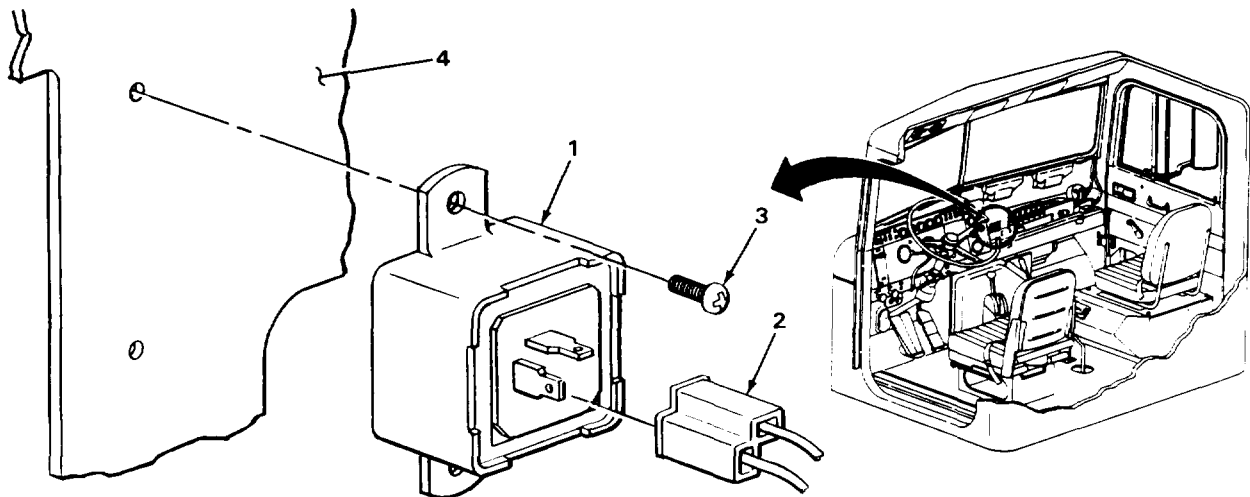
- | | | | |
|---------------------------------------|----------------|---|--|
| 1. Turn signal and hazard flasher (1) | Two wires (2) | Pull off. | |
| 2. unscrew and take out. | Two screws (3) | Using number two cross-tip screwdriver, | |

INSTALLATION

CAUTION

Use care when working behind instrument panel pad to prevent breaking or disconnecting wires.

- | | | | |
|--|----------------|--|--|
| 3. Firewall (4) and turn signal and hazard flasher (1) | Two screws (3) | Screw in and tighten using number two cross-tip screwdriver. | |
| 4. Two wires (2) | Push on. | | |



TA244157

TURN SIGNAL AND HAZARD FLASHER - CONTINUED**NOTE****FOLLOW-ON MAINTENANCE:**

1. Connect battery ground cable (page 2-424).
2. Install instrument panel pad (page 2-424).
3. Close right cab door (page 2-424).

TASK ENDS HERE**HORN BUTTON**

This task covers:

- | | |
|--------------------------|--|
| a. Removal (page 2-714) | c. Inspection/Replacement (page 2-714) |
| b. Cleaning (page 2-714) | d. Installation (page 2-714) |

INITIAL SETUP:**Tools**

Screwdriver, cross-tip, number two

Materials/Parts

Rags, wiping (item 15, appendix C)

Personnel Required

One

Equipment ConditionBattery ground cable disconnected
(page 2-424).

Left cab door opened (page 2-424).

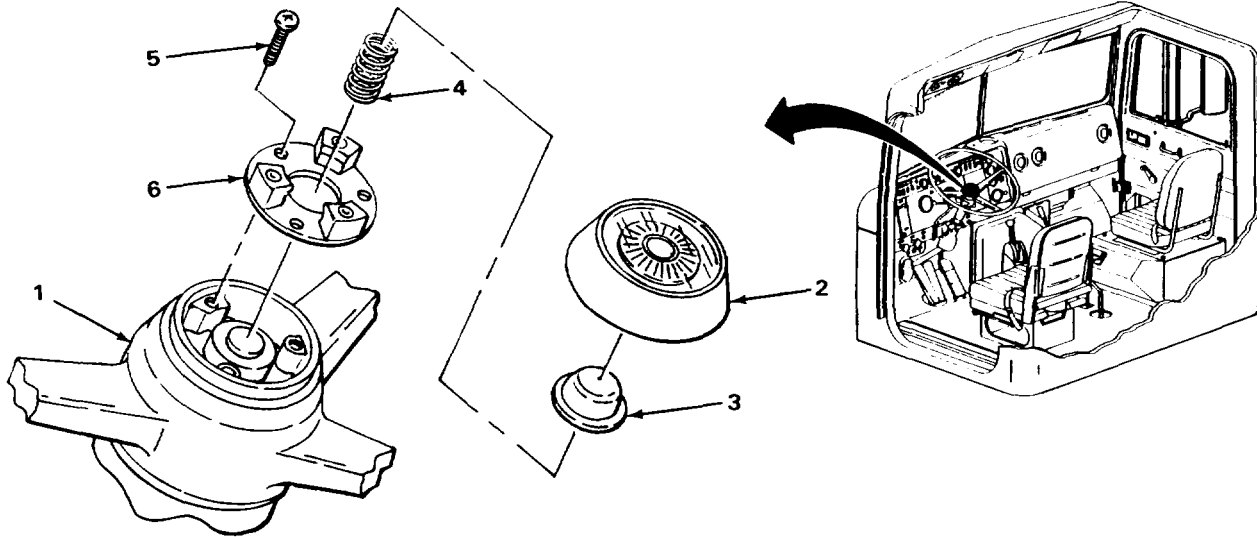
2-713

HORN BUTTON - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1. Steering wheel (1)	Horn button (2)	Turn counterclockwise and take out.	
2.	Contact cup (3)	Take out.	
3.	Spring (4)	Take out.	
4.	Three screws (5) and horn plate (6)	Using number two cross-tip screwdriver, unscrew and take out.	
CLEANING			
NOTE			
For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).			
5. All parts	Wipe clean using wiping rag.		
INSPECTION/REPLACEMENT			
NOTE			
Replace all damaged or defective parts.			
For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).			
6.	Horn button (2)	Look for cracks or breaks.	
7.	Horn plate (5)	Look for cracks or burn holes.	
8.	Spring (4)	Look for cracks or breaks.	
9.	All threaded parts	Look for damaged threads and rounded heads.	
INSTALLATION			
10. Steering wheel (1)	Three screws (5) and horn plate (6)	Screw in and tighten using number two cross-tip screwdriver.	

HORN BUTTON - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
11. Steering wheel (1)	Spring (4)	Put in place.	
12.	Contact cup (3)	Put in place.	
13.	Horn button (2)	Put in place and turn clockwise to lock.	



NOTE

FOLLOW-ON MAINTENANCE:

1. Connect battery ground cable (page 2-424).
2. Close left cab door (page 2-424).

TASK ENDS HERE

HORN

This task covers:

- a. Removal (page 2-716)
- b. Installation (page 2-716)

HORN - CONTINUED

INITIAL SETUP:

Tools

Wrench, open-end, 1/2-inch (two required)

Materials/Parts

Lockwasher, mounting

Personnel Required

One

Equipment Condition

Right side hood panel opened (page 2-424).

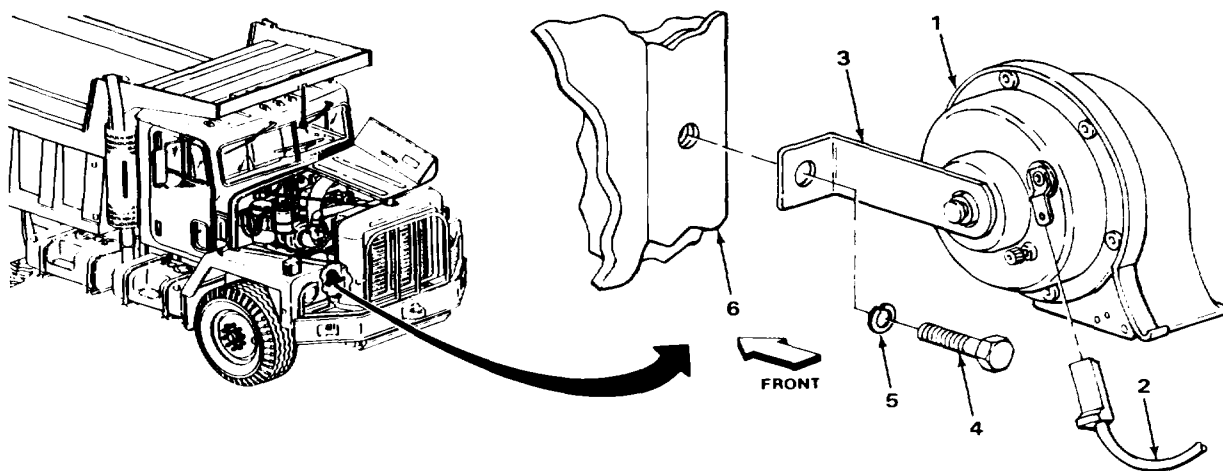
LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

REMOVAL

- | | | | |
|-------------------------|------------------------------|---|--|
| 1. Horn (1) | Wire (2) | Pull off. | |
| 2. Mounting bracket (3) | Screw (4) and lockwasher (5) | a. Using two 1/2-inch open-end wrenches, unscrew and take out.
b. Get rid of lockwasher. | |

INSTALLATION

- | | | | |
|--|----------------------------------|--|--|
| 3. Mounting bracket (3) and fan shroud (6) | Screw (4) and new lockwasher (5) | Screw in and tighten using two 1/2-inch open-end wrenches. | |
| 4. Horn (1) | Wire (2) | Push on. | |



HORN - CONTINUED**NOTE**

FOLLOW-ON MAINTENANCE: Close right side hood panel (page 2-424).

TASK ENDS HERE**ALARM BELL**

This task covers:

- a. Removal (page 2-718)
 - b. Installation (page 2-718)
-

INITIAL SETUP:**Tools**

Screwdriver, cross-tip, number two
Screwdriver, flat-tip, 3/16-inch
Wrench, box-end, 3/8-inch

Materials/Parts

Lockwasher, mounting (three required)
Tags, marker (item 21, appendix C)

Personnel Required

One

Equipment Condition

Right cab door opened (page 2-424).
Instrument panel pad removed (page 2-424).

2-717

ALARM BELL - CONTINUED

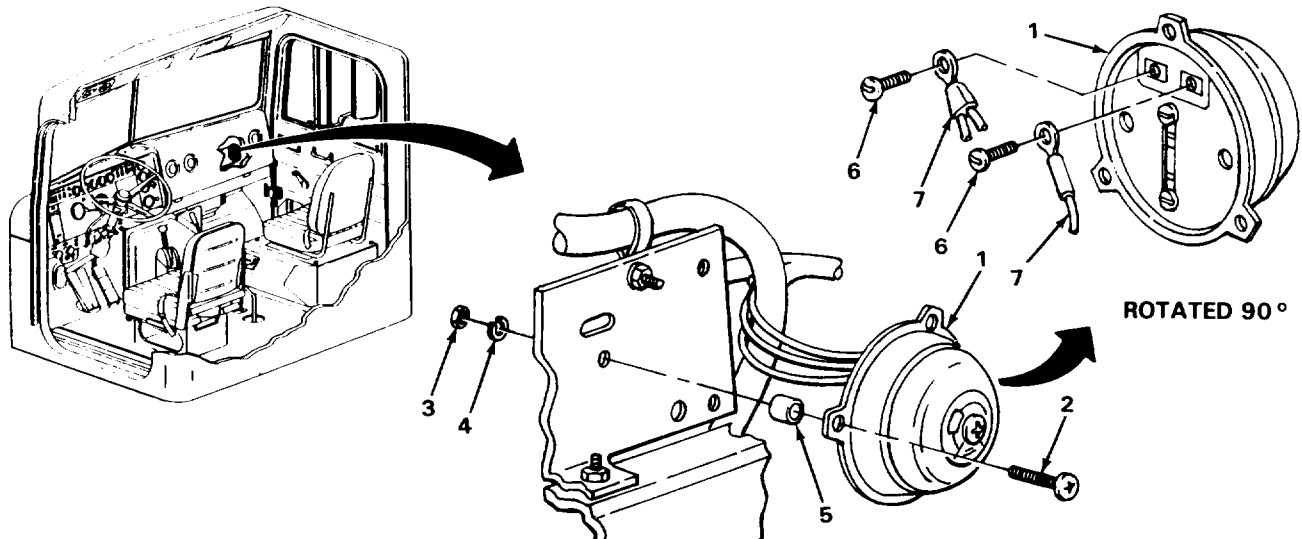
LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
<u>CAUTION</u>			
Use care when working behind instrument panel pad to prevent breaking or disconnecting wires.			
1. Alarm bell (1)	Three screws (2), three nuts (3), three lockwashers (4), and three spacers (5)	a.	Using 3/8-inch box-end wrench and number two cross-tip screwdriver, unscrew and take out.
		b.	Get rid of lockwashers.
2.	Two screws (6) and two wires (7)	a.	Tag wires (page 2-424).
		b.	Using 3/16-inch flat-tip screwdriver, unscrew and take out.

INSTALLATION**CAUTION**

Use care when working behind instrument panel pad to prevent breaking or disconnecting wires.

3. Alarm bell (1)	Two wires (7) and two screws (6)	a.	Put wires in place.
		b.	Screw in and tighten using 3/16-inch flat-tip screwdriver.
		c.	Get rid of tags.
4.	Three spacers (5), three screws (2), three new lockwashers (4), and three nuts (3)		Screw in and tighten using 3/8-inch box-end wrench and number two cross-tip screwdriver.

ALARM BELL - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE:

1. Install instrument panel pad (page 2-424).
2. Close right cab door (page 2-424).

TASK ENDS HERE

DOME LIGHT

This task covers:

- | | |
|---|--|
| <ol style="list-style-type: none"> a. Removal (page 2-720) b. Cleaning (page 2-720) | <ol style="list-style-type: none"> c. Inspection/Replacement (page 2-720) d. Installation (page 2-721) |
|---|--|

INITIAL SETUP:

Tools

- Screwdriver, cross-tip, number one
- Screwdriver, flat-tip, 3/16-inch

Materials/Parts

- Rags, wiping (item 15, appendix C)
- Tags, marker (item 21, appendix C)

DOMELIGHT - CONTINUED

INITIAL SETUP - CONTINUED

Personnel Required

One

Equipment Condition

Left cab door opened (page 2-424).

		ACTION
LOCATION	ITEM	REMARKS
REMOVAL		
1. Dome light base (1)	Dome light lens (2)	Using 3/16-inch flat-tip screwdriver, pry out.
2.	Lamp (3)	Take out.
3.	Two screws (4)	Using number one cross-tip screwdriver, unscrew and take out.
4.	Two wires (5)	a. Tag (page 2-424). b. Pull off.

CLEANING

NOTE

Clean all parts thoroughly.

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

5.	All parts	Clean using wiping rag.
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INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

2-720

DOME LIGHT - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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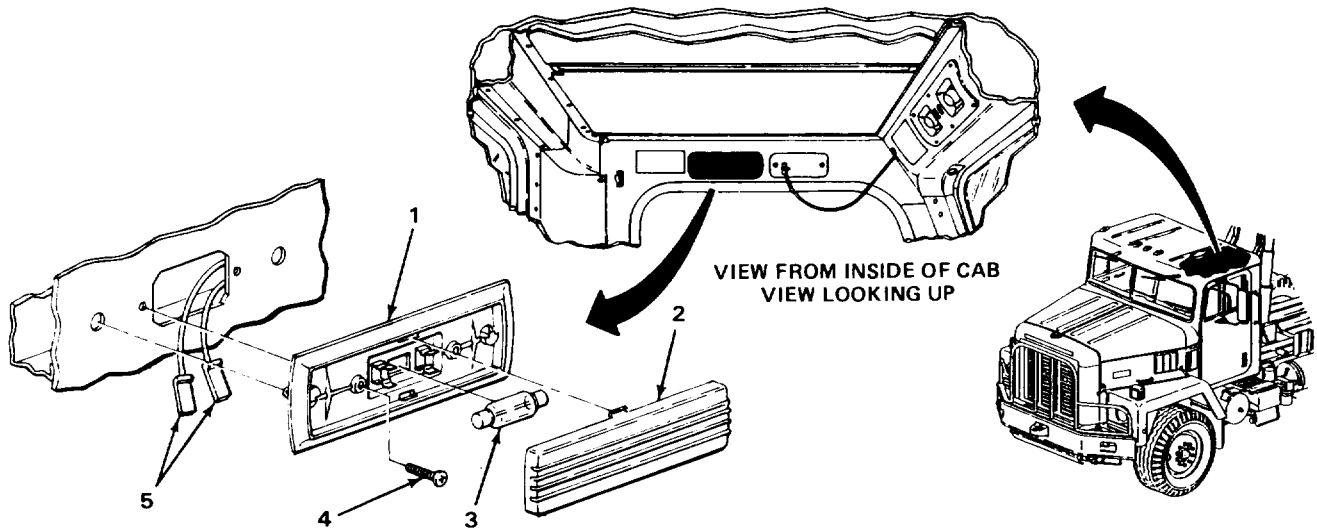
NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

6.	Dome light lens (2)	a.	Look for cracks or chips.
		b.	Look for dark spots.
7.	Dome light base (1)	a.	Look for cracks or chips.
		b.	Look for corroded connectors.
8.	Lamp (3)		Look for cracks or corroded ends.
9.	All threaded parts		Look for damaged threads or damaged heads.

INSTALLATION

10.	Dome light base (1)	Two wires (5)	a.	Push on.
			b.	Get rid of tags.

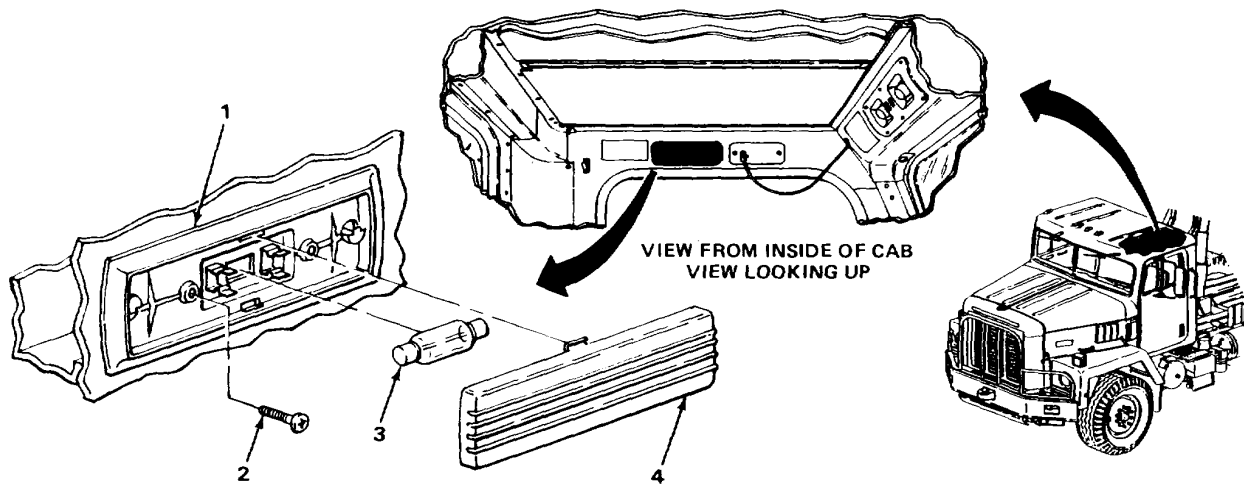


TA244161

DOMELIGHT - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
11. Dome light base (1)	Two screws (2)	Screw in and tighten using number one cross-tip screwdriver.	
12.	Lamp (3)	Put in place.	
13.	Dome light lens (4)	Put in place.	

NOTE



FOLLOW-ON MAINTENANCE: Close left cab door (page 2-424).

TASK ENDS HERE

DOMELIGHT/PANEL LAMP SWITCH

This task covers:

- a. Removal (page 2-723)
- b. Installation (page 2-724)

DOME/PANEL LAMP SWITCH - CONTINUED

INITIAL SETUP:

Tools

Screwdriver, cross-tip, number one

Materials/Parts

Tags, marker (item 21, appendix C)

Personnel Required

One

Equipment Condition

Battery ground cable disconnected (page 2-424).

Left cab door opened (page 2-424).

Upper center instrument panel opened (page 2-424).

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

REMOVAL

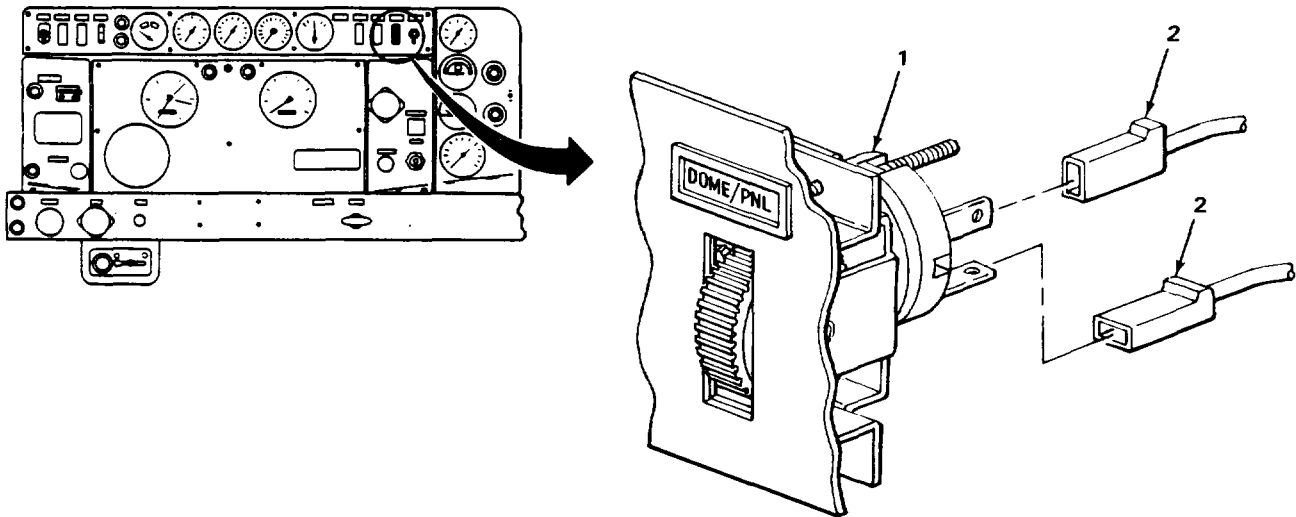
CAUTION

Use care when working behind upper center instrument panel to prevent breaking or disconnecting wires.

1. Dome/panel lamp switch (1)

Two connectors (2)

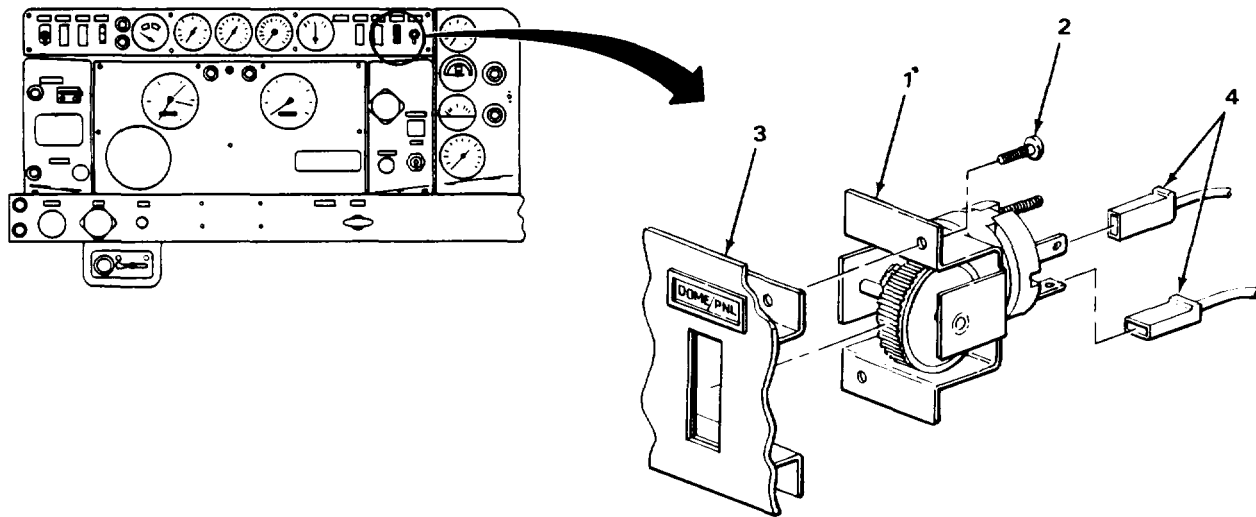
- a. Tag (page 2-424).
- b. Pull off.



2-723

DOME/PANEL LAMP SWITCH - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
2. Dome/panel lamp switch (1)	Two screws (2)		Using number one cross-tip screwdriver, unscrew and take out.
INSTALLATION			
<u>CAUTION</u>			
Use care when working behind upper center instrument panel to prevent breaking or disconnecting wires.			
3. Upper center instrument panel (3)	Dome/panel lamp switch (1)		Put in place and hold.
4. Dome/panel lamp switch (1)	Two screws (2)		Screw in and tighten using number one cross-tip screwdriver.
5.	Two connectors (4)		a. Push on. b. Get rid of tags.



TA244164

DOME/PANEL LAMP SWITCH - CONTINUED**NOTE****FOLLOW-ON MAINTENANCE:**

1. Close upper center instrument panel (page 2-424).
2. Connect battery ground cable (page 2-424).
3. Close left cab door (page 2-424).

TASK ENDS HERE**LIGHTS SWITCH**

This task covers:

- a. Removal (page 2-726)
 - b. Installation (page 2-726)
-

INITIAL SETUP:**Tools**

Wrench, open-end, 9/16-inch

Materials/Parts

Tags, marker (item 21, appendix C)

Personnel Required

One

Equipment Condition

Battery ground cable disconnected
(page 2-424).

Left cab door opened (page 2-424).

Upper center instrument panel opened
(page 2-424).

2-725

LIGHTS SWITCH - CONTINUED

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

REMOVAL

CAUTION

Use care when working behind upper center instrument panel to prevent breaking or disconnecting wires.

1.	LIGHTS switch (1)	Eight connectors (2)	a. Tag wires (page 2-424). b. Pull off.
2.		Nut (3)	Using 9/16-inch open-end wrench, unscrew and take out.
3.	Upper center instrument panel (4)	LIGHTS switch (1)	Take out.

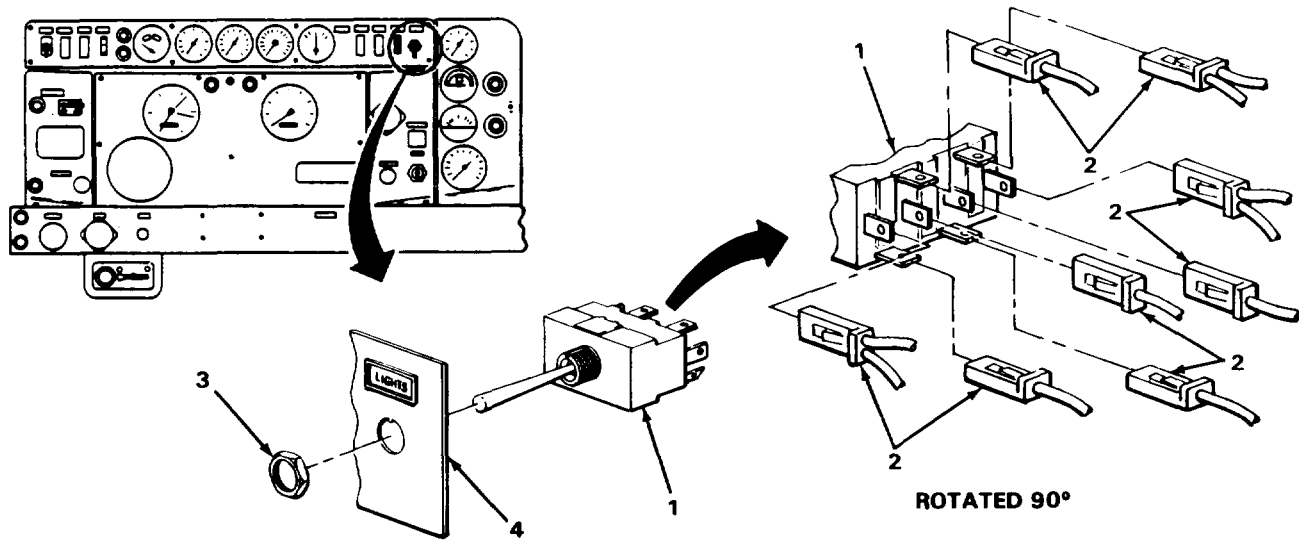
INSTALLATION

CAUTION

Use care when working behind upper center instrument panel to prevent breaking or disconnecting wires.

4.	Upper center instrument panel (4)	LIGHTS switch (1)	Put in place.
5.	LIGHTS switch (1)	Nut (3)	Screw in and tighten using 9/16-inch open-end wrench.
6.	Eight connectors (2)		a. Put in correct position. b. Push on. c. Get rid of tags.

LIGHTS SWITCH - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE:

1. Connect battery ground cable (page 2-424).
2. Close upper center instrument panel (page 2-424).
3. Close left cab door (page 2-424).

TASK ENDS HERE

FUEL GAGE

This task covers:

- | | |
|---|--|
| <ol style="list-style-type: none"> a. Removal (page 2-728) b. Inspection/Replacement (page 2-728) | <ol style="list-style-type: none"> c. Installation (page 2-729) |
|---|--|

INITIAL SETUP:

Tools

- Wrench, box-end, 5/16-inch
- Wrench, box-end, 3/8-inch

Materials/Parts

- Lockwashers, gage (two required)
- Lockwashers, wires (two required)
- Tags, marker (item 21, appendix C)

FUEL GAGE - CONTINUED

INITIAL SETUP - CONTINUED

Personnel Required

One

Equipment Condition

Battery ground cable disconnected
(page 2-424).

Equipment Condition - Continued

Left cab door opened (page 2-424).
Upper center instrument panel opened
(page 2-424).

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

REMOVAL

CAUTION

Use care when working behind upper center instrument panel to prevent breaking or disconnecting wires.

1.	Fuel gage (1)	Light socket (2)	Pull out.
2.		Two nuts (3), two lockwashers (4), and two wires (5)	<ul style="list-style-type: none"> a. Tag wires (page 2-424). b. Using 5116-inch box-end wrench, unscrew and take out. c. Get rid of lockwashers.
3.	Mounting bracket (6)	Two nuts (7) and two lockwashers (8)	<ul style="list-style-type: none"> a. Using 318-inch box-end wrench, unscrew and take out. b. Get rid of lockwashers.
4.	Fuel gage (1)	Mounting bracket (6)	Take off.
5.	Upper center instrument panel (9)	Fuel gage (1)	Take out.

INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

FUEL GAGE - CONTINUED

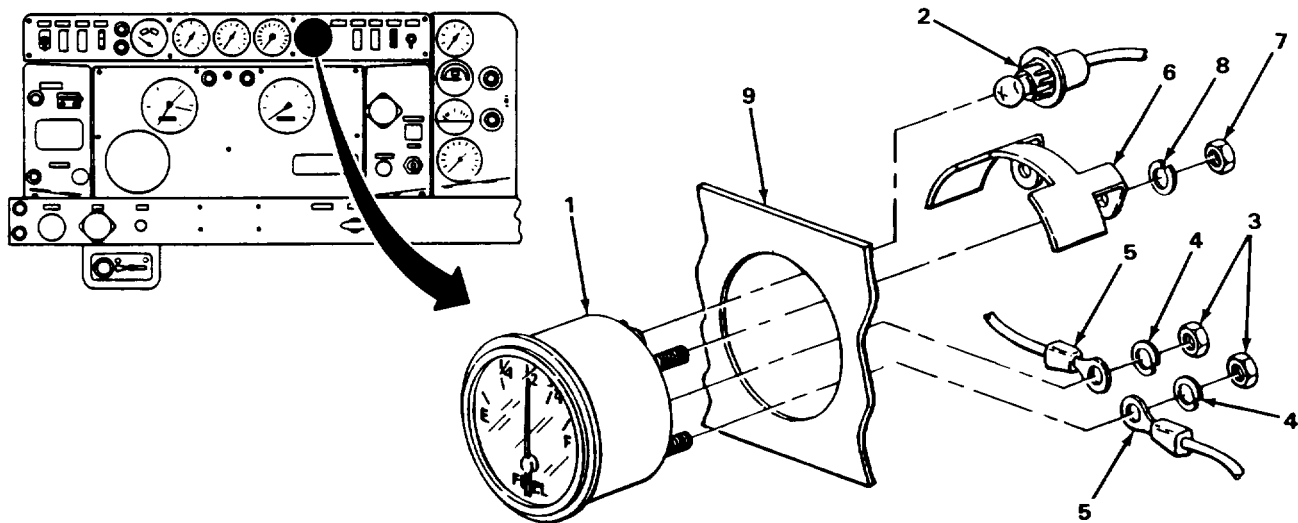
LOCATION	ITEM	ACTION	REMARKS
6.	Fuel gage (1)	a. Look for cracks or dents. b. Check to see if gage is readable.	
7.	Mounting bracket (6)	Look for bends or breaks.	
8.	All threaded parts	Look for damaged threads or rounded nuts.	

INSTALLATION

CAUTION

Use care when working behind upper center instrument panel to prevent breaking or disconnecting wires.

9.	Upper center instrument panel (9)	Fuel gage (1)	Put in and hold. Position as shown.
10.	Fuel gage (1)	Mounting bracket (6)	Put on.
11.	Mounting bracket (6)	Two new lockwashers (8) and two nuts (7)	Screw on and tighten using 3/8-inch box-end wrench.



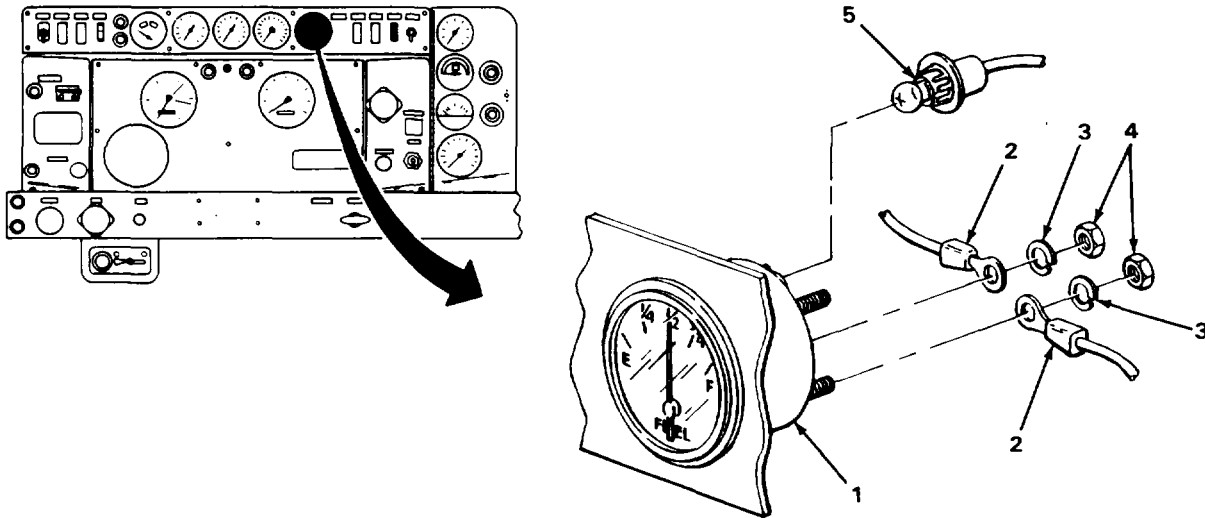
TA244166

FUEL GAGE - CONTINUED

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

INSTALLATION - CONTINUED

- | | | | |
|-------------------|--|---|--|
| 12. Fuel gage (1) | Two wires (2), two new lockwashers (3), and two nuts (4) | a. Put wires in correct position.
b. Screw in and tighten using 5/16-incl box-end wrench.
c. Get rid of tags. | |
| 13. | Light socket (5) | Push in. | |



NOTE

FOLLOW-ON MAINTENANCE:

1. Close upper center instrument panel (page 2-424).
2. Connect battery ground cable (page 2-424).
3. Close left cab door (page 2-424).

TASK ENDS HERE

AMMETER

This task covers:

- | | |
|--|------------------------------|
| a. Removal (page 2-731) | c. Installation (page 2-732) |
| b. Inspection/Replacement (page 2-732) | |

AMMETER - CONTINUED

INITIAL SETUP:

Tools

Wrench, box-end, 5/16-inch
Wrench, box-end, 3/8-inch

Personnel Required

One

Materials/Parts

Lockwasher, wire
Lockwasher, mounting bracket
(two required)
Tags, marker (item 21, appendix C)

Equipment Condition

Battery ground cable disconnected
(page 2-424).
Left cab door opened (page 2-424).
Upper center instrument panel opened
(page 2-424).

LOCATION	ITEM	ACTION REMARKS
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REMOVAL

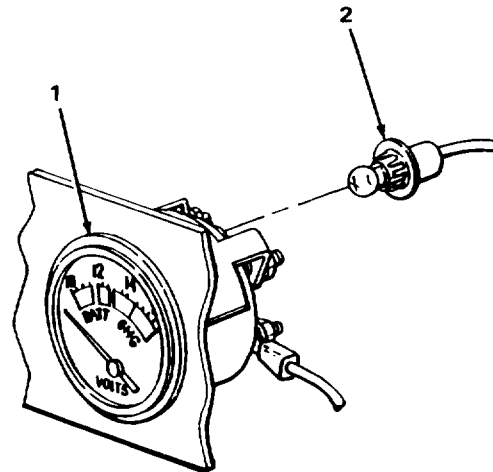
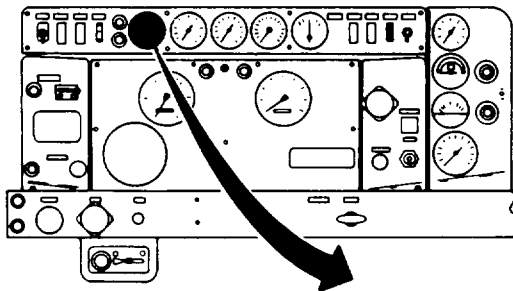
CAUTION

Use care when working behind upper center instrument panel to prevent breaking or disconnecting wires.

1. Ammeter (1)

Light socket (2)

Pull out.



TA244168

AMMETER - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED		
2. Ammeter (1)	Nut (2), lockwashers (3), and wire (4)	a. Tag wire (page 2-424). b. Using 5/16-inch box-end wrench, unscrew and take out. c. Get rid of lockwasher.
3.	Two nuts (5), two lockwashers (6), and wire (7)	a. Tag wire (page 2-424). b. Using 3/8-inch box-end wrench, unscrew and take out. c. Get rid of lockwashers.
4.	Mounting bracket (8)	Take off.
5. Upper center instrument panel (9)	Ammeter (1)	Take out.

INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

6.	Ammeter (1)	a. Look for cracks or dents. b. Check to see if gage is readable.
7.	Mounting bracket (8)	Look for bends or breaks.
8.	All threaded parts	Look for damaged threads or rounded nuts.

INSTALLATION

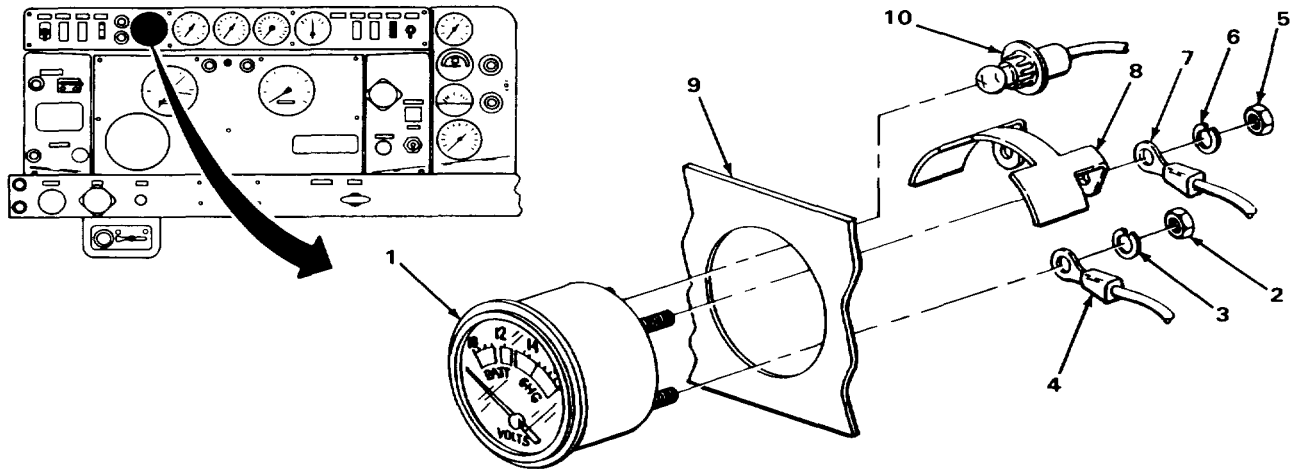
CAUTION

Use care when working behind upper center instrument panel to prevent breaking or disconnecting wires.

9. Upper center instrument panel (9)	Ammeter (1)	Put in and hold. Position as shown.
--------------------------------------	-------------	---

AMMETER - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
10. Ammeter (1)	Mounting bracket (8)	Put in place.	
11.	Wire (7), two new lockwashers (6), and two nuts (5)	a. Screw on and tighten using 3/18-inch box-end wrench. b. Get rid of tags.	
12.	Wire (4), new lock-washer (3), and nut (2)	a. Screw on and tighten using 5/16-inch box-end wrench. b. Get rid of tags.	
13 Light socket (10)	Push in.		



NOTE

FOLLOW-ON MAINTENANCE:

1. Install upper center instrument panel (page 2-424).
2. Connect battery ground cable (page 2-424).
3. Close left cab door (page 2-424).

TASK ENDS HERE

GLOW PLUG SWITCH

This task covers:

- a. Removal (page 2-734)
- b. Installation (page 2-734)

INITIAL SETUP:

Tools

Screwdriver, cross-tip, number one

Personnel Required

One

Equipment Condition

Battery ground cable disconnected (page 2-424).

Upper center instrument panel opened (page 2-424).

Left cab door opened (page 2-424).

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

REMOVAL

CAUTION

Use care when working behind upper center instrument panel to prevent breaking or disconnecting wires.

- | | | | |
|----|-----------------------------------|----------------------|---|
| 1. | Glow plug switch (1) | Two connectors (2) | a. Tag (page 2-424).
b. Pull off. |
| 2. | | Two screws (3) | Using number one cross-tip screwdriver, unscrew and take out. |
| 3 | Upper center instrument panel (4) | Glow plug switch (1) | Take out. |

INSTALLATION

CAUTION

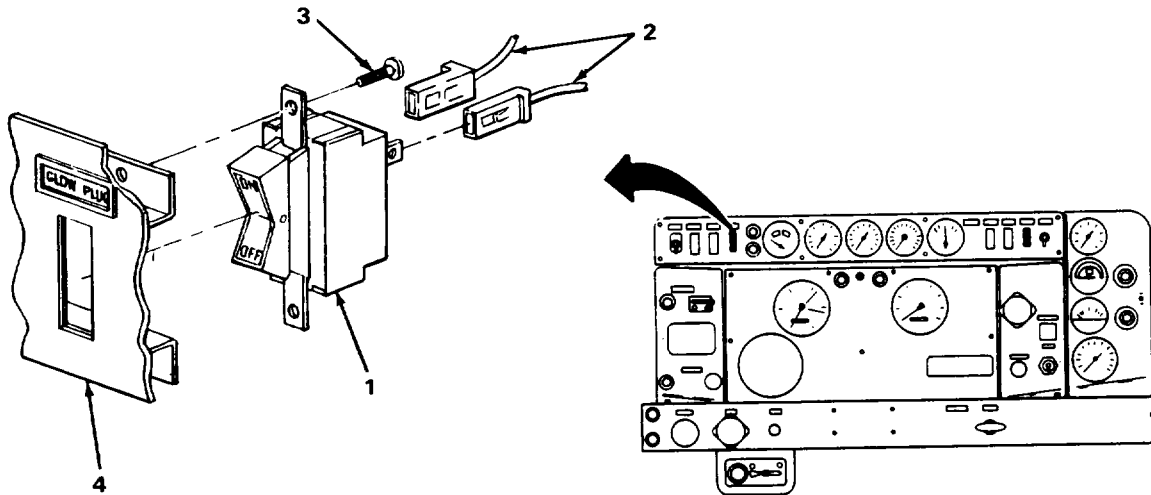
Use care when working behind upper center instrument panel to prevent breaking or disconnecting wires.

- | | | | |
|----|-----------------------------------|----------------------|--|
| 4. | Upper center instrument panel (4) | Glow plug switch (1) | Put in place. |
| 5. | Glow plug switch (1) | Two screws (3) | Screw in and tighten using number one cross-tip screwdriver. |

GLOW PLUG SWITCH - CONTINUED

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

- | | | | |
|----|--------------------|------------------------------------|--|
| 6. | Two connectors (2) | a. Push on.
b. Get rid of tags. | |
|----|--------------------|------------------------------------|--|



NOTE

FOLLOW-ON MAINTENANCE:

1. Close upper center instrument panel (page 2-424).
2. Connect battery ground cable (page 2-424).
3. Close left cab door (page 2424).

TASK ENDS HERE

ENGINE COMPRESSION BRAKE SWITCH

This task covers:

- a. Removal (page 2-736)
- b. Installation (page 2-736)

ENGINE COMPRESSION BRAKE SWITCH - CONTINUED

INITIAL SETUP:

Tools	Equipment Condition
Pliers, slip-joint, 8-inch	Battery ground cable disconnected (page 2-424).
Materials/Parts	Upper center instrument panel opened (page 2-424).
Tags, marker (item 21, appendix C)	Left cab door opened (page 2-424).
Personnel Required	
One	

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

REMOVAL

CAUTION

Use care when working behind upper center instrument panel to prevent breaking or disconnecting wires.

1. Engine compression brake switch (1)	Two connectors (2)	a. Tag (page 2-424). b. Pull off.
2.	Locknut (3)	Using 8-inch slip-joint pliers, unscrew and take off.
3.	Nameplate (4)	Take off.
4. Instrument panel (5)	Engine compression brake switch (1)	Take out.
5. Engine compression brake switch (1)	Nut (6)	Unscrew and take off.

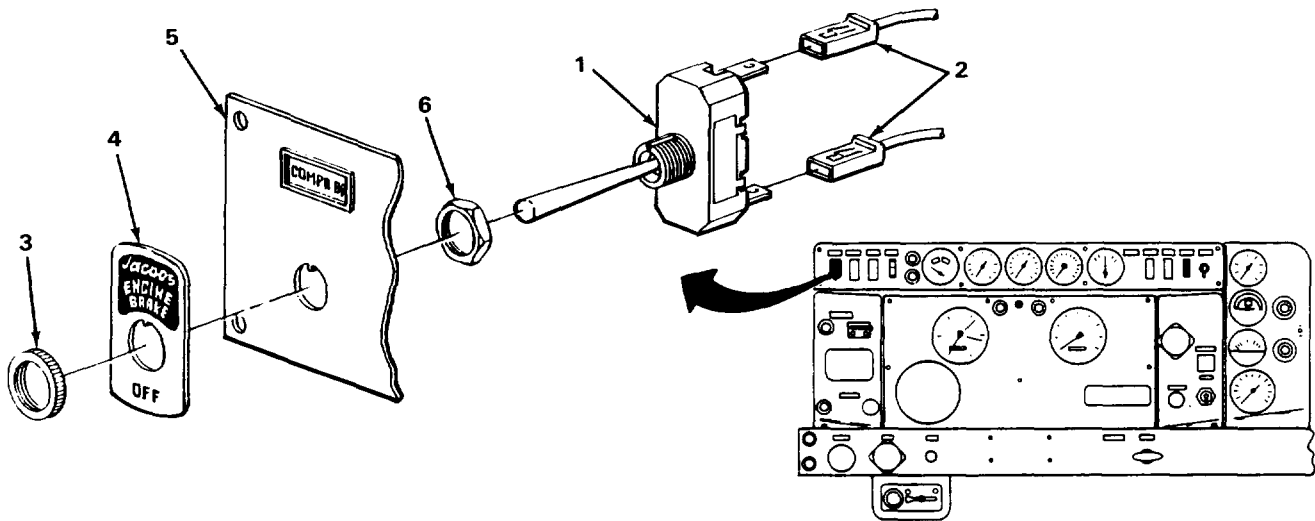
INSTALLATION

CAUTION

Use care when working behind upper center instrument panel to prevent breaking or disconnecting wires.

ENGINE COMPRESSION BRAKE SWITCH - CONTINUED

	LOCATION	ITEM	ACTION	REMARKS
6.	Engine compression brake switch (1)	Nut (6)	Screw on completely and then unscrew one turn.	
7.	Instrument panel (5)	Engine compression brake switch (1)	Put in place.	
8.	Engine compression brake switch (1)	Nameplate (4)	Put in place.	
9.		Locknut (3)	Screw on and tighten using 8-inch slip-joint pliers.	If locknut will not screw on, adjust nut (6).
10.		Two connectors (2)	a. Push on.	



NOTE

FOLLOW-ON MAINTENANCE:

1. Close upper center instrument panel (page 2-424).
2. Connect battery ground cable (page 2-424).
3. Close left cab door (page 2-424).

TA244171

TASK ENDS HERE

ENGINE START BUTTON

This task covers:

- a. Removal (page 2-738)
- b. Installation (page 2-739)

INITIAL SETUP:

Tools

Wrench, box-end, 5/16-inch
 Wrench, box-end, 3/4-inch

Personnel Required

One

Equipment Condition

Battery ground cable disconnected (page 2-424).
 Left side cab door opened (page 2-424).
 Right side instrument panel opened (page 2-424).

Materials/Parts

Lockwasher, switch
 Lockwasher, wire connectors (two required)
 Tags, marker (item 21, appendix C)

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

REMOVAL

CAUTION

Use care when working behind instrument panel to prevent breaking or disconnecting wires.

1.	Engine start button (1)	Boot (2)	Unscrew and take off.
2.		Nut (3) and lockwasher (4)	<ul style="list-style-type: none"> a. Using 3/4-inch box-end wrench, unscrew and take off. b. Get rid of lockwasher.
3.	Instrument panel (5)	Engine start button (1)	Carefully move back behind right instrument panel (6).
4.	Engine start button (1)	Two nuts (7), two lockwashers (8), and three wires (9)	<ul style="list-style-type: none"> a. Tag wires (page 2-424). b. Using 5/16-inch box-end wrench, unscrew and take off. c. Get rid of lockwashers.

ENGINE START BUTTON - CONTINUED

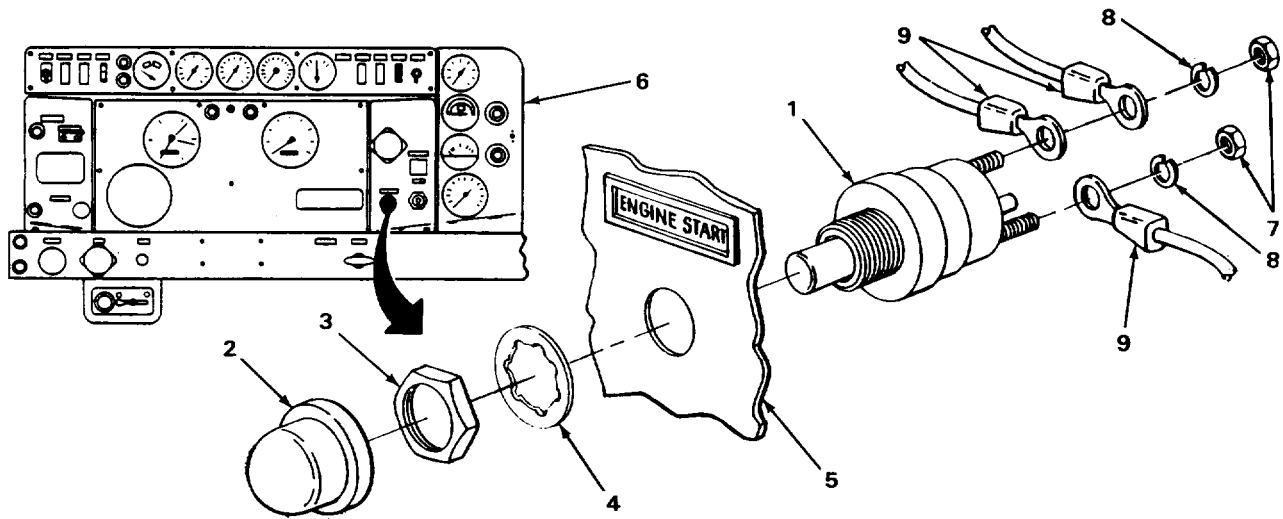
LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION

CAUTION

Use care when working behind instrument panel to prevent breaking or disconnecting wires.

- | | | |
|----------------------------|--|---|
| 5. Engine start button (1) | Three wires (9), two new lockwashers (8), and two nuts (7) | a. Put connectors in place.
b. Screw on and tighten using 5/16-inch box-end wrench.
c. Get rid of tags. |
| 6. Instrument panel (5) | Engine start button (1) | Put in place. |
| 7. Engine start button (1) | New lockwasher (4) and nut (3) | Screw on and tighten using 3/4-inch box-end wrench. |
| 8. Boot (2) | Screw on and tighten. | |



TA244172

ENGINE START SWITCH - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Close right side instrument panel (page 2-424).
2. Connect battery ground cable (page 2-424).
3. Close left side cab door (page 2-424).

TASK ENDS HERE

KEY SWITCH

This task covers:

- a. Removal (page 2-740)
 - b. Installation (page 2-741)
-

INITIAL SETUP:

Tools Equipment Condition

Wrench, box-end, 1 18-inch

Battery ground cable disconnected
(page 2-424).

Materials/Parts

Tags, marker (item 21, appendix C)

Right side instrument panel opened
(page 2-424).

Left side cab door opened (page 2-424).

Personnel Required

One

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

REMOVAL

CAUTION

Use care when working behind instrument panel to prevent breaking or disconnecting wires.

- | | | |
|-------------------|--------------------|--|
| 1. Key switch (1) | Six connectors (2) | <ol style="list-style-type: none"> a. Tag (page 2-424). b. Pull off. |
|-------------------|--------------------|--|

KEY SWITCH - CONTINUED

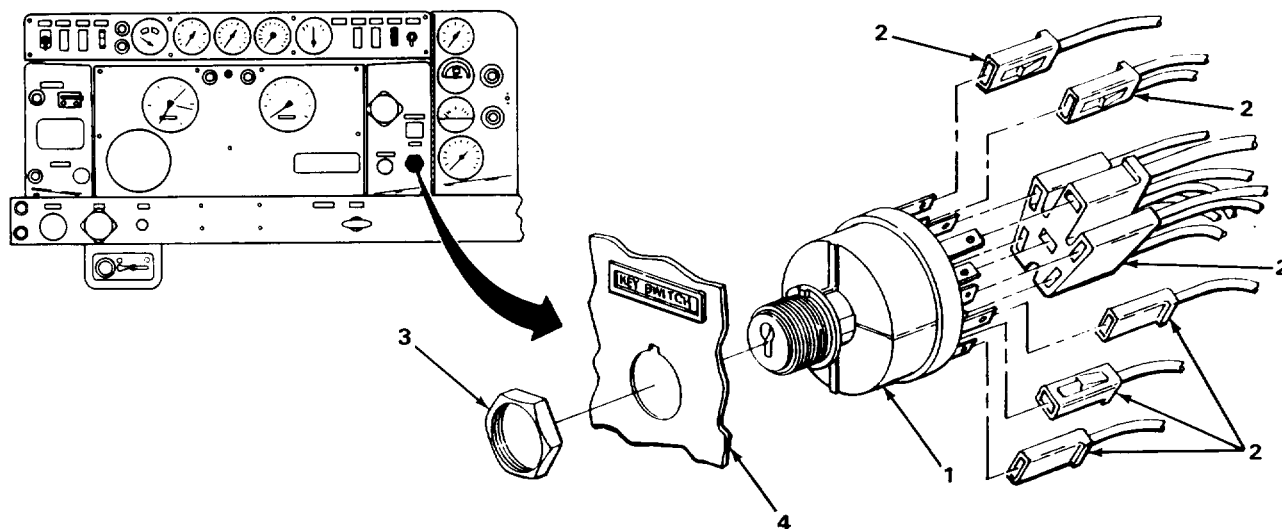
LOCATION	ITEM	ACTION	REMARKS
2.	Key switch (1) screw and take off.	Nut (3)	Using 1 18-inch open-end wrench, un-
3.	Instrument panel (4)	Key switch (1)	Take out.

INSTALLATION

CAUTION

Use care when working behind instrument panel to prevent breaking or disconnecting wires.

4.	Instrument panel (4)	Key switch (1)	Put in place.
5.	Key switch (1) end wrench.	Nut (3)	Screw in and tighten using 1 118-inch open-
6.		Six connectors (2)	a. Push on. b. Get rid of tags.



TA244173

KEY SWITCH - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Close side right instrument panel (page 2-424).
2. Connect battery ground cable (page 2-424).
3. Close left side cab door (page 2-424).

TASK ENDS HERE

HEADLIGHT BEAM SELECTOR SWITCH

This task covers:

- a. Removal (page 2-742)
 - b. Installation (page 2-743)
-

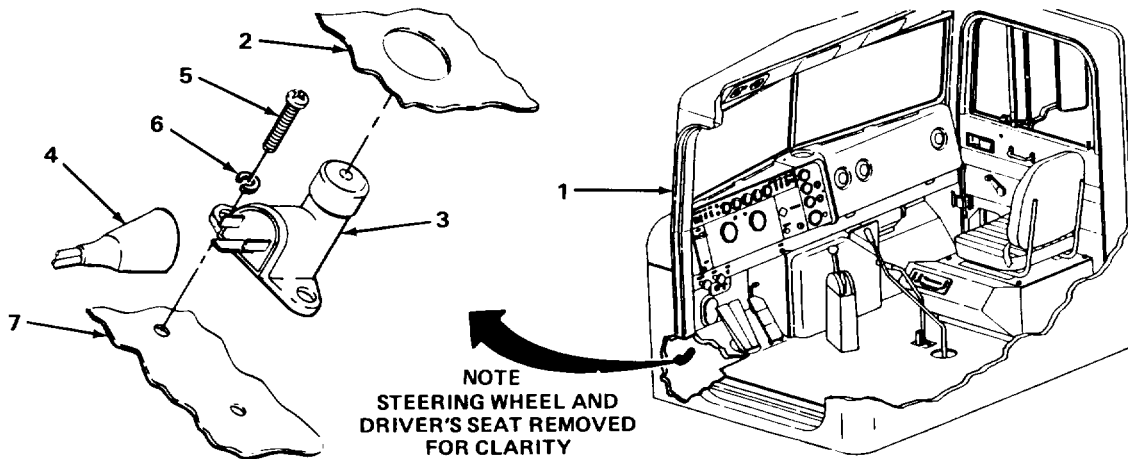
INITIAL SETUP

<p>Tools</p> <p>Screwdriver, cross-tip, number three</p> <p>Materials/Parts</p> <p>Lockwasher, switch (two required)</p>	<p>Personnel Required</p> <p>One</p> <p>Equipment Condition</p> <p>Left side cab door opened (page 2-424).</p>
--	--

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1. Cab (1)	Floormat (2)		Lift up and pull back.
2. Headlight beam selector switch (3)	Connector (4)		Pull off.
3.	Two screws (5) and two lockwashers (6)	a. Using number three cross-tip screwdriver, unscrew and take out. b. Get rid of lockwashers.	
4. Cab floor (7)	Headlight beam selector switch (3)		Take out.

HEADLIGHT BEAM SELECTOR SWITCH - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
5. Cab floor (7)	Headlight beam selector switch (3)	Put in place.	
6. Headlight beam selector switch (3)	Two screws (5) and two new lock-washers (6)	Screw in and tighten using number three cross-tip screwdriver.	
7.	Connector (4)	Push on.	
8. Cab (1)	Floormat (2)	Put in place.	



NOTE

FOLLOW-ON MAINTENANCE: Close left side cab door (page 2-424).

TASK ENDS HERE

TA244174

TURN SIGNAL SWITCH

This task covers:

- a. Removal (page 2-744)
 - b. Installation (page 2-746)
-

INITIAL SETUP**Tools**

Pliers, diagonal-cutting, 6-inch
Screwdriver, cross-tip, number one
Wrench, open-end, 9/16-inch (two
required)

Materials/Parts

Lockwasher, bracket (three required)
Strap, tiedown, self-locking (item 20,
appendix C)

Personnel Required

One

Equipment Condition

Battery ground cable disconnected
(page 2-424).
Left side cab door opened (page 2-424).

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

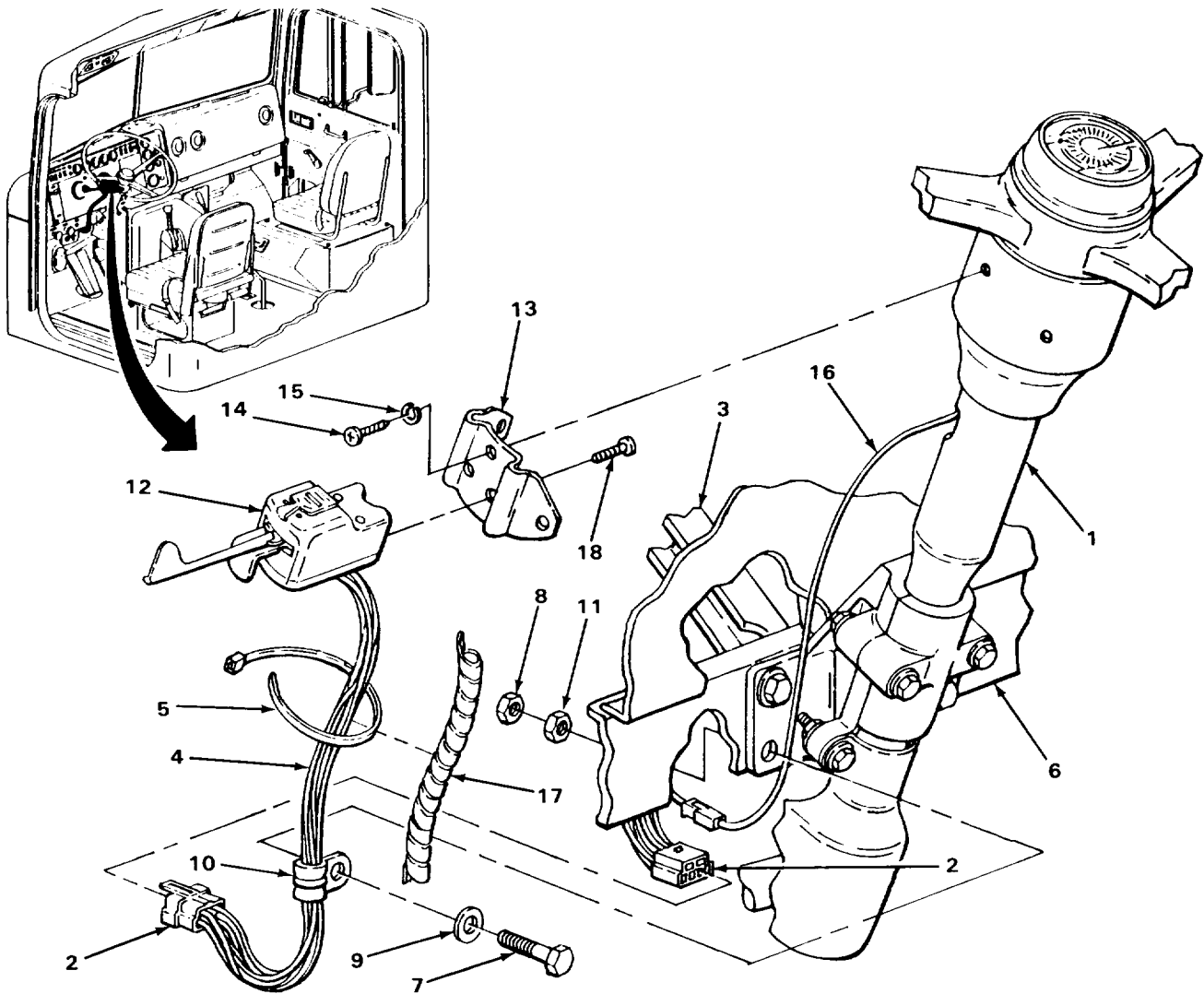
REMOVAL

- | | | | |
|----|---|--|--|
| 1. | Steering column (1) | Connector (2) | Pull apart. |
| 2. | Instrument panel support (3) and wire harness (4) | Electrical tiedown strap (5) | <ul style="list-style-type: none"> a. Using 6-inch diagonal-cutting pliers, cut. b. Get rid of. |
| 3. | Instrument panel (6) and screw (7) | Jamnut (8) | Using two 9/16-inch open-end wrenches, unscrew and take out. |
| 4. | Instrument panel (6) | Screw (7), flat washer (9), clamp (10), and nut (11) | Using two 9/16-inch open-end wrenches, unscrew and take out. |
| 5. | Steering column (1) | Turn signal switch (12), bracket (13), three screws (14), and three lockwashers (15) | <ul style="list-style-type: none"> a. Using number one cross-tip screwdriver, unscrew and take out. b. Get rid of lockwashers. |

TURN SIGNAL SWITCH - CONTINUED

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

- | | | | |
|----|--|-------------------------------------|--|
| 6. | Wire harness (4)
and horn wire (16) | Protective
covering (17) | Take off. |
| 7. | Turn signal
switch (12) | Bracket (13) and
two screws (18) | Using number one cross-tip screwdriver,
unscrew and take off. |

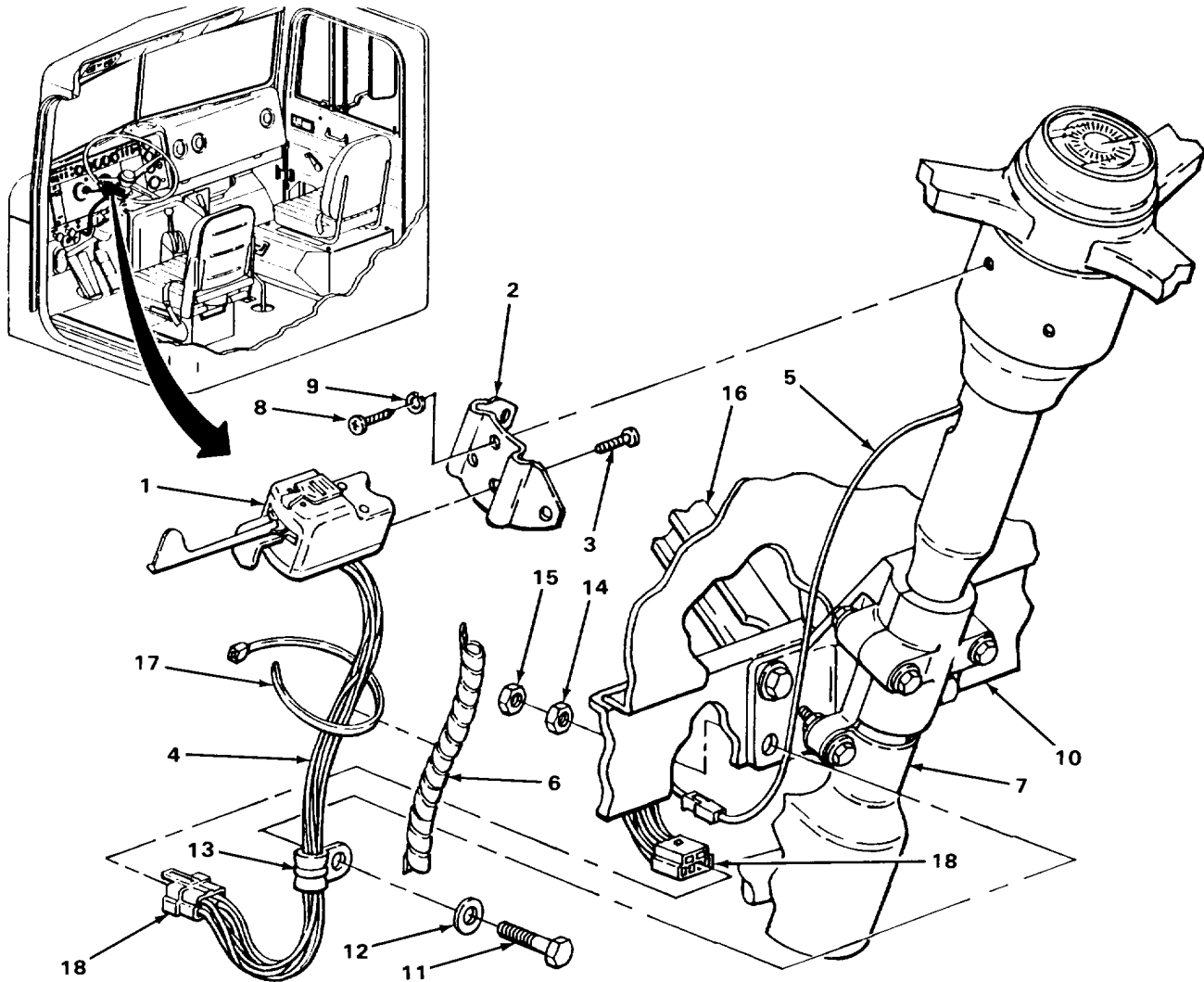


TA244175

TURN SIGNAL SWITCH - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
8.	Turn signal switch (1)	Bracket (2) and two screws (3)	Screw in and tighten using number one cross-tip screwdriver.
9.	Wire harness (4) and horn wire (5)	Protective covering (6)	Put on.
10.	Steering column (7)	Turn signal switch (1), bracket (2), three screws (8), and three new lockwashers (9)	Screw in and tighten using number one cross-tip screwdriver.
11.	Instrument panel (10) (13), and nut (14)	Screw (11), flat washer (12), clamp	Screw in and tighten using two 9/16-inch open-end wrenches.
12.	Instrument panel (10) and screw (11)	Jamnut (15)	Screw on and tighten using two 9/16-inch open-end wrenches.
13.	Instrument panel support (16) and wire harness (4)	New electrical tiedown strap (17)	Wrap loosely.
14.	Steering column (7)	Connector (18)	Push together.

TURN SIGNAL SWITCH - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE:

1. Connect battery ground cable (page 2-424).
2. Close side left cab door (page 2-424).

TASK ENDS HERE

ENGINE COMPRESSION BRAKE 15 AMP CIRCUIT BREAKER

This task covers:

- a. Removal (page 2-748)
 - b. Installation (page 2-749)
-

INITIAL SETUP

Tools

Wrench, box-end, 3/8-inch

Materials/Parts

Nut, self-locking (two required)
 Tags, marker (item 21, appendix C)

Personnel Required

One

Equipment Condition

Battery ground cable disconnected
 (page 2-424).
 Right side cab door opened (page 2-424).
 Right instrument panel pad removed
 (page 2-424).

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

CAUTION

Use care when working behind right instrument panel pad to prevent breaking or disconnecting wires.

1.	Circuit breaker (1)	Two self-locking nuts (2) and two wires (3)	<ul style="list-style-type: none"> a. Tag wires (page 2-424). b. Using 3/8-inch box-end wrench, unscrew and take off. c. Get rid of self-locking nuts.
2.		Two nuts (4) and two flat washers (5)	Using 3/8-inch box-end wrench, unscrew and take off.
3.	Circuit breaker panel (6)	Circuit breaker (1)	Slide up and take out.

ENGINE COMPRESSION BRAKE 15 AMP CIRCUIT BREAKER - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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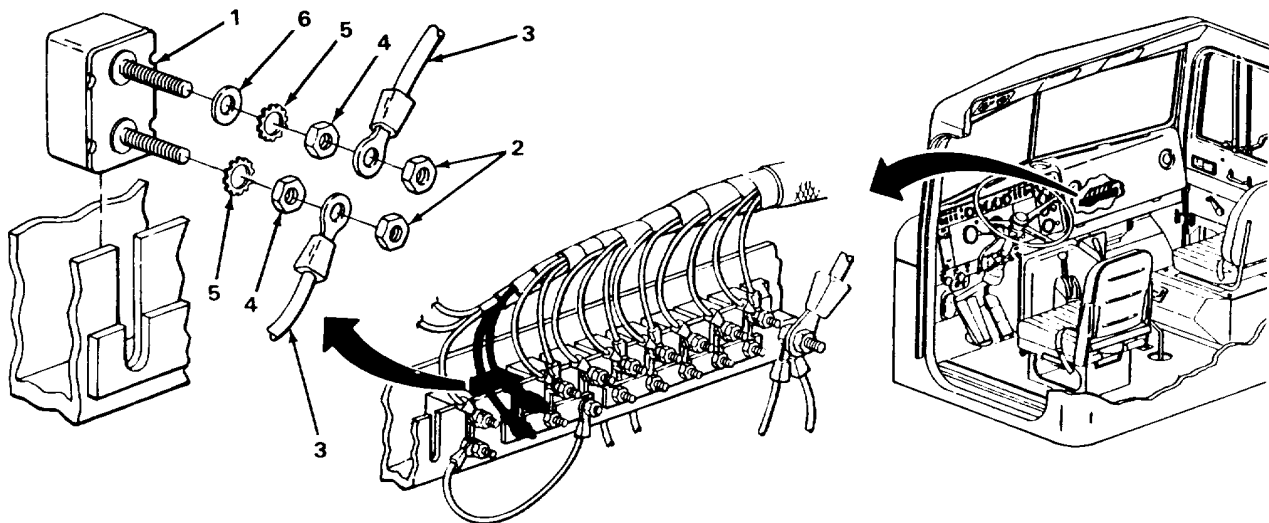
INSTALLATION

CAUTION

Use only correct amperage circuit breakers, to prevent damage to equipment.

Use care when working behind right instrument panel pad, to prevent breaking or disconnecting wires.

- | | | |
|------------------------------|---|--|
| 4. Circuit breaker panel (6) | Circuit breaker (1) | Slide down into place. |
| 5. Circuit breaker (1) | Two flat washers (5) and two nuts (4) | Screw on and tighten using 3/8-inch box-end wrench. |
| 6. | Two wires (3) and two new self-locking nuts (2) | <ul style="list-style-type: none"> a. Put wires in place. b. Screw on and tighten using 3/8-inch box-end wrench. c. Take tags off wires. d. Get rid of tags. |



T244177

ENGINE COMPRESSION BRAKE 15 AMP CIRCUIT BREAKER - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Connect battery ground cable (page 2-424).
2. Install right instrument panel pad (page 2-424).
3. Close right side cab door (page 2-424).

TASK ENDS HERE

BACKUP LIGHT 20 AMP CIRCUIT BREAKER

This task covers:

- a. Removal (page 2-750)
- b. Installation (page 2-751)

INITIAL SETUP

Tools	Personnel Required
Wrench, box-end, 3/8-inch	One
Materials/Parts	Equipment Condition
Lockwasher, circuit breaker (two required)	Battery ground cable disconnected (page 2-424).
Nut, self-locking (two required)	Right side cab door opened (page 2-424).
Tags, marker (item 21, appendix C)	Right instrument panel pad removed (page 2-424).

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

REMOVAL

CAUTION

Use care when working behind right instrument panel pad to prevent breaking or disconnecting wires.

1.	Circuit breaker (1)	Two self-locking nuts (2) and two wires (3)	<ol style="list-style-type: none"> a. Tag wires (page 2-424). b. Using 3/8-inch box-end wrench, unscrew and take off. c. Get rid of self-locking nuts.
2.		Two nuts (4), two lockwashers (5), and flat washer (6)	<ol style="list-style-type: none"> a. Using 3/8-inch box-end wrench, unscrew and take off. b. Get rid of lockwashers

BACKUP LIGHT 20 AMP CIRCUIT BREAKER - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
3. Circuit breaker panel (7)	Circuit breaks	Slide up and take out.	

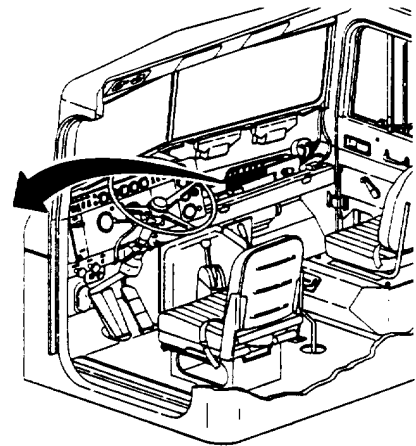
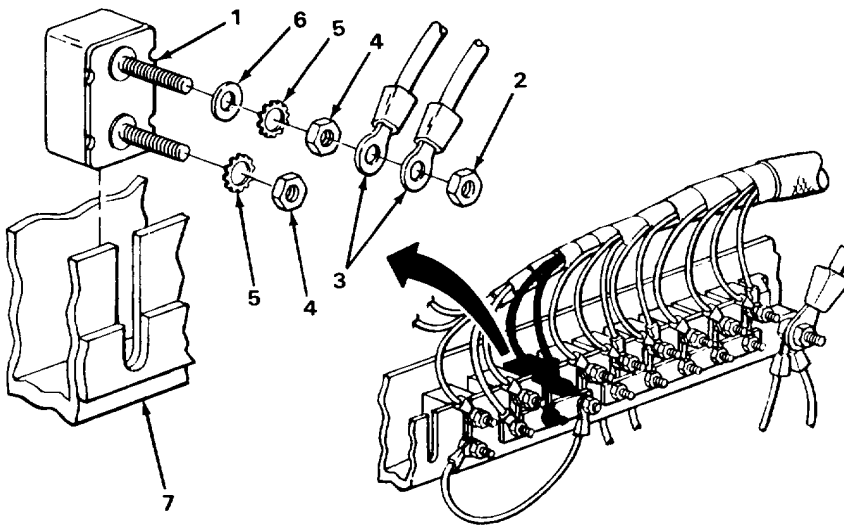
INSTALLATION

CAUTION

Use only correct amperage circuit breaker, to prevent damage to equipment.

Use care when working behind right instrument panel pad to prevent breaking or disconnecting wires.

- | | | |
|------------------------------|--|--|
| 4. Circuit breaker panel (7) | Circuit breaker (1) | Slide down into place. |
| 5. Circuit breaker (1) | Flat washer (6), two new lockwashers (5), and two nuts (4) | Screw on and tighten using 3/8-inch box-end wrench. |
| 6. Two wires (3) and | a. Put wires in place. two new self-locking nuts (2) | b. Screw on and tighten using 3/8 inch box-end wrench.
c. Take off tags.
d. Get rid of tags. |



TA244178

BACKUP LIGHT 20 AMP CIRCUIT BREAKER - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Connect battery ground cable (page 2-424).
2. Install right instrument panel pad (page 2-424).
3. Close right side cab door (page 2-424).

TASK ENDS HERE

HEATER 40 AMP CIRCUIT BREAKER

This task covers:

- a. Removal (page 2-752)
- b. Installation (page 2-753)

INITIAL SETUP

Tools

Wrench, box-end, 3/8-inch

Personnel Required

One

Materials/Parts

Lockwasher, circuit breaker
(two required)
Nut, self-locking
Tags, marker (item 21, appendix C)

Equipment Condition

Battery ground cable disconnected
(page 2-424).
Right side cab door opened (page 2-424).
Right instrument panel pad removed
(page 2-424).

LOCATION

ITEM

ACTION

REMARKS

REMOVAL

CAUTION

Use care when working behind right instrument panel pad to prevent breaking or disconnecting wires.

- | | | | |
|----|--|--|--|
| 1. | Circuit breaker (1) | Self-locking nut (2) and two wires (3) screw and take off. | a. Tag wires (page 2-424).
b. Using 3/8-inch box-end wrench, un- |
| | | | c. Get rid of self-locking nut. |
| 2. | Two nuts (4), two lockwashers (5), and flat washer (6) | | a. Using 3/8-inch box-end wrench, un-screw and take off.
b. Get rid of lockwashers. |

HEATER 40 AMP CIRCUIT BREAKER - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
3. Circuit breaker panel (7)	Circuit breaker (1)	Slide up and take out.	

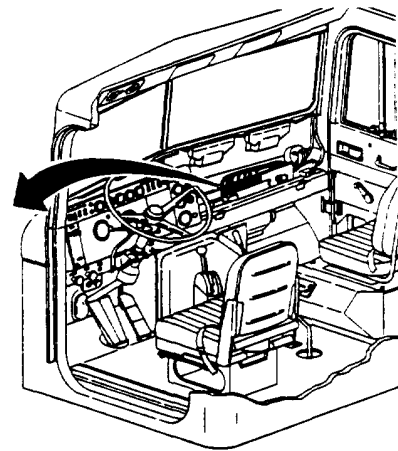
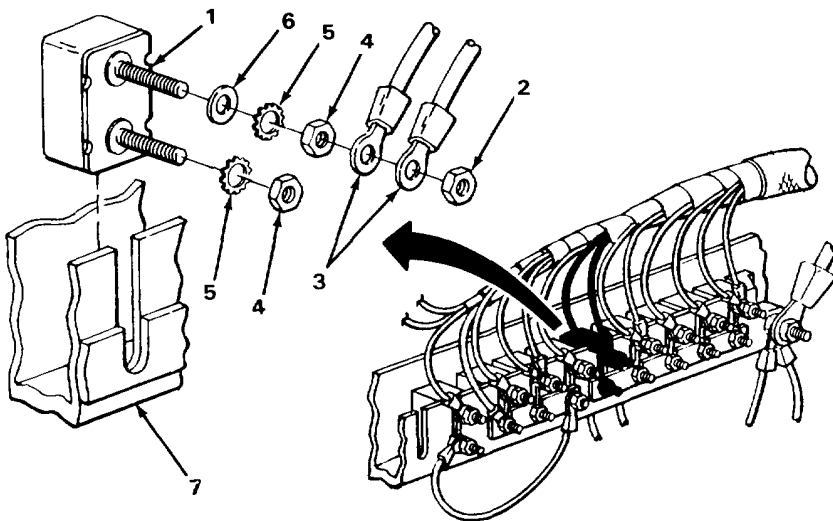
INSTALLATION

CAUTION

Use only correct amperage circuit breaker, to prevent damage to equipment.

Use care when working behind right instrument panel pad to prevent breaking or disconnecting wires.

4. Circuit breaker panel (7)	Circuit breaker (1)	Slide down into place.	
5. Circuit breaker (1)	Flat washer (6), two new lockwashers (5), and two nuts (4)	Screw on and tighten using 3/8-inch box-end wrench.	
6.	Two wires (3) and new self-locking nut (2)	<ol style="list-style-type: none"> Put wires in place. Screw on and tighten using 3/8 inch box-end wrench. Take off tags. Get rid of tags. 	



TA244179

HEATER 40 AMP CIRCUIT BREAKER - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Connect battery ground cable (page 2-424).
2. Install right instrument panel pad (page 2-424).
3. Close right side cab door (page 2-424).

TASK ENDS HERE

HORN 20 AMP CIRCUIT BREAKER

This task covers:

- a. Removal (page 2-754)
- b. Installation (page 2-755)

INITIAL SETUP

<p>Tools</p> <p>Wrench, box-end, 3/8-inch</p>	<p>Personnel Required</p> <p>One</p>
<p>Materials/Parts</p> <p>Lockwasher, circuit breaker (two required)</p> <p>Nut, self-locking (two required)</p> <p>Tags, marker (item 21, appendix C)</p>	<p>Equipment Condition</p> <p>Battery ground cable disconnected (page 2-424).</p> <p>Right side cab door opened (page 2-424).</p> <p>Right instrument panel pad removed (page 2-424).</p>

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

REMOVAL

CAUTION

Use care when working behind right instrument panel pad to prevent breaking or disconnecting wires.

<p>1. Circuit breaker (1)</p>	<p>Two self-locking nuts (2) and two wires (3)</p>	<p>a. Tag wires (page 2-424).</p> <p>b. Using 3/8-inch box-end wrench, unscrew and take off.</p> <p>c. Get rid of self-locking nuts.</p>
<p>2.</p>	<p>Two nuts (4), two lockwashers (5), and flat washer (6)</p>	<p>a. Using 3/8-inch box-end wrench, unscrew and take off.</p> <p>b. Get rid of lockwashers.</p>

HORN 20 AMP CIRCUIT BREAKER - CONTINUED

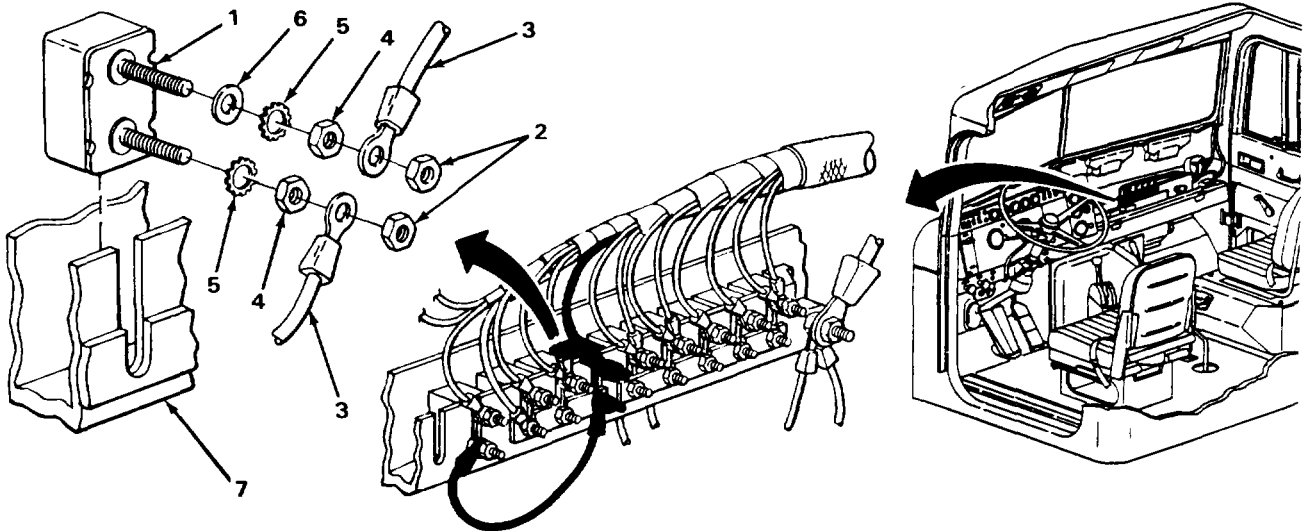
LOCATION	ITEM	ACTION	REMARKS
3. Circuit breaker panel (7)	Circuit breaker (1)	Slide up and take out.	
INSTALLATION			

CAUTION

Use only correct amperage circuit breaker, to prevent damage to equipment.

Use care when working behind right instrument panel pad to prevent breaking or disconnecting wires.

- | | | |
|------------------------------|--|--|
| 4. Circuit breaker panel (7) | Circuit breaker (1) | Slide down into place. |
| 5. Circuit breaker (1) | Flat washer (6), two new lockwashers (5), and two nuts (4) | Screw on and tighten using 3/8-inch box-end wrench. |
| 6. Two wires (3) and | a. Put wires in place. two new self-locking nuts (2) | b. Screw on and tighten using 3/8-inch box-end wrench.
c. Take off tags.
d. Get rid of tags. |



TA244180

HORN 20 AMP CIRCUIT BREAKER - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Connect battery ground cable (page 2-424).
2. Install right instrument panel pad (page 2-424).
3. Close right side cab door (page 2-424).

TASK ENDS HERE

GLOW PLUG AND CIGAR LIGHTER 40 AMP CIRCUIT BREAKER

This task covers:

- a. Removal (page 2-756)
- b. Installation (page 2-757)

INITIAL SETUP

Tools	Personnel Required
Wrench, box-end, 3/8-inch	One
Materials/Parts	Equipment Condition
Lockwasher, circuit breaker (two required)	Battery ground cable disconnected (page 2-424).
Nut, self-locking	Right side cab door opened (page 2-424).
Tags, marker (item 21, appendix C)	Right instrument panel pad removed (page 2-424).

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

CAUTION

Use care when working behind right instrument panel pad to prevent breaking or disconnecting wires.

- | | | | |
|----|---------------------|--|--|
| 1. | Circuit breaker (1) | Self-locking nut (2) and two wires (3) | <ol style="list-style-type: none"> a. Tag wires (page 2-424). b. Using 3/8-inch box-end wrench, unscrew and take off. c. Get rid of self-locking nut. |
| 2. | | Two nuts (4), two lockwashers (5), and flat washer (6) | <ol style="list-style-type: none"> a. Using 3/8-inch box-end wrench, unscrew and take off. b. Get rid of lockwashers. |

GLOW PLUG AND CIGAR LIGHTER 40 AMP CIRCUIT BREAKER - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
3. Circuit breaker panel (7)	Circuit breaker (1)	Slide up and take out.	

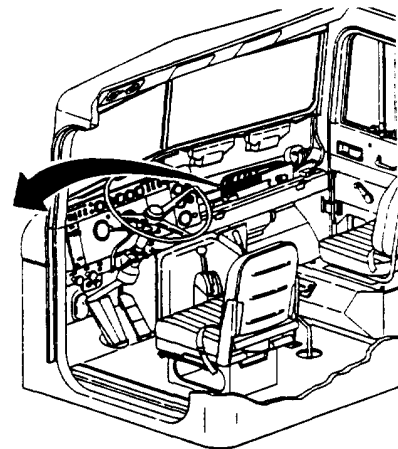
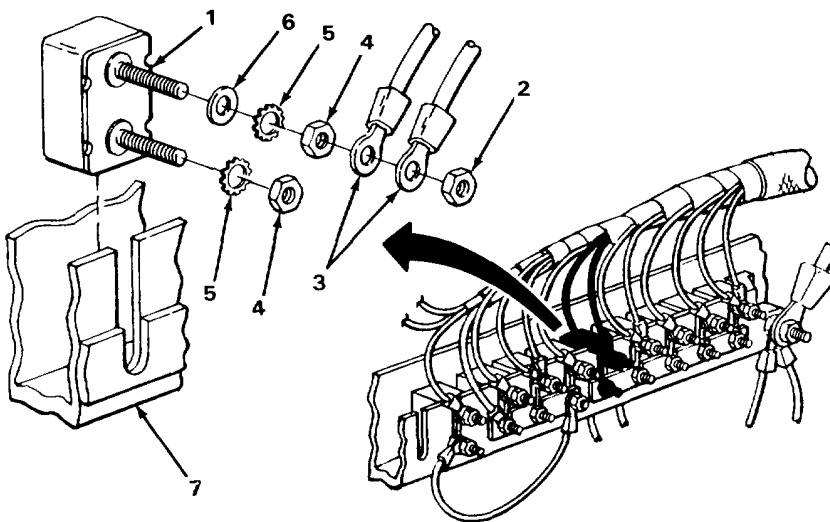
INSTALLATION

CAUTION

Use only correct amperage circuit breaker, to prevent damage to equipment.

Use care when working behind right instrument panel pad to prevent breaking or disconnecting wires.

- | | | |
|------------------------------|--|--|
| 4. Circuit breaker panel (7) | Circuit breaker (1) | Slide down into place. |
| 5. Circuit breaker (1) | Flat washer (6), two new lockwashers (5), and two nuts (4) | Screw on and tighten using 3/8 inch box-end wrench. |
| 6. Two wires (3) | a. Put wires in place and new self-locking nut (2) | b. Screw on and tighten using 3/8-inch box-end wrench.
c. Take off tags.
d. Get rid of tags. |



TA244181

GLOW PLUG AND CIGAR LIGHTER 40 AMP CIRCUIT BREAKER - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Connect battery ground cable (page 2-424).
2. Install right instrument panel pad (page 2-424).
3. Close right side cab door (page 2-424).

TASK ENDS HERE

STOP AND DOME LIGHT 30 AMP CIRCUIT BREAKER

This task covers:

- a. Removal (page 2-758)
- b. Installation (page 2-759)

INITIAL SETUP

<p>Tools</p> <p>Wrench, box-end, 3/8-inch</p>	<p>Personnel Required</p> <p>One</p>
<p>Materials/Parts</p> <p>Lockwasher, circuit breaker (two required)</p> <p>Nut, self-locking</p> <p>Tags, marker (item 21, appendix C)</p>	<p>Equipment Condition</p> <p>Battery ground cable disconnected (page 2-424).</p> <p>Right cab side door opened (page 2-424).</p> <p>Right instrument panel pad removed (page 2-424).</p>

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

CAUTION

Use care when working behind right instrument panel pad to prevent breaking or disconnecting wires.

<p>1. Circuit breaker (1)</p>	<p>Self-locking nut (2) and two wires (3)</p>	<p>a. Tag wires (page 2-424).</p> <p>b. Using 3/8-inch box-end wrench, unscrew and take off.</p> <p>c. Get rid of self-locking nut.</p>
<p>2.</p>	<p>Two nuts (4), two lockwashers (5), and flat washer (6)</p>	<p>a. Using 3/8-inch box-end wrench, unscrew and take off.</p> <p>b. Get rid of lockwashers.</p>

STOP AND DOME LIGHT 30 AMP CIRCUIT BREAKER - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
3. Circuit breaker panel (7)	Circuit breaker (1)	Slide up and take out.	

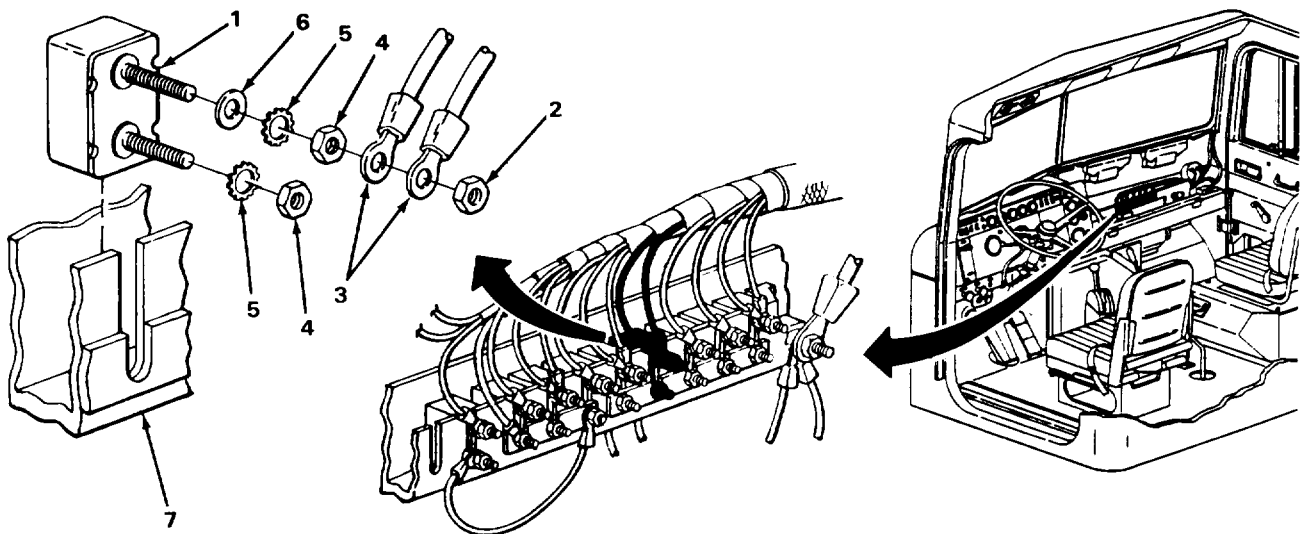
INSTALLATION

CAUTION

Use only correct amperage circuit breaker, to prevent damage to equipment.

Use care when working behind right instrument panel pad to prevent breaking or disconnecting wires.

4. Circuit breaker panel (7)	Circuit breaker (1)	Slide down into place.	
5. Circuit breaker (1)	Flat washer (6), two new lockwashers (5), and two nuts (4)	Screw on and tighten using 3/8-inch box-end wrench.	
6.	Two wires (3) and new self-locking nut (2)	<ul style="list-style-type: none"> a. Put wires in place. b. Screw on and tighten using 3/8-inch box-end wrench. c. Take off tags. d. Get rid of tags. 	



TA244182

STOP AND DOME LIGHT 30 AMP CIRCUIT BREAKER - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Connect battery ground cable (page 2-424).
2. Install right instrument panel pad (page 2-424).
3. Close right side cab door (page 2-424).

TASK ENDS HERE

TAIL AND PANEL LIGHT 20 AMP CIRCUIT BREAKER

This task covers:

- a. Removal (page 2-760)
- b. Installation (page 2-761)

INITIAL SETUP

Tools

Wrench, box-end, 3/8-inch

Personnel Required

One

Materials/Parts

Lockwasher, circuit breaker (two required)
 Nut, self-locking
 Tags, marker (item 21, appendix C)

Equipment Condition

Battery ground cable disconnected (page 2-424).
 Right cab door opened (page 2-424).
 Right instrument panel pad removed (page 2-424).

LOCATION

ITEM

ACTION

REMARKS

REMOVAL

CAUTION

Use care when working behind right instrument panel pad to prevent breaking or disconnecting wires.

- | | | | |
|----|--|---|---|
| 1. | Circuit breaker (1) | Self-locking nut (2) and wire (3) screw and take off. | a. Tag wire (page 2-424).
b. Using 3/8-inch box-end wrench, un- |
| | | | c. Get rid of self-locking nut. |
| 2. | Two nuts (4), two lockwashers (5), and flat washer (6) | | a. Using 3/8-inch box-end wrench, unscrew and take off.
b. Get rid of lockwashers. |

TAIL AND PANEL LIGHT 20 AMP CIRCUIT BREAKER - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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3. Circuit breaker panel (7)	Circuit breaker (1)	Slide up and take out.	
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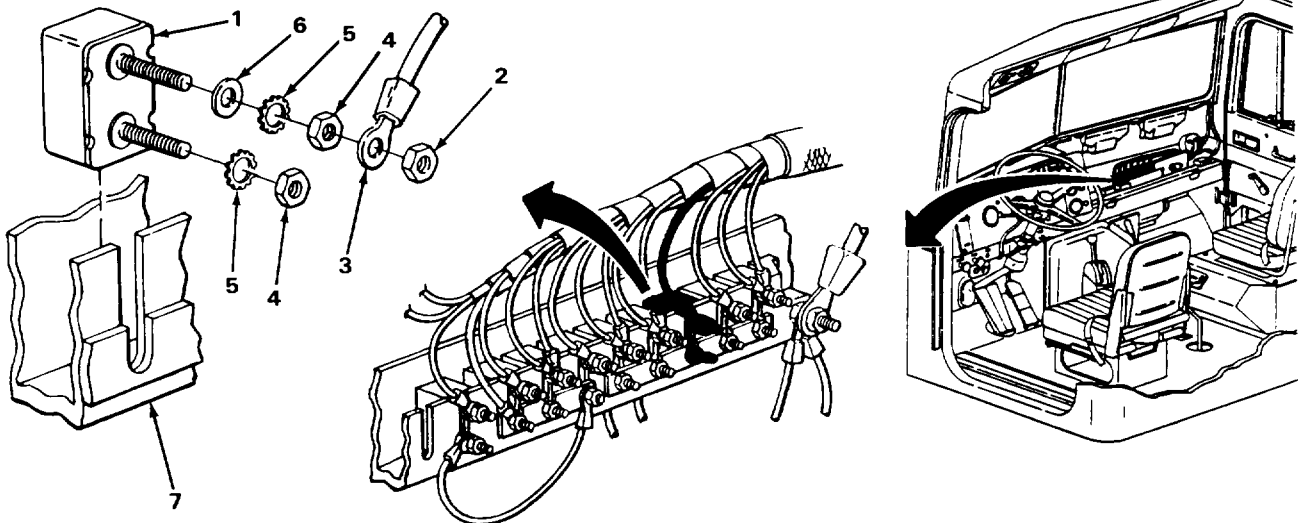
INSTALLATION

CAUTION

Use only correct amperage circuit breaker, to prevent damage to equipment.

Use care when working behind right instrument panel pad to prevent breaking or disconnecting wires.

4. Circuit breaker panel (7)	Circuit breaker (1)	Slide down into place.	
5. Circuit breaker (1)	Flat washer (6), two new lockwashers (5), and two nuts (4)	Screw on and tighten using 3/8-inch box-end wrench.	
6.	Wire (3) and new self-locking nut (2)	<ul style="list-style-type: none"> a. Put wire in place. b. Screw on and tighten using 3/8-inch box-end wrench. c. Take off tag. d. Get rid of tag. 	



TA244183

TAIL AND PANEL LIGHT 20 AMP CIRCUIT BREAKER - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Connect battery ground cable (page 2-424).
2. Install right instrument panel pad (page 2-424).
3. Close right side cab door (page 2-424).

TASK ENDS HERE

HEADLIGHT 20 AMP CIRCUIT BREAKER

This task covers:

- a. Removal (page 2-762)
- b. Installation (page 2-763)

INITIAL SETUP

Tools

Wrench, box-end, 3/8-inch

Personnel Required

One

Materials/Parts

Lockwasher, circuit breaker (two required)
 Nut, self-locking
 Tags, marker (item 21, appendix C) (page 2-424).

Equipment Condition

Battery ground cable disconnected (page 2-424).
 Right cab door opened (page 2-424).
 Right instrument panel pad removed

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

REMOVAL

CAUTION

Use care when working behind right instrument panel pad to prevent breaking or disconnecting wires.

- | | | | |
|----|---------------------|--|---|
| 1. | Circuit breaker (1) | Self-locking nut (2) and wire (3) | <ol style="list-style-type: none"> a. Tag wire (page 2-424). b. Using 3/8-inch box-end wrench, unscrew and take off. c. Get rid of self-locking nut. |
| 2. | | Two nuts (4), two lockwashers (5), and flat washer (6) | <ol style="list-style-type: none"> a. Using 3/8-inch box-end wrench, unscrew and take off. b. Get rid of lockwashers. |

HEADLIGHT 20 AMP CIRCUIT BREAKER - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
3. Circuit breaker panel (7)	Circuit breaker (1)	Slide up and take out.	

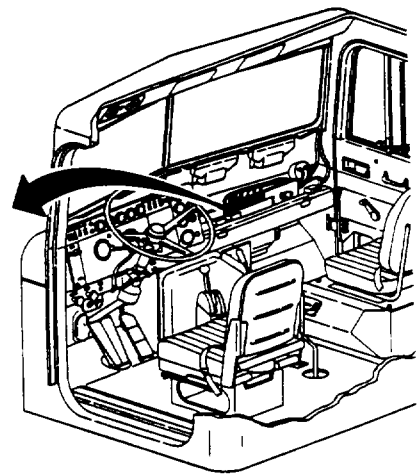
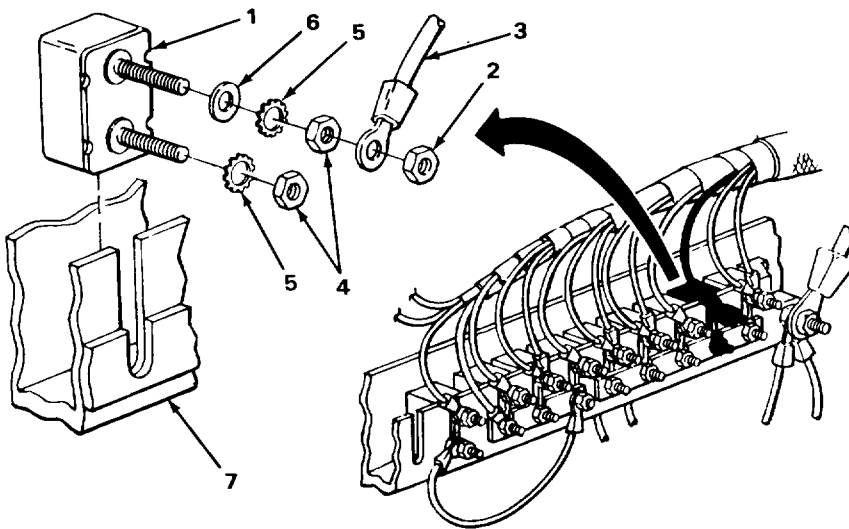
INSTALLATION

CAUTION

Use only correct amperage circuit breaker, to prevent damage to equipment.

Use care when working behind right instrument panel pad to prevent breaking or disconnecting wires.

- | | | |
|------------------------------|--|---|
| 4. Circuit breaker panel (7) | Circuit breaker (1) | Slide down into place. |
| 5. Circuit breaker (1) | Flat washer (6), two new lockwashers (5), and two nuts (4) | Screw on and tighten using 3/8-inch box-end wrench. |
| 6. | Wire (3) and new self-locking nut (2) | <ol style="list-style-type: none"> Put wire in place. Screw on and tighten using 3/8-inch box-end wrench. Take off tag. Get rid of tag. |



TA244184

HEADLIGHT 20 AMP CIRCUIT BREAKER - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Connect battery ground cable (page 2-424).
2. Install right instrument panel pad (page 2-424).
3. Close right side cab door (page 2-424).

TASK ENDS HERE

MARKER LIGHT 30 AMP CIRCUIT BREAKER

This task covers:

- a. Removal (page 2-764)
- b. Installation (page 2-765)

INITIAL SETUP

Tools	Personnel Required
Wrench, box-end, 3/8-inch	One
Materials/Parts	Equipment Condition
Lockwasher, circuit breaker (two required)	Battery ground cable disconnected (page 2-424).
Nut, self-locking	Right side cab door opened (page 2-424).
Tags, marker (item 21, appendix C)	Instrument panel pad removed (page 2-424).

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

REMOVAL

CAUTION

Use care when working behind right instrument panel pad to prevent breaking or disconnecting wires.

- | | | | |
|----|---------------------|--|--|
| 1. | Circuit breaker (1) | Self-locking nut (2) and two wires (3) | <ol style="list-style-type: none"> a. Tag wires (page 2-424). b. Using 3/8-inch box-end wrench, unscrew and take off. c. Get rid of self-locking nut. |
| 2. | | Two nuts (4), two lockwashers (5), and flat washer (6) | <ol style="list-style-type: none"> a. Using 3/8-inch box-end wrench, unscrew and take off. b. Get rid of lockwashers. |

MARKER LIGHT 30 AMP CIRCUIT BREAKER - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
3. Circuit breaker	Circuit breaker (1) panel (7)	Slide up and take out.	

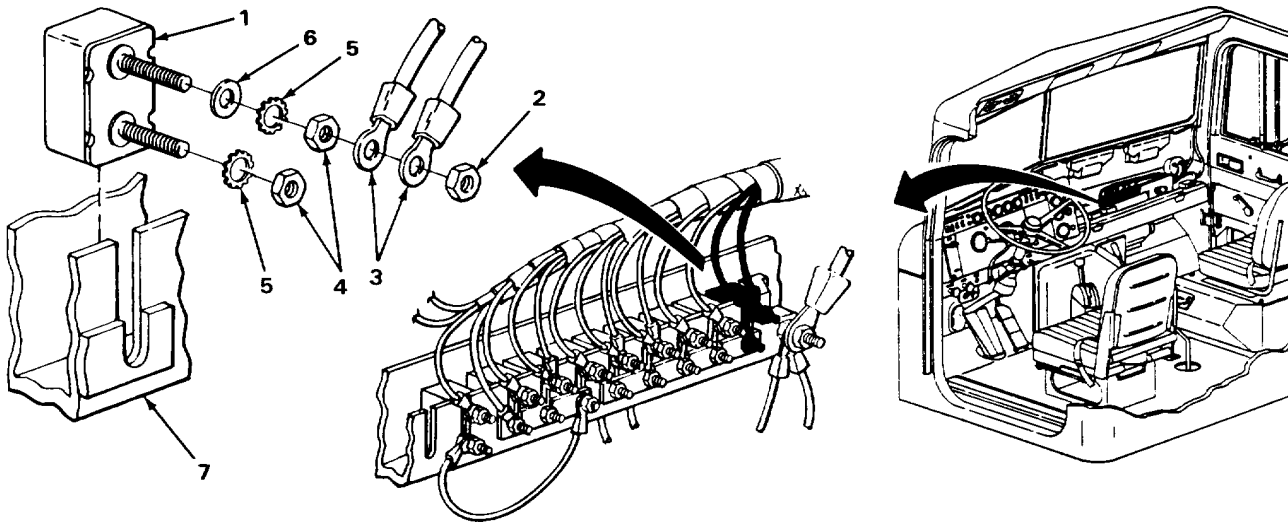
INSTALLATION

CAUTION

Use only correct amperage circuit breaker, to prevent damage to equipment.

Use care when working behind right instrument panel pad to prevent breaking or disconnecting wires.

- | | | |
|------------------------------|--|--|
| 4. Circuit breaker panel (7) | Circuit breaker (1) | Slide down into place. |
| 5. Circuit breaker (1) | Flat washer (6), two new lockwashers (5), and two nuts (4) | Screw on and tighten using 3/8-inch box-end wrench. |
| 6. | Two wires (3) and new self-locking nut (2) | <ol style="list-style-type: none"> Put wires in place. Screw on and tighten using 3/8-inch box-end wrench. Take off tags. Get rid of tags. |



TA244185

MARKER LIGHT 30 AMP CIRCUIT BREAKER - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Connect battery ground cable (page 2-424).
2. Install instrument panel pad (page 2-424).
3. Close right side cab door (page 2-424).

TASK ENDS HERE

FUSE BLOCK

This task covers:

- | | |
|---|--|
| <ol style="list-style-type: none"> a. Removal (page 2-766) b. Inspection/Replacement c. (page 2-767) | <ol style="list-style-type: none"> c. Installation (page 2-768) |
|---|--|

INITIAL SETUP

<p>Tools</p> <p>Screwdriver, cross-tip, number two</p> <p>Materials/Parts</p> <p>Tags, marker (item 21, appendix C)</p> <p>Personnel Required</p> <p>One</p>	<p>Equipment Condition</p> <p>Battery ground cable disconnected (page 2-424).</p> <p>Right side cab door opened (page 2-424).</p> <p>Right instrument panel opened (page 2-424).</p> <p>Instrument panel pad removed (page 2-424).</p>
--	--

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

REMOVAL

CAUTION

Use care when working behind instrument panel to prevent breaking or disconnecting wires.

- | | | |
|---|------------------------|------------------|
| <ol style="list-style-type: none"> 1. Fuse block (1) | <p>Three fuses (2)</p> | <p>Take out.</p> |
|---|------------------------|------------------|

2-766

FUSE BLOCK - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
2. Fuse block (1)	Five connectors (3)	a. Tag (page 2-424). b. Pull off.	
3.	Two screws (4)	Using number two cross-tip screwdriver, unscrew and take out.	
4. Instrument panel reinforcement (5)	Fuse block (1)	Take out.	

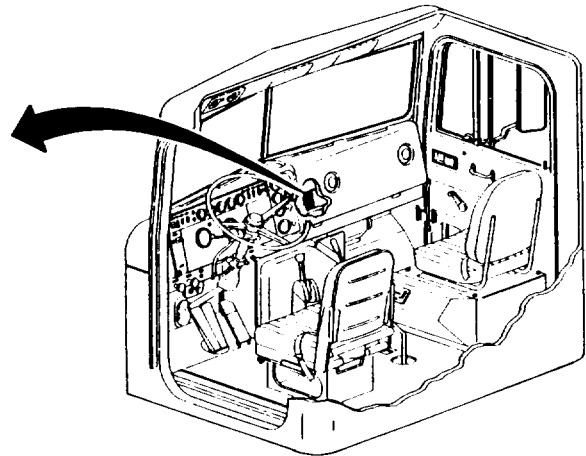
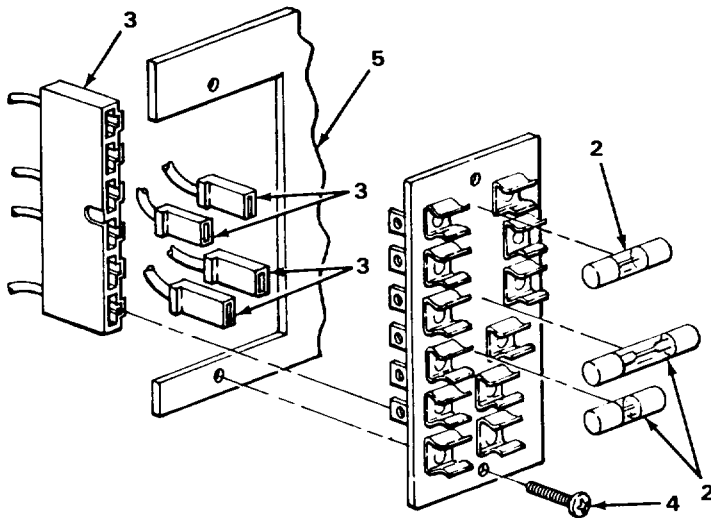
INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

- | | | |
|----|--------------------|--|
| 5. | Fuse block (1) | Look for cracks, breaks or corrosion. |
| 6. | All threaded parts | Look for damaged threads or rounded heads. |



TA244186

FUSE BLOCK - CONTINUED

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

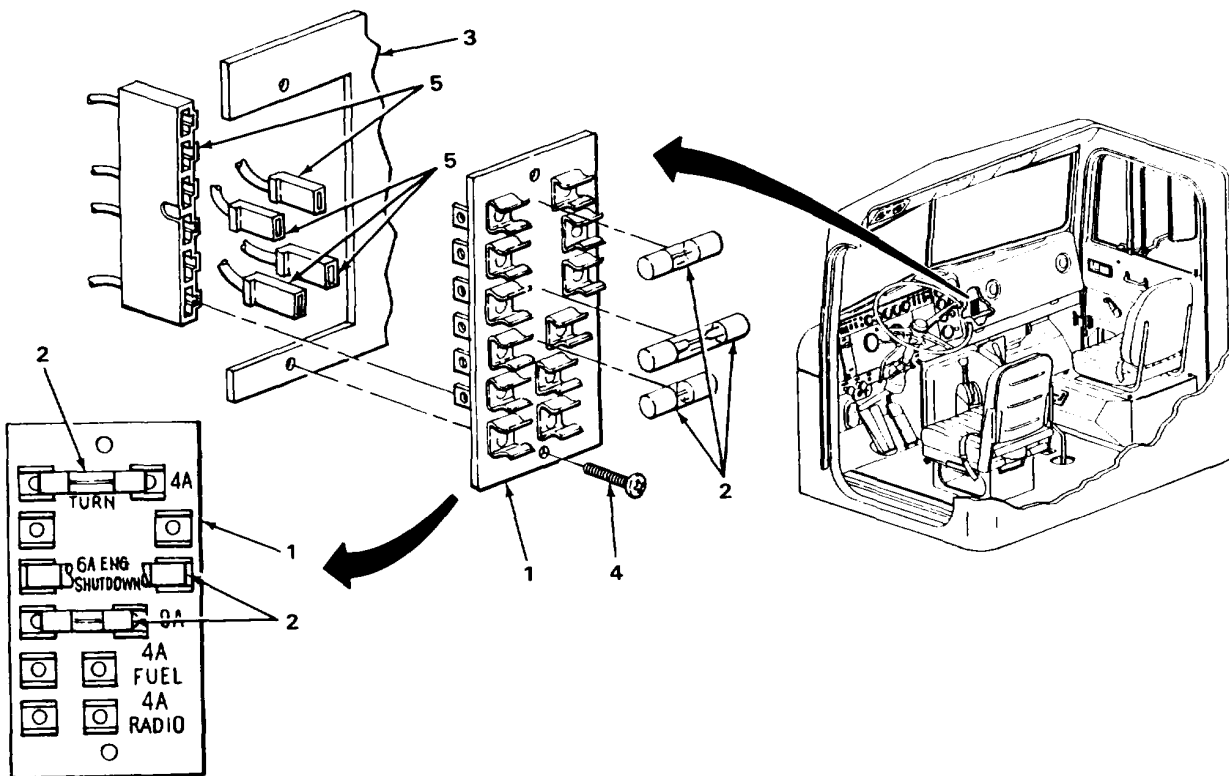
INSTALLATION

CAUTION

Use only correct amperage fuses, to prevent damage to equipment.

Use care when working behind instrument panel to prevent breaking or disconnecting wires.

- | | | |
|---------------------------------------|---------------------|--|
| 7. Fuse block (1) | Three fuses (2) | Put in.
Use correct fuses only. |
| 8. Instrument panel reinforcement (3) | Fuse block (1) | Put in place and hold. |
| 9. Fuse block (1) | Two screws (4) | Screw in and tighten using number two cross-tip screwdriver. |
| 10. | Five connectors (5) | a. Push on.
b. Takeoff tags.
c. Get rid of tags. |



TA244187

TA244187

FUSE BLOCK - CONTINUED**NOTE****FOLLOW-ON MAINTENANCE:**

1. Connect battery ground cable (page 2-424).
2. Close right instrument panel (page 2-424).
3. Install instrument panel pad (page 2-424).
4. Close right side cab door (page 2-424).

TASK ENDS HERE**IGN SYSTEM STARTER CIRCUIT BREAKER**

This task covers:

- a. Removal (page 2-770)
- b. Installation (page 2-770)

INITIAL SETUP**Tools**

Screwdriver, flat-tip, 3/8-inch
Wrench, box-end, 7/16-inch (two
required)

Materials/Parts

Lockwasher, circuit breaker (two
required)
Lockwasher, mounting bracket (two
required)
Tags, marker (item 21, appendix C)

Personnel Required

One

Equipment Condition

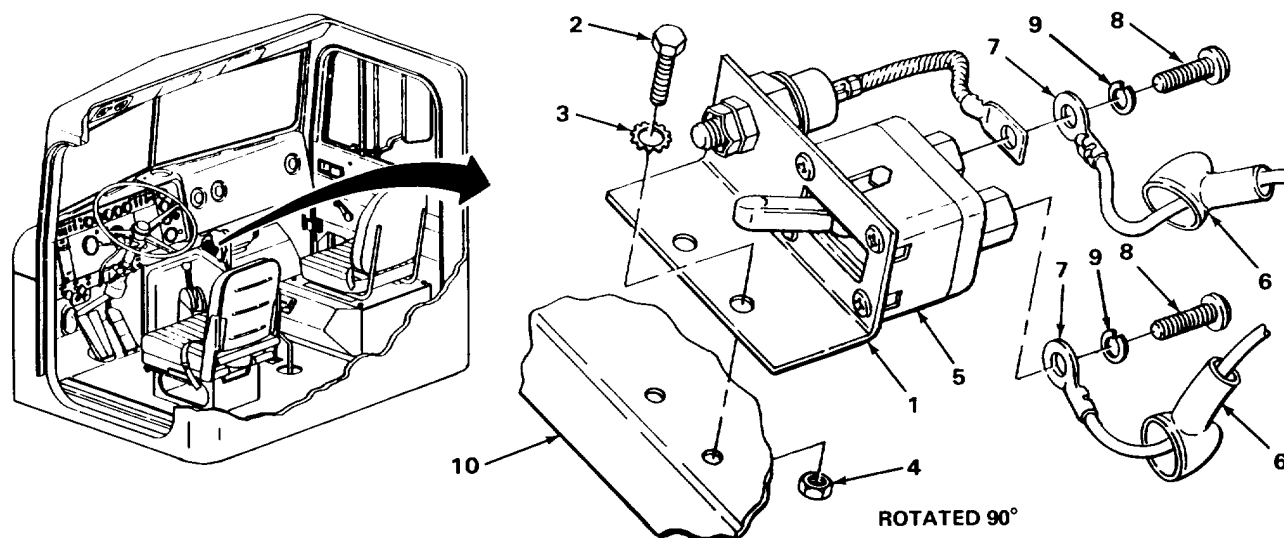
Battery ground cable disconnected
(page 2-424).
Right cab door opened (page 2-424).
Instrument panel pad removed (page 2-424).
Engine cover removed (page 2-1270).

2-769

IGN SYSTEM STARTER CIRCUIT BREAKER - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
<u>CAUTION</u>			
Use care when working behind instrument panel to prevent breaking or disconnecting wires.			
1.	Mounting bracket (1)	Two screws (2), two lockwashers (3), and two nuts (4)	<ol style="list-style-type: none"> a. Using two 7/16-inch box-end wrenches, unscrew and take out. b. Get rid of lockwashers.
2.	Circuit breaker (5)	Rubber boot (6)	Pull off and slide back.
3.		Two wires (7), two screws (8), and two lockwashers (9)	<ol style="list-style-type: none"> a. Tag wires (page 2-424). b. Using 3/8-inch flat-tip screwdriver, unscrew and take out. c. Get rid of lockwashers.
4.	Lower instrument panel support (10)	Circuit breaker (5)	Take out.
INSTALLATION			
<u>CAUTION</u>			
Use care when working behind instrument panel to prevent breaking or disconnecting wires.			
5.	Lower instrument panel support (10)	Circuit breaker (5)	Put in place and hold.
6.	Circuit breaker (5)	Two wires (7), two screws (8), and two new lockwashers (9)	<ol style="list-style-type: none"> a. Put wires in correct position. b. Screw in and tighten using 3/8-inch flat-tip screwdriver. c. Take off tags. d. Get rid of tags.
7.		Rubber boot (6)	Slide down and put on.
8.	Mounting bracket (1)	Two screws (2), two new lockwashers (3), and two nuts (4)	Screw in and tighten using two 7/16-inch box-end wrenches.

IGN SYSTEM STARTER CIRCUIT BREAKER - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE:

1. Connect battery ground cable (page 2-424).
2. Install instrument panel pad (page 2-424).
3. Install engine cover (page 2-1270).
4. Close right side cab door (page 2-424).

TASK ENDS HERE

CENTER ENGINE SIDE OF FIREWALL JUNCTION BOX

This task covers:

- | | |
|--|------------------------------|
| a. Removal (page 2-772) | c. Installation (page 2-773) |
| b. Inspection/Replacement (page 2-772) | |

INITIAL SETUP

Tools

Screwdriver, cross-tip, number two
Wrench, box-end, 3/8-inch

Materials/Parts

Nut, self-locking (sixteen required)
Tags, marker (item 21, appendix C)

TA244188

CENTER ENGINE SIDE OF FIREWALL JUNCTION BOX - CONTINUED

INITIAL SETUP - CONTINUED

Personnel Required

One

Equipment Condition

Battery ground cable disconnected (page 2-424).
Right and left side hood panels opened (page 2-424).

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1.	Junction box (1) and cover (3)	Two wingscrews (2)	Unscrew and take out.
2.	Thirty wires (4) and sixteen self-locking	nuts (5)	a. Tag wires (page 2-424). b. Using 3/8-inch box-end wrench, unscrew and take off. c. Get rid of self-locking nuts.
3.	Firewall (6)	Two screws (7), two cover mounting brackets (8), and junction box (1)	Using number two cross-tip screwdriver, unscrew and take out.

INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

- | | | |
|----|-----------------------------|--|
| 4. | Junction box (1) | Look for cracks, breaks, or corrosion. |
| 5. | Cover mounting brackets (8) | Look for cracks, breaks, or bends. |
| 6. | All threaded parts heads. | Look for damaged threads or rounded |

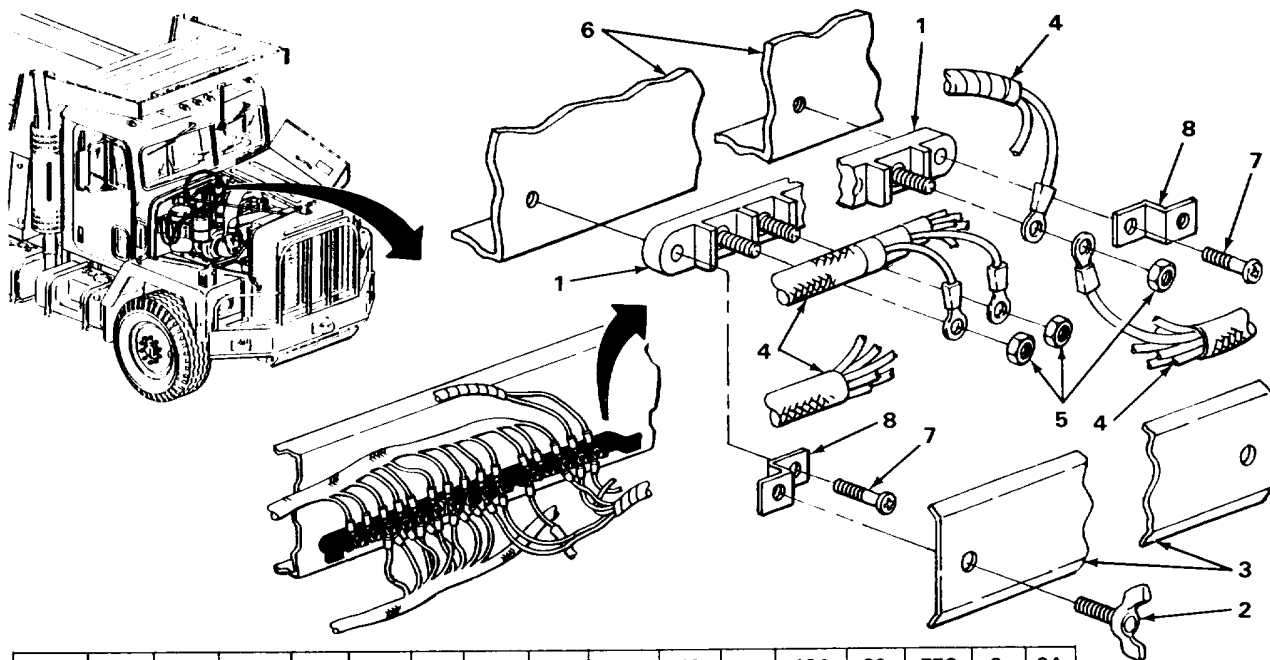
2-772

CENTER ENGINE SIDE OF FIREWALL JUNCTION BOX - CONTINUED

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

INSTALLATION

- | | | | |
|----|------------------|---|---|
| 7. | Firewall (6) | Junction box (1), two cover mounting brackets (8), and two screws (7) | Screw in and tighten using number two cross-tip screwdriver. |
| 8. | Junction box (1) | Thirty wires (4) and sixteen new self-locking nuts (5) | a. Put wires in place. See table below.
b. Screw on and tighten using 3/8-inch box-end wrench.
c. Take off tags.
d. Get rid of tags. |
| 9. | | Cover (3) and two wingscrews (2) | a. Put cover in place.
b. Screw in and tighten. |



WIRE	54A	64A	58D	57	52	56	53	85A	18A	19		19A	30	77C	2	2A
POST	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
WIRE			58A 58	57	52A 52	56	53A 53	85	18A	19		19A		77C	2	2A

TA244189

CENTER ENGINE SIDE OF FIREWALL JUNCTION BOX - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Connect battery ground cable (page 2-424).
2. Close right and left side hood panels (page 2-424).

TASK ENDS HERE

RIGHT ENGINE SIDE OF FIREWALL JUNCTION BOX

This task covers:

- | | |
|---|--|
| <ol style="list-style-type: none"> a. Removal (page 2-774) b. Inspection/Replacement (page 2-775) | <ol style="list-style-type: none"> c. Installation (page 2-776) |
|---|--|
-

INITIAL SETUP

<p>Tools</p> <p>Wrench, box-end, 38-inch Wrench, box-end, 7/16-inch Wrench, open-end, 7/16-inch</p> <p>Materials/Parts</p> <p>Nut, self-locking (eight required) Tags, marker (item 21, appendix C)</p>	<p>Personnel Required</p> <p>One</p> <p>Equipment Condition</p> <p>Battery ground cable disconnected (page 2-424). Right side hood panel opened (page 2-424).</p>
---	---

LOCATION	ITEM	ACTION REMARKS
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REMOVAL

1.	Junction box (1)	Two wingnuts (2) and cover (3) Unscrew and take off.
2.	Ten wires (4) and eight self-locking nuts (5)	<ol style="list-style-type: none"> a. Tag wires (page 2-424). b. Using 3/8-inch box-end wrench, unscrew and take off. c. Get rid of self-locking nuts.

RIGHT ENGINE SIDE OF FIREWALL JUNCTION BOX - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
3. Junction box (1)	Two wires (6) and nut (7)	a. Tag wires (page 2-424). b. Using 7/16-inch box-end wrench, unscrew and take off.	
4. Firewall (8)	Two nuts (9) and junction box (1)	Using 7/16-inch open-end wrench and 7/16-inch box-end wrench, unscrew and take off.	

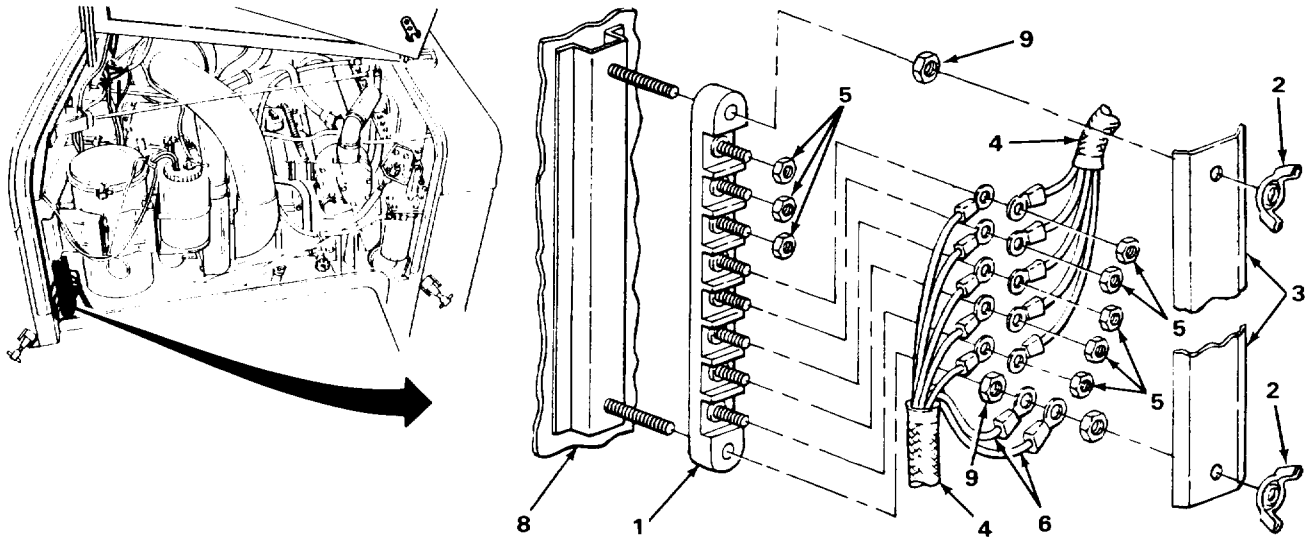
INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

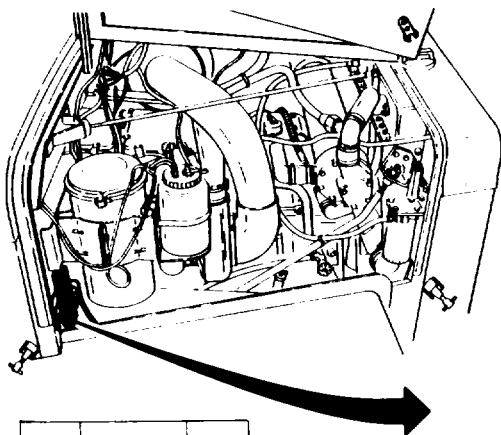
5.	Junction box (1)	Look for cracks, breaks, or corrosion.
6.	Cover (3)	Look for cracks or breaks.
7.	All threaded parts	Look for damaged threads or rounded heads.



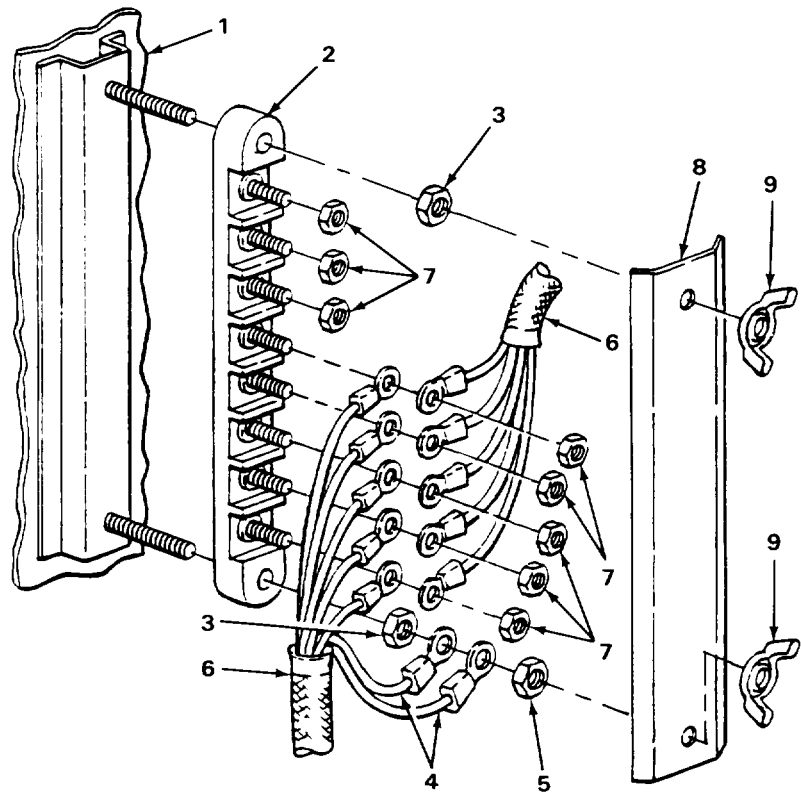
TA244190

RIGHT ENGINE SIDE OF FIREWALL JUNCTION BOX - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
8. Firewall (1)	Junction box (2) and two nuts (3)	a. Put junction box in place. b. Screw on and tighten using 7/16-inch open-end wrench and 7/16-inch box-end wrench.	
9. Junction box (2)	Two wires (4) and nut (5)	a. Put wires in place. See table below. b. Screw on and tighten using 7/16-inch box-end wrench. c. Take off tags. d. Get rid of tags.	
10.	Ten wires (6) and eight new self-locking nuts (7)	a. Put wires in place. b. Screw on and tighten using 3/8-inch box-end wrench. c. Takeoff tags. d. Get rid of tags.	
11.	Cover (8) and two wingnuts (9)	a. Put cover in place. b. Screw on and tighten.	



	1	
	2	
	3	
85	4	85
53A	5	53
52A	6	52
57	7	55
58A	8	58
11A	GROUND	11



TA244191

RIGHT ENGINE SIDE OF FIREWALL JUNCTION BOX - CONTINUED**NOTE****FOLLOW-ON MAINTENANCE:**

1. Connect battery ground cable (page 2-424).
2. Close right side hood panel (page 2-424).

TASK ENDS HERE**LEFT ENGINE SIDE OF FIREWALL JUNCTION BOX**

This task covers:

- | | |
|---|--|
| <ol style="list-style-type: none"> a. Removal (page 2-778) b. Inspection/Replacement (page 2-778) | <ol style="list-style-type: none"> c. Installation (page 2-778) |
|---|--|

INITIAL SETUP

Tools

Wrench, box-end, 3/8-inch
 Wrench, box-end, 7/16-inch
 Wrench, open-end, 7/16-inch

Materials/Parts

Nut, self-locking (eight required)
 Tags, marker (item 21, appendix C)

Personnel Required

One

Equipment Condition

Battery ground cable disconnected (page 2-424).
 Left side hood panel opened (page 2-424).

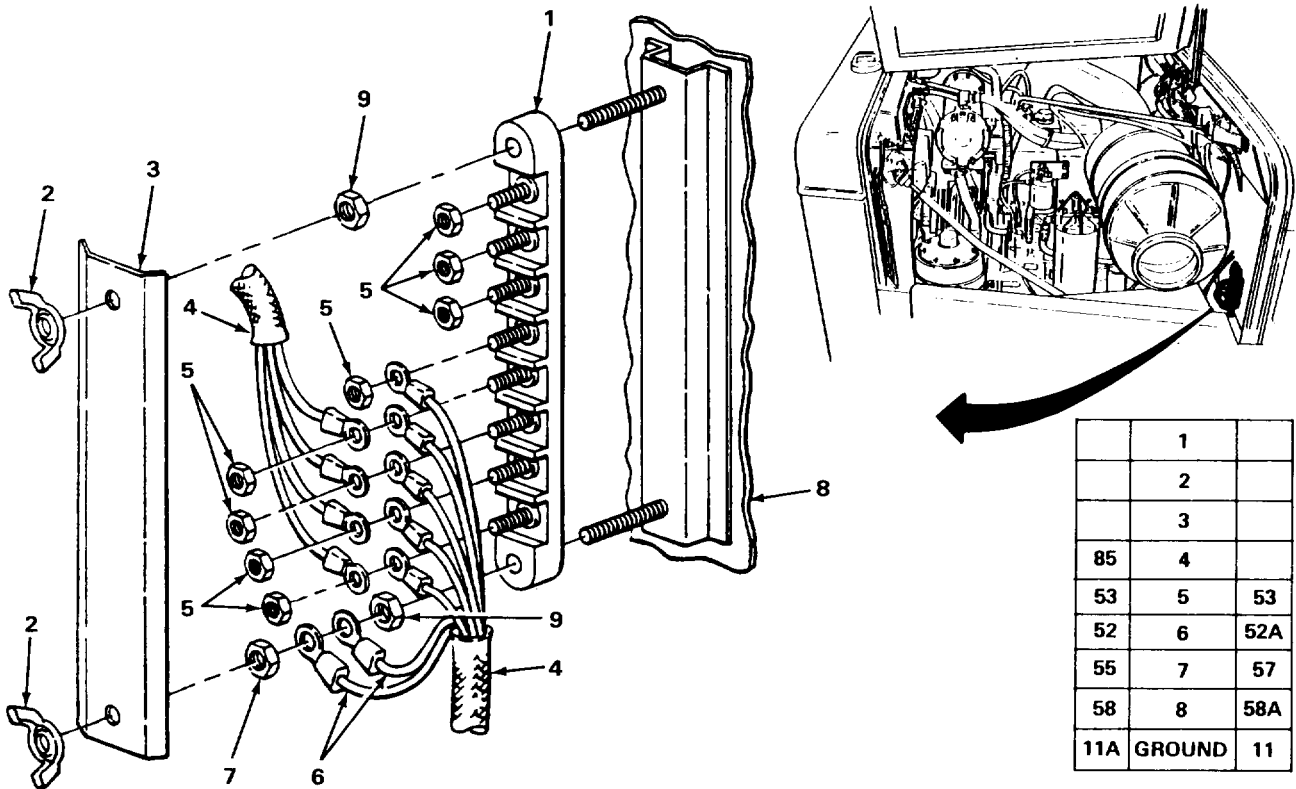
2-777

LEFT ENGINE SIDE OF FIREWALL JUNCTION BOX - CONTINUED

LOCATION	ITEM	ACTION REMARKS	
REMOVAL			
1.	Junction box (1)	Two wingnuts (2) and cover (3)	Unscrew and take off.
2.	Nine wires (4) and eight self-locking nuts (5)		a. Tag wires (page 2-424). b. Using 3/8-inch box-end wrench, unscrew and take off. c. Get rid of self-locking nuts.
3.	Two wires (6) and nut (7)		a. Tag wires (page 2-424). b. Using 7/16-inch box-end wrench, unscrew and take off.
4.	Firewall (8)	Two nuts (9) and junction box (1)	Using 7/16-inch open-end wrench and 7/16-inch box-end wrench, unscrew and take off.
INSPECTION/REPLACEMENT			
NOTE			
Replace all damaged or defective parts.			
For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).			
5.	Junction box (1)		Look for cracks, breaks, or corrosion.
6.	Cover (3)		Look for cracks or breaks.
7.	All threaded parts		Look for damaged threads or rounded heads.
INSTALLATION			
8.	Firewall (8)	Junction box (1) and two nuts (9)	a. Put junction box in place. b. Screw on and tighten using 7/16-inch open-end wrench and 7/16-inch box-end wrench.

LEFT ENGINE SIDE OF FIREWALL JUNCTION BOX - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
9.	Junction box (1) Two wires (6) and nut (7)	a. Put wires in place. b. Screw on and tighten using 7/16-inch box-end wrench. c. Take off tags. d. Get rid of tags.	
10.	Nine wires (4) and eight new self-locking nuts (5)	a. Put wires in place. See table below. b. Screw on and tighten using 7/16-inch box-end wrench. c. Take off tags. d. Get rid of tags.	
11.	Cover (3) and two wingnuts (2)	a. Put cover in place. b. Screw on and tighten.	



	1	
	2	
	3	
85	4	
53	5	53
52	6	52A
55	7	57
58	8	58A
11A	GROUND	11

TA244192

LEFT ENGINE SIDE OF FIREWALL JUNCTION BOX - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Connect battery ground cable (page 2-424).
2. Close left side hood panel (page 2-424).

TASK ENDS HERE

FRONT REAR OF CAB JUNCTION BOX

This task covers:

- | | |
|---|--|
| <ol style="list-style-type: none"> a. Removal (page 2-780) b. Inspection/Replacement (page 2-782) | <ol style="list-style-type: none"> c. Installation (page 2-782) |
|---|--|

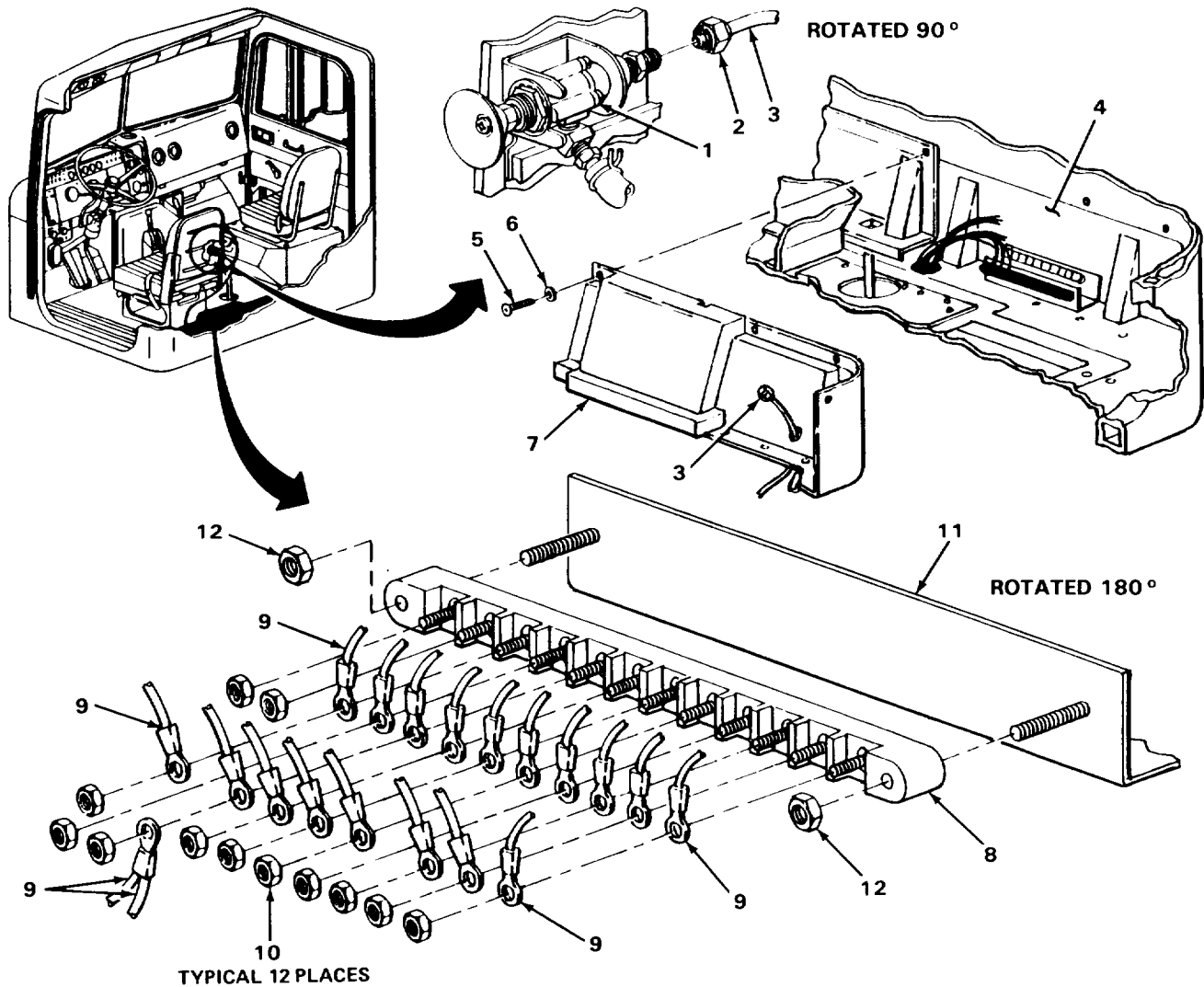
INITIAL SETUP

<p>Tools</p> <p>Screwdriver, cross-tip, number two Wrench, box-end, 3/8-inch Wrench, box-end, 7/16-inch Wrench, open-end, 9/16-inch</p> <p>Materials/Parts</p> <p>Nut, self-locking (12 required) Tags, marker (item 21, appendix C)</p>	<p>Personnel Required</p> <p>One</p> <p>Equipment Condition</p> <p>Battery ground cable disconnected (page 2-424). Left side cab door opened (page 2-424). Airbrake system drained (page 2-1034).</p>
--	---

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
1.	Driver seat valve assembly (1) Line nut (2) and air line (3)	Using 9/16-inch open-end wrench, unscrew and take off.
2.	Left lower rear molding (4) washers (6)	Using number two cross-tip screwdriver, unscrew and take out.
3.	Left side rear cab wall (7) molding (4)	<ol style="list-style-type: none"> a. Push air line through hole in molding. b. Take out molding.

FRONT REAR OF CAB JUNCTION BOX - CONTINUED

LOCATION	ITEM	ACTION REMARKS
4. Junction box (8)	Nineteen wires (9) and twelve self-locking nuts (10)	a. Tag wires (page 2-424). b. Using 3/8-inch box-end wrench, unscrew and take off. c. Get rid of self-locking nuts.
5. Junction box support (11)	Two nuts (12) and junction box (8)	Using 7/16-inch box-end wrench, unscrew and take off.

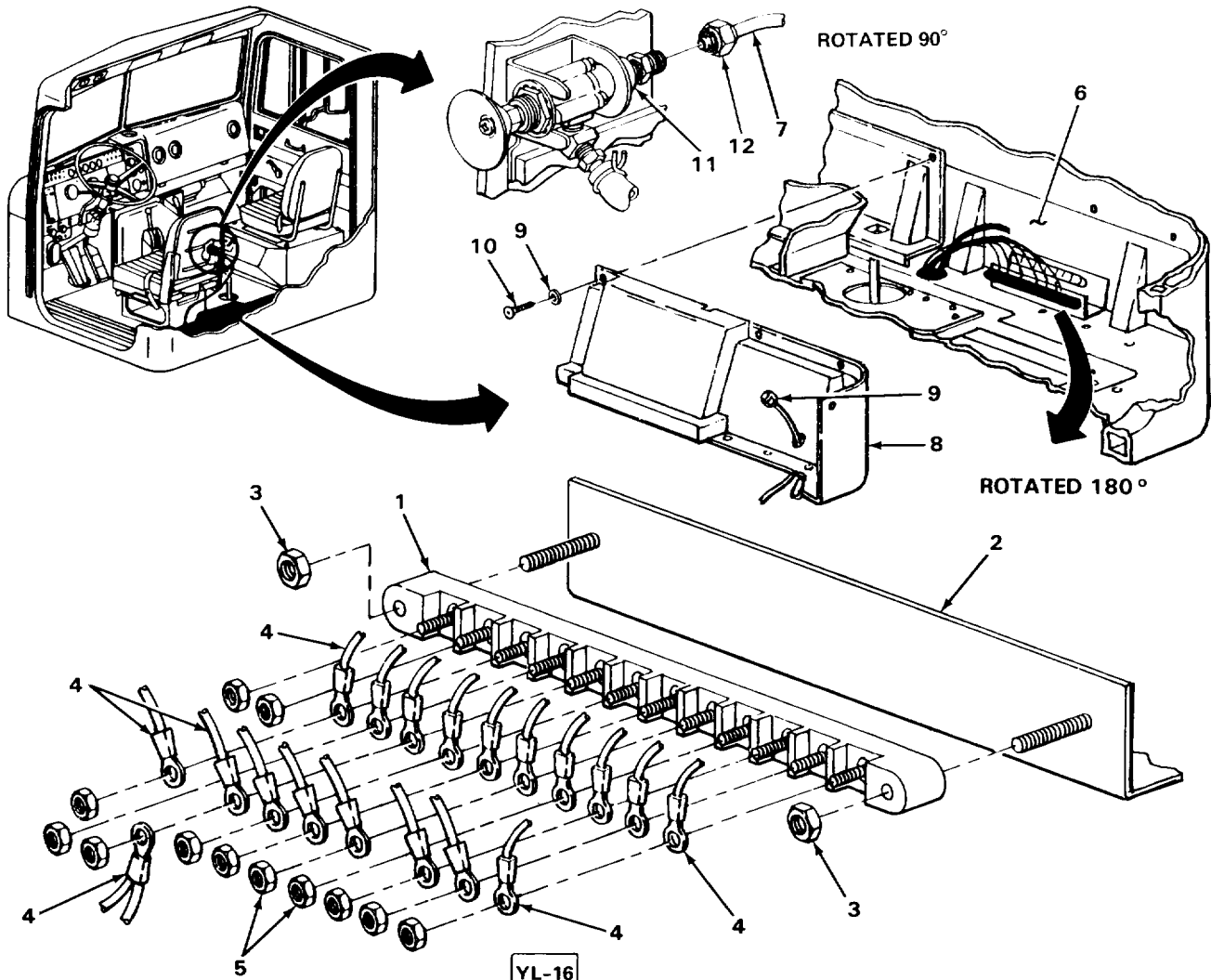


TA244193

FRONT REAR OF CAB JUNCTION BOX - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSPECTION/REPLACEMENT			
NOTE			
Replace all damaged or defective parts.			
For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).			
6.	Junction box (1)	Look for cracks, breaks, or corrosion.	
7.	All threaded parts heads.	Look for damaged threads or rounded	
INSTALLATION			
8.	Junction box support (2)	Junction box (1) and two nuts (3)	a. Put junction box in place. See table below. b. Screw on and tighten using 7/16-inch box-end wrench.
9.	Junction box (1)	Nineteen wires (4) and twelve new self-locking nuts (5)	a. Put wires in place. b. Screw on and tighten using 3/8-inch box-end wrench. c. Take off tags. d. Get rid of tags.
10.	Left side rear cab wall (6)	Air line (7) and left lower rear molding (8)	a. Push air line through hole in molding. b. Put molding in place.
11.	Left lower rear molding (8)	Eight flat washers (9) and eight screws (10)	Screw in and tighten using number two cross-tip screwdriver.
12.	Driver seat valve assembly (11)	Air line (7) and line nut (12)	a. Put line in place. b. Screw on and tighten using 9/16-inch open-end wrench.

FRONT REAR OF CAB JUNCTION BOX - CONTINUED



TYPICAL 12 PLACES

WIRE	TYPICAL 12 PLACES											
	12	11	10	9	8	7	6	5	4	3	2	1
			17B		71A	31	31A	32A		17C	17B	36
			17B	37G	17A	31	31A	92A	32A	17C	17B	36
POST	12	11	10	9	8	7	6	5	4	3	2	1

2-X-68

NOTE

FOLLOW-ON MAINTENANCE:

1. Connect battery ground cable (page 2-424).
2. Close left side cab door (page 2-424). TA244194

TASK ENDS HERE

TA244194

REAR REAR OF CAB JUNCTION BOX

This task covers:

- a. Removal (page 2-784)
 - b. Inspection/Replacement (page 2-786)
 - c. Installation (page 2-786)
-

INITIAL SETUP

Tools

Screwdriver, cross-tip, number two
 Wrench, box-end, 3/8-inch
 Wrench, box-end, 7/16-inch
 Wrench, open-end, 9/16-inch

Materials/Parts

Nut, self-locking (eight required)
 Tags, marker (item 21, appendix C)

Personnel Required

One

Equipment Condition

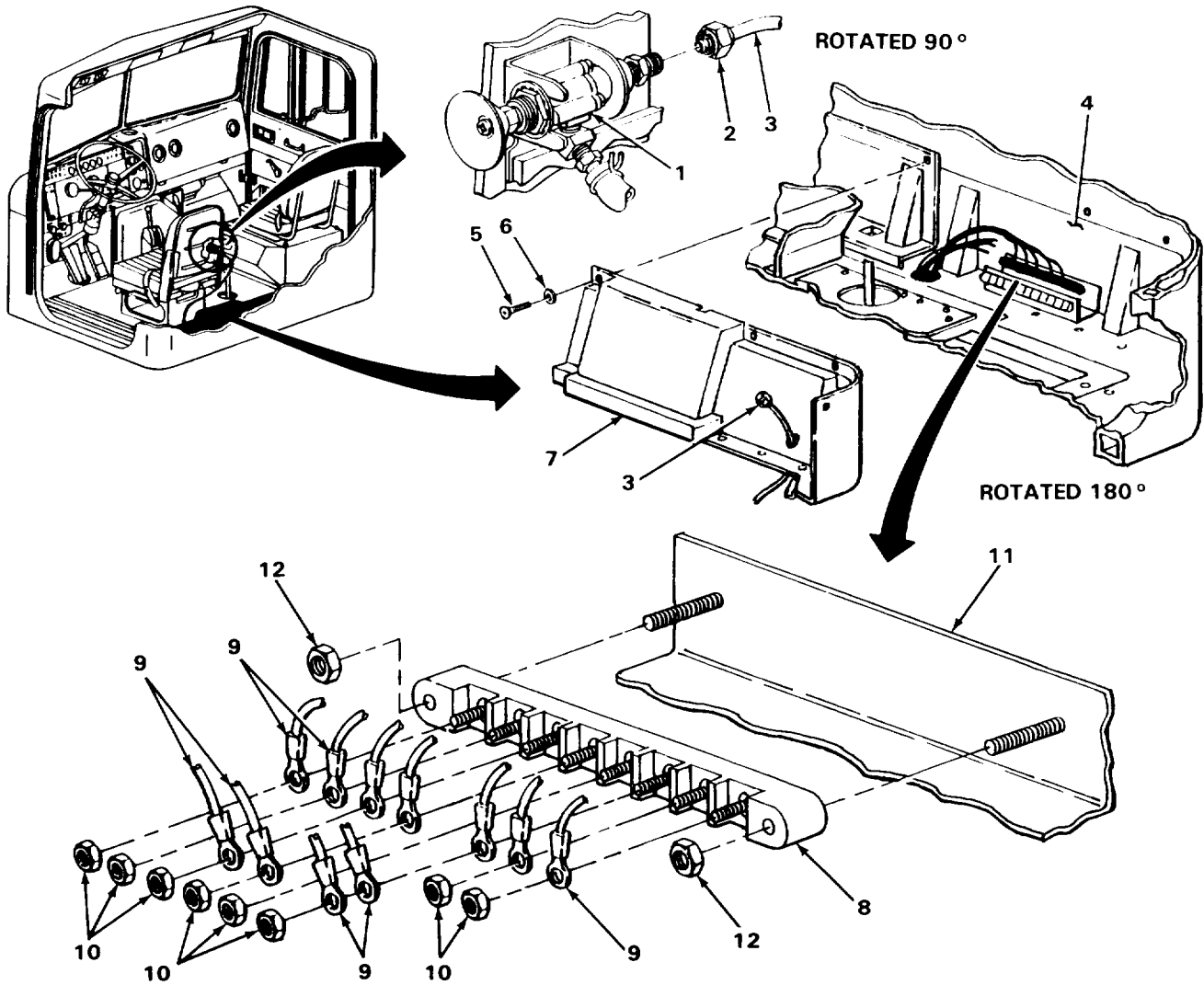
Battery ground cable disconnected (page 2-424).
 Left cab side door opened (page 2-424).
 Airbrake system drained (page 2-1034).

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

REMOVAL

1.	Driver seat valve assembly (1)	Line nut (2) and air line (3)	Using 9/16-inch open-end wrench, unscrew and take off.
2.	Left lower rear molding (4)	Eight screws (5) and eight flat washers (6)	Using number two cross-tip screwdriver, unscrew and take out.
3.	Left side rear cab wall (7)	Air line (3) and left lower rear molding (4)	a. Push air line through hole in molding. b. Take out molding.
4.	Junction box (8)	Eleven wires (9) and eight self-locking nuts (10)	a. Tag wires (page 2-424). b. Using 3/8-inch box-end wrench, unscrew and take off. c. Get rid of self-locking nuts.
5.	Junction box support (11)	Two nuts (12) and junction box (8)	Using 7/16-inch box-end wrench, unscrew and take off.

REAR REAR OF CAB JUNCTION BOX - CONTINUED

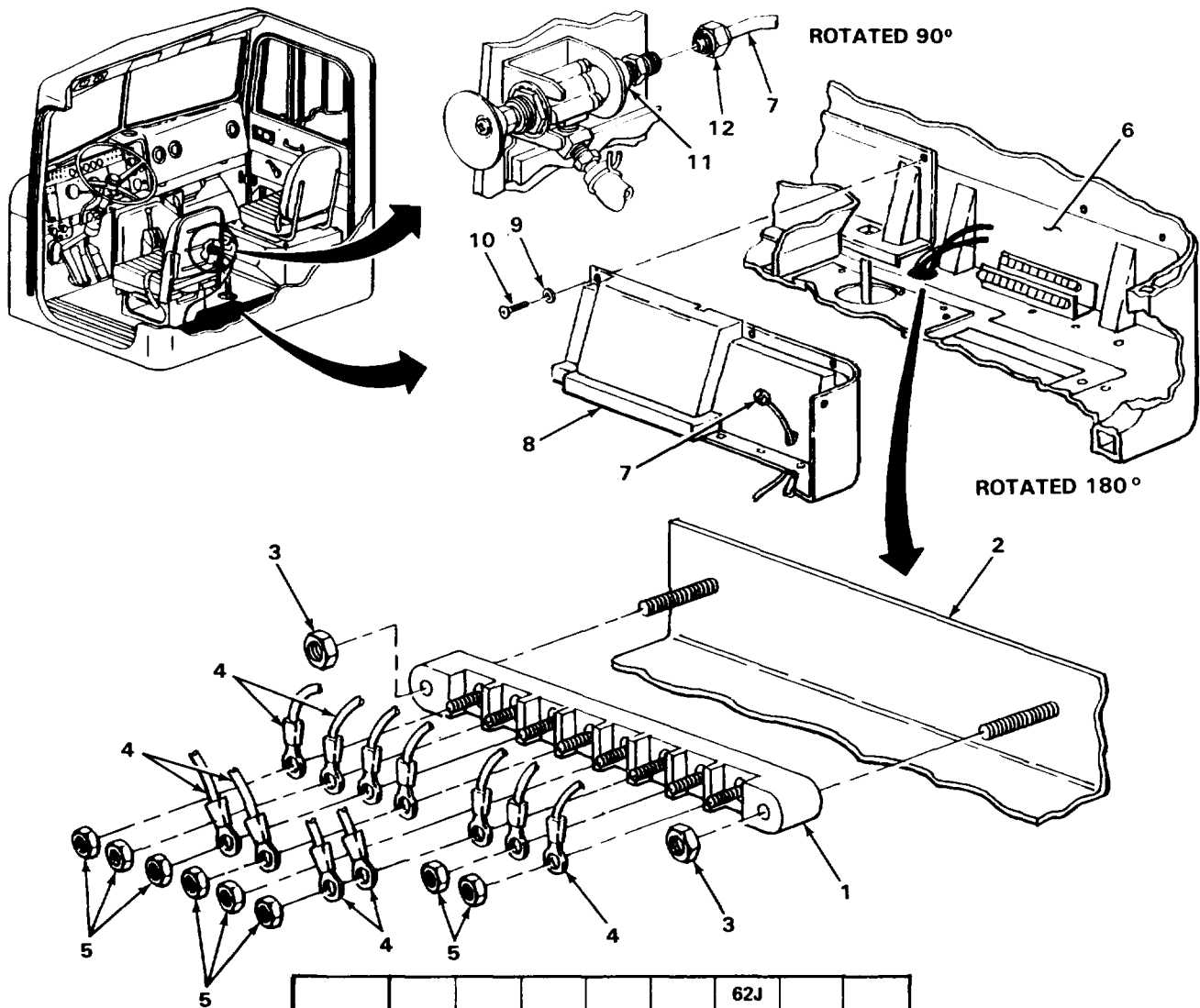


TA244195

REAR REAR OF CAB JUNCTION BOX - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSPECTION/REPLACEMENT			
NOTE			
Replace all damaged or defective parts.			
For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).			
6.	Junction box (1)		Look for cracks, breaks, or corrosion.
7.	All threaded parts		Look for damaged threads or rounded heads.
INSTALLATION			
8.	Junction box support (2)	Junction box (1) and two nuts (3)	a. Put junction box in place. b. Screw on and tighten using 7/16-inch box-end wrench.
9.	Junction box (1)	Eleven wires (4) and eight new self-locking nuts (5)	a. Put wires in place. See table below. b. Screw on and tighten using 3/8-inch box-end wrench. c. Take off tags. d. Get rid of tags.
10.	Left side rear cab wall (6)	Air line (7) and left lower rear molding (8)	a. Push air line through hole in molding. b. Put molding in place.
11.	Left lower rear molding (8)	Eight flat washers (9) and eight screws (10)	Screw in and tighten using number two cross-tip screwdriver.
12.	Driver seat valve assembly (11)	Air line (7) and line nut (12)	a. Put line in place. b. Screw on and tighten using 9/16-inch open-end wrench.

REAR REAR OF CAB JUNCTION BOX - CONTINUED



WIRE			14YL	14GN		62J		
	70B	70D	56B	57B		68A	68A	58B
POST	8	7	6	5	4	3	2	1

NOTE

FOLLOW-ON MAINTENANCE:

1. Connect battery ground cable (page 2-424).
2. Close left cab door (page 2-424).

TASK ENDS HERE

TA244196

LEFT STOPLIGHT/TAILLIGHT ASSEMBLY

This task covers:

- a. Removal (page 2-788)
 - b. Disassembly (page 2-788)
 - c. Inspection/Replacement (page 2-789)
 - d. Assembly (page 2-790)
 - e. Installation (page 2-790)
-

INITIAL SETUP

Tools

Screwdriver, cross-tip, number one
Wrench, box-end, 7/16-inch

Personnel Required

One

Materials/Parts

Gasket, lens, stoplight/taillight assembly
Lockwasher, stoplight/taillight assembly
(three required)
Tags, marker (item 21, appendix C)

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
1.	Stoplight/taillight assembly (1)	Terminal cover (2) and four screws (3)
		Using number one cross-tip screwdriver, unscrew and take out.
2.	Seven wires (4)	
		a. Tag wires (page 2-424). b. Take off.
3.	Bracket (5)	Stoplight/taillight assembly (1), three nuts (6), and three lockwashers (7)
		a. Hold stoplight/taillight assembly. b. Using 7/16-inch box-end wrench, unscrew and take out. c. Get rid of lockwashers.
DISASSEMBLY		
4.	Stoplight/taillight assembly (1) gasket (10)	Four screws (8), lens (9), and
		a. Using number one cross-tip screwdriver, unscrew and take out. b. Get rid of gasket.
5.	Tail, turn, and stop lamp (11)	
		Push in, turn counterclockwise, and take out.
6.	Backup lamp (12)	
		Push in, turn counterclockwise, and take out.

LEFT STOPLIGHT/TAILLIGHT ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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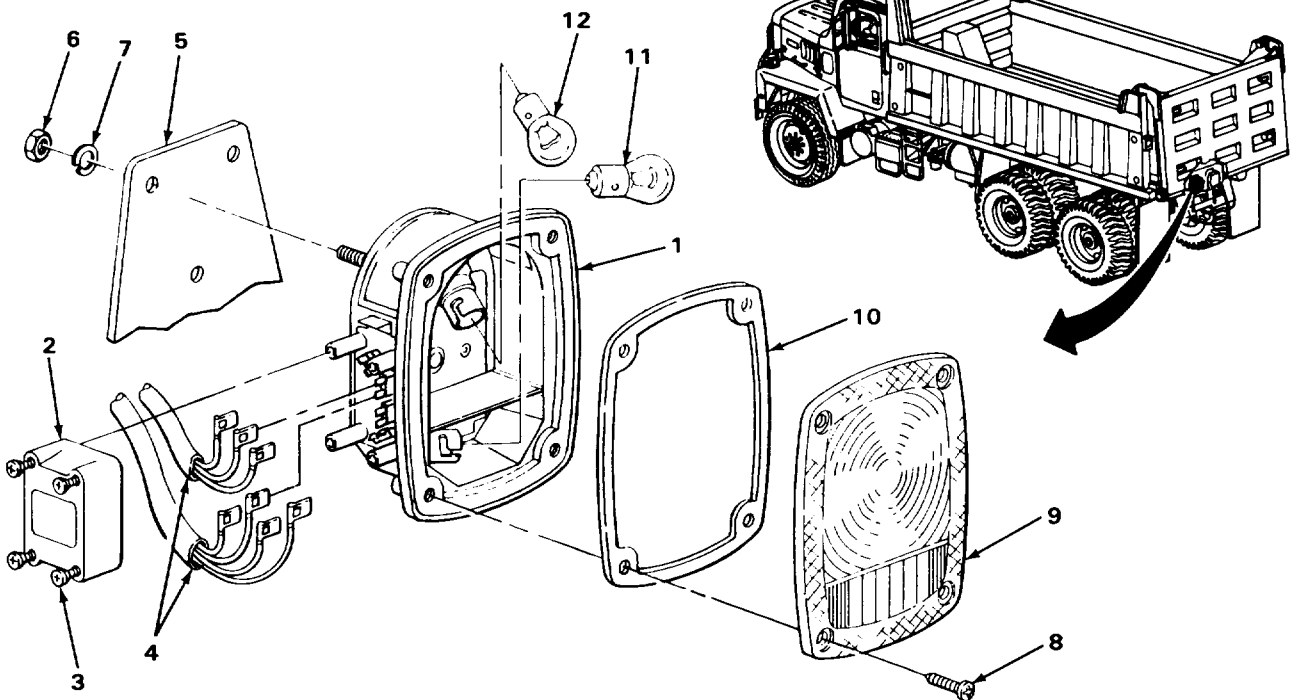
INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

- | | | |
|----|---|--|
| 7. | Stoptlight/taillight assembly (1), lens (9), and terminal cover (2) | Look for cracks, breaks, or corrosion. |
| 8. | All threaded parts heads. | Look for damaged threads or rounded |

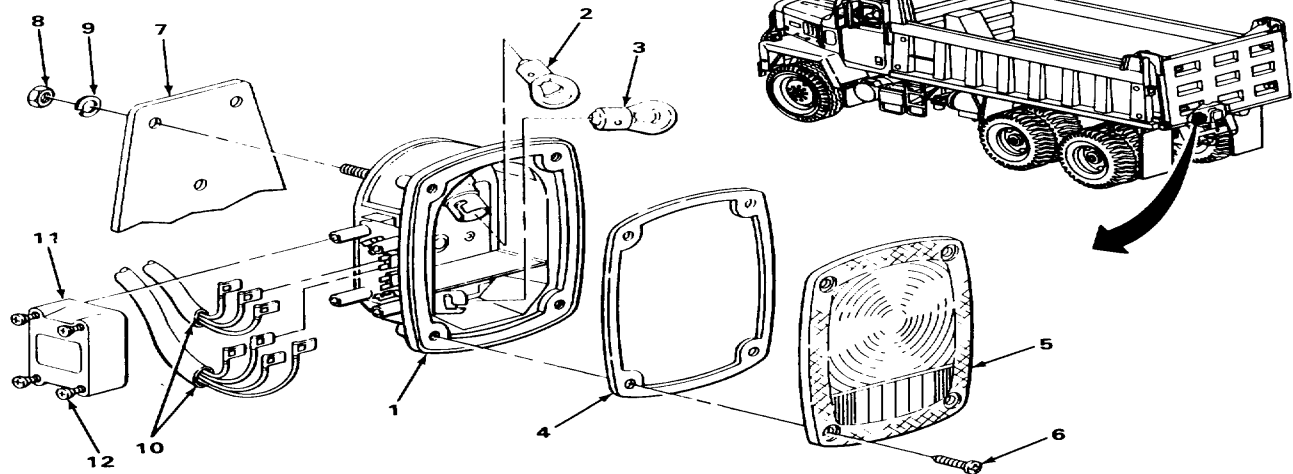


TA244197

LEFT STOPLIGHT/TAILLIGHT ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
ASSEMBLY			
9.	Stoplight/taillight	Backup lamp (2) assembly (1)	a. Aline pins on lamp with slots in stoplight/taillight assembly. b. Push in, turn clockwise, and release.
10.		Tail, turn, and stop lamp (3)	a. Aline pins on lamp with slot in stoplight/taillight assembly. b. Push in, turn clockwise, and release. If lamp will not turn, take out, turn 180 degrees, and repeat a and b.
11.		New gasket (4), lens (5), and four screws (6)	a. Put gasket in place. b. Put lens in place. c. Screw in and tighten using number one cross-tip screwdriver.
INSTALLATION			
NOTE			
Taillight and bracket mating surfaces must be free of paint, dirt, and grease to ensure proper ground.			
12.	Bracket (7)	Stoplight/taillight assembly (1), three nuts (8), and three new lockwashers (9)	a. Hold stoplight/taillight assembly in place. b. Screw in and tighten using 7/16 inch box-end wrench.
13.	Stoplight/taillight (1)	Seven wires (10)	a. Put wires in correct position and push on. b. Take off tags. c. Get rid of tags.
14.		Terminal cover (11) and four screws (12)	a. Put cover in place. b. Screw in and tighten using number one cross-tip screwdriver.

LEFT STOPLIGHT/TAILLIGHT - CONTINUED



TASK ENDS HERE

RIGHT STOPLIGHT/TAILLIGHT ASSEMBLY

This task covers:

- a. Removal (page 2-792)
- b. Disassembly (page 2-792)
- c. Inspection/Replacement (page 2-792)
- d. Assembly (page 2-793)
- e. Installation (page 2-794)

INITIAL SETUP

Tools

Screwdriver, cross-tip, number one
Wrench, box-end, 7/16-inch

Personnel Required

One

Materials/Parts

Gasket, lens, stoplight/taillight assembly
Lockwasher, stoplight/taillight assembly
(three required)
Tags, marker (item 21, appendix C)

TA244198

RIGHT STOPLIGHT/TAILLIGHT - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1.	Stoplight/taillight assembly (1)		Using number one cross-tip screwdriver, unscrew and take out.
2.		Three wires (4)	a. Tag wires (page 2-424). b. Take off.
3.	Bracket (5)	Stoplight/taillight assembly (1), three nuts (6), and three lockwashers (7)	a. Hold stoplight/taillight. b. Using 7/16-inch box-end wrench, unscrew and take out. c. Get rid of lockwashers.
DISASSEMBLY			
4.	Stoplight/taillight (1) gasket (10)	Four screws (8), lens (9), and	a. Using number one cross-tip screwdriver, unscrew and take out. b. Get rid of gasket.
5.		Tail, turn, and stop lamp (11)	Push in, turn counterclockwise, and take out.
6.		Backup lamp (12) out.	Push in, turn counterclockwise, and take out.

INSPECTION/REPLACEMENT

NOTE

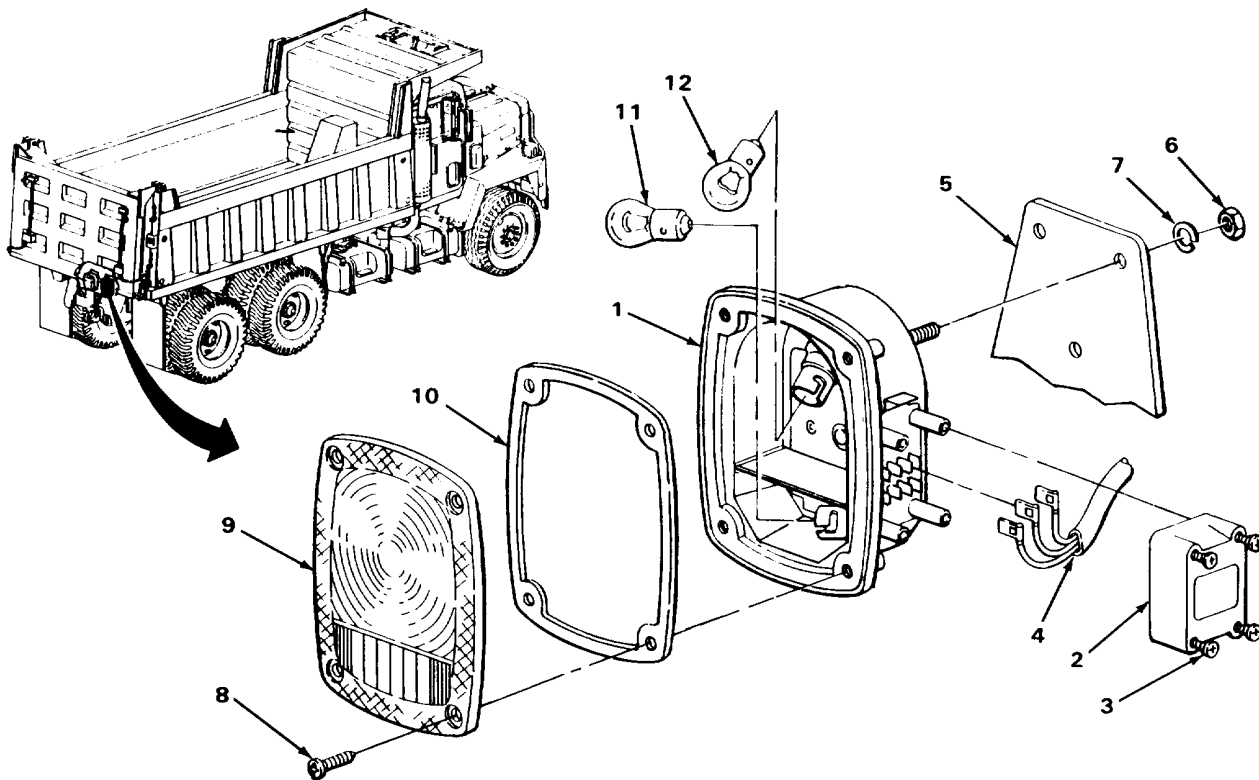
Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

- | | | |
|----|---|--|
| 7. | Stoplight/taillight (1), lens (9), and terminal cover (2) | Look for cracks, breaks, or corrosion. |
| 8. | All threaded parts | Look for damaged threads or rounded heads. |

RIGHT STOPLIGHT/TAILLIGHT - CONTINUED

LOCATION	ITEM	ACTION REMARKS
ASSEMBLY		
9. Stoplight/taillight assembly (1)	Backup lamp (12)	a. Aline pins on lamp with slot in stoplight/taillight assembly. b. Push in, turn clockwise, and release.
10. Tail, turn, and	stop lamp (11)	a. Aline pins on lamp with slot in stoplight/taillight assembly. b. Push in, turn clockwise, and release. If lamp will not turn, take out, turn 180 degrees, and repeat a and b.
11.	New gasket (10), lens (9), and four screws (8)	a. Put gasket in place. b. Put lens in place. c. Screw in and tighten using number one cross-tip screwdriver.



TA244199

RIGHT STOPLIGHT/TAILLIGHT ASSEMBLY - CONTINUED

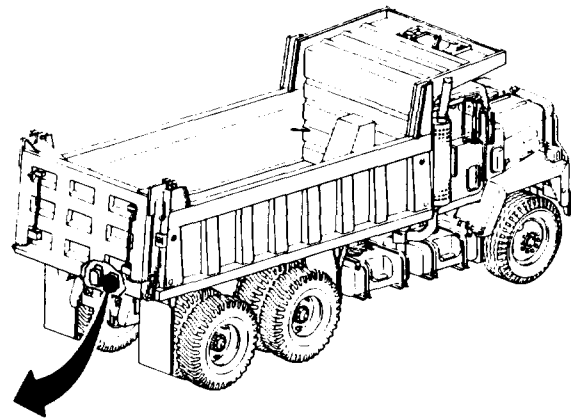
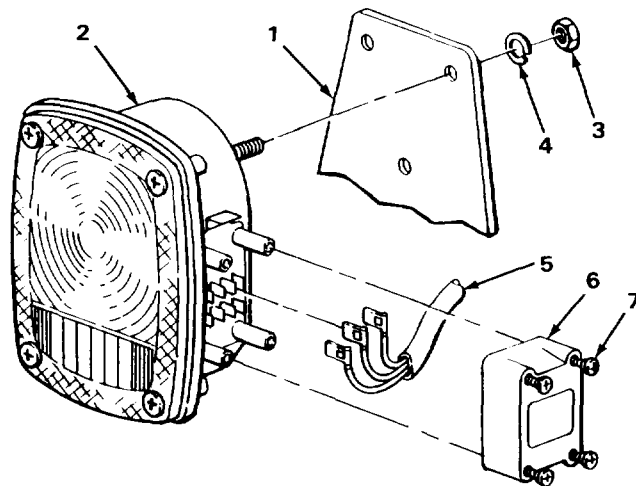
LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION

NOTE

Stoptlight/taillight assembly and bracket mating surfaces must be free of paint, dirt, and grease to ensure proper ground.

- | | | |
|---------------------------------------|--|--|
| 12. Bracket (1) | Stoptlight/taillight assembly (2), three nuts (3), and three new lockwashers (4) | <ul style="list-style-type: none"> a. Hold stoptlight/taillight assembly in place. b. Screw in and tighten using 7/16-inch box-end wrench. |
| 13. Stoptlight/taillight assembly (2) | Three wires (5) | <ul style="list-style-type: none"> a. Put wires in correct position and push on. b. Take off tags. c. Get rid of tags. |
| 14. | Terminal cover (6) and four screws (7) | <ul style="list-style-type: none"> a. Put cover in place. b. Screw in and tighten using number one cross-tip screwdriver. |



TASK ENDS HERE

TA244200

FRONT TURN SIGNAL

This task covers:

- a. Removal (page 2-795)
- b. Disassembly (page 2-796)
- c. Inspection/Replacement (page 2-796)
- d. Assembly (page 2-797)
- e. Installation (page 2-799)

INITIAL SETUP

Tools

Screwdriver, cross-tip, number one
Wrench, box-end, 1/2-inch (two required)

Materials/Parts

Gasket, lens (two required)
Gasket, marker lens

Materials/Parts - Continued

Lockwasher, mounting (four required)
Pad, mounting

Personnel Required

One

LOCATION	ITEM	ACTION	REMARKS
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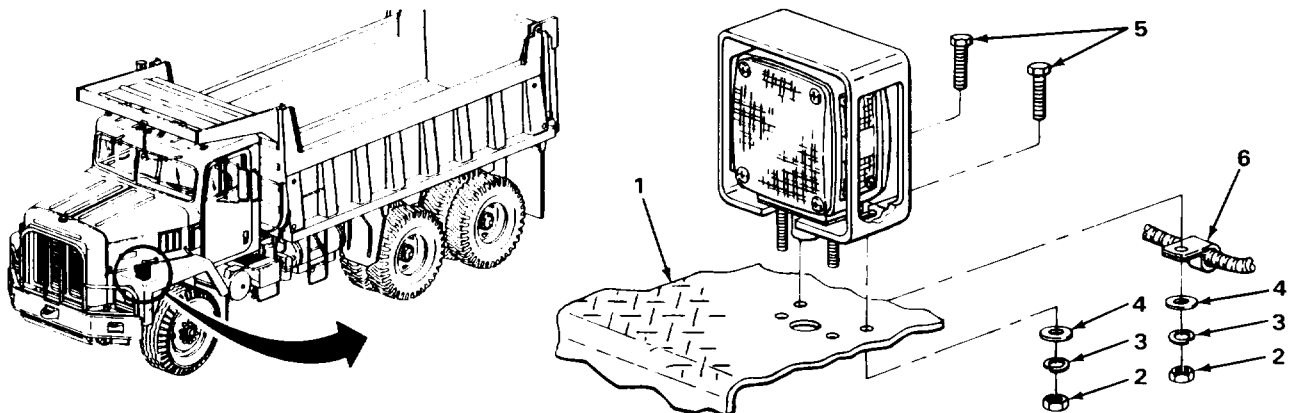
REMOVAL

NOTE

Steps given are typical for both left and right front turn signals.

- 1. Front fender (1) Four nuts (2), four lockwashers (3), four flat washers (4), two screws (5), and clamp (6)

- a. Using two 1/2-inch open-end wrenches, unscrew and take off.
- b. Get rid of lockwashers.



TA244201

FRONT TURN SIGNAL - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
2.	Turn signal (1)	Connector (2)	Pull out.
3.	Front fender (3)	Turn signal (1), and guard (4)	Take off.
DISASSEMBLY			
4.	Guard (4)	Turn signal (1)	Take out.
5.	Turn signal (1)	Mounting pad (5)	a. Take off. b. Get rid of.
6.		Four screws (6), amber lens (7), and gasket (8)	a. Using number one cross-tip screw- driver, unscrew and take out. b. Get rid of gasket.
7.		Four screws (9), red lens (10), and gasket (11)	a. Using number one cross-tip screw- driver, unscrew and take out. b. Get rid of gasket.
8.		Four screws (12), marker lens (13), and gasket (14)	a. Using number one cross-tip screw- driver, unscrew and take out. b. Get rid of gasket.
9.		Turn signal lamp (15)	Push in, turn counterclockwise and take out.
10.		Marker lamp (16) out.	Push in, turn counterclockwise and take out.

INSPECTION/REPLACEMENT

NOTE

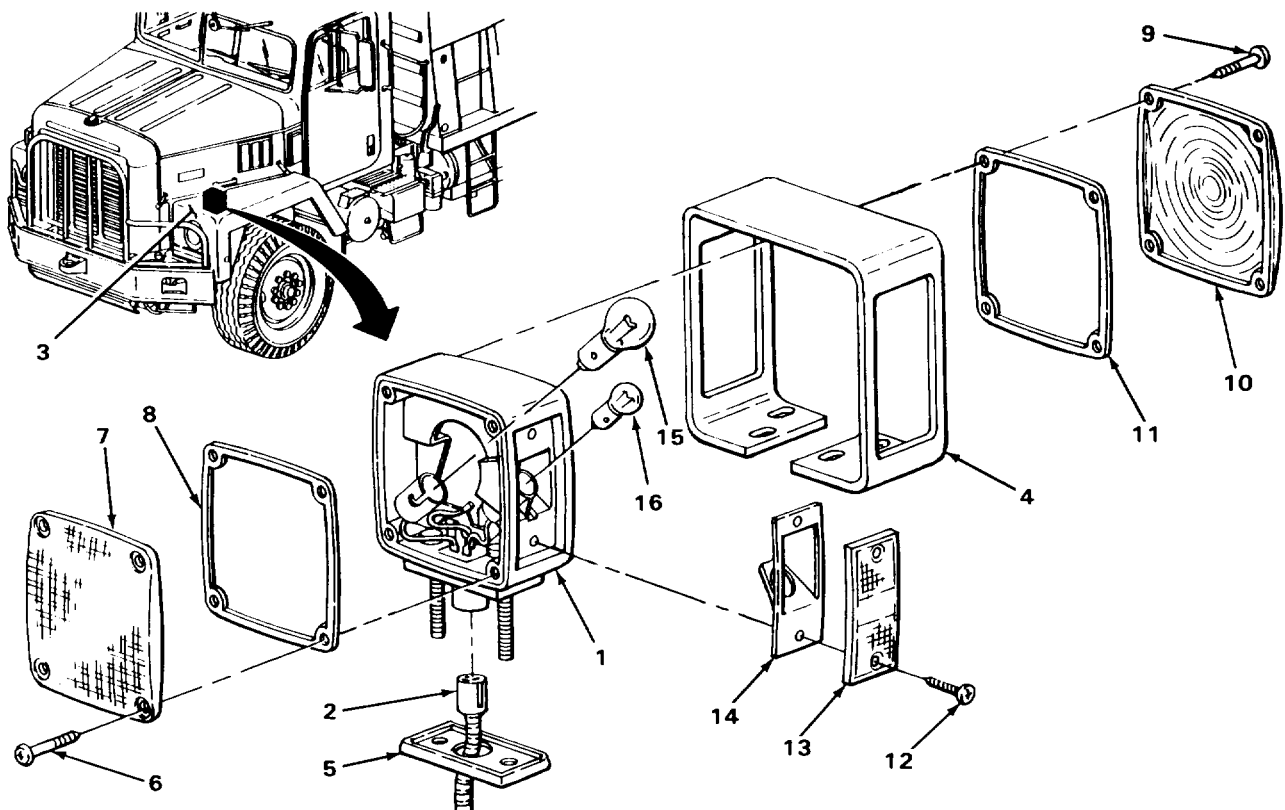
Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

11.	Turn signal (1), and lenses (7,10, and 13)	Look for cracks, breaks or corrosion.
12.	All threaded parts	Look for damaged threads or rounded heads.

FRONT TURN SIGNAL - CONTINUED

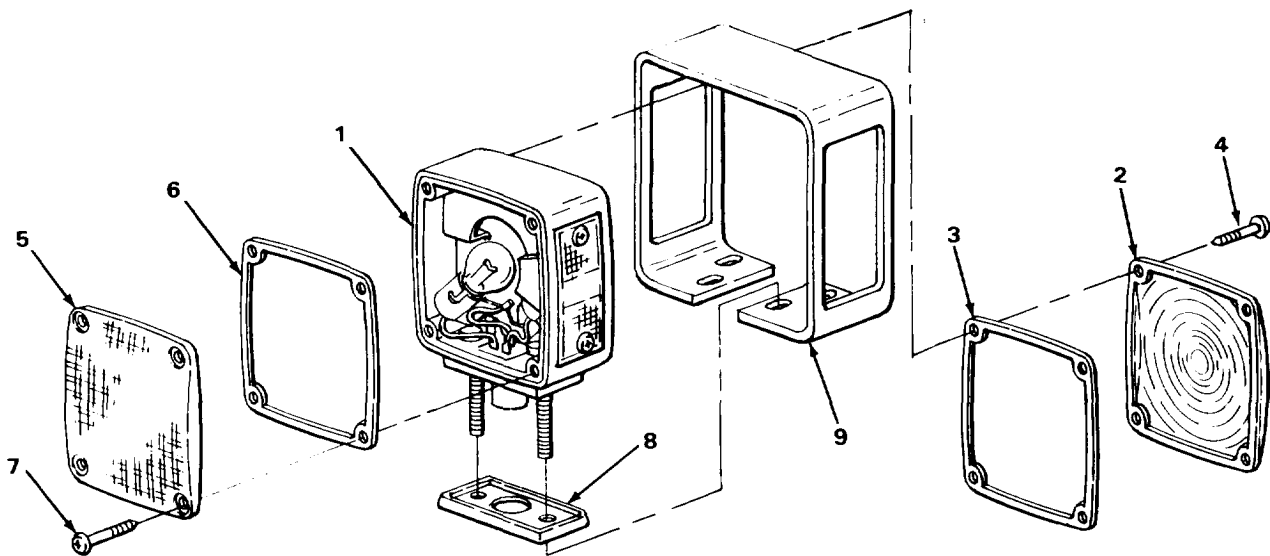
LOCATION	ITEM	ACTION REMARKS
ASSEMBLY		
13. Turn signal (1)	Marker lamp (16)	a. Aline pins on lamp with slot in turn signal. b. Push in, turn clockwise and release.
14.	Turn signal lamp (15)	a. Aline pins on lamp with slot in turn signal. b. Push in, turn clockwise and release.
15.	Marker lens (13), new gasket (14), and four screws (12)	a. Put gasket in place. b. Put lens in place. c. Screw in and tighten using number one cross-tip screwdriver.



TA244202

FRONT TURN SIGNAL - CONTINUED

LOCATION	ITEM	ACTION REMARKS
ASSEMBLY - CONTINUED		
16. Turn signal (1)	Red lens (2), new gasket (3), and four screws (4) cross-tip screwdriver.	a. Put gasket in place. b. Put lens in place. c. Screw in and tighten using number one
17.	Amber lens (5), new gasket (6), and four screws (7) cross-tip screwdriver.	a. Put gasket in place. b. Put lens in place. c. Screw in and tighten using number one
18.	New mounting pad (8)	Put in place.
19. Guard (9)	Turn signal (1)	Put in.



TA244203

FRONT TURN SIGNAL - CONTINUED

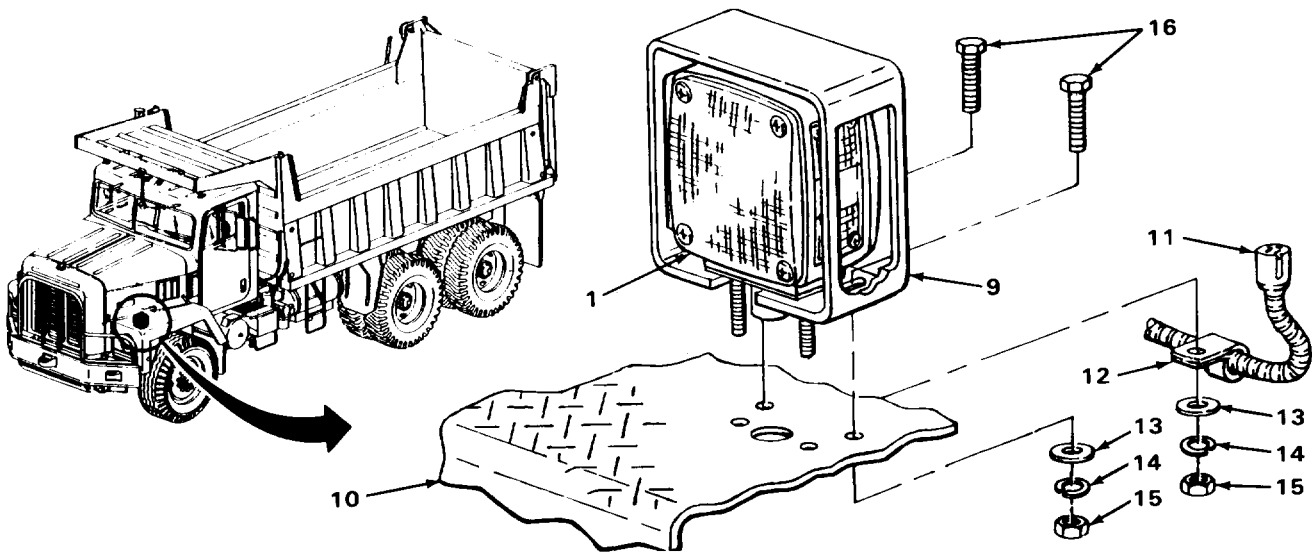
LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION

NOTE

Steps given are typical for both left and right front turn signals.

20. Front fender (10) and guard (9)	Turn signal (1)	Put in place and hold.	
21. Turn signal (1)	Connector (11)	Push in.	
22. Front fender(10)	Clamp (12), four flat washers (13), four new lockwashers (14), four nuts (15), and two screws (16)	a. Put clamp in place. b. Screw on and tighten using two 1/2-inch box-end wrenches.	



TASK ENDS HERE

FRONT MARKER LIGHT

This task covers:

- a. Removal (page 2-800)
- b. Inspection/Replacement (page 2-800)
- c. Installation (page 2-801)

TA244204

FRONT MARKER LIGHT - CONTINUED

INITIAL SETUP

Tools	Personnel Required
Screwdriver, cross-tip, number one	One
Materials/Parts	
Gasket, lens	

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

REMOVAL

NOTE

Steps given are typical for both left and right front marker lights.
 This procedure is limited to the replacement of lens, gasket, and lamp.

- | | | | |
|----|-----------------|---|---|
| 1. | Turn signal (1) | Four screws (2), lens (3), and gasket (4) | a. Using number one cross-tip screwdriver, unscrew and take out.
b. Get rid of gasket. |
| 2. | | Marker lamp (5) | Push in, turn counterclockwise and take out. |

INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.
 For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

- | | | |
|----|--------------------|---|
| 3. | Lens (3) | Look for cracks or breaks. |
| 4. | Turn signal (1) | Look for cracks, breaks or corrosion.
If defective, replace front turn signal (page 2-795). |
| 5. | All threaded parts | Look for damaged threads or rounded heads. |

FRONT MARKER LIGHT - CONTINUED

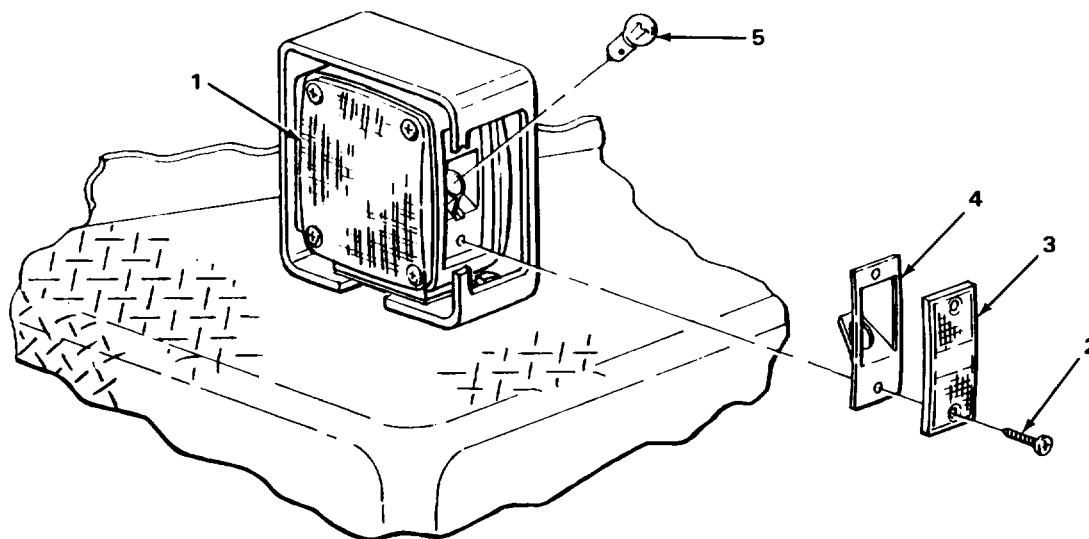
LOCATION	ITEM	ACTION REMARKS
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INSTALLATION

NOTE

Steps given are typical for both left and right front marker lights.

- | | | | |
|----|-----------------|---|---|
| 6. | Turn signal (1) | Marker lamp (5) | <ul style="list-style-type: none"> a. Aline pins on lamp with slot in turn signal. b. Push in, turn clockwise and release. |
| 7. | | New gasket (4), lens (3), and four screws (2) | <ul style="list-style-type: none"> a. Put gasket in place. b. Put lens in place. c. Screw in and tighten using number one cross-tip screwdriver. |



TASK ENDS HERE

CAB ROOF MARKER LIGHT AND CLEARANCE LIGHT

This task covers:

- a. Removal (page 2-802)
- b. Inspection/Replacement (page 2-804)
- c. Installation (page 2-804)

CAB ROOF MARKER LIGHT AND CLEARANCE LIGHT - CONTINUED

INITIAL SETUP

Tools

Screwdriver, cross-tip, number one
 Screwdriver, cross-tip, number two
 Screwdriver, flat-tip, 3/16-inch

Personnel Required

One

Materials/Parts

Gasket, lens

LOCATION	ITEM	ACTION REMARKS
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REMOVAL

NOTE

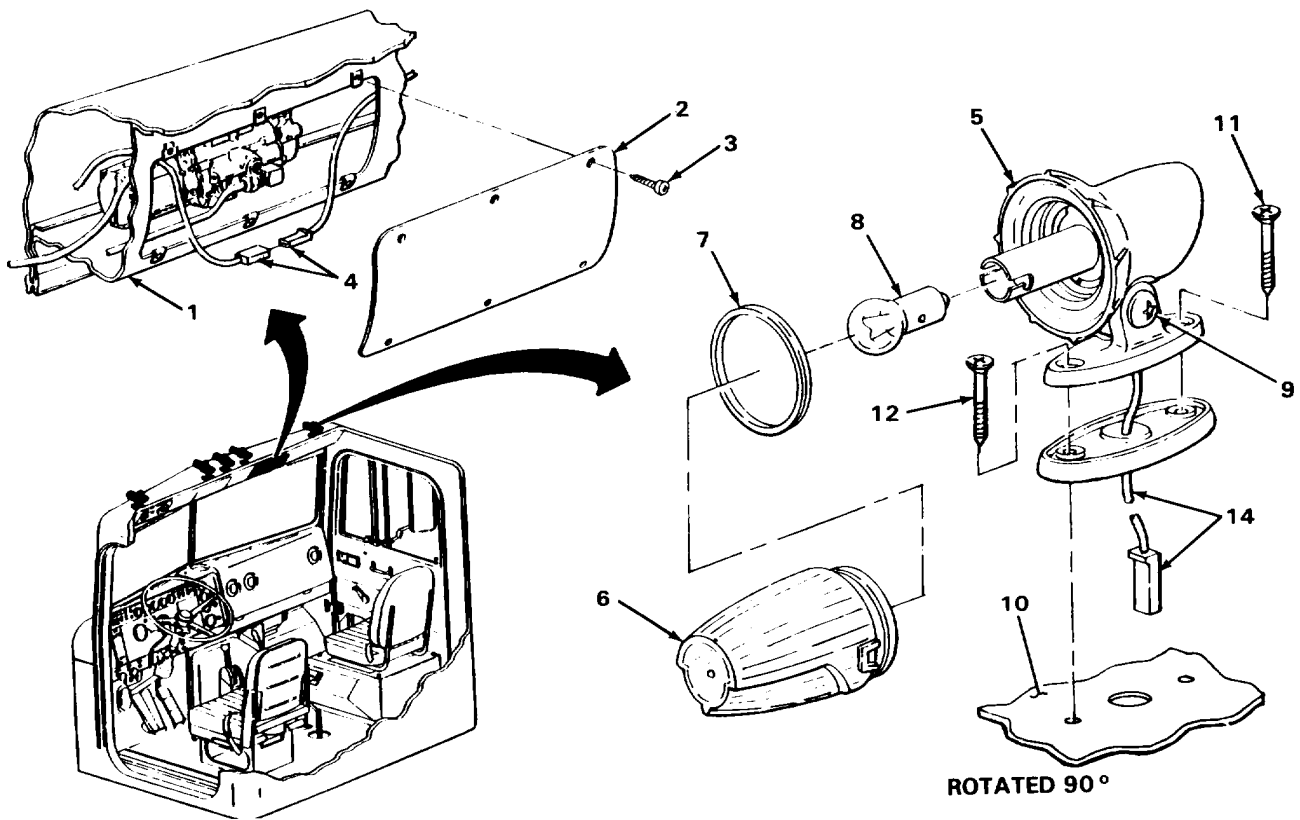
Steps given are typical for both marker lights and clearance lights.

Take off cover nearest to marker light or clearance light to be removed.

1. Cab ceiling (1)	Cover (2) and six screws (3)	Using number one cross-tip screwdriver, unscrew and take out.
2.	Connector (4)	Pull apart.
3. Marker light body (5)	Lens (6) and gasket (7)	a. Using 3/16-inch flat-tip screwdriver, out. b. Get rid of gasket.
4.	Lamp (8)	Push in, turn counterclockwise and take out.
5.	Adjustment screw (9)	Using 3/16-inch flat-tip screwdriver, loosen.
6. Cab roof (10)	Marker light body (5)	Bend forward.
7. Marker light body (5)	Rear screw (11)	Using number two cross-tip screwdriver, unscrew and take out.
8. Cab roof (10)	Marker light body (5)	Bend to rear.

CAB ROOF MARKER LIGHT AND CLEARANCE LIGHT - CONTINUED

LOCATION	ITEM	ACTION REMARKS
9. Marker light body (5)	Front screw (12)	Using number two cross-tip screwdriver, unscrew and take out.
10. Cab roof (10)	Marker light body (5), pad (13), and wire (14)	Pull up and take out.



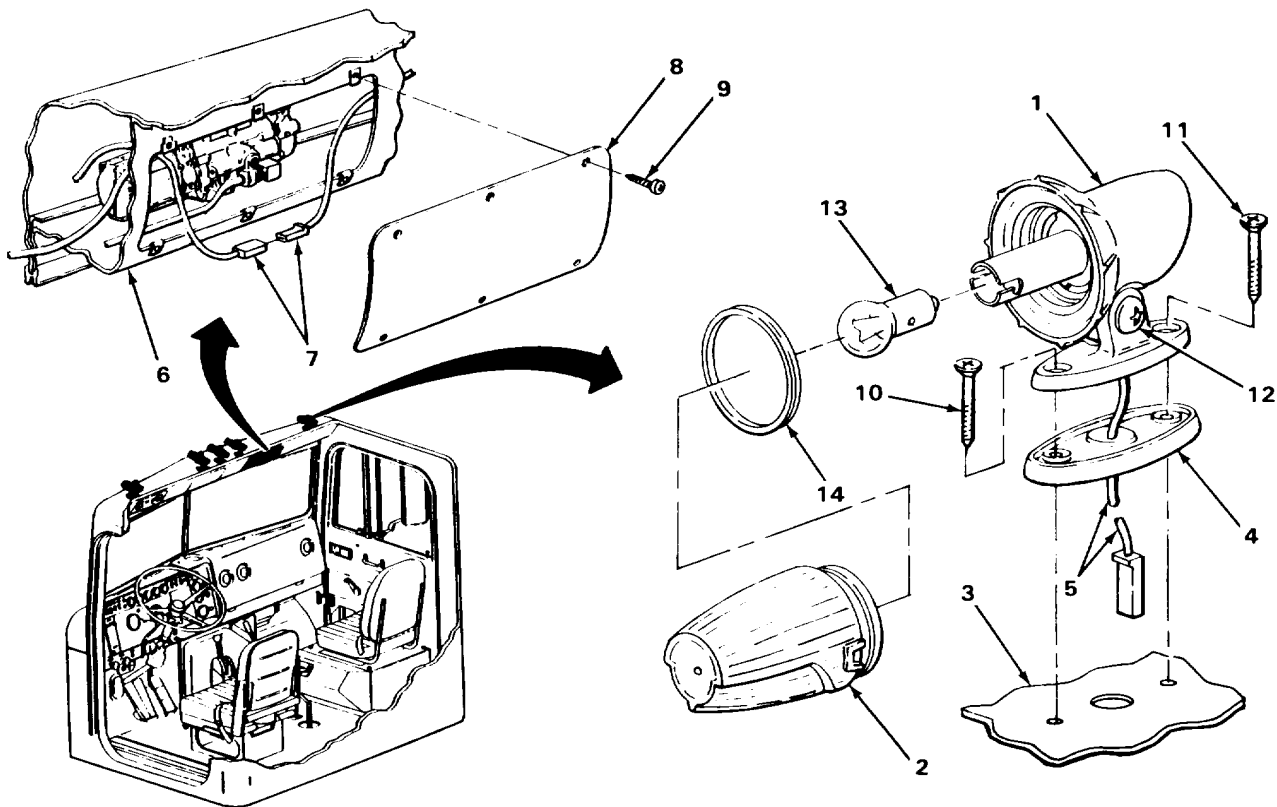
TA244206

CAB ROOF MARKER LIGHT AND CLEARANCE LIGHT - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSPECTION/REPLACEMENT		
NOTE		
Replace all damaged or defective parts.		
For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).		
11.	Marker light body (1)	Look for cracks, breaks or corrosion.
12.	Lens (2)	Look for cracks or breaks.
13.	All threaded parts	Look for damaged threads or rounded heads.
INSTALLATION		
NOTE		
Steps given are typical for both marker lights and clearance lights.		
14. Cab roof (3)	Marker light body (2), pad (4), and wire (5)	a. Put wire through hole in pad. b. Put wire through hole in roof. c. Put marker light in place.
15. Cab ceiling (6)	Connector (7)	Push together.
16.	Cover (8) and six screws (9)	a. Put cover in place. b. Screw in and tighten using number one cross-tip screwdriver.
17. Cab roof (3)	Marker light body (1)	Bend to rear.
18. Marker light body (1)	Front screw (10)	Screw in and tighten using number two cross-tip screwdriver.
19. Cab roof (3)	Marker light body (1)	Bend forward.
20. Marker light body (1)	Rear screw (11)	Screw in and tighten using number two cross-tip screwdriver.
21. Cab roof (3)	Marker light body (1) and adjustment screw (12)	a. Bend light into position. b. Tighten adjustment screw using 3/16-inch flat-tip screwdriver.

CAB ROOF MARKER LIGHT AND CLEARANCE LIGHT - CONTINUED

LOCATION	ITEM	ACTION REMARKS
22. Marker light body (1)	Lamp (13)	a. Aline pins on lamp with slots in marker light body. b. Push in, turn clockwise and release.
23.	New gasket (14) and lens (2)	a. Put gasket in place. b. Push on and snap in place.



TASK ENDS HERE

TA244207

DUMP BODY MARKER LIGHT

This task covers:

- a. Removal (page 2-806)
 - b. Installation (page 2-806)
-

INITIAL SETUP

Tools

Screwdriver, flat-tip, 3/16-inch

Personnel Required

One

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

REMOVAL

NOTE

Steps given are typical for seven body marker lights.

- | | | |
|---------------------|------------------|--|
| 1. Dump body (1) | Marker light (2) | Using 3/16-inch flat-tip screwdriver, pry out. |
| 2. Marker light (2) | Connector (3) | Pull apart. |

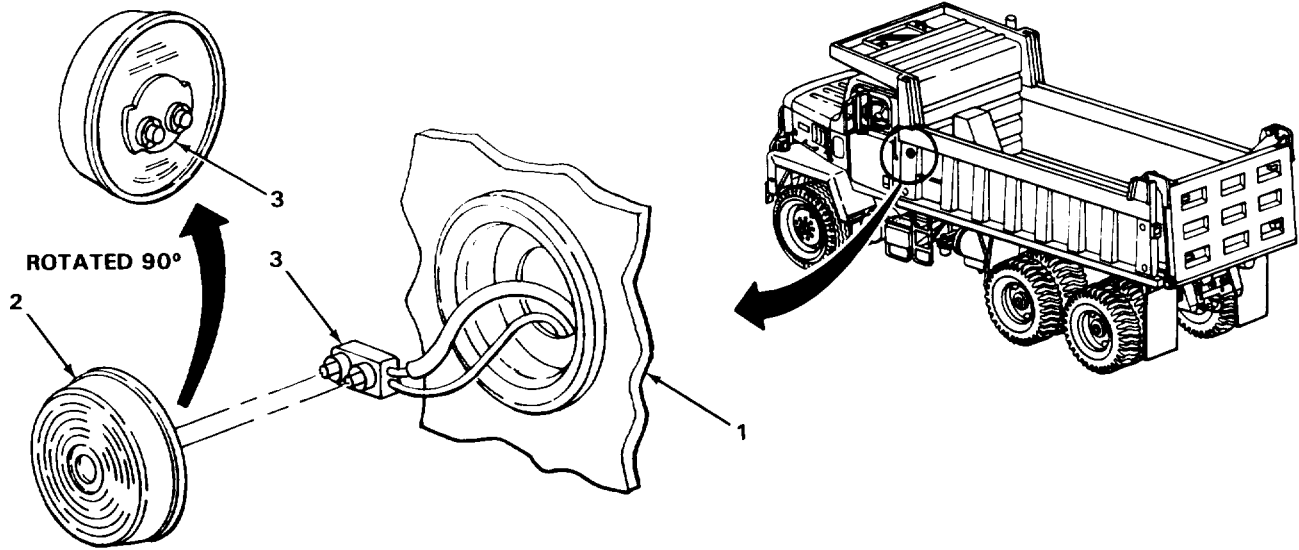
INSTALLATION

NOTE

Steps given are typical for seven body marker lights.

- | | | |
|---------------------|------------------|-------------------|
| 3. Marker light (2) | Connector (3) | Push together. |
| 4. Dump body (1) | Marker light (2) | Press into place. |

DUMP BODY MARKER LIGHT - CONTINUED



TASK ENDS HERE

HEADLIGHT ASSEMBLY

This task covers:

- a. Removal (page 2-808)
- b. Inspection/Replacement (page 2-810)
- c. Installation (page 2-810)
- d. Alinement (page 2-812)

INITIAL SETUP

Tools

- Chalk
- Pliers, longnose, 6-inch
- Screwdriver, cross-tip, number one
- Screwdriver, flat-tip, 3/16-inch
- Square, carpenter's
- Tape, measure, 50-foot

Materials/Parts

- Gasket, fender basket

Personnel Required

Two

TA244208

HEADLIGHT ASSEMBLY - CONTINUED

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

REMOVAL

WARNING

Use care when removing damaged headlight assembly, broken glass or sharp metal could cut you.

NOTE

Steps given are typical for both left and right headlight assemblies.

To remove lamp only perform steps 1 thru 4.

- | | | |
|---------------|-------------------------|--|
| 1. Fender (1) | Bezel (2) and screw (3) | <ul style="list-style-type: none"> a. Using number one cross-tip screwdriver, unscrew and take out screw. b. Lift up and take off bezel. |
|---------------|-------------------------|--|

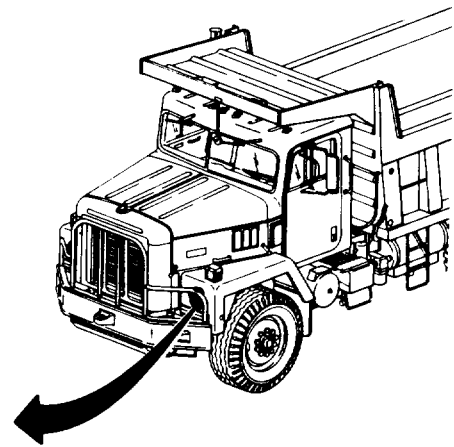
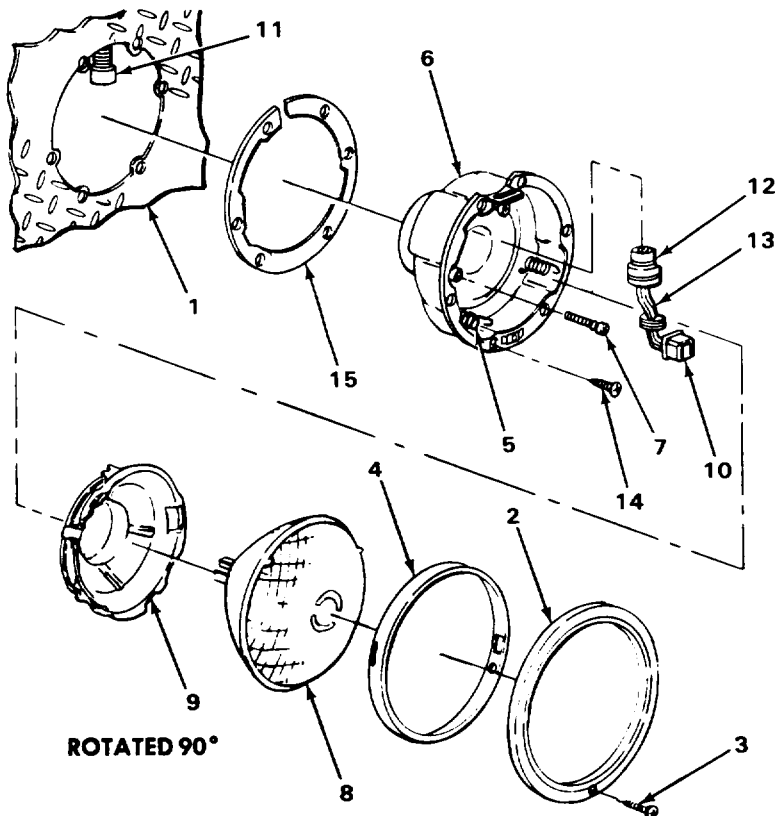
NOTE

Hold retaining ring, lamp, and adjustment basket in place when performing step 2.

- | | | |
|--|---|---|
| 2. Ring (4) | Spring (5) | Using 6-inch longnose pliers, unhook and take off. |
| 3. Fender basket (6) and two adjustment screws (7) | Ring (4), lamp (8), and adjustment basket (9) | <ul style="list-style-type: none"> a. Lift up from fender basket recess. b. Take out and hold. c. Lift up and take off retaining ring. |
| 4. Connector (10) | Lamp (8) and adjustment basket (9) | <ul style="list-style-type: none"> a. Pull apart and take out lamp. b. Take out adjustment basket. |
| 5. Underfender(11) | Connector (12) | Pull apart. |
| 6. Fender basket (6) | Harness (13) | Using 3/16-inch flat-tip screwdriver, pry out. |

HEADLIGHT ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION REMARKS
7.	Two adjustment screws (7)	Using number one cross-tip screwdriver, unscrew and take out.
8. Fender (1)	Four screws (14), fender basket (6), and gasket (15)	a. Using number one cross-tip screwdriver, unscrew and take out. b. Get rid of gasket.



TA244209

HEADLIGHT ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSPECTION/REPLACEMENT		
NOTE		
For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).		
Replace all damaged or defective parts.		
9.	Bezel (1), ring (2), adjustment basket (3), and fender basket (4)	Look for bends, breaks or corrosion.
10.	Fender basket (4)	Spring (5)
		a. Look for loose rivet. b. Look for straightened or broken coils.
11.	Two adjustment screw sockets (6)	a. Look for cracks or breaks. b. Look for loose rivets.
12.	Two adjustment	Look for worn slot or bent shank. screws (7)
13.	Adjustment basket (3)	Adjustment tabs (8) and tongue (9)
		Look for bends, breaks or corrosion.
14.	Harness (10)	Grommet (11)
		Look for cracks, tears or worn groove.
15.	Two connectors (12) and (13)	Look for cracks, breaks or corroded ends.

INSTALLATION

NOTE

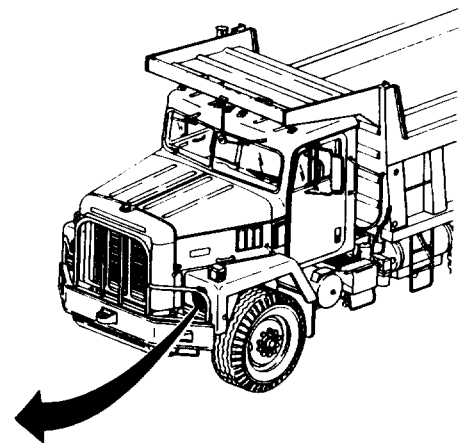
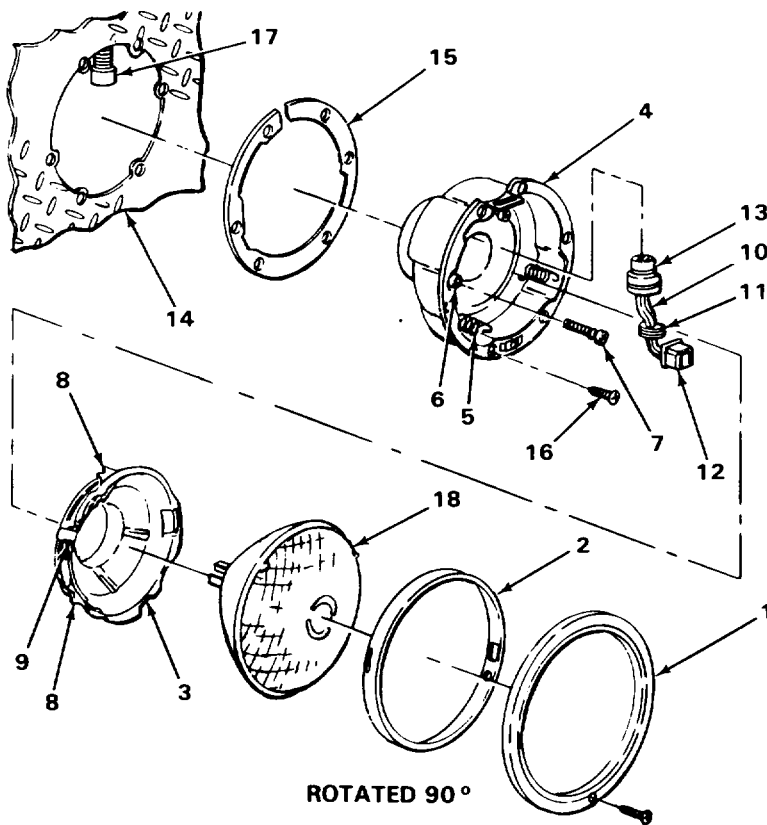
Steps given are typical for both left and right headlight assemblies.

To install lamp only perform steps 21 thru 24.

Install fender basket with harness grommet hole in 12 o'clock position.

HEADLIGHT ASSEMBLY - CONTINUED

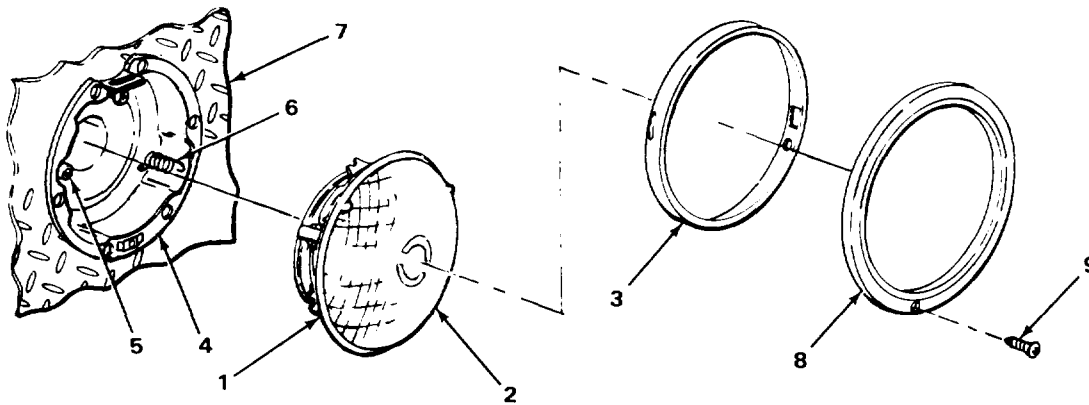
LOCATION	ITEM	ACTION REMARKS
16. Fender (14)	New gasket (15), fender basket (4), and four screws (16)	Screw in and tighten using number one cross-tip screwdriver.
17. Fender basket (4)	Two adjustment screws (7)	Screw in five turns using number one cross-tip screwdriver.
18.	Harness (10)	Press into place.
19. Underfender(17)	Connector(13)	Push together.
20. Connector(12)	Adjustment basket (3) and lamp (18)	a. Put connector through adjustment basket. b. Push together and put in place.



TA244210

HEADLIGHT ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
21. Adjustment basket (1) and lamp (2)	Ring (3)	Align tongue of adjustment basket with slot of ring, push down and snap in place.
22. Fender basket (4) and two adjustment screws (5)	Ring (3), lamp (2), and adjustment basket (1)	Put adjustment basket tabs into adjustment screw slots, push down and hold.
23. Ring (3)	Spring (6)	Hook through hole in ring.
24. Fender (7)	Bezel (8) and screw (9)	a. Put tongue of bezel into slot of fender basket (4), push down and hold. b. Screw in and tighten using number one cross-tip screwdriver.



ALINEMENT

NOTE

This procedure should only be performed when alinement tool or screen is not available.

Headlight alinement must be performed on level surface with wall at one end and in shaded area.

TA244211

HEADLIGHT ASSEMBLY - CONTINUED

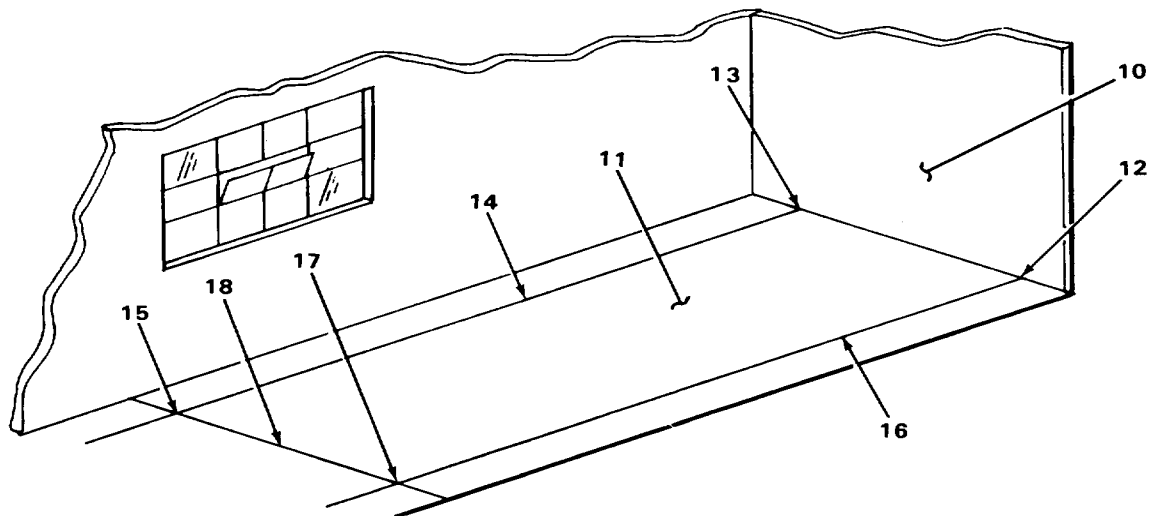
LOCATION	ITEM	ACTION REMARKS
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NOTE

The purpose of steps 25, 26, and 27 is to make sure that both left and right headlights are equally 25 feet (7.6 meters) from wall or screen.

Assistance will be needed to perform this task.

25. Level area and wall (10)	Floor (11)	<ul style="list-style-type: none"> a. Using chalk, make mark (12) where wall meets floor. b. Using 50-foot tape measure and chalk, measure 6 feet 5 1/2 inches (1.97 m) to left of mark (12) and make mark (13) where wall meets floor. c. Using carpenter's square, 50-foot tape measure and chalk, measure straight out from mark (13) 27 feet 11 1/2 inches (8.52 m) on floor and draw line (14). d. Make mark (15) at end of line (14). e. Using carpenter's square, 50-foot tape measure and chalk, measure straight out from mark (12) 27 feet 11 1/2 inches (8.52 m) on floor and draw line (16). f. Make mark (17) at end of line (16). g. Using 50-foot tape measure and chalk, draw line (18) between mark (15) and mark (17) and extend line (18) 3 feet (.91 m) at both ends.
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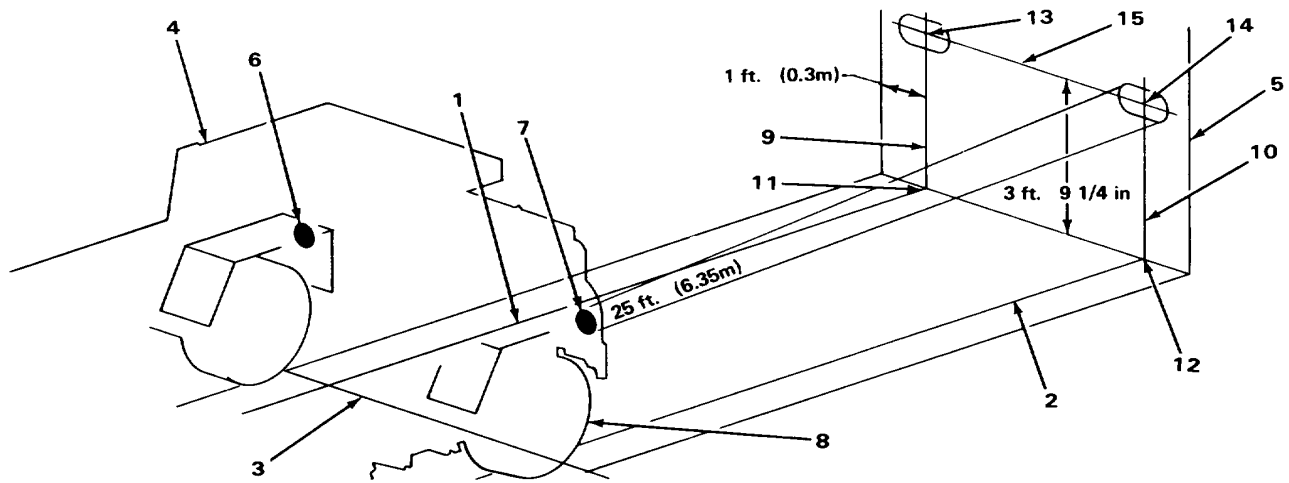
TA244212

HEADLIGHT ASSEMBLY - CONTINUED

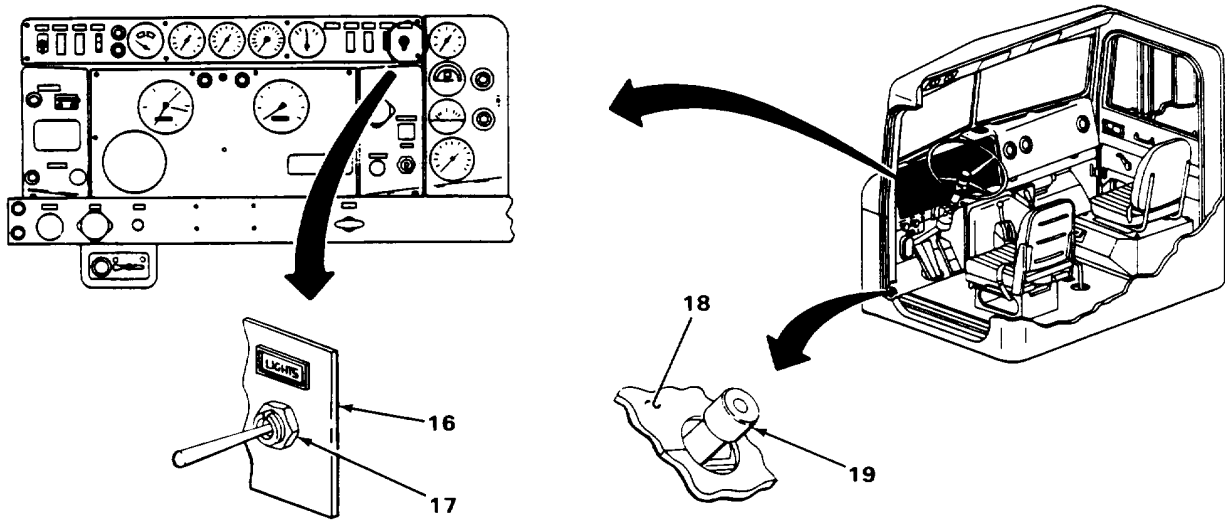
LOCATION	ITEM	ACTION REMARKS
ALINEMENT - CONTINUED		
NOTE		
Have assistant drive truck while you direct him.		
26. Lines (1, 2, and 3)	Truck (4)	Using lines (1 and 2) to guide driver, park truck so the center of each front wheel is directly over line (3) and tires are evenly placed on lines (1 and 2).
27. Wall (5)	Lamps (6 and 7)	Using 50-foot tape measure, check distance between lamps and wall. Move truck to plus or minus 1/2-inch (1.27 cm).
28. Truck (4)	Ten tires (8)	Check for correct inflation (page 1-20).
29. Wall (5)	Lines (9 and 10)	a. Using chalk and carpenter's square, draw lines (9 and 10) 3-feet 9 1/4-inches (1.15 m) straight up from marks (11 and 12) and make marks (13 and 14) at end of lines (9 and 10). b. Using chalk and 50-foot tape measure, extend lines (9 and 10) 1-foot (.3 m).
30.	Line (15)	Using chalk and 50-foot tape measure, draw line (15) between marks (13 and 14) and extend 1-foot (.3 m) at both ends.

HEADLIGHT ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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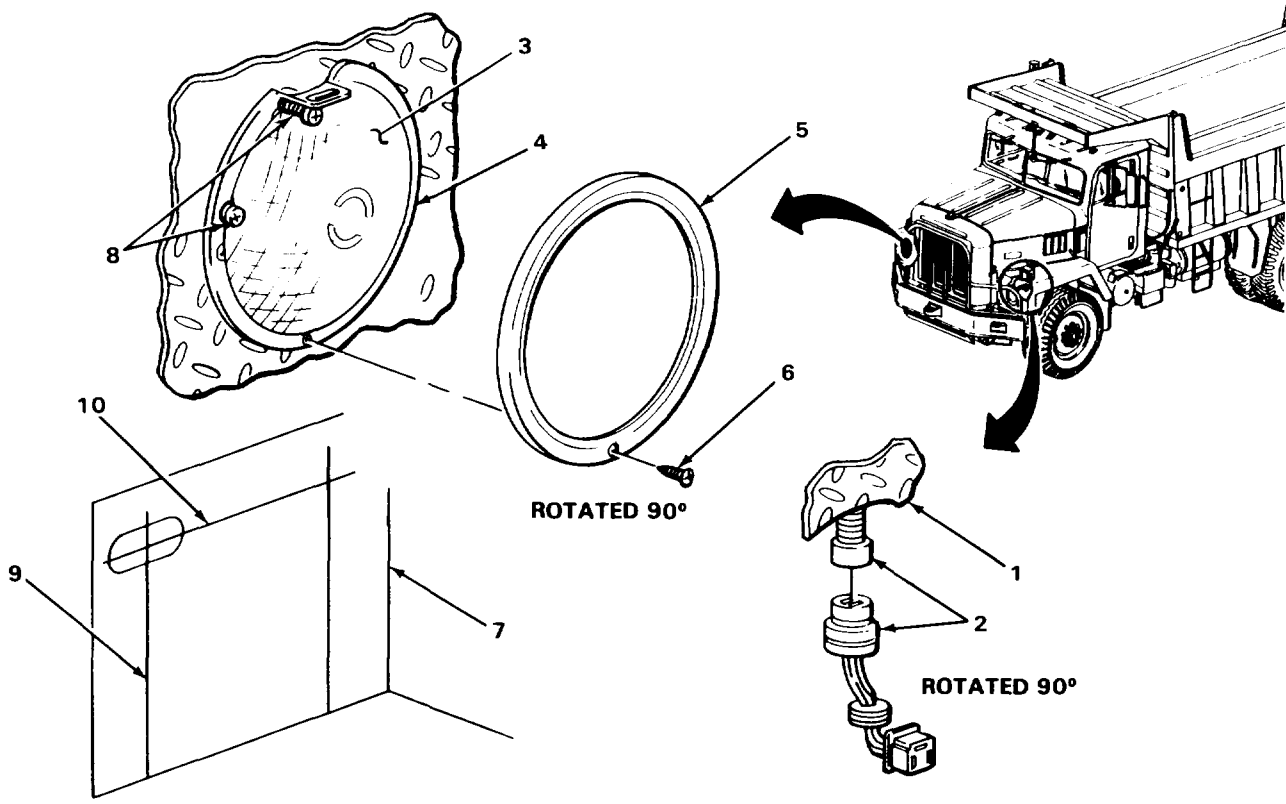
- | | | |
|---------------------------|--------------------------------|---|
| 31. Instrument panel (16) | Headlight switch (17) | Put in on position. |
| 32. Cab floor (18) | Headlight selector switch (19) | Push in and release to select highbeam. |



TA244213

HEADLIGHT ASSEMBLY - CONTINUED

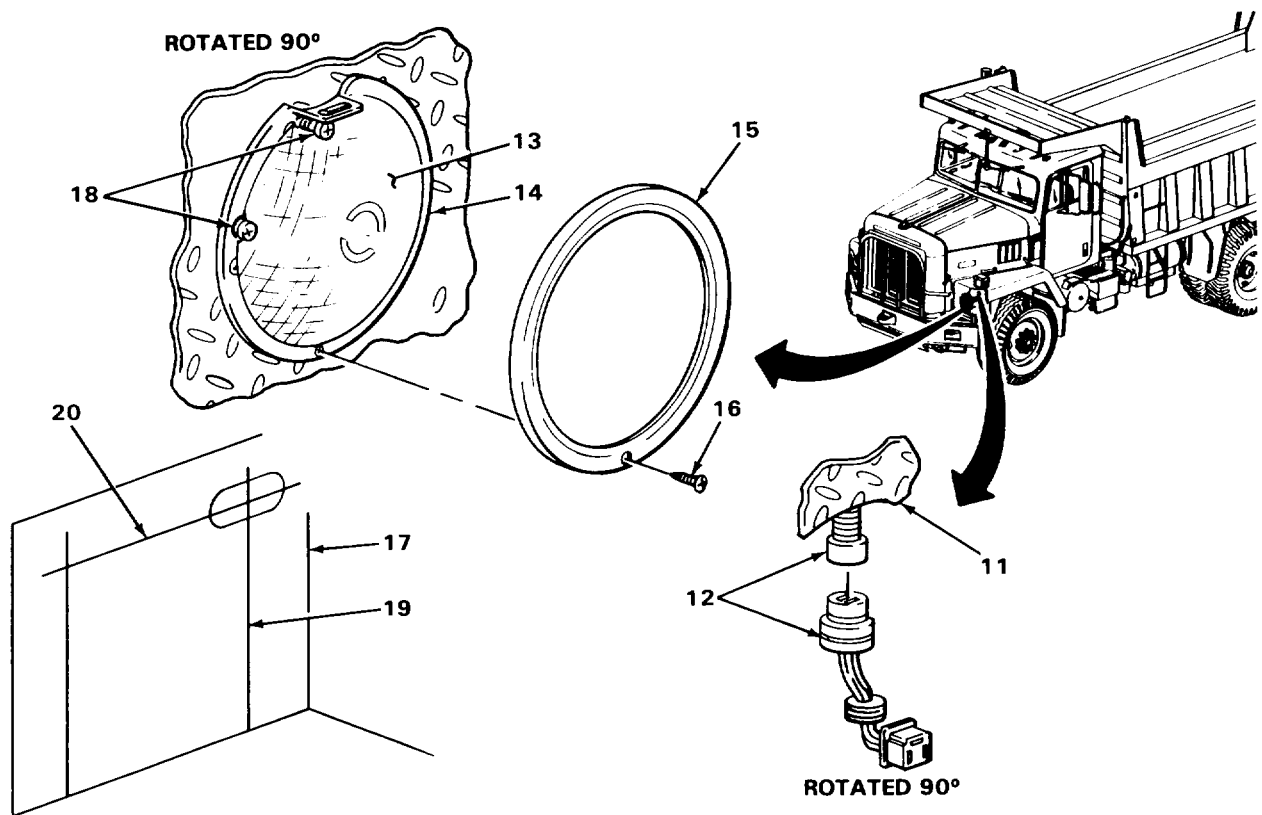
LOCATION	ITEM	ACTION REMARKS
ALINEMENT - CONTINUED		
33. Under right fender (1)	Connector (2)	Pull apart to disconnect lamp (3).
34. Left fender basket (4)	Bezel (5) and screw (6)	a. Using number one cross-tip screwdriver, unscrew and take out screw. b. Lift up and take off bezel.
35. Wall (7)	Two adjustment screws (8)	Using number one cross-tip screwdriver, turn until center of brightest part of headlight is where lines (9 and 10) cross.
36. Right fender (1)	Connector (2)	Push together.
37. Left fender basket (4)	Bezel (5) and screw (6)	a. Put tongue of bezel into slot of fender basket, push down and hold. b. Screw in and tighten using number one cross-tip screwdriver.



TA244214

HEADLIGHT ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION REMARKS
38. Under left fender (11)	Connector (12)	Pull apart to disconnect lamp (13).
39. Right fender basket (14)	Bezel (15) and screw (16)	a. Using number one cross-tip screwdriver, unscrew and take out screw. b. Lift up and take off bezel.
40. Wall (17)	Two adjustment screws (18)	Using number one cross-tip screwdriver, turn until center of brightest part of headlight is where lines (19 and 20) cross.
41. Under left fender (11)	Connector (12)	Push together.
42. Right fender basket (14)	Bezel (15) and screw (16)	a. Put tongue of bezel into slot of fender basket, push down and hold. b. Screw in and tighten using number one cross-tip screwdriver.



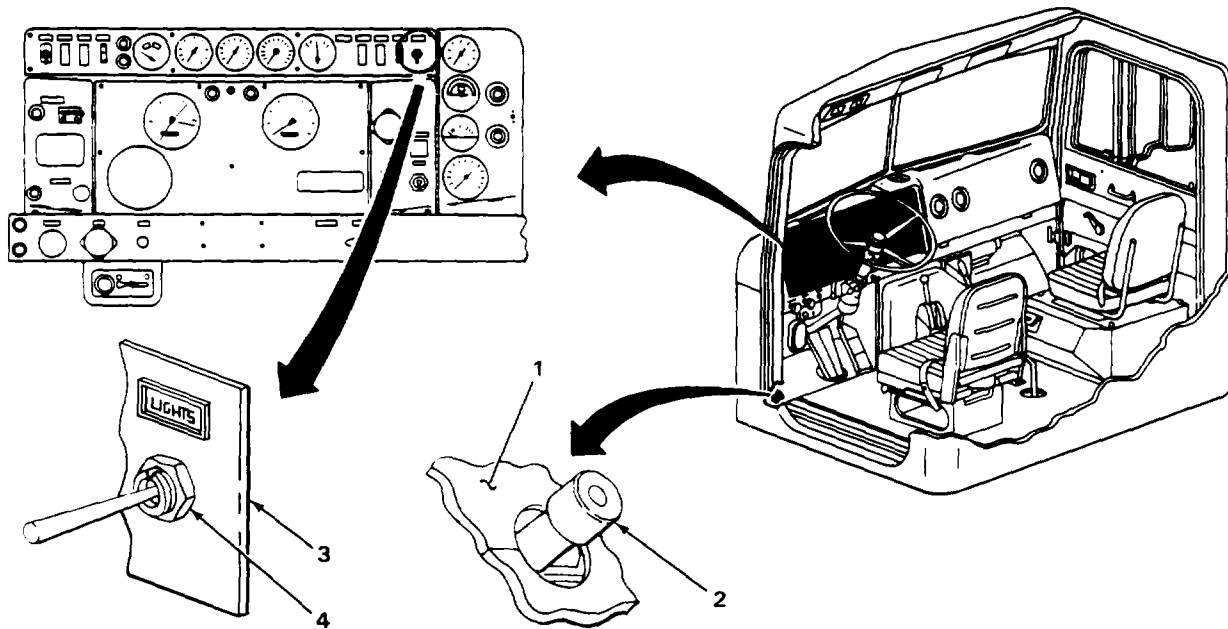
TA244215

HEADLIGHT ASSEMBLY - CONTINUED

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

ALINEMENT - CONTINUED

- | | | |
|--------------------------|-------------------------------|--|
| 43. Cab floor (1) | Headlight selector switch (2) | Push in and release to select lowbeam. |
| 44. Instrument panel (3) | Headlight switch (4) | Put in off position. |



TASK ENDS HERE

TA244216

BATTERY POSITIVE-TO-NEGATIVE CONNECTOR CABLE

This task covers:

- | | |
|-----------------------------|--|
| a. Removal (page 2-820) | d. Inspection/Replacement (page 2-822) |
| b. Disassembly (page 2-820) | e. Assembly (page 2-822) |
| c. Cleaning (page 2-820) | f. Installation (page 2-822) |
-

INITIAL SETUP**Tools**

Apron, rubber
Cleaner, battery terminal
Gloves, safety
Goggles, safety
Puller, battery terminal
Wrench, open-end, 1/2-inch (two required)
Wrench, open-end, 9/16-inch (two required)

Personnel Required

One

Equipment Condition

Battery ground cable disconnected (page 2-424).

Materials/Parts

Grease, GAA (item 10, appendix C)
Rags, wiping (item 15, appendix C)
Soda, bicarbonate (item 17, appendix C)

BATTERY POSITIVE-TO-NEGATIVE CONNECTOR CABLE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
<u>WARNING</u>		
Rubber apron, safety gloves, and safety goggles must be worn when working with batteries. Failure to observe this precaution could cause serious injury to personnel.		
Do not smoke, use open flame, or allow sparks near batteries. Mixture of oxygen and hydrogen gases released from batteries is highly flammable and can explode causing injury to personnel.		
NOTE		
Steps given are typical for both positive-to-negative connector cables.		
1. Two hooks (1)	Two latches (2)	Lift up and take off.
2. Battery compartment (3)	Cover (4)	Lift up and take out.
3. Terminal (5)	Screw (6) and nut (7)	Using two 1/2-inch open-end wrenches, unscrew two turns.
4. Post (8)	Terminal (5)	Using battery terminal puller, pull off.
5. Terminal (9)	Screw (10) and nut (11)	Using two 1/2-inch open-end wrenches, unscrew two turns.
6. Post (12)	Terminal (9) and cable (13)	Using battery terminal puller, pull off and take out.

DISASSEMBLY

NOTE

Steps given are typical for both positive-to-negative connector cables.

- | | | |
|----------------------------|---|--|
| 7. Two terminals (5 and 9) | Two screws (6 and 10) and two nuts (7 and 11) | Using two 1/2-inch open-end wrenches, unscrew and take out. |
| 8. Cable (13) | Two terminals (5 and 9), two screws (14), and two nuts (15) | Using two 9/16-inch open-end wrenches, unscrew and take out. |

CLEANING

WARNING

Improper cleaning methods and use of unauthorized cleaning liquids or solvents can injure personnel and cause damage to equipment. Refer to TM 9-247.

BATTERY POSITIVE-TO-NEGATIVE CONNECTOR CABLE - CONTINUED

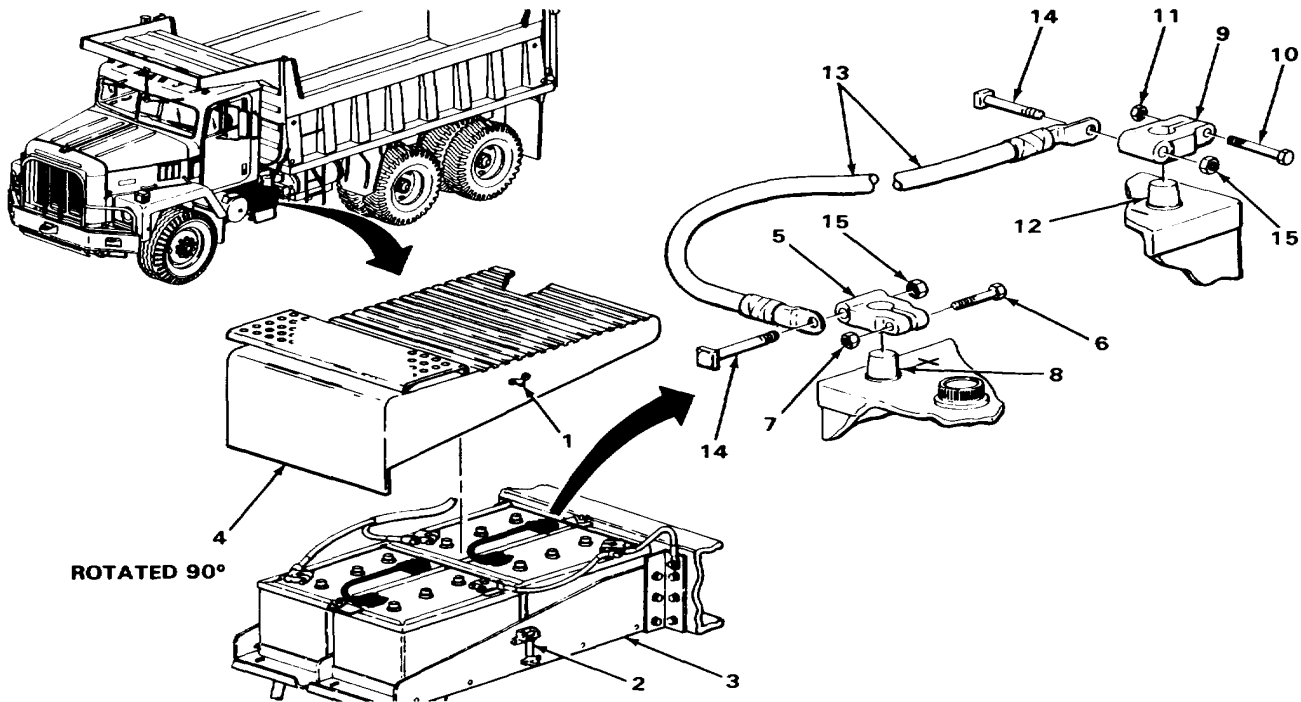
LOCATION	ITEM	ACTION REMARKS
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NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

Steps given are typical for both positive-to-negative connector cables.

- | | | |
|-----|--|--|
| 9. | Two posts
(8 and 12) | <ul style="list-style-type: none"> a. Using weak solution of bicarbonate soda, water and wiping rags, clean. b. Using wiping rags, dry. c. Using battery terminal cleaner, clean. |
| 10. | Two terminals
(5 and 9) | <ul style="list-style-type: none"> a. Using weak solution of bicarbonate soda, water and wiping rags, clean. b. Using wiping rags, dry. c. Using battery terminal cleaner, clean. |
| 11. | Four screws (6, 10 and 14), four nuts (7, 11 and 15), and cable (13) | <ul style="list-style-type: none"> a. Using weak solution of bicarbonate soda, water and wiping rags, clean. b. Using wiping rags, dry. |

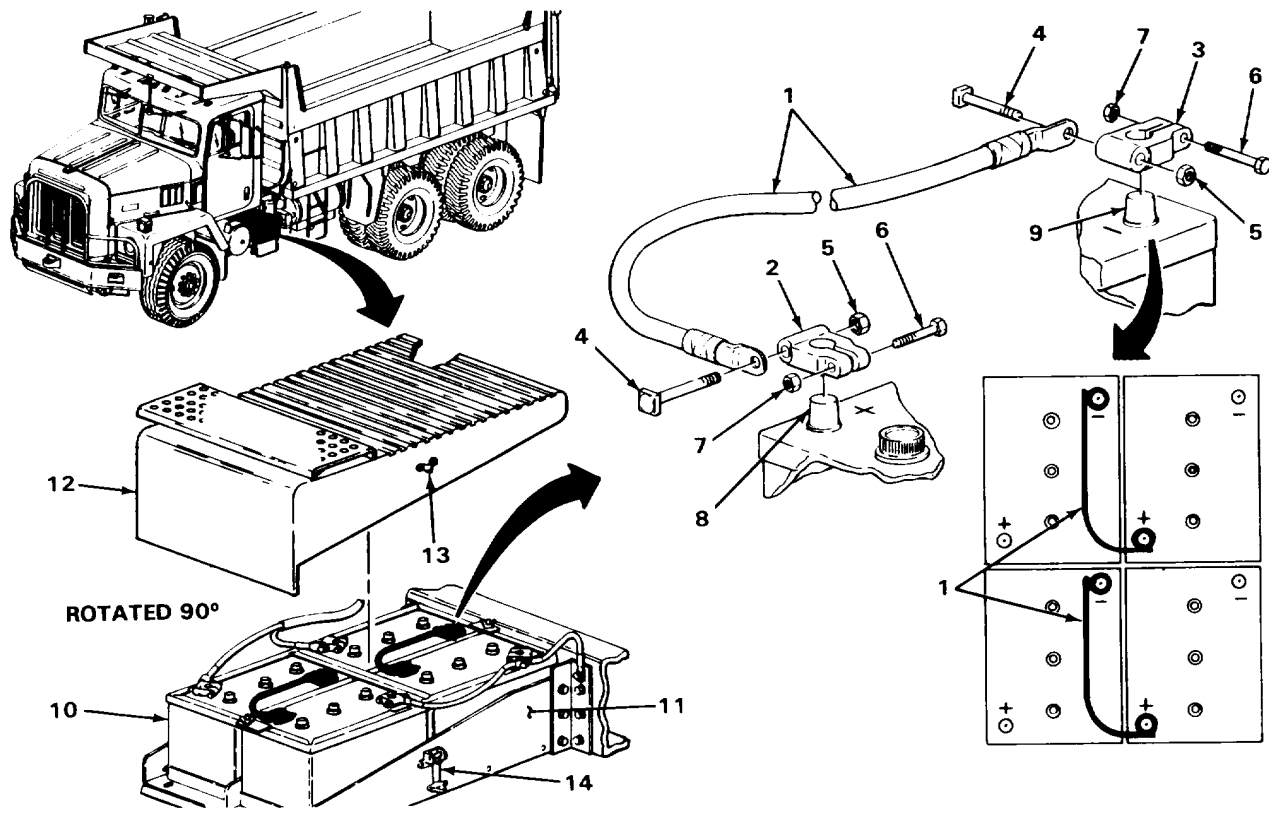


BATTERY POSITIVE-TO-NEGATIVE CONNECTOR CABLE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSPECTION/REPLACEMENT		
NOTE		
Replace all damaged or defective parts.		
For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).		
Steps given are typical for both battery positive-to-negative connector cables.		
12.	Cable (1)	Look for corroded ends or worn cable covering.
13.	Two terminals (2 and 3)	Look for cracks, breaks or corroded mating surfaces.
14.	All threaded parts	Look for damaged threads or rounded heads.
ASSEMBLY		
NOTE		
Steps given are typical for both positive-to-negative connector cables.		
15. Cable (1)	Two terminals (2 and 3), two screws (4), and two nuts (5)	Screw in and tighten using two 9/16-inch open-end wrenches.
16. Two terminals (2 and 3)	Two screws (6) and two nuts (7)	Screw in two turns using two 1/2-inch open-end wrenches.
Do not tighten.		
INSTALLATION		
NOTE		
Steps given are typical for both positive-to-negative connector cables.		
17. Post (8)	Cable (1) and terminal (2)	Put on.

