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TECHNICAL MANUAL

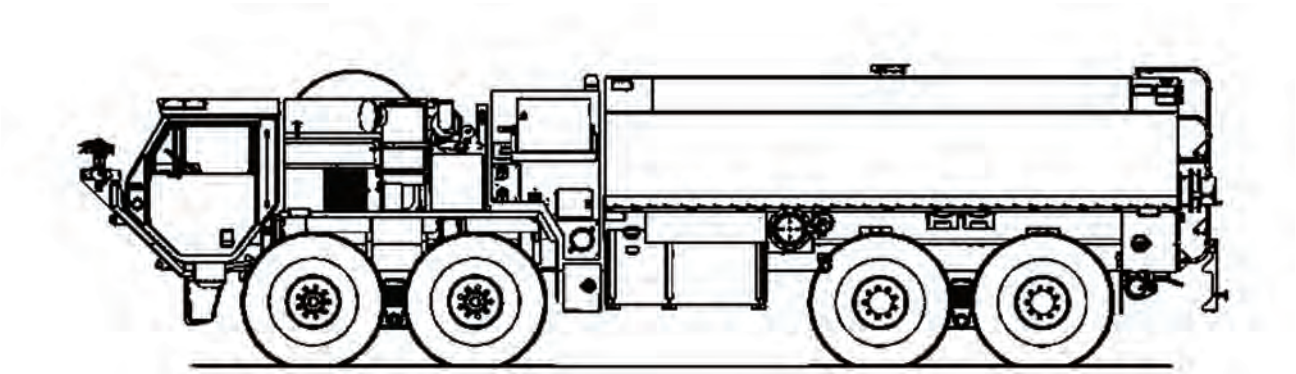
OPERATOR'S AND FIELD LEVEL
MAINTENANCE MANUAL
(INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)

FOR

HEMTT-BASED WATER TENDER (HEWATT)

MODEL M1158

NSN 2320-01-528-6294



DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.

HEADQUARTERS, DEPARTMENT OF THE ARMY

APRIL 2008

WARNING SUMMARY

This list summarizes critical warnings in this technical manual. They are repeated here to let you know how important they are. Study these warnings carefully. They can save your life and the lives of personnel you work with. If there is any doubt about handling tools, materials, equipment, and procedures, see TB 43-0216, Safety and Hazard Warnings for Operation and Maintenance of TACOM Equipment.

FOR INFORMATION ON FIRST AID, REFER TO FM 4-25.11.

OPERATION HAZARDS

WARNING



- **CARBON MONOXIDE (EXHAUST GAS) CAN CAUSE DEATH**
- **Carbon monoxide is without color or smell, but can cause death. Breathing air with carbon monoxide produces symptoms of headache, dizziness, loss of muscular control, a sleepy feeling, and coma. Brain damage or death can result from heavy exposure. Carbon monoxide occurs in the exhaust fumes of fuel-burning heaters and internal combustion engines. Carbon monoxide can become dangerously concentrated under conditions of no ventilation. Precautions must be followed to ensure crew safety when the personnel heater or engine of any vehicle is operated for any purpose.**
- **DO NOT operate personnel heater or engine of vehicle in a closed place without proper ventilation.**
- **DO NOT drive any vehicle with inspection plates, cover plates, or engine compartment covers removed unless necessary for maintenance purposes.**
- **BE ALERT at all times during vehicle operation for exhaust odors and exposure symptoms. If either are present, IMMEDIATELY VENTILATE personnel compartments. If symptoms persist, remove affected crew to fresh air and keep warm. DO NOT PERMIT PHYSICAL EXERCISE. If necessary, give artificial respiration and get immediate medical attention. For artificial respiration, refer to FM 4-25.11.**
- **BE AWARE that the gas particulate filter unit or field protection mask for nuclear-biological-chemical protection WILL NOT offer safety from carbon monoxide poisoning.**
- **THE BEST DEFENSE AGAINST CARBON MONOXIDE POISONING IS GOOD VENTILATION.**

WARNING



Personnel hearing can be PERMANENTLY DAMAGED if exposed to constant high noise levels of 85 dB or greater. Wear approved hearing protection devices when working in high noise level areas. Hearing loss occurs gradually, but becomes permanent over time.

WARNING



Diesel fuel compartment heaters come on automatically when truck engine is running and air temperature is below (+39°F [4°C]). CARBON MONOXIDE (EXHAUST GAS) CAN KILL YOU. Carbon monoxide is a colorless, odorless, DEADLY POISONOUS gas and when breathed, deprives body of oxygen and causes SUFFOCATION. Breathing air with carbon monoxide produces symptoms of headache, dizziness, loss of muscular control, a sleepy feeling, and coma. Permanent BRAIN DAMAGE or DEATH can result from severe exposure. Precautions MUST be followed to ensure personnel are safe whenever compartment heaters or engine are operated for any purpose. Injury to personnel may result.

WARNING



DO NOT operate compartment heaters or engine of truck in enclosed area without adequate ventilation. BE ALERT at all times whenever BATTERY switch is ON, truck engine is running, and air temperature is below (+39°F [4°C]) for exhaust symptoms. If either are present, IMMEDIATELY EVACUATE AND VENTILATE the area. Affected personnel treatment shall be: expose to fresh air; keep warm; DO NOT PERMIT PHYSICAL EXERCISE; if necessary, give artificial respiration as described in FM 4-25.11 and get medical attention. BE AWARE; neither the gas particulate filter unit nor field protection mask for nuclear-biological-chemical protection will protect you from carbon monoxide poisoning. THE BEST DEFENSE AGAINST CARBON MONOXIDE POISONING IS GOOD VENTILATION.

MODIFICATION HAZARD

WARNING



Unauthorized modifications to, alterations to, or installations of this equipment are prohibited and are in violation of AR 750-10. Any unauthorized modifications, alterations, or installations could result in injury or death to personnel or damage to equipment.

HIGH-PRESSURE HYDRAULIC SYSTEM

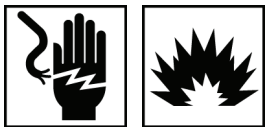
WARNING



- **Hydraulic systems can cause serious injury if high-pressure lines or equipment fails.**
- **Never work on hydraulic systems or equipment unless there is another person nearby who is familiar with the operation and hazards of the equipment and can give first aid.**
- **Never disconnect any hydraulic hose or part while the engine is running. Allow several minutes to elapse after shutting off engine, to allow pressure to relieve itself, before attempting to remove hoses. Failure to comply may result in injury to personnel.**

ELECTRICAL SYSTEM

WARNING



- **Remove all jewelry, such as rings, dog tags, bracelets, etc. If jewelry or tools contact electrical circuits, a direct short may result. Damage to equipment or death to personnel may occur.**
- **Do not smoke, use open flame, make sparks or other ignition sources around batteries. A battery giving off gas could explode and cause injury to personnel.**

SOLVENT CLEANING COMPOUND

WARNING



Solvent cleaning compound MIL-PRF-680 Type II and III may be irritating to the eyes and skin. Use protective gloves and goggles. Use in well-ventilated areas. Use respirator as needed. Accidental ingestion can cause irritation of digestive tract and respiratory tract, may cause lung and central nervous system damage. Can be fatal if swallowed. Inhalation of high/massive concentrations can cause coma or be fatal. First aid for ingestion: do not induce vomiting. Seek immediate medical attention. First aid for skin contact: remove contaminated clothing. Wash skin thoroughly with soap and water. If symptoms persist, seek medical attention. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If symptoms persist, seek medical attention. First aid for inhalation: move to fresh air. If not breathing, provide artificial respiration. If symptoms persist, seek medical attention. Keep away from open flames and other sources of ignition. Failure to follow this warning may result in injury or death to personnel.

- **The flashpoint for Type II solvent cleaning compound is 141-198°F (61-92°C) and Type III is 200-241°F (93-116°C).**
- **Improper cleaning methods and use of unauthorized cleaning solvents may injure personnel and damage equipment.**
- **Fire extinguishers should be placed nearby when using solvent cleaning compound. Failure to follow this warning may result in injury or death.**
- **Cloths or rags saturated with solvent cleaning compound must be disposed of IAW authorized facilities' procedures. Failure to follow this warning may result in injury.**
- **Eye shields must be worn when cleaning with a wire brush. Flying rust and metal particle may cause injury.**

ADHESIVE

WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

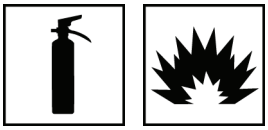
FLAMMABLE LIQUID AND COMBUSTIBLE VAPOR

WARNING



Gasoline, fuel oil, lubricating oil, grease, paint, paint thinner, cleaning solvents, and other combustible liquids present a serious fire hazard. Always store combustible liquids in approved containers and in their designated compartments or deck storage locations. Ensure exhaust and ventilation fans are operating while using cleaning solvents or paint products. Never store or charge batteries in a confined space without ventilation or near electrical equipment.

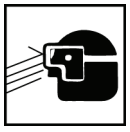
WARNING



Fuel is very flammable and can explode easily. To avoid serious injury or death, keep fuel away form open fire and keep fire extinguisher within easy reach when working with fuel. Do not work on fuel system when engine is hot. Fuel can be ignited by hot engine. While working with fuel, post signs that read NO SMOKING WITHIN 5O FEET OF VEHICLE.

PARTS UNDER PRESSURE

WARNING



Wear safety goggles and use caution when removing or installing springs, snap rings, retaining rings, and other parts under spring tension. These parts can act as projectiles, resulting in serious injury to personnel.

LIST OF EFFECTIVE PAGES/WORK PACKAGES

NOTE: Zero in the “Change No.” column indicates an original page or work package.

Date of issue for the original manual is:

Original . . . . . 30 April 2008

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HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, 30 APRIL 2008

TECHNICAL MANUAL

OPERATOR'S AND FIELD LEVEL MAINTENANCE MANUAL (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)

FOR

HEMTT-BASED WATER TENDER (HEWATT)

MODEL M1158

NSN 2320-01-528-6294

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS
You can help improve this publication. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Submit your DA Form 2028 (Recommended Changes to Equipment Technical Publications) through the Internet, on the Army Electronic Product Support (AEPS) website. The Internet address is https://aeps.ria.army.mil. The DA Form 2028 is located under the Public Applications section in the AEPS Public Home Page. Fill out the form and click on SUBMIT. Using this form on the AEPS will enable us to respond quicker to your comments and better manage the DA Form 2028 program. You may also mail, fax or e-mail your letter or DA Form 2028 direct to: U. S. Army TACOM Life Cycle Management Command, ATTN: AMSTA-LC-LMPP/TECH PUBS, 1 Rock Island Arsenal, Rock Island, IL 61299-7630. The email address is ROCK-TACOM-TECH-PUBS@conus.army.mil. The fax number is DSN 793-0726 or Commercial (309) 782-0726.

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HOW TO USE THIS TECHNICAL MANUAL

This manual is designed to help operate and maintain the HEMTT-Based Water Tender (HEWATT). This technical manual should be used in conjunction with the TM 9-2320-279-10 and TM 9-2320-315-14&P series manuals. Listed below are some of the features included in this manual to help locate and use the needed information:

- Warnings, cautions, subject headings, and other essential information are printed in bold type, making them easier to see.
- In addition to text, there are illustrations showing how to take a component off and put it back on. Cleaning and inspection criteria are also included where necessary.

This manual is subdivided into three volumes containing the following:

Volume 1

- Chapter 1 of this manual supplements the TM 9-2320-279-10 manual and it describes the HEWATT specific components. Equipment data is also provided.
- Chapter 2 of this manual supplements the TM 9-2320-279-10 manual and provides HEWATT Operating Instructions.
- Chapter 3 of this manual supplements the TM 9-2320-315-14&P manual and provides HEWATT Operator and Field Level Troubleshooting Procedures.
- Chapter 4 of this manual supplements the TM 9-2320-315-14&P manual and provides HEWATT Preventive Maintenance Checks and Services (PMCS) and Lubrication Instructions.

Volume 2

- Chapter 5 of this manual supplements the TM 9-2320-315-14&P manual and provides Field Level Maintenance Instructions for the HEWATT. An Illustrated List of Manufactured Items and Torque Limits are provided at the rear of this chapter.

Volume 3

- Chapter 6 of this manual supplements the TM 9-2320-315-14&P manual and provides Repair Parts and Special Tools List (RPSTL) for the HEWATT.
- Chapter 7 of this manual supplements the TM 9-2320-315-14&P manual and provides References, Two-Level Maintenance Allocation Chart (MAC), Components of End Item (COEI) and Basic Issue Items (BII) Lists, Expendable and Durable Items List, an Alphabetical Index, and Schematic Foldouts for the HEWATT electrical, hydraulic, and pneumatic systems.

The vehicles referenced in the TM 9-2320-279-10 and TM 9-2320-315-14&P manuals are similar, but not identical to the vehicle referenced in the supplemental manual. HEWATT vehicle procedures that are common to the M977 can be found in the TM 9-2320-279-10 or TM 9-2320-315-14&P manual. Configuration differences can be determined by visually inspecting the vehicle prior to maintenance.

Follow these guidelines when using the manual:

- Read all WARNINGS and CAUTIONS before performing any procedure.
- The operator must read this technical manual along with TM 9-2320-279-10 manual and become familiar with the content of each manual before attempting to operate the vehicle.
- Maintenance personnel must read this technical manual along with TM 9-2320-315-14&P manual and become familiar with the content of each manual before performing any maintenance to the vehicle.

CHAPTER 5

MAINTENANCE INSTRUCTIONS

FIELD LEVEL MAINTENANCE

MAINTENANCE GENERAL INTRODUCTION

SCOPE

This work package supplements the M985 Series Manuals and provides general maintenance information for the HEWATT.

STANDARD ARMY TOOLS AND EQUIPMENT

There are standard army tools and general mechanic's tool sets required for maintenance of this vehicle. For authorizing standard army tools and equipment, refer to the Modified Table of Organization and Equipment (MTOE) applicable to the unit. General Mechanics Tool Kit (GMTK), tools from the Standard Automotive Tool Set (SATS) and tools that are considered Special Tools will be listed under Tools and Special Tools at the beginning of the maintenance task.

SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

Special tools for Field Level Maintenance are listed in the RPSTL which is the authority for requisitioning. The Maintenance Allocation Chart (MAC) lists special tools needed for the various maintenance tasks.

REPAIR PARTS

Field and Sustainment level repair parts are listed and illustrated in the Repair Parts and Special Tools List covering Field Level Maintenance for this vehicle.

INSPECTION AND SERVICE UPON RECEIPT

a. Upon receipt of new, used, or reconditioned vehicle, inspect all fill valves, drain valves, and dump valves to be sure they are in proper working order. Secure, clean, and correctly adjust and/or lubricate as needed (WP 0126). Check Components of End Item (COEI) and Basic Issue Items (BII) to be sure every item is there, in good condition, and properly mounted or stowed (WP 0039).

b. Check vehicle for proper tire pressure.

WARNING



Tire pressure must be checked properly or serious injury or death to personnel may occur. Refer to Table 1 for proper tire pressure check instructions.

Table 1. Tire Pressures.

Tire Location	Tire Pressures			
	Highway	**Cross Country-Dry**	**Cross Country-Wet**	**Sandy Terrain**
Front Tire	60 psi (414 kPa)	35 psi (241 kPa)	20 psi (138 kPa)	30 psi (207 kPa)
Front Sand Tire	60 psi (414 kPa)	N/A	N/A	25 psi (172 kPa)
Rear Tire	70 psi (483 kPa)	40 psi (276 kPa)	30 psi (207 kPa)	35 psi (241 kPa)
Rear Sand Tire	70 psi (483 kPa)	N/A	N/A	30 psi (207 kPa)

c. Perform Preventive Maintenance Checks and Services (PMCS) for the HEWATT (WP 0126).

GENERAL MAINTENANCE PROCEDURES

a. **Cleanliness.**

WARNING



Solvent cleaning compound MIL-PRF-680 Type II and III may be irritating to the eyes and skin. Use protective gloves and goggles. Use in well-ventilated areas. Use respirator as needed. Accidental ingestion can cause irritation of digestive tract and respiratory tract, may cause lung and central nervous system damage. Can be fatal if swallowed. Inhalation of high/massive concentrations can cause coma or be fatal. First aid for ingestion: do not induce vomiting. Seek immediate medical attention. First aid for skin contact: remove contaminated clothing. Wash skin thoroughly with soap and water. If symptoms persist, seek medical attention. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If symptoms persist, seek medical attention. First aid for inhalation: move to fresh air. If not breathing, provide artificial respiration. If symptoms persist, seek medical attention. Keep away from open flames and other sources of ignition. Failure to follow this warning may result in injury or death to personnel.

- **The flashpoint for Type II solvent cleaning compound is 141-198°F (61-92°C) and Type III is 200-241°F (93-116°C).**
- **Improper cleaning methods and use of unauthorized cleaning solvents may injure personnel and damage equipment.**
- **Fire extinguishers should be placed nearby when using solvent cleaning compound. Failure to follow this warning may result in injury or death.**
- **Cloths or rags saturated with solvent cleaning compound must be disposed of IAW authorized facilities' procedures. Failure to follow this warning may result in injury.**
- **Eye shields must be worn when cleaning with a wire brush. Flying rust and metal particle may cause injury.**
- **Never use fuel to clean parts. Fuel is highly flammable. Serious personal injury could result if fuel ignites during cleaning.**
- **Compressed air used for cleaning purposes will not exceed 30 psi (207 kPa). Use only with effective chip guarding and personal protective equipment (goggles/shield, gloves, etc). Failure to comply may result in injury to personnel.**

Dirt, grease, oil, and debris only get in the way and may cover up a serious problem. Use solvent cleaning compound (WP 0401, Item 8) on metal surfaces and soapy water on rubber.

b. **Bolts, Nuts, and Screws.**

Check bolts, nuts, and screws for obvious looseness, missing, bent, or broken condition and tighten or replace as necessary. If they cannot be checked with a tool, look for chipped paint, bare metal, or rust around bolt heads.

c. **Welds.**

Look for loose or chipped paint, rust, or gaps where parts are welded together. If a bad weld is found, notify your supervisor.

d. **Electric Wires and Connectors.**

Look for cracked or broken insulation, bare wires, and loose or broken connectors. Tighten loose connectors and ensure wires are in good shape.

e. **Fluid Hoses, Tubes, and Fittings.**

Look for wear, damage, leaks, and ensure clamps and fittings are tight. Wet spots show leaks, but a stain around a fitting or connector may also indicate a leak. If connector or fitting is loose, tighten it. If something is broken or worn out, repair or replace per applicable procedure.

f. **Damage.**

Damage is defined as any condition that affects safety or would make the vehicle unserviceable for mission requirements.

GENERAL REMOVAL INSTRUCTIONS

a. **Work Required.**

Remove parts if replacement is required. Do not disassemble a component any further than needed.

b. **Preparation.**

Before removal of any electrical, hydraulic, or air system components, ensure system component is not energized or pressurized. Disconnect battery ground cables. Relieve air system pressure before removal of fasteners (e.g., nuts, locknuts, etc.). Remove any paint on threads to prevent binding of fasteners.

c. **Identification.**

To ease assembly and installation, tag and mark shims, connectors, wires, and mating end of lines before disconnecting them. Identify similar parts to ensure correct assembly.

d. **Position of Valves.**

Before removing valve handles, mark or diagram their position when open and closed. This will help during assembly.

e. **Location.**

Before removing cable ties, cushion clamps, hoses, tubing, wire, etc., note the location, position, and routing of each to ensure correct assembly.

GENERAL CLEANING INSTRUCTIONS

a. **Cleaning Solvents.**

WARNING



Solvent cleaning compound MIL-PRF-680 Type II and III may be irritating to the eyes and skin. Use protective gloves and goggles. Use in well-ventilated areas. Use respirator as needed. Accidental ingestion can cause irritation of digestive tract and respiratory tract, may cause lung and central nervous system damage. Can be fatal if swallowed. Inhalation of high/massive concentrations can cause coma or be fatal. First aid for ingestion: do not induce vomiting. Seek immediate medical attention. First aid for skin contact: remove contaminated clothing. Wash skin thoroughly with soap and water. If symptoms persist, seek medical attention. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If symptoms persist, seek medical attention. First aid for inhalation: move to fresh air. If not breathing, provide artificial respiration. If symptoms persist, seek medical attention. Keep away from open flames and other sources of ignition. Failure to follow this warning may result in injury or death to personnel.

- **The flashpoint for Type II solvent cleaning compound is 141-198°F (61-92°C) and Type III is 200-241°F (93-116°C).**
- **Improper cleaning methods and use of unauthorized cleaning solvents may injure personnel and damage equipment.**
- **Fire extinguishers should be placed nearby when using solvent cleaning compound. Failure to follow this warning may result in injury or death.**
- **Cloths or rags saturated with solvent cleaning compound must be disposed of IAW authorized facilities' procedures. Failure to follow this warning may result in injury.**
- **Eye shields must be worn when cleaning with a wire brush. Flying rust and metal particle may cause injury.**
- **Never use fuel to clean parts. Fuel is highly flammable. Serious personal injury could result if fuel ignites during cleaning.**
- **Compressed air used for cleaning purposes will not exceed 30 psi (207 kPa). Use only with effective chip guarding and personal protective equipment (goggles/shield, gloves, etc). Failure to comply may result in injury to personnel.**

Use only approved cleaning solvents to clean parts. Solvent cleaning compound (WP 0401, Item 8) is commonly used. Always work in a well-ventilated area.

b. **Removing Deposits.**

Soak parts in solvent cleaning compound (WP 0401, Item 8), and wash away deposits by flushing or spraying. When necessary, brush with soft bristle brush (not wire) moistened in solvent. Use compressed air to dry parts (except bearings) after cleaning. Bearings must drip and air dry.

CAUTION

Do not use wire brushes, abrasive wheels or compounds to clean parts. Failure to comply may result in damage to equipment.

c. **Tools.**

Do not use wire brushes, abrasive wheels or abrasive compounds to clean parts unless specifically approved in the detailed procedures. Parts may be scratched or altered and a highly stressed part may weaken.

d. **Ball and Roller Bearings.**

When cleaning ball or roller bearings, place them in a basket and suspend them in a container of solvent cleaning compound (WP 0401, Item 8). If needed, use a brush to remove caked grease, chips, etc. Avoid rotating bearing before solid particles are removed to prevent damaging races and balls. When bearings have been cleaned, coat them lightly with lubricating oil (WP 0401, Item 20) to remove solvent.

e. **Rubber Parts.**

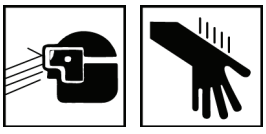
CAUTION

Do not clean tires, lubricant seals, rubber hoses, or electrical components with solvent. Failure to comply may result in damage to equipment.

Do not clean preformed packings or rubber parts in solvent cleaning compound. Wipe parts clean with a dry, cleaning cloth (WP 0401, Item 9).

f. **Exterior Parts.**

WARNING



Steam cleaning creates hazardous noise levels and severe burn potential. Eye, skin, and ear protection is required. Failure to comply may result in injury to personnel.

Steam clean all exterior parts thoroughly before removing. This will make inspection and disassembly easier.

g. **Degreasing Machine.**

CAUTION

To prevent corrosion, parts should be dipped in rust preventive within 2 hours of degreasing.

A degreasing machine may be used to remove heavy grease and oil from metal parts.

h. **Passages.**

WARNING



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- **Improper cleaning methods and use of unauthorized cleaning solvents may injure personnel and damage equipment.**
- **Fire extinguishers should be placed nearby when using solvent cleaning compound. Failure to follow this warning may result in injury or death.**
- **Cloths or rags saturated with solvent cleaning compound must be disposed of IAW authorized facilities' procedures. Failure to follow this warning may result in injury.**
- **Eye shields must be worn when cleaning with a wire brush. Flying rust and metal particle may cause injury.**

After degreasing, check all oil passages and cavities for dirt or blockage before coating with lubricating oil (WP 0401, Item 20). Run a thin, flexible wire through oil passages to ensure they are not clogged. Use a pressure spray gun and solvent cleaning compound (WP 0401, Item 8) to clean dirty passages.

i. **Electrical Parts.**

Electrical parts; such as coils, junction blocks, and switches, should not be soaked or sprayed with cleaning solutions. Clean these parts with a cleaning cloth (WP 0401, Item 9) moistened with solvent cleaning compound (WP 0401, Item 8).

j. **Hydraulic System.**

When cleaning hydraulic system parts, use solvent cleaning compound (WP 0401, Item 8). Clean and dry parts thoroughly to make sure no residue remains. If a coating preservative is required before assembly, apply a light film of hydraulic fluid (WP 0401, Item 17). If petroleum-free solvents are not available, use the same hydraulic fluid as used in vehicles system.

GENERAL INSPECTION INSTRUCTIONS

a. **Cleaning.**

Clean all parts before inspection. Check for defects such as physical distortion, wear, cracks, and pitting.

b. **Sealing Surfaces.**

Inspect all surfaces in contact with gaskets, packings, or seals for nicks and burring. If any defect is found, remove it before assembly.

c. **Tubing, Hoses, and Fittings.**

Inspect all hose surfaces for broken or frayed fabric. Check for breaks caused by sharp kinks or contact with other parts of the vehicle. Inspect fittings, tubing, mating surfaces, and threads for nicks, cracks, scratches, and other damage. Replace any defective part. After assembly and during initial vehicle operation periods, check for leaks.

d. **Electrical Parts.**

Inspect all wiring harnesses for broken, chafed, or burned wiring. Inspect all terminal connectors for loose connections and broken parts.

GENERAL INSTALLATION INSTRUCTIONS

a. **Preparation.**

When unpacking items, remove all packing material, barrier paper, tape, plastic bags, protective caps, and protective grease coatings. Handle and store removed components carefully.

b. **Sealing Compounds.**

WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

⚠ CAUTION

Use sealing compound sparingly and only on male threads. Do not apply compound on first two threads to avoid contamination of system from compound. Do not apply compound to hose connections or fittings with preformed packings. Damage to equipment may result.

Use sealing compounds as required in each maintenance task.

c. **Torquing.**

Tighten bolts, screws, washers, hoses, and fittings as required in WP 0388 or in each maintenance task.

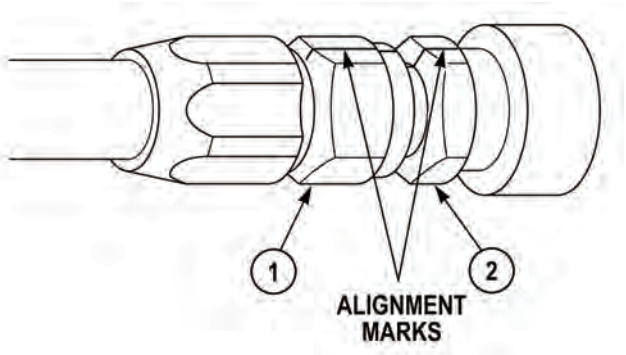
d. **Identification Tags.**

Put hoses, tubes, lines, and electrical wiring in place by matching identification tags and markings on equipment.

e. **Hoses, Air Lines, and Wiring.**

After installing hoses, air lines, and wiring, ensure that they do not contact moving parts or component edges. Secure in place, out of way, with cable ties and cushion clips.

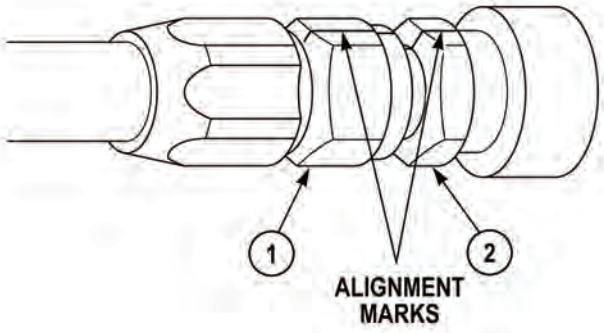
f. **Hose and Fitting Tightening Procedures.**



NOTE

Tighten hoses and fittings as required in WP 0388 or in each maintenance task. If a torque wrench and crowsfoot are not available or cannot be used, use the following procedure.

1. Install hose (1) on fitting (2).



NOTE

When turning effort increases, hose nut seat is in contact with fitting seat.

2. Tighten hose (1) until seated on fitting (2).

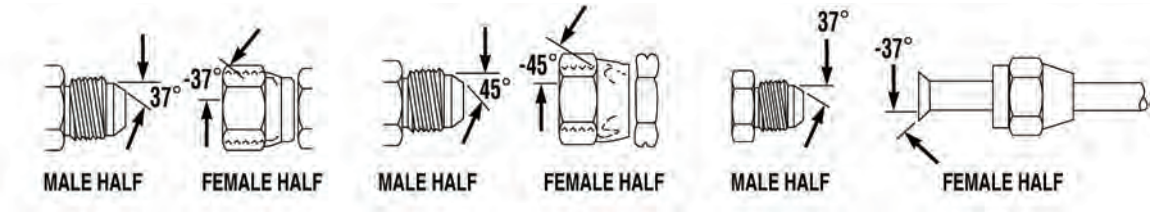
NOTE

Alignment marks allow the mechanic to count the number of flats the hose has rotated during tightening.

3. Scribe alignment mark on hose (1) and fitting (2).

4. Tighten hose nut (1) until mark on hose nut has rotated correct number of flats (refer to Table 2).

Table 2. Recommended Flats Rotation.



Dash No.	JIC 37-Degree Flared Hose and Fitting Machined Seat	SAE 45-Degree Flared Hose and Fitting Machined Seat	JIC 37-Degree Flared Tube
-4	1 1/2 - 1 3/4	1 - 1 1/4	2 1/4 - 2 3/4
-5	1 - 1 1/2	1 - 1 1/4	2 1/4 - 2 3/4
-6	1 - 1 1/2	3/4 - 1	2 1/4 - 2 3/4
-8	1 1/4 - 1 3/4	1 - 1 1/4	2 1/4 - 2 3/4
-10	1 1/4 - 1 3/4	1 - 1 1/4	2 - 1/2
-12	1 - 1 1/2	1 - 1 1/4	2 - 1/2
-16	3/4 - 1	-----	2 1/4 - 2 3/4
-20	1/2 - 3/4	-----	2 - 1/2
-24	1/2 - 3/4	-----	2 - 1/2
-32	3/4	-----	1 - 1 1/4

g. **Fastener Tightening Sequence Procedure**.

1. **Installation Torque.**

NOTE

If a component has a critical tightening sequence, it will be illustrated in that particular work package; otherwise, use the general sequence charts provided in Figure 1.

(a) Tighten nuts twice in a crisscross pattern using a torque wrench. The first time nut is torqued, apply approximately 75% of final torque value.

(b) Repeat sequence a second time until 100% of final torque value has been obtained for each nut.

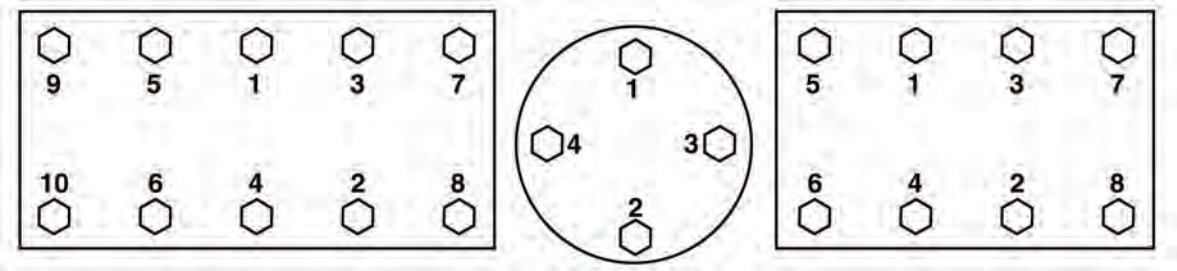


Figure 1. General Tightening Sequences.

2. **Check Torque.**

NOTE

When one or more screws are loose, check torque for all bolts on the component.

Tighten nuts in a crisscross pattern using a torque wrench. Apply 100% of final torque value.

h. **Pipe Thread Tightening Procedures.**

WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

⚠ CAUTION

Use sealing compound sparingly and only on male threads. Do not apply compound on first two threads to avoid contamination of system from compound. Do not apply compound to hose connections or fittings with preformed packings. Damage to equipment may result.

1. Coat threads of male fitting with sealing compound, sealant, or adhesive as indicated in each work package.

2. Position male fitting on female fitting. Tighten only finger-tight.
3. Scribe alignment mark on both fittings.

⚠ CAUTION

- **It may be necessary to tighten fitting slightly more or less than 2 1/2 turns to match position noted prior to removal. Do not loosen fitting to arrive at proper position or a leak may occur.**
- **Overtightening may cause pipe fitting to deform and damage to the joining fitting, flange, or component.**

4. Tighten male fitting 2 1/2 (3 maximum) full turns past hand-tight position.

PREPARATION FOR SHIPMENT OR STORAGE

Proper preservation of a vehicle and its individual parts for storage or shipment is vital to the life of the equipment.

a. Perform pump and blow-out procedures (WP 0032).

b. Perform preparation for storage or shipment (WP 0031).

c. For general preservation data as well as preservation procedures for vehicle specific parts, refer to Equipment Preservation Data Sheets (EPDS).

d. Refer to TM 9-2320-315-14&P for preparation for shipment or storage information.

e. Refer to TM 43-0213 Corrosion Prevention and Control (CPC) for Tactical Vehicles.

f. Refer to TB 9-2300-281-15 for overseas shipment instructions.

g. Refer to TB 9-2300-281-15 for Basic Issue Items (BII) packing instructions.

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PUMP OPERATOR'S PANEL FOAM LEVEL GAUGE CALIBRATION

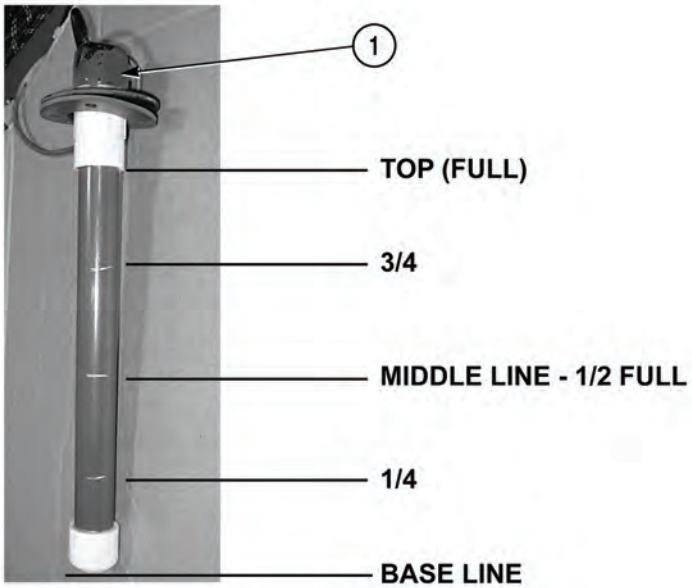
INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Equipment Conditions
Foam tank level probe removed (WP 0173)
Pump operator's panel opened (WP 0010)

References
WP 0007

CALIBRATION



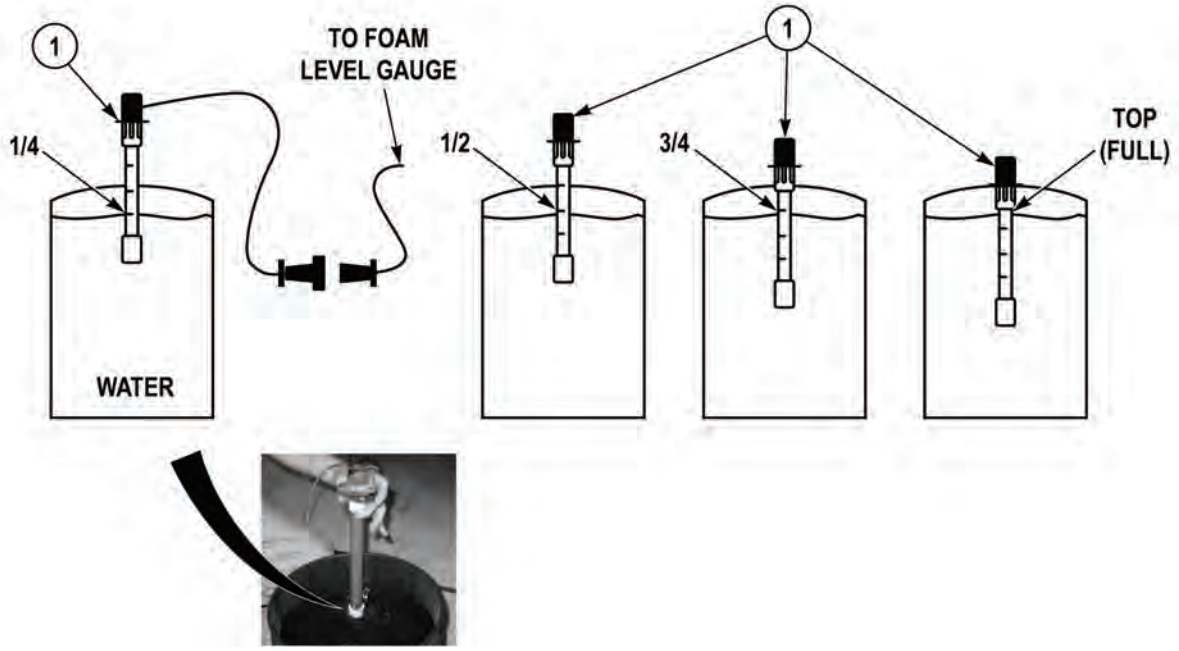
NOTE

This calibration procedure must be performed when installing a new foam level probe or foam level gauge.

1. Measure distance between baseline of foam level probe (1) and top (full) of foam level probe (1).
2. Divide distance measured in Step (1) by two and mark middle line 1/2 full on foam level probe (1).
3. Measure distance between middle line 1/2 and baseline on foam level probe (1).
4. Divide distance measured in Step (3) by two and mark 1/4 line.
5. Measure distance between middle line 1/2 and top (full) on foam level probe (1).
6. Divide distance measured in Step (5) by two and mark (3/4) line.



7. Remove cover (2) from foam level gauge (3).

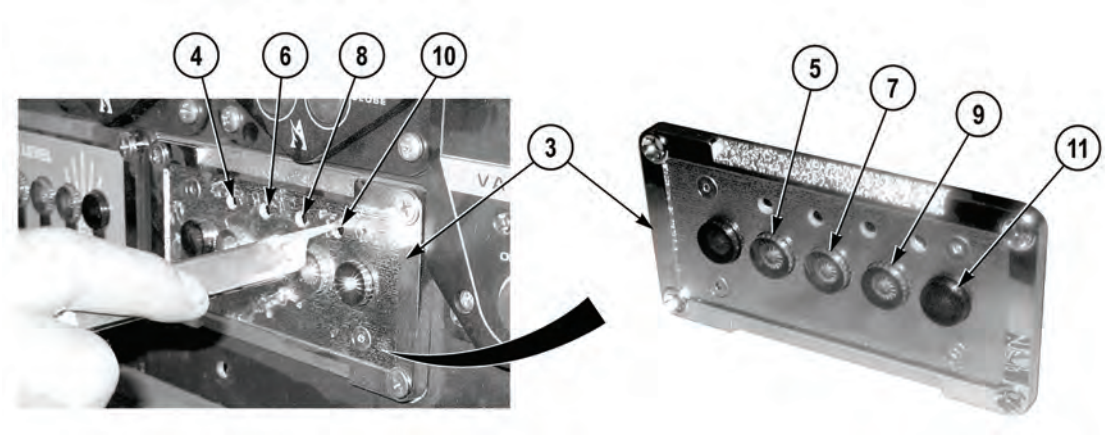


8. Push battery disconnect switch to on position (WP 0007).

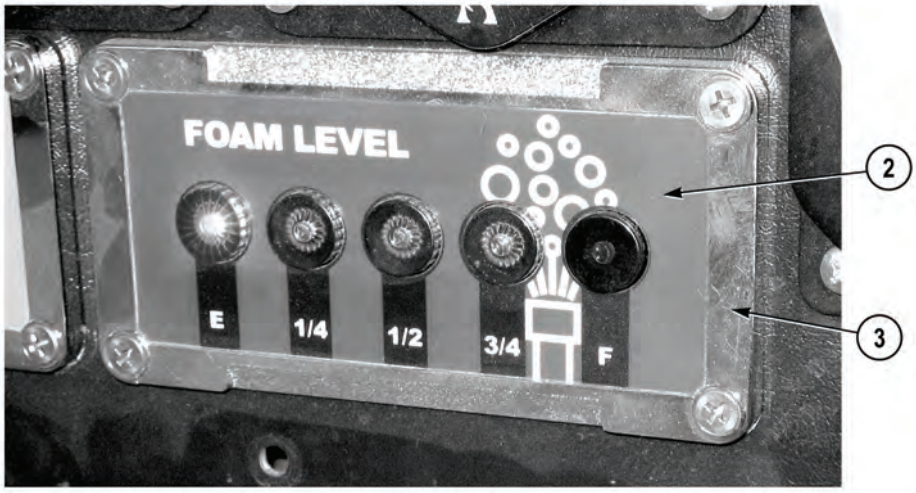
NOTE

Use any container of water deep enough to allow the level probe to be submerged to the full (top) position may be used.

9. Submerge foam level probe (1) in water to 1/4 mark.



10. Rotate adjusting screw (4) on foam level gauge (3) until foam level gauge 1/4 indicator lamp (5) is lit.
11. Submerge foam level probe (1) in water to 1/2 mark.
12. Rotate adjusting screw (6) on foam level gauge (3) until foam level gauge 1/2 indicator lamp (7) is lit.
13. Submerge foam level probe (1) in water to 3/4 mark.
14. Rotate adjusting screw (8) on foam level gauge (3) until foam level gauge 3/4 indicator lamp (9) is lit.
15. Submerge foam level probe (1) in water to top (full) mark.
16. Rotate adjusting screw (10) on foam level gauge (3) until foam level gauge F indicator lamp (11) is lit.
17. Pull battery disconnect to off position (WP 0007).



18. Install cover (2) on foam level gauge (3).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install foam tank level probe (WP 0173)
2. Close pump operator's panel (WP 0010)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

STOWAGE COMPARTMENT DOOR LATCH STRIKER ADJUSTMENT

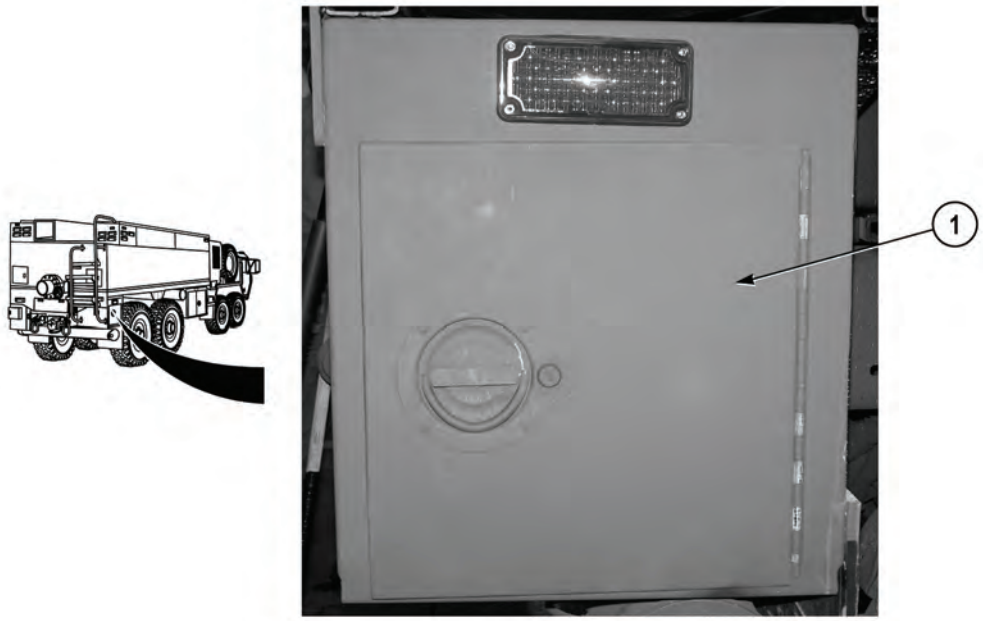
INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)

References
WP 0008

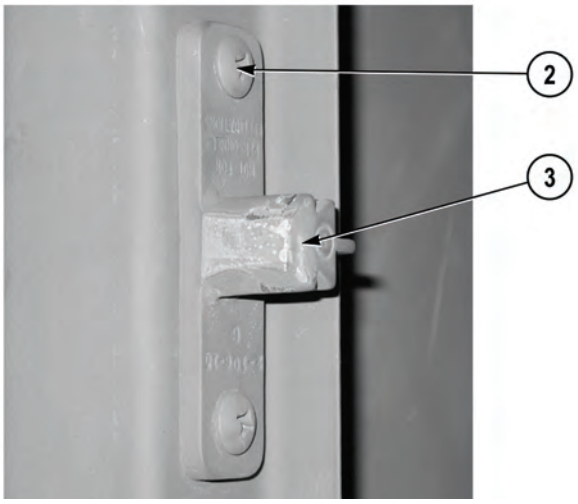
LOWER STOWAGE COMPARTMENT DOOR LATCH STRIKER ADJUSTMENT



NOTE

All lower stowage compartment door latch strikers are adjusted the same way. Passenger side rear stowage compartment shown.

1. Open stowage compartment door (1) (WP 0008).



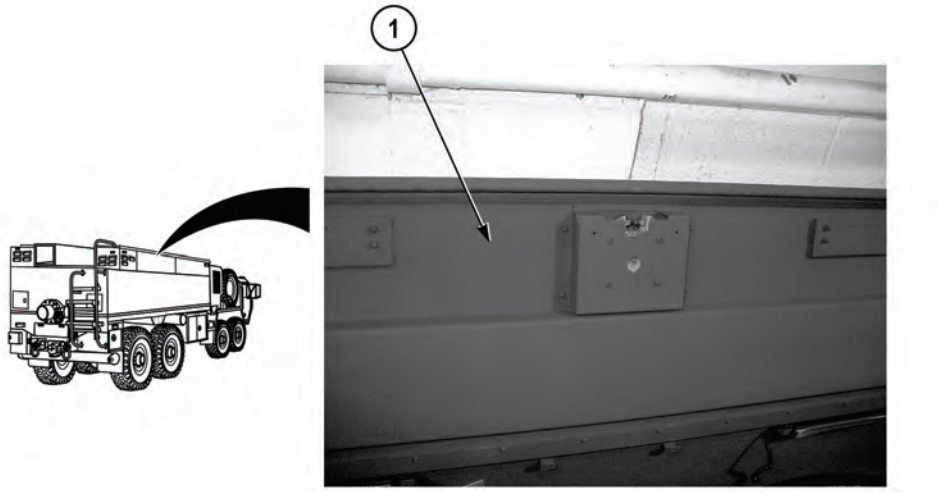
NOTE

To adjust door latch striker, move door latch striker side to side and up and down.

2. Loosen two screws (2) on door latch striker (3) and adjust to desired position.
3. Tighten two screws (2) and close stowage compartment door (1) to check for proper adjustment (WP 0008).
4. Repeat Steps (1) through (3) until desired adjustment has been met.

END OF TASK

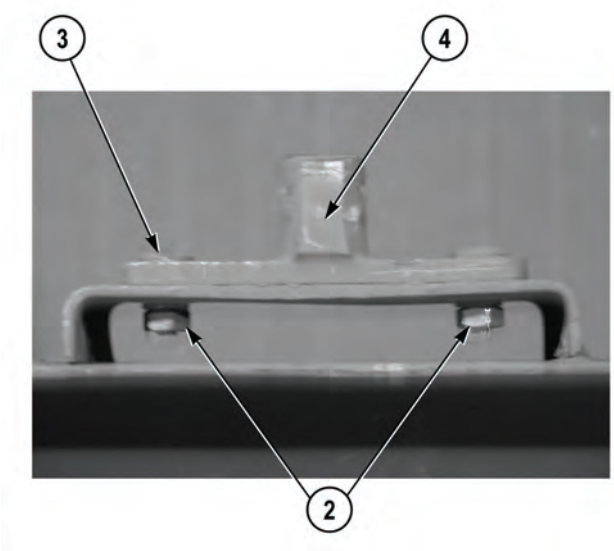
UPPER STOWAGE COMPARTMENT DOOR LATCH STRIKER ADJUSTMENT



NOTE

All upper stowage compartment door latch strikers are adjusted the same way.
Passenger side rear stowage compartment shown.

1. Open stowage compartment door (1) (WP 0008).



NOTE

To adjust door latch striker, move door latch striker side to side and up and down.

2. Loosen two nuts (2) on screws (3) on door latch striker (4) and adjust to desired position.
3. Tighten two nuts (2) on screws (3) and close stowage compartment door (1) to check for proper adjustment (WP 0008).
4. Repeat Steps (1) through (3) until desired adjustment has been met.

END OF TASK

FOLLOW-ON MAINTENANCE

Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

BUMPER TURRET ADJUSTMENT

INITIAL SETUP:

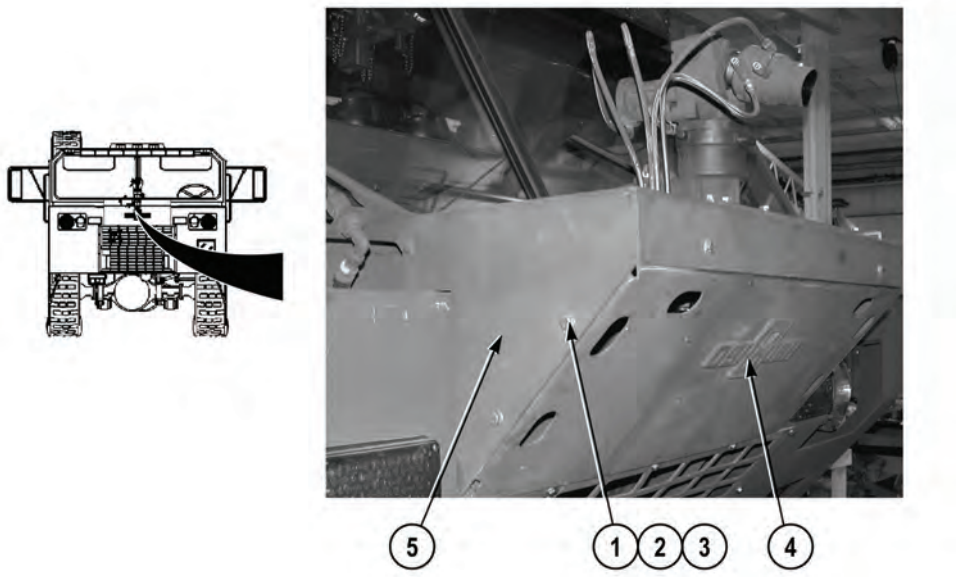
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive
(WP 0399, Item 17)

Materials/Parts
Locknut (6)

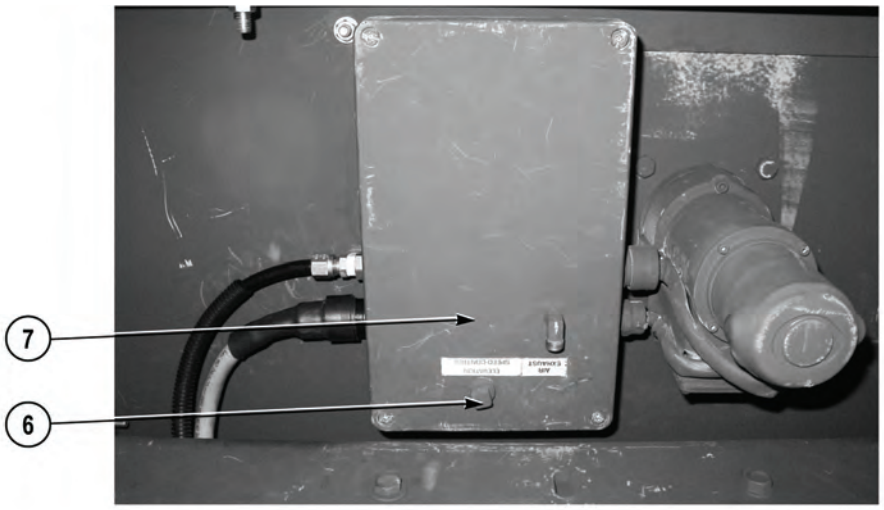
References
WP 0027
WP 0392, Fig. 79

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)

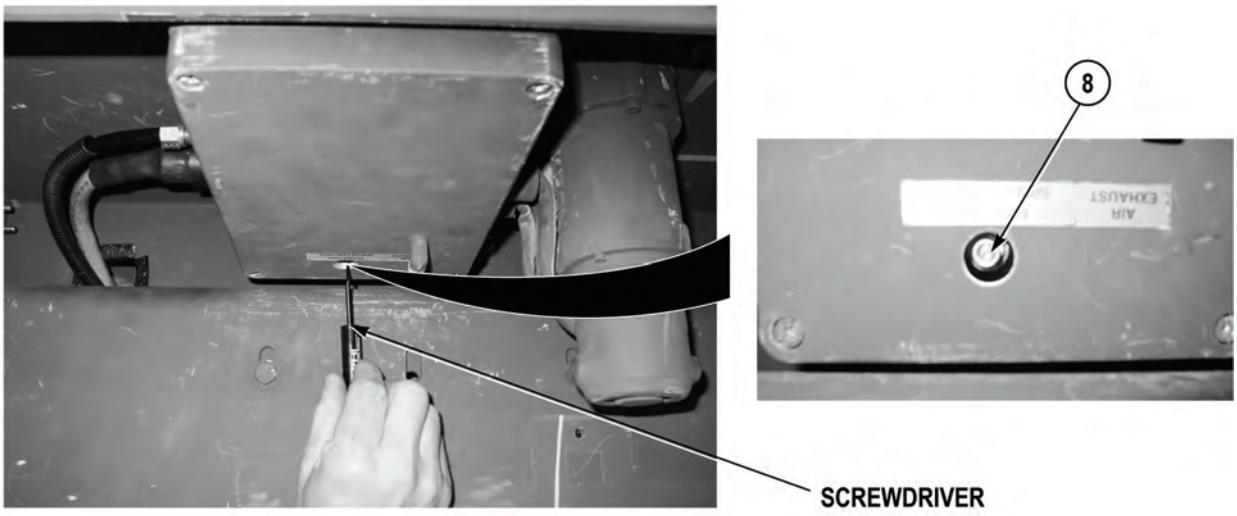
BUMPER TURRET VERTICAL SPEED ADJUSTMENT



1. Remove six locknuts (1), 12 washers (2), six screws (3), and cover (4) from bumper turret mount (5). Discard locknuts.



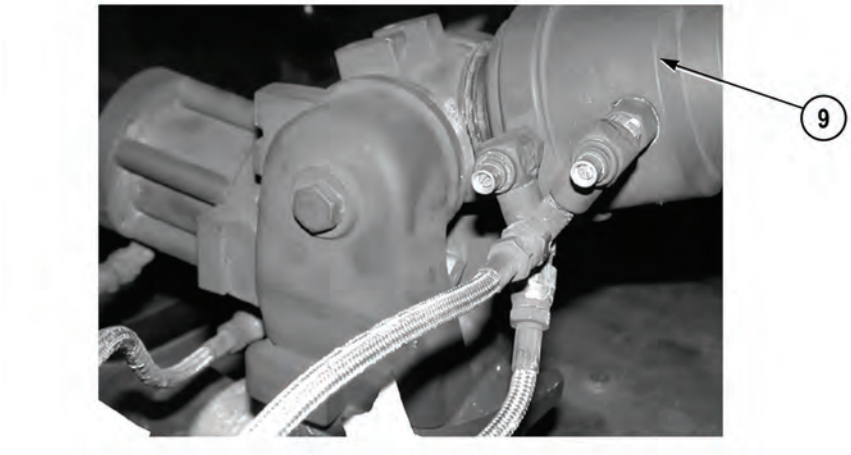
2. Remove plug (6) from junction box cover (7).



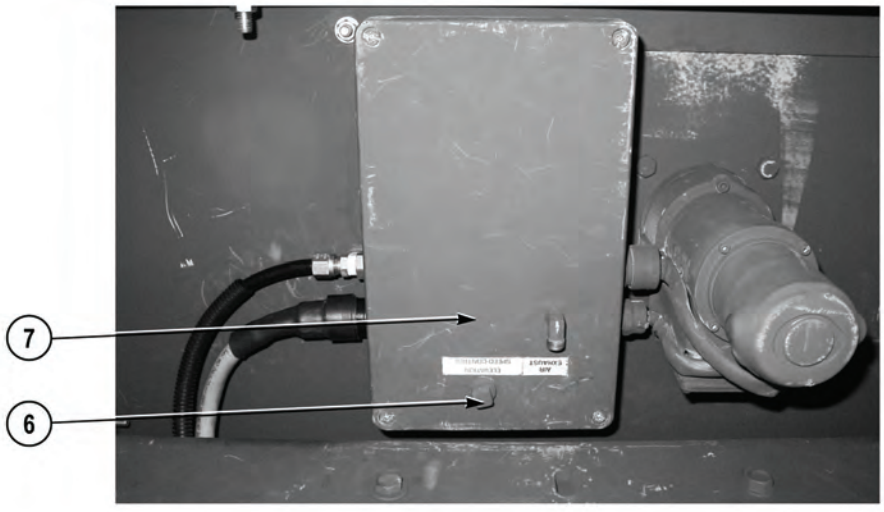
NOTE

- Vertical speed control is adjusted by using screwdriver and turning needle valve clockwise or counterclockwise in increments of 1/8 of a turn.
- To increase vertical speed, turn needle valve counterclockwise in increments of 1/8 of a turn.
- To decrease vertical speed, turn needle valve clockwise in increments of 1/8 of a turn.
- Maintain air pressure in normal operating range (85 to 120 psi [586 to 827 kPa]) to ensure accurate adjustment.

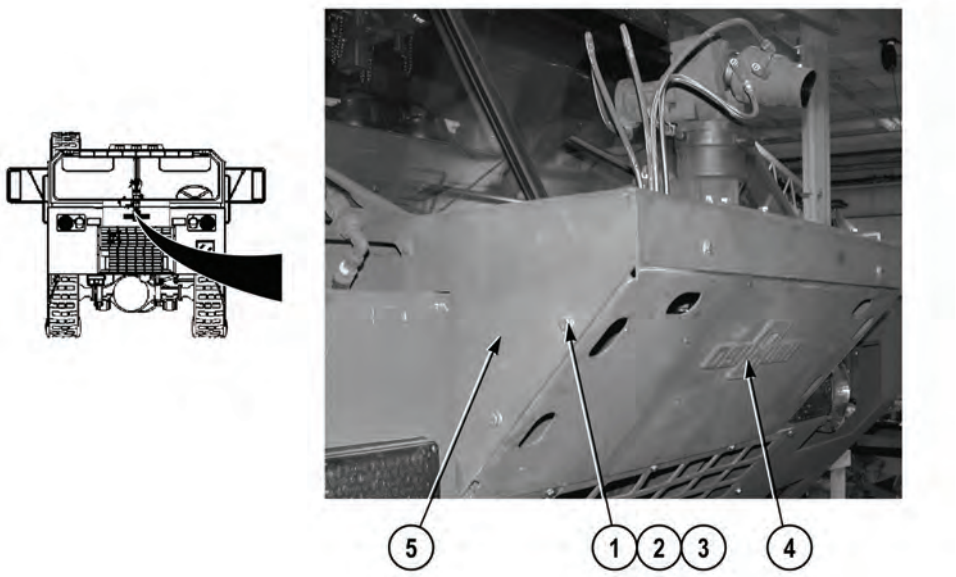
3. Using a small screwdriver, adjust needle valve (8).



4. Check vertical speed by operating bumper turret (9) (WP 0027).
5. Repeat Steps (3) and (4) until desired vertical speed is obtained.



6. Install plug (6) on junction box cover (7).



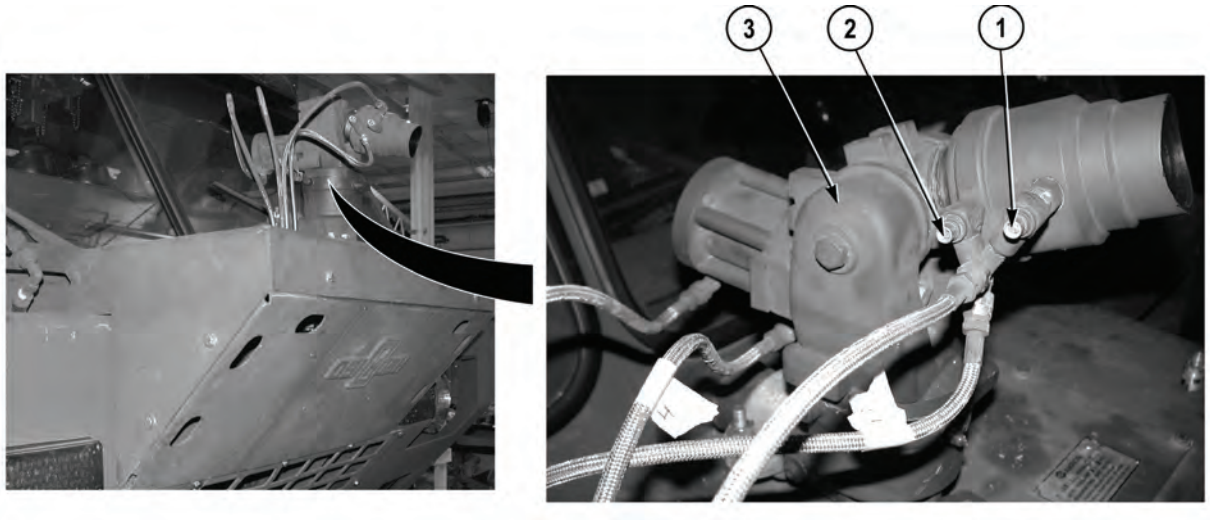
7. Install cover (4) on bumper turret mount (5) with six screws (3), 12 washers (2), and six locknuts (1).

END OF TASK

BUMPER TURRET NOZZLE SPEED ADJUSTMENT

NOTE

- Reducing speed too much may cause erratic or incorrect shift pattern operation.
- Nozzle speed control is adjusted by using a small screwdriver and turning two needle valves clockwise or counterclockwise in increments of 1/8 of a turn.
- Both needle valves must be turned in same direction and distance. Failure to comply may result in nozzle pattern sleeve drifting when pattern control rocker switch is released on joystick.
- To increase nozzle speed, turn both needle valves counterclockwise in increments of 1/8 of a turn.
- To decrease nozzle speed, turn both needle valves clockwise in increments of 1/8 of a turn.
- Needle valve closest to nozzle discharge controls fog speed.
- Needle valve closest to air cylinders controls straight stream speed.
- Maintain air pressure in normal operating range (85 to 120 psi [586 to 827 kPa]) to ensure accurate adjustment.



1. Using a small screwdriver, adjust fog needle valve (1) and straight stream needle valve (2).
2. Check nozzle speed by operating bumper turret (3) (WP 0027).
3. Repeat Steps (1) and (2) until desired nozzle speed is obtained.

END OF TASK

FOLLOW-ON MAINTENANCE

Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

HYDRAULIC HEAT EXCHANGER FAN(S) SWITCH REPLACEMENT

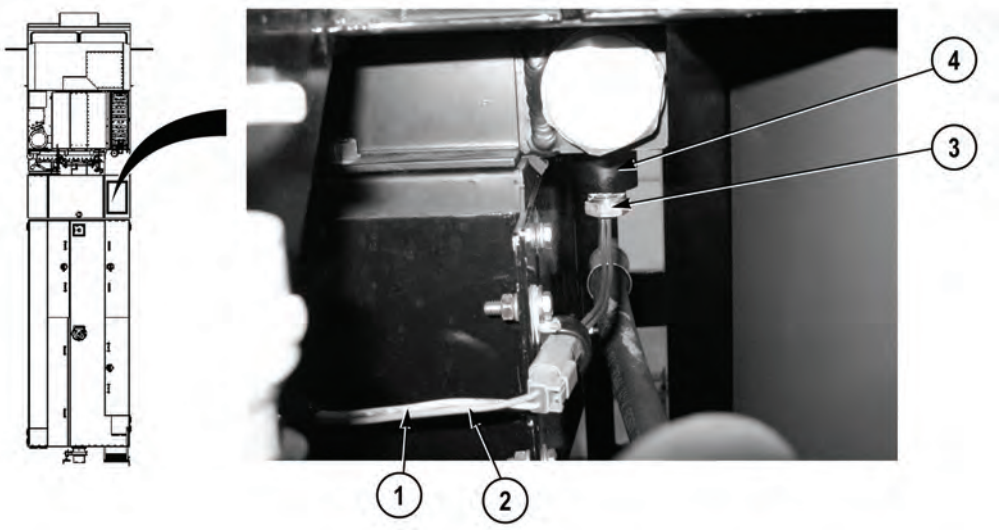
INITIAL SETUP:

Tools and Special Tools
Cap Set, Protective (WP 0399, Item 1)
Drain Pan (WP 0399, Item 4)
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Compound, Sealing, Pipe Thread (WP 0401, Item 11)
Tags, Identification (WP 0401, Item 22)

Equipment Conditions
Pump house panel K removed (WP 0341)

REMOVAL



NOTE

Tag and mark wires prior to removal to ensure proper installation.

1. Disconnect wire 3280 (1) and wire 3277 (2).

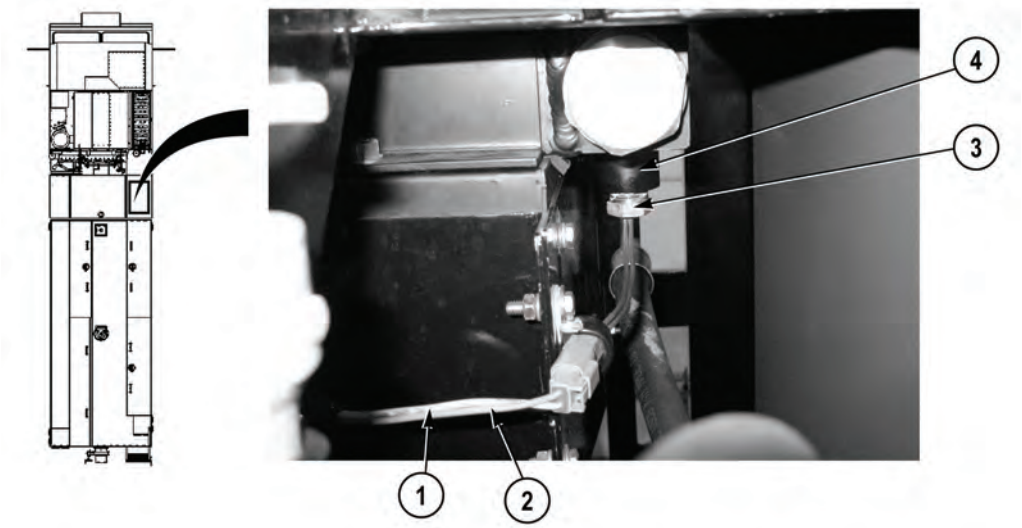
NOTE

Place a suitable drain pan under fan switch.

2. Remove fan switch (3) from hydraulic heat exchanger (4).

END OF TASK

INSTALLATION



WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

1. Apply pipe thread sealing compound to threads of fan switch (3).
2. Install fan switch (3) on hydraulic heat exchanger (4).
3. Connect wire 3277 (2) and wire 3280 (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Install pump house panel K (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

HYDRAULIC HEAT EXCHANGER REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
- Cap Set, Protective (WP 0399, Item 1)
- Drain Pan (WP 0399, Item 4)
- Standard Automotive Tool Set (SATS), (WP 0399, Item 15)
  - • Wrench, Adjustable 18”
  - • Wrench, Pipe 18”
- Tool Kit, General Mechanic’s: Automotive (WP 0399, Item 17)

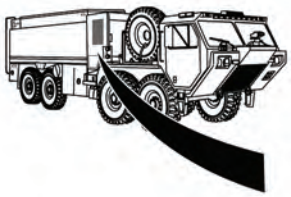
Materials/Parts
- Fluid, Hydraulic (WP 0401, Item 17)
- Tags, Identification (WP 0401, Item 22)
- Preformed Packing (1)
- Preformed Packing (2)
- Preformed Packing (1)
- Preformed Packing (1)
- Preformed Packing (1)
- Preformed Packing (1)
- Preformed Packing (1)
- Preformed Packing (1)
- Lockwasher (21)

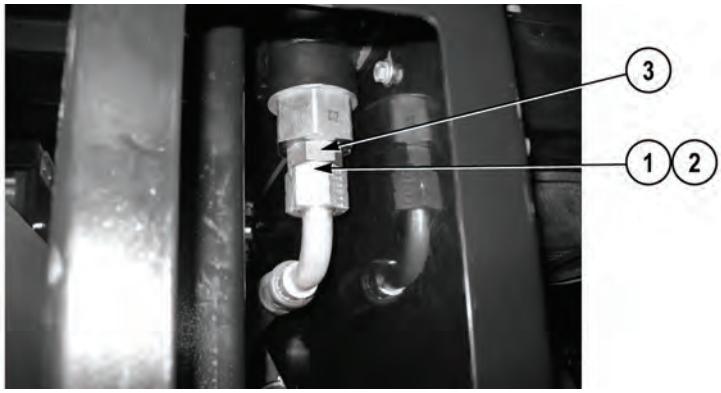
Personnel Required
- MOS 63B Wheeled Vehicle Mechanic (2)

References
- WP 0134
- WP 0392, Fig. 7, 8, 10, 46, 71

Equipment Conditions
- Hydraulic heat exchanger shrouds A, B, and C removed (WP 0135)
- Hydraulic heat exchanger fans removed (WP 0134)
- Pump house panel M removed (WP 0341)
- Hydraulic reservoir drained (WP 0143)
- Hydraulic heat exchanger fan switch removed (WP 0131)

REMOVAL

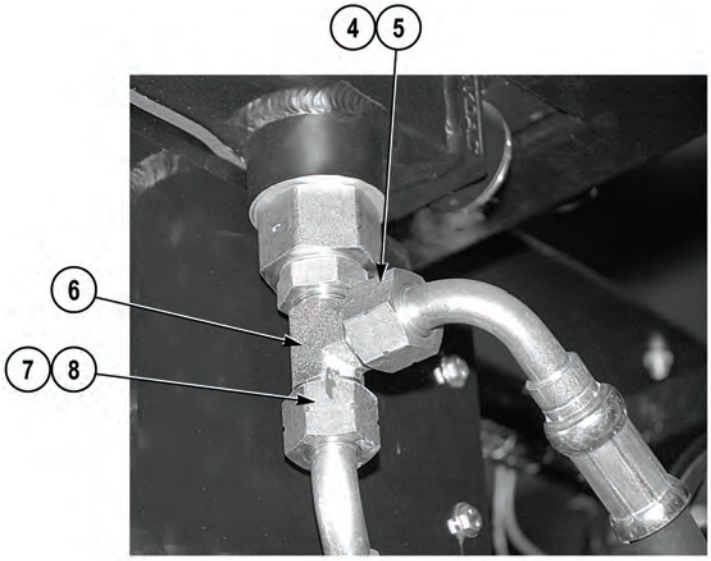




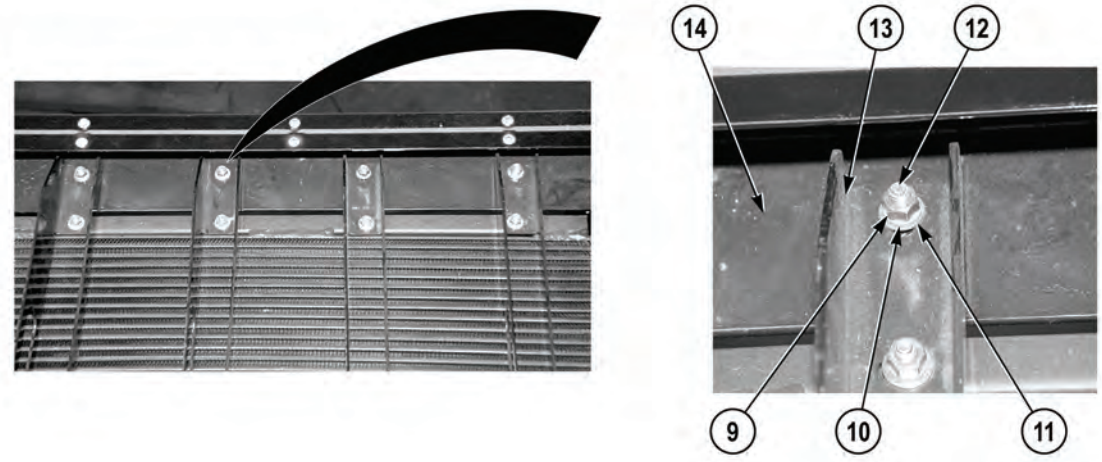
NOTE

- Tag and mark hoses and fittings prior to removal to ensure proper installation.
- Place suitable drain pan under hoses being removed.
- Cap and plug hoses and fittings upon removal.

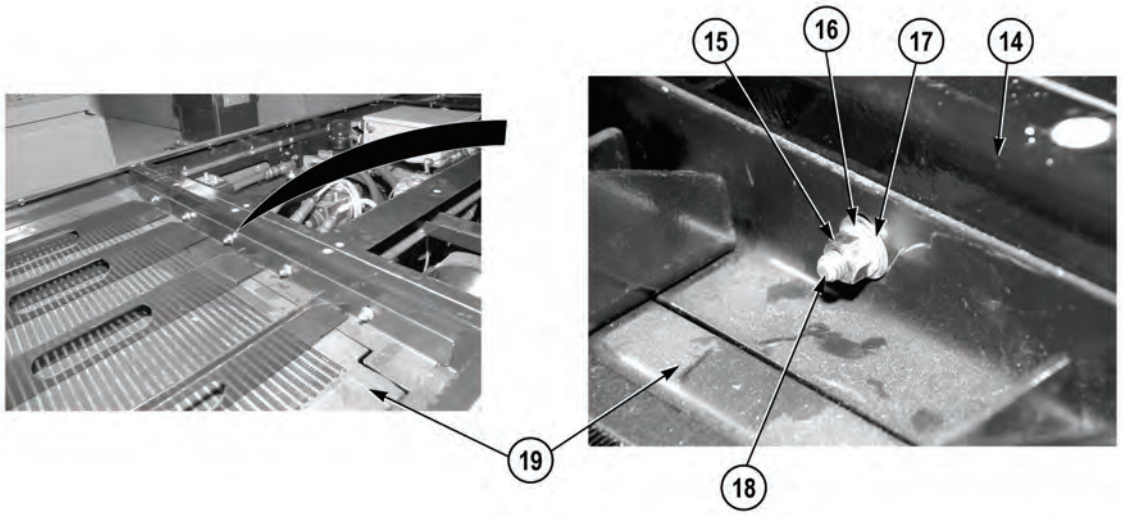
1. Remove hose 1682893 (1) and preformed packing (2) from fitting (3). Discard preformed packing.



2. Remove hose 1682884 (4) and preformed packing (5) from tee (6). Discard preformed packing.
3. Remove hose 1682886 (7) and preformed packing (8) from tee (6). Discard preformed packing.



4. Remove four nuts (9), lockwashers (10), eight washers (11), and four screws (12) from four brackets (13) and pump house frame (14). Discard lockwashers.

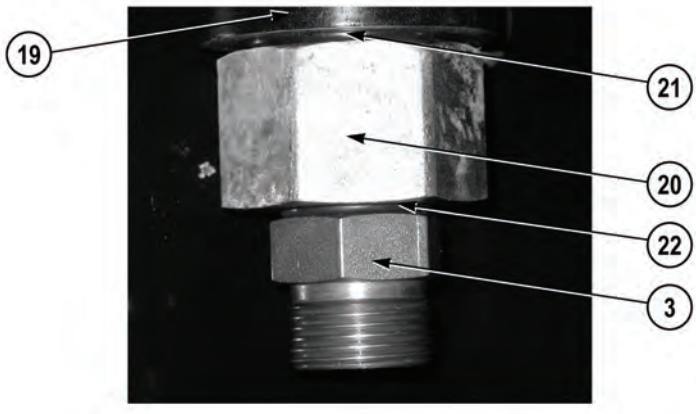


WARNING



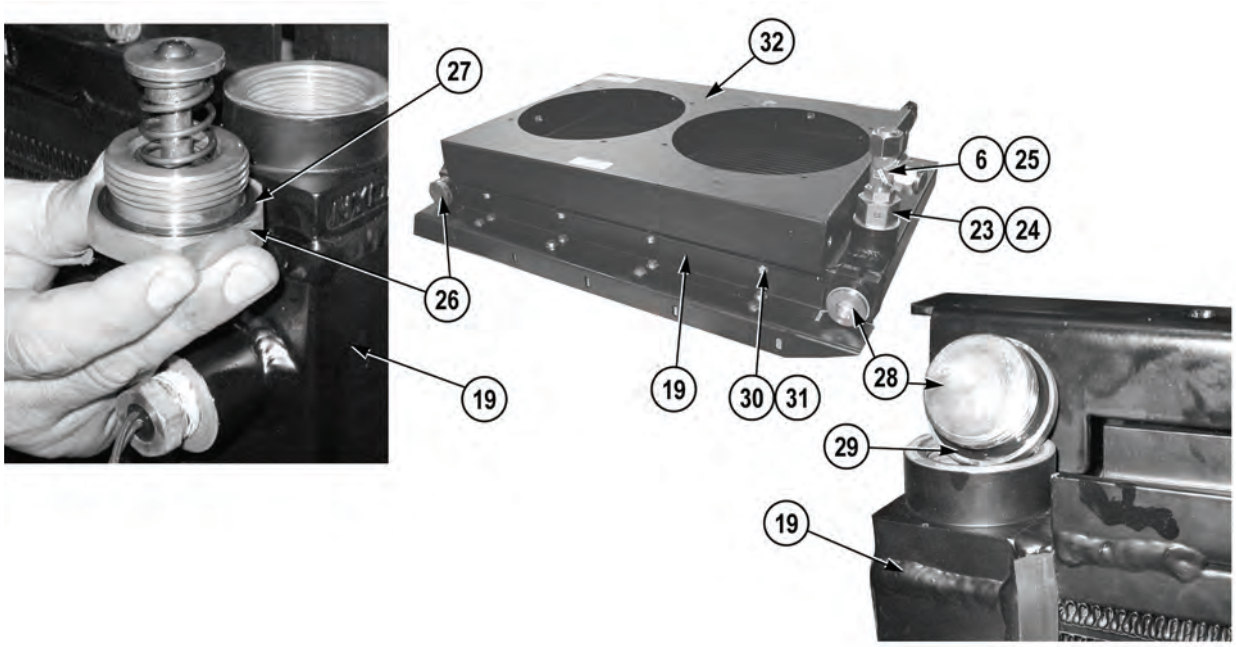
Hydraulic heat exchanger weighs 85 lb. (38.56 kg). Do not attempt to remove hydraulic heat exchanger without the aid of an assistant and a suitable lifting device. Failure to comply may result in serious injury to personnel and damage to equipment.

5. With the aid of an assistant and a suitable lifting device, remove five nuts (15), lockwashers (16), 10 washers (17), five screws (18), and hydraulic heat exchanger (19) from pump house frame (14). Discard lockwashers.



6. Remove fitting (20) and preformed packing (21) from hydraulic heat exchange (19). Discard preformed packing.

7. Remove fitting (3) and preformed packing (22) from fitting (20). Discard preformed packing.



NOTE

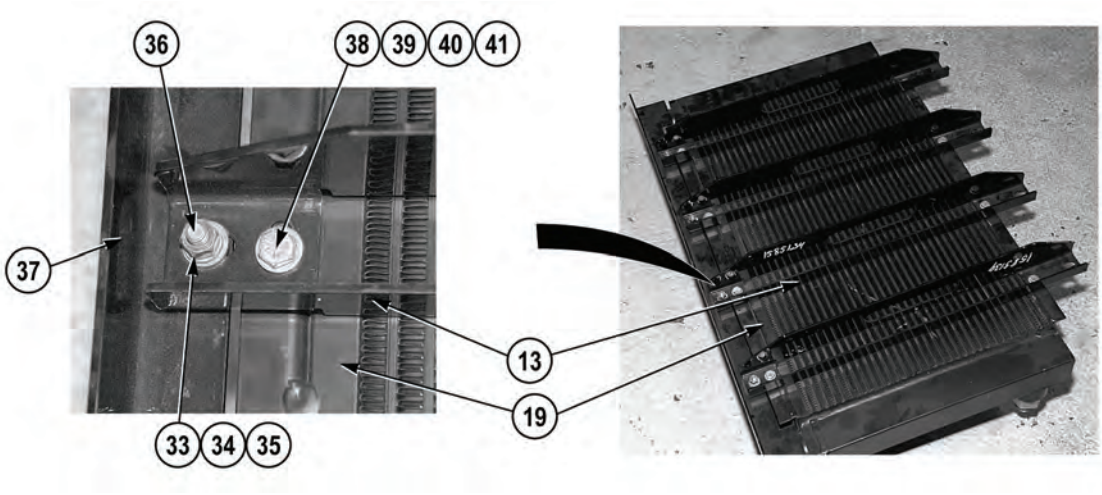
Note position of tee prior to removing fitting to ensure proper installation.

8. Remove fitting (23) and preformed packing (24) from hydraulic heat exchanger (19). Discard preformed packing.
9. Remove tee (6) and preformed packing (25) from fitting (23). Discard preformed packing.
10. Remove pressure relief valve (26) and preformed packing (27) from hydraulic heat exchanger (19). Discard preformed packing.
11. Remove plug (28) and preformed packing (29) from hydraulic heat exchanger (19). Discard preformed packing.

NOTE

- Perform Step (12) if housing needs to be removed.
- Note position of housing on hydraulic heat exchanger prior to removal to ensure proper installation.

12. Remove eight screws (30), washers (31), and housing (32) from hydraulic heat exchanger (19).



13. Remove four nuts (33), lockwashers (34), eight washers (35), four screws (36), and bracket (37) from four brackets (13). Discard lockwashers.

NOTE

Note position and orientation of brackets prior to removal to ensure proper installation.

14. Remove eight nuts (38), lockwashers (39), 16 washers (40), eight screws (41), and four brackets (13) from hydraulic heat exchanger (19). Discard lockwashers.

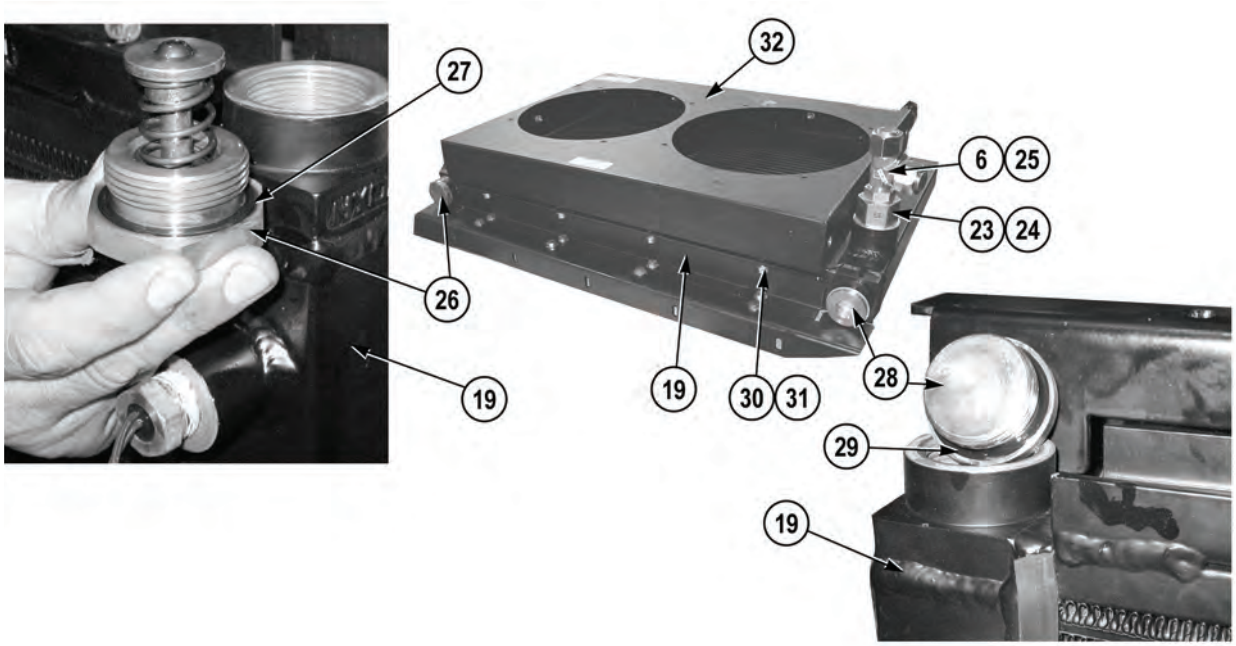
END OF TASK

INSTALLATION

NOTE

Install brackets on hydraulic heat exchanger as noted prior to removal.

1. Install four brackets (13) on hydraulic heat exchanger (19) with eight screws (41), 16 washers (40), eight lockwashers (39), and nuts (38).
2. Install bracket (37) on four brackets (13) with four screws (36), eight washers (35), four lockwashers (34), and nuts (33).



NOTE

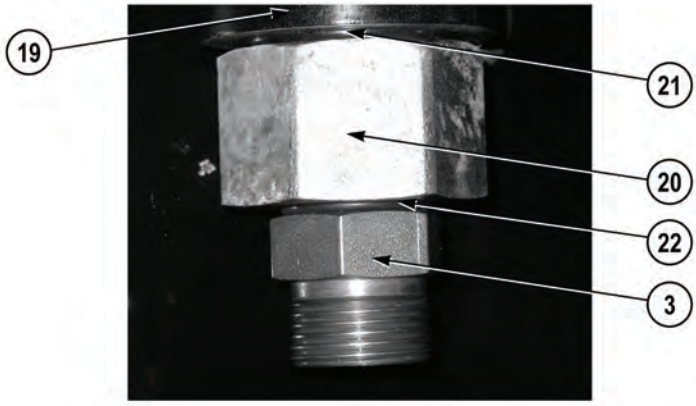
- Perform Step (3) if housing was removed.
- Install housing on hydraulic heat exchanger as noted prior to removal.

3. Install housing (32) on hydraulic heat exchanger (19) with eight washers (31) and screws (30).
4. Lightly lubricate preformed packing (29) with clean oil, and install preformed packing (29) and plug (28) on hydraulic heat exchanger (19).
5. Lightly lubricate preformed packing (27) with clean oil, and install preformed packing (27) and pressure relief valve (26) on hydraulic heat exchanger (19).

NOTE

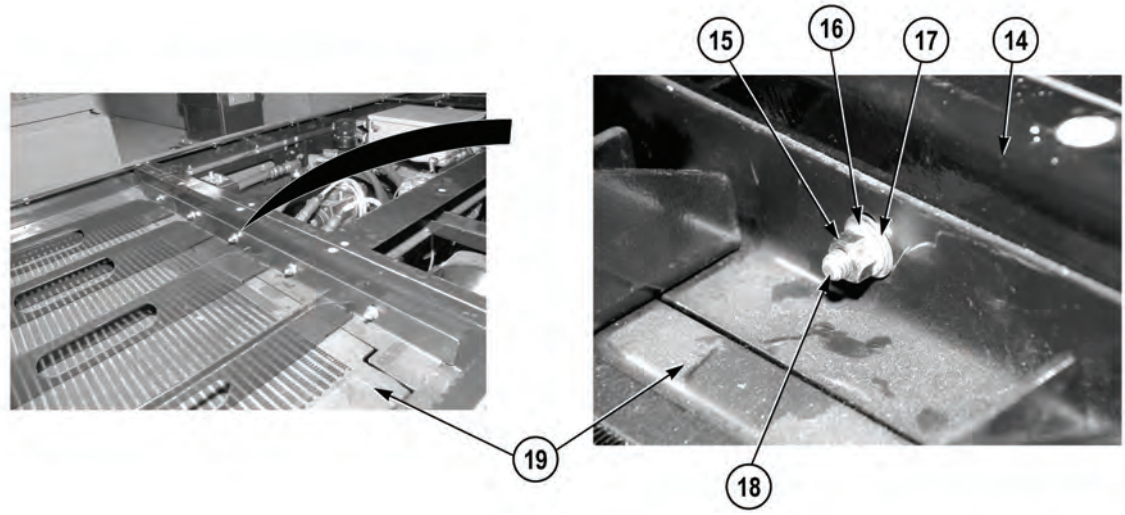
Install tee as noted prior to removal.

6. Lightly lubricate preformed packing (25) with clean oil, and install preformed packing (25) and tee (6) on fitting (23).
7. Lightly lubricate preformed packing (24) with clean oil, and install preformed packing (24) and fitting (23) on hydraulic heat exchanger (19).



8. Lightly lubricate preformed packing (21) with clean oil, and install preformed packing (21) and fitting (20) on hydraulic heat exchanger (19).

9. Lightly lubricate preformed packing (22) with clean oil, and install preformed packing (22) and fitting (20) on fitting (20).

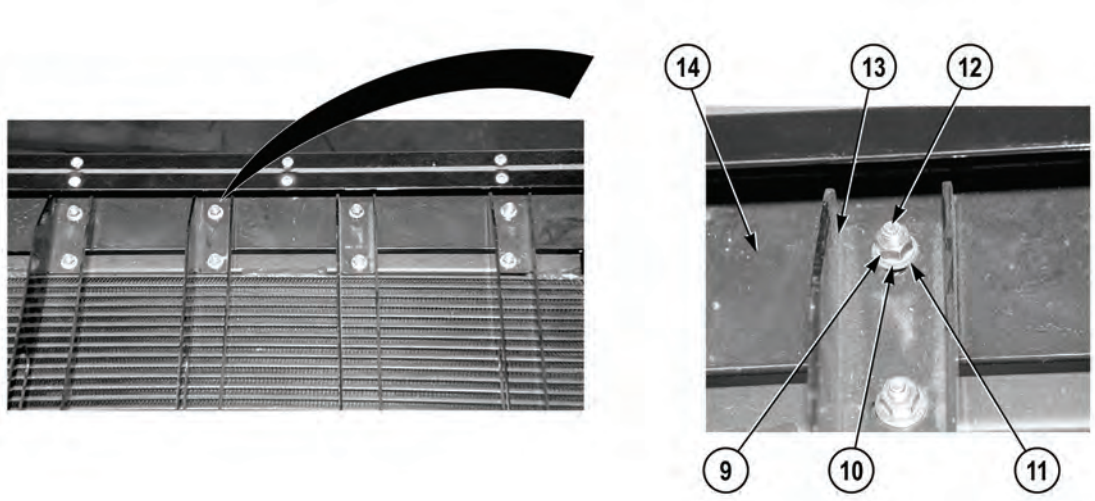


WARNING

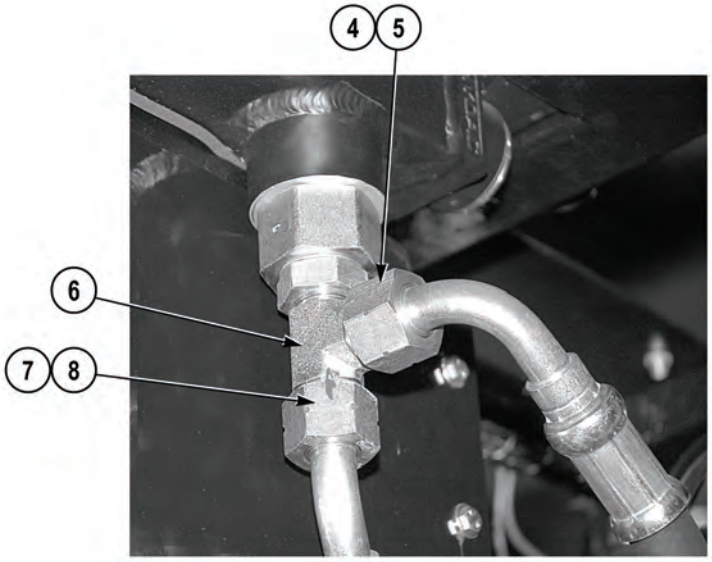


Hydraulic heat exchanger weighs 85 lb. (38.56 kg). Do not attempt to install hydraulic heat exchanger without the aid of an assistant and a suitable lifting device. Failure to comply may result in serious injury to personnel and damage to equipment.

10. With the aid of an assistant and a suitable lifting device, install hydraulic heat exchanger (19) on pump house frame (14) with five screws (18), 10 washers (17), five lockwashers (16), and nuts (15).



11. Install four brackets (13) on pump house frame (14) with four screws (12), eight washers (11), four lockwashers (10), and nuts (9).



12. Lightly lubricate preformed packing (8) with clean oil, and install preformed packing (8) and hose 1682886 (7) on tee (6).

13. Lightly lubricate preformed packing (5) with clean oil, and install preformed packing (5) and hose 1682884 (4) on tee (6).



14. Lightly lubricate preformed packing (2) with clean oil, and install preformed packing (2) and hose 1682893 (1) on fitting (3).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install hydraulic heat exchanger fan switch (WP 0131)
2. Install hydraulic heat exchanger fans (WP 0134)
3. Fill hydraulic reservoir (WP 0143)
4. Install pump house panel M (WP 0341)
5. Install hydraulic heat exchanger shrouds A, B, and C (WP 0135)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

HYDRAULIC HEAT EXCHANGER BOTTOM SHROUD PANEL REPLACEMENT

INITIAL SETUP:

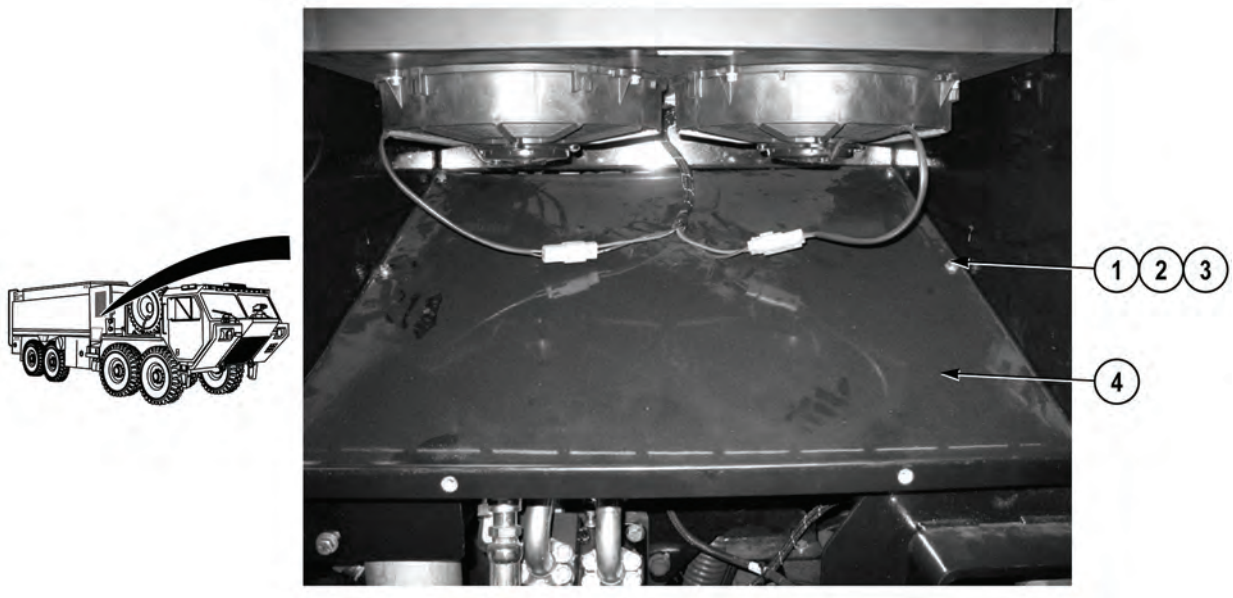
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Lockwasher (4)

References
WP 0392, Fig. 8

Equipment Conditions
Pump house panel H removed (WP 0341)

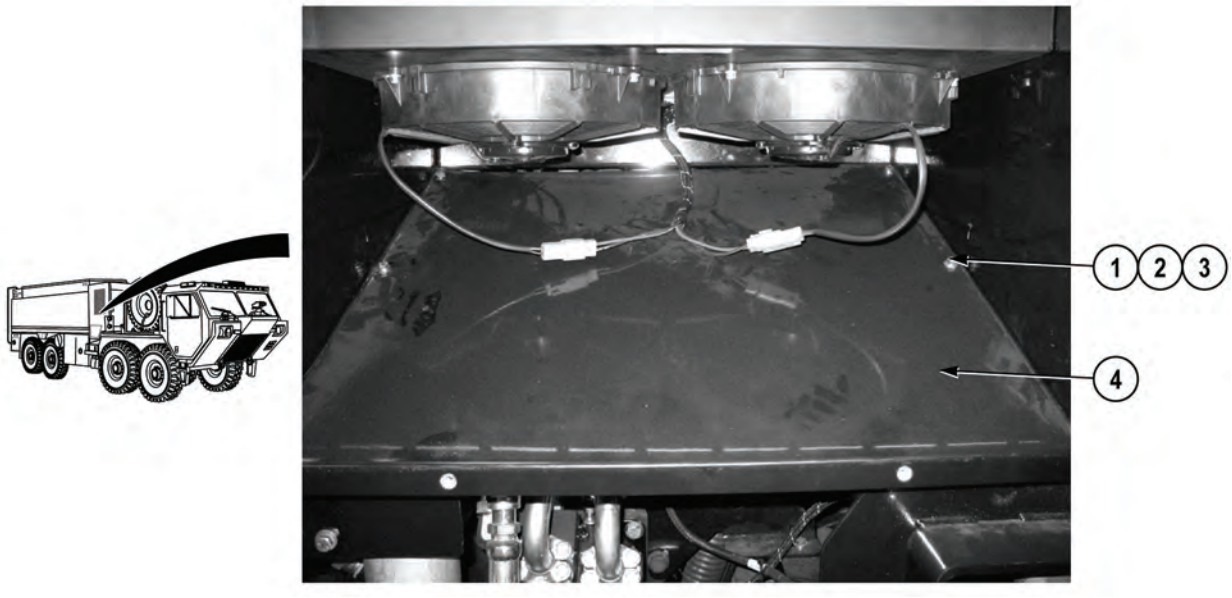
REMOVAL



Remove four screws (1), lockwashers (2), washers (3), and hydraulic heat exchanger bottom shroud panel (4) from vehicle. Discard lockwashers.

END OF TASK

INSTALLATION



Install hydraulic heat exchanger bottom shroud panel (4) on vehicle with four washers (3), lockwashers (2), and screws (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Install pump house panel H (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

HYDRAULIC HEAT EXCHANGER FAN(S) REPLACEMENT

INITIAL SETUP:

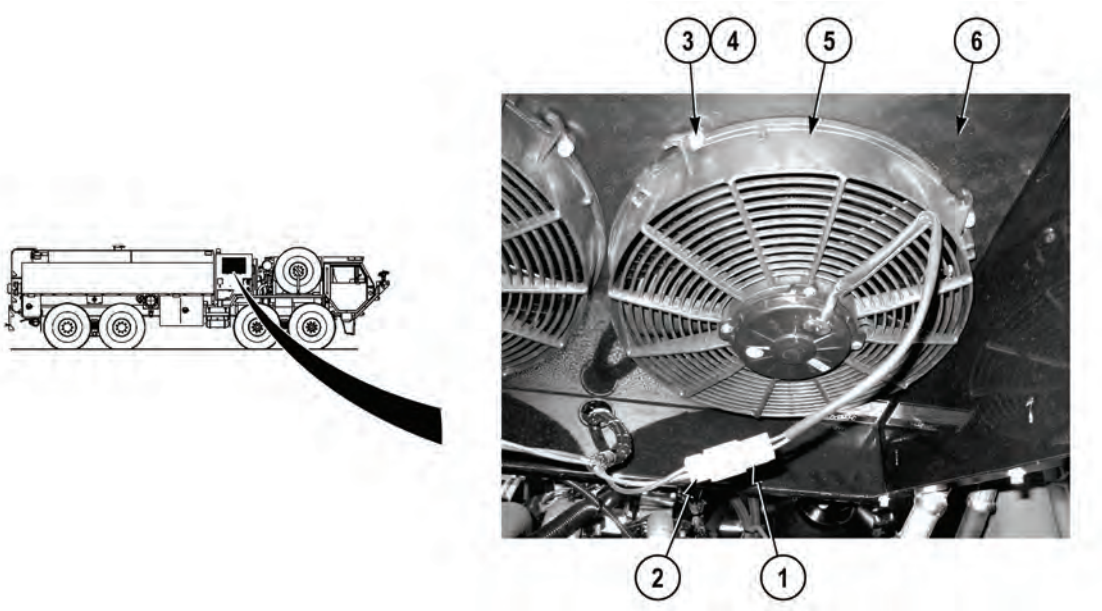
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Lockwasher (4)

References
WP 0392, Fig. 8

Equipment Conditions
Hydraulic heat exchanger bottom shroud panel removed (WP 0133)

REMOVAL



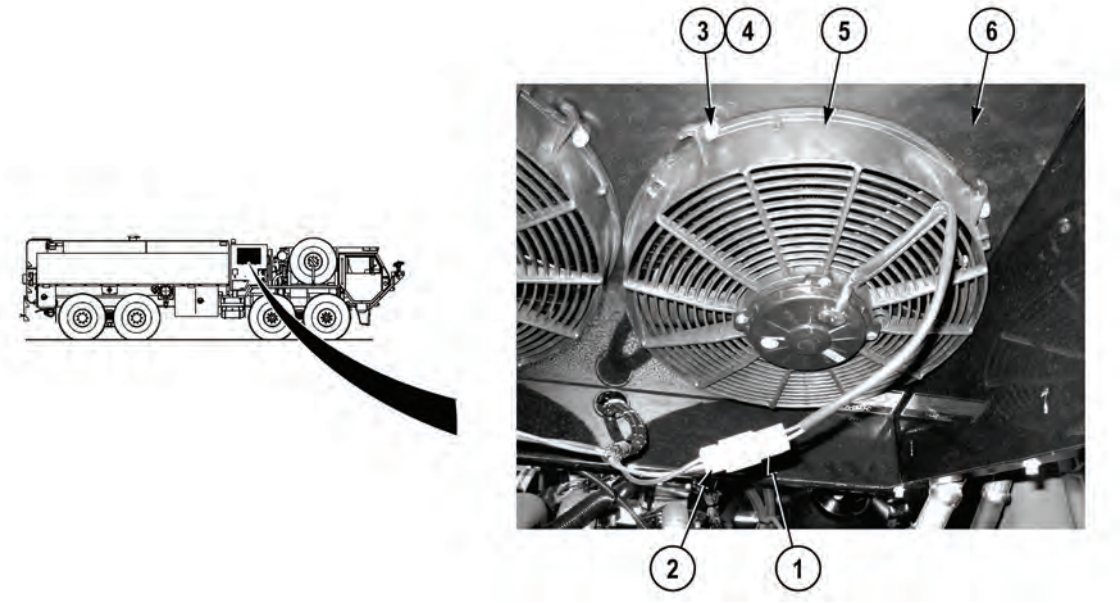
NOTE

- Both hydraulic heat exchanger fans are removed the same way. Front hydraulic heat exchanger fan shown.
- Note position of hydraulic heat exchanger fans prior to removal to ensure proper installation.

1. Disconnect hydraulic heat exchanger fan connector (1) from pump house wire harness connector (2).
2. Remove four screws (3), lockwashers (4), and hydraulic heat exchanger fan (5) from bracket (6). Discard lockwashers.

END OF TASK

INSTALLATION



NOTE

- Both hydraulic heat exchanger fans are installed the same way. Front hydraulic heat exchange fan shown.
- Install hydraulic heat exchanger fans as noted prior to removal.

1. Install hydraulic heat exchanger fan (5) on bracket (6) with four lockwashers (4) and screws (3).
2. Connect pump house wire harness connector (2) to hydraulic heat exchanger fan connector (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Install hydraulic heat exchanger bottom shroud panel (WP 0133)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

HYDRAULIC HEAT EXCHANGER SHROUD REPLACEMENT

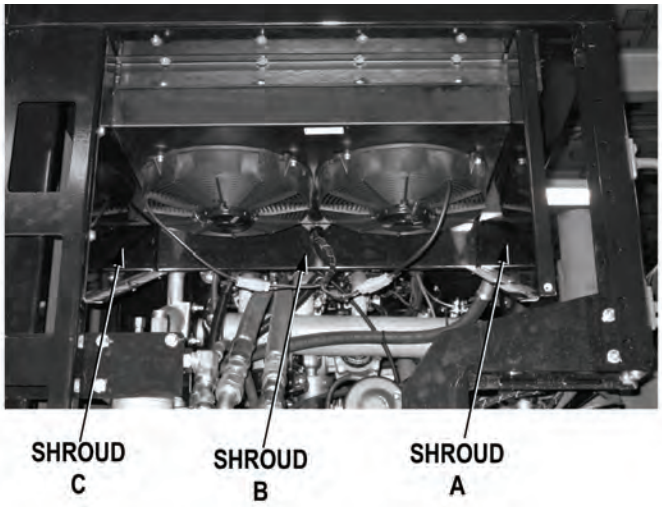
INITIAL SETUP:

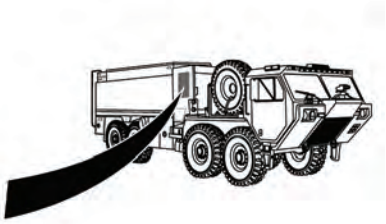
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Adhesive, Thread, Locking (WP 0401, Item 6)
Tags, Identification (WP 0401, Item 22)
Lockwasher (18)

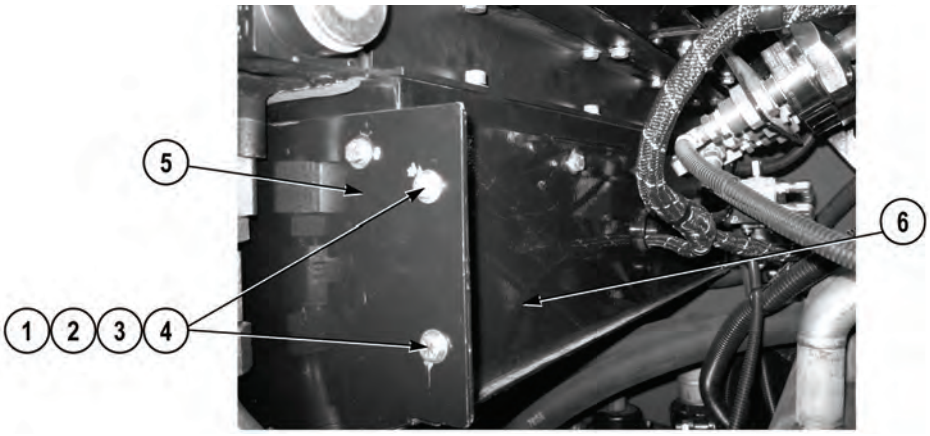
References
WP 0392, Fig. 8

Equipment Conditions
Pump house panel G removed (shrouds A and B) (WP 0341)
Pump house panel K removed (shrouds B and C) (WP 0341)
Hydraulic heat exchanger bottom shroud panel removed (WP 0133)

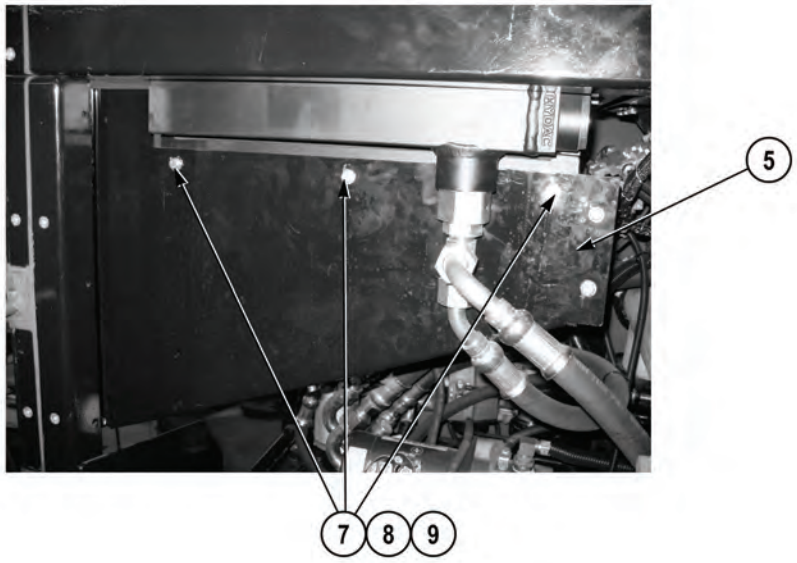




SHROUD A REMOVAL



1. Remove two nuts (1), lockwashers (2), four washers (3), and two screws (4) from shroud A (5) and shroud B (6). Discard lockwashers.



2. Remove three screws (7), lockwashers (8), washers (9), and shroud A (5) from vehicle. Discard lockwashers.

END OF TASK

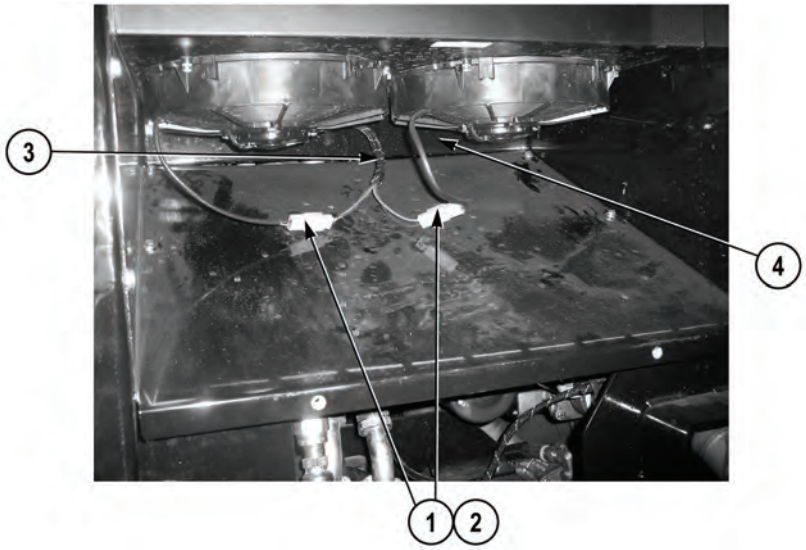
SHROUD A INSTALLATION

1. Install shroud A (5) on vehicle with three washers (9), lockwashers (8), and screws (7).



2. Install shroud A (5) on shroud B (6) with two screws (4), four washers (3), two lockwashers (2), and nuts (1).

SHROUD B REMOVAL



NOTE

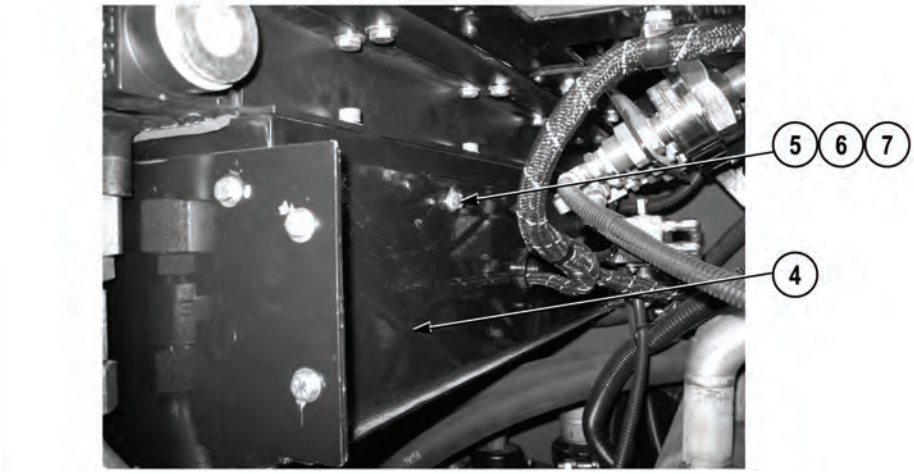
Tag and mark wires prior to removal to ensure proper installation.

1. Disconnect two pump house wire harness connectors (1) from hydraulic heat exchanger fan connectors (2).

NOTE

Note routing of wire harness prior to removal to ensure proper installation.

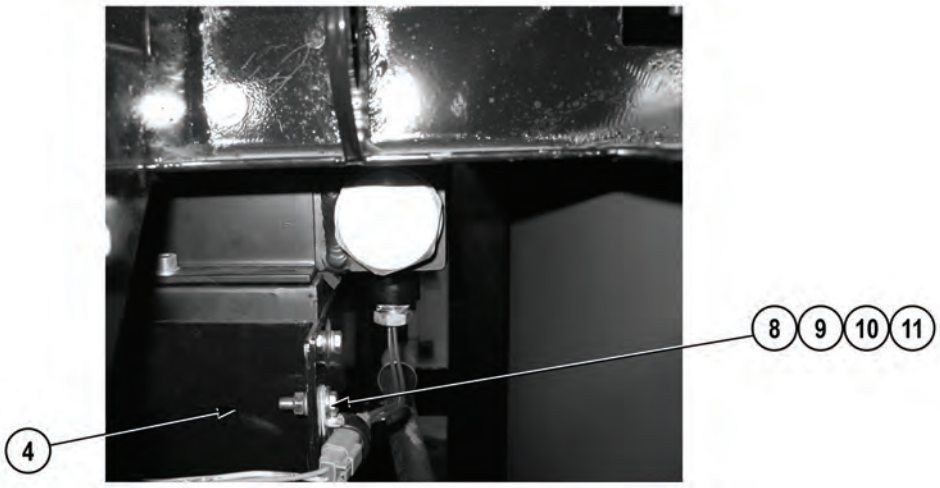
2. Remove pump house wire harness (3) from shroud B (4).



NOTE

Note position and orientation of shroud B prior to removal to ensure proper installation.

3. Remove two screws (5), lockwashers (6), and washers (7) from shroud B (4) and vehicle. Discard lockwashers.



NOTE

Remove cushion clips as required.

4. Remove four nuts (8), lockwashers (9), eight washers (10), four screws (11), and shroud B (4) from vehicle. Discard lockwashers.

END OF TASK

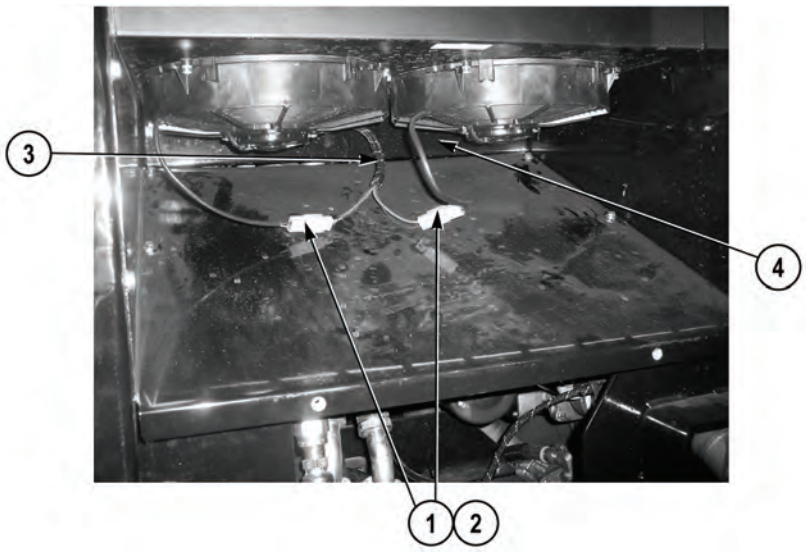
SHROUD B INSTALLATION



NOTE

- Install cushion clips as required.
- Install shroud B as noted prior to removal.

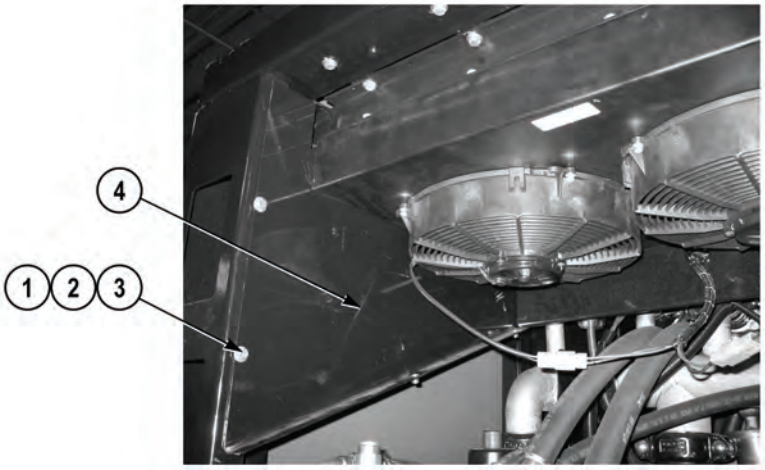
1. Install shroud B (4) on vehicle with four screws (11), eight washers (10), four lockwashers (9), and nuts (8).
2. Install two washers (7), lockwashers (6), and screws (5) on shroud B (4) and vehicle.



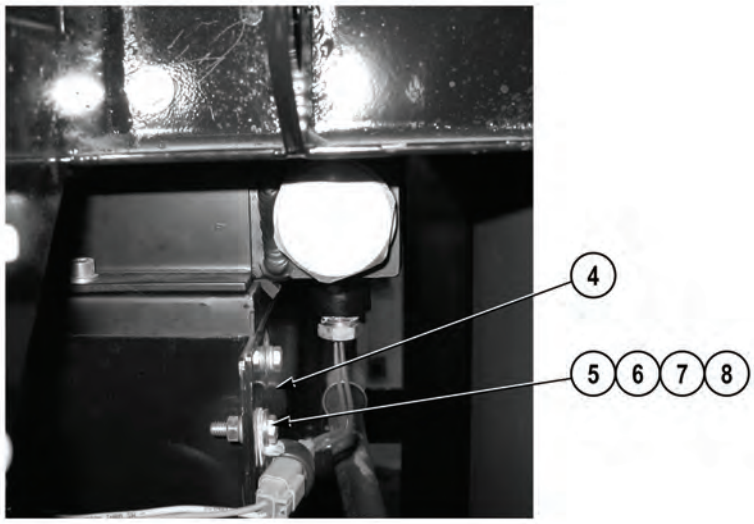
3. Install pump house wire harness (3) through shroud B (4).
4. Connect two pump house wire harness connectors (1) to heat exchanger fan connectors (2).

END OF TASK

SHROUD C REMOVAL



1. Remove three screws (1), lockwashers (2), and washers (3) from shroud C (4) and vehicle. Discard lockwashers.



NOTE

Remove cushion clips as required.

2. Remove four nuts (5), lockwashers (6), eight washers (7), four screws (8), and shroud C (4) from vehicle. Discard lockwashers.

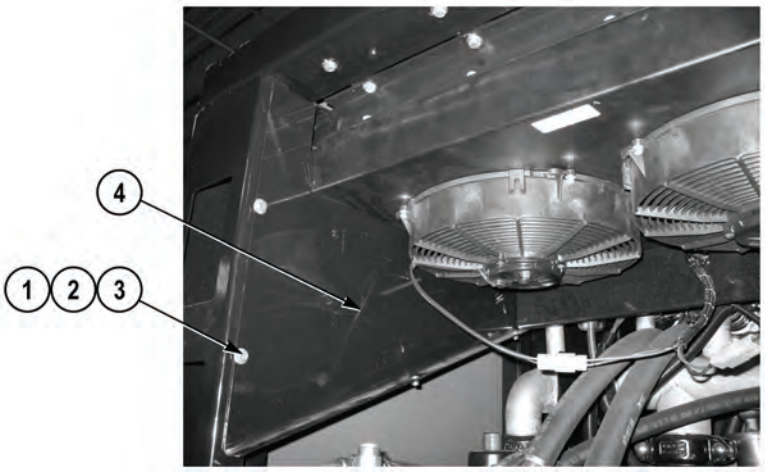
END OF TASK

SHROUD C INSTALLATION

NOTE

Install cushion clips as required.

1. Install shroud C (4) on vehicle with four screws (8), eight washers (7), four lockwashers (6), and nuts (5).



2. Install three washers (3), lockwashers (2), and screws (1) on shroud C (4) and vehicle.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install hydraulic heat exchanger bottom shroud panel (WP 0133)
2. Install pump house panel K (shrouds B and C) (WP 0133)
3. Install pump house panel G (shrouds A and B) (WP 0133)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

HYDRAULIC HOSE REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Cap Set, Protective (WP 0399, Item 1)
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

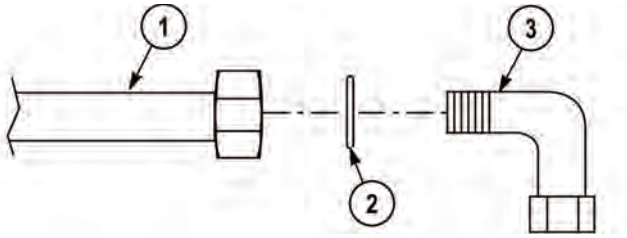
Materials/Parts
Fluid, Hydraulic(WP 0401, Item 17)
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)

Materials/Parts (continued)
Preformed Packing (Qty may vary)

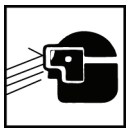
References
WP 0392, Fig. 7, 9, 10

Equipment Conditions
Hydraulic reservoir drained (WP 0143)

TYPICAL HYDRAULIC HOSE REMOVAL



WARNING



Hydraulic hoses may retain residual pressure. Wear eye protection to prevent eye injury. Failure to comply may result in serious injury to personnel.

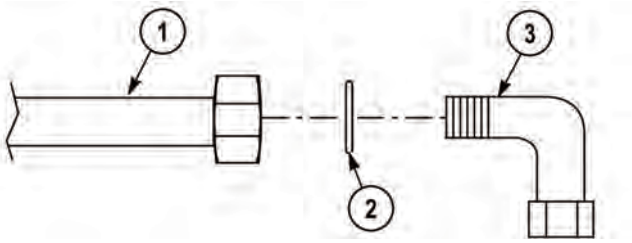
NOTE

- This procedure only shows location of hydraulic hoses. It will never be necessary to remove all hydraulic hoses at once.
- All hydraulic hoses are connected to fittings. Fittings from which hydraulic hoses are being removed or installed may be an elbow, tee fitting, or an adapter on a valve or other hydraulic component.
- All hoses are removed the same way. Elbow is shown.
- Tag and mark position of hydraulic hoses.
- Remove cushion clips and cable ties as required.
- Cap and plug hydraulic hoses and fittings upon removal.

Remove hose (1) and preformed packing (2) from elbow (3). Discard preformed packing.

END OF TASK

TYPICAL HYDRAULIC HOSE INSTALLATION



NOTE

Install cushion clips and cable ties as required.

Lightly lubricate preformed packing (2) with clean oil, and install preformed packing (2) and hose (1) on elbow (3).

END OF TASK

HYDRAULIC HOSES

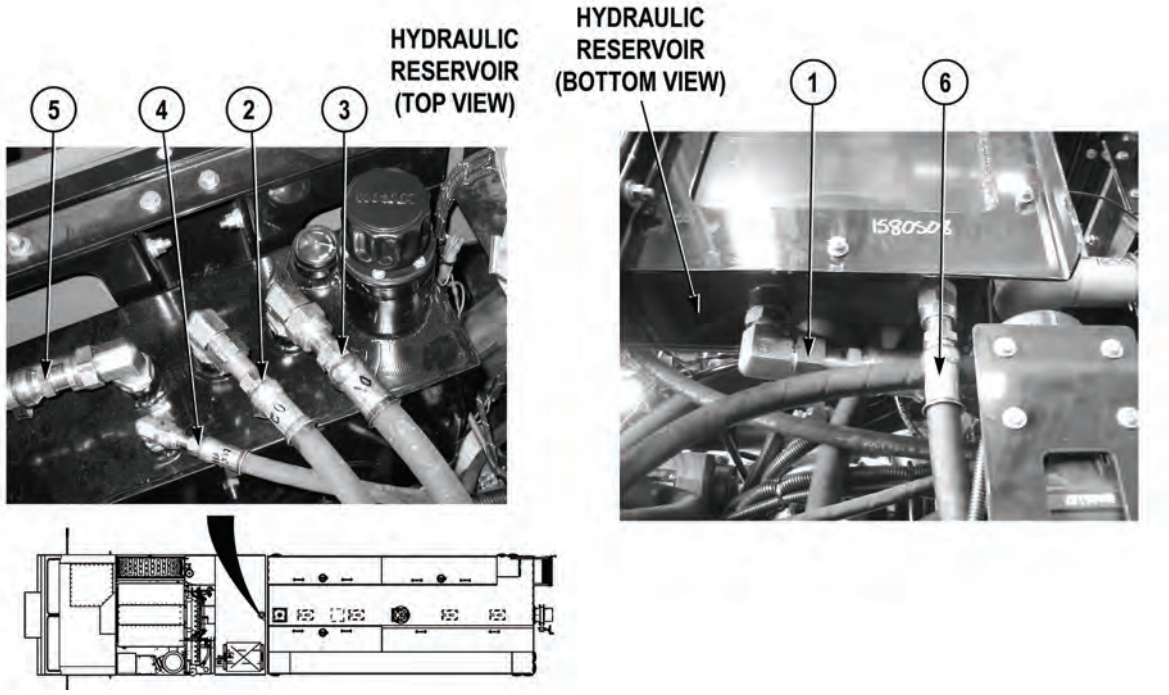


Table 1. Hydraulic Reservoir Hoses.

Item No.	Hose No.	From	To
1	1682838	Hydraulic reservoir	Hydrostatic charge pump (Table 2)
2	1682841	Hydraulic reservoir	Hydrostatic pump motor (Table 5) (T1)
3	1682888	Hydraulic reservoir	Hydrostatic charge pump (Table 2) (T2)
4	1682987	Hydraulic reservoir	Hydraulic override manifold (Table 4) (T1)
5	1682893	Hydraulic reservoir	Hydraulic heat exchange (Table 7)
6	1682915	Hydraulic reservoir	Drain

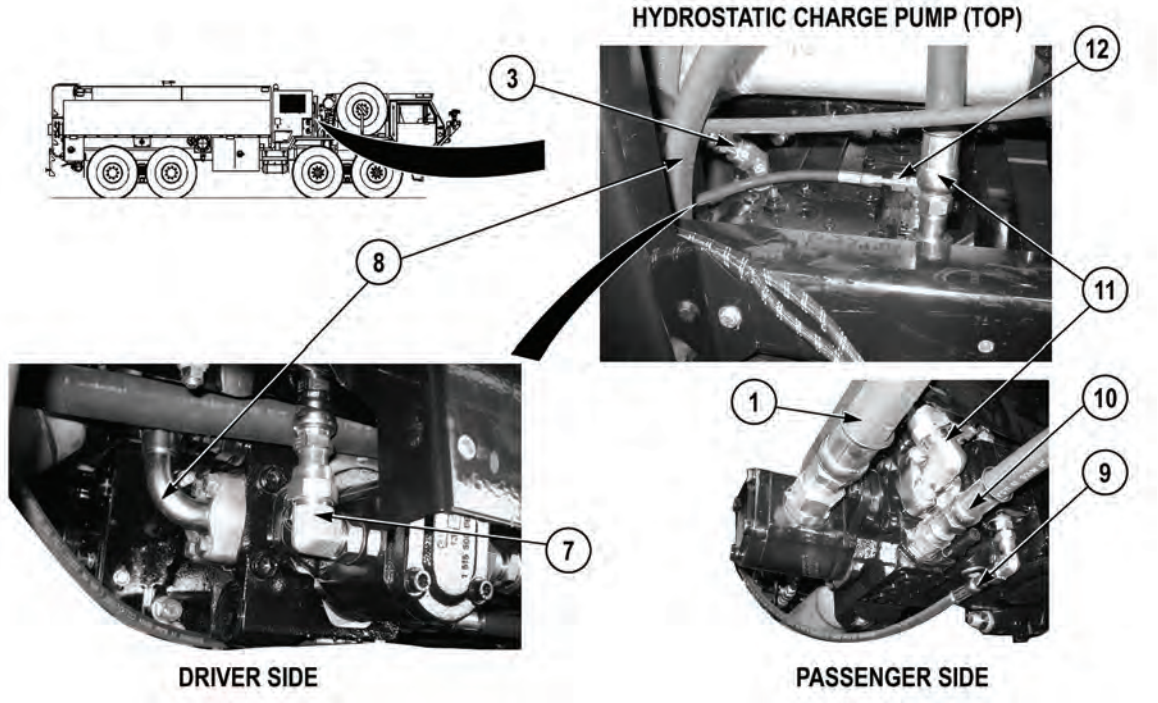


Table 2. Hydrostatic Charge Pump Hoses.

Item No.	Hose No.	From	To
1	1682838	Hydrostatic charge pump	Hydraulic reservoir (Table 1)
7	1682901	Hydrostatic charge pump	Hydraulic oil filter base (Table 4) (P1)
8	1682839	Hydrostatic charge pump	Hydrostatic pump motor (Table 5)
9	1682912	Hydrostatic charge pump (Y2)	Hydraulic override manifold (Table 3) (Y2)
10	1682902	Hydrostatic charge pump	Hydraulic oil filter base (Table 4) (P2)
11	1682840	Hydrostatic charge pump	Hydrostatic pump motor (Table 5)
12	1682911	Hydrostatic charge pump (Y1)	Hydraulic override manifold (Table 3) (Y1)
3	1682888	Hydrostatic charge pump	Hydraulic reservoir (Table 1)

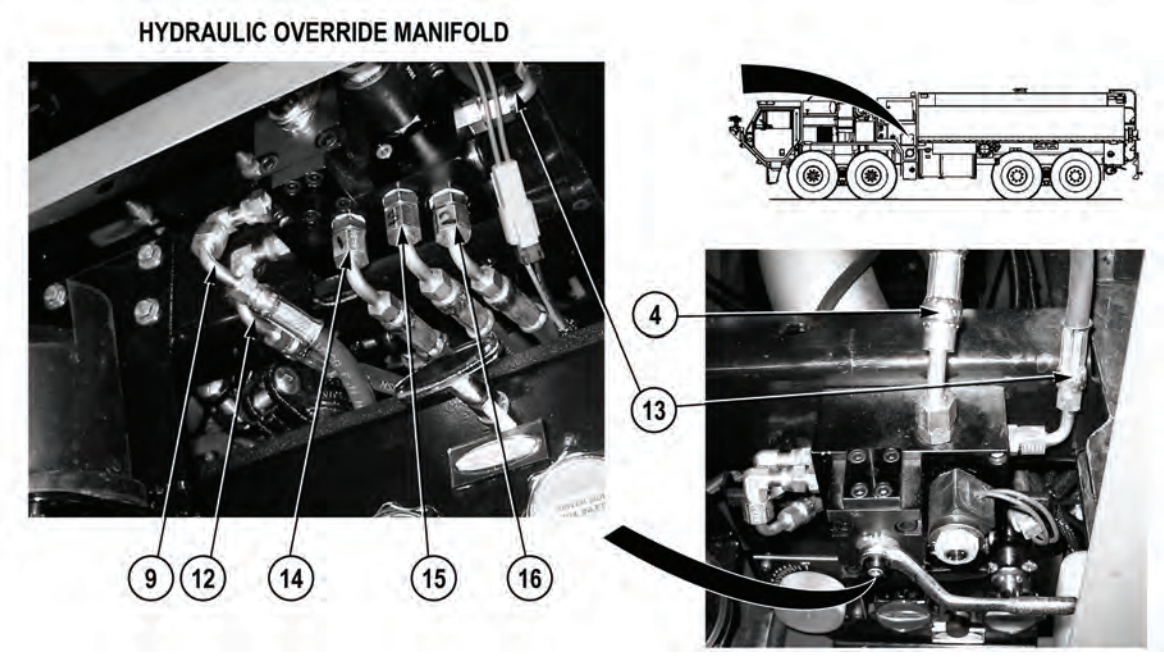


Table 3. Hydraulic Override Manifold Hoses.

Item No.	Hose No.	From	To
4	1682987	Hydraulic override manifold (T1)	Hydraulic reservoir (Table 1)
13	1682910	Hydraulic override manifold (CP)	Hydraulic oil filter base (Table 4) (G)
9	1682912	Hydraulic override manifold (Y2)	Hydrostatic charge pump (Table 2) (Y2)
12	1682911	Hydraulic override manifold (Y1)	Hydrostatic charge pump (Table 2) (Y1)
14	1682914 (No. 1)	Hydraulic override manifold (MC1) (No. 1)	Hydraulic pressure control (Table 6) (Port 1)
15	1682914 (No. 2)	Hydraulic override manifold (MC2) (No. 2)	Hydraulic pressure control (Table 6) (Port 2)
16	1682914 (No. 3)	Hydraulic override manifold (MC3) (No. 3)	Hydraulic pressure control (Table 6) (Port 3)

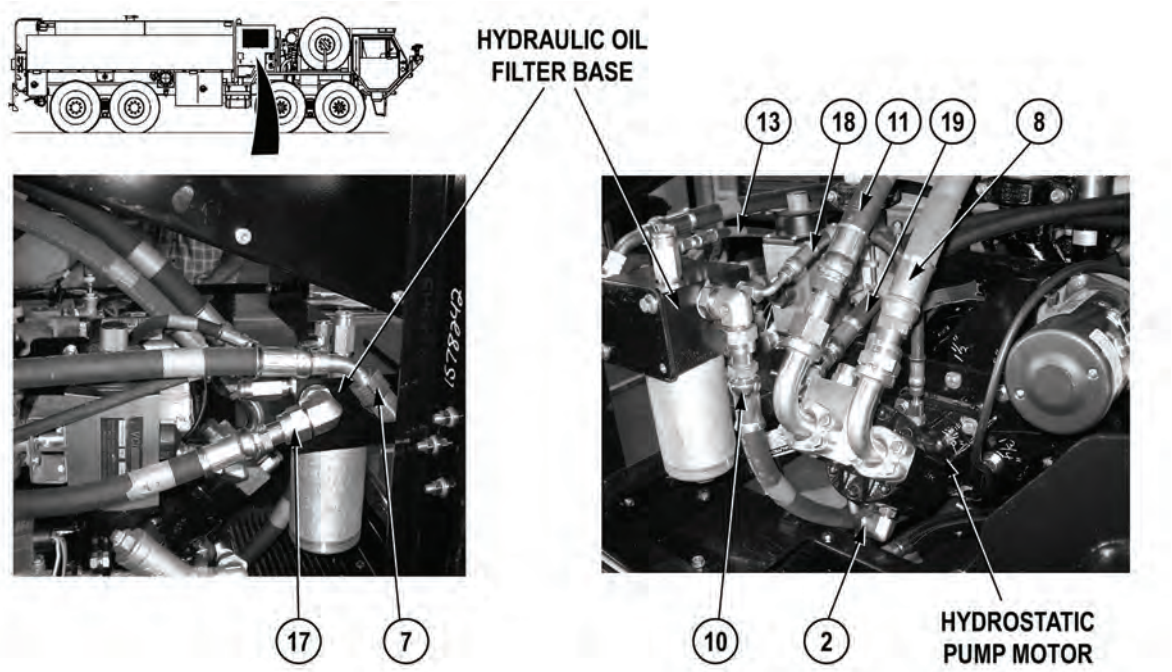


Table 4. Hydraulic Oil Filter Base Hoses.

Item No.	Hose No.	From	To
13	1682910	Hydraulic oil filter base (G)	Hydraulic override manifold (Table 3) (CP)
7	1682901	Hydraulic oil filter base (P1)	Hydrostatic charge pump (Table 2)
17	1682884	Hydraulic oil filter base (T1)	Hydraulic heat exchanger (Table 7)
18	1682906	Hydraulic oil filter base (T2)	Hydrostatic pump motor (Table 5) (T2)
10	1682902	Hydraulic oil filter base (P2)	Hydrostatic charge pump (Table 2)

Table 5. Hydrostatic Pump Motor.

Item No.	Hose No.	From	To
8	1682839	Hydrostatic pump motor	Hydrostatic charge pump (Table 2)
11	1682840	Hydrostatic pump motor	Hydrostatic charge pump (Table 2)
18	1682906	Hydrostatic pump motor (T2)	Hydraulic oil filter base (Table 4) (T2)
19	1682886	Hydrostatic pump motor	Hydraulic heat exchanger (Table 7)
2	1682841	Hydrostatic pump motor (T1)	Hydraulic reservoir (Table 1)

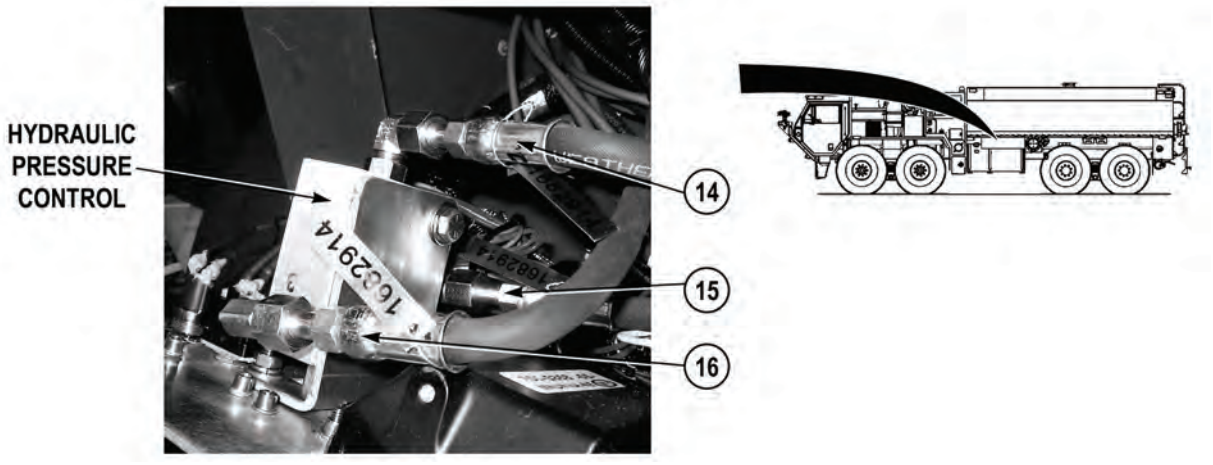


Table 6. Hydraulic Pressure Control Hoses.

Item No.	Hose No.	From	To
14	1682914 (MC1) No. 1	Hydraulic pressure control (Port 1)	Hydraulic override manifold (MC1) No. 1 (Table 3)
15	1682914 (MC2) No.2	Hydraulic pressure control (Port 2)	Hydraulic override manifold (MC2) No. 2 (Table 3)
16	1682914 (MC3) No. 3	Hydraulic pressure control (Port 3)	Hydraulic override manifold (MC3) No. 3 (Table 3)

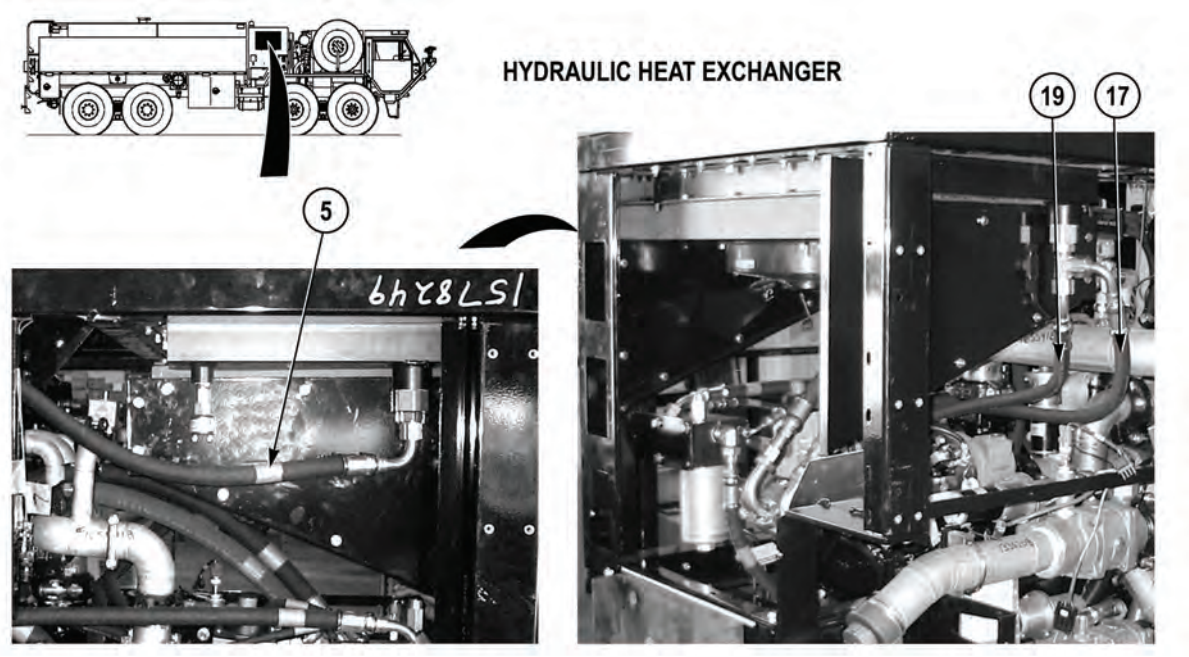


Table 7. Hydraulic Heat Exchanger.

Item No.	Hose No.	From	To
5	1682893	Hydraulic heat exchanger	Hydraulic reservoir (Table 1)
19	1682886	Hydraulic heat exchanger	Hydrostatic pump motor (Table 5)
17	1682884	Hydraulic heat exchanger	Hydraulic oil filter base (Table 4)

END OF TASK

FOLLOW-ON MAINTENANCE

Fill oil reservoir (WP 0143)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

HYDRAULIC OIL DRAIN MOUNTING BRACKET REPLACEMENT

INITIAL SETUP:

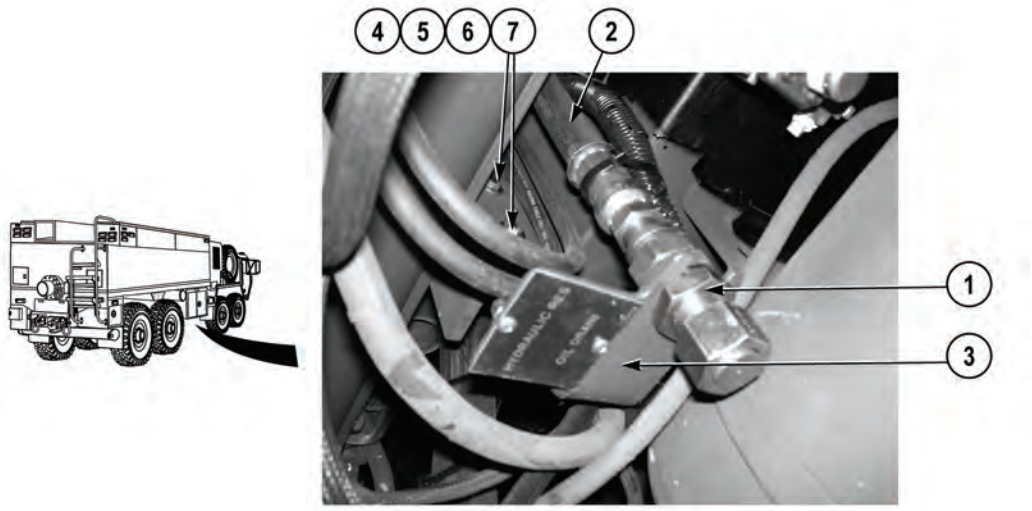
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Lockwasher (2)

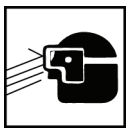
References
WP 0392, FIg. 10

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)

REMOVAL



WARNING

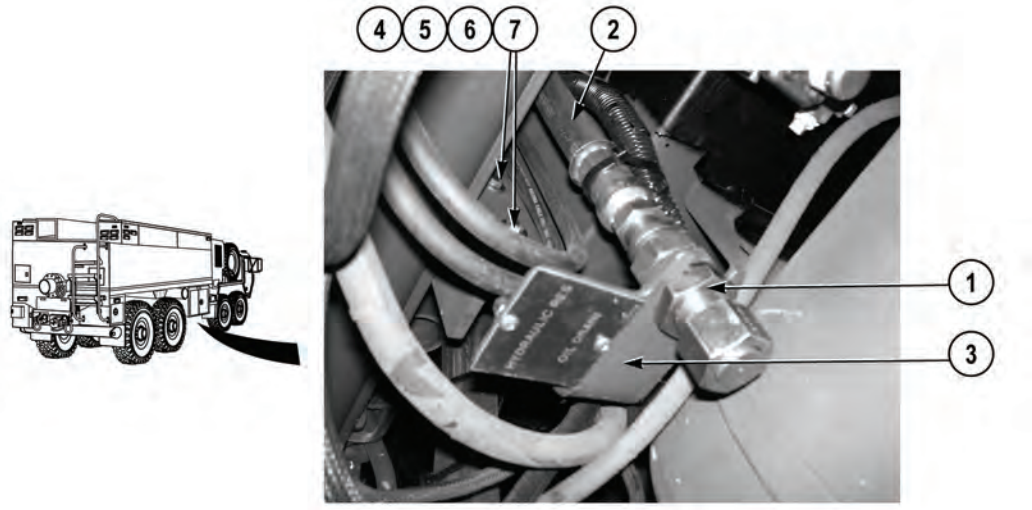


Hydraulic hoses may retain residual pressure. Wear eye protection to prevent eye injury. Failure to comply may result in serious injury to personnel.

1. Loosen jam nut (1) on hydraulic oil drain hose (2).
2. Remove hydraulic oil drain hose (2) from hydraulic oil drain mounting bracket (3).
3. Remove two nuts (4), four washers (5), two lockwashers (6), screws (7), and hydraulic oil drain mounting bracket (3) from vehicle. Discard lockwashers.

END OF TASK

INSTALLATION



1. Install two screws (7), lockwashers (6), four washers (5), two nuts (4), and hydraulic oil drain mounting bracket (3) on vehicle.
2. Install hydraulic oil drain hose (2) on hydraulic oil drain mounting bracket (3).
3. Tighten jam nut (1) on hydraulic drain hose (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

HYDRAULIC OIL FILTER REPLACEMENT

INITIAL SETUP:

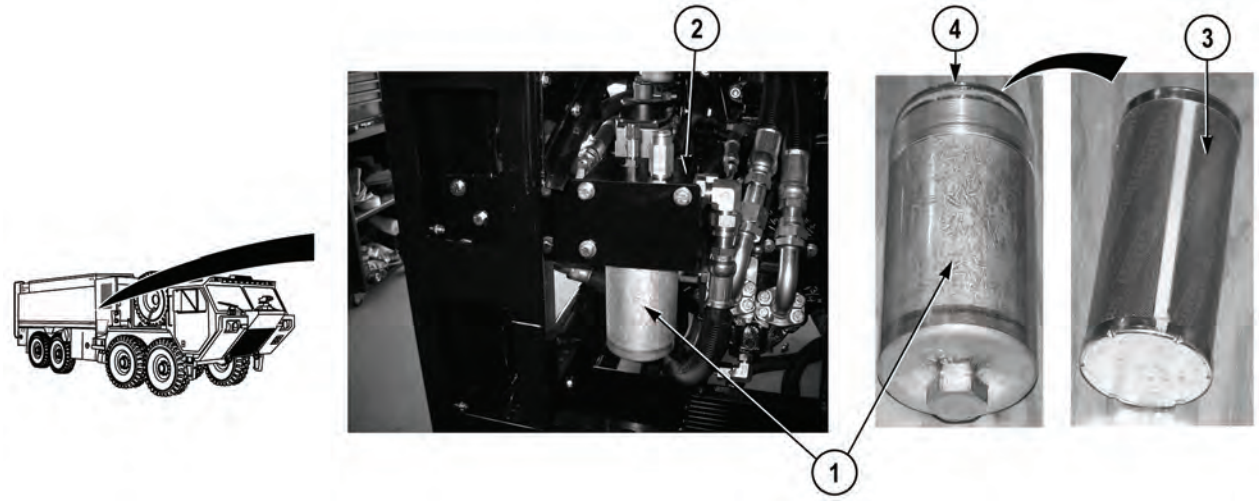
Tools and Special Tools
Drain Pan (WP 0399, Item 4)
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Preformed Packing (1)

References
WP 0392, Fig. 46

Equipment Conditions
Hydraulic reservoir drained (WP 0143)
Pump house panel H removed (WP 0341)

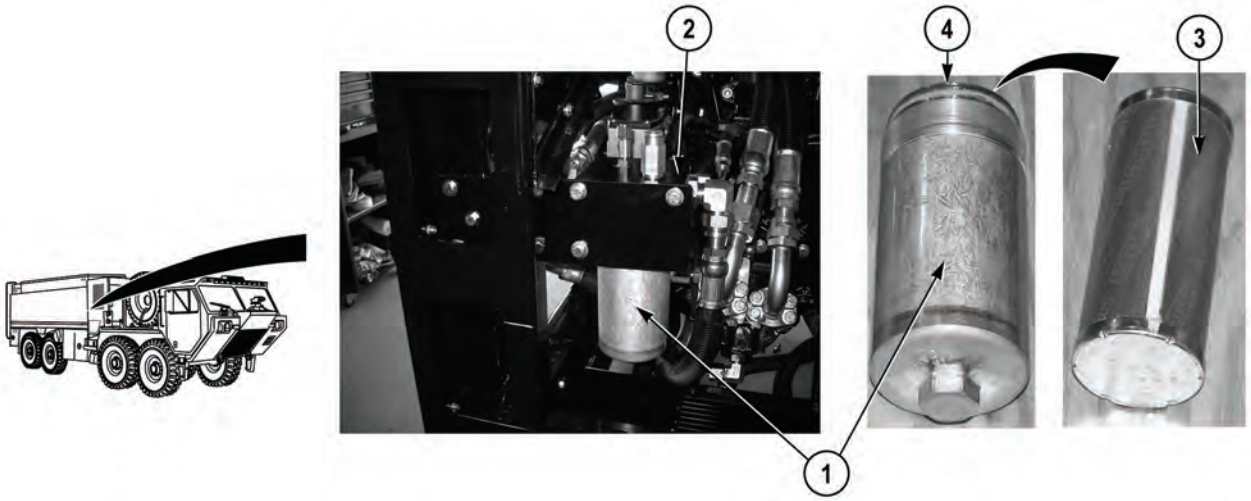
REMOVAL



1. Position drain pan under filter housing (1).
2. Remove filter housing (1) from manifold (2).
3. Remove filter (3) and preformed packing (4) from filter housing (1). Discard preformed packing.

END OF TASK

INSTALLATION



Lightly lubricate preformed packing (4) with clean oil, and install preformed packing (4), filter (3), and filter housing (1) on manifold (2).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Fill hydraulic reservoir (WP 0143)
2. Install pump house panel H (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

HYDRAULIC OIL FILTER BASE REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
- Cap Set, Protective (WP 0399, Item 1)
- Drain Pan (WP 0399, Item 4)
- Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
- Oil, Lubricating (WP 0401, Item 20)
- Tags, Identification (WP 0401, Item 22)
- Preformed Packing (1)
- Preformed Packing (1)
- Preformed Packing (1)
- Lockwashers (3)
- Preformed Packing (1)
- Preformed Packing (1)
- Preformed Packing (1)
- Preformed Packing (1)
- Preformed Packing (1)
- Preformed Packing (1)
- Preformed Packing (1)

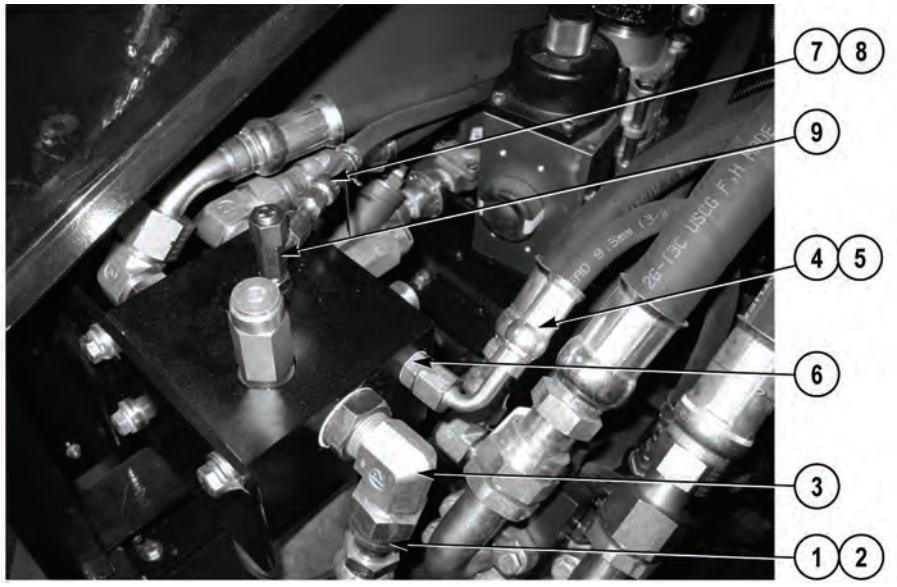
Materials/Parts (continued)
- Preformed Packing (1)
- Preformed Packing (1)
- Backing Ring (2)
- Preformed Packing (1)
- Preformed Packing (1)
- Preformed Packing (1)
- Preformed Packing (1)
- Preformed Packing (1)
- Preformed Packing (1)
- Preformed Packing (1)
- Lockwasher (3)

References
- WP 0392, Fig. 4

Equipment Conditions
- Hydraulic oil filter removed (WP 0138)
- Hydraulic heat exchanger bottom shroud panel removed (WP 0133)

REMOVAL

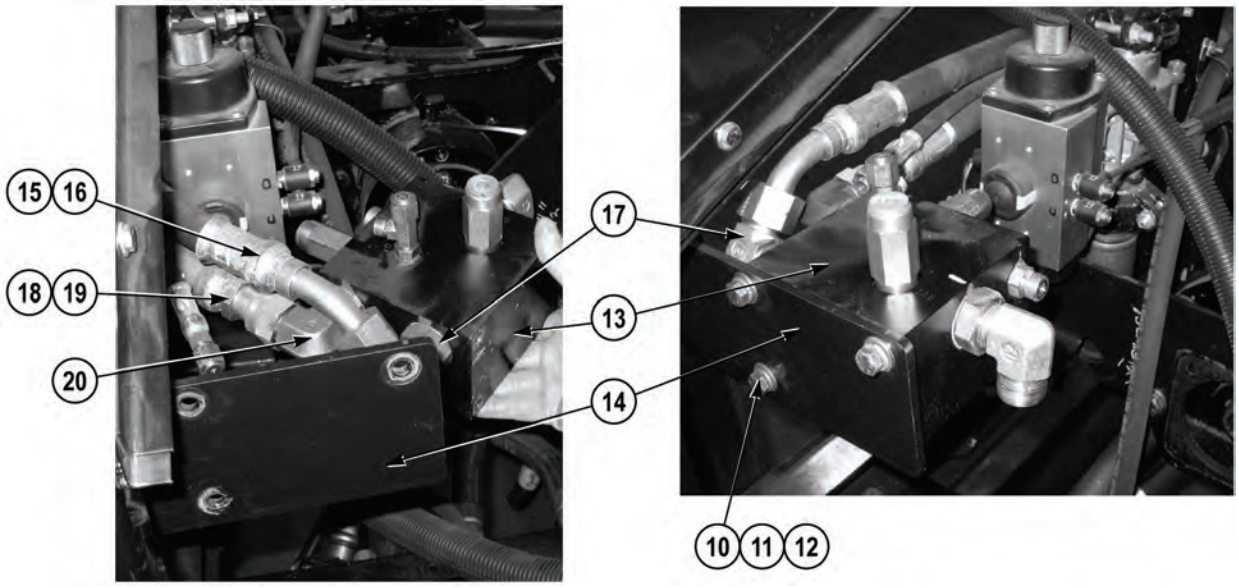




NOTE

- Cap and plug hoses upon removal.
- Tag and mark hoses prior to removal to ensure proper installation.
- Place suitable drain pan under hoses.

1. Remove hose 1682902 (1) and preformed packing (2) from elbow (3). Discard preformed packing.
2. Remove hose 1682906 (4) and preformed packing (5) from fitting (6). Discard preformed packing.
3. Remove hose 1682910 (7) and preformed packing (8) from tee (9). Discard preformed packing.



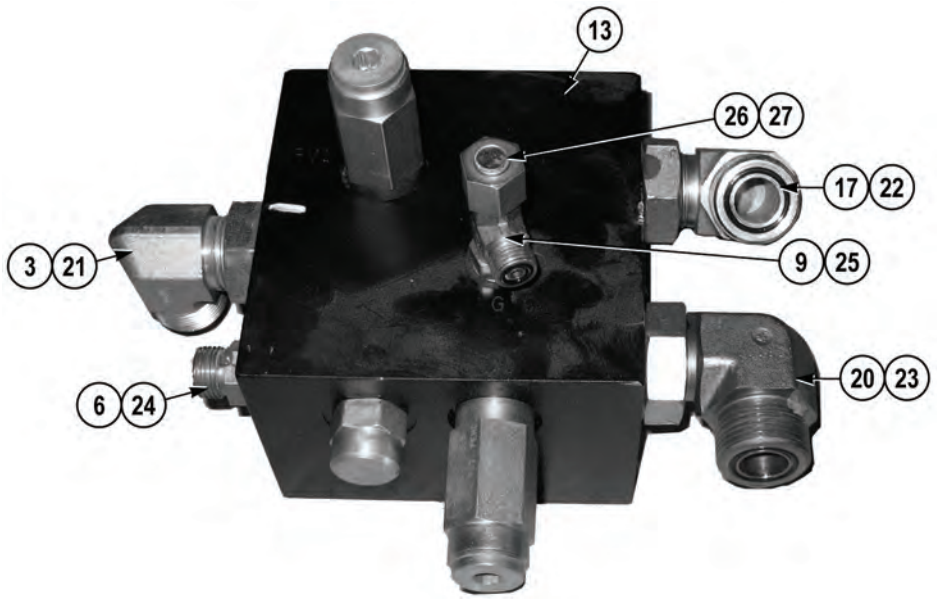
NOTE

Manifold needs to be removed from bracket in order to remove two remaining hoses.

4. Remove three screws (10), lockwashers (11), washers (12), and manifold (13) from bracket (14). Discard lockwashers.

5. Remove hose 1682901 (15) and preformed packing (16) from elbow (17). Discard preformed packing.

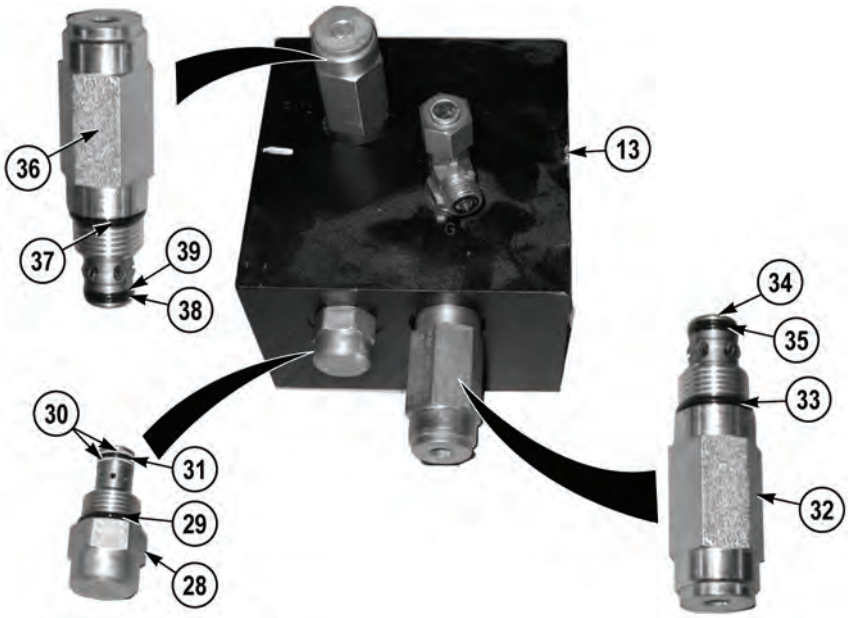
6. Remove hose 1682884 (18) and preformed packing (19) from elbow (20) and manifold (13) from vehicle. Discard preformed packing.



NOTE

Note position of elbows and fittings prior to removal to ensure proper installation.

7. Remove elbow (3) and preformed packing (21) from manifold (13). Discard preformed packing.
8. Remove elbow (17) and preformed packing (22) from manifold (13). Discard preformed packing.
9. Remove elbow (20) and preformed packing (23) from manifold (13). Discard preformed packing.
10. Remove fitting (6) and preformed packing (24) from manifold (13). Discard preformed packing.
11. Remove tee (9) and preformed packing (25) from manifold (13). Discard preformed packing.
12. Remove cap (26) and preformed packing (27) from tee (9). Discard preformed packing.



13. Remove flow control valve (28), preformed packing (29), two backing rings (30), and preformed packing (31) from manifold (13). Discard preformed packings and backing rings.

⚠ CAUTION

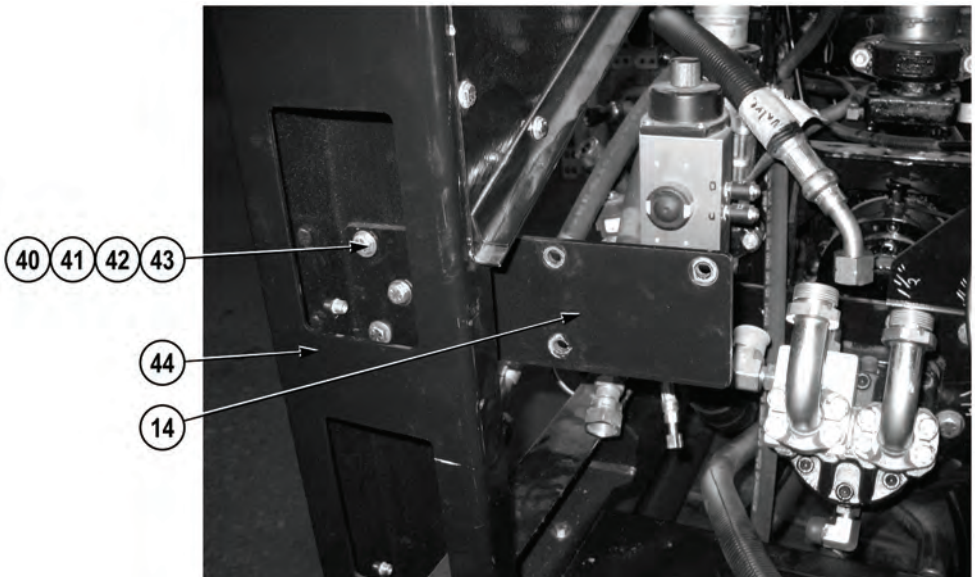
Relief valves are not interchangeable. Note position of relief valves prior to removal to ensure proper installation. Failure to comply may cause damage to equipment.

NOTE

Note position of preformed packings prior to removal to ensure proper installation.

14. Remove relief valve (32), preformed packing (33), and two preformed packings (34) and (35) from manifold (13). Discard preformed packing.

15. Remove relief valve (36), preformed packing (37), and two preformed packings (38) and (39) from manifold (13). Discard preformed packing.



NOTE

Perform Step (16) if bracket needs to removed.

16. Remove three nuts (40), lockwashers (41), six washers (42), three screws (43), and bracket (14) from frame rail (44). Discard lockwashers.

END OF TASK

INSTALLATION

NOTE

Perform Step (1) if bracket was removed.

1. Install bracket (14) on frame rail (44) with three screws (43), six washers (42), three lockwashers (41), and nuts (40).

⚠ CAUTION

Relief valves are not interchangeable. Install relief valves as noted prior to removal. Failure to comply may cause damage to equipment.

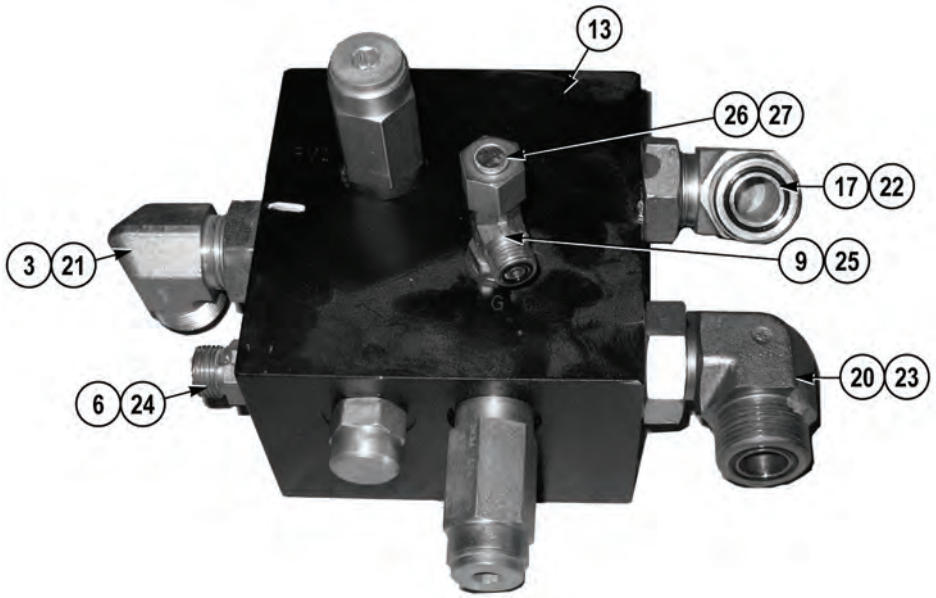
NOTE

Install preformed packings as noted prior to removal.

2. Lightly lubricate three preformed packings (37), (38), and (39) with clean oil, and install preformed packing (37), two preformed packings (39) and (38), and relief valve (36) on manifold (13).

3. Lightly lubricate three preformed packings (33), (34), and (35) with clean oil, and install preformed packing (33), two preformed packings (35) and (34), and relief valve (32) on manifold (13).

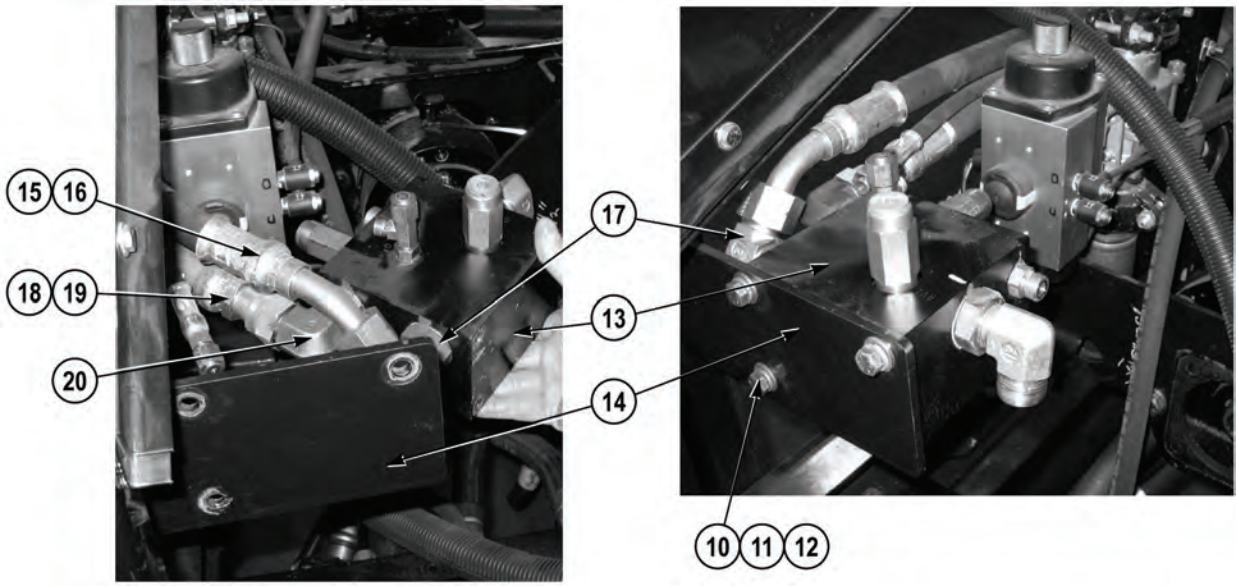
4. Lightly lubricate two preformed packings (29) and (31) and two backing rings (30) with clean oil, and install two preformed packings (29) and (31), backing rings (30), and flow control valve (28) on manifold (13).



NOTE

Install elbows and fittings as noted prior to removal.

5. Lightly lubricate preformed packing (27) with clean oil, and install preformed packing (27) and cap (26) on tee (9).
6. Lightly lubricate preformed packing (25) with clean oil, and install preformed packing (25) and tee (9) on manifold (13).
7. Lightly lubricate preformed packing (24) on manifold (13) with clean oil, and install preformed packing (24) and fitting (6) on manifold (13).
8. Lightly lubricate preformed packing (23) with clean oil, and install preformed packing (23) and elbow (20) on manifold (13).
9. Lightly lubricate preformed packing (22) with clean oil, and install preformed packing (22) and elbow (17) on manifold (13).
10. Lightly lubricate preformed packing (21) with clean oil, and install preformed packing (21) and elbow (3) on manifold (13).



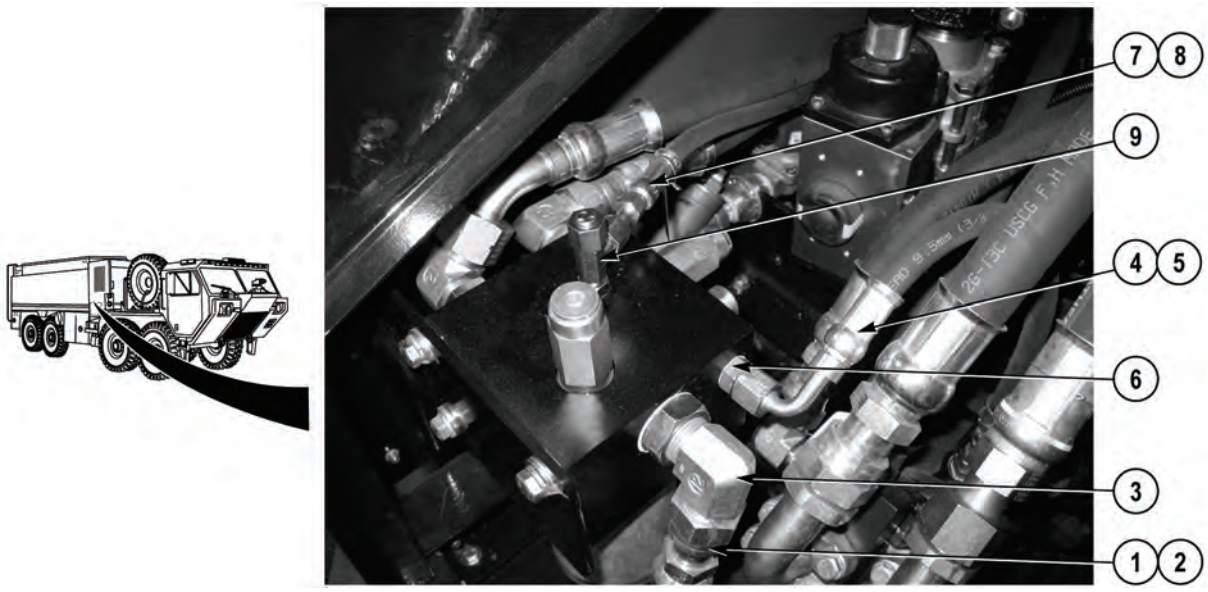
NOTE

First two hoses are installed on manifold before manifold is attached to bracket.

11. Lightly lubricate preformed packing (19) with clean oil, and install preformed packing (19) and hose 1682884 (18) on elbow (20).

12. Lightly lubricate preformed packing (16) with clean oil, and install preformed packing (16) and hose 1682901 (15) on elbow (17).

13. Install manifold (13) on bracket (14) with three washers (12), lockwashers (11), and screws (10).



14. Lightly lubricate preformed packing (8) with clean oil, and install preformed packing (8) and hose 1682910 (7) on tee (9).
15. Lightly lubricate preformed packing (5) with clean oil, and install preformed packing (5) and hose 1682906 (4) on tee (6).
16. Lightly lubricate preformed packing (2) with clean oil, and install preformed packing (2) and hose 1682902 (1) on elbow (3).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install hydraulic heat exchanger bottom shroud panel installed (WP 0133)
2. Install hydraulic oil filter (WP 0138)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

HYDRAULIC OVERRIDE MANIFOLD REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
- Cap Set, Protection (WP 0399, Item 1)
- Drain Pan (WP 0399, Item 4)
- Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

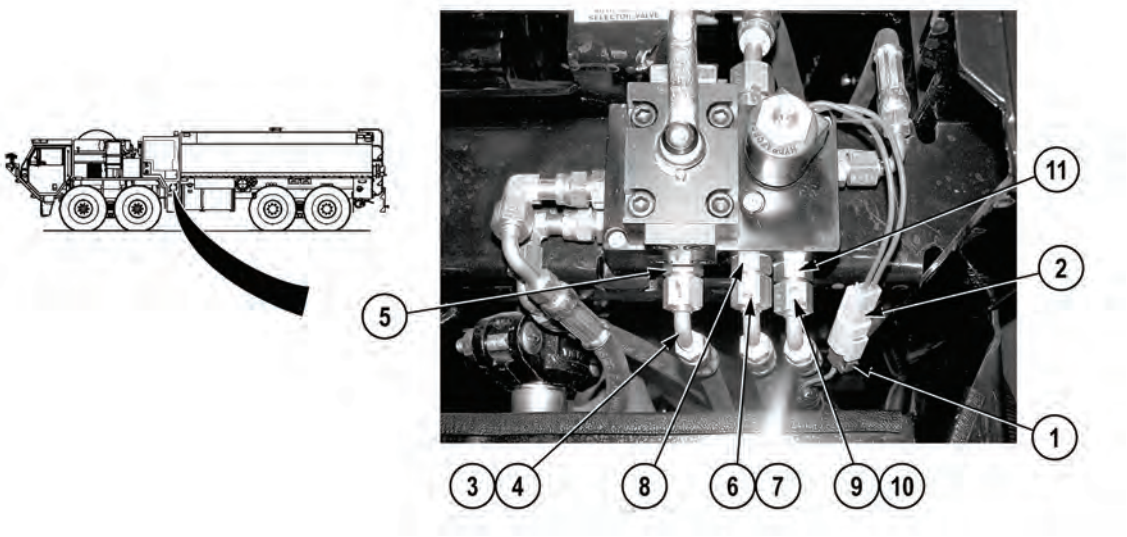
Materials/Parts
- Oil, Lubricating (WP 0401, Item 20)
- Tags, Identification (WP 0401, Item 22)
- Preformed Packing (1)
- Preformed Packing (1)
- Preformed Packing (1)
- Preformed Packing (1)
- Preformed Packing (1)
- Preformed Packing (1)
- Preformed Packing (1)
- Preformed Packing (1)
- Preformed Packing (1)

Materials/Parts (continued)
- Preformed Packing (1)
- Preformed Packing (1)
- Preformed Packing (1)
- Preformed Packing (1)
- Preformed Packing (1)
- Preformed Packing (1)
- Preformed Packing (1)
- Lockwasher (2)

References
- WP 0392, Fig. 39

Equipment Conditions
- Pump house access door opened (WP 0009)
- Hydraulic reservoir drained (WP 0143)

REMOVAL

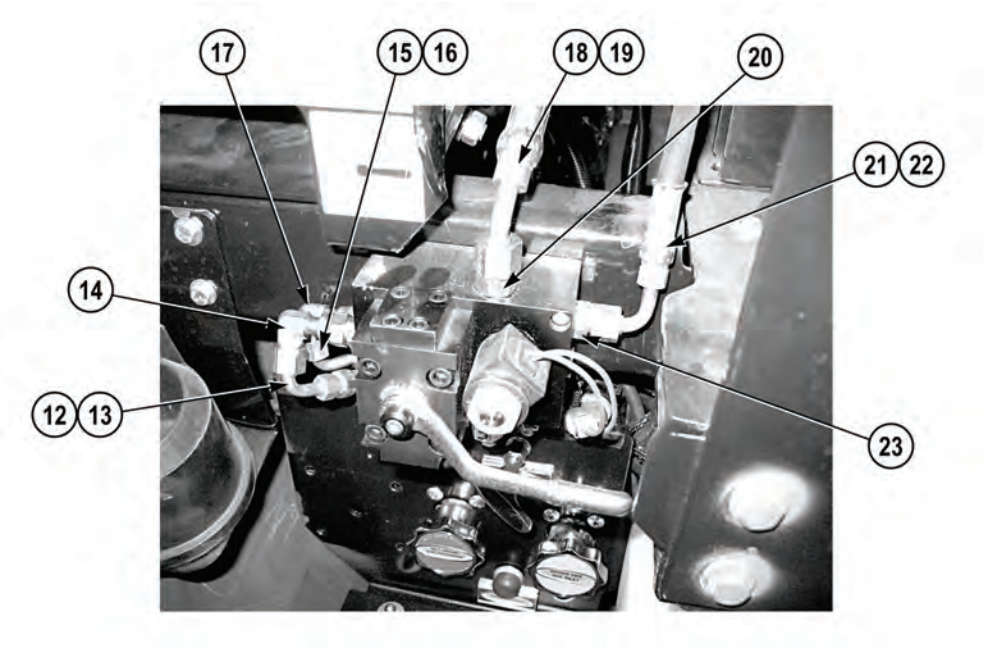


1. Disconnect pump house wire harness connector (1) from hydraulic override manifold connector (2).

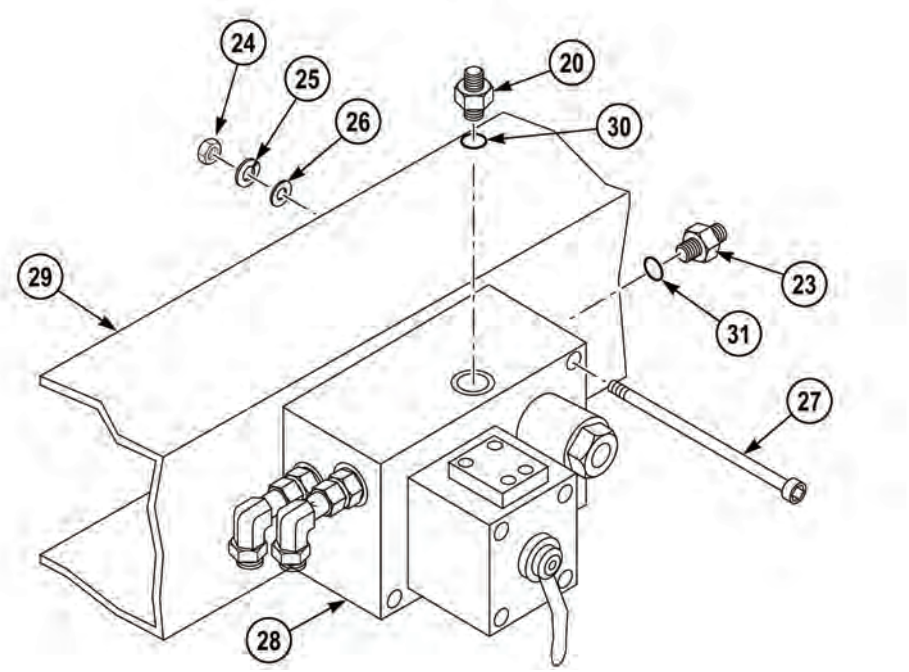
NOTE

- Position suitable drain pan under hoses to catch hydraulic fluid.
- Cap and plug hoses upon removal.
- Hoses 3, 6, and 9 have the same hose number.
- Tag and mark hoses prior to removal to ensure proper installation.

2. Remove hose 1682914 (3) and preformed packing (4) from fitting (5). Discard preformed packing.
3. Remove hose 1682914 (6) and preformed packing (7) from fitting (8). Discard preformed packing.
4. Remove hose 1682914 (9) and preformed packing (10) from fitting (11). Discard preformed packing.



5. Remove hose 1682912 (12) and preformed packing (13) from elbow (14). Discard preformed packing.
6. Remove hose 1682911 (15) and preformed packing (16) from elbow (17). Discard preformed packing.
7. Remove hose 1682987 (18) and preformed packing (19) from fitting (20). Discard preformed packing.
8. Remove hose 1682910 (21) and preformed packing (22) from fitting (23). Discard preformed packing.

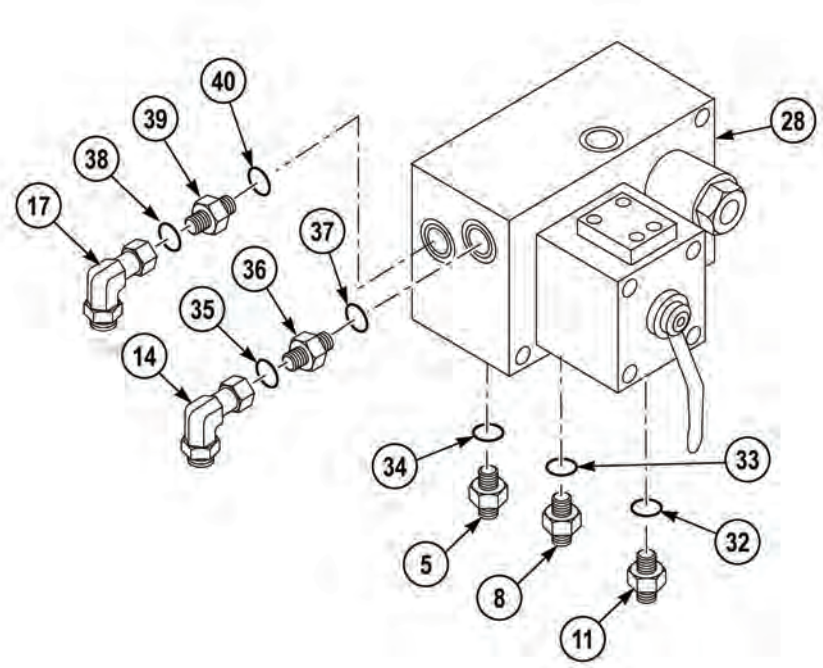


9. Remove two nuts (24), lockwashers (25), washers (26), screws (27), and manifold (28) from frame rail (29). Discard lockwashers.

NOTE

Note position of fittings and elbows prior to removal to ensure proper installation.

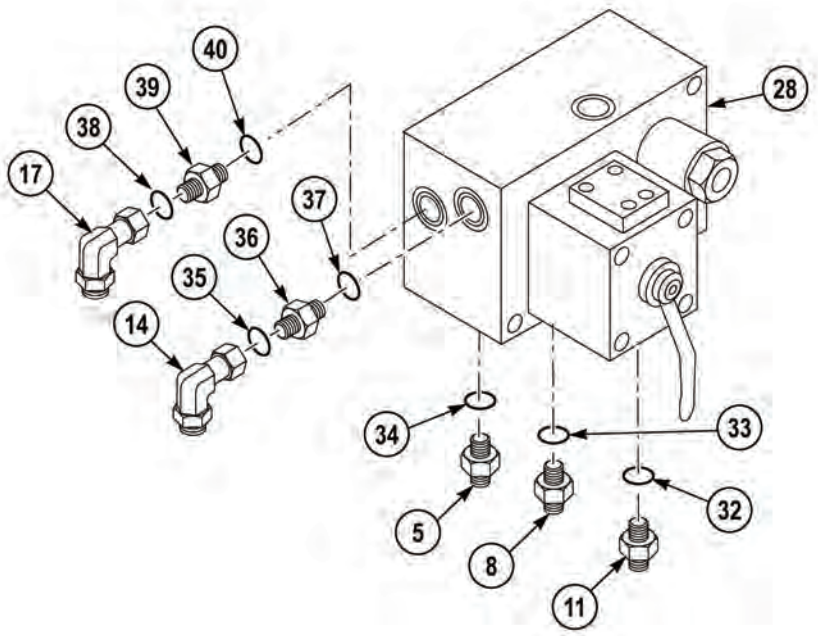
10. Remove fitting (20) and preformed packing (30) from manifold (28). Discard preformed packing.
11. Remove fitting (23) and preformed packing (31) from manifold (28). Discard preformed packing.



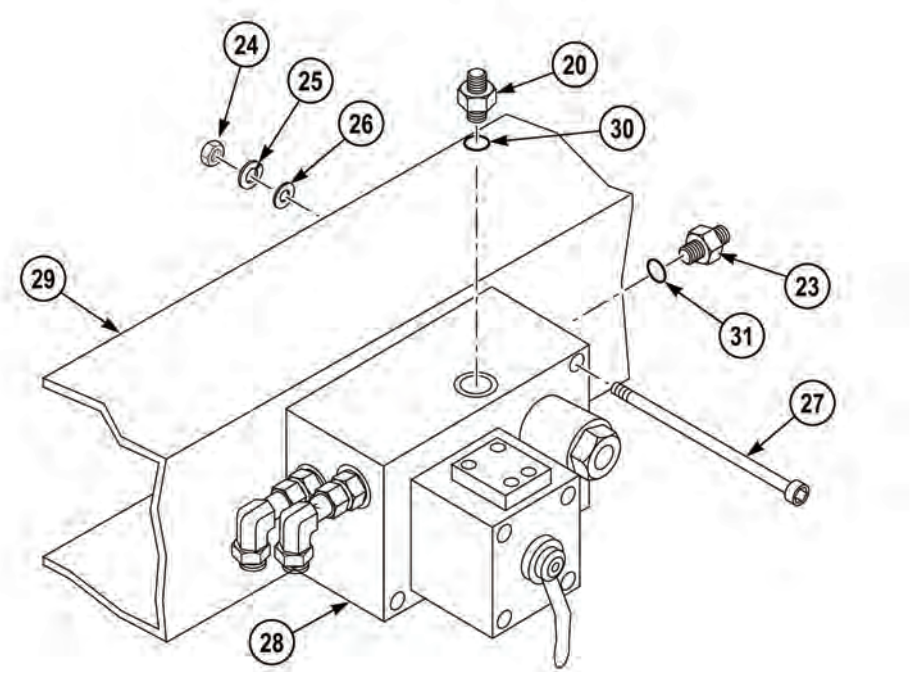
12. Remove fitting (11) and preformed packing (32) from manifold (28). Discard preformed packing.
13. Remove fitting (8) and preformed packing (33) from manifold (28). Discard preformed packing.
14. Remove fitting (5) and preformed packing (34) from manifold (28). Discard preformed packing.
15. Remove elbow (14) and preformed packing (35) from fitting (36). Discard preformed packing.
16. Remove fitting (36) and preformed packing (37) from manifold (28). Discard preformed packing.
17. Remove elbow (17) and preformed packing (38) from fitting (39). Discard preformed packing.
18. Remove fitting (39) and preformed packing (40) from manifold (28). Discard preformed packing.