BATTERY POSITIVE-TO-NEGATIVE CONNECTOR CABLE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
18. Post (9)	Terminal (3)	Put on.	
19. Cable (1) and two terminals (2 and 3)	Two screws (6) and two nuts (7)	Screw in and tighten using two 1/2-inch open-end wrenches.	
20. Two batteries (10)	Two posts (8 and 9) and two terminals (2 and 3)	Apply GAA grease.	
21. Battery compartment (11)	Cover (12)	Put in place.	
22. Two hooks (13)	Two latches (14)	Lift up, put in place and release.	



NOTE

FOLLOW-ON MAINTENANCE: Connect battery ground cable (page 2-424).

TASK ENDS HERE

BATTERY NEGATIVE CABLE

This task covers:

- | | |
|-----------------------------|--|
| a. Removal (page 2-824) | d. Inspection/Replacement (page 2-827) |
| b. Disassembly (page 2-826) | e. Assembly (page 2-827) |
| c. Cleaning (page 2-826) | f. Installation (page 2-828) |

INITIAL SETUP

Tools

Apron, rubber
 Brush, wire
 Cleaner, battery terminal
 Extension, 6-inch, 1/2-inch drive
 Gloves, safety
 Goggles, safety
 Handle, ratchet, 1/2-inch drive
 Knife, pocket
 Puller, battery terminal
 Socket, 3/4-inch, 1/2-inch drive
 Wrench, box-end, 3/4-inch
 Wrench, open-end, 1/2-inch (two required)

Tools - Continued

Wrench, open-end, 9/16-inch (two required)

Materials/Parts

Grease, GAA (item 10, appendix C)
 Rags, wiping (item 15, appendix C)
 Soda, bicarbonate (item 17, appendix C)

Personnel Required

One

LOCATION	ITEM	ACTION REMARKS
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WARNING

Rubber apron, safety gloves, and safety goggles must be worn when working with batteries. Failure to observe this precaution could cause serious injury to personnel.

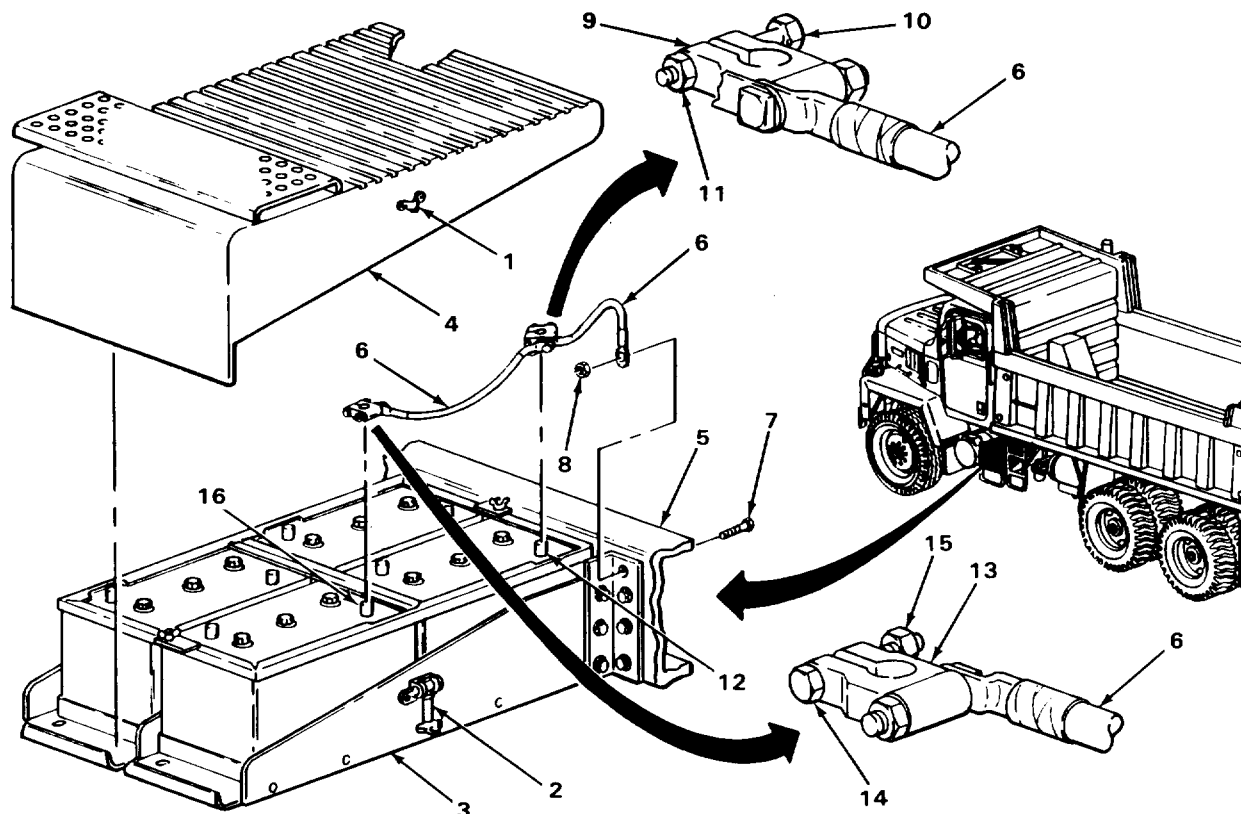
Do not smoke, use open flame, or allow sparks near batteries. Mixture of oxygen and hydrogen gases released from batteries is highly flammable and can explode causing injury to personnel.

REMOVAL

- | | | |
|----------------------------|-----------------------------------|---|
| 1. Two hooks (1) | Two latches (2) | Lift up and take off. |
| 2. Battery compartment (3) | Cover (4) | Lift up and take out. |
| 3. Left frame rail (5) | Cable (6), screw (7), and nut (8) | Using 3/4-inch 1/2-inch drive socket, 6-inch extension, ratchet handle and 3/4-inch box-end wrench, unscrew and take off. |

BATTERY NEGATIVE CABLE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
4. Terminal (9)	Screw (10) and nut (11)	Using two 1/2-inch open-end wrenches. unscrew two turns. Do not take out.
5. Post (12)	Terminal (9)	Using battery terminal puller, lift up and take off.
6. Terminal (13)	Screw (14) and nut (15)	Using two 1/2-inch open-end wrenches, unscrew two turns. Do not take out.
7. Post (16)	Terminal (13) and cable (6)	Using battery terminal puller, lift up and take out.



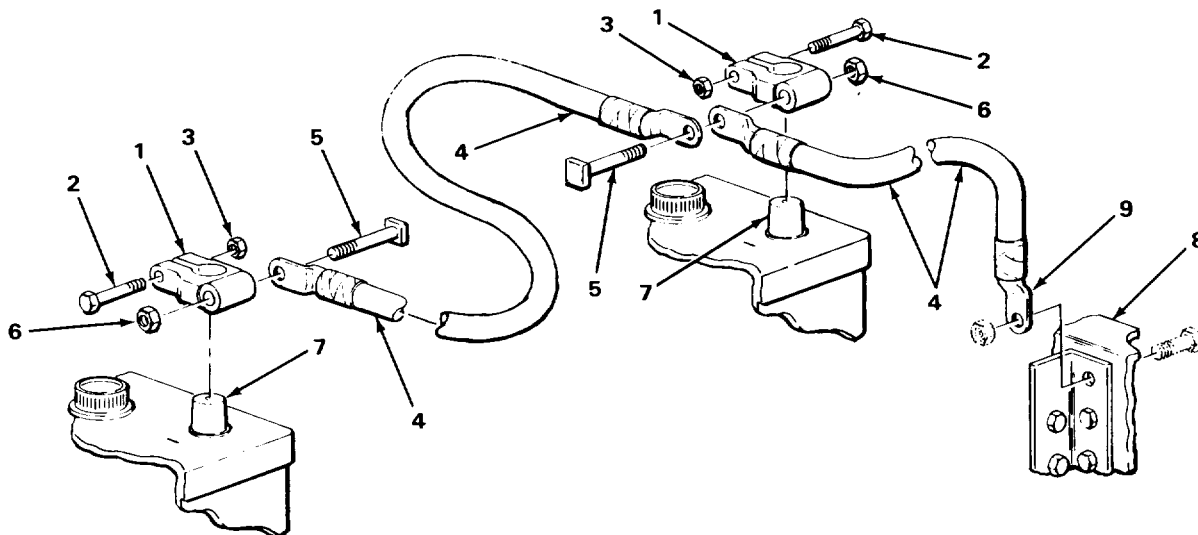
TA244219

BATTERY NEGATIVE CABLE - CONTINUED

LOCATION	ITEM	ACTION REMARKS	
DISASSEMBLY			
8.	Two terminals (1)	Two screws (2) and two nuts (3)	Using two 1/2-inch open-end wrenches, unscrew and take out.
9.	Two cables (4)	Two terminals (1), two screws (5), and two nuts (6)	Using two 9/16-inch open-end wrenches, unscrew and take out.
CLEANING			
<u>WARNING</u>			
Improper cleaning methods and use of unauthorized cleaning liquids or solvents can injure personnel and cause damage to equipment. Refer to TM 9-247.			
NOTE			
For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).			
10.	Two posts (7)	<ul style="list-style-type: none"> a. Using weak solution of bicarbonate soda, water and wiping rags, clean. b. Using wiping rags, dry. c. Using battery terminal cleaner, clean. 	
11.	Two terminals (1)	<ul style="list-style-type: none"> a. Using weak solution of bicarbonate soda, water and wiping rags, clean. b. Using wiping rags, dry. c. Using battery terminal cleaner, clean. 	
12.	Four screws (2 and 5), four nuts (3 and 6), and two cables (4)	<ul style="list-style-type: none"> a. Using weak solution of bicarbonate soda, water and wiping rags, clean. b. Using wiping rags, dry. 	
<u>WARNING</u>			
Safety goggles must be worn when using wire brush. Flying rust or metal particles could cause eye injury.			
13.	Left frame rail (8)	Cable ground area (9)	<ul style="list-style-type: none"> a. Using pocket knife, scrape clean. b. Using wire brush, clean.

BATTERY NEGATIVE CABLE - CONTINUED

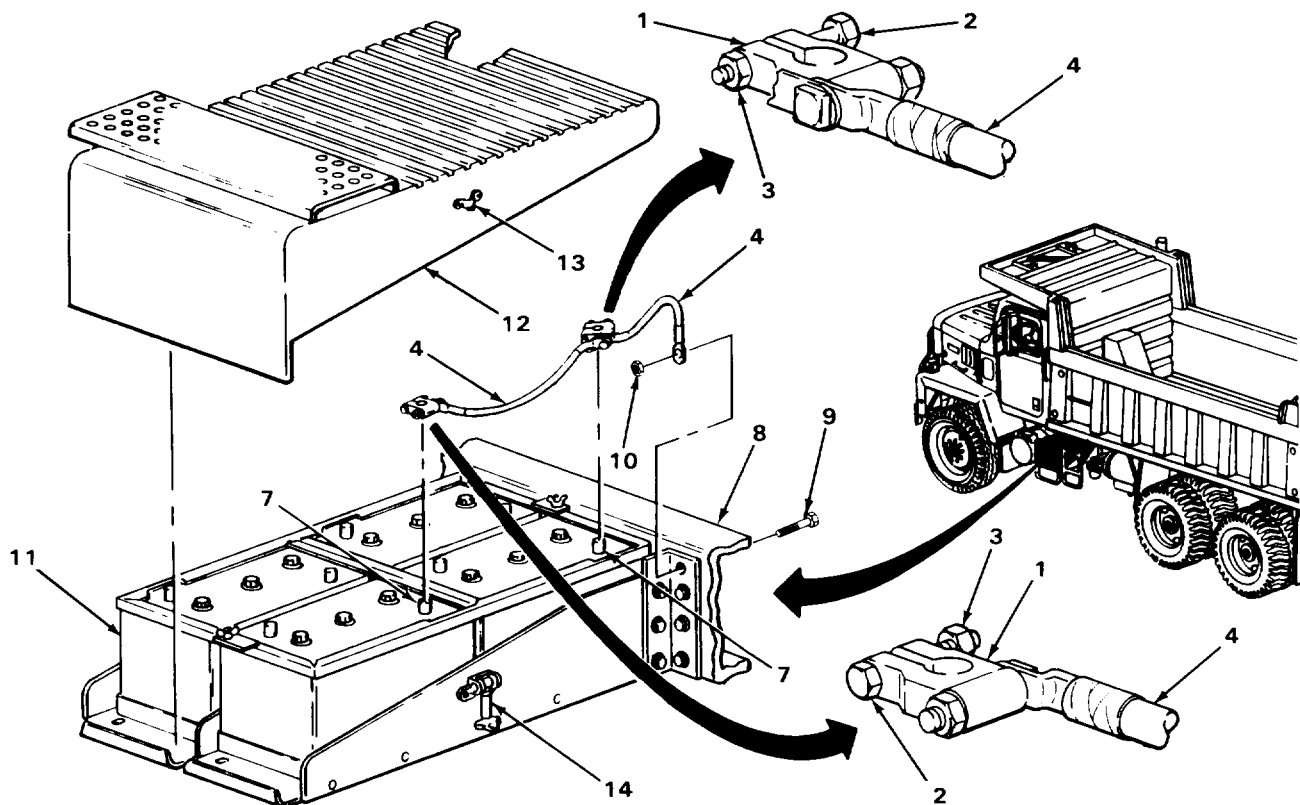
LOCATION	ITEM	ACTION REMARKS
INSPECTION/REPLACEMENT		
NOTE		
Replace all damaged or defective parts.		
For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).		
14.	Two terminals (1)	Look for cracks, breaks or corroded mating surfaces.
15.	Two cables (4)	Look for corroded ends or worn cable coverings.
16.	All threaded parts	Look for damaged threads or rounded heads.
ASSEMBLY		
17. Two cables (4)	Two terminals (1), two screws (5), and two nuts (6)	Screw in and tighten using two 9/16-inch open-end wrenches.
18. Two terminals (1)	Two screws (2) and two nuts (3)	Screw in two turns using two 1/2-inch open-end wrenches. Do not tighten.



TA244220

BATTERY NEGATIVE CABLE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
19. Two posts (7)	Two terminals (1)	Put in place.
20. Two terminals (1)	Two screws (2) and two nuts (3)	a. Screw in and tighten using two 1/2-inch open-end wrenches. b. Apply GAA grease.
21. Left frame rail (8)	Cable (4), screw (9), and nut (10)	Screw in and tighten using 3/4-inch 1/2-inch drive socket, 6-inch extension, ratchet handle, and 3/4-inch box-end wrench.
22. Battery compartment (11)	Cover (12)	Put in place.
23. Two hooks (13)	Two latches (14)	Lift up, put in place, and release.



TA244221

TASK ENDS HERE

BATTERY POSITIVE CABLE

This task covers:

- | | |
|-----------------------------|--|
| a. Removal (page 2-830) | d. Inspection/Replacement (page 2-833) |
| b. Disassembly (page 2-832) | e. Assembly (page 2-834) |
| c. Cleaning (page 2-832) | f. Installation (page 2-834) |
-

INITIAL SETUP**Tools**

Apron, rubber
 Cleaner, battery terminal
 Gloves, safety
 Goggles, safety
 Puller, battery terminal
 Wrench, box-end, 7/16-inch (two required)
 Wrench, box-end, 3/4-inch
 Wrench, open-end, 1/2-inch (two required)
 Wrench, open-end, 9/16-inch (two required)

Materials/Parts

Detergent, liquid, GP (item 7, appendix C)
 Grease, GAA (item 10, appendix C)

Materials/Parts - Continued

Lockwasher, clamp (two required)
 Lockwasher, solenoid
 Rags, wiping (item 15, appendix C)
 Soda, bicarbonate (item 17, appendix C)

Personnel Required

Two

Equipment Condition

Battery ground cable disconnected (page 2-424).
 Left side hood panel opened (page 2-424).

BATTERY POSITIVE CABLE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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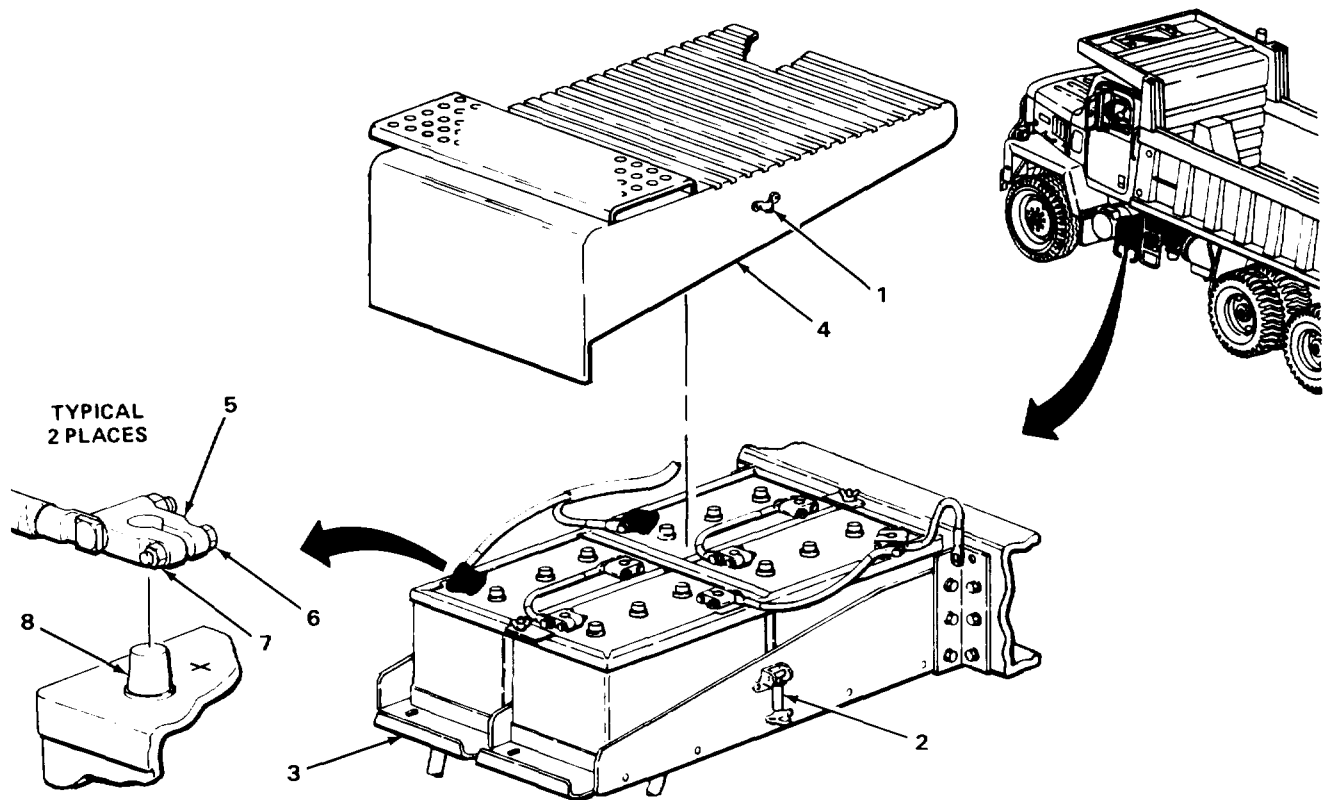
REMOVAL

WARNING

Rubber apron, safety gloves, and safety goggles must be worn when working with batteries. Failure to observe this precaution could cause serious injury to personnel.

Do not smoke, use open flame, or allow sparks near batteries. Mixture of oxygen and hydrogen gases released from batteries is highly flammable and can explode causing injury to personnel.

- | | | |
|----------------------------|--------------------------|--|
| 1. Two hooks (1) | Two latches (2) | Lift up and take off. |
| 2. Battery compartment (3) | Cover (4) | Lift up and take out. |
| 3. Terminal (5) | Screw (6)
and nut (7) | Using two 1/2-inch open-end wrenches, unscrew two turns. |
| 4. Post (8) | Terminal (5) | Using battery terminal puller, pull off. |



TA244222

BATTERY POSITIVE CABLE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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NOTE

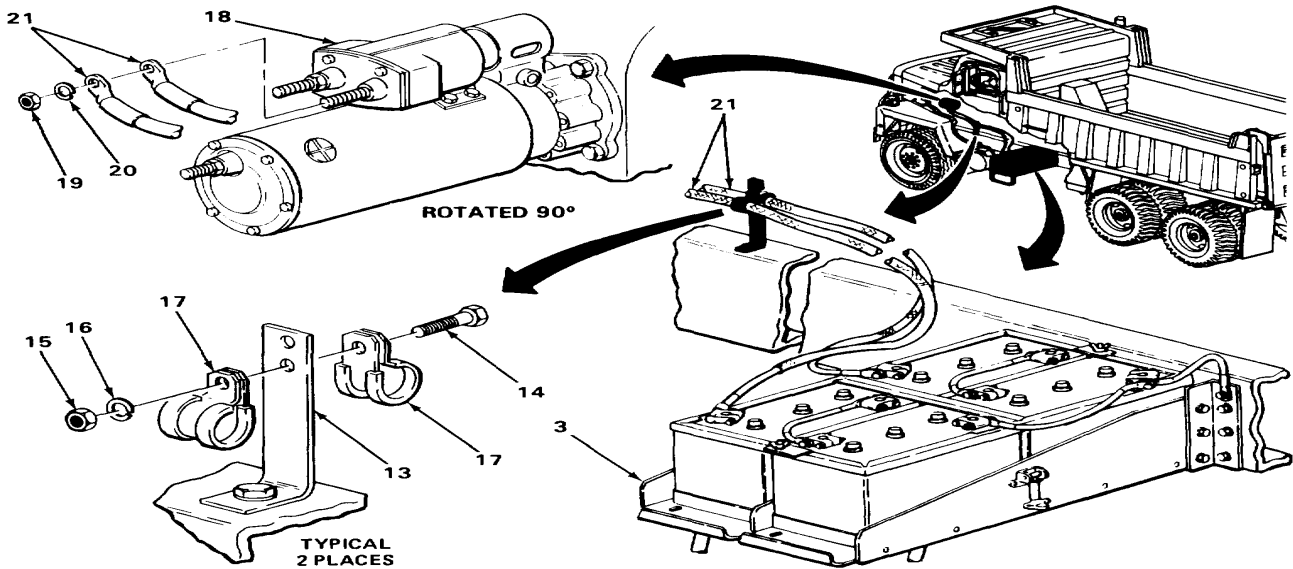
Steps given are typical for both brackets.

5	Bracket (13)	Two screws (14), two nuts (15), two lockwashers (16), and	<ul style="list-style-type: none"> a Using two 7/16-inch box-end wrenches, unscrew and take out. b Get rid of lockwashers. four clamps (17)
6	Starter solenoid (18)	Nut (19), lockwasher (20), and two cables (21)	<ul style="list-style-type: none"> a Using 3/4-inch box-end wrench, unscrew and take off. b Get rid of lockwasher.

NOTE

Assistance will be needed to guide cables when performing step 9.

7	Battery compartment (3)	Two cables (21)	With assistance, carefully take out.
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TA244223

BATTERY POSITIVE CABLE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
DISASSEMBLY		
8	Two terminals (1) Two screws (2) and two nuts (3)	Using two 1/2-inch open-end wrenches, unscrew and take out.
9	Two cables (4) Two terminals (1), two screws (5), and two nuts (6)	Using two 9/16-inch open-end wrenches, unscrew and take out.
10	Two coverings (7)	Take off.

CLEANING**WARNING**

Improper cleaning methods and use of unauthorized cleaning liquids or solvents can injure personnel and cause damage to equipment Refer to TM 9-247.

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

11	Two posts (8)	a Using weak solution of bicarbonate soda, water and wiping rags, clean. b Using wiping rags, dry. c Using battery terminal cleaner, clean.
12	Two terminals (1)	a Using weak solution of bicarbonate soda, water and wiping rags, clean. b Using wiping rags, dry. c Using battery terminal cleaner, clean.
13	Four screws (2 and 5), four nuts (3 and 6), and two cables (4)	a Using weak solution of bicarbonate soda, water and wiping rags, clean. b Using wiping rags, dry.
14	Two coverings (7) and two clamps (9)	a Using liquid detergent and water, clean. b Using wiping rags, dry.

BATTERY POSITIVE CABLE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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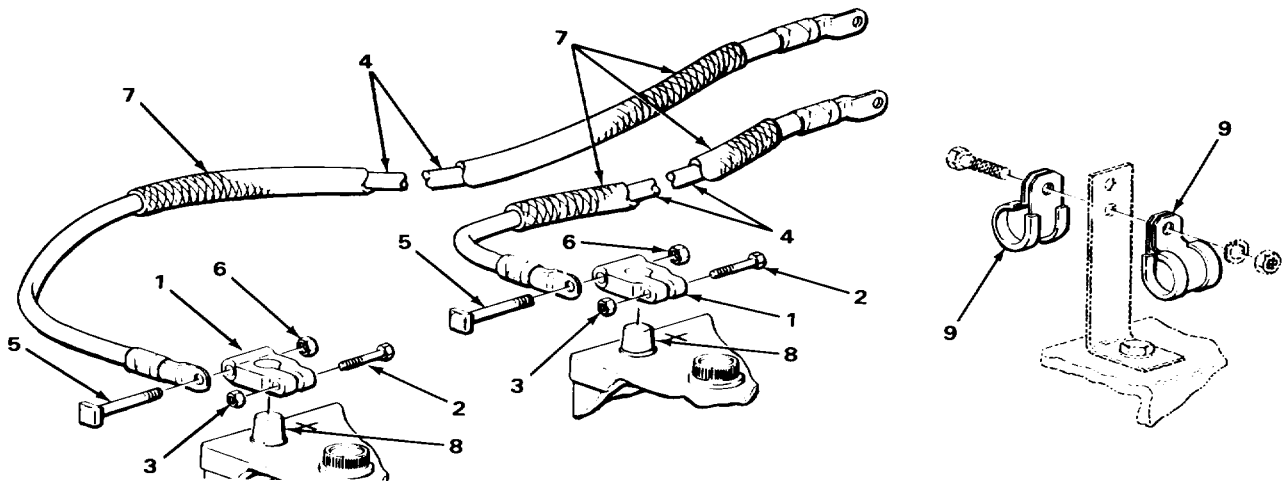
INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

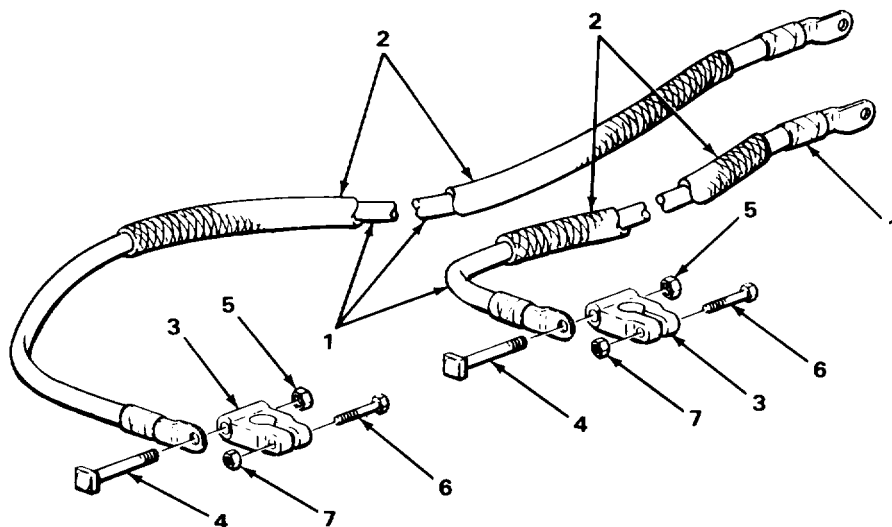
For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

15	Two terminals (1)	Look for cracks, breaks or corroded mating surfaces.
16	Two cables (4)	Look for corroded ends or worn cable covering.
17	Two coverings (7)	Look for worn areas, cracks or gouges.
18	Four clamps (9)	Look for breaks, cracks or bends.



BATTERY POSITIVE CABLE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
ASSEMBLY			
19	Two cables (1)	Two coverings (2)	Put on.
20	Two terminals (3), two screws (4), and two nuts (5)		Screw on and tighten using two 9/16-inch open-end wrenches.
21	Two terminals (3)	Two screws (6) and two nuts (7)	Screw in two turns, using two 1/2-inch open-end wrenches. Do not tighten.



INSTALLATION

NOTE

Assistance will be needed to guide cables when performing step 22.

22	Battery compartment (8)	Two cables (1)	With assistance carefully put in place.
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TA244663

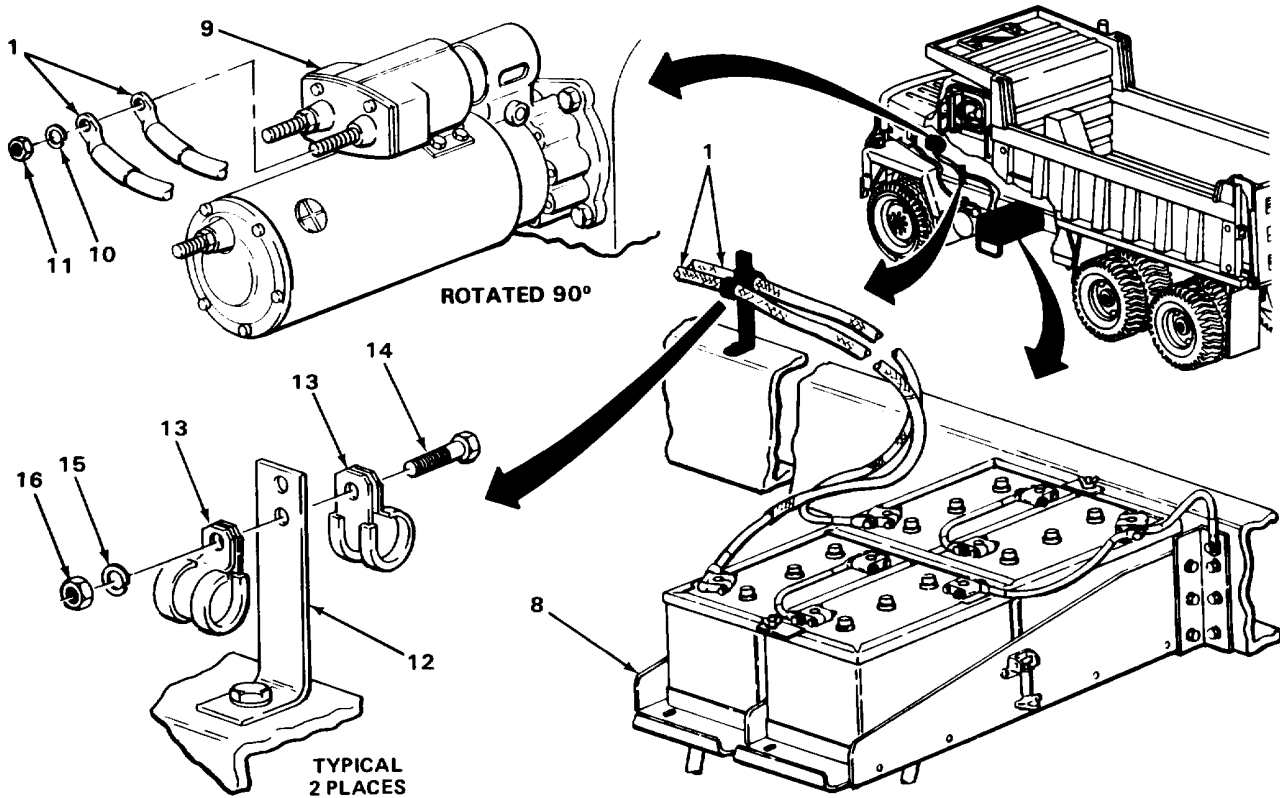
BATTERY POSITIVE CABLE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
23 Starter solenoid (9)	Two cables (1), new lockwasher (10), and nut (11)	a Put cables on. b Screw on and tighten using 3/4-inch box-end wrench.

NOTE

Steps given are typical for both brackets.

24 Two brackets (12) and two cables (1)	Four clamps (13), two screws (14), two new lockwashers (15), and two nuts (16)	a Put clamps on cables. b Screw in and tighten using two 7/16-inch box-end wrenches.
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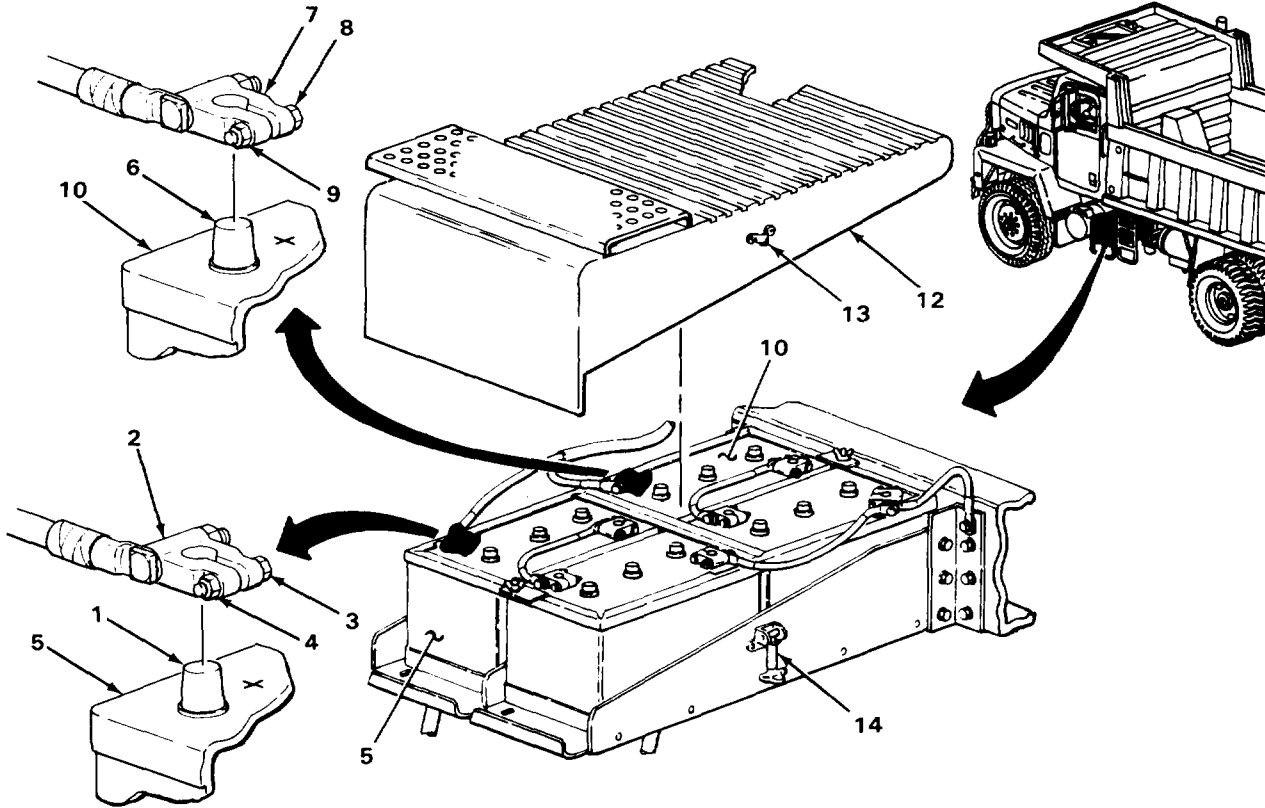


TA244225

BATTERY POSITIVE CABLE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
25 Post (1)	Terminal (2)	Put on.
<u>CAUTION</u>		
Do not overtighten terminals, failure to observe this precaution could cause damage to terminals or posts.		
26 Terminal (2)	Screw (3) and nut (4)	Screw in and tighten using two 1/2-inch open-end wrenches.
27 Battery (5)	Terminal (2) and post (1)	Apply GAA grease.
28 Post(6)	Terminal (7)	Put on.
29 Terminal (7)	Screw (8) and nut (9)	Screw in and tighten using two 1/2-inch open-end wrenches.
30 Battery (10)	Terminal (7) and post (6)	Apply GAA grease.
31 Battery compartment (11)	Cover (12)	Put in place.
32 Two hooks (13)	Two latches (14)	Lift up, put in place and release.

BATTERY POSITIVE CABLE - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE: Connect battery ground cable (page 2-424).

TASK ENDS HERE

TA244226

STORAGE BATTERIES

This task covers:

- | | |
|-------------------------|---------------------------------------|
| a Testing (page 2-838) | d Inspection/Replacement (page 2-840) |
| b Removal (page 2-839) | e Installation (page 2-841) |
| c Cleaning (page 2-840) | |

INITIAL SETUP

Tools

- Apron, rubber
- Brush, wire
- Carrier, storage battery
- Cleaner, battery terminal
- Gloves, safety
- Goggles, safety
- Wrench, box-end, 9/16-inch

Personnel Required

One

Equipment Condition

Battery cables disconnected (page 2-424).

References

Materials/Parts

- Grease, GAA (item 10, appendix C)
- Rags, wiping (item 15, appendix C)
- Soda, bicarbonate (item 17, appendix C)

TM 9-6140-200-14 (Operator's, Unit, Intermediate Direct Support, and Intermediate General Support Maintenance Manual for Lead-Acid Storage Batteries)

LOCATION	ITEM	ACTION REMARKS
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WARNING

Rubber apron, safety gloves, and safety goggles must be worn when working with batteries. Failure to observe this precaution could cause serious injury to personnel.

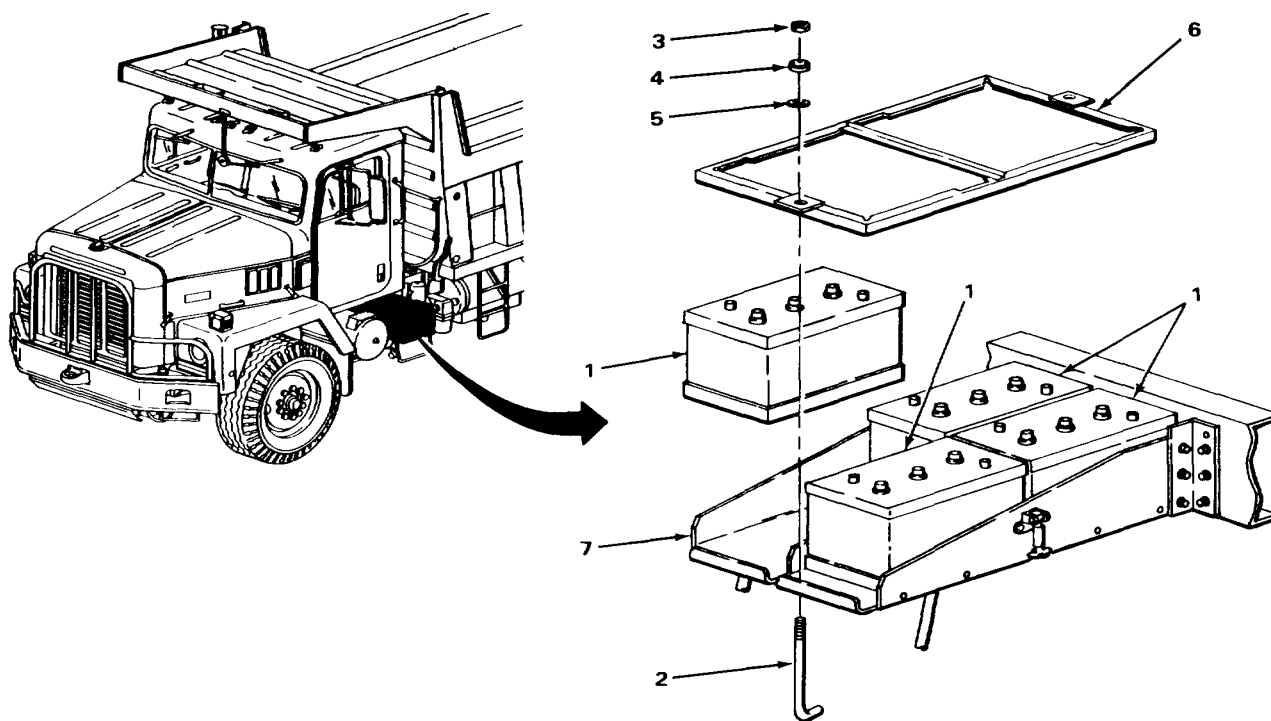
Do not smoke, use open flame, or allow sparks near batteries. Mixture of oxygen and hydrogen gases released from batteries is highly flammable and can explode causing injury to personnel.

TESTING

1	Four storage batteries (1)	Test (TM 96140-200-14).
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STORAGE BATTERIES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
2 Two battery hold-down bolts (2)	Two nuts (3), two gaskets (4), and two flat washers (5)	Using 9/16-inch, box-end wrench, unscrew and take off.
3 Four storage batteries (1)	Holddown retainer (6)	Take off.
4 Battery tray (7)	Two battery hold-down bolts (2)	Take off.
5	Four storage batteries (1)	Using storage battery carrier, take out.



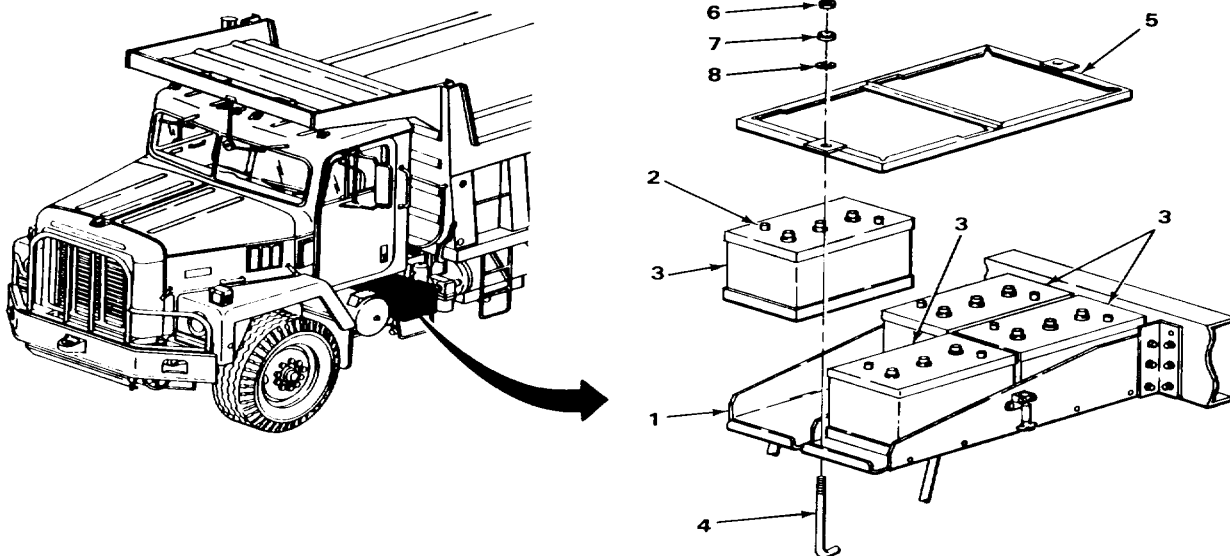
TA244227

STORAGE BATTERIES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
CLEANING		
NOTE		
For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).		
6	Battery tray (1)	<ul style="list-style-type: none"> a Using weak solution of bicarbonate soda, water, and wiping rag, clean. b Using wire brush, clean. c Using clean dry wiping rags, wipe clean and dry.
7	Posts (2)	<ul style="list-style-type: none"> a Using weak solution of bicarbonate soda, water, and wiping rags, clean. b Using battery terminal cleaner, clean. c Using clean dry wiping rags, wipe clean and dry.
8	All metal parts	<ul style="list-style-type: none"> a Using weak solution of bicarbonate soda, water, and wiping rags, clean. b Using wire brush, clean. c Using clean dry wiping rags, wipe clean and dry.
INSPECTION/REPLACEMENT		
NOTE		
Replace all damaged or defective parts.		
For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).		
9	Four storage batteries (3)	Check for cracks or breaks.
10	All metal parts	Check for cracks, breaks, or corrosion.
11	All threaded parts	Check for damaged threads or rounded heads.

STORAGE BATTERIES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
<u>WARNING</u>		
Do not smoke, use open flame, or allow sparks near batteries. Mixture of oxygen and hydrogen gases released from batteries is highly flammable and can explode causing serious injury or death.		
12 Battery tray (1)	Four storage batteries (3)	Put in place using storage battery carrier.
13	Two battery hold-down bolts (4)	Put in place.
14 Four storage batteries (3)	Hold-down retainer (5)	Put in place.
15 Two battery hold-down bolts (4)	Two nuts (6), two gaskets (7), and two flat washers (8)	Screw on and tighten using 9/16-inch box-end wrench.



NOTE
 FOLLOW-ON MAINTENANCE: Connect battery cables (page 2-424)

TASK ENDS HERE

BATTERY BOX

This task covers:

- | | | | |
|---|--------------------------|---|-------------------------------------|
| a | Removal (page 2-842) | d | Inspection/Replacement (page 2-840) |
| b | Disassembly (page 2-845) | e | Assembly (page 2-850) |
| c | Cleaning (page 2-848) | f | Installation (page 2-855) |

INITIAL SETUP

Tools

- Apron, rubber
- Gloves, safety
- Goggles, safety
- Handle, ratchet, 1/2-inch drive
- Screwdriver, 1/4-inch, flat-tip
- Socket, 9/16-inch, 112-inch drive
- Wrench, box-end, 318-inch
- Wrench, box-end, 9/16-inch
- Wrench, box-end, 3/4-inch
- Wrench, open-end, 3/8-inch
- Wrench, open-end, 1/2-inch
- Wrench, open-end, 3/4-inch

Materials/Parts - Continued

- Lockwashers, battery retainers (four required)
- Lockwashers, step (four required)
- Lockwashers, upper step (four required)
- Rags, wiping (item 15, appendix C)
- Soda, bicarbonate (item 17, appendix C)
- Solvent, drycleaning (item 19, appendix C)

Personnel Required

Two

Equipment Condition

Materials/Parts

- Detergent, liquid (item 7, appendix C)
- Lockwashers, battery box assembly (six required)
- Lockwashers, battery holddown (two required)

- Batteries removed (page 2-838).
- Wet air reservoir removed (page 2-986).

LOCATION	ITEM	ACTION	REMARKS
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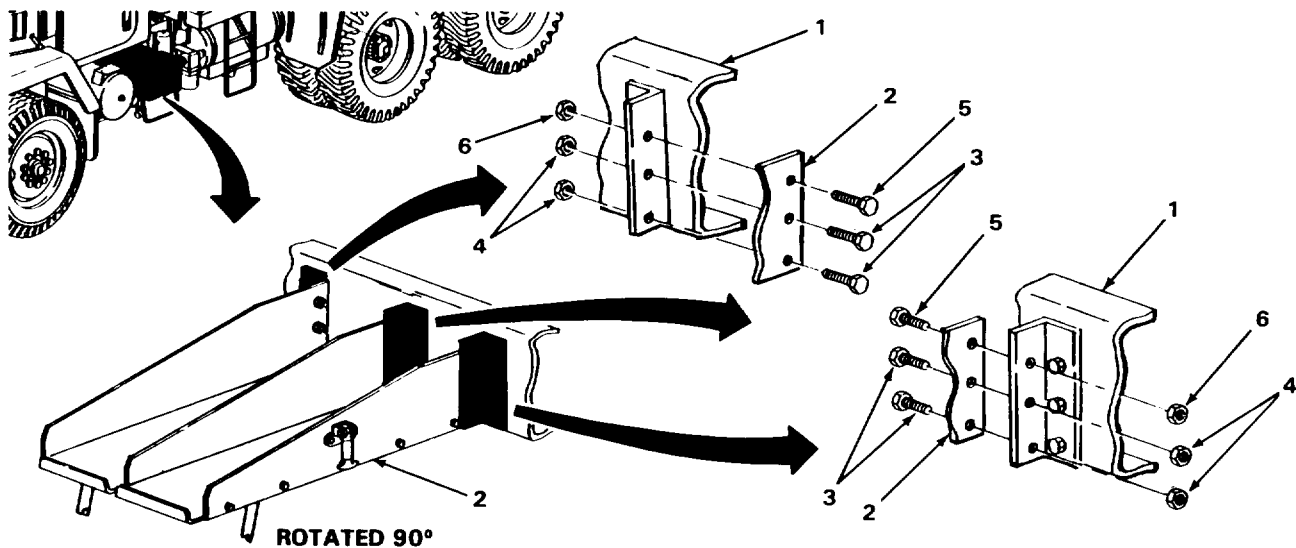
REMOVAL

WARNING

Rubber apron, safety gloves, and safety goggles must be worn when working with batteries Failure to observe this precaution could cause serious injury.

BATTERY BOX - CONTINUED

LOCATION	ITEM	ACTION REMARKS
1 Frame rail (1)	Battery box (2)	a Using weak solution of bicarbonate soda, water, and wiping rags, clean. b Using wiping rags, dry.
2 Battery box (2)	Six screws (3) and six nuts (4)	Using 3/4-inch box-end wrench, and 3/4-inch open-end wrench, unscrew and take out.
<u>WARNING</u>		
Due to excessive weights, assistance will be needed to support battery box, to prevent personal injury.		
3	Three screws (5) and three nuts (6) and take off.	a Using 3/4-inch box-end wrench and 3/4-inch open-end wrench, unscrew b With assistance, take off battery box.



BATTERY BOX - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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REMOVAL - CONTINUED

NOTE

If brackets are to be removed perform steps 4 and 5.

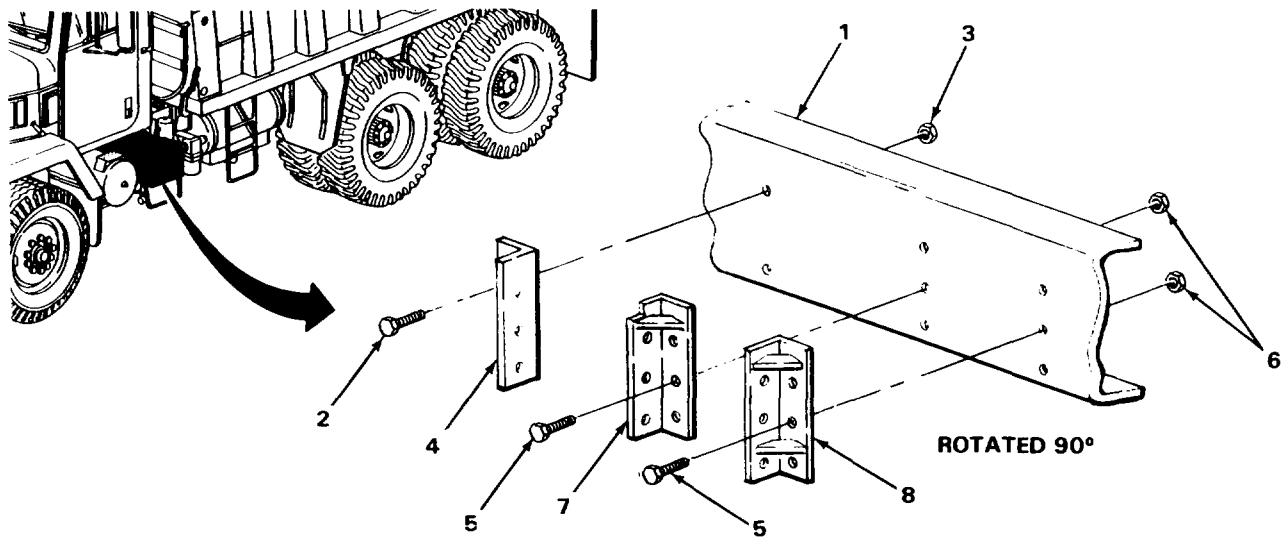
Step 4 is for front bracket only.

4	Frame rail (1) Two screws (2), two nuts (3), and front bracket (4)	<ul style="list-style-type: none"> a Using 3/4-inch box-end wrench and 3/4-inch open-end wrench, unscrew and take out. b Take off front bracket.
---	---	--

NOTE

step 5 is typical for both center and rear mounting brackets.

5	Six screws (5), six nuts (6), center bracket (7), and rear bracket (8)	<ul style="list-style-type: none"> a Using 3/4-inch box-end wrench and 3/4-inch open-end wrench, unscrew and take off. b Take off center and rear brackets.
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TA244230

BATTERY BOX - CONTINUED

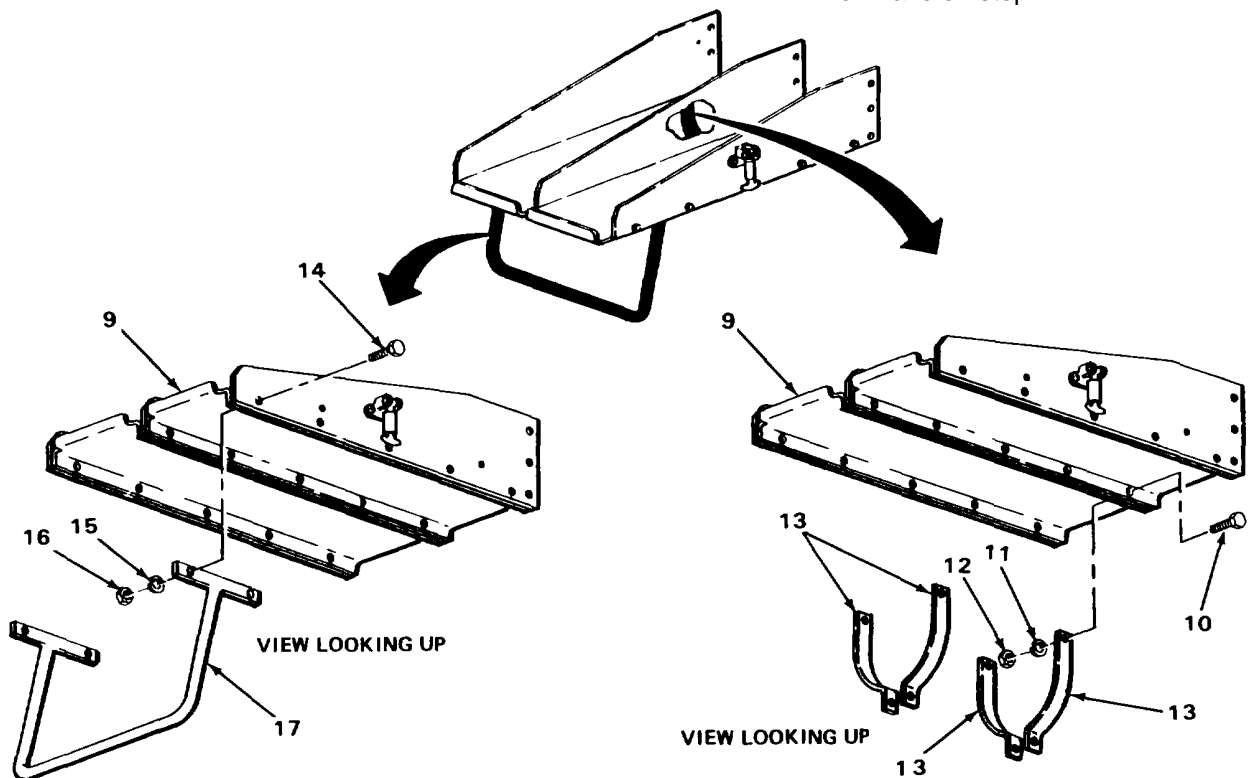
LOCATION	ITEM	ACTION REMARKS
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DISASSEMBLY

NOTE

Step 7 is typical for all four support straps.

6	Battery box (9)	Four screws (10), four lockwashers (11), four nuts (12), and four support straps (13)	a Using 9/16-inch, 1/2-inch drive socket and ratchet handle and 9/16-inch box-end wrench, unscrew and take off. b Get rid of lockwashers. c Take off support straps.
7		Four screws (14), four lockwashers (15), four nuts (16), and step (17)	a Using 9/16-inch, 1/2-inch drive socket and ratchet handle and 9/16-inch box- end wrench, unscrew and take off. b Get rid of lockwashers. c Take off step.

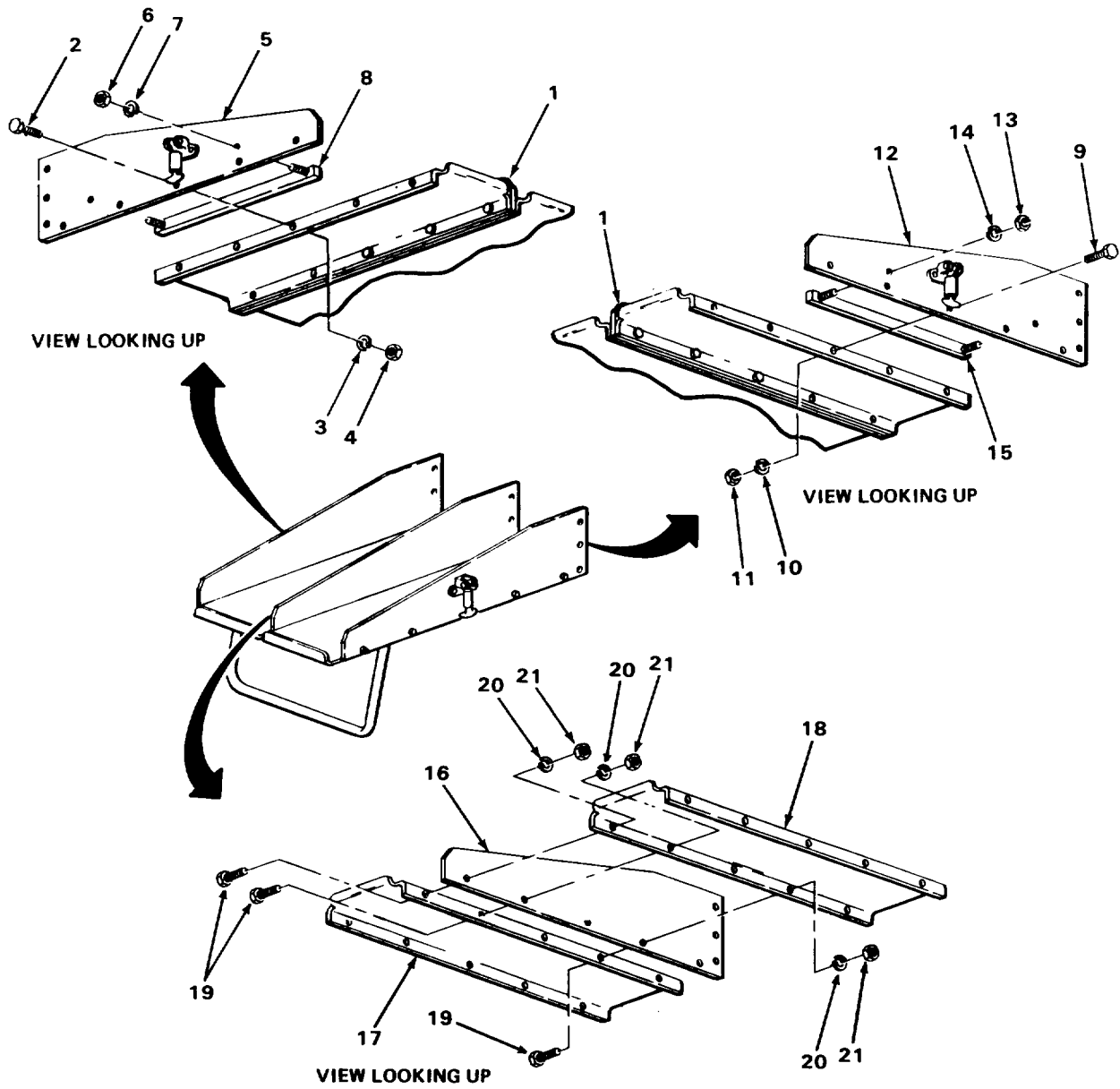


TA244231

BATTERY BOX - CONTINUED

LOCATION	ITEM	ACTION REMARKS
DISASSEMBLY - CONTINUED		
8 Battery box (1)	Screw (2), lockwasher (3), nut (4), and side panel (5)	a Using 9/16-inch, 1/2-inch drive socket and ratchet handle and 9/16-inch box-end wrench, unscrew and take off. b Get rid of lockwasher. c Take off side panel.
9 Side panel (5)	Two nuts (6), two lockwashers (7), and battery retainer (8)	a Using 3/8-inch open-end wrench, unscrew and take off. b Get rid of lockwashers. c Take off battery retainer.
10 Battery box (1)	Three screws (9), three lockwashers (10), three nuts (11), and side panel (12)	a Using 9/16-inch, 1/2-inch drive socket and ratchet handle and 9/16-inch box-end wrench, unscrew and take off. b Get rid of lockwashers. c Take off side panel.
11 Side panel (12)	Two nuts (13), two lockwashers (14), and battery retainer (15)	a Using 3/8-inch open-end wrench, unscrew and take off. b Get rid of lockwashers. c Take off battery retainer.
12 Center panel (16)	Two trays (17) and (18), three screws (19), three lockwashers (20), and three nuts (21)	a Using 9/16-inch, 1/2-inch drive socket and ratchet handle and 9/16-inch box-end wrench, unscrew and take off. b Get rid of lockwashers. c Take apart two trays and center panel (16).

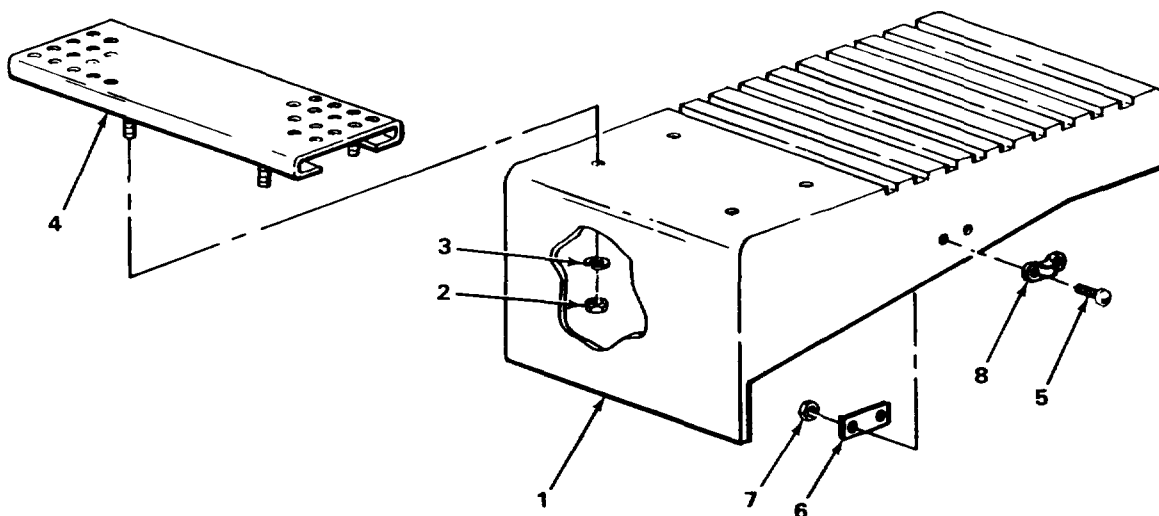
BATTERY BOX - CONTINUED



TA244232

BATTERY BOX - CONTINUED

LOCATION	ITEM	ACTION REMARKS
DISASSEMBLY - CONTINUED		
13 Cover (1)	Four nuts (2), four lockwashers (3), and upper step (4)	a Using 1/2-inch open-end wrench, unscrew and take off. b Get rid of lockwashers. c Take off upper step.
14	Four screws (5), two plates (6), four nuts (7), and two hooks (8)	a Using 3/8-inch box-end wrench and 11/4-inch flat-tip screwdriver, unscrew and take off. b. and take off.



CLEANING

WARNING

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 1000F (380C) and for type #2 is 138°F (590C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

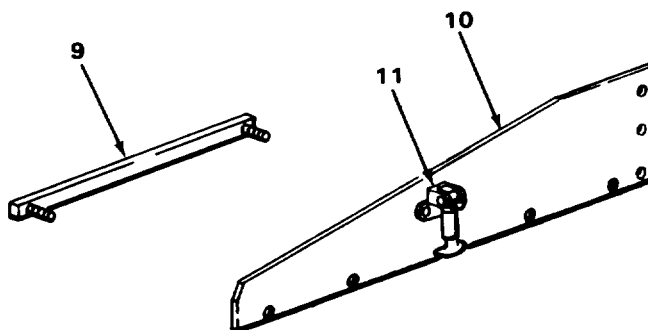
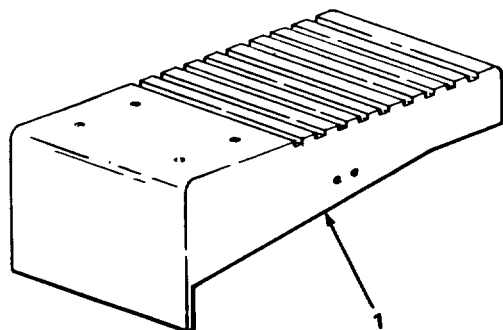
TA244233

BATTERY BOX - CONTINUED

LOCATION	ITEM	ACTION REMARKS
NOTE		
For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).		
15	All metal parts	Clean, using drycleaning solvent and wiping rags.
16	Cover (1) and two battery retainers (9)	Clean, using liquid detergent with water and wiping rags.

INSPECTION/REPLACEMENT

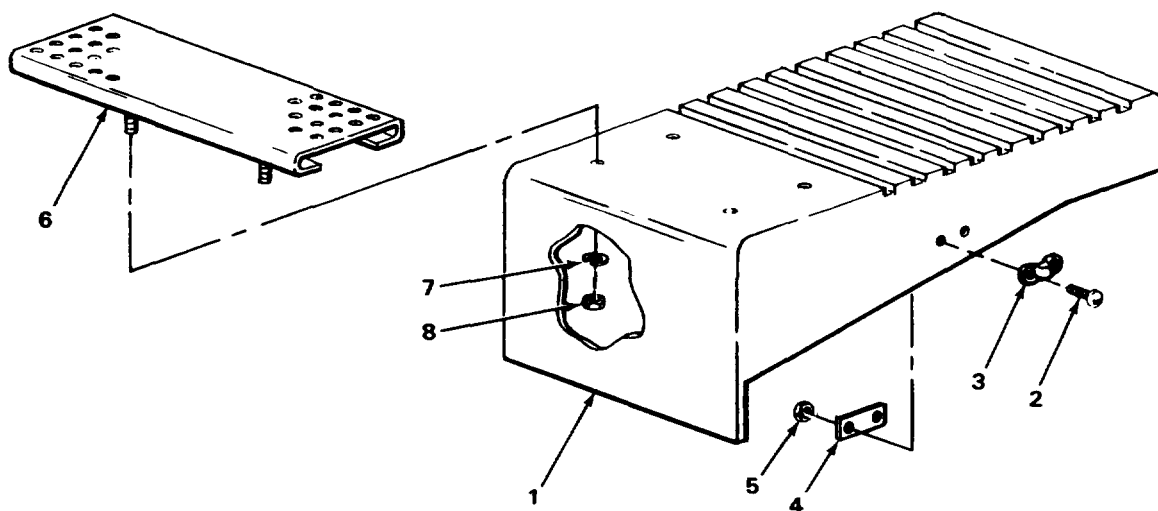
NOTE		
Replace all damaged or defective parts.		
For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).		
17	Cover (1) and two battery retainers (9)	Look for cracks or breaks.
18	Two side panels (10) Two hooks (11)	Pull up and check for spring tension and release. Hook should be under spring tension and return when released.



TA244234

BATTERY BOX - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSPECTION/REPLACEMENT- CONTINUED		
19	All metal parts	Look for cracks, breaks, or corroded areas.
20	All threaded parts	Look for damaged threads or rounded heads.
ASSEMBLY		
21 Cover (1)	Four screws (2), four hooks (3), four plates (4), and four nuts (5)	a Put in place. b Screw on and tighten, using 3/8-inch box-end wrench and 1/4-inch flat-tip screwdriver.
22	Upper step (6), four new lockwashers (7), and four nuts (8)	a Put upper step in place. b Screw on and tighten, using 1/2-inch open-end wrench.



TA244235

BATTERY BOX - CONTINUED

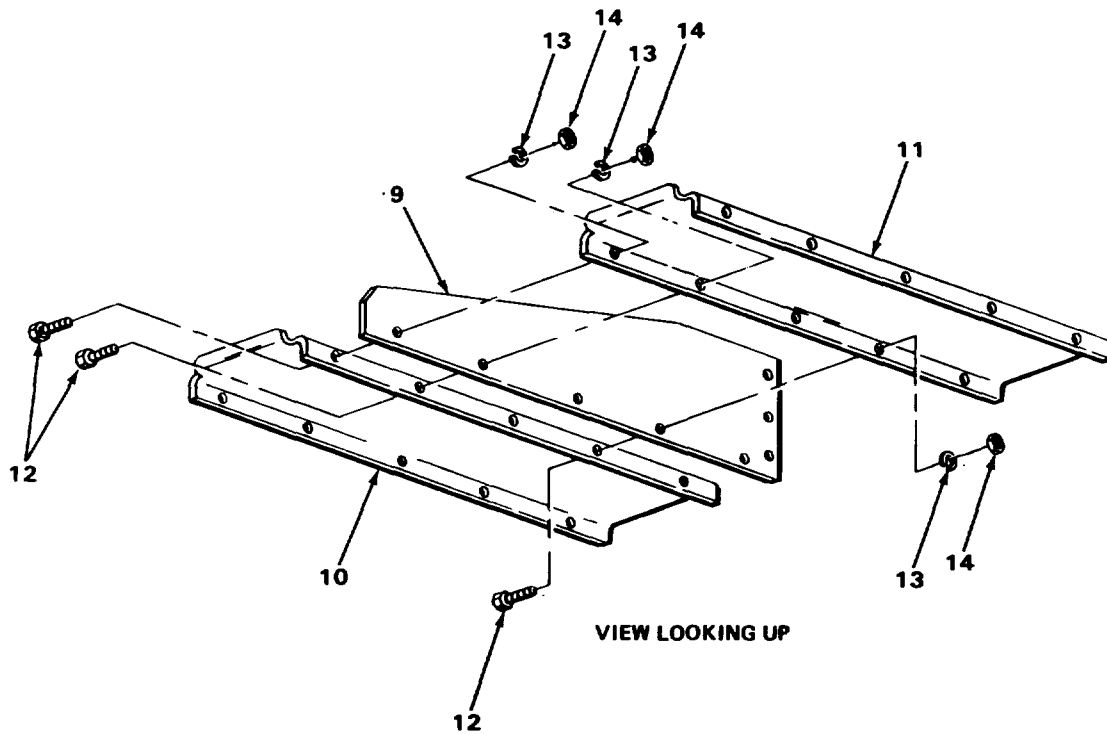
LOCATION	ITEM	ACTION REMARKS
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NOTE

Position trays with five holes towards center panel Position center panel as shown.

Hardware must be installed as shown.

23	Center panel (9)	Two trays (10) and (11), three screws (12), three new lockwashers (13), and three nuts (14)	<ul style="list-style-type: none"> a Aline center panel and two trays. b Screw in and tighten using 9/16-inch, 11/2-inch drive socket and ratchet handle and 9/16-inch box-end wrench.
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TA244236

BATTERY BOX - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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ASSEMBLY - CONTINUED

NOTE

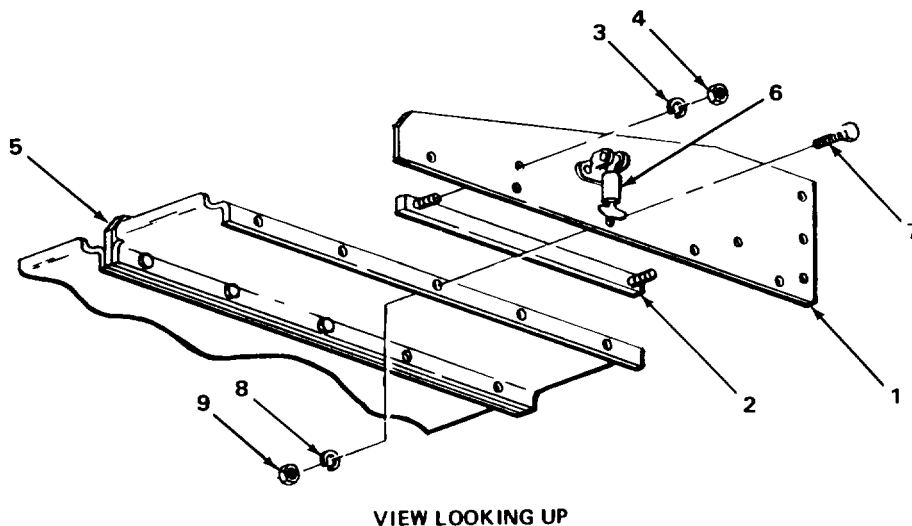
Position battery retainer and side panel as shown.

24	Side panel (1) Battery retainer (2), two new lock-washers (3), and two nuts (4)	<ul style="list-style-type: none"> a Put in place. b Screw on and tighten, using 3/8-inch box-end wrench.
----	--	---

NOTE

Hardware must be installed in location and direction shown.

25	Battery box (5) Side panel (1), three screws (7), three new lock-washers (8), and three nuts (9)	<ul style="list-style-type: none"> a Put in place. Hook (6) must face towards outside of battery box. b Screw on and tighten using 9/16-inch, 1/2-inch drive socket and ratchet handle and 9/16-inch box-end wrench.
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TA244237

BATTERY BOX - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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NOTE

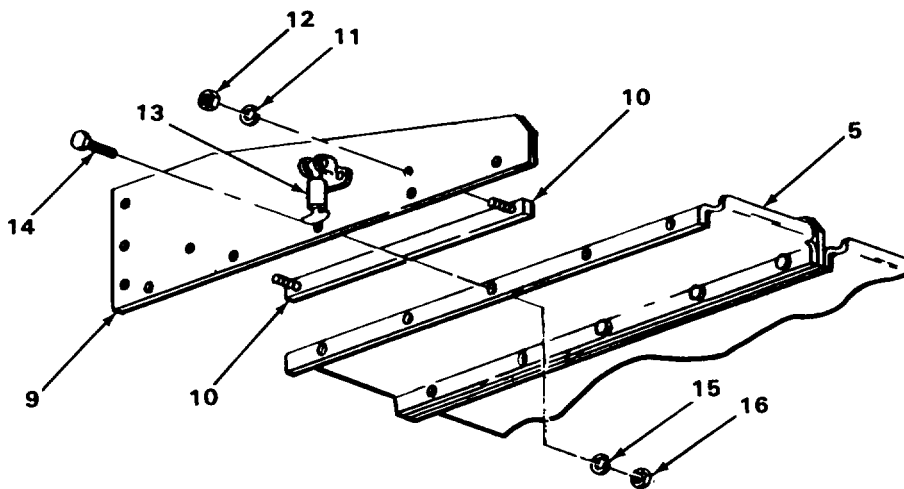
Position battery retainer and side panel as shown.

26	Side panel (9)	Battery retainer (10), two new lock-washers (11), and two nuts (12) <ul style="list-style-type: none"> a Put in place. b Screw on and tighten, using 3/8inch box-end wrench.
----	----------------	--

NOTE

Hardware must be installed in location and direction shown.

27	Battery box (5)	Side panel (9), screw (14), new lockwasher (15), and nut (16) <ul style="list-style-type: none"> a Put in place. Hook (13) must face towards outside of battery box. b Screw on and tighten, using 9/16-inch, 1/2-inch drive socket and ratchet handle and 9/16-inch, box-end wrench.
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VIEW LOOKING UP

TA244238

BATTERY BOX - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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ASSEMBLY - CONTINUED

NOTE

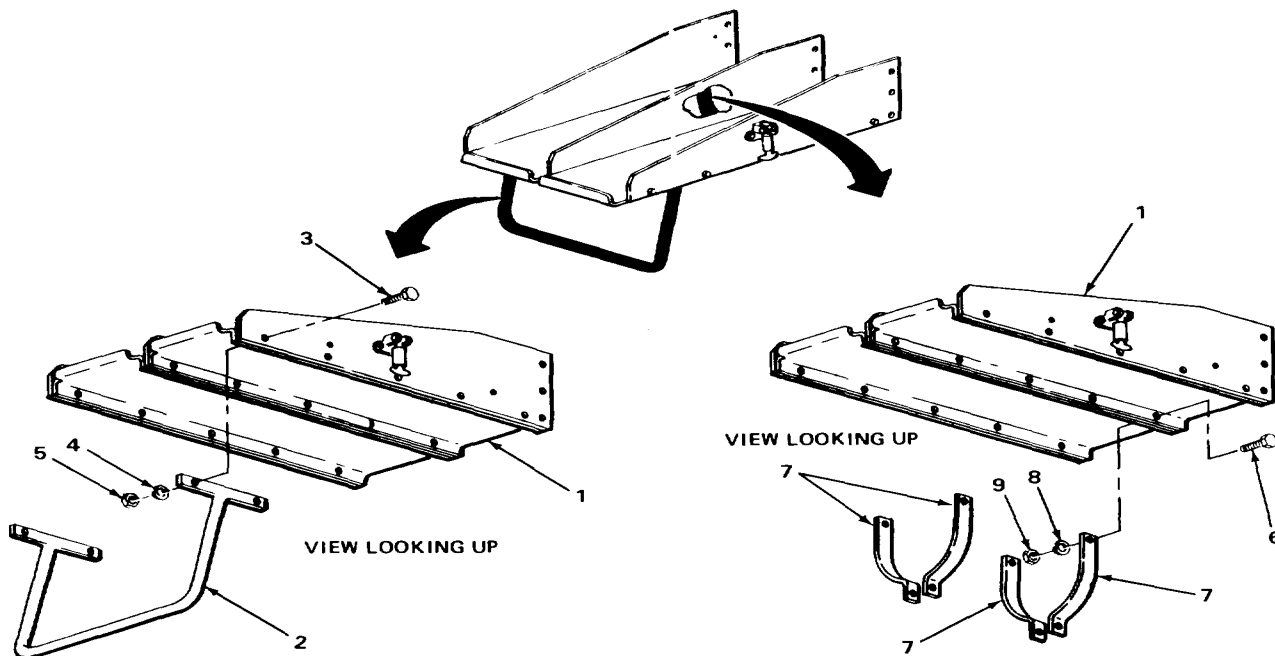
Hardware must be installed facing center of battery box.

28	Battery box (1)	<p>Step (2), four screws (3), four new lockwashers (4), and four nuts (5)</p> <p>a Put step in place. b Screw in and tighten, using 9/16-inch, 11/2-inch drive socket and ratchet handle and 9/16-inch box-end wrench.</p>
----	-----------------	--

NOTE

Hardware and straps must be installed in location and direction shown.

29	<p>Four screws (6), four straps (7), four new lockwashers (8), and four nuts (9)</p>	<p>a Put in place. b Screw on and tighten, using 9/16-inch, 1/2-inch drive socket and ratchet handle and 9/16-inch box-end wrench.</p>
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TA244239

BATTERY BOX - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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INSTALLATION

NOTE

If battery box mounting brackets were removed perform steps 30 and 31.

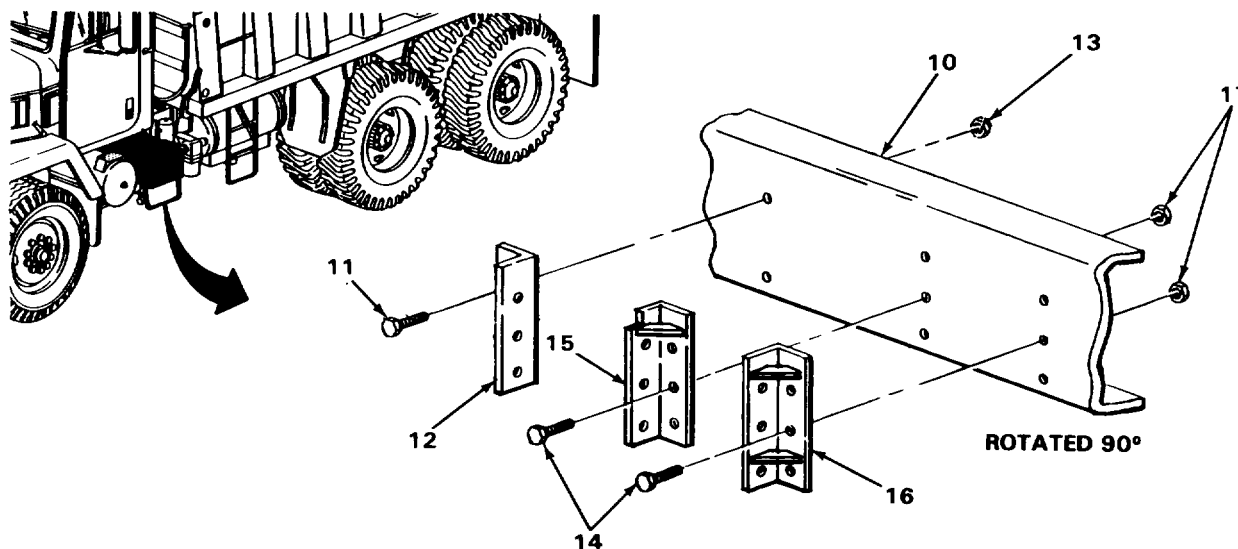
Step 30 is for front bracket only.

30	Frame rail (10) Two screws (11), front bracket (12), and two nuts (13)	a Aline holes. b Screw on and tighten, using 3/4-inch box-end wrench and 3/4-inch open-end wrench.
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NOTE

Step 31 is typical for both center and rear brackets.

31	Six screws (14), center bracket (15), rear bracket (16), and six nuts (17)	a Aline holes. b Screw on and tighten, using 3/4-inch box-end wrench and 3/4-inch open-end wrench.
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TA244240

BATTERY BOX - CONTINUED

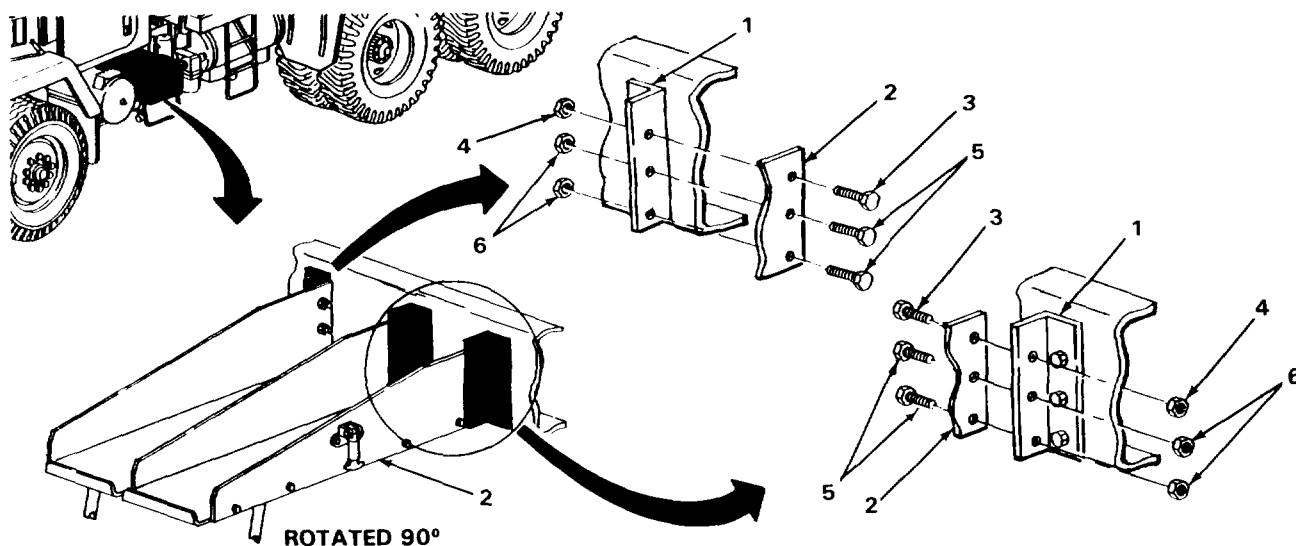
LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

INSTALLATION - CONTINUED

WARNING

Due to excessive weight, assistance will be needed to support battery box to prevent personal injury.

32	Three brackets (1) Battery box (2), three screws (3), and three nuts (4)	a With assistance put on. b Screw on and tighten, using 3/4-inch box-end wrench and 3/4-inch open-end wrench.
33	Six screws (5) and three nuts (6)	Screw on and tighten, using 3/4-inch box- end wrench and 3/4-inch open-end wrench.



NOTE

FOLLOW-ON MAINTENANCE:

- 1 Install batteries (page 2-838).
- 2 Install wet air reservoir (page 2-986).

TASK ENDS HERE

TA244241

OPTICAL LIGHT LAMP

This task covers:

- a Removal (page 2-857)
- b Installation (page 2-857)

INITIAL SETUP

Personnel Required

One

Equipment Condition

Battery cables disconnected (page 2-424).
 Left side cab door opened (page 2-424).
 Lower center instrument panel opened (page 2-424).

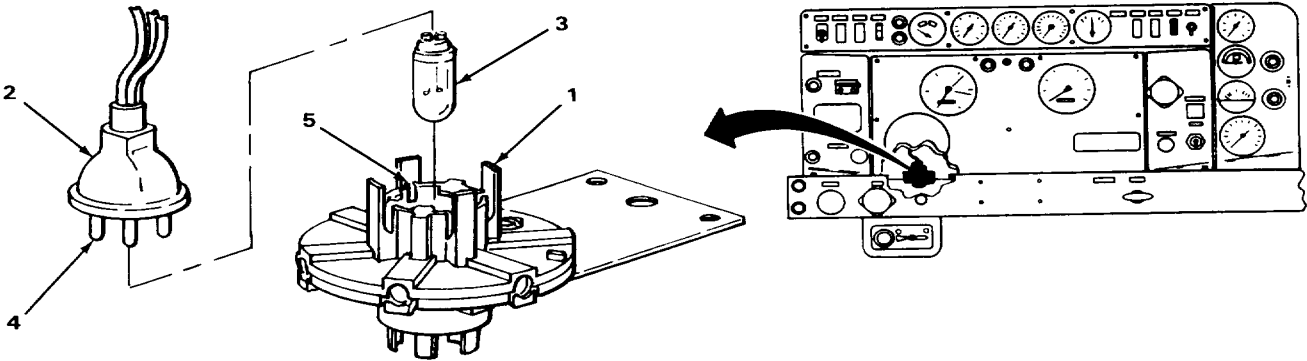
LOCATION	ITEM	ACTION REMARKS
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REMOVAL

- | | | | |
|---|----------------------------|------------|-------------------------------------|
| 1 | Optical light assembly (1) | Socket (2) | Turn counterclockwise and pull out. |
| 2 | Socket (2) | Lamp (3) | Pull out. |

INSTALLATION

- | | | | |
|---|----------------------------|-------------------------------|--|
| 3 | Socket (2) | Lamp (3) | Put in. |
| 4 | Optical light assembly (1) | Socket (2)
light assembly. | a Aline tabs (4) on socket with slots (5) on
b Put in and turn clockwise. |



TA244242

OPTICAL LIGHT LAMP - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

- 1 Close lower center instrument panel (page 2-424).
- 2 Connect battery cables (page 2-424).
- 3 Close left side cab door (page 2-424).

TASK ENDS HERE

OPTICAL LIGHT ASSEMBLY

This task covers:

a	Removal (page 2-858)	c	Assembly (page 2-859)
b	Disassembly (page 2-858)	d	Installation (page 2-859)

INITIAL SETUP

Tools

- Screwdriver, cross-tip, number one
- Screwdriver, flat-tip, 3/16-inch
- Wrench, box-end, 1/4-inch

Personnel Required

One

Equipment Condition

Materials/Parts

- Lockwasher, bracket

Battery cables disconnected (page 2-424).
 Left side cab door opened (page 2-424).
 Left center instrument panel opened (2-424).

LOCATION	ITEM	ACTION REMARKS
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REMOVAL

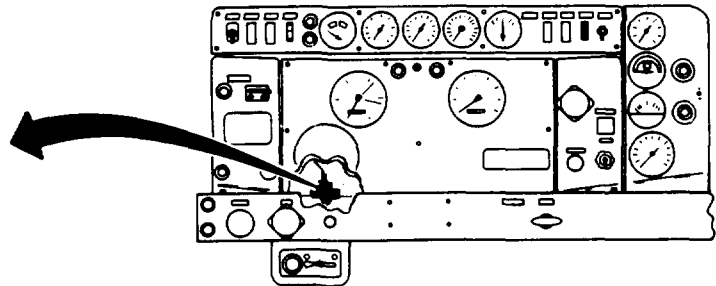
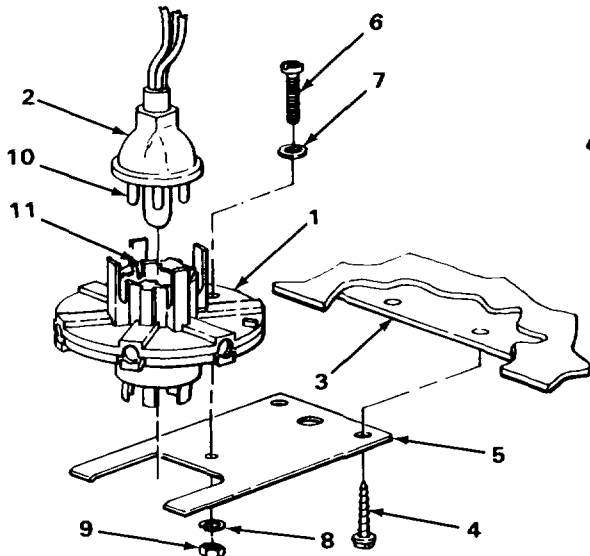
1	Optical light assembly (1)	Socket (2)	Turn counterclockwise and pull out.
2	Lower instrument panel (3)	Two screws (4) and bracket (5)	<ol style="list-style-type: none"> a Using number one cross-tip screwdriver, unscrew and take out. b Take off bracket.

DISASSEMBLY

3	Bracket (5) and optical light assembly (1)	Screw (6), flat washer (7), lockwasher (8), and nut (9)	<ol style="list-style-type: none"> a Using 3/16-inch flat-tip screwdriver and 1/4-inch box-end wrench, unscrew and take off. b Get rid of lockwasher.
---	--	---	---

OPTICAL LIGHT ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
ASSEMBLY			
4	Bracket (5) and optical light assembly (1)	Screw (6), flat washer (7), new lockwasher (8), and nut (9)	a Put bracket in place. b Screw in and tighten using 3/16-inch flat-tip screwdriver and 1/4-inch box-end wrench.
INSTALLATION			
5	Lower instrument panel (3)	Two screws (4) and bracket (5)	a Put bracket in place. b Screw in and tighten using number one cross-tip screwdriver.
6	Optical light assembly (1)	Socket (2) on optical light assembly.	a Aline tabs (10) on socket with slots (11)
b	Put in and turn clockwise.		



NOTE

FOLLOW-ON MAINTENANCE:

- 1 Close lower center instrument panel (page 2-424)
- 2 Connect battery cables (page 2-424)
- 3 Close left side cab door (page 2-424).

TASK ENDS HERE

TA244243

RIGHT INSTRUMENT PANEL OPTICAL RIBBON

This task covers:

- a Removal (page 2-860)
- b Installation (page 2-862)

INITIAL SETUP

Tools

Screwdriver, cross-tip, number one
 Screwdriver, flat-tip, 1/8-inch
 Screwdriver, flat-tip, 1/4-inch
 Wrench, box-end, 7/16-inch (two required)

Materials/Parts

Lockwasher, power take off control to lower center instrument panel (two required)

Personnel Required

One

Equipment Condition

Battery cables disconnected (page 2-424).
 Left side cab door opened (page 2-424).
 Lower center instrument panel opened (page 2-424).
 Right instrument panel opened (page 2-424).

LOCATION	ITEM	ACTION REMARKS
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REMOVAL

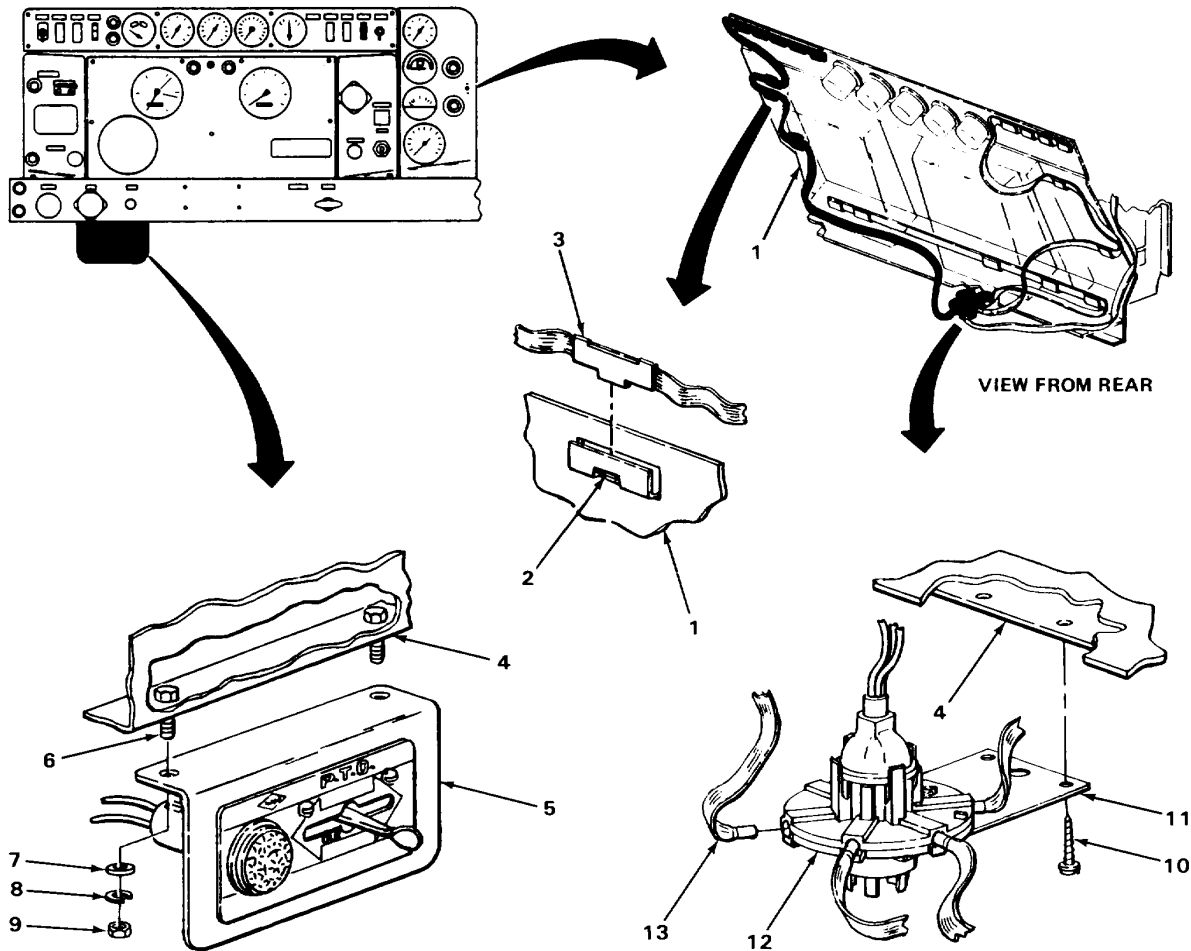
NOTE

Steps given are typical for removal of four identification tabs from four bezels.

1	Rear of instrument panel (1)	Bezel (2) and identification tab (3)	<ul style="list-style-type: none"> a Using 1/8-inch flat-tip screwdriver, pry rear of bezel back and take out identification tab. b Take out bezel. c Repeat step a until all four identification tabs and bezels have been removed.
2	Lower center instrument panel (4) screws (6), two flat washers (7), two lockwashers (8), and two nuts (9)	Power take off control (5), two b Do not remove screws from lower center instrument panel. c	<ul style="list-style-type: none"> a Using two 7/16-inch box-end wrenches, unscrew and take off. Take off power take off control. c Get rid of lockwashers.

RIGHT INSTRUMENT PANEL OPTICAL RIBBON - CONTINUED

LOCATION	ITEM	ACTION REMARKS
3. b. Take out bracket.	Two screws (10) and bracket (11)	a. Using number one cross-tip screw- driver, unscrew and take out.
4. Optical light assembly (12)	Optical ribbon (13)	Using 1/4-inch, flat-tip screwdriver, lift up plastic tab and pull out optical ribbon.



TA244244

RIGHT INSTRUMENT PANEL OPTICAL RIBBON - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION

NOTE

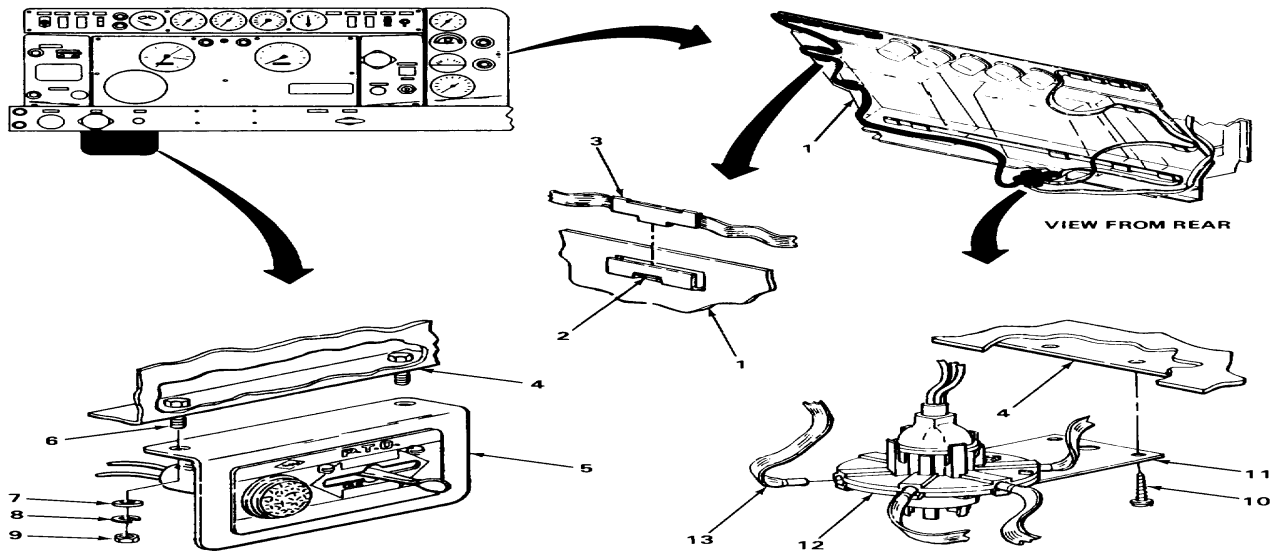
Steps given are typical for the installation of four identification tabs into four bezels.

When installing optical ribbon be sure to start at end farthest away from optical light assembly.

5. Rear of instrument panel (1)

Bezel (2) and identification tab (3)

- a. Put in place.
- b. Push identification tab into bezel.
- c. Repeat step b until all identification tabs are installed in bezels.



6. Optical light assembly (4)

Optical ribbon (5)

Push in.

7. Lower center instrument panel (6)

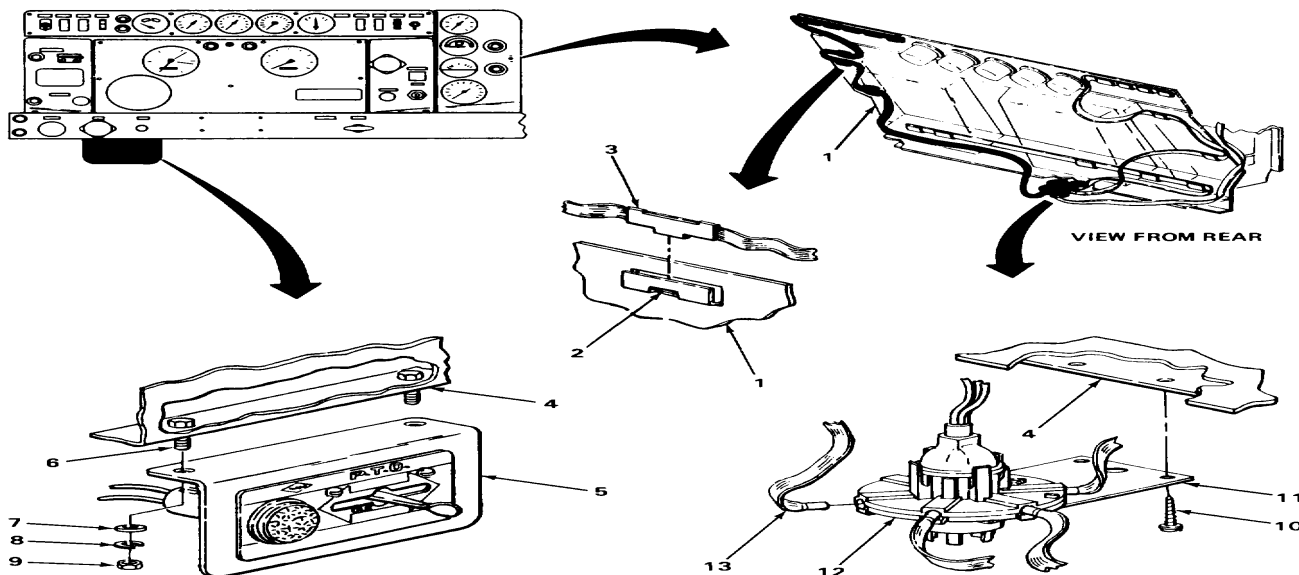
Two screws (7) and bracket (8)

- a. Put bracket in place.
- b. Screw in and tighten using number one cross-tip screwdriver.

RIGHT INSTRUMENT PANEL OPTICAL RIBBON - CONTINUED

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

- | | | | |
|----|---|--|--|
| 8. | Power take off control (9), two screws (10), two inch, box-end wrenches. flat washers (11), two new lockwashers (12), and two nuts (13) | a. Put power take off control in place.
b. Screw in and tighten using two 7/16- | |
|----|---|--|--|



NOTE

FOLLOW-ON MAINTENANCE:

1. Close lower center instrument panel (page 2-424).
2. Connect battery cables (page 2-424).
3. Close right instrument panel (page 2-424). TA244246
4. Close left side cab door (page 2-424). 2863

TASK ENDS HERE

LOWER INSTRUMENT PANEL OPTICAL RIBBON

This task covers:

- a. Removal (page 2-864)
 - b. Installation (page 2-866)
-

INITIAL SETUP

Tools

Screwdriver, cross-tip, number one
 Screwdriver, flat-tip, 118-inch
 Screwdriver, flat-tip, 1/4-inch
 Wrench, box-end, 7/16-inch
 (two required)

Materials/Parts

Lockwasher, power take off control
 to lower center instrument panel
 (two required)

Personnel Required

One

Equipment Condition

Battery cables disconnected (page 2-424).
 Left side cab door opened (page 2-424).
 Lower center instrument panel opened
 (page 2-424).

LOCATION	ITEM	ACTION	REMARKS
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3. Two screws (10) and a. Using number one cross-tip screw-

REMOVAL

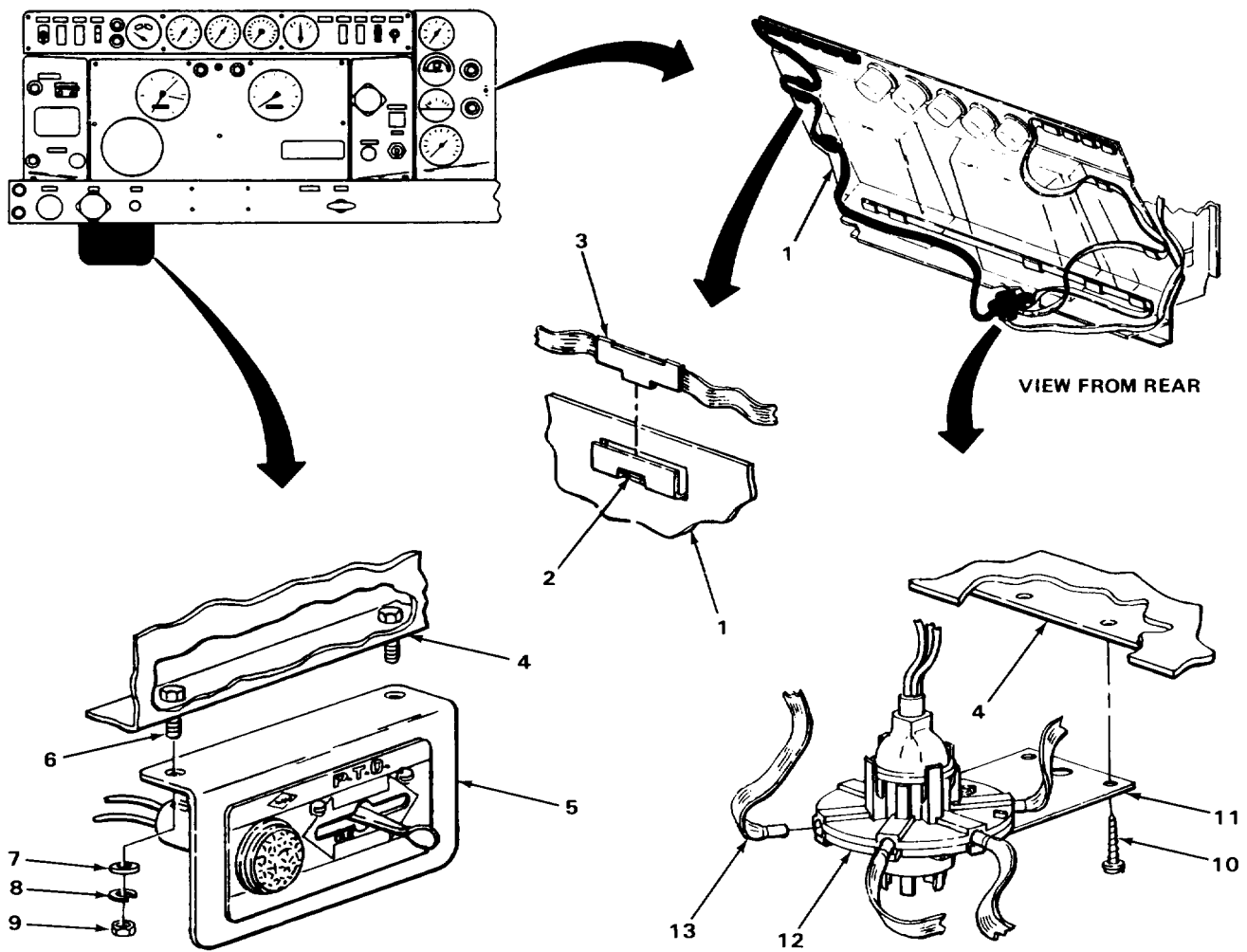
NOTE

Steps given are typical for removal of three identification tabs from three bezels.

1. Rear of instrument panel (1)	Bezel (2) and identification tab (3)	<ul style="list-style-type: none"> a. Using 1/8-inch flat-tip screwdriver, pry rear of bezel back and take out identification tab. b. Take out bezel. c. Repeat step a until all three identification tabs and bezels have been removed. 	
2. Lower center instrument panel (4)	Power take off control (5), two screws (6), two flat washers (7), two lockwashers (8), and two nuts (9)	<ul style="list-style-type: none"> a. Using two 7/16-inch box-end wrenches, unscrew and take off. b. Take off power take off control. Do not remove screws from lower center instrument panel. c. Get rid of lockwashers. 	

LOWER INSTRUMENT PANEL OPTICAL RIBBON - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
3.	Two screws (10) and bracket (11)	a. Using number one cross-tip screwdriver, unscrew and take out. b. Take out bracket.	
4. Optical light assembly (12)	Optical ribbon (13)	Using 1/4-inch flat-tip screwdriver, lift up plastic tab and pull out optical ribbon.	



LOWER INSTRUMENT PANEL OPTICAL RIBBON - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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**INSTALLATION
NOTE**

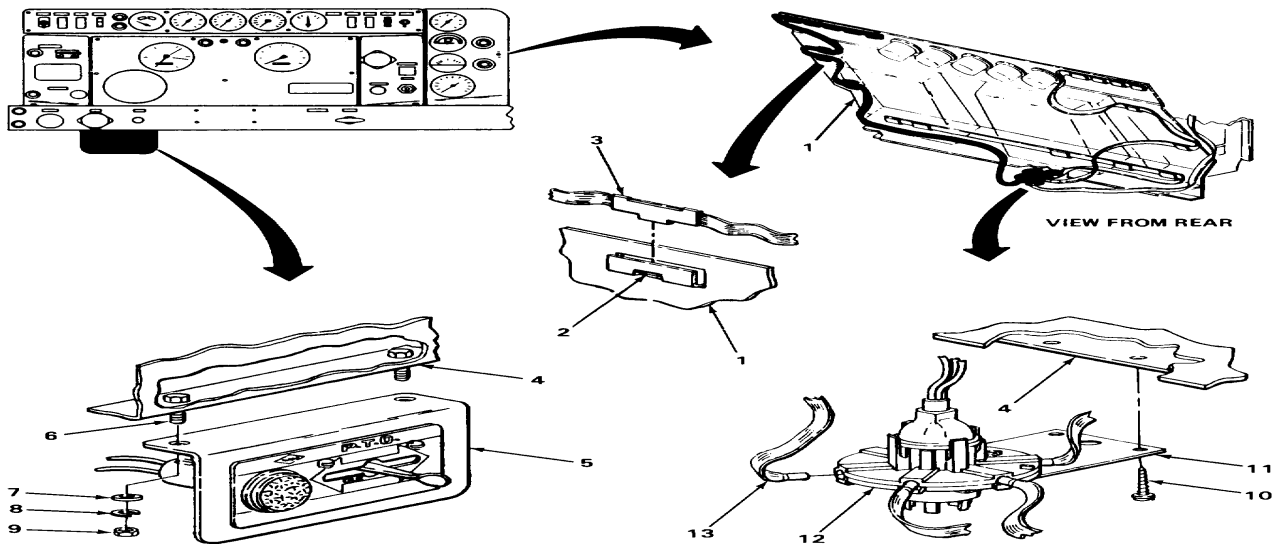
Steps given are typical for the installation of three identification tabs into three bezels.

When installing optical ribbon be sure to start at end farthest away from optical light assembly.

5. Rear of instrument panel (1)

Bezel (2) and identification tab (3)

- a. Put in place.
- b. Push identification tab into bezel.
- c. Repeat step b until all identification tabs are installed in bezels.



6. Optical light assembly (4)

Optical ribbon (5)

Push in.

7. Lower center instrument panel (6)

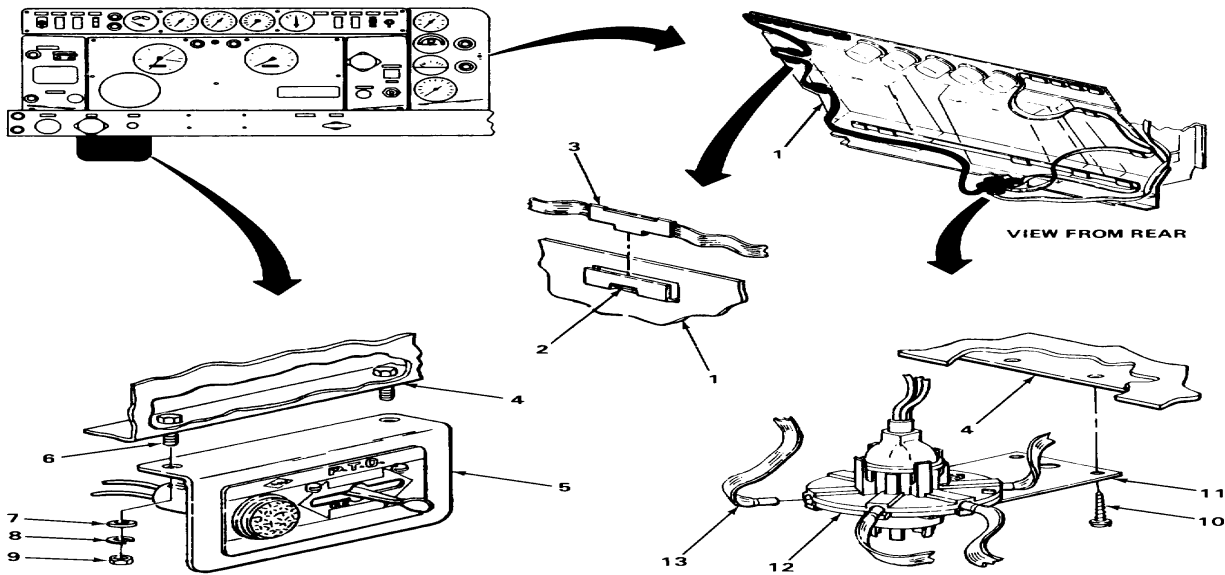
Two screws (7) and bracket (8)

- a. Put bracket in place.
- b. Screw in and tighten using number one cross-tip screwdriver.

RIGHT INSTRUMENT PANEL OPTICAL RIBBON - CONTINUED

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

- | | | | |
|----|--|--|--|
| 8. | Power take off control (9), two screws (10), two flat washers (11), two new lockwashers (12), and two nuts(1 | a. Put power take off control in place.
b. Screw in and tighten using two 7/16-inch box-end wrenches. | |
|----|--|--|--|



NOTE

FOLLOW-ON MAINTENANCE:

1. Close lower center instrument panel (page 2-424).
2. Connect battery cables (page 2-424).
3. Close left side cab door (page 2-424).

TASK ENDS HERE

LEFT INSTRUMENT PANEL OPTICAL RIBBON

This task covers:

- a. Removal (page 2-868)
- b. Installation (page 2-870)

INITIAL SETUP

Tools

Screwdriver, cross-tip, number one
 Screwdriver, flat-tip, 118-inch
 Screwdriver, flat-tip, 114-inch
 Wrench, box-end, 7/16-inch
 (two required)

Materials/Parts

Lockwasher, power take off control
 to lower center instrument panel
 (two required)

Personnel Required

One

Equipment Condition

Battery cables disconnected (page 2-424).
 Left side cab door opened (page 2-424).
 Lower center instrument panel opened
 (page 2-424).

LOCATION	ITEM	ACTION	REMARKS
3.	Two screws (10) and a.	Using number one cross-tip screw-	

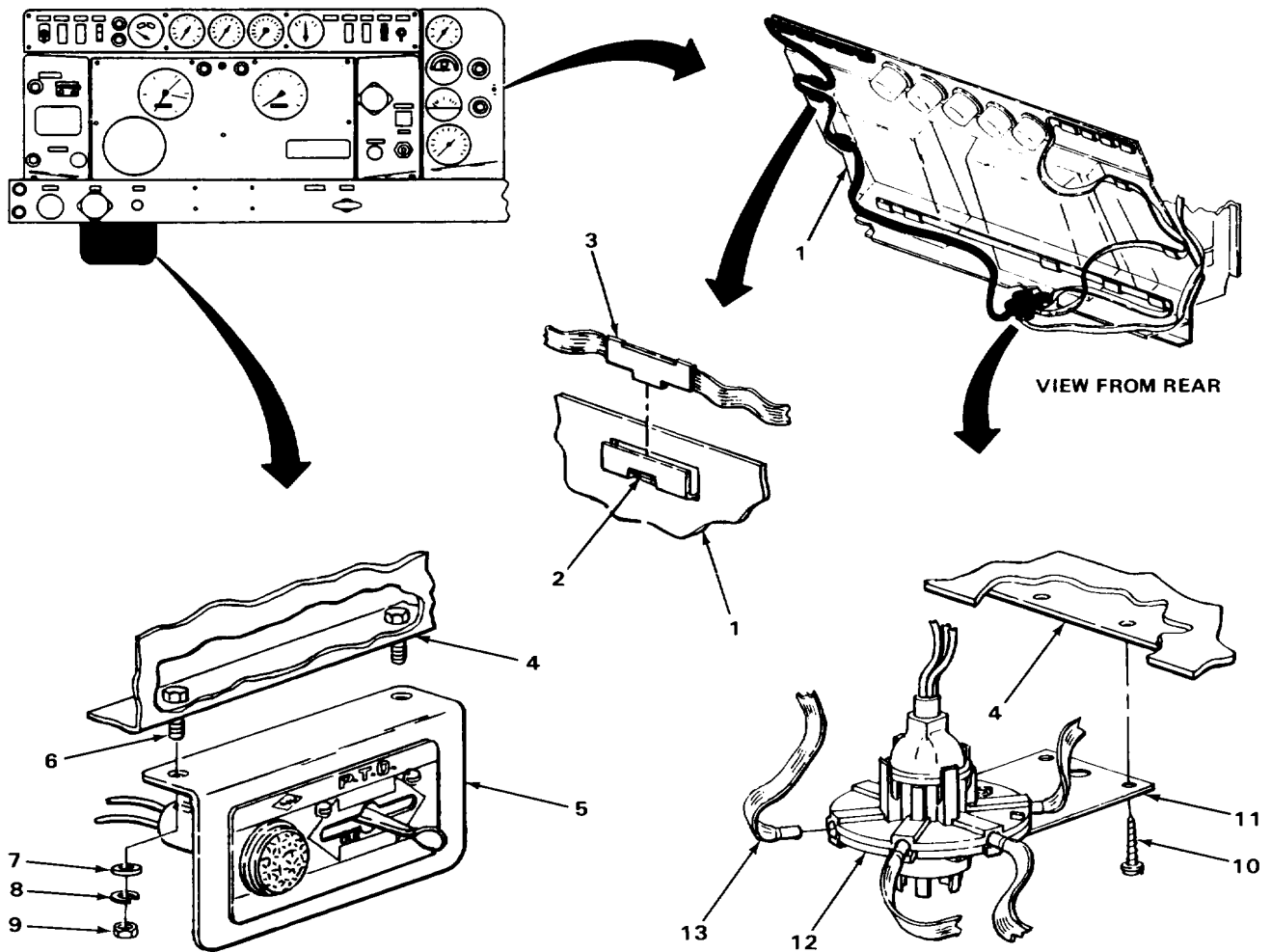
REMOVAL

NOTE

Step 1 is typical for removal of three identification tabs from three bezels.

1. Rear of instrument panel (1)	Bezel (2) and identification tab (3)	<ul style="list-style-type: none"> a. Using 1/8-inch flat-tip screwdriver, pry rear of bezel back and take out identification tab. b. Take out bezel. c. Repeat step a until all three identification tabs and bezels have been removed. 	
2. Lower center instrument panel (4)	Power take off control (5), two screws (6), two flat washers (7), two lockwashers (8), and two nuts (9)	<ul style="list-style-type: none"> a. Using two 7/16-inch box-end wrenches, unscrew and take off. b. Take off power take off control. Do not remove screws from lower center instrument panel. c. Get rid of lockwashers. 	

LOCATION	ITEM	ACTION REMARKS
3.	Two screws (10) and bracket (11)	a. Using number one cross-tip screw- driver, unscrew and take out. b. Take out bracket.
4. Optical light assembly (12)	Optical ribbon (13)	Using 114-inch flat-tip screwdriver, lift up plastic tab and pull out optical ribbon.



TA244245

LEFT INSTRUMENT PANEL OPTICAL RIBBON - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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3. Two screws (10) and a. Using number one cross-tip screw-

INSTALLATION

NOTE

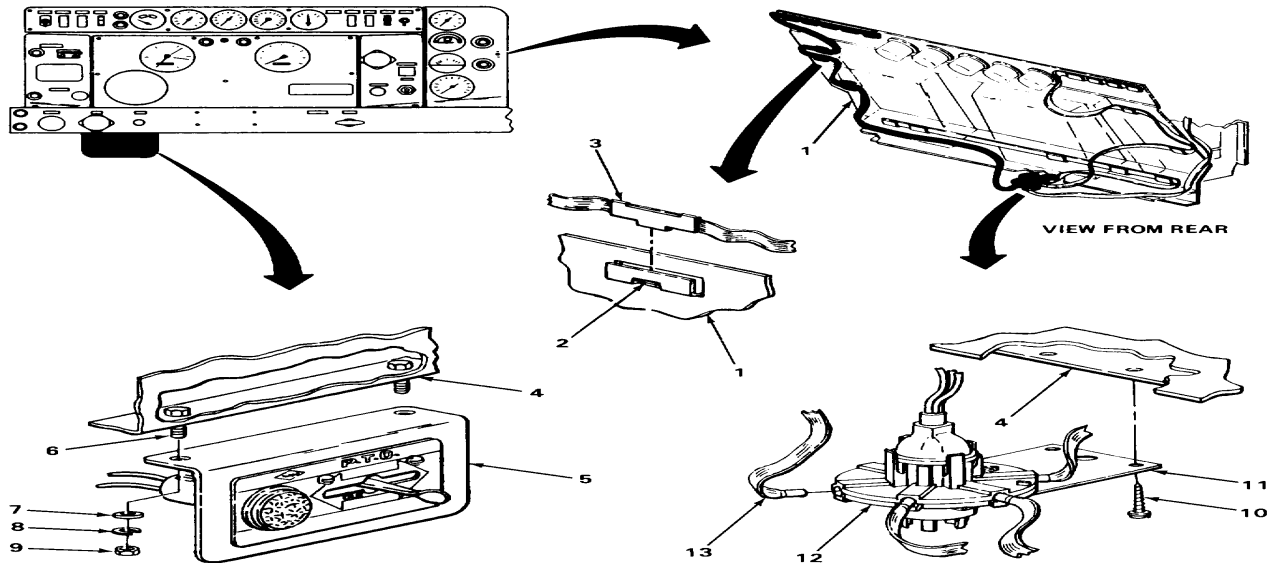
Step 5 is typical for installation of three identification tabs into three bezels.

When installing optical ribbon be sure to start at end farthest away from optical light assembly.

5. Rear of instrument panel (1)

Bezel (2) and identification tab (3)

a. Put in place.
b. Push identification tab into bezel.
c. Repeat step b until all identification tabs are installed in bezels.



6. Optical light assembly (4) Push in. Optical ribbon (5)

7. Lower center instrument panel (6) Two screws (7) and bracket (8) cross-tip screwdriver.

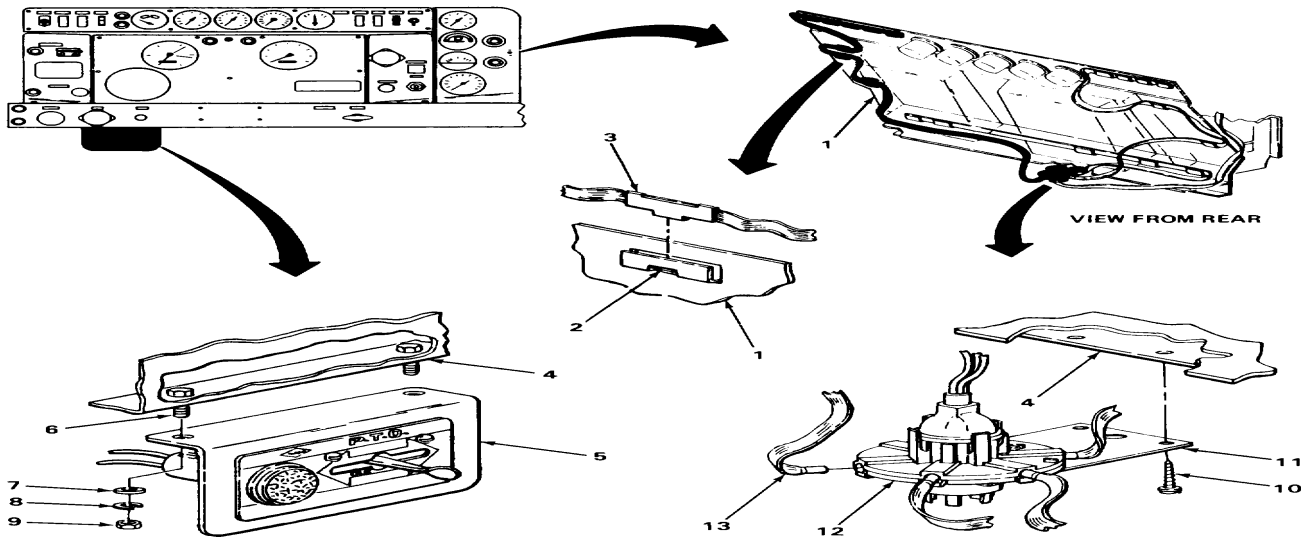
Two screws (7) and bracket (8)

a. Put bracket in place.
b. Screw in and tighten using number one

LEFT INSTRUMENT PANEL OPTICAL RIBBON - CONTINUED

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

- | | | | |
|----|---|--|--|
| 8. | Power take off control (9), two screws (10), two flat washers (11), two new lockwashers (12), and two nuts (13) | a. Put power take off control in place.
b. Screw in and tighten using two 7/16-inch box-end wrenches. | |
|----|---|--|--|



NOTE

FOLLOW-ON MAINTENANCE:

1. Close lower center instrument panel (page 2-424).
2. Connect battery cables (page 2-424).
3. Close left side cab door (page 2-424).

TASK ENDS HERE

UPPER INSTRUMENT PANEL OPTICAL RIBBON

This task covers:

- a. Removal (page 2-872)
 - b. Installation (page 2-875)
-

INITIAL SETUP

(two required)

Tools

- Scissors, 5inch
- Screwdriver, cross-tip, number one
- Screwdriver, flat-tip, 1/8-inch
- Screwdriver, flat-tip, 114-inch
- Wrench, box-end, 7/16-inch (two required)

Materials/Parts

- Lockwasher, power take off control to lower center instrument panel (two required)
- Tape, masking (item 25, appendix C)

Personnel Required

One

Equipment Condition

- Battery cables disconnected (page 2-424).
 - Left side cab door opened (page 2-424).
 - Lower center instrument panel opened (page 2-424).
-

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

REMOVAL

1. Cover plate (1) to front trim panel head retainer (2)	Six screws (3)	Using number one cross-tip screwdriver, unscrew and take out.	
2. Front trim panel head retainer (2)	Cover plate (1)	Take off.	

NOTE

Steps given are typical for removal of two identification tabs from two bezels.

3. Cover plate (1) Bezel (4) and identification tab (5)	<ul style="list-style-type: none"> a. Using 118-inch flat-tip screwdriver, pry rear of bezel back and take out identification tab. b. Take out bezel. c. Repeat step a until two identification tabs and bezels have been removed.
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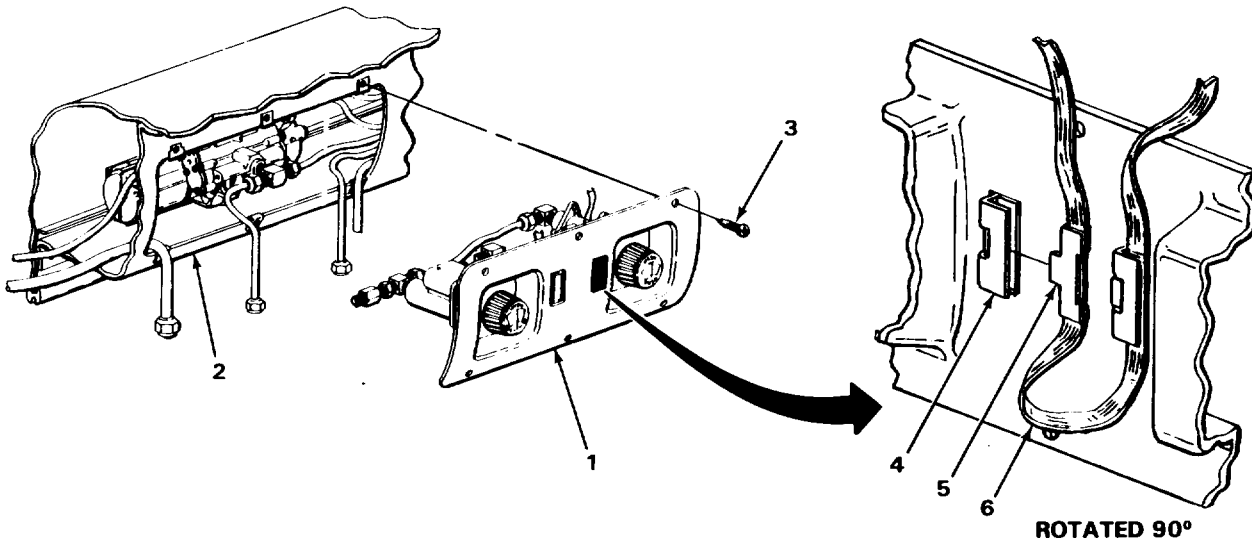
UPPER INSTRUMENT PANEL OPTICAL RIBBON - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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4. Optical ribbon (6)

Two identification tabs (5)

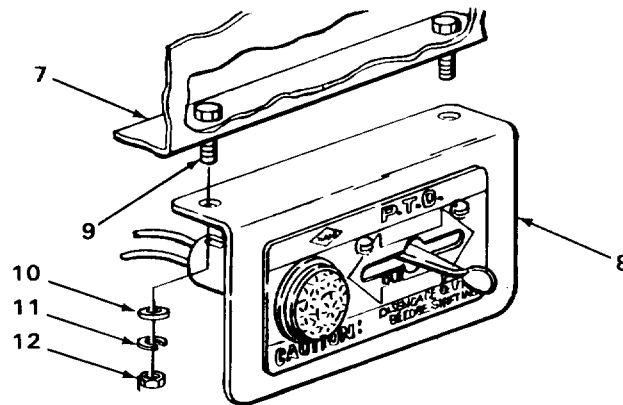
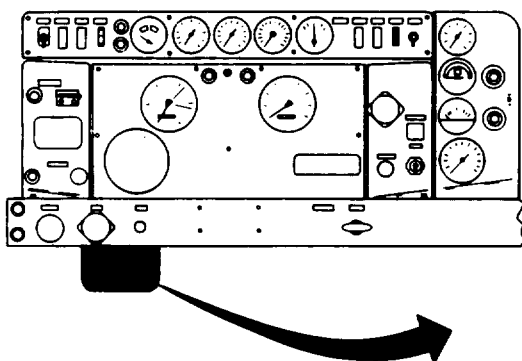
a. Using 5-inch scissors cut off.
b. Tape new optical ribbon to old optical ribbon.



5. Lower center instrument panel (7)

Power take off control (8), two screws (9), two flat washers (10), two lockwashers (11), and two nuts (12)

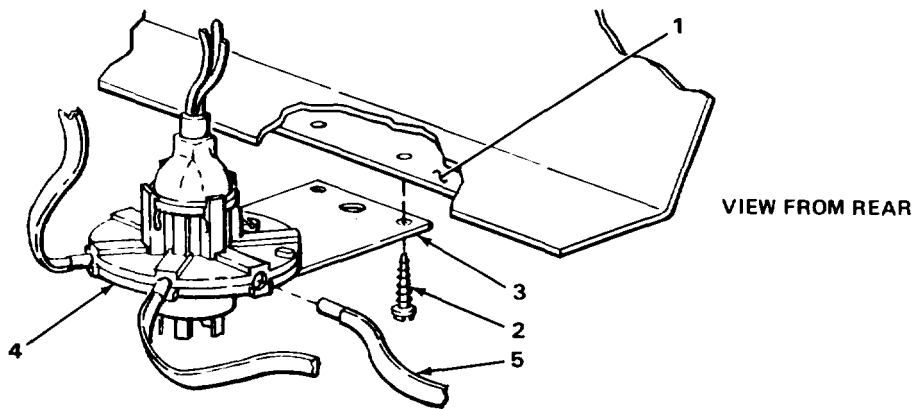
a. Using two 7/16-inch box-end unscrew and take off.
b. Take off power take off control. Do not remove screws from lower center instrument panel.
c. Get rid of lockwashers.



TA244253

UPPER INSTRUMENT PANEL OPTICAL RIBBON - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED		
6. Lower center instrument panel (1)	Two screws (2) bracket (3)	a Using number one cross-tip screwdriver, unscrew and take out. b. Take out bracket.
7. Optical light assembly (4)	Optical ribbon (5)	Using 1/4-inch flat-tip screwdriver, lift up plastic tab and pull out optical ribbon.



CAUTION

Care must be taken when pulling optical ribbon through tube to prevent damage or breaking.

8. Tube (6)	Optical ribbon (7)	Pull through until new optical ribbon comes through.
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CAUTION

Care must be taken when removing tape holding optical ribbons together, to prevent damage to new optical ribbon.

9.	Optical ribbon (7)	Remove old optical ribbon from new optical ribbon.
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TA244254

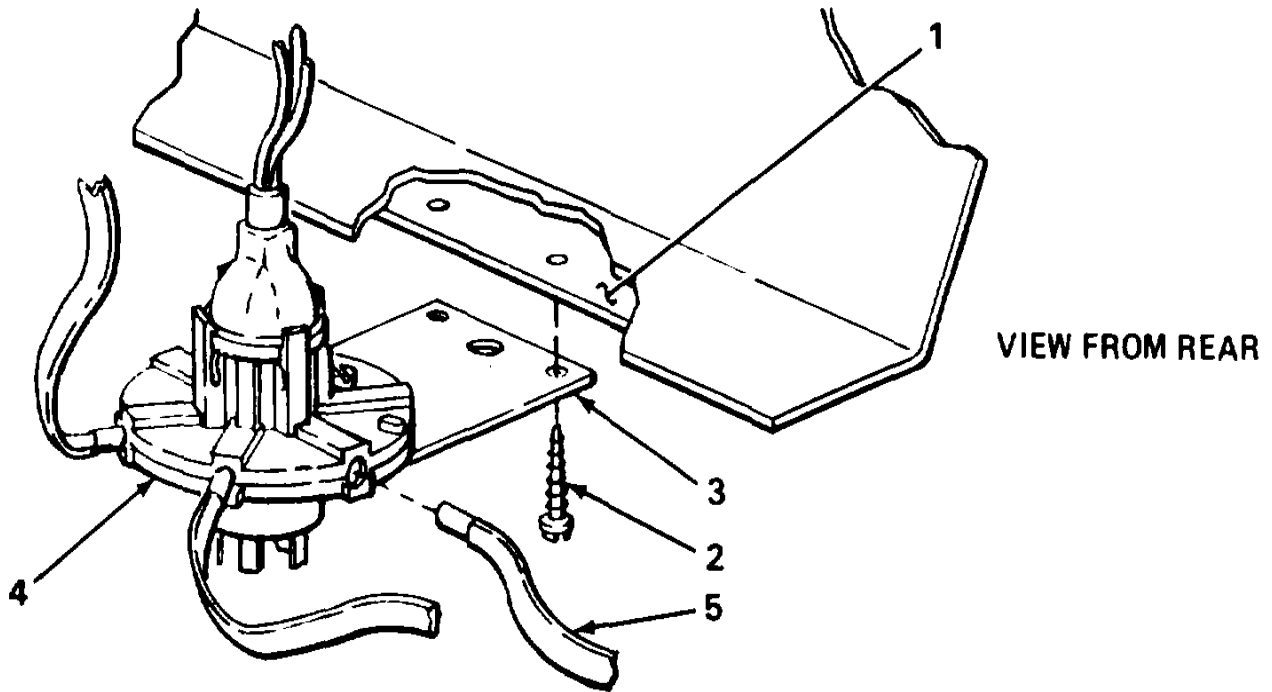
LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION

NOTE

Steps given are typical for installation of two identification tabs into two bezels.

10. Cover plate (8)	Bezel (9) and identification tab (10)	a. Put in place. b. Push identification tab into bezel. c. Repeat step b until two identification tabs are installed in bezels.
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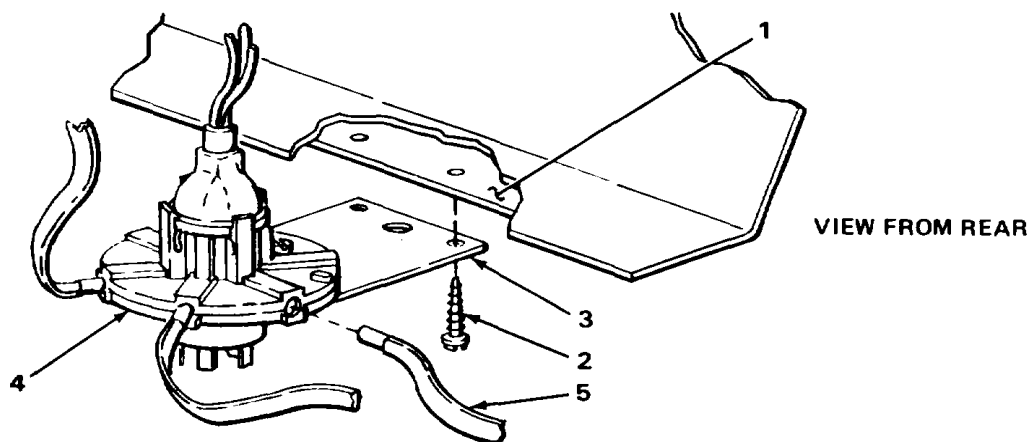


UPPER INSTRUMENT PANEL OPTICAL RIBBON - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION - CONTINUED

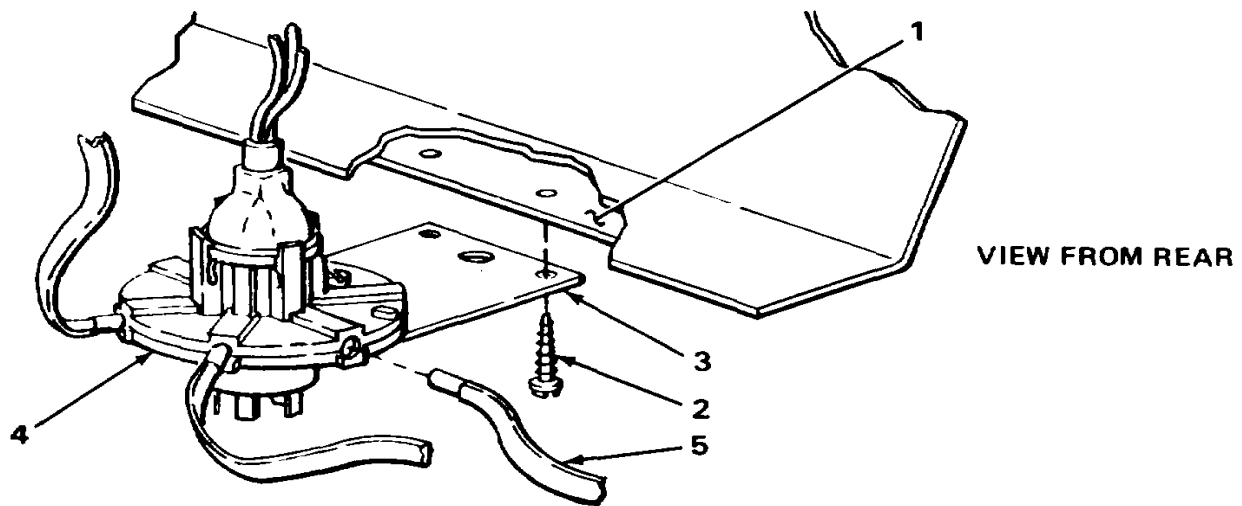
- | | | | |
|---|-----------------|--|--|
| 11. Front trim panel head retainer (1) | Cover plate (2) | Put in place. | |
| 12. Cover plate (2) to front trim panel head retainer (1) | Six screws (3) | Screw in and tighten using number one cross-tip screwdriver. | |



- | | | | |
|---------------------------------------|---|---|--|
| 13. Optical light assembly (4) | Optical ribbon (5) | Push in. | |
| 14. Lower center instrument panel (6) | Two screws (7) and bracket (8) | a. Put bracket in place.
b. Screw in and tighten using number one cross-tip screwdriver. | |
| 15. | Power take off control (9), two screws (10), two flat washers (11), two new lockwashers (12), and two nuts (13) | a. Put in place.
b. Screw in and tighten using two 7/16-inch box-end wrenches. | |

TA244256

UPPER INSTRUMENT PANEL OPTICAL RIBBON - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE:

1. Connect battery cables (page 2424).
2. Close lower center instrument panel (page 2-424).
3. Close left side cab door (page 2-424).

TASK ENDS HERE

AUTOMATIC OVERRIDE MODULE

This task covers:

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

INITIAL SETUP

Tools

Screwdriver, cross-tip, number three
Wrench, box-end, 11132-inch

Materials/Parts

Tags, marker (item 21, appendix C)

AUTOMATIC OVERRIDE MODULE - CONTINUED

INITIAL SETUP - CONTINUED

Personnel Required

One

Equipment Condition

Battery ground cable disconnected (page 2-424).
 Right side cab door opened (page 2-424).
 Instrument panel pad removed (page 2-424).

LOCATION	ITEM	ACTION	REMARKS
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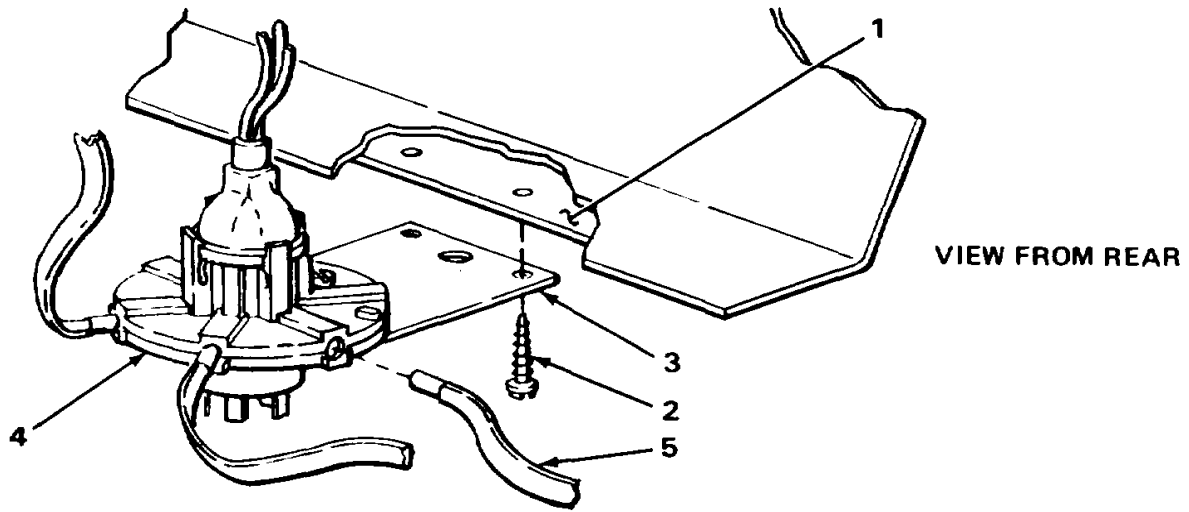
REMOVAL

NOTE

For more information on how to tag parts, go to General Maintenance Instructions (page 2-424).

1. Automatic override module (1)	Four nuts (2) and four wire terminals (3)	<ul style="list-style-type: none"> a. Tag wires. b. Using 11132-inch, box-end wrench, unscrew and take off four nuts. c. Take off four wire terminals. 	
2. Support (4)	Two screws (5), automatic override module (1), and two flat washers (6)	<ul style="list-style-type: none"> a. Using number three cross-tip screwdriver, unscrew and take out two screws. b. Take off automatic override module. c. Take off two flat washers. 	
INSTALLATION			
3.	Two screws (5), automatic override module (1), and two flat washers (6)	<ul style="list-style-type: none"> a. Put flat washers in place. b. Put automatic override module in place. c. Screw in and tighten using number three cross-tip screwdriver. 	
4. Automatic override module (1)	Four nuts (2) and four wire terminals (3)	<ul style="list-style-type: none"> a. Put wire terminals in place. b. Screw on and tighten using 11132-inch box-end wrench. c. Take off tags. d. Get rid of tags. 	

AUTOMATIC OVERRIDE MODULE - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE:

1. Connect battery ground cable (page 2-824).
2. Install instrument panel pad (page 2-424).
3. Close right side cab door (page 2-424).

TASK ENDS HERE

POWER TAKE-OFF (PTO) INDICATOR LAMP

This task covers:

- a. Removal (page 2-880)
 - b. Installation (page 2-880)
-

INITIAL SETUP

Personnel Required

One

Equipment Condition

Left side cab door opened (page 2-424).

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

REMOVAL**WARNING**

Care must be taken when removing lamp that is cracked or gray in color to prevent personal injury.

CAUTION

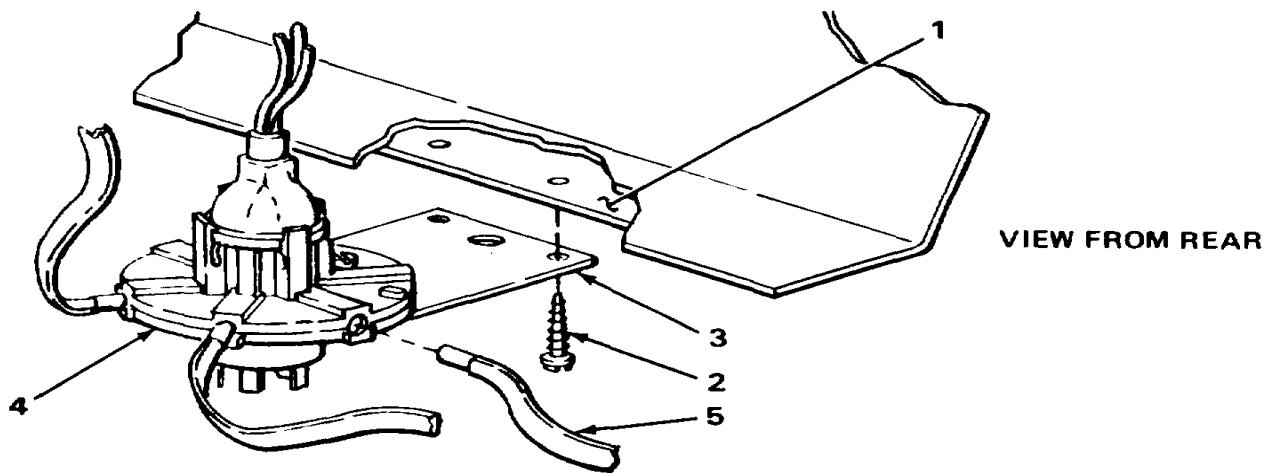
To prevent damaging socket, do not twist to side while removing.

- | | | | |
|--------------------------|------------|---|--|
| 1. Rear of indicator (1) | Socket (2) | Pull out. | |
| 2. Socket (2) | Lamp (3) | Push in, turn counterclockwise, and pull out. | |

INSTALLATION

- | | | | |
|--------------------------|------------|--|--|
| 3. Socket (2) | Lamp (3) | a. Put in place.
b. Push in, turn clockwise, and release. | |
| 4. Rear of indicator (1) | Socket (2) | Put in. | |

POWER TAKE-OFF (PTO) INDICATOR LAMP - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE: Close left side cab door (page 2-424).

TASK ENDS HERE

UPPER INSTRUMENT PANEL GAGE LAMPS

This task covers:

- a. Removal (page 2-882)
- b. Installation (page 2-882)

TA244259

UPPER INSTRUMENT PANEL GAGE LAMPS - CONTINUED

INITIAL SETUP

Personnel Required

One

Equipment Condition

Left side cab door opened (page 2-424).
Upper center instrument panel opened
(page 2-424).

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

REMOVAL

WARNING

Care must be taken when removing lamp that is cracked or gray in color to prevent personal injury.

NOTE

Steps given are typical for removal of five upper instrument panel gage lamps.

1. Rear of gage (1)	Socket (2)	Pull out.	
2. Socket (2)	Lamp (3)	Push in, turn counterclockwise, and pull out.	

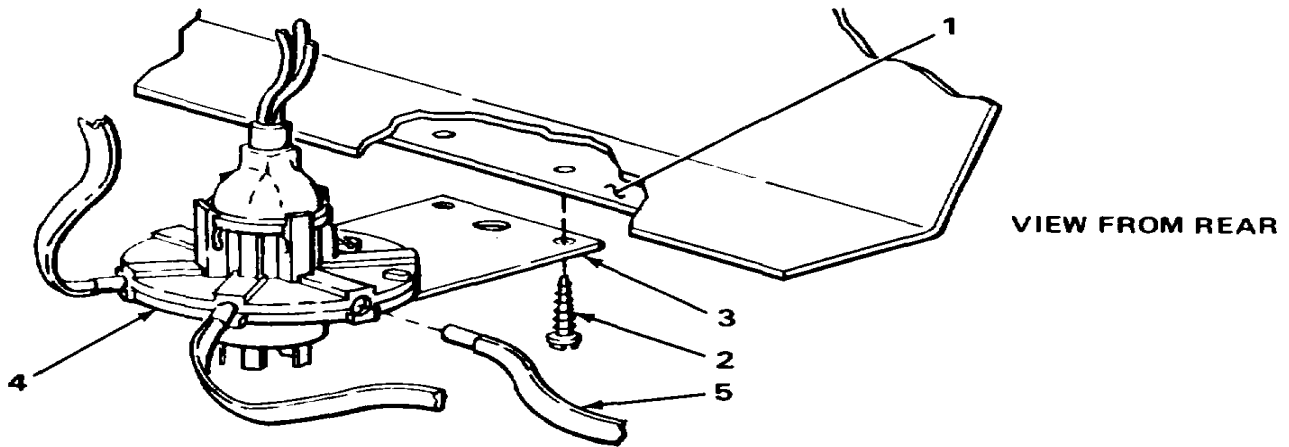
INSTALLATION

NOTE

Steps given are typical for installation of five upper instrument panel gage lamps.

3. Socket (2)	Lamp (3)	a. Put in place. b. Push in, turn clockwise, and release.	
4. Rear of gage (1)	Socket (2)	Put in.	

UPPER INSTRUMENT PANEL GAGE LAMPS - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE:

1. Close upper center instrument panel (page 2-424).
2. Close left side cab door (page 2-424).

TASK ENDS HERE

UPPER INSTRUMENT PANEL INDICATOR LAMPS

This task covers:

- a. Removal (page 2-884)
 - b. Installation (page 2-884)
-

INITIAL SETUP

Personnel Required

One

Equipment Condition

Left side cab door opened (page 2-424).
Upper center instrument panel opened (page 2-424).

UPPER INSTRUMENT PANEL INDICATOR LAMPS - CONTINUED

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

3. Two screws (10) and a.	Using number one cross-tip screw-		
---------------------------	-----------------------------------	--	--

REMOVAL

WARNING

Care must be taken when removing lamp that is cracked or gray in color to prevent personal injury.

NOTE

Steps given are typical for removal of two upper instrument panel indicator lamps.

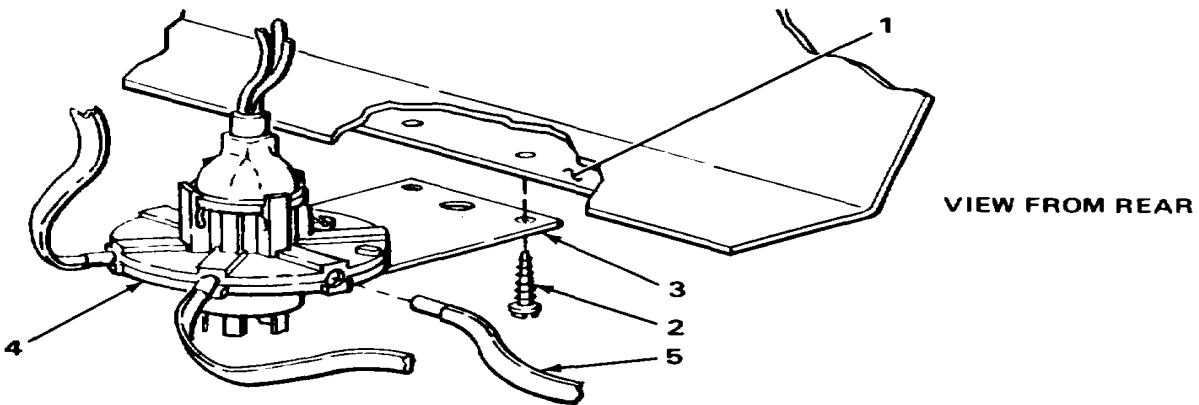
1. Rear of	Socket (2)	Pull out. indicator (1)
2. Socket (2)	Lamp (3)	Push in, turn counterclockwise, and pull out.

INSTALLATION

NOTE

Steps given are typical for installation of two upper instrument panel indicator lamps.

3. Socket (2)	Lamp (3)	a. Put in place. b. Push in, turn clockwise, and release.
4. Rear of gage (1)	Socket (2)	Put in.



TA244245

UPPER INSTRUMENT PANEL INDICATOR LAMPS - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Close upper center instrument panel (page 2-424).
2. Close left side cab door (page 2-424).

TASK ENDS HERE

LEFT SIDE LOWER INSTRUMENT PANEL INDICATOR LAMP

This task covers:

- a. Removal (page 2-886)
 - b. Installation (page 2-886)
-

INITIAL SETUP

Personnel Required

One

Equipment Condition

Left side cab door opened (page 2-424).
 Left side lower instrument panel opened
 (page 2-424).

LEFT SIDE LOWER INSTRUMENT PANEL INDICATOR LAMP - CONTINUED

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

REMOVAL

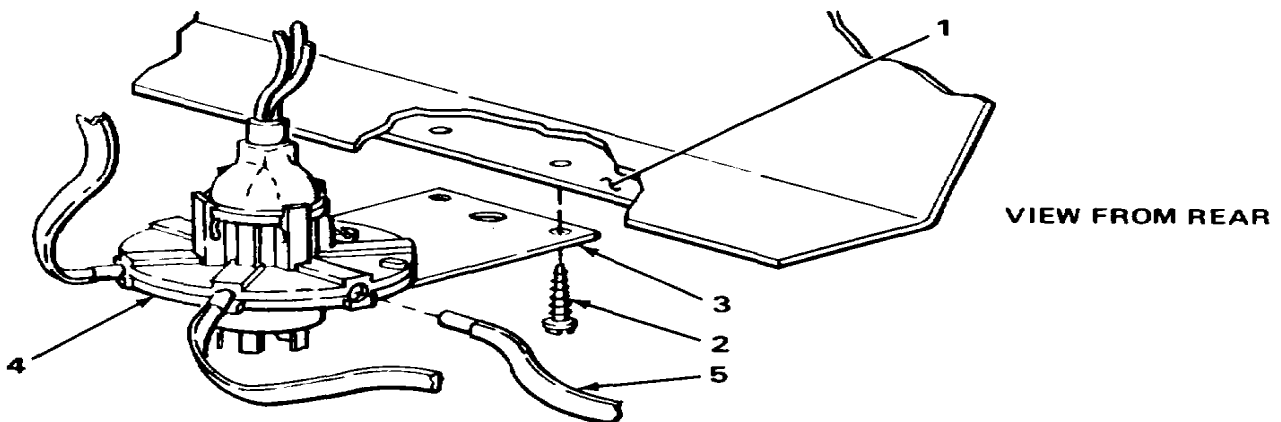
WARNING

Care must be taken when removing lamp that is cracked or gray in color to prevent personal injury.

1. Rear of indicator (1)	Socket (2)	Pull out.	
2. Socket (2)	Lamp (3)	Push in, turn counterclockwise, and pull out.	

INSTALLATION

3. Socket (2)	Lamp (3)	a. Put in place. b. Push in, turn clockwise, and release.	
4. Rear of indicator (1)	Socket (2)	Pull out.	



NOTE

FOLLOW-ON MAINTENANCE:

1. Close left side lower instrument panel (page 2-424).
2. Close left side cab door (page 2-424).

TASK ENDS HERE

TA244262

LOWER CENTER INSTRUMENT PANEL GAGE LAMPS

This task covers:

- a. Removal (page 2-887)
- b. Installation (page 2-887)

INITIAL SETUP

Personnel Required

One

Equipment Condition

Left side cab door opened (page 2-424).
Lower center instrument panel opened (page 2-424).

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

NOTE

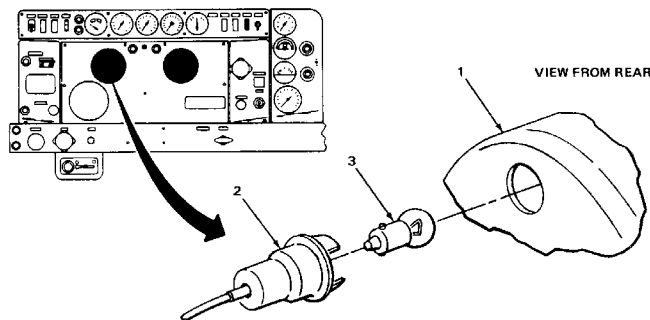
Steps given are typical for two instrument panel lamps.

REMOVAL

1. Rear of gage (1)	Socket (2)	Pull out.
2. Socket (2) out.	Lamp (3)	Push in, turn counterclockwise, and pull

INSTALLATION

3. Socket (2)	Lamp (3)	a. Put in place. b. Push in, turn clockwise, and release.
4. Rear of gage (1)	Socket (2)	Put in.



TA244263

LOWER CENTER INSTRUMENT PANEL GAGE LAMPS - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Close lower center instrument panel (page 2-424).
2. Close left side cab door (page 2-424).

TASK ENDS HERE

TURN SIGNAL INDICATOR LAMPS

This task covers:

- a. Removal (page 2-888)
 - b. Installation (page 2-888)
-

INITIAL SETUP

Personnel Required

One

Equipment Condition

Left side cab door opened (page 2-424).
Lower center instrument panel opened (page 2-424).

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

REMOVAL

WARNING

Care must be taken when removing lamp that is cracked or gray in color to prevent personal injury.

NOTE

Steps given are typical for removal of both turn signal indicator lamps.

1. Rear of indicator (1)	Socket (2)	Pull out.	
2. Socket (2)	Lamp (3)	Push in, turn counterclockwise, and pull out.	

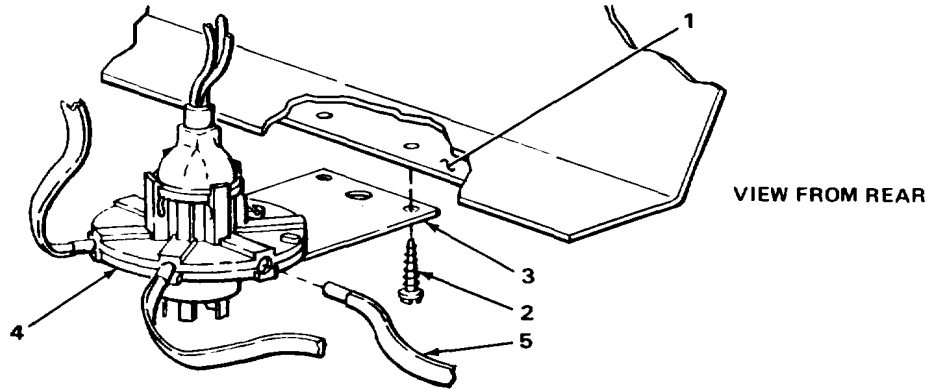
INSTALLATION

NOTE

Steps given are typical for installation of both turn signal indicator lamps.

TURN SIGNAL INDICATOR LAMPS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
3. Socket (2)	Lamp (3)	a. Put in place. b. Push in, turn clockwise, and release.	
4. Rear of gage (1)	Socket (2)	Put in.	



NOTES

FOLLOW-ON MAINTENANCE:

1. Close lower center instrument panel (page 2-424).
2. Close left side cab door (page 2-424).

TASK ENDS HERE

RIGHT INSTRUMENT PANEL GAGE LAMPS

This task covers:

- a. Removal (page 2-890)
- b. Installation (page 2-890)

INITIAL SETUP

Personnel Required

One

Equipment Condition

Left side cab door opened (page 2-424).
Right instrument panel opened (page 2-424).

TA244264

RIGHT INSTRUMENT PANEL GAGE LAMPS - CONTINUED

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

REMOVAL

WARNING

Care must be taken when removing lamp that is cracked or gray in color to prevent personal injury.

NOTE

Steps given are typical for removal of three right instrument panel gage lamps.

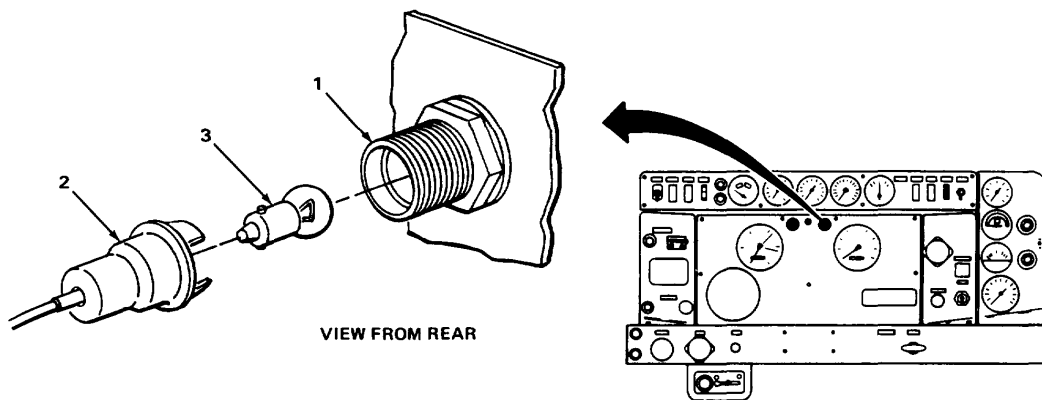
1. Rear of gage (1)	Socket (2)	Pull out.
2. Socket (2)	Lamp (3)	Push in, turn counterclockwise, and pull out.

INSTALLATION

NOTE

Steps given are typical for installation of three right instrument panel gage lamps.

3. Socket (2)	Lamp (3)	a. Put in place. b. Push in, turn clockwise, and release.
4. Rear of gage (1)	Socket (2)	Put in.



TA244265

RIGHT INSTRUMENT PANEL GAGE LAMPS - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Close right instrument panel (page 2-424).
2. Close left side cab door (page 2-424).

TASK ENDS HERE

RIGHT INSTRUMENT PANEL INDICATOR LAMPS

This task covers:

- a. Removal (page 2-892)
 - b. Installation (page 2-892)
-

INITIAL SETUP

Personnel Required

One

Equipment Condition

Left side cab door opened (page 2-424).
Right instrument panel opened (page 2-424).

RIGHT INSTRUMENT PANEL INDICATOR LAMPS - CONTINUED

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

REMOVAL

WARNING

Care must be taken when removing lamp that is cracked or gray in color to prevent personal injury.

NOTE

Steps given are typical for removal of two right instrument panel indicator lamps.

1. Rear of indicator (1)	Socket (2)	Pull out.	
2. Socket (2)	Lamp (3)	Push in, turn counterclockwise, and pull out.	

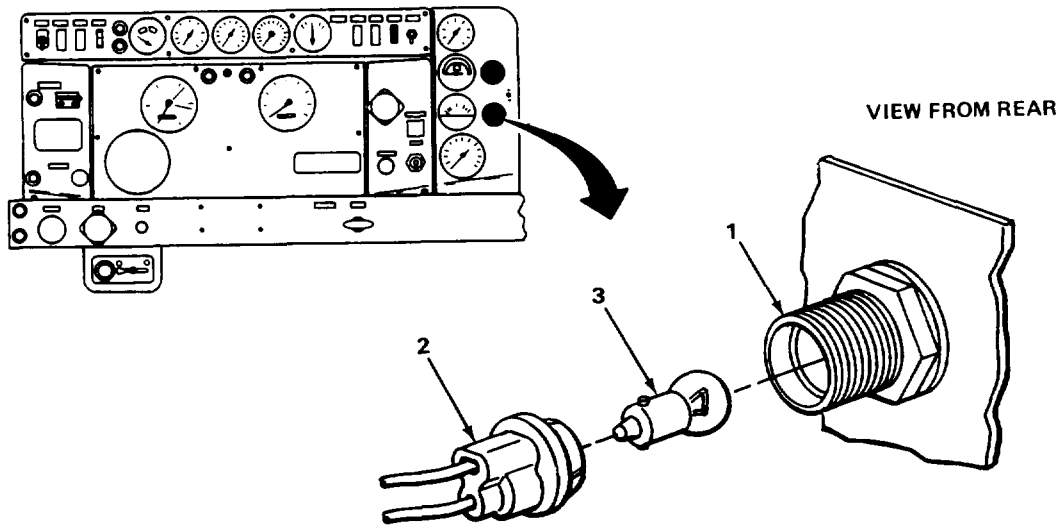
INSTALLATION

NOTE

Steps given are typical for installation of two right instrument panel indicator lamps.

3. Socket (2)	Lamp (3)	a. Put in place. b. Push in, turn clockwise, and release.	
4. Rear of indicator (1)	Socket (2)	Put in.	

RIGHT INSTRUMENT PANEL INDICATOR LAMPS - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE:

1. Close right instrument panel (page 2-424).
2. Close left side cab door (page 2-424).

TASK ENDS HERE

TRANSMISSION POSITION INDICATOR LAMP

This task covers:

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

INITIAL SETUP

Tools

Screwdriver, cross-tip, number-one

Personnel Required

One

Equipment Condition

Left side cab door opened (page 2-424).

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

REMOVAL

1	Shift control	Two screws (2) assembly (1)	Using number-one cross-tip screwdriver, unscrew and take out.
2.		Position strip lens (3)	Take out.
3	Socket (4) out.	Lamp (5)	Push in, turn counterclockwise, and pull

INSTALLATION

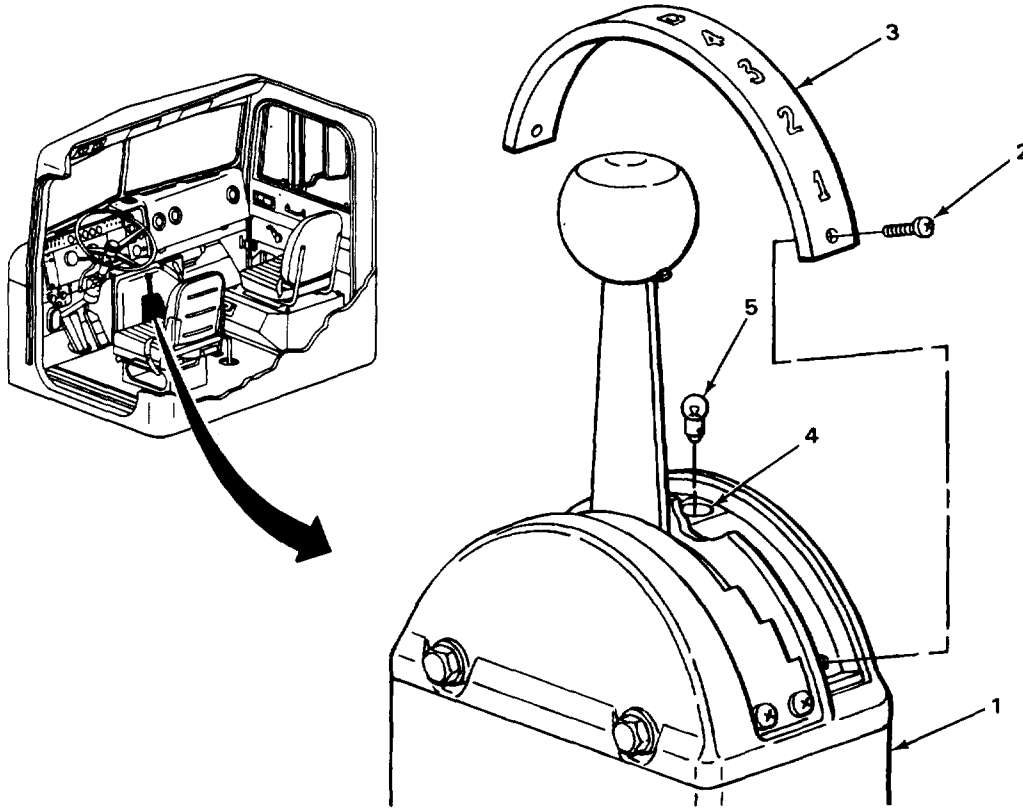
4.	Socket (4) release.	Lamp (5)	Put in place, push in, turn clockwise, and
5.	Shift control assembly (1)	Position strip lens (3)	Put in place. Position with R toward front of dump truck.

CAUTION

Care must be used when tightening screws. Overtightening screws can cause plastic position strip lens to crack.

6.		Two screws (2)	Screw in and tighten using number-one cross-tip screwdriver.
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TRANSMISSION POSITION INDICATOR LAMP - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE: Close left side cab door (page 2-424).

TASK ENDS HERE

TA244267

SLAVE RECEPTACLE

This task covers:

- a. Removal (page 2-895.0)
- b. Cleaning (page 2-895.0)
- c. Installation (page 2-895.2)

INITIAL SETUP

Equipment Conditions

Battery cables disconnected (page 2-424).
Left and right side hood panels opened (page 2-424).

Tools/Test Equipment

Wrench, box-end, 1/2-inch (two required)
Wrench, box-end, 3/4-inch
Wrench, open-end, 3/4-inch

Materials/Parts

Detergent, liquid, GP (item 7, appendix C)
Rags, wiping (item 15, appendix C)
Lockwasher, slave receptacle to splash plate (four required)
Lockwasher, starter solenoid
Lockwasher, engine

Personnel Required

One

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

REMOVAL

1. Starter solenoid (1)	Nut (2), lockwasher (3), slave receptacle cable (4), and cable (5)	a. Using 3/4-inch box-end wrench, unscrew, and take off. b. Get rid of lockwasher.	
2. Left side of engine (6)	Screw (7), lockwasher (8), and slave receptacle cable (9)	a. Using 1/4-inch box-end wrench, unscrew, and take off. b. Get rid of lockwasher.	
3. Left splash plate (10)	Four nuts (11), lockwashers (12), and screws (13)	a. Using two 1/2-inch box-end wrenches, unscrew, and take out. b. Get rid of lockwashers.	
4.	Slave receptacle (14)	Take off.	

CLEANING

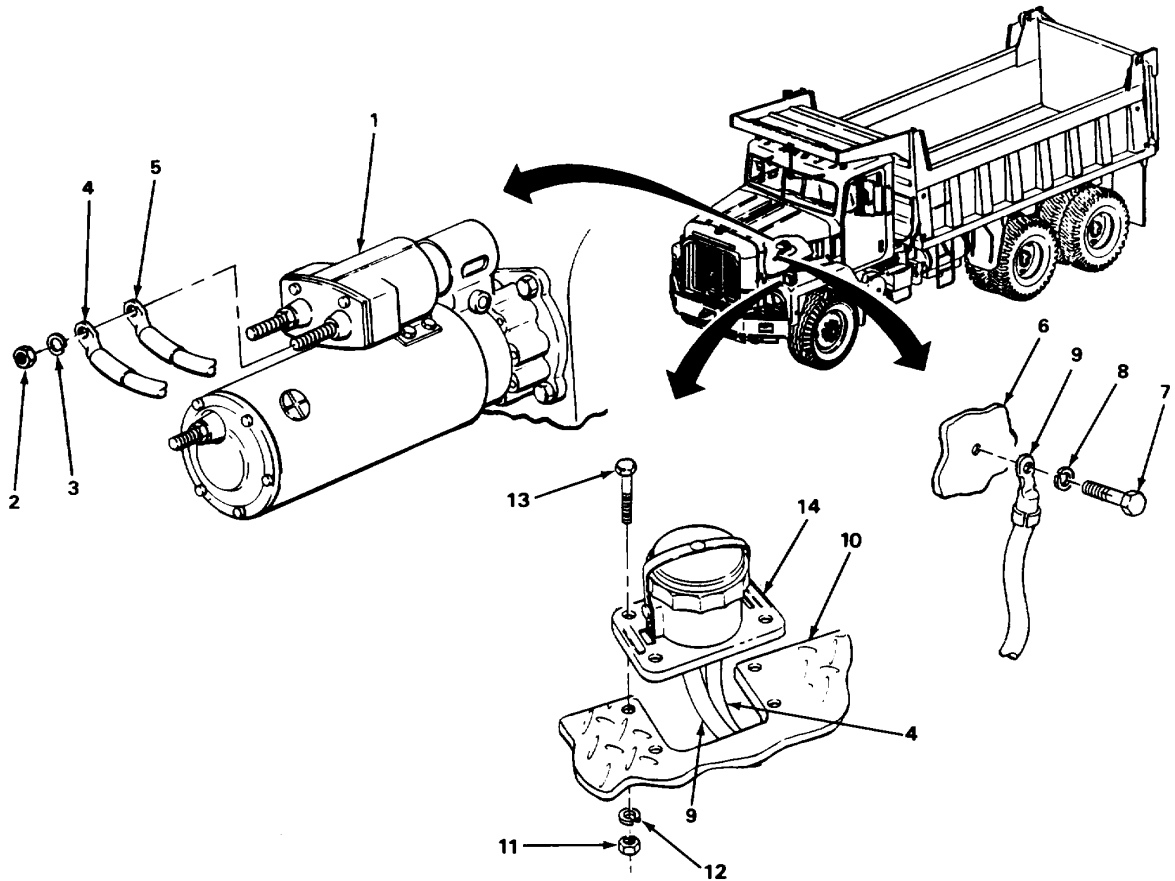
NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

5.	Slave receptacle (14) and two slave receptacle cables (4 and 9)	a. Using liquid detergent and water, clean. b. Using wiping rags, dry.	
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SLAVE RECEPTACLE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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TA702130 I

Change 1 2-895.1

SLAVE RECEPTACLE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
NOTE		
For more information on how to tag parts, go to General Maintenance Instructions (page 2-424).		
INSTALLATION		
6. Left splash plate (1)	Slave receptacle (2)	Put in place.
7.	Four screws (3), new lockwashers (4), and nuts (5)	Screw on and tighten using two 1/2-inch, box-end wrenches.
8. Left side of engine (6)	Slave receptacle cable (7), new lockwasher (8), and screw (9)	Screw on and tighten using 3/4-inch box-end wrench.
9. Starter solenoid (10)	Cable (11), slave receptacle cable (12), new lockwasher (13), and nut (14)	a. Put on cables. b. Screw on and tighten using 3/4-inch box-end wrench.

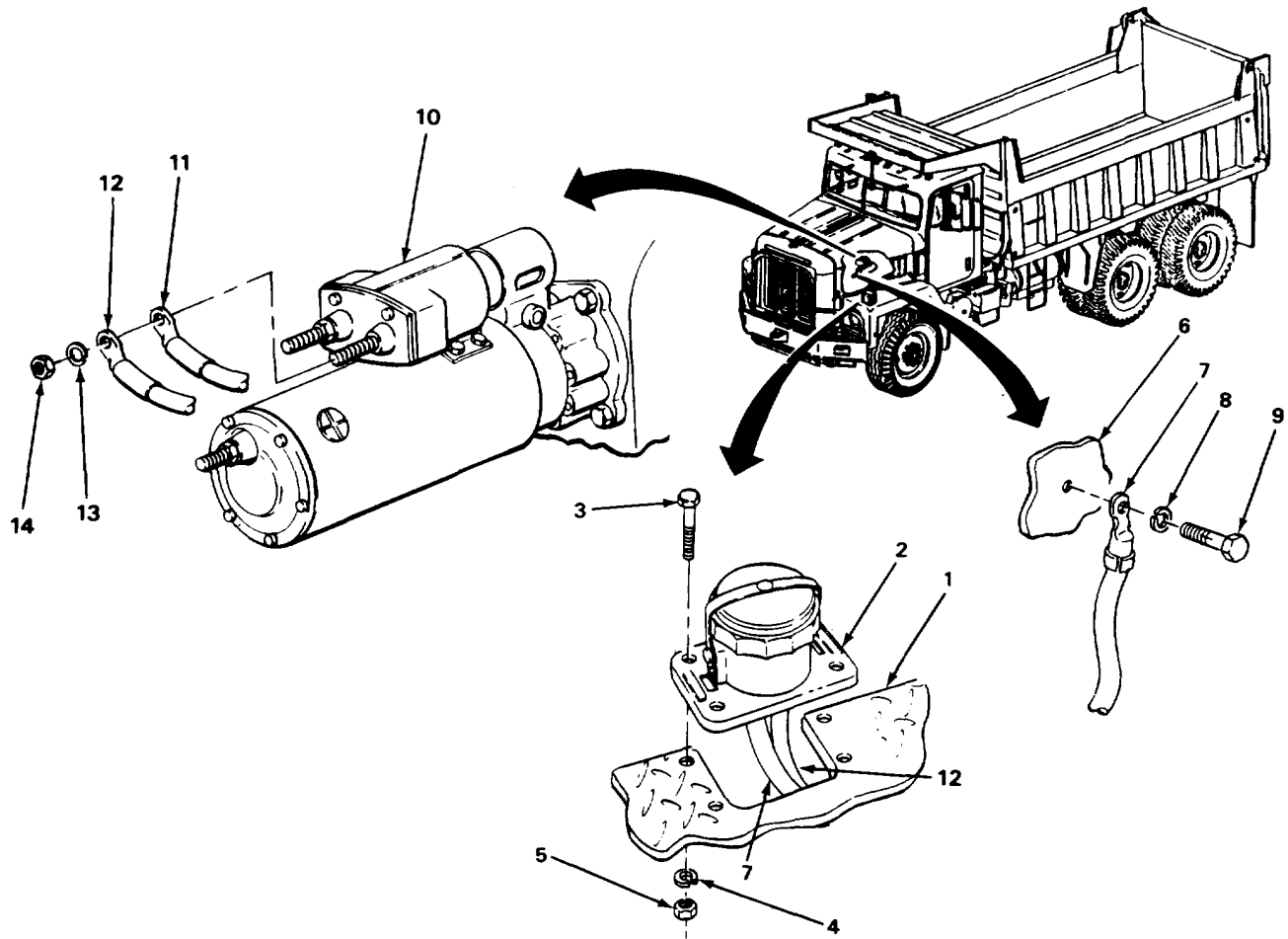
NOTE

FOLLOW-ON MAINTENANCE:

1. Close left and right side hood panels (page 2-424).
2. Connect battery cables (page 2-424).

SLAVE RECEPTACLE - CONTINUED

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



TASK ENDS HERE

TA702131

Change 1 2-895.3

STARTER MOTOR

This task covers:

- a. Removal (page 2-896)
 - b. Installation (page 2-898)
-

INITIAL SETUP

Tools

- Screwdriver, flat-tip, 1/4-inch
- Wrench, box-end, 3/4-inch
- Wrench, box-end, 15116-inch
- Wrench, half-moon, 9/16-inch

Materials/Parts

- Lockwasher, starter motor mounting (three required)
- Lockwasher, solenoid ground
- Lockwasher, starter motor ground

Personnel Required

Two

Equipment Condition

Battery cables disconnected (page 2-424).
Rear engine cover removed (page 2-1270).

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

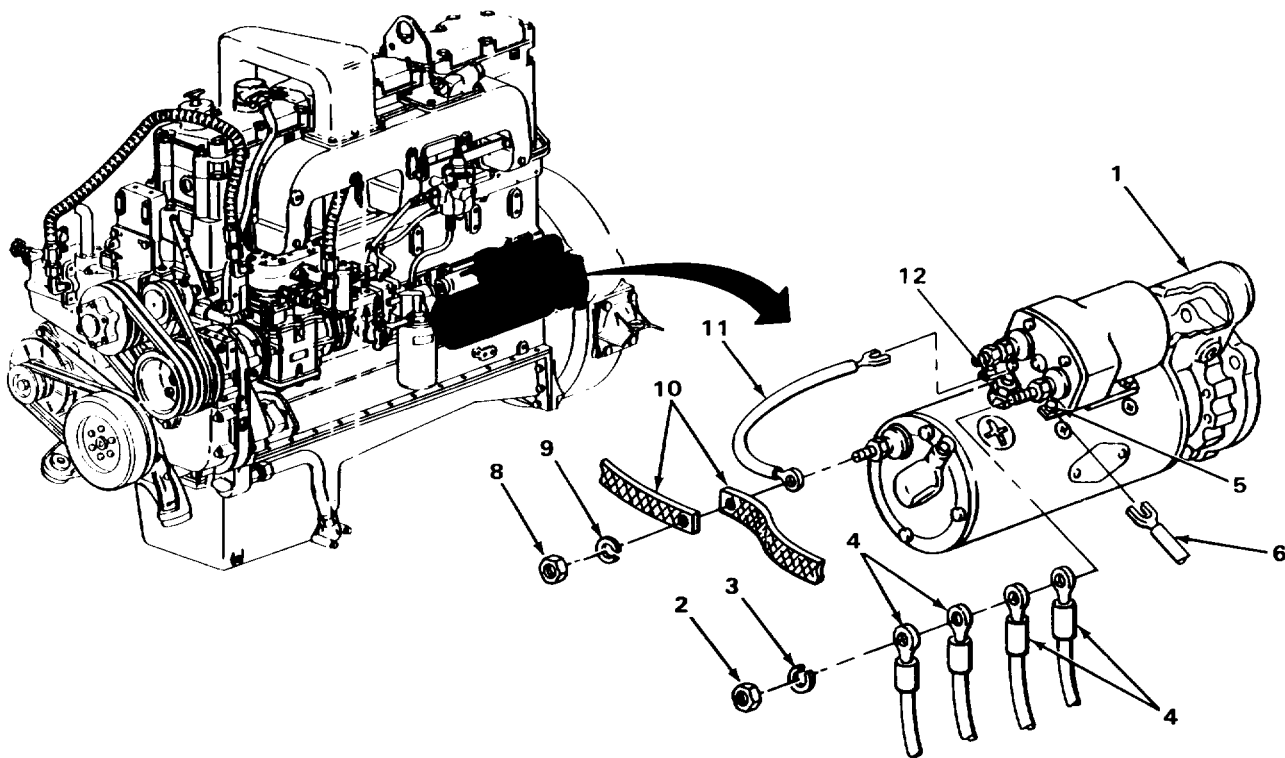
NOTE

For more information on how to tag parts, go to General Maintenance Instructions (page 2-424).

1. Starter motor solenoid (1)	Nut (2), lockwasher (3), and four wires (4)	<ul style="list-style-type: none"> a. Tag wires. b. Using 3/4-inch box-end wrench, unscrew and take off. c. Get rid of lockwasher. d. Take off four wires. 	
2.	Screw (5) and wire (6)	<ul style="list-style-type: none"> a. Tag wire. b. Using 1/4-inch flat-tip screwdriver, loosen. <li style="padding-left: 20px;">Do not take out. c. Take off wire. 	

STARTER MOTOR - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
3. Starter motor (7)	Nut (8), lockwasher (9), two ground straps (10), and ground wire (11)	a. Tag wires. b. Using 3/4-inch box-end wrench, unscrew and take off. c. Get rid of lockwasher. d. Take off two ground straps and ground wire.	
4. Starter motor solenoid (1)	Screw (12)	Using 1/4-inch flat-tip screwdriver, loosen.	
5.	Wire (11)	Take off.	



STARTER MOTOR - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
6	Starter motor (1)	Screw (2) and lockwasher (3)	<ul style="list-style-type: none"> a Using 9/16-inch half-moon wrench, unscrew and take out. b Get rid of lockwasher.
<u>WARNING</u>			
Due to excessive weight, care must be taken to prevent personal injury or damage to equipment.			
NOTE			
Have assistant support starter motor.			
7.	Two screws (4) and two lockwashers (5)		<ul style="list-style-type: none"> a Using 15/16-inch box-end wrench, unscrew and take out. b Get rid of lockwashers. c With assistance, pull starter motor forward, down, and out of chassis.
INSTALLATION			
8	Starter motor solenoid (6)	Ground wire (7)	Put in place.
9.	Screw (8)		Tighten using 1/4-inch flat-tip screwdriver.
<u>WARNING</u>			
Due to excessive weight, care must be taken to prevent personal injury or damage to equipment.			
10	Starter motor (1)	Screw (2) and new lockwasher (3)	<ul style="list-style-type: none"> a With assistance, put starter motor in place. b Screw in and tighten using 9/16-inch half-moon wrench.
11.	Two screws (4) and two new lockwashers (5)		Screw in and tighten using 15/16-inch box-end wrench.
12.	Nut (9), new lockwasher (10), ground wire (7), and two ground straps (11)		<ul style="list-style-type: none"> a Put ground wire and two ground straps in place. b Screw on and tighten using 3/4-inch box-end wrench.

STARTER MOTOR - CONTINUED

13. Starter motor solenoid (6)

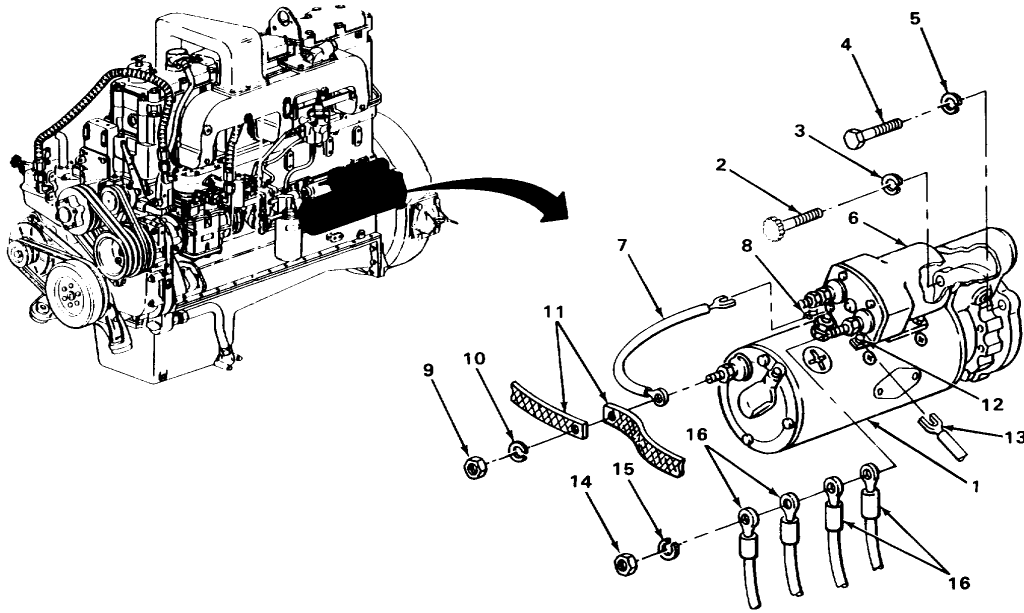
Screw (12) and wire (13)

- a. Put wire in place.
- b. Tighten using 1/4-inch flat-tip screwdriver.

14.

Nut (14), new lock-washer (15), and

- a. Put four wires in place.
- b. Screw on and tighten using 3/4-inch four wires (16) box-end wrench.



NOTE

FOLLOW-ON MAINTENANCE:

- 1. Install rear engine cover (page 2-1270).
- 2. Connect battery cables (page 2-424).

TASK ENDS HERE

TA244269

Section XI. TRANSMISSION MAINTENANCE

	Page		Page
Auxiliary Transmission	2-932	Transmission Shift Cable	2-919
Internal Oil Filter	2-907	Transmission Shift Control	2-909
Oil Filler Tube and Dipstick	2-927	Transmission Shift Control	
Remote Oil Filter Cartridge	2-935	Stand	2-917
Transmission Oil Pan	2-900		

TRANSMISSION OIL PAN

This task covers:

- | | |
|--------------------------|--|
| a. Draining (page 2-901) | d. Inspection/Replacement (page 2-904) |
| b. Removal (page 2-902) | e. Installation (page 2-904) |
| c. Cleaning (page 2-903) | f. Filling (page 2-906) |

INITIAL SETUP**Tools**

Container, 12-gallon
 Extension, 10-inch, 1/2-inch drive
 Gloves, safety
 Goggles, safety
 Handle, ratchet, 1/2-inch drive
 Pliers, round nose, 8-inch
 Socket, 11/2-inch, 11/2-inch drive
 Wrench, open-end, 1 1/16-inch
 Wrench, torque, 0 to 175 ft lb
 (0 to 245 N.m)

Materials/Parts

Cotter pin, shift cable swivel
 Gasket, oil pan
 Lockwasher, shift cable bracket
 (two required)

Materials/Parts - Continued

Oil, transmission (item 8, appendix C)
 Rags, wiping (item 15, appendix C)
 Solvent, dry cleaning (item 19, appendix C)

Personnel Required

Two

Equipment Condition

Right side hood panel opened (page 2-424).

References

TM 5-3805-254-10 (Operator's Manual)
 LO 5-3805-254-12 (Lubrication Order)

TRANSMISSION OIL PAN - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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DRAINING

WARNING

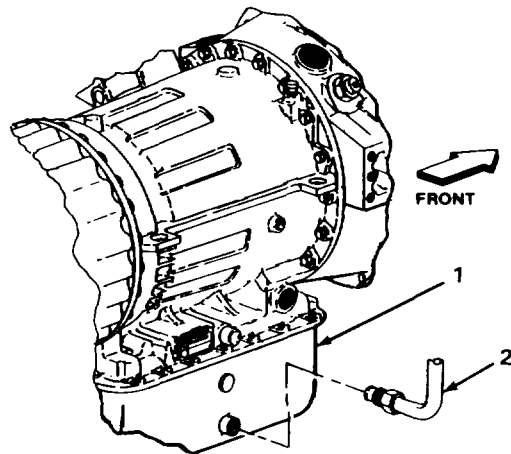
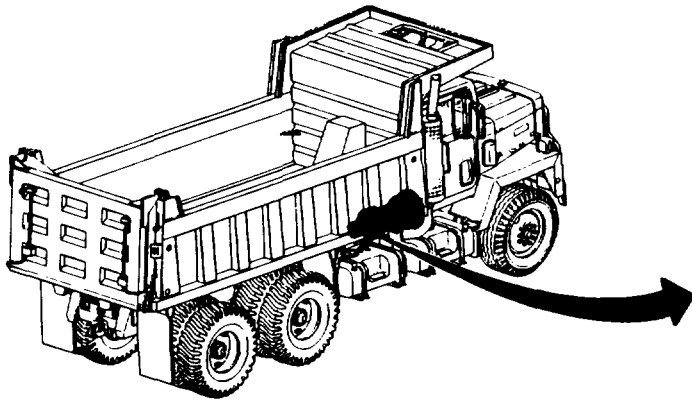
Safety goggles must be worn when working under truck to prevent eye injury.

Hot transmission oil can burn you. Care must be taken to prevent personal injury.

NOTE

Transmission oil must be warm and engine shut down (TM 5-3805-254-10) before draining transmission.

- | | | |
|-----------------------------|---------------------|--|
| 1. Transmission oil pan (1) | Oil filler tube (2) | <ul style="list-style-type: none"> a. Place 12-gallon container underneath. b. Using 1 1/16-inch open-end wrench, slowly loosen and take off.
Move out of way. c. Allow oil to drain. d. Get rid of drained oil (page 2-424). |
|-----------------------------|---------------------|--|



TA244269

TRANSMISSION OIL PAN - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
2	Shift control Cotter pin (2) swivel lever (1)	a Using 8-inch roundnose pliers, straighten ends and pull out. b Get rid of.	
3.	Two flat washers (3) and shift cable swivel (4)	Take off.	
4	Transmission oil pan (5)	Two screws (6), two a lockwashers (7), shift cable bracket (8), and two spacers (9)	Using 112-inch, 112-inch drive socket, 10-inch extension, and ratchet handle, unscrew and take out. Move shift cable bracket out of way. b Get rid of lockwashers.
NOTE			
Assistance will be needed when performing steps 5 and 6.			
5.	Twenty-one a screws (10)	Have assistant hold transmission oil pan in place. b Using 112-inch, 1/2-inch drive socket, 10-inch extension, and ratchet handle, unscrew and take out.	
NOTE			
Care must be taken not to tilt transmission oil pan to prevent oil from spilling.			
6.	Transmission oil pan (5) and oil pan gasket (11)	a Take off. b Drain oil. c Get rid of drained oil (page 2-424). d Take off gasket. e Get rid of gasket.	

TRANSMISSION OIL PAN - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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CLEANING

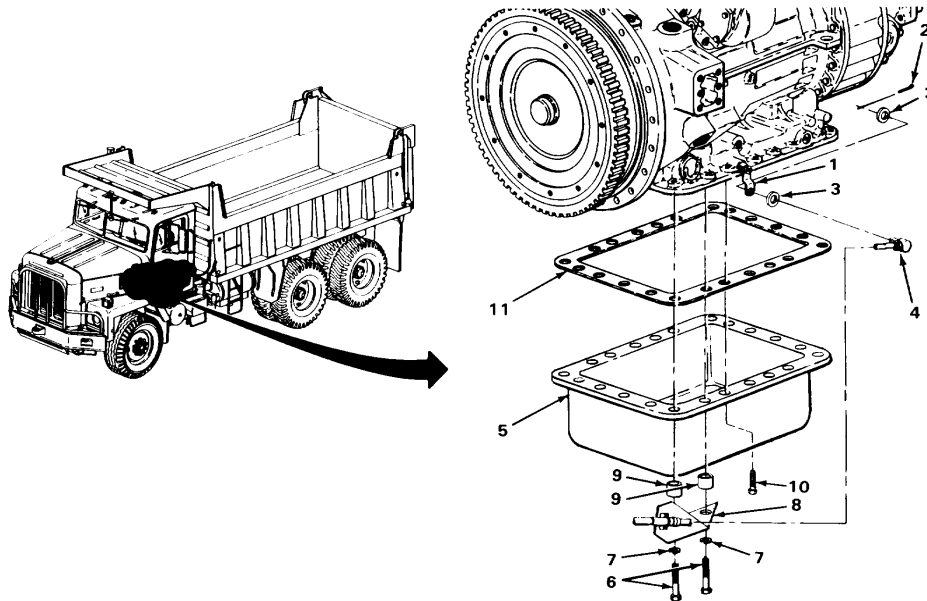
WARNING

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 1000F (380C) and for type #2 is 138°F (590C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

- | | | |
|----|--------------------------|---|
| 7. | Transmission oil pan (5) | Clean using drycleaning solvent and wiping rag. |
| 8. | All metal parts | Clean using drycleaning solvent and wiping rag. |



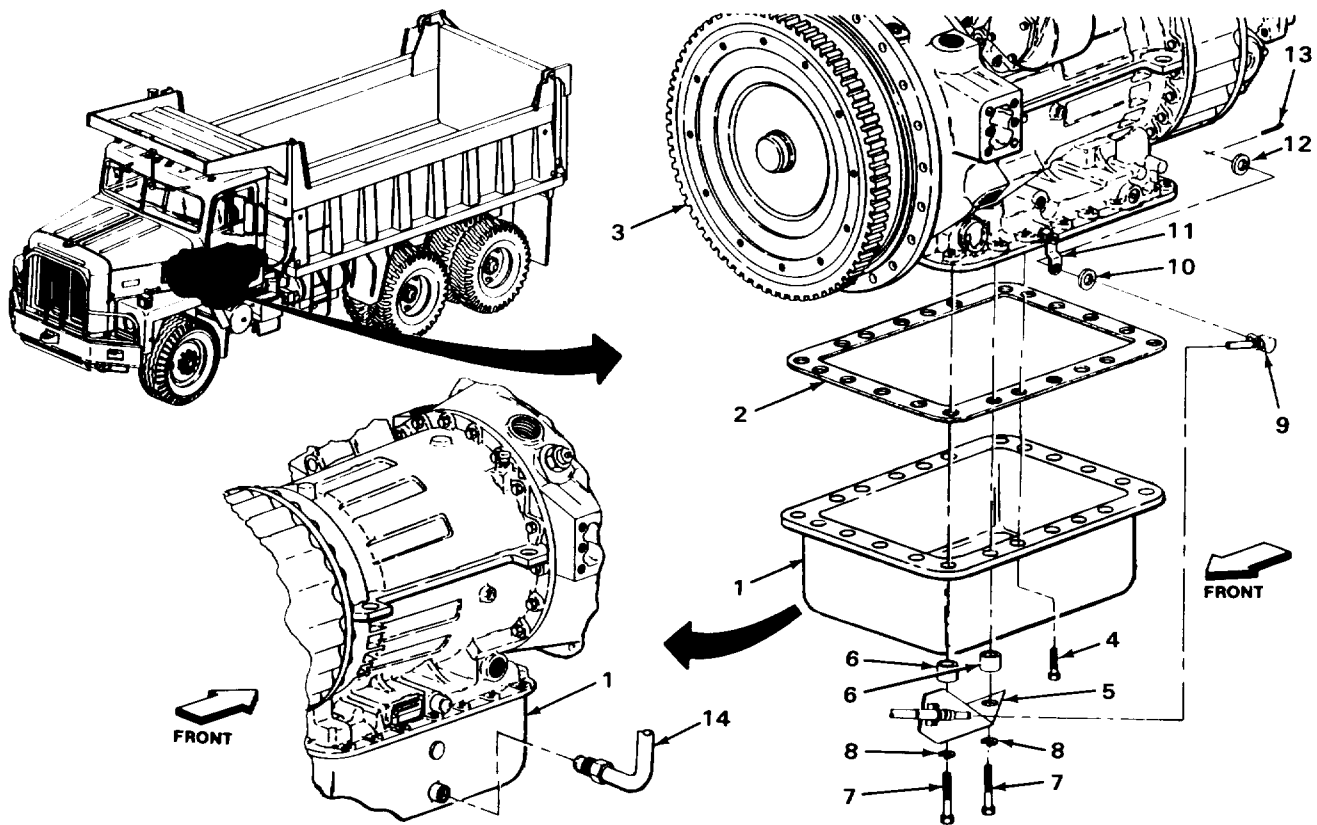
TA244271

TRANSMISSION OIL PAN - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSPECTION/REPLACEMENT			
NOTE			
Replace all damaged or defective parts.			
For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).			
9.	Transmission oil pan (1)	a Look for cracks, breaks, or severe dents. b Look for damaged oil filler tube threads.	
10	All threaded parts	Look for damaged threads or rounded heads.	
INSTALLATION			
11	Transmission oil pan (1)	New gasket (2)	Put on.
12	Main transmission (3)	Transmission oil pan (1) and twenty-one screws (4)	a Put transmission oil pan in place. b Screw in and torque evenly to 17 to 20 ft lb (23 to 27 N.m) using 1 1/2-inch, 1/2-inch drive socket, 10-inch extension, and 0 to 175 ft lb (0 to 245 N.m) torque wrench.
13	Transmission oil pan (1)	Shift cable bracket (5) and two spacers (6)	Put in place.
14.		Two screws (7) and two new lock-washers (8)	Screw in and torque to 17 to 20 ft lb (23 to 27 N.m) using 1/2-inch, 1/2-inch drive socket, 10-inch extension, and 0 to 175 ft lb (0 to 245 N.m) torque wrench.
15	Shift cable swivel (9)	Flat washer (10)	Put on.
16	Shift control swivel lever (11)	Shift cable swivel (9)	Put in.

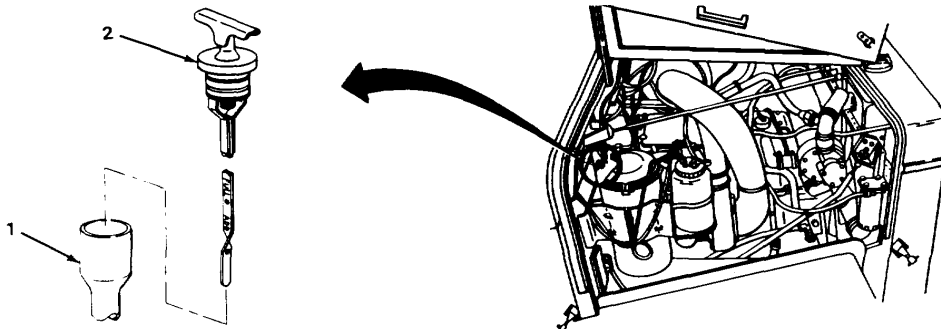
TRANSMISSION OIL PAN - CONTINUED

LOCATION	ITEM	ACTION REMARKS
17. Shift cable swivel (9)	Flat washer (12) and new cotter pin (13)	a. Put on flat washer. b. Put in cotter pin and bend back ends using 8-inch roundnose pliers.
18. Transmission oil pan (1)	Oil filler tube (14)	Screw on and tighten using 1 1/16-inch open-end wrench.



TRANSMISSION OIL PAN - CONTINUED

LOCATION	ITEM	ACTION REMARKS
FILLING		
19. Oil filler tube (1)	Dipstick (2)	Turn handle counterclockwise and pull out.
20.	Oil filler tube (1)	Add proper amount and grade of transmission oil (LO 53805-254-12).
21.	Dipstick (2)	Put in.
22.	Dump truck	a. Start engine (TM 5-3805254-10). b. Move transmission selector lever through all driving ranges. c. Allow TRANSMISSION TEMP gage to indicate 1600 to 2000F. d. Perform step b again. e. Put transmission selector lever in N (neutral).
23.	Dipstick (2)	a. Wipe clean with wiping rag. b. Push in as far as possible. c. Pull out and check oil level. Oil level should be between FULL and ADD marks on dipstick. If oil is at ADD or below, perform step 21 again. If oil is above FULL mark on dipstick, drain oil to reach proper level. If oil level is between FULL and ADD marks, push in dipstick and turn handle clockwise to tighten.



TA244269

TRANSMISSION OIL PAN - CONTINUED**NOTE**

FOLLOW-ON MAINTENANCE: Close right side hood panel (page 2-424).

TASK ENDS HERE

INTERNAL OIL FILTER

This task covers:

- a. Removal (page 2-908)
- b. Installation (page 2-908)

INITIAL SETUP

Tools

Extension, 3-inch, 1/2-inch drive
 Goggles, safety
 Handle, ratchet, 112-inch drive
 Socket, 112-inch, 1/2-inch drive
 Wrench, torque, 0 to 175 ft lb
 (0 to 245 N.m)

Personnel Required

One

Equipment Condition

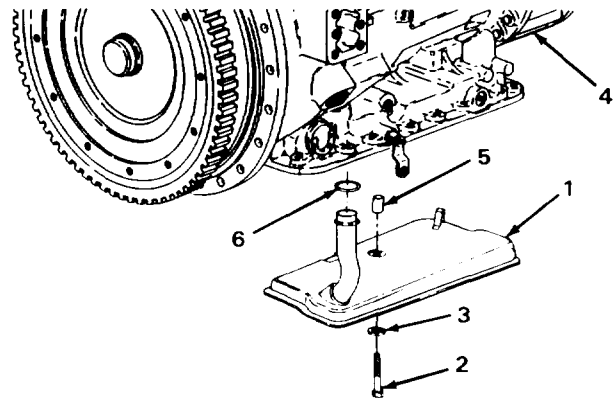
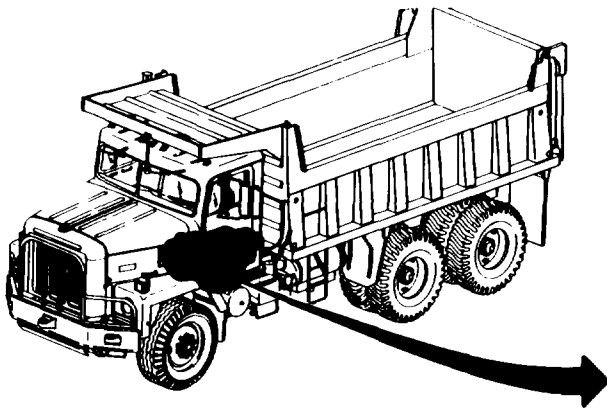
Transmission oil pan removed (page 2-900).

Materials/Parts

Filter, oil, internal
 Ring, seal, filter

INTERNAL OIL FILTER - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
<u>WARNING</u>			
Safety goggles must be worn when working under truck to prevent eye injury.			
1. Internal oil filter (1)	Screw (2) and flat washer (3)	Using 1/2-inch, 1/2-inch drive socket, 3-inch extension, and ratchet handle, unscrew and take out.	
2. Main transmission (4)	Internal oil filter (1), spacer (5), and filter seal ring (6)	a. Take off. b. Get rid of internal oil filter and filter seal ring.	
INSTALLATION			
3. New internal oil filter (1)	New filter seal ring (6)	Put on.	
4. Main transmission (4)	New internal oil filter (1) and spacer (5)	Put in.	
5. Internal oil filter (1)	Screw (2) and flat washer (3)	Screw in and torque to 10 to 13 ft lb (14 to 18 N.m) using 1/2-inch, 1/2-inch drive socket, 3-inch extension, and 0 to 175 ft lb (0 to 245 N.m) torque wrench.	



TA244274

INTERNAL OIL FILTER - CONTINUED**NOTE**

FOLLOW-ON MAINTENANCE: Install transmission oil pan (page 2-900).

TASK ENDS HERE**TRANSMISSION SHIFT CONTROL**

This task covers:

- | | |
|--------------------------|--|
| a. Removal (page 2-910) | c. Inspection/Replacement (page 2-913) |
| b. Cleaning (page 2-913) | d. Installation (page 2-914) |

INITIAL SETUP**Tools**

Extension, 10-inch, 1/2-inch drive
 Gloves, safety
 Goggles, safety
 Handle, ratchet, 1/2-inch drive
 Pen, marking
 Pliers, roundnose, 8-inch
 Socket, 1/2-inch, 1/2-inch drive
 Wrench, box-end, 3/8-inch
 Wrench, box-end, 7/16-inch
 Wrench, box-end, 1/2-inch
 Wrench, torque, 0 to 175 ft lb
 (0 to 245 N.m)

Materials/Parts

Cotter, pin, shift cable swivel
 Lockwasher, control stand (four
 required)

Materials/Parts - Continued

Lockwasher, shift cable bracket (two required)
 Lockwasher, side cover (four required)
 Lockwasher, U-bolt (two required)
 Nut, self-locking, shift control
 Rags, wiping (item 15, appendix C)
 Solvent, drycleaning (item 19, appendix C)

Personnel Required

One

Equipment Condition

Left side cab door opened (page 2-424).

TRANSMISSION SHIFT CONTROL - CONTINUED

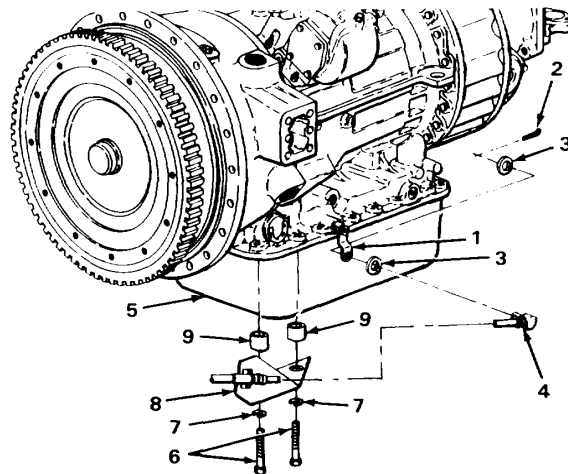
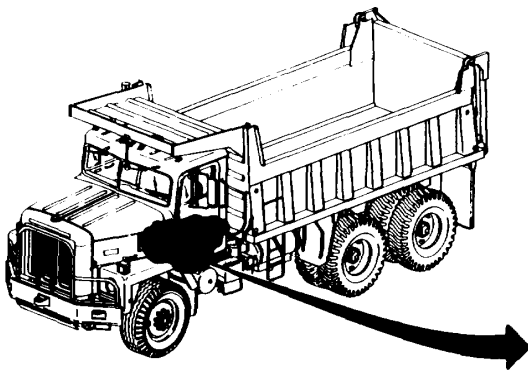
LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

Safety goggles must be worn when working under truck to prevent eye injury.

1 Shift control swivel lever (1)	Cotter pin (2) a	Using 8-inch roundnose pliers, straighten ends and pull out. b Get rid of.
2.	Two flat washers (3) and shift cable swivel (4)	Take off.
3 Transmission oil pan (5)	Two screws (6), two a lockwashers (7), shift cable bracket (8), and two spacers (9)	Using 11/2-inch, 1/2-inch drive socket, 10-inch extension, and ratchet handle, unscrew and take out. Move shift cable bracket out of way. b Get rid of lockwashers.

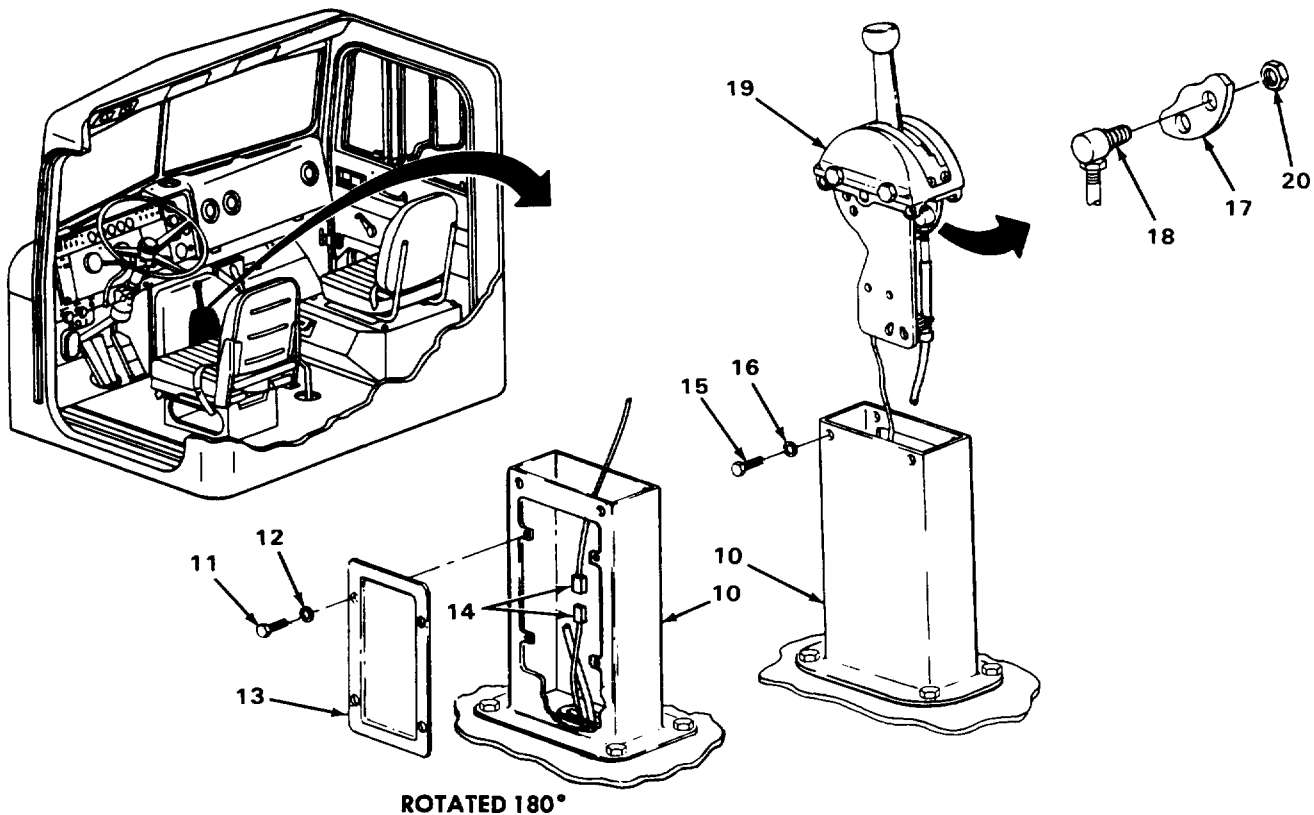


4. Transmission shift	Four screws (11), control stand (10) (12), and side cover (13)	a. Using 7/16-inch box-end wrench, un-four lockwashers screw and take out. b. Get rid of lockwashers. c. Take off side cover.
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TA244275

TRANSMISSION SHIFT CONTROL - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
5	Indicator light wire connector (14)	Pull apart.	
6	Four screws (15) and four lock-washers (16)	Using 7/16-inch box-end wrench, unscrew and take out.	
7 Shift lever plate (17)	Shift cable swivel (18)	Using marking pen, mark location.	
8 Transmission shift control (19)	Self-locking nut a (20) and shift cable swivel (18)	Using 11/2-inch box-end wrench, unscrew and take off, b Get rid of self-locking nut. c Take out shift cable swivel.	



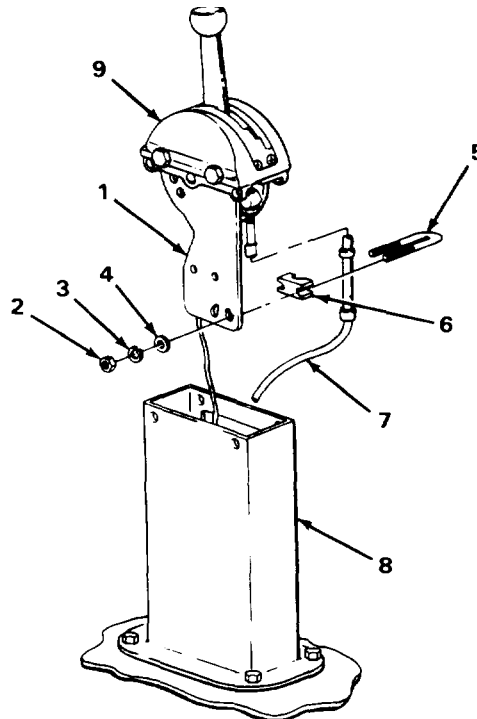
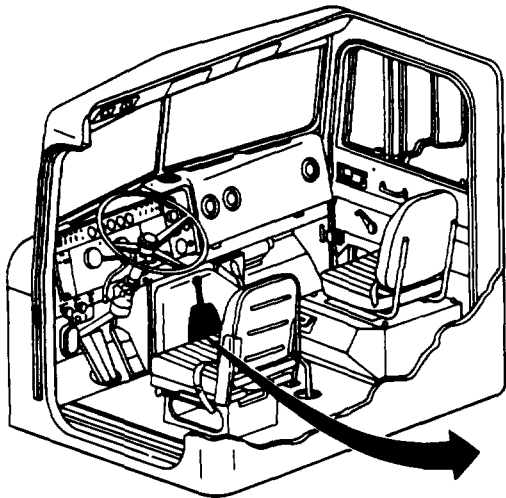
TA244276

TRANSMISSION SHIFT CONTROL - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL - CONTINUED

9	Adapter plate (1)	Two nuts (2), two lockwashers (3), flat washers (4), U-bolt (5), spacer (6), and shift control cable (7)	<ul style="list-style-type: none"> a Using 3/8-inch box-end wrench, undo screw and take off. b Get rid of lockwashers. c Take off U-bolt and spacer. d Take off shift control cable. <p>Do not let shift control cable fall through hole in floor.</p>
10	Transmission shift control stand (8)	Transmission shift control (9)	Take out.



TA244277

TRANSMISSION SHIFT CONTROL - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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CLEANING

WARNING

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 1000F (380C) and for type #2 is 138°F (590C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

11.	All metal parts	Clean using drycleaning solvent and wiping rag.	
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INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

12.	All threaded parts	Look for damaged threads or rounded heads.	
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TRANSMISSION SHIFT CONTROL - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
13	Transmission shift control (1)	Shift control lever (2)	Put in driving range 1.
14	Transmission shift control stand (3)	Transmission shift control (1)	Put in.
15	Shift lever plate (4)	Shift cable swivel (5)	Put in hole marked during removal.
16	Shift cable swivel (5)	New self-locking nut (6)	Screw on and tighten using 11/2-inch box-end wrench.
17	Adapter plate (7)	Shift control cable (8), spacer (9), U-bolt (10), two flat washers (11), two new lockwashers (12), and two nuts (13) side, loosen two nuts, adjust, and retighten.	<p>a Put shift control cable in position. b Put in spacer and U-bolt. c Screw on and tighten using 3/8-inch box-end wrench.</p> <p>Make sure shift control cable is not being forced to one side. If shift control cable is being forced to one</p>
18	Transmission shift control stand (3)	Indicator light wire connector (14)	<p>Aline and push together. Make sure indicator light wire (15) is clear of all moving parts.</p>
19		Four screws (16) and four new lockwashers (17)	Screw in and tighten using 7/16-inch box-end wrench.
20		Side cover (18), four screws (19), and four new lockwashers (20)	<p>a Put side cover in place. b Screw in and tighten using 7/16-inch box-end wrench.</p>

TRANSMISSION SHIFT CONTROL - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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CLEANING

WARNING

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 1000F (380C) and for type #2 is 138°F (590C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

11	All metal parts	Clean using drycleaning solvent and wiping rag.	
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INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

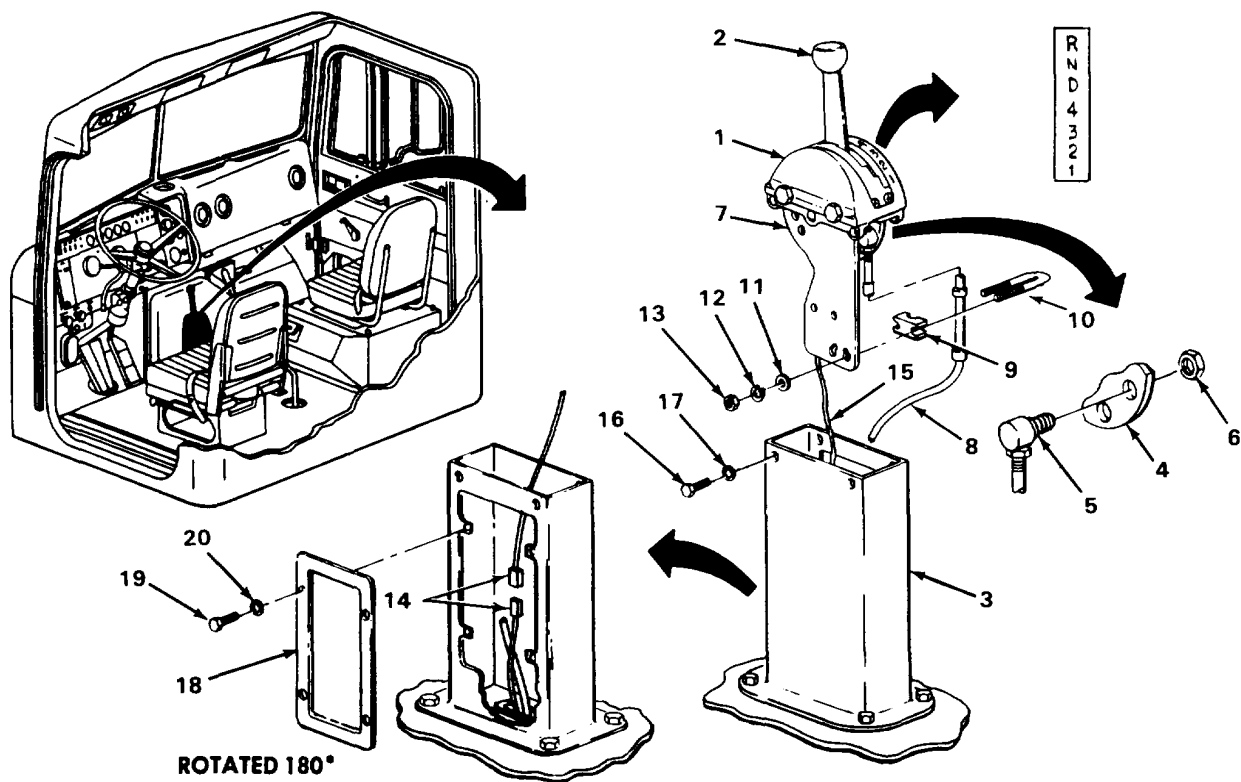
12	All threaded parts	Look for damaged threads or rounded heads.	
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TRANSMISSION SHIFT CONTROL - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
13 Transmission shift Control (1)	Shift control lever (2)	Put in driving range 1.
14 Transmission shift Control stand (3)	Transmission shift control (1)	Put in.
15 Shift lever late (4)	Shift cable swivel (5)	Put in hole marked during removal.
16 Shift cable swivel (5)	New self-locking nut (6)	Screw on and tighten using 112-inch box-end wrench.
17 Adapter plate (7)	Shift control cable (8), spacer (9), U-bolt (10), two flat washers (11), two new lockwashers (12), and two nuts (13)	a Put shift control cable in position. b Put in spacer and U-bolt. c Screw on and tighten using 3/8-inch box-end wrench. Make sure shift control cable is not being forced to one side. If shift control cable is being forced to one side, loosen two nuts, adjust, and retighten.
18 Transmission shift control stand (3)	Indicator light wire connector (14)	Aline and push together. Make sure indicator light wire (15) is clear of all moving parts.
19	Four screws (16) and four new lockwashers (17)	Screw in and tighten using 7/16-inch box-end wrench.
20	Side cover (18), four screws (19), and four new lockwashers (20)	a Put side cover in place. b Screw in and tighten using 7/16-inch box-end wrench.

TRANSMISSION SHIFT CONTROL - CONTINUED

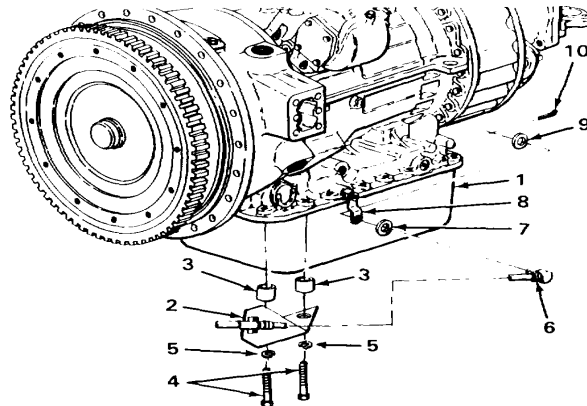
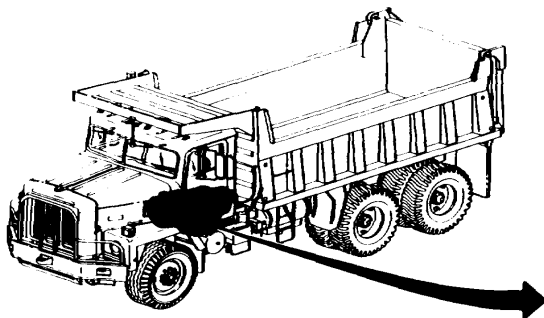
LOCATION	ITEM	ACTION REMARKS
21. Transmission shift control (1)	Shift control lever (2)	Put in position N.



TA244278

TRANSMISSION SHIFT CONTROL - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
22. Transmission oil pan (1)	Shift cable bracket (2) and two spacers (3)	Put in place.
23.	Two screws (4) and two new lock-washers (5)	Screw in and torque to 17 to 20 ft lb (23 to 27 N.m) using 1/2-inch, 1/2-inch drive socket, 10-inch extension, and 0 to 175 ft lb (0 to 245 N.m) torque wrench.
24. Shift cable swivel (6)	Flat washer (7)	Put on.
25. Shift control swivel lever (8)	Shift cable swivel (6)	Put in.
26. Shift cable swivel (6)	Flat washer (9) and new cotter pin (10)	a. Put on flat washer. b. Put in cotter pin and bend back ends using 8-inch roundnose pliers.



NOTE

FOLLOW-ON MAINTENANCE: Close left cab door (page 2-424).

TASK ENDS HERE

TA244279

TRANSMISSION SHIFT CONTROL STAND

This task covers:

- a. Removal (page 2-917)
- b. Cleaning (page 2-918)
- c. Inspection/Replacement (page 2-918)
- d. Installation (page 2-919)

INITIAL SETUP

Tools

Brush, wire
 Extension, 6-inch, 112-inch drive
 Gloves, safety
 Goggles, safety
 Handle, ratchet, 1/2-inch drive
 Socket, 7/16-inch, 112-inch drive

Personnel Required

One

Equipment Condition

Transmission shift control removed
 (page 2-909).

Materials/Parts

Grommet
 Rags, wiping (item 15, appendix C)
 Solvent, drycleaning (item 19, appendix C)

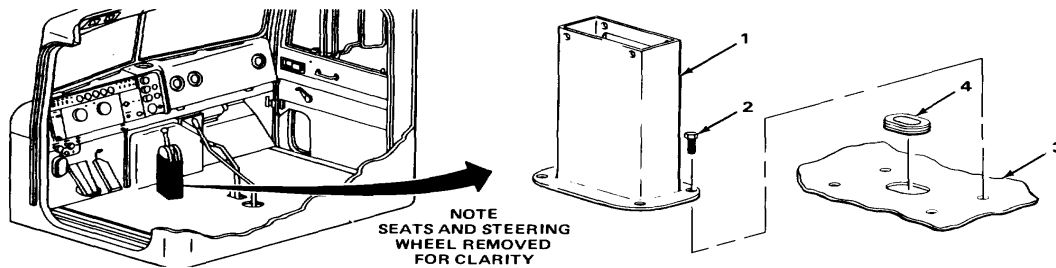
References

TM 43-0139 (Painting Instructions for Army Materiel)

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

1. Transmission shift control stand (1)
 - Four screws (2)
 - Using 7/16-inch, 1/2-inch drive socket, 6-inch extension, and ratchet handle, unscrew and take out.
2. Cab floor (3)
 - Transmission shift control stand (1) and grommet (4)
 - a. Take off.
 - b. Get rid of grommet.



TA244280

TRANSMISSION SHIFT CONTROL STAND - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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CLEANING

WARNING

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 1000F (380C) and for type #2 is 138°F (590C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

NOTE

For more information on how to clean parts, go to **General Maintenance Instructions (page 2-424)**.

- | | | | |
|----|--------------------------------------|--|--|
| 3. | Transmission shift control stand (1) | <ul style="list-style-type: none"> a. Clean rust or corrosion using wire brush. b. Clean using drycleaning solvent and wiping rag. c. To touchup or repaint, refer to TM 43-0139. | |
| 4. | All metal parts | Clean using drycleaning solvent and wiping rag. | |

INSPECTION/REPLACEMENT

NOTE

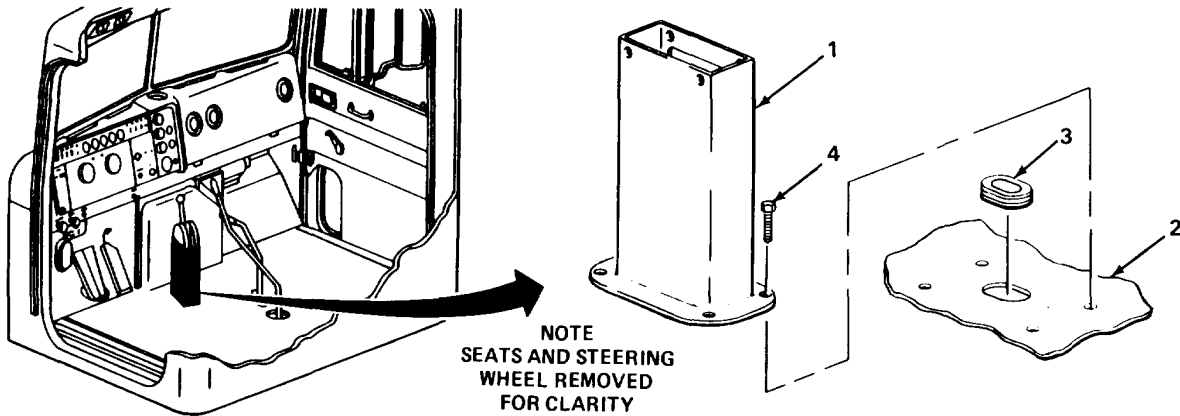
Replace all damaged or defective parts.

For more information on how to inspect parts, go to **General Maintenance Instructions (page 2-424)**.

- | | | | |
|----|--------------------------------------|--|--|
| 5. | Transmission shift control stand (1) | <ul style="list-style-type: none"> a. Look for excessive rust or corrosion. b. Look for severe dents or distortion which could effect installation or operation of transmission shift control. | |
| 6. | All threaded parts | Look for damaged threads or rounded heads. | |

TRANSMISSION SHIFT CONTROL STAND - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
7. Cab floor (2)	New grommet (3)	Put in.	
8.	Transmission shift control stand (1)	Put in position.	
9. Transmission shift control stand (1)	Four screws (4)	Screw in and tighten using 7/16-inch, 112-inch drive socket, 6-inch extension, and ratchet handle.	



NOTE

FOLLOW-ON MAINTENANCE: Install transmission shift control (page 2-909).

TASK ENDS HERE

TRANSMISSION SHIFT CABLE

This task covers:

- a. Removal (page 2-920)
- b. Disassembly (page 2-920)
- c. Cleaning (page 2-922)
- d. Inspection/Replacement (page 2-922)
- e. Assembly (page 2-922)
- f. Installation (page 2-924)
- g. Adjustment (page 2-924)

TRANSMISSION SHIFT CABLE - CONTINUED

INITIAL SETUP

Tools

- Gloves, safety
- Goggles, safety
- Pliers, roundnose, 8-inch
- Pliers, slip-joint, 12-inch
- Wrench, box-end, 3/8-inch
- Wrench, open-end, 7/16-inch

Materials/Parts

- Cotter pin, shift cable swivel (if required)
- Grommet (Shift cable)

Materials/Parts - Continued

- Lockwasher, U-bolt (two required)
- Rags, wiping (item 15, appendix C)
- Solvent, drycleaning (item 19, appendix C)

Personnel Required

Two

Equipment Condition

Transmission shift control removed (page 2-909).

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

Safety goggles must be worn when working under truck to prevent eye injury.

NOTE

Equipment condition leaves transmission shift cable disconnected and ready to be pulled out of truck.

Assistance will be needed to remove transmission shift cable from under truck.

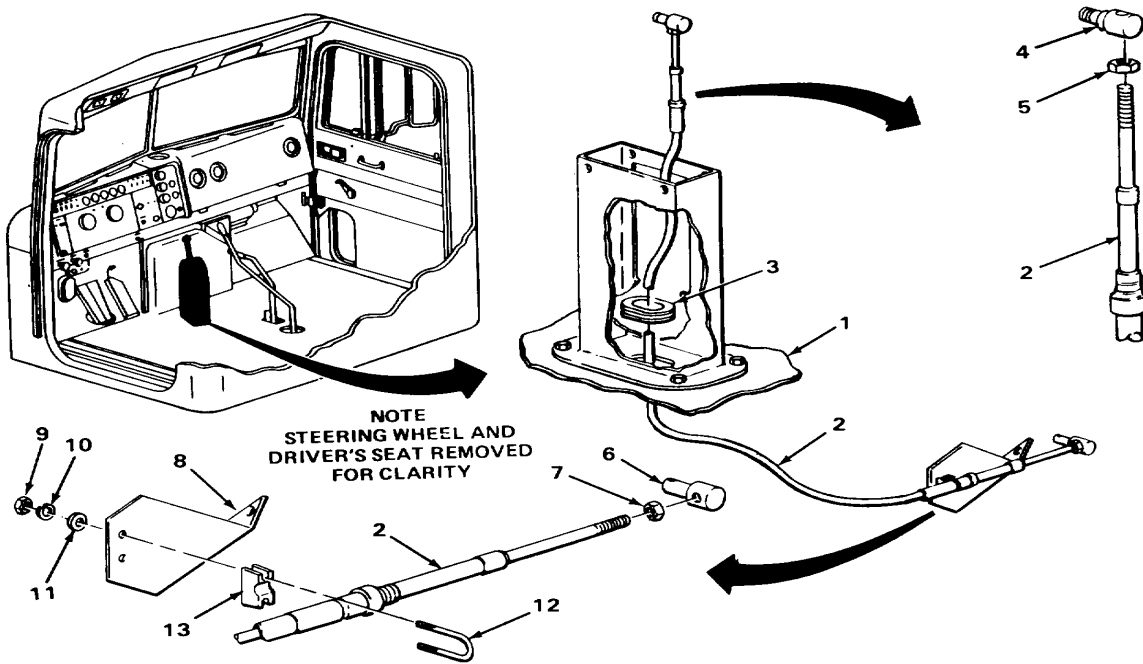
- | | | | |
|----|---------------|------------------------------|--|
| 1. | Cab floor (1) | Transmission shift cable (2) | Pull out. |
| 2. | | Grommet (3) | <ul style="list-style-type: none"> a. Take out. b. Get rid of. |

DISASSEMBLY

- | | | | |
|----|------------------------------|---------------------------------------|---|
| 3. | Transmission shift cable (2) | Shift cable swivel (4) and jamnut (5) | <ul style="list-style-type: none"> a. Using 12-inch slip-joint pliers and 7/16-inch open-end wrench, loosen. b. Screw off shift cable swivel. c. Screw off jamnut. |
|----|------------------------------|---------------------------------------|---|

TRANSMISSION SHIFT CABLE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
4.	Shift cable swivel (6) and jamnut (7)	a. Using 12-inch slip-joint pliers and 7116-inch open-end wrench, loosen. b. Screw off shift cable swivel. c. Screw off jamnut.	
5. Shift cable bracket (8)	Two nuts (9), two lockwashers (10), two flat washers (11), U-bolt (12), and spacer (13)	a. Using 3/8-inch box-end wrench, unscrew and take off. b. Get rid of lockwashers. c. Take off U-bolt and spacer. d. Get rid of transmission shift cable.	



TA244282

TRANSMISSION SHIFT CABLE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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CLEANING

WARNING

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 1000F (380C) and for type #2 is 138°F (590C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

6.	All metal parts	Clean using drycleaning solvent and wiping rag.	
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INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

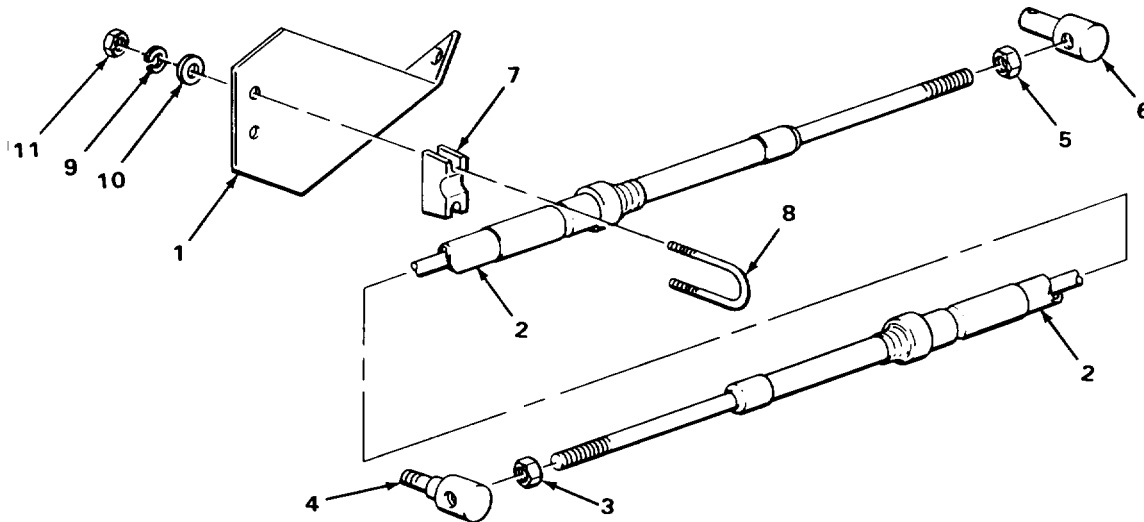
7.	Shift cable bracket (1)	Look for cracks or breaks.	
8.	All threaded parts	Look for damaged threads or rounded heads.	

ASSEMBLY

9.	New transmission shift cable (2)	Jamnut (3) and shift cable swivel (4)	a. Screw on. Allow two threads to stick out from top of shift cable swivel. b. Tighten using 12-inch slip-joint pliers and 7/16-inch open-end wrench.
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TRANSMISSION SHIFT CABLE - CONTINUED

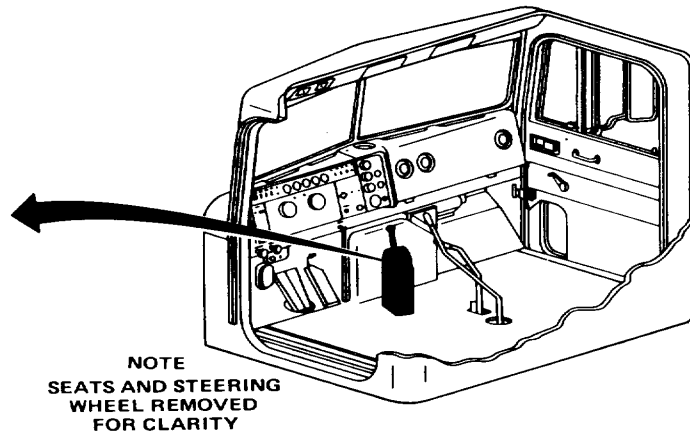
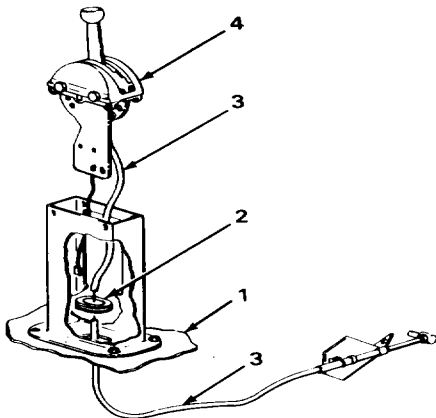
LOCATION	ITEM	ACTION	REMARKS
10.	Jamnut (5) and shift cable swivel (6)	Screw on.	Allow four threads to stick out from top of shift cable swivel. Do not tighten at this time.
11.	Shift cable bracket (1), spacer (7), U-bolt (8), two new lockwashers (9), two flat washers (10), and two nuts (11)	a. Put in position. b. Screw on and tighten using 3/8-inch box-end wrench.	



TA244283

TRANSMISSION SHIFT CABLE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
12. Cab floor (1)	New grommet (2)	Put in.	
NOTE			
Assistance will be needed under truck to push and guide transmission shift cable up through hole in cab floor.			
13.	Transmission shift cable (3)	With assistance, put in.	
14.	Transmission shift control (4)	Install (page 2-909).	



ADJUSTMENT

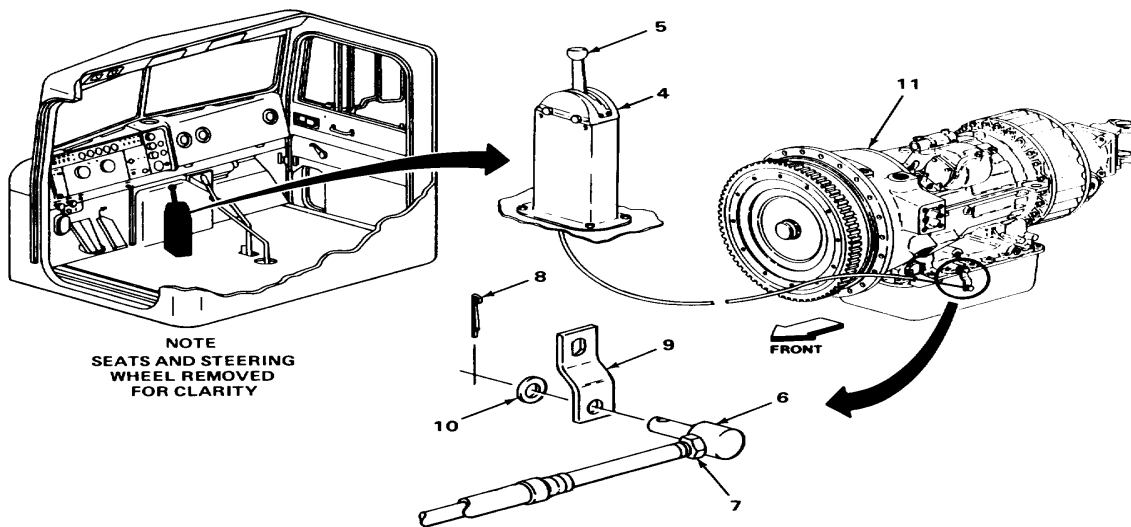
NOTE

Transmission shift cable adjustments are performed with shift control lever and shift control swivel lever in N (neutral) position. Perform steps 16 thru 19 only if transmission shift cable is already connected to shift control swivel lever.

TA244284

TRANSMISSION SHIFT CABLE - CONTINUED

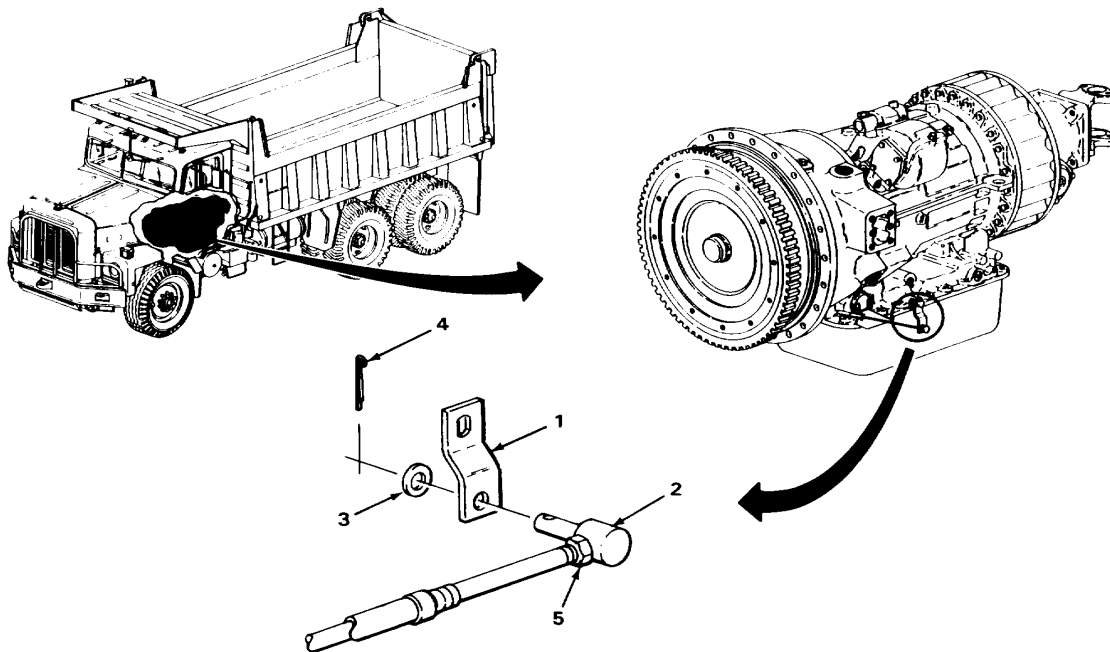
LOCATION	ITEM	ACTION	REMARKS
15. Transmission shift control (4)	Shift control lever (5)	Put in N (neutral) position.	
16. Shift cable swivel (6)	Jamnut (7)	Using 7/16-inch open-end wrench, loosen.	
17.	Cotter pin (8)	a. Using 8-inch roundnose pliers, straighten ends and pull out. b. Get rid of.	
18. Shift control swivel lever (9)	Shift cable swivel (6) and flat washer (10)	Take out.	
19. Main transmission (11)	Shift control swivel lever (9)	a. Move forward to last position. Clicks will be felt as each position is selected. b. Move rearward one click. This is the N (neutral) position.	



TA244285

TRANSMISSION SHIFT CABLE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
ADJUSTMENT - CONTINUED			
20. Shift control swivel lever (1)	Shift cable swivel (2) and flat washer (3)	Put in.	Check for loose fit. If tight on one side, take out and turn one thread at a time away from tight side and recheck until loose fit is met. If loose fit, go to step 21.
21. Shift cable swivel (2)	New cotter pin (4)	Put in and bend back ends using 8-inch roundnose pliers.	
22.	Jamnut (5)	Tighten using 7/16-inch open-end wrench.	



TASK ENDS HERE

TA244286

OIL FILLER TUBE AND DIPSTICK

This task covers:

- | | |
|--------------------------|--|
| a. Removal (page 2-928) | c. Inspection/Replacement (page 2-930) |
| b. Cleaning (page 2-929) | d. Installation (page 2-930) |
-

INITIAL SETUP

Tools

Container, 12-gallon
Gloves, safety
Goggles, safety
Wrench, box-end, 7/16-inch
Wrench, box-end, 15/16-inch
Wrench, open-end, 7/16-inch
Wrench, open-end, 1 1/16-inch

Personnel Required

One

Equipment Condition

Engine cover removed (page 2-424)
Right side hood panel opened (page 2-424)

Materials/Parts

Lockwasher, clamp screw
Rags, wiping (item 15, appendix C)
Solvent, drycleaning (item 19, appendix C)

2-927

OIL FILLER TUBE AND DIPSTICK - CONTINUED

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

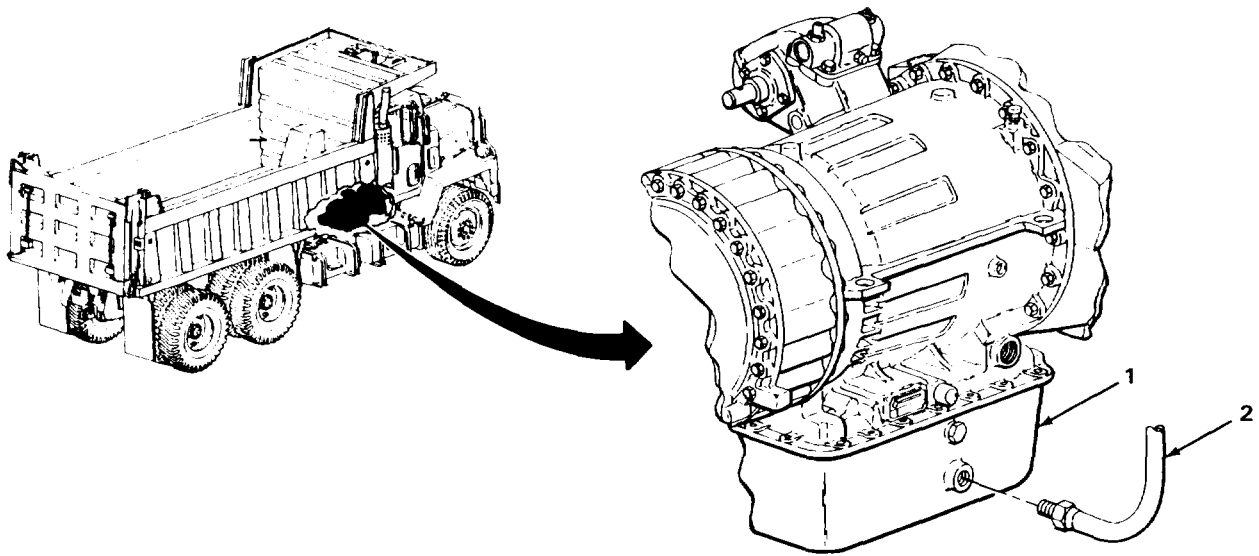
REMOVAL

WARNING

Safety goggles must be worn when working under truck to prevent eye injury.

Hot transmission oil can burn you. Care must be taken to prevent personal injury.

- | | | |
|-----------------------------|---------------------|--|
| 1. Transmission oil pan (1) | Oil filler tube (2) | <ul style="list-style-type: none"> a. Place 12-gallon container underneath. b. Using 1 1/16-inch open-end wrench, slowly loosen and take off. c. Allow oil to drain. d. Get rid of drained oil (page 2-424). |
|-----------------------------|---------------------|--|



- | | | |
|----------------------|---|--|
| 2. Bracket (3) | Screw (4), flat washer (5), lock-washer (6), nut (7), and clamp (8) | <ul style="list-style-type: none"> a. Using 7/16-inch box-end and 7/16-inch open-end wrenches, unscrew and take out. b. Get rid of lockwasher. c. Take clamp off oil filler tube (2). d. Take out oil filler tube (2). |
| 3. Oil fillertube(9) | Dipstick (10) | Turn handle counterclockwise and pull out. |

TA244287

OIL FILLER TUBE AND DIPSTICK - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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CLEANING

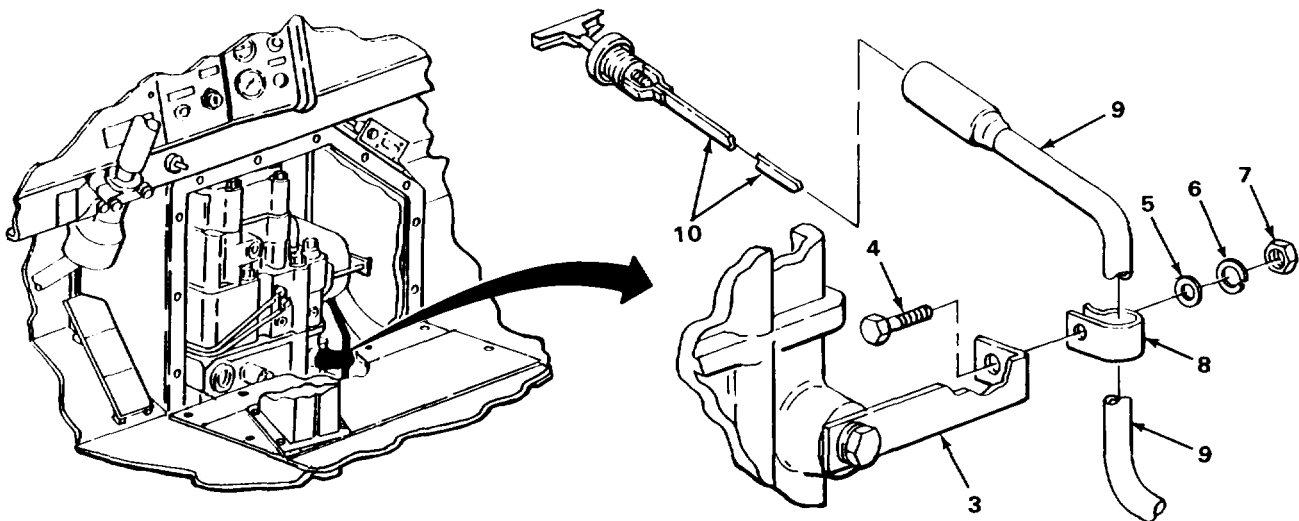
WARNING

Drycleaning solvent PD680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 1000F (380C) and for type #2 is 138°F (590C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

- | | | |
|----|-----------------|---|
| 4. | All metal parts | Clean using drycleaning solvent and wiping rag. |
|----|-----------------|---|



TA244288

OIL FILLER TUBE AND DIPSTICK - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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INSPECTION/REPLACEMENT

NOTE

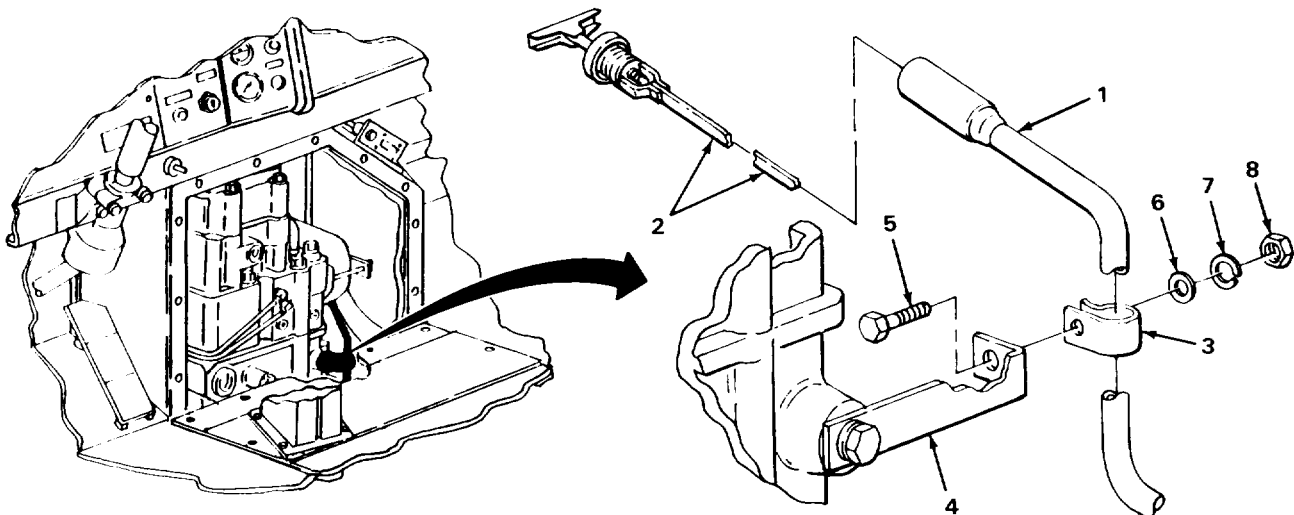
Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

5.	Oil filler tube (1)	Look for cracks, bends, or kinks.
6.	Dipstick (2)	a. Look for cracks, breaks, or bends. b. Look for cracked rubber plug.
7.	All threaded parts	Look for damaged threads or rounded heads.

INSTALLATION

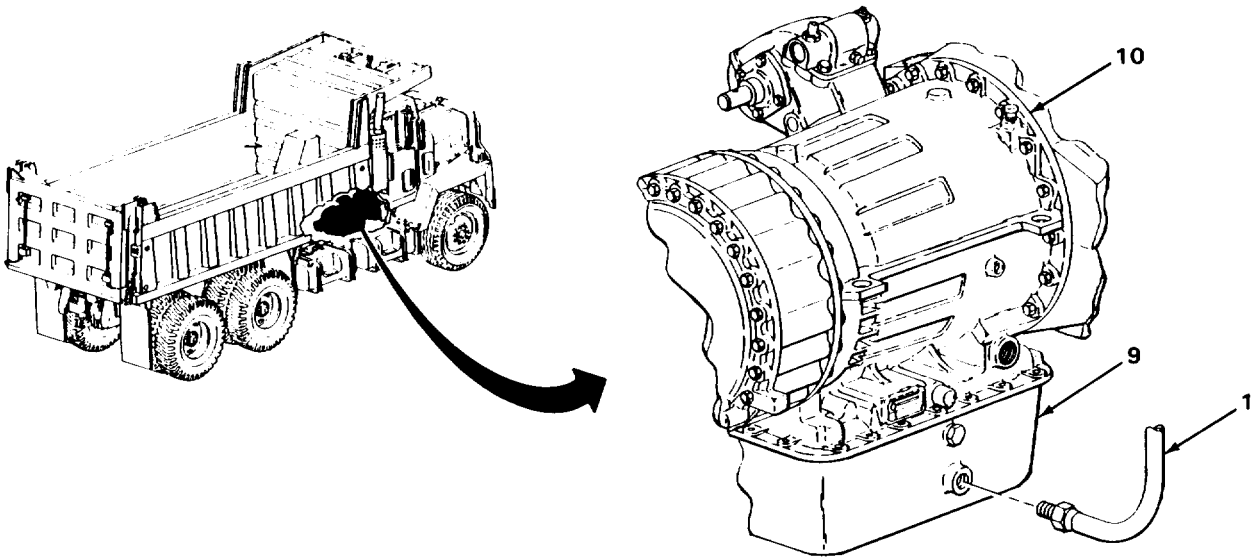
8.	Oil filler tube (1)	Clamp (3)	Put on.
9.	Bracket (4)	Clamp (3), screw (5), flat washer (6), new lockwasher (7), and nut (8)	a. Aline clamp and bracket holes. b. Screw on and tighten using 7/16-inch box-end and 7/16-inch open-end wrenches.



TA244289

OIL FILLER TUBE AND DIPSTICK - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
10. Transmission oil pan (9)	Oil filler tube (1) open-end wrench.	Screw on and tighten using 1 1/16-inch	
11.	Main transmission (10)	Fill. (See Transmission Oil Pan, page 2-900).	



NOTE

FOLLOW-ON MAINTENANCE:

1. Close right side hood panel (page 2-424). TA244290
2. Install engine cover (page 2-424). 2-931

TASK ENDS HERE

TA244290

2-931

AUXILIARY TRANSMISSION

This task covers:

- a. Oil Level Check (page 2-932)
 - b. Draining (page 2-933)
 - c. Filling (page 2-934)
 -
-

INITIAL SETUP

<p>Tools</p> <p>Container, 10-gallon Goggles, safety Key, square, 112-inch Pump, lubricating, bucket Wrench, open-end, 15116-inch</p> <p>Materials/Parts</p> <p>Oil, lubricating (item 14, appendix C) Rags, wiping (item 15, appendix C) Tape, antiseizing (item 22, appendix C)</p>	<p>Personnel Required</p> <p>One</p> <p>Equipment Condition</p> <p>Truck on level ground.</p> <p>References</p> <p>LO 5-3805-254-12 (Lubrication Order) TM 5-3805-254-10 (Operator's Manual)</p>
---	--

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

OIL LEVEL CHECK

WARNING

Safety goggles must be worn when working under truck to prevent eye injury.

Do not check oil level when hot. Hot oil can burn you.

- | | | | |
|----|-----------|-------------------------------------|--|
| 1. | Auxiliary | Filler plug (2)
transmission (1) | <ul style="list-style-type: none"> a. Wipe filler plug and area around it, clean using wiping rag. b. Using 15/16-inch open-end wrench, unscrew and take out. |
| 2. | Auxiliary | transmission (1) | <p>Insert finger through filler plug hole.</p> <p>If oil is up to filler plug hole, oil is at proper level. Go to step 6. If oil is below filler plug hole, oil must be added. Go to step 4, 5 and 6.</p> |

AUXILIARY TRANSMISSION - CONTINUED

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

DRAINING

WARNING

Safety goggles must be worn when working under truck to prevent eye injury.

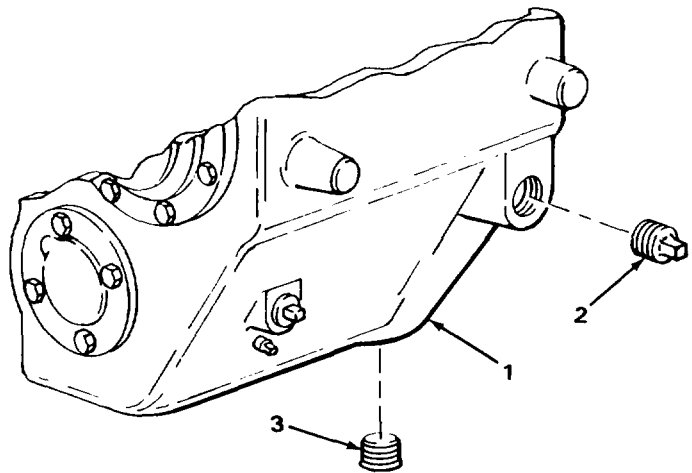
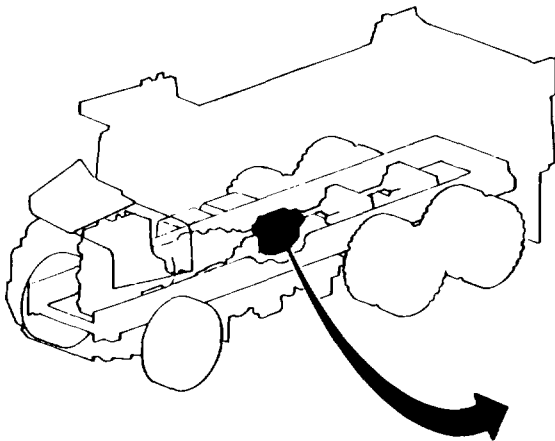
Do not drain oil when hot. Hot oil can burn you.

NOTE

Auxiliary transmission oil must be warm and engine shut down (TM 5-3805-254-10).

If filler plug was not removed, do step 1.

- | | | |
|----|---------------|---|
| 3. | Drainplug (3) | <ol style="list-style-type: none"> a. Place 10-gallon container underneath. b. Wipe drainplug and area around it, clean using wiping rag. c. Using 1/2-inch square key, unscrew and take out. d. Allow oil to drain. e. Get rid of drained oil (page 2-424). |
|----|---------------|---|



TA244291

AUXILIARY TRANSMISSION - CONTINUED

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

FILLING

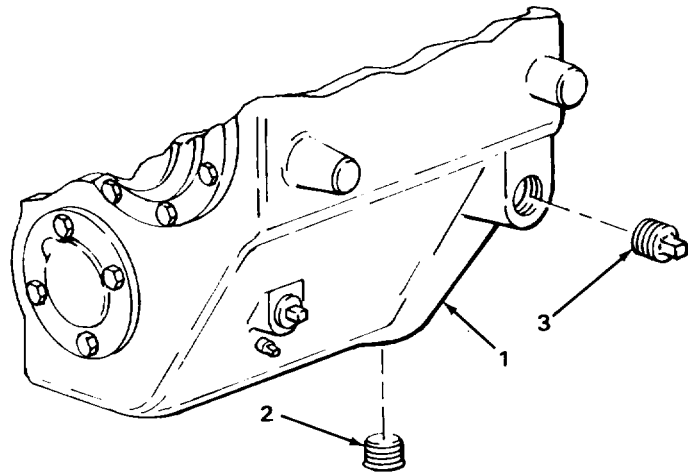
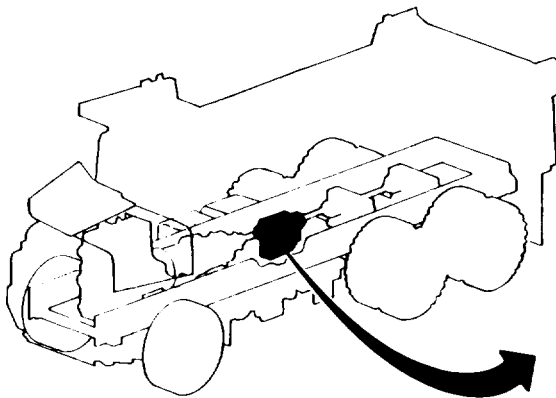
CAUTION

Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.

NOTE

For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).

- | | | | |
|----|-----------|-----------------------------------|--|
| 4. | Auxiliary | Drainplug (2)
transmission (1) | <ul style="list-style-type: none"> a. Wipe clean using wiping rag. b. Wrap pipe threads with antiseizing tape. c. Screw in and tighten using 11/2-inch square key. |
| 5. | | Auxiliary
transmission (1) | Using lubricating bucket pump, fill through filler plug hole until oil comes out (LO 5-3805-254-12). |
| 6. | | Filler plug (3) | <ul style="list-style-type: none"> a. Wipe clean using wiping rag. b. Wrap threads with antiseizing tape. c. Screw in and tighten using 15/16-inch open-end wrench. |



TASK ENDS HERE

TA244292

REMOTE OIL FILTER CARTRIDGE

This task covers:

- | | |
|--------------------------|--|
| a. Removal (page 2-936) | c. Inspection/Replacement (page 2-938) |
| b. Cleaning (page 2-936) | d. Installation (page 2-938) |
-

INITIAL SETUP

Tools

Brush, wire
Container, 10-gallon
Gloves, safety
Goggles, safety
Wrench, box-end, 7/16-inch
Wrench, box-end, 1 1/8-inch

Materials/Parts

Cartridge, oil filter
Ring

Materials/Parts - Continued

Rags, wiping (item 15, appendix C)
Solvent, drycleaning (item 19, appendix C)
Tape, antiseizing (item 22, appendix C)

Personnel Required

One

References

TM 5-3805-254-10 (Operator's Manual)

2-935

REMOTE OIL FILTER CARTRIDGE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
<u>WARNING</u>			
Safety goggles must be worn when working under truck to prevent eye injury.			
Hot transmission oil can burn you. Care must be taken to prevent personal injury.			
1.	Remote oil filter (1)	Drainplug (2)	a. Place 10-gallon container underneath. b. Using 7/16-inch box-end wrench, unscrew and take out. c. Allow oil to drain. d. Get rid of drained oil (page 2-424).
NOTE			
Hold oil filter canister while performing next step.			
2.		Retaining screw (3)	Using 1 1/8-inch box-end wrench, unscrew and loosen. Retaining screw remains in oil filter canister.
3.		Oil filter canister (4) and ring (5)	a. Take off. b. Get rid of ring.
4.	Oil filter canister (4)	Oil filter cartridge (6)	a. Take out. b. Get rid of.

CLEANING**WARNING**

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 1000F (380C) and for type #2 is 138°F (590C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

Safety goggles must be worn when using wire brush. Flying rust and metal particles can cause eye injury.

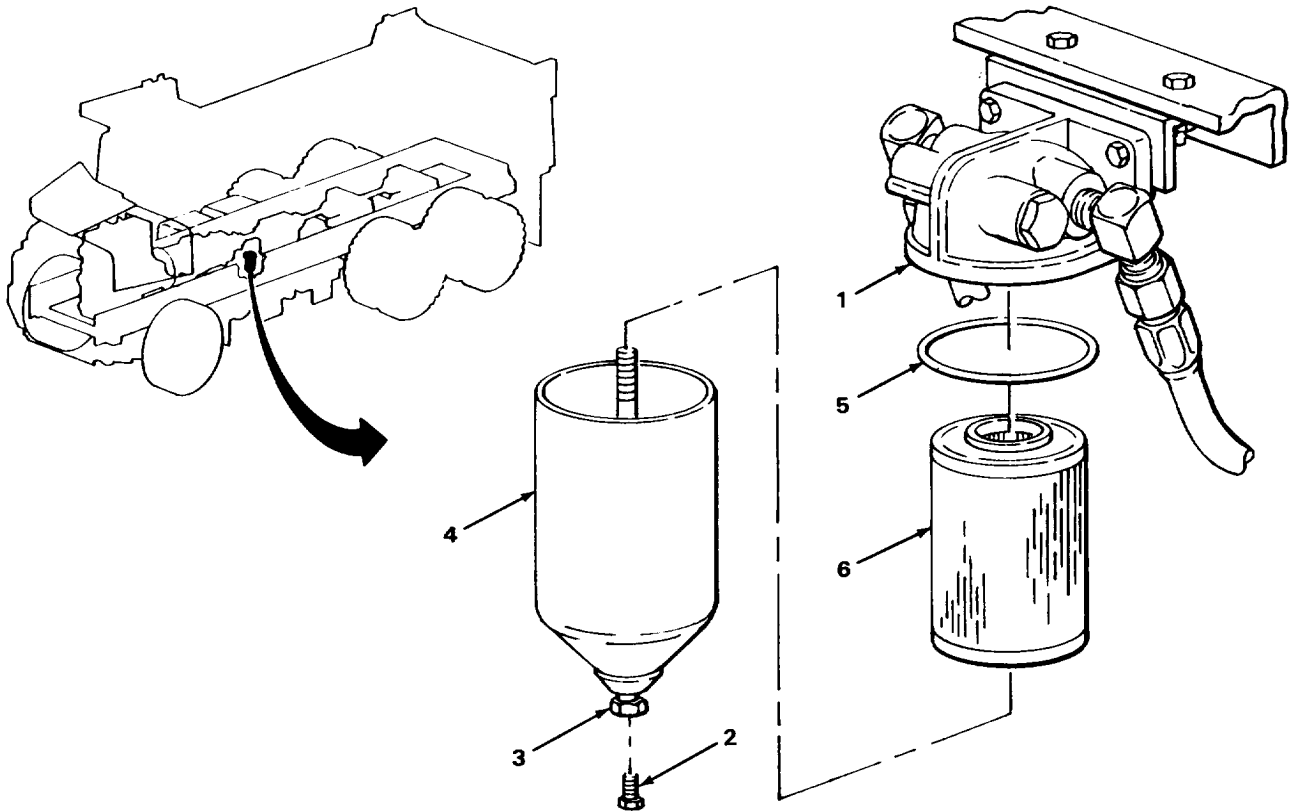
REMOTE OIL FILTER CARTRIDGE - CONTINUED

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

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

- | | | |
|----|-------------------------|--|
| 5. | Oil filter canister (4) | <ul style="list-style-type: none"> a. Clean rust and corrosion from outside surface using wire brush. b. Clean inside and outside surfaces using drycleaning solvent and wiping rag.
Be sure to remove all built-up sludge from inside surface. |
|----|-------------------------|--|



TA244293

REMOTE OIL FILTER CARTRIDGE - CONTINUED

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

INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2424).

6.	Oil filter canister (1)	a. Look for cracks, breaks, or chips. b. Look for excessive rust on inside surface.	
7.	All threaded parts	Look for damaged threads or rounded heads.	

INSTALLATION

CAUTION

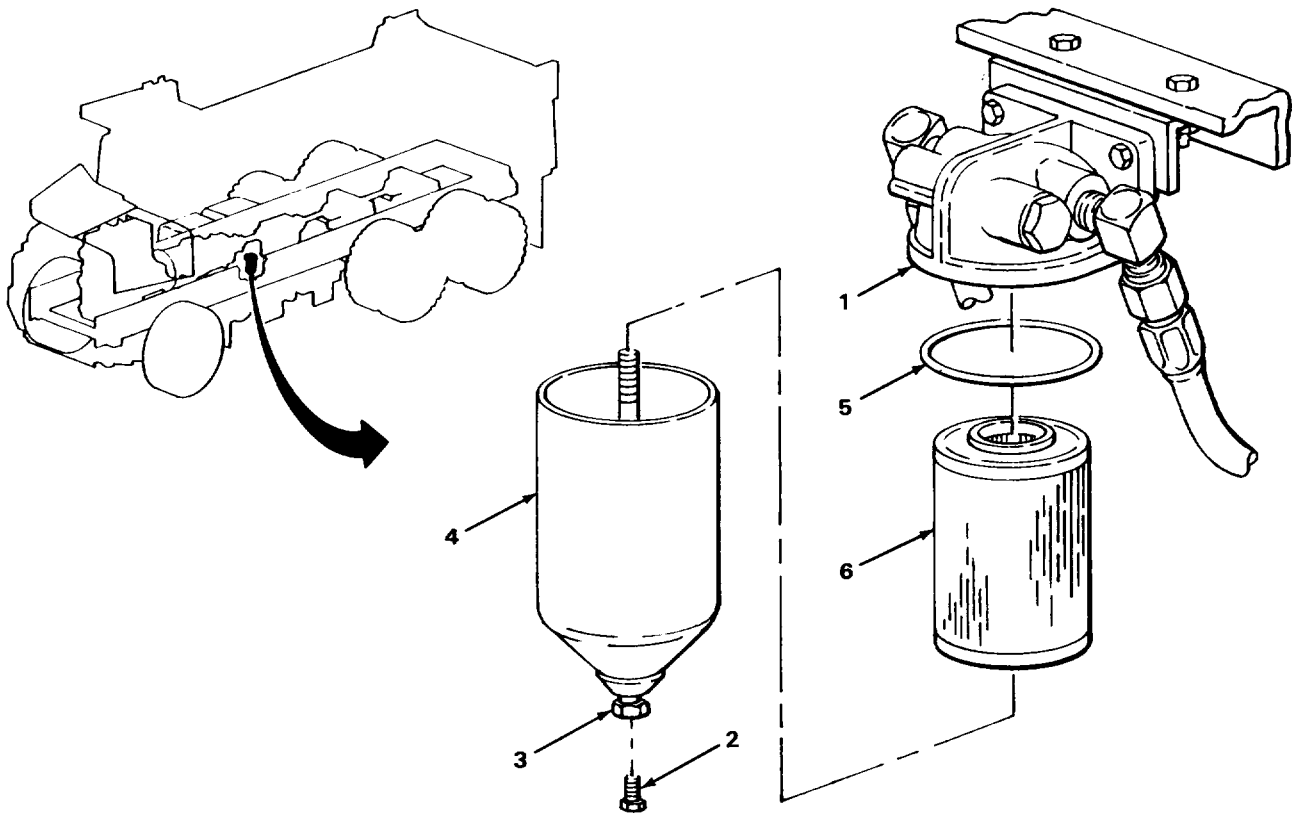
Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.

NOTE

For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).

8.	Oil filter canister (1)	New oil filter cartridge (2)	Put in.
9.	Remote oil filter (3)	Ring (4)	Put in groove.
10.	Oil filter canister (1) and retaining screw (5)	Oil filter canister (1) and retaining screw (5)	a. Put oil filter canister in position. b. Screw on and tighten using 1 1/8-inch box-end wrench.
11.	Oil filter canister (1)	Drainplug (6)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 7/16-inch box-end wrench.
12.	Dump truck	Transmission	a. Start engine and check transmission oil level (TM 5-3805-254-10). b. Check for leaks.

REMOTE OIL FILTER CARTRIDGE - CONTINUED



TASK ENDS HERE

Section XII. PROPELLER SHAFTS AND UNIVERSAL JOINT MAINTENANCE

For propeller shaft and universal joint maintenance refer to Preventative Maintenance checks and Services (PMCS) page 2-34 and Lubrication Order (LO 5380525412). The intervals specified are based on operation under normal conditions. Modification of the recommended intervals may be required under unusual operating conditions.

TA244294

Section XIII. REAR AXLE MAINTENANCE

Page Page

Interaxle Differential	2-945	Rear Axle Housing.....	2-942
Power Divider Hoses, Tubes, and Fittings	2-946.1	Rear Axle Housing Breather.....	2-940

REAR AXLE HOUSING BREATHER

This task covers:

- | | |
|--------------------------|--|
| a. Removal (page 2-940) | c. Inspection/Replacement (page 2-941) |
| b. Cleaning (page 2-940) | d. Installation (page 2-941) |

INITIAL SETUP

Tools	Materials/Parts
Gloves, safety	Solvent, drycleaning (item 19, appendix C)
Goggles, safety	
Gun, air blow	Personnel Required
Hose, air assembly	
Wrench, open-end, 3/4-inch	One

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

REMOVAL

NOTE

Steps given are typical for both rear axle housing breathers.

1. Rear axle housing (1)	Rear axle housing breather (2)	Using 3/4-inch open-end wrench, unscrew and take out.
--------------------------	--------------------------------	---

CLEANING

WARNING

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 1000F (380C) and for type #2 is 138°F (59°C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

REAR AXLE HOUSING BREATHER - CONTINUED

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

WARNING

Particles blown by compressed air are hazardous. Make certain the air stream is directed away from user and other personnel in the area. Compressed air used for cleaning purposes shall not exceed 30 psi (207 kPa). User must wear safety goggles or face shield to prevent personnel injury.

- | | | | |
|----|--------------------------------|--|--|
| 2. | Rear axle housing breather (2) | a. Clean with drycleaning solvent.
b. Using air blow gun and air hose assembly, blow out air passage. | |
|----|--------------------------------|--|--|

INSPECTION/REPLACEMENT

NOTE

Replace breather if damaged or defective.

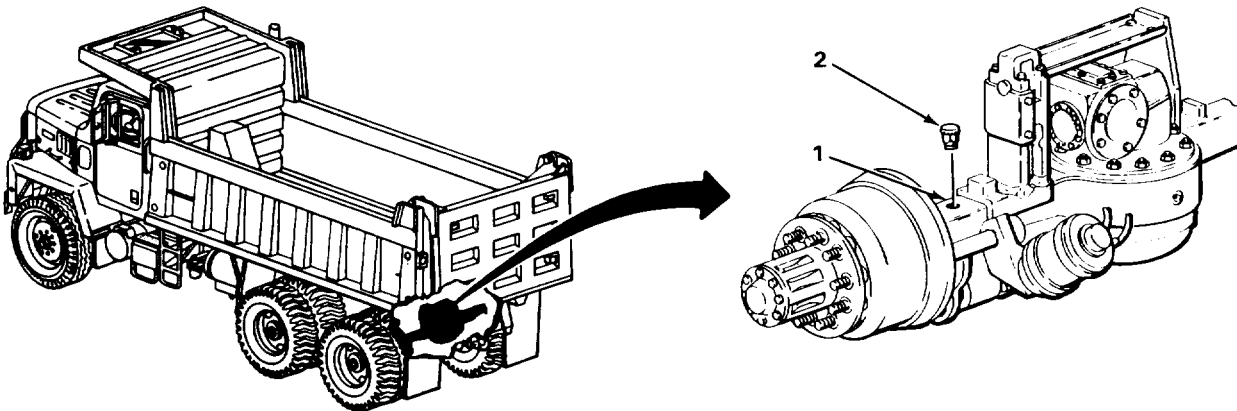
- | | | | |
|----|--------------------------------|--|--|
| 3. | Rear axle housing breather (2) | a. Look for cracks, breaks, or corrosion.
b. Look for clogged breather passage.
c. Look for damaged threads. | |
|----|--------------------------------|--|--|

INSTALLATION

CAUTION

Overtightening rear axle breather could cause damage to axle housing or breather.

- | | | | |
|----|-----------------------|--------------------------------|--|
| 4. | Rear axle housing (1) | Rear axle housing breather (2) | Screw in and tighten using 3/4-inch open-end wrench. |
|----|-----------------------|--------------------------------|--|



TASK ENDS HERE

TA244295

REAR AXLE HOUSING

This task covers:

- a. Oil level check (page 2-942)
 - b. Draining (page 2-943)
 - c. Filling (page 2-944)
-

INITIAL SETUP

<p>Tools</p> <p>Container, 10-gallon Key, square, 1/2-inch Pump, bucket, lubricating</p> <p>Materials/Parts</p> <p>Oil, lubricating (item 4 appendix C) Rags, wiping (item 5 appendix C) Tape, antiseizing (item 22 appendix C)</p>	<p>Personnel Required</p> <p>One</p> <p>Equipment Condition</p> <p>On level ground</p> <p>References</p> <p>TM 5-3805-254-10 (Operator's Manual) LO 5-3805-254-12 (Lubrication Order)</p>
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LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

OIL LEVEL CHECK

WARNING

Do not check rear axle housing oil level when hot. Hot oil can burn you.

NOTE

Steps given are typical for both rear axle housings.

- | | | | |
|----|-----------------------|-----------------|---|
| 1. | Rear axle housing (1) | Filler plug (2) | Using wiping rag, wipe filler plug and area around it clean. |
| 2. | | Filler plug (2) | Using 1/2-inch square key, unscrew and take out. |
| 3. | Rear axle housing (1) | | <ul style="list-style-type: none"> a. Insert finger through filler plug hole. b. If oil is up to filler plug hole, oil is at correct level. Go to step 5. c. If oil is below filler plug hole, go to step 4. |
| 4. | Rear axle housing (1) | | Using lubricating bucket pump, fill through filler plug hole to correct level. |

REAR AXLE HOUSING - CONTINUED

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

NOTE

For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).

- | | | | |
|----|-----------------|--|--|
| 5. | Filler plug (2) | <ol style="list-style-type: none"> Using antiseizing tape, wrap threads. Screw in and tighten using 1/2-inch square key. Using wiping rag, wipe filler plug and area around it clean. | |
|----|-----------------|--|--|

DRAINING

WARNING

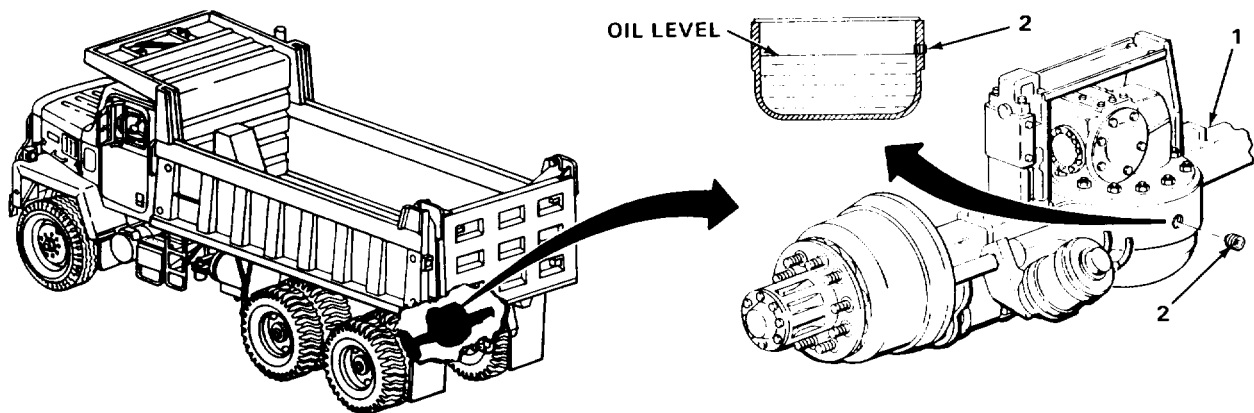
Do not drain rear axle housing oil when hot. Hot oil can burn you.

NOTE

Rear axle housing oil must be warm and engine shut down (TM 5-3805-254-10) before draining.

Steps given are typical for both rear axle housings.

- | | | | |
|----|-----------------------|---|---|
| 6. | Rear axle housing (1) | Filler plug (2) and magnetic drain plug (3) | <ol style="list-style-type: none"> Using wiping rag, wipe filler plug, magnetic drainplug, and area around it clean. Place 10-gallon container underneath. Using 1/2-inch square key, unscrew and take out. Allow oil to drain. Get rid of drained oil (page 2-424). |
|----|-----------------------|---|---|



TA244296

REAR AXLE HOUSING - CONTINUED

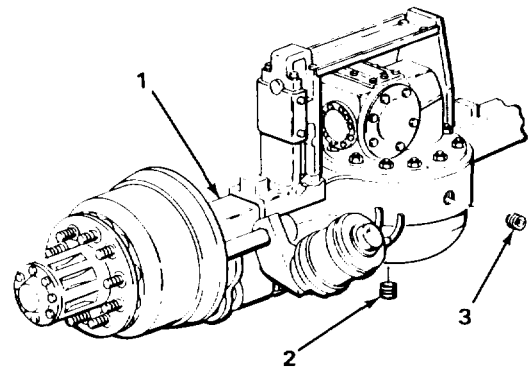
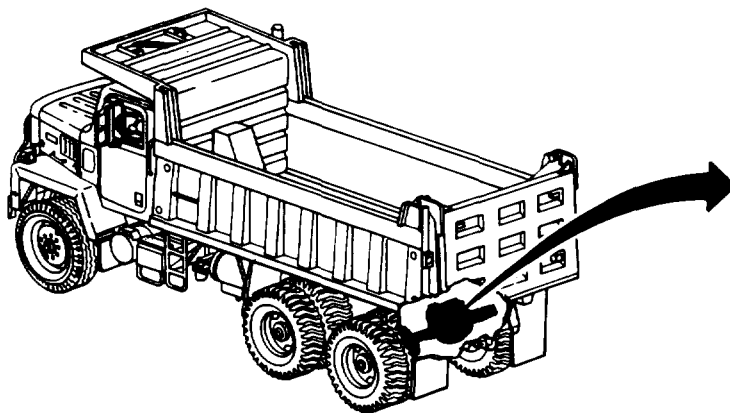
LOCATION	ITEM	ACTION	REMARKS
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FILLING

NOTE

For more information on how to use antiseizing tape, go to **General Maintenance Instructions (page 2-424)**.

- | | | | |
|----|-----------------------|-------------------------|--|
| 7. | Rear axle housing (1) | Magnetic drain plug (2) | <ol style="list-style-type: none"> Using wiping rag, wipe magnetic drain plug clean. Using antiseizing tape wrap threads. Screw in and tighten using 1/2-inch square key. |
| 8. | Rear axle housing (1) | | Using lubricating bucket pump, fill through filler plug hole, until oil comes out. |
| 9. | | Filler plug (3) | <ol style="list-style-type: none"> Using antiseizing tape, wrap threads. Screw in and tighten using 1/2-inch square key. Using wiping rag, wipe filler plug and area around it clean. |



TA244297

INTERAXLE DIFFERENTIAL

This task covers:

- a Draining (page 2-946)
 - b Filling (page 2-946)
-

INITIAL SETUP

Tools

Container, 2-gallon
Key, square, 1/2-inch
Pump, bucket, lubricating References
Wrench, open-end, 5/8-inch

Personnel Required

One

LO 5-3805-254-12 (Lubrication Order)

Materials/Parts

Oil, lubricating (item 14, appendix C)
Rags, wiping (item 15, appendix C)
Tape, antiseizing (item 22, appendix C)

INTERAXLE DIFFERENTIAL - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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DRAINING

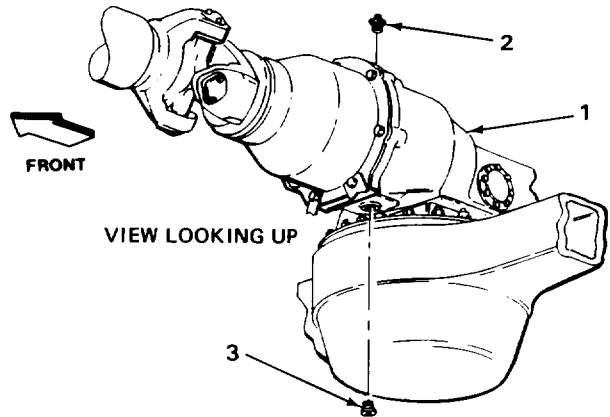
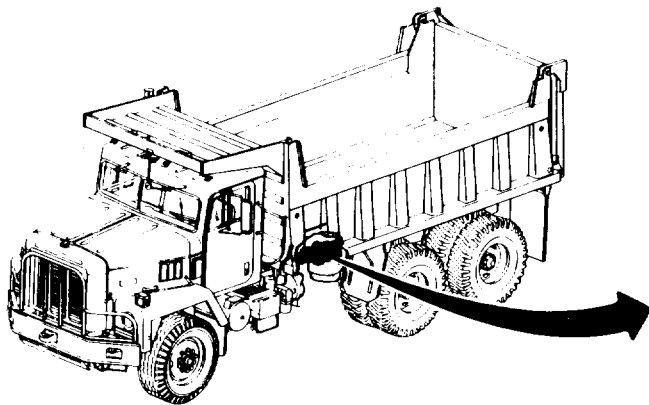
WARNING

Do not drain interaxle differential oil when hot. Hot oil can burn you.

1	Interaxle differential (1)	<p>Filler plug (2)</p> <p>differential (1)</p>	<p>a Using wiping rag, wipe filler plug and area around it clean.</p> <p>b Using 5/8-inch open-end wrench, unscrew and take out.</p>
2	0	Drainplug (3)	<p>a Using wiping rag, wipe drainplug and area around it clean.</p> <p>b Using 1/2-inch square key, unscrew and take out.</p> <p>c Using 2-gallon container, allow oil to drain.</p> <p>d Get rid of drained oil (page 2-424).</p> <p>e Wrap threads with antiseizing tape (2-424).</p> <p>f Screw in and tighten using 1/2-inch square key.</p>

FILLING

3	Interaxle differential (1)	Using lubricating bucket pump fill through filler plug hole (LO 5-3805-254-12).
4	Filler plug (2)	<p>a Wrap threads with antiseizing tape (2-424).</p> <p>b Screw in and tighten using 5/8-inch open-end wrench.</p>



TA244298

TASK ENDS HERE

TA244298

POWER DIVIDER HOSES, TUBES, AND FITTINGS

This task covers:

- | | | | |
|---|---------------------------------------|---|-----------------------------|
| a | Removal (page 2-946.2) | c | Installation (page 2-946.6) |
| b | Inspection/Replacement (page 2-946.5) | | |
-

INITIAL SETUP

Equipment Conditions

- Lower center instrument panel opened (page 2-438)
- Upper center instrument panel opened (page 2-439)

Materials/Parts

- Tags, marking (item 21, appendix C)
- Lockwasher, cab floor
- Lockwasher, front crossmember (two required)
- Lockwasher, drop elbow

Tools/Test Equipment

- Wrench, box-end, 7/16-inch (two required)
- Wrench, box-end, 3/4-inch (two required)
- Wrench, open-end, 9/16-inch (two required)
- Wrench, open-end, 1-inch (two required)

Personnel Required

Two

Change 1 2-946.1

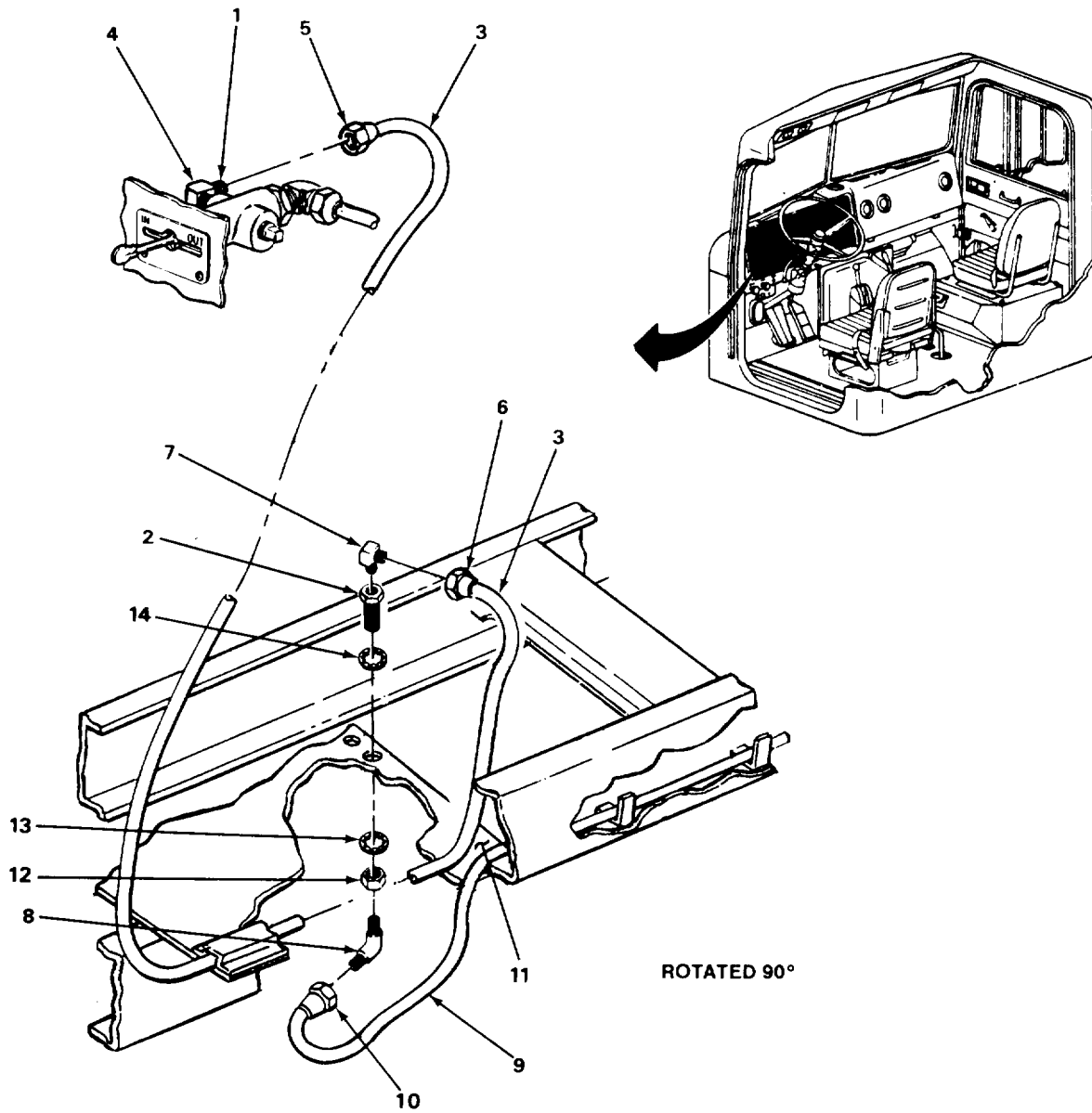
POWER DIVIDER HOSES, TUBES, AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
<u>CAUTION</u>		
Use care when working behind instrument panel to prevent breaking or disconnecting wires. NOTE		
For more information on how to tag parts, go to General Maintenance Instructions (page 2-424).		
1	Power divider control valve (1) to cab floor adapter (2)	Tube (3) Tag.
2	Elbow (4)	Line nut (5) Using 9/16-inch open-end wrench, unscrew, and take off.
3	Power divider control valve (1)	Elbow (4) Using 9/16-inch open-end wrench, unscrew, and take off.
4	Cab floor adapter (2)	Line nut (6), tube (3), and elbow (7) a Using 9/16-inch open-end wrench, unscrew, and take off. b Take out tube.
5	Elbow (8)	Tube (9) Tag.
6		Line nut (10) Using 9/16-inch open-end wrench, unscrew, and take off.
7	Cab floor adapter (2)	Elbow (8) Using 9/16-inch open-end wrench, unscrew, and take off.
8	Cab floor (11)	Nut (12), washer adapter (2), and lockwasher (14) a Using 1-inch open-end wrench, unscrew, and (13), cab floor take off. b Get rid of lockwasher.

Change 1 2-946.2

POWER DIVIDER HOSES, TUBES, AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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TA702132

Change 1 2-946.3

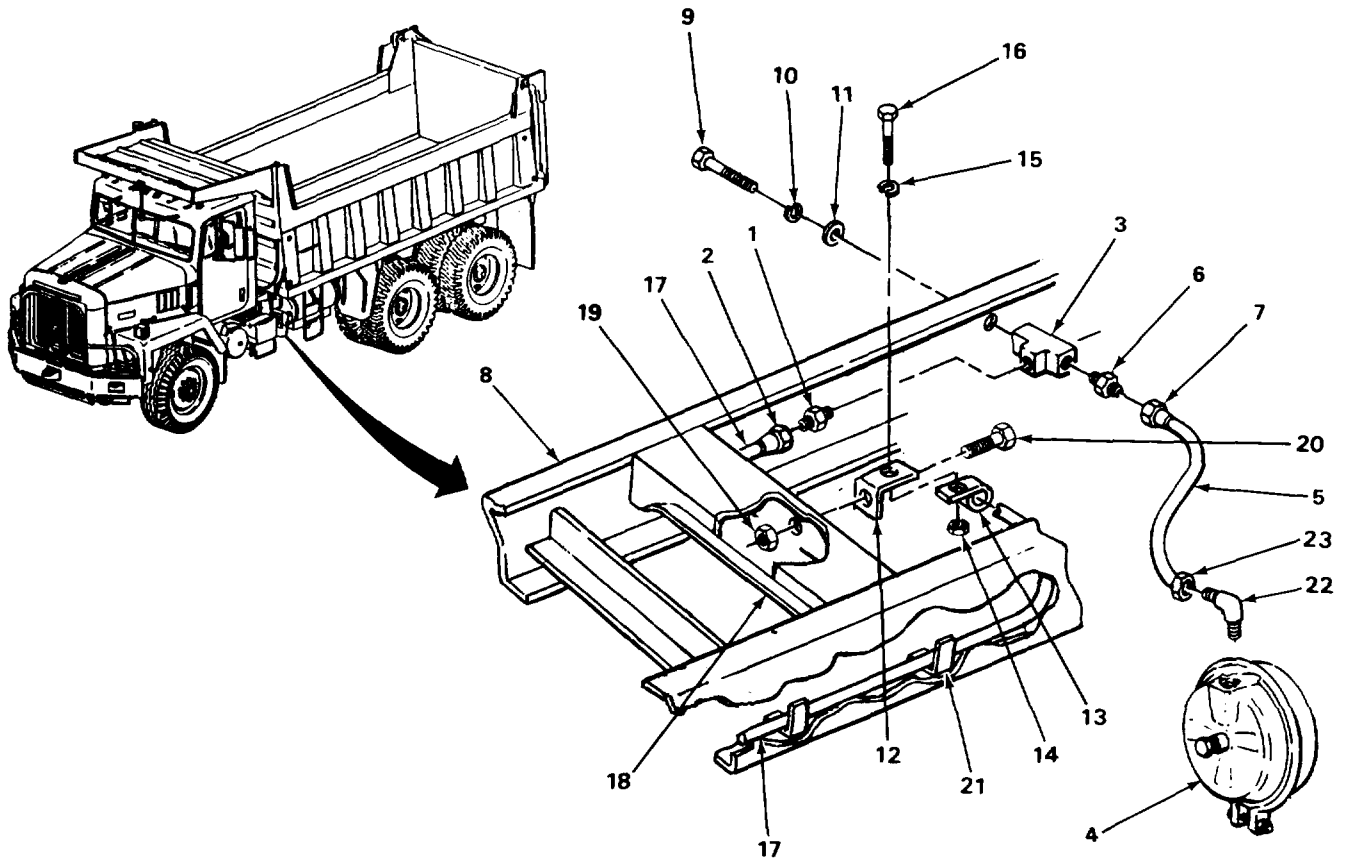
POWER DIVIDER HOSES, TUBES, AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS	
REMOVAL - CONTINUED			
9	Adapter (1)	Line nut (2)	Using 9/16-inch open-end wrench, unscrew, and take off.
10	Drop elbow (3)	Adapter (1)	Using 9/16-inch open-end wrench, unscrew, and take off.
11	Drop elbow (3) to power divider (4)	Hose (5)	Tag.
12	Adapter (6)	Line nut (7)	Using 9/16-inch open-end wrench, unscrew, and take off.
13	Drop elbow (3)	Adapter (6)	Using 9/16-inch open-end wrench, unscrew, and take off.
14	Frame (8)	Screw (9), lockwasher (10), and washer (11)	a Using 7/16-inch box-end wrench, unscrew, and take off. b. Get rid of lockwasher.
15	Drop elbow (3)	Take off.	
16	Two extension clips wrenches, (12)	Two clamps (13), nuts (14), lockwashers (15), and screws (16)	a Using two 7/16-inch box-end unscrew, and take off. b Get rid of lockwashers.
17	Tube (17)	Two clamps (13)	Take off.
18	Frame crossmember (18)	Two extension clips (12), nuts (19), and screws (20)	Using two 3/4-inch box-end wrenches, unscrew, take off.
19	Four clamps (21)	Tube (17)	Take off.
20	Elbow (22)	Line nut (23)	Using 9/16-inch open-end wrench, unscrew, and takeoff.
21	Hose (5)	Take off.	
22	Power divider (4)	Elbow (22)	Using 9/16-inch open-end wrench, unscrew, and take off.

Change 1 2-946.4

POWER DIVIDER HOSES, TUBES, AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts go to General Maintenance Instructions (page 2-424).

For more information on how to inspect parts,

- 23
- 24
- 25

- Hose (5) and tube (17)
- All threaded parts
- All metal parts

- Look for cracks, breaks, and wear.
- Look for damaged threads or rounded heads.
- Look for cracks and breaks.

TA702133

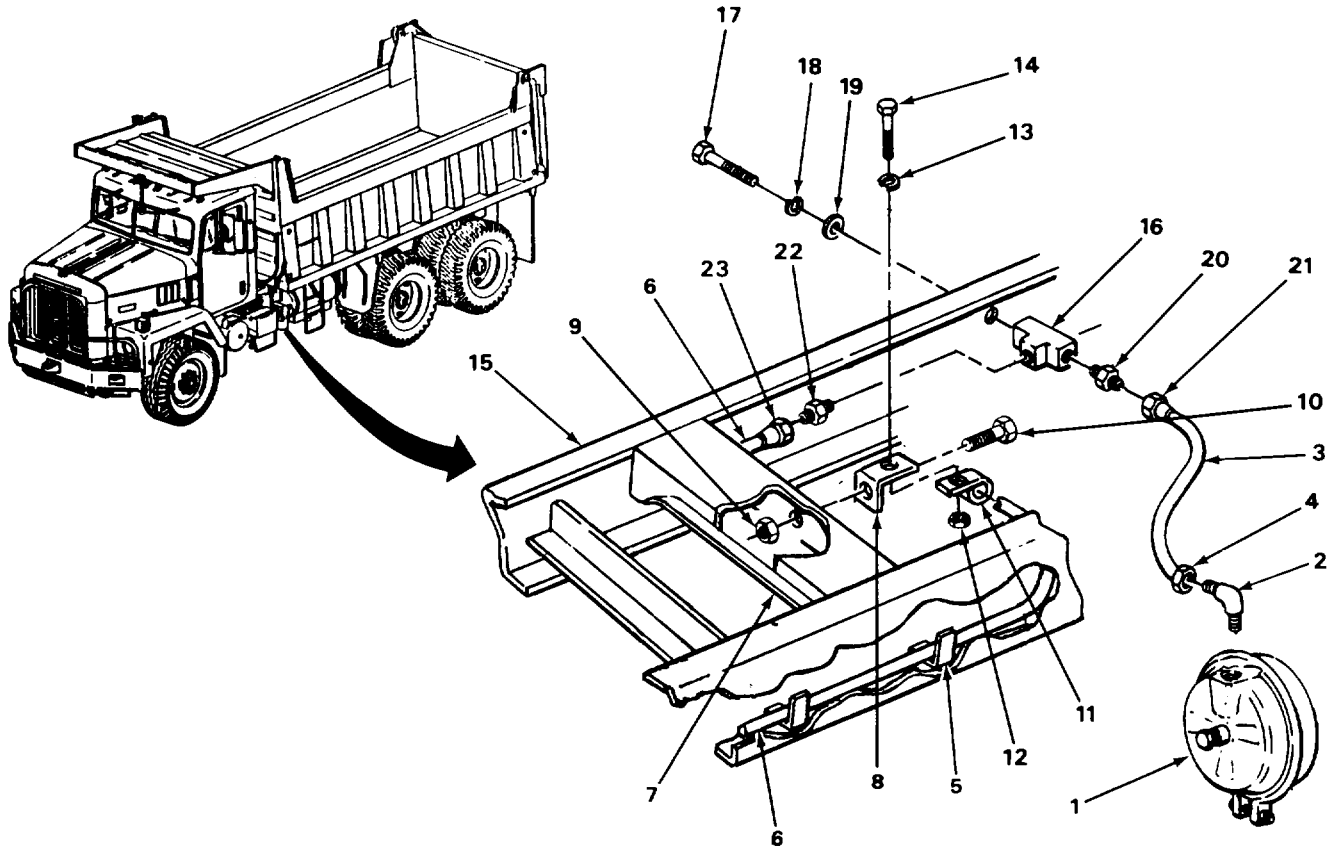
Change 1 2-946.5

POWER DIVIDER HOSES, TUBES, AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS	
INSTALLATION			
26	Power divider (1)	Elbow (2)	Screw on and tighten using 9/16-inch open-end wrench.
27	Elbow (2)	Hose (3)	Put in place.
28		Line nut (4)	Screw on and tighten using 9/16-inch open-end wrench.
29	Four clamps (5)	Tube (6)	Put on.
30	Frame crossmember (7)	Two extension clips (8), nuts (9), and screws (10)	Screw on and tighten using two 3/4-inch box-end wrenches.
31	Tube (6)	Two clamps (11)	Put on.
32	Two extension clips (8)	Two clamps (11), nuts (12), new lockwashers (13), and screws (14)	Screw on and tighten using two 7/16-inch box-end wrenches.
33	Frame (15)	Drop elbow (16)	Put in place.
34		Screw (17), new lockwasher (18), and washer (19)	Screw on and tighten using 7/16-inch box-end wrench.
35	Drop elbow (16)	Adapter (20)	Screw on and tighten using 9/16-inch open-end wrench.
36	Adapter (20)	Line nut (21)	a Screw on and tighten using 9/16-inch open-end wrench. b Get rid of tags.
37	Drop elbow (16)	Adapter (22)	Screw on and tighten using 9/16-inch open-end wrench.
38	Adapter (22)	Line nut (23)	Screw on and tighten using 9/16-inch open-end wrench.

POWER DIVIDER HOSES, TUBES, AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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TA702134

Change 1 2-946.7

POWER DIVIDER HOSES, TUBES, AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
39 Cab floor (1)	Nut (2), washer (3), cab floor adapter (4), and new lockwasher (5)	Screw on and tighten using 1-inch open-end wrench.
40 Cab floor adapter (4)	Elbow (6)	Screw on and tighten using 9/16-inch open-end wrench.
41 Elbow (6)	Line nut (7) and tube (8)	Screw on and tighten using 9/16-inch open-end wrench.
42 Cab floor adapter (4)	Line nut (9), tube (10), and elbow (11)	a Put tube in place. b Screw on and tighten using 9/16-inch open-end wrench.
43 Power divider control valve (12)	Elbow (13) wrench.	Screw on and tighten using 9/16-inch open-end wrench.
44 Elbow (13)	Line nut (14)	a Screw on and tighten using 9/16-inch open-end wrench. b Get rid of tags.

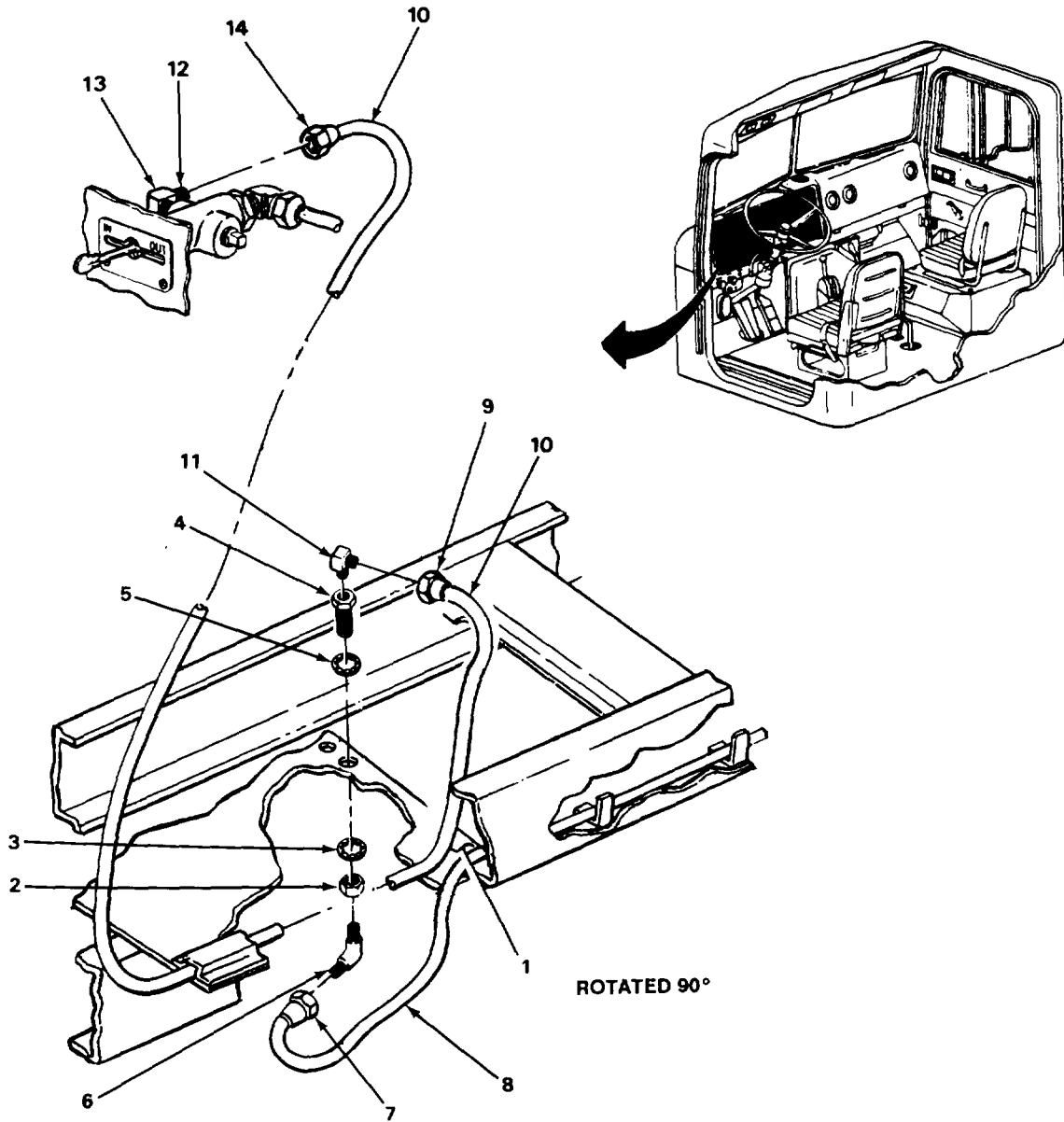
NOTE

FOLLOW-ON MAINTENANCE:

- 1 Close upper center instrument panel (page 2-439).
- 2 Close lower center instrument panel (page 2-438).

POWER DIVIDER HOSES, TUBES, AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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TASK ENDS HERE

TA702135

Change 1 2-946.9/(2-946.10 blank)

Section XIV. BRAKE SYSTEM MAINTENANCE

	Page		Page
Airbrake Cylinder Control Valve	2-1034.1	Front Brakes	2-947
Airbrake System Draining.....	2-1034	Front Brake Limiting and Quick Release Valve	2-1084.1
Air Compressor Governor to Air Dryer Lines and Fittings.....	2-1040	Front Brake Limiting and Quick Release Valve to Brake Treadle Valve Hose.....	2-1084
Air Compressor Governor to Wet Air Reservoir Lines and Fittings.....	2-1046	Front Brake Limiting Control Valve Hoses and Fittings	2-1159
Air Compressor to Air Dryer Hose and Lines.....	2-1035	Front Rear Quick Release Valve	2-1088.1
Air Dryer	2-1002	Front Rear Quick Release Valve to Parking Airbrake Chamber Hoses	2-1088.3
Air Dryer Cartridge.....	2-1014	Front Rear T-Fitting.....	2-1093.0
Alcohol Evaporator	2-995	Front Rear T-Fitting to Service Airbrake Chamber Hoses.....	2-1093.1
Brake Pedal.....	2-1021	Front Relay Valve.....	2-1098.1
Brake Treadle Valve to Double Check Valve T-Fitting Hose.....	2-1062	Front Relay Valve T-Fitting to Rear Relay Valve Hose.....	2-1105
Brake Treadle Valve and Right Manifold Hoses.....	2-1052	Front Relay Valve to Front Rear T-Fitting Hose.....	2-1099
Brake Treadle Valve to T-Mani- fold Hoses.....	2-1067	Front Relay Valve to Rear Relay Valve Hose.....	2-1101
Cab Floor Through Connector to Double Check Valve Hose.....	2-1108	Left Front Wheel to Front Brake Limiting and Quick Release Valve Hoses	2-1115
Chassis 90-Degree Elbow	2-1151.0	Parking Brake Control Valve.....	2-1024.1
Chassis T-Fitting	2-1151.2	Parking Brake Lines	2-1025
Chassis T-Fitting to Chassis 90-Degree Elbow Hose	2-1151.3	Rear Brakes	2-955
Chassis T-Fitting to Double Check Valve Hose	2-1143	Rear Rear Quick Release Valve	2-1130.1
Chassis T-Fitting to Front Rear Quick Release Valve Hose.....	2-1146	Rear Rear Quick Release Valve to Parking Airbrake Chamber Hoses	2-1131
Chassis 90-Degree Elbow to Rear Rear Quick Release Valve Hose	2-1157	Rear Rear Quick Release Valve to Service Airbrake Chamber Hoses	2-1136
Double Check Valve	2-1148.1	Rear Relay Valve	2-1140.1
Double Check Valve T-Fitting to Front Relay Valve T-Fitting Hose	2-1149	Rear Relay Valve to Rear Rear Quick Release Valve Hose	2-1140.3
Double Check Valve to Double Check Valve T-Fitting Hose	2-1071	Right Front Wheel to Front Brake Limiting and Quick Release Valve Hoses	2-1122
Dry Air Reservoir	2-975	T-Manifold	2-1077.0
Dry Air Reservoir to Front Relay Valve Hose	2-1080	Wet Air Reservoir	2-986
Dry Air Reservoir to T-Manifold Hoses	2-1074	Wet Air Reservoir to Air Dryer Hose.....	2-1154
Dry Air Reservoir to Wet Air Reservoir Hoses	2-1077.2		

FRONT BRAKES

This task covers:

- | | |
|---------------------------------------|-----------------------------|
| a Removal (page 2-948) | d Installation (page 2-952) |
| b Cleaning (page 2-950) | e Adjustment (page 2-954) |
| c Inspection/Replacement (page 2-950) | |
-

INITIAL SETUP

Tools

- Brush, cleaning
- Gage, depth, tire tread
- Gloves, safety
- Goggles, safety
- Mask, filter
- Pliers, repair, brake
- Screwdriver, flat-tip, 3/8-inch
- Tool, adjusting, brake
- Vacuum, industrial-type

Personnel Required

One

Equipment Condition

Front wheel removed (page 2-1168).
 Front hub and brakedrum assembly removed (page 2-1175).

Materials/Parts

- Grease, GAA (item 10, appendix C)
- Rags, wiping (item 15, appendix C)
- Solvent, drycleaning (item 19, appendix C)

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

REMOVAL

WARNING

Parts of the service brake assembly will be coated with asbestos dust. Breathing this dust may be hazardous to your health. Use a filter mask approved for use against asbestos dust. Never use compressed air or dry brush to clean these assemblies. Dust shall be removed using an industrial-type vacuum cleaner with a high-efficiency filter system.

NOTE

Steps given are typical for right side and left side front brakes.

1 Dust shield (1)	Two brakeshoes (2) and brake spider (3)	Using industrial type vacuum, clean asbestos dust and dirt.
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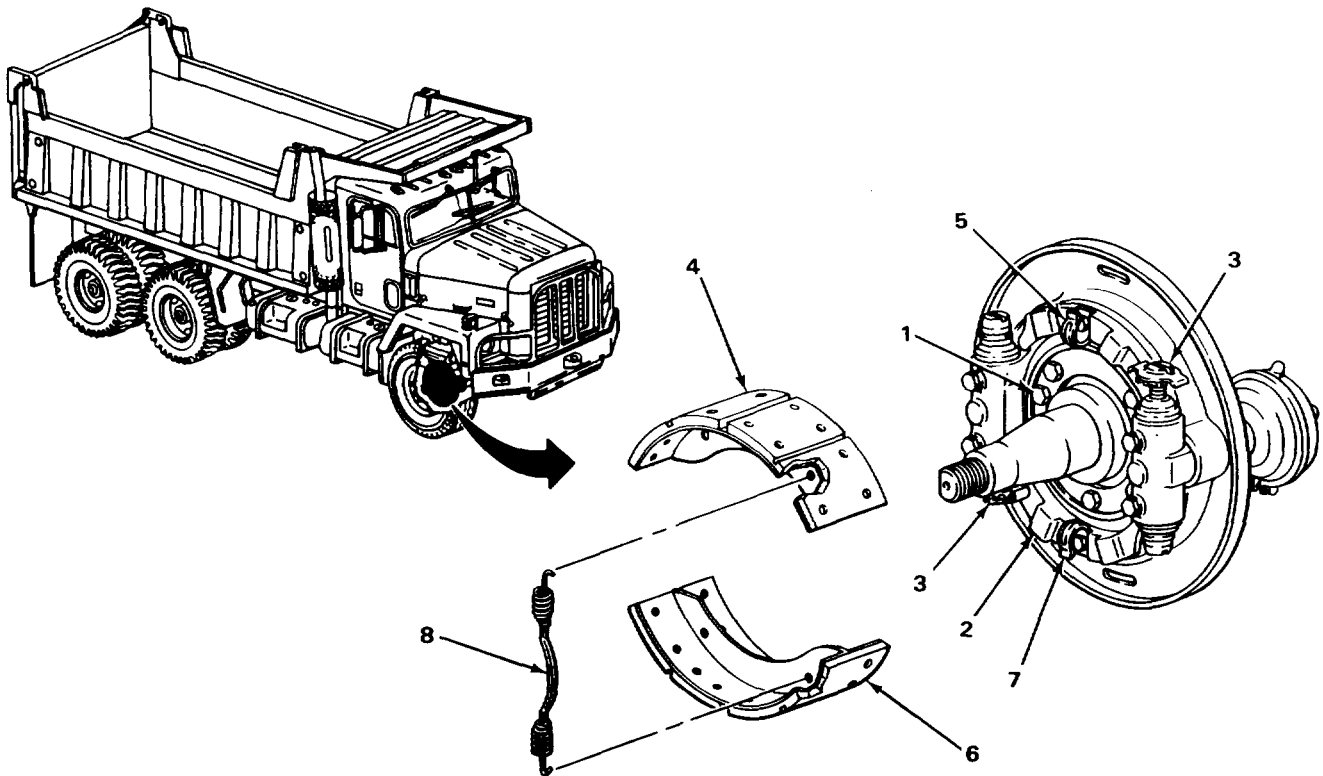
FRONT BRAKES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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WARNING

Brake springs under tension can injure or kill Use extreme care to prevent injury Safety goggles must be worn.

2	Two brakeshoes (2)	Two brake springs (4)	Using brake repair pliers, take off.
3	Brake spider (3)	Two brakeshoes (2)	Take off.



TA244299

FRONT BRAKES - CONTINUED

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

CLEANING

WARNING

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 1000F (380C) and for type #2 is 138°F (590C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

Parts of the service brake assembly will be coated with asbestos dust. Breathing this dust may be hazardous to your health. Use a filter mask approved for use against asbestos dust. Never use compressed air or dry brush to clean these assemblies. Dust shall be removed using an industrial-type vacuum cleaner with a high-efficiency filter system.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

4	Dust shield (1) and brake spider (2)	<ul style="list-style-type: none"> a Clean using drycleaning solvent and cleaning brush. b Wipe clean using wiping rag.
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INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

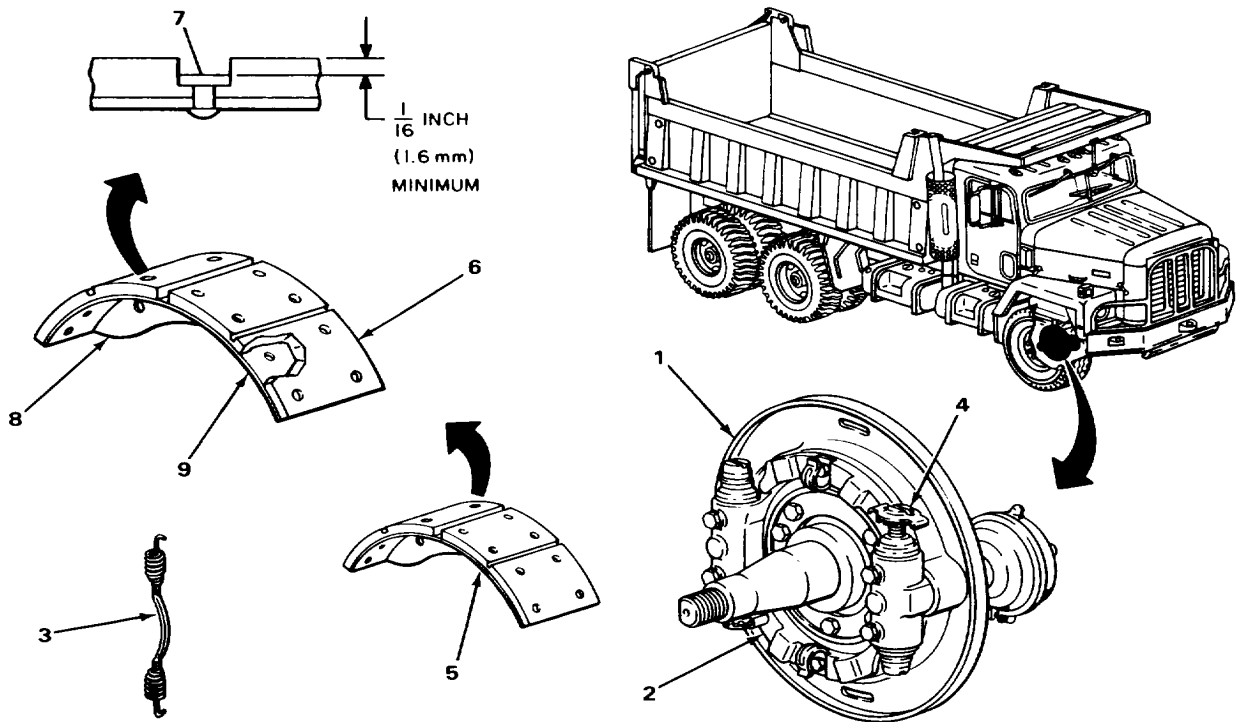
For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

Steps given are typical for both brakeshoes.

5	Two brake springs (3)	<ul style="list-style-type: none"> a Look for cracked, broken, or stretched coils. b Look for broken or distorted ends.
---	--------------------------	---

FRONT BRAKES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
6	Two adjusting screw rings (4)	Look for missing or broken teeth or binding. If damaged, notify higher category of maintenance.
7	Two brakeshoes (5)	<ul style="list-style-type: none"> a Look for oil soaked, cracked, burned, or chipped lining (6). b Using tire tread depth gage, check that lining (6) thickness is more than 1/16-inch (1.6 mm) above rivets (7). c Look for loose, broken, or missing rivets (7). d Look for twisted or cracked web (8). e Look for twisted or cracked table (9). f Look for cracked welds between web (8) and table (9).



TA244300

FRONT BRAKES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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INSTALLATION

NOTE

Steps given are typical for right and left front brakes.

8	Brake spider (1)	Four brakeshoe rest pads (2)	Coat with thin layer of grease. Wipe off excess.
9		Two adjusting screw rings (3)	Turn until fully closed. Do not tighten.

CAUTION

Make sure hands are free of grease when handling brakeshoes to prevent grease from getting on linings.

NOTE

Position brakeshoes on brake spider with DRUM ROTATION stamping facing out and arrows facing forward direction of wheels.

10	Brake spider (1)	Upper brakeshoe (4)	Position behind upper holddown clip (5) and into slots of both adjusting screw rings (3).
11		Lower brakeshoe (6)	Position behind lower holddown clip (7) and up into slots of both adjusting screw rings (3).

WARNING

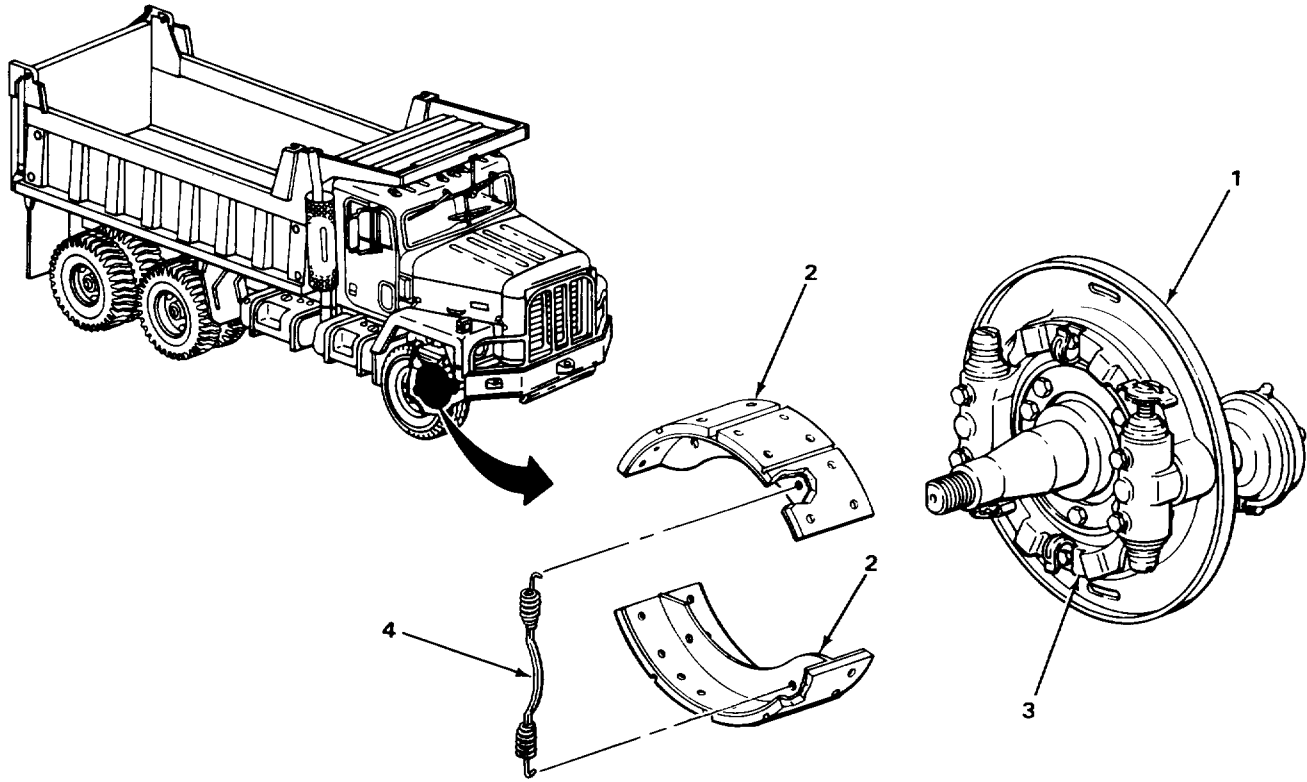
Brake springs under tension can injure or kill Use extreme care to prevent injury Safety goggles must be worn.

NOTE

Hold upper and lower brakeshoes together when performing next step.

FRONT BRAKES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
12 Upper brakeshoe (4) and lower brake- shoe (6)	Two brake springs (8)	a Hook into holes in upper brakeshoe. b Connect to holes in lower brakeshoe using brake repair pliers.



TA244301

FRONT BRAKES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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INSTALLATION - CONTINUED

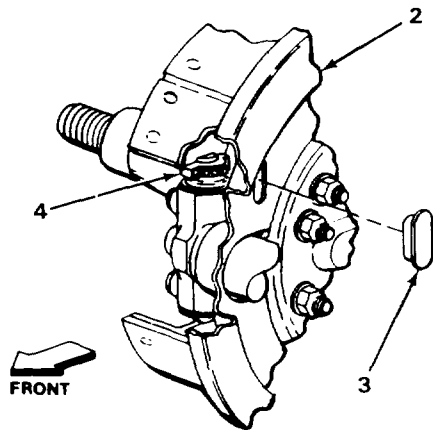
13	Front hub and brake-drum assembly (1)	Install (page 2-1175).
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ADJUSTMENT

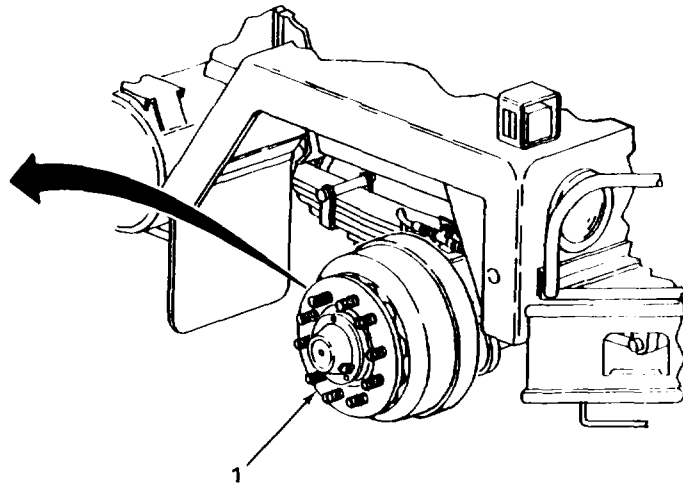
NOTE

Steps given are typical for adjusting upper and lower brakeshoes on right and left front wheels.

14	Dust shield (2)	Cover (3)	Pry out using 3/8-inch flat-tip screwdriver.
15	Adjusting screw ring (4)		While slowly turning front hub, adjust each adjusting screw ring until a heavy drag is felt, then back off each adjusting screw ring to allow a slight drag using brake adjusting tool.
16		Cover (3)	Push into place.



TYPICAL 4 PLACES



NOTE

FOLLOW-ON MAINTENANCE: Install front wheel (page 2-1168).

TA244302
TASK ENDS HERE

REAR BRAKES

This task covers:

- a. Removal (page 2-956)
 - b. Cleaning (page 2-961)
 - c. Inspection/Replacement (page 2-963)
 - d. Installation (page 2-965)
 - e. Adjustment (page 2-973)
-

INITIAL SETUP**Tools**

Brush, cleaning
 Brush, wire
 Gage, depth, tire tread
 Gloves, safety
 Goggles, safety
 Hammer, ball-peen, 2-pound
 Hammer, plastic-face
 Handle, ratchet, 1/2-inch drive
 Mask, filter
 Pliers, brake repair
 Pliers, retaining ring
 Pliers, roundnose, 8-inch
 Press, anchor pin
 Screwdriver, flat-tip, 1/8-inch
 Socket, 3/4-inch, 112-inch drive
 Socket, 15/16-inch, 1/2-inch drive
 Vacuum, industrial-type
 Wrench, box-end, 9/16-inch
 Wrench, box-end, 15/16-inch
 Wrench, open-end, 15/16-inch

Materials/Parts

Compound, antiseizing (item 4, appendix C)
 Cotter pin, clevis
 Grease, GAA (item 10, appendix C)

Materials/Parts - Continued

Locknut, airbrake chamber (two required)
 Locknut, brake spider (eight required)
 Lockwasher, brake spider (eight required)
 Lockwasher, camshaft bracket (four required)
 Packing, anchor pin (four required)
 Packing, brake camshaft
 Rags, wiping (item 15, appendix C)
 Ring, slack adjuster (one required)
 Ring, anchor pin (four required)
 Screw, dust shield (six required)
 Solvent, drycleaning (item 19, appendix C)

Personnel Required

Two

Equipment Condition

Rear hub and brakedrum assembly removed (page 2-1188).

References

TM 5-3805-254-10 (Operator's Manual)

REAR BRAKES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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REMOVAL

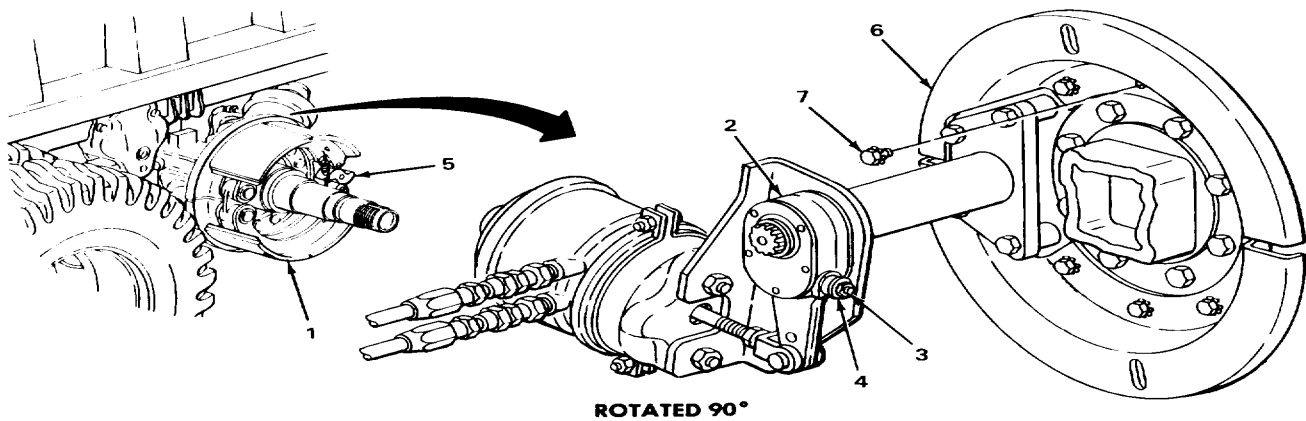
WARNING

Parts of the service brake assembly will be coated with asbestos dust. Breathing this dust may be hazardous to your health. Use a filter mask approved for use against asbestos dust. Never use compressed air or dry brush to clean these assemblies. Dust shall be removed using an industrial-type vacuum cleaner with a high-efficiency filter system.

NOTE

Steps given are typical for right and left front rear and rear rear brakes.

1	Brake assembly (1)	Using industrial-type vacuum, clean off asbestos dust.
2	Slack adjuster (2)	Adjusting screw (3) and locking sleeve (4)
		Using 9/16-inch box-end wrench, push in on locking sleeve and turn until brake cam-shaft S-head (5) is horizontal and slack adjuster is loose.
3	Upper dust shield (6)	Three screws (7)
		screw and take out.
		a Using 9/16-inch box-end wrench, un-
		b Get rid of.
4	Upper dust shield (6)	Take off.



TA244657

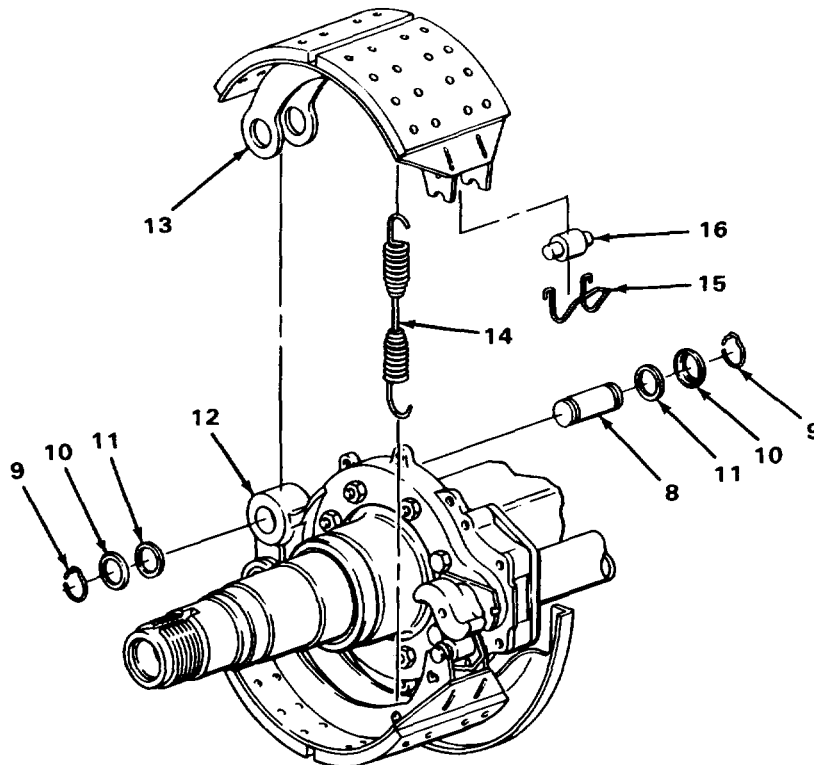
REAR BRAKES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
5 Upper anchor pin (8)	Two rings (9), two packing retainers (10), and two packings (11)	a Using 1/8-inch flat-tip screwdriver, pry off rings. b Take off packing retainers and packings. c Get rid of rings and packings.
6 Brake spider (12)	Upper anchor pin (8)	Using anchor pin press, press out.

WARNING

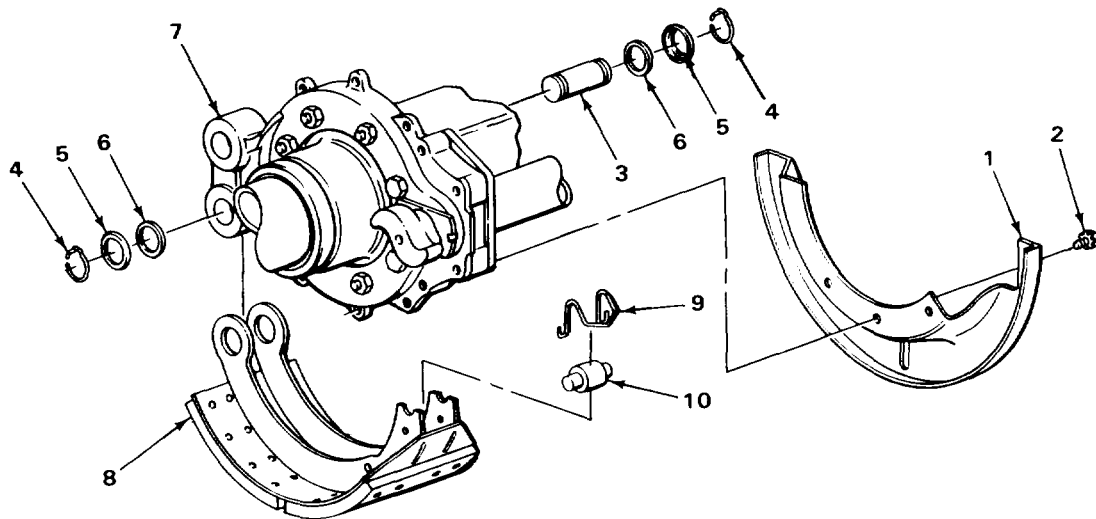
Brake springs under tension can injure or kill Use extreme care to prevent injury Safety goggles must be worn.

7	Upper brakeshoe (13) and brake spring (14)	a Lift upper brakeshoe from anchor pin side and twist forward to free brake spring. b Take off upper brakeshoe and brake spring.
8	Upper brakeshoe (13)	Clip (15) and brake roller (16) Take off.



REAR BRAKES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED		
9 Lower dust shield (1)	Three screws (2)	a Using 9/16-inch box-end wrench, unscrew and take out. b Get rid of.
10	Lower dust shield (1)	Take off.
11 Lower anchor pin (3)	Two rings (4), two packing retainers (5), and two packings (6)	a Using 1/8-inch flat-tip screwdriver, pry off rings. b Take off packing retainers and packings. c Get rid of rings and packings.
12 Brake spider (7)	Lower anchor pin (3) and lower brake-shoe (8)	a Using anchor pin press, press out anchor pin. b Take off lower brakeshoe.
13 Lower brakeshoe (8)	Clip (9) and brake roller (10)	Take off.



TA244304

REAR BRAKES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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NOTE

If brakeshoes only are being replaced, go to cleaning (page 2-961).

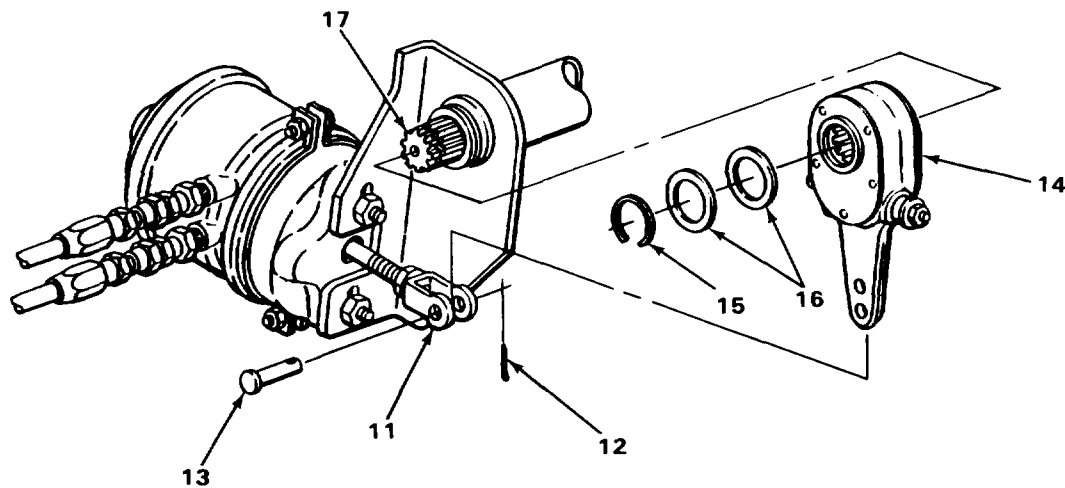
If slack adjuster is being replaced, perform steps 14, 15, and 16.

If brake camshaft is being replaced, perform steps 14 thru 19.

If camshaft bracket is being replaced, perform steps 14 thru 23.

If brake spider is being replaced, perform steps 14 thru 26.

14	Clevis (11)	Cotter pin (12) and yoke pin (13)	<ul style="list-style-type: none"> a Using 8-inch roundnose pliers, take out cotter pin. b Get rid of cotter pin. c Take out yoke pin.
15	Slack adjuster (14)	Ring (15) and two flat washers (16)	<ul style="list-style-type: none"> a Using retaining ring pliers, take off ring. b Get rid of ring. c Take off flat washers.
16	Brake camshaft (17)	Slack adjuster (14)	Using 2-pound ball-peen hammer, tap gently and pull off.



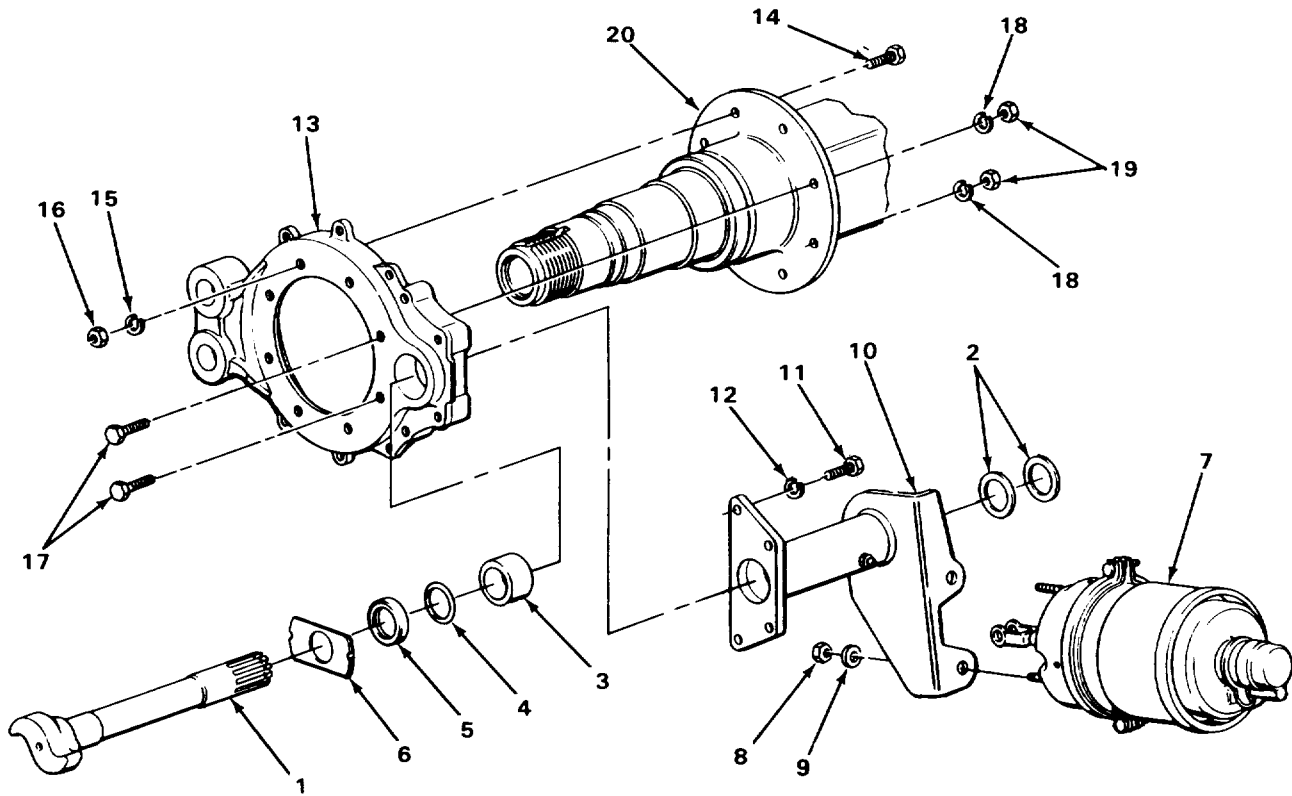
TA244305

REAR BRAKES - CONTINUED

LOCATION	ITEM	ACTION REMARKS	
REMOVAL - CONTINUED			
17	Brake camshaft (1)	Two flat washers (2)	Take off.
18		Brake camshaft (1)	Pull out.
19		Sleeve bushing (3), packing (4), packing retainer (5), and plate (6)	a Slide off. b Get rid of packing.
20	Airbrake chamber (7)	Two locknuts (8) and two flat washers (9)	a Using 15/16-inch box-end wrench, un- screw and take off. b Get rid of locknuts.
<u>CAUTION</u>			
Do not allow airbrake chamber to hang by airbrake hoses Damage to airbrake hoses could result.			
21	Camshaft bracket (10)	Airbrake chamber (7)	Lift off and set aside.
22		Four screws (11) and four lockwashers (12)	a Using 3/4-inch 1/2-inch drive socket and ratchet handle, unscrew and take out. b Get rid of lockwashers.
23		Camshaft bracket (10)	Take off.
24	Brake spider (13)	Six screws (14), six lockwashers (15), and six locknuts (16)	a Using 15/16-inch, 1/2-inch drive socket, ratchet handle, and 15/16-inch box-end wrench, unscrew and take off. b Get rid of lockwashers and locknuts.
25		Two screws (17), two lockwashers (18), and two locknuts (19)	a Using 15/16-inch, 1/2-inch drive socket, ratchet handle, and 15/16-inch box-end wrench, unscrew and take off. b Get rid of lockwashers and locknuts.

REAR BRAKES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
26 Rear axle housing (20)	Brake spider (13)	Take off.



CLEANING

WARNING

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 100°F (38°C) and for type #2 is 138°F (59°C). If you become dizzy while using cleaning solvent, get fresh air immediately, TA244306 and get medical aid. If contact with eyes is made, flush your eyes with water and get 2-961 medical aid immediately.

TA244306

REAR BRAKES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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CLEANING - CONTINUED

WARNING

Parts of the service brake assembly will be coated with asbestos dust. Breathing this dust may be hazardous to your health. Use a filter mask approved for use against asbestos dust. Never use compressed air or dry brush to clean these assemblies. Dust shall be removed using an industrial-type vacuum cleaner with a high-efficiency filter system.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

27	Upper dust shield (1), lower dust shield (2), and brake spider (3)	a Clean using drycleaning solvent and cleaning brush. b Wipe clean using wiping rag.
28	Brake camshaft (4) cleaning brush.	a Clean using drycleaning solvent and b Wipe clean using wiping rag.

WARNING

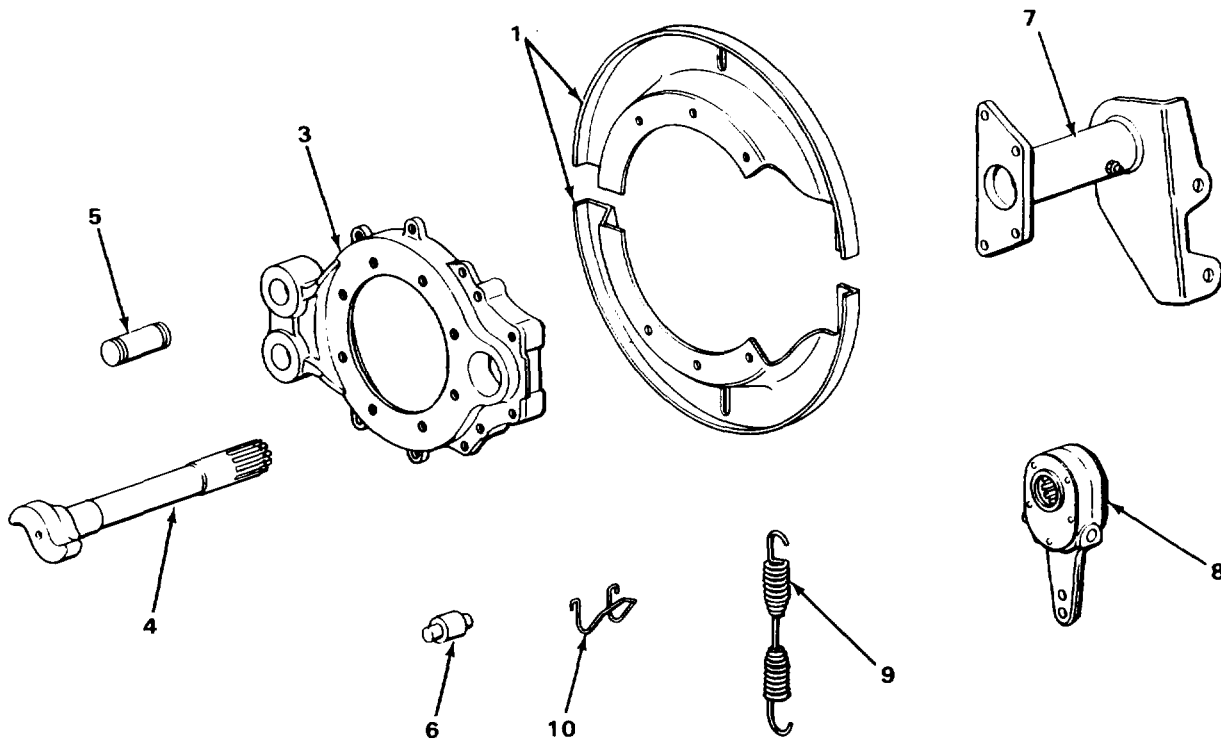
Safety goggles must be worn when using wire brush. Flying rust and metal particles can cause eye injury.

29	Upper and lower anchor pins (5) and brake rollers (6) and wiping rag.	a Clean off rust and scale using wire brush. b Wipe clean using drycleaning solvent
30	Camshaft bracket (7)	a Clean inside and outside using dry-cleaning solvent and cleaning brush. b Wipe clean using wiping rag.
31	Slack adjuster (8)	a Clean spline and outside surfaces using drycleaning solvent and cleaning brush. b Wipe clean using wiping rag.

REAR BRAKES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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32	Brake spring (9), clip (10), and all screws	Clean using drycleaning solvent and wiping rag.
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INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

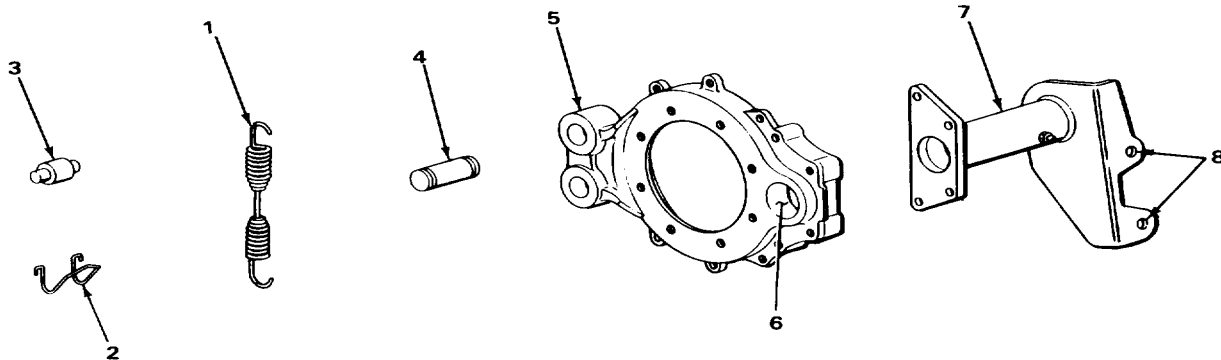
For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

Steps given are typical for both brakeshoes and their components.

TA244307

REAR BRAKES - CONTINUED

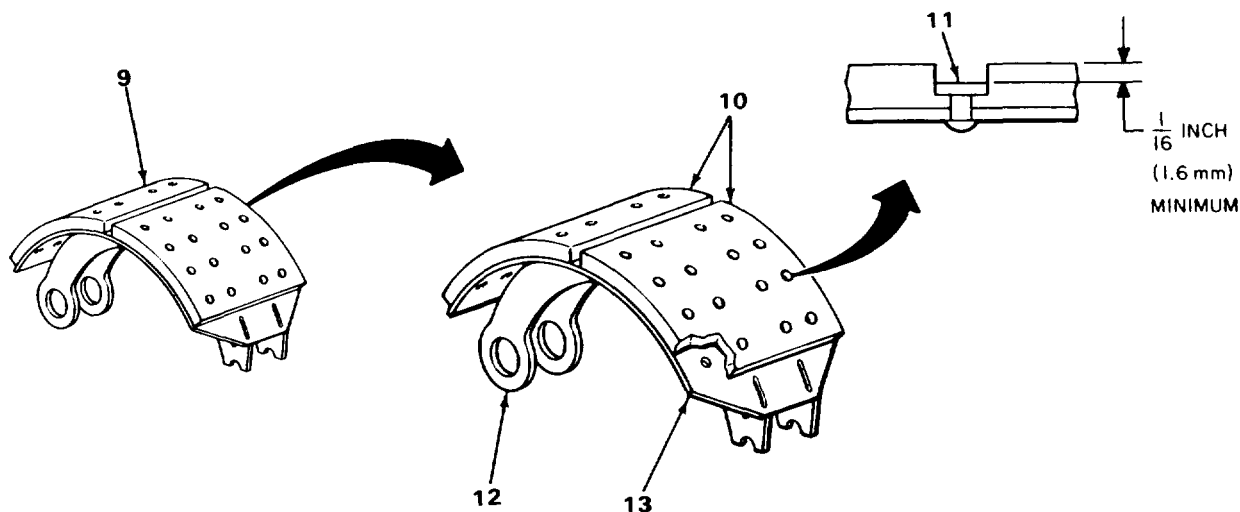
LOCATION	ITEM	ACTION REMARKS
INSPECTION/REPLACEMENT- CONTINUED		
32	Brake spring (1) and clip (2)	a Look for cracked, broken, or stretched coils or bends. b Look for broken or distorted ends.
33	Brake rollers (3)	Look for deep grooves or excessive wear.
34	Anchor pins (4)	a Look for damaged retaining ring groove. b Look for excessive rust or deep grooves. c Look for chips, burrs, or gouges.
35	Brake spider (5)	a Look for cracks near anchor pinholes. b Look for scored, oversized, or distorted anchor pinholes. c Look for scored or loose sleeve bushing (6). If sleeve bushing is scored or loose, refer to higher category of maintenance.
36	Camshaft bracket (7)	a Look for cracked or broken welds. b Look for cracked or broken screw tabs (8).
37	All threaded parts	Look for damaged threads or rounded heads.



TA244308

REAR BRAKES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
38.	Brakeshoe (9)	a. Look for oil soaked, cracked, burned, or chipped lining (10). b. Using tire tread depth gage, check that lining (10) thickness is more than 1/16-inch (1.6 mm) above rivets (11). c. Look for loose, broken, or missing rivets (11). d. Look for twisted or cracked web (12). e. Look for twisted or cracked table (13). f. Look for cracked or broken welds between web (12) and table (13).



INSTALLATION

NOTE

If brakeshoes only are being replaced, go to step 54.

If brake spider is being replaced, perform steps 39 thru 53.

If camshaft bracket is being replaced, perform steps 43 thru 53.

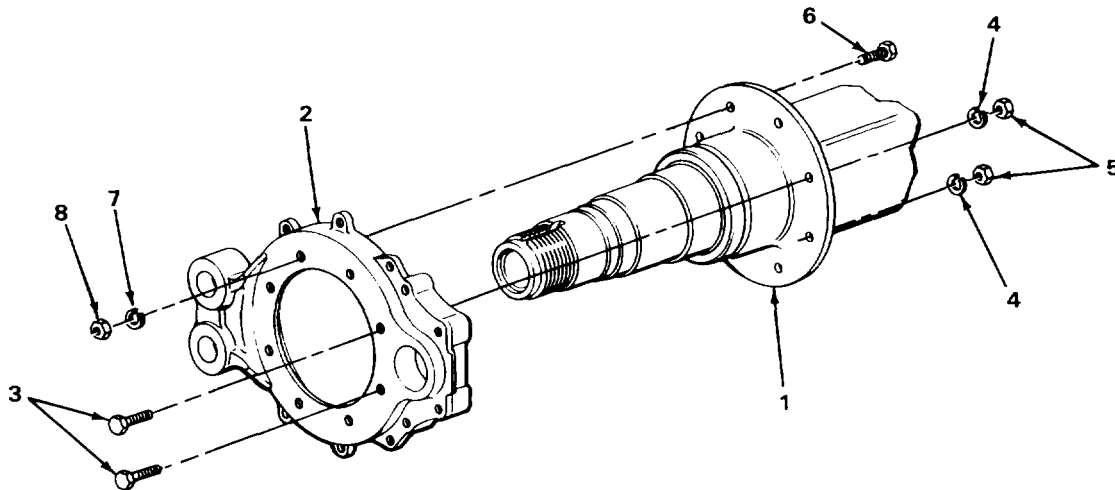
If brake camshaft is being replaced, perform steps 47 thru 53. TA244309

If slack adjuster is being replaced, perform steps 50 thru 53.

TA244309

REAR BRAKES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
39. Rear axle housing (1)	Brake spider (2)	Put in place and aline holes.
40. Brake spider (2)	Two screws (3), two new lockwashers (4), and two new locknuts (5)	Put in holes from front of brake spider. Do not tighten.
41.	Six screws (6), six new lockwashers (7), and six new locknuts (8)	Put in remaining six holes from rear of brake spider. Do not tighten.
42.	Two screws (3) and six screws (6)	Tighten on alternate sides using 15/16-inch, 1/2-inch drive socket, ratchet handle, and 15/16-inch box-end wrench.

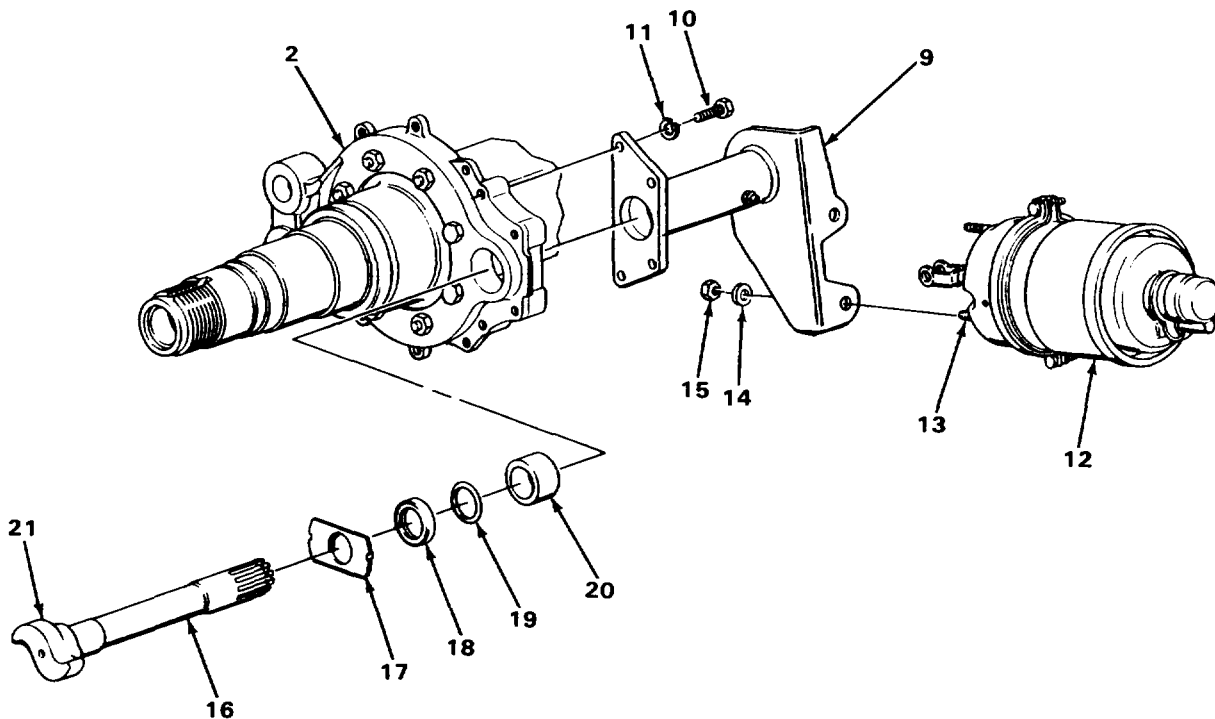


43. Brake spider (2)	Camshaft bracket (9)	Put in place and aline holes.
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TA24431 0

REAR BRAKES - CONTINUED

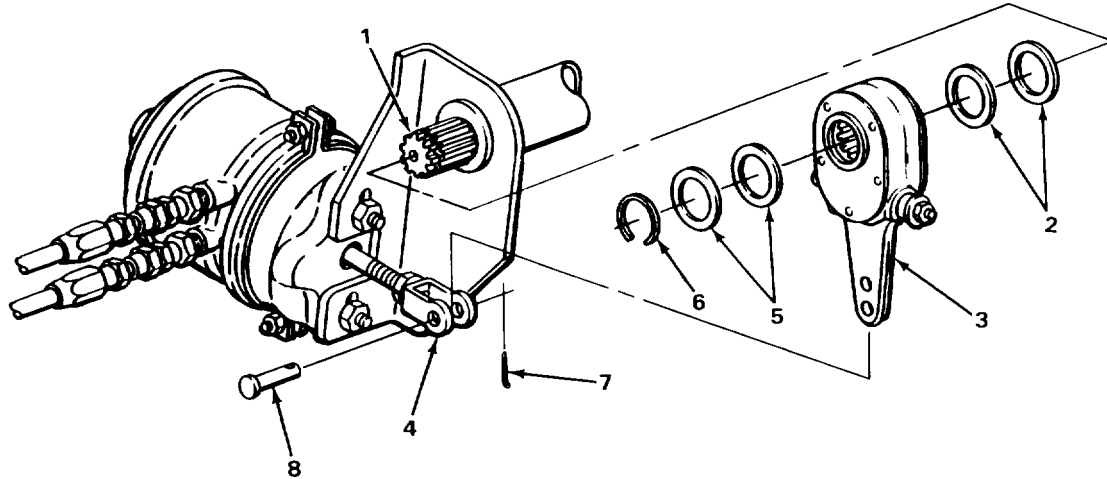
LOCATION	ITEM	ACTION REMARKS
44.	Four screws (10) and four new lockwashers (11)	Screw in and tighten using 3/4-inch, 112- inch drive socket and ratchet handle.
45. Camshaft bracket (9)	Airbrake chamber (12)	Aline two studs (13) with holes and push into place.
46. Two studs (13)	Two flat washers (14) and two new locknuts (15)	Screw on and tighten using 15116-inch box- end wrench.
47. Brake camshaft (16)	Plate (17), packing retainer (18), new	a. Put on. b. Coat shaft with GAA grease. packing (19), and sleeve bushing (20)
48. Camshaft bracket (9)	Brake camshaft (16)	Put in. Place brake camshaft S-head (21) in horizontal position shown.



TA244311

REAR BRAKES - CONTINUED

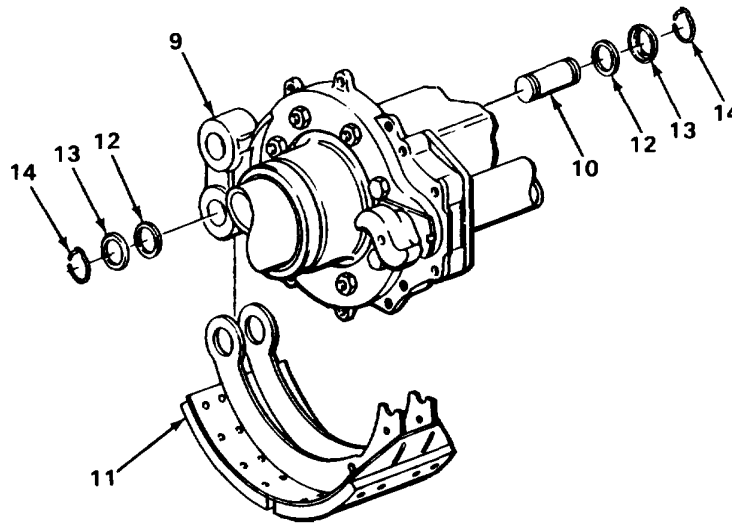
LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
49. Brake camshaft (1)	Two flat washers (2)	Put on.	
NOTE			
Make sure brake camshaft S-head is in horizontal position.			
50. Brake camshaft (1)	Slack adjuster (3)	a. Coat splines with antiseizing compound. b. Put on.	Position lower hole as close as possible to clevis (4).
51.	Two flat washers (5)	Put on.	
52.	New ring (6)	Put into groove using retaining ring pliers.	Make sure entire ring is in groove.
53. Slack adjuster (3)	Clevis (4), new cotter pin (7), and yoke pin (8)	a. Aline lower hole in slack adjuster with clevis. b. Put in yoke pin. c. Put cotter pin through yoke pin and bend ends enough to prevent falling out.	



TA244312

REAR BRAKES - CONTINUED

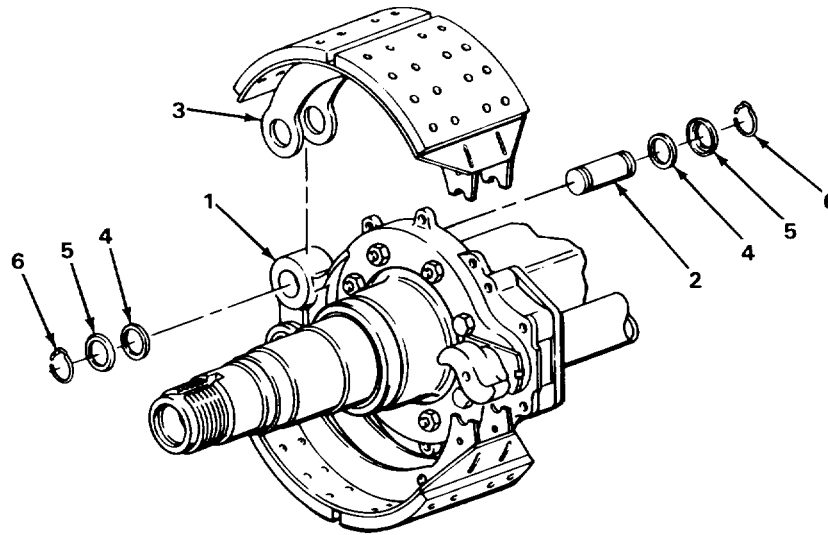
LOCATION	ITEM	ACTION REMARKS
54. Brake spider (9)	Lower anchor pin (10) and lower brakeshoe (11)	a. Coat lower anchor pin and brake spider bore with antiseizing compound. b. Place lower brakeshoe in position. c. Push lower anchor pin into place. If necessary, tap in using plastic-face hammer.
55. Lower anchor pin (10)	Two new packings (12) and two packing retainers (13)	Put on.
56.	Two new rings (14)	Put into groove. Make sure entire ring is in groove.



TA244313

REAR BRAKES - CONTINUED TM 5-3805-254-20-2

LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
57. Brake spider (1)	Upper anchor pin (2) and upper brake-shoe (3)	a. Coat upper anchor pin and brake spider bore with antiseizing compound. b. Place upper brakeshoe in position. c. Push upper anchor pin into place. If necessary, tap in using plastic-face hammer.
58. Upper anchor pin (2)	Two new packings (4) and two packing retainers (5)	Put on.
59.	Two new rings (6)	Put in groove using retaining ring pliers. Make sure rings are in grooves.

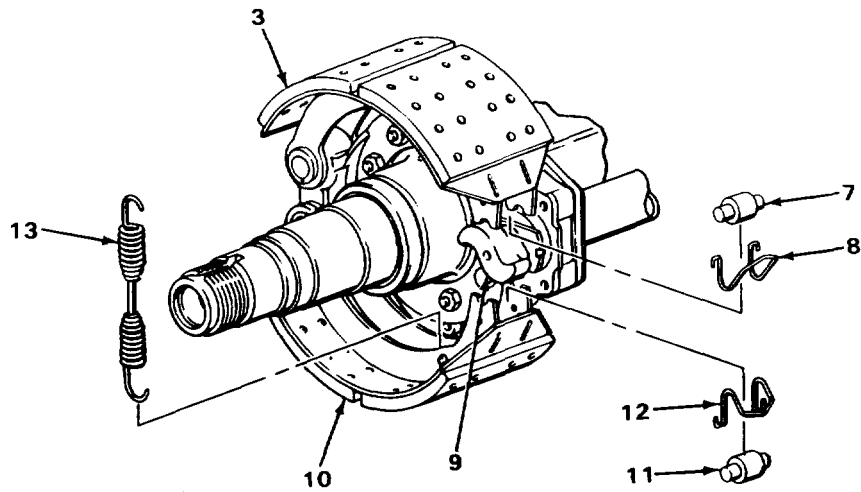


60. Upper brakeshoe (3)	Brake roller (7) and clip (8)	a. Coat brake roller and brake camshaft S-head (9) with a thin layer of GAA grease. b. Put brake roller in position. c. Position clip around brake roller and connect to upper brakeshoe.
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TA244314

REAR BRAKES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
61. Lower brakeshoe (10)	Brake roller (11)	a. Coat brake roller with a thin layer of GAA and clip (12)grease. b. Hold brake roller in place. c. Position clip around brake roller and connect to lower brakeshoe.
62. Upper brakeshoe (3) and lower brake-shoe (10)	Brake spring (13)	Hook onto upper brakeshoe and connect to lower brakeshoe using brake repair pliers.

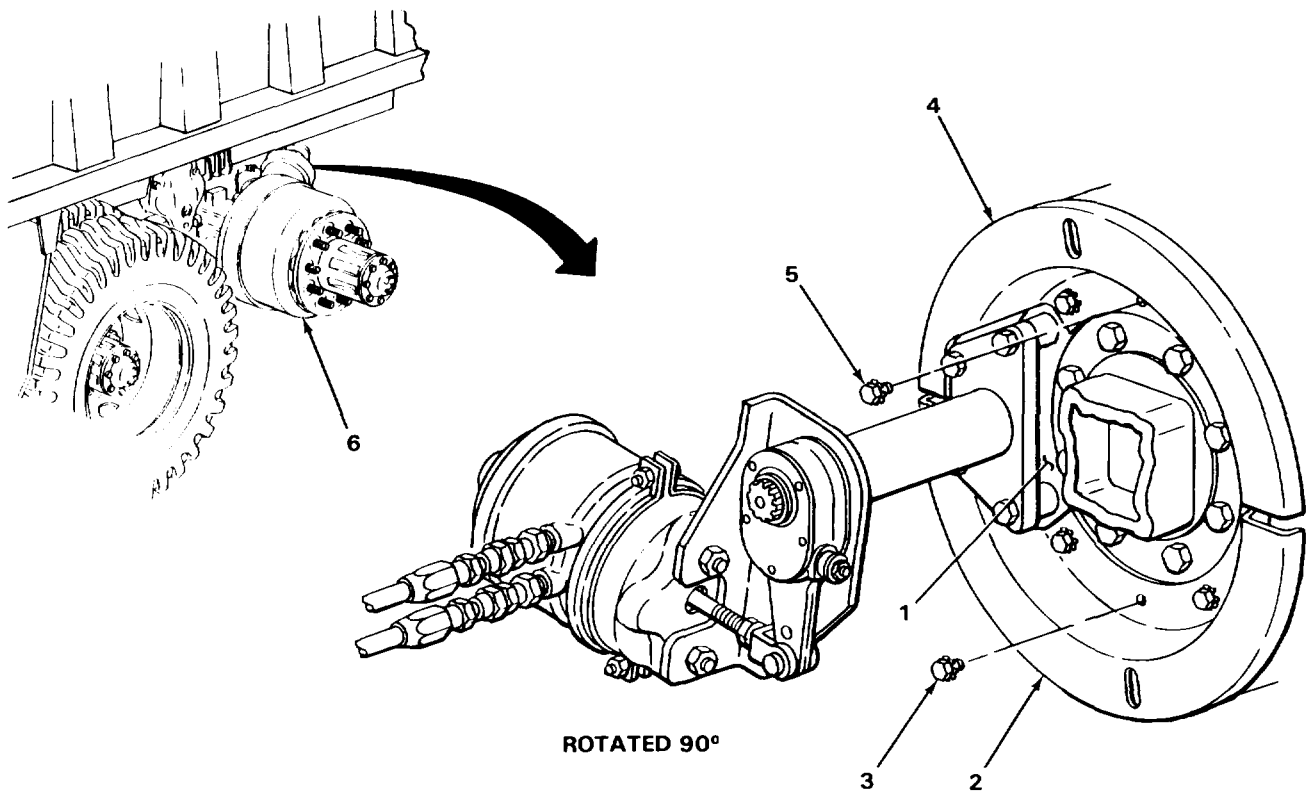


2-971

TA244315

REAR BRAKES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
63. Brake spider (1)	Lower dust shield (2)	Put in place and aline.	
64. Lower dust	Three new screws (3)	Screw in and tighten using 9/16-inch box-end wrench.	
65. Brake spider (1)	Upper dust shield (4)	Put in place and aline.	
66. Upper dust shield (4)	Three new screws (5)	Screw in and tighten using 9/16-inch box-end wrench.	
67.	Rear hub and brake-drum assembly (6)	Install (page 2-1188).	



TA244316

REAR BRAKES - CONTINUED

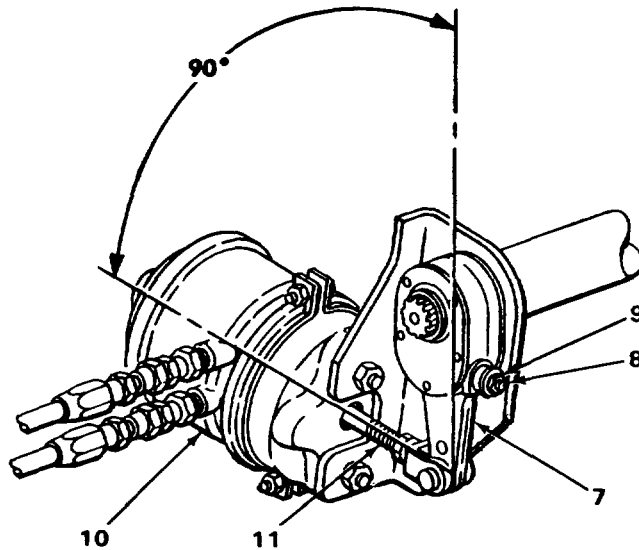
LOCATION	ITEM	ACTION REMARKS
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ADJUSTMENT

NOTE

Steps given are typical for right and left front rear and rear rear brakes.

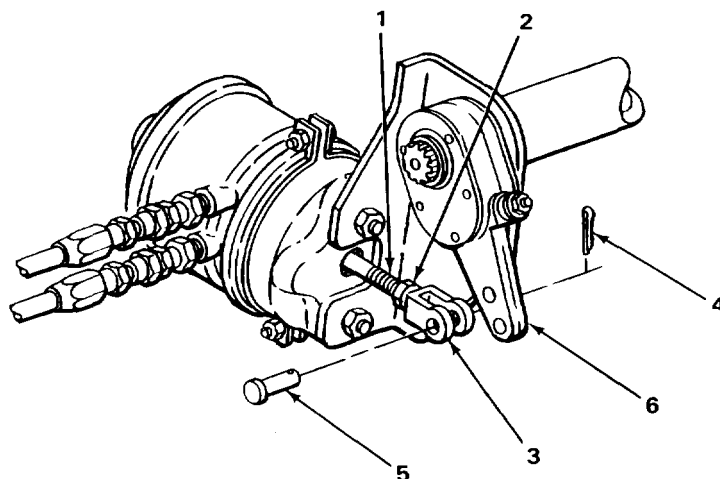
68. Slack adjuster (7)	Adjusting screw (8) and locking sleeve (9)	While slowly turning rear hub, push in locking sleeve and adjust until a heavy drag is felt, then back off to allow a slight drag using 9/16-inch box-end wrench.
69. Airbrake chamber (10)	Push rod (11) and slack adjuster (7)	<ol style="list-style-type: none"> a. Start engine to build up air pressure (TM 5-3805254-10). b. Have assistant hold down brake pedal. c. Check for 90-degree angle between push rod and slack adjuster. <p>See illustration. If angle is correct, shut down engine(TM 5-3805254-10) and task ends here. If angle is less than 90-degrees, have assistant release brake pedal and perform steps 70 thru 74.</p>



TA244317

REAR BRAKES - CONTINUED TM 5380-25420-2

LOCATION	ITEM	ACTION REMARKS
ADJUSTMENT - CONTINUED		
70. Push rod (1)	Nut (2) and clevis (3)	Using 15/16-inch open-end wrench, loosen and move nut away from clevis.
71. Clevis (3)	Cotter pin (4) and yoke pin (5)	a. Using 8-inch roundnose pliers, take out cotter pin. b. Take out yoke pin.
72. Push rod (1)	Clevis (3)	Turn to adjust to position needed.
73. Clevis (3)	Nut (2)	Turn toward clevis and tighten using 15/16-inch open-end wrench.
74. Slack adjuster (6)	Clevis (3), cotter pin (4), and yoke pin (5)	a. Aline lower hole in slack adjuster with clevis. b. Put in yoke pin. c. Put cotter pin through yoke pin. d. Bend back ends of cotter pin using 8-inch roundnose pliers. e. Perform step 69 again.



NOTE

FOLLOW-ON MAINTENANCE: Install rear hub and brakedrum assembly (page 1188).

TASK ENDS HERE

DRY AIR RESERVOIR

This task covers:

- | | |
|-----------------------------|--|
| a. Removal (page 2-976) | d. Inspection/Replacement (page 2-980) |
| b. Disassembly (page 2-978) | e. Assembly (page 2-982) |
| c. Cleaning (page 2-980) | f. Installation (page 2-984) |
-

INITIAL SETUP:**Tools**

Brush, wire
 Extension, 6-inch, 112-inch drive
 Flashlight
 Gloves, safety
 Goggles, safety
 Handle, ratchet, 1/2-inch drive
 Socket, deep, 9/16-inch, 112-inch drive
 Socket, square, 3/8-inch, 1/2-inch drive
 Wrench, box-end, 9/16-inch
 Wrench, open-end, 9/16-inch
 Wrench, open-end, 3/4-inch
 Wrench, open-end, 11/16-inch
 Wrench, open-end, 13/16-inch
 Wrench, open-end, 7/8-inch
 Wrench, open-end, 1-inch
 Wrench, open-end, 1 1/4-inch
 Wrench, open-end, 1 3/8-inch

Materials/Parts

Locknut, step (four required)
 Lockwasher, cable assembly (two required)
 Rags, wiping (item 15, appendix C)
 Solvent, drycleaning (item 19, appendix C)
 Tags, marker (item 21, appendix C)
 Tape, antiseizing (item 22, appendix C)

Personnel Required

Two

References

TM 43-0139 (Painting Instructions for Army Materiel)

Change 1 2-975

DRY AIR RESERVOIR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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REMOVAL

WARNING

Drain air from airbrake system before removing lines or fittings to avoid injury to personnel from compressed air.

- | | | | |
|----|-----------------------|--------------------|--|
| 1. | Dry air reservoir (1) | Two draincocks (2) | Turn to open.
Allow all compressed air to drain. |
|----|-----------------------|--------------------|--|

NOTE

For more information on how to tag parts, go to General Maintenance Instructions (page 2-424).

- | | | | |
|----|---------------------------|--|---|
| 2. | 90-degree elbow (3) | Airhose to tee (4) | a. Tag.
b. Using 1-inch open-end wrench, unscrew and take off. |
| 3. | 45-degree elbow (5) | Airhose to tee (6) | a. Tag.
b. Using 1-inch open-end wrench, unscrew and take off. |
| 4. | 90-degree elbow (7) | Airhose to relay valve (8) | a. Tag.
b. Using 1 1/4-inch open-end wrench, unscrew and take off. |
| 5. | 90-degree elbow (9) | Airhose to wet air reservoir rear (10) | a. Tag.
b. Using 7/8-inch open-end wrench, unscrew and take off. |
| 6. | 90-degree elbow(11) | Airhose to wet air reservoir front (12) | a. Tag.
b. Using 7/8-inch open-end wrench, unscrew and take off. |
| 7. | Two cable assemblies (13) | Two nuts (14), two lockwashers (15), and two flat washers (16) | a. Using 9/16-inch, 1/2-inch drive deep socket, 6-inch extension, and ratchet handle, unscrew and take off.
b. Get rid of lockwashers. |
| 8. | Bracket (17) | Two cable assemblies (13) | Pull out and move out of way. |

DRY AIR RESERVOIR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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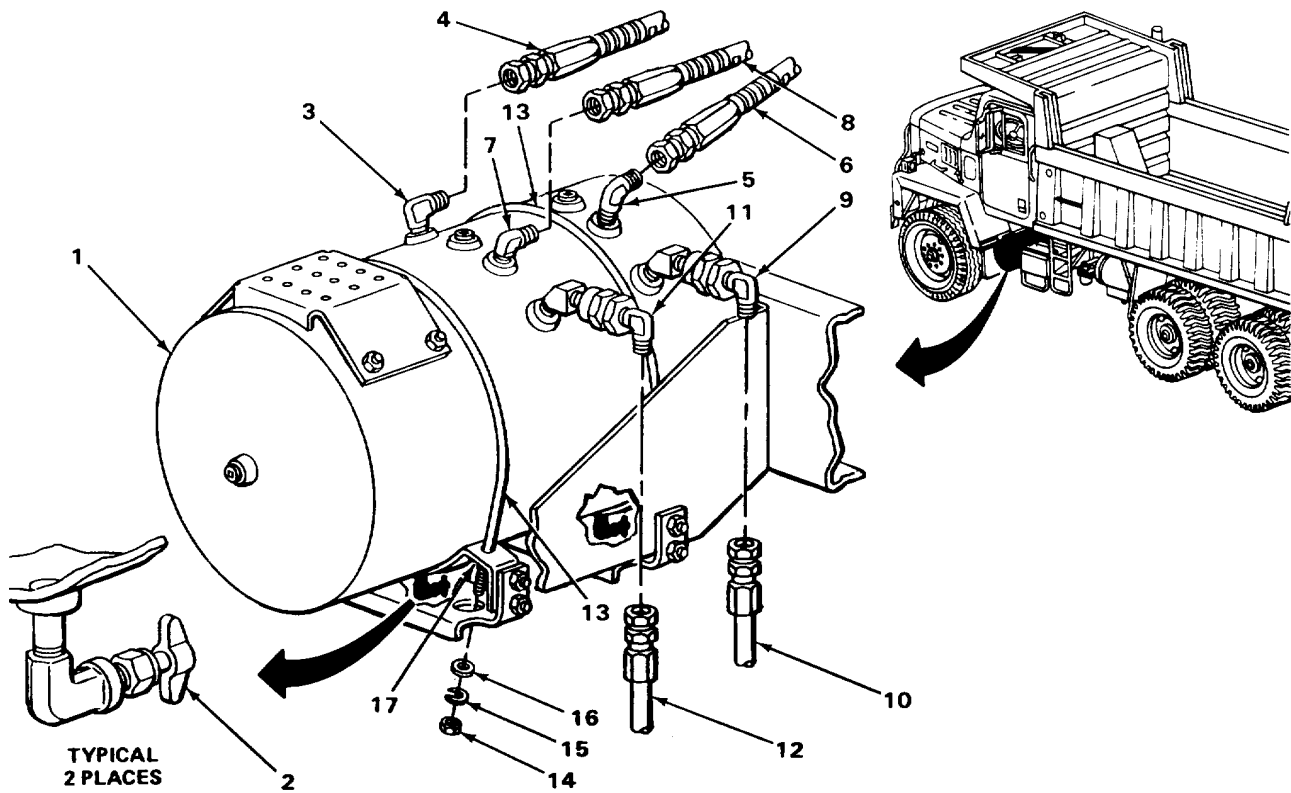
WARNING

Due to excessive weight and size, assistance will be needed when handling dry air reservoir. Failure to observe this precaution could cause injury to personnel.

CAUTION

Care must be taken not to drop dry air reservoir. Damage to fittings or draincocks could occur.

- | | | | |
|----|--------------|-----------------------|--|
| 9. | Bracket (17) | Dry air reservoir (1) | With assistance, lift up and pull out. |
|----|--------------|-----------------------|--|



TA244319

DRY AIR RESERVOIR - CONTINUED

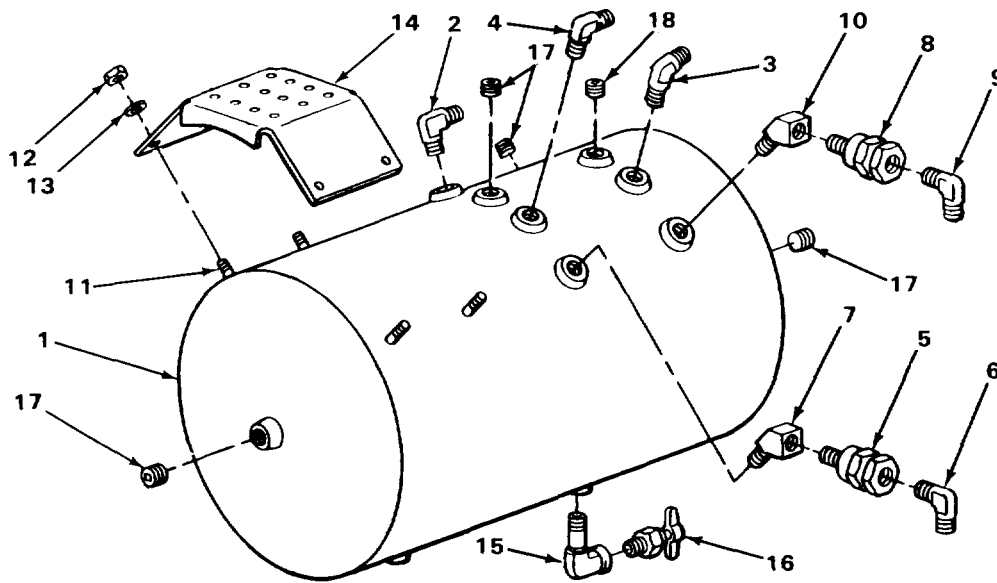
LOCATION	ITEM	ACTION REMARKS
DISASSEMBLY		
10. Dry air reservoir (1)	90-degree elbow (2)	Using 13/16-inch open-end wrench, unscrew and take out.
11.	45-degree elbow (3)	Using 3/4-inch open-end wrench, unscrew and take out.
12.	90-degree elbow (4)	Using 7/8-inch open-end wrench, unscrew and take out.
13. Check valve (5)	90-degree elbow (6)	Using 1 3/8-inch and 13/16-inch open-end wrenches, unscrew and take out.
14. 45-degree elbow (7)	Check valve (5)	Using 1 3/8-inch open-end wrench, unscrew and take out.
15. Dry air reservoir (1)	45-degree elbow (7)	Using 1-inch open-end wrench, unscrew and take out.
16. Check valve (8)	90-degree elbow (9)	Using 1 3/8-inch and 13/16-inch open-end wrenches, unscrew and take out.
17. 45-degree elbow (10)	Check valve (8)	Using 1 3/8-inch open-end wrench, unscrew and take out.
18. Dry air reservoir (1)	45-degree elbow (10)	Using 1-inch open-end wrench, unscrew and take out.
19. Four step studs (11)	Four locknuts (12) and four flat washers (13)	a. Using 9/16-inch box-end wrench, unscrew and take out. b. Get rid of locknuts.
20.	Step (14)	Take off.

NOTE

Steps 21 and 22 are typical for both draincocks.

DRY AIR RESERVOIR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
21. 90-degree elbow (15)	Draincock (16)	Using 9/16-inch open-end wrench, unscrew and take out.
22. Dry air reservoir (1)	90-degree elbow (15)	Using 11/16-inch open-end wrench, unscrew and take out.
23.	Five plugs (17)	Using 3/8-inch, 1/2-inch drive square socket and ratchet handle, unscrew and take out.



TA244320

DRY AIR RESERVOIR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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CLEANING

WARNING

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 100°F (38°C) and for type #2 is 138°F (59°C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

Safety goggles must be worn when using wire brush. Flying rust and metal particles can cause eye injury.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

24.	Dry air reservoir (1)	<ul style="list-style-type: none"> a. Clean rust, scale, and corrosion from outside surfaces using wire brush. b. Wipe clean using drycleaning solvent and wiping rag. c. To touchup or repaint, refer to TM 43-0139.
25.	Step (2)	<ul style="list-style-type: none"> a. Clean rust, scale, and corrosion using wire brush. b. Wipe clean using drycleaning solvent and wiping rag. c. To touchup or repaint, refer to TM 43-0139.

INSPECTION/REPLACEMENT

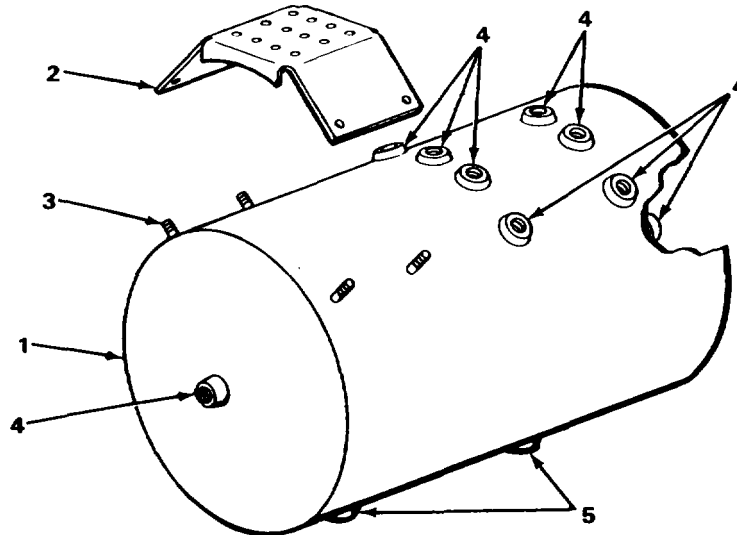
NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

DRY AIR RESERVOIR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
26.	Dry air reservoir (1)	a. Look for cracks or broken welds. b. Look for stripped or broken step studs (3). c. Look for stripped or cracked elbow and plug bosses (4). d. Look for stripped or cracked draincock bosses (5). e. Using flashlight, look inside for excessive rust or corrosion.
27.	Step (2)	a. Look for cracks, breaks, or bends. b. Look for distorted step stud holes.
28.	All threaded parts	Look for damaged threads or rounded heads.



TA244321

DRY AIR RESERVOIR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
ASSEMBLY		
<u>CAUTION</u>		
Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.		
<u>NOTE</u>		
For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).		
Position all elbows as shown in illustration.		
29. Dry air reservoir (1)	45-degree elbow (2)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 1-inch open-end wrench.
30. 45-degree elbow (2)	Check valve (3)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 1 3/8-inch open-end wrench.
31. Check valve (3)	90-degree elbow (4)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 1 3/8-inch and 13/16-inch open-end wrenches.
32. Dry air reservoir (1)	45-degree elbow (5)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 1-inch open-end wrench.
33. 45-degree elbow (5)	Check valve (6)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 1 3/8-inch open-end wrench.
34. Check valve (6)	90-degree elbow (7)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 1 3/8-inch and 13/16-inch open-end wrenches.
35. Dry air reservoir (1)	90-degree elbow (8)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 7/8-inch open-end wrench.
36.	45-degree elbow (9)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 3/4-inch open-end wrench.
37.	90-degree elbow (10)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 13/16-inch open-end wrench.

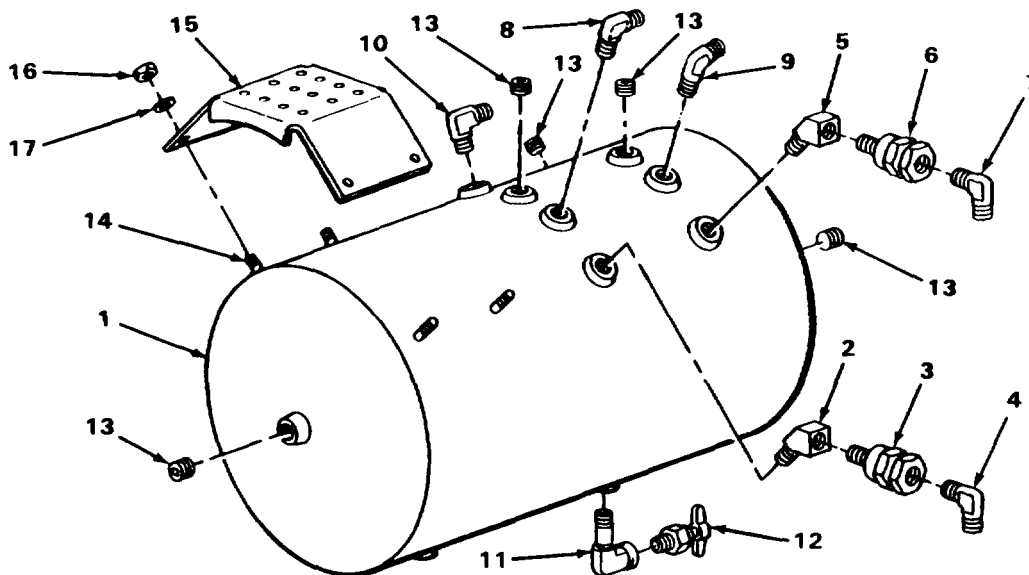
DRY AIR RESERVOIR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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NOTE

Steps 38 and 39 are typical for both draincocks.

38.	90-degree elbow (11)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 11/16-inch open-end wrench. Position facing rear of dry air reservoir.
39.	90-degree elbow (11) Draincock (12)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 9/16-inch open-end wrench. c. Turn to close.
40.	Dry air reservoir (1) Five plugs (13)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 38-inch, 1/2-inch drive square socket and ratchet handle.
41.	Four step studs (14) Step (15)	Put on.
42.	Four new locknuts (16) and four flat washers (17)	Screw on and tighten using 9/16-inch box-end wrench.



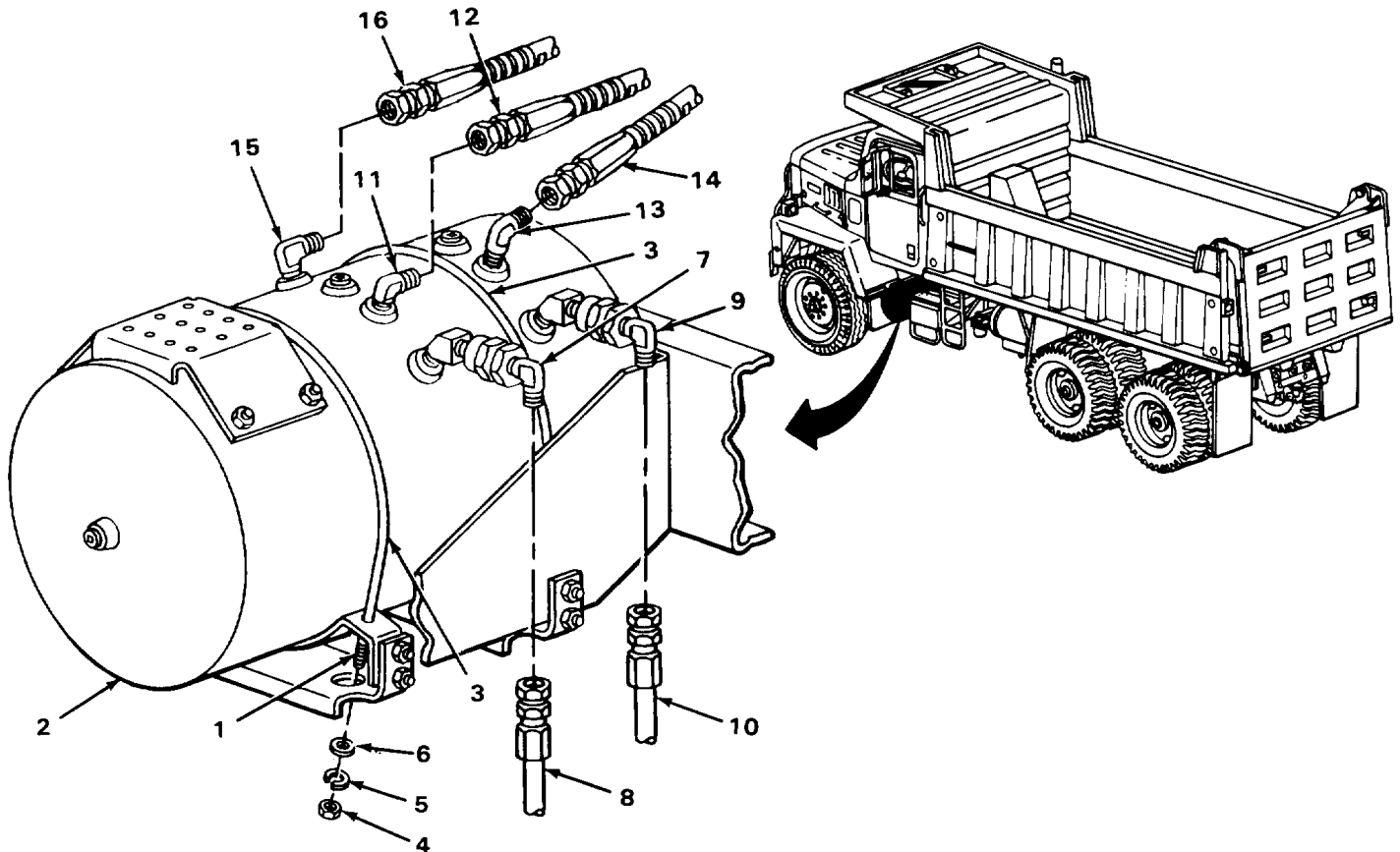
TA244322

DRY AIR RESERVOIR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
<u>WARNING</u>		
Due to excessive weight and size, assistance will be needed when handling dry air reservoir. Failure to observe this precaution could cause injury to personnel.		
<u>CAUTION</u>		
Care must be taken not to drop dry air reservoir. Damage to fittings or draincocks could occur.		
43. Bracket (1)	Dry air reservoir (2)	With assistance, put on.
44.	Two cable assemblies (3)	Put over dry air reservoir (2) and through bracket.
45. Two cable assemblies (3)	Two nuts (4), two new lockwashers (5), and two flat washers (6)	Screw on and tighten using 9/16-inch, 112-inch drive deep socket, 6inch extension, and ratchet handle.
46. Dry air reservoir (2)	90-degree elbow (7)	Wrap pipe threads with antiseizing tape.
47. 90-degree elbow (7)	Airhose to wet air	a. Screw on and tighten using 7/8-inch reservoir rear (8)open-end wrench. b. Take off tag. c. Get rid of tag.
48. Dry air reservoir (2)	90-degree elbow (9)	Wrap pipe threads with antiseizing tape.
49. 90-degree elbow (9)	Airhose to wet air reservoir front (10)	a. Screw on and tighten using 7/8-inch open-end wrench. b. Take off tag. c. Get rid of tag.
50. Dry air reservoir (2)	90-degree elbow (11)	Wrap pipe threads with antiseizing tape.
51. 90-degree elbow (11)	Airhose to relay valve (12)	a. Screw on and tighten using 1 1/4-inch open-end wrench. b. Take off tag. c. Get rid of tag.

DRY AIR RESERVOIR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
52. Dry air reservoir (2)	45-degree elbow (13)	Wrap pipe threads with antiseizing tape.
53. 45-degree elbow (13)	Airhose to tee (14)	a. Screw on and tighten using 1-inch open-end wrench. b. Take off tag. c. Get rid of tag.
54. Dry air reservoir (2)	90-degree elbow (15)	Wrap pipe threads with antiseizing tape.
55. 90-degree elbow (15)	Airhose to tee (16)	a. Screw on and tighten using 1-inch open-end wrench. b. Takeoff tag. c. Get rid of tag.



TA244323

TASK ENDS HERE

WET AIR RESERVOIR

This task covers:

- | | |
|-----------------------------|--|
| a. Removal (page 2-986) | d. Inspection/Replacement (page 2-990) |
| b. Disassembly (page 2-988) | e. Assembly (page 2-991) |
| c. Cleaning (page 2-988) | f. Installation (page 2-994) |

INITIAL SETUP:

Tools

- Brush, wire
- Flashlight
- Gloves, safety
- Goggles, safety
- Punch, pin, 1/4-inch
- Wrench, box-end, 9/16-inch (two required)
- Wrench, open-end, 3/8-inch
- Wrench, open-end, 9/16-inch
- Wrench, open-end, 5/8-inch
- Wrench, open-end, 11/16-inch
- Wrench, open-end, 3/4-inch (two required)
- Wrench, open-end, 13/16-inch
- Wrench, open-end, 7/8-inch
- Wrench, open-end, 1-inch
- Wrench, open-end, 11/8-inch

Materials/Parts

- Locknut, clamp (two required)
- Rags, wiping (item 15, appendix C)
- Solvent, drycleaning (item 19, appendix C)
- Tape, antiseizing (item 22, appendix C)
- Tags, marker (item 21, appendix C)

Personnel Required

Two

References

TM 43-0139 (Painting Instructions for Army Materiel)

LOCATION	ITEM	ACTION REMARKS
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REMOVAL

WARNING

Drain air from airbrake system before removing lines or fittings to avoid injury to personnel from compressed air.

- | | | |
|--------------------------|---------------------------|--|
| 1. Wet air reservoir (1) | Automatic drain valve (2) | Using 1/4-inch pin punch, push in on manual drain pin (3) and allow compressed air to drain. |
|--------------------------|---------------------------|--|

NOTE

For more information on how to tag parts, go to General Maintenance Instructions (page 2-424).

Change 1 2-986

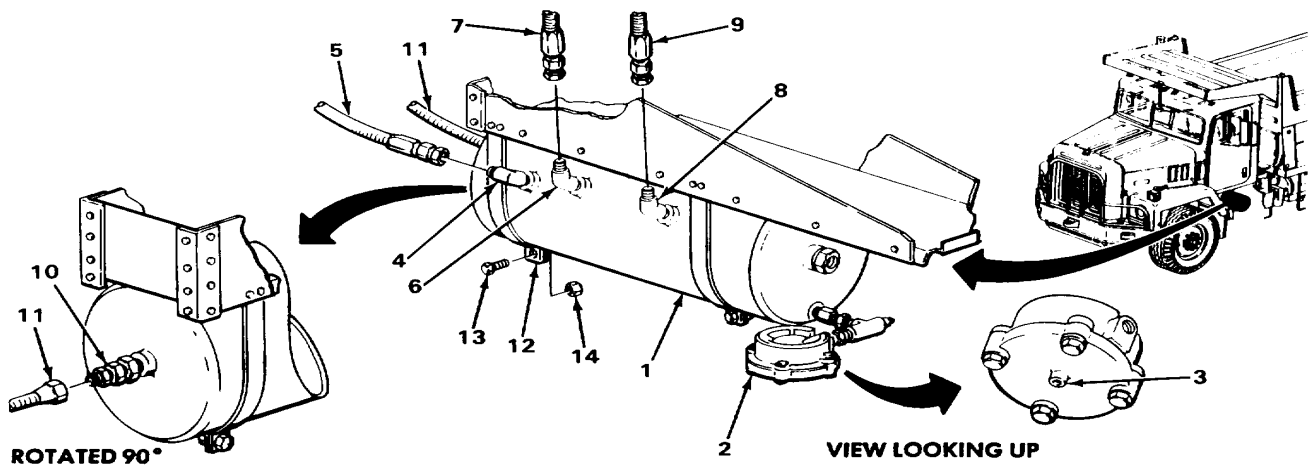
WET AIR RESERVOIR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
2. 90-degree elbow (4)	Airhose to air dryer (5)	a. Tag. b. Using 1-inch open-end wrench, unscrew and take off.
3. 45-degree elbow (6)	Airhose to dry air reservoir rear (7)	a. Tag. b. Using 7/8-inch open-end wrench, unscrew and take off.
4. 45-degree elbow (8)	Airhose to dry air reservoir front (9)	a. Tag. b. Using 7/8-inch open-end wrench, unscrew and take off.
5. Fitting (10)	Air line to compressor governor (11)	Using 11/16-inch and 9/16-inch open-end wrenches, unscrew and take off.
6. Two clamps (12)	Two screws (13) and two locknuts (14)	a. Using two 9/16-inch box-end wrenches, unscrew and take off. b. Get rid of locknuts.

CAUTION

Care must be taken not to drop wet air reservoir. Damage to fittings or automatic drain valve could occur.

7. Two clamps (12) Wet air reservoir (1) Take out.



TA244324

WET AIR RESERVOIR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
DISASSEMBLY		
8. Wet air reservoir (1)	90-degree elbow (2) and 45-degree elbows (3 and 4)	Using 13/16-inch open-end wrench, unscrew and take out.
9. Fitting (5)	Fitting (6)	Using 11/16-inch and 9/16-inch open-end wrenches, unscrew and take out.
10. Fitting (7)	Fitting (5)	Using 7/8-inch and 11/16-inch open-end wrenches, unscrew and take out.
11. Wet air reservoir (1)	Fitting (7)	Using 7/8-inch open-end wrench, unscrew and take out.
12. Fitting (8)	Automatic drain valve (9)	Using 1 1/8-inch and 11/16-inch open-end wrenches, unscrew and take out.
13. Tee fitting (10)	Fitting (8)	Using 3/4-inch and 11/16-inch open-end wrenches, unscrew and take out.
14.	Plug (11)	Using 3/8-inch open-end wrench, unscrew and take out.
15. Fitting (12)	T-fitting (10)	Using two 3/4-inch open-end wrenches, unscrew and take off.
16. Wet air reservoir (1)	Fitting (12)	Using 3/4-inch open-end wrench, unscrew and take out.
17. Fitting (13)	Pressure relief valve (14)	Using 7/8-inch and 5/8-inch open-end wrenches, unscrew and take out.
18. Wet air reservoir (1)	Fitting (13)	Using 7/8-inch open-end wrench, unscrew and take out.

CLEANING

WARNING

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 100°F (38°C) and for type #2 is 138°F (59°C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

WET AIR RESERVOIR - CONTINUED TM 5-38052542

LOCATION	ITEM	ACTION REMARKS
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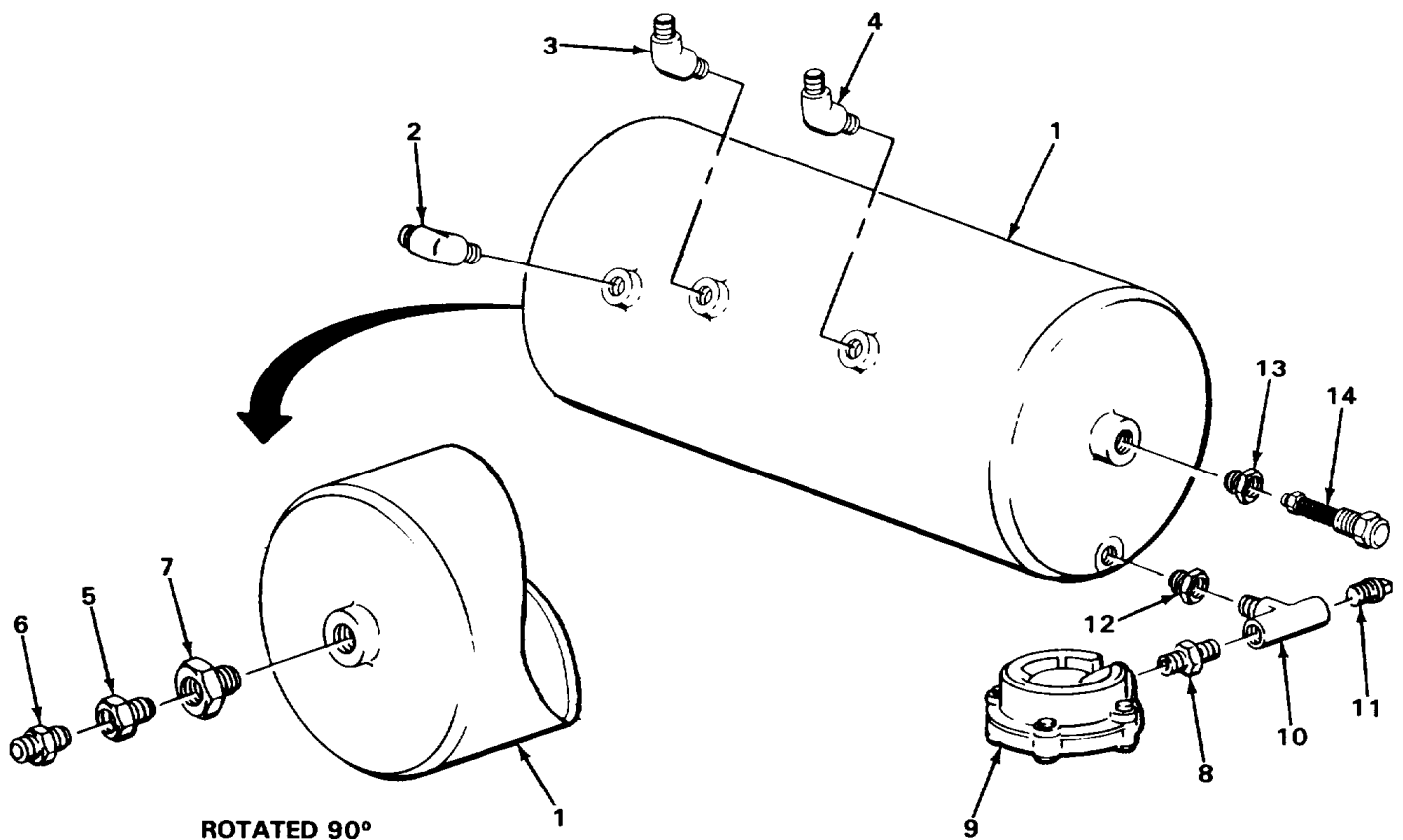
WARNING

Safety goggles must be worn when using wire brush. Flying rust and metal particles can cause eye injury.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

- | | | |
|-----|---------------------------|--|
| 19. | Wet air reservoir (1) | <ul style="list-style-type: none"> a. Clean rust, scale, and corrosion from outside surfaces using wire brush. b. Wipe clean using drycleaning solvent and wiping rag. c. To touchup or repaint, refer to TM 43-0139. |
| 20. | Automatic drain valve (9) | Wipe clean using drycleaning solvent and wiping rag. |



TA244325

WET AIR RESERVOIR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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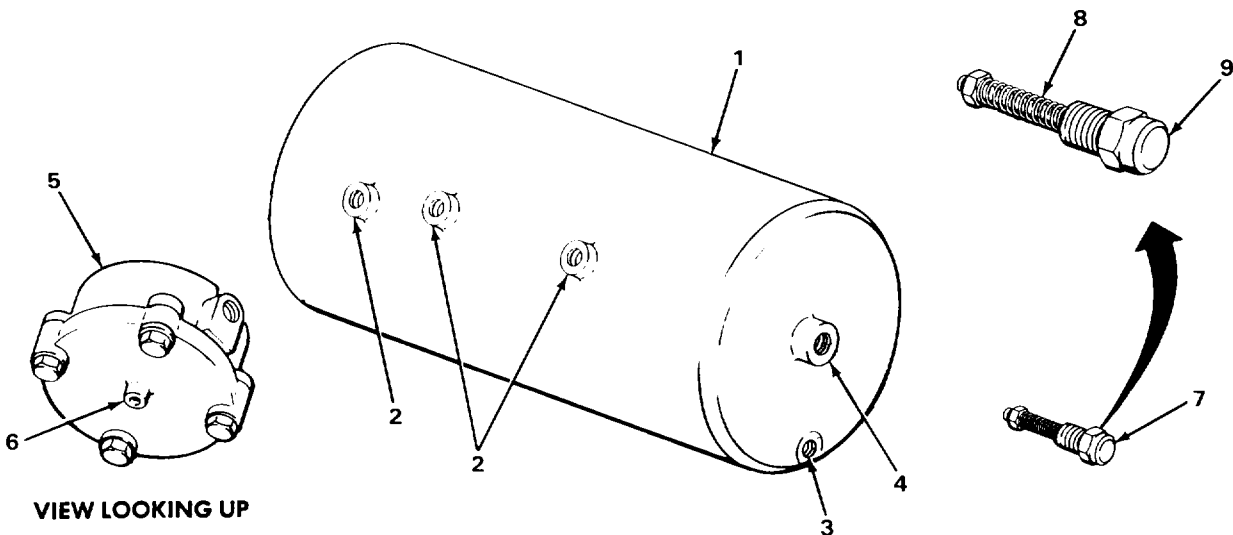
INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

21.	Wet air reservoir (1)	<ul style="list-style-type: none"> a. Look for cracked or broken welds. b. Look for stripped or broken elbow bosses (2). c. Look for stripped or broken automatic drain valve boss (3) and pressure relief valve boss (4). d. Using flashlight, look inside for excessive rust or corrosion.
22.	Automatic drain valve (5)	<ul style="list-style-type: none"> a. Look for cracks, breaks, or chips. b. Look for frozen manual drain pin (6). If damaged, notify higher category of maintenance.
23.	Pressure relief valve (7)	<ul style="list-style-type: none"> a. Look for broken or frozen spring (8). b. Look for bent, dented, or cracked cap (9). If damaged, notify higher category of maintenance.
24.	All threaded parts	Look for damaged threads or rounded heads.



TA244326

WET AIR RESERVOIR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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ASSEMBLY

CAUTION

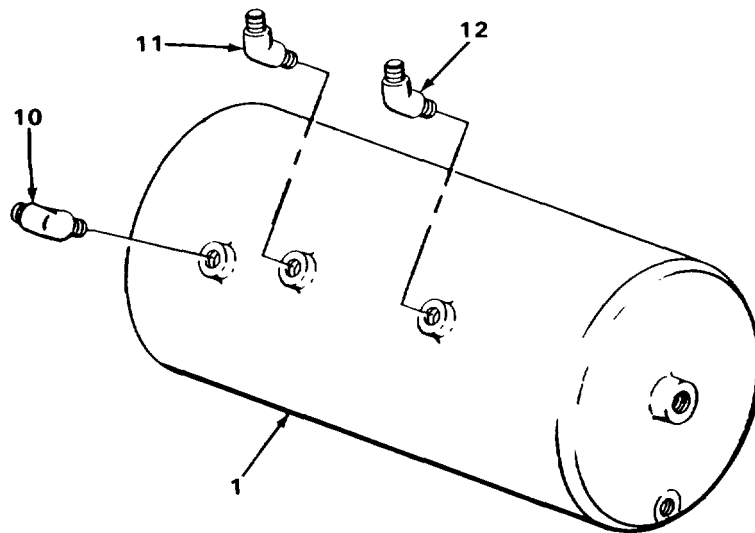
Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.

NOTE

For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).

Position all elbows as shown in illustration.

- | | | | |
|-----|-----------------------|----------------------|--|
| 25. | Wet air reservoir (1) | 90-degree elbow (10) | <ul style="list-style-type: none"> a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 13/16-inch open-end wrench. |
| 26. | | 45-degree elbow (11) | <ul style="list-style-type: none"> a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 13/16-inch open-end wrench. |
| 27. | | 45-degree elbow (12) | <ul style="list-style-type: none"> a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 13/16-inch open-end wrench. |



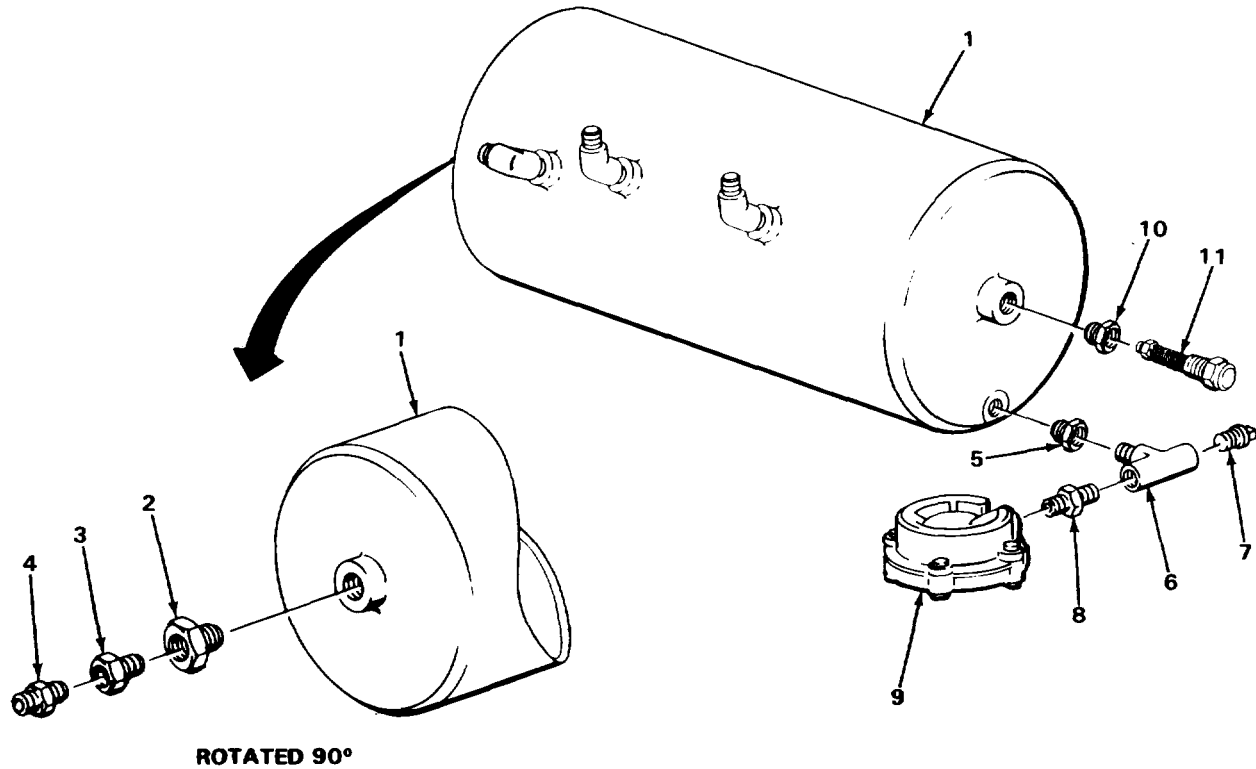
TA244327

WET AIR RESERVOIR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
ASSEMBLY - CONTINUED		
28. Wet air reservoir (1)	Fitting (2)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 7/8-inch open-end wrench.
29. Fitting (2)	Fitting (3)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 7/8-inch and 11/16-inch open-end wrenches.
30. Fitting (3)	Fitting (4)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 11/16-inch and 9/16-inch open-end wrenches.
31. Wet air	Fitting (5) reservoir (1)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 3/4-inch open-end wrench.
32. Fitting (5)	T-fitting (6)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 3/4-inch open-end wrench. Put in vertical position.
33. T-fitting (6)	Plug (7)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 3/8-inch open-end wrench.
34.	Fitting (8)	a. Wrap smaller and larger diameter pipe threads with antiseizing tape. b. Screw in and tighten using 11/16-inch open-end wrench.
35. Fitting (8)	Automatic drain valve (9)	Screw on and tighten using 1 1/8-inch open-end wrench.
36. Wet air reservoir (1)	Fitting (10)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 7/8-inch open-end wrench.

WET AIR RESERVOIR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
37. Fitting (10)	Pressure relief valve (11)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 7/8-inch and 5/8-inch open-end wrenches.



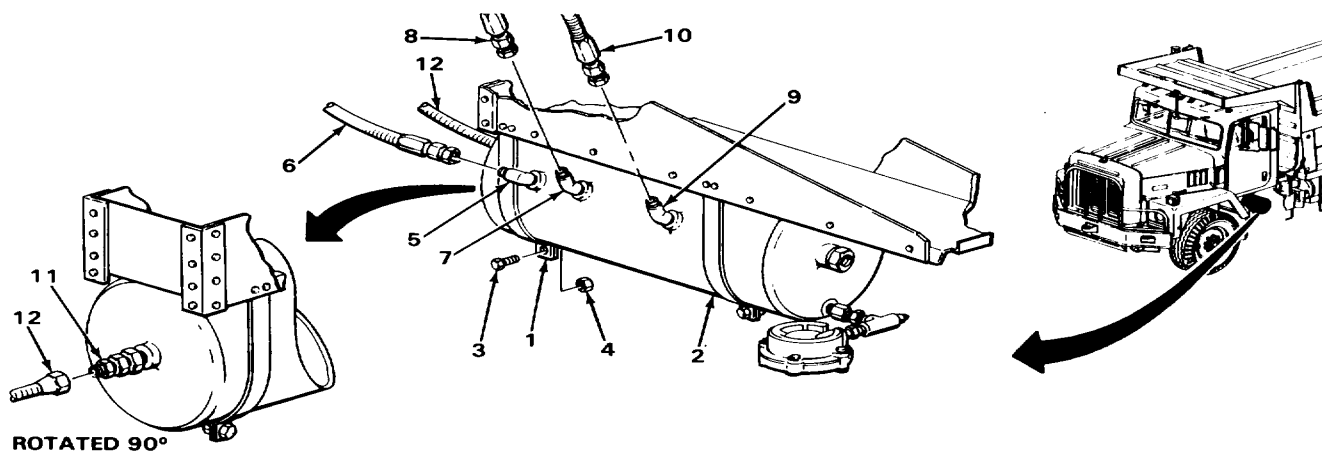
TA244328

WET AIR RESERVOIR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
<u>CAUTION</u>		
Care must be taken not to drop wet air reservoir. Damage to fittings or automatic drain valve could occur.		
Antiseizing tape must be used on all pipe threads to provide a good seal and prevent threaded parts from seizing.		
<u>NOTE</u>		
For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).		
38. Two clamps (1)	Wet air reservoir (2)	Put in place.
39.	Two screws (3) and two new locknuts (4)	Screw in and tighten using two 9/16-inch box-end wrenches.
40. Wet air reservoir (2)	90-degree elbow (5)	Wrap pipe threads with antiseizing tape.
41. 90-degree elbow (5)	Airhose to air	a. Screw on and tighten using 1-inch open-dryer (6)end wrench. b. Take off tag. c. Get rid of tag.
42. Wet air reservoir (2)	45-degree elbow (7)	Wrap pipe threads with antiseizing tape.
43. 45-degree elbow (7)	Airhose to dry air	a. Screw on and tighten using 7/8-inch reservoir rear (8)open-end wrench. b. Take off tag. c. Get rid of tag.
44. Wet air reservoir (2)	45-degree elbow (9)	Wrap pipe threads with antiseizing tape.
45. 45-degree elbow (9)	Airhose to dry air	a. Screw on and tighten using 7/8-inch reservoir front (10)open-end wrench. b. Take off tag. c. Get rid of tag.
46. Wet air reservoir (2)	Fitting (11)	Wrap pipe threads with antiseizing tape.

WET AIR RESERVOIR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
47. Fitting (11)	Air line to compressor governor (12)	Screw on and tighten using 11/16-inch and 9/16-inch open-end wrenches.



TASK ENDS HERE

ALCOHOL EVAPORATOR

This task covers:

- | | |
|-----------------------------|--|
| a. Removal (page 2-996) | d. Inspection/Replacement (page 2-998) |
| b. Disassembly (page 2-996) | e. Assembly (page 2-1000) |
| c. Cleaning (page 2-998) | f. Installation (page 2-1001) |

INITIAL SETUP:

Tools

- Gloves, safety
- Goggles, safety
- Wrench, box-end, 7/16-inch
- Wrench, open-end, 7/16-inch
- Wrench, box-end, 1/2-inch
- Wrench, open-end, 1/2-inch
- Wrench, open-end, 9/16-inch
- Wrench, open-end, 5/8-inch

Materials/Parts

- Lockwasher, bracket (five required)
- Rags, wiping (item 15, appendix C)
- Solvent, drycleaning (item 19, appendix C)
- Washer, rubber, air tube (one required)

Personnel Required

One

TA244329

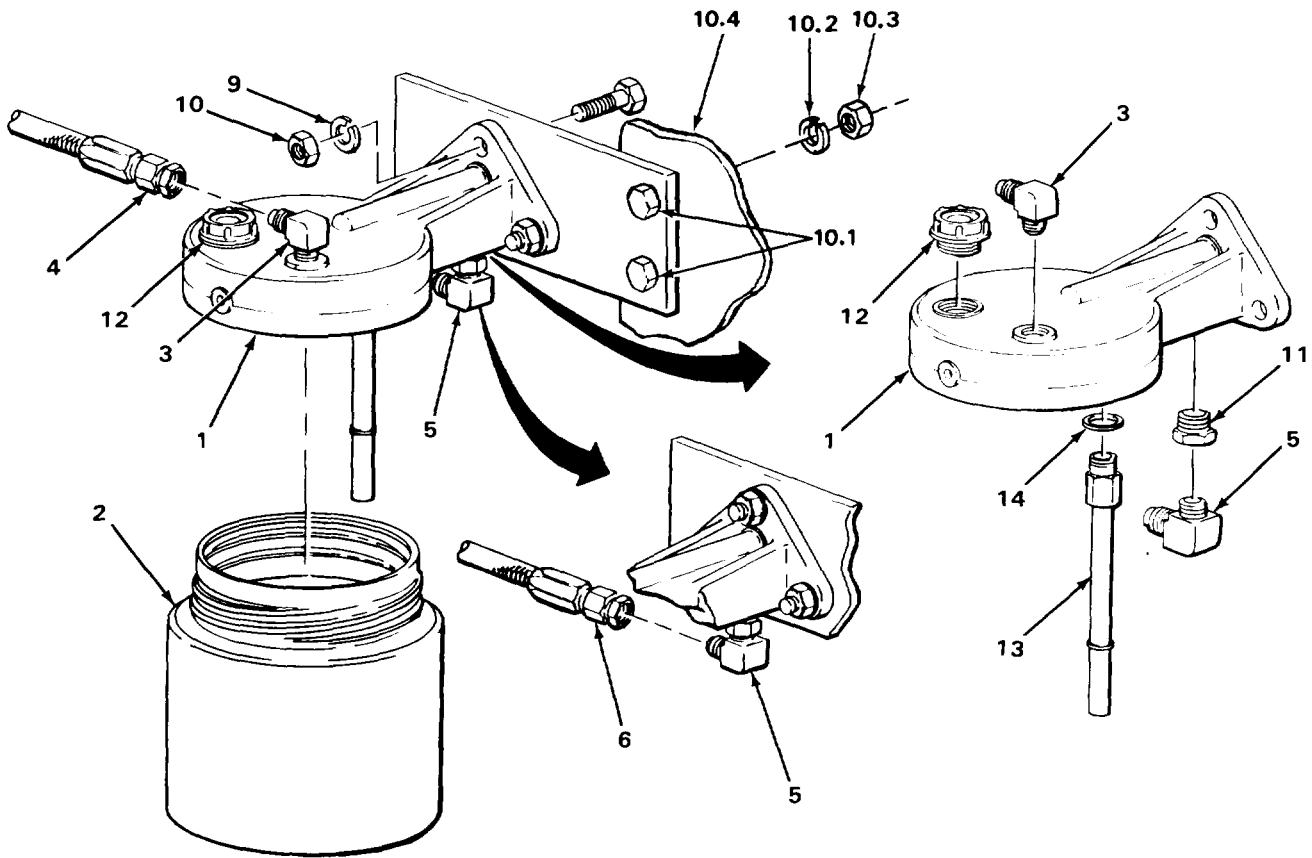
ALCOHOL EVAPORATOR - CONTINUED


LOCATION	ITEM	ACTION REMARKS
REMOVAL		
WARNING		
Do not smoke or allow open flames or sparks into areas where alcohol is being used. Failure to observe this precaution could cause death or serious injury to personnel.		
Care must be taken when taking off canister to prevent spilling alcohol. Injury to personnel could result.		
1. Housing (1)	Cannister (2)	Unscrew and take off.
NOTE		
For more information on how to tag parts, go to General Maintenance Instructions (page 2-424).		
2. 90-degree elbow (3)	Vacuum hose (4)	a. Tag. b. Using 9/16-inch open-end wrench, unscrew and take off.
3. 90-degree elbow (5)	Airhose (6)	a. Tag. b. Using 9/16-inch open-end wrench, unscrew and take off.
4. Bracket (7)	Three screws (8), three lockwashers (9), and three nuts (10)	a. Using 7/16-inch open-end and 7/16-inch box-end wrenches, unscrew and take off. b. Get rid of lockwashers.
5. Housing (1)	Take off.	
5.1.	Two screws (10.1), two lockwashers (10.2), and two nuts (10.3)	a. Using 1/2-inch open-end and 1/2-inch box-end wrenches, unscrew, and take off. b. Get rid of lockwashers.
5.2. Mounting bracket (10.4)	Bracket (7)	Take off.
DISASSEMBLY		
6. Housing (1)	90-degree elbow (3)	Using 1/2-inch open-end wrench, unscrew and take out.
7. Fitting (11)	90-degree elbow (5)	Using 5/8-inch and 1/2-inch open-end wrenches, unscrew and take out.

Change 1 2-996

ALCOHOL EVAPORATOR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
8.	Fitting (11)	Using 5/8-inch open-end wrench, unscrew and take out.
9.	Fill cap (12)	Unscrew and take off.
10.	Air tube (13) and rubber washer (14)	a. Using 7/16-inch open-end wrench, unscrew and take out. b. Get rid of rubber washer.



TA702136 

Change 1 2-997

ALCOHOL EVAPORATOR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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CLEANING

WARNING

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 100°F (38°C) and for type #2 is 138°F (59°C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

11.	Housing (1)	Wipe clean using drycleaning solvent and wiping rag.
12.	Cannister (2)	Wipe inside and outside clean using drycleaning solvent and wiping rag.

INSPECTION/REPLACEMENT

NOTE

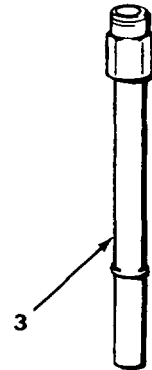
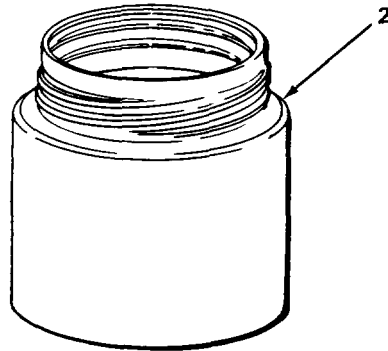
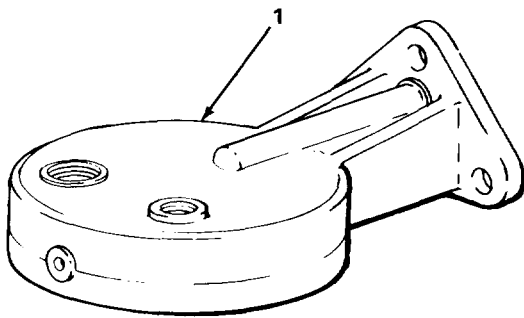
Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

13.	Housing (1)	<ul style="list-style-type: none"> a. Look for cracks or breaks. b. Look for stripped or damaged elbow or fitting hole threads. c. Look for damaged cannister screw threads.
14.	Air tube (3)	<ul style="list-style-type: none"> a. Look for cracks or breaks on sides. b. Look for clogged hole on end. c. Look for stripped or damaged threads.

ALCOHOL EVAPORATOR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
15.	Cannister (2)	a. Look for severe dents or distorted screw threads. b. Look for holes, breaks, or cracks.
16.	All threaded parts	Look for damaged threads or rounded heads.



TA244331

2-999

ALCOHOL EVAPORATOR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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ASSEMBLY

CAUTION

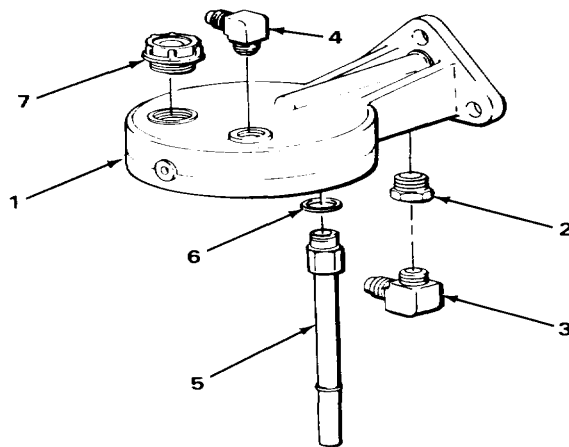
Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.

NOTE

For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).

Position all elbows as shown in illustration.

17. Housing (1)	Fitting (2)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 5/8-inch open-end wrench.
18. Fitting (2)	90-degree elbow (3)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 5/8-inch and 1/2-inch open-end wrenches.
19. Housing (1)	90-degree elbow (4)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 1/2-inch open-end wrench.
20.	Air tube (5) and new rubber washer (6)	Screw in and tighten using 7/16-inch open-end wrench. Do not overtighten.
21.	Fill cap (7)	Screw on.

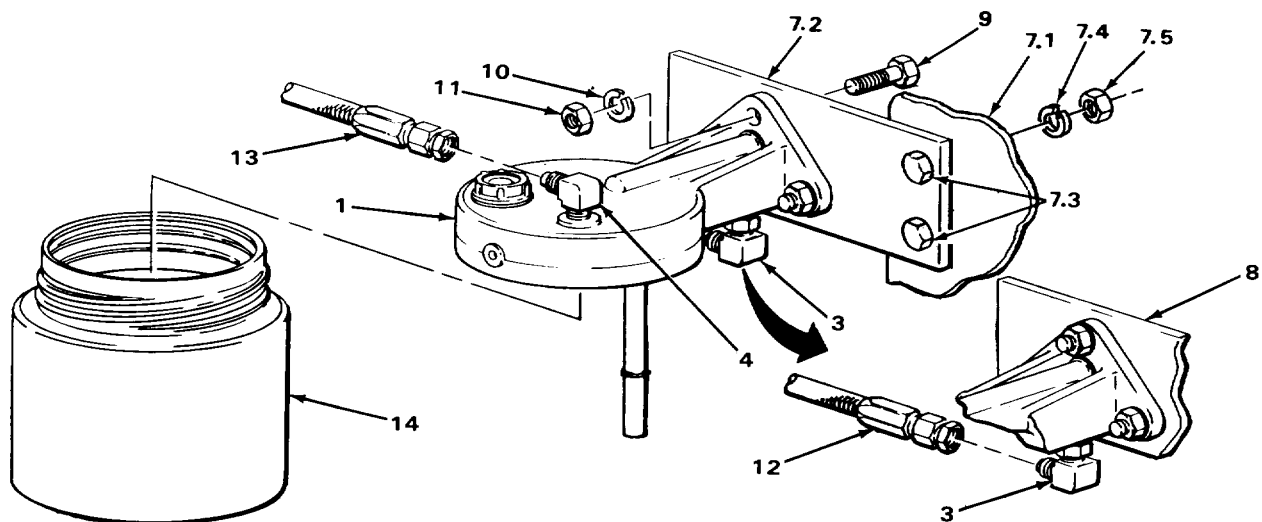


TA244332

ALCOHOL EVAPORATOR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
21.1. Mounting bracket (7.1)	Bracket (7.2)	Put in place.
21.2.	Two screws (7.3), two new lockwashers (7.4), and two nuts (7.5)	Screw on and tighten using 1/2-inch box-end and 1/2-inch open-end wrenches.
22. Bracket (8)	Housing (1)	Put in place.
23.	Three screws (9), three new lock- washers (10), and three nuts (11)	Screw on and tighten using 7/16-inch box- end and 7/16-inch open-end wrenches.
24. Housing (1)	90-degree elbow (3)	Wrap pipe threads with antiseizing tape.
25. 90-degree elbow (3)	Airhose (12)	Screw on and tighten using 9/16-inch open- end wrench.
26. Housing (1)	90-degree elbow (4)	Wrap pipe threads with antiseizing tape.
27. 90-degree elbow (4)	Vacuum hose (13)	Screw on and tighten using 9/16-inch open- end wrench.
28. Housing (1)	Cannister (14)	Screw on and hand tighten.

TA702137



TASK ENDS HERE

TA702137

AIR DRYER

This task covers:

- | | |
|------------------------------|---|
| a. Removal (page 2-1002) | d. Inspection/Replacement (page 2-1008) |
| b. Disassembly (page 2-1004) | e. Assembly (page 2-1009) |
| c. Cleaning (page 2-1006) | f. Installation (page 2-1012) |

INITIAL SETUP:

Tools

- Brush, wire
- Extension, 3-inch, 1/2-inch drive
- Gloves, safety
- Goggles, safety
- Handle, ratchet, 1/2-inch drive
- Punch, pin, 1/4-inch
- Socket, 3/4-inch, 1/2-inch drive
- Wrench, box-end, 1/2-inch (two required)
- Wrench, box-end, 9/16-inch (two required)
- Wrench, box-end, 3/4-inch
- Wrench, box-end, 7/8-inch
- Wrench, open-end, 3/8-inch
- Wrench, open-end, 5/8-inch
- Wrench, open-end, 3/4-inch
- Wrench, open-end, 13/16-inch
- Wrench, open-end, 15/16-inch
- Wrench, open-end, 1-inch
- Wrench, open-end, 1 1/4-inch

Materials/Parts

- Lockwasher, clamp to bracket (four required)
- Lockwasher, cap screw (two required)
- Rags, wiping (item 15, appendix C)
- Solvent, drycleaning (item 19, appendix C)
- Tags, marker (item 21, appendix C)
- Tape, antiseizing (item 22, appendix C)

Personnel Required

Two

References

TM 43-0139 (Painting Instructions for Army Materiel)-

LOCATION	ITEM	ACTION REMARKS
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REMOVAL

WARNING

Drain air from airbrake system before removing lines or fittings to avoid injury to personnel from compressed air.

- | | | |
|--------------------------|---------------------------|--|
| 1. Wet air reservoir (1) | Automatic drain valve (2) | Using 1/4-inch pin punch, push in on manual drain pin (3) and allow compressed air to drain. |
|--------------------------|---------------------------|--|

Change 1 2-1002

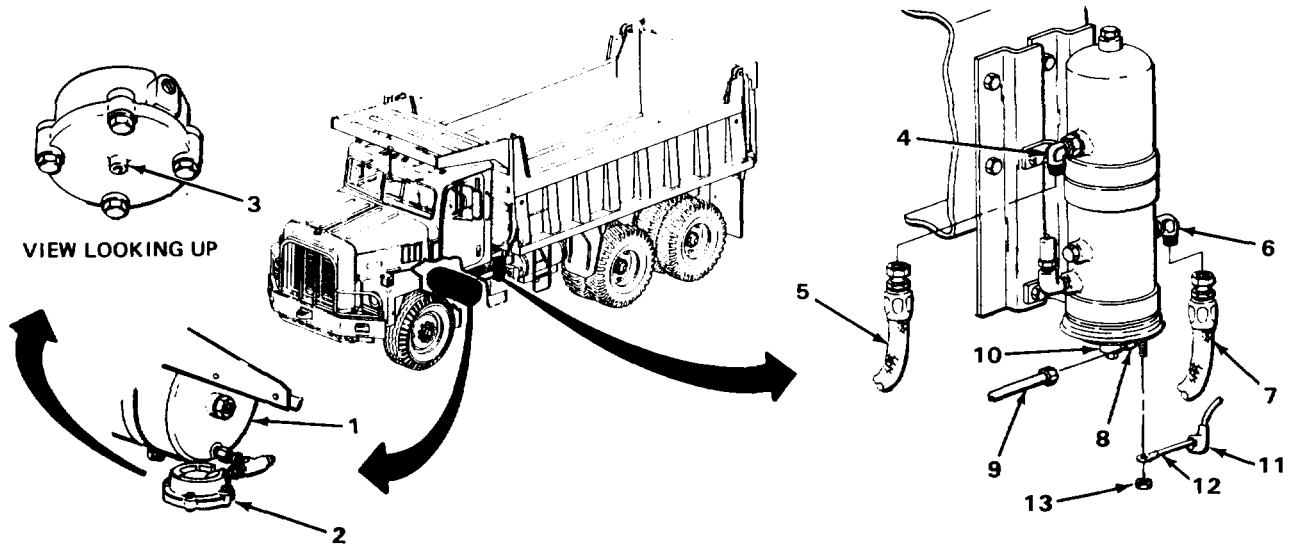
AIR DRYER - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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NOTE

For more information on how to tag parts, go to General Maintenance Instructions (page 2-424).

2.	90degree elbow (4)	Outlet airhose (5)	a. Tag. b. Using 1-inch open-end wrench, unscrew and take off.
3.	90-degree elbow (6)	Inlet air line (7)	a. Tag. b. Using 15/16-inch open-end wrench, unscrew and take off.
4.	45-degree elbow (8)	Governor line (9)	a. Tag. b. Using 5/8-inch open-end wrench, unscrew and take off.
5.	Head assembly (10)	Boot (11)	Pull back.
6.	Heater wire (12)	Nut (13)	Using 3/8-inch open-end wrench, unscrew and take off.
7.	Head assembly (10)	Heater wire (12)	Take off.



TA244334

AIR DRYER - CONTINUED TM 5380-2520-2

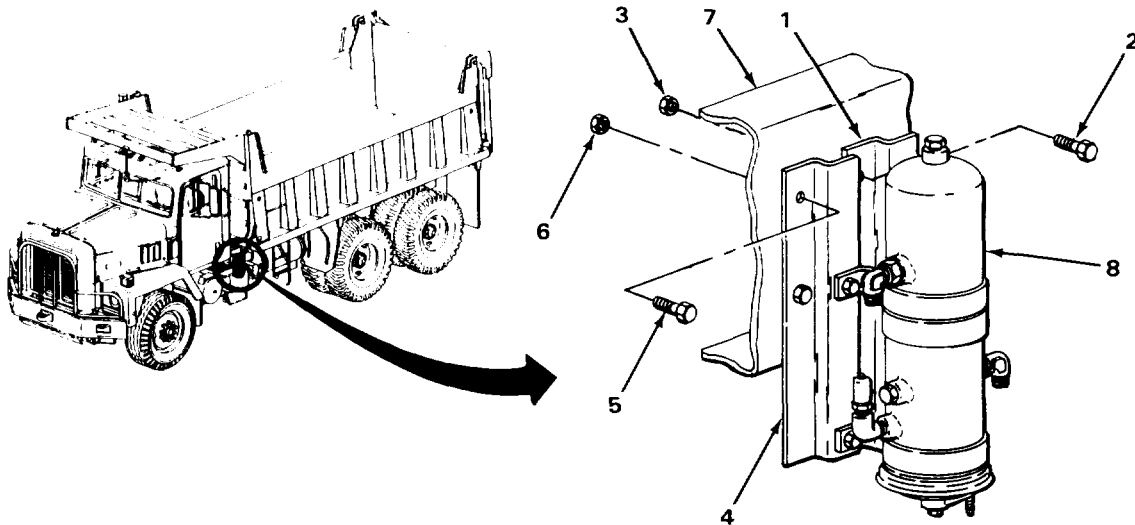
LOCATION	ITEM	ACTION REMARKS
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REMOVAL - CONTINUED

WARNING

Assistance will be needed to support air dryer when performing steps 8 thru 10 to prevent injury to personnel.

8. Right bracket (1)	Two screws (2) and two nuts (3)	Using 3/4-inch, 1/2-inch drive socket, 3-inch extension, ratchet handle, and 3/4-inch box-end wrench, unscrew and take out.
9. Left bracket (4)	Two screws (5) and two nuts (6)	Using 3/4-inch, 1/2-inch drive socket, 3-inch extension, ratchet handle, and 3/4-inch box-end wrench, unscrew and take out.
10. Frame rail (7)	Air dryer (8)	With assistance, take off.



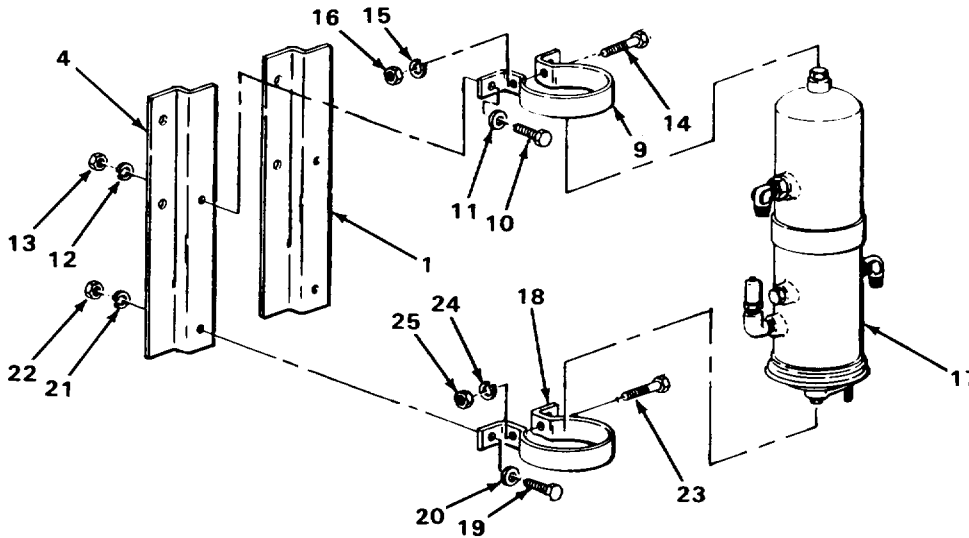
DISASSEMBLY

11. Top clamp (9)	Two screws (10), two flat washers (11), two lockwashers (12), and two nuts (13)	<ul style="list-style-type: none"> a. Using two 9/16-inch box-end wrenches, unscrew and take out. b. Get rid of lockwashers.
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TA244335

AIR DRYER - CONTINUED

LOCATION	ITEM	ACTION REMARKS
12.	Cap screw (14), lockwasher (15), and nut (16)	a. Using two 1/2-inch box-end wrenches, unscrew and take out. b. Get rid of lockwashers.
13. Air dryer (8)	Top clamp (9)	Open and slide off.
14. Bottom clamp (17)	Two screws (18), two flat washers (19), two lock- washers (20), and two nuts (21)	a. Using two 9/16-inch box-end wrenches, unscrew and take off. b. Get rid of lockwashers.
15.	Right bracket (1) and left bracket (4)	Take off.
16.	Cap screw (22), lockwasher (23), and nut (24)	a. Using two 1/2-inch box-end wrenches, unscrew and take out. b. Get rid of lockwashers.
17. Air dryer (8)	Bottom clamp (17)	Open and slide off.



TA244336

AIR DRYER - CONTINUED

LOCATION	ITEM	ACTION REMARKS
DISASSEMBLY - CONTINUED		
18. Air dryer (1)	Two plugs (2)	Using 7/8-inch box-end wrench, unscrew and take out.
19.	90-degree elbow (3)	Using 3/4-inch open-end wrench, unscrew and take out.
20. Check valve (4)	90-degree elbow (5)	Using 1 1/4-inch and 13/16-inch open-end wrenches, unscrew and take out.
21. Air dryer (1)	Check valve (4)	Using 1 1/4-inch open-end wrench, unscrew and take out.
22. 90-degree elbow (6)	Pressure relief valve (7)	Using 3/4-inch open-end wrench, unscrew and take out.
23. Air dryer (1)	90-degree elbow (6)	Using 13/16-inch open-end wrench, unscrew and take out.
24. Head assembly (8)	45-degree elbow (9)	Using 5/8-inch open-end wrench, unscrew and take out.

CLEANING

WARNING

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 100°F (38°C) and for type #2 is 138°F (59°C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

Safety goggles must be worn when using wire brush. Flying rust or metal particles could cause eye injury.

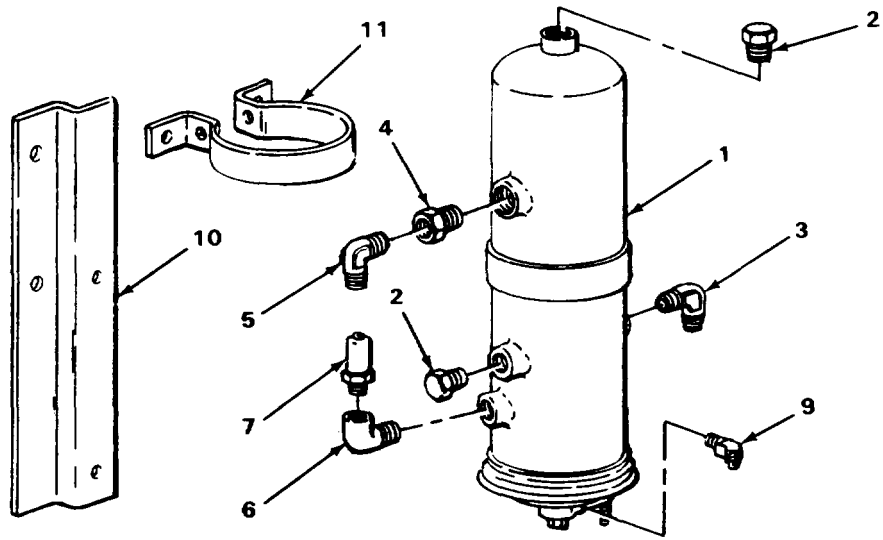
NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

2-1006

AIR DRYER - CONTINUED

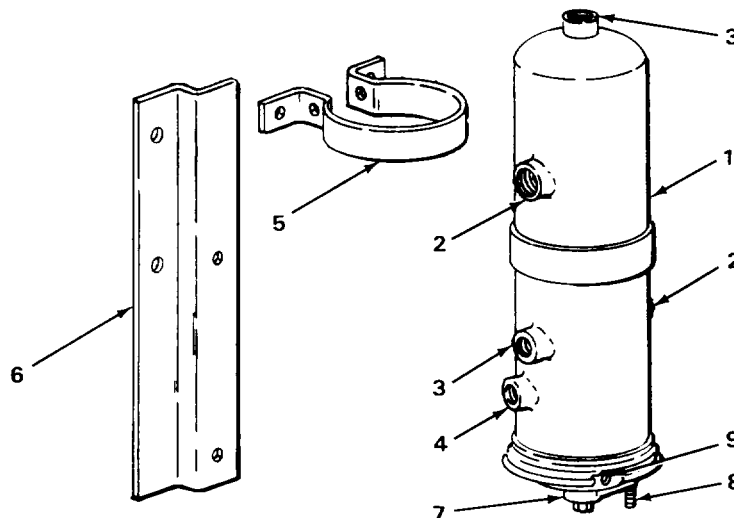
LOCATION	ITEM	ACTION REMARKS
25.	Air dryer (1)	a. Clean rust, scale, and corrosion from outside surfaces using wire brush. b. Wipe clean using drycleaning solvent and wiping rag. c. To touch-up or repaint, refer to TM 43-0139.
26.	Two brackets (10)	a. Clean rust, scale, and corrosion using and two clamps (11) wire brush. b. Wipe clean using drycleaning solvent and wiping rag. c. To touchup or repaint, refer to TM 43-0139.



TA244337

AIR DRYER - CONTINUED

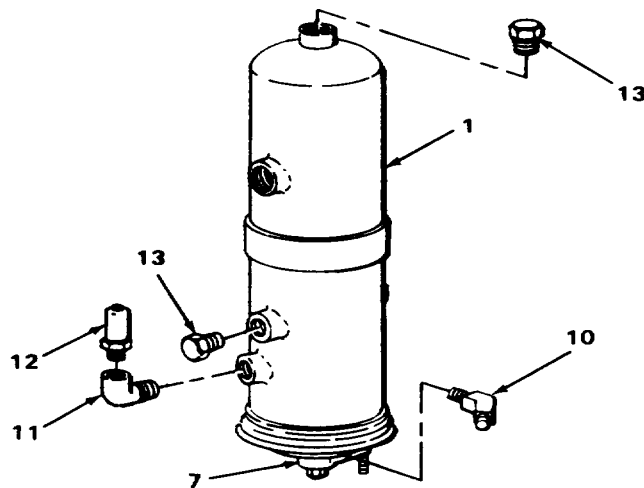
LOCATION	ITEM	ACTION REMARKS
INSPECTION/REPLACEMENT		
NOTE		
Replace all damaged or defective parts.		
For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).		
27.	Air dryer (1)	<ul style="list-style-type: none"> a. Look for cracks or broken welds. b. Look for stripped or cracked elbow bosses (2) or plug bosses (3). c. Look for stripped or cracked pressure relief valve boss (4).
28.	Two clamps (5)	<ul style="list-style-type: none"> a. Look for cracks, breaks, or twists. b. Look for distorted or oversized holes.
29.	Two brackets (6)	<ul style="list-style-type: none"> a. Look for cracks, breaks, or bends. b. Look for distorted or oversized holes.
30.	Head assembly (7)	<ul style="list-style-type: none"> a. Look for cracks or breaks. b. Look for broken heater wire terminal (8). c. Look for stripped governor line boss (9).
31.	All threaded parts	Look for damaged threads or rounded heads.



TA244338

AIR DRYER - CONTINUED TM 5-3805254-20-2

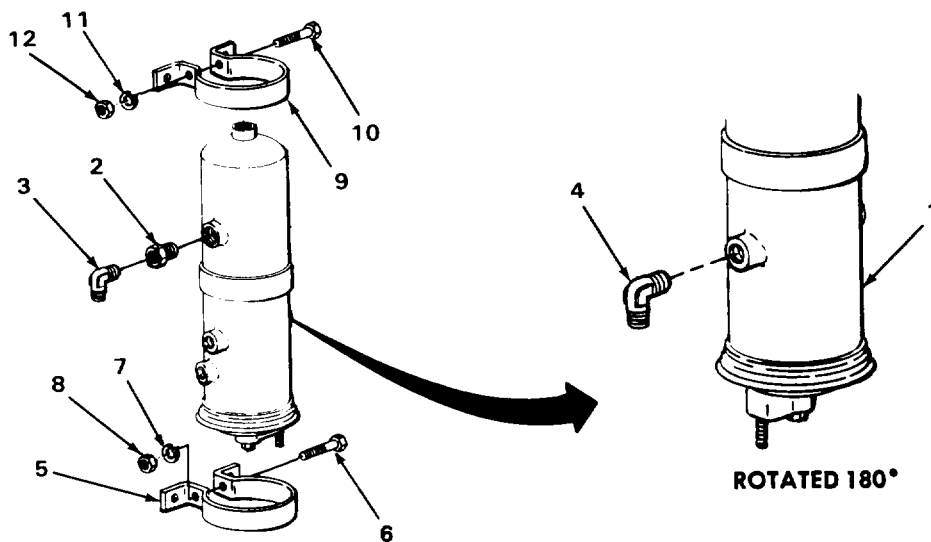
LOCATION	ITEM	ACTION REMARKS
ASSEMBLY		
<u>CAUTION</u>		
Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.		
<u>NOTE</u>		
For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).		
Position all elbows as shown in illustration.		
32. Head assembly (7)	45-degree elbow (10)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 5/8-inch open-end wrench.
33. Air dryer (1)	90-degree elbow (11)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 13116-inch open-end wrench.
34. 90-degree elbow (11)	Pressure relief valve (12)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 3/4-inch open-end wrench.
35. Airdryer (1)	Two plugs (13)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 7/8-inch box-end wrench.



TA244339

AIR DRYER - CONTINUED

LOCATION	ITEM	ACTION REMARKS
ASSEMBLY - CONTINUED		
36. Air dryer (1)	Check valve (2)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 1 1/4-inch open-end wrench.
37. Check valve (2)	90-degree elbow (3)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 1 1/4-inch and 13/16-inch open-end wrenches.
38. Air dryer (1)	90-degree elbow (4)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 3/4-inch open-end wrench.
39.	Bottom clamp (5)	Open and slide on.
40. Bottom clamp (5)	Cap screw (6), new lockwasher (7), and nut (8)	Put in place. Do not tighten.
41.	Top clamp (9)	Open and slide on.
42. Top clamp (9)	Cap screw (10), new lockwasher (11), and nut (12)	Put in place. Do not tighten.



TA244340

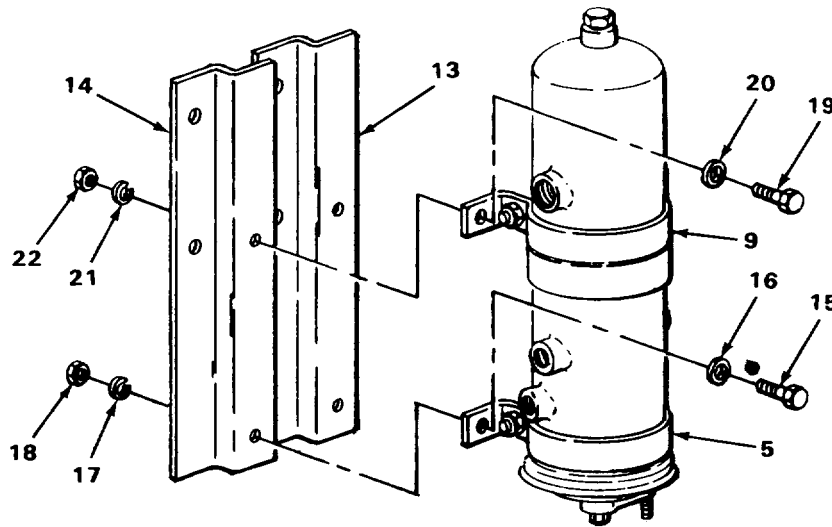
AIR DRYER - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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NOTE

Position right and left brackets as shown in illustration.

- | | | |
|--|---|--|
| 43. Bottom clamp (5) and top clamp (9) | Right bracket (13) and left bracket (14) | Put into position. |
| 44. Bottom clamp (5) | Two screws (15), two flat washers (16), two new lockwashers (17), and two nuts (18) | Screw in and tighten using two 9/16-inch box-end wrenches. |
| 45. Top clamp (9) | Two screws (19), two flat washers (20), two new lockwashers (21), and two nuts (22) | Screw in and tighten using two 9/16-inch box-end wrenches. |



TA244341

AIR DRYER - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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INSTALLATION

WARNING

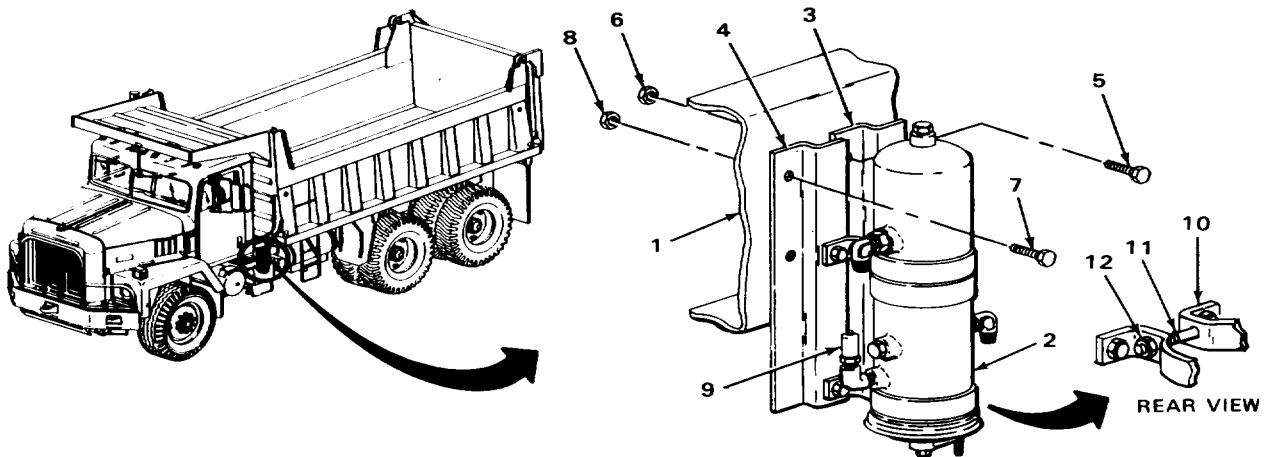
Assistance will be needed to support air dryer while performing steps 46, 47, and 48. Failure to observe this precaution could cause injury to personnel.

46. Frame rail (1)	Air dryer (2), right bracket (3), and left bracket (4)	Put in place aligning holes in right and left brackets with holes in frame rail.
47. Right bracket (3)	Two screws (5) and two nuts (6)	Screw in and tighten using 3/4-inch, 11/2-inch drive socket, 3-inch extension, ratchet handle, and 3/4-inch box-end wrench.
48. Left bracket (4)	Two screws (7) and two nuts (8)	Screw in and tighten using 3/4-inch, 1/2-inch drive socket, 3-inch extension, ratchet handle, and 3/4-inch box-end wrench.
49. Air dryer (2)	Pressure relief valve (9)	Turn air dryer to position pressure relief valve toward front of dump truck.

NOTE

Step 50 is typical for top and bottom clamps.

50. Clamp (10)	Pinch screw (11) and nut (12)	Tighten using two 1/2-inch box-end wrenches.
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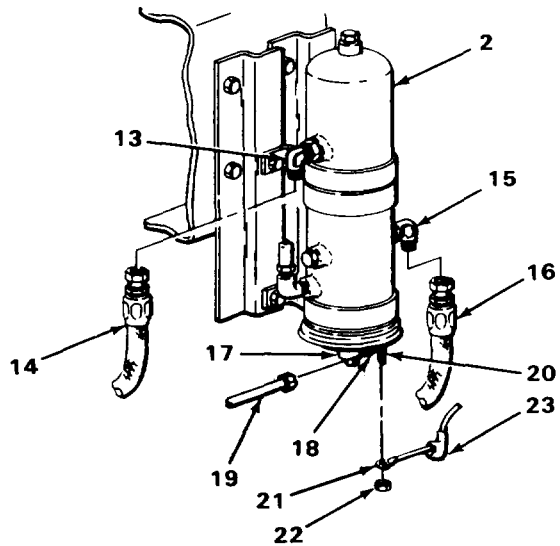
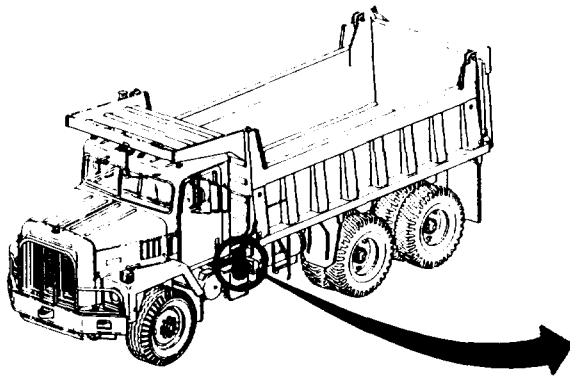


51. Air dryer (2)	90-degree elbow (13)	Wrap pipe threads with antiseizing tape.
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TA244342

AIR DRYER - CONTINUED

LOCATION	ITEM	ACTION REMARKS
52. 90-degree elbow (13)	Outlet airhose (14)	a. Screw on and tighten using 1-inch open-end wrench. b. Take off tag. c. Get rid of tag.
53. Air dryer (2)	90-degree elbow (15)	Wrap pipe threads with antiseizing tape.
54. 90-degree elbow (15)	Inlet air line (16)	a. Screw on and tighten using 15/16-inch open-end wrench. b. Takeoff tag. c. Get rid of tag.
55. Head assembly (17)	45-degree elbow (18)	Wrap pipe threads with antiseizing tape.
56. 45-degree elbow (18)	Governor line (19)	a. Screw on and tighten using 5/8-inch open-end wrench. b. Take off tag. c. Get rid of tag.
57. Terminal (20)	Heater wire (21), nut (22), and boot (23)	a. Put on heater wire. b. Screw on and tighten nut using 3/8-inch open-end wrench. c. Push boot over nut.



TA244343

AIR DRYER CARTRIDGE

This task covers:

- | | |
|------------------------------|---|
| a. Removal (page 2-1014) | d. Inspection/Replacement (page 2-1018) |
| b. Disassembly (page 2-1016) | e. Assembly (page 2-1019) |
| c. Cleaning (page 2-1016) | f. Installation (page 2-1020) |

INITIAL SETUP:

Tools

- Gloves, safety
- Goggles, safety
- Hammer, plastic-face
- Handle, ratchet, 1/2-inch drive
- Screwdriver, cross-tip, number two
- Screwdriver, flat-tip, 3/8-inch
- Socket, deep, 3/4-inch, 1/2-inch drive
- Wrench, box-end, 7/16-inch
- Wrench, box-end, 11/16-inch
- Wrench, open-end, 3/8-inch
- Wrench, open-end, 5/8-inch

Materials/Parts

- Cartridge, air dryer
- Locknut, cartridge

Materials/Parts - Continued

- Lockwasher, check ball retaining screw
- Lockwasher, head assembly (three required)
- Oil, lubricating (item 14, appendix C)
- Ring set
- Rags, wiping (item 15, appendix C)
- Solvent, drycleaning (item 19, appendix C)
- Tags, marker (item 21, appendix C)
- Tape, antiseizing (item 22, appendix C)
- Valve, ball check

Personnel Required

One

Equipment Condition

Airbrake system drained (page 2-1034).

LOCATION	ITEM	ACTION REMARKS
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REMOVAL

NOTE

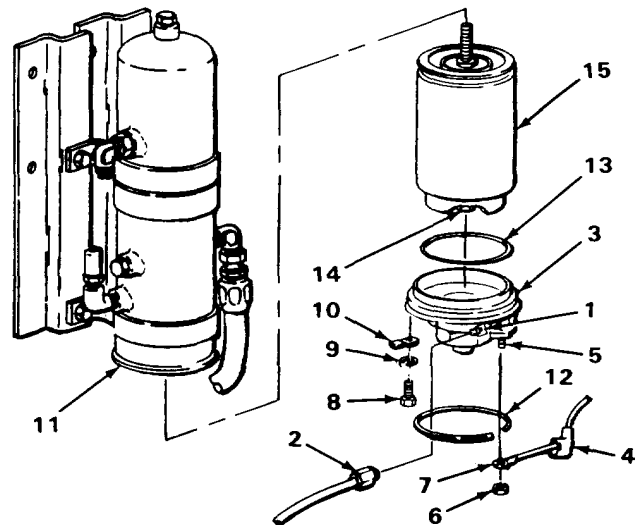
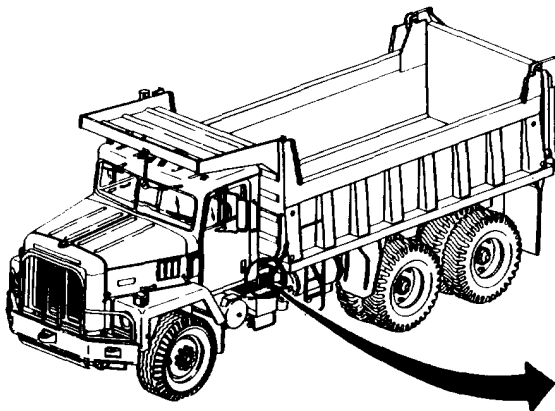
For more information on how to tag parts, go to General Maintenance Instructions (page 2-424).

- | | | |
|------------------------|-----------------------------|--|
| 1. 45-degree elbow (1) | Governor line (2) | a. Tag.
b. Using 5/8inch open-end wrench, unscrew and take off. |
| 2. Head assembly (3) | Boot (4) | Pull back. |
| 3. Terminal (5) | Nut (6) and heater wire (7) | Using 3/8-inch open-end wrench, unscrew and take off. |

2-1014

AIR DRYER CARTRIDGE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
4. Head assembly (3)	Three screws (8), three lockwashers (9), and three clips (10)	a. Using 7/16-inch box-end wrench, unscrew and take off. b. Get rid of lockwashers.
CAUTION		
Care must be taken not to strike heater wire terminal or 45-degree elbow.		
5. Air dryer (11)	Head assembly (3)	Using plastic-face hammer, strike gently to push up.
6.	Retaining ring (12)	Using 3/8-inch flat-tip screwdriver, pry out from notch.
7.	Head assembly (3)	Pull out.
8.	Ring (13)	a. Take out. b. Get rid of.
9.	Cartridge screw (14) and cartridge (15)	Using 3/4-inch, 1/2-inch drive deep socket and ratchet handle, unscrew and lower cartridge.



TA244344

AIR DRYER CARTRIDGE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
DISASSEMBLY		
<u>CAUTION</u>		
Position cartridge with cartridge locknut facing up to prevent beads from spilling.		
10. Cartridge (1)	Cartridge locknut (2) and cartridge screw (3)	a. Using 3/4-inch 1/2-inch drive deep socket, ratchet handle, and 11/16-inch box-end wrench, unscrew and take off cartridge locknut. b. Get rid of cartridge locknut. Do not take out cartridge screw.
11.	Plate (4), washer (5), and spring (6)	Take out.
12.	Cartridge (1)	Get rid of.
13. Plate (4)	Two rings (7)	a. Take off. b. Get rid of.
14.	Screw (8), lock-washer (9), and clip (10)	a. Using number two cross-tip screw-driver, unscrew and take off. b. Get rid of lockwasher.
15.	Ball check valve (11)	a. Take out. b. Get rid of.

CLEANING

WARNING

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 100°F (38°C) and for type #2 is 138°F (59°C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

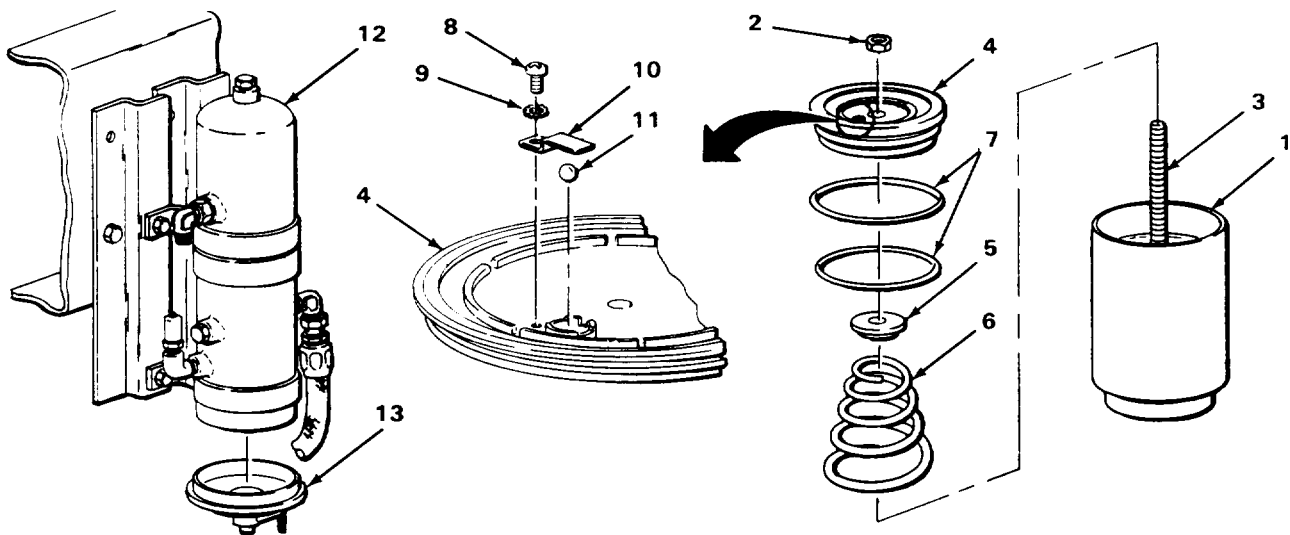
AIR DRYER CARTRIDGE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

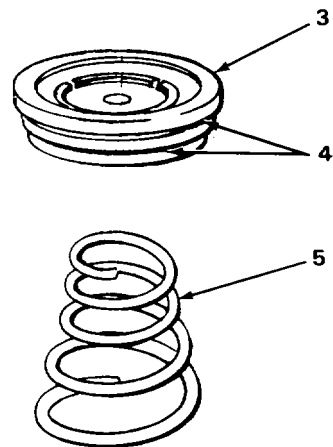
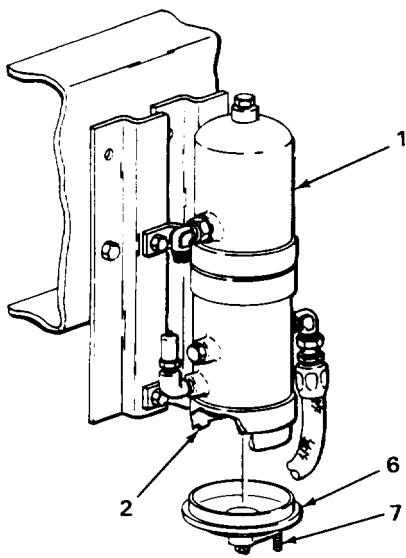
16.	Air dryer (12)	Wipe inside clean using drycleaning solvent and wiping rag.
17.	Plate (4)	Clean using drycleaning solvent and wiping rag.
18.	Head assembly (13)	Clean using drycleaning solvent and wiping rag.
19.	Washer (5) and spring (6)	Clean using drycleaning solvent and wiping rag.



TA244345

AIR DRYER CARTRIDGE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSPECTION/REPLACEMENT		
NOTE		
Replace all damaged or defective parts.		
For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).		
20.	Air dryer (1)	a. Look for bent or broken retaining ring flange (2). b. Look inside for excessive rust, scale, or corrosion. If excessive rust or corrosion is found, replace air dryer (page 2-1002).
21.	Plate (3)	a. Look for cracks, breaks, or dents. b. Look for cracked or broken O-ring grooves (4).
22.	Spring (5)	Look for stretched or broken coils.
23.	Head assembly (6)	a. Look for cracks or breaks. b. Look for broken heater wire terminal (7).
24.	All threaded parts	Look for defective threads or rounded heads.



TA244346

AIR DRYER CARTRIDGE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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ASSEMBLY

CAUTION

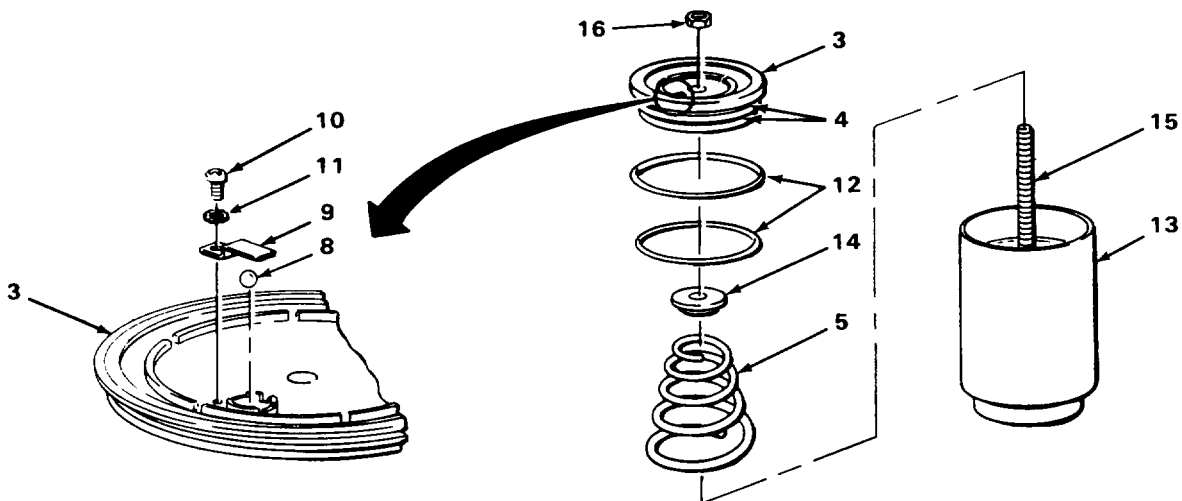
Position new cartridge with cartridge locknut facing up to prevent beads from spilling.

25. Plate (3)	New ball check valve (8) and clip (9)	a. Drop in ball check valve. b. Put retaining clip in position.
26.	Screw (10) and new lockwasher (11)	Screw in and tighten using number two cross-tip screwdriver.
27.	Two new rings (12)	a. Coat with lubricating oil. b. Put into ring grooves (4).
28. New cartridge (13)	Spring (5) and washer (14)	Put in. Position large diameter of spring facing down.

NOTE

Hold cartridge screw from being pushed out when performing next step.

29.	Plate (3)	Put on.
30. Cartridge screw (15)	New cartridge locknut (16)	Screw on and tighten using 3/4-inch 112-inch drive deep socket, ratchet handle, and 11/16-inch box-end wrench.

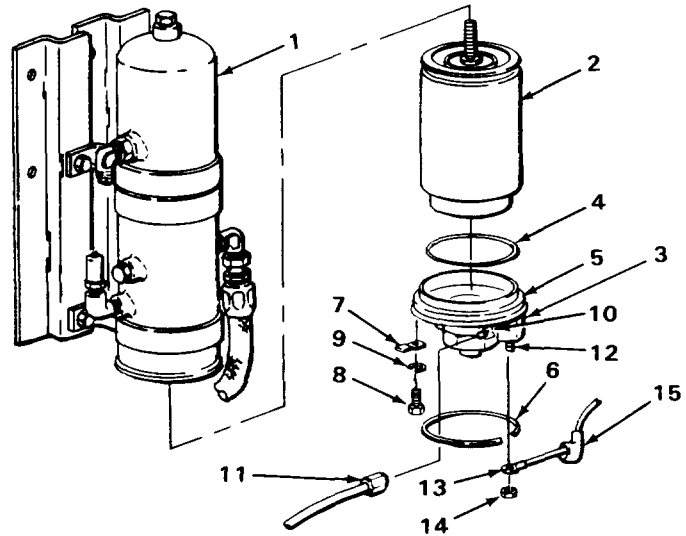
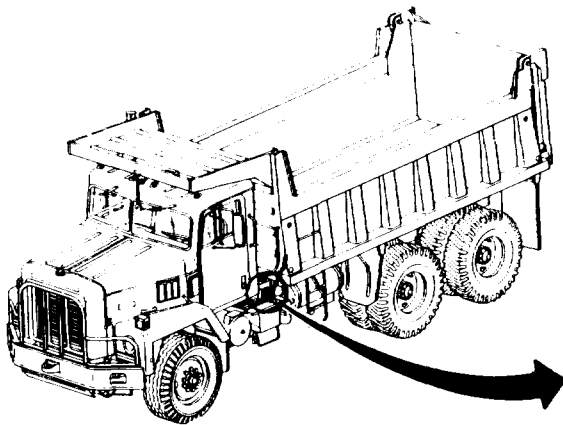


TA244347

AIR DRYER CARTRIDGE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
NOTE		
Position new cartridge as shown in illustration.		
31. Air dryer (1)	New cartridge (2)	Screw in and tighten using 3/4-inch 1/2-inch drive deep socket and ratchet handle.
32. Head assembly (3)	New ring (4)	a. Coat with lubricating oil. b. Put on up to lip (5).
NOTE		
Position head assembly as shown in illustration.		
33. Air dryer (1)	Head assembly (3)	Put in.
34.	Ring (6)	a. Push up head assembly (3). b. Put in ring. c. Release head assembly.
NOTE		
Position three clips as shown in illustration.		
35. Head assembly (3)	Three clips (7)	Put into position.
36.	Three screws (8) and three new lockwashers (9)	Screw in and tighten using 7/16-inch box-end wrench.
NOTE		
For more information on antiseizing tape, go to General Maintenance Instructions (page 2-424).		
37.	45-degree elbow (10)	Wrap pipe threads with antiseizing tape.
38. 45-degree elbow (10)	Governor line (11)	a. Screw on and tighten using 5/8-inch open-end wrench. b. Get rid of tag.
39. Terminal (12)	Heater wire (13), nut (14), and	a. Put on heater wire. b. Screw on and tighten nut using 3/8-inch boot (15) open-end wrench. c. Push boot over nut.

AIR DRYER CARTRIDGE - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE: Fill airbrake system (TM 5-3805-254-10).

TASK ENDS HERE

BRAKE PEDAL

This task covers:

- | | |
|------------------------------|---|
| a. Removal (page 2-1022) | d. Inspection/Replacement (page 2-1023) |
| b. Disassembly (page 2-1022) | e. Assembly (page 2-1024) |
| c. Cleaning (page 2-1022) | f. Installation (page 2-1024) |

INITIAL SETUP:

Tools

- Brush, cleaning
- Brush, wire
- Gloves, safety
- Goggles, safety
- Pliers, long-nose, 6-inch

Materials/Parts

- Cotter pin (two required)
- Grease, GAA (item 10, appendix C)
- Rags, wiping (item 15, appendix C)
- Solvent, drycleaning (item 19, appendix C)

Personnel Required

One

TA244348

BRAKE PEDAL - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
1. Brake pin (1)	Cotter pin (2)	a. Using 6-inch long-nose pliers, bend back ends and pull out. b. Get rid of.
2. Brake pedal (3)	Brake pin (1)	Using 6-inch long-nose pliers, pull out.
3.	Brake pedal (3)	Take off.
DISASSEMBLY		
4. Roller pin (4)	Cotter pin (5)	a. Using 6-inch long-nose pliers, bend back ends and pull out. b. Get rid of.
5. Brake pedal (3)	Roller pin (4)	Using 6-inch long-nose pliers, pull out.
6.	Roller (6)	Take out.

CLEANING**WARNING**

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 100°F (38°C) and for type #2 is 138°F (59°C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

Safety goggles must be worn when using wire brush. Flying rust or metal particles could cause eye injury.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

7.	Brake pedal (3)	Clean using drycleaning solvent and cleaning brush.
8.	Roller (6)	a. Clean rust using wire brush. b. Wipe clean using drycleaning solvent and wiping rag.

BRAKE PEDAL - CONTINUED

LOCATION	ITEM	ACTION REMARKS
9.	Brake pin (1) and roller pin (4)	a. Clean rust using wire brush. b. Wipe clean using drycleaning solvent and wiping rag.

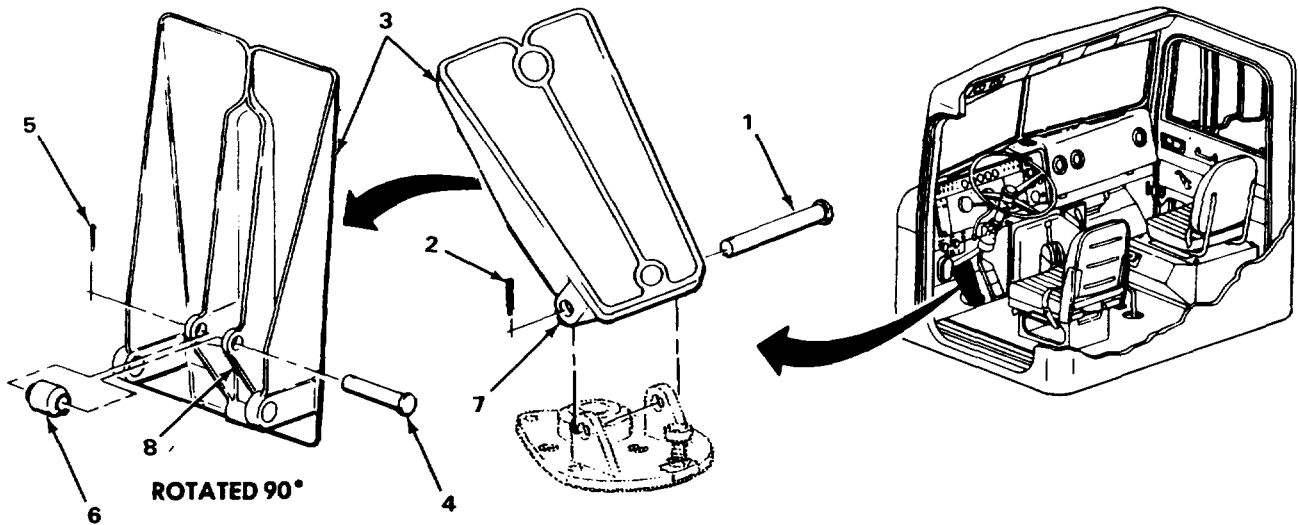
INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

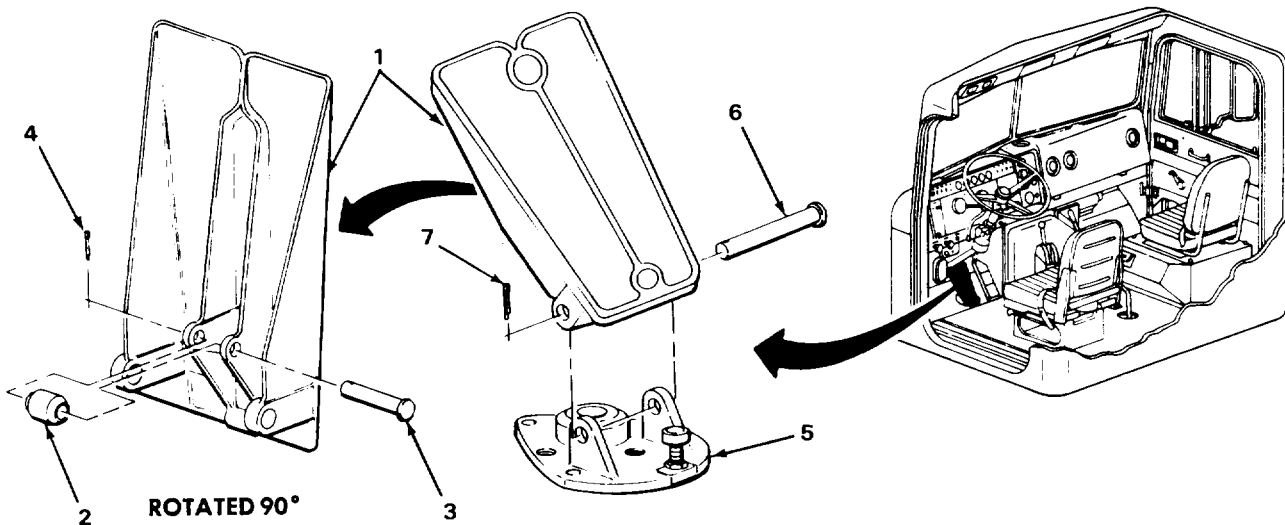
10.	Brake pedal (3)	a. Look for cracks or breaks near brake pin bosses (7) and roller pin bosses (8). b. Look for worn or distorted brake pin (1) and roller pin (4) holes.
11.	Brake pin (1) and roller pin (4)	Look for cracks, breaks, bends, or grooves.
12.	Roller (6)	a. Look for cracks, breaks, or dents. b. Look for worn or distorted areas.



TA244349

BRAKE PEDAL - CONTINUED

LOCATION	ITEM	ACTION REMARKS
ASSEMBLY		
13. Brake pedal (1)	Roller (2)	a. Coat with thin layer of GAA grease. b. Put in.
14.	Roller pin (3)	a. Coat with thin layer of GAA grease. b. Put in.
15. Roller pin (3)	New cotter pin (4)	Put in and bend back ends using 6-inch long-nose pliers.
INSTALLATION		
16. Treadle mounting plate (5)	Brake pedal (1)	Put in position.
17. Brake pedal (1)	Brake pin (6)	a. Coat with thin layer of GAA grease. b. Put in.
18. Brake pin (6)	New cotter pin (7)	Put in and bend back ends using 6-inch long-nose pliers.



TASK ENDS HERE

TA244350

PARKING BRAKE CONTROL VALVE

This task covers:

- a. Removal (page 2-1024.1) b. Installation (page 2-1024.2)

INITIAL SETUP:

Equipment Conditions

Lower center instrument panel removed (page 2-424).
 Parking brake lines and fittings removed (page 2-1025).

Tools/Test Equipment

Screwdriver, cross-tip, number one
 Wrench, open-end, 7/16-inch

Materials/Parts

Lockwasher, control valve (two required)

Personnel Required

One

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

1. Parking brake control valve (1)

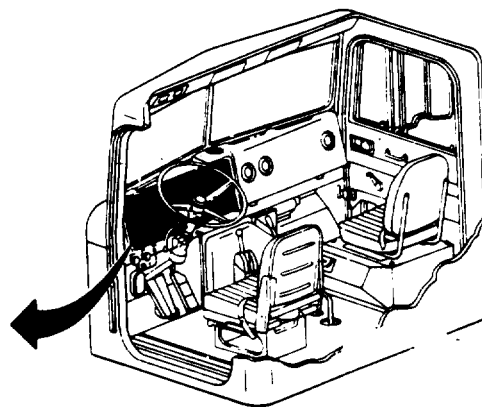
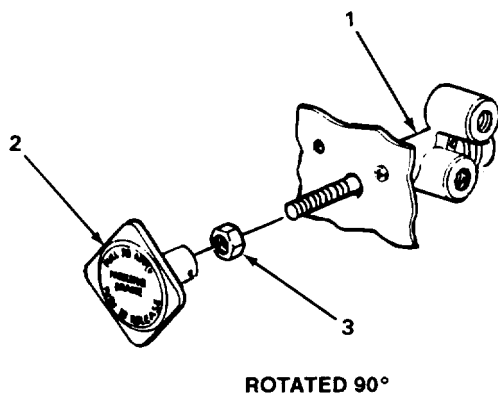
Knob (2)

Unscrew and take off.

- 2.

Nut (3)

Using 7/16-inch open-end wrench, unscrew, and take off.

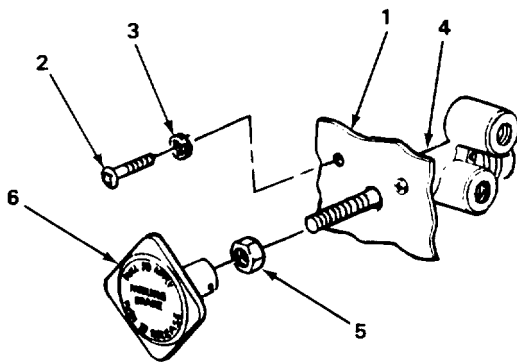


TA702138

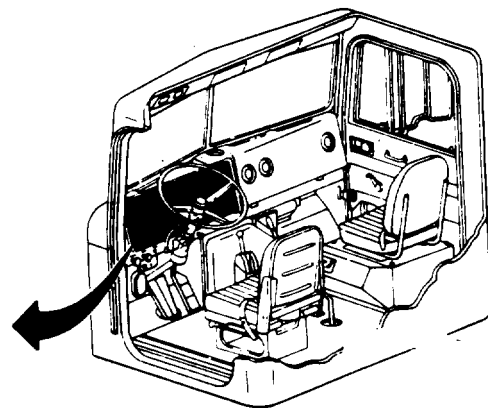
Change 1 2-1024.1

PARKING BRAKE CONTROL VALVE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
3. Instrument panel (1)	Two screws (2) and lockwashers (3)	a. Using number one cross-tip screwdriver, unscrew, and take off.	
4.	Parking brake control valve (4)	b. Get rid of lockwashers. Take off.	
INSTALLATION			
5. Instrument panel (1)	Parking brake control valve (4)	Put in place.	
6.	Two screws (2) and new lockwashers (3)	Screw in and tighten using number one cross-tip screwdriver.	
7. Parking brake control valve (4)	Nut (5)	Using 7/16-inch open-end wrench, screw on. Do not tighten.	
8.	Knob (6)	Screw on.	
9.	Nut (5)	Using 7/16-inch open-end wrench, tighten against knob (2).	



ROTATED 90°



NOTE

FOLLOW-ON MAINTENANCE:

1. Install parking brake lines and fittings (page 2-1025).
2. Install lower center instrument panel (page 2-424).

TASK ENDS HERE

PARKING BRAKE LINES

This task covers:

- a. Removal (page 2-1026)
 - b. Inspection/Replacement (page 2-1029)
 - c. Installation (page 2-1030)
-

INITIAL SETUP:**Tools**

Screwdriver, cross-tip, number two
Wrench, box-end, 3/8-inch
Wrench, open-end, 9/16-inch
Wrench, open-end, 5/8-inch

Materials/Parts

Tags, marker (item 21, appendix C)
Tape, antiseizing (item 22, appendix C)

Personnel Required

One

Equipment Condition

Left side cab door opened (page 2-424).
Right instrument panel opened (page 2-424).
Instrument panel pad removed (page 2-424).
Airbrake system drained (page 2-1034).

2-1025

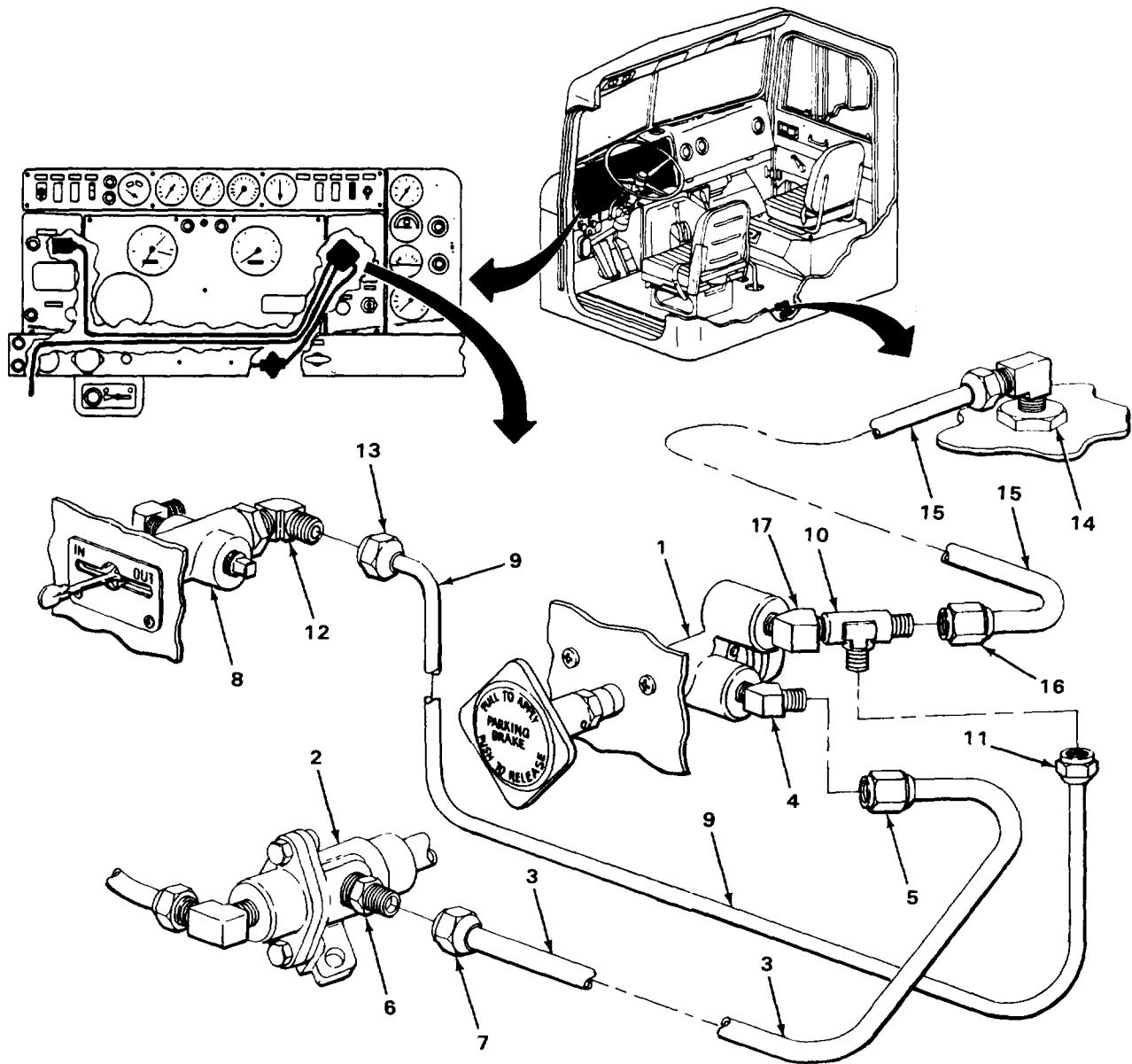
PARKING BRAKE LINES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
<u>CAUTION</u>		
Care must be taken when working behind instrument panel to prevent damaging wires or components.		
<u>NOTE</u>		
For more information on how to tag parts, go to General Maintenance Instructions (page 2-424).		
1. Parking brake control valve (1) to double check valve (2)	Air line (3)	Tag.
2.	Line nut (5) and 45-degree elbow (4)	Using 5/8-inch open-end wrench, unscrew and take off.
3.	Line nut (7), air line (3), and fitting (6)	a. Using 5/8-inch open-end wrench, unscrew and take off. b. Take out air line.
4. Parking brake control valve (1) to power divider control valve (8)	Air line (9)	Tag.
5. T-fitting (10)	Line nut (11)	Using 9/16-inch open-end wrench, unscrew and take off.
6. Power divider control valve (8)	Line nut (13), air line (9), and 90-degree elbow (12)	a. Using 9/16-inch open-end wrench, unscrew and take off. b. Take out air line.
7. Parking brake control valve (1) to cab floor through-connector (14)	Air line (15)	Tag.

Change 1 2-1026

PARKING BRAKE LINES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
8. Parking brake control valve (1)	Line nut (16), T-fitting (10), and 45-degree elbow (17)	Using 5/8-inch and 9/16-inch open-end wrenches, unscrew and take off.