END OF TASK

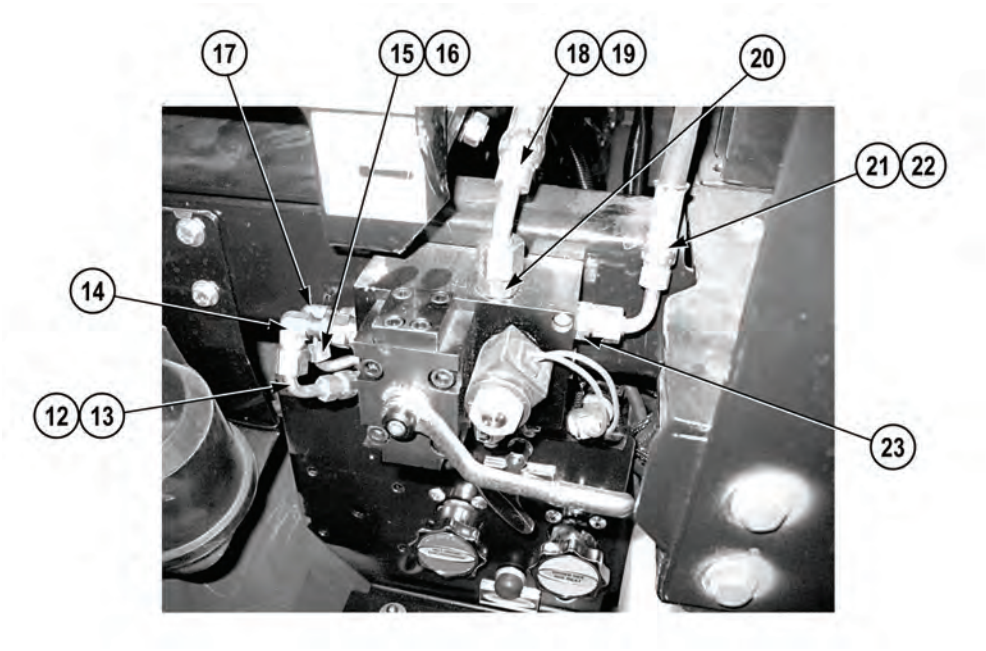
INSTALLATION



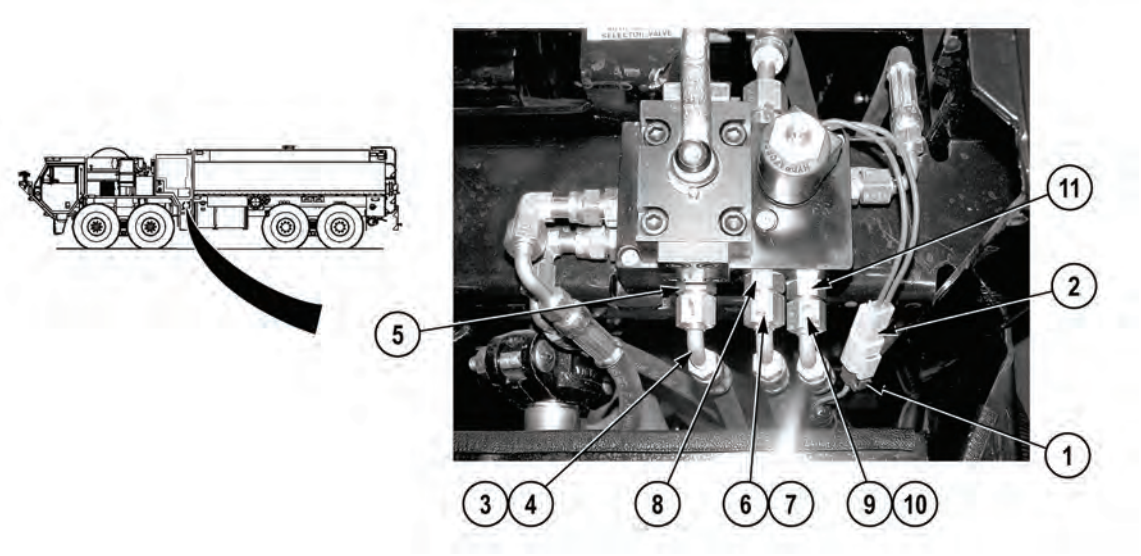
1. Lightly lubricate preformed packing (40) with clean oil, and install preformed packing (40) and fitting (39) on manifold (28).
2. Lightly lubricate preformed packing (38) with clean oil, and install preformed packing (38) and elbow (17) on fitting (39).
3. Lightly lubricate preformed packing (37) with clean oil, and install performed packing (37) and fitting (36) on manifold (28).
4. Lightly lubricate preformed packing (35) with clean oil, and install performed packing (35) and elbow (14) on fitting (36).
5. Lightly lubricate preformed packing (34) with clean oil, and install performed packing (34) and fitting (5) on manifold (28).
6. Lightly lubricate preformed packing (33) with clean oil, and install preformed packing (33) and fitting (8) on manifold (28).
7. Lightly lubricate preformed packing (32) with clean oil, and install preformed packing (32) and fitting (11) on manifold (28).



8. Lightly lubricate preformed packing (31) with clean oil, and install preformed packing (31) and fitting (23) on manifold (28).
9. Lightly lubricate preformed packing (30) with clean oil, and install preformed packing (30) and fitting (20) on manifold (28).
10. Install manifold (28) on frame rail (29) with two screws (27), washers (26), lockwashers (25), and nuts (24).



11. Lightly lubricate preformed packing (22) with clean oil, and install preformed packing (22) and hose 1682910 (21) on fitting (23).
12. Lightly lubricate preformed packing (19) with clean oil, and install preformed packing (19) and hose 1682987 (18) on fitting (20).
13. Lightly lubricate preformed packing (16) with clean oil, and install preformed packing (16) and hose 1682911 (15) on elbow (17).
14. Lightly lubricate preformed packing (13) with clean oil, and install preformed packing (13) and hose 1682912 (12) on elbow (14).



15. Lightly lubricate preformed packing (10) with clean oil, and install preformed packing (10) and hose 1682914 (9) on fitting (11).
16. Lightly lubricate preformed packing (7) with clean oil, and install preformed packing (7) and hose 1682914 (6) on fitting (8).
17. Lightly lubricate preformed packing (4) with clean oil, and install preformed packing (4) and hose 1682914 (3) on fitting (5).
18. Connect hydraulic override manifold connector (2) on pump house wire harness connector (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Fill hydraulic reservoir (WP 0143)
2. Close pump house access door (WP 0009)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

HYDRAULIC PRESSURE CONTROL REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Cap Set, Protective (WP 0399, Item 1)
Drain Pan (WP 0399, Item 4)
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

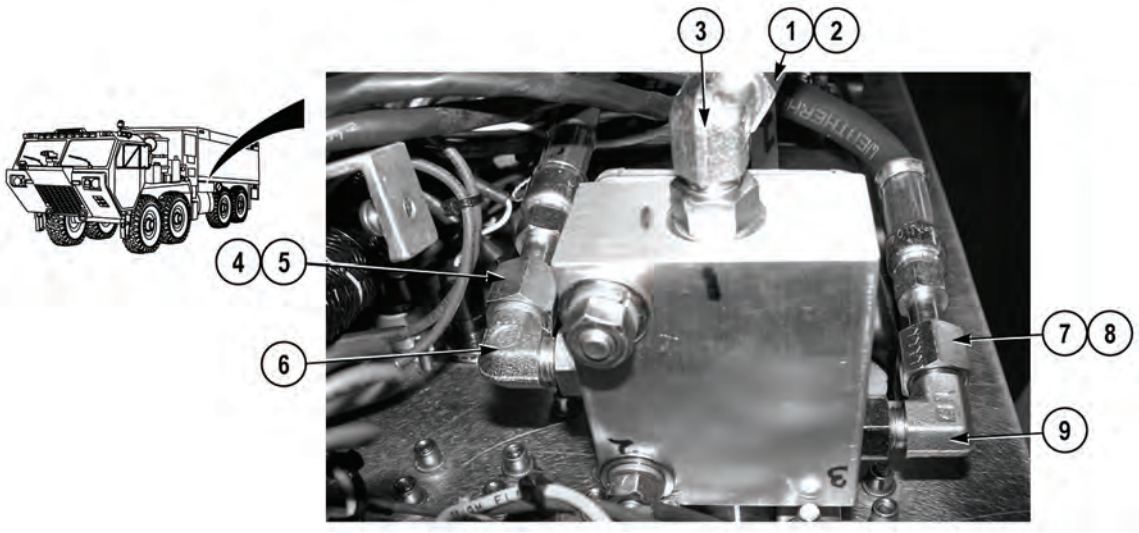
Materials/Parts
Oil, Lubrication, (WP 0401, Item 20)
Tags, Identification (WP 0401, Item 22)
Preformed Packing (1)
Preformed Packing (1)
Preformed Packing (1)

Materials/Parts (continued)
Lockwasher (2)
Preformed Packing (1)
Preformed Packing (1)
Preformed Packing (1)
Lockwasher (2)

References
WP 0392, Fig. 15

Equipment Conditions
Pump operator's panel opened (WP 0205)

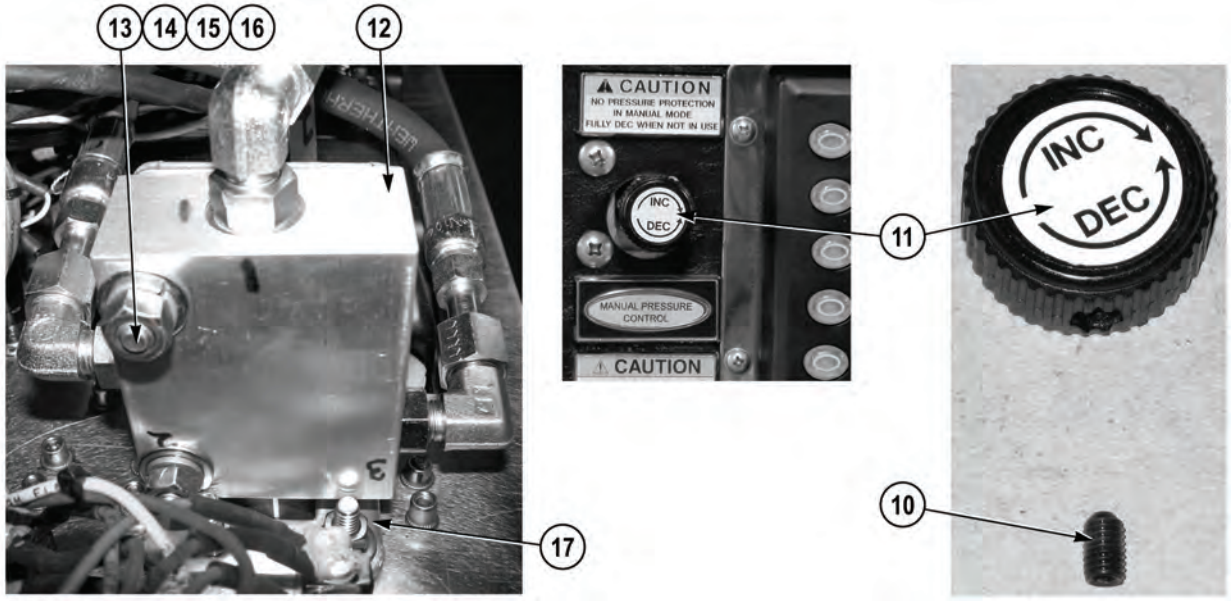
REMOVAL



NOTE

- Position drain pan under hoses and valve.
- Tag and mark hoses prior to removal to ensure proper installation.
- Cap and plug hoses upon removal.
- Hoses 1, 4, and 7 have same hose number.

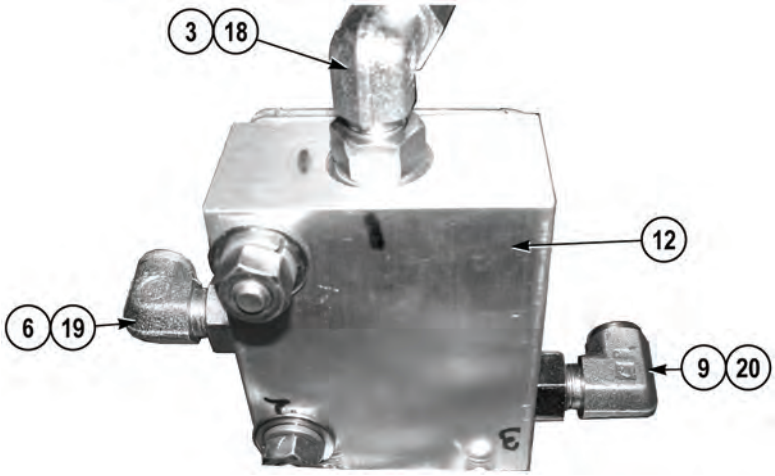
1. Remove hose 1682914 (1) and preformed packing (2) from elbow (3). Discard preformed packing.
2. Remove hose 1682914 (4) and preformed packing (5) from elbow (6). Discard preformed packing.
3. Remove hose 1682914 (7) and preformed packing (8) from elbow (9). Discard preformed packing.



NOTE

Note position of knob prior to removal to ensure proper installation.

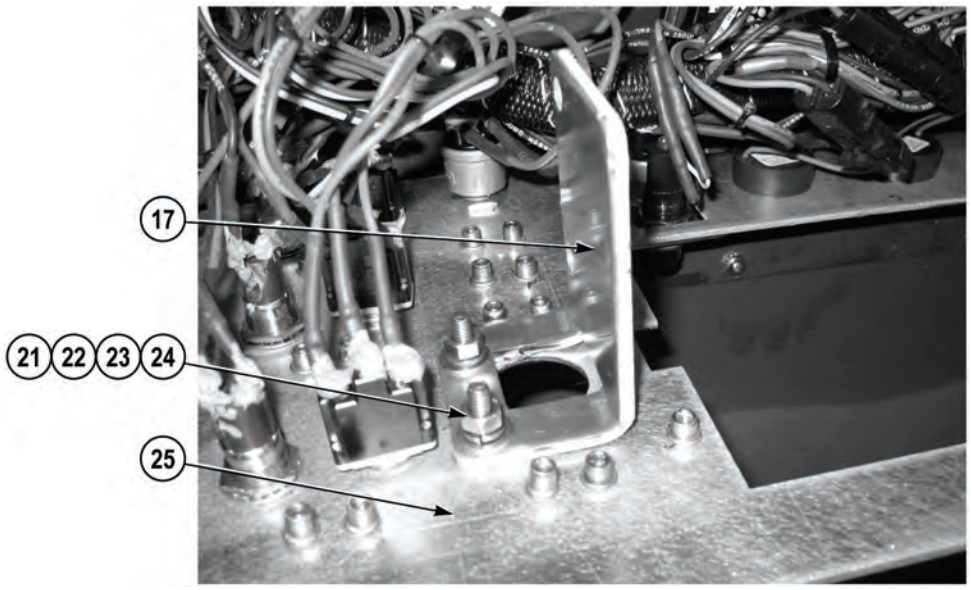
4. Remove setscrew (10) and knob (11) from valve (12).
5. Remove two nuts (13), lockwashers (14), four washers (15), two screws (16), and valve (12) from bracket (17). Discard lockwashers.



NOTE

Note position of elbows prior to removal to ensure proper installation.

6. Remove elbow (3) and preformed packing (18) from valve (12). Discard preformed packing.
7. Remove elbow (6) and preformed packing (19) from valve (12). Discard preformed packing.
8. Remove elbow (9) and preformed packing (20) from valve (12). Discard preformed packing.



NOTE

Perform Step (9) if bracket needs to be removed.

9. Remove two nuts (21), lockwashers (22), washers (23), screws (24), and bracket (17) from panel (25). Discard lockwashers.

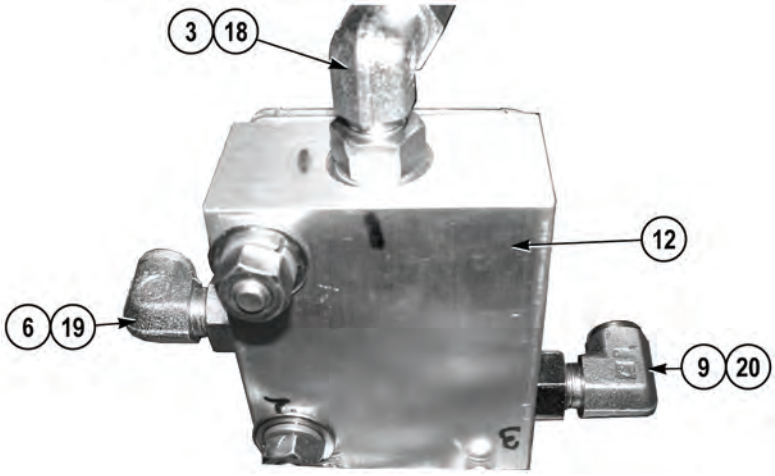
END OF TASK

INSTALLATION

NOTE

Perform Step (1) if bracket was removed.

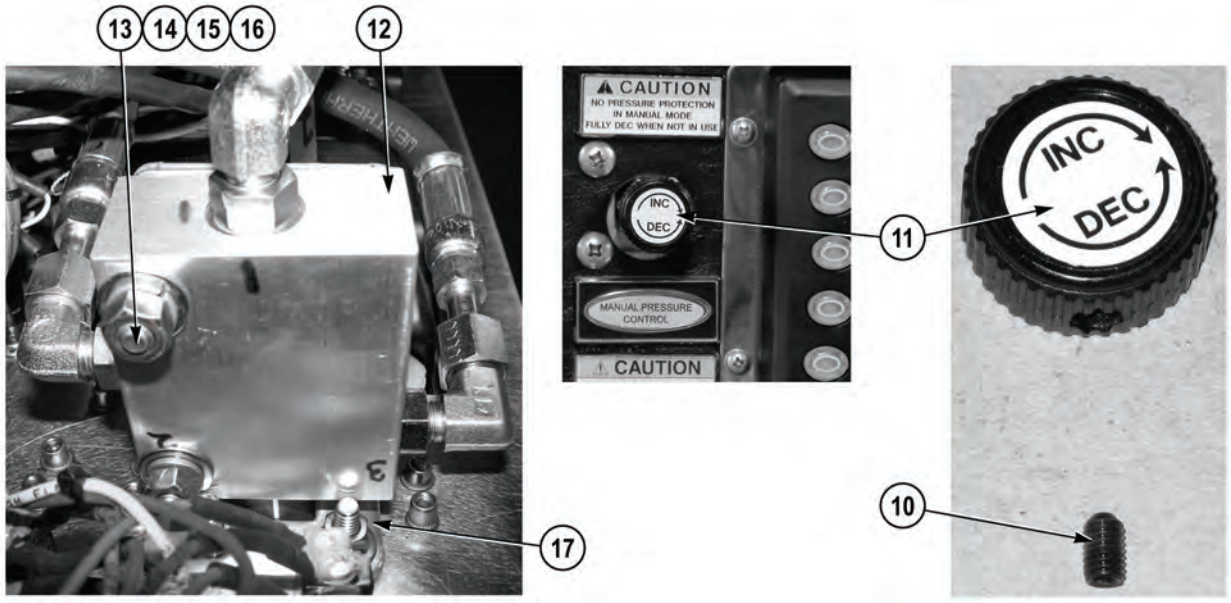
1. Install bracket (17) on panel (25) with two screws (24), washers (23), lockwashers (22), and nuts (21).



NOTE

Install elbows as noted prior to removal.

2. Lightly lubricate preformed packing (20) with clean oil, and install preformed packing (20) and elbow (9) on valve (12).
3. Lightly lubricate preformed packing (19) with clean oil, and install preformed packing (19) and elbow (6) on valve (12).
4. Lightly lubricate preformed packing (18) with clean oil, and install preformed packing (18) and elbow (3) on valve (12).

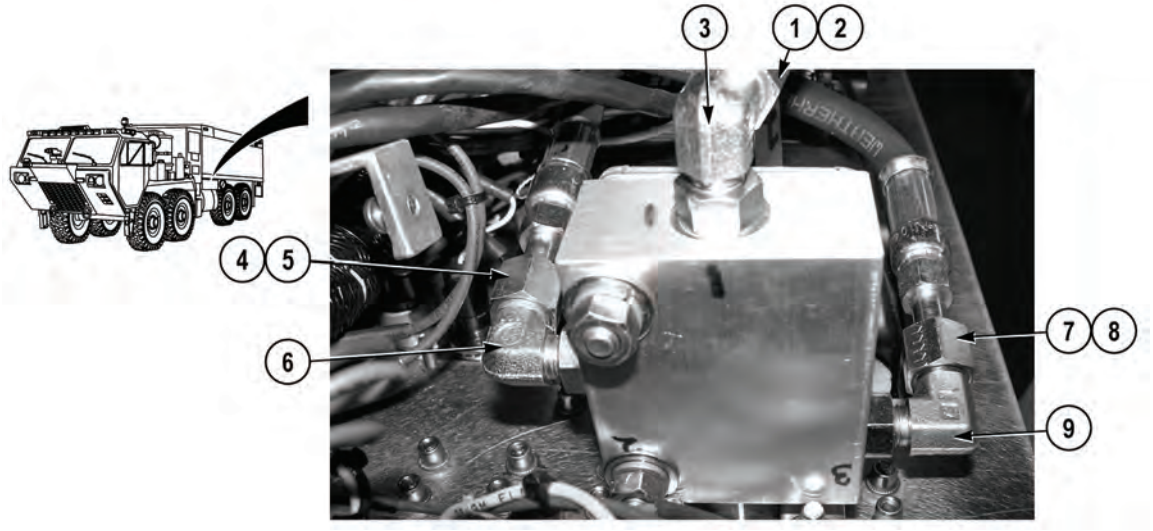


5. Install valve (12) on bracket (17) with two screws (16), four washers (15), two lockwashers (14), and nuts (13).

NOTE

Install knob as noted prior to removal.

6. Install knob (11) on valve (12) with setscrew (10).



7. Lightly lubricate preformed packing (8) with clean oil, and install preformed packing (8) and hose 1682914 (7) on elbow (9).
8. Lightly lubricate preformed packing (5) with clean oil, and install preformed packing (5) and hose 1682914 (4) on elbow (6).
9. Lightly lubricate preformed packing (2) with clean oil, and install preformed packing (2) and hose 1682914 (1) on elbow (3).

END OF TASK

FOLLOW-ON MAINTENANCE

Close pump operator’s panel (WP 0205)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

HYDRAULIC RESERVOIR BREATHER REPLACEMENT

INITIAL SETUP:

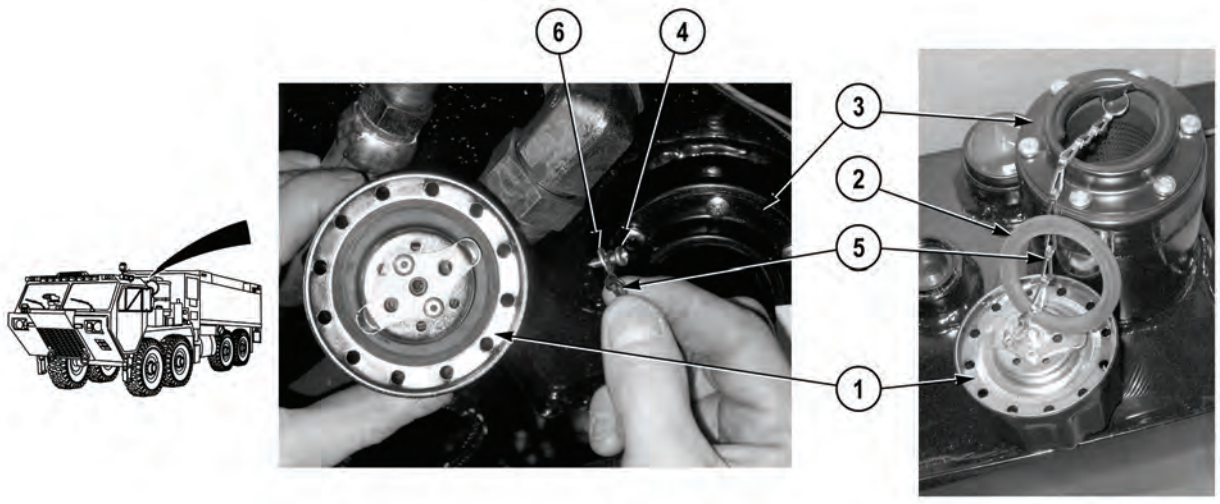
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Fluid, Hydraulic (WP 0401, Item 17)
Preformed Packing (1)

References
WP 0147
WP 0392, Fig. 10

Equipment Conditions
Pump house panel K removed (WP 0341)

REMOVAL



1. Remove breather (1) and preformed packing (2) from strainer collar (3).
2. Remove screw (4), chain (5), and washer (6) from breather (1).
3. Remove preformed packing (2) from breather (1). Discard preformed packing.

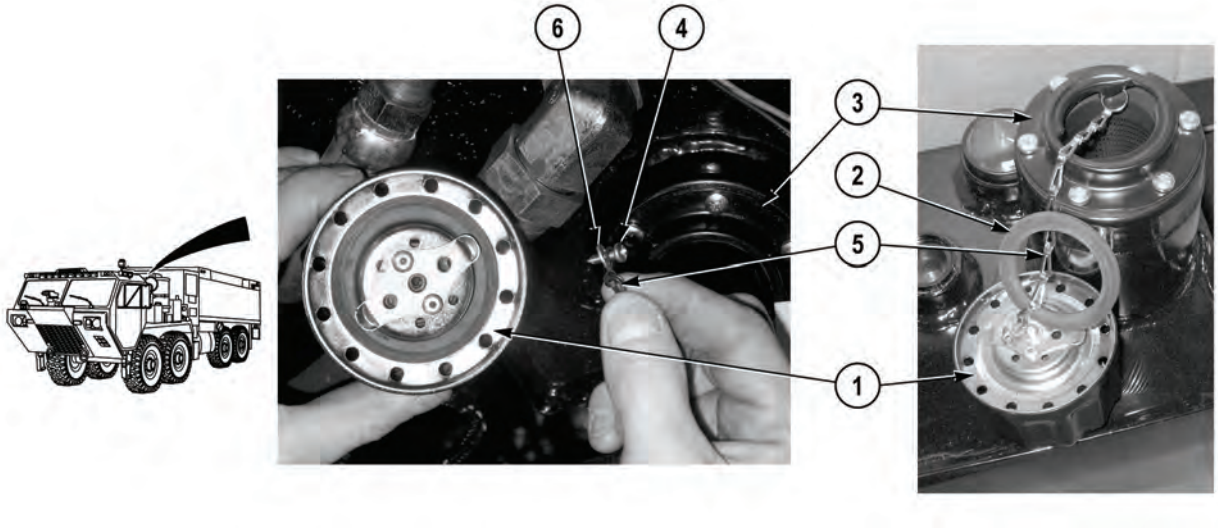
NOTE

Perform Step (4) if chain needs to be removed.

4. Remove chain (5) from strainer collar (3) (WP 0147).

END OF TASK

INSTALLATION



NOTE

Perform Step (1) if chain needs to be installed.

1. Install chain (5) on strainer collar (3) (WP 0147).

NOTE

Perform Step (2) if installing new preformed packing.

2. Lightly lubricate preformed packing (2) with clean oil and install preformed packing (2) on breather (1).
3. Install preformed packing (2) on breather (1).
4. Install washer (6) and chain (5) on breather (1) with screw (4).
5. Install preformed packing (2) and breather (1) on strainer collar (3).

END OF TASK

FOLLOW-ON MAINTENANCE

Install pump house panel K (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

HYDRAULIC RESERVOIR DRAIN/FILL

INITIAL SETUP:

Tools and Special Tools
Drain Pan (2) (WP 0399, Item 4)
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

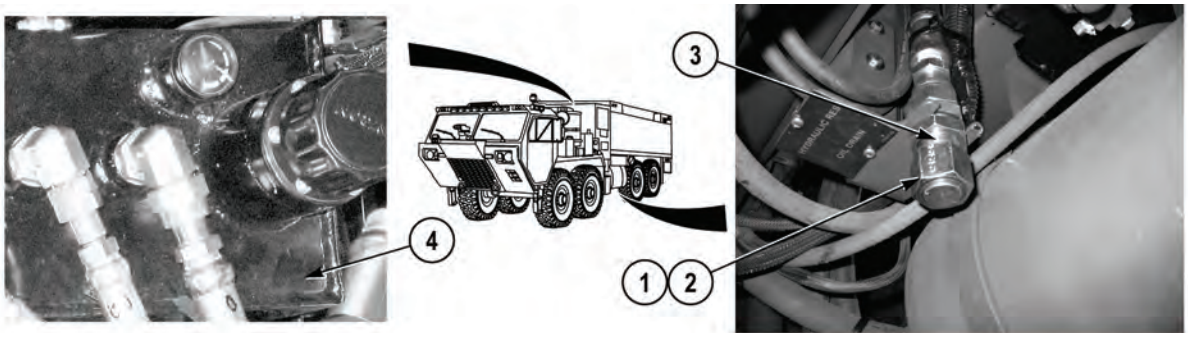
Materials/Parts
Hydraulic Fluid, Petroleum Base (WP 0401, Item 17)
Preformed Packing (1)

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

References
TM 9-2320-315-14&P
TM 9-2320-279-10
WP 0004
WP 0392, Fig. 10

Equipment Conditions
Pump house panel K removed (WP 0341)

DRAIN



WARNING



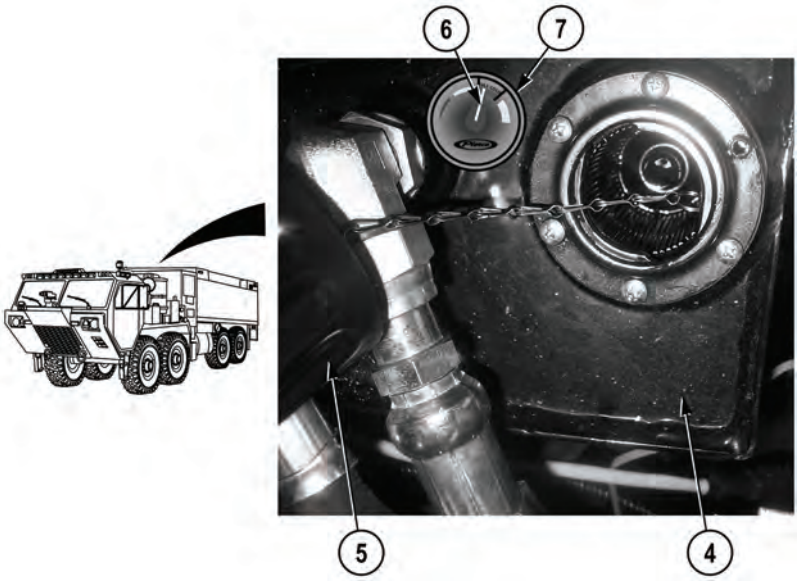
Hydraulic oil may be hot. Ensure hydraulic oil is cool prior to removal. Failure to comply may result in injury to personnel.

NOTE

- Hydraulic reservoir contains approximately nine gallons of hydraulic fluid.
- With the aid of an assistant, alternate drain pans as required to keep drain pans from overflowing.

1. Remove cap (1) and preformed packing (2) from fitting (3). Discard preformed packing.
2. Allow oil to drain completely from hydraulic reservoir (4).
3. Lightly lubricate preformed packing (2) with clean oil, and install preformed packing (2) and cap (1) on fitting (3).

FILL



1. Remove hydraulic reservoir breather (5) from hydraulic reservoir (4).
2. Fill hydraulic reservoir (4) until indicator (6) on fluid level gauge (7) reaches mark on full cold.

NOTE

Perform Steps (3) through (9) if any hydraulic components have been removed or replaced.

3. Connect batteries (TM 9-2320-315-14&P).
4. Start engine (TM 9-2320-279-10).
5. Operate PTO for one minute (WP 0004).
6. Disconnect batteries (TM 9-2320-315-14&P).
7. Check for leaks.
8. Check indicator (6) on fluid level gauge (7) and fill hydraulic reservoir (4) until indicator (6) on fluid level gauge (7) reaches mark on full cold.
9. Install hydraulic reservoir breather (5) on hydraulic reservoir (4).

END OF TASK

FOLLOW-ON MAINTENANCE

Install pump house panel K (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

HYDRAULIC RESERVOIR FLUID LEVEL GAUGE REPLACEMENT

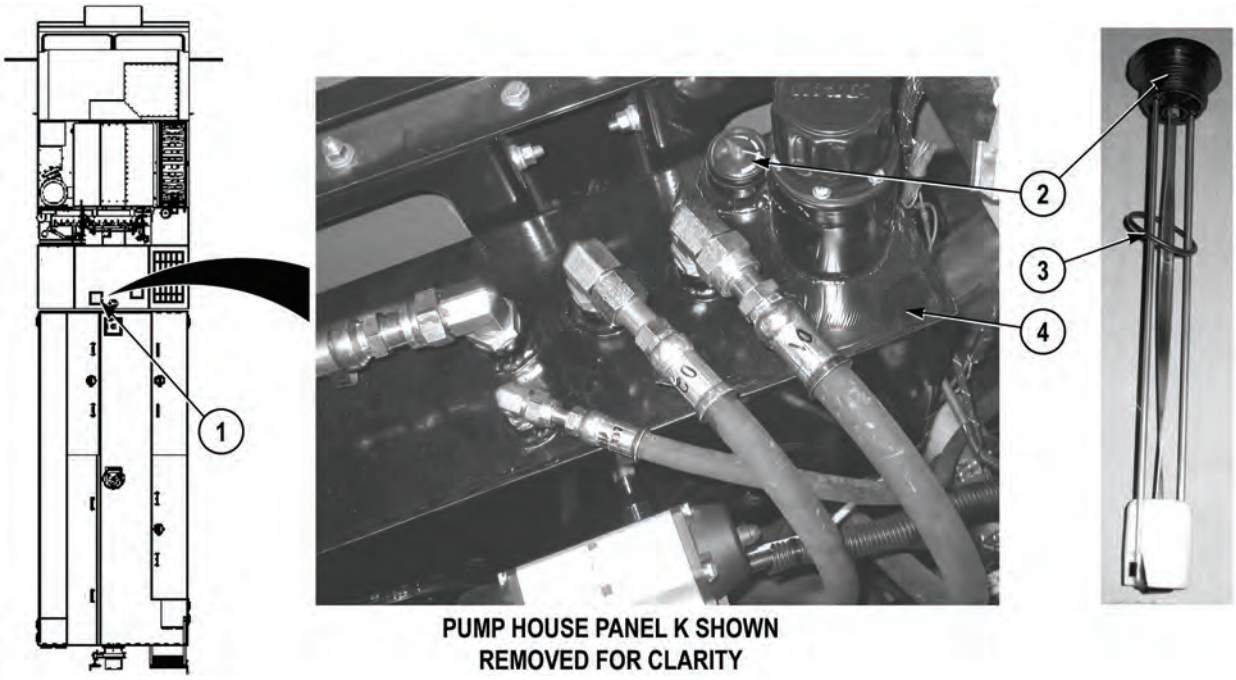
INITIAL SETUP:

Materials/Parts
Fluid, Hydraulic (WP 0401, Item 17)
Preformed Packing (1)

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)

References
WP 0392, Fig. 10

REMOVAL

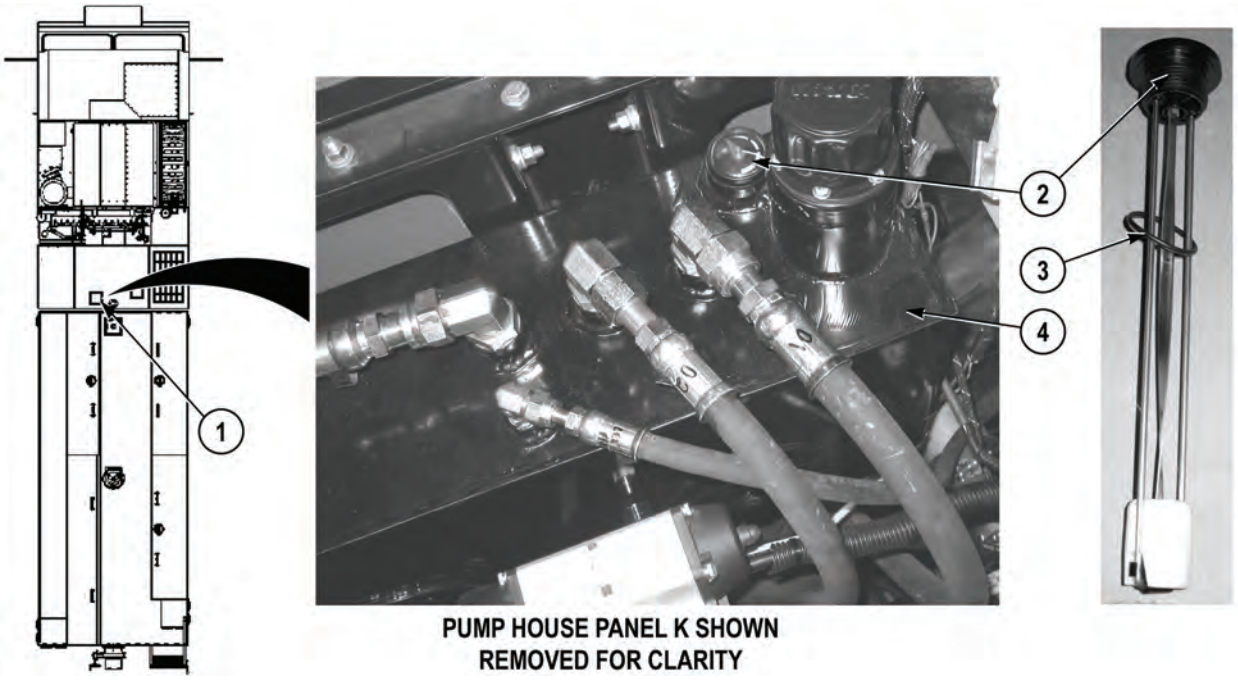


PUMP HOUSE PANEL K SHOWN REMOVED FOR CLARITY

1. Open small hydraulic reservoir access door (1).
2. Remove fluid level gauge (2) and preformed packing (3) from hydraulic reservoir (4). Discard preformed packing.

END OF TASK

INSTALLATION



PUMP HOUSE PANEL K SHOWN
REMOVED FOR CLARITY

1. Lightly lubricate preformed packing (3) with clean oil, and install preformed packing (3) and fluid level gauge (2) on hydraulic reservoir (4).
2. Close small hydraulic reservoir access door (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

HYDRAULIC RESERVOIR FLUID LEVEL SWITCH REPLACEMENT

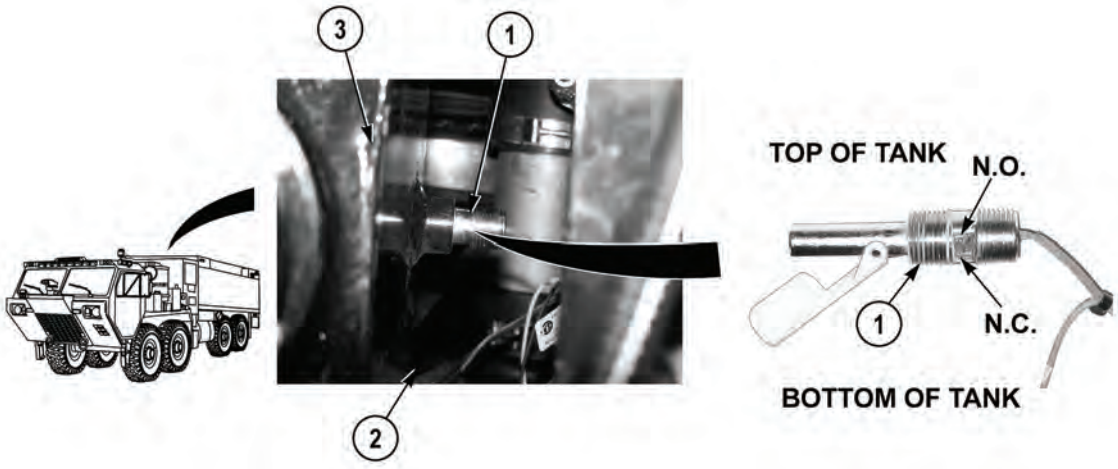
INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tape, Teflon (WP 0401, Item 24)

Equipment Conditions
Pump house panel K removed (WP 0341)
Hydraulic reservoir drained (WP 0143)

REMOVAL



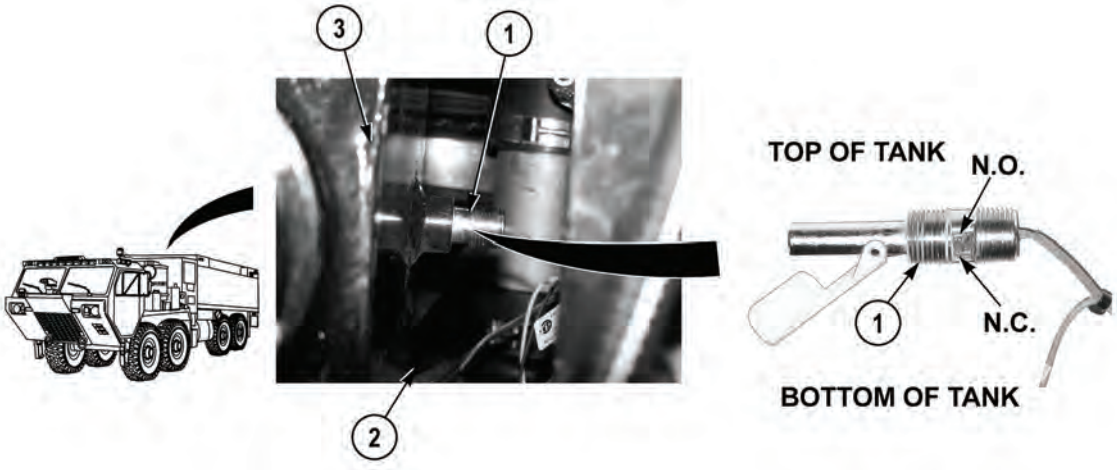
NOTE

- Hydraulic reservoir fluid level switch is located on driver side at hydraulic reservoir.
- Note position of switch prior to removal to ensure proper installation.

1. Disconnect hydraulic reservoir fluid level switch (1) from hydraulic reservoir fluid level switch wire harness (2).
2. Remove hydraulic reservoir fluid level switch (1) from hydraulic reservoir (3).

END OF TASK

INSTALLATION



NOTE

Install switch as noted prior to removal.

1. Apply teflon tape to threads of hydraulic reservoir fluid level switch (1).
2. Install hydraulic reservoir fluid level switch (1) in hydraulic reservoir (3).
3. Connect hydraulic reservoir fluid level switch (1) to hydraulic reservoir fluid level switch wire harness (2).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Fill hydraulic reservoir (WP 0143)
2. Install pump house panel K (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

HYDRAULIC RESERVOIR AND BRACKET REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
- Cap Set, Protective (WP 0399, Item 1)
- Drain Pan (WP 0399, Item 4)
- Standard Automotive Tool Set (SATS), (WP 0399, Item 15)
  - Wrench, Adjustable 15”
- Tool Kit, General Mechanic’s: Automotive (WP 0399, Item 17)

Materials/Parts
- Tags, Identification (WP 0401, Item 22)
- Ties, Cable, Plastic (WP 0401, Item 25)
- Fluid, Hydraulic (WP 0401, Item 17)
- Locknut (2)
- Preformed Packing (1)
- Preformed Packing (1)
- Preformed Packing (2)
- Preformed Packing (1)
- Preformed Packing (1)
- Preformed Packing (1)
- Preformed Packing (1)
- Preformed Packing (2)
- Preformed Packing (1)

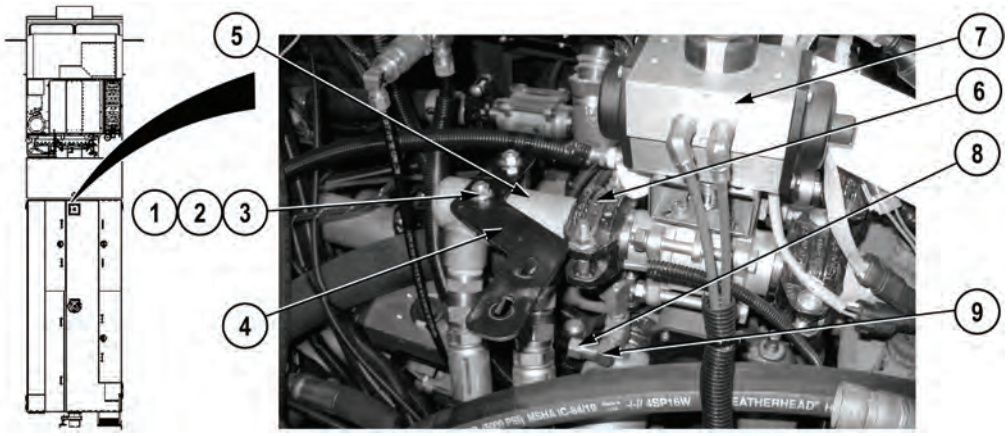
Materials/Parts (continued)
- Preformed Packing (1)
- Lockwasher (2)
- Lockwasher (5)
- Lockwasher (9)
- Seal (2)

Personnel Required
- MOS 63B Wheeled Vehicle Mechanic (2)

References
- WP 0392, Fig. 10, 21, 71, 93

Equipment Conditions
- Hydraulic reservoir drained (WP 0143)
- Foam system eductor valve removed (WP 0176)
- Hydraulic reservoir temperature sensor removed (WP 0148)
- Hydraulic reservoir fluid level switch removed (WP 0145)
- Hydraulic reservoir fluid level gauge removed (WP 0144)
- Hydraulic reservoir strainer removed (WP 0147)

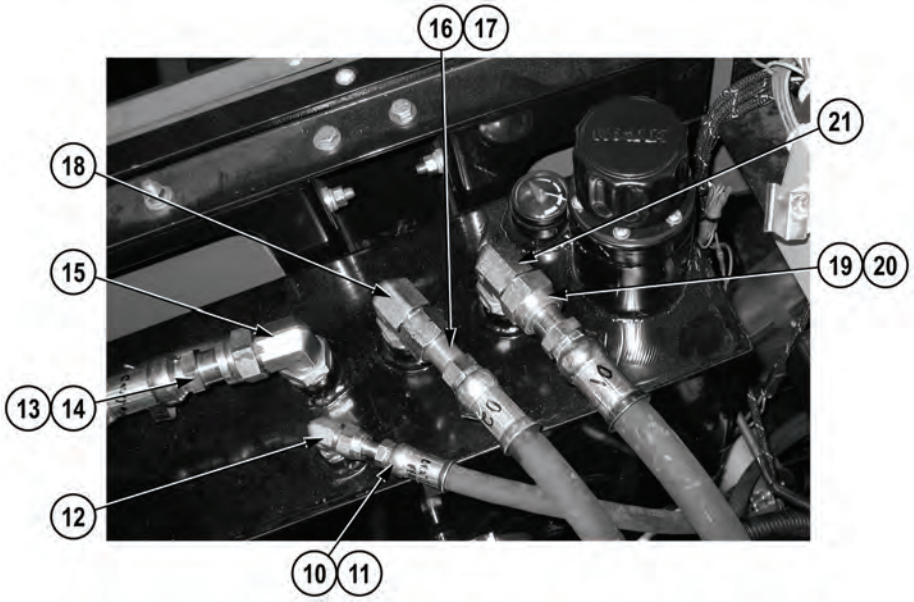
REMOVAL



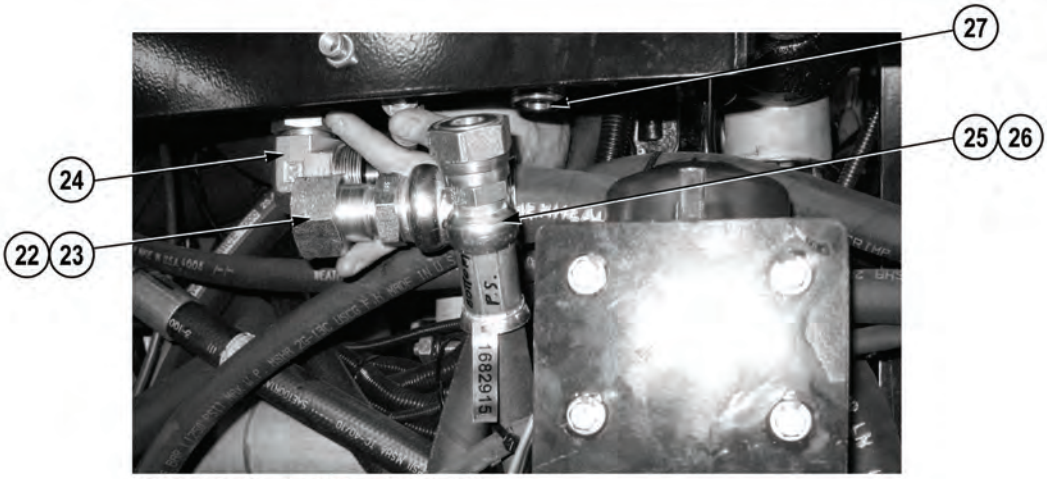
NOTE

- Position suitable drain pan under hoses to catch hydraulic fluid.
- Tag and mark hoses prior to removal to ensure proper installation.
- Cap and plug hoses prior to removal.
- Remove cable ties as required.
- Perform Steps (1) through (3) to provide clearance for hydraulic reservoir and hoses removal.

1. Remove two locknuts (1), cradle (2), U-bolt (3), and bracket (4) from pipe (5). Discard locknuts.
2. Remove coupling (6) (WP 0315) and pipe (5) from valve (7).
3. Remove line (8) from elbow (9).

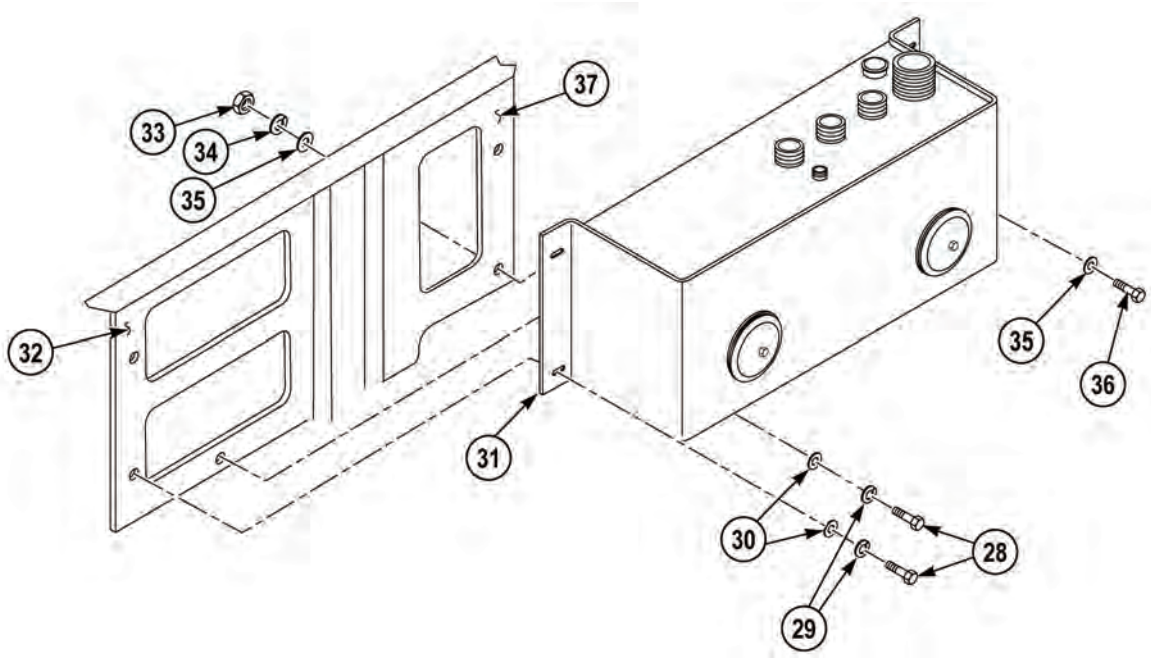


4. Remove hose 1682987 (10) and preformed packing (11) from elbow (12). Discard preformed packing.
5. Remove hose 1682893 (13) and preformed packing (14) from elbow (15). Discard preformed packing.
6. Remove hose 1682841 (16) and preformed packing (17) from elbow (18). Discard preformed packing.
7. Remove hose 1682888 (19) and preformed packing (20) from elbow (21). Discard preformed packing.



(BOTTOM OF TANK, BACK VIEW)

8. Remove hose 1682838 (22) and preformed packing (23) from elbow (24). Discard preformed packing.
9. Remove hose 1682915 (25) and preformed packing (26) from fitting (27). Discard preformed packing.

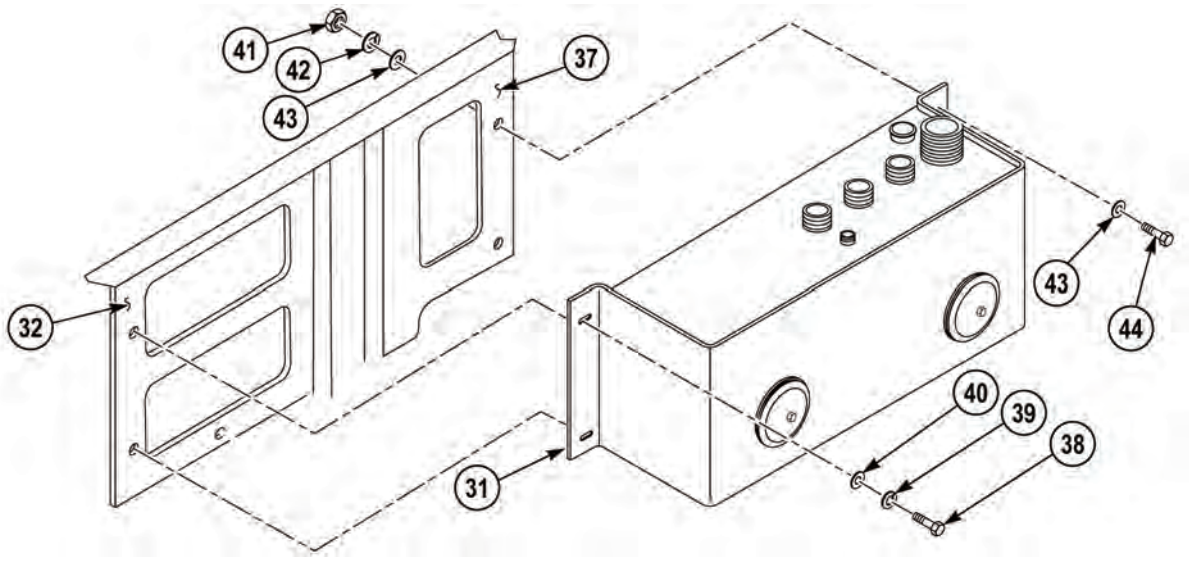


NOTE

Top two screws are removed last.

10. Remove two screws (28), lockwashers (29), and washers (30) from hydraulic reservoir (31) and bracket (32). Discard lockwashers.

11. Remove nut (33), lockwasher (34), two washers (35), and screw (36) from hydraulic reservoir (31) and bracket (37). Discard lockwasher.

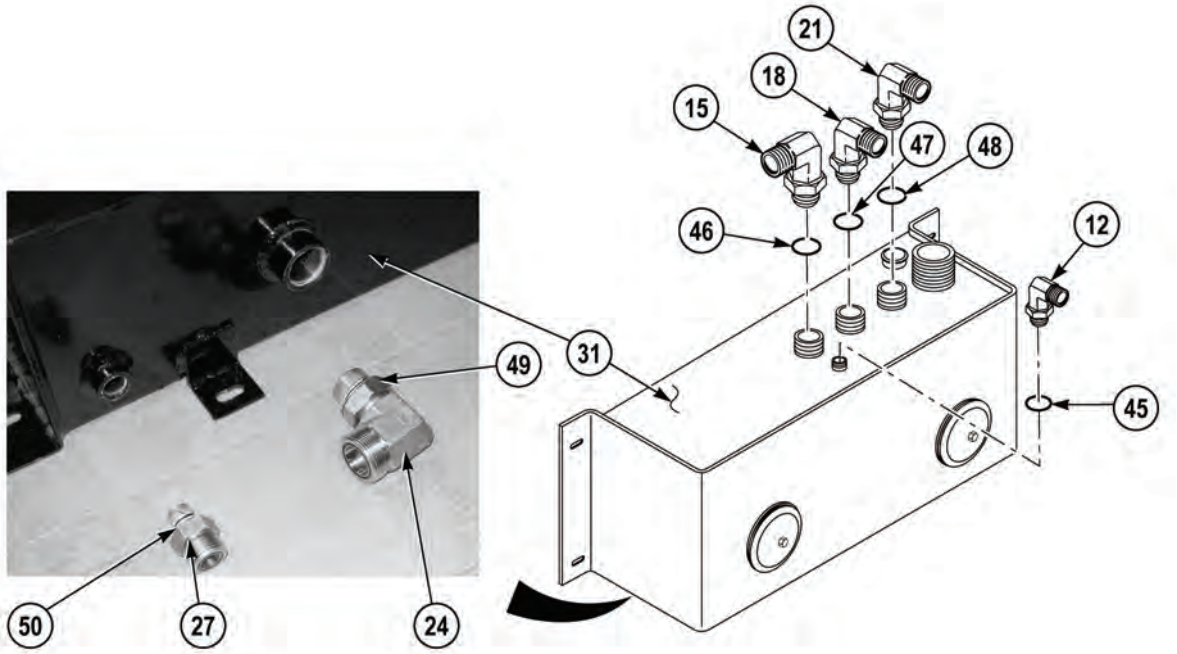


⚠ CAUTION

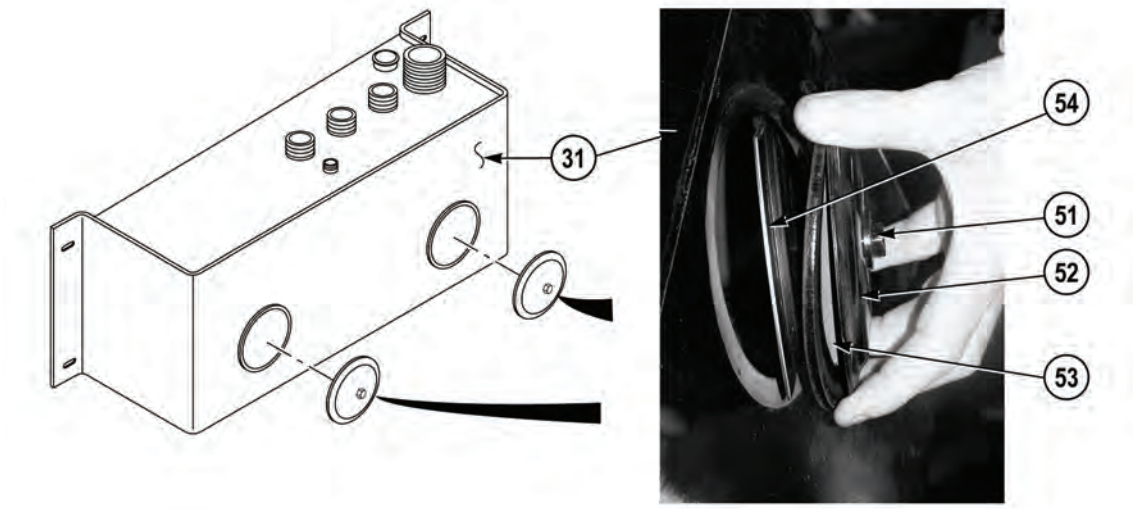
Hydraulic reservoir is awkward and must be removed with the aid of an assistant. Failure to comply may cause damage to equipment.

12. With the aid of an assistant, remove screw (38), lockwasher (39), washer (40), and hydraulic reservoir (31) from bracket (32). Discard lockwasher.

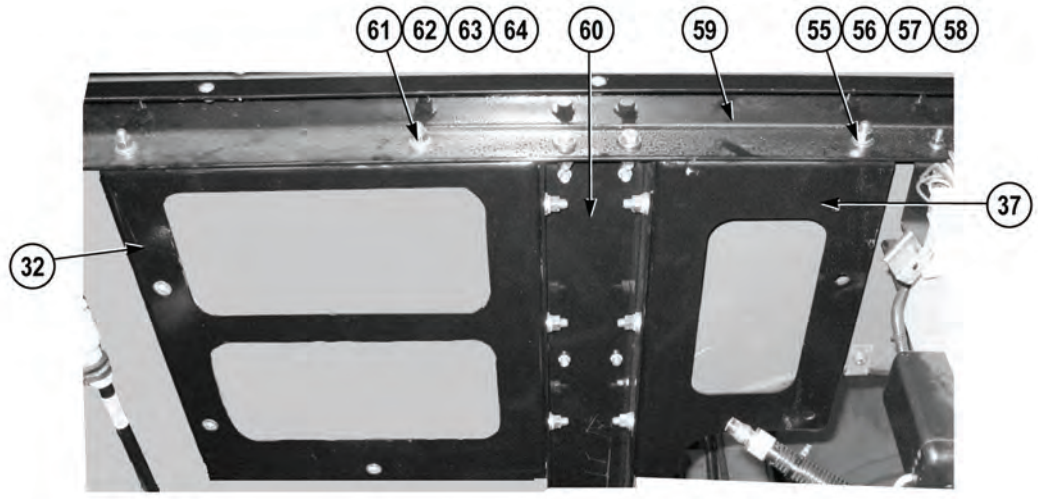
13. With the aid of an assistant, remove nut (41), lockwasher (42), two washers (43), screw (44), and hydraulic reservoir (31) from bracket (37) and vehicle. Discard lockwasher.



14. Remove elbow (12) and preformed packing (45) from hydraulic reservoir (31). Discard preformed packing.
15. Remove elbow (15) and preformed packing (46) from hydraulic reservoir (31). Discard preformed packing.
16. Remove elbow (18) and preformed packing (47) from hydraulic reservoir (31). Discard preformed packing.
17. Remove elbow (21) and preformed packing (48) from hydraulic reservoir (31). Discard preformed packing.
18. Remove elbow (24) and preformed packing (49) from hydraulic reservoir (31). Discard preformed packing.
19. Remove fitting (27) and preformed packing (50) from hydraulic reservoir (31). Discard preformed packing.



20. Loosen two screws (51) and remove covers (52), seals (53), and retainers (54) from hydraulic reservoir (31). Discard seals.



NOTE

Perform Steps (21) and (22) if brackets need to be removed.

21. Remove four nuts (55), lockwashers (56), eight washers (57), four screws (58), and bracket (37) from crossmember (59) and support bracket (60). Discard lockwashers.

22. Remove five nuts (61), lockwashers (62), ten washers (63), five screws (64), and bracket (32) from crossmember (59) and support bracket (60). Discard lockwashers.

END OF TASK

INSTALLATION

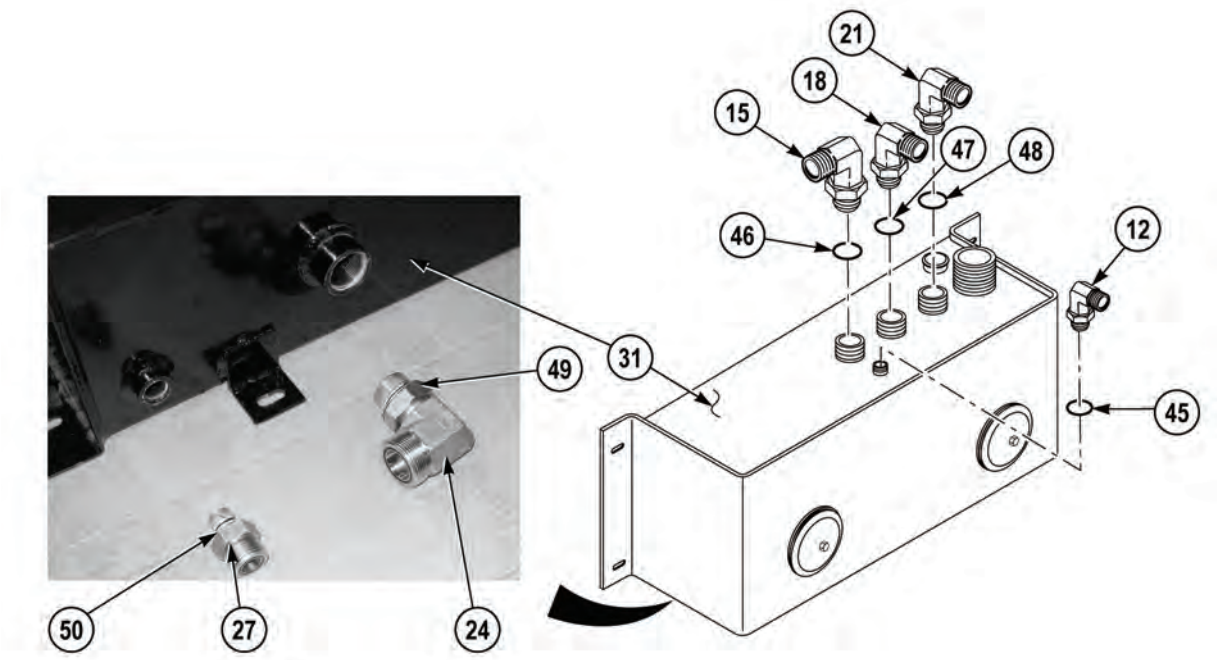
NOTE

Perform Steps (1) and (2) if brackets were removed.

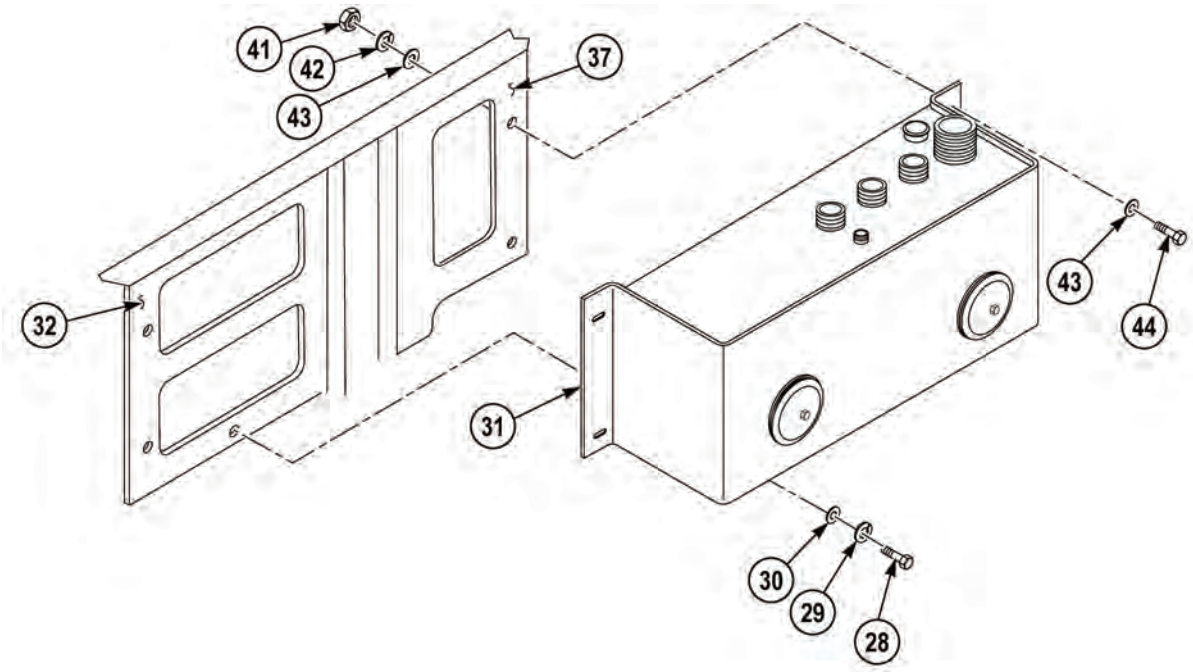
1. Install bracket (32) on support bracket (60) and crossmember (59) with five screws (64), ten washers (63), five lockwashers (62), and nuts (61).

2. Install bracket (37) on support bracket (60) and crossmember (59) with four screws (58), eight washers (57), four lockwashers (56), and nuts (55).

3. Lightly lubricate two seals (53) with clean oil, and install seal (53) on hydraulic reservoir (31) with two retainers (54), covers (52), and tighten screws (51).



4. Lightly lubricate preformed packing (50) with clean oil, and install preformed packing (50) and fitting (27) on hydraulic reservoir (31).
5. Lightly lubricate preformed packing (49) with clean oil, and install preformed packing (49) and elbow (24) on hydraulic reservoir (31).
6. Lightly lubricate preformed packing (48) with clean oil, and install preformed packing (48) and elbow (21) on hydraulic reservoir (31).
7. Lightly lubricate preformed packing (47) with clean oil, and install preformed packing (47) and elbow (18) on hydraulic reservoir (31).
8. Lightly lubricate preformed packing (46) with clean oil, and install preformed packing (46) and elbow (15) on hydraulic reservoir (31).
9. Lightly lubricate preformed packing (45) with clean oil, and install preformed packing (45) and elbow (12) on hydraulic reservoir (31).



⚠ CAUTION

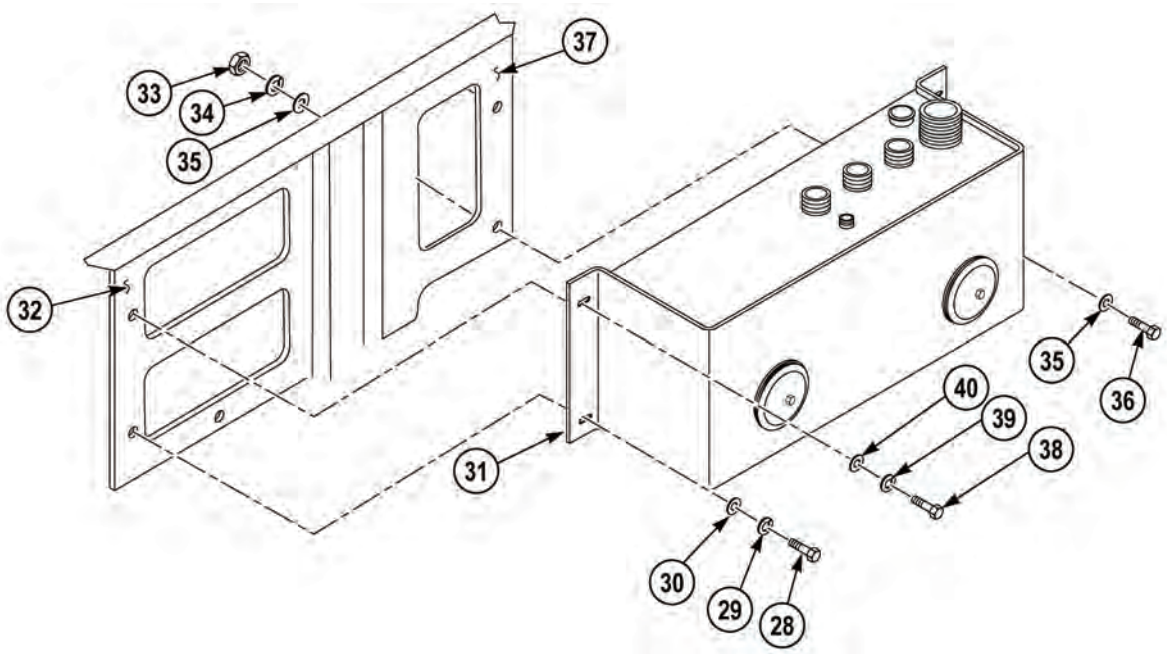
Hydraulic reservoir is awkward and must be installed with the aid of an assistant. Failure to comply may cause damage to equipment.

NOTE

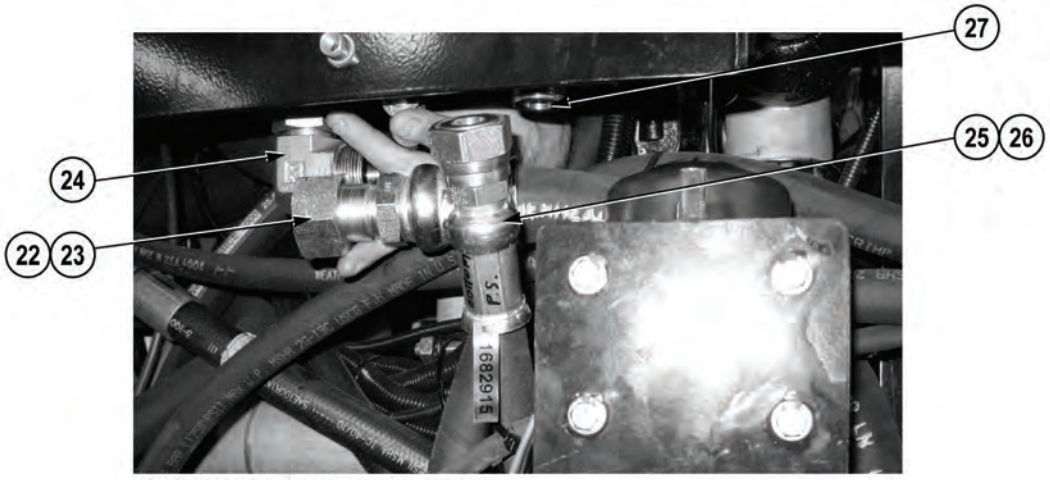
Installing hydraulic reservoir on two brackets is not the reverse of removal. Installing screw on upper right hand corner first, and screw under hydraulic reservoir second allows for easier installation for hydraulic reservoir and remaining screws.

10. With the aid of an assistant, install hydraulic reservoir (31) on bracket (37) with screw (44), two washers (43), lockwasher (42), and nut (41).

11. With the aid of an assistant, install hydraulic reservoir (31) on bracket (32) with bottom washer (30), lockwasher (29), and screw (28).

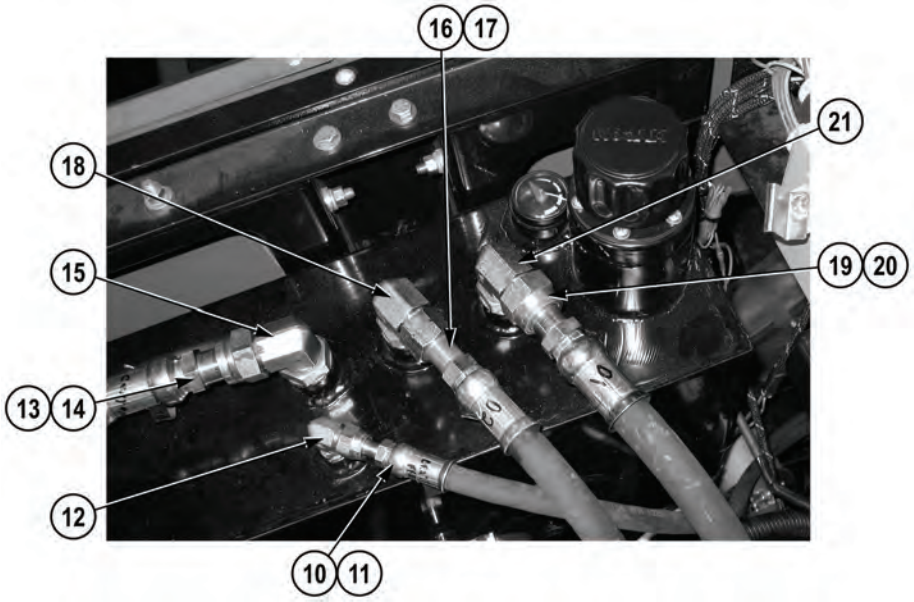


12. Install washer (40), lockwasher (39), and screw (38) on hydraulic reservoir (31) and bracket (32).
13. Install washer (30), lockwasher (29), and screw (28) on hydraulic reservoir (31) and bracket (32).
14. Install screw (36), two washers (35), lockwasher (34), and nut (33) on hydraulic reservoir (31) and bracket (37).

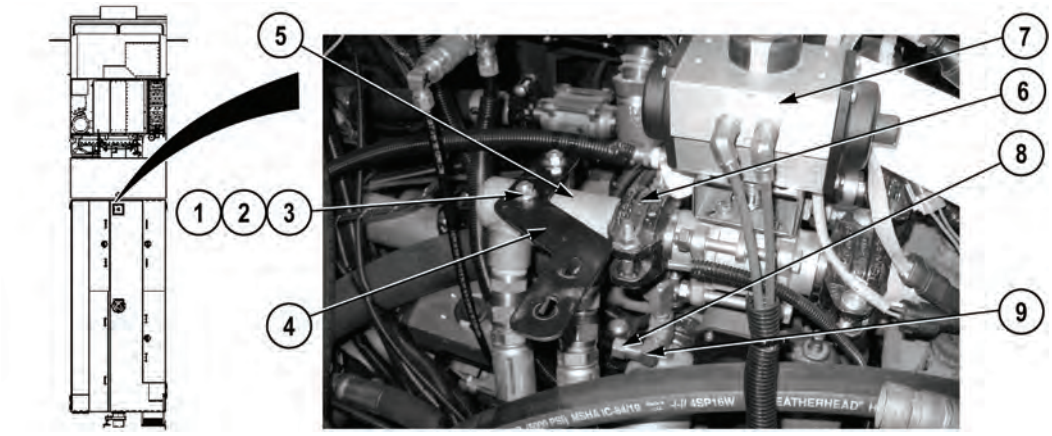


(BOTTOM OF TANK, BACK VIEW)

15. Lightly lubricate preformed packing (26) with clean oil, and install preformed packing (26) and hose 1682915 (25) on fitting (27).
16. Lightly lubricate preformed packing (23) with clean oil, and install preformed packing (23) and hose 1682838 (22) on elbow (24).



17. Lightly lubricate preformed packing (20) with clean oil, and install preformed packing (20) and hose 1682888 (19) on elbow (21).
18. Lightly lubricate preformed packing (17) with clean oil, and install preformed packing (17) and hose 1682841 (16) on elbow (18).
19. Lightly lubricate preformed packing (14) with clean oil, and install preformed packing (14) and hose 1682893 (13) on elbow (15).
20. Lightly lubricate preformed packing (11) with clean oil, and install preformed packing (11) and hose 1682987 (10) on elbow (12).



21. Install line (8) on elbow (9).
22. Install coupling (6) (WP 0315) and pipe (5) on valve (7).

NOTE

Install cable ties as required.

23. Install bracket (4) on pipe (5) with U-bolt (3), cradle (2), and two locknuts (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install hydraulic reservoir strainer (WP 0147)
2. Install hydraulic reservoir fluid level gauge (WP 0144)
3. Install hydraulic reservoir fluid level switch (WP 0145)
4. Install hydraulic reservoir temperature sensor (WP 0148)
5. Install foam system eductor valve (WP 0176)
6. Fill hydraulic reservoir (WP 0143)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

HYDRAULIC RESERVOIR STRAINER REPLACEMENT

INITIAL SETUP:

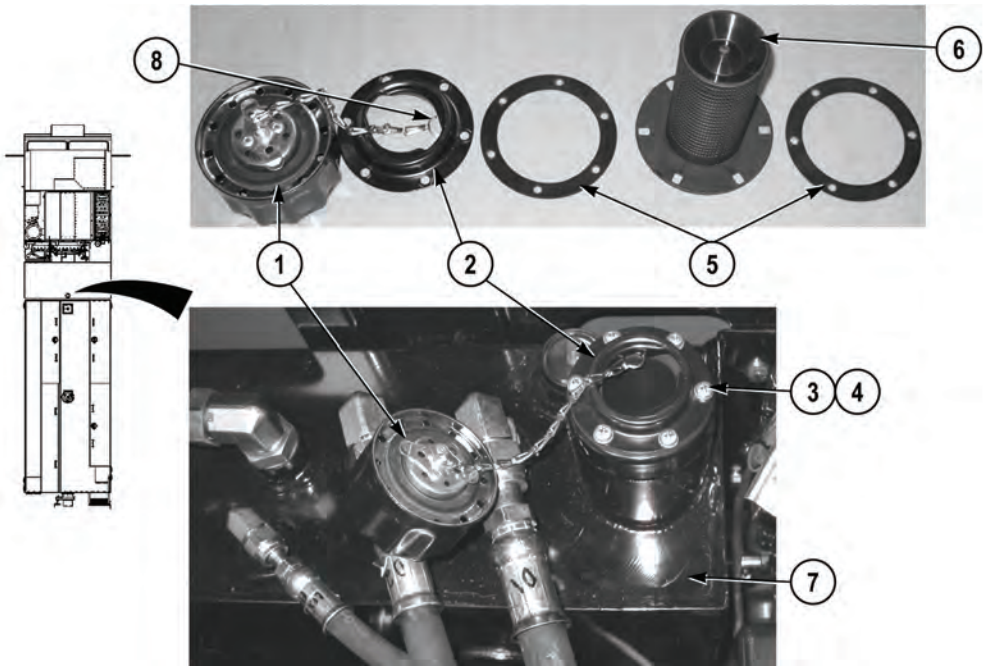
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Adhesive, Thread, Locking (WP 0401, Item 6)
Gasket (2)

References
WP 0392, Fig. 10

Equipment Conditions
Pump house panel K removed (WP 0341)

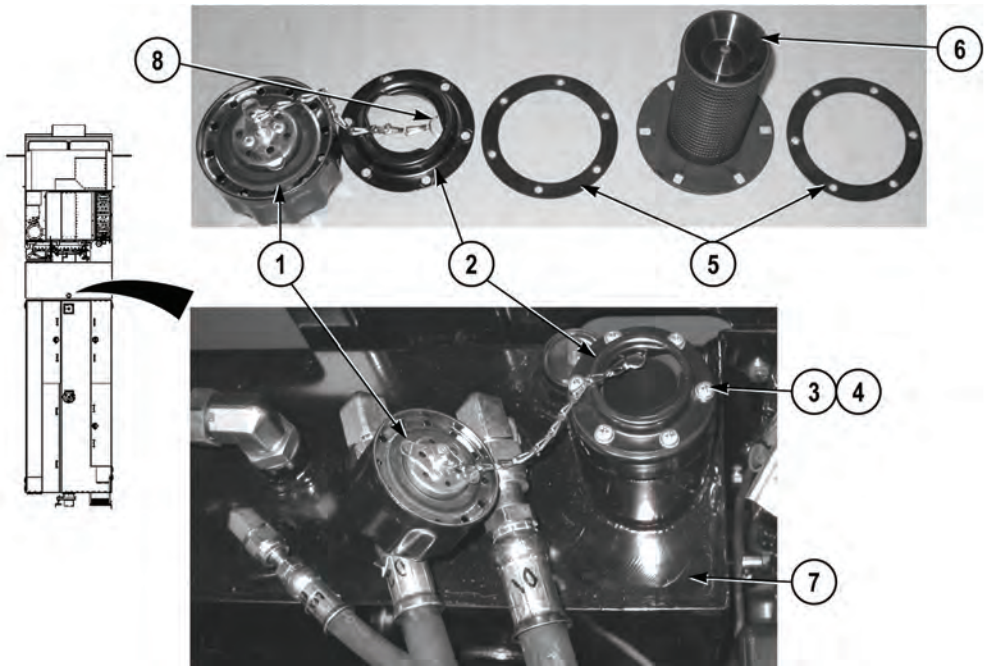
REMOVAL



1. Remove breather (1) from strainer collar (2).
2. Remove six screws (3), washers (4), strainer collar (2), two gaskets (5), and strainer (6) from reservoir (7). Discard gaskets.
3. Remove ring (8) from strainer collar (2).

END OF TASK

INSTALLATION



1. Install ring (8) on strainer collar (2).

WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

2. Apply adhesive on threads of six screws (3).
3. Install two gaskets (5), strainer (6), and strainer collar (2) on reservoir (7) with six washers (4) and screws (3).
4. Install breather (1) on strainer collar (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Install pump house panel K (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

HYDRAULIC RESERVOIR TEMPERATURE SENSOR REPLACEMENT

INITIAL SETUP:

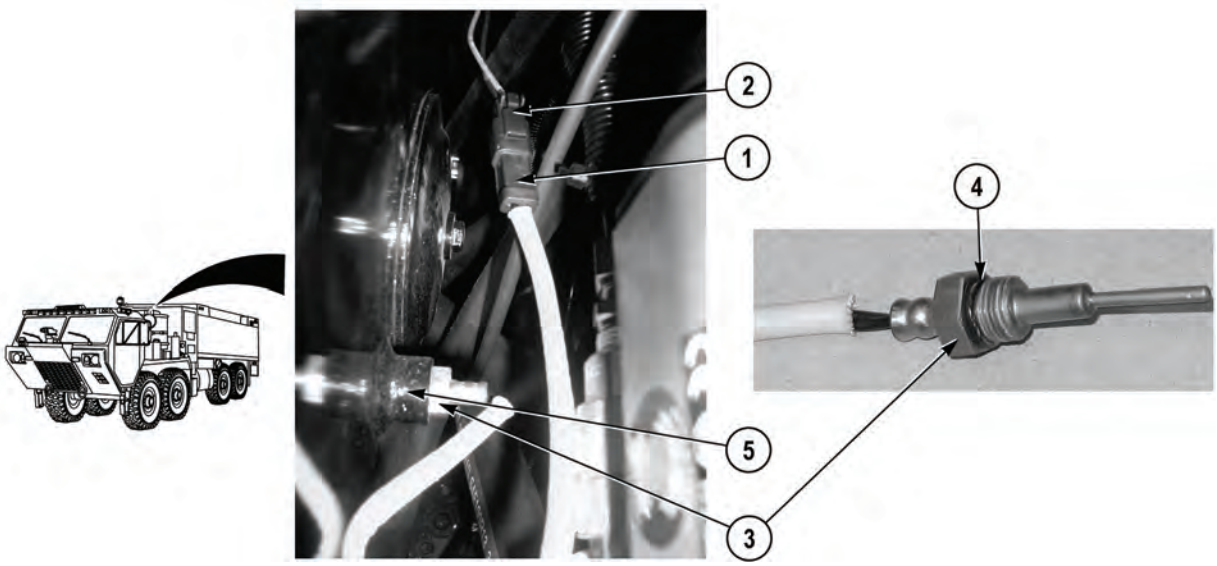
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Fluid, Hydraulic (WP 0401, Item 17)
Preformed Packing (1)

References
WP 0392, Fig. 10

Equipment Conditions
Pump house panel K removed (WP 0341)
Hydraulic reservoir drained (WP 0143)

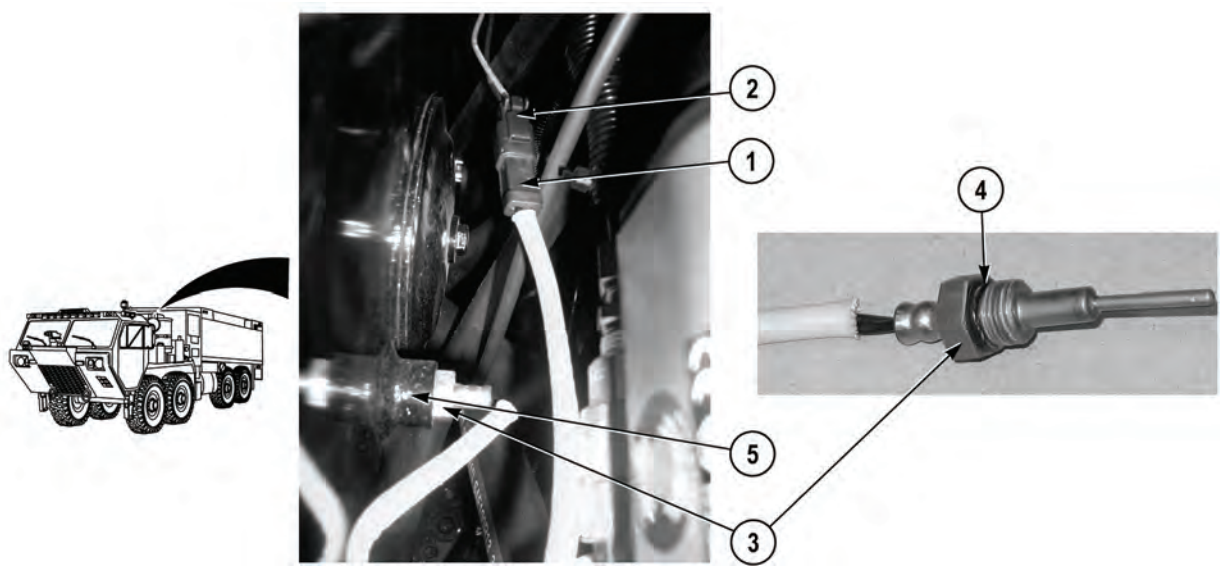
REMOVAL



1. Disconnect hydraulic reservoir temperature sensor connector (1) from pump house wire harness connector (2).
2. Remove hydraulic reservoir temperature sensor (3) and preformed packing (4) from hydraulic reservoir (5). Discard preformed packing.

END OF TASK

INSTALLATION



1. Lightly lubricate preformed packing (4) with clean oil, and install preformed packing (4) and hydraulic reservoir temperature sensor (3) on hydraulic reservoir (5).
2. Connect hydraulic reservoir temperature sensor connector (1) on pump house wire harness connector (2).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Fill hydraulic reservoir (WP 0143)
2. Install pump house panel K (WP 0341)
3. Check for leaks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

HYDROSTATIC PUMP MOTOR REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
- Cap Set, Protective (WP 0399, Item 1)
- Drain Pan (WP 0399, Item 4)
- Standard Automotive Tool Set (SATS), (WP 0399, Item 15)
  - Wrench, Adjustable 18”
- Tool Kit, General Mechanic’s: Automotive (WP 0399, Item 17)

Materials/Parts
- Fluid, Hydraulic (WP 0401, Item 17)
- Tags, Identification (WP 0401, Item 22)
- Ties, Cable, Plastic (WP 0401, Item 25)
- Preformed Packing (2)
- Preformed Packing (1)
- Preformed Packing (1)
- Preformed Packing (1)
- Preformed Packing (1)
- Preformed Packing (1)
- Preformed Packing (1)

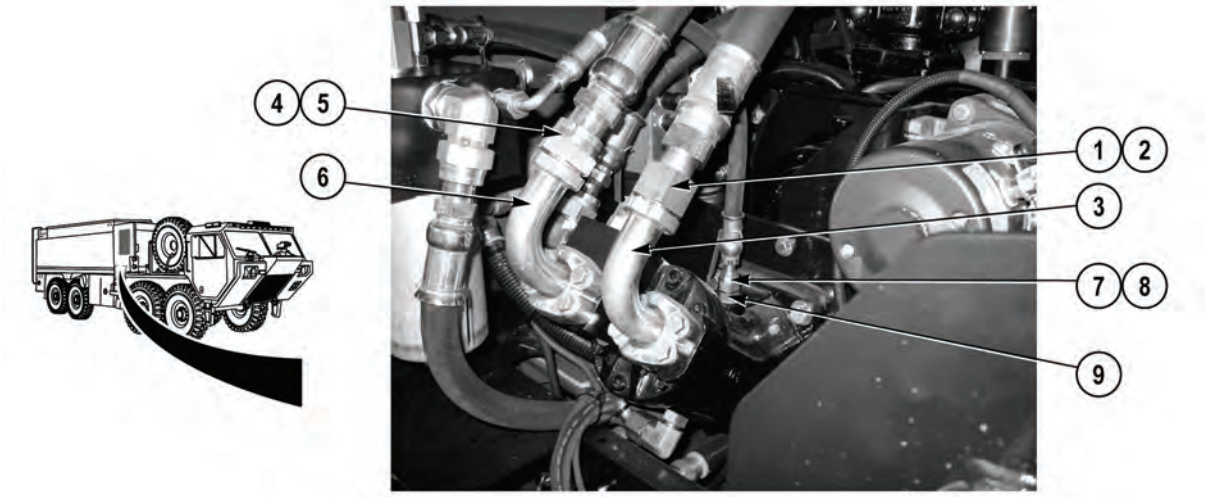
Materials/Parts (continued)
- Preformed Packing (1)
- Preformed Packing (1)
- Preformed Packing (2)
- Lockwasher (4)
- Lockwasher (8)
- Backup Ring (2)

Personnel Required
- MOS 63B Wheeled Vehicle Mechanic (2)

References
- WP 0392, Fig. 7, 9, 10, 11

Equipment Conditions
- Hydraulic heat exchanger shroud panel A removed (WP 0135)
- Hydraulic reservoir drained (WP 0143)

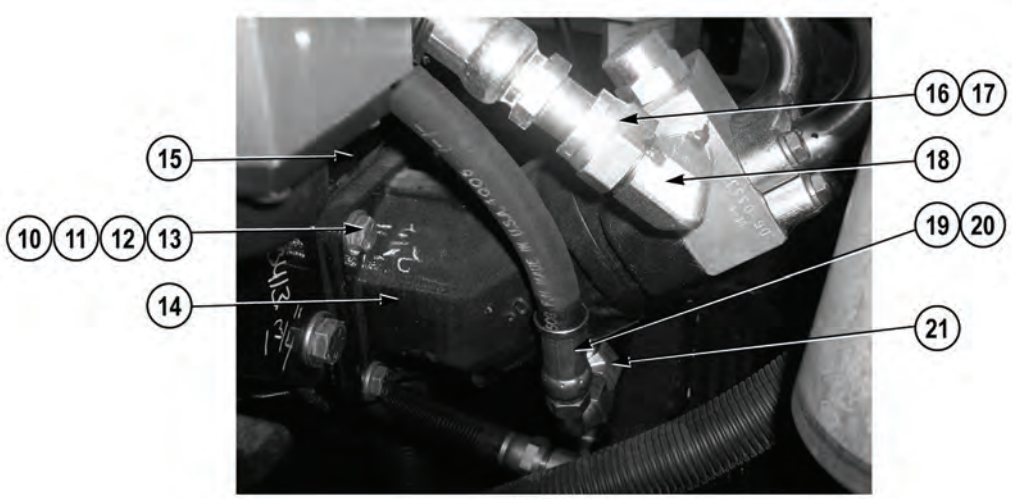
REMOVAL



NOTE

- Position drain pan under hoses.
- Tag and mark hoses prior to removal to ensure proper installation.
- Cap and plug hoses and fittings upon removal.
- Remove cable ties as required.

1. Remove hose 1682839 (1) and preformed packing (2) from elbow (3). Discard preformed packing.
2. Remove hose 1682840 (4) and preformed packing (5) from elbow (6). Discard preformed packing.
3. Remove hose 1682906 (7) and preformed packing (8) from fitting (9). Discard preformed packing.



SIDE VIEW

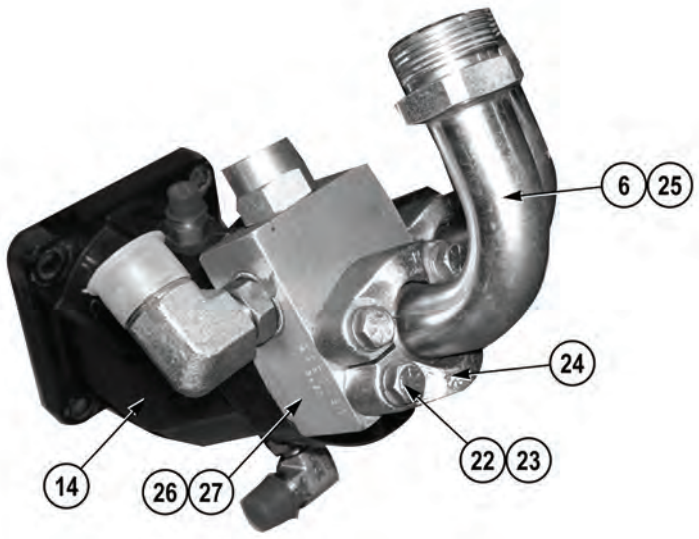
⚠ CAUTION

Pump motor has a splined shaft that turns water pump. Pump motor must be rotated in order to remove two remaining hoses, only pull pump motor away from water pump enough to provide clearance. Failure to comply may cause damage to equipment.

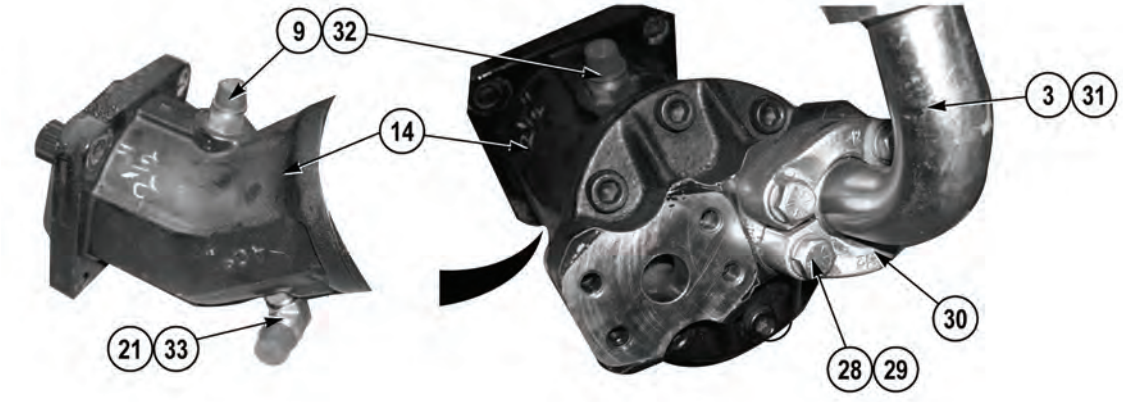
NOTE

Note position of elbows and fittings prior to removal to ensure proper installation.

4. With the aid of an assistant, remove four nuts (10), lockwashers (11), eight washers (12), and four screws (13) from pump motor (14) and water pump (15). Discard lockwashers.
5. Pull pump motor (14) away from water pump (15) and rotate clockwise.
6. Remove hose 1682886 (16) and preformed packing (17) from elbow (18). Discard preformed packing.
7. Remove hose 1682841 (19) and preformed packing (20) from elbow (21). Discard preformed packing.
8. Remove pump motor (14) from water pump (15).



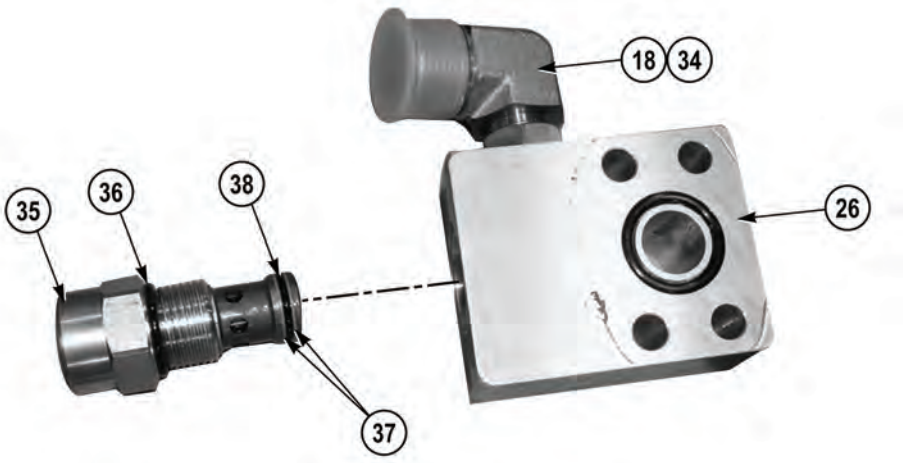
9. Remove four screws (22), lockwashers (23), two flange halves (24), elbow (6), preformed packing (25), adapter block (26), and preformed packing (27) from pump motor (14). Discard lockwashers and preformed packings.



10. Remove four screws (28), lockwashers (29), two flange halves (30), elbow (3), and preformed packing (31) from pump motor (14). Discard lockwashers and preformed packing.

11. Remove fitting (9) and preformed packing (32) from pump motor (14). Discard preformed packing.

12. Remove elbow (21) and preformed packing (33) from pump motor (14). Discard preformed packing.



13. Remove elbow (18) and preformed packing (34) from adapter block (26). Discard preformed packing.
14. Remove valve (35) preformed packing (36), two backup rings (37), and preformed packing (38) from adapter block (21). Discard preformed packings and backup rings

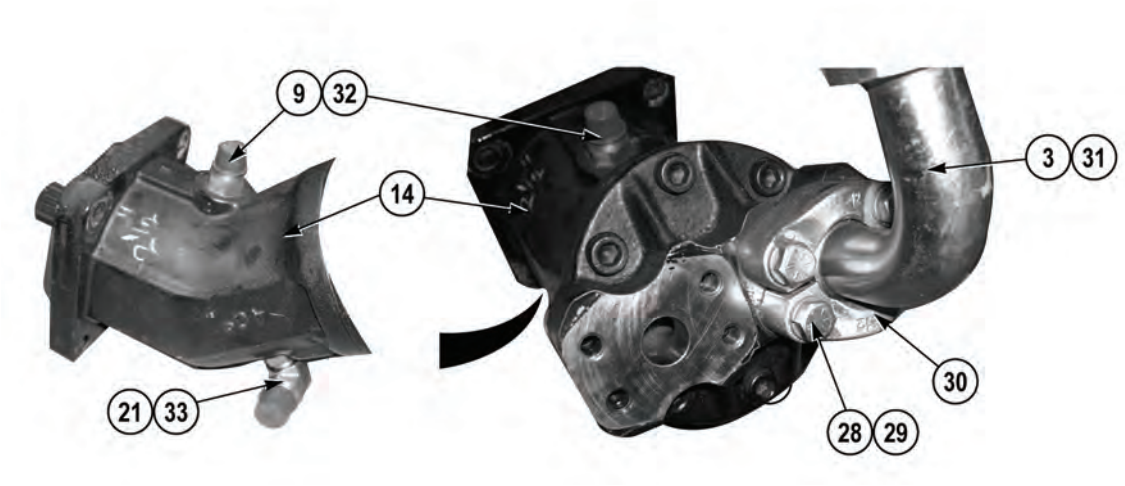
END OF TASK

INSTALLATION

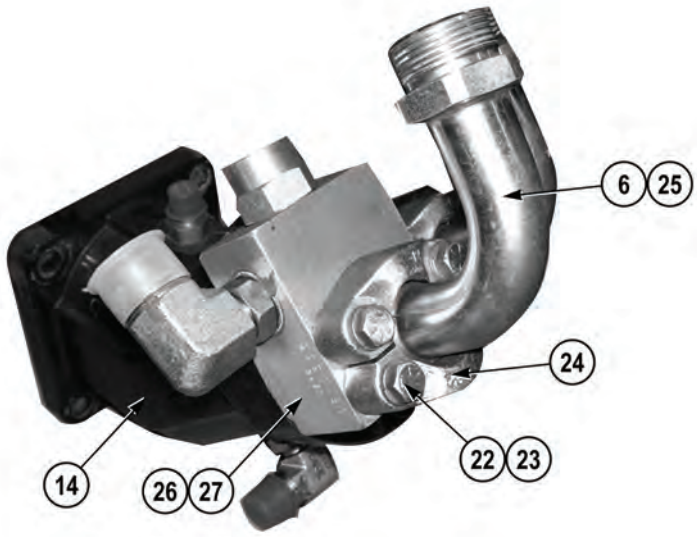
NOTE

- Install elbows and fittings as noted prior to removal.
- Install cable ties as required.

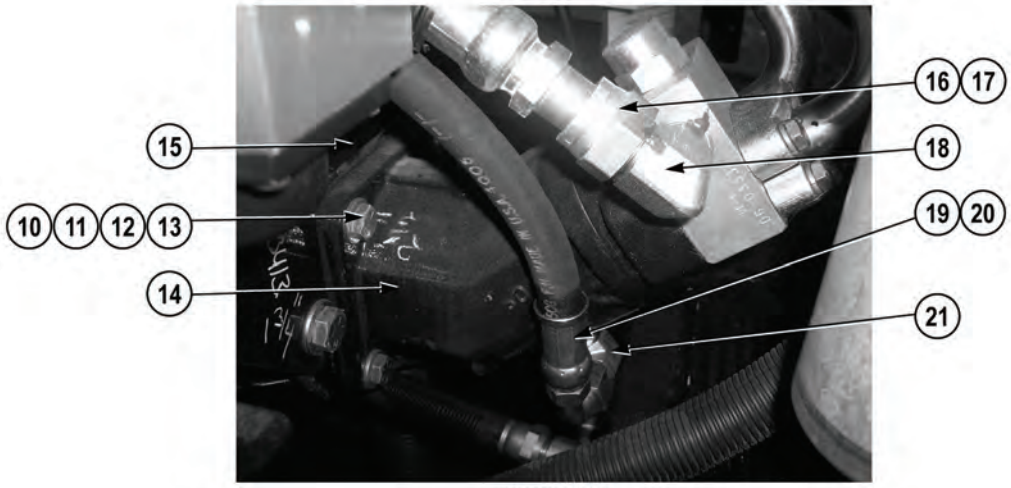
1. Lightly lubricate two backup rings (37) and preformed packings (38) and (36) with clean oil, and install preformed packings (38) and (36), backing rings (37), and valve (35) on adapter block (26).
2. Lightly lubricate preformed packing (34) with clean oil, and install preformed packing (34) and elbow (18) on adapter block (26).



3. Lightly lubricate preformed packing (33) with clean oil, and install preformed packing (33) and elbow (21) on pump motor (14).
4. Lightly lubricate preformed packing (32) with clean oil, and install preformed packing (32) and fitting (9) on pump motor (14).
5. Lightly lubricate preformed packing (31) with clean oil, and install preformed packing (31) and elbow (3) on pump motor (14) with two flange halves (30), four lockwashers (29), and screws (28).

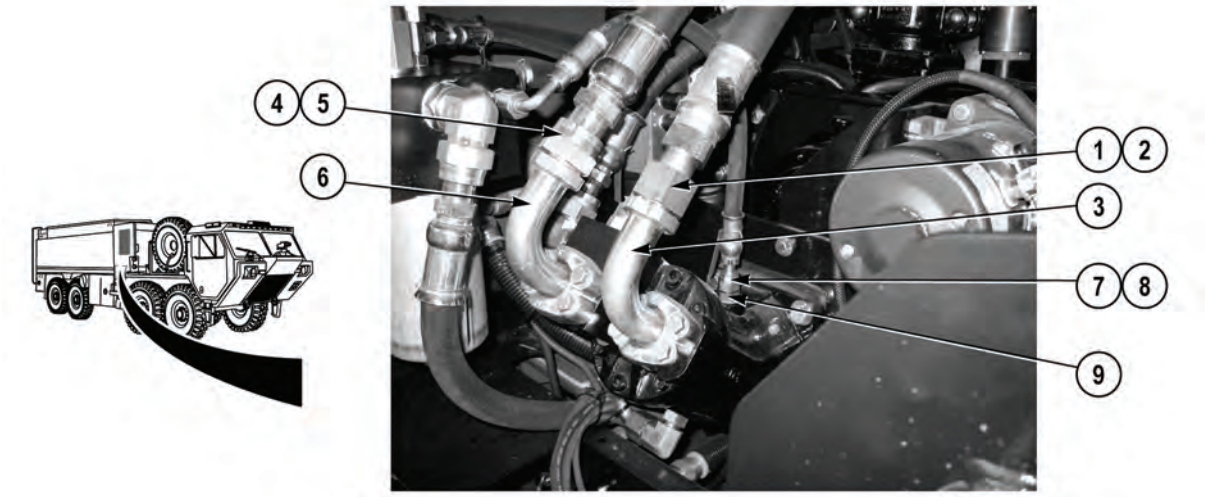


6. Lightly lubricate two preformed packings (27) and (25) with clean oil, and install preformed packing (27), adapter block (26), preformed packing (25) and elbow (6) on pump motor (14) with two flange halves (24), four lockwashers (23), and screws (22).



SIDE VIEW

7. Position pump motor (14) on water pump (15).
8. Lightly lubricate preformed packing (20) with clean oil, and install preformed packing (20) and hose 1682841 (19) on elbow (21).
9. Lightly lubricate preformed packing (17) with clean oil, and install preformed packing (17) and hose 1682886 (16) on elbow (18).
10. With the aid of an assistant, rotate pump motor (14) counterclockwise, and install pump motor (14) on water pump (15) with four screws (13) eight washers (12), four lockwashers (11), and nuts (10).



11. Lightly lubricate preformed packing (8) with clean oil, and install preformed packing (8) and hose 1682906 (7) on fitting (9).
12. Lightly lubricate preformed packing (5) with clean oil, and install preformed packing (5) and hose 1682840 (4) on elbow (6).
13. Lightly lubricate preformed packing (2) with clean oil, and install preformed packing (2) and hose 1682839 (1) on elbow (3).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install hydraulic heat exchanger shroud panel A (WP 0135)
2. Fill hydraulic reservoir (WP 0143)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

HYDROSTATIC CHARGE PUMP REPLACEMENT

INITIAL SETUP:

Tools and Special Tools

Cap Set, Protective (WP 0399, Item 1)
Drain Pan (WP 0399, Item 4)
Standard Automotive Tool Set (SATS), (WP 0399, Item 15)
- Socket, Socket Wrench, 1/2” DR, 6 PT, Regular, 1-1/16”
- Wrench, Adjustable 18”
- Wrench, Combination, 1-1/16”
- Wrench, Combination, 1-1/8” (2)
- Wrench, Adjustable, Automotive, 18”

Tool Kit, General Mechanic’s: Automotive (WP 0399, Item 17)
Water Pump Engine Removal Kit

Materials/Parts

Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)
Oil, Lubrication (WP 0401, Item 20)
Preformed Packing (1)
Preformed Packing (1)
Preformed Packing (1)
Preformed Packing (1)
Preformed Packing (1)
Preformed Packing (1)
Preformed Packing (1)
Preformed Packing (1)
Preformed Packing (1)
Preformed Packing (1)
Preformed Packing (1)

Materials/Parts (continued)

Preformed Packing (1)
Preformed Packing (1)
Preformed Packing (1)
Preformed Packing (1)
Preformed Packing (1)
Preformed Packing (1)
Lockwasher (4)
Lockwasher (4)
Lockwasher (4)
Lockwasher (4)

Personnel Required

MOS 63B Wheeled Vehicle Mechanic (2)

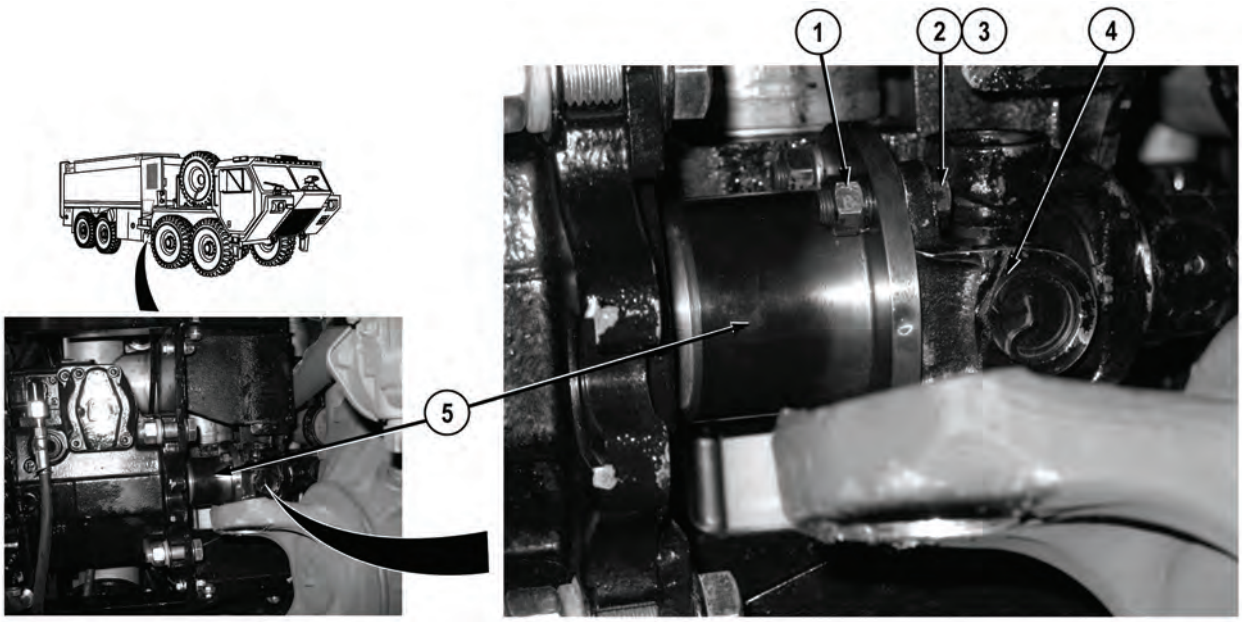
References

WP 0315
WP 0392, Fig. 6, 9, 10, 39

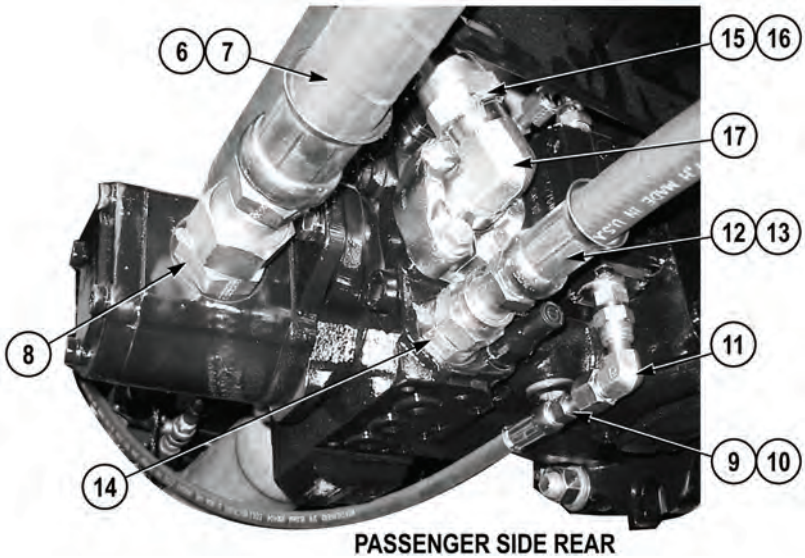
Equipment Conditions

Transmission and transfer case set to neutral (TM 9-2320-279-10)
Hydraulic reservoir removed (WP 0146)
Pump house panel G removed (WP 0341)
Propeller shafts removed from transfer case to No. 2 axle and transmission to transfer case (TM 9-2320-315-14&P)
Water system drained (WP 0032)
Foam system drained (WP 0021)

REMOVAL



1. Remove four nuts (1), lockwashers (2), screws (3) and PTO yoke (4) from pump (5). Discard lockwashers.

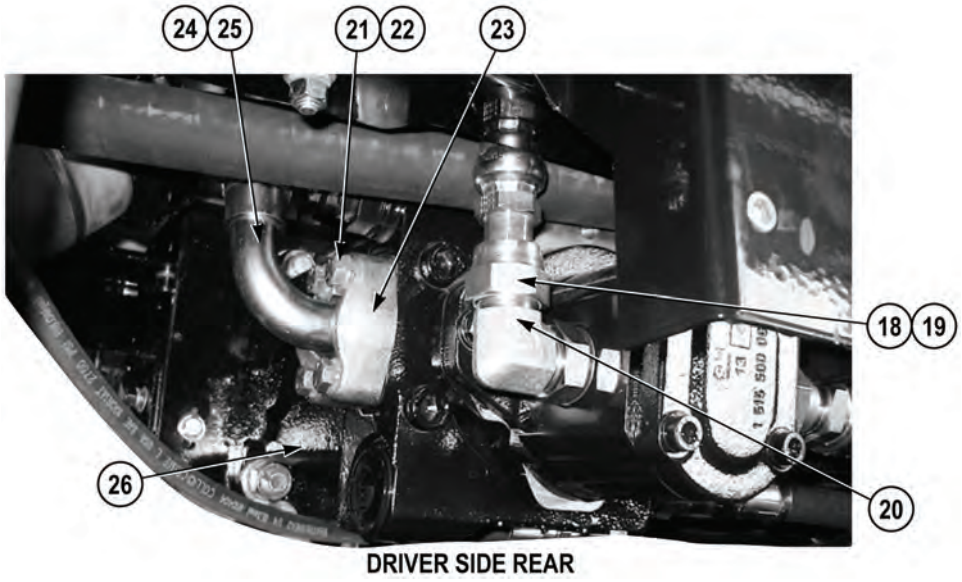


NOTE

- Position drain pan under hoses being removed.
- Tag and mark hoses and fittings upon removal.
- Cap and plug hoses and fittings upon removal.
- Remove cable ties as required.

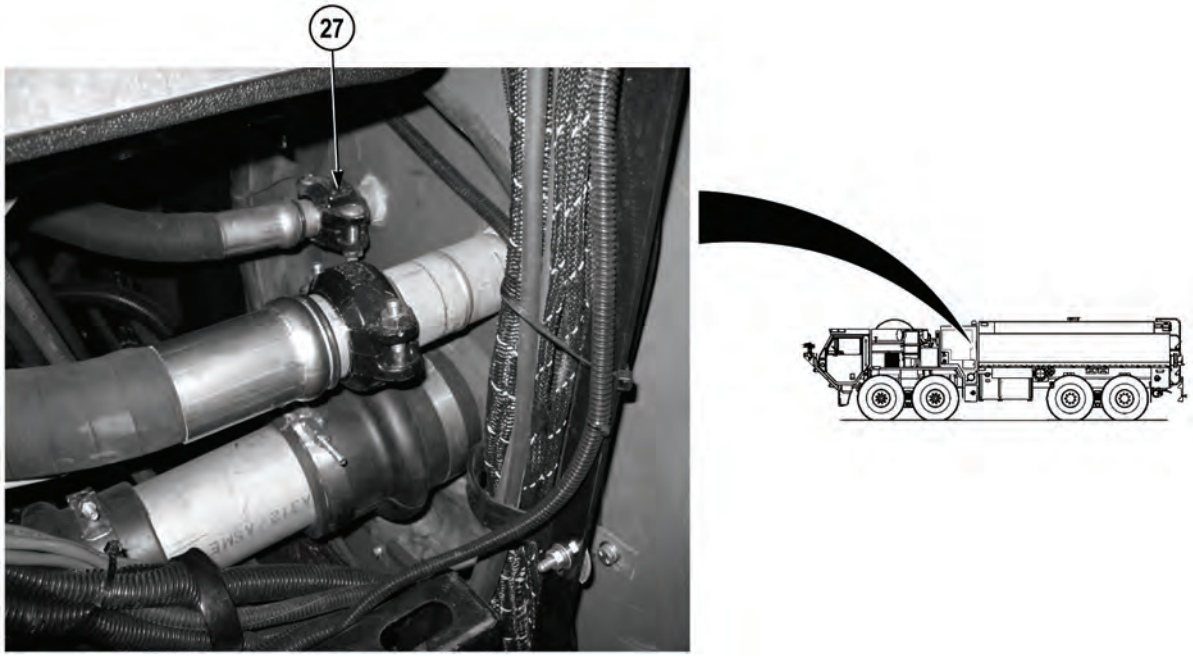
2. Remove hose 1682838 (6) and preformed packing (7) from fitting (8). Discard preformed packing.

3. Remove hose 1682912 (9) and preformed packing (10) from elbow (11). Discard preformed packing.
4. Remove hose 1682902 (12) and preformed packing (13) from fitting (14). Discard preformed packing.
5. Remove hose 1682840 (15) and preformed packing (16) from elbow (17). Discard preformed packing.



DRIVER SIDE REAR

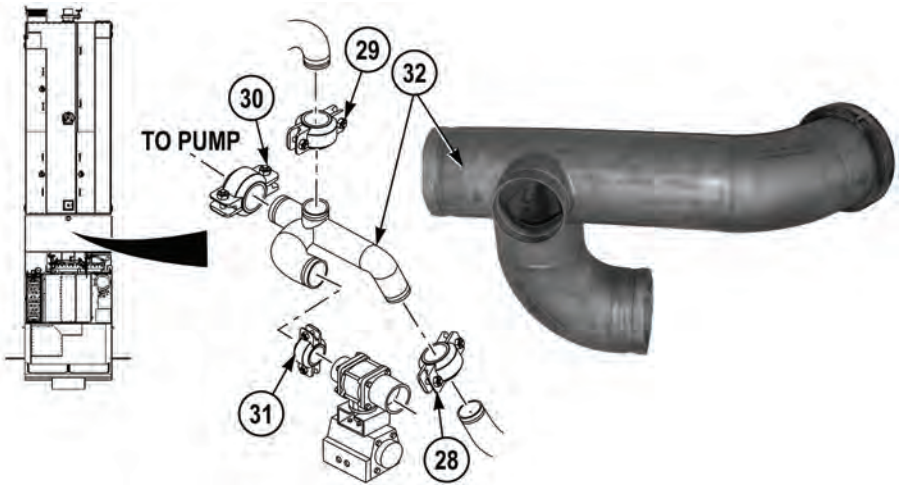
6. Remove hose 1682901 (18) and preformed packing (19) from elbow (20). Discard preformed packing.
7. Remove four screws (21), lockwashers (22), two flange halves (23), hose 1682839 (24), and preformed packing (25) from charge pump (26). Discard lockwashers and preformed packing.



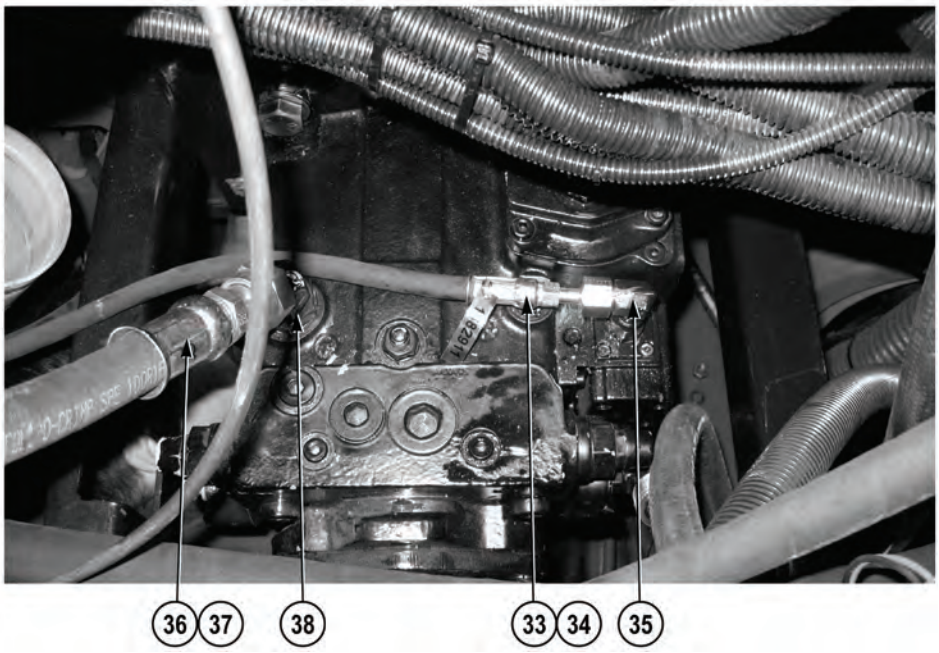
NOTE

Removing coupling on foam supply line is required to remove main inlet manifold.

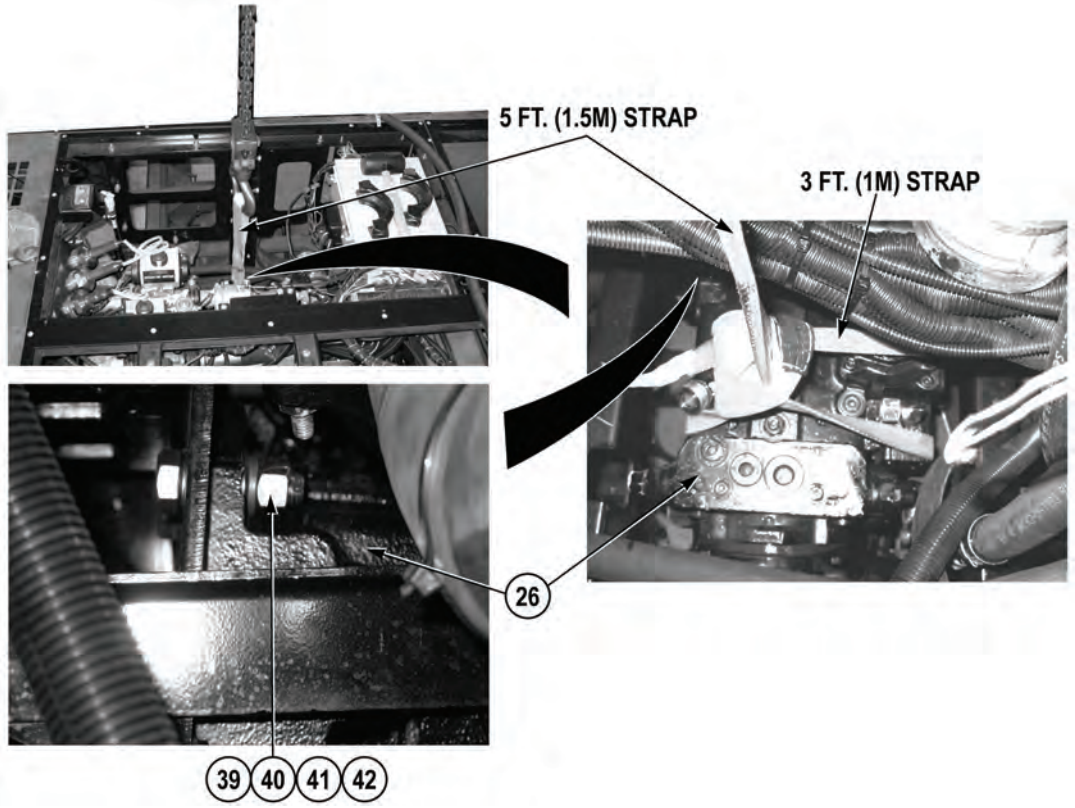
8. Remove coupling (27) from vehicle (WP 0315).



9. Remove four couplings (28), (29), (30), and (31), and main inlet manifold (32) from vehicle (WP 0315).



10. Remove hose 1682911 (33) and preformed packing (34) from elbow (35). Discard preformed packing.
11. Remove hose 1682888 (36) and preformed packing (37) from elbow (38). Discard preformed packing.



WARNING



Charge pump weighs 170 lb. (77.18 kg). Do not attempt to remove hydraulic pump without the aid of an assistant, two straps and a suitable lifting device. Failure to comply may result in injury or death to personnel and damage to equipment.

NOTE

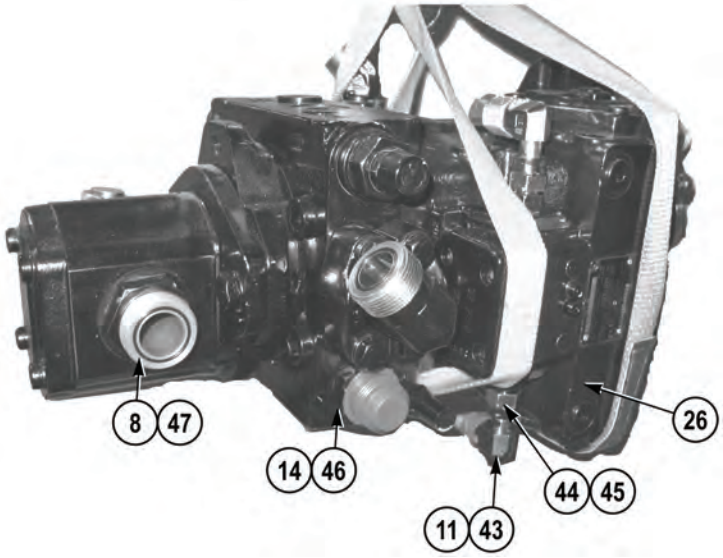
Loops are obtained from the TFFT water pump engine removal kit.

12. Loop 3 ft. (1 m) strap around charge pump (26).
13. Loop 5 ft. (1.5 m) strap through 3 ft. (1 m) strap.
14. Attach suitable lifting device to 5 ft. (1.5 m) strap.

NOTE

Charge pump is lowered to ground.

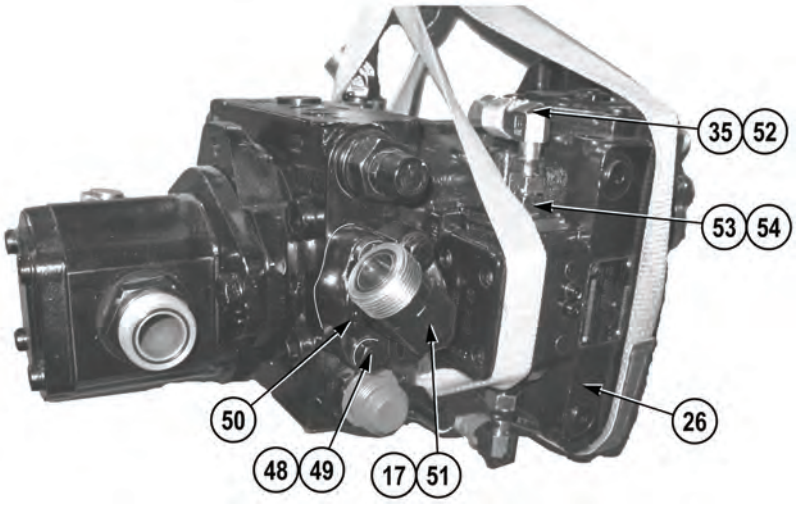
15. With the aid of an assistant and suitable lifting device, remove four nuts (39), lockwashers (40), eight washers (41), four screws (42), and charge pump (26) from vehicle. Discard lockwashers.



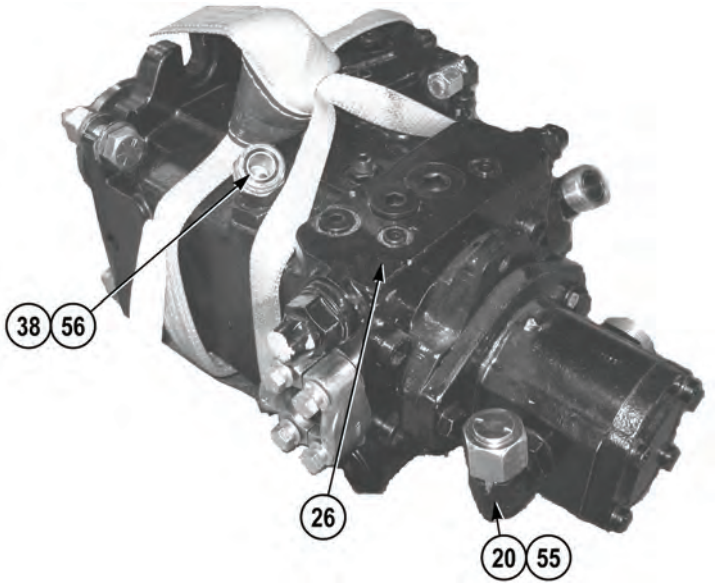
NOTE

Note position of elbows and fittings prior to removal to ensure proper installation.

16. Remove elbow (11) and preformed packing (43) from fitting (44). Discard preformed packing.
17. Remove fitting (44) and preformed packing (45) from charge pump (26). Discard preformed packing.
18. Remove fitting (14) and preformed packing (46) from charge pump (26). Discard preformed packing.
19. Remove fitting (8) and preformed packing (47) from charge pump (26). Discard preformed packing.



20. Remove four screws (48), lockwashers (49), two flange halves (50), elbow (17), and preformed packing (51) from charge pump (26). Discard lockwashers and preformed packing.
21. Remove elbow (35) and preformed packing (52) from fitting (53). Discard preformed packing.
22. Remove fitting (53) and preformed packing (54) from charge pump (26). Discard preformed packing.



23. Remove elbow (20) and preformed packing (55) from charge pump (26). Discard preformed packing.
24. Remove elbow (38) and preformed packing (56) from charge pump (26). Discard preformed packing.

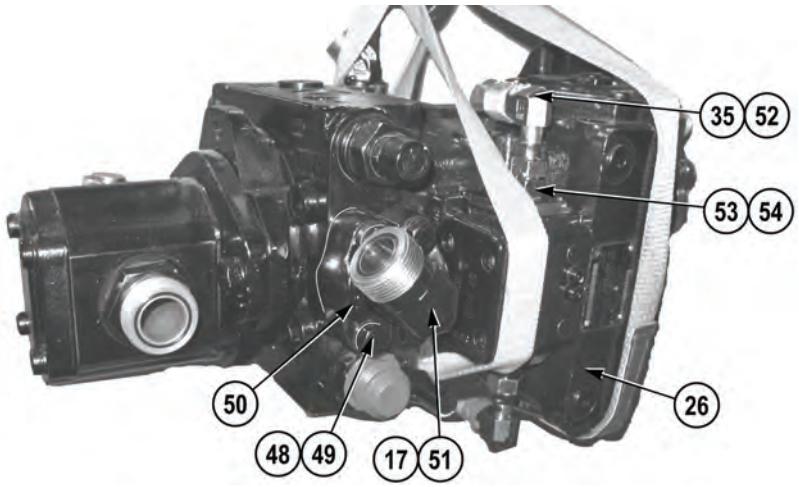
END OF TASK

INSTALLATION

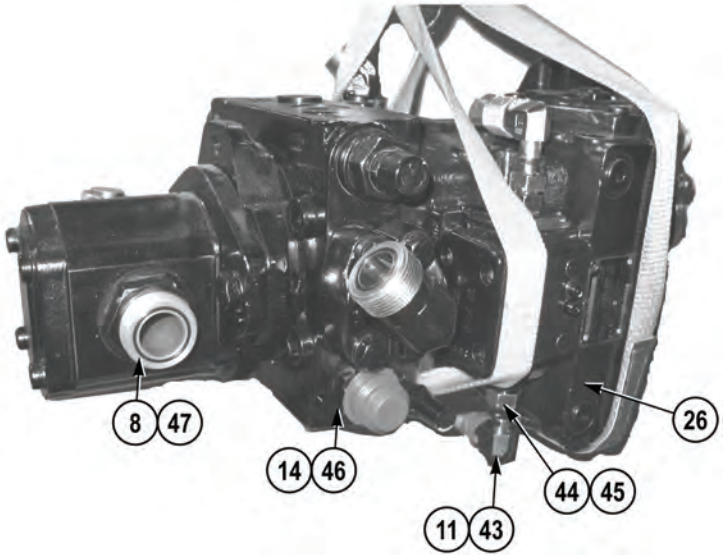
NOTE

Install elbows and fittings as noted prior to removal.

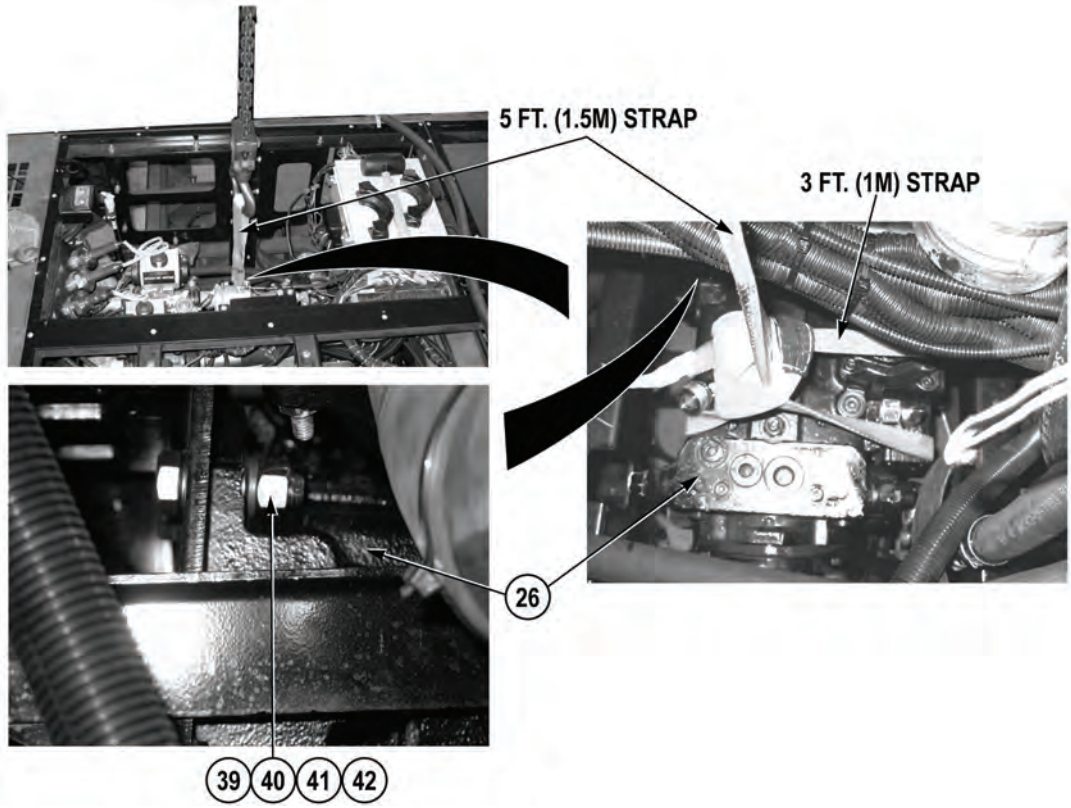
1. Lightly lubricate preformed packing (56) with clean oil, and install preformed packing (56) and elbow (38) on charge pump (26).
2. Lightly lubricate preformed packing (55) with clean oil, and install preformed packing (55) and elbow (20) on charge pump (26).



3. Lightly lubricate preformed packing (54) with clean oil, and install preformed packing (54) and fitting (53) on charge pump (26).
4. Lightly lubricate preformed packing (52) with clean oil, and install preformed packing (52) and elbow (35) on fitting (53).
5. Lightly lubricate preformed packing (51) with clean oil, and install preformed packing (51) and elbow (17) on charge pump (26) with two flange halves (50), four lockwashers (49), and screws (48).



6. Lightly lubricate preformed packing (47) with clean oil, and install preformed packing (47) and fitting (8) on charge pump (26).
7. Lightly lubricate preformed packing (46) with clean oil, and install preformed packing (46) and fitting (14) on charge pump (26).
8. Lightly lubricate preformed packing (45) with clean oil, and install preformed packing (45) and fitting (44) on charge pump (26).
9. Lightly lubricate preformed packing (43) with clean oil, and install preformed packing (43) and elbow (11) on fitting (44).

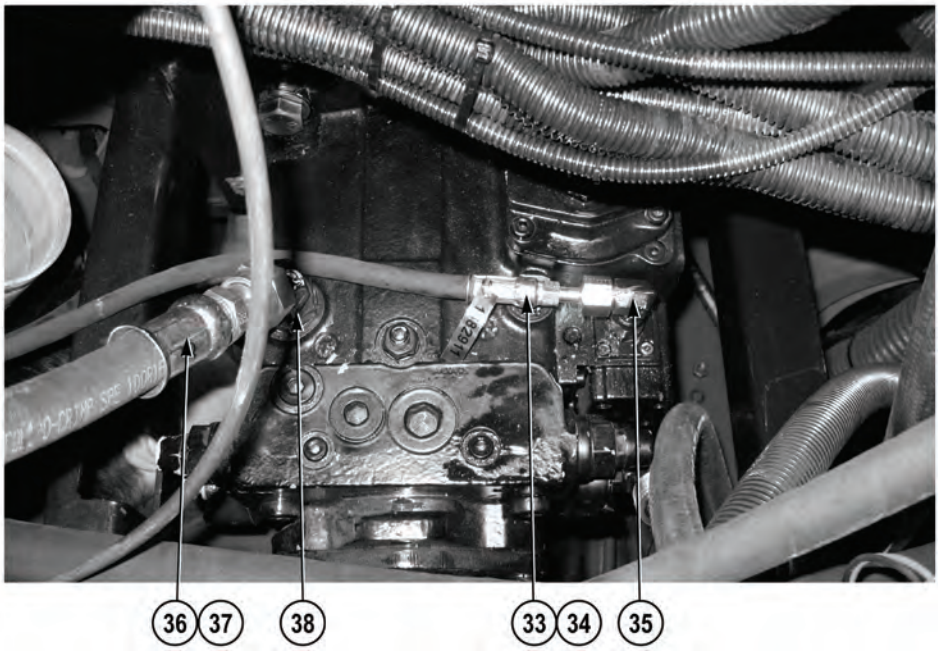


WARNING



Hydraulic pump weighs 170 lb. (77.18 kg). Do not attempt to install hydraulic pump without the aid of an assistant, two straps and a suitable lifting device. Failure to comply may result in injury or death to personnel and damage to equipment.

10. Loop 3 ft. (1 m) strap around charge pump (26).
11. Loop 5 ft. (1.5 m) strap through 3 ft. (1 m) strap.
12. Attach suitable lifting device to 5 ft. (2 m) strap.
13. With the aid of an assistant and suitable lifting device, install charge pump (26) on vehicle with four screws (42), eight washers (41), four lockwashers (40), and nuts (39).

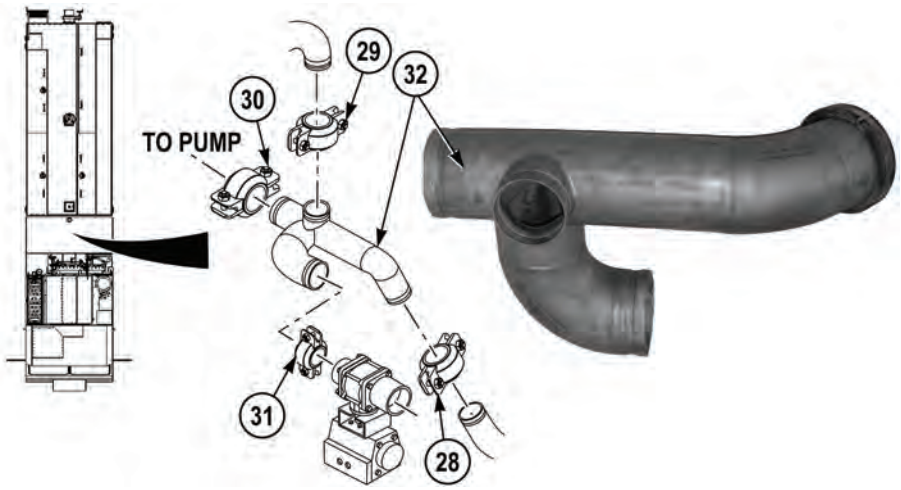


NOTE

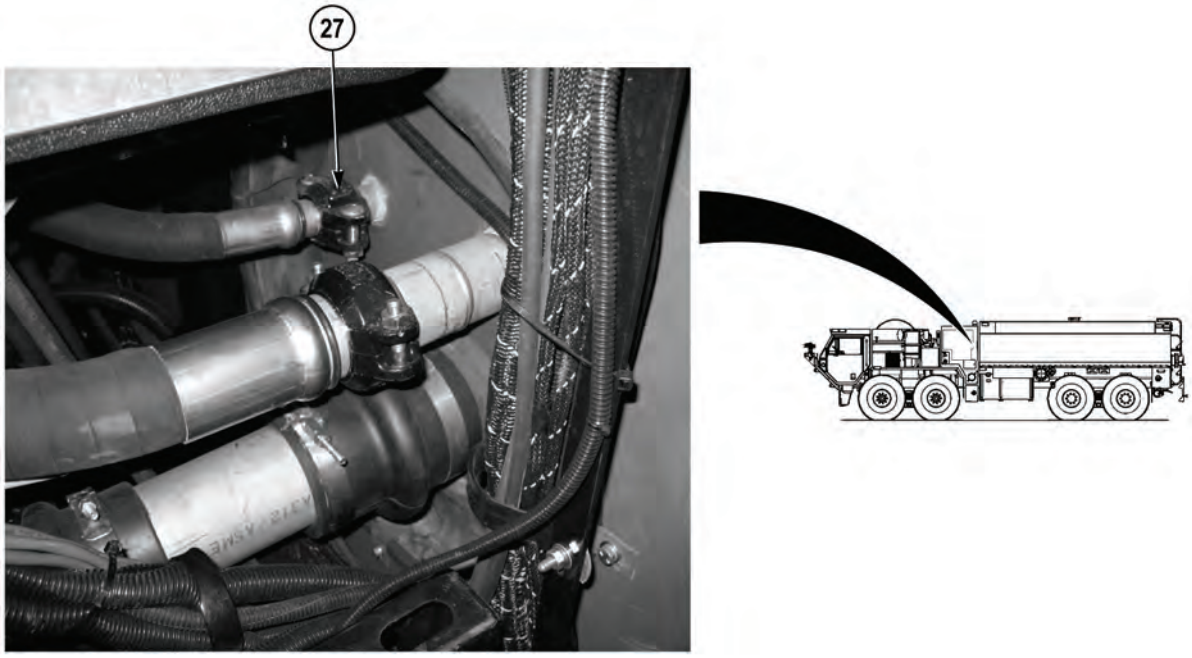
Install cable ties as required.

14. Lightly lubricate preformed packing (37) with clean oil, and install preformed packing (37) and hose 1682888 (36) on elbow (38).

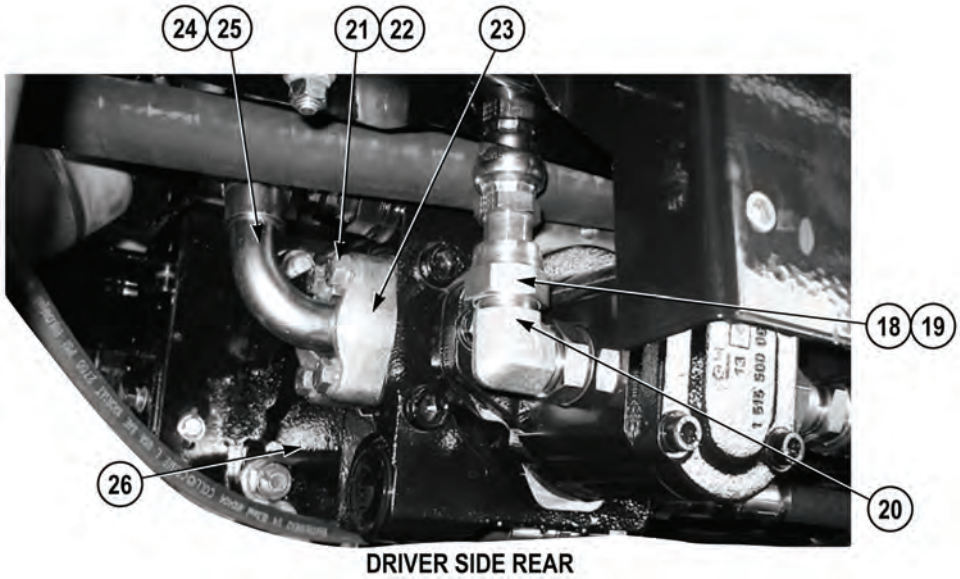
15. Lightly lubricate preformed packing (34) with clean oil, and install preformed packing (34) and hose 1682911 (33) on elbow (35).



16. Install four couplings (28), (29), (30), and (31) (WP 0315) and main inlet manifold (32) on vehicle.



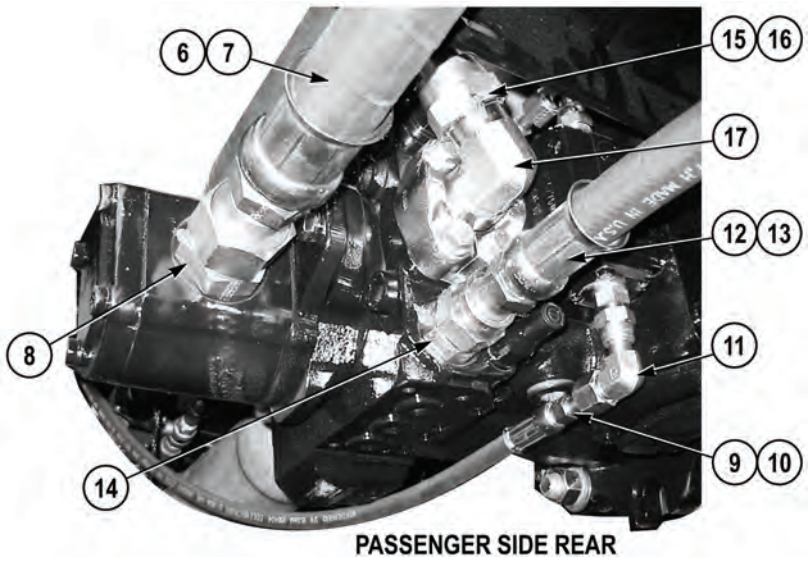
17. Install coupling (27) on vehicle (WP 0315).



DRIVER SIDE REAR

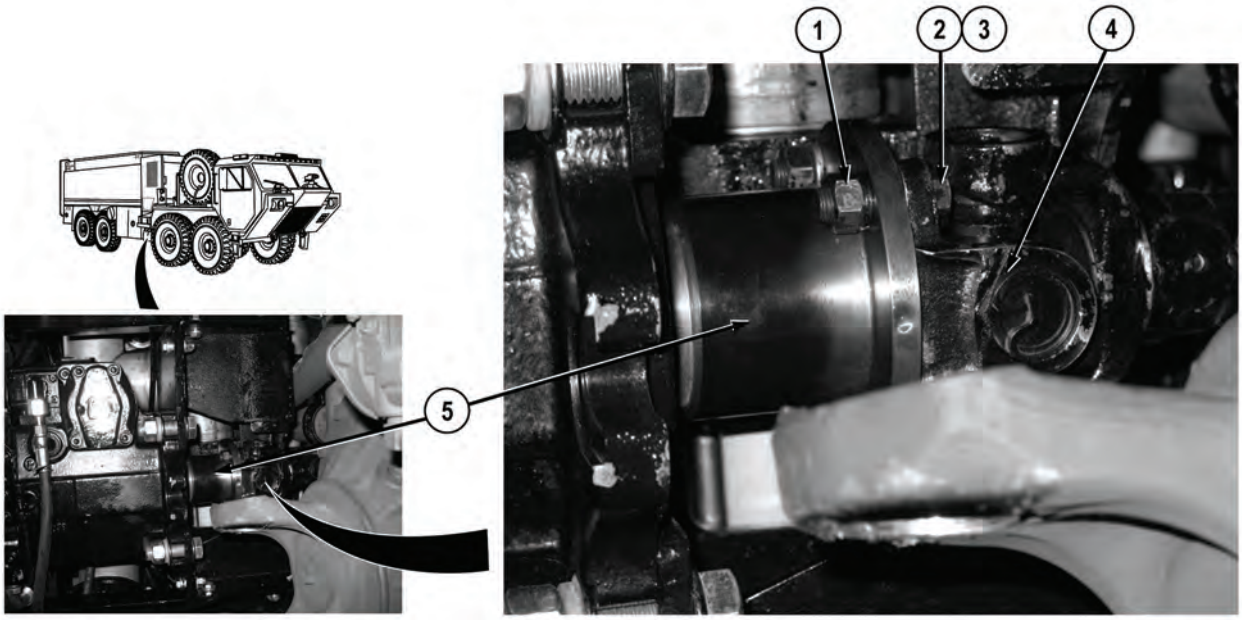
18. Lightly lubricate preformed packing (25) with clean oil, and install preformed packing (25) and hose 1682839 (24) on charge pump (26) with two flange halves (23), four lockwashers (22), and screws (21).

19. Lightly lubricate preformed packing (19) with clean oil, and install preformed packing (19) and hose 1682901 (18) on elbow (20).



PASSENGER SIDE REAR

20. Lightly lubricate preformed packing (16) with clean oil, and install preformed packing (16) and hose 1682840 (15) on elbow (17).
21. Lightly lubricate preformed packing (13) with clean oil, and install preformed packing (13) and hose 1682902 (12) on fitting (14).
22. Lightly lubricate preformed packing (10) with clean oil, and install preformed packing (10) and hose 168212 (9) on elbow (11).
23. Lightly lubricate preformed packing (7) with clean oil, and install preformed packing (7) and hose 1682838 (6) on fitting (8).



24. Install PTO yoke (4) on pump (5) with four screws (3), lockwashers (2), and nuts (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install hydraulic reservoir (WP 0146)
2. Install pump house panel G (WP 0341)
3. Fill foam system (WP 0021)
4. Install propeller shafts from transmission to transfer case and transfer case to No. 2 axle (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

POWER TAKE OFF (PTO) REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Cap Set, Protective (WP 0399, Item 1)
Crows Foot, 10 mm, 0.25 in. (WP 0399, Item 3)
Drain Pan (WP 0399, Item 4)
Standard Automotive Tool Set (SATS), (WP 0399, Item 15)
- Wrench, Adjustable 18”
- Wrench, Torque, Ratcheting, 3/8” Drive, 75 ft-lb

Tool Kit, General Mechanic’s: Automotive (WP 0399, Item 17)

Materials/Parts
Adhesive, Thread, Locking, (WP 0401, Item 6)
Compound, Sealing, Pipe Thread (WP 0401, Item 11)
Fluid, Hydraulic (WP 0401, Item 17)
Tags, Identification (WP 0401, Item 22)

Materials/Parts (continued)
Lockwasher (4)
Gasket (1)

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

References
WP 0392, Fig. 5

Equipment Conditions
Batteries disconnected (TM 9-2320-315-14&P)
Lifting bracket tube brace removed (TM 9-2320-315-14&P)
Muffler removed (TM 9-2320-315-14&P)
Air system drained (TM 9-2320-279-10)

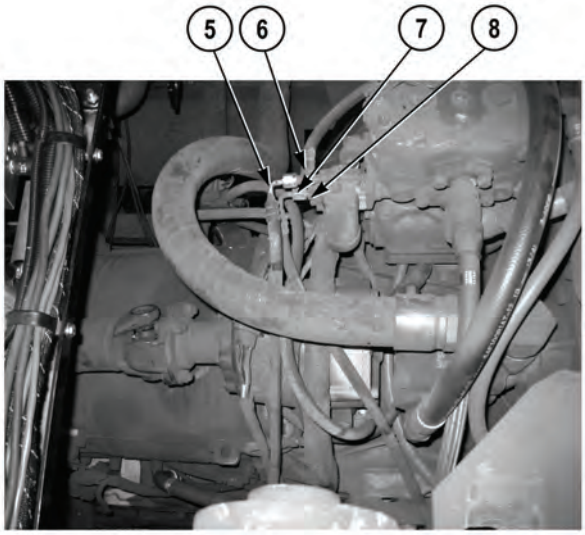
REMOVAL



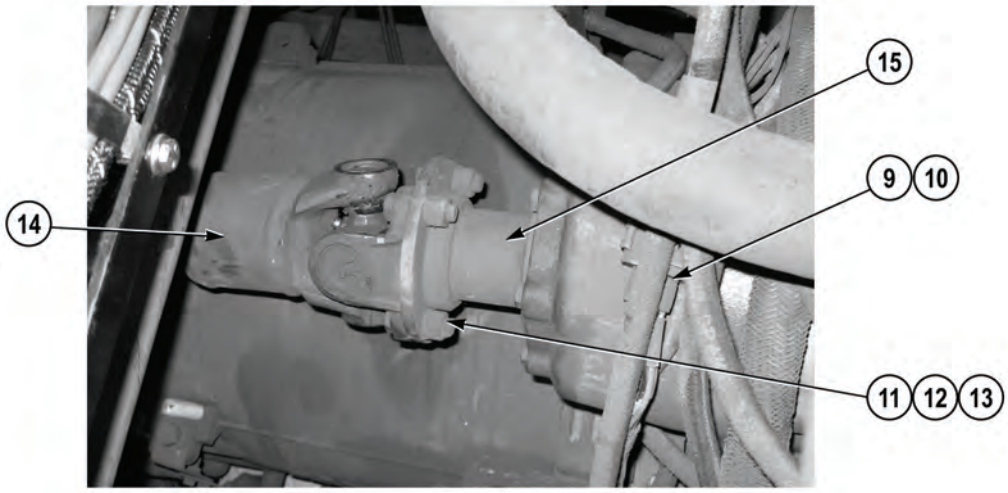
NOTE

- Tag and mark air lines and hoses prior to removal to ensure proper installation.
- Cap and plug hoses and fittings upon removal.

1. Remove air line 2001 (1) from fitting (2).
2. Remove hose 2278 (3) from elbow (4).



3. Remove air line 2159 (5) from tee (6).
4. Remove air line 2126 (7) from fitting (8).

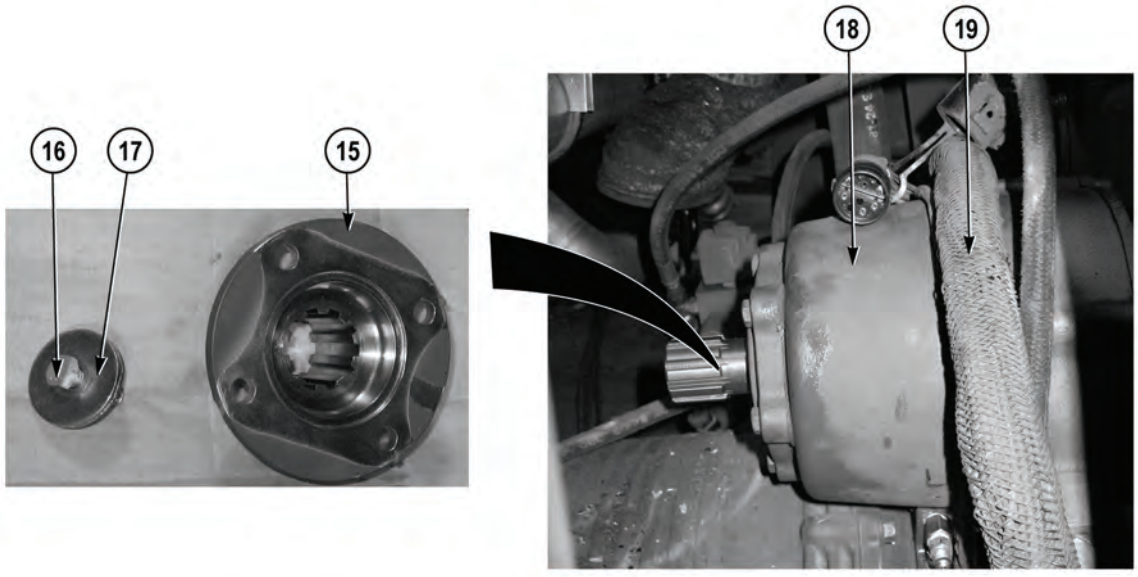


5. Disconnect connector C82 (9) from connector C82 (10).

NOTE

An assistant rotating and holding drive shaft aids in drive shaft removal.

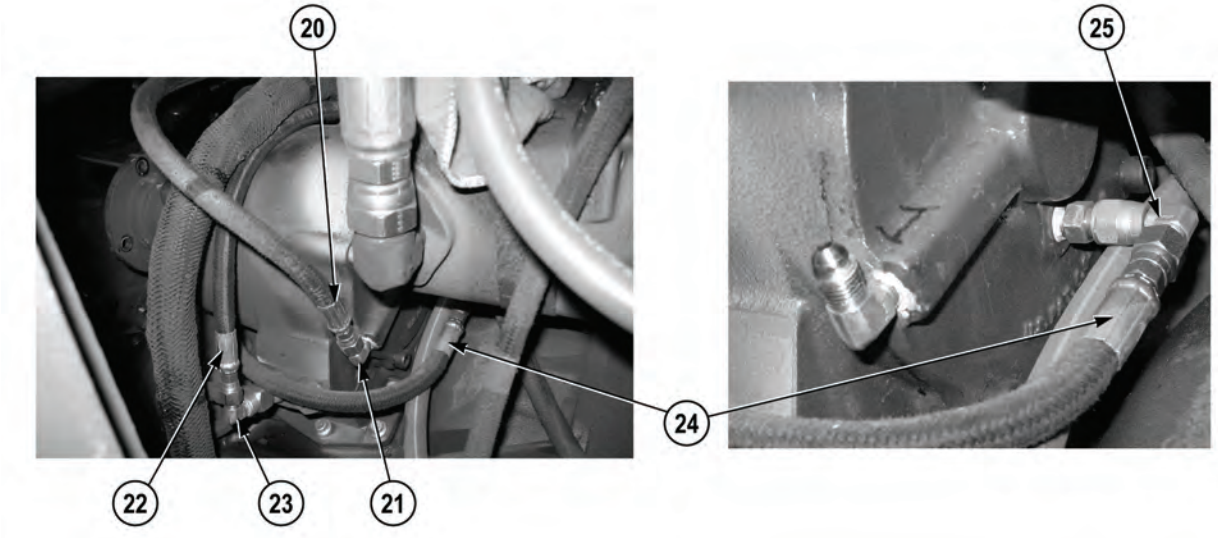
6. With the aid of an assistant, remove four nuts (11), lockwashers (12), screws (13), and drive shaft (14) from flange (15). Discard lockwashers.



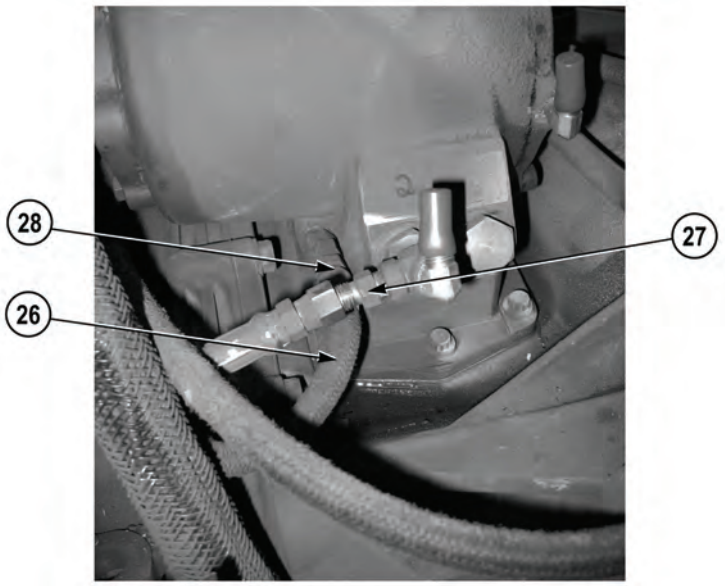
NOTE

Remove flange to allow repositioning of wire harness and easier removal of power take off and attaching hardware.

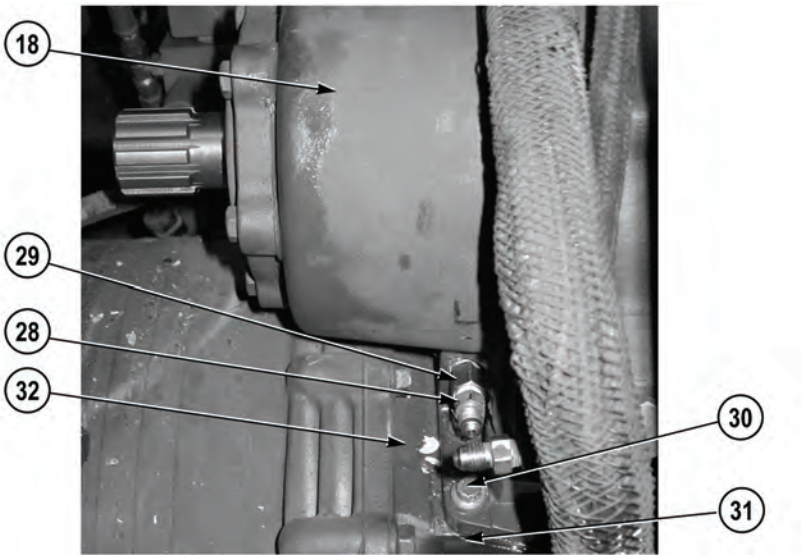
7. Remove screw (16), washer (17), and flange (15) from power take off (18).
8. Reposition main wire harness (19) from top of power take off (18) to below power take off (18).



9. Remove hose (20) from elbow (21).
10. Remove hose (22) from elbow (23).
11. Remove hose (24) from elbow (25).



12. Remove hose (26) from fitting (27).
13. Remove hose (26) from fitting (28).



NOTE

- Fitting and orifice fitting must be removed in order to provide clearance when removing screws.
- Note position of elbows and fittings prior to removal to ensure proper installation.

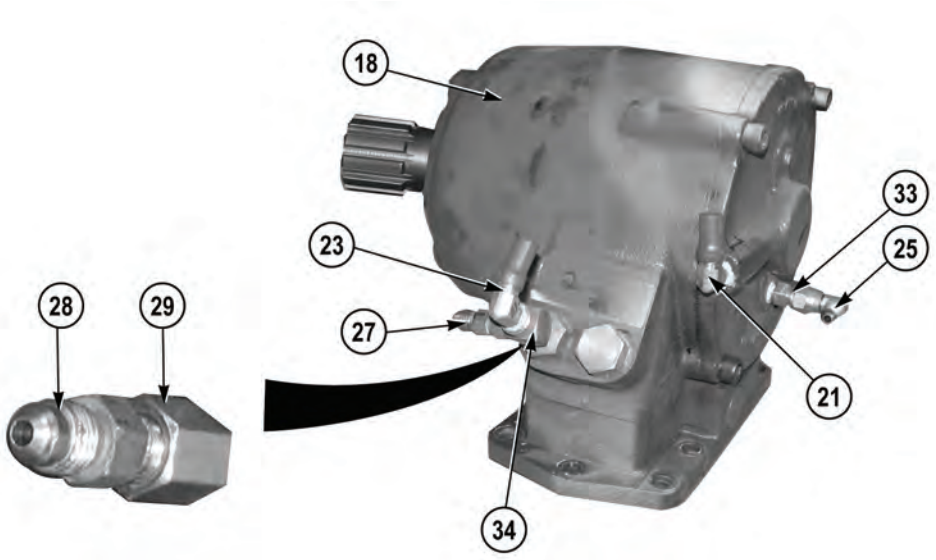
14. Remove orifice fitting (29) and fitting (28) from power take off (18).

WARNING



Power take off weighs 72 lb. (33 kg). Do not attempt to remove power take off without the aid of an assistant. Failure to comply may result in injury to personnel and damage to equipment.

15. With the aid of an assistant, remove eight screws (30), power take off (18), and gasket (31) from transmission (32). Discard gasket.

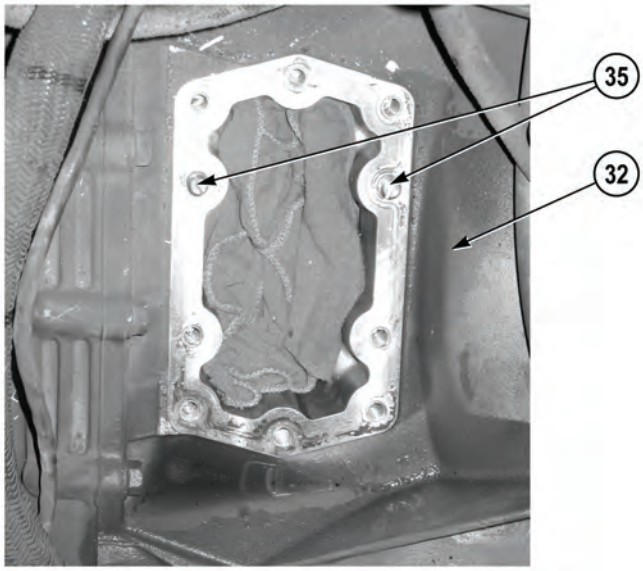


16. Remove elbow (25) from fitting (33).
17. Remove fitting (33) from power take off (18).
18. Remove elbow (21) from power take off (18).

NOTE

Power take off comes with tee fitting.

19. Remove elbow (23) and fitting (27) from tee (34).
20. Remove fitting (28) from orifice fitting (29).

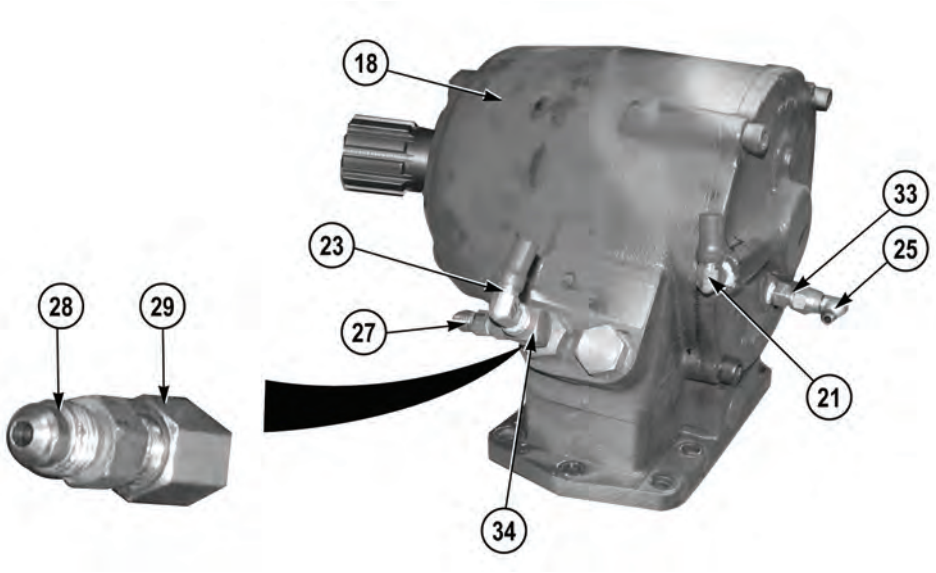


21. Remove two alignment pins (35) from transmission (32).

END OF TASK

INSTALLATION

1. Install two alignment pins (35) on transmission (32).

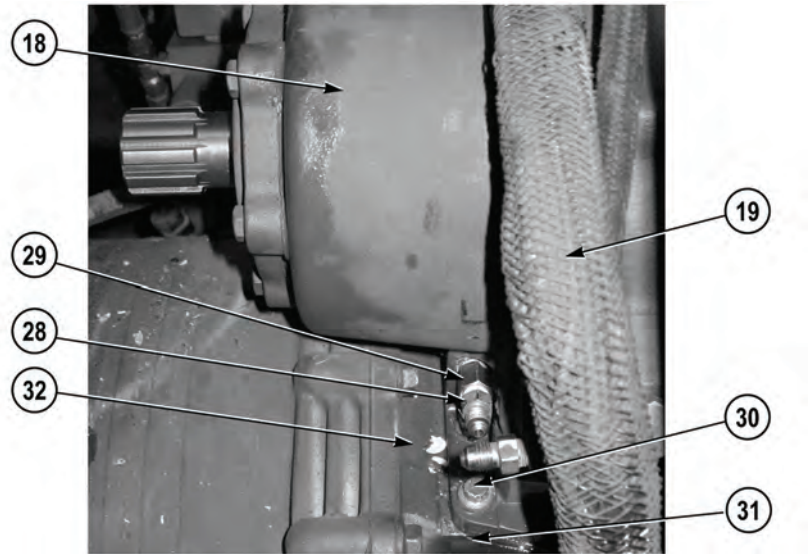


WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

2. Apply sealing compound to threads of three fittings (27), (28), and (33) and three elbows (21), (23), and (25).
3. Install fitting (28) on orifice fitting (29).
4. Install fitting (27) and elbow (23) on tee (34).
5. Install elbow (21) on power take off (18).
6. Install fitting (33) on power take off (18).
7. Install elbow (25) on fitting (33).



WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

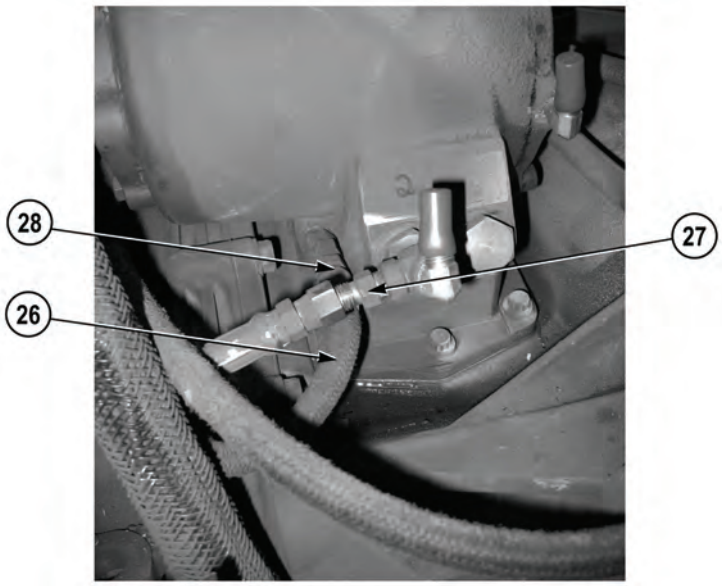
8. Apply sealing compound to threads of eight screws (30).

WARNING

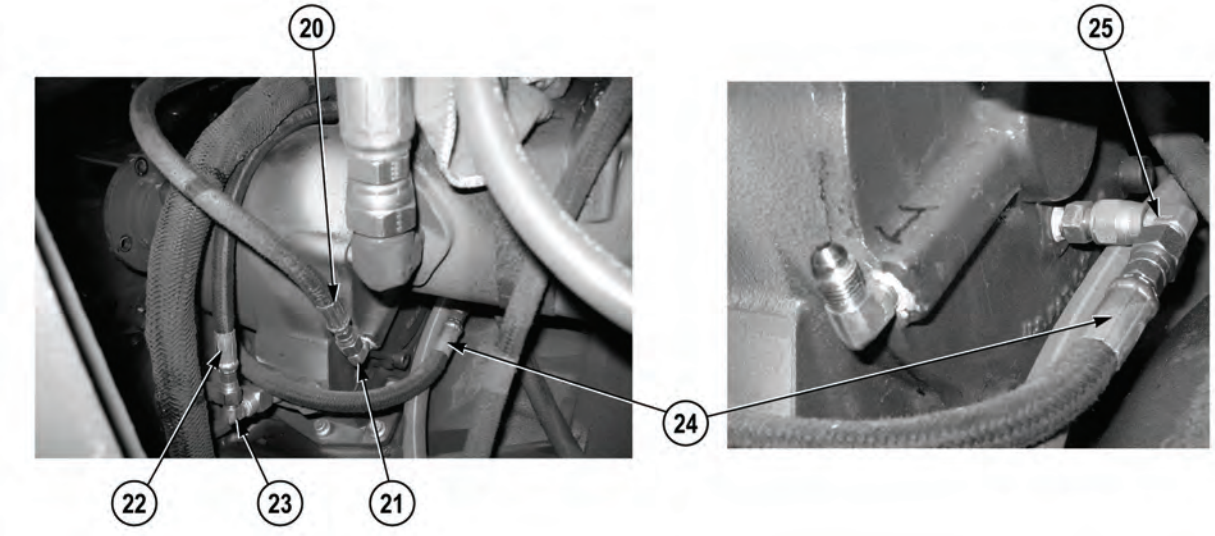


Power take off weighs 72 lb. (33 kg). Do not attempt to install power take off without the aid of an assistant. Failure to comply may result in injury to personnel and damage to equipment.

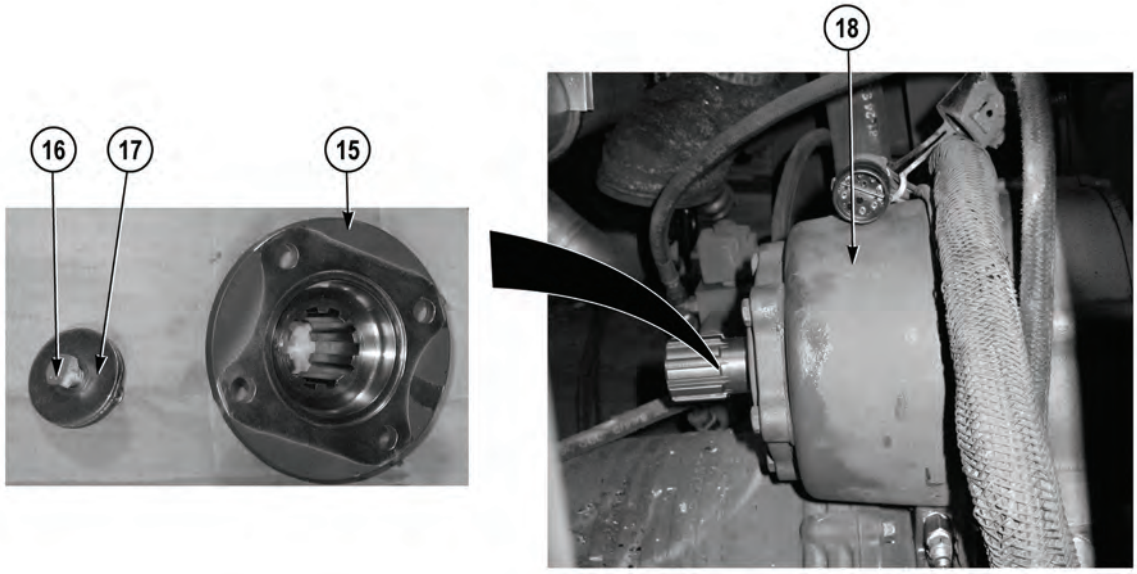
9. With the aid of an assistant, install gasket (31) and power take off (18) on transmission (32) with eight screws (30). Tighten screws to 30 to 35 lb-ft (41 to 47 N•m).
10. Apply sealing compound to threads of orifice fitting (29).
11. Install orifice fitting (29) and fitting (28) on power take off (18).
12. Reposition main wire harness (19) from bottom of power take off (18) to top of power take off (18).



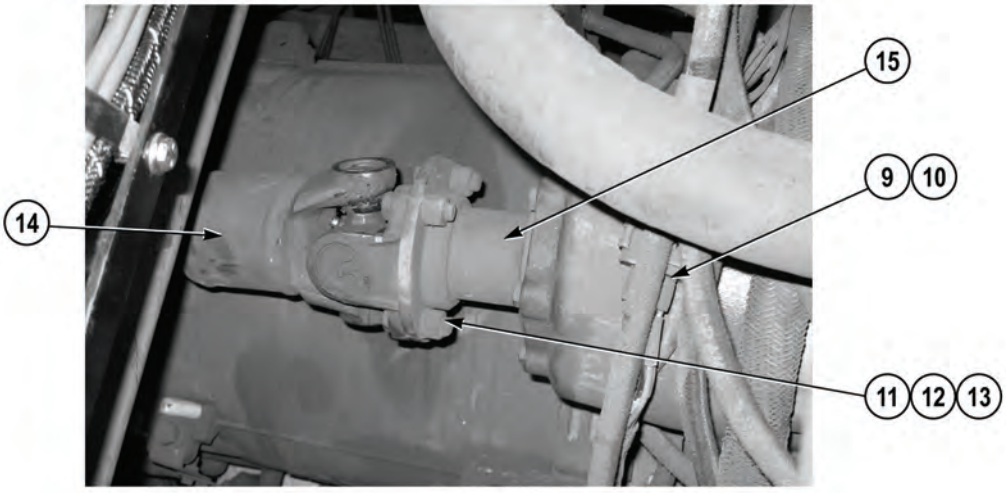
13. Install hose (26) on fitting (28).
14. Install hose (26) on fitting (27).



15. Install hose (24) on elbow (25).
16. Install hose (22) on elbow (23).
17. Install hose (20) on elbow (21).

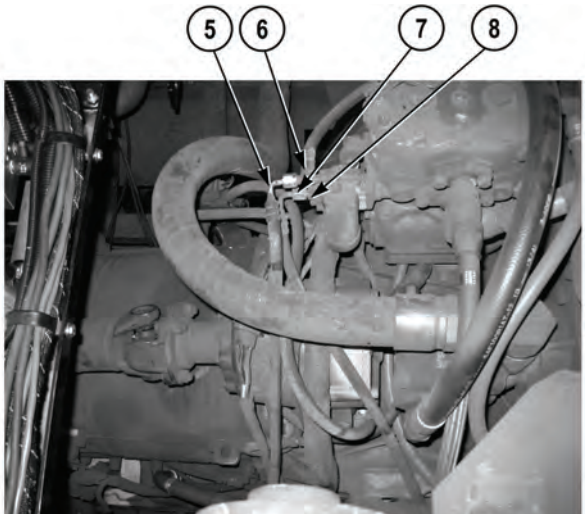


18. Install flange (15) on power take off (18) with washer (17) and screw (16). Tighten screw to 25 lb-ft (34 N•m).



19. With the aid of an assistant, install drive shaft (14) on flange (15) with four screws (13), lockwashers (12), and nuts (11).

20. Connect connector C82 (10) to connector C82 (9).



21. Install air line 2126 (7) on fitting (8).
22. Install air line 2159 (5) on tee fitting (6).



23. Install hose 2278 (3) on elbow (4).
24. Install air line 2001 (1) on fitting (2).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install muffler (TM 9-2320-315-14&P)
2. Install lifting bracket tube brace (TM 9-2320-315-14&P)
3. Connect batteries (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

POWER TAKE OFF (PTO) DRIVE SHAFT REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

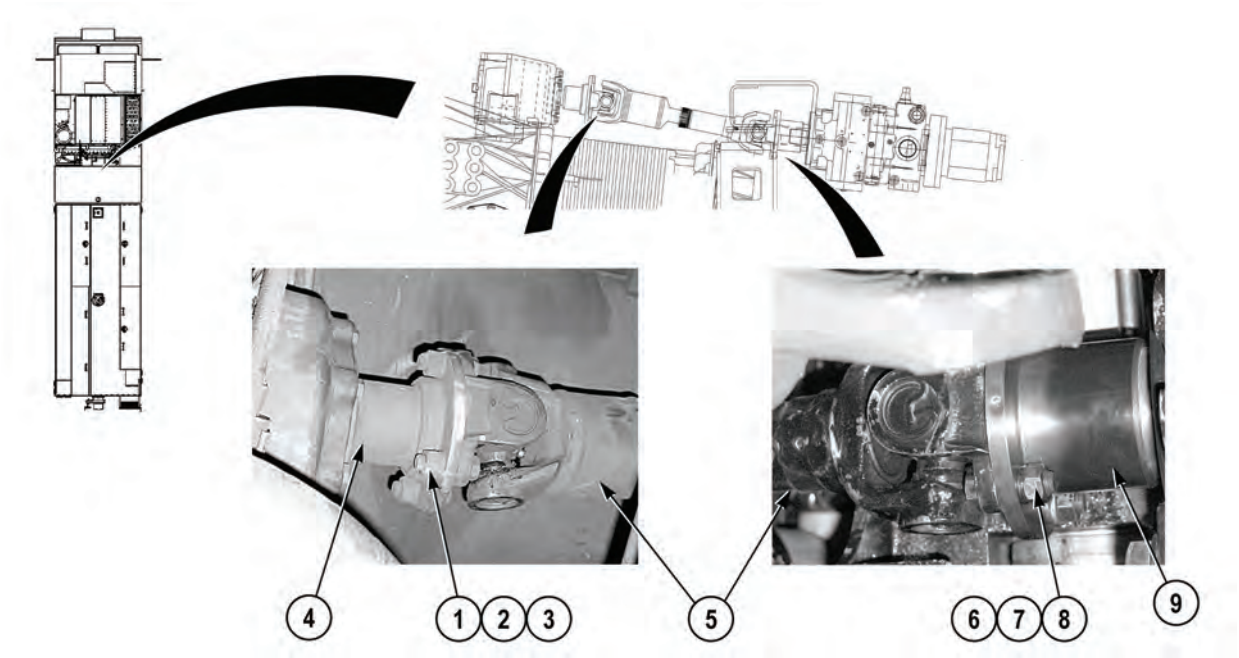
Materials/Parts
Lockwasher (4)
Lockwasher (4)

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

References
WP 0392, Fig. 5, 6

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)

REMOVAL



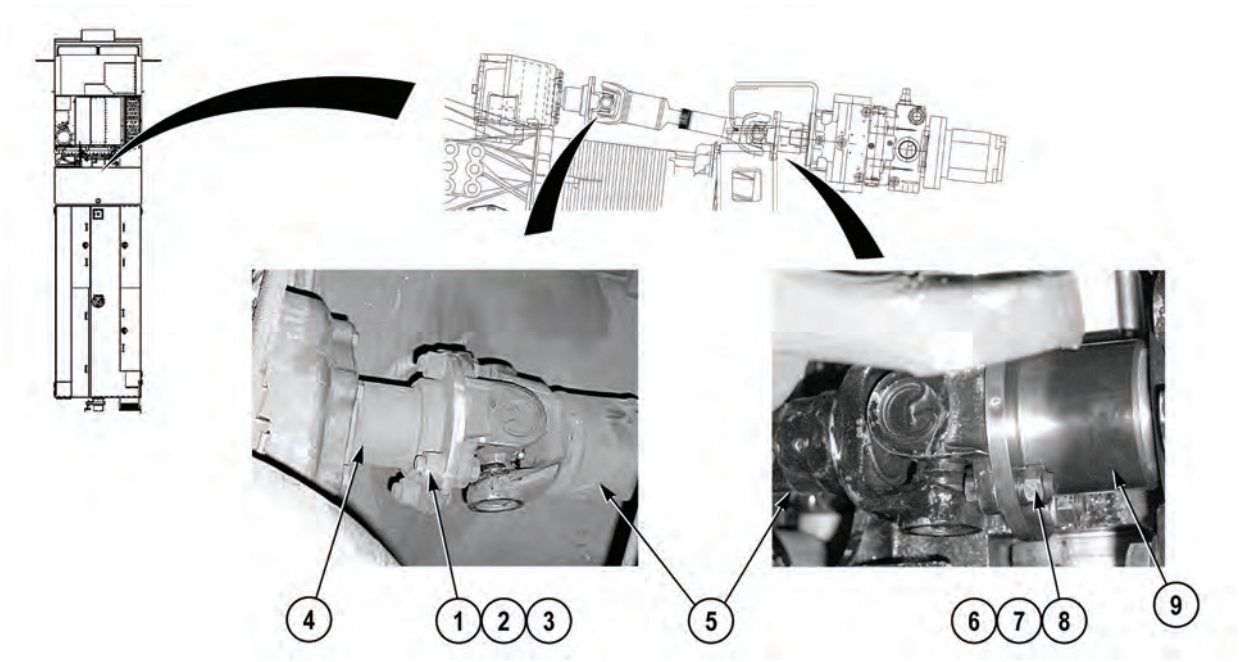
NOTE

An assistant rotating and holding drive shaft aids in drive shaft removal.