TA702140

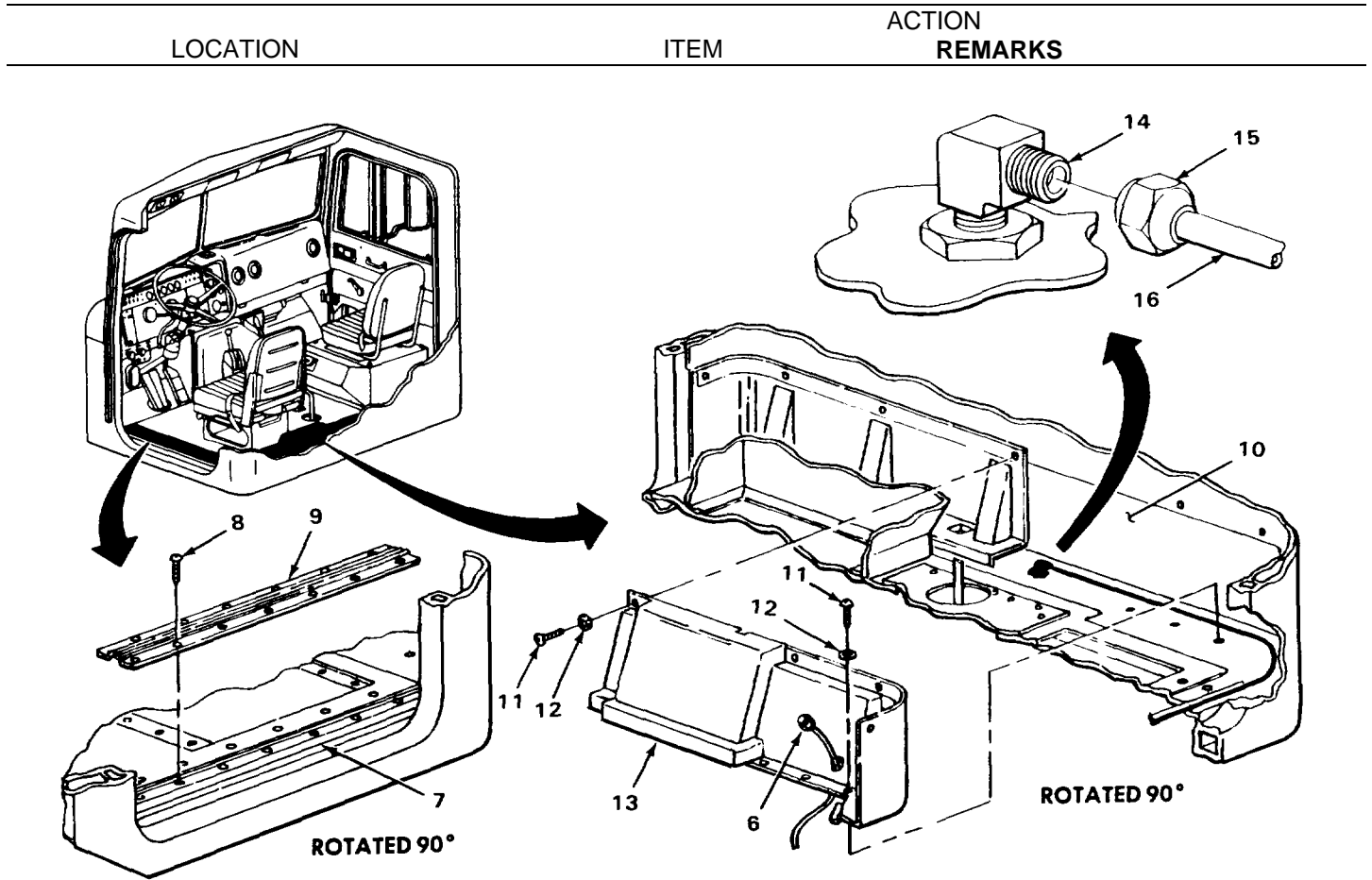
Change 1 2-1027

PARKING BRAKE LINES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED		
9. Driver's side firewall (1)	Screw (2) and clamp (3)	a. Using 3/8-inch box-end wrench, unscrew and take out. b. Take off clamp.
10. Driver's seat valve assembly (4)	Line nut (5) and air line (6)	Using 9/16-inch open-end wrench, unscrew and take off.
11. Left side cab floor (7)	Fourteen screws (8) and left scuff plate (9)	a. Using number two cross-tip screwdriver, unscrew and take out. b. Take off left scuff plate.
12. Left side rear cab wall (10)	Eight screws (11), eight flat washers (12), and left lower rear molding (13)	a. Using number two cross-tip screwdriver, unscrew and take out. b. Push air line (6) through hole while taking off left lower rear molding. Be careful not to bend or crimp air line.
13. Cab floor through-connector 90-degree elbow (14)	Line nut (15) and air line (16)	a. Using 5/8-inch open-end wrench, unscrew and take off. b. Take out air line.

TA244352

PARKING BRAKE LINES - CONTINUED



INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

- | | | |
|-----|--------------------|--|
| 14. | All air lines | <ul style="list-style-type: none"> a. Look for cracks, breaks, crimps, or chafing. b. Look for cracked or distorted line nuts. |
| 15. | All threaded parts | Look for damaged threads or rounded heads. |

TA244353

PARKING BRAKE LINES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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INSTALLATION

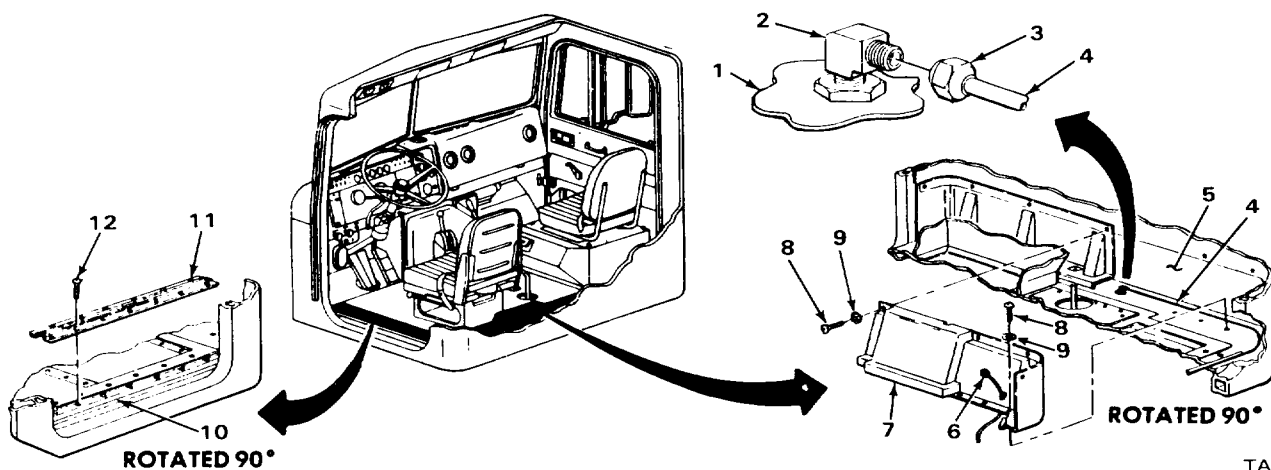
CAUTION

Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.

NOTE

For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).

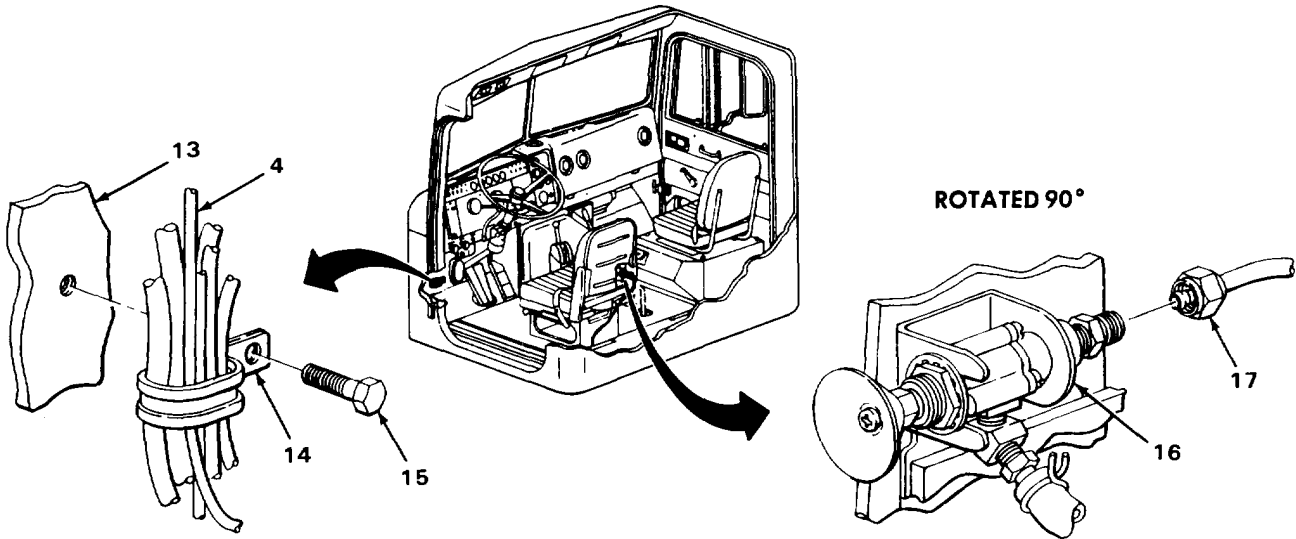
16. Cab rear floor (1)	Cab floor through connector 90-degree elbow (2)	Wrap pipe threads with antiseizing tape.
17. Cab floor through connector 90-degree elbow (2)	Line nut (3) and air line (4)	a. Screw on and tighten using 5/8-inch open-end wrench. b. Route air line as shown.
18. Left side rear cab wall (5) molding (7)	Air line (6) and left lower rear	a. Push air line through hole. b. Put left lower rear molding in position.
19. Left lower rear molding (7) washers (9)	Eight screws (8) and eight flat	Screw in and tighten using number two cross-tip screwdriver.
20. Left side cab floor (10) screws (12)cross-tip screwdriver.	Left scuff plate (11) and fourteen	a. Put left scuff plate in position. b. Screw in and tighten using number two



TA244354

PARKING BRAKE LINES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
22. Driver's side firewall (13)	Air line (4), clamp (14), and screw (15)	a. Put clamp around air line. b. Screw in and tighten using 3/8-inch box-end wrench.
23. Driver's seat valve assembly (16)	Air line (17)	Screw on and tighten using 9/16-inch open-end wrench.



CAUTION

Care must be taken when working behind instrument panel to prevent damaging wires or components.

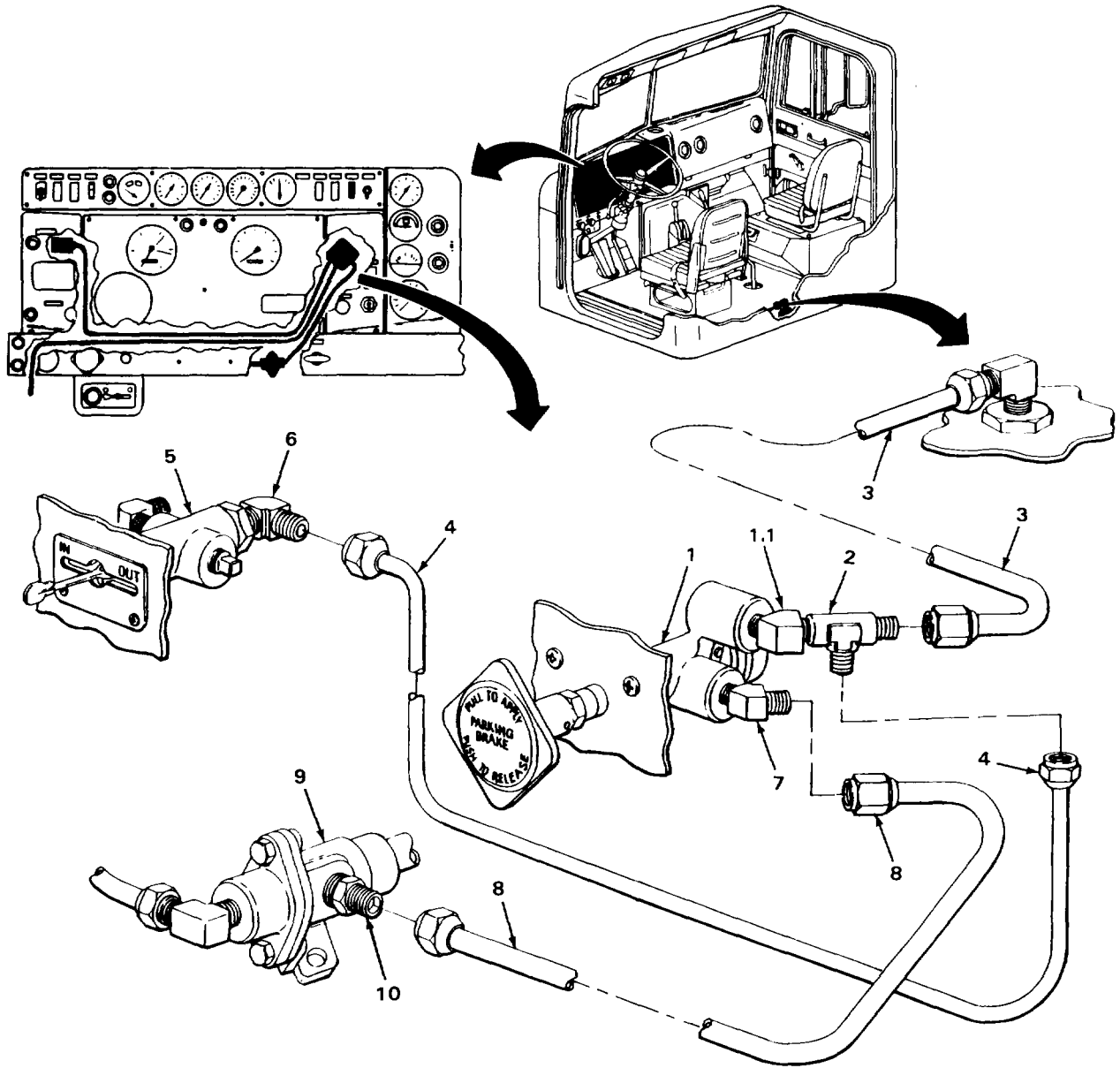
TA244355

PARKING BRAKE LINES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
NOTE		
See tags for air line locations.		
24. Parking brake control valve (1)	45-degree elbow (1.1) and T-fitting (2)	Wrap pipe threads with antiseizing tape.
25.	45-degree elbow (1.1), T-fitting (2), and air line (3)	a. Screw on and tighten using 5/18inch open-end wrench. b. Take off tag. c. Get rid of tag.
26.	Air line (4)	Screw on and tighten using 9/16-inch open-end wrench.
27. Power divider control valve (5)	90-degree elbow (6)	Wrap pipe threads with antiseizing tape.
28.	90-degree elbow (6) and air line (4)	a. Screw on and tighten using 9/16-inch open-end wrench. b. Take off tag. c. Get rid of tag.
29. Parking brake control valve (1)	45-degree elbow (7)	Wrap pipe threads with antiseizing tape.
30.	45-degree elbow (7) and air line (8)	Screw on and tighten using 5/8-inch open-end wrench.
31. Double check valve (9)	Fitting (10)	Wrap pipe threads with antiseizing tape.
32.	Fitting (10) and air line (8)	a. Screw on and tighten using 5/8-inch open-end wrench. b. Take off tag. c. Get rid of tag.

Change 1 2-1032

PARKING BRAKE LINES - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE:

1. Install instrument panel pad (page 2-424).
2. Close right instrument panel (page 2-424). Change 12-1033
3. Close left side cab door (page 2-424).

TASK ENDS HERE

AIRBRAKE SYSTEM DRAINING

This task covers:

Draining

INITIAL SETUP:

Personnel Required

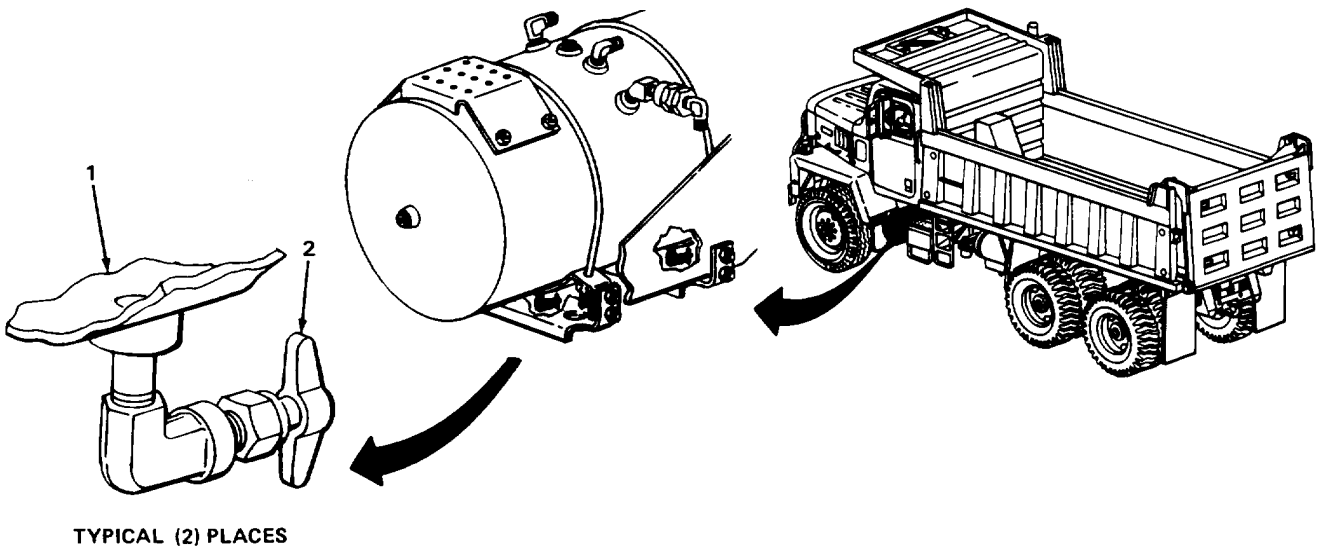
One

LOCATION	ITEM	ACTION	REMARKS
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WARNING

Drain air from airbrake system before removing hoses, lines or fittings to avoid injury to personnel from compressed air.

- | | | |
|--------------------------|--------------------|--|
| 1. Dry air reservoir (1) | Two draincocks (2) | <ul style="list-style-type: none"> a. Turn counterclockwise to open and allow compressed air to drain. b. Turn clockwise to close. |
|--------------------------|--------------------|--|



TA244357

TASK ENDS HERE

AIRBRAKE CYLINDER CONTROL VALVE

This task covers:

a. Removal (page 2-1034.1)

b. Installation (page 2-1034.2)

INITIAL SETUP:

Equipment Conditions

Front brake limiting control valve hoses and fittings disconnected (page 2-1159).

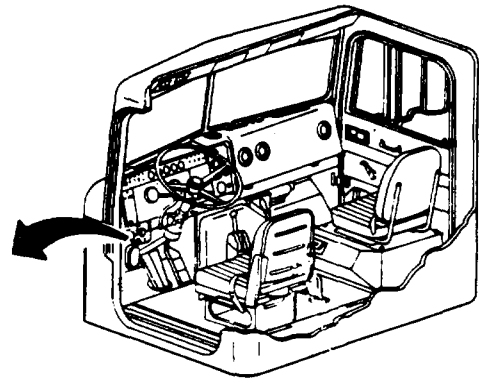
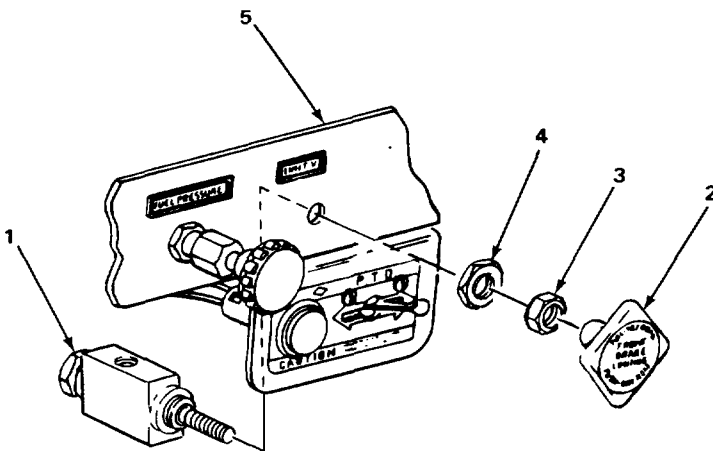
Tools/Test Equipment

Wrench, box-end, 7/16-inch
Wrench, open-end, 1-inch

Personnel Required

One

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1. Airbrake cylinder control valve (1)	Knob (2)	Unscrew and take off.	
2.	Nut (3)	Using 7/16-inch open-end wrench, unscrew, and take off.	
3.	Nut (4)	Using 1-inch open-end wrench, unscrew, and take off.	
4. Instrument panel (5)	Airbrake cylinder control valve (1)	Take off.	



TA702142

Change 1 2-1034.1

AIRBRAKE CYLINDER CONTROL VALVE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
5. Instrument panel (1)	Airbrake cylinder control valve (2)	Put in place.
6. Airbrake cylinder control valve (2)	Nut (3)	Screw on and tighten using 1 -inch open-end wrench.
7.	Nut (4)	Screw on using 7/16-inch open-end wrench. Do not tighten.
8.	Knob (5)	Screw on.
9.	Nut (4)	Using 7/16-inch open-end wrench, tighten against knob (2).

NOTE

FOLLOW-ON MAINTENANCE: Connect front brake limiting control valve hoses and fittings (page 2-1159).

TASK ENDS HERE

TA702143

Change 1 2-1034.2

AIR COMPRESSOR TO AIR DRYER HOSE AND LINES

This task covers:

- | | |
|---------------------------|---|
| a. Removal (page 2-1036) | c. Inspection/Replacement (page 2-1037) |
| b. Cleaning (page 2-1037) | d. Installation (page 2-1038) |
-

INITIAL SETUP:**Tools**

Gloves, safety
 Goggles, safety
 Wrench, box-end, 7/16-inch
 Wrench, open-end, 7/16-inch
 Wrench, open-end, 15/16-inch
 Wrench, open-end, 1-inch

Materials/Parts

Detergent, liquid, GP (item 7, appendix C)
 Lockwasher, clamp screw, front
 Lockwasher, clamp screw, rear (two required)

Materials/Parts - Continued

Rags, wiping (item 15, appendix C)
 Solvent, drycleaning (item 19, appendix C)
 Tags, marker (item 21, appendix C)
 Tape, antiseizing (item 22, appendix C)

Personnel Required

One

Equipment Condition

Airbrake system drained (page 2-1034).
 Left side hood panel opened (page 2-424).

2-1035

AIR COMPRESSOR TO AIR DRYER HOSE AND LINES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
WARNING		
Safety goggles must be worn when working under truck to prevent eye injury.		
NOTE		
Air line is in three sections. Tag sections from front to rear of truck as section 1, section 2, and section 3.		
For more information on how to tag parts, go to General Maintenance Instructions (page 2-424).		
1. Air compressor (1)	Air line (2)	Tag.
2. Air line (2)	Line nut (3)	Using 1-inch open-end wrench, unscrew and take off.
3. Three clamps (4)	Screw (5), lock-washer (6), and nut (7)	a. Using 7/16-inch box-end and 7/16-inch open-end wrenches, unscrew and take out. b. Get rid of lockwasher. c. Take clamps off air line (2).
4. Air line (2) and airhose (8)	Line nut (9) and line nut (10)	a. Using 1-inch and 15/16-inch open-end wrenches, unscrew and take off. b. Take out air line (2).
5.	Airhose (8)	Tag.
6. Airhose (8) and air line (11)	Line nut (12) and line nut (13)	a. Using 1-inch and 15/16-inch open-end wrenches, unscrew and take off. b. Take out airhose (8).
7.	Air line (11)	Tag.

NOTE

Step 9 is typical for two clamp assemblies.

8. Air line (11)	Screw (14), lock-washer (15), nut (16), clamp (17), and clamp (18)	a. Using 7/16-inch box-end and 7/16-inch open-end wrenches, unscrew and take out. b. Get rid of lockwasher. c. Take clamp (17) off air line.
9. Air dryer (19) and 90-degree elbow (20)	Line nut (21) and air line (11)	a. Using 15/16-inch open-end wrench, unscrew and take off. b. Take out air line.

AIR COMPRESSOR TO AIR DRYER HOSE AND LINES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
CLEANING		
WARNING		
<p>Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 100°F (38°C) and for type #2 is 138°F (59°C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.</p>		
NOTE		
<p>For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).</p>		
10.	Airhose (8)	Clean using liquid detergent and wiping rag.
11.	All metal parts	Clean using drycleaning solvent and wiping rag.

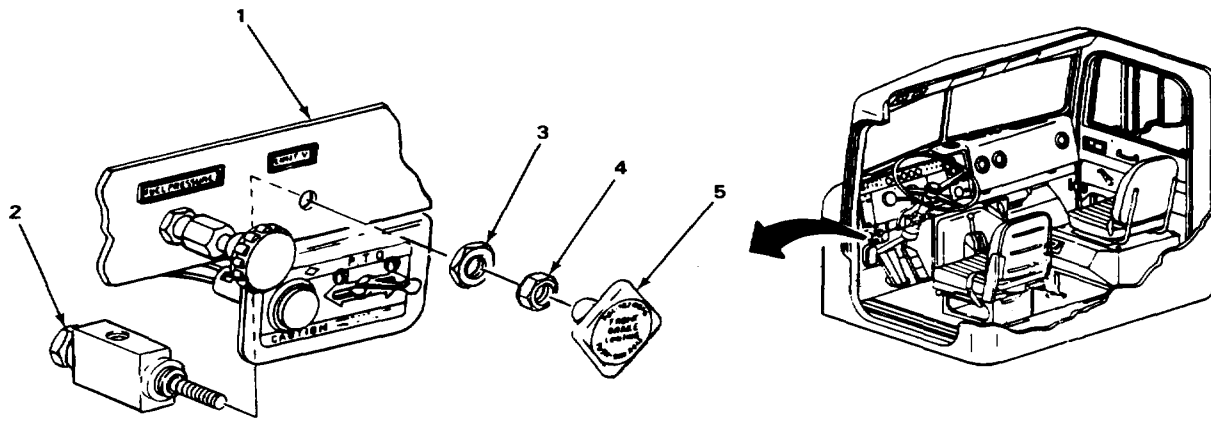
INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

12.	Air lines (2 and 11) and airhose (8)	<ul style="list-style-type: none"> a. Look for cracks, breaks, kinks, or chafing. b. Look for excessive rust or corrosion.
13.	All threaded parts	Look for damaged threads or rounded heads.



TA244358

AIR COMPRESSOR TO AIR DRYER HOSE AND LINES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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INSTALLATION

CAUTION

Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.

NOTE

For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).

Air line is in three sections, see tags for correct locations.

14. Air dryer (1)	90-degree elbow (2)	Wrap pipe threads with antiseizing tape.
15. 90-degree elbow (2)	Air line (3)	a. Screw on and tighten using 15/16-inch open-end wrench. b. Take off tag. c. Get rid of tag.

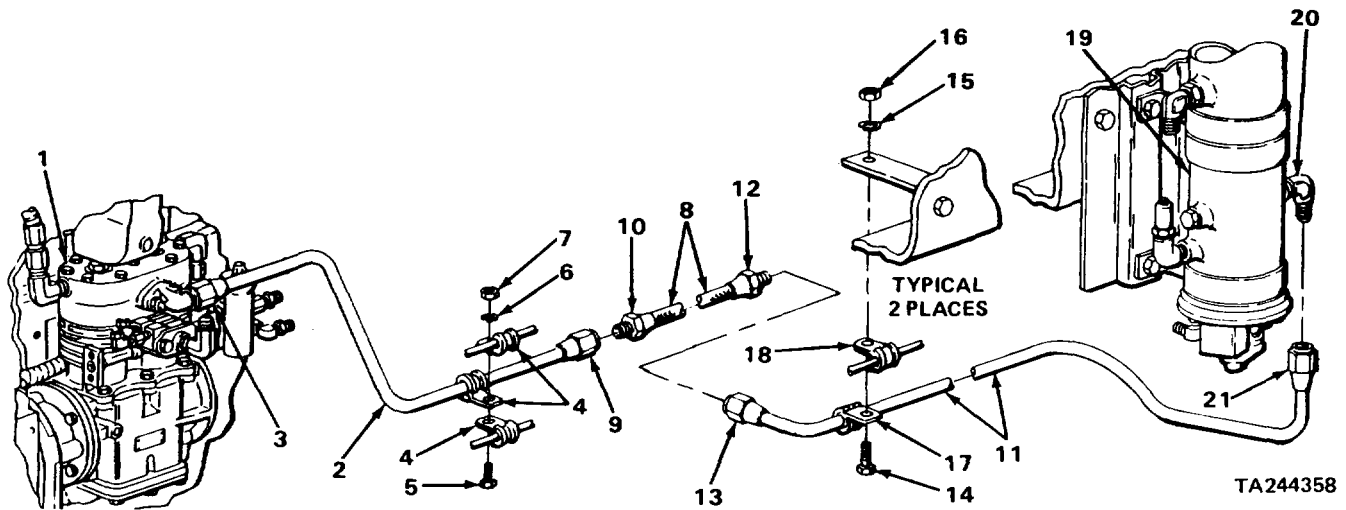
NOTE

Step 15 is typical for two clamp assemblies.

16. Clamp bracket (4) and air line (3)	Clamp (5), clamp (6), screw (7), new lockwasher (8), and nut (9)	a. Put clamp (5) around air line and position with clamp (6) on clamp bracket. b. Screw in and tighten using 7/16-inch box-end and 7/16-inch open-end wrenches.
17.	Airhose (10)	Wrap both male pipe threads with antiseizing tape.
18. Air line (3) and airhose (10)	Line nut (11) and line nut (12)	a. Screw on and tighten using 1-inch and 15/16-inch open-end wrenches. b. Take tag off air hose. c. Get rid of tag.
19. Airhose (10) and air line (13)	Line nut (14) and line nut (15)	a. Screw on and tighten using 1-inch and 15/16-inch open-end wrenches. b. Take tag off air line. c. Get rid of tag.

AIR COMPRESSOR TO AIR DRYER HOSE AND LINES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
20. Air line (13)	Clamp (16)	Put on and aline with holes in two clamps.
21. Clamp (16) and two clamps (17)	Screw (18), new lockwasher (19), and nut (20)	Screw in and tighten using 7/16-inch box-end and 7/16-inch open-end wrenches.
22. Air compressor (21)	90-degree elbow (22)	Wrap pipe threads with antiseizing tape.
23. 90-degree elbow (22)	Air line (13)	Screw on and tighten using 1-inch open-end wrench.



NOTE

FOLLOW-ON MAINTENANCE: Close left side hood panel (page 2-424).

TASK ENDS HERE

TA244359

AIR COMPRESSOR GOVERNOR TO AIR DRYER LINES AND FITTINGS

This task covers:

- | | |
|---------------------------|---|
| a. Removal (page 2-1040) | c. Inspection/Replacement (page 2-1043) |
| b. Cleaning (page 2-1042) | d. Installation (page 2-1044) |

INITIAL SETUP:

Tools

- Gloves, safety
- Goggles, safety
- Wrench, box-end, 7/16-inch
- Wrench, open-end, 7/16-inch
- Wrench, open-end, 9/16-inch
- Wrench, open-end, 5/8-inch

Materials/Parts

- Lockwasher, clamp screw, front
- Lockwasher, clamp screw, rear
- Rag, wiping (item 15, appendix C)

Materials/Parts - Continued

- Solvent, drycleaning (item 19, appendix C)
- Tags, marker (item 21, appendix C)
- Tape, antiseizing (item 22, appendix C)

Personnel Required

One

Equipment Condition

- Airbrake system drained (page 2-1034).
- Left side hood panel opened (page 2-424).

LOCATION	ITEM	ACTION REMARKS
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REMOVAL

WARNING

Safety goggles must be worn when working under truck to prevent eye injury.

NOTE

Air line is in three sections. Tag sections from front to rear of truck as section 1, section 2, and section 3.

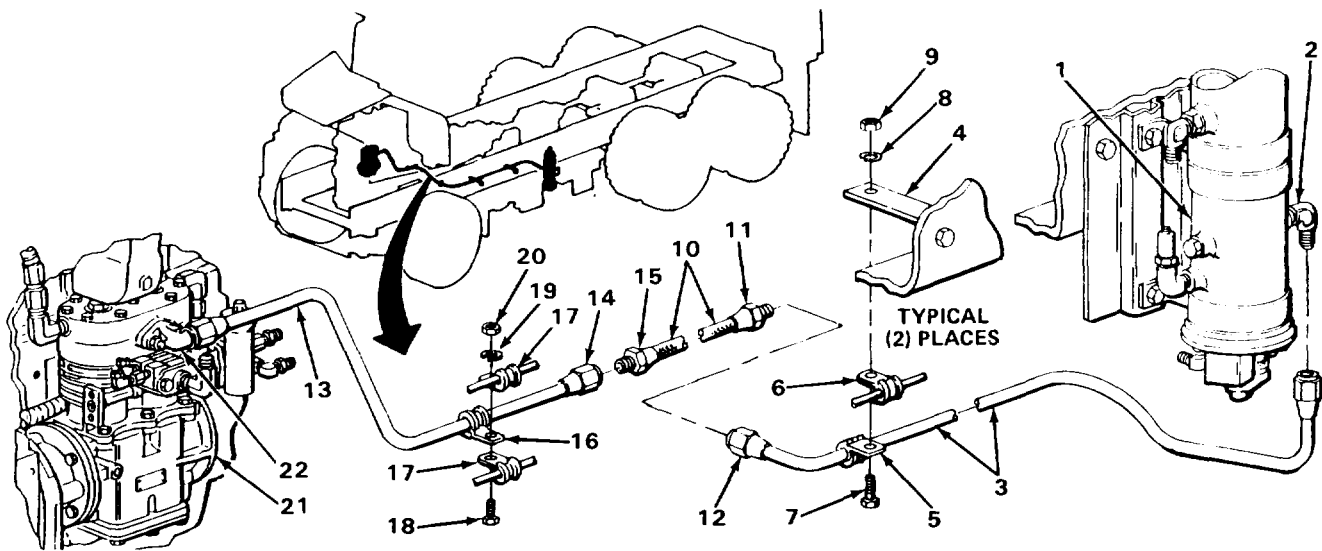
For more information on how to tag parts, go to General Maintenance Instructions (page 2-424).

- | | | | |
|----|-----------------------------|--------------|---|
| 1. | Air compressor governor (1) | Air line (2) | Tag. |
| 2. | Air line (2) | Line nut (3) | Using 5/8-inch open-end wrench, unscrew and take off. |

2-1040

AIR COMPRESSOR GOVERNOR TO AIR DRYER LINES AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
3. Three clamps (4)	Screw (5), lock-washer (6), and nut (7)	a. Using 7/16-inch box-end and 7/16-inch open-end wrenches, unscrew and take out. b. Get rid of lockwasher. c. Take clamp off air line (2).
4. Adapter (8)	Line nut (9)	a. Using 5/8-inch and 9/16-inch open-end wrenches, unscrew and take off. b. Take out air line (2).
5. Connector (10)	Adapter (8)	Using 9/16-inch and 7/16-inch open-end wrenches, unscrew and take off.
6. Line nut (11)	Connector (10)	Using 9/16-inch and 7/16-inch open-end wrenches, unscrew and take off.
7.	Air line (12)	Tag.



TA244360

AIR COMPRESSOR GOVERNOR TO AIR DRYER LINES AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED		
8. Air line (1)	Line nut (2) and connector (3)	a. Using 9/16-inch and 7/16-inch open-end wrenches, unscrew and take off. b. Take out air line.
9. Adapter (4)	Connector (3)	Using 9/16-inch and 7/16-inch open-end wrenches, unscrew and take off.
10. Line nut (5)	Adapter (4)	Using 5/8-inch and 9/16-inch open-end wrenches, unscrew and take off.
11.	Air line (6)	Tag.
12. Air line (6)	Screw (7), lock-washer (8), nut (9), and clamp (10)	a. Using 7/16-inch box-end and 7/16-inch open-end wrenches, unscrew and take out. b. Get rid of lockwasher. c. Take off clamp.
13. 45-degree elbow (11)	Line nut (12)	a. Using 5/8-inch open-end wrench, unscrew and take off. b. Take out air line (6).

CLEANING

WARNING

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 100°F (38°C) and for type #2 is 138°F (59°C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

14.	All metal parts	Clean using drycleaning solvent and wiping rag.
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AIR COMPRESSOR GOVERNOR TO AIR DRYER LINES AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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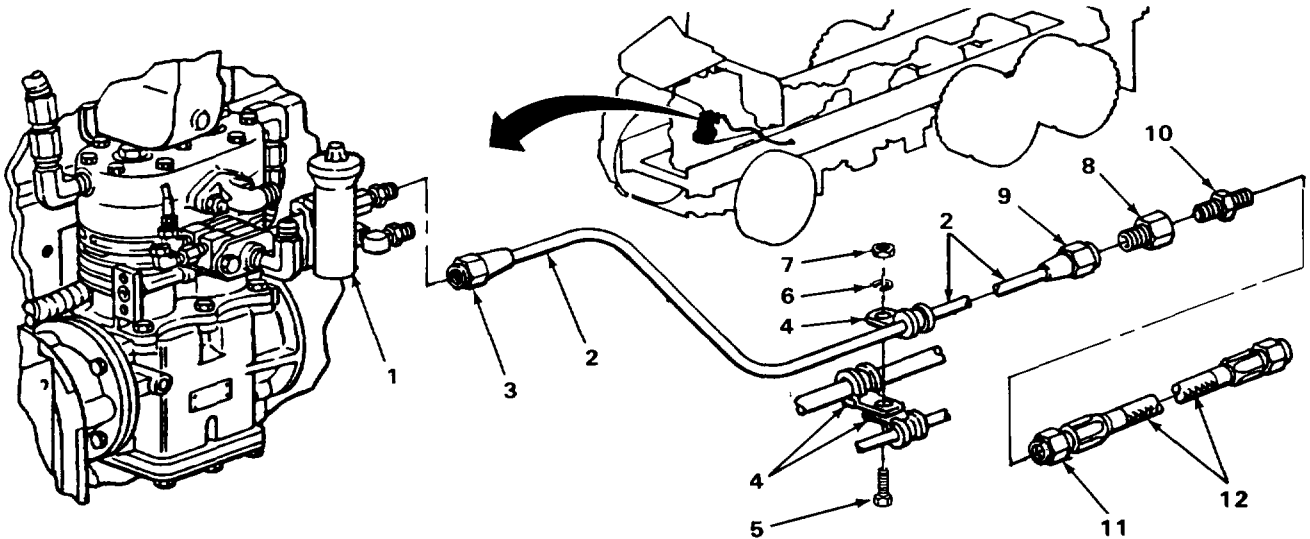
INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

- | | | |
|-----|--------------------|--|
| 15. | All air lines | <ul style="list-style-type: none"> a. Look for cracks, breaks, kinks, or chafing. b. Look for excessive rust or corrosion. |
| 16. | All threaded parts | Look for damaged threads or rounded heads. |



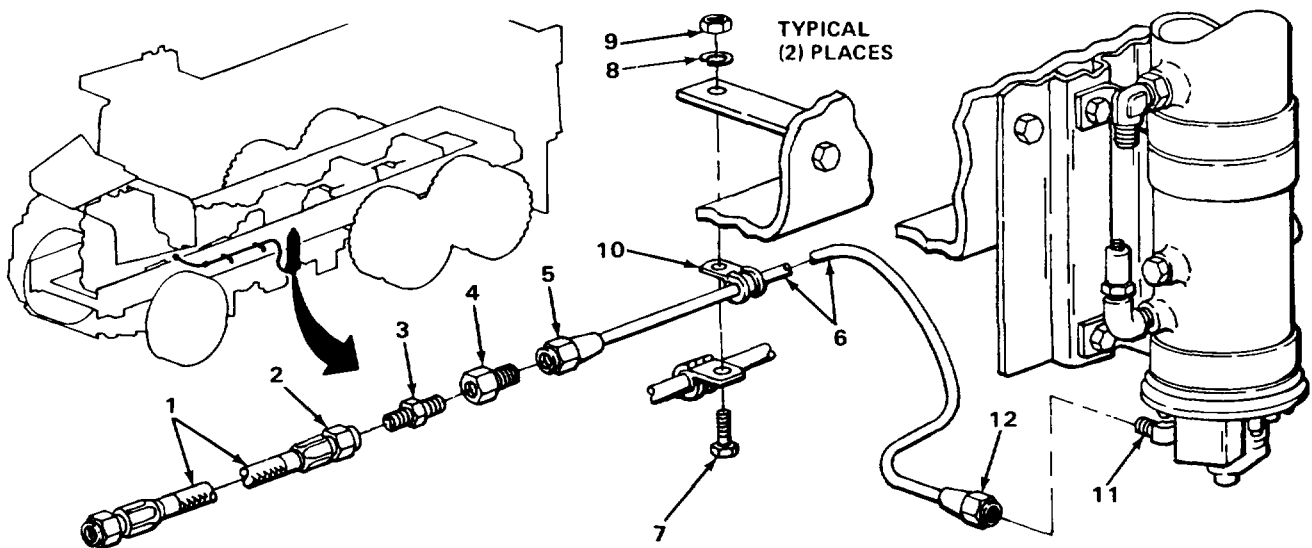
TA244361

AIR COMPRESSOR GOVERNOR TO AIR DRYER LINES AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
<u>CAUTION</u>		
Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.		
NOTE		
For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).		
Air line is in three sections. See tags for correct locations.		
17. Air dryer (1)	45-degree elbow (2)	Wrap pipe threads with antiseizing tape.
18. 45-degree elbow (2)	Air line (3) and line nut (4)	a. Screw on and tighten using 5/8-inch open-end wrench. b. Take off tag. c. Get rid of tag.
19. Clamp bracket (5) and air line (3)	Clamp (6), clamp (7), screw (8), new lockwasher (9), and nut (10)	a. Put clamp (6) around air line and position with clamp (7) on clamp bracket. b. Screw in and tighten using 7/16-inch box-end and 7/16-inch open-end wrenches.
20.	Adapter (11)	Wrap pipe threads with antiseizing tape.
21. Adapter (11)	Line nut (12)	Screw on and tighten using 5/8-inch and 9/16-inch open-end wrenches.
22.	Connector (13)	Wrap both male pipe threads with antiseizing tape.
23.	Connector (13)	Screw in and tighten using 9/16-inch and 7/16-inch open-end wrenches.
24. Connector (13)	Air line (14) and line nut (15)	a. Screw on and tighten using 5/8-inch and 9/16-inch open-end wrenches. b. Take off tag. c. Get rid of tag.
25.	Connector (16)	Wrap both male pipe threads with antiseizing tape.
26. Air line (14)	Connector (16) and line nut (17)	Screw on and tighten using 9/16-inch and 7/16-inch open-end wrenches.
27. Connector (16)	Adapter (18)	Screw on and tighten using 9/16-inch and 7/16-inch open-end wrenches.

AIR COMPRESSOR GOVERNOR TO AIR DRYER LINES AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
28.	Adapter (18)	Wrap pipe threads with antiseizing tape.
29. Air line (19)	Adapter (18) and line nut (20)	a. Screw on and tighten using 5/8-Inch and 9/16-inch open-end wrenches. b. Take tag off air line. c. Get rid of tag.
30.	Clamp (21)	Put on and align holes in two clamps (22).
31. Clamps (21 and 22)	Screw (23), new lockwasher (24), and nut (25)	Screw in and tighten using 7/16-inch box-end and 7/16-inch open-end wrenches.
32. Air compressor governor (26)	90-degree elbow (27)	Wrap pipe threads with antiseizing tape.
33. 90-degree elbow (27)	Line nut (28)	Screw on and tighten using 5/8-inch open-end wrench.



NOTE

FOLLOW-ON MAINTENANCE: Close left side hood panel (page 2-424).

TASK ENDS HERE

TA244362

AIR COMPRESSOR GOVERNOR TO WET AIR RESERVOIR LINES AND FITTINGS

This task covers:

- | | |
|---------------------------|---|
| a. Removal (page 2-1046) | c. Inspection/Replacement (page 2-1049) |
| b. Cleaning (page 2-1048) | d. Installation (page 2-1050) |

INITIAL SETUP:

Tools

- Gloves, safety
- Goggles, safety
- Wrench, box-end, 7/16-inch
- Wrench, open-end, 7/16-inch
- Wrench, open-end, 9/16-inch
- Wrench, open-end, 5/8-inch
- Wrench, open-end, 11/16-inch

Materials/Parts

- Lockwasher, clamp screw, front
- Rags, wiping (item 15, appendix C)
- Solvent, drycleaning (item 19, appendix C)

Materials/Parts - Continued

- Tags, marker (item 21, appendix C)
- Tape, antiseizing (item 22, appendix C)

Personnel Required

One

Equipment Condition

- Airbrake system drained (page 2-1034).
- Left side hood panel opened (page 2-424).

LOCATION	ITEM	ACTION REMARKS
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REMOVAL

WARNING

Safety goggles must be worn when working under truck to prevent eye injury.

NOTE

Air line is in three sections. Tag sections from front to rear of truck as section 1, section 2, and section 3.

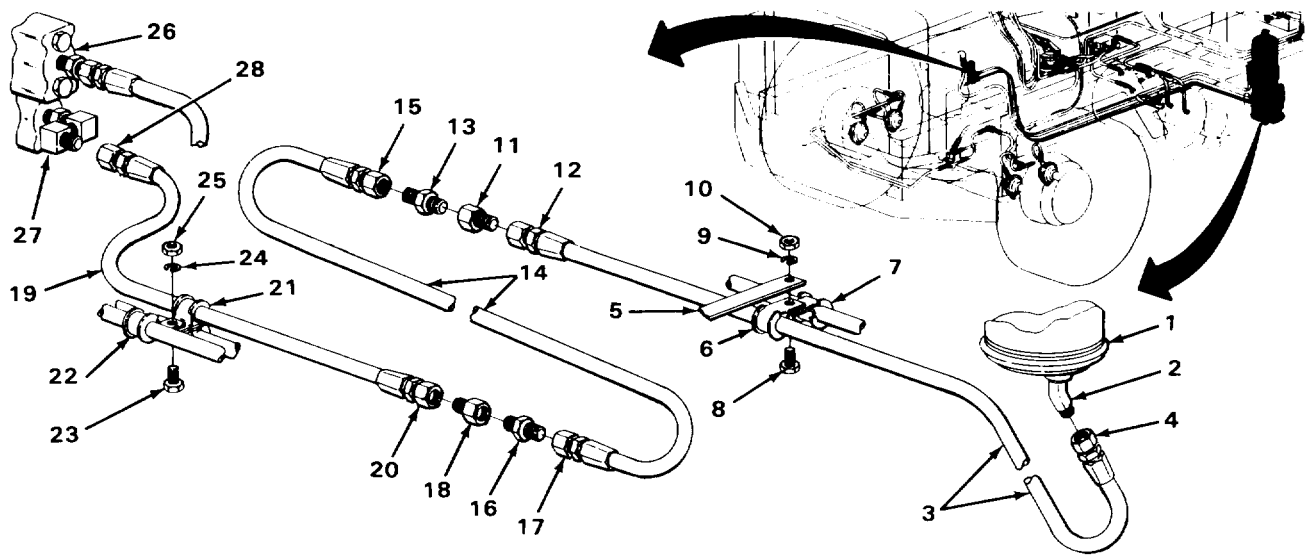
For more information on how to tag parts, go to General Maintenance Instructions (page 2-424).

- | | | | |
|----|-----------------------------|--------------------------------|---|
| 1. | Air compressor governor (1) | Air line (2) | Tag. |
| 2. | Air line (2) | Line nut (3) and adapter (3.1) | Using 5/8-inch open-end wrench, unscrew and take off. |

Change 1 2-1046

AIR COMPRESSOR GOVERNOR TO WET AIR RESERVOIR LINES AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
3. Three clamps (4)	Screw (5), lock-washer (6), and nut (7)	a. Using 7/16-inch box-end and 7/16-inch open-end wrenches, unscrew and take out. b. Get rid of lockwasher. c. Take clamp off air line (2).
4. Adapter (8)	Line nut (9)	a. Using 5/8-inch and 9/16-inch open-end wrenches, unscrew and take off. b. Take out air line (2).
5. Connector (10)	Adapter (8)	Using 9/16-inch and 7/16-inch open-end wrenches, unscrew and take off.
6. Line nut (11)	Connector (10)	Using 9/16-inch and 7/16-inch open-end wrenches, unscrew and take off.
7.	Air line (12)	Tag.



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Change 1 2-1047

AIR COMPRESSOR GOVERNOR TO WET AIR RESERVOIR LINES AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED		
8. Air line (1)	Line nut (2) and connector (3)	a. Using 9/16-inch and 7/16-inch open-end wrenches, unscrew and take off. b. Take out air line.
9. Adapter (4)	Connector (3)	Using 9/16-inch and 7/16-inch open-end wrenches, unscrew and take off.
10. Line nut (5)	Adapter (4)	Using 11/16-inch and 9/16-inch open-end wrenches, unscrew and take off.
11.	Air line (6)	Tag.
12. Wet air reservoir (7)	Line nut (9) and fitting (8)	a. Using 11/16-inch and 9/16-inch open-end wrenches, unscrew and take off. b. Take out air line (6).

CLEANING

WARNING

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 100°F (38°C) and for type #2 is 138°F (59°C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

13.	All metal parts	Clean using drycleaning solvent and wiping rag.
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Change 1 2-1048

AIR COMPRESSOR GOVERNOR TO WET AIR RESERVOIR LINES AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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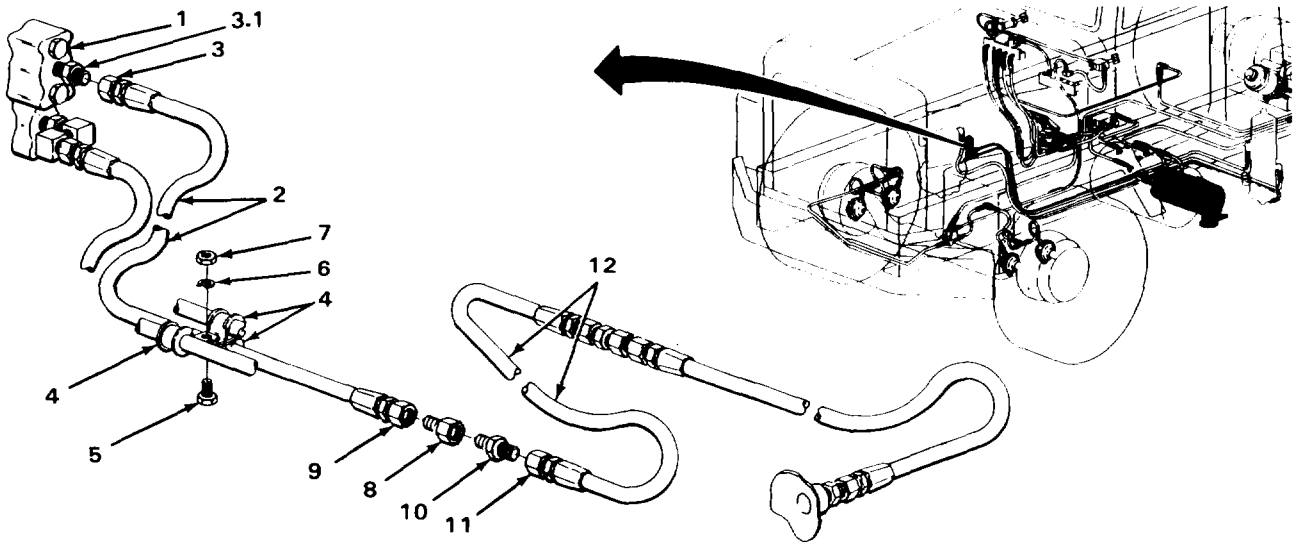
INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

- | | | |
|-----|--------------------|--|
| 14. | All air lines | a. Look for cracks, breaks, kinks, or chafing.
b. Look for excessive rust or corrosion. |
| 15. | All threaded parts | Look for damaged threads or rounded heads. |



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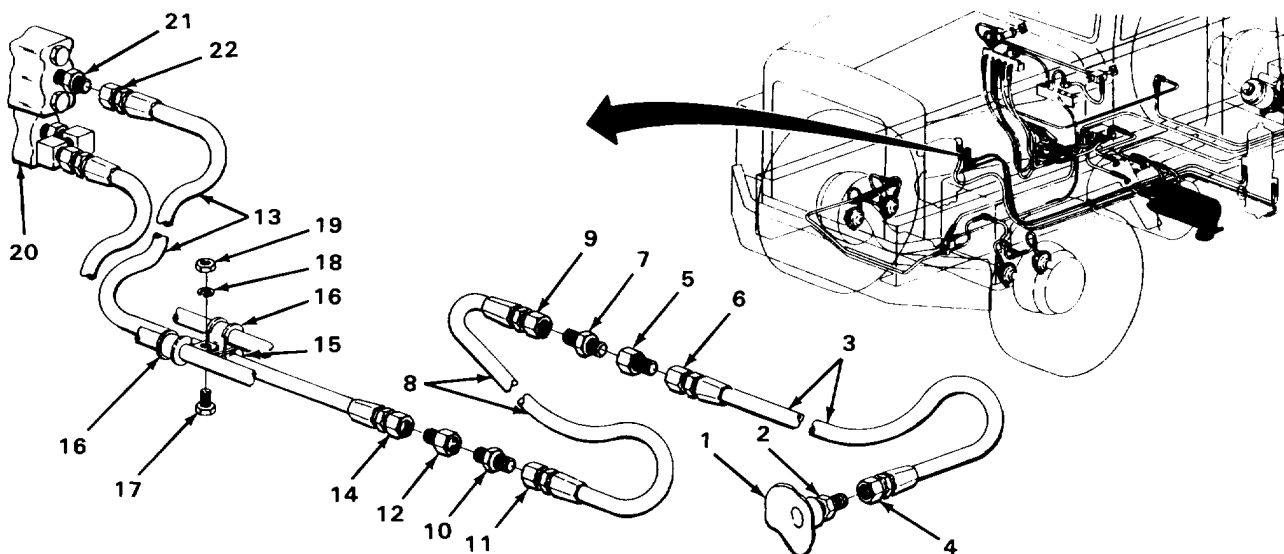
AIR COMPRESSOR GOVERNOR TO WET AIR RESERVOIR LINES AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
<u>CAUTION</u>		
Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.		
<u>NOTE</u>		
For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).		
Air line is in three sections. See tags for correct locations.		
16. Wet air reservoir (1)	Fitting (2)	Wrap pipe threads with antiseizing tape.
17.	Fitting (2), air line (3), and line nut (4)	a. Screw on and tighten using 11/16-inch and 9/16-inch open-end wrenches. b. Take off tag. c. Get rid of tag.
18.	Adapter (5)	Wrap pipe threads with antiseizing tape.
19. Adapter (5)	Line nut (6)	Screw on and tighten using 11/16-inch and 9/16-inch open-end wrenches.
20.	Connector (7)	Wrap both male pipe threads with antiseizing tape.
21. Adapter (5)	Connector (7)	Screw on and tighten using 9/16-inch and 7/16-inch open-end wrenches.
22. Connector (7)	Air line (8) and line nut (9)	a. Screw on and tighten using 5/8-inch and 9/16-inch open-end wrenches. b. Take off tag. c. Get rid of tag.
23.	Connector (10)	Wrap both male pipe threads with antiseizing tape.
24. Air line (8)	Connector (10) and line nut (11)	Screw on and tighten using 9/16-inch and 7/16-inch open-end wrenches.

Change 1 2-1050

AIR COMPRESSOR GOVERNOR TO WET AIR RESERVOIR LINES AND FITTINGS - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
25.	Connector (10)	Adapter (12)	Screw on and tighten using 9/16-inch and 7/16-inch open-end wrenches.
26.		Adapter (12)	Wrap pipe threads with antiseizing tape.
27.	Air line (13)	Adapter (12) and line nut (14)	a. Screw on and tighten using 5/8-inch and 9/16-inch open-end wrenches. b. Take tag off air line. c. Get rid of tag.
28.		Clamp (15)	Put on and align holes in two clamps (16).
29.	Clamps (15 and 16)	Screw (17), new lockwasher (18), and nut (19)	Screw on and tighten using 7/16-inch box-end and 7/16-inch open-end wrenches.
30.	Air compressor governor (20)	Adapter (21)	Wrap pipe threads with antiseizing tape.
31.		Adapter (21) and line nut (22)	Screw on and tighten using 5/8-inch open-end wrench.



NOTE

FOLLOW-ON MAINTENANCE: Close left side hood panel (page 2-424).

TASK ENDS HERE

BRAKE TREADLE VALVE AND RIGHT MANIFOLD HOSES

This task covers:

- | | |
|---------------------------|---|
| a. Removal (page 2-1052) | c. Inspection/Replacement (page 2-1056) |
| b. Cleaning (page 2-1056) | d. Installation (page 2-1057) |

INITIAL SETUP:

Tools

- Gloves, safety
- Goggles, safety
- Extension, 3inch, 1/2-inch drive
- Handle, ratchet, 1/2-inch drive
- Socket, 1/2-Inch, 1/2-inch drive
- Wrench, box-end, 7/16-inch
- Wrench, open-end, 7/16-inch
- Wrench, open-end, 11/16-inch
- Wrench, open-end, 3/4-inch
- Wrench, open-end, 7/8-inch
- Wrench, open-end, 1-inch

Materials/Parts

- Detergent, liquid, GP (item 7, appendix C)
- Lockwasher, brake treadle valve mounting plate (six required)

Materials/Parts - Continued

- Lockwasher, clamp screw (two required)
- Rags, wiping (item 15, appendix C)
- Solvent, drycleaning (item 19, appendix C)
- Tags, marker (item 21, appendix C)
- Tape, antiseizing (item 22, appendix C)

Personnel Required

Two

Equipment Condition

- Airbrake system drained (page 2-1034).
- Left side hood panel opened (page 2-424).
- Air filter element removed (page 2-462).
- Left side floor mat removed (page 2-1276).

LOCATION	ITEM	ACTION REMARKS
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REMOVAL

NOTE

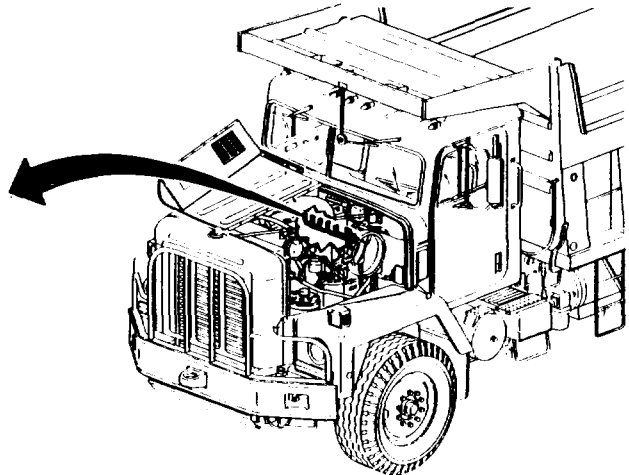
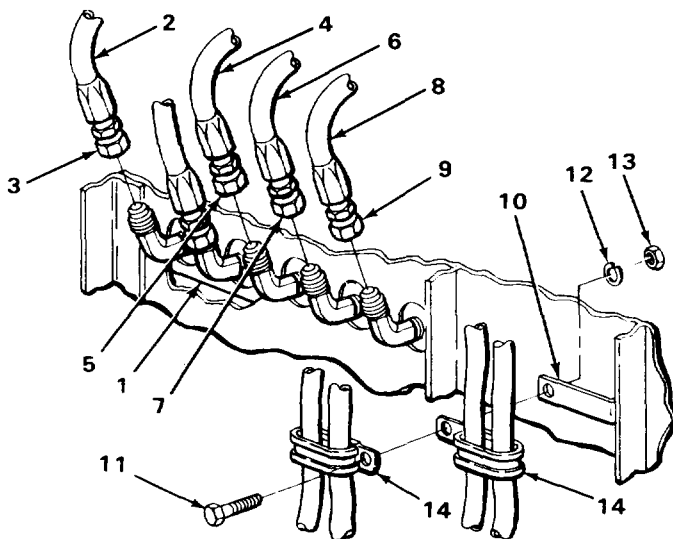
Tag air hoses to ensure correct installation.

For more information on how to tag parts, go to General Maintenance Instructions (page 2-424).

- | | | | |
|----|--------------------|--------------|---|
| 1. | Right manifold (1) | Airhose (2) | Tag as no. 1. |
| 2. | | Line nut (3) | Using 3/4-inch open-end wrench, unscrew and take off. |

BRAKE TREADLE VALVE AND RIGHT MANIFOLD HOSES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
3.	Airhose (4)	Tag as no. 2.
4.	Line nut (5)	Using 3/4-inch open-end wrench, unscrew and take off.
5.	Airhose (6)	Tag as no. 3.
6.	Line nut (7)	Using 7/8-inch open-end wrench, unscrew and take off.
7.	Airhose (8)	Tag as no. 4.
8.	Line nut (9)	Using 7/8-inch open-end wrench, unscrew and take off.
9.	Two clamp brackets (10)	a. Using 7/16-inch box-end and 7/16-inch open-end wrenches, unscrew and take out. b. Get rid of two lockwashers.
10.	Four clamps (14)	Take off.



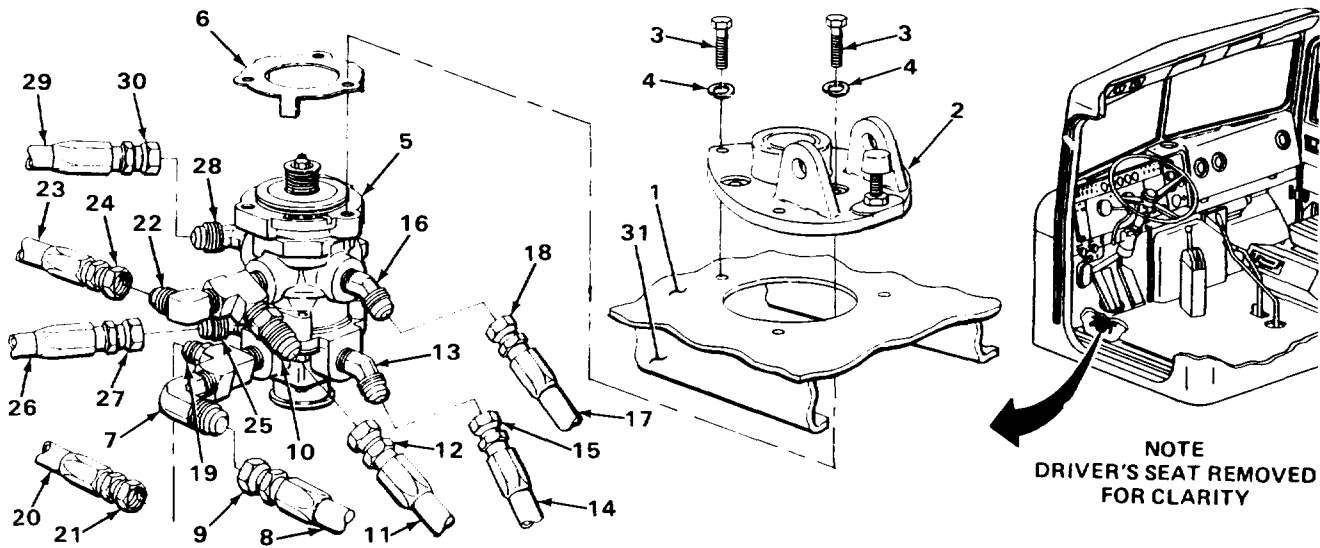
TA244366

BRAKE TREADLE VALVE AND RIGHT MANIFOLD HOSES - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED			
11.	Top of cab floor (1)	Brake pedal	Remove (page 2-1021).
12.	Brake treadle valve mounting plate (2)	Six screws (3) and six lockwashers (4)	a. Using 1/2-inch, 1/2-inch drive socket, 3-inch extension, and ratchet handle, unscrew and take out. b. Get rid of six lockwashers.
13.	Top of cab floor (1)	Brake treadle valve mounting plate (2)	Take out.
14.		Brake treadle valve (5)	Push down through cab floor as far as possible. Do not force.
<u>WARNING</u>			
Safety goggles must be worn when working under truck to prevent eye injury.			
15.	Brake treadle valve (5)	Spacer (6)	Take off.
16.	90-degree elbow (7)	Airhose (8)	Tag.
17.		Line nut (9)	a. Using 1-inch open-end wrench, unscrew and take off. b. Move air line (8) out of way.
18.	Fitting (10)	Airhose (11)	Tag.
19.		Line nut (12)	a. Using 1-inch and 7/8-inch open-end wrenches, unscrew and take off. b. Move air line (11) out of way.
20.	45-degree elbow(13)	Airhose (14)	Tag.
21.		Line nut (15)	a. Using 7/8-inch open-end wrench, unscrew and take off. b. Move air line (14) out of way.
22.	45-degree elbow (16)	Airhose (17)	Tag.
23.		Line nut (18)	a. Using 7/8-inch open-end wrench, unscrew and take off. b. Move air line (17) out of way.
24.	Fitting (19)	Airhose (20)	Tag as no. 2.

BRAKE TREADLE VALVE AND RIGHT MANIFOLD HOSES - CONTINUED

	LOCATION	ITEM	ACTION	REMARKS
25.		Line nut (21)		Using 3/4-inch and 11/16-inch open-end wrenches, unscrew and take off.
26.	90-degree elbow (22)	Airhose (23)		Tag as no. 3.
27.		Line nut (24)		Using 7/8-inch open-end wrench, unscrew and take off.
28.	45-degree elbow (25)	Airhose (26)		Tag as no. 1.
29.		Line nut (27)		Using 3/4-inch open-end wrench, unscrew and take off.
30.	45-degree elbow (28)	Airhose (29)		Tag as no. 4.
31.		Line nut (30)		Using 7/8-inch open-end wrench, unscrew and take out.
32.	Under cab floor (31)	Brake treadle		Take out valve (5)
33.		Airhoses tagged Nos. 1 thru 4		Pull out.



**NOTE
DRIVER'S SEAT REMOVED
FOR CLARITY**

TA244367

BRAKE TREADLE VALVE AND RIGHT MANIFOLD HOSES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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CLEANING

WARNING

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 100°F (38°C) and for type #2 is 138°F (59°C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

34.	Four airhoses	Clean using liquid detergent and wiping rag.
35.	All metal parts	Clean using drycleaning solvent and wiping rag.

INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

36.	Four airhoses	<ul style="list-style-type: none"> a. Check for cracks, breaks, chafing, or hardness. b. Look for excessive rust or corrosion.
37.	All threaded parts	Look for damaged threads or rounded heads.

BRAKE TREADLE VALVE AND RIGHT MANIFOLD HOSES - CONTINUED

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

INSTALLATION

CAUTION

Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.

NOTE

For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).

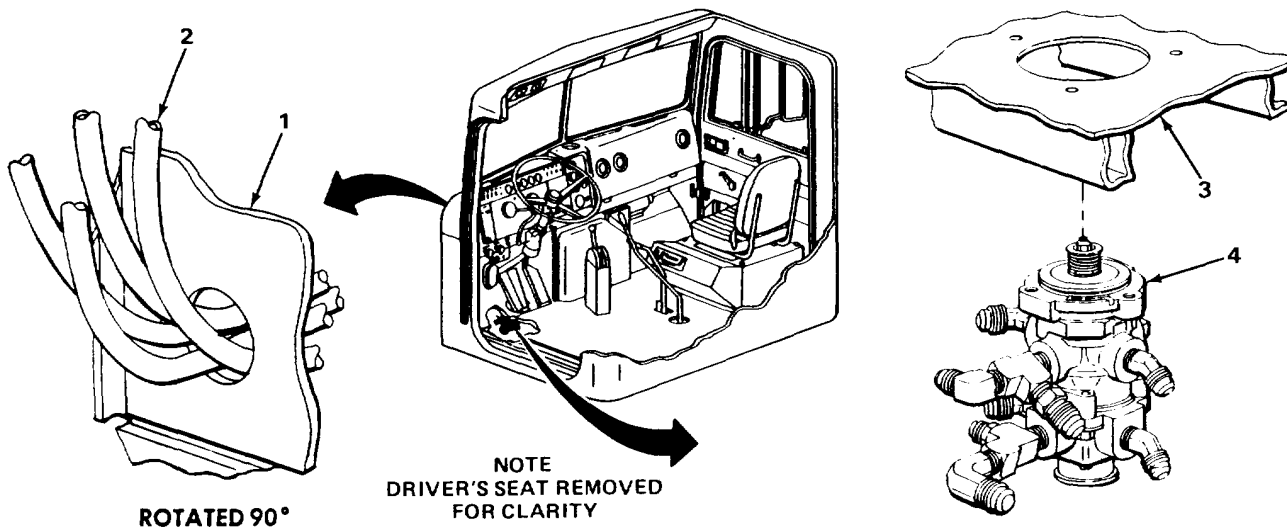
See tags for correct location of airhoses.

Step 38 is for four airhoses tagged nos. 1 thru 4.

38.	Engine side of firewall (1)	Four airhoses (2)	Push through hole until visible from under cab floor (3).
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NOTE

Assistance will be needed when performing steps 39 thru 59.



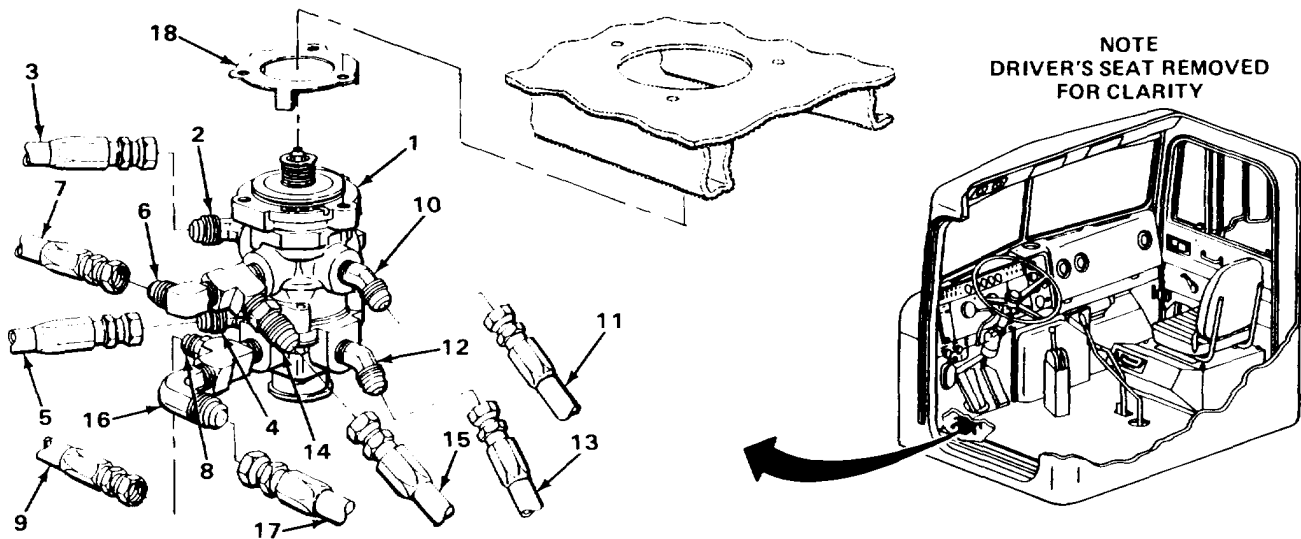
TA244368

BRAKE TREADLE VALVE AND RIGHT MANIFOLD HOSES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
40.	Brake treadle valve (1)	45-degree elbow (2)	Wrap pipe threads with antiseizing tape.
41.	45-degree elbow (2)	Airhose tagged no. 4 (3)	a. Screw on and tighten using 7/8-inch open-end wrench. b. Take off tag. c. Get rid of tag.
42.	Brake treadle valve (1)	45-degree elbow (4)	Wrap pipe threads with antiseizing tape.
43.	45-degree elbow (4)	Airhose tagged no. 1 (5)	a. Screw on and tighten using 3/4-inch open-end wrench. b. Take off tag. c. Get rid of tag.
44.	Brake treadle valve (1)	90-degree elbow (6)	Wrap pipe threads with antiseizing tape.
45.	90-degree elbow (6)	Airhose tagged no. 3 (7)	a. Screw on and tighten using 7/8-inch open-end wrench. b. Take off tag. c. Get rid of tag.
48.	Brake treadle valve (1)	Fitting (8)	Wrap pipe threads with antiseizing tape.
47.	Fitting (8)	Airhose tagged no. 2 (9)	a. Screw on and tighten using 3/4-inch and 11/16-inch open-end wrenches. b. Takeoff tag. c. Get rid of tag.
48.	Brake treadle valve (1)	45-degree elbow (10)	Wrap pipe threads with antiseizing tape.
49.	45-degree elbow (10)	Airhose (11)	a. Screw on and tighten using 7/8-inch open-end wrench. b. Take off tag. c. Get rid of tag.
50.	Brake treadle valve (1)	45-degree elbow (12)	Wrap pipe threads with antiseizing tape.

BRAKE TREADLE VALVE AND RIGHT MANIFOLD HOSES - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
51.	45-degree elbow (12)	Airhose (13)	a. Screw on and tighten using 7/8-inch open-end wrench. b. Take off tag. c. Get rid of tag.
52.	Brake treadle valve (1)	Fitting (14)	Wrap pipe threads with antiseizing tape.
53.	Fitting (14)	Airhose (15)	a. Screw on and tighten using 1-inch and 7/8-inch open-end wrenches. b. Take off tag. c. Get rid of tag.
54.	Brake treadle valve (1)	90-degree elbow (16)	Wrap pipe threads with antiseizing tape.
55.	90degree elbow (16)	Airhose (17)	a. Screw on and tighten using 1-inch open-end wrench. b. Take off tag. c. Get rid of tag.
56.	Brake treadle	Spacer (18)	Aline and put on.



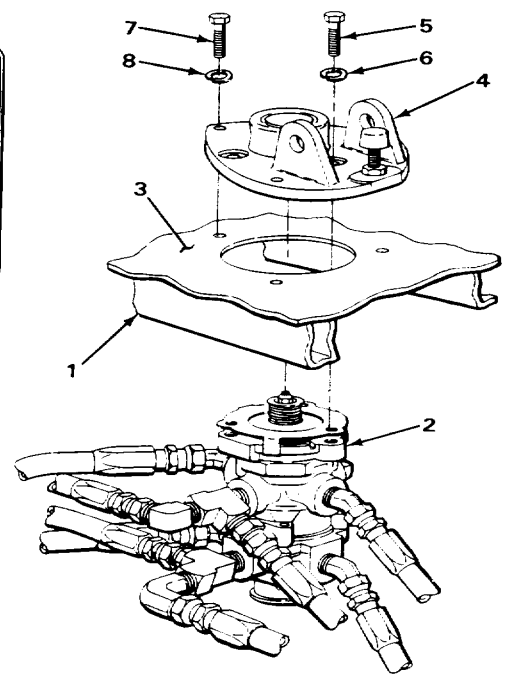
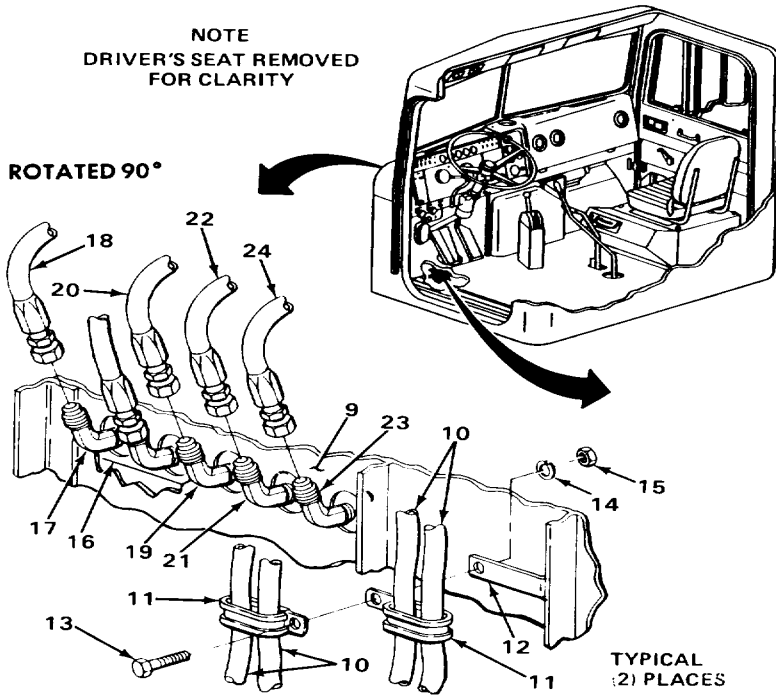
TA244369

BRAKE TREADLE VALVE AND RIGHT MANIFOLD HOSES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
<u>WARNING</u>		
Safety goggles must be worn when working under truck to prevent eye injury.		
57. Under cab floor (1)	Brake treadle valve (2)	Have assistant push into hole and hold in position.
58. Top of cab floor (3)	Brake treadle valve mounting plate (4)	Put in position and aline with holes on brake treadle valve (2).
59. Brake treadle valve mounting plate (4)	Three screws (5) and three new lockwashers (6)	Screw in until snug, by hand.
60.	Three screws (7) and three new lockwashers (8)	Screw in and tighten using 1/2-inch, 1/2-inch drive socket, 3-inch extension, and ratchet handle.
61.	Three screws (5)	Tighten using 1/2-inch, 1/2-inch drive socket, 3-inch extension, and ratchet handle.
62.	Brake pedal	Install (page 2-1021).
63. Engine side of firewall (9)	Four airhoses (10) and four clamps (11)	Put clamps around airhoses as shown.
64. Two clamp brackets (12)	Four clamps (11)	Put in position and aline holes in clamps with holes in clamp brackets.
65.	Two screws (13), two new lockwashers (14), and two nuts (15)	Screw in and tighten using 7/16-inch box-end and 7/16-inch open-end wrenches.
66. Right manifold (16)	45-degree elbow (17)	Wrap pipe threads with antiseizing tape.
67. 45-degree elbow (17)	Airhose tagged no. 1 (18)	a. Screw on and tighten using 3/4-inch open-end wrench. b. Take off and get rid of tag.
68. Right manifold (16)	45-degree elbow (19)	Wrap pipe threads with antiseizing tape.
69. 45-degree elbow (19)	Airhose tagged no. 2 (20)	a. Screw on and tighten using 3/4-inch open-end wrench. b. Take off and get rid of tag.

BRAKE TREADLE VALVE AND RIGHT MANIFOLD HOSES - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
70.	Right manifold (16)	45-degree elbow (21)	Wrap pipe threads with antiseizing tape.
71.	45-degree elbow (21)	Airhose tagged no. 3 (22)	a. Screw on and tighten using 7/8-inch open-end wrench. b. Take off tag. c. Get rid of tag.
72.	Right manifold (16)	45-degree elbow (23)	Wrap pipe threads with antiseizing tape.
73.	45-degree elbow (23)	Airhose tagged no. 4 (24)	a. Screw on and tighten using 7/8-inch open-end wrench. b. Take off tag. c. Get rid of tag.



FOLLOW-ON MAINTENANCE:

1. Install air filter element (page 2-462).
2. Close left side hood panel (page 2-424).
3. Install left side floor mat (page 2-1276).

TASK ENDS HERE

BRAKE TREADLE VALVE TO DOUBLE CHECK VALVE T-FITTING HOSE

This task covers:

- | | |
|---------------------------|---|
| a. Removal (page 2-1062) | c. Inspection/Replacement (page 2-1064) |
| b. Cleaning (page 2-1064) | d. Installation (page 2-1064) |

INITIAL SETUP:

Tools

- Gloves, safety
- Goggles, safety
- Wrench, box-end, 7/16-inch
- Wrench, open-end, 7/16-inch
- Wrench, open-end, 13/16-inch
- Wrench, open-end, 7/8-inch
- Wrench, open-end, 1-inch

Materials/Parts

- Detergent, liquid, GP (item 7, appendix C)
- Lockwasher, clamp screw (four required)
- Rags, wiping (item 15, appendix C)

Materials/Parts - Continued

- Solvent, drycleaning (item 19, appendix C)
- Tags, marker (item 21, appendix C)
- Tape, antiseizing (item 22, appendix C)

Personnel Required

One

Equipment Condition

Airbrake system drained (page 2-1034).

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

Safety goggles must be worn when working under truck to prevent eye injury.

NOTE

Tag airhoses to ensure correct installation.

For more information on how to tag parts, go to General Maintenance Instructions (page 2-424).

- | | | | |
|----|---------------------|--------------|---|
| 1. | 90-degree elbow (1) | Airhose (2) | Tag. |
| 2. | | Line nut (3) | a. Using 1-inch open-end wrench, unscrew and take off.
b. Move airhose (2) out of way. |
| 3. | Fitting (4) | Airhose (5) | Tag. |

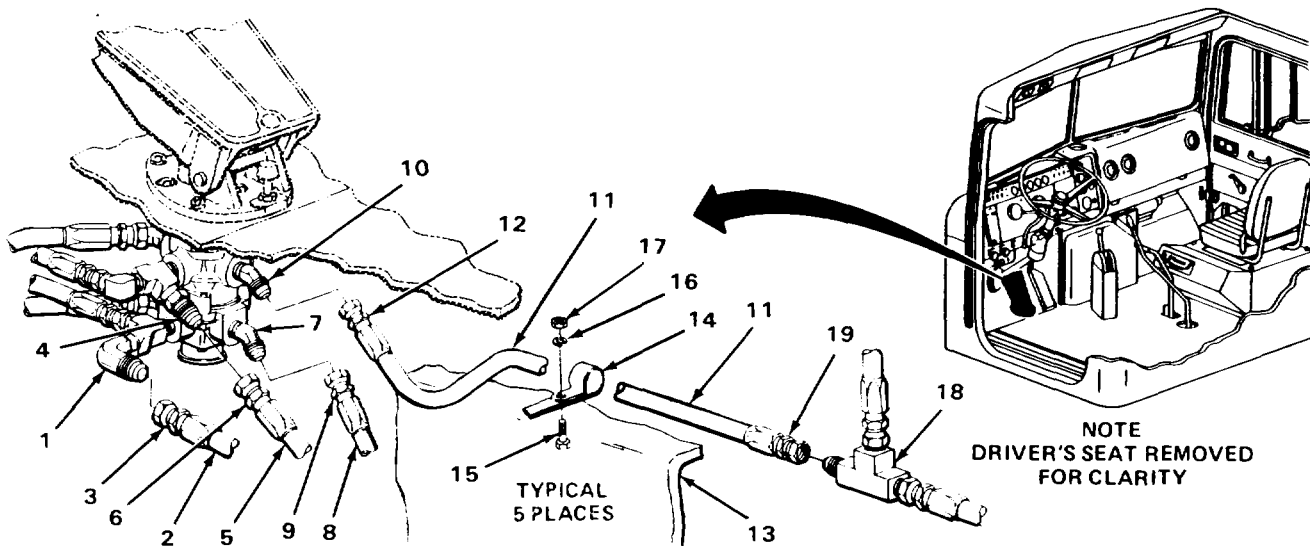
BRAKE TREADLE VALVE TO DOUBLE CHECK VALVE T-FITTING HOSE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
4.	Line nut (6)	a. Using 1-inch and 7/8-inch open-end wrenches, unscrew and take off. b. Move airhose (5) out of way.
5.	45-degree elbow (7)	Tag.
6.	Line nut (9)	a. Using 7/8-inch open-end wrench, unscrew and take off. b. Move airhose (8) out of way.
7.	45-degree elbow (10)	Tag.
8.	Line nut (12)	Using 7/8-inch open-end wrench, unscrew and take off.

NOTE

Step 9 is typical for four clamps.

9.	Left frame rail (13) and airhose (11)	Clamp (14), screw (15), lockwasher (16), and nut (17)	a. Using 7/16-inch box-end and 7/16-inch open-end wrenches, unscrew and take out. b. Get rid of lockwasher. c. Take clamp off airhose.
10.	Double check valve T-fitting (18)	Line nut (19)	a. Using 7/8-inch and 13/16-inch open-end wrenches, unscrew and take off. b. Take out airhose (11).



TA244371

BRAKE TREADLE VALVE TO DOUBLE CHECK VALVE T-FITTING HOSE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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CLEANING**WARNING**

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 100°F (38°C) and for type #2 is 138°F (59°C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

11.	Airhose	Clean using liquid detergent and wiping rag.
12.	All metal parts	Clean using drycleaning solvent and wiping rag.

INSPECTION/REPLACEMENT**NOTE**

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

13.	Airhose	a. Check for cracks, breaks, chafing, or hardness. b. Look for excessive rust or corrosion.
14.	All threaded parts	Look for damaged threads or rounded heads.

INSTALLATION**CAUTION**

Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.

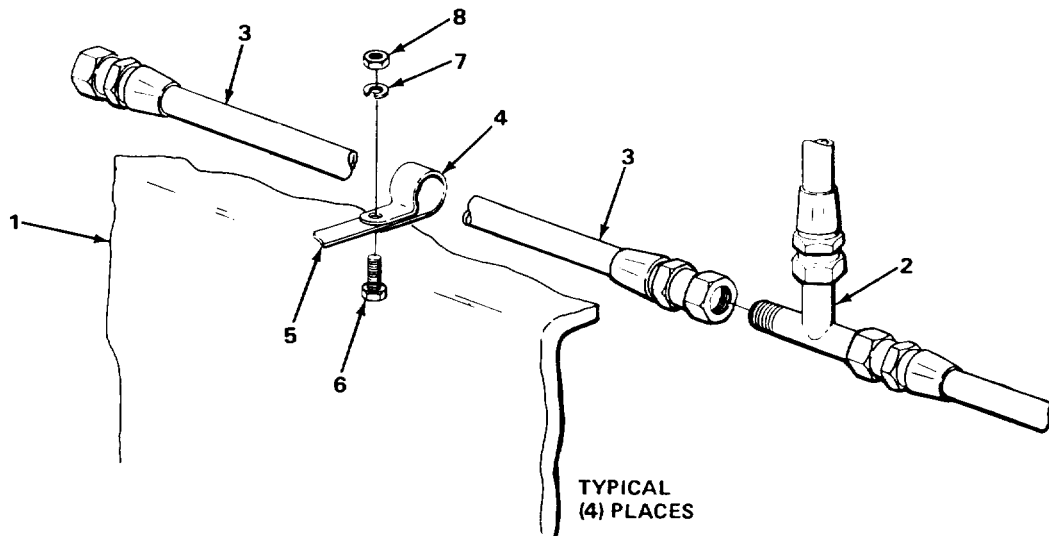
NOTE

For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).

See tags for correct location of airhoses.

BRAKE TREADLE VALVE TO DOUBLE CHECK VALVE T-FITTING HOSE - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
15.	Left frame rail (1)	Double check valve T-fitting (2)	Wrap pipe threads with antiseizing tape.
16.	Double check valve T-fitting (2)	Airhose (3)	Screw on and tighten using 7/8-inch and 13/16-inch open-end wrenches.
NOTE			
Steps 17 and 18 are typical for four clamps.			
17.	Airhose (3)	Clamp (4)	Put on.
18.	Clamp bracket (5)	Clamp (4), screw (6), new lock- washer (7), and nut (8)	a. Aline holes in clamp and clamp bracket. b. Screw in and tighten using 7/16-inch box-end and 7/16-inch open-end wrenches.
19.	Left frame rail (1)	Airhose (3)	Route.

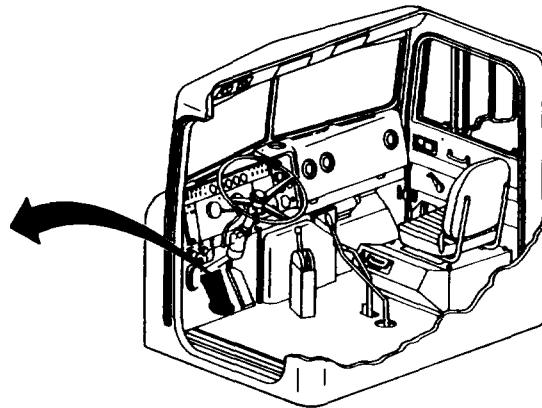
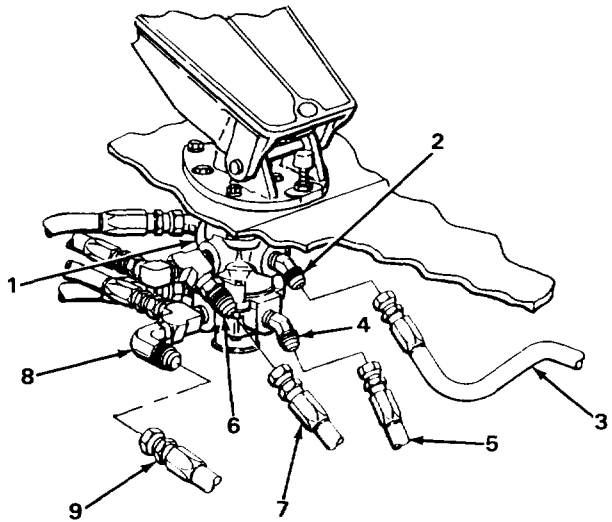


TA244372

BRAKE TREADLE VALVE TO DOUBLE CHECK VALVE T-FITTING HOSE - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED			
20.	Brake treadle valve (1)	45-degree elbow (2)	Wrap pipe threads with antiseizing tape.
21.	45-degree elbow (2)	Airhose (3)	a. Screw on and tighten using 7/8-inch open-end wrench. b. Takeoff tag. c. Get rid of tag.
22.	Brake treadle valve (1)	45-degree elbow (4)	Wrap pipe threads with antiseizing tape.
23.	45-degree elbow (4)	Airhose (5)	a. Screw on and tighten using 7/8-inch open-end wrench. b. Takeoff tag. c. Get rid of tag.
24.	Brake treadle valve (1)	Fitting (6)	Wrap pipe threads with antiseizing tape.
25.	Fitting (6)	Airhose (7)	a. Screw on and tighten using 1-inch and 7/8-inch open-end wrenches. b. Takeoff tag. c. Get rid of tag.
26.	Brake treadle valve (1)	90-degree elbow (8)	Wrap pipe threads with antiseizing tape.
27.	90-degree elbow (8)	Airhose (9)	a. Screw on and tighten using 1-inch open-end wrench. b. Takeoff tag. c. Get rid of tag.

BRAKE TREADLE VALVE TO DOUBLE CHECK VALVE T-FITTING HOSE - CONTINUED TM 5-3805-254-20-2



**NOTE
DRIVER'S SEAT REMOVED
FOR CLARITY**

TASK ENDS HERE

BRAKE TREADLE VALVE TO T-MANIFOLD HOSES

This task covers:

- a. Removal (page 2-1068)
- b. Cleaning (page 2-1068)
- c. Inspection/Replacement (page 2-1069)
- d. Installation (page 2-1070)

INITIAL SETUP:

Tools

- Gloves, safety
- Goggles, safety
- Wrench, box-end, 7/16-inch
- Wrench, open-end, 7/16-inch
- Wrench, open-end, 7/8-inch
- Wrench, open-end, 1-inch

Materials/Parts

- Detergent, liquid, GP (item 7, appendix C)
- Lockwasher, clamp screw
- Rags, wiping (item 15, appendix C)

Materials/Parts - Continued

- Solvent, drycleaning (item 19, appendix C)
- Tags, marking (item 21, appendix C)
- Tape, antiseizing (item 22, appendix C)

Personnel Required

One

Equipment Condition

Airbrake system drained (page 2-1034).

TA244373

BRAKE TREADLE VALVE TO T-MANIFOLD HOSES - CONTINUED

LOCATION	ITEM	ACTION REMARKS	
REMOVAL			
<u>WARNING</u>			
Safety goggles must be worn when working under truck to prevent eye injury.			
NOTE			
Tag air hoses to ensure correct installation.			
For more information on how to tag parts, go to General Maintenance Instructions (page 2-424).			
1.	90-degree elbow (1)	Airhose (2)	Tag.
2.		Line nut (3)	Using 1-inch open-end wrench, unscrew and take off.
3.	Fitting (4)	Airhose (5)	Tag.
4.		Line nut (6)	Using 1-inch and 7/8-inch open-end wrenches, unscrew and take off.
5.	T-manifold (6.1)	Line nut (8) and 45-degree elbow (7)	Using 1-inch open-end wrench, unscrew and take off.
6.		Line nut (10) and 45-degree elbow (9)	Using 1-inch open-end wrench, unscrew and take off.
7.	Undercab floor (11)	Screw (12), lock-washer (13), nut (14), and clamp (15)	a. Using 7/16-inch box-end and 7/16-inch open-end wrenches, unscrew and take out. b. Take clamp off airhoses (2 and 5).
8.		Airhoses (2 and 5)	Take out.

CLEANING

WARNING

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 100°F (38°C) and for type #2 is 138°F (59°C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

Change 1 2-1068

BRAKE TREADLE VALVE TO T-MANIFOLD HOSES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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NOTE

For more Information on how to clean parts, go to General Maintenance Instructions (page 2-424).

9.	Airhoses (2 and 5)	Clean using liquid detergent and wiping rag.
10.	All metal parts	Clean using drycleaning solvent and wiping rag.

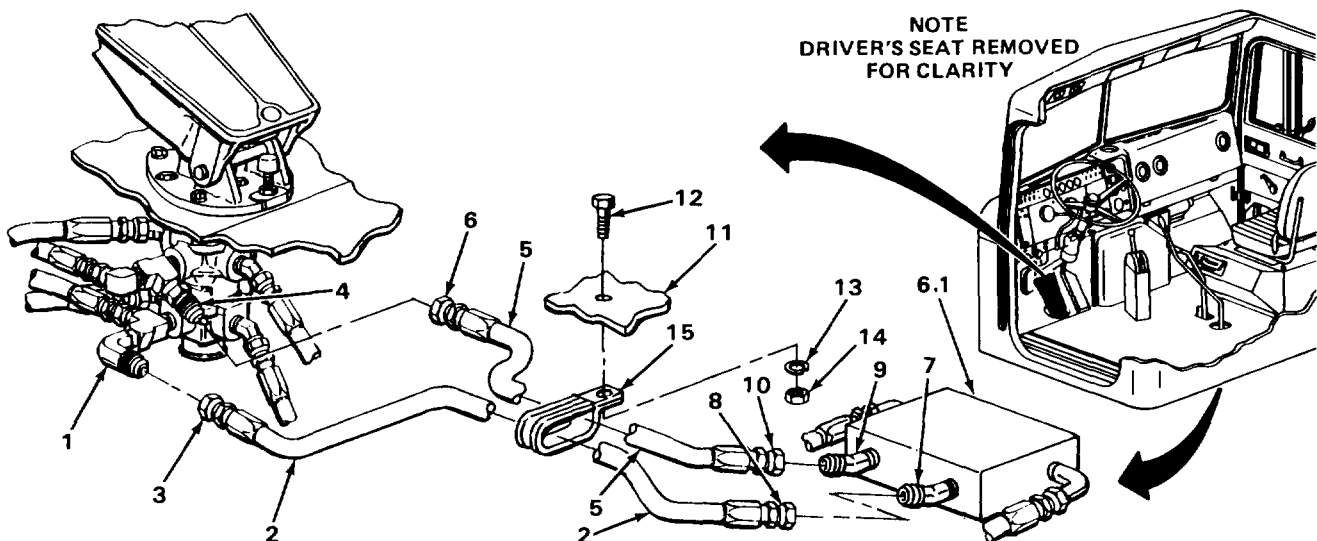
INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

11.	Airhoses (2 and 5)	a. Check for cracks, breaks, chafing, or hardness. b. Look for excessive rust or corrosion.
12.	All threaded parts	Look for damaged threads or rounded heads.

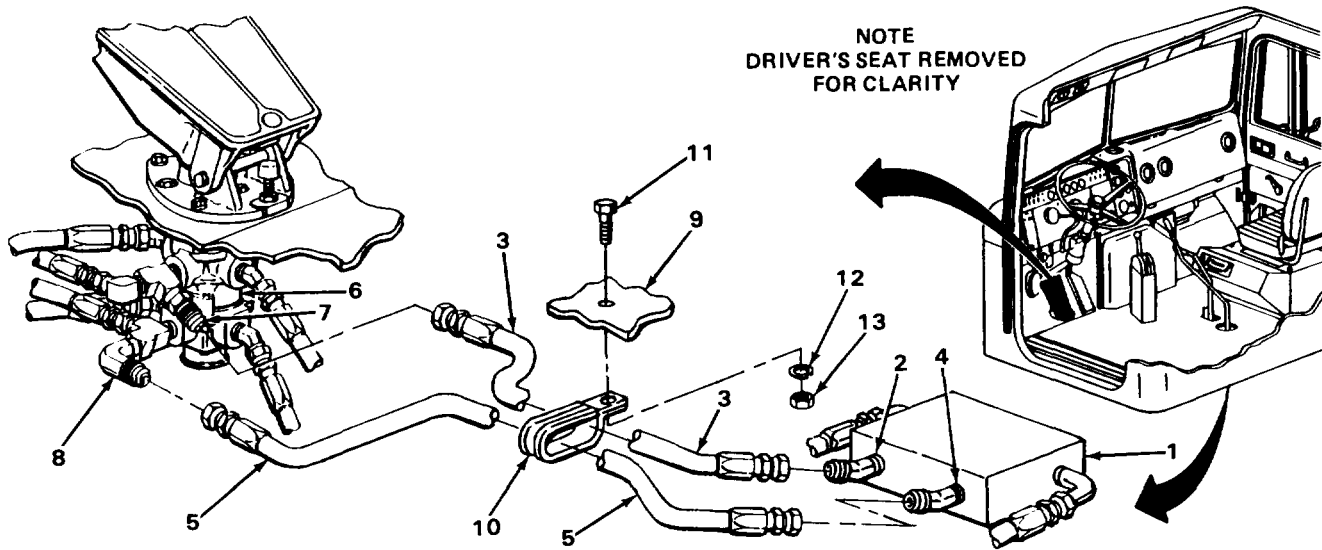


BRAKE TREADLE VALVE TO T-MANIFOLD HOSES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
<u>CAUTION</u>			
Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.			
<u>NOTE</u>			
For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).			
See tags for correct location of airhoses.			
13.	T-manifold (1)	45-degree elbow (2)	Wrap pipe threads with antiseizing tape.
14.		45-degree elbow (2) and airhose (3)	Screw on and tighten using 1-inch open-end wrench.
15.	T-manifold (1)	45-degree elbow (4)	Wrap pipe threads with antiseizing tape.
16.		45-degree elbow (4) and airhose (5)	Screw on and tighten using 1-inch open-end wrench.
17.	Brake treadle valve (6)	Fitting (7)	Wrap pipe threads with antiseizing tape.
18.	Fitting (7)	Airhose (3)	a. Screw on and tighten using 1-inch and 7/8-inch open-end wrenches. b. Takeoff tag. c. Get rid of tag.
19.	Brake treadle valve (6)	90-degree elbow (8)	Wrap pipe threads with antiseizing tape.
20.	90-degree elbow (8)	Airhose (5)	a. Screw on and tighten using 1-inch open-end wrench. b. Take off tag. c. Get rid of tag.
21.	Under cab floor (9)	Clamp (10), screw (11), new lockwasher (12), and nut (13)	a. Put clamp around air hoses (3 and 5) and put in position. b. Screw in and tighten using 7/16-inch box-end and 7/16-inch open-end wrenches.

Change 1 2-1070

BRAKE TREADLE VALVE TO T-MANIFOLD HOSES - CONTINUED



TASK ENDS HERE

DOUBLE CHECK VALVE TO DOUBLE CHECK VALVE T-FITTING HOSE

This task covers:

- | | |
|---------------------------|---|
| a. Removal (page 2-1072) | c. Inspection/Replacement (page 2-1072) |
| b. Cleaning (page 2-1072) | d. Installation (page 2-1072) |

INITIAL SETUP:

Tools

- Goggles, safety
- Wrench, open-end, 5/8-inch
- Wrench, open-end, 3/4-inch

Personnel Required

One

Equipment Condition

Airbrake system drained (page 2-1034).

Materials/Parts

- Detergent, liquid, GP (item 7, appendix C)
- Rags, wiping (item 15, appendix C)
- Tape, antiseizing (item 22, appendix C)

TA244375

DOUBLE CHECK VALVE TO DOUBLE CHECK VALVE T-FITTING HOSE - CONTINUED

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

REMOVAL

WARNING

Safety goggles must be worn when working under truck to prevent eye injury.

1.	Double check valve (7)	Line nut (2) and 45-degree elbow (1)	Using 3/4-inch open-end wrench, unscrew and take off.
2.	Fitting (3)	Line nut (4) and airhose (5)	<ul style="list-style-type: none"> a. Using 3/4-inch and 5/8-inch open-end wrenches, unscrew and take off. b. Take out airhose.

CLEANING

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

3.	Airhose (5)	Clean using liquid detergent and wiping rag.
----	-------------	--

INSPECTION/REPLACEMENT

NOTE

Replace damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

4.	Airhose (5)	<ul style="list-style-type: none"> a. Check for cracks, breaks, chafing, or hardness. b. Look for excessive rust or corrosion.
5.	All threaded parts	Look for damaged threads or rounded heads.

INSTALLATION

CAUTION

Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.

Change 1 2-1072

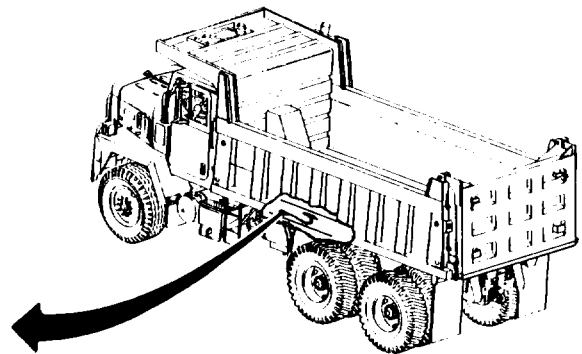
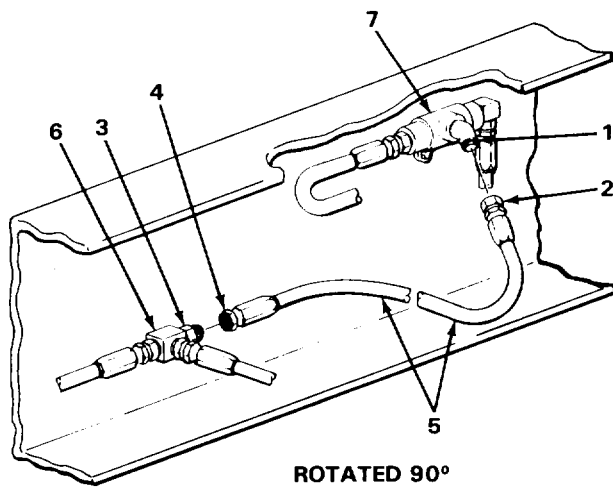
DOUBLE CHECK VALVE TO DOUBLE CHECK VALVE T-FITTING HOSE - CONTINUED

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

NOTE

For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).

- | | | | |
|----|----------------------------|-------------------------------------|---|
| 6. | Double check valve tee (6) | Fitting (3) | Wrap pipe threads with antiseizing tape. |
| 7. | Fitting (3) | Airhose (5) | Screw on and tighten using 3/4-inch and 5/8-inch open-end wrenches. |
| 8. | Double check valve (7) | 45-degree elbow (1) | Wrap pipe threads with antiseizing tape. |
| 9. | | 45-degree elbow (1) and airhose (5) | Screw on and tighten using 3/4-inch open-end wrench. |



TASK ENDS HERE

Change 1 2-1073

TA244376

DRY AIR RESERVOIR TO T-MANIFOLD HOSES

This task covers:

- | | |
|---------------------------|---|
| a. Removal (page 2-1074) | c. Inspection/Replacement (page 2-1075) |
| b. Cleaning (page 2-1075) | d. Installation (page 2-1076) |

INITIAL SETUP:

Tools

- Goggles, safety
- Wrench, open-end, 1-inch

Materials/Parts

- Detergent, liquid, GP (item 7, appendix C)
- Rags, wiping (item 15, appendix C)
- Tape, antiseizing (item 22, appendix C)

Personnel Required

One

Equipment Condition

Airbrake system drained (page 2-1034).

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

REMOVAL

WARNING

Safety goggles must be worn when working under truck to prevent eye injury.

1.	90-degree elbow (1)	Line nut (2)	Using 1-inch open-end wrench, unscrew and take off.
2.	45-degree elbow (3)	Line nut (4)	Using 1-inch open-end wrench, unscrew and take off.
3.	T-manifold (4.1)	Line nut (6), airhose (7), and 90-degree elbow (5)	<ul style="list-style-type: none"> a. Using 1-inch open-end wrench, unscrew and take off. b. Take out airhose.
4.		Line nut (9), airhose (10), and 90-degree elbow (8)	<ul style="list-style-type: none"> a. Using 1-inch open-end wrench, unscrew and take off. b. Take out airhose.

Change 1 2-1074

DRY AIR RESERVOIR TO T-MANIFOLD HOSES - 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 2-424).

5.	Airhoses (7 and 10)	Clean using liquid detergent and wiping rag.
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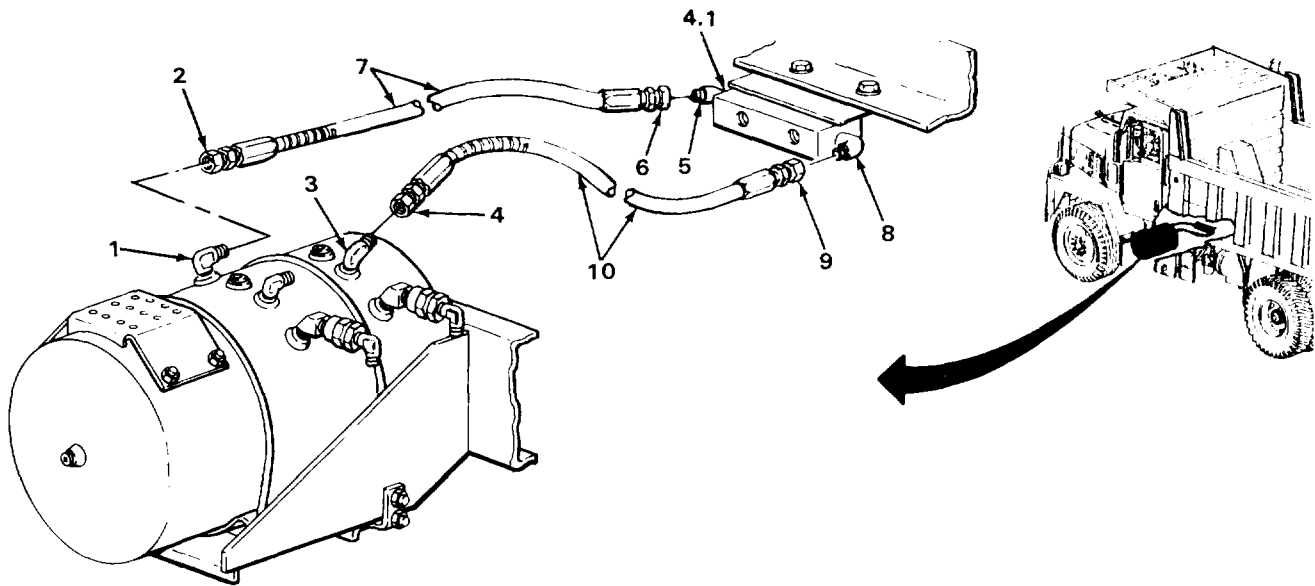
INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

6.	Airhoses (7 and 10)	a. Check for cracks, breaks, chafing, or hardness. b. Look for excessive rust or corrosion.
7.	All threaded parts	Look for damaged threads or rounded heads.



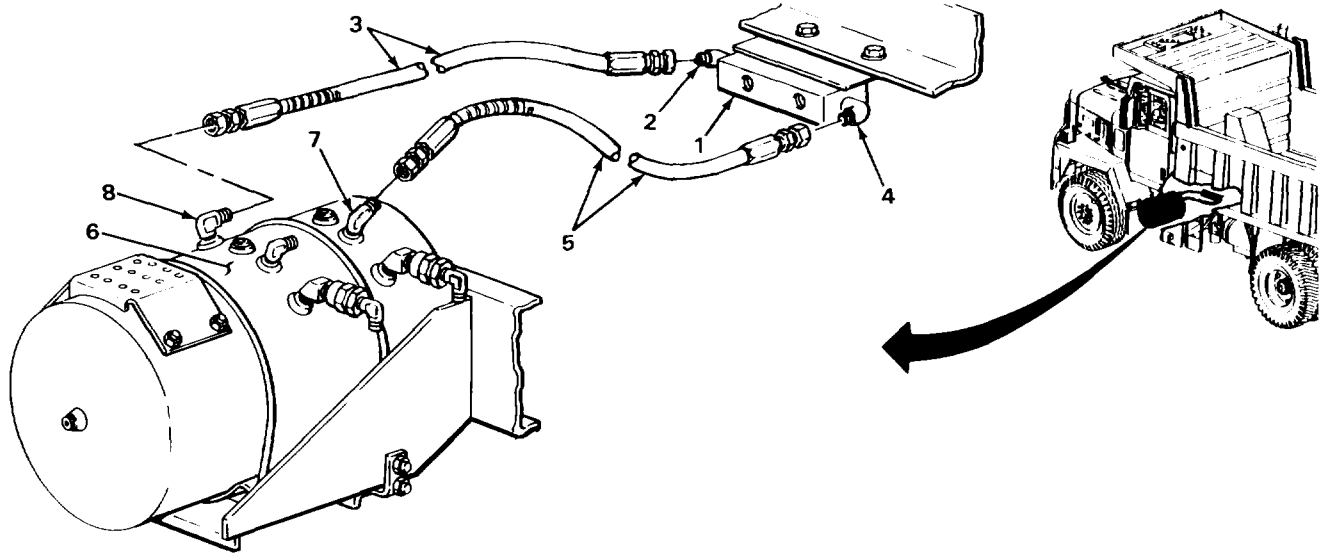
TA702146

DRY AIR RESERVOIR TO T-MANIFOLD HOSES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
<u>CAUTION</u>		
Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.		
<u>NOTE</u>		
For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).		
8.	T-manifold (1) 90-degree elbow (2)	Wrap pipe threads with antiseizing tape.
9.	90-degree elbow (2) and airhose (3)	Screw on and tighten using 1-inch open-end wrench.
10.	T-manifold (1) 90-degree elbow (4)	Wrap pipe threads with antiseizing tape.
11.	90-degree elbow (4) and airhose (5)	Screw on and tighten using 1-inch open-end wrench.
12.	Dry air reservoir (6) 45-degree elbow (7)	Wrap pipe threads with antiseizing tape.
13.	45-degree elbow (7) Airhose (5)	Screw on and tighten using 1-inch open-end wrench.
14.	Dry air reservoir (6) 90-degree elbow (8)	Wrap pipe threads with antiseizing tape.
15.	90-degree elbow (8) Airhose (3)	Screw on and tighten using 1-inch open-end wrench.

Change 1 2-1076

DRY AIR RESERVOIR TO T-MANIFOLD HOSES - CONTINUED



TASK ENDS HERE

TA244378

Change 1 2-1077

T-MANIFOLD

This task covers:

- a Removal (page 2-1077.0)
- b. Installation (page 2-1077.0)

INITIAL SETUP:

Equipment Conditions

Dry air reservoir to T-manifold hoses disconnected (page 2-1074).
 Brake treadle valve to T-manifold hoses disconnected (page 2-1067).

Materials/Parts

Lockwasher, T-manifold (four required)

Personnel Required

One

Tools/Test Equipment

Goggles, safety
 Wrench, box-end, 7/16-inch
 Wrench, open-end, 7/16-inch

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

Safety goggles must be worn when working under truck to prevent eye injury.

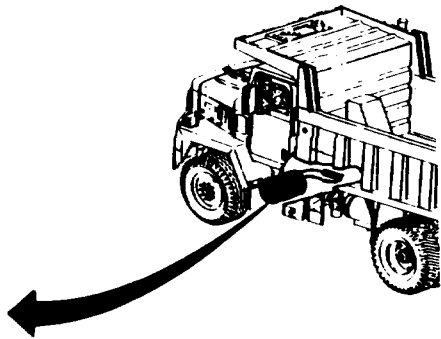
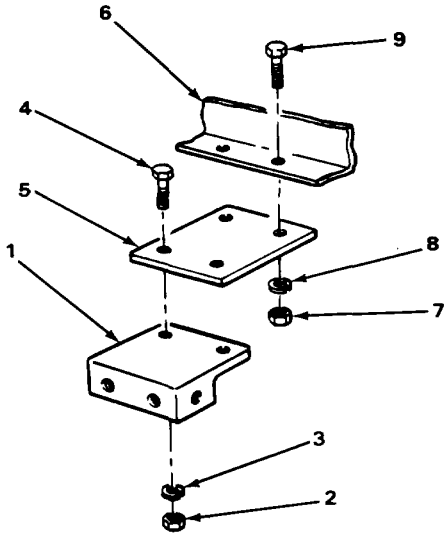
1.	T-manifold (1)	Two nuts (2), lockwashers (3), and screws (4)	<ul style="list-style-type: none"> a. Using 7/16-inch open-end wrench and 7/16-inch box-end wrench, unscrew, and take off. b. Get rid of lockwashers.
2.	Bracket (5)	T-manifold (1)	Take off.
3.	Cab floor (6)	Two nuts (7), lockwashers (8), and screws (9)	<ul style="list-style-type: none"> a. Using 7/16-inch open-end wrench and 7/16-inch box-end wrench, unscrew, and take off. b. Get rid of lockwashers.
4.	Bracket (5)	Take off.	

INSTALLATION

5.	Cab floor (6)	Bracket (5)	Put in place.
6.		Two nuts (7), new lockwashers (8), and screws (9)	Screw in and tighten using 7/16-inch box-end wrench and 7/16-inch open-end wrench.
7.	Bracket (5)	T-manifold (1)	Put in place.

T-MANIFOLD - CONTINUED

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



8.	T-manifold (1)	Two nuts (2), new lockwashers (3), and screws (4)	Screw in and tighten using 7/16-inch box-end wrench and 7/16-inch open-end wrench.
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NOTE

FOLLOW-ON MAINTENANCE:

1. Connect brake treadle valve to T-manifold hoses (page 2-1067).
2. Connect dry air reservoir to T-manifold hoses (page 2-1074).

TASK ENDS HERE

TA702147

Change 1 2-1077.1

DRY AIR RESERVOIR TO WET AIR RESERVOIR HOSES

This task covers:

- | | |
|---------------------------|---|
| a. Removal (page 2-1078) | c. Inspection/Replacement (page 2-1078) |
| b. Cleaning (page 2-1078) | d. Installation (page 2-1079) |
-

INITIAL SETUP:

Tools

Goggles, safety
Wrench, open-end, 7/8-inch

Materials/Parts

Detergent, liquid, GP (item 7, appendix C)
Rags, wiping (item 15, appendix C)
Tape, antiseizing (item 22, appendix C)

Personnel Required

One

Equipment Condition

Airbrake system drained (page 2-1034).

Change 1 2-1077.2/(2-1077.3 blank)

DRY AIR RESERVOIR TO WET AIR RESERVOIR HOSES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
<u>WARNING</u>		
Safety goggles must be worn when working under truck to prevent eye injury.		
1.	90-degree elbow (1) Line nut (2)	Using 7/8-inch open-end wrench, unscrew and take off.
2.	90degree elbow (3) Line nut (4)	Using 7/8-inch open-end wrench, unscrew and take off.
3.	45-degree elbow (5) Line nut (6) and airhose (7)	a. Using 7/8-inch open-end wrench, un- screw and take off. b. Take out airhose.
4.	45-degree elbow (8) Line nut (9) and airhose (10)	a. Using 7/8-inch open-end wrench, un- screw and take off. b. Take out airhose.

CLEANING

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

5.	Airhoses (7 and 10)	Clean using liquid detergent and wiping rag.
----	---------------------	--

INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

6.	Airhoses (7 and 10)	a. Check for cracks, breaks, chafing, or hardness. b. Look for excessive rust or corrosion.
7.	All threaded parts	Look for damaged threads or rounded heads.

DRY AIR RESERVOIR TO WET AIR RESERVOIR HOSES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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INSTALLATION

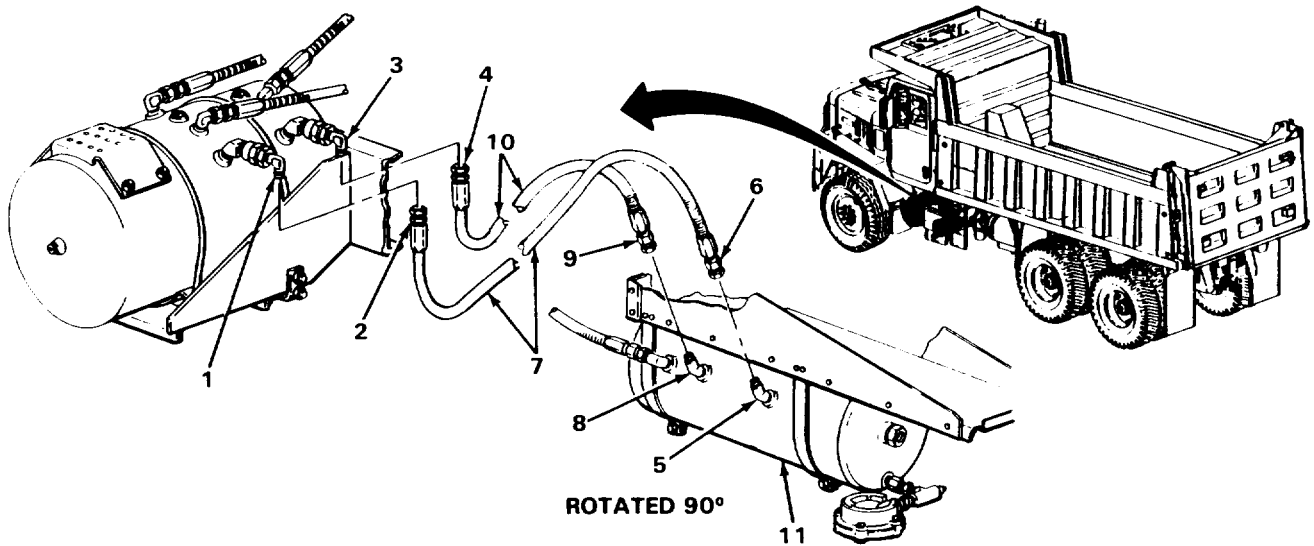
CAUTION

Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.

NOTE

For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).

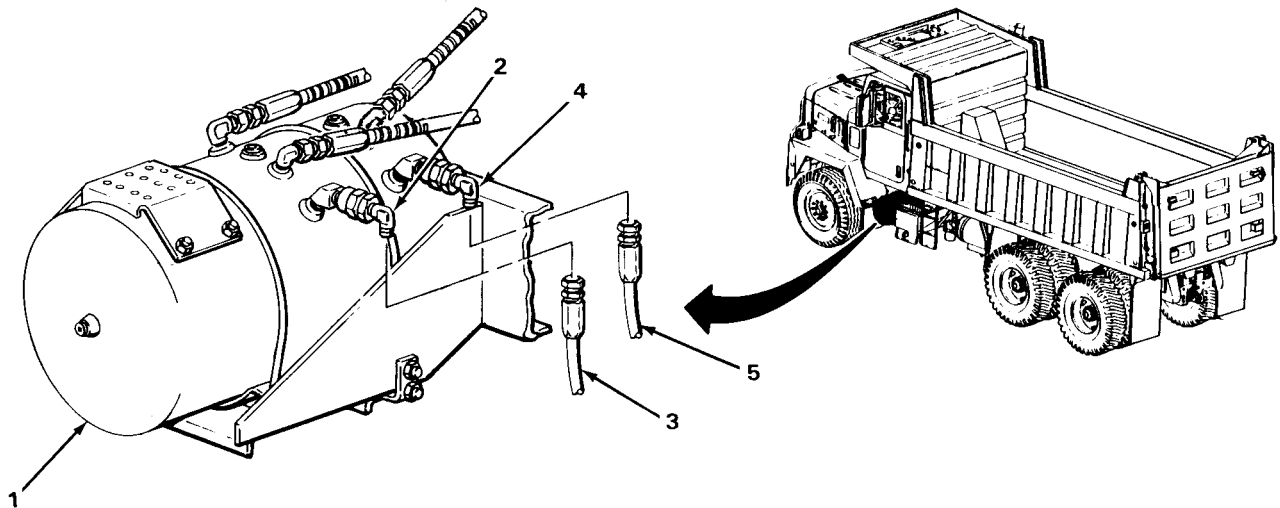
- | | | | |
|-----|------------------------|---------------------|--|
| 8. | Wet air reservoir (11) | 45-degree elbow (8) | Wrap pipe threads with antiseizing tape. |
| 9. | 45-degree elbow (8) | Airhose (10) | Screw on and tighten using 7/8-inch open-end wrench. |
| 10. | Wet air reservoir (11) | 45-degree elbow (5) | Wrap pipe threads with antiseizing tape. |
| 11. | 45-degree elbow (5) | Airhose (7) | Screw on and tighten using 7/8-inch open- |



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DRY AIR RESERVOIR TO WET AIR RESERVOIR HOSES - CONTINUED

	LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED				
12.	Dry air reservoir (1)	90-degree elbow (2)		Wrap pipe threads with antiseizing tape.
13.	90-degree elbow (2)	Airhose (3)		Screw on and tighten using 7/8-inch open-end wrench.
14.	Dry air reservoir (1)	90-degree elbow (4)		Wrap pipe threads with antiseizing tape.
15.	90-degree elbow (4)	Airhose (5)		Screw on and tighten using 7/8-inch open-end wrench.



TASK ENDS HERE

DRY AIR RESERVOIR TO FRONT RELAY VALVE HOSE

This task covers:

- a. Removal (page 2-1081)
- b. Cleaning (page 2-1082)
- c. Inspection/Replacement (page 2-1082)
- d. Installation (page 2-1083)

TA244379

DRY AIR RESERVOIR TO FRONT RELAY VALVE HOSE - CONTINUED

INITIAL SETUP:

Tools

- Gloves, safety
- Goggles, safety
- Wrench, box-end, 7/16-inch
- Wrench, open-end, 7/16-inch
- Wrench, open-end, 1 1/16-inch
- Wrench, open-end, 1 1/4-inch

Materials/Parts

- Detergent, liquid, GP (item 7, appendix C)
- Lockwasher, clamp screw (three required)

Materials/Parts - Continued

- Rags, wiping (item 15, appendix C)
- Solvent, drycleaning (item 19, appendix C)
- Tape, antiseizing (Item 22, appendix C)

Personnel Required

One

Equipment Condition

Airbrake system drained (page 2-1034).

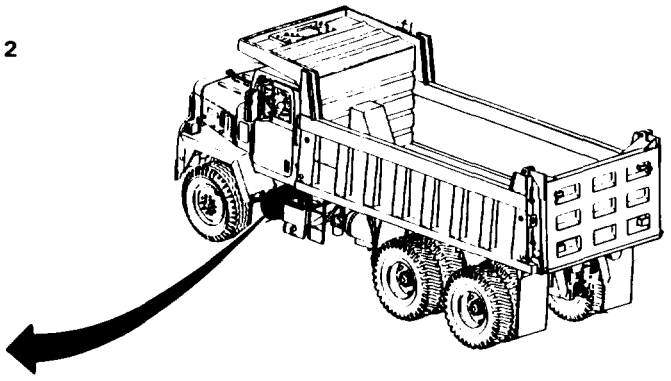
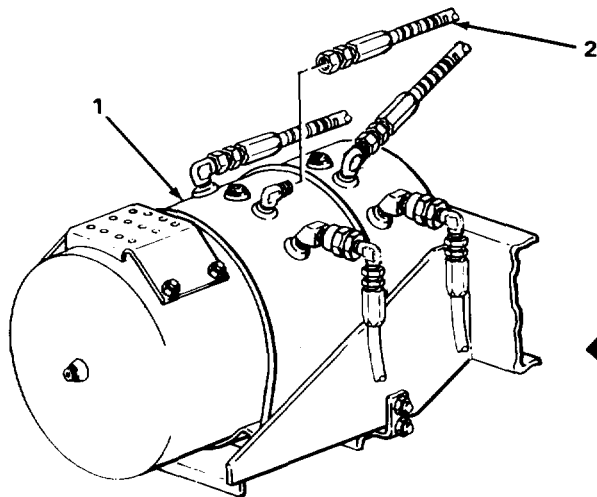
LOCATION	ITEM	ACTION REMARKS
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REMOVAL

WARNING

Safety goggles must be worn when working under truck to prevent eye injury.

- | | | | |
|----|-----------------------|-------------|---|
| 1. | Dry air reservoir (1) | Airhose (2) | Using 1 1/4-inch open-end wrench, unscrew and take off. |
|----|-----------------------|-------------|---|



DRY AIR RESERVOIR TO FRONT RELAY VALVE HOSE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
NOTE			
Step 2 is typical for three clamps.			
2.	Left frame rail (1) and airhose (2)	Clamp (3), screw (4), lockwasher (5), and nut (6)	a. Using 7/16-inch box-end and 7/16-inch open-end wrenches, unscrew and take out. b. Get rid of lockwasher. c. Take clamp off airhose.
3.	Front relay valve (9)	Line nut (8), airhose (2), and fitting (7)	a. Using 1 1/4-inch and 1 1/16-inch open-end wrenches, unscrew and take off. b. Take out airhose.

CLEANING

WARNING

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 100°F (38°C) and for type #2 is 138°F (59°C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

4.	Airhose (2)	Clean using liquid detergent and wiping rag.
5.	All metal parts	Clean using drycleaning solvent and wiping rag.

INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

Change 1 2-1082

DRY AIR RESERVOIR TO FRONT RELAY VALVE HOSE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
6.	Airhose (2)	a. Check for cracks, breaks, chafing, or hardness. b. Look for rust or corrosion.	
7.	All threaded parts	Look for damaged threads or rounded heads.	

INSTALLATION

CAUTION

Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.

NOTE

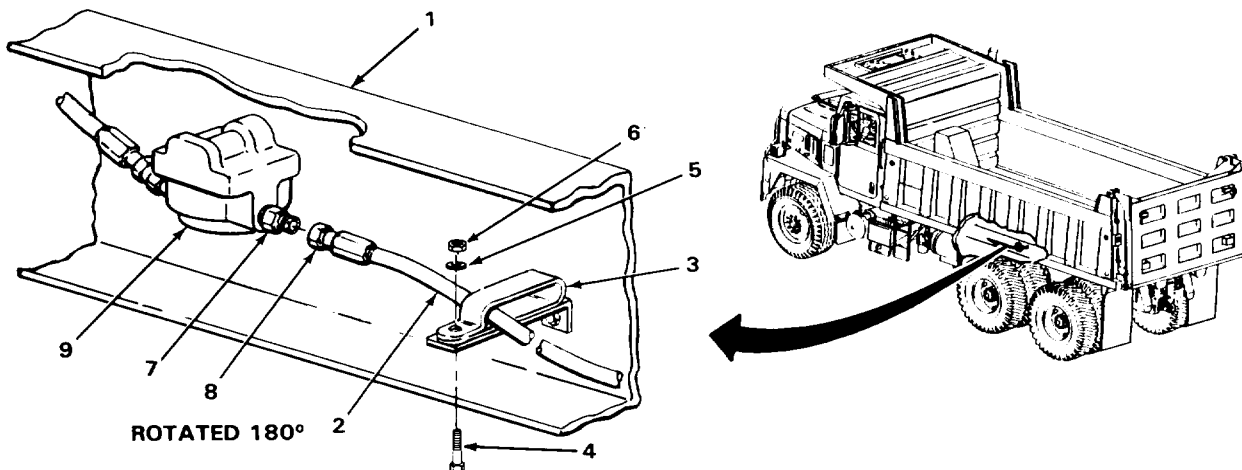
For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).

8.	Front relay valve (9)	Fitting (7)	Wrap pipe threads with antiseizing tape.
9.		Fitting (7) and airhose (2)	Screw on and tighten using 1 1/4-inch and 1 1/16-inch open-end wrenches.

NOTE

Steps 10 and 11 are typical for three clamps.

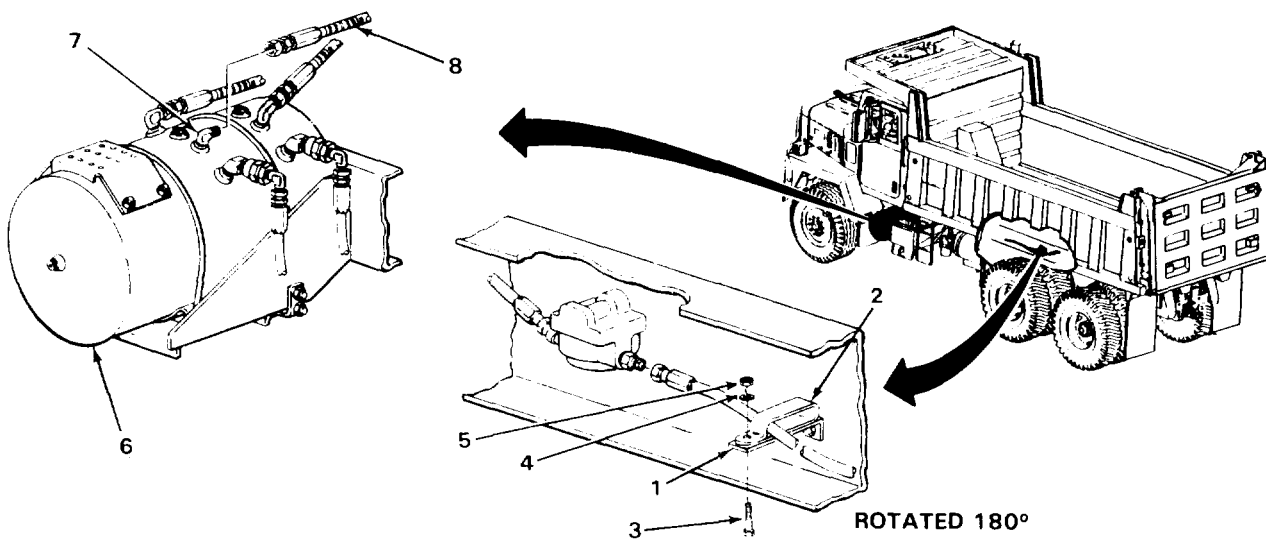
10.	Airhose (2)	Clamp (3)	Put on.
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TA244381

DRY AIR RESERVOIR TO FRONT RELAY VALVE HOSE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
11. Clamp bracket (1)	Clamp (2), screw (3), new lockwasher (4), and nut (5)	a. Aline holes in clamp and clamp bracket. b. Screw in and tighten using 7/16-inch box-end and 7/16-inch open-end wrenches.
12. Dry air reservoir (6)	90-degree elbow (7)	Wrap pipe threads with antiseizing tape.
13. 90-degree elbow (7)	Airhose (8)	Screw on and tighten using 1 1/4-inch open-end wrench.



TASK ENDS HERE

FRONT BRAKE LIMITING AND QUICK RELEASE VALVE

This task covers:

- a. Removal (page 2-1084.2)
- b. Installation (page 2-1084.2)

INITIAL SETUP:

Equipment Conditions

- Front brake limiting and quick release valve to brake treadle valve hose disconnected (page 2-1084)
- Left front wheel to front brake limiting and quick release valve hose disconnected (page 2-1115)
- Right front wheel to front brake limiting and quick release valve hose disconnected (page 1-1122).
- Front brake limiting control valve hose and fitting disconnected (page 2-1159).

Materials/Parts

Lockwasher, quick release valve (two required)

Tools/Test Equipment

- Goggles, safety
- Wrench, box-end, 7/16-inch
- Wrench, open-end, 7/16-inch

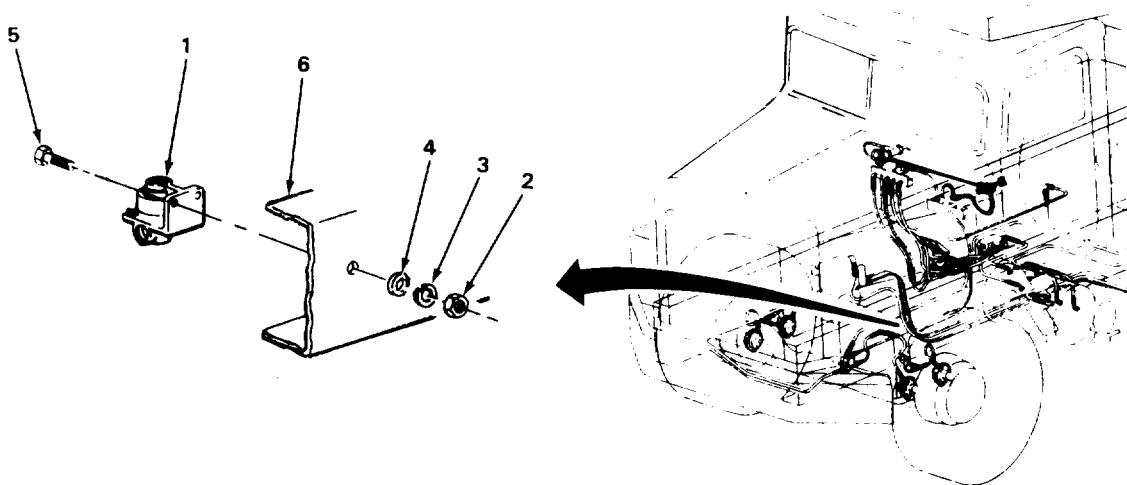
Personnel Required

One

Change 1 2-1084.1

FRONT BRAKE LIMITING AND QUICK RELEASE VALVE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
<u>WARNING</u>		
Safety goggles must be worn when working under truck to prevent eye injury.		
1. Front brake limiting and quick release valve (1)	Two nuts (2), lockwashers (3), washers (4), and screws (5)	a. Using 7/16-inch open-end wrench and 7/16-inch box-end wrench, unscrew, and take off. b. Get rid of lockwashers.
2. Left frame rail (6)	Front brake limiting and quick release valve (1)	Take off.
INSTALLATION		
3. Left frame rail (6)	Front brake limiting and quick release valve (1)	Put in place.
4. Front brake limiting and quick release valve (1)	Two nuts (2), new lockwashers (3), washers (4), and screws (5)	Screw in and tighten using 7/16-inch box-end wrench and 7/16-inch open-end wrench.



FRONT BRAKE LIMITING AND QUICK RELEASE VALVE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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NOTE

FOLLOW-ON MAINTENANCE:

1. Connect front brake limiting control valve hose and fitting (page 2-1159).
2. Connect front wheel to front brake limiting and quick release valve hose (page 2-1122).
3. Connect left front wheel to front brake limiting and quick release valve hose (page 2-1115).
4. Connect front brake limiting and quick release valve to brake treadle valve hose (page 2-1084).

TASK ENDS HERE

FRONT BRAKE LIMITING AND QUICK RELEASE VALVE TO BRAKE TREADLE VALVE HOSE

This task covers:

- | | |
|---------------------------|---|
| a. Removal (page 2-1085) | c. Inspection/Replacement (page 2-1086) |
| b. Cleaning (page 2-1086) | d. Installation (page 2-1087) |

Change 1 2-1084.3/(2-1084.4 blank)

FRONT BRAKE LIMITING AND QUICK RELEASE VALVE TO BRAKE TREADLE VALVE HOSE - CONTINUED

INITIAL SETUP:

Tools

- Gloves, safety
- Goggles, safety
- Wrench, box-end, 7/16-inch
- Wrench, open-end, 7/16-inch
- Wrench, open-end, 7/8-inch

Materials/Parts

- Detergent, liquid, GP (item 7, appendix C)
- Lockwasher, clamp screw (two required)
- Rags, wiping (item 15, appendix C)

Materials/Parts - Continued

- Solvent, drycleaning (item 19, appendix C)
- Tape, antiseizing (item 22, appendix C)

Personnel Required

One

Equipment Condition

- Airbrake system drained (page 2-1034).
- Left side hood panel opened (page 2-424).

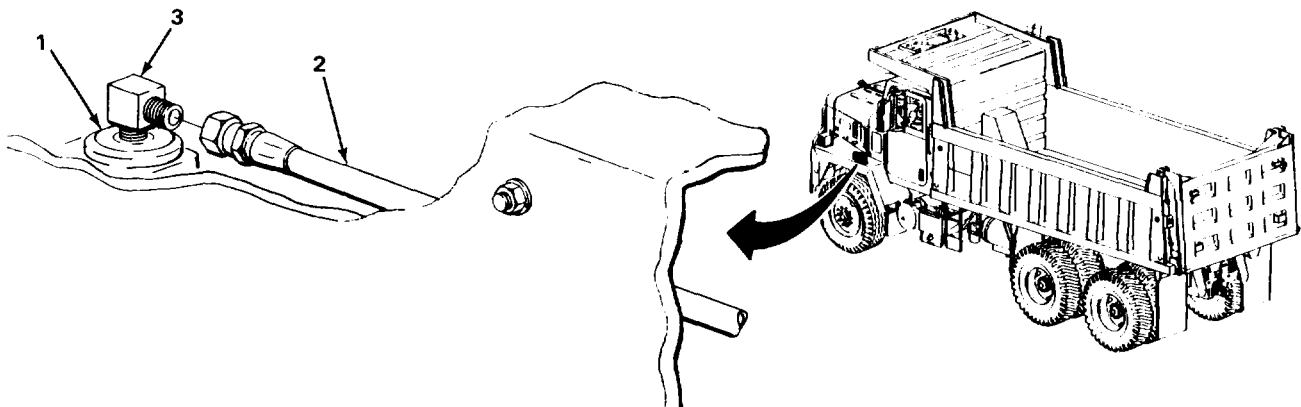
LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

Safety goggles must be worn when working under truck to prevent eye injury.

- | | | | |
|----|--|-------------------------------------|---|
| 1. | Front brake limiting and quick release valve (1) | Airhose (2) and 90-degree elbow (3) | Using 7/8-inch open-end wrench, unscrew and take off. |
|----|--|-------------------------------------|---|



TA702149

FRONT BRAKE LIMITING AND QUICK RELEASE VALVE TO BRAKE TREADLE VALVE HOSE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED		
2.	Left frame rail (1) and airhose (2)	Clamp (3), screw (4), lockwasher (5), and nut (6)
		a. Using 7/16-inch box-end and 7/16-inch open-end wrenches, unscrew and take out. b. Get rid of lockwasher. c. Take clamp off airhose.
3.	Engine side of firewall (7) and airhose (2)	Clamp (8), screw (9), lockwasher (10), and nut (11)
		a. Using 7/16-inch box-end and 7/16-inch open-end wrenches, unscrew and take out. b. Get rid of lockwasher. c. Take clamp off airhose.
4.	Brake treadle valve (12)	Line nut (13) and airhose (2)
		a. Using 7/8-inch open-end wrench, unscrew and take off. b. Take out airhose.

CLEANING

WARNING

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 100°F (38°C) and for type #2 is 138°F (59°C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

5.	Airhose (2)	Clean using liquid detergent and wiping rag.
6.	All metal parts	Clean using drycleaning solvent and wiping rag.

INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

FRONT BRAKE LIMITING AND QUICK RELEASE VALVE TO BRAKE TREADLE VALVE HOSE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
7.	Airhose (2)	a. Check for cracks, breaks, chafing, or hardness. b. Look for excessive rust or corrosion.	
8.	All threaded parts	Look for damaged threads and rounded heads.	

INSTALLATION

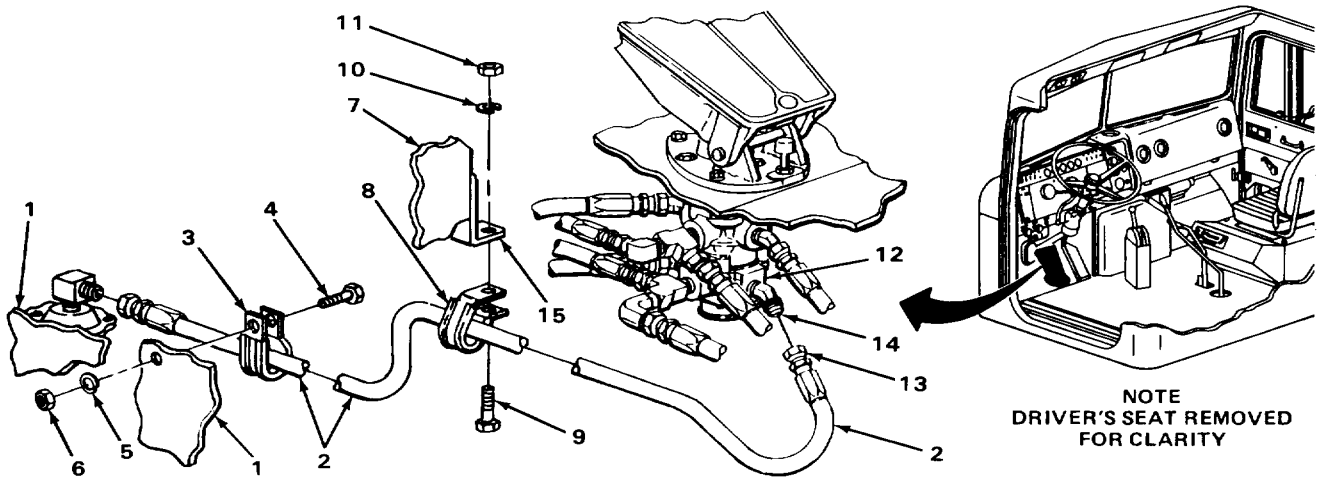
CAUTION

Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.

NOTE

For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).

9.	Brake treadle valve (12)	45-degree elbow (14)	Wrap pipe threads with antiseizing tape.
10.	45-degree elbow (14)	Airhose (2)	Screw on and tighten using 7/8-inch open-end wrench.
11.	Clamp bracket (15)	Clamp (8), screw (9), new lockwasher (10), and nut (11)	a. Put clamp on airhose (2). b. Aline holes in clamp and clamp bracket. c. Screw in and tighten using 7/16-inch box-end and 7/16-inch open-end wrenches.

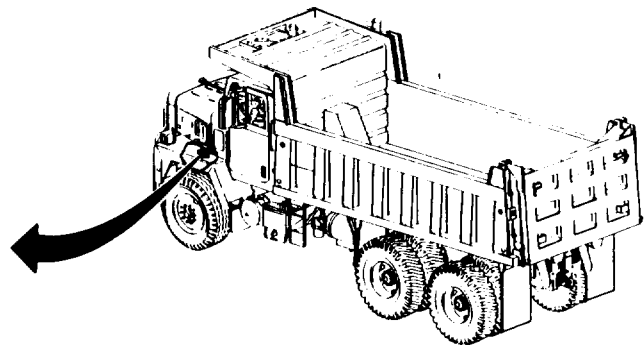
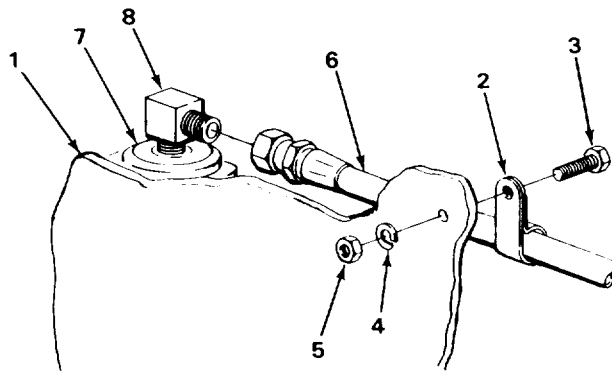


NOTE
DRIVER'S SEAT REMOVED FOR CLARITY

TA244384

FRONT BRAKE LIMITING AND QUICK RELEASE VALVE TO BRAKE TREADLE VALVE HOSE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
12. Left frame rail (1)	Clamp (2), screw (3), new lockwasher (4), and nut (5)	a. Put clamp on airhose (6). b. Aline holes in clamp and left frame rail. c. Screw in and tighten using 7/16-inch box-end and 7/16-inch open-end wrenches.
13. Front brake limiting and quick release valve (7)	90-degree elbow (8)	Wrap pipe threads with antiseizing tape.
14.	90-degree elbow (8) and airhose (6)	Screw on and tighten using 7/8-inch open-end wrench.



NOTE

FOLLOW-ON MAINTENANCE: Close left side hood panel (page 2-424).

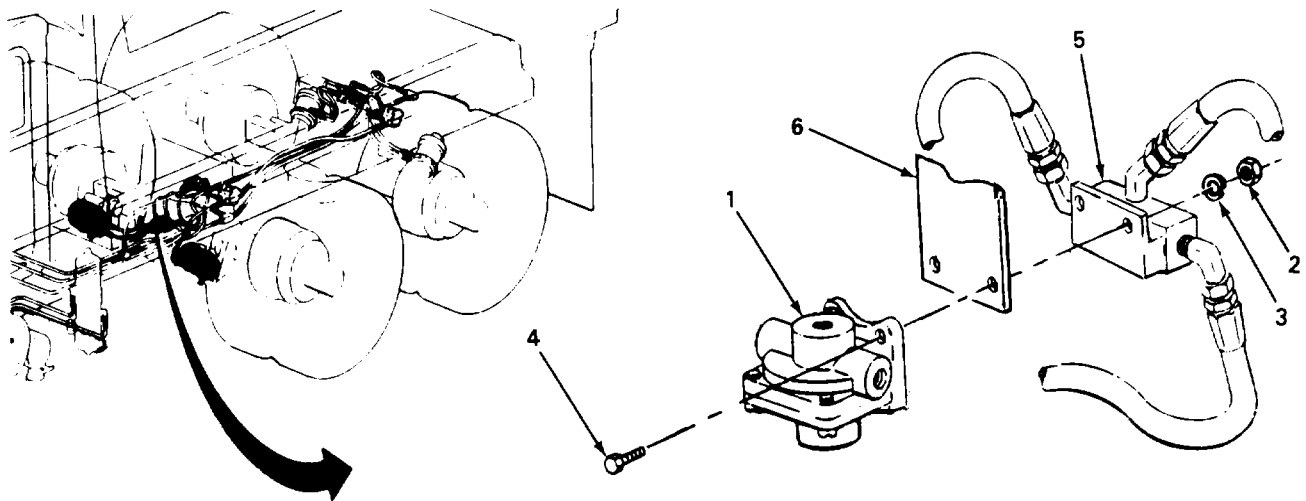
TASK ENDS HERE

TA244385

Change 1 2-1088

FRONT REAR QUICK RELEASE VALVE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
<u>WARNING</u>		
Safety goggles must be worn when working under truck to prevent eye injury.		
1. Front rear quick release valve (1)	Two nuts (2), lockwashers (3), and screws (4)	a Using 7/16-inch open-end wrench and 7/16-inch box-end wrench, unscrew, and take off. b Get rid of lockwashers. Front rear T-fitting (5) is also removed.
2. Bracket (6)	Front rear quick release valve (1)	Take off.
INSTALLATION		
3. Bracket (6)	Front rear quick release valve (1)	Put in place.
4. Front rear quick release valve (1)	Two nuts (2), new lockwashers (3), and screws (4) installed.	Screw in and tighten using 7/16-inch box-end wrench and 7/16-inch open-end wrench. Front rear quick release valve (5) is also



TA702150

Change 1 2-1088.2

FRONT REAR QUICK RELEASE VALVE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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NOTE

FOLLOW-ON MAINTENANCE:

1. Connect chassis T-fitting to front rear quick release valve hose (page 2-1146).
2. Connect front rear quick release valve to parking airbrake chamber hose (page 2-1088.3).

TASK ENDS HERE

FRONT REAR QUICK RELEASE VALVE TO PARKING AIRBRAKE CHAMBER HOSES

This task covers:

- | | |
|---------------------------|---|
| a. Removal (page 2-1089) | c. Inspection/Replacement (page 2-1091) |
| b. Cleaning (page 2-1090) | d. Installation (page 2-1092) |

Change 1 2-1088.3/(2-1088.4 blank)

FRONT REAR QUICK RELEASE VALVE TO PARKING AIRBRAKE CHAMBER HOSES - CONTINUED

INITIAL SETUP:

Tools Materials/Parts - Continued

Gloves, safety
 Goggles, safety
 Wrench, box-end, 7/16-inch
 Wrench, open-end, 7/16-inch
 Wrench, open-end, 5/8-inch
 Wrench, open-end, 11/16-inch
 Wrench, open-end, 3/4-inch

Rags, wiping (item 15, appendix C)
 Solvent, drycleaning (item 19, appendix C)
 Tags, marker (item 21, appendix C)
 Tape, antiseizing (item 22, appendix C)

Personnel Required

One

Materials/Parts

Detergent, liquid, GP (item 7, appendix C)
 Lockwasher, clamp screw

Equipment Condition

Airbrake system drained (page 2-1034).

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

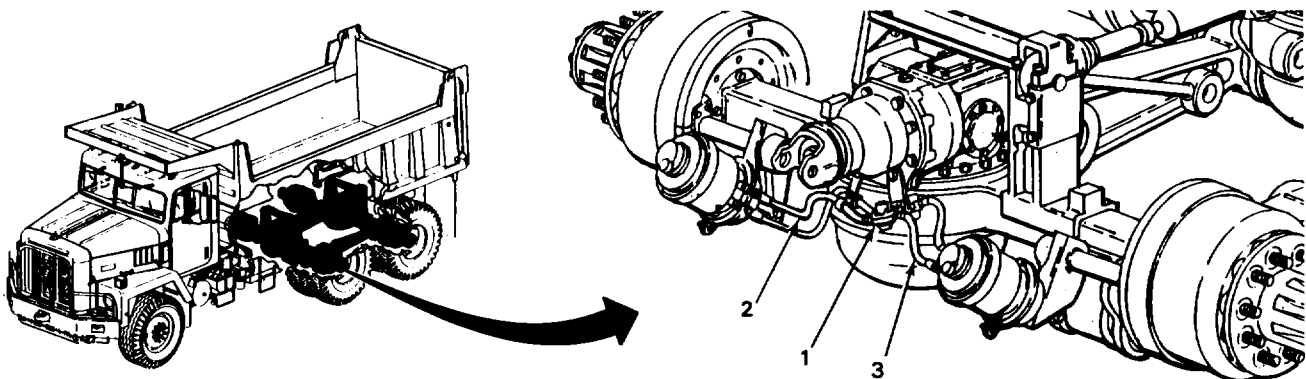
Safety goggles must be worn when working under truck to prevent eye injury.

NOTE

Tag airhoses to ensure correct installation.

For more information on how to tag parts, go to General Maintenance Instructions (page 2-424).

- | | | | |
|----|------------------------------------|--|------|
| 1. | Front rear quick release valve (1) | Right airhose (2) and left airhose (3) | Tag. |
|----|------------------------------------|--|------|



TA702151

FRONT REAR QUICK RELEASE VALVE TO PARKING AIRBRAKE CHAMBER HOSES - CONTINUED

LOCATION	ITEM	ACTION REMARKS	
REMOVAL - CONTINUED			
2.	Front rear quick release valve (0.1)	Line nut (2) and fitting (1)	Using 3/4-inch and 11/16-inch open-end wrenches, unscrew and take off.
3.		Line nut (4) and 45-degree elbow (3)	Using 3/4-inch open-end wrench, unscrew and take off.
4.	Right parking air-brake chamber (5)	Line nut (7) and fitting (6)	Using 3/4-inch and 5/8-inch open-end wrenches, unscrew and take off.
5.	Left parking air-brake chamber (8)	Line nut (10), fitting (9), and left airhose (11)	a. Using 3/4-inch and 5/8-inch open-end wrenches, unscrew and take off. b. Take out left airhose.
6.	Clamp bracket (12)	Screw (13), lock-washer (14), nut (15), and two clamps (16)	a. Using 7/16-inch box-end and 7/16-inch open-end wrenches, unscrew and take out. b. Get rid of lockwasher. c. Take clamp off right airhose (17) only. d. Take out right airhose (17).

CLEANING

WARNING

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 100°F (38°C) and for type #2 is 138°F (59°C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

7.	Two airhoses (11 and 17)	Clean using liquid detergent and wiping rag.
8.	All metal parts	Clean using drycleaning solvent and wiping rag.

Change 1 2-1090

FRONT REAR QUICK RELEASE VALVE TO PARKING AIRBRAKE CHAMBER HOSES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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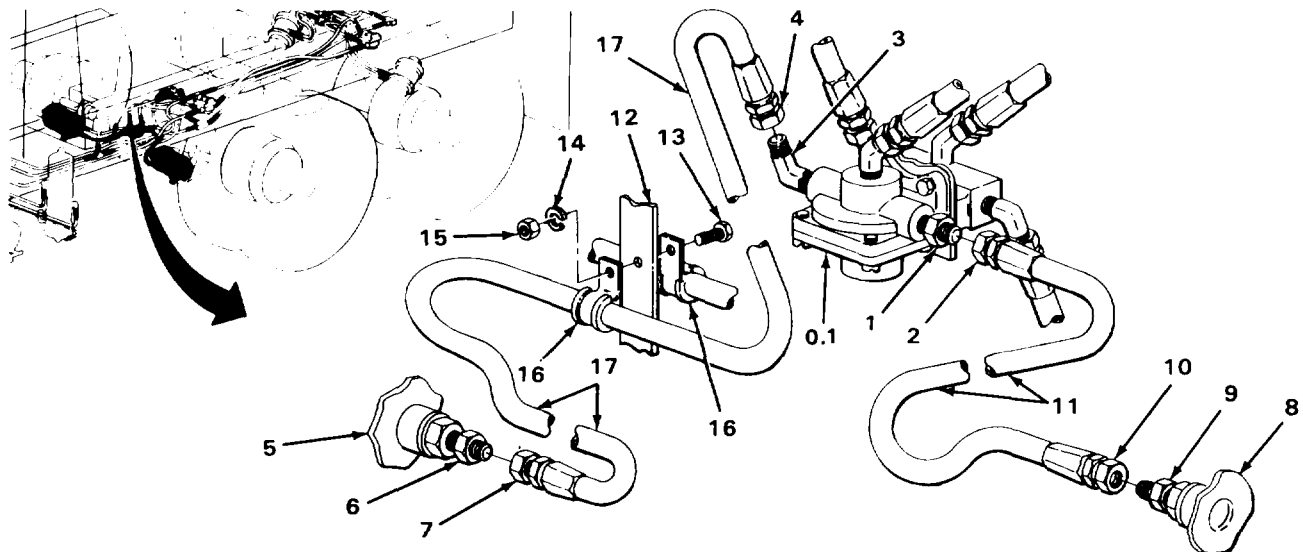
INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

- | | | |
|-----|-----------------------------|---|
| 9. | Two airhoses
(11 and 17) | a. Check for cracks, breaks, chafing, or
hardness.
b. Look for excessive rust or corrosion. |
| 10. | All threaded parts | Look for damaged threads or rounded
heads. |



TA702152

Change 1 2-1091

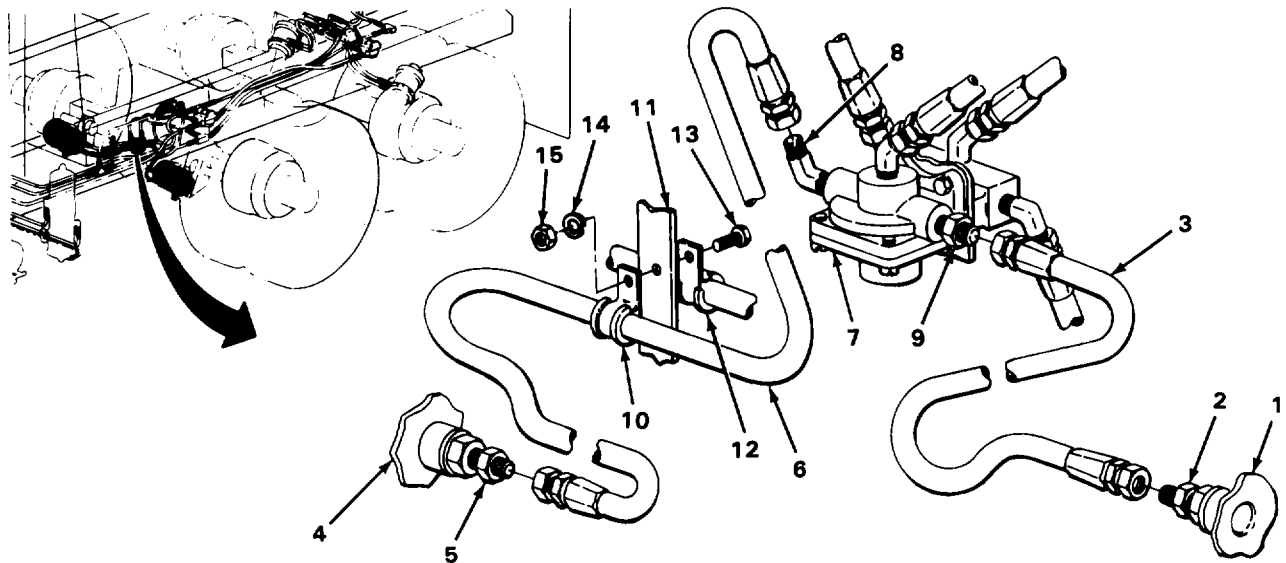
FRONT REAR QUICK RELEASE VALVE TO PARKING AIRBRAKE CHAMBER HOSES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
<u>CAUTION</u>		
Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.		
For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).		
See tags for correct location of airhoses.		
11. Left parking air-brake chamber (1)	Fitting (2)	Wrap pipe threads with antiseizing tape.
12.	Fitting (2) and left airhose (3)	Screw on and tighten using 3/4-inch and 5/8-inch open-end wrenches.
13. Right parking air-brake chamber (4)	Fitting (5)	Wrap pipe threads with antiseizing tape.
14.	Fitting (5) and right airhose (6)	Screw on and tighten using 3/4-inch and 5/8-inch open-end wrenches.
15. Front rear quick release valve (7)	45-degree elbow (8)	Wrap pipe threads with antiseizing tape.
16.	45-degree elbow (8) and right airhose (6)	a. Screw on and tighten using 3/4-inch open-end wrench. b. Take off tag. c. Get rid of tag.
17.	Fitting (9)	Wrap pipe threads with antiseizing tape.
18.	Fitting (9) and left airhose (3)	a. Screw on and tighten using 3/4-inch and 11/16-inch open-end wrenches. b. Take off tag. c. Get rid of tag.

Change 1 2-1092

FRONT REAR QUICK RELEASE VALVE TO PARKING AIRBRAKE CHAMBER HOSES - CONTINUED

LOCATION	ITEM	ACTION REMARKS	
19.	Right alrhone (6)	Clamp (10)	Put on.
20.	Clamp bracket (11)	Clamp (10), clamp (12), screw (13), new lockwasher (14), and nut (15)	a. Allne holes In clamps and clamp bracket. b. Screw In and tighten using 7/16-Inch box-end and 7/16-Inch open-end wrenches.



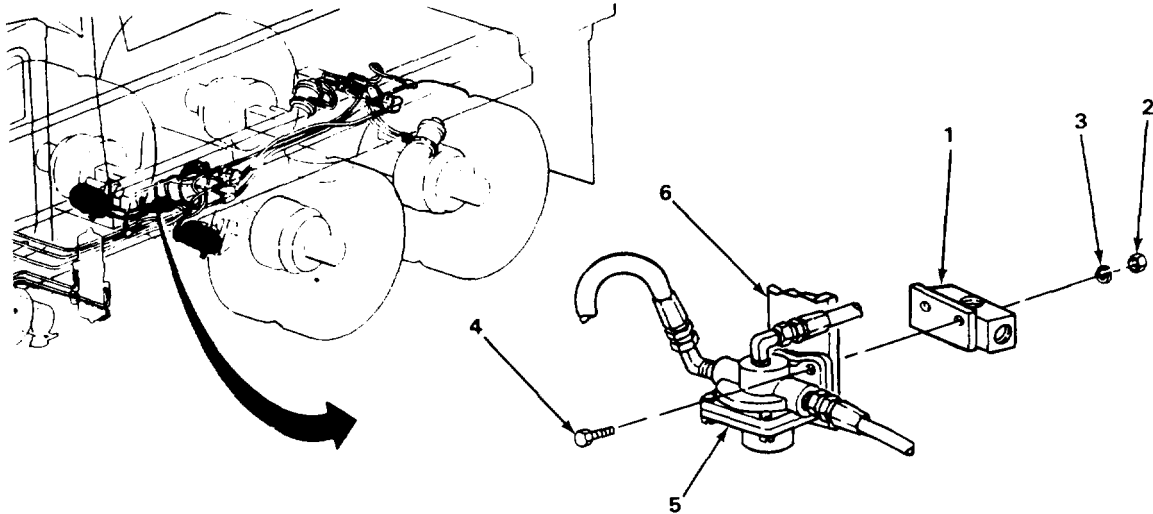
TASK ENDS HERE

TA244388

Change 1 2-1093

FRONT REAR T-FITTING - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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NOTE

FOLLOW-ON MAINTENANCE:

1. Connect front relay valve to front rear T-fitting hose (page 2-1099).
2. Connect front rear T-fitting to service airbrake chamber hoses (page 2-1093.1).

TASK ENDS HERE

FRONT REAR T-FITTING TO SERVICE AIRBRAKE CHAMBER HOSES

This task covers:

- | | |
|---------------------------|---|
| a. Removal (page 2-1094) | c. Inspection/Replacement (page 2-1096) |
| b. Cleaning (page 2-1096) | d. Installation (page 2-1096) |

TA702153

Change 1 2-1093.1

FRONT REAR T-FITTING TO SERVICE AIRBRAKE CHAMBER HOSES - CONTINUED

INITIAL SETUP:

Tools

- Gloves, safety
- Goggles, safety
- Wrench, box-end, 7/16-inch
- Wrench, open-end, 7/16-inch
- Wrench, open-end, 5/8-inch
- Wrench, open-end, 3/4-inch

Materials/Parts

- Detergent, liquid, GP (item 7, appendix C)
- Lockwasher, clamp screw

Materials/Parts - Continued

- Rags, wiping (item 15, appendix C)
- Solvent, drycleaning (item 19, appendix C)
- Tags, marker (item 21, appendix C)
- Tape, antiseizing (item 22, appendix C)

Personnel Required

One

Equipment Condition

Airbrake system drained (page 2-1034).

LOCATION	ITEM	ACTION REMARKS
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REMOVAL

WARNING

Safety goggles must be worn when working under truck to prevent eye injury.

NOTE

Tag airhoses to ensure correct installation.

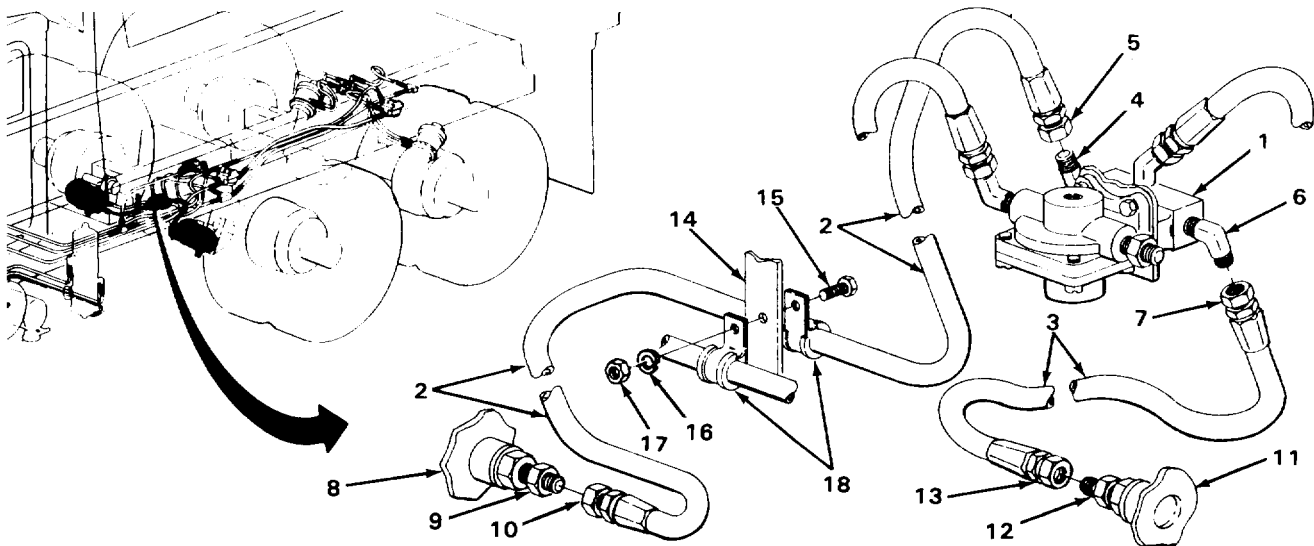
For more information on how to tag parts, go to General Maintenance Instructions (page 2-424).

- | | | | |
|----|-------------------------------------|--|--|
| 1. | Front rear T-fitting (1) | Right airhose (2) and left airhose (3) | Tag. |
| 2. | | Line nut (5) and 45-degree elbow (4) | Using 3/4-inch open-end wrench, unscrew and take off. |
| 3. | | Line nut (7) and 45-degree elbow (6) | Using 3/4-inch open-end wrench, unscrew and take off. |
| 4. | Right service air-brake chamber (8) | Line nut (10) and fitting (9) | Using 3/4-inch and 5/8-inch open-end wrenches, unscrew and take off. |

Change 1 2-1094

FRONT REAR T-FITTING TO SERVICE AIRBRAKE CHAMBER HOSES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
5. Left service air-brake chamber (11)	Line nut (13) and fitting (12)	a. Using 3/4-inch and 5/8-inch open-end wrenches, unscrew and take off. b. Take out left airhose (3).
6. Clamp bracket (14)	Screw (15), lock-washer (16), nut (17), and two clamps (18)	a. Using 7/16-inch box-end and 7/16-inch open-end wrenches, unscrew and take out. b. Get rid of lockwasher. c. Take clamp off right airhose (2) only. d. Take out right airhose (2).



TA244389

Change 1 2-1095

FRONT REAR T-FITTING TO SERVICE AIRBRAKE CHAMBER HOSES - CONTINUED

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

CLEANING

WARNING

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 100°F (38°C) and for type #2 is 138°F (59°C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

7.	Two airhoses	Clean using liquid detergent and wiping rag.
8.	All metal parts	Clean using drycleaning solvent and wiping rag.

INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

9.	Two airhoses	<ul style="list-style-type: none"> a. Check for cracks, breaks, chafing, or hardness. b. Look for excessive rust or corrosion.
10.	All threaded parts	Look for damaged threads or rounded heads.

INSTALLATION

CAUTION

Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.

NOTE

For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).

FRONT REAR T-FITTING TO SERVICE AIRBRAKE CHAMBER HOSES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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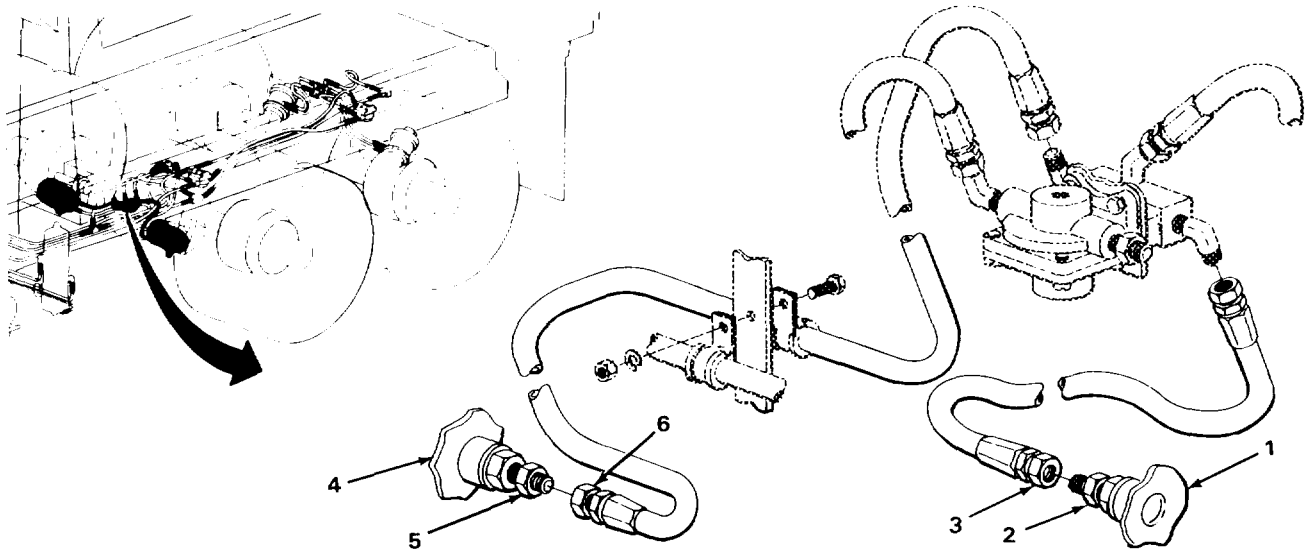
WARNING

Safety goggles must be worn when working under truck to prevent eye injury.

NOTE

See tags for correct location of airhoses.

11. Left service air-brake chamber (1)	Fitting (2)	Wrap pipe threads with antiseizing tape.
12.	Fitting (2) and left airhose (3)	Screw on and tighten using 3/4-inch and 5/8-inch open-end wrenches.
13. Right service air-brake chamber (4)	Fitting (5)	Wrap pipe threads with antiseizing tape.
14.	Fitting (5) and right airhose (6)	Screw on and tighten using 3/4-inch and 5/8-inch open-end wrenches.

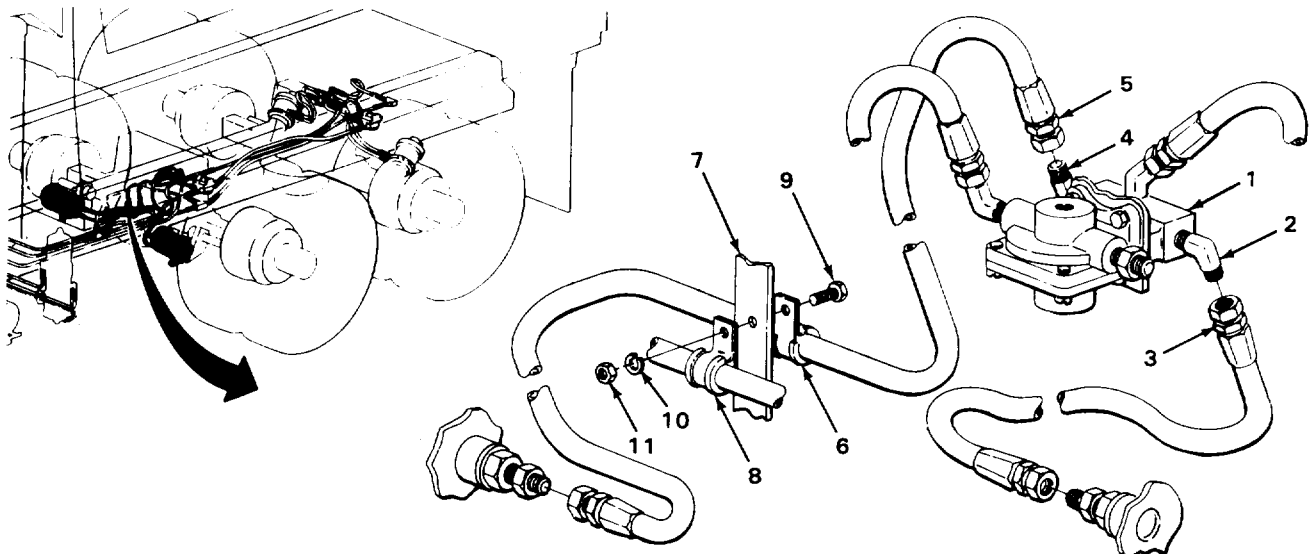


TA244390

Change 1 2-1097

FRONT REAR T-FITTING TO SERVICE AIRBRAKE CHAMBER HOSES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
15.	Front rear T-fitting (1)	45-degree elbow (2)	Wrap pipe threads with antiseizing tape.
16.		45-degree elbow (2) and left airhose (3)	a. Screw on and tighten using 3/4-inch open-end wrench. b. Take off tag. c. Get rid of tag.
17.		45-degree elbow (4)	Wrap pipe threads with antiseizing tape.
18.		45-degree elbow (4) and right airhose (5)	a. Screw on and tighten using 3/4-inch open-end wrench. b. Take off tag. c. Get rid of tag.
19.	Right airhose (5)	Clamp (6)	Put on.
20.	Clamp bracket (7)	Clamp (6), clamp (8), screw (9), new lockwasher (10), and nut (11)	a. Aline holes in clamps and clamp bracket. b. Screw in and tighten using 7/16-inch box-end and 7/16-inch open-end wrenches.



TASK ENDS HERE

FRONT RELAY VALVE

This task covers:

- a. Removal (page 2-1098.2)
- b. Installation (page 2-1098.2)

INITIAL SETUP:

Equipment Conditions

Double check valve T-fitting to front relay valve
 T-fitting hose disconnected (page 2-1149)
 Front relay valve to front rear T-fitting hose disconnected (page 2-1099)
 Dry air reservoir to front relay valve hose disconnected (page 2-1080)
 Front relay valve T-fitting to rear relay valve hose disconnected (page 2-1105).
 Front relay valve to rear relay valve hose disconnected (page 2-1101).

Materials/Parts

Tape, antiseizing (item 22, appendix C)
 Lockwasher, relay valve (two required)

Personnel Required

One

Tools/Test Equipment

Goggles, safety
 Wrench, box-end, 7/16-inch
 Wrench, open-end, 7/16-inch
 Wrench, open-end, 3/4-inch

Change 1 2-1098.1

FRONT RELAY VALVE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
<u>WARNING</u>			
Safety goggles must be worn when working under truck to prevent eye injury.			
1.	Front relay valve (1)	Two nuts (2), lockwashers (3), and screws (4)	a Using 7/16-inch open-end wrench and 7/16-inch box-end wrench, unscrew, and take off. b Get rid of lockwashers.
2.	Bracket (5)	Front relay valve (1)	Take off.
3.	Front relay valve (1)	T-fitting (6)	Using 3/4-inch open-end wrench, unscrew, and take off.

INSTALLATION

CAUTION

Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.

NOTE

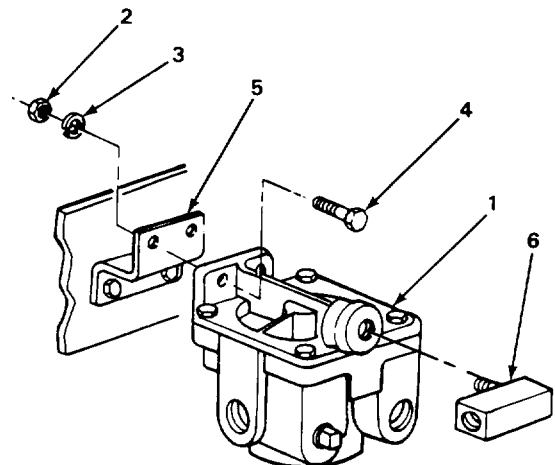
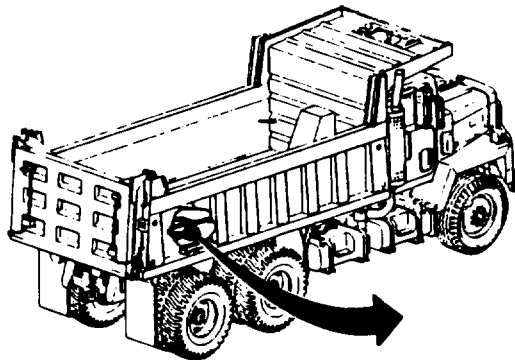
For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).

4.	Front relay valve (1)	T-fitting (6) 2-424).	a Wrap pipe threads with antiseizing tape (page b Screw in and tighten using 3/4-inch open-end wrench.
5.	Bracket (5)	Front relay valve (1)	Put in place.
6.	Front relay valve (1)	Two nuts (2), new lockwashers (3), and screws (4)	Screw in and tighten using 7/16-inch box-end wrench and 7/16-inch open-end wrench.

Change 1 2-1098.2

FRONT RELAY VALVE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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NOTE

FOLLOW-ON MAINTENANCE:

1. Connect front relay valve to front rear relay valve hose (page 2-1101).
2. Connect front relay valve T-fitting to rear relay valve hose (page 2-1105).
3. Connect dry air reservoir to front relay valve hose (page 2-1080).
4. Connect front relay valve to front rear T-fitting hose (page 2-1099).
5. Connect double check valve T-fitting to front relay valve T-fitting hose (page 2-1149).

TASK ENDS HERE

TA702154

Change 1 2-1098.3/(2-1098.4 blank)

FRONT RELAY VALVE TO FRONT REAR T-FITTING HOSE

This task covers:

- a. Removal (page 2-1099)
- b. Cleaning (page 2-1100)
- c. Inspection/Replacement (page 2-1100)
- d. Installation (page 2-1100)

INITIAL SETUP:

Tools

Goggles, safety
Wrench, open-end, 7/8-inch

Materials/Parts

Detergent, liquid, GP (item 7, appendix C)
Rags, wiping (item 15, appendix C)
Tape, antiseizing (item 22, appendix C)

Personnel Required

One

Equipment Condition

Airbrake system drained (page 2-1034).

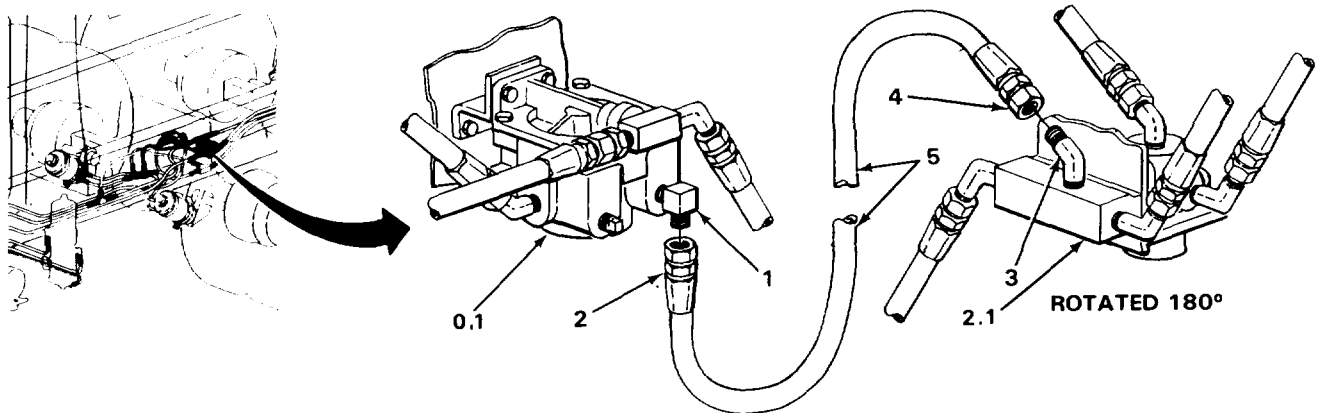
LOCATION	ITEM	ACTION REMARKS
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REMOVAL

WARNING

Safety goggles must be worn when working under truck to prevent eye injury.

- | | | | |
|----|----------------------------|--------------------------------------|---|
| 1. | Front relay valve (0.1) | Line nut (2) and 90-degree elbow (1) | Using 7/8-inch open-end wrench, unscrew and take off. |
| 2. | Front rear T-fitting (2.1) | Line nut (4) and 45-degree elbow (3) | <ul style="list-style-type: none"> a. Using 7/8-inch open-end wrench, unscrew, and take off. b. Take out airhose (5). |

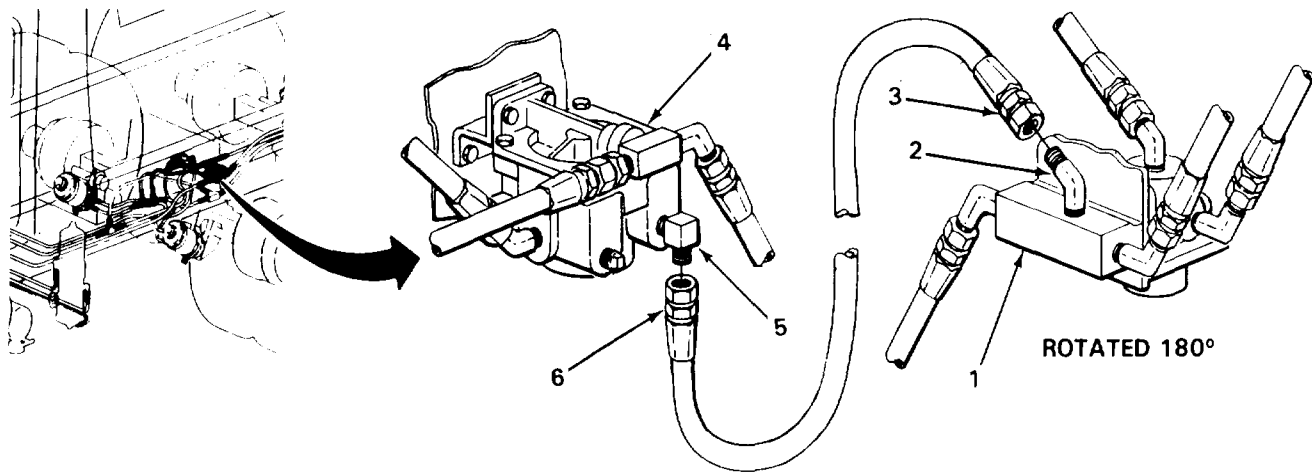


TA702155

FRONT RELAY VALVE TO FRONT REAR T-FITTING HOSE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
CLEANING		
NOTE		
For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).		
3.	Airhose	Clean using liquid detergent and wiping rag.
INSPECTION/REPLACEMENT		
NOTE		
Replace all damaged or defective parts.		
For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).		
4.	Airhose	a. Check for cracks, breaks, chafing, or hardness. b. Look for excessive rust or corrosion.
5.	All threaded parts	Look for damaged threads or rounded heads.
INSTALLATION		
<u>CAUTION</u>		
Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.		
NOTE		
For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).		
6.	Front rear T-fitting (1)	45-degree elbow (2) Wrap pipe threads with antiseizing tape.
7.		45-degree elbow (2) and line nut (3) Screw on and tighten using 7/8-Inch open-end wrench.
8.	Front relay valve (4)	90-degree elbow (5) Wrap pipe threads with antiseizing tape.
9.		90-degree elbow (5) and line nut (6) Screw on and tighten using 7/8-inch open-end wrench.

FRONT RELAY VALVE TO FRONT REAR T-FITTING HOSE - CONTINUED



TASK ENDS HERE

FRONT RELAY VALVE TO REAR RELAY VALVE HOSE

This task covers:

- | | |
|---------------------------|---|
| a. Removal (page 2-1102) | c. Inspection/Replacement (page 2-1103) |
| b. Cleaning (page 2-1102) | d. Installation (page 2-1103) |

INITIAL SETUP:

Tools

- Gloves, safety
- Goggles, safety
- Wrench, box-end, 7/16-inch
- Wrench, open-end, 7/16-inch
- Wrench, open-end, 1 1/4-inch

Materials/Parts

- Detergent, liquid, GP (item 7, appendix C)
- Lockwasher, clamp screw (two required)

Materials/Parts - Continued

- Rags, wiping (item 15, appendix C)
- Solvent, drycleaning (item 19, appendix C)
- Tape, antiseizing (item 22, appendix C)

Personnel Required

One

Equipment Condition

Airbrake system drained (page 2-1034).

TA244393

FRONT RELAY VALVE TO REAR RELAY VALVE HOSE - CONTINUED

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

REMOVAL

WARNING

Safety goggles must be worn when working under truck to prevent eye injury.

1.	Front relay valve (0.1)	Line nut (2) and 45-degree elbow (1)	Using 1 1/4-inch open-end wrench, unscrew and take off.
2.	Rear relay valve (2.1)	Line nut (4) and 45-degree elbow (3)	Using 1 1/4-inch open-end wrench, unscrew and take off.

NOTE

Step 3 is typical for two clamp assemblies.

3.	Clamp bracket (5)	Screw (6), lock-washer (7), nut (8), and clamp (9)	<ul style="list-style-type: none"> a. Using 7/16-inch box-end and 7/16-inch open-end wrenches, unscrew and take out. b. Get rid of lockwasher. c. Take clamps off airhose (10). d. Take out airhose (10).
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CLEANING

WARNING

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 100°F (38°C) and for type #2 is 138°F (59°C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

4.	Airhose (10)	Clean using liquid detergent and wiping rag.
5.	All metal parts	Clean using drycleaning solvent and wiping rag.

Change 1 2-1102

FRONT RELAY VALVE TO REAR RELAY VALVE HOSE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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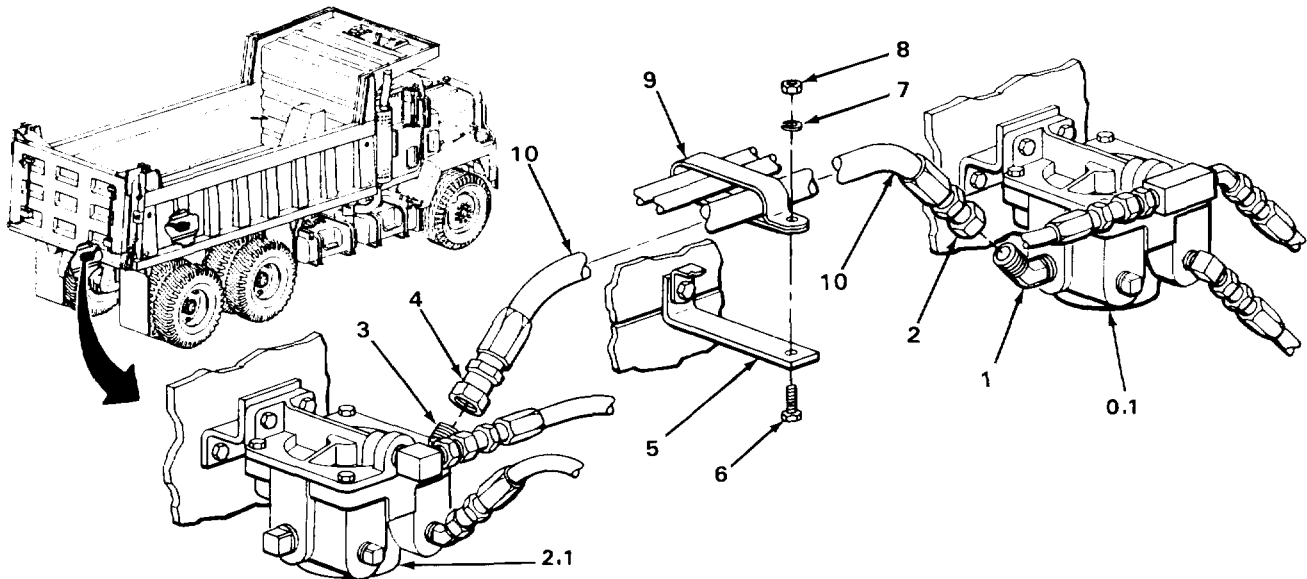
INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

- | | | |
|----|--------------------|--|
| 6. | Airhose (10) | <ul style="list-style-type: none"> a. Check for cracks, breaks, chafing, or hardness. b. Look for excessive rust or corrosion. |
| 7. | All threaded parts | Look for damaged threads or rounded heads. |



INSTALLATION

CAUTION

Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.

NOTE

For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).

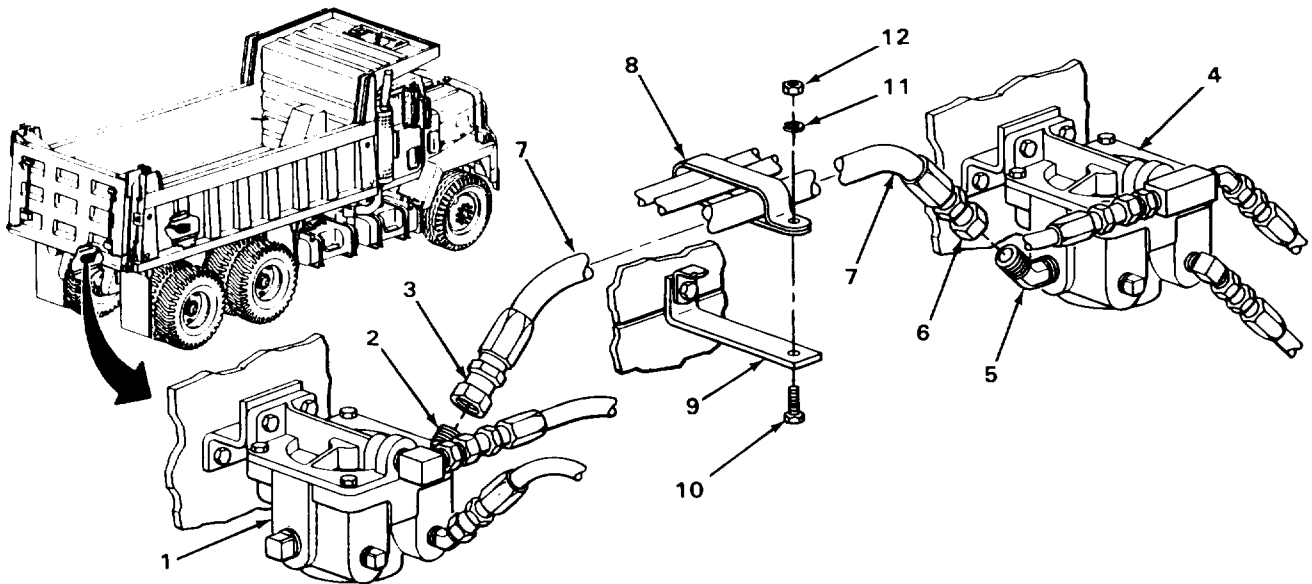
FRONT RELAY VALVE TO REAR RELAY VALVE HOSE - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED			
8.	Rear relay valve (1)	45-degree elbow (2)	Wrap pipe threads with antiseizing tape.
9.		45-degree elbow (2) and line nut (3)	Screw on and tighten using 1 1/4-inch open-end wrench.
10.	Front relay valve (4)	45-degree elbow (5)	Wrap pipe threads with antiseizing tape.
11.		45-degree elbow (5) and line nut (6)	Screw on and tighten using 1 1/4-inch open-end wrench.

NOTE

Steps 12 and 13 are typical for two clamp assemblies.

12.	Airhose (7)	Clamp (8)	Put on.
13.	Clamp bracket (9)	Clamp (8), screw (10), new lock-washer (11), and nut (12)	a. Aline holes in clamp and clamp bracket. b. Screw in and tighten using 7/16-inch box-end and 7/16-inch open-end wrenches.



TASK ENDS HERE

TA244395

Change 1 2-1104

FRONT RELAY VALVE T-FITTING TO REAR RELAY VALVE HOSE

This task covers:

- a. Removal (page 2-1105)
- b. Cleaning (page 2-1106)
- c. Inspection/Replacement (page 2-1106)
- d. Installation (page 2-1107)

INITIAL SETUP:

Tools

- Gloves, safety
- Goggles, safety
- Wrench, box-end, 7/16-inch
- Wrench, open-end, 7/16-inch
- Wrench, open-end, 3/4-inch
- Wrench, open-end, 7/8-inch

Materials/Parts

- Detergent, liquid, GP (item 7, appendix C)
- Lockwasher, clamp screw

Materials/Parts - Continued

- Rags, wiping (item 15, appendix C)
- Solvent, drycleaning (item 19, appendix C)
- Tape, antiseizing (item 22, appendix C)

Personnel Required

One

Equipment Condition

Airbrake system drained (page 2-1034).

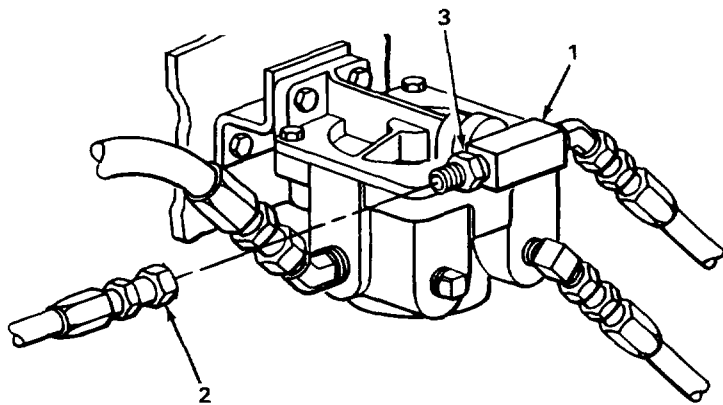
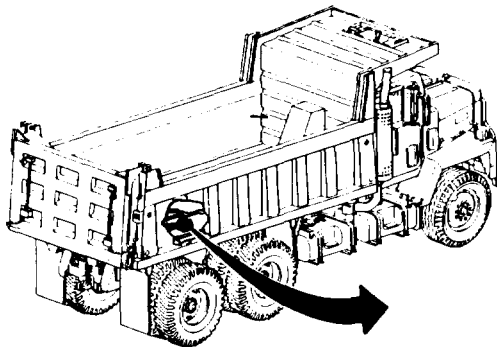
LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

Safety goggles must be worn when working under truck to prevent eye injury.

- | | | | |
|----|---------------------------------|------------------------------|--|
| 1. | Front relay valve T-fitting (1) | Line nut (2) and fitting (3) | Using 7/8-inch and 3/4-inch open-end wrenches, unscrew and take off. |
|----|---------------------------------|------------------------------|--|



TA702157

FRONT RELAY VALVE T-FITTING TO REAR RELAY VALVE HOSE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED		
2.	Rear relay valve (9)	Line nut (2) and 90-degree elbow (1)
		Using 7/8-inch open-end wrench, unscrew and take off.
NOTE		
Step 3 is typical for two clamp assemblies.		
3.	Clamp bracket (3)	Screw (4), lock-washer (5), nut (6), and clamp (7)
		a. Using 7/16-inch box-end and 7/16-inch open-end wrenches, unscrew and take out.
		b. Get rid of lockwasher.
		c. Take clamp off airhose (8).
		d. Take out airhose (8).

CLEANING

WARNING

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 100°F (38°C) and for type #2 is 138°F (59°C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

4.	Airhose (8)	Clean using liquid detergent and wiping rag.
5.	All metal parts	Clean using drycleaning solvent and wiping rag.

INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

FRONT RELAY VALVE T-FITTING TO REAR RELAY VALVE HOSE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
6.	Airhose (8)	a. Check for cracks, breaks, chafing, or hardness. b. Look for excessive rust or corrosion.	
7.	All threaded parts	Look for damaged threads or rounded heads.	

INSTALLATION

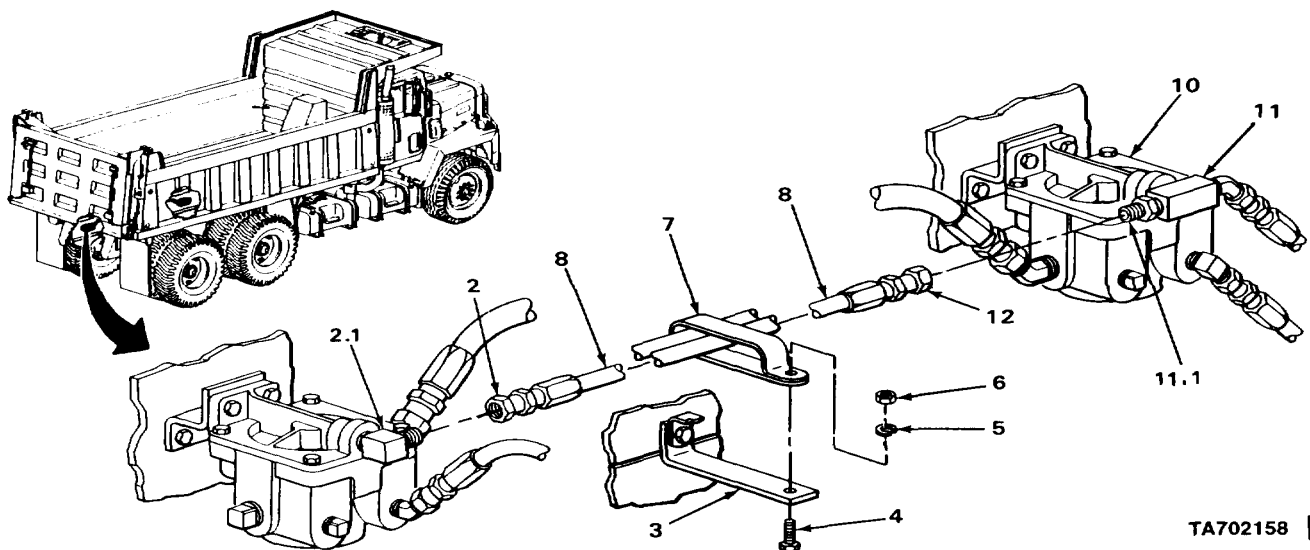
CAUTION

Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.

NOTE

For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).

8.	Rear relay valve (9)	90-degree elbow (1)	Wrap pipe threads with antiseizing tape.
9.	90-degree elbow (1)	90-degree elbow (1) and line nut (2)	Screw on and tighten using 7/8-inch open-end wrench.
10.	Front relay valve (10)	Front relay valve T-fitting (11) and fitting (11.1)	Wrap pipe threads with antiseizing tape.
11.		Front relay valve T-fitting (11), fitting (11.1), and line nut (12)	Screw on and tighten using 7/8-inch and 3/4-inch open-end wrenches.



TA702158

FRONT RELAY VALVE T-FITTING TO REAR RELAY VALVE HOSE - CONTINUED

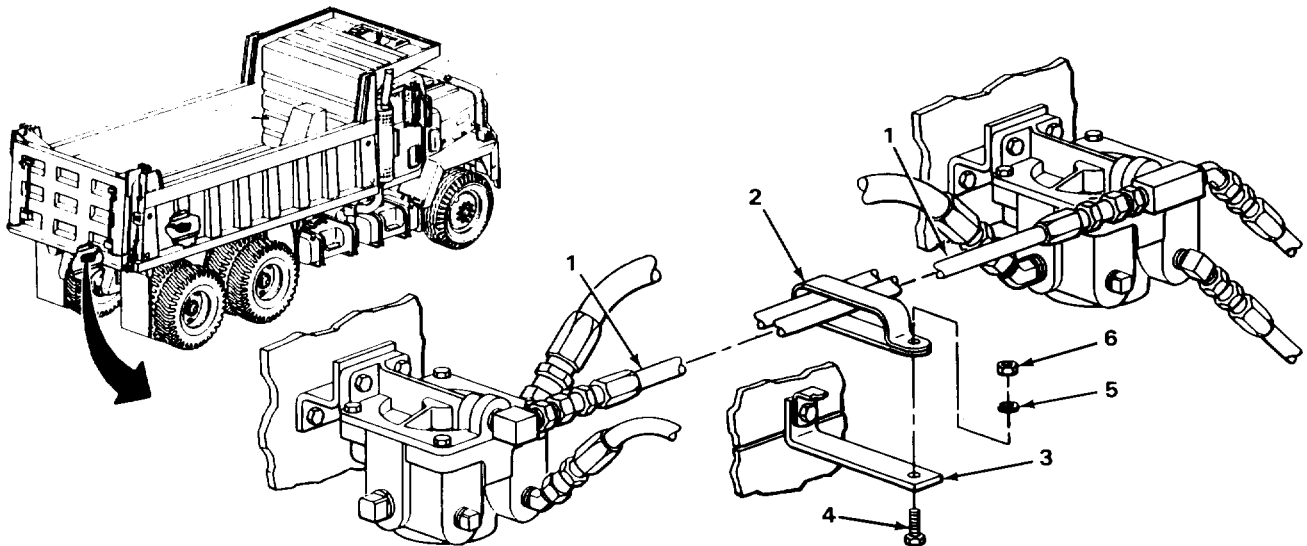
LOCATION	ITEM	ACTION REMARKS
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INSTALLATION - CONTINUED

NOTE

Steps 12 and 13 are typical for two clamp assemblies.

12.	Airhose (1)	Clamp (2)	Put on.
13.	Clamp bracket (3)	Clamp (2), screw (4), new lockwasher (5), and nut (6)	a. Aline holes in clamp and clamp bracket. b. Screw in and tighten using 7/16-inch box-end and 7/16-inch open-end wrenches.



TASK ENDS HERE

CAB FLOOR THROUGH CONNECTOR TO DOUBLE CHECK VALVE HOSE

This task covers:

- | | |
|---------------------------|---|
| a. Removal (page 2-1109) | c. Inspection/Replacement (page 2-1112) |
| b. Cleaning (page 2-1112) | d. Installation (page 2-1112) |

TA244398

CAB FLOOR THROUGH CONNECTOR TO DOUBLE CHECK VALVE HOSE - CONTINUED

INITIAL SETUP:

Tools

- Gloves, safety
- Goggles, safety
- Screwdriver, cross-tip, number two
- Wrench, box-end, 7/16-inch
- Wrench, open-end, 7/16-inch
- Wrench, open-end, 1/2-inch
- Wrench, open-end, 9/16-inch
- Wrench, open-end, 5/8-inch
- Wrench, open-end, 3/4-inch
- Wrench, open-end, 1-inch
- Wrench, open-end, 1 1/8-inch
- Left cab door opened (page 2-424).

Materials/Parts - Continued

- Rags, wiping (item 15, appendix C)
- Solvent, drycleaning (item 19, appendix C)
- Tape, antiseizing (item 22, appendix C)

Personnel Required

Two

Equipment Condition

Airbrake system drained (page 2-1034).

Materials/Parts

- Detergent, liquid, GP (item 7, appendix C)
- Lockwasher, clamp screw (three required)

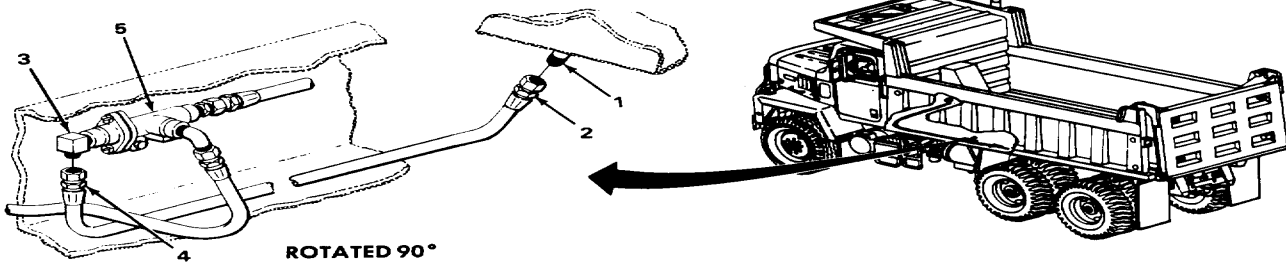
LOCATION	ITEM	ACTION REMARKS
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REMOVAL

WARNING

Safety goggles must be worn when working under truck to prevent eye injury.

- | | | | |
|----|---|--------------------------------------|---|
| 1. | Cab floor through-connector 45-degree elbow (1) | Line nut (2) | Using 3/4-inch open-end wrench, unscrew and take off. |
| 2. | Double check valve (5) | Line nut (4) and 90-degree elbow (3) | Using 3/4-inch open-end wrench, unscrew and take off. |



TA702159

CAB FLOOR THROUGH CONNECTOR TO DOUBLE CHECK VALVE HOSE - CONTINUED

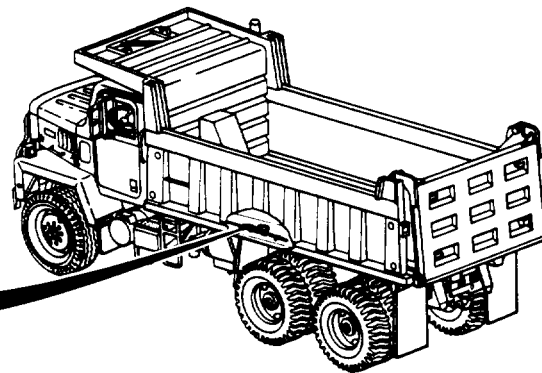
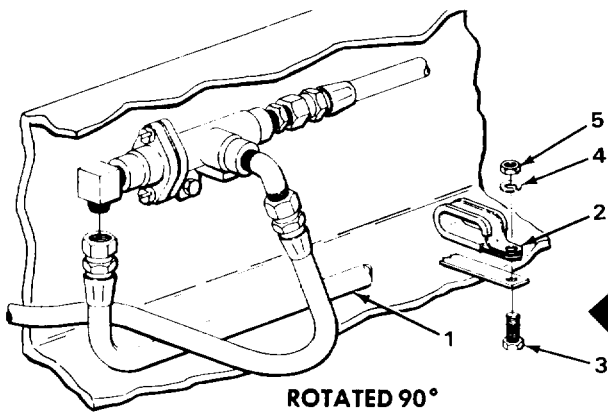
LOCATION	ITEM	ACTION REMARKS
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REMOVAL - CONTINUED

NOTE

Step 3 is typical for three clamp assemblies.

- | | | | |
|----|-------------|---|--|
| 3. | Airhose (1) | Clamp (2), screw (3), lockwasher (4), and nut (5) | <ul style="list-style-type: none"> a. Using 7/16-inch box-end and 7/16-inch open-end wrenches, unscrew and take out. b. Get rid of lockwasher. c. Take clamp off airhose. d. Take out airhose. |
|----|-------------|---|--|



- | | | | |
|----|--|--|--|
| 4. | Driver's seat valve assembly (6) | Line nut (7) and air line (8) | <ul style="list-style-type: none"> a. Using 9/16-inch open-end wrench, unscrew and take off. b. Move air line out of way. |
| 5. | Left side rear cab wall (9) | Eight screws (10), eight flat washers (11), and left lower rear molding (12) | <ul style="list-style-type: none"> a. Using number two cross-tip screwdriver, unscrew and take out. b. Push air line (8) through hole while taking off left lower rear molding.
Be careful not to bend or crimp air line. |
| 6. | Cab floor through-connector 90-degree elbow (13) | Line nut (14) and air line (15) | <ul style="list-style-type: none"> a. Using 5/8-inch open-end wrench, unscrew and take off. b. Move air line out of way. |
| 7. | | Cab floor through-connector 90-degree elbow (13) | Using 9/16-inch open-end wrench, unscrew and take off. |

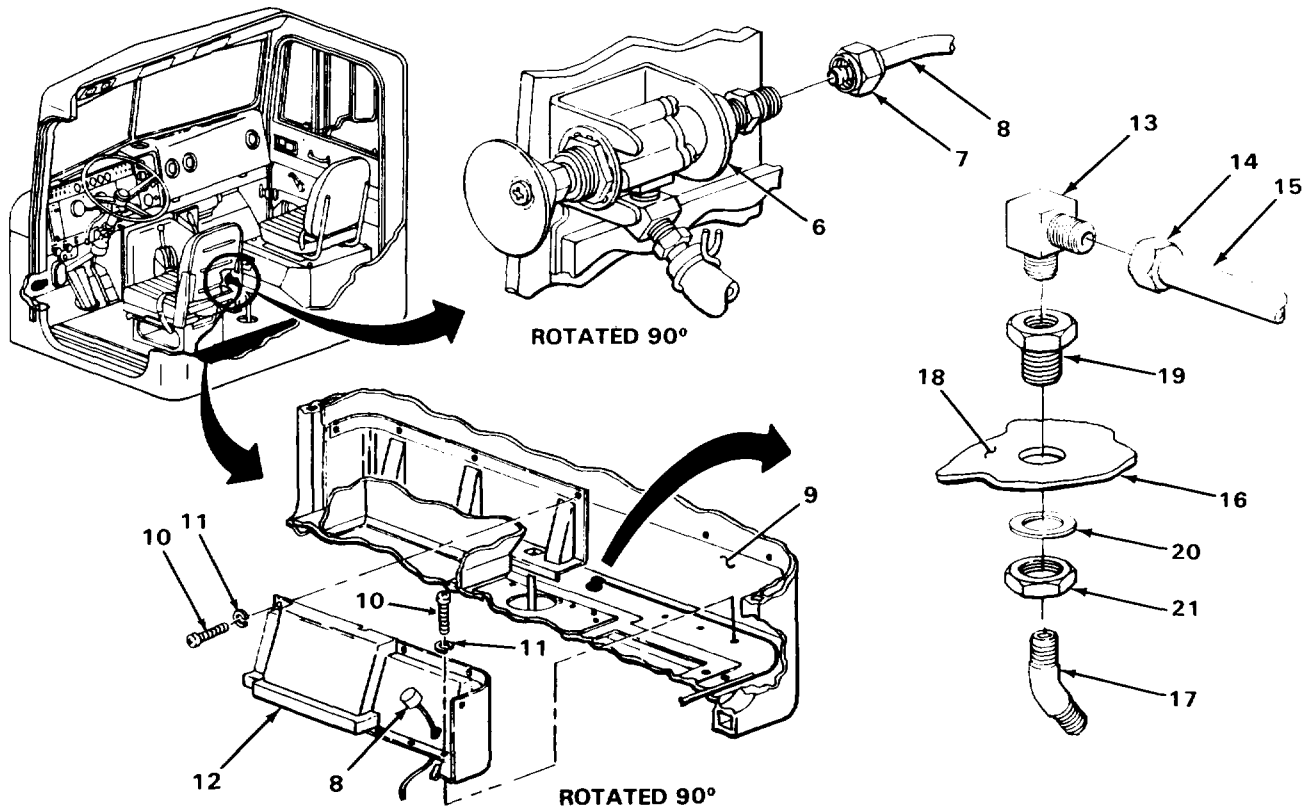
CAB FLOOR THROUGH CONNECTOR TO DOUBLE CHECK VALVE HOSE - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
8.	Under cab floor (16)	Cab floor through-connector 45-degree elbow (17)	Using 9/16-inch open-end wrench, unscrew and take off.

NOTE

Assistance will be needed when performing step 9.

9.	Top of cab floor (18) and under cab floor (16)	Anchor coupling (19), flat washer (20), and nut (21)	Using 1 1/8-inch and 1-inch open-end wrenches, unscrew and take out.
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TA244401

CAB FLOOR THROUGH CONNECTOR TO DOUBLE CHECK VALVE HOSE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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CLEANING

WARNING

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 100°F (38°C) and for type #2 is 138°F (59°C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

10.	Airhose	Clean using liquid detergent and wiping rag.
11.	All metal parts	Clean using drycleaning solvent and wiping rag.

INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

12.	Airhose	<ul style="list-style-type: none"> a. Check for cracks, breaks, chafing, or hardness. b. Look for excessive rust or corrosion.
13.	All threaded parts	Look for damaged threads or rounded heads.

INSTALLATION

CAUTION

Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.

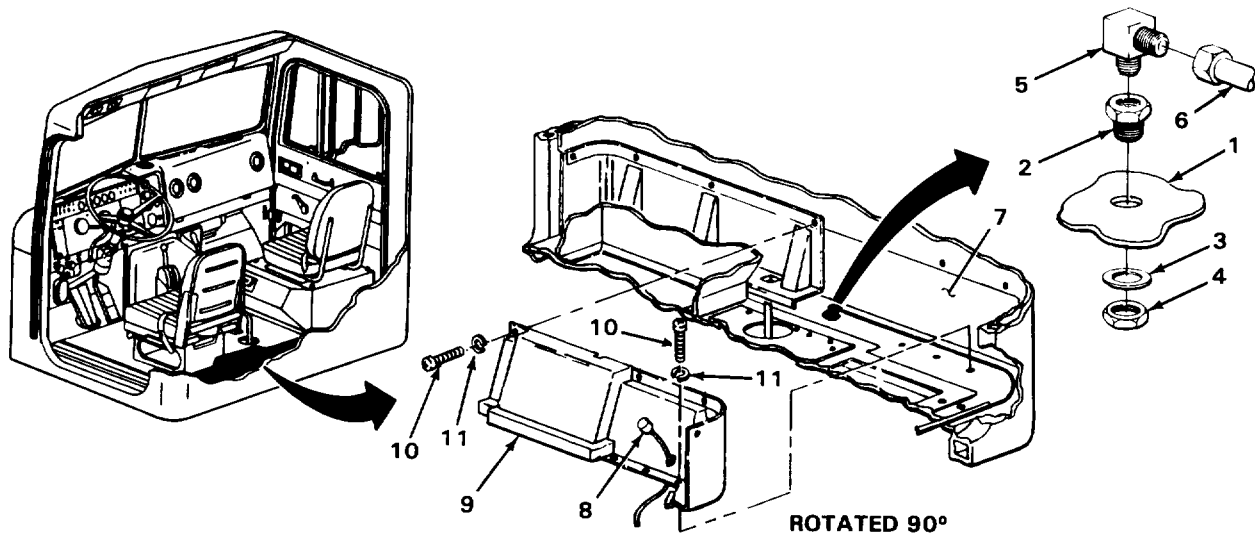
NOTE

For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).

CAB FLOOR THROUGH CONNECTOR TO DOUBLE CHECK VALVE HOSE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
14. Top of cab floor (1)	Anchor coupling (2)	Put in.
NOTE		
Assistance will be needed when performing step 15.		
15. Anchor coupling (2)	Flat washer (3) and nut (4)	Screw on and tighten using 1 1/8-inch and 1-inch open-end wrenches.
16.	Cab floor through-connector 90-degree elbow (5)	a. Wrap both male pipe threads with anti-seizing tape. b. Screw in and tighten using 9/16-inch open-end wrench. Position to face left cab door.
17. Cab floor through-connector 90-degree elbow (5)	Air line (6)	Screw on and tighten using 5/8-inch open-end wrench.
18. Left side rear cab wall (7)	Air line (8) and left lower rear molding (9)	a. Push air line through hole in left lower rear molding. b. Put left lower rear molding in position.
19. Left lower rear molding (9)	Eight screws (10) and eight flat washers (11)	Screw in and tighten using number two cross-tip screwdriver.

TA244402



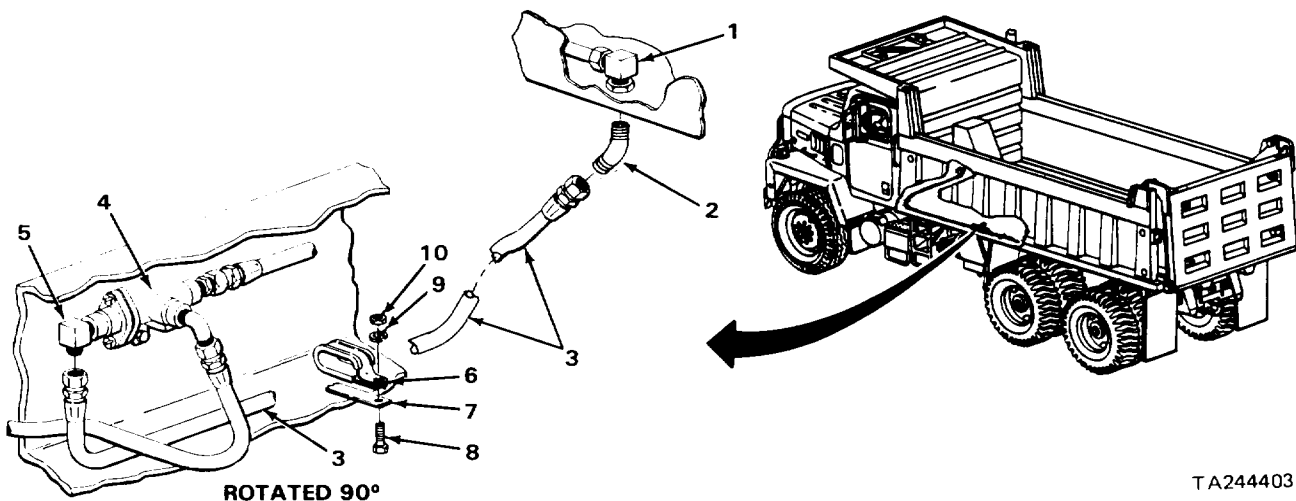
CAB FLOOR THROUGH CONNECTOR TO DOUBLE CHECK VALVE HOSE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
WARNING			
Safety goggles must be worn when working under truck to prevent eye injury.			
20.	Anchor coupling (1) Cab floor through-connector 45-degree elbow (2)	a. Wrap both male pipe threads with anti-seizing tape. b. Screw in and tighten using 9/16-inch open-end wrench.	Position to face left side cab door.
21.	Cab floor through connector 45-degree elbow (2)	Screw on and tighten using 3/4-inch open-end wrench.	
22.	Double check valve (4)	Wrap pipe threads with antiseizing tape.	
23.	90-degree elbow (5) and airhose (3)	Screw on and tighten using 3/4-inch open-end wrench.	

NOTE

Steps 24 and 25 are typical for three clamp assemblies.

24.	Airhose (3)	Clamp (6)	Put on.
25.	Clamp bracket (7)	Clamp (6), screw (8), new lockwasher (9), and nut (10)	a. Aline holes in clamp and clamp bracket. b. Screw in and tighten using 7/16-inch box-end and 7/16-inch open-end wrenches.



CAB FLOOR THROUGH CONNECTOR TO DOUBLE CHECK VALVE HOSE - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE: Close left cab door (page 2-424).

TASK ENDS HERE

LEFT FRONT WHEEL TO FRONT BRAKE LIMITING AND QUICK RELEASE VALVE HOSES

This task covers:

- a. Removal (page 2-1116)
- b. Cleaning (page 2-1118)
- c. Inspection/Replacement (page 2-1118)
- d. Installation (page 2-1118)

INITIAL SETUP:

Tools

- Gloves, safety
- Goggles, safety
- Wrench, open-end, 1/2-inch
- Wrench, open-end, 5/8-inch
- Wrench, open-end, 11/16-inch
- Wrench, open-end, 3/4-inch
- Wrench, open-end, 7/8-inch
- Wrench, open-end, 1-inch
- Wrench, open-end, 1 1/8-inch
- Wrench, open-end, 1 7/16-inch

Materials/Parts

- Detergent, liquid, GP (item 7, appendix C)
- Lockwasher, anchor coupling (two required)

Materials/Parts - Continued

- Rags, wiping (item 15, appendix C)
- Solvent, drycleaning (item 19, appendix C)
- Tags, marker (item 21, appendix C)
- Tape, antiseizing (item 22, appendix C)

Personnel Required

One

Equipment Condition

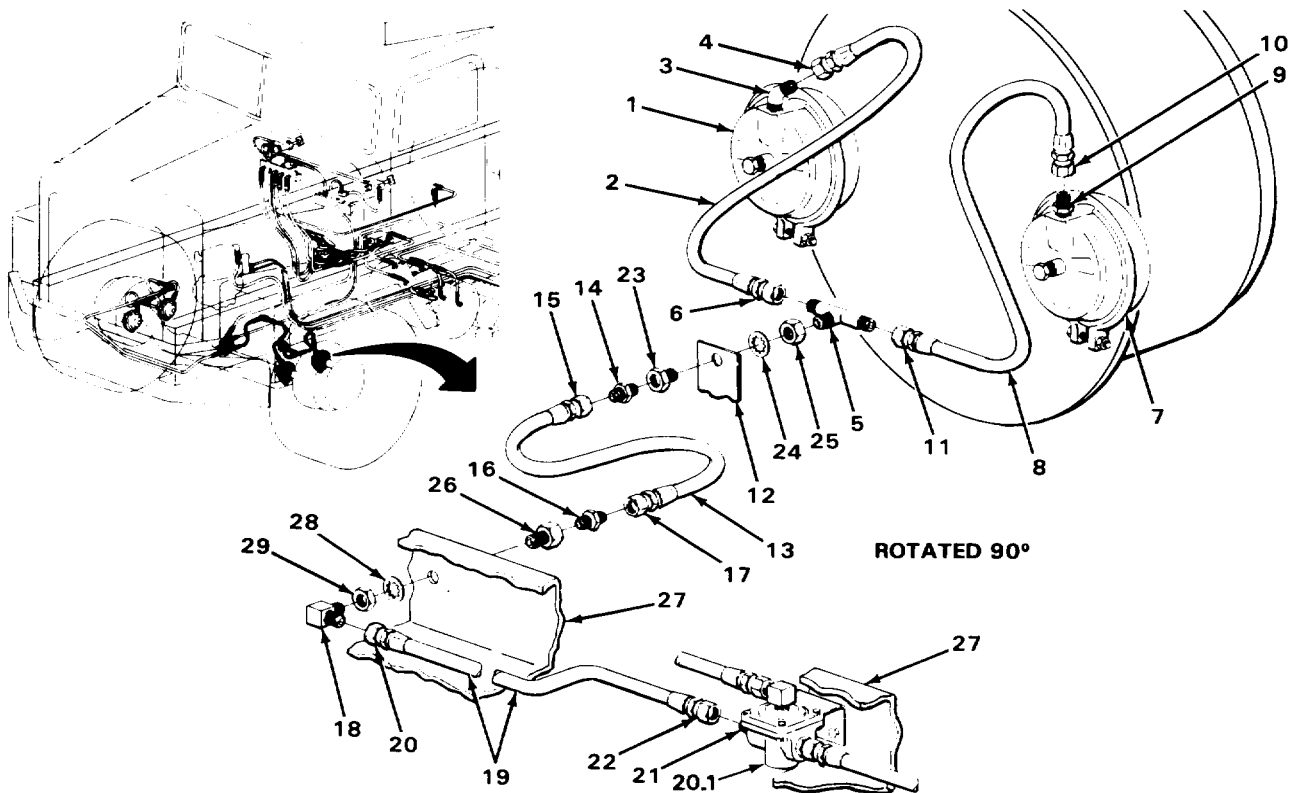
- Airbrake system drained (page 2-1034).
- Left side hood panel opened (page 2-424).
- Left front wheel removed (page 2-1168).

LEFT FRONT WHEEL TO FRONT BRAKE LIMITING AND QUICK RELEASE VALVE HOSES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
<u>WARNING</u>		
Safety goggles must be worn when working under truck to prevent eye injury.		
NOTE		
For more information on how to tag parts, go to General Maintenance Instructions (page 2-424).		
1.	Rear airbrake chamber (1)	Airhose (2) Tag.
2.		Line nut (4) and 45-degree elbow (3) Using 3/4-inch open-end wrench, unscrew and take off.
3.	T-fitting (5)	Line nut (6) and airhose (2) a. Using 3/4-inch open-end wrench, unscrew and take off. b. Take out airhose.
4.	Front airbrake chamber (7)	Airhose (8) Tag.
5.		Line nut (10) and fitting (9) Using 3/4-inch and 5/8-inch open-end wrenches, unscrew and take off.
6.	T-fitting (5)	Line nut (11) and airhose (8) a. Using 3/4-inch open-end wrench, unscrew and take off. b. Take out airhose.
7.	Bracket (12)	Airhose (13) Tag.
8.	Fitting (14)	Line nut (15) Using 3/4-inch and 5/8-inch open-end wrenches, unscrew and take off.
9.	Fitting (16)	Line nut (17) and airhose (13) a. Using 3/4-inch and 11/16-inch open-end wrenches, unscrew and take off. b. Take out airhose.
10.	90-degree elbow (18)	Airhose (19) Tag.
11.		Line nut (20) Using 1-inch open-end wrench, unscrew and take off.
12.	Front brake limiting and quick release valve (20.1)	Line nut (22), fitting (21), and airhose (19) a. Using 1-inch and 7/8-inch open-end wrenches, unscrew and take off. b. Take out airhose.

LEFT FRONT WHEEL TO FRONT BRAKE LIMITING AND QUICK RELEASE VALVE HOSES - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
13.	Anchor coupling (23)	Fitting (14)	Using 1-inch and 5/8-inch open-end wrenches, unscrew and take out.
14.		T-fitting (5)	Using 1/2-inch open-end wrench, unscrew and take out.
15.	Bracket (12)	Anchor coupling (23), lockwasher (24), and nut (25)	a. Using 1 1/8-inch and 1-inch open-end wrenches, unscrew and take out. b. Get rid of lockwasher.
16.	Anchor coupling (26)	Fitting (16)	Using 1 18-inch and 11/16-inch open-end wrenches, unscrew and take out.
17.		90-degree elbow (18)	Using 3/4-inch open-end wrench, unscrew and take out.
18.	Left frame rail (27)	Anchor coupling (26), lockwasher (28), and nut (29)	a. Using 1 7/16-inch and 1 1/8-inch open-end wrenches, unscrew and take out. b. Get rid of lockwasher.



TA702160

LEFT FRONT WHEEL TO FRONT BRAKE LIMITING AND QUICK RELEASE VALVE HOSES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
CLEANING		
<u>WARNING</u>		
<p>Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 100°F (38°C) and for type #2 is 138°F (59°C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.</p>		
NOTE		
<p>For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).</p>		
19.	Four airhoses	Clean using liquid detergent and wiping rag.
20.	All metal parts	Clean using drycleaning solvent and wiping rag.

INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

21.	Four airhoses	<ul style="list-style-type: none"> a. Check for cracks, breaks, chafing, or hardness. b. Look for excessive rust or corrosion.
22.	All threaded parts	Look for damaged threads or rounded heads.

INSTALLATION

CAUTION

Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.

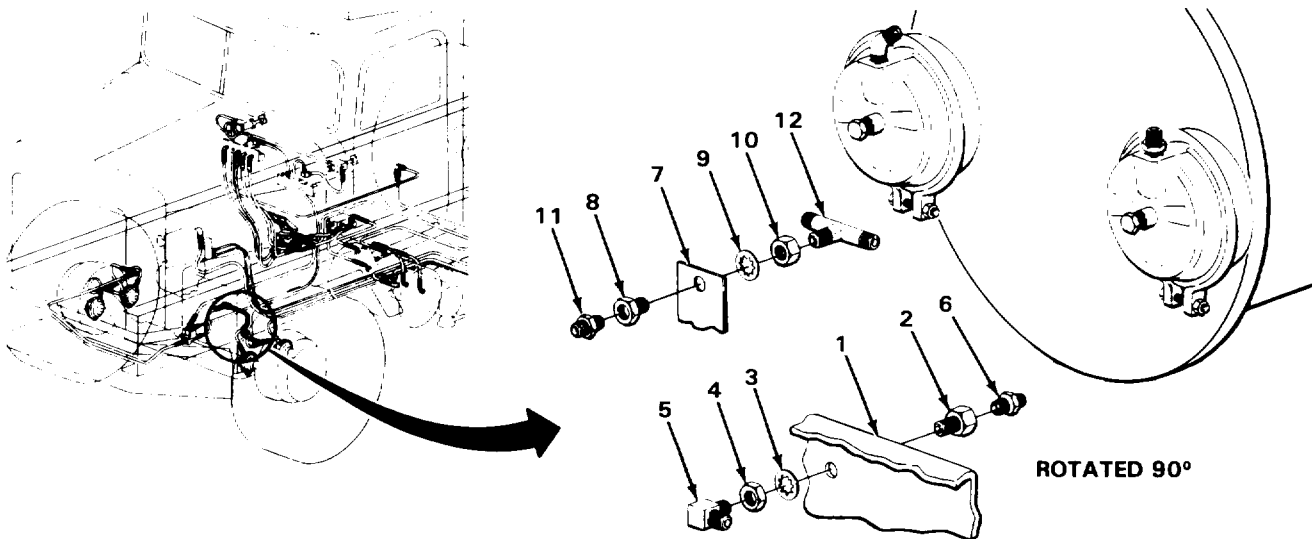
NOTE

For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).

See tags for correct location of airhoses.

LEFT FRONT WHEEL TO FRONT BRAKE LIMITING AND QUICK RELEASE VALVE HOSES - CONTINUED

	LOCATION	ITEM	ACTION	REMARKS
23.	Left frame rail (1)	Anchor coupling (2)	Put in.	
24.	Anchor coupling (2)	New lockwasher (3) and nut (4)	Screw on and tighten using 1 7/16-inch and 1 1/8-inch open-end wrenches.	
25.		90-degree elbow (5)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 3/4-inch open-end wrench.	Position to face front of truck.
26.		Fitting (6)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 1 1/8-inch and 11/16-inch open-end wrenches.	
27.	Bracket (7)	Anchor coupling (8)	Put in.	
28.	Anchor coupling (8)	New lockwasher (9) and nut (10)	Screw on and tighten using 1 1/8-inch and 1-inch open-end wrenches.	
29.		Fitting (11)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 1-inch and 5/8-inch open-end wrenches.	
30.		T-fitting (12)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 1/2-inch open-end wrench.	Position ends horizontally



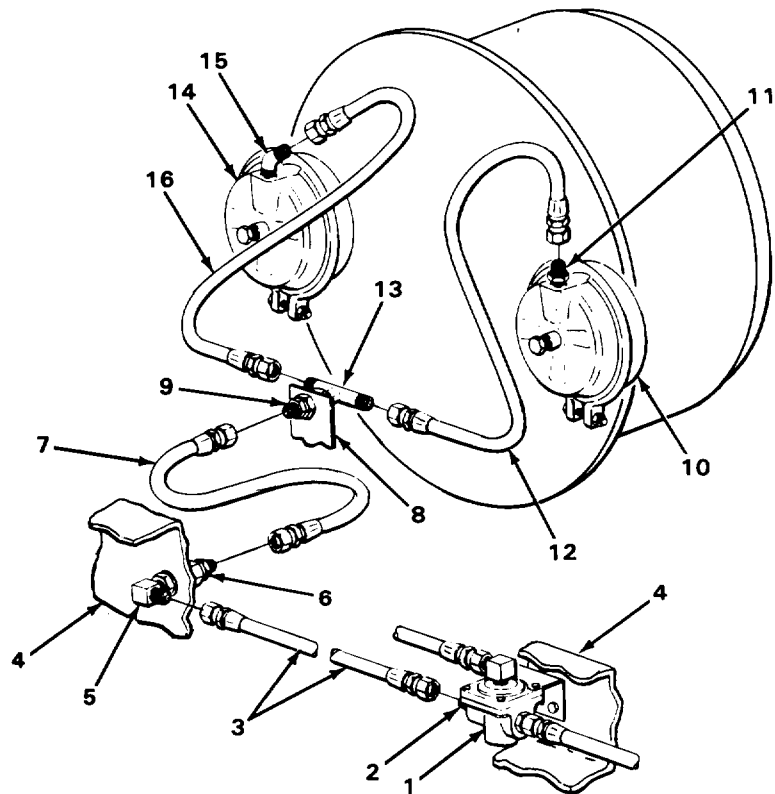
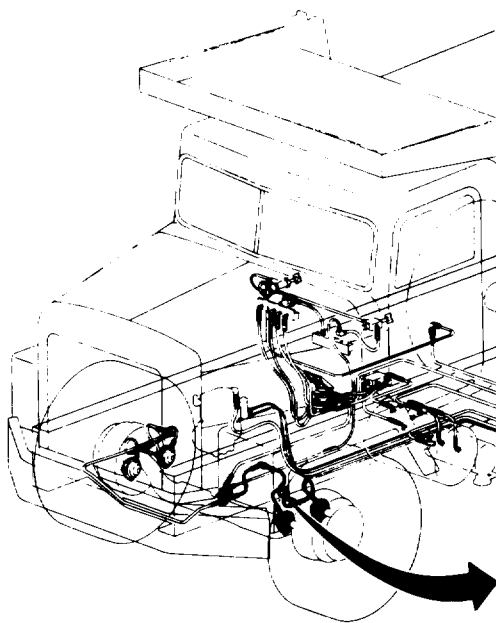
TA244405

LEFT FRONT WHEEL TO FRONT BRAKE LIMITING AND QUICK RELEASE VALVE HOSES - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED			
31.	Front brake limiting and quick release valve (1)	Fitting (2)	Wrap pipe threads with antiseizing tape.
32.		Fitting (2) and airhose (3)	Screw on and tighten using 1-inch and 7/8-inch open-end wrenches.
33.	Left frame rail (4)	90-degree elbow (5)	Wrap pipe threads with antiseizing tape.
34.	90-degree elbow (5)	Airhose (3)	a. Screw on and tighten using 1-inch open-end wrench. b. Take off tag. c. Get rid of tag.
35.	Left frame rail (4)	Fitting (6)	Wrap pipe threads with antiseizing tape.
36.	Fitting (6)	Airhose (7)	Screw on and tighten using 3/4-inch and 11/16-inch open-end wrenches.
37.	Bracket (8)	Fitting (9)	Wrap pipe threads with antiseizing tape.
38.	Fitting (9)	Airhose (7)	a. Screw on and tighten using 3/4-inch and 5/8-inch open-end wrenches. b. Take off tag. c. Get rid of tag.
39.	Front airbrake chamber (10)	Fitting (11)	Wrap pipe threads with antiseizing tape.
40.		Fitting (11) and airhose (12)	Screw on and tighten using 3/4-inch and 5/8-inch open-end wrenches.
41.	Bracket (8)	T-fitting (13)	Wrap pipe threads with antiseizing tape.
42.	T-fitting (13)	Airhose (12)	a. Screw on and tighten using 3/4-inch open-end wrench. b. Take off tag. c. Get rid of tag.
43.	Rear airbrake chamber (14)	45-degree elbow (15)	Wrap pipe threads with antiseizing tape.

LEFT FRONT WHEEL TO FRONT BRAKE LIMITING AND QUICK RELEASE VALVE HOSES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
44.	45-degree elbow (15) and airhose (16)	Screw on and tighten using 3/4-inch open-end wrench.
45.	Bracket (8)	Wrap pipe threads with antiseizing tape.
46.	T-fitting (13)	a. Screw on and tighten using 3/4-inch open-end wrench. b. Take off tag. c. Get rid of tag.



NOTE

FOLLOW-ON MAINTENANCE:

1. Install left front wheel (page 2-1168).
2. Close left side hood panel (page 2-424).

RIGHT FRONT WHEEL TO FRONT BRAKE LIMITING AND QUICK RELEASE VALVE HOSES

This task covers:

- | | |
|---------------------------|---|
| a. Removal (page 2-1122) | c. Inspection/Replacement (page 2-1126) |
| b. Cleaning (page 2-1126) | d. Installation (page 2-1126) |

INITIAL SETUP:

Tools

- Gloves, safety
- Goggles, safety
- Wrench, box-end, 7/16-inch
- Wrench, open-end, 7/16-inch
- Wrench, open-end, 1/2-inch
- Wrench, open-end, 5/8-inch
- Wrench, open-end, 11/16-inch
- Wrench, open-end, 3/4-inch
- Wrench, open-end, 7/8-inch
- Wrench, open-end, 1-inch
- Wrench, open-end, 1 1/8-inch
- Wrench, open-end, 1 7/16-inch

Materials/Parts

- Detergent, liquid, GP (item 7, appendix C)
- Lockwasher, anchor coupling (two required)

Materials/Parts - Continued

- Lockwasher, clamp (three required)
- Rags, wiping (item 15, appendix C)
- Solvent, drycleaning (item 19, appendix C)
- Tags, marker (item 21, appendix C)
- Tape, antiseizing (item 22, appendix C)

Personnel Required

One

Equipment Condition

- Airbrake system drained (page 2-1034).
- Left and right side hood panels opened (page 2-424).
- Right front wheel removed (page 2-1168).

LOCATION	ITEM	ACTION REMARKS
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REMOVAL

WARNING

Safety goggles must be worn when working under truck to prevent eye injury.

NOTE

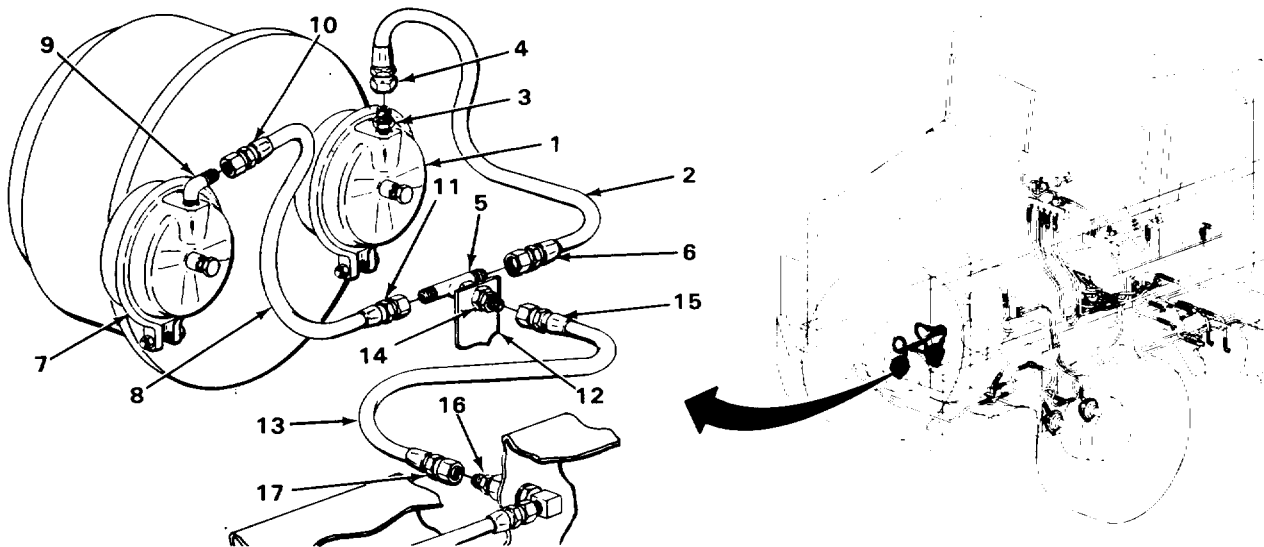
Tag airhoses to ensure correct installation.

For more information on how to tag parts, go to General Maintenance Instructions (page 2-424).

- | | | | |
|----|---------------------------|------------------------------|--|
| 1. | Rear airbrake chamber (1) | Airhose (2) | Tag. |
| 2. | | Line nut (4) and fitting (3) | Using 3/4-inch and 5/8-inch open-end wrenches, unscrew and take off. |

RIGHT FRONT WHEEL TO FRONT BRAKE LIMITING AND QUICK RELEASE VALVE HOSES - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
3.	T-fitting (5)	Line nut (6) and airhose (2)	a. Using 3/4-inch open-end wrench, unscrew and take off. b. Take out airhose.
4.	Front airbrake chamber (7)	Airhose (8)	Tag.
5.		Line nut (10) and 45-degree elbow (9)	Using 3/4-inch open-end wrench, unscrew and take off.
6.	T-fitting (5)	Line nut (11) and airhose (8)	a. Using 3/4-inch open-end wrench, unscrew and take off. b. Take out airhose.
7.	Bracket (12)	Airhose (13)	Tag.
8.	Fitting (14)	Line nut (15)	Using 3/4-inch and 5/8-inch open-end wrenches, unscrew and take off.
9.	Fitting (16)	Line nut (17) and airhose (13)	a. Using 3/4-inch and 11/16-inch open-end wrenches, unscrew and take off. b. Take out airhose.



TA244407

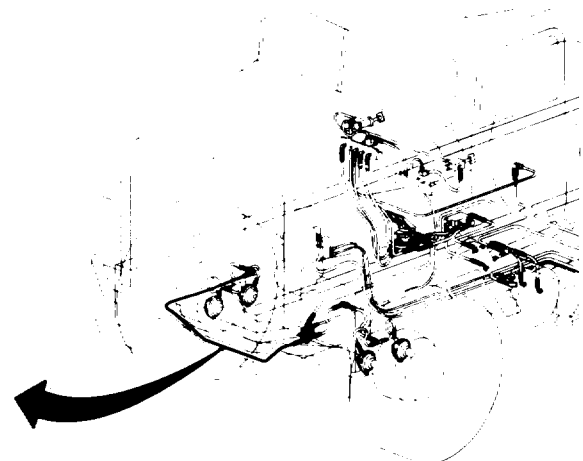
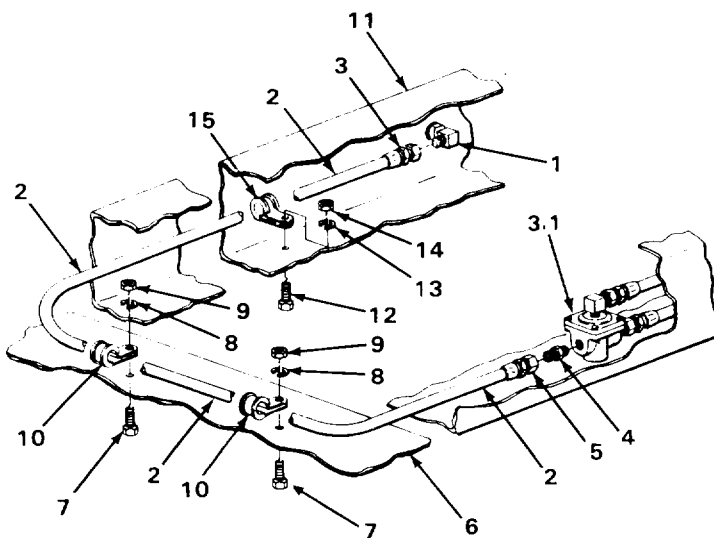
RIGHT FRONT WHEEL TO FRONT BRAKE LIMITING AND QUICK RELEASE VALVE HOSES - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED			
10.	90-degree elbow (1)	Airhose (2)	Tag.
11.		Line nut (3)	Using 1-inch open-end wrench, unscrew and take off.
12.	Front brake limiting and quick release valve (3.1)	Line nut (5) and fitting (4)	Using 1-inch and 7/8-inch open-end wrenches, unscrew and take off.

NOTE

Step 13 is typical for two clamp assemblies on front crossmember.

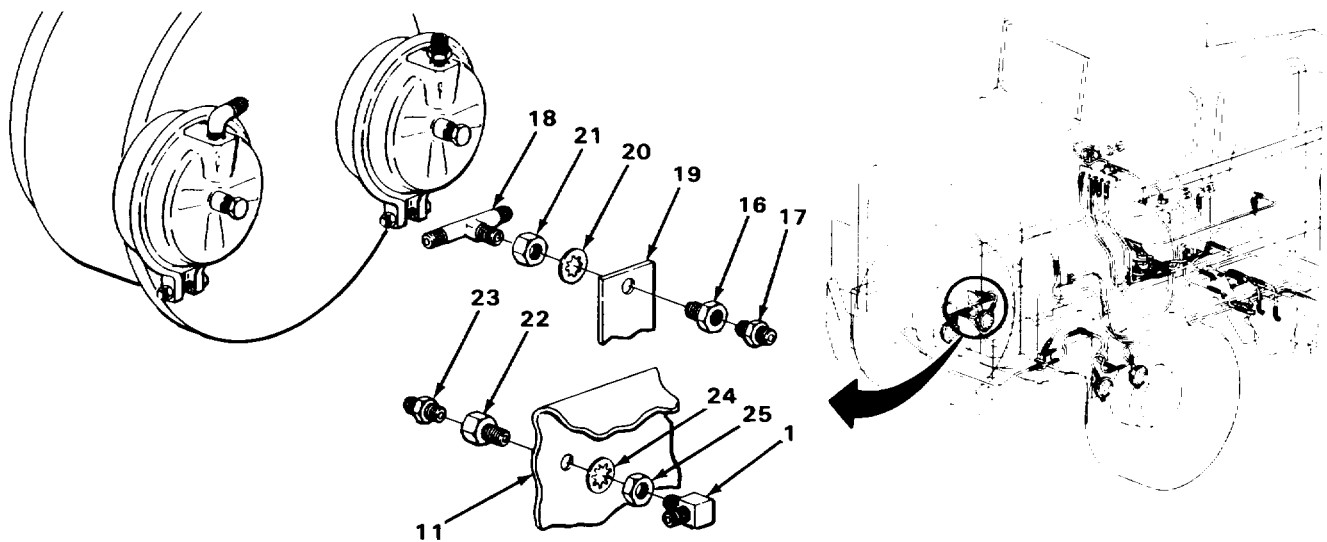
13.	Front cross-member (6)	Screw (7), lock-washer (8), nut (9), and clamp (10)	<ol style="list-style-type: none"> Using 7/16-inch box-end and 7/16-inch open-end wrenches, unscrew and take out. Get rid of lockwasher. Take clamp off airhose (2).
14.	Right frame rail (11)	Screw (12), lock-washer (13), nut (14), and clamp (15)	<ol style="list-style-type: none"> Using 7/16-inch box-end and 7/16-inch open-end wrenches, unscrew and take out. Get rid of lockwasher. Take clamp off airhose (2). Take out airhose.



TA702162

RIGHT FRONT WHEEL TO FRONT BRAKE LIMITING AND QUICK RELEASE VALVE HOSES - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
15.	Anchorcoupling (16)	Fitting (17)	Using 1-inch and 5/8-inch open-end wrenches, unscrew and take out.
16.		T-fitting (18)	Using 1/2-inch open-end wrench, unscrew and take out.
17.	Bracket (19)	Anchor coupling (16), lockwasher (20), and nut (21)	a. Using 1 1/8-inch and 1-inch open-end wrenches, unscrew and take out. b. Get rid of lockwasher.
18.	Anchor coupling (22)	Fitting (23)	Using 1 11/8-inch and 11/16-inch open-end wrenches, unscrew and take out.
19.		90-degree elbow (1)	Using 3/4-inch open-end wrench, unscrew and take out.
20.	Right frame rail (11)	Anchor coupling (22), lockwasher (24), and nut (25)	a. Using 1 7/16-inch and 1 11/8-inch open-end wrenches, unscrew and take out. b. Get rid of lockwasher.



TA244409

**RIGHT FRONT WHEEL TO FRONT BRAKE LIMITING AND QUICK RELEASE VALVE HOSES -
CONTINUED**

LOCATION	ITEM	ACTION REMARKS
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CLEANING

WARNING

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 100°F (38°C) and for type #2 is 138°F (59°C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

21.	Four airhoses	Clean using liquid detergent and wiping rag.
22.	All metal parts	Clean using drycleaning solvent and wiping rag.

INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

23.	Four airhoses	a. Check for cracks, breaks, chafing, or hardness. b. Look for excessive rust or corrosion.
24.	All threaded parts	Look for damaged threads or rounded heads.

INSTALLATION

CAUTION

Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.

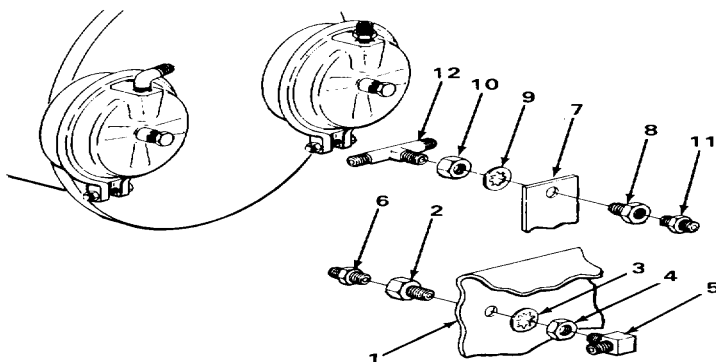
NOTE

For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).

See tags for correct location of airhoses.

RIGHT FRONT WHEEL TO FRONT BRAKE LIMITING AND QUICK RELEASE VALVE HOSES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
<u>WARNING</u>			
Safety goggles must be worn when working under truck to prevent eye injury.			
25.	Right frame rail (1)	Anchor coupling (2)	Put in.
26.	Anchor coupling (2)	New lockwasher (3) and nut (4)	Screw on and tighten using 1 7/16-inch and 1 1/8-inch open-end wrenches.
27.		90-degree elbow (5)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 3/4-inch open-end wrench. Position to face front of truck.
28.		Fitting (6)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 1 1/8-inch and 11/16-inch open-end wrenches.
29.	Bracket (7)	Anchor coupling (8)	Put in.
30.	Anchor coupling (8)	New lockwasher (9) and nut (10)	Screw on and tighten using 1 1/8-inch and 1-inch open-end wrenches.
31.		Fitting (11)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 1-inch and 5/8-inch open-end wrenches.
32.		T-fitting (12)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 1/2-inch open-end wrench. Position ends horizontally.



TA244410

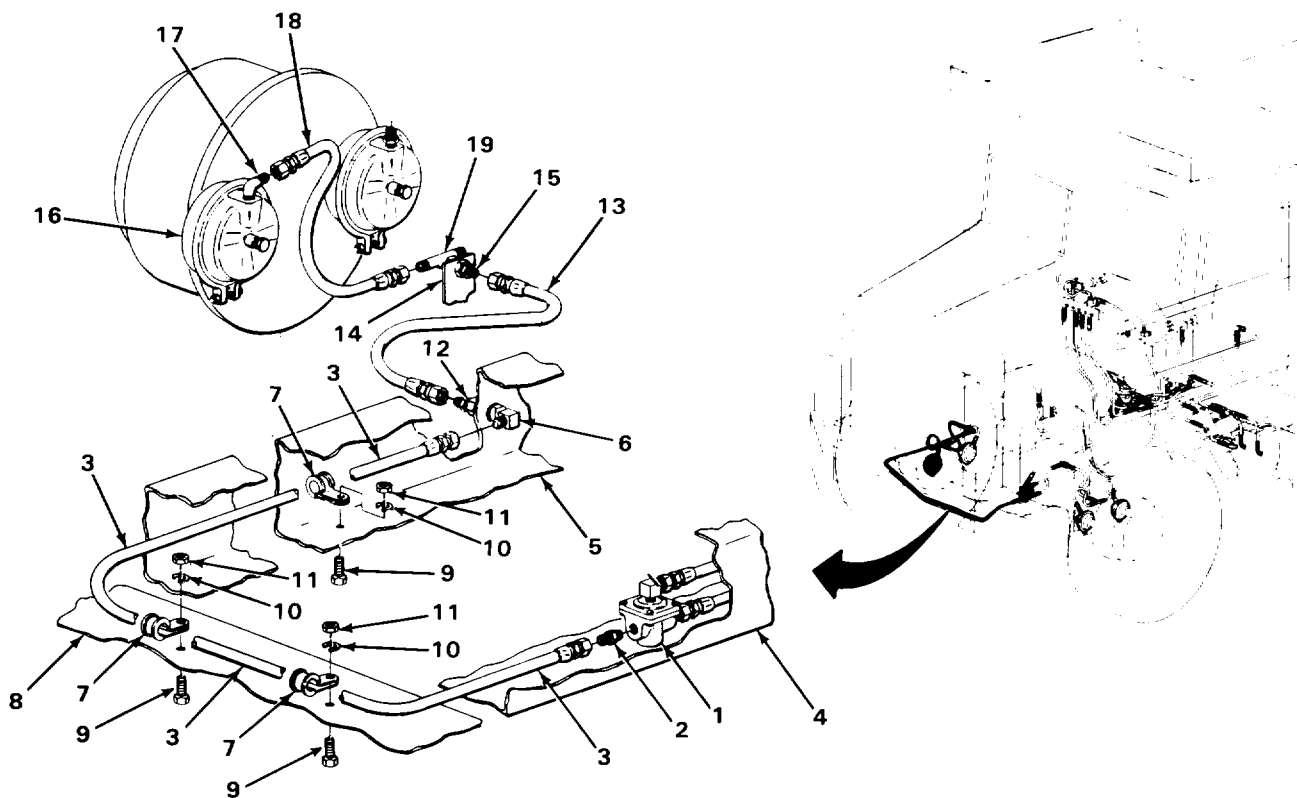
**RIGHT FRONT WHEEL TO FRONT BRAKE LIMITING AND QUICK RELEASE VALVE HOSES -
CONTINUED**

	LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED			
33.	Front brake limiting and quick release valve (1)	Fitting (2)	Wrap pipe threads with antiseizing tape.
34.		Fitting (2) and airhose (3)	Screw on and tighten using 1-inch and 7/8-inch open-end wrenches.
35.	Left frame rail (4) to right frame rail (5)	Airhose (3)	Route.
36.	Right frame rail (5)	90-degree elbow (6)	Wrap pipe threads with antiseizing tape.
37.	90-degree elbow (6)	Airhose (3)	a. Screw on and tighten using 1-inch open-end wrench. b. Takeoff tag. c. Get rid of tag.
NOTE			
Steps 38 and 39 are typical for three clamp assemblies.			
38.	Airhose (3)	Clamp (7)	Put on.
39.	Right frame rail (5) and front cross-member (8)	Clamp (7), screw (9), new lockwasher (10), and nut (11)	a. Aline holes. b. Screw in and tighten using 7/16-inch box-end and 7/16-inch open-end wrenches.
40.	Right frame rail (5)	Fitting (12)	Wrap pipe threads with antiseizing tape.
41.	Fitting (12)	Airhose (13)	Screw on and tighten using 3/4-inch and 11/16-inch open-end wrenches.
42.	Bracket (14)	Fitting (15)	Wrap pipe threads with antiseizing tape.

Change 1 2-1128

RIGHT FRONT WHEEL TO FRONT BRAKE LIMITING AND QUICK RELEASE VALVE HOSES - CONTINUED

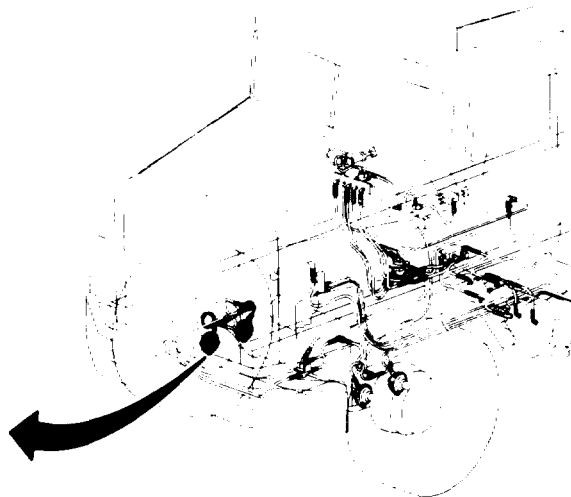
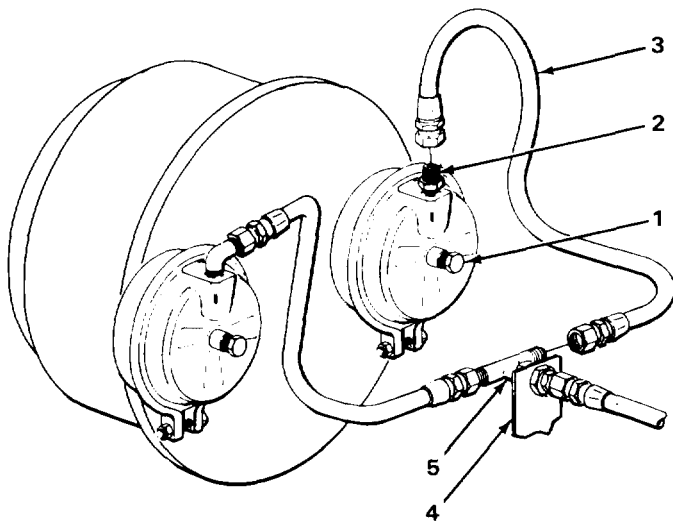
LOCATION	ITEM	ACTION REMARKS
43. Fitting (15)	Airhose (13)	a. Screw on and tighten using 3/4-inch and 5/8-inch open-end wrenches. b. Take off tag. c. Get rid of tag.
44. Front airbrake chamber (16)	45-degree elbow (17)	Wrap pipe threads with antiseizing tape.
45.	45-degree elbow (17) and airhose (18)	Screw on and tighten using 3/4-inch open-end wrench.
46. Bracket (15)	T-fitting (19)	Wrap pipe threads with antiseizing tape.
47. T-fitting (19)	Airhose (18)	a. Screw on and tighten using 3/4-inch open-end wrench. b. Take off tag. c. Get rid of tag.



TA244411

RIGHT FRONT WHEEL TO FRONT BRAKE LIMITING AND QUICK RELEASE VALVE HOSES CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
48. Rear airbrake chamber (1)	Fitting (2)	Wrap pipe threads with antiseizing tape.
49.	Fitting (2) and airhose (3)	Screw on and tighten using 3/4-inch open-end wrench.
50. Bracket (4)	T-fitting (5)	Wrap pipe threads with antiseizing tape.
51. T-fitting (5)	Airhose (3)	a. Screw on and tighten using 3/4-inch open-end wrench. b. Take off tag. c. Get rid of tag



NOTE

FOLLOW-ON MAINTENANCE:

1. Install right front wheel (page 2-1168).
2. Close left and right side hood panels (page 2-424).

TASK ENDS HERE

TA244412

REAR REAR QUICK RELEASE VALVE

This task covers:

- a. Removal (page 2-1130.1) b. Installation (page 2-1130.2)

INITIAL SETUP

Equipment Conditions	Tools/Test Equipment
Parking and service airbrake hoses disconnected as required (page 2-1131, 2-1136, 2-1140.3, 2-1157).	Goggles, safety Wrench, box-end, 7/16-inch Wrench, open-end, 7/16-inch
Materials/Parts	Personnel Required
Lockwasher, quick release valve (two required)	One

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

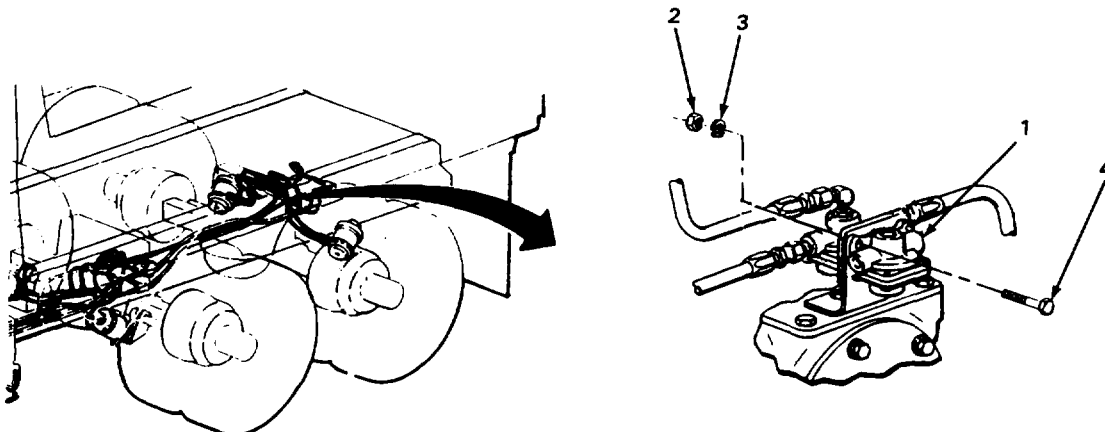
WARNING

Safety goggles must be worn when working under truck to prevent eye injury.

NOTE

Steps 1 and 2 are typical to remove only one or both quick release valves.

- | | | |
|---|--|---|
| <p>1. Rear rear quick release valve (1)</p> | <p>Two nuts (2), lockwashers (3), and screws (4)</p> | <p>a. Using 7/16-Inch open-end wrench and 7/16-inch box-end wrench, unscrew, and take off.
b. Get rid of lockwashers.</p> |
|---|--|---|



REAR REAR QUICK RELEASE VALVE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL - CONTINUED

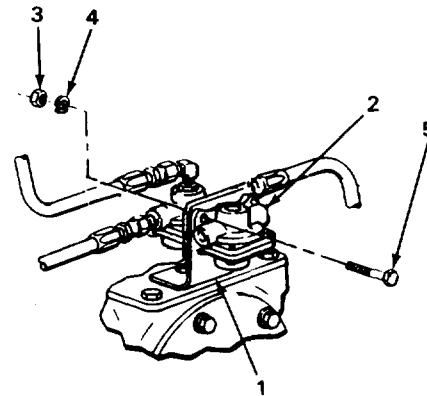
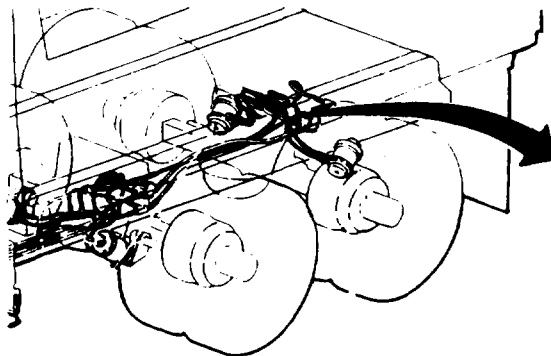
2. Bracket (1)	Rear rear quick release valve (2)	Take off.	
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INSTALLATION

NOTE

Steps 3 and 4 are typical to install only one or both quick release valves.

3. Bracket (1)	Rear rear quick release valve (2)	Put in place.	
4. Rear rear quick release valve (2)	Two nuts (3), new lockwashers (4), and screws (5)	Screw in and tighten using 7/16-inch box-end wrench and 7/16-inch open-end wrench.	



NOTE

FOLLOW-ON MAINTENANCE: Connect parking and service airbrake hoses as required (page 2-1131, 2-1136, 2-1140.3, and 2-1157).

TASK ENDS HERE

TA702164

Change 1 2-1130.2

REAR REAR QUICK RELEASE VALVE TO PARKING AIRBRAKE CHAMBER HOSES

This task covers:

- | | |
|---------------------------|---|
| a. Removal (page 2-1132) | c. Inspection/Replacement (page 2-1134) |
| b. Cleaning (page 2-1133) | d. Installation (page 2-1134) |
-

INITIAL SETUP

Tools

Gloves, safety
 Goggles, safety
 Wrench, box-end, 7/16-inch
 Wrench, open-end, 7/16-inch
 Wrench, open-end, 5/8 inch
 Wrench, open-end, 11/16-inch
 Wrench, open-end, 3/4-inch

Materials/Parts

Detergent, liquid, GP (item 7, appendix C)
 Lockwasher, clamp screw (two required)

Materials/Parts - Continued

Rags, wiping (item 15, appendix C)
 Solvent, drycleaning (item 19, appendix C)
 Tags, marker (item 21, appendix C)
 Tape, antiseizing (item 22, appendix C)

Personnel Required

One

Equipment Condition

Airbrake system drained (page 2-1034).

2-1131

REAR REAR QUICK RELEASE VALVE TO PARKING AIRBRAKE CHAMBER HOSES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

Safety goggles must be worn when working under truck to prevent eye injury.

NOTE

Tag airhoses to ensure correct installation.

For more information on how to tag parts, go to General Maintenance Instructions (page 2-424).

1. Rear rear quick release valve (1)	Right airhose (2) and left airhose (3)	Tag.	
2.	Line nut (5) and fitting (4)	Using 3/4-inch and 11/16-inch open-end wrenches, unscrew and take off.	
3.	Line nut (7) and fitting (6)	Using 3/4-inch and 11/16-inch open-end wrenches, unscrew and take off.	
4. Right parking air-brake chamber (8)	Fitting (9), line nut (10), and right airhose (2)	Using 3/4-inch and 5/8-inch open-end wrenches, unscrew and take off.	
5. Left parking air-brake chamber (11)	Fitting (12), line nut (13), and left airhose (3)	Using 3/4-inch and 5/8-inch open-end wrenches, unscrew and take off.	

NOTE

Step 6 is typical for two clamp assemblies.

6. Right airhose (2) and left airhose (3)	Two clamps (14), screw (15), lock-washer (16), and nut (17)	<ol style="list-style-type: none"> Using 7/16-inch box-end and 7/16-inch open-end wrenches, unscrew and take out. Get rid of lockwasher. Take clamps off right airhose (2) and left airhose (3). Take out right airhose (2) and left airhose (3). 	
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REAR REAR QUICK RELEASE VALVE TO PARKING AIRBRAKE CHAMBER HOSES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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CLEANING

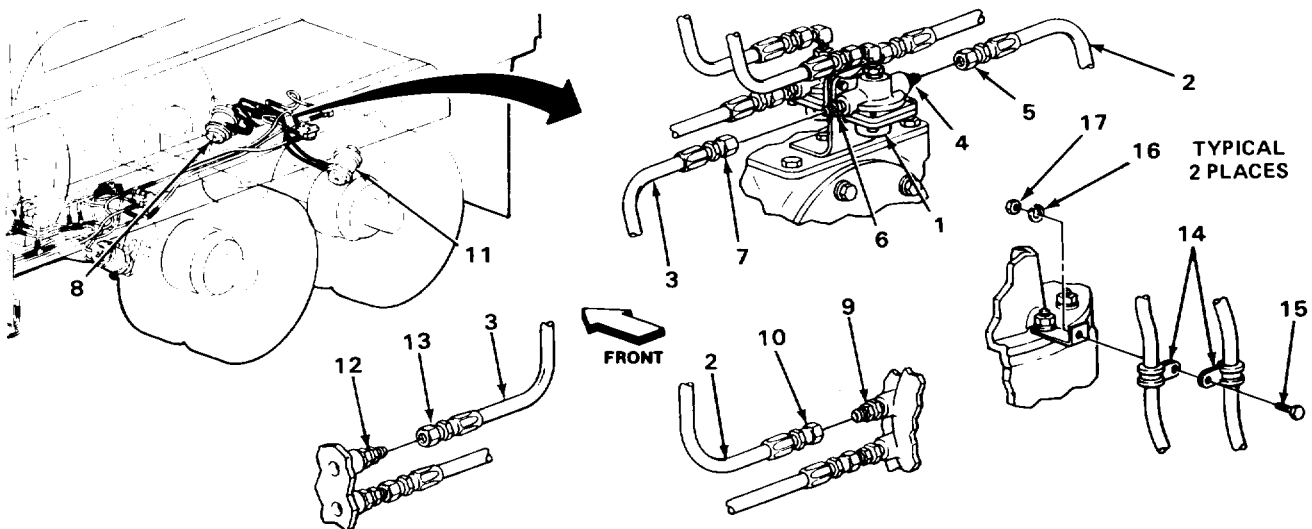
WARNING

Drycleaning solvent PD680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 1000F (380C) and for type #2 is 138°F (590C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

- | | | |
|----|---------------------------|---|
| 7. | Two airhoses
(2 and 3) | Clean using liquid detergent and wiping rag. |
| 8. | All metal parts | Clean using drycleaning solvent and wiping rag. |



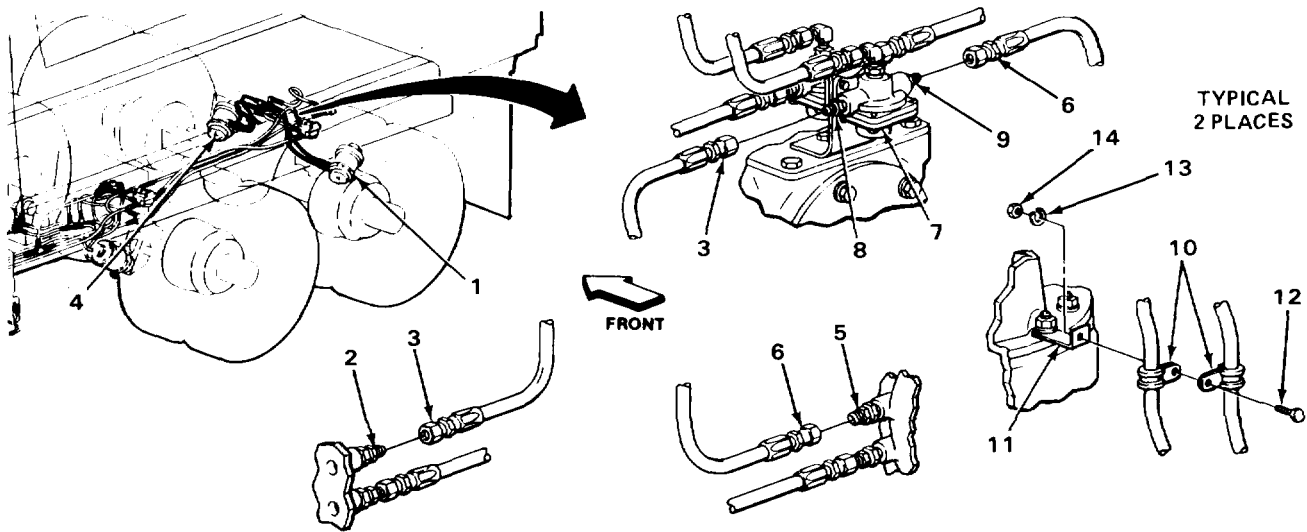
TA244413

REAR REAR QUICK RELEASE VALVE TO PARKING AIRBRAKE CHAMBER HOSES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSPECTION/REPLACEMENT			
NOTE			
Replace all damaged or defective parts.			
For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).			
9.	Two airhoses	a. Check for cracks, breaks, chafing, or hardness. b. Look for excessive rust or corrosion.	
10.	All threaded parts	Look for damaged threads or rounded heads.	
INSTALLATION			
<u>CAUTION</u>			
Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.			
NOTE			
For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).			
See tags for correct location of airhoses.			
11. Left parking air-brake chamber (1)	Fitting (2)	Wrap pipe threads with antiseizing tape.	
12. Fitting (2)	Left airhose (3)	Screw on and tighten using 3/4-inch and 5/8-inch open-end wrenches.	
13. Right parking air-brake chamber (4)	Fitting (5)	Wrap pipe threads with antiseizing tape.	
14. Fitting (5)	Right airhose (6)	Screw on and tighten using 3/4-inch and 5/8-inch open-end wrenches.	
15. Rear rear quick release valve (7)	Fitting (8)	Wrap pipe threads with antiseizing tape.	
16.	Fitting (8) and left airhose (3)	a. Screw on and tighten using 3/4-inch and 11/16-inch open-end wrenches. b. Take off tag. c. Get rid of tag.	

REAR REAR QUICK RELEASE VALVE TO PARKING AIRBRAKE CHAMBER HOSES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
17.	Fitting (9)	Wrap pipe threads with antiseizing tape.	
18.	Fitting (9) and right airhose (6)	a. Screw on and tighten using 3/4-inch and 11/16-inch open-end wrenches. b. Take off tag. c. Get rid of tag.	
NOTE			
Steps 19 and 20 are typical for two clamp assemblies.			
19.	Left airhose (3) and right airhose (6)	Put on.	
20.	Clamp bracket (11)	a. Aline holes in clamps and clamp bracket. b. Screw in and tighten using 7/16-inch box-end and 7/16-inch open-end wrenches.	



TASK ENDS HERE

TA244414

Change 1 2.1135

REAR REAR QUICK RELEASE VALVE TO SERVICE AIRBRAKE CHAMBER HOSES

This task covers:

- a. Removal (page 2-1136)
 - b. Cleaning (page 2-1138)
 - c. Inspection/Replacement (page 2-1138)
 - d. Installation (page 2-1138)
-

INITIAL SETUP

Tools

- Gloves, safety
- Goggles, safety
- Wrench, box-end, 7/16-inch
- Wrench, open-end, 7/16-inch
- Wrench, open-end, 5/18 inch
- Wrench, open-end, 11/16-inch
- Wrench, open-end, 3/4-inch

Materials/Parts

- Detergent, liquid, GP (item 7, appendix C)
- Lockwasher, clamp screw (two required)

Materials/Parts - Continued

- Rags, wiping (item 15, appendix C)
- Solvent, drycleaning (item 19, appendix C)
- Tags, marker (item 21, appendix C)
- Tape, antiseizing (item 22, appendix C)

Personnel Required

One

Equipment Condition

Airbrake system drained (page 2-1034).

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

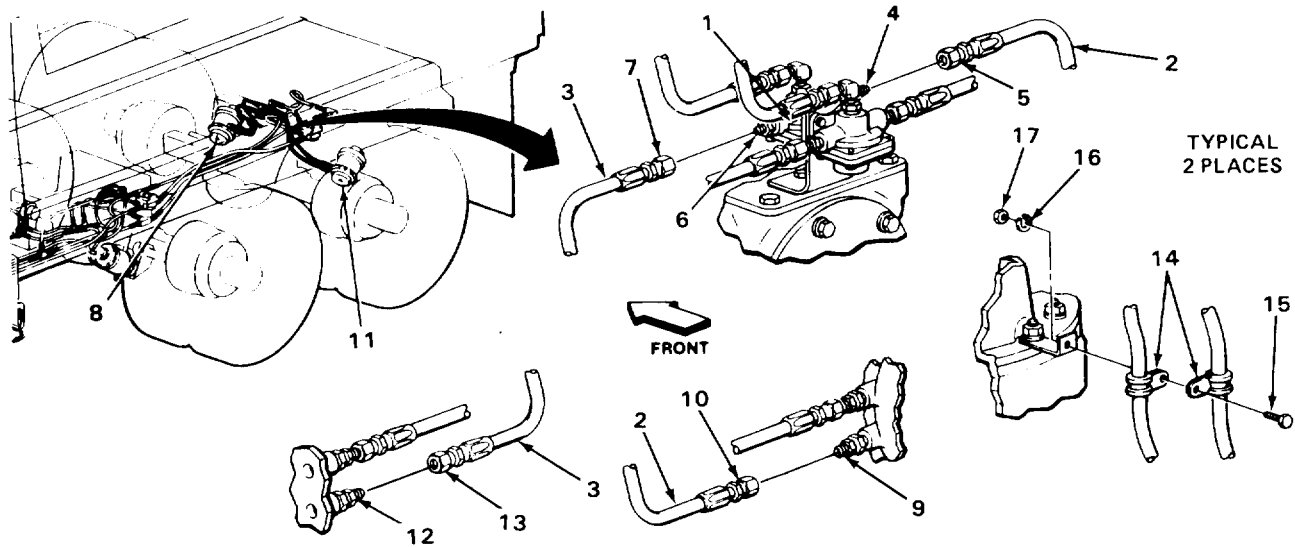
Safety goggles must be worn when working under truck to prevent eye injury.

NOTE

Tag airhoses to ensure correct installation.

For more information on how to tag parts, go to General Maintenance Instructions (page 2-424).

- | | | | |
|----|-----------------------------------|--|--|
| 1. | Rear rear quick release valve (1) | Right airhose (2) and left airhose (3) | Tag. |
| 2. | | Line nut (5) and fitting (4) | Using 3/4-inch and 11/16-inch open-end wrenches, unscrew and take off. |
| 3. | | Line nut (7) and fitting (6) | Using 3/4-inch and 11/16-inch open-end wrenches, unscrew and take off. |



REAR REAR QUICK RELEASE VALVE TO SERVICE AIRBRAKE CHAMBER HOSES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
4. Right service air-brake chamber (8)	Fitting (9), line nut (10), and right airhose (2)		Using 3/4-inch and 5/8-inch open-end wrenches, unscrew and take off.
5. Left service air-brake chamber (11)	Fitting (12), line nut (13), and left airhose (3)		Using 3/4-inch and 5/8-inch open-end wrenches, unscrew and take off.
NOTE			
Step 6 is typical for two clamp assemblies.			
6. Right airhose (2) and left airhose (3)	Two clamps (14), screw (15), lock-washer (16), and nut (17)	a. Using 7/16-inch box-end and 7/16-inch open-end wrenches, unscrew and take out. b. Get rid of lockwasher. c. Take clamps off right airhose (2) and left airhose (3). d. Take out right airhose (2) and left airhose (3).	

REAR REAR QUICK RELEASE VALVE TO SERVICE AIRBRAKE CHAMBER HOSES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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CLEANING

WARNING

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 1000F (380C) and for type #2 is 138°F (590C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

- | | | |
|----|-----------------|---|
| 7. | Two airhoses | Clean using liquid detergent and wiping rag. |
| 8. | All metal parts | Clean using drycleaning solvent and wiping rag. |

INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

- | | | |
|-----|--------------------|--|
| 9. | Two airhoses | <ul style="list-style-type: none"> a. Check for cracks, breaks, chafing, or hardness. b. Look for excessive rust or corrosion. |
| 10. | All threaded parts | Look for damaged threads or rounded heads. |

INSTALLATION

CAUTION

Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.

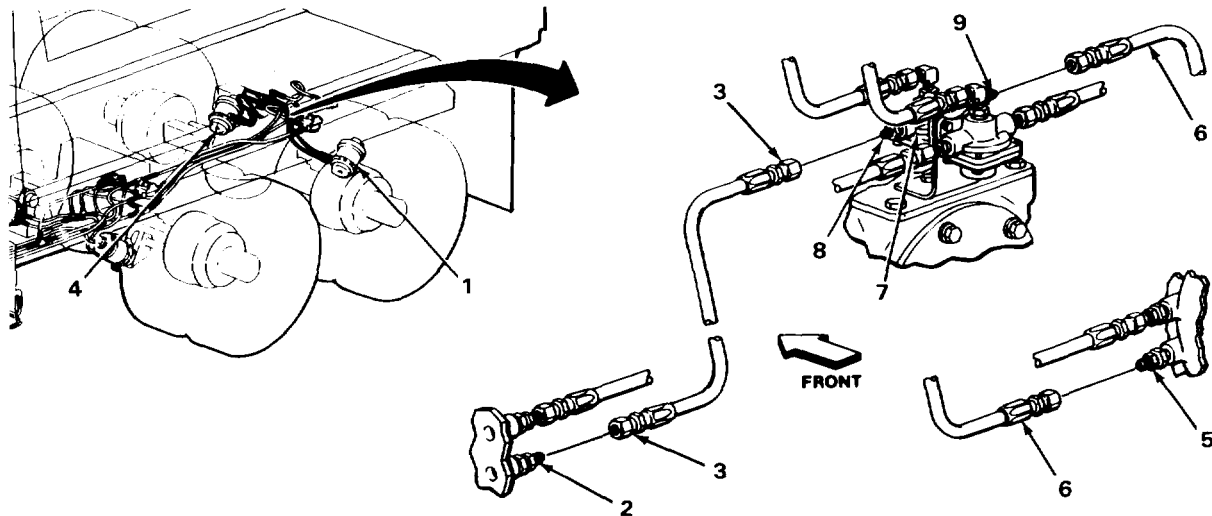
NOTE

For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).

See tags for correct location of airhoses.

REAR REAR QUICK RELEASE VALVE TO SERVICE AIRBRAKE CHAMBER HOSES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
11. Left service air-brake chamber (1)	Fitting (2)	Wrap pipe threads with antiseizing tape.
12. Fitting (2)	Left airhose (3)	Screw on and tighten using 3/4-inch and 5/8-inch open-end wrenches.
13. Right service air-brake chamber (4)	Fitting (5)	Wrap pipe threads with antiseizing tape.
14. Fitting (5)	Right airhose (6)	Screw on and tighten using 3/4-inch and 5/8-inch open-end wrenches.
15. Rear rear quick release valve (7)	Fitting (8)	Wrap pipe threads with antiseizing tape.
16.	Fitting (8) and left airhose (3)	a. Screw on and tighten using 3/4-inch and 11/16-inch open-end wrenches. b. Take off tag. c. Get rid of tag.
17.	Fitting (9)	Wrap pipe threads with antiseizing tape.
18.	Fitting (9) and right airhose (6)	a. Screw on and tighten using 3/4-inch and 11/16-inch open-end wrenches. b. Take off tag. c. Get rid of tag.



TA244416

REAR REAR QUICK RELEASE VALVE TO SERVICE AIRBRAKE CHAMBER HOSES - CONTINUED

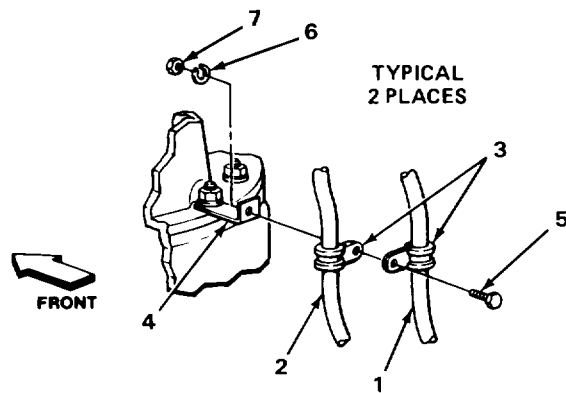
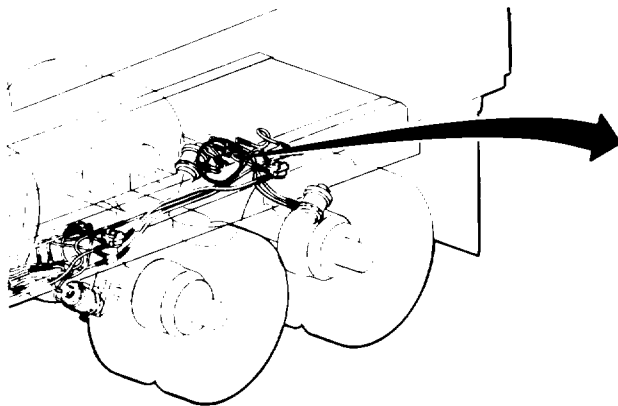
LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION - CONTINUED

NOTE

Steps 19 and 20 are typical for two clamp assemblies.

- | | | |
|--|---|---|
| 19. Left airhose (1) and right airhose (2) | Two clamps (3) | Put on. |
| 20. Clamp bracket (4) | Two clamps (3), screw (5), new lock-washer (6), and nut (7) | <ul style="list-style-type: none"> a. Aline holes in clamps and clamp bracket. b. Screw in and tighten using 7/16-inch box-end and 7/16-inch open-end wrenches. |



TASK ENDS HERE

TA244417

Change 1 2-1140

REAR RELAY VALVE

This task covers:

- a. Removal (page 2-1140.2)
 - b. Installation (page 2-1140.2)
-

INITIAL SETUP

Equipment Conditions

Materials/Parts

Front relay valve T-fitting to rear relay valve hose disconnected (page 2-1105).

Lockwasher, relay valve (two required)

Rear relay valve to rear rear quick release valve hose disconnected (page 2-1140.3).

Personnel Required

Front relay valve to rear relay valve hose disconnected (page 2-1101).

One

Tools/Test Equipment

Goggles, safety

Wrench, box-end, 7/16-inch

Wrench, open-end, 7/16-inch

Change 1 2-1140.1

REAR RELAY VALVE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

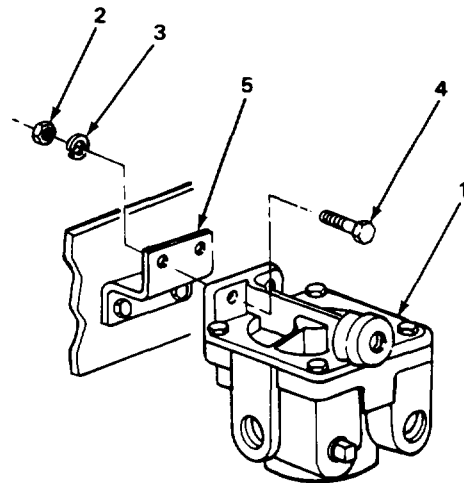
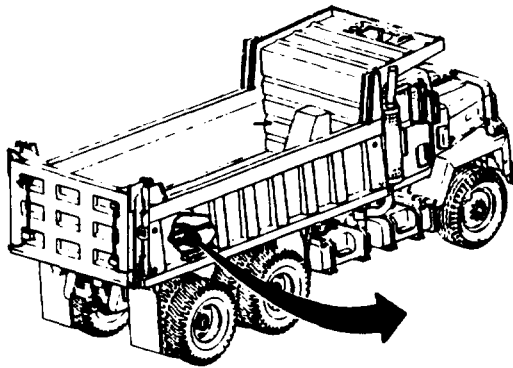
WARNING

Safety goggles must be worn when working under truck to prevent eye injury.

- | | | |
|-------------------------|---|---|
| 1. Rear relay valve (1) | Two nuts (2), lockwashers (3), and screws (4) | a. Using 7/16-inch open-end wrench and 7/16-inch box-end wrench, unscrew, and take off.
b. Get rid of lockwashers. |
| 2. Bracket (5) | Rear relay valve (1) | Take off. |

INSTALLATION

- | | | |
|-------------------------|---|--|
| 3. Bracket (5) | Rear relay valve (1) | Put in place. |
| 4. Rear relay valve (1) | Two nuts (2), new lockwashers (3), and screws (4) | Screw in and tighten using 7/16-inch box-end wrench and 7/16-inch open-end wrench. |



TA702166

REAR RELAY VALVE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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NOTE

FOLLOW-ON MAINTENANCE:

1. Connect front relay valve to rear relay valve hose (page 2-1101).
2. Connect rear relay valve to rear rear quick release valve hose (page 2-1140.3).
3. Connect front relay valve T-fitting to rear relay valve hose (page 2-1105).

TASK ENDS HERE

REAR RELAY VALVE TO REAR REAR QUICK RELEASE VALVE HOSE

This task covers:

- | | |
|---------------------------|---|
| a. Removal (page 2-1141) | c. Inspection/Replacement (page 2-1142) |
| b. Cleaning (page 2-1142) | d. Installation (page 2-1142) |

Change 1 2-1140.3/(2-1140.4 blank)

REAR RELAY VALVE TO REAR REAR QUICK RELEASE VALVE HOSE - CONTINUED

INITIAL SETUP

Tools

Goggles, safety
Wrench, open-end, 7/8-inch

Personnel Required

One

Materials/Parts

Detergent, liquid, GP (item 7, appendix C)
Rags, wiping (item 15, appendix C)
Tape, antiseizing (item 22, appendix C)

Equipment Condition

Airbrake system drained (page 2-1034).

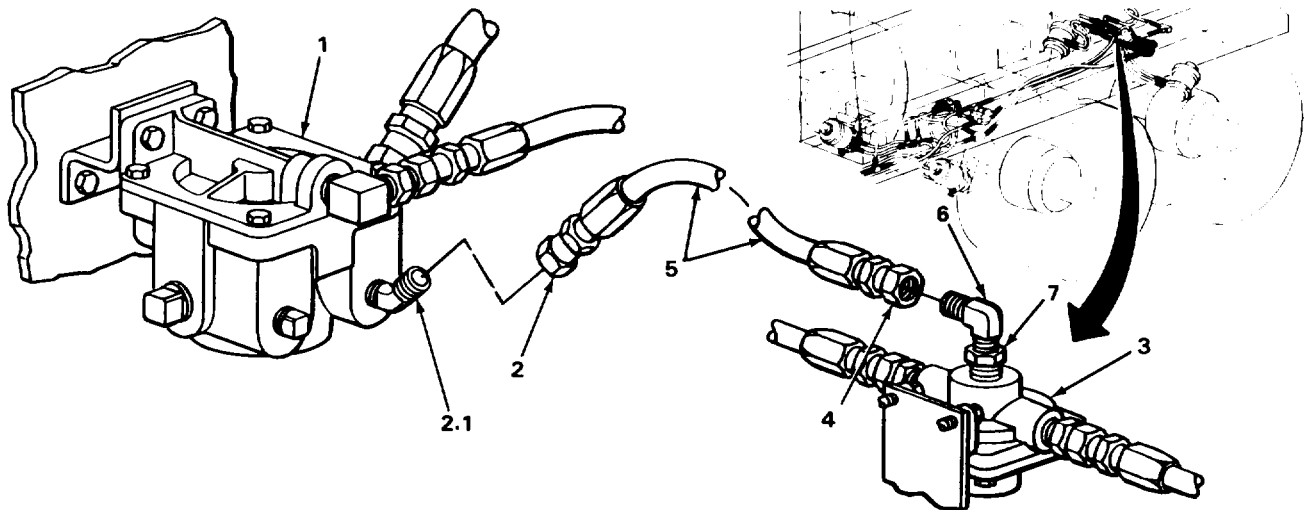
LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

Safety goggles must be worn when working under truck to prevent eye injury.

- | | | | |
|----|-----------------------------------|---|--|
| 1. | Rear relay valve (1) | Line nut (2) and 45-degree elbow (2.1) | Using 7/8-inch open-end wrench, unscrew and take off. |
| 2. | Rear rear quick release valve (3) | Line nut (4), airhose (5), 90-degree elbow (6), and adapter (7) | a. Using 7/8-inch open-end wrench, unscrew and take off.
b. Take out airhose. |



REAR RELAY VALVE TO REAR REAR QUICK RELEASE VALVE HOSE - 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 2-424).

- | | | | |
|----|---------|--|--|
| 3. | Airhose | | Clean using liquid detergent and wiping rag. |
|----|---------|--|--|

INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

- | | | | |
|----|--------------------|--|--|
| 4. | Airhose | | a. Check for cracks, breaks, chafing, or hardness.
b. Look for excessive rust or corrosion. |
| 5. | All threaded parts | | Look for damaged threads or rounded heads. |

INSTALLATION

CAUTION

Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.

NOTE

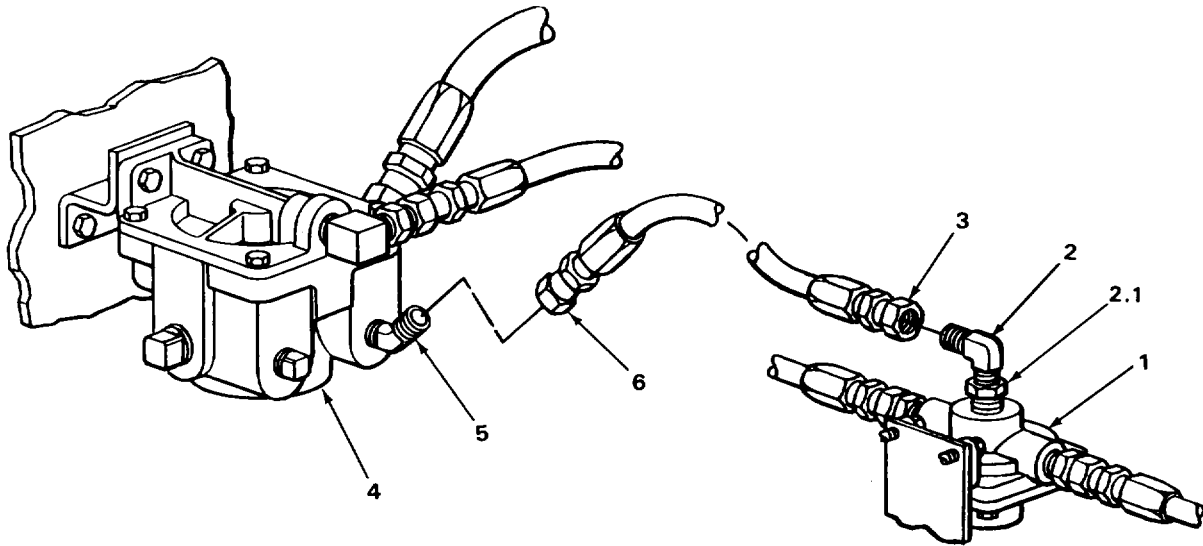
For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).

- | | | | |
|----|-----------------------------------|--|--|
| 6. | Rear rear quick release valve (1) | 90-degree elbow (2) and adapter (2.1) | Wrap pipe threads with antiseizing tape. |
| 7. | | Adapter (2.1), 90-degree elbow (2), and line nut (3) | Screw on and tighten using 7/8-inch open-end wrench. |

Change 1 2-1142

REAR RELAY VALVE TO REAR REAR QUICK RELEASE VALVE HOSE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
8. Rear relay valve (4)	45-degree elbow (5)	Wrap pipe threads with antiseizing tape.	
9.	45-degree elbow (5) and line nut (6)	Screw on and tighten using 7/8-inch open-end wrench.	I



TASK ENDS HERE

CHASSIS T-FITTING TO DOUBLE CHECK VALVE HOSE

This task covers:

- a. Removal (page 2-1144)
- b. Cleaning (page 2-1144)
- c. Inspection/Replacement (page 2-1144)
- d. Installation (page 2-1145)

INITIAL SETUP

Tools

- Goggles, safety
- Wrench, open-end, 5/8-inch
- Wrench, open-end, 3/4-inch

Materials/Parts

- Detergent, liquid, GP (item 7, appendix C)
- Rags, wiping (item 15, appendix C)
- Tape, antiseizing (item 22, appendix C)

TA702168

CHASSIS T-FITTING TO DOUBLE CHECK VALVE HOSE - CONTINUED

INITIAL SETUP - CONTINUED

Personnel Required

One

Equipment Condition

Airbrake system drained (page 2-1034).

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

Safety goggles must be worn when working under truck to prevent eye injury.

- | | | | |
|----|------------------------|--|--|
| 1. | Chassis T-fitting (7) | Line nut (2) and fitting (1) | Using 3/4-inch and 5/8-inch open-end wrenches, unscrew and take off. |
| 2. | Double check valve (6) | Line nut (4), airhose (5), and 45-degree elbow (3) | <ul style="list-style-type: none"> a. Using 3/4-inch open-end wrench, unscrew and take off. b. Take out airhose. |

CLEANING

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

- | | | |
|----|-------------|--|
| 3. | Airhose (5) | Clean using liquid detergent and wiping rag. |
|----|-------------|--|

INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

- | | | |
|----|--------------------|---|
| 4. | Airhose (5) | <ul style="list-style-type: none"> a. Check for cracks, breaks, chaffing, or hardness. b. Look for excessive rust or corrosion. |
| 5. | All threaded parts | Look for damaged threads or rounded heads. |

CHASSIS T-FITTING TO DOUBLE CHECK VALVE HOSE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION

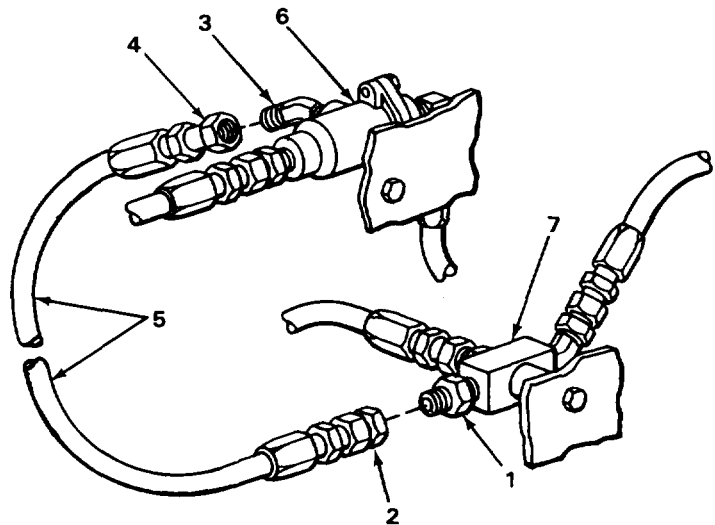
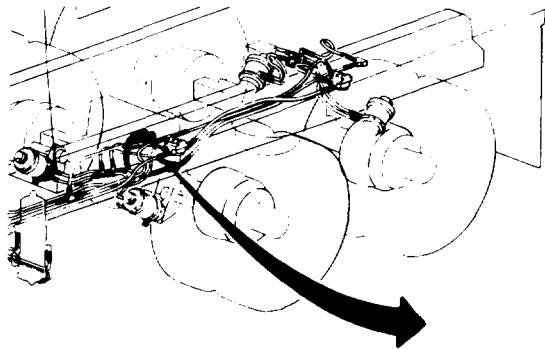
CAUTION

Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.

NOTE

For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).

- | | | |
|---------------------------|--------------------------------------|---|
| 6. Double check valve (6) | 45-degree elbow (3) | Wrap pipe threads with antiseizing tape. |
| 7. | 45 degree elbow (3) and line nut (4) | Screw on and tighten using 3/4-inch open-end wrench. |
| 8. Chassis T-fitting (7) | Fitting (1) | Wrap pipe threads with antiseizing tape. |
| 9. | Fitting (1) and line nut (2) | Screw on and tighten using 3/4-inch and 5/8-inch open-end wrenches. |



TASK ENDS HERE

CHASSIS T-FITTING TO FRONT REAR QUICK RELEASE VALVE HOSE

This task covers:

- a. Removal (page 2-1146)
 - b. Cleaning (page 2-1146)
 - c. Inspection/Replacement (page 2-1147)
 - d. Installation (page 2-1148)
-

INITIAL SETUP

<p>Tools</p> <p>Goggles, safety Wrench, open-end, 5/8-inch Wrench, open-end, 3/4-inch</p> <p>Materials/Parts</p> <p>Detergent, liquid, GP (item 7, appendix C) Rags, wiping (item 15, appendix C) Tape, antiseizing (item 22, appendix C)</p>	<p>Personnel Required</p> <p>One</p> <p>Equipment Condition</p> <p>Airbrake system drained (page 2-1034).</p>
---	---

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

REMOVAL

WARNING

Safety goggles must be worn when working under truck to prevent eye injury.

1.	Chassis T-fitting (0.1)	Line nut (2) and fitting (1)	Using 3/4-inch and 5/8-inch open-end wrenches, unscrew and take off.
2.	Front rear quick release valve (2.1)	Line nut (4), airhose (5), and 45-degree elbow (3)	<ul style="list-style-type: none"> a. Using 3/4-inch open-end wrench, unscrew and take off. b. Take out airhose.

CLEANING

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

3.	Airhose (5)	Clean using liquid detergent and wiping rag.
----	-------------	--

Change 1 2-1146

CHASSIS T-FITTING TO FRONT REAR QUICK RELEASE VALVE HOSE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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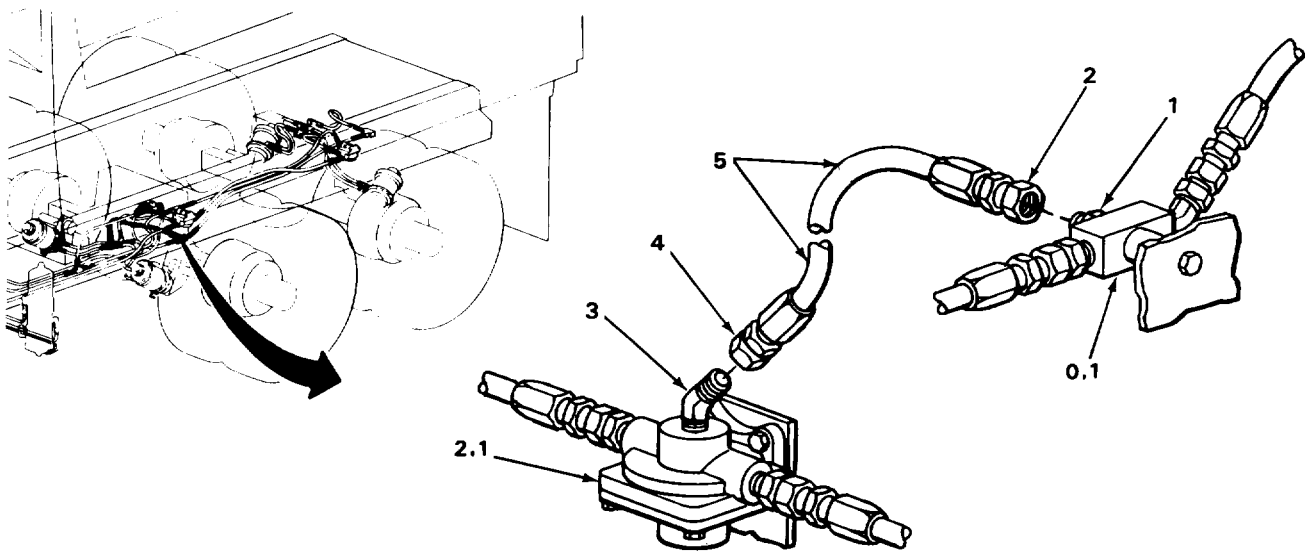
INSPECTION/REPLACEMENT

NOTE

Replace damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

- | | | |
|----|--------------------|--|
| 4. | Airhose (5) | <ul style="list-style-type: none"> a. Check for cracks, breaks, chafing, or hardness. b. Look for excessive rust or corrosion. |
| 5. | All threaded parts | Look for damaged threads or rounded heads. |



TA702169

Change 1 2-1147

CHASSIS T-FITTING TO FRONT REAR QUICK RELEASE VALVE HOSE - CONTINUED

LOCATION

ITEM

ACTION

REMARKS

INSTALLATION

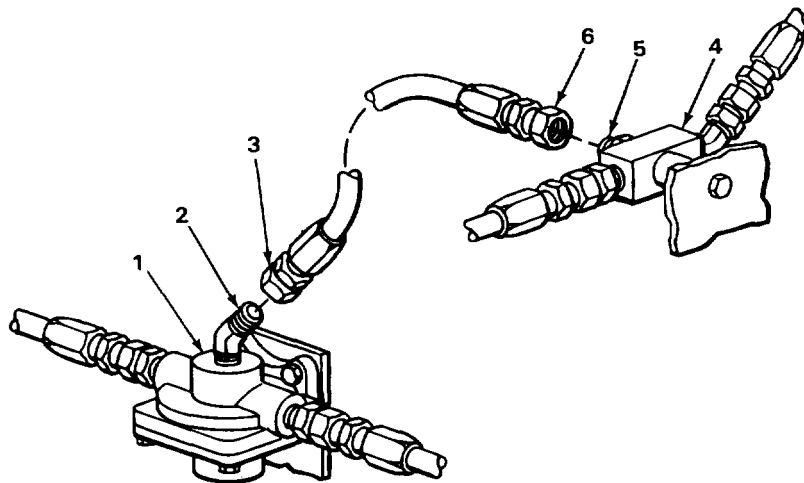
CAUTION

Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.

NOTE

For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).

- | | | | |
|----|------------------------------------|--------------------------------------|---|
| 6. | Front rear quick release valve (1) | 45-degree elbow (2) | Wrap pipe threads with antiseizing tape. |
| 7. | | 45-degree elbow (2) and line nut (3) | Screw on and tighten using 3/4-inch open-end wrench. |
| 8. | Chassis T-fitting (4) | Fitting (5) | Wrap pipe threads with antiseizing tape. |
| 9. | | Fitting (5) and line nut (6) | Screw on and tighten using 3/4-inch and 5/8-inch open-end wrenches. |



TASK ENDS HERE

TA244658

Change 1 2-1148

DOUBLE CHECK VALVE

This task covers:

- a. Removal (page 2-1148.2) b. Installation (page 2-1148.2)
-

INITIAL SETUP

<p>Equipment Conditions</p> <p>Chassis T-fitting to double check valve hose disconnected (page 2-1143). Cab floor through connector to double check valve hose disconnected (page 2-1108).</p> <p>Tools/Test Equipment</p> <p>Goggles, safety Wrench, box-end, 7/16-inch Wrench, open-end, 7/16-inch Wrench, open-end, 3/4-inch (two required)</p>	<p>Materials/Parts</p> <p>Tape, antiseizing (item 22, appendix C) Lockwasher, double check valve</p> <p>Personnel Required</p> <p>One</p>
--	---

Change 1 2-1148.1

DOUBLE CHECK VALVE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
<u>WARNING</u>			
Safety goggles must be worn when working under truck to prevent eye injury.			
1.	Fitting (1)	Line nut (2) and air hose (3)	a. Using two 3/4-inch open-end wrenches, unscrew, and take off. b. Move air hose out of way.
2.	Double check valve (4)	Fitting (1)	Using 3/4-inch open-end wrench, unscrew, and take off.
3.		Nut (5), lockwasher (6), and screw (7)	a. Using 7/16-inch open-end wrench and 7/16-inch box-end wrench, unscrew, and take off. b. Get rid of lockwasher.
4.	Left frame rail (8)	Double check valve (4)	Take off.

INSTALLATION**CAUTION**

Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.

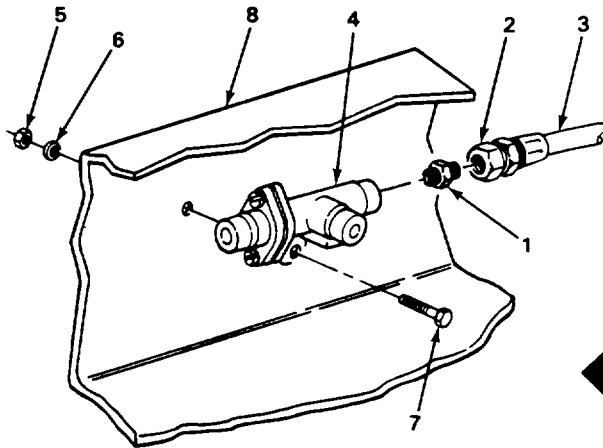
NOTE

For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).

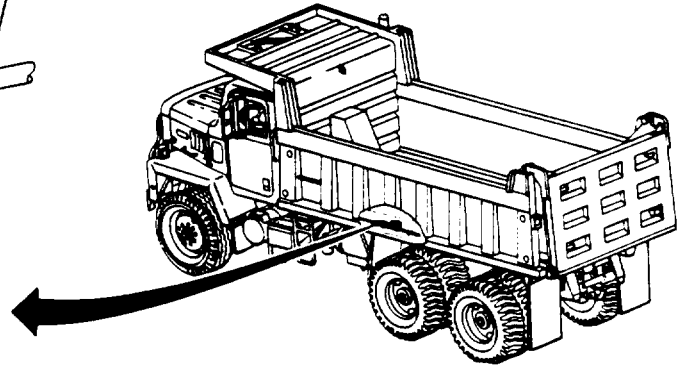
5.	Left frame rail (8)	Double check valve (4)	Put in place.
6.	Double check valve (4)	Nut (5), lockwasher (6), and screw (7)	Screw in and tighten using 7/16-inch box-end wrench and 7/16-inch open-end wrench.
7.		Fitting (1)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 3/4-inch open-end wrench.
8.	Fitting (1)	Line nut (2) and air hose (3)	Screw on and tighten using two 3/4-inch open-end wrenches.

DOUBLE CHECK VALVE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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ROTATED 90°



NOTE

FOLLOW-ON MAINTENANCE:

1. Connect cab floor through connector to double check valve hose (page 2-1108).
2. Connect T-fitting to double check valve hose (page 2-1143).

TASK ENDS HERE

TA702170 I

Change 1 2-1148.3/(2-1148.4 blank)

DOUBLE CHECK VALVE T-FITTING TO FRONT RELAY VALVE T-FITTING HOSE

This task covers:

- a. Removal (page 2-1149)
- b. Cleaning (page 2-1150)
- c. Inspection/Replacement (page 2-1150)
- d. Installation (page 2-1150)

INITIAL SETUP

Tools

Goggles, safety
Wrench, open-end, 7/8-inch

Personnel Required

One

Materials/Parts

Detergent, liquid, GP (item 7, appendix C)
Rags, wiping (item 15, appendix C)
Tape, antiseizing (item 22, appendix C)

Equipment Condition

Airbrake system drained (page 2-1034).

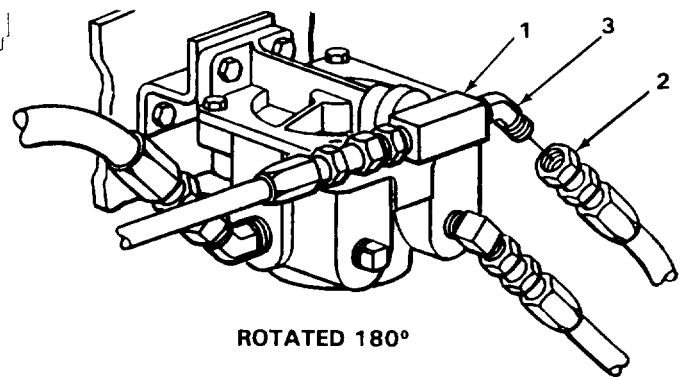
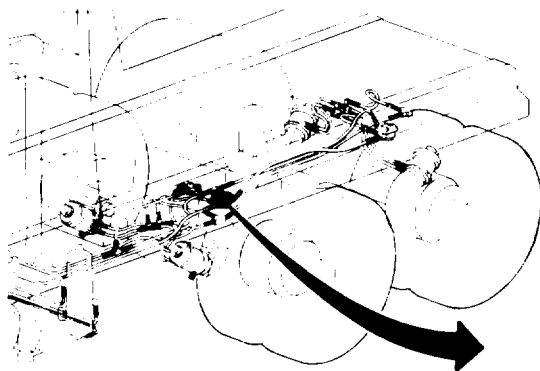
LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

Safety goggles must be worn when working under truck to prevent eye injury.

- | | | |
|--|--------------------------------------|---|
| 1. Front relay valve T-fitting (1) and take off. | Line nut (2) and 45-degree elbow (3) | Using 7/8-inch open-end wrench, unscrew |
|--|--------------------------------------|---|



DOUBLE CHECK VALVE T-FITTING TO FRONT RELAY VALVE T-FITTING HOSE - CONTINUED

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

REMOVAL - CONTINUED

- | | | | |
|-------------------------------------|------------------------------|--|--|
| 2. Double check valve T-fitting (1) | Line nut (2) and airhose (3) | <ul style="list-style-type: none"> a. Using 7/8-inch open-end wrench, unscrew and take off. b. Take out airhose. | |
|-------------------------------------|------------------------------|--|--|

CLEANING

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

- | | | | |
|----|-------------|--|--|
| 3. | Airhose (3) | Clean using liquid detergent and wiping rag. | |
|----|-------------|--|--|

INSPECTION/REPLACEMENT

NOTE

Replace damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

- | | | | |
|----|--------------------|--|--|
| 4. | Airhose (3) | <ul style="list-style-type: none"> a. Check for cracks, breaks, chafing, or hardness. b. Look for excessive rust or corrosion. | |
| 5. | All threaded parts | Look for damaged threads or rounded heads. | |

INSTALLATION

CAUTION

Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.

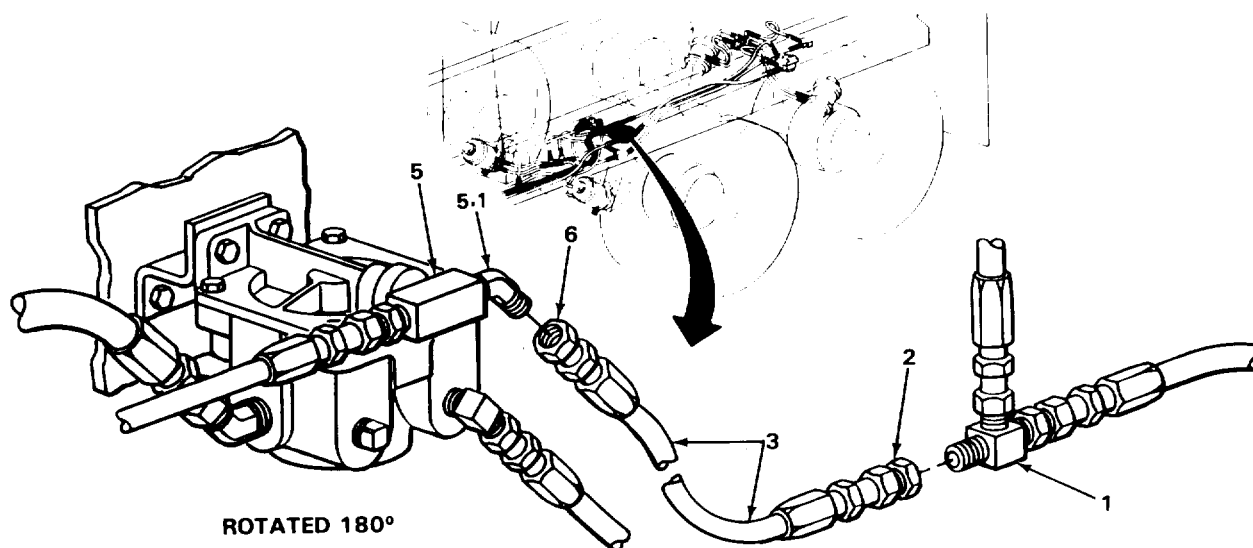
NOTE

For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).

- | | | | |
|------------------------------------|-----------------------|--|--|
| 6. Front relay valve T-fitting (5) | 45-degree elbow (5.1) | Wrap pipe threads with antiseizing tape. | |
|------------------------------------|-----------------------|--|--|

DOUBLE CHECK VALVE T.FITTING TO FRONT RELAY VALVE T-FITTING HOSE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
7 Front relay valve T-fitting (5)	45-degree elbow (5.1) and line nut (6)	Screw on and tighten using 7/8-inch open- end wrench.
8	Double check valve T-fitting (1)	Wrap pipe threads with antiseizing tape.
9 Double check valve T-fitting (1)	Line nut (2)	Screw on and tighten using 7/8-inch open-



TASK ENDS HERE

TA702172

Change 1 2-1151

CHASSIS 90-DEGREE ELBOW

This task covers:

- a Removal (page 2-1151.0) b Installation (page 2-1151.0)

INITIAL SETUP

Equipment Conditions

Chassis T-fitting to chassis 90-degree elbow hose disconnected (page 2-1151.4).
 Chassis 90-degree elbow to rear rear quick release valve hose (page 2-1157).

Materials/Parts

Lockwasher, elbow

Personnel Required

One

Tools/Test Equipment

Goggles, safety
 Wrench, box-end, 7/16-inch

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

REMOVAL

WARNING

Safety goggles must be worn when working under truck to prevent eye injury.

1	Left frame rail (1)	Screw (2) and lockwasher (3)	a Using 7/16-inch box-end wrench, unscrew, and take off. b Get rid of lockwasher.
2		Chassis 90-degree elbow (4)	Take off.

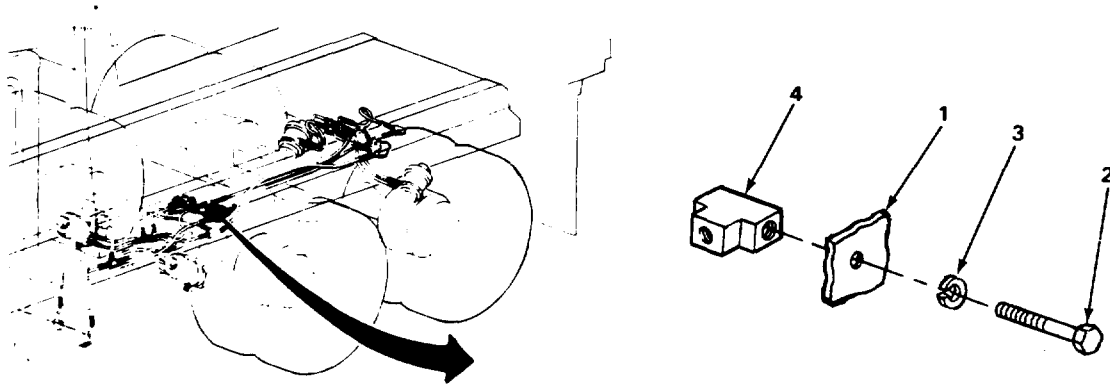
INSTALLATION

3	Left frame rail (1)	Chassis 90-degree elbow (4)	Put in place.
4		Screw (2) and new lockwasher (3)	Screw in and tighten using 7/16-inch box-end wrench.

Change 1 2-1151.0

CHASSIS 90-DEGREE ELBOW - CONTINUED

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



NOTE

FOLLOW-ON MAINTENANCE:

- 1 Connect chassis 90-degree elbow to rear rear quick release valve hose (page 2-1157).
- 2 Connect chassis T-fitting to chassis 90-degree elbow hose (page 2-1151.4).

TASK ENDS HERE

TA702173

Change 1 2-1151.1

CHASSIS T-FITTING

This task covers:

- | | |
|---------------------------|--------------------------------|
| a Removal (page 2-1151.2) | b Installation (page 2-1151.2) |
|---------------------------|--------------------------------|

INITIAL SETUP

Equipment Conditions

- Chassis T-fitting to front rear quick release valve hose disconnected (page 2-1146).
- Chassis T-fitting to double check valve hose disconnected (page 2-1143).
- Chassis T-fitting to chassis 90-degree elbow hose disconnected (page 2-1152)

Materials/Parts

- Lockwasher, T-fitting
- Personnel Required
- One

Tools/Test Equipment

- Goggles, safety
- Wrench, box-end, 7/16-inch

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

REMOVAL

WARNING

Safety goggles must be worn when working under truck to prevent eye injury.

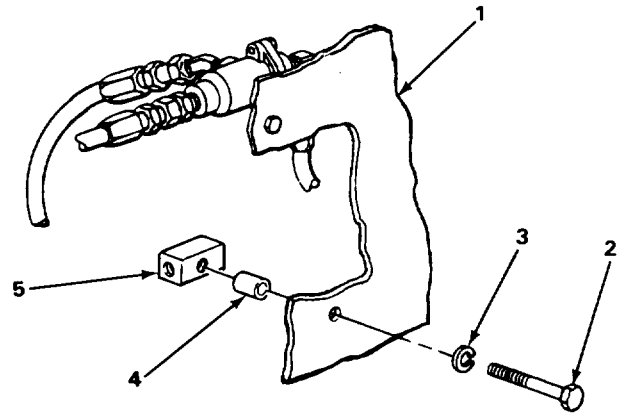
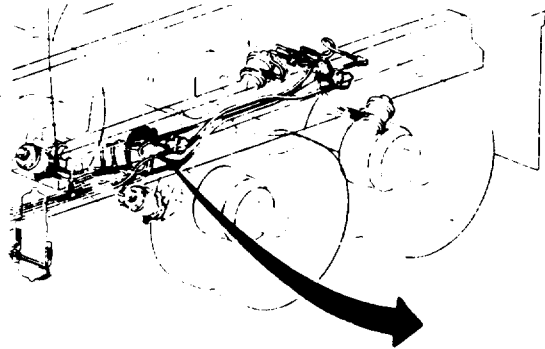
1	Left frame rail (1)	Screw (2) and lockwasher (3)	<ul style="list-style-type: none"> a Using 7/16-inch box-end wrench, unscrew, and take off. b Get rid of lockwasher.
2		Spacer (4) and chassis T-fitting (5)	Take off.

INSTALLATION

3	Left frame rail (1)	Spacer (4) and chassis T-fitting (5)	Put in place.
4		Screw (2) and new lockwasher (3)	Screw in and tighten using 7/16-inch box-end wrench.

CHASSIS T-FITTING - CONTINUED

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



NOTE

FOLLOW-ON MAINTENANCE:

- 1 Connect chassis T-fitting to chassis 90-degree elbow hose (page 2-1152).
- 2 Connect chassis T-fitting to double check valve hose (page 2-1143).
- 3 Connect chassis T-fitting to front rear quick release valve hose (page 2-1146).

TASK ENDS HERE

CHASSIS T-FITTING TO CHASSIS 90-DEGREE ELBOW HOSE

This task covers:

- | | |
|--------------------------|--|
| a Removal (page 2-1152) | c Inspection/Replacement (page 2-1152) |
| b Cleaning (page 2-1152) | d Installation (page 2-1153) |

TA702174

CHASSIS T-FITTING TO CHASSIS 90-DEGREE ELBOW HOSE - CONTINUED

INITIAL SETUP

<p>Tools</p> <p>Goggles, safety Wrench, open-end, 11/16-inch Wrench, open-end, 3/4-inch</p> <p>Materials/Parts Detergent, liquid, GP (item 7, appendix C) Rags, wiping (item 15, appendix C) Tape, antiseizing (item 22, appendix C)</p>	<p>Personnel Required</p> <p>One</p> <p>Equipment Condition</p> <p>Airbrake system drained (page 2-1034).</p>
---	---

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

REMOVAL

WARNING

Safety goggles must be worn when working under truck to prevent eye injury.

1	Chassis T-fitting (7)	Line nut (2) and 45-degree elbow (1)	Using 3/4-inch open-end wrench, unscrew and take off.
2	Chassis 90-degree (6)	Line nut (4), airhose (5), and fitting (3)	<ul style="list-style-type: none"> a Using 3/4-inch and 11/16-inch open-end wrenches, unscrew and take off. b Take out airhose.

CLEANING

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

3	Airhose (5)	Clean using liquid detergent and wiping rag.
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INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

CHASSIS T-FITTING TO CHASSIS 90-DEGREE ELBOW HOSE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
4	Airhose (5)	a Check for cracks, breaks, chafing, or hardness. b Look for excessive rust or corrosion.
5	All threaded parts	Look for damaged threads or rounded heads.

INSTALLATION

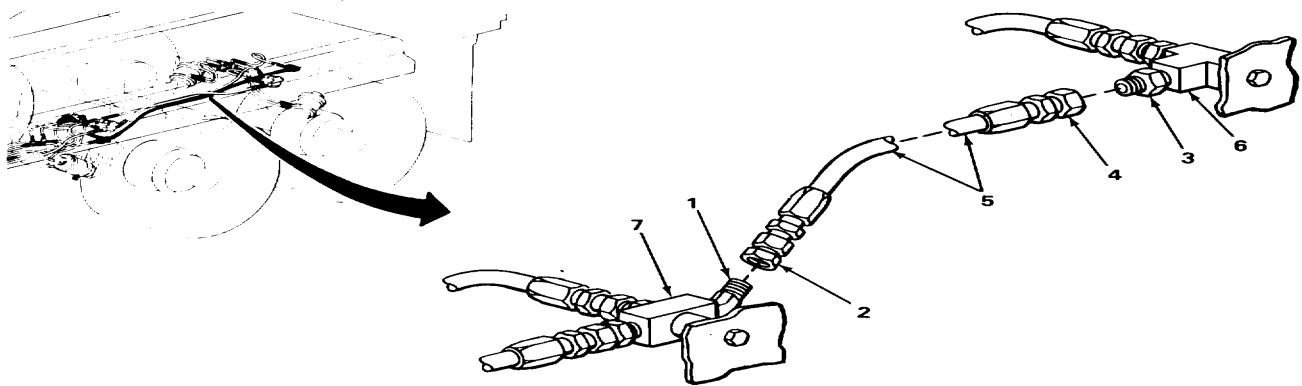
CAUTION

Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.

NOTE

For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).

8	Chassis 90-degree elbow (6)	Fitting (3)	Wrap pipe threads with antiseizing tape.
7		Fitting (3) and line nut (4)	Screw on and tighten using 3/4-inch and 11/16-inch open-end wrenches.
8	Chassis T-fitting (7)	45-degree elbow (1)	Wrap pipe threads with antiseizing tape.
9		45-degree elbow (1) and line nut (2)	Screw on and tighten using 3/4-inch open-end wrench.



TASK ENDS HERE

WET AIR RESERVOIR TO AIR DRYER HOSE

This task covers:

- | | | | |
|---|------------------------|---|--------------------------------------|
| a | Removal (page 2-1154) | c | Inspection/Replacement (page 2-1155) |
| b | Cleaning (page 2-1154) | d | Installation (page 2-1156) |

INITIAL SETUP

Tools

- Goggles, safety
- Wrench, open-end, 1-inch

Personnel Required

One

Equipment Condition

Airbrake system drained (page 2-1034).

Materials/Parts

- Detergent, liquid GP (item 7, appendix C)
- Rags, wiping (item 15, appendix C)
- Tape, antiseizing (item 22, appendix C)

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

REMOVAL

WARNING

Safety goggles must be worn when working under truck to prevent eye injury.

1	90-degree elbow (1)	Line nut (2)	Using 1-inch open-end wrench, unscrew and take off.
2	90-degree elbow (3)	Line nut (4) and airhose (5)	a Using 1-inch open-end wrench, unscrew and take off. b Take out airhose.

CLEANING

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

3	Airhose (5)	Clean using liquid detergent and wiping rag.
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WET AIR RESERVOIR TO AIR DRYER HOSE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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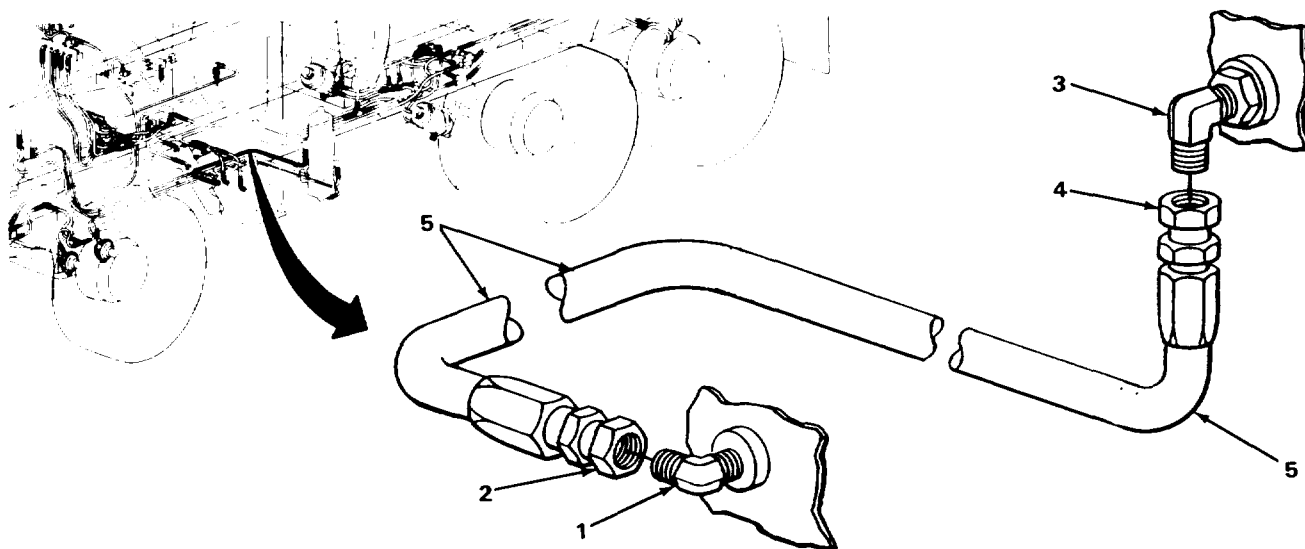
INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

4	Airhose (5) hardness.	a Check for cracks, breaks, chafing, or b Look for excessive rust or corrosion.
5	All threaded parts	Look for damaged threads or rounded heads.



TA244425

WET AIR RESERVOIR TO AIR DRYER HOSE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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INSTALLATION

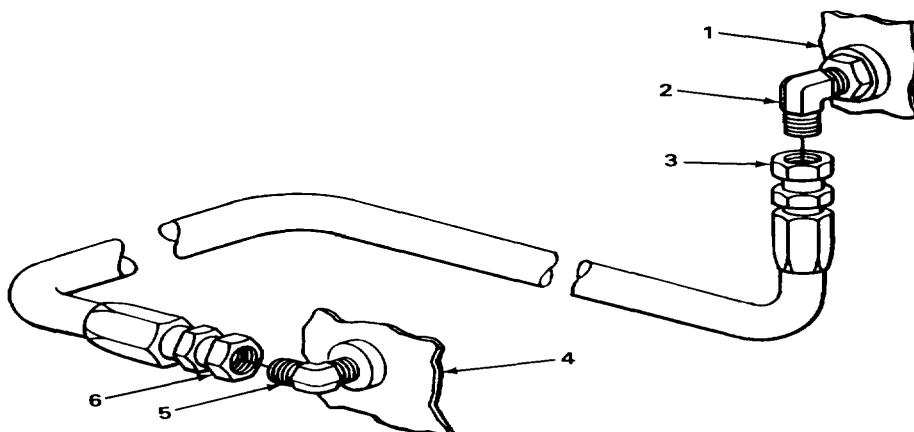
CAUTION

Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.

NOTE

For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).

6	Air dryer (1)	90-degree elbow (2)	Wrap pipe threads with antiseizing tape.
7	90-degree elbow (2)	Line nut (3)	Screw on and tighten using 1-inch open-end wrench.
8	Wet air reservoir (4)	90-degree elbow (5)	Wrap pipe threads with antiseizing tape.
9	90-degree elbow (5)	Line nut (6)	Screw on and tighten using 1-inch open-end wrench.



TA244426

CHASSIS 90-DEGREE ELBOW TO REAR REAR QUICK RELEASE VALVE HOSE

This task covers:

- | | |
|--------------------------|--|
| a Removal (page 2-1157) | c Inspection/Replacement (page 2-1158) |
| b Cleaning (page 2-1158) | d Installation (page 2-1158) |

INITIAL SETUP

Tools

- Goggles, safety
- Wrench, open-end, 11/16-inch
- Wrench, open-end, 3/4-inch

Personnel Required

One

Equipment Condition

Airbrake system drained (page 2-1034).

Materials/Parts

- Detergent, liquid, GP (item 7, appendix C)
- Rags, wiping (item 15, appendix C)
- Tape, antiseizing (item 22, appendix C)

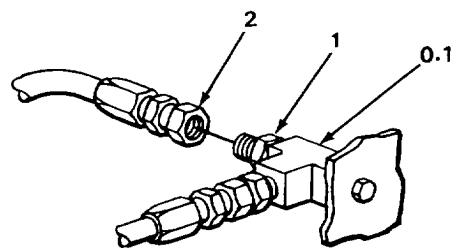
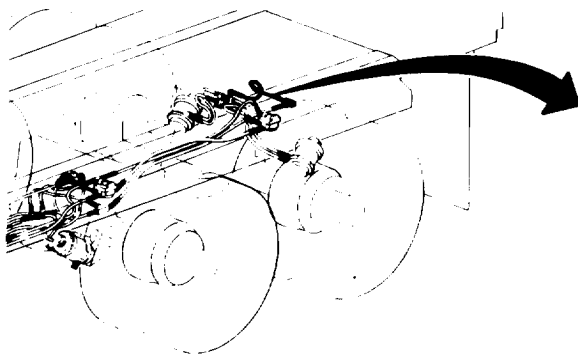
LOCATION	ITEM	ACTION REMARKS
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REMOVAL

WARNING

Safety goggles must be worn when working under truck to prevent eye injury.

- | | | | |
|---|-------------------------------|------------------------------|--|
| 1 | Chassis 90-degree elbow (0.1) | Line nut (2) and fitting (1) | Using 3/4-inch and 11/16-inch open-end wrenches, unscrew and take off. |
|---|-------------------------------|------------------------------|--|



TA702175

CHASSIS 90-DEGREE ELBOW TO REAR REAR QUICK RELEASE VALVE HOSE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED		
2	Rear rear quick release valve (4)	Line nut (2), 90-degree elbow (1), and adapter (4.1)
		a Using 3/4-inch open-end wrench, unscrew and take off. b Take out airhose.

CLEANING**NOTE**

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

3	Airhose (3)	Clean using liquid detergent and wiping rag.
---	-------------	--

INSPECTION/REPLACEMENT**NOTE**

Replace damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

4	Airhose (3)	Check for cracks, breaks, chafing, or hardness.
5	All threaded parts	Look for damaged threads or rounded heads.

INSTALLATION**CAUTION**

Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.

NOTE

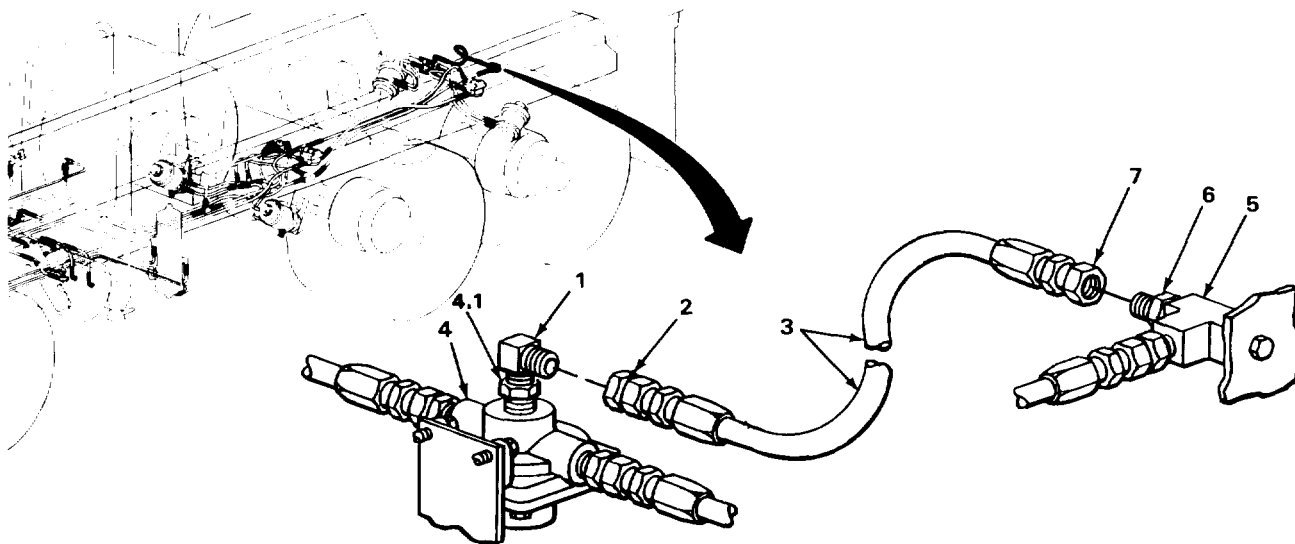
For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).

6	Rear rear quick release valve (4)	90-degree elbow (1) and adapter (4.1)	Wrap pipe threads with antiseizing tape.
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Change 1 2-1158

CHASSIS 90-DEGREE ELBOW TO REAR REAR QUICK RELEASE VALVE HOSE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
7	Adapter (4.1), 90-degree elbow (1), and line nut (2)	Screw on and tighten using 3/4-inch open-end wrench.
8 Chassis 90-degree elbow (5)	Fitting (6)	Wrap pipe threads with antiseizing tape.
9 Fitting (6)	Line nut (7)	Screw on and tighten using 3/4-inch and 11/16-inch open-end wrenches.



**TASK ENDS HERE
FRONT BRAKE LIMITING CONTROL VALVE HOSES AND FITTINGS**

This task covers:

- a Removal (page 2-1160)
- b Cleaning (page 2-1162)
- c Inspection/Replacement (page 2-1163)
- d Installation (page 2-1164)

FRONT BRAKE LIMITING CONTROL VALVE HOSES AND FITTINGS - CONTINUED

INITIAL SETUP

Tools

- Gloves, safety
- Goggles, safety
- Wrench, box-end, 7/16-inch
- Wrench, open-end, 7/16-inch
- Wrench, open-end, 1/2-inch
- Wrench, open-end, 9/16-inch
- Wrench, open-end, 1-inch
- Wrench, open-end, 1 1/8-inch

Materials/Parts - Continued

- Rags, wiping (item 15, appendix C)
- Solvent, drycleaning (item 19, appendix C)
- Tags, marker (item 21, appendix C)
- Tape, antiseizing (item 22, appendix C)

Personnel Required

Two

Materials/Parts

- Detergent, liquid, GP (item 7, appendix C)
- Lockwasher, anchor coupling (two required)
- Lockwasher, clamp screw (two required)

Equipment Condition

- Airbrake system drained (page 2-1034).
- Left side hood panel opened (page 2-424).
- Air cleaner removed (page 2-446).
- Left side cab door opened (page 2-424).

LOCATION	ITEM	ACTION REMARKS
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REMOVAL

WARNING

Safety goggles must be worn when working under truck to prevent eye injury.

NOTE

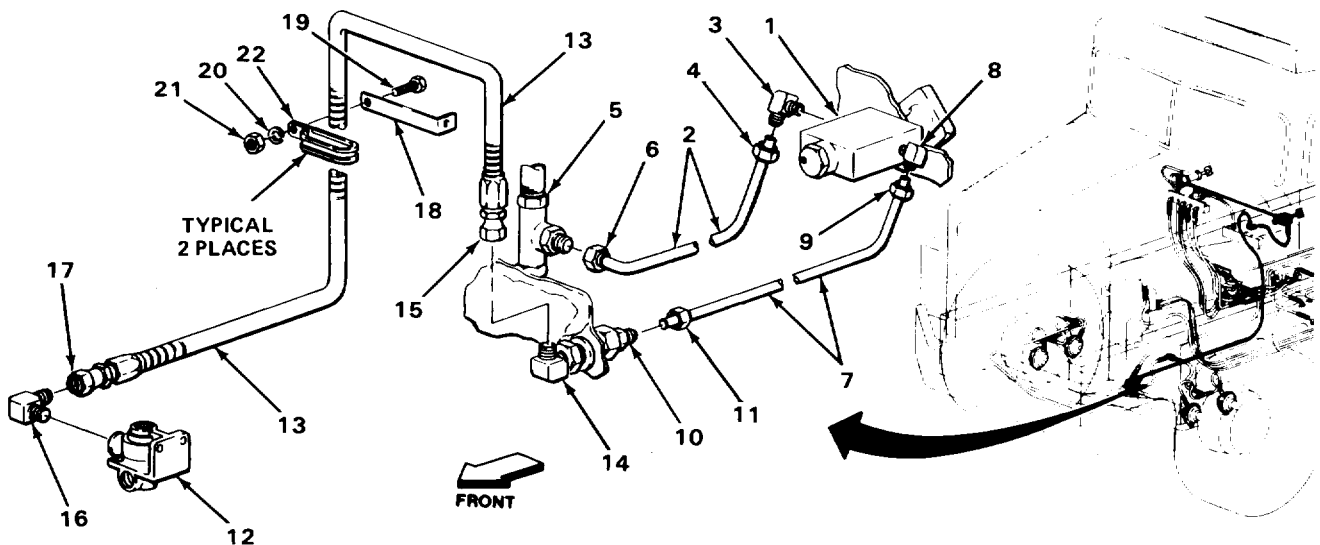
Tag airhoses to ensure correct installation.

For more information on how to tag parts, go to General Maintenance Instructions (page 2-424).

1	Front brake limiting control valve (1)	Airhose (2)	Tag.
2		Line nut (4) and 90-degree elbow (3)	Using 9/16-inch open-end wrench, unscrew and take off.
3	T-fitting (5)	Line nut (6) and airhose (2)	a Using 9/16-inch open-end wrench, unscrew and take off. b Take out airhose.
4	Front brake limiting control valve (1)	Airhose (7)	Tag.

FRONT BRAKE LIMITING CONTROL VALVE HOSES AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
5	Line nut (9) and 90-degree elbow (8)	Using 9/16-inch open-end wrench, unscrew and take off.
6	Fitting (10)	a Using 9/16-inch and 7/16-inch open-end wrenches, unscrew and take off. b Take out airhose.
7	Front brake limiting and quick release valve (12)	Tag.
8	90-degree elbow (14)	Using 9/16inch open-end wrench, unscrew and take off.
9	Front brake limiting and quick release valve (12)	Using 9/16-inch open-end wrench, unscrew and take off.
10	Two clamp brackets (18)	a Using 7/16-inch box-end and 7/16-inch open-end wrenches, unscrew and take out. b Get rid of lockwashers.
11	Airhose (13)	a Take off. b Take out airhose.



TA244429

Change 1 2-1161

FRONT BRAKE LIMITING CONTROL VALVE HOSES AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED		
	-	
12	Driver's side of firewall (1)	Fitting (2) and take out. Using 7/16-inch box-end wrench, unscrew
13	Engine side of firewall (3)	90-degree elbow (4) and take out. Using 1/2-inch open-end wrench, unscrew
NOTE		
Assistance will be needed when performing step 14.		
14	Driver's side of firewall (1) and engine side of firewall (3)	Nut (5), two lock-washers (6), and anchor coupling (7) a Using 1 1/8-inch and 1-inch open-end wrenches, unscrew and take out. b Get rid of lockwashers.
CLEANING		
<u>WARNING</u>		
Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 1000F (380C) and for type #2 is 138°F (590C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.		
NOTE		
For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).		
15	Three airhoses	Clean using liquid detergent and wiping rag.
16	All metal parts	Clean using drycleaning solvent and wiping rag.

FRONT BRAKE LIMITING CONTROL VALVE HOSES AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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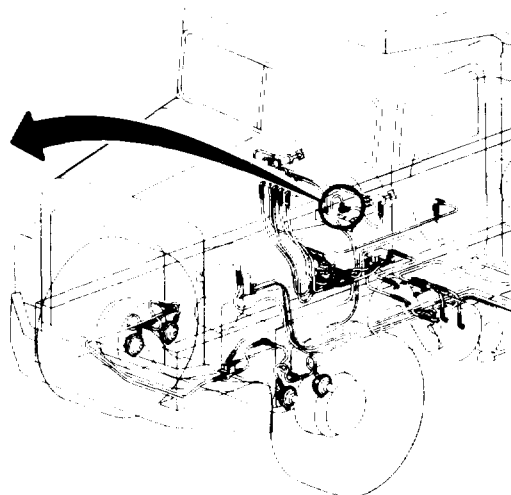
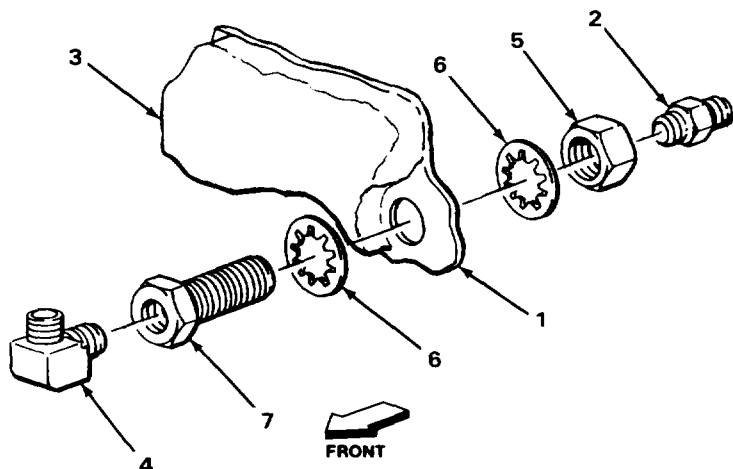
INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more Information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

17	Three airhoses	a Check for cracks, breaks, chafing, or hardness.
18	All threaded parts	b Look for excessive rust or corrosion. Look for damaged threads or rounded heads.



TA244430

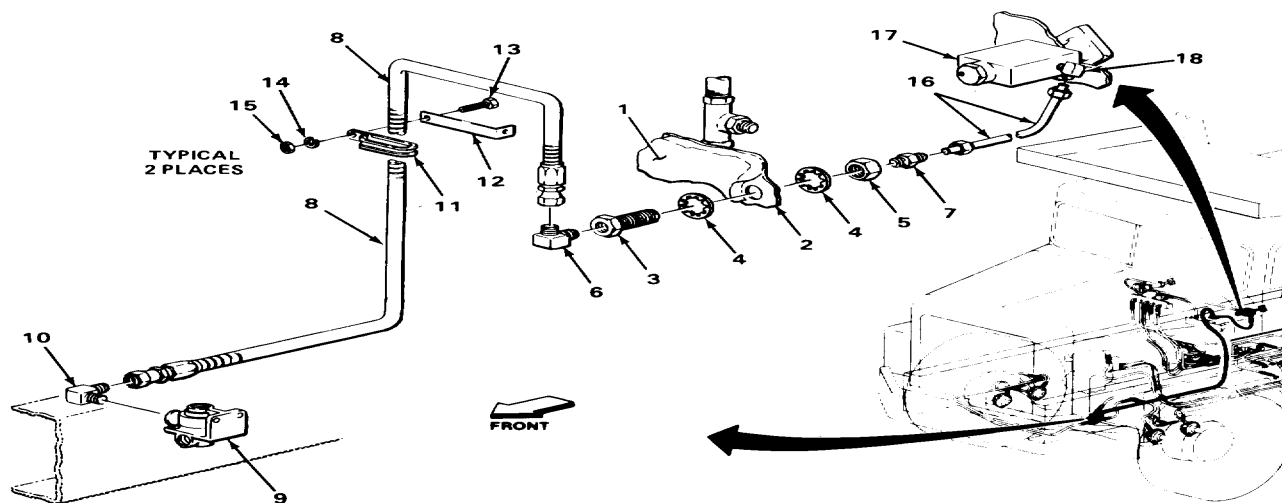
FRONT BRAKE LIMITING CONTROL VALVE HOSES AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
<u>CAUTION</u>		
Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.		
<u>NOTE</u>		
For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).		
See tags for correct location of airhoses.		
Assistance will be needed when performing step 19.		
19	Engine side of firewall (1) and driver's side of firewall (2)	Anchor coupling (3), two new lockwashers (4), and nut (5)
		a Put anchor coupling in position. b Screw in and tighten using 1 118-inch and 1-inch open-end wrenches.
20	Engine side of firewall (1)	90-degree elbow (6)
		a Wrap pipe threads with antiseizing tape. b Screw in and tighten using 1/2-inch open-end wrench. Position to face up.
21	Driver's side of firewall (2)	Fitting (7)
		a Wrap pipe threads with antiseizing tape. b Screw in and tighten using 7116-inch box-end wrench.
22	Engine side of firewall (1)	90-degree elbow (6)
		Wrap pipe threads with antiseizing tape.
23	90-degree elbow (6)	Airhose (8)
		Screw on and tighten using 9116-inch open-end wrench.
24	Front brake limiting and quick release valve (9)	90-degree elbow (10)
		Wrap pipe threads with antiseizing tape.
25		90-degree elbow (10) and airhose (8)
		a Screw on and tighten using 9116-inch open-end wrench. b Take off tag. c Get rid of tag.
26	Airhose (8)	Two clamps (11)
		Put on.

Change 1 2-1164

FRONT BRAKE LIMITING CONTROL VALVE HOSES AND FITTINGS - CONTINUED

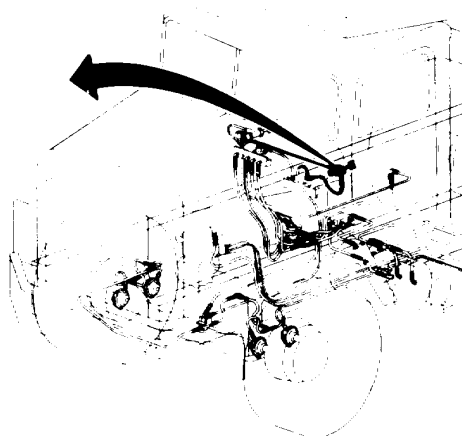
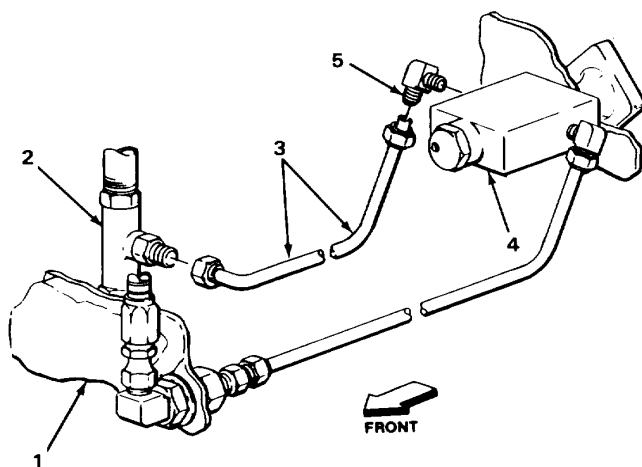
LOCATION	ITEM	ACTION REMARKS
27 Two clamp brackets (12)	Two clamps (11), two screws (13), two new lockwashers (14), and two nuts (15)	a Align holes in clamps and clamp brackets. b Screw in and tighten using 7/16-inch box-end and 7/16-inch open-end wrenches.
28 Driver's side of firewall (2)	Fitting (7)	Wrap pipe threads with antiseizing tape.
29 Fitting (7)	Airhose (16)	Screw on and tighten using 9/16-inch and 7/16-inch open-end wrenches.
30 Front brake limiting control valve (17)	90-degree elbow (18)	Wrap pipe threads with antiseizing tape.
31	90-degree elbow (18) and airhose (16)	a Screw on and tighten using 9/16-inch open-end wrench. b Take off tag. c Get rid of tag.



Change 1 2-1165

FRONT BRAKE LIMITING CONTROL VALVE HOSES AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
32 Right manifold (1)	T-fitting (2)	Wrap pipe threads with antiseizing tape.
33 T-fitting (2)	Airhose (3)	Screw on and tighten using 9/16-inch open-end wrench.
34 Front brake limiting control valve (4)	90-degree elbow (5)	Wrap pipe threads with antiseizing tape.
35	90-degree elbow (5) and airhose (3)	a Screw on and tighten using 9/16-inch open-end wrench. b Take off tag. c Get rid of tag.



NOTE

FOLLOW-ON MAINTENANCE:

- 1 Install air cleaner (page 2-446).
- 2 Close left side hood panel (page 2-424).
- 3 Close left side cab door (page 2-424).

TASK ENDS HERE

Change 1 2-1166/(2-1167 blank)

Section XV. WHEEL, TIRE, HUB AND DRUM MAINTENANCE

	Page		Page
Front Hub and Brakedrum Assembly and Wheel Bearings	2-1175	Rear Hub and Brakedrum Assembly and Wheel Bearings.....	2-1188
Front Wheel.....	2-1168	Rear Wheel.....	2-1171

FRONT WHEEL

This task covers:

- | | |
|--|--|
| <ul style="list-style-type: none"> a Removal (page 2-1168) b Disassembly/Repair/Assembly
(page 2-1169) | <ul style="list-style-type: none"> c Installation (page 2-1169) |
|--|--|

INITIAL SETUP

<p>Tools</p> <p>Handle, hinged, 3/4-inch drive Socket, 1 1/2-inch, 3/4-inch drive Truck, wheel, lift Wrench, torque, 0 to 600 ft lb (0 to 814 N.m)</p> <p>Personnel Required</p> <p>Two</p>	<p>Equipment Condition</p> <p>If air pressure gage shows less than normal pressure, start dump truck to build up air pressure Shut down when air pressure builds up to between 90 and 125 psi (TM 5-3805-254-10). Dump truck jacked and supported (page 2-424).</p> <p>References</p> <p>TM 9-2610-200-14 (Tire Manual)</p>
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LOCATION	ITEM	ACTION REMARKS
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REMOVAL

NOTE

- Steps given are typical for right and left front wheels.
- Assistant must apply dump truck brakes to allow loosening of lug nuts.
- Lug nuts on right side of dump truck have right-hand threads and lug nuts on left side of dump truck have left-hand threads.

Change 1 2-1168

FRONT WHEEL - CONTINUED

LOCATION	ITEM	ACTION REMARKS
1 Ten hub studs (1)	Ten lug nuts (2)	Using 1 1/2-inch, 3/4-inch drive socket and hinged handle, unscrew and take off.

NOTE

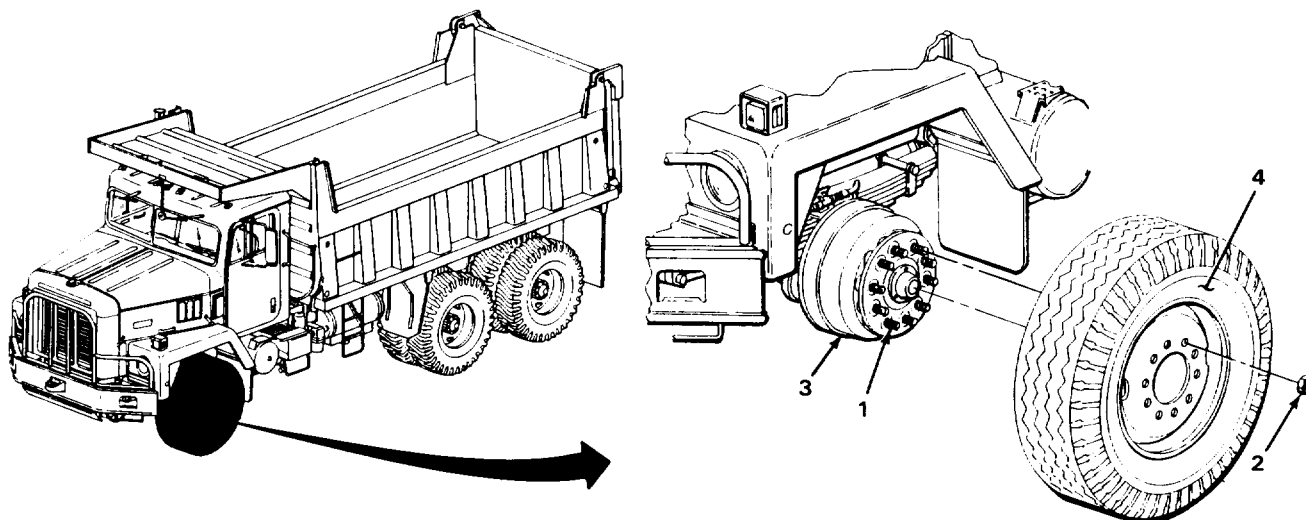
Assistance will be needed to support wheel on wheel lift truck.

2 Front hub (3)	Wheel (4)	<ul style="list-style-type: none"> a Position wheel lift truck underneath. b Raise wheel lift truck to support weight of wheel. c Using wheel lift truck, pull off wheel. d Lower wheel lift truck and take off wheel.
-----------------	-----------	--

DISASSEMBLY/REPAIR/ASSEMBLY

NOTE

To disassemble, repair, and assemble wheels and tires, refer to TM 9-2610-200-14



INSTALLATION

NOTE

INSTALLATION Steps given are typical for right and left front wheels.

TA244433

FRONT WHEEL - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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INSTALLATION - CONTINUED

NOTE

Assistance will be needed to support wheel on wheel lift truck.

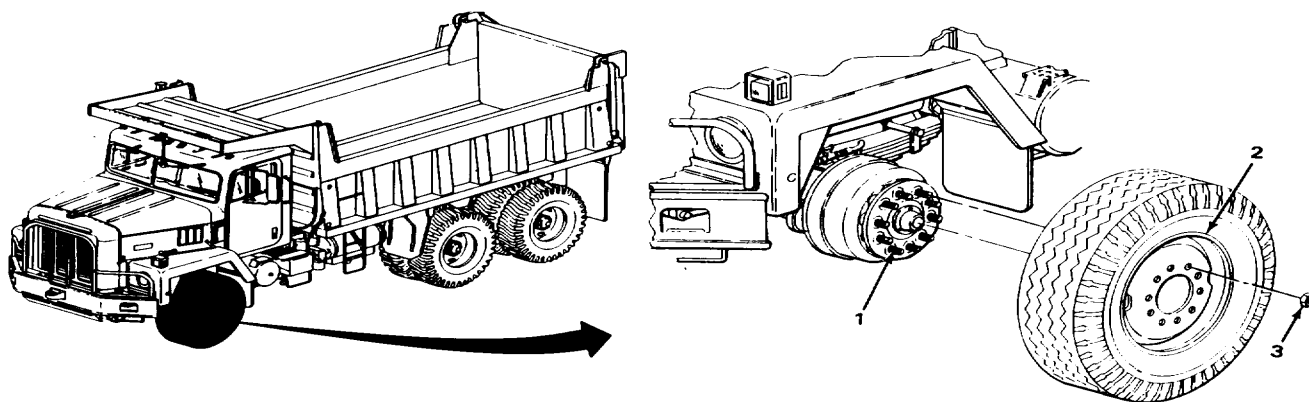
3	Ten hub studs (1)	Wheel (2)	<ul style="list-style-type: none"> a Put on wheel lift truck. b Raise wheel lift truck and put in position. c Aline holes in wheel with ten hub studs and push into place. d Lower wheel lift truck.
---	-------------------	-----------	--

NOTE

Assistant must apply dump truck brakes to allow tightening of lug nuts.

Lug nuts on right side of dump truck have right-hand threads and lug nuts on left side of dump truck have left-hand threads.

4	Ten lug nuts (3)	<ul style="list-style-type: none"> a Screw on and alternately tighten using 1 1/2-inch, 314-Inch drive socket and hinged handle. b Tighten to 450 to 500 ft lbs (610 to 678 N.m) using 1 11/2-inch, 3/4inch drive socket and hinged handle and 0 to 600 ft lbs (0 to 814 N.m) torque wrench.
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NOTE

FOLLOW-ON MAINTENANCE: Dump truck lowered and supports removed (page 2-424).

TASK ENDS HERE

TA244434

REAR WHEEL

This task covers:

- a Removal (page 2-1171)
- b Disassembly/Repair/Assembly (page 2-1172)
- c Installation (page 2-1173)

INITIAL SETUP

Tools

Handle, hinged, 3/4-inch drive
 Socket, square, 13/16-inch, 3/4-inch drive
 Wrench, torque, 0 to 600 ft lb (0 to 814 N.m)
 Socket, 1 1/2-inch, 314-inch drive
 Truck, lift, wheel

Equipment Condition

If air pressure gage shows less than normal pressure, start dump truck to build up air pressure. Shut down when air pressure builds up to between 90 and 125 psi. (TM 5-3805-254-10).
 Dump truck jacked and supported (page 2-424).

Personnel Required

Two

References

TM 9-2610-200-14 (Tire Manual)

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

REMOVAL

NOTE

Steps given are typical for right and left front rear and rear rear wheels.

Engage parking brake (TM 5-3805-254-10) or have assistant apply dump truck brakes to allow loosening of lug nuts and wheel studs.

Lug nuts and wheel studs on right side of dump truck have right-hand threads and lug nuts and wheel studs on left side of dump truck have left-hand threads.

Change 1 2-1171

REAR WHEEL - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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REMOVAL - CONTINUED

NOTE

To remove outer wheel only, perform steps 1 and 2.

To remove outer wheel and inner wheel, perform steps 1 thru 4.

1	Ten wheel studs (1) Ten lug nuts (2)	Using 1 1/2-inch, 3/4-inch drive socket and hinged handle, unscrew and take off.
---	---	--

NOTE

Assistance will be needed to support wheel on wheel lift truck.

2	Rear hub (3) Outer wheel (4)	<ul style="list-style-type: none"> a Position wheel lift truck underneath. b Raise wheel lift truck to support weight of wheel. c Using wheel lift truck, pull off wheel. d Lower wheel lift truck and take off wheel.
---	-------------------------------------	--

3	Ten hub studs (5) Ten wheel studs (1)	Using 13/16-inch, 3/4-inch drive square socket and hinged handle, unscrew and take off.
---	--	---

NOTE

Assistance will be needed to support wheel on wheel lift truck.

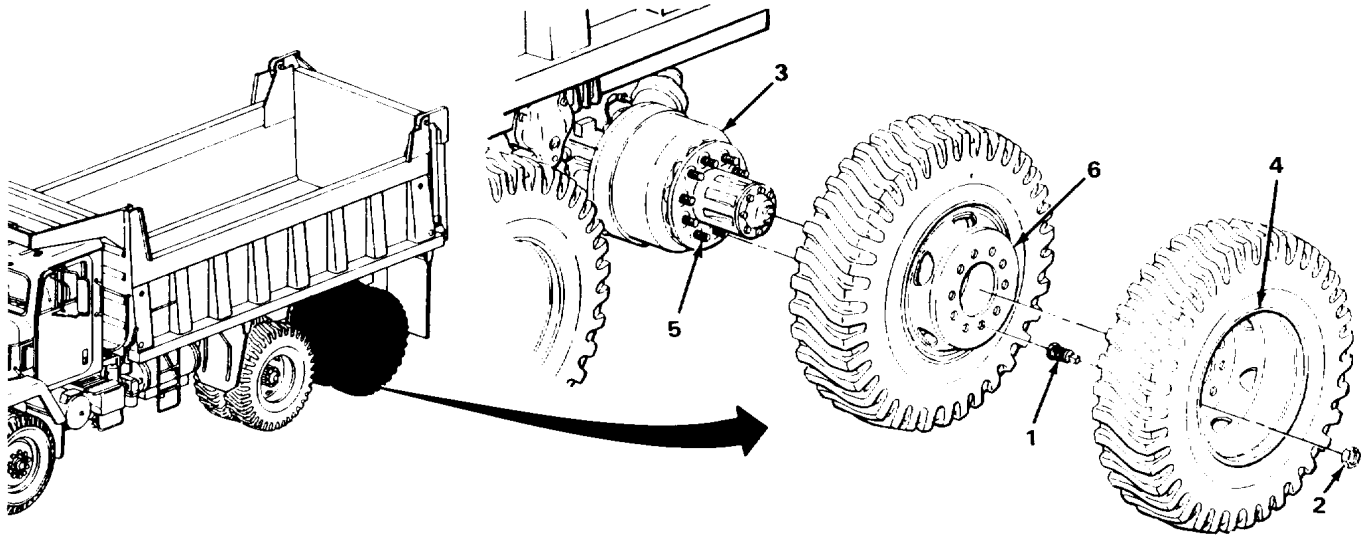
4	Rear hub (3) Inner wheel (6)	<ul style="list-style-type: none"> a Position wheel lift truck underneath. b Raise wheel lift truck to support weight of wheel. c Using wheel lift truck, pull off wheel. d Lower wheel lift truck and take off wheel.
---	-------------------------------------	--

DISASSEMBLY/REPAIR/ASSEMBLY

NOTE

To disassemble, repair, and assemble wheels and tires, refer to TM 9-2610-200-14.

REAR WHEEL - CONTINUED



INSTALLATION

NOTE

Steps given are typical for right and left front rear and rear rear wheels.

Engage parking brake (TM 5-3805-254-10) or have assistant apply dump truck brakes to allow tightening of lug nuts and wheel studs.

Lug nuts and wheel studs on right side of dump truck have right-hand threads and lug nuts and wheel studs on left side of dump truck have left-hand threads.

To install inner wheel and outer wheel, perform steps 5 thru 8.

To install outer wheel only, perform steps 7 and 8.

Assistance will be needed to support wheel on wheel lift truck.

REAR WHEEL - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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INSTALLATION - CONTINUED

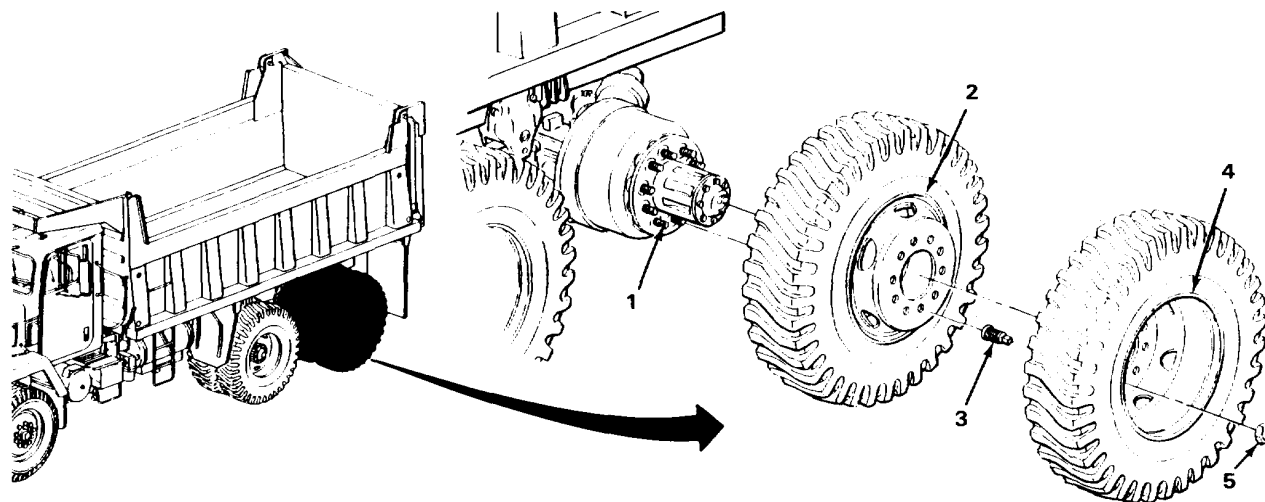
5	Ten hub studs (1)	Inner wheel (2)	<ul style="list-style-type: none"> a Put on wheel lift truck. b Raise wheel lift truck and put in position. c Aline holes in wheel with ten hub studs and push into place. d Lower wheel lift truck.
---	-------------------	-----------------	--

CAUTION

Always tighten the inner nuts 50 foot pounds (68 N.m) more than the outer nuts and never let the outer nuts get below 400 foot pounds (542 N.m).

6		Ten wheel studs (3)	<ul style="list-style-type: none"> a Screw on and alternately tighten using 13/16-inch, 3/4-inch drive square socket and hinged handle. b Tighten to 450 to 500 ft lbs (610 to 678 N.m) using 13/16-inch, 3/4-inch square socket and hinged handle and 0 to 600 ft lbs (0 to 814 N.m) torque wrench.
7	Ten wheel studs (3)	Outer wheel (4)	<ul style="list-style-type: none"> a Put on wheel truck. b Raise wheel lift truck and put in position. c Aline holes in wheel with ten wheel studs and push into place. d Lower wheel lift truck.
8		Ten lug nuts (5)	<ul style="list-style-type: none"> a Screw on and alternately tighten using 1 1/2-inch, 3/4-inch drive socket and hinged handle. b Tighten to 400 to 450 ft lbs (542 to 610 N.m) using 1 1/2-inch, 3/4-inch drive socket and hinged handle and 0 to 600 ft lbs (0 to 814 N.m) torque wrench.

REAR WHEEL - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE: Dump truck lowered and supports removed (page 2-424).

TASK ENDS HERE

FRONT HUB AND BRAKEDRUM ASSEMBLY AND WHEEL BEARINGS

This task covers:

- | | | | |
|---|---------------------------|---|--------------------------------------|
| a | Removal (page 2-1176) | d | Inspection/Replacement (page 2-1180) |
| b | Disassembly (page 2-1178) | e | Assembly (page 2-1184) |
| c | Cleaning (page 2-1178) | f | Installation (page 2-1184) |

INITIAL SETUP

Tools

Adjusting tool, brake
 Blocks, wood, 4 x 4 x 18-inch
 (22 x 22 x 46 cm) (three required)
 Brush, cleaning
 Gloves, safety
 Goggles, safety
 Hammer, cross-peen, 3-pound
 Pan, drain, 1-gallon
 Pliers, roundnose, 8-inch
 Puller
 Punch, driftpin, brass
 Screwdriver, flat-tip, 3/8-inch
 Socket, 2 3/4-inch, 112-inch drive
 Wrench, adjustable
 Wrench, box-end, 7/16-inch

Tools - Continued

Wrench, hex, 5/16-inch
 Wrench, torque, 0 to 150 ft lb
 (0 to 210 N.m)

Materials/Parts

Cup, inner bearing (if needed)
 Cup, outer bearing (if needed)
 Gasket, grease cap (one required)
 Lockwasher, grease cap (three required)
 Oil, lubricating (item 14, appendix C)
 Pin, cotter (one required)
 Rags wiping (item 15, appendix C)
 Seal, grease (one required)
 Solvent, drycleaning (item 19, appendix C)

FRONT HUB AND BREAKDRUM ASSEMBLY AND WHEEL BEARINGS - CONTINUED

INITIAL SETUP - CONTINUED

Personnel Required

References

Two
Equipment Condition
Front wheels removed (page 2-1168)

LO 5-3805-254-12 (Lubrication order)

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

REMOVAL

NOTE

Steps given are typical for right and left front hubs.

1	Front hub (1)	Turn and check for drag caused by binding brakes. If drag is felt, perform steps 2, 3, and 4. If no drag is felt, go to step 5.
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NOTE

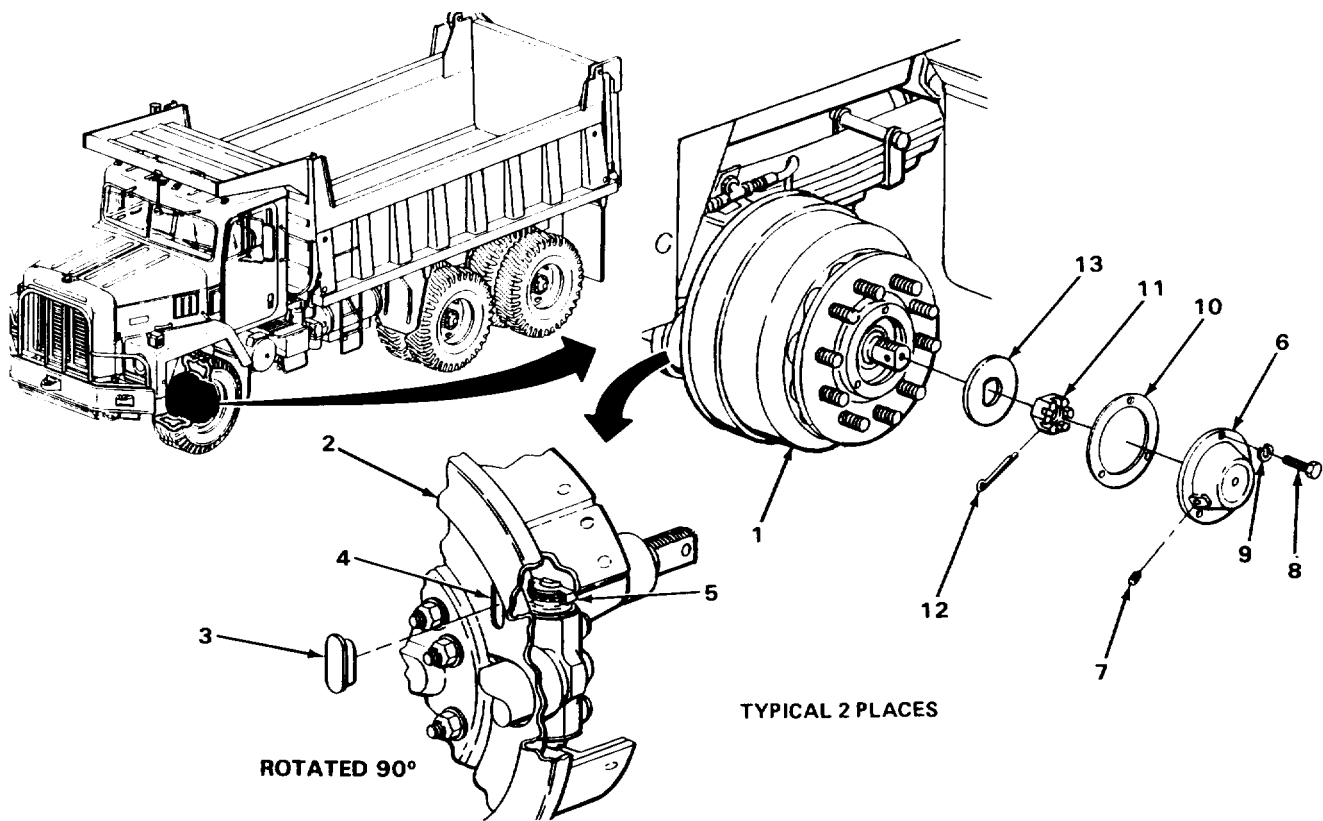
Both front and rear brake adjusters must be taken out of adjustment.

Steps given are typical for front and rear brake adjusters.

2	Dust shield (2) out.	Cover (3)	Using 3/8-inch flat-tip screwdriver, pry
3	Adjuster slot (4) to allow front hub to move freely.	Brake adjuster (5)	Using brake adjusting tool, loosen enough
4	Cover (3) Push into place.		
5	Grease cap (6)	Plug (7)	a Turn front hub to position plug at bottom. b Place drain pan underneath. c Using 5/16-inch hex wrench, unscrew and take out. d Allow oil to drain. e Screw in hand tight. f Get rid of drained oil (page 2-424).
6	Three screws (8) and three lockwashers (9)		a Using 7/16-inch box-end wrench, unscrew and take out. b Get rid of lockwashers.

FRONT HUB AND BRAKEDRUM ASSEMBLY AND WHEEL BEARINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
7 Front hub (1)	Grease cap (6) and gasket (10)	a Take off. b Get rid of gasket.
8 Adjusting nut (11)	Cotter pin (12)	a Using 8-inch roundnose pliers, bend back ends and take out. b Get rid of.
9 Front hub (1)	Adjusting nut (11) and washer (13)	Using adjustable wrench, unscrew and take off.



TA24437

FRONT HUB AND BRAKEDRUM ASSEMBLY AND WHEEL BEARINGS - CONTINUED

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

REMOVAL - CONTINUED

WARNING

Due to excessive weight, care must be taken to prevent front hub and brakedrum assembly from falling Do not pull out too far on spindle Serious injury to personnel could result.

NOTE

Assistance will be needed to perform steps 10 and 11.

- | | | | |
|----|-------------------------|--|---|
| 10 | Spindle | (1) Front hub (2) and
outer bearing (3) | a Pull front hub out enough to free outer bearing.
b Push front hub back in. |
| c | Take out outer bearing. | | |

WARNING

Due to excessive weight, assistance will be needed to lift hub and brakedrum assembly. Failure to observe this precaution could cause serious injury to personnel.

- | | | |
|----|-------------------|---|
| 11 | Front hub (2) and | With assistance, take off.
brakedrum (4) |
|----|-------------------|---|

DISASSEMBLY

- | | | | |
|----|-------------------|-----------------|--|
| 12 | Front hub (2) | Grease seal (5) | a Using 3/8-inch flat-tip screwdriver, pry out.
b Get rid of. |
| 13 | Inner bearing (6) | Take out. | |

CLEANING

WARNING

Drycleaning solvent P-D-680 is toxic and flammable Wear protective safety goggles and gloves and use only in a well-ventilated area Avoid contact with skin, eyes, and clothes and do not breathe vapors Do not use near open flame or excessive heat The flashpoint for type #1 drycleaning solvent is 1000F (380C) and for type #2 is 138°F (590C) If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid If contact with eyes is made, flush your eyes with water and get medical aid immediately.

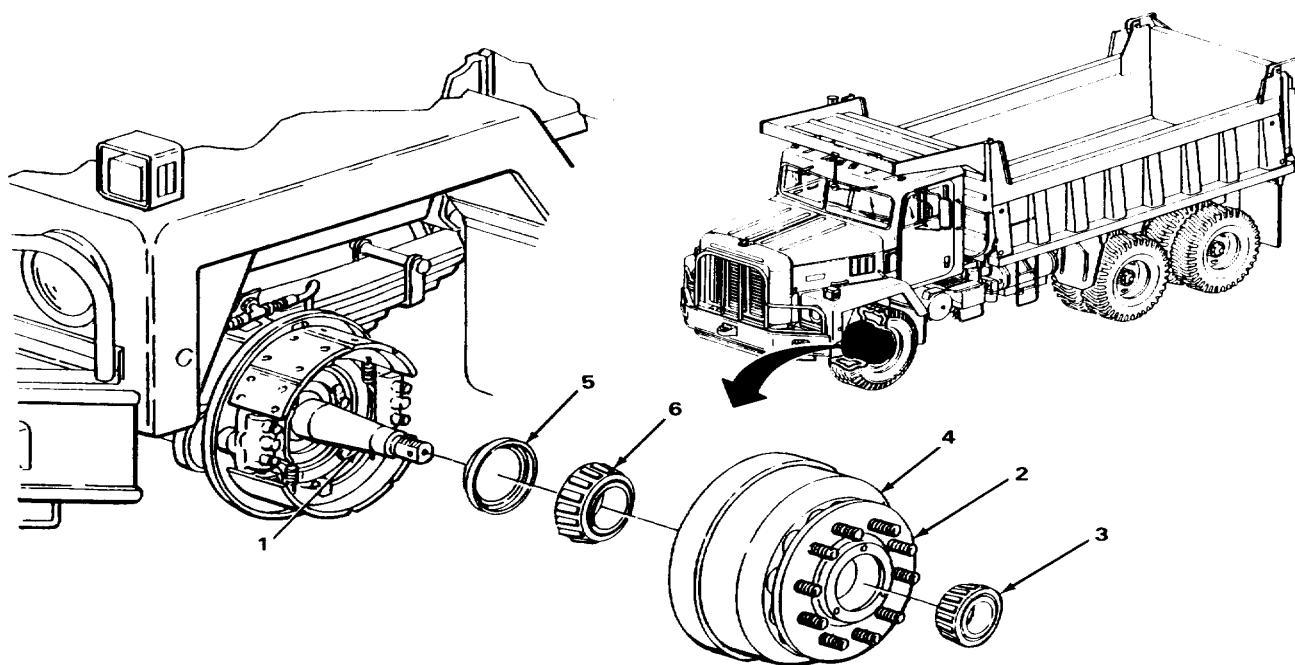
FRONT HUB AND BRAKEDRUM ASSEMBLY AND WHEEL BEARINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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NOTE

For more information on how to clean parts, go to General Maintenance Instructions, (page 2-424).

14	Front hub (2) and brakedrum (4)	a Clean outside, inside, and bearing cups using drycleaning solvent and cleaning brush. b Wipe clean using wiping rag.
15	Outer bearing (3) and inner bearing (6)	a Clean using drycleaning solvent and cleaning brush. b Wipe clean using wiping rag.
16	Spindle (1)	a Clean grease from threads and bearing surfaces using drycleaning solvent and wiping rag. b Wipe clean using wiping ran



TA2444378

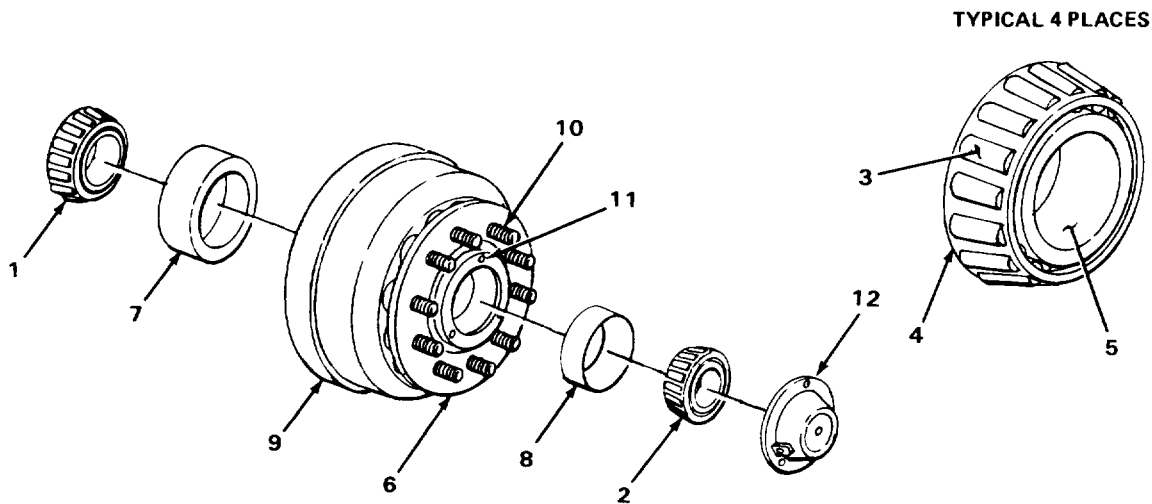
FRONT HUB AND BRAKEDRUM ASSEMBLY AND WHEEL BEARINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSPECTION/REPLACEMENT		
NOTE		
For more information on how to inspect parts, go to General Maintenance Instructions, (page 2-424).		
Replace all damaged or defective parts.		
A blue color on metal parts indicates a dry overheated condition.		
17	Inner bearing (1) and outer bearing (2)	<ul style="list-style-type: none"> a Look for chipped, pitted, scored, blued, or loose rollers (3). b Look for cracked or worn roller cage (4). c Look for scored, cracked, or blued inner race (5).
18	Front hub (6)	<ul style="list-style-type: none"> a Inner bearing cup (7) and outer bearing cup (8) Look for cracks, pits, scores, or blueing. Replace if damaged, steps 26 thru 29. b Check for looseness in front hub. If loose, replace front hub, steps 22 thru 25.
19	Front hub (6) and brakedrum (9)	<ul style="list-style-type: none"> a Look for cracks across face or near bearing cups (7 and 8). b Look for stripped, bent, or broken hub studs (10). Replace if damaged, steps 22 thru 25. c Look for damaged grease capscrew holes (11). d Look for cracks, heat spots, pitting deep grooves, or out-of-round in brakedrum. Replace if damaged, steps 22 thru 25. If minor grooves or pitting is found, notify higher category of maintenance.
20	Grease cap (12)	Look for cracks, chips, burrs, or broken level window (13).

FRONT HUB AND BRAKEDRUM ASSEMBLY AND WHEEL BEARINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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21	All threaded parts	Look for damaged threads or rounded heads.
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WARNING

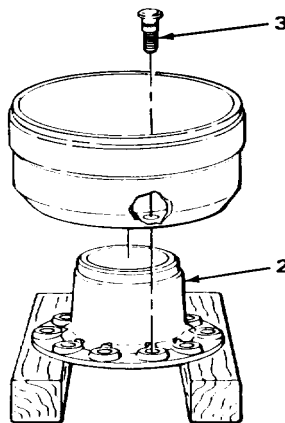
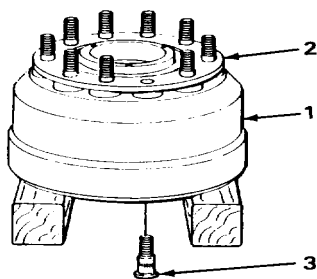
Due to excessive weight, assistance will be needed to lift hub and breakdrum assembly. Failure to observe this precaution could cause serious injury to personnel.

NOTE

Steps 22 thru 25 are typical for all ten hub studs.

FRONT HUB AND BRAKEDRUM ASSEMBLY AND WHEEL BEARINGS - CONTINUED

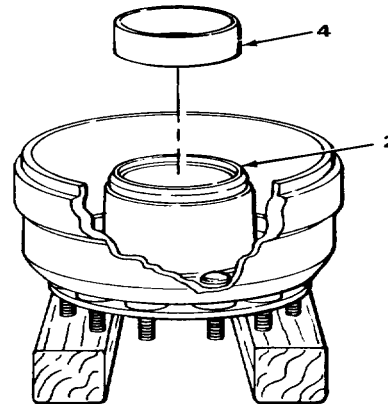
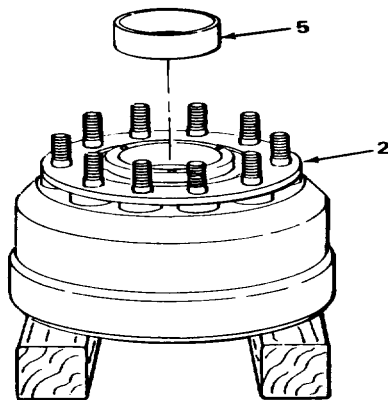
LOCATION	ITEM	ACTION REMARKS
INSPECTION/REPLACEMENT - CONTINUED		
22	Brakedrum (1)	Position on wood blocks with hub studs facing up.
<u>WARNING</u>		
Safety goggles must be worn to prevent eye injury from flying metal chips when using compressed air, or striking metal surfaces.		
23	Front hub (2)	Hub stud (3)
Using 3-pound cross-peen hammer, drive out.		
<u>NOTE</u>		
If brakedrum or front hub is to be replaced, replace before performing following step.		
24	Brakedrum (1) and front hub (2)	<ul style="list-style-type: none"> a Put brakedrum onto front hub. b Position on wood blocks with brakedrum facing up. c Aline hub stud holes.
25	Brakedrum (1)	Hub stud (3)
<ul style="list-style-type: none"> a Put into hub stud hole. b Drive in using 3-pound cross-peen hammer and brass driftpin punch. 		
Make sure hub stud is flush against brakedrum		



TA244440

FRONT HUB AND BRAKEDRUM ASSEMBLY AND WHEEL BEARINGS - CONTINUED

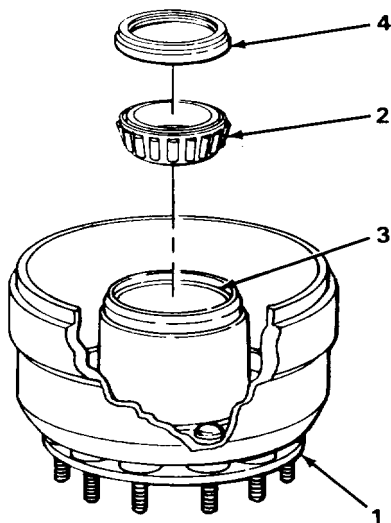
LOCATION	ITEM	ACTION REMARKS
26 Front hub (2)	Inner bearing cup (4)	a Position rear hub on wood blocks. b Using puller, pull out. c Get rid of.
27	New inner bearing cup (4)	a Position level and square. b Drive in until flush with top of front hub using wood block and 3-pound cross-peen hammer. c Seat completely by tapping on alternate sides using 3-pound cross-peen hammer and brass driftpin punch. Make sure inner bearing cup is flush with machined surface inside front hub.
28	Outer bearing cup (5)	a Position rear hub on wood blocks. b Using puller, pull out. c Get rid of.
29	New outer bearing cup (5)	a Position level and square. b Drive in until flush with top of front hub using wood block and 3-pound cross-peen hammer. c Seat completely by tapping on alternate sides using 3-pound cross-peen hammer and brass driftpin punch. Make sure outer bearing cup is flush with machined surface inside front hub.



TA244441

FRONT HUB AND BRAKEDRUM ASSEMBLY AND WHEEL BEARINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
ASSEMBLY		
30 Front hub (1)	Inner bearing (2) and inner bearing cup (3)	Soak inner bearing and coat inner bearing cup with lubricating oil (LO 5-3805-254-12).
31 Inner bearing cup (3)	Inner bearing (2)	Put in.
32 Front hub (1)	New grease seal (4)	a Position level and square. b Tap in until flush with top of front hub using wood block and 3-pound cross-peen hammer. Make sure grease seal is level.



INSTALLATION

WARNING

Due to excessive weight, assistance will be needed to lift hub and brake drum assembly. Failure to observe this precaution could cause serious injury to personnel

TA244442

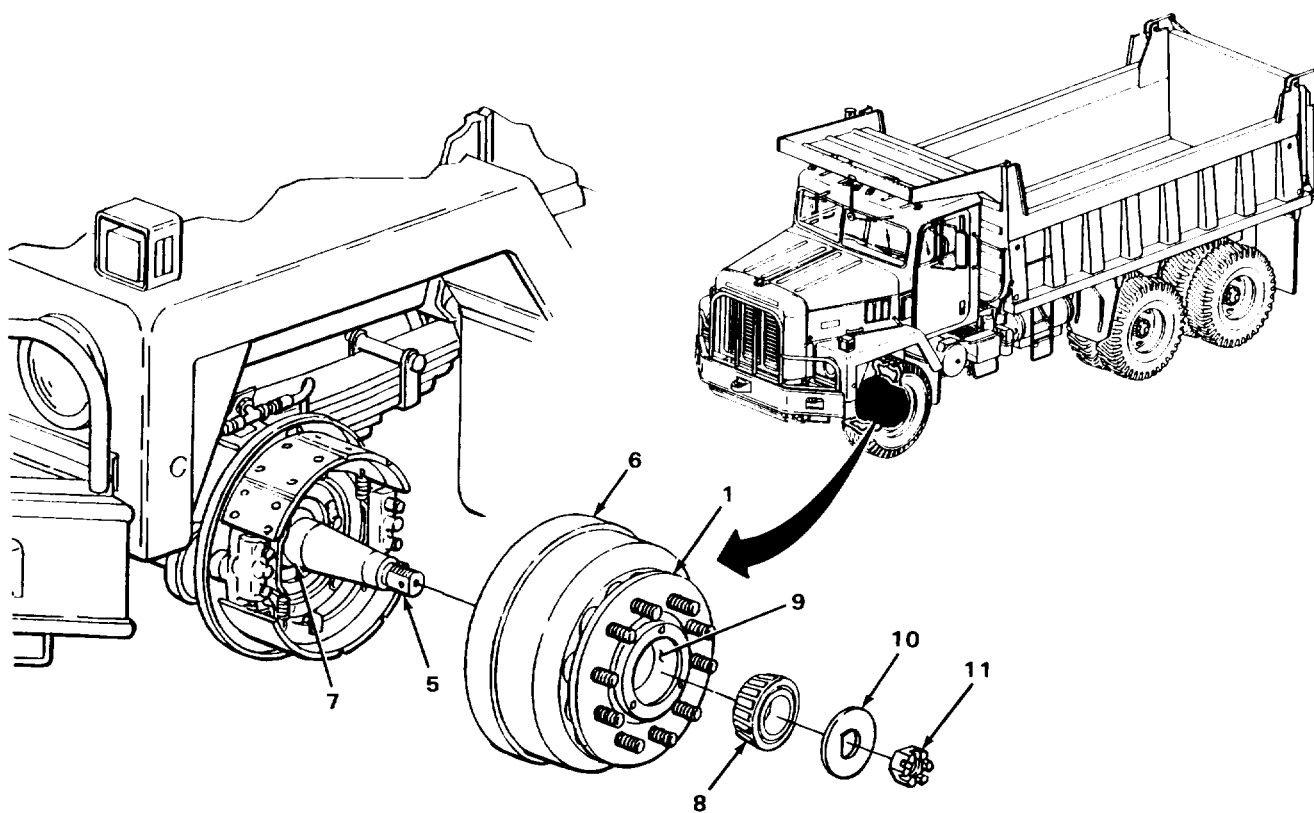
FRONT HUB AND BRAKEDRUM ASSEMBLY AND WHEEL BEARINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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NOTE

Steps given are typical for right and left front hubs.

33	Spindle (5) Front hub (1) and brakedrum (6)	a Coat spindle with lubricating oil. b With assistance, put on. Make sure inner bearing is seated on inner race (7) on spindle.
34	Outer bearing (8)	a Soak outer bearing and coat outer bearing cup (9) and inner race (7) on spindle with lubricating oil (LO 5-3805-254-12). b Put on.
35	Washer (10) and adjusting nut (11)	a Put on washer. b Screw on adjusting nut until snug.



TA244443

FRONT HUB AND BRAKEDRUM ASSEMBLY AND WHEEL BEARINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
36 Spindle (1)	Front hub (2)	Push onto spindle as far as possible.
37	Adjusting nut (3)	<ul style="list-style-type: none"> a While slowly turning front hub, torque to 50 ft lb (70 N.m) using 2 3/4-inch 1/2-inch drive socket and 0 to 150 ft lb (0 to 210 N.m) torque wrench. b Loosen adjusting nut one-quarter turn using adjustable wrench. If slots in adjusting nut and hole in spindle do not align, tighten adjusting nut to nearest hole.
38 Spindle (1)	New cotter pin (4)	Put in and bend back ends using 8-inch roundnose pliers.
39 Front hub (2)	New gasket (5) and grease cap (6)	Put in position.
40 Grease cap (6)	Three screws (7) and three new lockwashers (8)	Screw in and tighten using 7/16-inch box-end wrench.
41	Plug (9)	Turn front hub to position plug at 12 o'clock.
42	Plug (9)	<ul style="list-style-type: none"> a Unscrew and take out. b Fill through plug hole to correct level as indicated on grease cap (LO 5-3805-254-12). c Screw in and tighten using 5/16-inch hex wrench.

NOTE

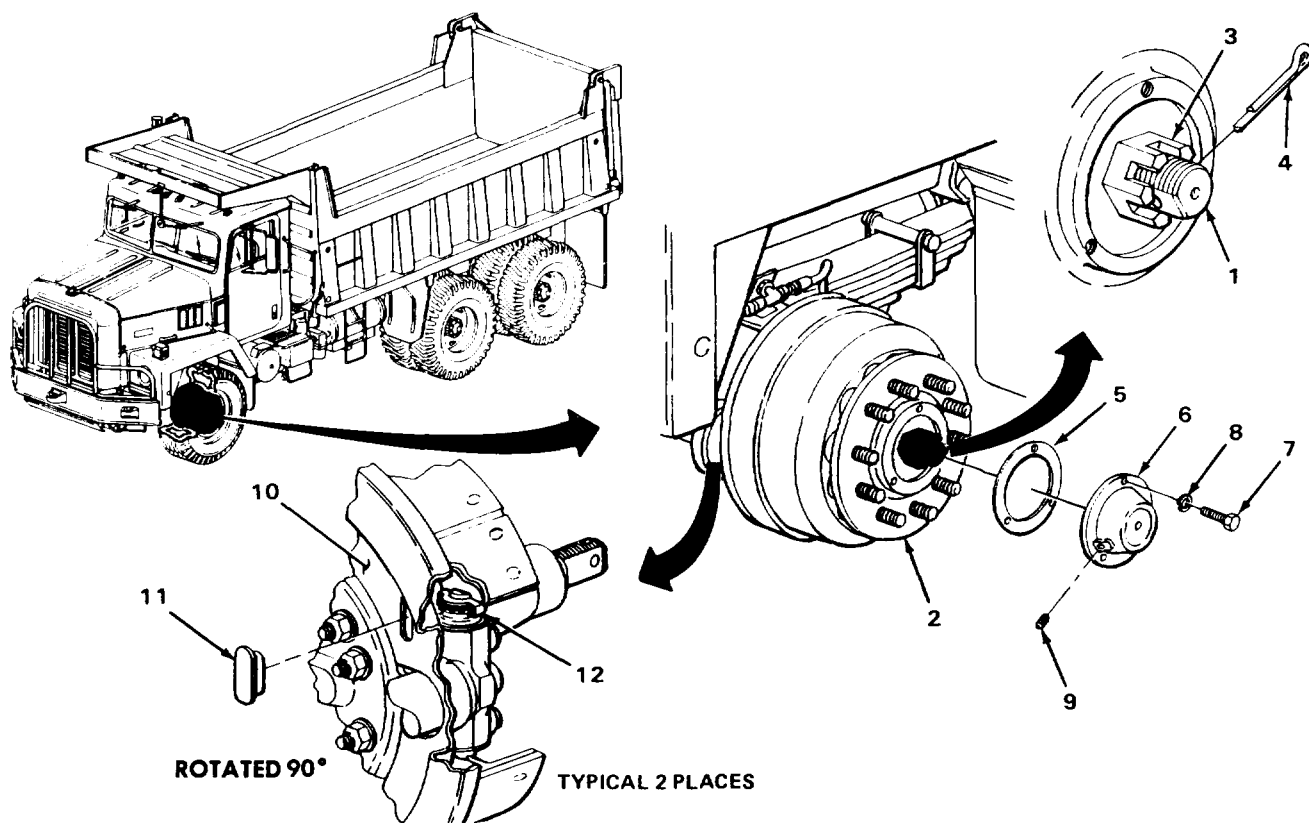
If brakes were taken out of adjustment or need to be adjusted, perform steps 43, 44, and 45.

Both front and rear brake adjusters must be adjusted.

Steps given are typical for both brake adjusters.

FRONT HUB AND BRAKEDRUM ASSEMBLY AND WHEEL BEARINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
43 Dust shield (10)	Cover (11)	Using 3/8-inch flat-tip screwdriver, pry out.
44	Brake adjuster (12)	While slowly turning front hub, adjust each brake adjuster, until a slight drag is felt, using brake adjusting tool.
45	Cover (11)	Push into place.



TA244444

NOTE
FOLLOW-ON MAINTENANCE: Install front wheels (page 2-1168).

TASK ENDS HERE

REAR HUB AND BRAKEDRUM ASSEMBLY AND WHEEL BEARINGS

This task covers:

- | | | | |
|---|---------------------------|---|--------------------------------------|
| a | Removal (page 2-1188) | d | Inspection/Replacement (page 2-1192) |
| b | Disassembly (page 2-1191) | e | Assembly (page 2-1198) |
| c | Cleaning (page 2-1192) | f | Installation (page 2-1198) |

INITIAL SETUP

Tools

- Bar, pinch, 26-inch
- Blocks, wood, 4 x 4 x 18-inch (22 x 22 x 46 cm) (five required)
- Brush, cleaning
- Gloves, safety
- Goggles, safety
- Hammer, ball-peen, 1-pound
- Hammer, cross-peen, 3-pound
- Hammer, cross-peen, 12-pound
- Handle, hinged, 3/4-inch drive
- Handle, ratchet, 1/2-inch drive
- Pan, drain, 1-gallon
- Puller
- Punch, driftpin, brass
- Screwdriver, flat-tip, 1/2-inch
- Socket, deep, 3/4-inch, 1/2-inch drive
- Socket, 15/16-inch, 1/2-inch drive
- Socket, 4-inch, 3/4-inch drive
- Wrench, torque, 0 to 600 ft lb (0 to 814 N.m), 3/4-inch drive

Materials/Parts

- Cup, bearing, inner (one required)
- Cup, bearing, outer (one required)
- Gasket, flange, axle (one required)
- Gasket, seal, outer (one required)
- Grease, GAA (item 10, appendix C)
- Nuts, self-locking (eight required)
- Rags, wiping (item 15, appendix C)
- Seal, inner (one required)
- Seal, outer (one required)
- Solvent, drycleaning (item 19, appendix C)

Personnel Required

Three

Equipment Condition

Rear wheel removed (page 2-1171).

References

LO 5-3805-254-12 (Lubrication Order)

LOCATION	ITEM	ACTION REMARKS
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REMOVAL

NOTE

Steps given are typical for right and left front rear and rear rear hubs.

2-1188

REAR HUB AND BRAKEDRUM ASSEMBLY AND WHEEL BEARINGS - CONTINUED

ACTION LOCATION	ITEM	REMARKS
1 Air brake chamber (1)	Cover (2)	Using 26-inch pinch bar, pry off. Cover will hang from air chamber.
2	Caging bolt (3)	Loosen fully using 3/4-inch, 1/2-inch drive deep socket and ratchet handle.
3 Axle flange (4)	Eight self-locking nuts (5)	a Using 15/16-inch, 1/2-inch drive socket and ratchet handle, unscrew and take off. b Get rid of.

WARNING

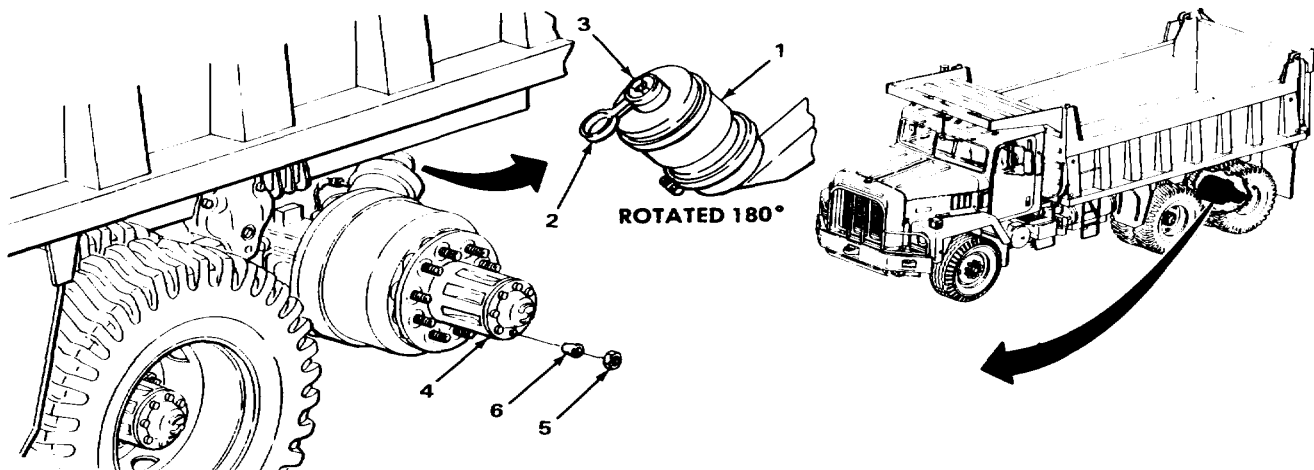
Safety goggles must be worn to prevent eye injury from flying metal chips when using compressed air, or striking metal surfaces.

Stand to side of axle flange while striking to prevent injury from flying lock collars.

CAUTION

Care must be taken not to damage axle flange studs.

4 Axle flange (4)	Eight lock collars (6)	a Place 1-gallon drain pan underneath. b Using 12-pound cross-peen hammer, strike sharply on edge of axle flange to loosen. c Take out lock collars. d Get rid of drained oil (page 2-424).
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TA244445

REAR HUB AND BRAKEDRUM ASSEMBLY AND WHEEL BEARINGS - CONTINUED

ACTION LOCATION	ITEM	REMARKS
REMOVAL - CONTINUED		
5 Rear hub (1)	Axle (2) and axle flange gasket (3)	a Pull out axle. b Take off gasket. c Get rid of gasket.
6	Outer seal (4) and outer seal gasket (5)	a Take off. b Get rid of outer seal and outer seal gasket.
7 Spindle (6)	Locknut (7)	Using 4-inch, 3/4-inch drive socket and hinged handle, unscrew and take off.
8	Adjusting nut lock (8)	Pull off.
9	Adjusting nut (9)	Using 4-inch, 3/4-inch drive socket and hinged handle, unscrew and take off.

WARNING

Due to excessive weight, care must be taken to prevent rear hub and brakedrum assembly from falling. Do not pull out too far on spindle. Serious injury to personnel could result.

NOTE

Assistance will be needed to perform steps 10 and 11.

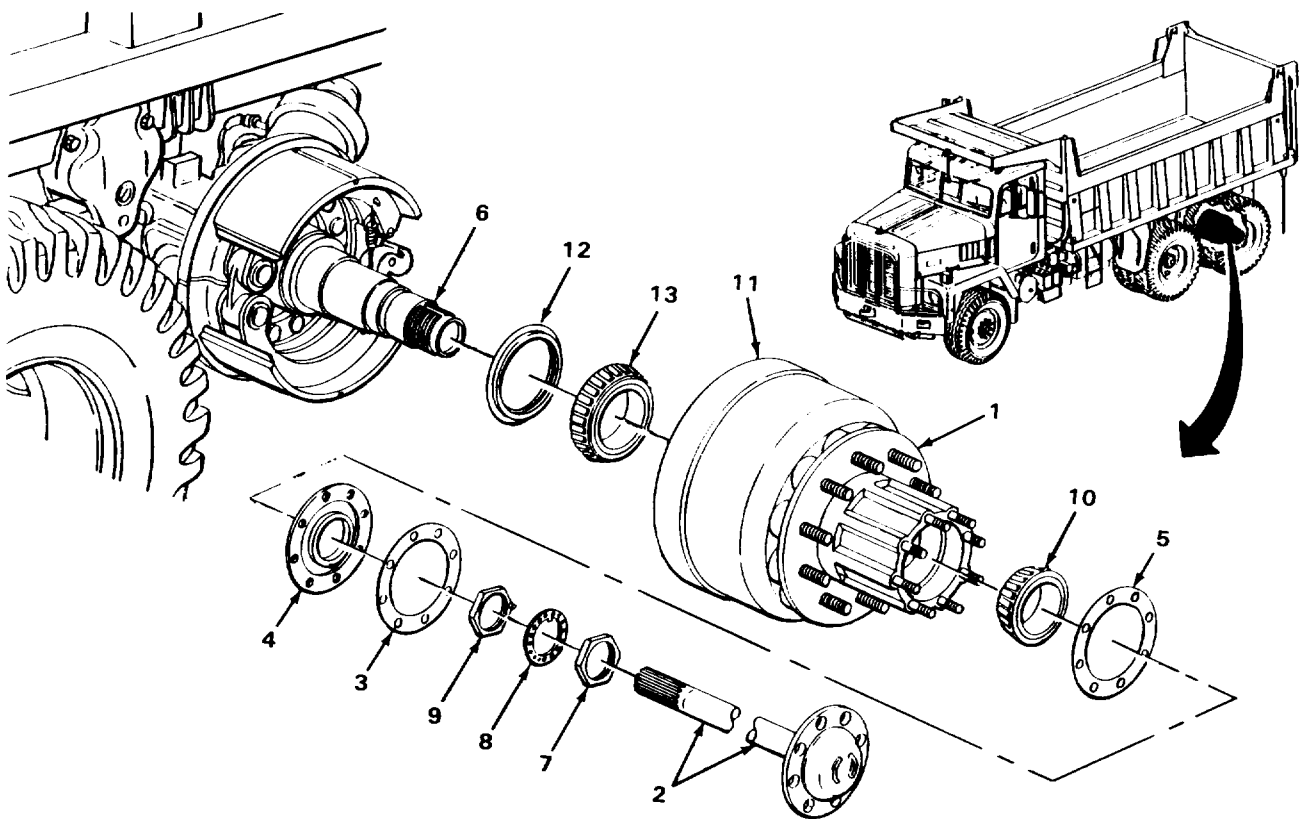
10	Rear hub (1) and outer bearing (10)	a Pull rear hub out enough to free outer bearing. b Push rear hub back in. c Take off outer bearing.
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WARNING

Due to excessive weight, assistance will be needed to lift hub and brakedrum assembly. Failure to observe this precaution could cause serious injury to personnel.

REAR HUB AND BRAKEDRUM ASSEMBLY AND WHEEL BEARINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
11 Spindle (6)	Rear hub (1) and brakedrum (11)	With two assistants, take off.
DISASSEMBLY		
12 Rear hub (1)	Inner seal (12)	a Using 26-inch pinch bar, pry out. b Get rid of.
13	Inner bearing (13)	Take out.



TA244446

REAR HUB AND BRAKEDRUM ASSEMBLY AND WHEEL BEARINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
CLEANING		
<u>WARNING</u>		
Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 1000F (380C) and for type #2 is 138°F (590C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.		
NOTE		
For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).		
14	Rear hub (1) and brakedrum (2) brush.	a Clean outside, inside, and bearing cups using drycleaning solvent and cleaning b Wipe clean using wiping rag.
15	Outer bearing (3) and inner bearing (4)	a Clean using drycleaning solvent and cleaning brush. b Wipe clean using wiping rag.
16	Spindle (5)	a Clean threads using drycleaning solvent and cleaning brush. b Clean bearing and seal surfaces using drycleaning solvent and wiping rag. c Wipe clean using wiping rag.

INSPECTION/REPLACEMENT

NOTE

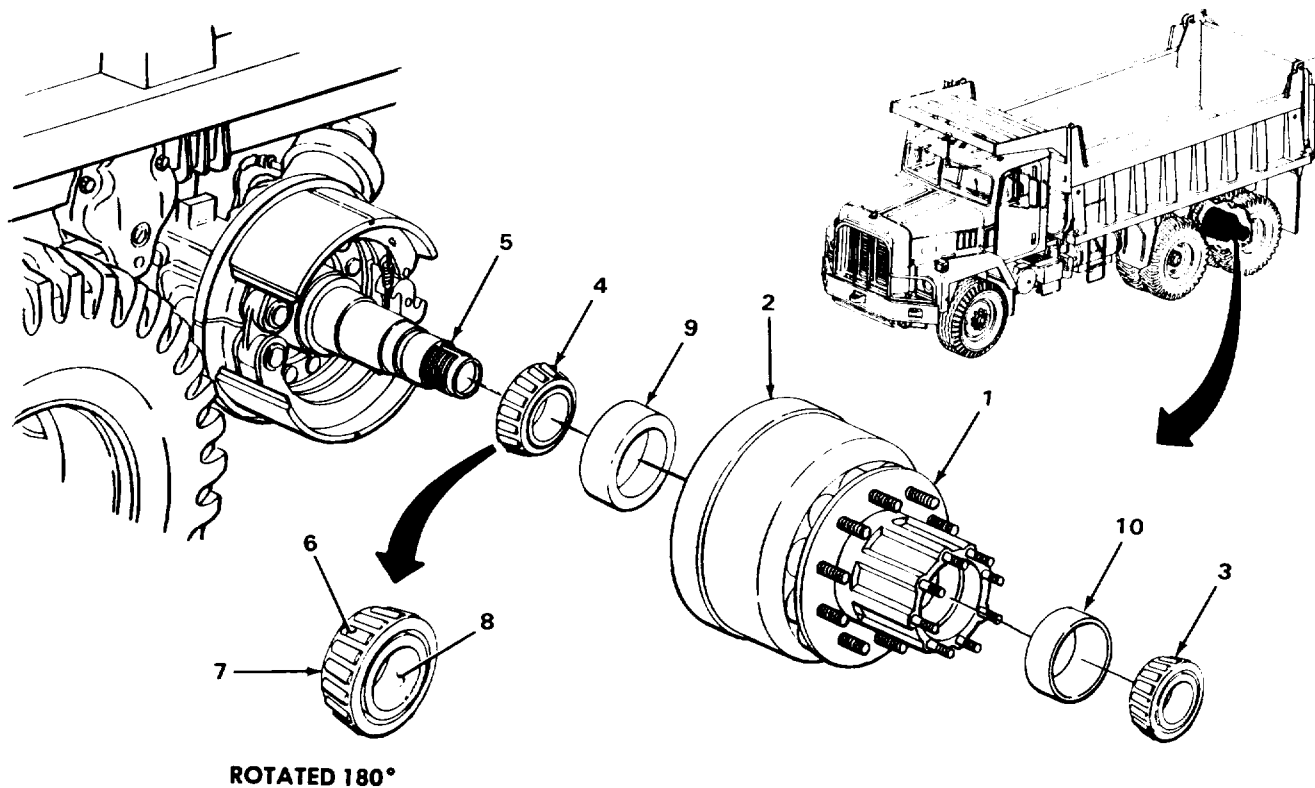
Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

A blue color on metal parts indicates a dry overheated condition.

REAR HUB AND BRAKEDRUM ASSEMBLY AND WHEEL BEARINGS - CONTINUED

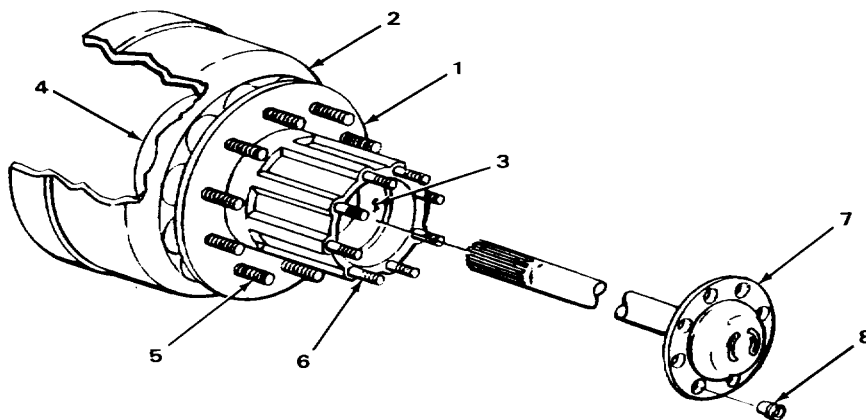
LOCATION	ITEM	ACTION REMARKS
17	Outer bearing (3) and inner bearing (4)	a Look for chipped, pitted, scored, blued, or loose rollers (6). b Look for cracked or scored roller cage (7). c Look for scored or blued inner race (8).
18 Rear hub (1)	Inner bearing cup (9) and outer bearing cup (10)	a Look for cracks, pits, scores, or blueing. Replace if damaged, steps 27 thru 30. b Check for looseness in rear hub. If loose, replace rear hub, steps 23 thru 26



TA244447

REAR HUB AND BRAKEDRUM ASSEMBLY AND WHEEL BEARINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSPECTION/REPLACEMENT - CONTINUED		
19	Rear hub (1) and brakedrum (2)	a Look for cracks across face or near bearing cups (3 and 4). b Look for stripped, bent, or broken hub studs (5). Replace if damaged, steps 23 thru 26. c Look for stripped, bent, or broken axle flange studs (6). If damaged, notify higher category of maintenance. d Look for cracks, heat spots, pitting, deep grooves, or out-of-round in brakedrum. Replace if damaged, steps 23 thru 26. If minor grooves or pitting is found, notify higher category of maintenance.
20	Axle flange (7)	Look for bends or out-of-round axle flange stud holes.
21	Lock collars (8)	Look for cracks, breaks, chips, or dents.
22	All threaded parts	Look for damaged threads or rounded heads.



TA244448

REAR HUB AND BRAKEDRUM ASSEMBLY AND WHEEL BEARINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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WARNING

Due to excessive weight, assistance will be needed to lift hub and breakdrum assembly. Failure to observe this precaution could cause serious injury to personnel.

NOTE

Steps 23 thru 26 are typical for all ten hub studs.

23	Brakedrum (2)	Position on wood blocks with hub studs facing up.
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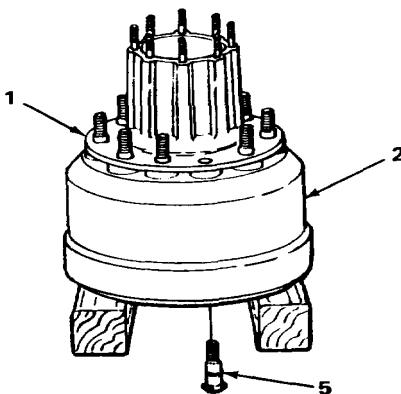
WARNING

Safety goggles must be worn to prevent eye injury from flying metal chips.

24 Rear hub (1)	Hub stud (5)	Using 3-pound cross-peen hammer, drive out.
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NOTE

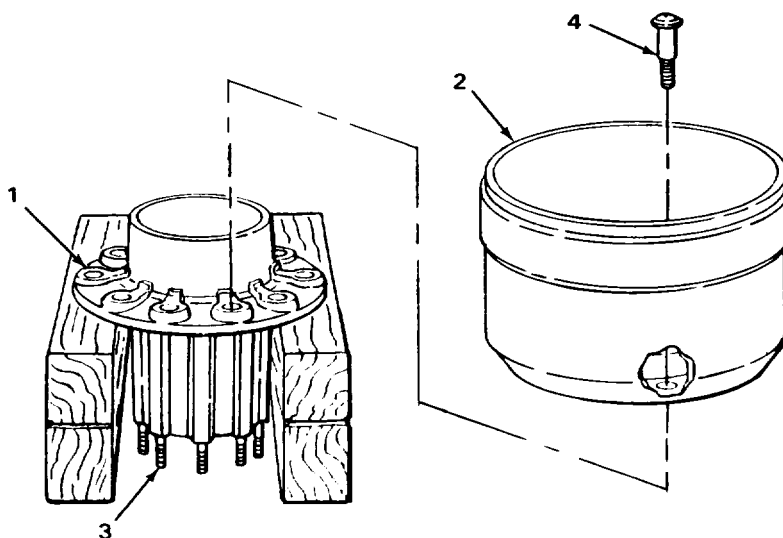
If brakedrum or rear hub is to be replaced, replace before performing step 25.



TA244449

REAR HUB AND BRAKEDRUM ASSEMBLY AND WHEEL BEARINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSPECTION/REPLACEMENT - CONTINUED		
25	Rear hub (1) and brakedrum (2)	a Position rear hub on wood blocks with axle flange studs (3) facing down. b Position brakedrum on rear hub facing up. c Aline hub stud holes.
26	Brakedrum (2)	a Put into hub stud hole. b Drive in using 3-pound cross-peen hammer and brass driftpin punch. Make sure hub stud is flush against brakedrum.

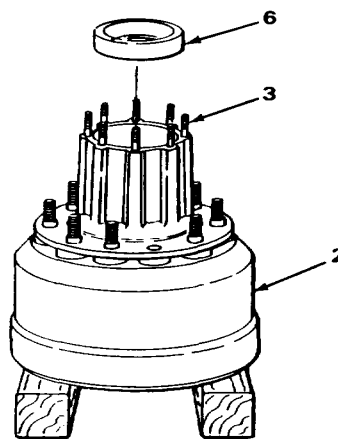
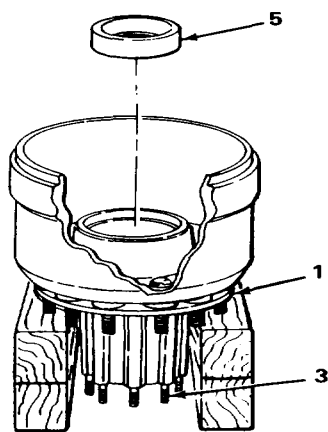


27	Rear hub (1)	Inner bearing cup (5) a Position rear hub on wood blocks with axle flange studs (3) facing down. b Using puller, pull out. c Get rid of.
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TA244450

REAR HUB AND BRAKEDRUM ASSEMBLY AND WHEEL BEARINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
28	New inner bearing cup (5)	a Position level and square. b Drive in until flush with top of rear hub using wood block and 3-pound cross-peen hammer. c Seat completely by tapping on alternate sides using brass driftpin punch and 3-pound cross-peen hammer. Make sure inner bearing cup is flush with machined surface inside rear hub.
29	Outer bearing cup (6)	a Position brakedrum (2) on wood blocks with axle flange studs (3) facing up. b Using puller, pull out. c Get rid of.
30	New outer bearing cup (6)	a Position level and square. b Drive in until flush with top of rear hub using wood block and 3-pound cross-peen hammer. c Seat completely by tapping on alternate sides using brass driftpin punch and 3-pound cross-peen hammer. Make sure outer bearing cup is flush with machined surface inside rear hub.

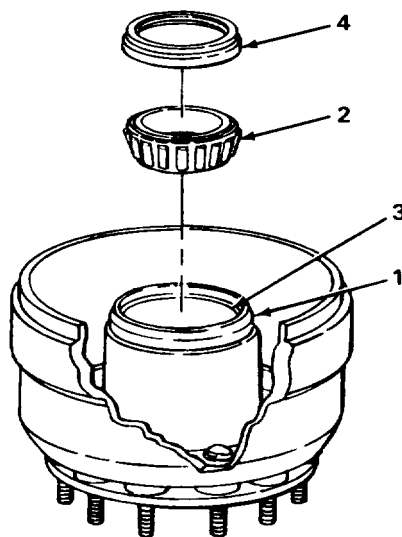


TA244451

REAR HUB AND BRAKEDRUM ASSEMBLY AND WHEEL BEARINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
ASSEMBLY		
31 Rear hub (1)	Inner bearing (2) and inner bearing cup (3)	Pack inner bearing and coat inner bearing cup with grease (LO 5-3805-254-12).
32 Inner bearing	Inner bearing (2) cup (3)	Put in.
33 Rear hub (1)	New inner seal (4)	a Position level and square. b Tap in until flush with top of rear hub using wood block and 1-pound ball-peen hammer.

Make sure inner grease seal is level.



WARNING

Due to excessive weight, assistance will be needed to lift hub and brake drum assembly. Failure to observe this precaution could cause serious injury to personnel.

TA244452

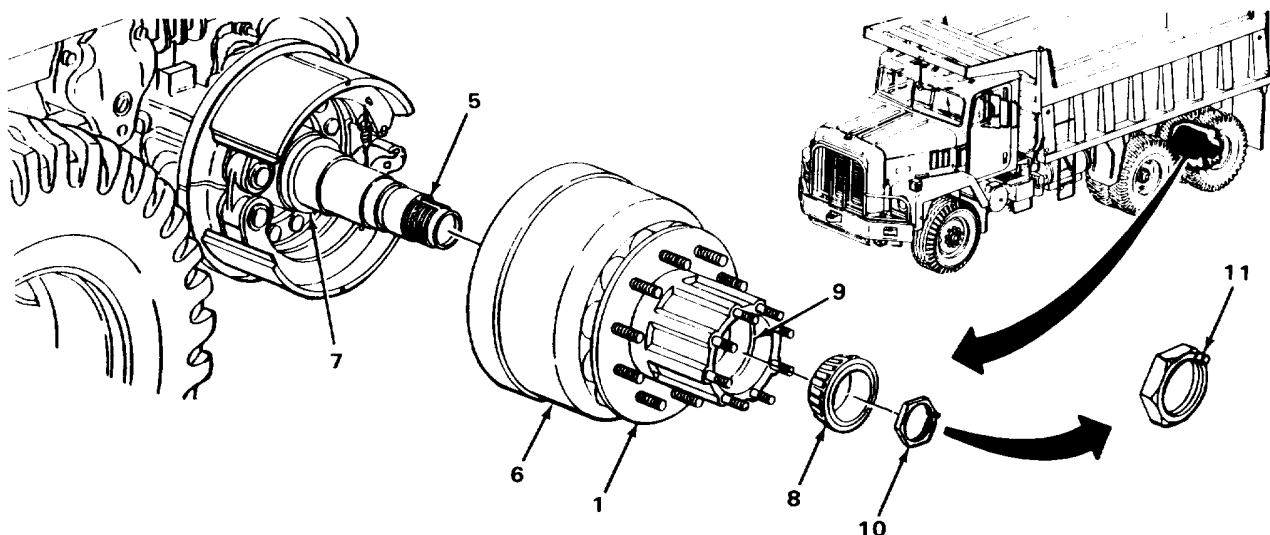
REAR HUB AND BRAKEDRUM ASSEMBLY AND WHEEL BEARINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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NOTE

Steps given are typical for right and left front rear and rear rear hubs.

34	Spindle (5)	Rear hub (1) and brakedrum (6)	<ul style="list-style-type: none"> a Coat spindle with grease (LO 5-3805-254-12). b With assistance, put on. Make sure inner bearing is seated on inner race (7) on spindle.
35		Outer bearing (8)	<ul style="list-style-type: none"> a Pack outer bearing and coat outer bearing cup (9) with grease (LO 5-3805-254-12). b Put on.
36		Adjusting nut (10)	<ul style="list-style-type: none"> a Position with pin (11) facing out and screw on and tighten until snug. b While slowly turning rear hub (1), torque to 50 ft lb (70 N.m) using 4-inch, 3/4-inch drive socket and 0 to 600 ft lb (0 to 814 N.m) torque wrench. c Loosen one-quarter turn using 4-inch, 3/4-inch drive socket and hinged handle

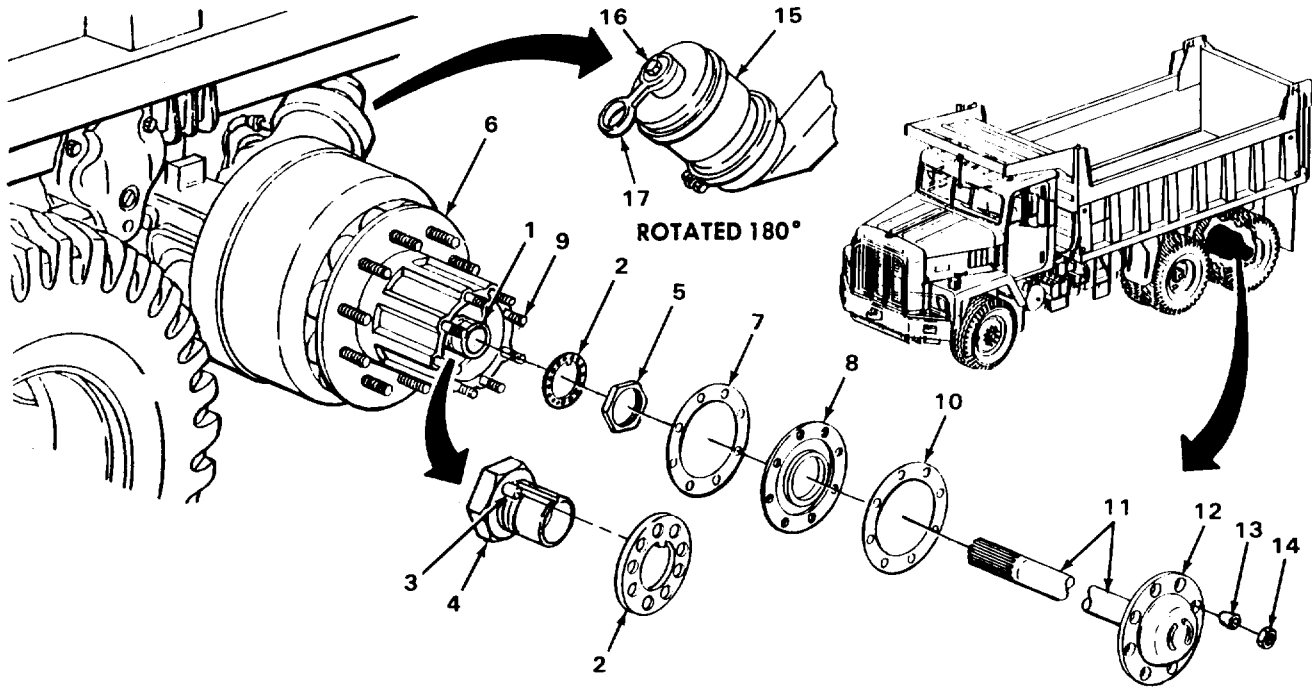


TA244453

REAR HUB AND BRAKEDRUM ASSEMBLY AND WHEEL BEARINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
37 Spindle (1)	Adjusting nut lock (2)	Put on and aline hole in adjusting nut lock with pin (3) on adjusting nut (4). If hole and pin do not aline, tighten adjusting nut to nearest hole and push adjusting nut lock into place.
38	Locknut (5)	a Screw on until snug. b Torque to 250 ft lb (350 N.m) using 4-inch, 3/4-inch drive socket and 0 to 600 ft lb (0 to 814 N.m) torque wrench.
39 Rear hub (6)	New outer seal gasket (7) and new outer seal (8)	Put in position on axle flange studs (9).
40	New axle flange gasket (10)	Put in position on axle flange studs (9).
41 Spindle (1)	Axle (11)	a Push in and aline axle flange (12) holes with axle flange studs (9) on rear hub (6). b Push into position.
42 Axle flange(12)	Eight lock collars (13) and eight new self-locking nuts (14)	a Put on. b Tighten on alternate sides using 15116-inch, 1/2-inch drive socket and ratchet handle.
43 Air brake chamber (15)	Caging bolt (16)	Tighten fully using 3/4-inch, 1/2-inch drive deep socket and ratchet handle.
44	Cover (17)	Push on.

REAR HUB AND BRAKEDRUM ASSEMBLY AND WHEEL BEARINGS - CONTINUED



NOTE

FOLLOW ON MAINTENANCE:

1. Install rear wheel (page 2-1168).
2. Check rear axle oil level (page 2-942).

TA244454

Change 1 2-1201

Section XVI. STEERING SYSTEM MAINTENANCE

	Page		Page
Draining Steering System	2-1207	Pump Bypass Hose and Fittings	2-1232
Filling Steering System	2-1243	Pump-to-Left Steering Gear	
Filter	2-1202	Hose and Fittings	2-1228
Left Steering Gear-to-Reservoir		Reservoir-to-Pump Hose and	
Hose and Fittings	2-1212	Fittings	2-1224
Left Steering Gear-to-Right Steering		Right Steering Gear-to-Left	
Gear Hose and Fittings	2-1215	Steering Gear Hose and	
Oil Reservoir	2-1237	Fittings.....	2-1220

FILTER

This task covers:

- | | | | |
|---|------------------------|---|--------------------------------------|
| a | Removal (page 2-1203) | c | Inspection/Replacement (page 2-1205) |
| b | Cleaning (page 2-1204) | d | Installation (page 2-1206) |

INITIAL SETUP

Tools

- Container, 6-gallon
- Gloves, safety
- Goggles, safety
- Gun, blow, air
- Hose, air, assembly
- Pliers, slip-joint, 8-inch
- Wrench, open-end, 7/16-inch

Materials/Parts

- Element, filter, reservoir
- Lockwashers, reservoir (eight required)
- Oil, lubricating, reservoir (item 14, appendix C)
- Ring, reservoir
- Rags, wiping (item 15, appendix C)

Materials/Parts - Continued

- Solvent, drycleaning (item 19, appendix C)
- Tape, antiseizing (item 22, appendix C)

Personnel Required

One

Equipment Condition

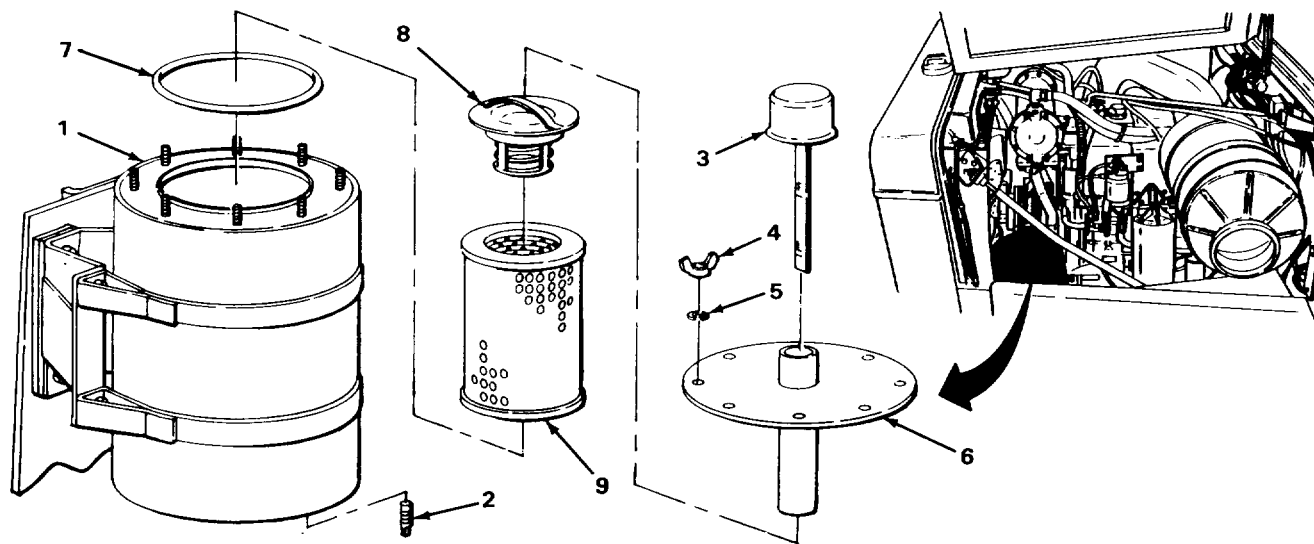
- Left side hood panel opened (page 2-424).
- Left side cab door opened (page 2-424).

References

TM 5-3805-254-10 (Operator's Manual)

FILTER - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
1	Reservoir (1)	Drainplug (2)
		a Place 6-gallon container underneath. b Using 7/16-inch open-end wrench, unscrew and take out. Allow oil to drain.
2	Cap (3)	Pull up and out.
3	Eight wingnuts (4) and eight lockwashers (5)	a Using 8-inch slip-joint pliers, unscrew and take off. b Get rid of lockwashers.
4	Cover (6)	Take off.
5	Ring (7)	a Take off.
b	Get rid of.	
6	Relief valve (8)	Take out.
7	Filter element (9)	a Take out. b Get rid of.



TA244455

FILTER - CONTINUED

ACTION LOCATION	ITEM	REMARKS
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CLEANING

WARNING

Improper cleaning methods and use of unauthorized cleaning liquids or solvents can injure personnel and cause damage to equipment Refer to TM 9-247.

WARNING

Drycleaning solvent P-D-680 is toxic and flammable Wear protective safety goggles and gloves and use only in a well-ventilated area Avoid contact with skin, eyes, and clothes and do not breathe vapors Do not use near open flame or excessive heat The flashpoint for type #1 drycleaning solvent is 1000F (380C) and for type #2 is 138°F (590C) If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid If contact with eyes is made, flush your eyes with water and get medical aid immediately.

NOTE

All parts must be cleaned thoroughly.

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

8	All parts	Using drycleaning solvent, clean thoroughly.
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WARNING

Particles blown by compressed air are hazardous Make certain the air stream is directed away from user and other personnel in the area Compressed air used for cleaning purposes shall not exceed 30 psi (207 kPa) User must wear safety goggles or face shield to prevent injury to personnel.

9	All parts	Using air blow gun and air hose assembly, blow dry.
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10	Reservoir (1)	Using wiping rag, wipe clean.
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FILTER - CONTINUED

ACTION LOCATION	ITEM	REMARKS
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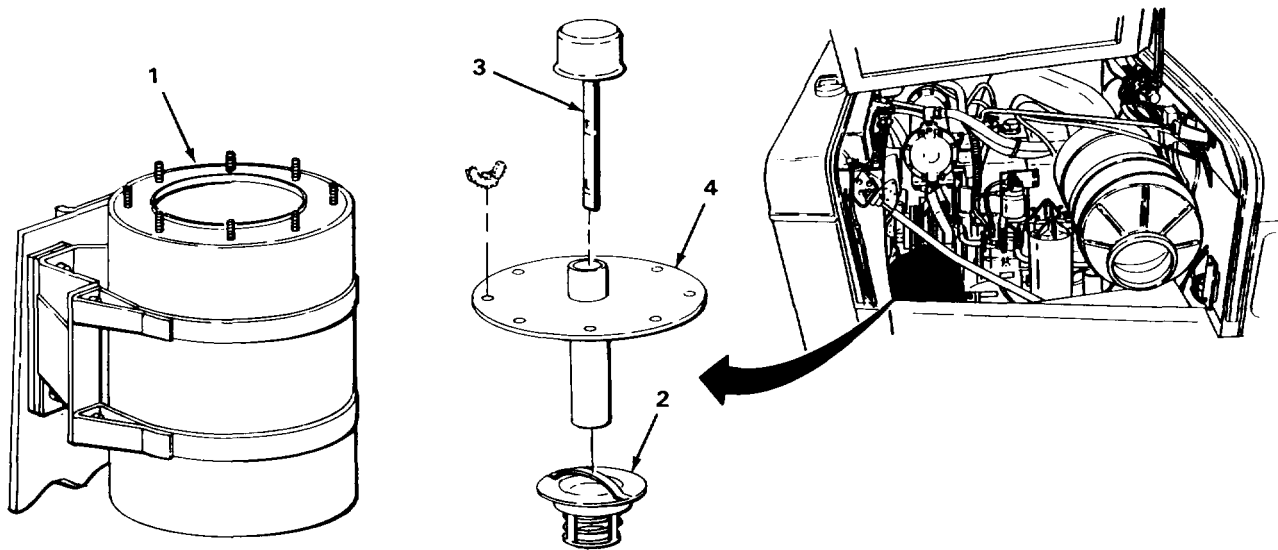
INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

11	Relief valve (2)	a Look for clogged or torn screen. b Look for broken spring.
12	Cap (3)	a Look for clogged vent holes. b Look for bends or cracks.
13	Cover (4)	Look for bends or cracks.
14	All threaded parts	Look for damaged threads or rounded heads.

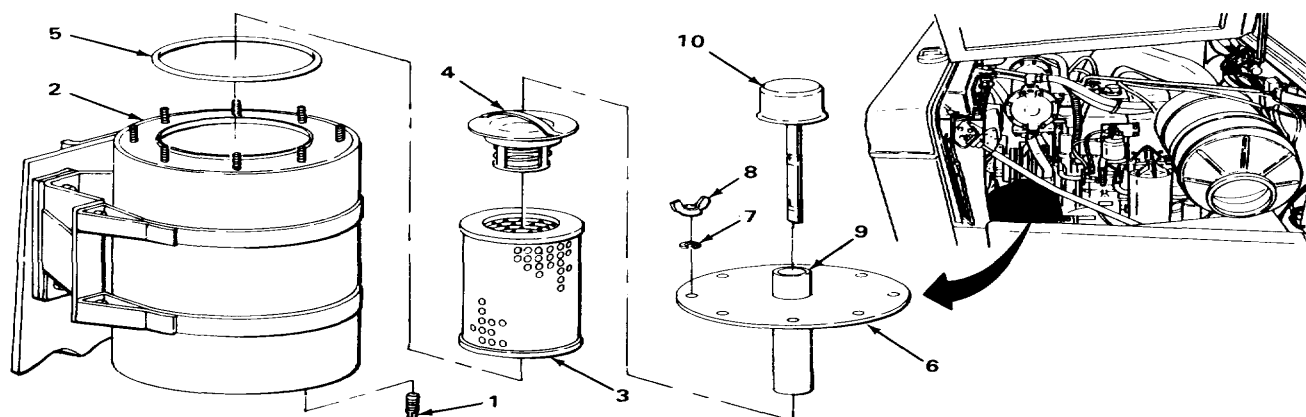


TA244456

FILTER - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
15	Drainplug (1)	Wrap threads with antiseizing tape (page 2-424).
16	Reservoir (2)	Drainplug (1)
		Screw in and tighten using 7/16-inch open-end wrench.
17	New filter element (3)	Put in.
18	Relief valve (4)	Put in.
19	New ring (5)	Put on.
20	Cover (6)	Put on.
21	Eight new lock-washers (7) and eight wingnuts (8)	Screw on and tighten using 8-inch slip-joint pliers.
22	Filler neck (9)	Fill with lubricating oil to 4 inches (10.16 cm) below top of filler neck.
23	Cap (10)	Put on.
NOTE		
Start engine (TM 5-3805-254-10) and allow engine to idle Turn wheels to full left and full right three times Shut down engine (TM 5-3805-254-10).		
24	Cap (10)	a Pull up and out. b Using wiping rag, wipe clean. c Put on and push in completely. d Pull up and out. If oil is up to (F) full mark, go to step 25. If oil is below (F) full mark, repeat steps 21 thru 24.
25	Cap (10)	Put on.

FILTER - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE:

1. Close left side hood panel (page 2-424).
2. Close left side cab door (page 2-424).

TASK ENDS HERE

DRAINING STEERING SYSTEM

This task covers:

Draining (2-1207)

INITIAL SETUP

Tools

- Container, 6-gallon
- Wrench, open-end, 7/16-inch (two required)
- Wrench, open-end, 9/16-inch
- Wrench, open-end, 11/16-inch
- Wrench, open-end, 7/8-inch

Materials/Parts

- Lockwasher, clamp
- Tape, antiseizing (item 22, appendix C)

Personnel Required

One

Equipment Condition

Left side hood panel opened (page 2-424).

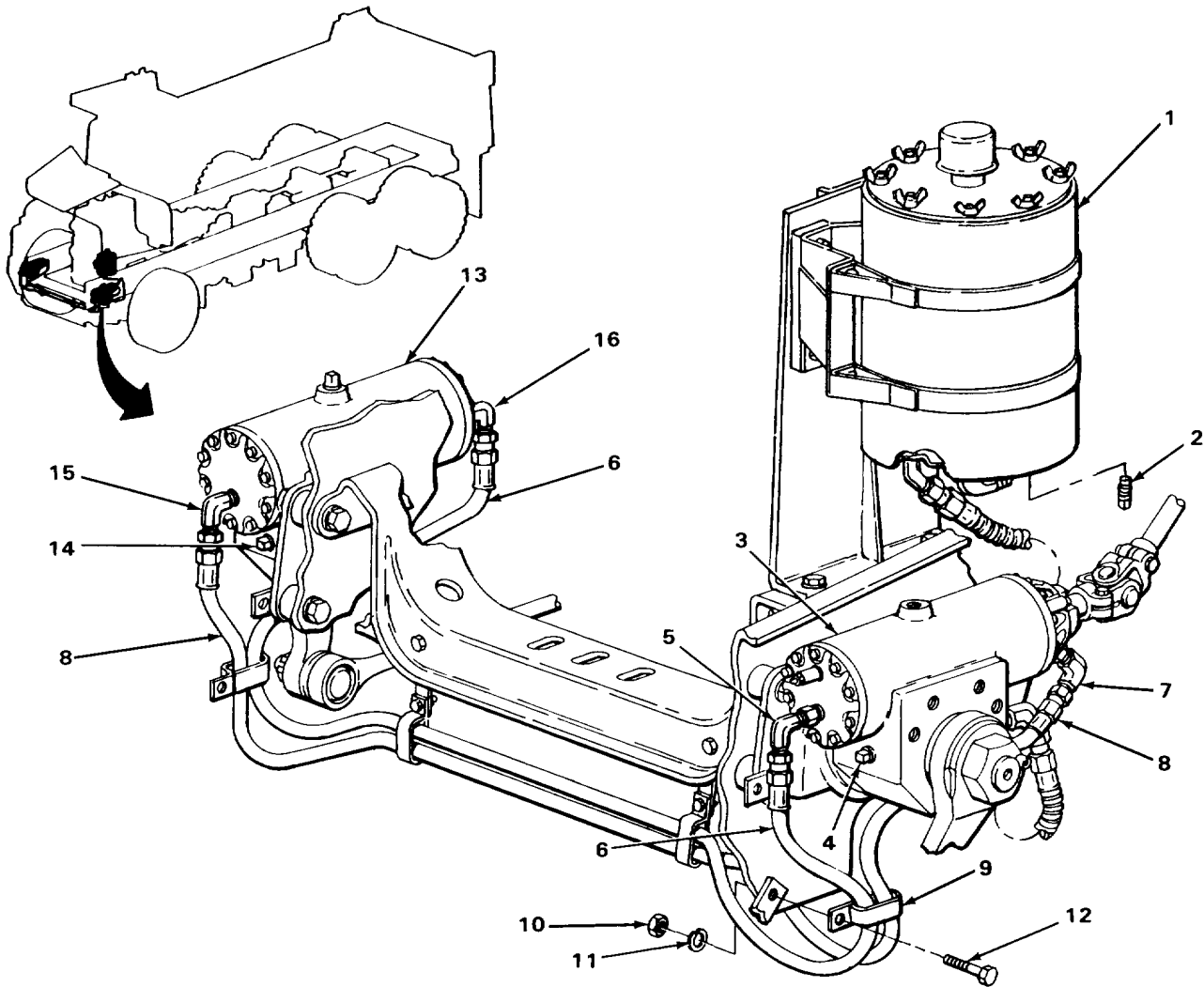
DRAINING STEERING SYSTEM - CONTINUED

LOCATION	ITEM	ACTION REMARKS
<u>WARNING</u>		
Do not drain steering system when hot		Hot oil can burn you.
1	Reservoir (1) Drainplug (2)	a Place 6-gallon container underneath. b Using 7/16-inch open-end wrench, unscrew and take out. Allow oil to drain.
2	Left steering gear (3) Drainplug (4) b	a Place 6-gallon container underneath. Using 9/16-inch open-end wrench, unscrew and take out. Allow oil to drain.
3	Elbow (5) Hose (6)	Using 11/16-inch and 7/8-inch open-end wrenches, unscrew and take off.
4	Elbow (7) Hose (8)	Using 11/16-inch and 7/8-inch open-end wrenches, unscrew and take off.
5	Clamp (9) Nut (10), lockwasher (11), and screw (12)	a Using two 7/16-inch open-end wrenches, unscrew and take out- b Get rid of lockwasher.
6	Right steering gear (13) Drainplug (14)	a Place 6-gallon container underneath. b Using 9/16-inch open-end wrench, unscrew and take out. Allow oil to drain.
7	Elbow (15) Hose (8)	Using 11/16-inch and 7/8-inch open-end wrenches, unscrew and take off. Allow oil to drain.

DRAINING STEERING SYSTEM - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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8 Elbow (16)	Hose (6)	Using 11/16-inch and 7/8-inch open-end wrenches, unscrew and take off. Allow oil to drain.
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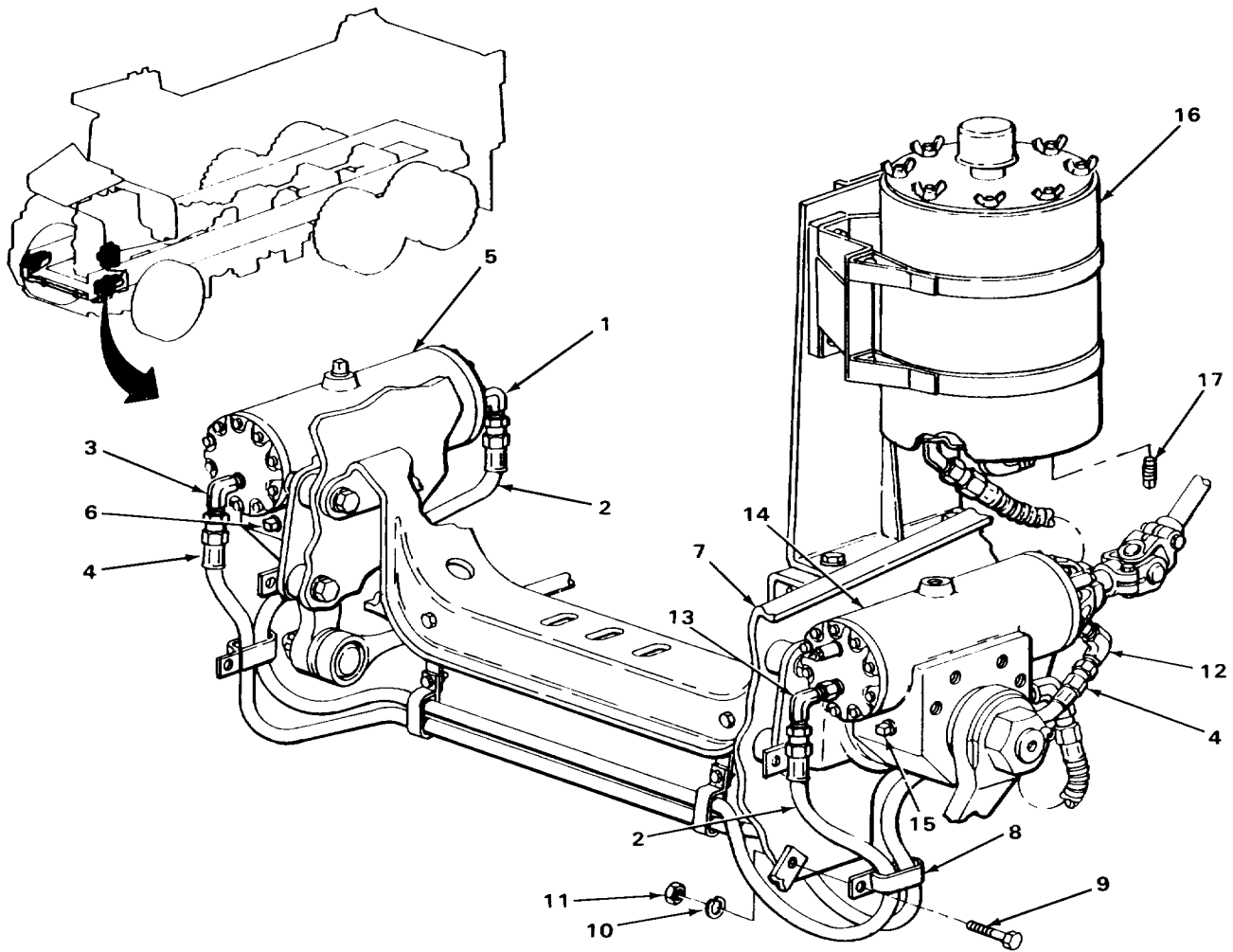


TA244458

DRAINING STEERING SYSTEM - CONTINUED

LOCATION	ITEM	ACTION REMARKS
9 Elbow (1)	Hose (2)	Screw on and tighten using 11/16-inch and 7/8-inch open-end wrenches.
10 Elbow (3)	Hose (4)	Screw on and tighten using 11/16-inch and 7/8-inch open-end wrenches.
<u>CAUTION</u>		
Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.		
NOTE		
For more information on how to use antiseizing tape go to General Maintenance Instructions (page 2-424).		
11 Right steering gear (5)	Drainplug (6)	a Wrap with antiseizing tape. Screw in and tighten using 9/16-inch open-end wrench.
12 Left frame rail (7)	Clamp (8), screw (9), new lockwasher (10), and nut (11)	Screw in and tighten using two 7/16-inch open-end wrenches.
13 Elbow (12)	Hose (4)	Screw on and tighten using 11/16-inch and 7/8-inch open-end wrenches.
14 Elbow (13)	Hose (2)	Screw on and tighten using 11/16-inch and 7/8-inch open-end wrenches.
15 Left steering gear (14)	Drainplug (15)	a Wrap with antiseizing tape. b Screw in and tighten using 9/16-inch open-end wrench.
16 Reservoir (16)	Drainplug (17)	a Wrap with antiseizing tape. b Screw in and tighten using 7/16-inch open-end wrench.

DRAINING STEERING SYSTEM - CONTINUED



CAUTION

Do not start engine with steering system drained.

NOTE

FOLLOW-ON MAINTENANCE:

- 1 Close left side hood panel (page 2-424)
- 2 Fill steering system (page 2-1243)

TASK ENDS HERE

LEFT STEERING GEAR-TO-RESERVOIR HOSE AND FITTINGS

This task covers:

- | | | | |
|---|------------------------|---|--------------------------------------|
| a | Removal (page 2-1212) | c | Inspection/Replacement (page 2-1214) |
| b | Cleaning (page 2-1212) | d | Installation (page 2-1214) |

INITIAL SETUP

Tools

Container, 6-gallon
 Goggles, safety
 Gun, blow, air
 Hose, air assembly
 Wrench, open-end, 3/4-inch
 Wrench, open-end, 1-inch

Personnel Required

One

Equipment Condition

Left side hood panel opened (page 2-424).

Materials/Parts

Detergent, liquid, GP (item 7, appendix C)
 Tape, antiseizing (item 22, appendix C)

LOCATION	ITEM	ACTION REMARKS
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REMOVAL

1	Elbow (1)	Hose (2)	a Place 6-gallon container underneath. b Using 3/4-inch and 1-inch open-end wrenches, unscrew and take off. Allow oil to drain.
2	Reservoir (3)	Elbow (1)	Using 3/4-inch open-end wrench, unscrew and take out.
3	Elbow (4)	Hose (2)	Using 3/4-inch and 1-inch open-end wrenches, unscrew and take off.
4	Left steering	Elbow (4) gear (5)	Using 3/4-inch open-end wrench, unscrew and take out.

CLEANING

WARNING

Improper cleaning methods and use of unauthorized cleaning liquids or solvents can injure personnel and cause damage to equipment Refer to TM 9-247.

LEFT STEERING GEAR-TO-RESERVOIR HOSE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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NOTE

Hose and fittings must be cleaned thoroughly.

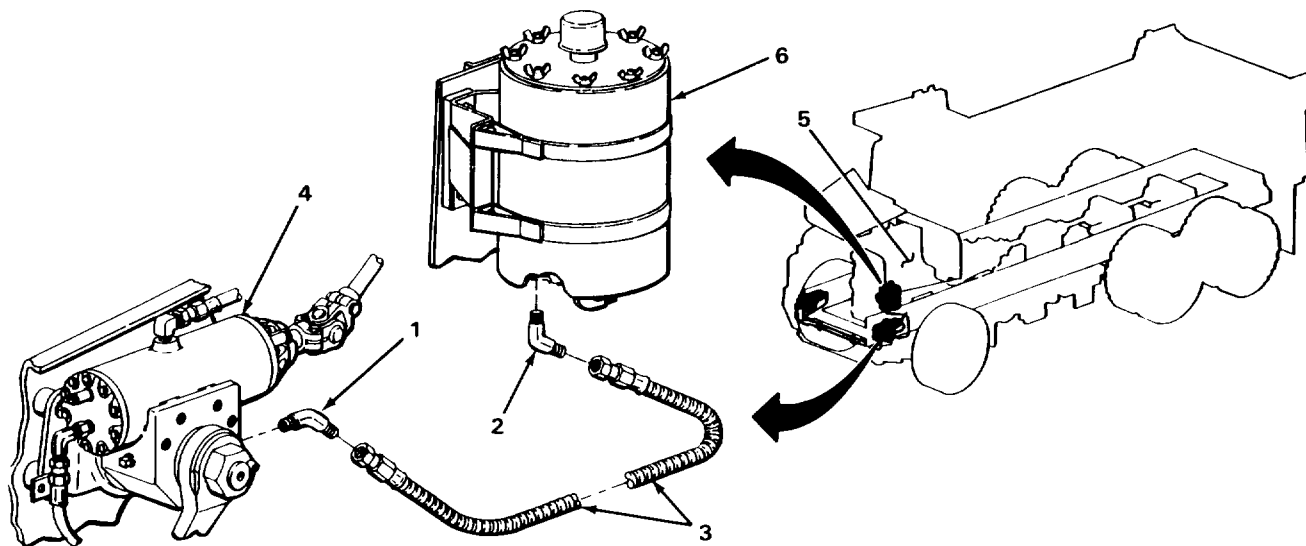
For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

5	All parts	Using detergent and water, clean thoroughly.
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WARNING

Particles blown by compressed air are hazardous. Make certain the air stream is directed away from user and other personnel in the area. Compressed air used for cleaning purposes shall not exceed 30 psi (207 kPa). User must wear safety goggles or face shield to prevent injury to personnel.

6	All parts	Using air blow gun and air hose assembly, blow dry.
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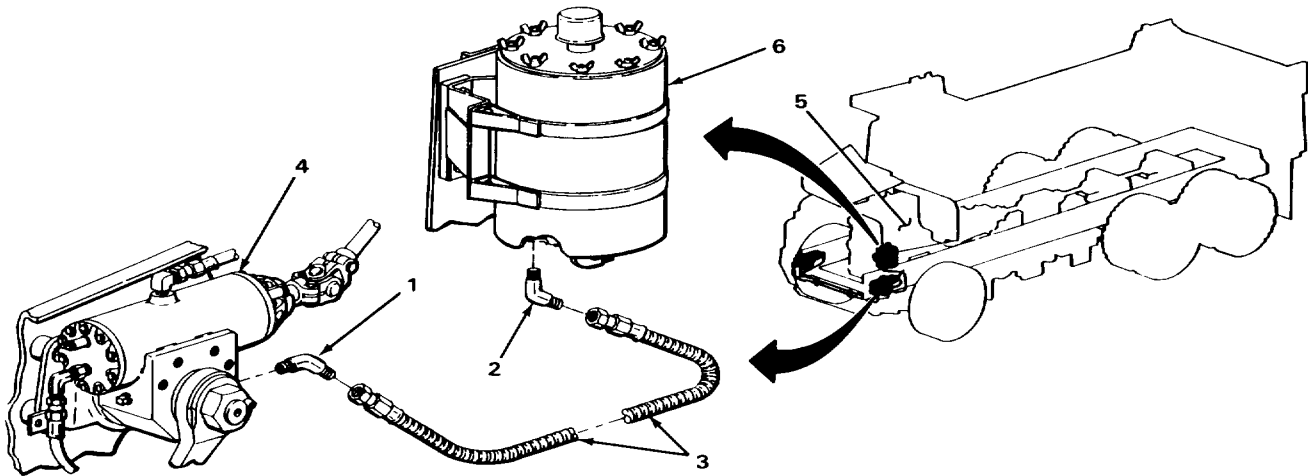


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LEFT STEERING GEAR-TO-RESERVOIR HOSE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSPECTION/REPLACEMENT		
NOTE		
Replace all damaged or defective parts.		
For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).		
7	Elbow (1) and elbow (2)	Look for bends, dents, or cracks.
8	Hose (3)	Look for worn areas or gouges.
9	All threaded parts	Look for damaged threads or rounded nuts.
INSTALLATION		
10	Left steering gear (4)	Elbow (1) (page 2-424). Wrap pipe threads with antiseizing tape
11	Elbow (1)	Screw in and tighten using 3/4-inch open-end wrench.
12	Elbow (1)	Hose (3) Screw on and tighten using 3/4-inch and 1-inch open-end wrenches.
13	Reservoir (6)	Elbow (2) Wrap pipe threads with antiseizing tape (page 2-424).
14	Elbow (2)	Elbow (2) Screw in and tighten using 3/4-inch open-end wrench.
15	Elbow (2)	Hose (3) Screw on and tighten using 3/4-inch and 1-inch open-end wrench.
16	Left side of engine (5)	Reservoir (6) Fill (page 2-1243).

LEFT STEERING GEAR-TO-RESERVOIR HOSE AND FITTINGS - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE: Close left side hood panel (page 2-424).

TASK ENDS HERE

LEFT STEERING GEAR-TO-RIGHT STEERING GEAR HOSE AND FITTINGS

This task covers:

- | | | | |
|---|------------------------|---|--------------------------------------|
| a | Removal (page 2-1216) | c | Inspection/Replacement (page 2-1218) |
| b | Cleaning (page 2-1216) | d | Installation (page 2-1218) |

INITIAL SETUP

Tools

- Container, 6-gallon
- Goggles, safety
- Gun, blow, air
- Hose, air assembly
- Wrench, box-end, 7/16-inch (two required)
- Wrench, open-end, 11/16-inch
- Wrench, open-end, 3/4-inch
- Wrench, open-end, 7/8-inch

Materials/Parts

- Detergent, liquid, GP (item 7, appendix C)
- Lockwasher, clamp (four required)
- Tape, antiseizing (item 22, appendix C)

Personnel Required

One

Equipment Condition

Right side hood panel opened (page 2-424).

TA244461

LEFT STEERING GEAR-TO-RIGHT STEERING GEAR HOSE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS	
REMOVAL			
1	Elbow (1)	Hose (2)	a Place 6-gallon container underneath. b Using 11/16-inch and 7/8-inch open-end wrenches, unscrew and take off. Allow oil to drain.
2	Adapter (3)	Elbow (1)	Using 11/16-inch and 3/4-inch open-end wrenches, unscrew and take out.
3	Left steering gear (4)	Adapter (3)	Using 3/4-inch open-end wrench, unscrew and take out.
4	Four clamps (5)	Four screws (6), four nuts (7), and four lockwashers (8)	a Using two 7/16-inch box-end wrenches, unscrew and take out. b Get rid of lockwashers.
5		Hose (2)	Take out.
6	Elbow (9)	Hose (2)	Using 11/16-inch and 7/8-inch open-end wrenches, unscrew and take off.
7	Right steering gear (10)	Elbow (9)	Using 11/16-inch open-end wrench, unscrew and take out.

CLEANING

WARNING

Improper cleaning methods and use of unauthorized cleaning liquids or solvents can injure personnel and cause damage to equipment Refer to TM 9-247.

NOTE

Hose and fittings must be cleaned thoroughly.

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

8	All parts	Using detergent and water, clean thoroughly.
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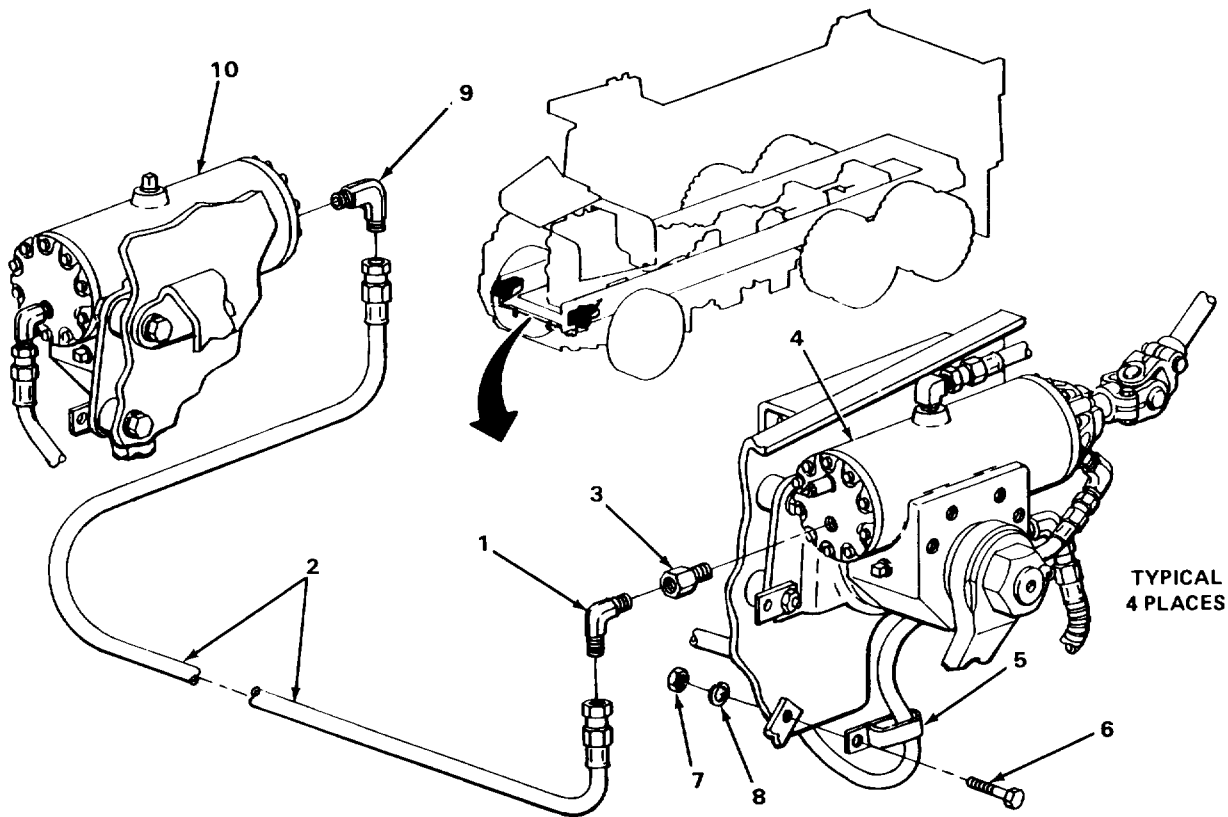
LEFT STEERING GEAR-TO-RIGHT STEERING GEAR HOSE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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WARNING

Particles blown by compressed air are hazardous. Make certain the air stream is directed away from user and other personnel in the area. Compressed air used for cleaning purposes shall not exceed 30 psi (207 kPa). User must wear safety goggles or face shield to prevent injury to personnel.

9	All parts	Using air blow gun and air hose assembly, blow dry.
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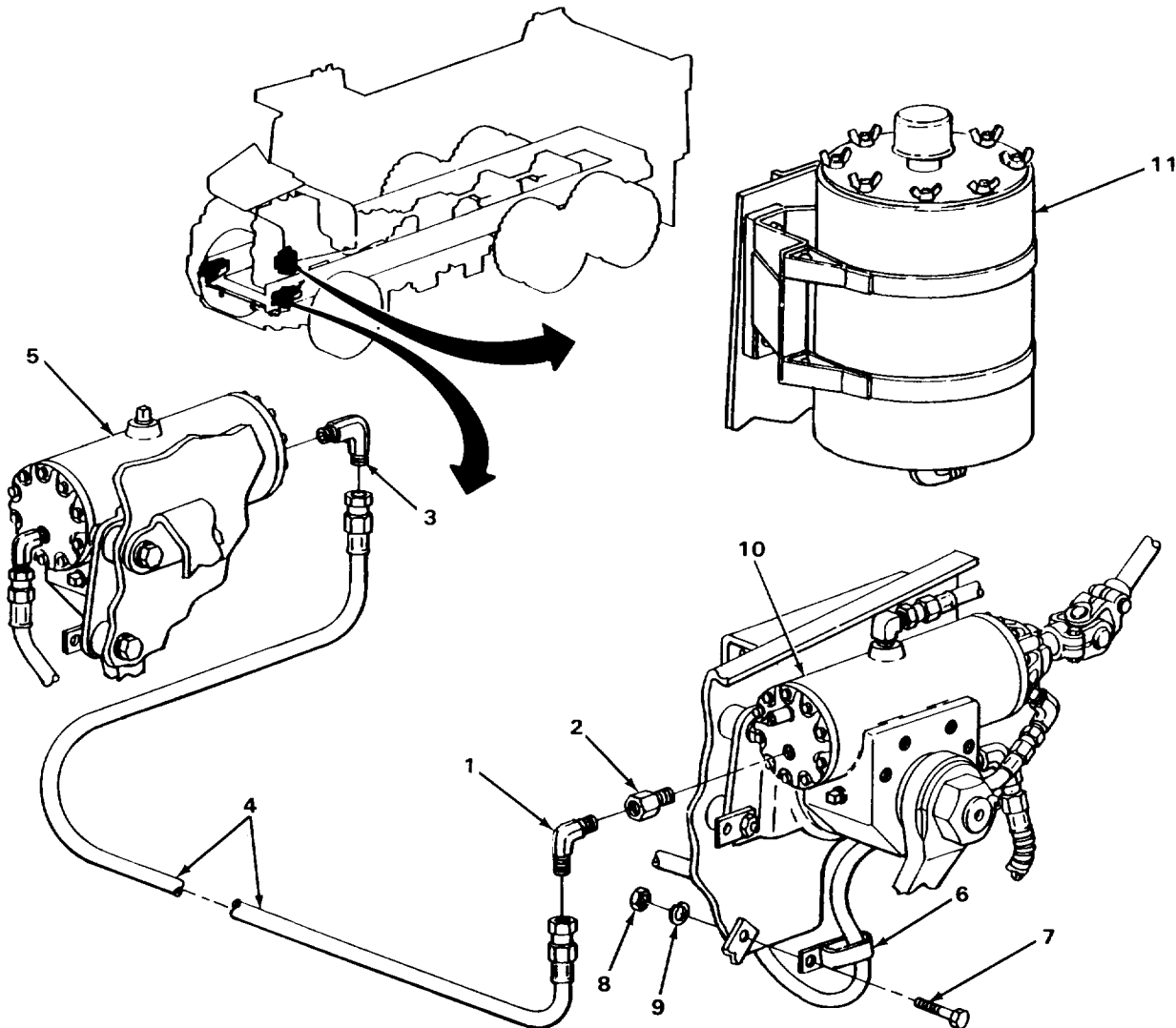
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LEFT STEERING GEAR-TO-RIGHT STEERING GEAR HOSE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSPECTION/REPLACEMENT		
NOTE		
Replace all damaged or defective parts.		
For more information on how to inspect parts go to General Maintenance Instructions (page 2-424).		
10	Elbow (1), adapter (2), and elbow (3)	Look for bends, dents, or cracks.
11	Hose (4)	Look for worn areas or gouges.
12	All threaded parts	Look for damaged threads or rounded heads.
INSTALLATION		
13	Right steering gear (5)	Elbow (3) a Wrap pipe threads with antiseizing tape (page 2-424). b Screw in and tighten using 11/16-inch open-end wrench.
14	Elbow (3)	Hose (4) Screw on and tighten using 11/16-inch and 7/8-inch open-end wrenches.
15	Four clamps (6)	Hose (4) Put in.
16	Four screws (7), four nuts (8), and four new lock-washers (9)	Screw in and tighten using two 7/16-inch box-end wrenches.
17	Left steering gear (10)	Adapter (2) (page 2-424). a Wrap threads with antiseizing tape b Screw in and tighten using 3/4-inch open-end wrench.
18	Adapter (2)	Elbow (1) a Wrap threads with antiseizing tape (page 2-424). b Screw in and tighten using 11/16-inch and 3/4-inch open-end wrenches.

LEFT STEERING GEAR-TO-RIGHT STEERING GEAR HOSE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
19 Elbow (1)	Hose (4)	Screw on and tighten using 11/16-inch and 7/8-inch open-end wrenches.
20 Reservoir (11)	Fill (page 2-1243).	



NOTE

FOLLOW-ON MAINTENANCE: Close right side hood panel (page 2-424).

TASK ENDS HERE

RIGHT STEERING GEAR-TO-LEFT STEERING GEAR HOSE AND FITTINGS

This task covers:

- | | | | |
|---|------------------------|---|--------------------------------------|
| a | Removal (page 2-1220) | c | Inspection/Replacement (page 2-1222) |
| b | Cleaning (page 2-1221) | d | Installation (page 2-1222) |
-

INITIAL SETUP**Tools**

Container, 6-gallon
 Goggles, safety
 Gun, blow, air
 Hose, air assembly
 Wrench, box-end, 7/16-inch (two required)
 Wrench, open-end, 11/16-inch
 Wrench, open-end, 3/4-inch
 Wrench, open-end, 7/8-inch

Materials/Parts

Detergent, liquid, GP (item 7, appendix C)
 Lockwasher, clamp (four required)
 Tape, antiseizing (item 22, appendix C)

Personnel Required

One

LOCATION	ITEM	ACTION REMARKS	
REMOVAL			
1	Elbow (1)	Hose (2)	a Place 6-gallon container underneath. b Using 11/16-inch and 7/8-inch open-end wrenches, unscrew and take off. Allow oil to drain.
2	Right steering gear (3)	Elbow (1)	Using 11/16-inch open-end wrench, unscrew and take out.
3	Four clamps (4)	Four screws (5), four nuts (6), and four lockwashers (7)	a Using two 7/16-inch box-end wrenches, unscrew and take out. b Get rid of lockwashers.
4		Hose (2)	Take out.
5	Elbow (8)	Hose (2)	Using 11/16-inch and 7/8-inch open-end wrenches, unscrew and take off.
6	Adapter (9)	Elbow (8)	Using 11/16-inch and 3/4-inch open-end wrenches, unscrew and take out.
7	Left steering gear (10)	Adapter (9)	Using 3/4-inch open-end wrench, unscrew and take out.

RIGHT STEERING GEAR-TO-LEFT STEERING GEAR HOSE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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CLEANING

WARNING

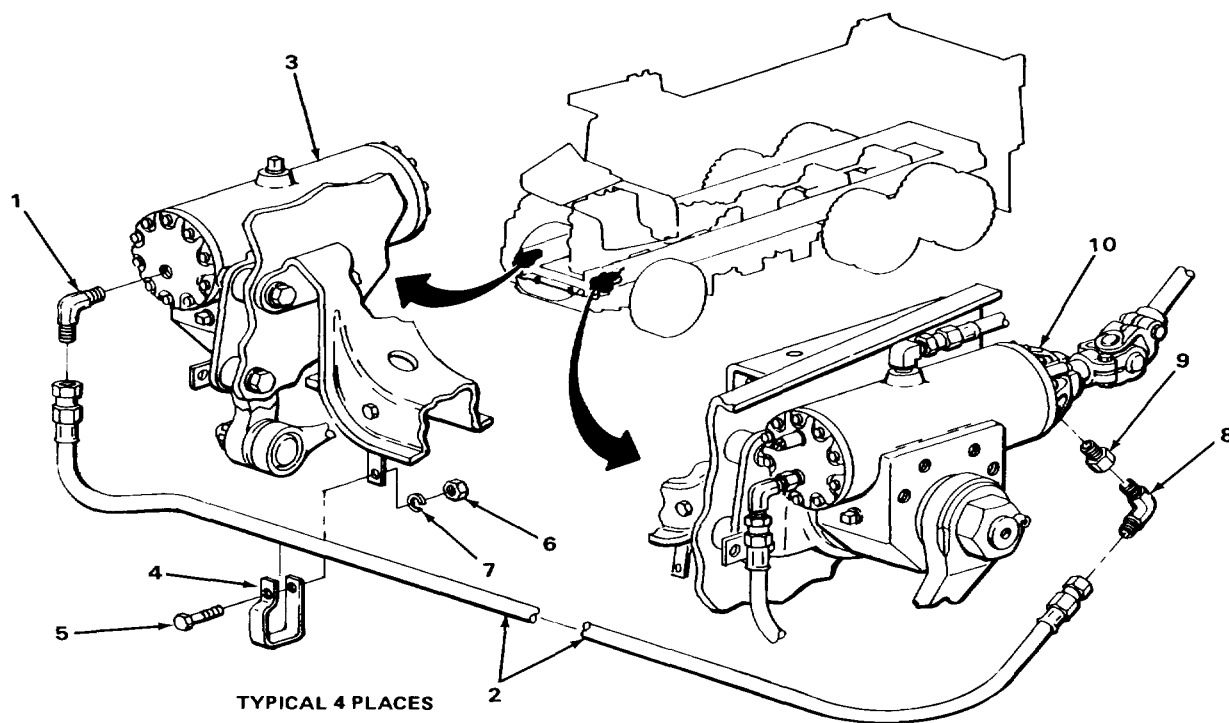
Improper cleaning methods and use of unauthorized cleaning liquids or solvents can injure personnel and cause damage to equipment Refer to TM 9-247.

NOTE

Hoses and fittings must be cleaned thoroughly.

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

8	Elbow (1), hose (2), elbow (8), and adapter (9)	Using detergent and water, clean thoroughly.
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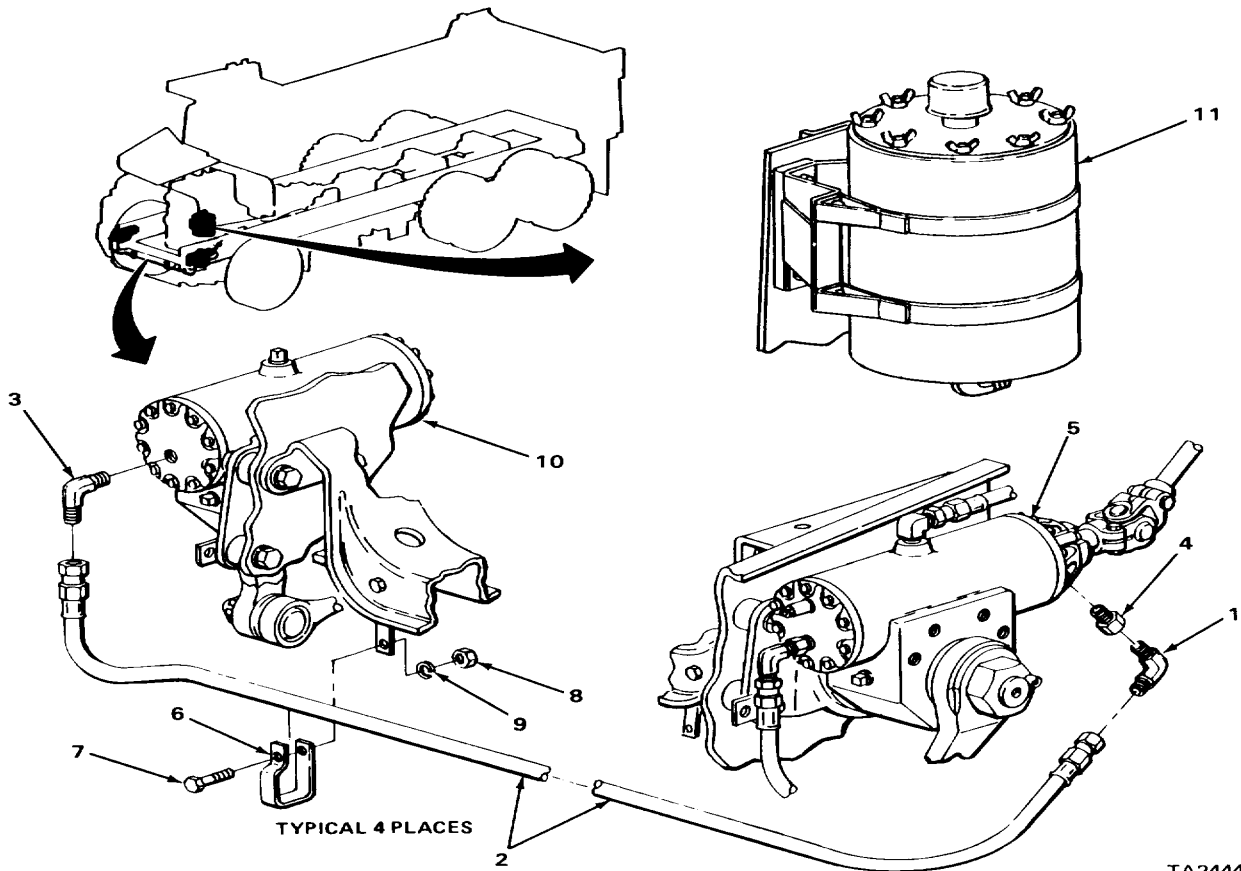
TA244464

RIGHT STEERING GEAR-TO-LEFT STEERING GEAR HOSE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
CLEANING - CONTINUED		
<u>WARNING</u>		
Particles blown by compressed air are hazardous. Make certain the air stream is directed away from user and other personnel in the area. Compressed air used for cleaning purposes shall not exceed 30 psi (207 kPa). User must wear safety goggles or face shield to prevent injury to personnel.		
9	Elbow (1), hose (2), elbow (3), and adapter (4)	Using air blow gun and air hose assembly, blow dry.
INSPECTION/REPLACEMENT		
NOTE		
Replace all damaged or defective parts.		
For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).		
10	Elbow (1), elbow (3), and adapter (4)	Look for bends, dents, or cracks.
11	Hose (2)	Look for worn areas or gouges.
12	All threaded parts	Look for damaged threads or rounded heads.
INSTALLATION		
13	Left steering gear (5)	<ul style="list-style-type: none"> a Wrap pipe threads with antiseizing tape b Screw in and tighten using 3/4-inch open-end wrench.
14	Adapter (4)	<ul style="list-style-type: none"> a Wrap pipe threads with antiseizing tape (page 2-424). b Screw in and tighten using 11/16-inch and 3/4-inch open-end wrenches.
15	Elbow (1)	Screw on and tighten using 11/16-inch and 7/8-inch open-end wrenches.
16	Four clamps (6)	Put in.

RIGHT STEERING GEAR-TO-LEFT STEERING GEAR HOSE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
17	Four screws (7), four nuts (8), and four new lock- washers (9)	Screw in and tighten using two 7/16-inch box-end wrenches.
18 Right steering gear (10)	Elbow (3)	a Wrap pipe threads with antiseizing tape (page 2-424). b Screw in and tighten using 11/16-inch open-end wrench.
19 Elbow (3)	Hose (2)	Screw on and tighten using 11/16-inch and 7/8-inch open-end wrenches.
20	Reservoir (11)	Fill (page 2-1243).



TA244465

TASK ENDS HERE

RESERVOIR-TO-PUMP HOSE AND FITTINGS

This task covers:

- | | | | |
|---|------------------------|---|--------------------------------------|
| a | Removal (page 2-1224) | c | Inspection/Replacement (page 2-1226) |
| b | Cleaning (page 2-1225) | d | Installation (page 2-1226) |

INITIAL SETUP

Tools

- Container, 6-gallons
- Goggles, safety
- Gun, blow, air
- Hose, air assembly
- Wrench, open-end, 7/16-inch
- Wrench, open-end, 1 5/16-inch
- Wrench, open-end, 1 11/2-inch (two required)

Materials/Parts

- Detergent, liquid, GP (item 7, appendix C)
- Tape, antiseizing (item 22, appendix C)

Personnel Required

One

Equipment Condition

Right side hood panel opened (page 2-424).

LOCATION	ITEM	ACTION REMARKS
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REMOVAL

1	Reservoir (1)	Drainplug (2)	a Place 6-gallon container underneath. b Using 7/16-inch open-end wrench, unscrew and take out. Allow oil to drain.
2	Elbow (3)	Hose (4)	Using 1 5/16-inch and 1 11/2-inch open-end wrenches, unscrew and take off.
3	Reservoir (1)	Elbow (3)	Using 1 5/16-inch open-end wrench, unscrew and take out.
4	Elbow (5)	Hose (4)	Using two 1 1/2-inch open-end wrenches, unscrew and take off.

RESERVOIR-TO-PUMP HOSE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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CLEANING

WARNING

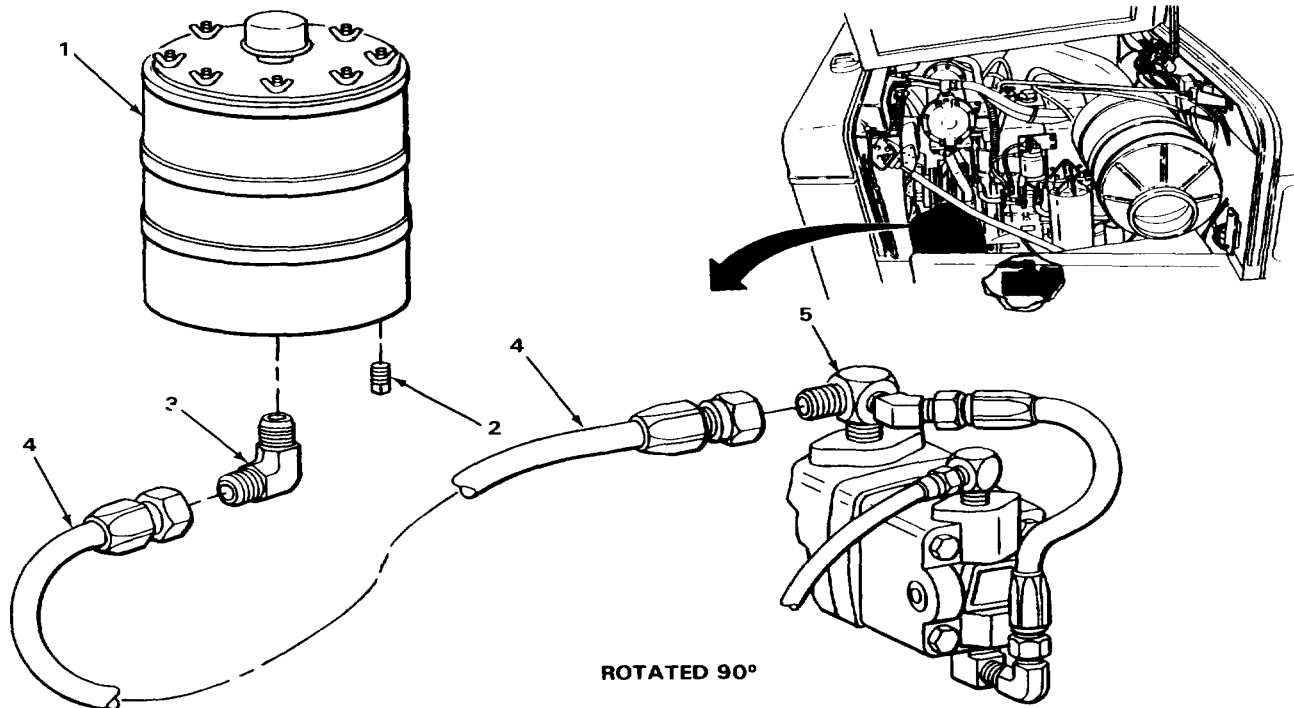
Improper cleaning methods and use of unauthorized cleaning liquids or solvents can injure personnel and cause damage to equipment Refer to TM 9-247.

NOTE

Hose and fittings must be cleaned thoroughly.

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

- | | | |
|---|---|---|
| 5 | Elbow (3), hose (4),
and drainplug (2) | Using detergent and water, clean
thoroughly. |
|---|---|---|



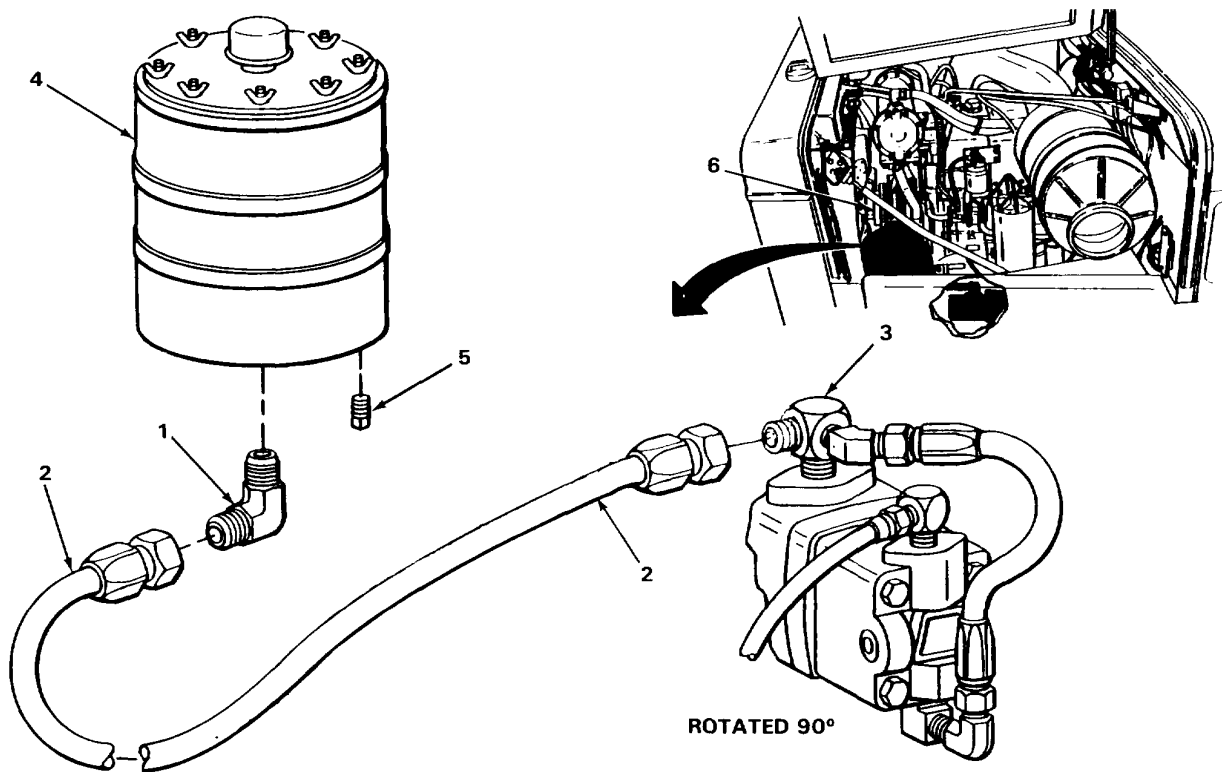
TA244466

RESERVOIR-TO-PUMP HOSE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
CLEANING - CONTINUED		
<u>WARNING</u>		
Particles blown by compressed air are hazardous. Make certain the air stream is directed away from user and other personnel in the area. Compressed air used for cleaning purposes shall not exceed 30 psi (207 kPa). User must wear safety goggles or face shield to prevent injury to personnel.		
6	Elbow (1) and hose (2)	Using air blow gun and air hose assembly, blow dry.
INSPECTION/REPLACEMENT		
NOTE		
Replace all damaged or defective parts.		
For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).		
7	Elbow (1)	Look for bends, dents, or cracks.
8	Hose (2)	Look for worn areas or gouges.
9	All threaded parts	Look for damaged threads or rounded heads.
INSTALLATION		
10	Elbow (3)	Screw on and tighten using two 1 1/2-inch open-end wrenches.
11	Reservoir (4)	a Wrap pipe threads with antiseizing tape (page 2-424). b Screw in and tighten using 1 5/16-inch open-end wrench.
12	Elbow (1)	Screw on and tighten using 1 1/2-inch and 1 5/16-inch open-end wrenches.
13	Reservoir (4)	a Wrap pipe threads with antiseizing tape (page 2-424). b Screw in and tighten using 7/16-inch open-end wrench.

RESERVOIR-TO-PUMP HOSE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
14 Left side of engine (6)	Reservoir (4)	Fill (page 2-1243).



FOLLOW-ON MAINTENANCE: **NOTE** Close left side hood panel (page 2-424) 2-1227

TASK ENDS HERE

TA244467

2-1227

PUMP-TO-LEFT STEERING GEAR HOSE AND FITTINGS

This task covers:

- | | | | |
|---|------------------------|---|--------------------------------------|
| a | Removal (page 2-1228) | c | Inspection/Replacement (page 2-1230) |
| b | Cleaning (page 2-1229) | d | Installation (page 2-1230) |

INITIAL SETUP

Tools

- Container, 6-gallon
- Goggles, safety
- Gun, blow, air
- Hose, air assembly
- Wrench, open-end, 7/16-inch
- Wrench, open-end, 13/16-inch
- Wrench, open-end, 7/8-inch (two required)

Materials/Parts

- Detergent, liquid, GP (item 7, appendix C)
- Ring, elbow pump
- Tape, antiseizing (item 22, appendix C)

Personnel Required

One

Equipment Condition

Left side hood panel opened (page 2-424).

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

REMOVAL

1	Reservoir (1)	Drainplug (2)	<ul style="list-style-type: none"> a Place 6-gallon container underneath. b Using 7/16-inch open-end wrench, unscrew and take out. <p style="text-align: center;">Allow oil to drain.</p>
2	Elbow (3)	Hose (4)	Using 13/16-inch and 7/8-inch open-end wrenches, unscrew and take off.
3	Left steering	Elbow (3) gear (5)	Using 13/16-inch open-end wrench, unscrew and take out.
4	Elbow (6)	Hose (4)	Using two 7/8-inch open-end wrenches, unscrew and take off.
5	Pump (7)	Elbow (6) and Ring (8)	<ul style="list-style-type: none"> a Using 7/8-inch open-end wrench, unscrew and take out. b Get rid of ring.

PUMP-TO-LEFT STEERING GEAR HOSE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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CLEANING

WARNING

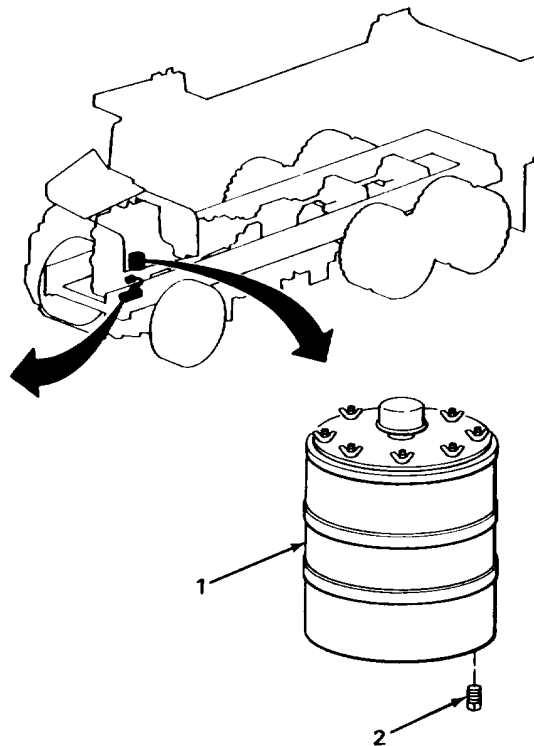
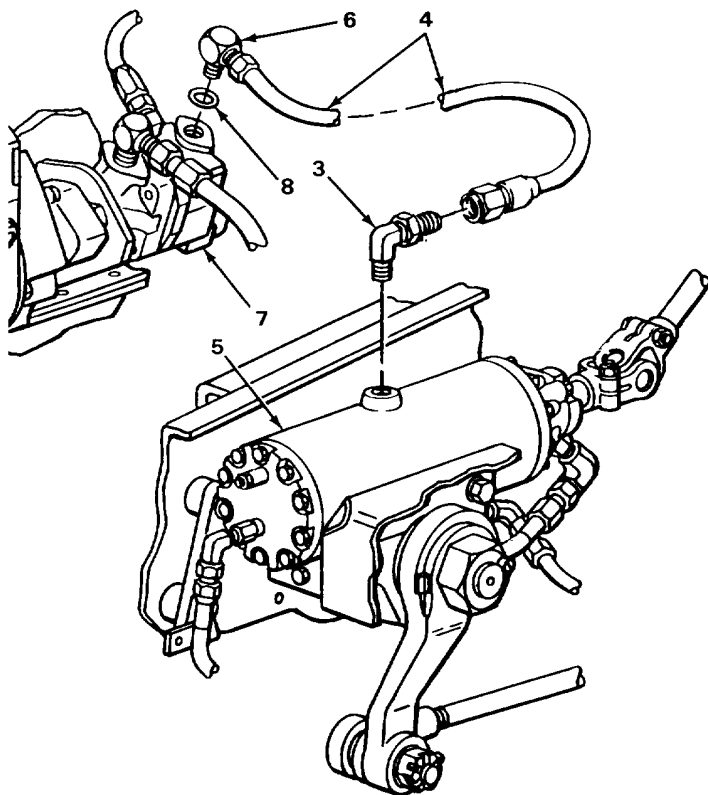
Improper cleaning methods and use of unauthorized cleaning liquids or solvents can injure personnel and cause damage to equipment Refer to TM 9-247.

NOTE

Hose and fittings must be cleaned thoroughly.

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

6	Elbow (3), hose (4), elbow (6), and	Using detergent and water, clean thoroughly.
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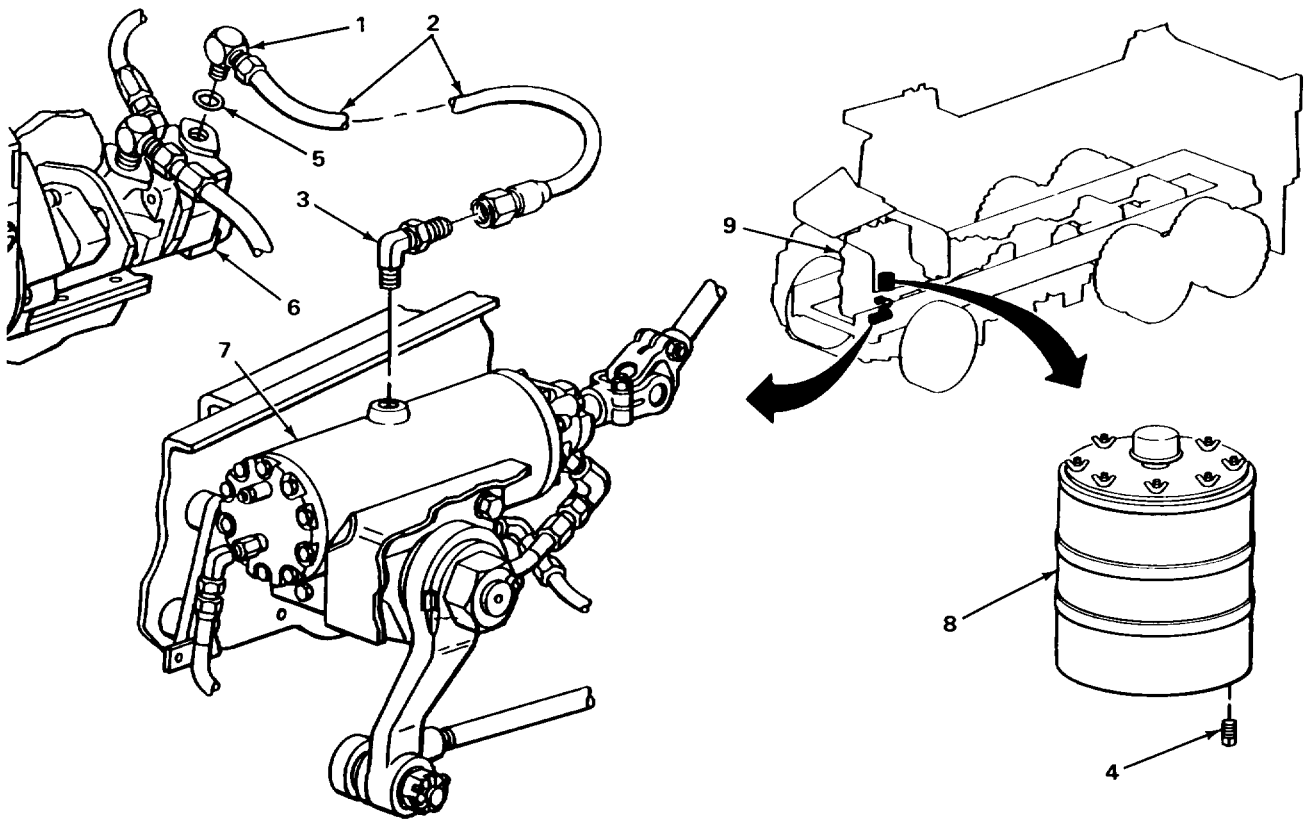
TA244468

PUMP-TO-LEFT STEERING GEAR HOSE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS	
CLEANING - CONTINUED			
<u>WARNING</u>			
<p>Particles blown by compressed air are hazardous. Make certain the air stream is directed away from user and other personnel in the area. Compressed air used for cleaning purposes shall not exceed 30 psi (207 kPa). User must wear safety goggles or face shield to prevent injury to personnel.</p>			
7	Elbow (1), hose (2), elbow (3), and drainplug (4)	Using air blow gun and air hose assembly, blow dry.	
INSPECTION/REPLACEMENT			
NOTE			
<p>Replace all damaged or defective parts.</p> <p>For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).</p>			
8	Elbow (1) and elbow (3)	Look for bends, dents, or cracks.	
9	Hose (2)	Look for worn areas or gouges.	
10	All threaded parts	Look for damaged threads or rounded heads.	
INSTALLATION			
11	Elbow(1)	New ring (5)	Put on.
12	Pump (6)	Elbow (1) and new ring (5)	Screw on and tighten using two 7/8-inch open-end wrenches.
13	Elbow (1)	Hose (2)	Screw on and tighten using two 7/8-inch open-end wrenches.
14	Left steering	Elbow (3) gear (7)	<ul style="list-style-type: none"> a Wrap pipe threads with antiseizing tape (page 2-424). b Screw in and tighten using 13/16-inch open-end wrench.

PUMP-TO-LEFT STEERING GEAR HOSE AND FITTINGS - CONTINUED

ACTION LOCATION	ITEM	REMARKS
15 Elbow (3)	Hose (2)	Screw on and tighten using 13/16-inch and 7/8-inch open-end wrenches.
16 Reservoir (8)	Drainplug (4)	a Wrap pipe threads with antiseizing tape (page 2-424). b Screw in and tighten using 7/16-inch open-end wrench.
17 Left side of engine (9)	Reservoir (8)	Fill (page 2-1243).



NOTE

FOLLOW-ON MAINTENANCE: Close left side hood panel (page 2-424).

TASK ENDS HERE

PUMP BYPASS HOSE AND FITTINGS

This task covers:

- | | | | |
|---|------------------------|---|--------------------------------------|
| a | Removal (page 2-1232) | c | Inspection/Replacement (page 2-1234) |
| b | Cleaning (page 2-1234) | d | Installation (page 2-1235) |

INITIAL SETUP

Tools

- Container, 6-gallon
- Goggles, safety
- Gun, blow, air
- Hose, air assembly
- Wrench, open-end, 7/16-inch
- Wrench, open-end, 3/4-inch
- Wrench, open-end, 13/16-inch
- Wrench, open-end, 1-inch
- Wrench, open-end, 1 1/2-inch (two required)

Materials/Parts

- Detergent, liquid, GP (item 7, appendix C)

Materials/Parts - Continued

- Solvent, drycleaning (item 19, appendix C)
- Tape, antiseizing (item 22, appendix C)

Personnel Required

One

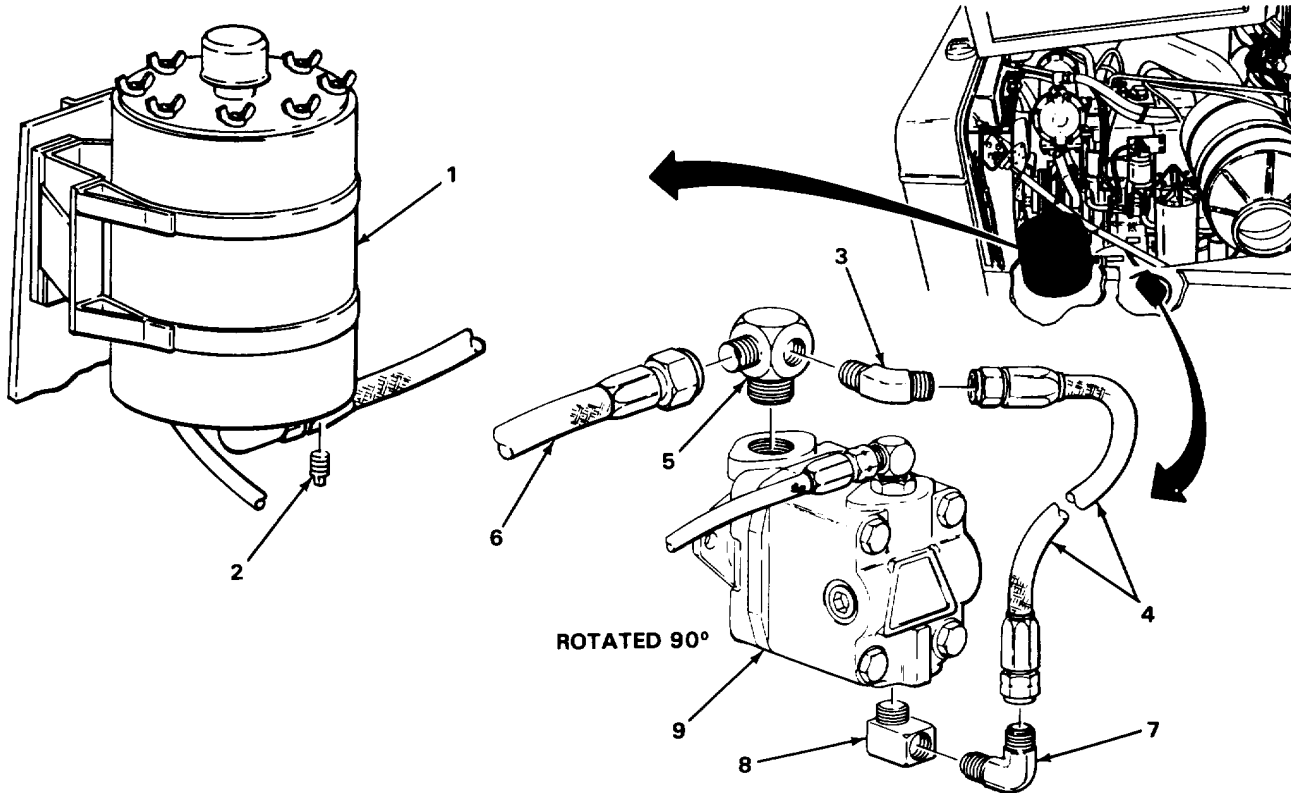
Equipment Condition

- Left side hood panel opened (page 2-424).
- Left side cab door opened (page 2-424).

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
1	Reservoir (1)	Drainplug (2)
		a Place 6-gallon container underneath. b Using 7/16-inch open-end wrench, unscrew and take out. Allow oil to drain.
2	Elbow (3)	Hose (4)
		Using 3/4-inch and 1-inch open-end wrenches, unscrew and take off.
3	Elbow (5)	Elbow (3)
		Using 3/4-inch and 1 1/2-inch open-end wrenches, unscrew and take out.
4		Hose (6)
		Using two 1 1/2-inch open-end wrenches, unscrew and take off.
5	Elbow (7)	Hose (4)
		Using 13/16-inch and 1-inch open-end wrenches, unscrew and take off.