1. With the aid of an assistant, remove four nuts (1), lockwashers (2), and screws (3) from PTO (4) and drive shaft (5). Discard lockwashers.
2. With the aid of an assistant, remove four nuts (6), lockwashers (7), screws (8), and drive shaft (5) from pump (9). Discard lockwashers.

END OF TASK

INSTALLATION



NOTE

An assistant rotating and holding drive shaft aids in drive shaft installation.

1. With the aid of an assistant, install drive shaft (5) on pump (9) with four screws (8), lockwashers (7), and nuts (6).
2. With the aid of an assistant, install drive shaft (5) on PTO (4) with four screws (3), lockwashers (2), and nuts (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

POWER TAKE OFF (PTO) SOLENOID AND PRESSURE SWITCH REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Drain Pan (WP 0399, Item 4)
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

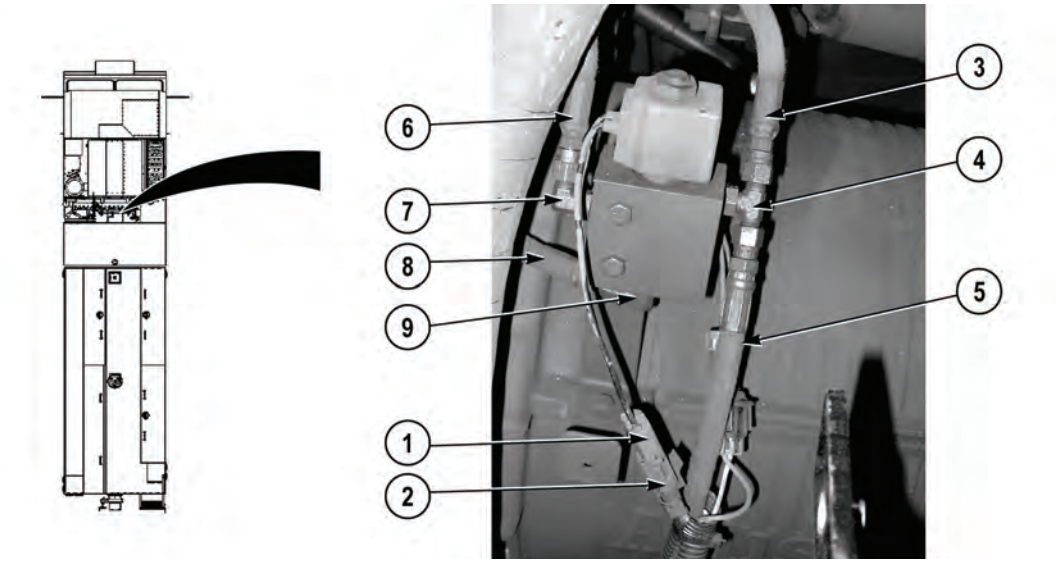
Materials/Parts
Tags, Identification (WP 0401, Item 22)
Lockwasher (2)
Preformed Packing (1)

Materials/Parts (continued)
Preformed Packing (1)
Preformed Packing (1)
Lockwasher (1)

References
WP 0392, Fig. 5

Equipment Conditions
Batteries disconnected (TM 9-2320-315-14&P)

REMOVAL

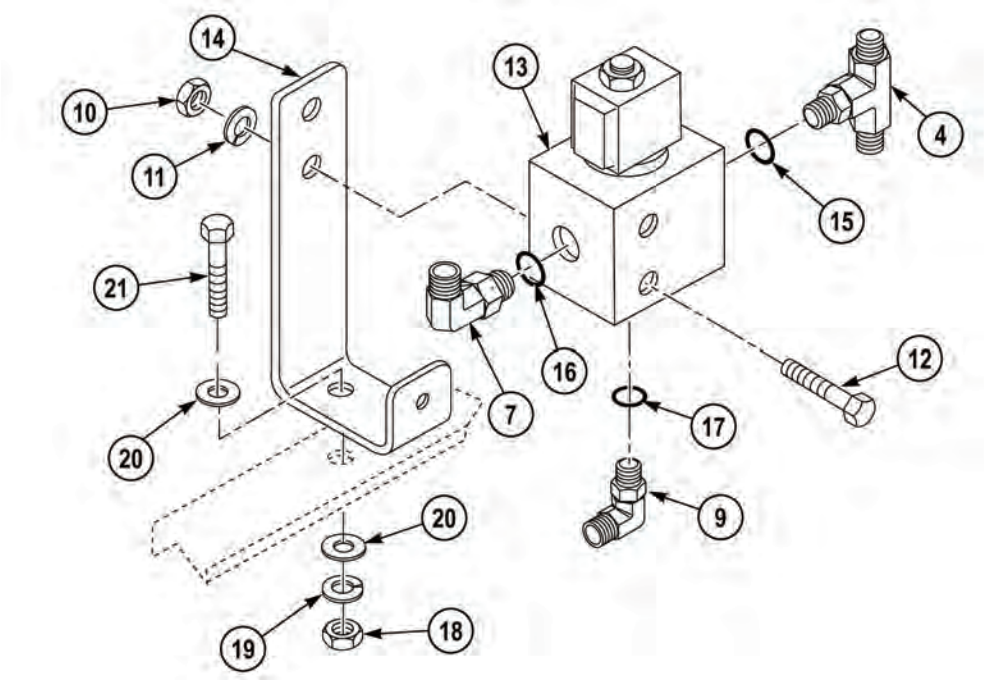


1. Disconnect solenoid connector (1) from main wire harness connector (2).

NOTE

- Note position of elbows prior to removal to ensure proper installation.
- Tag and mark hoses prior to removal to ensure proper installation.
- Position drain pan under hoses.

2. Remove hose (3) from tee (4).
3. Remove hose (5) from tee (4).
4. Remove hose (6) from elbow (7).
5. Remove hose (8) from elbow (9).



6. Remove two nuts (10), lockwashers (11), screws (12), and valve body (13) from bracket (14). Discard lockwashers.
7. Remove tee (4) and preformed packing (15) from valve body (13). Discard preformed packing.
8. Remove elbow (7) and preformed packing (16) from valve body (13). Discard preformed packing.
9. Remove elbow (9) and preformed packing (17) from valve body (13). Discard preformed packing.

NOTE

Perform Step (10) if bracket needs to be removed.

10. Remove nut (18), lockwasher (19), two washers (20), screw (21), and bracket (14) from vehicle. Discard lockwashers.

END OF TASK

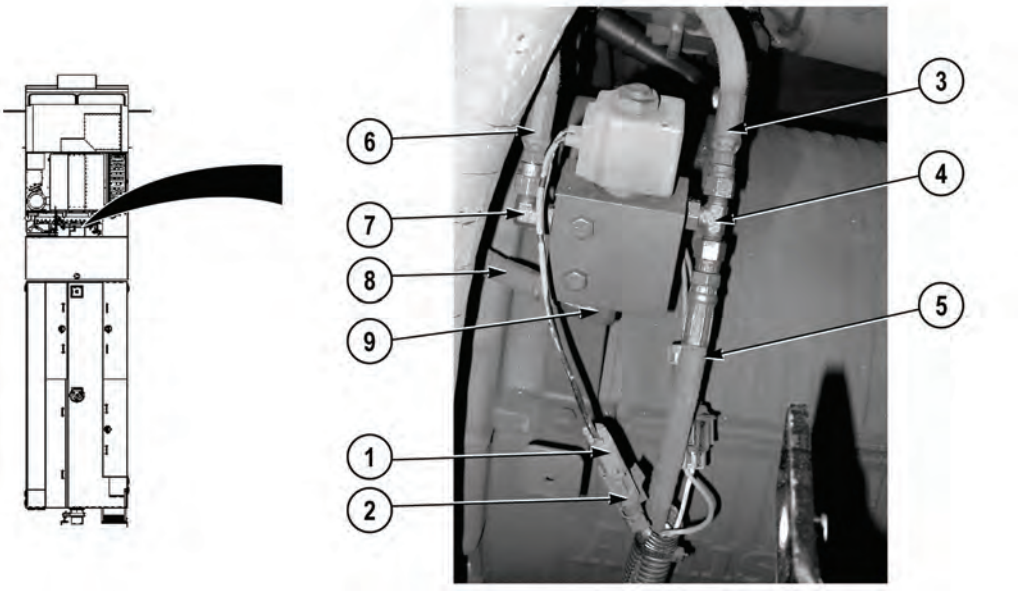
INSTALLATION

NOTE

Perform Step (1) if bracket was removed.

1. Install bracket (14) on vehicle with screw (21), two washers (20), lockwashers (19), and nut (18).
2. Lightly lubricate preformed packing (17) with clean oil, and install preformed packing (17) and elbow (9) on valve body (13).

3. Lightly lubricate preformed packing (16) with clean oil, and install preformed packing (16) and elbow (7) on valve body (13).
4. Lightly lubricate preformed packing (15) with clean oil, and install preformed packing (15) and tee (4) on valve body (13).
5. Install valve body (13) on bracket (14) with two screws (12), lockwashers (11), and nuts (10).



6. Install hose (8) on elbow (9).
7. Install hose (6) on elbow (7).
8. Install hose (5) on tee (4).
9. Install hose (3) on tee (4).
10. Connect main wire harness connector (2) on solenoid connector (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Connect batteries (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

WATER PUMP DIPSTICK ASSEMBLY REPLACEMENT

INITIAL SETUP:

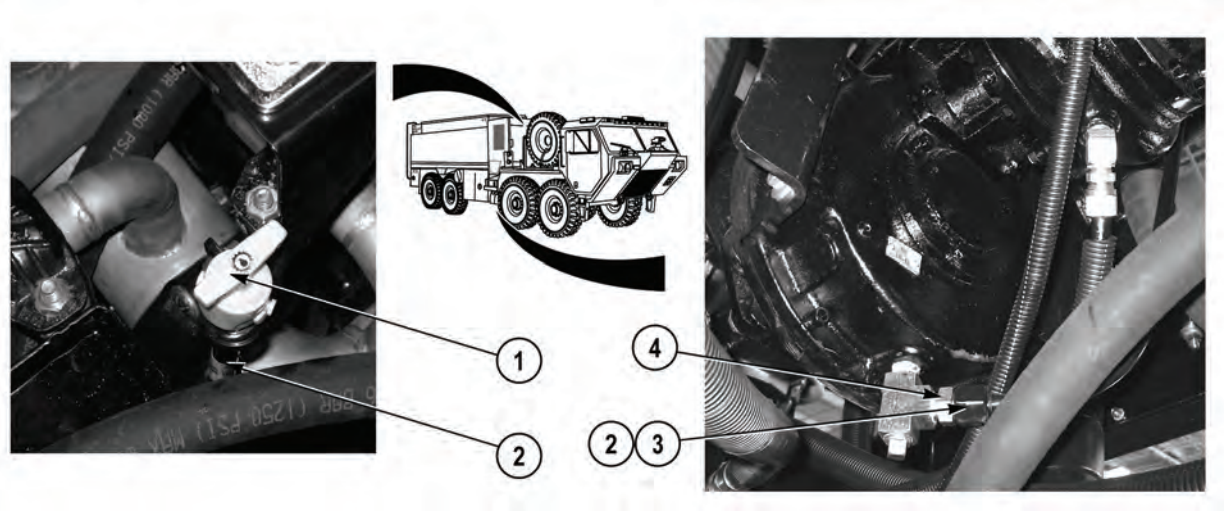
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Preformed packing (1)
Lockwasher (1)

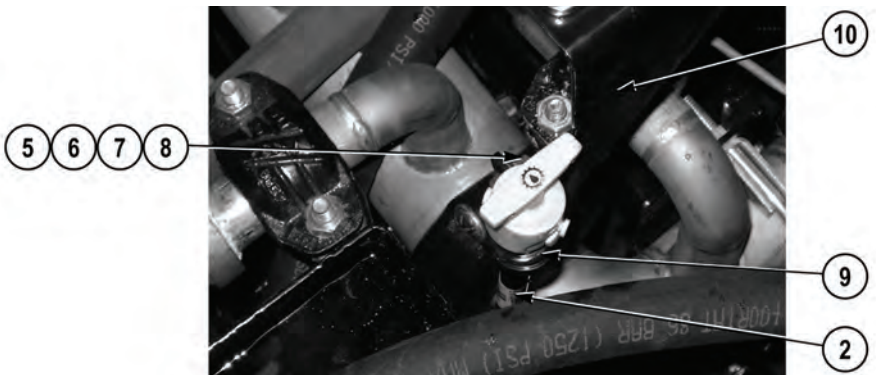
References
WP 0392, Fig. 11

Equipment Conditions
Pump house panel K removed (WP 0341)
Water pump gear case drained (WP 0155)

REMOVAL



1. Remove dipstick (1) from tube (2).
2. Remove tube (2) and preformed packing (3) from fitting (4). Discard preformed packing.

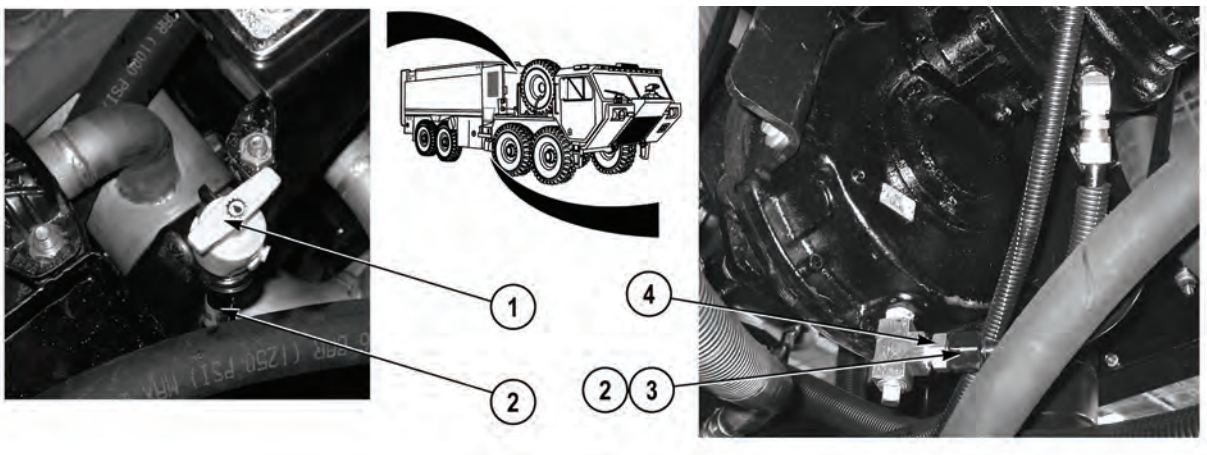


3. Remove nut (5), lockwasher (6), two washers (7), screw (8), cushion clip (9), and tube (2) from bracket (10). Discard lockwashers.

END OF TASK

INSTALLATION

1. Install tube (2) and cushion clip (9) on bracket (10) with screw (8), two washers (7), lockwasher (6) and nut (5).



2. Lightly lubricate preformed packing (3) with clean oil, and install preformed packing (3) and tube (2) on fitting (4).

3. Install dipstick (1) in tube (2).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Fill water pump gear case (WP 0155)

2. Install pump house panel K (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

WATER PUMP GEAR CASE DRAIN/FILL

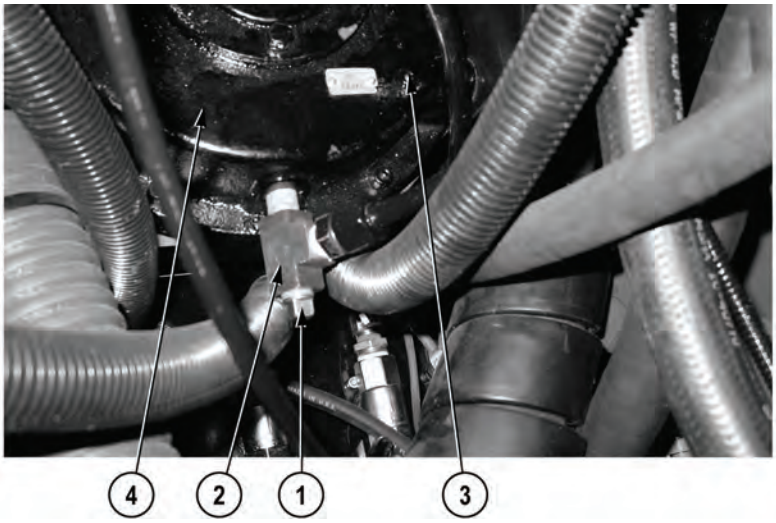
INITIAL SETUP:

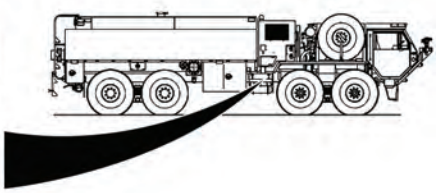
Tools and Special Tools
Drain Pan (WP 0399, Item 4)
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Compound, Sealing, Pipe Thread (WP 0401, Item 11)
Pump, Lubricant (WP 0401, Item 1)

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)

REMOVAL





WARNING

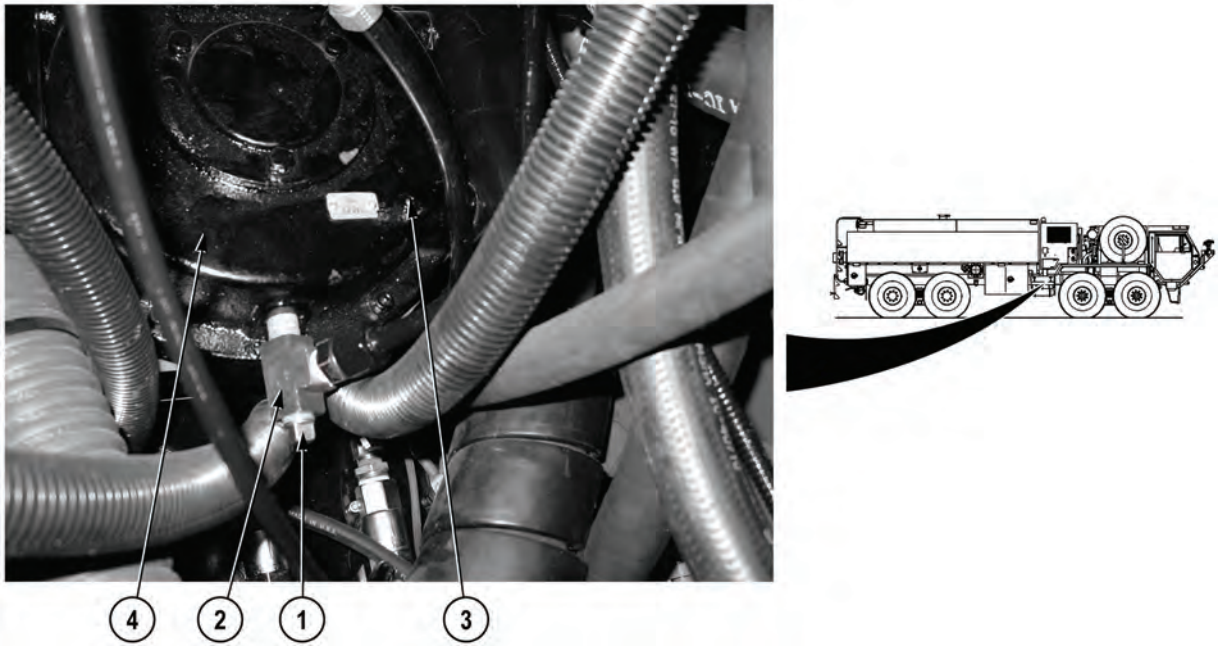


Gear case oil may be hot. Ensure oil is cool prior to removal. Failure to comply may result in injury to personnel.

1. Place drain pan under water pump gear case drain plug (1).
2. Remove water pump gear case drain plug (1) from tee (2).
3. Remove water pump gear case oil level plug (3) from water pump gear case (4).
4. Allow oil to drain completely from water pump gear case (4).

END OF TASK

INSTALLATION



WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

1. Apply sealing compound to water pump gear case oil level plug (3) and water pump gear case drain plug (1).
2. Install water pump gear case drain plug (1) in tee (2).
3. Fill water pump gear case (4) with gear lube through water pump gear case oil level opening until oil flows out opening.
4. Install water pump gear case oil level plug (3) in water pump gear case (4).

END OF TASK

FOLLOW-ON MAINTENANCE

Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

WATER PUMP REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Cap Set, Protective (WP 0399, Item 1)
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)
Water Pump Engine Removal Kit

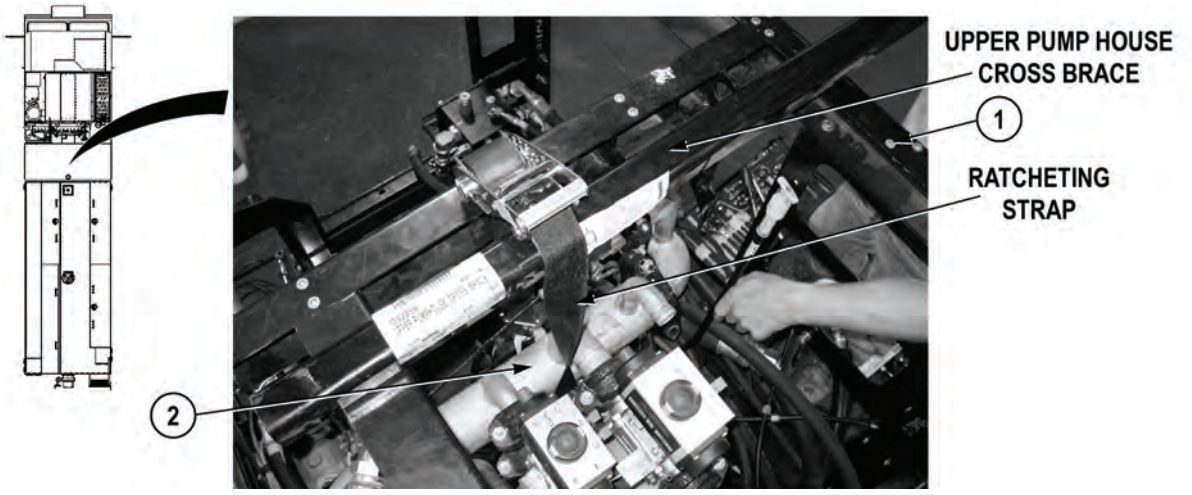
Materials/Parts
Compound, Sealing (WP 0401, Item 11)
Oil, Lubricating (WP 0401, Item 20)
Tags, Identification (WP 0401, Item 22)
Ties, Cable (WP 0401, Item 25)
Preformed Packing (1)
Lockwasher (16)
Lockwasher (2)
Lockwasher (4)
Gasket (1)

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

References
WP 0315
WP 0392, Fig. 11, 12

Equipment Conditions
Pump house panel K removed (WP 0341)
Hydraulic heat exchanger removed (WP 0132)
Water pump gear case drained (WP 0155)
Hydrostatic pump motor removed (WP 0149)
Bumper turret valve removed (WP 0314)
Primer pump removed (WP 0163)
Water tank drained (WP 0014)

REMOVAL



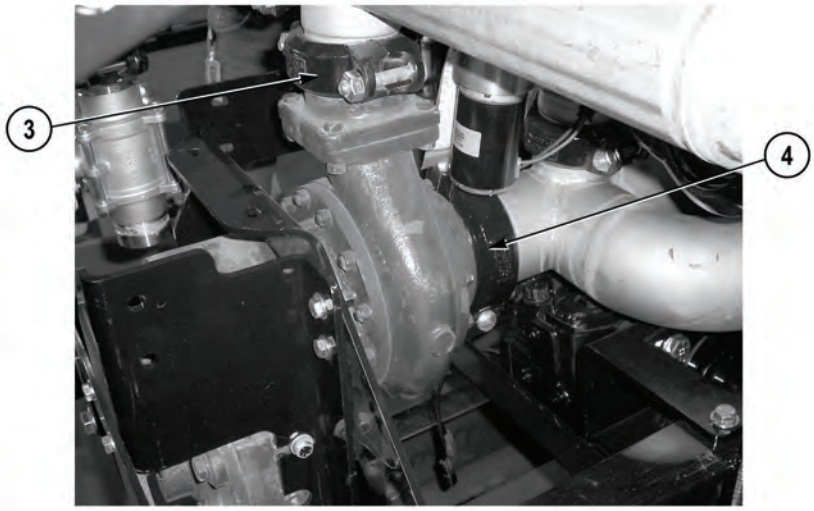
⚠ CAUTION

Discharge manifold assembly is heavy and must be supported with ratcheting strap. Failure to comply may result in damage to equipment.

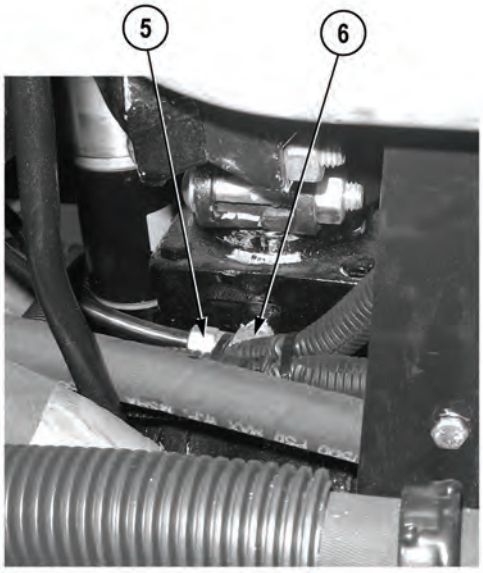
NOTE

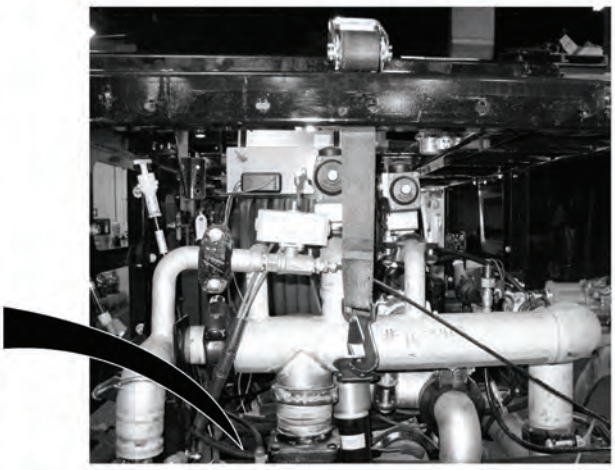
Ratcheting strap is obtained from the TFFT water pump engine removal kit.

1. Position upper pump house cross brace on upper pump house frame (1).
2. Attach ratcheting strap on upper pump house cross brace and support discharge manifold assembly (2).



3. Remove two couplings (3) and (4) from vehicle (WP 0315).

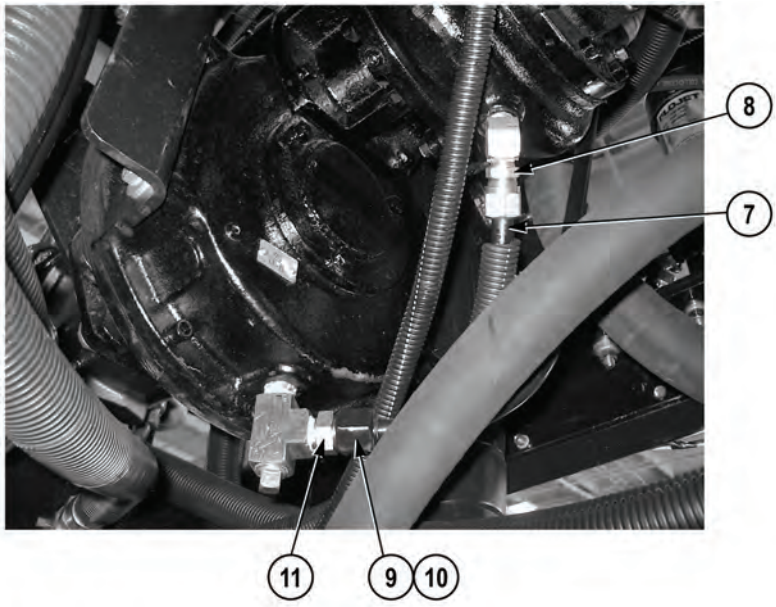




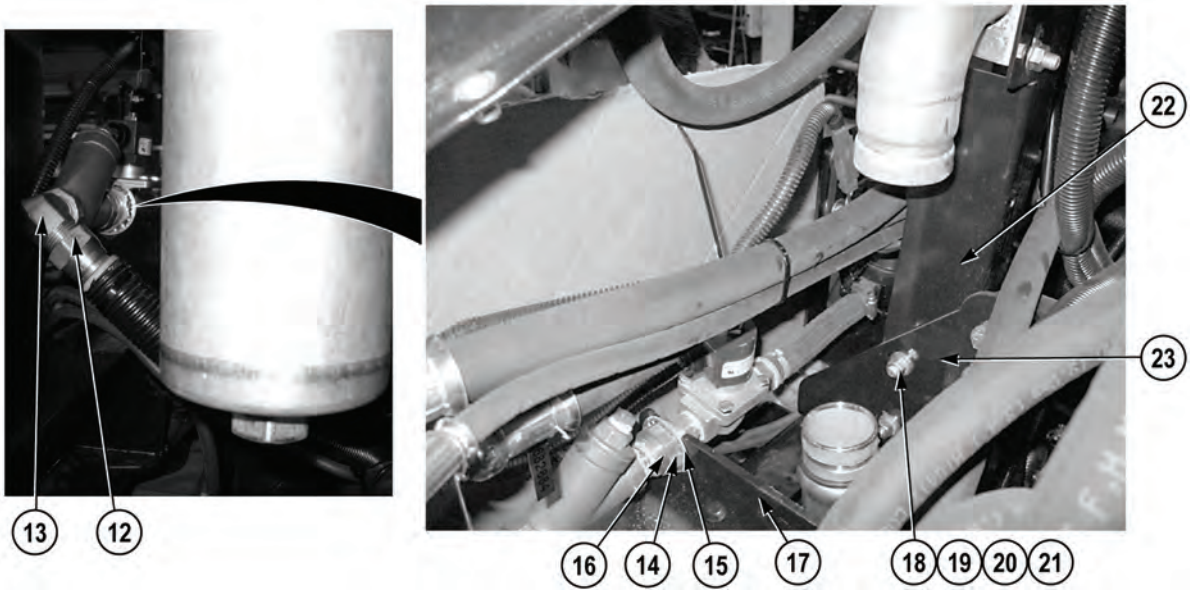
NOTE

- Tag and mark lines and hoses prior to removal to ensure proper installation.
- Remove cable ties as required.

4. Remove line (5) from elbow (6).



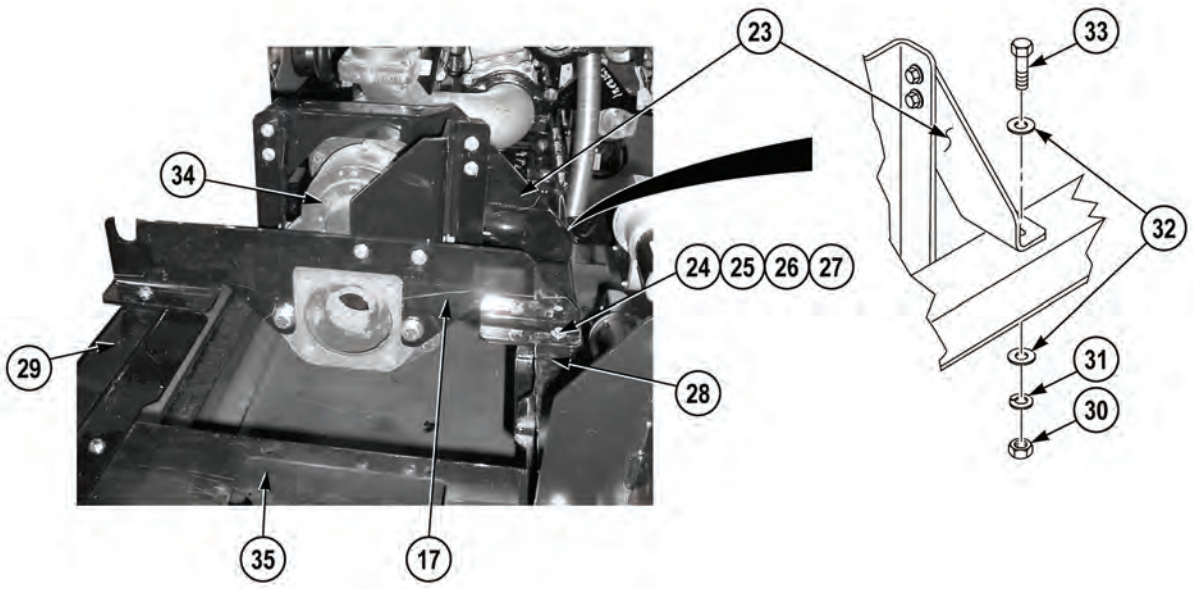
5. Remove line (7) from fitting (8).
6. Remove dipstick tube fitting (9) and preformed packing (10) from fitting (11). Discard preformed packing.



NOTE

Cap and plug hoses upon removal.

7. Remove hose (12) from elbow (13).
8. Loosen nut (14) and lockwasher (15), and remove bulkhead fitting (16) from bracket (17).
9. Remove two nuts (18), lockwashers (19), four washers (20), two screws (21), and bracket (22) from bracket (23). Discard lockwashers.



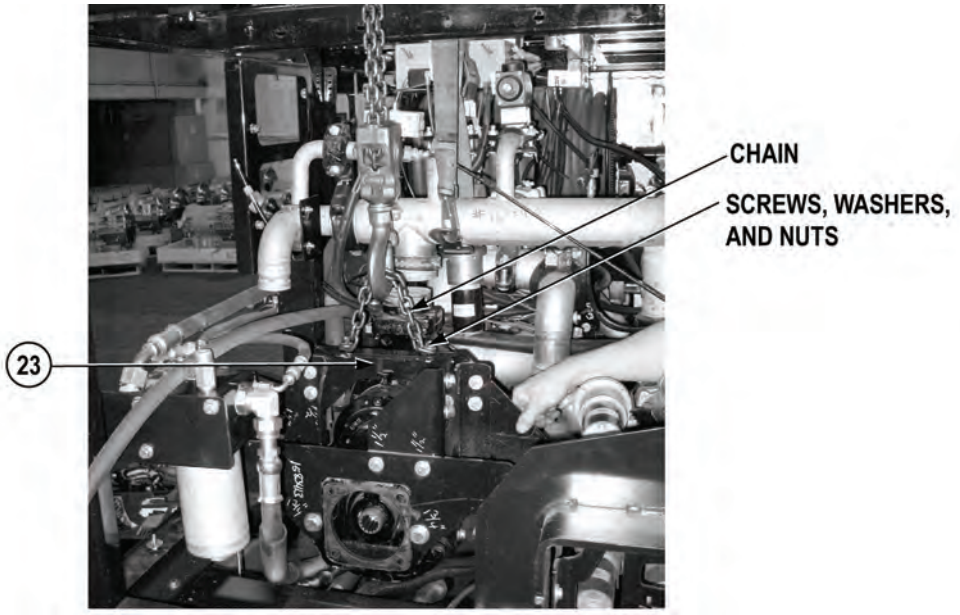
10. Remove two nuts (24), lockwashers (25), four washers (26), and two screws (27) from bracket (17) and two frame rails (28) and (29). Discard lockwashers.

11. Remove two nuts (30), lockwashers (31), four washers (32), and two screws (33) from bracket (23) and two frame rails (28) and (29). Discard lockwashers.

NOTE

Pump and brackets need to be slid towards outside frame rail in order to attach lifting device.

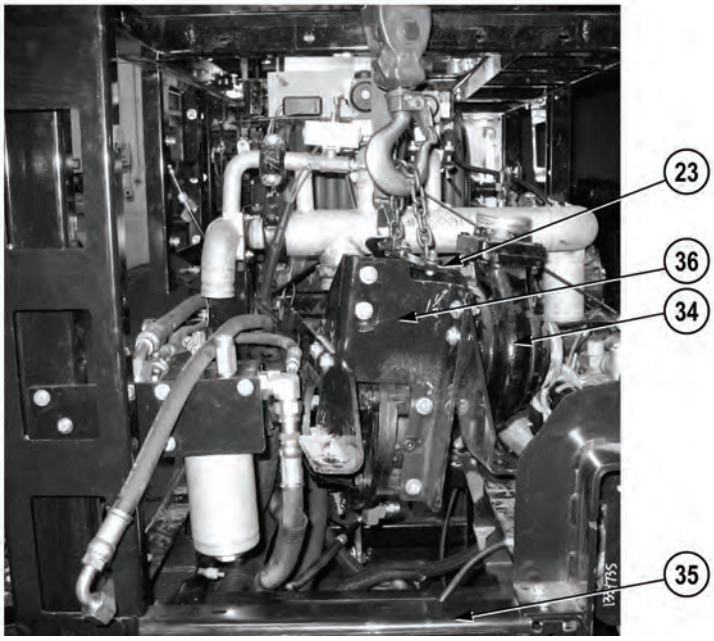
12. Slide two brackets (17) and (23) and water pump (34) towards outside frame rail (35).



NOTE

Chain, screws, washers, and nuts are obtained from the TFFT water pump engine removal kit.

13. Attach chain on bracket (23) with two screws, four washers and two nuts.



WARNING



Water pump and brackets weigh 160 lb. (73 kg). Do not attempt to remove water pump without the aid of an assistant and a suitable lifting device. Failure to comply may result in serious injury to personnel or damage to equipment.

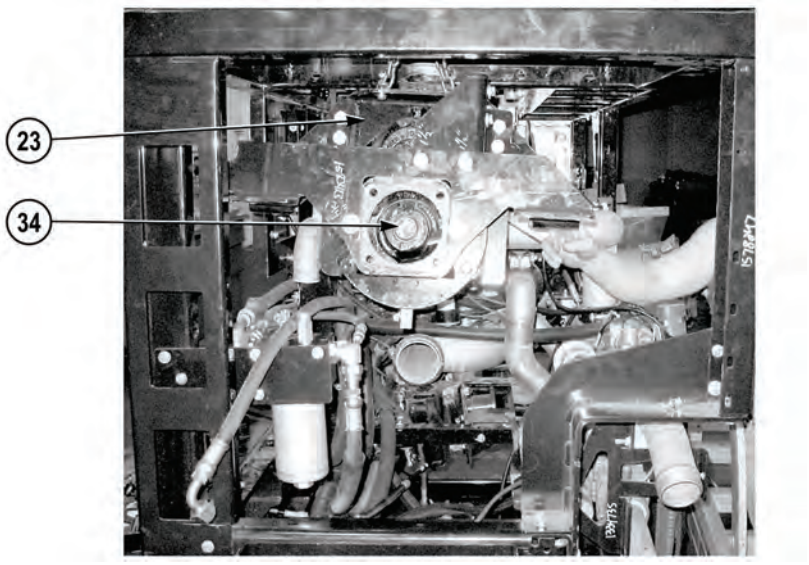
CAUTION

Water pump must be lifted and rotated in order to provide clearance when removing water pump. Failure to comply may cause damage to equipment.

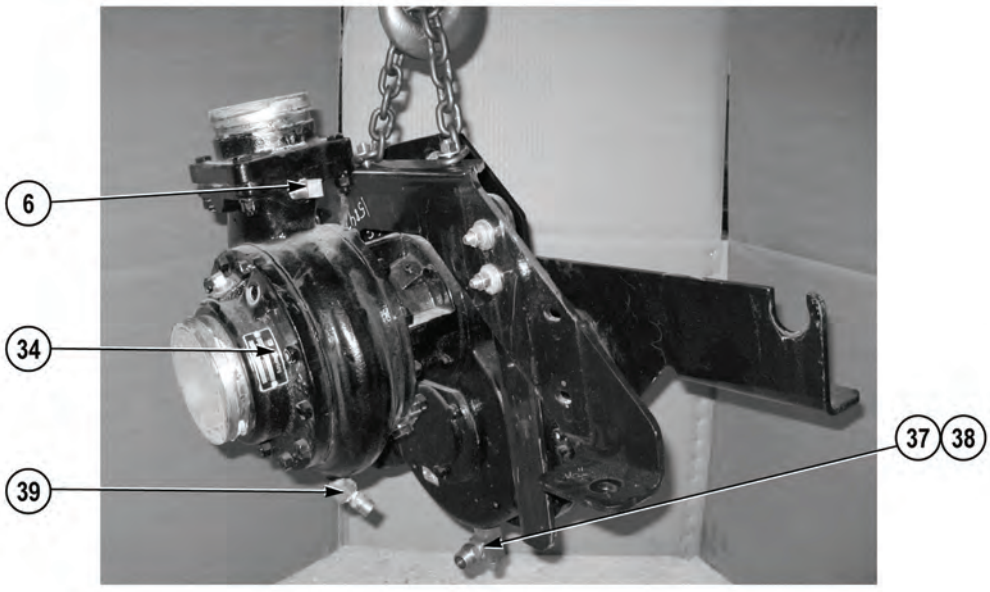
NOTE

Water pump must be lifted approximately five inches above frame rails.

14. With the aid of an assistant and suitable lifting device, lift bracket (23) and water pump (34).
15. Rotate bracket (23) and water pump (34) so that bracket (36) faces outside frame rail (35).



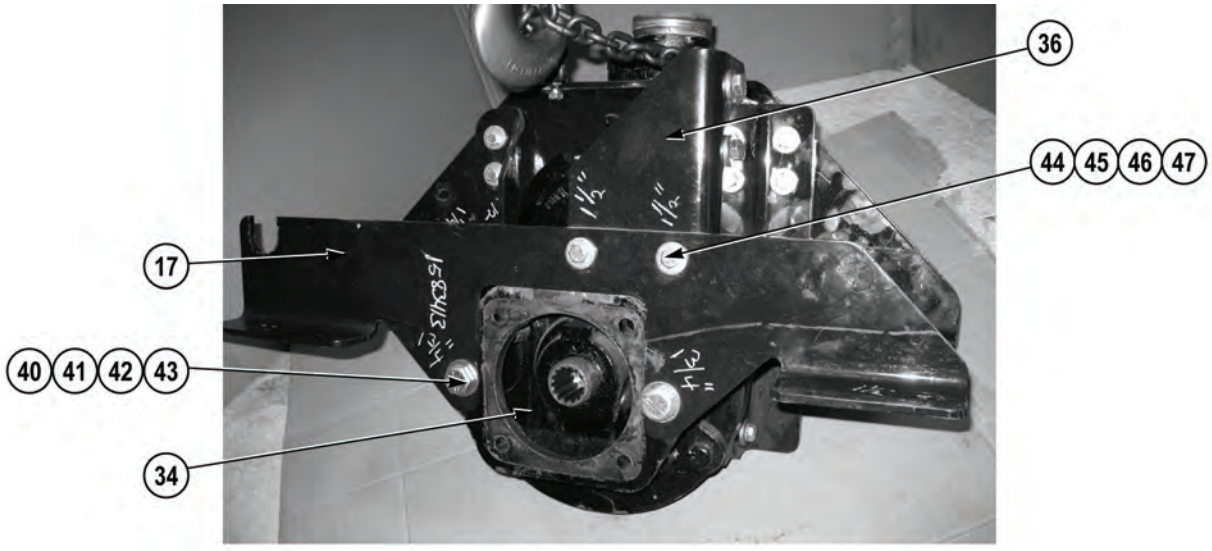
16. Continue lifting bracket (23) and water pump (34), and rotate water pump (34) back to original position and remove water pump (34) from vehicle.



NOTE

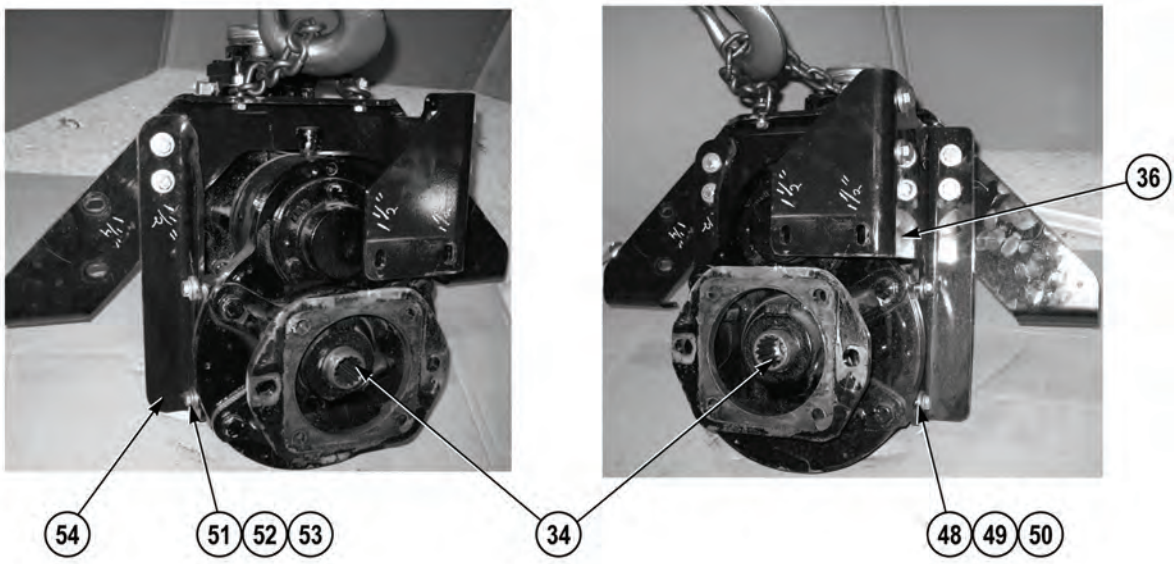
Note position of elbows and fittings prior to removal.

17. Remove tee (37) and nipple (38) from water pump (34).
18. Remove elbow (39) from water pump (34).
19. Remove elbow (6) from water pump (34).



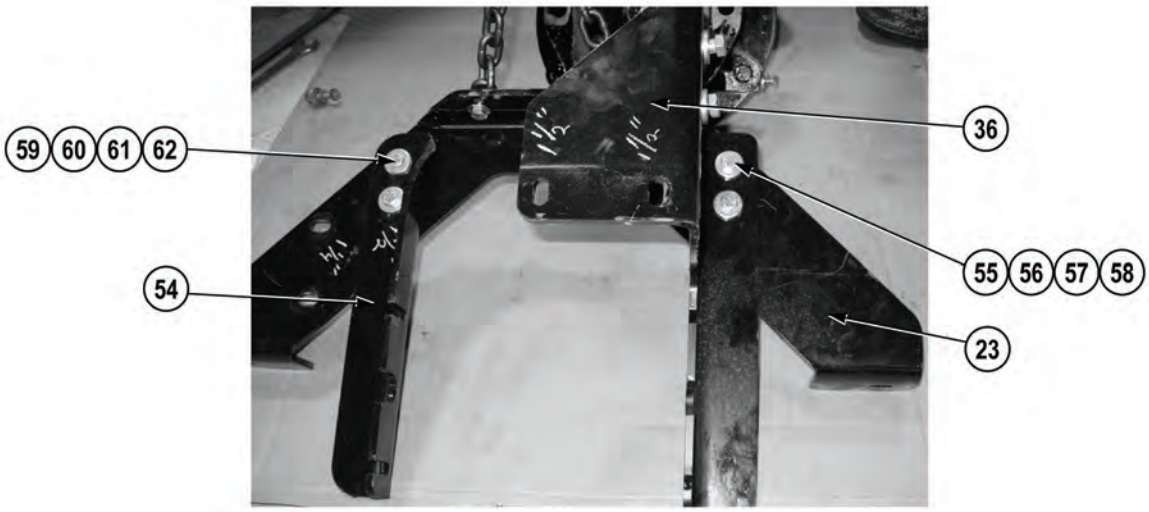
20. Remove two nuts (40), lockwashers (41), four washers (42), and two screws (43) from bracket (17) and water pump (34). Discard lockwashers.

21. Remove two nuts (44), lockwashers (45), four washers (46), two screws (47), and bracket (17) from bracket (36). Discard lockwashers.



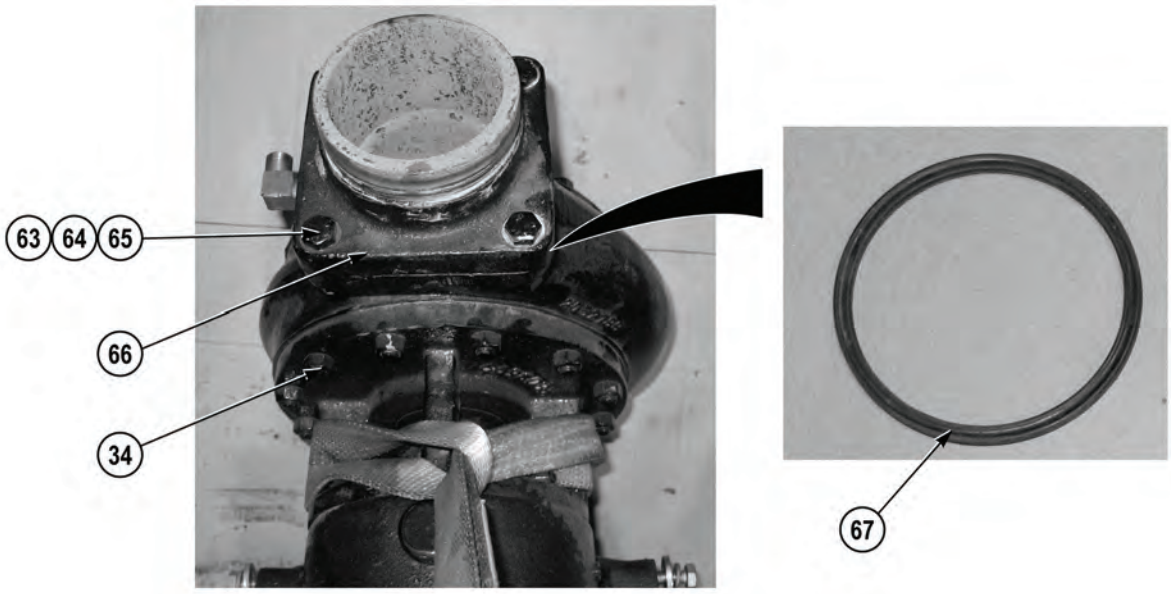
22. Remove two screws (48), lockwashers (49), and washers (50), from bracket (36), and water pump (34). Discard lockwashers.

23. Remove two screws (51), lockwashers (52), washers (53), bracket (54), and bracket (36) from water pump (34). Discard lockwashers.

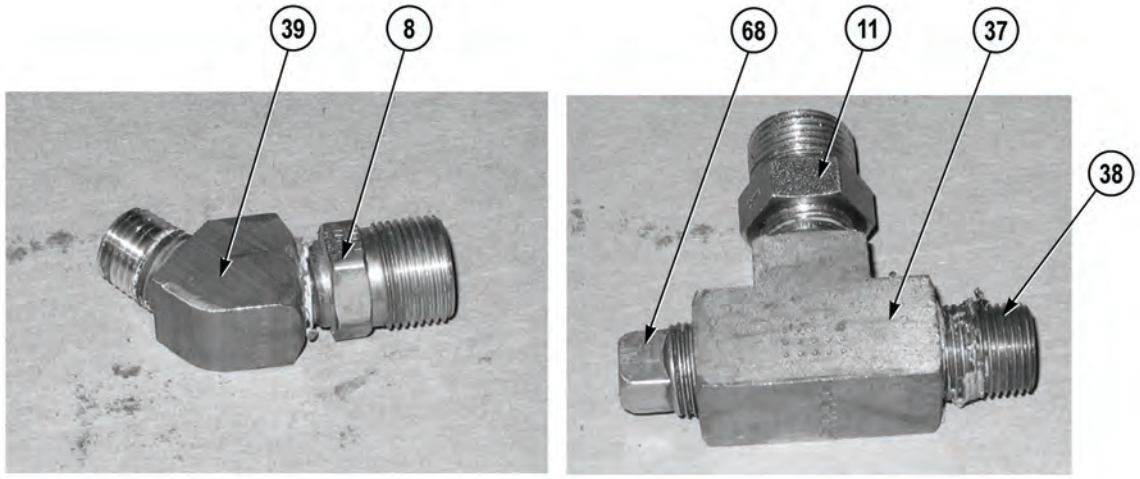


24. Remove two nuts (55), lockwashers (56), four washers (57), two screws (58), and bracket (36) from bracket (23). Discard lockwashers.

25. Remove two nuts (59), lockwashers (60), four washers (61), two screws (62), and bracket (54) from bracket (23). Discard lockwashers.



26. Remove four nuts (63), lockwashers (64), screws (65), flange (66), and gasket (67) from water pump (34). Discard lockwashers and gasket.



27. Remove fitting (8) from elbow (39).

28. Remove fitting (11), plug (68), and nipple (38) from tee (37).

END OF TASK

INSTALLATION

WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

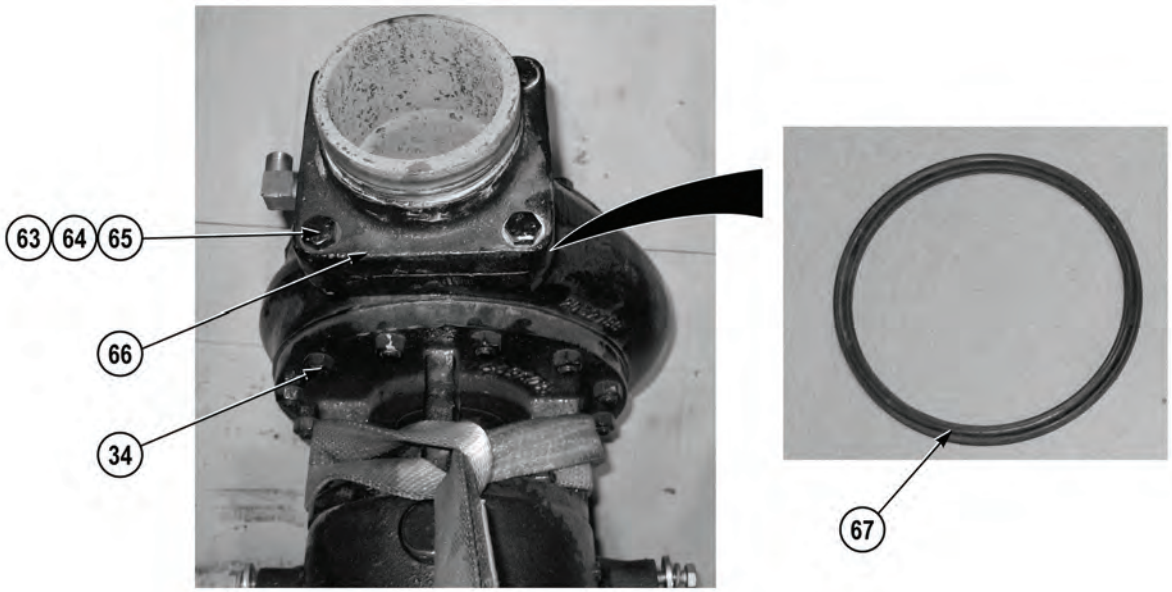
1. Apply sealing compound to threads of two fittings (8) and (11), plug (68), and nipple (38).

NOTE

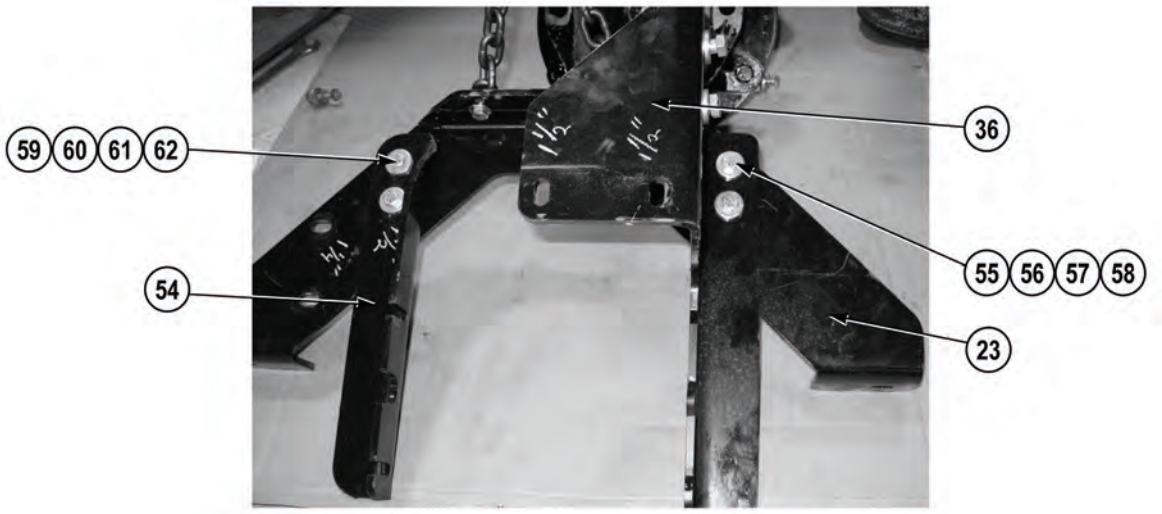
Install elbows and fittings as noted prior to removal.

2. Install nipple (38), plug (68), and fitting (11) on tee (37).

3. Install fitting (8) on elbow (39).

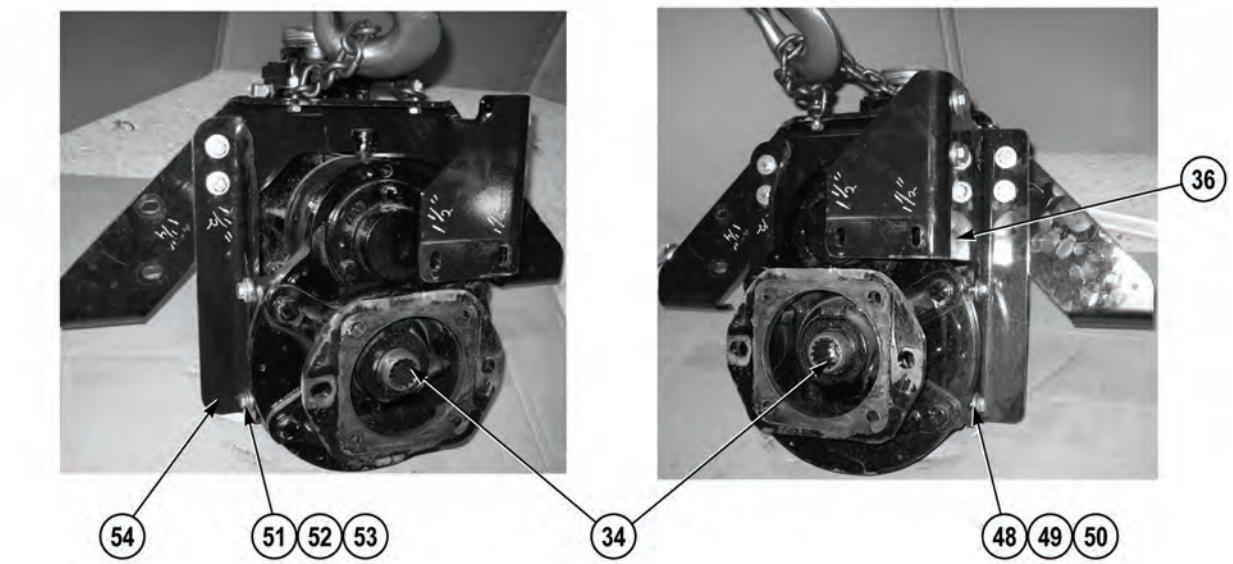


4. Install gasket (67) and flange (66) on water pump (34) with four screws (65), lockwashers (64), and nuts (63).

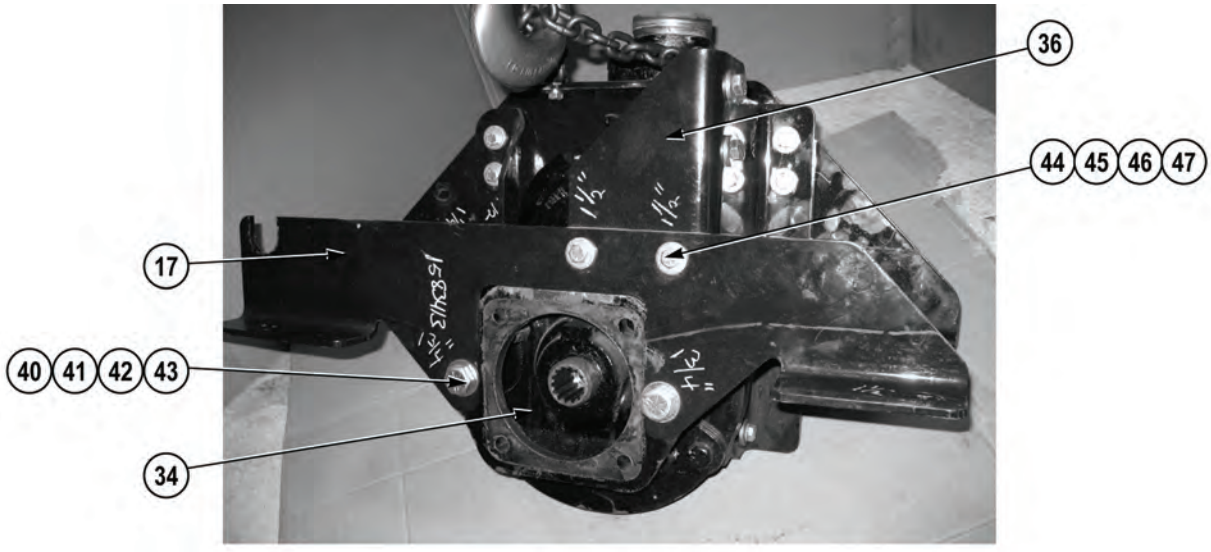


5. Install bracket (54) on bracket (23) with two screws (62), four washers (61), two lockwashers (60), and nuts (59).

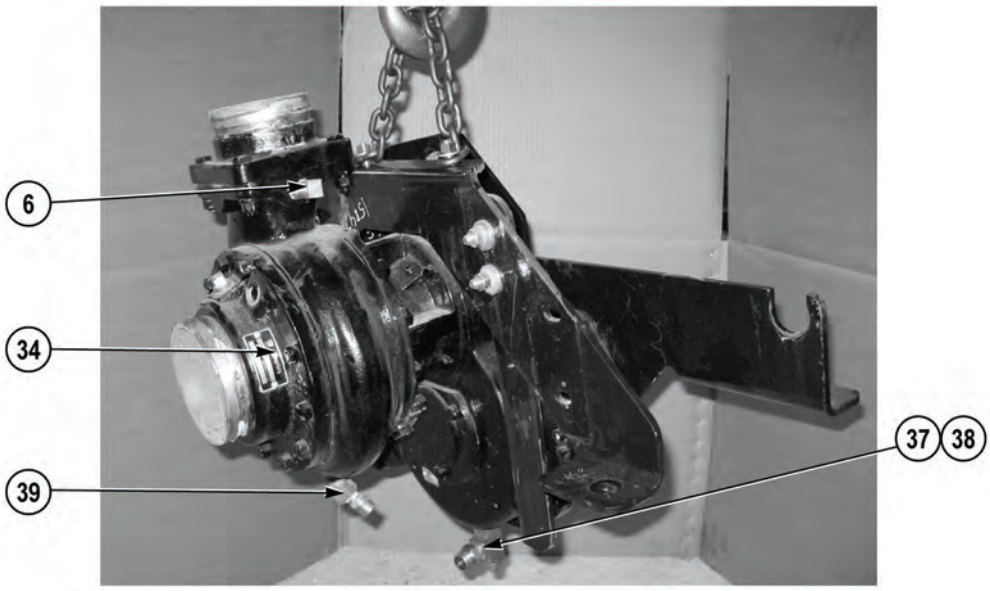
6. Install bracket (36) on bracket (23) with two screws (58), four washers (57), two lockwashers (56), and nuts (55).



7. Install bracket (54) on water pump (34) with two washers (53), lockwashers (52), and screws (51).
8. Install bracket (36) on water pump (34) with two washers (50), lockwashers (49), and screws (48).



9. Install bracket (17) on bracket (36) with two screws (47), four washers (46), two lockwashers (45), and nuts (44).
10. Install bracket (17) on water pump (34) with two screws (43), four washers (42), two lockwashers (41), and nuts (40).



WARNING



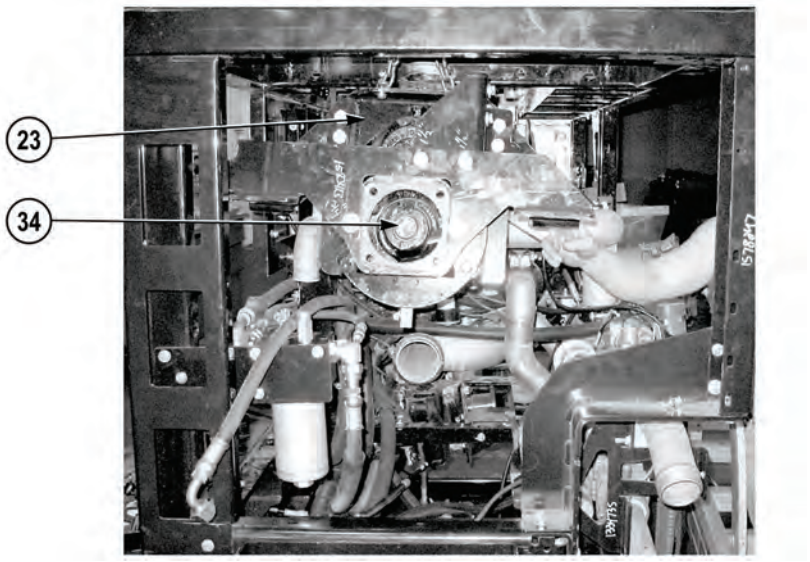
Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

11. Apply sealing compound to threads of two elbows (6) and (39) and nipple (38).

NOTE

Install elbows and tee as noted prior to removal.

12. Install elbow (6) on water pump (34).
13. Install elbow (39) on water pump (34).
14. Install tee (37) and nipple (38) on water pump (34).



WARNING

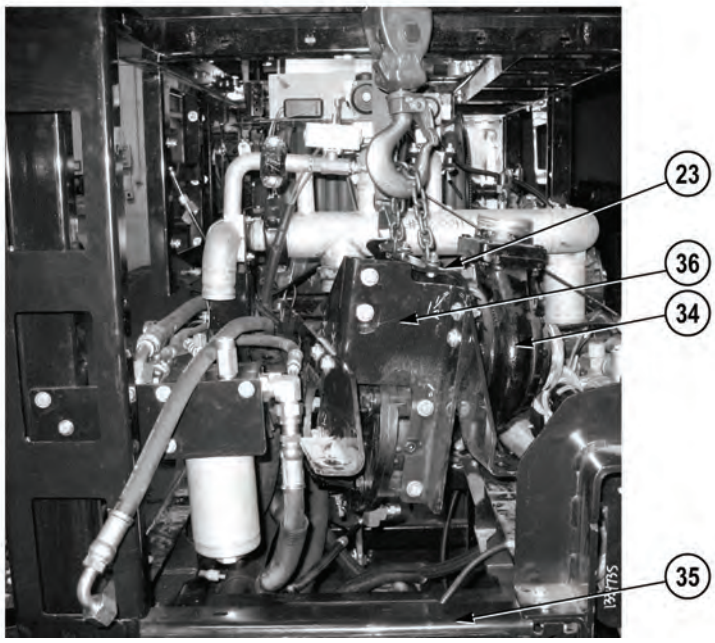


Water pump and brackets weigh 160 lb. (73 kg). Do not attempt to install water pump without the aid of an assistant and a suitable lifting device. Failure to comply may result in serious injury to personnel or damage to equipment.

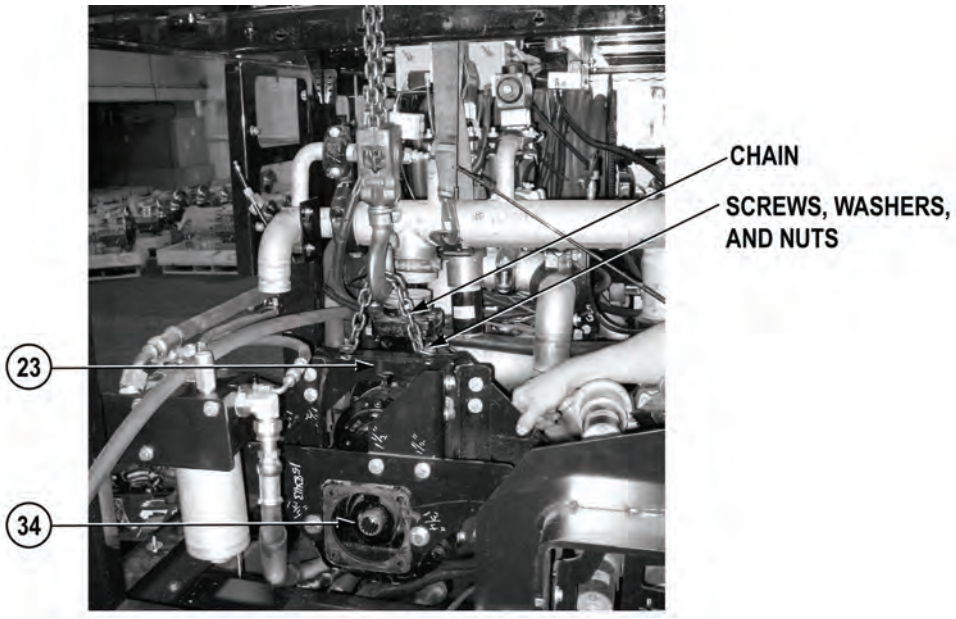
CAUTION

Water pump must be lowered and rotated in order to provide clearance when installing water pump. Failure to comply may cause damage to equipment.

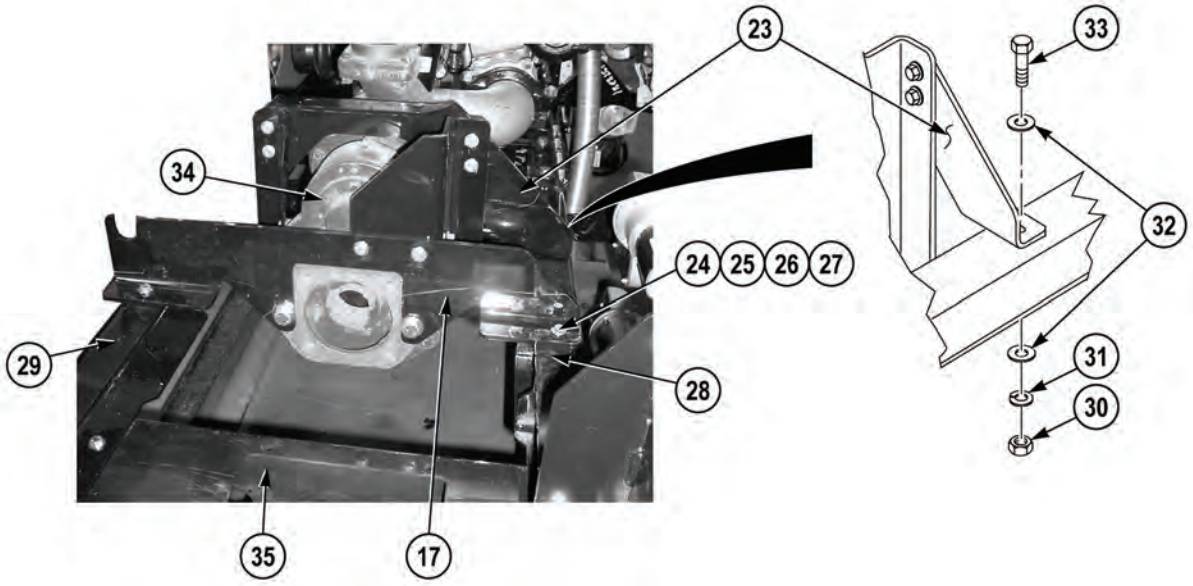
15. Lower bracket (23) and water pump (34).



16. Rotate water pump (34) and bracket (23) so that bracket (36) faces outside frame rail (35).



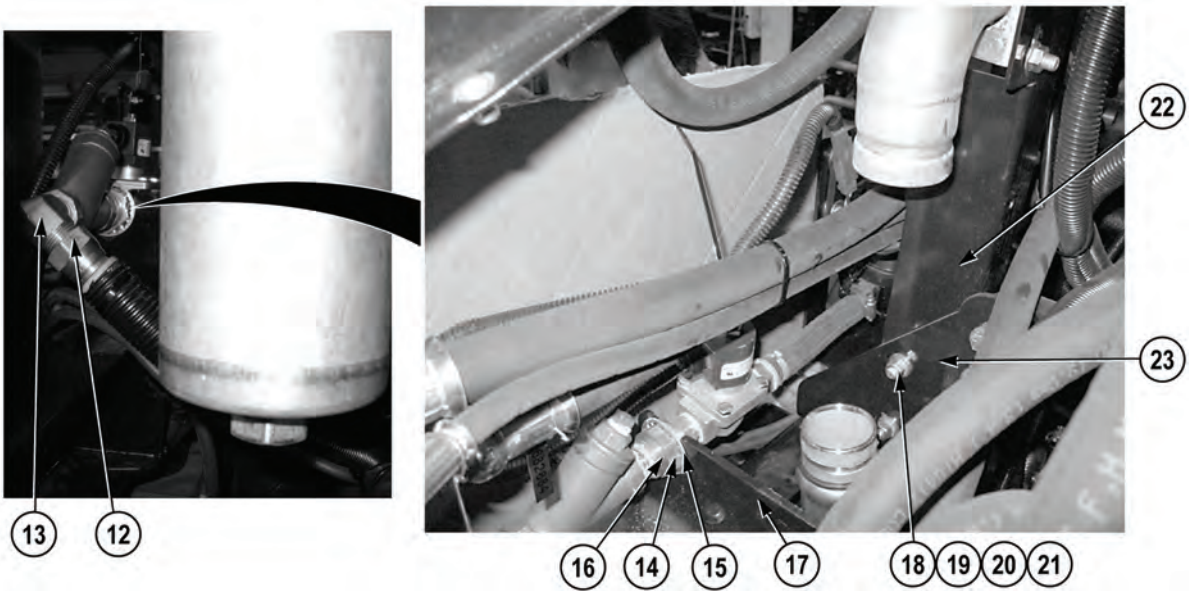
17. Rotate water pump (34) and bracket (23) and lower water pump (34) and bracket (23) on vehicle.
18. Remove two nuts, four washers, two screws, and chain from bracket (23).



19. Slide two brackets (17) and (23) and water pump (34) into position away from outside frame rail (35).

20. Install bracket (23) on two frame rails (29) and (28) with two screws (33), four washers (32), two lockwashers (31), and nuts (30).

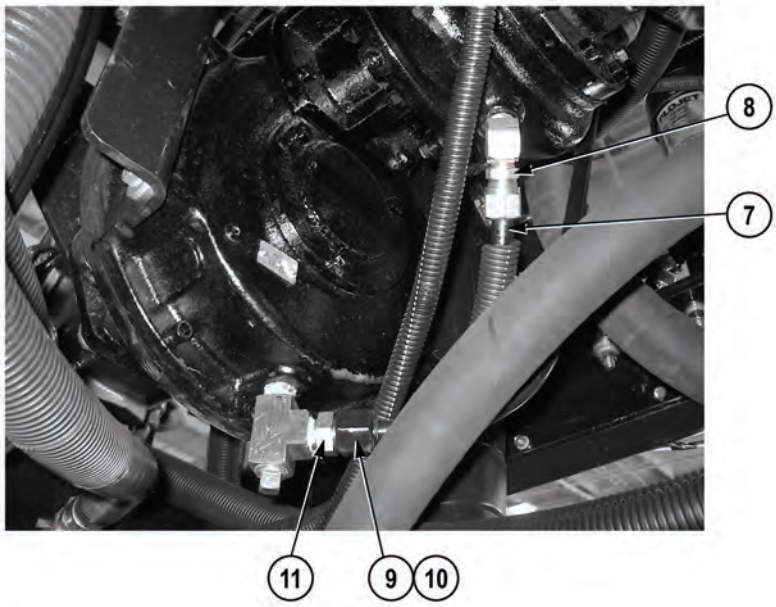
21. Install bracket (17) on two frame rails (28) and (29) with two screws (27), four washers (26), two lockwashers (25), and nuts (24).



22. Install bracket (22) on bracket (23) with two screws (21), four washers (20), two lockwashers (19), and nuts (18).

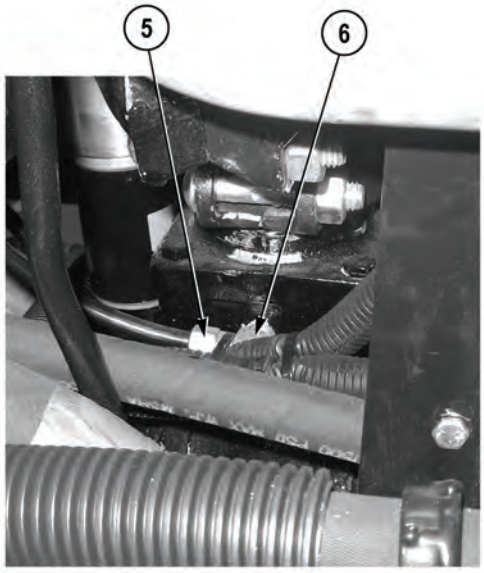
23. Install bulkhead fitting (16) on bracket (17) with lockwasher (15) and nut (14).

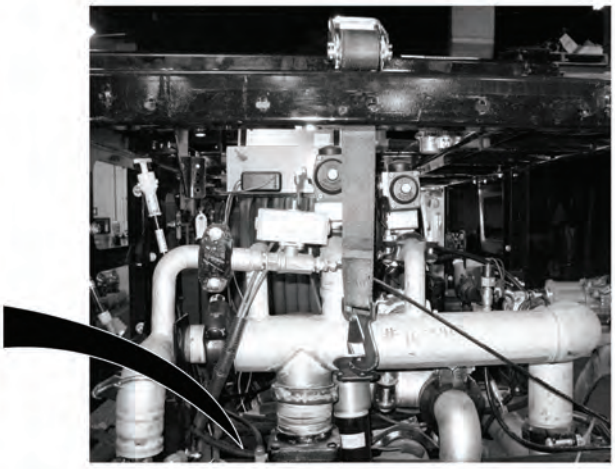
24. Install hose (12) on elbow (13).



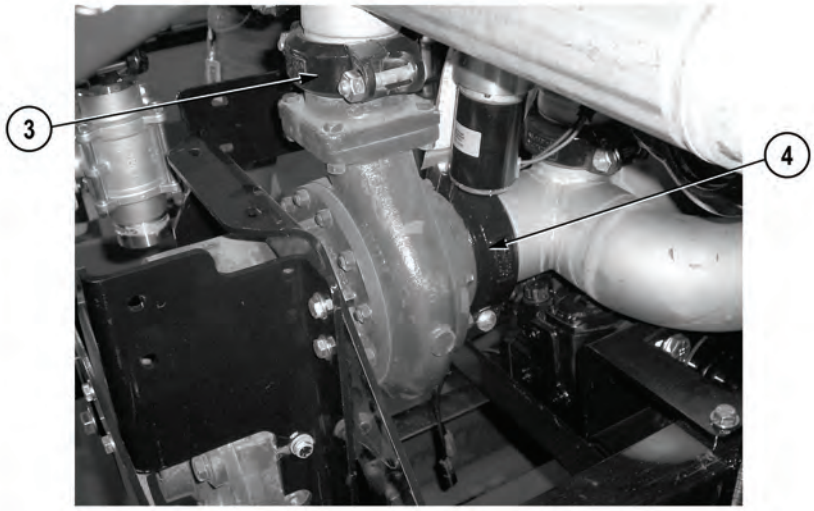
25. Lightly lubricate preformed packing (10) with clean oil, and install preformed packing (10) and dipstick tube fitting (9) on fitting (11).

26. Install line (7) on fitting (8).

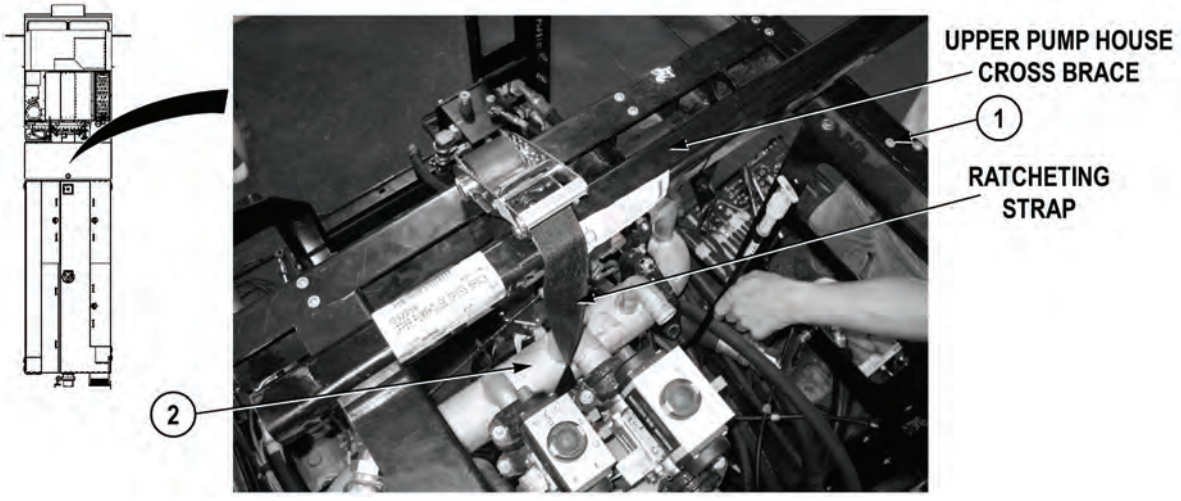




27. Install line (5) on elbow (6).



28. Install two couplings (3) and (4) on vehicle (WP 0315).



29. Remove ratcheting strap from upper pump house cross brace and discharge manifold assembly (2).

30. Remove upper pump house cross brace from upper pump house frame (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install primer pump (WP 0163)
2. Install bumper turret valve (WP 0314)
3. Install hydrostatic pump motor (WP 0149)
4. Fill water pump gear case (WP 0155)
5. Install hydraulic heat exchanger (WP 0132)
6. Install pump house panel K (WP 0341)
7. Check for proper operation and leaks

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PASSENGER SIDE AUXILIARY INLET DRAIN VALVE REPLACEMENT

INITIAL SETUP:

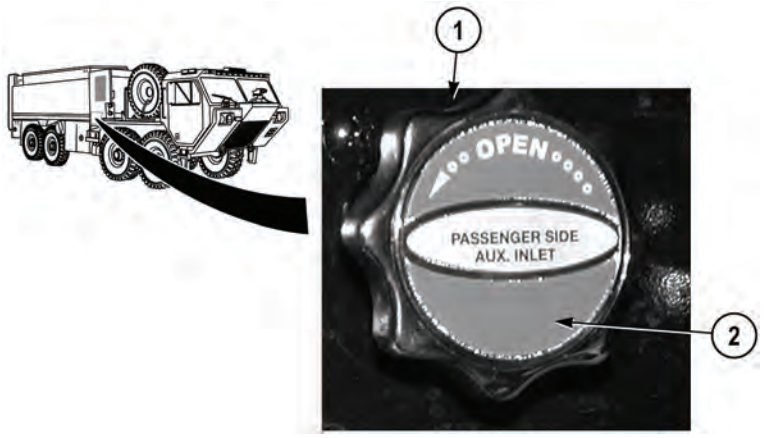
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Adhesive, Spray (WP 0401, Item 5)
Compound, Sealing, Pipe Thread (WP 0401, Item 11)
Tags, Identification (WP 0401, Item 22)
Locknut (1)

References
WP 0392, Fig. 14

Equipment Conditions
Pump house panel H access door opened (WP 0008)
Pump house panel P removed (WP 0341)

REMOVAL

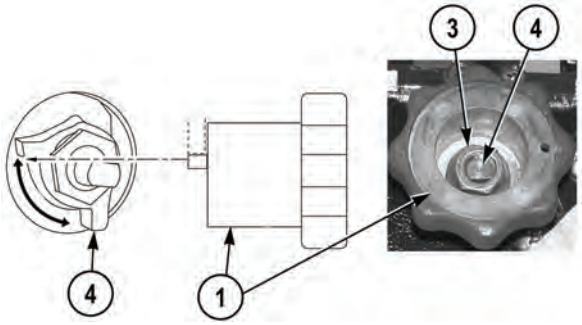


1. Turn valve handle (1) clockwise to closed position.

NOTE

- Cover is attached to valve handle with adhesive.
- Note position of cover prior to removal to ensure proper installation.
- Use care when removing cover.

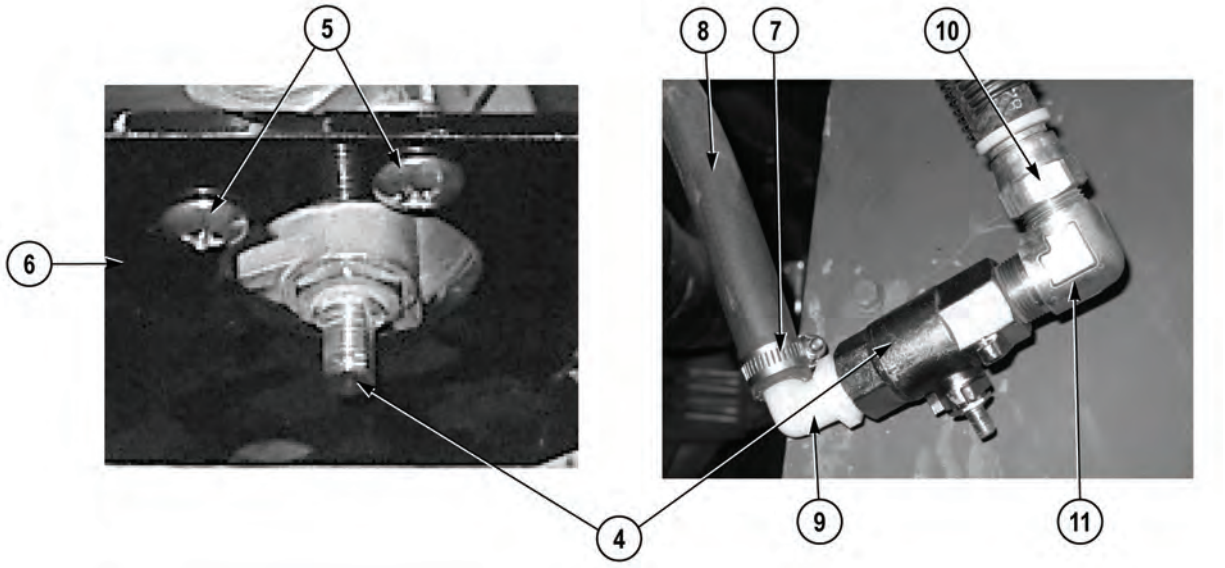
2. Pry cover (2) from valve handle (1).



NOTE

- Stop on valve handle is positioned between 90 degrees indent on valve.
- Note position of valve handle on valve prior to removal to ensure proper installation.

3. Remove locknut (3) and valve handle (1) from valve (4). Discard locknut.



4. Remove two screws (5) and valve (4) from manual valve control mounting bracket (6).

NOTE

Tag and mark hoses prior to removal to ensure proper installation.

5. Loosen clamp (7) and remove hose (8) from elbow (9).

6. Remove hose (10) from elbow (11).

NOTE

Note location of elbows prior to removal to ensure proper installation.

7. Remove elbow (9) and elbow (11) from valve (4).

END OF TASK

INSTALLATION

WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

1. Apply sealing compound to threads of elbow (9), and elbow (11).

NOTE

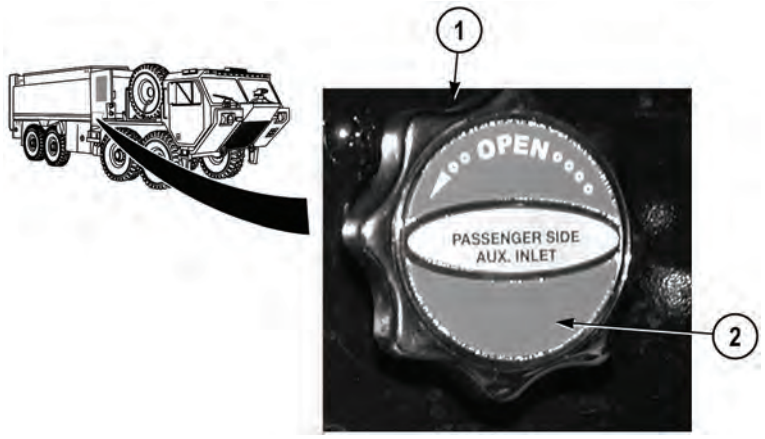
Install elbows as noted prior to removal.

2. Install elbow (11) and elbow (9) on valve (4).
3. Install hose (10) on elbow (11).
4. Install hose (8) on elbow (9) and tighten clamp (7).
5. Install valve (4) on manual valve control mounting bracket (6) with two screws (5).

NOTE

Install valve handle on valve as noted prior to removal.

6. Install valve handle (1) on valve (4) with locknut (3).



WARNING



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7. Apply adhesive to back of cover (2).

NOTE

Install cover on handle as noted prior to removal.

8. Install cover (2) on handle (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Close pump house panel H access door (WP 0008)
2. Install pump house panel P (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

DRIVER SIDE AUXILIARY INLET DRAIN VALVE REPLACEMENT

INITIAL SETUP:

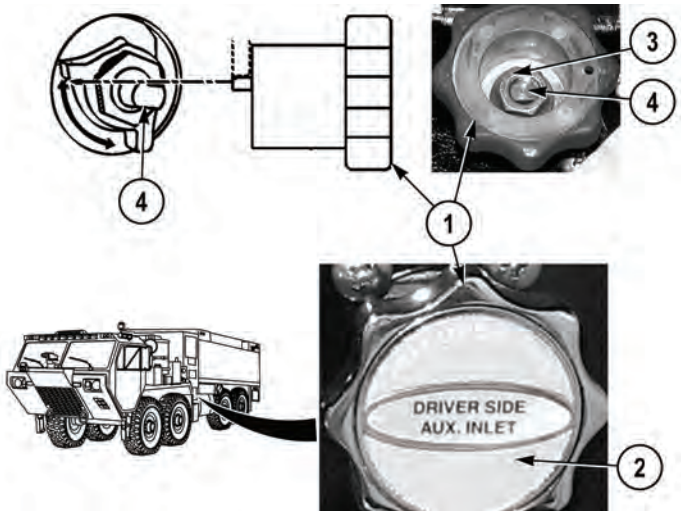
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Adhesive, Spray (WP 0401, Item 5)
Compound, Sealing, Pipe Thread (WP 0401, Item 11)
Tags, Identification (WP 0401, Item 22)
Locknut (1)

References
WP 0392, Fig. 14

Equipment Conditions
Pump house panel A access door opened (WP 0008)
Pump house panel B removed (WP 0341)

REMOVAL



1. Turn valve handle (1) clockwise to closed position.

NOTE

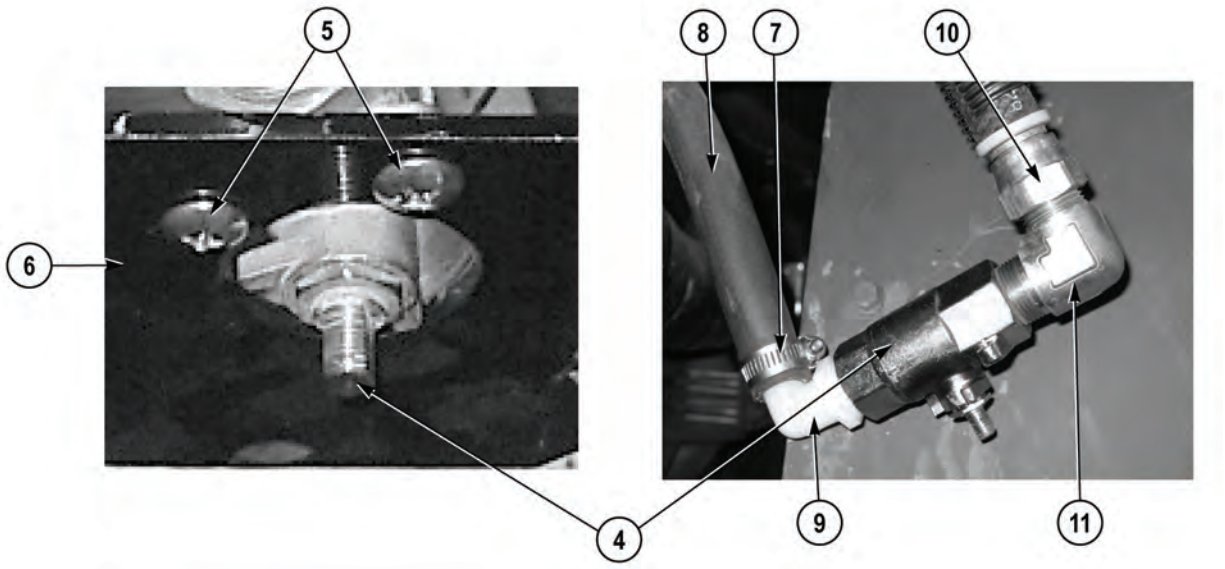
- Cover is attached to valve handle with adhesive.
- Note position of cover prior to removal to ensure proper installation.
- Use care when removing cover.

2. Pry cover (2) from valve handle (1).

NOTE

- Stop on valve handle is positioned between 90 degrees indent on valve.
- Note position of valve handle on valve prior to removal to ensure proper installation.

3. Remove locknut (3) and valve handle (1) from valve (4). Discard locknut.



4. Remove two screws (5) and valve (4) from manual valve control mounting bracket (6).

NOTE

Tag and mark hoses prior to removal to ensure proper installation.

5. Loosen clamp (7) and remove hose (8) from elbow (9).
6. Remove hose (10) from elbow (11).

NOTE

Note location of elbows prior to removal to ensure proper installation.

7. Remove elbow (9) and elbow (11) from valve (4).

END OF TASK

INSTALLATION

WARNING



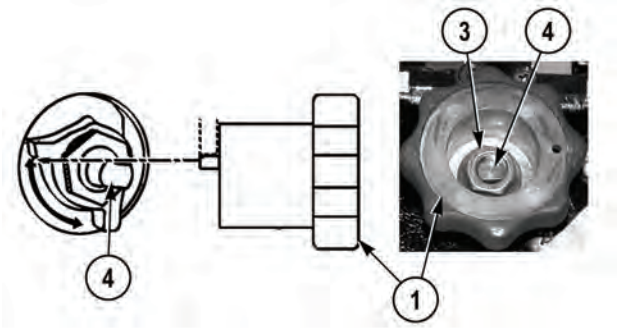
Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

1. Apply pipe thread sealing compound to threads of elbow (9) and elbow (11).

NOTE

Install elbows as noted prior to removal.

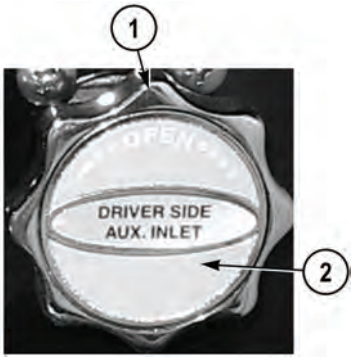
2. Install elbow (11) and elbow (9) on valve (4).
3. Install hose (10) on elbow (11).
4. Install hose (8) on elbow (9) and tighten clamp (7).
5. Install valve (4) on manual valve control mounting bracket (6) with two screws (5).



NOTE

Install handle in the position as noted prior to removal.

6. Install valve handle (1) on valve (4) and locknut (3).



WARNING



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7. Apply adhesive to back of cover (2).

NOTE

Install cover on handle as noted prior to removal.

8. Install cover (2) on handle (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Close pump house panel A access door (WP 0008)
2. Install pump house panel B (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

NO. 1 DRIVER SIDE DISCHARGE DRAIN VALVE REPLACEMENT

INITIAL SETUP:

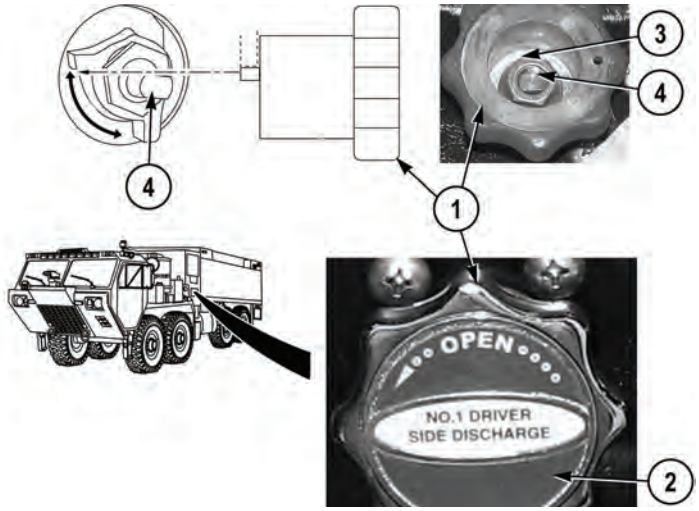
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Adhesive, Spray (WP 0399, Item 5)
Compound, Sealing, Pipe Thread, (WP 0401, Item 11)
Tags, Identification (WP 0401, Item 22)
Locknut (1)

References
WP 0392, Fig.14

Equipment Conditions
Pump house panel A access door open (WP 0008)
Pump house panel B removed (WP 0341)

REMOVAL



1. Turn valve handle (1) clockwise to closed position.

NOTE

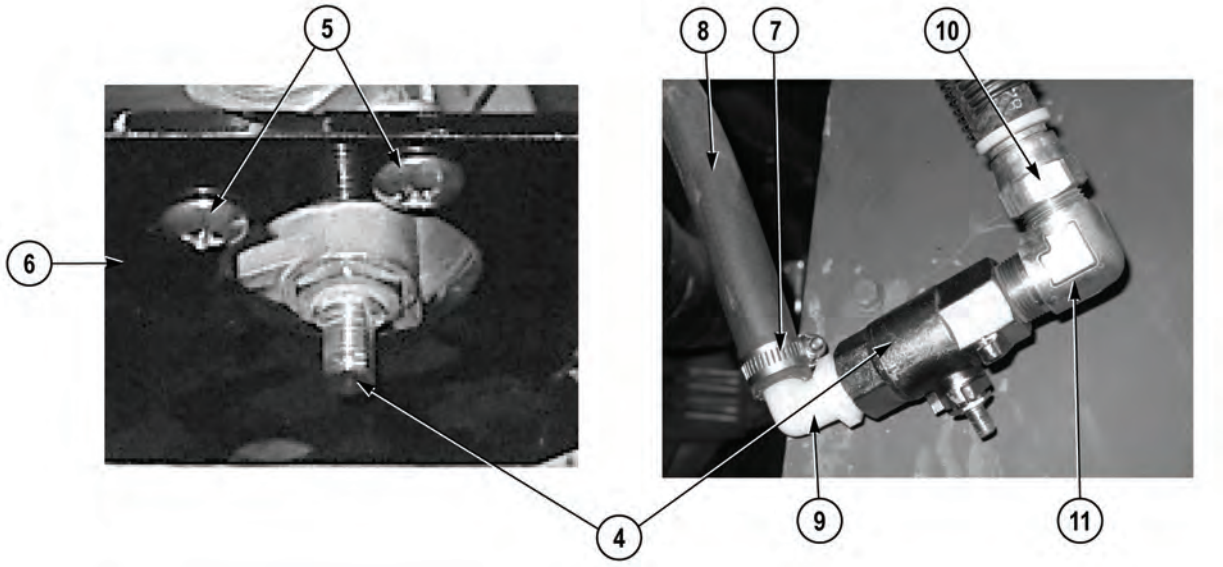
- Cover is attached to valve handle with adhesive.
- Note position of cover prior to removal to ensure proper installation.
- Use care when removing cover.

2. Pry cover (2) from valve handle (1).

NOTE

- Stop on valve handle is positioned between 90 degrees indent on valve.
- Note position of valve handle on valve prior to removal to ensure proper installation.

3. Remove locknut (3) and valve handle (1) from valve (4). Discard locknut.



4. Remove two screws (5) and valve (4) from manual valve control mounting bracket (6).

NOTE

- Tag and mark hoses prior to removal to ensure proper installation.

5. Loosen clamp (7) and remove hose (8) from elbow (9).
6. Remove hose (10) from elbow (11).

NOTE

Note location of elbows prior to removal to ensure proper installation.

7. Remove elbow (9) and elbow (11) from valve (4).

END OF TASK

INSTALLATION

WARNING



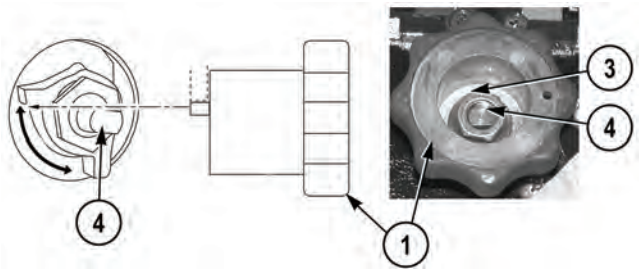
Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

1. Apply thread sealing compound to threads of elbow (9) and elbow (11).

NOTE

Install elbows as noted prior to removal.

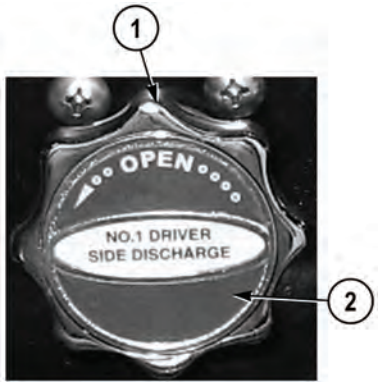
2. Install elbow (11) and elbow (9) on valve (4).
3. Install hose (10) on elbow (11).
4. Install hose (8) on elbow (9) and tighten clamp (7).
5. Install valve (4) on manual valve control mounting bracket (6) with two screws (5).



NOTE

Install handle in the position as noted prior to removal.

6. Install valve handle (1) on valve (4) with locknut (3).



WARNING



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7. Apply adhesive to back of cover (2).

NOTE

Install cover on handle as noted prior to removal.

8. Install cover (2) on handle (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Close pump house panel A access door (WP 0008)
2. Install pump house panel B (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

NO. 2 PASSENGER SIDE DISCHARGE DRAIN VALVE REPLACEMENT

INITIAL SETUP:

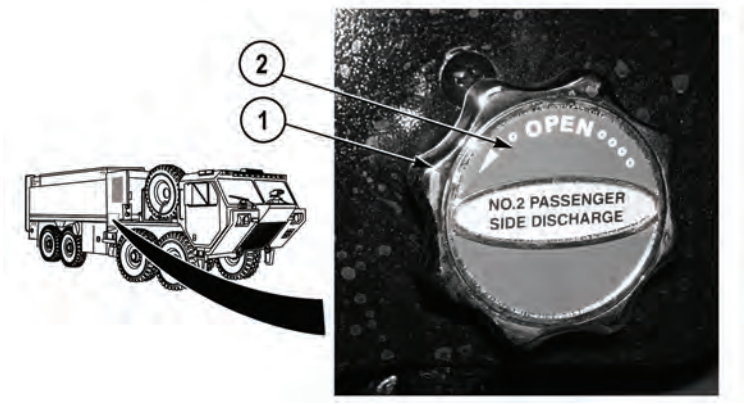
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Adhesive, Spray (WP 0399, Item 5)
Compound, Sealing, Pipe Thread (WP 0401, Item 11)
Tags, Identification (WP 0401, Item 22)
Locknut (1)

References
WP 0392, Fig. 14

Equipment Conditions
Pump house panel H access door opened (WP 0008)
Pump house panel P removed (WP 0341)

REMOVAL

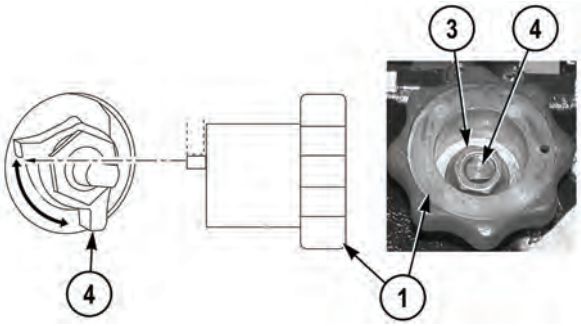


1. Turn valve handle (1) clockwise to closed position.

NOTE

- Cover is attached to valve handle with adhesive.
- Note position of cover prior to removal to ensure proper installation.
- Use care when removing cover.

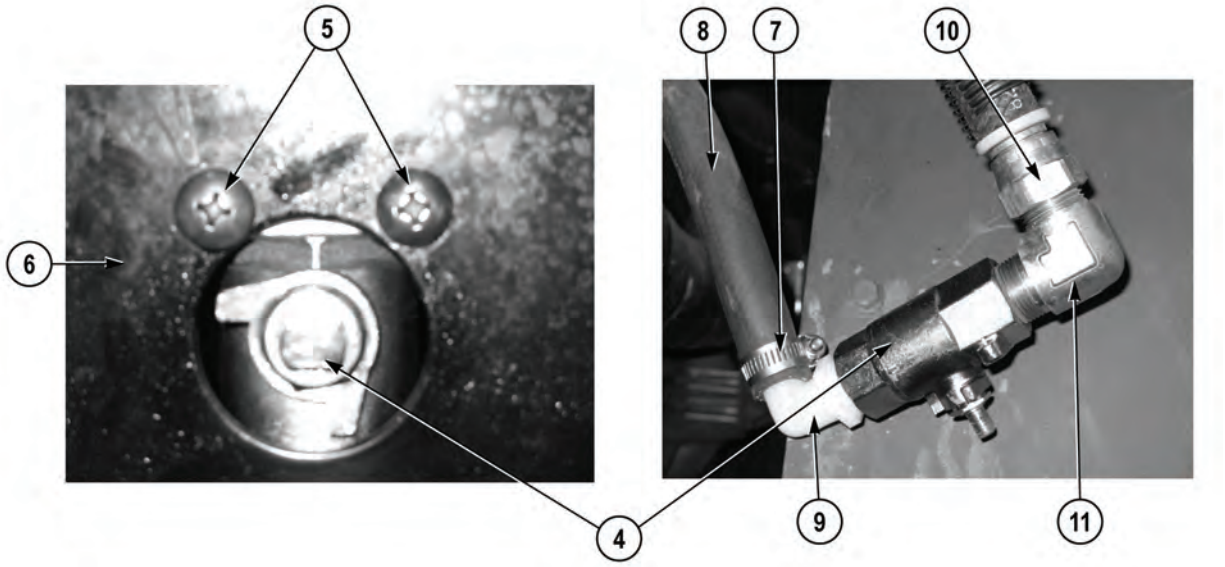
2. Pry cover (2) from valve handle (1).



NOTE

- Stop on valve handle is positioned between 90 degrees indent on valve.
- Note position of valve handle on valve prior to removal to ensure proper installation.

3. Remove locknut (3) and valve handle (1) from valve (4). Discard locknut.



4. Remove two screws (5) and valve (4) from manual valve control mounting bracket (6).

NOTE

Tag and mark hoses prior to removal to ensure proper installation.

5. Loosen clamp (7) and remove hose (8) from elbow (9).

6. Remove hose (10) from elbow (11).

NOTE

Note location of elbow prior to removal to ensure proper installation.

7. Remove elbow (9) and elbow (11) from valve (4).

END OF TASK

INSTALLATION

WARNING



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1. Apply sealing compound to threads of elbow (9), and elbow (11).

NOTE

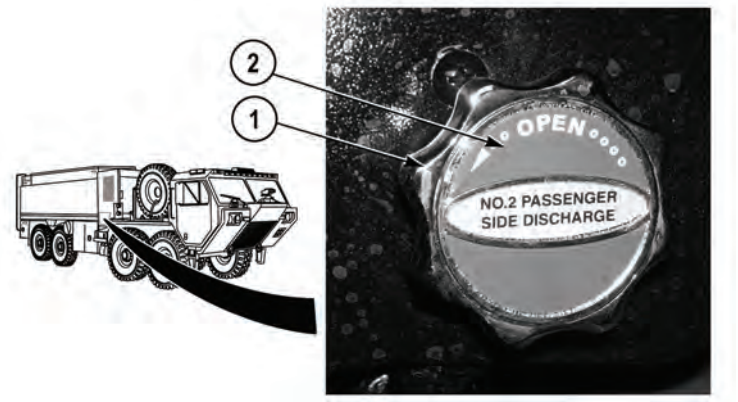
Install elbows as noted prior to removal.

2. Install elbow (11) and elbow (9) on valve (4).
3. Install hose (10) on elbow (11).
4. Install hose (8) on elbow (9) and tighten clamp (7).
5. Install valve (4) on manual valve control mounting bracket (6) with two screws (5).

NOTE

Install handle in the position as noted prior to removal.

6. Install valve handle (1) on valve (4) with locknut (3).



WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

NOTE

Install cover on handle as noted prior to removal.

7. Apply adhesive to back of cover (2).
8. Install cover (2) on handle (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Close pump house panel H access door (WP 0008)
2. Install pump house panel P (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

THERMAL RELIEF VALVE REPLACEMENT

INITIAL SETUP:

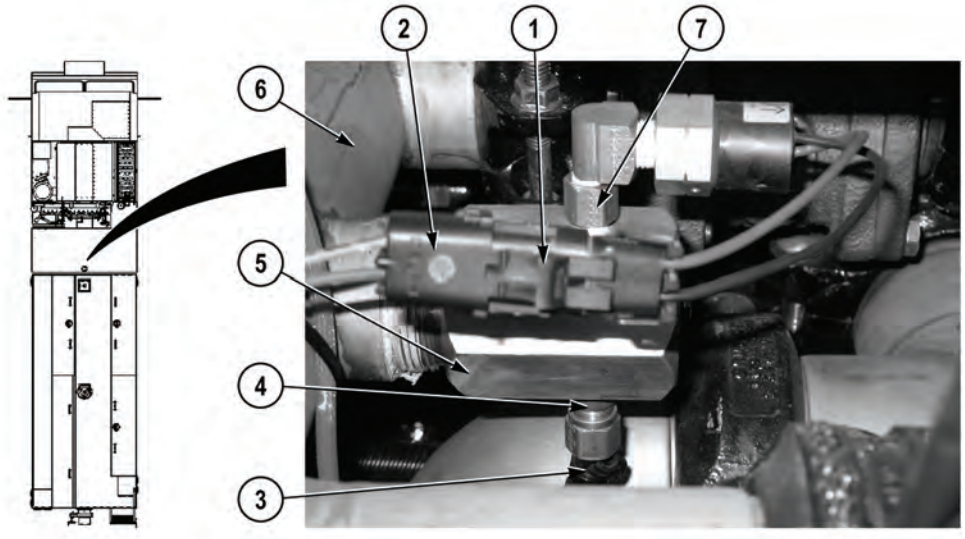
Tools and Special Tools
Standard Automotive Tool Set (SATS), (WP 0399, Item 15)
• Wrench, Adjustable, 18”
Tool Kit, General Mechanic’s: Automotive (WP 0399, Item 17)

Materials/Parts
Compound, Sealing, Pipe Thread (WP 0401, Item 11)

References
WP 0320

Equipment Conditions
Pump house panel G removed (WP 0341)

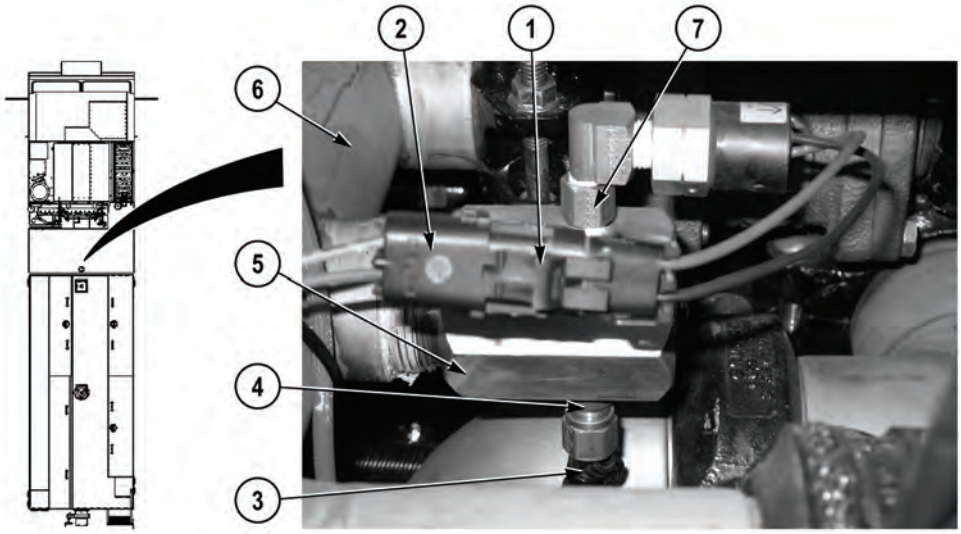
REMOVAL



1. Disconnect thermal relief valve switch connector (1) from pump house wire harness connector (2).
2. Remove drain line (3) from fitting (4).
3. Remove thermal relief valve (5) from manifold (6) (WP 0320).
4. Remove fitting (7) from thermal relief valve (5).
5. Remove fitting (4) from thermal relief valve (5).

END OF TASK

INSTALLATION



WARNING



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CAUTION

Use pipe thread sealing compound sparingly only on pipe threads. Do not apply compound to hose connections. Failure to comply may result in damage to equipment.

1. Apply sealing compound to threads of two fittings (4) and (7).
2. Install fitting (4) on thermal relief valve (5).
3. Install fitting (7) on thermal relief valve (5).
4. Install thermal relief valve (5) on manifold (6) (WP 0320).
5. Install drain line (3) on fitting (4).
6. Connect thermal relief valve switch connector (1) on pump house wire harness connector (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Install pump house panel G (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

MANUAL PRIMER HANDLE REPLACEMENT

INITIAL SETUP:

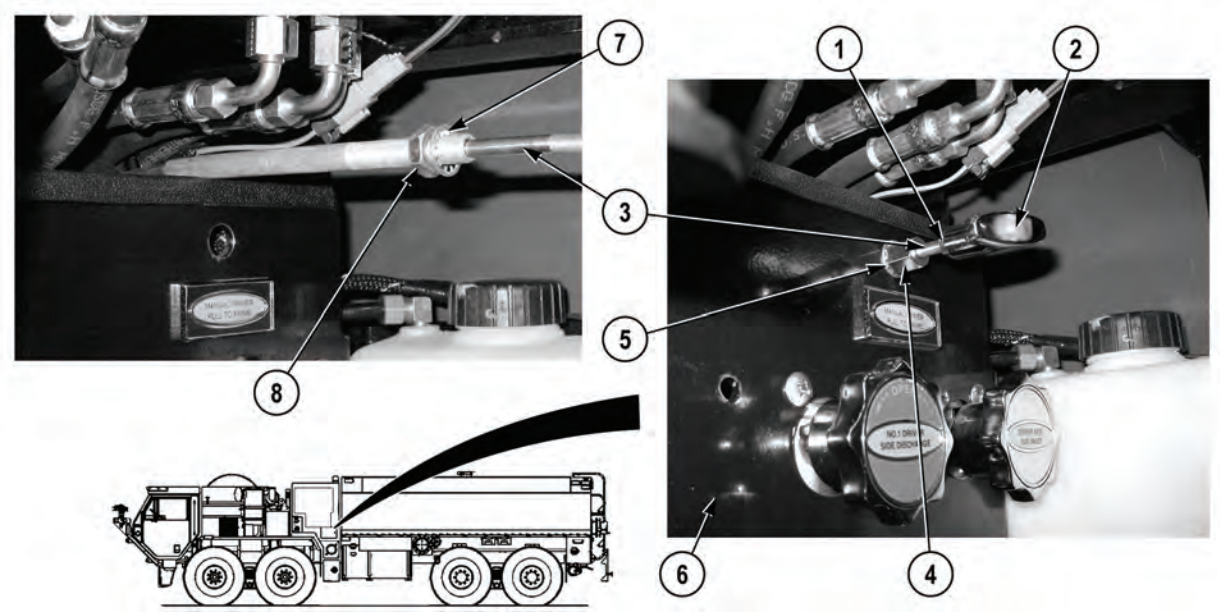
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Lockwasher (2)

References
WP 0392, Fig. 18

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)

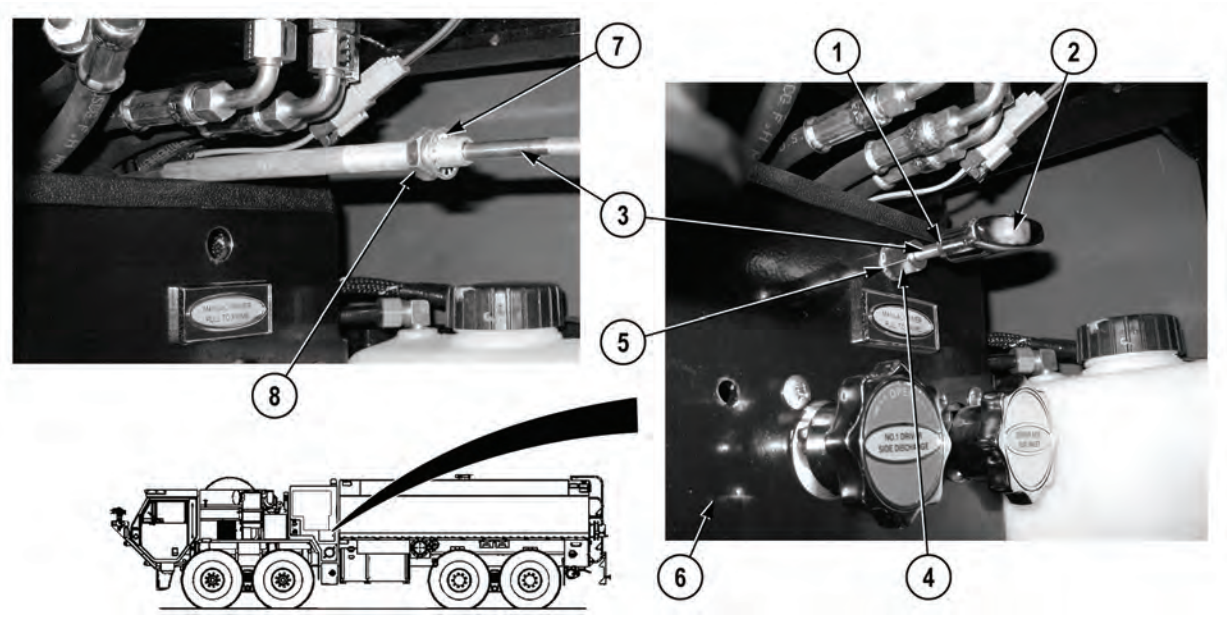
REMOVAL



1. Loosen jam nut (1) and remove handle (2) from cable (3).
2. Remove jam nut (1) from cable (3).
3. Remove nut (4), lockwasher (5), and cable (3) from bracket (6). Discard lockwasher.
4. Remove lockwasher (7) and nut (8) from cable (3). Discard lockwasher.

END OF TASK

INSTALLATION



1. Position nut (8) and lockwasher (7) on cable (3).
2. Install cable (3) on bracket (6) with lockwasher (5) and nut (4).
3. Position jam nut (1) on cable (3).
4. Install handle (2) on cable (3) and tighten jam nut (1).

FOLLOW-ON MAINTENANCE

1. Check for proper operation and leaks
2. Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PRIMER PUMP REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

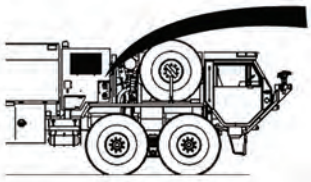
Materials/Parts
Compound, Sealing, Pipe Thread (WP 0401, Item 11)
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)
Locknut (1)
Locknut (1)

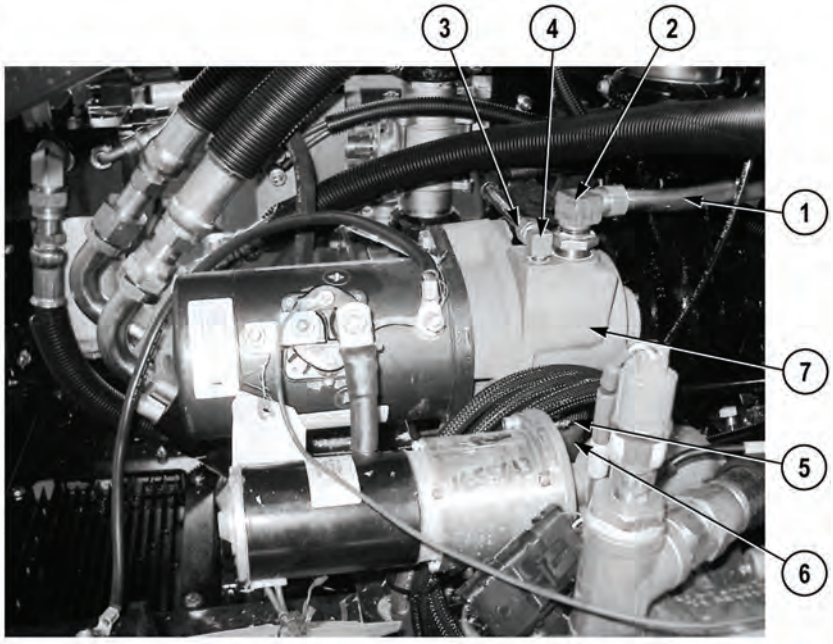
Materials/Parts (continued)
Locknut (1)
Lockwasher (2)

References
WP 0392, Fig. 17

Equipment Conditions
Hydraulic heat exchanger shroud panel A removed (WP 0135)

REMOVAL

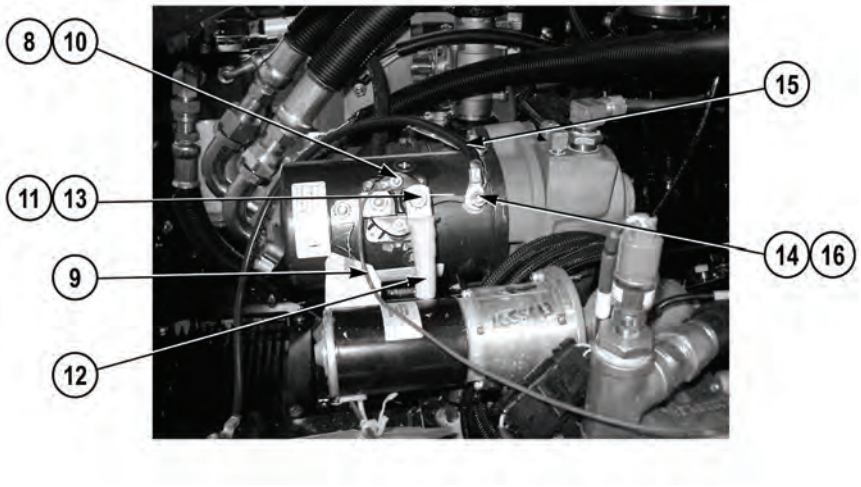




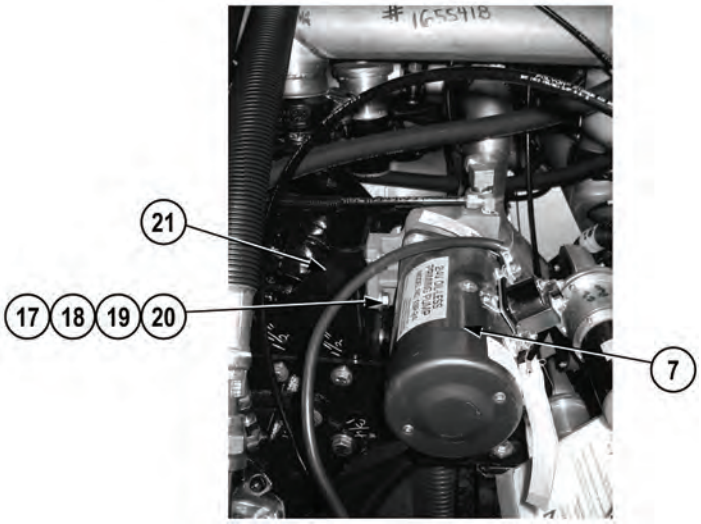
NOTE

- Tag and mark hoses and wires prior to removal to ensure proper installation.
- Remove cable ties as required.

1. Remove line (1) from elbow (2).
2. Remove supply line (3) from elbow (4).
3. Loosen clamp (5) and remove hose (6) from primer pump (7) and vehicle.



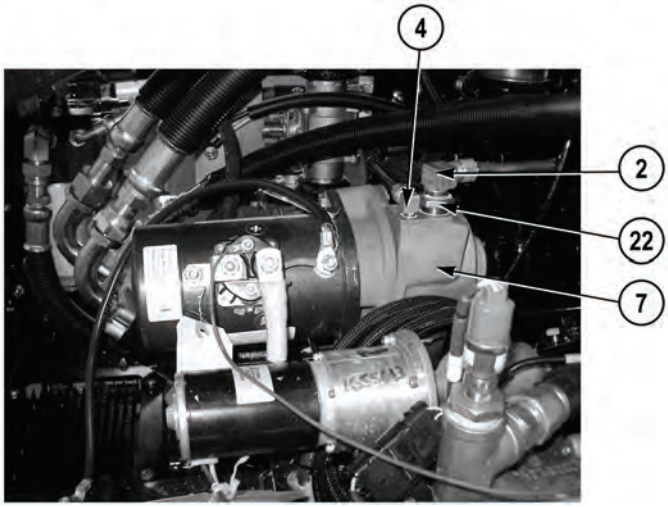
4. Remove locknut (8) and wire 2774 (9) from stud (10). Discard locknut.
5. Remove locknut (11) and high amperage cable (12) from stud (13). Discard locknut.
6. Remove locknut (14) and wire (15) from stud (16). Discard locknut.



NOTE

Note position of washers prior to removal to ensure proper installation.

7. Remove two nuts (17), lockwashers (18), four washers (19), two screws (20), and primer pump (7) from bracket (21). Discard lockwashers.



8. Remove elbow (2) and fitting (22) from primer pump (7).
9. Remove elbow (4) from primer pump (7).
10. Remove elbow (2) from fitting (22).

END OF TASK

INSTALLATION

WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

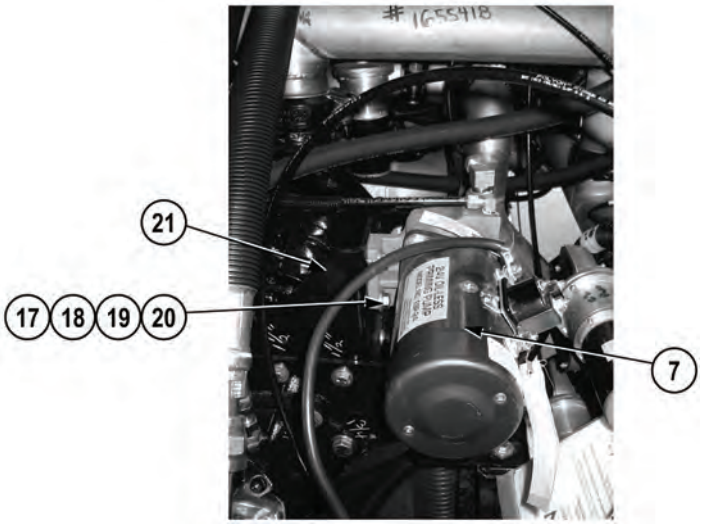
CAUTION

Use sealing compound sparingly only on pipe threads. Do not apply compound to hose connections. Damage to equipment may result.

NOTE

Install cable ties as required.

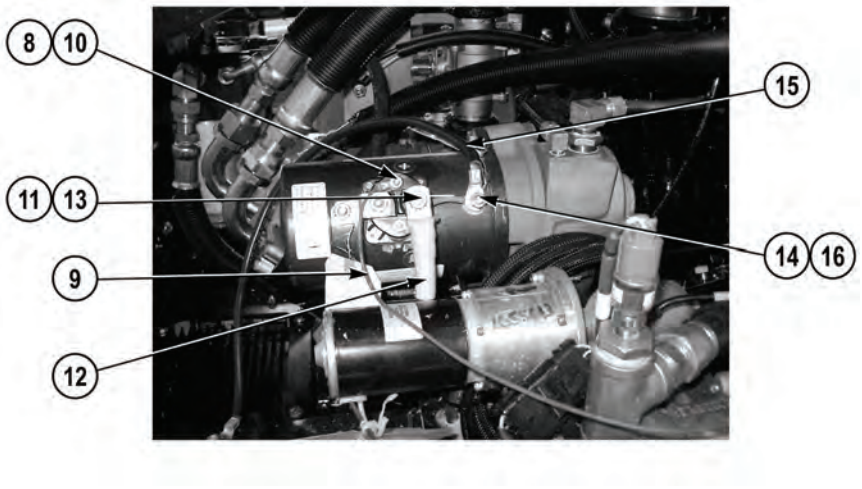
1. Apply sealing compound to threads of fitting (22) and two elbows (2) and (4).
2. Install elbow (2) on fitting (22).
3. Install fitting (22) and elbow (2) on primer pump (7).
4. Install elbow (4) on primer pump (7).



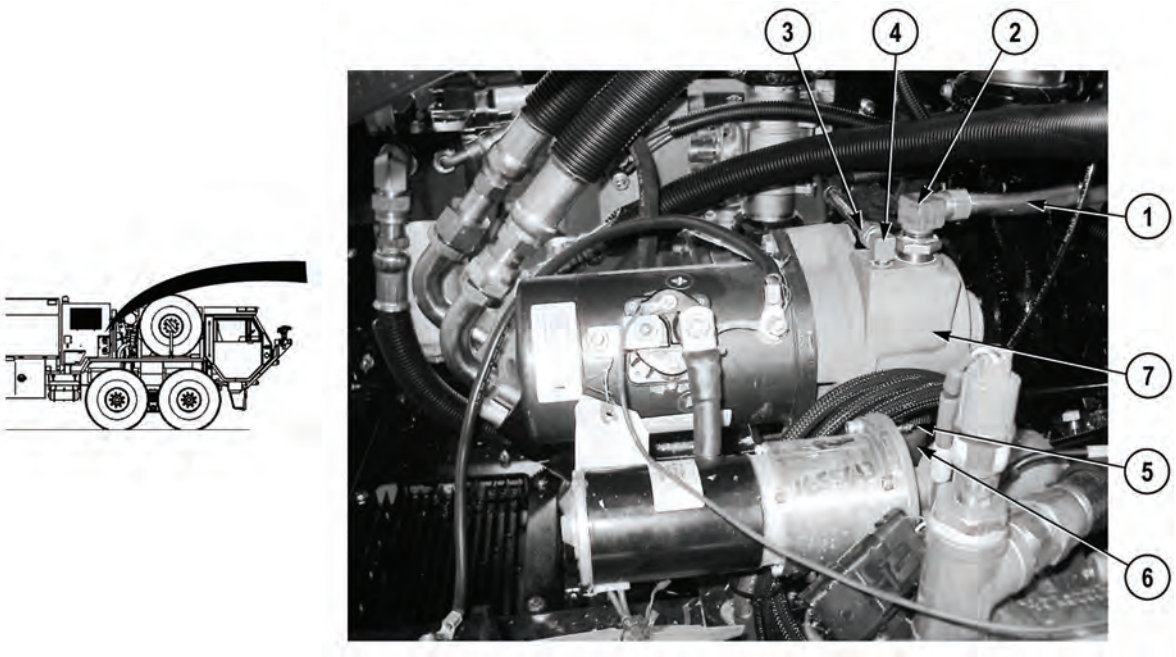
NOTE

Install washers as noted prior to removal.

5. Install primer pump (7) on bracket (21) with two screws (20), four washers (19), two lockwashers (18), and nuts (17).



6. Install wire (15) on stud (16) with locknut (14).
7. Install high amperage cable (12) on stud (13) with locknut (11).
8. Install wire 2774 (9) on stud (10) with locknut (8).



9. Install hose (6) on primer pump (7) and tighten clamp (5).
10. Install supply line (3) on elbow (4).
11. Install line (1) on elbow (2).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install hydraulic heat exchanger shroud panel A (WP 0135)
2. Check for proper operation and leaks

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PRIMER TANK AND BRACKET REPLACEMENT

INITIAL SETUP:

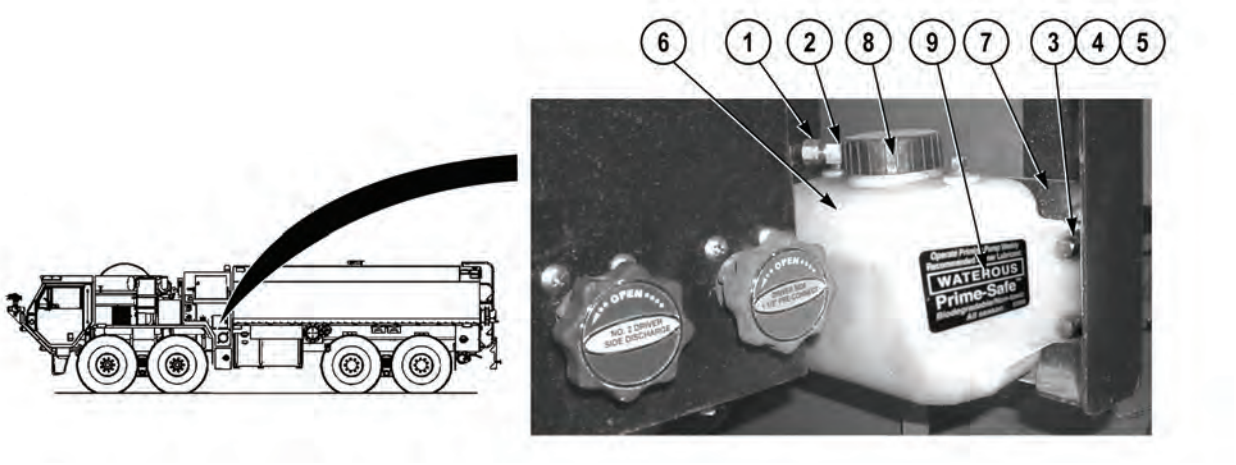
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Compound, Sealing, Pipe Thread (WP 0401, Item 11)
Lockwasher (4)
Lockwasher (2)

References
WP 0328
WP 0392, Fig. 19

Equipment Conditions
Pump house panels B and D removed (WP 0341)

REMOVAL

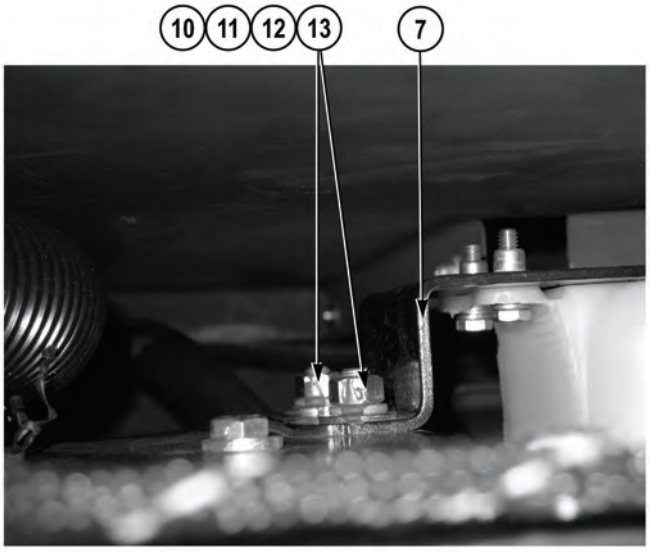


1. Remove primer line (1) from elbow (2).
2. Remove four screws (3), lockwashers (4), washers (5), and primer tank (6) from bracket (7). Discard lockwashers.

NOTE

- Pickup tube remains attached to elbow and is removed as an assembly.
- Note position of elbow prior to removal to ensure proper installation.

3. Remove elbow (2) from primer tank (6).
4. Remove cap (8) from primer tank (6).
5. Remove decal (9) from primer tank (6) (WP 0328).



NOTE

Perform Step (6) if bracket needs to be removed.

6. Remove two nuts (10), lockwashers (11), four washers (12), two screws (13), and bracket (7) from vehicle. Discard lockwashers.

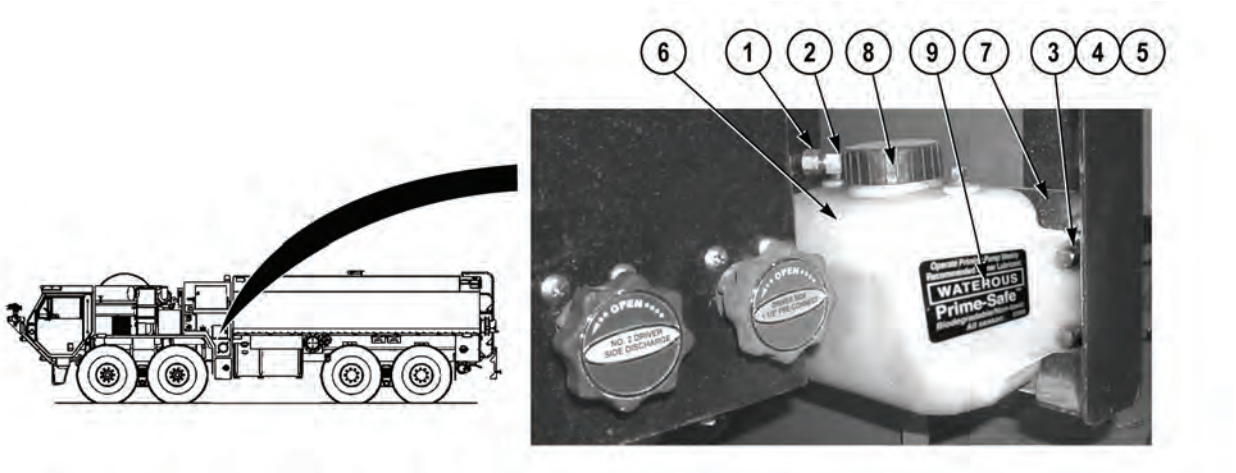
END OF TASK

INSTALLATION

NOTE

Perform Step (1) if bracket was removed.

1. Install bracket (7) on vehicle with two screws (13), four washers (12), two lockwashers (11), and nuts (10).
2. Install decal (9) on prime tank (6) (WP 0328).



3. Install cap (8) on primer tank (6).

WARNING



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4. Apply sealing compound to threads of elbow (2).

NOTE

Install elbow in same position as noted prior to removal.

5. Install elbow (2) on primer tank (6).
6. Install primer tank (6) on bracket (7) with four washers (5), lockwashers (4), and screws (3).
7. Install primer line (1) on elbow (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Install pump house panels B and D (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PRIMER VALVE CABLE REPLACEMENT

INITIAL SETUP:

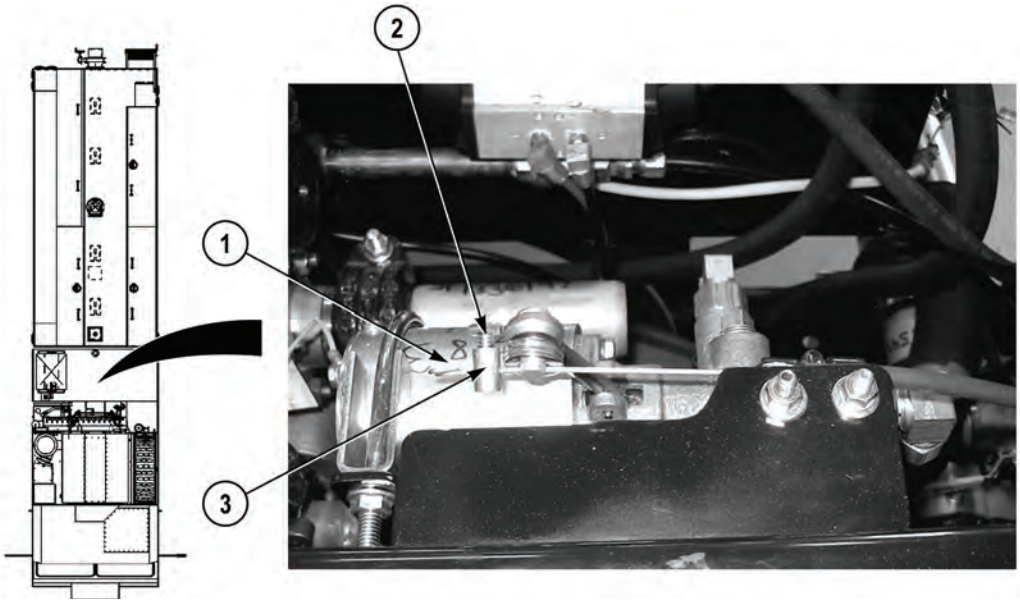
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Ties, Cable, Plastic (WP 0401, Item 25)
Lockwasher (2)

References
WP 0392, Fig. 18

Equipment Conditions
Manual primer handle removed (WP 0162)
Pump house panel K removed (WP 0341)

REMOVAL



1. Straighten cable wire (1).

WARNING

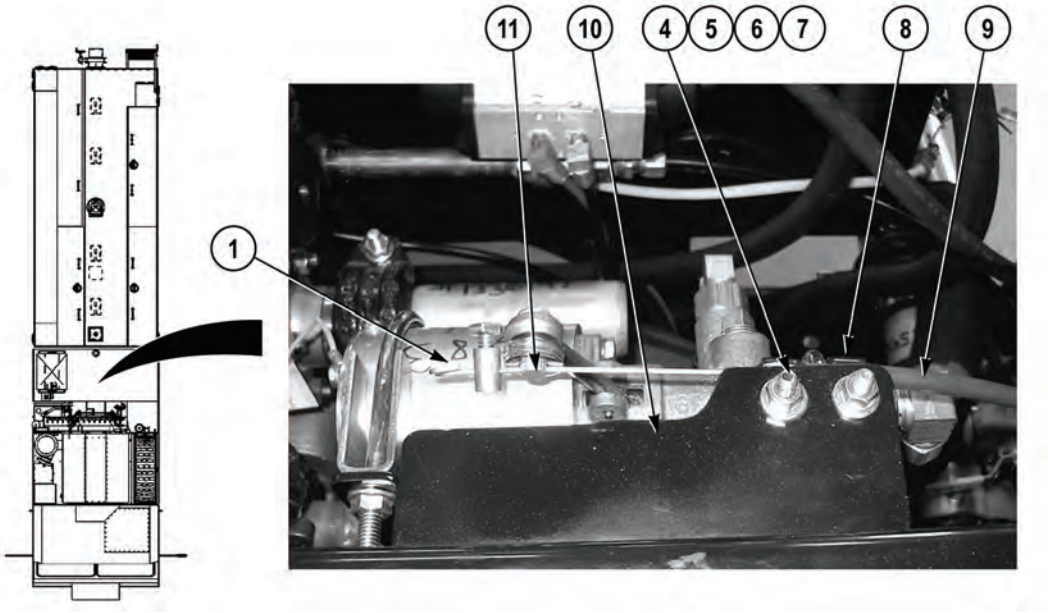


Care must be taken when removing cable wire from arm and bracket. Wire is under tension and must be held until safely repositioned. Failure to comply may result in injury to personnel.

NOTE

Note position of retainer on cable wire prior to removal to ensure proper installation.

2. Loosen screw (2) and remove retainer (3) from cable wire (1).



NOTE

Note position of cable on bracket prior to removal to ensure proper installation.

3. Remove two nuts (4), lockwashers (5), four washers (6), two screws (7), cushion clips (8), and cable (9) from bracket (10). Discard lockwashers.

NOTE

- Pin and four washers remain on primer valve.
- Number of washers may vary.

4. Remove cable wire (1) from pin (11).

NOTE

- Note routing of cable in pump house prior to removal to ensure proper installation.
- Remove cable ties as required.

5. Remove cable (9) from vehicle.

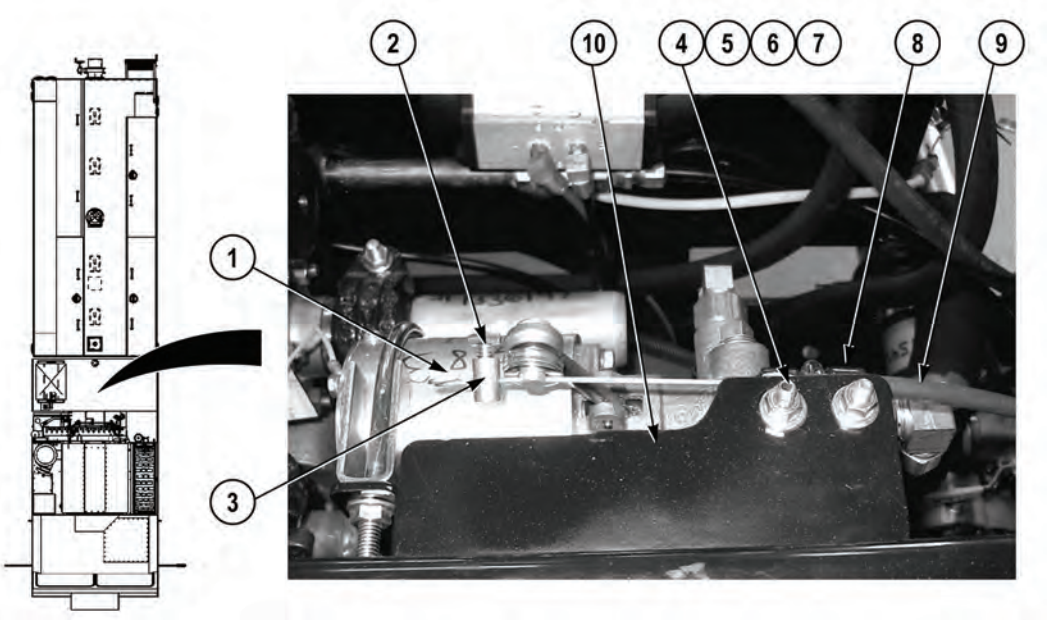
END OF TASK

INSTALLATION

NOTE

- Route cable in pump house as noted prior to removal.
- Install cable ties as required.

1. Position cable (9) on vehicle.
2. Install cable wire (1) through pin (11).



NOTE

Install cable on bracket as noted prior to removal.

3. Install cable (9) on bracket (10) with two cushion clips (8), screws (7), four washers (6), two lockwashers (5), and nuts (4). Do not tighten screws.

NOTE

Install retainer on cable wire as noted prior to removal.

4. Install retainer (3) on cable wire (1) with screw (2).

NOTE

Cable must be pushed down all the way at pump panel before bending cable.

5. Bend cable wire (1).

6. Tighten two screws (7).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install pump house panel K (WP 0341)

2. Install manual primer handle (WP 0162)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PRIMER VALVE CONTROL SOLENOID REPLACEMENT

INITIAL SETUP:

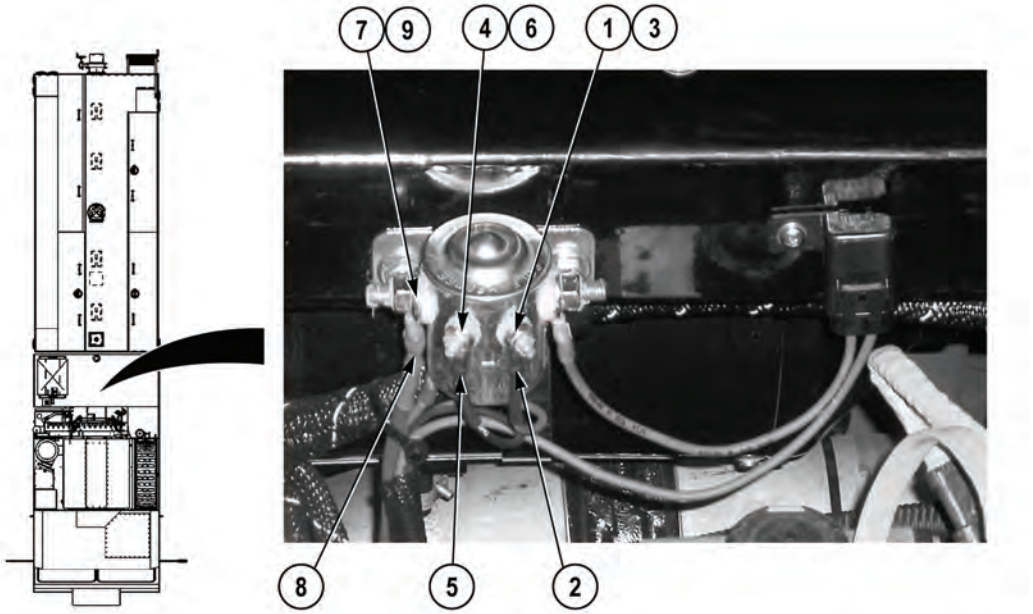
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Compound, Sealing (WP 0401, Item 10)
Tags, Identification (WP 0401, Item 22)
Lockwasher (2)

References
WP 0392, Fig. 17, 18

Equipment Conditions
Pump house panel K removed (WP 0341)

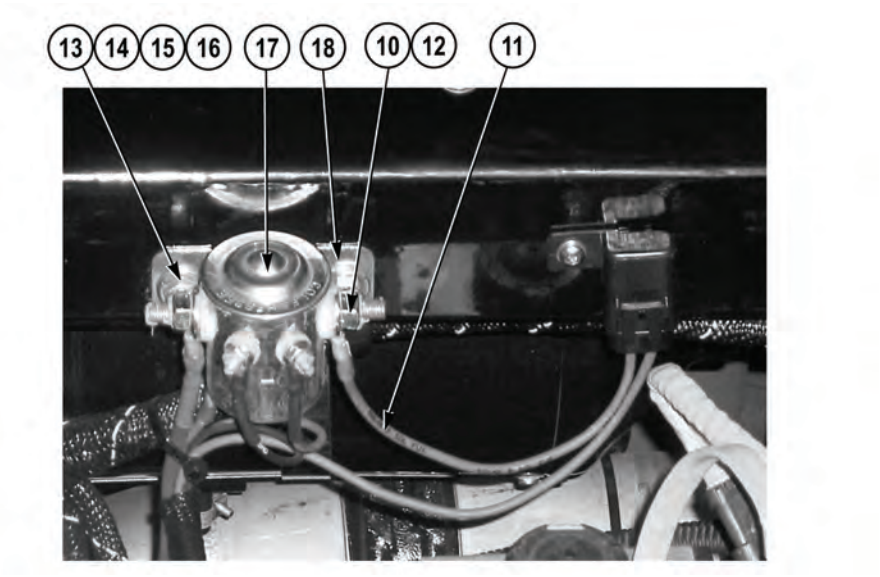
REMOVAL



NOTE

Tag and mark wires prior to removal to ensure proper installation.

1. Remove nut (1) and wire 1590 (2) from stud (3).
2. Remove nut (4) and wire 1640 (5) from stud (6).
3. Remove nut (7) and power wire (8) from stud (9).

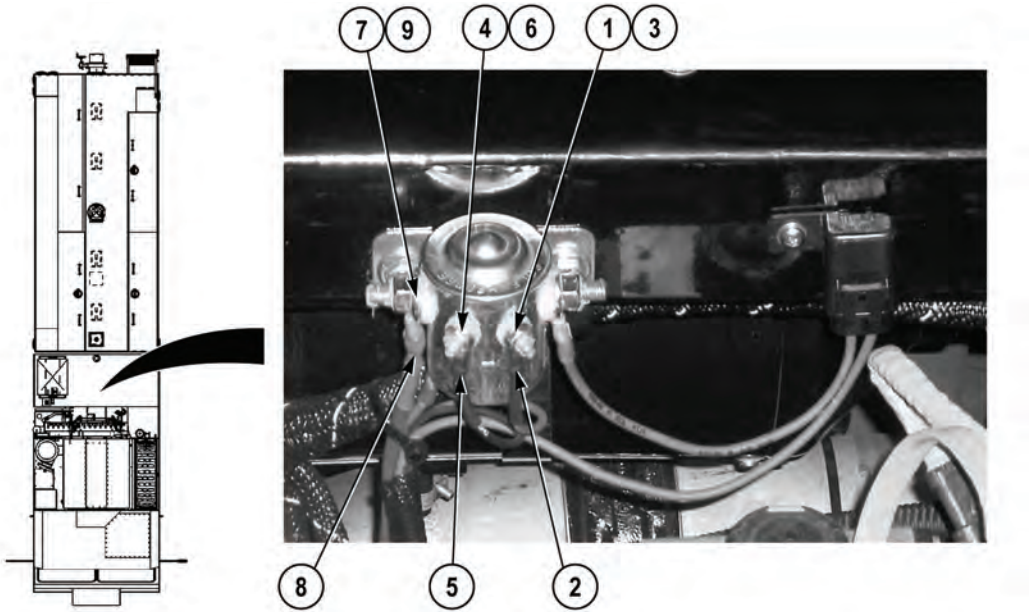


4. Remove nut (10) and wire 4064 (11) from stud (12).
5. Remove two nuts (13), lockwashers (14), four washers (15), two screws (16), and solenoid (17) from bracket (18). Discard lockwashers.

END OF TASK

INSTALLATION

1. Install solenoid (17) on bracket (18) with two screws (16), four washers (15), two lockwashers (14), and nuts (13).
2. Install wire 4064 (11) on stud (12) with nut (10).



3. Install power wire (8) on stud (9) with nut (7).
4. Install wire 1640 (5) on stud (6) with nut (4).
5. Install wire 1590 (2) on stud (3) with nut (1).

WARNING



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6. Apply sealing compound to ends of four wires (2), (5), (8), and (11), nuts (1), (4), (7), and (10), and studs (3), (6), (9), and (12).

END OF TASK

FOLLOW-ON MAINTENANCE

Install pump house panel K (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PRIMER VALVE REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

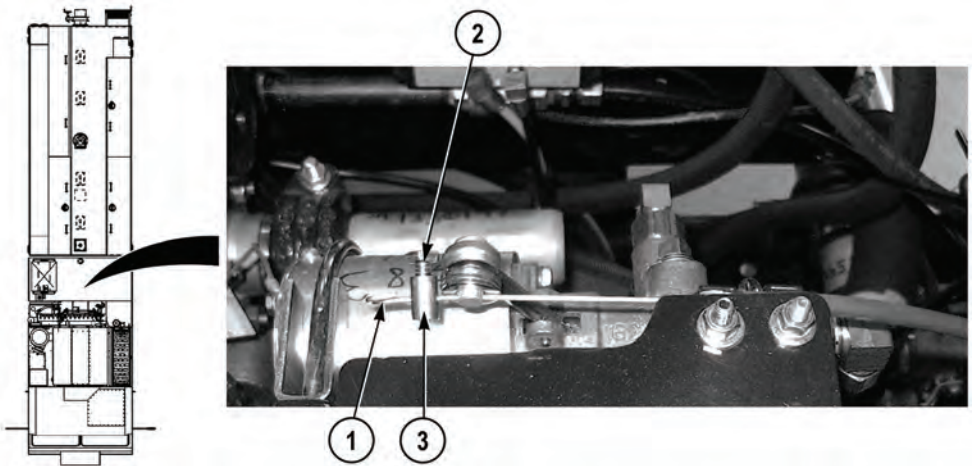
Materials/Parts
Compound, Sealing, Pipe Thread (WP 0401, Item 11)
Tags, Identification (WP 0401, Item 22)
Lockwasher (2)
Locknut (1)
Lockwasher (1)

Materials/Parts (continued)
Locknut (4)
Lockwasher (2)

References
WP 0392, Fig. 18

Equipment Conditions
Pump house panel K removed (WP 0341)

REMOVAL



1. Straighten wire (1).

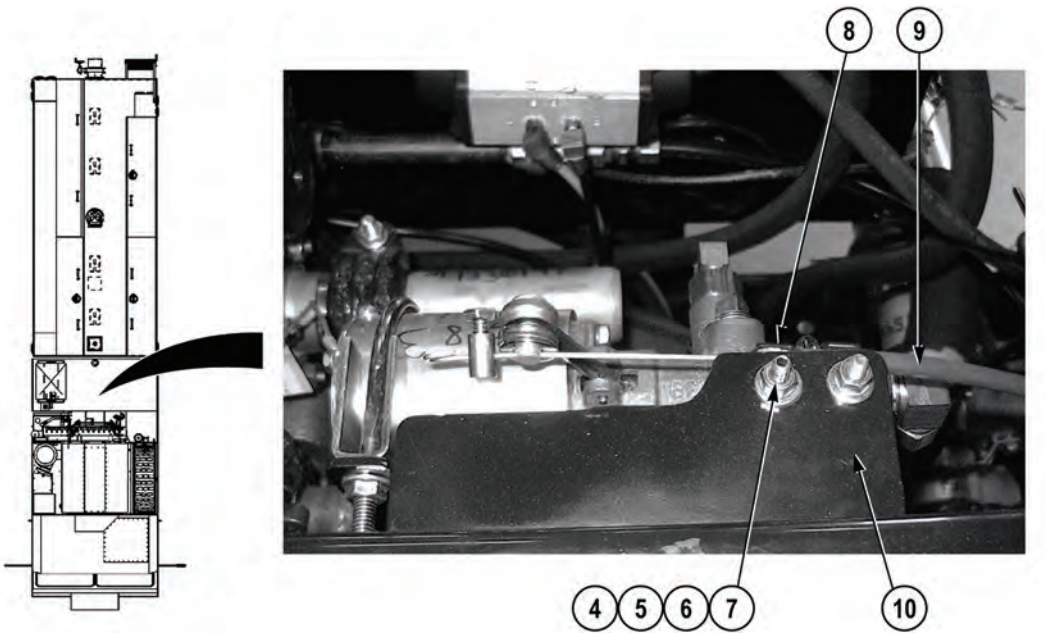
WARNING

Care must be taken when removing wire from arm and bracket. Wire is under tension and must be held until safely repositioned. Failure to comply may result in injury to personnel.

NOTE

Note position of retainer prior to removal to ensure proper installation.

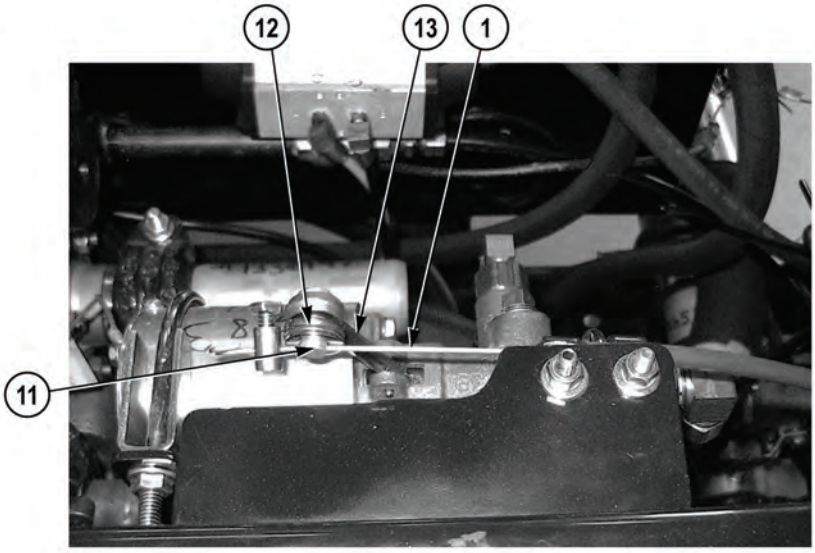
2. Loosen screw (2) and remove retainer (3) from wire (1).



NOTE

Note position of cable prior to removal to ensure proper installation.

3. Remove two nuts (4), lockwashers (5), four washers (6), two screws (7), cushion clips (8), and cable (9) from bracket (10). Discard lockwashers.

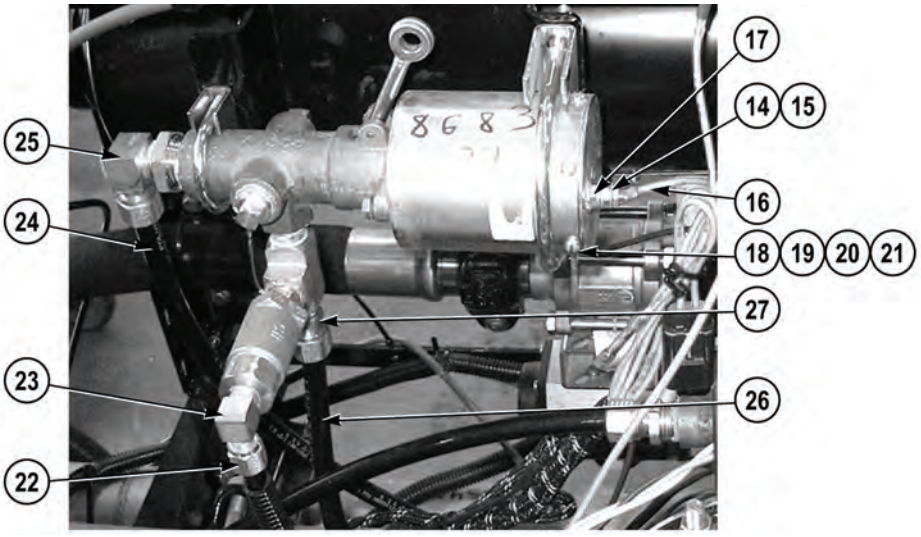


4. Remove wire (1) from pin (11).

NOTE

- Note position of washers prior to removal to ensure proper installation.
- Number of washers may vary.

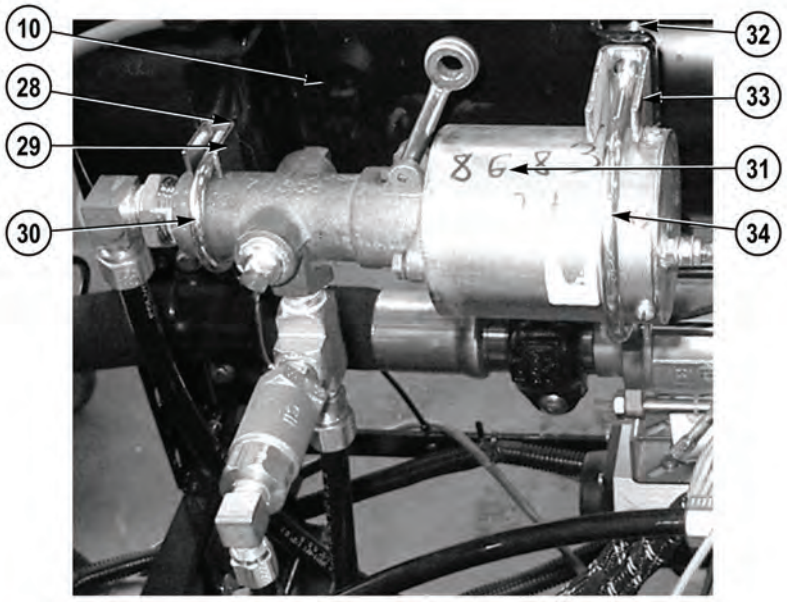
5. Remove pin (11) and four washers (12) from arm (13).



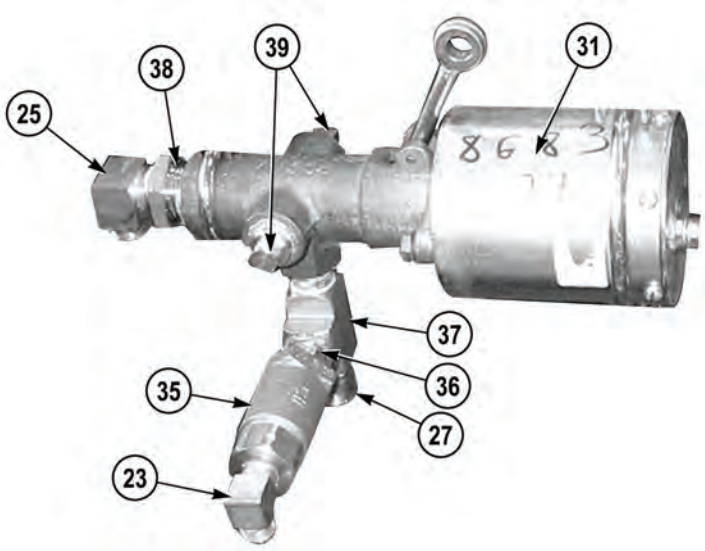
NOTE

Tag and mark wires and hoses prior to removal to ensure proper installation.

6. Remove locknut (14), washer (15), and wire 4065 (16) from stud (17). Discard locknut.
7. Remove screw (18), lockwasher (19), and ground wire 4068 (20) from stud (21). Discard lockwasher.
8. Remove line (22) from elbow (23).
9. Remove line (24) from elbow (25).
10. Remove line (26) from fitting (27).



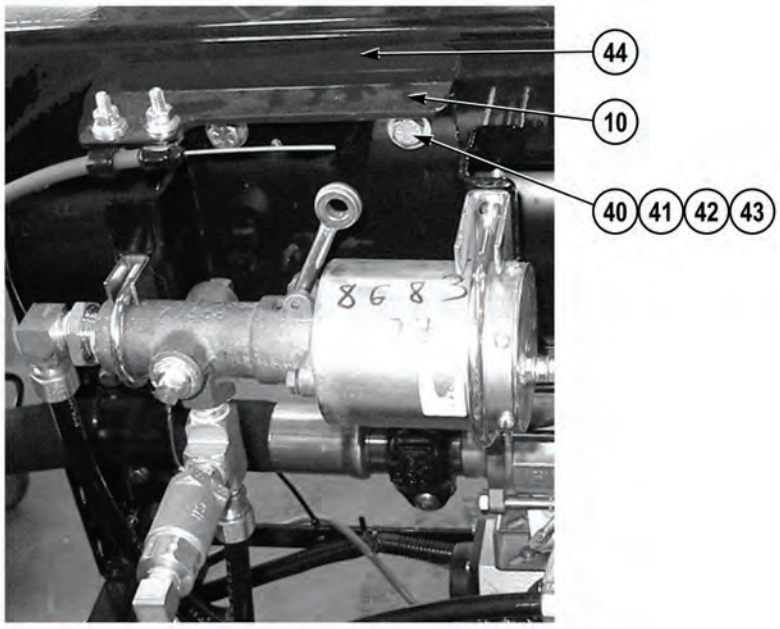
11. Remove two locknuts (28), cradle (29), and U-bolt (30) from bracket (10) and primer valve (31). Discard locknuts.
12. Remove two locknuts (32), cradle (33), U-bolt (34), and primer valve (31) from bracket (10). Discard locknuts.



NOTE

Note position of elbows and fittings prior to removal to ensure proper installation.

13. Remove elbow (23) from check valve (35).
14. Remove check valve (35) from fitting (36).
15. Remove two fittings (27) and (36) from tee (37).
16. Remove tee (37) from primer valve (31).
17. Remove elbow (25) from fitting (38).
18. Remove fitting (38) from primer valve (31).
19. Remove two plugs (39) from primer valve (31).

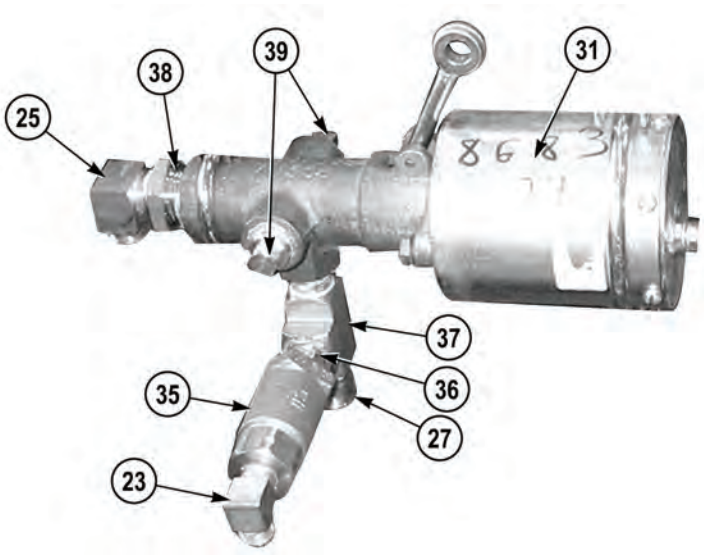


20. Remove two nuts (40), lockwashers (41), four washers (42), two screws (43), and bracket (10) from frame rail (44). Discard lockwashers.

END OF TASK

INSTALLATION

1. Install bracket (10) on frame rail (44) with two screws (43), four washers (42), two lockwashers (41), and nuts (40).



WARNING



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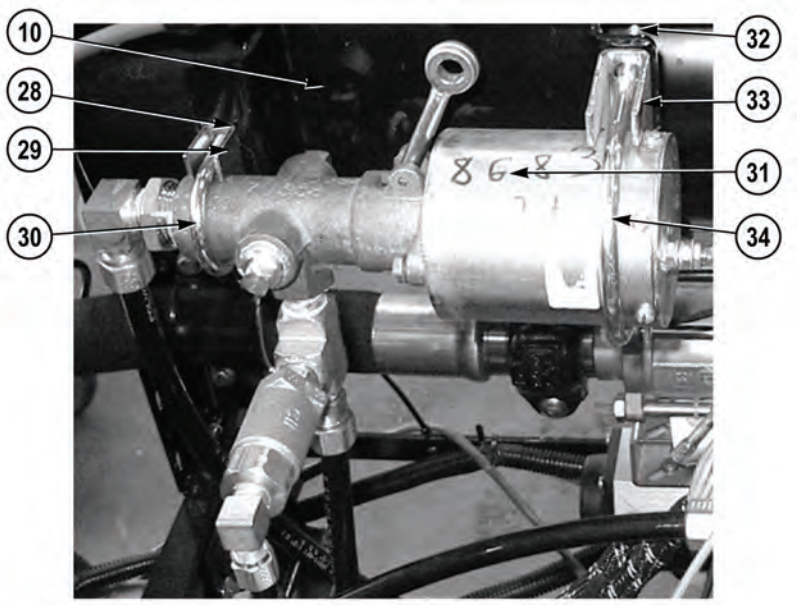
⚠ CAUTION

Use thread sealing compound sparingly only on pipe threads. Do not apply compound to hose connections. Failure to comply may result in damage to equipment.

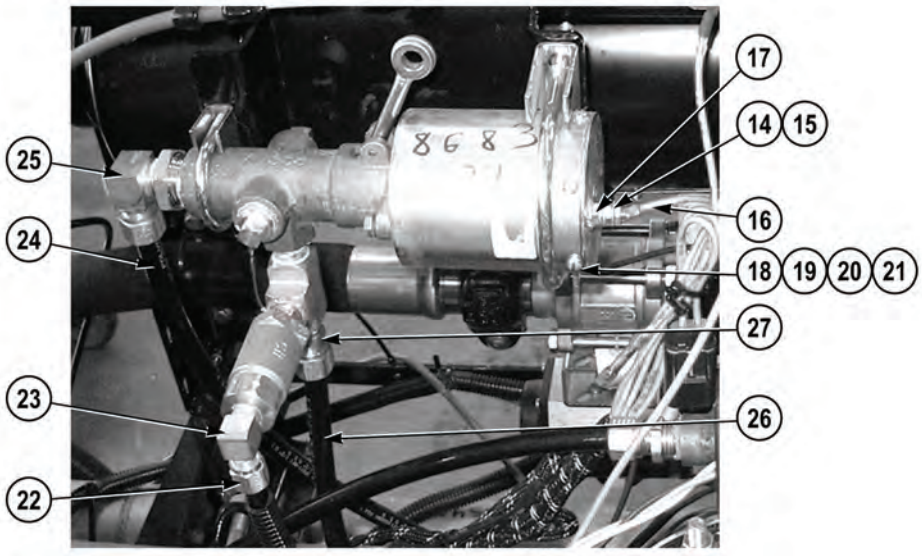
NOTE

Install elbows and fittings as noted prior to removal.

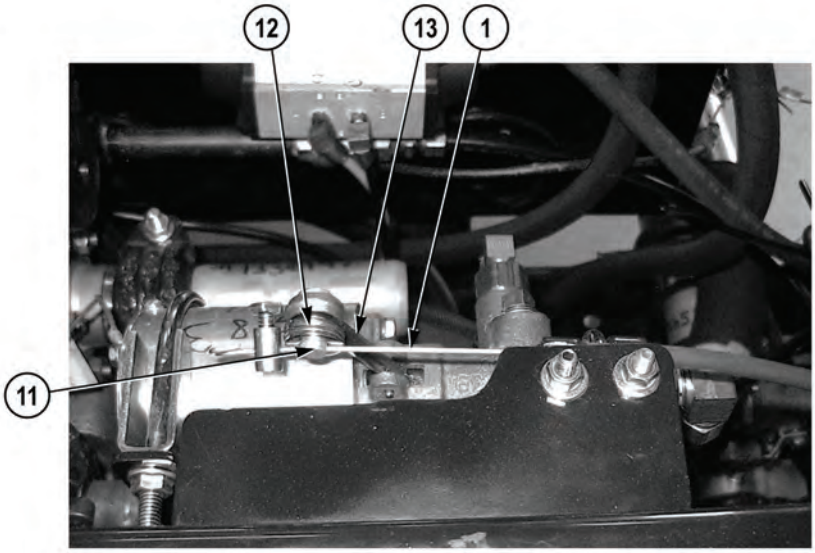
2. Apply sealing compound to threads of two plugs (39), tee (37), three fittings (27), (36), and (38), and two elbows (23) and (25).
3. Install two plugs (39) on primer valve (31).
4. Install fitting (38) on primer valve (31).
5. Install elbow (25) on fitting (38).
6. Install tee fitting (37) on primer valve (31).
7. Install two fittings (27) and (36) on tee (37).
8. Install check valve (35) on fitting (36).
9. Install elbow (23) on check valve (35).



10. Install primer valve (31) on bracket (10) with cradle (33), U-bolt (34), and two locknuts (32).
11. Install cradle (29) and U-bolt (30) on bracket (10) and primer valve (31) with two locknuts (28).



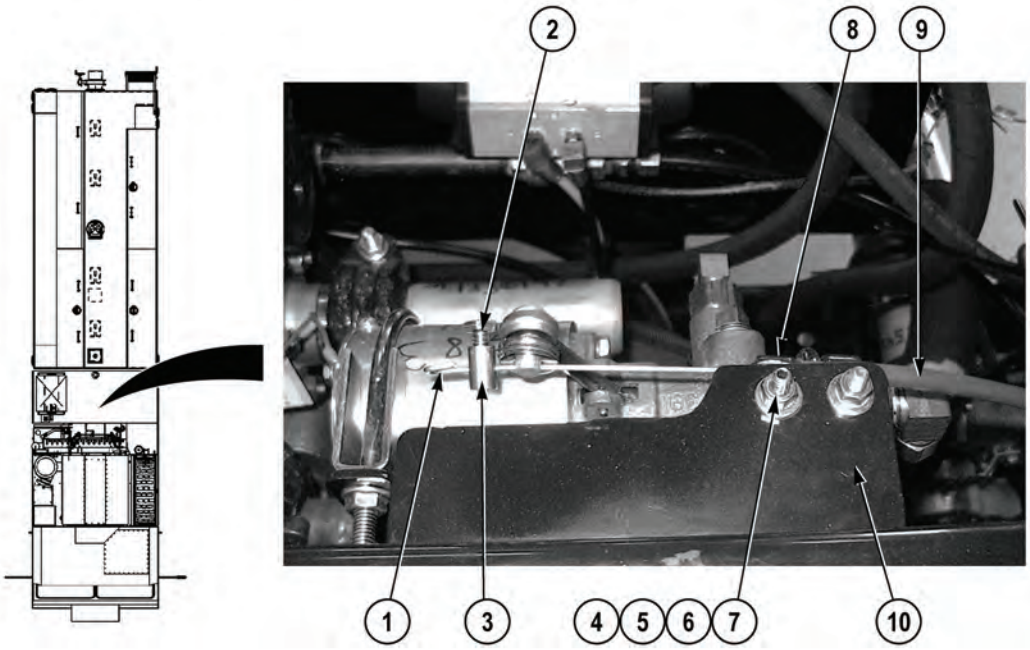
12. Install line (26) on fitting (27).
13. Install line (24) on elbow (25).
14. Install line (22) on elbow (23).
15. Install ground wire 4068 (20) on stud (21) with screw (18) and lockwasher (19).
16. Install wire 4065 (16) on stud (17) with washer (15) and locknut (14).



NOTE

Install washers in same position as noted prior to removal.

17. Position pin (11) and four washers (12) on arm (13).
18. Position wire (1) through pin (11).



WARNING



Care must be taken when installing wire on arm and bracket. Wire is under tension and must be held until safely repositioned. Failure to comply may result in injury to personnel.

NOTE

- Install cable in same position as noted prior to removal.
- Ensure manual primer handle is in closed position (pushed in) prior to installing cable on bracket.

19. Install cable (9) on bracket (10) with two cushion clips (8), screws (7), four washers (6), two lockwashers (5), and nuts (4). Do not tighten screws.

NOTE

Install retainer in same position as noted prior to removal.

20. Install retainer (3) on wire (1) with screw (2).

CAUTION

Cable wire must be bent a minimum of 90 degrees. Failure to comply may allow retainer to come loose and not allow primer cable to function.

21. Bend wire (1).

22. Tighten two screws (7).

END OF TASK

FOLLOW-ON MAINTENANCE

Install pump house panel K (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

BUMPER TURRET AUTO DRAIN VALVE REPLACEMENT

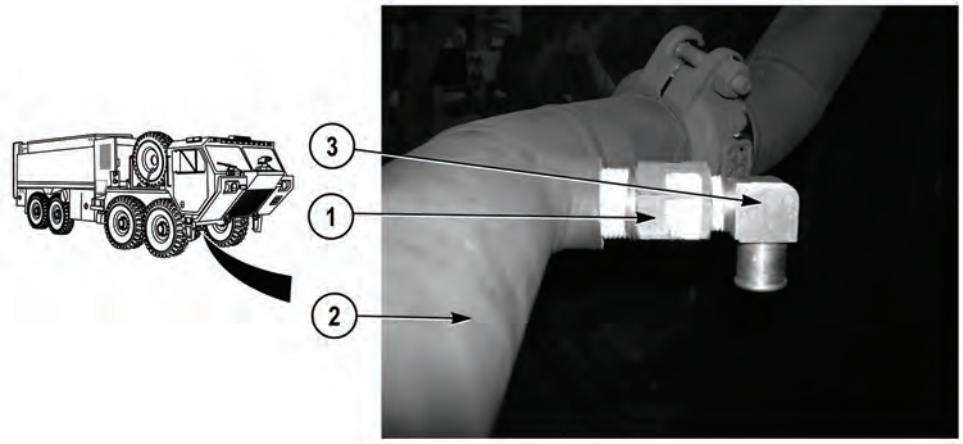
INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive
(WP 0399, Item 17)

Materials/Parts
Compound, Sealing, Pipe Thread
(WP 0401, Item 11)

Equipment Conditions
Skid plate grille removed (WP 0350)

REMOVAL



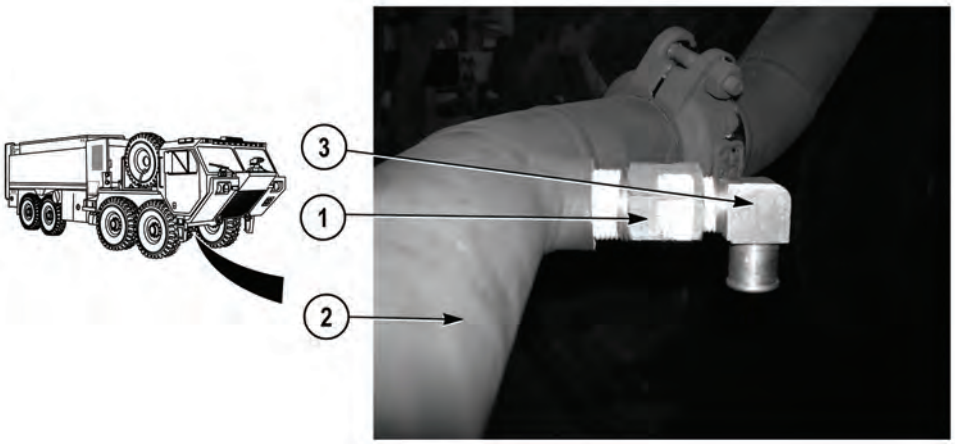
NOTE

Note position of drain valve and elbow prior to removal to ensure proper installation.

1. Remove drain valve (1) from pipe (2).
2. Remove elbow (3) from drain valve (1).

END OF TASK

INSTALLATION



WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

1. Apply sealing compound to threads of drain valve (1) and elbow (3).
2. Install elbow (3) on drain valve (1).

NOTE

Install drain valve and elbow as noted prior to removal.

3. Install drain valve (1) on pipe (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Install skid plate grille (WP 0350)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

FOAM TANK DRAIN VALVE REPLACEMENT

INITIAL SETUP:

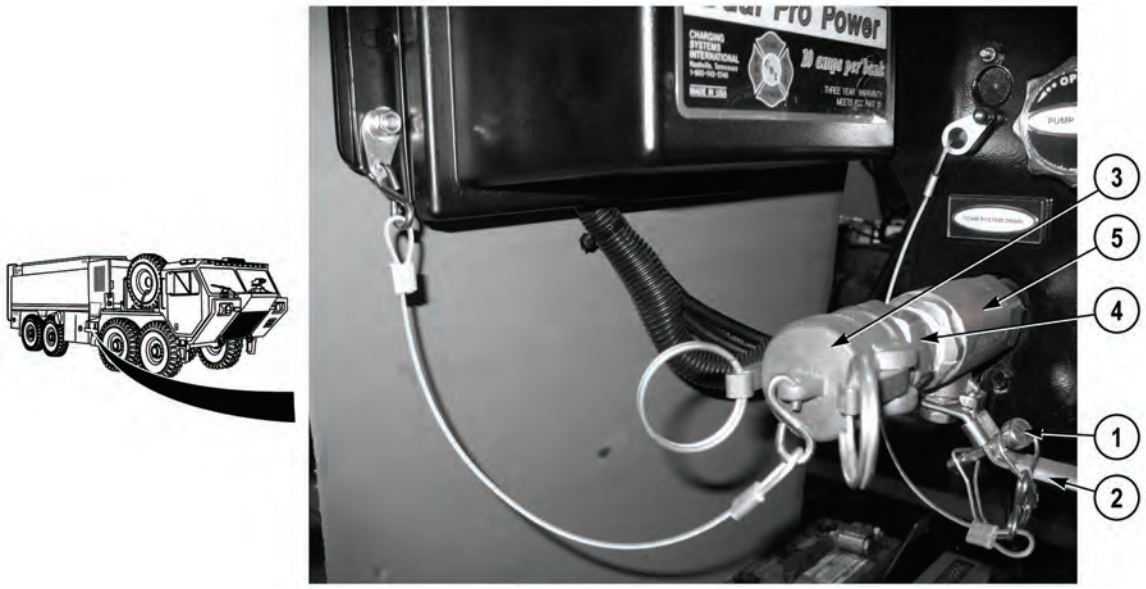
Tools and Special Tools
Drain Pan (WP 0399, Item 4)
Standard Automotive Tool Set (SATS), (WP 0399, Item 15)
• Wrench, Adjustable, 18”
Tool Kit, General Mechanic’s: Automotive (WP 0399, Item 17)

Materials/Parts
Compound, Sealing, Pipe Thread (WP 0401, Item 11)
Lockwasher (1)

References
WP 0370
WP 0392, Fig. 21

Equipment Conditions
Foam system service valve closed (WP 0004)
Pump house panel H removed (WP 0341)

REMOVAL

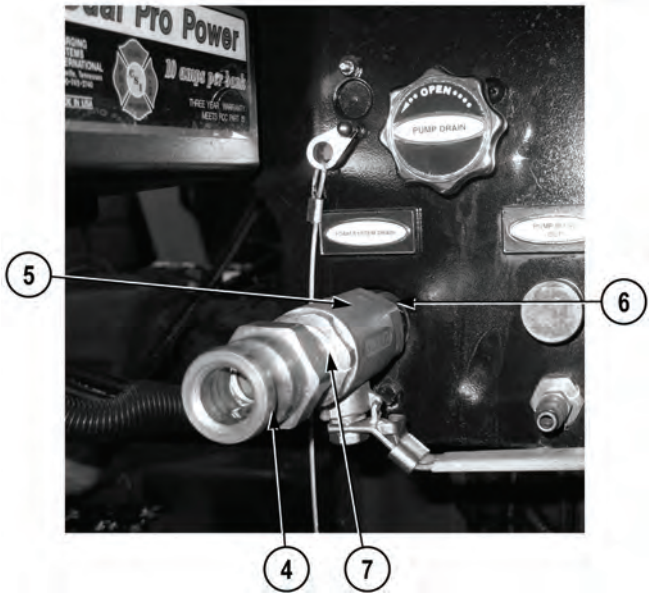


1. Remove snap pin (1) from handle (2).
2. Remove cap (3) from adapter (4).

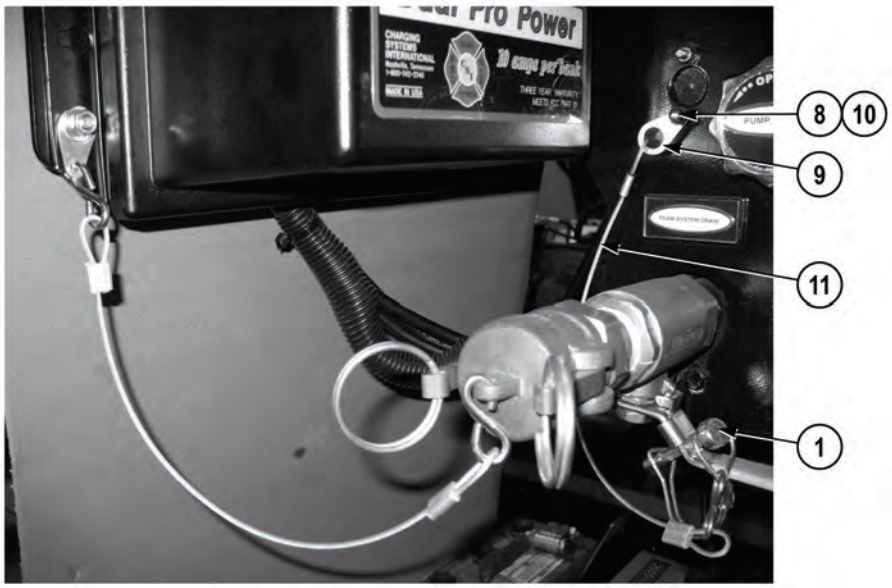
NOTE

Position drain pan under adapter to catch residual foam agent.

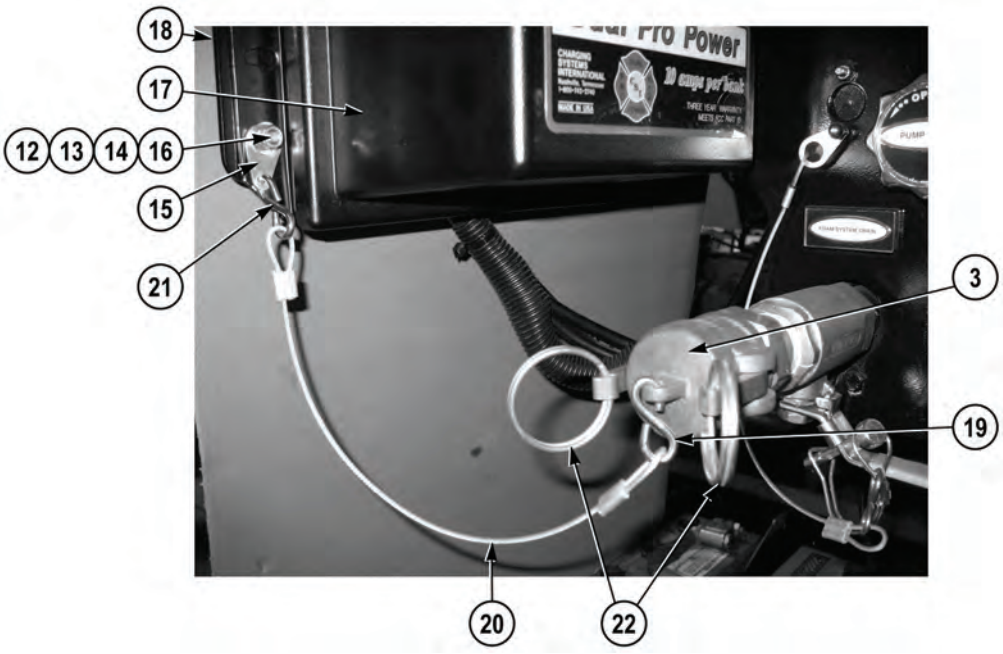
3. Open handle (2) on foam tank drain valve (5).



4. Remove foam tank drain valve (5) from bracket (6).
5. Remove foam tank drain valve (5) and adapter (4) from nipple (7).



6. Remove nut (8) and clip (9) from screw (10).
7. Remove wire rope (11) from clip (9) (WP 0370).



8. Remove nut (12), lockwasher (13), two washers (14), clip (15), and screw (16) from battery charger (17) and bracket (18). Discard lockwasher.
9. Remove S-hook (19) from cap (3) and wire rope (20).
10. Remove S-hook (21) from clip (15) and wire rope (20).
11. Remove two rings (22) from cap (3).

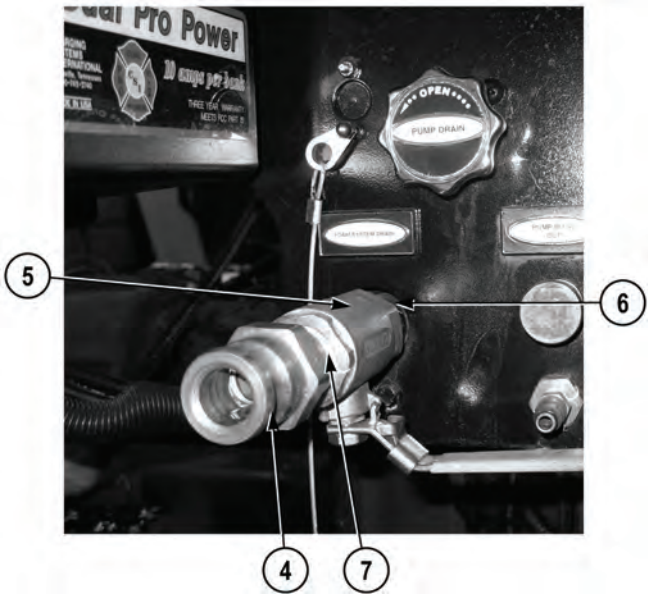
END OF TASK

INSTALLATION

1. Install two rings (22) on cap (3).
2. Install S-hook (21) on clip (15) and wire rope (20).
3. Install S-hook (19) on cap (3) and wire rope (20).
4. Install clip (15) on battery charger (17) and bracket (18) with screw (16), two washers (14), lockwasher (13), and nut (12).



5. Install wire rope (11) on clip (9) (WP 0370).
6. Install clip (9) on screw (10) with nut (8).

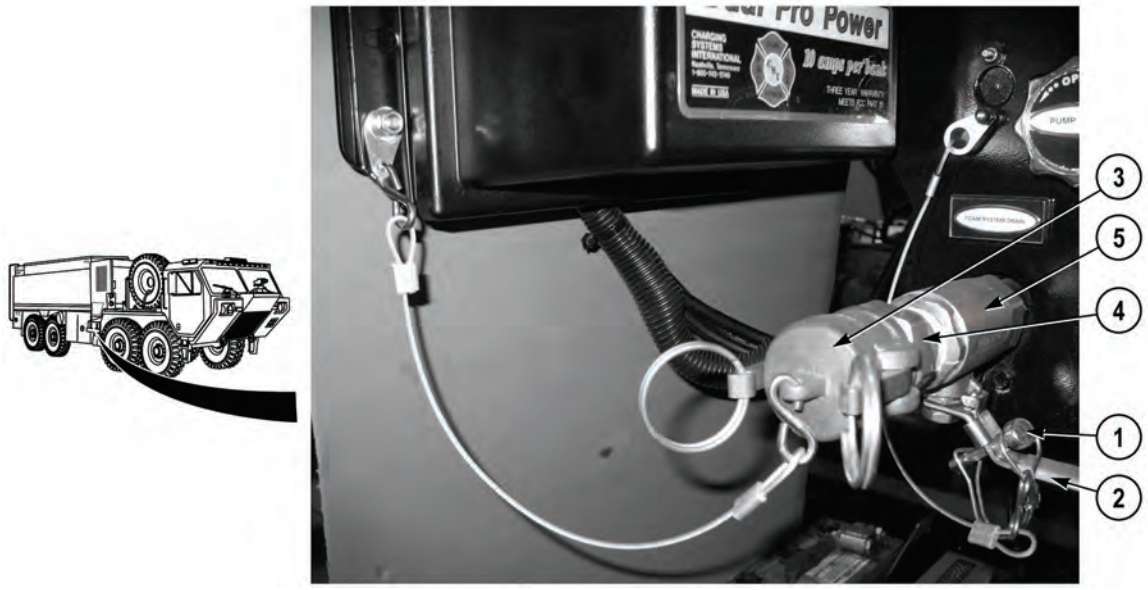


WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

7. Apply sealing compound to threads of nipple (7) and bracket (6).
8. Install foam tank drain valve (5) and adapter (4) on nipple (7).
9. Install foam tank drain valve (5) on bracket (6).



10. Close handle (2) on foam tank drain valve (5).
11. Install cap (3) on adapter (4).
12. Install snap pin (1) on handle (2).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Open foam system service valve (WP 0004)
2. Install pump house panel H (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

WATER TANK DRAIN VALVE REPLACEMENT

INITIAL SETUP:

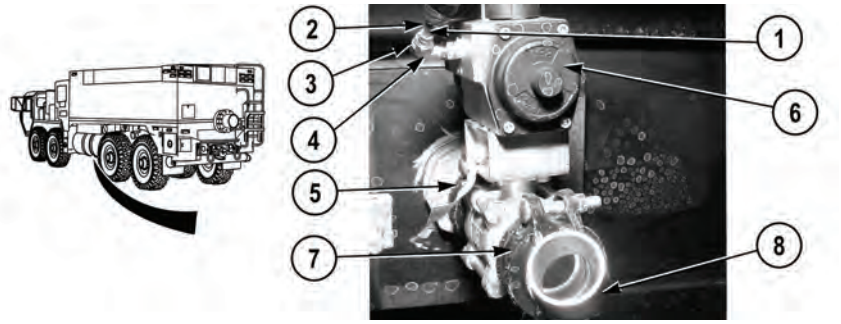
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Compound, Sealing, Pipe Thread (WP 0401, Item 11)
Tags, Identification (WP 0401, Item 22)

References
WP 0315

Equipment Conditions
Water tank drained (WP 0014)
Air system drained (TM 9-2320-279-10)

REMOVAL



WARNING



Air lines could contain residual air pressure. Air lines under pressure will move violently when removed. Ensure air system is completely drained prior to removing air lines. Failure to comply may result in serious injury to personnel.

NOTE

Tag and mark air lines prior to removal to ensure proper installation.

1. Remove two air lines (1) and (2) from elbows (3) and (4).

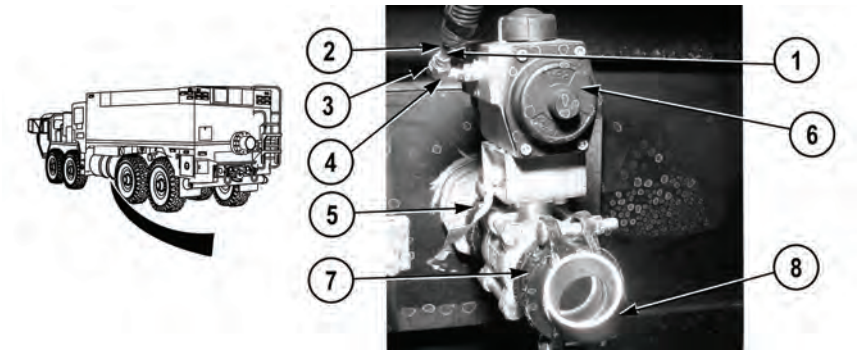
NOTE

Residual water may be present in valve.

2. Remove coupling (5) and valve (6) from vehicle (WP 0315).
3. Remove coupling (7) and elbow (8) from valve (6) (WP 0315).
4. Remove two elbows (3) and (4) from valve (6).

END OF TASK

INSTALLATION



WARNING



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CAUTION

Use pipe thread sealing compound sparingly only on pipe threads. Do not apply compound to hose connections. Failure to comply may result in damage to equipment.

1. Apply sealing compound to threads of two elbows (3) and (4).
2. Install two elbows (4) and (3) on valve (6).
3. Install elbow (8) and coupling (7) on valve (6) (WP 0315).
4. Install valve (6) and coupling (5) on vehicle (WP 0315).
5. Install two air lines (2) and (1) on elbows (4) and (3).

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

BUMPER TURRET FOAM METERING VALVE AND ORIFICE REPLACEMENT

INITIAL SETUP:

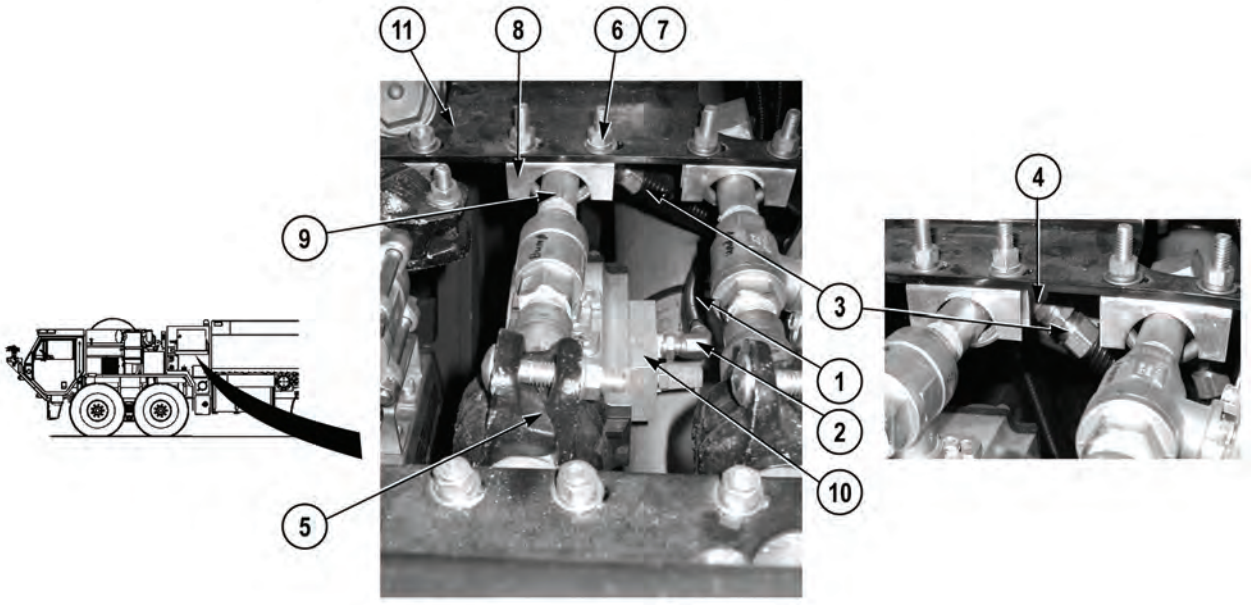
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Compound, Sealing, Pipe Thread (WP 0401, Item 11)
Tags, Identification (WP 0401, Item 22)
Locknut (2)

References
WP 0315
WP 0392, Fig. 21

Equipment Conditions
Air system drained (TM 9-2320-279-10)
Hose reel hose removed (WP 0318)

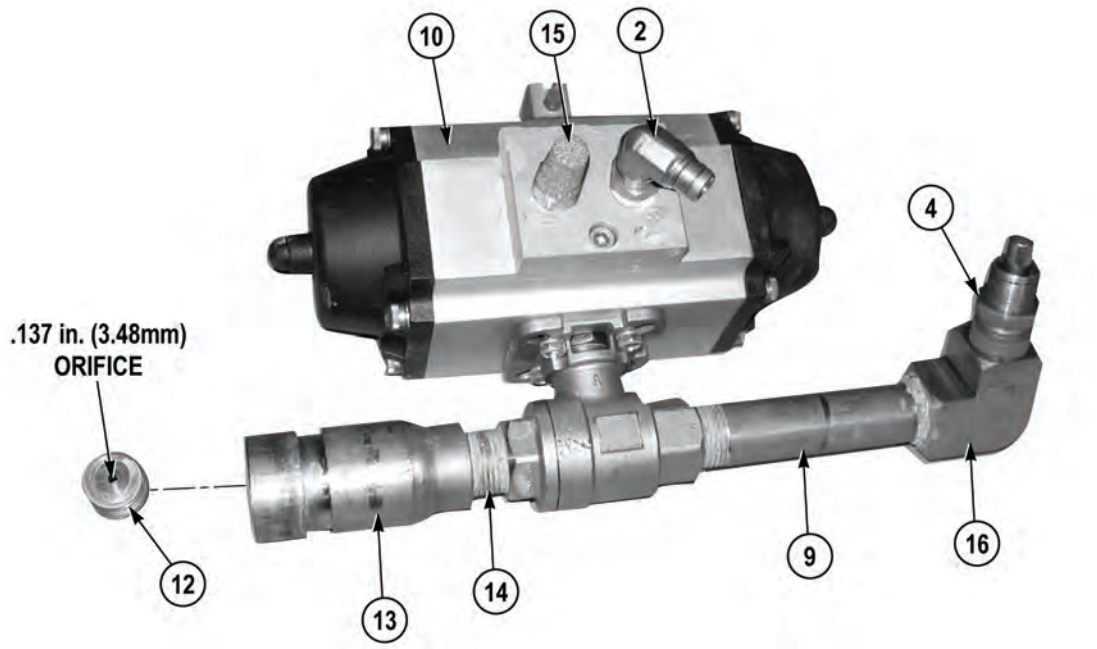
REMOVAL



NOTE

Tag and mark air line and line prior to removal to ensure proper installation.

1. Remove air line (1) from elbow (2).
2. Remove line (3) from fitting (4).
3. Remove coupling (5) from vehicle (WP 0315).
4. Remove two locknuts (6), U-bolt (7), cradle (8), pipe (9), and valve (10) from bracket (11). Discard locknuts.



5. Remove orifice fitting (12) from adapter (13).
6. Remove adapter (13) and nipple (14) from valve (10).
7. Remove pipe (9) from valve (10).
8. Remove elbow (2) and muffler (15) from valve (10).
9. Remove nipple (14) from adapter (13).
10. Remove fitting (4) and pipe (9) from elbow (16).

INSTALLATION

WARNING



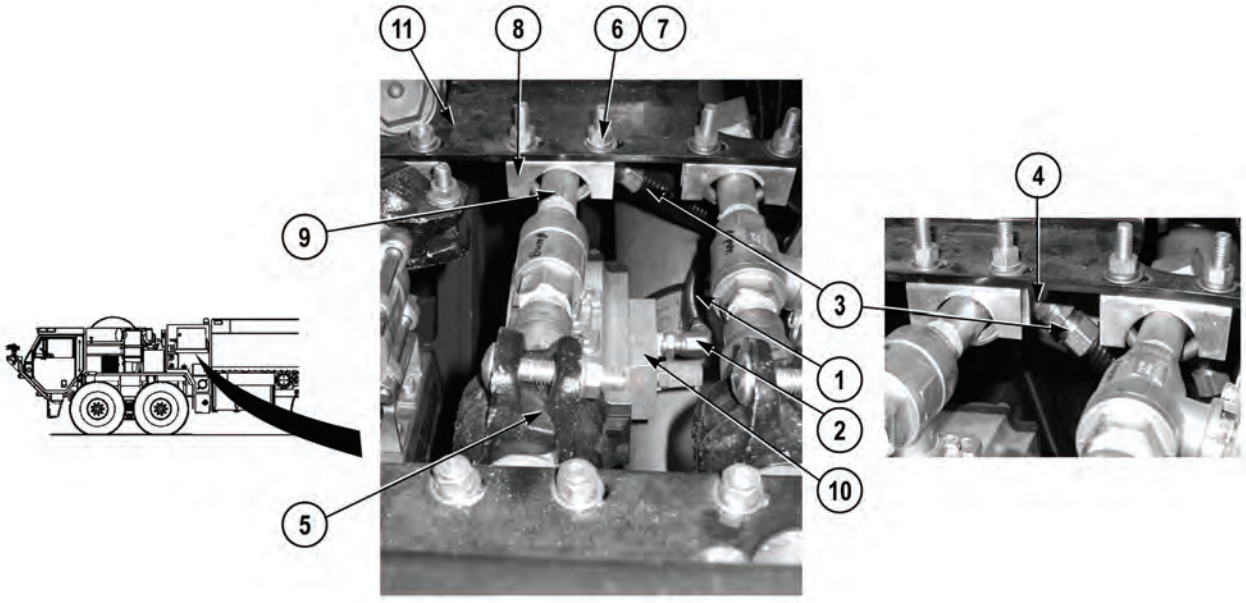
Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

1. Apply sealing compound to threads of elbow (2), fitting (4), pipe (9), nipple (14), and muffler (15).

NOTE

Install elbow and fittings as noted prior to removal.

2. Install fitting (4) and pipe (9) on elbow (16).
3. Install nipple (14) on adapter (13).
4. Install elbow (2) and muffler (15) on valve (10).
5. Install pipe (9) on valve (10).
6. Install nipple (14) and adapter (13) on valve (10).
7. Install orifice fitting (12) on adapter (13).



8. Install pipe (9) and valve (10) on bracket (11) with cradle (8), U-bolt (7), and two locknuts (6).
9. Install coupling (5) on vehicle (WP 0315).
10. Install line (3) on fitting (4).
11. Install air line (1) on elbow (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Install hose reel hose (WP 0318)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

UNDER TRUCK NOZZLES FOAM METERING VALVE AND ORIFICE REPLACEMENT

INITIAL SETUP:

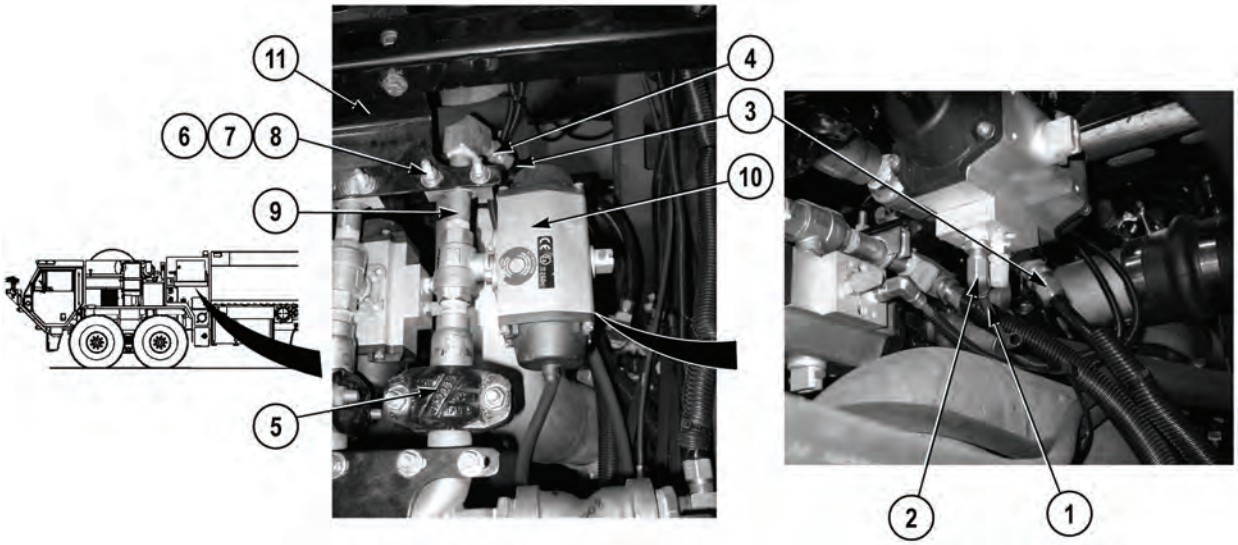
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Compound, Sealing, Pipe Thread (WP 0401, Item 11)
Tags, Identification (WP 0401, Item 22)
Locknut (2)

References
WP 0315
WP 0392, Fig. 21

Equipment Conditions
Air system drained (TM 9-2320-279-10)
Hose reel hose removed (WP 0318)

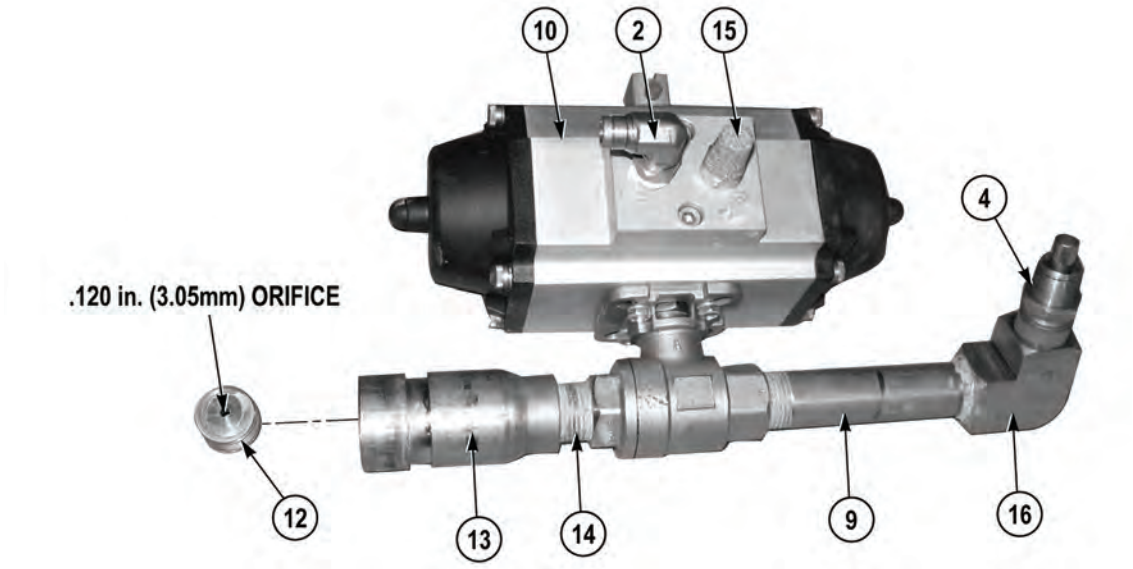
REMOVAL



NOTE

Tag and mark air line and line prior to removal to ensure proper installation.

1. Remove air line (1) from elbow (2).
2. Remove line (3) from fitting (4).
3. Remove coupling (5) from vehicle (WP 0315).
4. Remove two locknuts (6), U-bolt (7), cradle (8), pipe (9) and valve (10) from bracket (11). Discard locknuts.



NOTE

Note position of elbow and fittings prior to removal to ensure proper installation.

5. Remove orifice fitting (12) from adapter (13).
6. Remove adapter (13) and nipple (14) from valve (10).
7. Remove pipe (9) from valve (10).
8. Remove elbow (2) and muffler (15) from valve (10).
9. Remove nipple (14) from adapter (13).
10. Remove fitting (4) and pipe (9) from elbow (16).

END OF TASK

INSTALLATION

WARNING



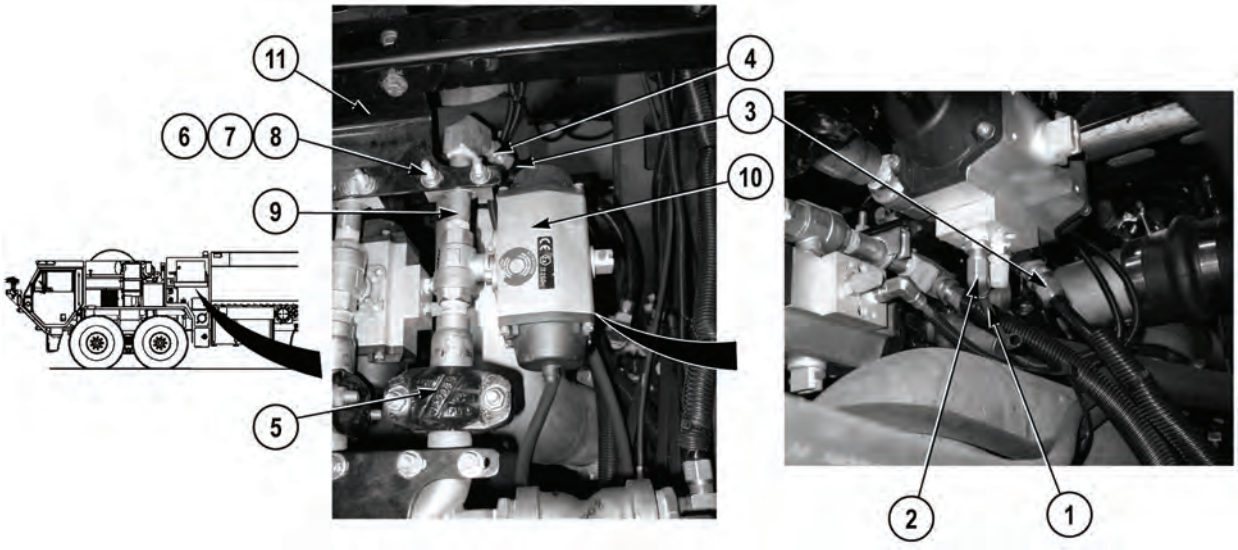
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1. Apply sealing compound to threads of elbow (2), fitting (4), pipe (9), nipple (14), and muffler (15).

NOTE

Install elbow and fittings as noted prior to removal.

2. Install fitting (4) and pipe (9) on elbow (16).
3. Install nipple (14) on adapter (13).
4. Install elbow (2) and muffler (15) on valve (10).
5. Install pipe (9) on valve (10).
6. Install nipple (14) and adapter (13) on valve (10).
7. Install orifice fitting (12) on adapter (13).



8. Install pipe (9) and valve (10) on bracket (11) with cradle (8), U-bolt (7), and two locknuts (6).
9. Install coupling (5) on vehicle (WP 0315).
10. Install line (3) on fitting (4).
11. Install air line (1) on elbow (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Install hose reel hose (WP 0318)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

FOAM TANK LEVEL PROBE REPLACEMENT

INITIAL SETUP:

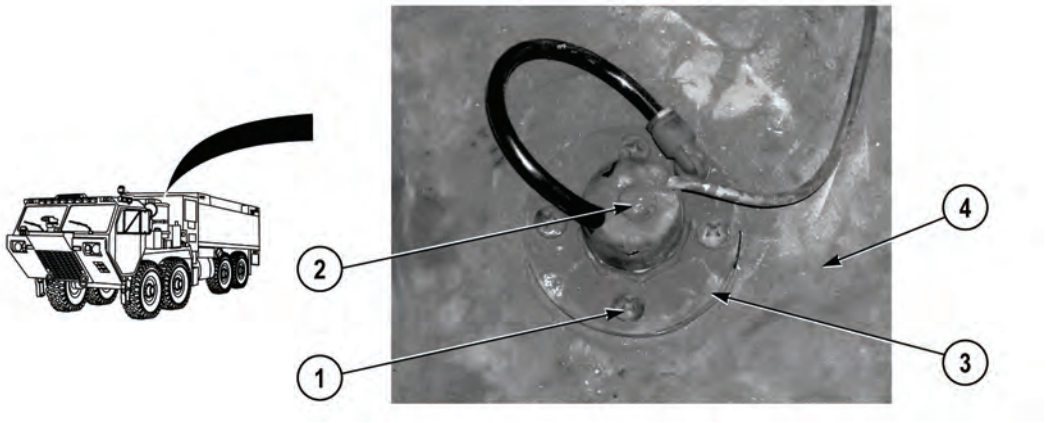
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Ties, Cable, Plastic (WP 0401, Item 25)

References:
WP 0021
WP 0128

Equipment Conditions
Pump operator's panel opened (WP 0205)
Foam/water tank level probe cover removed (WP 0187)

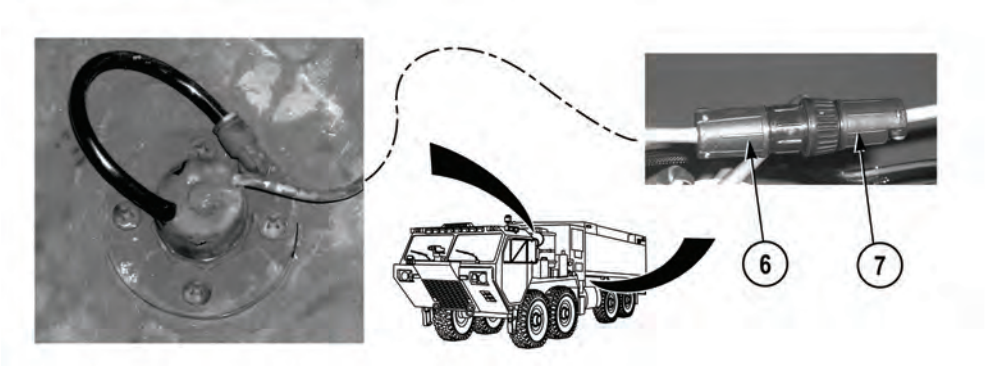
REMOVAL



NOTE

- Vent hole in tank lines up with vent tube. Note position of foam level probe prior to removal to ensure proper installation.
- Foam level may be higher than top of probe. Perform Step (1) if foam system requires draining.

1. Drain foam tank (WP 0021).
2. Remove four screws (1), foam level probe (2), and gasket (3) from tank (4).



NOTE

- Remove cable ties as required.
- Note wire routing prior to removal to ensure proper installation.

3. Disconnect foam level probe connector (6) from foam level gauge harness connector (7).

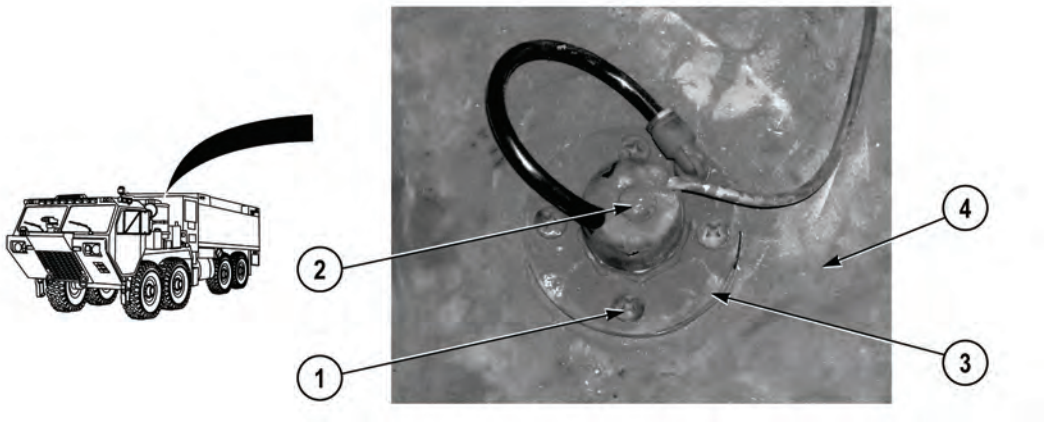
END OF TASK

INSTALLATION

NOTE

- Install cable ties as required.
- Route wire as noted prior to removal.

1. Connect foam level gauge harness connector (7) and foam level probe connector (6).



NOTE

If new probe is installed, perform Step (2).

2. Perform Pump Operator's Panel Foam Level Gauge Calibration (WP 0128).

NOTE

Ensure vent tube, vent tube hole in gasket, and vent tube hole in tank are aligned.

3. Install gasket (3) and foam tank level probe (2) on tank (4) with four screws (1).

FOLLOW-ON MAINTENANCE

1. Install foam/water tank level probe cover (WP 0187)
2. Close pump operator's panel (WP 0205)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

FOAM SYSTEM SHUTOFF VALVE REPLACEMENT

INITIAL SETUP:

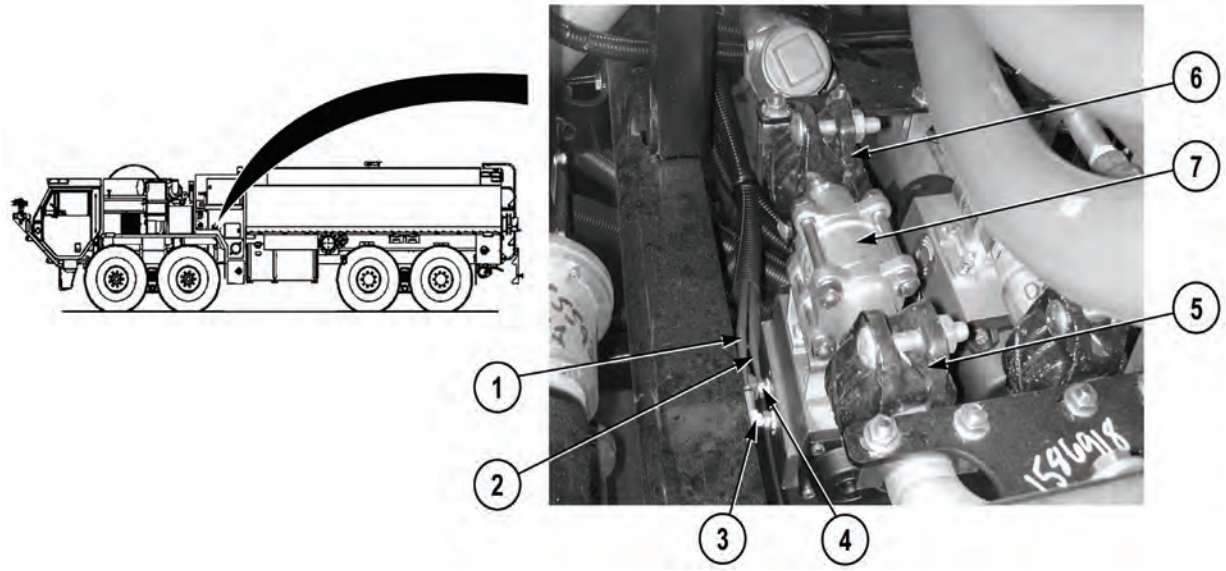
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Tape, Teflon (WP 0401, Item 24)
Ties, Cable, Plastic (WP 0401, Item 25)

References
WP 0315

Equipment Conditions
Air system drained (TM 9-2320-279-10)
Foam system service valve closed (WP 0004)
Hose reel hose removed (WP 0318)

REMOVAL



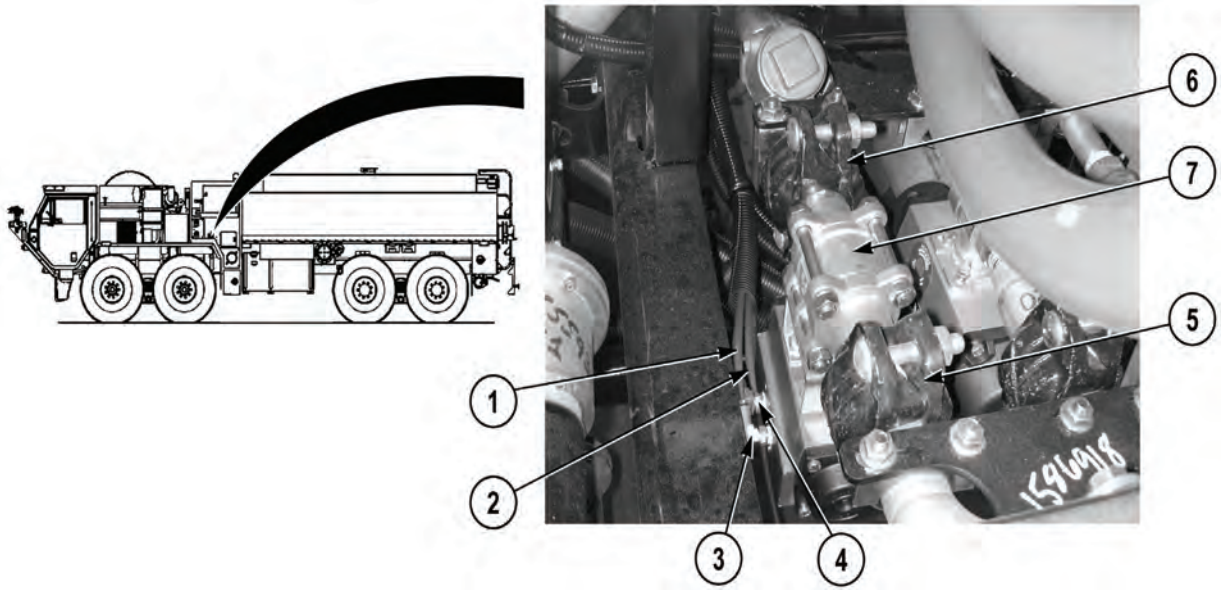
NOTE

- Tag and mark air lines prior to removal to ensure proper installation.
- Remove cable ties as required.
- Note position of elbows prior to removal to ensure proper installation.

1. Remove two air lines (1) and (2) from elbows (3) and (4).
2. Remove two couplings (5) and (6) and valve (7) from vehicle (WP 0315).
3. Remove two elbows (3) and (4) from valve (7).

END OF TASK

INSTALLATION



CAUTION

Use teflon tape sparingly only on pipe threads. Do not apply tape to hose connections. Damage to equipment may result.

1. Apply teflon tape to threads of two elbows (3) and (4).

NOTE

Install elbows in same position as noted prior to removal.

2. Install two elbows (4) and (3) on valve (7).
3. Install valve (7) and two couplings (6) and (5) on vehicle (WP 0315).

NOTE

Install cable ties as required.

4. Install two air lines (2) and (1) on elbows (4) and (3).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install hose reel hose (WP 0318)
2. Open foam system service valve (WP 0004)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

FOAM SYSTEM EDUCTOR REPLACEMENT

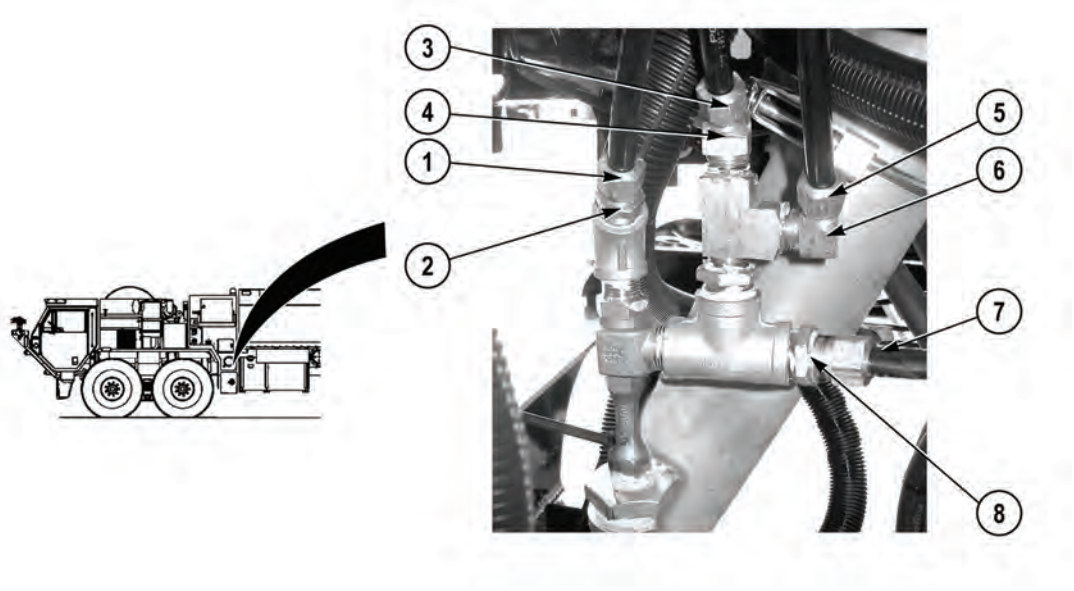
INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Compound, Sealing, Pipe Thread (WP 0401, Item 11)
Tags, Identification (WP 0401, Item 22)

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)

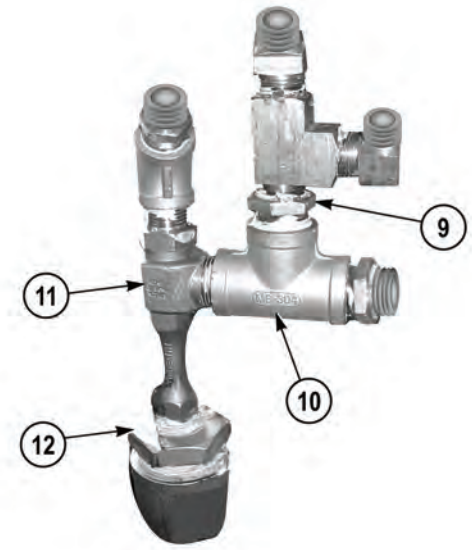
REMOVAL



NOTE

Tag and mark lines prior to removal to ensure proper installation.

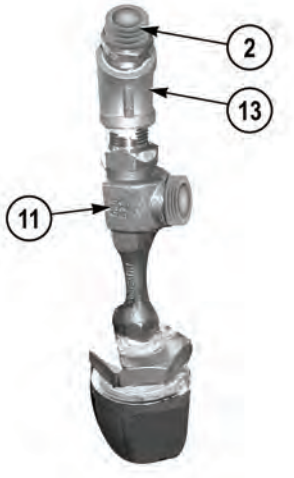
1. Remove line (1) from fitting (2).
2. Remove line (3) from elbow (4).
3. Remove line (5) from elbow (6).
4. Remove line (7) from fitting (8).



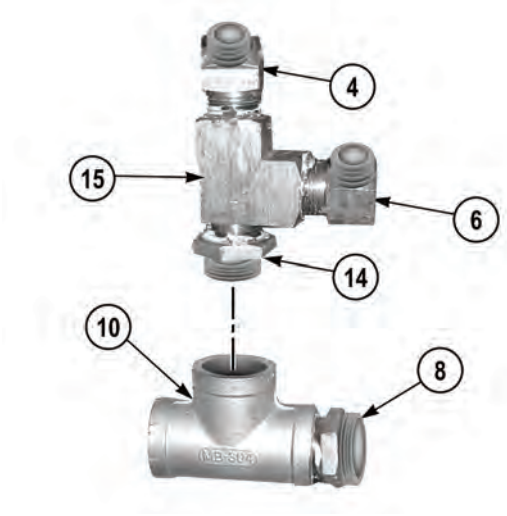
NOTE

Note position of elbows and fittings prior to removal to ensure proper installation.

5. Remove fitting (9) from tee (10).
6. Remove tee (10) from eductor (11).
7. Remove eductor (11) from fitting (12).



8. Remove elbow (13) from eductor (11).
9. Remove fitting (2) from elbow (13).



10. Remove two elbows (4) and (6) and fitting (14) from tee (15).
11. Remove fitting (8) from tee (10).

END OF TASK

INSTALLATION

NOTE

Install elbows and fittings as noted prior to removal.

1. Install fitting (8) on tee (10) (WP 0320).

WARNING

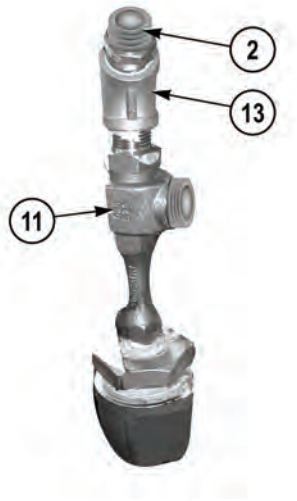


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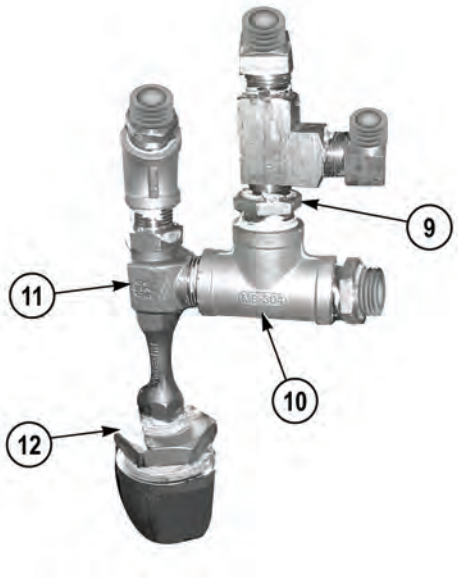
CAUTION

Use pipe thread sealing compound sparingly only on pipe threads. Do not apply compound to hose connections. Damage to equipment may result.

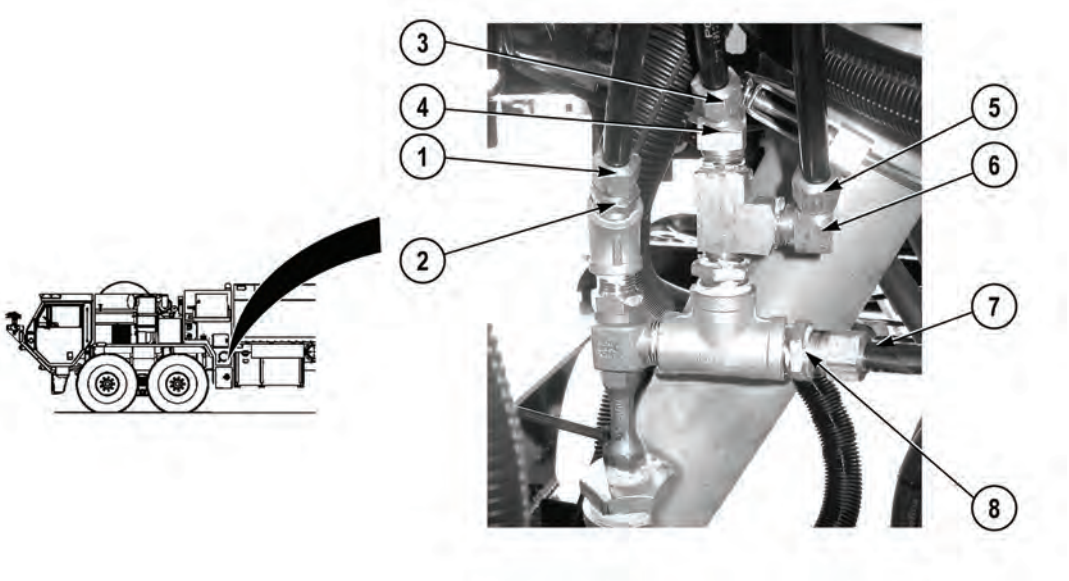
2. Apply pipe thread sealing compound to threads of two elbows (6) and (4), tee (15), and fitting (2).
3. Install two elbows (6) and (4) and fitting (14) on tee (15).



4. Install fitting (2) on elbow (13).
5. Install elbow (13) on eductor (11) (WP 0320).



6. Install eductor (11) on fitting (12) (WP 0320).
7. Install tee (10) on eductor (11) (WP 0320).
8. Install fitting (9) on tee (10) (WP 0320).



9. Install line (7) on fitting (8).
10. Install line (5) on elbow (6).
11. Install line (3) on elbow (4).
12. Install line (1) on fitting (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

FOAM SYSTEM EDUCTOR VALVE REPLACEMENT

INITIAL SETUP:

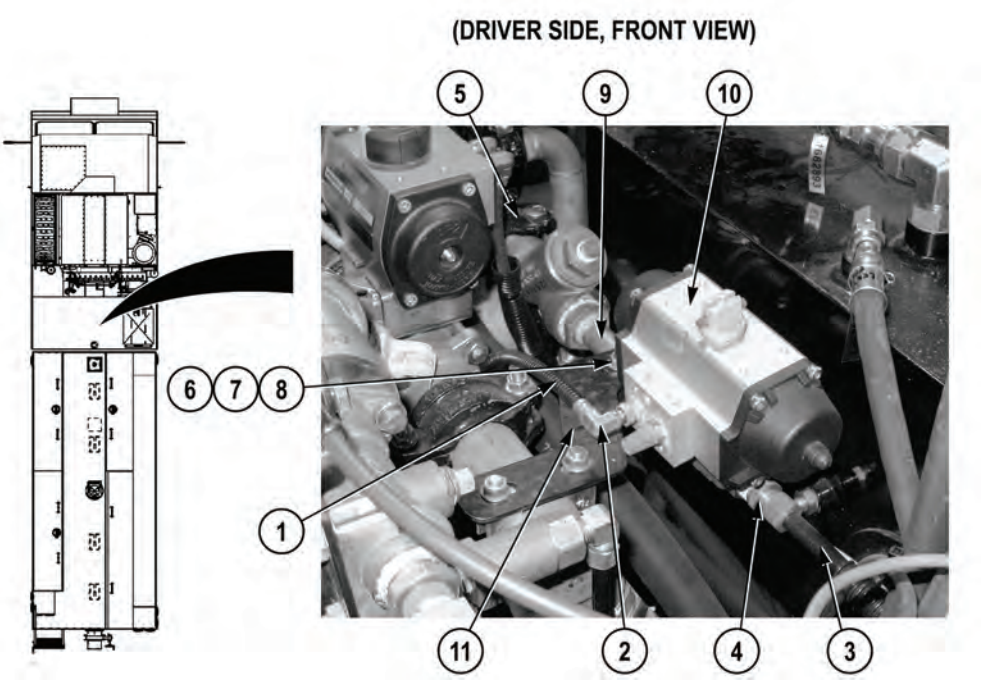
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive
(WP 0399, Item 17)

Materials/Parts
Compound, Sealing, Pipe Thread
(WP 0401, Item 11)
Locknut (2)

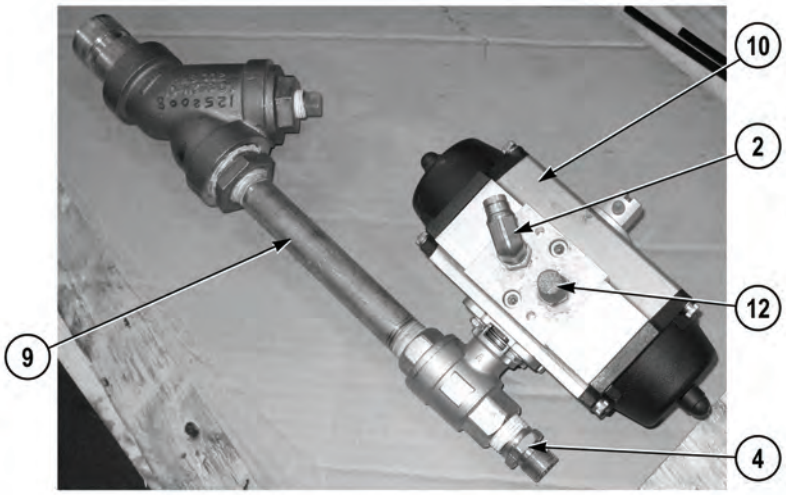
References
WP 0315
WP 0392, Fig. 21

Equipment Conditions
Air system drained (TM 9-2320-279-10)
Pump house panel K removed (WP 0341)

REMOVAL



1. Remove air line (1) from elbow (2).
2. Remove line (3) from fitting (4).
3. Remove coupling (5) from vehicle (WP 0315).
4. Remove two locknuts (6), U-bolt (7), cradle (8), pipe (9) and valve (10) from bracket (11). Discard locknuts.



NOTE

Note position of elbow and muffler prior to removal to ensure proper installation.

5. Remove fitting (4) and pipe (9) from valve (10).
6. Remove elbow (2) and muffler (12) from valve (10).

END OF TASK

INSTALLATION

WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

⚠ CAUTION

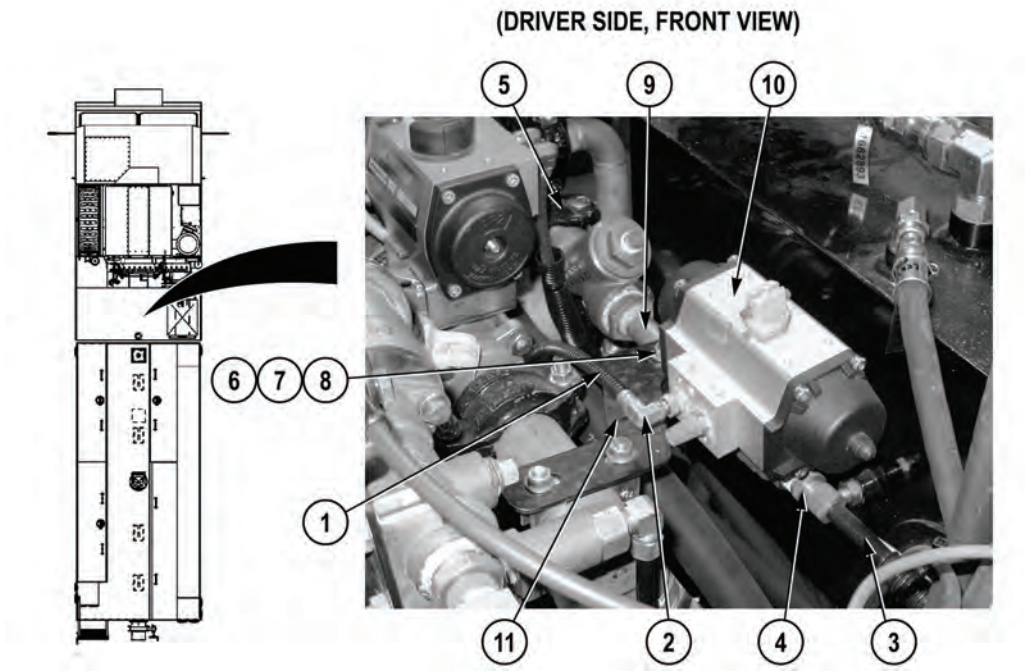
Use pipe thread sealing compound sparingly only on pipe threads. Do not apply compound to hose connections. Damage to equipment may result.

1. Apply sealing compound to threads of elbow (2) muffler (12), fitting (4), and pipe (9).

NOTE

Install elbow and muffler as noted prior to removal.

2. Install elbow (2) and muffler (12) on valve (10).
3. Install fitting (4) and pipe (9) on valve (10).



4. Install valve (10) and pipe (9) on bracket (11) with cradle (8), U-bolt (7), and two locknuts (6).
5. Install coupling (5) on vehicle (WP 0315).
6. Install line (3) on fitting (4).
7. Install air line (1) on elbow (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Install pump house panel K (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

FOAM SYSTEM FLUSH VALVE REPLACEMENT

INITIAL SETUP:

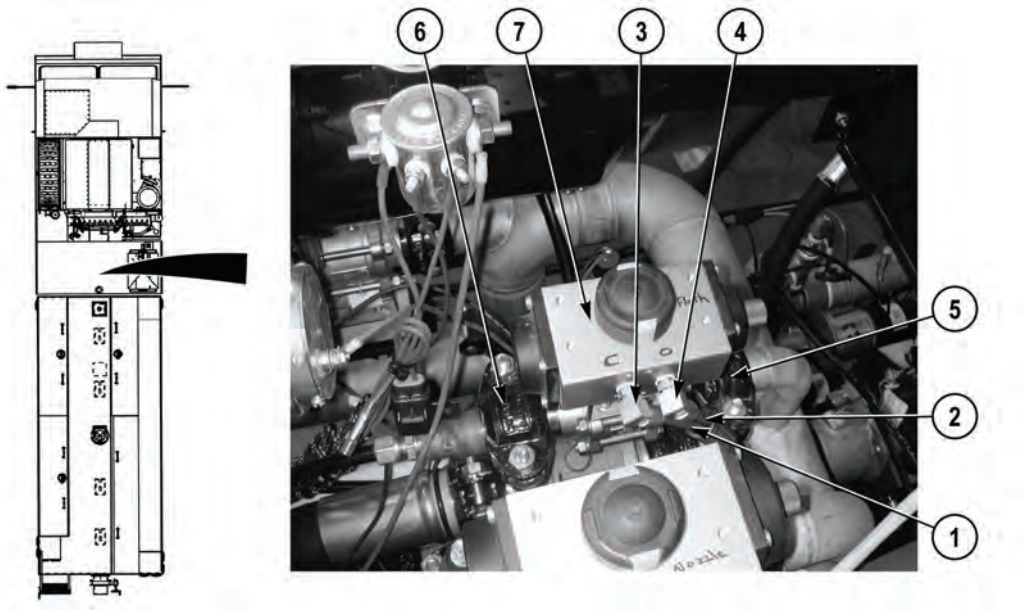
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Compound, Sealing, Pipe Thread (WP 0401, Item 11)
Tags, Identification (WP 0401, Item 22)
Tape, Teflon (WP 0401, Item 24)

References
WP 0315

Equipment Conditions
Air system drained (TM 9-2320-279-10)
Pump house panel K removed (WP 0341)

REMOVAL



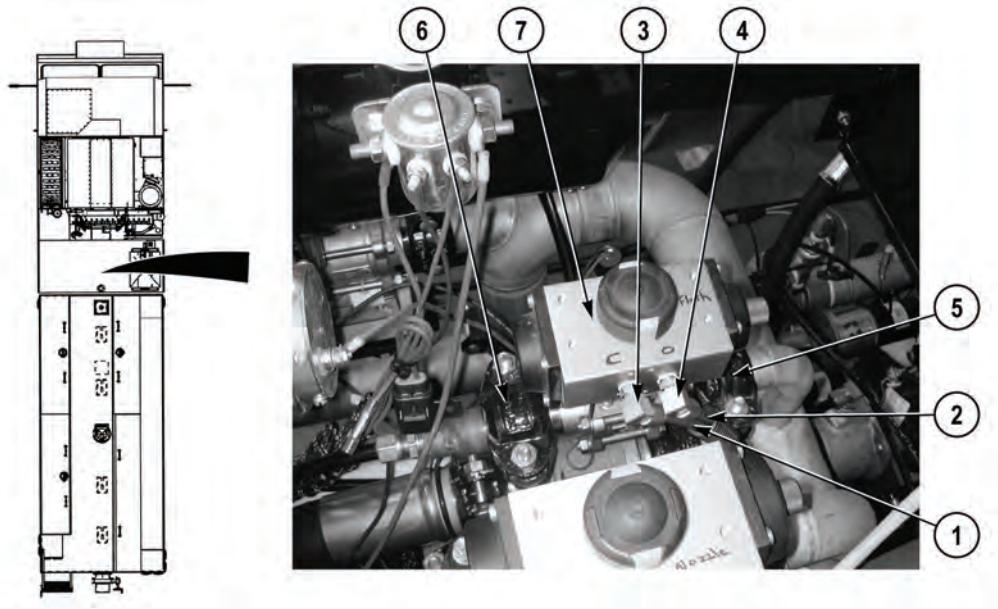
NOTE

- Tag and mark air lines prior to removal.
- Note position of elbows prior to removal to ensure proper installation.

1. Remove two air lines (1) and (2) from elbows (3) and (4).
2. Remove two couplings (5) and (6) and valve (7) from vehicle (WP 0315).
3. Remove two elbows (3) and (4) from valve (7).

END OF TASK

INSTALLATION



1. Apply teflon tape to threads of two elbows (3) and (4).

NOTE

Install elbows in same position as noted prior to removal.

2. Install two elbows (4) and (3) on valve (7).
3. Install valve (7) on vehicle with two couplings (6) and (5) (WP 0315).
4. Install two air lines (2) and (1) on elbows (4) and (3).

END OF TASK

FOLLOW-ON MAINTENANCE

Install pump house panel K (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

FOAM SYSTEM INLET CHECK VALVE REPLACEMENT

INITIAL SETUP:

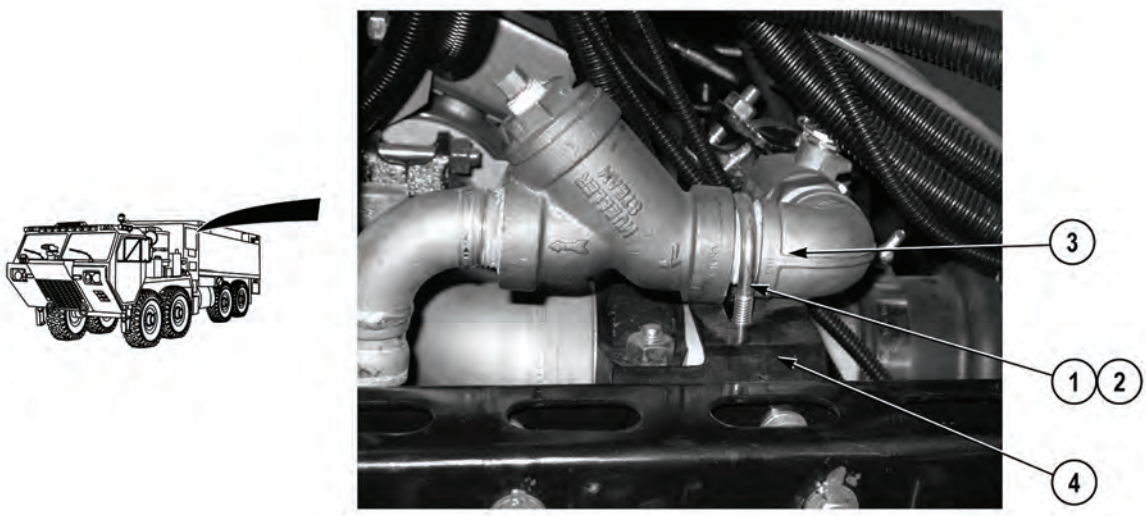
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive
(WP 0399, Item 17)

Materials/Parts
Compound, Sealing, Pipe Thread
(WP 0401, Item 11)
Locknut (2)
Locknut (2)

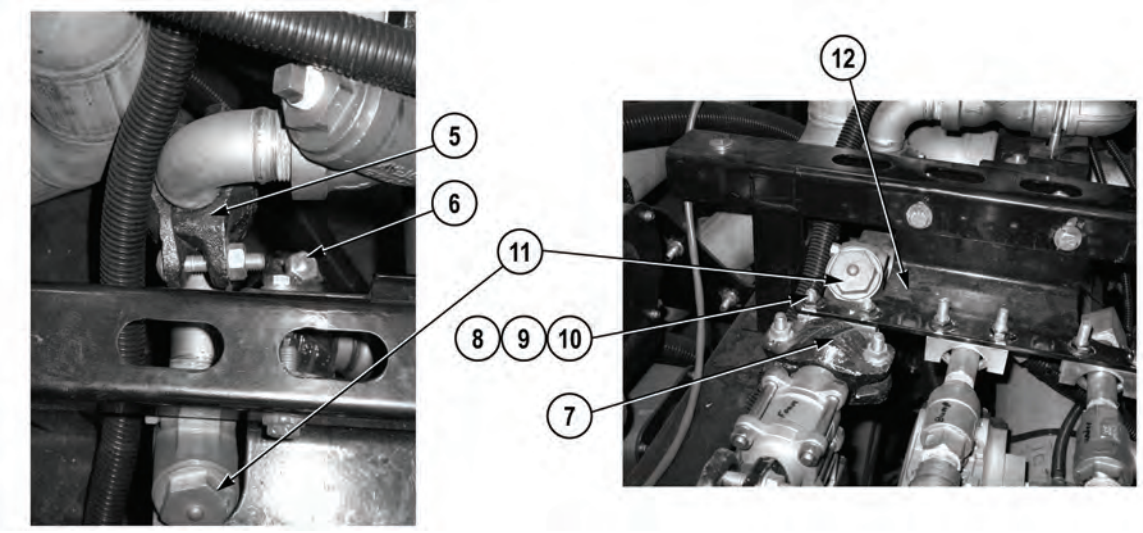
References
WP 0315
WP 0392, Fig. 21

Equipment Conditions
Foam system service valve closed (WP 0004)
Hose reel removed (WP 0246)

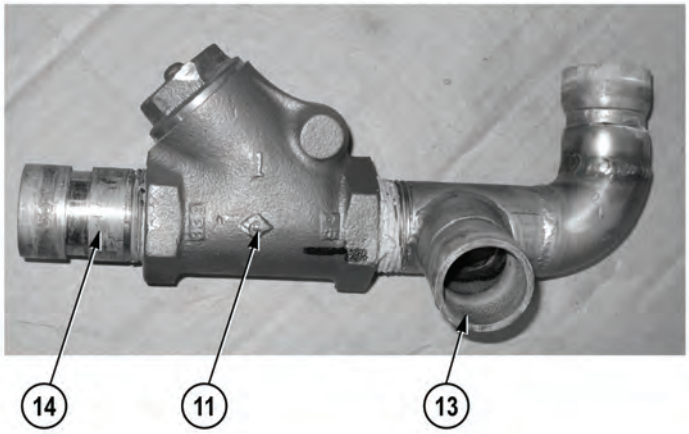
REMOVAL



1. Remove two locknuts (1) and U-bolt (2) from pipe (3) and bracket (4). Discard locknuts.



2. Remove three couplings (5), (6), and (7) from vehicle (WP 0315).
3. Remove two locknuts (8), U-bolt (9), cradle (10), and foam system inlet check valve (11) from bracket (12). Discard locknuts.



NOTE

Note position of supply/drain weldment on check valve prior to removal to ensure proper installation.

4. Remove supply/drain weldment (13) and nipple (14) from foam system inlet check valve (11).

END OF TASK

INSTALLATION

WARNING

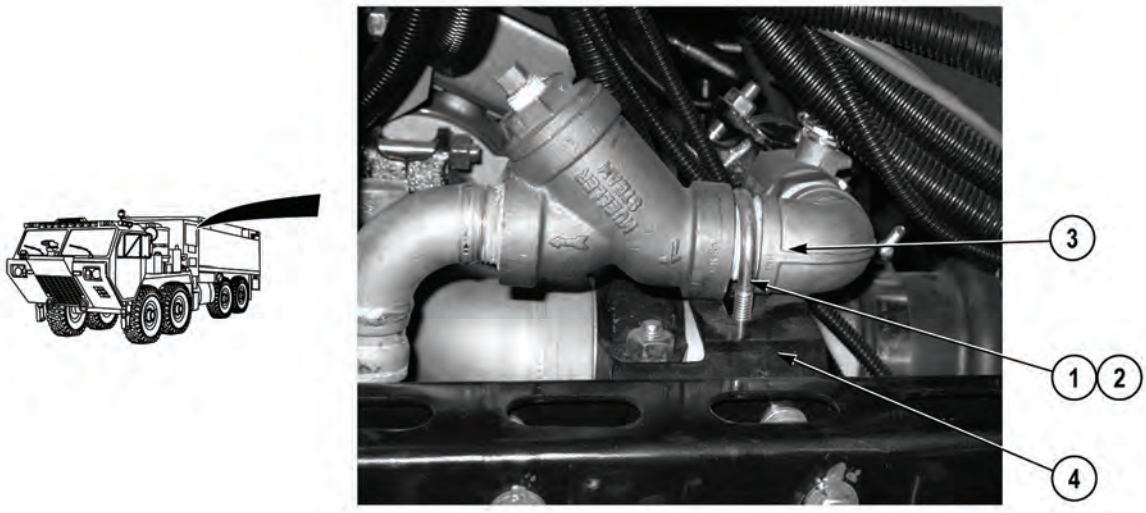


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NOTE

Install supply/drain weldment on check valve as noted prior to removal.

1. Apply sealing compound to threads of supply/drain weldment (13) and nipple (14).
2. Install nipple (14) and supply/drain weldment (13) on foam system inlet check valve (11).
3. Install foam system inlet check valve (11) on bracket (12) with cradle (10), U-bolt (9), and two locknuts (8).
4. Install three couplings (7), (6), and (5) on vehicle (WP 0315).



5. Install U-bolt (2) on bracket (4) and pipe (3) with two locknuts (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Open foam system service valve (WP 0004)
2. Install hose reel (WP 0246)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

FOAM SYSTEM MANUAL METERING VALVE REPLACEMENT

INITIAL SETUP:

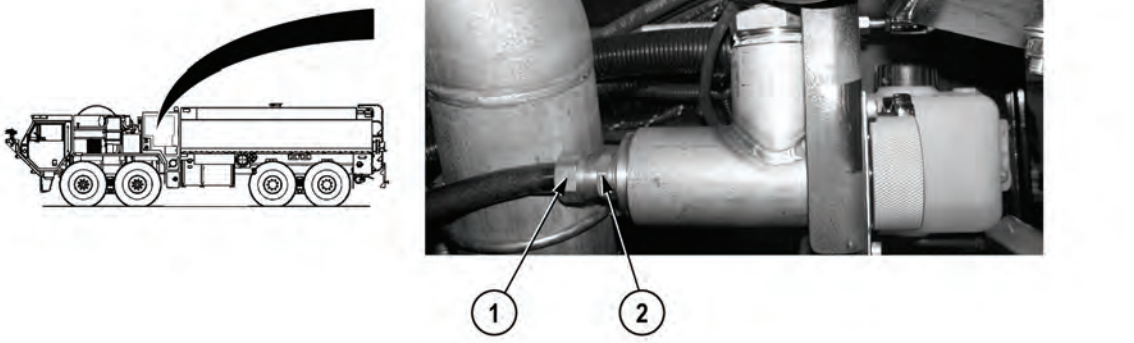
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive
(WP 0399, Item 17)

Materials/Parts
Compound, Sealing, Pipe Thread,
(WP 0401, Item 11)
Preformed Packing (1)
Lockwasher (2)

References
WP 0158
WP 0159
WP 0162
WP 0252
WP 0315
WP 0392, Fig. 21

Equipment Conditions
Pump house panels A and B removed (WP 0341)
Foam system service valve closed (WP 0004)

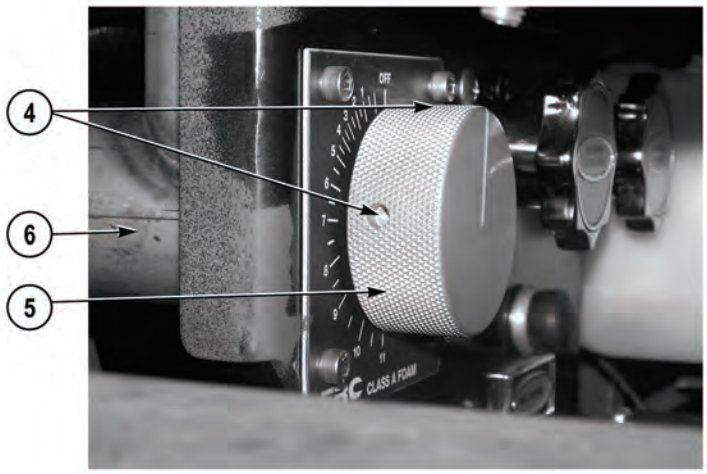
REMOVAL



NOTE

For ease of removal, fitting will be removed at a later step.

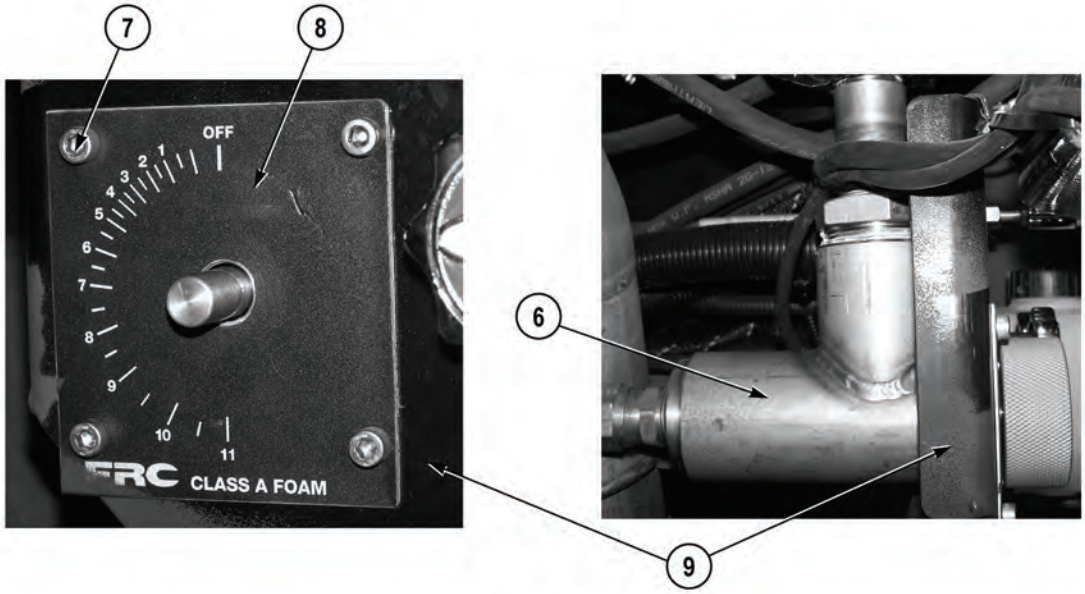
1. Remove hose (1) from fitting (2).
2. Remove coupling (3) from vehicle (WP 0315).



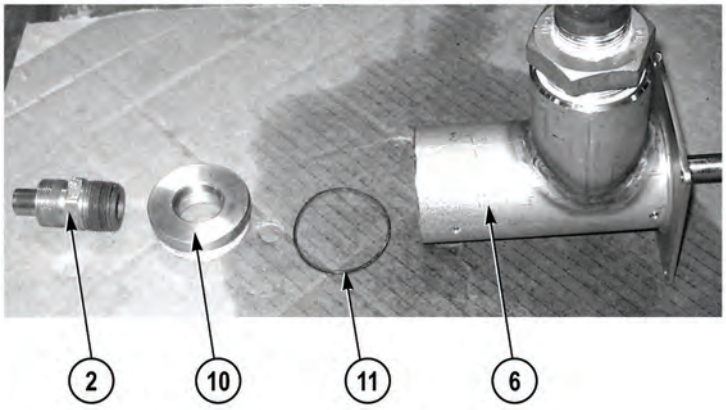
NOTE

Note position of valve control knob prior to removal to ensure proper installation.

3. Remove two setscrews (4) and valve control knob (5) from valve (6).



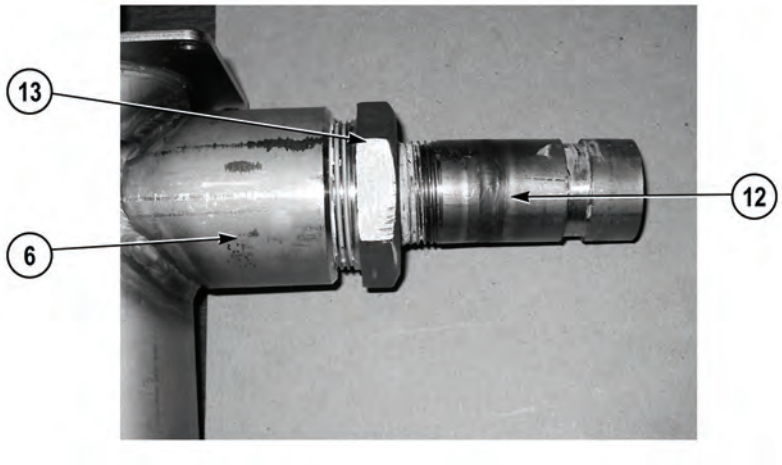
4. Remove four screws (7), data plate (8), and valve (6) from bracket (9).



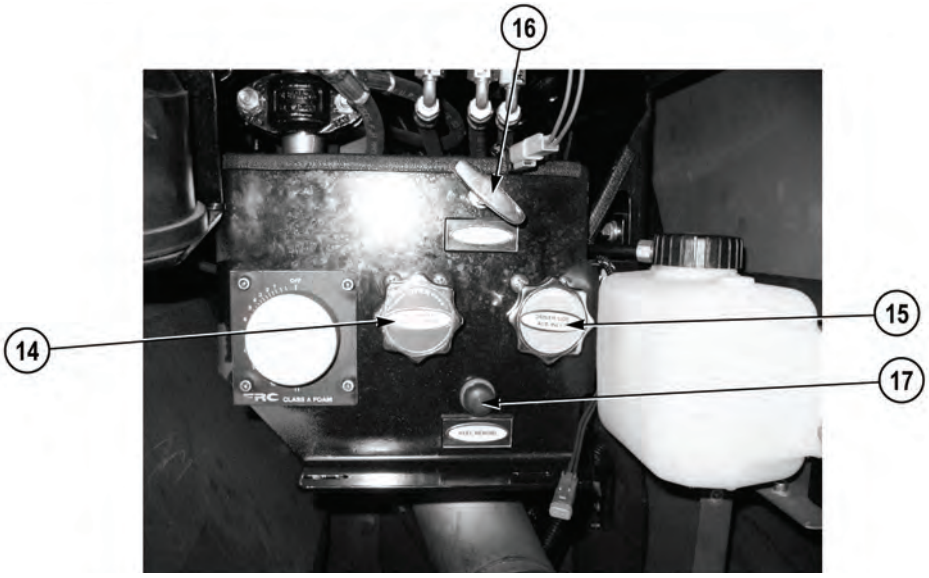
NOTE

Note position of fitting and adapters prior to removal to ensure proper installation.

5. Remove fitting (2) from adapter (10).
6. Remove adapter (10) and preformed packing (11) from valve (6). Discard preformed packing.



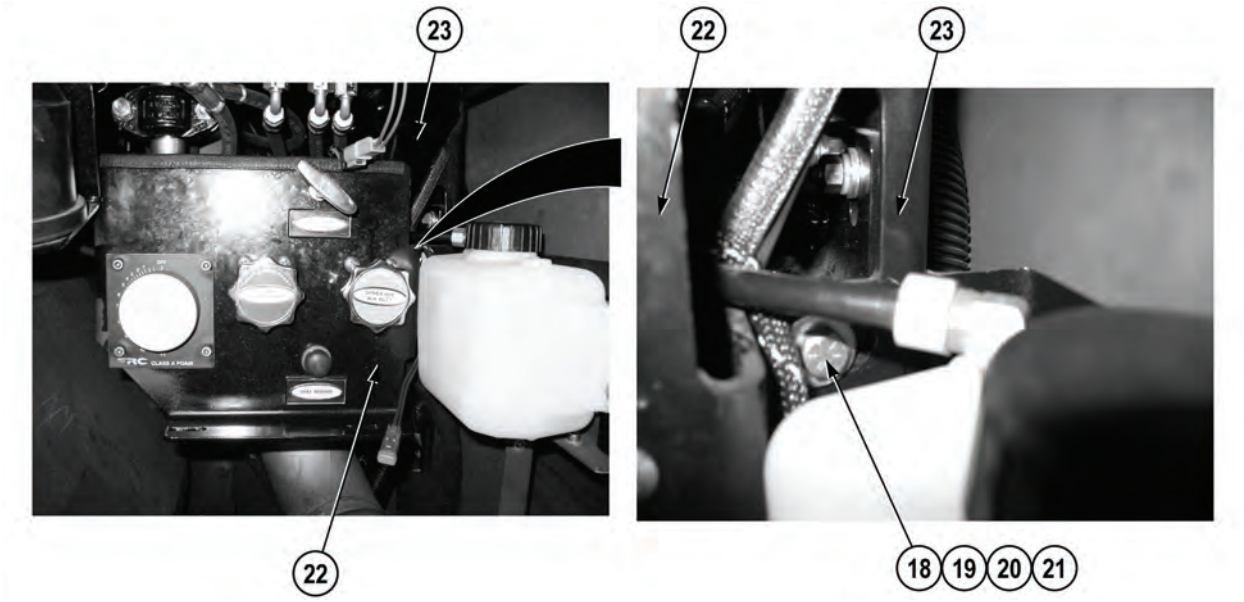
7. Remove nipple (12) from adapter (13).
8. Remove adapter (13) from valve (6).



NOTE

Perform Steps (10) through (14) if bracket needs to be removed.

9. Remove No. 1 driver side discharge valve (14) from vehicle (WP 0159).
10. Remove driver side auxiliary inlet drain valve (15) from vehicle (WP 0158).
11. Remove manual primer handle (16) from vehicle (WP 0162).
12. Remove reel rewind switch (17) from vehicle (WP 0252).



13. Remove two nuts (18), lockwashers (19), four washers (20), two screws (21), and bracket (22) from pump house (23). Discard lockwashers.

END OF TASK

INSTALLATION

NOTE

Perform Steps (1) through (5) if bracket was removed.

1. Install bracket (22) on pump house (23) with two screws (21), four washers (20), two lockwashers (19), and nuts (18).
2. Install reel rewind switch (17) on vehicle (WP 0252).
3. Install manual primer handle (16) on vehicle (WP 0162).
4. Install driver side auxiliary inlet drain valve (15) on vehicle (WP 0158).
5. Install No. 1 driver side discharge valve (14) on vehicle (WP 0159).

WARNING

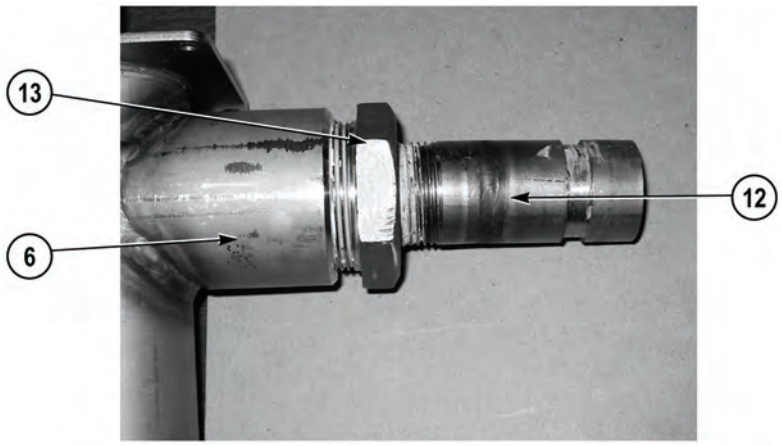


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CAUTION

Do not apply pipe thread sealing compound to threads of hose side of fitting (2). Failure to comply may result in damage to equipment.

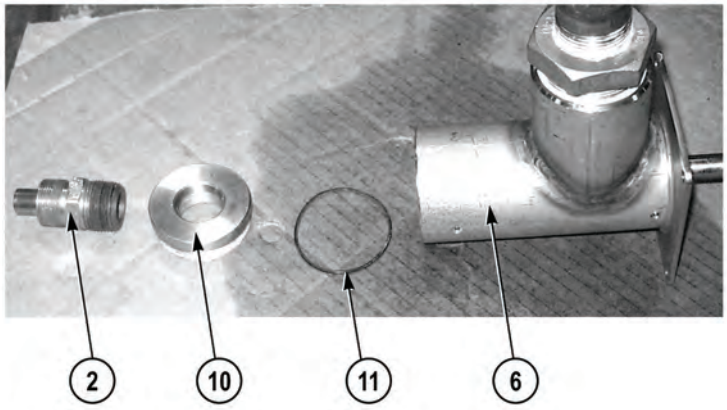
6. Apply sealing compound to threads of fitting (2), adapter (10), nipple (12), and adapter (13).



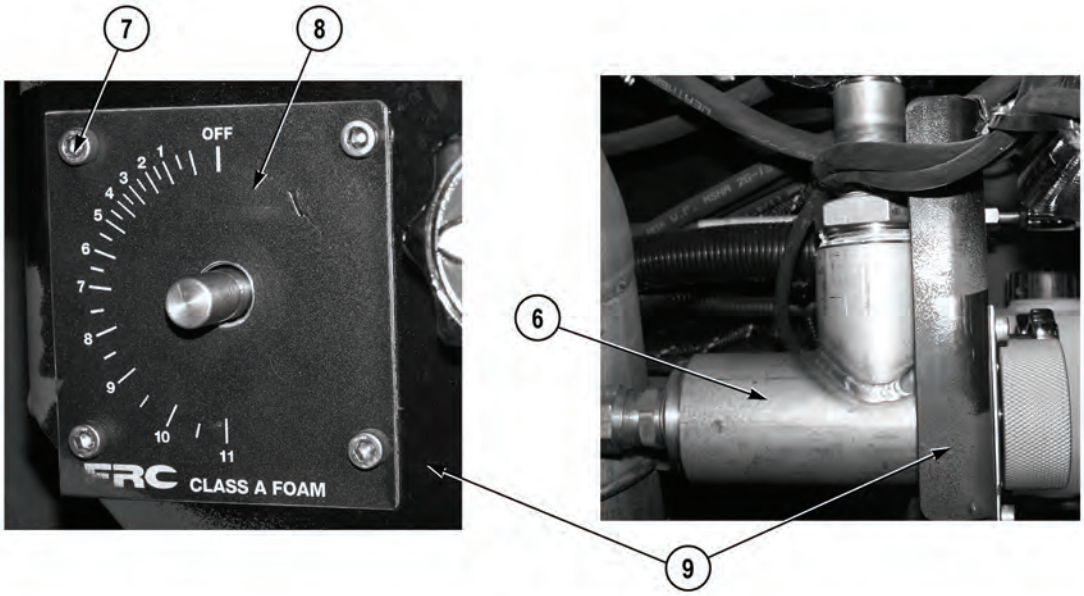
NOTE

Install fitting and adapters as noted prior to removal.

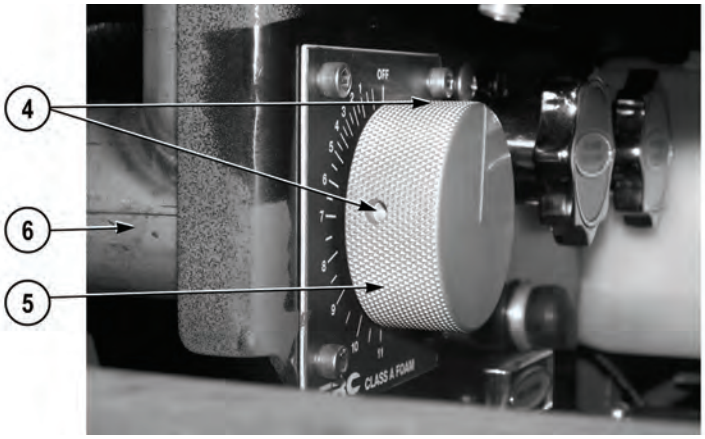
7. Install adapter (13) on valve (6).
8. Install nipple (12) on adapter (13).



9. Install preformed packing (11) and adapter (10) on valve (6).
10. Install fitting (2) on adapter (10).



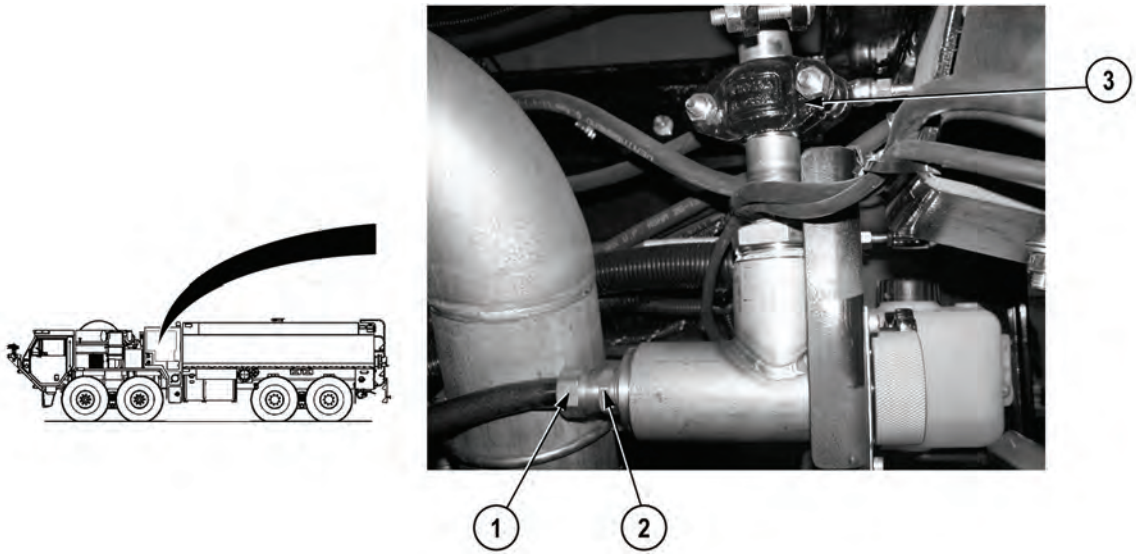
11. Install data plate (8) and valve (6) on bracket (9) with four screws (7).



NOTE

Install valve control knob as noted prior to removal.

12. Position valve control knob (5) on valve (6) with two setscrews (4).



13. Install coupling (3) on vehicle (WP 0315).
14. Install hose (1) on fitting (2).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Open foam system service valve (WP 0004)
2. Install pump house panels A and B (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

FOAM SYSTEM SERVICE VALVE REPLACEMENT

INITIAL SETUP:

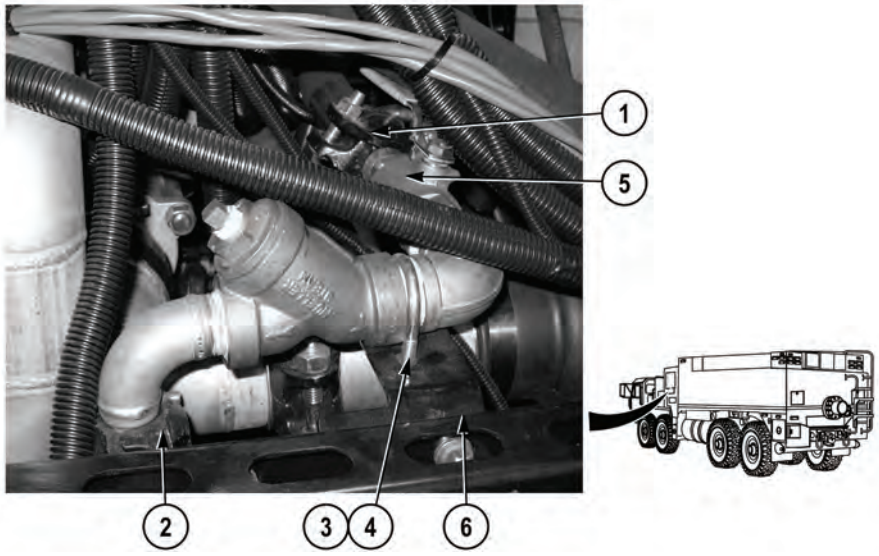
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive
(WP 0399, Item 17)

Materials/Parts
Compound, Sealing, Pipe Thread
(WP 0401, Item 11)
Locknut (2)

Reference
WP 0315
WP 0320
WP 0392, Fig. 21

Equipment Conditions
Foam system drained (WP 0021)
Hose reel removed (WP 0246)

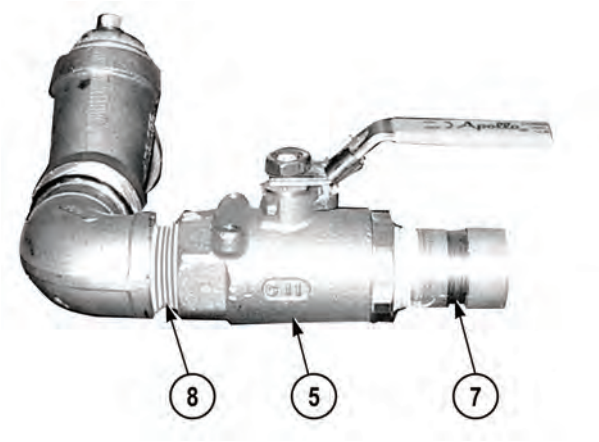
REMOVAL



NOTE

Foam service valve is removed as an assembly with strainer.

1. Remove two couplings (1) and (2) from vehicle (WP 0315).
2. Remove two locknuts (3), U-bolt (4), and valve (5) from bracket (6). Discard locknuts.



NOTE

Note position of valve prior to removal to ensure proper installation.

3. Remove fitting (7) and nipple (8) from valve (5).

END OF TASK

INSTALLATION

WARNING

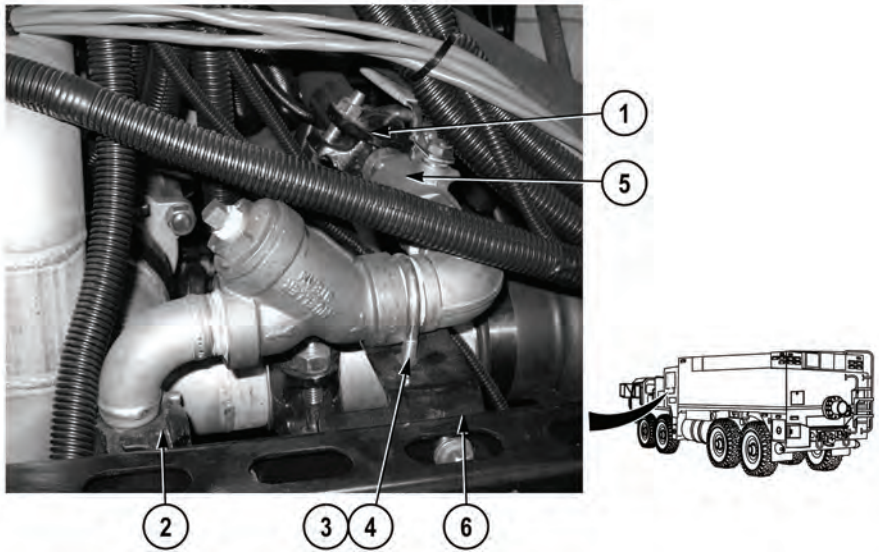


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NOTE

Install valve as noted prior to removal.

1. Apply sealing compound to threads of fitting (7) and nipple (8).
2. Install fitting (7) and nipple (8) on valve (5) (WP 0320).



NOTE

- Foam service valve is installed as an assembly.
- Valve must be installed in open position.

3. Install valve (5) on bracket (6) with U-bolt (4), and two locknuts (3).
4. Install two couplings (1) and (2) on vehicle (WP 0315).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install hose reel (WP 0246)
2. Fill foam system (WP 0021)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

FOAM SYSTEM STRAINER(S) REPLACEMENT

INITIAL SETUP:

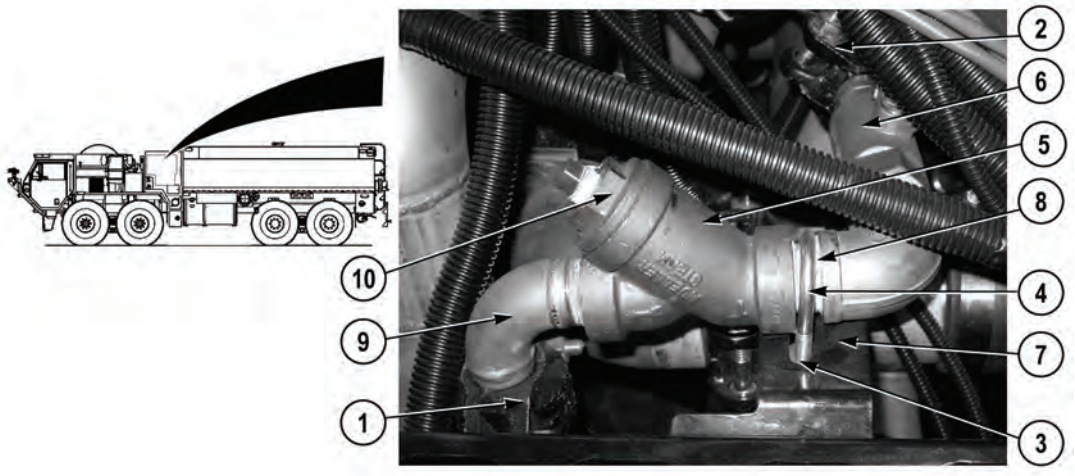
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Compound, Sealing, Pipe Thread (WP 0401, Item 11)
Locknut (2)

References
WP 0315
WP 0320
WP 0392, Fig. 21

Equipment Conditions
Foam agent drained (WP 0021)
Hose reel removed (supply strainer and flush strainer) (WP 0246)
Foam system eductor valve removed

FOAM SYSTEM SUPPLY STRAINER REMOVAL



NOTE

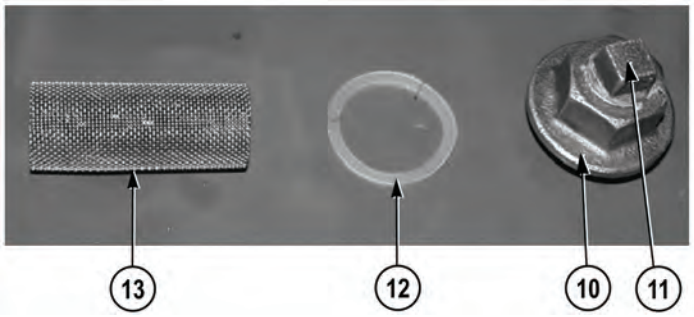
Foam system supply strainer is removed as an assembly with foam service valve.

1. Remove two couplings (1) and (2) from vehicle (WP 0315).
2. Remove two locknuts (3), U-bolt (4), strainer (5), and foam service valve (6) from bracket (7). Discard locknuts.
3. Remove strainer (5) from nipple (8).

NOTE

Note position of weldment prior to removal to ensure proper installation.

4. Remove weldment (9) from strainer (5).
5. Remove cap (10) from strainer (5).



6. Remove plug (11) from cap (10).
7. Remove gasket (12) and screen (13) from strainer (5).

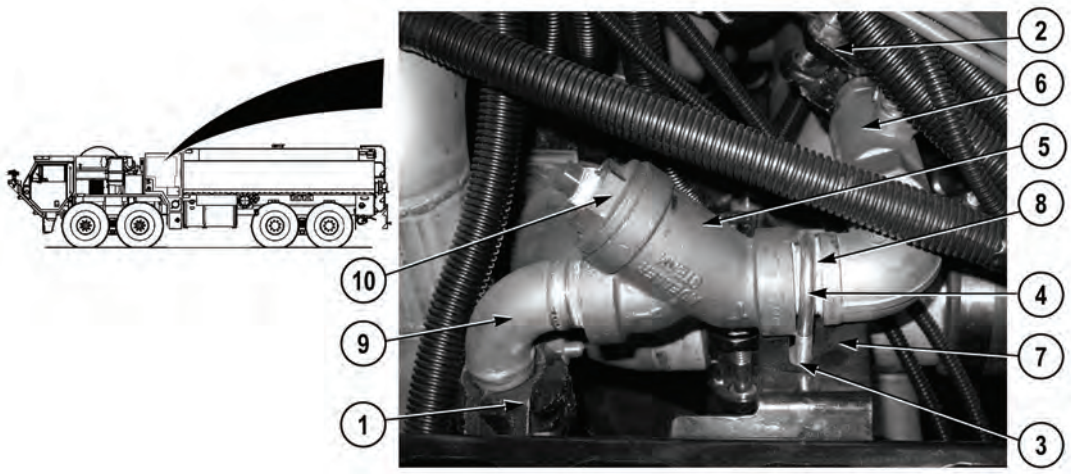
END OF TASK

FOAM SYSTEM SUPPLY STRAINER INSTALLATION

NOTE

Strainer can be cleaned and replaced.

1. Install screen (13) and gasket (12) in strainer (5).



WARNING



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2. Apply sealing compound to threads of cap (10), weldment (9), and foam service valve (6).
3. Install plug (11) on cap (10) (WP 0320).
4. Install cap (10) on strainer (5) (WP 0320).

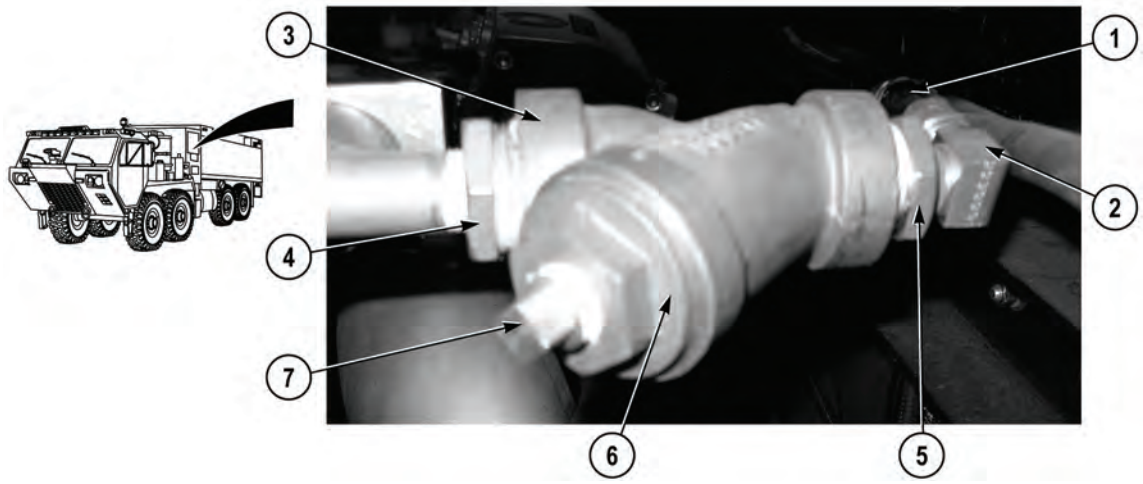
NOTE

Install weldment in same position as noted prior to removal.

5. Install weldment (9) on strainer (5) (WP 0320).
6. Install foam service valve (6), strainer (5) and U-bolt (4) on bracket (7) with two locknuts (3).
7. Install two couplings (1) and (2) on vehicle (WP 0315).

END OF TASK

FOAM SYSTEM FLUSH STRAINER REMOVAL

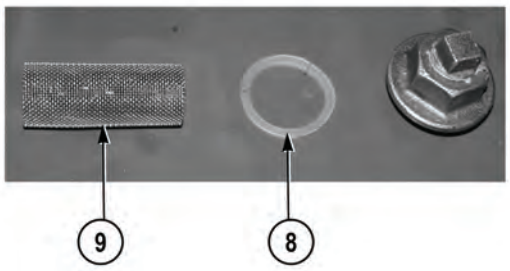


1. Remove hose (1) from elbow (2).
2. Remove strainer (3) from fitting (4).

NOTE

Note position of elbow prior to removal to ensure proper installation.

3. Remove elbow (2) from fitting (5).
4. Remove fitting (5) from strainer (3).
5. Remove cap (6) from strainer (3).
6. Remove plug (7) from cap (6).



7. Remove gasket (8) and screen (9) from strainer (3).

END OF TASK

FOAM SYSTEM FLUSH STRAINER INSTALLATION

1. Install screen (9) and gasket (8) in strainer (3).

WARNING

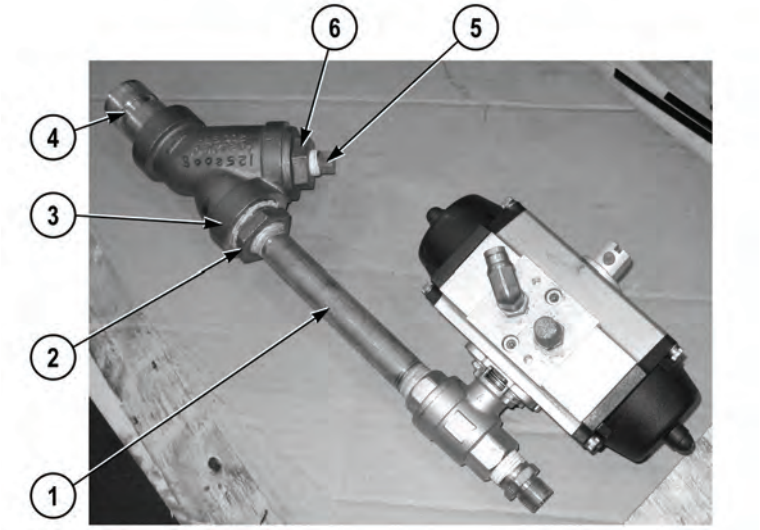


Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

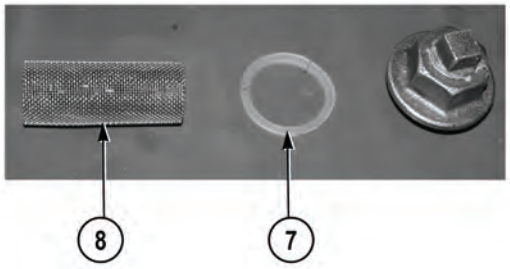
2. Apply sealing compound to threads of plug (7), cap (6), fitting (5), fitting (4), and elbow (2).
3. Install plug (7) on cap (6).
4. Install cap (6) on strainer (3).
5. Install fitting (5) on strainer (3).
6. Install elbow (2) on fitting (5).
7. Install strainer (3) on fitting (4).
8. Install hose (1) on elbow (2).

END OF TASK

FOAM SYSTEM EDUCTOR STRAINER REMOVAL



1. Remove pipe (1) from fitting (2).
2. Remove fitting (2) from strainer (3).
3. Remove pipe (4) from strainer (3).
4. Remove plug (5) from cap (6).
5. Remove cap (6) from strainer (3).

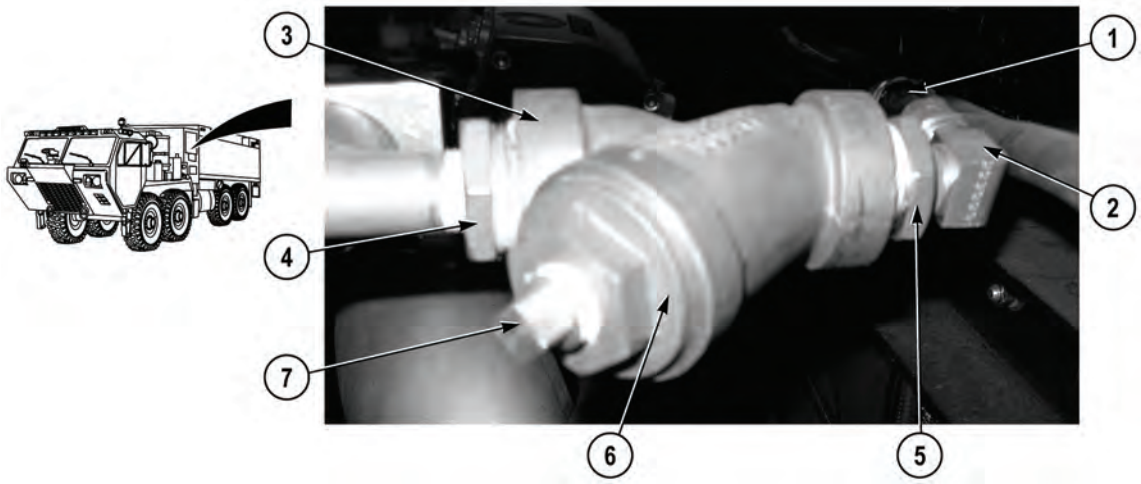


6. Remove gasket (7) and screen (8) from strainer (3).

END OF TASK

FOAM SYSTEM EDUCTOR STRAINER INSTALLATION

1. Install screen (8) and gasket (7) in strainer (3).

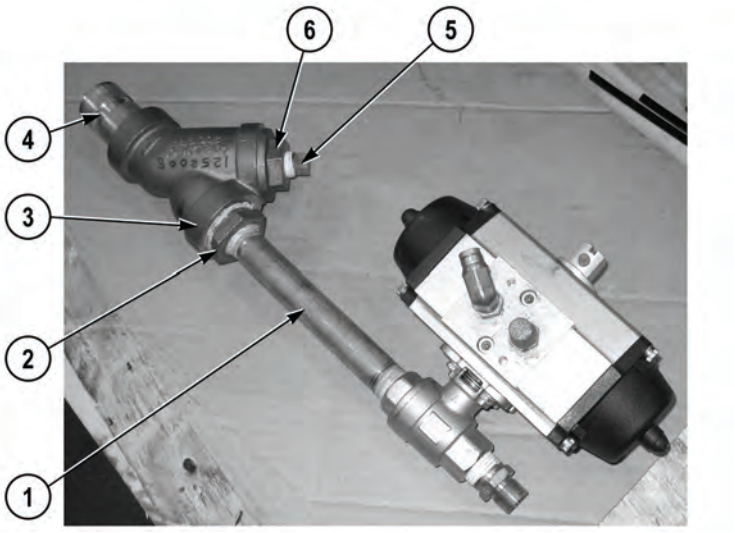


WARNING



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2. Apply sealing compound to threads of cap (6), plug (5), pipe (4), fitting (2), and pipe (1).



3. Install cap (6) on strainer (3).
4. Install plug (5) on cap (6).
5. Install pipe (4) on strainer (3).
6. Install fitting (2) on strainer (3).
7. Install fitting (2) on pipe (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install hose reel (if removed) (WP 0246)
2. Install foam system eductor valve (WP 0176)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

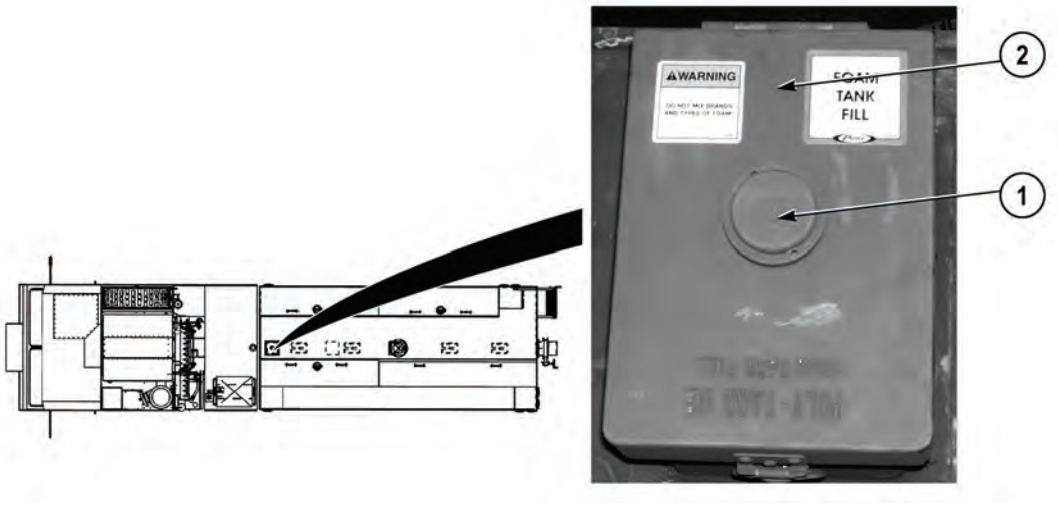
FOAM TANK PRESSURE/VACUUM/VENT REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive
(WP 0399, Item 17)

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)

REMOVAL



Remove foam tank vent (1) from foam tank (2).

END OF TASK

INSTALLATION

Install foam tank vent (1) on foam tank (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

FOAM TANK FILL PORT EXTENSION AND COVER REPLACEMENT

INITIAL SETUP:

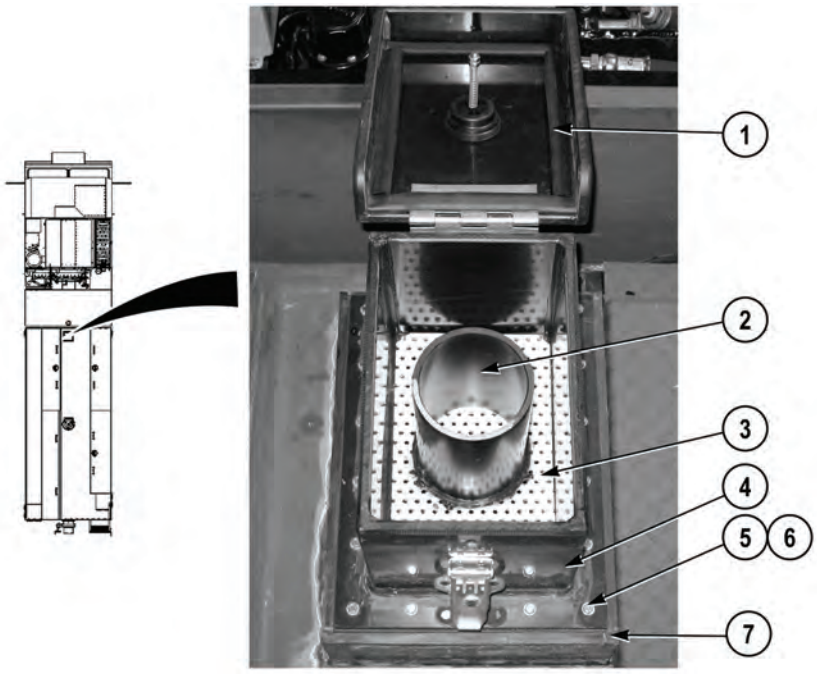
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/ Parts
Seal (1)

References
WP 0392, Fig. 24

Equipment Conditions
Foam tank pressure/vacuum/vent removed (WP 0182)

REMOVAL

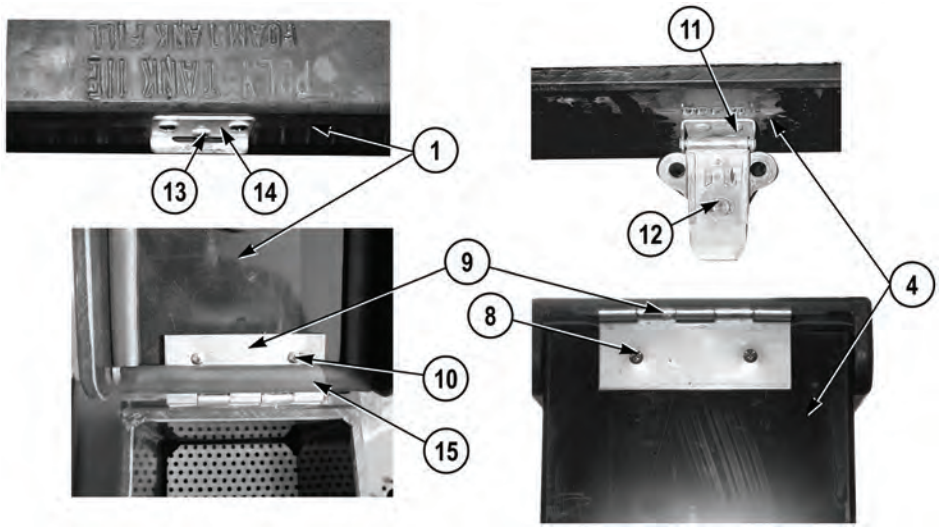


1. Open cover (1).

NOTE

Fill tube and strainer are removed as an assembly.

2. Remove fill tube (2) and strainer (3) from fill port extension (4).
3. Remove 18 screws (5), fill port extension (4), and rubber gasket (6) from water tank (7).

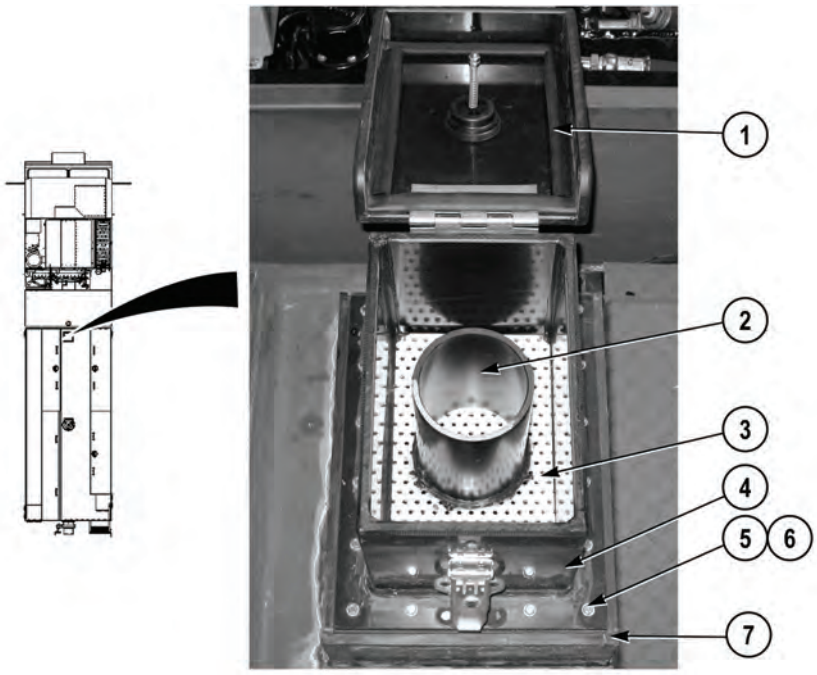


4. Remove two screws (8) and hinge (9) from fill port extension (4).
5. Remove two screws (10) and cover (1) from hinge (9).
6. Remove four screws (11) and latch (12) from fill port extension (4).
7. Remove three screws (13) and latch catch (14) from cover (1).
8. Remove and discard seal (15) from cover (1).

END OF TASK

INSTALLATION

1. Install seal (15) on cover (1).
2. Install latch catch (14) on cover (1) with three screws (13).
3. Install latch (12) on fill port extension (4) with four screws (11).
4. Install hinge (9) on cover (1) with two screws (10).
5. Install hinge (9) on fill port extension (4) with two screws (8).



6. Install rubber gasket (6) and fill port extension (4) on water tank (7) with 18 screws (5).
7. Install strainer (3) and fill tube (2) on fill port extension (4).
8. Close cover (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Install foam tank pressure/vacuum/vent (WP 0182)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

INLET VALVE REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

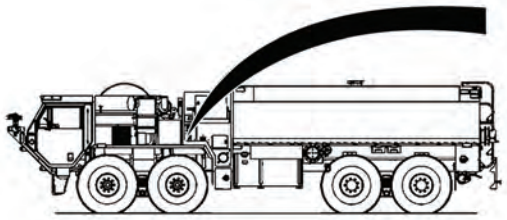
Materials/Parts
Compound, Sealing, Pipe Thread (WP 0401, Item 11)
Ties, Cable, Plastic (WP 0401, Item 25)
Locknut (2)
Lockwasher (2)
Locknut (2)

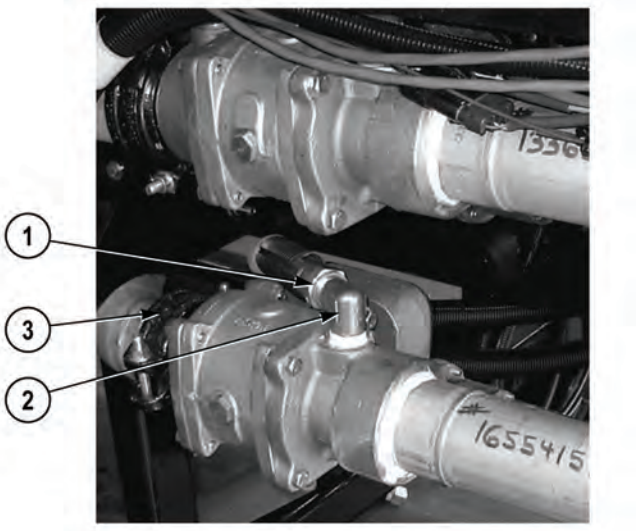
Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

References
WP 0247
WP 0315
WP 0320
WP 0392, Fig. 65

Equipment Conditions
Pump house panels A, C, and E removed driver side (WP 0341)
Pump house panels H, I, and G removed passenger side (WP 0341)

REMOVAL

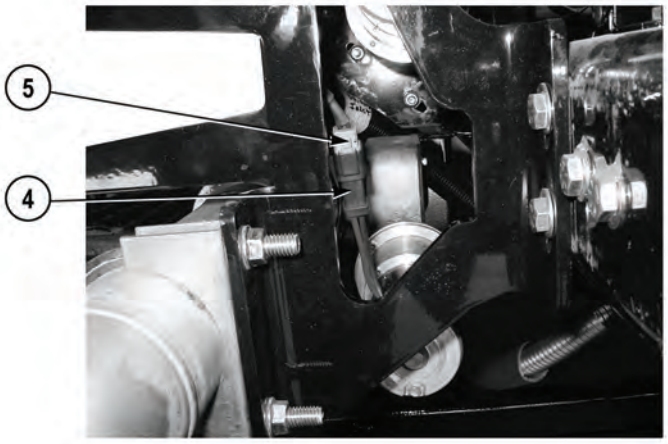




NOTE

- Both inlet valves are removed the same way. Driver side shown.
- Remove cable ties as required.

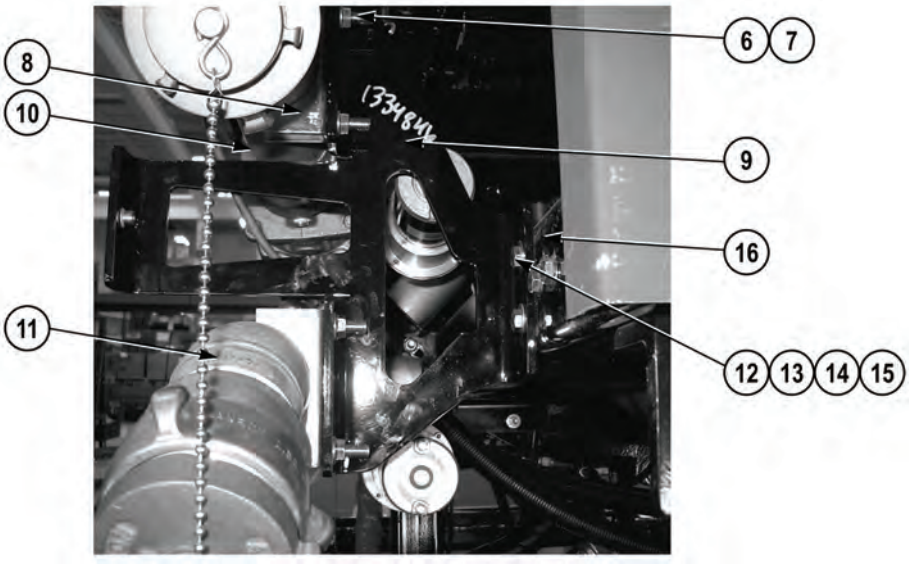
1. Remove hose (1) from elbow (2).
2. Remove coupling (3) from vehicle (WP 0315).



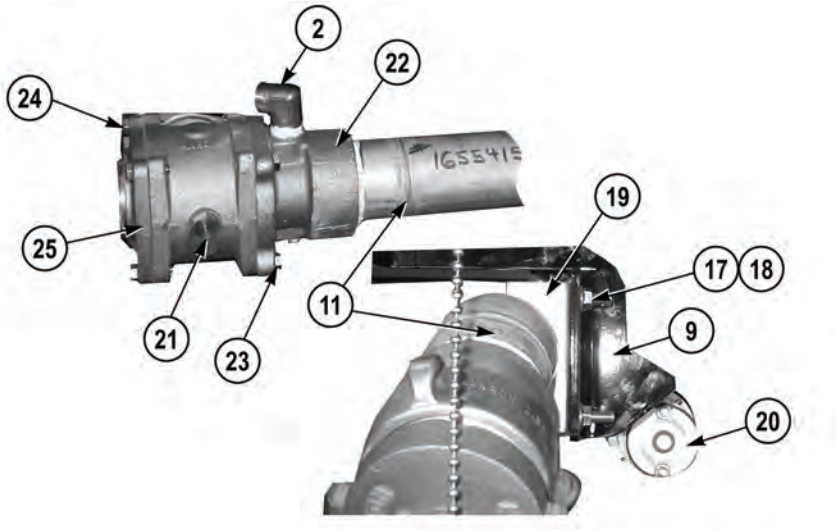
NOTE

- Support bracket holding inlet and discharge pipes must be removed with valve assembly to permit clearance for discharge valve replacement.
- Pipe and valve are replaced as an assembly.

3. Disconnect electric motor connector (4) from electric motor harness connector (5).



4. Remove two locknuts (6), U-bolt (7), and cradle (8) from bracket (9) and pipe (10). Discard locknuts.
5. With the aid of an assistant, support pipe (11) and remove two nuts (12), lockwashers (13), four washers (14), and two screws (15) from brackets (9) and channel bracket (16). Discard lockwasher.
6. With the aid of an assistant, remove pipe (11) and bracket (9) from vehicle.



7. Remove two locknuts (17), U-bolt (18), cradle (19), and pipe (11) from bracket (9). Discard locknuts.
8. Remove electric motor and drive assembly (20) from inlet valve (21) (WP 0247).

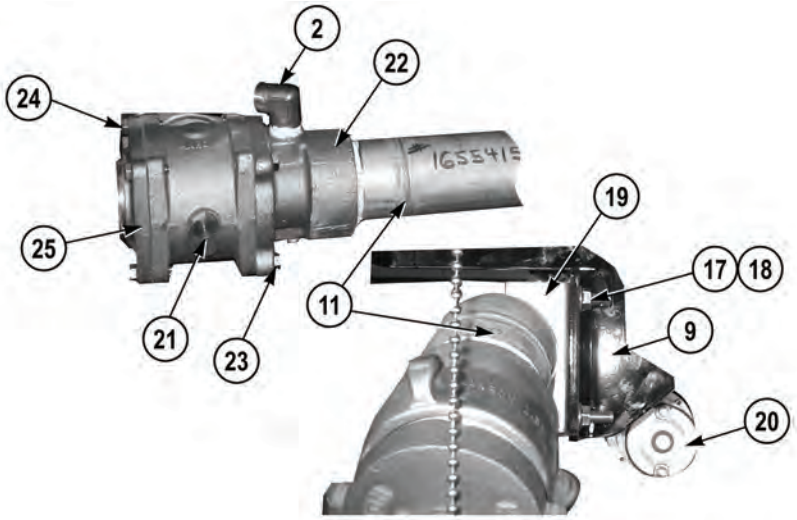
NOTE

Note position of elbow prior to removal to ensure proper installation.

9. Remove elbow (2) from adapter (22).
10. Remove pipe (11) from adapter (22).
11. Remove four screws (23) and adapter (22) from inlet valve (21).
12. Remove four screws (24) and adapter (25) from inlet valve (21).

END OF TASK

INSTALLATION



NOTE

- Both inlet valves are installed the same way. Driver side shown.
- Install cable ties as required.

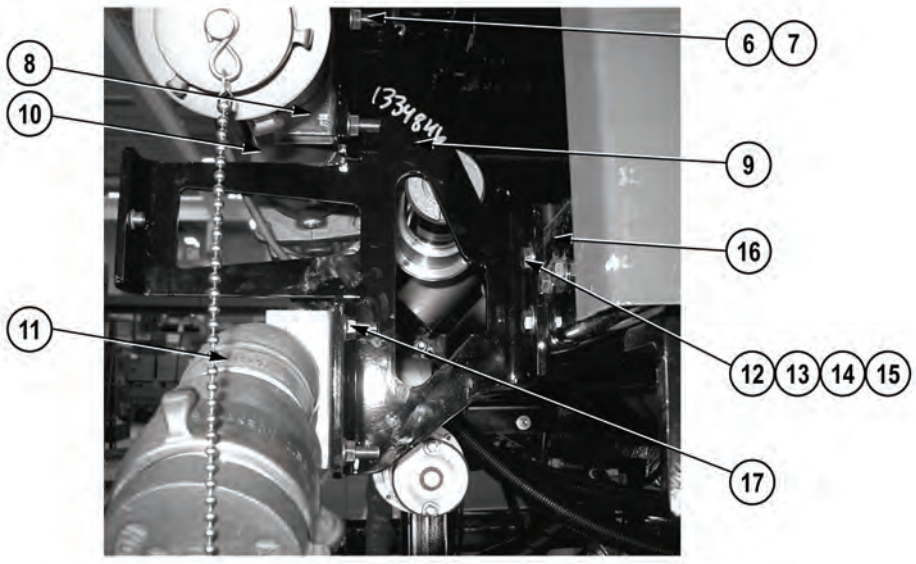
1. Install adapter (25) on inlet valve (21) with four screws (24).
2. Install adapter (22) on inlet valve (21) with four screws (23).

WARNING

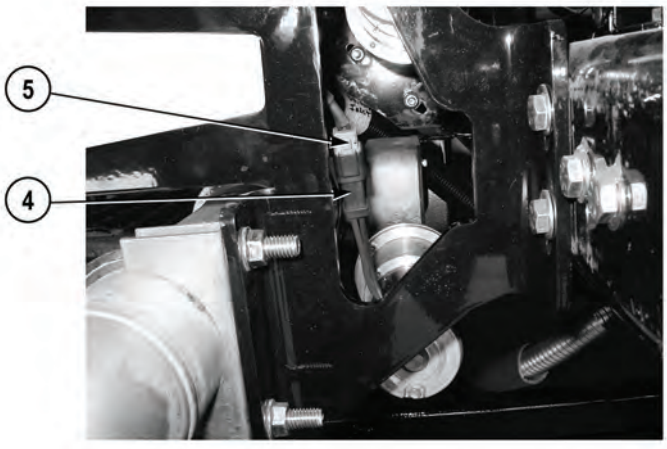


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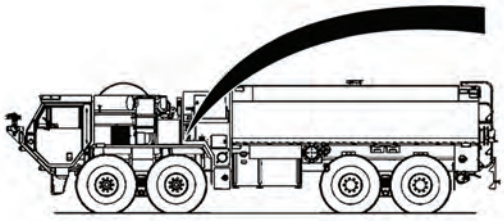
3. Apply sealing compound to threads of pipe (11) and elbow (2)
4. Install pipe (11) on adapter (22) (WP 0320).
5. Install elbow (2) on adapter (22) (WP 0320).
6. Install electric motor and drive assembly (20) on valve (21) (WP 0247).
7. Install pipe (11) on bracket (9) with cradle (19), U-bolt (18), and two locknuts (17). Do not tighten locknuts.

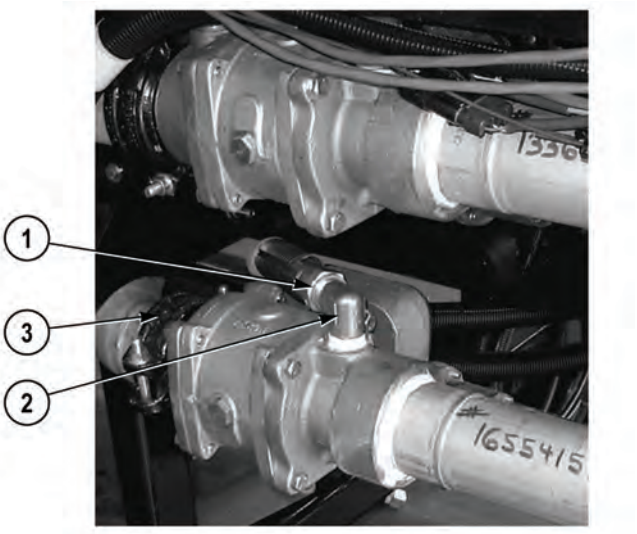


8. With the aid of an assistant, position pipe (11) and bracket (9) on vehicle.
9. With the aid of an assistant, install bracket (9) on channel bracket (16) with two screws (15), four washers (14), two lockwashers (13), and nuts (12).
10. Install bracket (9) on pipe (10) with U-bolt (7), cradle (8), and two locknuts (6).
11. Tighten two locknuts (17).



12. Connect electric motor connector (4) on electric motor harness connector (5).





13. Install coupling (3) on vehicle (WP 0315).
14. Install hose (1) on elbow (2).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install pump house panels A, C, and E driver side (WP 0341)
2. Install pump house panels H, I, and G passenger side (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

TANK-TO-PUMP CHECK VALVE REPLACEMENT

INITIAL SETUP:

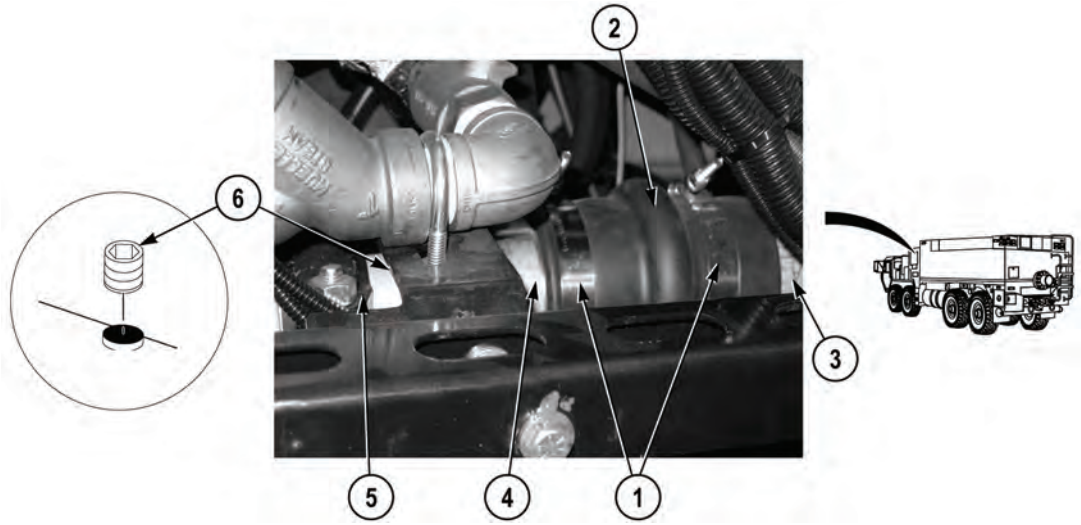
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Compound, Sealing, Pipe Thread (WP 0401, Item 11)

References
WP 0315

Equipment Conditions
Water tank drained (WP 0014)
Hose reel removed (WP 0246)

REMOVAL



⚠ CAUTION

Note position of check valve prior to removal. Failure to comply may cause damage to equipment.

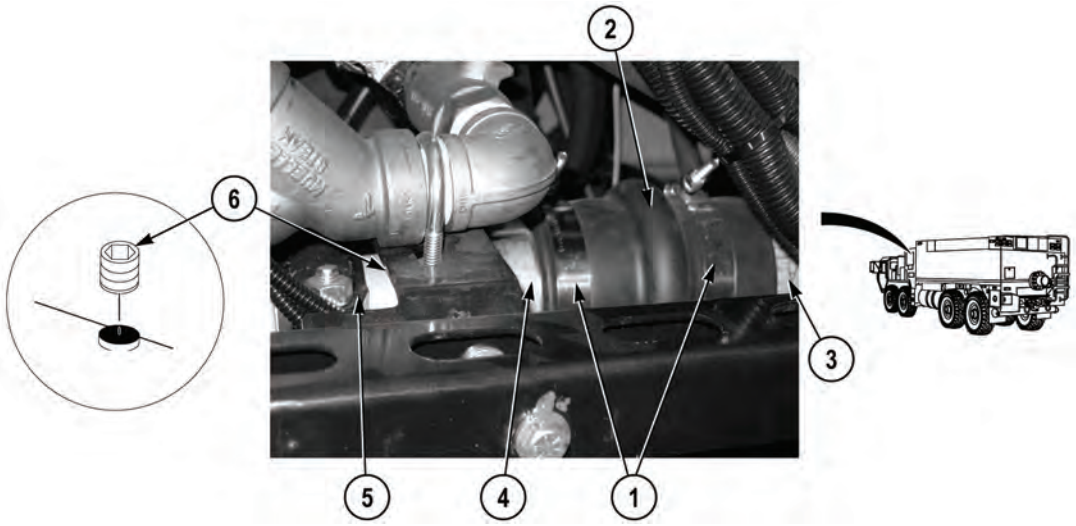
NOTE

Hump hose must be slid over pipe to provide clearance when removing check valve.

1. Loosen two clamps (1) and slide hump hose (2) onto pipe (3) and away from check valve (4).
2. Remove coupling (5) and check valve (4) from vehicle (WP 0315).
3. Remove plug (6) from check valve (4).

END OF TASK

INSTALLATION



WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

1. Apply sealing compound to threads of plug (6).
2. Install plug (6) on check valve (4).

NOTE

Install check valve as noted prior to removal.

3. Install coupling (5) and check valve (4) on vehicle (WP 0315).
4. Slide hump hose (2) onto check valve (4) from pipe (3) and tighten two clamps (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Install hose reel (WP 0246)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

MANUAL BRAY DUMP VALVE(S) REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Standard Automotive Tool Set (SATS), (WP 0399, Item 15)
• Wrench, Torque, Click, Ratcheting, 1/2” Drive, 250 ft-lb
• Wrench, Torque, Dial, 3/8” Drive, 300 in-lb
Tool Kit, General Mechanic’s: Automotive (WP 0399, Item 17)

Materials/Parts
Adhesive, Sealant (WP 0401, Item 4)
Guide Pin (WP 0387, Item a-1)
Lockwasher (2)
Lockwasher (2)
Lockwasher (4)

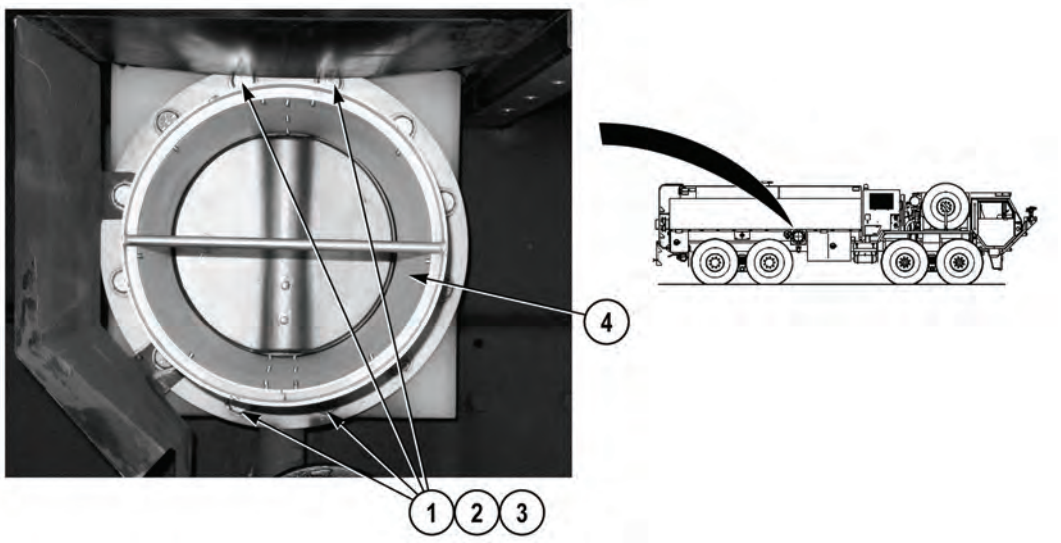
Materials/Parts (continued)
Lockwasher (6)
Locknut (12)
Locknut (14)
Gasket (1)

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

References
WP 0392, Fig. 16, Bulk

Equipment Conditions
Water tank drained (WP 0014)

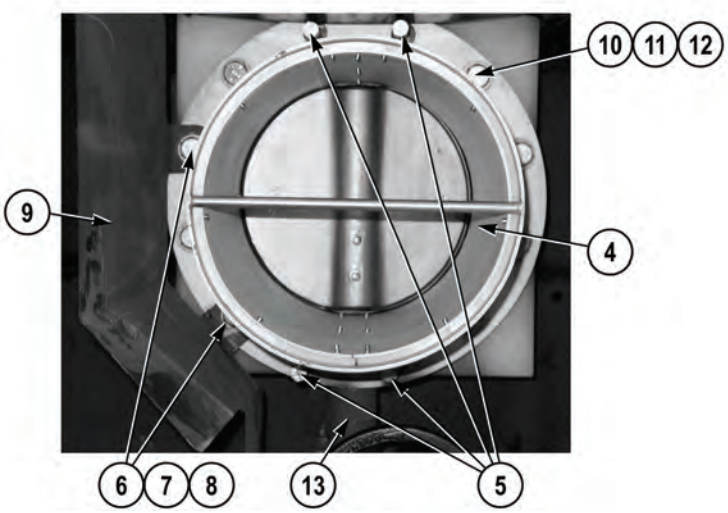
REMOVAL



NOTE

- Perform Steps (1) through (7) for driver and passenger side manual bray dump valve removal.
- Driver and passenger side manual bray dump valves are removed the same way. Passenger side shown.

1. Remove four screws (1), lockwashers (2), and washers (3) from dump chute (4). Discard lockwashers.

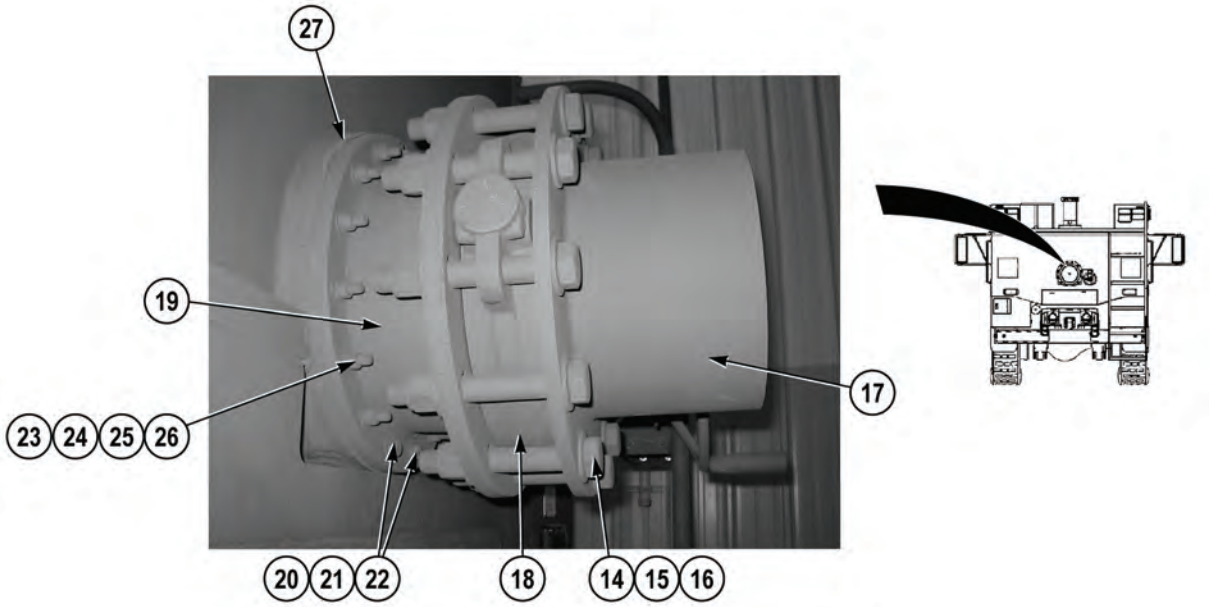


WARNING



Dump chute weighs 50 lb (22.7 kg). Bray valve weighs 55 lb (24.9 kg). Do not attempt to lift or move dump chute or bray valve without the aid of an assistant. Failure to comply may result in injury or death to personnel.

2. Install four guide pins (5) in dump chute (4).
3. Remove two screws (6), lockwashers (7), washers (8), and splash guard (9) from dump chute (4). Discard lockwashers.
4. Remove six screws (10), lockwashers (11), and washers (12) from dump chute (4). Discard lockwashers.
5. Remove dump chute (4) from four guide pins (5) and vehicle.
6. With the aid of an assistant, remove manual bray dump valve (13) from four guide pins (5) and vehicle.
7. Remove four guide pins (5) from vehicle.



NOTE

Perform Steps (8) through (10) for rear manual bray dump valve removal.

8. With the aid of an assistant, remove 12 locknuts (14), 24 washers (15), 12 screws (16), dump chute (17), and manual bray dump valve (18) from adapter (19). Discard locknuts.

9. Remove two screws (20), lockwashers (21), and washers (22) from adapter (19). Discard lockwashers.

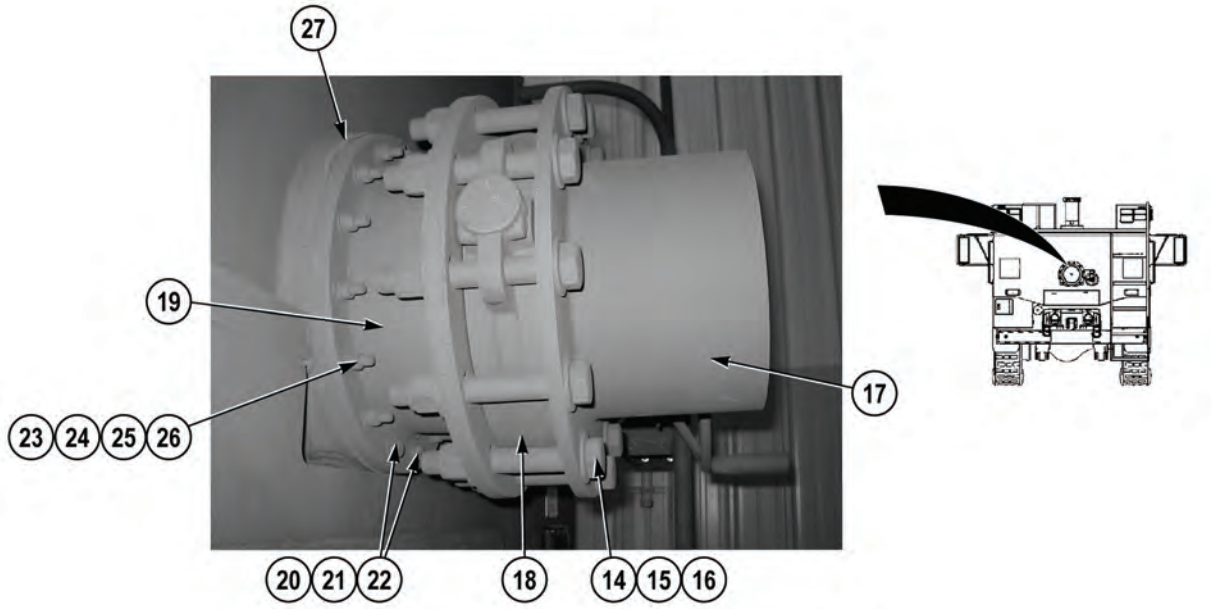
NOTE

Note position of washers prior to removal to ensure proper installation.

10. With the aid of an assistant, remove 14 locknuts (23), washers (24), washers (25), screws (26), adapter (19), and gasket (27) from vehicle. Discard locknuts and gasket.

END OF TASK

INSTALLATION



WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

NOTE

Performs Steps (1) through (4) for rear manual bray dump valve installation.

1. Apply sealant to 14 washers (24).

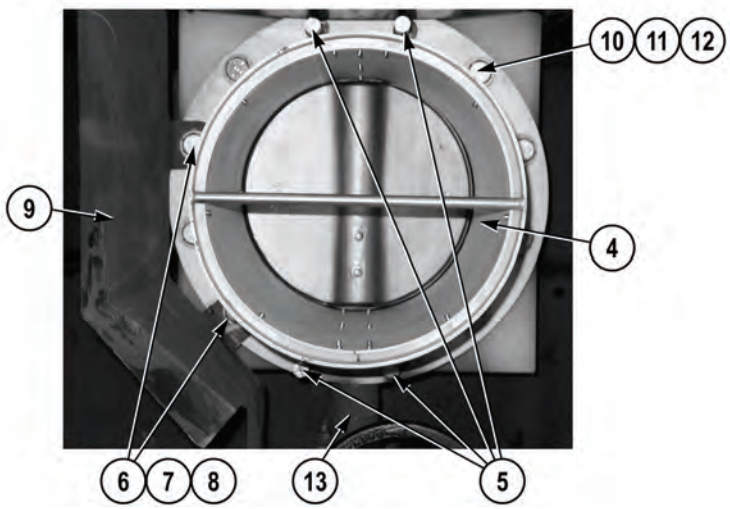
NOTE

Install washers as noted prior to removal.

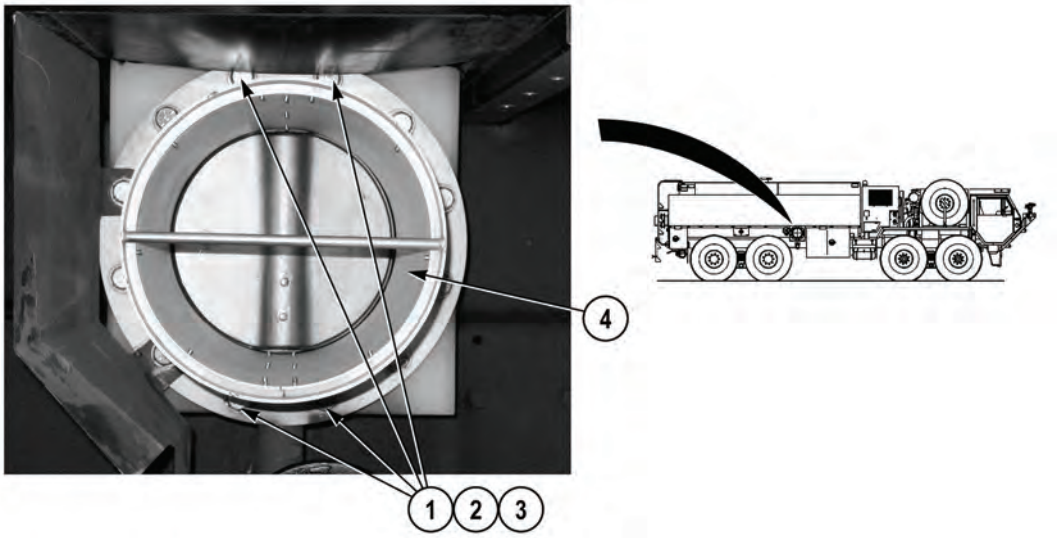
2. With the aid of an assistant, install gasket (27) and adapter (19) on vehicle with 14 screws (26), washers (25), washers (24), and locknuts (23). Tighten locknuts (23) in a criss-cross pattern until 3/8” of threads show beyond nut.

3. Install two washers (22), lockwashers (21) and screws (20) on adapter (19). Tighten screws to 60 lb-in (6.78 N•m).

4. With the aid of an assistant, install manual bray dump valve (18) and dump chute (17) on adapter (19) with 12 screws (16), 24 washers (15), and 12 locknuts (14). Tighten screws in a criss-cross pattern until 3/4” of threads show beyond nuts.



5. Install four guide pins (5) on vehicle.
6. With the aid of an assistant, install manual bray dump valve (13) on four guide pins (5) and vehicle.
7. Install dump chute (4) on four guide pins (5) and vehicle.
8. Install six washers (12), lockwashers (11), and screws (10) on dump chute (4). Do not tighten screws.
9. Install splash guard (9) on dump chute (4) with two washers (8), lockwasher (7), and screws (6). Do not tighten screws.
10. Remove four guide pins (5) from dump chute (4) and vehicle.



11. Install four washers (3), lockwashers (2), and screws (1) on dump chute (4) and vehicle. Do not tighten screws.

NOTE

Tighten screws in a criss-cross pattern.

12. Tighten six screws (10), two screws (6), and four screws (1) in a criss-cross pattern to 20 lb-ft (27.12 N•m).

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

FOAM/WATER TANK LEVEL PROBE COVER REPLACEMENT

INITIAL SETUP:

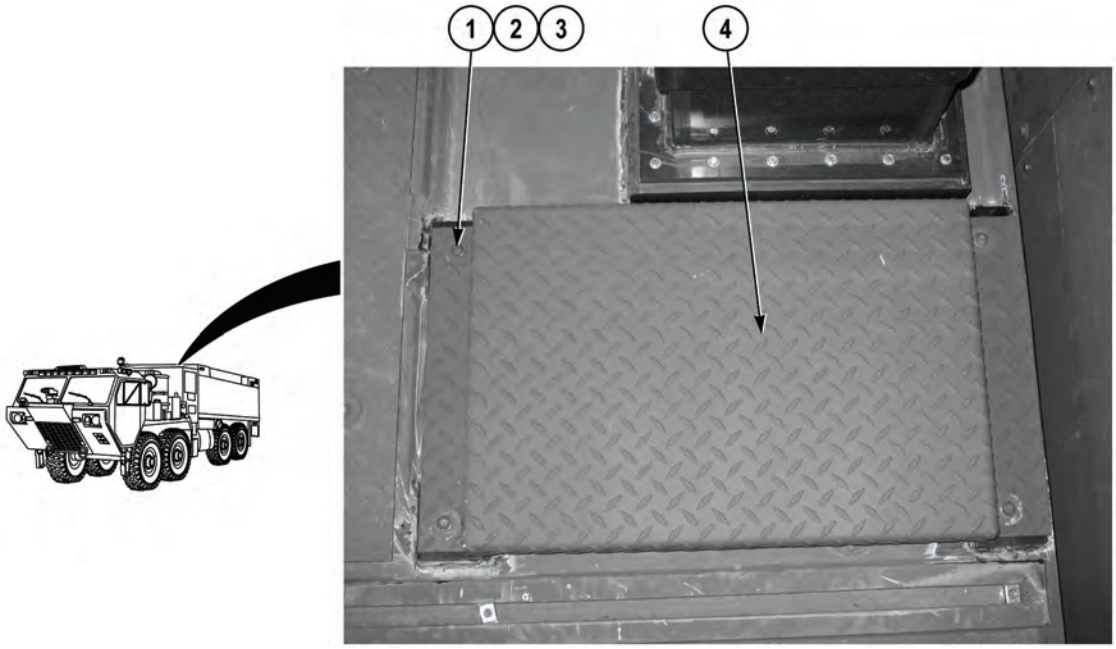
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Lockwasher (4)

References
WP 0392, Fig. 24

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)

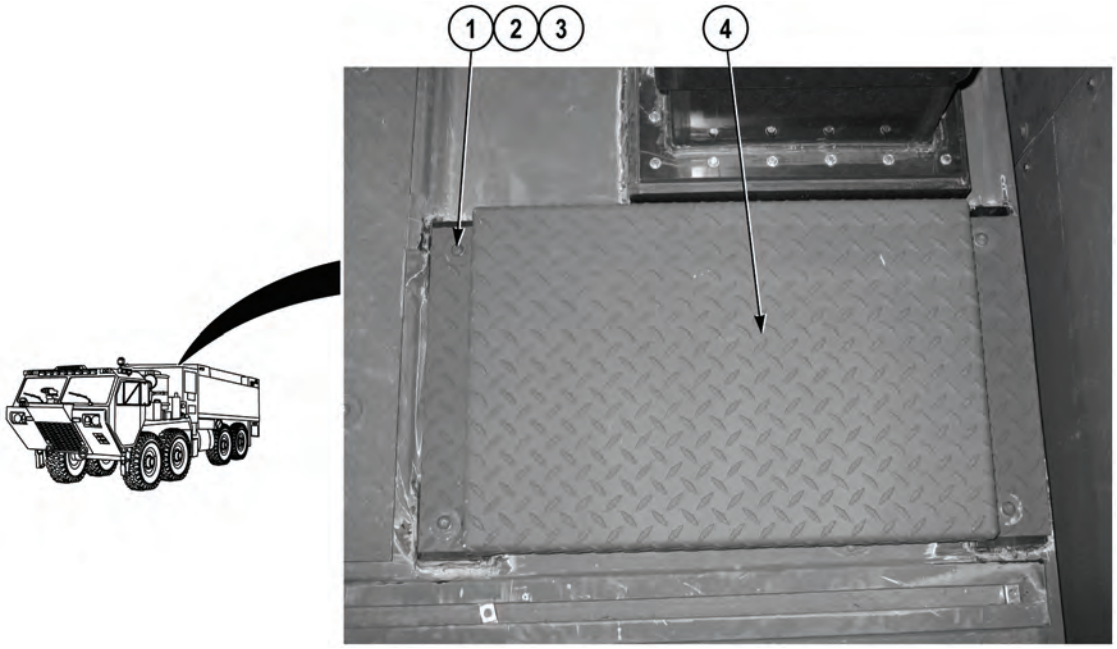
REMOVAL



Remove four screws (1), lockwashers (2), washers (3), and foam/water tank level probe cover (4) from vehicle. Discard lockwashers.

END OF TASK

INSTALLATION



Install foam/tank level probe cover (4) on vehicle with four washers (3), lockwashers (2), and screws (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

WATER TANK LEVEL PROBE REPLACEMENT

INITIAL SETUP:

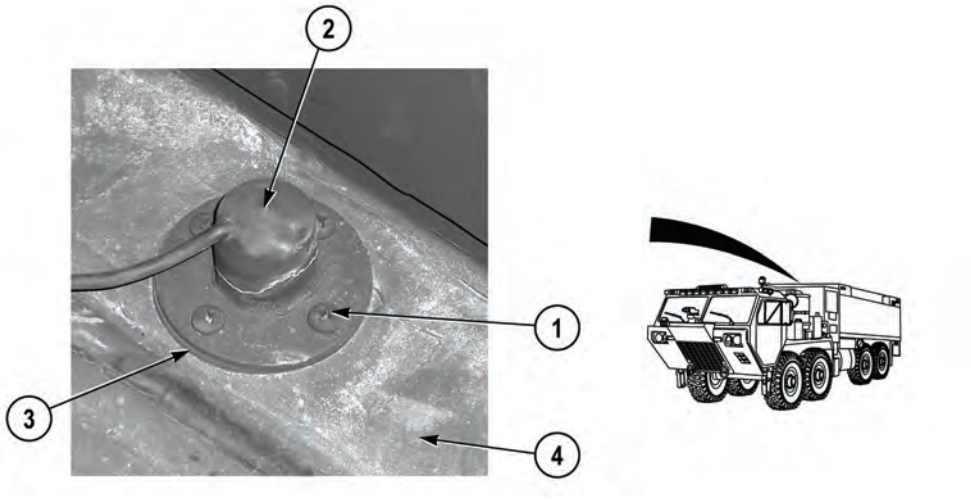
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Ties, Cable, Plastic (WP 0401, Item 25)
Lockwasher (2)

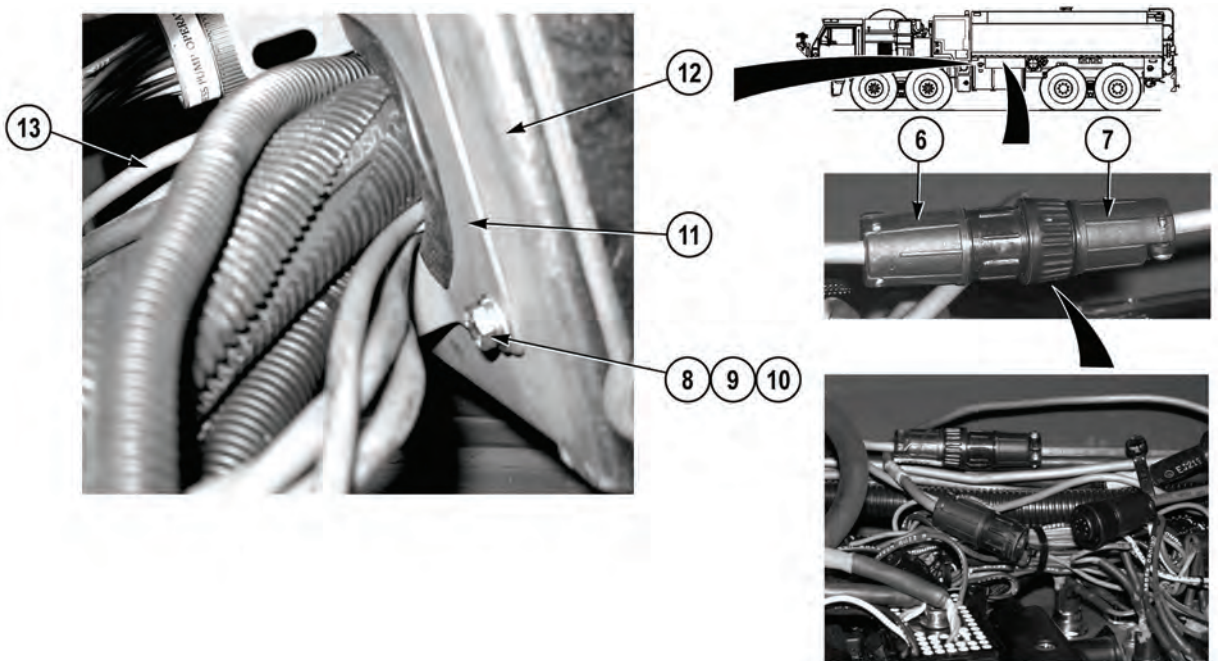
References
WP 0392, Fig. 82

Equipment Conditions
Pump operator's panel opened (WP 0195)
Foam/water tank level probe cover removed (WP 0187)

REMOVAL



1. Remove four screws (1), water tank probe (2), and gasket (3) from water tank (4).



NOTE

- Remove cable ties as required.
- Note wire routing prior to removal to ensure proper installation.

2. Disconnect water tank level probe connector (6) from water level gauge harness connector (7).

NOTE

Wire routing trim plate must be removed in order to provide clearance when removing and installing water level gauge cable.

3. Remove two screws (8), lockwashers (9), washers (10), and wire-routing trim plate (11) from pump operator's panel housing (12). Discard lockwashers.

4. Remove water level gauge cable (13) from pump operator's panel housing (12) and vehicle.

END OF TASK

INSTALLATION

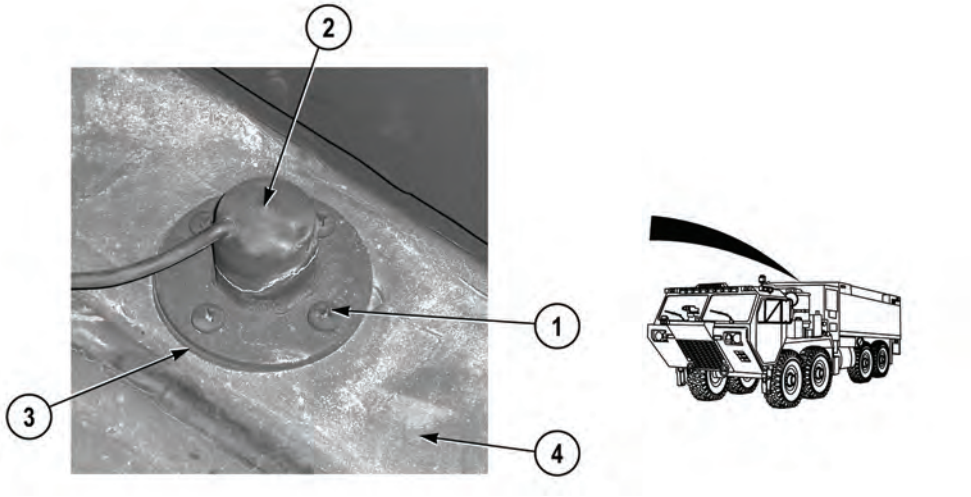
1. Position water level gauge cable (13) in pump operator's panel housing (12).

NOTE

- Install cable ties as required.
- Route wire as noted prior to removal.

2. Install wire routing trim plate (11) on pump operator's panel housing (12) with two washers (10), lockwashers (9), and screws (8).

3. Connect water level gauge harness connector (7) to water tank level probe connector (6).



4. Install gasket (3) and water tank probe (2) on water tank (4) with four screws (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install foam/water tank level probe cover (WP 0187)
2. Close pump operator’s panel (WP 0205)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

WATER TANK FILL & RE-CIRCULATING LINE VALVE REPLACEMENT

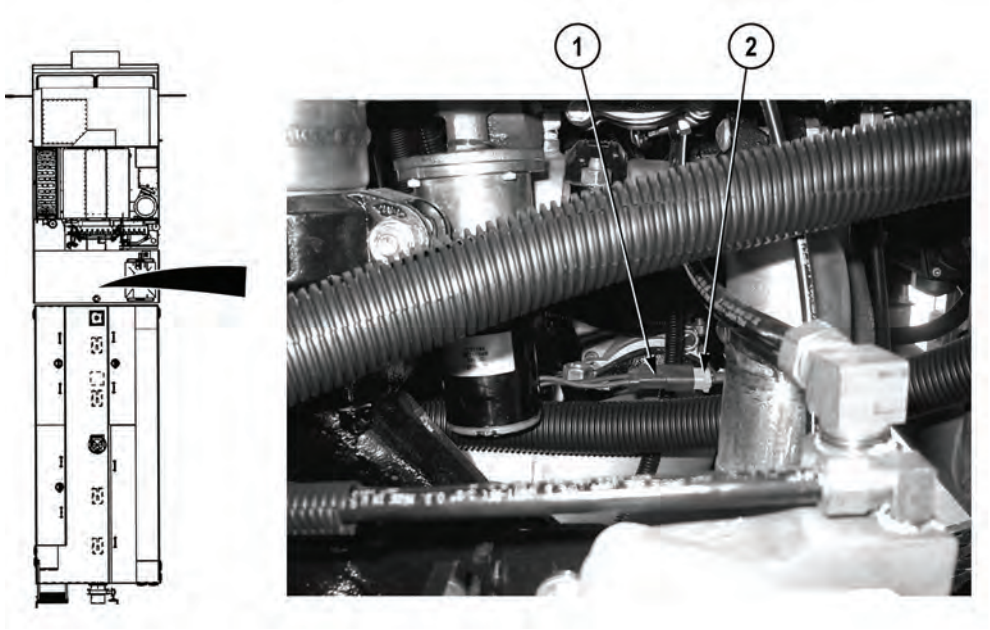
INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

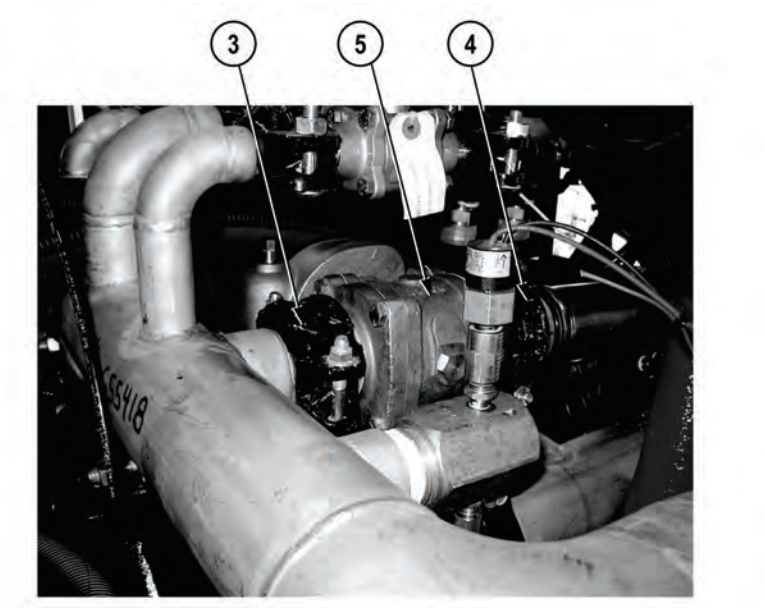
References
WP 0315

Equipment Conditions
Water tank drained (WP 0014)
Foam system flush valve removed (WP 0177)
Under truck nozzles valve removed (WP 0325)
Pump house panel G removed (WP 0341)

REMOVAL



1. Disconnect water tank fill & re-circulating line valve connector (1) from valve control wire harness connector (2).

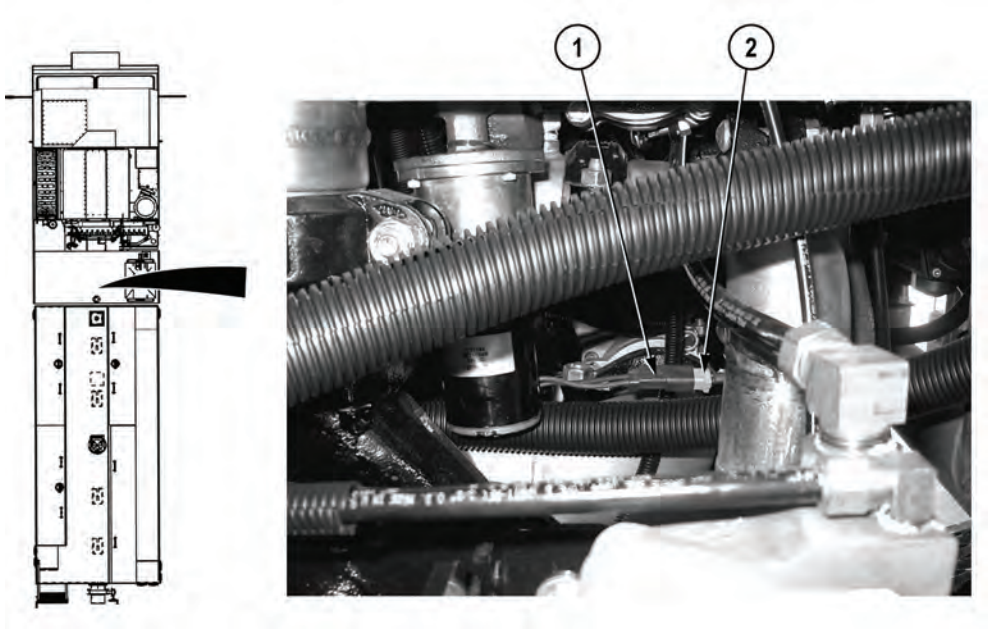


2. Remove two couplings (3) and (4) and valve (5) from vehicle (WP 0315).

END OF TASK

INSTALLATION

1. Install valve (5) and two couplings (4) and (3) on vehicle (WP 0315).



2. Connect water tank fill & re-circulating line valve connector (1) on valve control wire harness connector (2).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install under truck nozzles valve (WP 0325)
2. Install foam system flush valve (WP 0177)
3. Install pump house panel G (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

WATER TANK VENT FILL TOWER REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Standard Automotive Tool Set (SATS),
(WP 0399, Item 15)
• Wrench, Torque, Click, Ratcheting, 1/2” drive
75 lb-ft
Tool Kit, General Mechanic’s: Automotive
(WP 0399, Item 17)

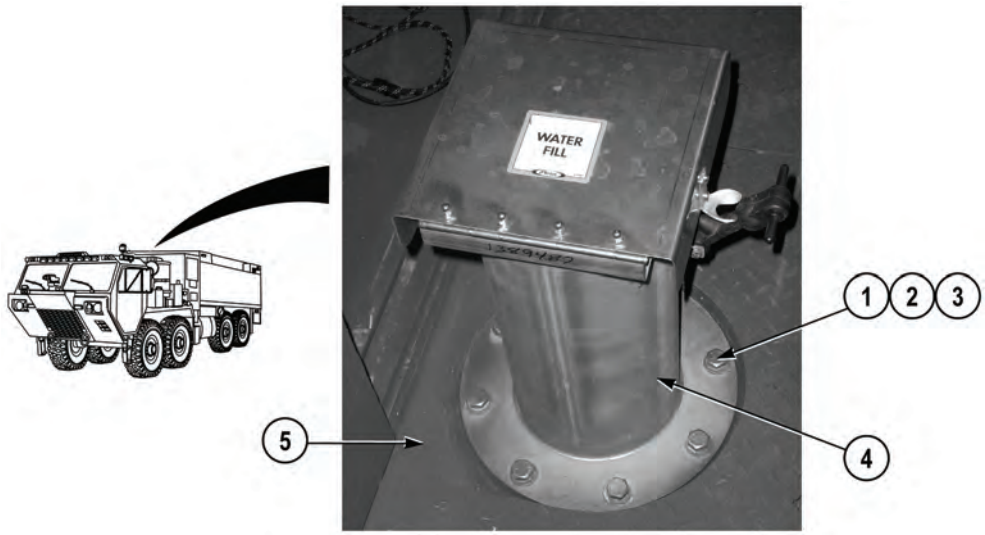
Materials/Parts
Adhesive, Sealant, Silicone RTV
(WP 0401, Item 3)
Lockwasher (8)
Locknut (3)

Materials/Parts (continued)
Lockwasher (4)
Locknut (2)
Locknut (1)

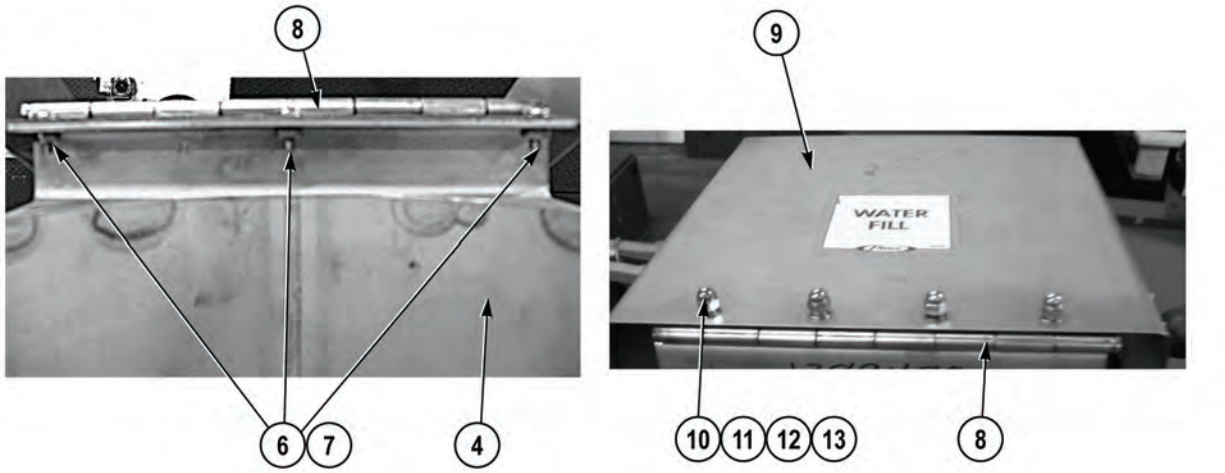
References
WP 0392, Fig. 66

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)

REMOVAL

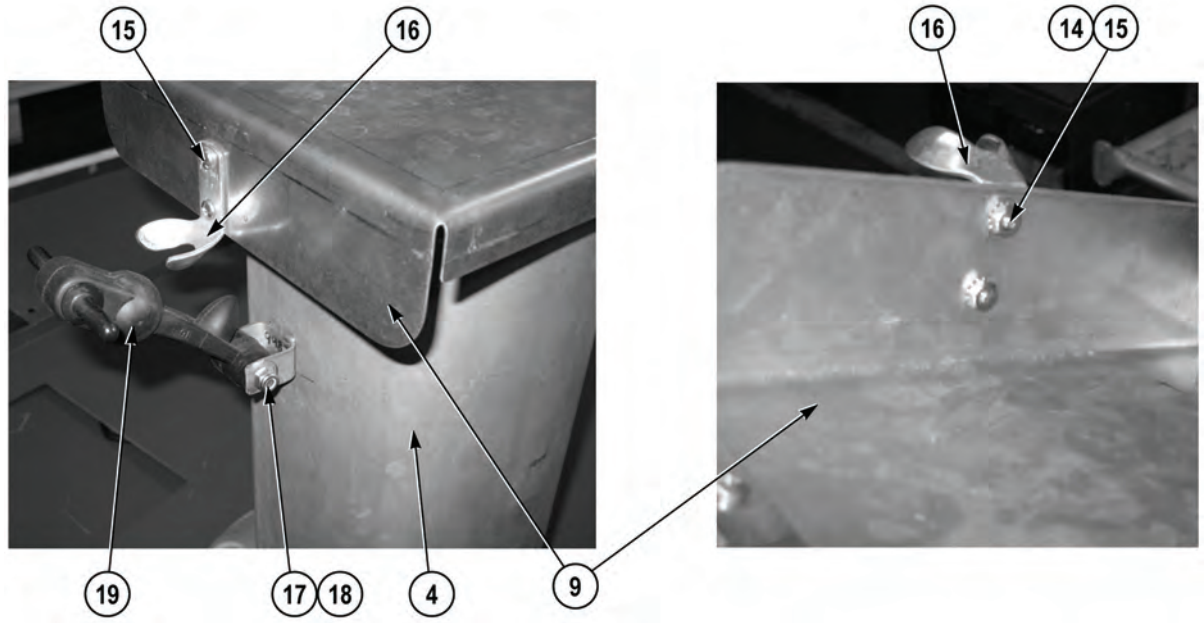


1. Remove eight screws (1), lockwashers (2), washers (3), and water tank vent/fill tower (4) from water tank (5). Discard lockwashers.



2. Remove three locknuts (6), screws (7), hinge (8), and cover (9) from water tank vent/fill tower (4). Discard locknuts.

3. Remove four nuts (10), lockwashers (11), washers (12), screws (13), and hinge (8) from cover (9). Discard lockwashers.



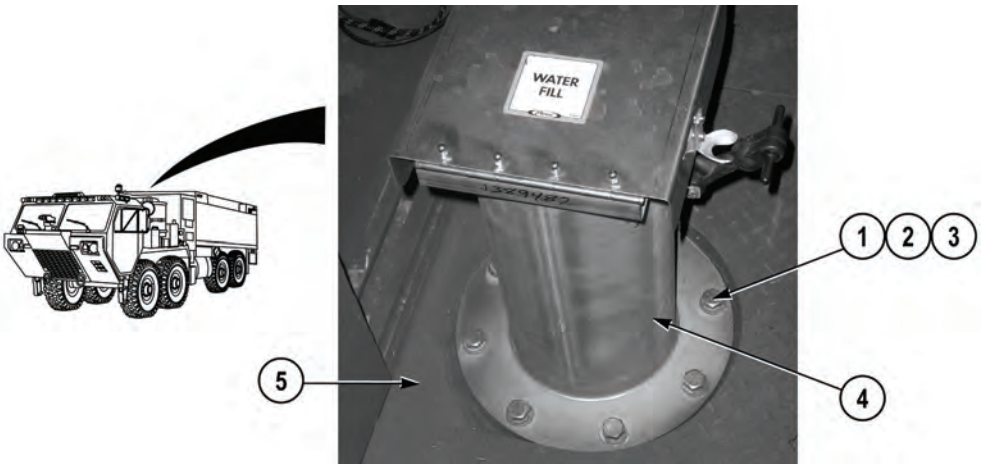
4. Remove two locknuts (14), screws (15), and bracket (16) from cover (9). Discard locknuts.

5. Remove locknut (17), screw (18), and rubber draw latch (19) from water tank vent/fill tower (4). Discard locknut.

END OF TASK

INSTALLATION

1. Install rubber draw latch (19) on water tank vent/fill tower (4) with screw (18) and locknut (17).
2. Install bracket (16) on cover (9) with two screws (15) and two locknuts (14).
3. Install hinge (8) on cover (9) with four screws (13), washers (12), lockwashers (11), and nuts (10).
4. Install hinge (8) on water tank vent/fill tower (4) with three screws (7) and locknuts (6).



WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

NOTE

Sealant will be applied to mating surface of water tank vent/fill tower and water tank.

5. Apply sealant to base of water tank vent/fill tower (4).
6. Install water tank vent/fill tower (4) to water tank (5) with eight washers (3), lockwashers (2), and screws (1).
7. Tighten screws (1) to 20 lb-ft (27 N•m).

END OF TASK

FOLLOW-ON MAINTENANCE

Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

WATER TANK REPLACEMENT

INITIAL SETUP:

Tools and Special Tools

Standard Automotive Tool Set (SATS), (WP 0399, Item 15)
- Wrench, Adjustable 18”
- Wrench, Pipe 18”
- Trestle, Hoist, Portable (4)
- Extension 1/2” DR, 10” Long

Tool Kit, General Mechanic’s: Automotive (WP 0399, Item 17)
Water Tank Lift Kit

Materials/Parts

Compound, Sealing, Pipe Thread (WP 0401, Item 11)
Tags, Identification (WP 0401, Item 22)

Personnel Required

MOS 63B Wheeled Vehicle Mechanic (4)

References

WP 0186
WP 0315
WP 0320
WP 0323

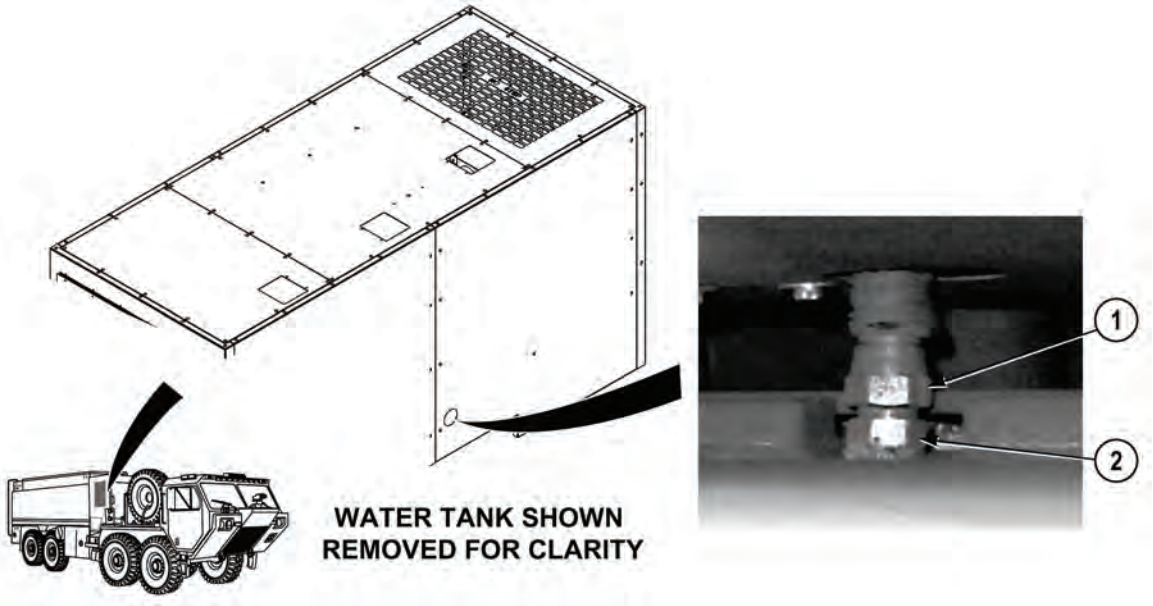
Equipment Conditions

Hose reel removed (WP 0246)
Foam tank drained (WP 0021)
Water tank drain valve removed (WP 0170)
Direct tank fill valve removed (WP 0313)
Small compartment doors removed (hard suction hoses) (WP 0351)

Equipment Conditions (continued)

Hard suction hoses removed (WP 0018)
Propeller shaft removed from transfer case to number three axle (TM 9-2320-315-14&P)
Portable water tank stowage compartment removed (WP 0339)
Foam tank level probe removed (WP 0173)
Foam tank fill port extension and cover removed (WP 0183)
Water tank level probe removed (WP 0188)
Water tank vent fill tower removed (WP 0190)
Stowage compartment (top front passenger side) removed (WP 0360)
Stowage compartment (top front driver side) removed (WP 0359)
Stowage compartment (top rear passenger side) removed (WP 0361)
Hose bed assembly removed (WP 0331)
Light bezels removed (WP 0336)
Walkway grating removed (WP 0365)
Driver side body wire harness removed (WP 0287)
Passenger side body wire harness removed (WP 0299)
Power cable assembly removed (SINCGARS) (WP 0259)
Rear access ladder removed (WP 0345)

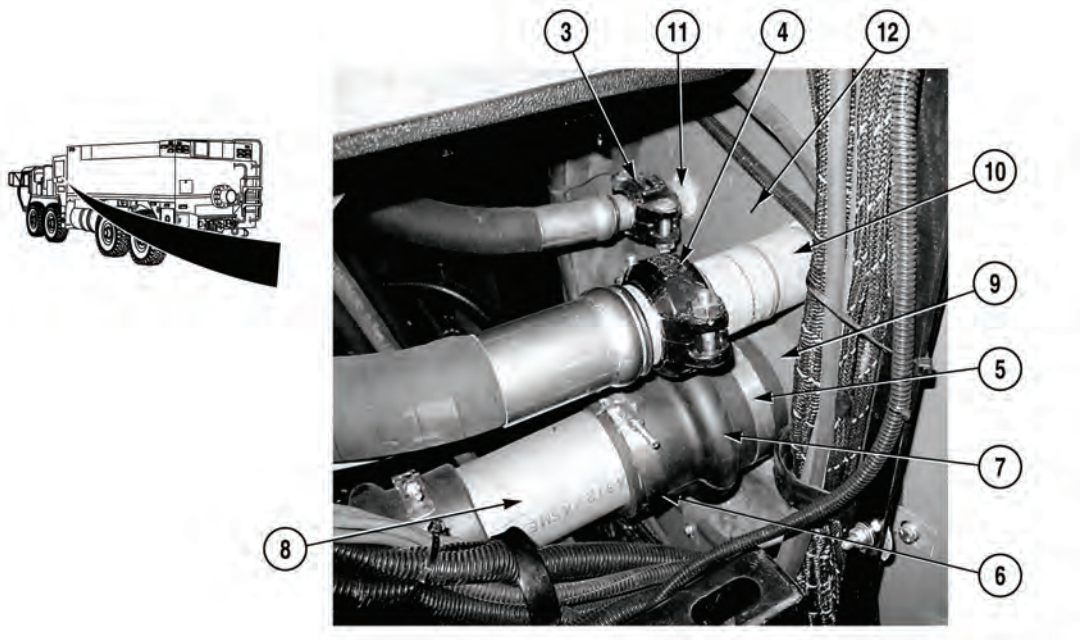
REMOVAL



NOTE

Tag and mark hoses upon removal.

1. Remove hose (1) from fitting (2).



2. Remove two couplings (3) and (4) from vehicle (WP 0315).
3. Loosen two clamps (5) and (6) and slide hump hose (7) on pipe (8) from tank outlet pipe (9).