PUMP BYPASS HOSE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
6 Elbow (8)	Elbow (7)	Using 13/16-Inch and 1-Inch open-end wrenches, unscrew and take out.
7 Pump (9)	Elbow (8)	Using 1-inch open-end wrench, unscrew and take out.



TA244470

PUMP BYPASS HOSE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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CLEANING

WARNING

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 1000F (380C) and for type #2 is 138°F (590C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

Improper cleaning methods and use of unauthorized cleaning liquids or solvent can injure personnel. Refer to TM 9-247.

NOTE

Hoses and fittings must be cleaned thoroughly.

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

8	All metal parts thoroughly.	Using drycleaning solvent, clean
---	-----------------------------	----------------------------------

9	Hose (1)	Using detergent and water, clean thoroughly.
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WARNING

Particles blown by compressed air are hazardous. Make certain the air stream is directed away from user and other personnel in the area. Compressed air used for cleaning purposes shall not exceed 30 psi (207 kPa). User must wear safety goggles or face shield to prevent injury to personnel.

10	All parts	Using air blow gun and air hose assembly, blow dry.
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INSPECTION/REPLACEMENT

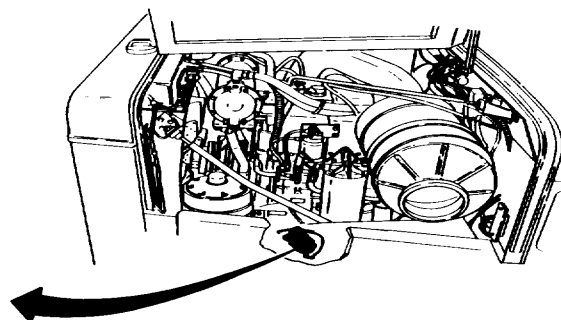
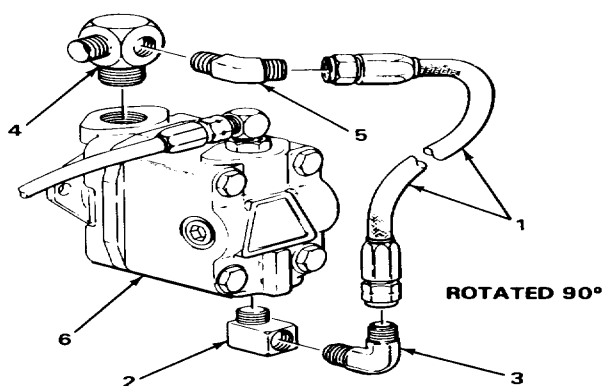
NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

PUMP BYPASS HOSE AND FITTINGS - CONTINUED

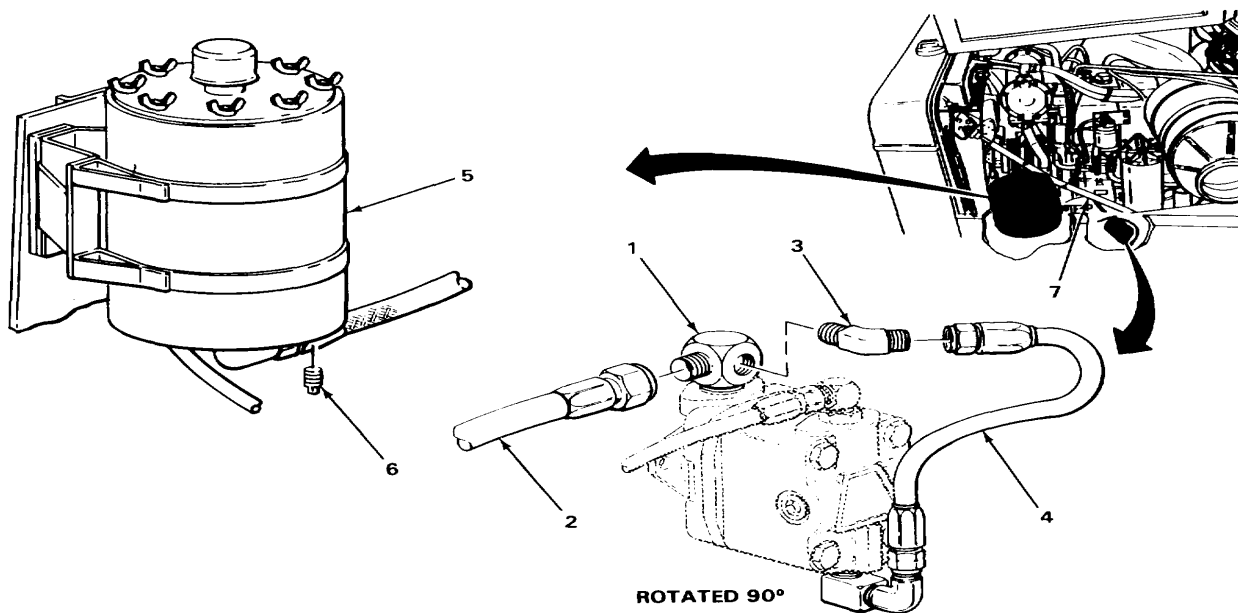
LOCATION	ITEM	ACTION REMARKS
11	Elbows (2, 3, 4, and 5)	Look for bends, dents, or cracks.
12	Hose (1)	Look for worn areas or gouges.
13	All threaded parts	Look for damaged threads or rounded heads.
INSTALLATION		
14 Pump (6)	Elbow (2)	a Wrap pipe threads with antiseizing tape (page 2-424). b Screw in and tighten using 1-inch open-end wrench.
15 Elbow (2)	Elbow (3)	a Wrap pipe threads with antiseizing tape (page 2-424). b Screw in and tighten using 13/16-inch and 1-inch open-end wrenches.
16 Elbow (3)	Hose (1)	Screw on and tighten using 1-inch and 13/16-inch open-end wrenches.
17 Pump (6)	Elbow (4)	a Wrap pipe threads with antiseizing tape (page 2-424). b Screw in and tighten using 1 1/2-inch open-end wrench.



TA244471

PUMP BYPASS HOSE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
18 Elbow (1)	Hose (2)	Screw on and tighten using two 1 1/2-inch open-end wrenches.
19	Elbow (3)	a Wrap pipe threads with antiseizing tape (page 2-424). b Screw in and tighten using 3/4-inch and 1 1/2-inch open-end wrenches.
20 Elbow (3)	Hose (4)	Screw on and tighten using 3/4-inch and 1-inch open-end wrenches.
21 Reservoir (5)	Drainplug (6)	a Wrap pipe threads with antiseizing tape (page 2-424). b Screw in and tighten using 7/16-inch open-end wrench.
22 Left side of engine (7)	Reservoir (5)	Fill (page 2-1243).



TA244472

PUMP BYPASS HOSE AND FITTINGS - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Close left side hood panel (page 2-424).
2. Close left side cab door (page 2-424).

TASK ENDS HERE

OIL RESERVOIR

This task covers:

- | | |
|---|---|
| <ol style="list-style-type: none"> a. Removal (page 2-1238) b. Disassembly (page 2-1239) c. Cleaning (page 2-1240) | <ol style="list-style-type: none"> d. Inspection/Replacement (page 2-1240) e. Assembly (page 2-1241) f. Installation (page 2-1241) |
|---|---|

INITIAL SETUP

Tools

- Gloves, safety
- Goggles, safety
- Gun, blow, air
- Hose, air assembly
- Wrench, open-end, 7/16-inch
- Wrench, open-end, 1/2-inch (two required)
- Wrench, open-end, 9/16-inch
- Wrench, open-end, 3/4-inch (two required)
- Wrench, open-end, 1-inch
- Wrench, open-end, 1 5/16-inch
- Wrench, open-end, 1 1/2-inch

Materials/Parts

- Lockwasher, bracket (four required)
- Lockwasher, strap (two required)
- Solvent, drycleaning (item 19, appendix C)
- Tape, antiseizing (item 22, appendix C)

Personnel Required

One

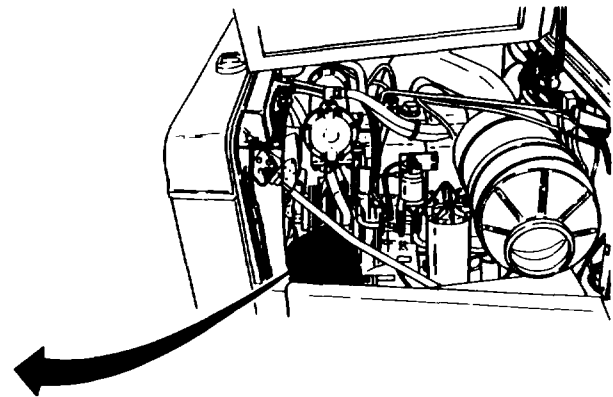
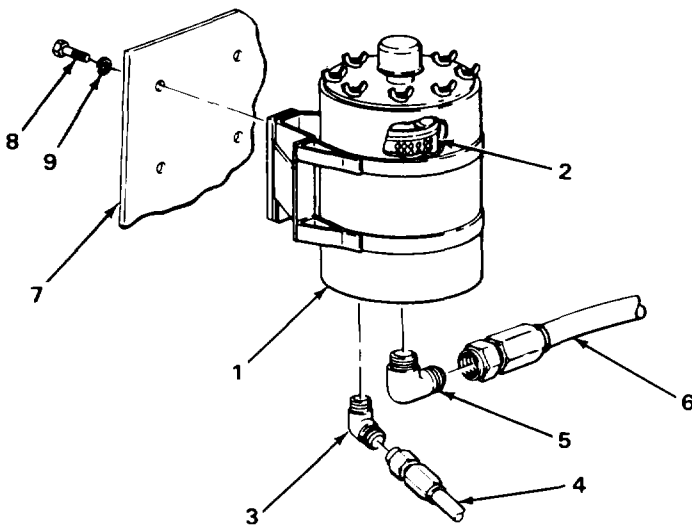
Equipment Condition

Left side hood panel opened (page 2-424).

Change 1 2-1237

OIL RESERVOIR - CONTINUED

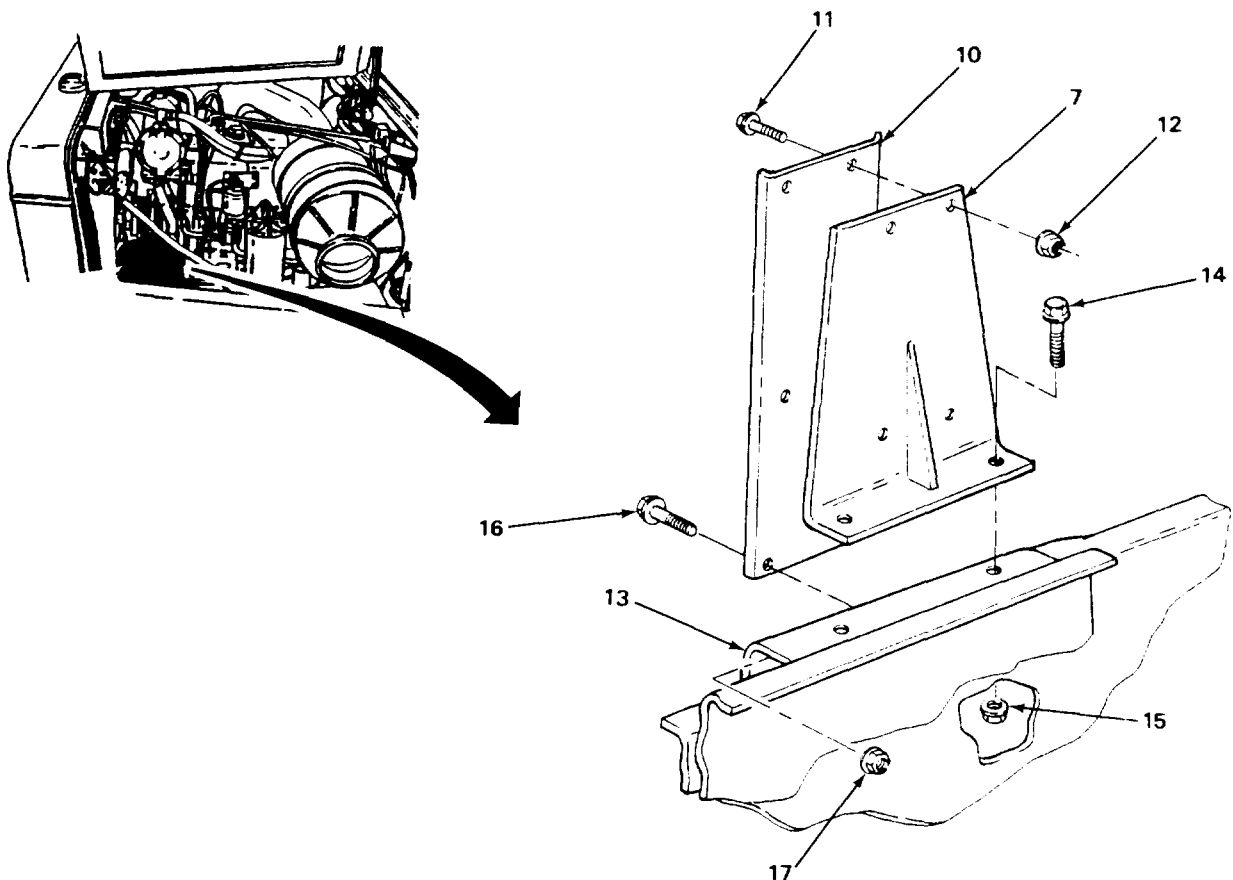
LOCATION	ITEM	ACTION REMARKS
REMOVAL		
<u>WARNING</u>		
Do not drain oil reservoir when hot. Hot oil can burn you.		
1. Reservoir (1)	Filter (2)	Remove (page 2-1237).
2. Elbow (3)	Hose (4)	Using 3/4-inch and 1-inch open-end wrenches, unscrew and take off.
3. Reservoir (1)	Elbow (3)	Using 3/4-inch open-end wrench, unscrew and take out.
4. Elbow (5)	Hose (6)	Using 1 5/16-inch and 1 1/2-inch open-end wrenches, unscrew and take off.
5. Reservoir (1)	Elbow (5)	Using 1 5/16-inch open-end wrench, unscrew and take off.
6. Bracket (7)	Four screws (8) and four lockwashers (9)	a. Using 9/16-inch open-end wrench, unscrew and take out. b. Get rid of lockwashers.
7.	Reservoir (1)	Take out.



TA244473

OIL RESERVOIR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
7.1. Support (10)	Four screws (11) and nuts (12)	Using two 3/4-inch open-end wrenches, unscrew, and take out.
7.2. Engine mount bracket (13)	Two screws (14) and nuts (15)	Using two 3/4-inch open-end wrenches, unscrew, and take out.
7.3.	Bracket (7)	Take off.
7.4.	Two screws (16) and nuts (17)	Using two 3/4-inch open-end wrenches, unscrew, and take out.
7.5.	Support (10)	Take off.



TA702177

OIL RESERVOIR - CONTINUED

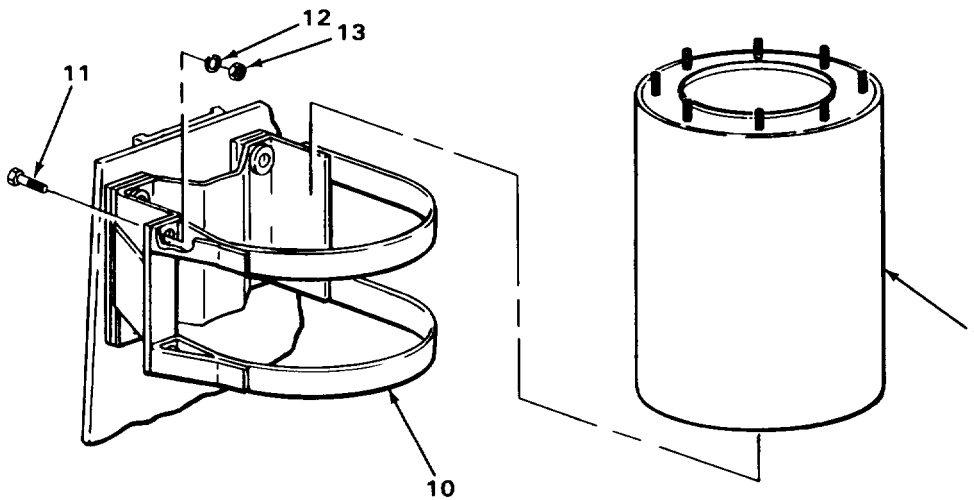
LOCATION	ITEM	ACTION REMARKS
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DISASSEMBLY

NOTE

Note position of reservoir in strap before disassembly to ensure correct repositioning during assembly.

- | | | |
|---------------|--|--|
| 8. Strap (10) | Two screws (11), two lockwashers (12), and two nuts (13) | a. Using two 1/2-inch open-end wrenches, unscrew and take out.
b. Get rid of lockwashers. |
| 9. | Reservoir (1) | Take out. |



TA244474

OIL RESERVOIR - CONTINUED

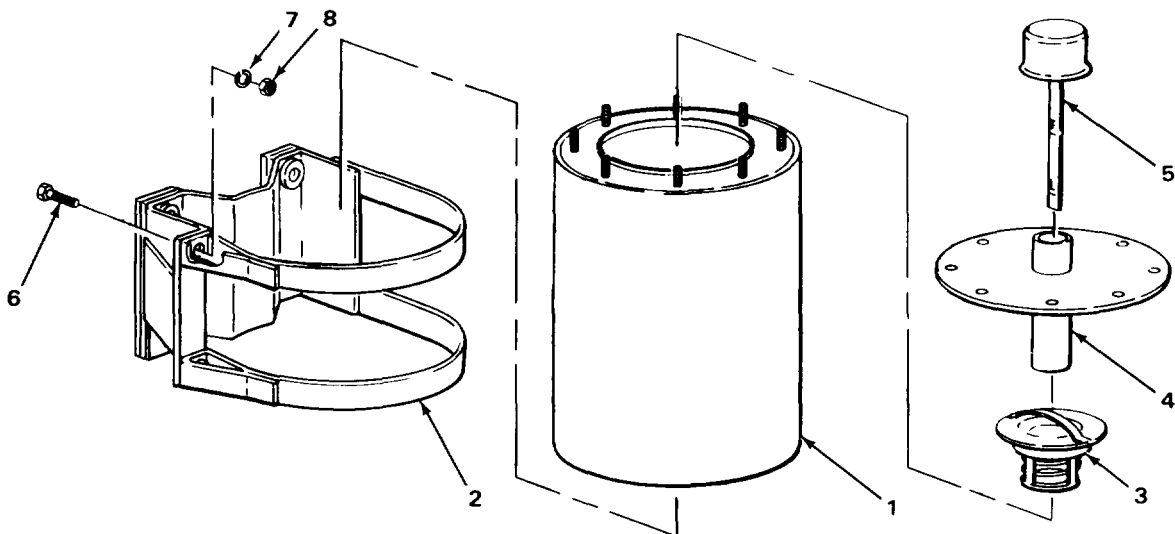
LOCATION	ITEM	ACTION REMARKS
CLEANING		
<u>WARNING</u>		
<p>Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 100°F (38°C) and for type #2 is 138°F (59°C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.</p>		
<p>Improper cleaning methods and use of unauthorized cleaning liquids or solvents can injure personnel and cause damage to equipment. Refer to TM 9-247.</p>		
NOTE		
<p>All parts must be cleaned thoroughly.</p>		
<p>For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).</p>		
10.	All parts	Using drycleaning solvent, clean thoroughly.
<u>WARNING</u>		
<p>Particles blown by compressed air are hazardous. Make certain the air stream is directed away from user and other personnel in the area. Compressed air used for cleaning purposes shall not exceed 30 psi (207 kPa). User must wear safety goggles or face shield to prevent injury to personnel.</p>		
11.	All parts	Using air blow gun and air hose assembly, blow dry.
INSPECTION/REPLACEMENT		
NOTE		
<p>Replace all damaged or defective parts.</p>		
<p>For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).</p>		
12.	Reservoir (1)	Look for bends, dents, or cracks.
2-1240		

OIL RESERVOIR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
13.	Strap (2)	Look for cracks or breaks.
14.	Relief valve (3)	a. Look for clogged or torn screen. b. Look for broken spring.
15.	Cover (4)	Look for bends, dents, or cracks.
16.	Cap (5)	a. Look for clogged vent holes. b. Look for bends or cracks.
17.	All threaded parts	Look for damaged threads or rounded heads.

ASSEMBLY

18. Strap (2)	Reservoir (1)	Put in. Position as noted in disassembly.
19.	Two screws (6), two new lockwashers (7), and two nuts (8)	Screw in and tighten using two 1/2-inch open-end wrenches.



TA702178

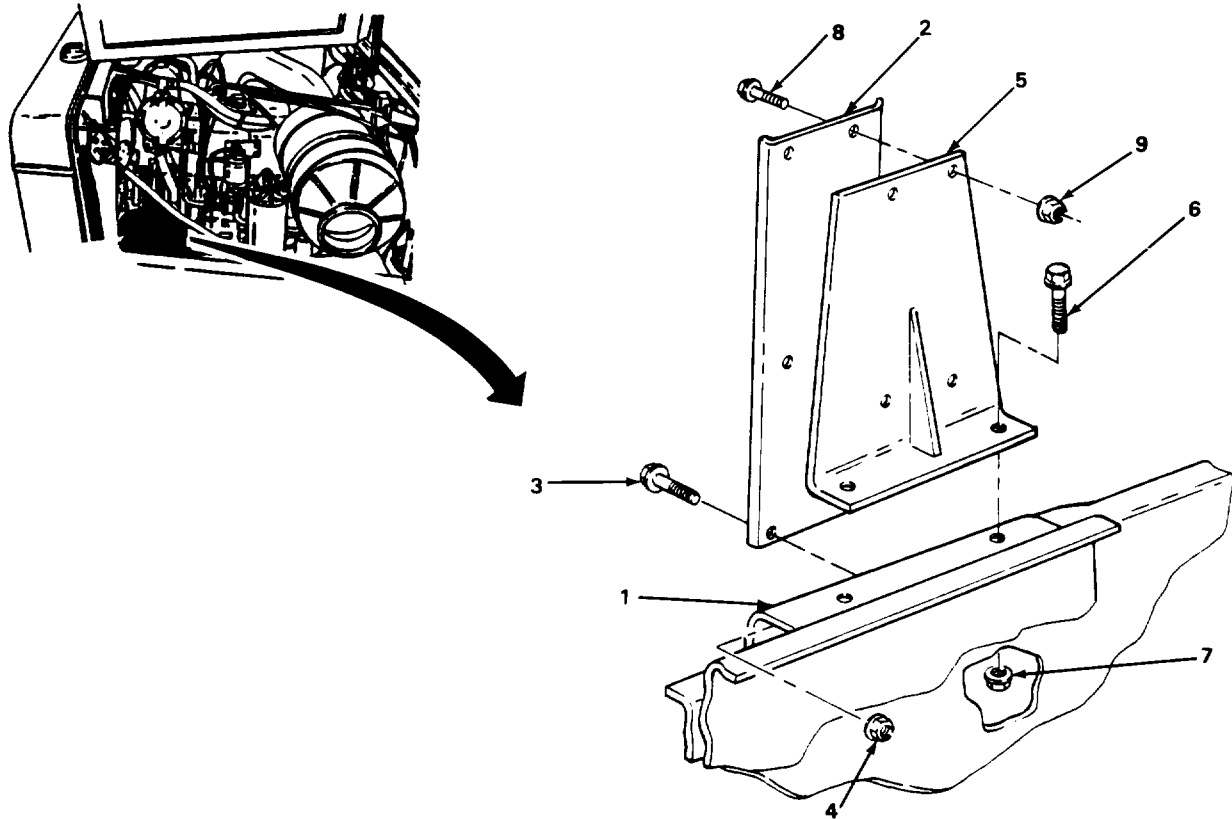
OIL RESERVOIR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
20. Engine mount bracket (1)	Support (2)	Put into place.
21.	Two screws (3) and nuts (4)	Screw in and tighten using two 3/4-inch open-end wrenches.
21.1.	Bracket (5)	Put into place.
21.2.	Two screws (6) and nuts (7)	Screw in and tighten using two 3/4-inch open-end wrenches.
21.3. Support (2)	Four screws (8) and nuts (9)	Screw in and tighten using two 3/4-inch open-end wrenches.
21.4. Bracket (5)	Reservoir (10)	Put into place.
21.5.	Four screws (11) and four new lockwashers (12)	Screw in and tighten using 9/16-inch open-end wrench.

Change 1 2-1241.0

OIL RESERVOIR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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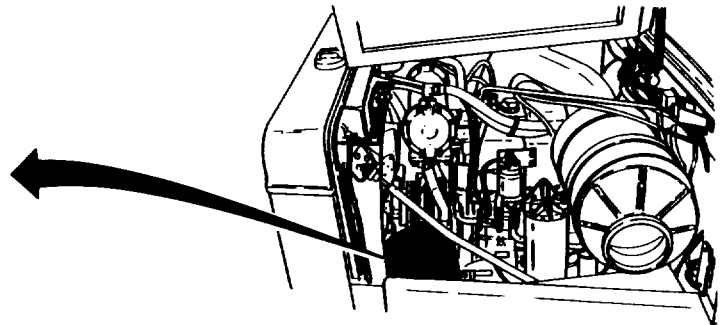
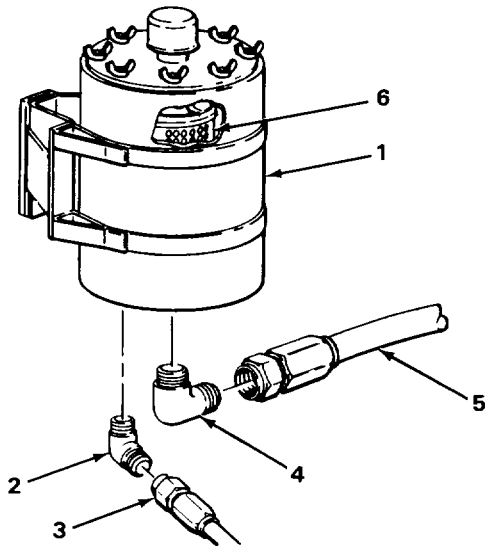


TA702179

Change 1 2-1241.1

OIL RESERVOIR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
22. Reservoir (1)	Elbow (2)	a. Wrap pipe threads with antiseizing tape (page 2-424). b. Screw in and tighten using 1 5/16-inch open-end wrench.
23. Elbow (2)	Hose (3)	Screw on and tighten using 1 5/16-inch and 1 1/2-inch open-end wrenches.
24. Reservoir (1)	Elbow (4)	a. Wrap pipe threads with antiseizing tape (page 2-424). b. Screw in and tighten using 3/4-inch open-end wrench.
25. Elbow (4)	Hose (5)	Screw on and tighten using 3/4-inch and 1-inch open-end wrenches.
26. Reservoir (1)	Filter (6)	Install (page 2-1237).



NOTE

FOLLOW-ON MAINTENANCE: Close left side hood panel (page 2-424).

TASK ENDS HERE

TA244476

FILLING STEERING SYSTEM

This task covers:

Filling (page 2-1243)

INITIAL SETUP

Tools

- Pliers, roundnose, 8-inch
- Puller, mechanical, cinch
- Scale, machinist, 6-inch
- Wrench, open-end, 1 5/16-inch

Personnel Required

Two

Equipment Condition

- Left cab door opened (page 2-424).
- Left side hood panel opened (page 2-424).

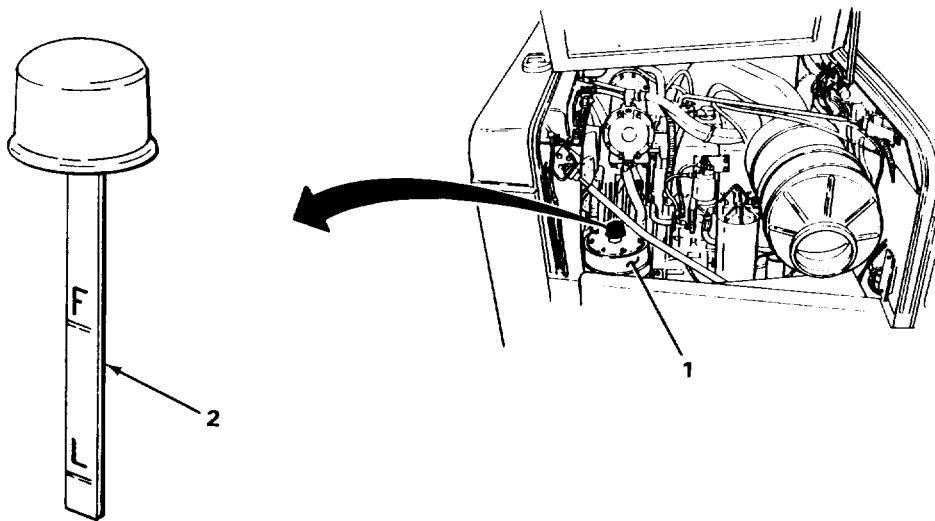
Materials/Parts

- Oil, lubricating (item 14, appendix C)
- Pin, cotter, drag link (two required)
- Rag, wiping (item 15, appendix C)

References

TM 5-3805-254-10 (Operator's Manual)

LOCATION	ITEM	ACTION REMARKS
1. Reservoir (1)	Cap (2)	Pull up and out.



TA244477

FILLING STEERING SYSTEM - CONTINUED

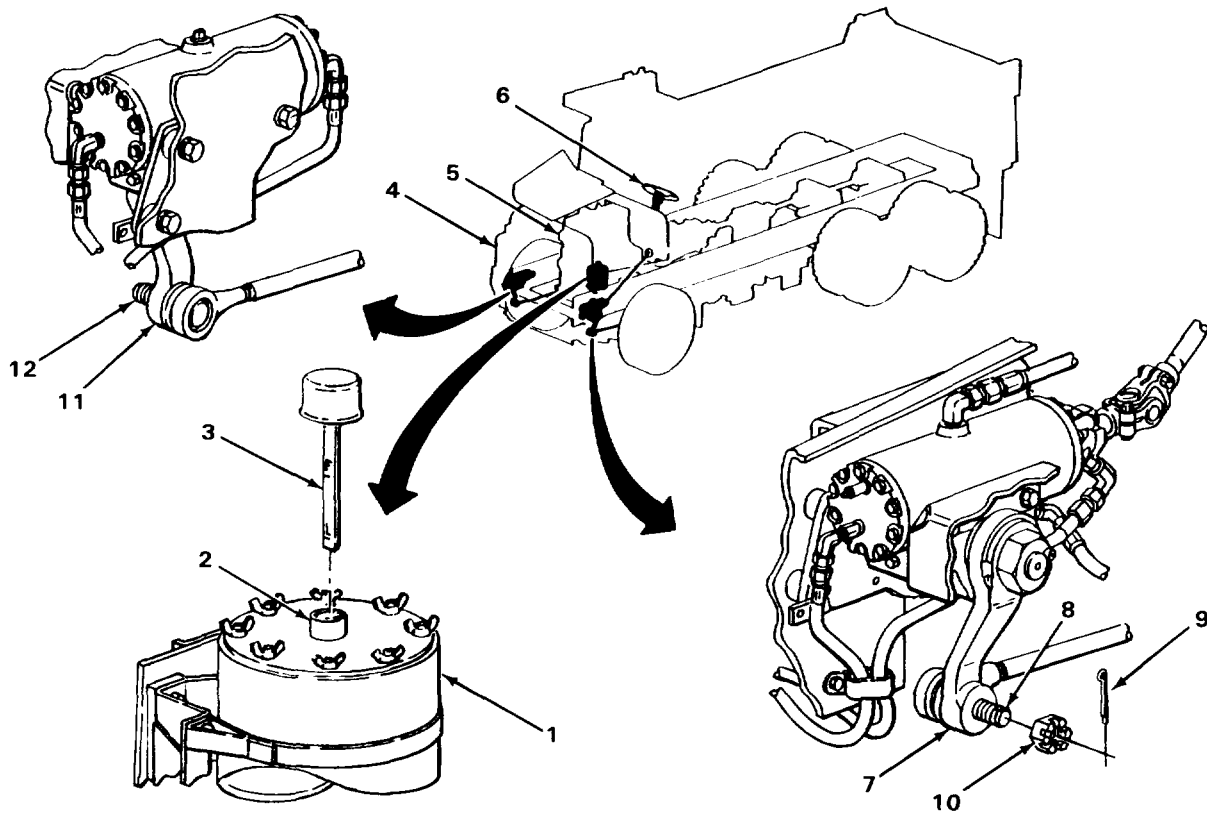
LOCATION	ITEM	ACTION REMARKS
2. Reservoir (1)	Filler neck (2)	Fill with lubricating oil to 4 inches (10.16 cm) below top of filler neck using 6-inch machinist scale.
3.	Cap (3)	Put on.
<u>CAUTION</u>		
Failure to perform the following steps could cause serious damage to equipment.		
4. Dump truck (4)	Engine (5)	a. Start (TM 5-3805-254-10). b. Let idle.
5.	Steering wheel (6)	Slowly turn to full left and to full right three times.
6.	Engine (5)	Shut down (TM 5-3805-254-10).
7. Reservoir (1)	Cap (3)	a. Pull up and out. b. Using wiping rag, wipe clean. c. Put in completely. d. Pull up and out. If oil is up to F (full) mark go to step 8. If oil is below F (full) mark repeat steps 2 thru 7.
8.	Cap (3)	Put on.
9. Dump truck (4)	Engine (5)	a. Start (TM 5-3805-254-10). b. Run at 900 rpm.
10.	Steering wheel (6)	Slowly turn to full left and to full right for three minutes.
11.	Engine (5)	Shut down (TM 53805-254-10).
12. Engine (5)	Reservoir (1)	Repeat steps 1, 2, and 3.

NOTE

Steps 13, 14, and 15 are typical for both left and right steering arms.

FILLING STEERING SYSTEM - CONTINUED

LOCATION	ITEM	ACTION REMARKS
13. Left steering arm (7) and link end (8)	Cotter pin (9)	a. Using 8-inch roundnose pliers, straighten ends and take out. b. Get rid of.
14.	Nut (10)	Using 1 5/16-inch open-end wrench, unscrew and take off.
15. Left steering arm (7)	Link end (8)	Using 8-inch mechanical puller, screw in and take out.
16. Right steering arm (11)	Link end (12)	Repeat steps 13, 14, and 15.



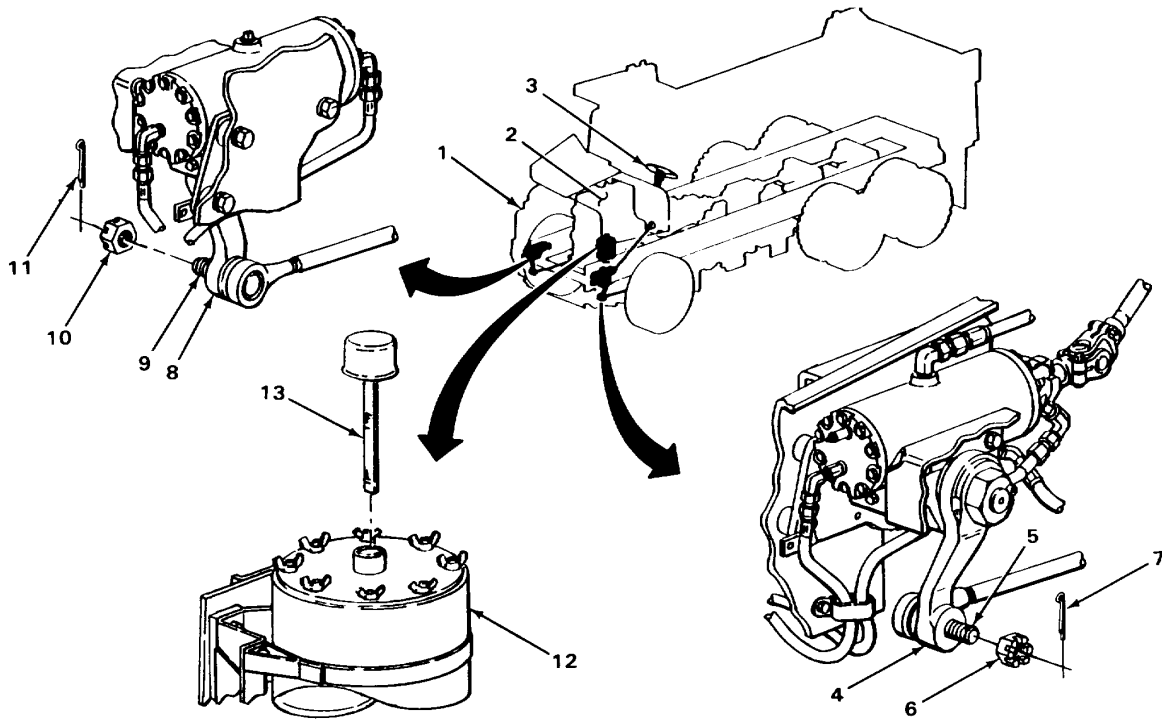
TA244478

FILLING STEERING SYSTEM - CONTINUED

LOCATION	ITEM	ACTION REMARKS
FILLING - CONTINUED		
17	Dump truck (1) Engine (2)	a. Start (Refer to TM 5-3805-254-10). b. Let idle.
<u>WARNING</u>		
Stand clear of steering arms while performing step 18. Failure to observe this precaution could cause serious injury to personnel.		
<u>CAUTION</u>		
Do not move steering arms by hand. Air could be pulled back into system.		
NOTE		
Assistance will be needed to perform steps 18 thru 22.		
Steps 18 thru 22 are typical for both left and right steering arms.		
18.	Steering wheel (3)	a. Have assistant turn steering wheel to full left and hold until right steering arm moves to stop. b. Turn to full right and hold until right steering arm moves to stop. c. Repeat a and b three times. d. Turn to align left steering arm with link end.
19.	Engine (2)	Shut down (TM 5-3805-254-10).
20.	Left steering arm (4)	Put in.
21.	Link end (5) Nut (6)	Screw on and tighten using 1 5/16-inch open-end wrench. Align hole in link end with slot in nut.
22.	Link end (5) and nut (6)	Put in and bend ends back using 8-inch roundnose pliers (page 2-424).
23.	Dump truck (1) Engine (2)	a. Start (TM 5-3805-254-10). b. Let idle.
24.	Dump truck (1) Steering wheel (3) and right steering arm (8)	Repeat step 18.

FILLING STEERING SYSTEM - CONTINUED

LOCATION	ITEM	ACTION REMARKS
25.	Engine (2)	Shut down (TM 5-3805-254-10).
26. Right steering arm (8)	Link end (9), nut (10), and new cotter pin (11)	Repeat steps 20, 21, and 22.
27. Reservoir (12)	Cap (13)	<ol style="list-style-type: none"> Repeat steps 1 thru 6. Pull up and out. Using wiping rag, wipe clean. Put in completely. Pull up and out. If oil is below F (full) repeat step 27 until oil level is full.



NOTE

FOLLOW-ON MAINTENANCE:

1. Close left side cab door (page 2-424).
2. Close left side hood panel (page 2-424).

TASK ENDS HERE

Section XVII. FRAME AND TOWING ATTACHMENT MAINTENANCE

Page

Pintle Hook 2-1248

PINTLE HOOK

This task covers:

- a. Removal (page 2-1248)
- b. Installation (page 2-1249)

INITIAL SETUP

Tools

- Extension, 6-inch, 1/2-inch drive
- Goggles, safety
- Handle, ratchet, 1/2-inch drive
- Socket, 1 1/8-inch, 1/2-inch drive
- Wrench, box-end, 1 1/8-inch
- Wrench, torque, 0-300 ft lb
(0 to 420 N•m), 1/2-inch drive

Personnel

Two

Equipment Condition

Parking brake engaged (TM 5-3805-254-10)

Materials/Parts

Lockwasher, pintle hook (four required)

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

REMOVAL

WARNING

Due to excessive weight, assistance will be needed to lift and remove pintle hook assembly from rear chassis cross-member. Serious injury to personnel could result.

Safety goggles must be worn when working under truck to prevent eye injury.

- | | | | |
|----|-------------------------------|--|---|
| 1. | Rear chassis cross-member (1) | Four screws (2), four nuts (3), and four lockwashers (4) | <ul style="list-style-type: none"> a. Using 1/2-inch drive 6-inch extension, ratchet handle, 1 1/8-inch socket and 1 1/8-inch box-end wrench, with assistance, unscrew and take off. b. Get rid of lockwashers. |
| 2. | Pintle hook (5) | | With assistance, take off. |

PINTLE HOOK - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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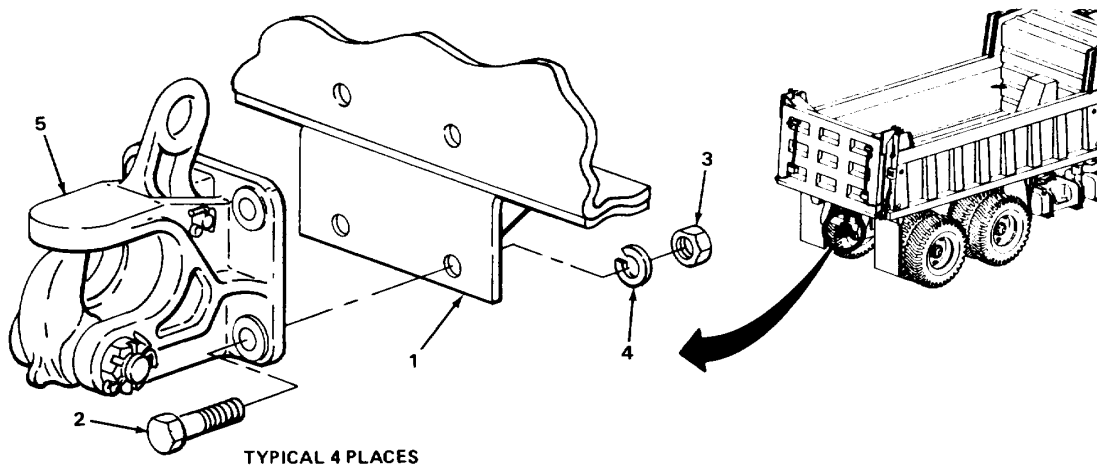
INSTALLATION

WARNING

Due to excessive weight, assistance will be needed to lift and remove pintle hook assembly from rear chassis cross-member. Serious injury to personnel could result.

Safety goggles must be worn when working under truck to prevent injury.

- | | | | |
|----|--|-----------------|---|
| 1. | Rear chassis cross-member (1) | Pintle Hook (5) | With assistance, put in place. |
| 2. | Four screws (2), four nuts (3), and four new lockwashers (4) | | a. With assistance, align screws in pintle hook (5) and rear chassis cross-member (1).
b. Screw nuts on screws and torque to 250 ft lb (281 N•m) using 1/2-inch drive 6-inch extension, 1 1/8-inch socket, torque wrench, 0 to 250 ft lb (0 to 420 N•m) and 1 1/8-inch box-end wrench. |



NOTE

FOLLOW ON MAINTENANCE: Disengage parking brake (TM 5-3805-254-10)

TASK ENDS HERE

TA244480

Section XVIII. BODY, CAB, AND HOOD MAINTENANCE

Page	Page
Driver's Seat..... 2-1274.1	Passenger Seat.....2-1272
Driver's Seat Covers and Pan..... 2-1275	Pioneer Tool Rack Replacement .....2-1284.1
.....	Radiator Grille .....2-1284.3
.....	Seat Belts.....2-1282
Hood..... 2-1251	Splash Guards .....2-1280

HOOD

This task covers:

- | | |
|---|--|
| <ul style="list-style-type: none"> a. Removal (page 2-1252) b. Disassembly (page 2-1254) c. Inspection/Replacement (page 2-1256) | <ul style="list-style-type: none"> d. Assembly (page 2-1258) e. Installation (page 2-1260) |
|---|--|

INITIAL SETUP

Tools

- Handle, ratchet, 1/2-inch drive
- Pliers, slip-joint, 8-inch
- Screwdriver, cross-tip, number two
- Screwdriver, cross-tip, number three
- Socket, 7/16-inch, 1/2-inch drive
- Socket, 1/2-inch, 1/2-inch drive
- Wrench, box-end, 7/16-inch
- Wrench, box-end, 1/2-inch
- Wrench, open-end, 7/16-inch
- Wrench, open-end, 1/2-inch

Materials/Parts

- Cotter pin, anchor pin (four required)
- Lockwasher, hood handle (four required)

Materials/Parts - Continued

- Nut, self-locking, center hood rod retainer to cowl (two required)
- Nut, self-locking, center hood rod retainer to fire wall bracket (two required)
- Nut, self-locking, hood rest to hood (two required)

Personnel Required

Three

Equipment Condition

Left and right side hood panels opened (page 2-424).

HOOD - CONTINUED

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

REMOVAL

WARNING

Assistance is needed to support hood panel to prevent falling and causing personal injury.

- | | | |
|---------------------------------|--|---|
| 1. Right hood rest (1) | Screw (2) and self-locking nut (3) | <ul style="list-style-type: none"> a. Using 1/2-inch drive, 7/16-inch socket, ratchet handle, and 7/16-inch box-end wrench, unscrew and take off. b. Get rid of self-locking nut. c. Place right side hood panel on top of left hood panel. |
| 2. Center hood rod retainer (4) | Two screws (5) and two self-locking nuts (6) | <ul style="list-style-type: none"> a. Using number three cross-tip screwdriver and 1/2-inch open-end wrench, unscrew and take off. b. Get rid of self-locking nuts. c. With two assistants, close right side hood panel. |
| 3. Left hood rest (7) | Screw (8) and self-locking nut (9) | <ul style="list-style-type: none"> a. Using 1/2-inch drive, 7/16-inch socket, ratchet handle, and 7/16-inch box-end wrench, unscrew and take off. b. Get rid of self-locking nut. c. Place left side hood panel on top of right side hood panel. |
| 4. Center hood rod retainer (4) | Two screws (10) and two self-locking nuts (11) | <ul style="list-style-type: none"> a. Using number three cross-tip screwdriver and 1/2-inch open-end wrench, unscrew and take off. b. Get rid of self-locking nuts. c. With two assistants, close left side hood panel. |

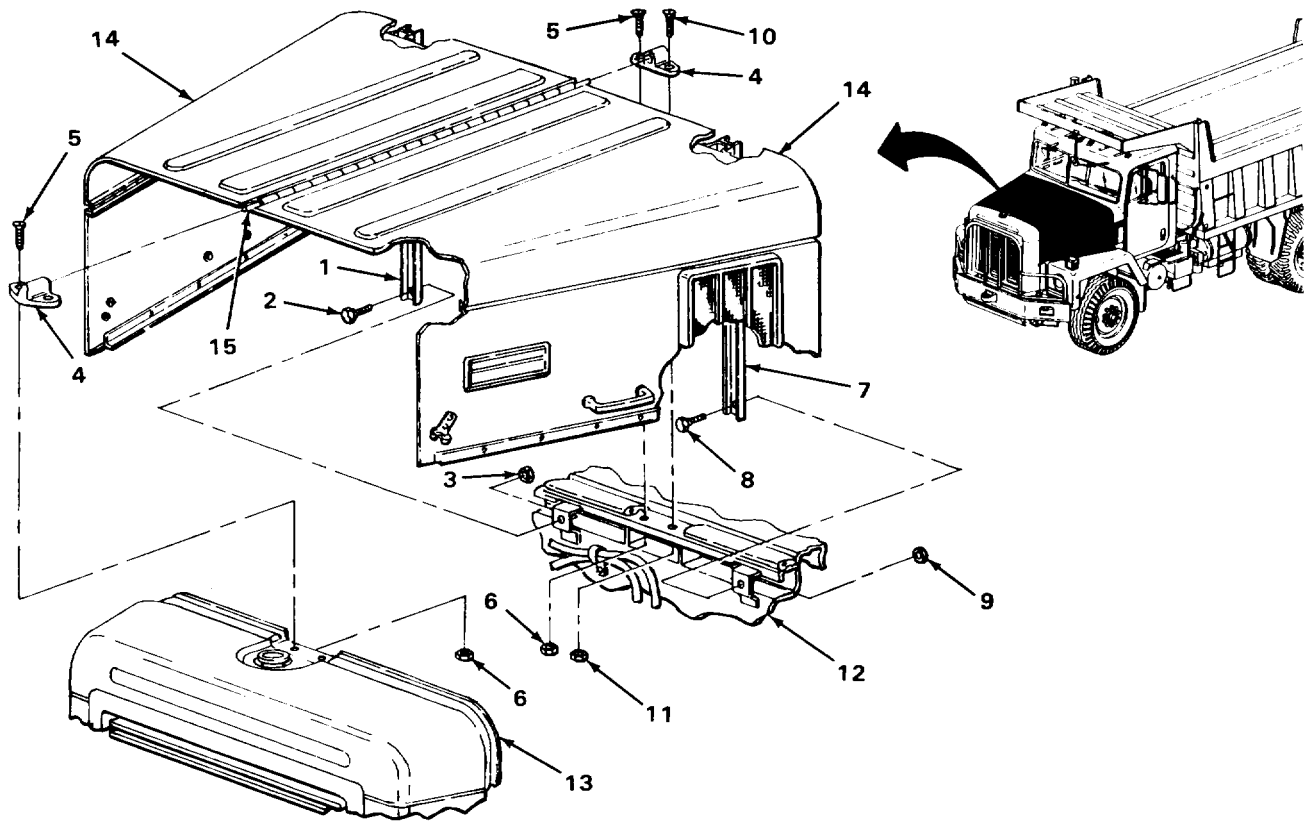
HOOD - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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WARNING

Due to excessive weight, assistance is needed to prevent personal injury when lifting heavy parts.

- | | | |
|--------------------------------------|------------------------------|--------------------------------|
| 5. Cowl (12) and radiator shell (13) | Hood assembly (14) | With two assistants, take off. |
| 6. Center hood hinge pin (15) | Center hood rod retainer (4) | Take off. |



TA244481

HOOD - CONTINUED

LOCATION	ITEM	ACTION REMARKS
DISASSEMBLY		
7. Right side hood panel (1)	Hood handle (2), two screws (3), and two lockwashers (4)	a. Using number three cross-tip screwdriver, unscrew and take out. b. Get rid of lockwashers.
8. Hood rest (5)	Shoulder bolt (6) and nut (7)	Using 1/2-inch drive, 1/2-inch socket, ratchet handle, and 1/2-inch box-end wrench, unscrew and take out.
9. Hood brackets (8)	Two screws (9) and two nuts (10)	Using number two cross-tip screwdriver and 1/2-inch box-end wrench, unscrew and take off.

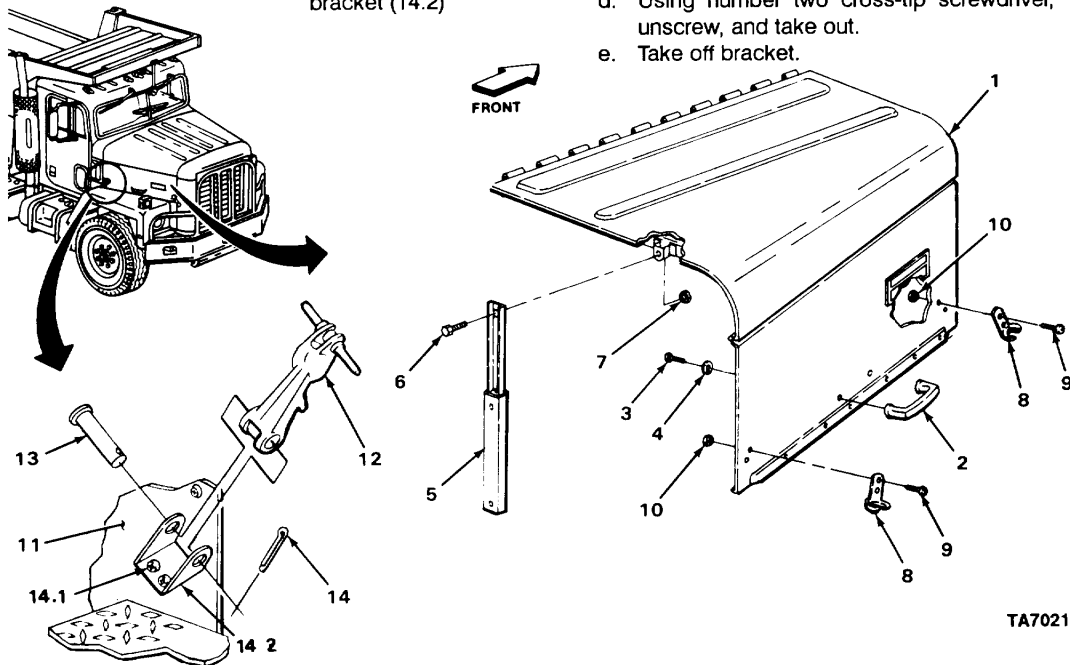
NOTE

All four hood latches are removed the same way.

10. Right side cab (11)

Hood latch hook (12), anchor pin (13), cotter pin (14), two screws (14.1), and bracket (14.2)

- Using 8-inch slip-joint pliers, take out cotter pin.
- Take out anchor pin.
- Take off hood latch hook.
- Using number two cross-tip screwdriver, unscrew, and take out.
- Take off bracket.

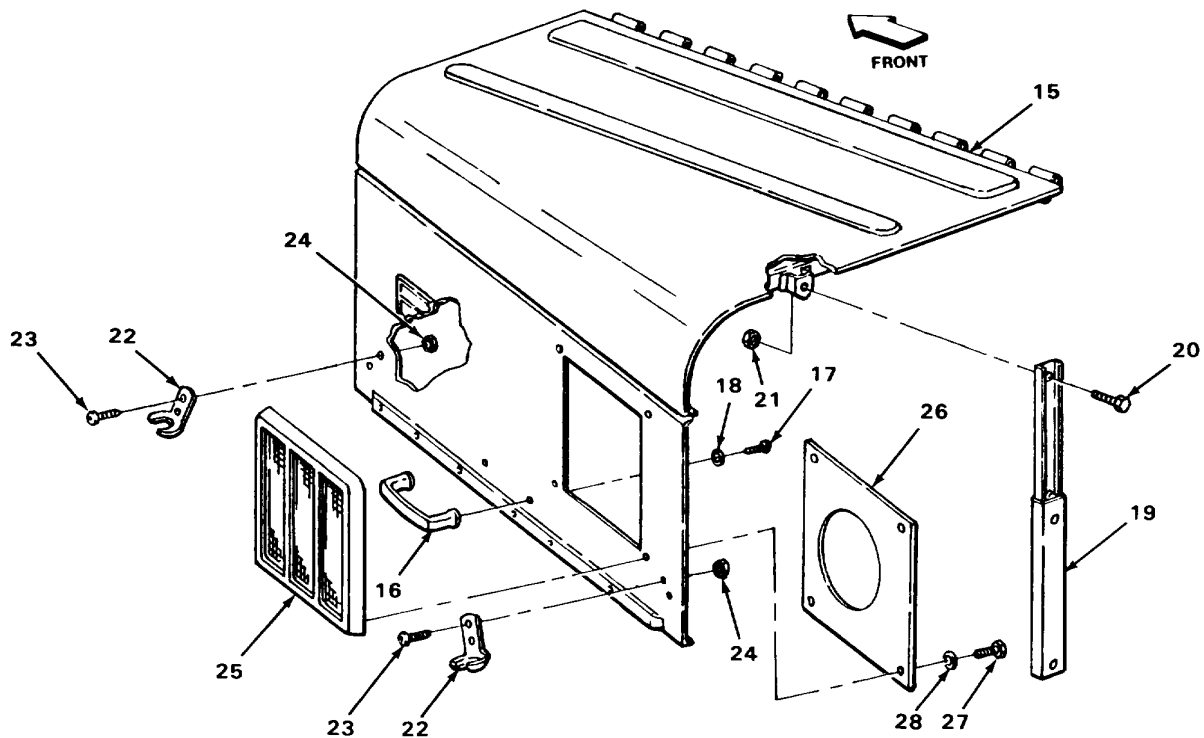


TA702180

TA702180

HOOD - CONTINUED

LOCATION	ITEM	ACTION REMARKS
11. Left side hood panel (15)	Hood handle (16), two screws (17), and two lockwashers (18)	a. Using number three cross-tip screwdriver, unscrew and take out. b. Get rid of lockwashers.
12. Hood rest (19)	Shoulder bolt (20) and nut (21)	Using 1/2-inch drive, 1/2-inch socket, ratchet handle, and 1/2-inch box-end wrench, unscrew and take out.
13. Hood brackets (22)	Two screws (23) and two nuts (24)	Using number two cross-tip screwdriver and 1/2-inch box-end wrench, unscrew and take off.
14. Air intake deflector (25) and intake cover plate (26)	Four bolts (27) and four flat washers (28)	Using 7/16-inch open-end wrench, unscrew and take out.



TA244483

HOOD - CONTINUED

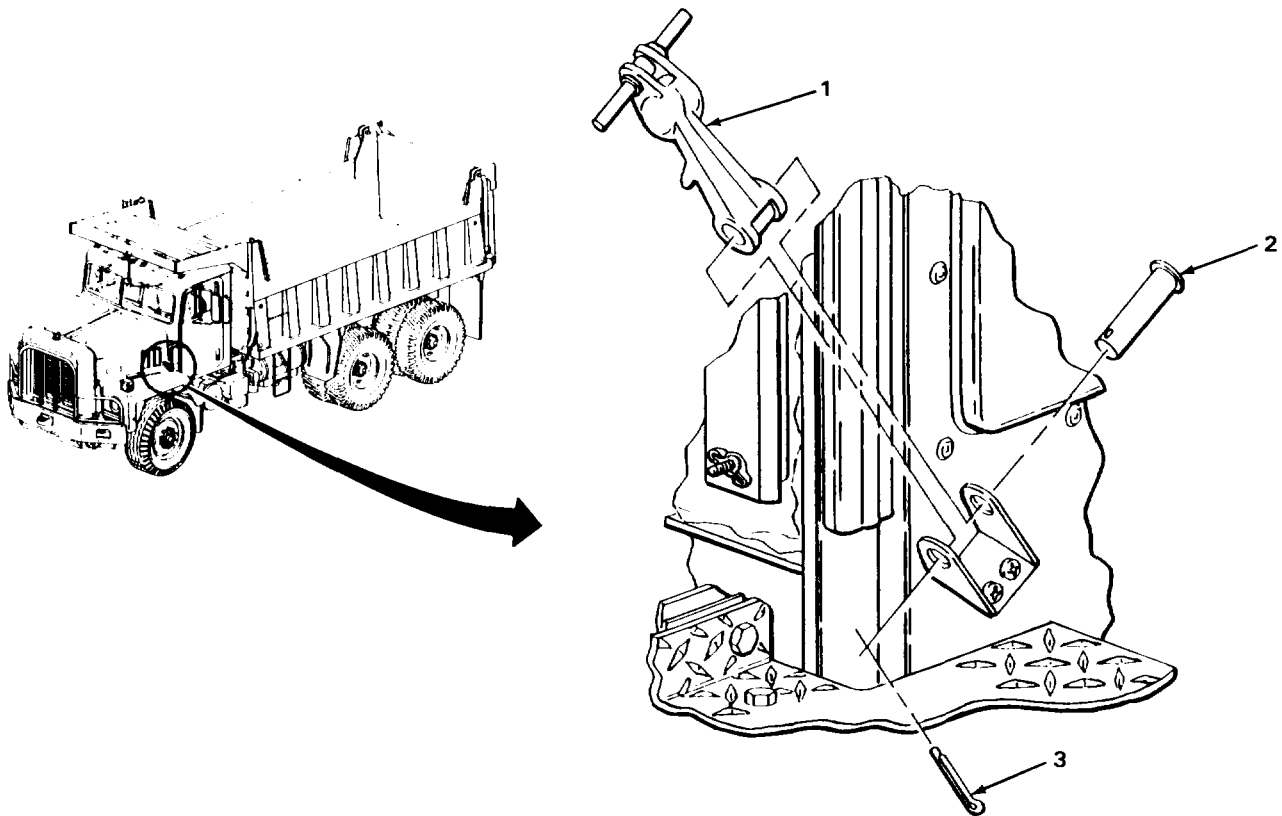
LOCATION	ITEM	ACTION REMARKS
INSPECTION/REPLACEMENT		

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

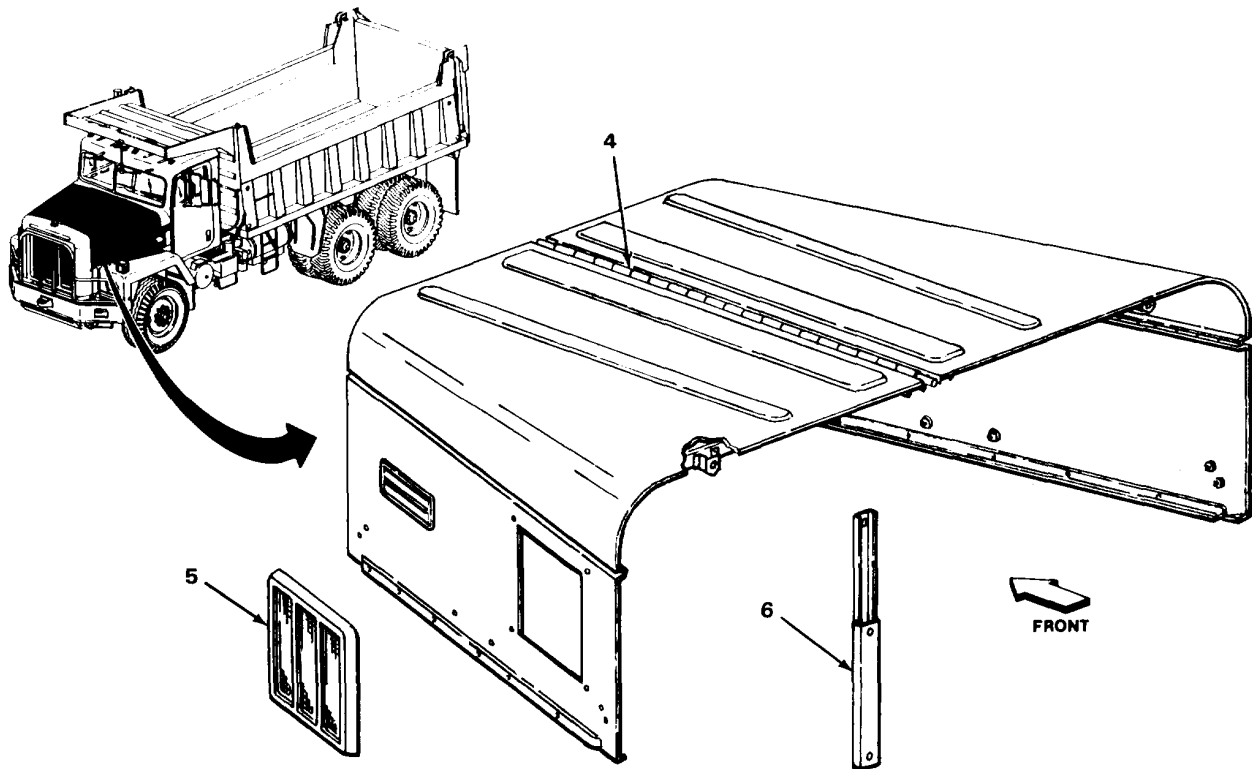
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|-----|----------------------|--|
| 15. | Hood latch hooks (1) | Look for cracks, brittleness, and broken pieces. |
| 16. | Anchor pins (2) | Look for cracks, breaks, and wear. |
| 17. | Cotter pins (3) | Check for breaks or distortion.
Replace as required. |



TA244484

HOOD - CONTINUED

LOCATION	ITEM	ACTION REMARKS
18.	Hood panels (4)	Check welded and riveted areas for cracks or breaks.
19.	Air intake deflector (5)	Check for dents or tears.
20.	Hood rests (6)	Check for twists, bends, or improper action.
21.	All threaded parts	a. Look for damaged threads or rounded heads. b. Check cross-tip grooves for wear.



TA244485

HOOD - CONTINUED

LOCATION	ITEM	ACTION REMARKS
ASSEMBLY		
22. Right side hood panel (1)	Hood handle (2), two screws (3), and two new lockwashers (4)	Screw in and tighten using number three cross-tip screwdriver.
23. Hood rest (5)	Shoulder bolt (6) and nut (7)	Screw in and tighten using 1/2-inch drive, 1/2-inch socket, ratchet handle, and 1/2-inch box-end wrench.
24. Hood brackets (8)	Two screws (9) and two nuts (10)	Screw in and tighten using number two cross-tip screwdriver and 1/2-inch box-end wrench.

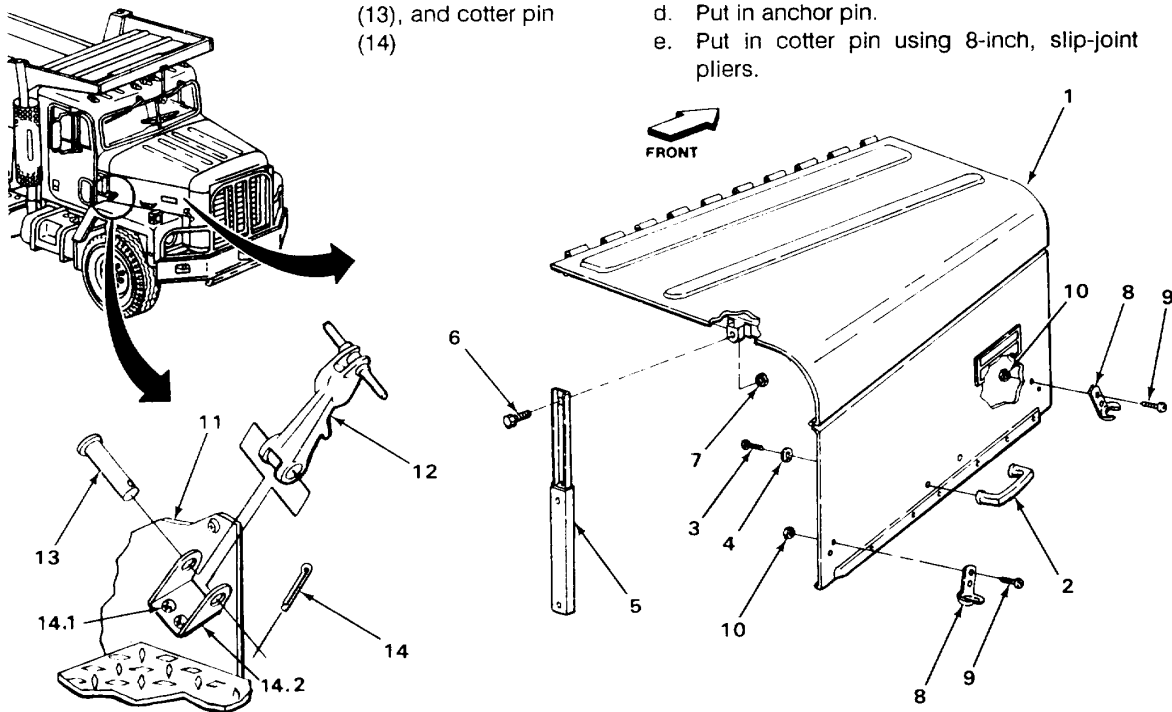
NOTE

All four hood latches are installed the same way.

25. Right side cab (11)

Bracket (14.2), two screws (14.1), hood latch hook (12), anchor pin (13), and cotter pin (14)

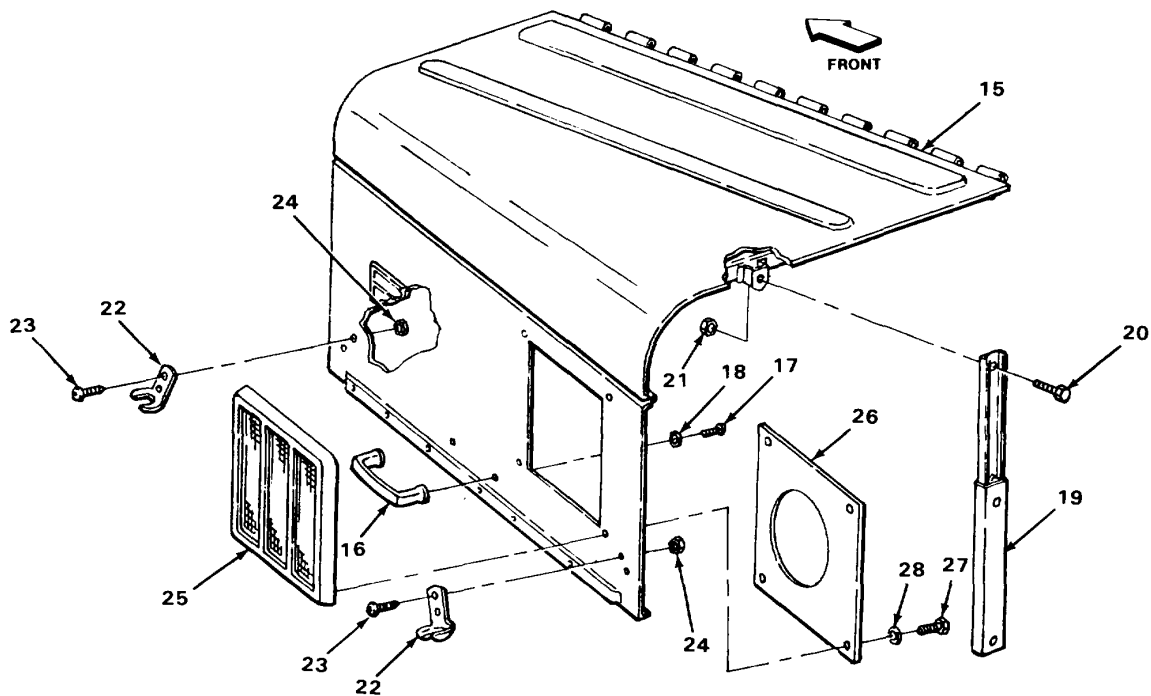
- a. Put bracket in place.
- b. Screw in and tighten using number two cross-tip screwdriver.
- c. Put hood latch hook in place.
- d. Put in anchor pin.
- e. Put in cotter pin using 8-inch, slip-joint pliers.



TA702181

HOOD - CONTINUED

LOCATION	ITEM	ACTION REMARKS
26. Left side hood panel (15)	Hood handle (16), two screws (17), and two new lockwashers (18)	Screw in and tighten using number three cross-tip screwdriver.
27. Hood rest (19)	Shoulder bolt (20) and nut (21)	Screw in and tighten using 1/2-inch drive, 1/2-inch socket, ratchet handle, and 1/2-inch box-end wrench.
28. Hood brackets (22)	Two screws (23) and two nuts (24)	Screw in and tighten using number two cross-tip screwdriver and 1/2-inch box-end wrench.
29. Air intake deflector (25) and intake cover plate (26)	Four bolts (27) and four flat washers (28)	Screw in and tighten using 7/16-inch open-end wrench.



TA244487

HOOD - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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INSTALLATION

WARNING

Due to excessive weight, assistance is needed to prevent personal injury when lifting heavy parts.

- | | | | |
|-----|-----------------------------|------------------------------|---|
| 30. | Center hood hinge pin (1) | Center hood rod retainer (2) | Put on. |
| 31. | Cowl and radiator shell (3) | Hood assembly (4) | With two assistants, place in position and align boltholes. |

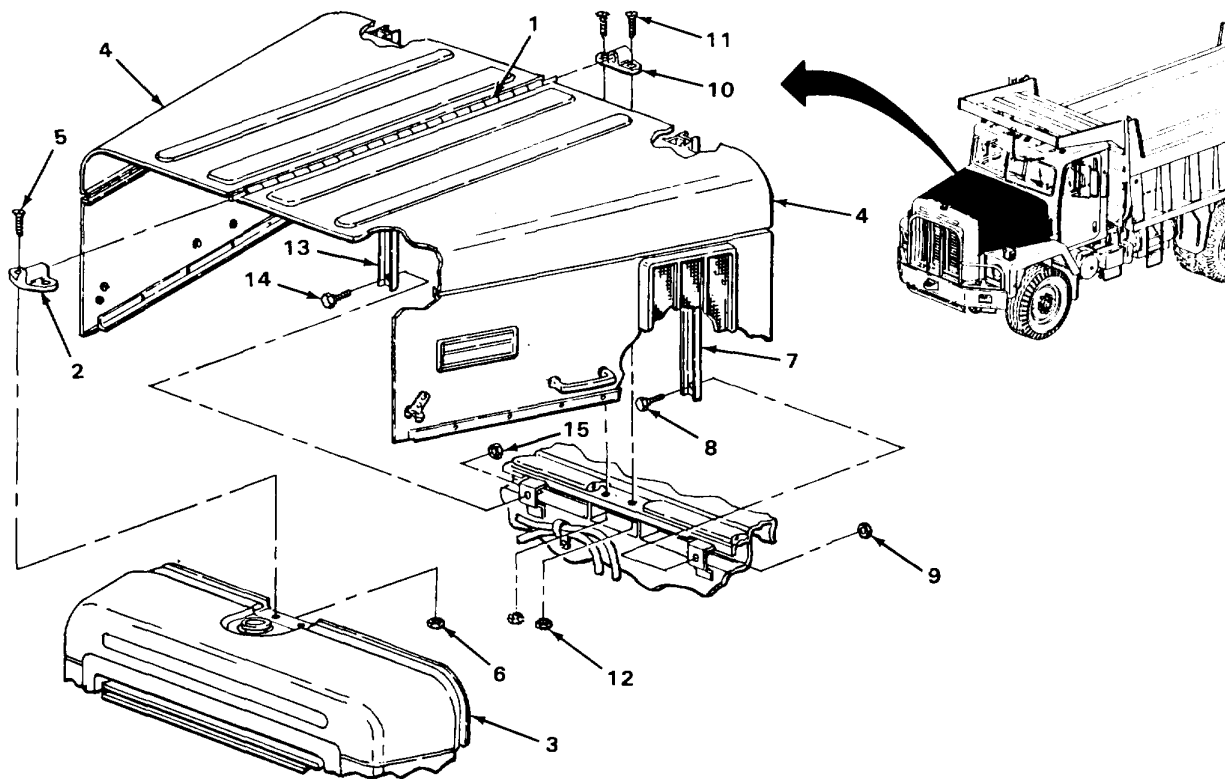
WARNING

Assistance is needed to support hood panel to prevent falling and causing personal injury.

- | | | | |
|-----|--|--|--|
| 32. | Left side center hood rod retainer (2) | Two screws (5) and two new self-locking nuts (6) | <ul style="list-style-type: none"> a. Place left side hood panel on top of right side hood panel. b. Screw in and tighten using number three cross-tip screwdriver and 1/2-inch open-end wrench. |
| 33. | Hood rest (7) | Screw (8) and new self-locking nut (9) | <ul style="list-style-type: none"> a. With two assistants, support hood in open position. b. Screw in and tighten using 1/2-inch drive, 7/16-inch socket, ratchet handle, and 7/16-inch box-end wrench. c. With two assistants, close left side hood panel. |
| 34. | Right side center hood rod retainer (10) | Two screws (11) and two new self-locking nuts (12) | <ul style="list-style-type: none"> a. Place right side hood panel on top of left side hood panel. b. Screw in and tighten using number three cross-tip screwdriver and 1/2-inch open-end wrench. |

HOOD - CONTINUED

LOCATION	ITEM	ACTION REMARKS
35. Hood rest (13)	Screw (14) and new self-locking nut (15)	a. With two assistants, support hood in open position. b. Screw in and tighten using 1/2-inch drive, 7/16-inch socket, ratchet handle, and 7/16-inch box-end wrench. c. With two assistants, close right side hood panel.



NOTE

FOLLOW-ON MAINTENANCE: Close left and right side hood panels (page 2-424).

TASK ENDS HERE

Pages 2-1262 through 2-1271 are rescinded.

TA244488

PASSENGER SEAT

This task covers:

- a. Removal (page 2-1272)
- b. Inspection/Replacement (page 2-1272)
- c. Disassembly (page 2-1273)
- d. Assembly (page 2-1274)
- e. Installation (page 2-1274)

INITIAL SETUP

Tools

Handle, ratchet, 1/2-inch drive
 Screwdriver, cross-tip, number two
 Screwdriver, flat-tip, 1/4-inch
 Socket, 9/16-inch, 1/2-inch drive
 Staple gun, 3/8-inch capacity

Personnel Required

One

Equipment Condition

Right cab door opened (page 2-424).

Materials/Parts

Lockwasher, seat frame to heater box
 cover (four required)
 Staples, 3/8-inch (as required)

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

REMOVAL

- | | | |
|-------------------------------------|--|---|
| 1. Seat frame (1) | Seat cushion (2) | Lift up and take off. |
| 2. Seat frame (1) to heater box (3) | Four screws (4), four lockwashers (5), and four flat washers (6) | a. Using 1/2-inch drive, 9/16 inch socket and ratchet handle, unscrew and take out.
b. Get rid of lockwashers. |
| 3. Heater box (3) | Seat frame (1) | Take out. |
| 4. Seat frame (1) | Back cushion (7) and four screws (8) | a. Using number two cross-tip screwdriver, unscrew and take out.
b. Take off back cushion. |

INSPECTION/REPLACEMENT

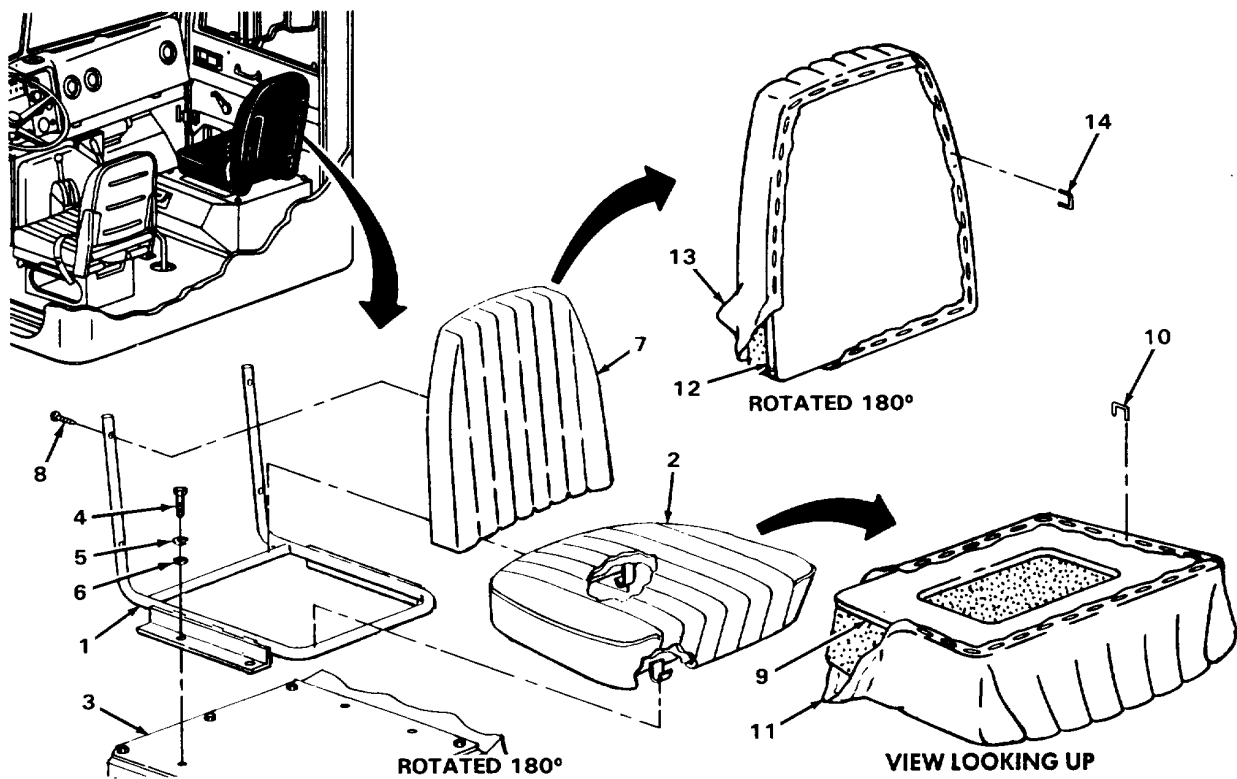
NOTE

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

- | | | |
|----|----------------|---|
| 5. | Seat frame (1) | Look for cracks, breaks on bends.
If damage, replace. |
|----|----------------|---|

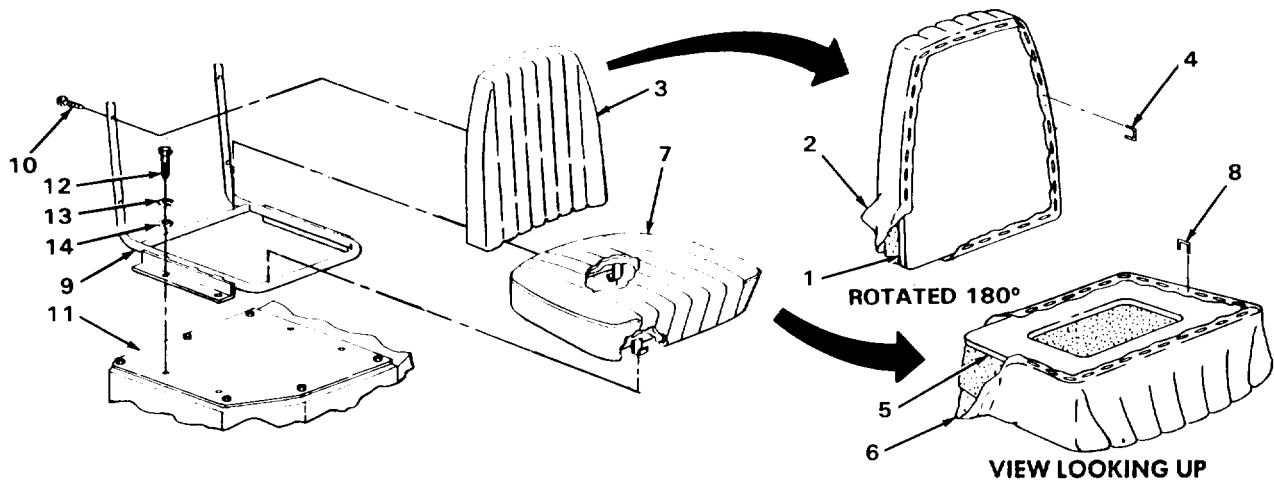
PASSENGER SEAT - CONTINUED

LOCATION	ITEM	ACTION REMARKS
6.	Seat cushion (2) and back cushion (7)	Look for rips or tears. If damaged, perform steps 7 thru 10.
DISASSEMBLY		
7. Seat cushion support (9)	Staples (10), seat cushion (2) and cover (11)	a. Using 1/4-inch flat-tip screwdriver, pry staples away from seat cushion. b. Get rid of staples. c. Take cover off seat cushion.
8. Back cushion support (12)	Staples (13), back cushion (7) and cover (14)	a. Using 1/4-inch flat-tip screw driver, pry staples away from back cushion. b. Get rid of staples. c. Take cover off back cushion.



TA244661

LOCATION	ITEM	ACTION REMARKS
ASSEMBLY		
9. Back cushion support (1)	Cover (2), and back cushion (3)	Put cover on back cushion.
10. Back cushion (3)	Back cushion support (1), cover (2) and staples (4).	Using staple gun and 3/8-inch staples, attach cover to back cushion support.
11. Seat cushion support (5)	Cover (6) and seat cushion (7)	Put cover on seat cushion.
12. Seat cushion (7)	Seat cushion support (5), cover (6) and staples (8).	Using staple gun and 3/4-inch staples, attach cover to seat cushion support.
INSTALLATION		
13. Seat frame (9)	Back cushion (3) and four screws (10)	a. Put back cushion in place. b. Screw in and tighten using number two cross-tip screwdriver.
14. Heater box (11)	Seat frame (9)	Put in place.
15. Seat frame (9) to heater box (11)	Four screws (12), four new lockwashers (13) and four flat washers (14)	Screw in and tighten using 1/2-inch drive, 9/16 socket and ratchet handle.
16. Seat frame (9)	Seat cushion (7)	Put in position and push down until cushion snaps into place.



NOTE

FOLLOW-ON MAINTENANCE: Close right cab door (page 2-424).

TASK ENDS HERE

TA244497

DRIVER'S SEAT

This task covers:

- a. Removal (page 2-1274.2)
 - b. Installation (page 2-1274.2)
-

INITIAL SETUP

Equipment Conditions

Airbrake system drained (page 2-1034).

Tools/Test Equipment

Handle, ratchet, 3/8-in drive
Socket, 1/2-inch, 3/8-Inch drive
Extension, 3-inch, 3/8-inch drive
Wrench, open-end, 7/16-inch
Wrench, open-end, 9/16-inch

Materials/Parts

Lockwasher, driver's seat (four required)
Lockwasher, seat riser (four required)

Personnel Required

One

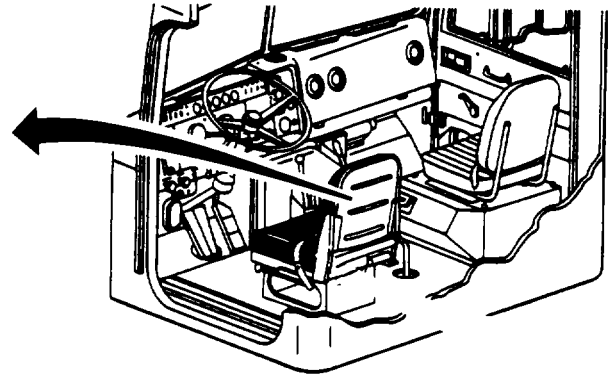
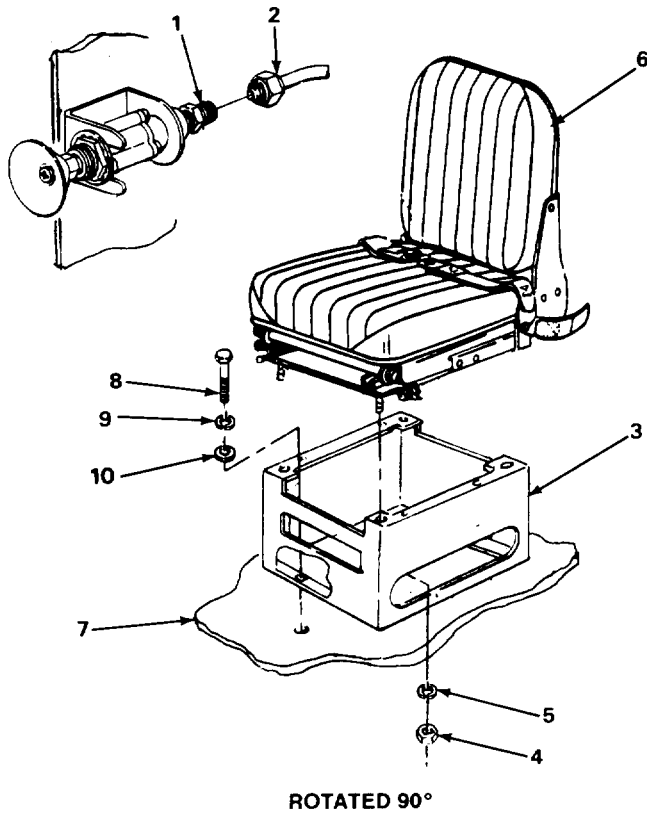
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DRIVER'S SEAT - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
<u>WARNING</u>		
Drain air from airbrake system before removing fittings to avoid injury to personnel from compressed air.		
1. Pipe nipple (1)	Air hose (2)	Using 7/16-inch and 9/16-inch open-end wrenches, unscrew, and take off.
2. Seat riser (3)	Four nuts (4) and lockwashers (5)	a. Using 1/2-inch, 3/8-inch drive socket, 3-inch extension, and ratchet handle, unscrew, and take out. b. Get rid of lockwashers.
3.	Driver's seat (6)	Take out.
4. Floorboards (7)	Four screws (8), lockwashers (9), and washers (10)	a. Using 1/2-inch, 3/8-inch drive socket, 3-inch extension, and ratchet handle, unscrew, and take out. b. Get rid of lockwashers.
5.	Seat riser (3)	Take out.
INSTALLATION		
6. Floorboards (7)	Seat riser (3)	Put in place.
7.	Four screws (8), new lockwashers (9), and washers (10)	Screw in and tighten using 1/2-inch, 3/8-inch drive socket, 3-inch extension, and ratchet handle.
8. Seat riser (3)	Driver's seat (6)	Put in place.
9.	Four nuts (4) and new lockwashers (5)	Screw in and tighten, using 1/2-inch, 3/8-inch drive socket, 3-inch extension, and ratchet handle.
10. Pipe nipple (1)	Air hose (2)	Screw on and tighten using 7/16-inch and 9/16-inch open-end wrenches.

DRIVER'S SEAT - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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TASK ENDS HERE

TA702182

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DRIVER'S SEAT COVERS AND PAN

This task covers:

- a. Removal (page 2-1275)
- b. Installation (page 2-1275)

INITIAL SETUP

Tools

Screwdriver, flat-tip, 1/4-inch
Wrench, box-end, 7/16-inch

Equipment Condition

Left cab door opened (page 2-424)

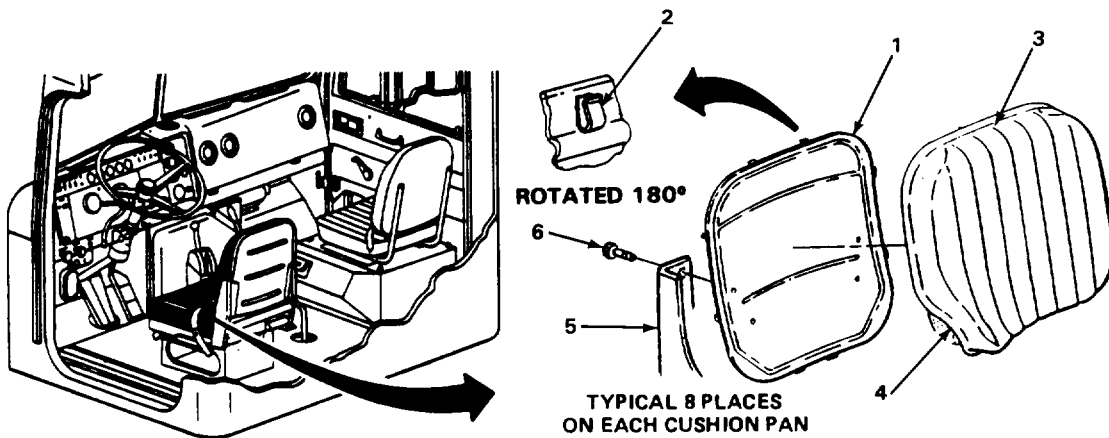
LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

NOTE

Steps given are typical for seat and back cushion covers.

REMOVAL

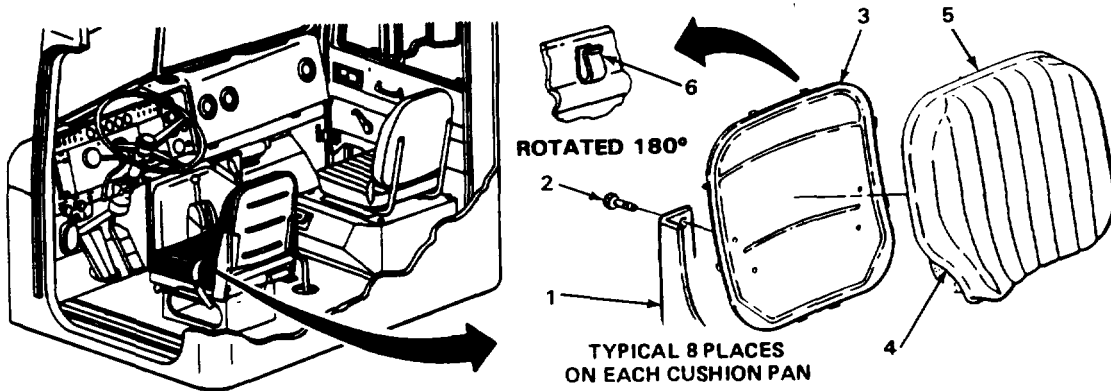
- | | | |
|----------------------|---|--|
| 1. Cushion pan (1) | Eight clips (2), cushion (3), and cover (4) | <ul style="list-style-type: none"> a. Using 1/4-inch flat-tip screwdriver, pry clips away from cushion. b. Take cushion off cushion pan. c. Pull cover off cushion. |
| 2. Driver's seat (5) | Four screws (6) and cushion pan (1) | Take off. |



TA702183

DRIVER'S SEAT COVERS AND PAN - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
3. Driver's seat (1)	Four screws (2) and cushion pan (3)	Put on and tighten using 7/16-inch box-end wrench.
4. Cushion pan (3)	Cover (4), cushion (5), and eight clips (6)	a. Put cover on cushion. b. Put cushion on cushion pan and pry clips over cushion using 1/4-inch flat-tip screwdriver.



NOTE

FOLLOW-ON MAINTENANCE: Close left cab door (page 2-424).

TASK ENDS HERE

Pages 2-1276 through 2-1279 are rescinded.

SPLASH GUARDS

This task covers:

- a. Removal (page 2-1280)
 - b. Installation (page 2-1280)
-

INITIAL SETUP

Tools	Personnel Required
Wrench, box-end, 1/2-inch Wrench, box-end, 9/16-inch	One
Materials/Parts	
Lockwasher, splash guards (four required)	

REMOVAL

NOTE

Steps given are typical for both splash guards.

- | | | |
|-------------------------|---|--|
| 1. Mounting bracket (1) | Four bolts (2), four lockwashers (3), and four nuts (4) | Using 9/16-inch and 1/2-inch box-end wrenches, unscrew and take out. |
| 2. | Splash guard (5) and bracket (6) | Take off. |

INSTALLATION

- | | | |
|-------------------------|----------------------------------|---------------|
| 3. Mounting bracket (1) | Splash guard (5) and bracket (6) | Put in place. |
|-------------------------|----------------------------------|---------------|

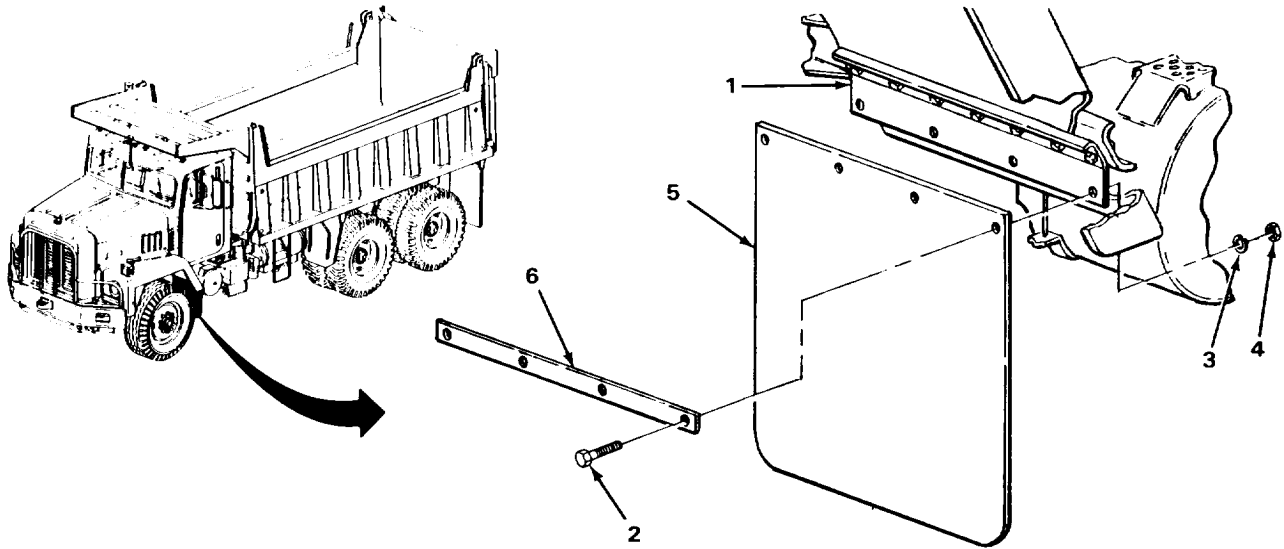
SPLASH GUARDS

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

4.

Four bolts (2), four new lockwashers (3), and four nuts (4)

Screw in and tighten using 9/16-inch and 1/2-inch box-end wrenches.



TA244501

2-1281

SEAT BELTS

This task covers:

- a. Removal (page 2-1282)
 - b. Installation (page 2-1282)
-

INITIAL SETUP

Tools

Handle, ratchet, 1/2-inch drive
 Socket, 5116-inch, 1/2-inch drive
 Wrench, box-end, 3/4-inch
 Wrench, open-end, 11/16-inch

Personnel Required

One

Equipment Condition

Cab doors opened (page 2-424).

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
1. Right side rear cab wall (1)	Two bolts (2) and seat belts (3)	<ul style="list-style-type: none"> a. Using 3/4-inch box-end wrench, unscrew bolts and take out. b. Take off seat belts.
2. Driver's seat (4)	Two bolts (5), two nuts (6), and seat belts (7)	<ul style="list-style-type: none"> a. Using 1/2-inch drive 5/16-inch socket, ratchet handle, and 11/16-inch open-end wrench, unscrew bolts and nuts and take out. b. Take off seat belts.

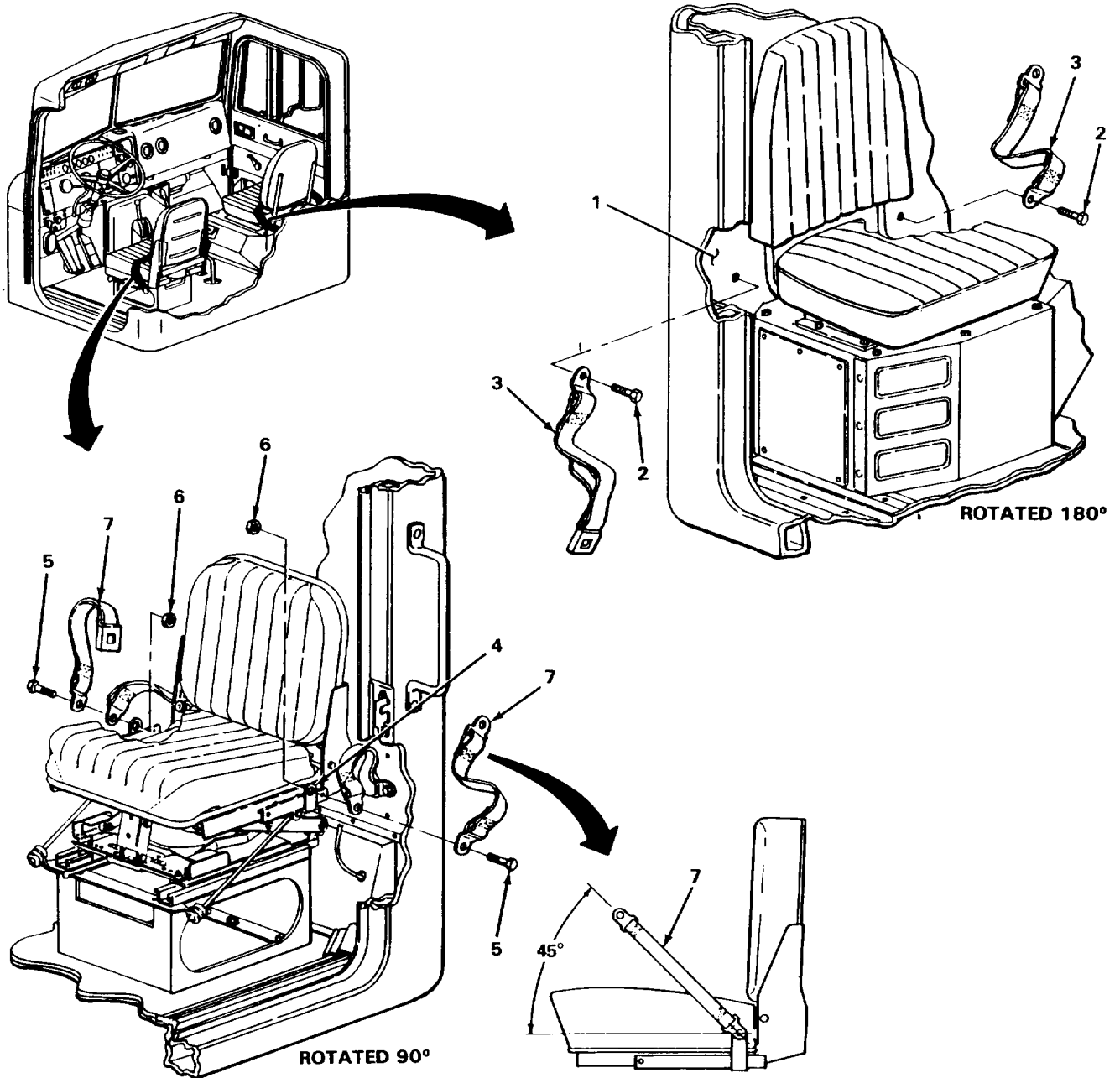
INSTALLATION

WARNING

Seat belts must be positioned correctly for proper operation.

- | | | |
|---------------------|---|--|
| 3. Drivers seat (4) | Two bolts (5), two nuts (6), and seat belts (7) | <ul style="list-style-type: none"> a. Put seat belts in place. b. Position seat belt at 45-degree angle. c. Screw in and tighten bolts and nuts using 1/2-inch drive 15/16-inch socket, ratchet handle, and 11/16-inch open-end wrench. |
|---------------------|---|--|

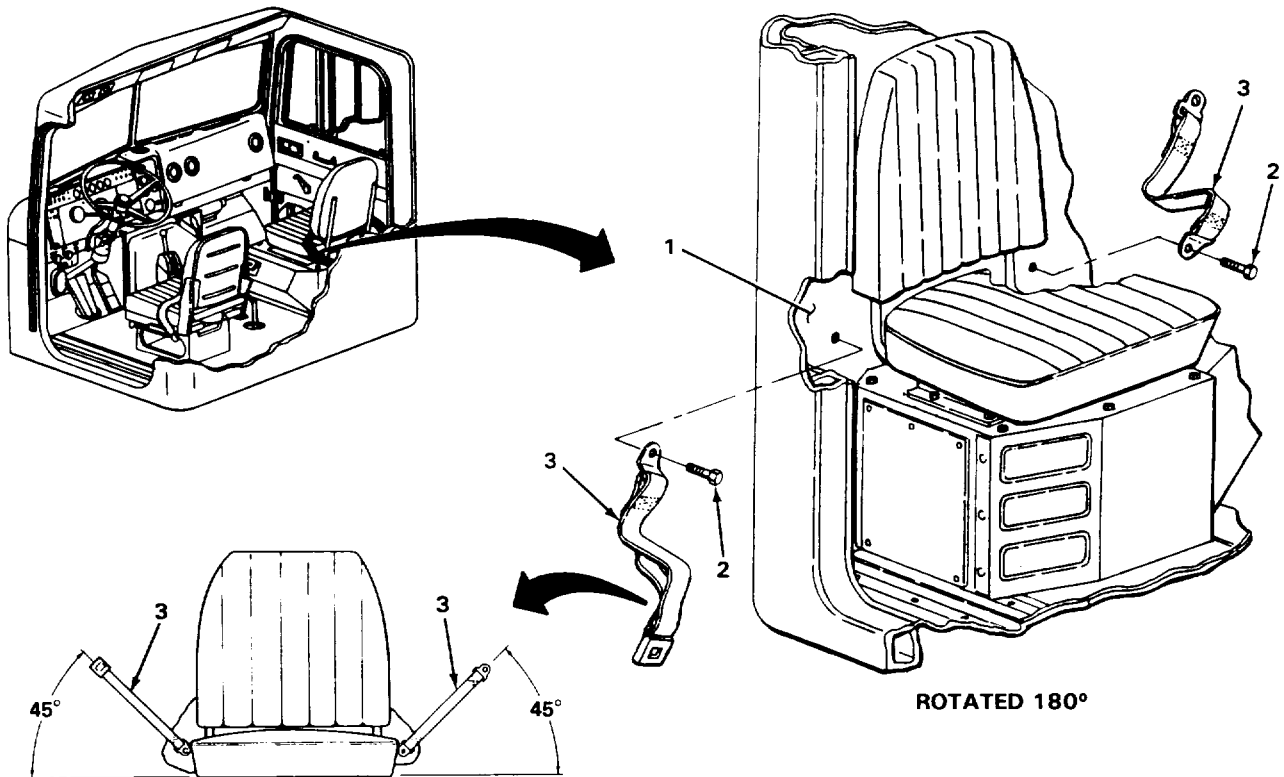
SEAT BELTS - CONTINUED



TA244502

SEAT BELTS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
4. Right side rear cab wall (1)	Two bolts (2) and seat belts (3)	a. Put seat belts in place. b. Position seat belt at 45-degree angle on right side rear cab wall. c. Screw in and tighten bolts using 3/4-inch box-end wrench.



NOTE

FOLLOW-ON MAINTENANCE: Close cab doors (page 2-424).

TASK ENDS HERE

TA244503

PIONEER TOOL RACK

This task covers:

- a. Removal (page 2-1284.1)
- b. Installation (page 2-1284.2)

INITIAL SETUP

Tools/Test Equipment

Handle, ratchet, 1/2-inch drive
 Socket, deep, 9/16-inch, 1/2-inch drive
 Wrench, box, 9/16-inch

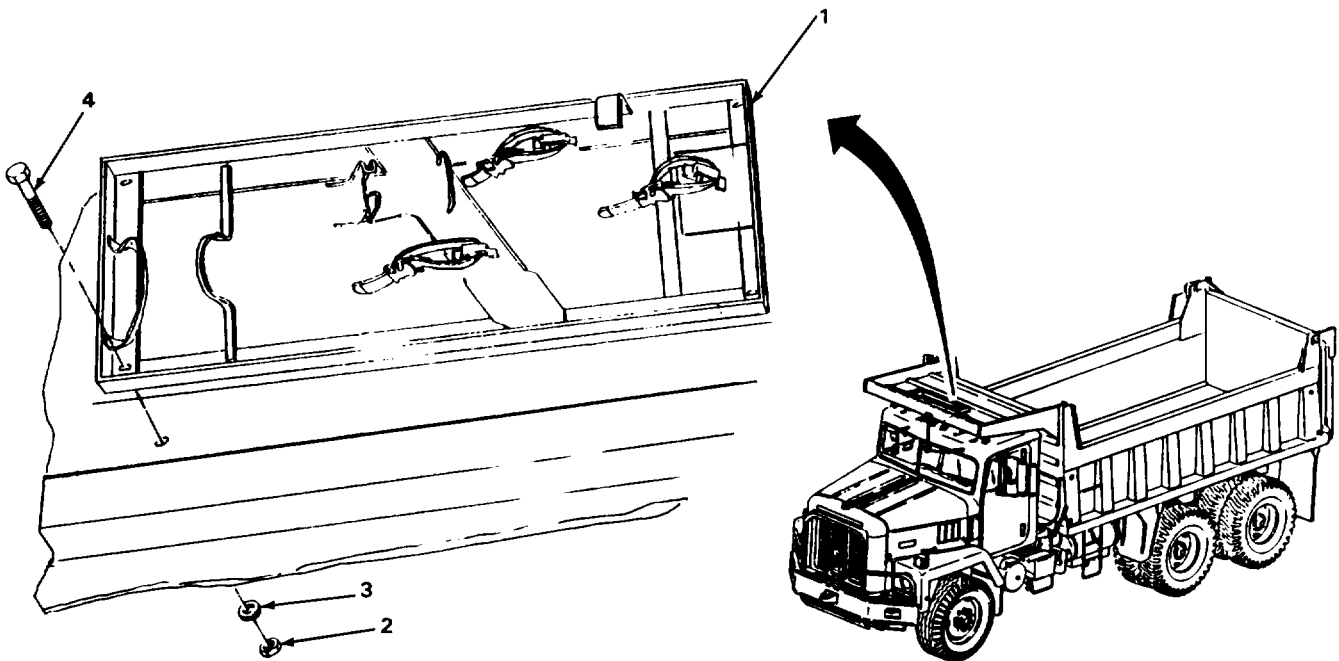
Personnel Required

Two

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

REMOVAL

- | | | |
|--------------------|--|---|
| 1. Top of body (1) | Four nuts (2), washers (3), and screws (4) | Using 9/16-inch, 1/2-inch drive deep socket, ratchet handle, and 9/16-inch box-end wrench, unscrew, and take off. |
|--------------------|--|---|

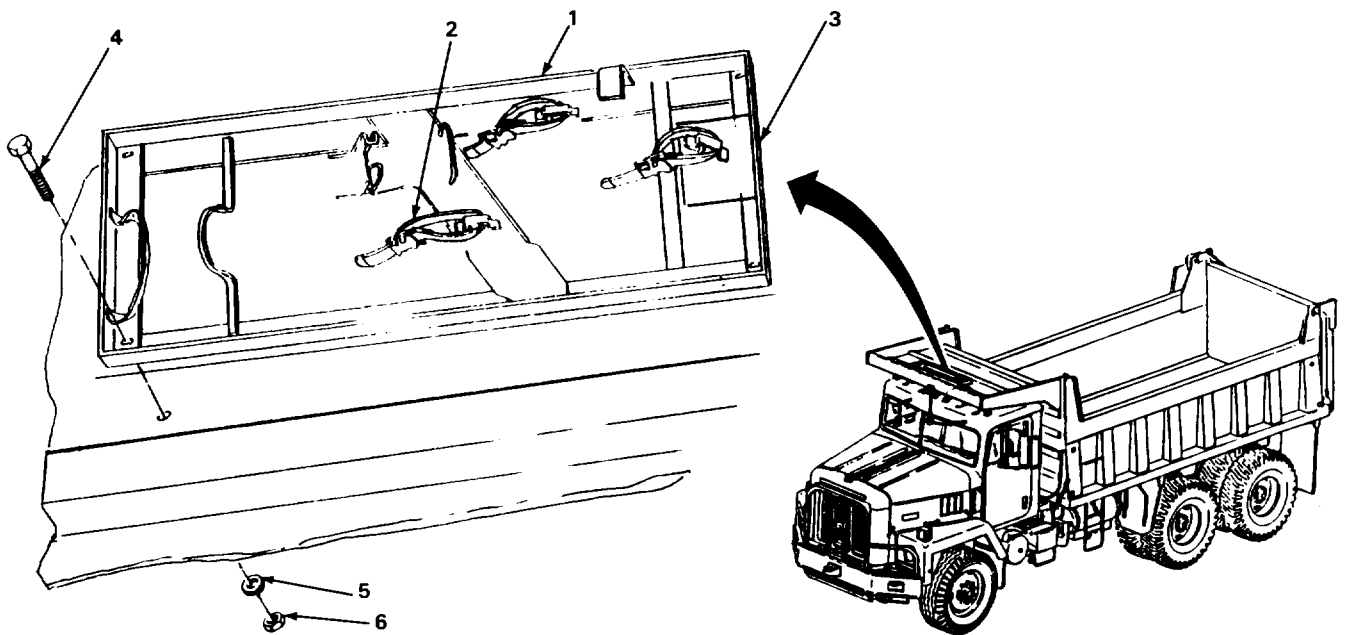


TA702185

Change 1 2-1284.1

PIONEER TOOL RACK - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
2.	Tool rack (1)	With assistance, take off.	
3.	Tool rack (1)	Strap (2)	Put on.
INSTALLATION			
4.	Tool rack (1)	Strap (2)	Put on.
5.	Top of body (3)	Tool rack (1)	With assistance, put on.
6.	Four screws (4), washers (5), and nuts (6)	Screw on and tighten using 9/16-inch, 1/2-inch drive deep socket, ratchet handle, and 9/16-inch box-end wrench.	



TASK ENDS HERE

TA702186

RADIATOR GRILLE

This task covers:

- a. Removal (page 2-1284.3)
- b. Installation (page 2-1284.4)

INITIAL SETUP

Materials/Parts

Seven speed nuts

Personnel Required

One

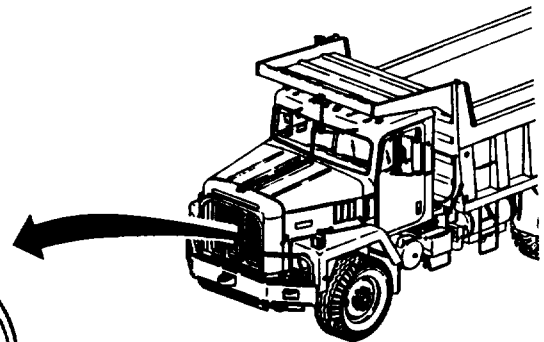
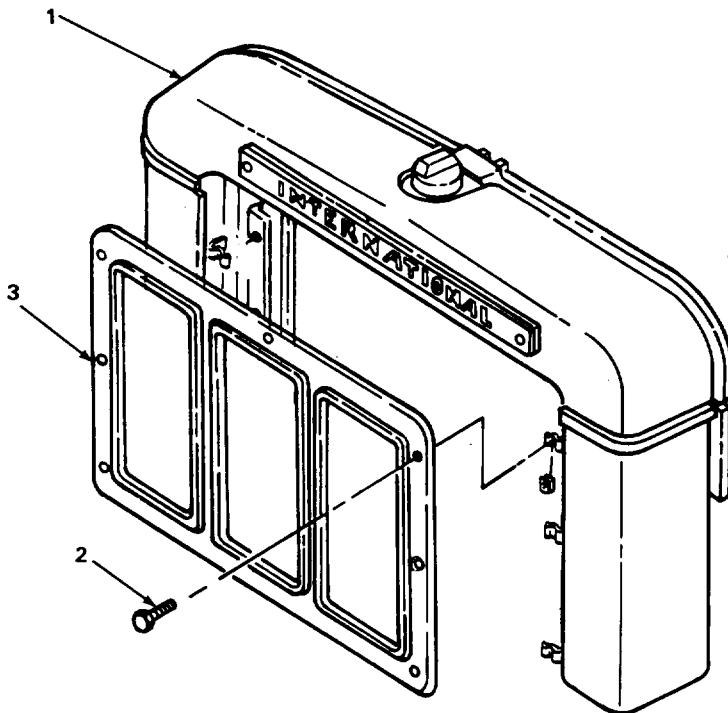
Tools/Test Equipment

Screwdriver, cross-tip, number three

LOCATION	ITEM	ACTION REMARKS
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REMOVAL

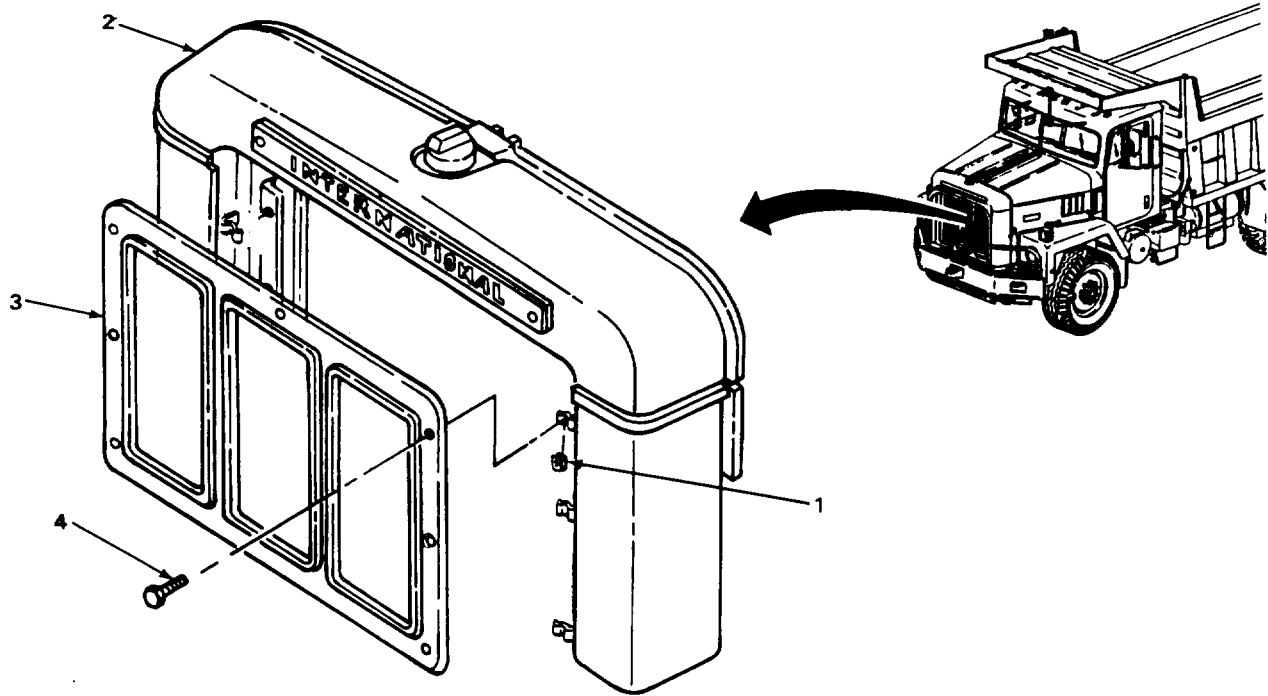
- | | | |
|-----------------------|--|--|
| 1. Radiator shell (1) | Seven screws (2) and radiator grille (3) | Using 1/2-inch, 3/8-inch drive socket and 3/8-inch drive ratchet handle, unscrew and take off. |
|-----------------------|--|--|



TA702187

RADIATOR GRILLE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED		
2.	Seven speed nuts (1)	a. Take off. b. Get rid of.
INSTALLATION		
3. Radiator shell (2)	Seven speed nuts (1)	Put into position on radiator shell.
4.	Radiator grille (3) and seven screws (4)	a. Put radiator grille in position. b. Screw in and tighten using 1/2-inch, 3/8-inch drive socket, and 3/8-inch drive ratchet handle.



TASK ENDS HERE

Pages 2-1285 through 2-1289 are rescinded.

TA702188

Section XIX. BODY AND CHASSIS ACCESSORY ITEM MAINTENANCE

Page	Page
Air Horn 2-1345	Windshield Washer Control .....2-1342
Air Horn Control Valve..... 2-1355	Windshield Washer Reservoir
Data and Instruction Plates 2-1350	and Pump .....2-1349.1
Dump Body Reflectors 2-1321	Windshield Wiper Control .....2-1337
Front Fender Reflectors 2-1320	Windshield Wiper Motor .....2-1324
Heater Core Hoses..... 2-1304	Windshield Wiper Blade.....2-1299
Rearview Mirror Assembly..... 2-1290	Wiper Blade and Arm .....2-1301

REARVIEW MIRROR ASSEMBLY

This task covers:

- a. Removal (page 2-1291)
- b. Installation (page 2-1294)
- c. Adjustment (page 2-1296)

INITIAL SETUP

Tools

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

Materials/Parts

- Lockwasher, nut to mirror head (two required)

Materials/Parts - Continued

- Lockwasher, support bar to upper mirror mounting bracket
- Lockwasher, rearview mirror arm to lower mirror mounting bracket
- Lockwasher, weld screw to lower mirror mounting bracket

Personnel Required

Two

Change 1 2-1290

REARVIEW MIRROR ASSEMBLY - CONTINUED

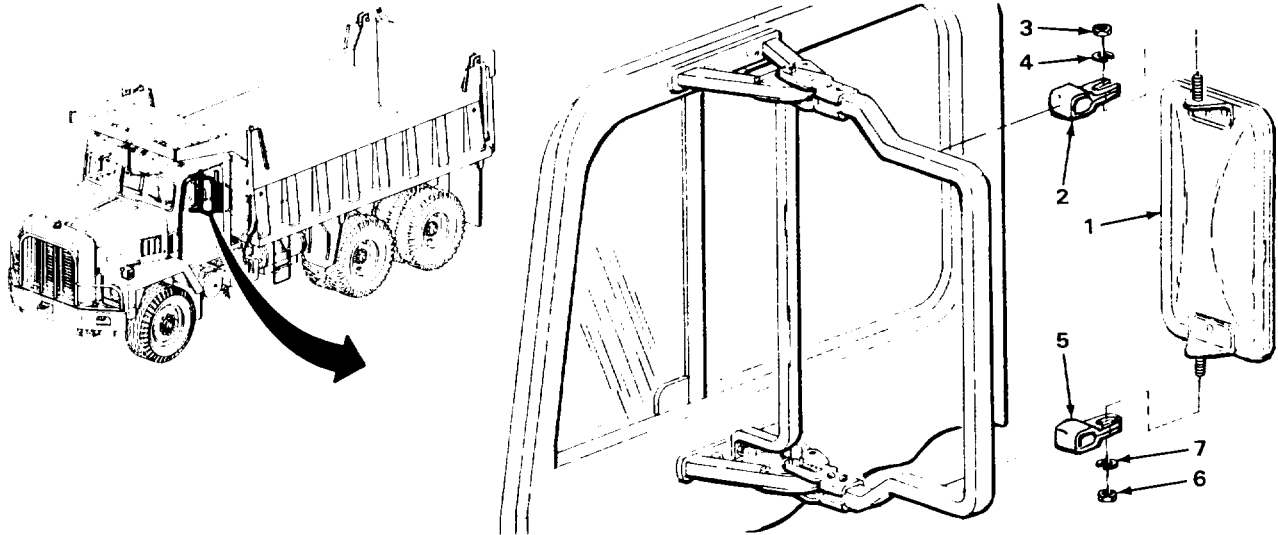
LOCATION	ITEM	ACTION REMARKS
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REMOVAL

NOTE

Except as noted, the steps in this task are the same for both right and left rearview mirror assemblies. The left rearview mirror assembly is used as the example.

- | | | |
|---|----------------------------|---|
| 1. Mirror head (1) to upper mirror clamp (2) | Nut (3) and lockwasher (4) | a. Using 1/2-inch box-end wrench, holding mirror head, unscrew and take off.
b. Get rid of lockwasher. |
| 2. Mirror head (1) to lower mirror clamp (5) | Nut (6) and lockwasher (7) | a. Using 1/2-inch box-end wrench, holding mirror head, unscrew and take off.
b. Get rid of lockwasher. |
| 3. Upper mirror clamp (2) to lower mirror clamp (5) | Mirror head (1) | Take off. |



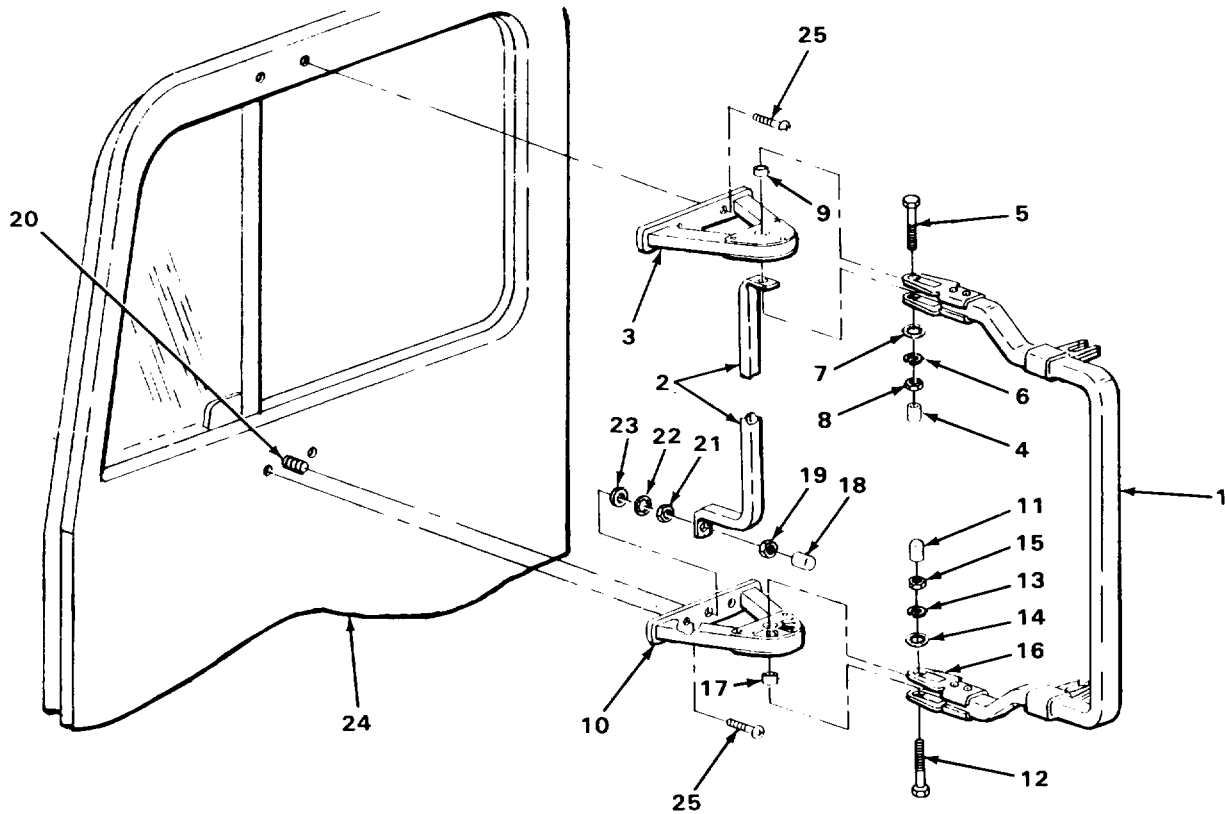
TA244509

REARVIEW MIRROR ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED		
4. Rearview mirror arm (1) to support bar (2) and upper mirror mounting bracket (3)	Dome nut cap (4)	Unscrew and take off by hand.
5.	Bolt (5), lockwasher (6), flat washer (7), and nut (8)	a. Using 7/16-inch, 3/8-inch drive deep-well socket and ratchet handle, unscrew and take off. b. Get rid of lockwasher.
6. Upper mirror mounting bracket (3)	Spacer (9)	Take out.
7. Rearview mirror arm (1) to lower mirror mounting bracket (10)	Dome nut cap (11)	Unscrew and take off by hand.
8.	Bolt (12), lockwasher (13), flat washer (14), nut (15), and mirror index spring (16)	a. Using 7/16-inch, 3/8-inch drive deep-well socket and ratchet handle, unscrew and take off. b. Get rid of lockwasher.
9. Lower mirror mounting bracket (10)	Spacer (17)	Take out.
10. Upper mirror mounting bracket (3) to lower mirror mounting bracket (10)	Rearview mirror arm (1)	Take off.
11. Support bar (2) to lower mirror mounting bracket (10)	Dome nut cap (18)	Unscrew and take off by hand.
12.	Nut (19)	Using 7/16-inch, 3/8-inch drive deep-well socket and ratchet handle, unscrew and take off.
13. Lower mirror mounting bracket (10)	Support bar (2)	Take off.

REARVIEW MIRROR ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
14. Weld screw (20)	Nut (21), lockwasher (22), and flat washer (23)	a. Using 7/16-inch, 3/8-inch drive deep-well socket and ratchet handle, unscrew and take off. b. Get rid of lockwasher.	
15. Upper mirror mounting bracket (3) to door (24)	Two screws (25)	Using number two cross-tip screwdriver, unscrew and take out.	
16. Door (24)	Upper mirror mounting bracket (3)	Take off.	
17. Lower mirror mounting bracket (10) to door (24)	Two screws (25)	Using number two cross-tip screwdriver, unscrew and take out.	
18. Door (24)	Lower mirror mounting bracket (10)	Take off.	



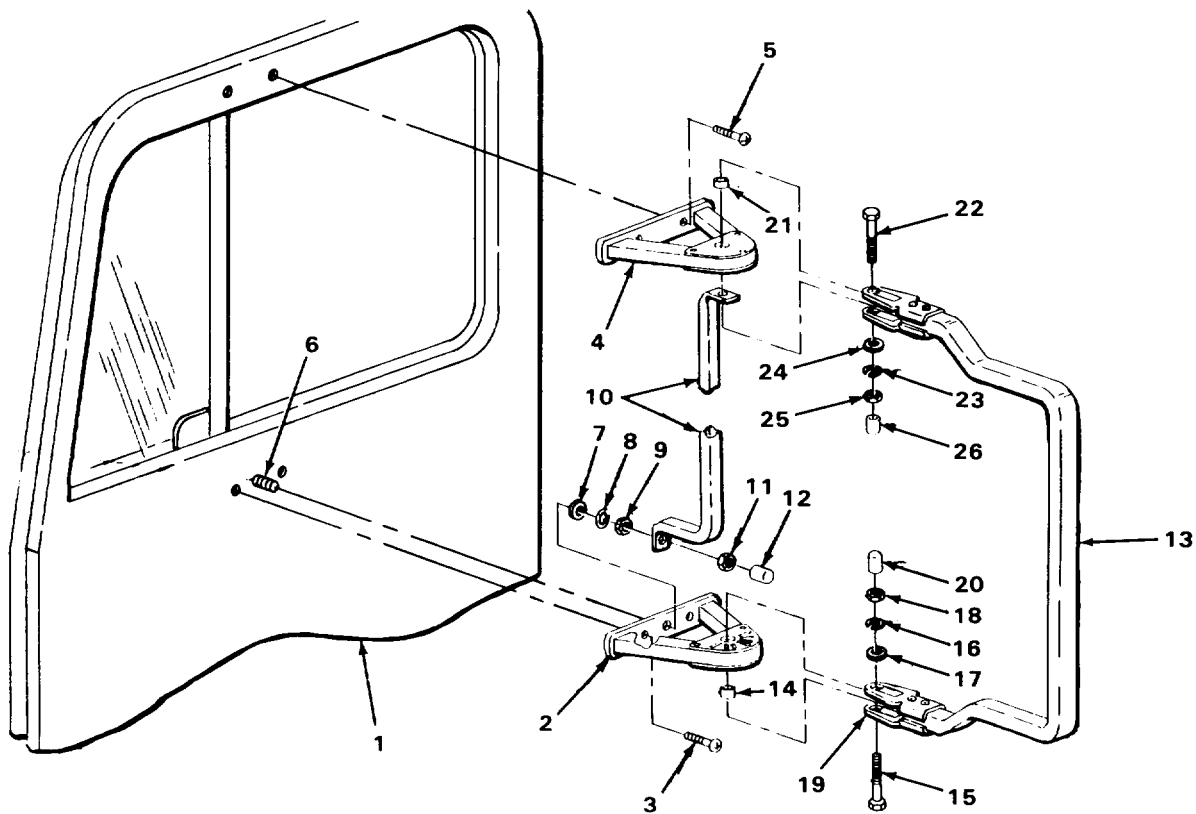
TA244510

REARVIEW MIRROR ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
19. Door (1)	Lower mirror mounting bracket (2)	Place in position.
20. Lower mirror mounting bracket (2) to door (1)	Two screws (3)	Screw in and tighten using number two cross-tip screwdriver.
21. Door (1)	Upper mirror mounting bracket (4)	Place in position.
22. Upper mirror mounting bracket (4) to door (1)	Two screws (5)	Screw in and tighten using number two cross-tip screwdriver.
23. Weld screw (6)	Flat washer (7), new lockwasher (8), and nut (9)	Screw on and tighten using 7/16-inch, 3/8-inch drive deep-well socket and ratchet handle.
24. Lower mirror mounting bracket (2)	Support bar (10)	Place in position.
25. Support bar (10) to lower mirror mounting bracket (2)	Nut (11)	Screw on and tighten using 7/16-inch, 3/8-inch drive deep-well socket and ratchet handle.
26.	Dome nut cap (12)	Screw on and tighten.
27. Upper mirror mounting bracket (4) to lower mirror mounting bracket (2)	Rearview mirror arm (13)	Place in position.
28. Lower mirror mounting bracket (2)	Spacer (14)	Place in position.
29. Rearview mirror arm (13) to lower mirror mounting bracket (2)	Bolt (15), new lockwasher (16), flat washer (17), nut (18), and mirror index spring (19)	Screw in and tighten using 7/16-inch, 3/8-inch drive deep-well socket and ratchet handle.

REARVIEW MIRROR ASSEMBLY - CONTINUED

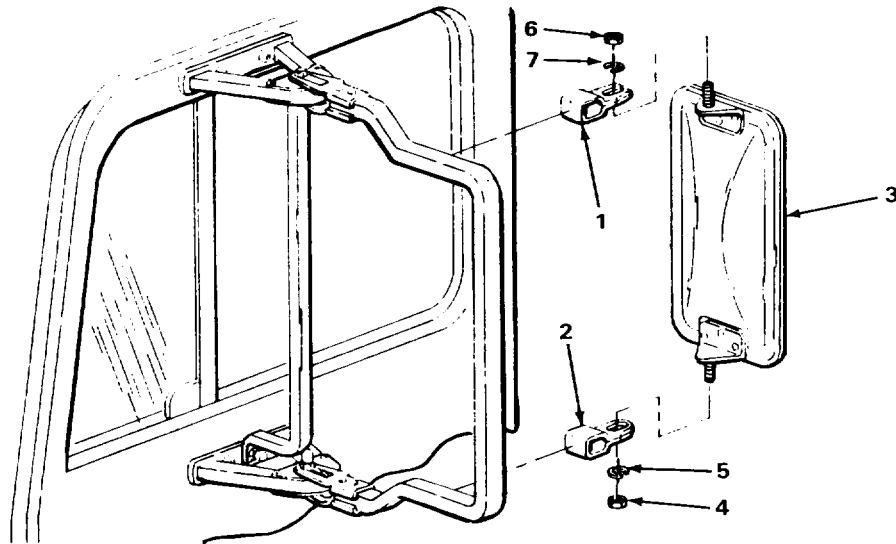
LOCATION	ITEM	ACTION REMARKS
30. Rearview mirror arm (13) to lower mirror mounting bracket (2)	Dome nut cap (20)	Screw on and tighten.
31. Upper mirror mounting bracket (4)	Spacer (21)	Place in position.
32. Rearview mirror arm (13) to support bar (10) and upper mirror mounting bracket (4)	Bolt (22), new lock-washer (23), flat washer (24), and nut (25)	Screw in and tighten using 7/16-inch, 3/8-inch drive deep-well socket and ratchet handle.
33.	Dome nut cap (26)	Screw on and tighten.



TA244511

REARVIEW MIRROR ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
34. Upper mirror clamp (1) to lower mirror clamp (2)	Mirror head (3)	Place in position and hold.
35. Mirror head (3) to lower mirror clamp (2)	Nut (4) and new lockwasher (5)	Screw on and tighten using 1/2-inch box-end wrench.
36. Mirror head (3) to upper mirror clamp (1)	Nut (6) and new lockwasher (7)	Screw on and tighten using 1/2-inch box-end wrench.



ADJUSTMENT

NOTE

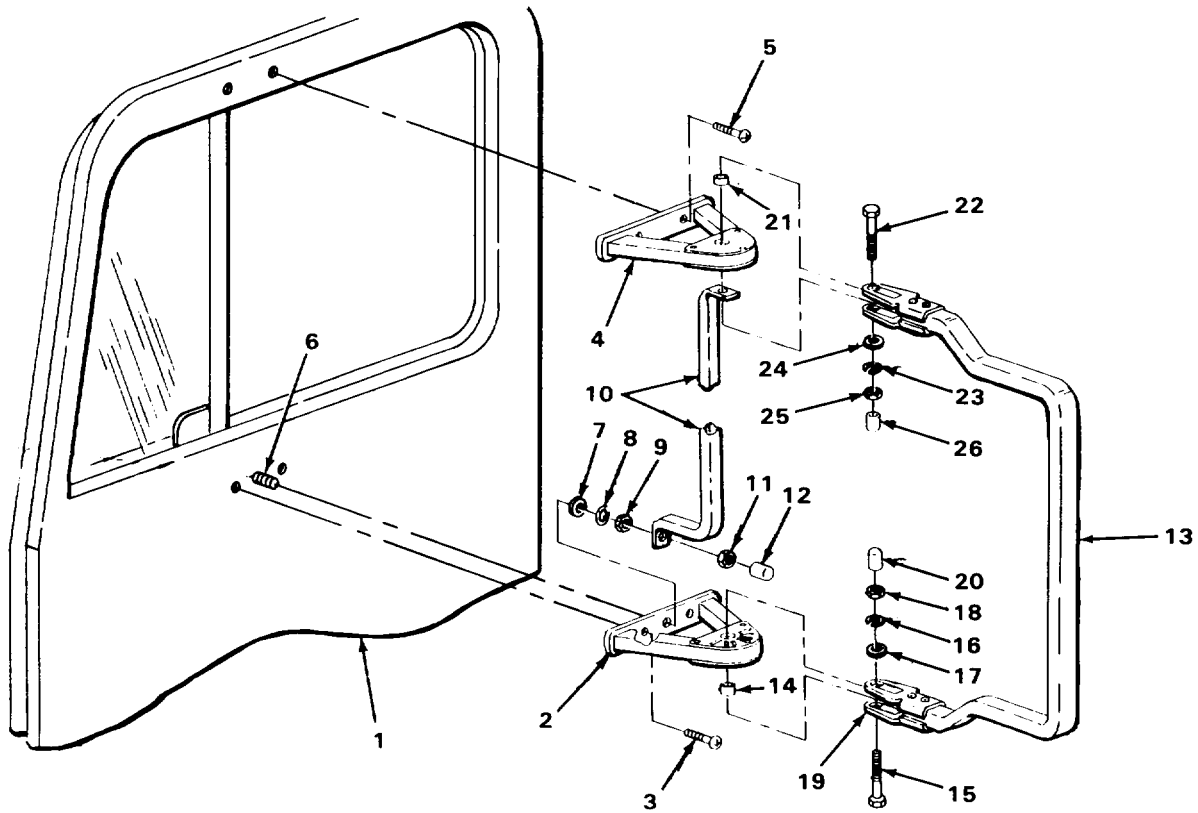
Steps given are typical for adjusting right and left rear view mirrors.

Assistant will be needed to adjust right rear view mirror.

37. Rearview mirror arm (8) to mirror mounting brackets (9 and 10)	Two dome nut caps (11 and 12)	Unscrew and take off by hand.
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REARVIEW MIRROR ASSEMBLY - CONTINUED

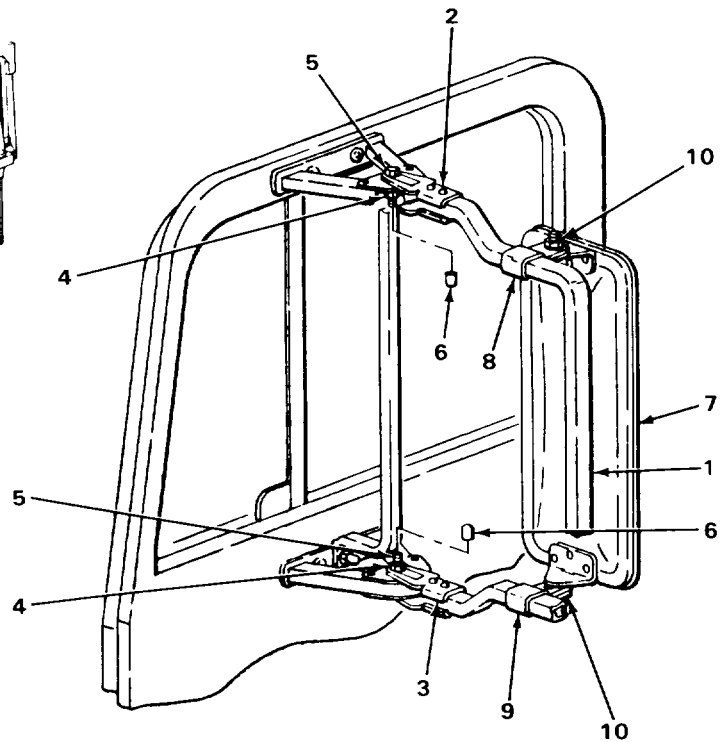
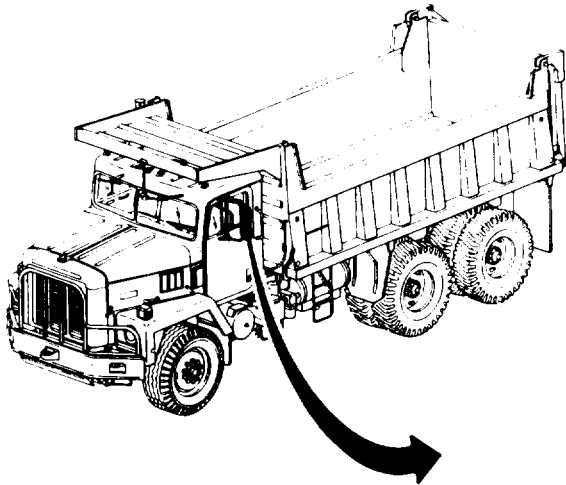
LOCATION	ITEM	ACTION REMARKS
38.	Two nuts (13) and two screws (14)	Loosen using two 7/16-inch box-end wrenches.
39. Mirror head (3) to mirror clamps (1 and 2)	Two nuts (4 and 6)	Loosen using 1/2-inch box-end wrench.
40.	Mirror head (3) and rearview mirror arm (8)	Adjust as necessary.



TA244513

REARVIEW MIRROR ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION REMARKS
ADJUSTMENT - CONTINUED		
41. Rearview mirror arm (1) to mirror mounting brackets (2 and 3)	Two nuts (4) and two screws (5)	Tighten using 7/16-inch box-end wrench.
42.	Two dome nut caps (6)	Screw on and tighten.
43. Mirror head (7) to mirror clamps (8 and 9)	Two nuts (10)	Tighten using 1/2-inch box-end wrench.



TASK ENDS HERE

TA244514

WINDSHIELD WIPER BLADE

This task covers:

- a. Inspection (page 2-1299)
- b. Removal (page 2-1300)
- c. Installation (page 2-1300)

INITIAL SETUP

Tools

Handle, ratchet, 1/4-inch drive
 Screwdriver, flat-tip, 1/8-inch
 Socket, 1/4-inch, 1/4-inch drive

Personnel Required

One

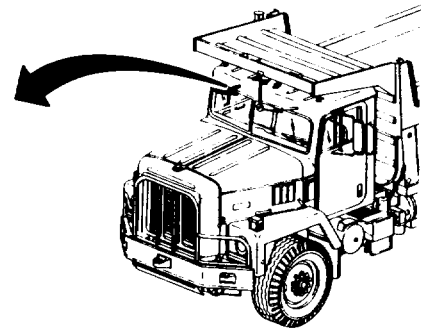
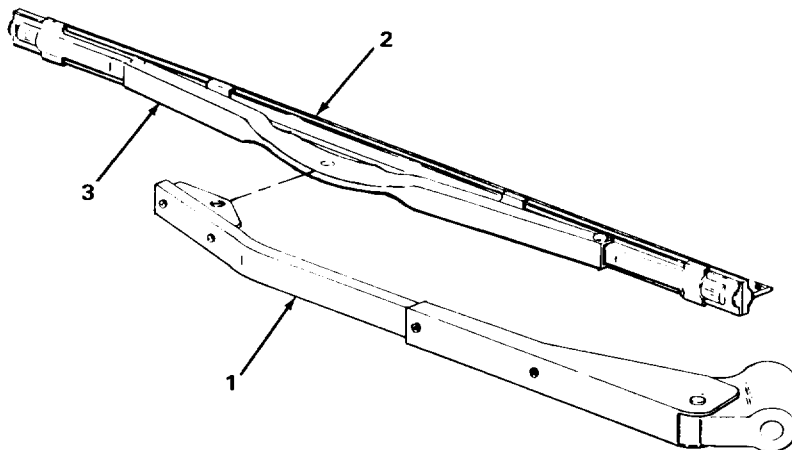
LOCATION	ITEM	ACTION REMARKS
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INSPECTION

NOTE

The steps in this task are typical for both left and right windshield wiper blades.

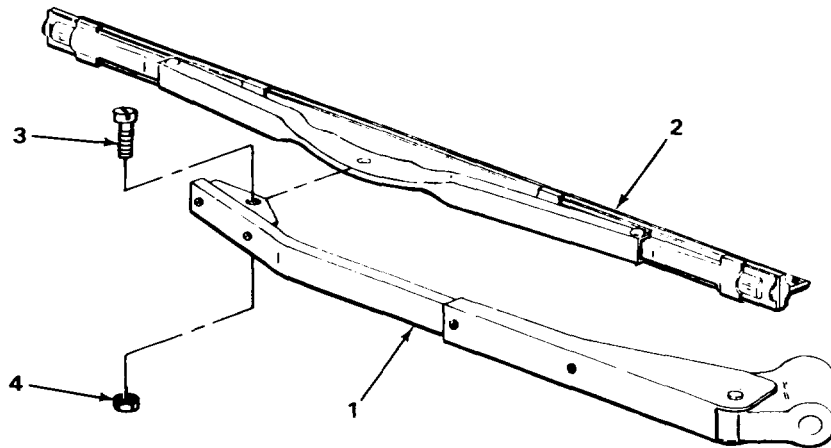
- | | | |
|-------------------------|--|--|
| <p>1. Wiper arm (1)</p> | <p>Wiper blade (2)
and support (3)</p> | <ul style="list-style-type: none"> a. Inspect for cracked, chipped, torn, or worn rubber. b. Inspect support for cracks or broken springs. |
|-------------------------|--|--|



TA244515

WINDSHIELD WIPER BLADE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
2. Wiper arm (1) to wiper blade (2)	Screw (3) and nut (4)	Using 1/4-inch, 1/4-inch drive socket and ratchet handle and 1/8-inch flat-tip screwdriver, unscrew and take off.
3. Wiper arm (1)	Wiper blade (2)	Take off.
INSTALLATION		
4. Wiper arm (1)	Wiper blade (2)	Place in position.
5. Wiper arm (1) to wiper blade (2)	Screw (3) and nut (4)	Screw in and tighten using 1/4-inch, 1/4-inch drive socket and ratchet handle and 1/8-inch flat-tip screwdriver.



TASK ENDS HERE

TA244516

WIPER BLADE AND ARM

This task covers:

- a. Removal (page 2-1301)
- b. Installation (page 2-1302)
- c. Adjustment (page 2-1302)

INITIAL SETUP

Tools

- Bar, pinch, 12-inch
- Hammer, hand, 12-ounce
- Handle, ratchet, 1/4-inch drive
- Punch, flat-tip, 3/8-inch
- Screwdriver, flat-tip, 1/8-inch
- Socket, 1/4-inch, 1/4-inch drive
- Wrench, box-end, 5/8-inch

Personnel Required

One

Equipment Condition

Engine started to build up air pressure (TM 5-3805-254-10).

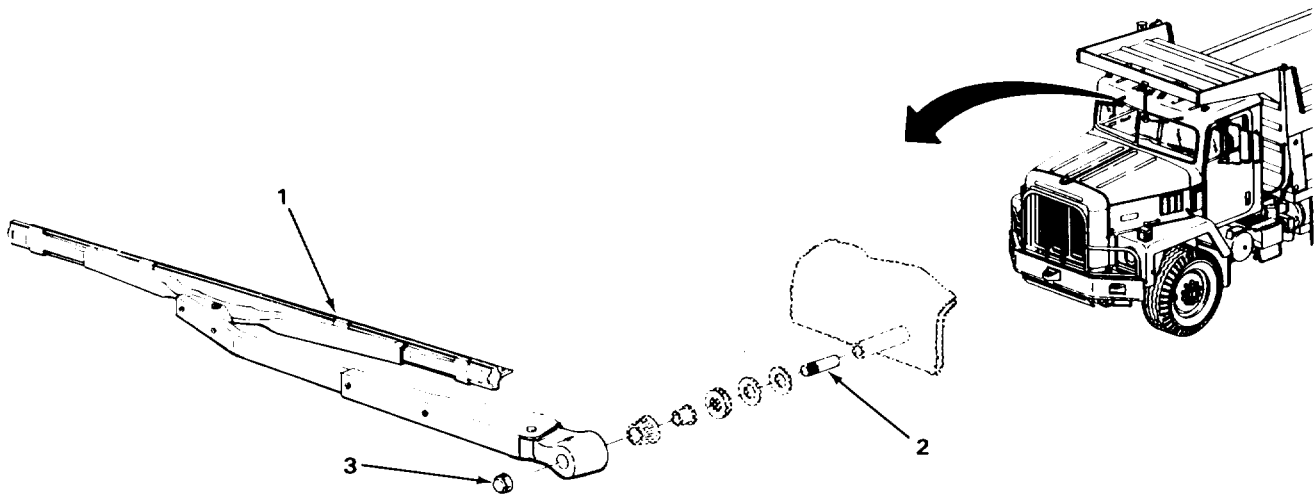
LOCATION	ITEM	ACTION REMARKS
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REMOVAL

NOTE

The steps in this task are typical for both left and right wiper arm and blade.

- | | | |
|---|---------------|--|
| 1. Wiper arm assembly (1) to driver shaft (2) | Acorn nut (3) | Using 5/8-inch box-end wrench, unscrew and take off. |
|---|---------------|--|



TA244517

WIPER BLADE AND ARM - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED		
2. Driver shaft (1)	Acorn nut (2) and wiper arm (3)	a. Using 5/8-inch box-end wrench, unscrew and take off. b. Using 12-inch pinch bar, pry off.
3. Wiper arm (3)	Driver nut (4)	Using 3/8-inch flat-tip punch and 12-ounce hammer, tap out.
4. Wiper arm (3) to wiper blade (5)	Screw (6) and nut (7)	Using 1/4-inch, 1/4-inch drive socket and ratchet handle and 1/8-inch flat-tip screwdriver, unscrew and take off.
5. Wiper arm (3)	Wiper blade (5)	Take off.
INSTALLATION		
6. Wiper arm (3)	Wiper blade (5)	Place in position.
7. Wiper arm (3) to wiper blade (5)	Screw (6) and nut (7)	Screw on and tighten using 1/4-inch, 1/4-inch drive socket and ratchet handle and 1/8-inch flat-tip screwdriver.
8. Driver shaft (1)	Driver nut (4)	Place into position.
9.	Wiper arm (3)	Place into position.
10. Wiper arm (3) to driver shaft (1)	Acorn nut (2)	Screw on and tighten using 5/8-inch box-end wrench.

] ADJUSTMENT

NOTE

Make sure air pressure is approximately 70 psi (482.3 kPa) for correct adjustment.

11. Wiper arm (3) to driver shaft (1)	Acorn nut (2)	Using 5/8-inch box-end wrench, unscrew and take off.
12. Driver shaft (1)	Wiper arm (3)	Using 12-inch pinch bar, pry off.
13. Wiper arm (3)	Driver nut (4)	Using 3/8-inch flat-tip punch and 12-ounce hammer, tap out.

WIPER BLADE AND ARM - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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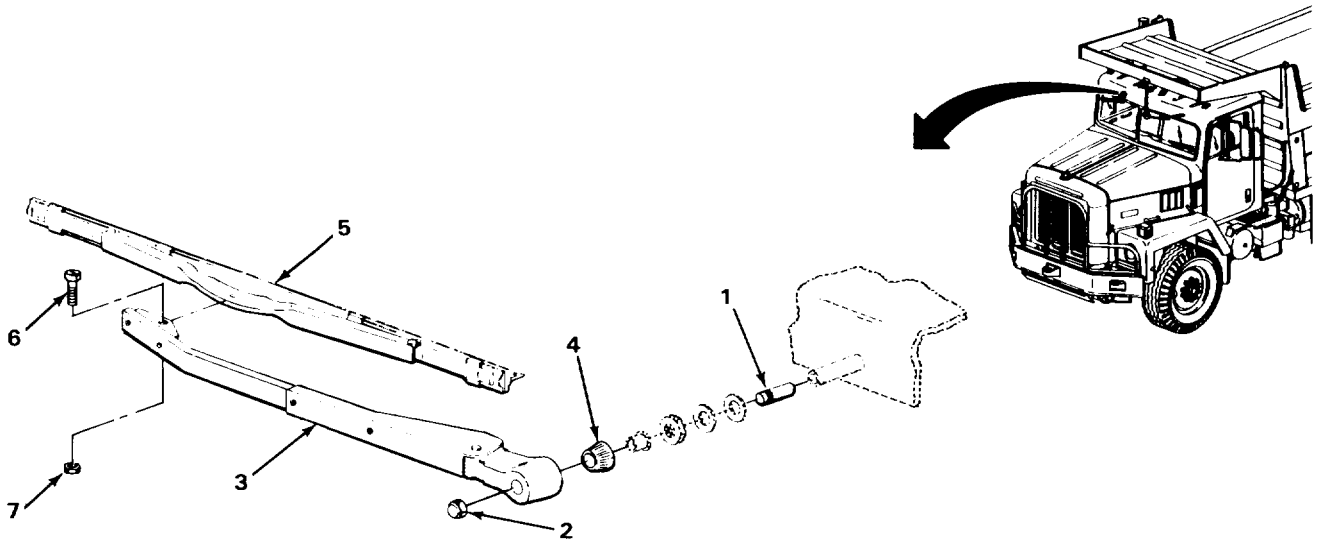
NOTE

For proper adjustment of windshield wipers, windshield wiper switch must be turned to the left to place windshield wipers in the park position.

- | | | | |
|-----|-----------------------------------|----------------|---|
| 14. | Driver shaft (1) | Driver nut (4) | Place into position. |
| 15. | | Wiper arm (3) | Place into position. |
| 16. | Wiper arm (3) to driver shaft (1) | Acorn nut (2) | Screw on and tighten using 5/8-inch box-end wrench. |

NOTE

Repeat steps 11 thru 16 until wiper blades stop 1 inch away from top of windshield.



NOTE

FOLLOW-ON MAINTENANCE: Shut off engine (TM 5-3805-254-10).

TASK ENDS HERE

TA244518

HEATER CORE HOSES

This task covers:

- a. Removal (page 2-1305)
 - b. Cleaning (page 2-1311)
 - c. Inspection/Replacement (page 2-1312)
 - d. Installation (page 2-1313)
-

INITIAL SETUP

Tools

Gloves, safety
Goggles, safety
Pliers, slip-joint, 8-inch
Screwdriver, flat-tip, 1/4-inch
Wrench, box-end, 7/16-inch (two required)
Wrench, box-end, 1/2-inch

Materials/Parts

Detergent, liquid, GP (item 7, appendix C)
Lockwasher, clamp support bracket

Materials/Parts - Continued

Lockwasher, clamp under cab floor
Lockwasher, stud, inner fender well
Rags, wiping (item 15, appendix C)
Solvent, drycleaning (item 19, appendix C)

Personnel Required

One

Equipment Condition

Right side hood panel opened (page 2-424).
Cooling system drained (page 2-628).

HEATER CORE HOSES - CONTINUED

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

REMOVAL

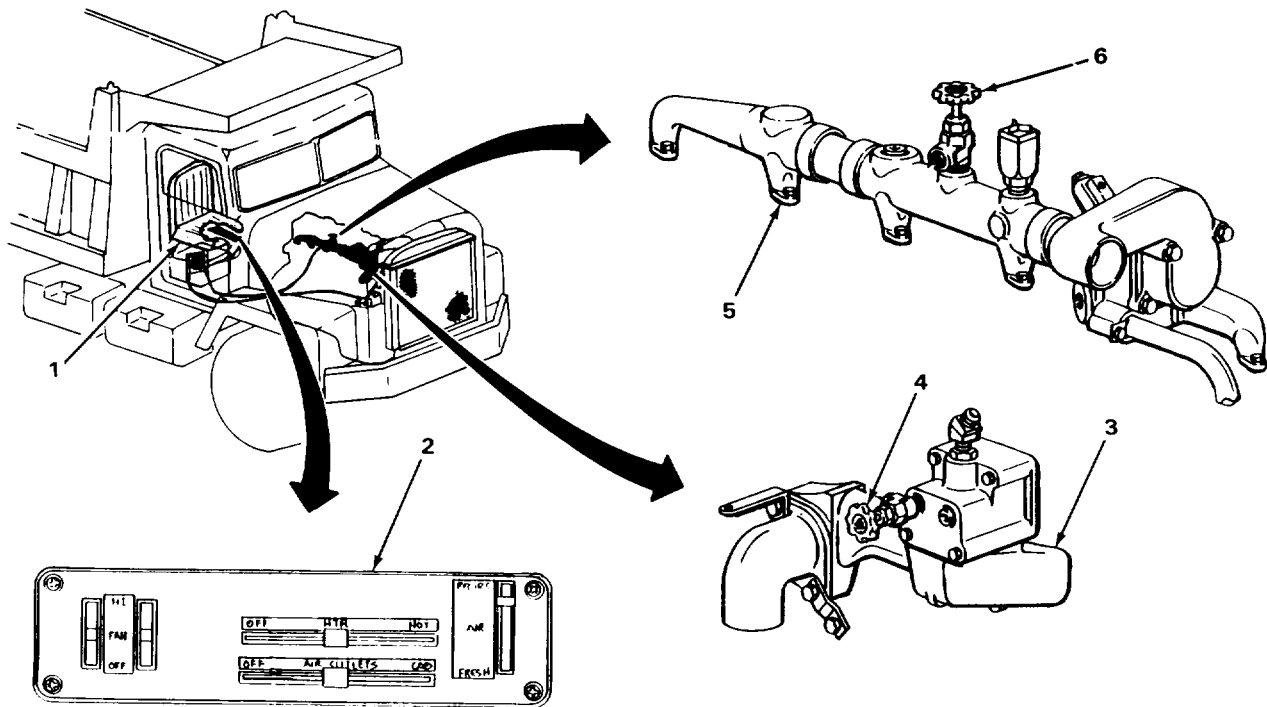
NOTE

Steps 1, 2, and 3 are typical for removal of both inlet and outlet hoses.

Steps 4 thru 16 are for removal of inlet hose only.

Steps 17 thru 29 are for removal of outlet hose only.

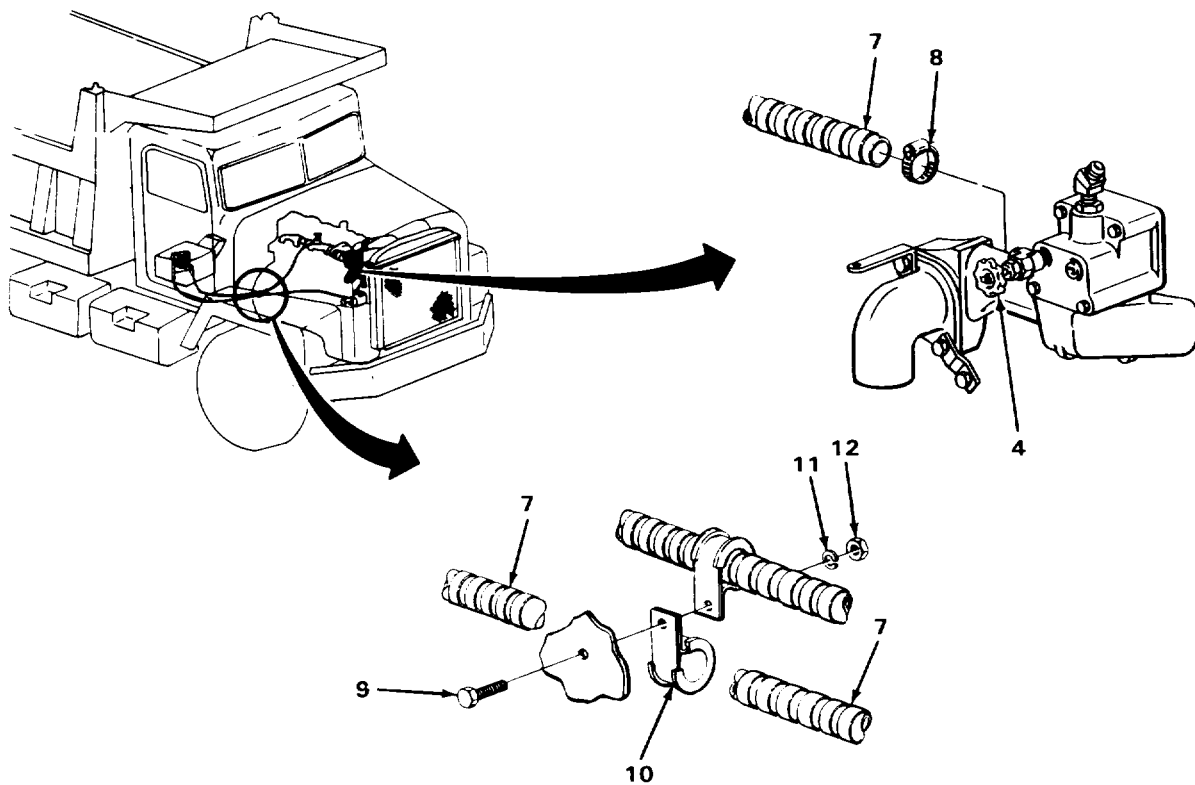
- | | | |
|-----------------------|------------------------------|--|
| 1. Passenger seat (1) | Heater temperature valve (2) | Move to OFF position. |
| 2. Water pump (3) | Shutoff valve (4) | Using 8-inch slip-joint pliers, turn clockwise to close. |
| 3. Water manifold (5) | Shutoff valve (6) | Using 8-inch slip-joint pliers, turn clockwise to close. |



TA244519

HEATER CORE HOSES - CONTINUED

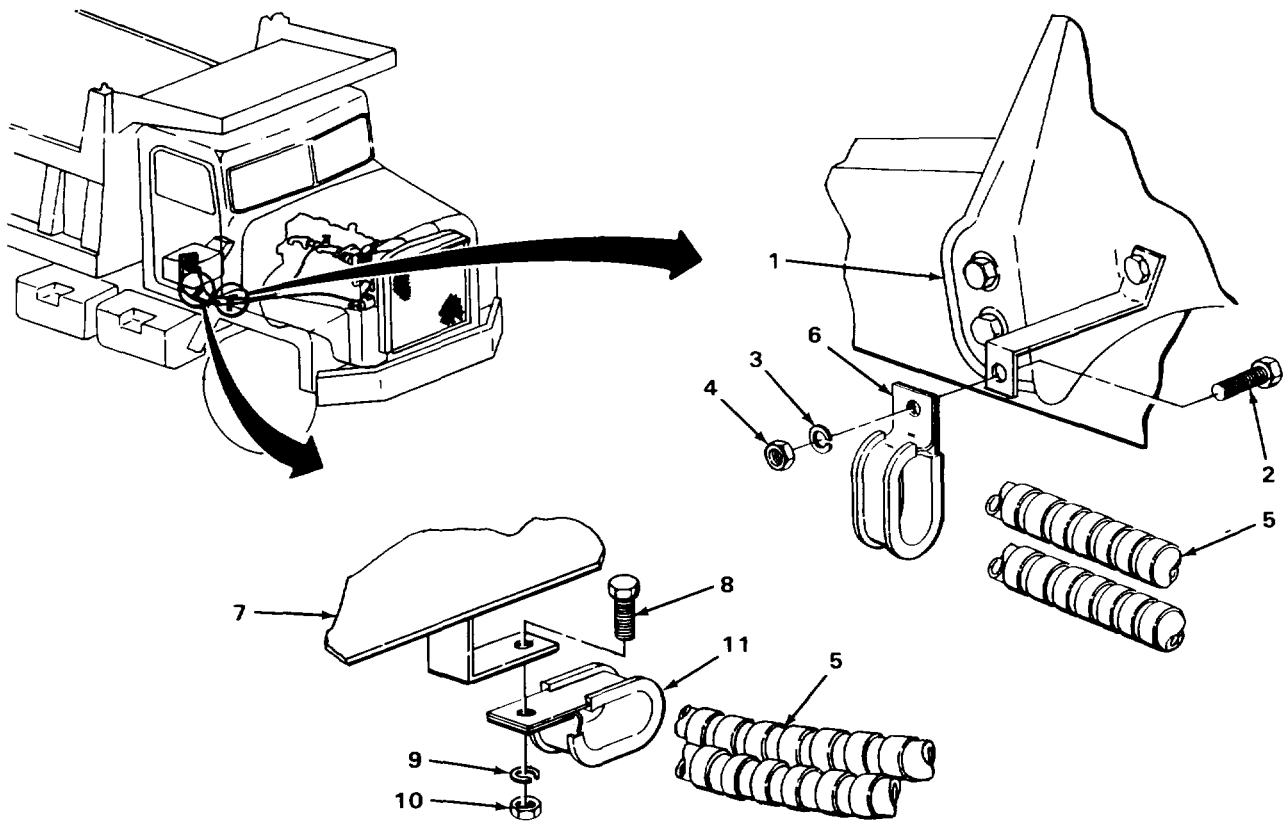
LOCATION	ITEM	ACTION REMARKS
4. Inlet hose (7)	Hose clamp (8)	Using 1/4-inch flat-tip screwdriver, loosen.
5. Shutoff valve (4)	Inlet hose (7) and hose clamp (8)	Take off.
6. Screw (9)	Clamp (10), lock-washer (11), and nut (12)	a. Using 1/2-inch box-end wrench, unscrew and take off. b. Take off clamp. c. Get rid of lockwasher.



TA244520

HEATER CORE HOSES - CONTINUED

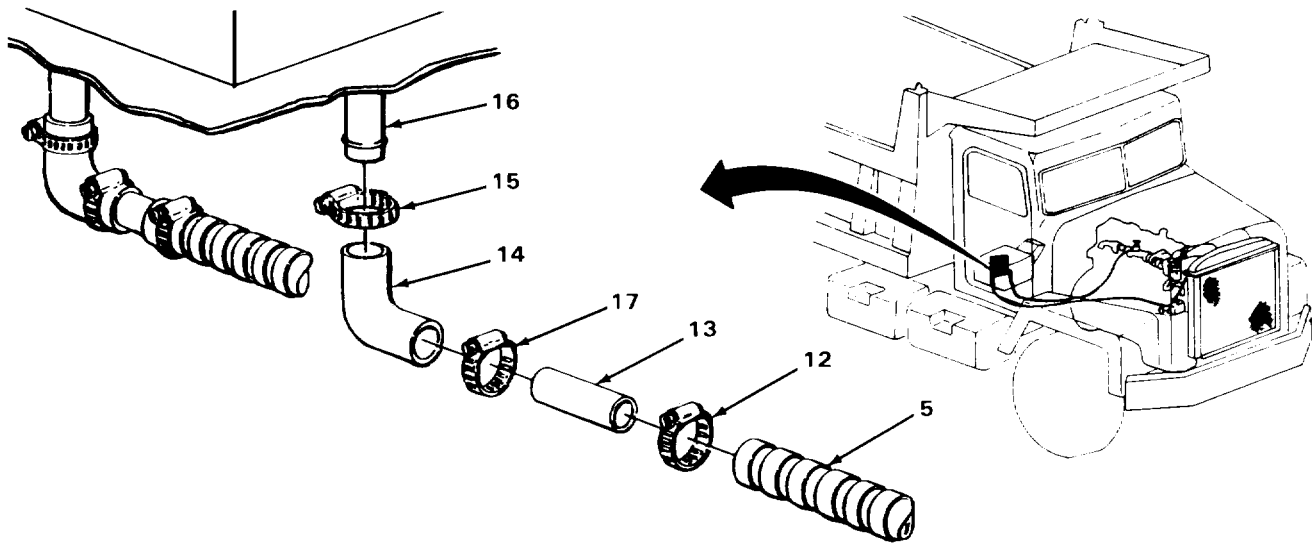
LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED		
7. Support bracket (1)	Screw (2), lock-washer (3), and nut (4)	a. Using two 7/16-inch box-end wrenches, unscrew and take off. b. Get rid of lockwasher.
8. Inlet hose (5)	Clamp (6)	Take off.
9. Under cab floor (7)	Screw (8), lock-washer (9), and nut (10)	Using two 7/16-inch box-end wrenches, unscrew and take off.
10. Inlet hose (5)	Clamp (11)	Take off.



TA244521

HEATER CORE HOSES - CONTINUED

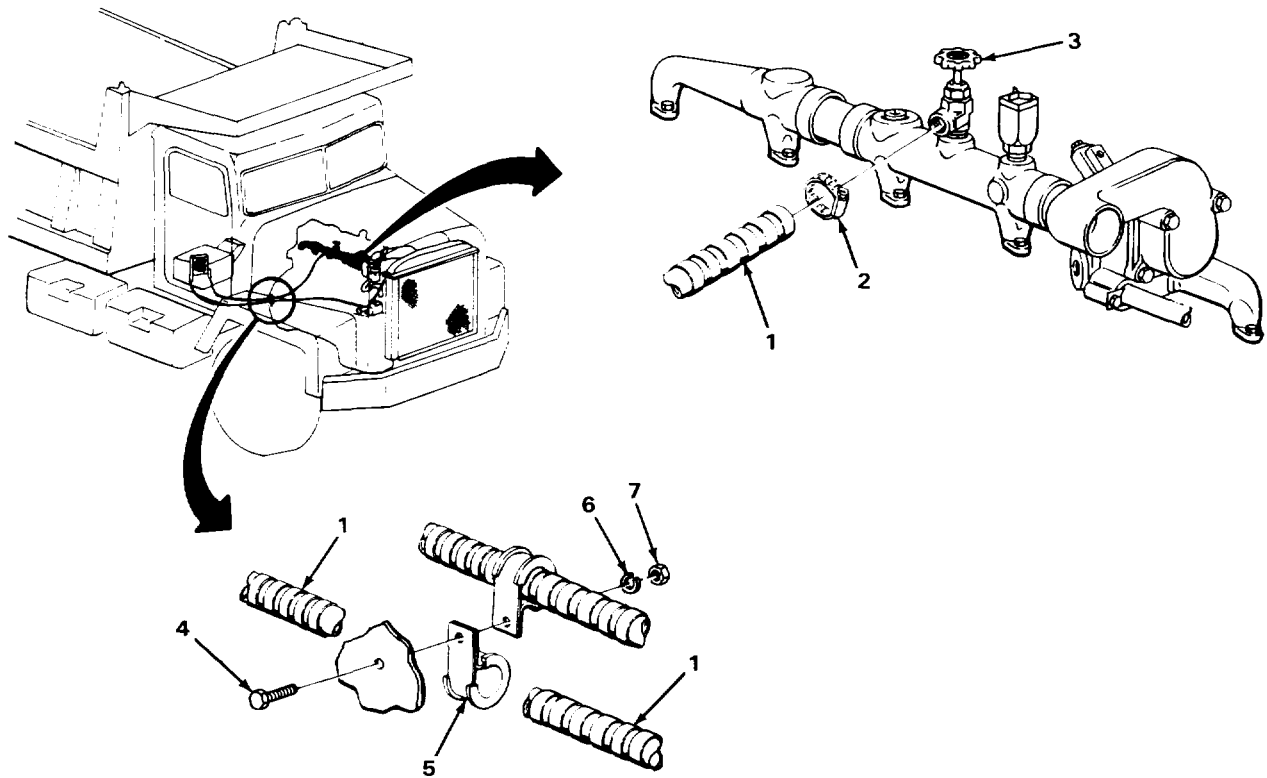
LOCATION	ITEM	ACTION REMARKS
11. Inlet hose (5)	Hose clamp (12)	Using 1/4-inch flat-tip screwdriver, loosen.
12. Pipe (13)	Inlet hose (5) and hose clamp (12)	Take off.
13. Preformed inlet hose (14)	Hose clamp (15)	Using 1/4-inch flat-tip screwdriver, loosen.
14. Heater core tube (16)	Preformed inlet hose (14) and hose clamp (15)	Take off.
15. Preformed inlet hose (14)	Hose clamp (17)	Using 1/4-inch flat-tip screwdriver, loosen.
16. Pipe (13)	Preformed inlet hose (14) and hose clamp (17)	Take off.



TA244522

HEATER CORE HOSES - CONTINUED

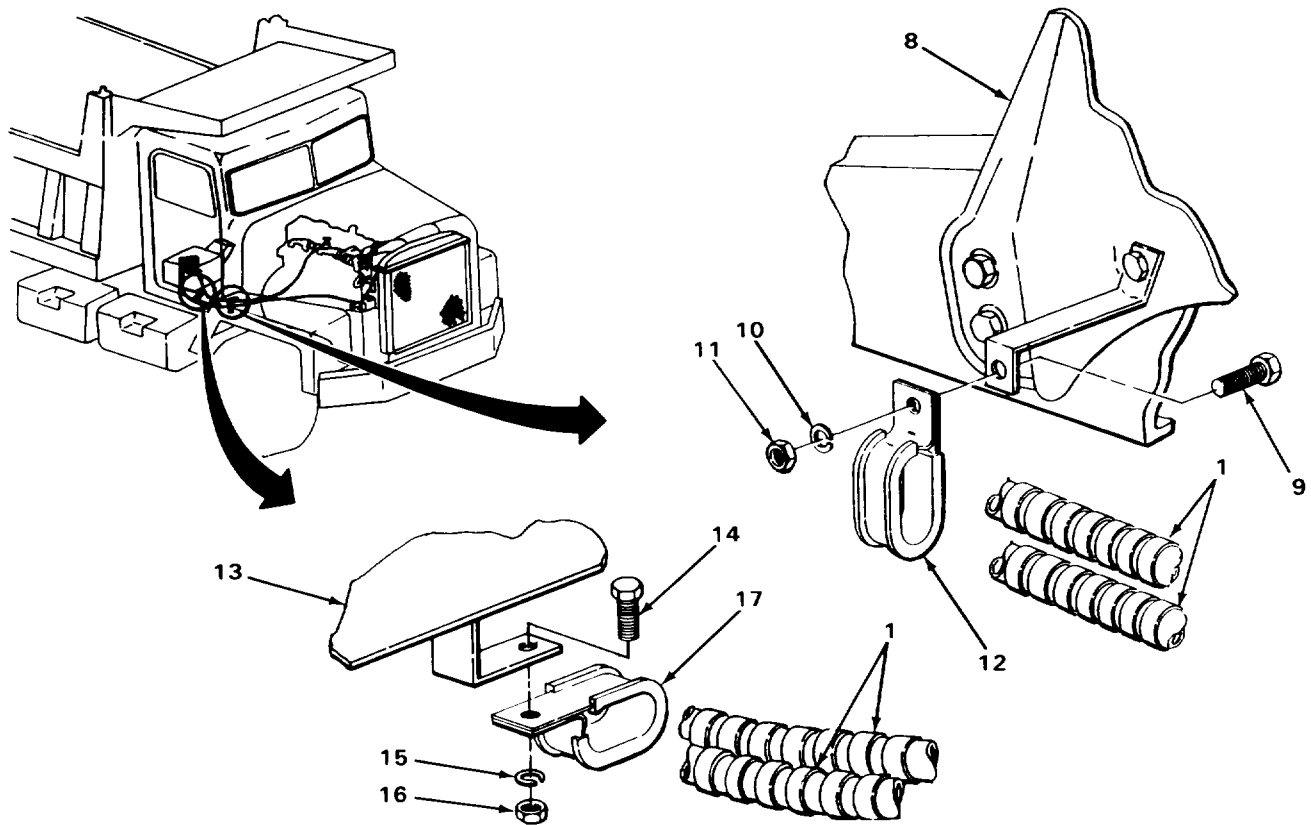
LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED		
17. Outlet hose (1)	Hose clamp (2)	Using 1/4-inch flat-tip screwdriver, loosen.
18. Shutoff valve (3)	Outlet hose (1) and hose clamp (2)	Take off.
19. Screw (4)	Clamp (5), lock-washer (6), and nut (7)	a. Using 1/2-inch box-end wrench, unscrew and take off. b. Take off clamp. c. Get rid of lockwasher.



TA244523

HEATER CORE HOSES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
20. Support bracket (8)	Screw (9), lock-washer (10), and nut (11)	a. Using two 7/16-inch box-end wrenches, unscrew and take off. b. Get rid of lockwasher.
21. Outlet hose (1)	Clamp (12)	Take off.
22. Under cab floor (13)	Screw (14), lock-washer (15), and nut (16)	a. Using two 7/16-inch box-end wrenches, unscrew and take off. b. Get rid of lockwasher.
23. Outlet hose (1)	Clamp (17)	Take off.



TA244524

HEATER CORE HOSES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED		
24. Outlet hose (1)	Hose clamp (2)	Using 1/4-inch flat-tip screwdriver, loosen.
25. Pipe (3)	Outlet hose (1) and hose clamp (2)	Take off.
26. Preformed outlet hose (4)	Hose clamp (5)	Using 1/4-inch flat-tip screwdriver, loosen.
27. Heater core tube (6)	Preformed outlet hose (4) and hose clamp (5)	Take off.
28. Preformed outlet hose (4)	Hose clamp (7)	Using 1/4-inch flat-tip screwdriver, loosen.
29. Pipe (3)	Preformed outlet hose (4) and hose clamp (7)	Take off.

CLEANING**NOTE**

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

- | | | |
|------------|------------------|--|
| 30. | All rubber parts | <ul style="list-style-type: none"> a. Clean with solution of liquid detergent and water. b. Rinse in clean water. c. Using clean, dry rags, wipe dry. |
|------------|------------------|--|

HEATER CORE HOSES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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WARNING

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 100°F (38°C) and for type #2 is 138°F (59°C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

- | | | |
|-----|-----------------|---|
| 31. | All metal parts | <ul style="list-style-type: none"> a. Clean with drycleaning solvent. b. Using clean, dry rags, wipe dry. |
|-----|-----------------|---|

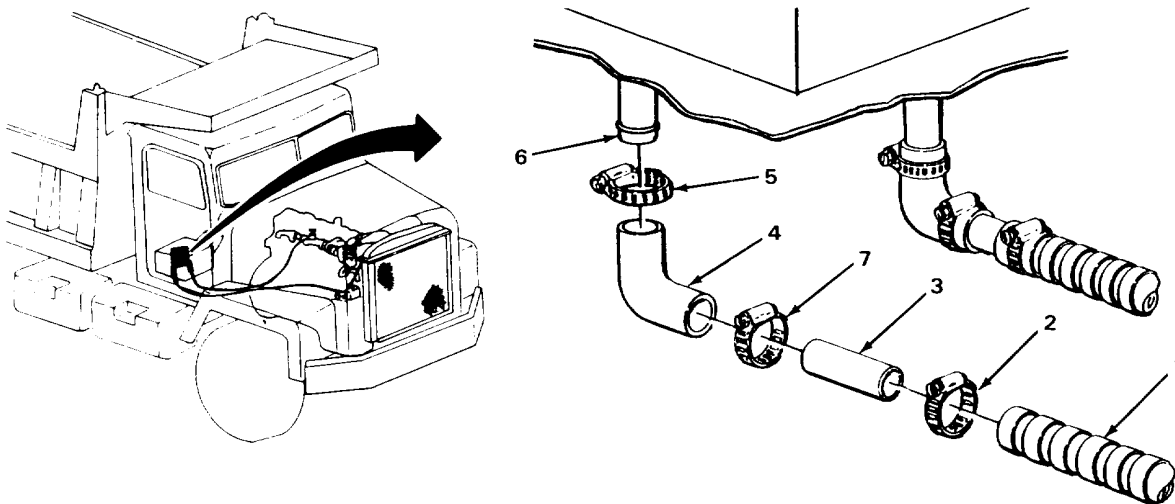
INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

- | | | |
|-----|--------------------|---|
| 32. | All rubber parts | Look for cracks, breaks, chafing, and hardness. |
| 33. | All metal parts | Look for cracks and breaks. |
| 34. | All threaded parts | Look for damaged threads and rounded heads. |



TA244526

HEATER CORE HOSES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION

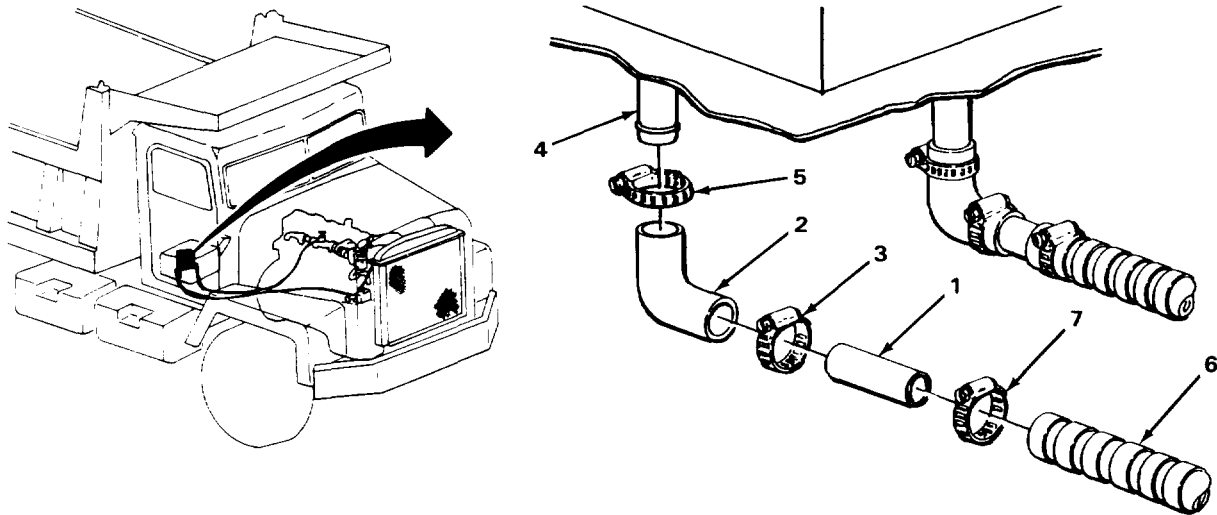
NOTE

Steps 35 thru 45 are for installation of outlet hose.

Steps 46 thru 59 are for installation of inlet hose.

Steps 60, 61, and 62 are typical for installation of both inlet and outlet hoses.

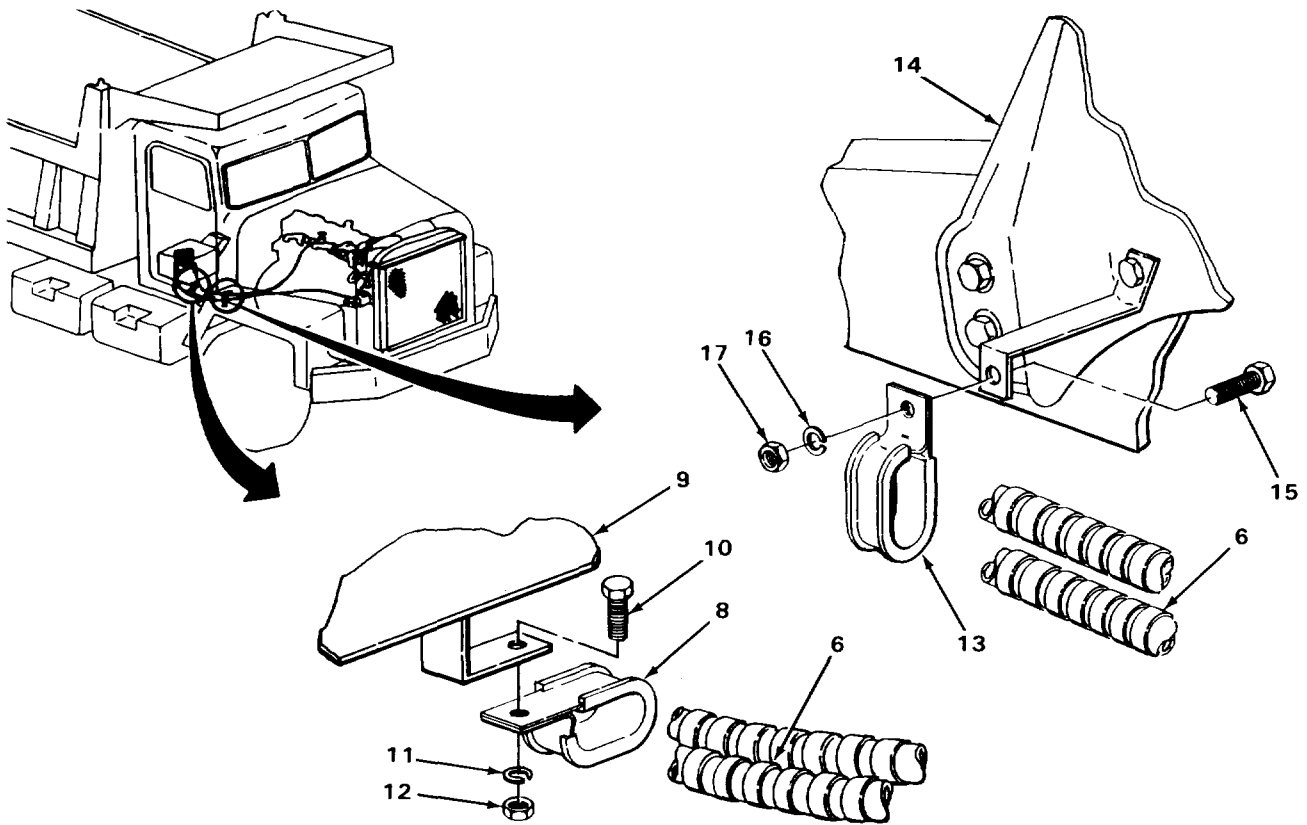
35. Pipe (1)	Preformed outlet hose (2) and hose clamp (3) screwdriver.	a. Put on. b. Tighten using 1/4-inch flat-tip
36. Heater core tube (4)	Preformed outlet hose (2) and hose clamp (5)	a. Put on. b. Tighten using 1/4-inch flat-tip screwdriver.
37. Pipe (1)	Outlet hose (6) and hose clamp (7)	a. Put on. b. Tighten using 1/4-inch flat-tip screwdriver.



TA244527

HEATER CORE HOSES - CONTINUED

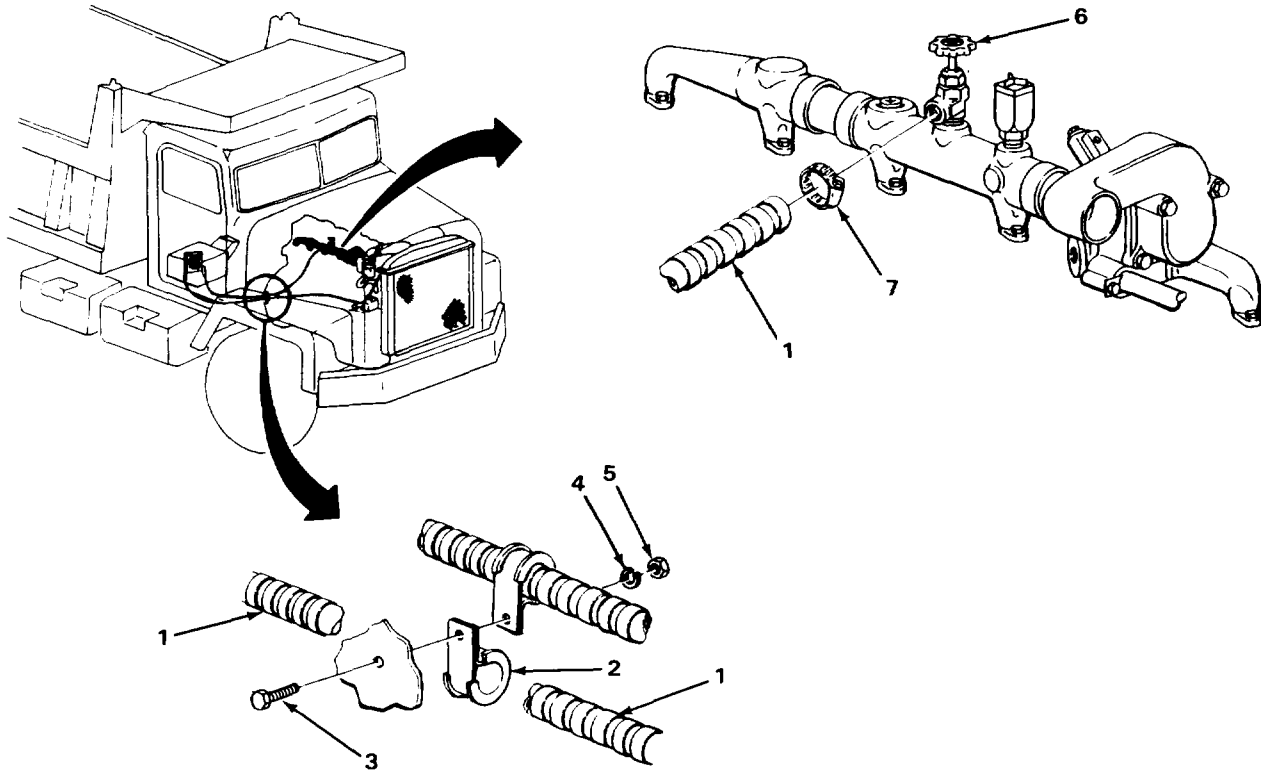
LOCATION	ITEM	ACTION REMARKS
38. Outlet hose (6)	Clamp (8)	Put on.
39. Under cab floor (9)	Clamp (8), screw (10), new lock-washer (11), and nut (12)	a. Put clamp in place. b. Screw in and tighten using two 7/16-inch box-end wrenches.
40. Outlet hose (6)	Clamp (13)	Put on.
41. Support bracket (14)	Clamp (13), screw (15), new lock-washer (16), and nut (17)	a. Put clamp in place. b. Screw in and tighten using two 7/16-inch box-end wrenches.



TA244528

HEATER CORE HOSES - CONTINUED

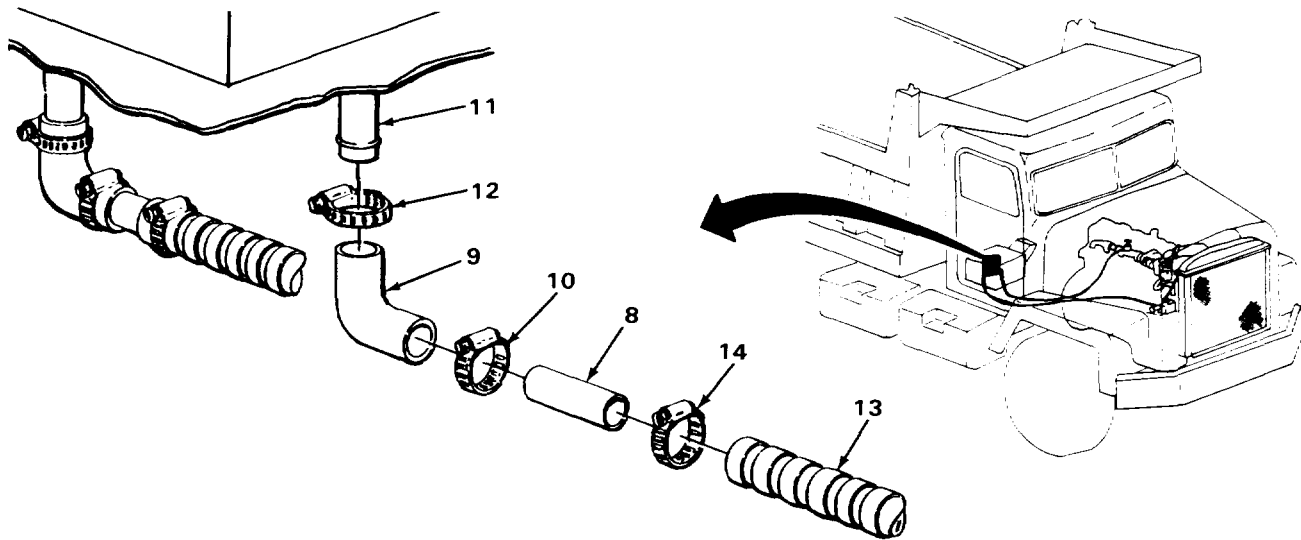
LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
42. Outlet hose (1)	Clamp (2)	Put on.
43. Stud (3)	Clamp (2), new lock-washer (4), and nut (5)	a. Put clamp in place. b. Screw on and tighten using 1/2-inch, box-end wrench.
44. Shutoff valve (6)	Outlet hose (1) and hose clamp (7)	Put on.
45. Outlet hose (1)	Hose clamp (7)	Tighten using 1/4-inch flat-tip screwdriver.



TA244529

HEATER CORE HOSES - CONTINUED

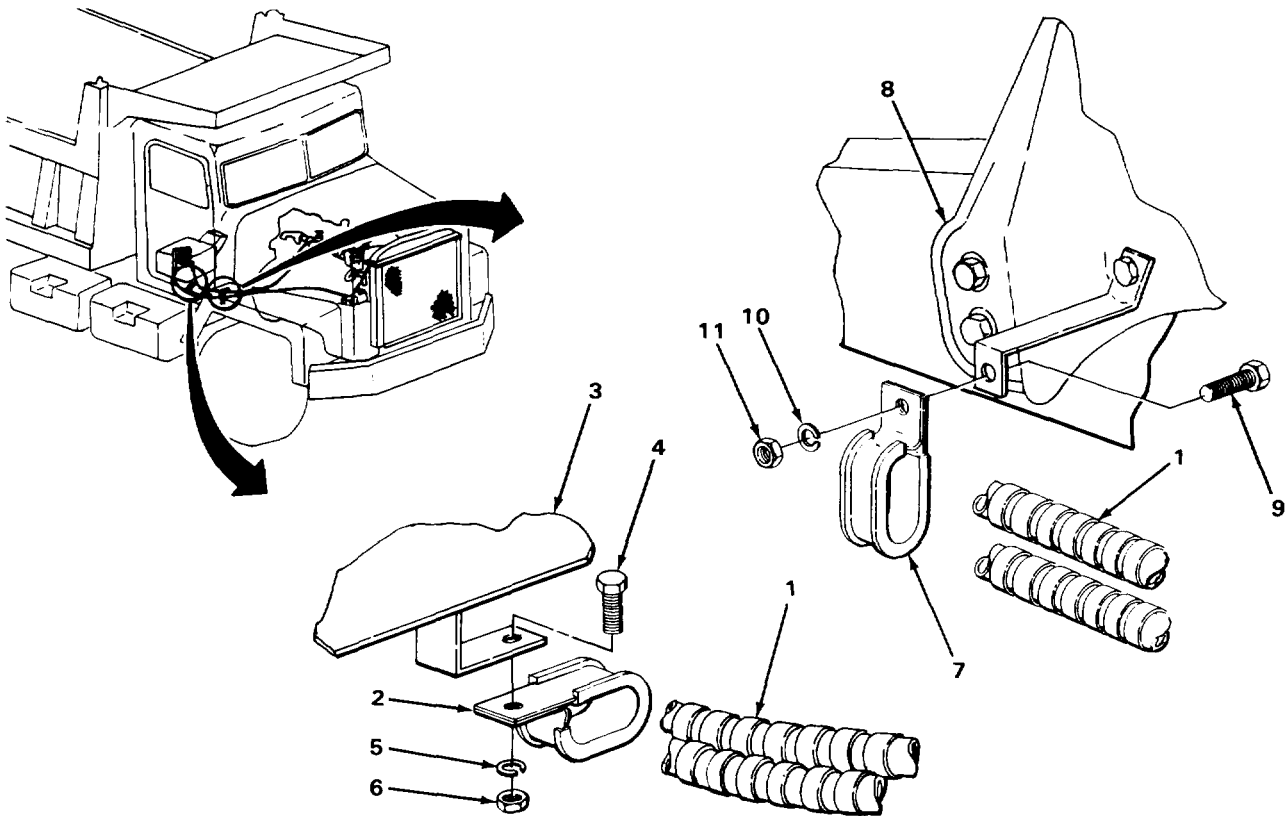
LOCATION	ITEM	ACTION REMARKS
46. Pipe(8)	Preformed inlet hose (9) and hose clamp (10)	Put on.
47. Preformed inlet hose (9)	Hose clamp (10)	Tighten using 1/4-inch flat-tip screwdriver.
48. Heater core tube (11)	Preformed inlet hose (9) and hose clamp (12)	Put on.
49. Preformed inlet hose (9)	Hose clamp (12)	Tighten using 1/4-inch flat-tip screwdriver.
50. Pipe (8)	Inlet hose (13) and hose clamp (14)	Put on.
51. Inlet hose (13)	Hose clamp (14)	Tighten using 1/4-inch flat-tip screwdriver.



TA244530

HEATER CORE HOSES - CONTINUED

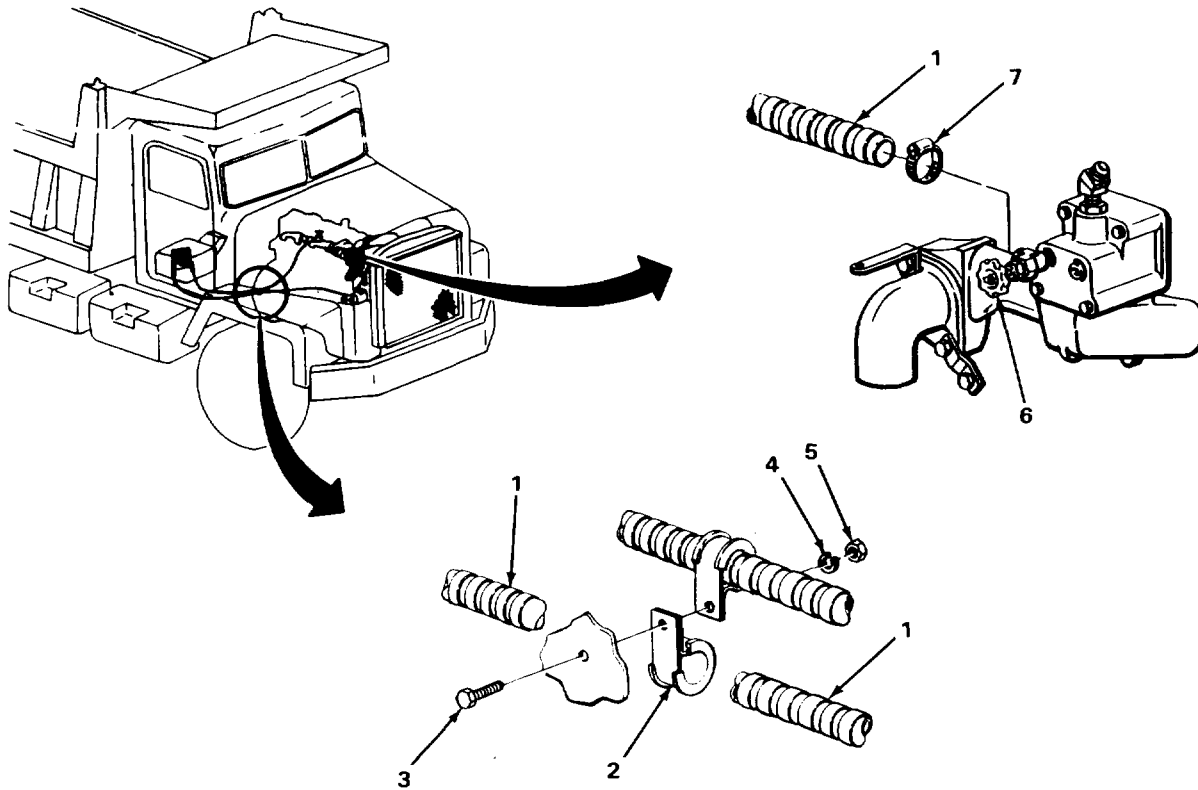
LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
52. Inlet hose (1)	Clamp (2)	Put on.
53. Under cab floor (3)	Clamp (2), screw (4), new lockwasher (5), and nut (6)	a. Put clamp in place. b. Screw in and tighten using two 7/16-inch box-end wrenches.
54. Inlet hose (1)	Clamp (7)	Put on.
55. Support bracket (8)	Clamp (7), screw (9), new lockwasher (10), and nut (11)	a. Put clamp in place. b. Screw in and tighten using two 7/16-inch box-end wrenches.



TA244531

HEATER CORE HOSES - CONTINUED

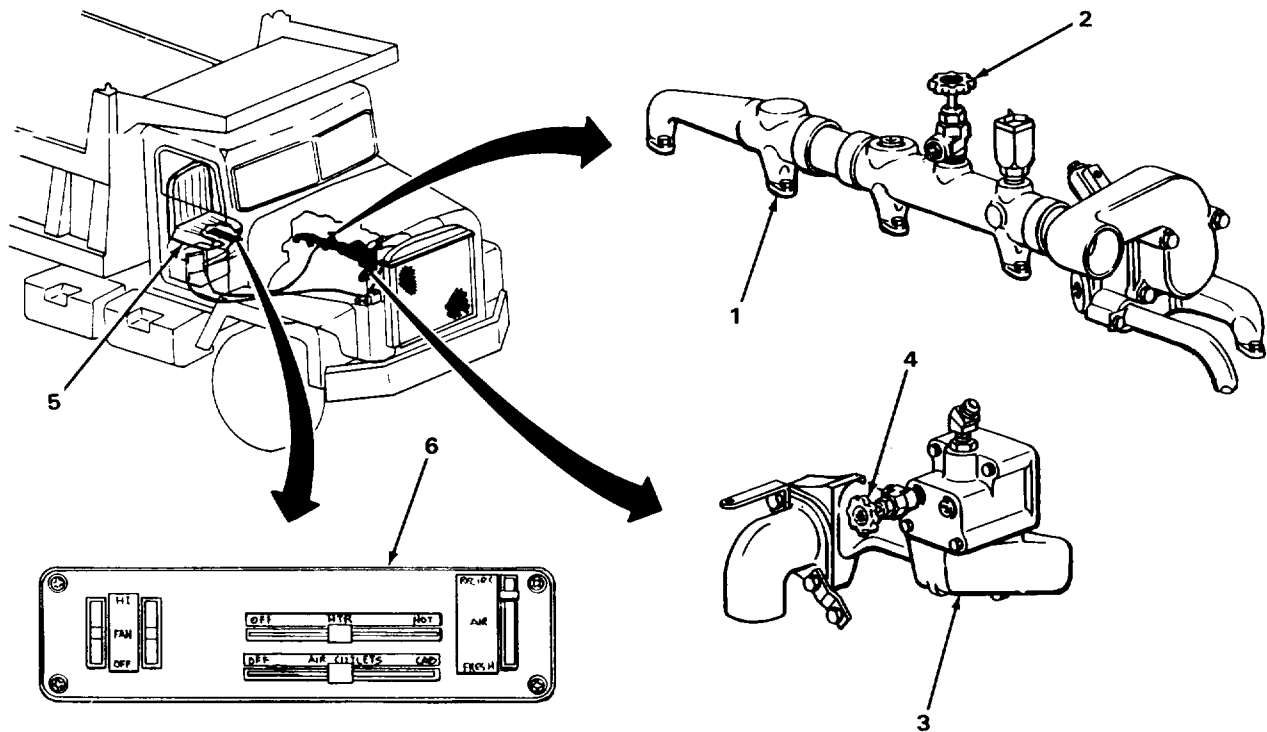
LOCATION	ITEM	ACTION REMARKS
56. Inlet hose (1)	Clamp (12)	Put on.
57. Screw (13)	Clamp (12), new lockwasher (14), and nut (15)	a. Put clamp in place. b. Screw in and tighten using 1/2-inch box-end wrench.
58. Shutoff valve (16)	Inlet hose (1) and hose clamp (17)	Put on.
59. Inlet hose (1)	Hose clamp (17)	Tighten using 1/4-inch flat-tip screwdriver.



TA244532

HEATER CORE HOSES - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
60. Water manifold (1)	Shutoff valve (2)	Turn counterclockwise to open using 8-inch slip-joint pliers.
61. Water pump (3)	Shutoff valve (4)	Turn counterclockwise to open using 8-inch slip-joint pliers.
62. Passenger seat (5)	Heater temperature valve (6)	Move to ON position.



NOTE

FOLLOW-ON MAINTENANCE:

1. Close right side hood panel (page 2-424).
2. Fill cooling system (page 2-628).

TASK ENDS HERE

TA244533

FRONT FENDER REFLECTORS

This task covers:

- a. Removal (page 2-1320)
 - b. Installation (page 2-1320)
-

INITIAL SETUP

Tools

Screwdriver, cross-tip, number one
Wrench, box-end, 3/8-inch

Personnel Required

One

Materials/Parts

Reflector, amber, front fenders
(two required)

LOCATION	ITEM	ACTION REMARKS
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REMOVAL

NOTE

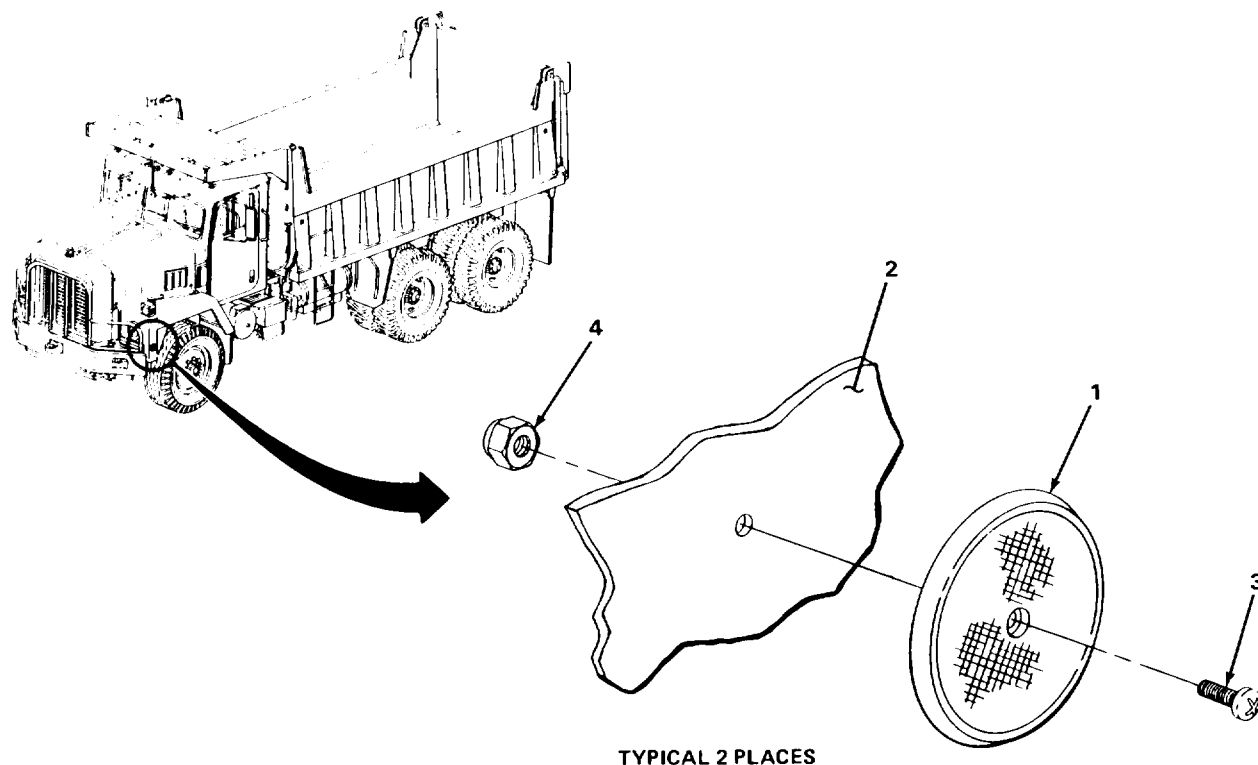
The following procedure is typical for both front fenders.

1. Amber reflector (1) to front fender (2)	Screw (3) and nut (4)	Using number one cross-tip screwdriver and 3/8-inch box-end wrench, unscrew and take off.
2. Front fender (2)	Amber reflector (1)	a. Take off. b. Get rid of reflector.

INSTALLATION

3. Front fender (2)	New amber reflector (1)	Place in position.
4. New amber reflector (1) to front fender (2)	Screw (3) and nut (4)	Screw in and tighten using number one cross-tip screwdriver and 3/8-inch box-end wrench.

FRONT FENDER REFLECTORS - CONTINUED



TASK ENDS HERE

DUMP BODY REFLECTORS

This task covers:

- a. Removal (page 2-1322)
- b. Installation (page 2-1323)

 INITIAL SETUP

Tools

Chisel, cold-hand, 1/4-inch
 Drill, electric, portable, 1/4-inch
 Drill, twist, number seven
 Goggles, safety
 Hammer, ball-peen, 12-ounce
 Handle, tap, adjustable
 Punch, pin-drive, straight, 3/16-inch
 Screwdriver, cross-tip, number two
 Tap, 1/4-inch, 20-NC

Materials/Parts

Reflector, amber, dump body (two required)
 Reflector, red, dump body (two required)
 Reflectors, red, tailgate (two required)
 Screws, 1/4-inch, NC (12 required)

TA244534

DUMP BODY REFLECTORS - CONTINUED

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

REMOVAL

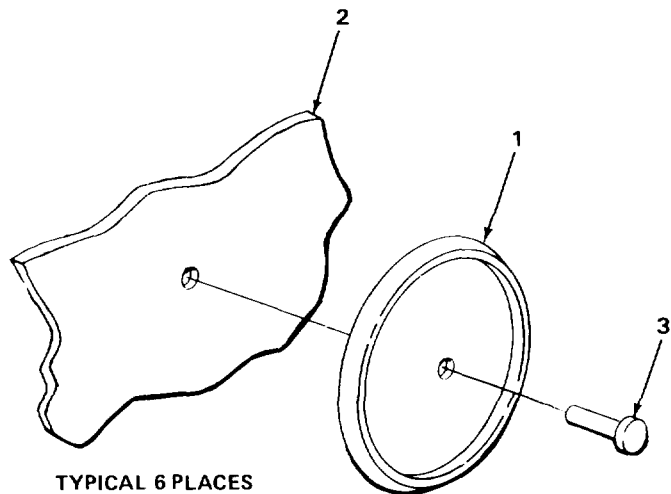
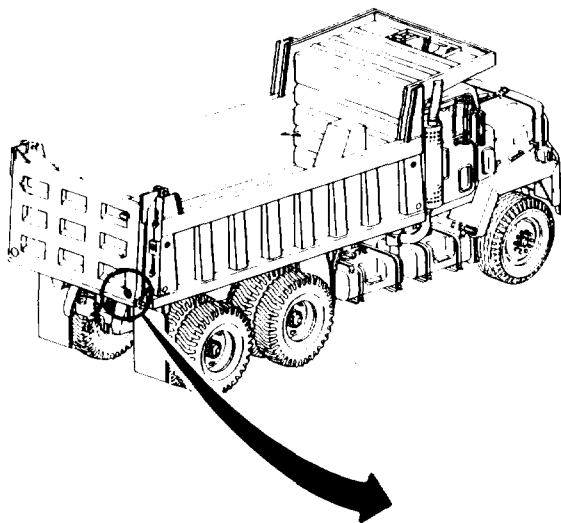
WARNING

Safety goggles must be worn, when using chisel and drill, to prevent eye injury caused by flying steel chips.

NOTE

There are six reflectors on the dump body. The two front reflectors are amber; the four rear reflectors are red. The four rear reflectors are initially installed with rivets.

- | | | |
|------------------------------|---------------|---|
| 1. Reflector (1) to body (2) | Rivet (3) | <ul style="list-style-type: none"> a. Using 12-ounce ball-peen hammer and 1/4-inch cold-hand chisel, cut off. b. Using 12-ounce ball-peen hammer and 3/16-inch straight drive-pin punch, tap out. |
| 2. Body (2) | Reflector (1) | <ul style="list-style-type: none"> a. Take off. b. Get rid of reflector. |

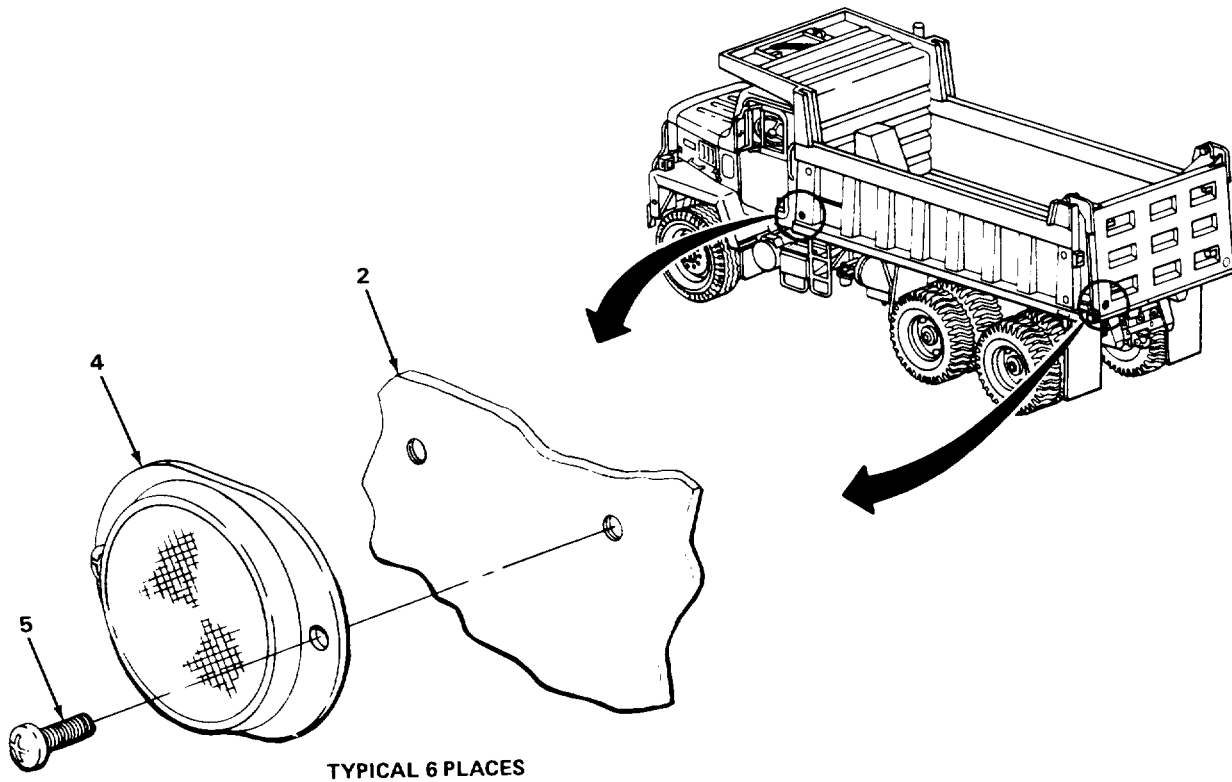


TYPICAL 6 PLACES

TA244535

DUMP BODY REFLECTORS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
3. Body (2)	New reflector (4)	a. Place in position. b. Drill two holes using 1/4-inch portable electric drill and number seven twist drill. c. Tap two holes using 1/4-inch 20-NC tap and adjustable tap handle.
4. New reflector (4) to body (2)	Two screws (5)	Screw in and tighten using number two cross-tip screwdriver.



TASK ENDS HERE

TA244536

WINDSHIELD WIPER MOTOR

This task covers:

- | | |
|---|---|
| <ul style="list-style-type: none"> a. Removal, Driver's Side
(page 2-1324) b. Installation, Driver's Side
(page 2-1328) | <ul style="list-style-type: none"> c. Removal, Passenger's Side
(page 2-1331) d. Installation, Passenger's Side
(page 2-1334) |
|---|---|

INITIAL SETUP

Tools

Screwdriver, cross-tip, number one
 Wrench, box-end, 7/16-inch
 Wrench, box-end, 15/16-inch
 Wrench, open-end, 1/2-inch
 Wrench, open-end, 9/16-inch

Materials/Parts

Tags, marker (item 21, appendix C)
 Tape, antiseizing (item 22, appendix C)

Personnel Required

One

Equipment Condition

Wiper blades and arms removed
 (page 2-1301).
 Left side cab door opened (page 2-424).

LOCATION	ITEM	ACTION REMARKS
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REMOVAL, DRIVER'S SIDE

NOTE

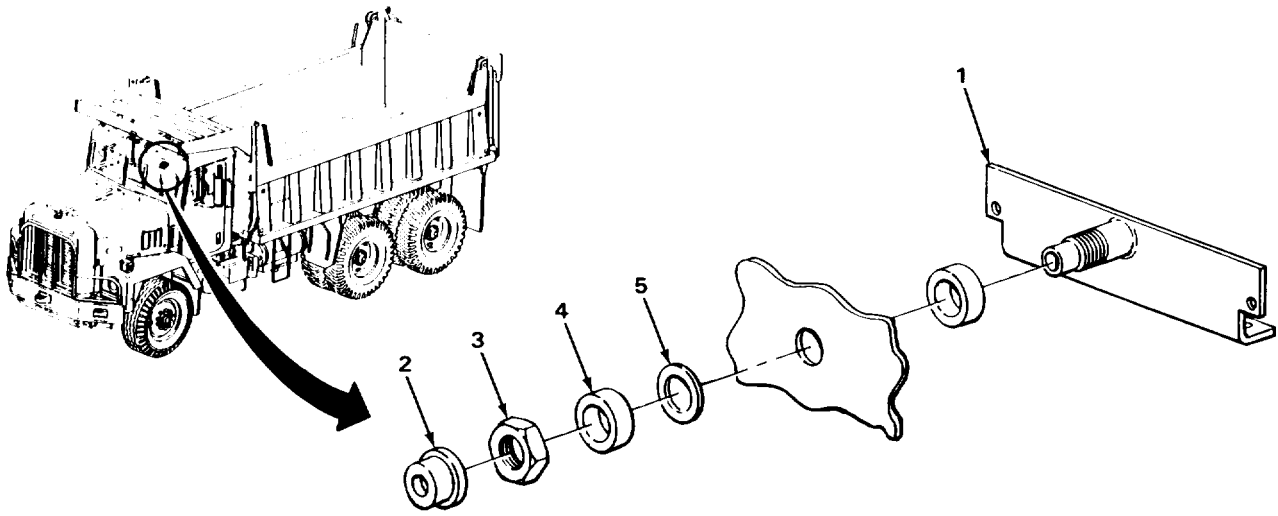
Tag all line fittings before removing for correct identification when installing.

For more information on how to tag parts, go to General Maintenance Instructions (page 2-424).

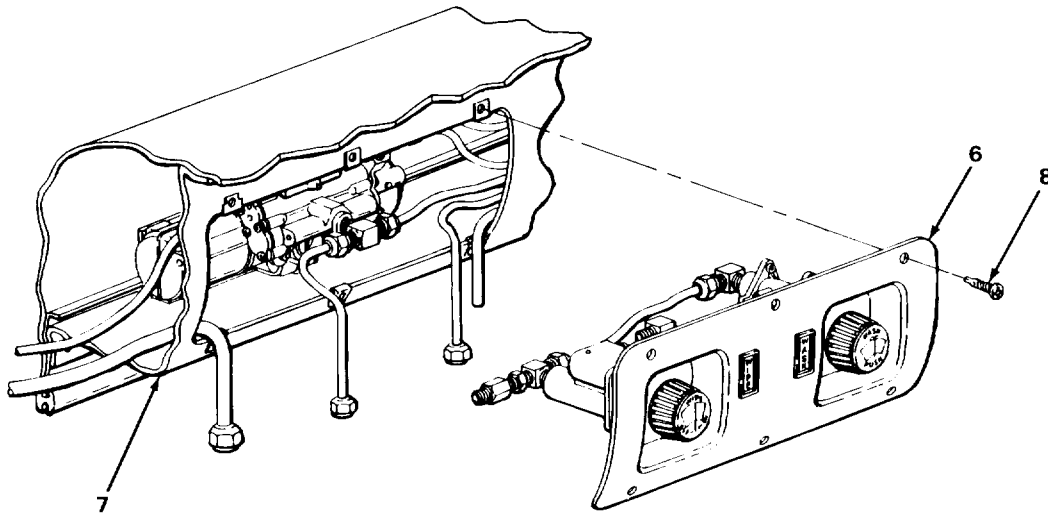
- | | | |
|--|--|---|
| <p>1. Wiper mount
bracket (1)</p> | <p>Weather seal (2)</p> | <p>Take off.</p> |
| <p>2.</p> | <p>Locknut (3)</p> | <p>Using 15/16-inch box-end wrench, unscrew and take off.</p> |
| <p>3.</p> | <p>Outer spacer (4) and
leather washer (5)</p> | <p>Take off.</p> |

WINDSHIELD WIPER MOTOR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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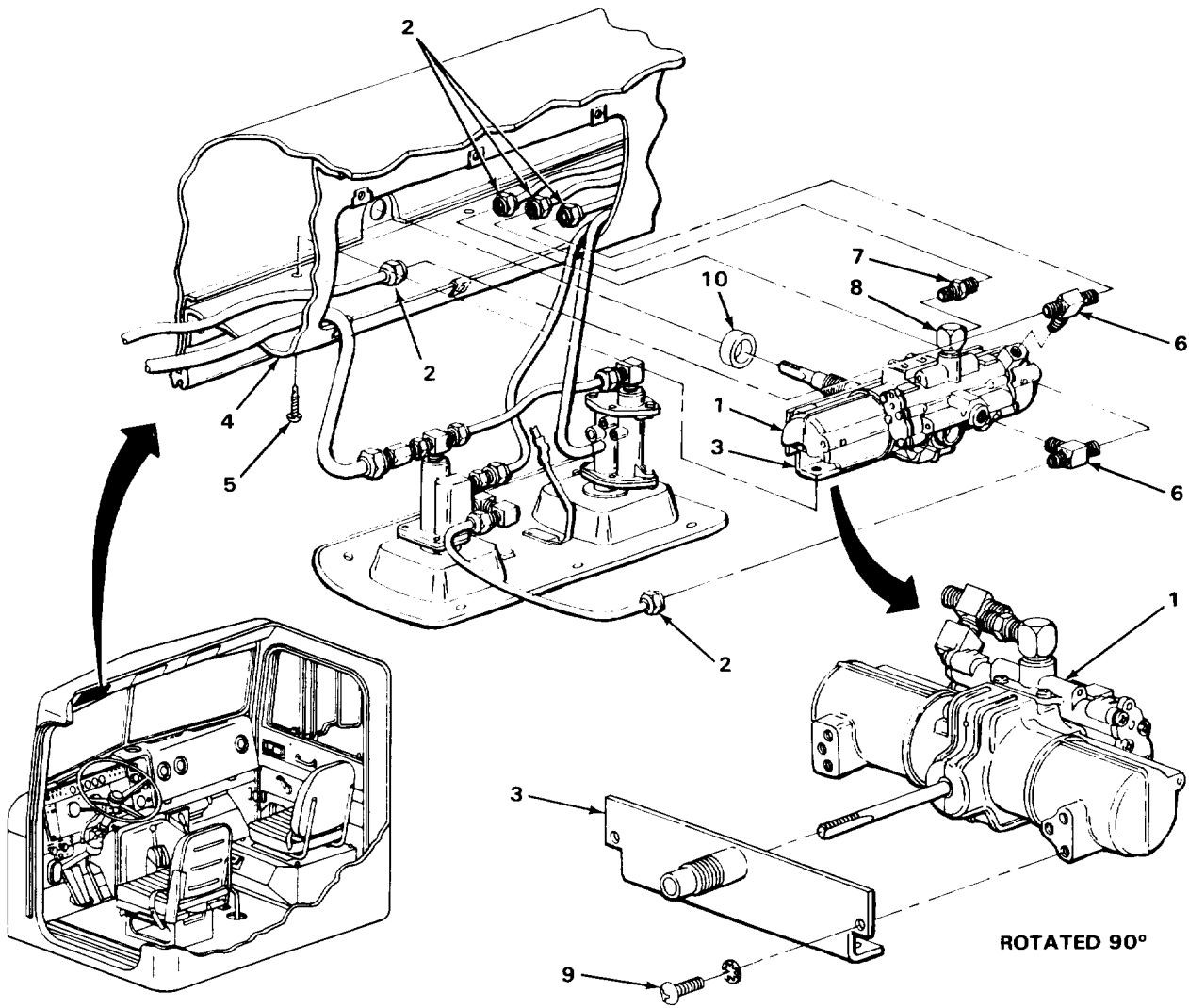
- | | | |
|--|-----------------|---|
| 4. Cover plate (6) to front trim panel head retainer (7) | Six screws (8) | Using number one cross-tip screwdriver, unscrew and take out. |
| 5. Front trim panel head retainer (7) | Cover plate (6) | Take off. |



WINDSHIELD WIPER MOTOR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL, DRIVER'S SIDE - CONTINUED		
6. Windshield wiper motor (1)	Five line fittings (2)	a. Using 9/16-inch open-end wrench, unscrew and take off. b. Tag line fittings.
7. Wiper mount bracket (3) to front trim panel head retainer (4)	Two screws (5)	Using number one cross-tip screwdriver, unscrew and take out.
8. Front trim panel head retainer (4)	Windshield wiper motor (1)	Take out.
9. Windshield wiper motor (1)	Two tee fittings (6)	Using 1/2-inch open-end wrench, unscrew and take off.
10.	Adapter fitting (7)	Using 7/16-inch box-end wrench, unscrew and take off.
11.	Fitting (8)	Using 1/2-inch open-end wrench, unscrew and take off.
12. Wiper mount bracket (3) to windshield wiper motor (1)	Two screws (9) unscrew and take out.	Using number one cross-tip screwdriver,
13. Windshield wiper motor (1)	Wiper mount bracket (3)	Take off.
14.	Inner spacer (10)	Take off.

WINDSHIELD WIPER MOTOR - CONTINUED

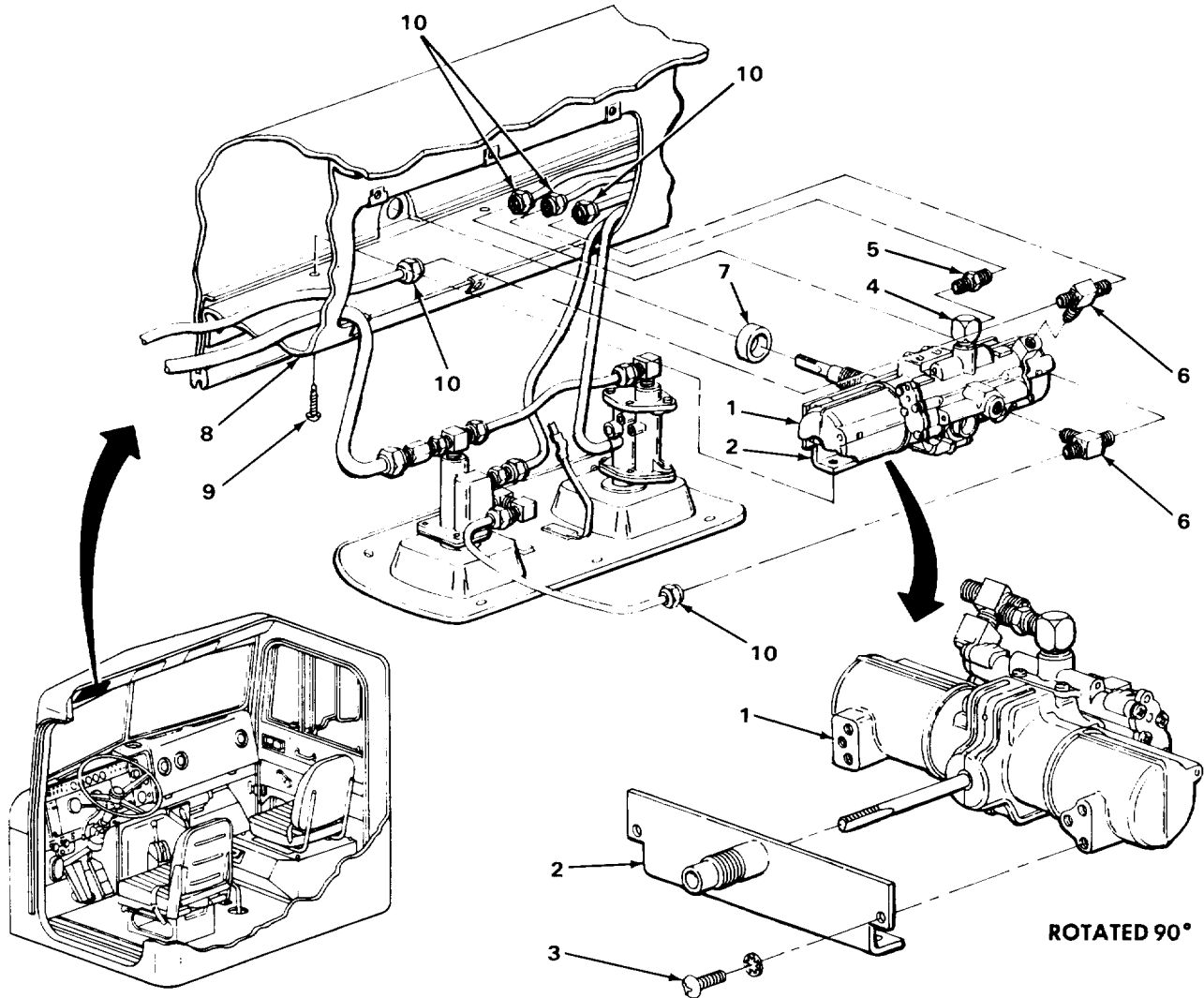


TA244538

WINDSHIELD WIPER MOTOR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION, DRIVER'S SIDE		
15. Windshield wiper motor (1)	Wiper mount bracket (2)	Place in position.
16. Wiper mount bracket (2) to windshield wiper motor (1)	Two screws (3)	Screw in and tighten using number one cross-tip screwdriver.
<u>CAUTION</u>		
Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.		
<u>NOTE</u>		
For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).		
17. Windshield wiper motor (1)	Fitting (4)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 1/2-inch open-end wrench.
18. Windshield wiper motor(1)	Adapter fitting (5)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 7/16-inch box-end wrench.
19.	Two tee fittings (6)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 1/2-inch open-end wrench.
20. Wiper mount bracket (2)	Inner spacer (7)	Place in position.
21. Front trim panel head retainer (8)	Windshield wiper motor (1)	Place in position.
22. Wiper mount bracket (2) to front trim panel head retainer (8)	Two screws (9)	Screw in and tighten using number one cross-tip screwdriver.
23. Windshield wiper motor (1)	Five line fittings (10)	a. Screw on and tighten using 9/16-inch open-end wrench. b. Take tags off.

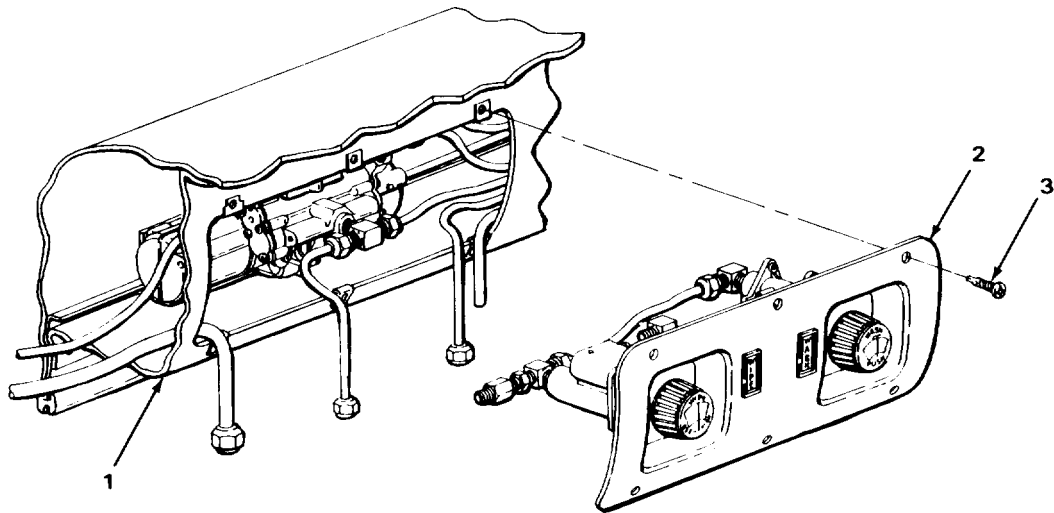
WINDSHIELD WIPER MOTOR - CONTINUED



TA244539

WINDSHIELD WIPER MOTOR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION, DRIVER'S SIDE - CONTINUED		
24. Front trim panel head retainer (1)	Cover plate (2)	Place in position.
25. Cover plate (2) to front trim panel head retainer (1)	Six screws (3)	Screw in and tighten using number one cross-tip screwdriver.

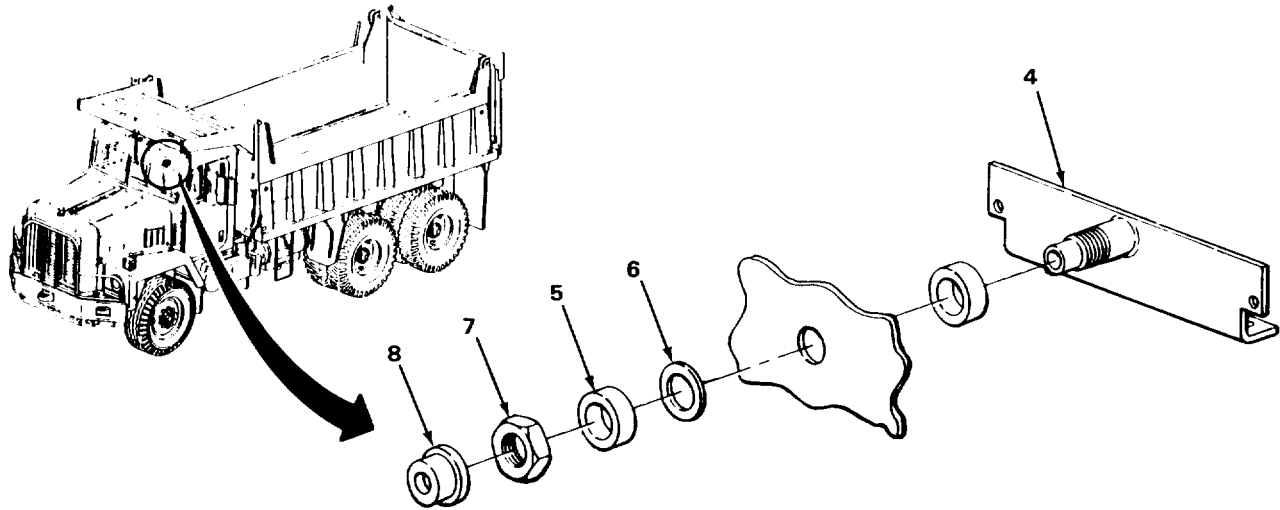


26. Wiper mount bracket (4)	Outer spacer (5) and leather washer (6)	Place in position.
27.	Locknut (7)	Screw on and tighten using 15/16-inch box-end wrench.
28.	Weather seal (8)	Place in position.

TA244540

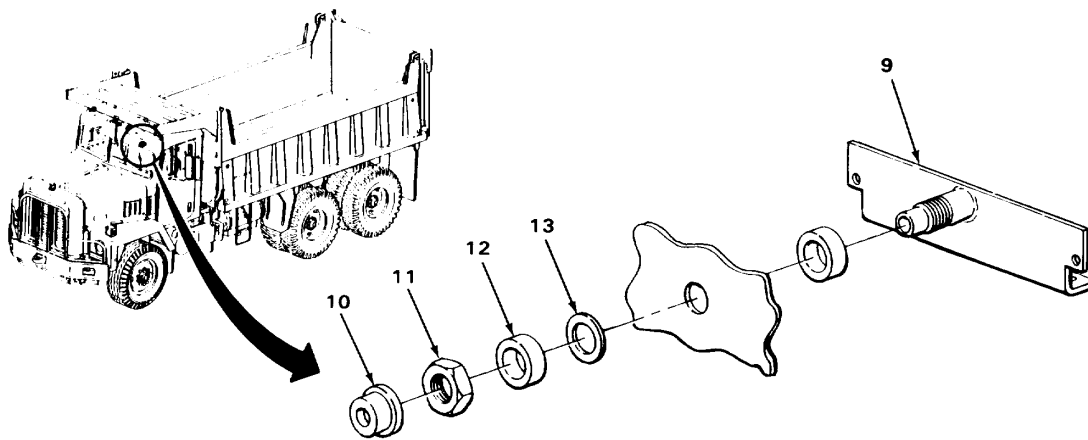
WINDSHIELD WIPER MOTOR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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REMOVAL, PASSENGER'S SIDE

- | | | | |
|-----|----------------------------|---|---|
| 29. | Wiper mount
bracket (9) | Weather seal (10) | Take off. |
| 30. | | Locknut (11) | Using 15/16-inch box-end wrench, un-
screw and take off. |
| 31. | | Outer spacer (12)
and leather
washer (13) | Take off. |

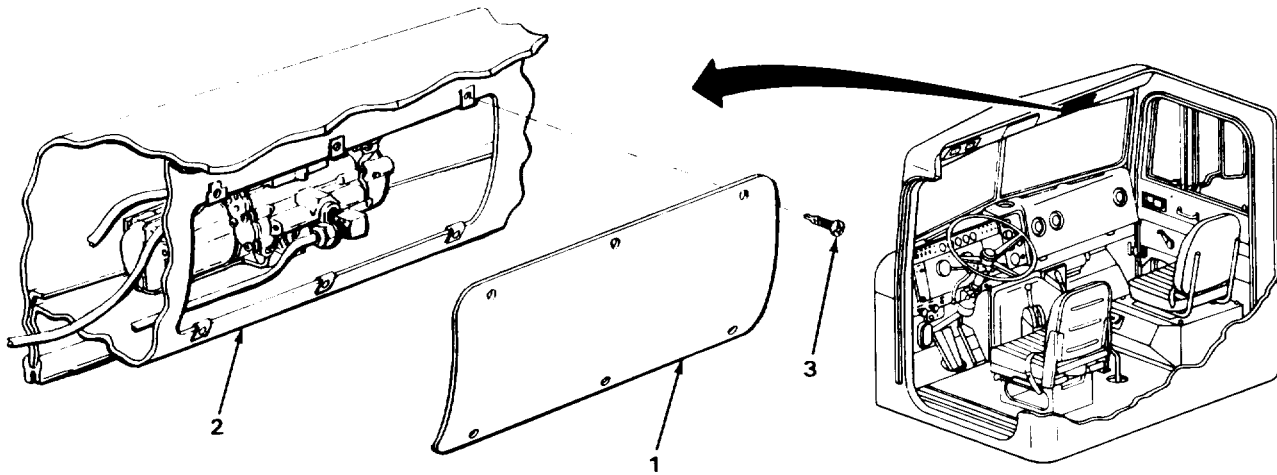


WINDSHIELD WIPER MOTOR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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REMOVAL, PASSENGER'S SIDE - CONTINUED

- | | | | |
|-----|---|-----------------|---|
| 32. | Cover plate (1) to front trim panel head retainer (2) | Six screws (3) | Using number one cross-tip screwdriver, unscrew and take out. |
| 33. | Front trim panel head retainer (2) | Cover plate (1) | Take off. |

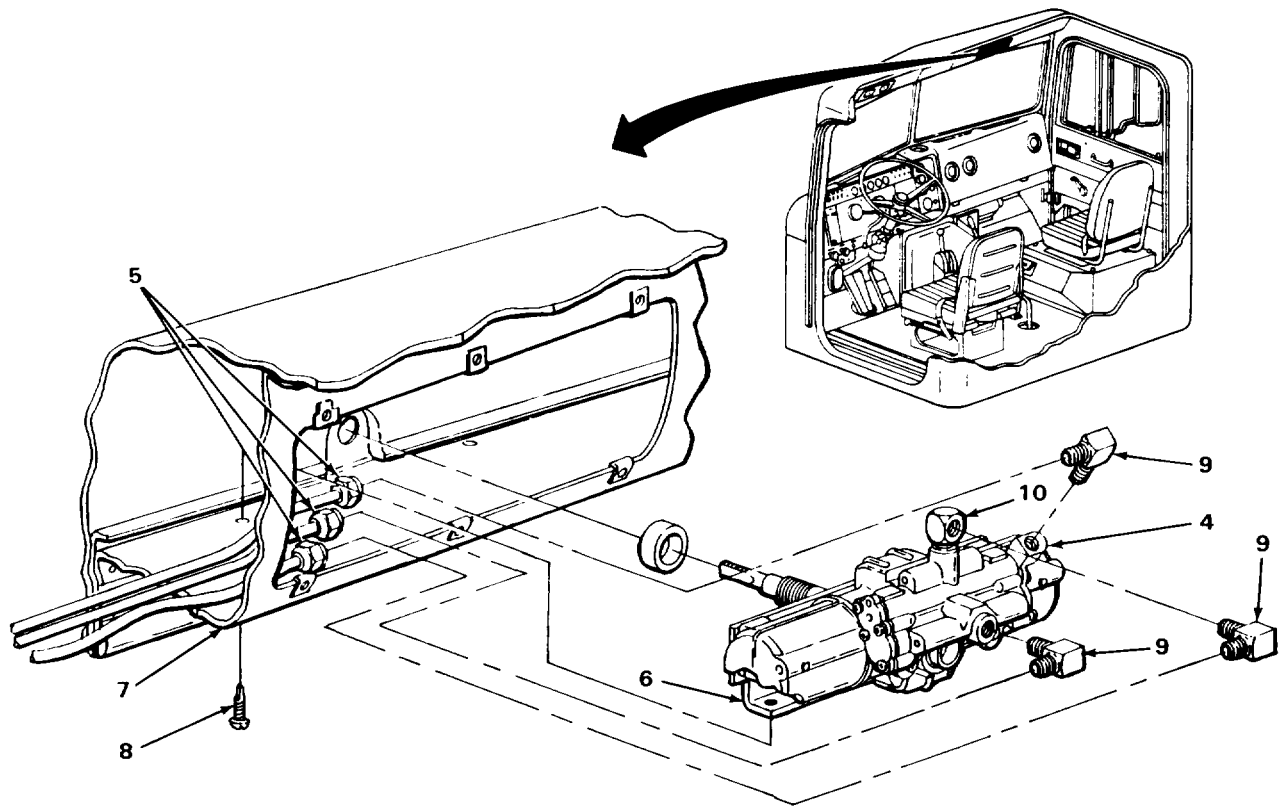


- | | | | |
|-----|---|-------------------------|--|
| 34. | Windshield wiper motor (4) | Three line fittings (5) | a. Using 9/16-inch open-end wrench, unscrew and take off.
b. Tag line fittings. |
| 35. | Wiper mount bracket (6) to front trim panel head retainer (7) | Two screws (8) | Using number one cross-tip screwdriver, unscrew and take out. |

TA244542

WINDSHIELD WIPER MOTOR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
36. Front trim panel head retainer (7)	Windshield wiper motor (4)	Take out.
37. Windshield wiper motor (4)	Three elbow fittings (9)	Using 1/2-inch open-end wrench, unscrew and take off.
38.	Fitting (10)	Using 1/2-inch open-end wrench, unscrew and take off.



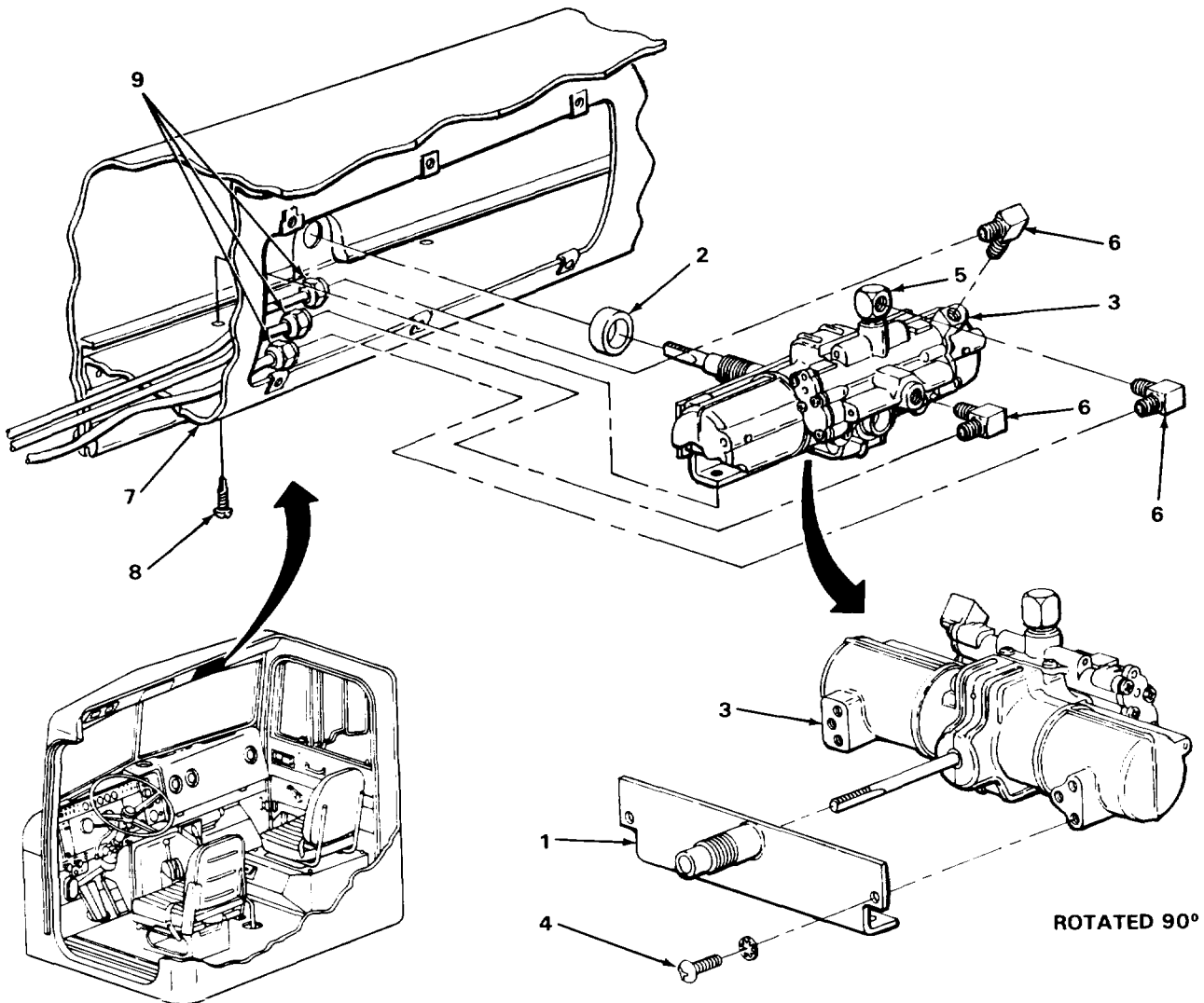
TA244543

WINDSHIELD WIPER MOTOR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL, PASSENGER'S SIDE - CONTINUED		
39. Wiper mount bracket (1)	Inner spacer (2)	Take off.
40. Wiper mount bracket (1) to windshield wiper motor (3)	Two screws (4)	Using number one cross-tip screwdriver, unscrew and take out.
41. Windshield wiper motor (3)	Wiper mount bracket (1)	Take off.
INSTALLATION, PASSENGER'S SIDE		
42. Windshield wiper motor (3)	Wiper mount bracket (1)	Place in position.
43. Wiper mount bracket (1) to windshield wiper motor (3)	Two screws (4)	Screw in and tighten using number one cross-tip screwdriver.
<u>CAUTION</u>		
Antiseizing tape must be used on all pipe threads to provide a good seal to prevent threaded parts from seizing.		
<u>NOTE</u>		
For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).		
44. Windshield wiper motor (3) open-end wrench.	Fitting (5)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 1/2-inch
45. Windshield wiper motor (3)	Three elbow fittings (6)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 1/2-inch open-end wrench.
46. Wiper mount bracket (1)	Inner spacer (2)	Place in position.
47. Front trim panel head retainer (7)	Windshield wiper motor (3)	Place in position.

WINDSHIELD WIPER MOTOR - CONTINUED

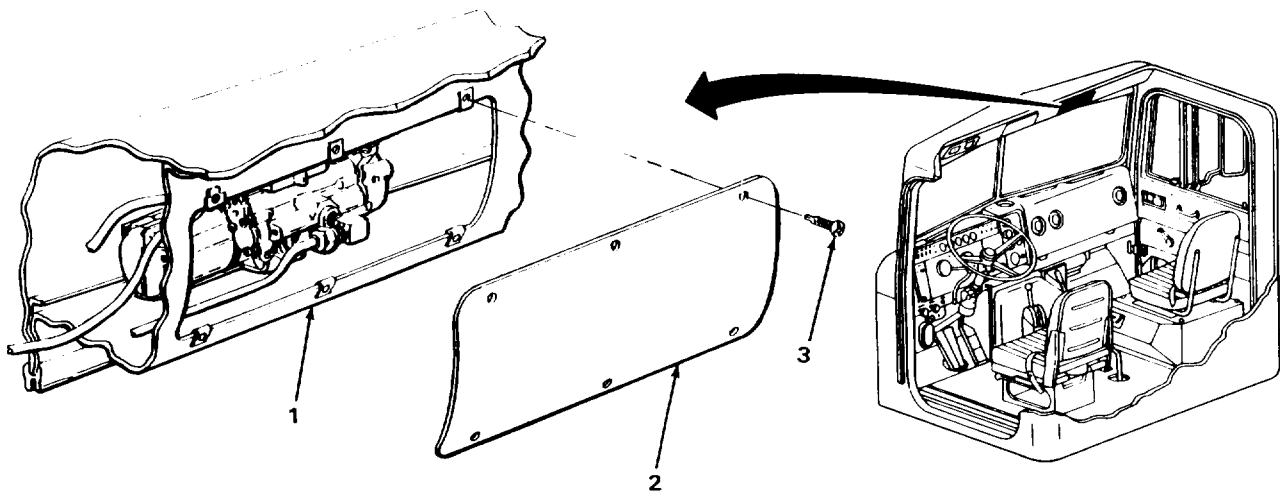
LOCATION	ITEM	ACTION REMARKS
48. Wiper mount bracket (1) to front trim panel head retainer (7)	Two screws (8)	Screw in and tighten using number one cross-tip screwdriver.
49. Windshield wiper motor (3)	Three line fittings (9)	a. Screw on and tighten using 9/16-inch open-end wrench. b. Take tags off.