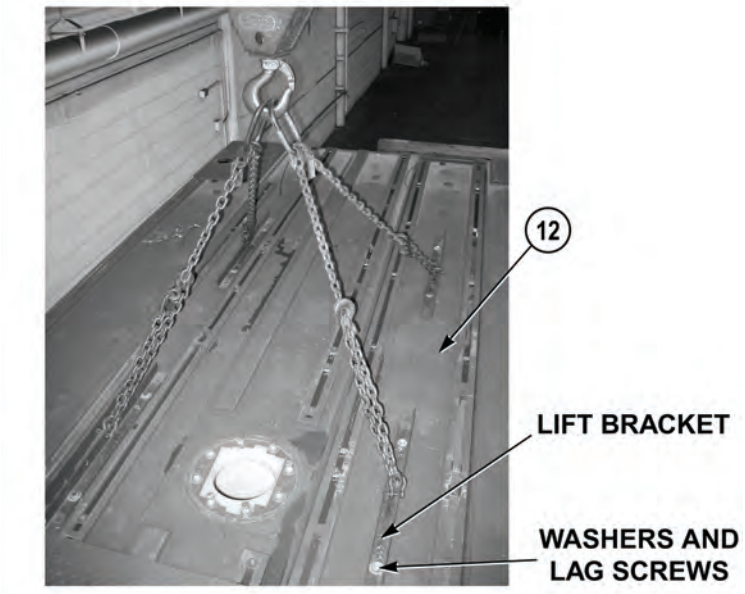
NOTE

Tank outlet pipe is part of tank and is not removed from tank.

4. Remove two pipes (10) and (11) from water tank (12).



5. Remove 48 screws (13) and eight brackets (14) from cradle (15) and water tank (12).



6. Attach four lift brackets on water tank (12) with eight washers and lag screws.

WARNING



- **Water tank weighs 2500 lb. (1135 kg). Do not attempt to move or lift water tank without the aid of three assistants and a suitable lifting device. Failure to comply may result in serious injury to personnel or damage to equipment.**
- **Do not stand between water tank cradle and water tank or under water tank when removing from vehicle. Water tank may swing toward vehicle or fall causing injury or death to personnel.**
- **All personnel must stand clear during lifting operations. A swinging or shifting load may cause death or injury to personnel.**

CAUTION

Water tank must be placed on four jack stands placed at four corners of water tank. Failure to comply may cause damage to equipment.

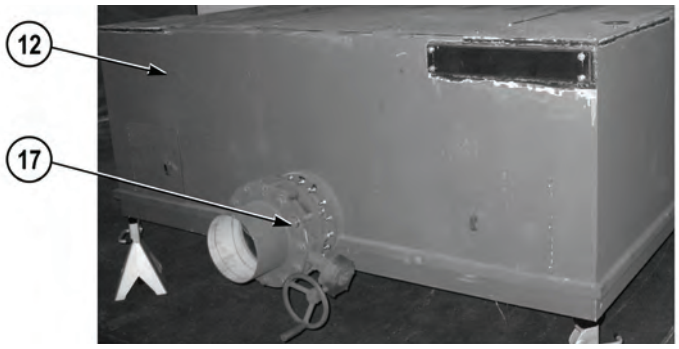
NOTE

- Use tiedown straps as needed to guide water tank during removal.
- Two tiedown straps are attached to rear manual bray dump valve.

7. With the aid of two assistants guiding water tank (12) with tie down straps, an assistant guiding from front of water tank (12), and using a suitable lifting device, remove water tank (12) from vehicle and set water tank (12) on four jackstands.



8. Remove fitting (2) from water tank (12).
9. Remove adapter (16) from water tank (12) (WP 0323).



10. Remove rear manual bray valve (17) from water tank (12) (WP 0186).

END OF TASK

INSTALLATION

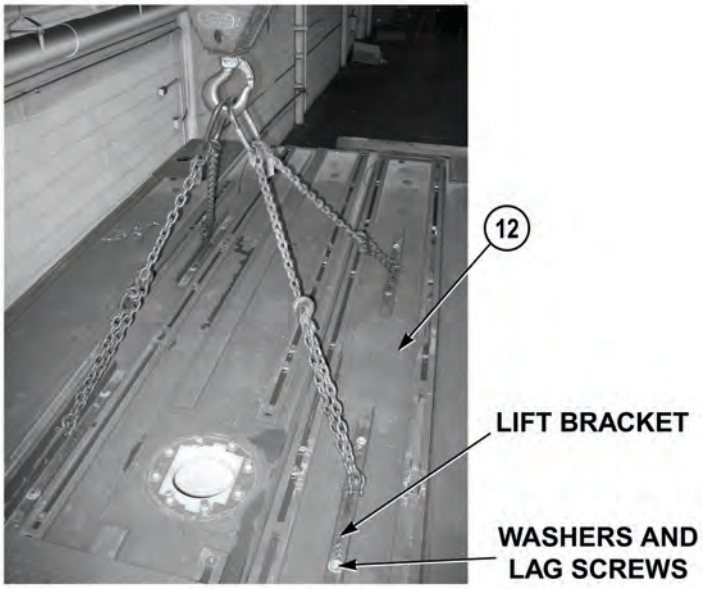
1. Install rear manual bray valve (17) on water tank (12) (WP 0186).
2. Install adapter (16) on water tank (12) (WP 0323).

WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

3. Apply sealing compound to threads of fitting (2).
4. Install fitting (2) in water tank (12).

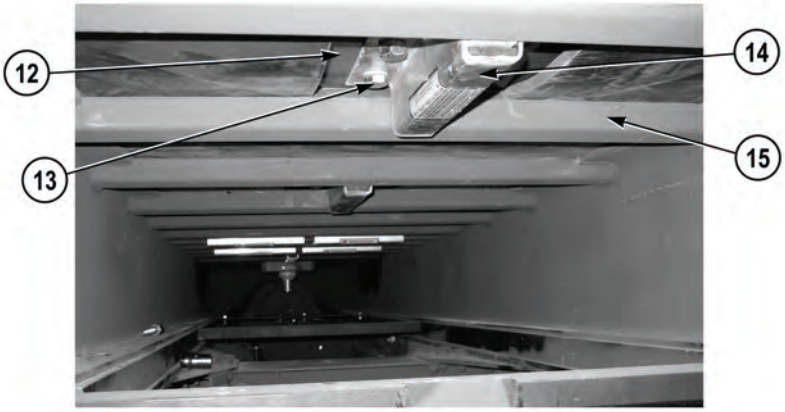


WARNING

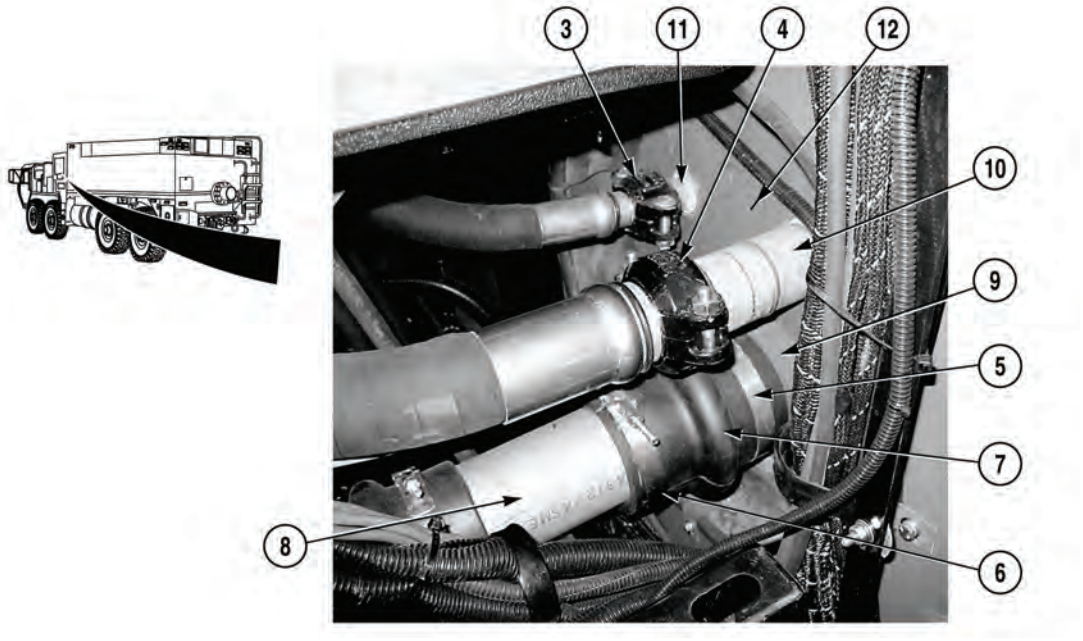


Water tank weighs 2500 lb. (1135 kg). Do not attempt to move or lift water tank without the aid of three assistants and a suitable lifting device. Failure to comply may result in serious injury to personnel or damage to equipment.

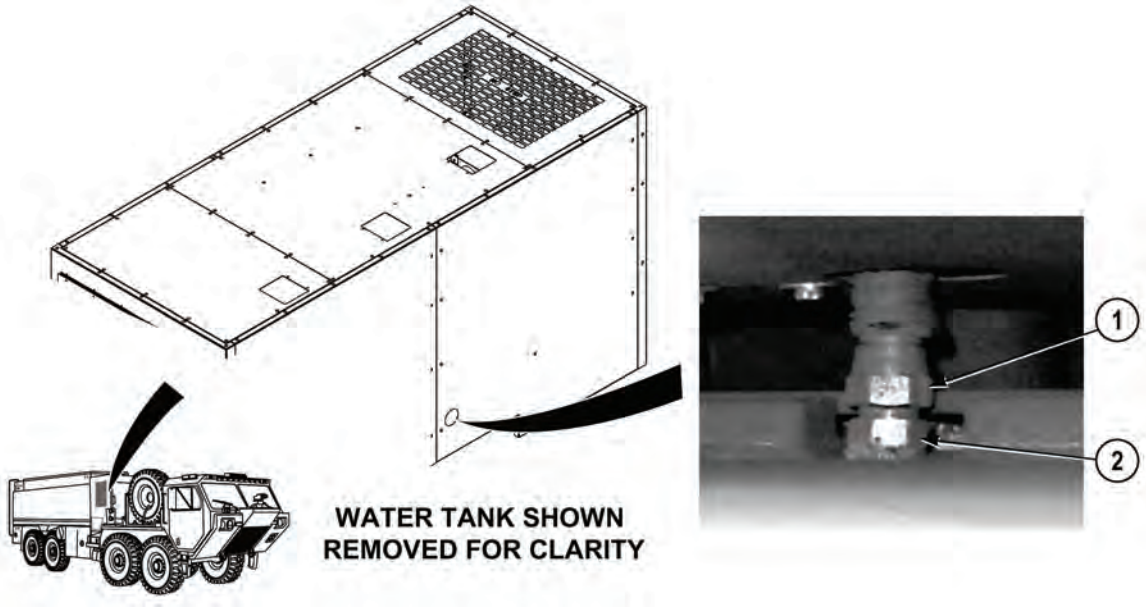
5. With the aid of three assistants and suitable lifting device, install water tank (12) on vehicle.
6. Remove eight lag screws, washers, and four lift brackets from water tank (12).



7. Install eight brackets (14) on cradle (15) and water tank (12) with 48 screws (13).



8. Install two pipes (11) and (10) on water tank (12) (WP 0320).
9. Slide hump hose (7) on tank outlet pipe (9) and tighten two clamps (6) and (5).
10. Install two couplings (4) and (3) on vehicle (WP 0315).



11. Install hose (1) on fitting (2).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install rear access ladder (WP 0345)
2. Install power cable assembly (SINCGARS) (WP 0259)
3. Install passenger side body wire harness (WP 0299)
4. Install driver side body wire harness (WP 0287)
5. Install walkway grating (WP 0365)
6. Install light bezels (WP 0336)
7. Install hose bed assembly (WP 0331)
8. Install stowage compartment (top rear passenger side) (WP 0361)
9. Install stowage compartment (top front driver side) (WP 0359)
10. Install stowage compartment (top front passenger side) (WP 0360)
11. Install water tank vent fill tower (WP 0190)
12. Install water tank level probe (WP 0188)
13. Install foam tank fill port extension and cover (WP 0183)
14. Install foam tank level probe (WP 0173)
15. Install portable water tank stowage compartment (WP 0339)
16. Install propeller shaft from transfer case to number three axle (TM 9-2320-315-14&P)
17. Install hard suction hoses (WP 0018)
18. Install small compartment doors (hard suction hoses) (WP 0351)
19. Install direct tank fill valve (WP 0313)
20. Install water tank drain valve (WP 0170)
21. Install hose reel (WP 0246)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

WATER TANK CRADLE REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

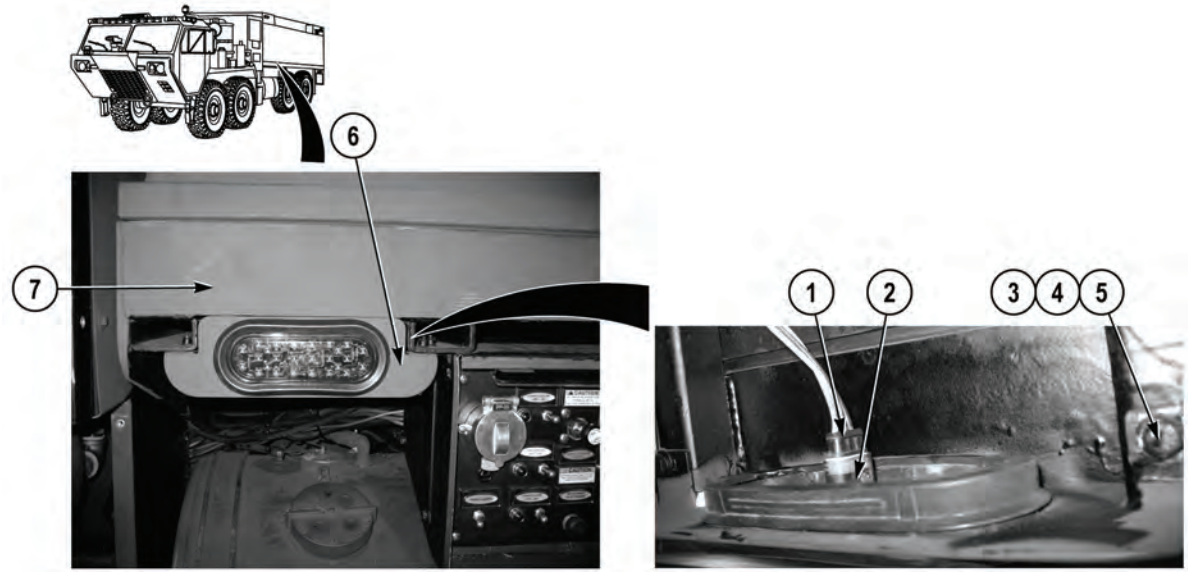
Materials/Parts
Adhesive, Spray (WP 0401, Item 5)
Lockwasher (4)
Locknut (2)
Lockwasher (2)
Locknut (1)
Locknut (18)
Lockwasher (14)

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

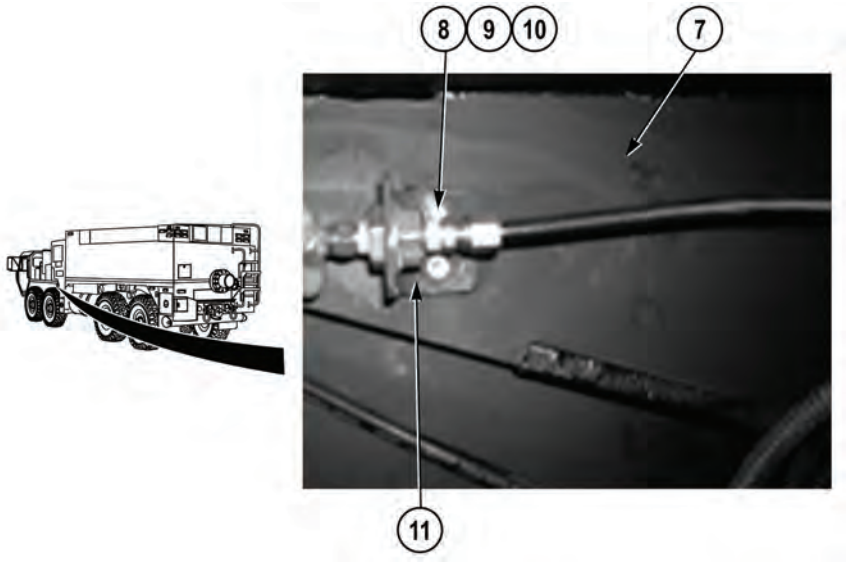
References
WP 0392, Fig. 25

Equipment Conditions
Water tank removed (WP 0191)
Wheel chocks stowage compartment removed (WP 0366)
Pump operator's panel removed (WP 0206)
Stowage compartment (lower front passenger side) removed (WP 0355)
Stowage compartment (lower rear passenger side) removed (WP 0358)
Stowage compartment (lower rear driver side) removed (WP 0357)

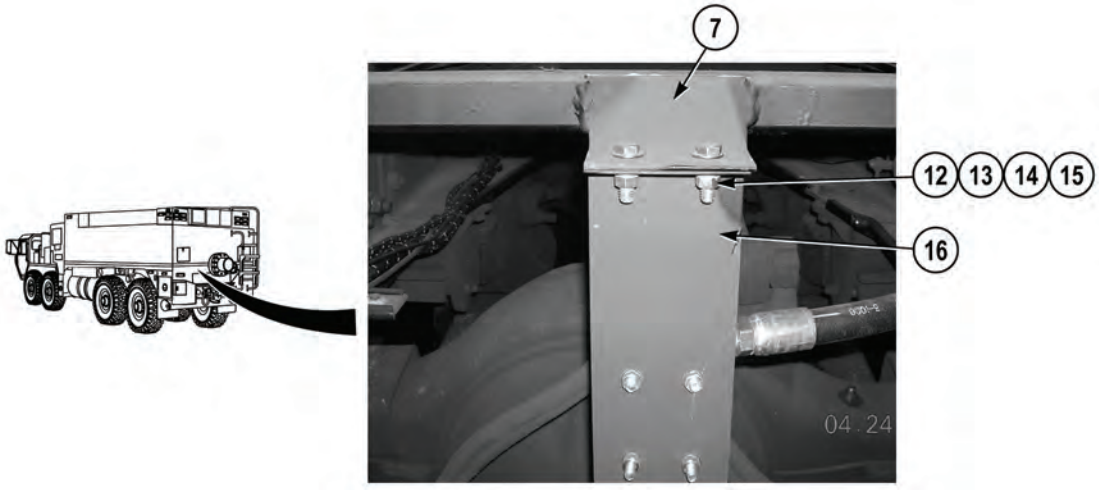
REMOVAL



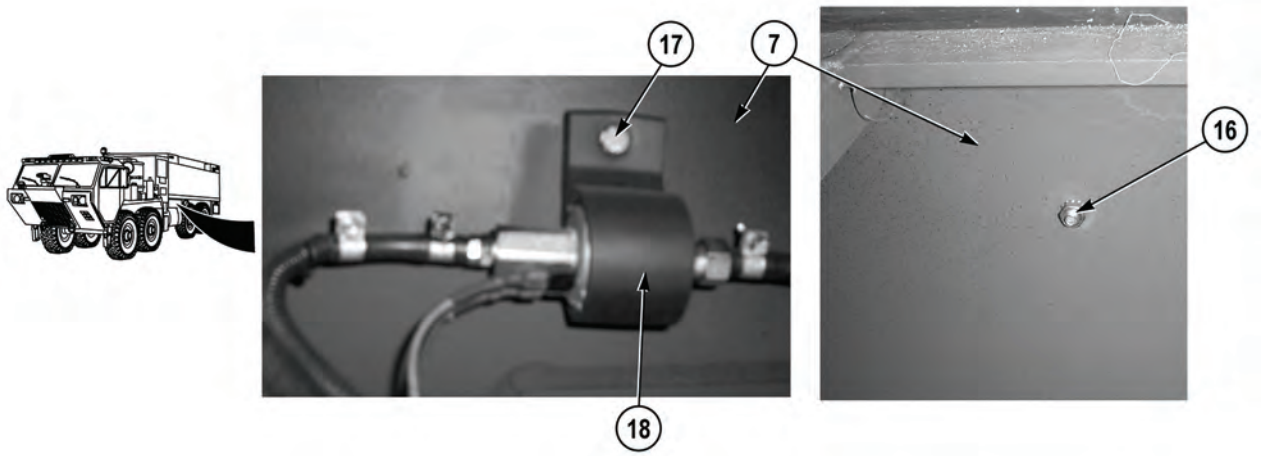
1. Disconnect side marker light wire harness (1) from side marker light (2).
2. Remove four screws (3), lockwashers (4), washers (5), and bracket (6) from water tank cradle (7). Discard lockwashers.



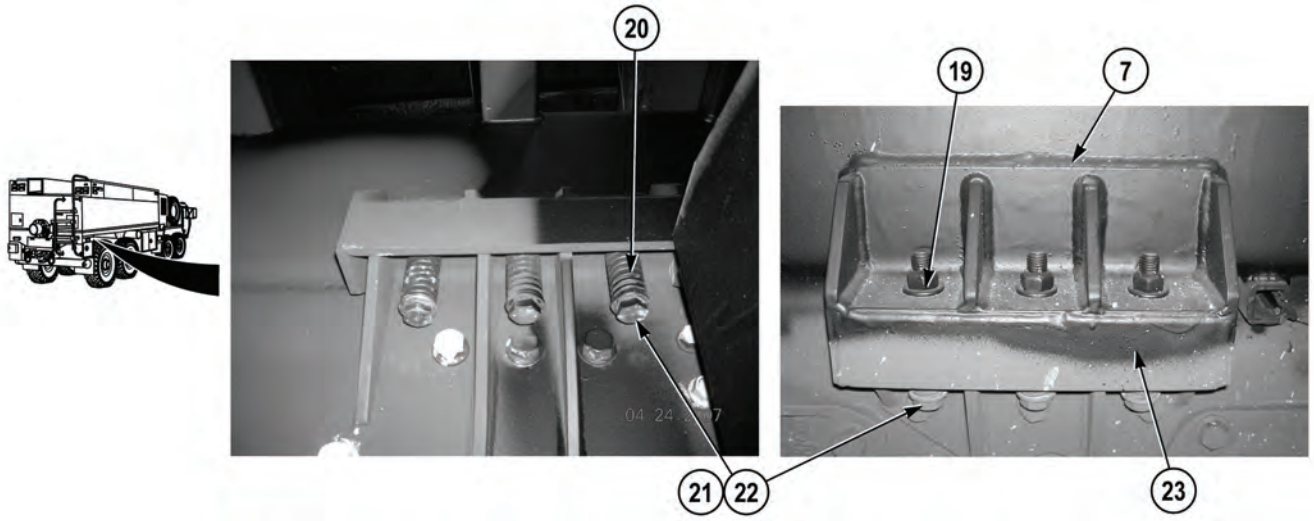
3. Remove two locknuts (8), washers (9), screws (10), and tire inflator connect bracket (11) from water tank cradle (7). Discard locknuts.



4. Remove two nuts (12), lockwashers (13), four washers (14), two screws (15), and rear under truck nozzle bracket (16) from water tank cradle (7). Discard lockwashers.



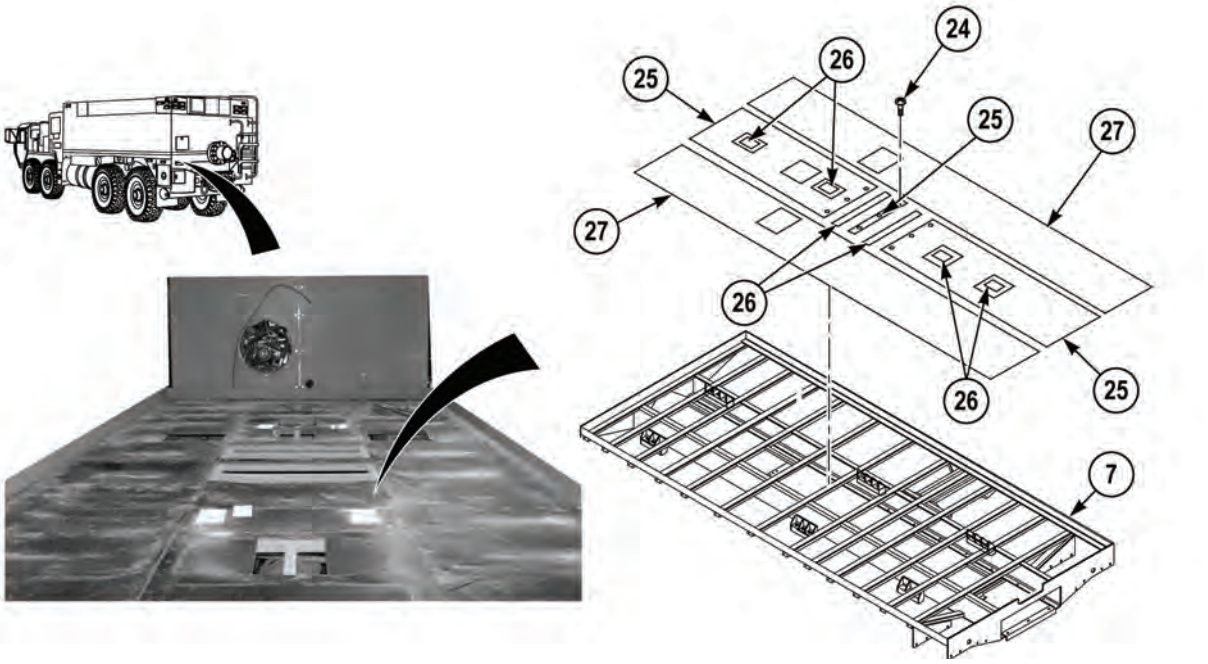
5. Remove locknut (16), screw (17), and pump house heater fuel pump bracket (18) from water tank cradle (7). Discard locknut.



NOTE

Note locators of washers prior to removal to ensure proper installation.

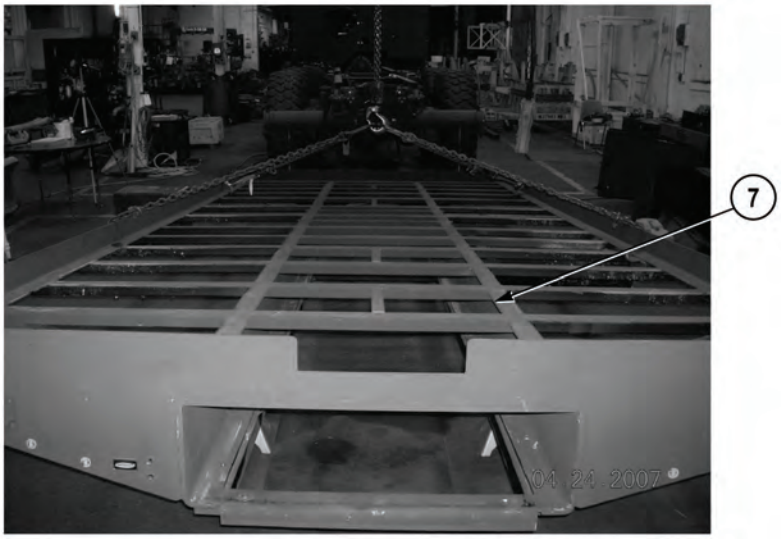
6. Remove 18 locknuts (19), springs (20), 36 washers (21), and 18 screws (22) from water tank cradle (7) and six frame rail mounting brackets (23). Discard locknuts.



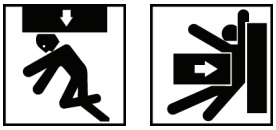
NOTE

- Note position of rubber tank padding strips prior to removal to ensure proper installation.
- Three rubber tank padding strips are held in place with screws.
- Six rubber tank padding strips are held in place with adhesive.

7. Remove nine screws (24) and three rubber tank padding strips (25) from water tank cradle (7).
8. Remove six rubber tank padding strips (26) and two rubber tank padding strips (27) from water tank cradle (7).

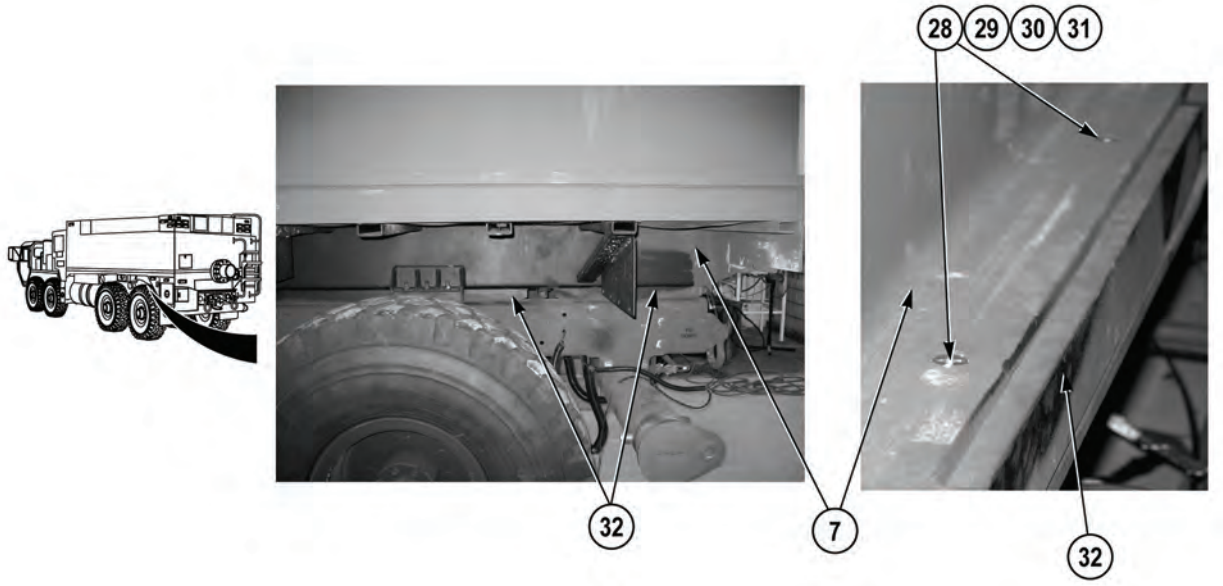


WARNING



- **Do not stand between vehicle and water tank cradle or under water tank cradle when removing from vehicle. Water tank cradle may swing toward vehicle or fall causing injury or death to personnel.**
- **Water tank cradle weighs approximately 2,000 lb. (908 kg). Do not attempt to lift or move water tank cradle without the aid of an assistant and a suitable lifting device. Failure to comply may result in injury or death to personnel.**
- **All personnel must stand clear during lifting operations. A swinging or shifting load may cause death or injury to personnel.**

9. With the aid of an assistant and a suitable lifting device, remove water tank cradle (7) from vehicle.



NOTE

Note position of wooden spacers prior to removal to ensure proper installation.

10. Remove 14 nuts (28), lockwashers (29), washers (30) screws (31), and four wooden spacers (32) from water tank cradle (7). Discard lockwashers.

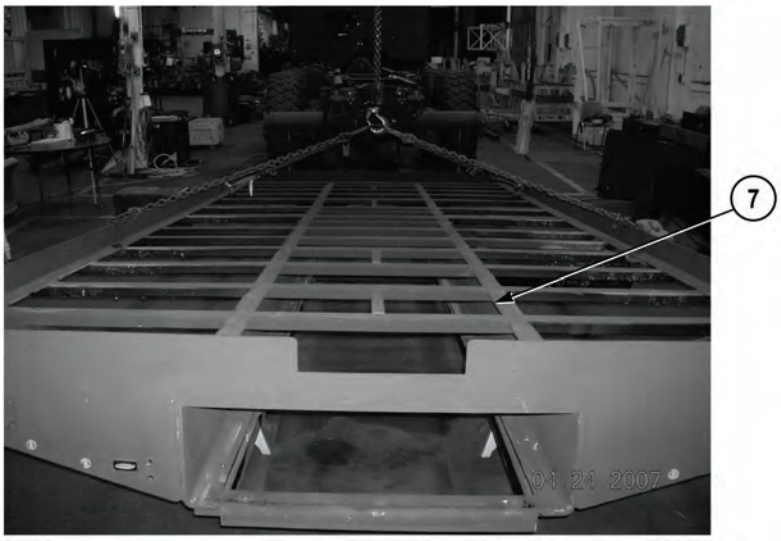
END OF TASK

INSTALLATION

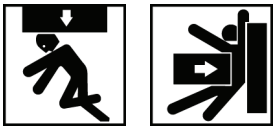
NOTE

Install wooden spacers as noted prior to removal.

1. Install four wooden spacers (27) with 14 screws (26), washers (25), lockwashers (24), and nuts (23) on water tank cradle (7).

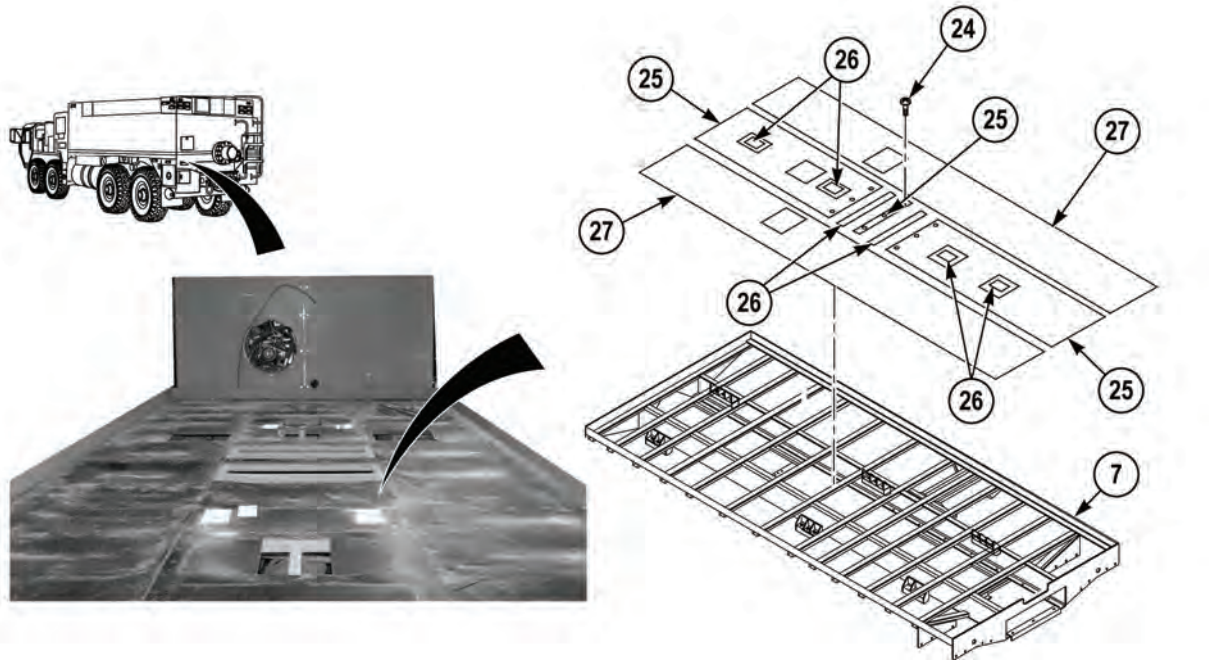


WARNING



- **Do not stand between vehicle and water tank cradle or under water tank cradle when removing from vehicle. Water tank cradle may swing toward vehicle or fall causing injury or death to personnel.**
- **Water tank cradle weighs approximately 2,000 lb. (908 kg). Do not attempt to lift or move water tank cradle without the aid of an assistant and a suitable lifting device. Failure to comply may result in injury or death to personnel.**
- **All personnel must stand clear during lifting operations. A swinging or shifting load may cause death or injury to personnel.**

2. With the aid of an assistant and a suitable lifting device, position water tank cradle (7) on vehicle.



NOTE

- Install rubber tank padding as noted prior to removal.
- Three rubber tank padding strips are held in place with screws.
- Six rubber tank padding strips are held in place with adhesive.

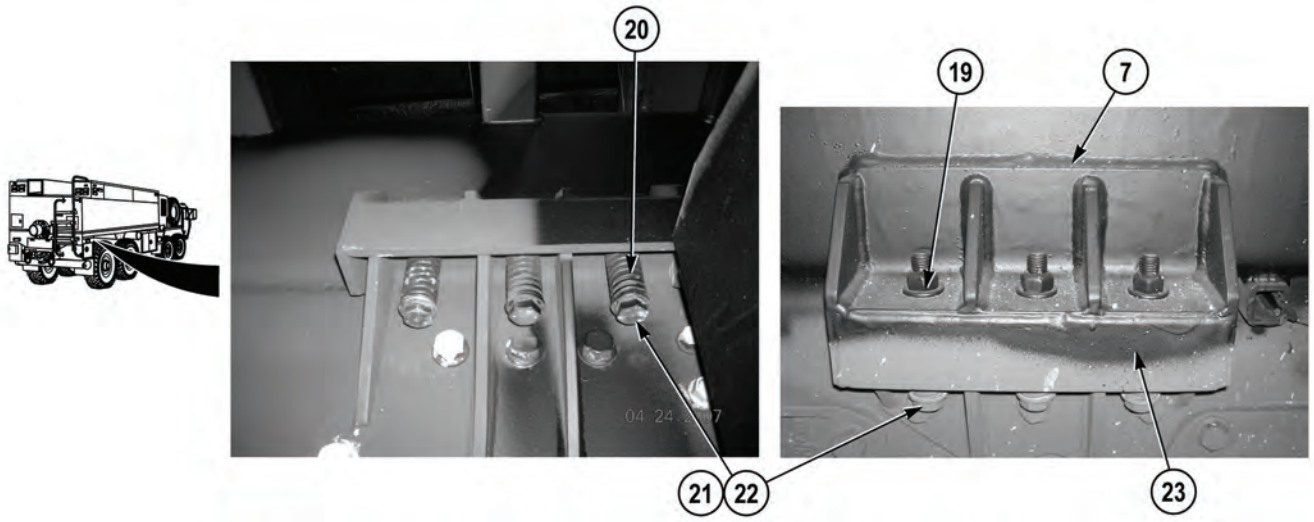
3. Install two rubber tank padding strips (27) on water tank cradle (7).

WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

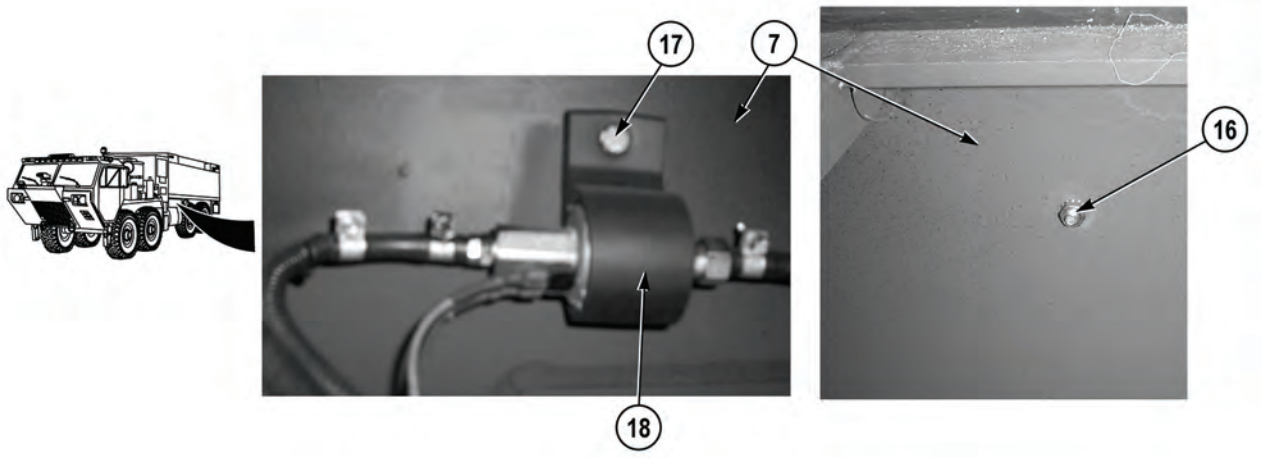
4. Apply adhesive to six rubber tank padding strips (26).
5. Install six rubber tank padding strips (26) on water tank cradle (7).
6. Install three rubber tank padding strips (25) on water tank cradle (7) with nine screws (24).



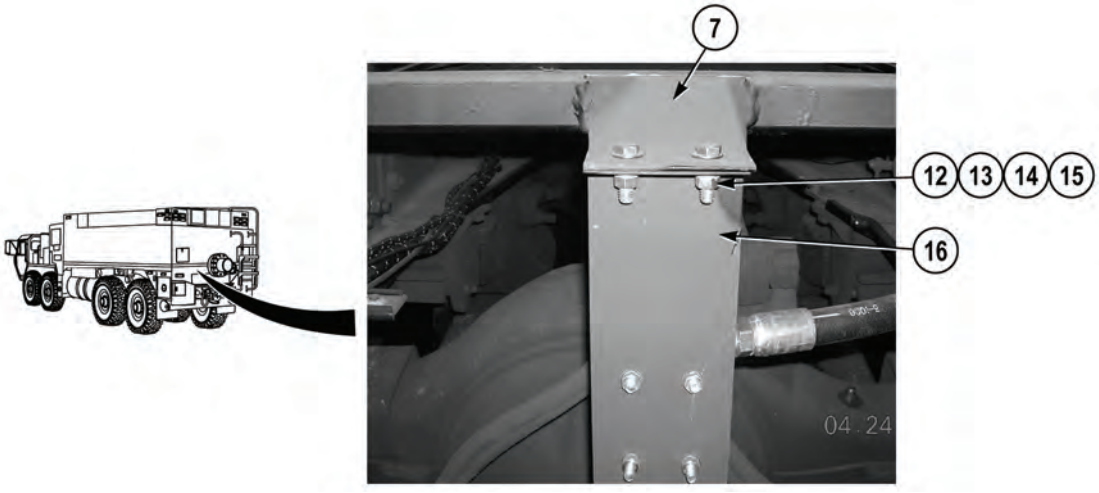
NOTE

- Install washers as noted prior to removal.
- Screw threads must have 0.75 in. (1.91 cm) or seven threads showing.

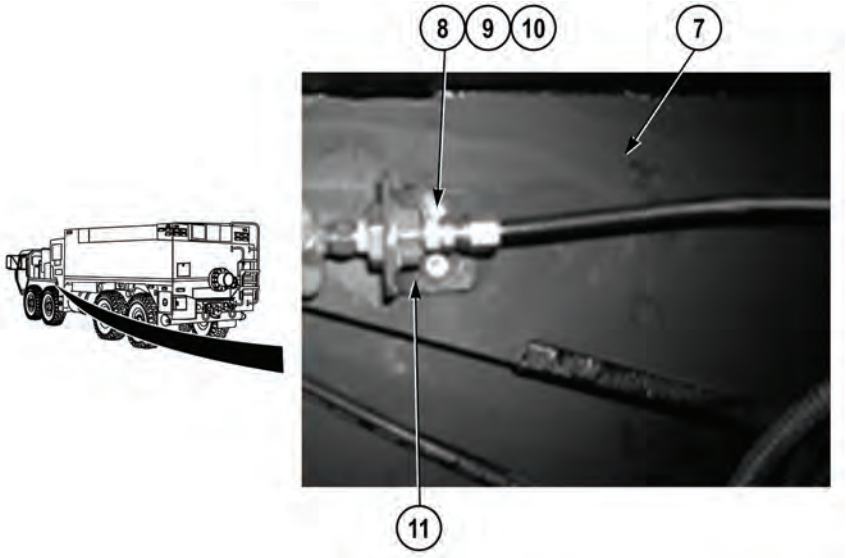
7. Install 18 screws (22), 36 washers (21), 18 springs (20), and locknuts (19) on six frame rail mounting brackets (23) and water tank cradle (7).



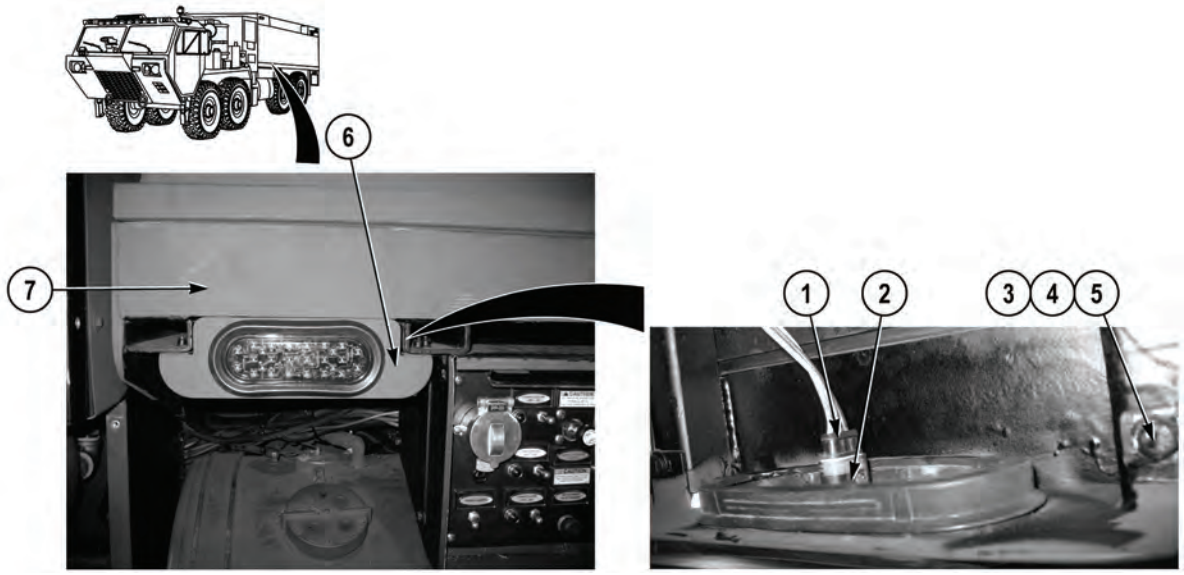
8. Install pump house heater fuel pump bracket (18) on water tank cradle (7) with screw (17), and locknut (16).



9. Install rear under truck nozzle bracket (16) on water tank cradle (7) with two screws (15), four washers (14), two lockwashers (13), and nuts (12).



10. Install tire inflator connect bracket (11) on water tank cradle (7) with two screws (10), washers (9), and locknuts (8).



11. Install bracket (6) on water tank cradle (7) with four washers (5), lockwashers (4), and screws (3).
12. Connect main wire harness connector (2) to side marker light (1).

END OF TASK

FOLLOW-0N MAINTENANCE

1. Install stowage compartment (lower rear driver side) (WP 0357)
2. Install stowage compartment (lower rear passenger side) (WP 0358)
3. Install stowage compartment (lower front passenger side) (WP 0355)
4. Install wheel chocks stowage compartments (WP 0366)
5. Install pump operator’s panel (WP 0206)
6. Install water tank (WP 0191)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

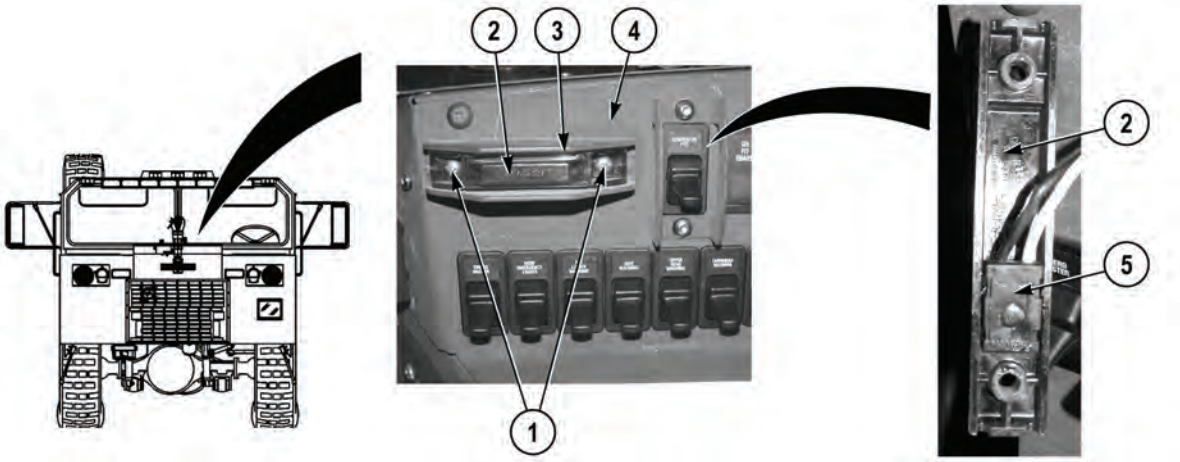
CHECK FOR OPEN COMPARTMENT DOORS WHEN LIGHT IS ON INDICATOR REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Equipment Conditions
Batteries disconnected (TM 9-2320-315-14&P)

REMOVAL



1. Remove two screws (1), indicator (2), and indicator guard (3) from cab instrument panel (4).
2. Disconnect indicator connector (5) from indicator (2).

END OF TASK

INSTALLATION

1. Pull indicator connector (5) through indicator guard (3).
2. Connect indicator connector (5) on indicator (2).
3. Install indicator guard (3) and indicator (2) on cab instrument panel (4) with two screws (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Connect batteries (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

WARNING LIGHT AND CHECK FOR OPEN COMPARTMENT DOORS WHEN LIGHT IS ON FLASHER UNIT(S) REPLACEMENT

INITIAL SETUP:

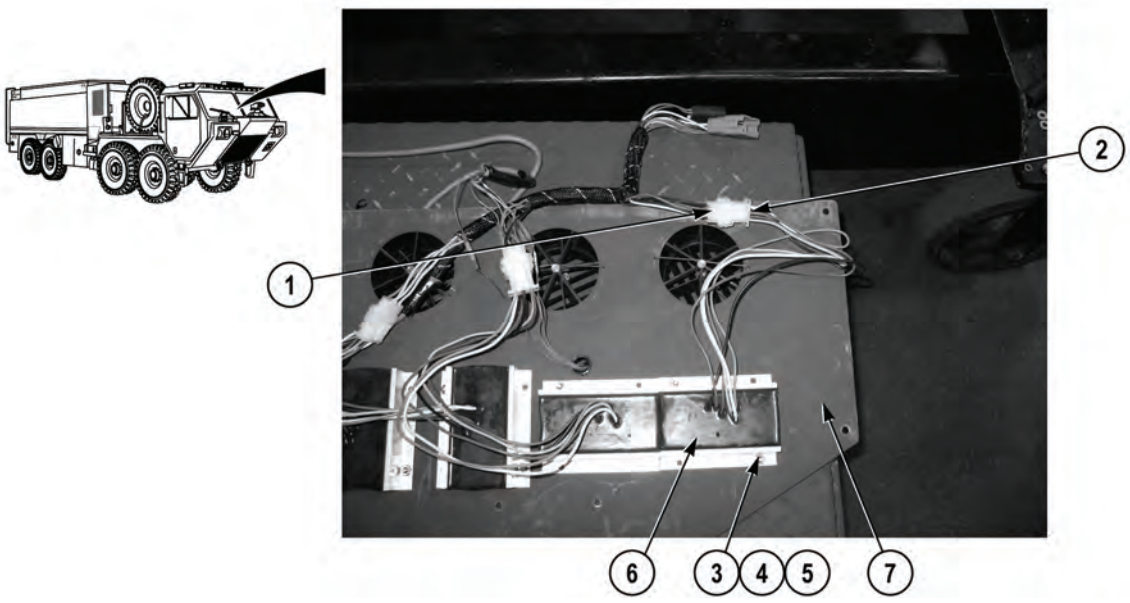
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)
Locknut (2)
Locknut (2)
Locknut (2)
Locknut (2)

References
WP 0392, Fig. 26

Equipment Conditions
Cab instrument panel A removed (WP 0203)

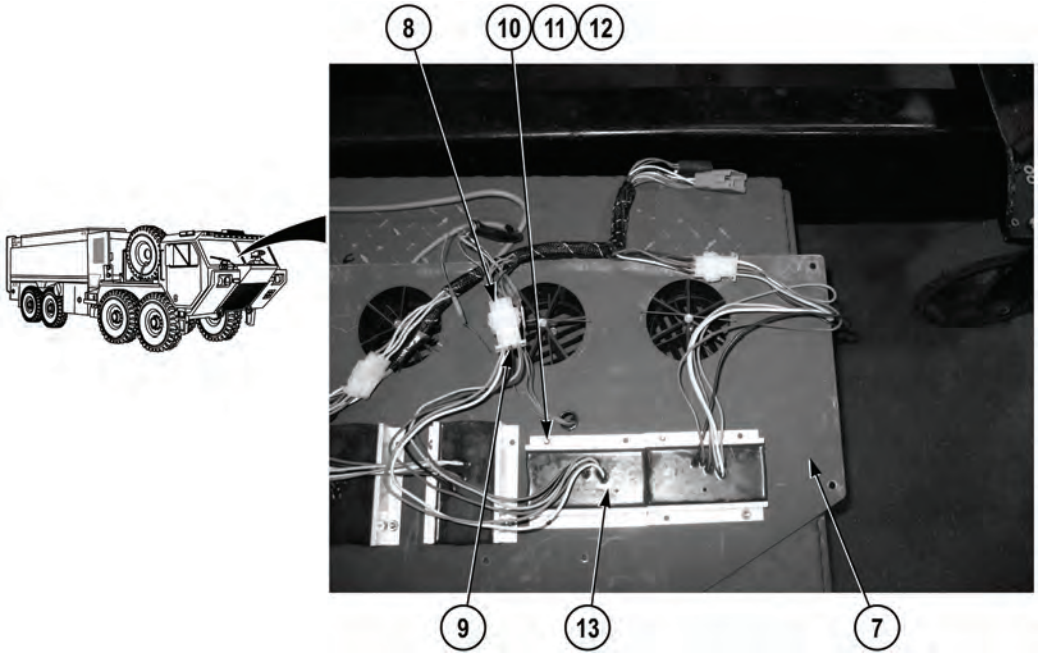
REMOVAL



NOTE

- Remove cable ties as required.
- Tag and mark wires prior to removal to ensure proper installation.
- Perform Steps (1) and (2) if upper rear warning light flasher unit needs to be removed.

1. Disconnect cab instrument panel wire harness connector (1) from upper rear warning light flasher unit wire connector (2).
2. Remove two locknuts (3), nylon washers (4), screws (5), and upper rear warning light flasher unit (6) from cab instrument panel A (7). Discard locknuts.

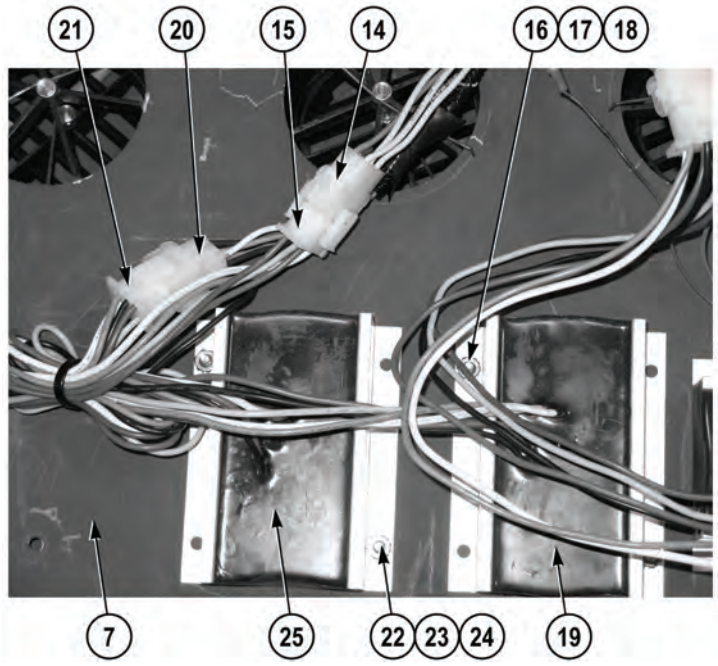


NOTE

Perform Steps (3) and (4) if check for open compartment doors when light is on flasher unit needs to be removed.

3. Disconnect cab instrument panel wire harness connector (8) from check for open compartment doors when light is on flasher unit wire connector (9).

4. Remove two locknuts (10), nylon washers (11), screws (12), and check for open compartment doors when light is on flasher unit (13) from cab instrument panel A (7). Discard locknuts.



NOTE

Perform Steps (5) and (6) if side warning light flasher unit needs to be removed.

5. Disconnect cab instrument panel wire harness connector (14) from side warning light flasher unit wire connector (15).

6. Remove two locknuts (16), nylon washers (17), screws (18), and side warning light flasher unit (19) from cab instrument panel A (7). Discard locknuts.

NOTE

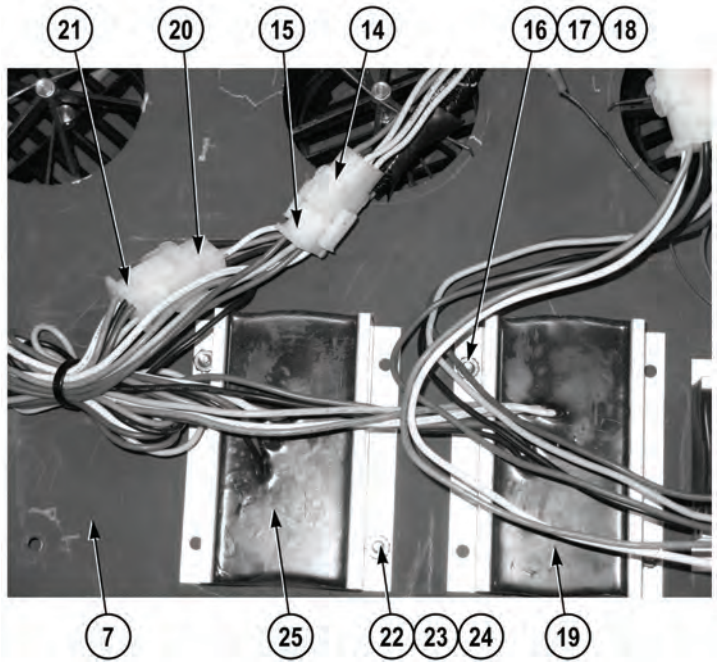
Perform Steps (7) and (8) if front and rear warning light flasher unit needs to be removed.

7. Disconnect cab instrument panel wire harness connector (20) from front and rear warning light flasher unit wire connector (21).

8. Remove two locknuts (22), nylon washers (23), screws (24), and front and rear warning light flasher unit (25) from cab instrument panel A (7). Discard locknuts.

END OF TASK

INSTALLATION



NOTE

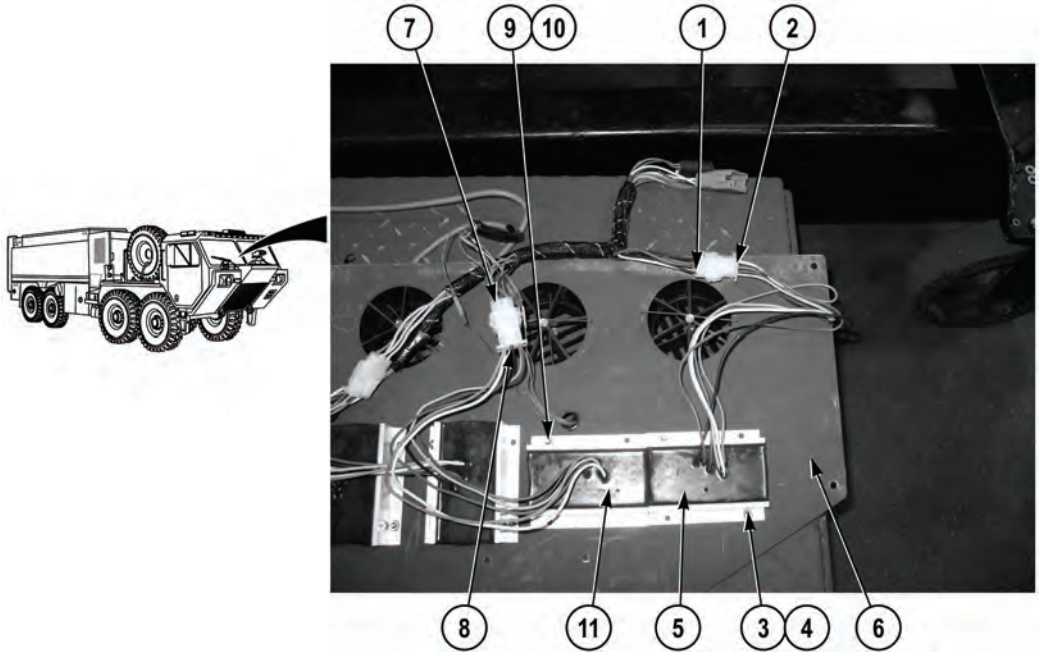
- Install cable ties as required.
- Perform Steps (1) and (2) if front and rear warning light flasher unit was removed.

1. Install front and rear warning light flasher unit (25) on cab instrument panel A (7) with two screws (24), nylon washers (23), and locknuts (22).
2. Connect front and rear warning light flasher unit wire connector (21) to cab instrument panel wire harness connector (20).

NOTE

Perform Steps (3) and (4) if side warning light flasher unit was removed.

3. Install side warning light flasher unit (19) on cab instrument panel A (7) with two screws (18), nylon washers (17), and locknuts (16).
4. Connect side warning light flasher unit wire connector (15) to cab instrument panel wire harness connector (14).



NOTE

Perform Steps (5) and (6) if check for open compartment doors when light is on flasher unit was removed.

5. Install check for open compartment doors when light is on flasher unit (13) on cab instrument panel A (7) with two screws (12), nylon washers (11), and locknuts (10).

6. Connect check for open compartment doors when light is on flasher unit wire connector (9) to cab instrument panel wire harness connector (8).

NOTE

Perform Steps (7) and (8) if upper rear warning light flasher unit was removed.

7. Install upper rear warning light flasher unit (6) on cab instrument panel (7) with two screws (5), lockwashers (4), and locknuts (3).

8. Connect upper rear warning light flasher unit wire connector (2) to cab instrument panel wire harness connector (1).

END OF TASK

FOLLOW ON MAINTENANCE

Install cab instrument panel A (WP 0203)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

CAB PRESSURE GOVERNOR CONTROL REPLACEMENT

INITIAL SETUP:

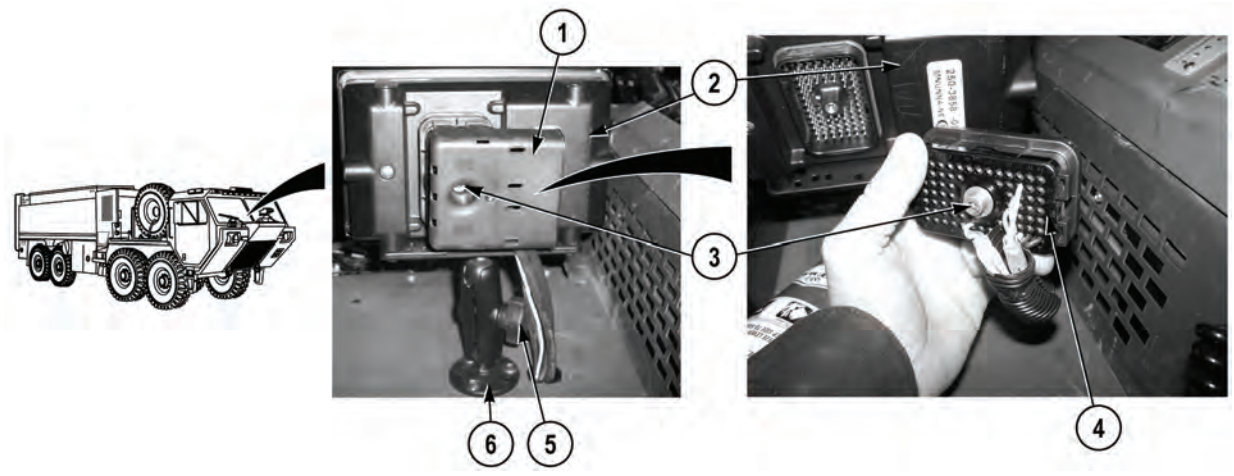
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Locknut (3)

References
WP 0392, Fig. 26

Equipment Conditions
Batteries disconnected (TM 9-2320-315-14&P)

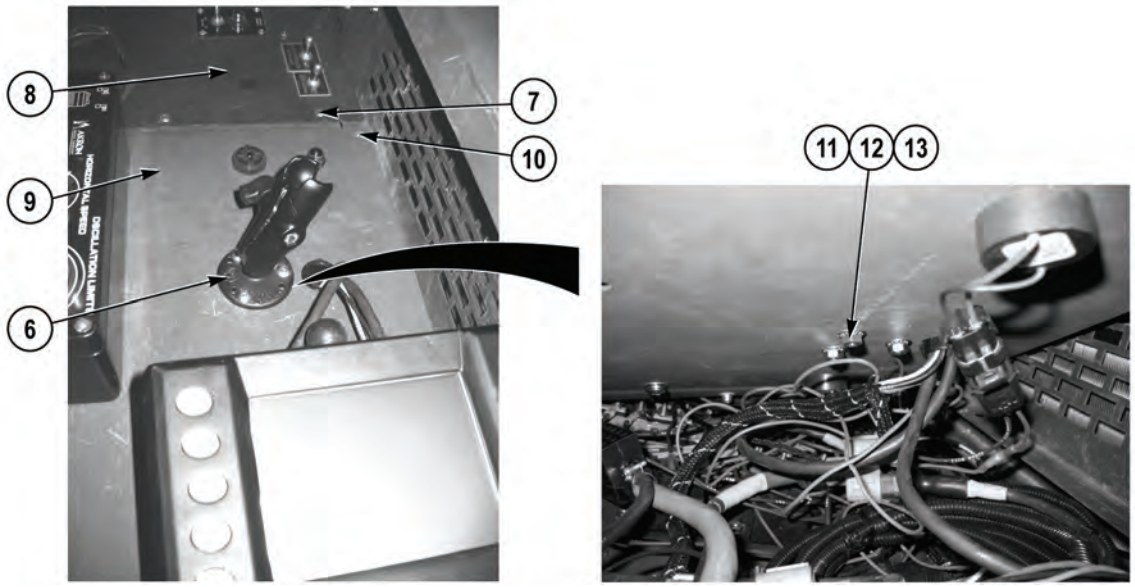
REMOVAL



NOTE

Cover is snapped in place.

1. Remove cover (1) from pressure governor control (2).
2. Loosen screw (3) and disconnect pressure governor control connector (4) from pressure governor control (2).
3. Loosen knob (5) and remove pressure governor control (2) from pressure governor control base (6).



NOTE

Perform Steps (4) through (7) if pressure governor control base needs to be removed.

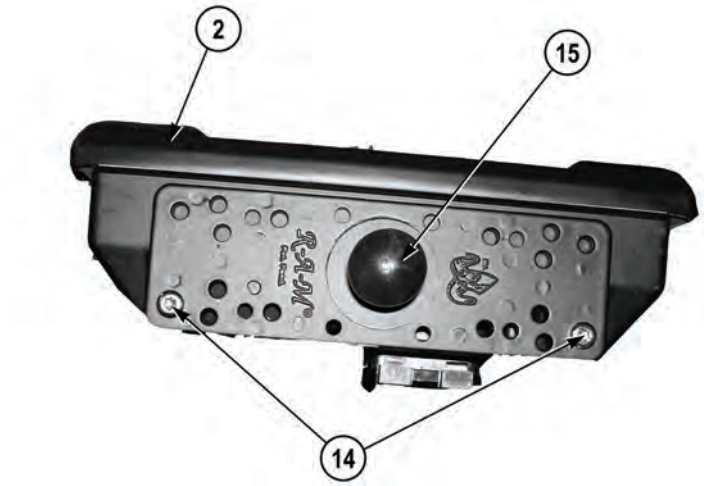
4. Remove three screws (7) from panel (8) and center panel (9).

5. Remove six screws (10) from center panel (9) and vehicle.

⚠ CAUTION

When lifting center panel, wires and cables are still attached. Only lift center panel high enough to access attaching hardware. Failure to comply may result in damage to equipment.

6. Lift center panel (9) and remove three locknuts (11), washers (12), screws (13), and pressure governor control base (6) from center panel (9). Discard locknuts.



7. Remove two screws (14) and swivel base (15) from pressure governor control (2).

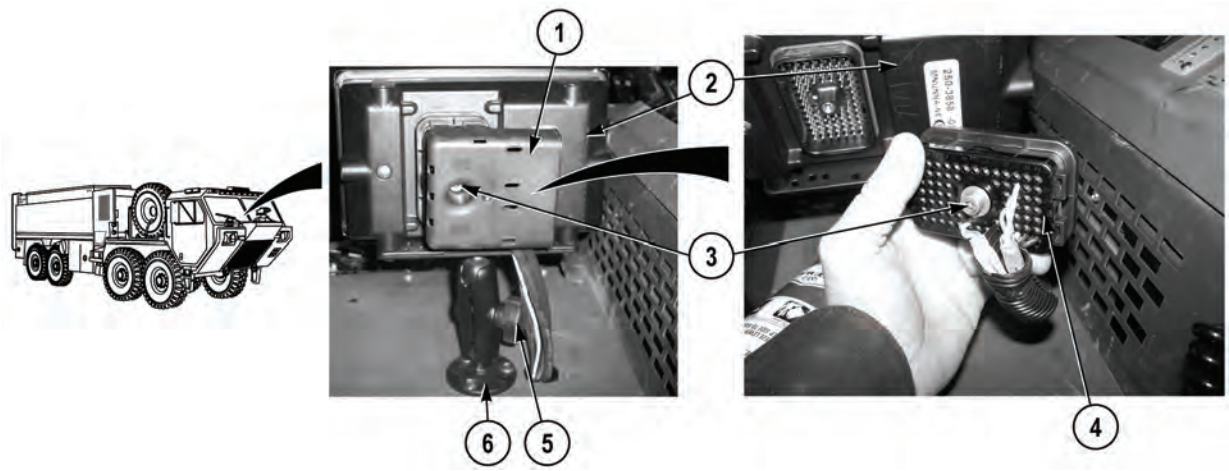
END OF TASK

INSTALLATION

NOTE

Perform Steps (1) through (4) if pressure governor control base was removed.

1. Install swivel base (15) on pressure governor control (2) with two screws (14).
2. Install pressure governor control base (6) on center panel (9) with three screws (13), washers (12), and locknuts (11).
3. Install center panel (9) on vehicle with six screws (10).
4. Install three screws (7) on panel (8) and center panel (9).



5. Position pressure governor control (2) on pressure governor control base (6) and tighten knob (5).
6. Connect pressure governor control connector (4) on pressure governor control (2) and tighten screw (3).

NOTE

Cover snaps in place.

7. Install cover (1) on pressure governor control (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Connect batteries (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

CAB PANEL INDICATOR REPLACEMENT

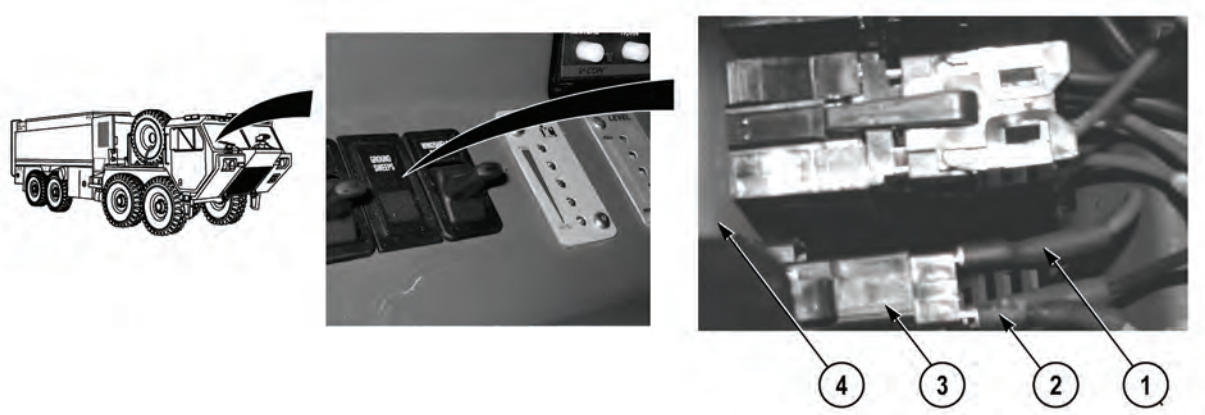
INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)

Equipment Conditions
Cab instrument panel C removed (WP 0203)

REMOVAL



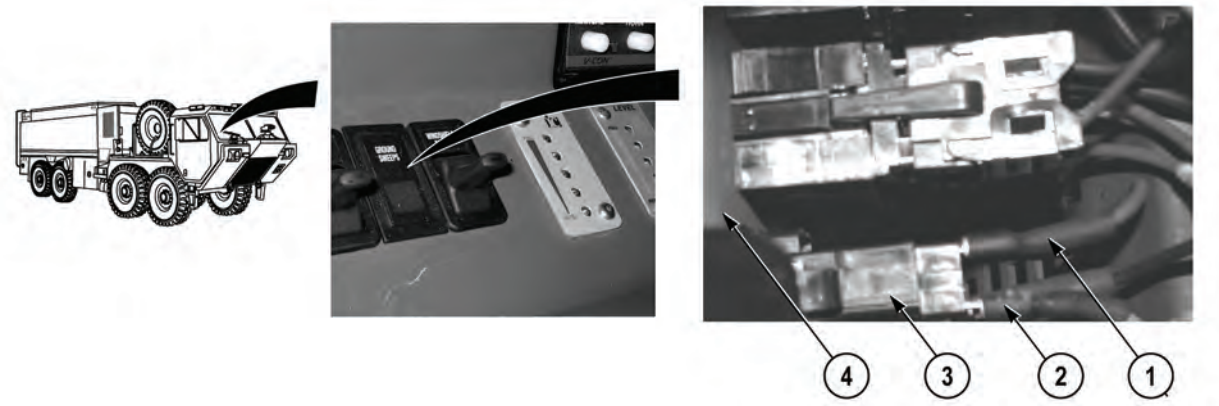
NOTE

- All indicators are removed the same way. Under truck nozzles indicator shown.
- Tag and mark wires prior to removal to ensure proper installation.

1. Remove wire 2772 (1) and wire 1023 (2) from indicator (3).
2. Remove indicator (3) from instrument panel (4).

END OF TASK

INSTALLATION



NOTE

All indicators are installed the same way. Under truck nozzles indicator shown.

1. Install indicator (3) on instrument panel (4).
2. Install wire 1023 (2) and wire 2772 (1) on indicator (3).

END OF TASK

FOLLOW-ON MAINTENANCE

Install cab instrument panel C (WP 0203)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

CAB ROCKER SWITCH REPLACEMENT

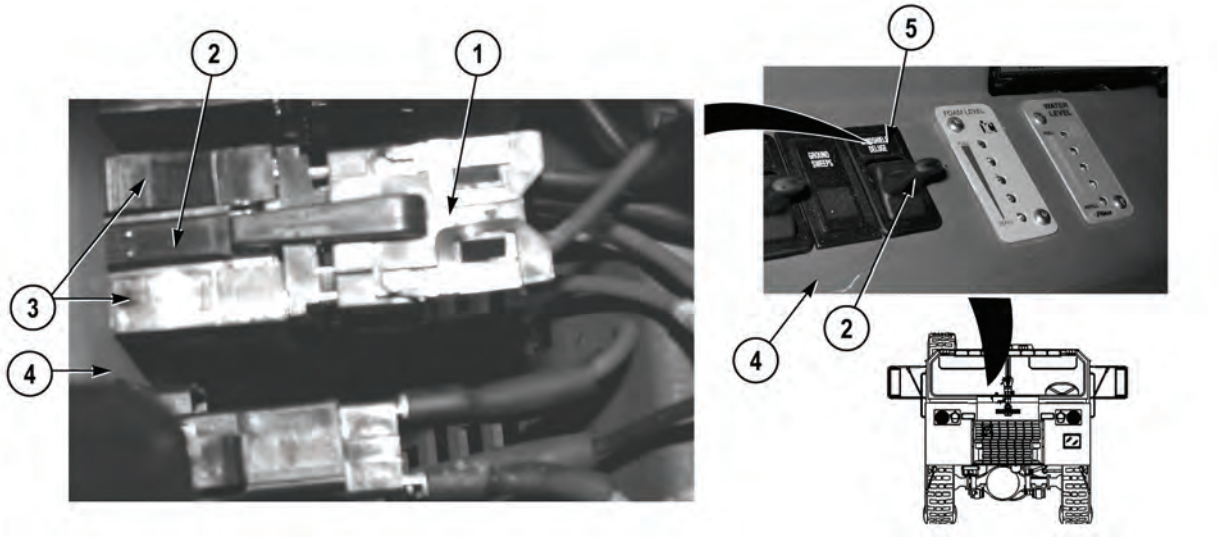
INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Adhesive, Spray (WP 0401, Item 5)

Equipment Conditions
Cab instrument panel B removed (WP 0203)

REMOVAL



NOTE

All rocker switches are removed the same way. Windshield deluge switch shown.

1. Disconnect windshield deluge switch connector (1) from switch (2).
2. Press four clips (3) and remove switch (2) from instrument panel (4).

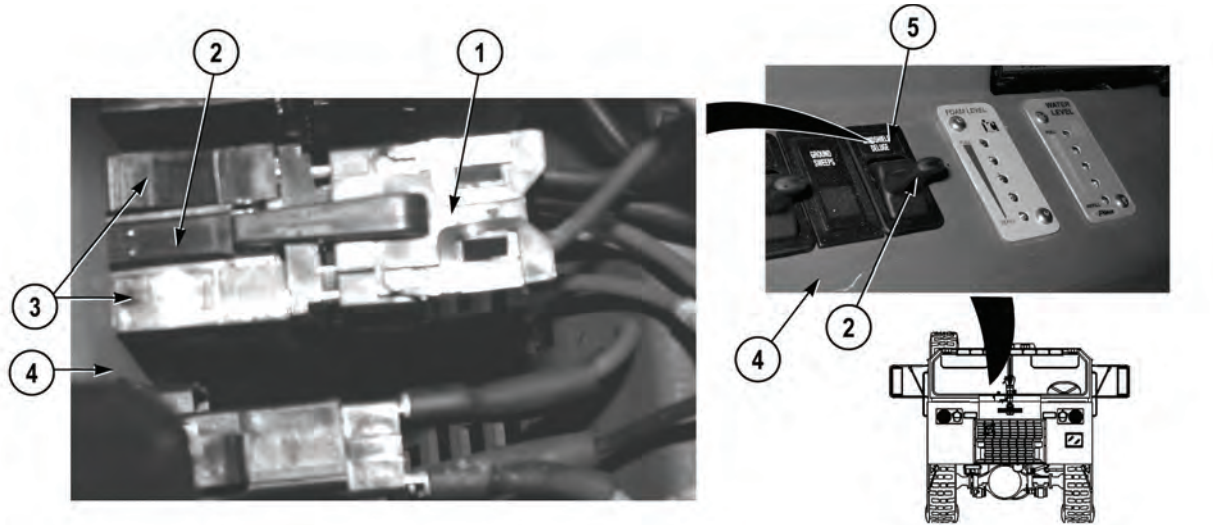
NOTE

- Perform Step (3) if decal requires removal.
- Use care when removing decal to prevent damage.

3. Remove decal (5) from switch (2).

END OF TASK

INSTALLATION



WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

NOTE

Perform Steps (1) and (2) if decal requires installation.

1. Apply adhesive to decal (5).
2. Install decal (5) on switch (2).

NOTE

All rocker switches are installed the same way. Windshield deluge switch shown.

3. Install switch (2) on instrument panel (4) with four clips (3).
4. Connect windshield deluge switch connector (1) on switch (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Install cab instrument panel B (WP 0203)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

CAB WATER AND/OR FOAM LEVEL GAUGE(S) REPLACEMENT

INITIAL SETUP:

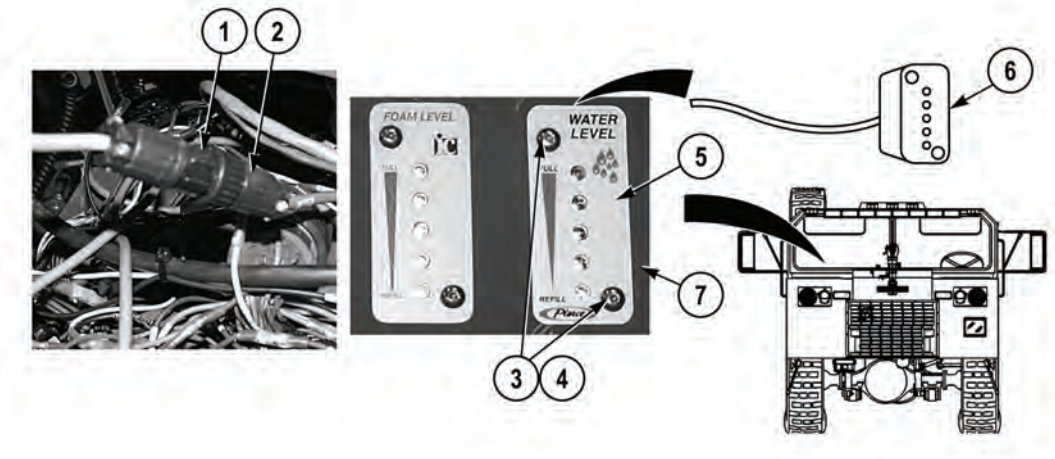
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Lockwasher (2)

References
WP 0392, Fig. 26

Equipment Conditions
Cab instrument panel B removed (WP 0203)

REMOVAL



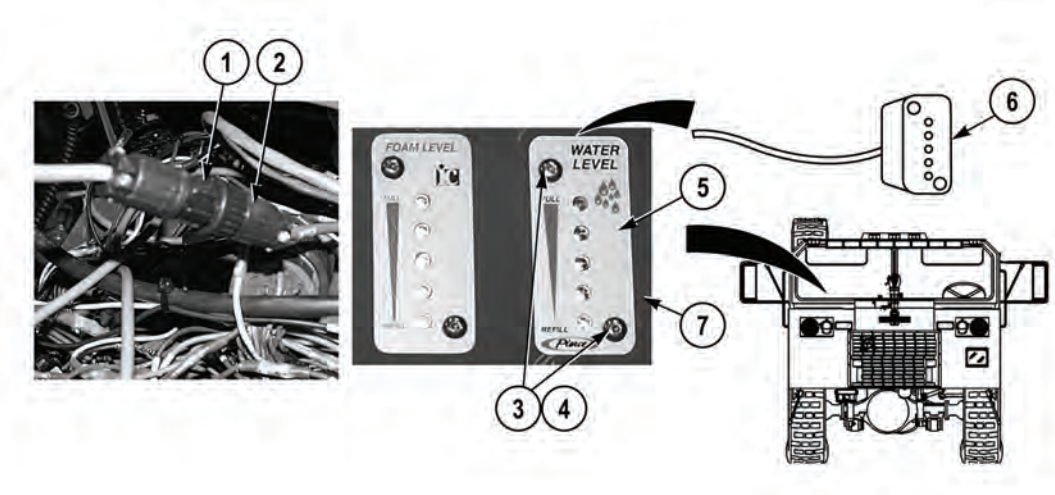
NOTE

- Water and foam level gauges are removed the same way. Water level gauge shown.
- Note orientation of gauge prior to removal to ensure proper installation.

1. Disconnect water level gauge connector (1) from water level gauge wire harness connector (2).
2. Remove two screws (3), lockwashers (4), plate (5), and water level gauge (6) from instrument panel (7). Discard lockwashers.

END OF TASK

INSTALLATION



NOTE

- Water and foam level gauges are installed the same way. Water level gauge shown.
- Install gauge in same orientation as noted prior to removal.

1. Install water level gauge (6) and plate (5) on instrument panel (7) with two lockwashers (4) and screws (3).
2. Connect water level gauge connector (1) on water level gauge wire harness connector (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Install cab instrument panel B (WP 0203)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

CAB 1-2-3 SIGNAL INDICATOR LAMP HOLDER REPLACEMENT

INITIAL SETUP:

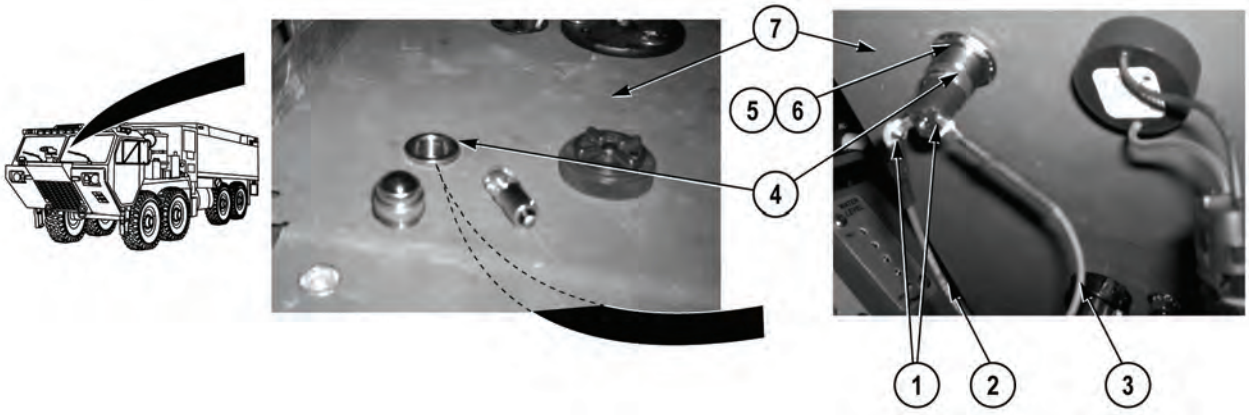
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Compound, Sealing (WP 0401, Item 10)
Tags, Identification (WP 0401, Item 22)
Lockwasher (1)

References
WP 0392, Fig. 26

Equipment Conditions
Cab 1-2-3 signal indicator lamp removed (WP 0200)
Cab instrument panel E removed (WP 0203)

REMOVAL



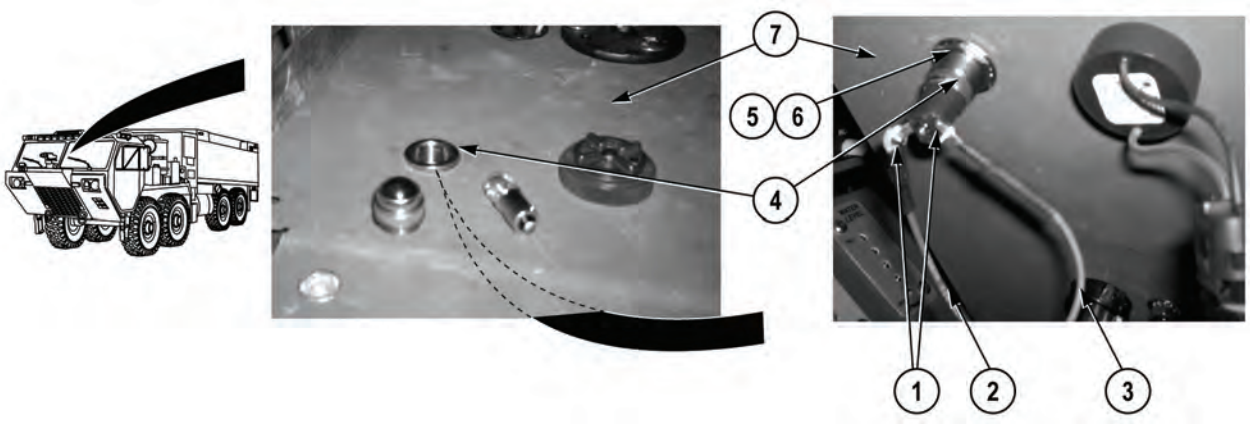
NOTE

Tag and mark wires prior to removal to ensure proper installation.

1. Remove two screws (1), wire 1647 (2), and wire 1614 (3) from lamp holder (4).
2. Remove nut (5) and lockwasher (6) and lamp holder (4) from panel (7). Discard lockwasher.

END OF TASK

INSTALLATION



1. Install lamp holder (4) on panel (7) with lockwasher (6) and nut (5).
2. Install wire 1614 (3) and wire 1647 (2) on lamp holder (4) with two screws (1).

WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

3. Apply sealing compound on two screws (1), wire 1647 (2), and wire 1614 (3).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install cab instrument panel E (WP 0203)
2. Install cab 1-2-3 signal indicator lamp (WP 0200)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

CAB 1-2-3 SIGNAL INDICATOR LAMP REPLACEMENT

INITIAL SETUP:

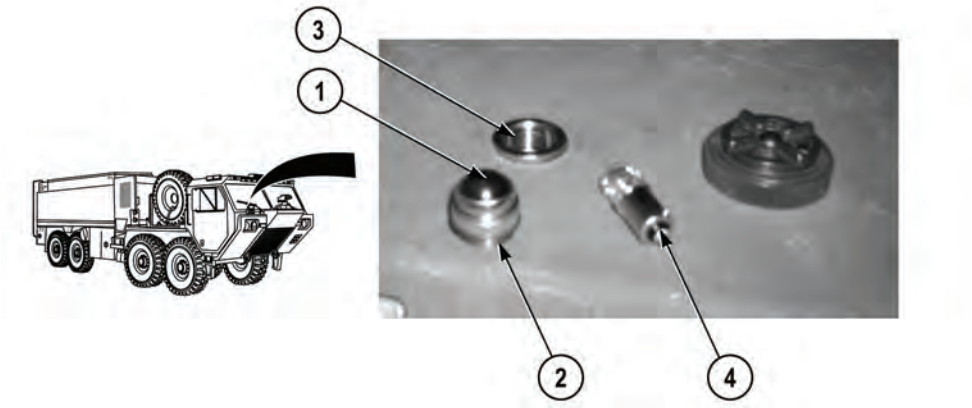
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Preformed Packing (1)

References
WP 0392, Fig. WP 26

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)

REMOVAL



1. Remove lamp cover (1) and preformed packing (2) from lamp holder (3). Discard preformed packing.
2. Remove lamp (4) from lamp holder (3).

END OF TASK

INSTALLATION

1. Install lamp (4) in lamp holder (3).
2. Install preformed packing (2) and lamp cover (1) on lamp holder (3).

END OF TASK

FOLLOW-ON MAINTENANCE

Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

WARNING BUZZER (CAB AND PUMP OPERATOR'S PANEL) REPLACEMENT

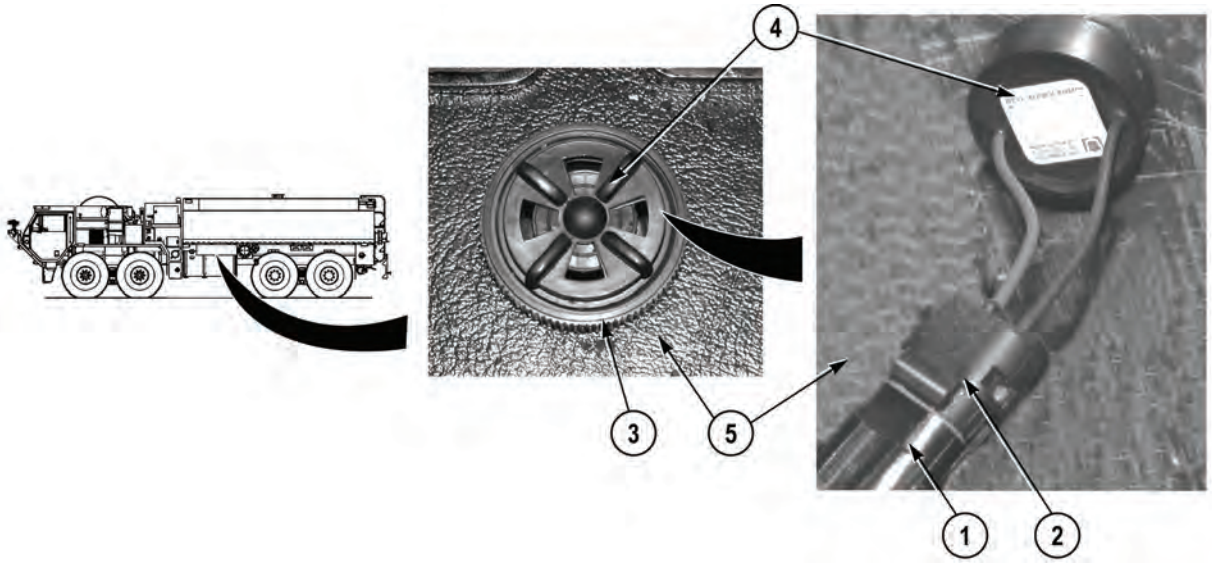
INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

References
WP 0392, Fig. 26

Equipment Conditions
Pump operator's panel opened (Pump operator's panel warning buzzer) (WP 0205)
Cab instrument Panel E removed (Cab instrument panel warning buzzer) (WP 0203)

REMOVAL



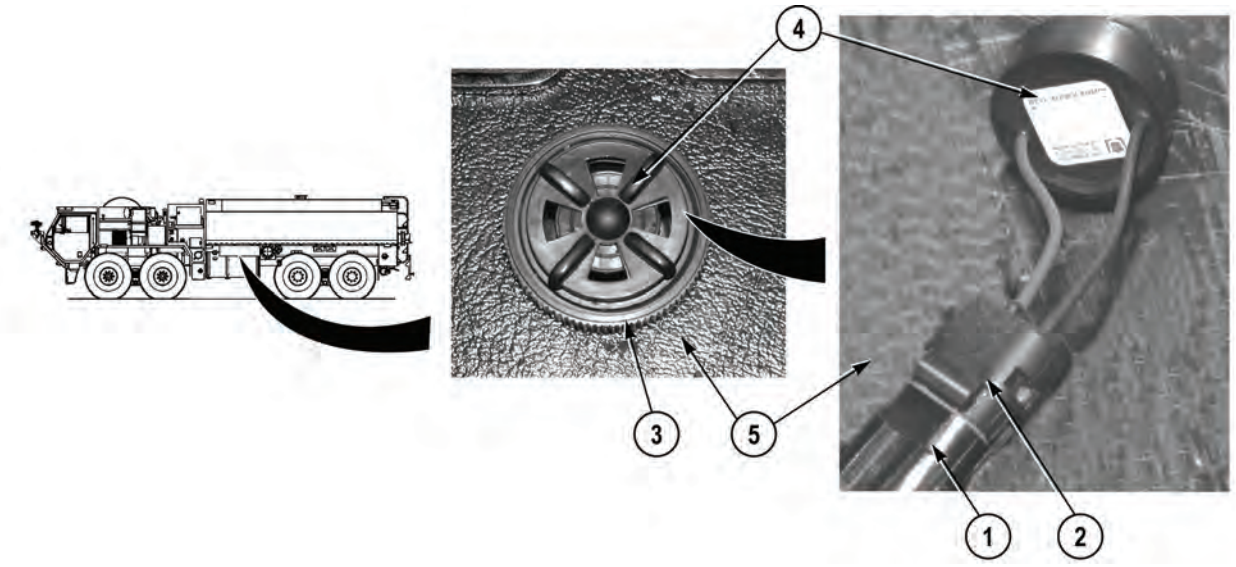
NOTE

Cab and pump operator's panel warning buzzer removed the same way. Pump operator's panel warning buzzer shown.

1. Disconnect connector (1) from buzzer audio alarm connector (2).
2. Remove retainer (3) and buzzer audio alarm (4) from pump operator's panel (5).

END OF TASK

INSTALLATION



NOTE

Cab and pump operator's panel warning buzzer installed the same way. Pump operator's panel shown.

1. Install buzzer audio alarm (4) on pump operator's panel (5) with retainer (3).
2. Connect connector (1) on buzzer audio alarm connector (2).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Close pump operator's panel (pump operator's panel warning buzzer) (WP 0205)
2. Install cab instrument panel E (cab instrument panel warning buzzer) (WP 0203)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

CAB INSTRUMENT PANEL ASSEMBLY REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

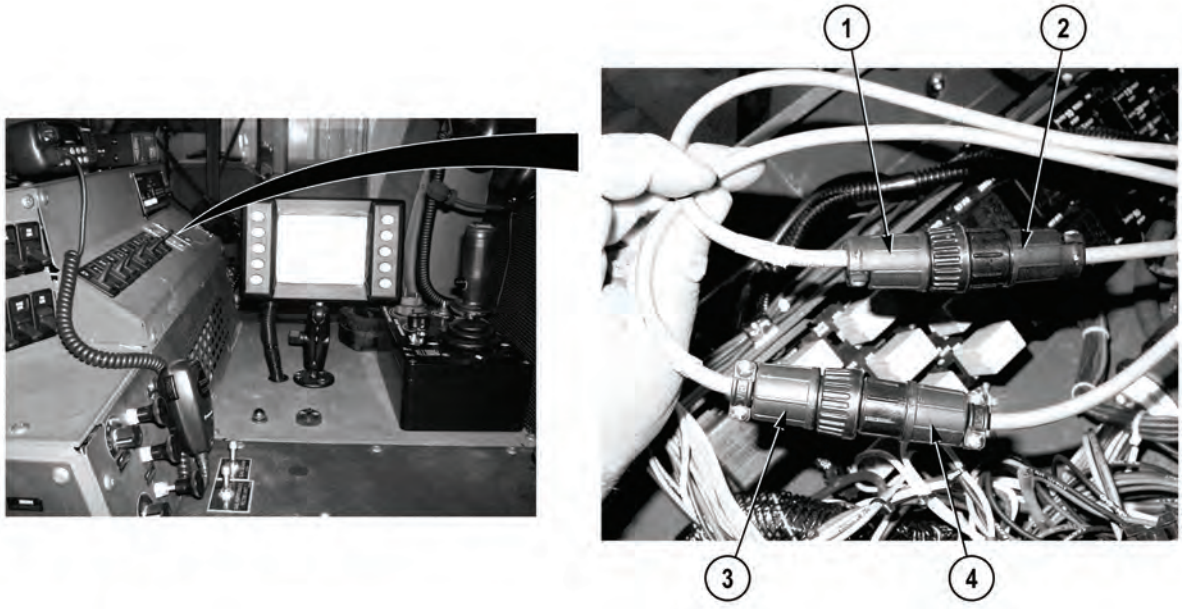
Materials/Parts
Tags, Identification (WP 0401, Item 22)
Lockwasher (1)
Lockwasher (1)
Lockwasher (1)
Locknut (1)
Locknut (1)

References
WP 0389, Fig. 26
TM 9-2320-315-14&P

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

Equipment Conditions
Siren removed (WP 0381)
Cab instrument panels D and E removed (WP 0203)
Skid plate grille removed (WP 0350)

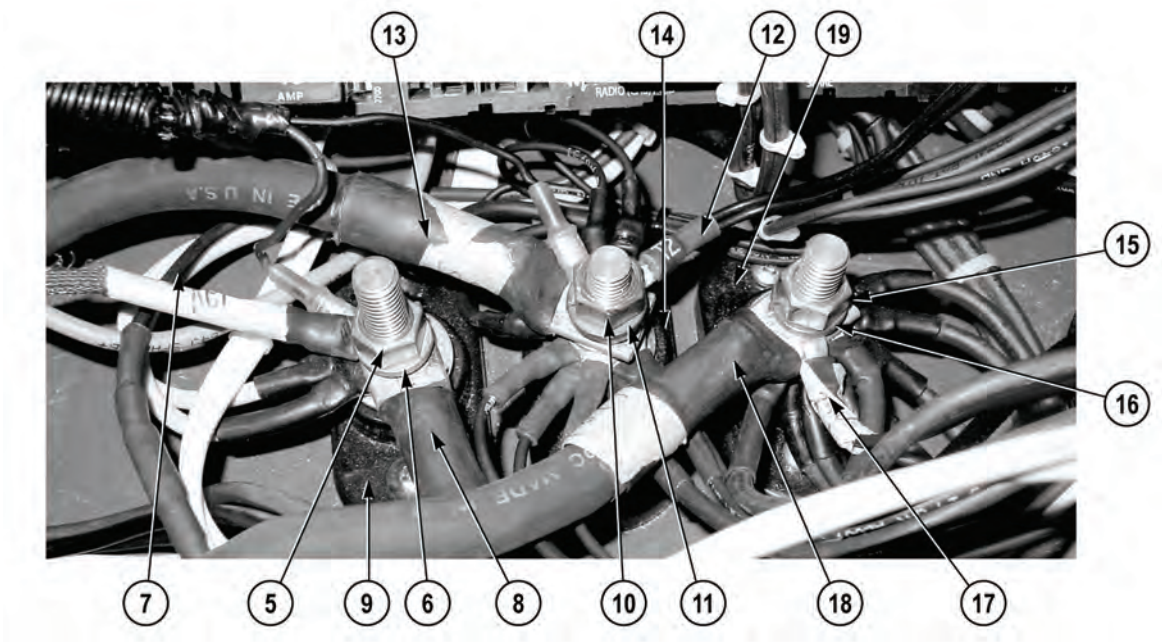
REMOVAL



NOTE

- Tag and mark wires prior to removal to ensure proper installation.
- Note routing of wires prior to removal to ensure proper installation.
- Note position and remove cable ties, split loom, and cushion clips as required.

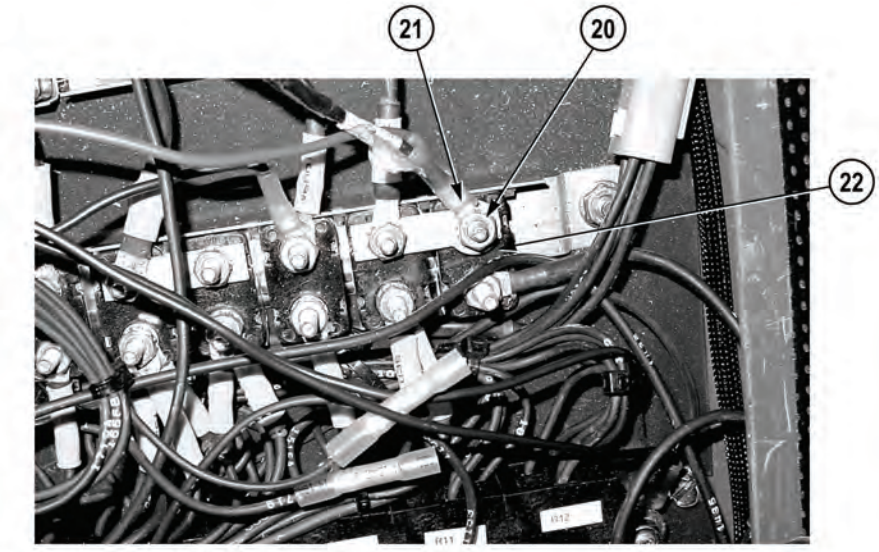
1. Disconnect cab foam tank level indicator wire harness connector (1) from cab foam level gauge connector (2).
2. Disconnect cab water tank level indicator wire harness connector (3) from cab water level gauge connector (4).



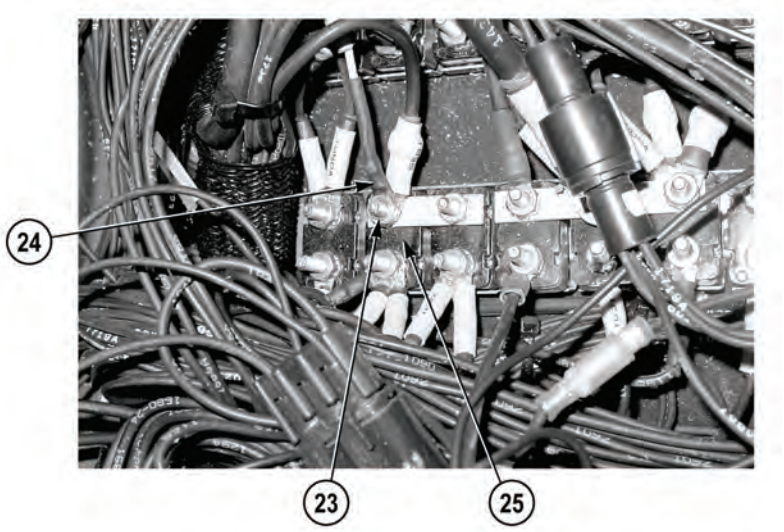
3. Remove nut (5), lockwasher (6), wire 1663 (7), and high amperage cable (8) from 12 VDC terminal block (9). Discard lockwasher.

4. Remove nut (10), lockwasher (11), power cable assembly (SINCGARS) (12), and ground cable (13) from ground terminal block (14). Discard lockwasher.

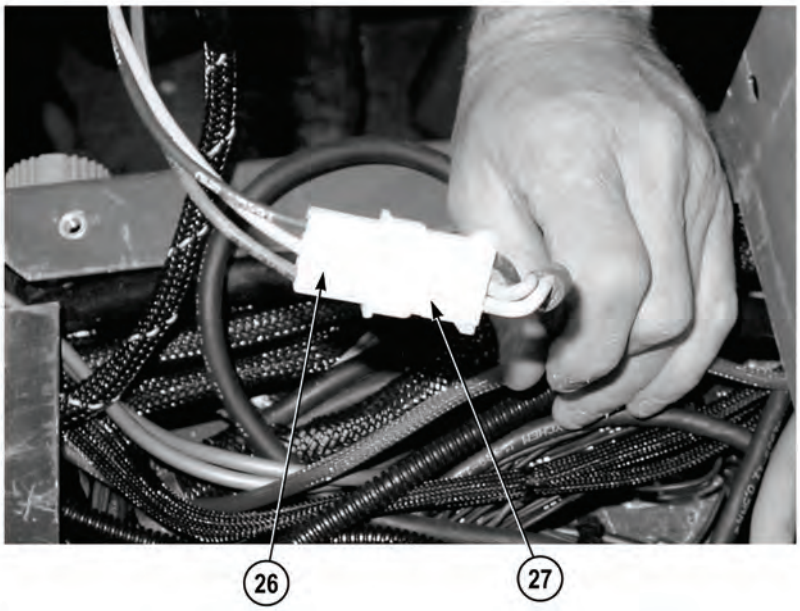
5. Remove nut (15), lockwasher (16), power cable assembly (SINCGARS) (17), and high amperage cable (18) from 24 VDC terminal block (19). Discard lockwasher.



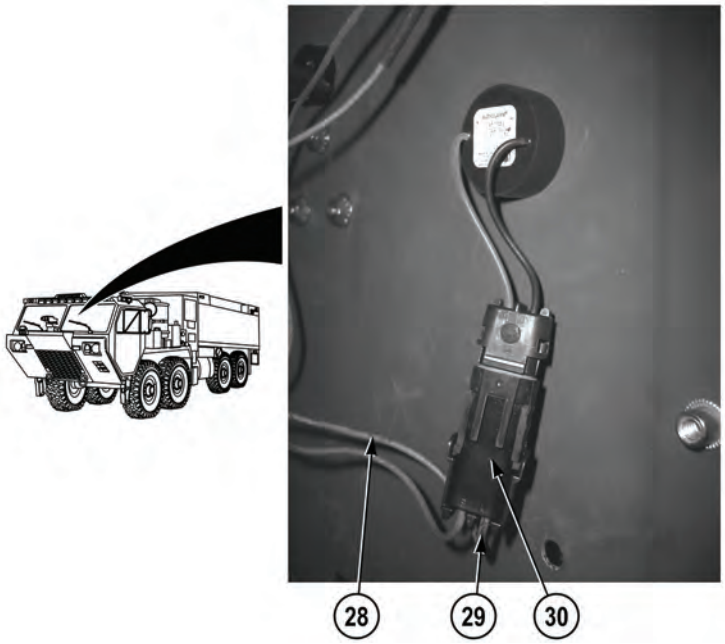
6. Remove locknut (20) and wire H052 (21) from circuit breaker 12 (22). Discard locknut.



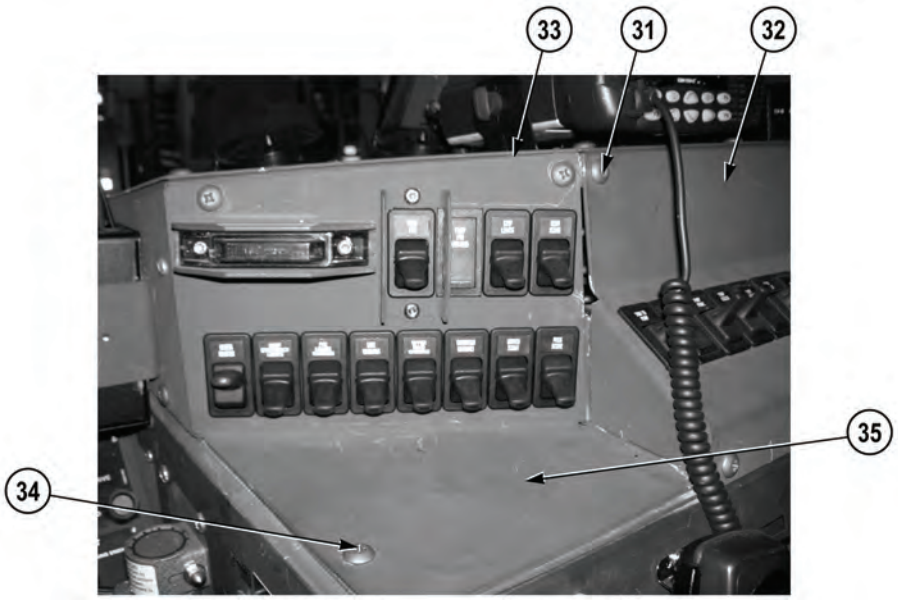
7. Remove locknut (23) and wire H835 (24) from circuit breaker 2 (25). Discard locknut.



8. Disconnect cab instrument panel wire harness connector (26) from bumper turret connector (27).



9. Cut cab power distribution wire harness (28), wire 1647 (29) from cab 1-2-3 buzzer audio alarm connector (30) (TM 9-2320-315-14&P).



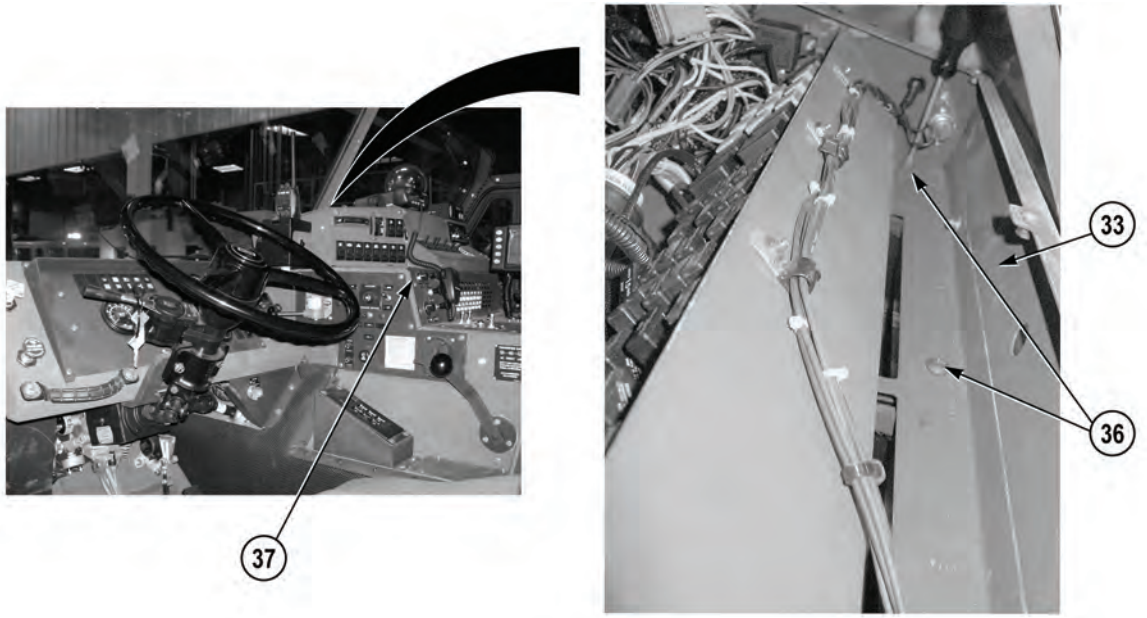
⚠ CAUTION

When performing Steps (1) and (2), lift cab instrument panel B and C only enough to access screws. Wire harnesses are still attached to cab instrument panels B and C. Failure to comply may cause damage to equipment.

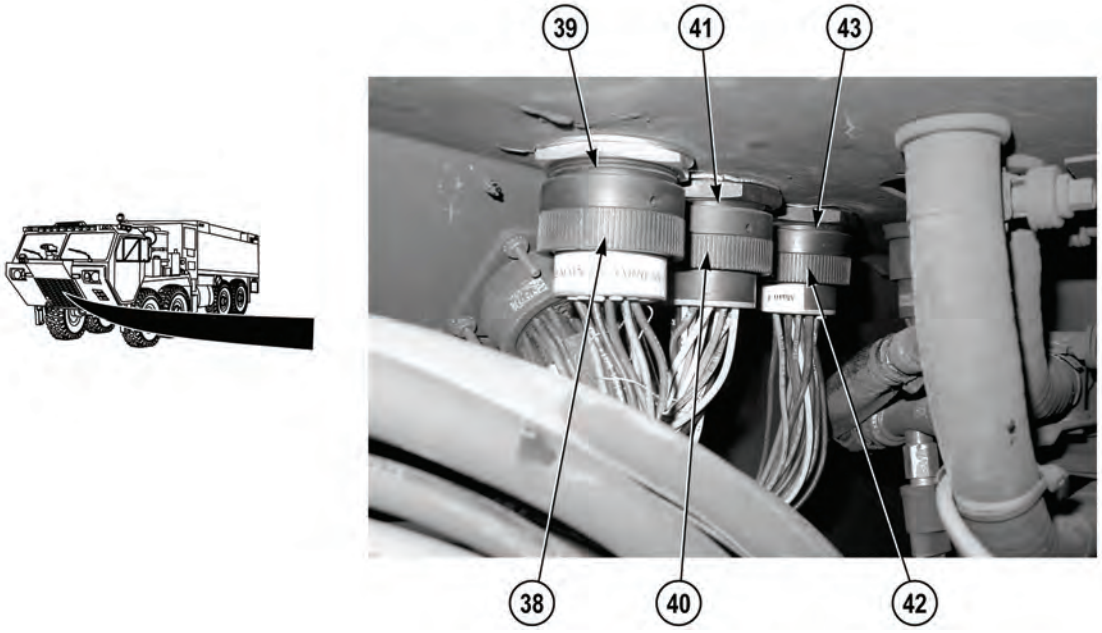
NOTE

Cab instrument panels B and C interlock. Lifting cab instrument panel B away from cab instrument panel assembly slightly, allows cab instrument panel C to move freely.

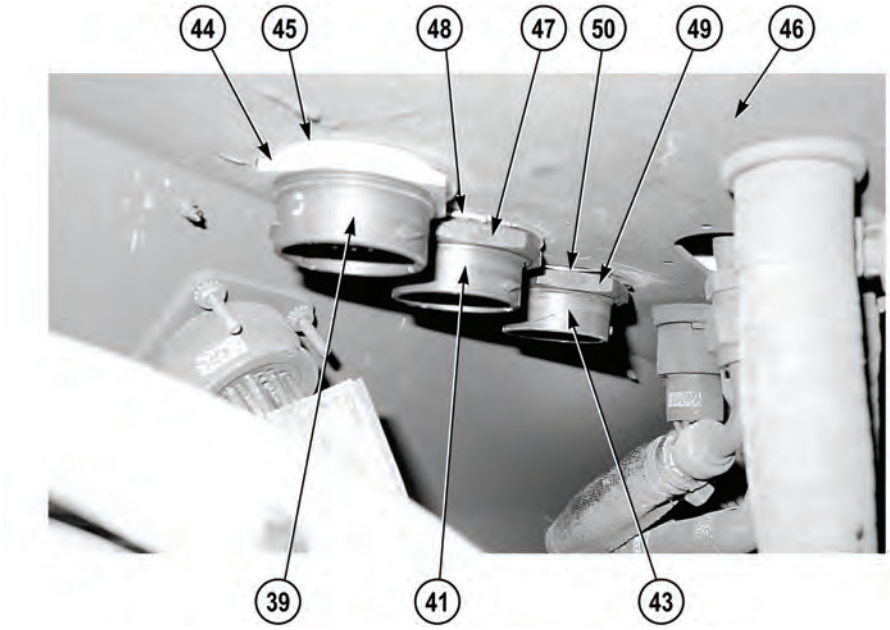
10. Remove five screws (31) and lift cab instrument panel B (32) away from cab instrument panel assembly (33).
11. Remove three screws (34) and pull cab instrument panel C (35) away from cab instrument panel assembly (33).



12. Remove six screws (36) from cab instrument panel assembly (33) and top heater compartment (37).



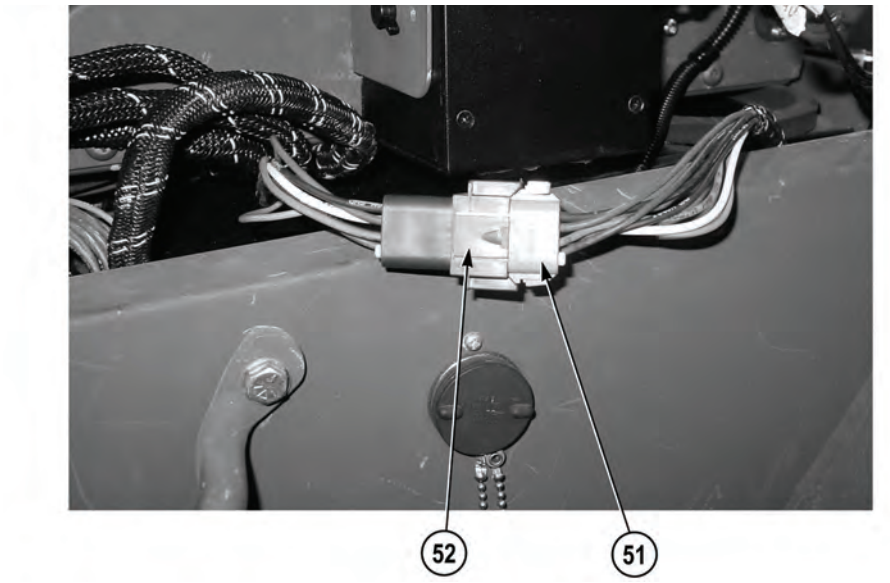
13. Disconnect main wire harness connector (38) from main 3 connector (39).
14. Disconnect main wire harness connector (40) from main 2 connector (41).
15. Disconnect main wire harness connector (42) from main 1 connector (43).



NOTE

Rotate cab instrument panel assembly on top heater compartment to access connectors.

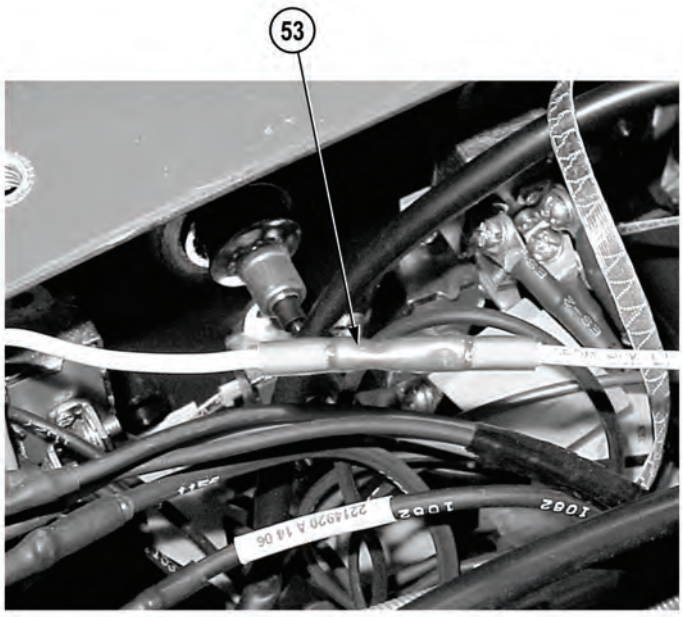
16. With the aid of an assistant, remove nut (44), lockwasher (45), and main 3 connector (39) from cab (46).
17. With the aid of an assistant, remove nut (47), lockwasher (48), and main 2 connector (41) from cab (46).
18. With the aid of an assistant, remove nut (49), lockwasher (50), and main 1 connector (43) from cab (46).



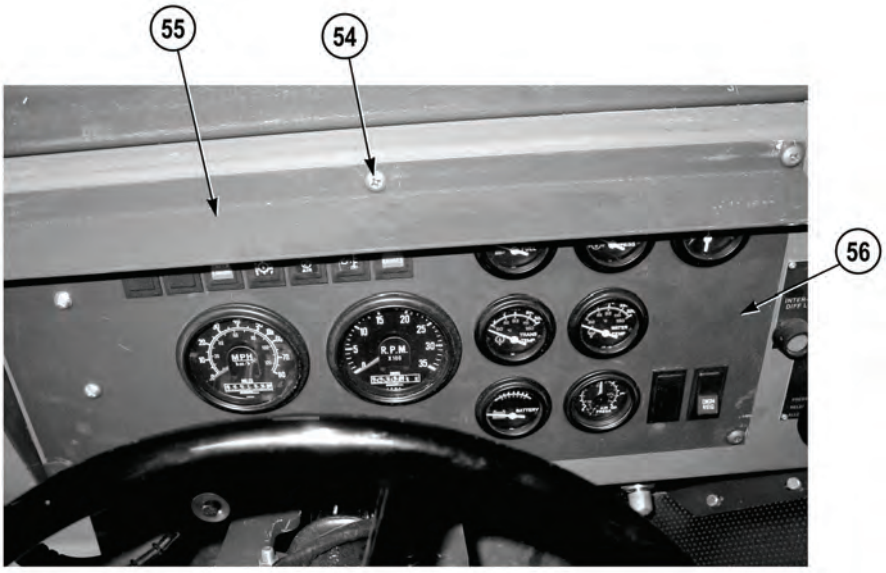
NOTE

Tag and mark wires prior to removal to ensure proper installation.

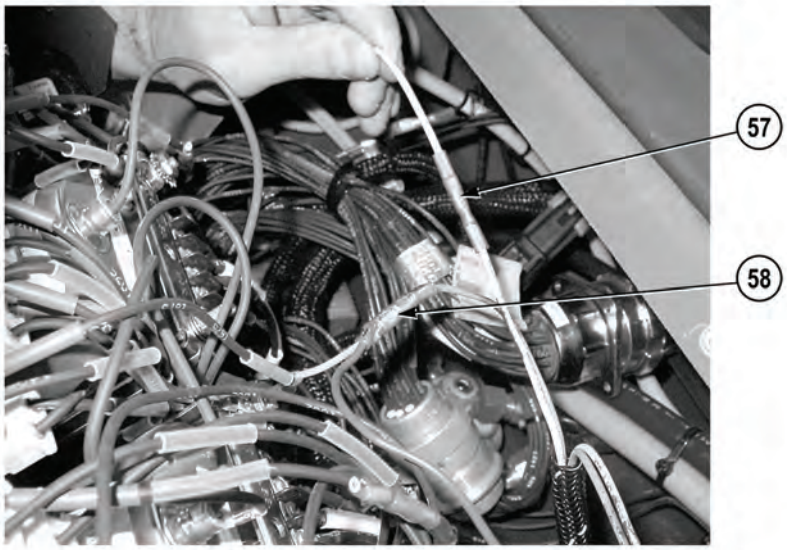
19. Disconnect cab roof wire harness connector (51) from cab instrument panel wire harness connector (52).



20. Cut wire H052 (53) (TM 9-2320-315-14&P).



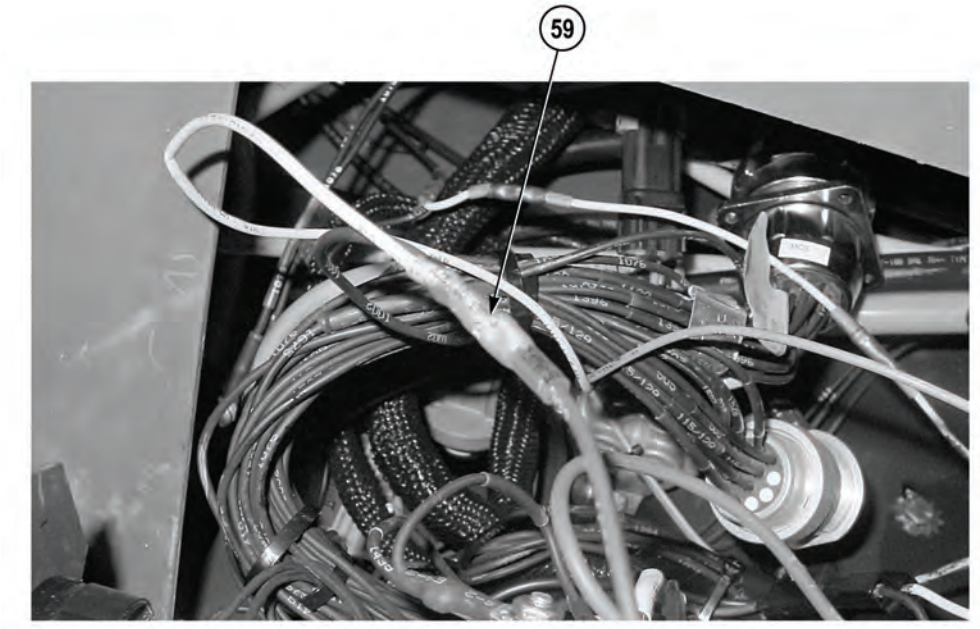
21. Remove six screws (54) and sunshield (55) from instrument panel (56).
22. Place instrument panel (56) in service position.



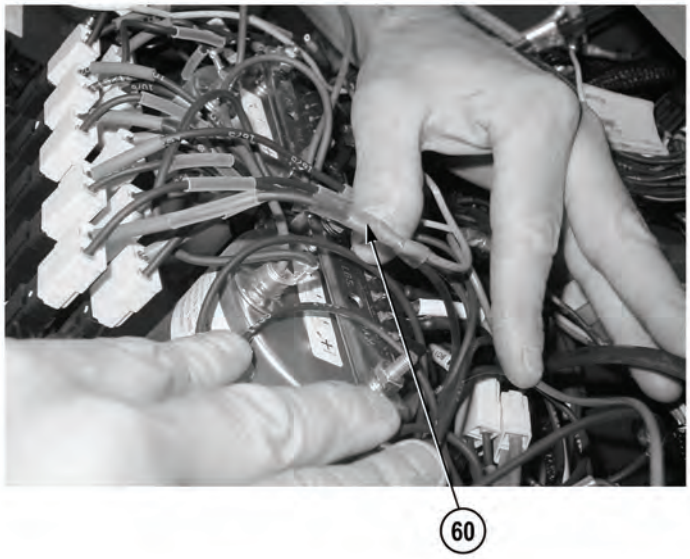
NOTE

Tag and mark wires prior to removal to ensure proper installation.

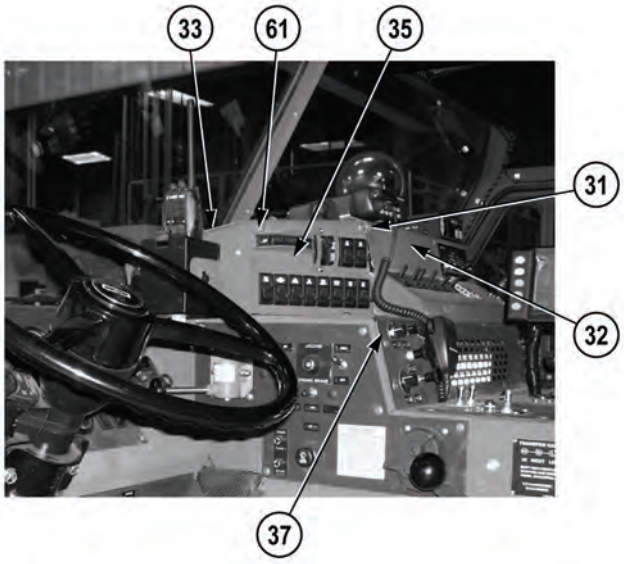
23. Cut wire H012 (57) (TM 9-2320-315-14&P).
24. Cut wire 1020 (58) (TM 9-2320-315-14&P).



25. Cut wire 1411 (59) (TM 9-2320-315-14&P).



26. Cut wire 1412 (60) (TM 9-2320-315-14&P).



NOTE

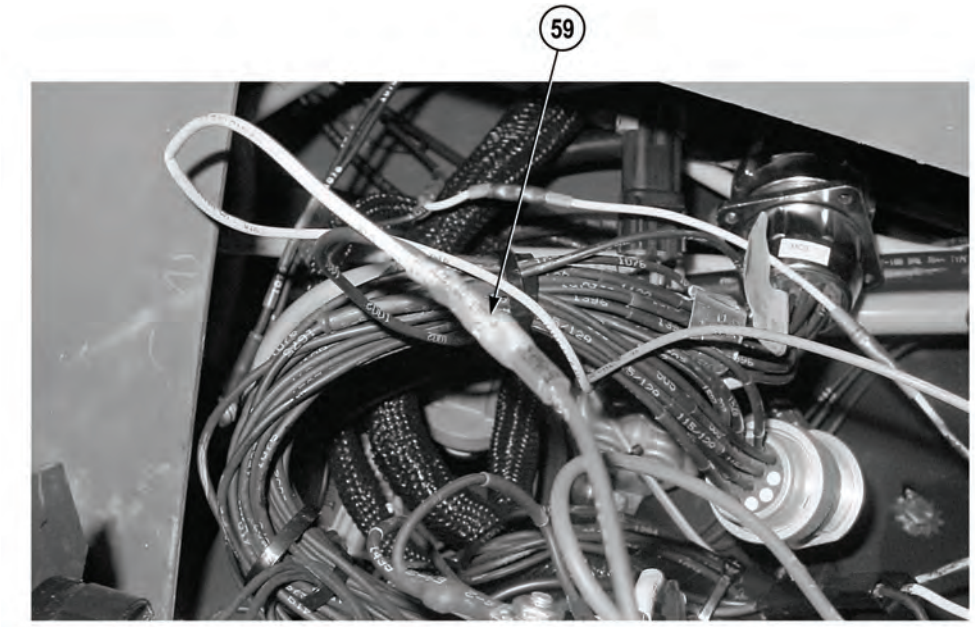
Installing screws on cab instrument panels B and C and cab instrument panel assembly secures cab instrument panels for removal from vehicle.

27. Install two screws (61) on cab instrument panel C (35) and cab instrument panel assembly (33).
28. Install five screws (31) on cab instrument panel B (32) and cab instrument panel assembly (33).
29. With the aid of an assistant, remove cab instrument panel assembly (33) from vehicle.

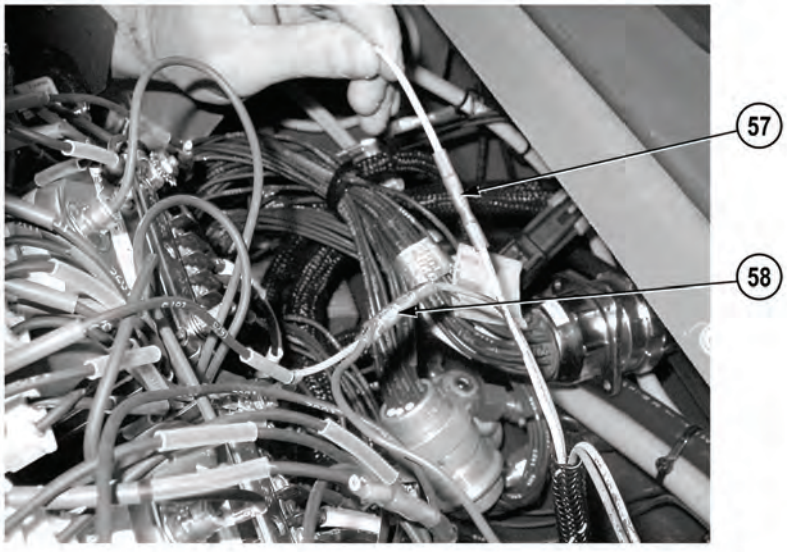
END OF TASK

INSTALLATION

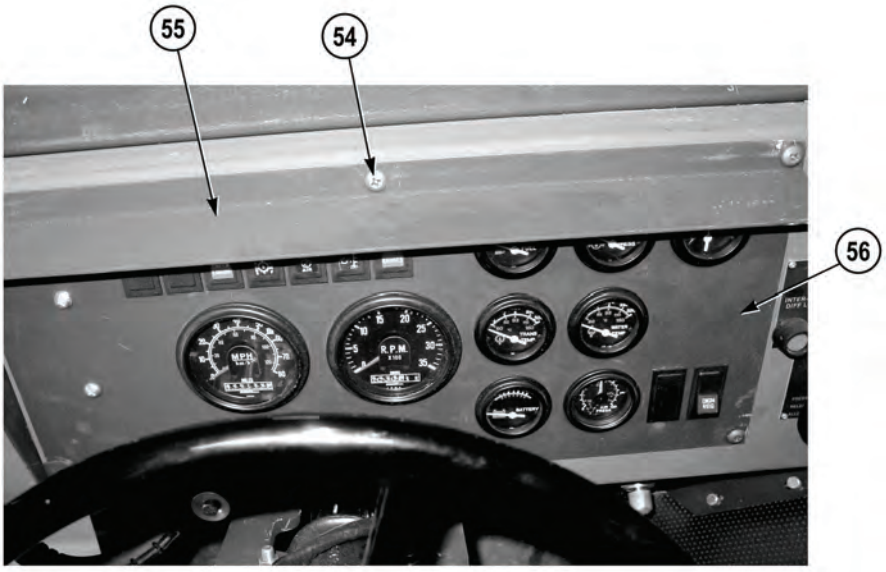
1. With the aid of an assistant, place cab instrument panel assembly (33) on top heater compartment (37).
2. Remove five screws (31) from cab instrument panel B (32) and cab instrument panel assembly (33).
3. Remove two screws (61) from cab instrument panel C (35) and cab instrument panel assembly (33).
4. Repair wire 1412 (60) (TM 9-2320-315-14&P).



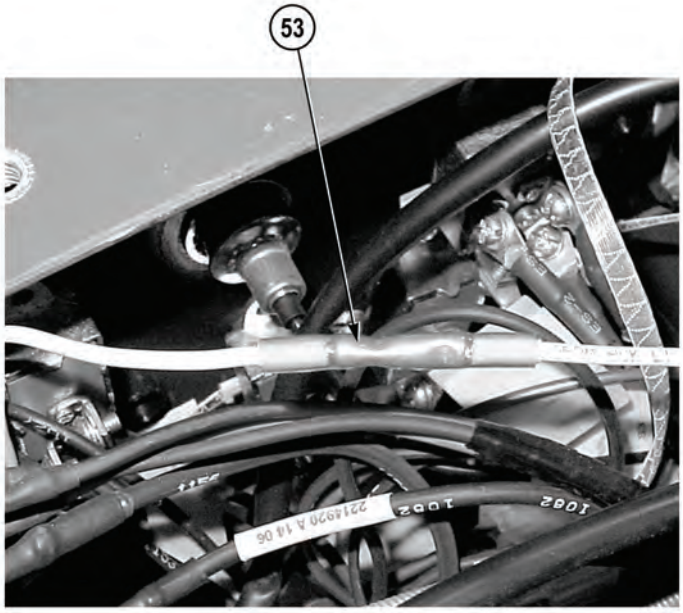
5. Repair wire 1411 (59) (TM 9-2320-315-14&P).



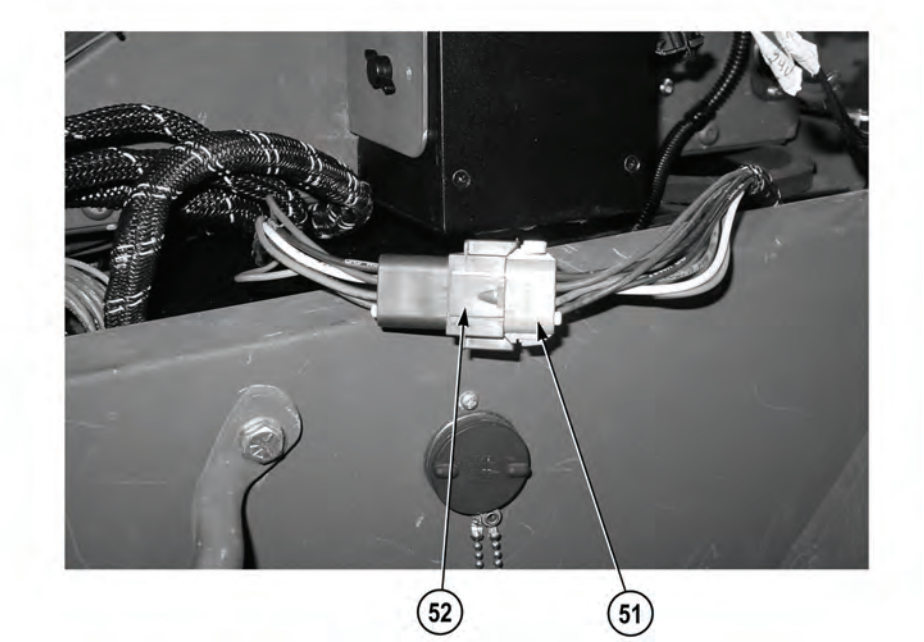
6. Repair wire H012 (57) (TM 9-2320-315-14&P).
7. Repair wire 1020 (58) (TM 9-2320-315-14&P).



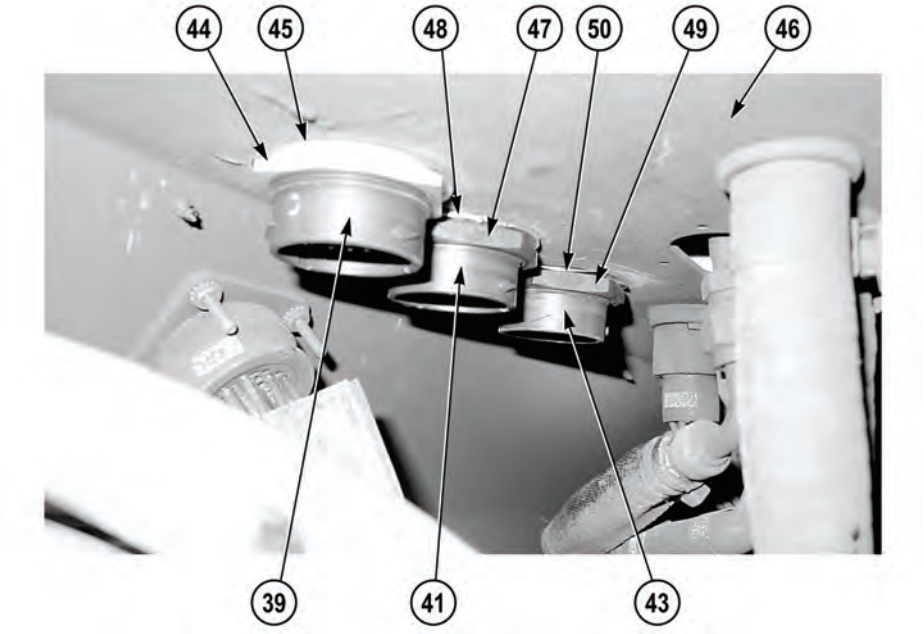
8. Install sunshield (55) on instrument panel (56) with six screws (54).



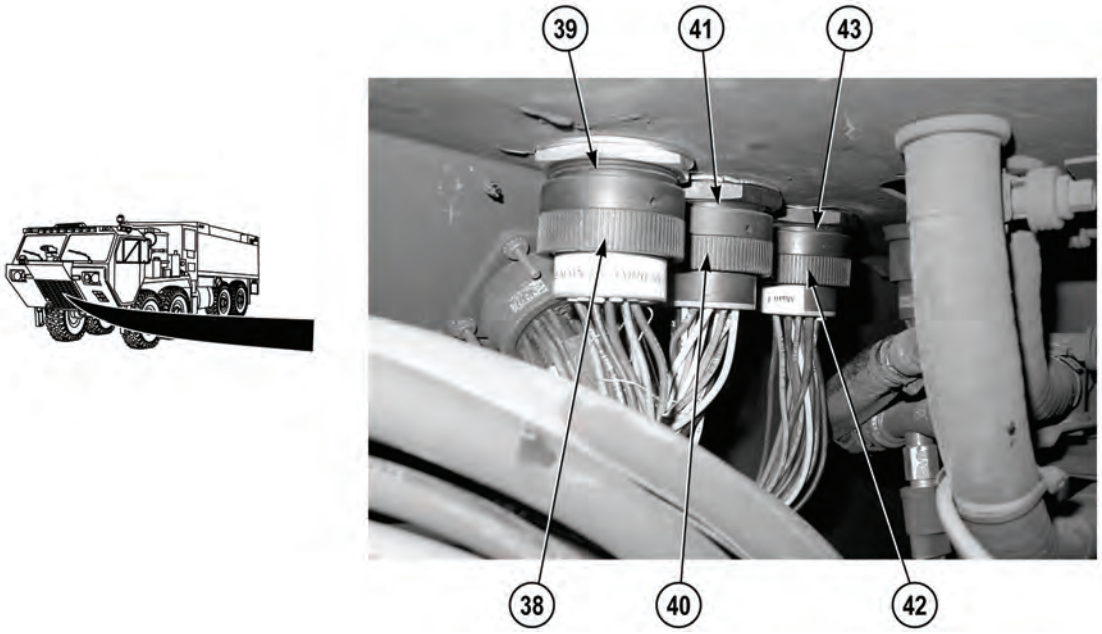
9. Repair wire H052 (53) (TM 9-2320-315-14&P).



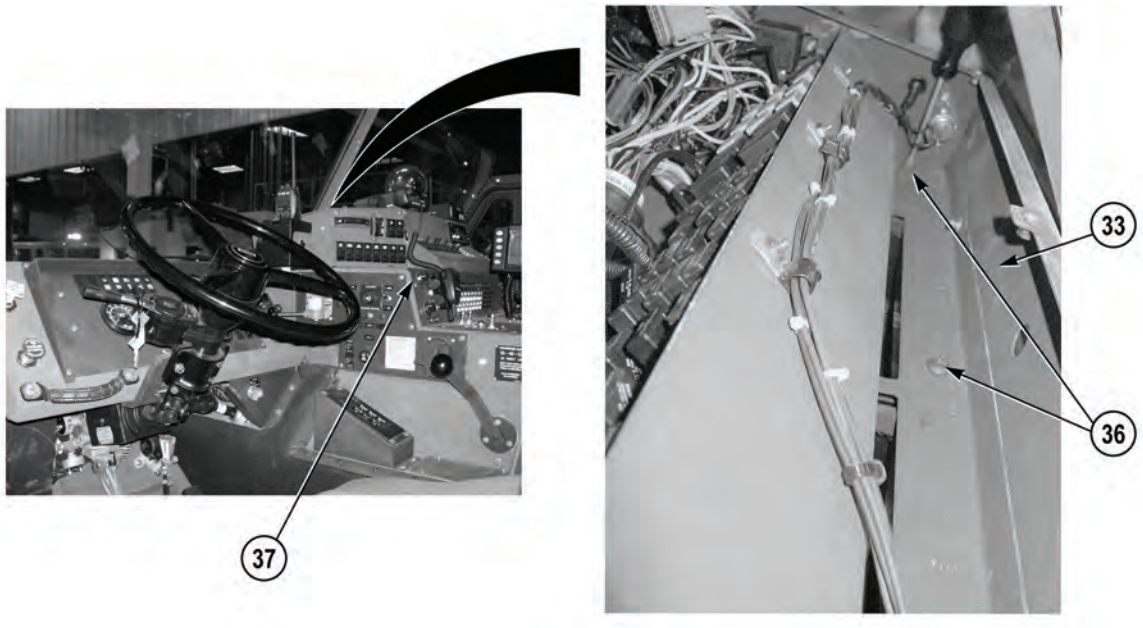
10. Connect cab roof wire harness connector (51) on cab instrument panel wire harness connector (52).



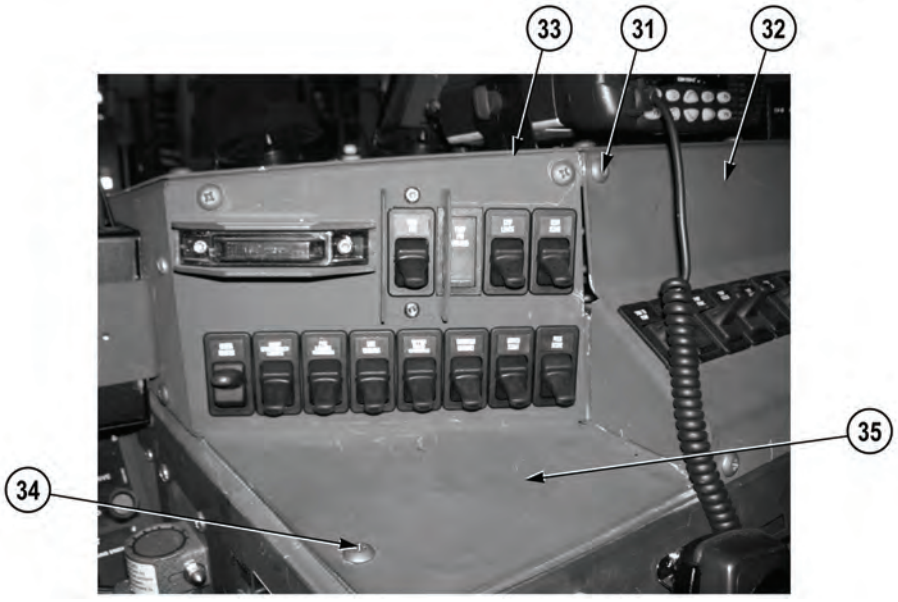
11. With the aid of an assistant, install main 1 connector (43) on cab (46) with lockwasher (50) and nut (49).
12. With the aid of an assistant, install main 2 connector (41) on cab (46) with lockwasher (48) and nut (47).
13. With the aid of an assistant, install main 3 connector (39) on cab (46) with lockwasher (45) and nut (44).



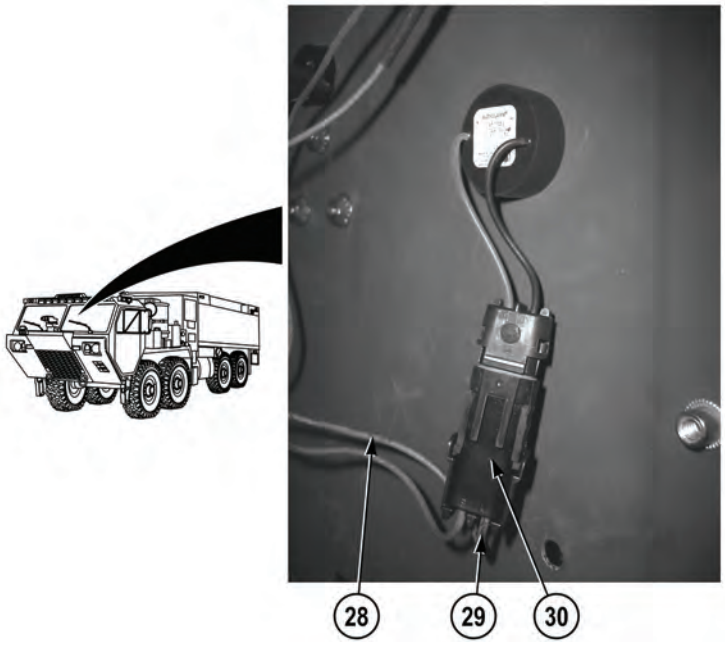
14. Connect main wire harness connector (42) on main 1 connector (43).
15. Connect main wire harness connector (40) on main 2 connector (41).
16. Connect main wire harness connector (38) on main 3 connector (39).



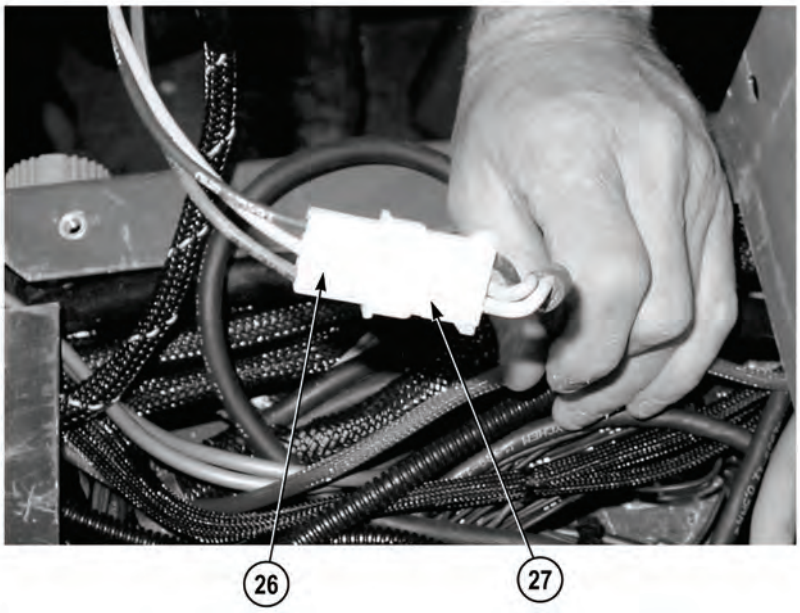
17. Install cab instrument panel assembly (33) on top heater compartment (37) with six screws (36).



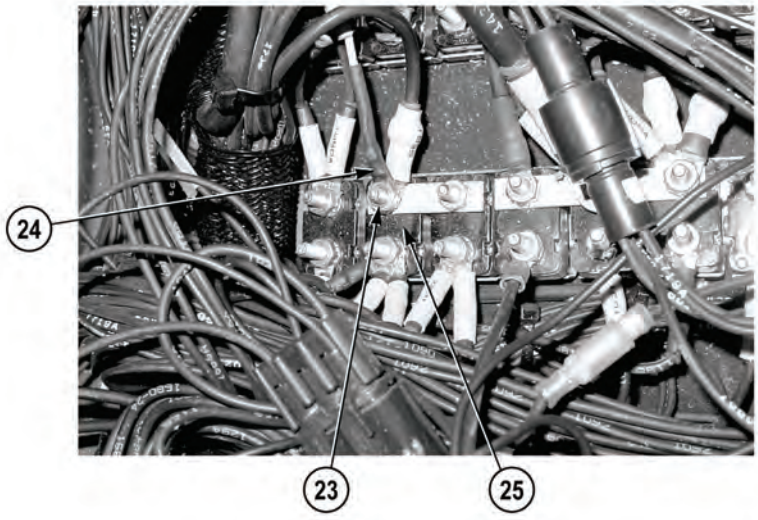
18. Install cab instrument panel B (32) on cab instrument panel assembly (33) with five screws (31).
19. Install cab instrument panel C (35) on cab instrument panel assembly (33) with three screws (34).



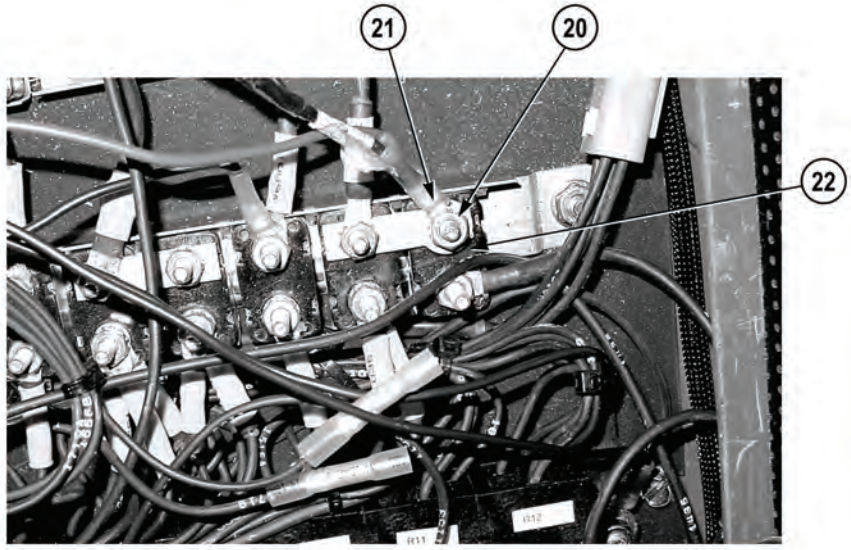
20. Butt splice cab power distribution wire harness (28) wire 1647 (29) on cab 1-2-3 buzzer audio alarm connector (30) (TM 9-2320-315-14&P).



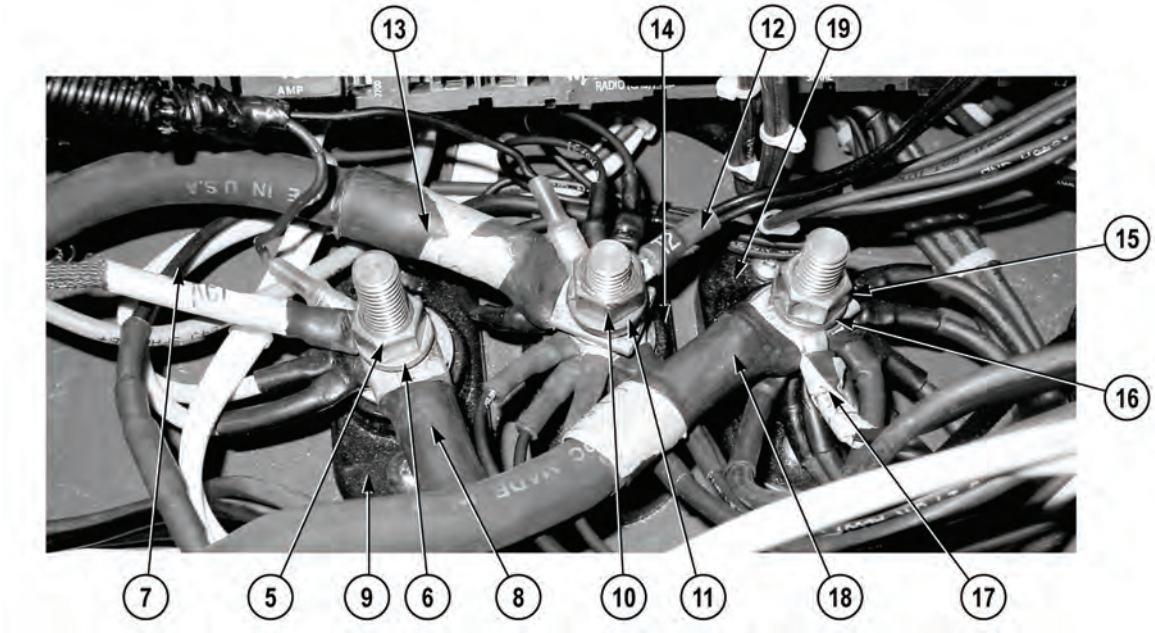
21. Connect cab instrument panel wire harness connector (26) on bumper turret connector (27).



22. Install wire H835 (24) on circuit breaker 2 (25) with locknut (23).



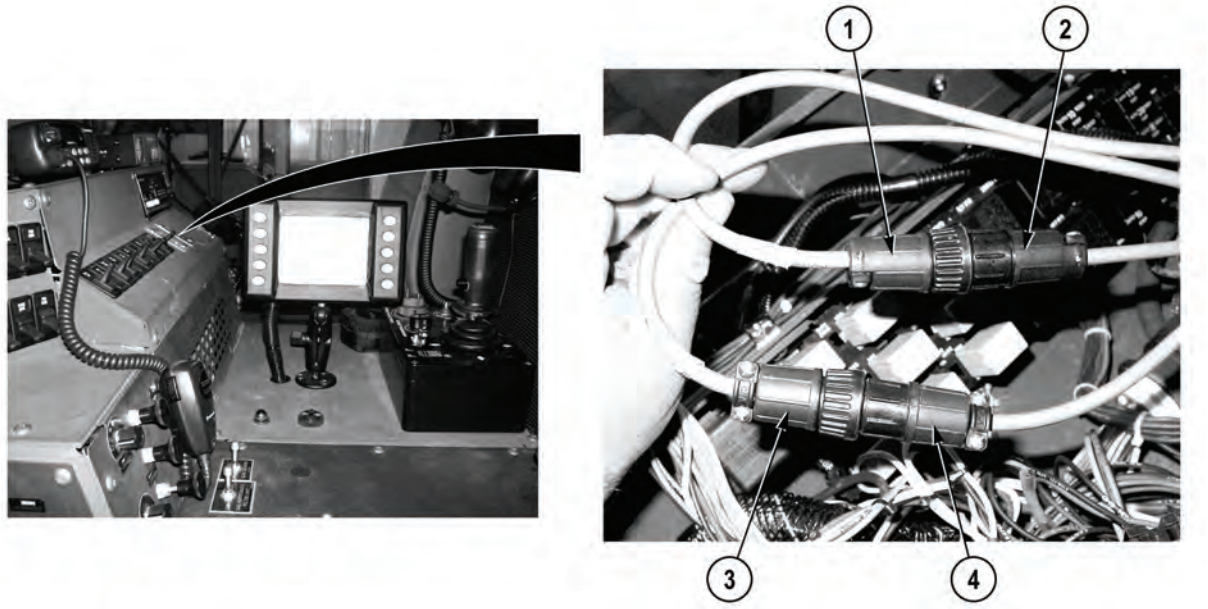
23. Install wire H052 (21) on circuit breaker 12 (22) with locknut (20).



24. Install power cable assembly (SINCGARS) (17) and high amperage cable (18) on 24 VDC terminal block (19) with lockwasher (16) and nut (15).

25. Install power cable assembly (SINCGARS) (12) and ground cable (13) on ground terminal block (14) with lockwasher (11) and nut (10).

26. Install wire 1663 (7) and high amperage cable (8) on 12 VDC terminal block (9) with lockwasher (6) and nut (5).



27. Connect cab water tank level indicator wire harness connector (3) on cab water level gauge connector (4).
28. Connect cab foam tank level indicator wire harness connector (1) on cab foam level gauge connector (2).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install skid plate grille (WP 0350)
2. Install cab instrument panels D and E (WP 0203)
3. Install siren (WP 0381)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

CAB INSTRUMENT PANEL REPLACEMENT

INITIAL SETUP:

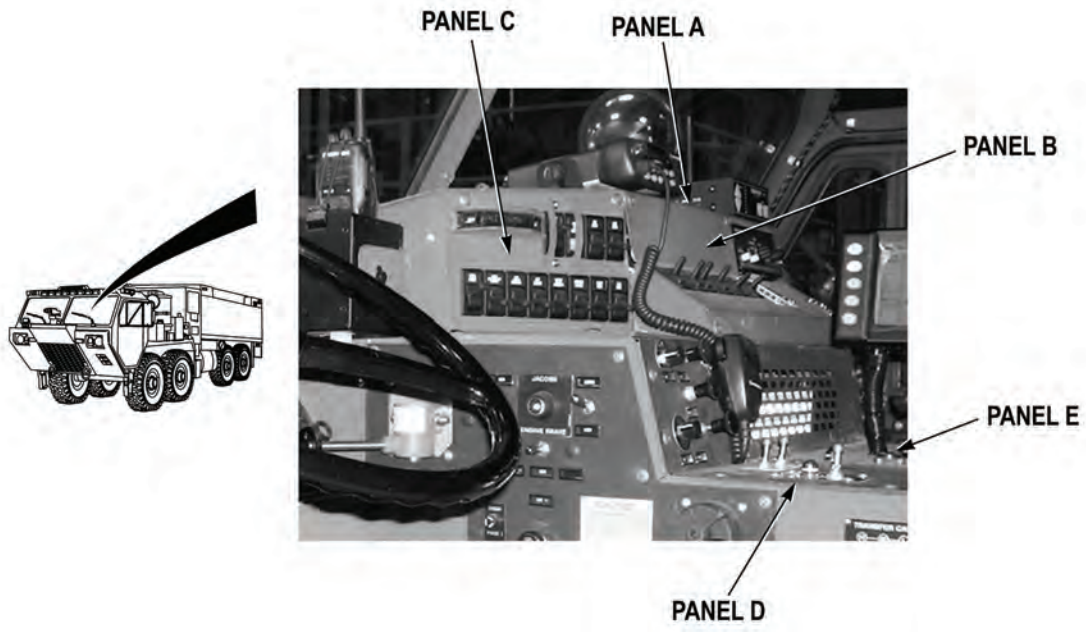
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)
Lockwasher (2)

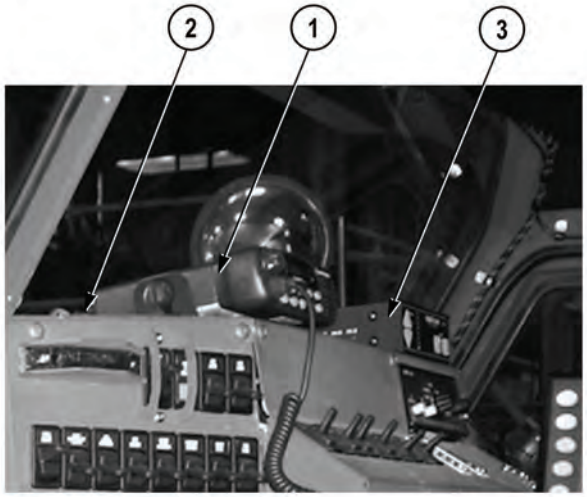
References
WP 0183
WP 0189
WP 0190
WP 0194
WP 0195

References (continued)
WP 0197
WP 0196
WP 0198
WP 0215
WP 0242
WP 0262
WP 0290
WP 0376
WP 0381
WP 0392, Fig. 26

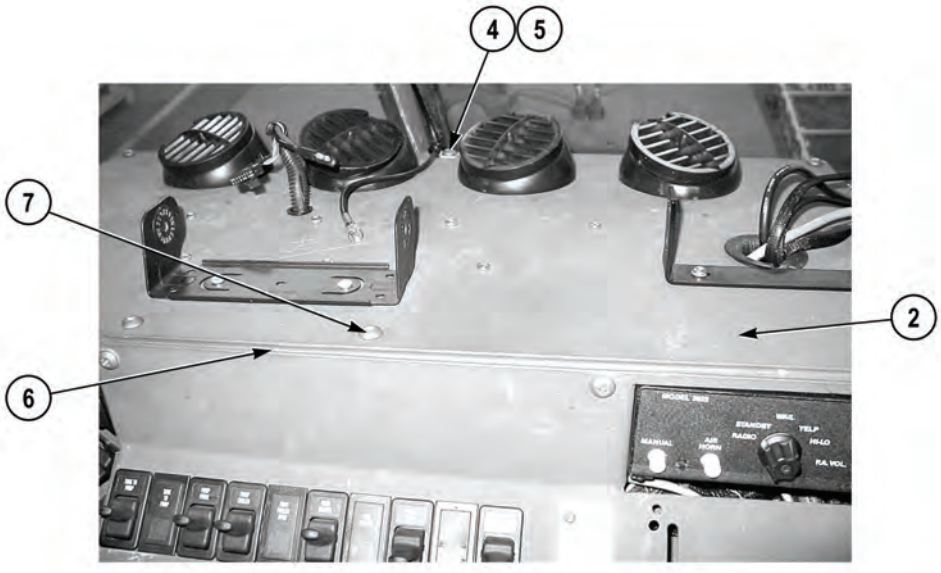
Equipment Conditions
Batteries disconnected (TM 9-2320-315-14&P)



PANEL A REMOVAL



1. Remove two-way radio (1) from cab instrument panel A (2) (WP 0262).
2. Remove intercom (3) from cab instrument panel A (2) (WP 0242).

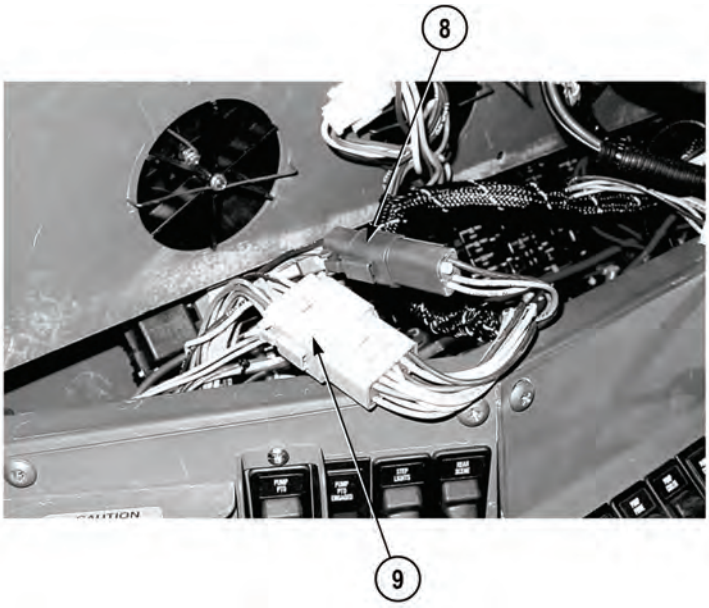


3. Remove screw (4) and cushion clip (5) from cab instrument panel A (2) and cab instrument panel assembly (6).

⚠ CAUTION

When performing Step (4), lift cab instrument panel A only enough to access wires. Wires for flasher units and two-way radio are still attached. Failure to comply may cause damage to equipment.

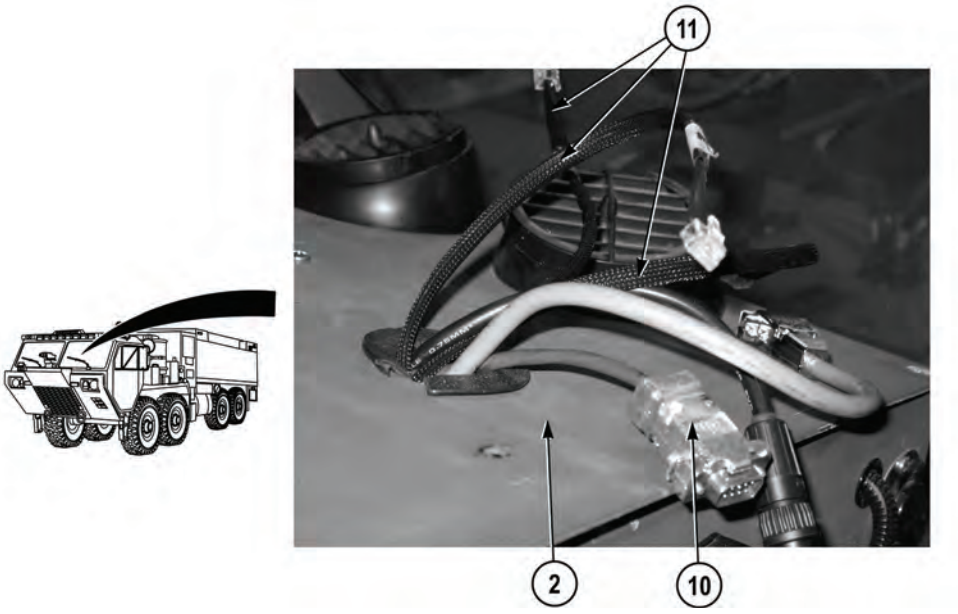
4. Remove six screws (7) and lift cab instrument panel A (2) slightly from cab instrument panel assembly (6).



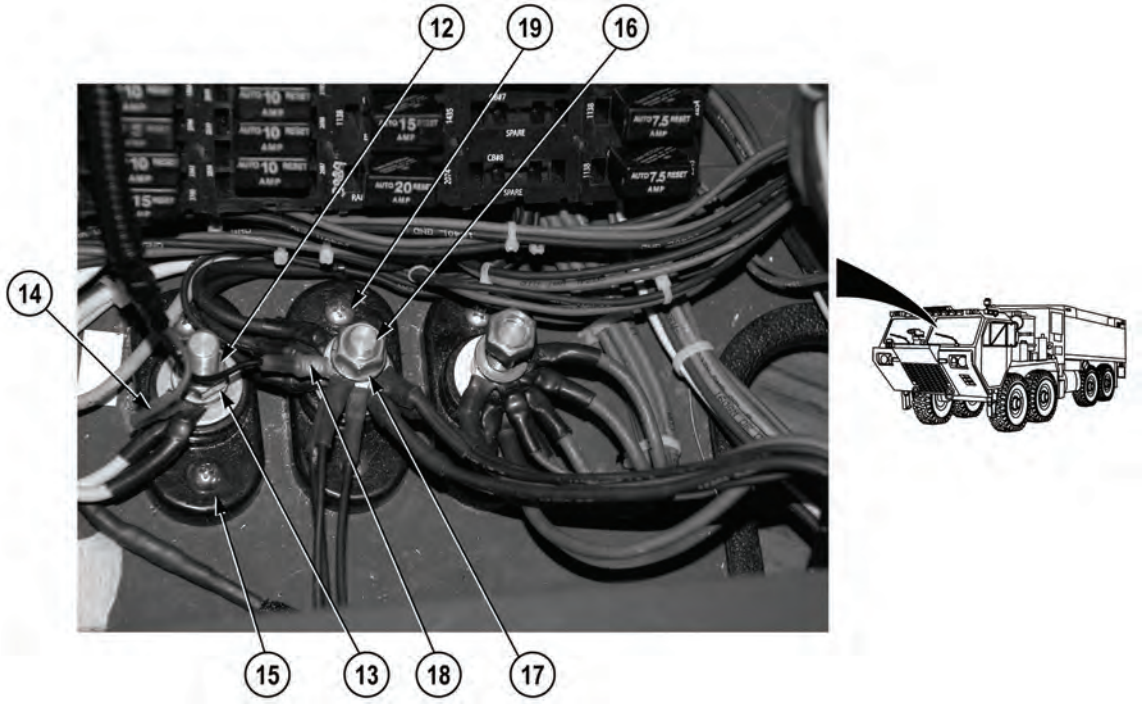
NOTE

- Note routing of harnesses prior to removal to ensure proper installation.
- Note location and remove cable ties, split loom, and cushion clips as required.

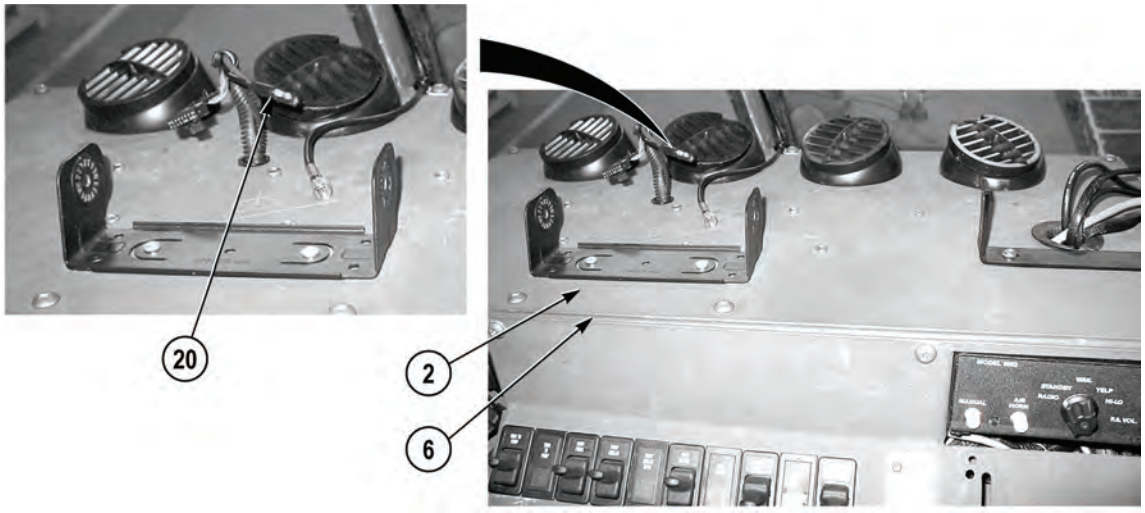
5. Disconnect cab instrument panel wire harness four pin connector (8).
6. Disconnect cab instrument panel wire harness 12 pin connector (9).



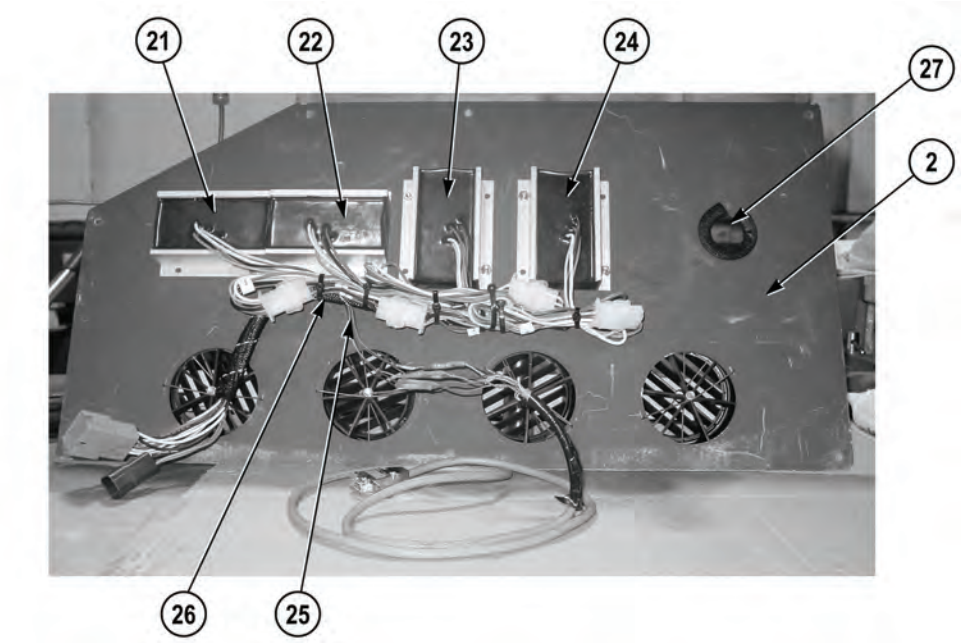
7. Remove SINCGARS interface wire harness connector (10) from cab instrument panel A (2).
8. Remove intercom wire harness (11) from cab instrument panel A (2).



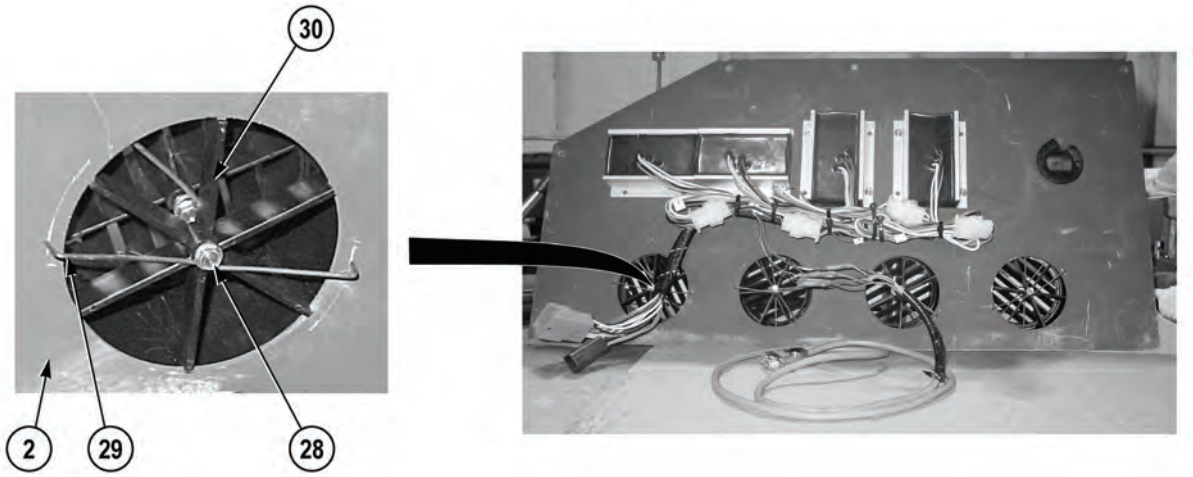
9. Remove nut (12), lockwasher (13), and two-way radio power wire (14) from cab 12 VDC terminal block (15). Discard lockwasher.
10. Remove nut (16), lockwasher (17), and two-way radio ground wire (18) from cab ground terminal block (19). Discard lockwasher.



11. Remove cab instrument panel A (2) from cab instrument panel assembly (6).
12. Remove two-way radio power cable (20) from cab instrument panel A (2).



13. Remove upper rear warning flasher unit (21) from cab instrument panel A (2) (WP 0194).
14. Remove check for open compartment door when light is on flasher unit (22) from cab instrument panel A (2) (WP 0194).
15. Remove side warning flasher unit (23) from cab instrument panel A (2) (WP 0194).
16. Remove front and rear lower warning flasher unit (24) from cab instrument panel A (2) (WP 0194).
17. Remove two-way radio interface wire harness (25) from cab instrument panel A (2) (WP 0290).
18. Remove two grommets (26) and (27) from cab instrument panel A (2).



NOTE

All four louvers are removed the same way. Driver side outer louver shown.

19. Remove screw (28), spring (29), and louver assembly (30) from cab instrument panel A (2).

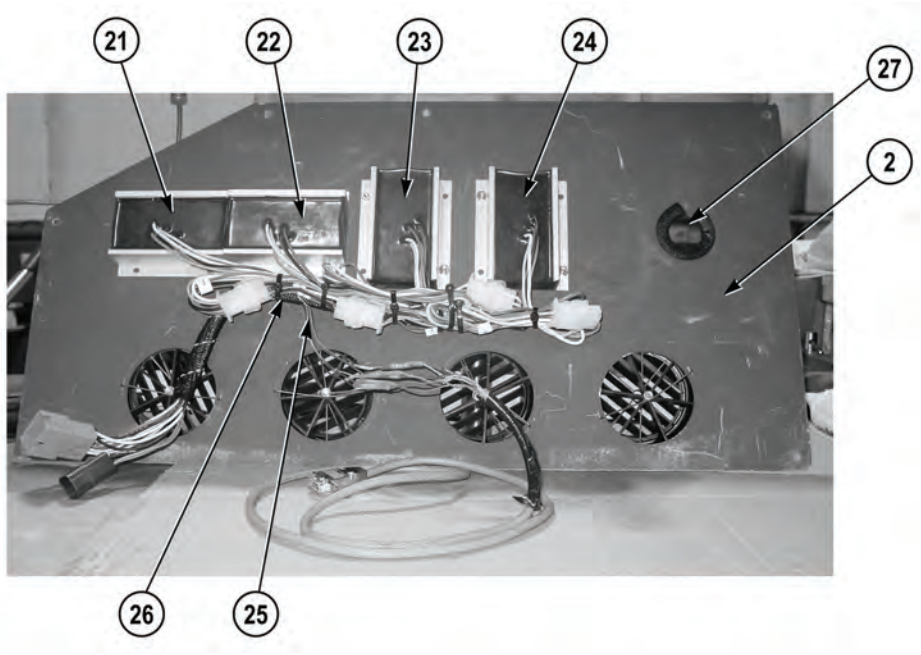
END OF TASK

PANEL A INSTALLATION

NOTE

All four louvers are installed the same. Driver side outer louver shown.

1. Install louver assembly (30) on cab instrument panel A (2) with spring (29) and screw (28).

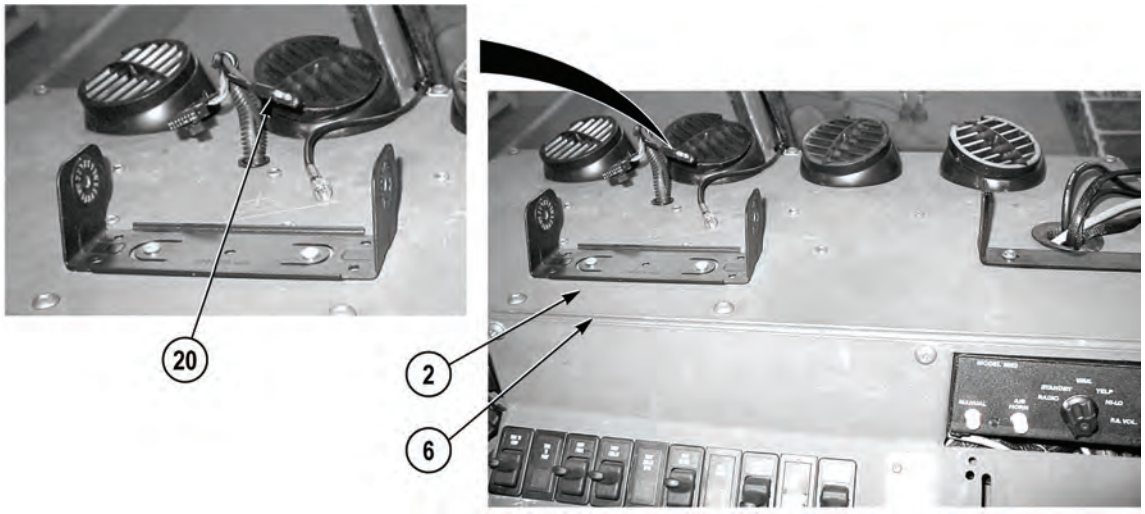


2. Install two grommets (26) and (27) on cab instrument panel A (2).

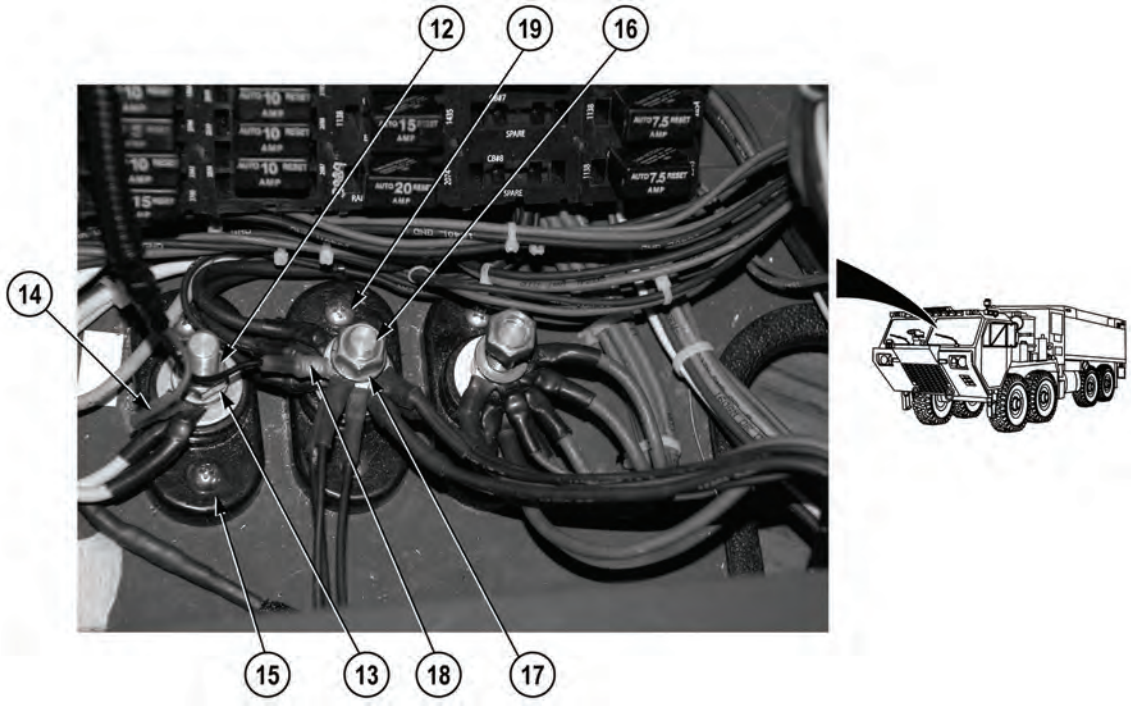
NOTE

- Route harnesses as noted prior to removal.
- Install cable ties, split loom, and cushion clips as required.

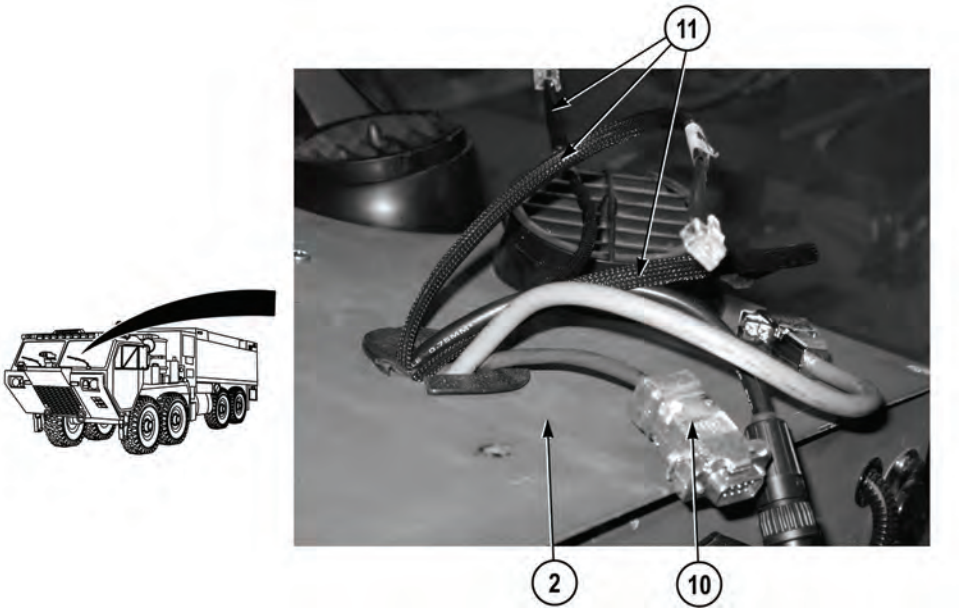
3. Install two-way radio interface wire harness (25) on cab instrument panel A (2) (WP 0290).
4. Install front and rear lower warning flasher unit (24) on cab instrument panel A (2) (WP 0194).
5. Install side warning flasher unit (23) on cab instrument panel A (2) (WP 0194).
6. Install check for open compartment door when light is on flasher unit (22) on cab instrument panel A (2) (WP 0194).
7. Install upper rear warning flasher unit (21) on cab instrument panel A (2) (WP 0194).



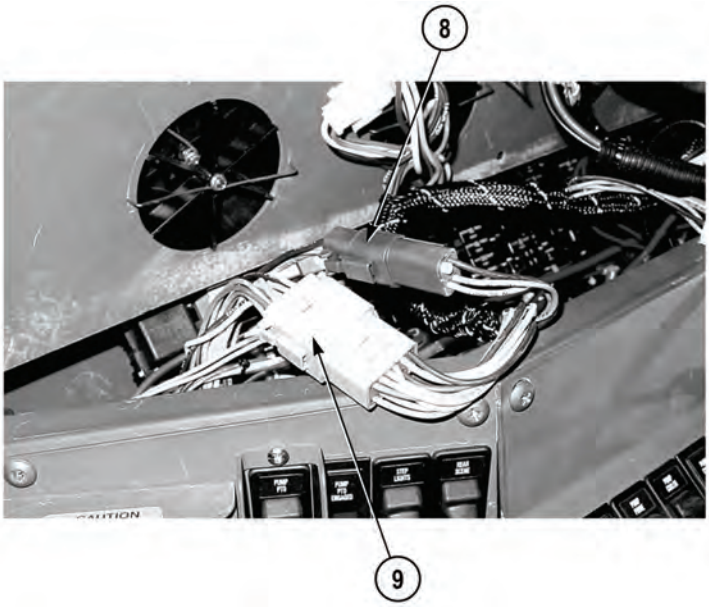
8. Install two-way radio power cable (20) on cab instrument panel A (2).
9. Set cab instrument panel A (2) on cab instrument panel assembly (6).



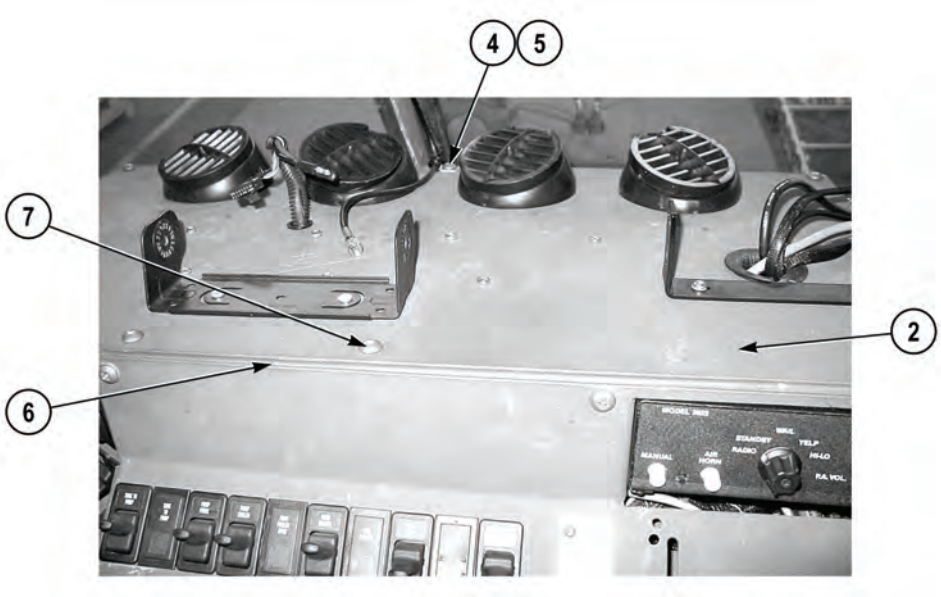
10. Install two-way radio ground wire (18) on cab ground terminal block (19) with lockwasher (17) and nut (16).
11. Install two-way radio power wire (14) on cab 12 VDC terminal block (15) with lockwasher (13) and nut (12).



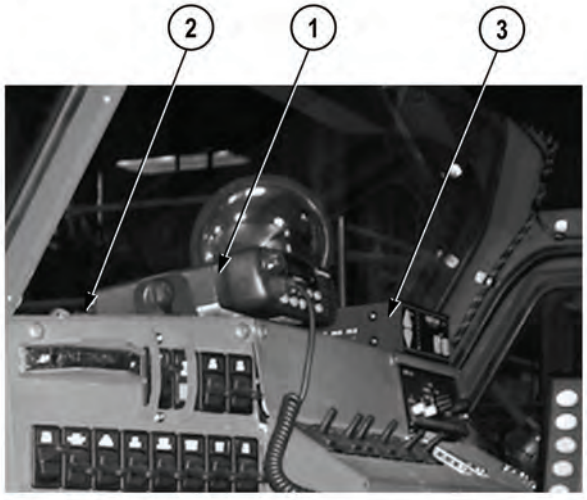
12. Install intercom wire harness (11) on cab instrument panel A (2).
13. Install SINCGARS interface wire harness connector (10) on cab instrument panel A (2).



14. Connect cab instrument panel wire harness 12 pin connector (9).
15. Connect cab instrument panel wire harness four pin connector (8).



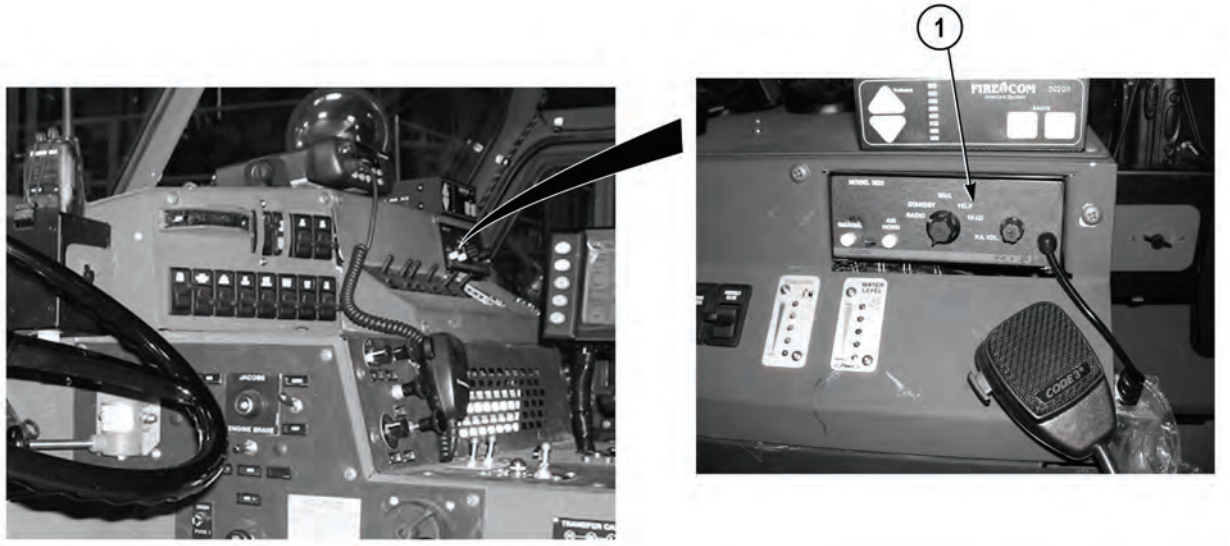
16. Install cab instrument panel A (2) on cab instrument panel assembly (6) with six screws (7).
17. Install cushion clip (4) on cab instrument panel A (2) and cab instrument panel assembly (6) with screw (3).



18. Install intercom (3) on cab instrument panel A (2) (WP 0242).
19. Install two-way radio (1) on cab instrument panel A (2) (WP 0262).

END OF TASK

CAB INSTRUMENT PANEL B REMOVAL



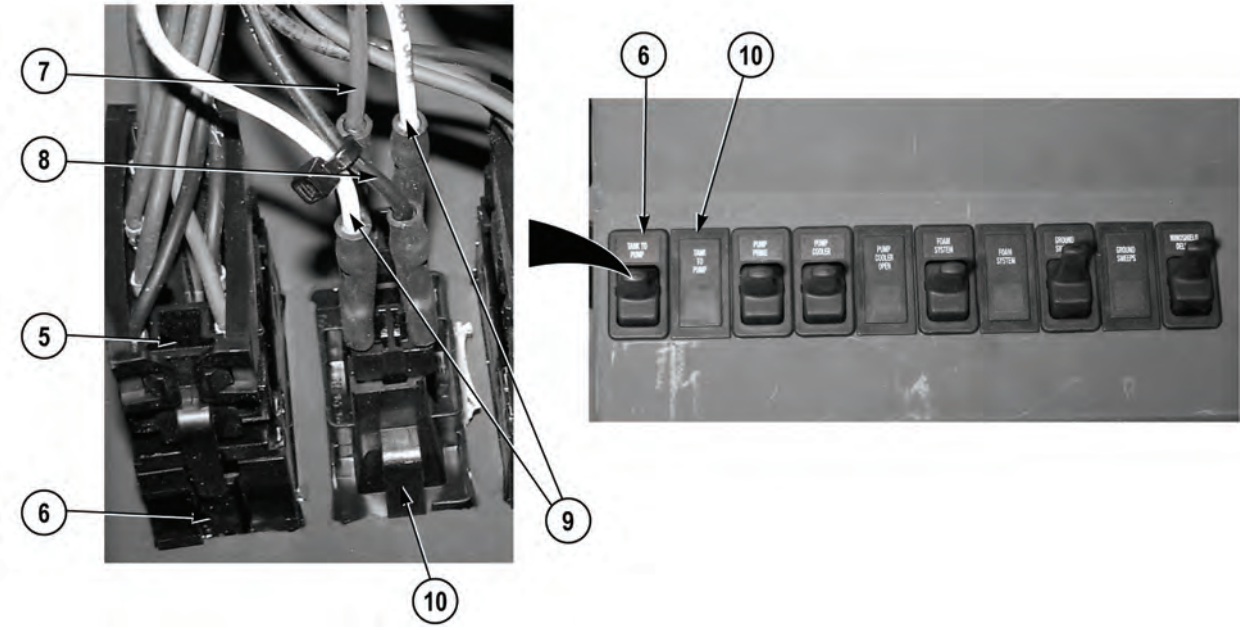
1. Remove siren control (1) from vehicle (WP 0381).



⚠ CAUTION

When performing Step (2), lift out and stow cab instrument panel B only enough to access wire harness connectors. Cab pump control and foam and water level gauge wire harnesses are still attached. Failure to comply may cause damage to equipment.

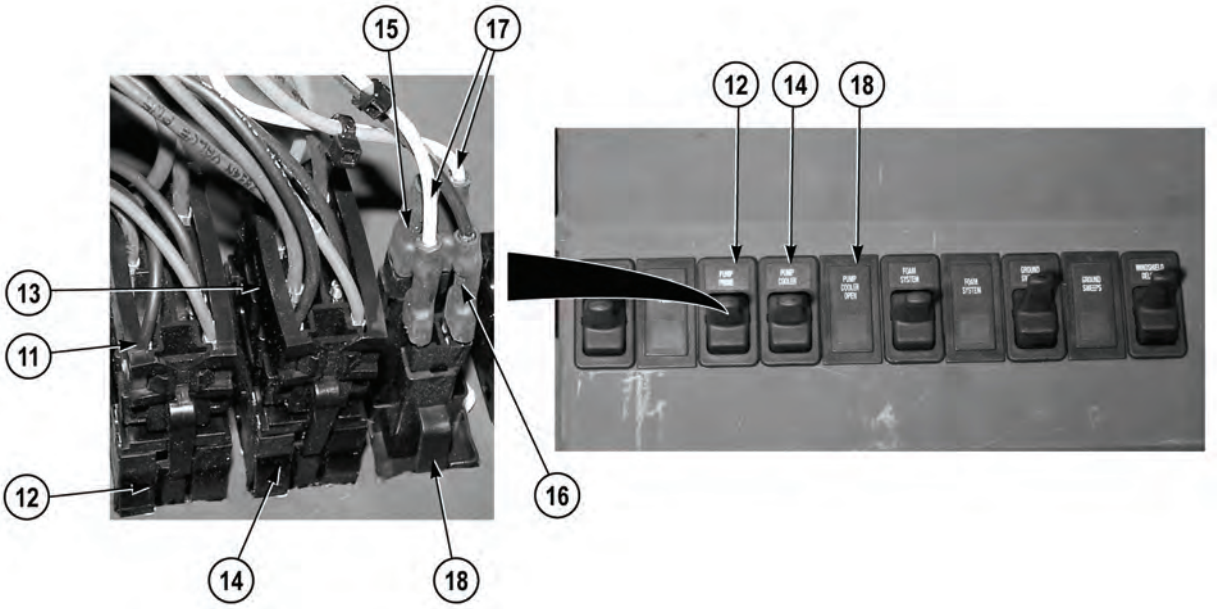
2. Remove five screws (2) and stow cab instrument panel B (3) away from cab instrument panel assembly (4).



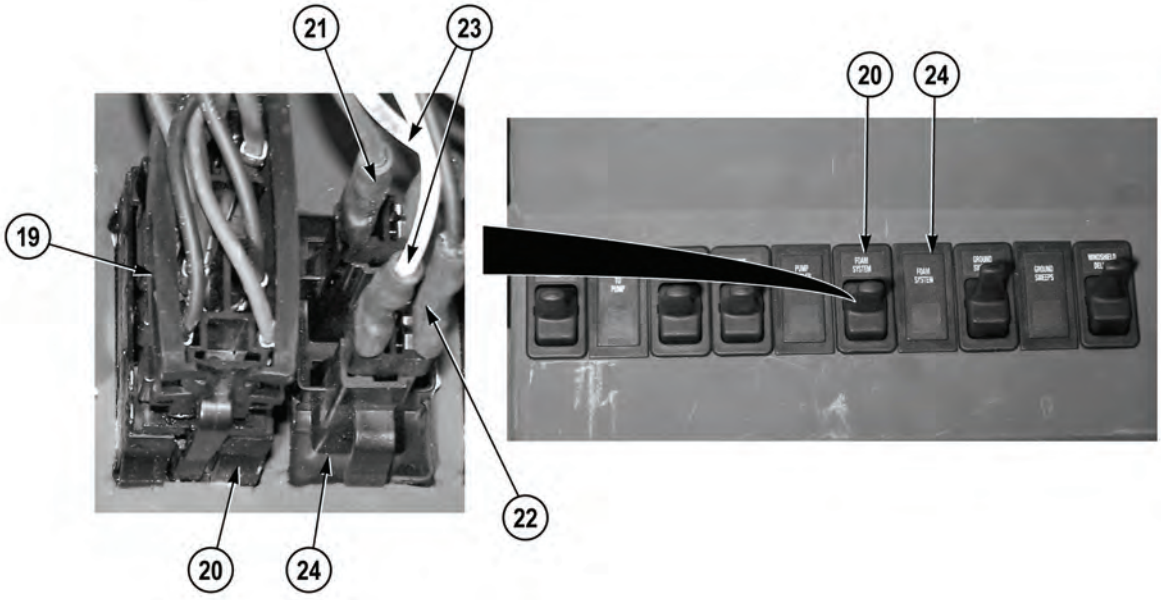
NOTE

- Tag and mark wires prior to removal to ensure proper installation.
- Note routing of harnesses prior to removal to ensure proper installation.
- Note position and remove cable ties as required.

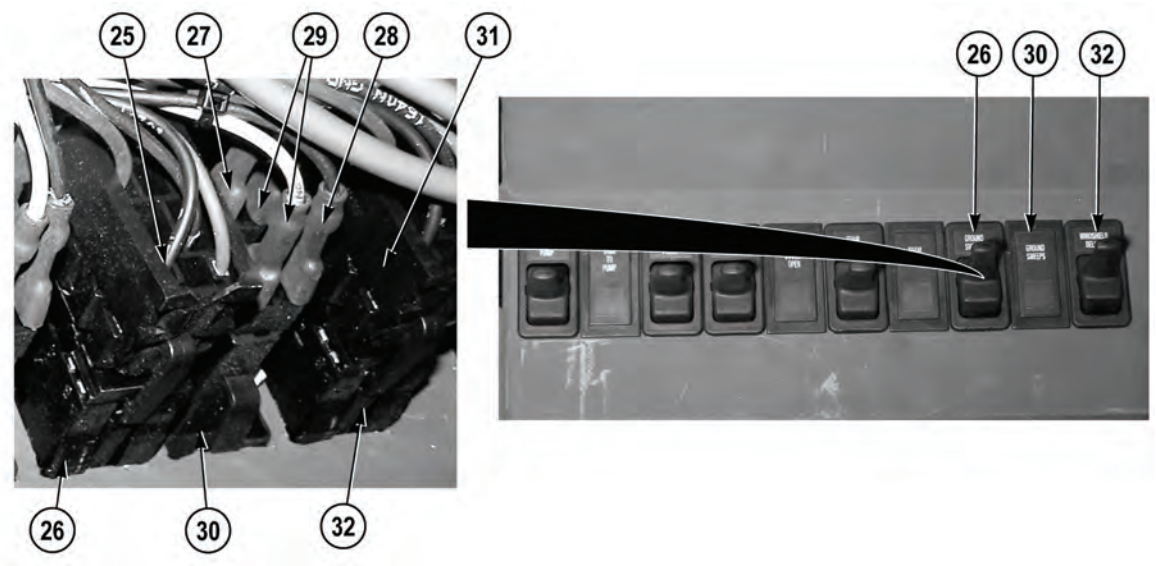
3. Disconnect cab pump control wire harness connector (5) from TANK TO PUMP switch (6).
4. Disconnect wire 2855 (7), wire 1023 (8), and jumperwire 2768 (9) from TANK TO PUMP indicator light (10).



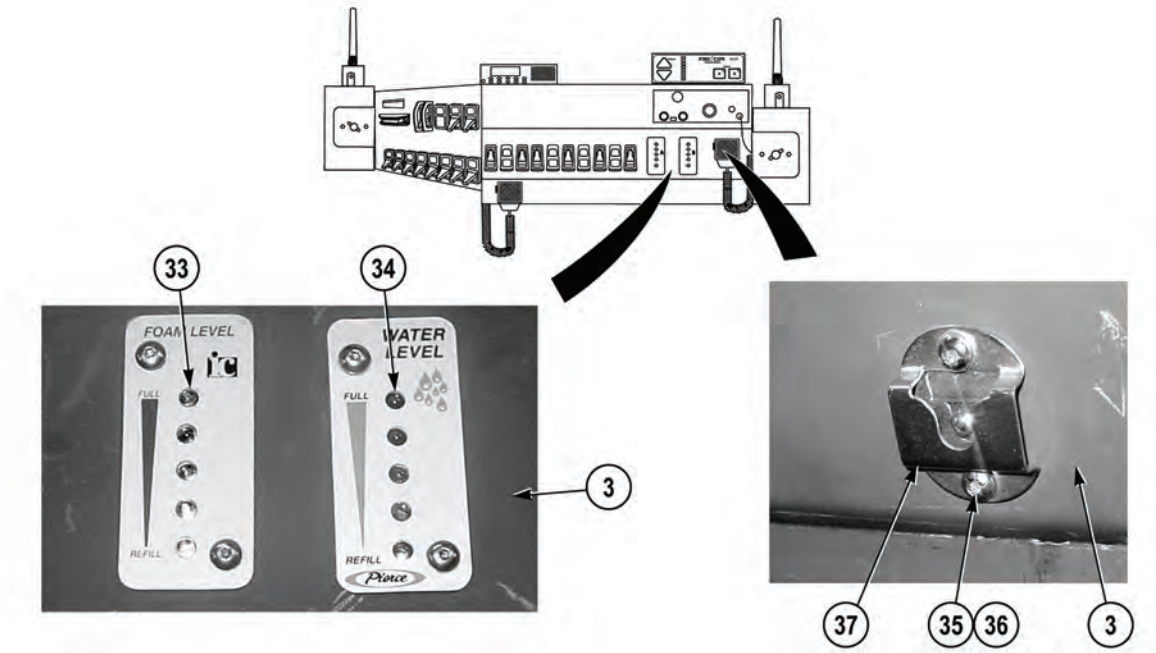
5. Disconnect cab pump control wire harness connector (11) from PUMP PRIMER switch (12).
6. Disconnect cab pump control wire harness connector (13) from PUMP COOLER switch (14).
7. Disconnect wire 4037 (15), wire 1023 (16), and jumperwire 2768 (17) from PUMP COOLER OPEN indicator light (18).



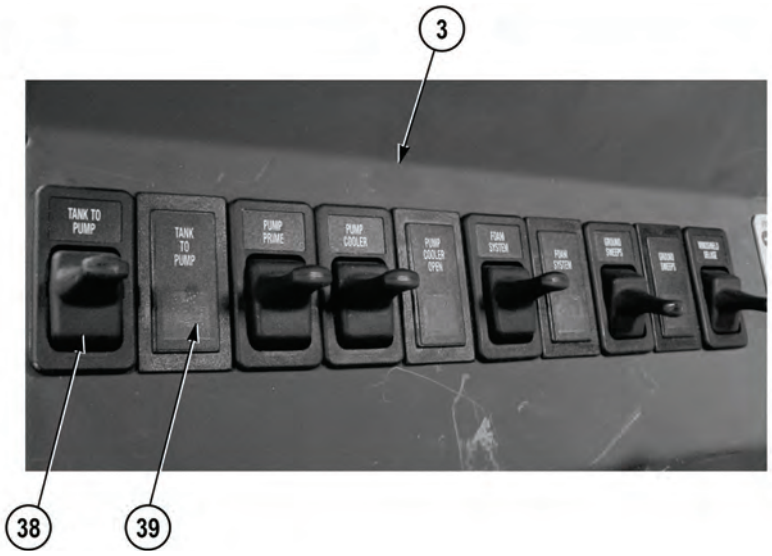
8. Disconnect cab pump control wire harness connector (19) from FOAM SYSTEM switch (20).
9. Disconnect wire 2830 (21), wire 1023 (22), and jumperwire 2768 (23) from FOAM SYSTEM indicator light (24).



10. Disconnect cab pump control wire harness connector (25) from UNDER TRUCK NOZZLES switch (26).
11. Disconnect wire 2772 (27), wire 1023 (28), and jumperwire 2768 (29) from UNDER TRUCK NOZZLES indicator light (30).
12. Disconnect cab pump control wire harness connector (31) from WINDSHIELD DELUGE switch (32).



13. Remove cab foam (33) and water (34) level gauges from cab instrument panel B (3) (WP 0198).
14. Remove cab instrument panel B (3) from vehicle.
15. Remove two nuts (35), screws (36), and bracket (37) from cab instrument panel B (3).



NOTE

Mark switches and indicators prior to removal to ensure proper installation.

16. Remove six switches (38) from cab instrument panel B (3) (WP 0197).
17. Remove four indicator lights (39) from cab instrument panel B (3) (WP 0196).

END OF TASK

CAB INSTRUMENT PANEL B INSTALLATION

NOTE

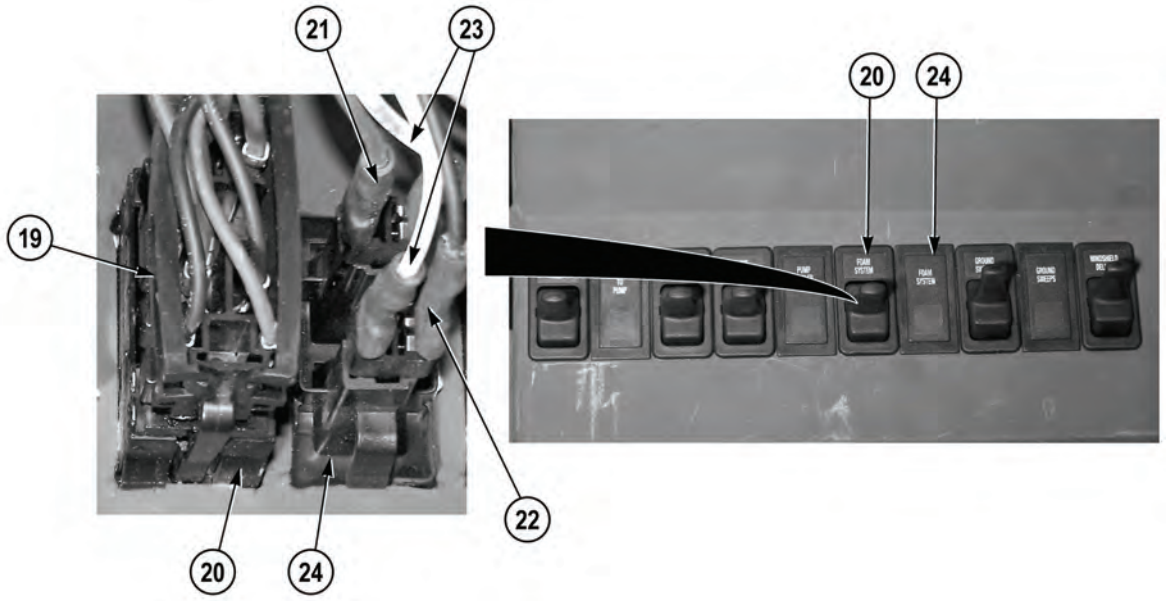
Install switches and indicators as noted prior to removal.

1. Install four indicator lights (39) on cab instrument panel B (3) (WP 0196).
2. Install six switches (38) on cab instrument panel B (3) (WP 0197).
3. Install bracket (37) on cab instrument panel B (3) with two screws (36) and nuts (35).
4. Place cab instrument panel B (3) in stow position on vehicle.

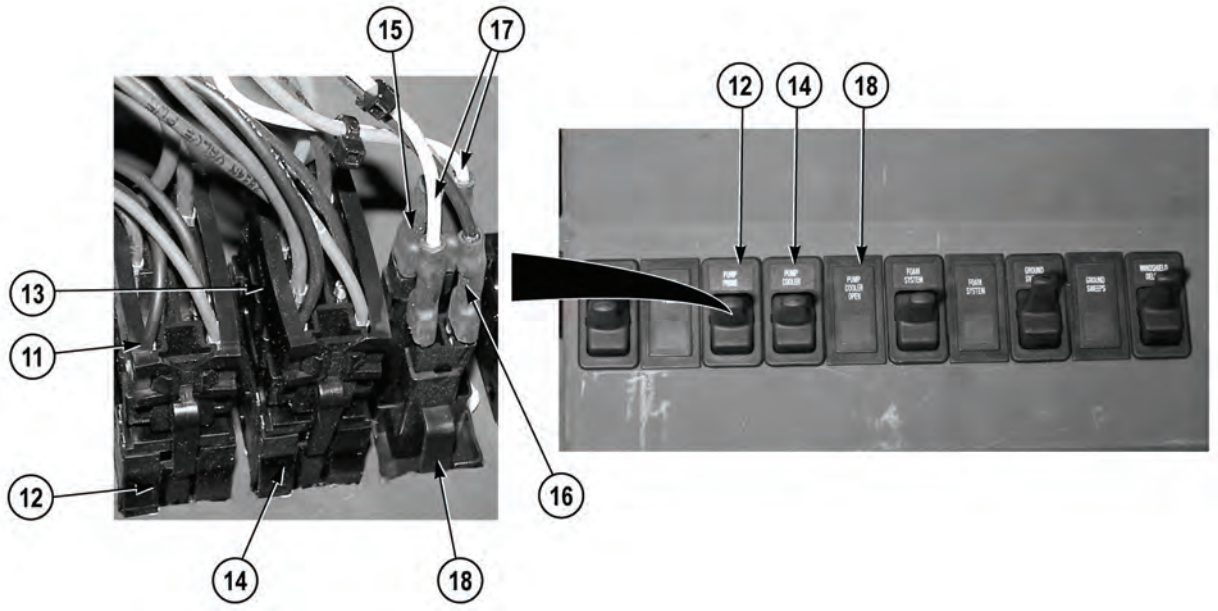
NOTE

- Route harnesses as noted prior to removal.
- Install cable ties as required.

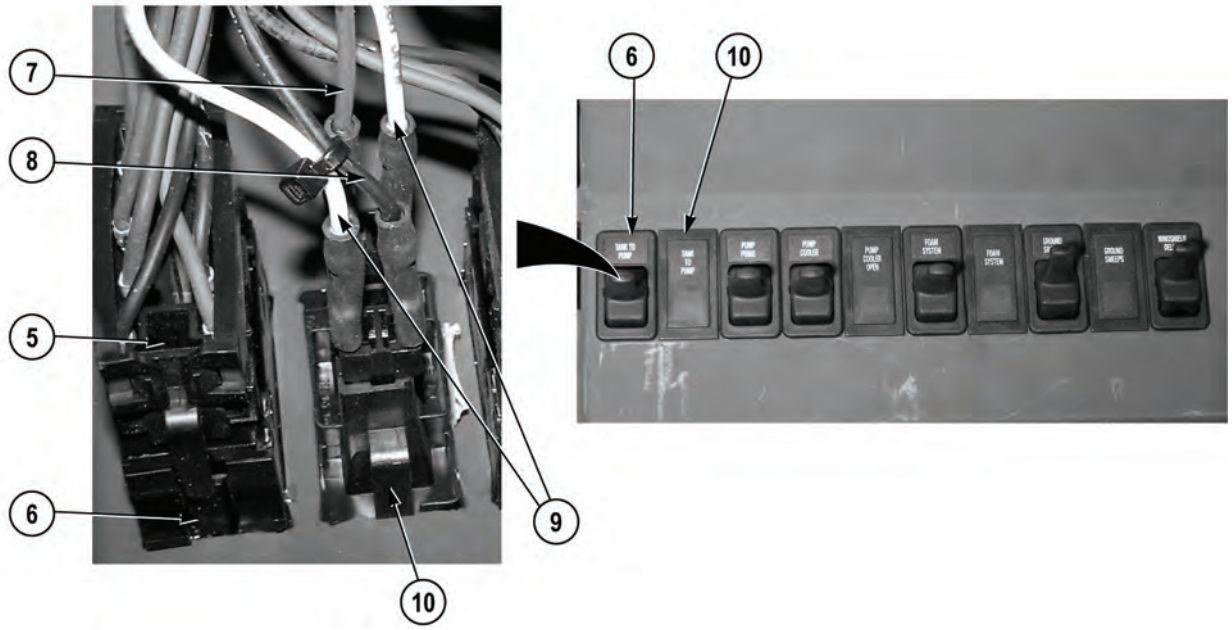
5. Install cab foam (33) and water (34) level gauges on cab instrument panel B (3) (WP 0198).
6. Connect cab pump control wire harness connector (31) on WINDSHIELD DELUGE switch (32).
7. Connect wire 2772 (27), wire 1023 (28), and jumperwire 2768 (29) on UNDER TRUCK NOZZLES indicator light (30).
8. Connect cab pump control wire harness connector (25) on UNDER TRUCK NOZZLES switch (26).



9. Connect wire 2830 (21), wire 1023 (22), and jumperwire 2768 (23) on FOAM SYSTEM indicator light (24).
10. Connect cab pump control wire harness connector (19) on FOAM SYSTEM switch (20).



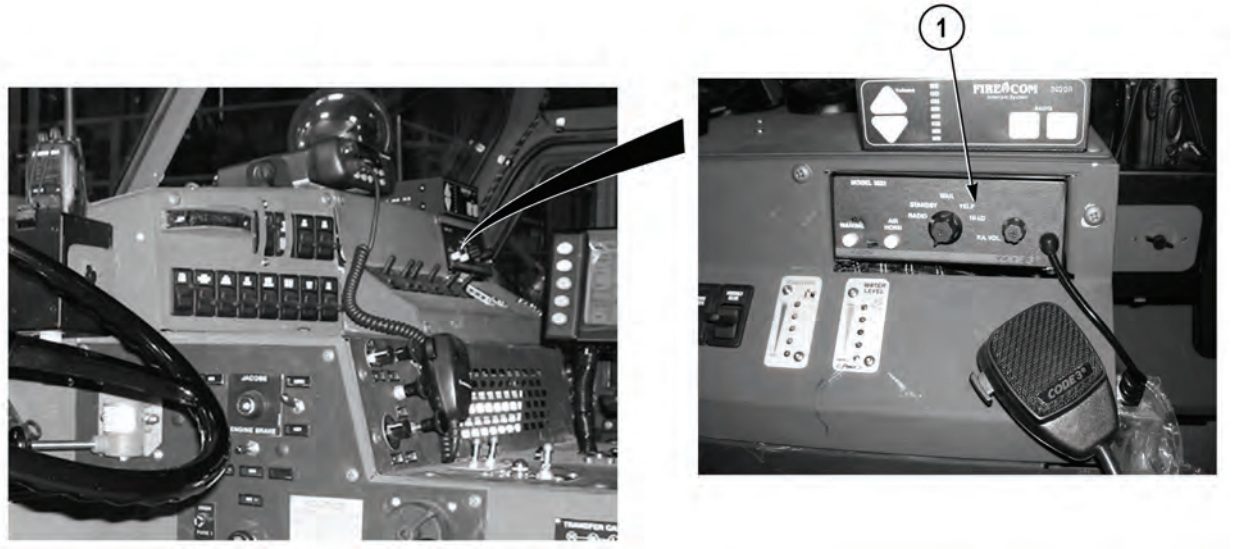
11. Connect wire 4037 (15), wire 1023 (16), and jumperwire 2768 (17) on PUMP COOLER OPEN indicator light (18).
12. Connect cab pump control wire harness connector (13) on PUMP COOLER switch (14).
13. Connect cab pump control wire harness connector (11) on PUMP PRIMER switch (12).



14. Connect wire 2855 (7), wire 1023 (8), and jumperwire 2768 (9) on TANK TO PUMP indicator light (10).
15. Connect cab pump control wire harness connector (5) on TANK TO PUMP switch (6).



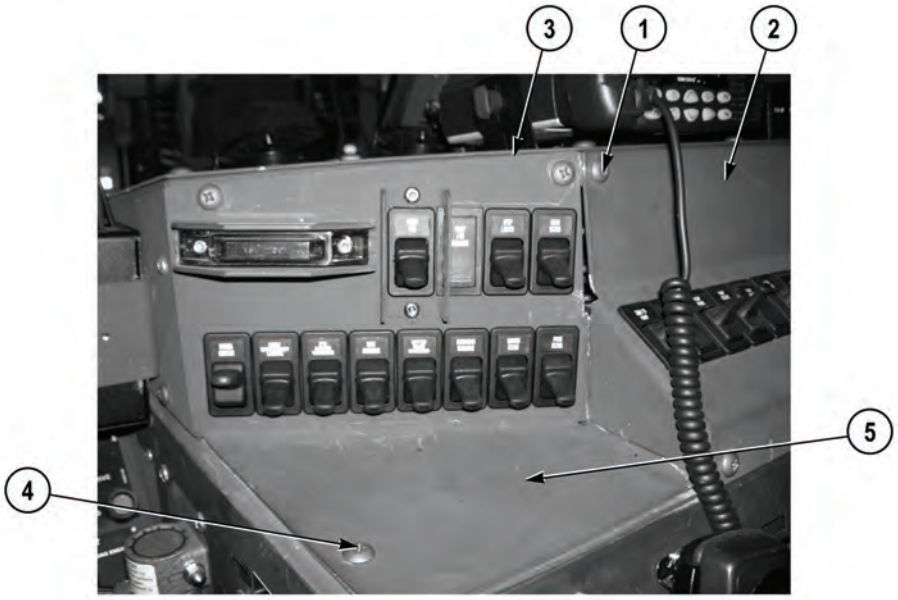
16. Install cab instrument panel B (3) on cab instrument panel assembly (4) with five screws (2).



17. Install siren control (1) on vehicle (WP 0381).

END OF TASK

CAB INSTRUMENT PANEL C REMOVAL



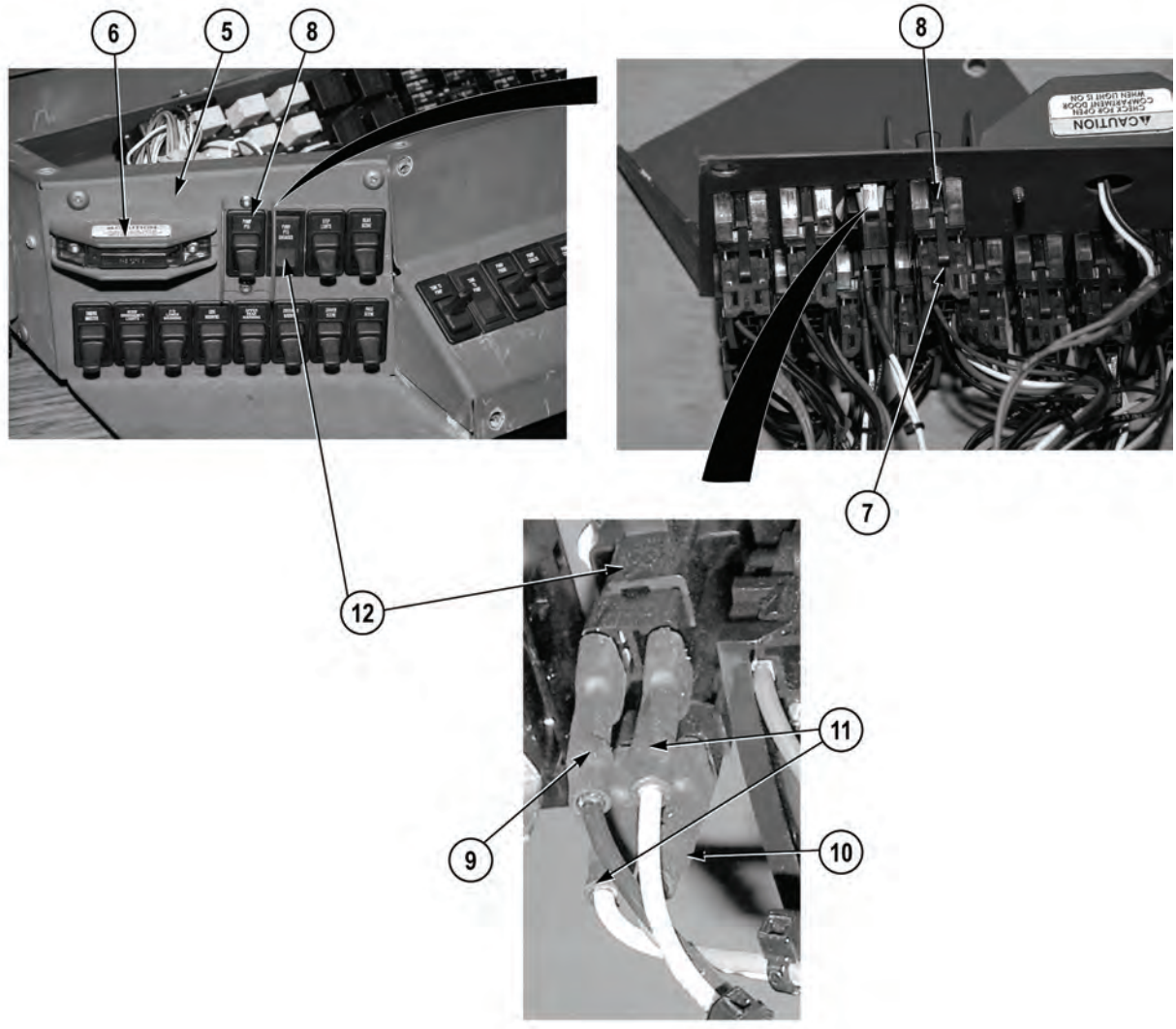
⚠ CAUTION

When performing Steps (1) and (2), lift out and stow cab instrument panel B and C only enough to access wire harness connectors. Cab pump control and foam and water level gauge wire harnesses are still attached to cab instrument panel B. Cab instrument panel wire harness connectors are still attached to cab instrument panel C. Failure to comply may cause damage to equipment.

NOTE

Cab instrument panels B and C interlock. Lifting cab instrument panel B away from cab instrument panel assembly slightly, allows cab instrument panel C to move freely.

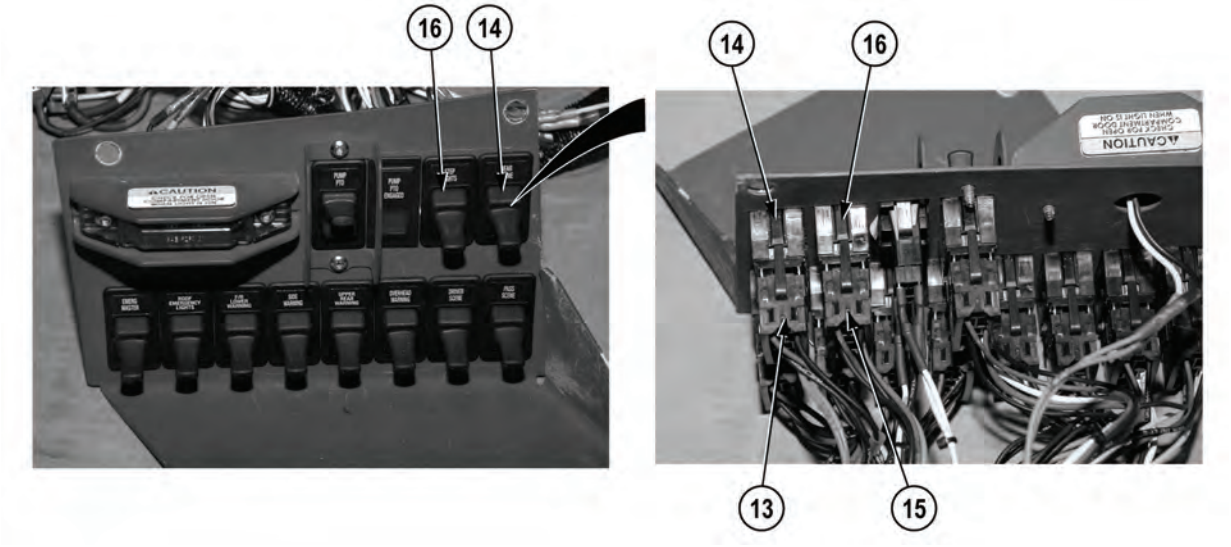
1. Remove five screws (1) and stow cab instrument panel B (2) away from cab instrument panel assembly (3).
2. Remove three screws (4) and pull cab instrument panel C (5) away from cab instrument panel assembly (3).



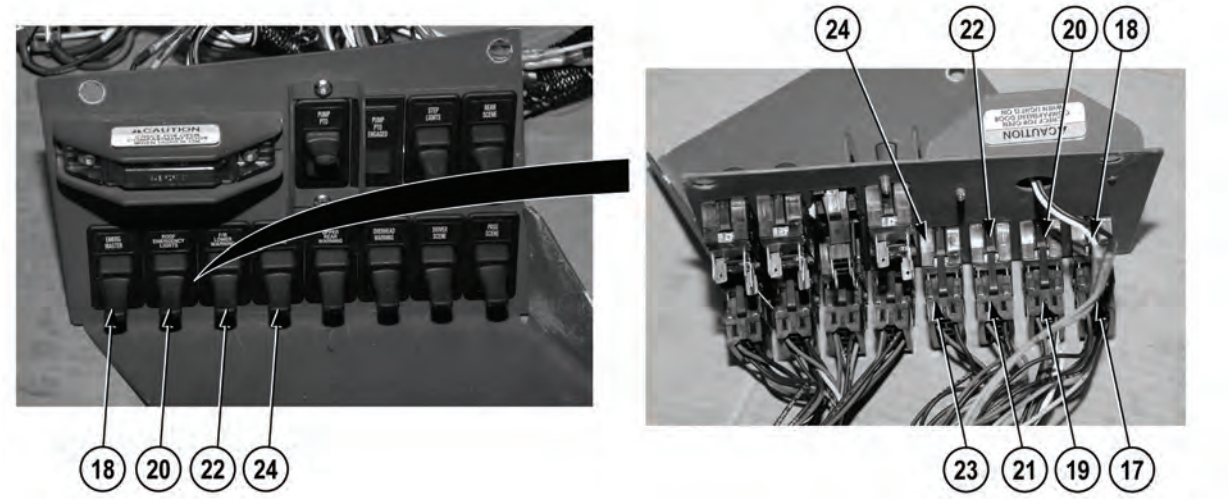
NOTE

- Tag and mark wires prior to removal to ensure proper installation.
- Note routing of cab power distribution wire harness to ensure correct installation.
- Note position and remove cable ties and cushion clips as required.

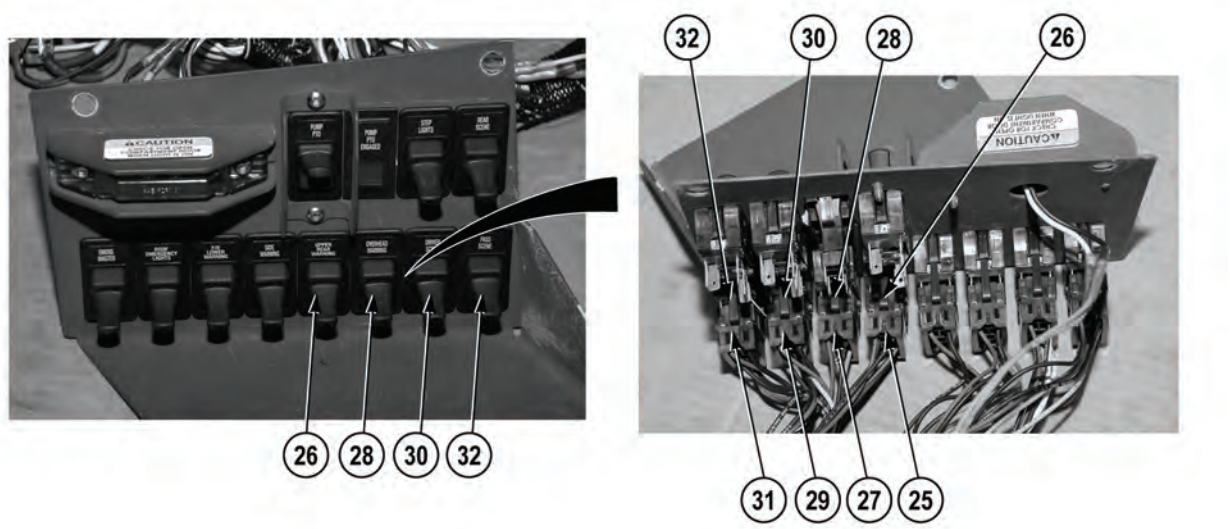
3. Remove CHECK FOR OPEN COMPARTMENT DOORS WHEN LIGHT IS ON indicator (6) from cab instrument panel C (5) (WP 0183).
4. Disconnect cab instrument panel wire harness connector (7) from PUMP PTO switch (8).
5. Disconnect wire 1677 (9), wire 1640 (10) and jumperwire 2768 (11) from PUMP PTO ENGAGED indicator light (12).



6. Disconnect cab instrument panel wire harness connector (13) from STEP LIGHTS switch (14).
7. Disconnect cab instrument panel wire harness connector (15) from REAR SCENE switch (16).



8. Disconnect cab instrument panel wire harness connector (17) from EMERG MASTER switch (18).
9. Disconnect cab instrument panel wire harness connector (19) from ROOF EMERGENCY LIGHTS switch (20).
10. Disconnect cab instrument panel wire harness connector (21) from F/R LOWER WARNING switch (22).
11. Disconnect cab instrument panel wire harness connector (23) from SIDE WARNING switch (24).



12. Disconnect cab instrument panel wire harness connector (25) from UPPER REAR WARNING switch (26).
13. Disconnect cab instrument panel wire harness connector (27) from OVERHEAD WARNING switch (28).
14. Disconnect cab instrument panel wire harness connector (29) from DRIVER SCENE switch (30).
15. Disconnect cab instrument panel wire harness connector (31) from PASS SCENE switch (32).



NOTE

Mark switches and indicator prior to removal to ensure proper installation.

16. Remove two screws (33) and switch guard (34) from cab instrument panel C (5).
17. Remove 11 switches (35) from cab instrument panel C (5)(WP 0197).

18. Remove indicator light (36) from cab instrument panel C (5) (WP 0196).
19. Remove cab instrument panel C (5) from cab instrument panel assembly (3) and remove from vehicle.

END OF TASK

CAB INSTRUMENT PANEL C INSTALLATION

1. Place cab instrument panel C (5) on cab instrument panel assembly (3).

NOTE

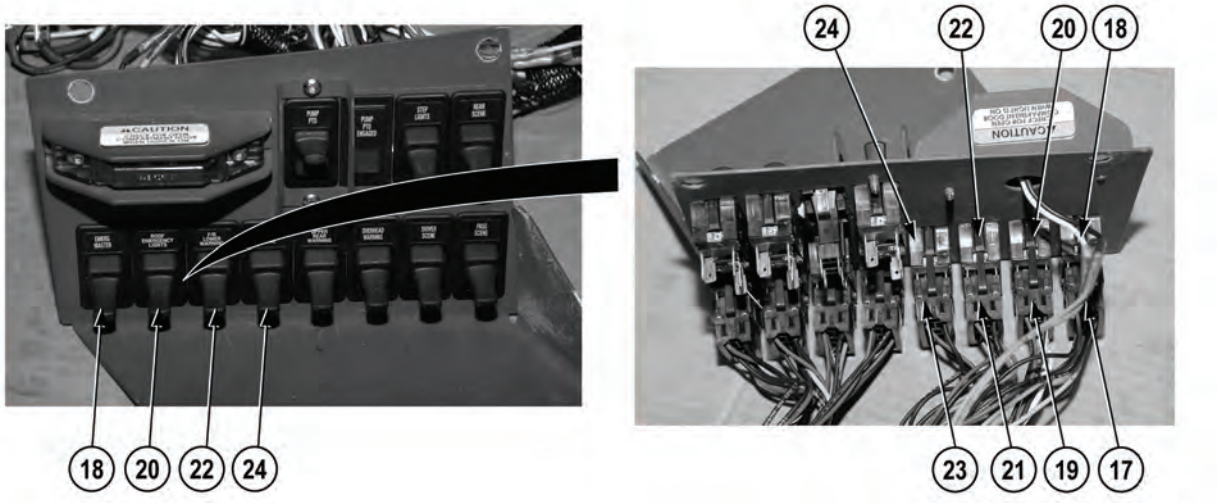
Install switches and indicator as noted prior to removal.

2. Install indicator light (36) on cab instrument panel C (5) (WP 0196).
3. Install 11 switches (35) on cab instrument panel C (5) (WP 0197).
4. Install switch guard (34) on cab instrument panel C (5) with two screws (33).

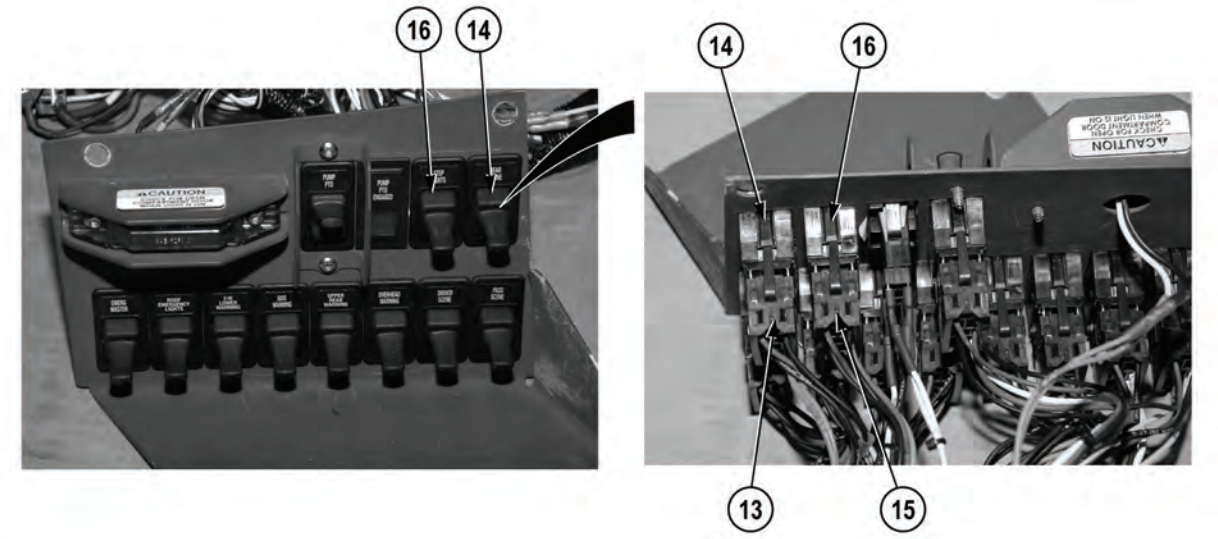
NOTE

- Route cab power distribution wire harness as noted prior to removal.
- Install cable ties and cushion clips as required.

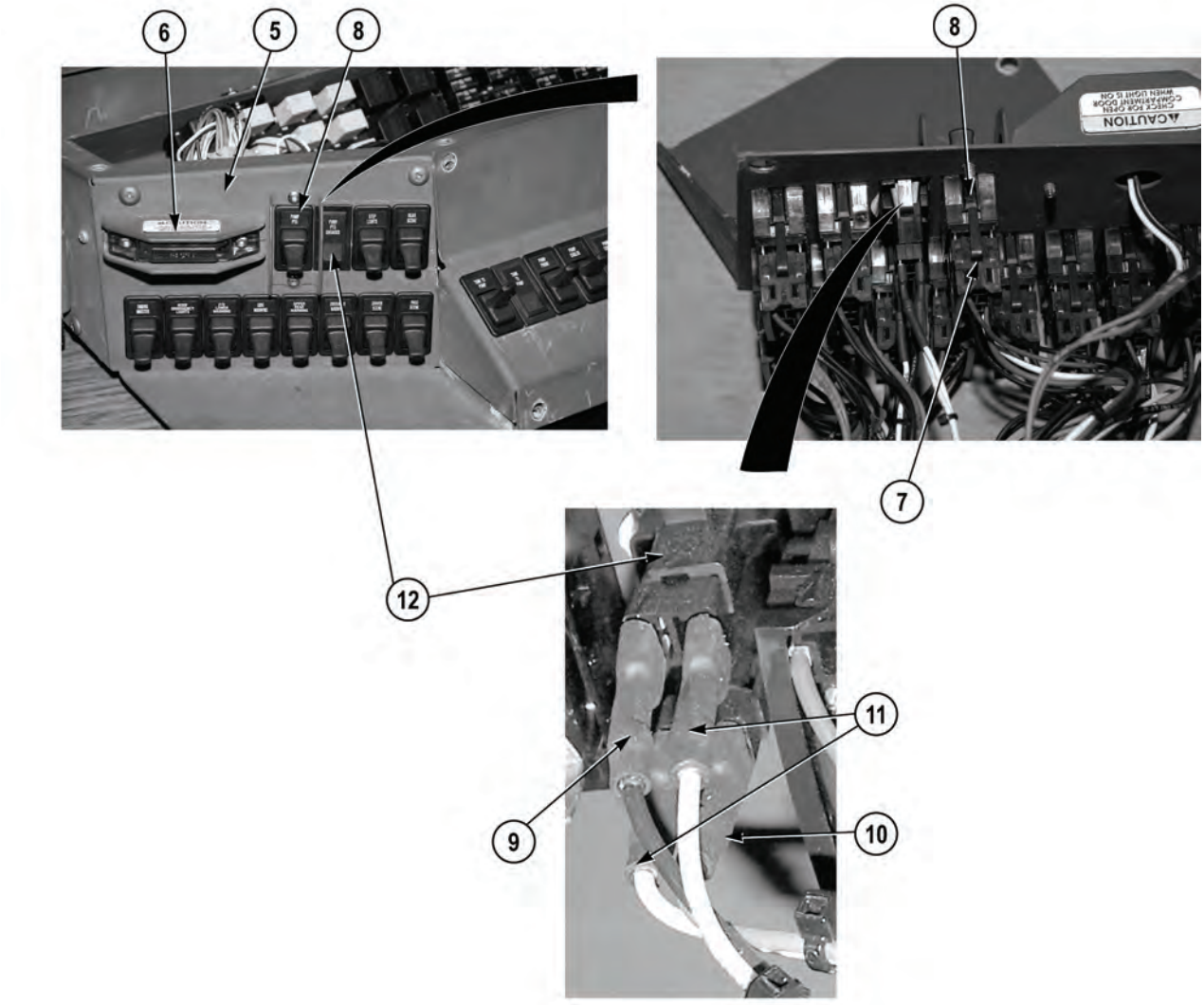
5. Connect cab instrument panel wire harness connector (31) on PASS SCENE switch (32).
6. Connect cab instrument panel wire harness connector (29) on DRIVER SCENE switch (30).
7. Connect cab instrument panel wire harness connector (27) on OVERHEAD WARNING switch (28).
8. Connect cab instrument panel wire harness connector (25) on UPPER REAR WARNING switch (26).



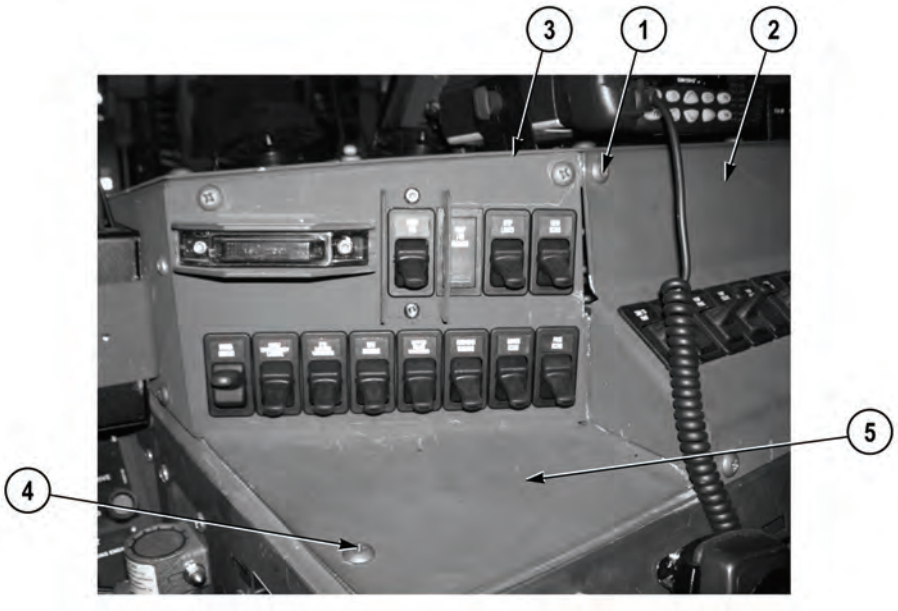
9. Connect cab instrument panel wire harness connector (23) on SIDE WARNING switch (24).
10. Connect cab instrument panel wire harness connector (21) on F/R LOWER WARNING switch (22).
11. Connect cab instrument panel wire harness connector (19) on ROOF EMERGENCY LIGHTS switch (20).
12. Connect cab instrument panel wire harness connector (17) on EMERG MASTER switch (18).



13. Connect cab instrument panel wire harness connector (15) on REAR SCENE switch (16).
14. Connect cab instrument panel wire harness connector (13) from STEP LIGHTS switch (14).



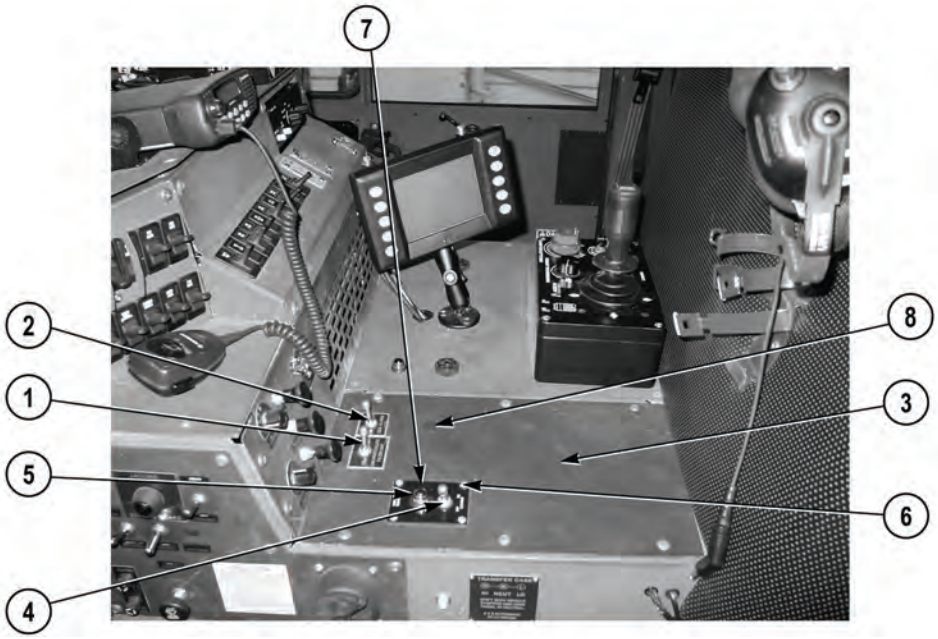
15. Connect wire 1677 (9), wire 1640 (10) and jumperwire 2768 (11) on PUMP PTO ENGAGED indicator light (12).
16. Connect cab instrument panel wire harness connector (7) on PUMP PTO switch (8).
17. Install CHECK FOR OPEN COMPARTMENT DOORS WHEN LIGHT IS ON indicator (6) on cab instrument panel C (5) (WP 0183).



18. Install cab instrument panel C (5) on cab instrument panel assembly (3) with three screws (4).
19. Install cab instrument panel B (2) on cab instrument panel assembly (3) with five screws (1).

END OF TASK

CAB INSTRUMENT PANEL D REMOVAL



NOTE

Cab instrument panel D fasteners are removed in Step (1).

1. Remove GAS PARTICULATE FILTER UNIT switch (1) and GAS ALARM switch (2) from cab instrument panel D (3) (TM 9-2320-315-14&P).
2. Remove cab HIGH IDLE switch (4) and indicator (5) from cab instrument panel D (3) (WP 0215).
3. Remove four screws (6) and data plate (7) from cab instrument panel D (3).
4. Remove plug (8) from cab instrument panel D (3).
5. Remove cab instrument panel D (3) from vehicle.

END OF TASK

CAB INSTRUMENT PANEL D INSTALLATION

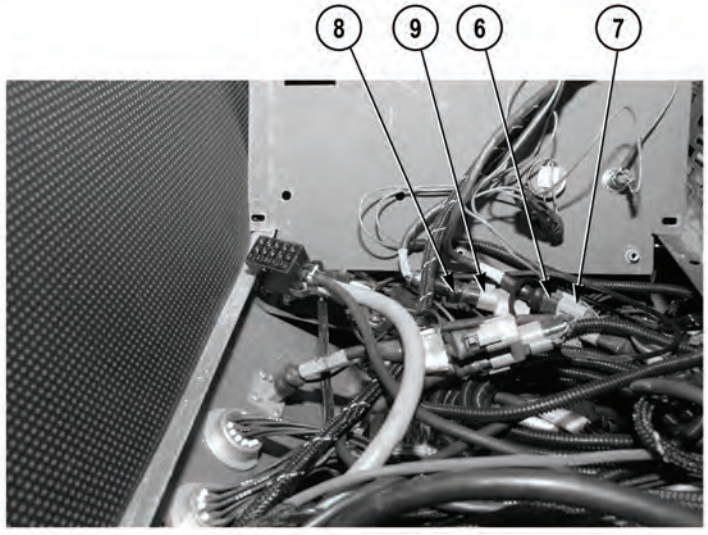
1. Place cab instrument panel D (3) in stow position on vehicle.
2. Install plug (8) on cab instrument panel D (3).
3. Install data plate (7) on cab instrument panel D (3) with four screws (6).
4. Install cab HIGH IDLE switch (4) and indicator (5) on cab instrument panel D (3) (WP 0215).
5. Install GAS PARTICULATE FILTER UNIT switch (1) and GAS ALARM switch (2) on cab instrument panel D (3) (TM 9-2320-315-14&P).

END OF TASK

CAB INSTRUMENT PANEL E REMOVAL



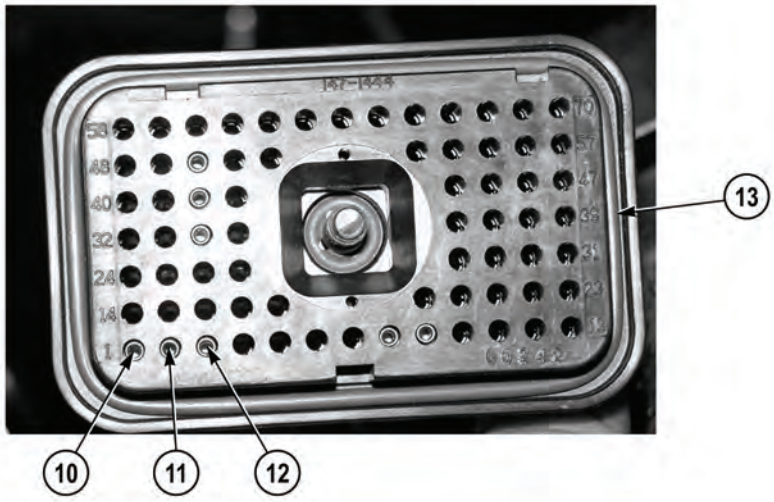
1. Remove bumper turret control (1) from vehicle (WP 0376).
2. Remove pressure governor control (2) from vehicle (WP 0195).
3. Remove cab 1-2-3 signal indicator (3) from cab instrument panel E (4) (WP 0189).
4. Remove cab 1-2-3 buzzer audio alarm (5) from cab instrument panel E (4) (WP 0190).



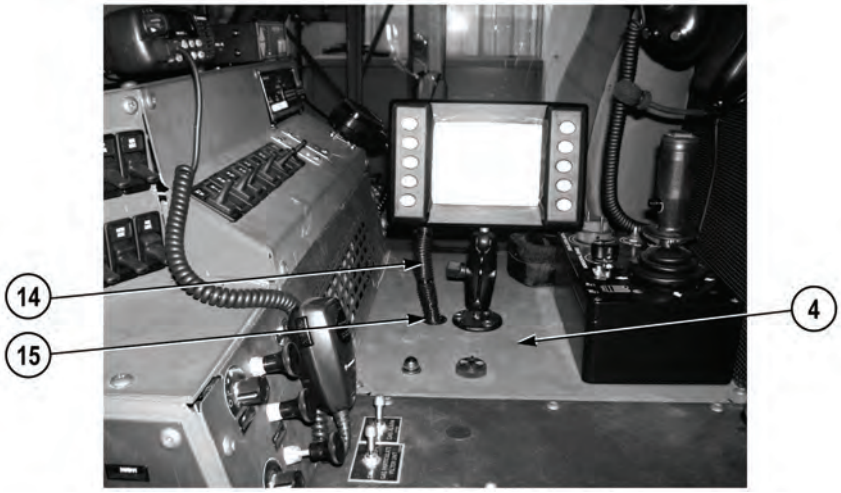
NOTE

- To locate correct datalink cable, follow yellow and green banded datalink cables from cab pressure governor control connector to first Y connector in series.
- Tag and mark all wires prior to removal for proper installation.
- Note routing of wires prior to removal for proper installation.

5. Disconnect main wire harness connector (6) from pressure governor control ECU datalink Y connector (7).
6. Disconnect main wire harness connector (8) from chassis datalink Y connector (9).



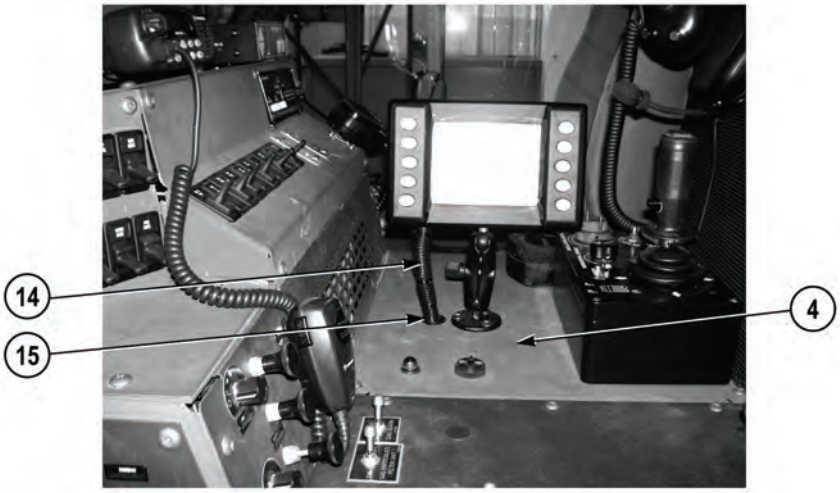
7. De-pin main wire harness, wire 1663 (10), wire 1640 (11), and wire 2839 (12), from cab pressure governor control connector (13) (TM 9-2320-315-14&P).



8. Remove cab instrument panel E (4) from vehicle.
9. Remove pressure governor control connector and wires (14) from cab instrument panel E (4).
10. Remove grommet (15) from cab instrument panel E (4).

END OF TASK

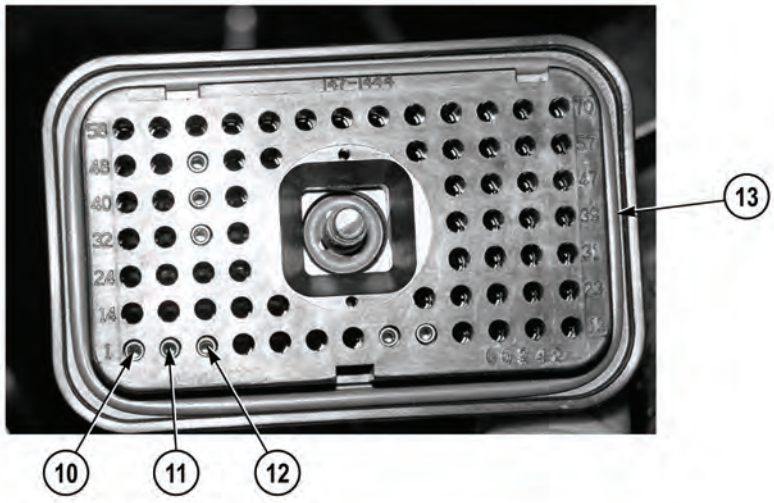
CAB INSTRUMENT PANEL E INSTALLATION



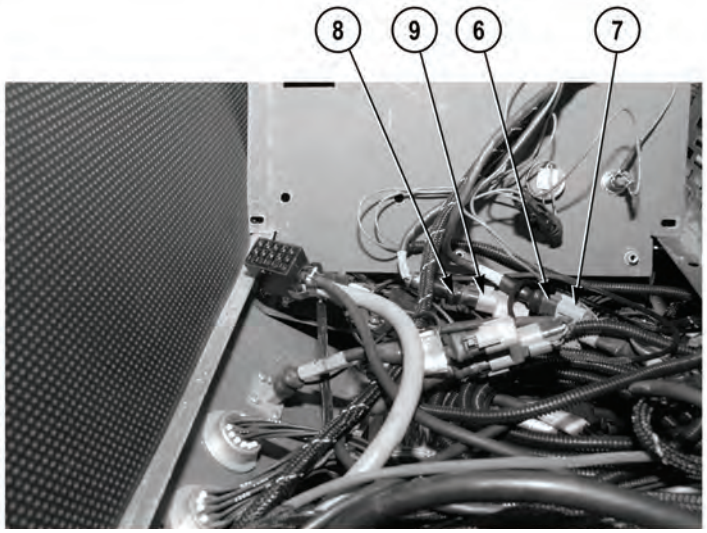
NOTE

Route wires as noted prior to removal.

1. Install grommet (15) on cab instrument panel E (4).
2. Route pressure governor control connector and wires (14) on cab instrument panel E (4).
3. Place cab instrument panel E (4) in stow position on vehicle.



4. Pin wire 1663 (10), wire 1640 (11), and wire 2839 (12) on main wire harness cab pressure governor control connector (13) (TM 9-2320-315-14&P).



5. Connect main wire harness connector (8) on chassis datalink Y connector (9).
6. Connect main wire harness connector (6) on pressure governor control ECU datalink Y connector (7).



7. Install cab 1-2-3 buzzer audio alarm (5) on cab instrument panel E (4) (WP 0190).
8. Install cab 1-2-3 signal indicator (3) on cab instrument panel E (4) (WP 0189).
9. Install pressure governor control (2) (WP 0195).
10. Install bumper turret control (1) (WP 0376).

FOLLOW-ON MAINTENANCE

Connect batteries (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PUMP OPERATOR'S PANEL COVER REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

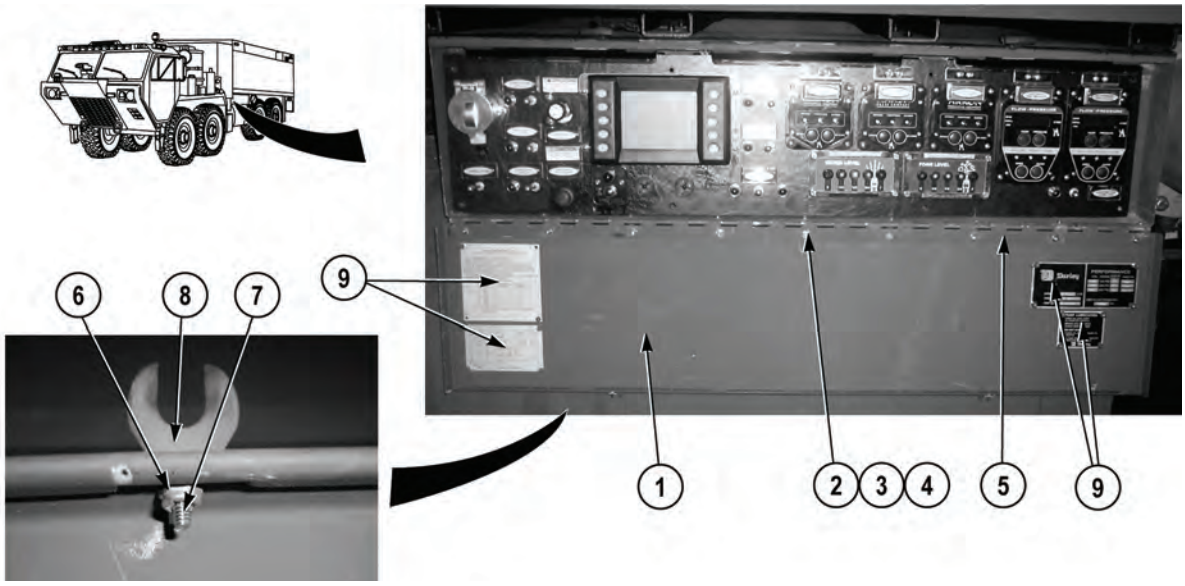
Materials/Parts
Locknut (9)
Locknut (2)

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

References
WP 0010
WP 0328
WP 0392, Fig. 82

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)

REMOVAL



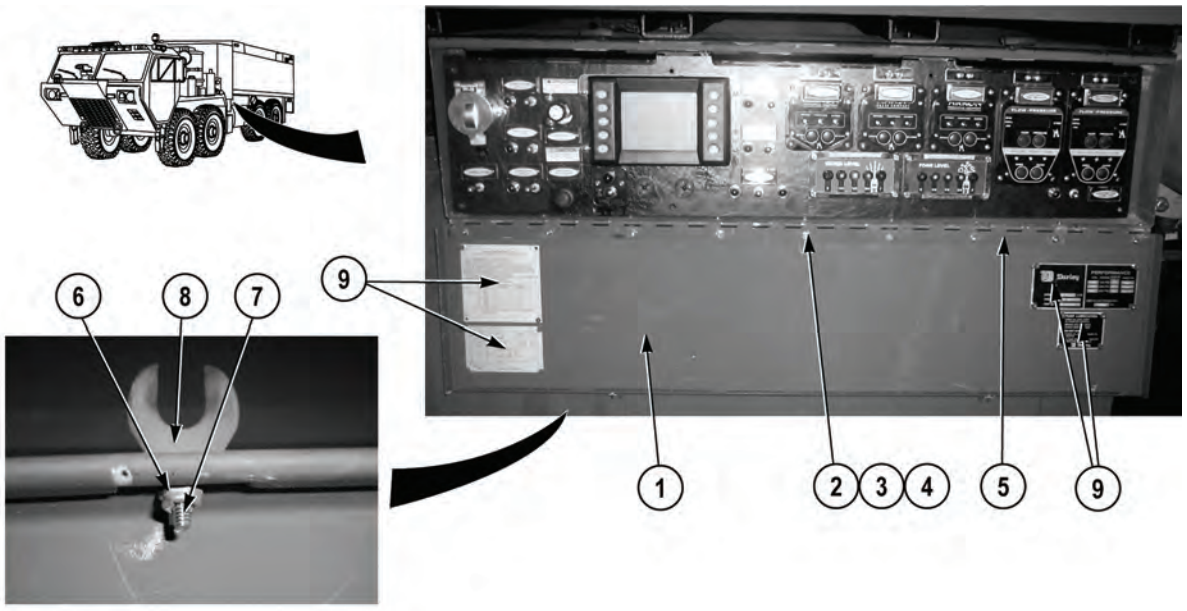
1. Open pump operator's panel cover (1) (WP 0010).

NOTE

The aid of an assistant may be required to remove pump operator's panel cover when removing last screw.

2. Remove nine locknuts (2), washers (3), screws (4), and pump operator's panel cover (1) from hinge (5). Discard locknuts.
3. Remove two locknuts (6), screws (7), and latches (8) from pump operator's panel cover (1). Discard locknuts.
4. Remove four data plates (9) from pump operator's panel cover (1) (WP 0328).

END OF TASK



INSTALLATION

1. Install four data plates (9) on pump operator's panel cover (1) (WP 0328).
2. Install two latches (8) on pump operator's panel cover (1) with two screws (7) and locknuts (6).

NOTE

The aid of an assistant may be required to install pump operator's pump cover when installing first screw.

3. Install pump operator's panel cover (1) on hinge (5) with nine screws (4), washers (3), and locknuts (2).
4. Close pump operator's panel cover (1) (WP 0010).

END OF TASK

FOLLOW-ON MAINTENANCE

Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PUMP OPERATOR'S PANEL OPEN/CLOSE

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Equipment Conditions
Batteries disconnected (TM 9-2320-315-14&P)
Pump operator's panel cover opened (WP 0010)

OPEN



NOTE

- To open panel, lift and tilt the bottom out, then tilt the top end out.
- Only open panel as far as needed to access wires.

Remove eight screws (1) and open pump operator's panel (2).

END OF TASK

CLOSE



Close pump operator’s panel (2) and secure with eight screws (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Close pump operator’s panel cover (WP 0010)
2. Connect batteries (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PUMP OPERATOR'S PANEL REPLACEMENT

INITIAL SETUP:

Tools and Special Tools

Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

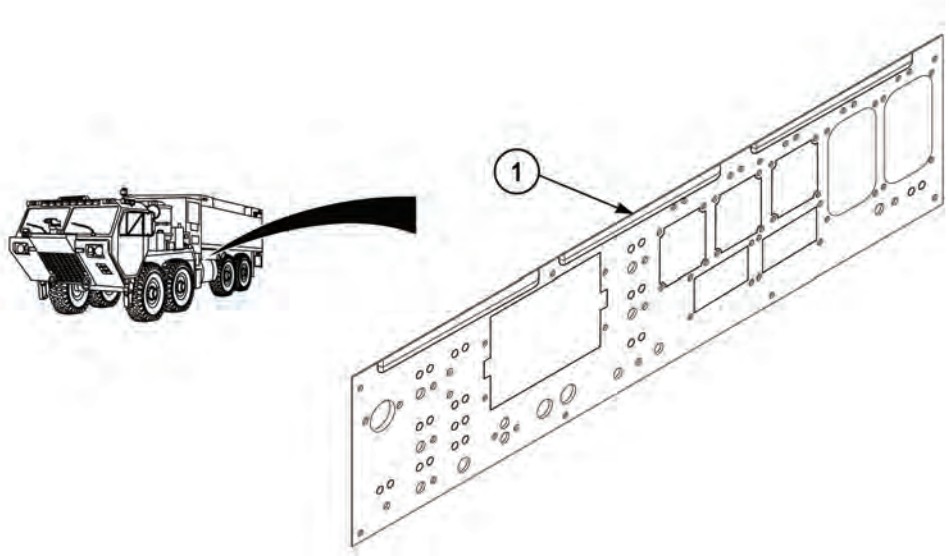
Equipment Conditions

Intercom cables and connectors removed (WP 0256)
Hydraulic pressure control removed (WP 0141)
Pump operator's panel pressure governor control removed (WP 0214)
Pump operator's panel electric valve controls removed (WP 0207)
Pump operator's panel electric valve control meters removed (WP 0208)
Pump operator's panel water level gauge removed (WP 0210)

Equipment Conditions (continued)

Pump operator's panel foam level gauge removed (WP 0209)
Pump operator's panel toggle switches (two-position) removed (WP 0218)
Pump operator's panel toggle switches (three-position) removed (WP 0219)
Pump operator's panel warning buzzers removed (WP 0201)
Pump operator's panel driver main inlet primer button removed (WP 0217)
Pump operator's panel overheat test button and indicator removed (WP 0216)
Pump operator's panel indicators removed (WP 0211)
Decal and data plates removed (WP 0328)

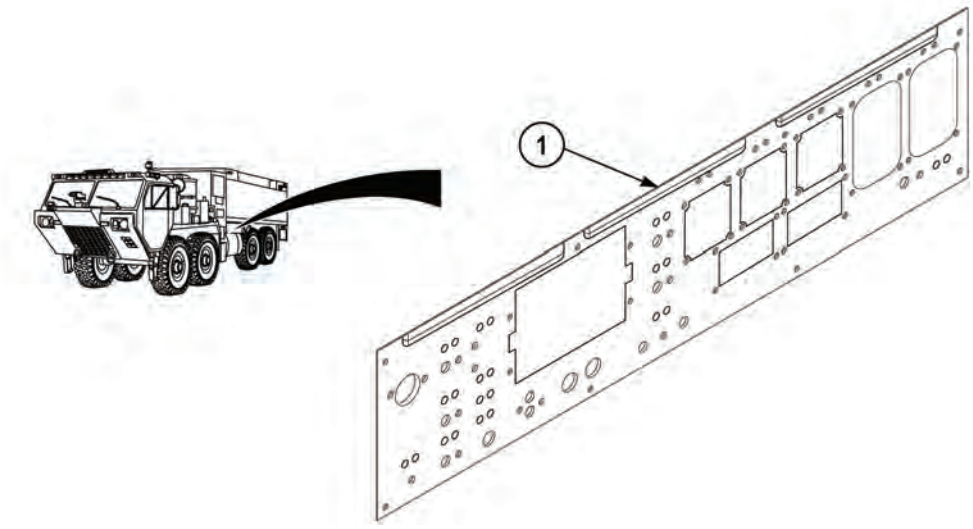
REMOVAL



Remove pump operator's panel (1) from vehicle.

END OF TASK

INSTALLATION



Install pump operator's panel (1) on vehicle.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install decals and data plates (WP 0328)
2. Install pump operator's panel indicators (WP 0211)
3. Install pump operator's panel overheat test button and indicator (WP 0216)
4. Install pump operator's panel driver main inlet primer button (WP 0217)
5. Install pump operator's panel warning buzzers (WP 0201)
6. Install pump operator's panel toggle switches (three-position) (WP 0219)
7. Install pump operator's panel toggle switches (two-position) (WP 0218)
8. Install pump operator's panel foam level gauge (WP 0209)
9. Install pump operator's panel water level gauge (WP 0210)
10. Install pump operator's panel electric valve control meters (WP 0208)
11. Install pump operator's panel electric valve controls (WP 0207)
12. Install pump operator's panel pressure governor control (WP 0214)
13. Install hydraulic pressure control valve (WP 0141)
14. Install intercom cables and connectors (WP 0256)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PUMP OPERATOR'S PANEL ELECTRIC VALVE CONTROL REPLACEMENT

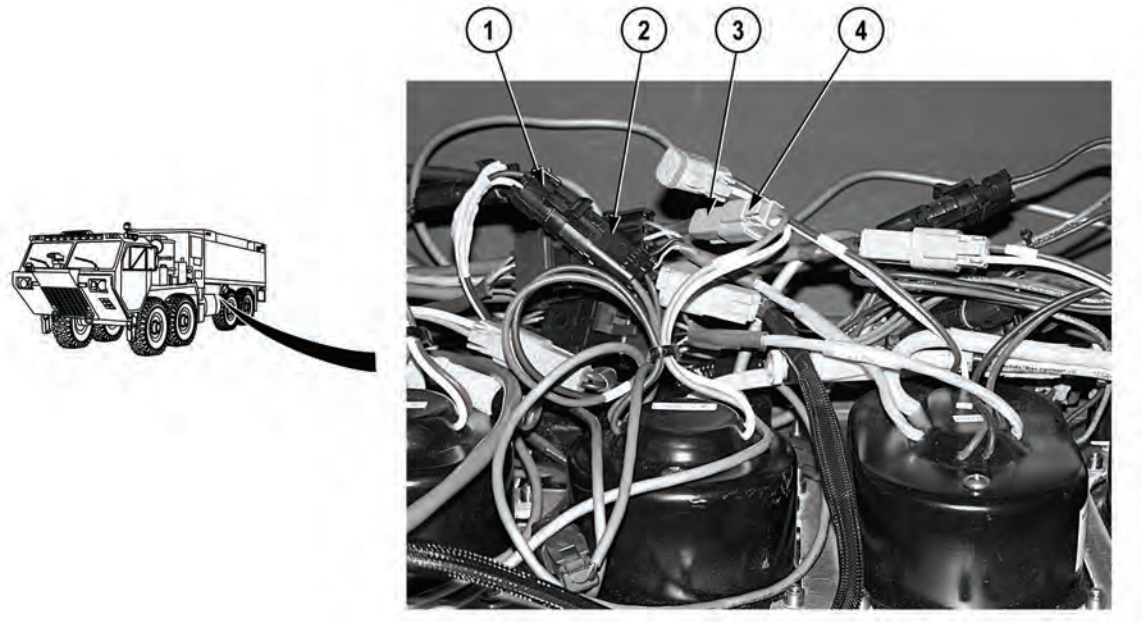
INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)

Equipment Conditions
Pump operator's panel open (WP 0205)

REMOVAL



NOTE

- All electrical valve controls are removed the same way. Driver side auxiliary inlet shown.
- Tag and mark wires prior to removal to ensure proper installation.
- Remove cable ties as required.

1. Disconnect pump operator's panel wire harness connector (1) from electric valve control connector (2).
2. Disconnect valve control wire harness connector (3) from electric valve control connector (4).



3. Remove two screws (5) and data plate bracket (6) from pump operator's control panel (7).
4. Remove four screws (8) and electric valve control (9) from pump operator's control panel (7).

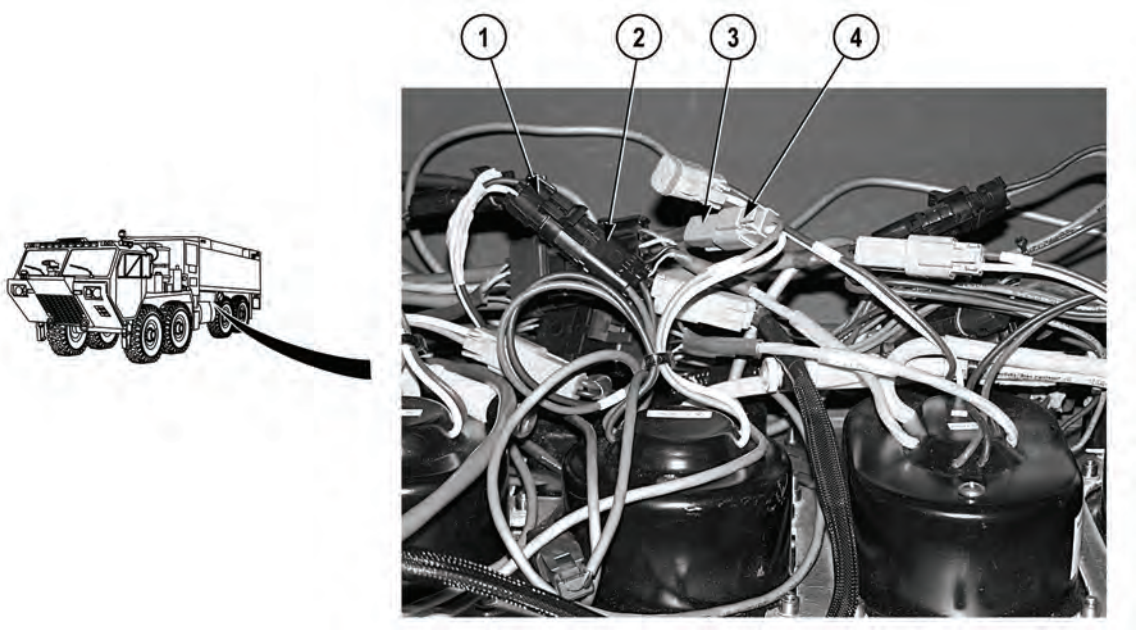
END OF TASK

INSTALLATION

NOTE

All electric valve controls are installed the same way. Driver side auxiliary inlet shown.

1. Install electric valve control (9) on pump operator's control panel (7) with four screws (8).
2. Install data plate bracket (6) on pump operator's control panel (7) with two screws (5).



NOTE

Install cable ties as required.

3. Connect electric valve control connector (4) to valve control wire harness connector (3).
4. Connect electric valve control connector (2) to pump operator's panel wire harness connector (1).

FOLLOW-ON MAINTENANCE

Close pump operator's panel (WP 0205)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PUMP OPERATOR'S PANEL ELECTRIC VALVE CONTROL METER REPLACEMENT

INITIAL SETUP:

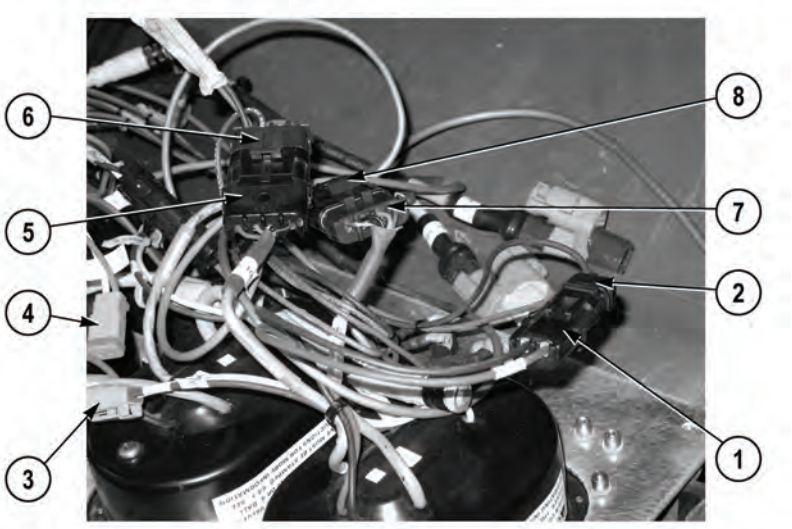
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)

Equipment Conditions
Pump operator's panel opened (WP 0205)

REMOVAL

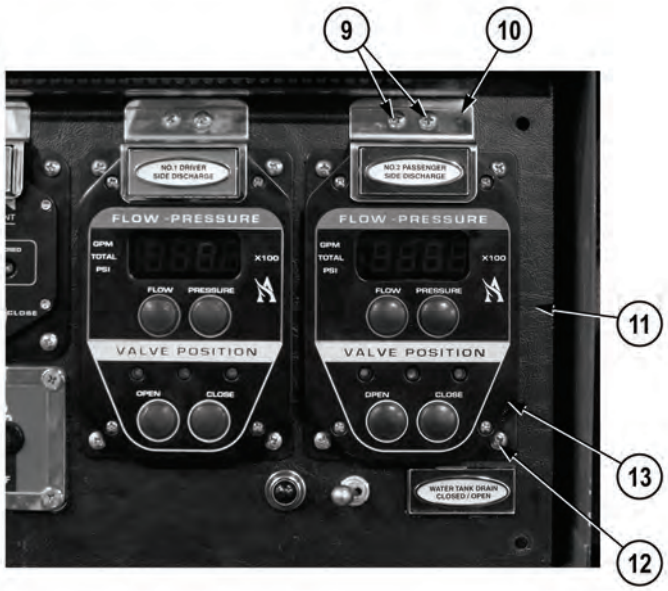




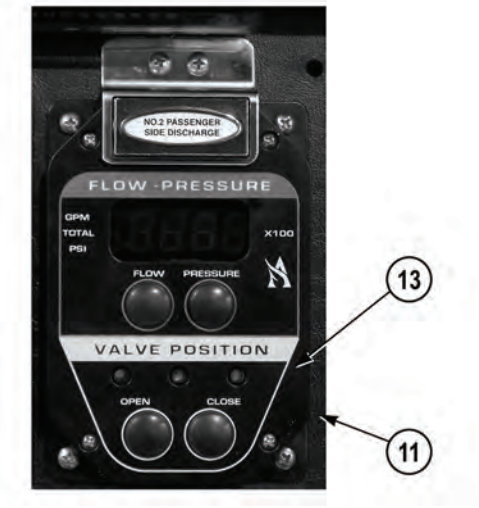
NOTE

- Tag and mark connectors prior to removal to ensure proper installation.
- Remove cable ties as required.
- Both electric valve control meters are removed the same way. Passenger side discharge electric valve control meter shown.

1. Disconnect electric valve control meter power connector (1) from pump operator's panel wire harness power connector (2).
2. Disconnect electric valve control meter valve motor connector (3) from pump operator's panel wire harness valve motor connector (4).
3. Disconnect electric valve control meter pressure transducer connector (5) from pressure transducer wire harness connector (6).
4. Disconnect electric valve control meter flow sensor connector (7) from flow sensor wire harness connector (8).



5. Remove two screws (9) and bracket (10) from pump operator's panel (11).
6. Remove four screws (12) and electric valve control meter (13) from pump operator's panel (11).



7. Remove electric valve control meter (13) from pump operator's panel (11).

END OF TASK

INSTALLATION

NOTE

Both electric valve control meters are installed the same way. Passenger side discharge electric valve control meter shown.

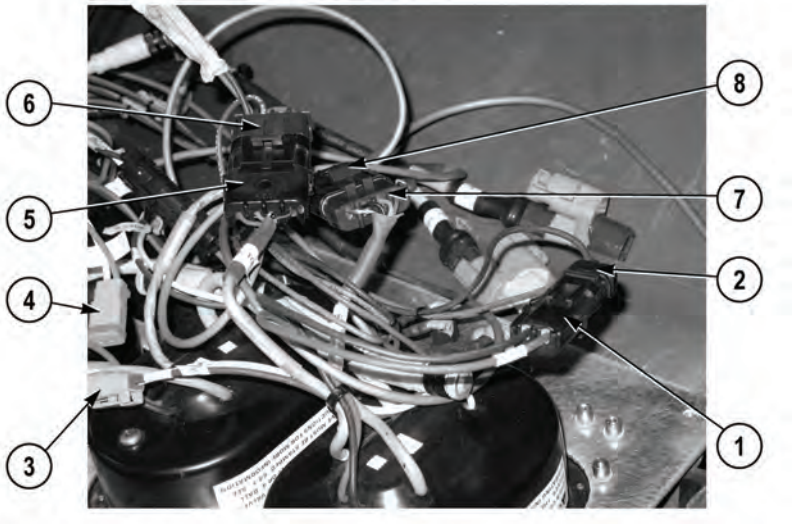
1. Position electric valve control meter (13) on pump operator's panel (11).

NOTE

Install cable ties as required.

2. Install electric valve control meter (13) on pump operator's panel (11) with four screws (12).
3. Install bracket (10) on pump operator's panel (11) with two screws (9).





4. Connect flow sensor wire harness connector (8) to electric valve control meter flow sensor connector (7).
5. Connect pressure transducer wire harness connector (6) to electric valve control meter pressure transducer connector (5).
6. Connect pump operator's panel wire harness valve motor connector (4) to electric valve control meter motor connector (3).
7. Connect pump operator's panel wire harness power connector (2) to electric valve control meter power connector (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Close pump operator's panel (WP 0205)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PUMP OPERATOR'S PANEL FOAM LEVEL GAUGE REPLACEMENT

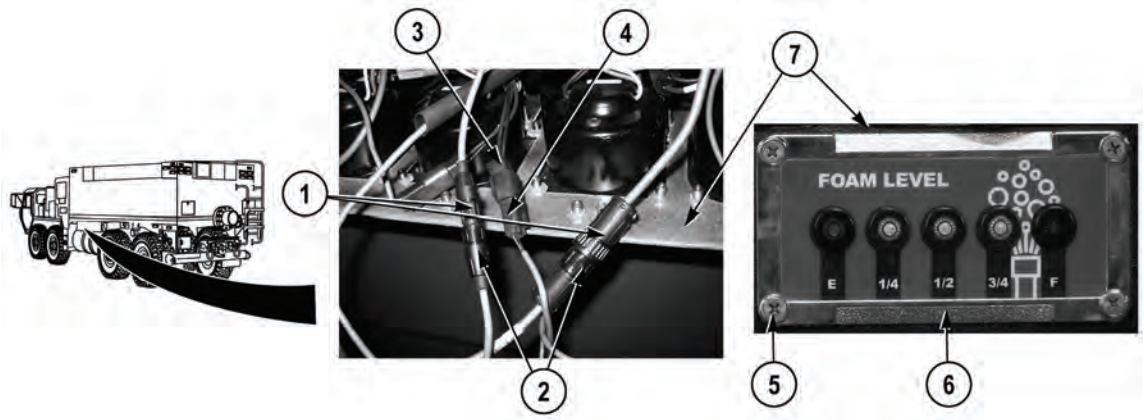
INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)

Equipment Conditions
Pump operator's panel opened (WP 0205)

REMOVAL



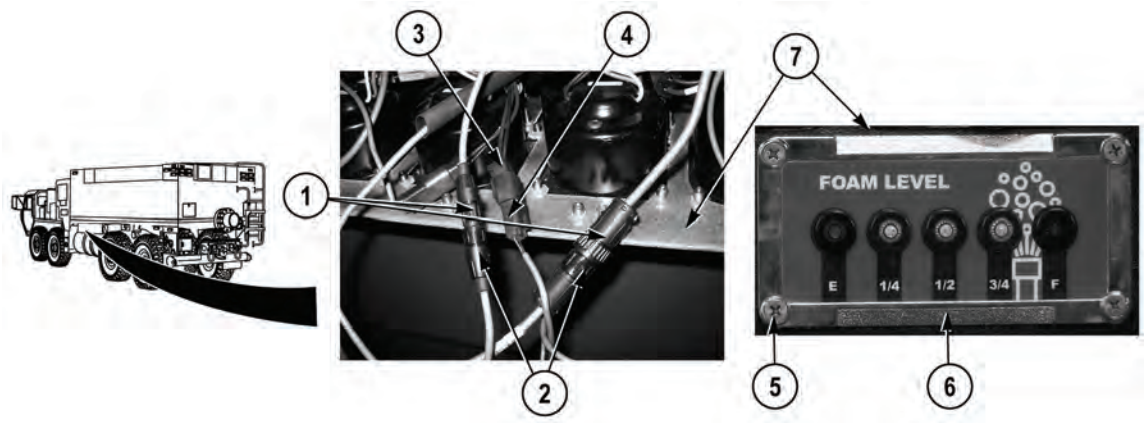
NOTE

- Remove cable ties as required.
- Tag and mark wires prior to removal to ensure proper installation.

1. Disconnect two foam level gauge connectors (1) from cab foam level gauge wire harness connectors (2).
2. Disconnect foam level gauge connector (3) from pump house wire harness connector (4).
3. Remove four screws (5) and foam level gauge (6) from pump operator's panel (7).

END OF TASK

INSTALLATION



1. Install foam level gauge (6) on pump operator's panel (7) with four screws (5).

NOTE

Install cable ties as needed.

2. Connect pump house wire harness connector (4) to foam level gauge connector (3).
3. Connect two cab foam level gauge wire harness connectors (2) to foam level gauge connectors (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Close pump operator's panel (WP 0205)
2. Calibrate foam level gauge (WP 0128)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PUMP OPERATOR'S PANEL WATER LEVEL GAUGE REPLACEMENT

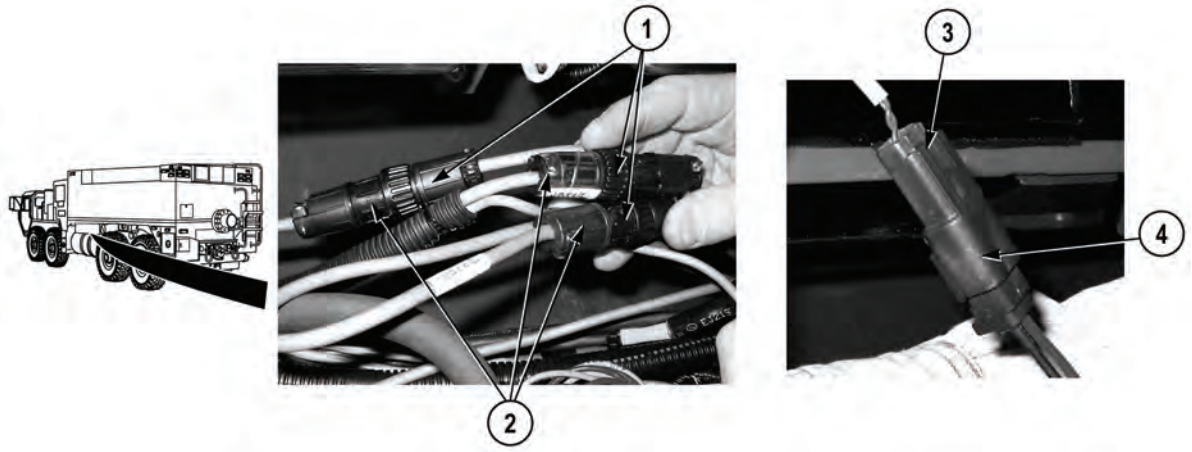
INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)

Equipment Conditions
Pump operator's panel opened (WP 0205)

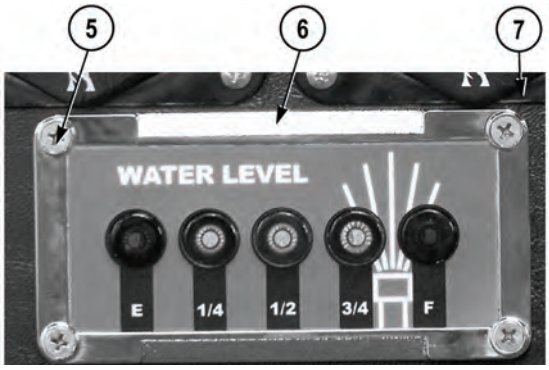
REMOVAL



NOTE

- Tag and mark wires prior to removal to ensure proper installation.
- Remove cable ties as required.

1. Disconnect three water level gauge connectors (1) from pump house wire harness connectors (2).
2. Disconnect connector (3) from pump house wire harness connector (4).

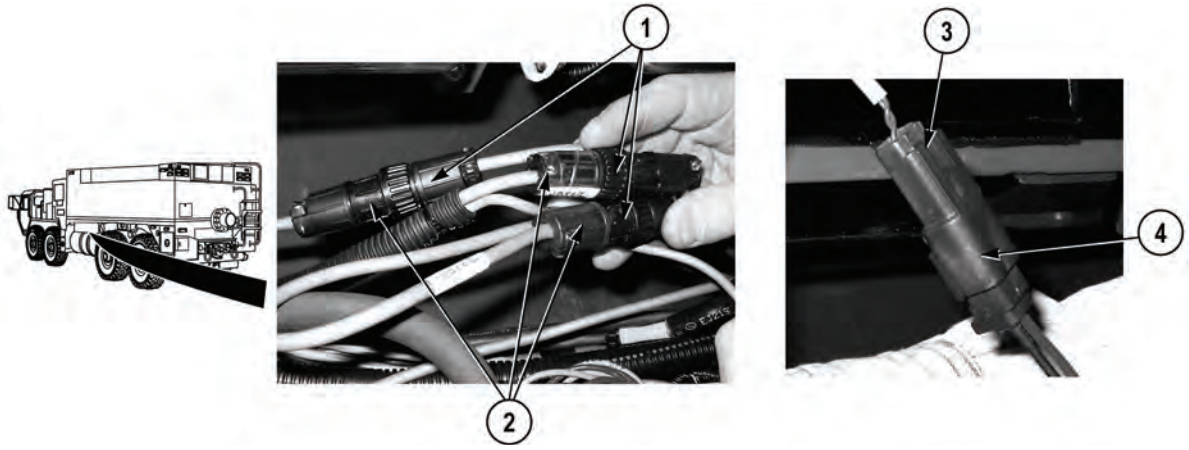


3. Remove four screws (5) and water level gauge (6) from pump operator's panel (7).

END OF TASK

INSTALLATION

1. Install water level gauge (6) on pump operator's panel (7) with four screws (5).



NOTE

Install cable ties as required.

2. Connect pump house wire harness connector (4) to water level gauge connector (3).
3. Connect three pump house wire harness connectors (2) to water level gauge connectors (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Close pump operator's panel (WP 0205)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PUMP OPERATOR'S PANEL INDICATOR REPLACEMENT

INITIAL SETUP:

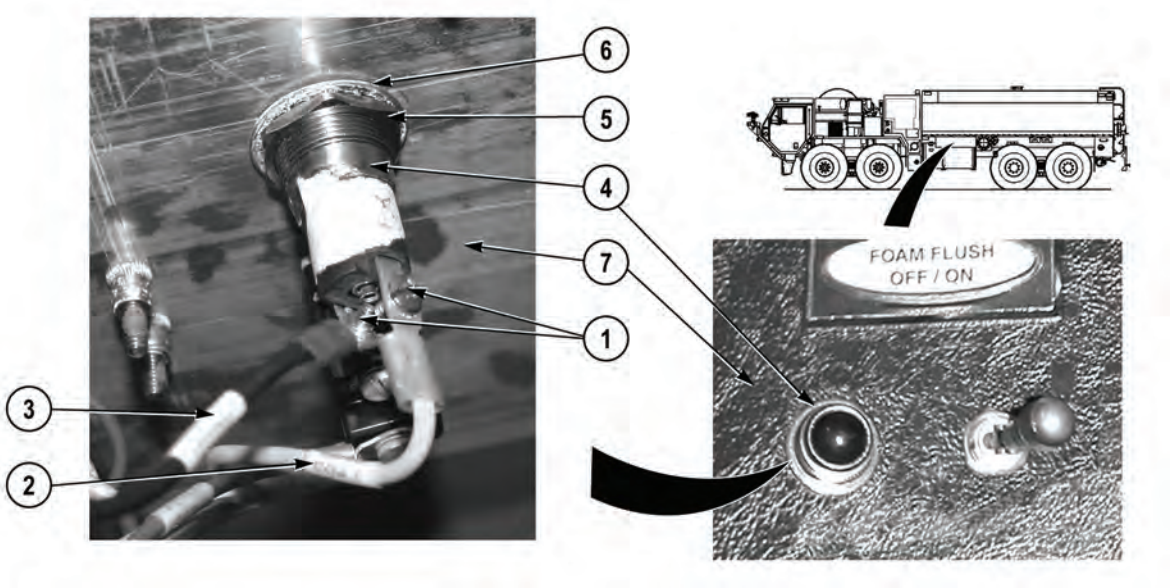
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Compound, Sealing (WP 0401, Item 10)
Lockwasher (1)

References
WP 0392, Fig. 34

Equipment Conditions
Pump operator's panel opened (WP 0205)

REMOVAL



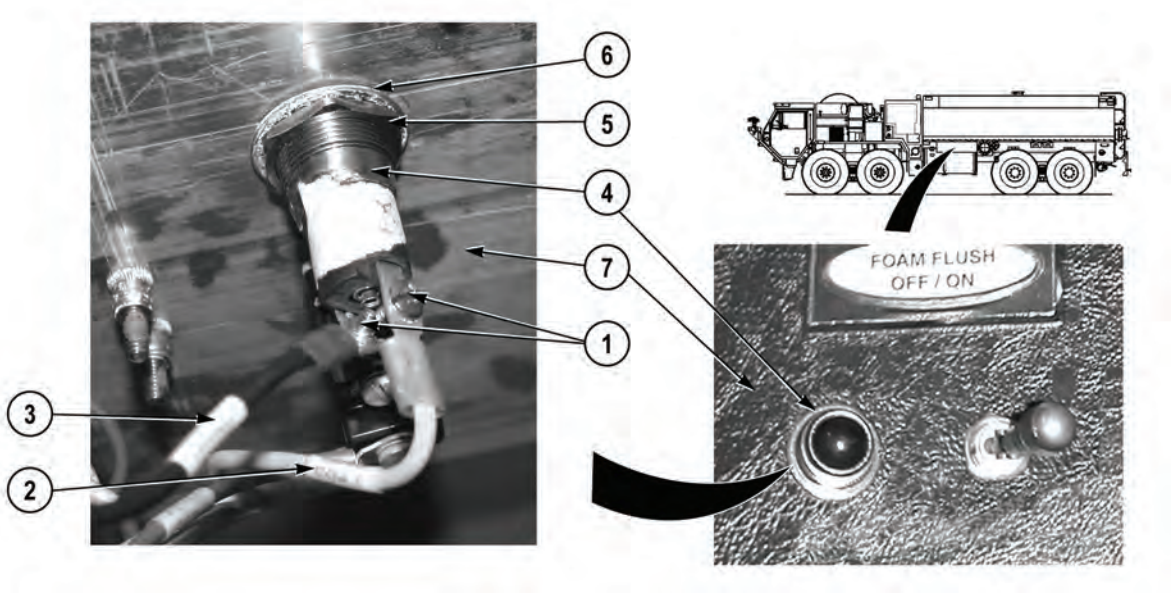
NOTE

- Tag and mark wires prior to removal to ensure proper installation.
- All indicators are removed the same way. Foam flush indicator shown.

1. Remove two screws (1), wire 3895 (2), and wire 2849 (3) from indicator (4).
2. Remove nut (5), lockwasher (6), and indicator (4) from pump operator's panel (7). Discard lockwasher.

END OF TASK

INSTALLATION



NOTE

All indicators are installed the same way. Foam flush indicator shown.

1. Install indicator (4) on pump operator's panel (7) with lockwasher (6) and nut (5).
2. Install wire 2849 (3) and wire 3895 (2) on indicator (4) with two screws (1).

WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

3. Apply sealing compound to ends of wire 2849 (3) and wire 3895 (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Close pump operator's panel (WP 0205)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PUMP OPERATOR'S PANEL INDICATOR LAMP REPLACEMENT

INITIAL SETUP:

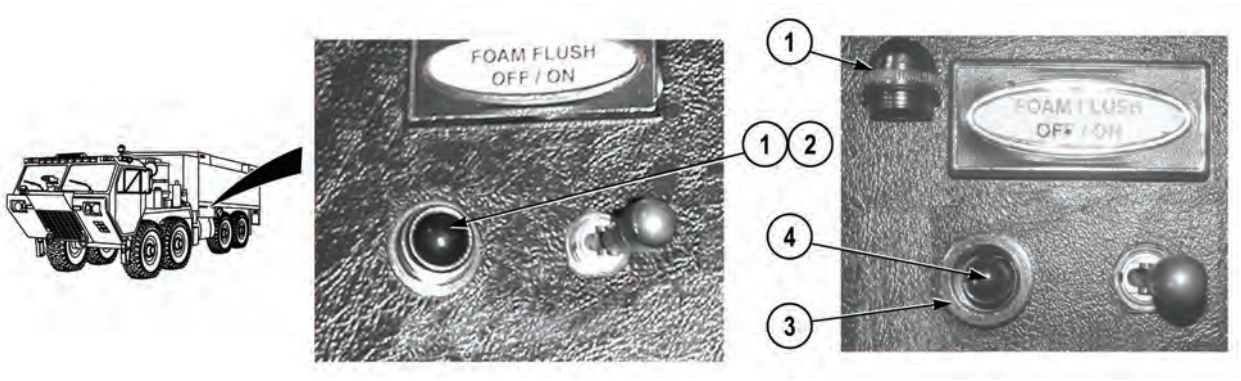
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Preformed Packing (1)

References
WP 0392, Fig. 34

Equipment Conditions
Pump operator's panel opened (WP 0205)

REMOVAL



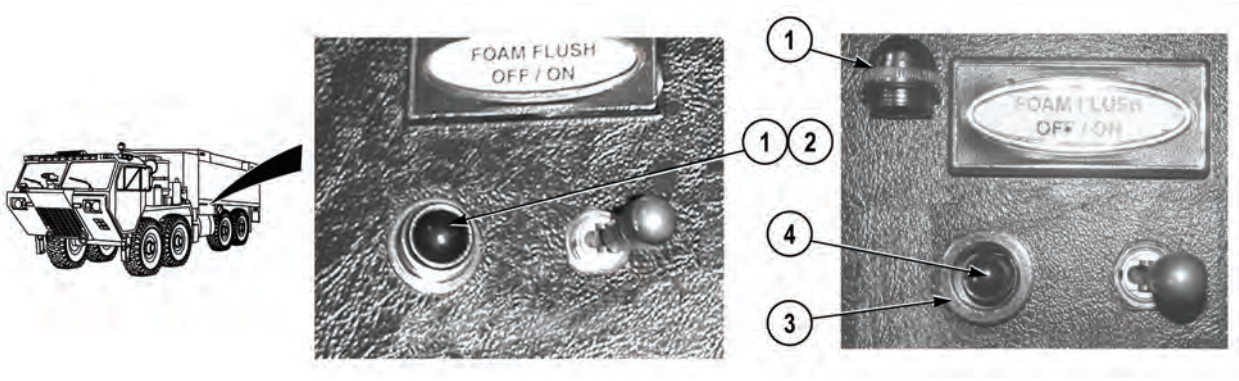
NOTE

All pump operator's panel indicator lamps are removed the same way. Foam/flush indicator lamp shown.

1. Remove lamp cover (1) and preformed packing (2) from indicator light (3). Discard preformed packing.
2. Remove indicator lamp (4) from indicator light (3).

END OF TASK

INSTALLATION



NOTE

All pump operator's panel indicator lamps are installed the same way. Foam/flush indicator lamp shown.

1. Install indicator lamp (4) in indicator light (3).
2. Install preformed packing (2) and lamp cover (1) on indicator light (3).

END OF TASK

FOLLOW-ON MAINTENANCE

Close pump operator's panel (WP 0205)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

STRIPLIGHT REPLACEMENT

INITIAL SETUP:

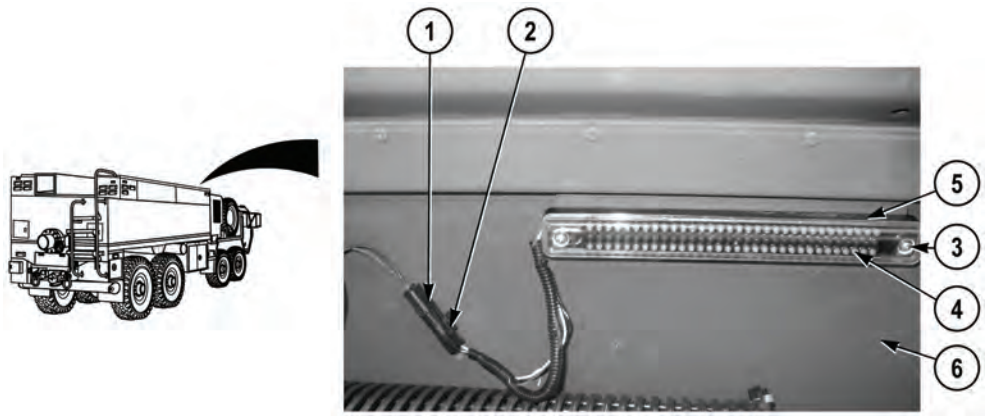
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)
Lockwasher (4)

References
WP 0392, Fig. 62

Equipment Conditions
Batteries disconnected (TM 9-2320-315-14&P)
Compartment door opened (WP 0008)

REMOVAL



NOTE

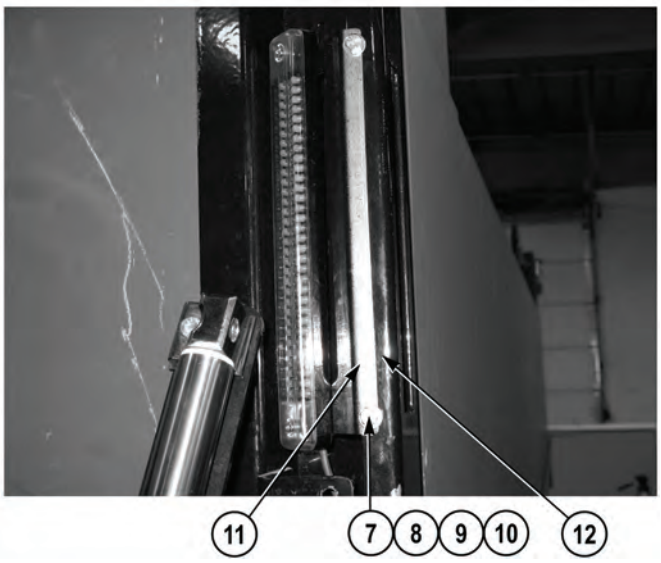
- Tag and mark wires prior to removal to ensure proper installation.
- Remove cable ties as required.
- All striplights except pump operator's panel are removed the same way. Top stowage compartment striplight shown.
- Pump operator's panel striplights have connectors.

1. Disconnect connector (1) from connector (2).

NOTE

Striplight and cover are removed as an assembly.

2. Remove two screws (3), cover (4), and striplight (5) from stowage compartment box (6).



NOTE

- Perform Step (3) if striplight bracket needs to be removed.
- All striplight brackets are removed the same way. Top driver side pump house bracket shown.
- Number of screws, washers, lockwashers, and nuts may vary.

3. Remove four nuts (7), lockwashers (8), eight washers (9), four screws (10), and striplight bracket (11) from pump house frame (12). Discard lockwashers.

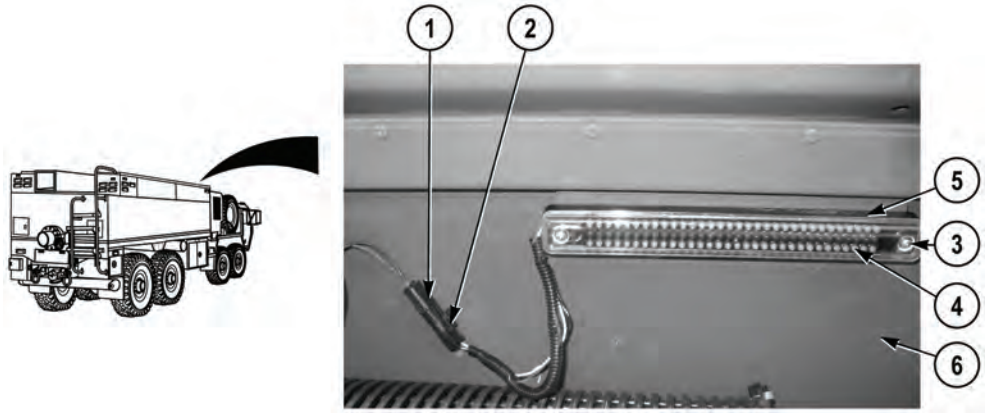
END OF TASK

INSTALLATION

NOTE

- Perform Step (1) if striplight bracket was removed.
- All striplight brackets are installed the same way. Top driver side pump house bracket shown.
- Number of screws, washers, lockwashers, and nuts may vary.

1. Install striplight bracket (11) on pump house frame (12) with four screws (10), eight washers (9), four lockwashers (8), and nuts (7).



NOTE

- All striplights except pump operator's panel are installed the same way. Top stowage compartment striplight shown.
- Pump operator's panel has connectors.
- Install cable ties as required.
- Striplight and cover are installed as an assembly.

2. Install striplight (5) and cover (4) on stowage compartment box (6) with two screws (3).
3. Connect connector (1) to connector (2).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Connect batteries (TM 9-2320-315-14&P)
2. Close compartment door (WP 0008)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PUMP OPERATOR'S PANEL PRESSURE GOVERNOR CONTROL REPLACEMENT

INITIAL SETUP:

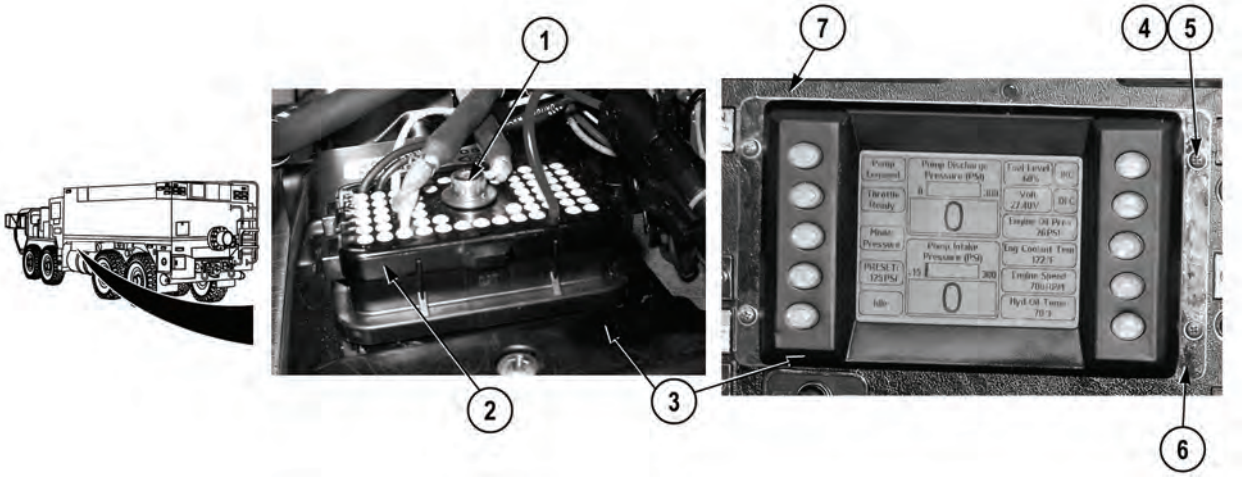
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Lockwasher (2)

References
WP 0392, Fig. 34

Equipment Conditions
Pump operator's panel opened (WP 0205)

REMOVAL

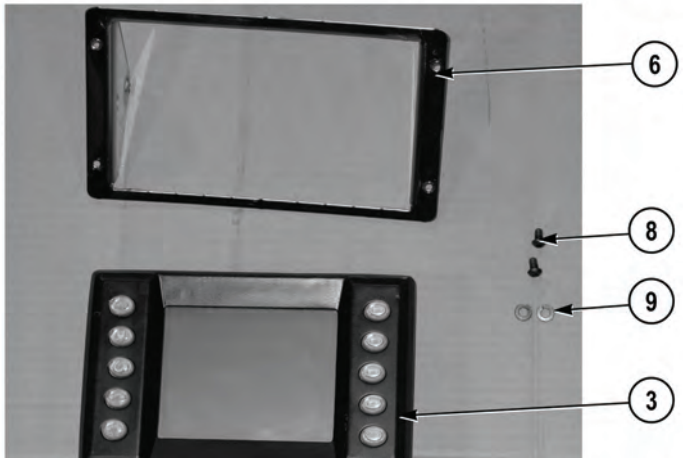


1. Loosen screw (1) and disconnect pressure governor control connector (2) from pressure governor control (3).

NOTE

Note orientation of pressure governor control prior to removal to ensure proper installation.

2. Remove four screws (4), washers (5), pressure governor control (3), and mounting bezel (6) from pump operator's panel (7).

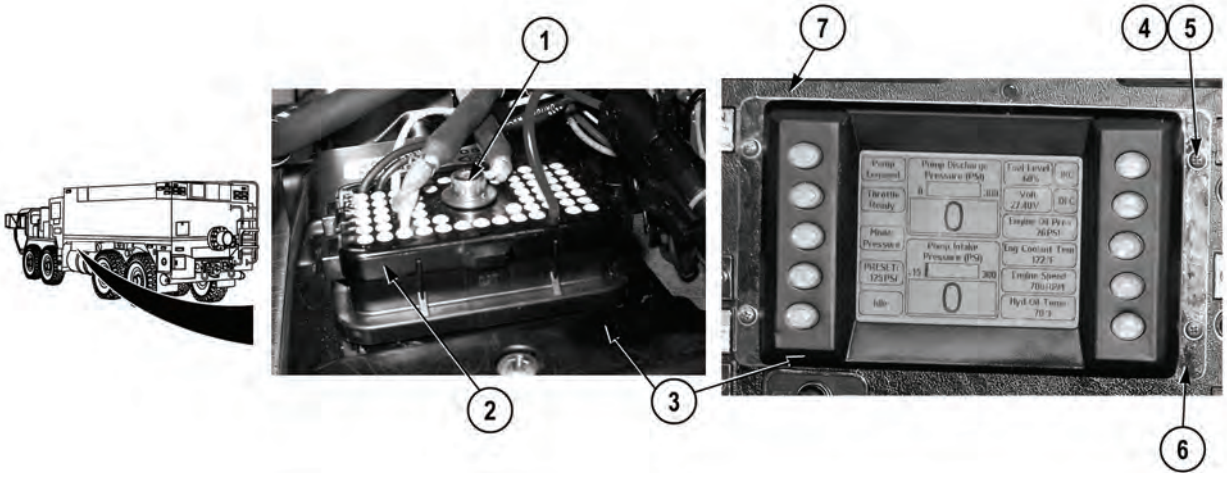


3. Remove two screws (8), lockwashers (9), and mounting bezel (6) from pressure governor control (3). Discard lockwashers.

END OF TASK

INSTALLATION

1. Install mounting bezel (6) on pressure governor control (3) with two lockwashers (9) and screws (8).



NOTE

Install pressure governor control in same orientation as noted prior to removal.

2. Install mounting bezel (6) and pressure governor control (3) on pump operator's panel (7) with four washers (5) and screws (4).

3. Install pressure governor control connector (2) on pressure governor control (3).

4. Tighten screw (1) on pressure governor control connector (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Close pump operator’s panel (WP 0205)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

CAB HIGH IDLE SWITCH AND INDICATOR REPLACEMENT

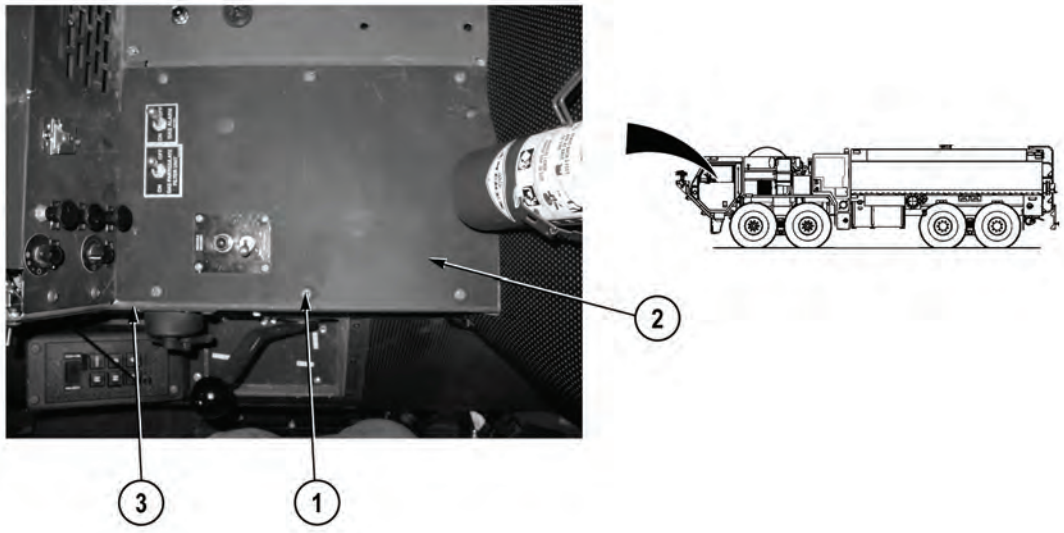
INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

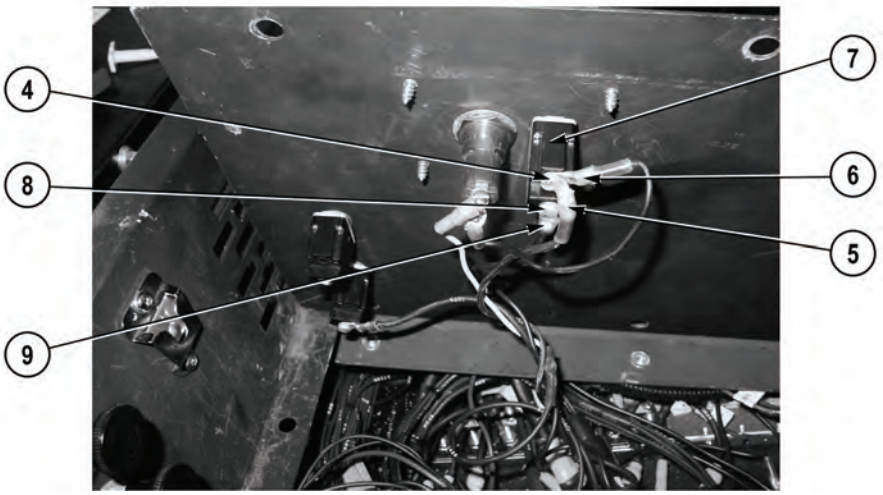
Materials/Parts
Compound, Sealing (WP 0401, Item 10)
Tags, Identification (WP 0401, Item 22)

Equipment Conditions
Batteries disconnected (TM 9-2320-315-14&P)

REMOVAL



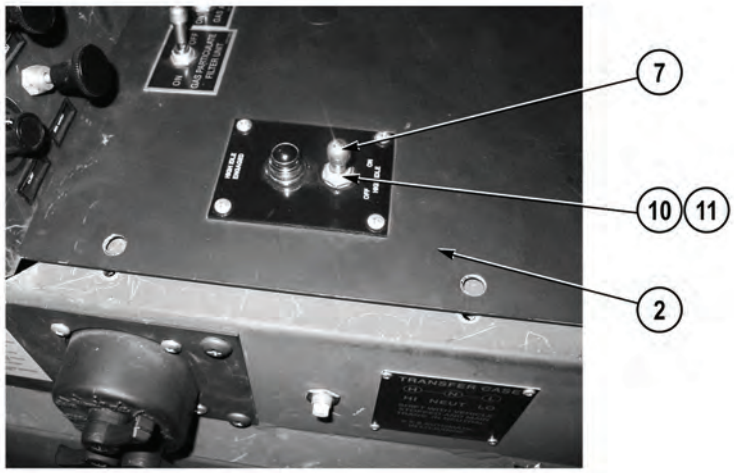
1. Remove six screws (1) and panel (2) from center console (3).



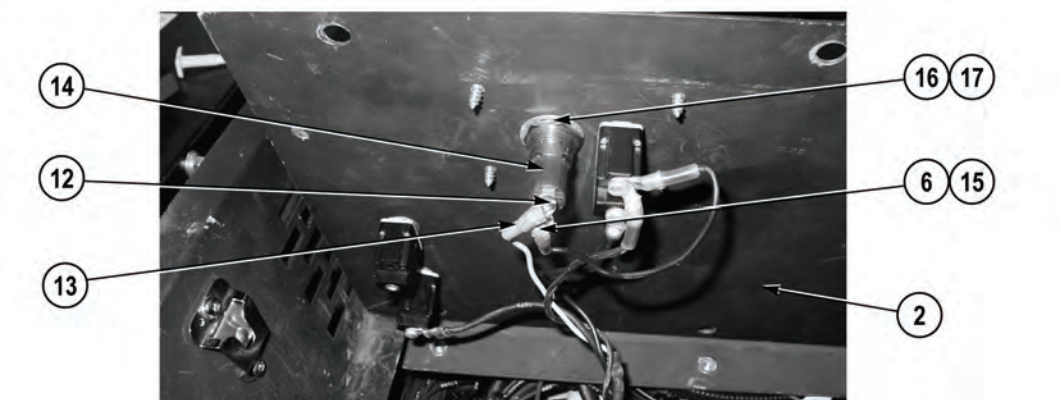
NOTE

- Tag and mark wires prior to removal to ensure proper installation.
- Perform Steps (2) through (4) for high idle engage switch replacement.

2. Remove screw (4), wire 1840 (5), and jumperwire (6) from high idle engage switch (7).
3. Remove screw (8) and power wire (9) from high idle engage switch (7).



4. Remove nut (10), washer (11), and high idle engage switch (7) from panel (2).



NOTE

- Tag and mark wires prior to removal to ensure proper installation.
- Perform Steps (5) through (7) for high idle engage indicator replacement.

5. Remove screw (12) and wire 1435 (13) from indicator (14).
6. Remove screw (15) and jumperwire (6) from indicator (14).
7. Remove nut (16), washer (17), and indicator (14) from panel (2).

END OF TASK

INSTALLATION

NOTE

Perform Steps (1) through (4) for high idle engage indicator installation.

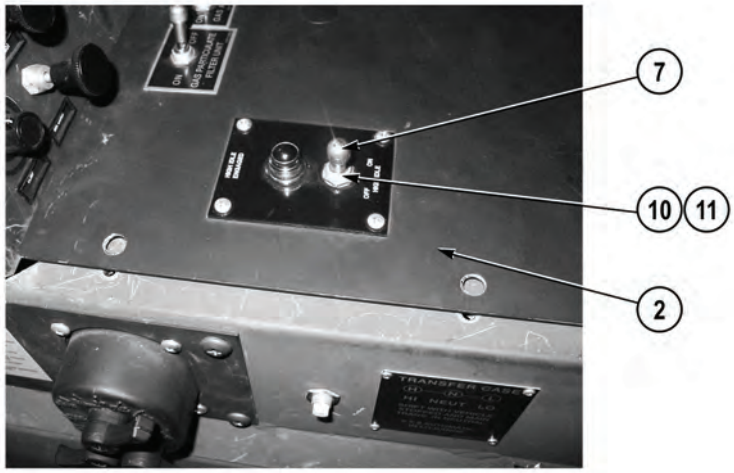
1. Install indicator (14) on panel (2) with washer (17) and nut (16).
2. Install jumperwire (6) on indicator (14) with screw (15).
3. Install wire 1435 (13) on indicator (14) with screw (12).

WARNING

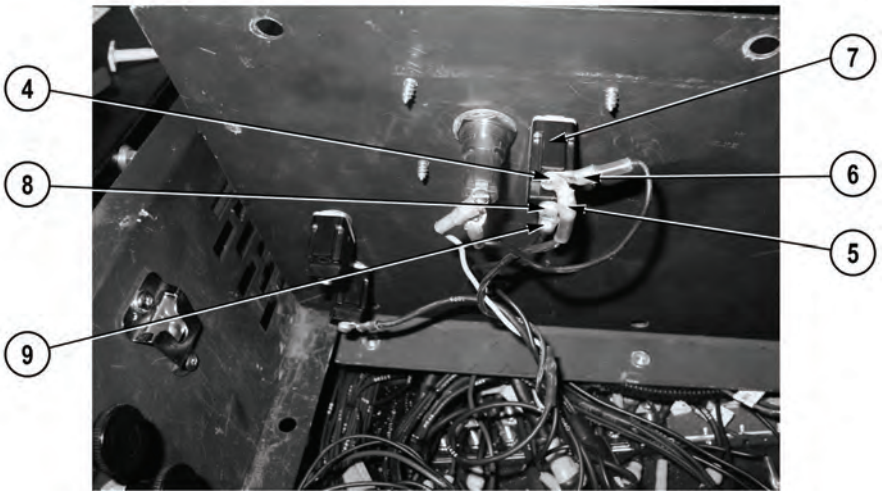


Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

4. Apply sealing compound to thread of two screws (15) and (12).



5. Install high idle engage switch (7) on panel (2) with washer (11) and nut (10).



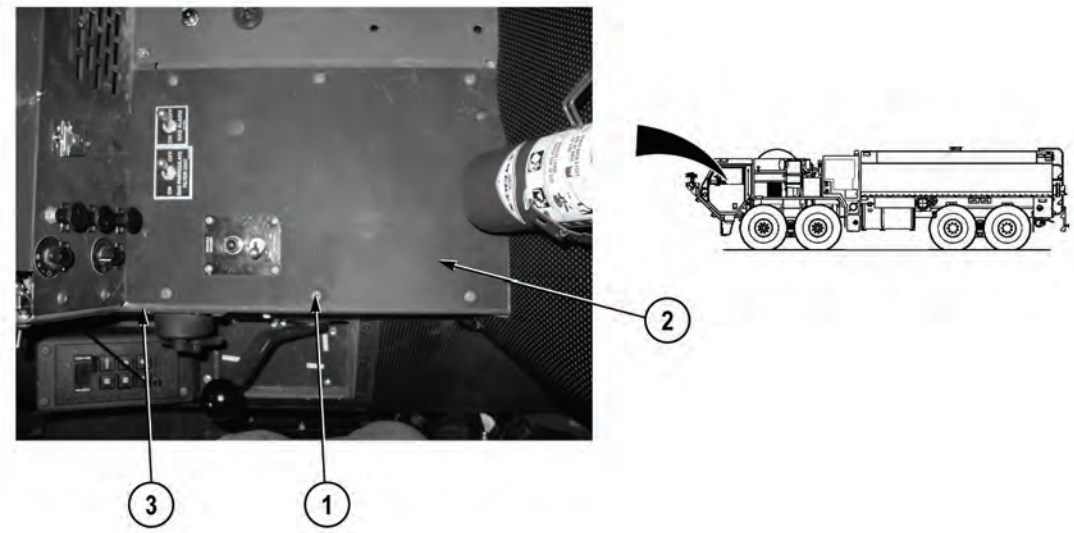
6. Install power wire (9) on high idle engage switch (7) with screw (8).
7. Install jumperwire (6) and wire 1840 (5) on high idle engage switch (7) with screw (4).

WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

8. Apply sealing compound to threads of two screws (8) and (4).



9. Install panel (2) on center console (3) with six screws (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Connect batteries (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PUMP OPERATOR'S PANEL OVERHEAT TEST BUTTON AND INDICATOR REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

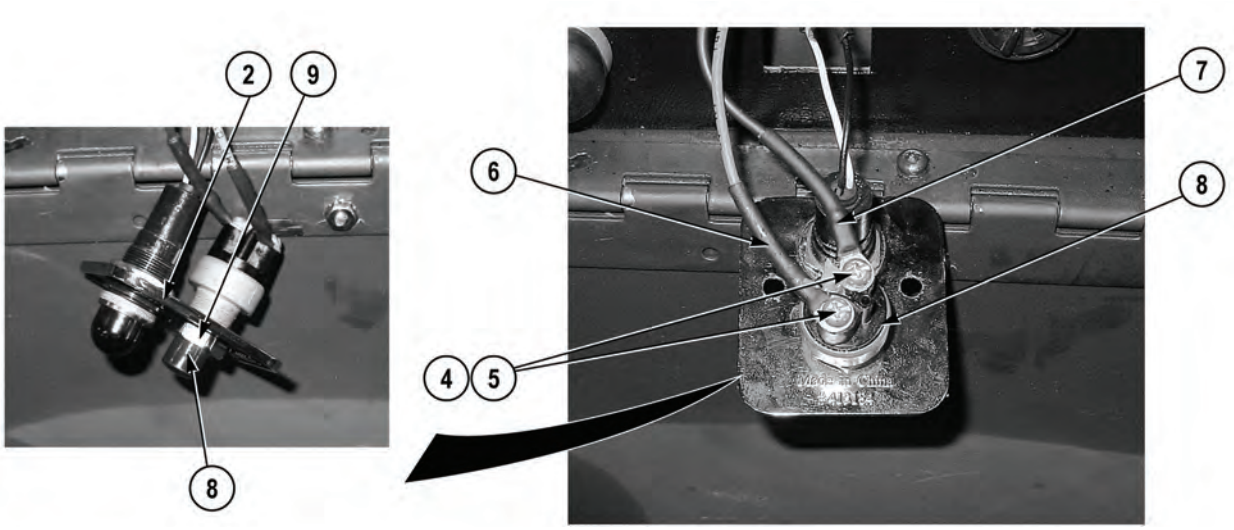
Materials/Parts
Compound, Sealing (WP 0401, Item 10)
Tags, Identification (WP 0401, Item 22)

Equipment Conditions
Pump operator's panel cover opened (WP 0010)

REMOVAL



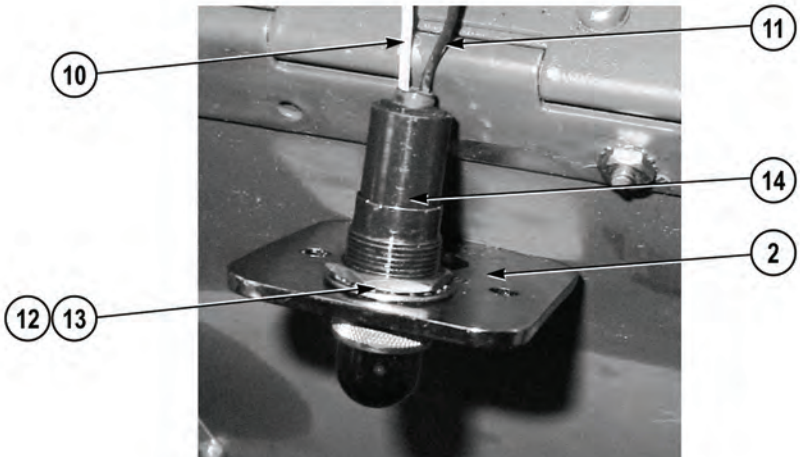
1. Remove two screws (1) and cover plate (2) from pump operator's panel (3).



NOTE

- Tag and mark wires prior to removal to ensure proper installation.
- Perform Steps (2) and (3) for overheat test button removal.

2. Remove two screws (4), washers (5), wire 1405, (6) and wire 4085 (7) from overheat test button (8).
3. Remove nut (9) and overheat test button (8) from cover plate (2).



NOTE

Perform Steps (4) and (5) for overheat test indicator removal.

4. Cut wire 1405 (10) and wire 3895 (11) (TM 9-2320-315-14&P).
5. Remove nut (12), washer (13), and indicator (14) from cover plate (2).

END OF TASK

INSTALLATION

NOTE

Perform Steps (1) and (2) for overheat test indicator installation.

1. Install indicator (14) on cover plate (2) with washer (14) and nut (13).
2. Repair wire 3895 (11) and wire 1405 (10) (TM 9-2320-315-14&P).

NOTE

Perform Steps (3) through (5) for overheat test button installation.

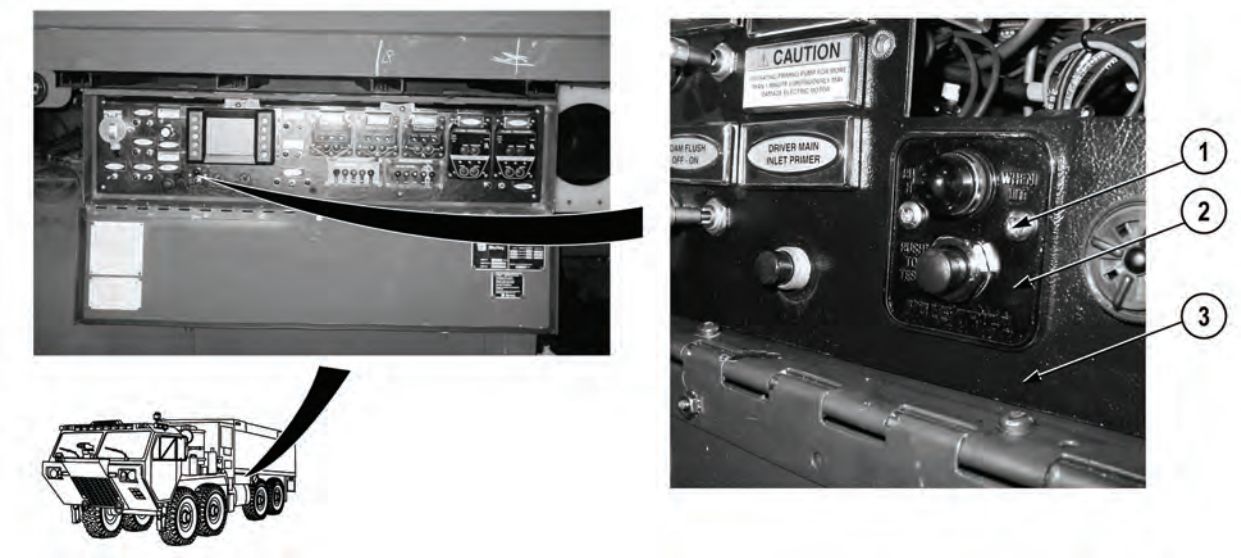
3. Install overheat test button (8) on cover plate (2) with nut (9).
4. Install wire 4085 (7) and wire 1405 (6) on overheat test button (8) with two washers (5) and screws (4).

WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

5. Apply sealing compound to threads of two screws (4).



6. Install cover plate (2) on operator’s pump panel (3) with two screws (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Close pump operator’s panel cover (WP 0010)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PUMP OPERATOR'S PANEL DRIVER MAIN INLET PRIMER BUTTON REPLACEMENT

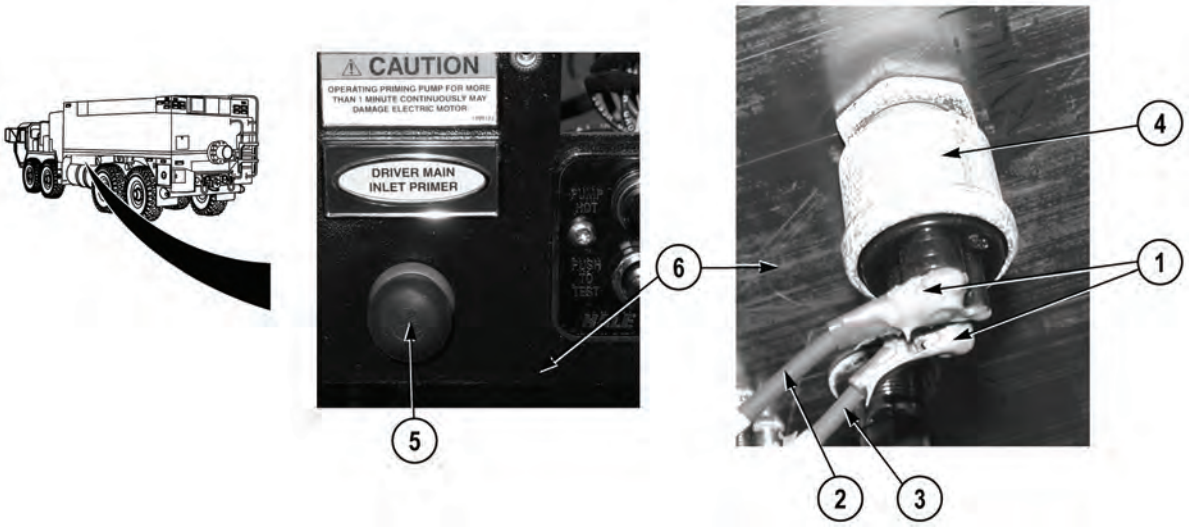
INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Compound, Sealing (WP 0401, Item 10)
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)

Equipment Conditions
Pump operator's panel opened (WP 0205)

REMOVAL



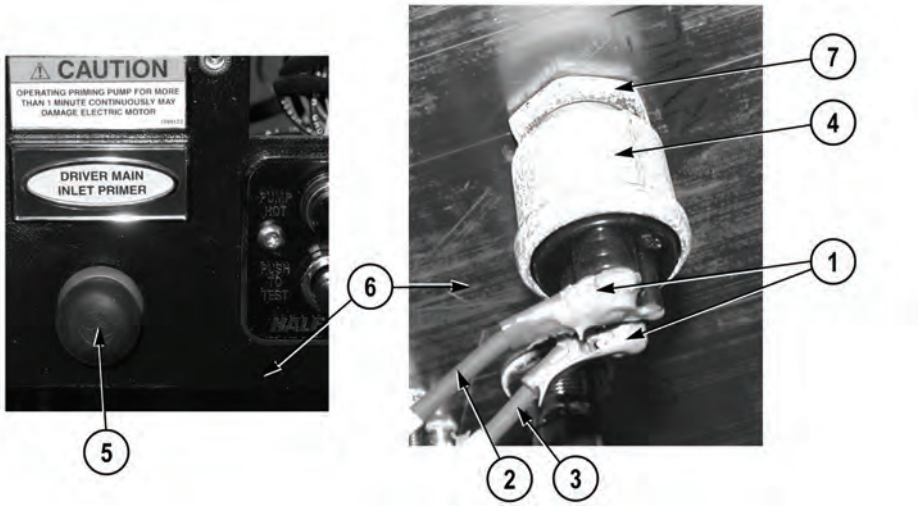
NOTE

- Tag and mark wires prior to removal to ensure proper installation.
- Remove cable tie as required.

1. Remove two screws (1), wire 2773 (2), and wire 1590 (3) from driver main inlet primer button (4).
2. Remove cover (5) and driver main inlet primer button (4) from pump operator's panel (6).

END OF TASK

INSTALLATION



NOTE

Adjusting nut comes with switch.

1. Adjust nut (7) on driver main inlet primer button (4).
2. Install driver main inlet primer button (4) on pump operator's panel (6) with cover (5).
3. Install wire 1590 (3) and wire 2773 (2) on driver main inlet primer button (4) with two screws (1).

WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

4. Apply sealing compound on two screws (1), wire 2773 (2), and wire 1590 (3).

END OF TASK

FOLLOW-ON MAINTENANCE

Close pump operator's panel (WP 0205)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PUMP OPERATOR'S PANEL TOGGLE SWITCH (TWO-POSITION) REPLACEMENT

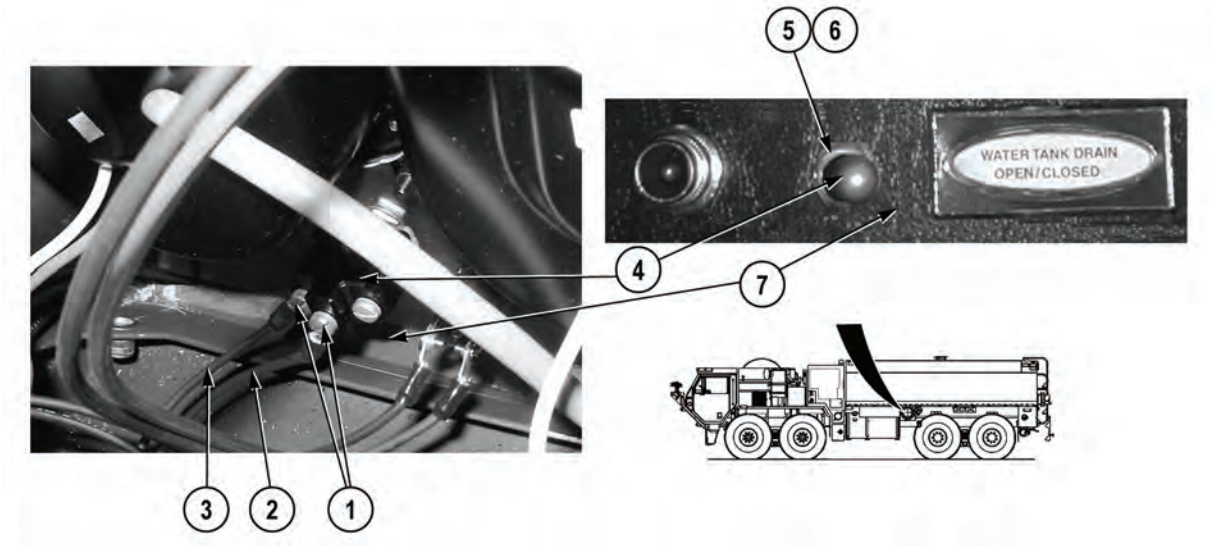
INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Compound, Sealing (WP 0401, Item 10)

Equipment Conditions
Pump operator's panel opened (WP 0205)

REMOVAL



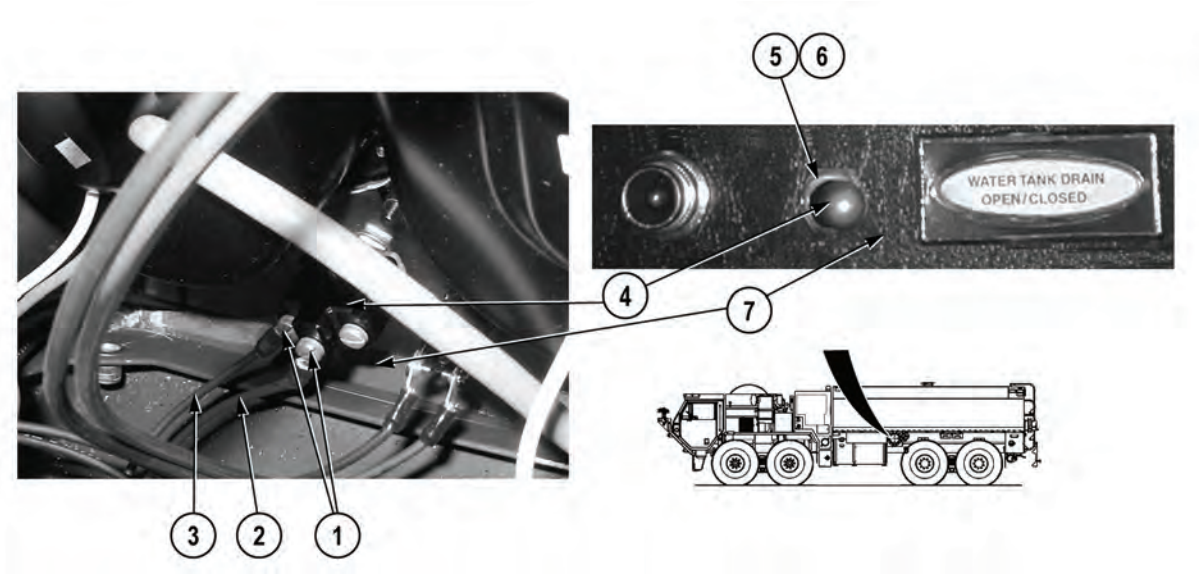
NOTE

- All two-position toggle switches are removed the same way. WATER TANK DRAIN two-position toggle switch shown.
- Note position of two-position toggle switch prior to removal to ensure proper installation.
- Tag and mark wires prior to removal to ensure proper installation.

1. Remove two screws (1), wire 2834 (2), and wire 4053 (3) from two-position toggle switch (4).
2. Remove nut (5), washer (6), and two-position toggle switch (4) from pump panel (7).

END OF TASK

INSTALLATION



NOTE

All two-position toggle switches are installed the same way.

1. Install two-position toggle switch (4) on pump panel (7) with washer (6) and nut (5).
2. Install wire 4053 (3) and wire 2834 (2) on toggle switch (4) with two screws (1).

WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

3. Apply sealing compound to ends of wire 4053 (3) and wire 2834 (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Close pump operator's panel (WP 0205)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PUMP OPERATOR'S PANEL TOGGLE SWITCH (THREE-POSITION) REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

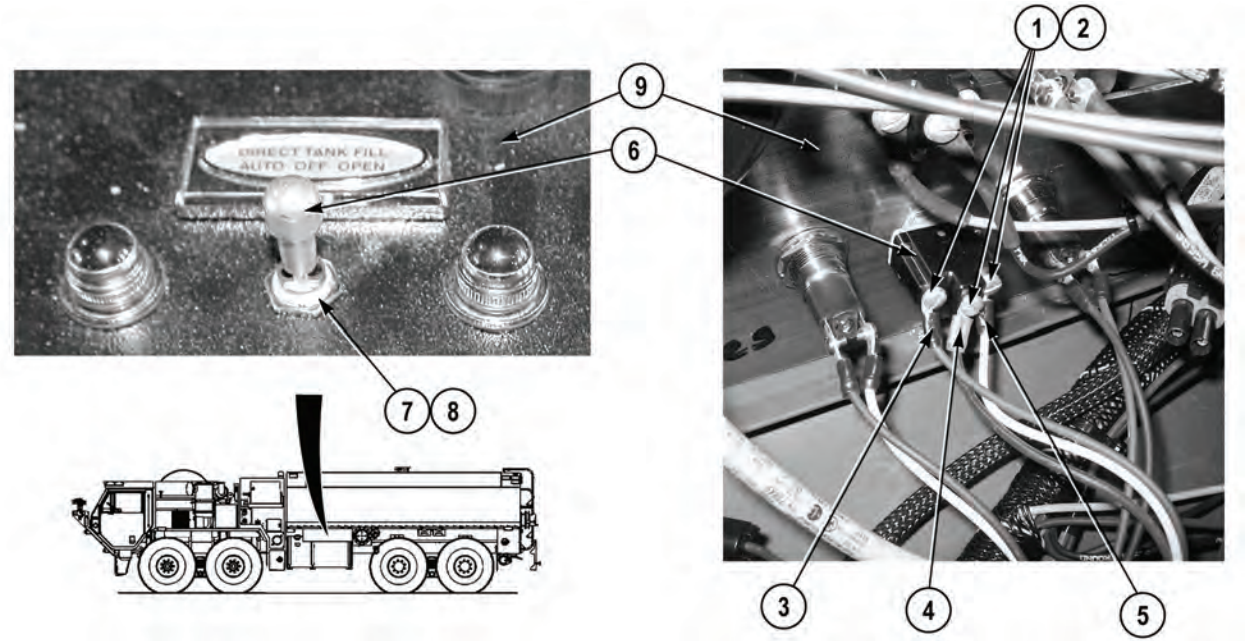
Materials/Parts
Compound, Sealing (WP 0401, Item 10)
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)

Materials/Parts (continued)
Lockwasher (3)

References
WP 0392, Fig. 34

Equipment Conditions
Pump operator's panel opened (WP 0205)

REMOVAL



NOTE

- Tag and mark wires prior to removal to ensure proper installation.
- Remove cable ties as required.

1. Remove three screws (1), lockwashers (2), wire 2316 (3), wire 2314 (4), and wire 2315 (5) from three-position toggle switch (6). Discard lockwashers.

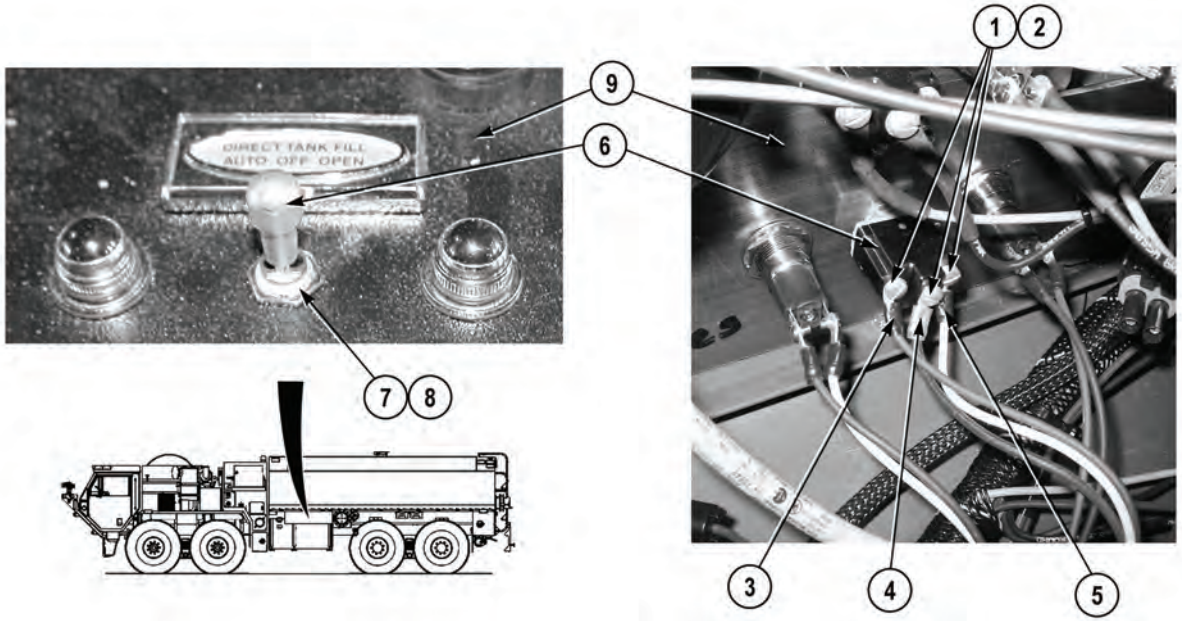
NOTE

Note position of three-position toggle switch prior to removal to ensure proper installation.

2. Remove nut (7), washer (8), and three-position toggle switch (6) from pump operator's panel (9).

END OF TASK

INSTALLATION



NOTE

- Install three-position toggle switch as noted prior to removal.
- Install cable ties as required.

1. Install three-position toggle switch (6) on pump operator's panel (9) with washer (8) and nut (7).
2. Install wire 2315 (5), wire 2314 (4), and wire 2316 (3) on three-position toggle switch (6) with three lockwashers (2) and screws (1).

WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

3. Apply sealing compound to three screws (1), lockwashers (2), wire 2316 (3), wire 2314 (4), and wire 2315 (5).

END OF TASK

FOLLOW-ON MAINTENANCE

Close pump operator's panel (WP 0205)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

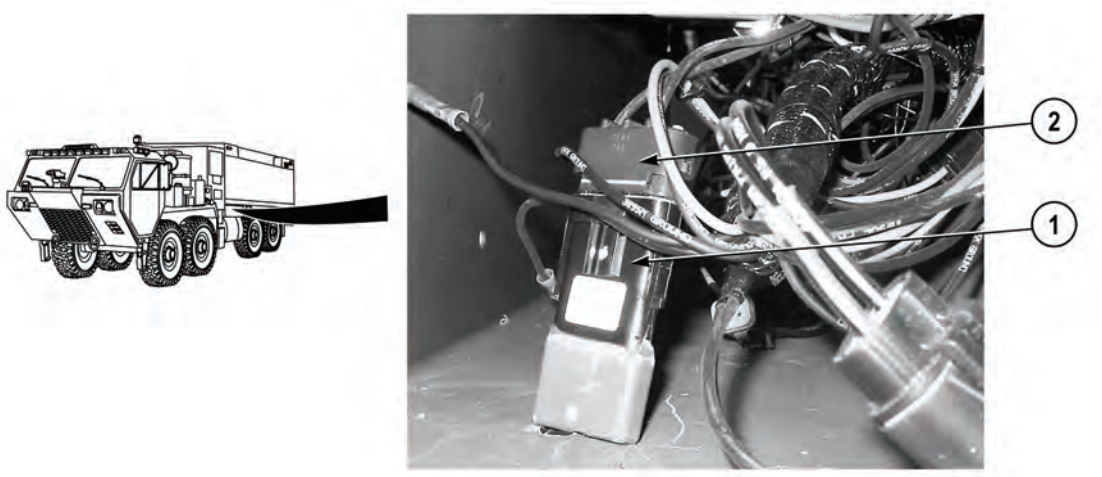
PUMP PRIMER MOTOR DIODE PACK REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Equipment Conditions
Pump operator's panel opened (WP 0205)

REMOVAL



Remove diode (1) from diode connector (2).

END OF TASK

INSTALLATION

Install diode (1) on diode connector (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Close pump operator's panel (WP 0205)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

CAB CLEARANCE LIGHTS AND BRACKET REPLACEMENT

INITIAL SETUP:

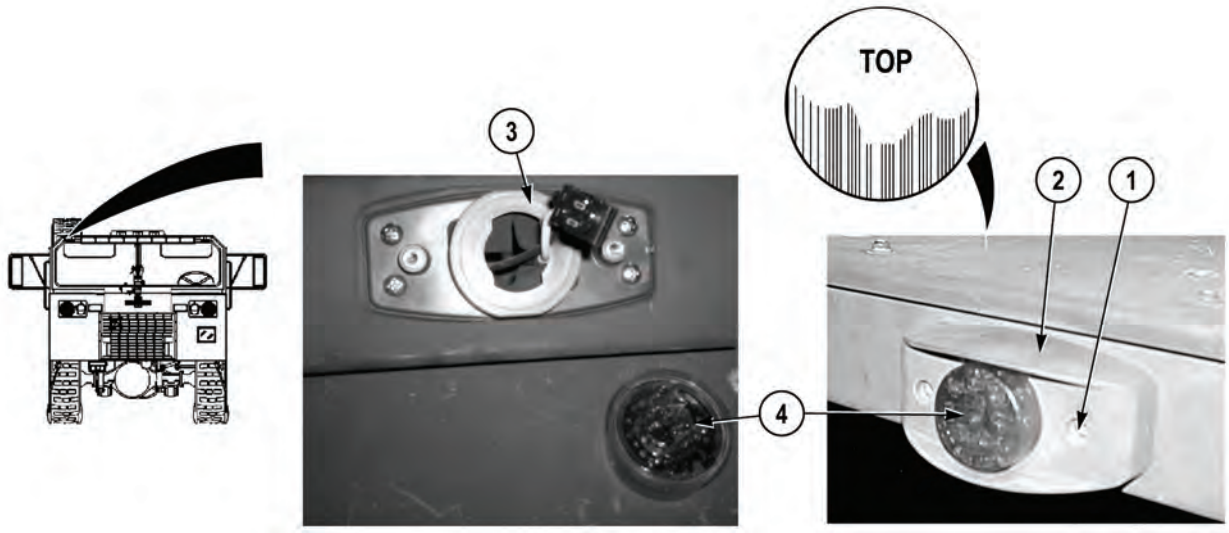
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Locknut (4)
Lockwasher (2)

References
WP 0392, Fig. 27, 28

Equipment Conditions
Batteries disconnected (TM 9-2320-315-14&P)

REMOVAL



NOTE

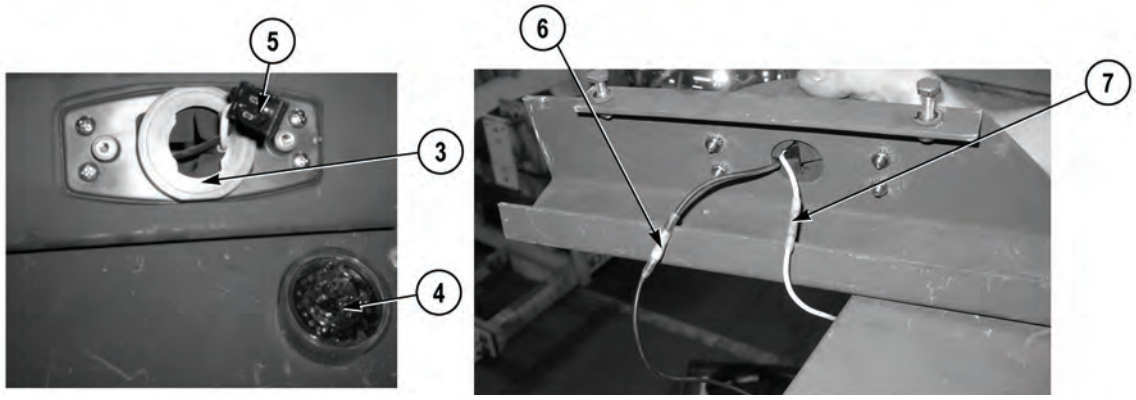
Passenger side and driver side clearance lights are removed the same way. Passenger side shown.

1. Remove two screws (1) and light cover (2) from mounting base (3).

NOTE

Lamp must be rotated 90 degrees in order to remove lamp from mounting base.

2. Remove lamp (4) from mounting base (3).



NOTE

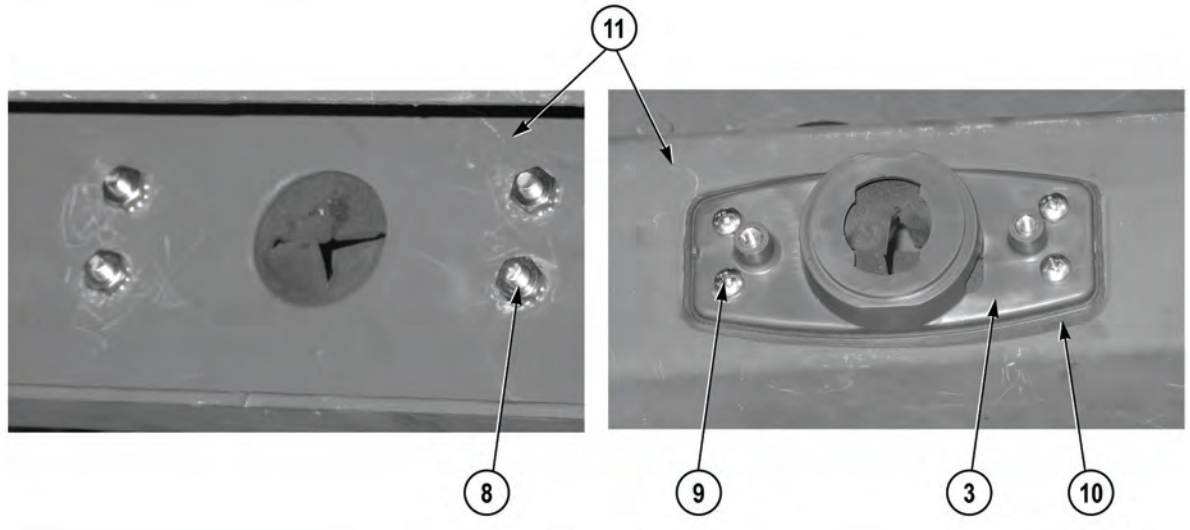
- Lamp will only function if correctly installed on rubber mounting of pigtail. Plastic tabs on lamp must align with openings on rubber mounting of pigtail. It is possible to force lamp on rubber mounting of pigtail in opposite position, which will not allow lamp to operate.
- Note position of lamp on rubber mounting of pigtail prior to removal to ensure proper installation.

3. Remove lamp (4) from rubber mounting of pigtail (5).

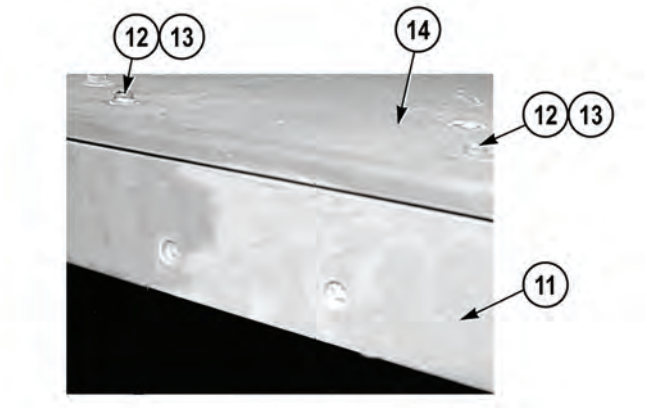
NOTE

- Perform Step (4) if pigtail needs to be replaced.
- Tag and mark wires prior to removal to ensure proper installation.

4. Cut black wire (6) and white wire (7) (TM 9-2320-315-14&P), and remove pigtail (5) from mounting base (3).



5. Remove four locknuts (8), screws (9), mounting base (3), and gasket (10) from bracket (11). Discard locknuts.



NOTE

Perform Step (6) if bracket needs to be removed.

6. Remove two screws (12), lockwashers (13), and bracket (11) from cab roof (14). Discard lockwashers.

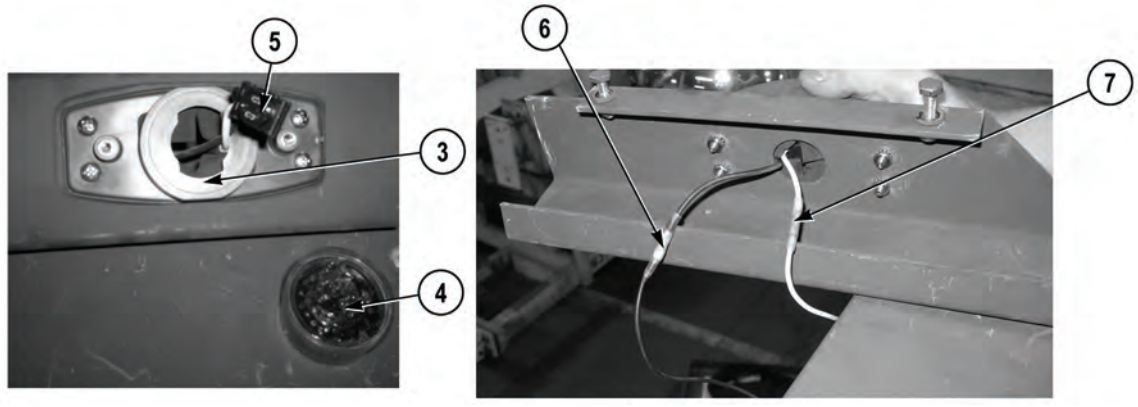
END OF TASK

INSTALLATION

NOTE

- Passenger side and driver side clearance lights are installed the same way. Passenger side shown.
- Perform Step (1) if bracket was removed.

1. Install bracket (11) on cab roof (14) with two lockwashers (13) and screws (12).
2. Install gasket (10) and mounting base (3) on bracket (11) with four screws (9), and locknuts (8).



NOTE

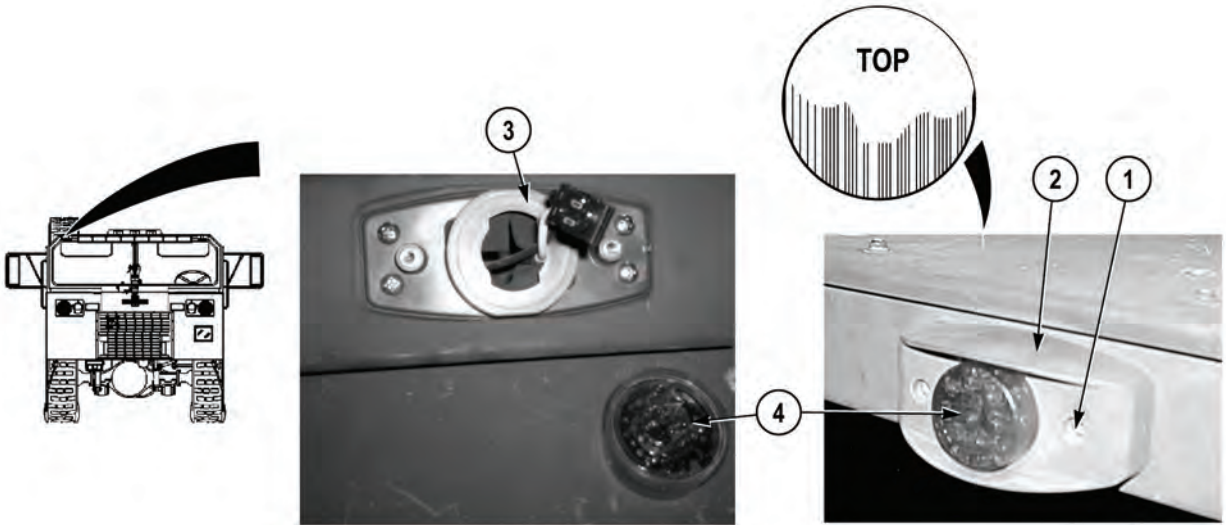
Perform Step (3) and (4) if pigtail was removed.

3. Install pigtail (5) on mounting base (3).
4. Repair white wire (7) and black wire (6) (TM 9-2320-315-14&P).

NOTE

Install lamp on rubber mounting of pigtail as noted prior to removal.

5. Install lamp (4) on rubber mounting of pigtail (5).



NOTE

- Lamp must be installed as indicated on lamp cover with TOP facing up.
- Install lamp on mounting base as noted prior to removal.

6. Install lamp (4) on mounting base (3).
7. Install light cover (2) on mounting base (3) with two screws (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Connect batteries (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

CAB FRONT LIGHTBAR REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

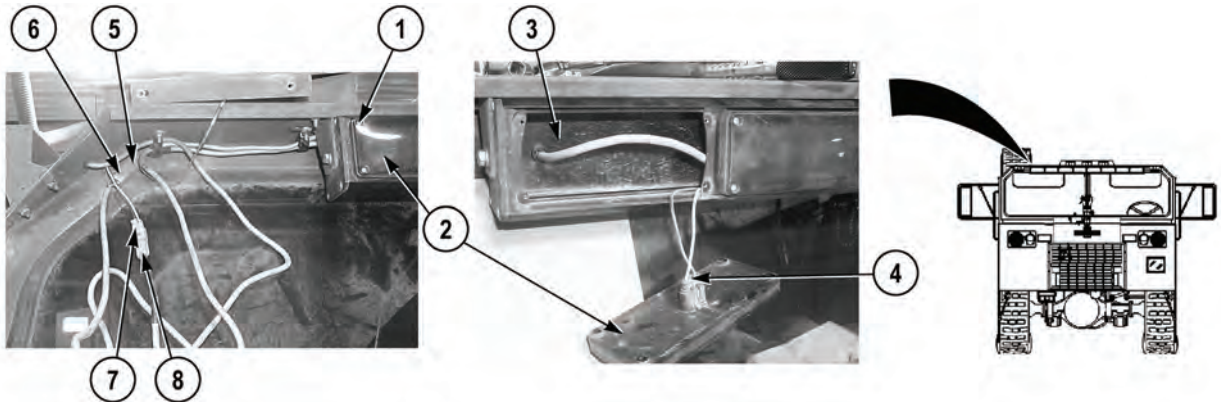
Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)
Lockwasher (1)
Lockwasher (1)
Lockwasher (1)
Lockwasher (2)
Lockwasher (1)
Lockwasher (1)

References
WP 0392, Fig. 27

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

Equipment Conditions
Cab clearance lights and brackets removed (WP 0221)

REMOVAL



NOTE

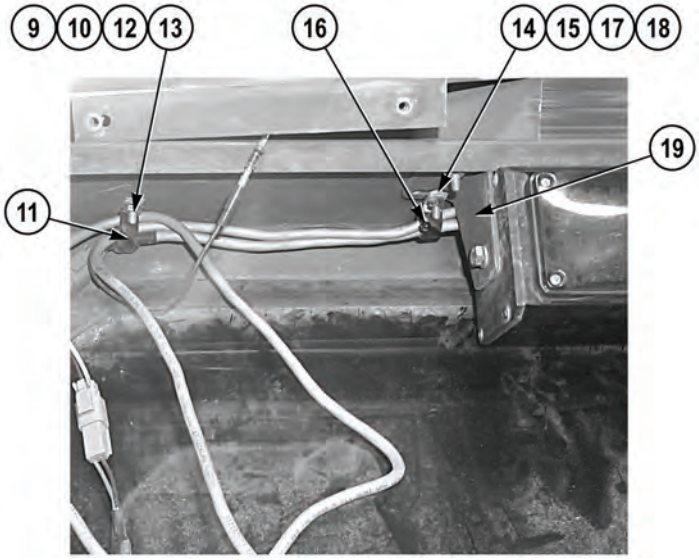
- Perform Steps (1) and (2) if removing cab front lightbar lights.
- All cab front lightbar lights are removed the same. Passenger side lights shown.

1. Remove four screws (1) and cab front lightbar light (2) from cab front lightbar (3).
2. Disconnect cab front lightbar wire harness connector (4) from cab front lightbar light (2).

NOTE

- Perform Steps (3) through (10) if removing cab front lightbar.
- Tag and mark wires prior to removal to ensure proper installation.
- Remove cable ties as required.

3. Disconnect cab front lightbar cable connector (5) from cab lightbar cable assembly branch connector (6).
4. Disconnect cab front lightbar cable connector (7) from cab roof wire harness connector (8).

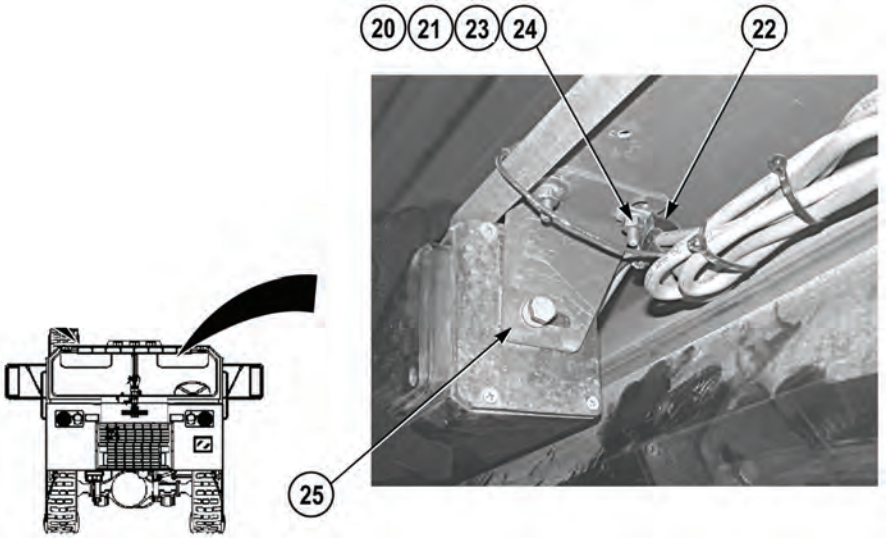


NOTE

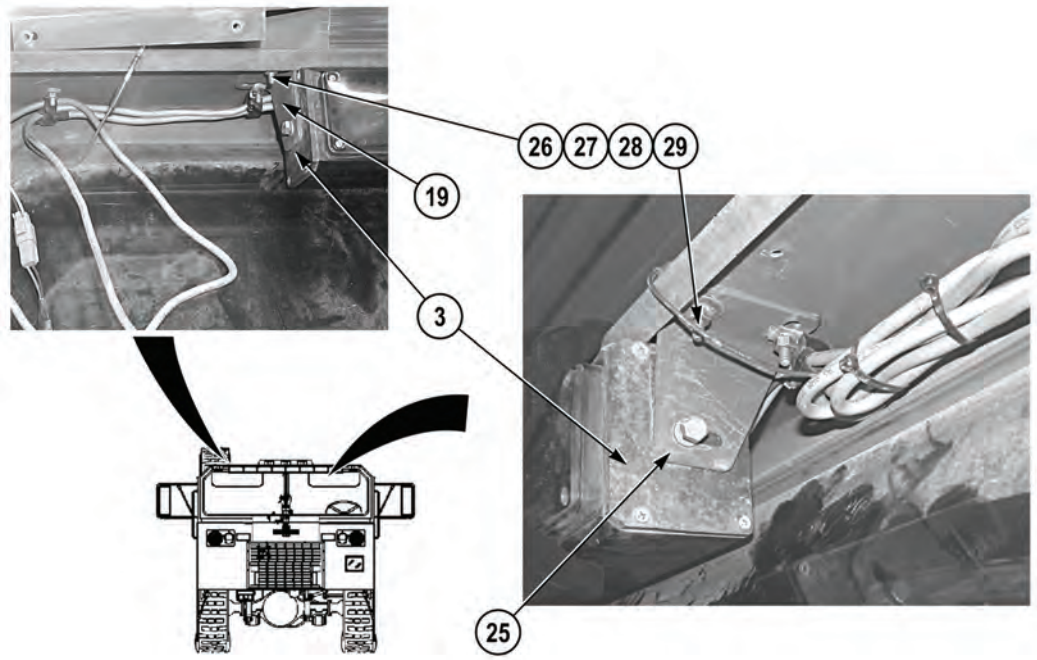
Note position of washers prior to removal to ensure proper installation.

5. Remove nut (9), lockwasher (10), cushion clip (11), washer (12), and screw (13) from vehicle. Discard lockwasher.

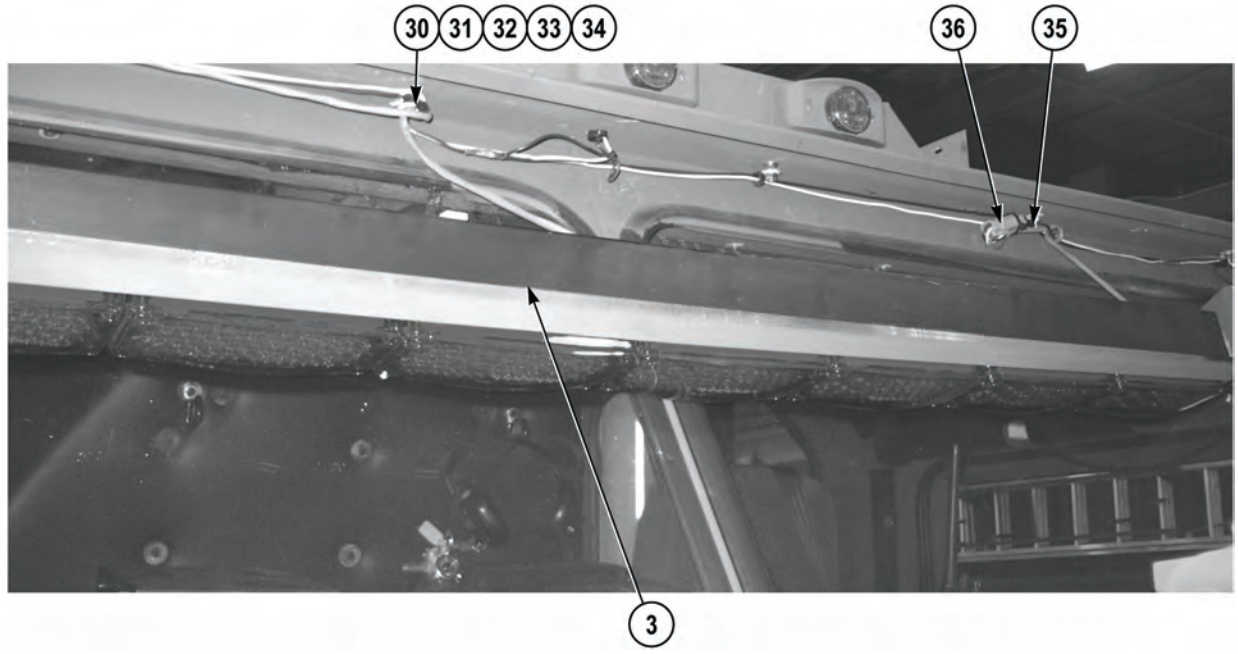
6. Remove nut (14), lockwasher (15), cushion clip (16), washer (17), and screw (18) from cab front lightbar bracket (19) and vehicle. Discard lockwasher.



7. Remove nut (20), lockwasher (21), cushion clip (22), washer (23), and screw (24) from cab front lightbar bracket (25) and vehicle. Discard lockwasher.

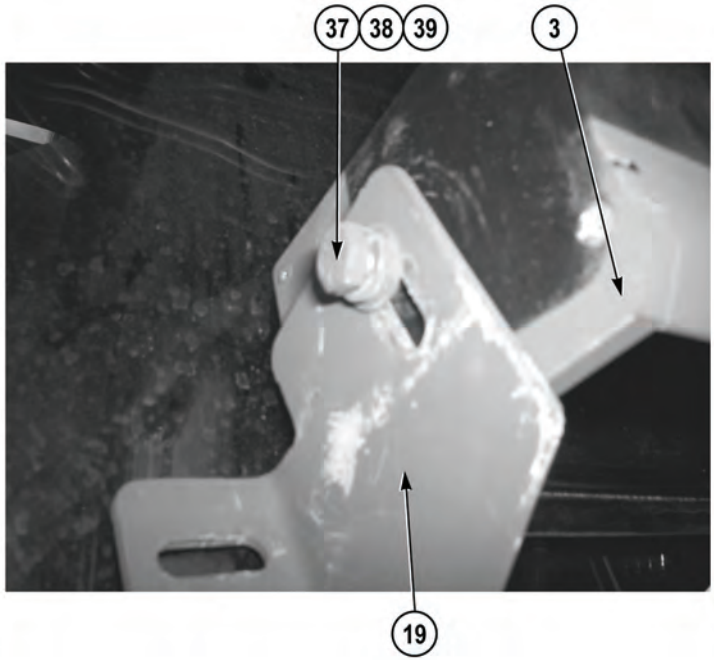


8. With the aid of an assistant, support cab front lightbar (3) and remove two nuts (26), lockwashers (27), four washers (28), two screws (29), cab front lightbar bracket (19), and cab front lightbar bracket (25), from vehicle. Discard lockwashers.