TA244544

WINDSHIELD WIPER MOTOR - CONTINUED

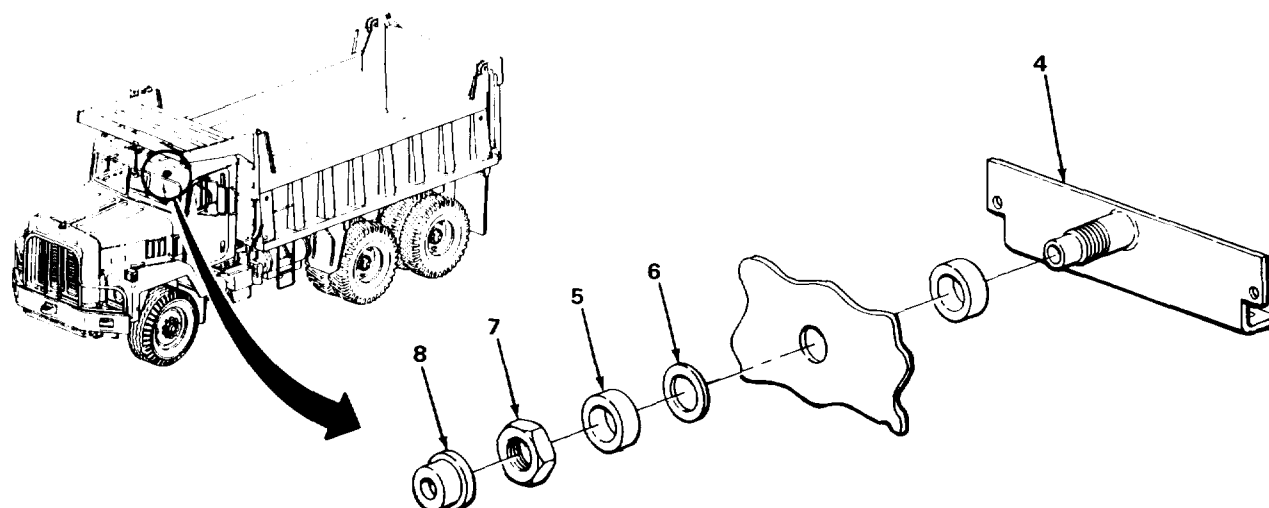
LOCATION	ITEM	ACTION REMARKS
INSTALLATION, PASSENGER'S SIDE - CONTINUED		
50. Front trim panel head retainer (1)	Cover plate (2)	Place in position.
51. Cover plate (2) to front trim panel head retainer (1)	Six screws (3)	Screw in and tighten using number one cross-tip screwdriver.



52. Wiper mount bracket (4)	Outer spacer (5) and leather washer (6)	Place in position.
53.	Locknut (7)	Screw on and tighten using 15/16-inch box-end wrench.
54.	Weather seal (8)	Place in position.

TA244545

WINDSHIELD WIPER MOTOR - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE:

1. Install wiper blade and arm (page 2-1301).
2. Close left side cab door (page 2-424).

TASK ENDS HERE

WINDSHIELD WIPER CONTROL

This task covers:

- a. Removal (page 2-1338)
- b. Installation (page 2-1340)

INITIAL SETUP

Tools

- Screwdriver, cross-tip, number one
- Wrench, hex-head, 5/64-inch
- Wrench, open-end, 7/16-inch
- Wrench, open-end, 7/16-inch
- Wrench, open-end, 9/16-inch
- Wrench, open-end, 5/8-inch
- Wrench, open-end, 1 3/16-inch

Materials/Parts

- Lockwasher, windshield wiper control to cover plate
- Tags, marker (item 21, appendix C)
- Tape, antiseizing (item 22, appendix C)

Personnel Required

One

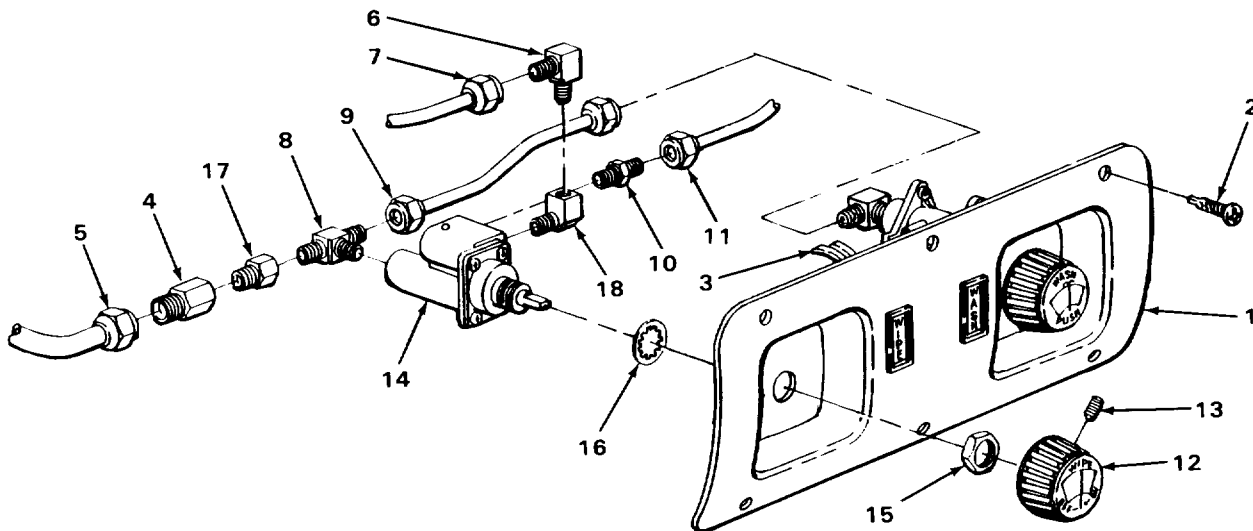
TA244546

WINDSHIELD WIPER CONTROL - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1	Cover plate (1)	Six screws (2)	Using number one cross-tip screwdriver, unscrew and take out.
2		Cover plate (1)	Take down.
3		Optical ribbon (3)	Take off.
NOTE			
Tag all line fittings before removing for correct identification when installing.			
For more information on how to tag parts, go to General Maintenance Instructions (page 2-424).			
4	Fitting (4)	Line fitting (5)	a Using 5/8-inch open-end wrench, unscrew and take off. b Tag line fitting.
5	Elbow fitting (6)	Line fitting (7)	a Using 9/16-inch open-end wrench, unscrew and take off. b Tag line fitting.
6	T-fitting (8)	Line fitting (9)	a Using 9/16-inch open-end wrench, unscrew and take off. b Tag line fitting.
7	Adapter fitting (10)	Line fitting (11)	a Using 9/16-inch open-end wrench, unscrew and take off. b Tag line fitting.
8	Windshield wiper control knob (12) to cover plate (1)	Setscrew (13)	Using 5/64-inch hex-head wrench, loosen one turn.
9	Cover plate (1)	Windshield wiper control knob (12)	Take off.
10	Windshield wiper control (14)	Nut (15)	Using 13/16-inch open-end wrench, unscrew and take off.

WINDSHIELD WIPER CONTROL - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
11	Cover plate (1)	Windshield wiper control (14)	Take off.
12	Windshield wiper control (14)	Lockwasher (16)	a Take off. b Get rid of lockwasher.
13	T-fitting (8) to windshield wiper control (14)	Fitting (4)	Using 9/16-inch and 1/2-inch open-end wrenches, unscrew and take off.
14	T-fitting (8)	Fitting (17)	Using 1/2-inch open-end wrench, unscrew and take off.
15	Windshield wiper control (14)	Adapter fitting (10)	Using 7/16-inch open-end wrench, unscrew and take out.
16	Elbow fitting (18)	Elbow fitting (6)	Using 1/2-inch open-end wrench, unscrew and take off.
17	Windshield wiper control (14)	Elbow fitting (18)	Using 9/16-inch open-end wrench, unscrew and take out.
18		T-fitting (8)	Using 1/2-inch open-end wrench, unscrew and take off



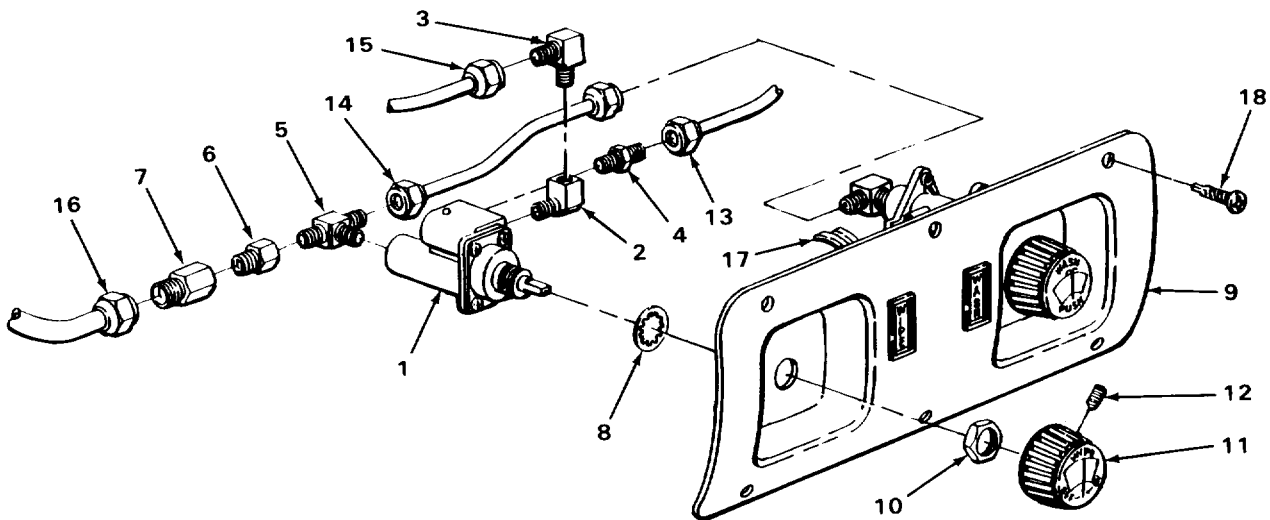
TA244547

WINDSHIELD WIPER CONTROL - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
<u>CAUTION</u>			
Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.			
<u>NOTE</u>			
For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).			
19	Windshield wiper control (1) open-end wrench.	Elbow fitting (2)	a Wrap pipe threads with antiseizing tape. b Screw in and tighten using 9/16-inch
20	Elbow fitting (2) open-end wrench.	Elbow fitting (3)	a Wrap pipe threads with antiseizing tape. b Screw in and tighten using 1/2-inch
21	Windshield wiper control (1) open-end wrench.	Adapter fitting (4)	a Wrap pipe threads with antiseizing tape. b Screw in and tighten using 7/16-inch
22		T-fitting (5)	a Wrap pipe threads with antiseizing tape. b Screw in and tighten using 1/2-inch open-end wrench.
23	T-fitting (5)	Fitting (6)	a Wrap pipe threads with antiseizing tape. b Screw in and tighten using 1/2-inch open-end wrench.
24	T-fitting (5) to windshield wiper control (1)	Fitting (7)	a Wrap pipe threads with antiseizing tape. b Screw in and tighten using 9/16-inch open-end wrench.
25	Windshield wiper control (1)	New lockwasher (8)	Place in position.
26	Cover plate (9) control (1)	Windshield wiper	Place in position.
27	Windshield wiper control (1)	Nut (10) open-end wrench.	Screw on and tighten using 13/16-inch
28	Cover plate (9) control knob (11)	Windshield wiper	Place in position.

WINDSHIELD WIPER CONTROL - CONTINUED

LOCATION	ITEM	ACTION REMARKS
29 Windshield wiper control knob (11) to cover plate (9)	Setscrew (12)	Tighten using 5/64-inch hex-head wrench.
30 Adapter fitting (4)	Line fitting (13)	a Screw on and tighten using 9/16-inch open-end wrench. b Take off tag.
31 T-fitting (5)	Line fitting (14)	a Screw on and tighten using 9/16-inch open-end wrench. b Take off tag.
32 Elbow fitting (3)	Line fitting (15)	a Screw on and tighten using 9/16-inch open-end wrench. b Take off tag.
33 Fitting (7)	Line fitting (16)	a Screw on and tighten using 5/8-inch open-end wrench. b Take off tag.
34 Cover plate (9)	Optical ribbon (17)	Snap into position.
35 Cover plate (9)	Place in position.	
36 Cover plate (9)	Six screws (18)	Screw in and tighten using number one cross-tip screwdriver.



TA244548

WINDSHIELD WASHER CONTROL

This task covers:

- a. Removal (page 2-1342)
- b. Installation (page 2-1343)

INITIAL SETUP

Tools

Screwdriver, cross-tip, number one
 Wrench, hex-head, 5/64-inch
 Wrench, open-end, 1/2-inch
 Wrench, open-end, 9/16-inch
 Wrench, open-end, 5/8-inch

Materials/Parts

Tape, antiseizing (item 22, appendix C)

Personnel Required

One

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1	Cover plate (1)	Six screws (2)	a Using number one cross-tip screwdriver, unscrew and take out. b Take down cover plate.
2	Optical ribbon (3)	Take off.	
3	Windshield washer control knob (4) to cover plate (1)	Setscrew (5)	Using 5/64-inch hex-head wrench, loosen one turn.
4	Cover plate (1)	Windshield washer control knob (4)	Take off.
5	Windshield washer control (6)	Nut (7)	Using 5/8-inch open-end wrench, unscrew and take off.
6	Cover plate (1) control (6)	Windshield washer	Take out.
7	Windshield washer control (6)	Flat washer (8)	Take off.
8	Elbow fitting (9) to windshield washer control (6)	Line fitting (10)	Using 9/16-inch open-end wrench, unscrew and take off.

WINDSHIELD WASHER CONTROL - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
9 Windshield washer control (6)	Elbow fitting (9)	Using 1/2-inch open-end wrench, unscrew and take off.	
10	Rubber hose (11)	Take off.	
INSTALLATION			
11 Windshield washer control (6)	Rubber hose (11)	Place in position.	

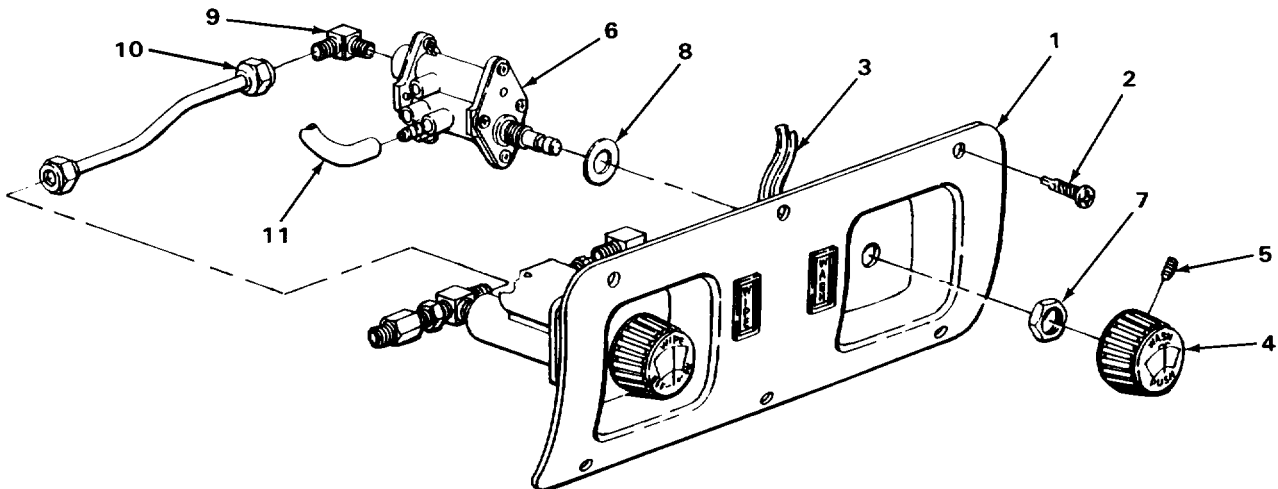
CAUTION

Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.

NOTE

For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).

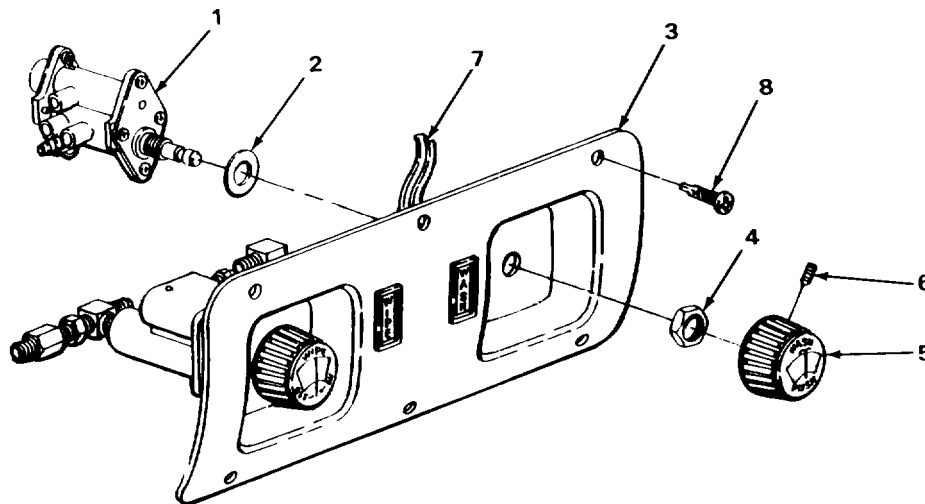
12	Elbow fitting (9)	a Wrap pipe threads with antiseizing tape. b Screw in and tighten using 1/2-inch open-end wrench.
13	Elbow fitting (9) to windshield washer control (6)	Screw on and tighten using 9/16-inch open-end wrench.



TA244549

WINDSHIELD WASHER CONTROL - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
14 Windshield washer control (1)	Flat washer (2)	Place in position.
15 Cover plate (3) control (1)	Windshield washer	Place in position.
16 Windshield washer control (1)	Nut (4)	Screw on and tighten using 5/8-inch open-end wrench.
17 Cover plate (3)	Windshield washer control knob (5)	Place in position.
18 Windshield washer control knob (5) to cover plate (3)	Setscrew (6)	Screw in and tighten using 5/64-inch hex-head wrench.
19 Cover plate (3)	Optical ribbon (7)	Snap into position.
20	Cover plate (3)	Place in position.
21	Six screws (8)	Screw in and tighten using number one cross-tip screwdriver.



TA244550

TASK ENDS HERE

WINDSHIELD WASHER RESERVOIR AND PUMP

This task covers:

- a Removal (page 2-1344.1)
- b Installation (page 2-1344.2)

INITIAL SETUP

Equipment Condition

Right side hood panel opened (page 2-424)

Tools

Wrench, box-end, 7/16-inch
Wrench, open-end, 7/16-inch

Materials/Parts

Lockwasher, reservoir mounting bracket
(four required)

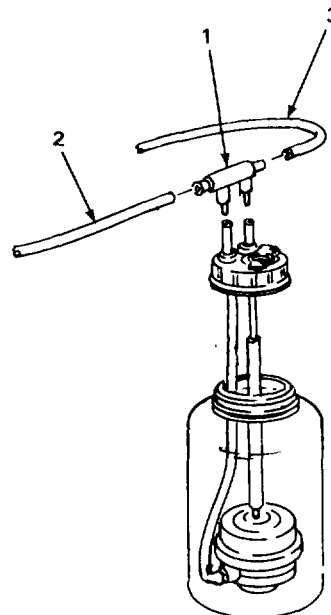
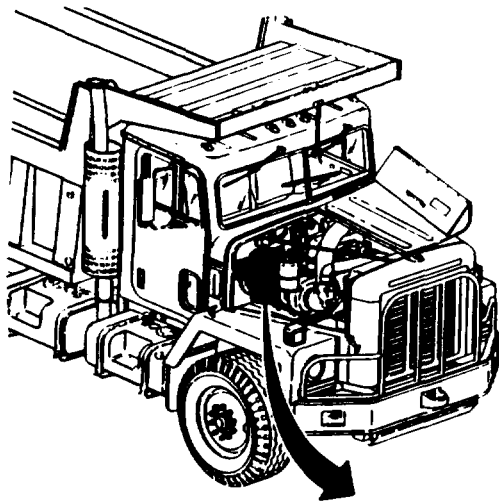
Personnel Required

One
removed (page 2-424).

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

1 Air valve (1)	Hose (2) and hose (3)	Disconnect.	
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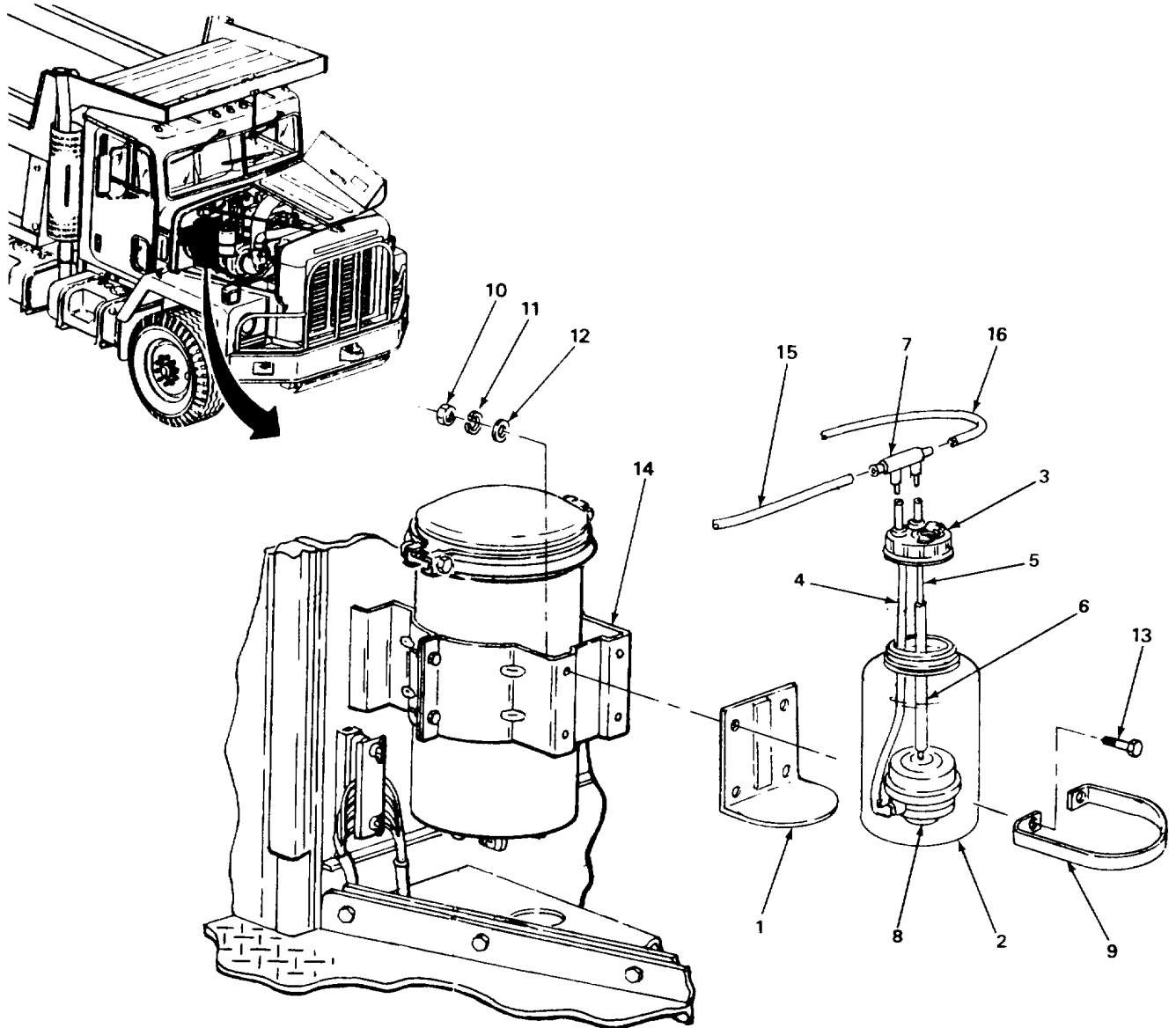


WINDSHIELD WASHER RESERVOIR AND PUMP - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
2	Reservoir mounting bracket (1)	Tank (2)	Take out.
3	Tank (2)	Cap (3)	Unscrew and take off.
4	Cap (3)	Hose (4), hose (5), tubing (6), air valve (7), and windshield washer pump (8)	Remove.
5	Strap (9)	Four locknuts (10), lockwashers (11), washers (12), and	a Using 7/16-inch open-end wrench and 7/16-inch box-end wrench, unscrew, and take off. b Get rid of lockwashers. bolts (13)
6	Bracket (14)	Strap (9) and reservoir mounting bracket (1)	Take off.
INSTALLATION			
7	Bracket (14)	Strap (9) and reservoir mounting bracket (1)	Put in place
8	Strap (9)	Four locknuts (10), new lockwashers (11), washers (12), and bolts (13)	Screw in and tighten, using 7/16-inch box-end wrench and 7/16-inch open-end wrench.
9	Cap (3)	Hose (4), hose (5), tubing (6), air valve (7), and windshield washer pump (8)	Install.
10	Tank (2)	Cap (3)	Screw in and tighten.
11	Reservoir mounting bracket (1)	Tank (2)	Put in place.
12	Air valve (7)	Hose (15) and hose (16)	Connect.

WINDSHIELD WASHER RESERVOIR AND PUMP - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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NOTE

FOLLOW-ON MAINTENANCE: Close right side hood panel (page 2-424).

TASK ENDS HERE

TA702190

Change 1 2-1344.3/(2-1344.4 blank)

AIR HORN

This task covers:

- a. Removal (page 2-1345)
- b. Installation (page 2-1348)

INITIAL SETUP

Tools

- Pliers, slip-joint, 6-inch
- Screwdriver, cross-tip, number two
- Screwdriver, cross-tip, number three
- Wrench, open-end, 7/16-inch
- Wrench, open-end, 9/16-inch

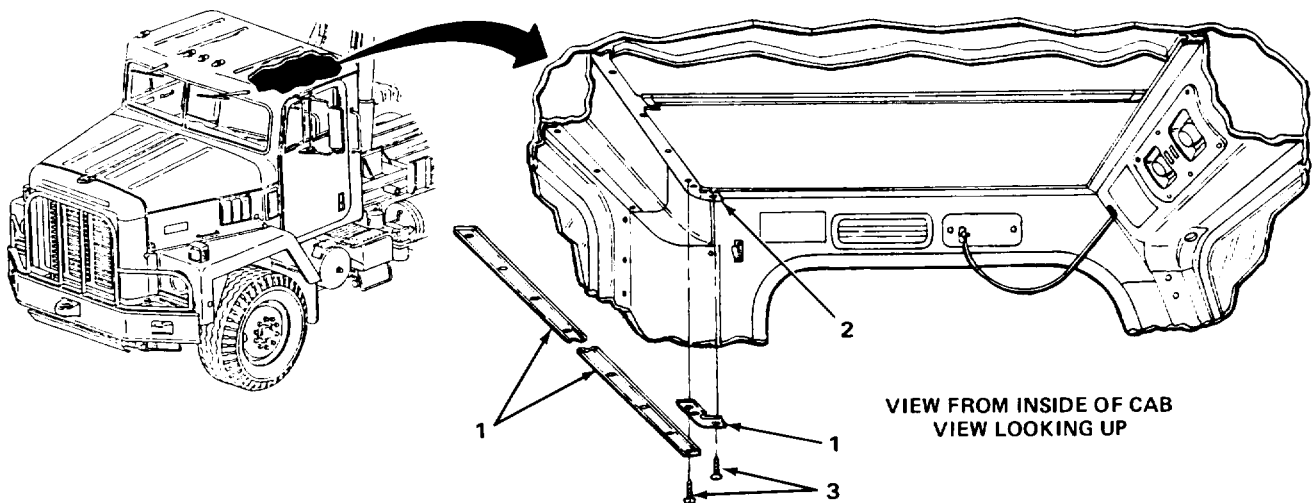
Materials/Parts

- Lockwasher, air horn (three required)
- Tape, antiseizing (item 22, appendix C)

Personnel Required

Two

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1 Molding (1) to head lining (2)	Fourteen screws (3)	Using number two cross-tip screwdriver, unscrew and take out.	
2 Head lining (2)	Molding (1)	Take off.	

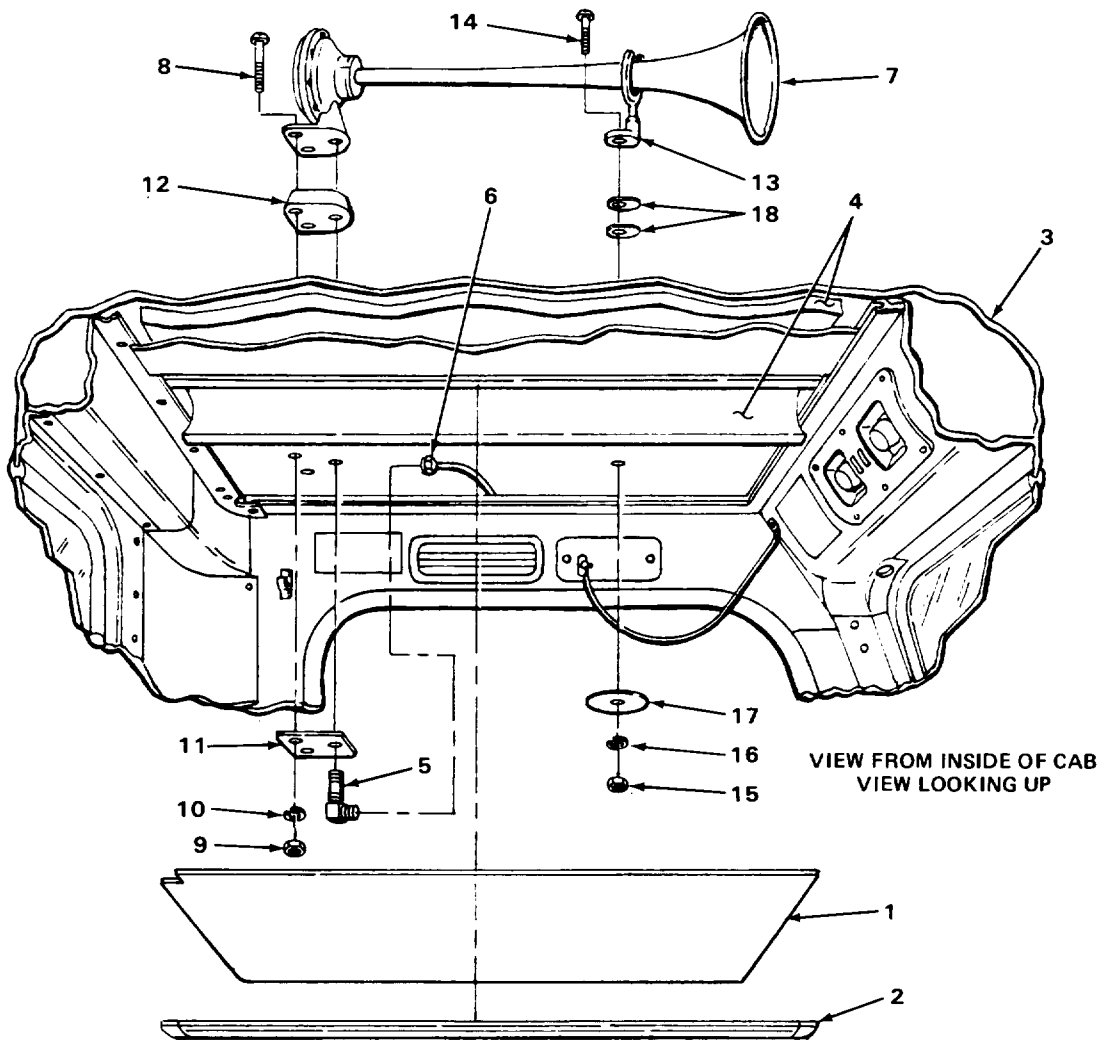


TA244551

AIR HORN - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED		
3	Head lining (1) Retainer (2)	Take down.
4	Cab ceiling (3) Head lining (1)	Take down.
5	Insulation (4)	Peel down gently.
6	Fitting (5) Line fitting (6)	Using 9/16-inch open-end wrench, unscrew and take off.
7	Air horn (7) Fitting (5)	Using 9/16-inch open-end wrench, unscrew and take out.
8	Air horn (7) to cab ceiling (3) Two screws (8), two nuts (9), and two lockwashers (10)	a Using number three cross-tip screwdriver and 7/16-inch open-end wrench, with assistance, unscrew and take off. b Get rid of lockwashers.
9	Cab ceiling (3) plate (11) Reinforcing	Take down.
10	Rubber mount (12)	Take off.
11	Air horn (7) Slide forward and take off.	
12	Yoke (13) to cab ceiling (3) Screw (14), nut (15), and lockwasher (16)	a Using number three cross-tip screwdriver and 7/16-inch open-end wrench, with assistance, unscrew and take off. b Get rid of lockwasher.
13	Cab ceiling (3) Reinforcing plate (17)	Take down.
14	Yoke (13) and two weather seals (18)	Take off.

AIR HORN - CONTINUED



TA244552

AIR HORN - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
15 Cab ceiling (1)	Yoke (2) and two weather seals (3)	Place in position.
16 Yoke (2) to cab ceiling (1)	Screw (4)	Place in position.
17 Cab ceiling (1)	Reinforcing plate (5)	Place in position and hold.
18	Nut (6) and new lockwasher (7) wrench, screw on and tighten.	With assistance, using number three cross-tip screwdriver and 7/16-inch open-end
19	Air horn (8)	Slide through yoke and into position.
20 Air horn (8) to cab ceiling (1)	Rubber mount (9)	Place in position.
21 Air horn (8)	Two screws (10)	Place in position.
22 Cab ceiling (1)	Reinforcing plate (11)	Place in position and hold.
23 Air horn (8) to cab ceiling (1)	Two nuts (12) and two new lockwashers (13)	With assistance, using number three cross-tip screwdriver and 7/16-inch open-end wrench, screw on and tighten.

CAUTION

Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.

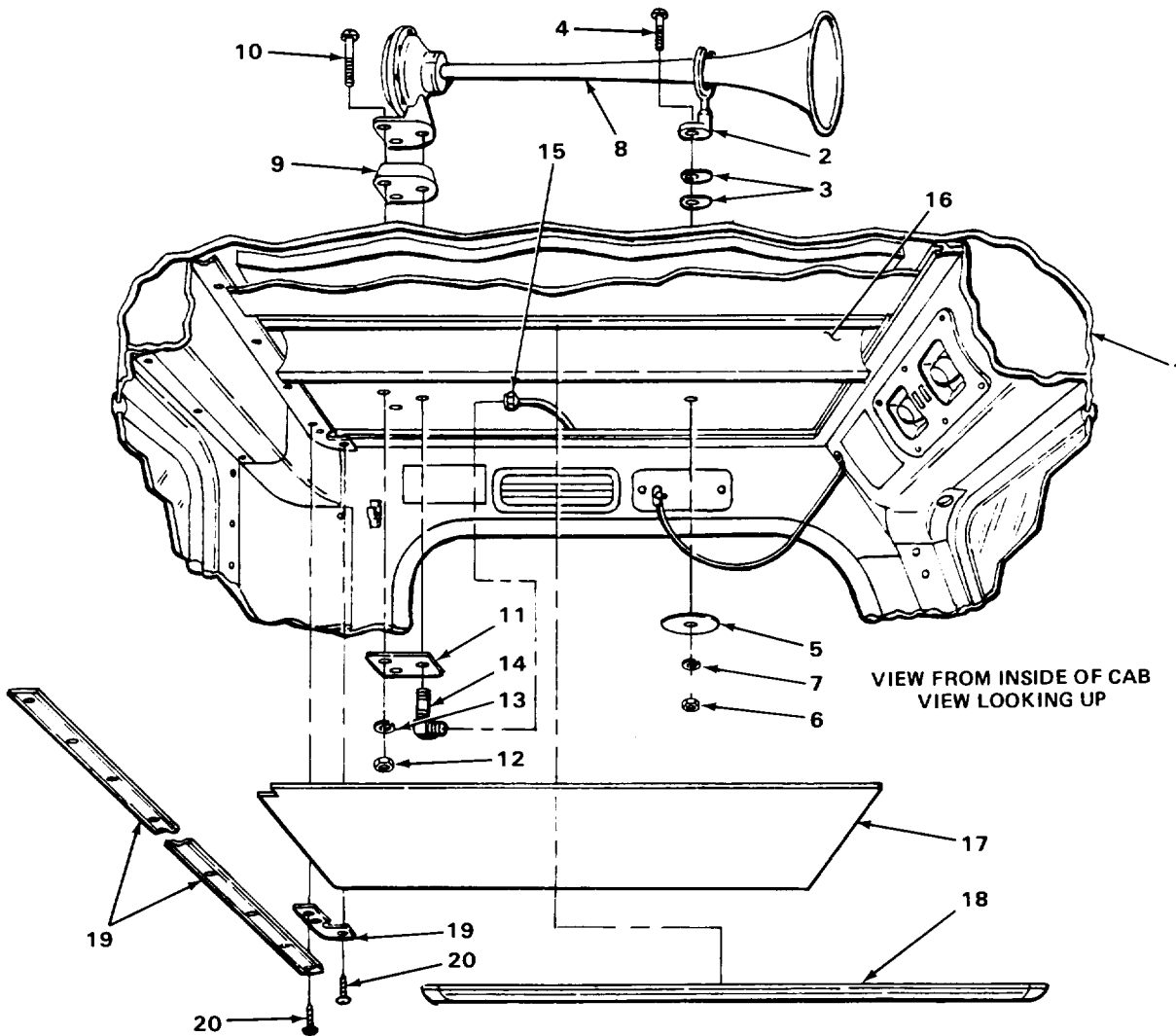
NOTE

For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).

24 Air horn (8)	Fitting (14)	a Wrap pipe threads with antiseizing tape. b Screw in and tighten using 9/16-inch open-end wrench.
25 Fitting (14)	Line fitting (15)	Screw on and tighten using 9/16-inch open-end wrench.
26 Cab ceiling (1)	Insulation (16)	Place in position.

AIR HORN - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
27 Cab ceiling (1)	Head lining (17)	Place in position.	
28 Head lining (17)	Retainer (18)	Snap in position.	
29	Molding (19)	Place in position and hold.	
30 Molding (19) to head lining (17)	Fourteen screws (20)	With assistance, using number two cross-tip screwdriver, screw in and tighten.	



TASK ENDS HERE

2-1349

DATA AND INSTRUCTION PLATES

This task covers:

- a Removal (page 2-1350)
 - b Cleaning (page 2-1352)
 - c Installation (page 2-1353)
-

INITIAL SETUP

Tools

- Bit, drill, 1/8-inch
- Bit, drill, 5/32-inch
- Drill, portable, electric, 1/4-inch
- Goggles, safety Personnel Required
- Knife, putty
- Screwdriver, cross-tip, number one
- Screwdriver, cross-tip, number two

Materials/Parts

- Data and instruction plates (as required)
- Naptha (item 11, appendix C)

Materials/Parts - Continued

- Rags, wiping (item 15, appendix C)
- Screw, self-tapping (as required)

One

Equipment Condition

Right and left cab doors opened (page 2-424).

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

REMOVAL

NOTE

Step 1 is typical for the removal of all data and instruction plates attached with adhesive.

- | | | |
|----------------------------|-----------------------|--------------------------------|
| 1. Automatic override | Four nuts (2) and | a. Tag wires. |
| 1 Inside driver's door (1) | Instruction plate (2) | Using putty knife, scrape off. |

WARNING

Safety goggles must be worn when using a portable electric drill. Flying metal particles can cause eye injury.

NOTE

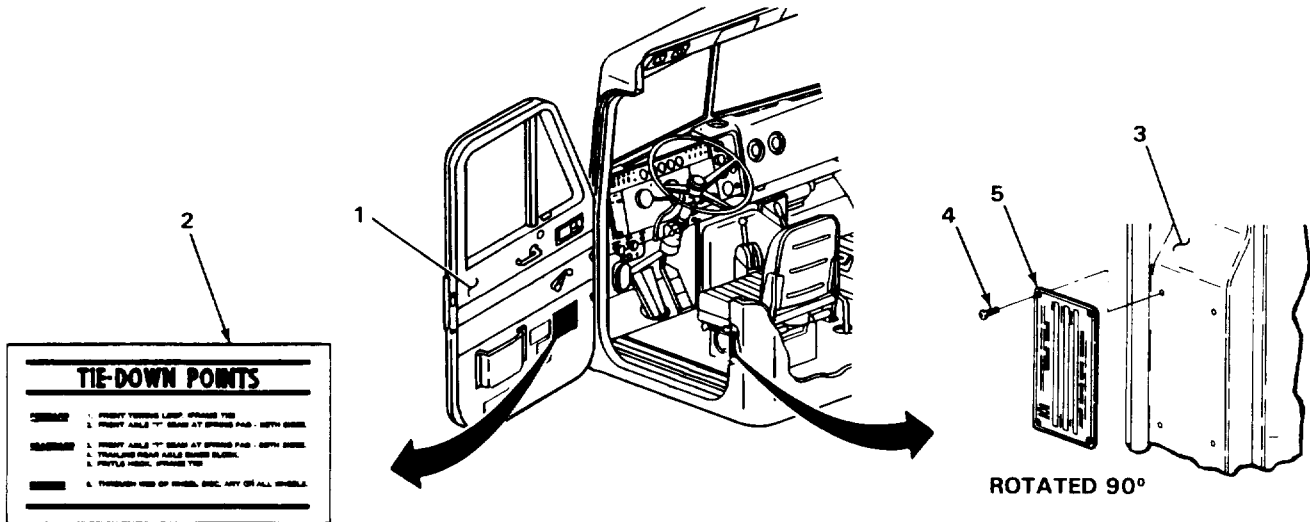
Steps 2 and 3 are typical for the removal of all data and instruction plates attached with rivets.

DATA AND INSTRUCTION PLATES - CONTINUED

2 Door frame (3)

Four rivets (4) and data plate (5)

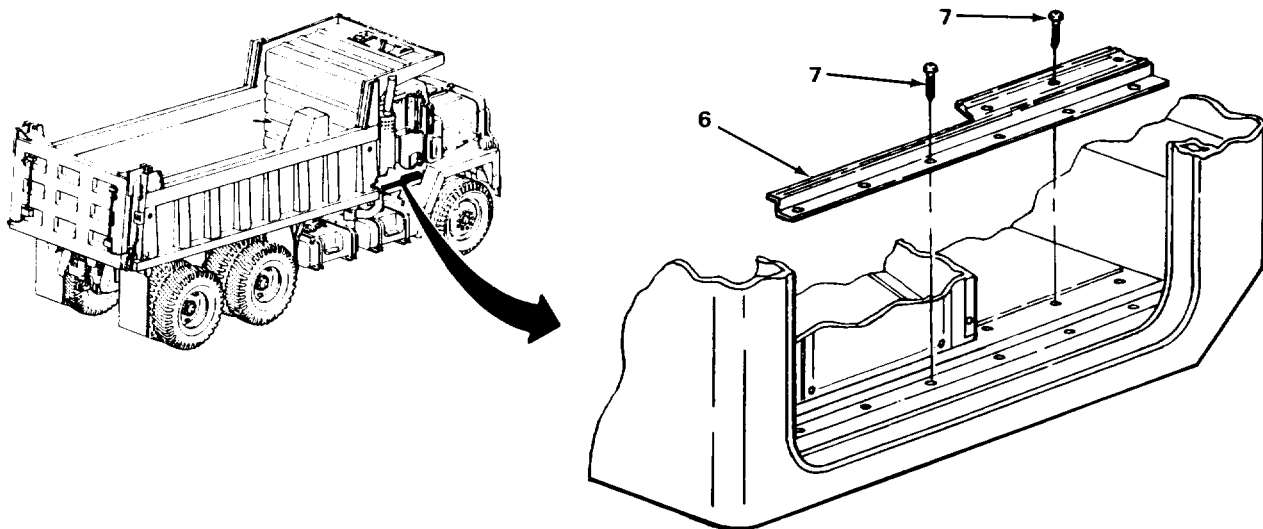
- a Using 1/8-inch drill bit and 1/4-inch portable electric drill, drill out rivets.
- b Take off data plate.



3 Right side kick panel (6)

Nine screws (7)

- a Using number two cross-tip screwdriver, unscrew and take out.
- b Take off right side kick panel.



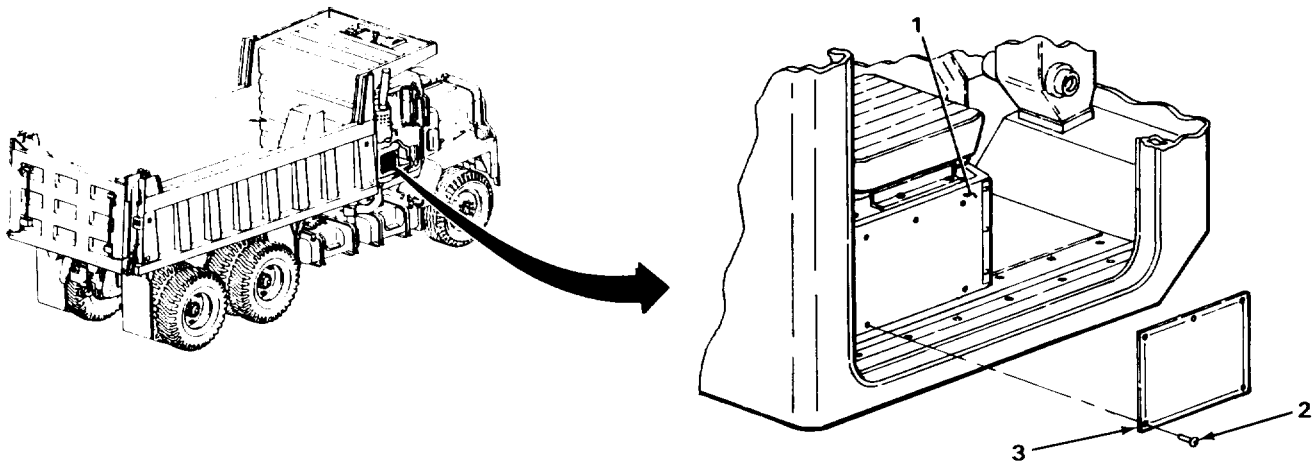
TA244554

DATA AND INSTRUCTION PLATES - CONTINUED

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

REMOVAL - CONTINUED

4 Heater box (1)	Five rivets (2) and wiring circuit diagram plate (3)	a Using 5/32-inch drill bit and 1/4-inch portable electric drill, drill out rivets. b Take off wiring circuit diagram plate.	
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CLEANING

WARNING

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

NOTE

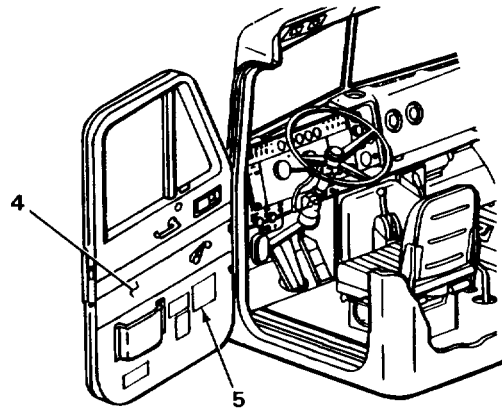
For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

5 Inside driver's door (4)	Old adhesive (5)	Using naphtha and rag, clean off old adhesive.	
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TA244555

DATA AND INSTRUCTION PLATES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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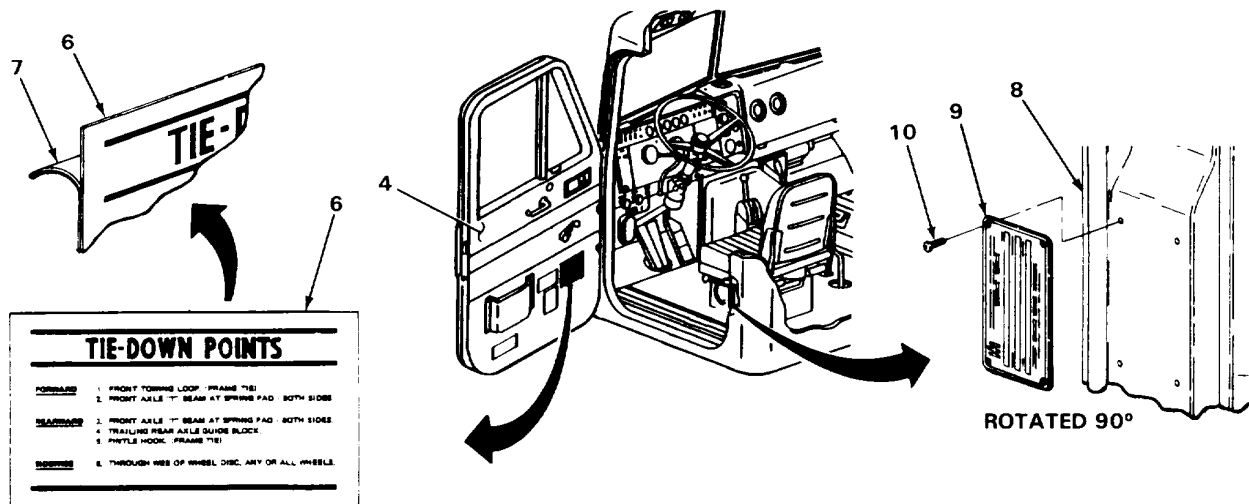


INSTALLATION

NOTE

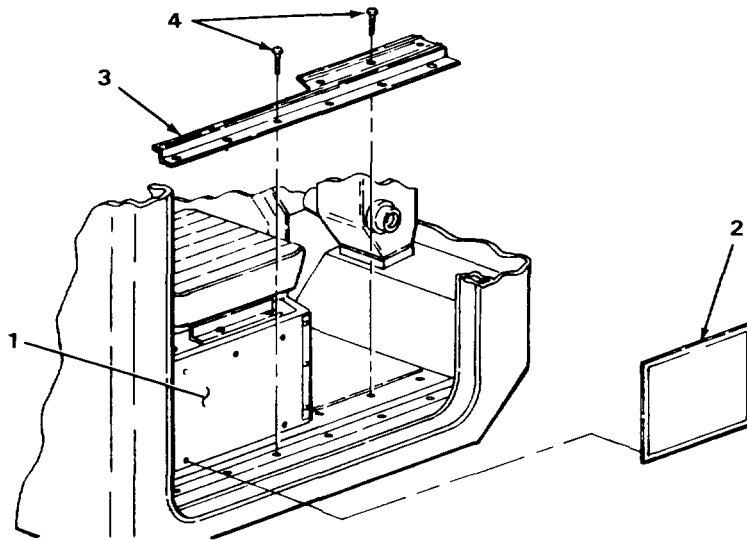
Steps given are typical for installation of all data and instruction plates attached with adhesive and screws.

6	Inside driver's door (4)	New instruction plate (6)	a Peel off paper backing (7). b Stick on inside driver's door (4).
7	Door frame (8)	New data plate (9)	Put in place.
8	New data plate (9)	Four self-tapping screws (10)	Screw in and tighten using number one cross-tip screwdriver.



DATA AND INSTRUCTION PLATES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
9 Heater box (1)	New wiring circuit diagram (2)	Put on.	
10 Right side kick panel (3)	Nine screws (4)	a Put right side kick panel in place. b Screw in and tighten using number two cross-tip screwdriver.	



NOTE

FOLLOW-ON MAINTENANCE: Close right and left cab doors (page 2-424).

TASK ENDS HERE TA244557

AIR HORN CONTROL VALVE

This task covers:

- a Removal (page 2-1355)
- b Disassembly (page 2-1357)
- c Cleaning (page 2-1358)
- d Inspection/Replacement (page 2-1358)
- e Assembly (page 2-1358)
- f Installation (page 2-1360)

INITIAL SETUP

Tools

- Brush, cleaning
- Pliers, slip-joint, 6-inch long
- Screwdriver, number one, cross-tip
- Wrench, open-end, 11/2-inch
- Wrench, open-end, 9/16-inch
- Wrench, open-end, 5/8-inch
- Wrench, open-end, 11/16-inch
- Wrench, open-end, 13/16-inch

Materials/Parts

- Detergent, liquid GP (item 14, appendix C)
- Pin, cotter

Materials/Parts - Continued

- Rags, wiping (item 15, appendix C)
- Tags, marker (item 21, appendix C)
- Tape, antiseizing (item 22, appendix C)

Personnel Required

One

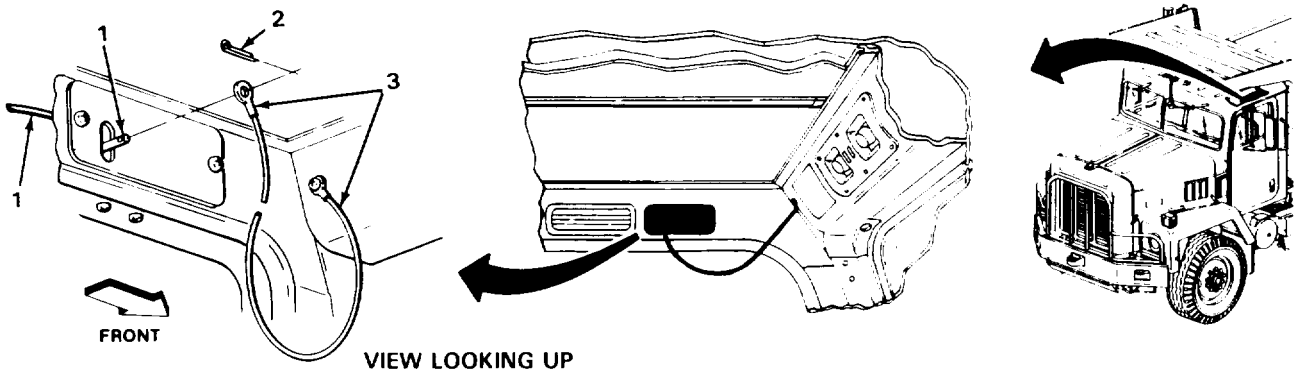
Equipment Condition

Air system drained (page 2-1034)

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

1 Lever (1)	Cotter pin (2) and pull chain (3)	<ul style="list-style-type: none"> a Using 6-inch slip-joint pliers take out cotter pin. b Take off pull chain. c Get rid of cotter pin. 	
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TA244558

AIR HORN CONTROL VALVE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
2	Head panel (1)	Screw (2) and pull chain (3)	Using number one cross-tip screwdriver, unscrew and take off.
3	Panel (4)	Two screws (5) and cover (6)	Using number one cross-tip screwdriver, unscrew and take off.
4	Air horn control valve (7)	Two screws (8)	Using number one cross-tip screwdriver, unscrew and take out.
5	Panel (9)	Two screws (10)	Using number one cross-tip screwdriver, unscrew and take out.

CAUTION

Use care when removing bracket, damage to air lines may result.

6	Access hole (11)	Bracket (12)	<ul style="list-style-type: none"> a While holding air horn control valve (7) push bracket back until lever (13) is disconnected from lever (14). b Take out bracket.
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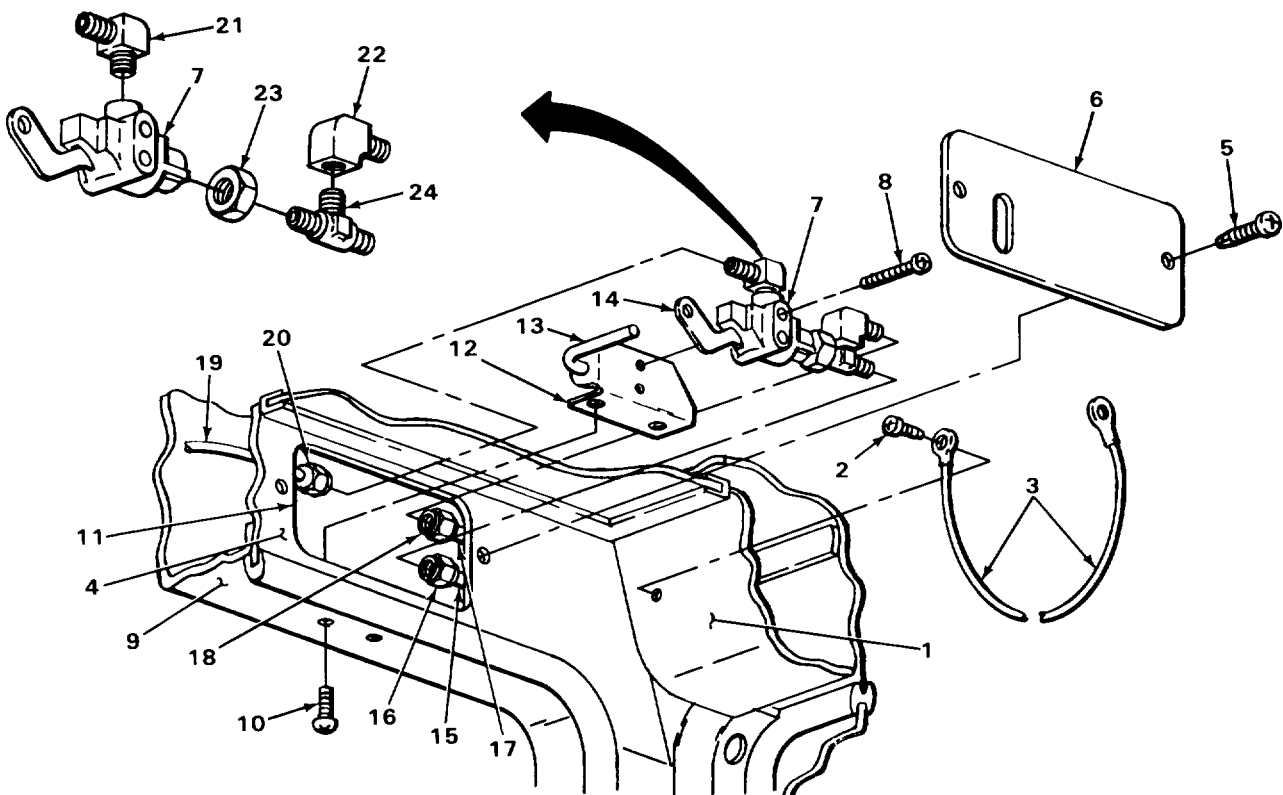
NOTE

For more information on how to tag parts, go to General Maintenance Instructions (page 2-424).

7	Air line (15)	Line nut (16)	<ul style="list-style-type: none"> a Tag air line. b Using 1/2-inch and 5/8-inch open-end wrenches, unscrew and take off.
8	Air line (17)	Line nut (18)	<ul style="list-style-type: none"> a Tag air line. b Using 5/8-inch and 11/16-inch open-end wrenches, unscrew and take off.
9	Air line (19)	Line nut (20) and air horn control valve (7)	<ul style="list-style-type: none"> a Tag air line. b Using 1/2-inch and 5/8-inch open-end wrenches, unscrew and take off. c Take out air horn control valve.

AIR HORN CONTROL VALVE - CONTROL

LOCATION	ITEM	ACTION REMARKS
DISASSEMBLY		
10 Air horn Control valve (7)	Elbow Fitting (21)	Using 1/2-inch open-end wrench, unscrew and take off.
11	Elbow Fitting (22)	Using 11/16-inch and 1/2-inch open-end wrenches, unscrew and take off.
12	Locknut (23) and tee fitting (24)	a Using 13/16-inch open-end wrench, loosen lock nut. b Using 1/2-inch open-end wrench, unscrew and take off. c Unscrew and take lock nut off of tee fitting.



AIR HORN CONTROL VALVE - CONTINUED

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

CLEANING

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

13	Air horn control valve (1), two elbow fittings (2 and 3), locknut (4), and tee fitting (5)	<ul style="list-style-type: none"> a Clean with solution of liquid detergent and water. b Rinse in clean water. c Using clean wiping rags, wipe dry. 	
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INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

14	Air horn control valve (1)	Look for cracks, breaks, and damaged threads.	
15	Two elbow fittings (2 and 3), locknut (4), and tee fitting (5)	Look for cracks, breaks, and damaged threads.	

ASSEMBLY

NOTE

Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.

For more information on how to use antiseizing tape, go to General Maintenance Instructions.

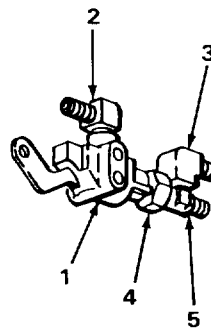
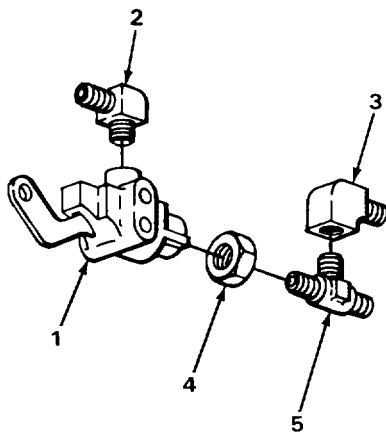
AIR HORN CONTROL VALVE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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NOTE

Assemble fittings in directions shown in illustration.

16 Air horn control valve (1)	Elbow fitting (2)	<ul style="list-style-type: none"> a Wrap pipe threads with antiseizing tape. b Screw on and tighten using 1/2-inch open-end wrench.
17	Locknut (4) and tee fitting (5)	<ul style="list-style-type: none"> a Wrap pipe threads with antiseizing tape. b Screw locknut on to tee fitting until locknut reaches end of threads. c Screw in tee fitting until snug, and tighten 2 turns using 1/2-inch open-end wrench. d Tighten locknut using 13/16-inch and 1/2-inch open-end wrenches.
18	Elbow fitting (3)	<ul style="list-style-type: none"> a Wrap pipe threads with antiseizing tape. b Screw on and tighten using 11/16-inch and 1/2-inch open-end wrench.



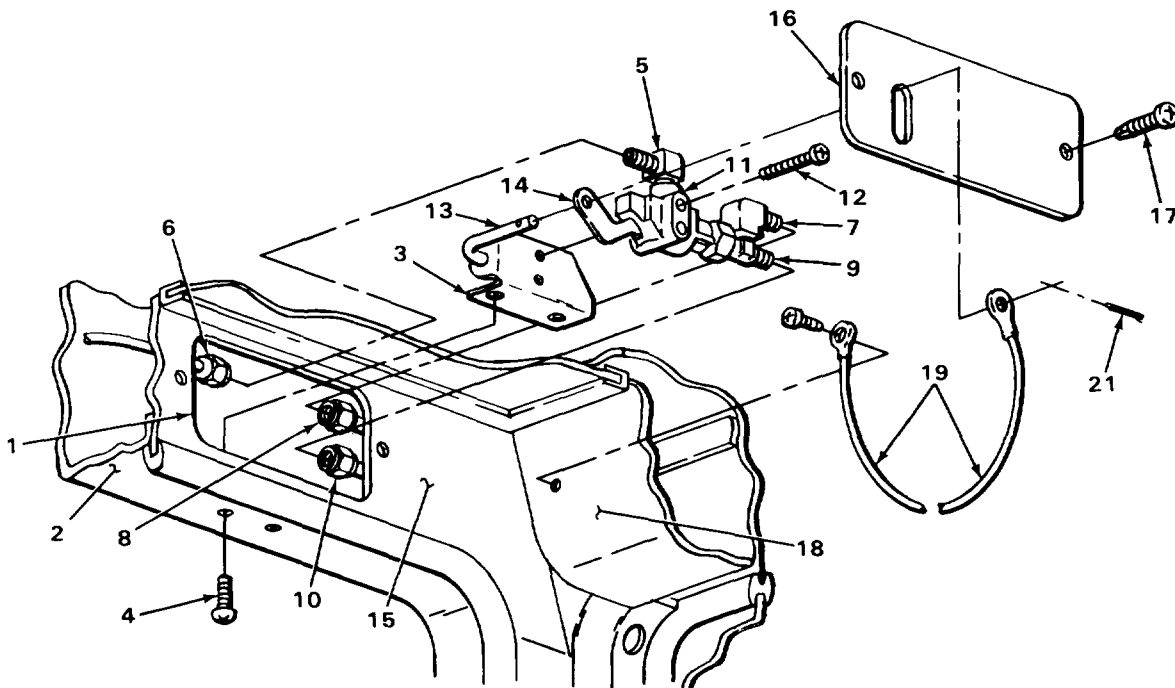
TA244560

AIR HORN CONTROL VALVE -CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
19 Access hole (1) and panel (2)	Bracket (3) and two screws (4)	a Put in bracket and aline holes in bottom of bracket with holes in panel (2). b Screw in two screws using number one cross-tip screwdriver.
20 Elbow fitting (5)	Line nut (6)	a Screw on using 9/16-inch open-end wrench. Do not tighten. b Take off tag. c Get rid of tag.
21 Elbow fitting (7)	Line nut (8)	a Screw on using 5/8-inch open-end wrench. Do not tighten. b Take off tag. c Get rid of tag.
22 Tee fitting (9)	Line nut (10)	a Screw on using 5/8-inch open-end wrench. Do not tighten. b Take off tag. c Get rid of tag.
23 Bracket (3)	Air horn control valve (11), and two screws (12)	a Put in while alining lever (13) with hole in lever (14). b Screw in two screws and tighten using number one cross-tip screwdriver.
24 Panel (2)	Two screws (4)	Tighten, using number one cross-tip screwdriver.
25 Elbow fitting (5)	Line nut (6)	Tighten, using 9/16-inch and 1/2-inch open-end wrenches.
26 Elbow fitting (7)	Line nut (8)	Tighten, using 5/8-inch and 11/16-inch open-end wrenches.

AIR HORN CONTROL VALVE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
27 Tee fitting (9)	Line nut (10)	Tighten, using 5/8-inch and 1/2-inch open-end wrenches.
28 Panel (15)	Cover (16) and two screws (17)	a Put cover in place. b Screw in two screws and tighten, using number one cross-tip screwdriver.
29 Head panel (18)	Pull chain (19) and screw (20)	a Put pull chain in position. b Screw in and tighten using number one cross-tip screwdriver.
30 Lever (1)	Pull chain (19) and new cotter pin (21)	a Put pull chain in place. b Put in and bend ends back using 6-inch slip-joint pliers



TASK ENDS HERE

TA244561

Section XX. HYDRAULIC AND FLUID SYSTEM MAINTENANCE

Page	Page
Dump Body Control Lever and Linkage 2-1367	Reservoir-To-Pump Suction Hose and Fittings 2-1390
Hydraulic Filter and Housing 2-1362	Valve-To-Cylinder Pressure Hoses and Fittings 2-1400
Hydraulic Oil Reservoir 2-1375	Valve-To-Reservoir Return Hose and Fittings 2-1395
Pump-To-Valve Pressure Hose and Fittings 2-1385	

HYDRAULIC FILTER AND HOUSING

This task covers:

- | | |
|---|--|
| <ul style="list-style-type: none"> a Removal (page 2-1362) b Cleaning (page 2-1364) | <ul style="list-style-type: none"> c Inspection/Replacement (page 2-1364) d Installation (page 2-1365) |
|---|--|

INITIAL SETUP

Tools

- Container, 6-gallon
- Extension, 10-inch
- Gloves, safety
- Goggles, safety
- Gun, blow, air
- Handle, ratchet, 1/2-inch drive
- Hose, air, assembly
- Screwdriver, flat-tip, 3/16-inch
- Socket, 5/8-inch, 1/2-inch drive
- Wrench, open-end, 7/16-inch

Materials/Parts

- Element, filter, hydraulic
- Gasket, ring, hydraulic filter
- Solvent, drycleaning (item 19, appendix C)
- Tape, antiseizing (item 22, appendix C) _

Personnel Required

One

References

LO 5-3805-254-12 (Lubrication Order)

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

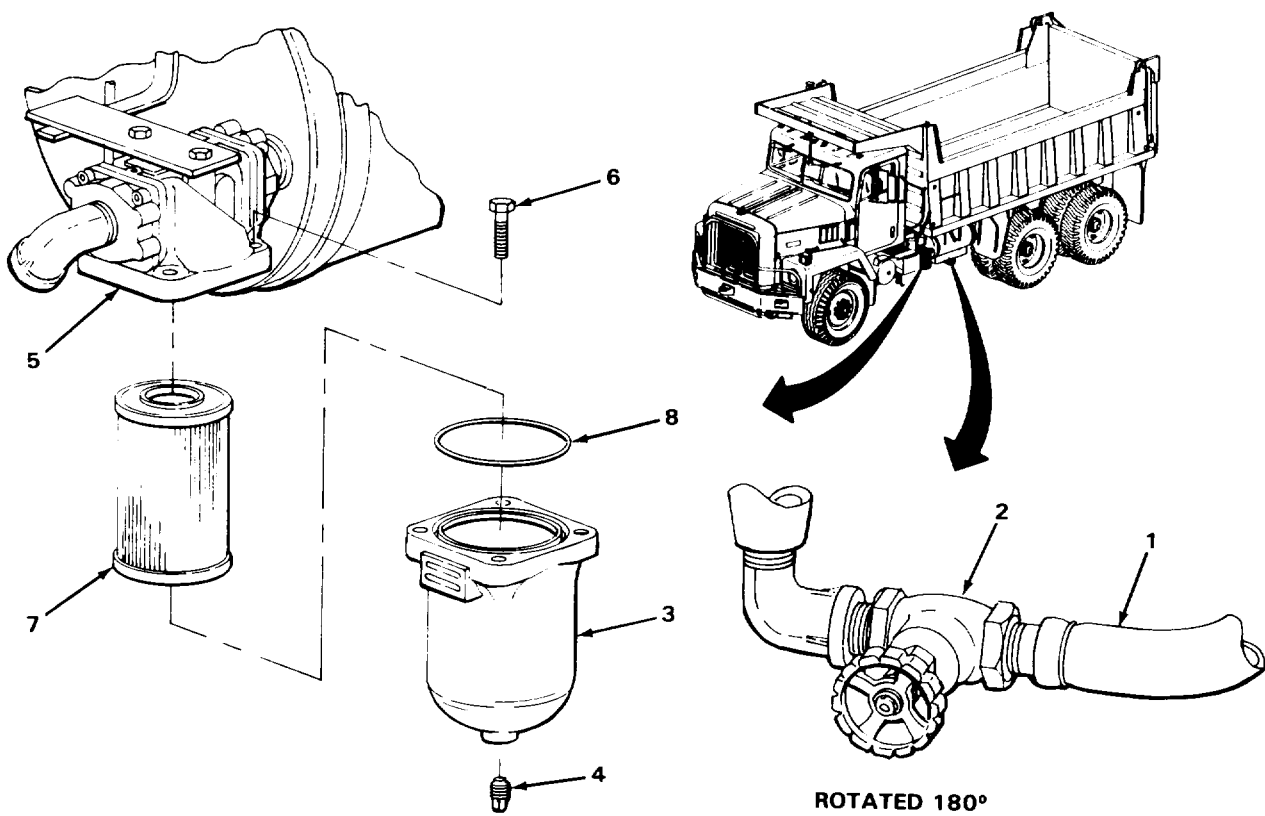
WARNING

Do not drain hydraulic oil when hot. Hot oil can burn you.

1 Suction hose (1)	Valve (2)	Turn clockwise to close.
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HYDRAULIC FILTER AND HOUSING - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
2	Filter housing (3)	Drainplug (4)	Using 7/16-inch open-end wrench, unscrew and take out.
3	Filter head (5) to filter housing (3)	Four screws (6)	Using 5/8-inch 1/2-inch drive socket, 10-inch extension, and ratchet handle, unscrew and take out.
4	Hydraulic filter element (7)	a Take out. b Get rid of.	
5	Gasket (8)	a Using 3/16-inch flat-tip screwdriver, take out. b Get rid of.	



TA244562

HYDRAULIC FILTER AND HOUSING - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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CLEANING

WARNING

Improper cleaning methods and use of unauthorized cleaning liquids or solvents can injure personnel and cause damage to equipment. Refer to TM 9-247.

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 1000F (380C) and for type #2 is 138°F (590C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

NOTE

All parts must be cleaned thoroughly.

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

6	All parts	Using drycleaning solvent, clean thoroughly.	
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WARNING

Particles blown by compressed air are hazardous. Make certain the airstream is directed away from user and other personnel in the area. Compressed air used for cleaning purposes shall not exceed 30 psi (207 kPa). User must wear safety goggles or face shield to prevent injury to personnel.

7	All parts	Using air blow gun and air hose assembly, blow dry.	
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INSPECTION/REPLACEMENT

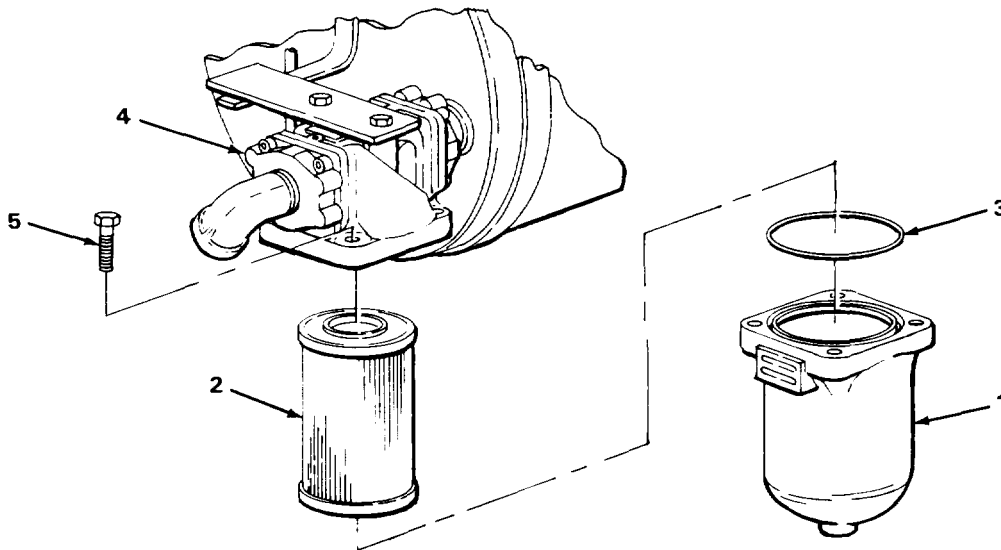
NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

HYDRAULIC FILTER AND HOUSING - CONTINUED

LOCATION	ITEM	ACTION REMARKS
8	Filter housing (1)	a. Look for cracks or dents. b. Look for damaged threads. c. Look for worn or damaged ring groove.
9	All threaded parts	Check for damaged threads or rounded heads.
INSTALLATION		
10 . Filter housing (1)	New hydraulic filter element (2)	Put in.
11	New gasket (3)	Put in.
12 Filter head (4) to filter housing (1)	Four screws (5)	Screw in and tighten using 5/8-inch 1/2-inch drive socket, 10-inch extension, and ratchet handle.



TA244563

HYDRAULIC FILTER AND HOUSING - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION - CONTINUED

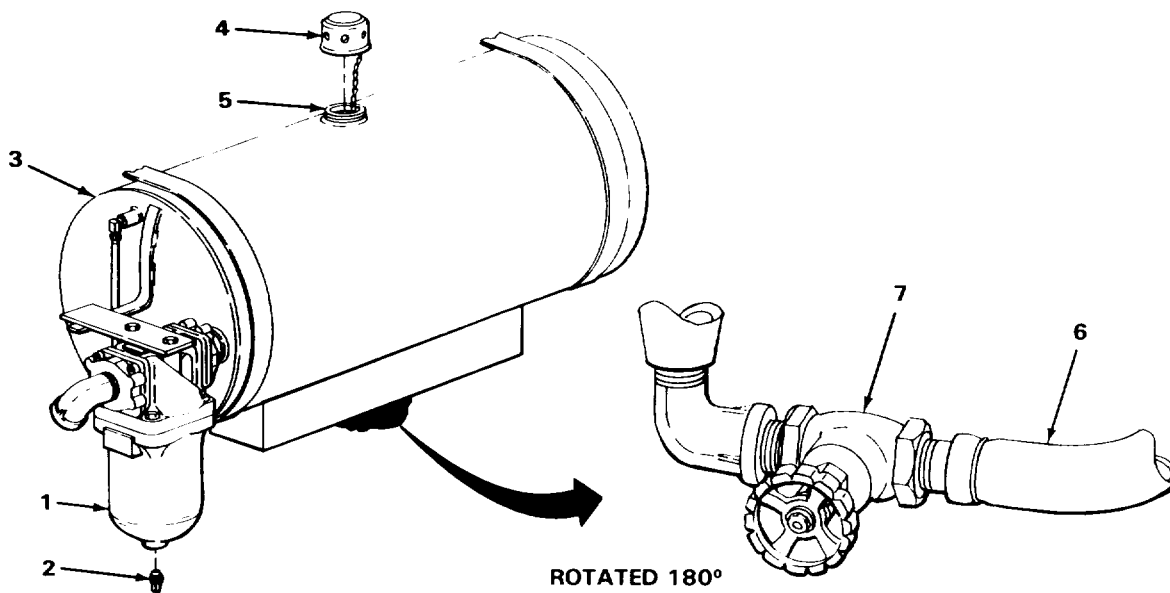
CAUTION

Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.

NOTE

For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).

13	Filter housing (1)	Drainplug (2)	a. Wrap pipe threads with antiseizing tape. b. Screw in and tighten using 7/16-inch open-end wrench.
14.	Reservoir (3)	Cap (4)	Take off.
15		Filler neck (5)	Fill with lubricating oil (LO 5-3805-254-12).
16.	Suction hose (6)	Valve (7)	Turn counterclockwise to open.



TASK ENDS HERE

TA244564

DUMP BODY CONTROL LEVER AND LINKAGE

This task covers:

- a Removal (page 2-1367)
- b Inspection/Replacement
- c Installation/Adjustment (page 2-1370)
(page 2-1370)

INITIAL SETUP

Tools

- Pliers, long-nose, 6-inch
- Pliers, slip-joint, 8-inch (two required)
- Tape, measuring, steel, 25-foot
- Wrench, box-end, 7/16-inch
- Wrench, open-end, 3/4-inch

Materials/Parts (page 2-1262).

- Pin, cotter, clevis pin
- Lockwasher, clamp (six required)

Personnel Required

Two

Equipment Condition

Left side cab door opened (page 2-424).
Center floor board cover plate removed

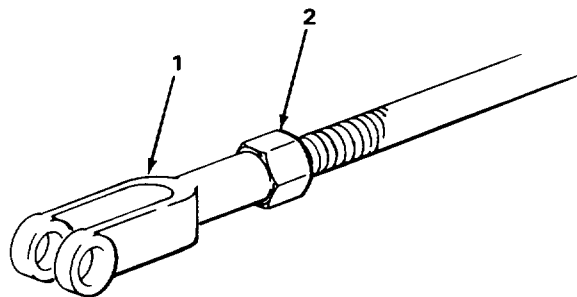
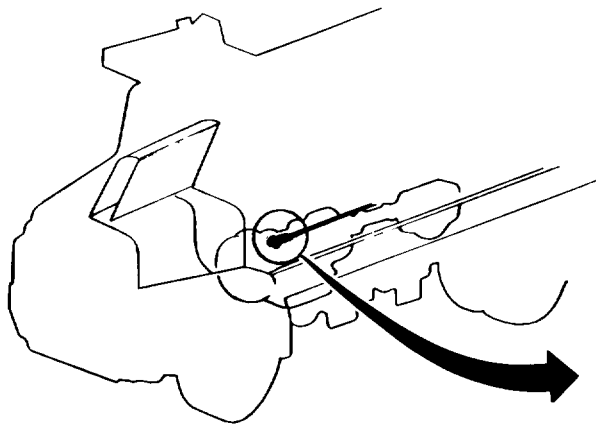
LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

1. Clevis (1)

Nut (2)

Using 3/4-inch open-end wrench and 8-inch slip-joint pliers, loosen one turn.



TA244565

DUMP BODY CONTROL LEVER AND LINKAGE - CONTINUED

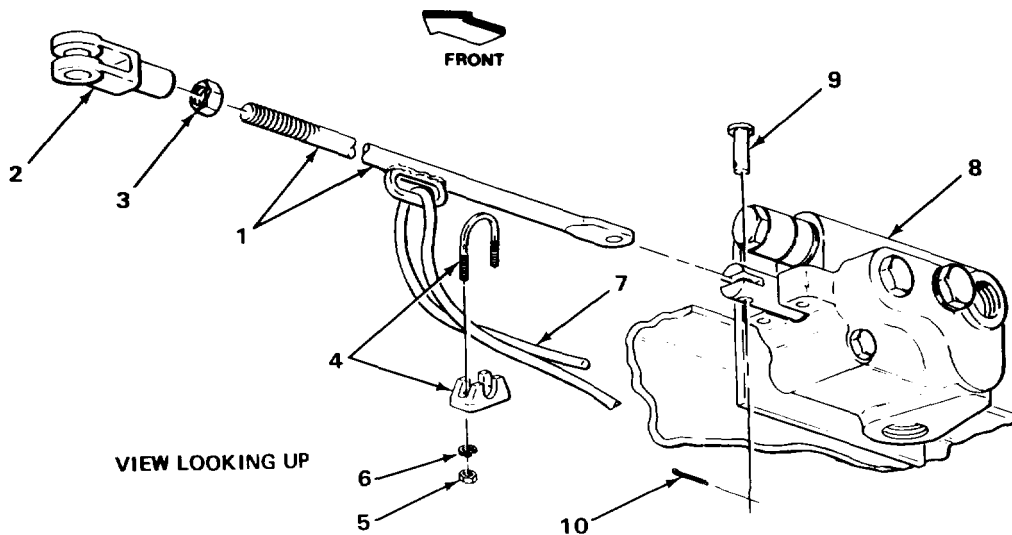
LOCATION	ITEM	ACTION	REMARKS
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REMOVAL - CONTINUED

NOTE

Count threads on rod before removing clevis, for correct adjustment when installing.

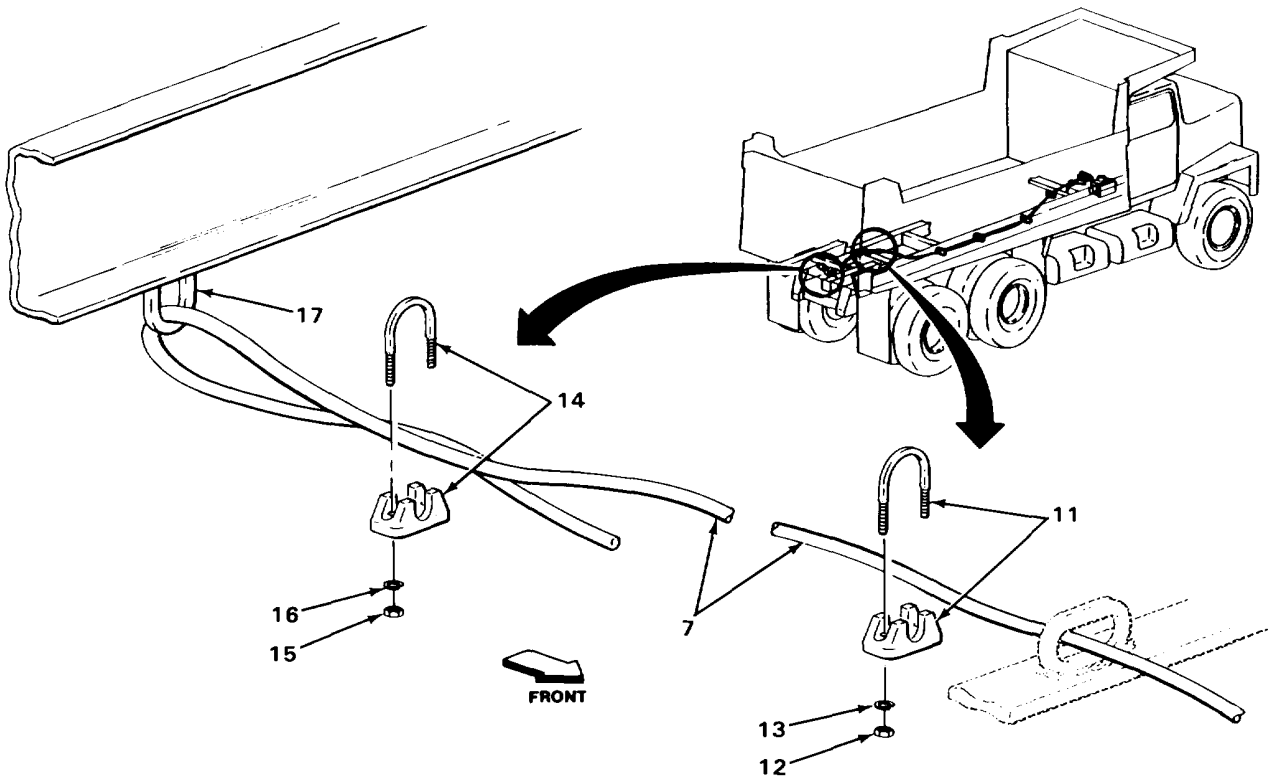
2. Rod (1)	Clevis (2)	Using two 8-inch slip-joint pliers, unscrew and take off.
3.	Nut (3)	Using 3/4-inch open-end wrench and 8-inch slip-joint pliers, unscrew and take off.
4. Clamp (4)	Two nuts (5) and two lockwashers (6)	a. Using 7/16-inch box-end wrench, unscrew and take off. b. Get rid of lockwashers.
5. Cable (7)	Clamp (4)	Take off.
6. Control valve (8) and clevis pin (9)	Cotter pin (10)	a. Using 6-inch long-nose pliers, straighten ends and take out. b. Get rid of.
7. Control valve (8)	Clevis pin (9)	Using 8inch slip-joint pliers, take out.
8. Rod (1)	Take out.	



TA244566

DUMP BODY CONTROL LEVER AND LINKAGE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
9. Clamp (11)	Two nuts (12) and two lockwashers (13)	a. Using 7/16-inch box-end wrench, unscrew and take off. b. Get rid of lockwashers.
10. Cable (7)	Clamp (11)	Take off.
11. Clamp (14)	Two nuts (15) and two lockwashers (16)	a. Using 7/16-inch box-end wrench, unscrew and take off. b. Get rid of lockwashers.
12. Cable (7)	Clamp (14)	Take off.
13. Eye (17)	Cable (7)	Take out.



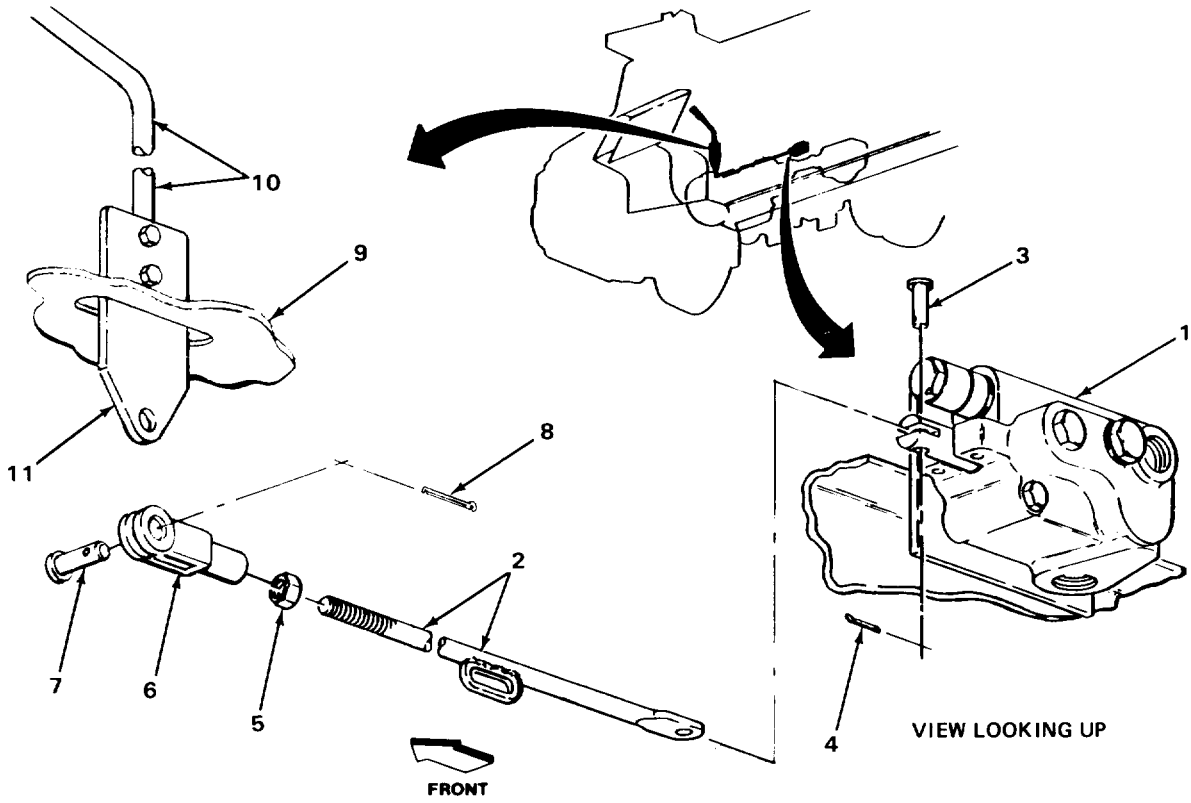
TA244567

DUMP BODY CONTROL LEVER AND LINKAGE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSPECTION/REPLACEMENT			
NOTE			
Replace all damaged or defective parts.			
For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).			
14.	All metal parts		Look for wear, bends, breaks, or corrosion.
15.	All threaded parts		Look for damaged threads or rounded heads.
INSTALLATION/ADJUSTMENT			
16	Control valve (1)	Rod (2)	Put in.
17	Rod (2)	Pin (3)	Put in using 8-inch slip-joint pliers.
18	Pin (3)	New cotter pin (4)	Put in and bend back ends using 6-inch long nose pliers.
19.	Rod (2)	Nut (5)	Screw on completely using 3/4-inch open-end wrench and 8-inch slip-joint pliers.
20.		Clevis (6)	Screw on using two 8-inch slip-joint pliers. Screw on number of threads counted during removal.
21.	Center floorboard cover plate		Install (page 2-1262).
22.	Pin (7)	Cotter pin (8)	a. Using 6-inch long-nose pliers, straighten ends and take out. b. Get rid of.
23.	Clevis (6)	Nut (5)	Using 3/4-inch open-end wrench and 8-inch slip-joint pliers, loosen four turns.
24.	Cab floor (9)	Dump body control lever (10)	Have assistant put in and hold in neutral position.

DUMP BODY CONTROL LEVER AND LINKAGE - CONTINUED

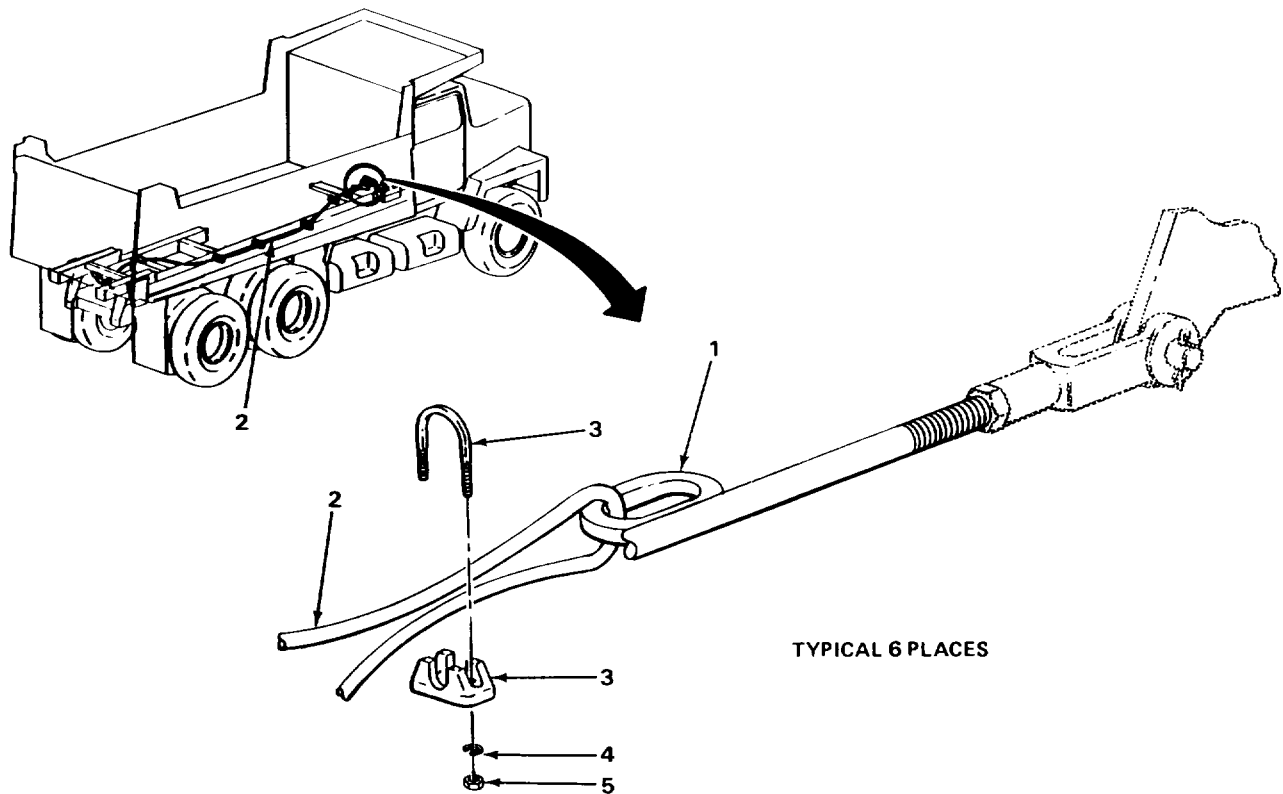
LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
25. Dump body control lever arm (11)	Pin (7) and clevis (6)	a. Put pin through clevis and dump body control lever arm (11). b. Check that pin moves freely. c. If pin does not move freely, take out pin and turn clevis in or out to adjust. d. Put pin back in.
26.	Pin (7) and new cotter pin (8)	a. Put in. b. Bend back ends using 6-inch long-nose pliers (page 2-424).
27. Clevis (6)	Nut (5)	Tighten using 3/4-inch open-end wrench and 8-inch slip-joint pliers.



TA244568

DUMP BODY CONTROL LEVER AND LINKAGE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
28. Eye (1)	Cable (2)	Put through and bend over.	
29. Cable (2)	Clamp (3)	Put on.	
30. Clamp (3)	Two new lockwashers (4) and two nuts (5)	Screw on and tighten using 7/16-inch box-end wrench.	
31. Six eyes (6)	Cable (2)	Pull through.	



TA244569

DUMP BODY CONTROL LEVER AND LINKAGE - CONTINUED

WARNING

To prevent injury, make sure all personnel are clear of tailgate when body is in raised position.

CAUTION

Do not hold dump body control lever in back position for any length of time when hydraulic cylinder is fully extended.

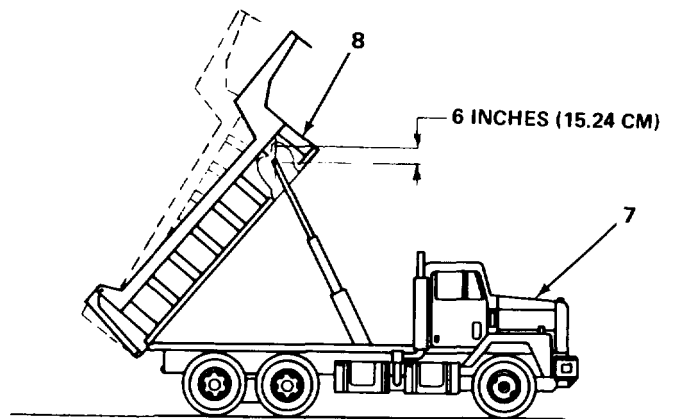
NOTE

Assistance will be needed to perform steps 30 thru 38.

32. Dump truck (7)

Dump body (8)

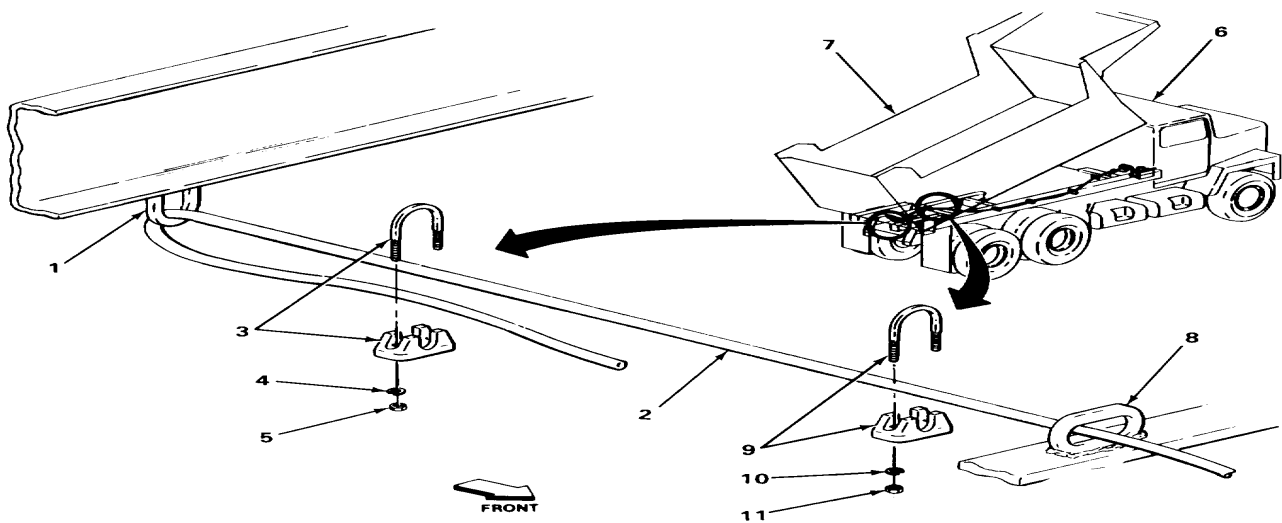
- a. Raise (page 2-424).
- b. Measure from cylinder top pin using 25 foot steel tape measure.
- c. Lower 6 inches (15.24 cm).
- d. Block in lowered 6-inch position.
- e. Hold dump body control lever in neutral position.



TA244570

DUMP BODY CONTROL LEVER AND LINKAGE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
33. Eye (1)	Cable (2)	Pull to rear and bend over.	
34. Cable (2)	Clamp (3)	Put on.	
35. Clamp (3)	Two new lockwashers (4) and two nuts (5)	Screw on and tighten using 7/16-inch box-end wrench.	
36. Dump truck (6)	Dump body (7)	Lower (page 2-424).	
37. Eye (8)	Cable (2)	Pull to rear.	
38. Cable (2)	Clamp (9)	a. Put on. b. Using 25-foot steel tape measure, adjust 1-inch (25.4 mm) to rear of eye.	
39. Clamp (9)	Two new lockwashers (10) and two nuts (11)	Screw on and tighten using 7/16-inch box-end wrench.	



TA244571

TA244571

DUMP BODY CONTROL LEVER AND LINKAGE - CONTINUED**NOTE**

FOLLOW-ON MAINTENANCE: Close left side cab door (page 2-424).

TASK ENDS HERE**HYDRAULIC OIL RESERVOIR**

This task covers:

- | | | | |
|---|---------------------------|---|--------------------------------------|
| a | Removal (page 2-1376) | d | Inspection/Replacement (page 2-1380) |
| b | Disassembly (page 2-1377) | e | Assembly (page 2-1380) |
| c | Cleaning (page 2-1378) | f | Installation (page 2-1383) |

INITIAL SETUP**Tools**

Container, 6gallon
 Gloves, safety
 Goggles, safety
 Gun, air, blow
 Hose, air, assembly
 Jack, floor, hydraulic, 20-ton
 Key, hex, 5/16-inch
 Screwdriver, flat-tip, 1/4-inch
 Wrench, open-end, 7/16-inch
 Wrench, open-end, 9/16-inch
 Wrench, open-end, 5/8-inch
 Wrench, open-end, 3/4-inch
 Wrench, open-end, 1 1/16-inch
 Wrench, open-end, 1 3/8-inch
 Wrench, open-end, 1 1/2-inch
 Wrench, open-end, 1 3/4-inch
 Wrench, open-end, 1 7/8-inch
 Wrench, pipe, 18-inch (two required)

Materials/Parts

Lockwasher, strap (two required)
 Oil, lubricating, OE/HDO/30 (item 14, appendix C)
 Ring, filter housing
 Rags, wiping (item 15, appendix C)
 Solvent, drycleaning (item 19, appendix C)
 Tape, antiseizing (item 22, appendix c)

Personnel Required

Three

References

LO 5-3805-254-12 (Lubrication Order)

HYDRAULIC OIL RESERVOIR - CONTINUED

REMOVAL

- | | | |
|-----------------------|---------------|--|
| 1. Reservoir (1) | Valve (2) | Turn clockwise to close. |
| 2. Hose (3) | Clamp (4) | a. Place 6-gallon container underneath.
b. Using 1/4-inch flat-tip screwdriver, unscrew and take off. |
| 3. Nipple (5) | Hose (3) | a. Take off.
b. Allow oil to drain. |
| 4. Reservoir (1) | Valve (2) | a. Place 6-gallon container underneath.
b. Slowly turn counterclockwise to open.
c. Allow oil to drain. |
| 5. Union (6) | Hose (7) | a. Place 6-gallon container underneath.
b. Using 1 3/8-inch and 1 1/2-inch open-end wrenches, unscrew and take out.
c. Allow oil to drain. |
| 6. Filter housing (8) | Drainplug (9) | a. Place 6-gallon container underneath.
b. Using 7/16-inch open-end wrench, unscrew and take out.
c. Allow oil to drain. |

NOTE

Assistance will be needed to perform steps 7 and 8.

- | | | |
|--------------------------------------|--|---|
| 7. Two straps (10) and reservoir (1) | Two nuts (11) and two lockwashers (12) | a. Using 20-ton hydraulic floor jack, have two assistants hold reservoir.
b. Using 15/16-inch open-end wrench, unscrew and take off.
c. Get rid of lockwashers. |
|--------------------------------------|--|---|

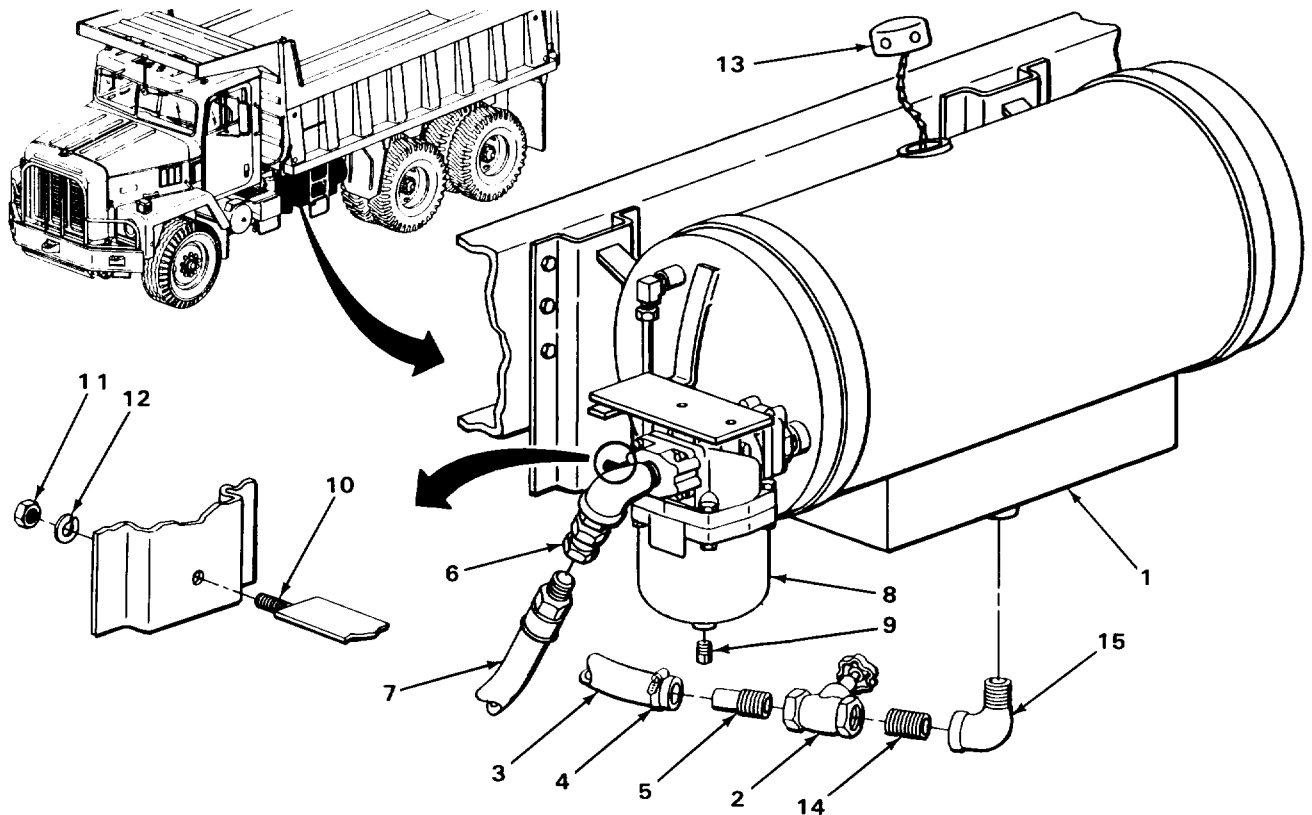
CAUTION

Use care when removing reservoir and fittings, damage could occur.

- | | | |
|--------------------|---------------|--|
| 8. Two straps (10) | Reservoir (1) | With assistance, using 20-ton hydraulic floor jack, take down and out. |
|--------------------|---------------|--|

HYDRAULIC OIL RESERVOIR - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
DISASSEMBLY			
9. Reservoir (1)	Cap (13)	Take off.	
10. Valve (2)	Nipple (5)	Using 1 7/8-inch open-end and 18-inch pipe wrenches, unscrew and take out.	
11. Nipple (14)	Valve (2)	Using 1 7/8-inch open-end and 18-inch pipe wrenches, unscrew and take off.	
12. Elbow (15)	Nipple (14)	Using two 18-inch pipe wrenches, unscrew and take out.	
13. Reservoir (1)	Elbow (15)	Using 18-inch pipe wrench, unscrew and take out.	



TA244572

HYDRAULIC OIL RESERVOIR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
DISASSEMBLY - CONTINUED		
14. Two elbows (1)	Two nuts (2) and sight glass (3)	Using 9/16-inch and 5/8-inch open-end wrenches, unscrew and take out.
15. Sight glass (3)	Two nuts (2)	Take off.
16. Reservoir (4)	Two elbows (1)	Using 9/16-inch open-end wrench, unscrew and take out.
17. Bushing (5)	Union (6)	Using 1 1/2-inch and 1 3/4-inch open-end wrenches, unscrew and take out.
18. Elbow (7)	Bushing (5)	Using 1 3/4-inch open-end and 18-inch pipe wrenches, unscrew and take out.
19. Filter housing (8)	Elbow (7)	Using 18-inch pipe wrench, unscrew and take out.
20.	Two screws (9)	Using 3/4-inch open-end wrench, unscrew and take out.
21. Reservoir (4)	Filter housing (8), four hex-head screws (10), and ring (11)	a. Using 5/16-inch hex key, unscrew and take out. b. Get rid of ring. c. Set filter housing aside for assembly.
22. Nipple (12)	Filter housing flange (13)	Using 18-inch pipe wrench, unscrew and take off.
23. Reservoir (4)	Nipple (12)	Using 18-inch pipe wrench, unscrew and take out.

CLEANING**WARNING**

Improper cleaning methods and use of unauthorized cleaning liquids or solvents can injure personnel and cause damage to equipment. Refer to TM 9-247.

HYDRAULIC OIL RESERVOIR - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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WARNING

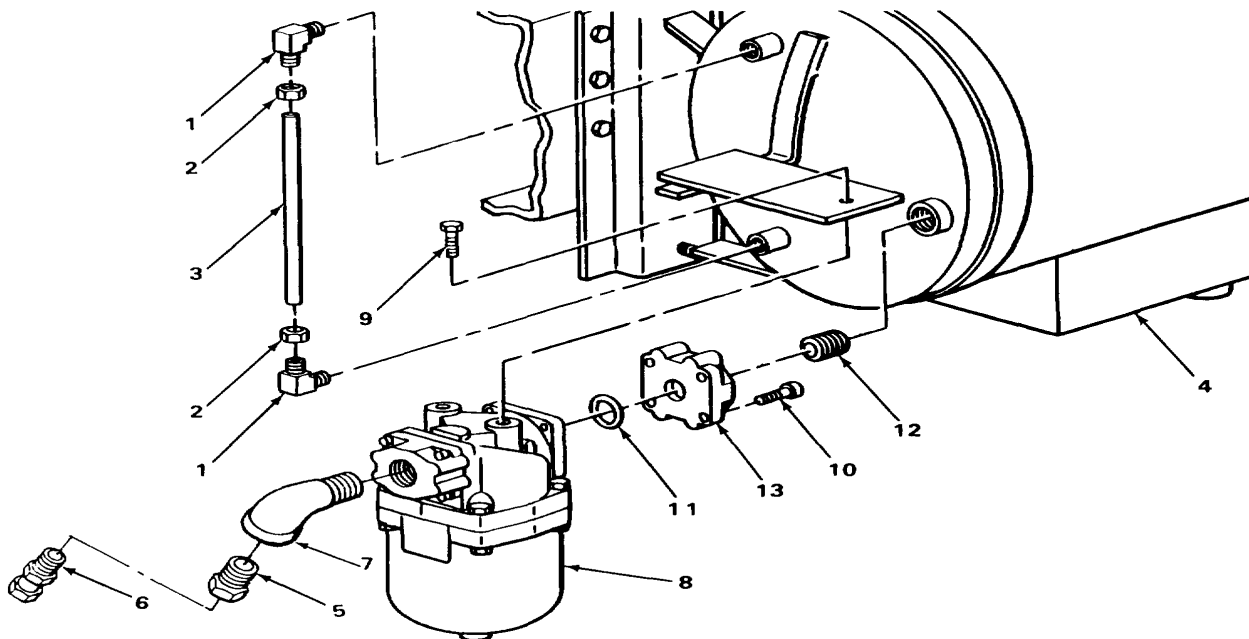
Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 1000F (380C) and for type #2 is 138°F (590C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

NOTE

All parts must be cleaned thoroughly.

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

- | | | |
|-----|-----------------|---|
| 24. | All metal parts | Using drycleaning solvent and wiping rag, clean thoroughly. |
|-----|-----------------|---|



TA244573

TA244573

HYDRAULIC OIL RESERVOIR - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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CLEANING - CONTINUED

WARNING

Particles blown by compressed air are hazardous. Make certain the air stream is directed away from user and other personnel in the area. Compressed air used for cleaning purposes shall not exceed 30 psi (207 kPa). User must wear safety goggles or face shield to prevent injury to personnel.

25.	All parts	Using air blow gun and air hose assembly, blow dry.	
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INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

26.	Reservoir (1)	For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424). a. Look for holes or large dents. b. Look for cracks in welded areas. c. Look for pitted areas inside.	
27.	Sight glass (2)	a. Look for cracks. b. Check for clearness of glass.	
28.	Cap (3)	a. Look for dents or cracks. b. Look for clogged vent holes.	
29.	All threaded parts	Look for damaged threads or rounded heads.	

ASSEMBLY

CAUTION

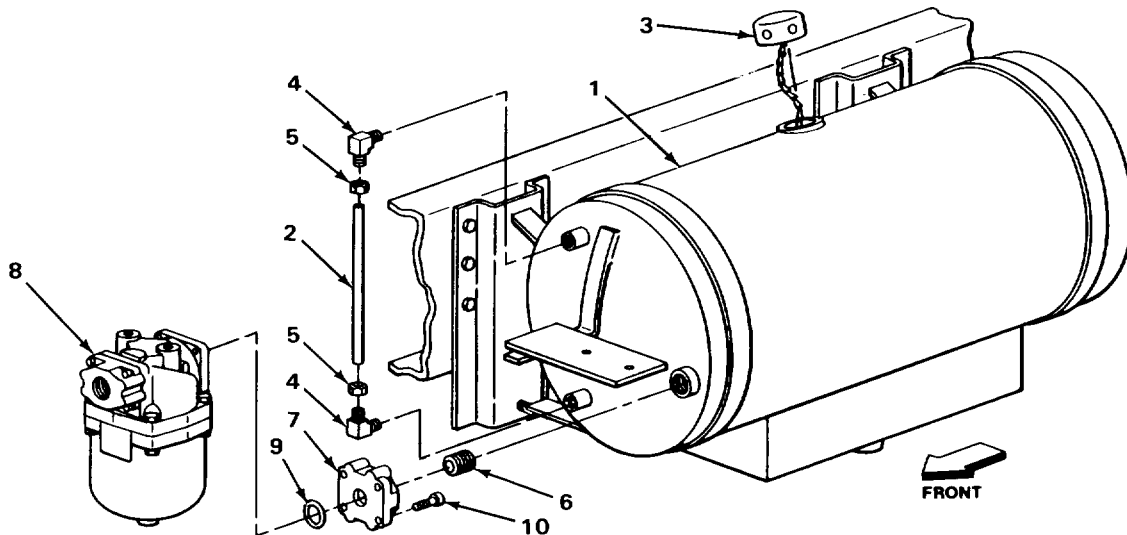
Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.

NOTE

For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).

HYDRAULIC OIL RESERVOIR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
30. Reservoir (1)	Two elbows (4)	a. Wrap pipe threads with antiseizing tape (page 2-424). b. Screw in and tighten using 9/16-inch open-end wrench.
31. Sight glass (2)	Two nuts (5)	Put on.
32. Two elbows (4)	Sight glass (2) and two nuts (5)	a. Put in place. b. Screw in and tighten using 9/16-inch and 5/8-inch open-end wrenches.
33. Reservoir (1)	Nipple (6)	a. Wrap pipe threads with antiseizing tape (page 2-424). b. Screw in and tighten using 18-inch pipe wrench.
34. Nipple (6)	Filter housing flange (7)	Screw on and tighten using 18-inch pipe wrench.
35. Filter housing flange (7)	Filter housing (8), new ring (9), and four hex-head screws (10)	a. Put ring in place. b. Screw in and tighten using 5/16-inch hex key.



TA244574

HYDRAULIC OIL RESERVOIR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
ASSEMBLY - CONTINUED		
36. Filter housing (1)	Two screws (2)	Screw in and tighten using 3/4-inch open-end wrench.
37. (page 2-424).	Elbow (3)	a. Wrap pipe threads with antiseizing tape b. Screw in and tighten using 18-inch pipe wrench.
38. Elbow (3)	Bushing (4)	a. Wrap pipe threads with antiseizing tape (page 2424). b. Screw in and tighten using 1 3/4-inch open-end and 18-inch pipe wrench.
39. Bushing (4)	Union (5)	a. Wrap pipe threads with antiseizing tape (page 2-424). b. Screw in and tighten using 1 11/2-inch and 1 3/4-inch open-end wrenches.
40. Reservoir (6)	Elbow (7)	a. Wrap pipe threads with antiseizing tape (page 2-424). b. Screw in and tighten using 18-inch pipe wrench.
41. Elbow (7)	Nipple (8)	a. Wrap pipe threads with antiseizing tape (page 2-424). b. Screw in and tighten using two 18-inch pipe wrenches.
42. Nipple (8)	Valve (9)	Screw in and tighten using 1 7/8-inch open-end and 18-inch pipe wrenches.
43. Valve (9)	Nipple (10)	a. Wrap pipe threads with antiseizing tape (page 2-424). b. Screw in and tighten using 1 7/8-inch open-end and 18-inch pipe wrenches.
44. Filter housing (1)	Drainplug (11)	a. Wrap pipe threads with antiseizing tape (page 2-424). b. Screw in and tighten using 7/16-inch open-end wrench.

HYDRAULIC OIL RESERVOIR - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION

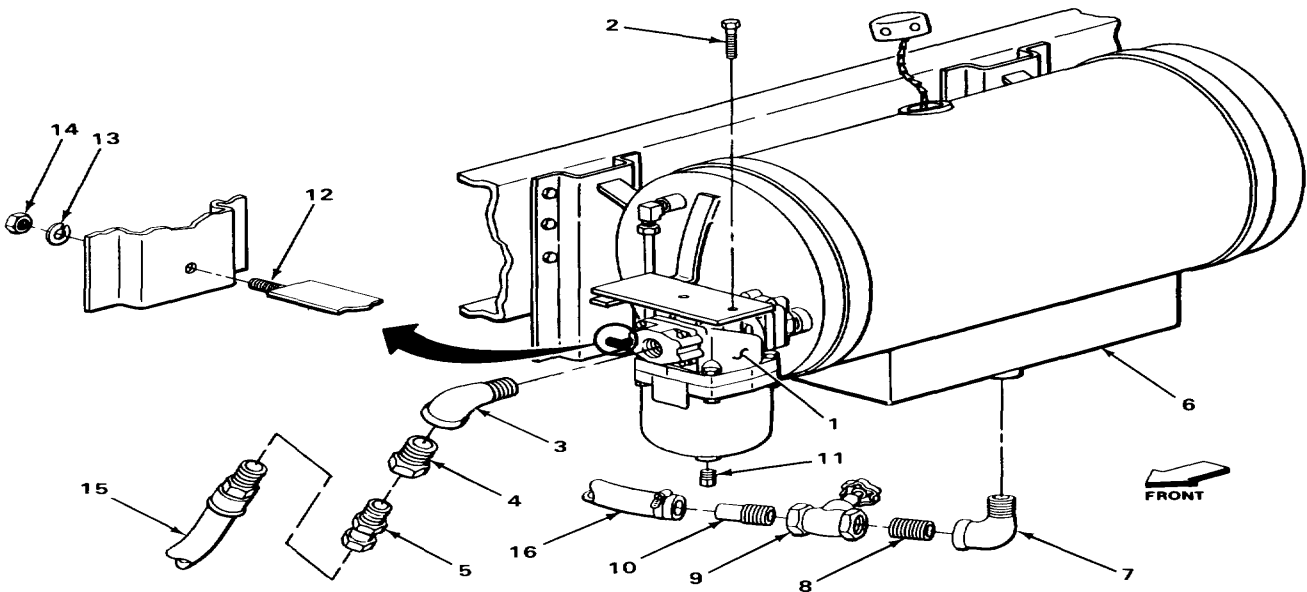
CAUTION

Use care when installing reservoir, damage to reservoir or fittings could occur.

NOTE

Assistance will be needed to perform steps 45 and 46.

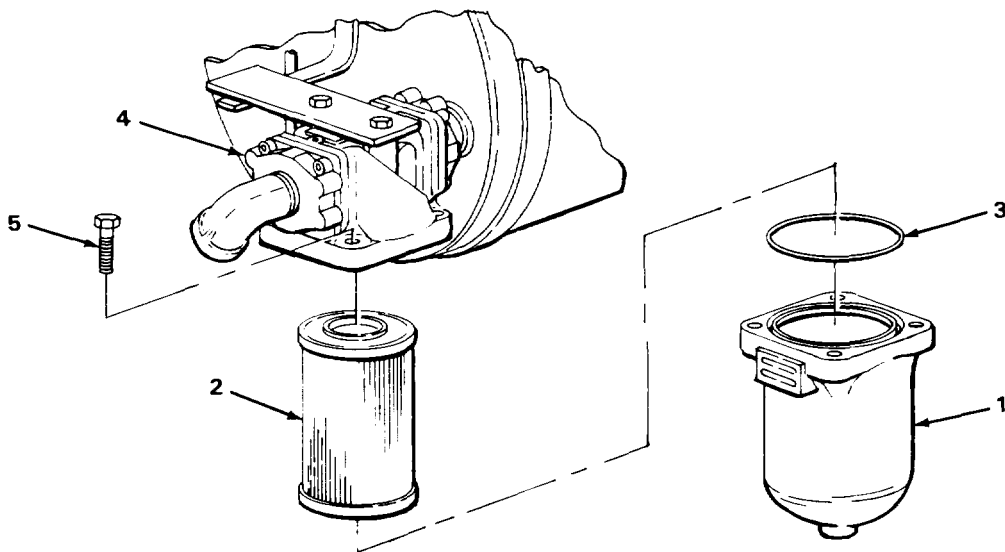
45	Two straps (12)	Reservoir (6)	With two assistants, put in place and hold using 20-ton hydraulic floor jack.
46	Two new lockwashers (13) and two nuts (14)		Screw in and tighten using 15/16-inch open-end wrench.
47	Union (5)	Hose (15)	Screw in and tighten using 1 3/8-inch and 1 1/2-inch open-end wrenches.
48.	Nipple (10)	Hose (16)	Put on.



TA244575

HYDRAULIC OIL RESERVOIR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
49 Hose (1)	Clamp (2)	a. Put in place. b. Screw on and tighten using 1/4-inch flat-tip screwdriver.
50 Reservoir (3)	Filler neck (4) and cap (5)	a. Fill with lubricating oil until sight glass (6) is full. b. Put cap on reservoir.
51 Dump truck (7)	Dump body (8)	a. Raise (page 2-424). b. Lower (page 2-424).
52 Reservoir (3)	Filler neck (4)	Repeat step 50 until full.



TASK ENDS HERE

TA24576

PUMP-TO-VALVE PRESSURE HOSE AND FITTINGS

This task covers:

- a. Removal (page 2-1386)
 c. Inspection/Replacement (page 2-1388)
 b. Cleaning (page 2-1386)
 d. Installation (page 2-1388)
-

INITIAL SETUP**Tools**

Brush, cleaning
 Container, 6-gallon
 Gloves, safety
 Goggles, safety
 Gun, blow, air
 Hose, air assembly
 Wrench, open-end, 1 1/4-inch
 (two required)
 Wrench, open-end, 1 3/8-inch

Materials/Parts

Detergent, liquid, GP (item 7, appendix C)
 Oil, lubricating, OE/HDO/30 (item 14,
 appendix C)
 Solvent, drycleaning (item 19, appendix C)
 Tape, antiseizing (item 22, appendix C)

Personnel Required

One

Equipment Condition

Dump body raised and secured (page 2-424).

References

(LO 5-3805-254-12) Lubrication Order

PUMP-TO-VALVE PRESSURE HOSE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
<u>WARNING</u>		
Do not drain hydraulic oil when hot. Hot oil could burn you.		
1. Elbow (1)	Hose (2)	a. Place 6-gallon container underneath. b. Using two 1 1/4-inch open-end wrenches, unscrew and take out. c. Allow oil to drain. d. Get rid of drained oil.
2. Pump (3)	Elbow (1)	Using 1 1/4-inch open-end wrench, unscrew and take out.
3. Elbow (4)	Hose (2)	a. Place 6-gallon container underneath. b. Using two 1 1/4-inch open-end wrenches, unscrew and take out. c. Allow oil to drain. d. Get rid of drained oil.
4. Bushing (5) wrenches, unscrew and take out.	Elbow (4)	Using 1 1/4-inch and 1 3/8-inch open-end
5. Valve (6)	Bushing (5)	Using 1 3/8-inch open-end wrench, unscrew and take out.

CLEANING

WARNING

Improper cleaning methods and use of unauthorized cleaning liquids or solvents can injure personnel and cause damage to equipment. Refer to TM 9-247.

WARNING

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 1000F (380C) and for type #2 is 138°F (590C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

PUMP-TO-VALVE PRESSURE HOSE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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9. Clamp (11)	Two nuts (12) and	a. Using 7/16-inch box-end wrench, un-	
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NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

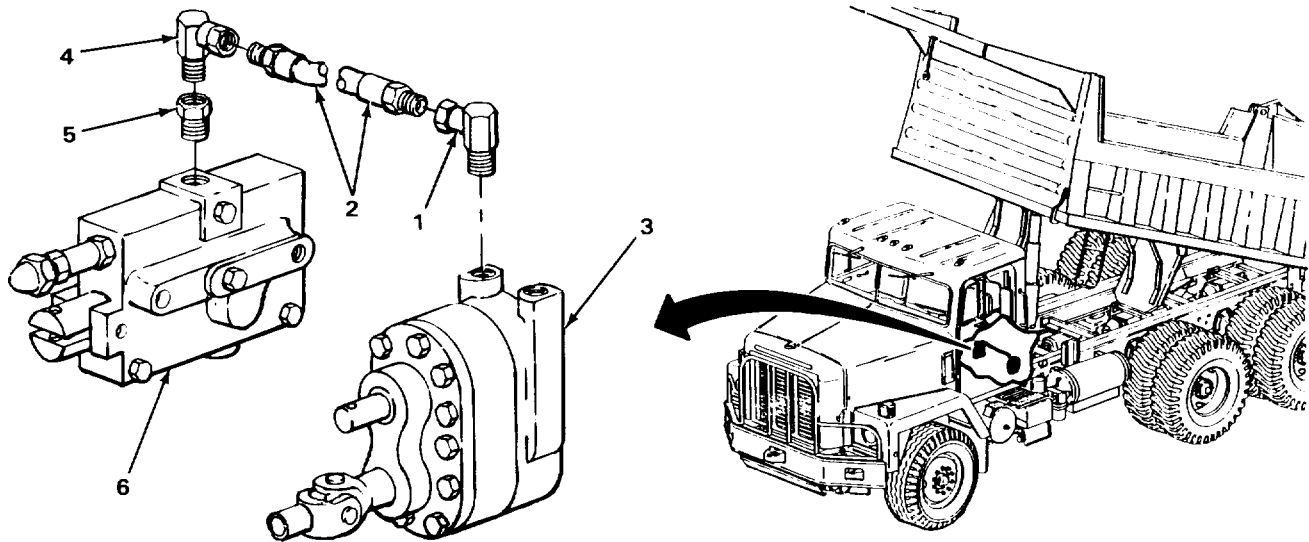
6.	Elbows (1 and 4) and bushing (5)	Using drycleaning solvent and cleaning brush, clean thoroughly.	
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7.	Hose (2)	Using liquid detergent, cleaning brush, and water, clean thoroughly.	
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WARNING

Particles blown by compressed air are hazardous. Make certain the airstream is directed away from user and other personnel in the area. Compressed air used for cleaning purposes shall not exceed 30 psi (207 kPa). User must wear safety goggles or face shield to prevent injury to personnel.

8.	All parts	Using blow gun and air hose assembly, blow dry.	
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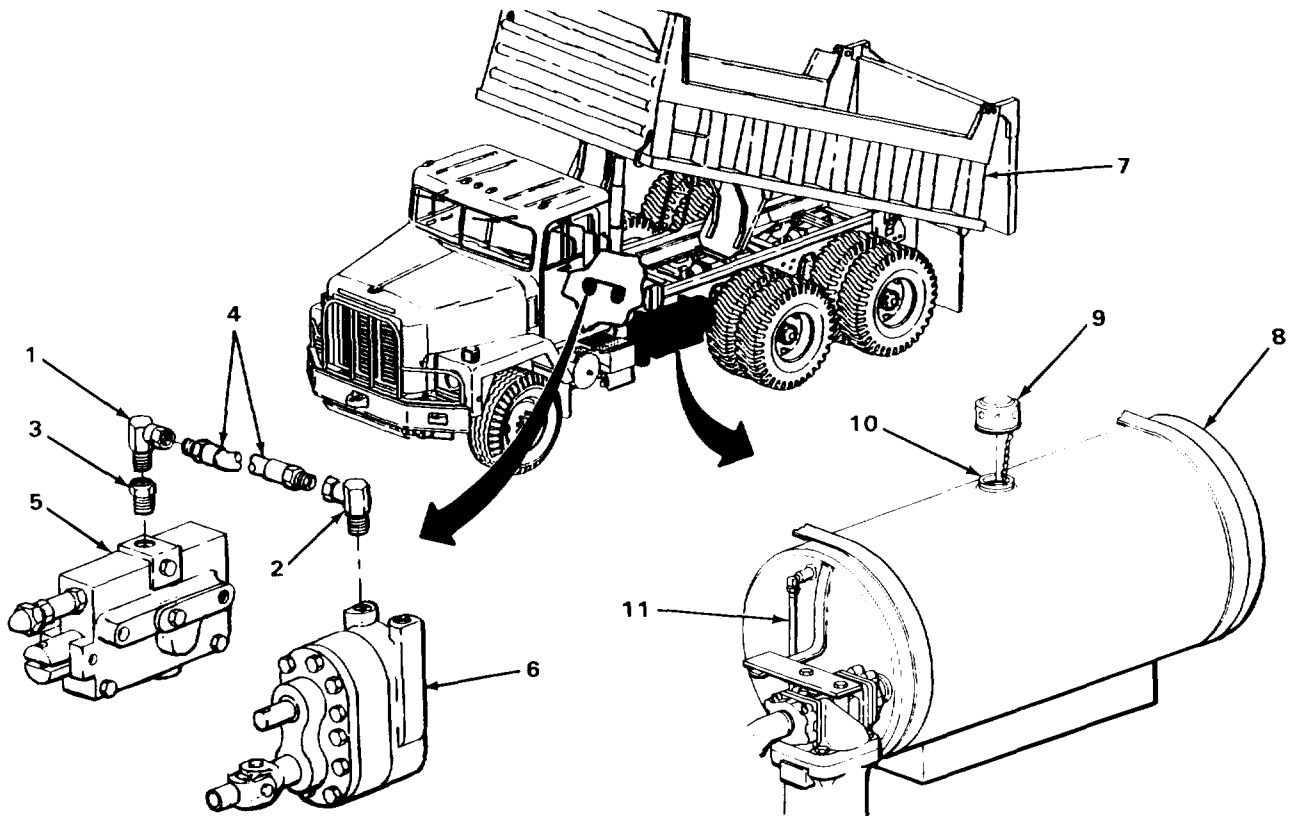
TA244577

PUMP-TO-VALVE PRESSURE HOSE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSPECTION/REPLACEMENT			
NOTE			
Replace all damaged or defective parts.			
For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).			
9.	Two elbows (1 and 2) and bushing (3)		Look for cracks, bends, or dents.
10.	Hose (4)		Look for cracks, gouges, or worn areas.
11.	All threaded parts		Look for damaged threads or rounded heads.
INSTALLATION			
12. Valve (5)	Bushing (3)		a. Wrap pipe threads with antiseizing tape (page 2-424). b. Screw in and tighten using 1 3/8-inch open-end wrench.
13. Bushing (3)	Elbow (1)		a. Wrap pipe threads with antiseizing tape (page 2-424). b. Screw in and tighten using 1 1/4-inch and 1 3/8-inch open-end wrenches.
14. Elbow (1)	Hose (4)		Screw in and tighten using two 1 1/4-inch open-end wrenches.
15. Pump (6)	Elbow (2)		a. Wrap pipe threads with antiseizing tape (page 2-424). b. Screw in and tighten using two 1 1/4-inch open-end wrenches.
16. Elbow (2)	Hose (4)		Screw in and tighten using two 1 1/4-inch open-end wrenches.
17. Dump body (7)	Lower completely (page 2-424).		
18. Reservoir (8)	Cap (9)		Turn counterclockwise and take off.
19. Filler neck (10) is full.	Fill with lubricating oil until sight glass (11)		

PUMP-TO-VALVE PRESSURE HOSE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
20.	Dump body (7)	a. Raise completely then lower completely (page 2-424).	b. Repeat steps 19 and 20 until sight glass (11) is full.
21. Reservoir (8)	Cap (9) Put in place and turn clockwise to close		



TA244578

TASK ENDS HERE

RESERVOIR-TO-PUMP SUCTION HOSE AND FITTINGS

This task covers:

- a. Removal (page 2-1390)
 - b. Cleaning (page 2-1392)
 - c. Inspection/Replacement (page 2-1392)
 - d. Installation (page 2-1393)
-

INITIAL SETUP

Tools

- Brush, cleaning
- Container, 6-gallon
- Gloves, safety
- Goggles, safety
- Gun, blow, air
- Hose, air assembly
- Screwdriver, flat-tip, 1/4-inch
- Wrench, pipe, 18-inch (two required)

Materials/Parts

- Detergent, liquid, GP (item 7, appendix C)

Materials/Parts - Continued

- Solvent, drycleaning (item 19, appendix C)
- Tape, antiseizing (item 22, appendix C)

Personnel Required

One

References

LO 5-3805-254-12 (Lubrication Order)

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

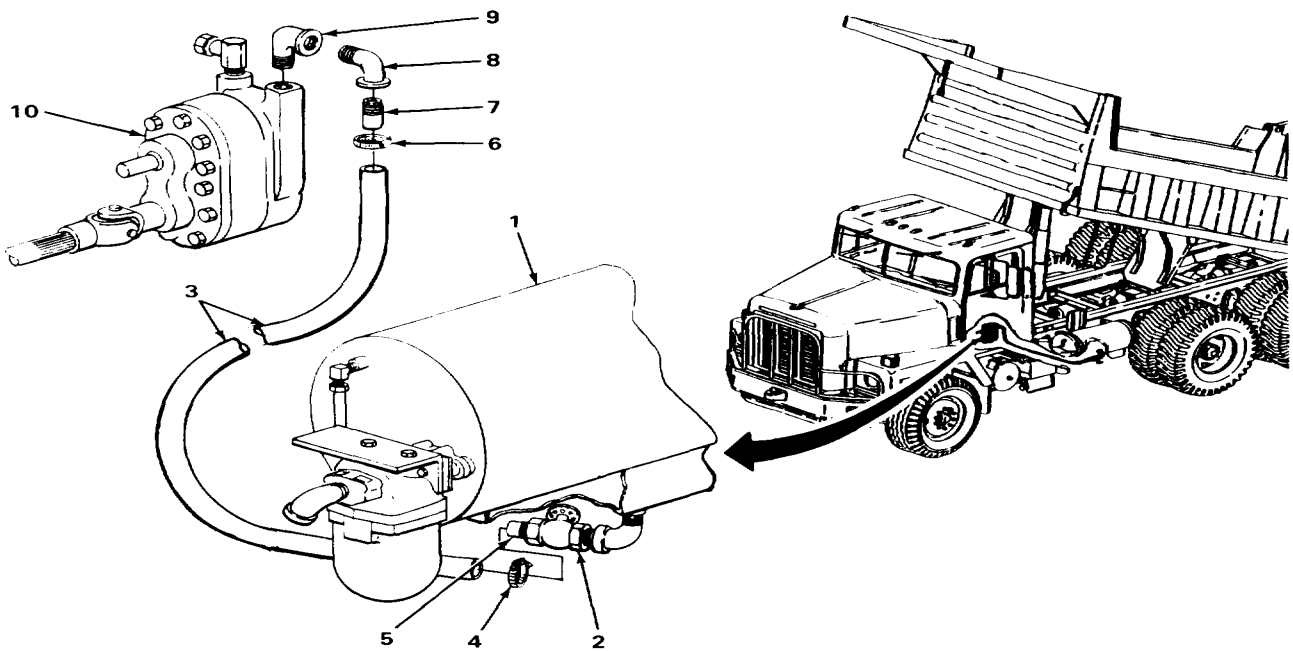
WARNING

Do not drain hydraulic oil when hot. Hot oil could burn you.

1. Reservoir (1)	Valve (2)	Turn clockwise to close.	
2. Hose (3)	Clamp (4)	a. Place 6-gallon container underneath. b. Using 1/4-inch flat-tip screwdriver, unscrew and take off.	
3. Nipple (5)	Hose (3)	a. Take off. b. Allow oil to drain. c. Get rid of drained oil.	
4. Hose (3)	Clamp (6)	a. Place 6-gallon container underneath. b. Using 1/4-inch flat-tip screwdriver, unscrew and take off.	

RESERVOIR-TO-PUMP SUCTION HOSE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
5. Nipple (7)	Hose (3)	a. Take off. b. Allow oil to drain. c. Take out.
6. Elbow (8)	Nipple (7)	Using two 18-inch pipe wrenches, unscrew and take out.
7. Elbow (9)	Elbow (8)	Using two 18-inch pipe wrenches, unscrew and take out.
8. Pump (10)	Elbow (9)	a. Using 18-inch pipe wrench, unscrew and take out. b. Allow oil to drain. c. Get rid of drained oil.



TA244579

RESERVOR-TO-PUMP SUCTION HOSE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
9. Clamp (11)	Two nuts (12) and	a. Using 7/16-inch box-end wrench, un-

CLEANING

WARNING

Improper cleaning methods and use of unauthorized cleaning liquids or solvents can injure personnel and cause damage to equipment. Refer to TM 9-247.

WARNING

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 1000F (380C) and for type #2 is 138°F (590C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

9.	All metal parts	Using drycleaning solvent and cleaning brush, clean thoroughly.
10.	Hose (1)	Using liquid detergent and cleaning brush, clean thoroughly.

WARNING

Particles blow by compressed air are hazardous. Make certain the airstream is directed away from user and other personnel in the area. Compressed air used for cleaning purposes shall not exceed 30 psi (207 kPa). User must wear safety goggles or face shield to prevent injury to personnel.

11.	All parts	Using blow gun and air hose assembly, blow dry.
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INSPECTION/REPLACEMENT

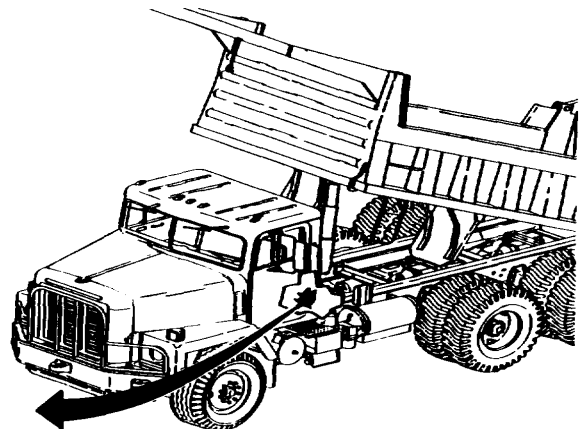
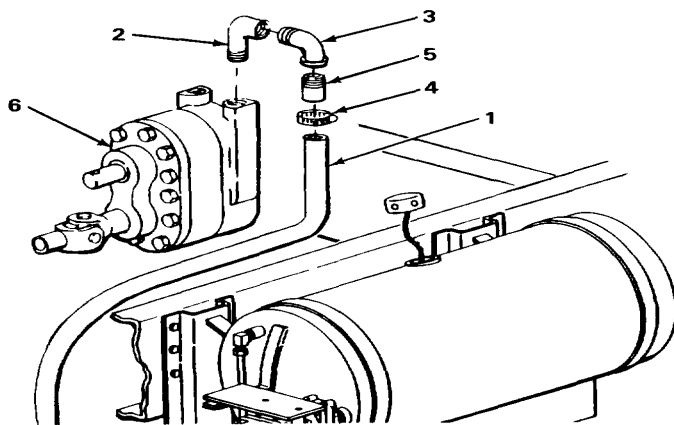
NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

RESERVOIR-TO-PUMP SUCTION HOSE AND FITTINGS - CONTINUED

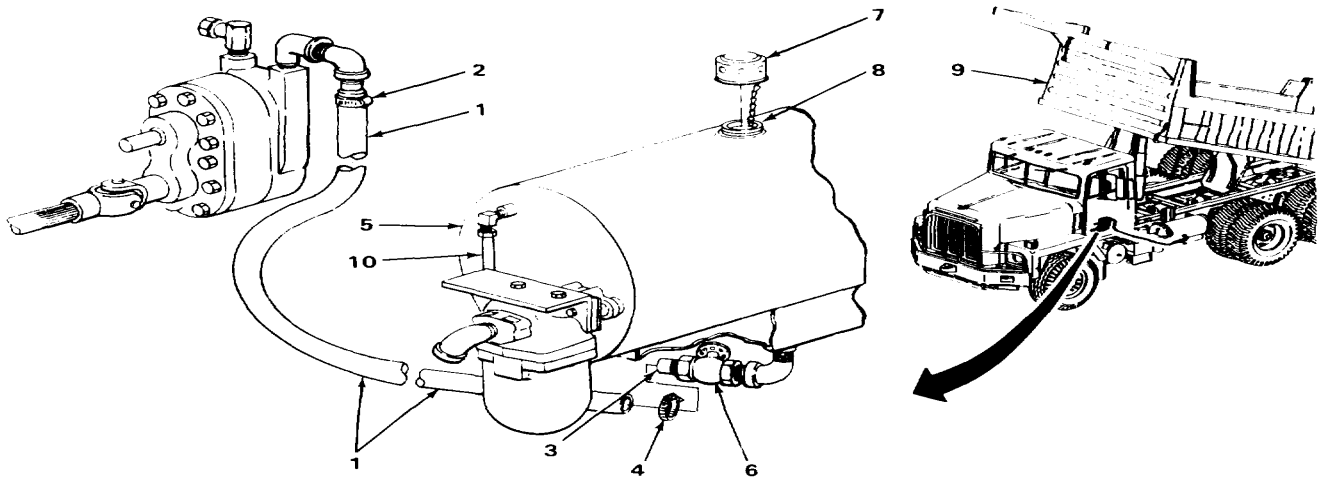
LOCATION	ITEM	ACTION REMARKS
12.	Two elbows (2 and 3), two clamps (4), and nipple (5)	Look for cracks, dents, or bends.
13.	Hose (1)	Look for cracks, gouges, or worn areas.
14.	All threaded parts	Look for damaged threads or rounded heads.
INSTALLATION		
15. Pump (6)	Elbow (2)	a. Wrap pipe threads with antiseizing tape (page 2-424). b. Screw in and tighten using 18-inch pipe wrench.
16. Elbow (2)	Elbow (3)	a. Wrap pipe threads with antiseizing tape (page 2-424). b. Screw in and tighten using two 18-inch pipe wrenches.
17. Elbow (3)	Nipple (5)	a. Wrap pipe threads with antiseizing tape (page 2-424). b. Screw in and tighten using two 18-inch pipe wrenches.
18. Nipple (5)	Hose (1)	Push on.



TA244580

RESERVOR-TO-PUMP SUCTION HOSE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
19. Hose (1)	Clamp (2)	a. Put in place. b. Screw on and tighten using 1/4-inch flat-tip screwdriver.	
20. Nipple (3)	Hose (1)	Put on.	
21. Hose (1)	Clamp (4)	a. Put in place. b. Screw on and tighten using 1/4-inch flat-tip screwdriver.	
22. Reservoir (5)	Valve (6)	Turn counterclockwise to open.	
23.	Cap (7)	Turn counterclockwise and take off.	
24.	Filler neck (8)	Fill with lubricating oil (LO 5-3805-254-12) until sight glass (10) is full.	
25.	Dump body (9)	a. Raise completely, then lower completely (page 2-424). b. Repeat steps 24 and 25 until sight glass (10) is full.	
26. Reservoir (5)	Cap (7)	Put in place and turn clockwise.	



TASK ENDS HERE

TA244581

VALVE-TO-RESERVOIR RETURN HOSE AND FITTINGS

This task covers:

- | | |
|---------------------------|---|
| a. Removal (page 2-1396) | c. Inspection/Replacement (page 2-1398) |
| b. Cleaning (page 2-1396) | d. Installation (page 2-1398) |
-

INITIAL SETUP

Tools

Brush, cleaning
Container, 6-gallon
Gloves, safety
Goggles, safety
Gun, blow, air
Hose, air assembly
Wrench, box-end, 1 5/8-inch
Wrench, open-end, 1 3/8-inch
Wrench, open-end, 1 1/2-inch

Materials/Parts

Detergent, liquid, GP (item 7,
appendix C)
Oil, lubricating (item 14, appendix C)

Materials/Parts - Continued

Rags, wiping (item 15, appendix C)
Solvent, drycleaning (item 19, appendix C)
Tape, antiseizing (item 22, appendix C)

Personnel Required

One

References

LO 5-3805-254-12 (Lubrication Order)

VALVE-TO-RESERVOIR RETURN HOSE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
9. Clamp (11)	Two nuts (12) and	a. Using 7/16-inch box-end wrench, un-	
REMOVAL			
<u>WARNING</u>			
Do not drain hydraulic oil when hot. Hot oil could burn you.			
1 Union (1)	Hose (2)	a Place 6-gallon container underneath. b Using 1 3/8-inch and 1 11/2-inch open-end wrenches, unscrew and take out. c Allow oil to drain. d Get rid of drained oil.	
2 Elbow (3)	Hose (2)	Using 1 3/8-inch and 1 1/2-inch open-end wrenches, unscrew and take out.	
3 Bushing (4)	Elbow (3)	Using 1 11/2-inch and 1 5/8-inch box-end wrenches, unscrew and take out.	
4 Valve (5)	Bushing (4)	a Using 1 5/8-inch box-end wrench, unscrew and take out. b Using wiping rag, clean area of excess oil.	

CLEANING**WARNING**

Improper cleaning methods and use of unauthorized cleaning liquids or solvents can injure personnel and cause damage to equipment. Refer to TM 9-247.

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 1000F (380C) and for type #2 is 138°F (590C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

VALVE-TO-RESERVOIR RETURN HOSE AND FITTINGS - CONTINUED

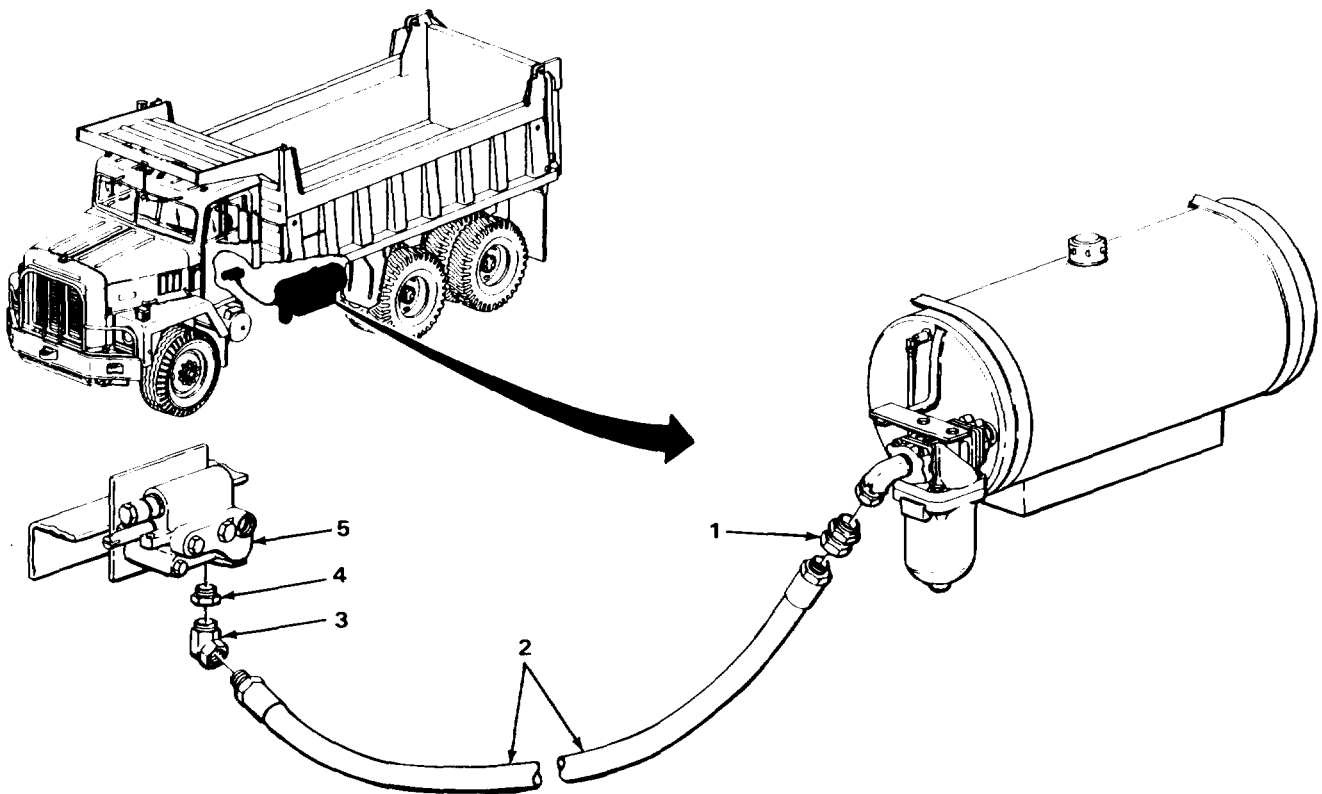
LOCATION	ITEM	ACTION	REMARKS
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9. Clamp (11)	Two nuts (12) and	a. Using 7/16-inch box-end wrench, un-	
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NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

5	Union (1), elbow (3) and bushing (4)	Using drycleaning solvent and cleaning brush, clean thoroughly.
6	Hose (2)	Using liquid detergent, cleaning brush and water, clean thoroughly.



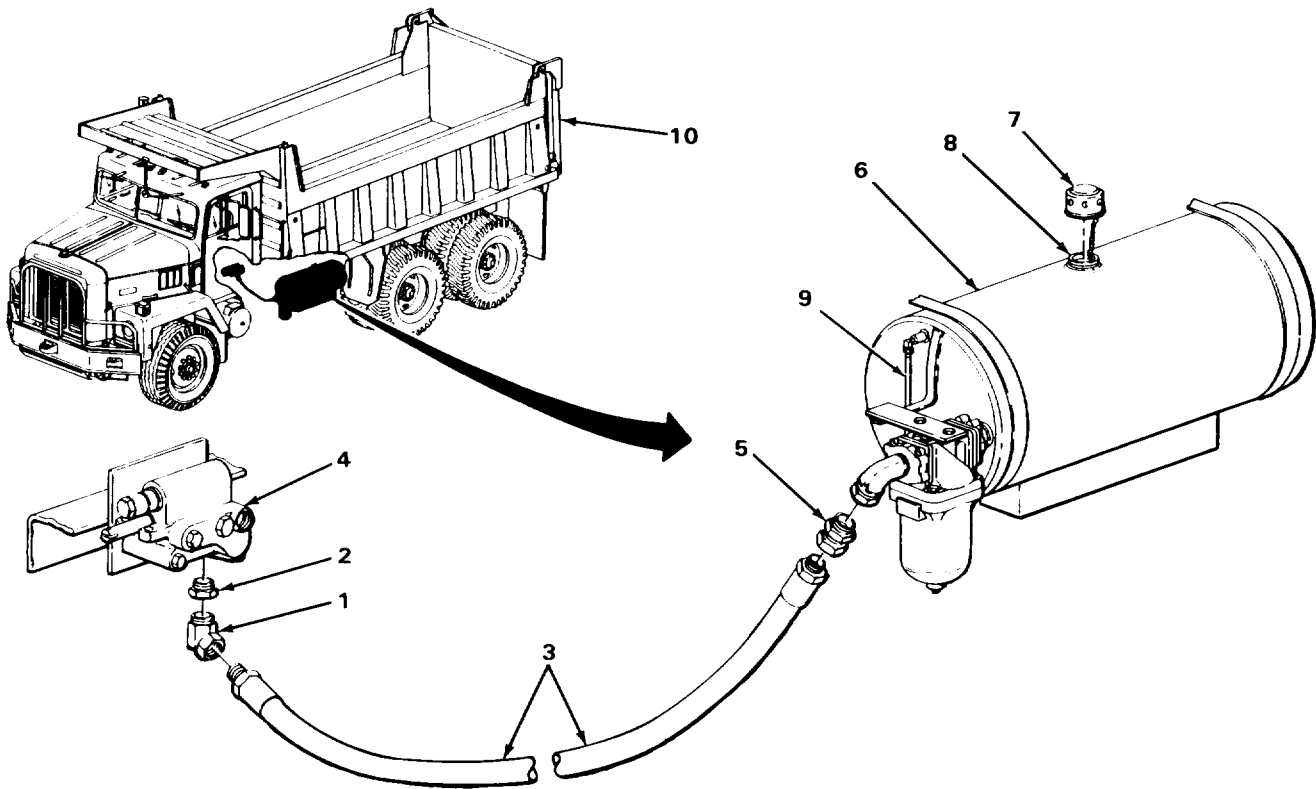
TA244564

VALVE-TO-RESERVOIR RETURN HOSE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
CLEANING - CONTINUED			
<u>WARNING</u>			
<p>Particles blown by compressed air are hazardous. Make certain the airstream is directed away from user and other personnel in the area. Compressed air used for cleaning purposes shall not exceed 30 psi (207 kPa). User must wear safety goggles or face shield to prevent injury to personnel.</p>			
7	All parts		Using blow gun and air hose assembly, blow dry.
INSPECTION/REPLACEMENT			
NOTE			
<p>Replace all damaged or defective parts.</p> <p>For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).</p>			
8	Elbow (1) and		Look for cracks, bends, or dents. bushing (2)
9	Hose (3)		Look for cracks, gouges, or worn areas.
10	All threaded parts		Look for damaged threads or rounded heads.
INSTALLATION			
11	Valve (4)	Bushing (2)	<ul style="list-style-type: none"> a Wrap pipe threads with antiseizing tape (page 2-424). b Screw in and tighten using 1 5/8-inch box-end wrench.
12	Bushing (2)	Elbow (1)	<ul style="list-style-type: none"> a Wrap pipe threads with antiseizing tape (page 2-424). b Screw in and tighten using 1 1/2-inch and 1 5/8-inch open-end wrenches.
13	Elbow (1)	Hose (3)	<ul style="list-style-type: none"> a Wrap pipe threads with antiseizing tape (page 2-424). b Screw in and tighten using 1 3/8-inch and 1 1/2-inch open-end wrenches.

VALVE-TO-RESERVOIR RETURN HOSE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
14 Union (5)	Hose (3)	Screw in and tighten using 1 3/8-inch and 1 1/2-inch open-end wrenches.	
15 Reservoir (6)	Cap (7)	Turn counterclockwise and take off.	
16	Filler neck (8)	Fill with lubricating oil until sight glass (9) is full.	
17	Dump body (10)	a Raise completely than lower completely (page 2-424). b Repeat steps 16 and 17 until sight glass (9) is full.	
18 Reservoir (6)	Cap (7)	Put in place and turn clockwise.	



TASK ENDS HERE

VALVE-TO-CYLINDER PRESSURE HOSE AND FITTINGS

This task covers:

- a Removal (page 2-1400)
- b Cleaning (page 2-1403)
- c Inspection/Replacement (page 2-1404)
- d Installation (page 2-1404)

INITIAL SETUP

Tools

- Brush, cleaning
- Container, 6-gallon
- Gloves, safety
- Goggles, safety
- Gun, blow, air
- Hose, air assembly
- Wrench, box-end, 1 3/8-inch
- Wrench, open-end, 1 1/2-inch
- Wrench, pipe, 18-inch

Materials/Parts

- Detergent, liquid, GP (item 7, appendix C)
- Oil, lubricating, OEIHDO/30 (item 14, appendix C)
- Solvent, drycleaning (item 19, appendix C)

Materials/Parts - Continued

Tape, antiseizing (item 22, appendix C)

Personnel Required

One

Equipment Condition

Dump body raised and secured (page 2-424).

References

LO 53805-254-12 (Lubrication Order)

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

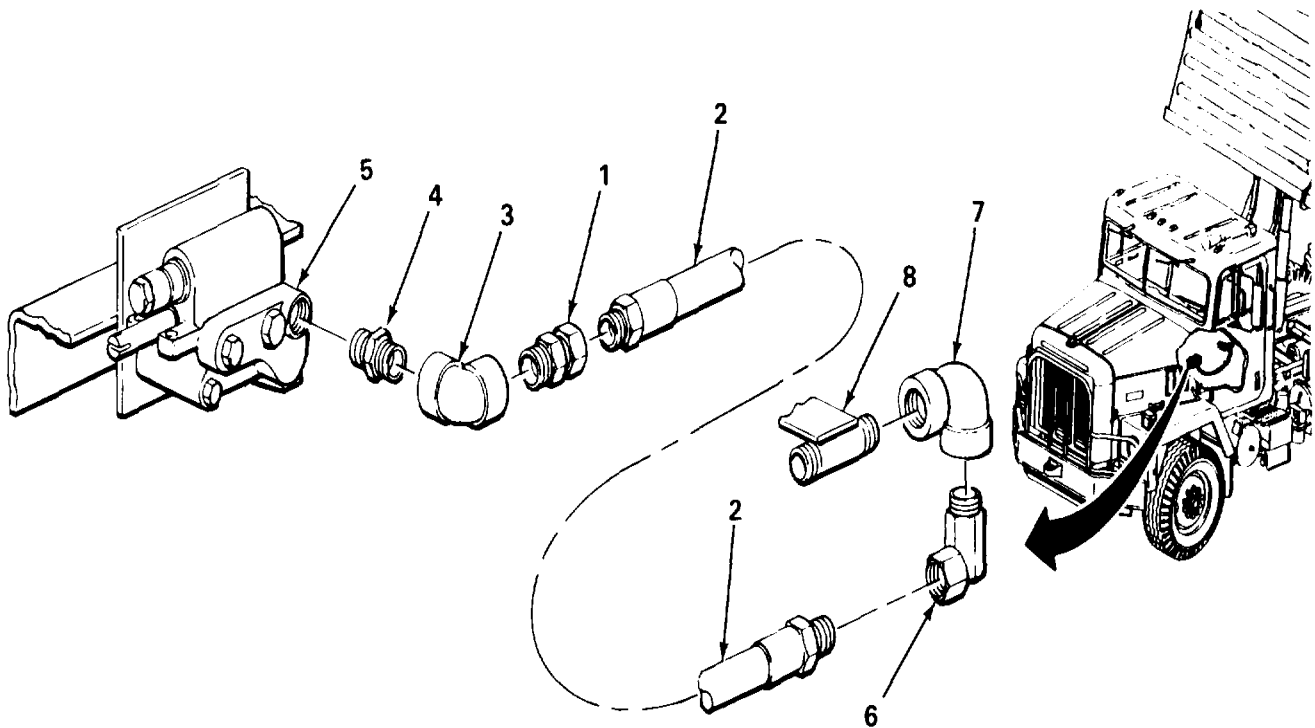
WARNING

Do not drain hot hydraulic oil Hot oil could burn you.

1	Union (1)	Hose (2)	<ul style="list-style-type: none"> a Place 6-gallon container underneath. b Using 1 3/8-inch and 1 1/2-inch open-end wrenches, unscrew and take out. c Allow oil to drain. d Get rid of drained oil (page 2-424).
2	Elbow (3)	Union (1)	Using 1 1/2-inch open-end wrench and 18-inch pipe wrench, unscrew and take out.

VALVE-TO-CYLINDER PRESSURE HOSE AND FITTINGS - CONTINUED

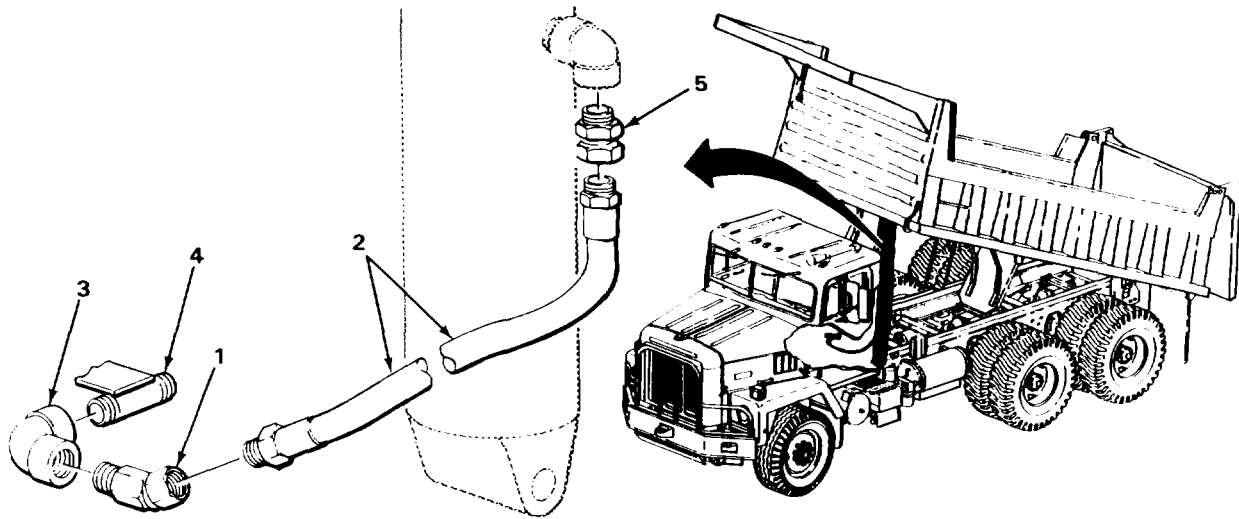
LOCATION	ITEM	ACTION	REMARKS
3 Fitting (4)	Elbow (3)	Using 1 3/8-inch open-end wrench and 18-inch pipe wrench, unscrew and take out.	
4 Valve (5)	Fitting (4)	Using 1 3/8-inch open-end wrench, unscrew and take out.	
5 Elbow (6)	Hose (2)	Using 1 3/8-inch and 1 1/2-inch open-end wrenches, unscrew and take out.	
6 Elbow (7)	Elbow (6)	Using 1 1/2-inch open-end wrench and 18-inch pipe wrench, unscrew and take out.	
7 Nipple (8)	Elbow (7)	Using 18-inch pipe wrench, unscrew and take out.	



TA244584

VALVE-TO-CYLINDER PRESSURE HOSE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
8 Elbow (1)	Hose (2)	Using 1 3/8-inch and 1 1/2-inch open-end wrenches, unscrew and take out.	
9 Elbow (3)	Elbow (1)	Using 1 1/2-inch open-end wrench and 18-inch pipe wrench, unscrew and take out.	
10 Nipple (4)	Elbow (3)	Using 18-inch pipe wrench, unscrew and take out.	
11 Union (5)	Hose (2)	Using 1 3/8-inch and 1 1/2-inch open-end wrenches, unscrew and take out.	



TA244585

VALVE-TO-CYLINDER PRESSURE HOSE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
9. Clamp (11)	Two nuts (12) and	a. Using 7/16-inch box-end wrench, un-

CLEANING

WARNING

Improper cleaning methods and use of unauthorized cleaning liquids or solvents can injure personnel and cause damage to equipment. Refer to TM 9-247.

WARNING

Drycleaning solvent P-D-680 is toxic and flammable. Wear protective safety goggles and gloves and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes and do not breathe vapors. Do not use near open flame or excessive heat. The flashpoint for type #1 drycleaning solvent is 100°F (380C) and for type #2 is 138°F (590C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, flush your eyes with water and get medical aid immediately.

NOTE

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

12	All metal parts	Using drycleaning solvent and cleaning brush, clean thoroughly.
13	Two rubber hoses	Using liquid detergent, water, and cleaning brush, clean thoroughly.

WARNING

Particles blown by compressed are hazardous Make certain the airstream is directed away from user and other personnel in the area Compressed air used for cleaning purposes shall not exceed 30 psi (207 kPa) User must wear safety goggles or face shield to prevent injury to personnel.

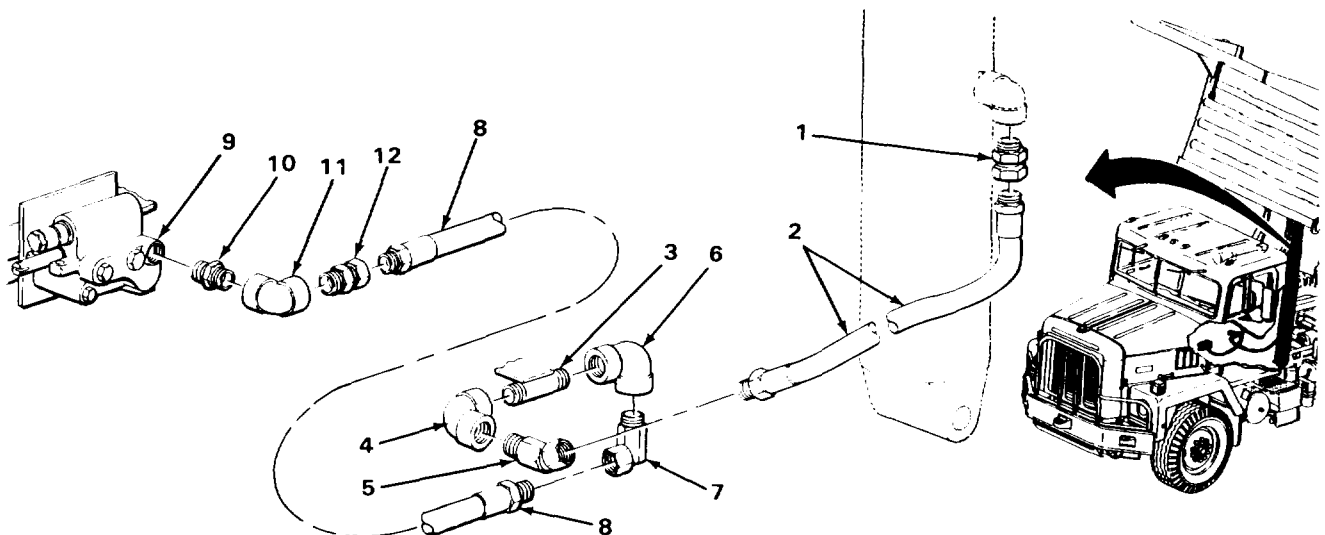
14	All parts	Using blow gun and air hose assembly, blow dry.
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VALVE-TO-CYLINDER PRESSURE HOSE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSPECTION/REPLACEMENT			
NOTE			
Replaced all damaged or defective parts.			
For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).			
15	All metal parts		Look for cracks, bends or dents.
16	Two rubber hoses		Look for cracks, gouges or worn areas.
17	All threaded parts		Look for damaged threads or rounded heads.
INSTALLATION			
<u>CAUTION</u>			
Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.			
NOTE			
For more information on how to use antiseizing tape, go to General Maintenance Instructions.			
18 Union (1)	Hose (2)	a	Wrap pipe threads with antiseizing tape (page 2-424).
		b	Screw in and tighten using 1 3/8-inch and 1 1/2-inch open-end wrenches.
19 Nipple (3)	Elbow (4)		Screw in and tighten using 18-inch pipe wrench.
20 Elbow (4)	Elbow (5)	a	Wrap pipe threads with antiseizing tape (page 2-424).
		b	Screw in and tighten using 1 1/2-inch open-end wrench and 18-inch pipe wrench.
21 Elbow (5)	Hose (2)	a	Wrap pipe thread with antiseizing tape (page 2-424).
		b	Screw in and tighten using 1 3/8-inch and 1 1/2-inch open-end wrenches.
22 Nipple (3)	Elbow (6)		Screw in and tighten using 18-inch pipe wrench.

VALVE-TO-CYLINDER PRESSURE HOSE AND FITTINGS - CONTINUED

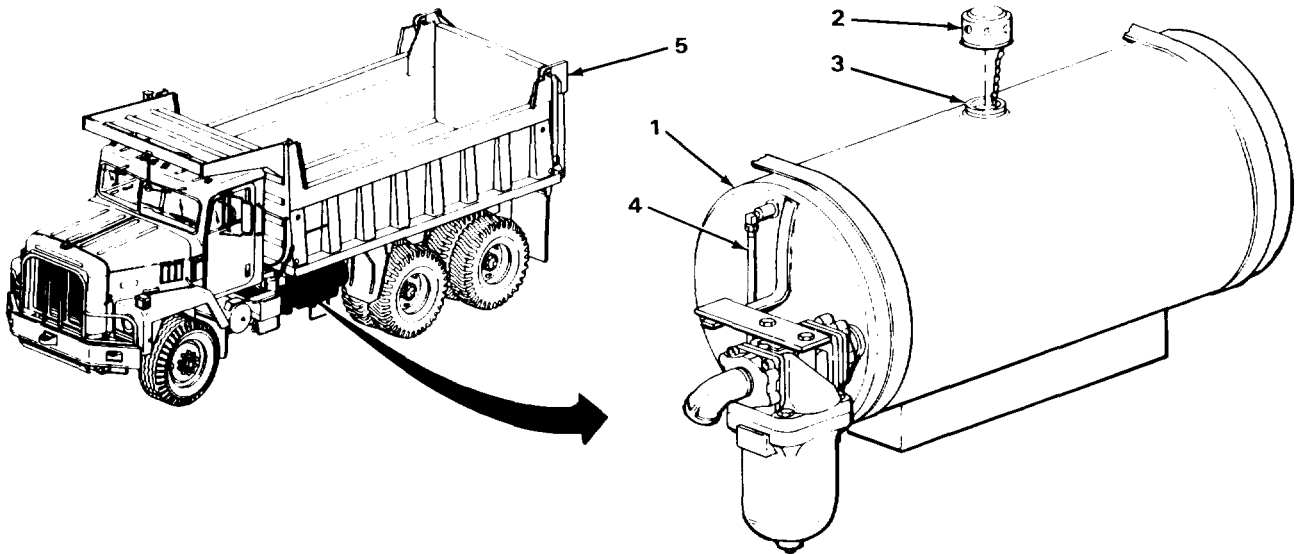
LOCATION	ITEM	ACTION REMARKS
23 Elbow (6)	Elbow (7)	a Wrap pipe threads with antiseizing tape. b Screw in and tighten using 1 1/2-inch open-end wrench and 18-inch pipe wrench.
24 Elbow (7)	Hose (8)	a Wrap pipe threads with antiseizing tape b Screw in and tighten using 1 3/8-inch and 1 1/2-inch open-end wrenches. 25 Valve (9) Fitting (10) a Wrap pipe threads with antiseizing tape. b Screw in and tighten using 1 3/8-inch box-end wrench.
26 Fitting (10)	Elbow (11)	Screw in and tighten using 1 3/8-inch open-end wrench and 18-inch pipe wrench.
27 Elbow (11)	Union (12)	a Wrap pipe threads with antiseizing tape. b Screw in and tighten using 1 1/2-inch open-end wrench and 18-inch pipe wrench.
28 Union (12)	Hose (8)	a Wrap pipe threads with antiseizing tape. b Screw in and tighten using 1 3/8-inch and 1 1/2-inch open-end wrenches.



TA244586

VALVE-TO-CYLINDER PRESSURE HOSE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
29	Dump body	Lower (page 2-424).	
30	Reservoir (1)	Cap (2)	Turn counterclockwise and take off.
31	Filler neck (3)		Fill with lubricating oil until sight glass (4) is full.
32	Dump body (5)	a Raise completely then lower completely (page 2-424). b Repeat steps 31 and 32 until sight glass (4) is full.	
33	Reservoir (1)	Cap (2)	Put in place and turn clockwise.



2-1406/(2-1407 blank)

TA244587

Section XXI. GAGES (NONELECTRICAL), WEIGHING AND MEASURING DEVICE MAINTENANCE

Page	Page
Air Cleaner Vacuum Gage .....2-1466	Speedometer.....2-1408
Air Cleaner Vacuum Gage Line and.....	Speedometer Drive Cable.....2-1414
Fittings .....2-1481	Tachometer .....2-1411
Air Pressure Gage.....2-1478	Tachometer Drive Cable .....2-1420
Air Pressure Gage Line and.....	Transmission Oil Pressure
Fittings.....2-1490	Gage.....2-1447
Engine Oil Pressure Gage.....2-1426	Transmission Oil Pressure Gage
Engine Oil Pressure Gage Line.....	Line and Fittings.....2-1450
and Fittings.....2-1429	Water Temperature Gage and
Fuel Pressure Gage .....2-1475	Line.....2-1469

SPEEDOMETER

This task covers:

- | | |
|---|--|
| <ul style="list-style-type: none"> a Removal (page 2-1408) b Inspection/Replacement (page 2-1410) | <ul style="list-style-type: none"> c Installation (page 2-1410) |
|---|--|

INITIAL SETUP

Tools

- Wrench, open-end, 3/8-inch
- Wrench, open-end, 3/4-inch

Materials/Parts

- Lockwasher, mounting bracket
(two required)

Personnel Required

One

Equipment Condition

- Lower center instrument panel opened
(page 2-424).
- Left side cab door opened (page 2-424).

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

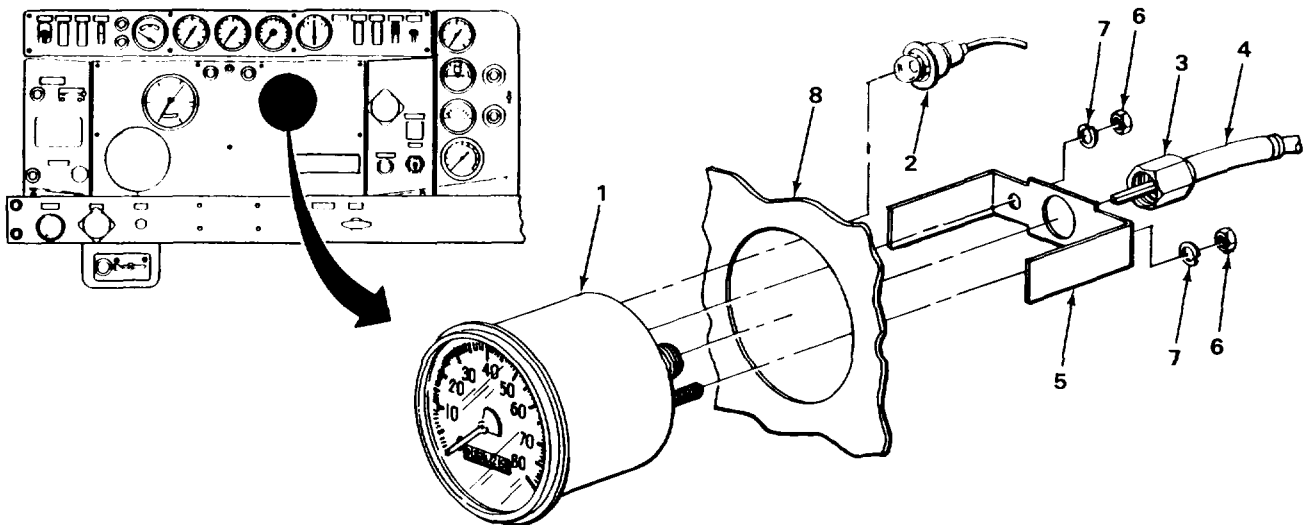
CAUTION

Use care when working behind lower center instrument panel to prevent breaking or disconnecting wires.

1 Speedometer (1)	Light socket (2)	Pull out.
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SPEEDOMETER - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
2	Cable retainer nut (3)	Using 3/4-inch open-end wrench, unscrew and slide back.	
3	Speedometer drive cable (4)	Pull out.	
NOTE			
Hold speedometer against lower center instrument panel when performing steps 4 and 5.			
4	Mounting bracket (5)	Two nuts (6) and two lockwashers (7)	a Using 3/8-inch open-end wrench, unscrew and take off. b Get rid of lockwashers.
5	Speedometer (1)	Mounting bracket (5)	Take off.
6	Lower center instrument panel (8)	Speedometer (1)	Take out.



TA244588

SPEEDOMETER - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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INSPECTION/REPLACEMENT

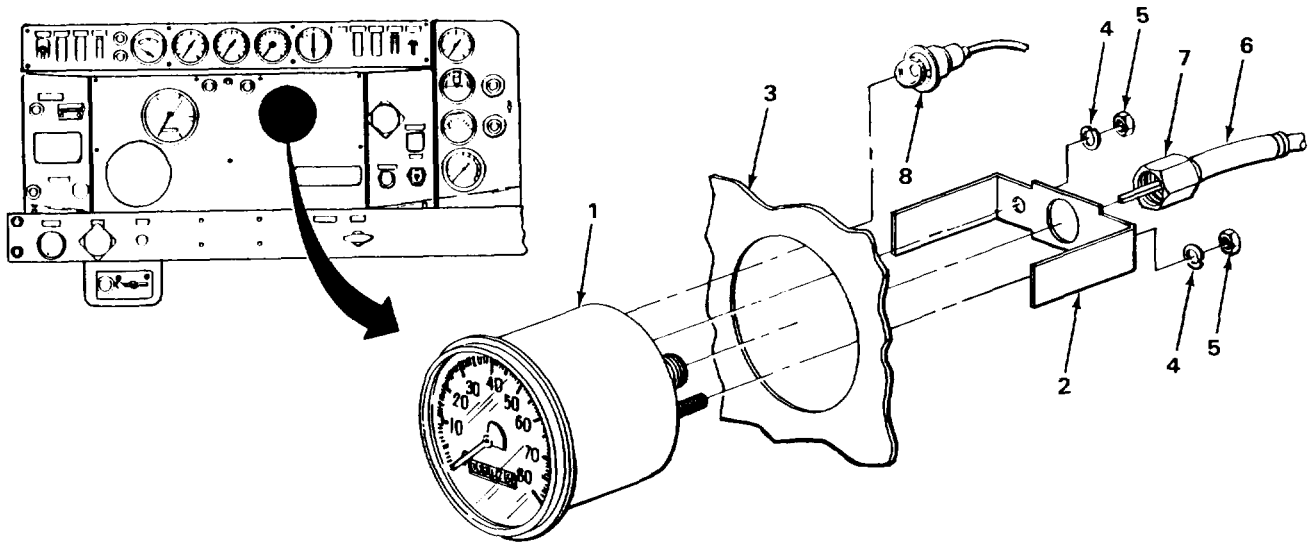
NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

7	Speedometer (1)	a Look for cracks, dents, or damaged threads. b Check to see if gage is readable.	
8	Mounting bracket (2)	Look for cracks, bends, or breaks.	
INSTALLATION			
9	Lower center instrument panel (3)	Speedometer (1)	Put in and hold. Position as shown.
10	Speedometer (1)	Mounting bracket (2)	Put on.
11	Mounting bracket (2)	Two new lockwashers (4) and two nuts (5)	Screw on and tighten using 3/8-inch open-end wrench.
12	Speedometer (1)	Speedometer drive cable (6)	Put in. Aline square end of drive tip with square hole of speedometer.
13	Cable retainer nut (7)		Screw on and tighten using 3/4-inch open-end wrench.
14	Light socket (8)		Push in.

SPEEDOMETER - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE:

1. Close lower center instrument panel (page 2-424).
2. Close side left cab door (page 2-424).

TASK ENDS HERE

TACHOMETER

This task covers:

- | | |
|---|--|
| <ul style="list-style-type: none"> a Removal (page 2-1412) b Inspection/Replacement (page 2-1412) | <ul style="list-style-type: none"> c Installation (page 2-1413) |
|---|--|

INITIAL SETUP

Tools

- Wrench, open-end, 3/8-inch
- Wrench, open-end, 3/4-inch

Materials/Parts

- Lockwasher, mounting bracket
(two required)

Personnel Required

One

Equipment Condition

- Lower center instrument panel opened
(page 2-424).
- Left side cab door opened (page 2-424).

TACHOMETER - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

CAUTION

Use care when working behind lower center instrument panel to prevent breaking or disconnecting wires.

1	Tachometer (1)	Light socket (2)	Pull out.
2		Cable retainer nut (3)	Using 3/4-inch open-end wrench, unscrew and slide back.
3		Tachometer drive cable (4)	Pull out.

NOTE

Hold tachometer against lower center instrument panel when performing steps 4 and 5.

4	Mounting bracket (5)	Two nuts (6) and two lockwashers (7)	<ul style="list-style-type: none"> a Using 3/8-inch open-end wrench, unscrew and take off. b Get rid of lockwashers.
5	Tachometer (1)	Mounting bracket (5)	Take off.
6	Lower center instrument panel (8)	Tachometer (1)	Take out.

INSPECTION/REPLACEMENT

NOTE

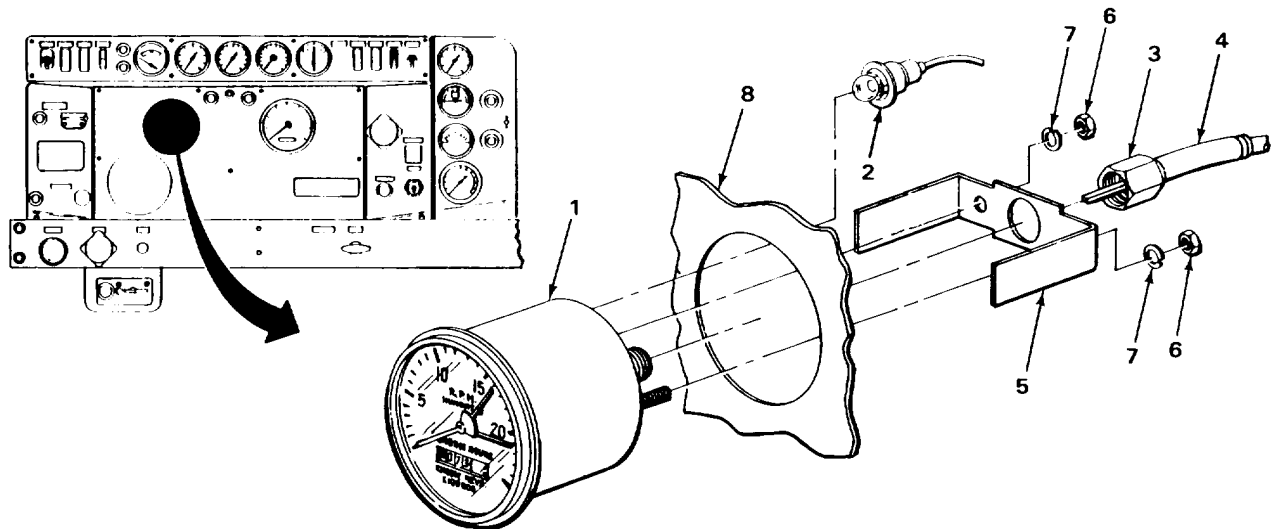
Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

7		Tachometer (1)	<ul style="list-style-type: none"> a Look for cracks, dents, or damaged threads. b Check to see if gage is readable.
8		Mounting bracket (5)	Look for cracks, bends, or breaks.

TACHOMETER - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
9 Lower center instrument panel (8)	Tachometer (1)	Put in and hold.	Position as shown.
10 Tachometer (1)	Mounting bracket (5)	Put on.	
11 Mounting bracket (5)	Two new lockwashers (7) and two nuts (6)	Screw on and tighten using 3/8-inch open-end wrench.	
12 Tachometer (1)	Tachometer drive cable (4)	Put in.	Align square end of cable with square hole of tachometer.
13	Cable retainer nut (3)	Screw on and tighten using 3/4-inch open-end wrench.	
14	Light socket (2)	Push in.	



NOTE

FOLLOW-ON MAINTENANCE:

1. Close lower center instrument panel (page 2-424)
2. Close left side cab door (page 2-424).

TA244590

TASK ENDS HERE

SPEEDOMETER DRIVE CABLE

This task covers:

- a Removal (page 2-1414)
 - b Inspection/Replacement (page 2-1416)
 - c Installation (page 2-1416)
-

INITIAL SETUP

Tools

- Wrench, box-end, 7/16-inch (two required)
- Wrench, open-end, 3/4-inch
- Wrench, open-end, 1-inch
- Left side cab door opened (page 2-424).

Materials/Parts

- Lockwasher, left frame rail (two required)
- Lockwasher, engine side of firewall
- Rags, wiping (item 15, appendix C)

Personnel Required

One

Equipment Condition

- Lower center instrument panel opened (page 2-424).
 - Left side hood panel opened (page 2-424).
 - Air cleaner housing removed (page 2-452).
-

LOCATION	ITEM	ACTION	REMARKS
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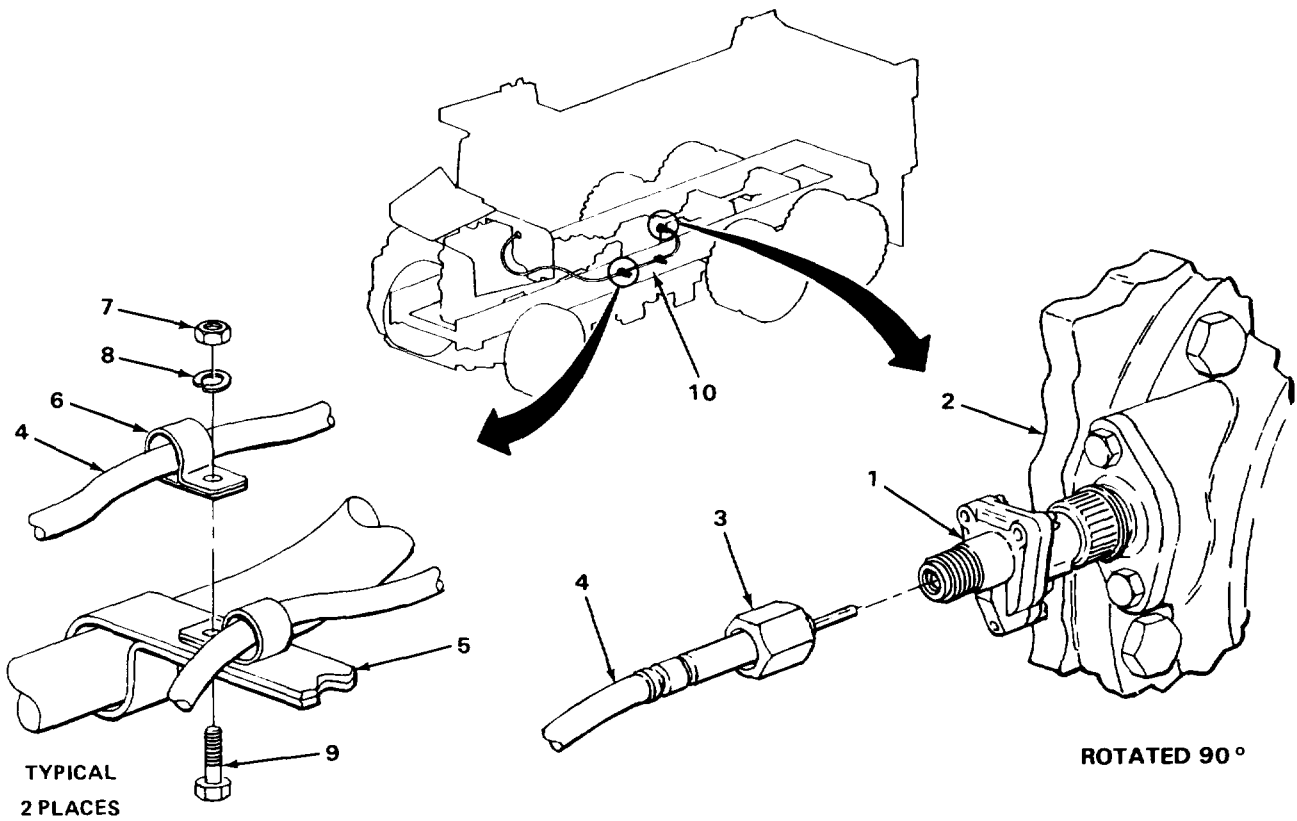
REMOVAL

1. Adapter (1) on auxiliary	Cable retainer nut (3) transmission (2)	a Using wiping rag, wipe clean. b Holding adapter and using 1-inch open-end wrench, unscrew and slide back.	
2.	Speedometer drive cable (4)	Pull out.	
3. Two extensions (5)	Two clips (6), two nuts (7), two lockwashers (8), and two screws (9)	a Using two 7/16-inch box-end wrenches, unscrew and take out. b Get rid of lockwashers.	
4. Speedometer drive cable (4)	Two clips (6)	Take off.	

SPEEDOMETER DRIVE CABLE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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5. Left frame rail (10)	Speedometer drive cable (4)	Push up over automatic transmission harness.	Make sure automatic transmission harness is clear of speedometer drive cable.
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CAUTION

Use care when working behind lower center instrument panel to prevent breaking or disconnecting wires.

TA244591

SPEEDOMETER DRIVE CABLE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
6	Speedometer (1) Cable retainer nut (2)	Using 3/4-inch open-end wrench, unscrew and slide back.	
7	Speedometer drive cable (3)	Pull out.	
8	Engine side of firewall (4) Grommet (5)	Take out.	
9	Speedometer drive cable (3)	Pull through.	
10	Extension (6) Clip (7), nut (8), lockwasher (9), and screw (10)	a Using two 7/16-inch box-end wrenches, unscrew and take out. b Get rid of lockwasher.	
11	Engine side of firewall (4) Speedometer drive cable (3)	Take out.	
12	Speedometer drive cable (3) Clip (7)	Take off.	

INSPECTION/REPLACEMENT**NOTE**

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instruction (page 2-424).

13	Speedometer drive cable (3)	Look for worn cable covering.	
14	Cable drive tip ends (11)	Look for rounded drive tip ends.	
15	Cable retainer nut (2)	Look for damaged threads or rounded heads.	
INSTALLATION			
16	Engine side of firewall (4) Speedometer drive cable (3)	Put small end through speedometer drive cable hole.	

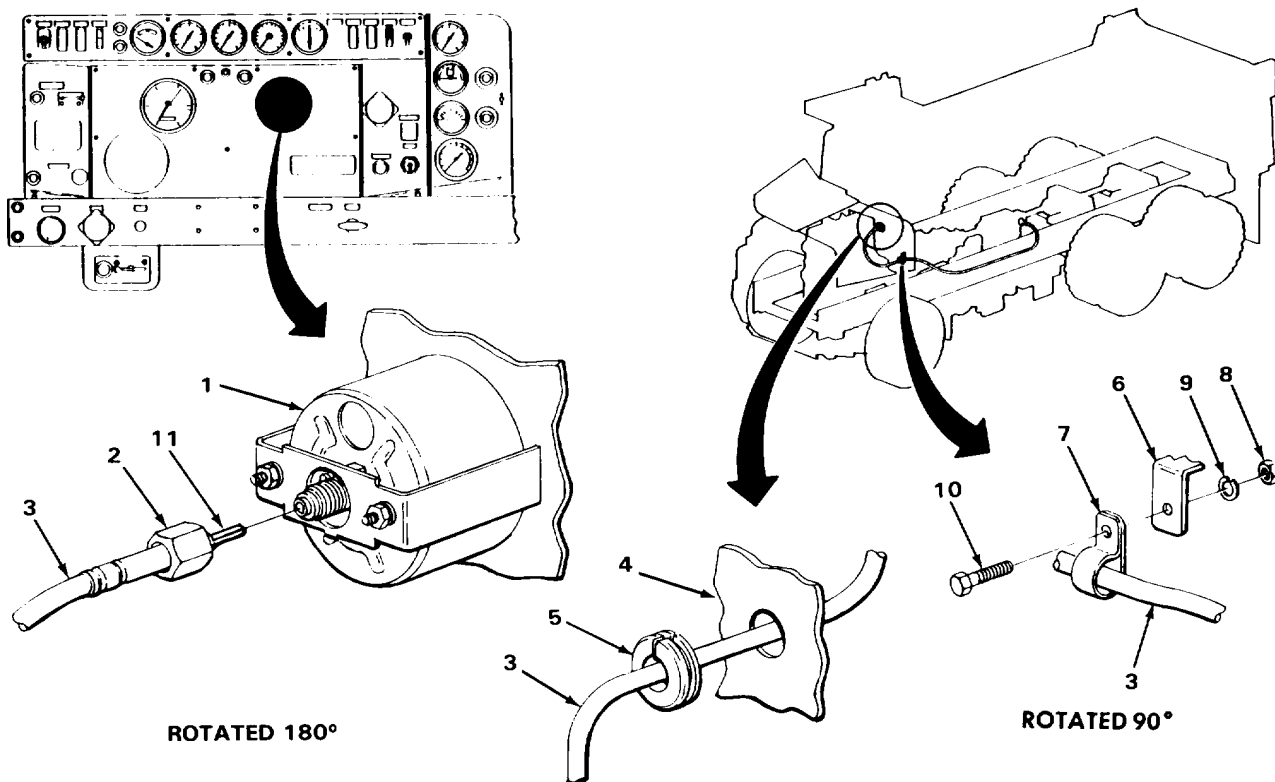
SPEEDOMETER DRIVE CABLE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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CAUTION

Use care when working behind lower center instrument panel to prevent breaking or disconnecting wires.

17 Speedometer (1)	Speedometer drive cable (3)	Put in.	Align square end of drive tip (11) with square hole of speedometer.
18	Cable retainer nut (2)	Screw on and tighten using 3/4-inch open-end wrench.	
19 Engine side of firewall (4-	Grommet (5)	Put in.	

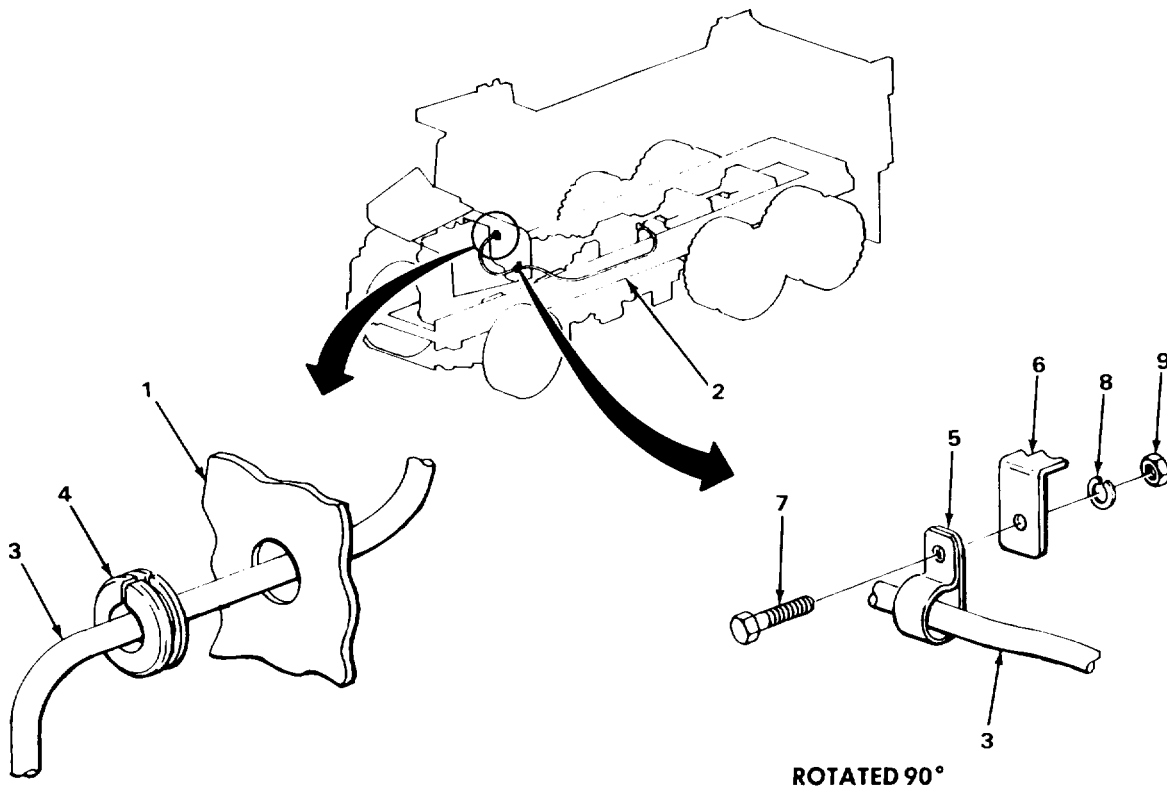


SPEEDOMETER DRIVE CABLE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION - CONTINUED

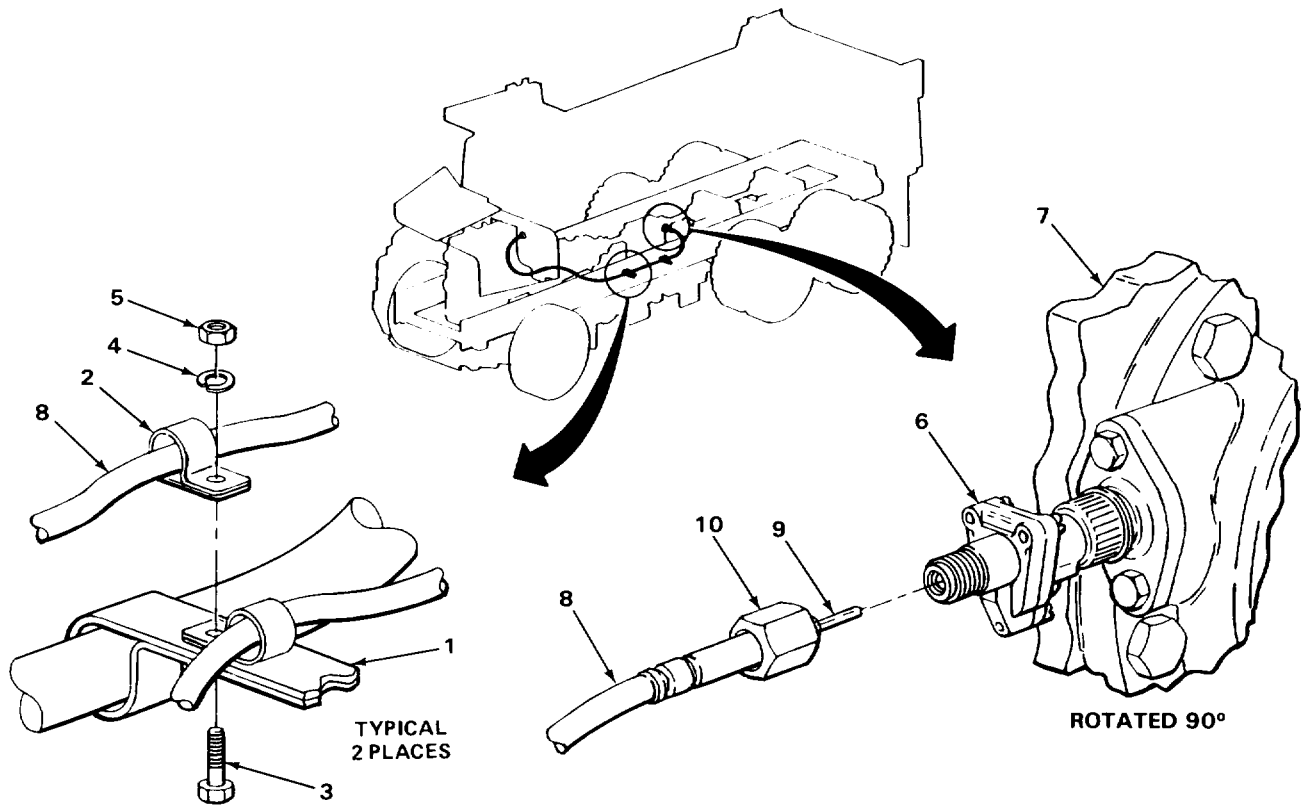
- | | | | |
|----|---|--|--|
| 20 | Engine side of firewall (1) and left frame rail (2) | Speedometer drive cable (3) and grommet (4) | Push down. |
| 21 | Speedometer drive cable (3) | Clip (5) | Put on. |
| 22 | Extension (6) | Clip (5), screw (7), new lockwasher (8), and nut (9) | Screw in and tighten using two 7/16-inch box-end wrenches. |



- | | | | |
|-----|-----------------------------|---------------|---------|
| 23. | Speedometer drive cable (3) | Two clips (4) | Put on. |
|-----|-----------------------------|---------------|---------|

SPEEDOMETER DRIVE CABLE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
24. Extension (1)	Two clips (2), two screws (3), two new lockwashers (4), and two nuts (5)	Screw in and tighten using two 7/16-inch box-end wrenches.	
25. Adapter (6) on auxiliary transmission (7)	Speedometer drive cable (8)	Put in. Align square end of drive tip (9) with square hole of adapter.	
26. Cable retainer nut (10)	Holding adapter, screw on and tighten using 1-inch open-end wrench.		



NOTE

FOLLOW-ON MAINTENANCE:

1. Close lower center instrument panel (page 2-424).
2. Close left side cab door (page 2-424).
3. Close left side hood panel (page 2-424).
4. Install air cleaner housing panel (page 2-452).

TASK ENDS HERE

TACHOMETER DRIVE CABLE

This task covers:

- a. Removal (page 2-1420)
 - b. Inspection/Replacement (page 2-1422)
 - c. Installation (page 2-1422)
 -
-

INITIAL SETUP

Tools

- Pliers, diagonal-cutting, 6-inch
- Screwdriver, cross-tip, number two
- Wrench, open-end, 3/4-inch
- Wrench, open-end, 1-inch

Materials/Parts

- Adhesive, liquid rubber (item 1, appendix C)
- Lockwasher (two required)
- Strap, tiedown (item 20, appendix C)
- Tape, pressure-sensitive (item 22, appendix C)

Personnel Required

One

Equipment Condition

- Lower center instrument panel opened (page 2-424).
 - Left side hood panel opened (page 2-424).
 - Left side cab door opened (page 2-424).
-

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

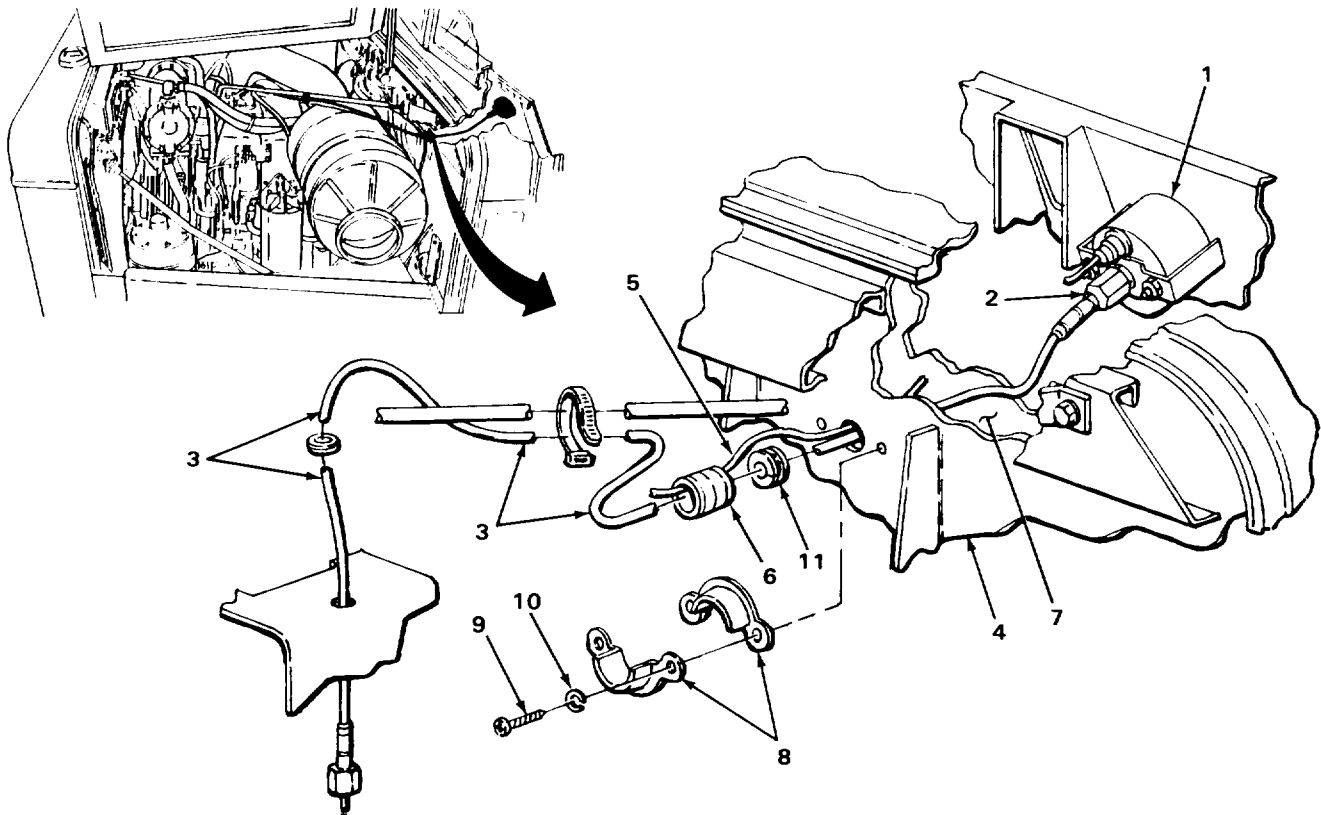
CAUTION

Use care when working behind lower center instrument panel to prevent breaking or disconnecting wires.

1	Tachometer (1) Cable retainer nut (2)	Using 3/4-inch open-end wrench, unscrew and slide back.	
2	Tachometer drive cable (3)	Pull out.	
3	Engine side of fire-wall (4), tachometer drive cable (3), and windshield wiper exhaust hose (5) Pressure-sensitive tape (6)	a Take off. b Get rid of.	

TACHOMETER DRIVE CABLE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
4 Engine side of firewall (4)	Insulation (7)	Pull back. Screws are behind Insulation.
5	Grommet retainer halves (8), two screws (9), and two lockwashers (10)	a Using number two cross-tip screw-driver, unscrew and take out. b Get rid of lockwashers.
6	Grommet (11)	Take out.
7 R	Tachometer drive	Pull through.



TA244595

TACHOMETER DRIVE CABLE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
8	Left radiator stabilizer rod (1) and tachometer drive cable (2)	Electrical tiedown strap (3)	a Using 6-inch diagonal-cutting pliers, cut off. b Get rid of strap.
9	Fuel filter bracket (4)	Grommet (5)	Take out.
10	Tachometer drive housing (6)	Cable retainer nut (7)	Using 1-inch open-end wrench, unscrew and slide back.
11		Tachometer drive cable (2)	Pull out.
12	Fuel filter bracket (4)	Tachometer drive cable (2)	Take out.

INSPECTION/REPLACEMENT**NOTE**

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

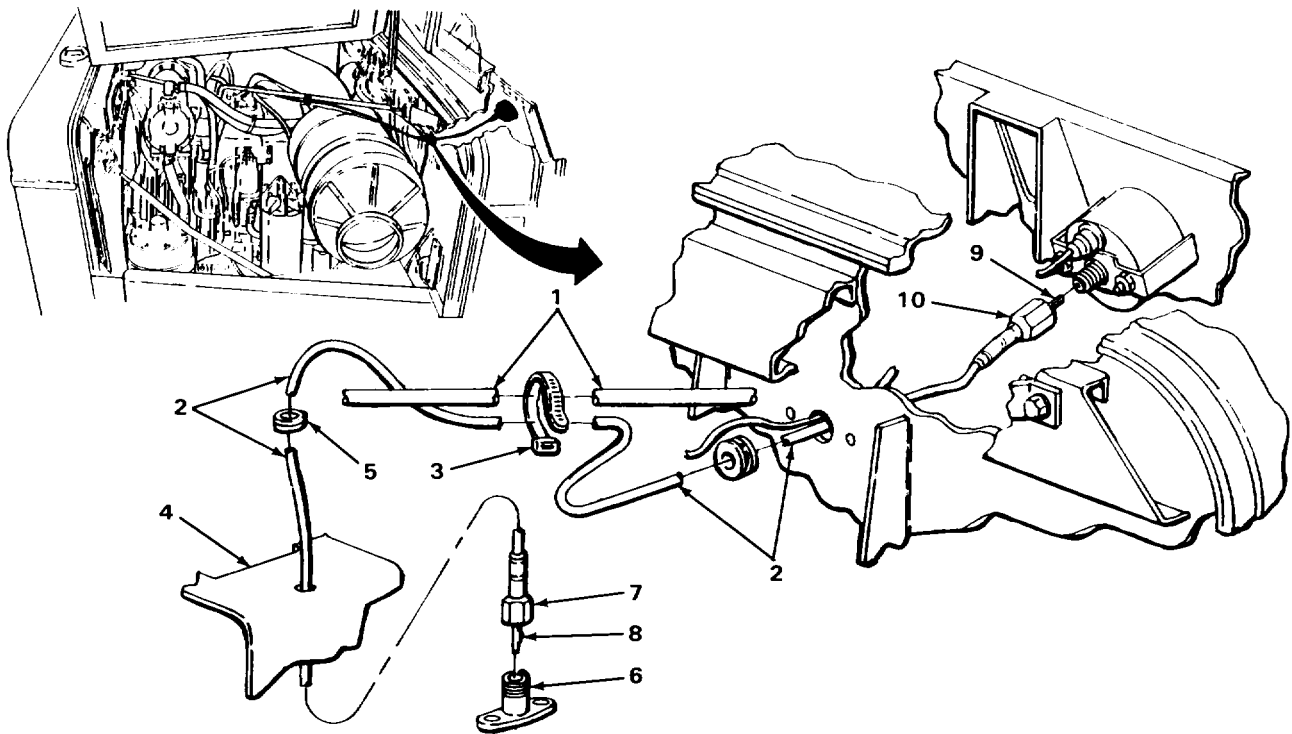
13		Tachometer drive cable (2)	Look for worn cable covering.
14		Cable drive tip ends (8 and 9)	Look for rounded drive tip ends.
15		Cable retainer nuts (7 and 10)	Look for damaged threads or rounded heads.

INSTALLATION

16	Fuel filter bracket (4)	Tachometer drive cable (2)	Put large end through grommet hole.
----	-------------------------	----------------------------	-------------------------------------

TACHOMETER DRIVE CABLE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
17 Tachometer drive housing (6)	Tachometer drive cable (2)	Put in.	Align tongue of cable drive tip end (8) with slot of tachometer drive housing.
18	Cable retainer nut (7)	Screw on and tighten using 1-inch open-end wrench.	
19 Fuel filter bracket (4) and tachometer drive cable (2)	Grommet (5)	Put in.	



TA244596

TACHOMETER DRIVE CABLE - CONTINUED

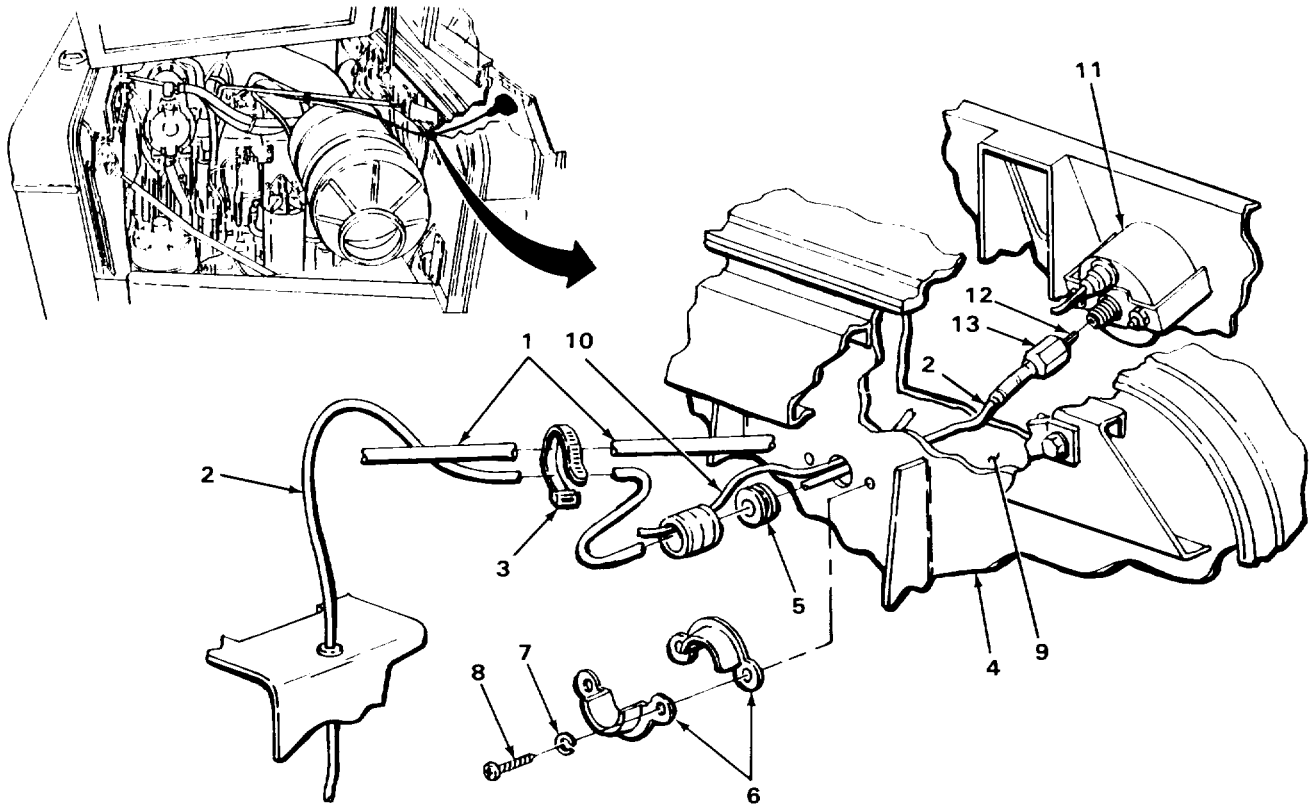
LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
20	Left radiator stabilizer rod (1) and tachometer drive cable (2)		Wrap loosely.
21	Engine side of firewall (4)		Push through tachometer drive cable hole.
22	Tachometer drive cable (2)		a Put on. b Slide into place.
23	Engine side of firewall (4)		Screw in and tighten using number two cross-tip screwdriver.
24			Insulation (9)
25			Glue into place using liquid rubber adhesive.
			Tachometer drive cable (2) and windshield wiper exhaust hose (10)
			Wrap using pressure-sensitive adhesive tape.

CAUTION

Use care when working behind lower center instrument panel to prevent breaking or disconnecting wires.

26	Tachometer (11)	Tachometer drive cable (2)	Put in. Aline square end of drive tip (12) with square hole of tachometer.
27		Cable retainer nut (13)	Screw on and tighten using 3/4-inch open-end wrench.

TACHOMETER DRIVE CABLE - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE:

1. Close left side hood panel (page 2-424).
2. Close lower center instrument panel (page 2-424).
3. Close left side cab door (page 2-424).

TASK ENDS HERE

ENGINE OIL PRESSURE GAGE

This task covers:

- a Removal (page 2-1426)
 - b Inspection/Replacement (page 2-1427)
 - c Installation (page 2-1428)
-

INITIAL SETUP

Tools

Wrench, open-end, 3/8-inch
 Wrench, open-end, 9/16-inch
 (two required)

Materials/Parts

Lockwasher (two required)

Personnel Required

One

Equipment Condition

Upper center instrument panel opened
 (page 2-424).
 Left side cab door opened (page 2-424).

LOCATION	ITEM	ACTION	REMARKS
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CAUTION

Use care when working behind upper center instrument panel to prevent breaking or disconnecting wires.

1	Gage (1)	Light socket (2)	Pull out.
2	Adapter (3)	Line (4)	Using two 9/16-inch open-end wrenches, unscrew and take off.
3	Gage (1)	Adapter (3)	Using 9/16-inch open-end wrench, unscrew and take out.
4		Two nuts (5) and two lockwashers (6)	a Hold gage. b Using 3/8-inch open-end wrench, unscrew and take out. c Get rid of lockwashers.
5		Mounting bracket (7)	Take off.
6	Upper center instrument panel (8)	Gage (1)	Take out.

ENGINE OIL PRESSURE GAGE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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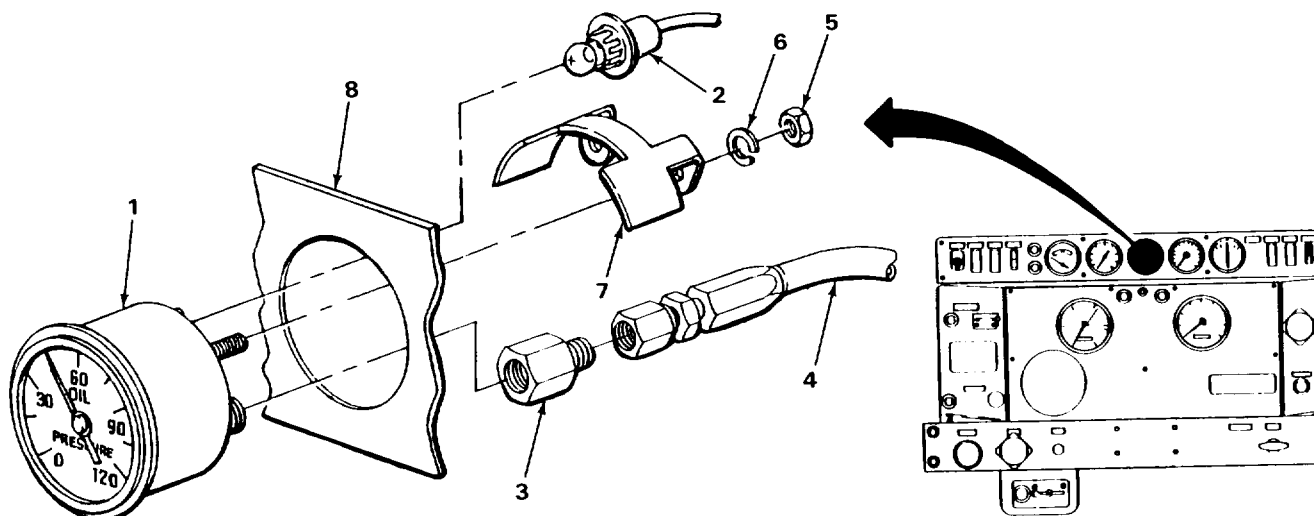
INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

- | | | |
|----|----------------------|--|
| 7. | Gage (1) | a. Look for cracks, dents, or damaged threads.
b. Check to see if gage is readable. |
| 8. | Mounting bracket (7) | Look for cracks, bends, or breaks. |
| 9. | All threaded parts | Look for damaged threads or rounded |



TA244598

ENGINE OIL PRESSURE GAGE - CONTINUED

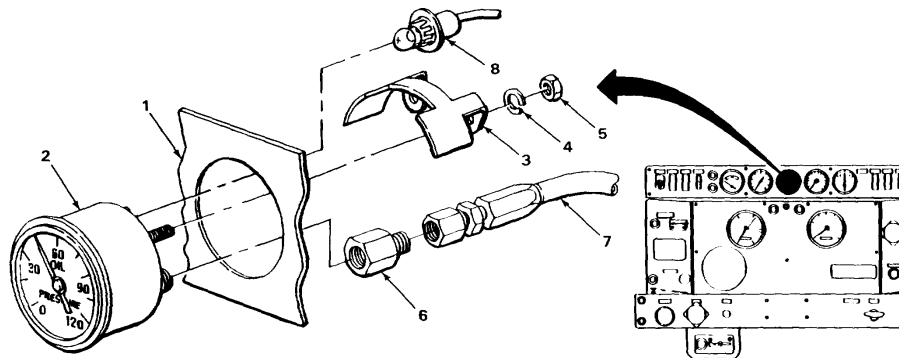
LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION

CAUTION

Use care when working behind upper center instrument panel to prevent breaking or disconnecting wires.

10. Upper center instrument panel (1)	Gage (2)	Put in and hold. Position as shown.
11. Gage (2)	Mounting bracket (3)	Put on.
12. Mounting bracket (3)	Two new lockwashers (4) and two nuts (5)	Screw on and tighten using 3/8-inch open-end wrench.
13. Gage (2)	Adapter (6)	Screw on and tighten using 9/16-inch open-end wrench.
14. Adapter (6)	Line (7)	Screw on and tighten using two 9/16-inch open-end wrenches.
15. Gage (2)	Light socket (8)	Push in.



NOTE

FOLLOW-ON MAINTENANCE:

1. Close upper center instrument panel (page 2-424).
2. Close left side cab door (page 2-424).

TASK ENDS HERE

TA244599

ENGINE OIL PRESSURE GAGE LINE AND FIT

This task covers:

- | | |
|------------------------------|---|
| a. Removal (page 2-1430) | d. Inspection/Replacement (page 2-1438) |
| b. Disassembly (page 2-1436) | e. Assembly (page 2-1439) |
| c. Cleaning (page 2-1438) | f. Installation (page 2-1440) |
-

INITIAL SETUP**Tools**

Extension, 10-inch, 1/2-inch drive
 Goggles, safety
 Gun, blow, air
 Handle, ratchet, 1/2-inch drive
 Hose, air, assembly
 Pliers, diagonal-cutting, 6-inch
 Screwdriver, flat-tip, 3/16-inch
 Socket, deep, 1 1/8-inch, 1/2-inch drive
 Wrench, open-end, 7/16-inch (two required)
 Wrench, open-end, 1/2-inch
 Wrench, open-end, 9/16-inch (two required)
 Wrench, open-end, 3/4-inch
 Wrench, open-end, 1-inch
 Wrench, open-end, 1 1/8-inch

Materials/Parts

Detergent, liquid, GP (item 7, appendix C)
 Lockwasher
 Strap, tiedown (item 20, appendix C)
 Tags, marker (item 21, appendix C)
 Tape, antiseizing (item 22, appendix C)

Personnel Required

Two

Equipment Condition

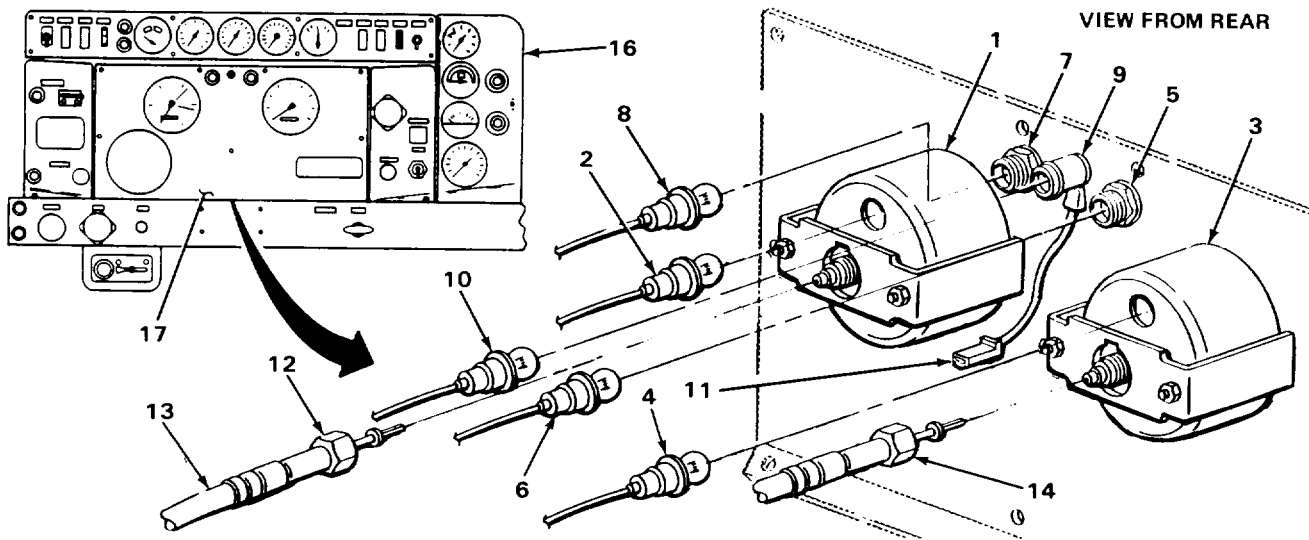
Left side cab door opened (page 2-424).
 Air cleaner housing removed (page 2-452).
 Upper center instrument panel opened (page 2-424).
 Lower center instrument panel opened (page 2-424).

ENGINE OIL PRESSURE GAGE LINE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
CAUTION			
Use care when working behind instrument panel to prevent breaking or disconnecting wires.			
NOTE			
Tag all light sockets, wires, lines and cables before removing, for correct identification when installing.			
For more information on how to tag parts, go to General Maintenance Instructions.			
1. Speedometer (1)	Light socket (2)	a. Tag. b. Pull out.	
2. Tachometer (3)	Light socket (4)	a. Tag. b. Pull out.	
3. Left directional indicator (5)	Light socket (6)	a. Tag. b. Pull out.	
4. Right directional indicator (7)	Light socket (8)	a. Tag. b. Pull out.	
5. High beam indicator (9)	Light socket (10)	a. Tag. b. Pull out.	
6.	Ground wire (11)	a. Tag. b. Pull out.	
7. Speedometer (1)	Cable retainer nut (12)	a. Tag. b. Using 3/4-inch open-end wrench, unscrew and slide back.	

ENGINE OIL PRESSURE GAGE LINE AND FITTINGS - CONTINUED

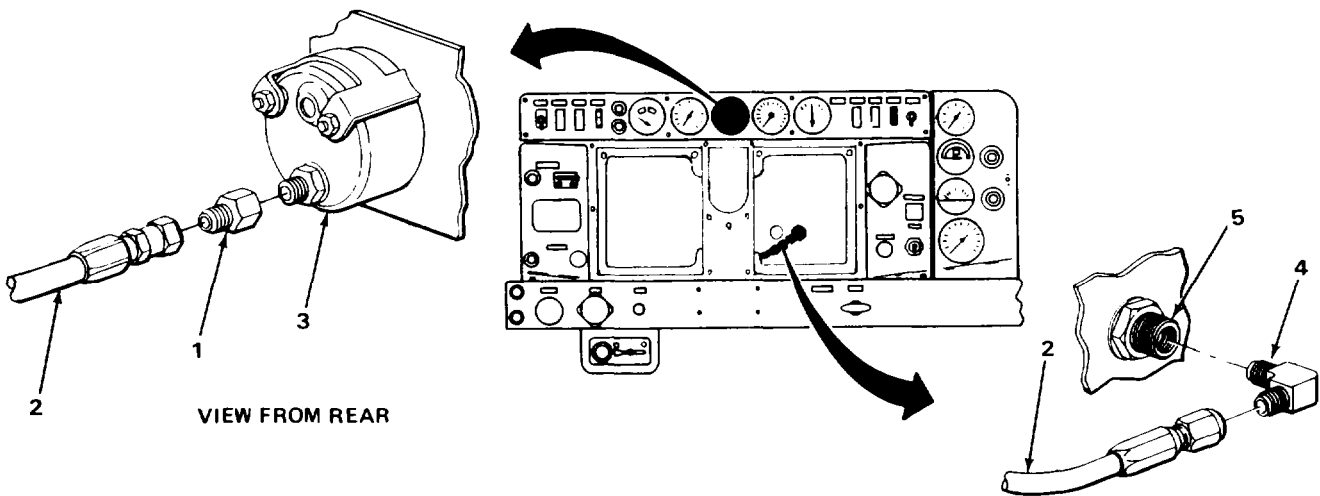
LOCATION	ITEM	ACTION	REMARKS
8. Speedometer (1)	Speedometer drive cable (13)	Pull out.	
9. Tachometer (3)	Cable retainer nut (14)	a. Tag. b. Using 3/4-inch open-end wrench, unscrew and slide back.	
10.	Tachometer drive cable (15)	Pull out.	
11. Instrument panel (16)	Lower center instrument panel (17)	Take out.	



TA244601

ENGINE OIL PRESSURE GAGE LINE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
12. Adapter (1)	Line (2)	a. Tag. b. Using two 9/16-inch open-end wrenches, unscrew and take off.	
13. Gage (3)	Adapter (1)	Using 9/16-inch open-end wrench, unscrew and take off.	
14. 90-degree elbow (4)	Line (2)	Using 1/2-inch and 9/16-inch open-end wrenches, unscrew and take off.	
15. Bulkhead fitting (5)	90-degree elbow (4)	Using 1/2-inch open-end wrench, unscrew and take out.	

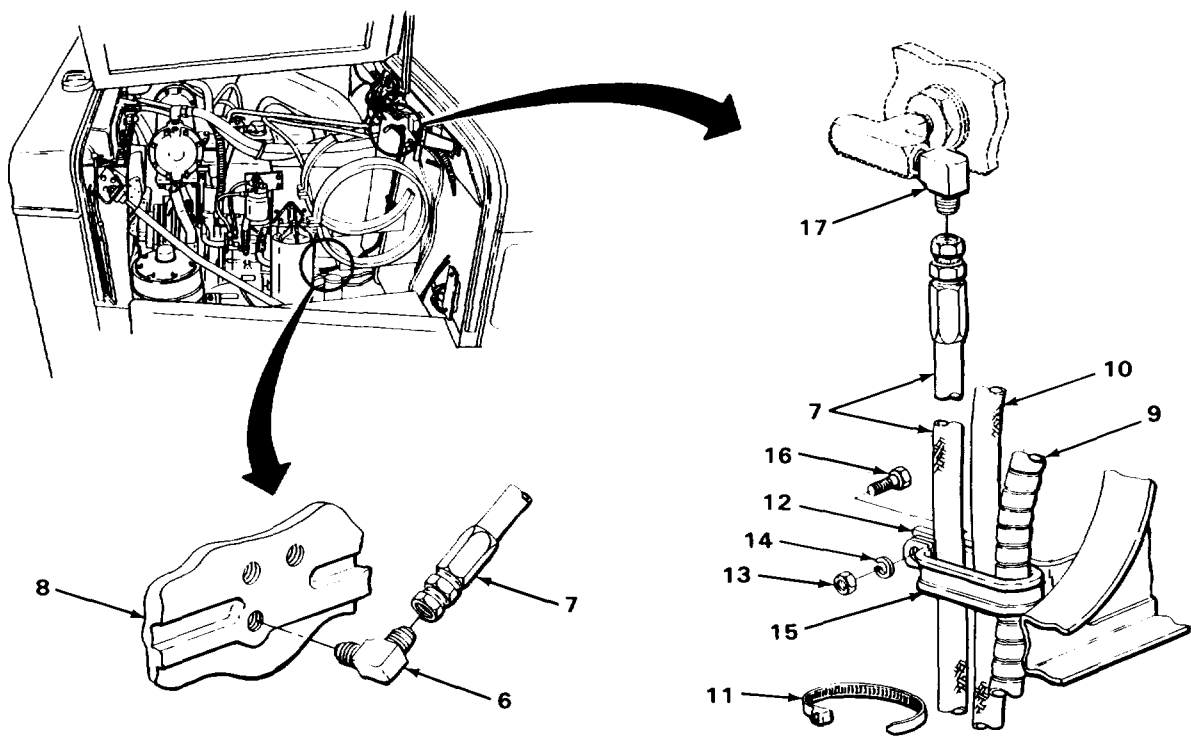


16. 90-degree elbow (6)	Line (7)	a. Tag. b. Using 1/2-inch and 9/16-inch open-end wrenches, unscrew and take off.	
17. Lower left side of cylinder block (8)	90-degree elbow (6)	Using 1/2-inch open-end wrench, unscrew and take out.	

TA244602

ENGINE OIL PRESSURE GAGE LINE AND FITTINGS - CONTINUED

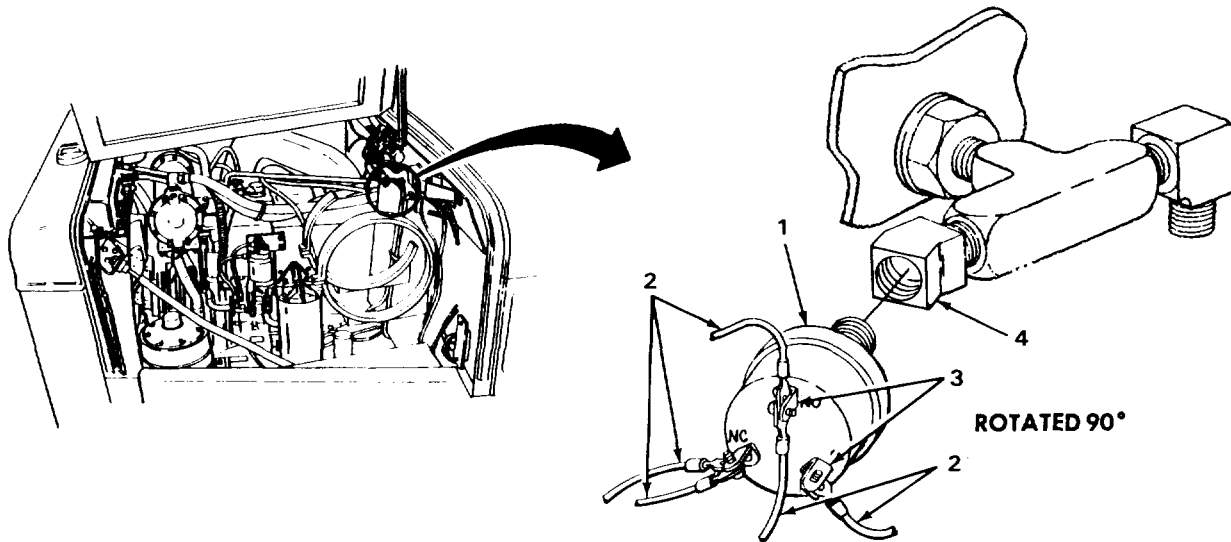
LOCATION	ITEM	ACTION REMARKS
18. Airhose (9), fuel hose (10), and line (7)	Electrical tiedown strap (11)	a. Using 6-inch diagonal-cutting pliers, cut and take off. b. Get rid of strap.
19. Bracket (12)	Nut (13), lockwasher (14), clamp (15), and screw (16)	a. Using two 7/16-inch open-end wrenches, unscrew and take out. b. Get rid of lockwasher.
20. 90-degree elbow (17)	Line (7)	Using 1/2-inch and 9/16-inch open-end wrenches, unscrew and take off.



TA244603

ENGINE OIL PRESSURE GAGE LINE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
21. Oil pressure switch (1)	Five wires (2) and three screws (3)	a. Tag wires. b. Using 3/16-inch flat-tip screwdriver, loosen screws. Do not take out screws. c. Take off wires.	
22. 45-degree elbow (4)	Oil pressure switch (1)	Using 7/16-inch open-end wrench, unscrew and take out.	



NOTE

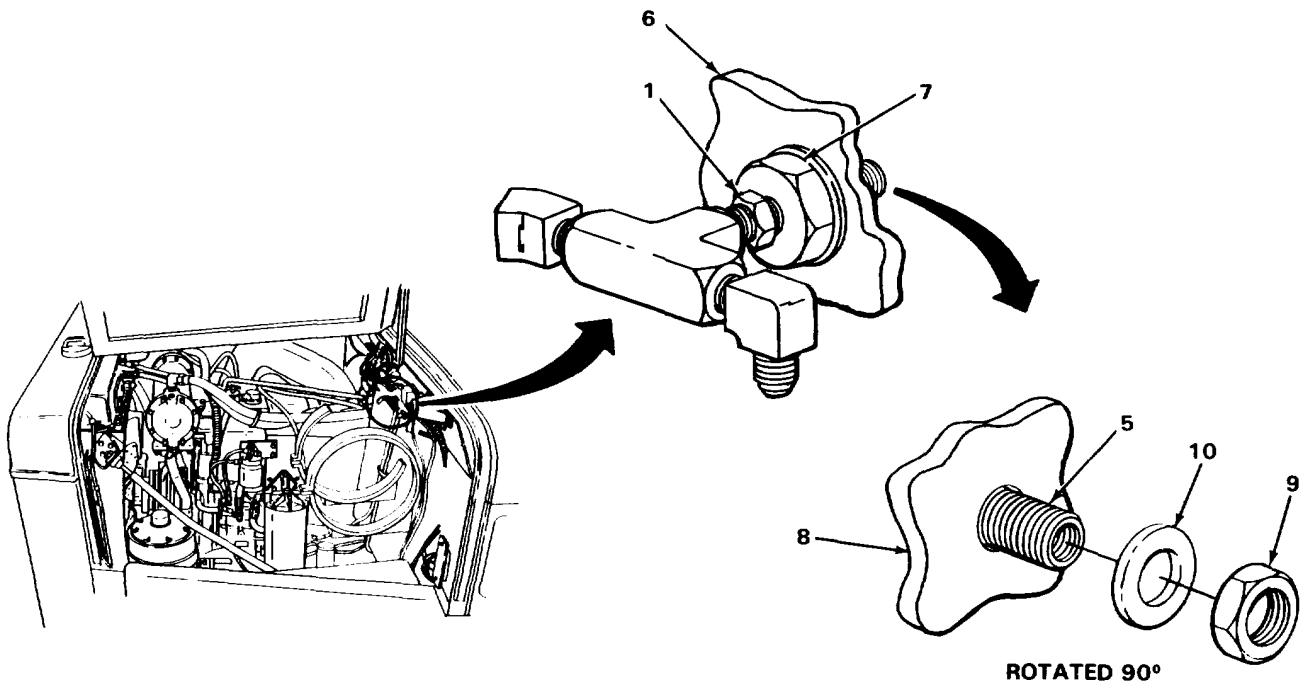
Assistance will be required to perform steps 23 and 24.

23. Bulkhead fitting (5) engine side of firewall (6)	Nut (7)	Using 1-inch open-end wrench, hold nut from turning.
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TA244604

ENGINE OIL PRESSURE GAGE LINE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
24. Bulkhead fitting (5) and driver's side of firewall (8)	Nut (9) and flat washer (10)	Using 1/2-inch drive, 1 118-inch deep socket, 10-inch extension, and ratchet handle, unscrew and take off.



TA244605

ENGINE OIL PRESSURE GAGE LINE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL - CONTINUED

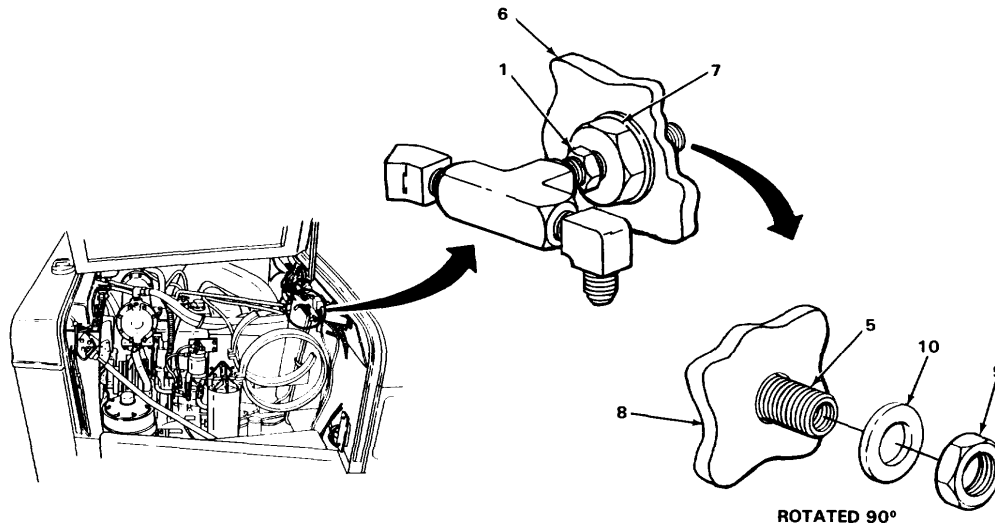
CAUTION

Use care when removing fittings and flat washer, to prevent damage.

NOTE

Before removing fittings and flat washer, make sure to note location and position of 45 and 90-degree elbows, for correct assembly.

- | | | |
|---------------------------------|--|--|
| 25. Engine side of firewall (1) | 45-degree elbow (2), T-fitting (3), 90-degree elbow (4), straight pipe fitting (5), large nut (6), and flat washer (7) | a. Take out.
b. Take off flat washer. |
|---------------------------------|--|--|

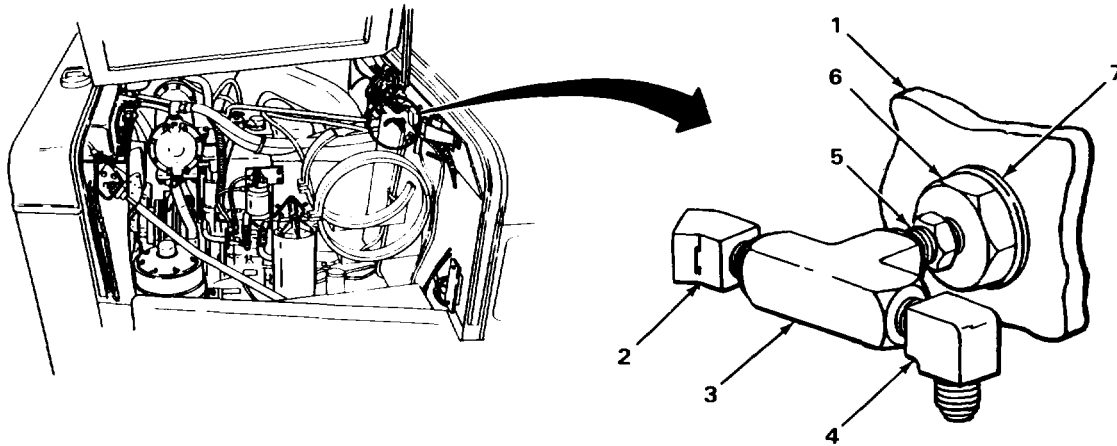


DISASSEMBLY

- | | | |
|-------------------------------|---------------------------------|--|
| 26. T-fitting (3) | 45-degree elbow (2) | Using two 9/16-inch open-end wrenches, unscrew and take out. |
| 27. | 90-degree elbow (4) | Using 1/2-inch and 9/16-inch open-end wrenches, unscrew and take out. |
| 28. Straight pipe fitting (5) | T-fitting (3) | Using 7/16-inch and 9/16-inch open-end wrenches, unscrew and take off. |
| 29. Bulkhead fitting (7) | Small nut (8) and large nut (6) | Using 1-inch and 1 1/8-inch open-end wrenches, screw on and tighten. |

ENGINE OIL PRESSURE GAGE LINE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
30. Bulkhead fitting (7)	Straight pipe fitting (5)	Using 7/16-inch and 1-inch open-end wrenches, unscrew and take out.
31.	Small nut (8) and large nut (6)	Using 1-inch and 1 1/8-inch open-end wrenches, unscrew and take off.



TA244607

2-1437

ENGINE OIL PRESSURE GAGE LINE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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CLEANING

WARNING

Improper cleaning methods and use of unauthorized cleaning liquids or solvents can injure personnel and cause damage to equipment. Refer to TM 9-247.

NOTE

All lines and fittings must be cleaned thoroughly.

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

- | | | | |
|-----|-----------|--|---|
| 32. | All parts | | Using liquid detergent and water, clean thoroughly. |
|-----|-----------|--|---|

WARNING

Particles blown by compressed air are hazardous. Make certain the airstream is directed away from user and other personnel in the area. Compressed air used for cleaning purposes shall not exceed 30 psi (207 kPa). User must wear safety goggles or face shield to prevent injury to personnel.

- | | | | |
|-----|-----------|--|---|
| 33. | All parts | | Using air blow gun and air hose assembly, blow dry. |
|-----|-----------|--|---|

INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

- | | | | |
|-----------------------------|--------------------|--|---|
| 34. | Lines (1) | | Look for cracks, gouges, or worn line covering. |
| 35. | All threaded parts | | Look for damaged threads or rounded heads. |
| 36. Lines (1) and elbow (9) | Flare seats | | Look for cracks, bends, or dents. |

ENGINE OIL PRESSURE GAGE LINE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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ASSEMBLY

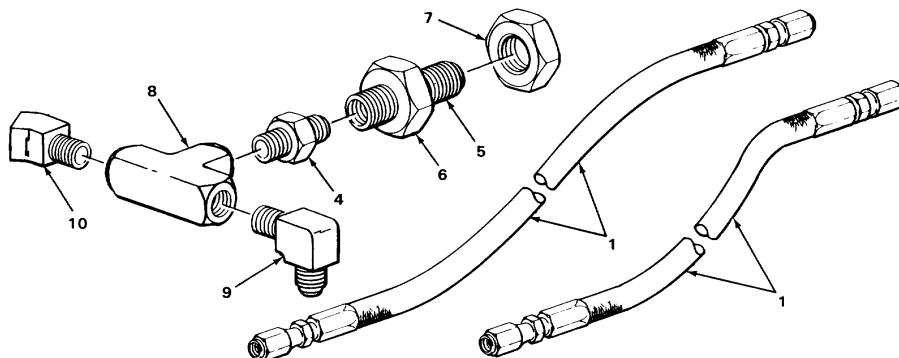
CAUTION

Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.

NOTE

For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).

- | | | |
|-----|--|---|
| 37. | Straight pipe fitting (4) | Wrap pipe threads with antiseizing tape. |
| 38. | Bulkhead fitting (5)
Small nut (6)
and large nut (7) | Screw on and tighten using 1-inch and 1 1/8-inch open-end wrenches. |
| 39. | Straight pipe fitting (4) | Screw in and tighten using 7/16-inch and 1-inch open-end wrenches. |
| 40. | Large nut (7) | Unscrew and take off using 1-inch and 1 1/8-inch open-end wrenches. |
| 41. | Straight pipe fitting (4)
T-fitting (8) | Screw on and tighten using 7/16-inch and 9/16-inch open-end wrenches. |
| 42. | 90-degree elbow (9)
and 45-degree elbow (10) | Wrap pipe threads with antiseizing tape. |



TA244608

ENGINE OIL PRESSURE GAGE LINE AND FITTINGS - CONTINUED

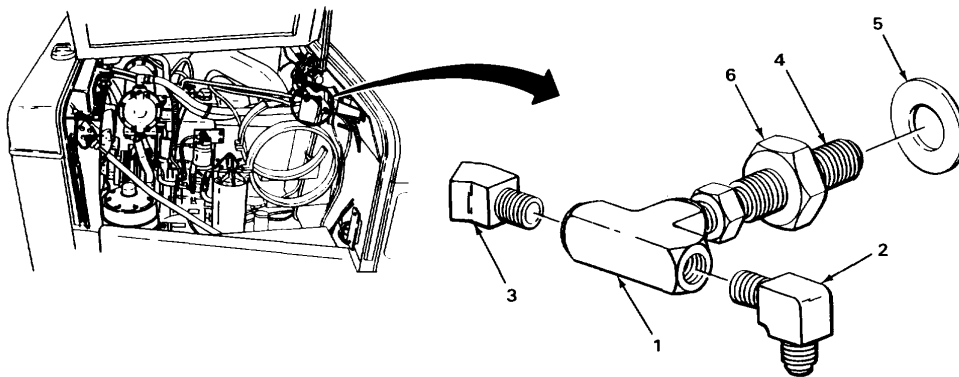
LOCATION	ITEM	ACTION	REMARKS
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ASSEMBLY - CONTINUED

NOTE

Make sure 45 and 90-degree elbows are assembled in same position and location as noted in removal.

- | | | |
|--------------------------|---------------------|---|
| 43. T-fitting (1) | 90-degree elbow (2) | Screw in and tighten using 1/2-inch and 9/16-inch open-end wrenches. |
| 44. | 45-degree elbow (3) | Screw in and tighten using two 9/16-inch open-end wrenches. |
| 45. Bulkhead fitting (4) | Flat washer (5) | Put on. |
| 46. | Small nut (6) | Turn small nut until a few threads can be seen on T-fitting side of bulkhead. |



INSTALLATION

- | | | |
|---------------------------------|--|---------------------------------|
| 47. Engine side of firewall (7) | Bulkhead fitting (4), small nut (6), flat washer (5), straight pipe fitting (8), T-fitting (1), 45-degree elbow (3), and 90-degree elbow (2) | Put into bulkhead fitting hole. |
|---------------------------------|--|---------------------------------|

TA244609

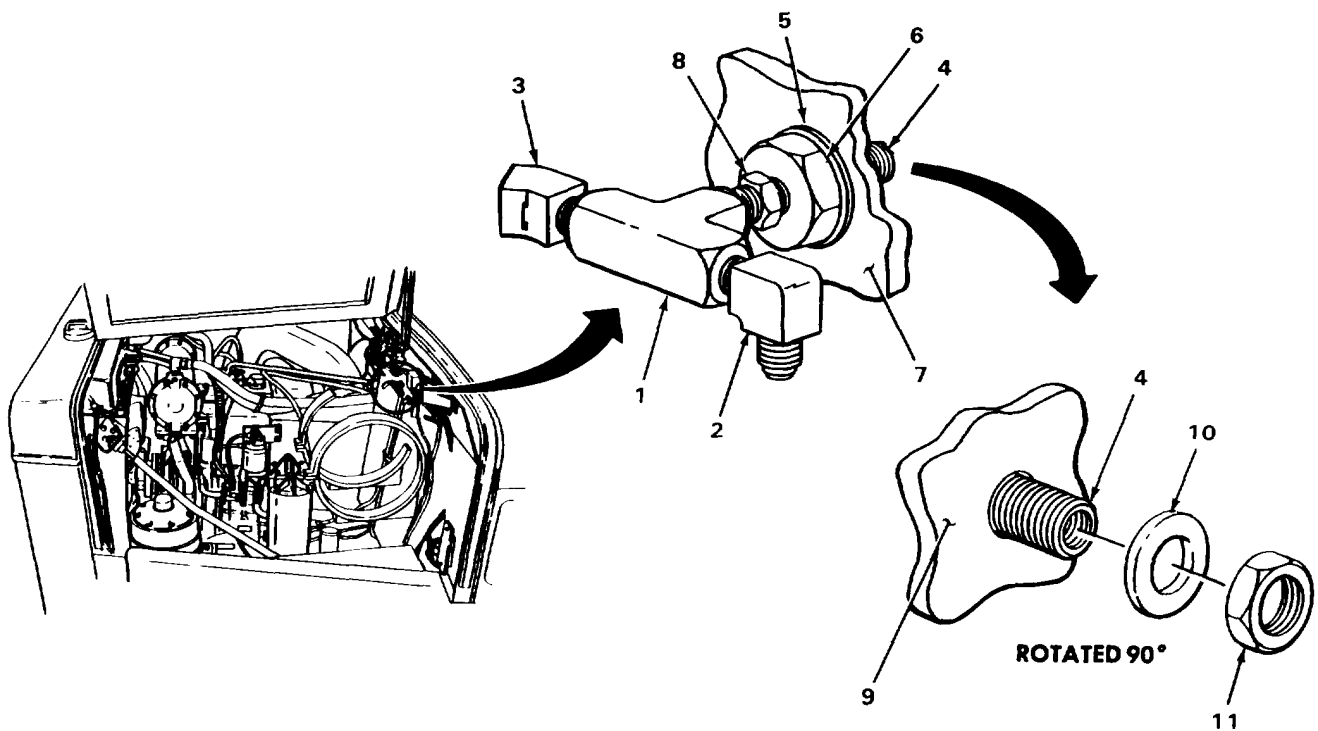
ENGINE OIL PRESSURE GAGE LINE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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NOTE

Assistance will be required to perform steps 48, 49, and 50.