9. With the aid of an assistant, lower cab front lightbar (3) from vehicle, and remove nut (30), lockwasher (31), cushion clip (32), and washer (33) from screw (34). Discard lockwasher.

10. Disconnect cab front lightbar cable connector (35) from cab lightbar cable assembly branch connector (36).



NOTE

- Perform Step (11) if removing cab front lightbar brackets.
- Both cab front lightbar brackets are removed the same. Passenger side shown.

11. Remove screw (37), lockwasher (38), washer (39), and cab front lightbar bracket (19) from cab front lightbar (3). Discard lockwasher.

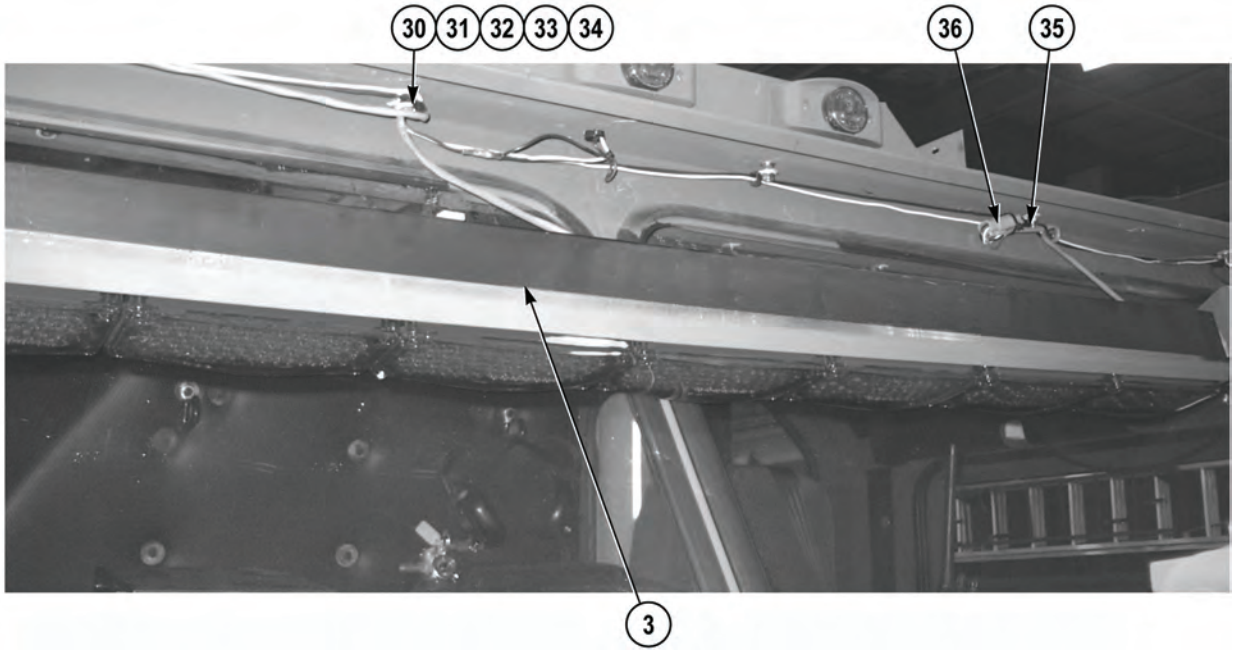
END OF TASK

INSTALLATION

NOTE

- Perform Step (1) if installing cab front lightbar brackets.
- Both cab front lightbar brackets are installed the same. Passenger side shown.

1. Position cab front lightbar bracket (19) on cab front lightbar (3) with washer (39), lockwasher (38), and screw (37).



NOTE

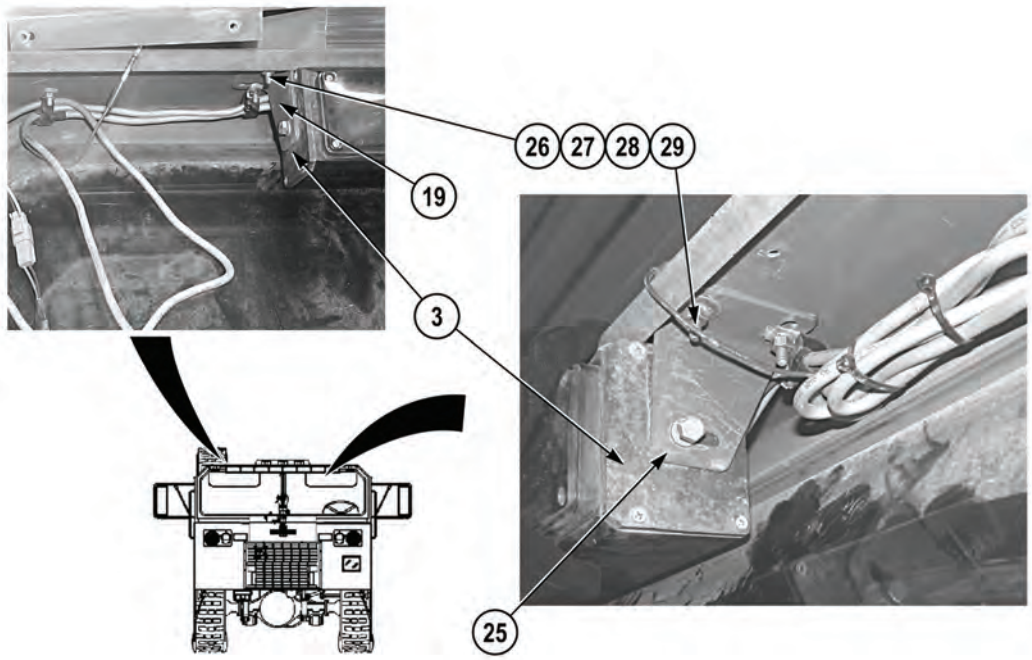
- Perform Steps (2) through (9) if installing cab front lightbar.
- Install cable ties as required.

2. With the aid of an assistant, support cab front lightbar (3) and connect cab lightbar cable assembly branch connector (36) on cab front lightbar cable connector (35).

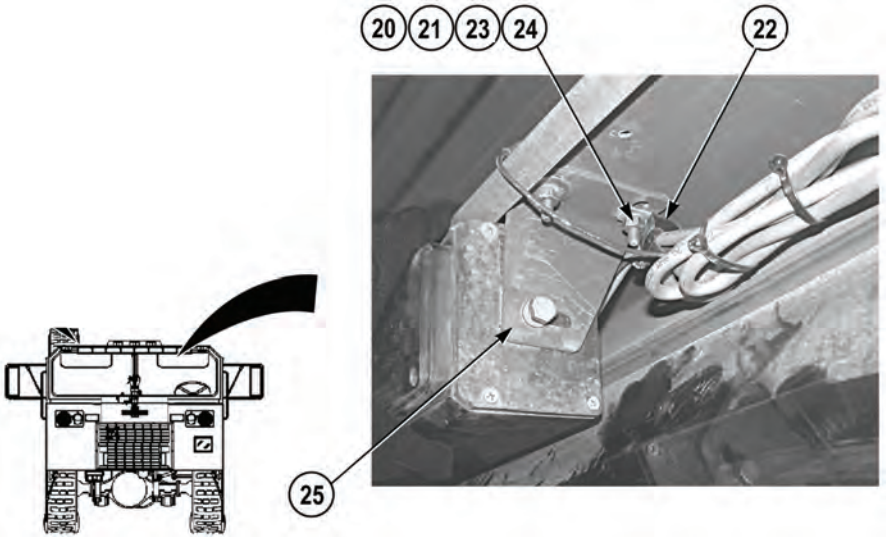
NOTE

Install washers as noted prior to removal.

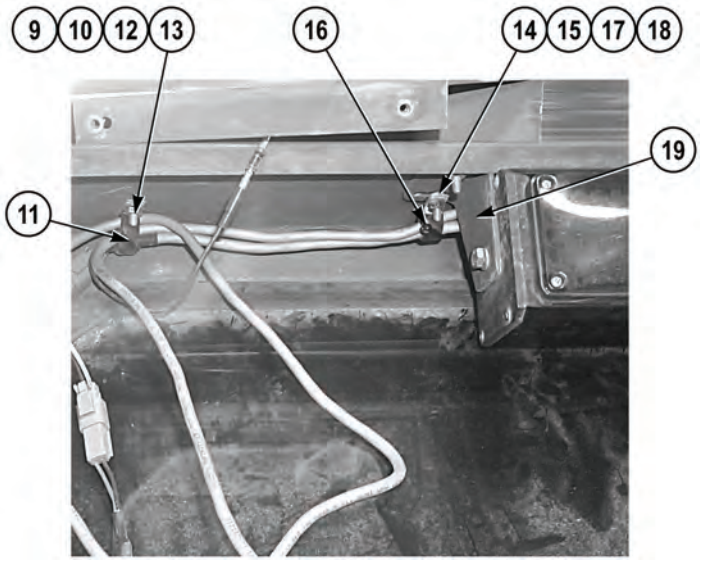
3. Install washer (33) and cushion clip (32) on vehicle with screw (34), lockwasher (31), and nut (30).



4. With the aid of an assistant, position cab front lightbar (3) and install cab front lightbar bracket (25) and cab front lightbar bracket (19) on vehicle with two screws (29), four washers (28), two lockwashers (27), and nuts (26).

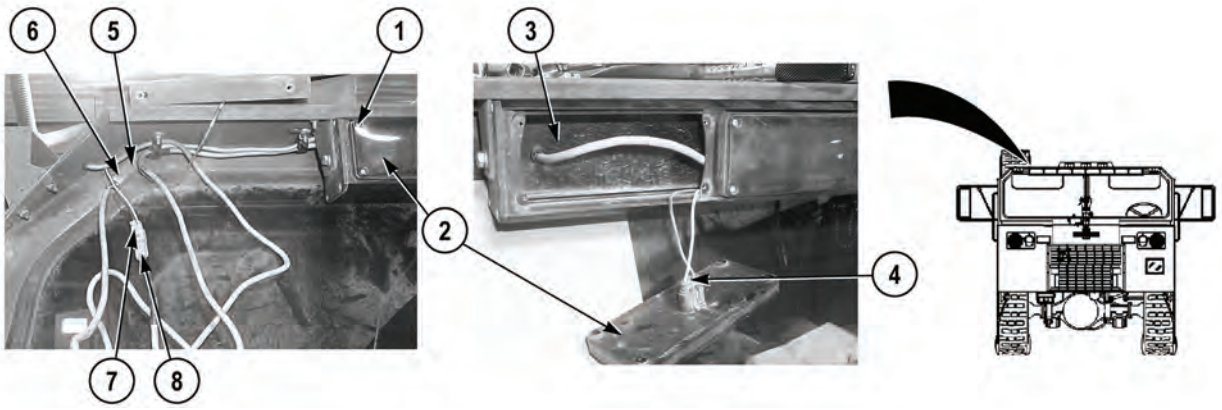


5. Install screw (24) and washer (23), on vehicle and cab front lightbar bracket (25) with cushion clip (22), lockwasher (21) and nut (20).



6. Install screw (18) and washer (17) on vehicle and cab front lightbar bracket (19) with cushion clip (16), lockwasher (15), and nut (14).

7. Install screw (13) and washer (12) on vehicle with cushion clip (11), lockwasher (10), and nut (9).



8. Connect cab roof wire harness connector (8) on cab front lightbar cable connector (7).
9. Connect cab lightbar cable assembly branch connector (6) on cab front lightbar cable connector (5).

NOTE

- Perform Steps (10) and (11) if installing cab front lightbar lights.
- All cab front lightbar lights are installed the same. Passenger side lights shown.

10. Connect cab front lightbar light (2) on cab front lightbar wire harness connector (4).
11. Install cab front lightbar light (2) on cab front lightbar (3) with four screws (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Install cab clearance lights and brackets (WP 0221)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

CAB SIDE LIGHTBAR REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

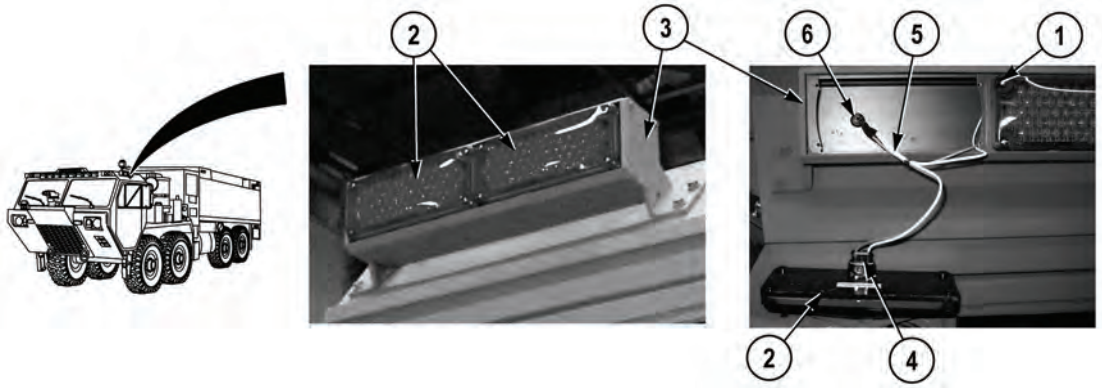
Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)
Lockwasher (2)

Materials/Parts (continued)
Lockwasher (2)

References
WP 0392, Fig. 27

Equipment Conditions
Batteries disconnected (TM 9-2320-315-14&P)

REMOVAL



NOTE

Both cab side lightbars are removed the same way. Driver side shown.

1. Remove eight screws (1) and two lights (2) from cab side lightbar (3).

⚠ CAUTION

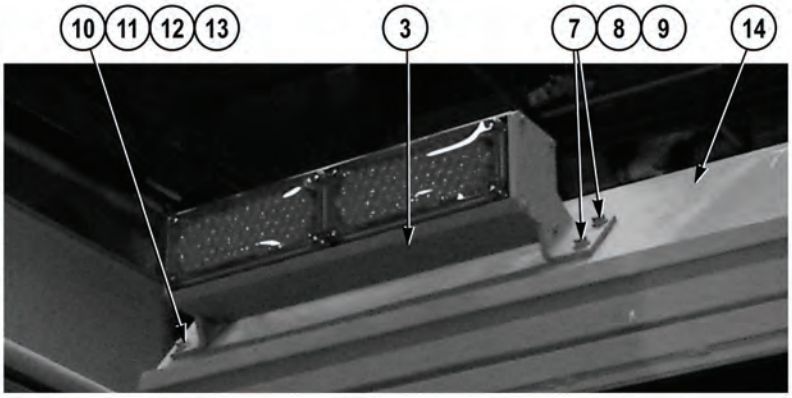
Support lights while removing wires from connectors to ensure lights do not drop. Failure to do so may cause damage to equipment.

2. Disconnect two lights (2) from connectors (4).

NOTE

- Tag and mark wires prior to removal to ensure proper installation.
- Remove cable ties as required.
- The white and black wires are spliced together.

3. Cut four wires (5) (TM 9-2320-315-14&P).
4. Remove four wires (5) and grommet (6) from cab side lightbar (3).



5. Remove two screws (7), lockwashers (8), and washers (9) from cab side lightbar (3). Discard lockwashers.
6. Remove two nuts (10), lockwashers (11), four washers (12), two screws (13), and cab side lightbar (3) from cab (14). Discard lockwashers.

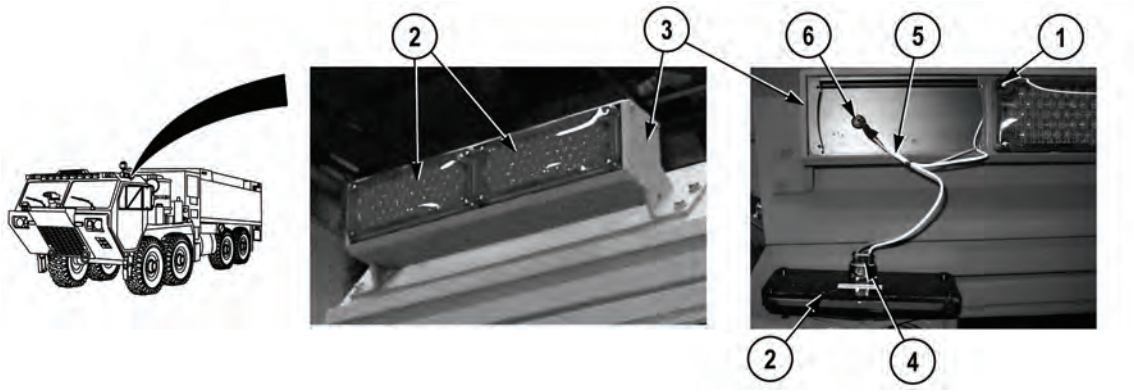
END OF TASK

INSTALLATION

NOTE

Both cab side lightbars are installed the same way. Driver side shown.

1. Install cab side lightbar (3) on cab (14) with two screws (13), four washers (12), two lockwashers (11), and nuts (10).
2. Install two washers (9), lockwashers (8), and screws (7) on cab side lightbar (3).



3. Install grommet (6) in cab side lightbar (3).
4. Insert four wires (5) in grommet (6).

NOTE

Install cable ties as required.

5. Repair four wires (5) (TM 9-2320-315-14&P).
6. Connect two connectors (4) to lights (2).
7. Install two lights (2) on cab side lightbar (3) with eight screws (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Connect batteries (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

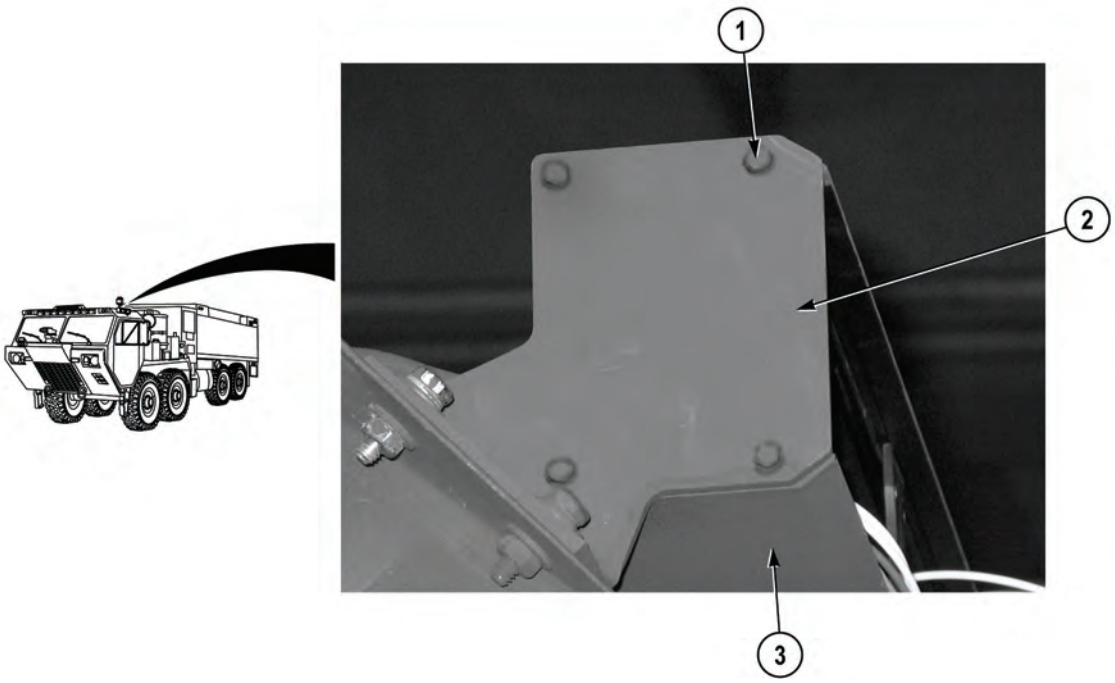
CAB LIGHTBAR REPAIR

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Equipment Conditions
Cab front lightbar removed (WP 0222)
Cab side lightbar removed (WP 0223)

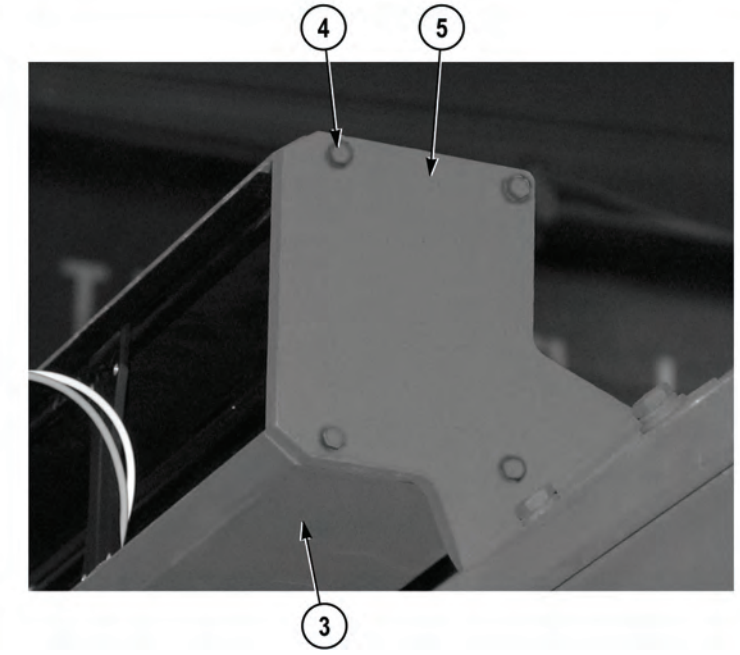
CAB SIDE LIGHTBAR DISASSEMBLY



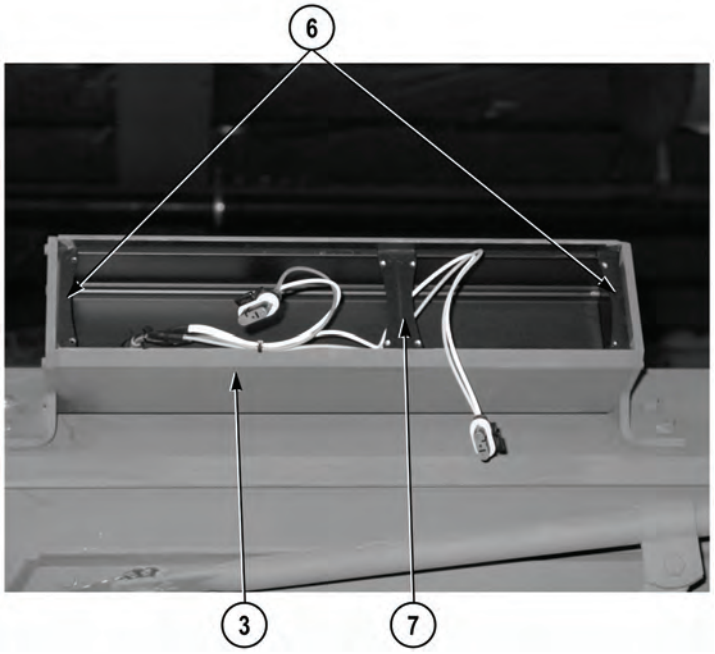
NOTE

Both cab side lightbars are disassembled the same. Driver side shown.

1. Remove four screws (1) and bracket (2) from cab side lightbar (3).



2. Remove four screws (4) and bracket (5) from cab side lightbar (3).



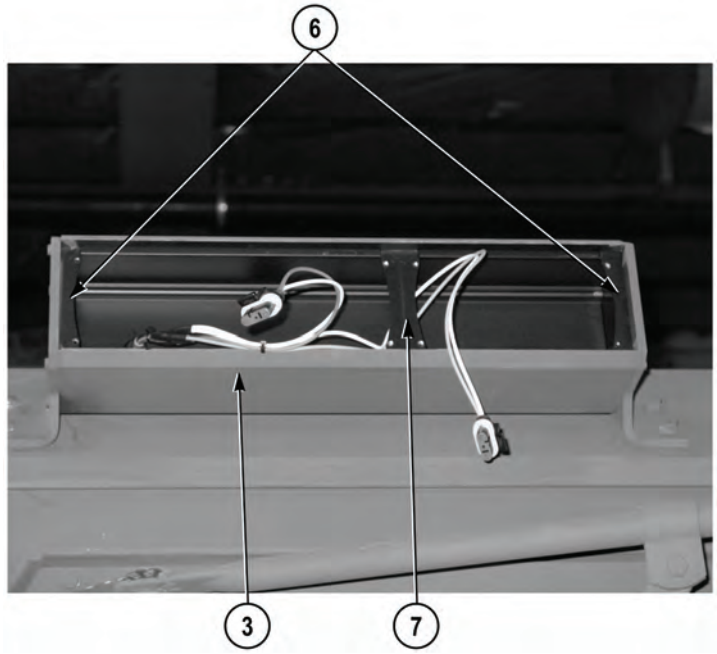
NOTE

Note position of brackets prior to removal to ensure proper installation.

3. Remove two, brackets (6) and bracket (7) from side lightbar (3).

END OF TASK

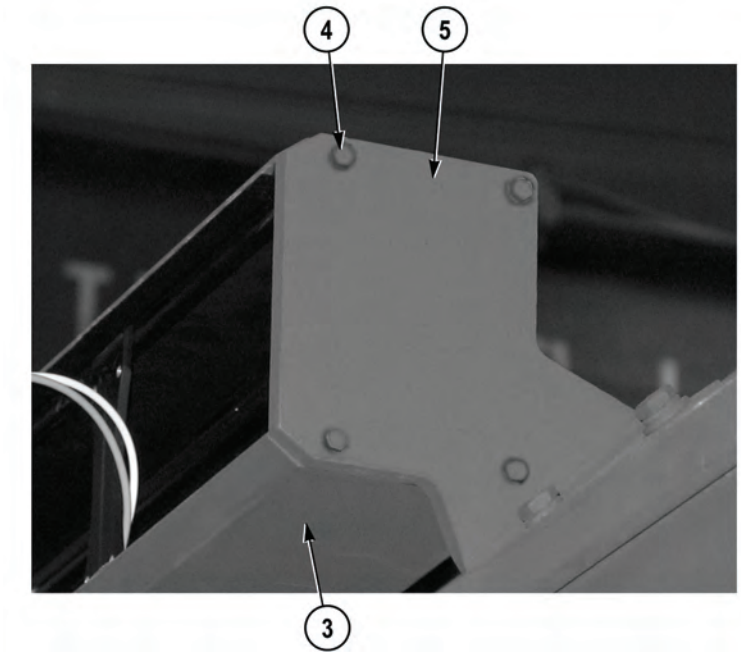
CAB SIDE LIGHTBAR ASSEMBLY



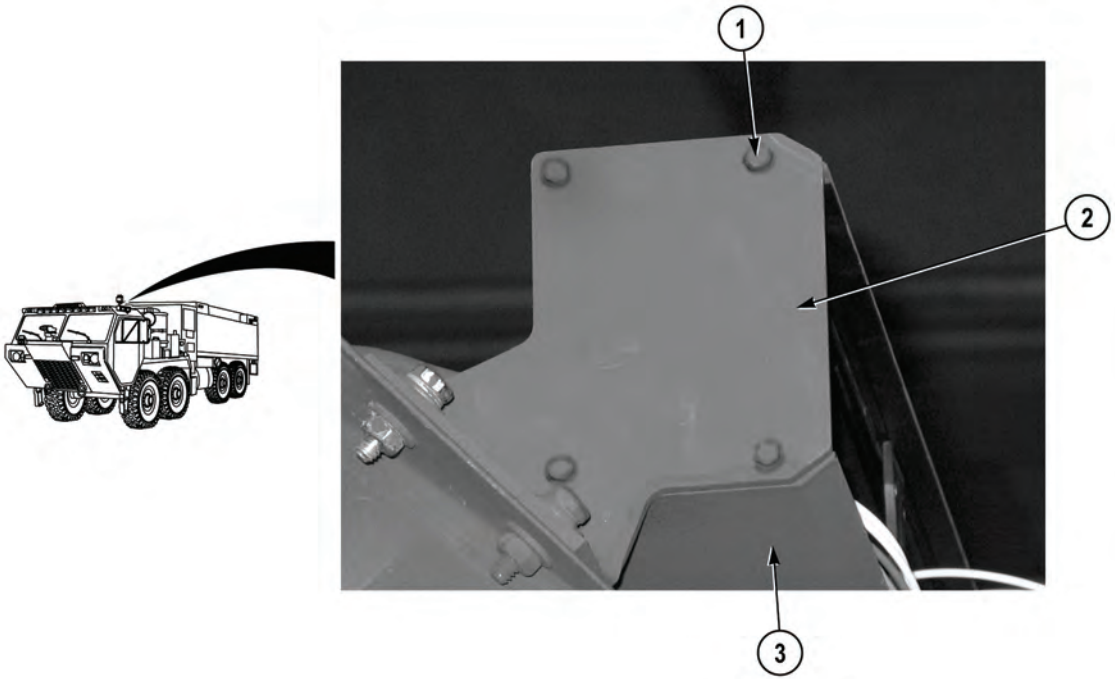
NOTE

- Both cab side lightbars are assembled the same way. Driver side shown.
- Install all brackets in same position as noted prior to removal.

1. Position bracket (7) and two brackets (6) on cab side lightbar (3).



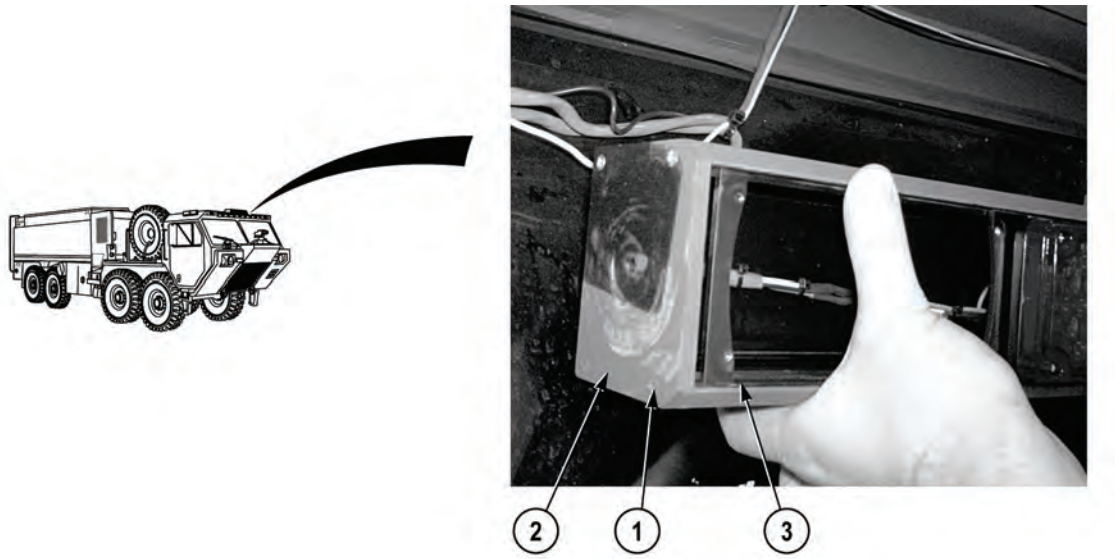
2. Install rear cab side lightbar bracket (5) on cab side lightbar (3) with four screws (4).



3. Install bracket (2) on cab side lightbar (3) with four screws (1).

END OF TASK

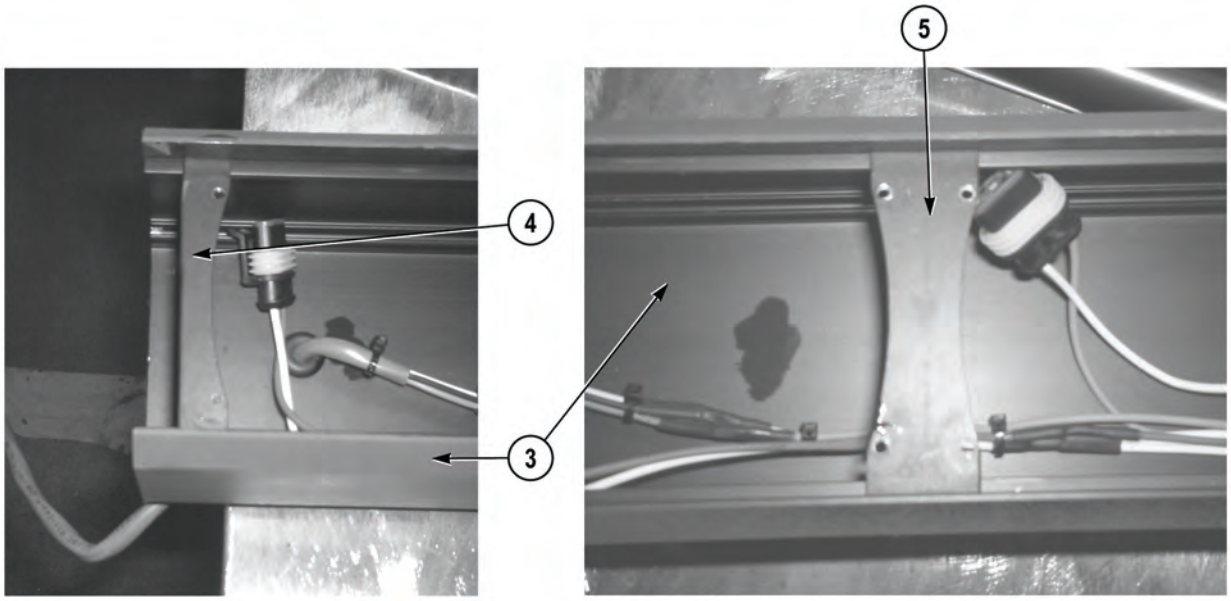
CAB FRONT LIGHTBAR DISASSEMBLY



NOTE

Both cab front lightbar end caps are removed the same way. Passenger side shown.

1. Remove four screws (1) and cab front lightbar end cap (2) from cab front lightbar (3).



NOTE

Note position of brackets prior to removal to ensure proper installation.

2. Remove two brackets (4) and seven brackets (5) from cab front lightbar (3).

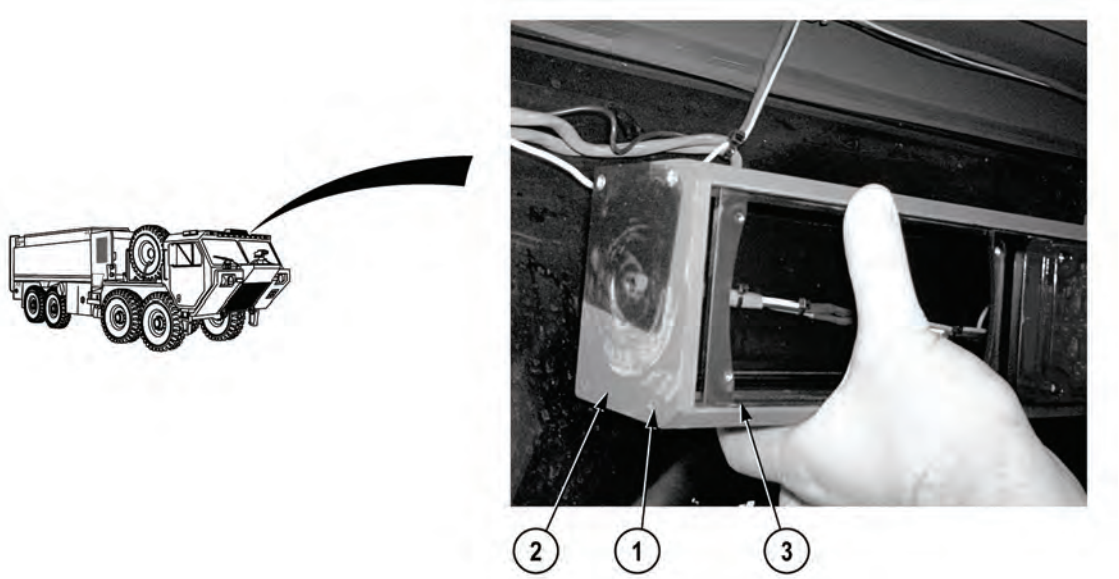
END OF TASK

CAB FRONT LIGHTBAR ASSEMBLY

NOTE

Install brackets in same position as noted prior to removal.

1. Position seven brackets (5) and two brackets (4) on cab front lightbar (3).



NOTE

Both cab front lightbar end caps are installed the same way. Passenger side shown.

2. Install cab front lightbar end cap (2) on cab front lightbar (3) with four screws (1).

END OF TASK

FOLLOW ON MAINTENANCE

1. Install cab side lightbar (WP 0223)
2. Install cab front lightbar (WP 0222)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

LOWER REAR MARKER LIGHTS AND BRACKET REPLACEMENT

INITIAL SETUP:

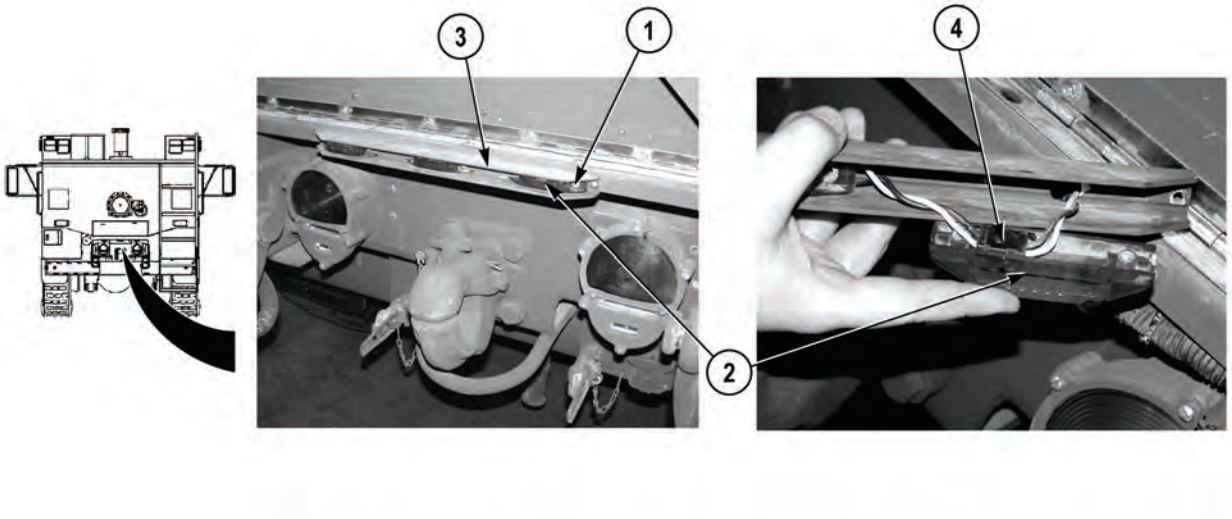
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)
Locknut (2)
Lockwasher (2)

References
WP 0392, Fig. 32

Equipment Conditions
Batteries disconnected (TM 9-2320-315-14&P)

REMOVAL



NOTE

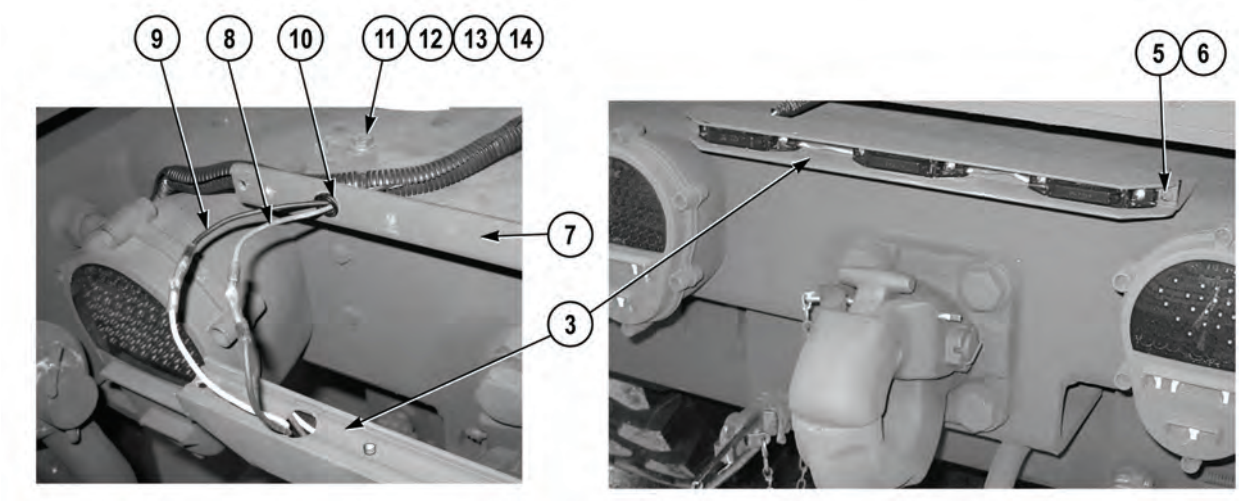
Marker lights are replaced the same way. Right side marker light shown.

1. Remove two screws (1) and marker light (2) from light bracket (3).

NOTE

Marker light will only function if properly installed on rubber mounting of pigtail. Plastic tabs on lamp must align with openings on rubber mounting of pigtail. It is possible to force lamp on rubber mounting of pigtail in opposite position, which will not allow lamp to operate. Note position of lamp on rubber mounting of pigtail prior to removal to ensure proper installation.

2. Remove marker light (2) from rubber mounting of pigtail (4).



3. Remove two locknuts (5), screws (6), and light bracket (3) from bracket (7). Discard locknuts.

NOTE

- Tag and mark wires prior to removal to ensure proper installation.
- Remove cable ties as required.

4. Cut wire 1606 (8) and wire 1640 (9) (TM 9-2320-315-14&P), and remove light bracket (3) from vehicle.
5. Remove grommet (10) from bracket (7).
6. Remove two nuts (11), four washers (12), two lockwashers (13), screws (14), and bracket (7) from vehicle. Discard lockwashers.

END OF TASK

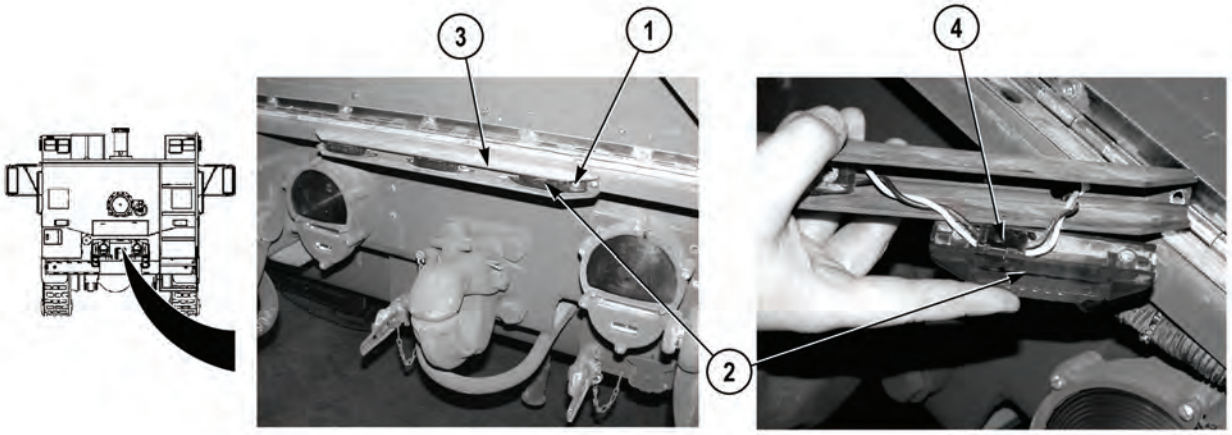
INSTALLATION

1. Install bracket (7) on vehicle with two screws (14), lockwashers (13), four washers (12), and nuts (11).
2. Install grommet (10) on bracket (7).

NOTE

Install cable ties as required.

3. Repair wire 1606 (8) and wire 1640 (9) (TM 9-2320-315-14&P).
4. Install light bracket (3) on bracket (7) with two screws (6) and locknuts (5).



NOTE

Marker light will only function if properly installed on rubber mounting of pigtail. Plastic tabs on lamp must align with openings on rubber mounting of pigtail. It is possible to force lamp on rubber mounting of pigtail in opposite position, which will not allow lamp to operate. Install lamp on rubber mounting of pigtail as noted prior to removal.

5. Install rubber mounting of pigtail (4) on marker light (2).
6. Install marker light (2) on bracket (3) with two screws (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Connect batteries (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

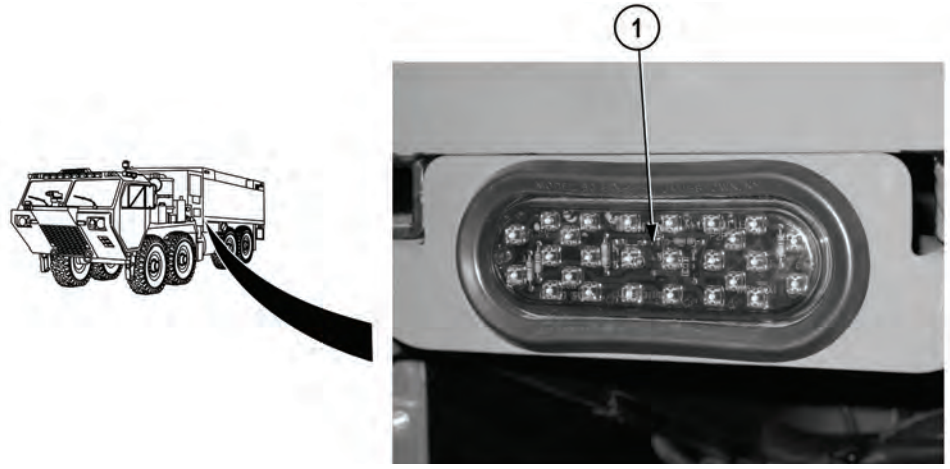
REAR MARKER/CLEARANCE DIRECTIONAL LED REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Equipment Conditions
Batteries disconnected (TM 9-2320-315-14&P)

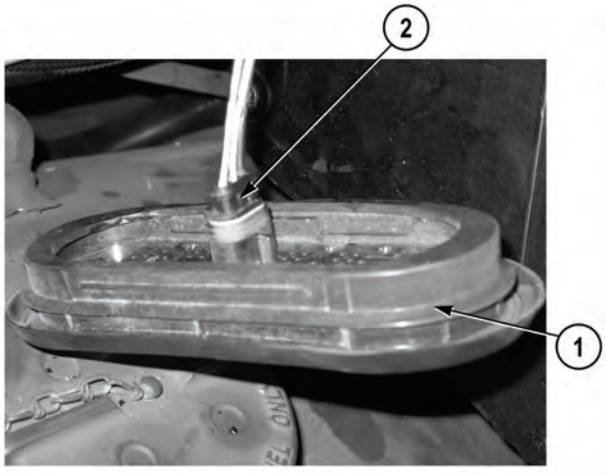
REMOVAL



NOTE

Both rear marker/clearance directional LEDs are removed the same way.

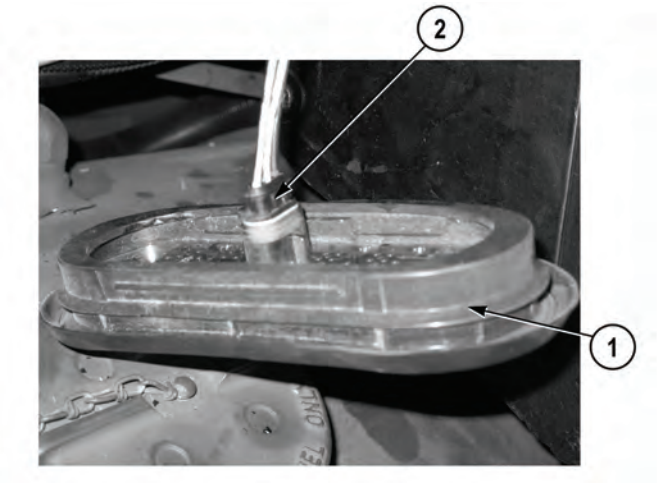
1. Remove rear marker/clearance directional LED (1) from vehicle.



2. Disconnect connector (2) from back of rear marker/clearance directional LED (1).

END OF TASK

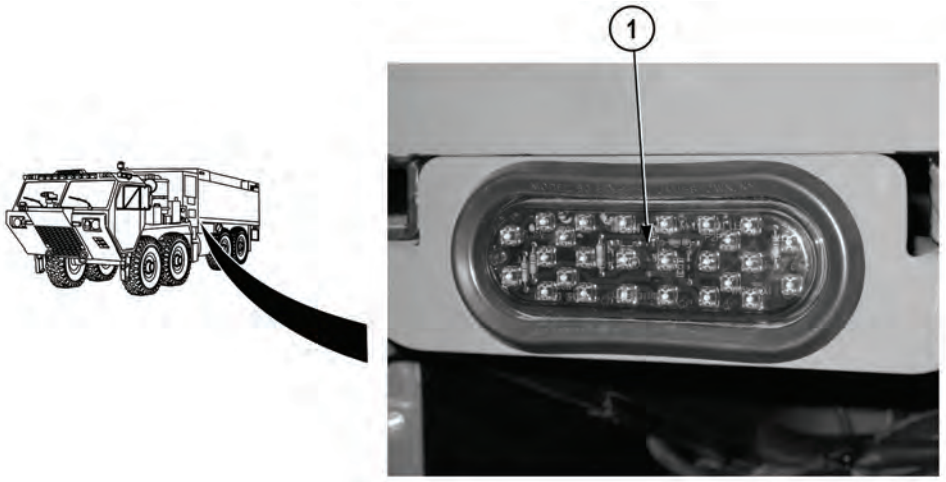
INSTALLATION



NOTE

Both rear marker/clearance directional LEDs are installed the same way.

1. Connect connector (2) to rear marker/clearance directional LED (1).



2. Install rear marker/clearance directional LED (1) on vehicle.

END OF TASK

FOLLOW-ON MAINTENANCE

Connect batteries (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

REAR MARKER/CLEARANCE LED REPLACEMENT

INITIAL SETUP:

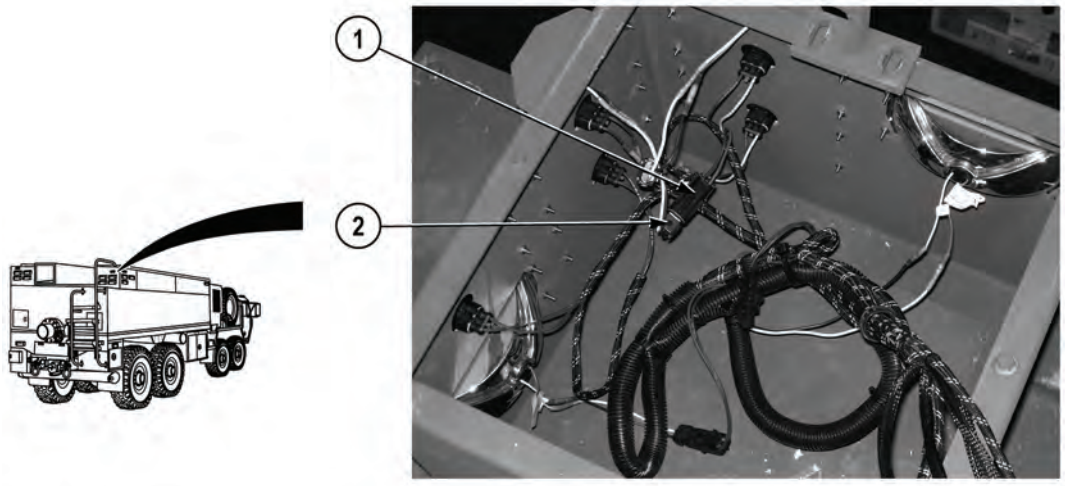
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Locknut (2)

References
WP 0392, Fig. 27

Equipment Conditions
Light bezel cover removed (WP 0336)

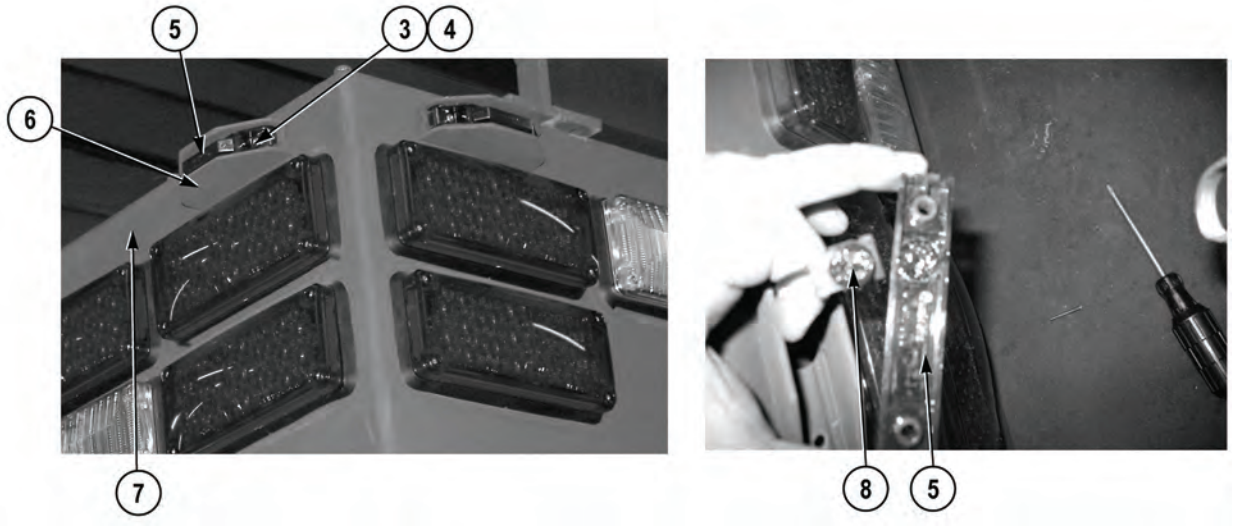
REMOVAL



NOTE

All four marker/clearance LEDs are removed the same way. Rear passenger side shown.

1. Disconnect wire harness connector (1) from marker/clearance LED connector (2).



2. Remove two locknuts (3), screws (4), marker/clearance LED (5), and marker/clearance LED cover (6) from light bezel (7). Discard locknuts.

NOTE

- Lamp will only function if correctly installed on rubber mounting of pigtail. It is possible to force lamp on rubber mounting of pigtail in opposite position, which will not allow lamp to operate.
- Note position of lamp on rubber mounting of pigtail prior to removal to ensure proper installation.

3. Remove marker/clearance LED pigtail connector (8) from marker/clearance LED (5).
4. Remove marker/clearance LED (5) from marker/clearance LED cover (6).

END OF TASK

INSTALLATION

NOTE

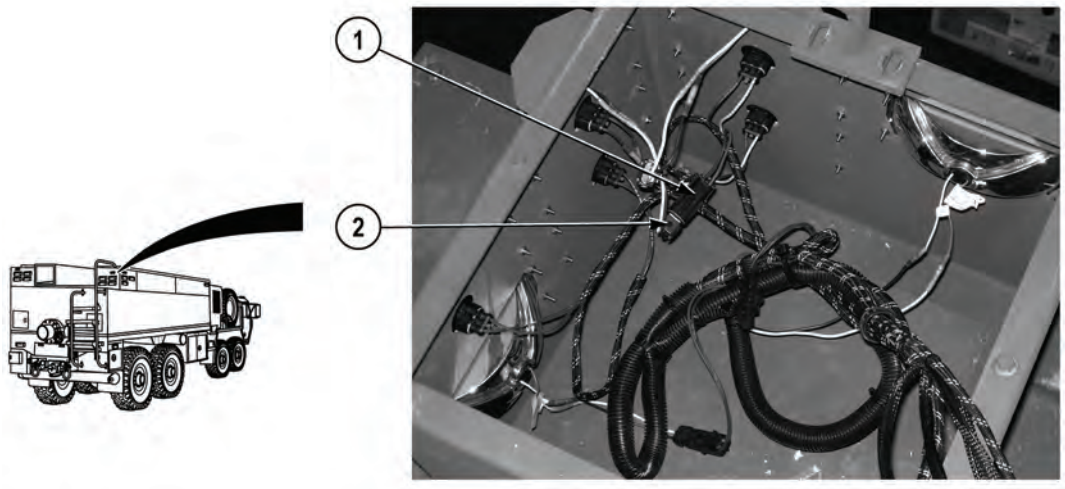
All four marker/clearance LEDs are installed the same way. Rear passenger side shown.

1. Install marker/clearance LED cover (6) on marker/clearance LED (5).

NOTE

- Lamp will only function if correctly installed on rubber mounting of pigtail. It is possible to force lamp on rubber mounting of pigtail in opposite position, which will not allow lamp to operate.
- Install lamp pigtail as noted prior to removal.

2. Install LED pigtail connector (8) on marker/clearance LED (5).
3. Install marker/clearance LED cover (6) and marker/clearance LED (5) on light bezel (7) with two screws (4), and locknuts (3).



4. Connect marker/clearance LED connector (2) on wire harness connector (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Install light bezel cover (WP 0336)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

ROOF MOUNTED CLEARANCE LIGHT(S) REPLACEMENT

INITIAL SETUP:

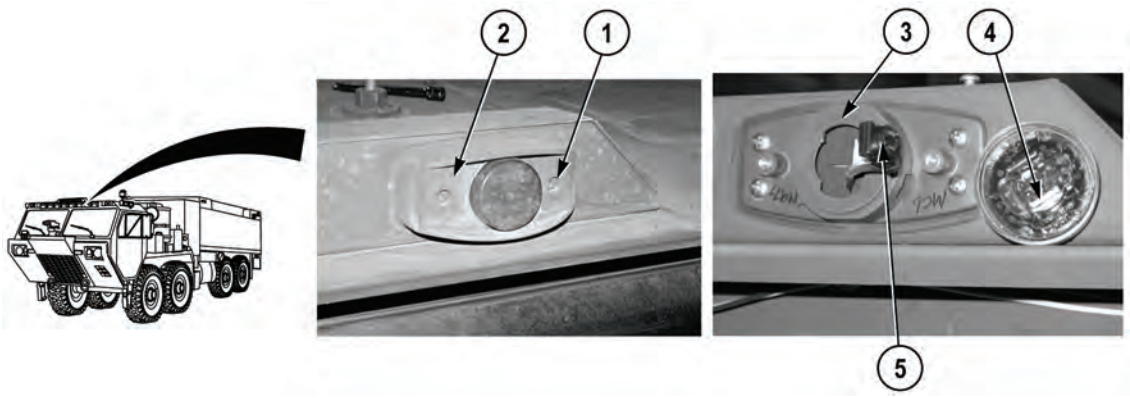
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Lockwasher (1)
Lockwasher (2)

References
WP 0392, Fig. 27

Equipment Conditions
Batteries disconnected (TM 9-2320-315-14&P)

REMOVAL



NOTE

All three clearance lights are removed the same way. Driver side shown.

1. Remove two screws (1) and cover (2) from mounting base (3).

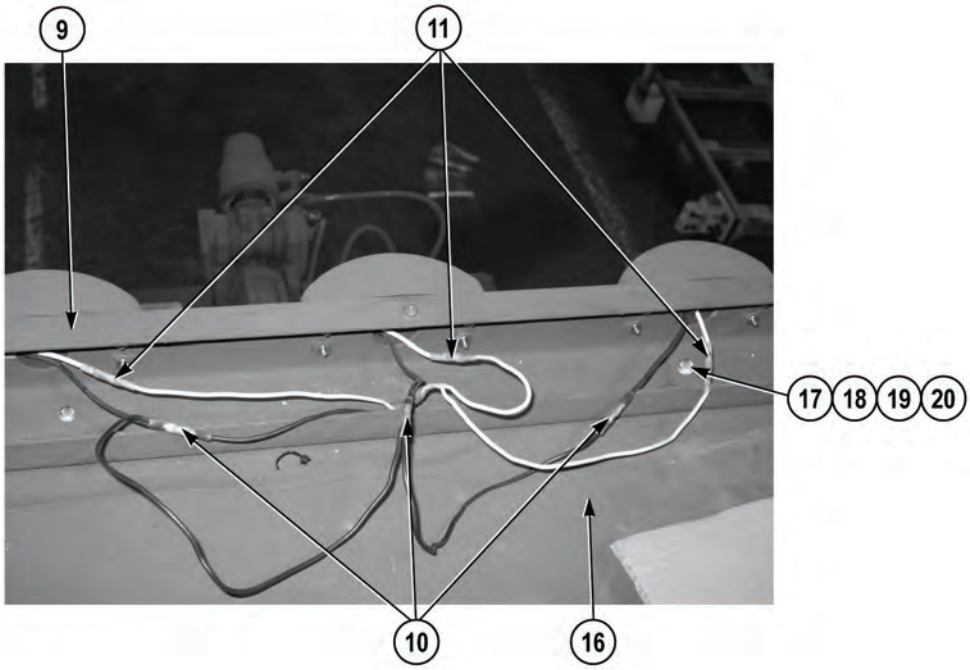
NOTE

Lamp must be rotated 90 degrees in order to remove lamp from mounting base.

2. Remove lamp (4) from mounting base (3).
   - Lamp will only function if correctly installed on rubber mounting of pigtail. Plastic tabs on lamp must align with openings on rubber mounting of pigtail. It is possible to force lamp on rubber mounting of pigtail in opposite position, which will not allow lamp to operate.
   - Note position of lamp on rubber mounting of pigtail prior to removal to ensure proper installation.
3. Remove lamp (4) from rubber mounting of pigtail (5).



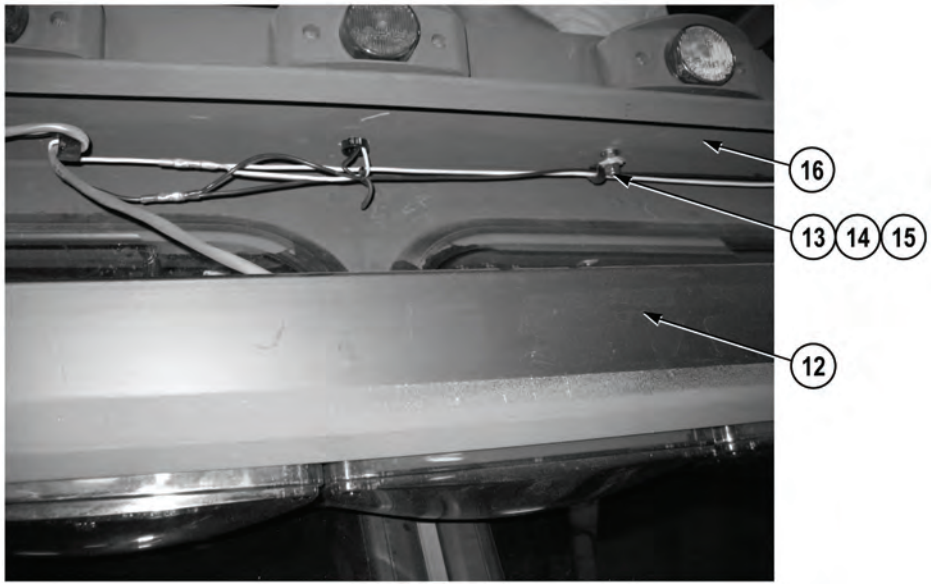
4. Remove five screws (6), washers (7), and cover (8) from mounting bracket (9).



NOTE

- Tag and mark wires prior to removal to ensure proper installation.
- Note routing of wires prior to removal to ensure proper installation.

5. Cut three wires 1640 (10), and three wires 2906 (11) (TM 9-2320-315-14&P).



NOTE

Cab front lightbar needs to be removed to access mounting bracket hardware.

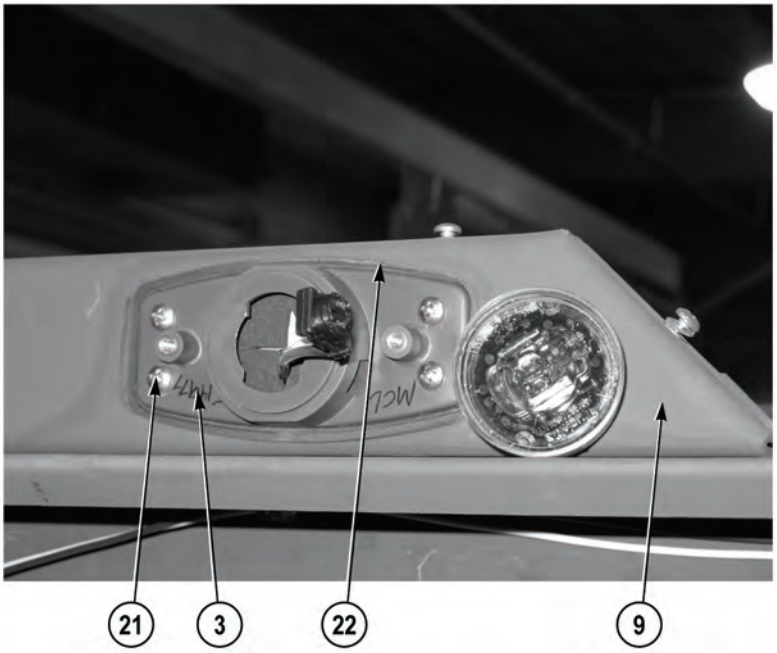
6. Remove cab front lightbar (12) (WP 0222).

NOTE

Note position of cushion clip prior to removal to ensure proper installation.

7. Remove nut (13), lockwasher (14), and cushion clip (15) from cab roof (16). Discard lockwasher.

8. Remove two nuts (17), lockwashers (18), four washers (19), two screws (20), and mounting bracket (9) from cab roof (16). Discard lockwashers.



9. Remove four screws (21), mounting base (3), and gasket (22) from mounting bracket (9).

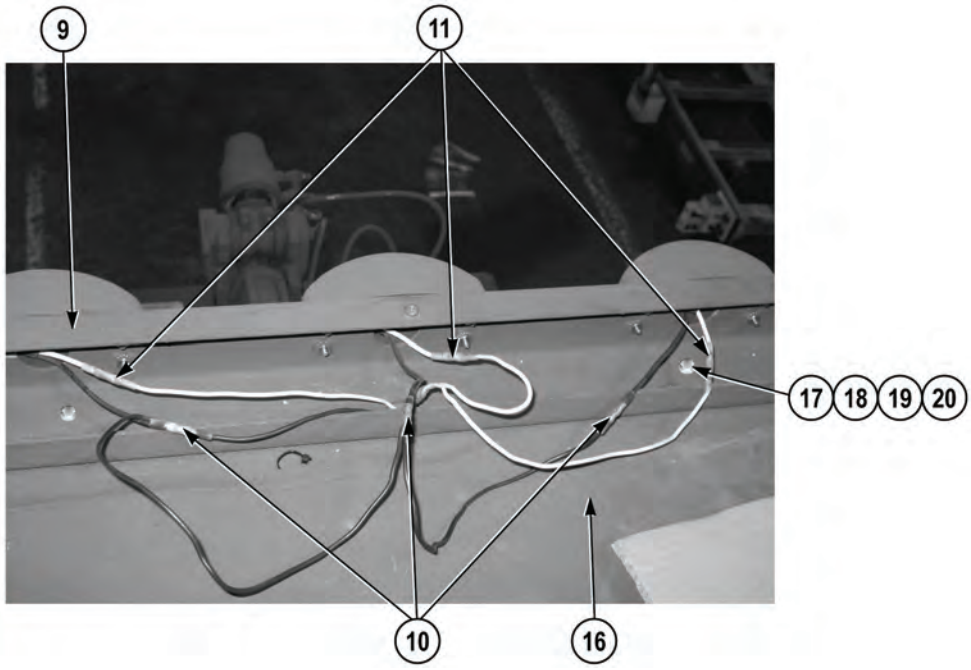
END OF TASK

INSTALLATION

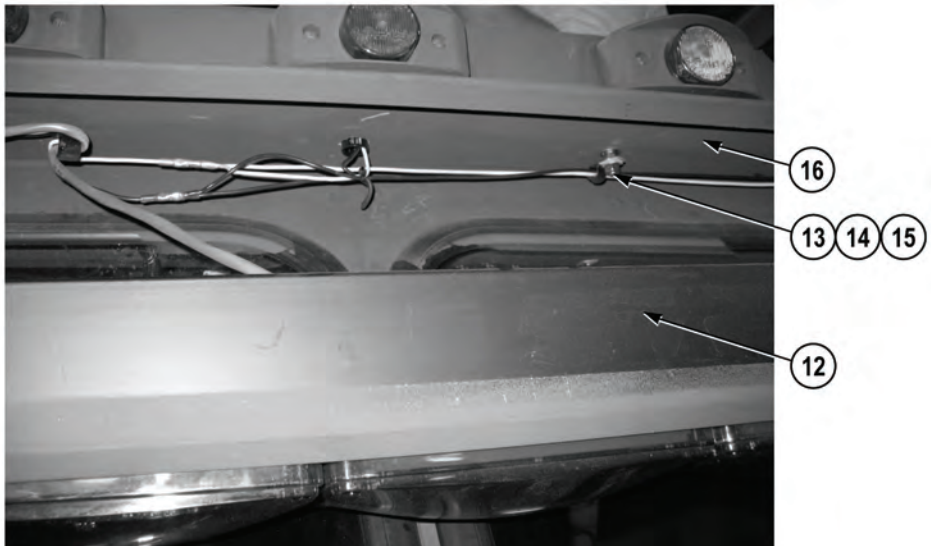
NOTE

All three clearance lights are installed the same way. Driver side shown.

1. Install gasket (22) and mounting base (3) on mounting bracket (9) with four screws (21).



2. Install mounting bracket (9) on cab roof (16) with two screws (20), four washers (19), two lockwashers (18) and nuts (17).



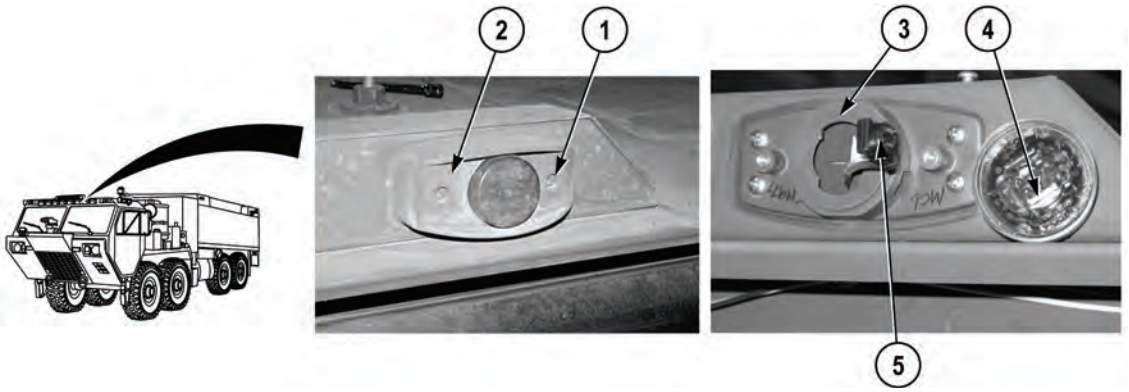
NOTE

Install cushion clip as noted prior to removal.

3. Install cushion clip (15) on cab roof (16) with lockwasher (14) and nut (13).
4. Install cab front lightbar (12) (WP 0222).
5. Repair three wires 2906 (11) and three wires 1640 (10) (TM 9-2320-315-14&P).



6. Install cover (8) on mounting bracket (9) with five washers (7) and screws (6).



⚠ CAUTION

Install lamp on rubber mounting of pigtail as noted prior to removal. Failure to connect lamp on rubber mounting of pigtail correctly will not allow lamp to function.

7. Install lamp (4) on rubber mounting of pigtail (5).

NOTE

Install lamp as noted prior to removal. Lamp must be installed with TOP facing up.

8. Install lamp (4) on mounting base (3).

9. Instal cover (2) on mounting base (3) with two screws (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Connect batteries (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

WARNING LIGHT(S) REPLACEMENT

INITIAL SETUP:

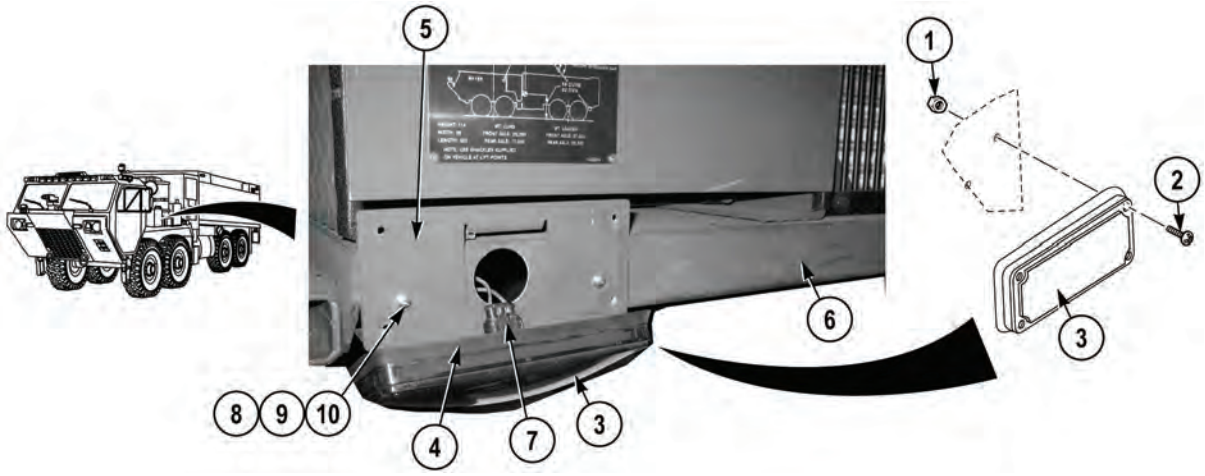
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Locknut (4)
Locknut (2)

References
WP 0392, Fig. 27

Equipment Conditions
Batteries disconnected (TM 9-2320-315-14&P)

REMOVAL



⚠ CAUTION

Bottom of light and seal both have weep holes to allow water to drain. Note position of weep holes prior to removal to ensure proper installation. Failure to comply may cause damage to equipment.

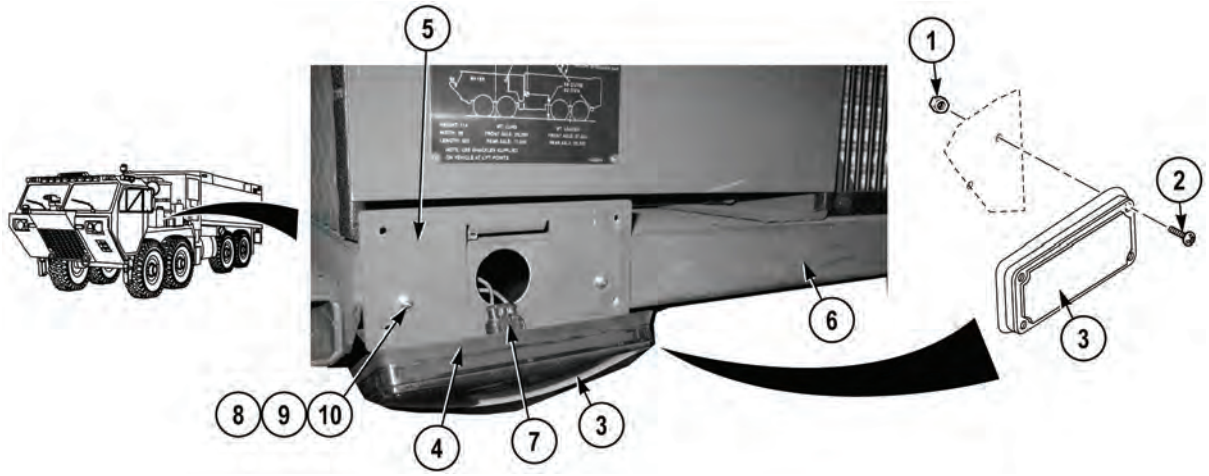
NOTE

All warning lights may not have brackets. Driver side shown.

1. Remove four locknuts (1), screws (2), light (3), and seal (4) from bracket (5) and fender (6). Discard locknuts.
2. Disconnect warning light main harness connector (7) from light (3).
3. Remove two locknuts (8), washers (9), screws (10), and bracket (5) from fender (6). Discard locknuts.

END OF TASK

INSTALLATION



NOTE

All warning lights installed similarly. Driver side shown.

1. Install bracket (5) on fender (6) with two screws (10), washers (9), and locknuts (8).
2. Connect warning light main harness connector (7) on light (3).

CAUTION

Bottom of light and seal both have weep holes to allow water to drain. Note position of weep holes prior to removal to ensure proper installation. Failure to comply may cause damage to equipment.

3. Install seal (4) and light (3) on bracket (5) and fender (6) with four screws (2) and locknuts (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Connect batteries (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

OVERHEAD WARNING BEACON REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

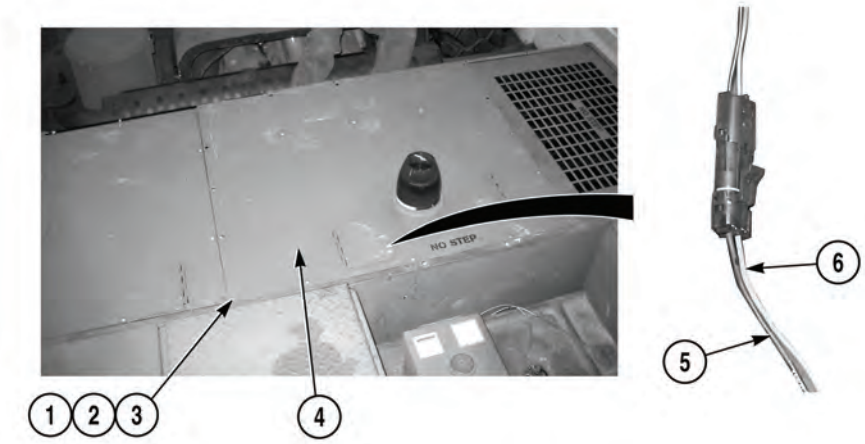
Materials/Parts
Lockwasher (19)
Locknut (2)

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

References
WP 0392, Fig. 31

Equipment Conditions
Batteries disconnected (TM 9-2320-315-14&P)

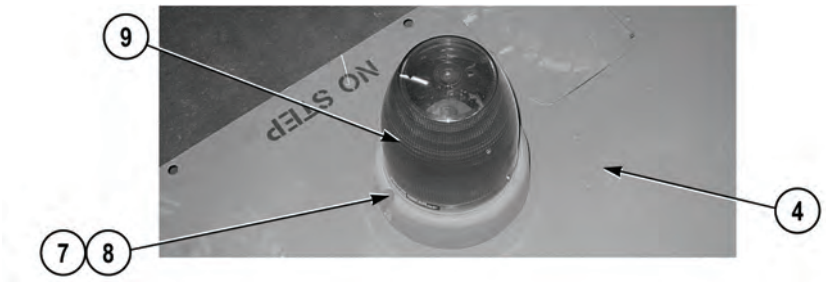
REMOVAL



⚠ CAUTION

Pump house panel must only be lifted far enough to cut wires for beacon light, failure to comply may cause damage to equipment.

1. Remove 19 screws (1), lockwashers (2), and washers (3) from pump house panel K (4) and vehicle. Discard lockwashers.
2. With the aid of an assistant, lift pump house panel K (4) and disconnect wire 1640 (5) and wire 1630 (6).

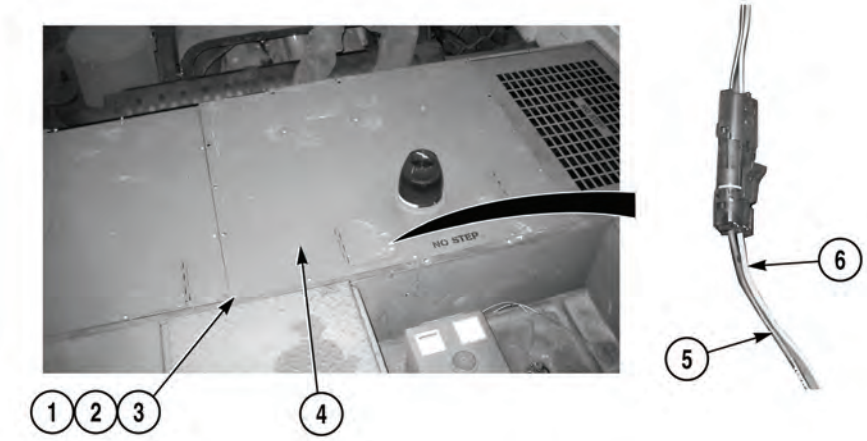


3. Remove two locknuts (7), screws (8), and beacon light (9) from pump house panel K (4). Discard locknuts.

END OF TASK

INSTALLATION

1. Install beacon light (9) on pump house panel K (4) with two screws (8) and locknuts (7).



2. With the aid of an assistant, connect wire 1630 (6) and wire 1640 (5) (TM 9-2320-315-14&P).
3. Install pump house panel K (4) on vehicle with 19 washers (3), lockwashers (2), and screws (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Connect batteries (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

SCENE LIGHT(S) REPLACEMENT

INITIAL SETUP:

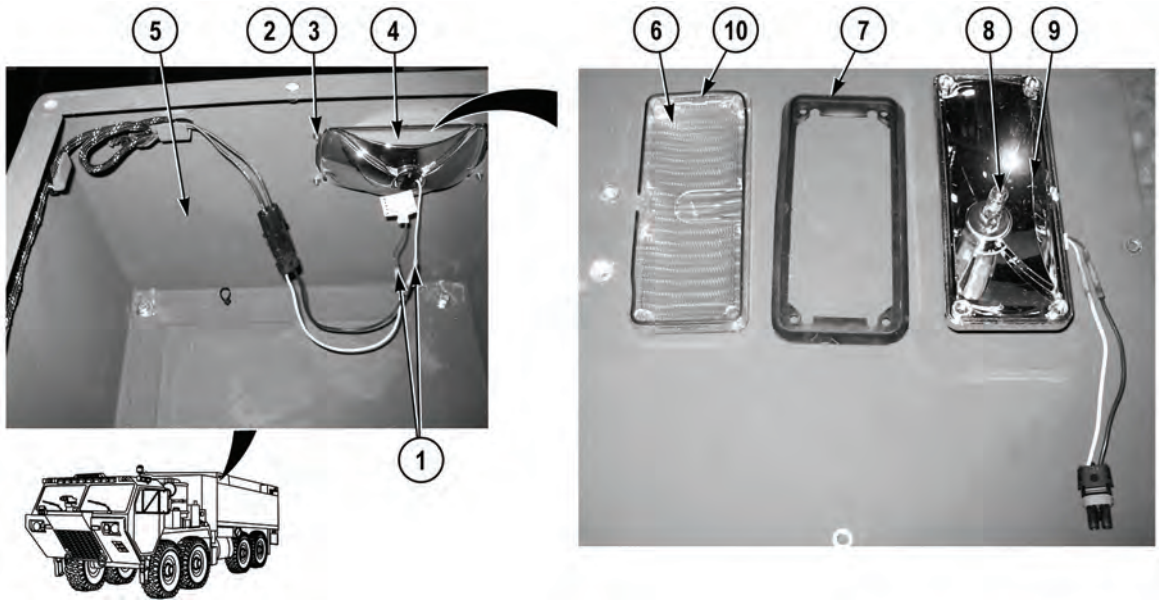
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Locknut (4)

References
WP 0392, Fig. 21

Equipment Conditions
Batteries disconnected (TM 9-2320-315-14&P)
Light bezel cover removed (WP 0337)

REMOVAL



NOTE

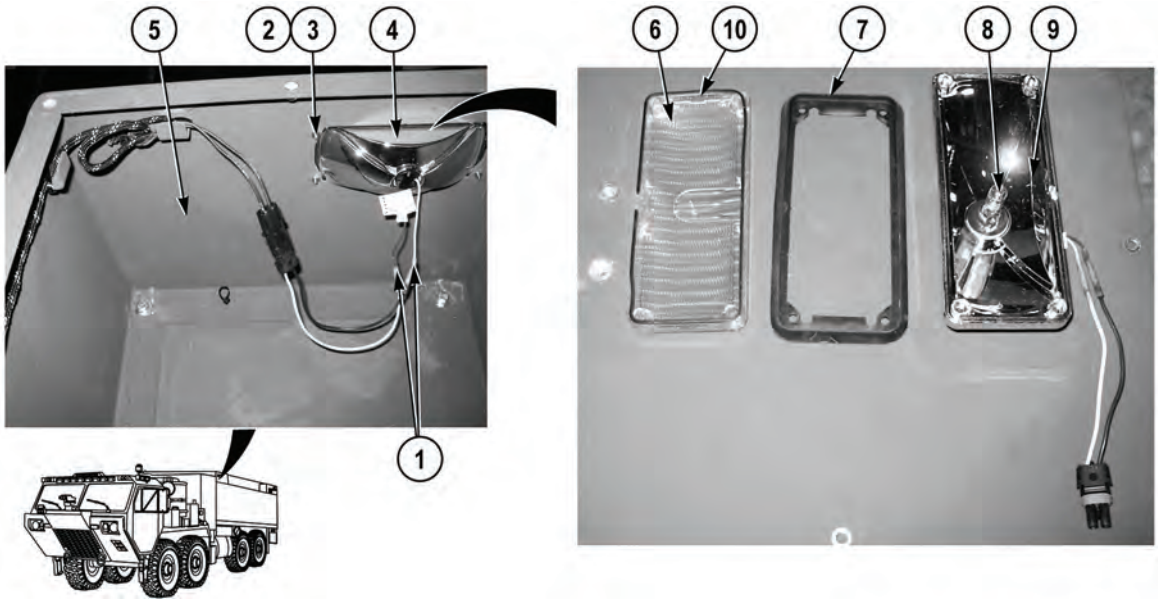
- All scene lights are removed the same way. Driver side front bezel box and scene light shown.
- Tag and mark wires prior to removal to ensure proper installation.

1. Disconnect connector (1).

NOTE

Note top of scene light and gaskets prior to removal to ensure proper installation.

2. Remove four locknuts (2), screws (3), and scene light (4) from bezel box (5). Discard locknuts.



3. Remove lens (6), gasket (7), and light bulb (8) from light reflector (9).
4. Remove gasket (10) from lens (6).

END OF TASK

INSTALLATION

NOTE

- All scene lights are installed the same way. Driver side front bezel box and scene light shown.
- Install scene light and gaskets as noted prior to removal.

1. Install gasket (10) on lens (6).
2. Install light bulb (8), gasket (7), and lens (6) on light reflector (9).
3. Install scene light (4) on bezel box (5) with four screws (3) and locknuts (2).
4. Connect connector (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install light bezel cover (WP 0337)
2. Connect batteries (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

STEP LIGHT(S) REPLACEMENT

INITIAL SETUP:

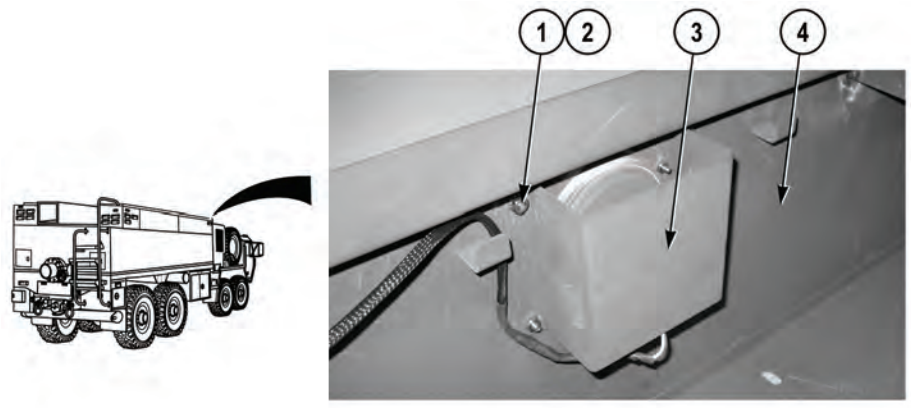
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Locknut (4)
Locknut (7)

References
WP 0392, Fig. 62

Equipment Conditions
Batteries disconnected (TM 9-2320-315-14&P)
Open stowage compartment doors (WP 0008)

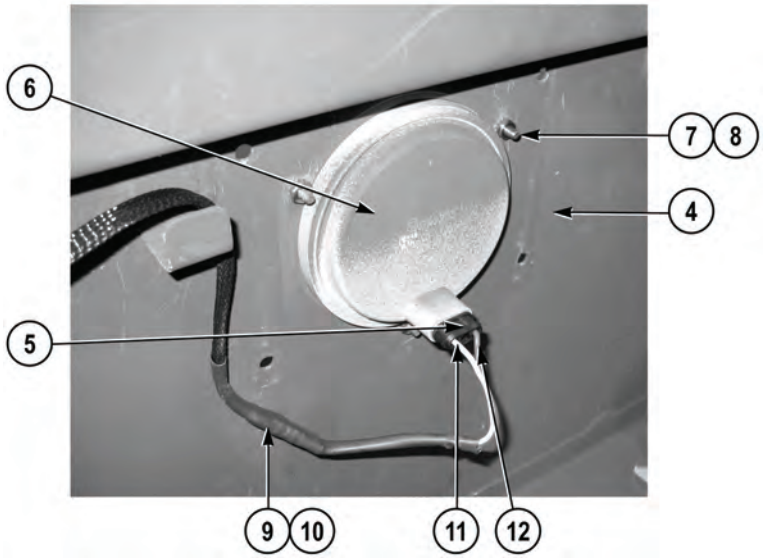
REMOVAL



NOTE

All step lights are removed the same way. Top front passenger side stowage compartment box shown.

1. Remove four locknuts (1), screws (2), and guard (3) from stowage compartment box (4). Discard locknuts.



2. Disconnect step light connector (5) from step light (6).
3. Remove three locknuts (7), screws (8), and step light (6) from stowage compartment box (4). Discard locknuts.

NOTE

Perform Step (4) if step light connector was removed.

4. Cut wire 1615 (9) and wire 2740 (10) from step light connector wire (11) and wire (12) (TM 9-2320-315-14&P).

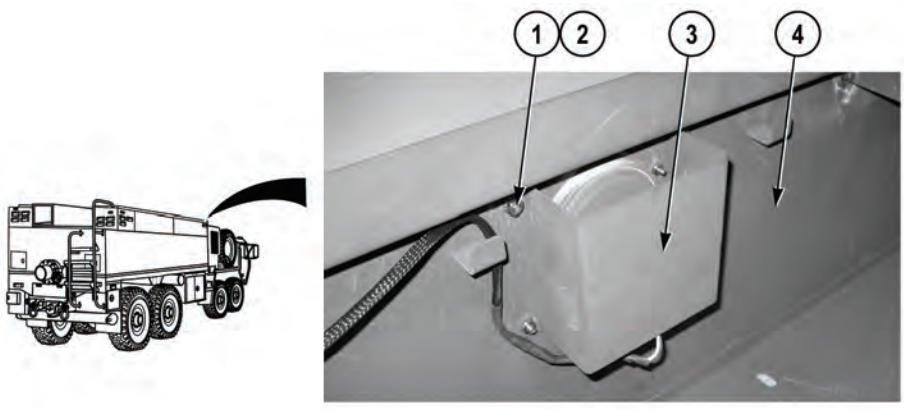
END OF TASK

INSTALLATION

NOTE

Perform Step (1) if step light connector was removed.

1. Connect step light connector wire (12) and wire (11) on wire 2740 (10) and wire 1615 (9) (TM 9-2320-315-14&P).
2. Install step light (6) on stowage compartment box (4) with three screws (8) and locknuts (7).
3. Connect step light connector (5) on step light (6).



4. Install guard (3) on stowage compartment box (4) with four screws (2) and locknuts (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Close stowage compartment doors (WP 0008)
2. Connect batteries (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

DOME LIGHT REPLACEMENT

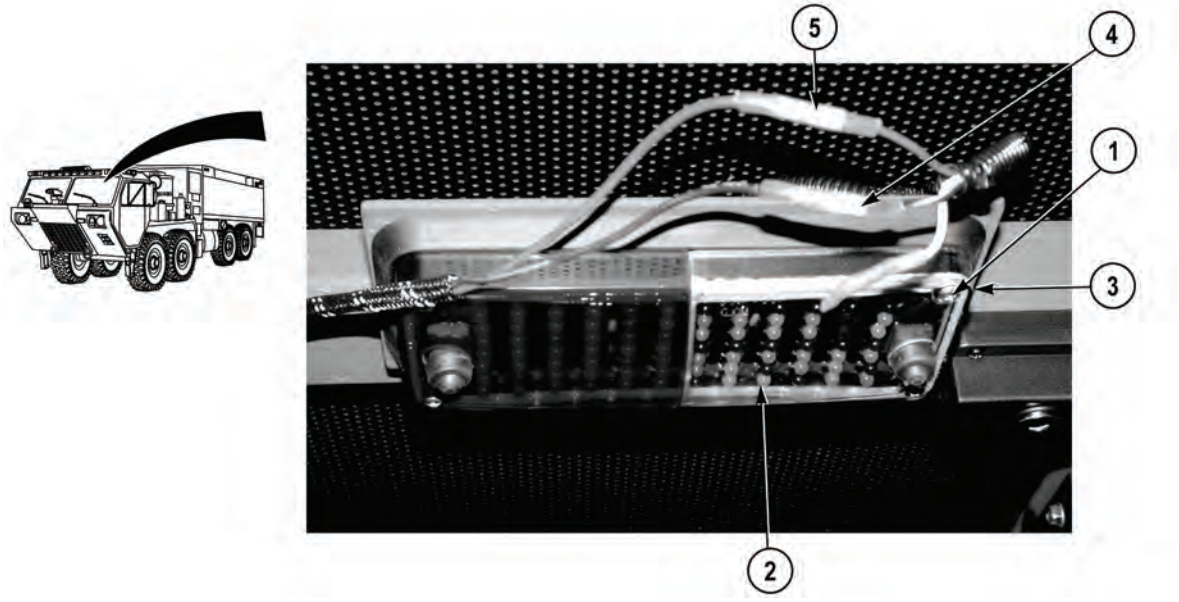
INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)

Equipment Conditions
Batteries disconnected (TM 9-2320-315-14&P)

REMOVAL

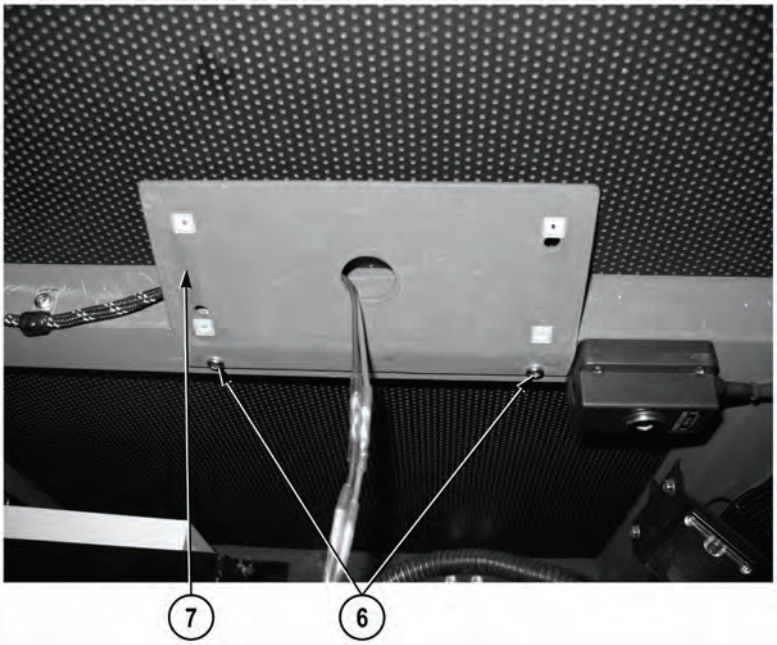


1. Remove four screws (1) and light (2) from bracket (3).

NOTE

Tag and mark wires prior to removal to ensure proper installation.

2. Cut wire 2640 (4) and wire 1047 (5) (TM 9-2320-315-14&P).

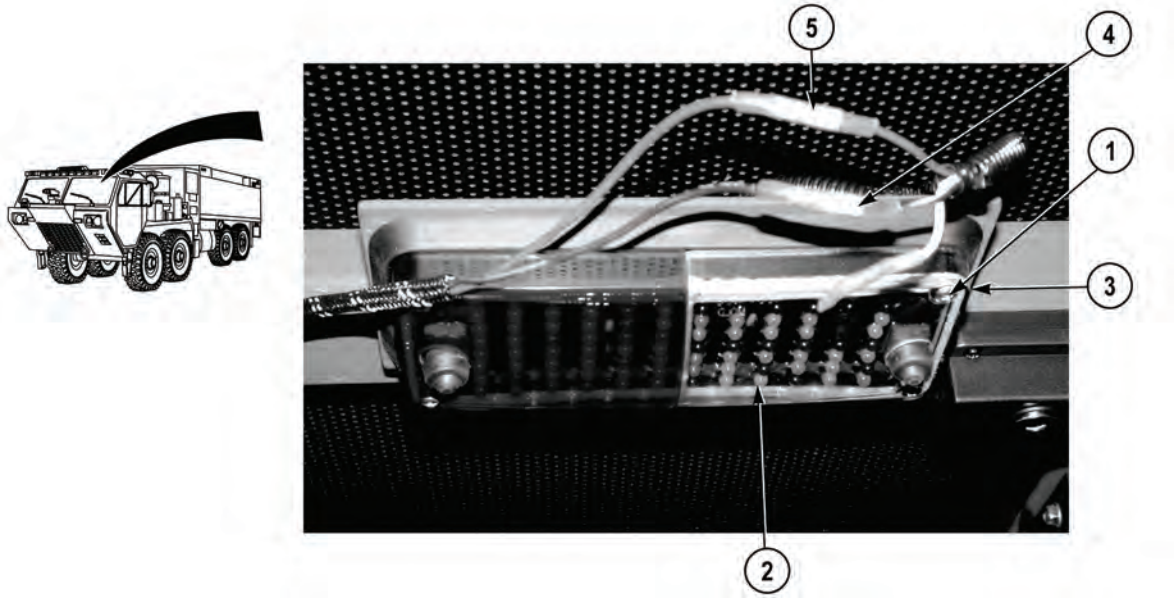


3. Remove two screws (6) and bracket (7) from vehicle.

END OF TASK

INSTALLATION

1. Install bracket (7) on vehicle with two screws (6).



2. Repair wire 1047 (5) and wire 2640 (4) (TM 9-2320-315-14&P).
3. Install light (2) and four screws (1) on bracket (3).

END OF TASK

FOLLOW-ON MAINTENANCE

Connect batteries (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

BATTERY DISCONNECT SWITCH REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Compound, Sealing (WP 0401, Item 10)
Tags, Identification (WP 0401, Item 22)
Lockwasher (4)
Lockwasher (4)
Locknut (2)

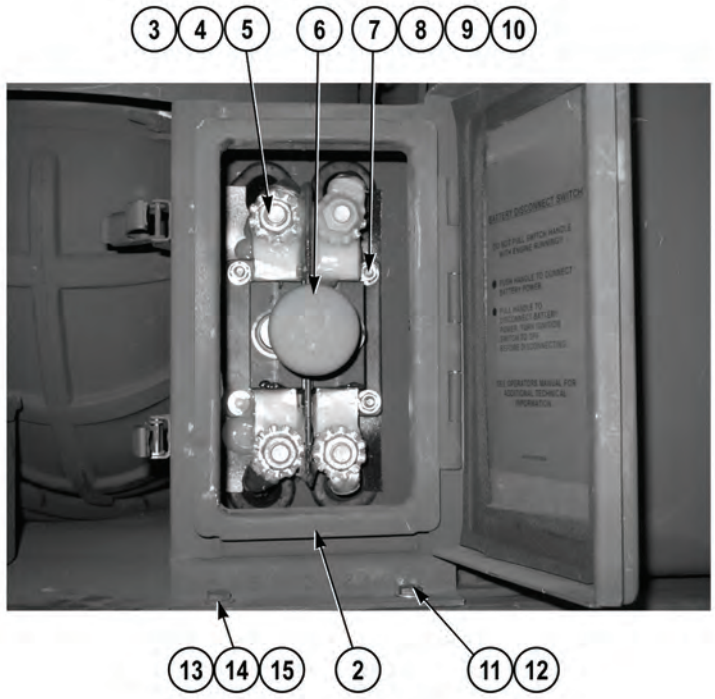
References
WP 0392, Fig. 35

Equipment Conditions
Batteries disconnected (TM 9-2320-315-14&P)

REMOVAL



1. Open door (1) on battery disconnect switch box (2).



NOTE

Tag and mark wires before removal to ensure proper installation.

2. Remove four nuts (3), lockwashers (4), and wires (5) from battery disconnect switch (6). Discard lockwashers.
3. Remove four nuts (7), lockwashers (8), washers (9), screws (10), and battery disconnect switch (6) from battery disconnect switch box (2). Discard lockwashers.

NOTE

Perform Steps (4) through (7) if removing battery disconnect switch box.

4. Remove four wires (5) from battery disconnect switch box (2).
5. Remove two screws (11) and washers (12) from battery disconnect switch box (2) and vehicle.
6. Remove two screws (13), washers (14), and locknuts (15) from battery disconnect switch box (2) and vehicle. Discard locknuts.
7. Remove battery disconnect switch box (2) from vehicle.

END OF TASK

INSTALLATION

NOTE

Perform Steps (1) through (3) if battery disconnect switch box was removed.

1. Install battery disconnect switch box (2) on vehicle with two locknuts (15), four washers (14), and two screws (13).
2. Install two washers (12) and screws (11) on battery disconnect switch box (2) and vehicle.
3. Install four wires (5) in battery disconnect switch box (2).
4. Install battery disconnect switch (6) in battery disconnect switch box (2) with four screws (10), washers (9), lockwashers (8), and nuts (7).

NOTE

Install wires as noted prior to removal.

5. Install four wires (5) on battery disconnect switch (6) with four lockwashers (4) and nuts (3).

WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

6. Apply sealing compound to four wires (5), lockwashers (4), and nuts (3).



7. Close door (1) on battery disconnect switch box (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Connect batteries (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

24-VOLT BATTERY CHARGER REPLACEMENT

INITIAL SETUP:

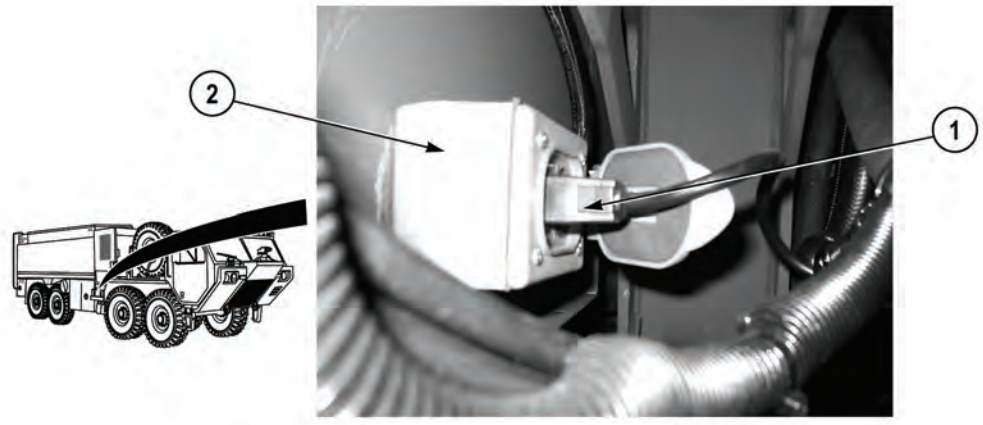
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)
Lockwasher (1)
Lockwasher (1)
Lockwasher (1)
Lockwasher (3)
Lockwasher (4)

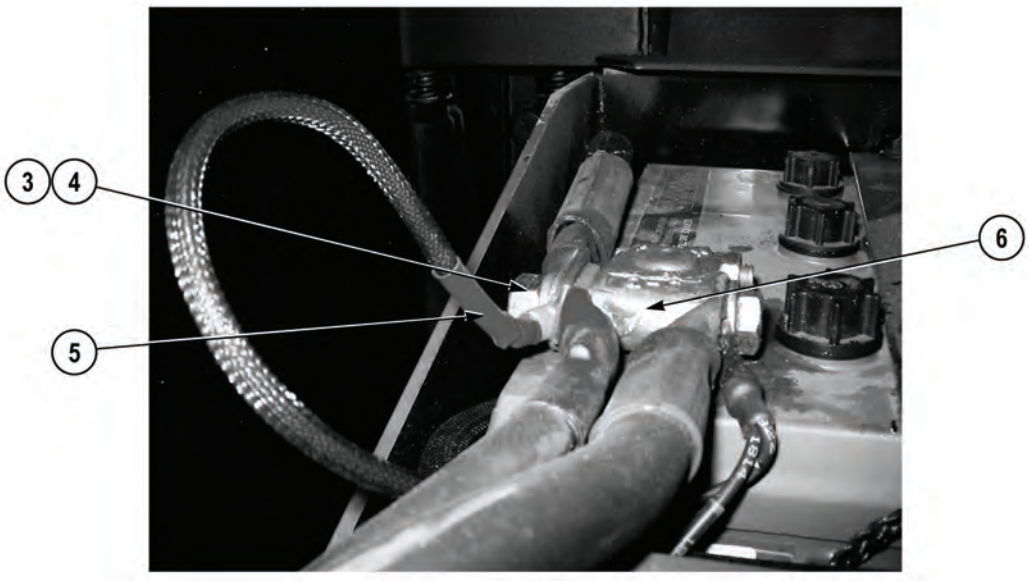
References
WP 0157
WP 0160
WP 0169
WP 0213
WP 0323
WP 0328
WP 0385
WP 0392, Fig. 41

Equipment Conditions
Batteries disconnected (TM 9-2320-315-14&P)
Pump house panel H removed (WP 0341)

REMOVAL



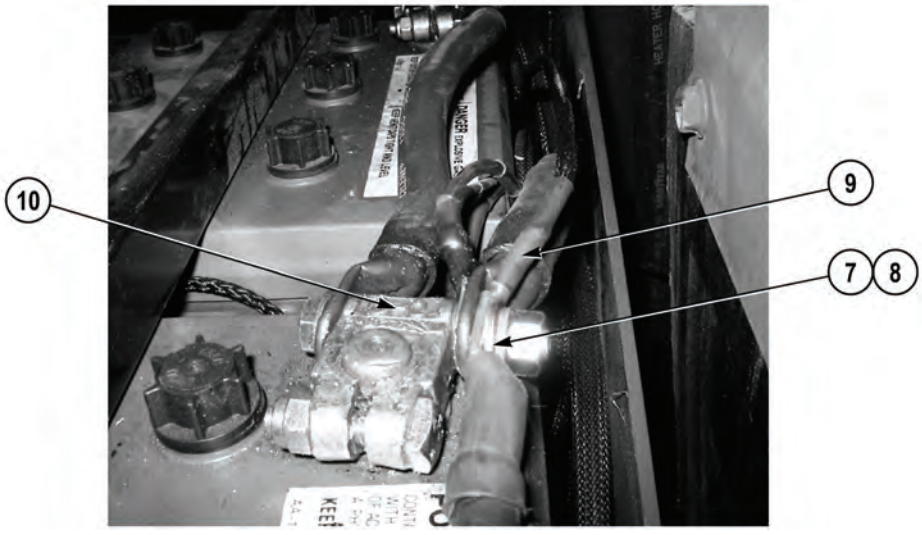
1. Remove power cord plug (1) from receptacle (2).



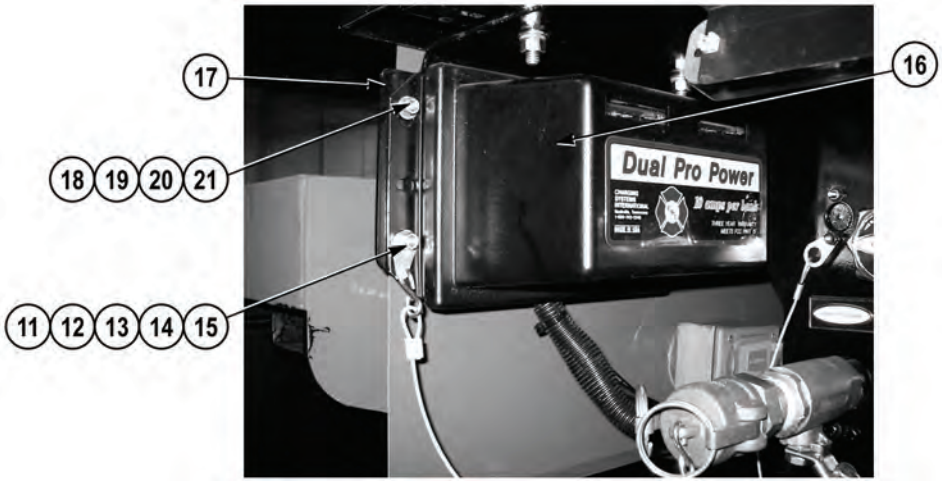
NOTE

- Tag and mark wires prior to removal to ensure proper installation.
- Remove split loom and plastic ties as required.

2. Remove nut (3), lockwasher (4), and braided red wire (5) from cable terminal (6). Discard lockwasher.

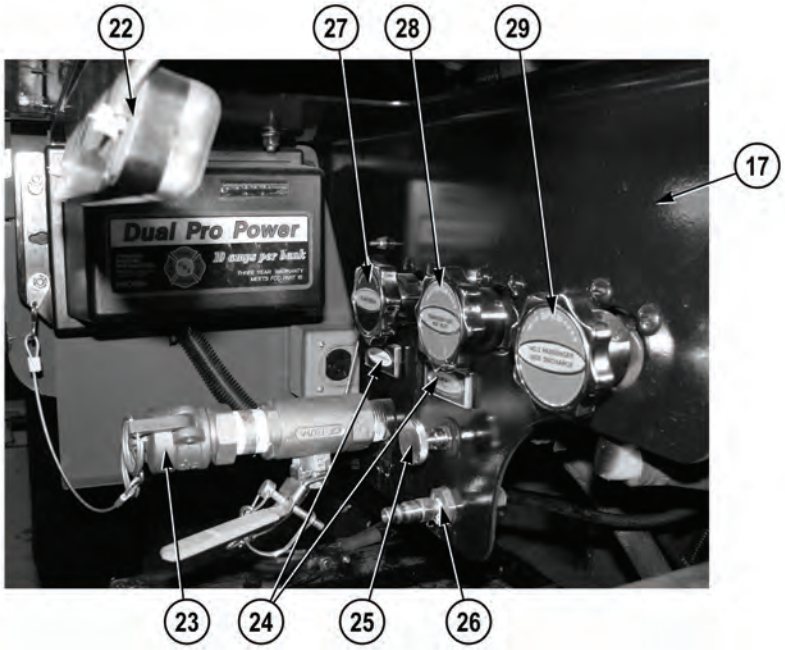


3. Remove nut (7), lockwasher (8), and braided black wire (9) from cable terminal (10). Discard lockwasher.



4. Remove nut (11), lockwasher (12), two washers (13), clip (14), and screw (15) from 24-volt battery charger (16) and bracket (17). Discard lockwasher.

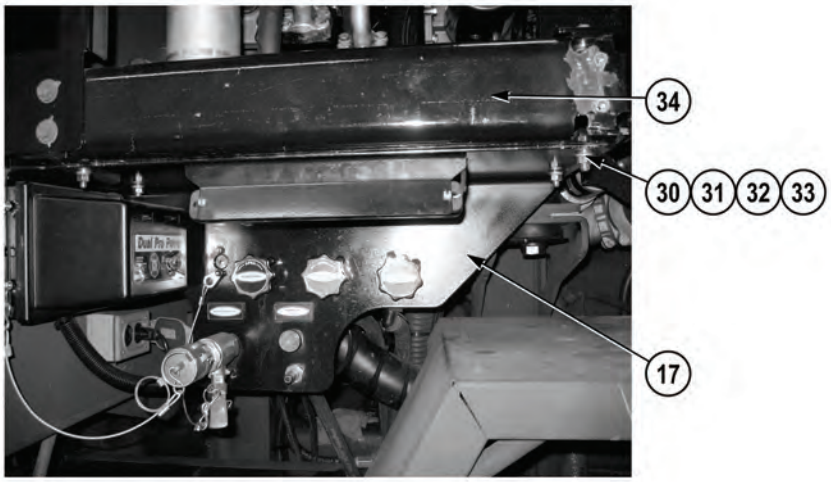
5. Remove three nuts (18), lockwashers (19), six washers (20), three screws (21), and 24-volt battery charger (16) from bracket (17). Discard lockwashers.



NOTE

Perform Steps (6) through (14) if bracket needs to be removed.

6. Remove striplight and bracket (22) from bracket (17) (WP 0213).
7. Remove foam system drain valve (23) from bracket (17) (WP 0169).
8. Remove decals and data plates (24) from bracket (17) (WP 0328).
9. Remove water pump blow-out valve (25) from bracket (17) (WP 0385).
10. Remove water pump blow-out air line and fitting (26) from bracket (17) (WP 0385).
11. Remove pump drain valve (27) from bracket (17) (WP 0323).
12. Remove passenger side auxiliary inlet valve (28) from bracket (17) (WP 0157).
13. Remove No. 2 passenger side discharge valve (29) from bracket (17) (WP 0160).



14. Remove four nuts (30), lockwashers (31), eight washers (32), four screws (33), and bracket (17) from pump house frame (34) and vehicle. Discard lockwashers.

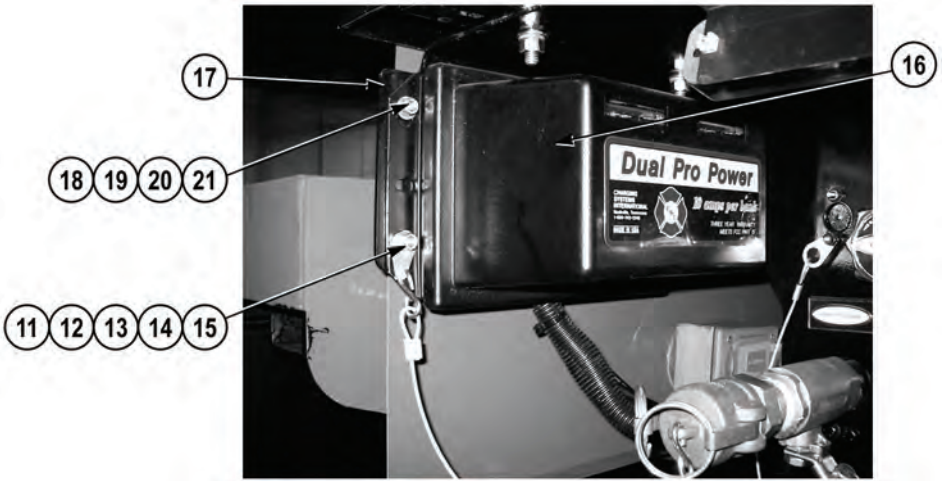
END OF TASK

INSTALLATION

NOTE

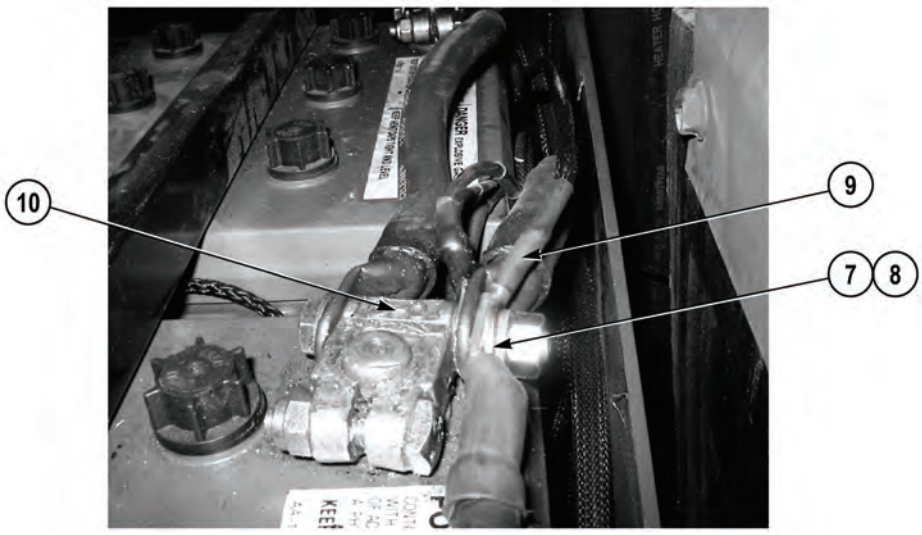
Perform Steps (1) through (9) if bracket was removed.

1. Install bracket (17) on pump house frame (34) with four screws (33), eight washers (32), four lockwashers (31), and four nuts (30).
2. Install No. 2 passenger side discharge valve (29) on bracket (17) (WP 0160).
3. Install passenger side auxiliary inlet valve (28) on bracket (17) (WP 0157).
4. Install pump drain valve (27) on bracket (17) (WP 0323).
5. Install water pump blow-out air line and fitting (26) on bracket (17) (WP 0385).
6. Install water pump blow-out valve (25) on bracket (17) (WP 0385).
7. Install decals and data plates (24) on bracket (17) (WP 0328).
8. Install foam system drain valve (23) on bracket (17) (WP 0169).
9. Install striplight and bracket (22) on bracket (17) (WP 0213).

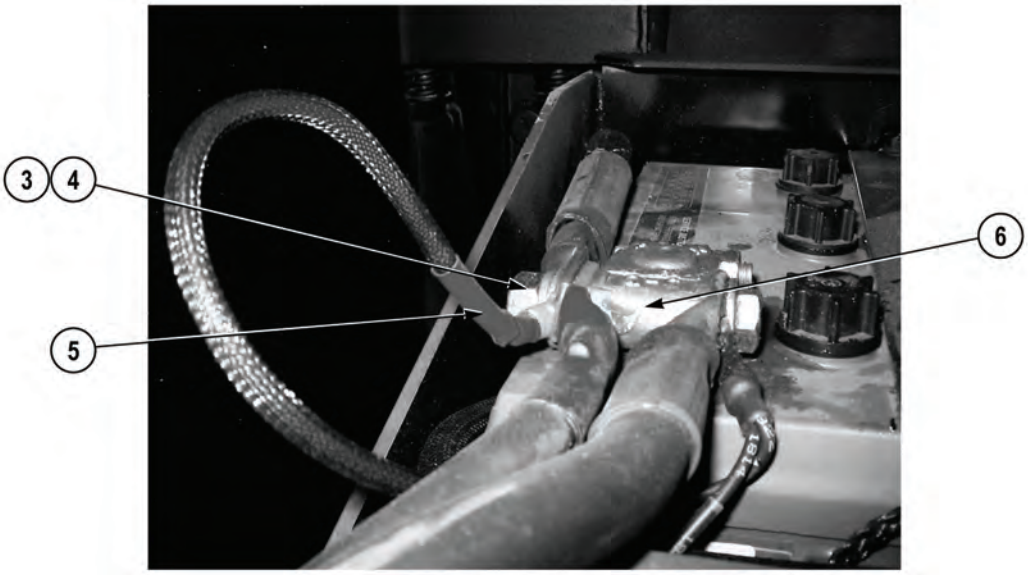


10. Install 24-volt battery charger (16) on bracket (17) with three screws (21), six washers (20), three lockwashers (19), and nuts (18).

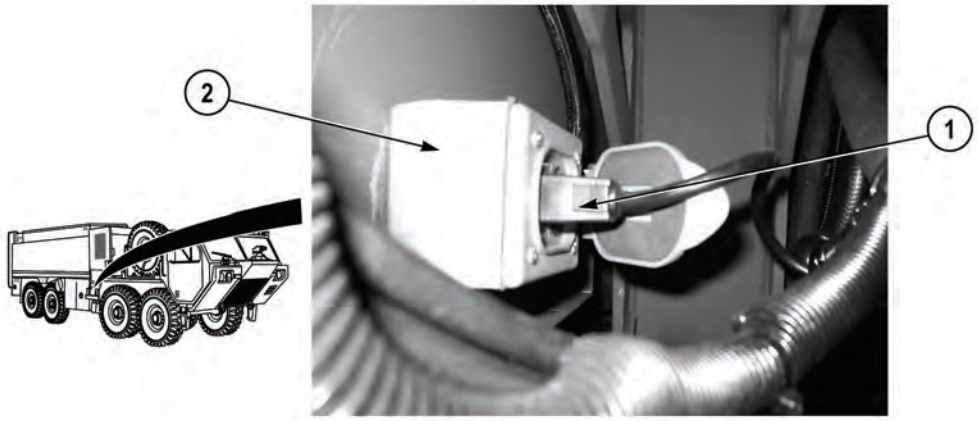
11. Install clip (14) on battery (17) and 24-volt battery charger (16) with screw (15), two washers (13), lockwasher (12), and nut (11).



12. Install braided black wire (9), lockwasher (8), and nut (7) to cable terminal (10).



13. Install braided red wire (5), lockwasher (4), and nut (3) on cable terminal (6).



14. Install power cord plug (1) in receptacle (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Install pump house panel H (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

BATTERY BOX AND BRACKET REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Standard Automotive Tool Set (SATS), (WP 0399, Item 15)
• Wrench, Torque, Click, Ratcheting, 1/2” Drive 250 ft-lb, Regular, 1-1/8”
Tool Kit, General Mechanic’s: Automotive (WP 0399, Item 17)

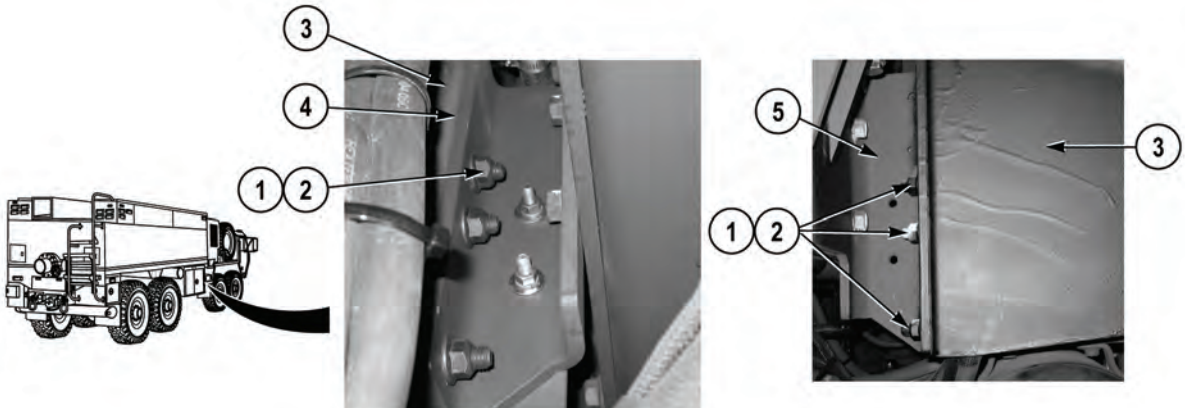
Materials/Parts
Locknut (6)
Locknut (3)
Locknut (3)
Locknut (3)
Locknut (5)

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

References
WP 0137
WP 0392, Fig. 48

Equipment Conditions
Batteries removed (TM 9-2320-315-14&P)
Air tanks 1 and 3 removed (TM 9-2320-315-14&P)

REMOVAL

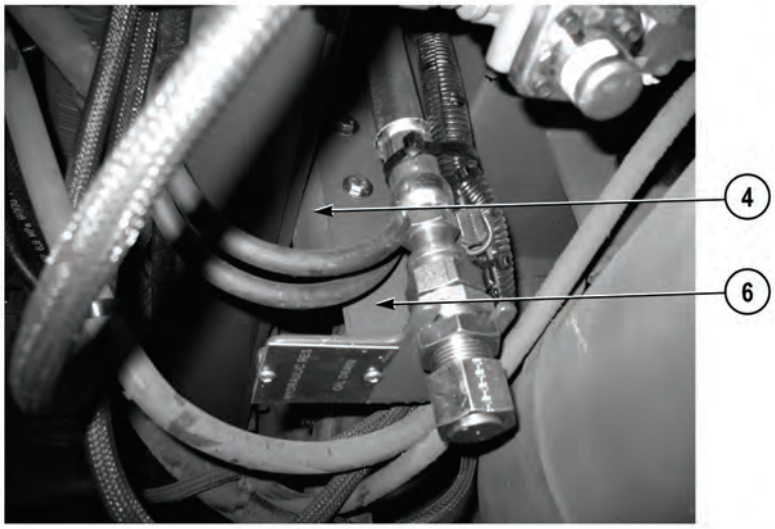


WARNING



Battery box weighs approximately 50 lb. (25 kg). Do not attempt to lift or move battery box without the aid of an assistant. Failure to comply may result in the injury to personnel and/or damage to equipment.

1. With the aid of an assistant, remove six locknuts (1), screws (2), and battery box (3) from front battery box bracket (4) and rear battery box bracket (5). Discard locknuts.



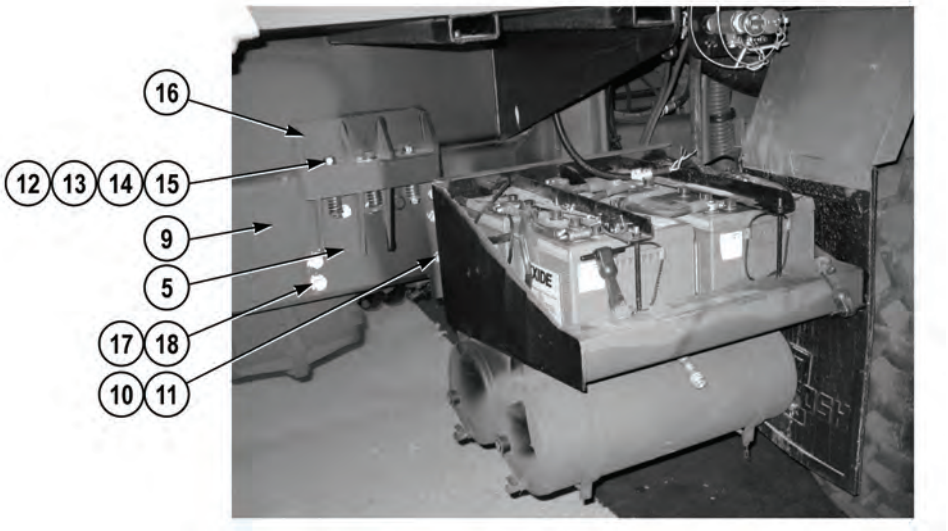
NOTE

Perform Steps (2) through (6) if battery box brackets need to be removed.

2. Remove hydraulic drain mounting bracket (6) from front battery box bracket (4) (WP 0137).



3. Remove three locknuts (7), screws (8), and front battery box bracket (4) from frame rail (9). Discard locknuts.



4. Remove three locknuts (10) and screws (11) from rear battery box bracket (5) and frame rail (9). Discard locknuts.
5. Remove three locknuts (12), springs (13), six washers (14), and three screws (15) from water tank cradle bracket (16) and rear battery box bracket (5). Discard locknuts.
6. Remove five locknuts (17), screws (18), and rear battery box bracket (5) from frame rail (9). Discard locknuts.

END OF TASK

INSTALLATION

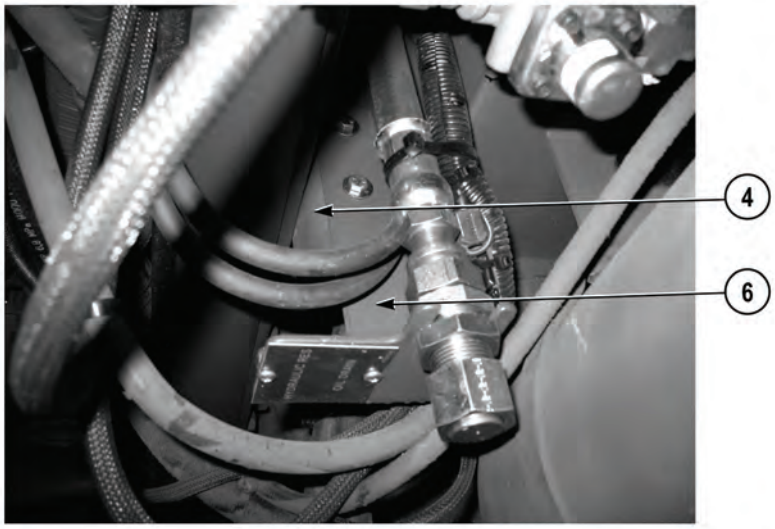
NOTE

Perform Steps (1) through (5) if batter box brackets were removed.

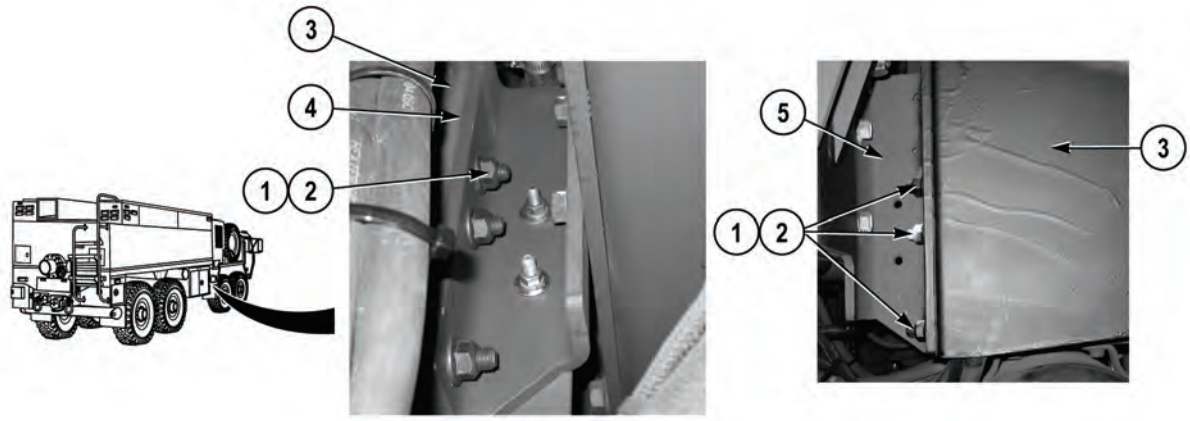
1. Install rear battery box bracket (5) on frame rail (9) with five screws (18) and locknuts (17). Tighten screws (18) to 220 lb-ft (298 N•m).
2. Install three screws (15), six washers (14), three springs (13) and locknuts (12) on rear battery box bracket (5) and water tank cradle bracket (16).
3. Install three screws (11), and locknuts (10) on frame rail (9) and rear battery box bracket (5). Tighten screws (11) to 96 lb-ft (130 N•m).



4. Install front battery box bracket (4) on frame rail (9) with three screws (8) and locknuts (7). Tighten screws (8) to 96 lb-ft (130 N•m).



5. Install hydraulic drain mounting bracket (6) on front battery box bracket (4) (WP 0137).



WARNING



Batter box weighs approximately 50 lb. (25 kg). Do not attempt to lift or move battery box without the aid of an assistant. Failure to comply may result in the injury to personnel and/or damage to equipment.

6. Install battery box (3) on rear battery box bracket (5) and front battery box bracket (4) with six screws (2) and locknuts (1). Tighten screws (2) to 96 lb-ft (130 N•m).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install air tanks 1 and 3 (TM 9-2320-315-14&P)
2. Install batteries (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

120-VOLT RECEPTACLE REPLACEMENT

INITIAL SETUP:

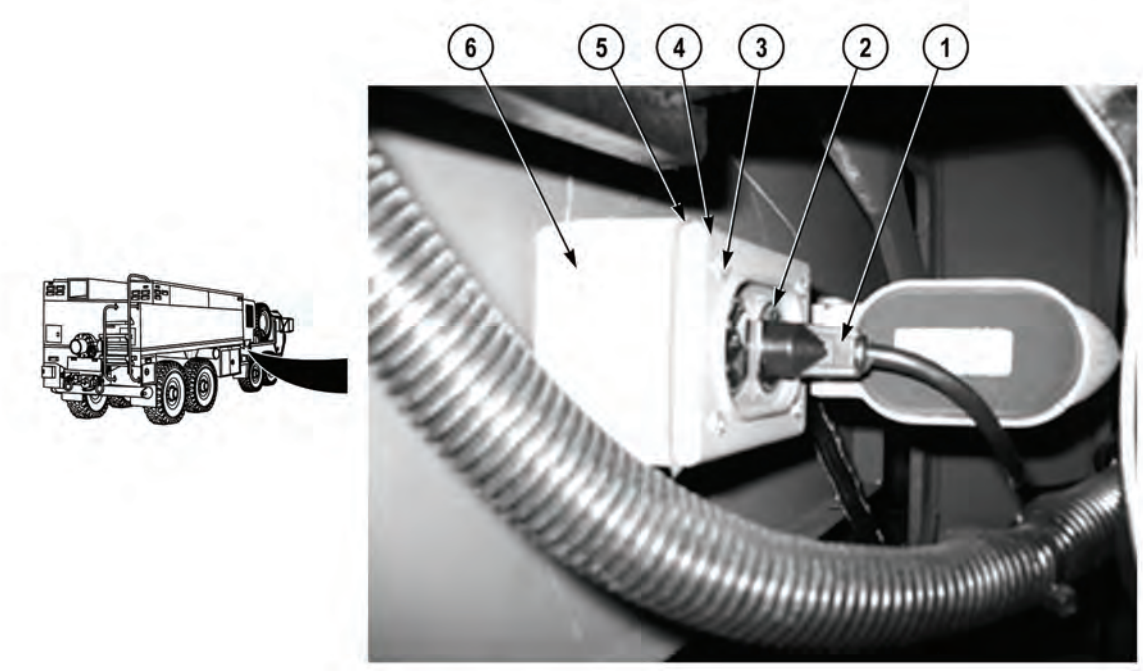
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Lockwasher (2)

References
WP 0392, Fig. 41

Equipment Conditions
Pump house panels H and P removed (WP 0341)

REMOVAL

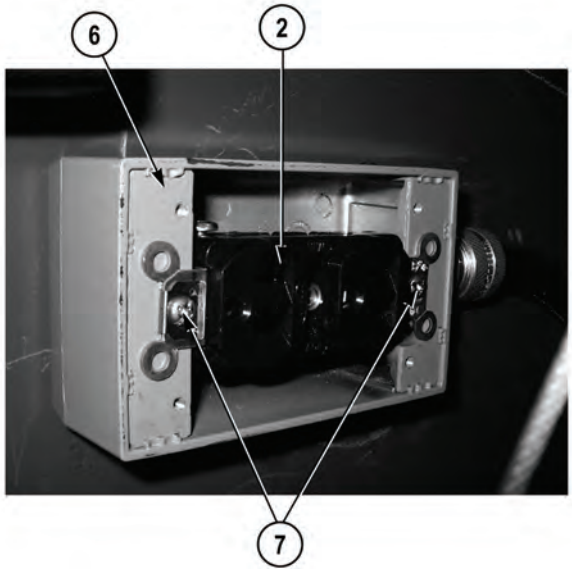


1. Remove power cord (1) from 120-volt receptacle (2).

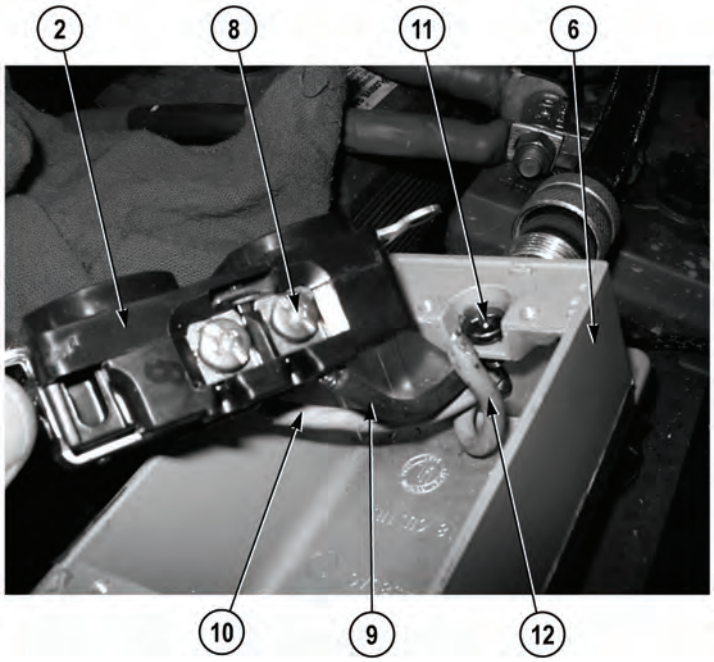
NOTE

Note orientation of 120-volt receptacle cover prior to removal to ensure proper installation.

2. Remove four screws (3), cover (4), and seal (5) from 120-volt receptacle box (6).



3. Remove two screws (7) and 120-volt receptacle (2) from 120-volt receptacle box (6).

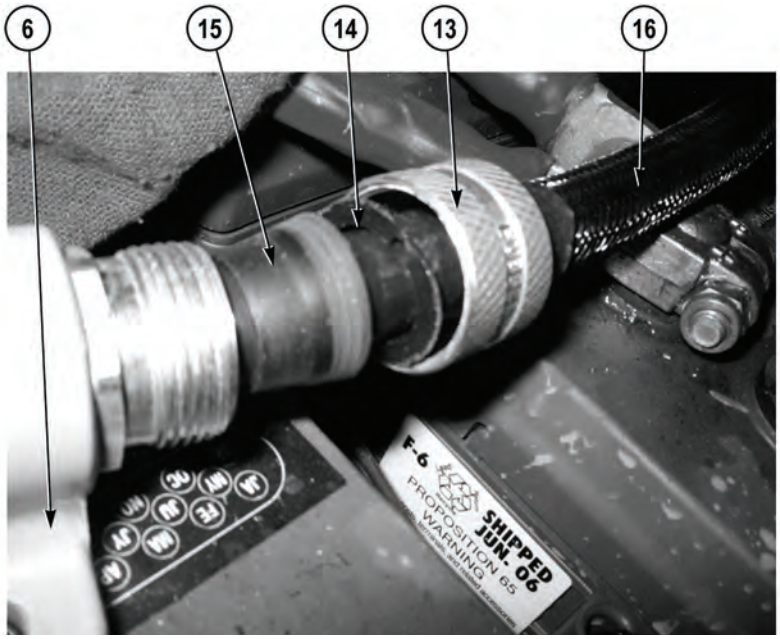


NOTE

Tag and mark wires prior to removal to ensure proper installation.

4. Loosen two screws (8) and remove (hot) black wire (9) and (common) white wire (10) from 120-volt receptacle (2).

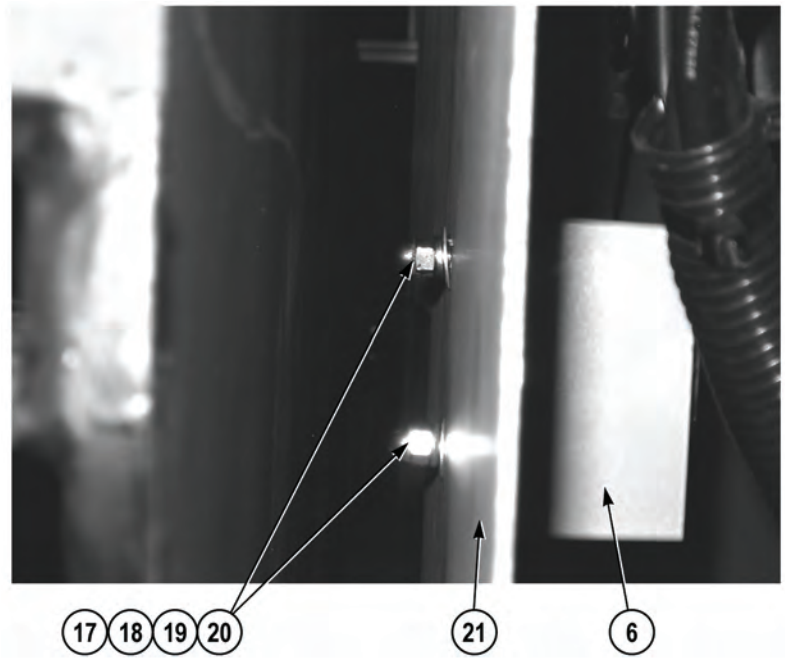
5. Loosen screw (11) and remove (ground) green wire (12) from 120-volt receptacle box (6).



NOTE

Perform Steps (6) and (7) if 120-volt receptacle box needs to be removed.

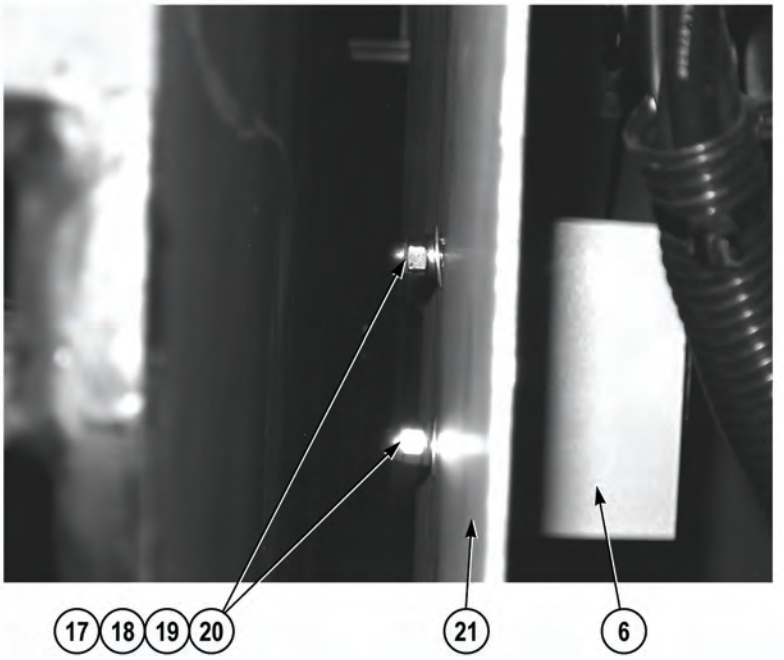
6. Remove strain relief (13), compression ring (14), rubber grommet (15), and shoreline inlet receptacle wire harness (16) from 120-volt receptacle box (6).



7. Remove two nuts (17), lockwashers (18), washers (19), screws (20), and 120-volt receptacle box (6) from pump house panel O (21). Discard lockwashers.

END OF TASK

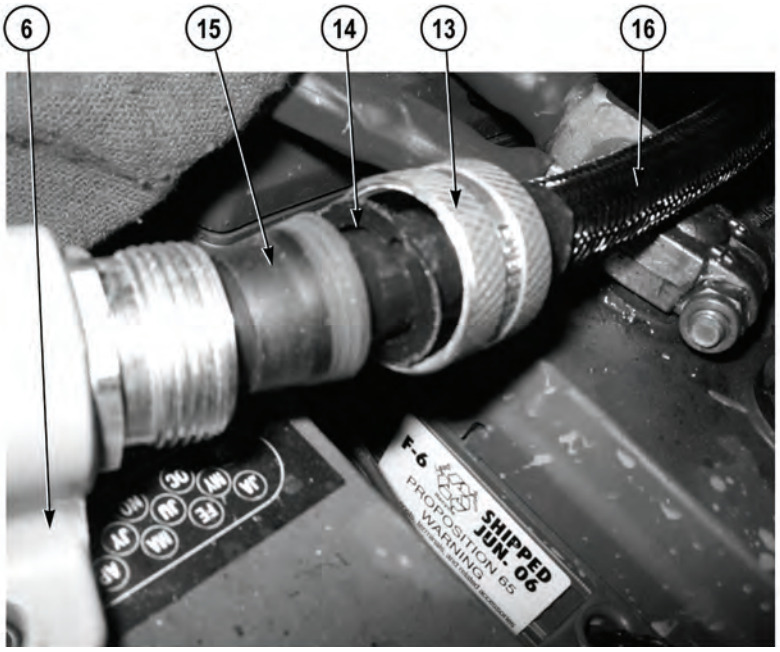
INSTALLATION



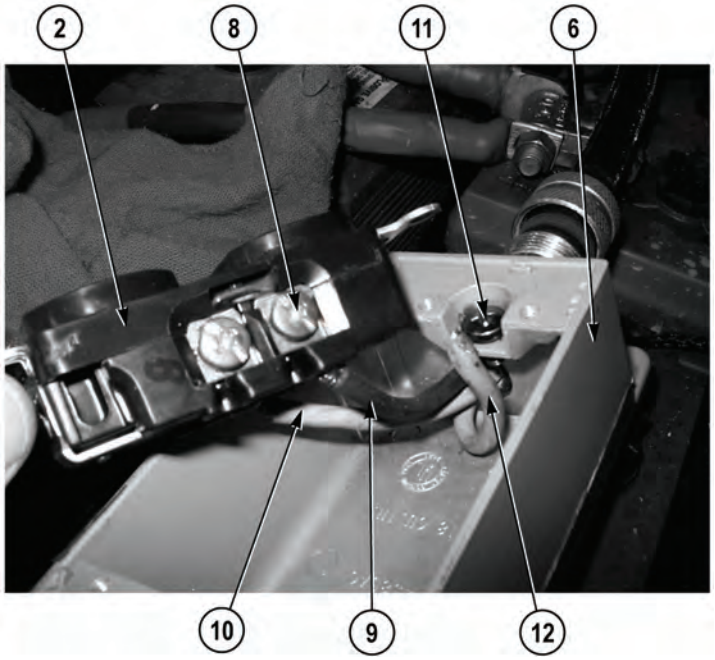
NOTE

Perform Steps (1) and (2) if 120-volt receptacle box was removed.

1. Install 120-volt receptacle box (6) on pump house panel O (21) with two screws (20), washers (19), lockwashers (18), and nuts (17).



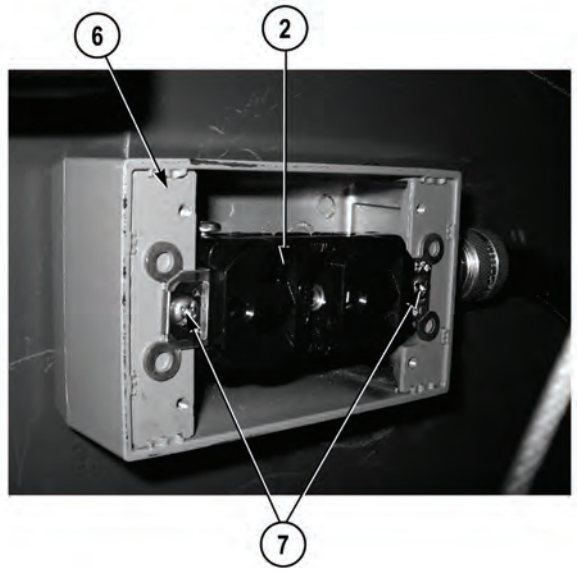
2. Install shoreline inlet receptacle wire harness (16) on 120-volt receptacle box (6) with rubber grommet (15), compression ring (14), and strain relief (13).



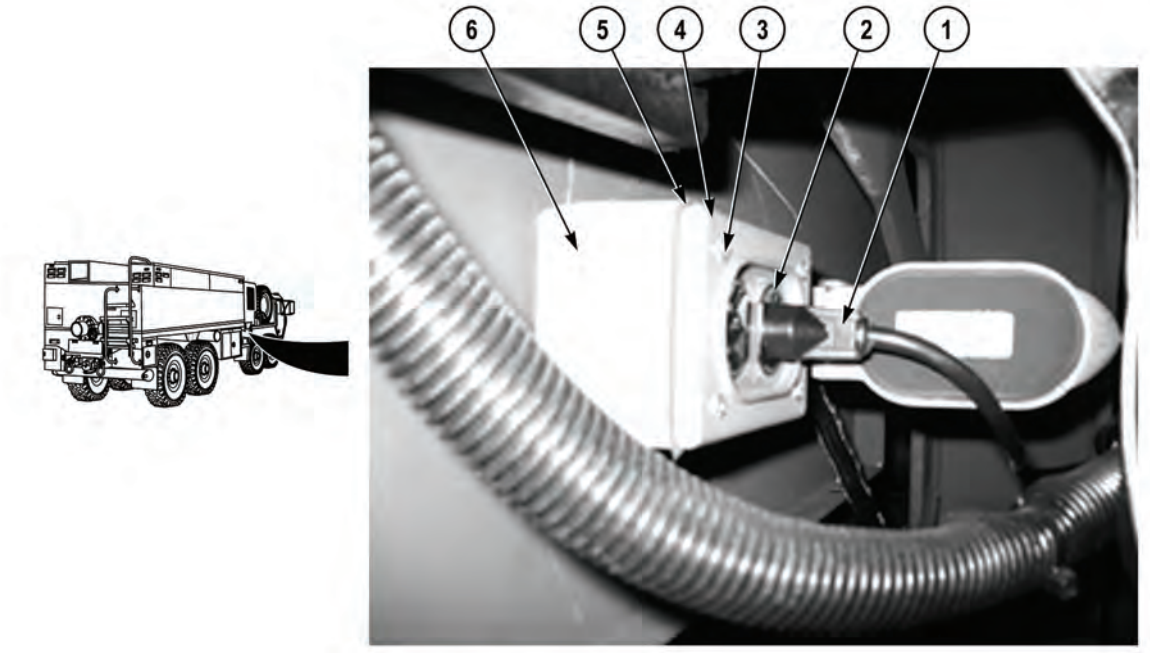
NOTE

- Green wires ground, green screw
- White wire common, silver screw
- Black wire hot, gold screw

3. Position (ground) green wire (12) on 120-volt receptacle box (6) and tighten screw (11).
4. Position (common) white wire (10) and (hot) black wire (9) in 120-volt receptacle (2) and tighten two screws (8).



5. Install 120-volt receptacle (2) on 120-volt receptacle box (6) with two screws (7).



NOTE

Position cover on 120-volt receptacle box as noted prior to removal.

6. Install seal (5) and cover on 120-volt receptacle box (6) with four screws (3).
7. Install power cord (1) on 120-volt receptacle (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Install pump house panels H and P (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

BLACKOUT RELAY(S) REPLACEMENT

INITIAL SETUP:

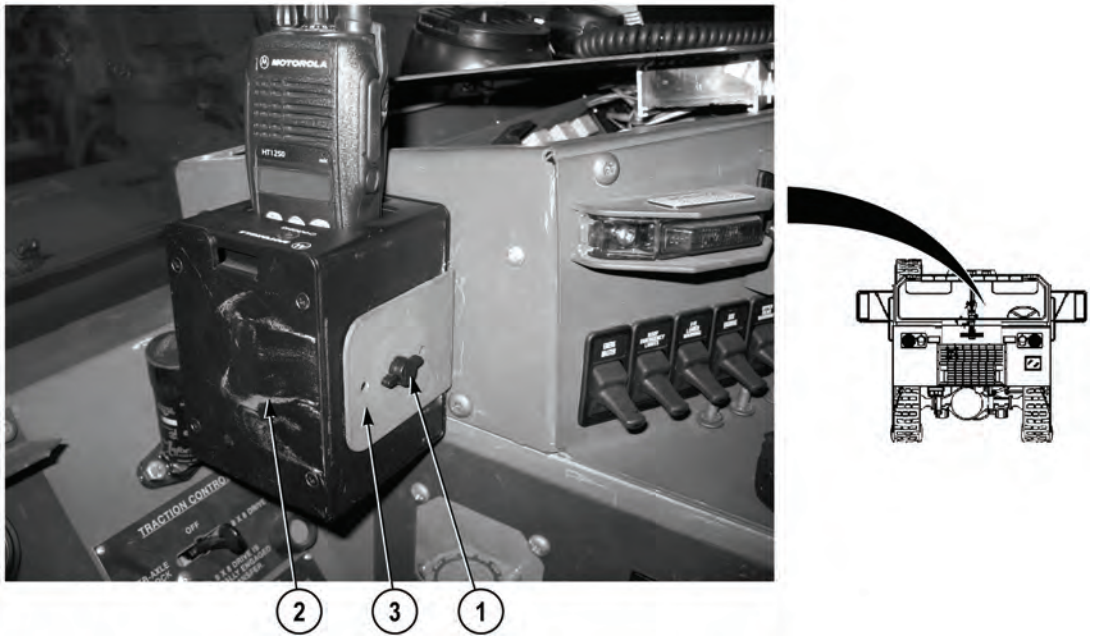
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Locknut (2)

References
WP 0392, Fig. 26

Equipment Conditions
Cab instrument panel A removed (WP 0203)

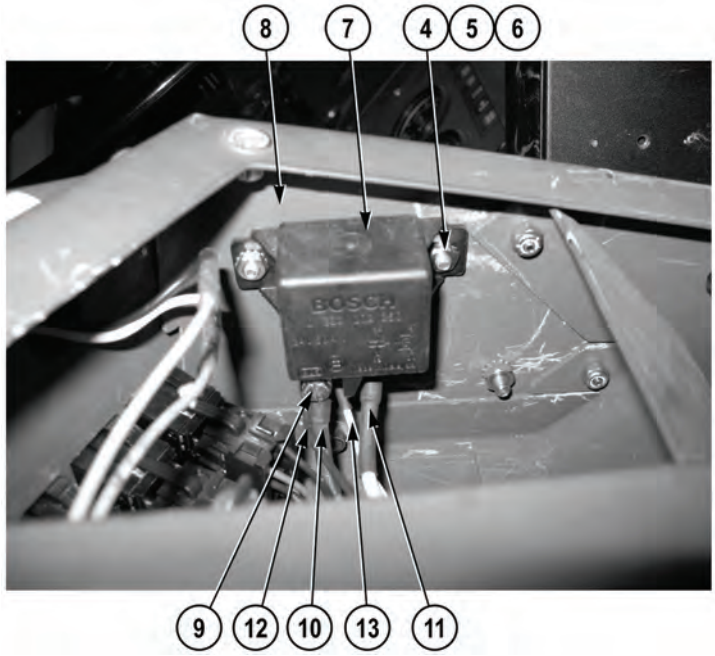
REMOVAL



NOTE

Both blackout relays are removed the same way. Driver side blackout relay shown.

1. Remove two screws (1) and handheld radio charger (2) from bracket (3).



2. Remove two locknuts (4), washers (5), screws (6), and blackout relay (7) from cab power distribution box (8). Discard locknuts.

NOTE

Tag and mark wires prior to removal to ensure proper installation.

3. Remove two screws (9), wire 1138J (10), and wire 2839J (11) from blackout relay (7).
4. Disconnect wire 1640M (12) and wire H835M (13) from blackout relay (7).

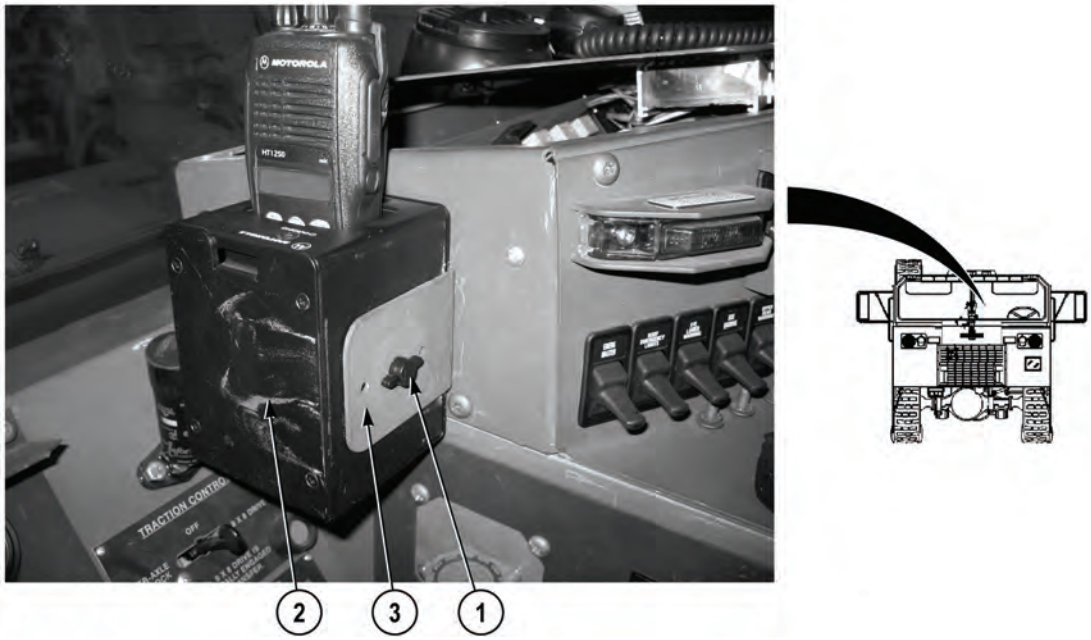
END OF TASK

INSTALLATION

NOTE

Both blackout relays are installed the same way. Driver side shown.

1. Connect wire H835 M (13) and wire 1640M (12) on blackout relay (7).
2. Install wire 2839J (11) and wire 1138J (10) on blackout relay (7) with two screws (9).
3. Install blackout relay (7) on cab power distribution box (8) with two screws (6), washers (5), and locknuts (4).



4. Install handheld radio charger (2) on bracket (3) with two screws (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Install cab instrument panel A (WP 0203)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

TERMINAL BLOCK (PASS THROUGH) REPLACEMENT

INITIAL SETUP:

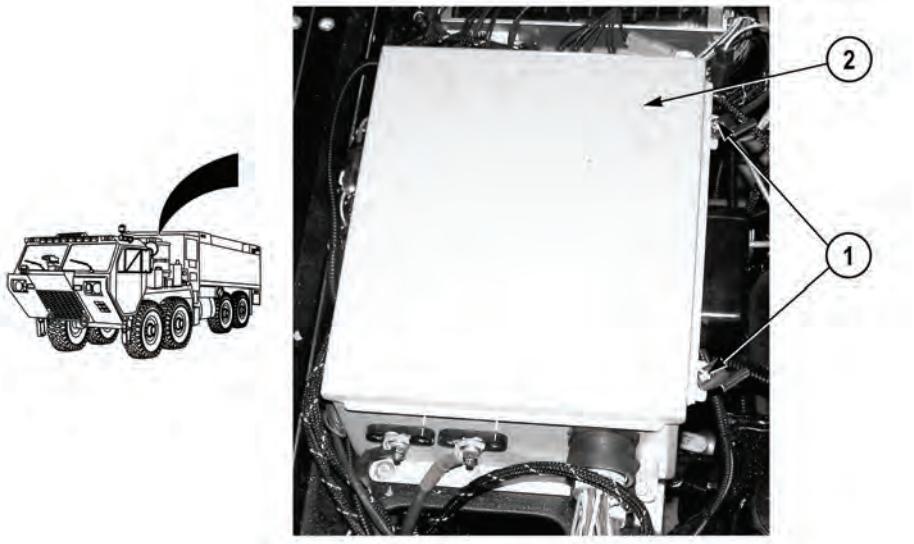
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Compound, Sealing (WP 0401, Item 10)
Tags, Identification (WP 0401, Item 22)
Lockwasher (2)
Lockwasher (2)
Locknut (2)
Locknut (2)

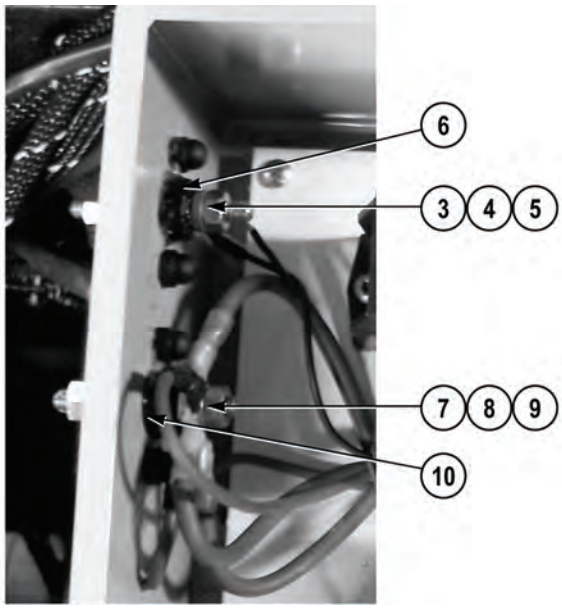
References
WP 0392, Fig. 42

Equipment Conditions
Pump house panel K removed (WP 0341)

REMOVAL



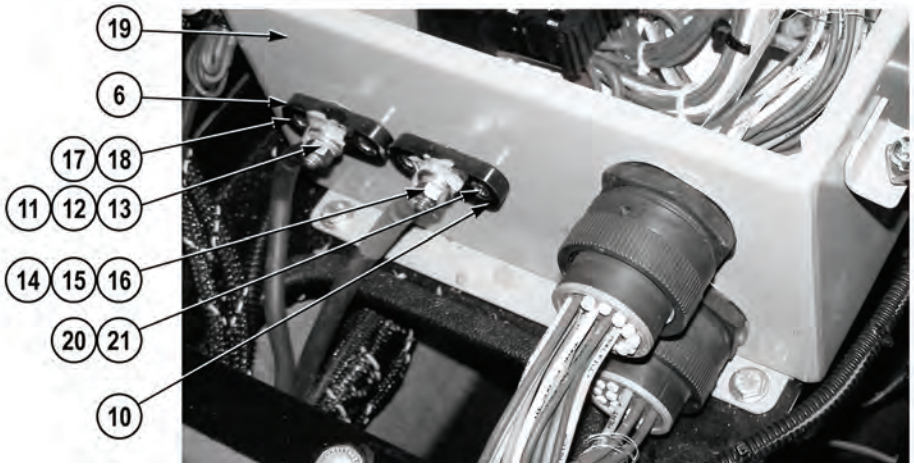
1. Loosen two screws (1) and open pump house control box cover (2).



NOTE

Tag and mark wires prior to removal to ensure proper installation.

2. Remove nut (3), lockwasher (4), and wire 1640 (5) from negative block terminal (6). Discard lockwasher.
3. Remove nut (7), lockwasher (8), and five wires 1138 (9) from positive block terminal (10). Discard lockwasher.

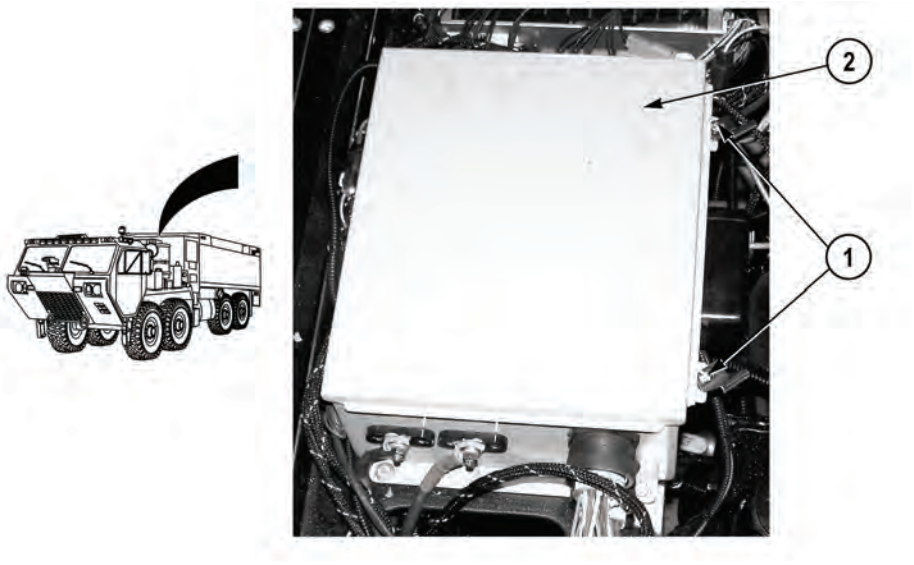


4. Remove nut (11), lockwasher (12), and wire (13) from negative block terminal (6). Discard lockwasher.
5. Remove nut (14), lockwasher (15), and wire (16) from positive block terminal (10). Discard lockwasher.
6. Remove two screws (17), locknuts (18), and negative block terminal (6) from pump house control box (19). Discard locknuts.
7. Remove two screws (20), locknuts (21), and positive block terminal (10) from pump house control box (19). Discard locknuts.

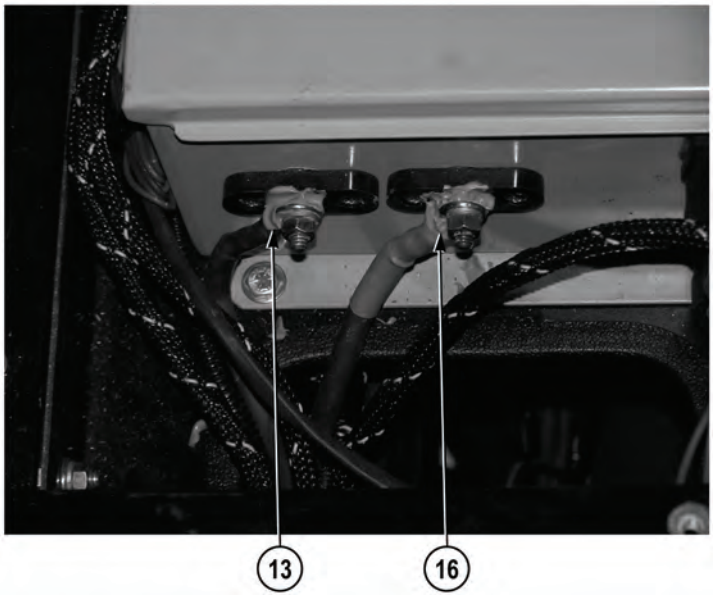
END OF TASK

INSTALLATION

1. Install positive block terminal (10) on pump house control box (19) with two locknuts (21) and screws (20).
2. Install negative block terminal (6) on pump house control box (19) with two locknuts (18) and screws (17).
3. Install wire (16) on positive block terminal (10) with lockwasher (15) and nut (14).
4. Install wire (13) on negative block terminal (6) with lockwasher (12) and nut (11).
5. Install five wires 1138 (9) on positive block terminal (10) with lockwasher (8) and nut (7).
6. Install wire 1640 (5) on negative block terminal (6) with lockwasher (4) and nut (3).



7. Close pump house control box cover (2) and tighten two screws (1).



WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

8. Apply sealing compound to connectors on wire (16) and wire (13).

END OF TASK

FOLLOW-ON MAINTENANCE

Install pump house panel K (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

CAB POWER DISTRIBUTION BLOCK CIRCUIT BREAKER REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Equipment Conditions
Cab instrument panel A removed (WP 0203)

REMOVAL



NOTE

All circuit breakers are removed the same way.

Remove circuit breaker (1) from cab power distribution block (2).

END OF TASK

INSTALLATION

NOTE

All circuit breakers installed the same way.

Install circuit breaker (1) on cab power distribution block (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Install cab instrument panel A (WP 0203)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

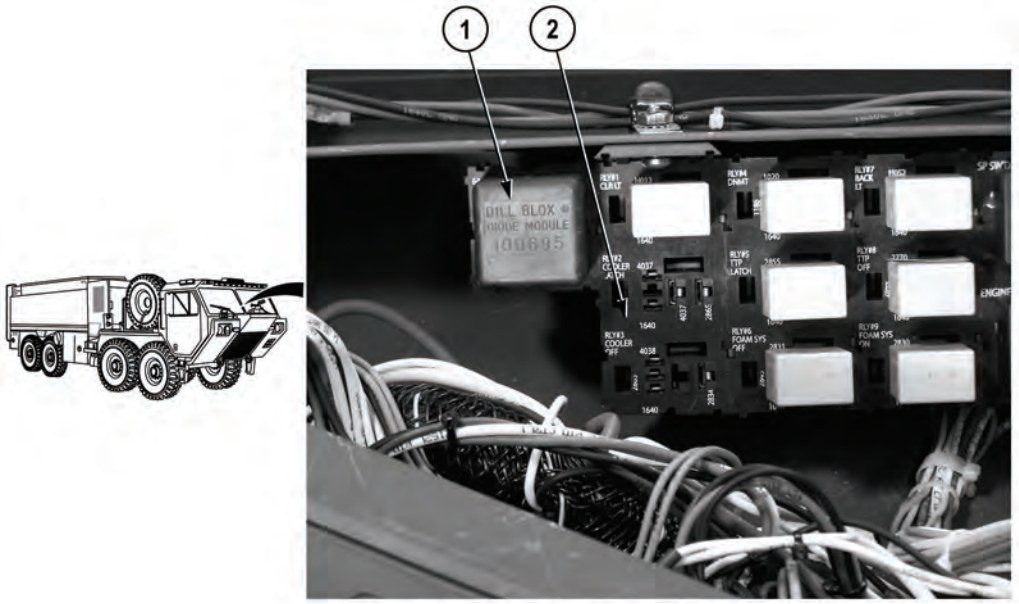
CAB POWER DISTRIBUTION BLOCK DIODE REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Equipment Conditions
Cab instrument panel A removed (WP 0203)

REMOVAL



Remove block diode (1) from cab power distribution block (2).

END OF TASK

INSTALLATION

Install block diode (1) on cab power distribution block (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Install cab instrument panel A (WP 0203)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

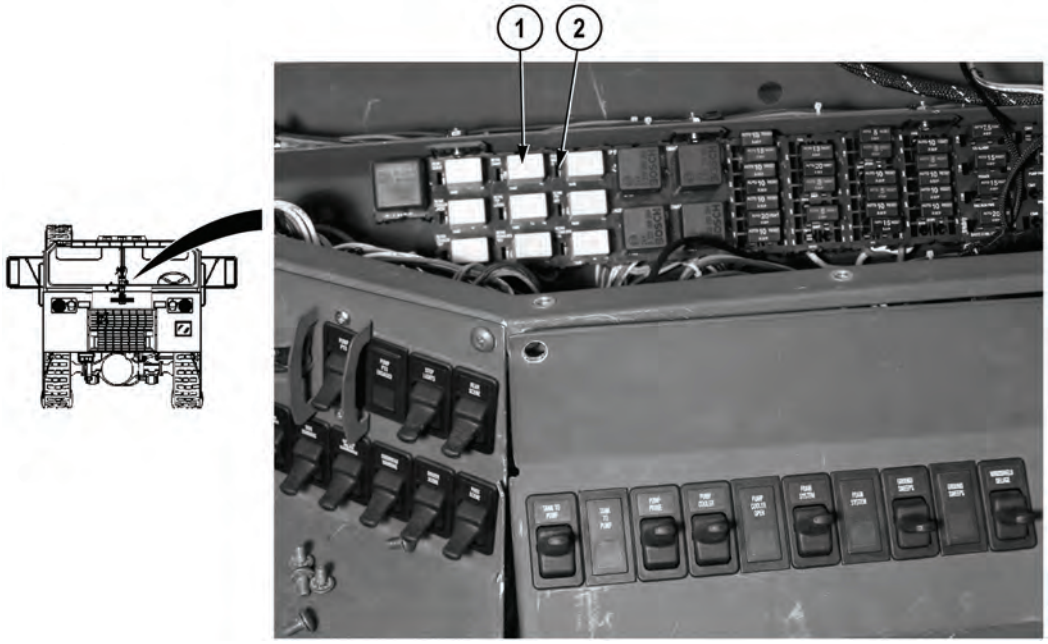
CAB POWER DISTRIBUTION BLOCK RELAY(S) REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Equipment Conditions
Cab instrument control panel A removed (WP 0203)

REMOVAL



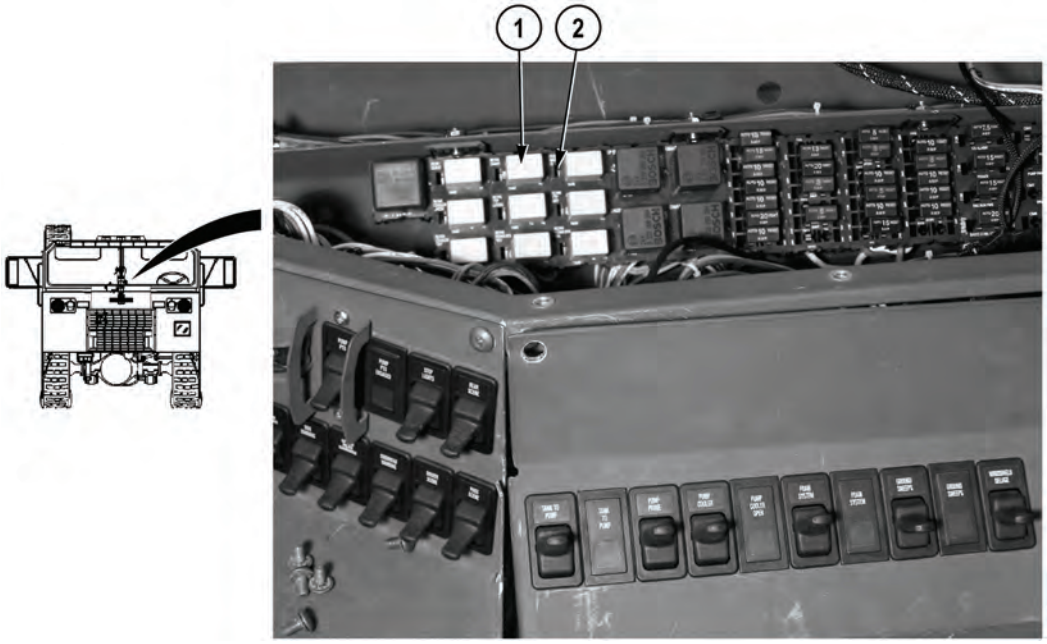
NOTE

All cab power distribution block relays are removed the same way.

Remove block relay (1) from cab power distribution block (2).

END OF TASK

INSTALLATION



Install block relay (1) on cab power distribution block (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Install cab instrument control panel (WP 0203)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

DIRECT TANK FILL VALVE CONTROL REPLACEMENT

INITIAL SETUP:

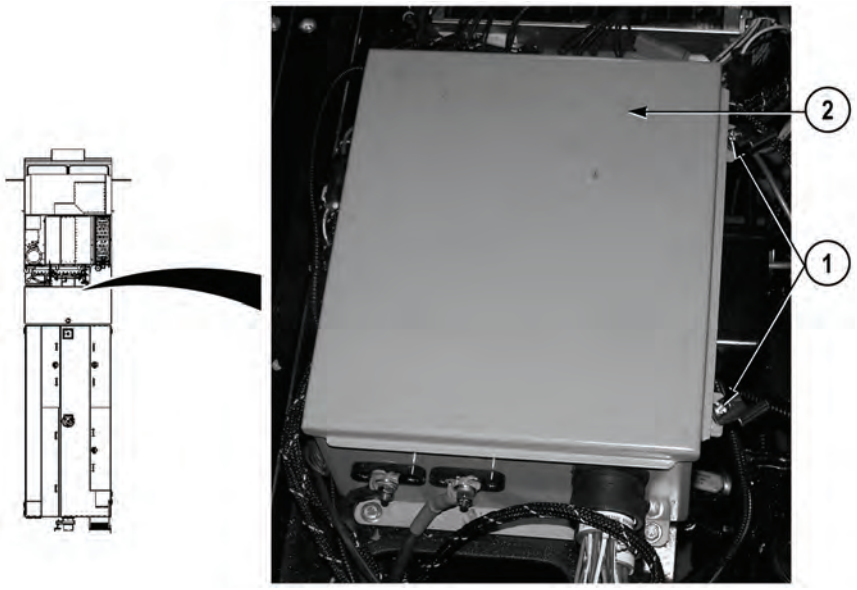
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Lockwasher (4)

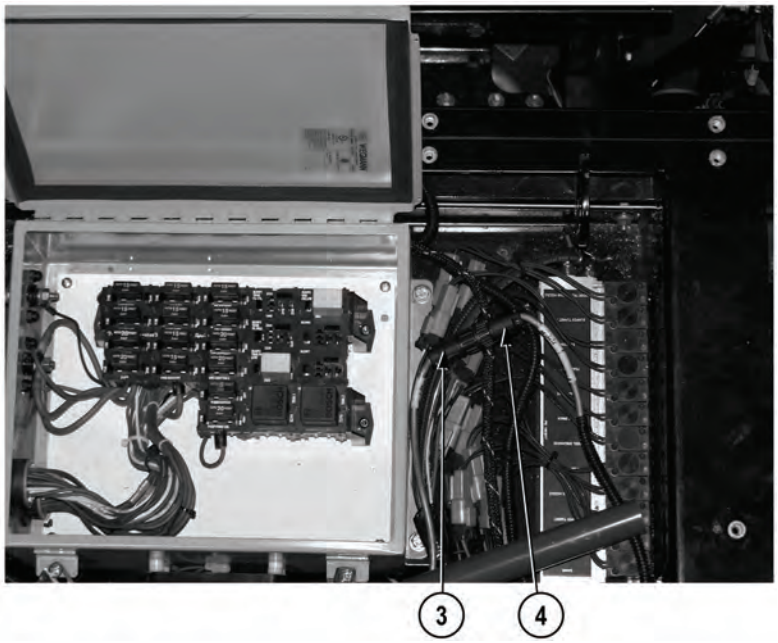
References
TM 9-2320-315-14&P
WP 0392, Fig. 42

Equipment Conditions
Pump house panel K removed (WP 0341)

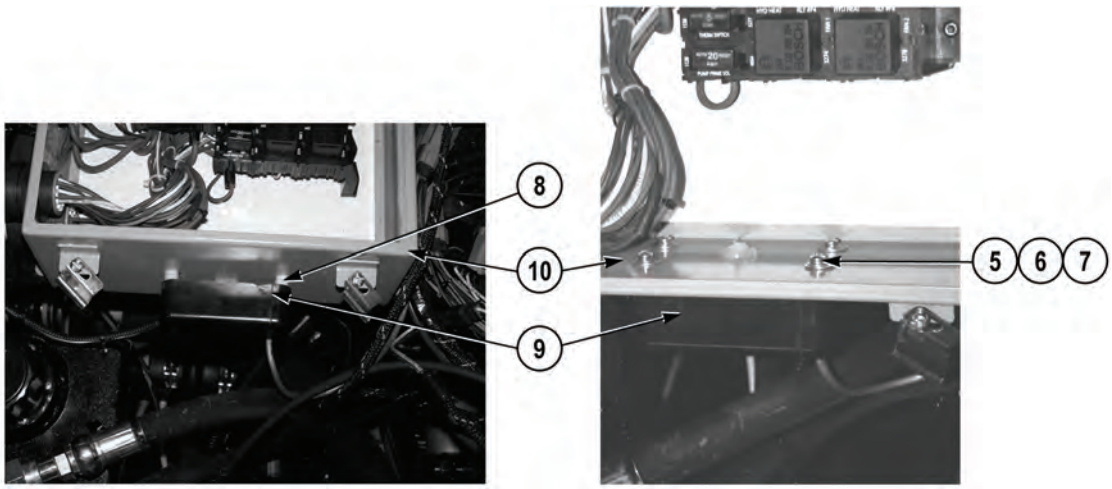
REMOVAL



1. Loosen two screws (1) and open pump house power distribution cover (2).



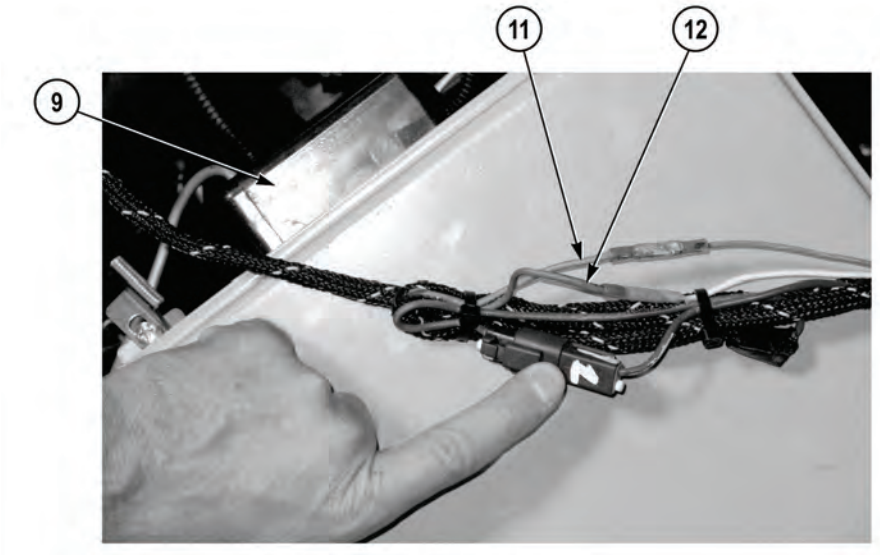
2. Disconnect direct tank fill valve control connector (3) from water tank level auto fill control wire harness connector (4).



⚠ CAUTION

Support direct tank control valve while removing screws to avoid possible damage to equipment and loss of parts.

3. Remove four screws (5), lockwashers (6), washers (7), eight spacers (8), and direct tank fill valve control (9) from pump house power distribution box (10). Discard lockwashers.



NOTE

Tag and mark wires prior to removal to ensure proper installation.

4. Cut wire 2328 (11) and wire 2323 (12) (TM 9-2320-315-14&P).
5. Remove direct tank fill valve control (9) from vehicle.

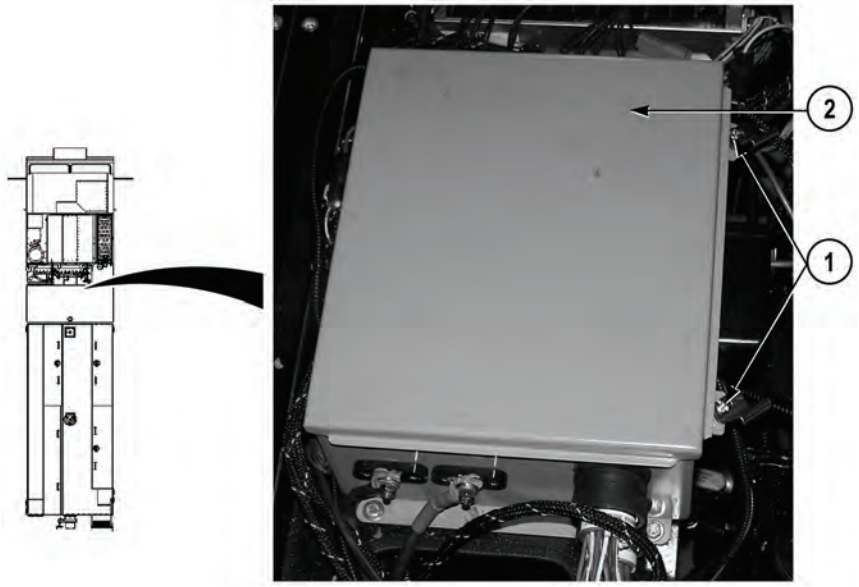
END OF TASK

INSTALLATION

NOTE

Install wires as previously noted.

1. Position direct tank fill valve control (9) on vehicle.
2. Repair wire 2323 (12) and wire 2328 (11) (TM 9-2320-315-14&P).
3. Install direct tank fill valve control (9) on pump house power distribution box (10) with eight spacers (8), four washers (7), lockwashers (6), and screws (5).
4. Connect water tank level auto fill control wire harness connector (4) to direct tank fill valve control connector (3).



5. Close pump house power distribution cover (2) and tighten two screws (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Install pump house panel K (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

DISCHARGE PRESSURE TRANSDUCER REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive
(WP 0399, Item 17)

Materials/Parts
Compound, Sealing, Pipe Thread
(WP 0401, Item 11)

Equipment Conditions
Pump house panel G removed (WP 0341)

REMOVAL



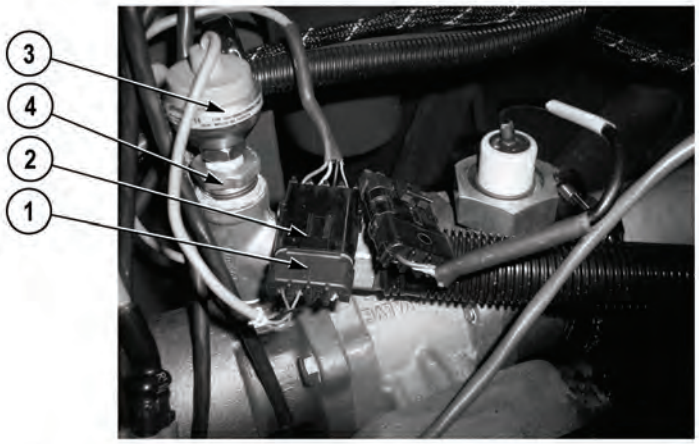
NOTE

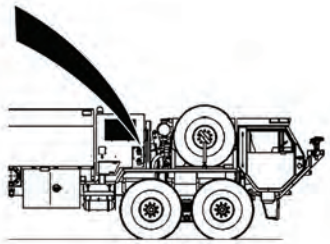
Both discharge pressure transducers are removed the same way. Passenger side shown.

1. Disconnect pressure transducer connector (1) from pressure transducer wire harness connector (2).
2. Remove pressure transducer (3) from fitting (4).

END OF TASK

INSTALLATION





WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

CAUTION

Use sealing compound sparingly only on pipe threads. Do not apply compound to hose connections. Damage to equipment may result.

NOTE

Both discharge pressure transducers are installed the same way. Passenger side shown.

1. Apply sealing compound on threads of pressure transducer (3).
2. Install pressure transducer (3) on fitting (4).
3. Connect pressure transducer connector (1) on pressure transducer wire harness connector (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Install pump house panel G (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

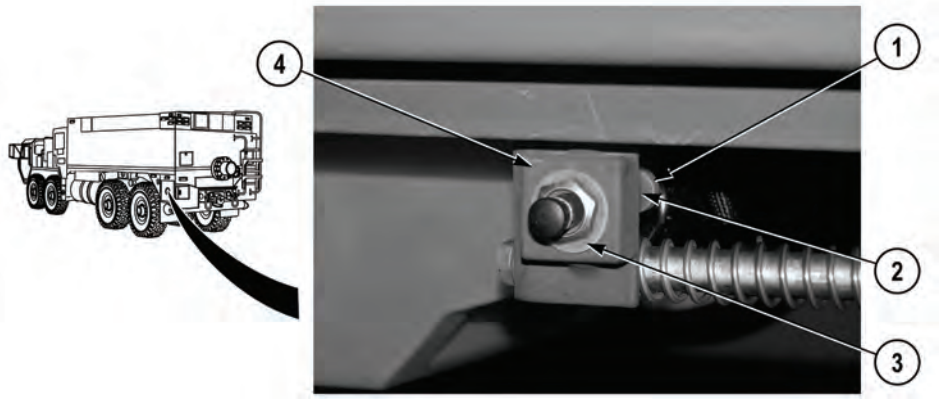
DOOR SWITCH REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Equipment Conditions
Batteries disconnected (TM 9-2320-315-14&P)

REMOVAL



NOTE

All door switches are removed the same way. Driver side rear compartment door shown.