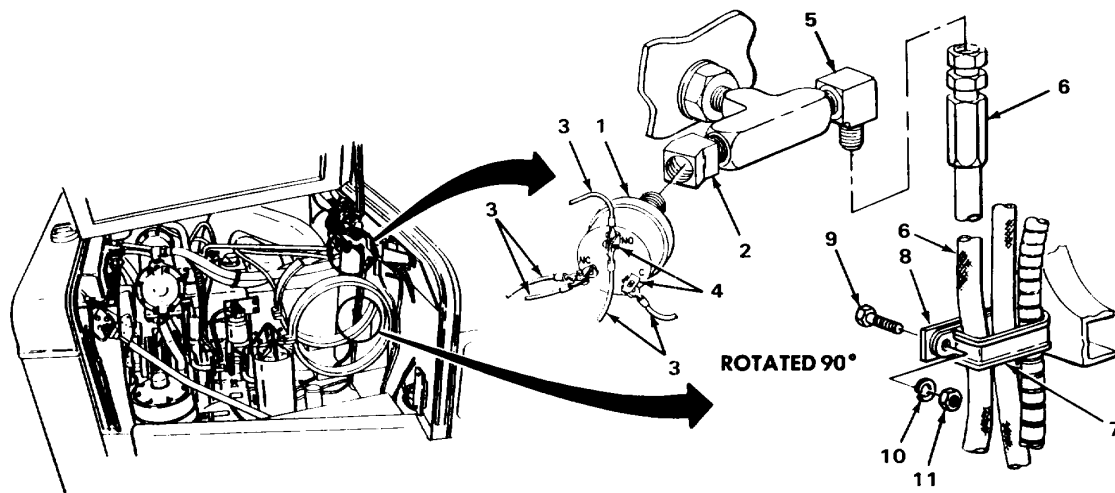
- | | | |
|--|------------------|--|
| 48. Engine side of firewall (7) | Small nut (6) | Hold nut from turning using 1-inch open-end wrench. |
| 49. Driver's side of firewall (9) and bulkhead fitting (4) | Flat washer (10) | Put on. |
| 50. | Large nut (11) | Screw on and tighten using 1/2-inch drive, 1 1/8-inch deep socket, 10-inch extension and ratchet handle. |



TA244610

ENGINE OIL PRESSURE GAGE LINE AND FITTINGS - CONTINUED

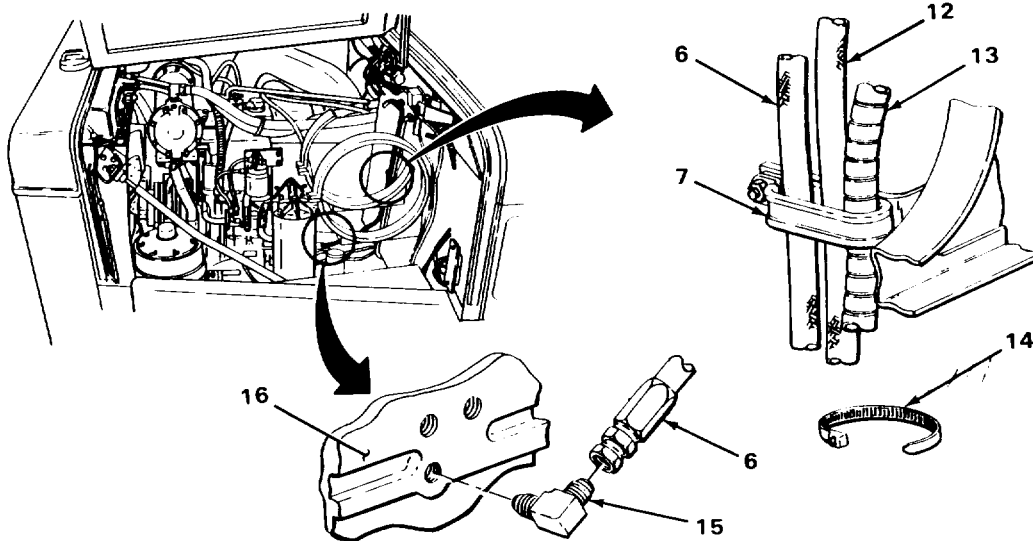
LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
51.	Oil pressure switch (1)	Wrap pipe threads with antiseizing tape (page 2-424).	
52.	45-degree elbow (2)	Screw in and tighten using 7/16-inch open-end wrench.	
53.	Oil pressure switch (1)	Put wires under correct screw heads.	
54.	Three screws (4)	a. Screw in and tighten using 3/16-inch flat-tip screwdriver. b. Get rid of tags.	
55.	90-degree elbow (5)	Screw on and tighten using 11/2-inch and 9/16-inch open-end wrenches.	
56.	Clamp (7)	a. Put in. b. Close clamp (7).	
57.	Bracket (8)	Screw in and tighten using two 7/16-inch open-end wrenches.	



TA244611

ENGINE OIL PRESSURE GAGE LINE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
58. Line (6), fuel hose (12), and airhose (13)	New electrical tie-down strap (14)	Wrap.
59.	90-degree elbow (15)	Wrap pipe threads with antiseizing tape (page 2-424).
60. Lower left side of cylinder block (16)	90-degree elbow (15)	Screw in and tighten using 1/2-inch open-end wrench.
61. 90-degree elbow (15)	Line (6)	a. Screw on and tighten using 1/2-inch and 9/16-inch open-end wrenches. b. Get rid of tone



TA244612

ENGINE OIL PRESSURE GAGE LINE AND FITTINGS - CONTINUED

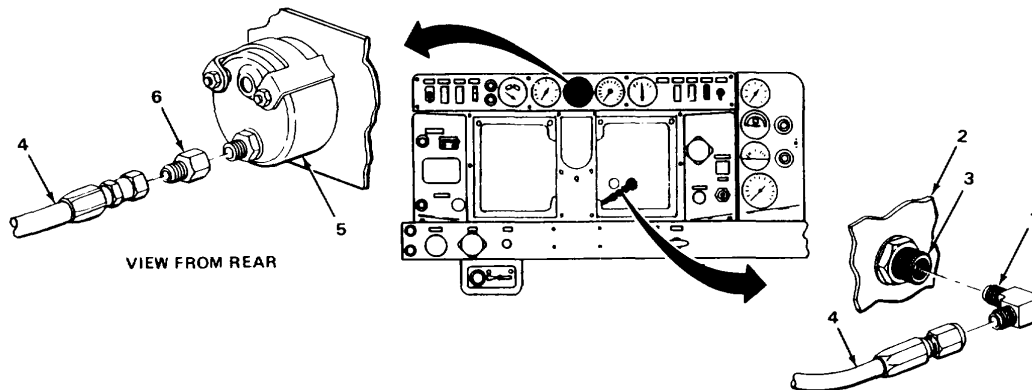
LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION - CONTINUED

CAUTION

Use care when working behind instrument panel to prevent breaking or disconnecting wires.

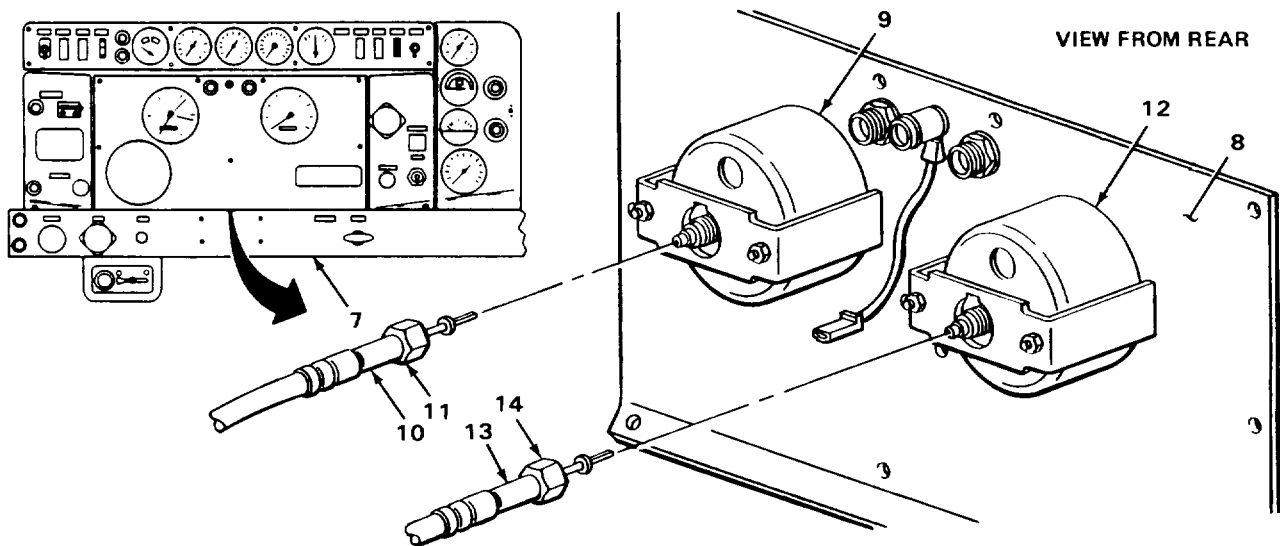
- | | | | |
|-----|--|--|--|
| 62. | 90-degree elbow (1) | Wrap pipe threads with antiseizing tape. | |
| 63. | Driver's side of firewall (2) and bulkhead fitting (3) | 90-degree elbow (1) end wrench. | Screw in and tighten using 1/2-inch open- |
| 64. | 90-degree elbow (1) | Line (4) | Screw on and tighten using 1/2-inch and 9/16-inch open-end wrenches. |
| 65. | Gage (5) | Adapter (6) | Screw on and tighten using 9/16-inch open-end wrench. |
| 66. | Adapter (6) | Line (4) | a. Screw on and tighten using two 9/16-inch open-end wrenches.
b. Get rid of tag. |



TA244613

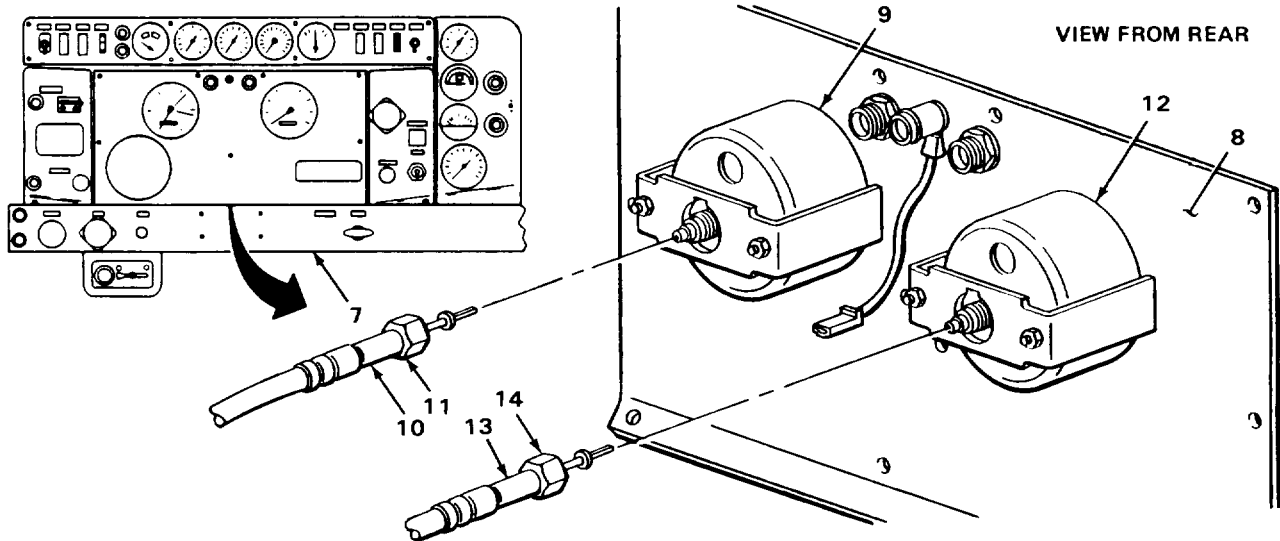
ENGINE OIL PRESSURE GAGE LINE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
67. Instrument panel (7)	Lower center instrument panel (8)	Put in.
68. Tachometer (9)	Tachometer drive cable (10)	Put in. Aline square end of drive tip with square hole in tachometer.
69.	Cable retainer nut (11)	Screw on and tighten using 3/4-inch open-end wrench.
70. Speedometer (12)	Speedometer drive cable (13)	Put in. Aline square end of drive tip with square hole in speedometer.
71.	Cable retainer nut (14)	Screw on and tighten using 3/4-inch open-end wrench.



ENGINE OIL PRESSURE GAGE LINE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
72. High beam indicator (1)	Ground wire (2)	a. Push on. b. Get rid of tag.	
73.	Light socket (3)	a. Push in. b. Get rid of tag.	
74. Right directional indicator (4)	Light socket (5)	a. Push in. b. Get rid of tag.	
75. Left directional indicator (6)	Light socket (7)	a. Push in. b. Get rid of tag.	
76. Tachometer (8)	Light socket (9)	a. Push in. b. Get rid of tag.	
77. Speedometer (10)	Light socket (11)	a. Push in. b. Get rid of tag.	



TA244615

ENGINE OIL PRESSURE GAGE LINE AND FITTINGS - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. Close upper center instrument panel (page 2-424).
2. Close lower center instrument panel (page 2-424).
3. Install air cleaner housing (page 2-452).
4. Close left side cab door (page 2-424).

TASK ENDS HERE

TRANSMISSION OIL PRESSURE GAGE

This task covers:

- | | |
|---|---|
| <ul style="list-style-type: none"> a. Removal (page 2-1447) b. Inspection/Replacement (page 2-1448) | <ul style="list-style-type: none"> c. Installation (page 2-1448) |
|---|---|
-

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>Right instrument panel opened (page 2-424). Lockwasher, gage (two required) Tape, antiseizing (item 22, appendix C)</p>	<p>Personnel Required</p> <p>One</p> <p>Equipment Condition</p> <p>Left side cab door opened (page 2-424).</p>
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2-1447

TRANSMISSION OIL PRESSURE GAGE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
<u>CAUTION</u>			
Use care when working behind instrument panel to prevent breaking or disconnecting wires.			
1.	Gage (1)	Light socket (2)	Pull out.
2.	Elbow (3)	Line (4)	Using two 9/16-inch open-end wrenches, unscrew and take off.
3.	Gage (1)	Elbow (3)	Using 9/16-inch open-end wrench, unscrew and take off.
4.		Two nuts (5) and two lockwashers (6)	a. Hold gage. b. Using 3/8-inch open-end wrench, unscrew and take off. c. Get rid of lockwashers.
5.		Mounting bracket (7)	Take off.
6.	Right instrument panel (8)	Gage (1)	Take out.

INSPECTION/REPLACEMENT**NOTE**

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

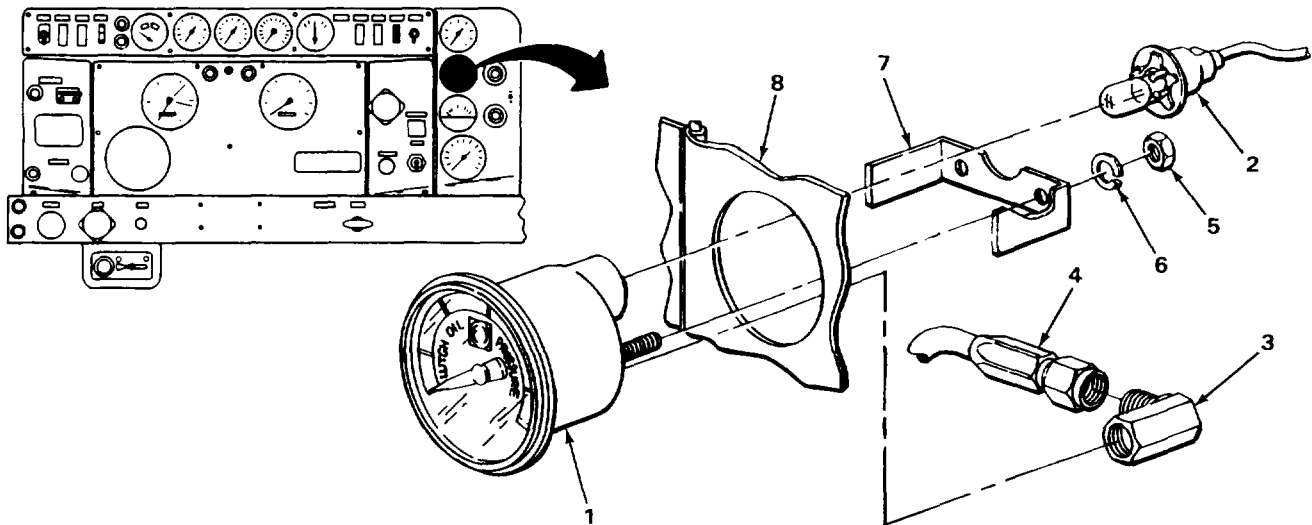
7.		Gage (1)	a. Look for cracks or dents. b. Check to see if gage is readable.
8.		Mounting bracket (7)	Look for cracks, bends, or breaks.
9.		All threaded parts	Look for damaged threads or rounded heads.

INSTALLATION

10.		Gage (1)	Wrap pipe threads with antiseizing tape (page 2-424).
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TRANSMISSION OIL PRESSURE GAGE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
11. Right instrument panel (8)	Gage (1)	Put in and hold.	Position as shown.
12. Gage (1)	Mounting bracket (7)	Put on.	
13.	Two new lockwashers (6) and two nuts (5)	Screw on and tighten using 3/8-inch open-end wrench.	
14. Gage (1)	Elbow (3)	Screw on and tighten using 9/16-inch open-end wrench.	Position as shown.
15. Elbow (3)	Line (4)	Screw on and tighten using two 9/16-inch open-end wrenches.	
16. Gage (1)	Light socket (2)	Push in.	



NOTE

FOLLOW-ON MAINTENANCE:

1. Close right instrument panel (page 2-424).
2. Close left side cab door (page 2-424).

TASK ENDS HERE

TA244616

TRANSMISSION OIL PRESSURE GAGE LINE AND FITTINGS

This task covers:

- a. Removal (page 2-1450)
 - b. Cleaning (page 2-1457)
 - c. Inspection/Replacement (page 2-1457)
 - d. Installation (page 2-1458)
-

INITIAL SETUP

Tools

Extension, 10-inch, 112-inch drive
 Goggles, safety
 Gun, blow, air
 Handle, ratchet, 112-inch drive
 Hose, air, assembly
 Screwdriver, flat-tip, 3/16-inch
 Socket, deep, 1 1/8 inch, 1/2-inch drive
 Wrench, open-end, 7/16-inch (two required)
 Wrench, open-end, 1/2-inch
 Wrench, open-end, 9/16-inch (two required)
 Wrench, open-end, 3/4-inch
 Wrench, open-end, 1-inch

Materials/Parts

Detergent, liquid, GP (item 7, appendix C)
 Tags, marker (item 21, appendix C)
 Tape, antiseizing (item 22, appendix C)
 Lockwasher, clamp (three required)

Personnel Required

Two

Equipment Condition

Left side cab door opened (page 2-424).
 Air cleaner housing removed (page 2-452).
 Upper center instrument panel opened (page 2-424).
 Lower center instrument panel opened (page 2-424).

LOCATION

ITEM

ACTION

REMARKS

REMOVAL

CAUTION

Use care when working behind lower center instrument panel to prevent breaking or disconnecting wires.

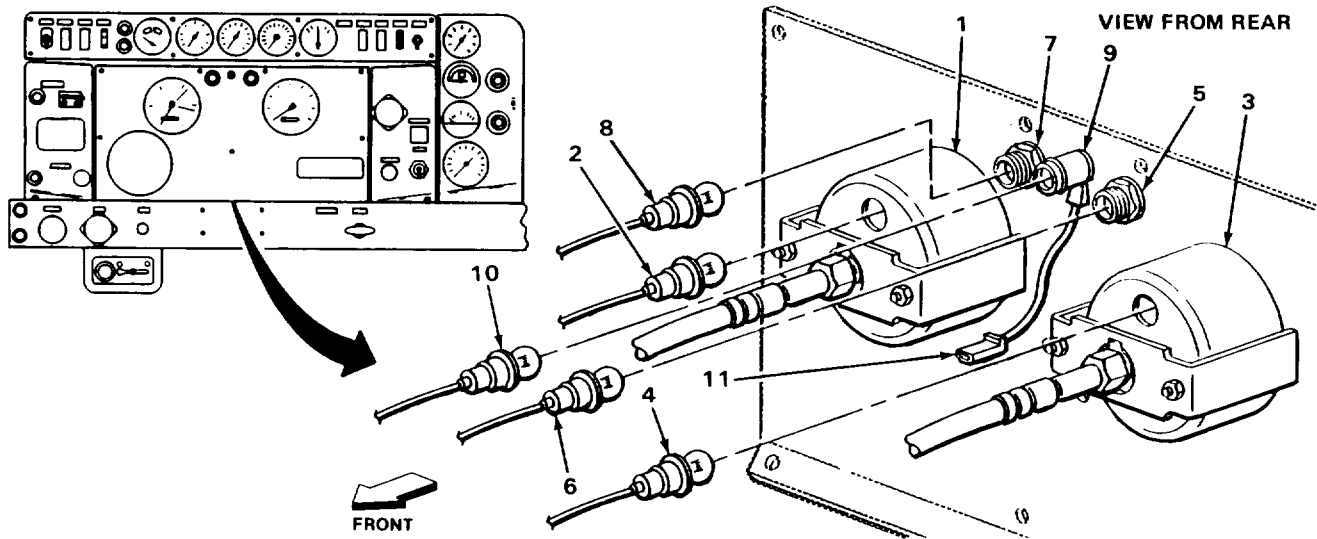
NOTE

Tag all light sockets, lines, wires, and cables before removing for correct identification when installing.

For more information on how to tag parts, go to General Maintenance Instructions (page 2-424).

TRANSMISSION OIL PRESSURE GAGE LINE AND FITTINGS - CONTINUED

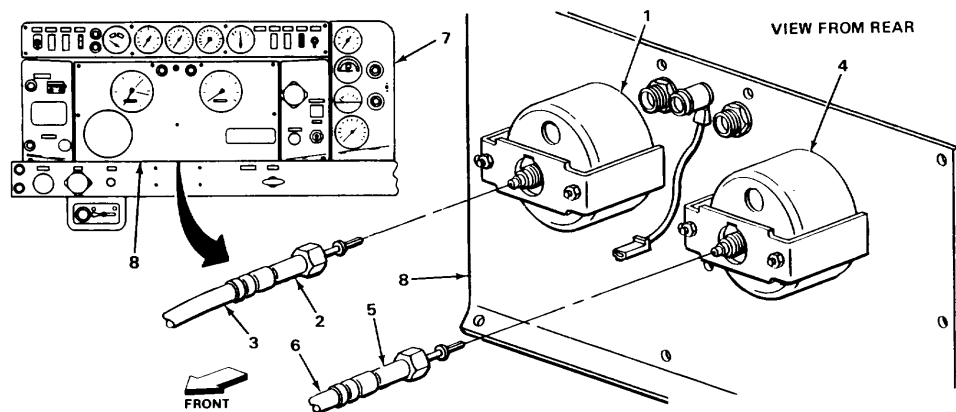
LOCATION	ITEM	ACTION	REMARKS
1. Speedometer (1)	Light socket (2)	a. Tag. b. Pull out.	
2. Tachometer (3)	Light socket (4)	a. Tag. b. Pull out.	
3. Left directional indicator (5)	Light socket (6)	a. Tag. b. Pull out.	
4. Right directional indicator (7)	Light socket (8)	a. Tag. b. Pull out.	
5. High beam indicator (9)	Light socket (10)	a. Tag. b. Pull out.	
6.	Ground wire (11)	a. Tag. b. Pull out.	



TA244617

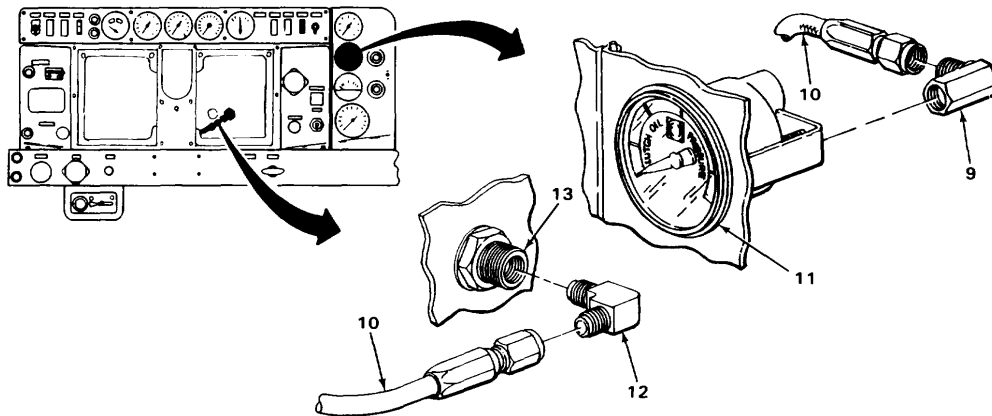
TRANSMISSION OIL PRESSURE GAGE LINE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
7. Speedometer (1)	Cable retainer nut (2)	a. Tag. b. Using 3/4-inch open-end wrench, unscrew and slide back.	
8.	Speedometer drive cable (3)	Pull out.	
9. Tachometer (4)	Cable retainer nut (5)	a. Tag. b. Using 3/4-inch open-end wrench, unscrew and slide back.	
10.	Tachometer drive cable (6)	Pull out.	
11. Instrument panel (7)	Lower center instrument panel (8)	Take out.	
12. 90-degree elbow (9)	Line (10)	a. Tag. b. Using two 9/16-inch open-end wrenches, unscrew and take off.	
13. Gage (11)	90-degree elbow (9)	Using 9/16-inch open-end wrench, unscrew and take off.	

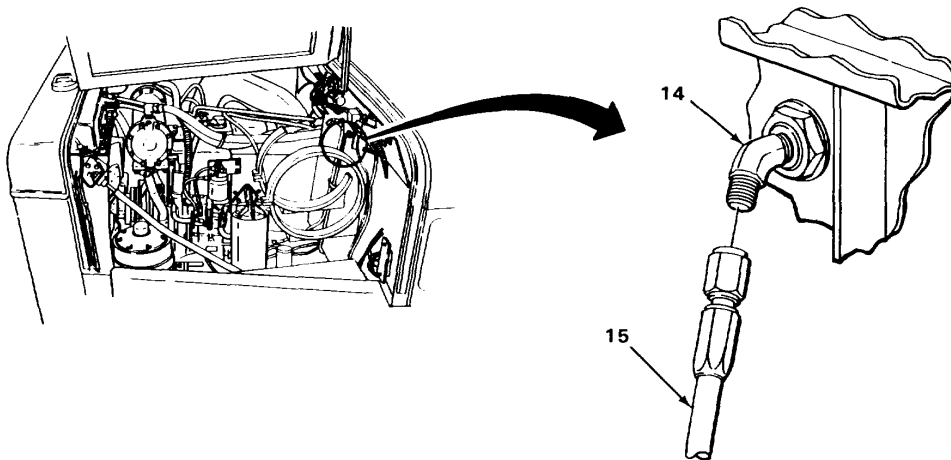


TRANSMISSION OIL PRESSURE GAGE LINE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
14. 90-degree elbow (12)	Line (10)	Using 1/2-inch and 9/16-inch open-end wrenches, unscrew and take off.	
15. Bulkhead fitting (13)	90-degree elbow (12) and take out.	Using 1/2-inch open-end wrench, unscrew	



16. 45-degree elbow(14)	Line (15)	Using 7/16-inch and 9/16-inch open-end wrenches, unscrew and take off.
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TA244619

TRANSMISSION OIL PRESSURE GAGE LINE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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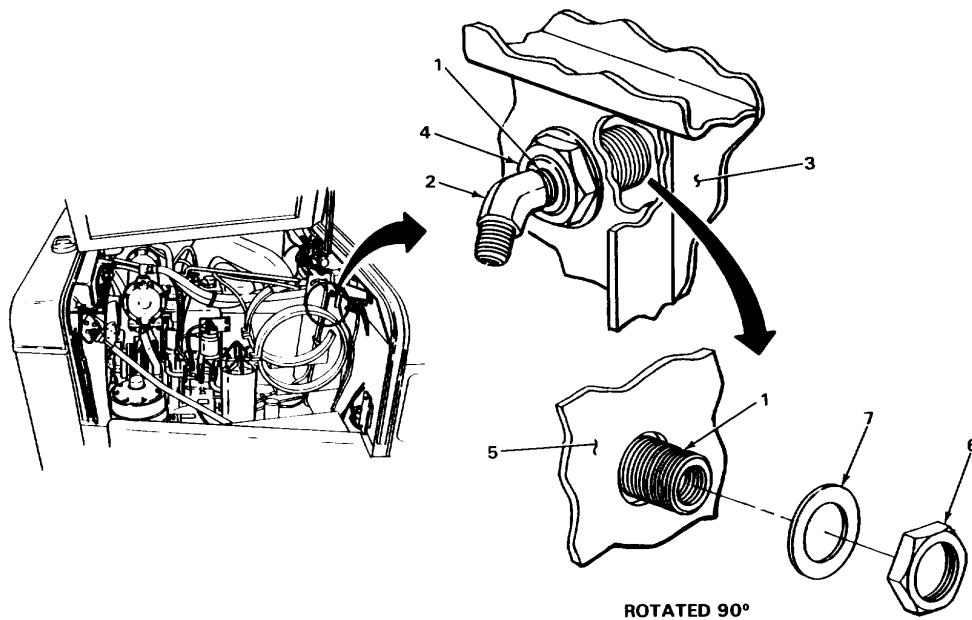
REMOVAL - CONTINUED

- | | | |
|--------------------------|---------------------|--|
| 17. Bulkhead fitting (1) | 45-degree elbow (2) | Using 7/16-inch open-end wrench, unscrew and take out. |
|--------------------------|---------------------|--|

NOTE

Assistance will be required to perform steps 18 and 19.

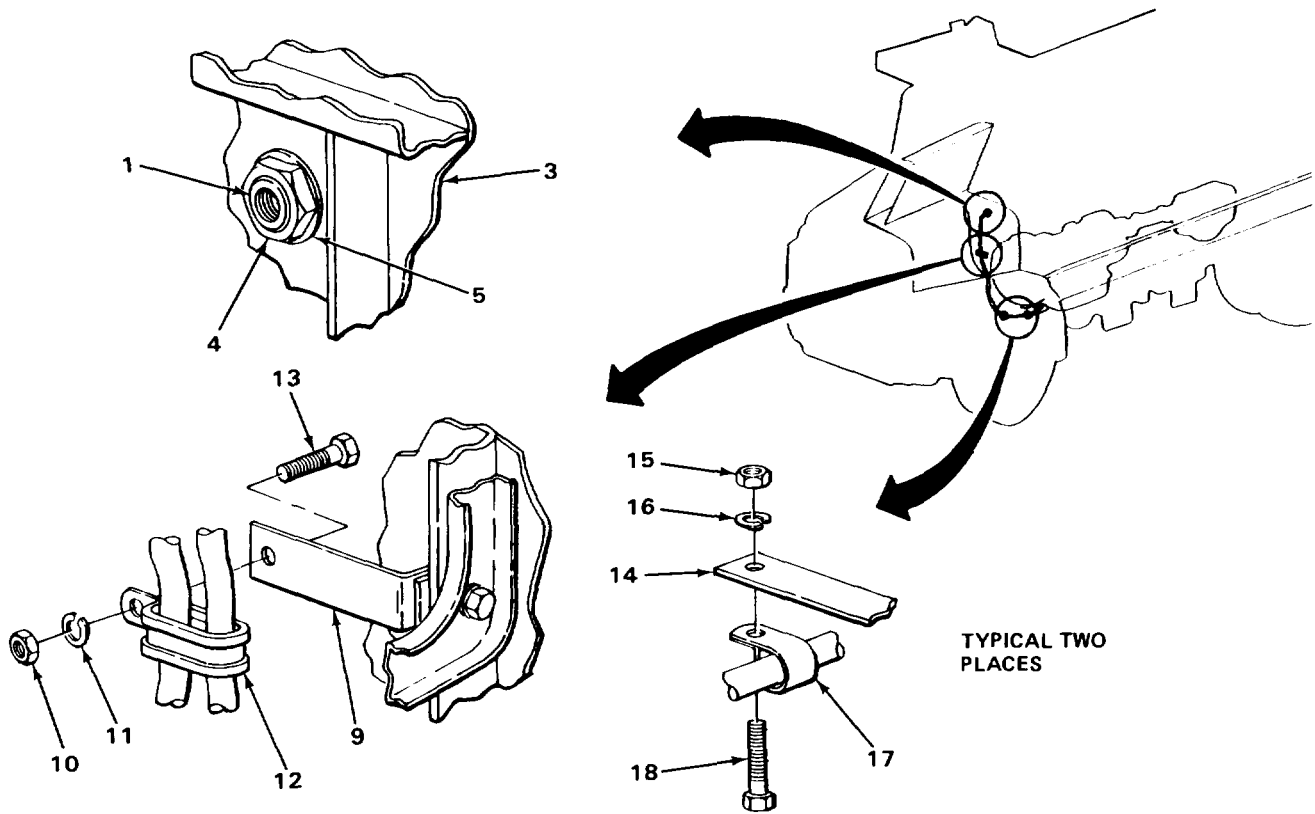
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|---|-----------------------------|--|
| 18. Bulkhead fitting (1) on engine side of firewall (3) | Nut (4) | Using 1-inch open-end wrench, hold nut from turning. |
| 19. Bulkhead fitting (1) on driver's side of | Nut (6) and flat washer (7) | Using 1/2-inch drive, 1 1/8-inch deep socket, 10-inch extension, and ratchet |



TA244620

TRANSMISSION OIL PRESSURE GAGE LINE AND FITTINGS - CONTINUED

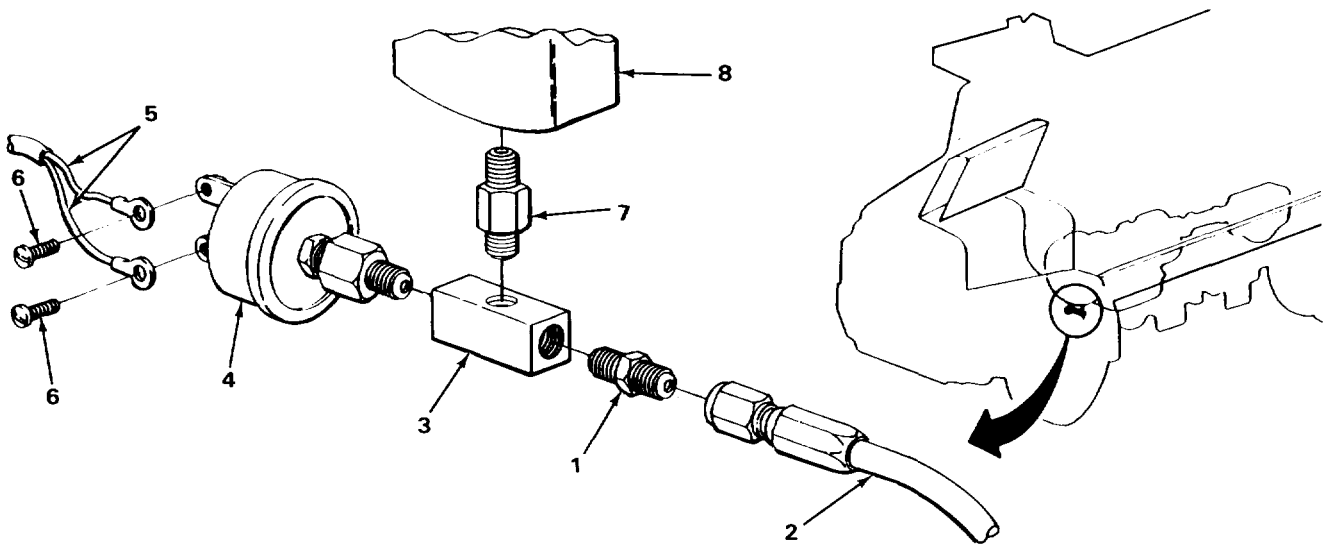
LOCATION	ITEM	ACTION REMARKS
20. Engine side of firewall (3)	Bulkhead fitting (1), nut (4), and flat washer (8)	Take out.
21. Bracket (9)	Nut (10), lockwasher (11), clamp (12), and screw (13)	a. Using two 7/16-inch open-end wrenches, unscrew and take out. b. Get rid of lockwasher.
22. Brackets (14)	Nuts (15), lockwashers (16), clamps (17), and screws (18)	a. Using two 7/16-inch open-end wrenches, unscrew and take out. b. Get rid of lockwashers.



TA244621

TRANSMISSION OIL PRESSURE GAGE LINE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
23. Straight pipe fitting (1)	Line (2)	Using 7/16-inch and 9/16-inch open-end wrenches, unscrew and take off.	
24. T-fitting (3)	Straight pipe fitting (1)	Using 7/16-inch and 9/16-inch open-end wrenches, unscrew and take out.	
25. Oil pressure switch (4)	Two wires (5)	Tag.	
26.	Two screws (6)	Using 3/16-inch flat-tip screwdriver, unscrew and take out.	
27. T-fitting (3)	Oil pressure switch (4)	Using two 9/16-inch open-end wrenches, unscrew and take out.	
28. Straight pipe fitting (7)	T-fitting (3)	Using 7/16-inch and 9/16-inch open-end wrenches, unscrew and take off.	
29. Torque converter housing (8)	Straight pipe fitting (7)	Using 7/16-inch open-end wrench, unscrew and take out.	



TA244622

TRANSMISSION OIL PRESSURE GAGE LINE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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CLEANING

WARNING

Improper cleaning methods and use of unauthorized cleaning liquids or solvents can injure personnel and cause damage to equipment Refer to TM 9-247.

NOTE

All lines and fittings must be cleaned thoroughly.

For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

30	All parts	Using liquid detergent and water, clean thoroughly.
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WARNING

Particles blown by compressed air are hazardous Make certain the airstream is directed away from user and other personnel in the area Compressed air used for cleaning purposes shall not exceed 30 psi (207 kPa) User must wear safety goggles or face shield to prevent injury to personnel.

31	All parts	Using air blow gun and air hose assembly, blow dry.
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INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

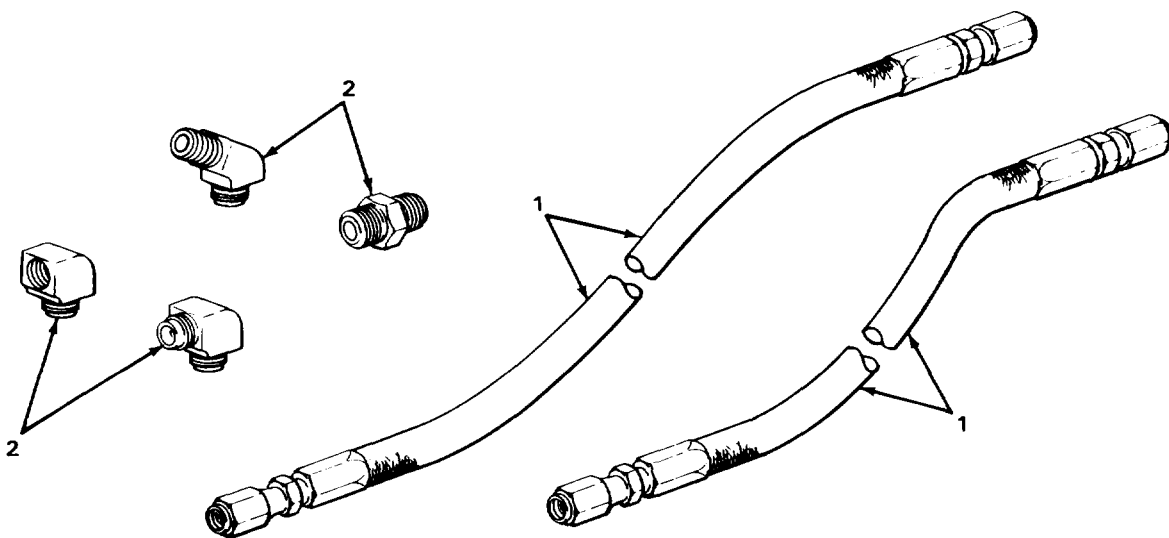
32	All threaded parts	Look for damaged threads or rounded heads.
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TRANSMISSION OIL PRESSURE GAGE LINE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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INSPECTION/REPLACEMENT - CONTINUED

33	Lines (1)	Look for cracks, gouges, or worn line covering.
34 Lines (1) and fittings (2)	Flare seats (3)	Look for cracks, bends, or dents.



INSTALLATION

CAUTION

Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.

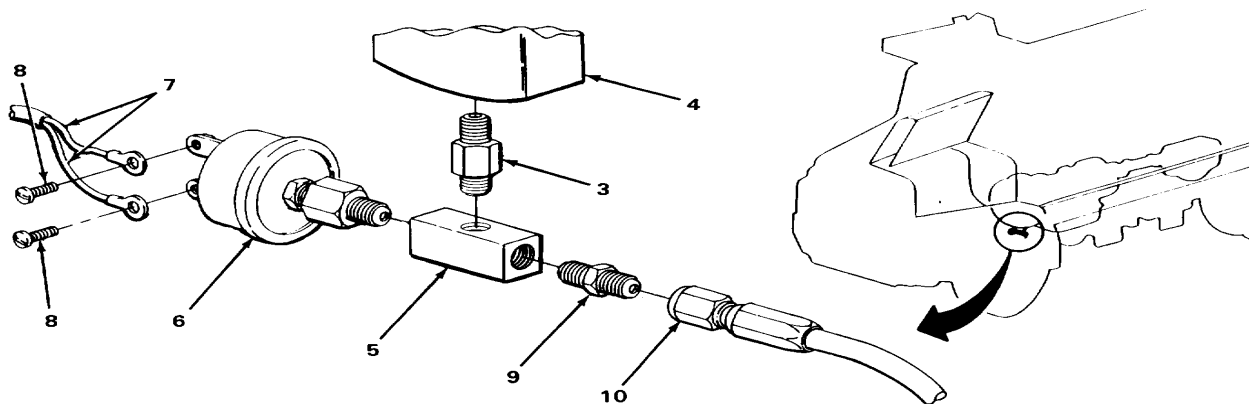
For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).

35	Straight pipe fitting (3)	Wrap pipe threads with antiseizing tape (page 2-424).
36 Torque converter housing (4)	Straight pipe fitting (3)	Screw in and tighten using 7/16-inch open-end wrench.

TA244623

TRANSMISSION OIL PRESSURE GAGE LINE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
37	Straight pipe fitting (3)	T-fitting (5) Screw on and tighten using 7/16-inch and 9/16-inch open-end wrenches.
38	Oil pressure switch (6)	Wrap pipe threads with antiseizing tape (page 2-424).
39	T-fitting (5)	Oil pressure switch (6) Screw in and tighten using two 9/16-inch open-end wrenches.
NOTE		
Install wires and lines as tagged in removal.		
40	Oil pressure switch (6)	Two wires (7) and two screws (8) a Screw in and tighten using 3/16-inch flat-tip screwdriver. b Get rid of tags.
41	Straight pipe fitting (9)	Wrap pipe threads with antiseizing tape (page 2-424).
42	T-fitting (5)	Straight pipe fitting (9) Screw in and tighten using 7/16-inch and 9/16-inch open-end wrenches.
43	Straight pipe fitting (9)	Line (10) Screw on and tighten using 7/16-inch and 9/16-inch open-end wrenches.



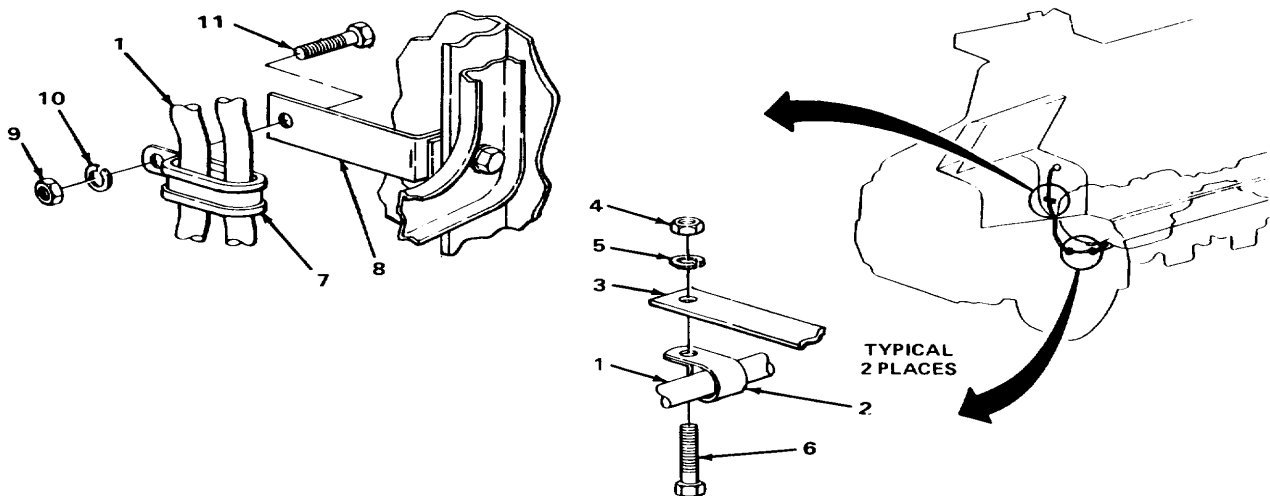
TA244626

TRANSMISSION OIL PRESSURE GAGE LINE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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INSTALLATION - CONTINUED

44	Line (1)	Two clamps (2)	Put on.
45	Brackets (3)	Nuts (4), new lockwashers (5), clamps (2), and screws (6)	Screw in and tighten using two 7/16-inch open-end wrenches.
46	Line (1)	Clamp (7)	Put on.
47	Bracket (8)	Nut (9), new lockwasher (10), clamp (7), and screw (11)	Screw in and tighten using two 7/16-inch open-end wrenches.



48	Bulkhead fitting (12)	Small nut (13)	Screw on until a few threads can be seen at one end.
49	Flat washer (14)	Put on.	
50	Engine side of firewall (15)	Bulkhead fitting (12), small nut (13), and flat washer (14)	Put in.

TA244625

TRANSMISSION OIL PRESSURE GAGE LINE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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NOTE

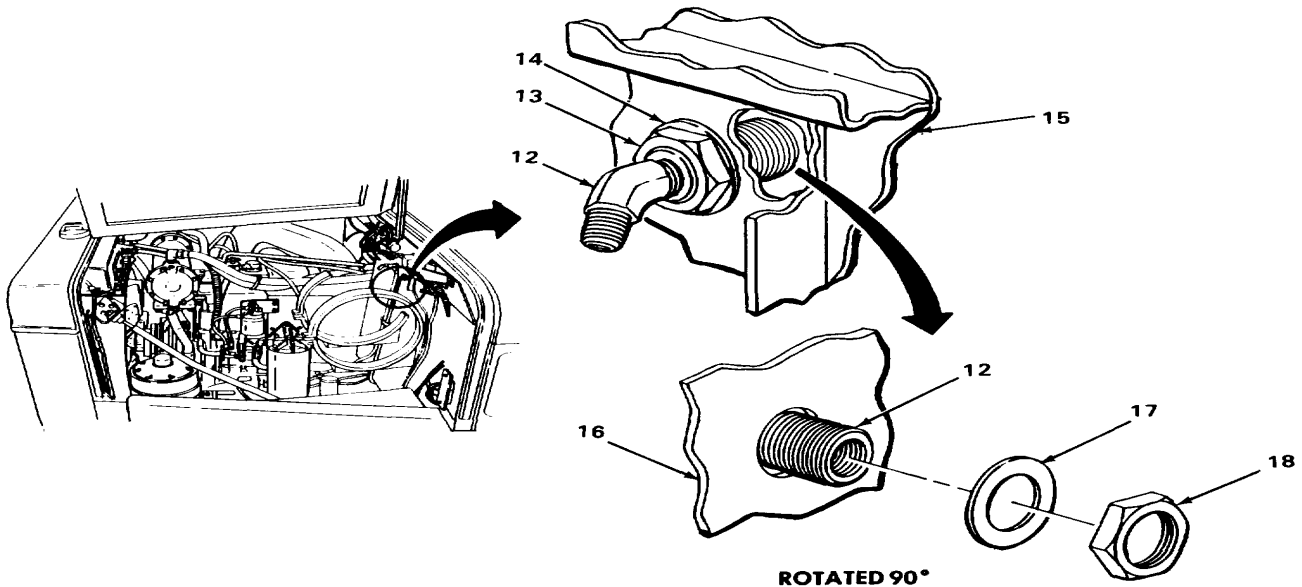
Assistance will be required to perform steps 51, 52, and 53.

51 Small nut (13) Hold nut from turning using 1-inch open-end wrench.

52 Bulkhead fitting (12) on driver's side of firewall (16) Flat washer (17) Put on.

53 Nut (18) Screw on and tighten using 11/2-inch drive, 1 11/8-inch deep socket, 10-inch extension, and ratchet handle.

TA244626
2-1461

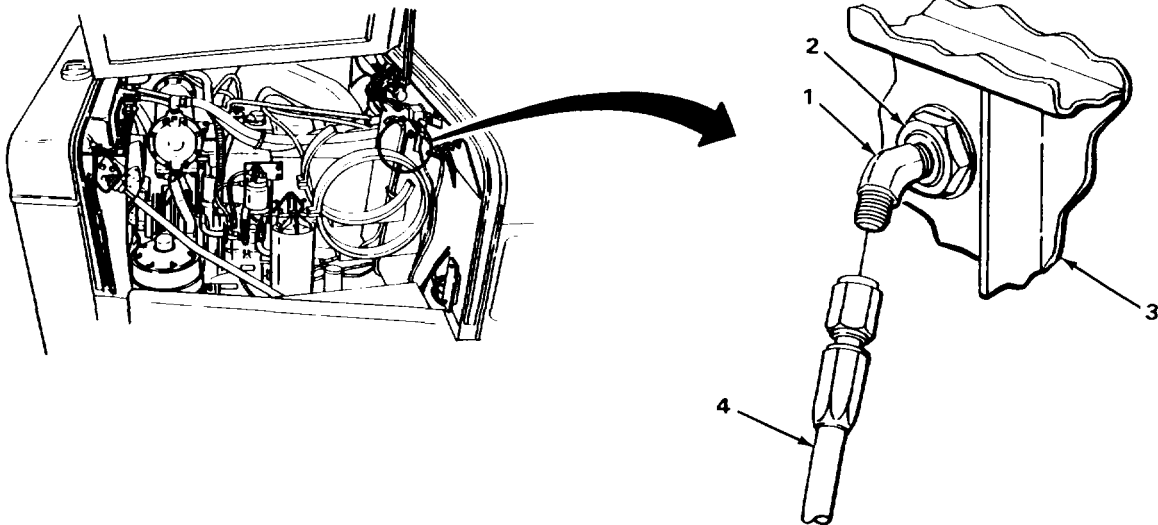


TA244626

2-1461

TRANSMISSION OIL PRESSURE GAGE LINE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
54	45-degree elbow (1)	Wrap pipe threads with antiseizing tape (page 2-424).
55 Bulkhead fitting (2) on engine side of firewall (3)	45-degree elbow (1)	Screw in and tighten using 7/16-inch open-end wrench. Position elbow toward line.
56 45-degree elbow (1)	Line (4)	Screw on and tighten using 7/16-inch and 9/16-inch open-end wrenches.



57	90-degree elbow (5)	Wrap pipe threads with antiseizing tape (page 2-424).
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CAUTION

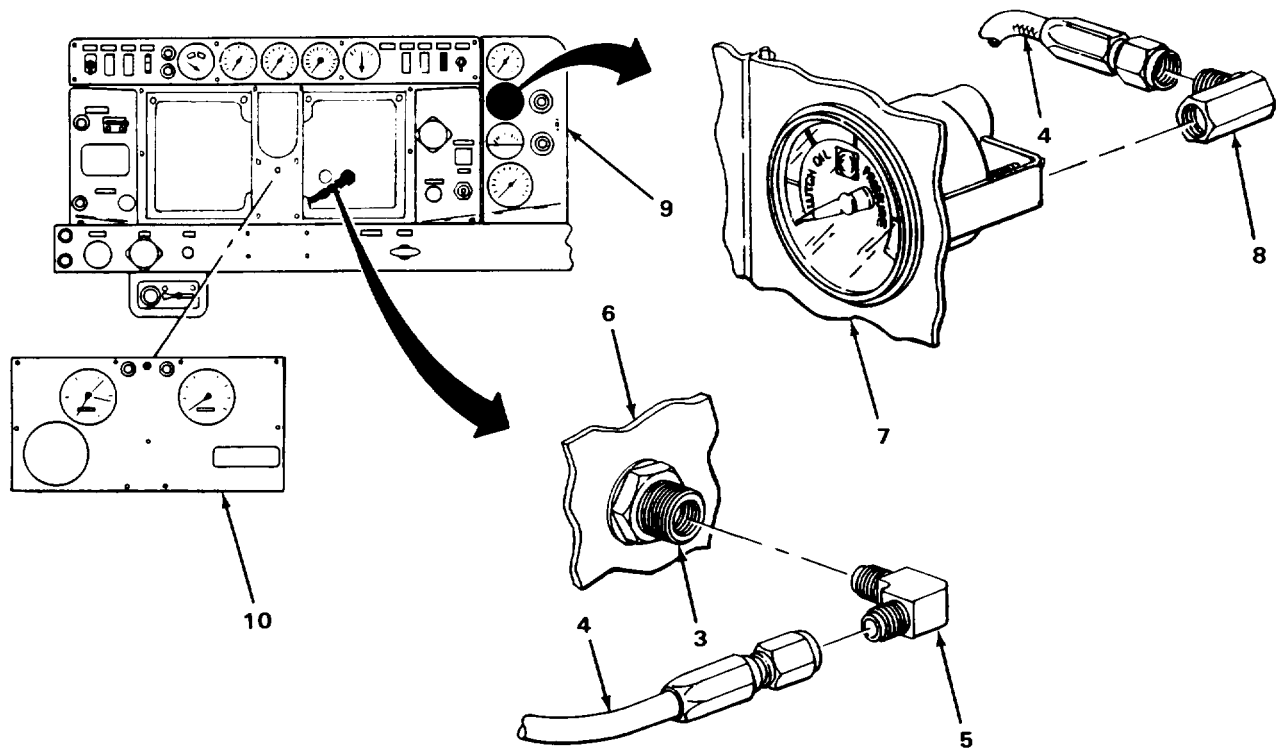
Use care when working behind instrument panel to prevent breaking or disconnecting wires.

58 Bulkhead fitting (3) on driver's side of firewall (6)	90-degree elbow (5)	Screw in and tighten using 1/2-inch open-end wrench.
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TA244627

TRANSMISSION OIL PRESSURE GAGE LINE AND FITTINGS - CONTINUED

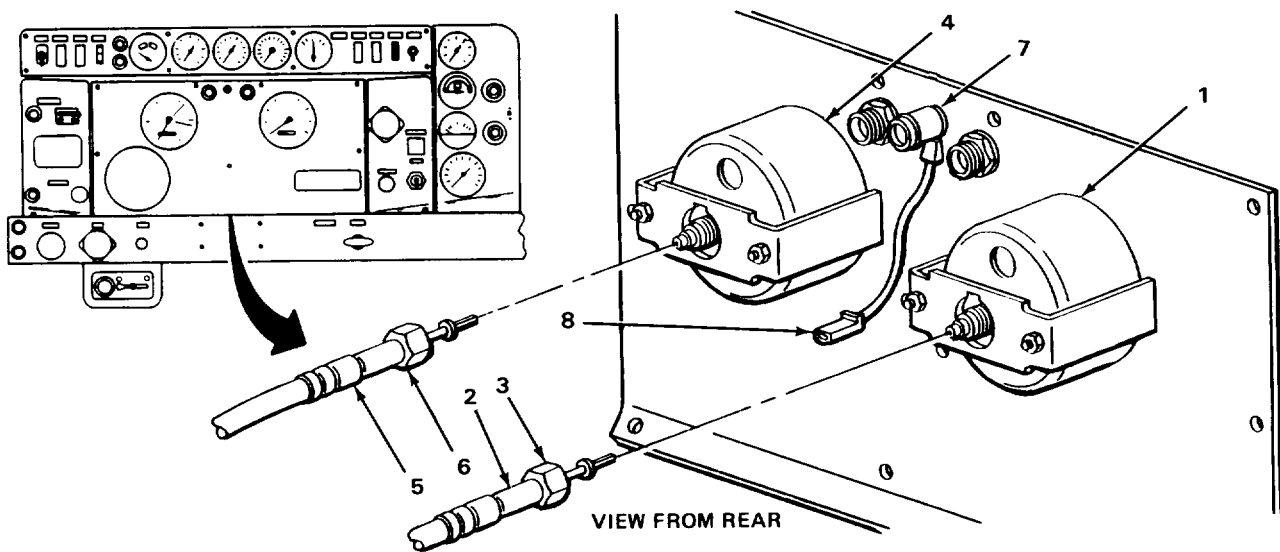
LOCATION	ITEM	ACTION REMARKS	
59	90-degree elbow (5)	Line (4)	Screw on and tighten using 1/2-inch and 9/16-inch open-end wrenches.
60		Gage (7)	Wrap pipe threads with antiseizing tape (page 2-424).
61		90-degree elbow (8)	Screw on and tighten using 9/16-inch open-end wrench.
62	90-degree elbow (8)	Line (4)	a Screw on and tighten using two 9/16-inch open-end wrenches. b Get rid of tag.
63	Instrument panel (9)	Lower center instrument panel (10)	Put in.



TA244628

TRANSMISSION OIL PRESSURE GAGE LINE AND FITTINGS - CONTINUED

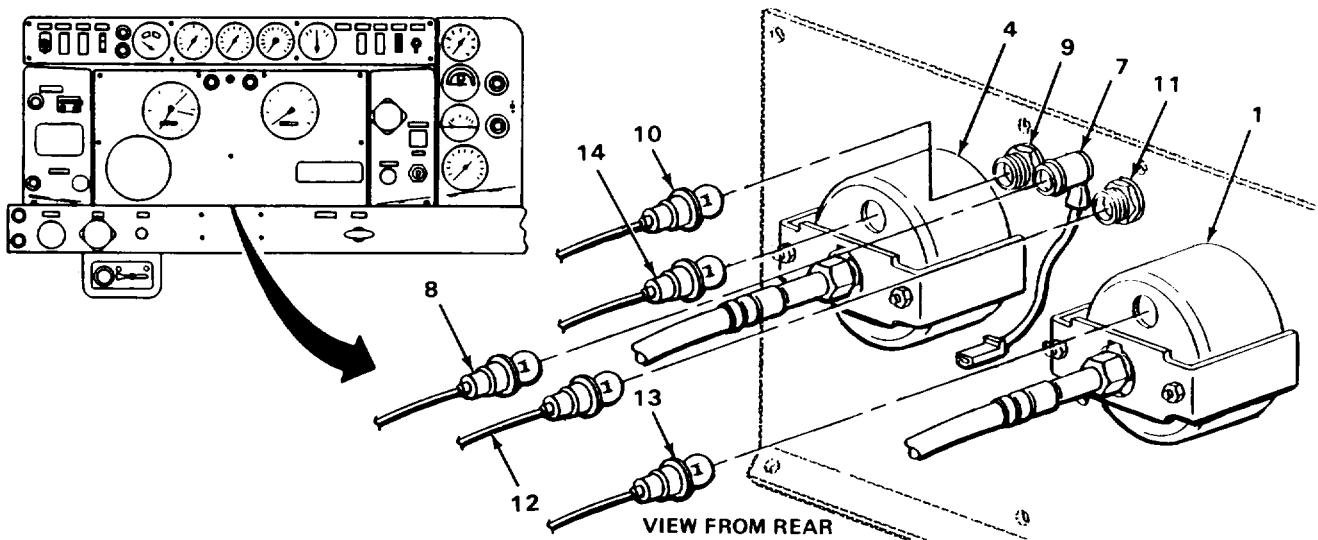
LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
64 Tachometer (1)	Tachometer drive cable (2)	Put in. Aline square end of drive tip with square hole of tachometer.
65	Cable retainer nut (3)	Screw on and tighten using 3/4-inch open-end wrench.
66 Speedometer (4)	Speedometer drive cable (5)	Put in. Aline square end of drive tip with square hole of speedometer.
67	Cable retainer nut (6)	Screw on and tighten using 3/4-inch open-end wrench.
68 High beam indicator (7)	Ground wire (8)	a Put on. b Get rid of tag.



TA244629

TRANSMISSION OIL PRESSURE GAGE LINE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
69 High beam indicator (7)	Light socket (8)	a Push in. b Get rid of tag.	
70 Right directional indicator (9)	Light socket (10)	a Push in. b Get rid of tag.	
71 Left directional indicator (11)	Light socket (12)	a Push in. b Get rid of tag.	
72 Tachometer (1)	Light socket (13)	a Push in. b Get rid of tag.	
73 Speedometer (4)	Light socket (14)	a Push in. b Get rid of tag.	



NOTE

FOLLOW-ON MAINTENANCE:

- 1 Close upper center instrument panel (page 2-424)
- 2 Close lower center instrument panel (page 2-424).
- 3 Install air cleaner housing (page 2-452)
- 4 Close left side cab door (page 2-424).

TASK ENDS HERE

TA244630

AIR CLEANER VACUUM GAGE

This task covers:

- a Removal (page 2-1466)
- b Inspection/Replacement (page 2-1467)
- c Installation (page 2-1468)

INITIAL SETUP

Tools

- Wrench, open-end, 3/8-inch
- Wrench, open-end, 9/16-inch (two required)
- Wrench, open-end, 3/4-inch

- Lockwasher, gage (two required)
- Tape, antiseizing (item 22, appendix C)

Personnel Required

One

Equipment Condition

- Left side cab door opened (page 2-424).
- Right instrument panel opened (page 2-424).

LOCATION	ITEM	ACTION REMARKS
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REMOVAL

CAUTION

Use care when working behind right instrument panel to prevent breaking or disconnecting wires.

1	Elbow (1) Line (2)	Using two 9/16-inch open-end wrenches, unscrew and take off.
2	Adapter (3) Elbow (1)	Using 9/16-inch and 3/4-inch open-end wrenches, unscrew and take out.
3	Gage (4) Adapter (3)	Using 3/4-inch open-end wrench, unscrew and take off.
4	Two nuts (5) and two lockwashers (6)	<ul style="list-style-type: none"> a Hold gage. b Using 3/8-inch open-end wrench, unscrew and take off. c Get rid of lockwashers.
5	Mounting bracket (7)	Take off.

AIR CLEANER VACUUM GAGE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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6	Right instrument panel (8)	Gage (4)	Take out.
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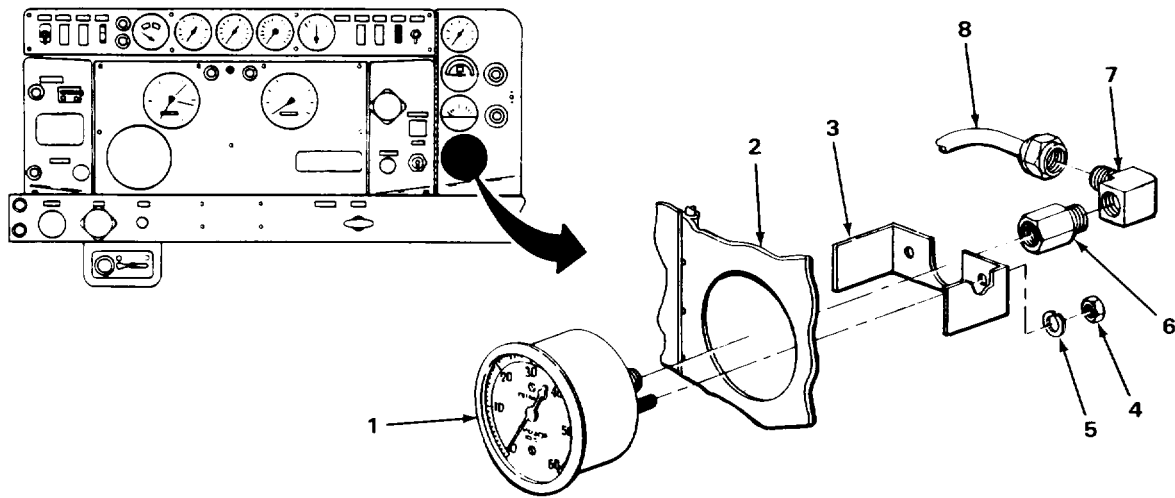
INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

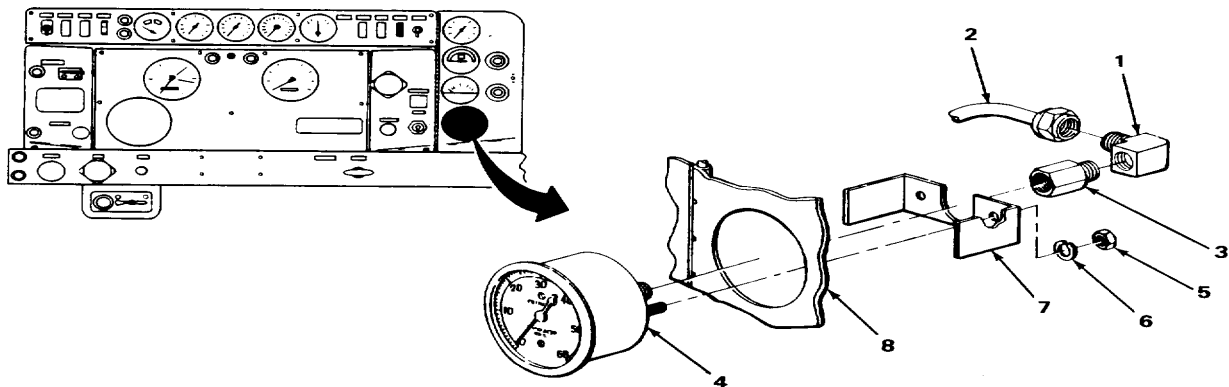
7	Gage (4)	a Look for cracks or dents. b Check to see if gage is readable.
8	Mounting bracket (7)	Look for cracks, bends, or breaks.
9	All threaded parts	Look for damaged threads or rounded heads.



TA244631

AIR CLEANER VACUUM GAGE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
10	Gage (1)	Wrap pipe threads with antiseizing tape (page 2-424).	
11	Right instrument panel (2)	Gage (1) Position as shown.	Put in and hold.
12	Gage (1)	Mounting bracket (3)	Put on.
13	Two nuts (4) and two new lockwashers (5)		Screw on and tighten using 3/8-inch open-end wrench.
14	Adapter (6)		Screw on and tighten using 3/4-inch open-end wrench.
15	Elbow (7)		Wrap pipe threads with antiseizing tape (page 2-424).
16	Adapter (6)	Elbow (7)	Screw in and tighten using 9/16-inch and 3/4-inch open-end wrenches. Position as shown.
17	Elbow (7)	Line (8)	Screw on and tighten using two 9/16-inch open-end wrenches.



TA244632

AIR CLEANER VACUUM GAGE - CONTINUED**NOTE****FOLLOW-ON MAINTENANCE:**

- 1 Close right instrument panel (page 2-424).
- 2 Close left side cab door (page 2-424).

TASK ENDS HERE**WATER TEMPERATURE GAGE AND LINE**

This task covers:

- | | |
|---|--|
| <ol style="list-style-type: none"> a Removal (page 2-1470) b Inspection/Replacement
(page 2-1471) | <ol style="list-style-type: none"> c Installation (page 2-1472) |
|---|--|
-

INITIAL SETUP**Tools**

Piers, diagonal-cutting, 6-inch
 Wrench, open-end, 31/8-inch
 Wrench, open-end, 5/8-inch
 Wrench, open-end, 7/8-inch

Materials/Parts

Lockwasher, gage (two required)
 Strap, tiedown (item 20, appendix C)

Personnel Required

One

Equipment Condition

Left side cab door opened (page 2-424).
 Upper center instrument panel opened
 (page 2-424).
 Right and left side hood panels opened
 (page 2-424)
 Cooling system drained (page 2-628).

WATER TEMPERATURE GAGE AND LINE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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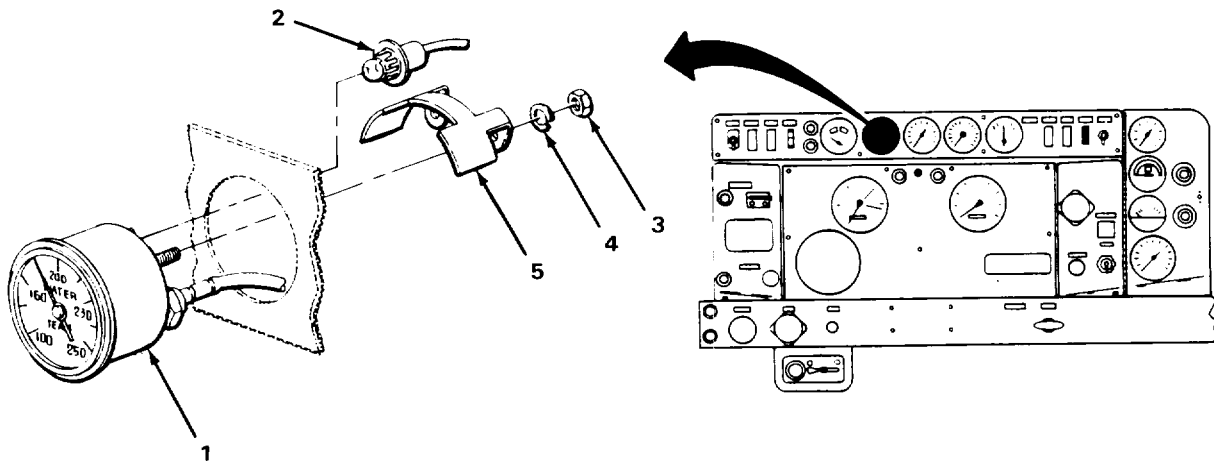
REMOVAL

CAUTION

Use care when working behind upper center instrument panel to prevent breaking or disconnecting wires.

Make sure water temperature gage is not disconnected from line. Damage to gage will occur.

1	Gage (1)	Light socket (2)	Pull out.
2		Two nuts (3) and two lockwashers (4)	a Using 3/8-inch open-end wrench, unscrew and take off. b Get rid of lockwashers.
3		Mounting bracket (5)	Take off.



4	Engine side of firewall (6) and bracket (7)	Electrical tiedown strap (8)	a Using 6-inch diagonal-cutting pliers, cut off. b Get rid of strap.
5	Front water manifold (9)	Line retainer nut (10)	Using 5/8-inch and 7/8-inch open-end wrenches, unscrew and slide back.

TA244633

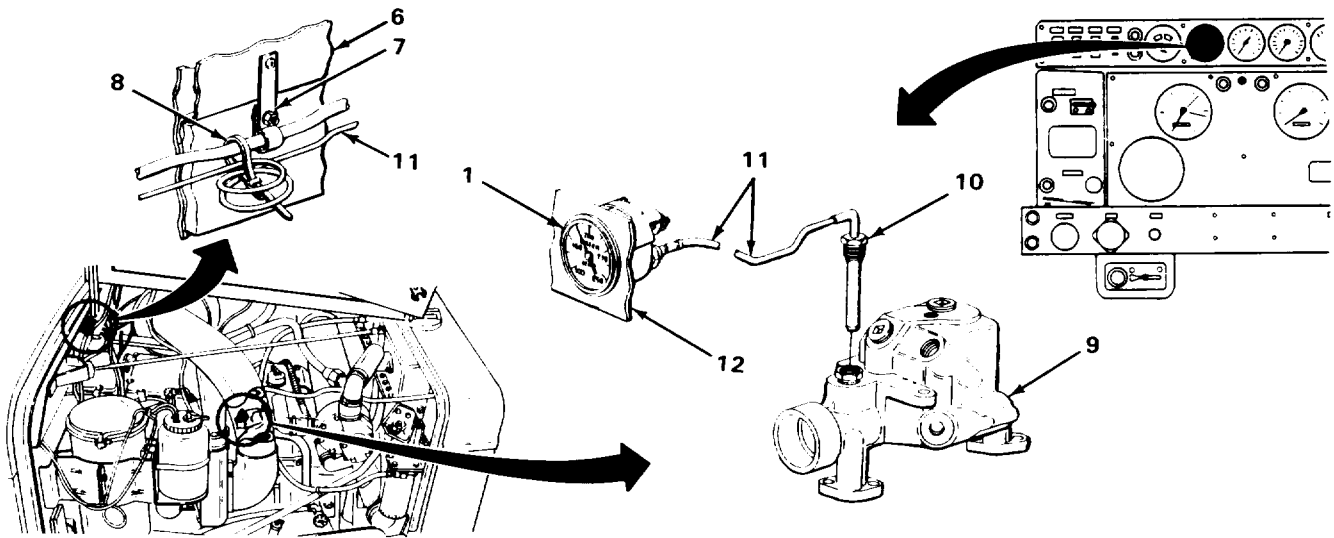
WATER TEMPERATURE GAGE AND LINE - CONTINUED

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

CAUTION

Use care when performing steps 6 and 7 to prevent damage to water temperature gage and line.

6	Front water manifold (9)	Line (11)	Take out.
7	Upper center instrument panel (12)	Gage (1) and line (11)	Carefully pull through.



INSPECTION/REPLACEMENT

NOTE

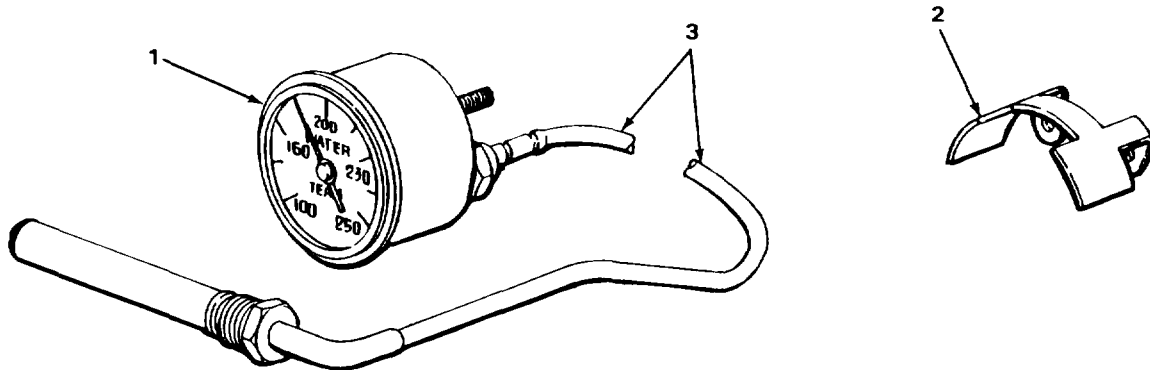
Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

TA244634

WATER TEMPERATURE GAGE AND LINE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSPECTION/REPLACEMENT - CONTINUED		
8	Gage (1)	a. Look for cracks or dents. b. Check to see if gage is readable.
9	Mounting bracket (2)	Look for cracks, bends, or breaks.
10	Line (3)	Look for cracks, kinks, or worn line covering.
11	All threaded parts	Look for damaged threads or rounded heads.



INSTALLATION

CAUTION

Make sure water temperature gage is not disconnected from line. Damage to gage will occur.

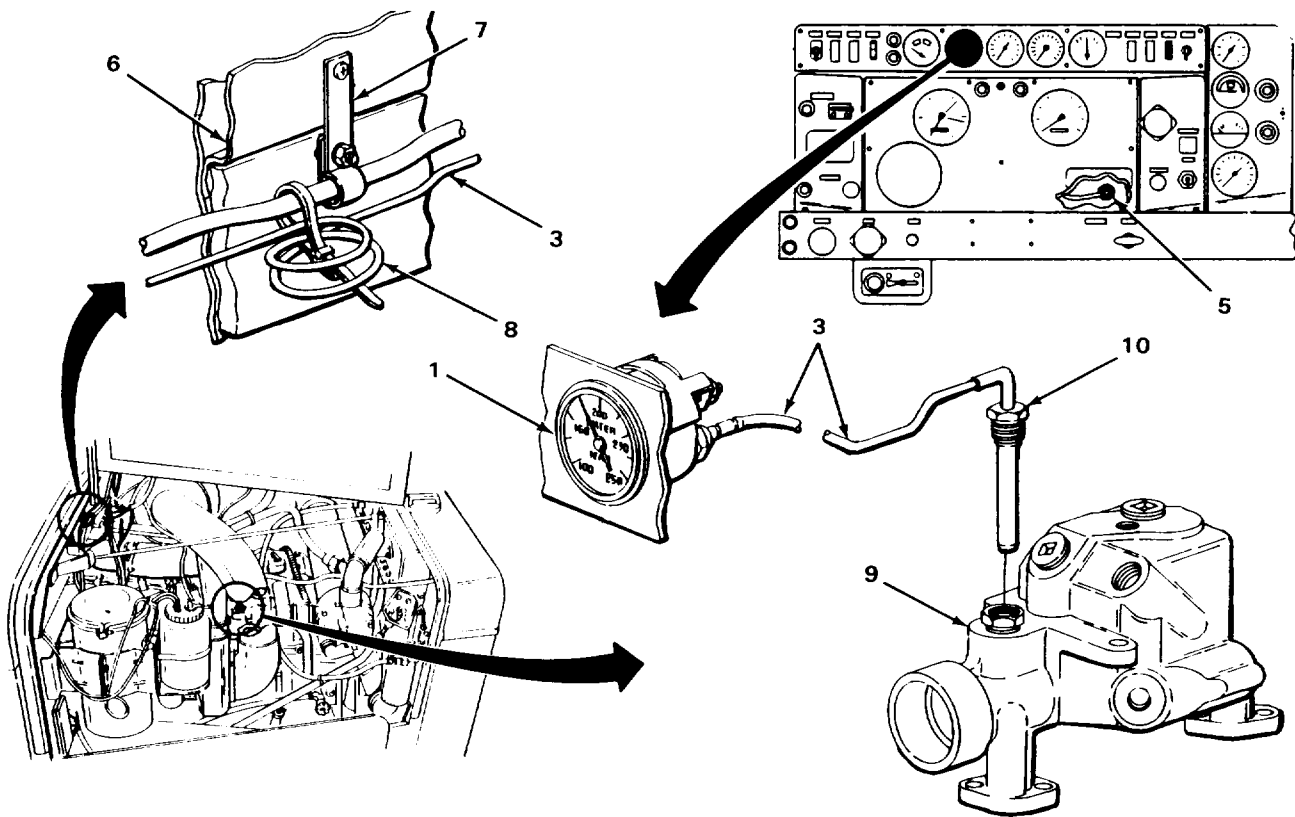
Use care when working behind upper center instrument panel to prevent breaking or disconnecting wires.

Use care when performing steps 12 and 13 to prevent damage to water temperature gage and line.

TA244635

WATER TEMPERATURE GAGE AND LINE - CONTINUED

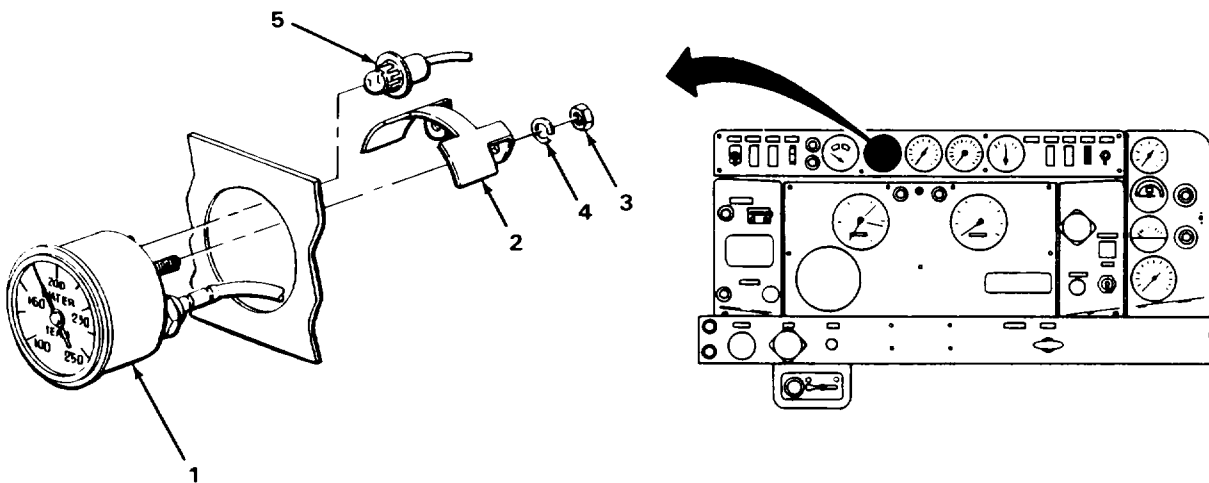
LOCATION	ITEM	ACTION REMARKS
12 Upper center instrument panel (4) and driver's side of firewall (5)	Gage (1) and line (3)	Carefully put through. Position gage as shown.
13 Engine side of firewall (6), bracket (7), and line (3)	New electrical tiedown strap (8)	Wrap loosely.
14 Front water manifold (9)	Line (3)	Put in.
15	Line retainer nut (10)	Screw in and tighten using 5/8-inch and 7/8-inch open-end wrenches.



TA244636

WATER TEMPERATURE GAGE AND LINE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
16 Gage (1)	Mounting bracket (2)	Put on.
17	Two nuts (3) and two new lockwashers (4)	Screw on and tighten using 3/8-inch open- end wrench. lockwashers (4)
18	Light socket (5)	Push in.



NOTE

FOLLOW-ON MAINTENANCE:

- 1 Close center instrument panel (page 2-424).
- 2 Fill cooling system (page 2-628).
- 3 Close left side cab door (page 2-424).
- 4 Close right and left side hood panels (page 2-424).

TASK ENDS HERE

TA244637

FUEL PRESSURE GAGE

This task covers:

- a Removal (page 2-1475)
- b Inspection/Replacement (page 2-1476)
- c Installation (page 2-1476)

INITIAL SETUP

Tools

Wrench, open-end, 3/8-inch
 Wrench, open-end, 9/16-inch (two required)

Materials/Parts

Lockwasher, gage (two required)
 Tape, antiseizing (item 22, appendix C)

Personnel Required

One

Equipment Condition

Left side cab door opened (page 2-424).
 Right instrument panel opened (page 2-424).

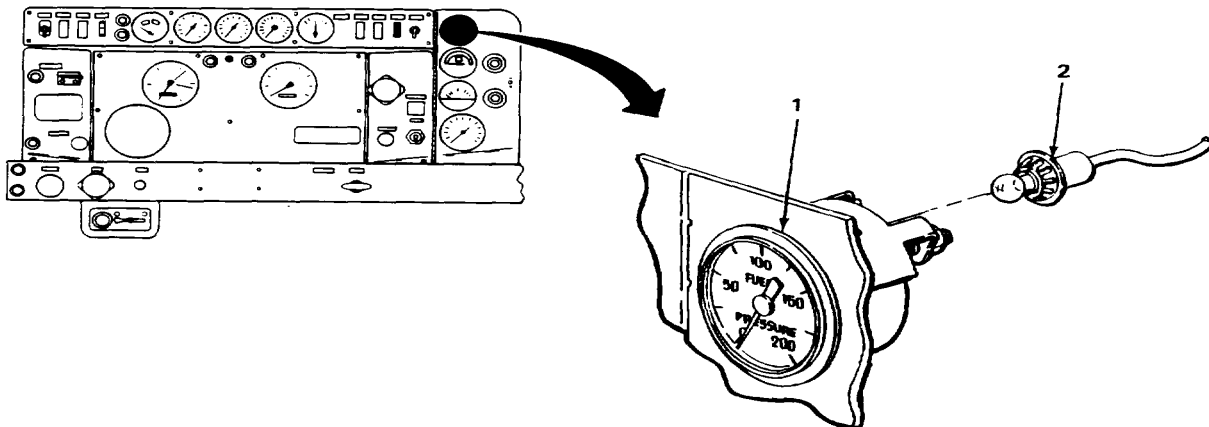
LOCATION	ITEM	ACTION REMARKS
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REMOVAL

CAUTION

Use care when working behind right instrument panel to prevent breaking or disconnecting wires.

- 1 Gage (1)
- Light socket (2)
- Pull out.



TA244638

FUEL PRESSURE GAGE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED		
2 Elbow (1)	Line (2)	Using two 9/16-inch open-end wrenches, unscrew and take off.
3 Gage (3)	Elbow (1)	Using 9/16-inch open-end wrench, unscrew and take off.
4	Two nuts (4) and two lockwashers (5) screw and take off.	a Hold gage. b Using 3/8-inch open-end wrench, unscrew and take off.
5.	Mounting bracket (6)	c Get rid of lockwashers. Take off.
6 Right instrument panel (7)	Gage (3)	Take out.

INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

7.	Gage (3)	a Look for cracks or dents. b Check to see if gage is readable.
9.	Mounting bracket (6) All threaded parts	Look for cracks, bends, or breaks. Look for damaged threads or rounded heads.

INSTALLATION

CAUTION

Use care when working behind right instrument panel to prevent breaking or disconnecting wires.

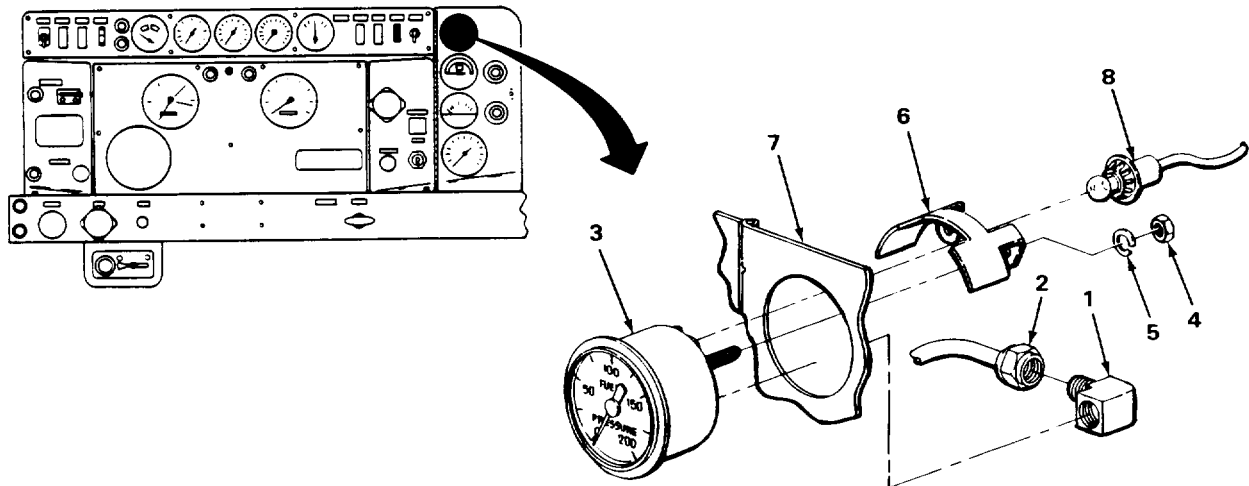
FUEL PRESSURE GAGE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
10	Gage (3)	Wrap pipe threads with antiseizing tape (page 2-424).
11 Right instrument panel (7)	Gage (3)	Put in and hold. Position as shown.
12 Gage (3)	Mounting bracket (6)	Put on.
13 Gage (3)	Two new lockwashers (5) and two nuts (4)	Screw on and tighten using 3/8-inch open-end wrench.

NOTE

Position elbow so that male threads are pointing toward hinge in instrument panel.

14	Elbow (1)	Screw on and tighten using 9/16-inch open-end wrench. Position as shown.
15 Elbow (1)	Line (2)	Screw on and tighten using two 9/16-inch open-end wrenches.
16 Gage (3)	Light socket (8)	Push in.



TA244639

FUEL PRESSURE GAGE - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

- 1 Close right instrument panel (page 2-424).
- 2 Close left side cab door (page 2-424).

TASK ENDS HERE

AIR PRESSURE GAGE

This task covers:

- | | |
|--|------------------------------|
| a Removal (page 2-1478) | c Installation (page 2-1480) |
| b Inspection/Replacement (page 2-1479) | |

INITIAL SETUP

Tools

Wrench, open-end, 1/2-inch
Wrench, open-end, 9/16-inch

Materials/Parts

- Tags, marker (item 21, appendix C)
- Tape, antiseizing (item 22, appendix C)

Personnel Required

One

Equipment Condition

Left side cab door opened (page 2-424).
Upper center instrument panel opened (page 2-424).

LOCATION	ITEM	ACTION REMARKS
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REMOVAL

CAUTION

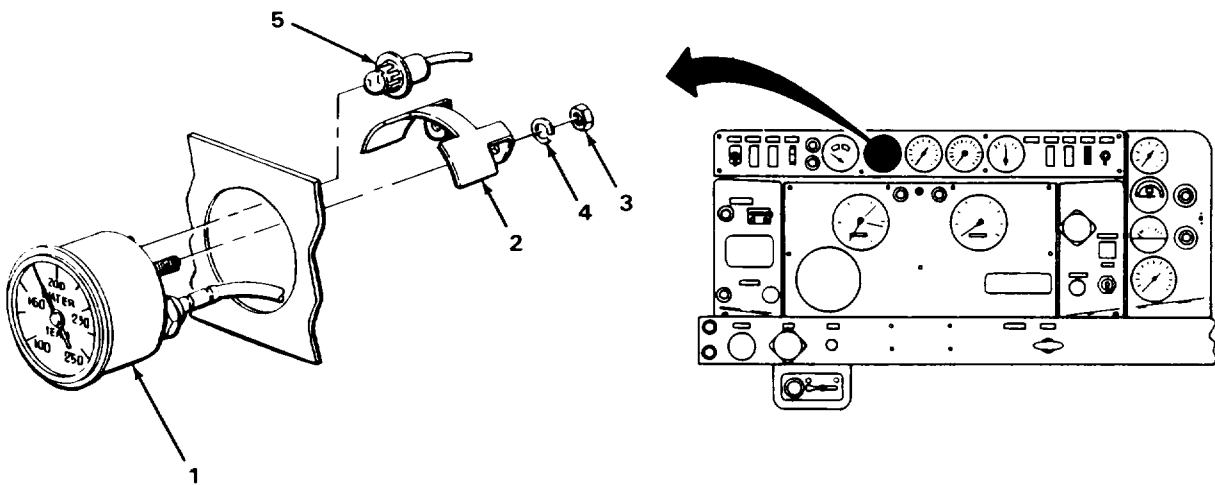
Use care when working behind upper center instrument panel to prevent breaking or disconnecting wires.

Pull out.

- | | | |
|--------------------|------------------|--|
| 1 Gage (1) | Light socket (2) | |
| 2 Two adapters (3) | Two lines (4) | a Tag (page 2-424).
b Using 1/2-inch and 9/16-inch open-end wrenches, unscrew and take off. |

AIR PRESSURE GAGE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
3 Gage (1)	Two adapters (3)	Using 1/2-inch and 9/16-inch open-end wrenches, unscrew and take off.
4 Two nuts (5)		a Hold gage. b Using 9/16-inch open-end wrench, unscrew and take off.
5	Mounting bracket (6)	Take off.
6 Upper instrument panel (7)	Gage (1)	Take out.



INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

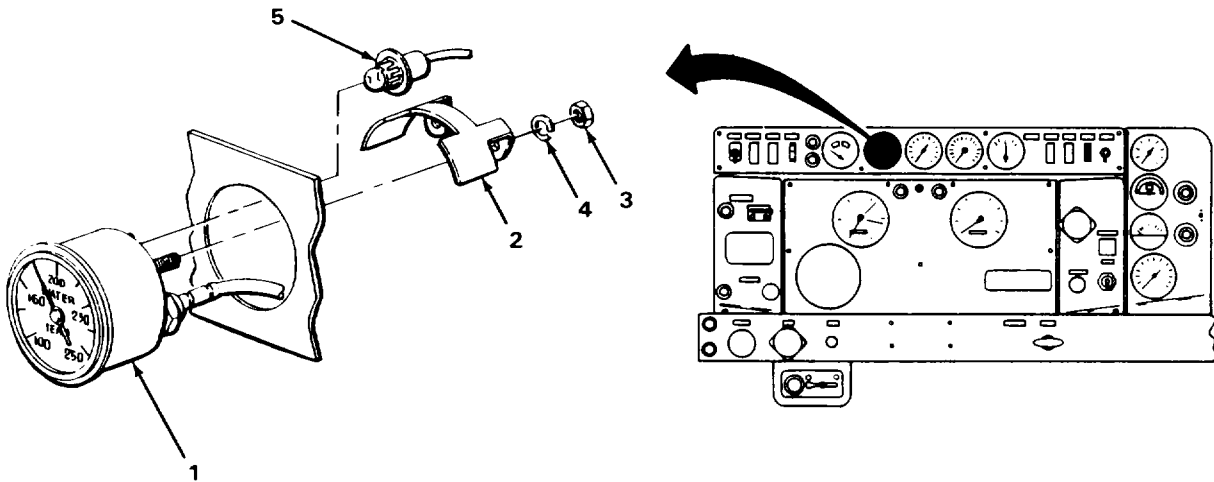
For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

TA244640

AIR PRESSURE GAGE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSPECTION/REPLACEMENT - CONTINUED		
7	Gage (1)	a Look for cracks or dents. b Check to see if gage is readable.
8	Mounting bracket (2)	Look for cracks, bends, or breaks.
9	All threaded parts	Look for damaged threads or rounded heads.
INSTALLATION		
<u>CAUTION</u>		
Use care when working behind upper center instrument panel to prevent breaking or disconnecting wires.		
10	Gage (1)	Wrap pipe threads with antiseizing tape (page 2-424).
11	Upper center instrument panel (3)	Put in and hold. Gage (1)
		Position as shown.
12	Gage (1)	Mounting bracket (2)
		Put on.
13	Two nuts (4)	Screw on and tighten using 9/16-inch open-end wrench.
14		Screw on and tighten using 1/2-inch and 9/16-inch open-end wrenches.
15	Two adapters (5)	a Screw on and tighten using 1/2-inch and 9/16-inch open-end wrenches b Get rid of tags.
16	Gage (1)	Light socket (7)
		Push in.

AIR PRESSURE GAGE - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE:

- 1 Close upper center instrument panel (page 2-424).
- 2 Close left side cab door (page 2-424).

TASK ENDS HERE

AIR CLEANER VACUUM GAGE LINE AND FITTINGS

This task covers:

- | | |
|--------------------------|--|
| a Removal (page 2-1482) | c Inspection/Replacement (page 2-1486) |
| b Cleaning (page 2-1484) | d Installation (page 2-1486) |

INITIAL SETUP

Tools

- Goggles, safety
- Gun, blow, air
- Hose, air, assembly
- Wrench, open-end, 7/16-inch
- Wrench, open-end, 1/2-inch
- Wrench, open-end, 9/16-inch (two required)
- Wrench, open-end, 3/4-inch

Materials/Parts

- Adhesive, liquid rubber (item 1, appendix C)
- Detergent, liquid, GP (item 7, appendix C)
- Tape, antiseizing (item 22, appendix C)

AIR CLEANER VACUUM GAGE LINE AND FITTINGS - CONTINUED

INITIAL SETUP - CONTINUED

Personnel Required

One

Equipment Condition

Left cab door opened (page 2-424).
Right instrument panel opened (page 2-424).

Equipment Condition - Continued

Right and left side hood panels opened (page 2-424).

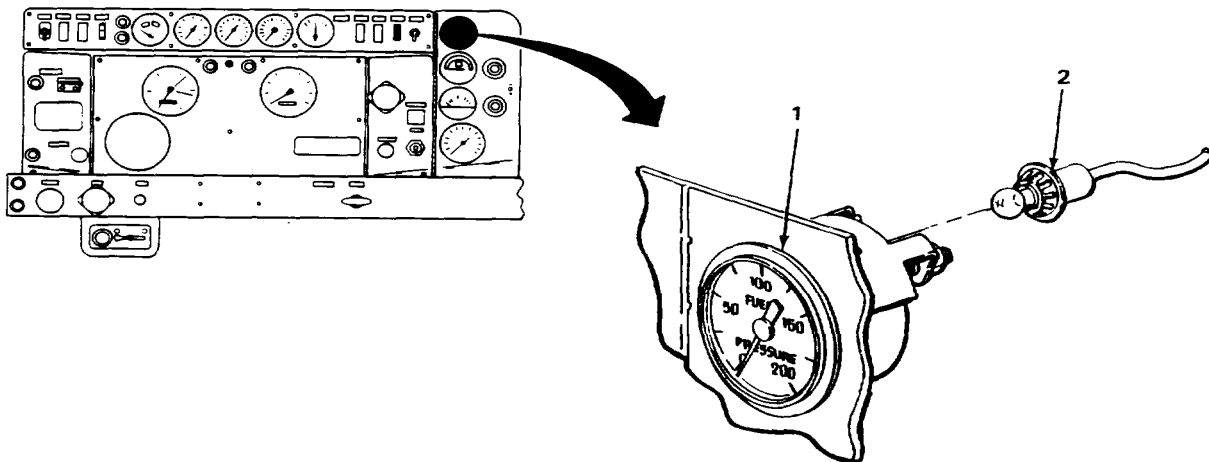
LOCATION	ITEM	ACTION REMARKS
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REMOVAL

CAUTION

Use care when working behind right instrument panel to prevent breaking or disconnecting wires.

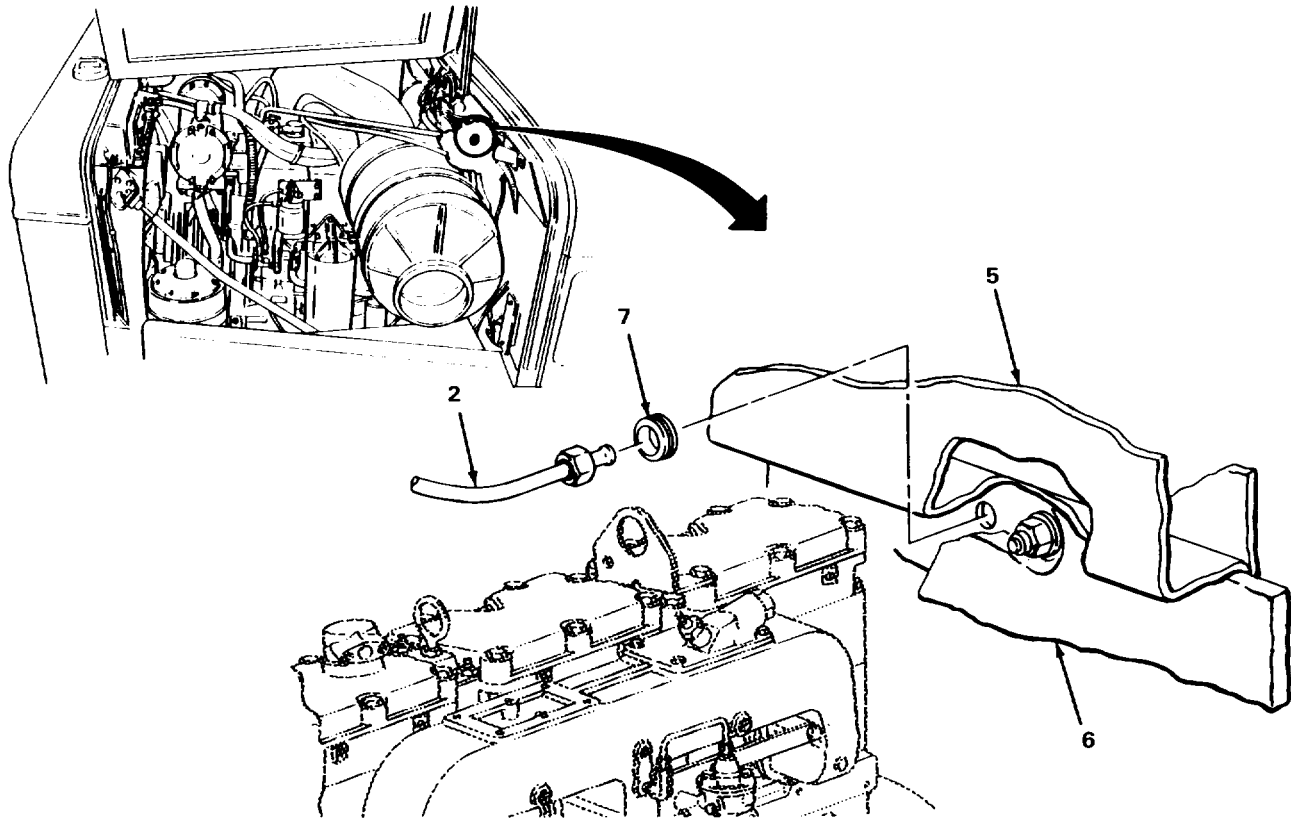
- | | | |
|---------------|-------------|---|
| 1 Elbow (1) | Line (2) | Using two 9/16-inch open-end wrenches, unscrew and take off. |
| 2 Adapter (3) | Elbow (1) | Using 3/4-inch and 9/16-inch open-end wrenches, unscrew and take off. |
| 3 Gage (4) | Adapter (3) | Using 3/4-inch open-end wrench, unscrew and take off. |



TA244642

AIR CLEANER VACUUM GAGE LINE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
4 Engine side of firewall (5) and line (2)	Insulation (6)	Pull back.
5	Grommet (7)	Take out.
6 Engine side of firewall (5)	Line (2)	Pull through.



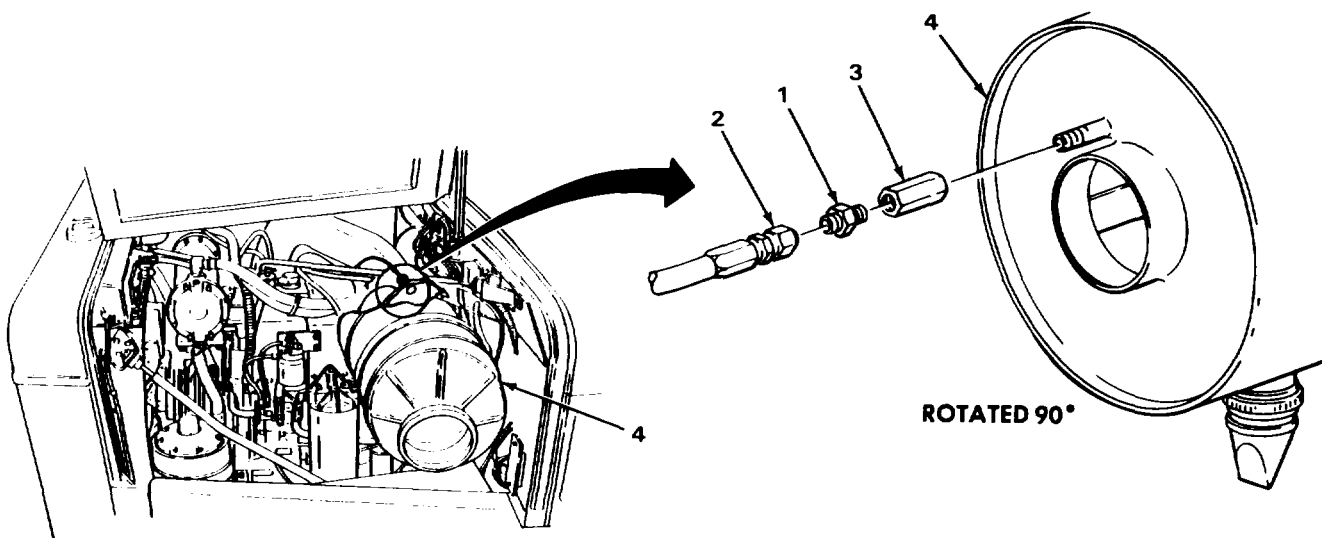
NOTE

Perform steps 7, 8, and 9 from right side of engine.

TA244643

AIR CLEANER VACUUM GAGE LINE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED		
7	Straight pipe fitting (1)	Using 9/16-inch and 7/16-inch open-end wrenches, unscrew and take off.
8	Coupling (3)	Using 7/16-inch and 1/2-inch open-end wrenches, unscrew and take out.
9	Air cleaner housing (4)	Using 1/2-inch open-end wrench, unscrew and take off.



CLEANING

WARNING

Improper cleaning methods and use of unauthorized cleaning liquids or solvents can injure personnel and cause damage to equipment Refer to TM 9-247.

NOTE

Line and fittings must be cleaned thoroughly.

TA244644

AIR CLEANER VACUUM GAGE LINE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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NOTE

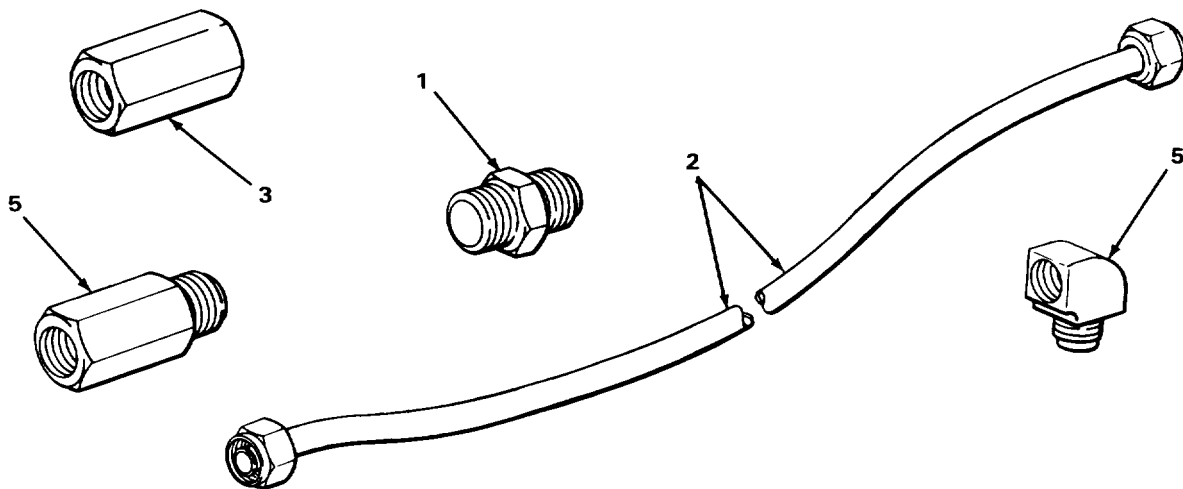
For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

10	All parts	Using liquid detergent and water, clean thoroughly.
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WARNING

Particles blown by compressed air are hazardous. Make certain the air stream is directed away from user and other personnel in the area. Compressed air used for cleaning purposes shall not exceed 30 psi (207 kPa). User must wear safety goggles or face shield to prevent injury to personnel.

11	Line (2), fittings (1 and 5), and coupling (3)	Using air blow gun and air hose assembly, blow dry.
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TA244645

AIR CLEANER VACUUM GAGE LINE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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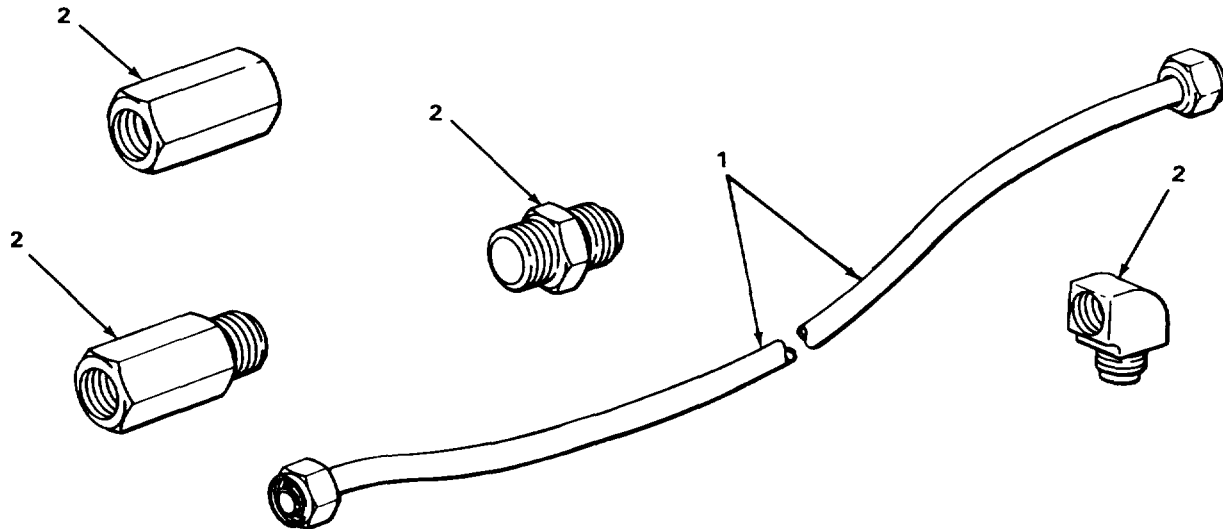
INSPECTION/REPLACEMENT

NOTE

Replace all damaged or defective parts.

For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).

12	Line (1)	Look for cracks, kinks, or burn holes.
13 Line (1) and fittings (2)	Flare seats	Look for cracks, bends, or dents.
14	All threaded parts	Look for damaged threads or rounded heads.



INSTALLATION

CAUTION

Antiseizing tape must be used on all pipe threads to provide a good seal and to prevent threaded parts from seizing.

TA244646

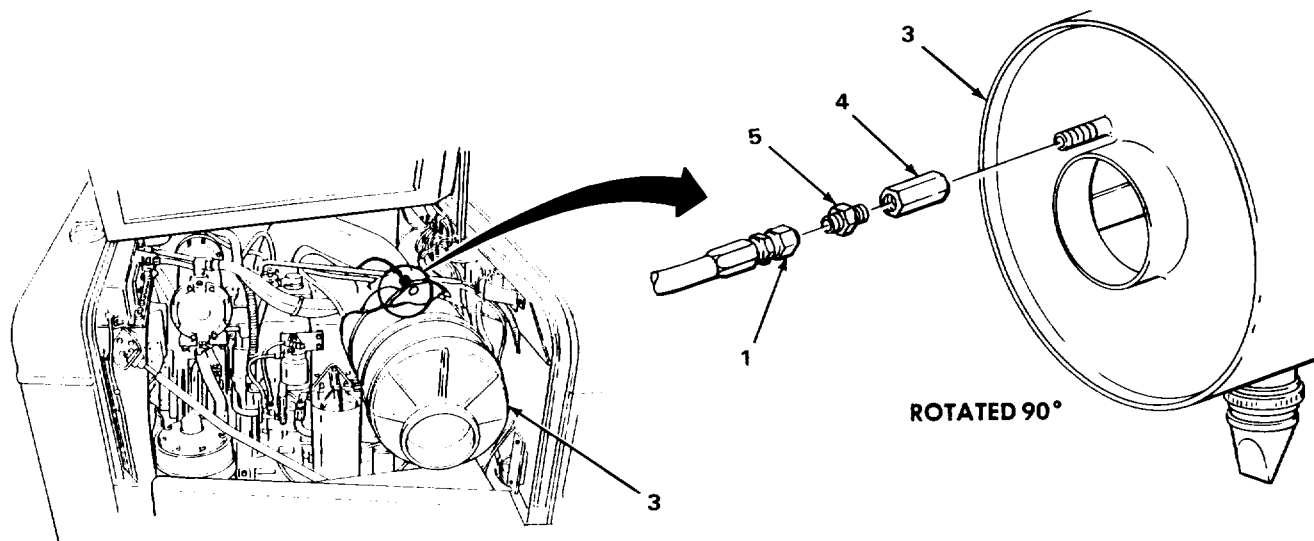
AIR CLEANER VACUUM GAGE LINE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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NOTE

For more information on how to use antiseizing tape, go to General Maintenance Instructions (page 2-424).

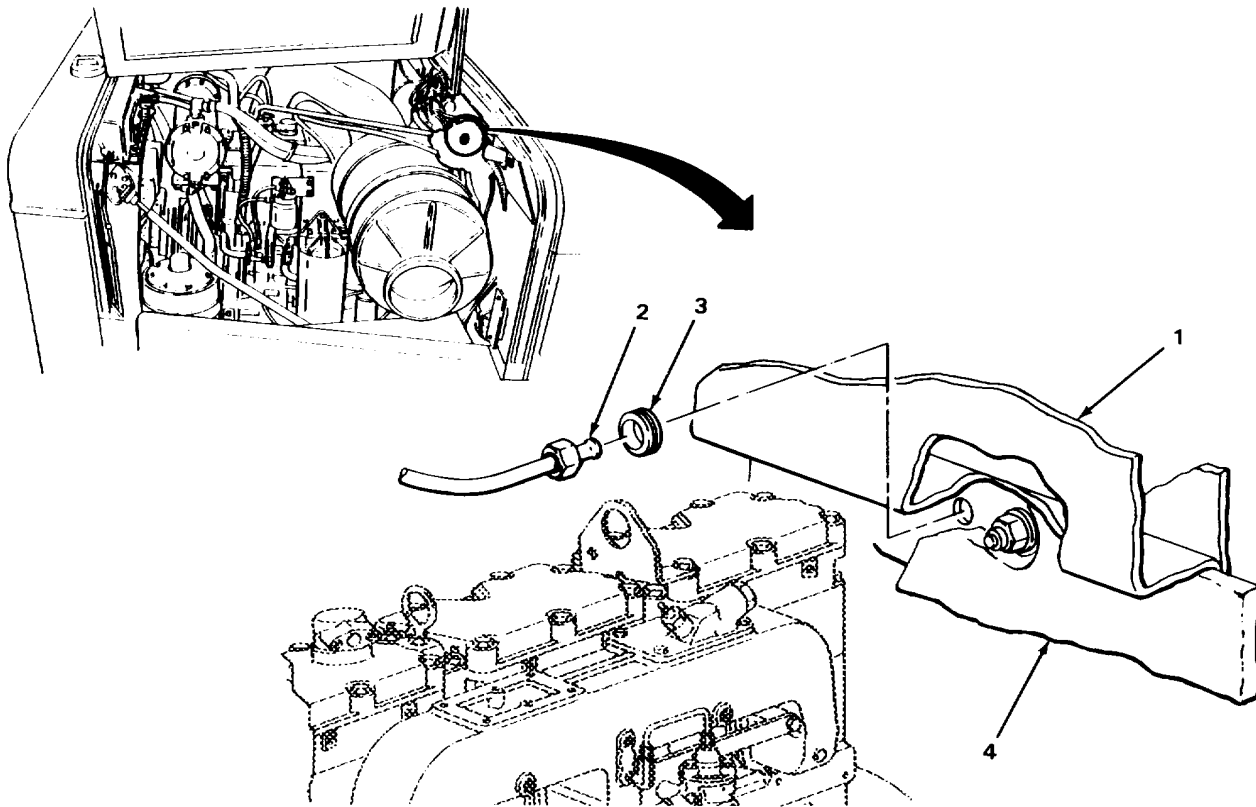
- | | | | |
|-------------------------------|---------------------------|--|--|
| 15. | Air cleaner housing (3) | Wrap pipe threads with antiseizing tape (page 2-424). | |
| 16. | Coupling (4) | Screw on and tighten using 11/2-inch open-end wrench. | |
| 17. | Straight pipe fitting (5) | Wrap pipe threads with antiseizing tape (page 2-424). | |
| 18. Coupling (4) | Straight pipe fitting (5) | Screw in and tighten using 7/16-inch and 1/2-inch open-end wrenches. | |
| 19. Straight pipe fitting (5) | Line (1) | Screw on and tighten using 7/16inch and 9/16-inch open-end wrenches. | |



TA244647

AIR CLEANER VACUUM GAGE LINE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
20. Engine side of firewall (1)	Line (2)	Put through line hole.	
21.	Grommet (3)	Put in.	
22.	Insulation (4)	Glue into place using liquid rubber adhesive.	



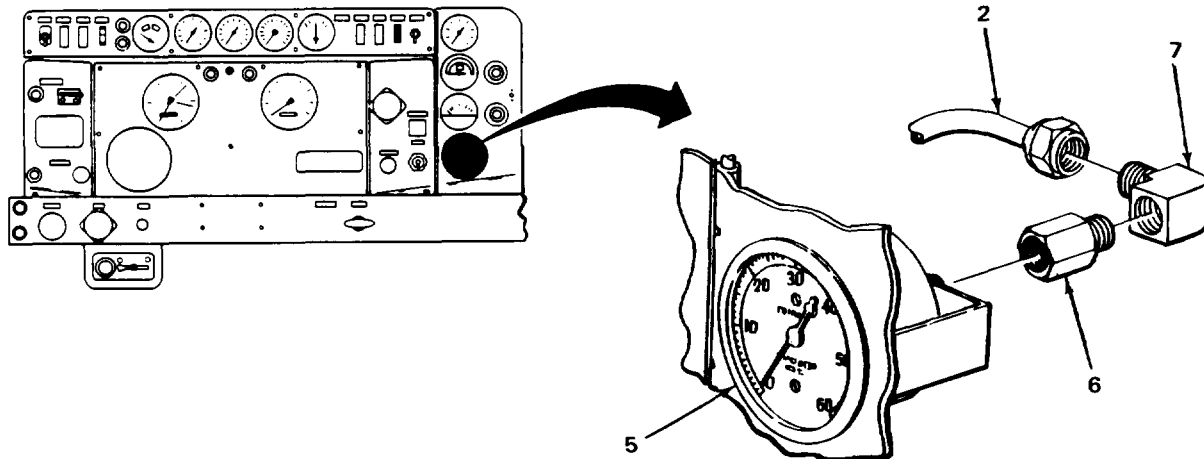
CAUTION

Use care when working behind right instrument panel to prevent breaking or disconnecting wires.

TA244648

AIR CLEANER VACUUM GAGE LINE AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
23.	Gage (5)	Wrap pipe threads with antiseizing tape (page 2-424).
24.	Adapter (6)	Screw on and tighten using 3/4-inch open-end wrench.
25.	Adapter (6)	Wrap pipe threads with antiseizing tape.
26.	Elbow (7)	Screw on and tighten using 9/16-inch and 3/4-inch open-end wrenches. Position as shown.
27. Elbow (7)	Line (2)	Screw on and tighten using two 9/16-inch open-end wrenches.



NOTE

FOLLOW-ON MAINTENANCE:

1. Close right instrument panel (page 2-424).
2. Close left side cab door (page 2-424).
3. Close left and right side hood panels (page 2-424).

TASK ENDS HERE

TA244649

AIR PRESSURE GAGE LINES AND FITTINGS

This task covers:

- a. Removal (page 2-1490)
- b. Cleaning (page 2-1493)
- c. Inspection/Replacement (page 2-1494)
- d. Installation (page 2-1494)

INITIAL SETUP

Tools

- Goggles, safety
- Gun, blow, air
- Hose, air, assembly
- Wrench, open-end, 7116-inch
- Wrench, open-end, 1/2-inch
- Wrench, open-end, 9116-inch (two required)

Personnel Required

One

Equipment Condition

Left side cab door opened (page 2-424).
Upper center instrument panel opened (page 2-424).

Materials/Parts

- Detergent, liquid, GP (item 7, appendix C)
- Tags, marker (item 21, appendix C)
- Tape, antiseizing (item 22, appendix C)

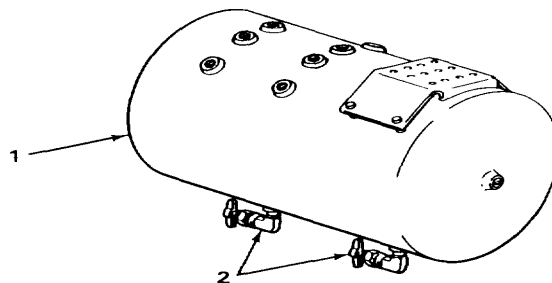
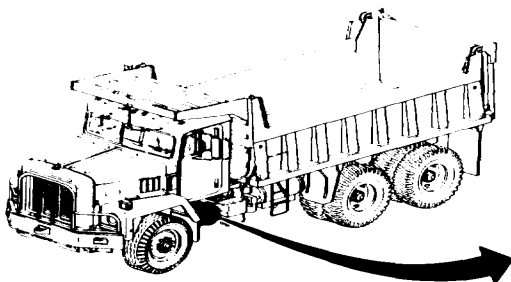
LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

Drain air from air tank system before removing lines or fittings to avoid injury to personnel from compressed air.

- | | | |
|---------------------------------|---------------------------|---|
| <p>1. Dry air reservoir (1)</p> | <p>Two draincocks (2)</p> | <p>a. Turn counterclockwise to open.
Allow compressed air to drain.</p> <p>b. Turn clockwise to close.</p> |
|---------------------------------|---------------------------|---|



TA244650

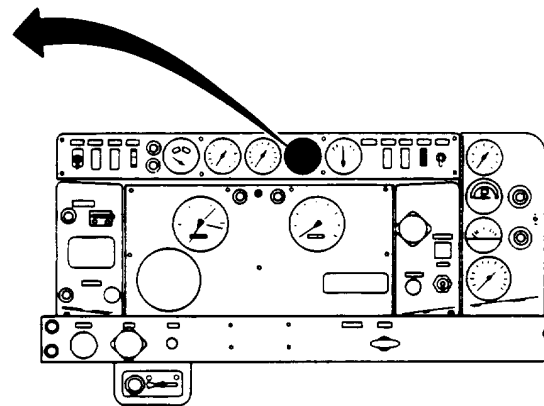
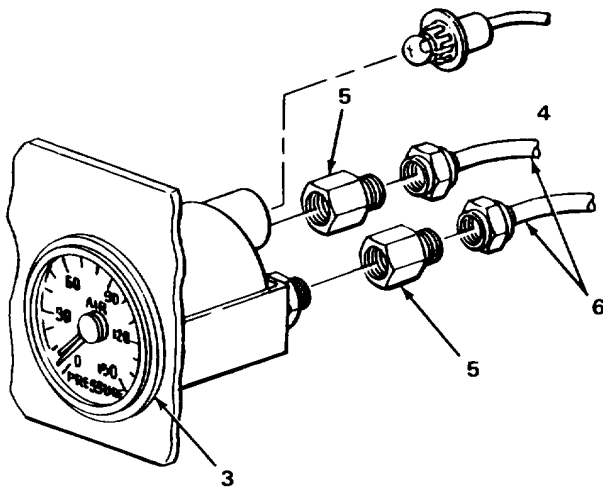
AIR PRESSURE GAGE LINES AND FITTINGS - CONTINUED

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

CAUTION

Use care when working behind upper center instrument panel to prevent breaking or disconnecting wires.

- | | | | |
|---------------------|------------------|---|--|
| 2. Gage (3) | Light socket (4) | Pull out. | |
| 3. Two adapters (5) | Two lines (6) | a. Tag (page 2-424).
b. Using 11/2-inch and 9/16-inch open-end wrenches, unscrew and take off. | |
| 4. Gage (3) | Two adapters (5) | Using 1/2-inch and 9/16-inch open-end wrenches, unscrew and take off. | |



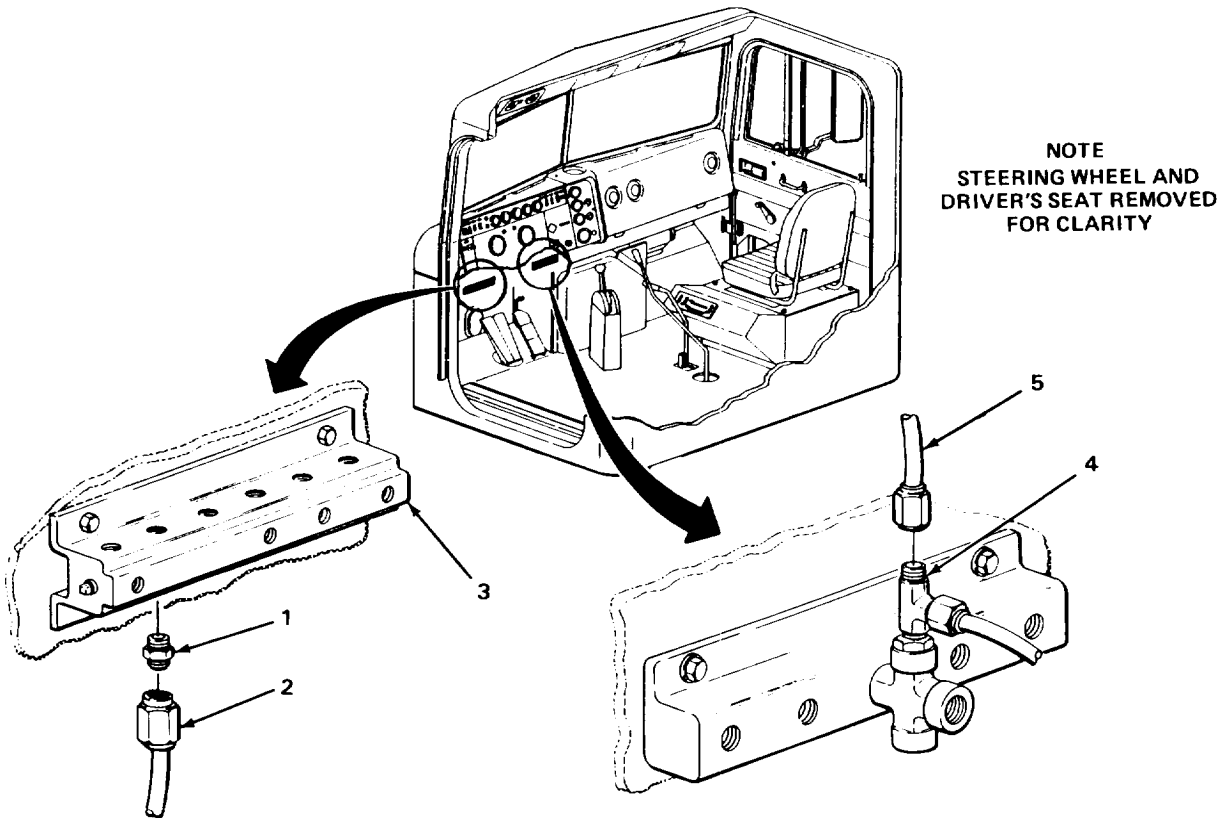
CAUTION

Use care when performing steps 5, 6, and 7 to prevent damage to air pressure switches, wires, and lines.

TA244651

AIR PRESSURE GAGE LINES AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
5. Straight pipe fitting (1)	Line (2)	Using two 9/16-inch open-end wrenches, unscrew and take off.	
6. Air manifold (3)	Straight pipe fitting (1)	Using 9/16-inch open-end wrench, unscrew and take out.	
7. T-fitting (4)	Line (5)	Using 7/16-inch and 9/16-inch open-end wrenches, unscrew and take off.	



TA244652

AIR PRESSURE GAGE LINES AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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CLEANING

WARNING

Improper cleaning methods and use of unauthorized cleaning liquids or solvents can injure personnel and cause damage to equipment. Refer to TM 9-247.

NOTE

All lines and fittings must be cleaned thoroughly.

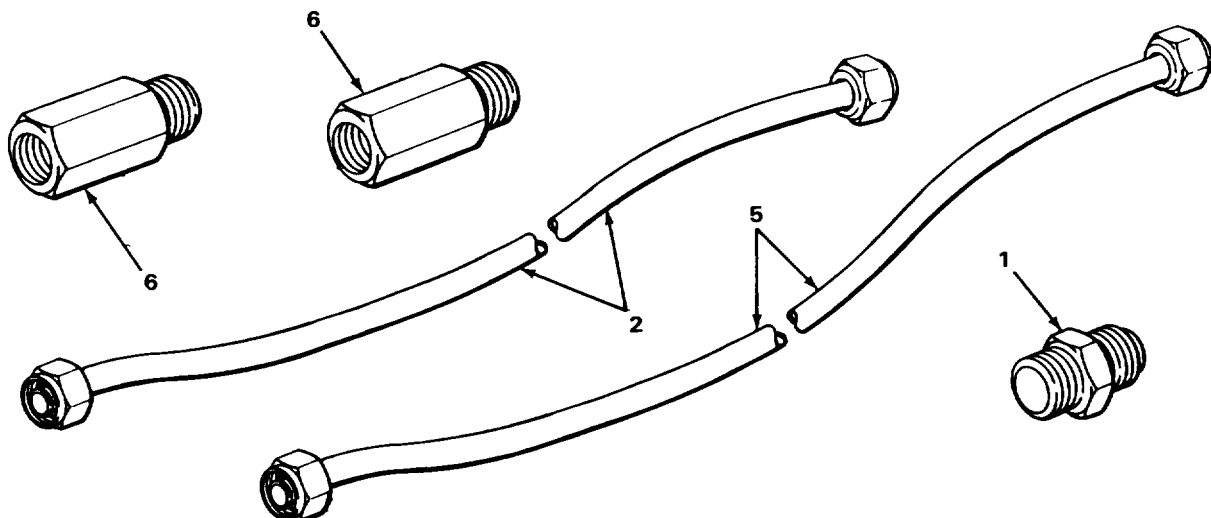
For more information on how to clean parts, go to General Maintenance Instructions (page 2-424).

- | | | |
|----|--|--|
| 8. | Lines (2 and 5) and fittings (1 and 6) | Using liquid detergent and water clean thoroughly. |
|----|--|--|

WARNING

Particles blown by compressed air are hazardous. Make certain the air stream is directed away from user and other personnel in the area. Compressed air used for cleaning purposes shall not exceed 30 psi (207 kPa). User must wear safety goggles or face shield to prevent injury to personnel.

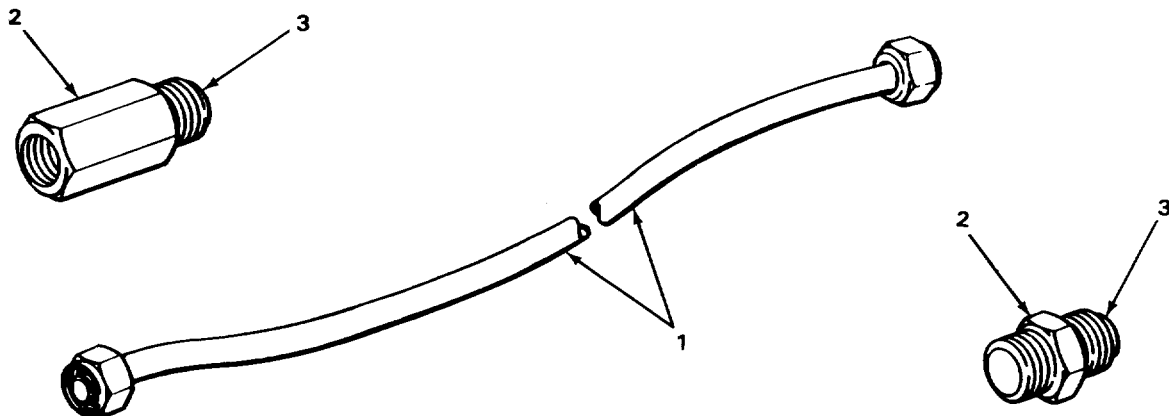
- | | | |
|----|--|--|
| 9. | Lines (2 and 5) and fittings (1 and 6) | Using air blow gun and air assembly, blow dry. |
|----|--|--|



TA244653

AIR PRESSURE GAGE LINES AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSPECTION/REPLACEMENT			
NOTE			
Replace all damaged or defective parts.			
For more information on how to inspect parts, go to General Maintenance Instructions (page 2-424).			
10.	Lines (1)		Look for cracks, kinks, or burn holes.
11. Lines (1) and fittings (2)	Flare seats (3)		Look for cracks, dents, or bends.
12.	All threaded parts		Look for damaged threads or rounded nuts.



INSTALLATION

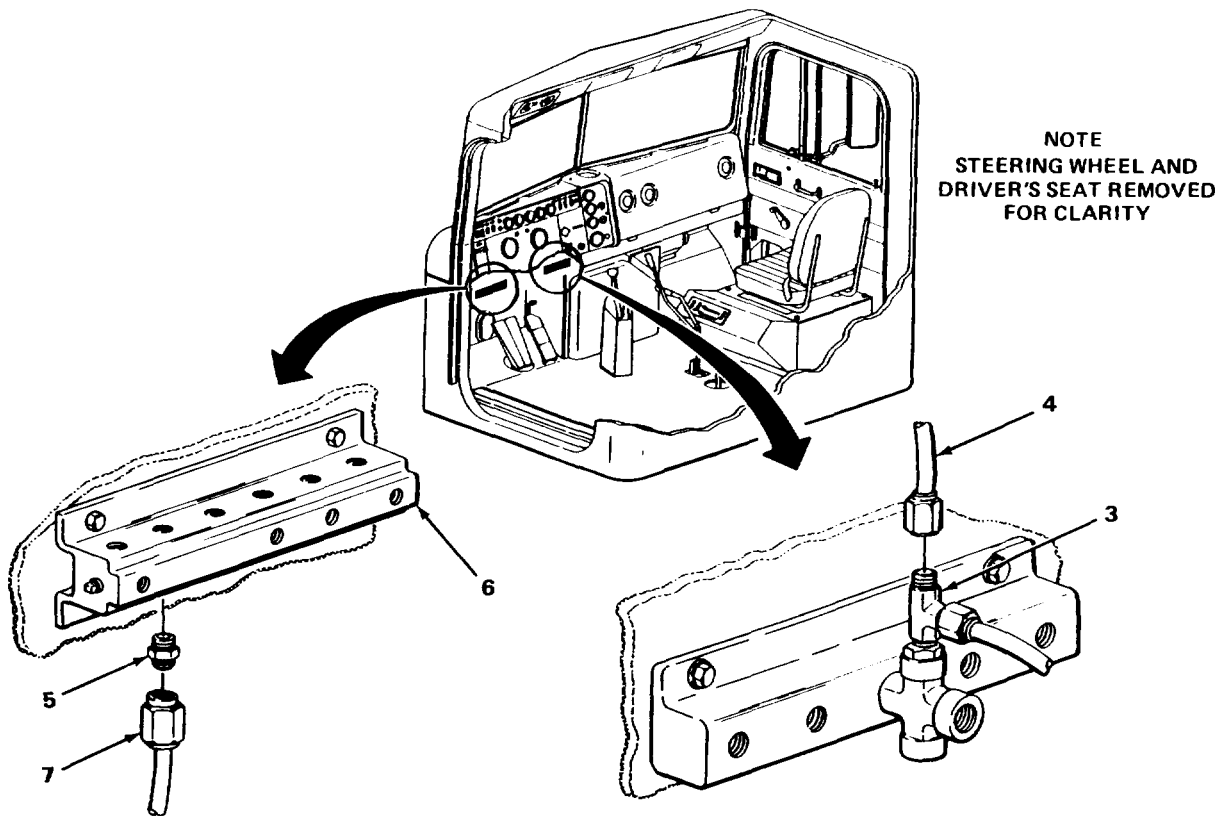
CAUTION

Use care when performing steps 13 thru 16 to prevent damage to air pressure switches, wires, and lines.

TA244654

AIR PRESSURE GAGE LINES AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
13. T-fitting (3)	Line (4)	Screw on and tighten using 7/16-inch and 9/16-inch open-end wrenches.	
14.	Straight pipe fitting (5)	Wrap pipe threads with antiseizing tape (page 2-424).	
15. Air manifold (6)	Straight pipe fitting (5)	Screw in and tighten using 9/16-inch open-end wrench.	
16. Straight pipe fitting (5)	Line (7) open-end wrenches.	Screw on and tighten using two 9/16-inch	



TA244655

AIR PRESSURE GAGE LINES AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
17.	Two adapters (1)	Wrap pipe threads with antiseizing tape (page 2-424).
<u>CAUTION</u>		
Use care when working behind upper center instrument panel to prevent breaking or disconnecting wires.		
18. Gage (2)	Two adapters (1)	Screw on and tighten using 1/2-inch and 9/16-inch open-end wrenches.
19. Two adapters (1)	Two lines (3)	a. Screw on and tighten using 1/2-inch and 9/16-inch open-end wrenches. b. Get rid of tags.
20. Gage (2)	Light socket (4)	Push in.

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NOTE

FOLLOW-ON MAINTENANCE:

1. Close upper center instrument panel (page 2-424).
2. Close left side cab door (page 2-424).

TASK ENDS HERE

TA244656

2-1496

APPENDIX A

REFERENCES

A-1. SCOPE.

This appendix lists all forms, technical bulletins, technical manuals, and miscellaneous publications referenced in this manual.

A-2. PUBLICATION INDEX.

The following indexes should be consulted frequently for latest changes or revisions and for new publications relating to material covered in this technical manual.

Consolidated Index of Army Publications and Blank Forms.....	DA Pam 310-1
The Army Maintenance Management System	DA Pam 738-750
US Army Equipment Index of Modification Work Orders	DA Pam 25-30

A-3. FORMS.

Recommended Changes to Publications and Blank Forms.....	DA Form 2028
Recommended Changes to Equipment Technical Publications	DA Form 2028-2
Equipment Inspection and Maintenance Worksheet.....	DA 2404
Preventive Maintenance Schedule and Record	DD 314
Processing and Deprocessing Record for Shipment, Storage, and Issue of Vehicles and Spare Engines.....	DD 1397
Product Quality Deficiency Report.....	SF 368

A-4. TECHNICAL MANUALS.

Administrative Storage of Equipment.....	TM 740-90-1
Inspection, Care, and Maintenance of Antifriction Bearings.....	TM 9-214
Materials Used for Cleaning, Preserving, Abrading, and Cementing Ordnance Material and Related Materials Including Chemicals	TM 9-247
Operator's Manual	TM 5-3805-254-10
Operator's Manual for Welding Theory and Application.....	TM 9-237
Operator's, Unit, Intermediate Direct Support, and Intermediate General Support Maintenance Manual for Lead-Acid Storage Batteries	TM 9-6140-200-14
Organizational and Direct Support Maintenance (Including RPSTL) for Army Oil Analysis Sampling Valve Army Oil Analysis Program Nonaeronautical Equipment.....	TM 9-2300-422-23&P
Unit Maintenance Repair Parts and Special Tools Lists	TM 5-3805-254-20P
Operator's, Unit, Direct Support and General Support Maintenance Manual for Care, Maintenance, Repair, and Inspection of Pneumatic Tires and Inner Tubes	TM 9-2610-200-14
Painting Instructions for Army Materiel.....	TM 43-0139
Procedures for Destruction of Tank-Automotive Equipment to Prevent Enemy Use.....	TM 750-244-6

A-5. TECHNICAL BULLETINS.

Elimination of Combustibles from Interiors of Metal or Plastic
Gasoline and Diesel Fuel Tanks TB 750-1047

Equipment Improvement Report and Maintenance Digest
(US Series Army Tank-Automotive Command) TB 43-0001-39

Purging, Cleaning and Coating Interior Ferrous and
Tern Sheet Vehicle Fuel Tanks TB 43-0212

Tactical Wheeled Vehicles: Repair of Frames TB 9-2300-247-40

Use of Antifreeze Solutions, Antifreeze Extender, Cleaning Compounds
and Test Kit in Engine Cooling Systems TB 750-651

A-6. MISCELLANEOUS PUBLICATIONS.

First Aid for Soldiers FM 21-11

Lubrication Order for Dump Truck.....LO 5-3805-254-12

Change 1 A-2

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 the various maintenance levels.

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

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

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

B-2. MAINTENANCE FUNCTIONS.

Maintenance functions will be limited to and defined as follows:

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

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

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

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

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

f. Calibrate. To determine and cause corrections to be made or to be adjusted on instruments or test, measuring, and diagnostic equipments used in precision 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. Remove/Install. To remove and install the same Item when required to perform service or other maintenance functions. Install may be the act of emplacing, seating, or fixing into position a spare, repair part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.

h. Replace. To remove an unserviceable item and install a serviceable counterpart in its place. "Replace" is authorized by the MAC and is shown as the third position of the SMR code.

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

B-2. MAINTENANCE FUNCTIONS - CONTINUED.

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

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

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

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

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

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

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

The symbol designations for the various maintenance 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, TMDE, and support equipment required to perform the designated function.

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

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

a. Column 1, Tool or Test Equipment Reference Code. The tool and test equipment reference code correlates with a code used in the MAC, Section II, Column 5.

b. Column 2, Maintenance Level. The lowest level of maintenance authorized to use the tool or test equipment.

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

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

d. Column 4, National/NATO Stock Number. The National or NATO Stock Number of the tool or test equipment.

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

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

a. Column 1, Reference Code . The code recorder in Column 6, Section II

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

Section II. MAINTENANCE ALLOCATION CHART

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT	(6) REMARKS	
			Unit		DS	GS			Depot
			C	O	F	H			D
01	ENGINE								
0100	Engine Assembly	Inspect Service Replace Repair Overhaul	0.5	0.2	8.0 8.0	54.0	79.0	1,3 1,4,10 1,4 1,4	
	Engine Mount	Replace			4.0			1,4	
0101	Crankcase, Block, Cylinder Head Engine Block	Inspect Repair				2.0 40.0		1,4 1,4	
	Cylinder Head	Inspect Repair Replace			1.0 7.0 10.0			1,4 1,4 1,4	
	Cylinder and Sleeve Assembly	Replace				18.0		1,4	

Change 1 B-3

Section II. MAINTENANCE ALLOCATION CHART

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT	(6) REMARKS	
			Unit		DS	GS			Depot
			C	O	F	H			D
0102	Crankshaft	Replace				6.0		1,4	B
	Crankshaft and Main Bearings	Repair				17.3		1,4	
	Main Seals	Replace				20.0		1,4	
	Vibration Damper	Replace			1.3			1,4	
	Crankshaft Groove Pulley	Replace			1.0			1,4	
0103	Flywheel Assembly	Replace			4.0			1,4	1,4,11-14
	Flywheel Housing	Replace			2.0				
	Flywheel	Replace							
0104	Torque Converter Flex Drive Plate	Replace			1.5			1,4	C
	Pistons and Connecting Rods								
0104	Connecting Rod Assembly	Replace				27.0		1,4	C
		Repair				8.0		1,4	
	Piston	Replace				8.0		1,4	
		Repair				8.0		1,4	
0105	Valves, Camshafts, and Timing System								
	Valves	Adjust			1.8			1,4	
		Replace			14.0			1,4	
	Camshaft and Bearings	Replace				27.0		1,4	
	Cam Follower	Replace			12.0			1,4	
		Repair			0.5			1,4	
	Pushrods	Replace			8.0			1,4	
	Rocker Arm	Adjust			1.0			1	
		Replace			2.5			1	
	Rocker Arm Covers	Replace			2.0			1	
	Timing Gear	Replace			3.5			1,4	

Change 1 B-4

Section II. MAINTENANCE ALLOCATION CHART

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT	(6) REMARKS
			Unit		DS	GS	Depot		
			C	O	F	H	D		
0106	Engine Lubrication System								
	Oil Pump	Replace			1.0			1	
		Repair			3.0			1,4	
	Oil Cooler	Replace			1.0			1	
		Repair			3.0			1,4	
	Oil Filter	Service		0.5				1	
		Repair		1.0				1	
	Auxiliary Oil Filter	Service		0.5				1	
		Replace		0.5				1	
		Repair		0.5				1	
	Oil Pan	Inspect	0.1						
		Replace			6.0			1,4	
	External Lines	Inspect		0.1					
		Replace		1.0				1	
Oil Breather	Replace		0.2				1		
Oil Pressure Regulator	Replace		0.3				1		
Oil Gage (Dipstick)	Replace		0.5						
0108	Manifolds								
	Intake	Replace			2.2			1	
	Exhaust	Replace			2.8			1	
0109	Accessory Driving Mechanisms								
	Accessory Drive	Replace			3.0			1,4	
		Repair				5.2		1,4	
	Pulley Fan and Water	Repair			1.0			1,4	
0112	Engine Brake								
	Engine Compression	Replace			2.0			1,4	
	Brake	Repair			4.2			1,4	
	Controls	Adjust			1.0			1	
		Replace			2.0			1	

Change 1 B-5

Section II. MAINTENANCE ALLOCATION CHART

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT	(6) REMARKS
			Unit		DS	GS	Depot		
			C	O	F	H	D		
03	FUEL SYSTEM								
0301	Carburetor, Fuel Injector	Test Replace Repair			1.0 1.0		1.0	8,9 1 8,9	
0302	Fuel Pumps Pump Assembly	Test Adjust Replace Calibrate Repair			1.0 1.0 2.0		1.0 2.0	8,9 1 1,4 8,9 8,9	
	Fuel Pump Filter	Service Replace		1.0 0.5				1 1	
	Aneroid Control	Replace Repair			1.2		2.5	1 8,9	
0304	Air Cleaner	Service Replace Repair		1.0 0.5 1.0				1,2 1 1	D
0305	Supercharger, Blower, Turbocharger, or Altitude Compensator Turbocharger	Inspect Replace Repair	0.1			3.0 2.0		1 1,4	
	Air Inlet	Inspect Replace		0.1 0.3				1	
0306	Tanks, Lines, Fittings, Headers Fuel Tank	Inspect Replace Repair	0.1	1.0		3.0		1 1,6,7	
	Fuel Lines	Inspect Replace	0.1			4.0		1	
	Fuel Solenoid	Replace Repair				1.5 1.0		1 1	
0309	Fuel Filters	Service Replace	0.1 0.5					1	

Section II. MAINTENANCE ALLOCATION CHART

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT	(6) REMARKS
			Unit		DS	GS	Depot		
			C	O	F	H	D		
0311	Engine Starting Aids	Test		0.5				1,2	
	Glow Plug and Preheater	Replace		1.5				1	
	Primer Pumps	Replace		1.0				1	
0312	Accelerator, Throttle, or Choke Controls	Replace		0.5				1	
	Accelerator Pedal and Linkage	Repair		0.5				1	
	Throttle Control and Linkage	Adjust		0.2				1	
		Replace		1.0				1	
04	EXHAUST SYSTEM								
0401	Muffler and Pipes	Inspect	0.1						
		Replace		2.0				1	
	Exhaust Pipe Rain Cap	Inspect	0.1						
		Replace		0.5				1	
	Exhaust Diverter	Inspect	0.1						
		Replace		2.0				1	
05	COOLING SYSTEM								
0501	Radiator, Evaporative Cooler, or Heat Exchang- er Radiator	Inspect	0.2						
		Test		0.2				3	
		Service		0.5				1,3	
		Replace			2.0			1,4	
	Draincocks Shutter Assembly	Repair				3.0		1,6,7	
		Replace		0.2				1	
		Replace				1.5		1	
		Repair				2.5		1	
0502	Cowling, Deflectors, Air Ducts, Shrouds, Etc. Fan Shroud	Replace			1.0			1	

Change 1 B-7

Section II. MAINTENANCE ALLOCATION CHART

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT	(6) REMARKS
			Unit		DS	GS	Depot		
			C	O	F	H	D		
0503	Water Manifold, Headers, Thermostats, and Hous- ing Gaskets Lines, Fittings, and Hoses	Inspect	0.1						
		Replace		2.5				1	
		Replace		1.0				1,2	
0504	Water Pump	Replace			0.5			1,4	
		Inspect	0.1						
		Replace		2.5				1,4	
0504	Idle Pulley	Adjust		0.2				1	
		Replace			1.0			1	
		Repair			1.0			1,4	
0505	Water Pump Belt	Adjust		0.2				1	
		Replace			1.0			1	
		Service		0.5				1,4	
0505	Fan Assembly	Replace			1.0			1,4	
		Repair		1.5				1,4	
		Inspect	0.1						
0505	Fan Drivebelts	Adjust		0.5				1	
		Replace		1.0				1	
		Replace		0.3				1	
0508	Water Filter	Replace		0.3				1	
06	ELECTRICAL SYSTEM								
0601	Generator, Alternator Alternator and Regulator	Inspect	0.2						
		Test		0.2				1,2	
		Adjust		0.2				1,2	
0601	Drivebelts	Replace		1.0				1,2	
		Repair			1.5			8,9	
		Inspect	0.1						
0601	Alternator Pulley	Adjust		0.2				1	
		Replace		0.3				1	
		Replace		1.0				1	

Change 1 B-8

Section II. MAINTENANCE ALLOCATION CHART

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT	(6) REMARKS
			Unit		DS	GS	Depot		
			C	O	F	H	D		
0603	Starting Motor Starter Motor	Test			0.2			8,9	
		Replace		0.5				1	
		Repair			1.3			8,9	
	Starter Motor Solenoid	Test		0.2				1,3	
		Replace			0.5			8	
0607	Instrument or Engine Control Panel	Inspect	0.1						
		Test		0.2				1,3	
		Replace		0.5				1	
	Instrument Panel Circuit Breakers	Test		0.2				1,3	
		Replace		0.5				1	
	Instrument Panel Lamps and Fuses	Inspect	0.1						
		Replace		0.5				1	
		Test		0.2				1,3	
Instrument Panel Wiring	Replace		3.5				1		
	Repair		1.0				1		
0608	Miscellaneous Items Turn Signal Switch	Replace		0.5				1	
		Test		0.2				1,3	
	Circuit Breakers and Switches	Replace		0.5				1	
		Replace		0.5				1	
		Replace		0.5				1	
Fuse Block Transmission Indicator	Replace		0.5				1		
	Replace		1.0				1		
0609	Lights Headlights	Inspect	0.1						
		Adjust		0.3				1	
		Replace		1.0				1	
	Tail and Signal Lights	Inspect	0.1						
		Replace		1.0				1	
		Repair		0.5				1	F
	Lamps Domelight	Replace		0.5				1	
Inspect		0.1							
	Replace		0.5				1		

Change 1 B-9

Section II. MAINTENANCE ALLOCATION CHART

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT	(6) REMARKS
			Unit		DS	GS	Depot		
			C	O	F	H	D		
0609	Lights - Continued Marker Lights	Inspect	0.1						
		Replace		0.5				1	
		Repair		0.6				1	
0610	Sending Units and Warn- ing Switches Warning Buzzer	Inspect	0.1						
		Test		0.3				1,3	
		Replace		0.3				1	
		Oil Pressure Switch		Replace	0.8				1
		Fuel Level		Replace	0.4				1
		Water Temperature Backup		Replace	0.2				1
0611	Horn, Siren Horn Relay Alarm Bell	Replace		0.6				1	
		Replace		0.3				1	
		Replace		0.5				1	
0612	Batteries, Storage	Inspect	0.1						
		Test		0.2				1,3	
		Service		0.4					
		Replace		0.5				1	
		Cables		Replace	0.3				1
0612	Battery Box	Replace		1.0				1	
		Repair		1.0				1	
0613	Hull or Chassis Wiring Harness Body and Chassis Wiring Engine Wiring Reverse Polarity Protection Transmission Wiring	Replace			16.0			1,4	
		Repair		6.0				1,2	
		Replace			4.0			1,4	
		Repair		2.0				1,2	
		Replace		0.5				1,2	
		Replace			2.0			1,4	
	Repair		2.5				1,4		

Change 1 B-10

Section II. MAINTENANCE ALLOCATION CHART

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT	(6) REMARKS
			Unit		DS	GS	Depot		
			C	O	F	H	D		
07	TRANSMISSION								
0700	Transmission Assembly Transmission Assembly Auxiliary	Inspect Service Replace Repair	0.2	0.2	3.0	3.0	1 1,4 1,4	A	
0701	Transmission Shafts Auxiliary Transmission Gear Shafts Auxiliary Transmission Bearings/Seals	Replace Replace				6.0 3.0	1,4 1,4		
0704	Transmission Top Cover Assembly Auxiliary Transmission Cover/Forks Auxiliary Transmission Linkage/Control	Replace Repair Replace			1.0 1.0 0.6		1 1,4 1		
0705	Transmission Shifting Components Main Transmission Shifter Assembly Main Transmission Shifter Cable	Replace Repair Replace		2.0 2.0 1.0			1 1 1		
0708	Torque Converter or Fluid Coupling Torque Converter Lockup Clutch	Replace Repair Replace Repair				2.5 2.0 6.0 1.0	1,4,11-16 1,4,11-16 1,4,11-16 1,4,11-16		
0710	Transmission Assembly and Associated Parts Main Transmission	Inspect Service Replace Repair Overhaul	0.3	0.2	5.0	6.0	1,3 1,4,11,12 1,4,11-29 1,4,11-29	A	
Change 1 B-11									

Section II. MAINTENANCE ALLOCATION CHART

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT	(6) REMARKS	
			Unit		DS	GS			Depot
			C	O	F	H			D
0713	Intermediate Clutch								
	Main Transmission Input Shaft and Forward Clutch	Replace				4.0		1,4	
		Repair				5.0		1,4,25,26	
	Main Transmission Third Clutch, Center Support, and Second Clutch	Replace				4.0		1,4	
		Repair				5.0		1,4	
	Main Transmission Fourth Clutch	Replace				3.0		1	
		Repair				4.0		1,4,25,27	
	Main Transmission First Reverse Clutch	Replace				4.0		1,4	
		Repair				5.0		1,4	
0714	Servo Unit								
	Main Transmission Control Valve	Replace				2.0		1,4	
		Repair				2.0		1,4	
	Main Transmission Modulator Valve	Replace				2.0		1	
		Repair				4.0		1	
0721	Coolers, Pumps, Motors								
	Oil Cooler	Replace				2.0		1	
		Repair				4.0		1	
	Main Transmission Oil Filters, Internal/Remote	Replace	2.0					1	
	Main Transmission Oil Lines/Fittings	Replace				1.0		1	
09	PROPELLER, PROPELLER SHAFTS, UNIVERSAL JOINTS, COUPLER, AND CLAMP ASSEMBLY								
0900	Propeller Shafts	Inspect	0.1						
		Service		0.3				2	
		Replace			2.5			1,4	
	Universal Joint	Inspect	0.1						
	Service			0.3				2	
	Replace				2.5			1,4	
	Flange/Slingers	Replace				2.5		1,4	

Change 1 B-12

Section II. MAINTENANCE ALLOCATION CHART

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT	(6) REMARKS	
			Unit		DS	GS			Depot
			C	O	F	H			D
0900	Propeller Shafts - Continued Yokes and Slip Joints	Replace			2.5			1,4	
10	FRONT AXLE								
1000	Front Axle Assembly	Replace			5.0				1,4
1004	Steering and Leaning Wheel Mechanism Spindles and Knuckles	Replace Repair					3.5 8.0		1,4 1,4
	Kingpins and Bushings Steering Arms	Replace Replace			1.0		3.5		1,4 1,4
11	REAR AXLE								
1100	Rear Axle Assembly	Service Replace Repair		0.5	5.0				1,2 1,4 1,4
	Axle Shafts Axle Breather	Replace Service Replace			1.5		7.5		1,4 1,2
	Plugs and Covers	Replace		0.2 0.3	0.5				1 1,4
	Equalizer Beams Equalizer Beams Bushings	Replace Replace Replace					16.0 3.0		1,4 1,4 1,4
1101	Housing, Beam, Housing Covers, Plugs, Seals, Etc. Axle Housings	Replace			10.0				1,4
1102	Differential Front and Rear Differential Interaxle Differential	Replace Repair Service Replace Repair		0.4	8.0 2.0 6.5 1.5				1,4 1,4 2 1,4 1,4

Change 1 B-13

Section II. MAINTENANCE ALLOCATION CHART

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT	(6) REMARKS
			Unit		DS	GS	Depot		
			C	O	F	H	D		
1102	Differential - Continued								
	Interaxle Differential	Adjust			0.8			1	
	Air Chamber	Replace			1.5			1	
		Repair			1.5			1	
	Interaxle Differential Lever Control	Replace		2.0				1	
12	BRAKES								
1201	Handbrakes Parking Brake Housing	Replace		4.5				1,2	
1202	Service Brakes Brakeshoes	Inspect		0.5					
		Adjust		0.5				1	
		Replace		3.5				1,2	
	Brake Camshaft	Replace		3.0				1	
	Slack Adjuster	Adjust		0.3				1	
		Replace		1.5				1	
1206	Mechanical Brake Sys- tem Brake Pedal	Replace		0.3				1	
1208	Airbrake System Alcohol Evaporator	Inspect	0.1						
		Service		0.3					
		Replace		1.0				1	
	Air Dryer	Inspect		0.2					
		Service		0.4				1	
		Replace		0.6				1	
	Brake Chamber	Inspect	0.1						
		Replace		1.5				1	
	Treadle Valve	Test	0.1						
		Replace		1.5				1	
	Parking Brake Control Valve	Replace		0.5				1	
	Front Brake Limiting Control Valve	Replace		0.5				1	
			Change 1 B-14						

Section II. MAINTENANCE ALLOCATION CHART

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT	(6) REMARKS
			Unit		DS	GS	Depot		
			C	O	F	H	D		
1208	Airbrake System - Continued Lines and Fittings Quick-release Valve Double Check Valve Relay Valve Reservoir	Replace		1.0			1		
		Replace		0.5			1		
		Replace		0.4			1		
		Replace		0.5			1		
		Inspect	0.1						
		Service Replace	0.1 1.1		1				
1209	Air Compressor Assembly Governor Assembly	Replace		2.5			1,4		
		Repair		1.5			1,4		
		Adjust		0.3			1		
		Replace		1.0			1		
		Repair		2.0			1,4		
13	WHEELS AND TRACKS								
1311	Wheel Assembly Wheel Alignment Adjust Front Hub Assembly Rear Hub Assembly Bearings and Seal Service Brakedrum Disc Wheel Assembly	Inspect		0.8				3	
		Adjust		0.5				1,3	
		Replace		2.0				1,3	
		Repair				3.0		1,4	
		Replace		2.0				1,3	
		Repair				3.5		1,4	
		Service		1.5				3	
		Replace		1.5				1,3	
		Replace		0.6				1,2	
		Repair				1.0		4	
1313	Tires, Tubes, Tire Chains Tire and Tube Assembly	Replace		0.2				2	
		Repair		1.0				1,2	
		Inspect	0.5						
	Tire and Tube Assembly	Replace		2.0				2	
		Repair				1.3		2	J

Section II. MAINTENANCE ALLOCATION CHART

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT	(6) REMARKS
			Unit		DS	GS	Depot		
			C	O	F	H	D		
14	STEERING								
1401	Mechanical Steering Gear Assembly Steering Wheel Tie-rod and Drag Link	Replace Inspect Adjust Replace Repair	0.1		1.0			1,4 1,3 1,4 1,4	
	Steering Column	Service Replace Repair Replace		0.2	4.0 3.0 3.5 0.8			1,4 2 1,4 1,4 1,4	
1407	Power Steering Gear Assembly	Inspect Service Adjust Replace Repair	0.2	0.2	1.5 3.0		5.0	2 1 1,4 1,4	A
1410	Hydraulic Pump or Fluid Motor Assembly Hydraulic Pump	Replace Repair			0.8		2.5	1,4 1,4	
1411	Hoses, Lines, Fittings Hydraulic Hose Assemblies Lines and Fittings	Replace Replace		0.8 0.5				1 1	
1413	Tanks, Reservoirs Power Steering Oil Reservoir	Inspect Replace Repair	0.1	0.2 1.0				1,2 1,2	

Change 1 B-16

Section II. MAINTENANCE ALLOCATION CHART

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT	(6) REMARKS
			Unit		DS	GS	Depot		
			C	O	F	H	D		
15	FRAME, TOWING AT-TACHMENTS, DRAW-BARS, AND ARTICULA-TION SYSTEMS								
1501	Frame Assembly	Inspect	0.1						
	Front Bumper	Repair Replace			2.0	8.0	1,4 1,4	K	
1503	Pintles and Towing Attachments								
	Front Towing Eye	Replace	0.1	2.0			1,3		
	Rear Pintle	Inspect Replace		1.0			1,3		
16	SPRINGS AND SHOCK ABSORBERS								
1601	Springs								
	Front Spring	Inspect Replace	0.1			3.0	1,4		
	Rear Spring	Inspect Replace	0.1			6.0	1,4		
1605	Torque, Radius, and Stabilizer Rods								
	Aligning Rod Assembly	Replace Repair			2.0 7.0		1,4 1,4		
18	BODY, CAB, HOOD, AND HULL								
1801	Body, Cab, Hood, and Hull Assemblies								
	Cab Assembly	Replace Repair			8.0 6.0		1,4 1,4	K	
	Hood	Replace		1.5			1,3		
	Grille	Replace			2.0		1,4		

Change 1 B-17

Section II. MAINTENANCE ALLOCATION CHART

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT	(6) REMARKS
			Unit		DS	GS	Depot		
			C	O	F	H	D		
1801	Body, Cab, Hood, and Hull Assemblies - Con- tinued								
	Door Assemblies	Replace			2.0			1,4	
		Repair			3.0			1,4	
	Mudflaps	Replace		1.5				1	
1802	Fenders, Running Boards with Mounting and At- taching Parts, Outriggers, Windshield, Glass, Etc.								
	Fenders	Replace			1.5			1,4	K
		Repair			1.0			1,4,5	
	Splashguards	Replace			1.5			1	
	Windshield and Glass	Inspect	0.1						
	Replace			2.5			1		
	Door and Rear Glass	Inspect	0.1						
		Replace			1.0			1	
1805	Floors, Subfloors, and Related Components								
	Floor and Related Components	Replace			1.0			1	
1806	Upholstery, Seats, and Carpets								
	Seats	Inspect	0.1						
		Replace		0.5				1	
		Repair			1.0			1,4	
	Driver's Seat Shock Absorber	Replace			0.5			1	
	Seatbelt	Inspect	0.1						
		Replace		0.3				1	
1810	Cargo Body								
	Dump Body	Replace			2.5			1,4,6,7	K
		Repair			2.0			6,7	
Tailgate	Replace			1.5			1,4		

Change 1 B-18

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT	(6) REMARKS
			C	O	F	H	D		
1810	<i>Cargo Body - Continued</i>								
	Hinges, Pins, and Locks	Replace			2.0		1		
	Bracket and Frame	Replace				3.0	1,4		
	Control Levers and Linkage	Replace		0.5			1		
20	HOIST, WINCH, CAP-STAN, WINDLASS, POWER CONTROL UNIT, AND POWER TAKE-OFF								
2004	<i>Power Take-off Assembly</i>	Inspect Replace Repair	0.1		2.0	1.0	1 1,4		
	Lever Control	Replace			4.0		1		
	Power Take-off Shaft	Replace			2.0		1		
	Shifter Cover Assembly	Replace Repair			6.0 1.0		1 1,4		
22	BODY, CHASSIS, AND HULL ACCESSORY ITEMS								
2202	<i>Accessory Items</i>								
	Rearview Mirror Assembly	Inspect Replace	0.1	0.2	1				
	Air Horn	Replace		0.5	1				
	Windshield Wiper Motor	Replace		1.0	1				
	Wiper Arms and Blades	Adjust Replace		0.2 0.2	1 1				
	Windshield Washer Assembly	Inspect Replace	0.1	0.5			1	I	
	Heater and Defroster Fan Motor	Replace		0.5			1		
	Heater Core	Replace Repair			0.5 1.0		1 1,4		
		Change 1 B-19							

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT	(6) REMARKS
			C	O	F	H	D		
2202	<i>Accessory Items - Con- tinued</i>								
	Heater Hoses	Inspect Replace		0.3 1.2				1	
	Reflectors	Replace		0.3				1	
2210	<i>Data Plates and Instruction Holders</i>	Inspect Replace	0.1	0.3				1,3	
24	HYDRAULIC AND FLUID SYSTEMS								
2401	<i>Pump and Motor</i>								
	Pump Assembly	Replace Repair			1.0 1.5			1,4 1,4	
2402	<i>Manifold and/or Control Valves</i>								
	Hydraulic Control Valve	Adjust Replace Repair			0.5 1.0 1.5			1 1 1,4	
2403	<i>Hydraulic Controls and/or Manual Controls</i>								
	Control Lever and Linkage	Replace Repair		0.5 0.5				1 1	
2406	<i>Strainers, Filters, Lines, and Fittings, Etc.</i>								
	Hydraulic Filter	Inspect Replace	0.1	0.5				1,2	
	Hydraulic Lines and Fittings	Replace		0.5				1,2	
2407	<i>Hydraulic Cylinder</i>								
	Hydraulic Lift Cylinder	Inspect Replace Repair	0.1		2.0 2.0			1,4 1,4	
		Change 1 B-20							

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT	(6) REMARKS
			C	O	F	H	D		
2408	Liquid Tanks or Reservoirs								
	Hydraulic Reservoir	Inspect Service Replace	0.1	2.0	2.0			1,4	
47	GAGES (NONELECTRICAL), WEIGHING AND MEASURING DEVICES								
4701	Instruments								
	Speedometer	Replace		1.0				1	
	Tachometer	Replace		1.0				1	
	Tachometer Drive	Replace Repair			2.0 1.0			1 1	
	Drive Cables	Replace		0.5				1	
4702	Gages, Mountings, Lines, and Fittings								
	Gages	Inspect Replace	0.1	1.0				1	

Section III. TOOL AND TEST EQUIPMENT REQUIREMENTS

(1) TOOL OR TEST EQUIPMENT REF CODE	(2) MAINTENANCE LEVEL	(3) NOMENCLATURE	(4) NATIONAL/NATO STOCK NUMBER	(5) TOOL NUMBER
1	O,F,H	Tool Kit, General Mechanic's, Automotive	5180-00-177-7033	
2	O	Shop Equipment, Automotive Maintenance and Repair: Organizational Maintenance Common No. 1, Less Power	4910-00 754-0654	

Section III. TOOL AND TEST EQUIPMENT REQUIREMENTS - CONTINUED

(1) TOOL OR TEST EQUIPMENT REF CODE	(2) MAINTENANCE LEVEL	(3) NOMENCLATURE	(4) NATIONAL/NATO STOCK NUMBER	(5) TOOL NUMBER
3	O	Shop Equipment, Automotive Maintenance and Repair: Organizational Maintenance Common No. 2, Less Power	4910-00-754-0650	
4	F,H	Shop Equipment, Automotive Maintenance and Repair: Field Maintenance, Basic Less Power	4910-00-705-0705	
5	F,H	Tool Kit, Body and Fender Repair	5180-00-754-0643	
6	F,H	Tool Kit, Welder's	5180-00-754-0661	
7	F	Shop Equipment, Welding, Field Maintenance	4940-00-357-7260	
8	F,H	Tool Kit, Automotive Fuel and Electrical System Repair	5180-00-754-0655	
9	F,H	Shop Equipment, Fuel and Electrical System Engine: Field Maintenance, Basic Less Power	4940-00-754-0714	
10	H	Lifting Eye		
11	H	Fixture, Holding	5120-01-115-1165	J-24310
12	H	Stand (1), Maintenance, Automotive Engine	4910-00-808-3372	J29109
13	H	Lifting Bracket, Fly	5120-01-116-6049	J-24365
14	H	Pin, Straight, Threaded	5315-01-158-3973	J24315-2
15	H	Puller, Bearing, Pump	5120-01-115-1164	J-25007
16	H	Installer, Spring, Ro	5120-01-115-1158	J-24218-2
17	H	Pin, Straight, Threaded	5315-01-158-3942	J24315-3
18	H	Bracket, Lifting	5120-01-115-1157	J-24196
19	H	Lifting Bracket, Cen	5120-01-116-6048	J-241
20	H	Plate, Pressure, Comp	4910-01-158-3972	J24208-3
21	H	Installer, Lever, Sea	5120-01-115-1161	J-26282
22	H	Compressor, Sprint	5120-01-048-2160	J24219
23	H	Installer, Bearing, N	5120-01-115-1160	J-24197
24	H	Handle, Drive	5120-00-677-2259	J8092
25	H	Compressor, Spring	5120-01-048-2159	J24204-3
Change 1 B-22				

Section III. TOOL AND TEST EQUIPMENT REQUIREMENTS

(1) TOOL OR TEST EQUIPMENT REF CODE	(2) MAINTENANCE LEVEL	(3) NOMENCLATURE	(4) NATIONAL/NATO STOCK NUMBER	(5) TOOL NUMBER
26	H	Compressor, Ring	5120-01-048-3130	J24204-1
27	H	Bar and Stud Assembly	5120-01-048-2159	J24204-2
28	H	Installer, Lockring	5120-01-054-4050	J24453
29	H	Installer, Orifice, P	5120-01-054-4053	J24369

Section IV. REMARKS

REFERENCE CODE	REMARKS
A	Inspection limited to visual checks for leaks, fluid levels, loose components, and listening for unusual noises.
B	Overhaul of crankshaft includes metalizing, grinding, and alining.
C	Replacement of connecting rod includes alinement.
D	Repair limited to removing and installing new gasket.
E	Adjust includes rotating adjustment cap.
F	Repair of taillights and signal lights limited to lens, gasket, and lamp replacement.
G	Item requires special handling or condemnation procedures. Refer to TM 9-6140-200-14 for lead-acid storage battery procedures.
H	Repair of wiring harness limited to terminal and hardware replacement.
I	Inspection limited to checking fluid level.
J	Refer to TM 9-2610-200-14 for tire and tube repair.
K	Repair consists of welding, straightening, and reconditioning the damaged part or parts. Refer to TB 9-2300-247-40.

Change 1 B-23/(B-24 blank)

APPENDIX C**EXPENDABLE SUPPLIES AND MATERIALS LIST
Section I. INTRODUCTION****C-1. SCOPE.**

This appendix lists expendable supplies and materials you will need to operate and maintain the F-5070 Dump Truck.

C-2. EXPLANATION OF COLUMNS.

a. Column 1, Item number. This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the material.

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

C - Operator/Crew

O - Organizational

c. Column 3, National Stock Number. This national stock number is assigned to an item. Use it to request or requisition the item.

d. Column 4, Description. Indicates Federal item name and a description if necessary. 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 measure used in performing actual maintenance functions. This measure is expressed by a two-character alphabetical abbreviation.

Section II. EXPENDABLE SUPPLIES AND MATERIALS LIST

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION PART NO. AND FSCM	(5) UNIT OF MEAS.
1	O	8040-00-893-1882	Adhesive, Liquid Rubber, MMM-A-1617, Type 11, 3-ounce (89-ml) Can	oz
2	O	5350-00-221-0872	Crocus Cloth, 50-Sheet Package P-C-458 P/N A-A-1206 (81348)	sh
3	O	5350-00-192-5050	Cloth, Emery, Silicone, Carbide, 50-Sheet Package P-C-458 (58536)	sh
4	O	9150-00-398-4170	Compound, Antiseizing, Grease, Special Purpose and Lubricant, 1-Pound (454-Gram) Can (07644)	lb
5	O	6850-00-935-1082	Compound, Cleaning, Trichloroethylene (MIL-C-81302) 55-gal (208-Liter) Drum	gl
6	O	6850-00-181-7933	Coolant, Antifreeze, Permanent, Ethylene Glycol, Inhibited, MIL-A-46153 (81348)	gl
	O	6850-00-181-7940	5-Gallon (18.93-Liter) 55-Gallon (208-Liter) Drum	gl
7	O	7930-00-282-9699	Detergent, Liquid, GP, WS 1-Gallon (3.785-Liter) Can, MIL-D-16791 (81349)	gl
8	O	9150-00-698-2382	Fluid, Transmission, Automatic (AFT) A-A Service Protection 1-Quart (0.946-Liter) Can (24617)	qt
9	O	3439-00-255-9935	Flux, Rosin Base OF506 (81348)	lb
10	O	8150-00-190-0904	Grease, GAA, Automotive and Artillery (MIL-G-10924) (81349) 1-Pound (454-Gram) Can	lb
11	O	6810-00-238-8119	Naptha, Alipnat 1GL(81348)	gl
12	O	9140-00-286-5294	Oil, Fuel, Diesel, DF-2 Regular (81348) VV-F-800 55-Gallon (208-Liter Drum)	gl
C-2				

Section II. EXPENDABLE SUPPLIES AND MATERIALS LIST

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION PART NO. AND FSCM	(5) UNIT OF MEAS.
13	O	9150-00-270-0067	Oil, Gear, GO 85W/140 (MIL-L-2150) (81348) 5-Gallon Can (18.93-Liter) Can 55-Gallon Drum (208-Liter) Drum	gl gl
14	O	9150-00-186-6181 9150-00-188-9858 9150-00-188-9859 9150-00-189-6792	Oil, Lubricating, OE/HDO/30, MIL-L-2104C (81349) 1-Quart (0.946-Liter) Can Type 1 5-Gallon (18.93-Liter) Can 55-Gallon (208-Liter) Drum (16-Gage) 55-Gallon (208-Liter) Drum (18-Gage) (15958)	qt gl gl gl
15	C	7920-00205-1711	Rags, Wiping, 50-Pound (22.7-kg) Bale P/N-A-A-531 (58536)	bl
16	O	8040-00-225-4548	Sealer, Silicone Rubber 12-ounce (355-mi) Package (81349)	oz
17	O	6810-00-264-6618	Soda, bicarbonate O-S-576 (81348)	lb
18	O	3439-00-555-4629	Solder, rosin core, 1132-inch Diameter, 1-Pound (454-Gram) Spool (81348)	lb
19	O	6850-00-664-5285 6850-00-281-1985 6850-00-285-0811	Solvent, Drycleaning, Type II, P-D-680 (81348) 1-Quart (0.946-Liter) Can 1-Gallon (3.785-Liter) Can 55-Gallon (208-Liter) Drum	qt gl gl
20	O	5975-00-570-9598	Strap, Tiedown, Self-Locking, Type I, Class 1, 5-Inches (13-cm) Long (96906)	ea
21	O	9950-00-537-3534	Tags, Marker MIL-T-12755 Box of 50, (81349)	ea
22	O	8030-00-889-3535	Tape, Antiseizing, Pipe-Joint Sealer 1/4-inch (0.4-cm) Wide, 54-Feet (16.5-m) Long (71643) 1/2-inch (1.3-cm) Wide, 22-Feet (6.7-m) Long (76381)	22.

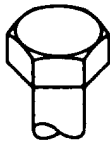




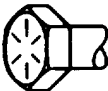



Section II. EXPENDABLE SUPPLIES AND MATERIALS LIST

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION PART NO. AND FSCM	(5) UNIT OF MEAS.
23	O	5640-00-103-2254	Tape Duct, 60-Yard (54-m) Roll, C-519 (07124)	yd
24	O	5970-00-184-2022	Tape, Electrical, Insulation, Grade A, Spec HH-T-0011, 1132-Inch (0.08-cm) Thick, 2-Inch (5.09-cm) Wide	ft
25	O	Tape, Masking		
26	O	7510-973-9513	Tape, Pressure Sensitive, Adhesive, 2-Inch (5.08-cm) Wide, MIL-T-23397 (81349)	rl
27	O	5970-00-815-1295	Tubing, Heat Shrinkable MIL-I-2305315 (81349)	ft
28	O	Wire, Mechanics	C4	

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  7 	 
Manufacturer's marks may vary				
These are all SAE Grade 5 (3 line)				
				

TORQUE VALUES

If replacement capscrews are of a higher grade than originally supplied, use torque specifications for that placement. This will prevent equipment damage due to overtightening.

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)

TA244665

TORQUE VALUES - CONTINUED

NOTE

Always use the torque values listed above when specific torque values are not available.

Do not use above 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.

INDEX

Subject	A	Page
Air cleaner vacuum gage.....		2-1466
Inspection/Replacement		2-1467
Installation.....		2-1468
Removal.....		2-1466
Air cleaner vacuum gage line and fittings.....		2-1481
Cleaning.....		2-1484
Inspection/Replacement		2-1486
Installation.....		2-1486
Removal.....		2-1482
Air compressor governor to wet air reservoir lines and fittings.....		2-1046
Cleaning.....		2-1048
Inspection/Replacement		2-1049
Installation.....		2-1050
Removal.....		2-1046
Air compressor to air dryer hose and lines.....		2-1035
Cleaning.....		2-1037
Inspection/Replacement		2-1037
Installation.....		2-1038
Removal.....		2-1036
Air dryer.....		2-1002
Assembly		2-1009
Cleaning.....		2-1006
Disassembly.....		2-1004
Inspection/Replacement		2-1008
Installation.....		2-1012
Removal.....		2-1002
Air dryer cartridge.....		2-1014
Assembly		2-1019
Cleaning.....		2-1016
Disassembly.....		2-1016
Inspection/Replacement		2-1018
Installation.....		2-1020
Removal.....		2-1014
Air dryer hose, to, wet air reservoir.....		2-1154
Cleaning.....		2-1154
Inspection/Replacement		2-1155
Installation.....		2-1156
Removal.....		2-1154
Air horn.....		2-1345
Installation.....		2-1348
Removal.....		2-1345
Air pressure gage.....		2-1478
Inspection/Replacement		2-1479
Installation.....		2-1480
Removal.....		2-1478

INDEX - CONTINUED

Subject	Page
A - CONTINUED	
Air pressure gage lines and fittings	2-1490
Cleaning.....	2-1493
Inspection/Replacement	2-1494
Installation.....	2-1494
Removal.....	2-1490
Airbrake cylinder control valve.....	2-1034.1
Installation.....	2-1034.2
Removal.....	2-1034.1
Airbrake system draining.....	2-1034
Alarm bell.....	2-717
Installation.....	2-718
Removal.....	2-718
Alcohol evaporator.....	2-995
Assembly	2-1000
Cleaning.....	2-998
Disassembly.....	2-996
Inspection/Replacement	2-998
Installation.....	2-1001
Removal.....	2-996
Ammeter	2-730
Inspection/Replacement	2-732
Installation.....	2-732
Removal.....	2-731
Arm, and, wiper blade.....	2-1301
Adjustment.....	2-1302
Installation.....	2-1302
Removal.....	2-1301
Automatic override module.....	2-877
Installation.....	2-878
Removal.....	2-878
Auxiliary transmission.....	2-932
Draining.....	2-933
Filling.....	2-934
Oil level check.....	2-932

B

Backup light 20 amp circuit breaker	2-750
Installation.....	2-751
Removal.....	2-750
Backup light switch	2-689
Installation.....	2-690
Removal.....	2-689
Batteries, storage	2-838
Cleaning.....	2-840
Inspection/Replacement	2-840
Installation.....	2-841
Removal.....	2-839
Testing 2-838	

INDEX - CONTINUED

Subject	Page
B - CONTINUED	
Battery box	2-842
Assembly	2-850
Cleaning.....	2-848
Disassembly.....	2-845
Inspection/Replacement	2-849
Installation.....	2-855
Removal.....	2-842
Battery negative cable.....	2-824
Assembly	2-827
Cleaning.....	2-826
Disassembly.....	2-826
Inspection/Replacement	2-827
Installation.....	2-828
Removal.....	2-824
Battery positive cable	2-829
Assembly	2-834
Cleaning.....	2-832
Disassembly.....	2-832
Inspection/Replacement	2-833
Installation.....	2-834
Removal.....	2-830
Battery positive-to-negative connector cable.....	2-819
Assembly	2-822
Cleaning.....	2-820
Disassembly.....	2-820
Inspection/Replacement	2-822
Installation.....	2-822
Removal.....	2-820
Bell, alarm.....	2-717
Installation.....	2-718
Removal.....	2-718
Belts, seat.....	2-1282
Installation.....	2-1282
Removal.....	2-1282
Block, fuse	2-766
Inspection/Replacement	2-767
Installation.....	2-768
Removal.....	2-766
Body and cab accessory item	
Maintenance	2-1290
Body, cab and hood	
Maintenance	2-1251
Box, battery	2-842
Assembly	2-850
Cleaning.....	2-848
Disassembly.....	2-845
Inspection/Replacement	2-849

INDEX - CONTINUED

Subject	Page
B - CONTINUED	
Box, junction, firewall, center engine side of - Continued	
Installation.....	2-773
Removal.....	2-772
Box, junction, front rear of cab	2-780
Inspection/Replacement	2-782
Installation.....	2-782
Removal.....	2-780
Box, junction, left engine side of firewall	2-777
Inspection/Replacement	2-778
Installation.....	2-778
Removal.....	2-778
Box, junction, rear rear of cab	2-784
Inspection/Replacement	2-786
Installation.....	2-786
Removal.....	2-784
Box, junction, right engine side of firewall	2-774
Inspection/Replacement	2-775
Installation.....	2-776
Removal.....	2-774
Brake pedal	2-1021
Assembly	2-1024
Cleaning.....	2-1022
Disassembly.....	2-1022
Inspection/Replacement	2-1023
Installation.....	2-1024
Removal.....	2-1022
Brake system maintenance	2-947
Brake treadle valve and right manifold hoses	2-1052
Cleaning.....	2-1056
Inspection/Replacement	2-1056
Installation.....	2-1057
Removal.....	2-1052
Brake treadle valve hose, to, front brake limiting and quick release valve.....	2-1084
Cleaning.....	2-1086
Inspection/Replacement	2-1086
Installation.....	2-1087
Removal.....	2-1085
Brake treadle valve to double check valve t-fitting hose	2-1062
Cleaning.....	2-1064
Inspection/Replacement	2-1064
Installation.....	2-1064
Removal.....	2-1062
Brake treadle valve to t-manifold hoses	2-1067
Cleaning.....	2-1068
Inspection/Replacement	2-1069
Installation.....	2-1070
Removal.....	2-1068

INDEX - CONTINUED

Subject	Page
B - CONTINUED	
Brakes, front	2-947
Adjustment	2-954
Cleaning	2-950
Inspection/Replacement	2-950
Installation	2-952
Removal	2-948
Brakes, rear	2-955
Adjustment	2-973
Cleaning	2-961
Inspection/Replacement	2-963
Installation	2-965
Removal	2-956
Breaker, circuit, 20 amp, backup light	2-750
Installation	2-751
Removal	2-750
Breaker, circuit, 40 amp, cigar lighter, and glow plug	2-756
Installation	2-757
Removal	2-756
Breaker, circuit, 15 amp, engine compression brake	2-748
Installation	2-749
Remove	2-748
Breaker, circuit, 20 amp, headlight	2-762
Installation	2-763
Removal	2-762
Breaker, circuit, 40 amp, heater	2-752
Installation	2-753
Removal	2-752
Breaker, circuit, 20 amp, horn	2-754
Installation	2-755
Removal	2-754
Breaker, circuit, 30 amp, marker light	2-764
Installation	2-765
Removal	2-764
Breaker, circuit, starter, ign system	2-769
Installation	2-770
Removal	2-770
Breaker, circuit, 30 amp, stop and domelight	2-758
Installation	2-759
Removal	2-758
Breaker, circuit, 20 amp, tail and panel light	2-760
Installation	2-761
Removal	2-760
Breather, rear axle housing	2-940
Cleaning	2-940
Inspection/Replacement	2-941
Installation	2-941
Removal	2-940

INDEX - CONTINUED

Subject	Page
B - CONTINUED	
Button, start, engine	2-738
Installation.....	2-739
Removal.....	2-738
Buzzer, warning, low air-pressure	2-709
Installation.....	2-710
Removal.....	2-710

C

Cab floor through connector to double check valve hose	2-1108
Cleaning.....	2-1112
Inspection/Replacement	2-1112
Installation.....	2-1112
Removal.....	2-1109
Cab roof marker light and clearance light.....	2-801
Inspection/Replacement	2-804
Installation.....	2-804
Removal.....	2-802
Cable, battery negative.....	2-824
Assembly	2-827
Cleaning.....	2-826
Disassembly.....	2-826
Inspection/Replacement	2-827
Installation.....	2-828
Removal.....	2-824
Cable, battery positive.....	2-829
Assembly	2-834
Cleaning.....	2-832
Disassembly.....	2-832
Inspection/Replacement	2-833
Installation.....	2-834
Removal.....	2-830
Cable, connector, battery positive-to-negative	2-819
Assembly	2-822
Cleaning.....	2-820
Disassembly.....	2-820
Inspection/Replacement	2-822
Installation.....	2-822
Removal.....	2-820
Cable, speedometer drive	2-1414
Inspection/Replacement	2-1416
Installation.....	2-1416
Removal.....	2-1414
Cable, tachometer drive	2-1420
Inspection/Replacement	2-1422
Installation.....	2-1422
Removal.....	2-1420

INDEX - CONTINUED

Subject	Page
C - CONTINUED	
Cable, transmission shift	2-919
Adjustment	2-924
Assembly	2-922
Cleaning	2-922
Disassembly	2-920
Inspection/Replacement	2-922
Installation	2-924
Removal	2-920
Cartridge, air dryer	2-1014
Assembly	2-1019
Cleaning	2-1016
Disassembly	2-1016
Inspection/Replacement	2-1018
Installation	2-1020
Removal	2-1014
Center engine side of firewall junction box	2-771
Inspection/Replacement	2-772
Installation	2-773
Removal	2-772
Chassis T-fitting	2-1151.2
Installation	2-1151.2
Removal	2-1151.2
Chassis t-fitting to chassis 90-degree elbow hose	2-1151.3
Cleaning	2-1152
Inspection/Replacement	2-1152
Installation	2-1153
Removal	2-1152
Chassis t-fitting to double check valve hose	2-1143
Cleaning	2-1144
Inspection/Replacement	2-1144
Installation	2-1145
Removal	2-1144
Chassis t-fitting to front rear quick release valve hose	2-1146
Cleaning	2-1146
Inspection/Replacement	2-1147
Installation	2-1148
Removal	2-1146
Chassis 90-degree elbow	2-1151.0
Installation	2-1151.0
Removal	2-1151.0
Chassis 90-degree elbow hose, to, chassis t-fitting	2-1151.3
Cleaning	2-1152
Inspection/Replacement	2-1152
Installation	2-1153
Removal	2-1152
Chassis 90-degree elbow to rear rear quick release valve hose	2-1157
Cleaning	2-1158
Inspection/Replacement	2-1158
Installation	2-1158
Removal	2-1157

INDEX - CONTINUED

Subject

Page

C - CONTINUED

Control stand, transmission shift	2-917
Cleaning.....	2-918
Inspection/Replacement	2-918
Installation.....	2-919
Removal.....	2-917
Control, transmission shift	2-909
Cleaning.....	2-913
Inspection/Replacement	2-913
Installation.....	2-914
Removal.....	2-910
Control valve, parking brake.....	2-1024.1
Installation.....	2-1024.2
Removal.....	2-1024.1

D

Data and instruction plates	2-1350
Cleaning.....	2-1352
Installation.....	2-1353
Removal.....	2-1350
Differential, interaxle.....	2-945
Draining.....	2-946
Filling	2-946
Dome light	2-719
Cleaning.....	2-720
Inspection/Replacement	2-720
Installation.....	2-721
Removal.....	2-720
Dome/panel lamp switch	2-722
Installation.....	2-724
Removal.....	2-723
Double check valve	2-1148.1
Installation.....	2-1148.2
Removal.....	2-1148.2

INDEX - CONTINUED

Subject	Page
D - CONTINUED	
Double check valve hose, to, cab floor through connector.....	2-1108
Cleaning.....	2-1112
Inspection/Replacement	2-1112
Installation.....	2-1112
Removal.....	2-1109
Double check valve hose, to, chassis t-fitting.....	2-1143
Cleaning.....	2-1144
Inspection/Replacement	2-1144
Installation.....	2-1145
Removal.....	2-1144
Double check valve to double check valve t-fitting hose.....	2-1071
Cleaning.....	2-1072
Inspection/Replacement	2-1072
Installation.....	2-1072
Removal.....	2-1072

Change 1 Index 8.1/(Index 8.2 blank)

INDEX - CONTINUED

Subject	Page
D - CONTINUED	
Double check valve t-fitting hose, to, brake treadle valve	2-1062
Cleaning.....	2-1064
Inspection/Replacement	2-1064
Installation.....	2-1064
Removal.....	2-1062
Double check valve t-fitting to front relay valve t-fitting hose.....	2-1149
Cleaning.....	2-1150
Inspection/Replacement	2-1150
Installation.....	2-1150
Removal.....	2-1149
Draining steering system.....	2-1207
Draining.....	2-1208
Driver's seat.....	2-1274.1
Installation.....	2-1274.2
Removal.....	2-1274.2
Driver's seat covers and pan.....	2-1275
Installation.....	2-1275
Removal.....	2-1275
Dry air reservoir.....	2-975
Assembly	2-982
Cleaning.....	2-980
Disassembly.....	2-978
Inspection/Replacement	2-980
Installation.....	2-984
Removal.....	2-976
Dry air reservoir to front relay valve hose.....	2-1080
Cleaning.....	2-1082
Inspection/Replacement	2-1082
Installation.....	2-1083
Removal.....	2-1081
Dry air reservoir to t-manifold hoses	2-1074
Cleaning.....	2-1075
Inspection/Replacement	2-1075
Installation.....	2-1076
Removal.....	2-1074
Dry air reservoir to wet air reservoir hoses.....	2-1077.2
Cleaning.....	2-1078
Inspection/Replacement	2-1078
Installation.....	2-1079
Removal.....	2-1078
Dryer, air.....	2-1002
Assembly	2-1009
Cleaning.....	2-1006
Disassembly.....	2-1004
Inspection/Replacement	2-1008
Installation.....	2-1012
Removal.....	2-1002
Dump body maintenance	2-1251

INDEX - CONTINUED

Subject	Page
D - CONTINUED	
Dump body control lever and linkage	2-1367
Inspection/Replacement	2-1370
Installation/Adjustment	2-1370
Removal	2-1367
Dump body marker light	2-806
Installation	2-806
Removal	2-806
Dump body reflectors	2-1321
Installation	2-1323
Removal	2-1322

E

Electrical system maintenance	2-664
Engine compression brake 15 amp circuit breaker	2-748
Installation	2-749
Removal	2-748
Engine compression brake pressure switch	2-683
Installation	2-684
Removal	2-684
Engine compression brake switch	2-735
Installation	2-736
Removal	2-736
Engine compression brake throttle switch	2-695
Adjustment	2-696
Installation	2-696
Removal	2-696
Engine oil pressure gage	2-1426
Inspection/Replacement	2-1427
Installation	2-1428
Removal	2-1426
Engine oil pressure gage line and fittings	2-1429
Assembly	2-1439
Cleaning	2-1438
Disassembly	2-1436
Inspection/Replacement	2-1438
Installation	2-1440
Removal	2-1430
Engine oil pressure switch	2-674
Installation	2-674
Removal	2-674
Engine start button	2-738
Installation	2-739
Removal	2-738

INDEX - CONTINUED

Subject	Page
E - CONTINUED	
Engine water temperature switch	2-675
Installation	2-676
Removal	2-676
Evaporator, alcohol	2-995
Assembly	2-1000
Cleaning	2-998
Disassembly	2-996
Inspection/Replacement	2-998
Installation	2-1001
Removal	2-996
Expendable supplies and materials list	C-1

F

Filling steering system	2-1243
Filling	2-1243
Filter	2-1202
Cleaning	2-1204
Inspection/Replacement	2-1205
Installation	2-1206
Removal	2-1203
Filter cartridge, remote oil	2-935
Cleaning	2-936
Inspection/Replacement	2-938
Installation	2-938
Removal	2-936
Filter, oil, internal	2-907
Installation	2-908
Removal	2-908
Fittings, and, line, air cleaner vacuum gage	2-1481
Cleaning	2-1484
Inspection/Replacement	2-1486
Installation	2-1486
Removal	2-1482
Fittings, and, line, engine oil pressure gage	2-1429
Assembly	2-1439
Cleaning	2-1438
Disassembly	2-1436
Inspection/Replacement	2-1438
Installation	2-1440
Removal	2-1430
Fittings, and, line, transmission oil pressure gage	2-1450
Cleaning	2-1457
Inspection/Replacement	2-1457
Installation	2-1458
Removal	2-1450

INDEX - CONTINUED

Subject	Page
F - CONTINUED	
Fittings, and, lines, air pressure gage	2-1490
Cleaning.....	2-1493
Inspection/Replacement	2-1494
Installation.....	2-1494
Removal.....	2-1490
Fittings, and, pump-to-valve pressure hose	2-1385
Cleaning.....	2-1386
Inspection/Replacement	2-1388
Installation.....	2-1388
Removal.....	2-1386
Fittings, and, reservoir-to-pump suction hose	2-1390
Cleaning.....	2-1392
Inspection/Replacement	2-1392
Installation.....	2-1393
Removal.....	2-1390
Fittings, and, valve-to-cylinder pressure hose.....	2-1400
Cleaning.....	2-1403
Inspection/Replacement	2-1404
Installation.....	2-1404
Removal.....	2-1400
Fittings, and, valve-to-reservoir return hose.....	2-1395
Cleaning.....	2-1396
Inspection/Replacement	2-1398
Installation.....	2-1398
Removal.....	2-1396
Flasher, hazard, turn signal and.....	2-711
Installation.....	2-712
Removal.....	2-712
Frame and towing attachment maintenance	2-1248
Frequency sensing relay switch	2-706
Installation.....	2-706
Removal.....	2-706
Front brake limiting and quick release valve	2-1084.1
Installation.....	2-1084.2
Removal.....	2-1084.2
Front brake limiting and quick release valve hoses, to, left front wheel	2-1115
Cleaning.....	2-1118
Inspection/Replacement	2-1118
Installation.....	2-1118
Removal.....	2-1116

INDEX - CONTINUED

Subject	Page
F - CONTINUED	
Front brake limiting and quick release valve hoses, to, right front wheel	2-1122
Cleaning.....	2-1126
Inspection/Replacement	2-1126
Installation.....	2-1126
Removal.....	2-1122
Front brake limiting and quick release valve to brake treadle valve hose.....	2-1084
Cleaning.....	2-1086
Inspection/Replacement	2-1086
Installation.....	2-1087
Removal.....	2-1085
Front brake limiting control valve hoses and fittings.....	2-1159
Cleaning.....	2-1162
Inspection/Replacement	2-1163
Installation.....	2-1164
Removal.....	2-1160
Front brakes	2-947
Adjustment	2-954
Cleaning.....	2-950
Inspection/Replacement	2-950
Installation.....	2-952
Removal.....	2-948
Front fender reflectors	2-1320
Installation.....	2-1320
Removal.....	2-1320
Front hub and brakedrum assembly and wheel bearings	2-1175
Assembly	2-1184
Cleaning.....	2-1178
Disassembly.....	2-1178
Inspection/Replacement	2-1180
Installation.....	2-1184
Removal.....	2-1176
Front marker light	2-799
Inspection/Replacement	2-800
Installation.....	2-801
Removal.....	2-800
Front rear of cab junction box.....	2-780
Inspection/Replacement	2-782
Installation.....	2-782
Removal.....	2-780
Front rear quick release valve	2-1088.1
Installation.....	2-1088.2
Removal.....	2-1088.2
Front rear quick release valve hose, to, chassis t-fitting	2-1146
Cleaning.....	2-1146
Inspection/Replacement	2-1147
Installation.....	2-1148
Removal.....	2-1146

INDEX - CONTINUED

Subject	Page
F - CONTINUED	
Front rear quick release valve to parking airbrake chamber hoses	2-1088.3
Cleaning.....	2-1090
Inspection/Replacement	2-1091
Installation.....	2-1092
Removal.....	2-1089
Front rear t-fitting.....	2-1093.0
Installation.....	2-1093.0
Removal.....	2-1093.0
Front rear t-fitting hose, to, front relay valve.....	2-1099
Cleaning.....	2-1100
Inspection/Replacement	2-1100
Installation.....	2-1100
Removal.....	2-1099
Front rear t-fitting to service air brake chamber hoses.....	2-1093.1
Cleaning.....	2-1096
Inspection/Replacement	2-1096
Installation.....	2-1096
Removal.....	2-1094
Front relay valve.....	2-1098.1
Installation.....	2-1098.2
Removal.....	2-1098.2
Front relay valve t-fitting hose, to, double check valve t-fitting.....	2-1149
Cleaning.....	2-1150
Inspection/Replacement	2-1150
Installation.....	2-1150
Removal.....	2-1149
Front relay valve t-fitting to rear relay valve hose.....	2-1105
Cleaning.....	2-1106
Inspection/Replacement	2-1106
Installation.....	2-1107
Removal.....	2-1105
Front relay valve to front rear t-fitting hose.....	2-1099
Cleaning.....	2-1100
Inspection/Replacement	2-1100
Installation.....	2-1100
Removal.....	2-1099
Front relay valve to rear relay valve hose.....	2-1101
Cleaning.....	2-1102
Inspection/Replacement	2-1103
Installation.....	2-1103
Removal.....	2-1102
Front turn signal.....	2-795
Assembly	2-797
Disassembly.....	2-796
Inspection/Replacement	2-796
Installation.....	2-799
Removal.....	2-795
Front wheel.....	2-1168
Disassembly/Repair/Assembly	2-1169
Installation.....	2-1169
Removal.....	2-1168

INDEX - CONTINUED

Subject	Page
F - CONTINUED	
Fuel gage.....	2-727
Inspection/Replacement	2-728
Installation.....	2-729
Removal.....	2-728
Fuel pressure gage	2-1475
Inspection/Replacement	2-1476
Installation.....	2-1476
Removal.....	2-1475
Fuse block	2-766
Inspection/Replacement	2-767
Installation.....	2-768
Removal.....	2-766

G

Gage, fuel	2-727
Inspection/Replacement	2-728
Installation.....	2-729
Removal.....	2-728
Gage, pressure, air.....	2-1478
Inspection/Replacement	2-1479
Installation.....	2-1480
Removal.....	2-1478
Gage, pressure, engine oil	2-1426
Inspection/Replacement	2-1427
Installation.....	2-1428
Removal.....	2-1426
Gage, pressure, fuel.....	2-1475
Inspection/Replacement	2-1476
Installation.....	2-1476
Removal.....	2-1475
Gage, pressure, transmission oil.....	2-1447
Inspection/Replacement	2-1448
Installation.....	2-1448
Removal.....	2-1447
Gage, vacuum, air cleaner	2-1466
Inspection/Replacement	2-1467
Installation.....	2-1468
Removal.....	2-1466
Gages (nonelectrical), weighing and measuring device	
Maintenance	2-1408
Generator and regulator	2-667
Adjustment	2-670
Installation.....	2-668
Removal.....	2-668
Generator drive belts.....	2-665
Adjustment	2-666
Installation.....	2-666
Removal.....	2-665

INDEX - CONTINUED

Subject	Page
G - CONTINUED	
Generator pulley	2-671
Cleaning	2-672
Inspection/Replacement	2-672
Installation	2-673
Removal	2-671
Glow plug and cigar lighter 40 amp circuit breaker	2-756
Installation	2-757
Removal	2-756
Glow plug switch	2-734
Installation	2-734
Removal	2-734
Grille, radiator	2-1284.3
Installation	2-1284.4
Removal	2-1284.3
Guards, splash	2-1280
Installation	2-1280
Removal	2-1280

H

Headlight assembly	2-807
Alinement	2-812
Inspection/Replacement	2-810
Installation	2-810
Removal	2-808
Headlight beam selector switch	2-742
Installation	2-743
Removal	2-742
Headlight 20 amp circuit breaker	2-762
Installation	2-763
Removal	2-762
Heater 40 amp circuit breaker	2-752
Installation	2-753
Removal	2-752
Hood	2-1251
Assembly	2-1258
Disassembly	2-1254
Inspection/Replacement	2-1256
Installation	2-1260
Removal	2-1252
Hook, pintle	2-1248
Installation	2-1249
Removal	2-1248
Horn	2-715
Installation	2-716
Removal	2-716
Horn, air	2-1345
Installation	2-1348
Removal	2-1345

INDEX - CONTINUED

Subject	Page
H - CONTINUED	
Horn button	2-713
Cleaning.....	2-714
Inspection/Replacement	2-714
Installation.....	2-714
Removal.....	2-714
Horn 20 amp circuit breaker.....	2-754
Installation.....	2-755
Removal.....	2-754
Horn relay	2-707
Installation.....	2-708
Removal.....	2-708
Hose and fittings, left steering gear-to-reservoir	2-1212
Cleaning.....	2-1212
Inspection/Replacement	2-1214
Installation.....	2-1214
Removal.....	2-1212
Hose and fittings, left steering gear-to-right steering gear	2-1215
Cleaning.....	2-1216
Inspection/Replacement	2-1218
Installation.....	2-1218
Removal.....	2-1216
Hose and fittings, pump bypass hose	2-1232
Cleaning.....	2-1234
Inspection/Replacement	2-1234
Installation.....	2-1235
Removal.....	2-1232
Hose and fittings, pump-to-left steering gear	2-1228
Cleaning.....	2-1229
Inspection/Replacement	2-1230
Installation.....	2-1230
Removal.....	2-1228
Hose and fittings, reservoir to pump.....	2-1224
Cleaning.....	2-1225
Inspection/Replacement	2-1226
Installation.....	2-1226
Removal.....	2-1224
Hose and fittings, right steering gear-to-left steering gear	2-1220
Cleaning.....	2-1221
Inspection/Replacement	2-1222
Installation.....	2-1222
Removal.....	2-1220
Hose, front relay valve, to, dry air reservoir.....	2-1080
Cleaning.....	2-1082
Inspection/Replacement	2-1082
Installation.....	2-1083
Removal.....	2-1081

INDEX - CONTINUED

Subject	Page
H - CONTINUED	
Hose, t-fitting, double check valve, to, double check valve	2-1071
Cleaning	2-1072
Inspection/Replacement	2-1072
Installation	2-1072
Removal	2-1072
Hoses and fittings, front brake limiting control valve	2-1159
Cleaning	2-1162
Inspection/Replacement	2-1163
Installation	2-1164
Removal	2-1160
Hoses, tubes, and fittings, power divider	2-946.1
Inspection/Replacement	2-946.5
Installation	2-946.6
Removal	2-946.2
Hoses, right manifold, and brake treadle valve	2-1052
Cleaning	2-1056
Inspection/Replacement	2-1056
Installation	2-1057
Removal	2-1052
Hoses, t-manifold, to, brake treadle valve	2-1067
Cleaning	2-1068
Inspection/Replacement	2-1069
Installation	2-1070
Removal	2-1068
Hoses, t-manifold, to, dry air reservoir	2-1074
Cleaning	2-1075
Inspection/Replacement	2-1075
Installation	2-1076
Removal	2-1074
Hoses, wet air reservoir, to, dry air reservoir	2-1077.2
Cleaning	2-1078
Inspection/Replacement	2-1078
Installation	2-1079
Removal	2-1078
Housing, and, hydraulic filter	2-1362
Cleaning	2-1364
Inspection/Replacement	2-1364
Installation	2-1365
Removal	2-1362
Housing, rear axle	2-942
Draining	2-943
Filling	2-944
Oil level check	2-942
How to use this manual	ii
Hydraulic filter and housing	2-1362
Cleaning	2-1364
Inspection/Replacement	2-1364
Installation	2-1365
Removal	2-1362
Hydraulic oil reservoir	2-1375
Assembly	2-1380
Cleaning	2-1378

INDEX - CONTINUED

Subject Page

H - CONTINUED

Disassembly.....	2-1377
Inspection/Replacement	2-1380
Installation.....	2-1383
Removal.....	2-1376

I

Ign system starter circuit breaker	2-769
Installation.....	2-770
Removal.....	2-770

Installation

Airbrake cylinder control valve	2-1034.2
Air cleaner vacuum gage	2-1468
Air cleaner vacuum gage line and fittings	2-1486
Air compressor governor to wet air reservoir lines and fitting	2-1050
Air compressor to air dryer hose and lines	2-1038
Air dryer.....	2-1012
Air dryer cartridge	2-1020
Air horn	2-1348
Air pressure gage.....	2-1480
Air pressure gage lines and fittings.....	2-1486
Alarm bell.....	2-718
Alcohol evaporator	2-1001
Ammeter	2-732
Automatic override module	2-878
Backup light 20 amp circuit breaker.....	2-751
Backup light switch	2-690
Battery box.....	2-855
Battery negative cable.....	2-828
Battery positive cable.....	2-834
Battery positive-to-negative connector cable.....	2-822
Brake pedal.....	2-1024
Brake treadle valve and right manifold hoses	2-1057
Brake treadle valve to double check valve t-fitting hose.....	2-1064
Brake treadle valve to t-manifold hoses.....	2-1070

INDEX - CONTINUED

Subject

Page

I - CONTINUED

Installation - Continued

Cab floor through connector to double check valve hose.....	2-1112
Cab roof marker light and clearance light.....	2-804
Center engine side of firewall junction box.....	2-773
Chassis 90-degree elbow.....	2-1151.0
Chassis 90-degree elbow to rear rear quick release valve hose.....	2-1158
Chassis t-fitting.....	2-1151.2
Chassis t-fitting to chassis 90-degree elbow hose.....	2-1153
Chassis t-fitting to double check valve hose.....	2-1145
Chassis t-fitting to front rear quick release valve hose.....	2-1148
Data and instruction plates.....	2-1353
Dome light.....	2-721
Dome/panel lamp switch.....	2-724
Double check valve.....	2-1148.2
Double check valve t-fitting to front relay valve t-fitting hose.....	2-1150

Change 1 Index 19.0/(Index 19.1 blank)

INDEX - CONTINUED

Subject	Page
I - CONTINUED	
Installation - Continued	
Double check valve to double check valve t-fitting hose	2-1072
Driver's seat	2-1274.2
Driver's seat covers and pan	2-1275
Dry air reservoir	2-984
Dry air reservoir to front relay valve hose	2-1083
Dry air reservoir to t-manifold hoses	2-1076
Dry air reservoir to wet air reservoir hoses	2-1079
Dump body control lever and linkage.....	2-1370
Dump body marker light.....	2-806
Dump body reflectors.....	2-1323
Engine compression brake 15 amp circuit breaker	2-749
Engine compression brake switch	2-736
Engine compression brake pressure switch	2-684
Engine compression brake throttle switch	2-696
Engine oil pressure gage	2-1428
Engine oil pressure gage line and fittings	2-1440
Engine oil pressure switch	2-674
Engine start button.....	2-739
Engine water temperature switch.....	2-676
Filter	2-1206
Frequency sensing relay switch.....	2-706
Front brakes.....	2-952
Front brake limiting and quick release valve to brake treadle valve hose	2-1087
Front brake limiting and quick release valve.....	2-1084.2
Front brake limiting control valve hoses and fitting.....	2-1164
Front fender reflectors	2-1320
Front hub and brakedrum assembly and wheel bearings	2-1184
Front marker light.....	2-801
Front rear of cab junction box	2-782
Front rear quick release valve.....	2-1088.2
Front rear quick release valve to parking airbrake chamber hose.....	2-1092
Front rear t-fitting	2-1093.0
Front rear t-fitting to service air brake chamber hoses	2-1096

INDEX - CONTINUED

Subject

Page

I - CONTINUED

Installation - Continued

Front relay valve.....	2-1098.2
Front relay valve t-fitting to rear relay valve hose	2-1107
Front relay valve to front rear t-fitting hose	2-1100
Front relay valve to rear relay valve hose.....	2-1103
Front turn signal	2-799
Front wheel	2-1169
Fuel gage	2-729
Fuel pressure gage	2-1476
Fuse block.....	2-768
Generator and regulator.....	2-668
Generator drive belts	2-666
Generator pulley.....	2-673
Glow plug and cigar lighter 40 amp circuit breaker.....	2-757
Glow plug switch	2-734
Headlight assembly.....	2-810

Change 1 Index 20.1/(Index 20.2 blank)

INDEX - CONTINUED

Subject	Page
I - CONTINUED	
Installation - Continued	
Headlight beam selector switch	2-743
Headlight 20 amp circuit breaker	2-763
Heater 40 amp circuit breaker	2-753
Hood	2-1260
Horn	2-716
Horn button	2-714
Horn relay.....	2-708
Horn 20 amp circuit breaker	2-755
Hydraulic filter and housing.....	2-1365
Hydraulic oil reservoir.....	2-1383
Ign system starter circuit breaker.....	2-770
Internal oil filter.....	2-908
Key switch.....	2-741
Left brakelight switch	2-680
Left engine side of firewall junction box.....	2-778
Left front wheel to front brake limiting and quick release valve hoses.....	2-1118
Left instrument panel optical ribbon.....	2-870
Left side lower instrument panel indicator lamp.....	2-886
Left steering gear-to-right steering gear hose and fittings	2-1218
Left steering gear-to-resevoir hose and fittings	2-1214
Left taillight.....	2-790
Lights switch	2-726
Low air-pressure warning buzzer.....	2-710
Low air-pressure warning buzzer switch.....	2-700
Low air-pressure warning light switch.....	2-698
Lower center instrument panel gage lamps.....	2-887
Lower instrument panel optical ribbon	2-866
Marker light 30 amp circuit breaker	2-765
Neutral safety switch.....	2-692
Oil filler tube and dipstick.....	2-930
Oil reservoir.....	2-1241.0
Optical light assembly	2-859
Optical light lamp	2-857
Parking brake control valve.....	2-1024.2
Passenger seat.....	2-1274
Pintle hook	2-1249
Pioneer tool rack.....	2-1284.2
Power divider hoses, tubes, and fittings	2-946.6
Power take-off light switch.....	2-694
Power take-off (PTO) indicator lamp	2-880

INDEX - CONTINUED

Subject

Page

I - CONTINUED

Installation - Continued

Primary magnetic switch	2-702
Pump by-pass hose and fitting.....	2-1235
Pump-to-left steering gear hose and fittings	2-1230
Pump-to-valve pressure hose and fittings	2-1388
Radiator grille.....	2-1284.4
Rear axle housing breather.....	2-941
Rear brakes	2-965
Rear hub and brake drum assembly and wheel bearings	2-1198
Rear rear of cab junction box.....	2-786
Rear rear quick release valve	2-1130.2
Rear rear quick release valve to parking airbrake chamber hoses	2-1134
Rear relay valve	2-1140.2
Rear relay valve to rear rear quick release valve hose.....	2-1142

Change 1 Index 21.0/(Index 21.1 blank)

INDEX - CONTINUED

Subject	Page
I - CONTINUED	
Installation - Continued	
Rear view mirror assembly	2-1294
Rear wheel.....	2-1173
Remote oil filter cartridge	2-938
Reservoir-to-pump hose and fittings	2-1226
Reservoir-to-pump suction hose and fittings	2-1393
Right brake light switch	2-682
Right engine side of firewall junction box.....	2-776
Right front wheel to front brake limiting and quick release valve hoses.....	2-1126
Right instrument panel gage lamps	2-890
Right instrument panel indicator lamps.....	2-892
Right instrument panel optical ribbon.....	2-862
Right steering gear-to-left steering gear hose and fittings	2-1222
Right taillight.....	2-794
Seat belts	2-1282
Secondary magnetic switch	2-704
Slave receptacle	2-895.2
Speedometer	2-1410
Speedometer drive cable	2-1416
Splash guards	2-1280
Stop and dome light 30 amp circuit breaker	2-759
Storage batteries.....	2-841
Starter motor	2-898
T-manifold	2-1077.0
Tachometer	2-1413
Tachometer drive cable	2-1422
Tail and panel light 20 amp circuit breaker	2-761
Transmission oil pan	2-904
Transmission oil pressure gage	2-1448
Transmission oil pressure gage line and fittings.....	2-1458
Transmission oil pressure switch.....	2-678
Transmission oil temperature sender	2-686
Transmission oil temperature switch	2688
Transmission position indicator lamp.....	2-894
Transmission shift cable	2-924
Transmission shift control	2-914
Transmission shift control stand	2-919
Turn signal and hazard flashers.....	2-712
Turn signal indicator lamps	2-888
Turn signal switch	2-746
Upper instrument panel indicator lamps	2-884
Upper instrument panel gage lamps.....	2-882
Upper instrument panel optical ribbon	2-875
Valve-to-cylinder pressure hose and fittings	2-1404
Valve-to-reservoir return hose and fittings.....	2-1398
Water temperature gage and line	2-1472
Wet air reservoir	2-994
Wet air reservoir to air dryer hose	2-1156
Windshield washer reservoir and pump.....	2-1344.2
Windshield wiper blade	2-1300

INDEX - CONTINUED

Subject	Page
I - CONTINUED	
Windshield wiper control	2-1340
Windshield wiper motor	2-1328
Wiper blade and arm	2-1302
Interaxle differential	2-945
Draining.....	2-946
Filling.....	2-946
Internal oil filter	2-907
Installation.....	2-908
Removal.....	2-908
K	
Key switch	2-740
Installation.....	2-741
Removal.....	2-740
L	
Lamp, indicator, left side lower instrument panel	2-885
Installation.....	2-886
Removal.....	2-886
Lamp, indicator, power take-off (PTO)	2-880
Installation.....	2-880
Removal.....	2-880
Lamp, indicator, transmission position	2-894
Installation.....	2-894
Removal.....	2-894
Lamp, optical light.....	2-857
Installation.....	2-857
Removal.....	2-857
Lamps, gage, lower center instrument panel	2-887
Installation.....	2-887
Removal.....	2-887
Lamps, gage, right instrument panel	2-889
Installation.....	2-890
Removal.....	2-890
Lamps, gage, upper instrument panel.....	2-881
Installation.....	2-882
Removal.....	2-882
Lamps, indicator, right instrument panel	2-891
Installation.....	2-892
Removal.....	2-892
Lamps, indicator, upper instrument panel	2-883
Installation.....	2-884
Removal.....	2-884
Lamps, turn signal indicator	2-888
Installation.....	2-888
Removal.....	2-888

INDEX - CONTINUED

Subject	Page
L - CONTINUED	
Left brake light switch.....	2-679
Installation.....	2-680
Removal.....	2-680
Left engine side of firewall junction box.....	2-777
Inspection/Replacement	2-778
Installation.....	2-778
Removal.....	2-778
Left front wheel to front brake limiting and quick release valve hoses	2-1115
Cleaning.....	2-1118
Inspection/Replacement	2-1118
Installation.....	2-1118
Removal.....	2-1116
Left instrument panel optical ribbon	2-868
Installation.....	2-870
Removal.....	2-868
Left side lower instrument panel indicator lamp	2-885
Installation.....	2-886
Removal.....	2-886
Left steering gear-to-reservoir hose and fittings.....	2-1212
Cleaning.....	2-1212
Inspection/Replacement	2-1214
Installation.....	2-1214
Removal.....	2-1212
Left steering gear-to-right steering gear hose and fittings.....	2-1215
Cleaning.....	2-1216
Inspection/Replacement	2-1218
Installation.....	2-1218
Removal.....	2-1216
Left taillight	2-788
Assembly	2-790
Disassembly.....	2-788
Inspection/Replacement	2-789
Installation.....	2-790
Removal.....	2-788
Light assembly, optical.....	2-858
Assembly	2-859
Disassembly.....	2-858
Installation.....	2-859
Removal.....	2-858
Light, clearance, cab roof marker light and	2-801
Inspection/Replacement	2-804
Installation.....	2-804
Removal.....	2-802
Light, dome.....	2-719
Cleaning.....	2-720
Inspection/Replacement	2-720
Installation.....	2-721
Removal.....	2-720

INDEX - CONTINUED

Subject	Page
L - CONTINUED	
Light, front marker	2-799
Inspection/Replacement	2-800
Installation.....	2-801
Removal.....	2-800
Light, marker, dump body.....	2-806
Installation.....	2-806
Removal.....	2-806
Lights switch.....	2-725
Installation.....	2-726
Removal.....	2-726
Line, and, gage, water temperature	2-1469
Inspection/Replacement	2-1471
Installation.....	2-1472
Removal.....	2-1470
Lines, and, air dryer hose, to, air compressor.....	2-1035
Cleaning.....	2-1037
Inspection/Replacement	2-1037
Installation.....	2-1038
Removal.....	2-1036
Lines and fittings, wet air reservoir, to, air compressor governor.....	2-1046
Cleaning.....	2-1048
Inspection/Replacement	2-1049
Installation.....	2-1050
Removal.....	2-1046
Lines, parking brake	2-1025
Inspection/Replacement	2-1029
Installation.....	2-1030
Removal.....	2-1026
Linkage, and dump body control lever.....	2-1367
Inspection/Replacement	2-1370
Installation/Adjustment.....	2-1370
Removal.....	2-1367
Low air-pressure warning buzzer	2-709
Installation.....	2-710
Removal.....	2-710
Low air-pressure warning buzzer switch	2-699
Installation.....	2-700
Removal.....	2-700
Low air-pressure warning light switch.....	2-697
Installation.....	2-698
Removal.....	2-698
Lower center instrument panel gage lamps	2-887
Installation.....	2-887
Removal.....	2-887
Lower instrument panel optical ribbon.....	2-864
Installation.....	2-866
Removal.....	2-864

INDEX - CONTINUED

Subject	Page
M	
Maintenance allocation chart.....	B-1
Maintenance instructions.....	2-664
Manual	
How to use.....	ii
Marker light 30 amp circuit breaker.....	2-764
Installation.....	2-765
Removal.....	2-764
Mirror assembly, rearview.....	2-1290
Adjustment.....	2-1296
Installation.....	2-1294
Removal.....	2-1291
Module, automatic override.....	2-877
Installation.....	2-878
Removal.....	2-878
Motor, starter.....	2-896
Installation.....	2-898
Removal.....	2-896
N	
Neutral safety switch.....	2-90
Installation.....	2-692
Removal.....	2-691
O	
Oil filler tube and dipstick.....	2-927
Cleaning.....	2-929
Inspection/Replacement.....	2-930
Installation.....	2-930
Removal.....	2-928
Oil reservoir.....	2-1237
Assembly.....	2-1241
Cleaning.....	2-1240
Disassembly.....	2-1239
Inspection/Replacement.....	2-1240
Installation.....	2-1241
Removal.....	2-1238
Optical light assembly.....	2-858
Assembly.....	2-859
Disassembly.....	2-858
Installation.....	2-859
Removal.....	2-858
Optical light lamp.....	2-857
Installation.....	2-857
Removal.....	2-857

INDEX - CONTINUED

Subject	Page
P	
Pan, oil, transmission	2-900
Cleaning.....	2-903
Draining.....	2-901
Filling.....	2-906
Inspection/Replacement	2-904
Installation.....	2-904
Removal.....	2-902
Parking airbrake chamber hoses, to, front rear quick release valve	2-1088.3
Cleaning.....	2-1090
Inspection/Replacement	2-1091
Installation.....	2-1092
Removal.....	2-1089
Parking airbrake chamber hoses, to, rear rear quick release valve	2-1131
Cleaning.....	2-1133
Inspection/Replacement	2-1134
Installation.....	2-1134
Removal.....	2-1132
Parking brake control valve	2-1024.1
Installation.....	2-1024.2
Removal.....	2-1024.1
Parking brake lines	2-1025
Inspection/Replacement	2-1029
Installation.....	2-1030
Removal.....	2-1026
Passenger seat	2-1272
Assembly	2-1274
Disassembly.....	2-1273
Inspection/Replacement	2-1272
Installation.....	2-1274
Removal.....	2-1272
Pedal, brake	2-1021
Assembly	2-1024
Cleaning.....	2-1022
Disassembly.....	2-1022
Inspection/Replacement	2-1023
Installation.....	2-1024
Removal.....	2-1022
Pintle hook.....	2-1248
Installation.....	2-1249
Removal.....	2-1248
Pioneer tool rack	2-1284.1
Installation.....	2-1284.2
Removal.....	2-1284.1

INDEX - CONTINUED

Subject

Page

P - CONTINUED

Plates, instruction, and, data	2-1350
Cleaning	2-1352
Installation	2-1353
Removal	2-1350
Power divider hoses, tubes, and fittings	2-946.1
Inspection/Replacement	2-946.5
Installation	2-946.6
Removal	2-946.2
Power take-off (PTO) indicator lamp	2-880
Installation	2-880
Removal	2-880
Power take-off light switch	2-692
Installation	2-694
Removal	2-693

Change 1 Index 27.0/(Index 27.1 blank)

INDEX - CONTINUED

Subject	Page
P - CONTINUED	
Primary magnetic switch	2-701
Installation.....	2-702
Removal.....	2-702
Propeller shaft and universal joint maintenance.....	2-939
Pulley, generator	2-671
Cleaning.....	2-672
Inspection/Replacement	2-672
Installation.....	2-673
Removal.....	2-671
Pump bypass hose and fittings	2-1232
Cleaning.....	2-1234
Inspection/Replacement	2-1234
Installation.....	2-1235
Removal.....	2-1232
Pump-to-left steering gear hose and fittings.....	2-1228
Cleaning.....	2-1229
Inspection/Replacement	2-1230
Installation.....	2-1230
Removal.....	2-1228
Pump-to-valve pressure hose and fittings	2-1385
Cleaning.....	2-1386
Inspection/Replacement	2-1388
Installation.....	2-1388
Removal.....	2-1386

R

Radiator grille	2-1284.3
Installation.....	2-1284.4
Removal.....	2-1284.3
Rear axle maintenance	2-940
Rear axle housing.....	2-942
Draining.....	2-943
Filling.....	2-944
Oil level check.....	2-942
Rear axle housing breather	2-940
Cleaning.....	2-940
Inspection/Replacement	2-941
Installation.....	2-941
Removal.....	2-940
Rear brakes	2-955
Adjustment	2-973
Cleaning.....	2-961
Inspection/Replacement	2-963
Installation.....	2-965
Removal.....	2-956
Rear hub and brakedrum assembly and wheel bearings.....	2-1188
Assembly	2-1198
Cleaning.....	2-1192
Disassembly.....	2-1191
Driver seat.....	2-XVIII-28
Dry air reservoir	2-XIV-30

INDEX - CONTINUED

Subject	Page
R - CONTINUED	
Inspection/Replacement	2-1192
Installation.....	2-1198
Removal.....	2-1188
Rear rear of cab junction box	2-784
Inspection/Replacement	2-786
Installation.....	2-786
Removal.....	2-2784
Rear rear quick release valve.....	2-1130.1
Installation.....	2-1130.2
Removal.....	2-1130.1
Rear rear quick release valve hose, to, chassis 90-degree elbow	2-1157
Cleaning.....	2-1158
Inspection/Replacement	2-1158
Installation.....	2-1158
Removal.....	2-1157
Rear rear quick release valve to parking airbrake chamber hoses	2-1131
Cleaning.....	2-1133
Inspection/Replacement	2-1134
Installation.....	2-1134
Removal.....	2-1132
Rear rear quick release valve hose, to, rear relay valve	2-1140.3
Cleaning.....	2-1142
Inspection/Replacement	2-1142
Installation.....	2-1142
Removal.....	2-1141
Rear rear quick release valve to service airbrake chamber hoses	2-1136
Cleaning.....	2-1138
Inspection/Replacement	2-1138
Installation.....	2-1138
Removal.....	2-1136
Rear relay valve.....	2-1140.1
Installation.....	2-1140.2
Removal.....	2-1140.2

INDEX - CONTINUED

Subject

Page

P - CONTINUED

Rear relay valve hose, to, front relay valve.....	2-1101
Cleaning.....	2-1102
Inspection/Replacement	2-1103
Installation.....	2-1103
Removal.....	2-1102
Rear relay valve hose, to, front relay valve t-fitting.....	2-1105
Cleaning.....	2-1106
Inspection/Replacement	2-1106
Installation.....	2-1107
Removal.....	2-1105
Rear relay valve to rear rear quick release valve hose	2-1140.3
Cleaning.....	2-1142
Inspection/Replacement	2-1142
Installation.....	2-1142
Removal.....	2-1141
Rear wheel	2-1171
Disassembly/Repair/Assembly	2-1172
Installation.....	2-1173
Removal.....	2-1171

Change 1 Index 29.0/(Index 29.1 blank)

INDEX - CONTINUED

Subject	Page
R - CONTINUED	
Rearview mirror assembly	2-1290
Adjustment	2-1296
Installation	2-1294
Removal	2-1291
Receptacle, slave	2-895.0
Cleaning	2-895.0
Installation	2-895.2
Removal	2-895.0
References	A-1
Reflectors, dump body	2-1321
Installation	2-1323
Removal	2-1322
Reflectors, front fender	2-1320
Installation	2-1320
Removal	2-1320
Regulator, and generator	2-667
Adjustment	2-670
Installation	2-668
Removal	2-668
Relay, horn 2-707	
Installation	2-708
Removal	2-708
Remote oil filter cartridge	2-935
Cleaning	2-936
Inspection/Replacement	2-938
Installation	2-938
Removal	2-936
Removal	
Airbrake cylinder control valve	2-1034.1
Air cleaner vacuum gage	2-1466
Air cleaner vacuum gage line and fittings	2-1482
Air compressor governor to wet air reservoir lines and fittings	2-1046
Air compressor to air dryer hose and lines	2-1036
Air dryer	2-1002
Air dryer cartridge	2-1014
Airhorn	2-1345
Air pressure gage	2-1478
Air pressure gage lines and fittings	2-1490
Alarm bell	2-718
Alcohol evaporator	2-996
Ammeter	2-731
Automatic override module	2-878
Backuplight 20 amp circuit breaker	2-750
Backup light switch	2-689
Battery box	2-842
Battery negative cable	2-824
Battery positive cable	2-830
Battery positive-to-negative connector cable	2-820
Brake pedal	2-1022
Brake treadle valve and right manifold hoses	2-1052
Brake treadle valve to double check valve t-fitting hose	2-1062
Brake treadle valve to t-manifold hoses	2-1068
Cab floor through connector to double check valve hose	2-1109

INDEX - CONTINUED

Subject	Page
R - CONTINUED	
Cab roof marker light and clearance light	2-802
Center engine side of firewall junction box	2-772
Chassis 90-degree elbow	2-1151.0
Chassis 90-degree elbow to rear rear quick release valve hose	2-1157
Chassis t-fitting	2-1151.2
Chassis t-fitting to chassis 90-degree elbow hose	2-1152
Chassis t-fitting to double check valve hose	2-1144
Chassis t-fitting to front rear quick release valve hose	2-1146
Data and instruction plates	2-1350
Dome light	2-720
Dome/panel lamp switch	2-723
Double check valve	2-1148.2
Double check valve t-fitting to front relay valve t-fitting hose	2-1149
Double check valve to double check valve t-fitting hose	2-1072
Driver's seat	2-1274.2
Driver's seat covers and pan	2-1275
Dry air reservoir	2-976
Frequency sensing relay switch	2-706
Front brakes	2-948
Front brake limiting and quick release valve	2-1084.2
Front brake limiting and quick release valve to brake treadle valve hose	2-1085
Front brake limiting control valve hoses and fittings	2-1160
Front fender reflectors	2-1320
Front hub and brake drum assembly and wheel bearings	2-1176
Front marker light	2-800
Front rear of cab junction box	2-780
Front rear quick release valve	2-1088.2
Front rear quick release valve to parking airbrake chamber hose	2-1089
Front rear t-fitting	2-1093.0
Front rear t-fitting to service airbrake chamber hoses	2-1094
Front relay valve	2-1098.2
Front relay valve t-fitting to rear relay valve hose	2-1105
Front relay valve to front rear t-fitting hose	2-1099
Front relay valve to rear relay valve hose	2-1102

INDEX - CONTINUED

Subject	Page
R - CONTINUED	
Removal - Continued	
Front turn signal.....	2-795
Front wheel.....	2-1168
Fuel gage.....	2-728
Fuel pressure gage.....	2-1475
Fuse block.....	2-766
Generator and regulator.....	2-668
Generator drive belts.....	2-665
Generator pulley.....	2-671
Glow plug and cigar lighter 40 amp circuit breaker.....	2-756
Glow plug switch.....	2-734
Headlight assembly.....	2-808
Headlight beam selector switch.....	2-742
Headlight 20 amp circuit breaker.....	2-762
Heater 40 amp circuit breaker.....	2-752
Hood.....	2-1252
Horn.....	2-716
Horn button.....	2-714
Horn relay.....	2-708
Horn 20 amp circuit breaker.....	2-754

Change 1 Index 31.0/(Index 31.1 blank)

INDEX - CONTINUED

Subject	Page
R - CONTINUED	
Removal - Continued	
Hydraulic filter and housing.....	2-1362
Hydraulic oil reservoir.....	2-1376
Ign system starter circuit breaker.....	2-770
Internal oil filter.....	2-908
Key switch.....	2-740
Left brake light switch.....	2-680
Left engine side of firewall junction box.....	2-778
Left front wheel to front brake limiting and quick release valve hoses.....	2-1115
Left instrument panel optical ribbon.....	2-868
Left side lower instrument panel indicator lamp.....	2-886
Left steering gear-to-right steering gear hose and fittings.....	2-1216
Left steering gear-to-reservoir hose and fittings.....	2-1212
Left taillight.....	2-788
Lights switch.....	2-726
Low air-pressure warning buzzer.....	2-710
Low air-pressure warning buzzer switch.....	2-700
Low air-pressure warning light switch.....	2-698
Lower center instrument panel gage lamps.....	2-887
Lower instrument panel optical ribbon.....	2-864
Marker light 30-amp circuit breaker.....	2-764
Neutral safety switch.....	2-691
Oil filter tube and dipstick.....	2-928
Oil reservoir.....	2-1238
Optical light assembly.....	2-858
Optical light lamp.....	2-857
Parking brake control valve.....	2-1024.1
Passenger seat.....	2-1272
Pintle hook.....	2-1248
Pioneer tool rack.....	2-1284.1
Power divider hoses, tubes, and fittings.....	2-946.2
Power take-off light switch.....	2-693
Power take-off (PTO) indicator lamp.....	2-880
Primary magnetic switch.....	2-702
Pump by-pass hose and fitting.....	2-1232
Pump-to-left steering gear hose and fittings.....	2-1228
Pump-to-valve pressure hose and fittings.....	2-1386
Radiator grille.....	2-1284.3
Rear axle housing breather.....	2-940

INDEX - CONTINUED

Subject

Page

R - CONTINUED

Removal - Continued

Rear brakes	2-956
Rear hub and brake drum assembly and wheel bearings	2-1188
Rear rear of cab junction box.....	2-784
Rear rear quick release valve	2-1130.1
Rear rear quick release valve to parking airbrake chamber hoses	2-1132
Rear relay valve	2-1140.2
Rear relay valve to rear rear quick release valve hose.....	2-1141
Rear view mirror assembly	2-1291
Rear wheel.....	2-1171
Remote oil filter cartridge	2-936
Reservoir-to-pump hose and fittings	2-1224
Reservoir-to-pump suction hose and fittings	2-1390
Right brake light switch	2-682
Right engine side of firewall junction box.....	2-774

Change 1 Index 32.1/(Index 32.2 blank)

INDEX - CONTINUED

Subject	Page
R - CONTINUED	
Removal - Continued	
Right front wheel to front brake limiting and quick release valve hoses.....	2-1122
Right instrument panel gage lamps.....	2-890
Right instrument panel indicator lamps.....	2-892
Right instrument panel optical ribbon.....	2-860
Right steering gear-to-left steering gear hose and fittings.....	2-1220
Right taillight.....	2-792
Seat belts.....	2-1282
Secondary magnetic switch.....	2-704
Slave receptacle.....	2-895.0
Speedometer.....	2-1408
Speedometer drive cable.....	2-1414
Splash guards.....	2-1280
Stop and dome light 30 amp circuit breaker.....	2-758
Storage batteries.....	2-839
Starter motor.....	2-896
T-manifold.....	2-1077.0
Tachometer.....	2-1412
Tachometer drive cable.....	2-1420
Tail and panel light 20 amp circuit breaker.....	2-760
Transmission oil pan.....	2-902
Transmission oil pressure gage.....	2-1448
Transmission oil pressure gage line and fittings.....	2-1450
Transmission oil pressure switch.....	2-678
Transmission oil temperature sender.....	2-685
Transmission oil temperature switch.....	2-687
Transmission position indicator lamp.....	2-894
Transmission shift cable.....	2-920
Transmission shift control.....	2-910
Transmission shift control stand.....	2-917
Turn signal and hazard flashers.....	2-712
Turn signal indicator lamps.....	2-888
Turn signal switch.....	2-744
Upper instrument panel indicator lamps.....	2-883
Upper instrument panel gage lamps.....	2-882
Upper instrument panel optical ribbon.....	2-872

INDEX - CONTINUED

Subject

Page

R - CONTINUED

Removal - Continued	
Valve-to-cylinder pressure hose and fittings.....	2-1400
Valve-to-reservoir return hose and fittings.....	2-1396
Water temperature gage and line	2-1470
Wet air reservoir	2-986
Wet air reservoir to air dryer hose	2-1154
Windshield washer reservoir and pump.....	2-1344.1
Windshield wiper blade	2-1300
Windshield wiper control.....	2-1338
Windshield wiper motor	2-1324
Wiper blade and arm	2-1301
Reporting errors and recommending improvements.....	i
Reservoir, dry air	2-975
Assembly	2-982
Cleaning.....	2-980
Disassembly.....	2-978

Change 1 Index 33.0/(Index 33.1 blank)

INDEX - CONTINUED

Subject	Page
R - CONTINUED	
Reservoir, dry air - Continued	
Inspection/Replacement	2-980
Installation	2-984
Removal	2-976
Reservoir, hydraulic oil	2-1375
Assembly	2-1380
Cleaning	2-1378
Disassembly	2-1377
Inspection/Replacement	2-1380
Installation	2-1383
Removal	2-1376
Reservoir, oil	2-1237
Assembly	2-1241
Cleaning	2-1240
Disassembly	2-1239
Inspection/Replacement	2-1240
Installation	2-1241
Removal	2-1238
Reservoir-to-pump hose and fittings	2-1224
Cleaning	2-1225
Inspection/Replacement	2-1226
Installation	2-1226
Removal	2-1224
Reservoir-to-pump suction hose and fittings	2-1390
Cleaning	2-1392
Inspection/Replacement	2-1392
Installation	2-1393
Removal	2-1390
Reservoir, wet air	2-986
Assembly	2-991
Cleaning	2-988
Disassembly	2-988
Inspection/Replacement	2-990
Installation	2-994
Removal	2-986
Ribbon, optical, left instrument panel	2-868
Installation	2-870
Removal	2-868
Ribbon, optical, lower instrument panel	2-864
Installation	2-866
Removal	2-864
Ribbon, optical, right instrument panel	2-860
Installation	2-862
Removal	2-860
Ribbon, optical, upper instrument panel	2-872
Installation	2-875
Removal	2-872

INDEX - CONTINUED

Subject	Page
R - CONTINUED	
Right brake light switch.....	2-481
Installation.....	2-682
Removal.....	2-682
Right engine side of firewall junction box.....	2-774
Inspection/Replacement.....	2-775
Installation.....	2-776
Removal.....	2-774
Right front wheel to front brake limiting and quick release valve hoses.....	2-1122
Cleaning.....	2-1126
Inspection/Replacement.....	2-1126
Installation.....	2-1126
Removal.....	2-1122
Right instrument panel gage lamps.....	2-889
Installation.....	2-890
Removal.....	2-890
Right instrument panel indicator lamps.....	2-891
Installation.....	2-892
Removal.....	2-892
Right instrument panel optical ribbon.....	2-860
Installation.....	2-862
Removal.....	2-860
Right steering gear-to-left steering gear hose and fittings.....	2-1220
Cleaning.....	2-1221
Inspection/Replacement.....	2-1222
Installation.....	2-1222
Removal.....	2-1220
Right taillight.....	2-791
Assembly.....	2-793
Disassembly.....	2-792
Inspection/Replacement.....	2-792
Installation.....	2-794
Removal.....	2-792

S

Seat belts.....	2-1282
Installation.....	2-1282
Removal.....	2-1282
Seat, driver's.....	2-1274.1
Installation.....	2-1274.2
Removal.....	2-1274.2
Seat, driver's, covers and pan.....	2-127
Seat, passenger.....	2-1272
Assembly.....	2-1274
Disassembly.....	2-1273
Inspection/Replacement.....	2-1272
Installation.....	2-1274
Removal.....	2-1272

INDEX - CONTINUED

Subject	Page
S - CONTINUED	
Secondary magnetic switch.....	2-703
Installation.....	2-704
Removal.....	2-704
Sender, temperature, transmission oil.....	2-685
Installation.....	2-686
Removal.....	2-685
Service airbrake chamber hoses, to, front rear t-fitting	2-1093.1
Cleaning.....	2-1096
Inspection/Replacement	2-1096
Installation.....	2-1096
Removal.....	2-1094
Service airbrake chamber hoses, to, rear rear quick release valve	2-1136
Cleaning.....	2-1138
Inspection/Replacement	2-1138
Installation.....	2-1138
Removal.....	2-1136
Signal, front turn	2-795
Assembly	2-797
Disassembly.....	2-796
Inspection/Replacement	2-796
Installation.....	2-799
Removal.....	2-795
Slave receptacle.....	2-895.0
Cleaning.....	2-895.0
Installation.....	2-895.2
Removal.....	2-895.0
Speedometer.....	2-1408
Inspection/Replacement	2-1410
Installation.....	2-1410
Removal.....	2-1408
Speedometer drive cable	2-1414
Inspection/Replacement	2-1416
Installation.....	2-1416
Removal.....	2-1414
Splash guards.....	2-1280
Installation.....	2-1280
Removal.....	2-1280
Starter motor	2-896
Installation.....	2-898
Removal.....	2-896
Steering system maintenance.....	2-1202
Steering system, filling.....	2-1243
Filling.....	2-1243
Stop and dome light 30 amp circuit breaker.....	2-758
Installation.....	2-759
Removal.....	2-758
Storage batteries	2-838
Cleaning.....	2-840
Inspection/Replacement	2-840
Installation.....	2-841
Removal.....	2-839
Testing 2-838	

INDEX - CONTINUED

Subject	Page
S - CONTINUED	
Switch, backup light.....	2-689
Installation.....	2-690
Removal.....	2-689
Switch, brake, engine compression.....	2-735
Installation.....	2-736
Removal.....	2-736
Switch, buzzer, warning, low air-pressure.....	2-699
Installation.....	2-700
Removal.....	2-700
Switch, glow plug.....	2-734
Installation.....	2-734
Removal.....	2-734
Switch, key.....	2-740
Installation.....	2-741
Removal.....	2-740
Switch, lamp, dome panel.....	2-722
Installation.....	2-724
Removal.....	2-723
Switch, light, left brake.....	2-679
Installation.....	2-680
Removal.....	2-680
Switch, light, power take off.....	2-692
Installation.....	2-694
Removal.....	2-693
Switch, light, right brake.....	2-681
Installation.....	2-682
Removal.....	2-682
Switch, light, warning, low air-pressure.....	2-697
Installation.....	2-698
Removal.....	2-698
Switch, lights.....	2-725
Installation.....	2-726
Removal.....	2-726
Switch, magnetic, primary.....	2-701
Installation.....	702
Removal.....	2-702
Switch, magnetic, secondary.....	2-703
Installation.....	2-704
Removal.....	2-704
Switch, pressure, engine compression brake.....	2-683
Installation.....	2-684
Removal.....	2-684
Switch, pressure, engine oil.....	2-674
Installation.....	2-674
Removal.....	2-674
Switch, pressure, transmission oil.....	2-677
Installation.....	2-678
Removal.....	2-678

INDEX - CONTINUED

Subject	Page
S - CONTINUED	
Switch, relay, frequency sensing	2-706
Installation	2-706
Removal	2-706
Switch, selector, headlight beam	2-742
Installation	2-743
Removal	2-742
Switch, temperature, engine water	2-675
Installation	2-676
Removal	2-676
Switch, temperature, transmission oil	2-687
Installation	2-688
Removal	2-687
Switch, throttle, brake, engine compression	2-695
Adjustment	2-696
Installation	2-696
Removal	2-696
Switch, turn signal	2-744
Installation	2-746
Removal	2-744

T

T-manifold	2-1077.0
Installation	2-1077.0
Removal	2-1077.0
Table of contents	i
Tachometer 2-1411	
Inspection/Replacement	2-1412
Installation	2-1413
Removal	2-1412
Tachometer drive cable	2-1420
Inspection/Replacement	2-1422
Installation	2-1422
Removal	2-1420
Tail and panel light 20 amp circuit breaker	2-760
Installation	2-761
Removal	2-760
Taillight, left	2-788
Assembly	2-790
Disassembly	2-788
Inspection/Replacement	2-789
Installation	2-790
Removal	2-788
Taillight right	2-791
Assembly	2-793
Disassembly	2-792

INDEX - CONTINUED

Subject	Page
T - CONTINUED	
Inspection/Replacement	2-792
Installation.....	2-794
Removal.....	2-792
Tires 2-1201	
Torque limits.....	D-1
Transmission maintenance	2-900
Transmission, auxiliary.....	2-932
Draining.....	2-933
Filling 2-934	
Oil level check.....	2-932
Transmission, oil pan	2-900
Cleaning.....	2-903
Draining.....	2-901
Filling 2-906	
Inspection/Replacement	2-904
Installation.....	2-904
Removal.....	2-902
Transmission oil pressure gage	2-1447
Inspection/Replacement	2-1448
Installation.....	2-1448
Removal.....	2-1447
Transmission oil pressure gage line and fittings	2-1450
Cleaning.....	2-1457
Inspection/Replacement	2-1457
Installation.....	2-1458
Removal.....	2-1450
Transmission oil pressure switch	2-677
Installation.....	2-678
Removal.....	2-678
Transmission oil temperature sender	2-685
Installation.....	2-686
Removal.....	2-685
Transmission oil temperature switch	2-687
Installation.....	2-688
Removal.....	2-687
Transmission position indicator lamp	2-894
Installation.....	2-894
Removal.....	2-894
Transmission shift cable.....	2-919
Adjustment.....	2-924
Assembly	2-922
Cleaning.....	2-922
Disassembly.....	2-920
Inspection/Replacement	2-922
Installation.....	2-924
Removal.....	2-920

INDEX - CONTINUED

Subject

Page

T - CONTINUED

Transmission shift control	2-909
Cleaning.....	2-913
Inspection/Replacement	2-913
Installation.....	2-914
Removal.....	2-910
Transmission shift control stand.....	2-917
Cleaning.....	2-918
Inspection/Replacement	2-918
Installation.....	2-919
Removal.....	2-917
Turn signal and hazard flasher.....	2-711
Installation.....	2-712
Removal.....	2-712
Turn signal indicator lamps	2-888
Installation.....	2-888
Removal.....	2-888
Turn signal switch.....	2-744
Installation.....	2-746
Removal.....	2-744
Tube, oil filler, and dipstick	2-927
Cleaning.....	2-929
Inspection/Replacement	2-930
Installation.....	2-930
Removal.....	2-928
Installation.....	2-882
Removal.....	2-882

U

Upper instrument panel gage lamps	2-881
Upper instrument panel indicator lamps.....	2-883
Installation.....	2-884
Removal.....	2-884
Upper instrument panel optical ribbon.....	2-872
Installation.....	2-875
Removal.....	2-872

V

Valve-to-cylinder pressure hose and fittings.....	2-1400
Cleaning.....	2-1403
Inspection/Replacement	2-1404
Installation.....	2-1404
Removal.....	2-1400

INDEX - CONTINUED

Subject	Page
V - CONTINUED	
Valve-to-reservoir return hose and fittings	2-1395
Cleaning	2-1396
Inspection/Replacement	2-1398
Installation	2-1398
Removal	2-1396
W	
Warnings	a
Water temperature gage and line	2-1469
Inspection/Replacement	2-1471
Installation	2-1472
Removal	2-1470
Wet air reservoir	2-986
Assembly	2-991
Cleaning	2-988
Disassembly	2-988
Inspection/Replacement	2-990
Installation	2-994
Removal	2-986
Wet air reservoir to air dryer hose	2-1154
Cleaning	2-1154
Inspection/Replacement	2-1155
Installation	2-1156
Removal	2-1154
Wheel bearings, and, front hub and brakedrum assembly	2-1175
Assembly	2-1184
Cleaning	2-1178
Disassembly	2-1178
Inspection/Replacement	2-1180
Installation	2-1184
Removal	2-1176
Wheel bearings, and, rear hub and brakedrum assembly	2-1188
Assembly	2-1198
Cleaning	2-1192
Disassembly	2-1191
Inspection/Replacement	2-1192
Installation	2-1198
Removal	2-1188
Wheel, front	2-1168
Disassembly/Repair/Assembly	2-1168
Installation	2-1169
Removal	2-1168
Wheel, rear	2-1171
Disassembly/Repair/Assembly	2-1172
Installation	2-1173
Removal	2-1171
Wheel, tire, hub and drum maintenance	2-1168
Windshield washer reservoir and pump	2-1344.1
Installation	2-1344.2
Removal	2-1344.1

INDEX - CONTINUED

Subject	Page
W - CONTINUED	
Windshield wiper blade	2-1299
Inspection.....	2-1299
Installation.....	2-1300
Removal.....	2-1300
Windshield wiper control	2-1337
Installation.....	2-1340
Removal.....	2-1338
Windshield wiper motor	2-1324
Installation, driver's side.....	2-1328
Installation, passenger's side.....	2-1334
Removal, driver's side.....	2-1324
Removal, passenger's side.....	2-1331
Wiper blade and arm	2-1301
Adjustment.....	2-1302
Installation.....	2-1302
Removal.....	2-1301
Wiper blade, windshield	2-1299
Inspection.....	2-1299
Installation.....	2-1300
Removal.....	2-1300
Wiper control, windshield	2-1337
Installation.....	2-1340
Removal.....	2-1338
Wiper motor, windshield	2-1324
Installation, driver's side.....	2-1328
Installation, passenger's side.....	2-1334
Removal, driver's side.....	2-1324
Removal, passenger's side.....	2-1331

By Order of the Secretary of the Army:

CARL E. VUONO
General, United States Army
Chief of Staff

Official:

R.L. DILWORTH
Brigadier General, United States Army
The Adjutant General

Distribution:

To be distributed in accordance with DA Form 12-25A, Unit Maintenance requirements for Truck, Dump, 20T, 6x4 On-Off Highway, 71,000 GVW, Model F5070 (CCE)

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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

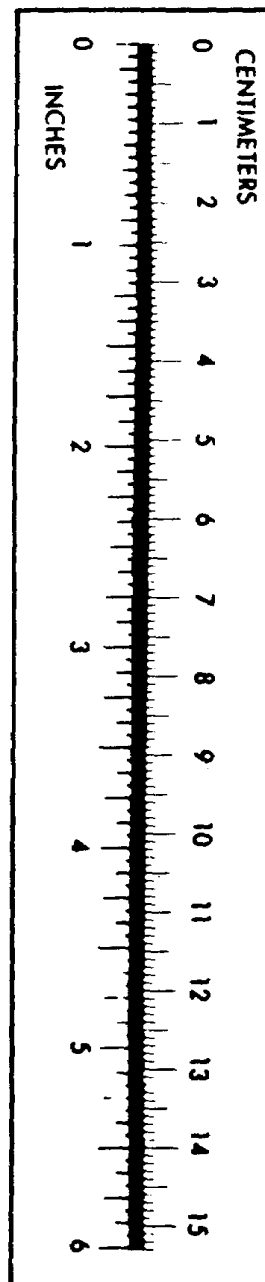
- $5/9 (^{\circ}\text{F} - 32) = ^{\circ}\text{C}$
- 212 $^{\circ}$ Fahrenheit is equivalent to 100 $^{\circ}$ Celsius
- 90 $^{\circ}$ Fahrenheit is equivalent to 32.2 $^{\circ}$ Celsius
- 32 $^{\circ}$ Fahrenheit is equivalent to 0 $^{\circ}$ Celsius
- $9/5 \text{ C}^{\circ} + 32 = \text{F}^{\circ}$

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



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