1. Disconnect passenger side body wire harness connector (1) from door switch (2).
2. Remove door switch (2) and washer (3) from door switch bracket (4).
3. Remove washer (3) from door switch (2).

END OF TASK

INSTALLATION

NOTE

All door switches are installed the same way. Driver side rear compartment door shown.

1. Install washer (3) on door switch (2).
2. Install door switch (2) on door switch bracket (4) with washer (3).
3. Connect passenger side body wire harness connector (1) on door switch (2).

END OF TASK

ADJUSTMENT



NOTE

Switch self adjusts on first door closure.

Close door (5).

END OF TASK

FOLLOW-ON MAINTENANCE

Connect batteries (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

HOSE REEL REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

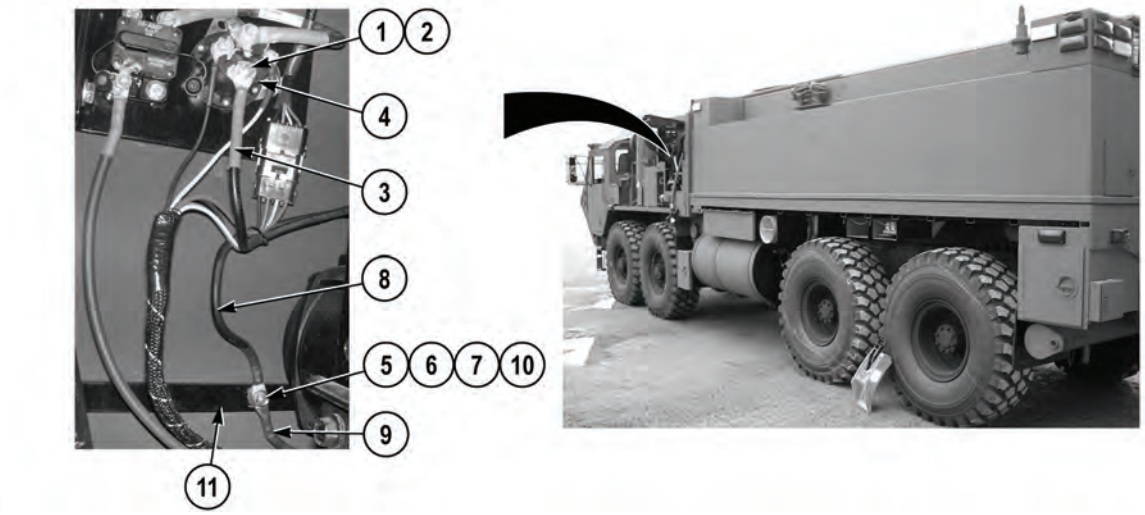
Materials/Parts
Compound, Sealing, Pipe Thread (WP 0401, Item 11)
Compound, Sealing (WP 0401, Item 10)
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)
Lockwasher (1)
Lockwasher (4)
Lockwasher (2)
Lockwasher (2)
Lockwasher (2)
Lockwasher (2)
Lockwasher (2)

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

References
WP 0315
WP 0392, Fig. WP 40

Equipment Conditions
Pump house panels A, E, and L removed (WP 0341)
Hose reel hose removed (WP 0318)
Lower hose reel guide removed (WP 0333)

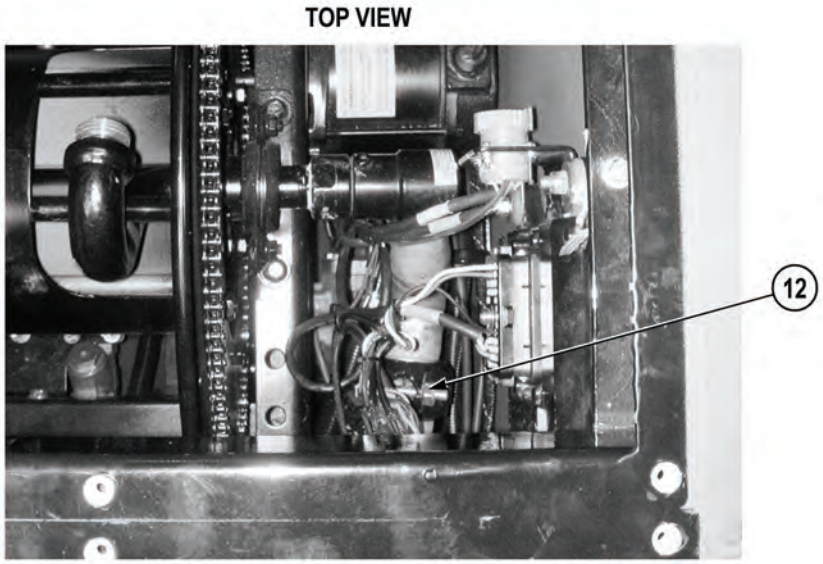
REMOVAL



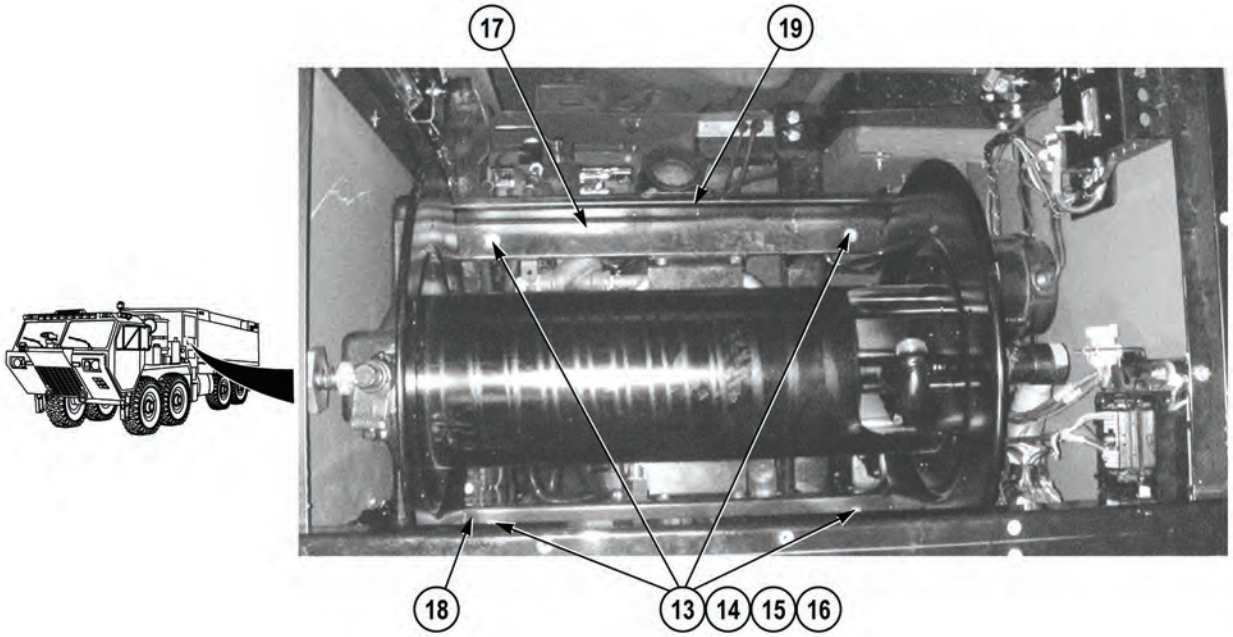
NOTE

- Tag and mark wires prior to removal to ensure proper installation.
- Remove cable ties as required.

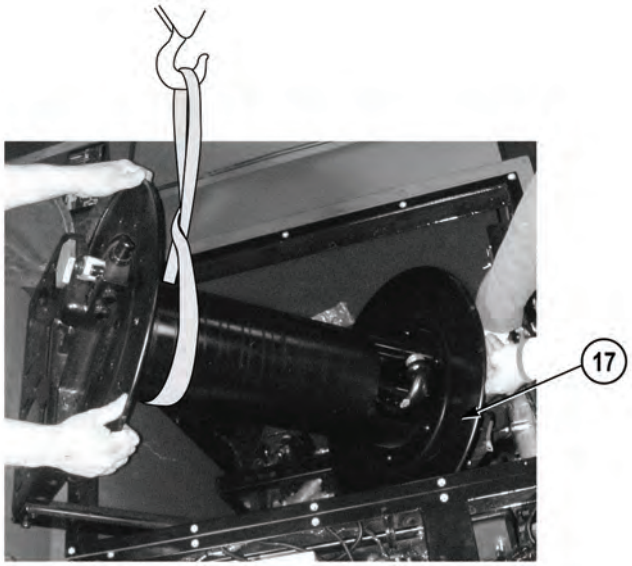
1. Remove nut (1), washer (2), and wire (3) from solenoid (4).
2. Remove nut (5), lockwasher (6), washer (7), two wires (8) and (9), and screw (10) from bracket (11). Discard lockwasher.



3. Remove coupling (12) from vehicle (WP 0315).



4. Remove four nuts (13), lockwashers (14), eight washers (15), and screws (16) from hose reel (17), bracket (18) and bracket (19). Discard lockwashers.



WARNING

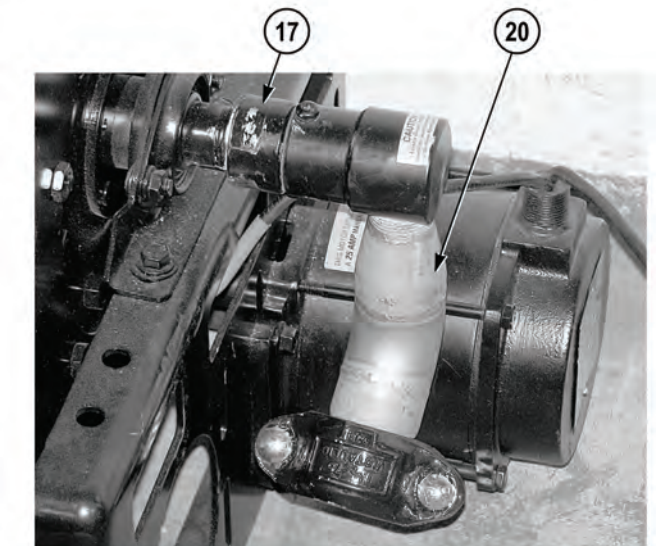


Hose reel assembly weighs 125 lb. (57 kg). Do not attempt to lift or move hose reel without the aid of an assistant and a suitable lifting device. Failure to comply may result in serious injury to personnel or damage to equipment.

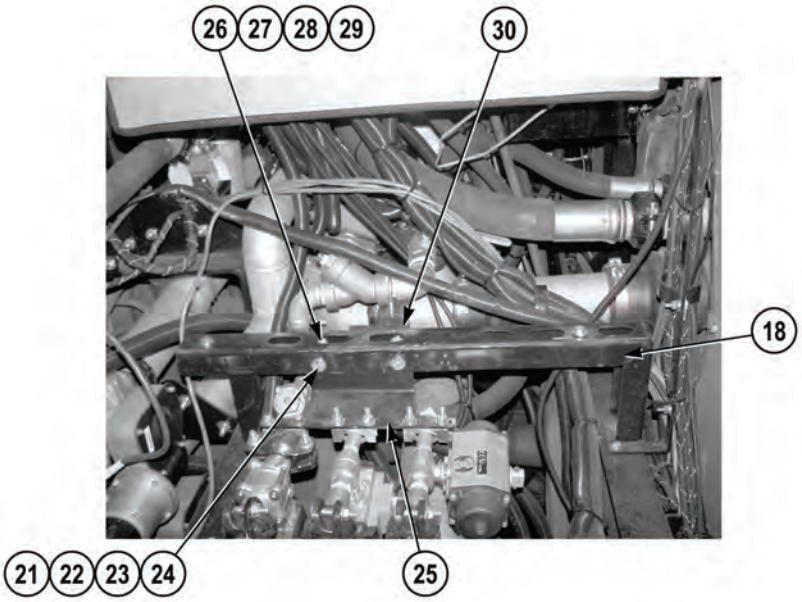
NOTE

Lifting device must be attached near rear end of hose reel. Hose reel is severely angled, and rear end if removed first. Failure to comply may result in damage to equipment.

5. With the aid of an assistant and a suitable lifting device, carefully remove hose reel (17) from vehicle.



6. Remove pipe (20) from hose reel (17).

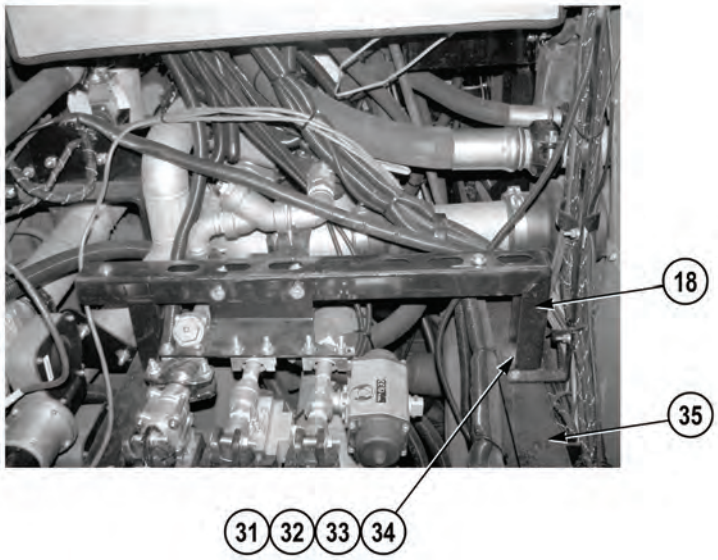


NOTE

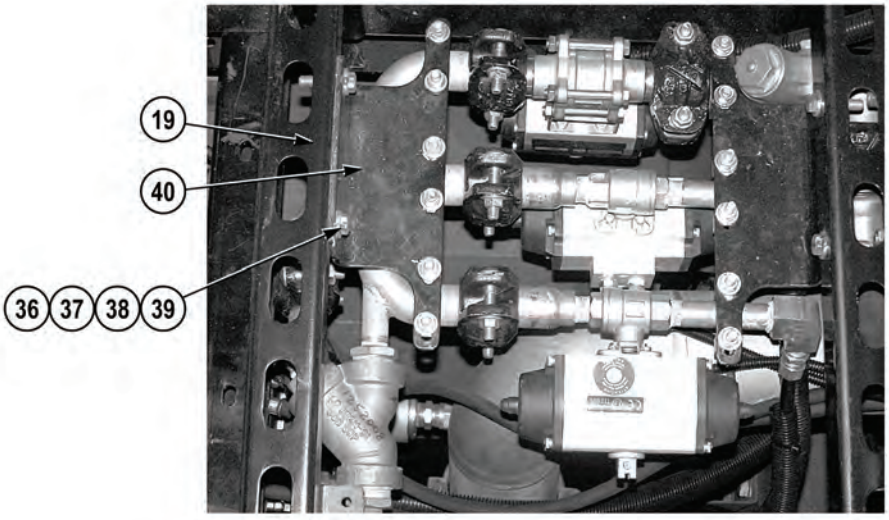
Perform Steps (7) through (11) if brackets need to be removed.

7. Remove two nuts (21), lockwashers (22), four washers (23), and two screws (24), from bracket (25) and bracket (18). Discard lockwashers.

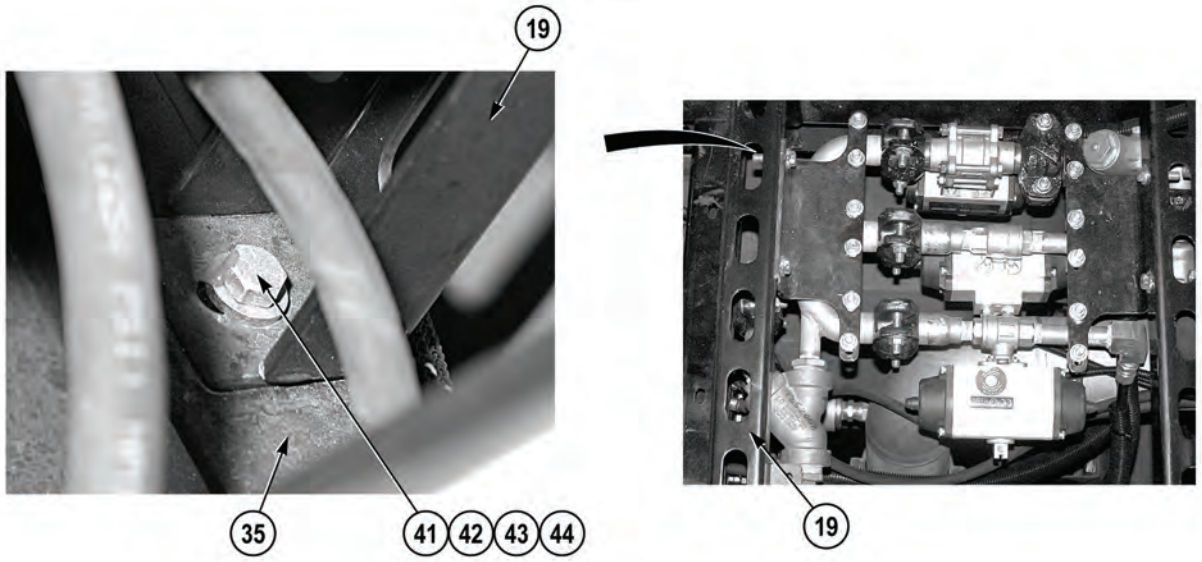
8. Remove two nuts (26), lockwashers (27), four washers (28), and two screws (29), from bracket (30) and bracket (18). Discard lockwashers.



9. Remove two nuts (31), lockwashers (32), four washers (33), two screws (34), and bracket (18), from pump house frame (35). Discard lockwashers.



10. Remove two nuts (36), lockwashers (37), four washers (38), and two screws (39), from bracket (40) and bracket (19). Discard lockwashers.



11. Remove two nuts (41), lockwashers (42), four washers (43), two screws (44), and bracket (19) from pump house frame (35). Discard lockwashers.

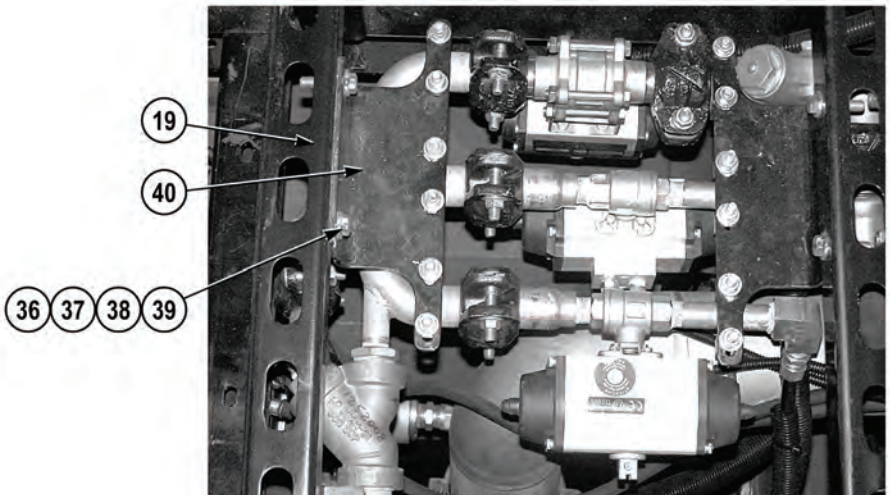
END OF TASK

INSTALLATION

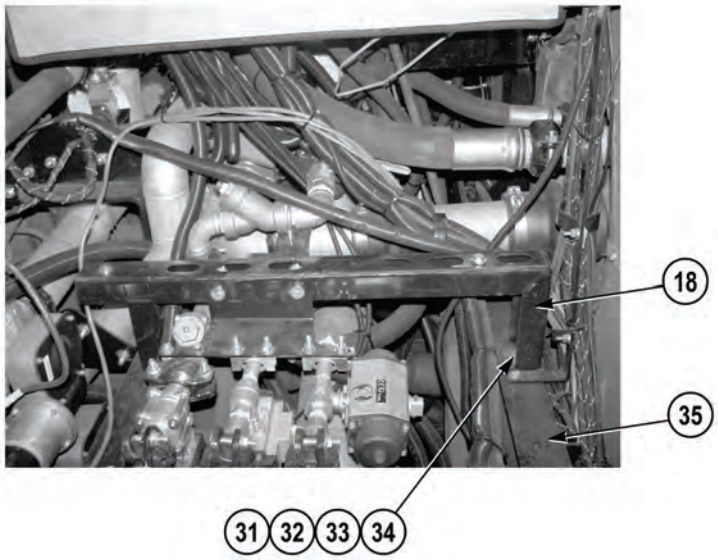
NOTE

Perform Steps (1) through (5) if brackets were removed.

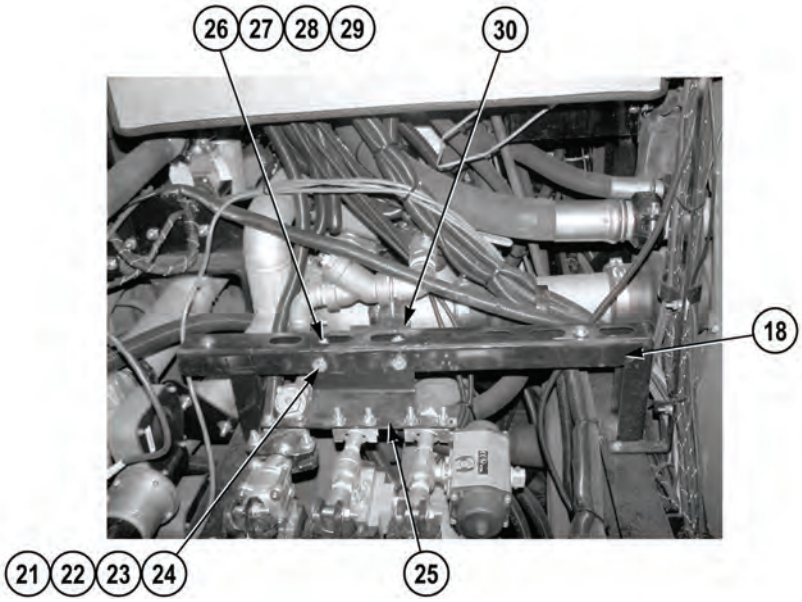
1. Install bracket (19) on pump house frame (35) with two screws (44), four washers (43), two lockwashers (42) and nuts (41).



2. Install bracket (40) on bracket (19) with two screws (39), four washers (38), two lockwashers (37), and nuts (36).

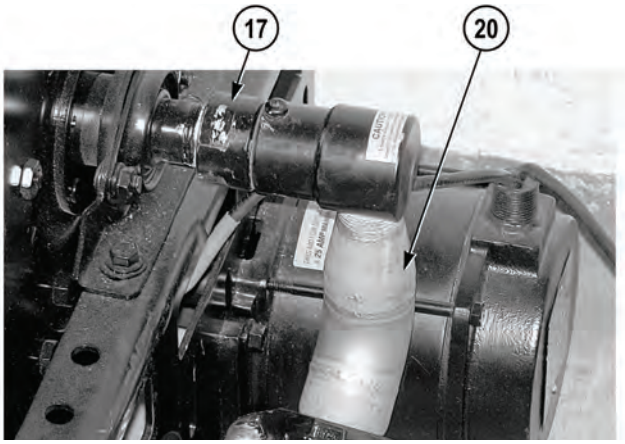


3. Install brackets (18) on pump house frame (35) with two screws (34), four washers (33), two lockwashers (32), and nuts (31).



4. Install bracket (30) on bracket (18) with two screws (29), four washers (28), two locknuts (27), and nuts (26).

5. Install bracket (25) on bracket (18) with two screws (24), four washers (23), two locknuts (22), and nuts (21).

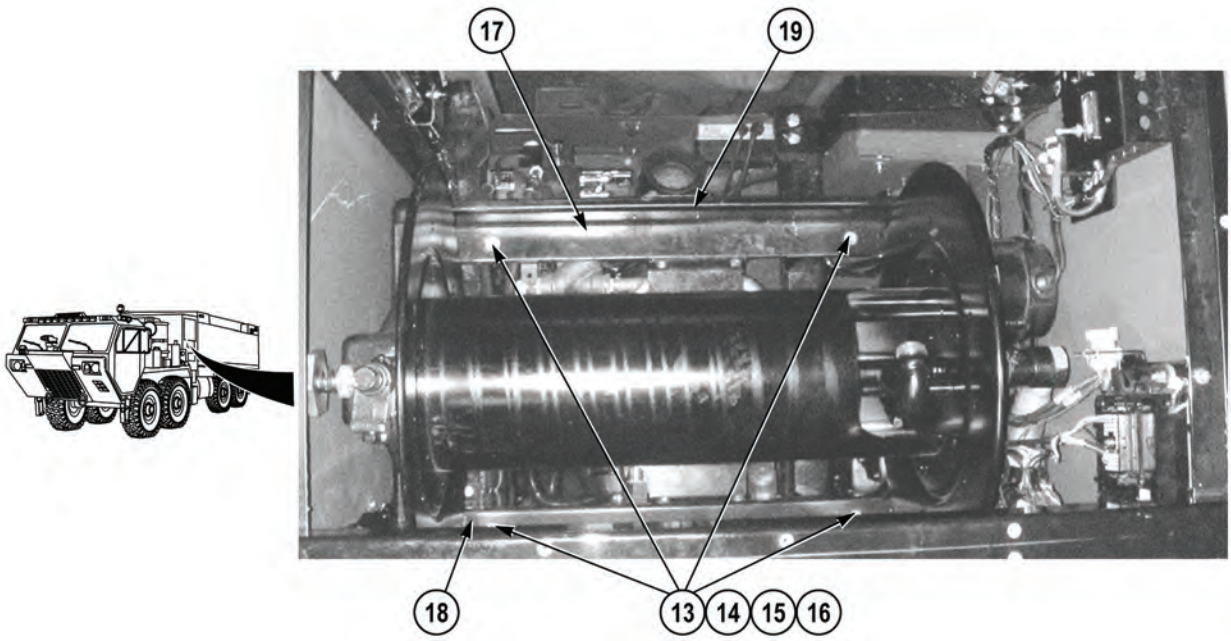


WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

6. Apply sealing compound to threads of pipe (20).
7. Install pipe (20) on hose reel (17).



WARNING

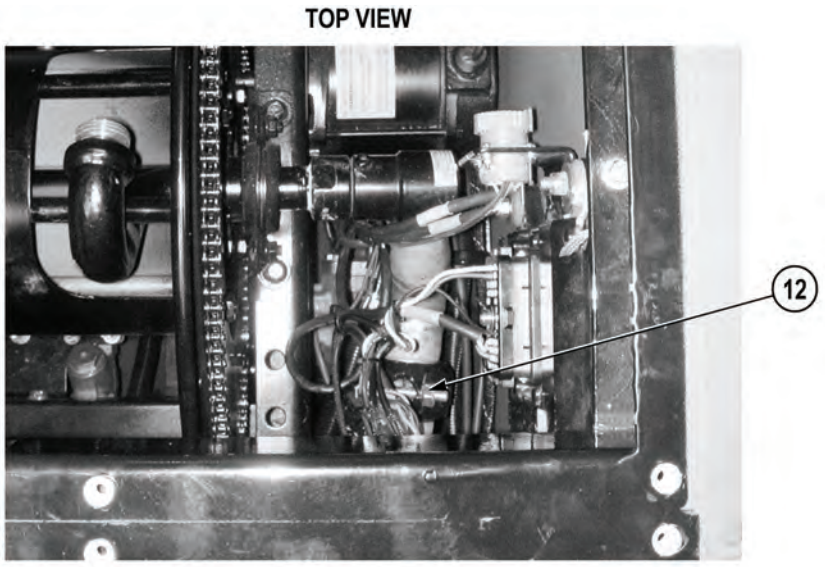


Hose reel assembly weighs 125 lb. (57 kg). Do not attempt to lift or move hose reel without the aid of an assistant and a suitable lifting device. Failure to comply may result in serious injury to personnel or damage to equipment.

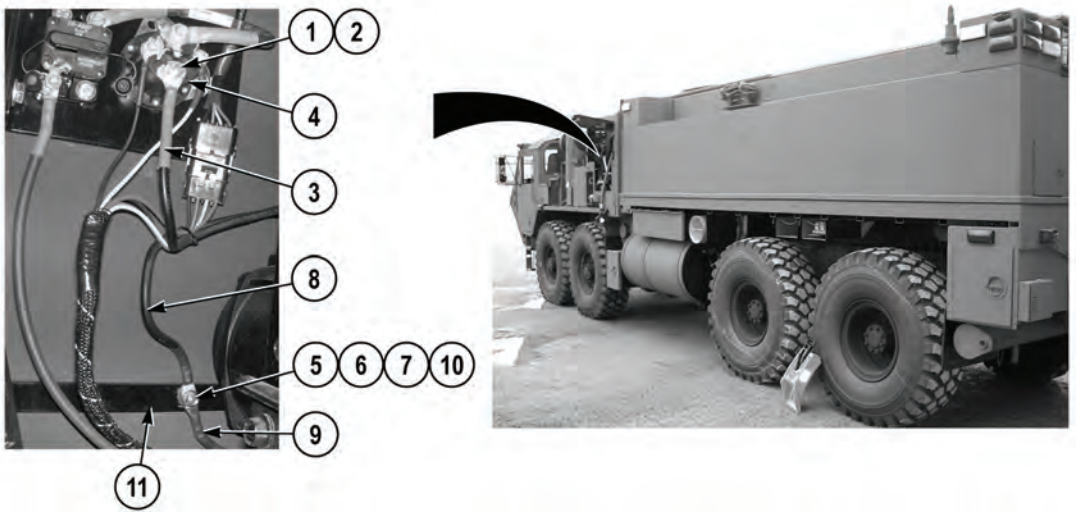
NOTE

Lifting device must be attached near rear end of hose reel. Hose reel is severely angled, and front end is installed first. Failure to comply may result in damage to equipment.

8. With the aid of an assistant and a suitable lifting device, install hose reel assembly (17) on bracket (18) and bracket (19) with four screws (16), eight washers (15), four lockwashers (14), and nuts (13).



9. Install coupling (12) on vehicle (WP 0315).



10. Install two wires (9) and (8) on bracket (11) with screw (10), washer (7), lockwasher (6), and nut (5).

CAUTION

Do not over tighten electrical connections on solenoid. Failure to comply may result in damage to equipment.

NOTE

Install cable ties as required.

11. Install wire (3) on solenoid (4) with washer (2) and nut (1).

12. Apply sealing compound to solenoid electrical connectors.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install lower hose reel guide (WP 0333)
2. Install hose on hose reel (WP 0318)
3. Install pump house panels A, E, and L (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

ELECTRICALLY-OPERATED BALL VALVE ELECTRIC MOTOR AND DRIVE ASSEMBLY REPLACEMENT

INITIAL SETUP:

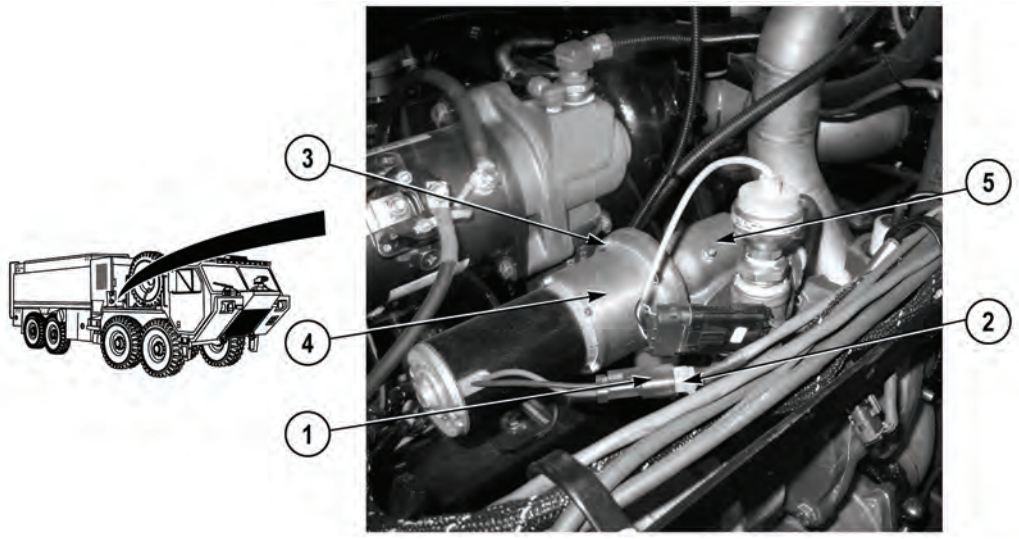
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Adhesive, Thread, Locking (WP 0401, Item 6)
Oil, Lubricating (WP 0401, Fig. Item 14)
Preformed Packing (1)
Preformed Packing (1)

References
WP 0392, Fig. 65

Equipment Conditions
Pump house panel G removed (WP 0341)

REMOVAL



NOTE

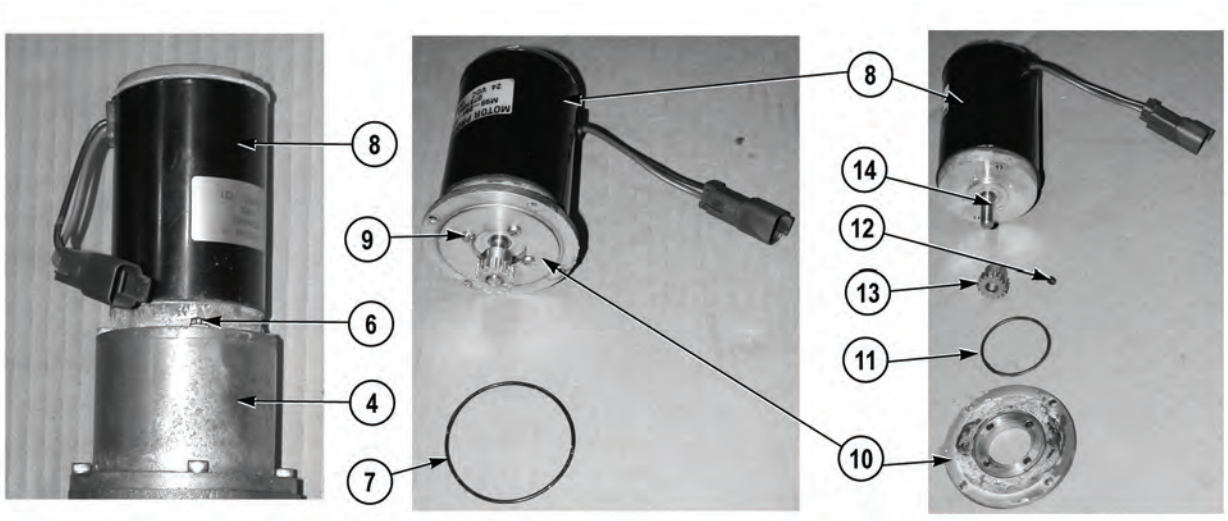
All five electrically-operated ball valve electric motors and drive assemblies are removed the same way. Passenger side shown.

1. Disconnect electric motor connector (1) from valve motor control wire harness connector (2).

NOTE

- Electric motor and drive assembly are removed as an assembly.
- Note position of electric motor and drive housing on valve prior to removal to ensure proper installation.

2. Remove four screws (3) and drive housing (4) from valve (5).



3. Remove four screws (6), preformed packing (7), and electric motor (8) from drive housing (4). Discard preformed packing.
4. Remove four screws (9), adapter (10), and preformed packing (11) from electric motor (8). Discard preformed packing.

NOTE

Note position of gear on shaft prior to removal to ensure proper installation.

5. Remove setscrew (12) and gear (13) from shaft (14).

END OF TASK

INSTALLATION

WARNING



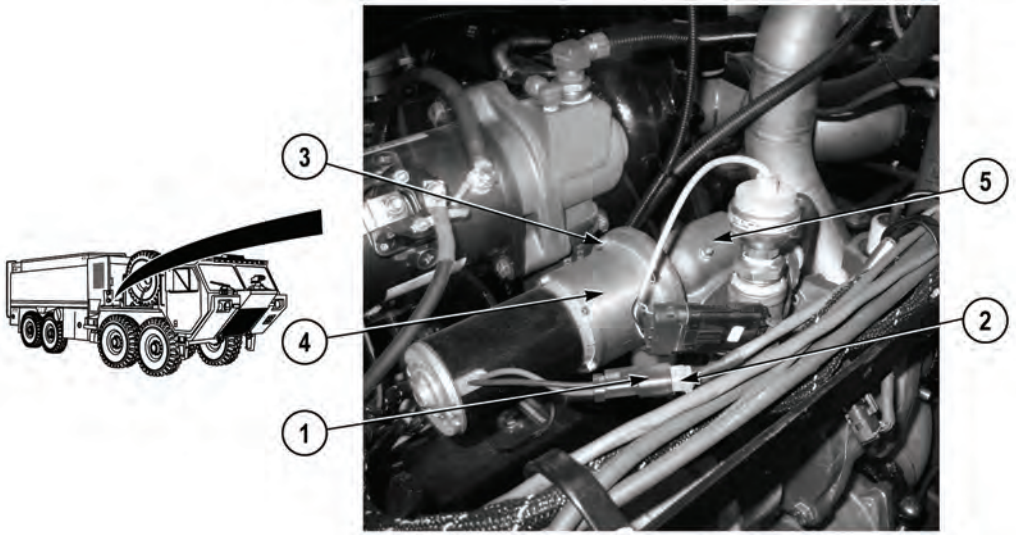
Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

NOTE

- All five electrically-operated ball valve electric motors are installed the same way. Passenger side shown.
- Install gear on shaft as noted prior to removal.

1. Apply adhesive to threads of eight screws (3) and (6) and setscrew (12).

2. Install gear (13) on shaft (14) with setscrew (12).
3. Lightly lubricate preformed packing (11) with clean oil, and install preformed packing (11) and adapter (10) on electric motor (8) with four screws (9).
4. Lightly lubricate preformed packing (7) with clean oil, and install electric motor (8) and preformed packing (7) on drive housing (4) with four screws (6).



NOTE

- Electric motor and drive assembly are installed as an assembly.
- Install electric motor and drive housing on valve as noted prior to removal.

5. Install drive housing (4) on valve (5) with four screws (3).
6. Connect electric motor connector (1) on valve motor control wire harness connector (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Install pump house panel G (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

ELECTRICALLY-OPERATED BALL VALVE SEATS AND PREFORMED PACKING REPLACEMENT

INITIAL SETUP:

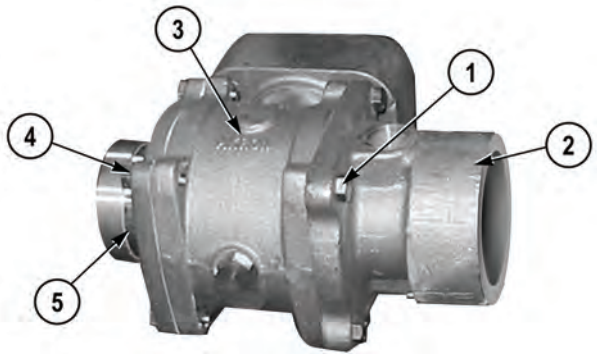
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Lubricant, Silicone Compound (WP 0401, Item 21)
Seal (2)
Preformed Packing (1)

References
WP 0392, Fig. 65

Equipment Conditions
Inlet valve removed (driver side) (WP 0184)

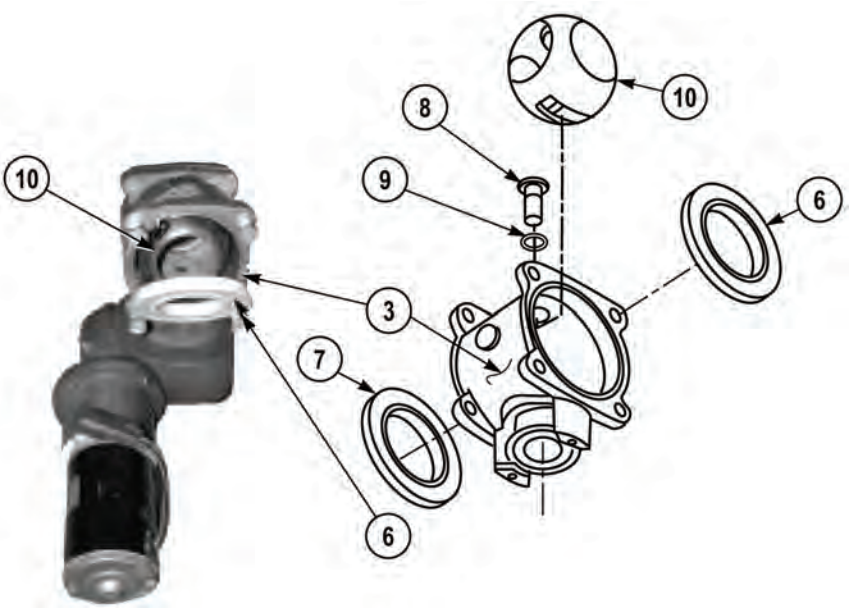
REMOVAL



NOTE

- All electrically-operated ball valve seats and preformed packing are removed the same way. Driver side inlet valve shown.
- Perform task with electrically-operated ball valve on clean work surface.

1. Remove four screws (1) and adapter (2) from valve body (3).
2. Remove four screws (4) and adapter (5) from valve body (3).



3. Remove two seals (6) and (7) from valve body (3). Discard seals.

NOTE

Valve must be placed in open position before replacing valve ball.

4. Remove trunnion (8), preformed packing (9), and valve ball (10) from valve body (3). Discard preformed packing.

END OF TASK

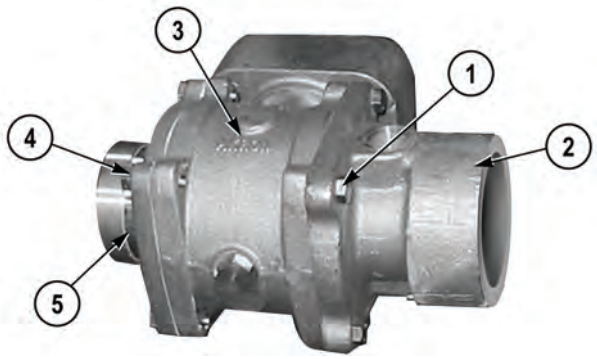
INSTALLATION

NOTE

All electrically-operated ball valve seats and preformed packing are installed the same way. Driver side inlet valve shown.

1. Coat preformed packing (9) with silicone, and install valve ball (10) on valve body (3) with preformed packing (9) and trunnion (8).

2. Install two seals (7) and (6) on valve body (3).



3. Install adapter (5) on valve body (3) with four screws (4).
4. Install adapter (2) on valve body (3) with four screws (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Install inlet valve (driver side) (WP 0184)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

FLOW SENSOR REPLACEMENT

INITIAL SETUP:

Tools and Special Tools

Standard Automotive Tool Set (SATS), (WP 0399, Item 15)
- Wrench, Adjustable, Automotive, 15 in.

Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts

Oil, Lubricating (WP 0401, Item 20)
Preformed Packing (2)

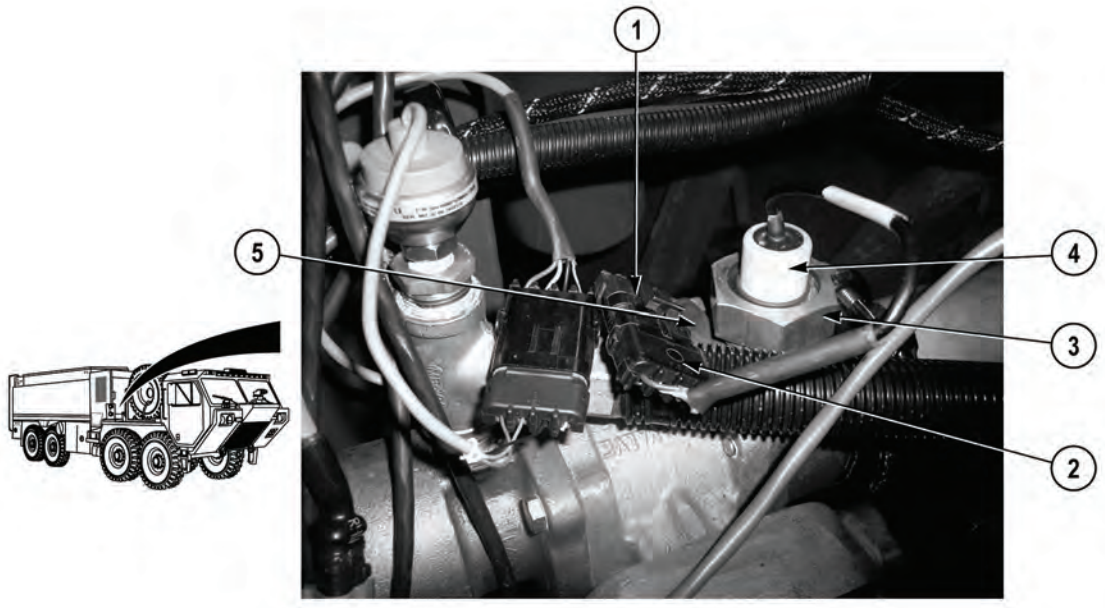
References

WP 0392, Fig. 65

Equipment Conditions

Pump house panel G removed (WP 0341)
Water system drained (WP 0014)

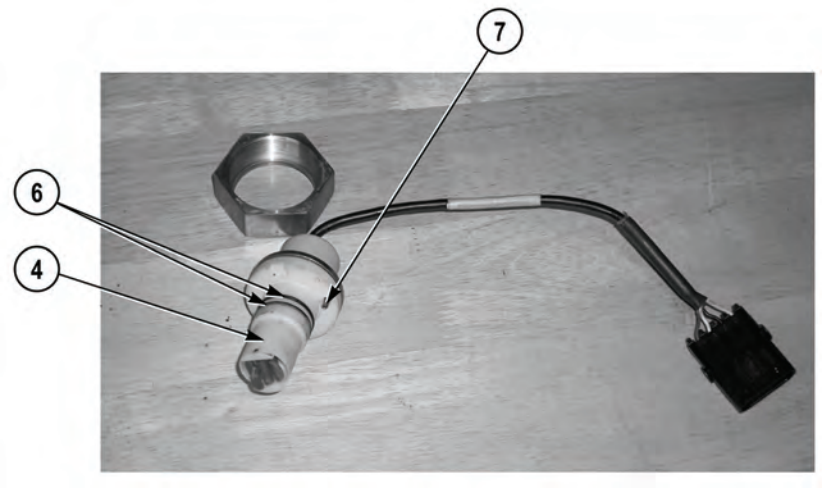
REMOVAL



NOTE

All flow sensors are removed the same way. Flow sensor on No.1 passenger side discharge valve shown.

1. Disconnect flow sensor connector (1) from flow sensor wire harness connector (2).
2. Loosen nut (3) and remove flow sensor (4) from adapter (5).



3. Remove two preformed packings (6) from flow sensor (4). Discard preformed packings.

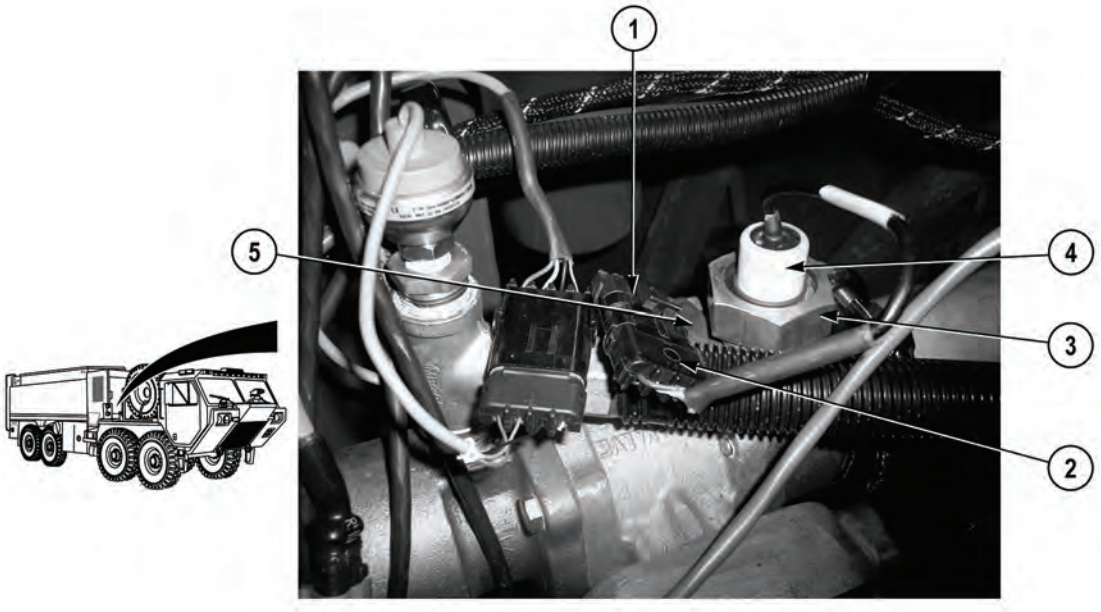
END OF TASK

INSTALLATION

NOTE

All flow sensors are installed the same way. Flow sensor on No. 1 passenger side discharge valve shown.

1. Lightly lubricate two preformed packings (6) with lubricating oil and install two preformed packings (6) on flow sensor (4).



NOTE

Alignment pin must align with hole on adapter before tightening nut.

2. Align alignment pin (7) on flow sensor (4) with hole in adapter (5).
3. Install flow sensor (4) on adaptor (5) and tighten nut (3).
4. Connect flow sensor wire harness connector (2) to flow sensor connector (1).

END OF TASK

FOLLOW ON MAINTENANCE

Install pump house access panel G (WP 0341).

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

HIGH AMPERAGE CABLE(S) REPLACEMENT

INITIAL SETUP:

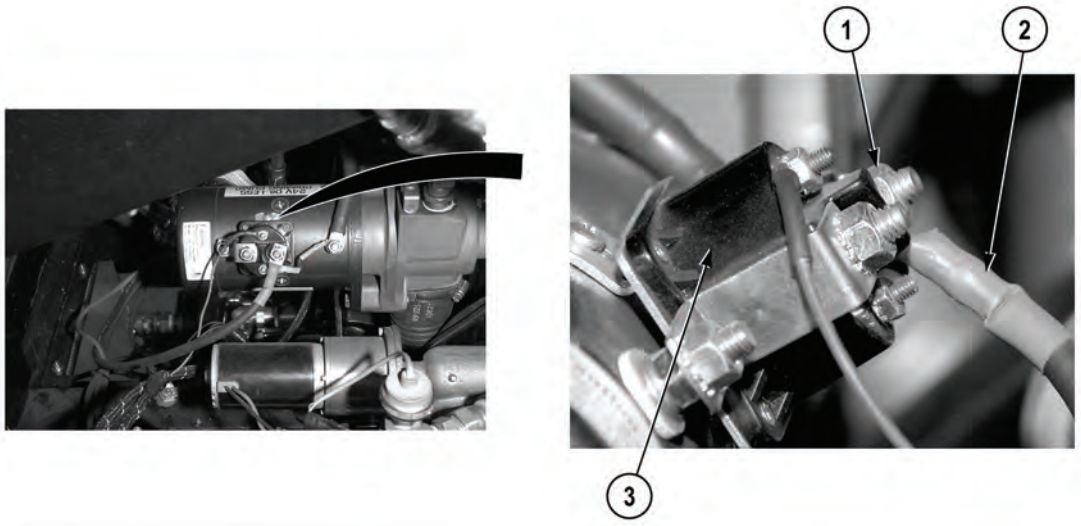
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

References
WP 0008
WP 0341

Materials/Parts
Ties, Cable, Plastic (WP 0401, Item 25)

Equipment Conditions
Batteries disconnected (TM 9-2320-315-14&P)

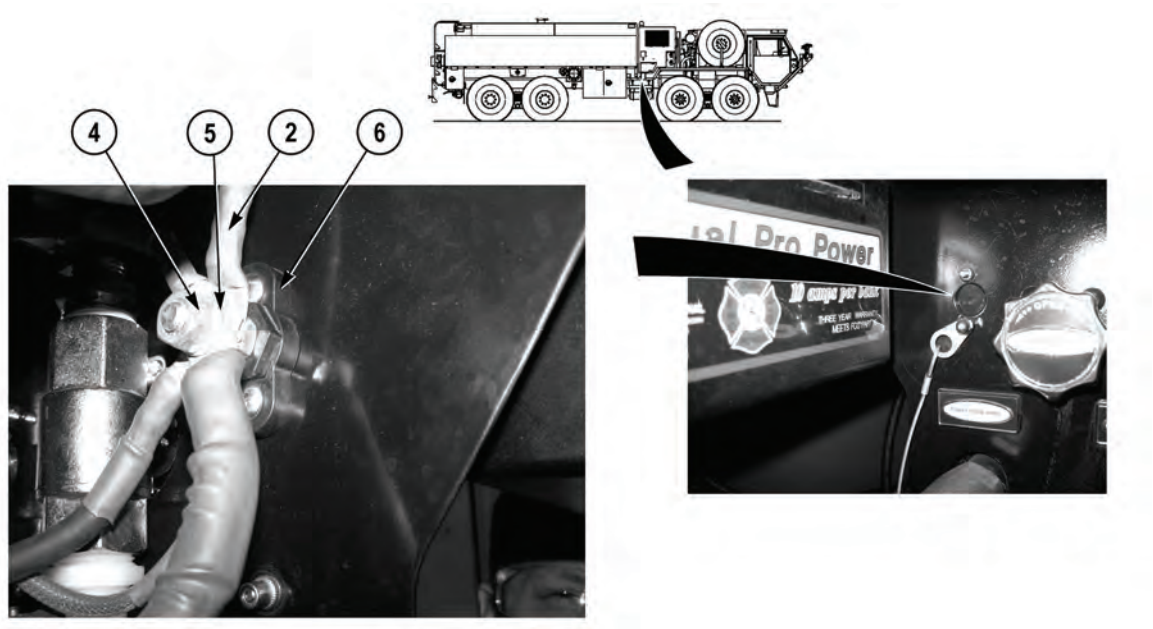
REMOVAL



NOTE

- Pump house panel and cab instrument panel removal may vary depending on location of high amperage cable.
- Tag and mark wires prior to removal to ensure proper installation.
- Note routing of high amperage cable prior to removal to ensure proper installation.
- Note position and remove cable ties, split loom, and cushion clips as required.
- All high amperage cables are removed the same way, primer pump high amperage cable shown.

1. Remove pump house panel G (WP 0341).
2. Remove locknut (1) and high amperage cable (2) from primer pump solenoid (3).
3. Open passenger side pump house control access door (WP 0008).



4. Remove nut (4), washer (5), and high amperage cable (2) from pump house B+ stud (6).
5. Remove high amperage cable (2) from vehicle.

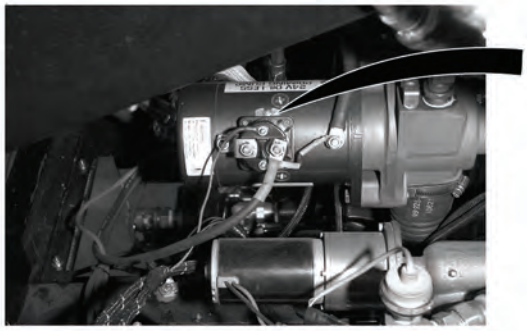
END OF TASK

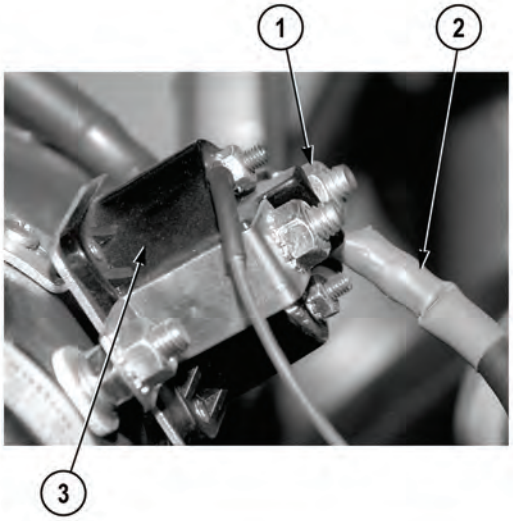
INSTALLATION

NOTE

- Route high amperage cable as noted prior to removal.
- Install cable ties, split loom, and cushion clips as required.

1. Install high amperage cable (2) on vehicle.
2. Install high amperage cable (2) on pump house B+ stud (6) with washer (5) and nut (4).
3. Close passenger side pump house control access door (WP 0008).





4. Install high amperage cable (2) on primer pump solenoid (3) with locknut (1).
5. Install pump house panel G (WP 0341).

END OF TASK

FOLLOW-ON MAINTENANCE

Connect batteries (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

HOSE REEL CIRCUIT BREAKER REPLACEMENT

INITIAL SETUP:

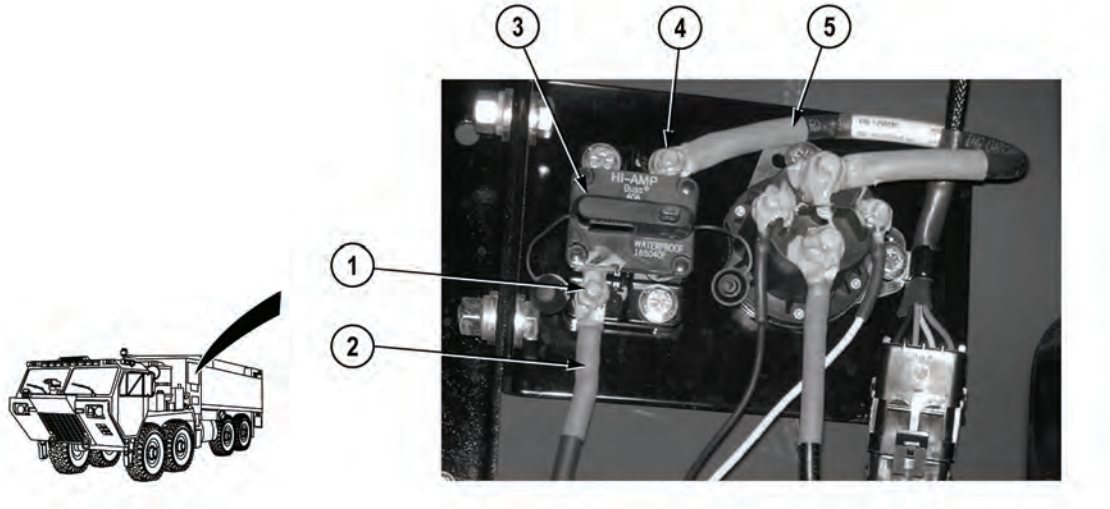
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive
(WP 0399, Item 17)

Materials/Parts
Compound, Sealing (WP 0401, Item 10)
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)
Locknut (1)
Locknut (1)
Lockwasher (2)
Lockwasher (2)

References
WP 0253
WP 0392, Fig. 40

Equipment Conditions
Pump house panels E removed (WP 0341)
Pump house access door opened (WP 0009)

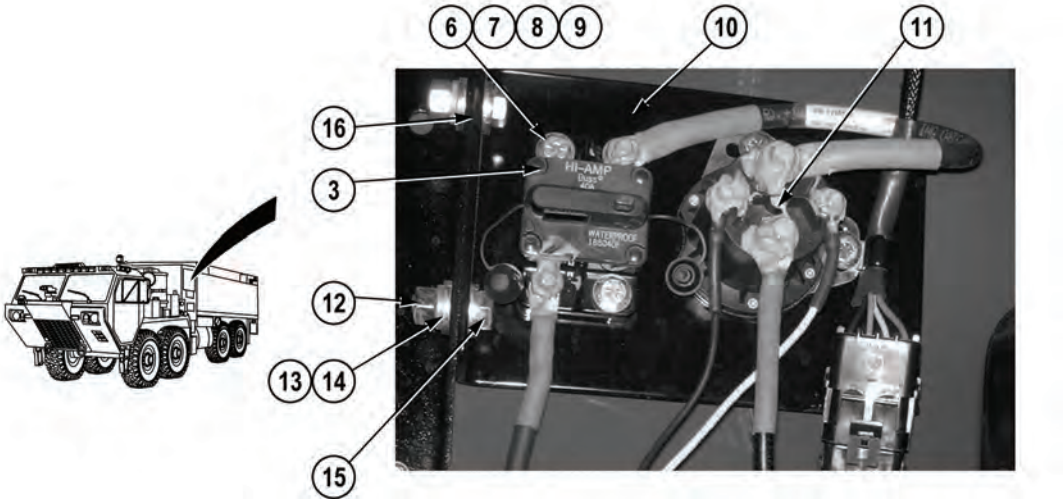
REMOVAL



NOTE

Tag and mark wires prior to removal to ensure proper installation.

1. Remove locknut (1) and wire (2) from circuit breaker (3). Discard locknut.
2. Remove locknut (4) and wire 1296580 (5) from circuit breaker (3). Discard locknut.



3. Remove two nuts (6), lockwashers (7), four washers (8), two screws (9), and circuit breaker (3) from bracket (10). Discard lockwashers.

NOTE

Perform Steps (4) and (5) if bracket needs to be removed.

4. Remove hose reel solenoid (11) (WP 0253).

5. Remove two nuts (12), lockwashers (13), four washers (14), screws (15), and bracket (10) from pump house frame (16). Discard lockwashers.

END OF TASK

INSTALLATION

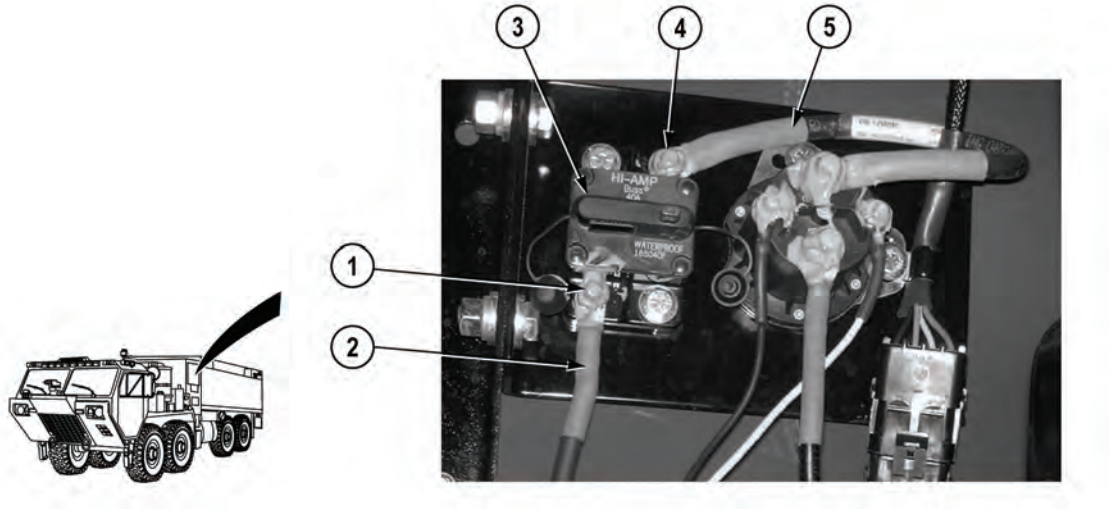
NOTE

Perform Steps (1) and (2) if bracket was removed.

1. Install bracket (10) on pump house frame (16) with two screws (15), fours washers (14), two lockwashers (13), and nuts (12).

2. Install hose reel solenoid (11) (WP 0253).

3. Install circuit breaker (3) on bracket (10) with two screws (9), four washers (8), two lockwashers (7), and nuts (6).



4. Install wire 1296580 (5) on circuit breaker (3) with locknut (4).
5. Install wire (2) on circuit breaker (3) with locknut (1).

WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

6. Apply sealing compound to wire 1296580 (5) and wire (2).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Close pump house access door (WP 0009)
2. Install pump house panel E (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

REEL REWIND SWITCH REPLACEMENT

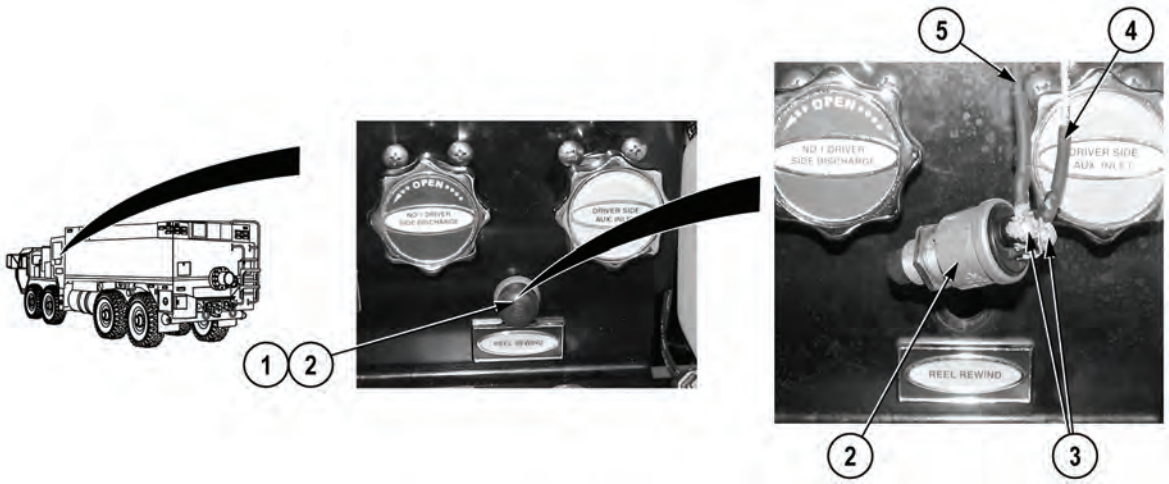
INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Compound, Sealing (WP 0401, Item 10)

Equipment Conditions
Pump house panels A and B removed (WP 0341)

REMOVAL



1. Remove cover (1) from switch (2).
2. Remove switch (2) from vehicle.

NOTE

Tag and mark wires prior to removal to ensure proper installation.

3. Remove two screws (3), wire 2341 (4) and wire 1664 (5) from switch (2).

END OF TASK

INSTALLATION



NOTE

Jam nut on switch may require adjustment after switch installation.

1. Install wire 1664 (5), wire 2341 (4), and screws (3) on switch (2).

WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

2. Apply sealant to two screws (3), wire 1664 (5), and wire 2341 (4).
3. Install switch (2) on vehicle.
4. Install cover (1) on switch (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Install pump house panels A and B (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

HOSE REEL SOLENOID REPLACEMENT

INITIAL SETUP:

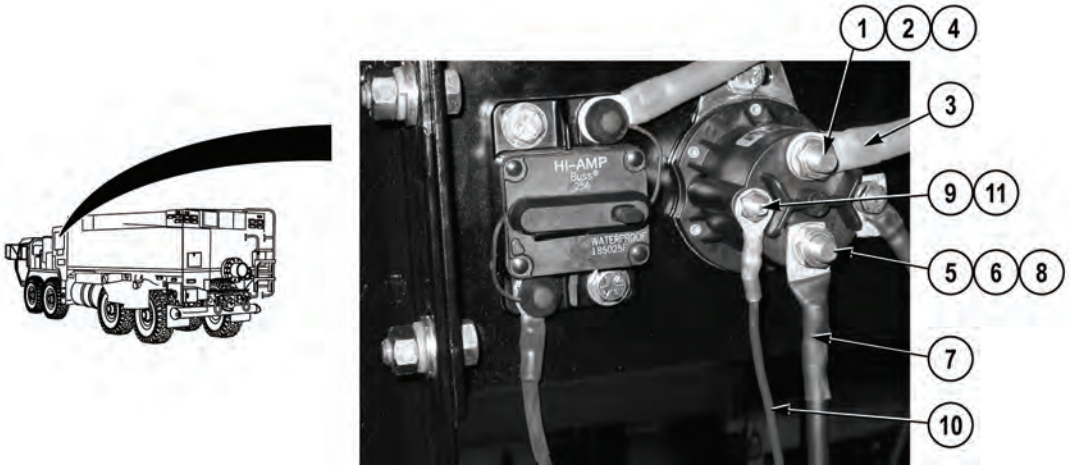
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Lockwasher (1)
Lockwasher (1)
Lockwasher (2)

References
WP 0392, Fig. 40

Equipment Conditions
Batteries disconnected (TM 9-2320-315-14&P)
Pump house access door opened (WP 0009)

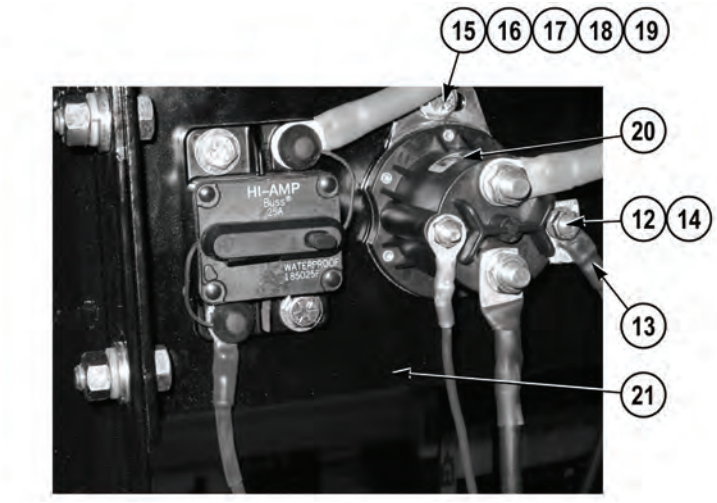
REMOVAL



NOTE

Tag and mark wires prior to removal to ensure proper installation.

1. Remove nut (1), lockwasher (2), and wire 1296580 (3) from stud (4). Discard lockwasher.
2. Remove nut (5), lockwasher (6), and hose reel wire (7) from stud (8). Discard lockwasher.
3. Remove nut (9) and wire 1640L (10) from stud (11).



4. Remove nut (12) and wire 1664L (13) from stud (14).

NOTE

Note position of cushion clip prior to removal to ensure proper installation.

5. Remove two nuts (15), lockwashers (16), four washers (17), cushion clip (18), two screws (19), and solenoid (20) from bracket (21). Discard lockwashers.

END OF TASK

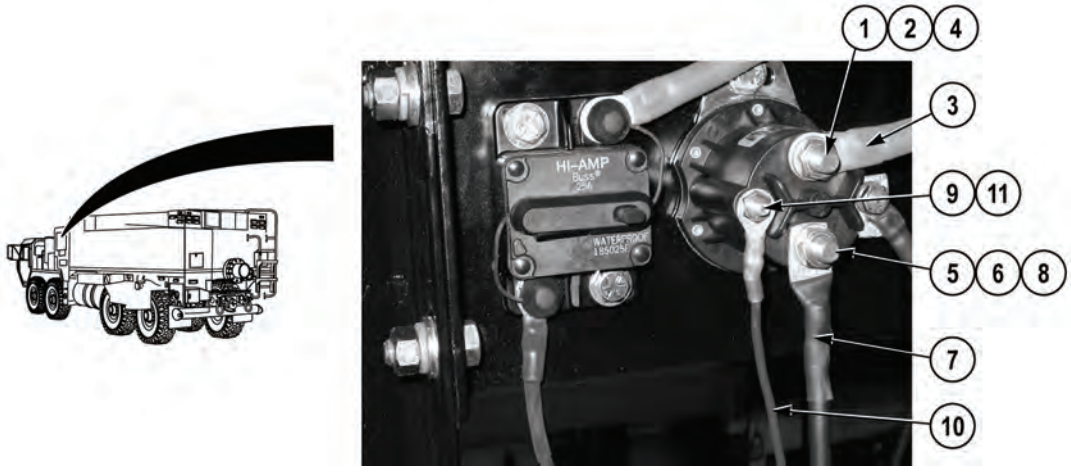
INSTALLATION

NOTE

Install cushion clip as noted prior to removal.

1. Install solenoid (20) and cushion clip (18) on bracket (21) with two screws (19), four washers (17), two lockwashers (16), and nuts (15).

2. Install wire 1664L (13) on stud (14) with nut (12).



3. Install wire 1640L (10) on stud (11) with nut (9).
4. Install hose reel wire (7) on stud (8) with lockwasher (6) and nut (5).
5. Install wire 1296580 (3) on stud (4) with lockwasher (2) and nut (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Close pump house access door (WP 0009)
2. Connect batteries (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

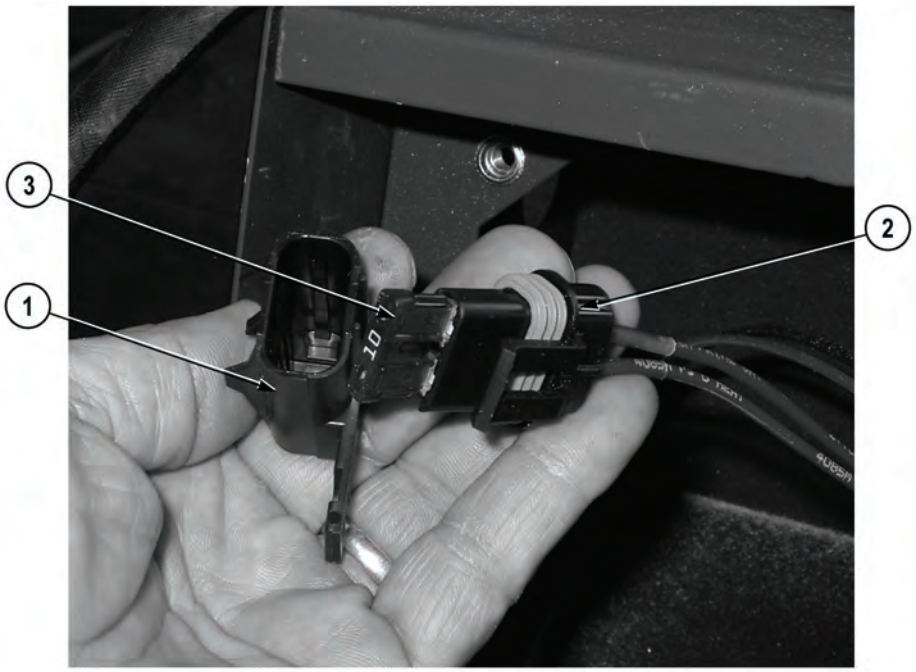
INLINE FUSE REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Equipment Conditions
Batteries disconnected (TM 9-2320-315-14&P)

REMOVAL



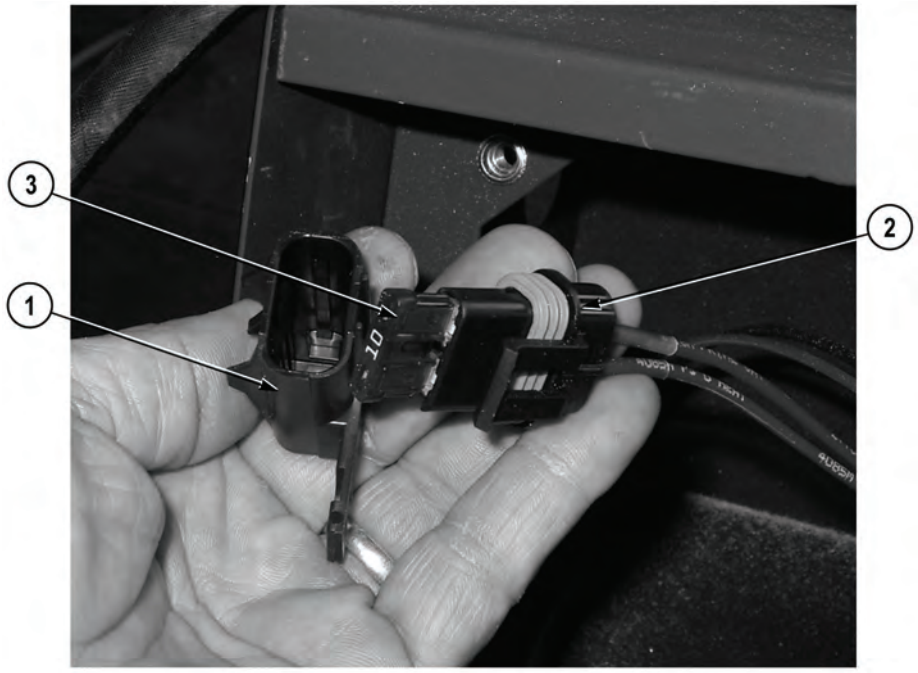
NOTE

All inline fuses removed the same way.

1. Remove fuse cover (1) from fuse holder (2).
2. Remove fuse (3) from fuse holder (2).

END OF TASK

INSTALLATION



NOTE

All inline fuses installed the same way.

1. Install fuse (3) in fuse holder (2).
2. Install fuse cover (1) on fuse holder (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Connect batteries (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

INTERCOM REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials
Tags, Identification (WP 0399, Item 6)
Locknut (2)
Lockwasher (1)
Lockwasher (1)

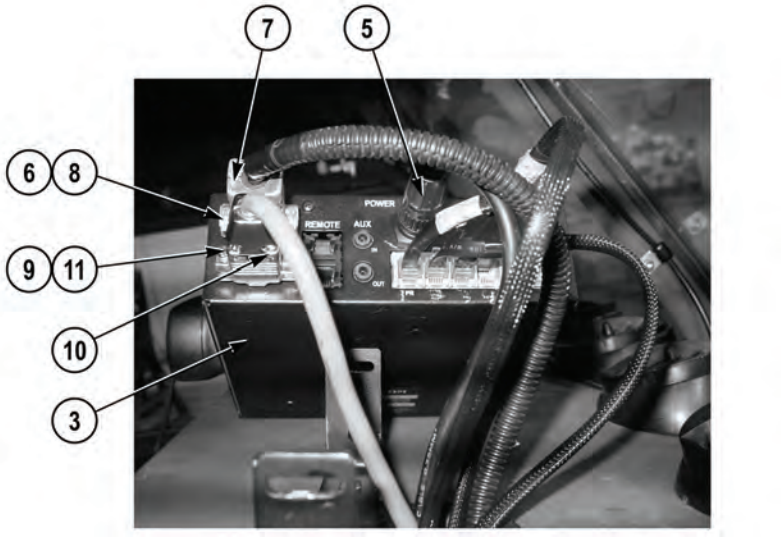
References
WP 0275
WP 0392, Fig. 43

Equipment Conditions
Batteries disconnected (TM 9-2320-279-10)

REMOVAL



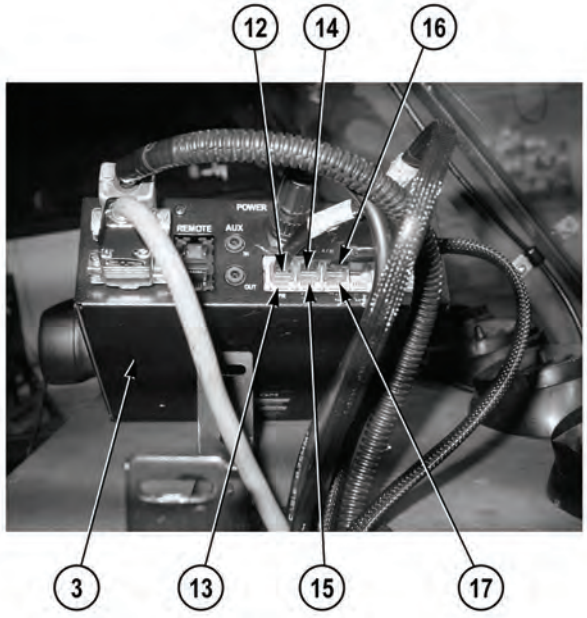
1. Remove four screws (1), washers (2), and intercom (3) from intercom bracket (4).



NOTE

Tag and mark wires prior to removal to ensure proper installation.

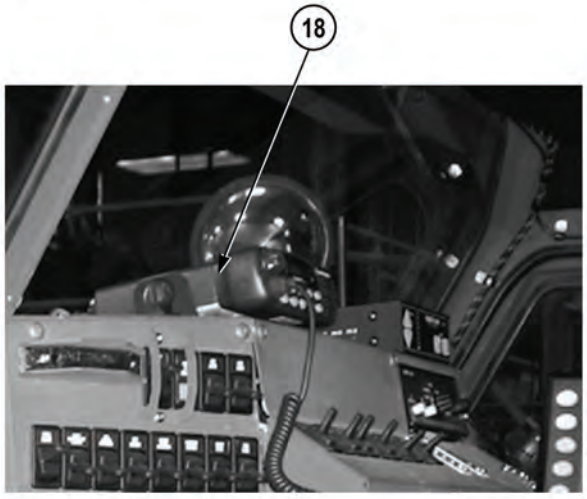
2. Remove intercom power supply wire harness (5) from intercom (3).
3. Loosen two screws (6) and remove SINCGARS interface wire harness connector (7) from intercom RADIO B terminal (8).
4. Loosen two screws (9) and remove two-way radio interface wire harness connector (10) from intercom RADIO A terminal (11).



NOTE

Intercom PR terminal jack has priority over other jacks during communication from intercom system.

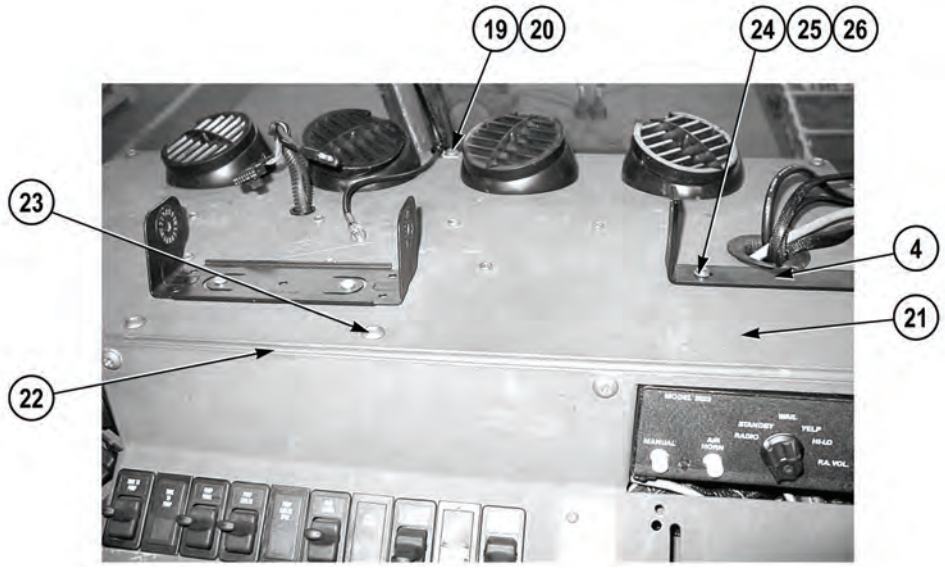
5. Remove remote intercom cable (12) from intercom terminal PR jack (13).
6. Remove remote intercom cable (14) from intercom terminal jack (15).
7. Remove remote intercom cable (16) from intercom terminal jack (17).
8. Remove intercom (3) from vehicle.



NOTE

Perform Steps (9) through (15) if intercom bracket and/or power supply wire harness needs to be removed.

9. Remove two-way radio (18) from vehicle (WP 0275).



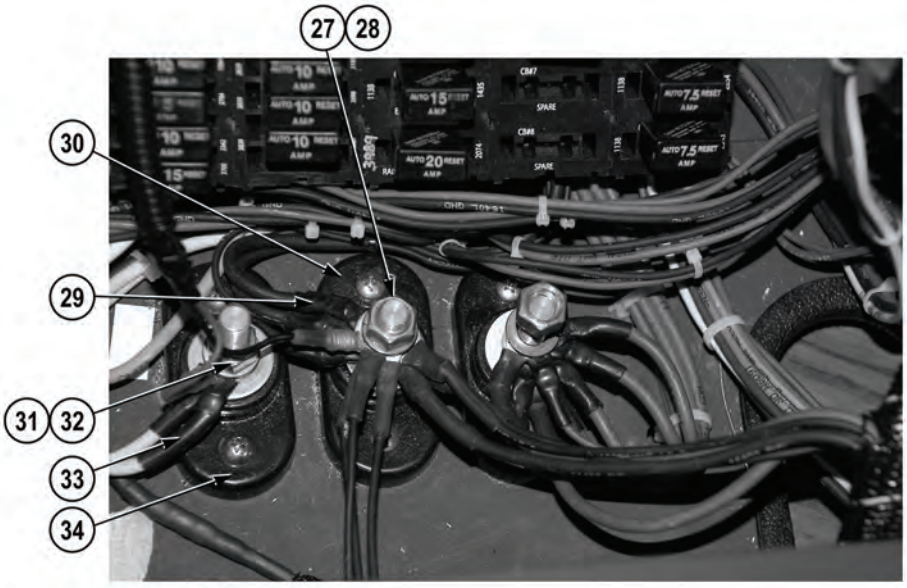
10. Remove screw (19) and cushion clip (20) from cab instrument panel A (21) and cab instrument panel assembly (22).

⚠ CAUTION

When performing Step (11), lift cab instrument panel A only enough to access wires. Wires for flasher units and two-way radio are still attached. Failure to comply may cause damage to equipment.

11. Remove six screws (23) and lift cab instrument panel A (21) slightly from cab instrument panel assembly (22).

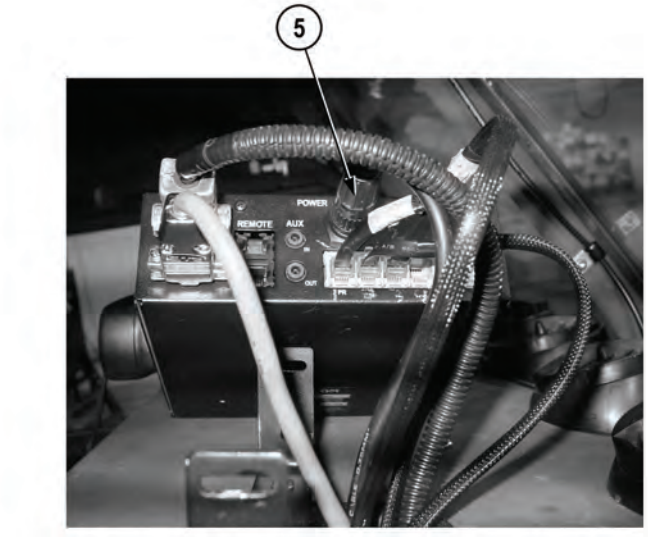
12. Remove two locknuts (24), washers (25), screws (26), and intercom bracket (4) from cab instrument panel A (21). Discard locknuts.



NOTE

- Note routing of intercom power supply wire harness prior to removal to ensure proper installation.
- Note position and remove split loom as required.

13. Remove nut (27), lockwasher (28), and intercom power supply wire harness black wire (29) from ground terminal block (30). Discard lockwasher.
14. Remove nut (31), lockwasher (32), and intercom power supply wire harness red wire (33) from 12 VDC terminal block (34). Discard lockwasher.



15. Remove intercom power supply wire harness (5) from vehicle.

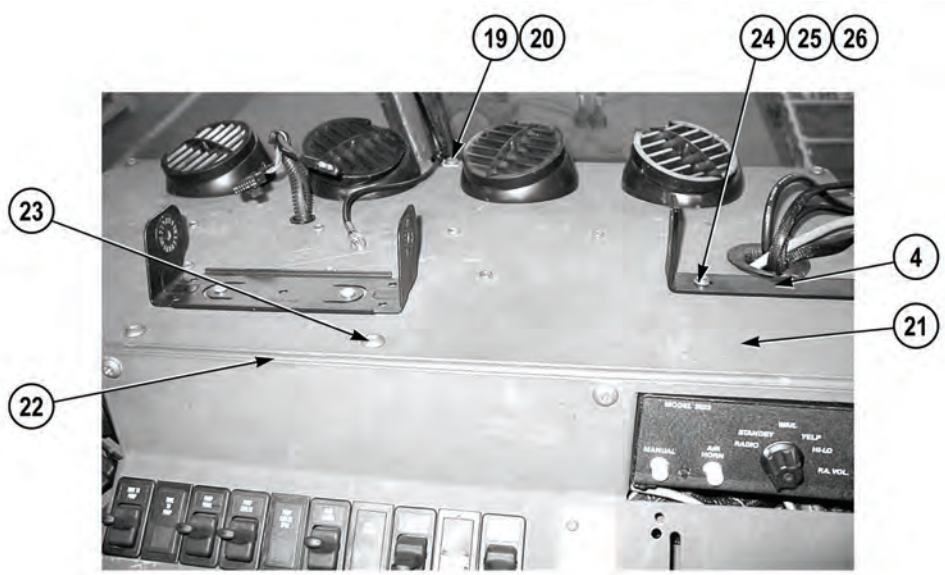
END OF TASK

INSTALLATION

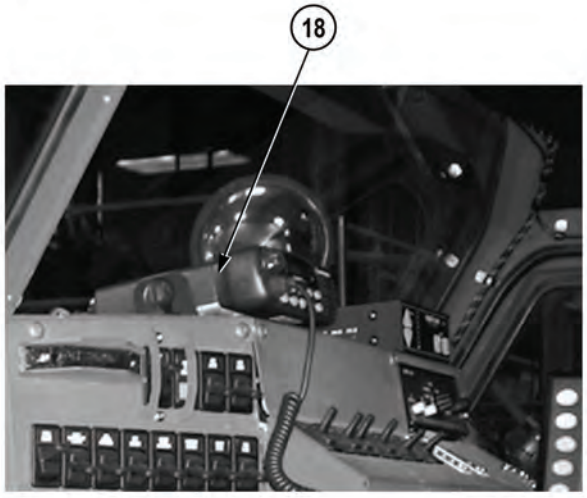
NOTE

- Perform Steps (1) through (7) if intercom bracket and/or power supply wire harness were removed.
- Route intercom power supply wire harness as noted prior to removal.
- Install split loom as required.

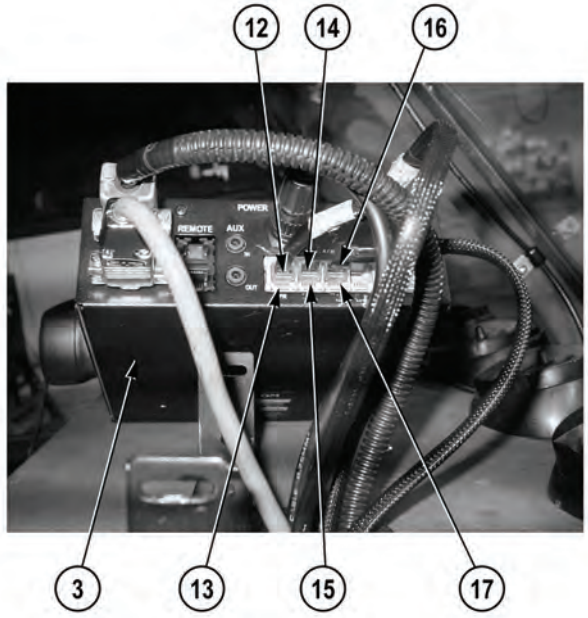
1. Position intercom power supply wire harness (5) on vehicle.
2. Install intercom power supply wire harness red wire (33) on 12 VDC terminal block (34) with lockwasher (32) and nut (31).
3. Install intercom power supply wire harness black wire (29) on ground terminal block (30) with lockwasher (28) and nut (27).



4. Install intercom bracket (4) on cab instrument panel A (21) with two screws (26), washers (25), and locknuts (24).
5. Install cab instrument panel A (21) on cab instrument panel assembly (22) with six screws (23).
6. Install cushion clip (20) on cab instrument panel A (21) and cab instrument panel assembly (22) with screw (19).



7. Install two-way radio (18) on vehicle (WP 0275).

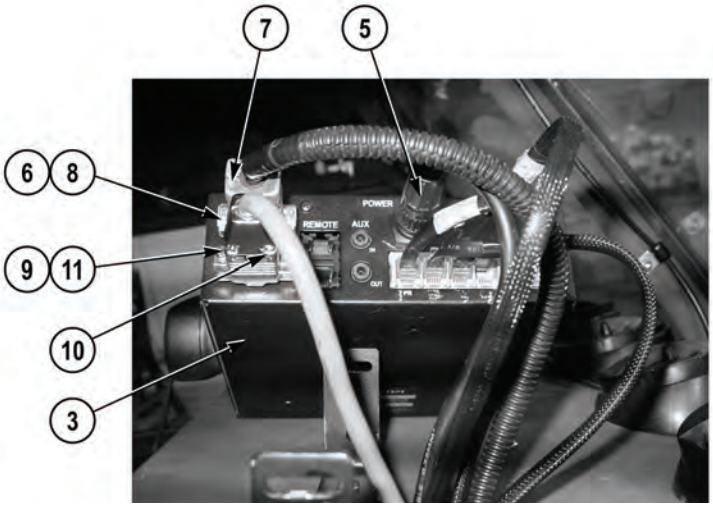


8. Position intercom (3) on vehicle.

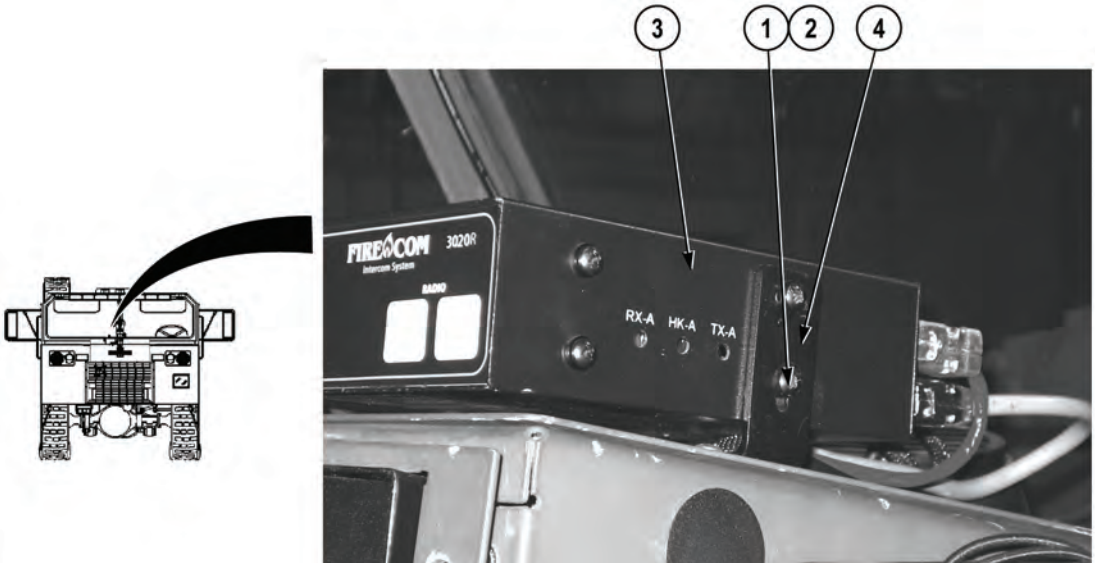
NOTE

Install wires as noted prior to removal.

9. Install intercom cable (16) on intercom terminal jack (17).
10. Install intercom cable (14) on intercom terminal jack (15).
11. Install intercom cable (12) on intercom terminal PR jack (13).



12. Install two-way radio interface wire harness connector (10) on intercom RADIO A terminal (11) with two screws (9).
13. Install SINCGARS interface wire harness connector (7) on intercom RADIO B terminal (8) with two screws (6).
14. Install intercom power supply wire harness connector (5) on intercom (3).



15. Install intercom (3) on intercom bracket (4) with four washers (2) and screws (1).

END OF TASK

FOLLOW ON MAINTENANCE

Connect batteries (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

INTERCOM CABLES AND CONNECTORS REPLACEMENT

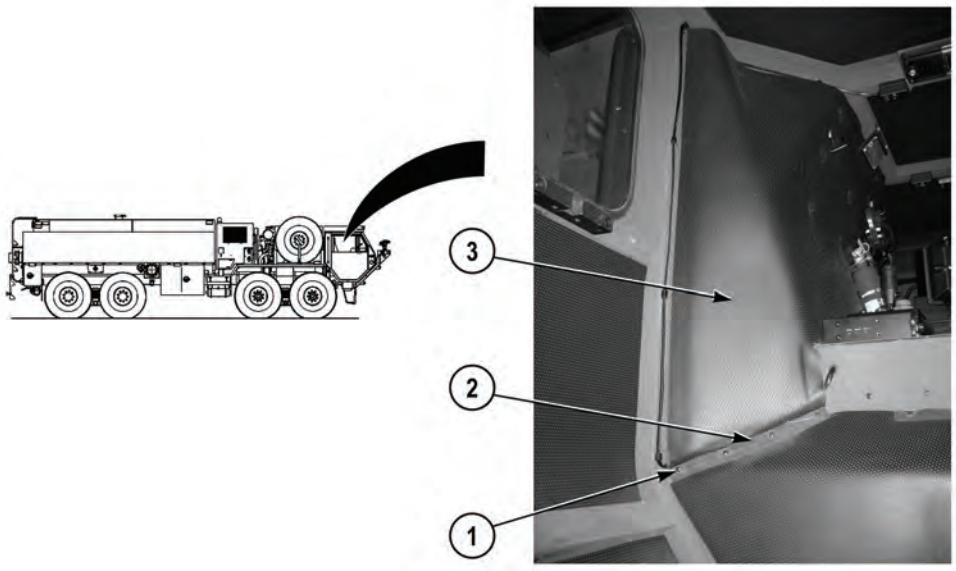
INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Tape, Insulation, Electrical (WP 0401, Item 23)
Ties, Cable, Plastic (WP 0401, Item 25)

Equipment Conditions
Cab instrument panels A, D, and E removed (WP 0203)
Pump operator's panel opened (WP 0205)

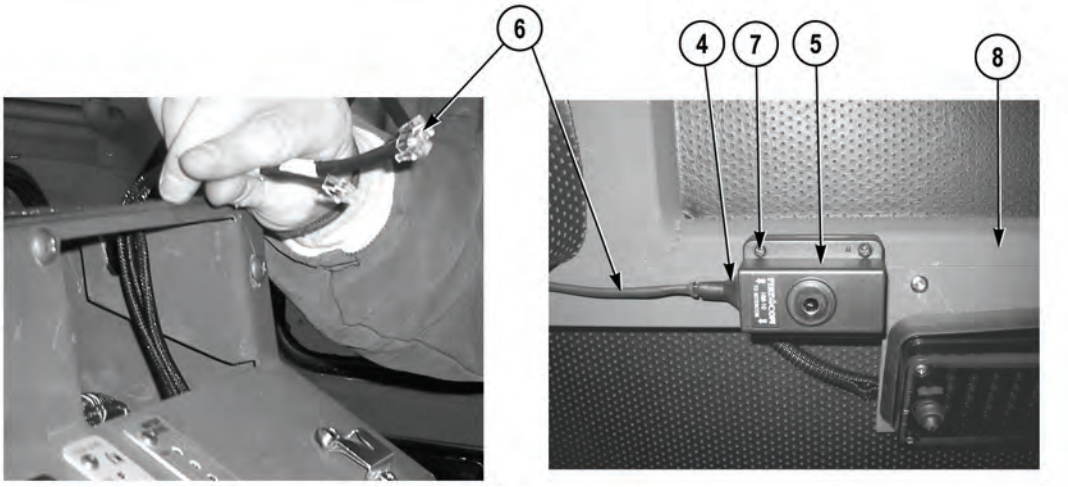
REMOVAL



NOTE

Driver side and passenger side intercom cables are removed the same way. Passenger side shown.

1. Remove four screws (1) and trim (2) from passenger side cab (3).



CAUTION

Intercom cable RJ12 connector must be protected with electrical tape during removal. Failure to comply may result in damage to equipment.

NOTE

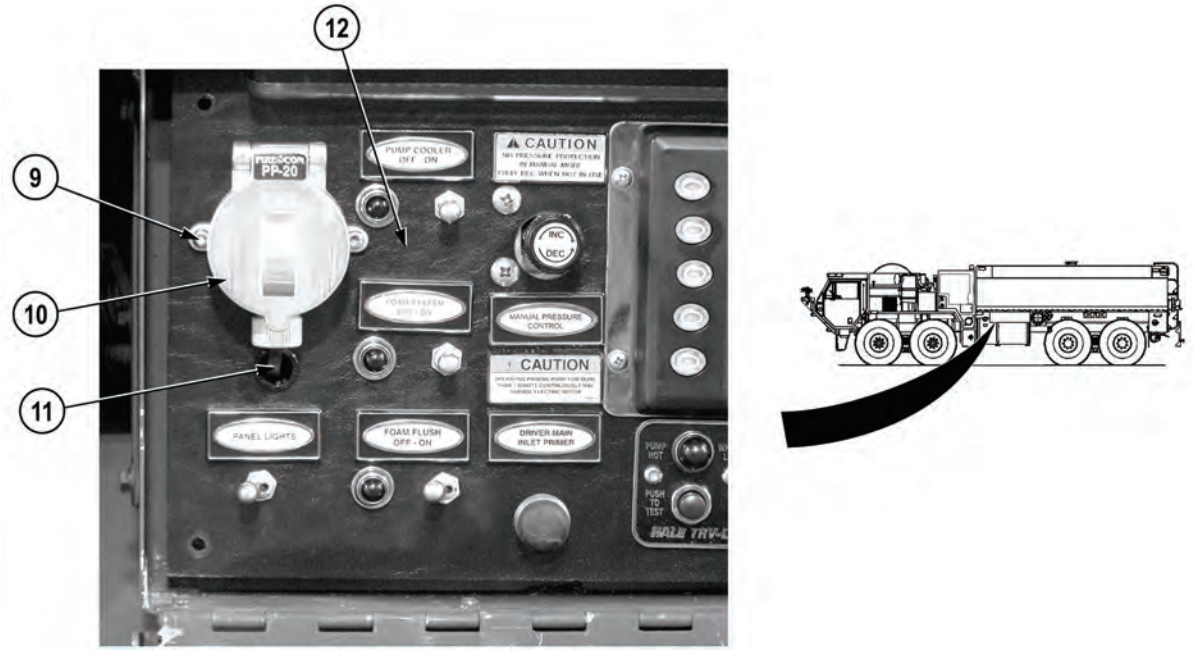
- Note location and routing of intercom cables prior to removal to ensure proper installation.
- Note position and remove cable ties, split loom, and cushion clips as required.
- Tag and mark wires prior to removal to ensure proper installation.

2. Disconnect intercom cable connector (4) from headset jack (5).
3. Carefully remove intercom cable (6) from vehicle.

NOTE

Perform Step (4) if headset jack must be removed.

4. Remove four screws (7) and headset jack (5) from cab roof (8).



5. Remove two screws (9), intercom connector housing (10), and intercom wire harness (11) from pump operator's panel (12).

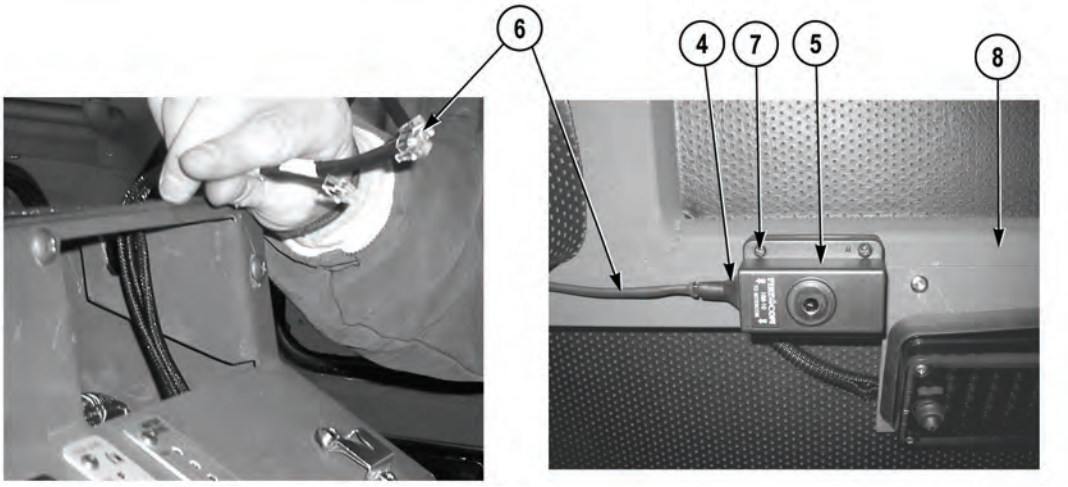
END OF TASK

INSTALLATION

NOTE

- Driver side and passenger side intercom cables and intercom wire harness are installed the same way. Passenger side shown.
- Route intercom wire harness as noted prior to removal.
- Install cable ties, split loom, and cushion clips as noted prior to removal.

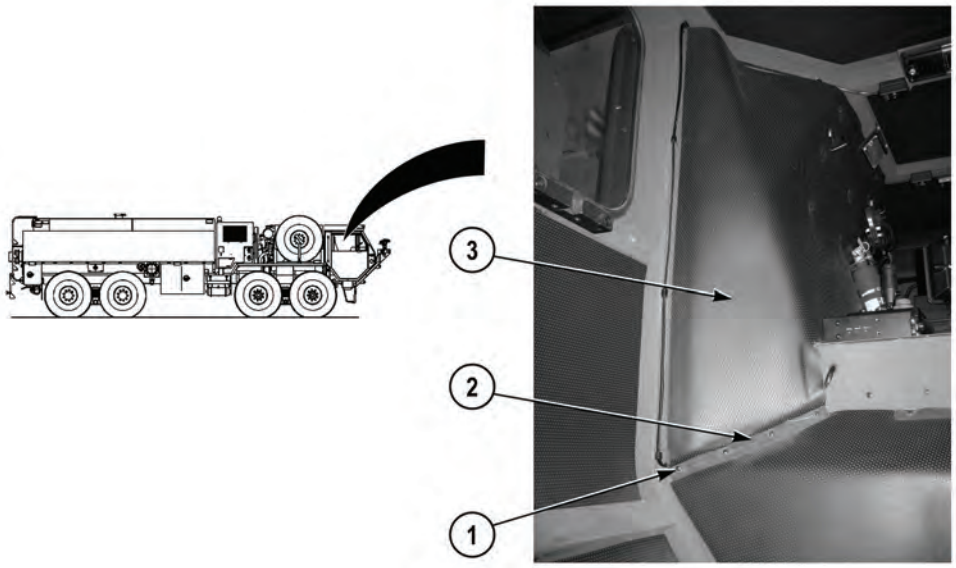
1. Install intercom wire harness (11) and intercom connector housing (10) on pump operator's panel (12) with two screws (9).



NOTE

Perform Step (2) if headset jack was removed.

2. Install headset jack (5) on cab roof (8) with four screws (7).
3. Carefully install intercom cable (6) on vehicle.
4. Connect intercom cable connector (4) to headset jack (5).



5. Install trim (2) on passenger side cab (3) with four screws (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Close pump operator’s panel (WP 0205)
2. Install cab instrument panels E, D, and A (WP 0203)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

INTERCOM HEADSET HANGERS REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

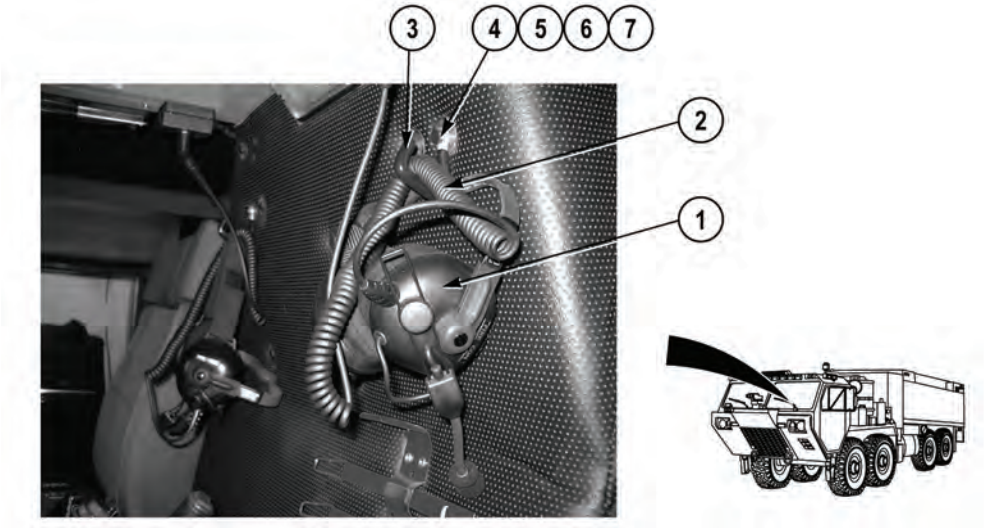
Materials/Parts
Lockwasher (1)

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

References
WP 0392, Fig. 43

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)

REMOVAL

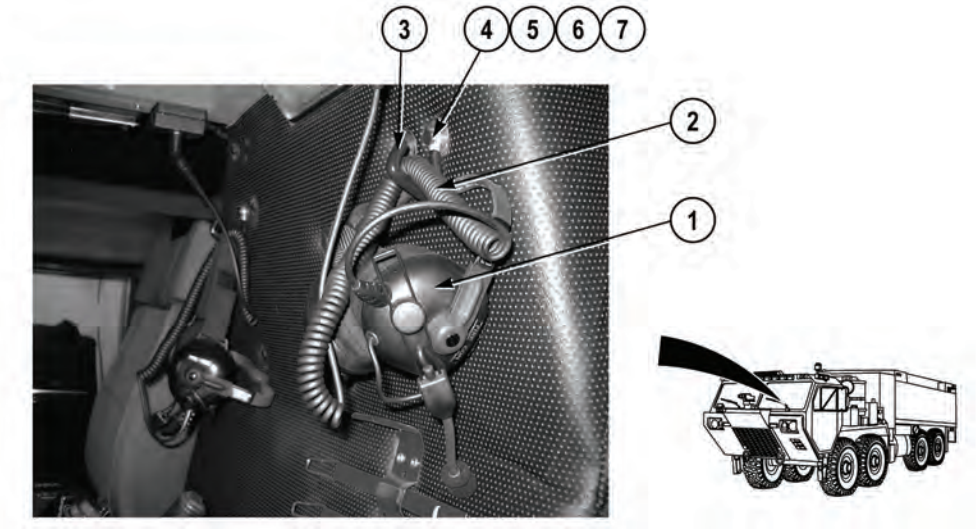


NOTE

Both headset hangers are removed the same way.

1. Remove headset (1) and cord (2) from hook (3).
2. With the aid of an assistant, remove nut (4), lockwasher (5), washer (6), screw (7), and hook (3) from vehicle. Discard lockwasher.

INSTALLATION



NOTE

Both headset intercoms are installed the same way.

1. With the aid of an assistant, install hook (3) on vehicle with screw (7), washer (6), lockwasher (5), and nut (4).
2. Position headset (1) and cord (2) on hook (3).

END OF TASK

FOLLOW-ON MAINTENANCE

Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PORTABLE HANDHELD RADIO AND CHARGER REPLACEMENT

INITIAL SETUP:

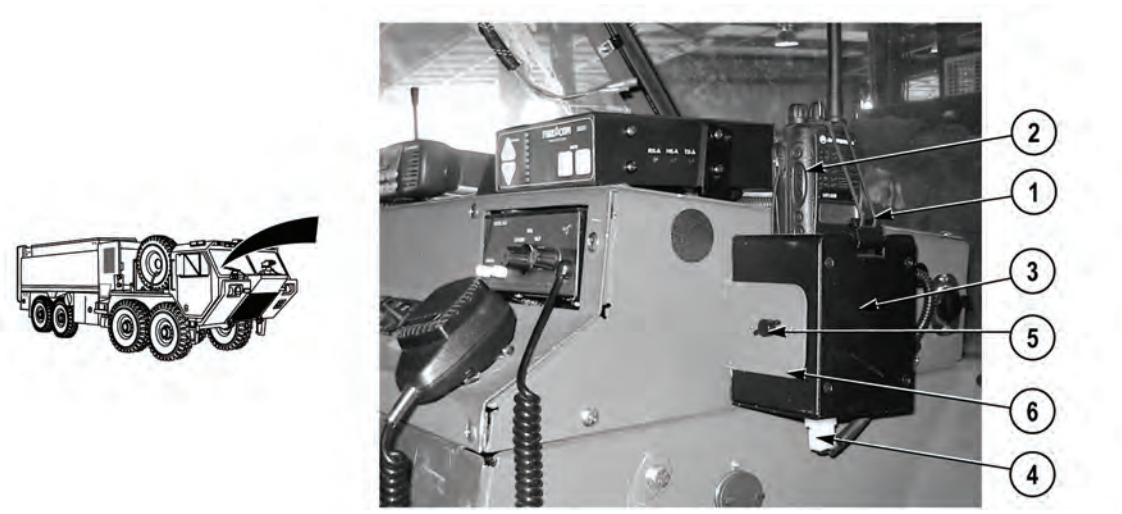
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Locknut (2)

References
WP 0392, Fig. 44

Equipment Conditions
Cab instrument panel A removed (WP 0203)

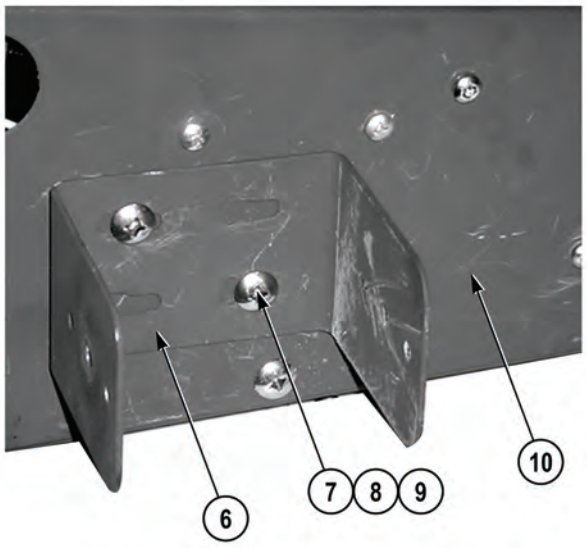
REMOVAL



NOTE

Both handheld radios and chargers are removed the same way.

1. Unlatch radio retainer (1) and remove radio (2) from charger (3).
2. Disconnect radio charger connector (4) from charger (3).
3. Remove two screws (5) and charger (3) from bracket (6).



4. Remove two locknuts (7), washer (8), screws (9), and bracket (6) from panel (10). Discard locknuts.

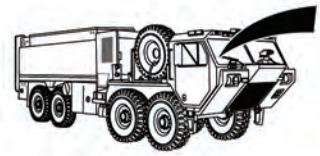
END OF TASK

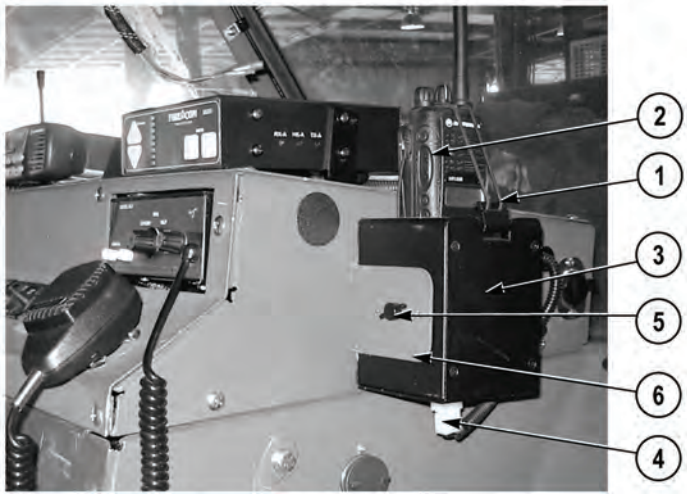
INSTALLATION

NOTE

Both handheld radios and chargers are installed the same way.

1. Install bracket (6) on panel (10) with two screws (9), washers (8), and locknuts (7).





2. Install charger (3) on bracket (6) with two screws (5).
3. Connect radio charger connector (4) on charger (3).
4. Install radio (2) on charger (3) with radio retainer (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Install cab instrument panel A (WP 0203)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

POWER CABLE ASSEMBLY REPLACEMENT (SINCGARS)

INITIAL SETUP:

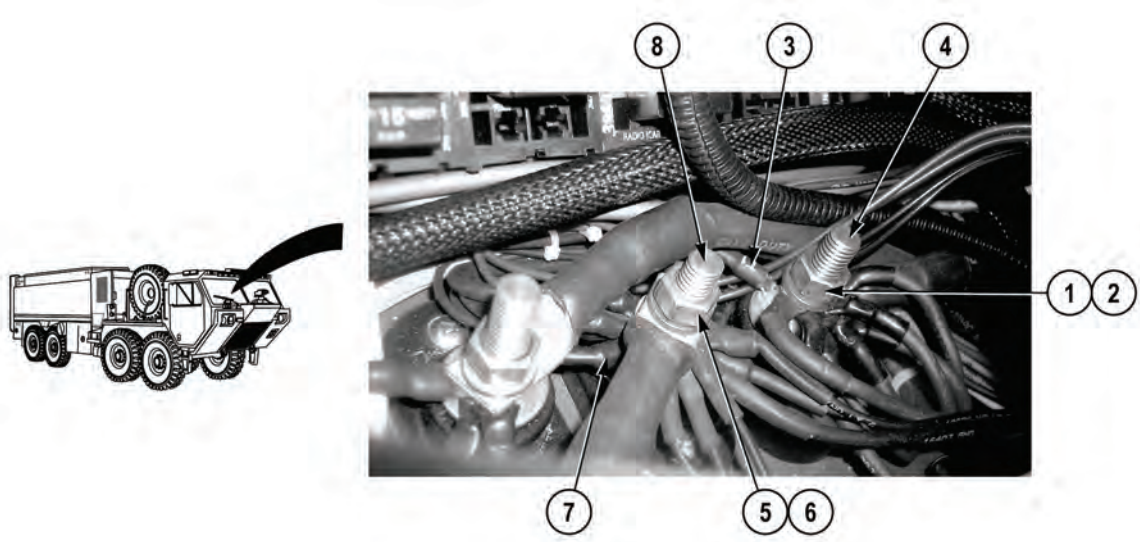
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)
Lockwasher (1)
Lockwasher (1)

References
WP 0008
WP 0392, Fig. 26

Equipment Conditions
Cab instrument panel A removed (WP 0203)

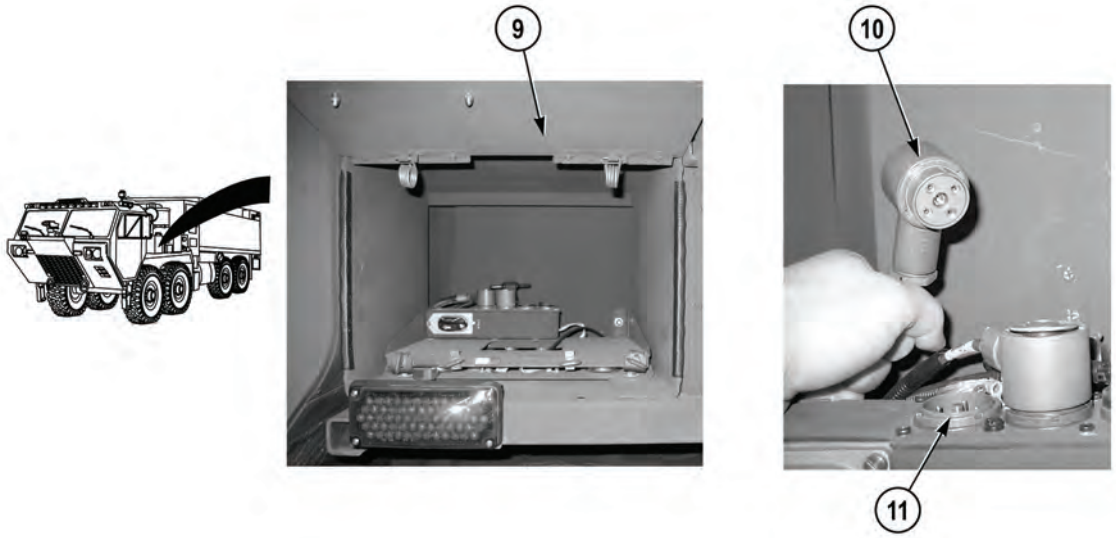
REMOVAL



NOTE

- Tag and mark wires prior to removal to ensure proper installation.
- Note routing of power cable assembly to ensure correct installation prior to removal to ensure proper installation.
- Remove cable ties and cushion clips as required.

1. Remove nut (1), lockwasher (2), and T1 connector (3) from power terminal (4). Discard lockwasher.
2. Remove nut (5), lockwasher (6), and T2 connector (7) from ground terminal (8). Discard lockwasher.



3. Open SINCGARS door (9) (WP 0008).
4. Disconnect power cable (10) from SINCGARS connector (11).
5. Remove power cable (10) from vehicle.

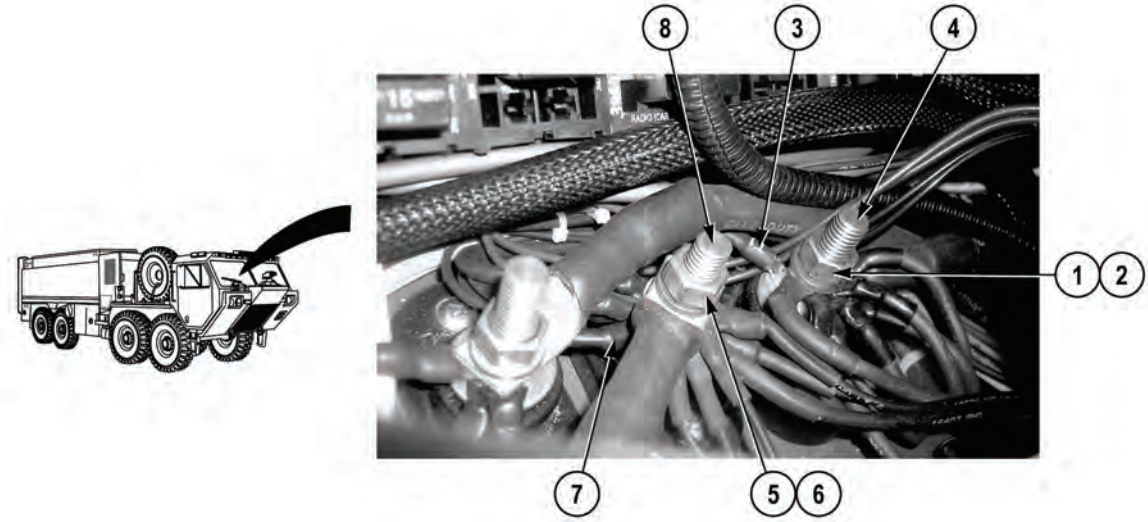
END OF TASK

INSTALLATION

NOTE

- Route power cable assembly as noted prior to removal.
- Install cable ties and cushion clips as required.

1. Install power cable (10) on vehicle.
2. Connect power cable (10) on SINCGARS connector (11).
3. Close SINCGARS door (9) (WP 0008).



4. Connect T2 connector (7) on ground terminal (8) with lockwasher (6) and nut (5).
5. Connect T1 connector (3) on power terminal (4) with lockwasher (2) and nut (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Install cab instrument panel A (WP 0203)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

STREAMLIGHT AND CHARGER REPLACEMENT

INITIAL SETUP:

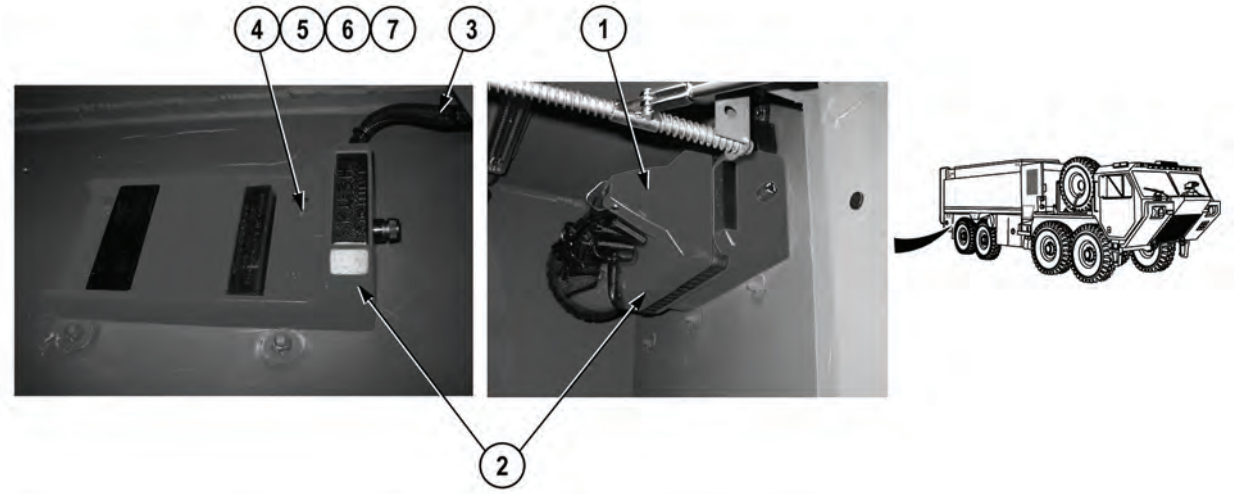
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Lockwasher (4)

References
WP 0392, Fig. 47

Equipment Conditions
Batteries disconnected (TM 9-2320-315-14&P)
Compartment door opened (WP 0008)

REMOVAL



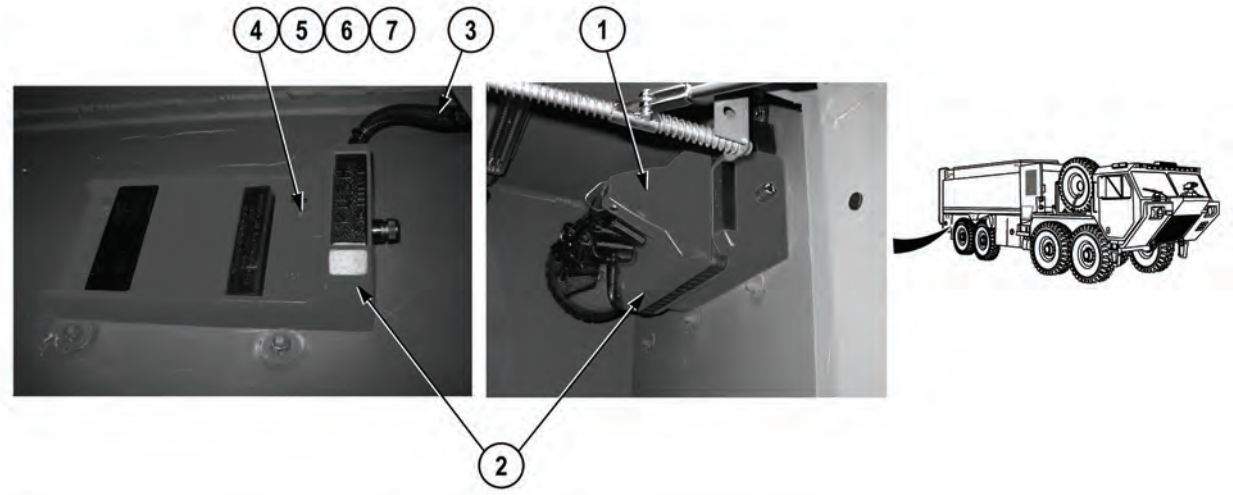
NOTE

Both streamlights and chargers are removed the same way. Front charger shown.

1. Remove streamlight (1) from charger (2).
2. Disconnect streamlight connector (3) from charger (2).
3. Remove four nuts (4), lockwashers (5), washers (6), screws (7), and charger (2) from vehicle. Discard lockwashers.

END OF TASK

INSTALLATION



NOTE

Both streamlights and chargers are installed the same way.

1. Install charger (2) on vehicle with four screws (7), washers (6), lockwashers (5), and nuts (4).
2. Connect streamlight connector (3) on charger (2).
3. Install streamlight (1) on charger (2).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Connect batteries (TM 9-2320-315-14&P)
2. Close compartment door (WP 0008)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

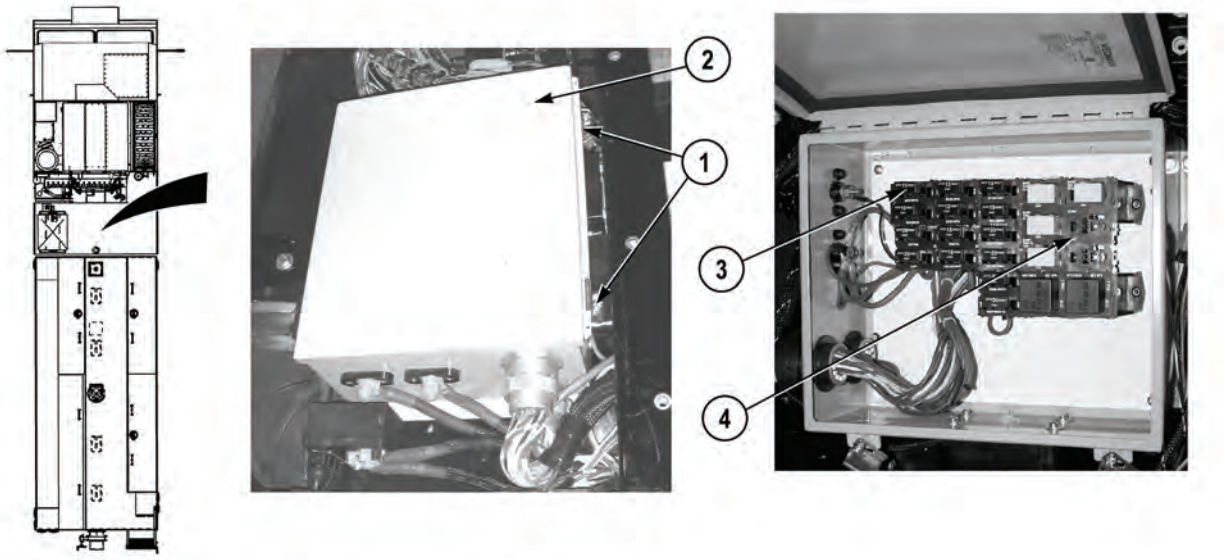
PUMP HOUSE POWER DISTRIBUTION BLOCK CIRCUIT BREAKER REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Equipment Conditions
Pump house panel K removed (WP 0341)

REMOVAL



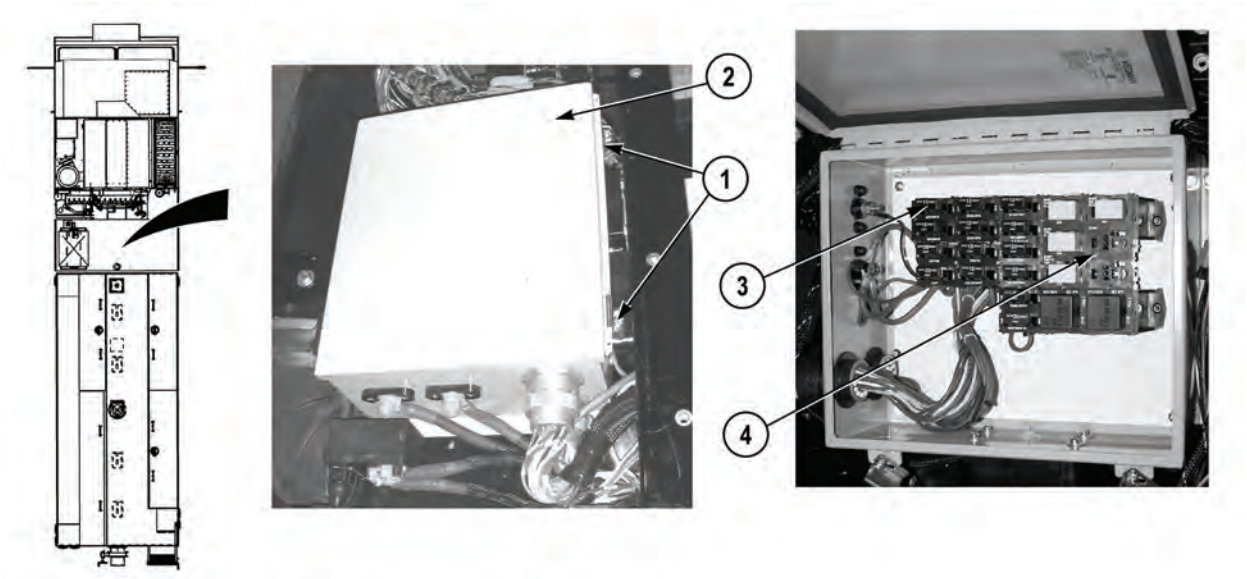
NOTE

All pump house distribution box circuit breakers are replaced the same way.

1. Loosen two screws (1) and open power distribution box cover (2).
2. Remove circuit breaker (3) from subpanel (4).

END OF TASK

INSTALLATION



1. Install circuit breaker (3) on subpanel (4).
2. Close power distribution box cover (2) and tighten two screws (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Install pump house panel K (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

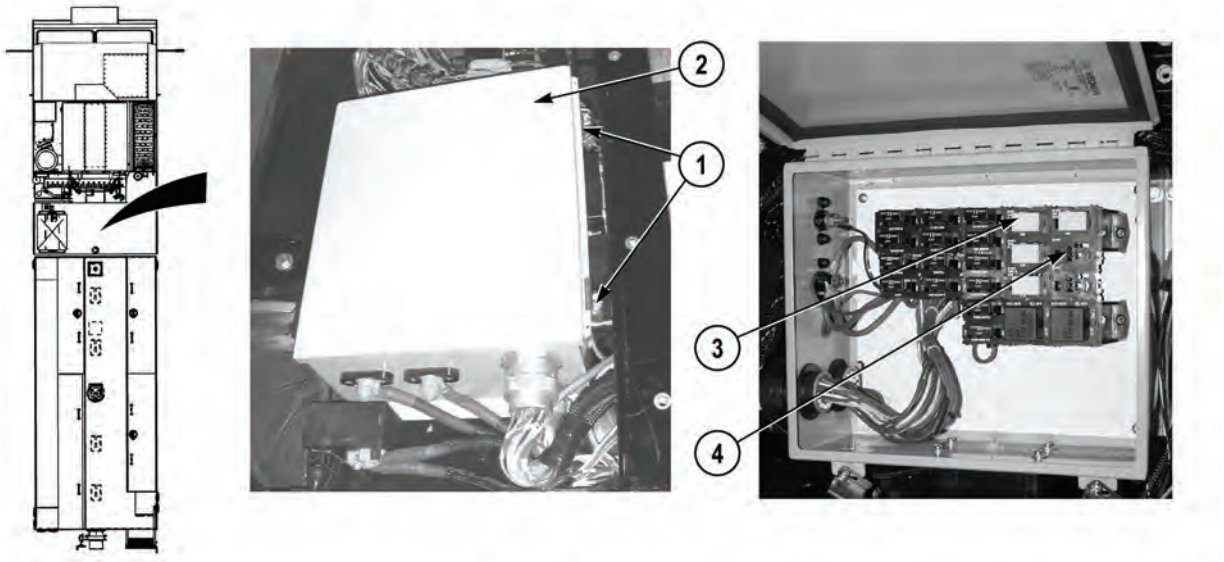
PUMP HOUSE POWER DISTRIBUTION BLOCK RELAY REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Equipment Conditions
Pump house panel K removed (WP 0341)

REMOVAL



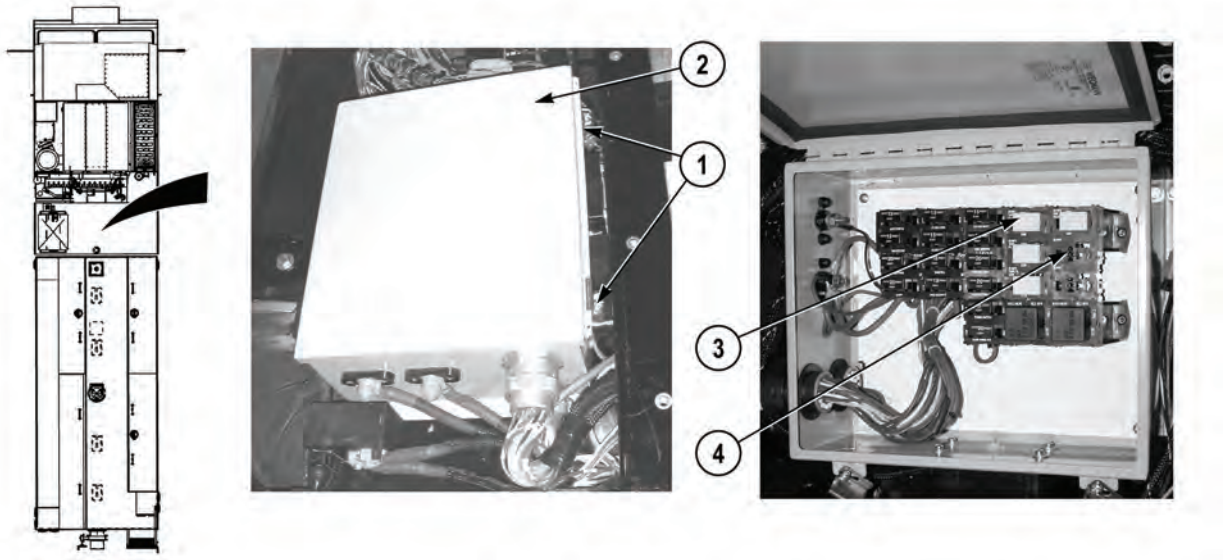
NOTE

All pump house distribution box relays are removed the same way.

1. Loosen two screws (1) and open power distribution box cover (2).
2. Remove relay (3) from subpanel (4).

END OF TASK

INSTALLATION



NOTE

All pump house distribution box relays are installed the same way.

1. Install relay (3) on subpanel (4).
2. Close power distribution box cover (2) and tighten two screws (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Install pump house panel K (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PUMP HOUSE POWER DISTRIBUTION BOX REPLACEMENT

INITIAL SETUP:

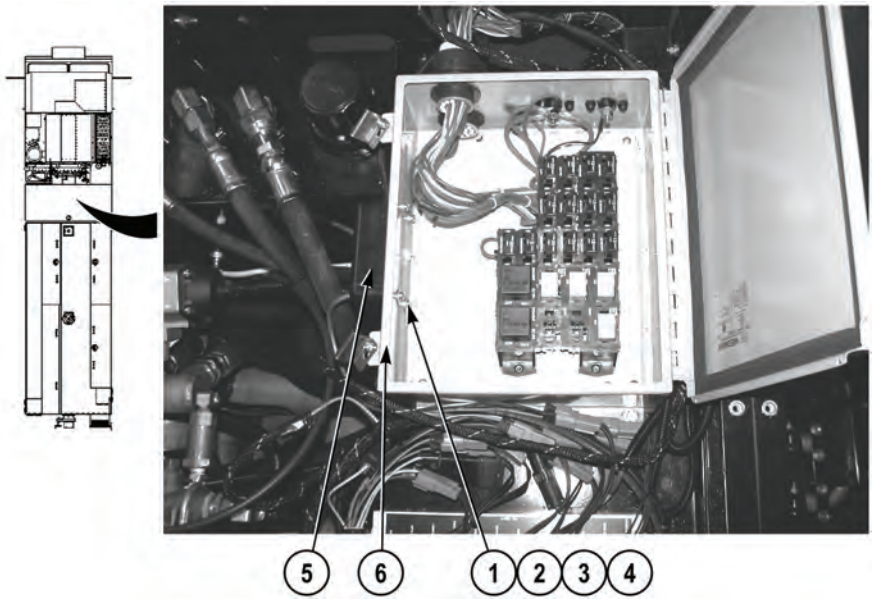
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive
(WP 0399, Item 17)

Materials/Parts
Lockwasher (4)
Lockwasher (4)
Lockwasher (4)

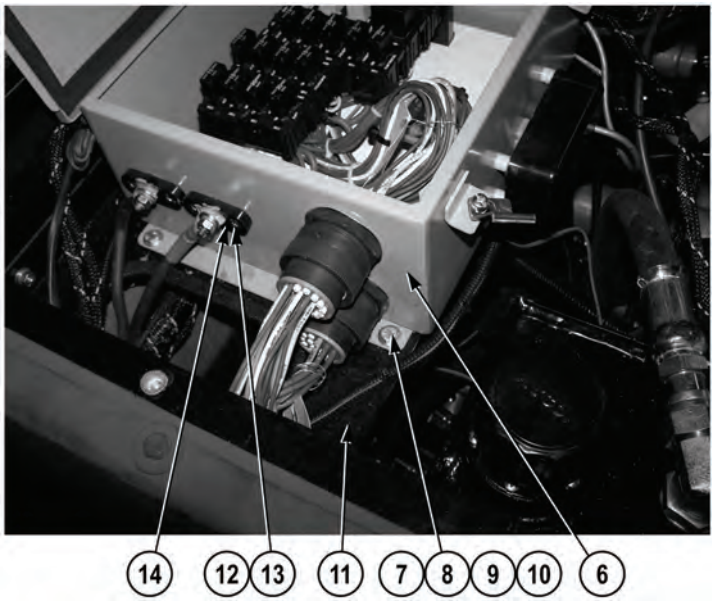
References
WP 0269
WP 0392, Fig. 42

Equipment Conditions
Pump house wire harness removed (WP 0303)
Pump house panel K removed (WP 0341)

REMOVAL

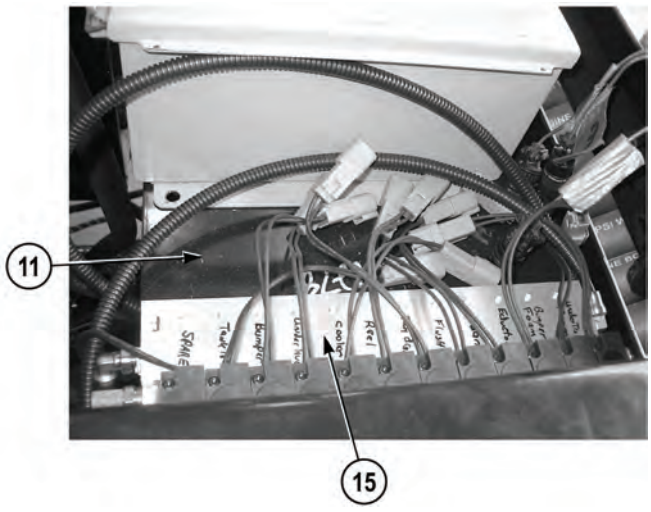


1. Remove four screws (1), lockwashers (2), eight washers (3), spacers (4), and direct auto fill tank valve control (5) from power distribution box (6). Discard lockwashers.



2. Remove four nuts (7), lockwashers (8), eight washers (9), four screws (10), and power distribution box (6) from bracket (11). Discard lockwashers.

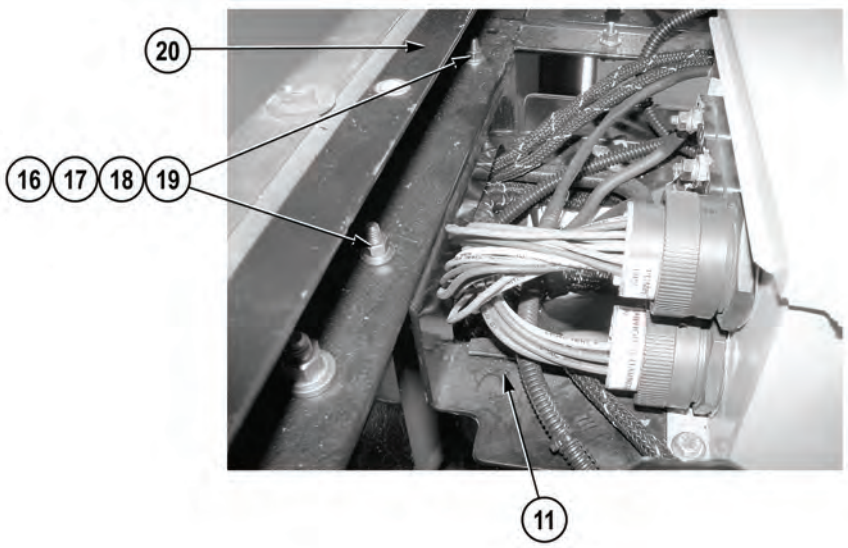
3. Remove four nuts (12), screws (13), and two through stud block terminals (14) from power distribution box (6).



NOTE

Perform Steps (4) and (5) if bracket needs to be removed.

4. Remove shutoff control valve manifold (15) from bracket (11) (WP 0269).



5. Remove four nuts (16), lockwashers (17), eight washers (18), four screws (19), and bracket (11) from pump house frame (20). Discard lockwashers.

END OF TASK

INSTALLATION

NOTE

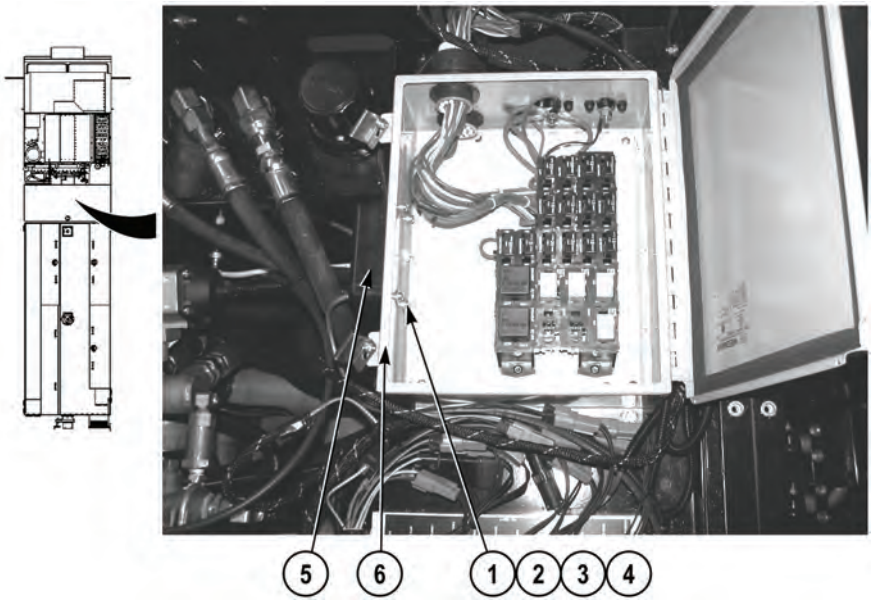
Perform Steps (1) and (2) if bracket was removed.

1. Install bracket (11) on pump house frame (20) with four screws (19), eight washers (18), four lockwashers (17), and nuts (16).
2. Install shutoff control valve manifold (15) on bracket (11) (WP 0269).

CAUTION

Do not overtighten nuts when installing through stud block terminals. Failure to comply may cause damage to equipment.

3. Install two through stud block terminals (14) in power distribution box (6) with four screws (13) and nuts (12).
4. Install power distribution box (6) on bracket (11) with four screws (10), eight washers (9), four lockwashers (8), and nuts (7).



5. Install direct auto fill tank valve control (5) on power distribution box (6) with eight spacers (4), washers (3), four lockwashers (2), and screws (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install pump house wire harness (WP 0303)
2. Install pump house panel K (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PUMP INPUT AND DISCHARGE PRESSURE TRANSDUCERS REPLACEMENT

INITIAL SETUP:

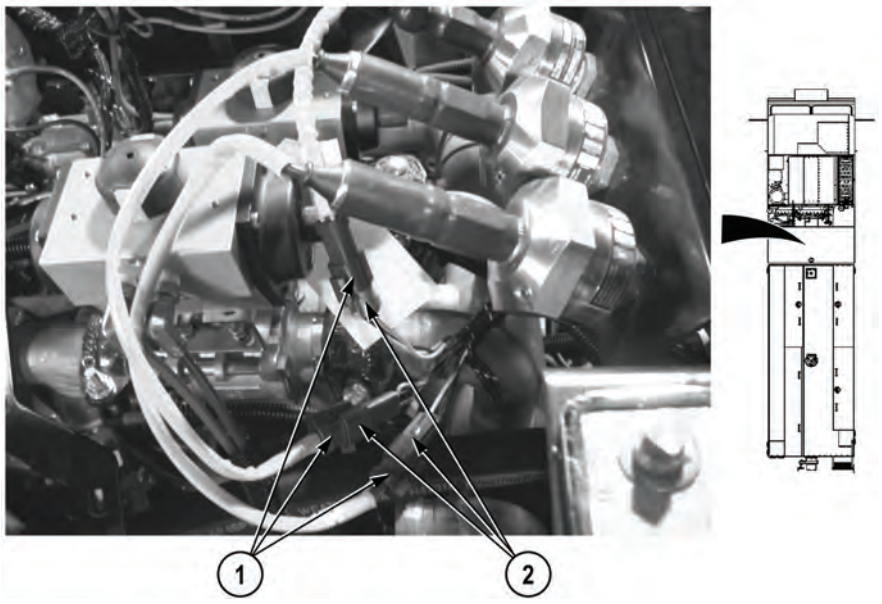
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Compound, Sealing, Pipe Thread (WP 0401, Item 11)
Tags, Identification (WP 0401, Item 22)
Lockwasher (1)
Lockwasher (1)
Lockwasher (1)
Lockwasher (3)

References
WP 0392, Fig. 38

Equipment Conditions
Pump house panel K removed (WP 0341)

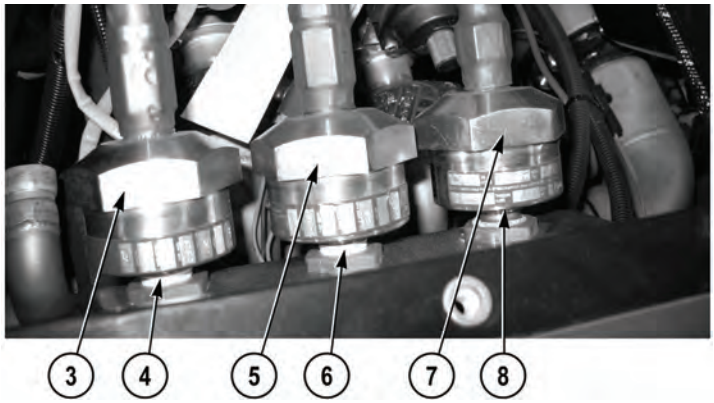
REMOVAL



NOTE

Tag and mark connectors prior to removal to ensure proper installation.

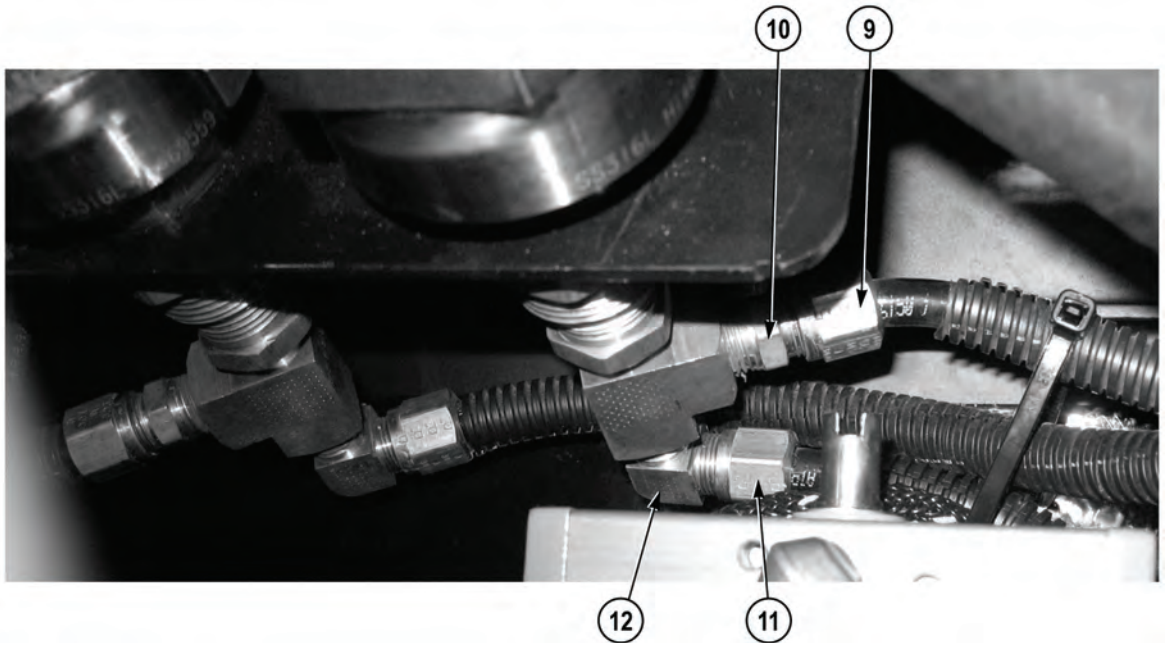
1. Disconnect three transducer connectors (1) from pump house wire harness connectors (2).



NOTE

If only intake transducer needs to be replaced, discharge transducer or vacuum transducer must be removed.

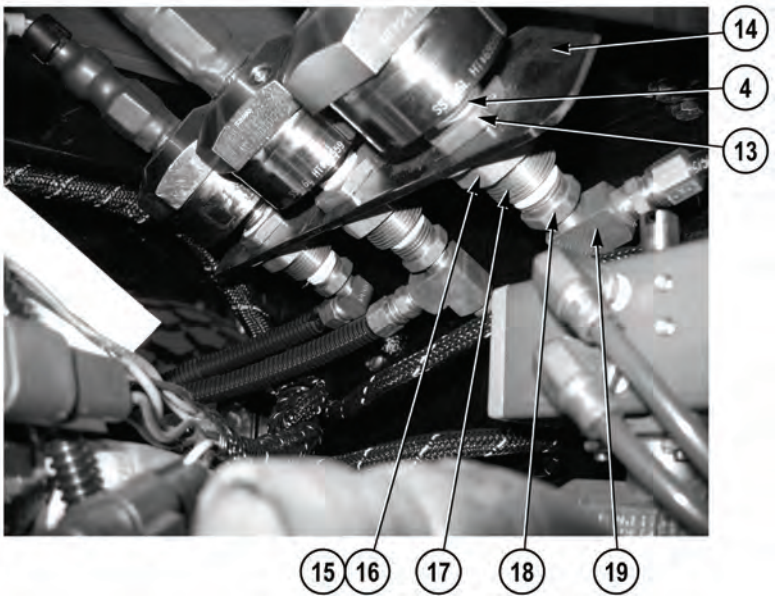
2. Remove discharge transducer (3) from nipple (4).
3. Remove intake transducer (5) from nipple (6).
4. Remove vacuum transducer (7) from nipple (8).



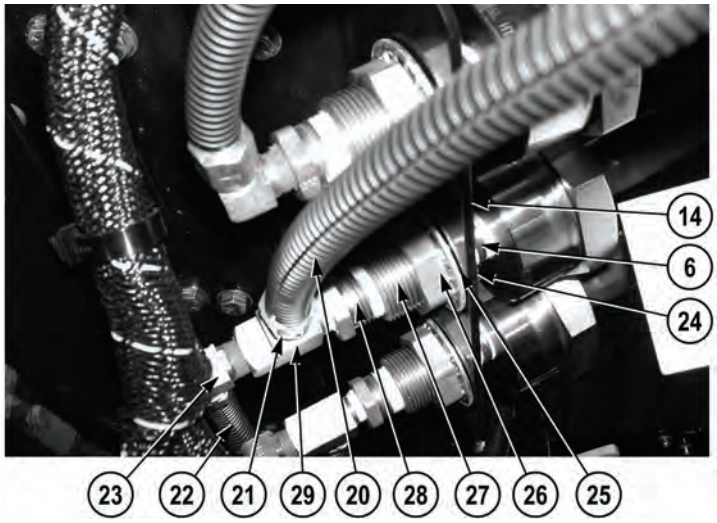
NOTE

- Note position of hoses, fittings, and elbows prior to removal to ensure proper installation.
- Tag and mark hoses prior to removal to ensure proper installation.

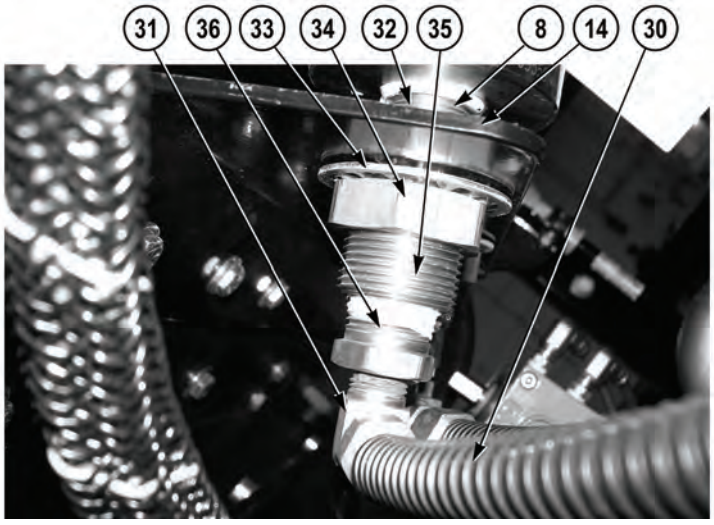
5. Remove hose (9) from fitting (10).
6. Remove hose (11) from elbow (12).



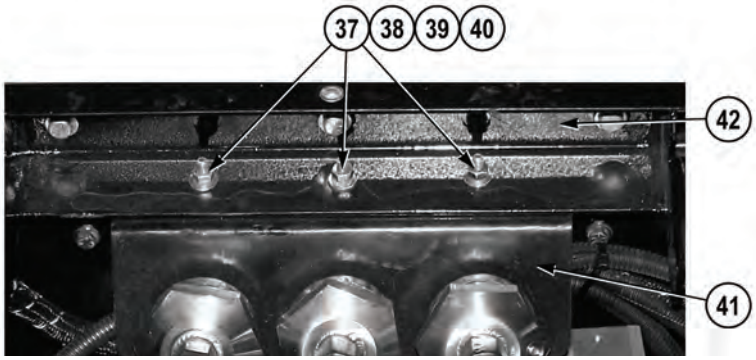
7. Remove nut (13) and nipple (4) from bracket (14).
8. Remove lockwasher (15), nipple (4), and nut (16) from fitting (17). Discard lockwasher.
9. Remove fitting (17) from fitting (18).
10. Remove elbow (12), fitting (10), and fitting (18) from tee (19).



11. Remove hose (20) from fitting (21).
12. Remove hose (22) from elbow (23).
13. Remove nut (24) and nipple (6) from bracket (14).
14. Remove lockwasher (25), nipple (6), and nut (26) from fitting (27). Discard lockwasher.
15. Remove fitting (27) from fitting (28).
16. Remove fitting (21), elbow (23), and fitting (28) from tee (29).



17. Remove hose (30) from elbow (31).
18. Remove nut (32) and nipple (8) from bracket (14).
19. Remove lockwasher (33), nipple (8), and nut (34) from fitting (35). Discard lockwasher.
20. Remove fitting (35) from fitting (36).
21. Remove fitting (36) from elbow (31).



22. Remove three nuts (37), lockwashers (38), six washers (39), three screws (40), and bracket (41) from pump house frame (42). Discard lockwashers.

END OF TASK

INSTALLATION

1. Install bracket (41) on pump house frame (42) with three screws (40), six washers (39), three lockwashers (38), and nuts (37).

WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

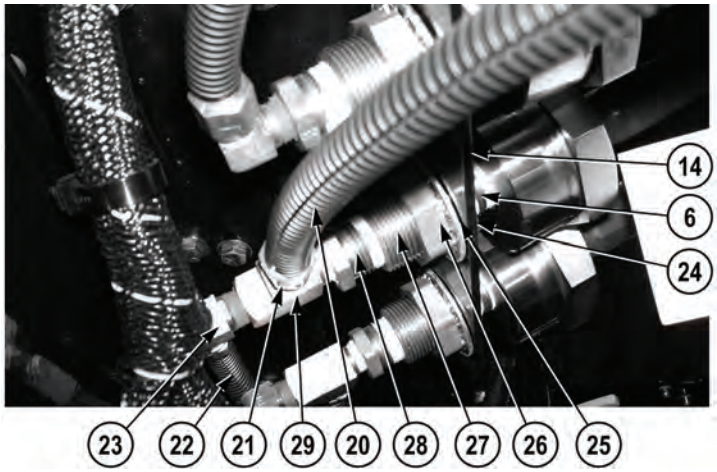
CAUTION

Use sealing compound sparingly only on pipe threads. Do not apply compound to hose connections. Damage to equipment may result.

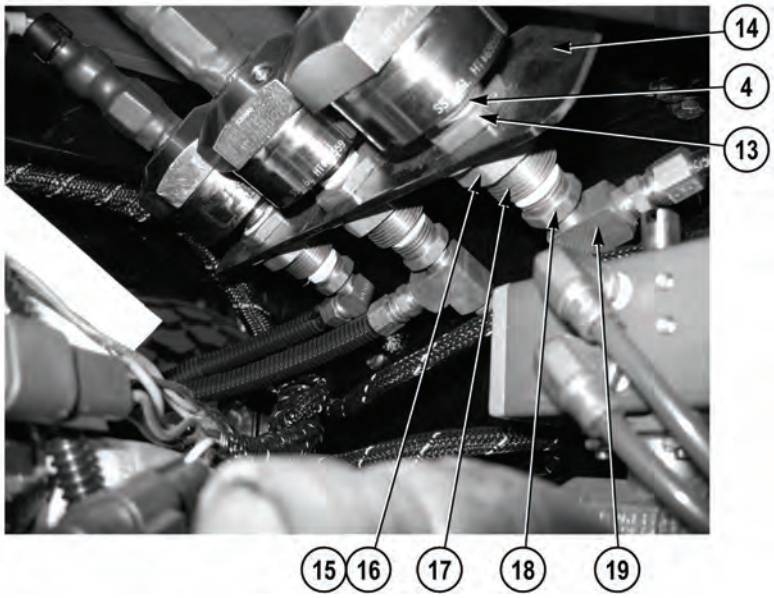
NOTE

Install hoses, fittings, and elbows as noted prior to removal.

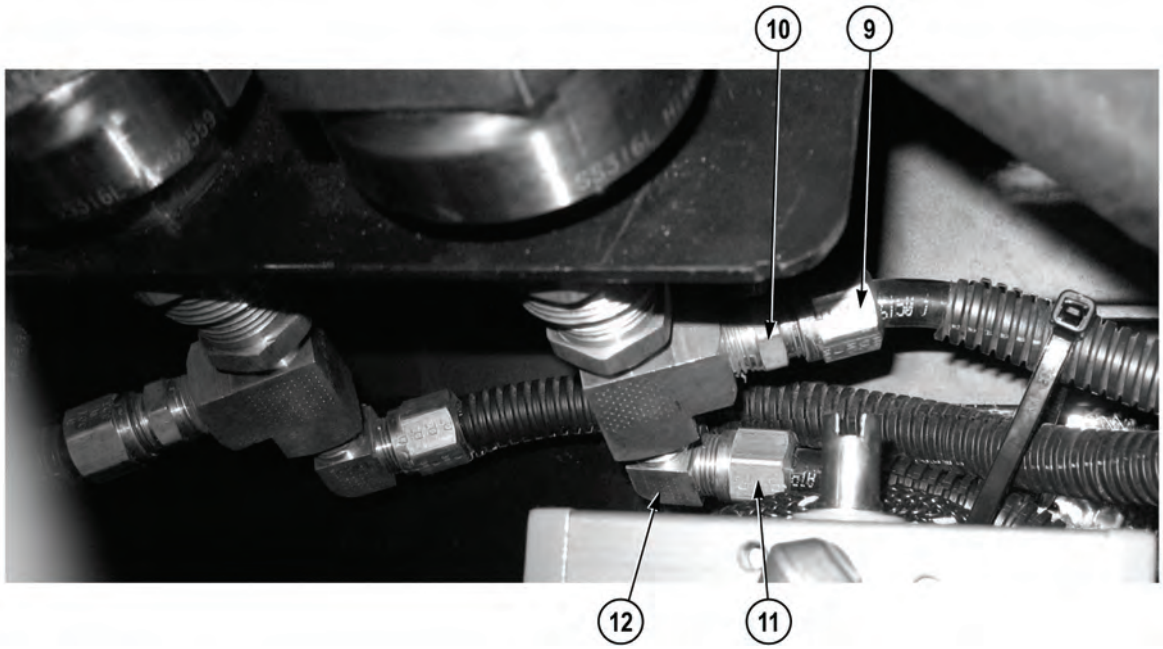
2. Apply sealing compound to threads of three nipples (4), (6), and (8), eight fittings (10), (17), (18), (21), (27), (28), (35), and (36), three elbows (12), (23), and (31), and two tees (19) and (29).
3. Install fitting (36) on elbow (31).
4. Install fitting (35) on fitting (36).
5. Install nut (34), nipple (8), and lockwasher (33) on fitting (35).
6. Install nipple (8) on bracket (14) with nut (32).
7. Install hose (30) on elbow (31).



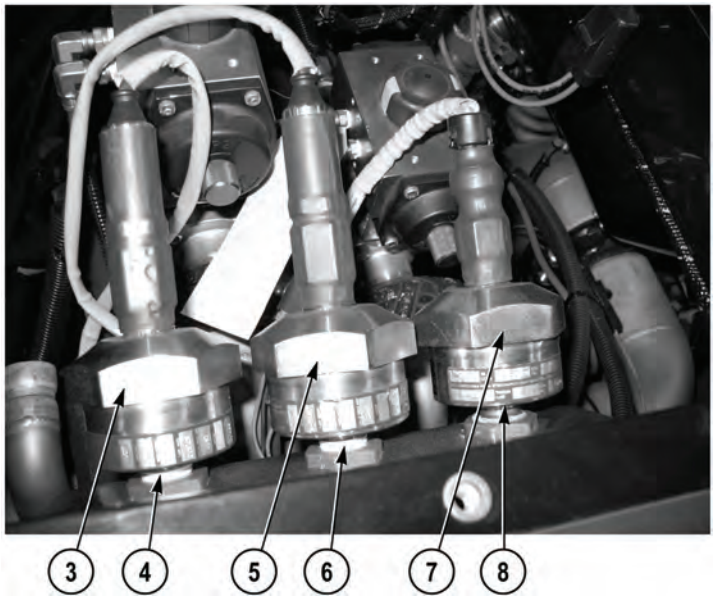
8. Install fitting (28), elbow (23), and fitting (21) on tee (29).
9. Install fitting (27) on fitting (28).
10. Install nut (26), nipple (6), and lockwasher (25) on fitting (27).
11. Install nipple (6) on bracket (14) with nut (24).
12. Install hose (22) on elbow (23).
13. Install hose (20) on fitting (21).



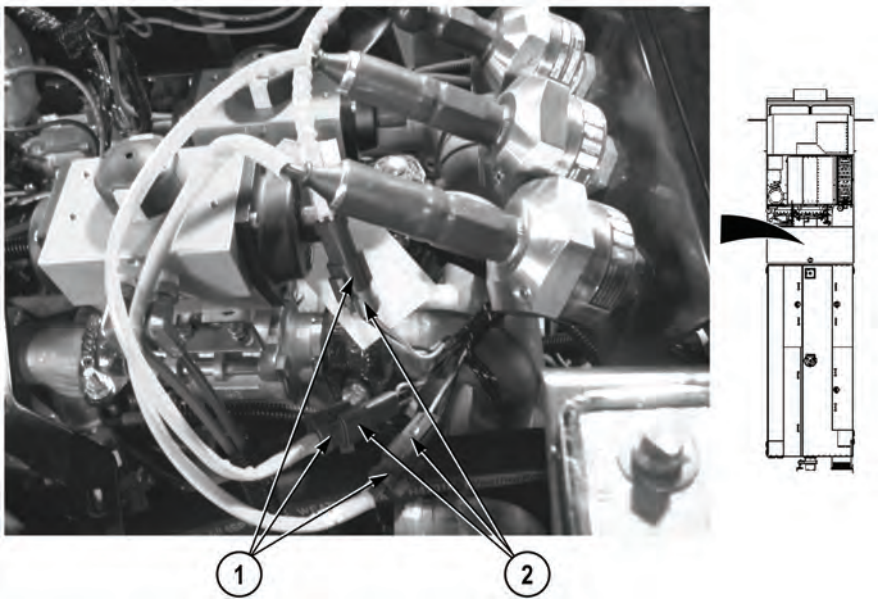
14. Install fitting (18), fitting (10), and elbow (12) on tee (19).
15. Install fitting (17) on fitting (18).
16. Install nut (16), nipple (4), and lockwasher (15) on fitting (17).
17. Install nipple (4) on bracket (14) with nut (13).



18. Install hose (11) on elbow (12).
19. Install hose (9) on fitting (10).



20. Install vacuum transducer (7) on nipple (8).
21. Install intake transducer (5) on nipple (6).
22. Install discharge transducer (3) on nipple (4).



23. Connect three transducers connectors (1) on pump house wire harness connectors (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Install pump house panel K (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

REAR STEP BUZZER BUTTON AND CABLE REPLACEMENT

INITIAL SETUP:

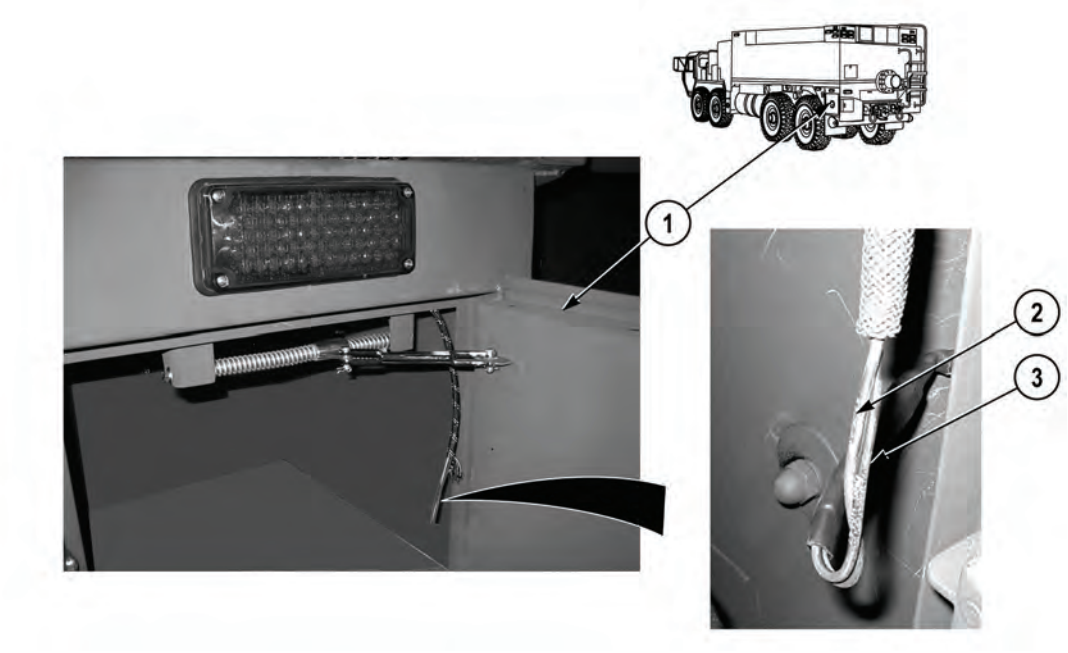
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)

References
WP 0008

Equipment Conditions
Batteries disconnected (TM 9-2320-315-14&P)

REMOVAL

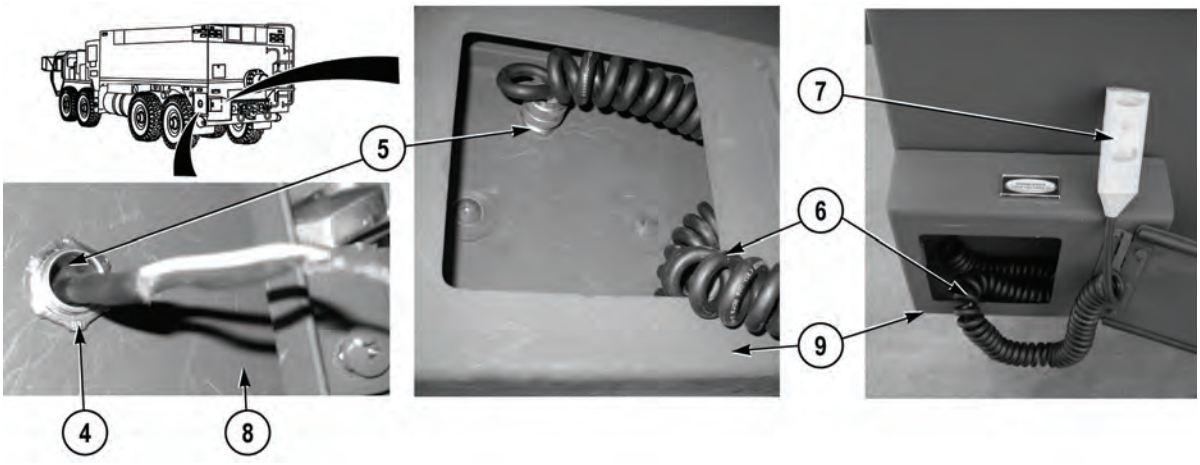


1. Open compartment door (1) (WP 0008).

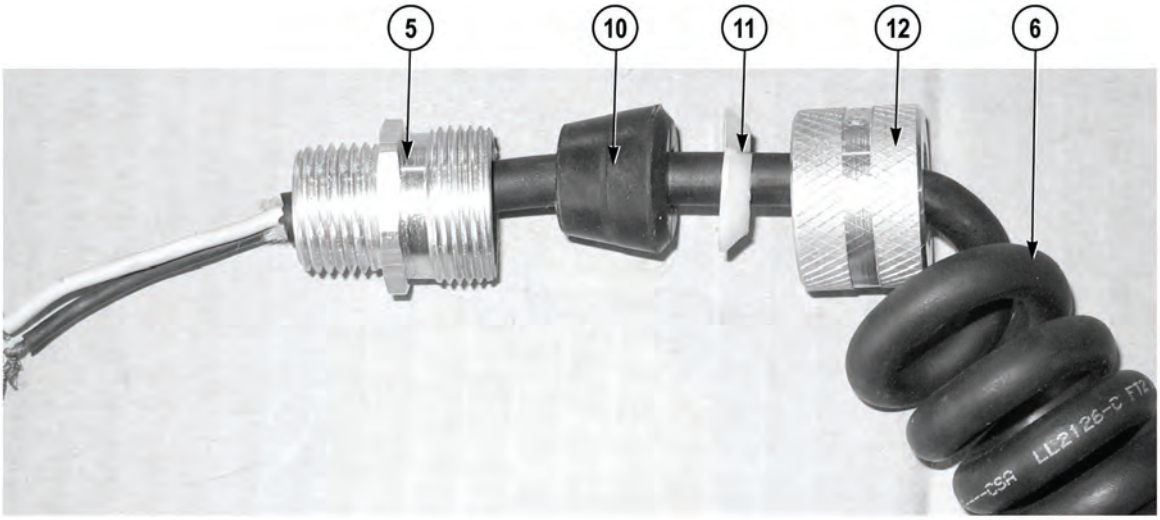
NOTE

Tag and mark wires prior to removal to ensure proper installation.

2. Cut wire 1614 (2) and wire 2640 (3) (TM 9-2320-315-14&P).



3. Remove nut (4), reducer (5), cable (6), and handle (7) from stowage compartment (8) and buzzer box (9).

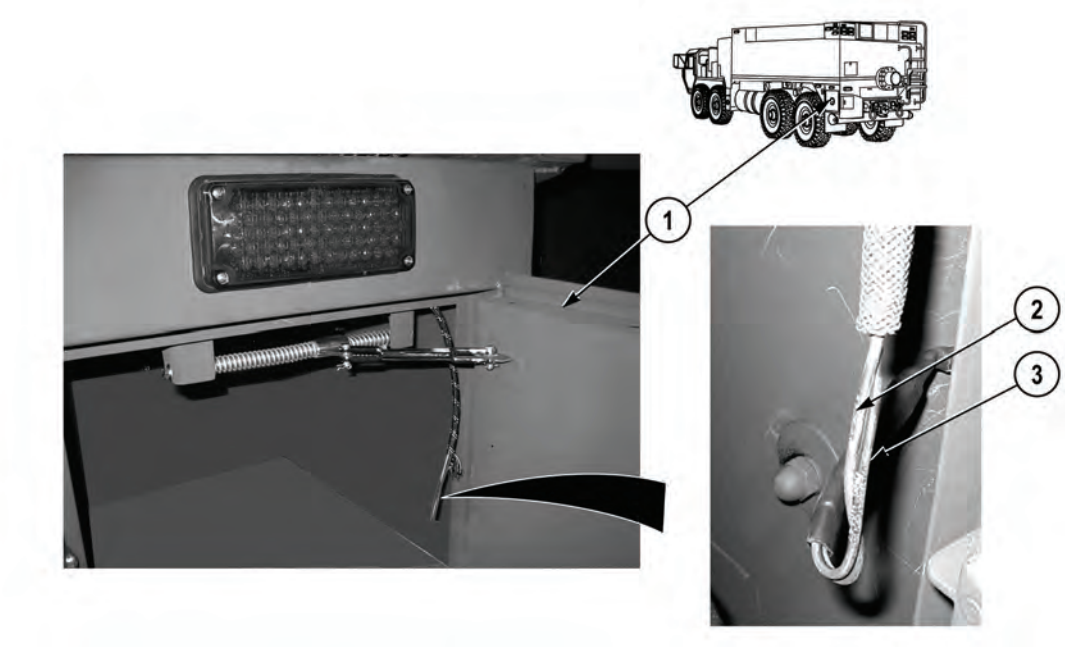


4. Remove reducer (5), grommet (10), backing washer (11), and collar (12) from cable (6).

END OF TASK

INSTALLATION

1. Install reducer (5) on cable (6) with grommet (10), collar (12), and backing washer (11).
2. Install reducer (5), handle (7), and cable (6) on buzzer box (9) and stowage compartment (8) with nut (4).



3. Repair wire 1614 (2) and wire 2640 (3) (TM 9-2320-315-14&P).
4. Close compartment door (1) (WP 0008).

END OF TASK

FOLLOW-ON MAINTENANCE

Connect batteries (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

REAR STEP BUZZER BUTTON COMPARTMENT REPLACEMENT

INITIAL SETUP:

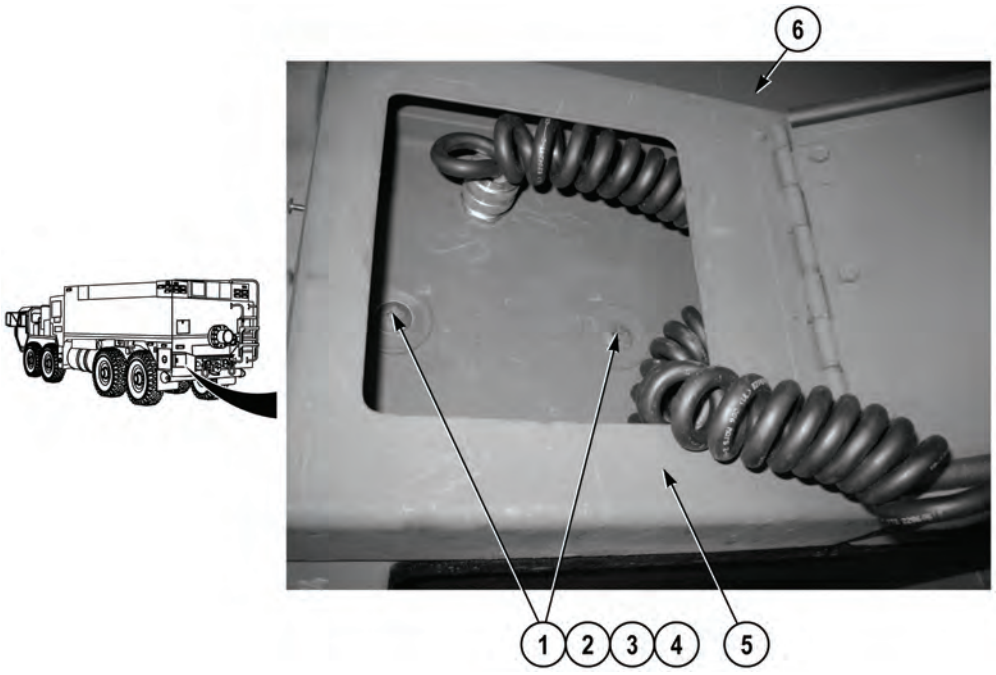
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Lockwasher (2)

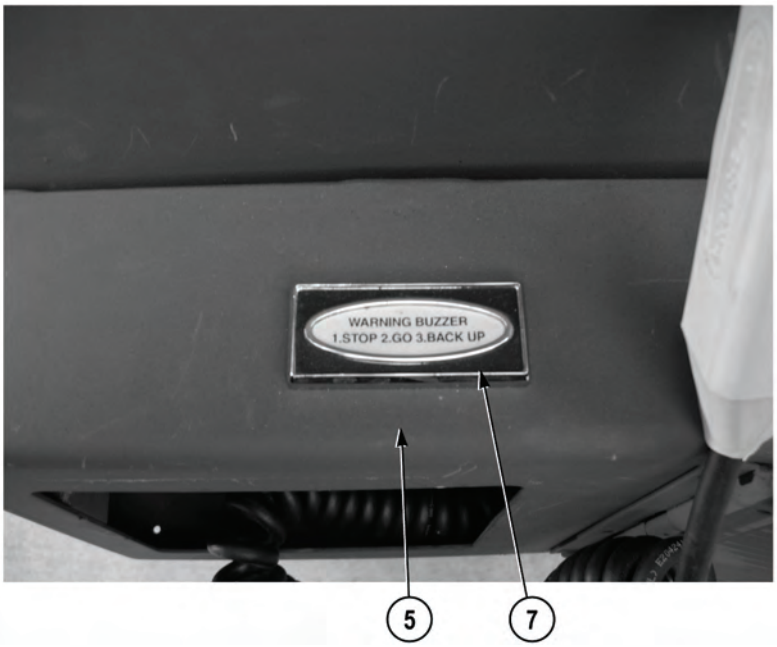
References
WP 0328
WP 0351
WP 0392, Fig. 60

Equipment Conditions
Rear step buzzer button and cable removed (WP 0265)

REMOVAL



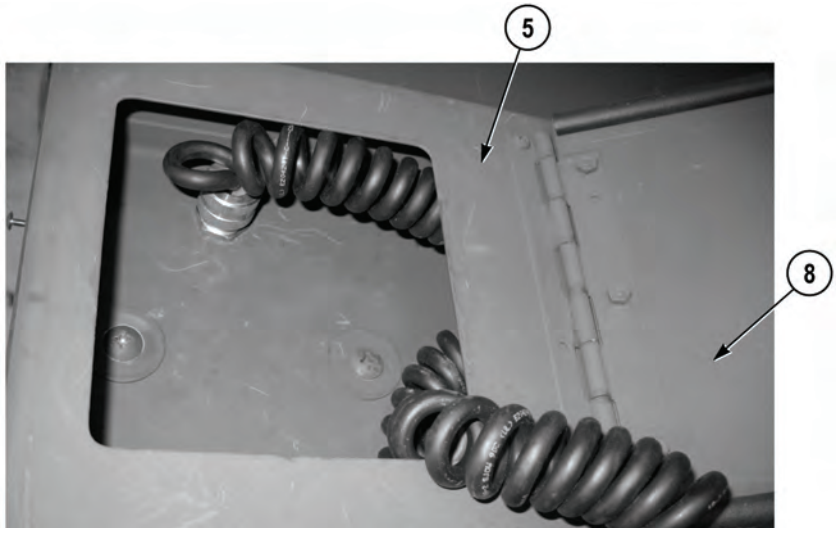
1. Remove two nuts (1), lockwashers (2), four washers (3), two screws (4), and buzzer button compartment (5) from stowage compartment (6). Discard lockwashers.



NOTE

Perform Step (2) if decal needs to removed.

2. Remove decal (7) from buzzer button compartment (5) (WP 0328).



NOTE

Perform Step (3) if buzzer button compartment door needs to be removed.

3. Remove buzzer button compartment door (8) from buzzer button compartment (5) (WP 0351).

END OF TASK

INSTALLATION

NOTE

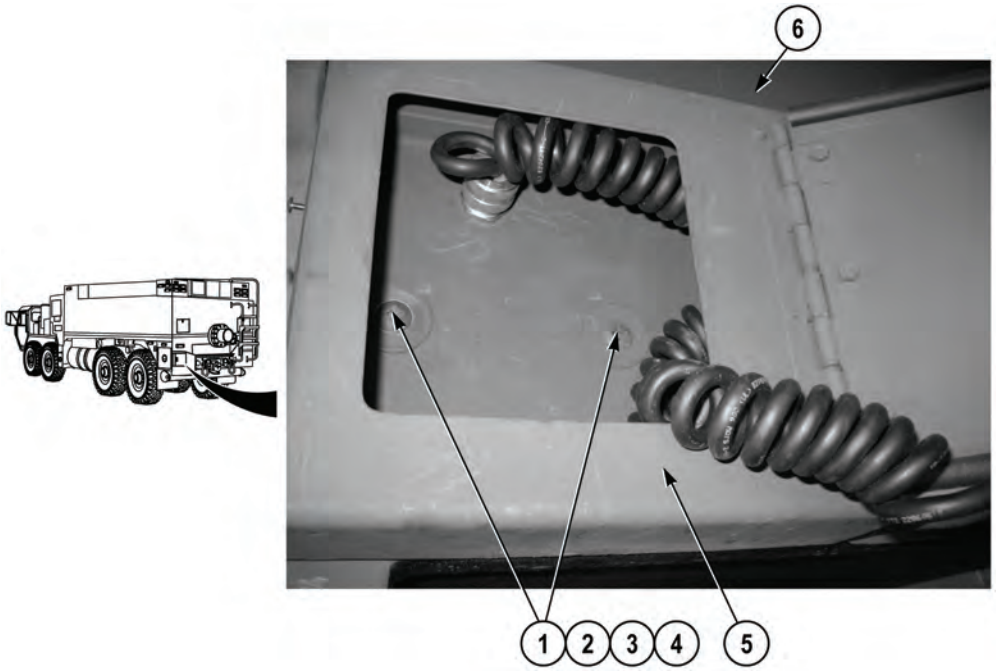
Perform Step (1) if compartment door was removed.

1. Install buzzer button compartment door (8) on buzzer button compartment (5) (WP 0351).

NOTE

Perform Step (2) if decal was removed.

2. Install decal (7) on buzzer button compartment (5) (WP 0328).



3. Install buzzer button compartment (5) on stowage compartment (6) with two screws (4), four washers (3), two lockwashers (2), and nuts (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Install rear step buzzer button and cable (WP 0265)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

SHORELINE INLET RECEPTACLE REPLACEMENT

INITIAL SETUP:

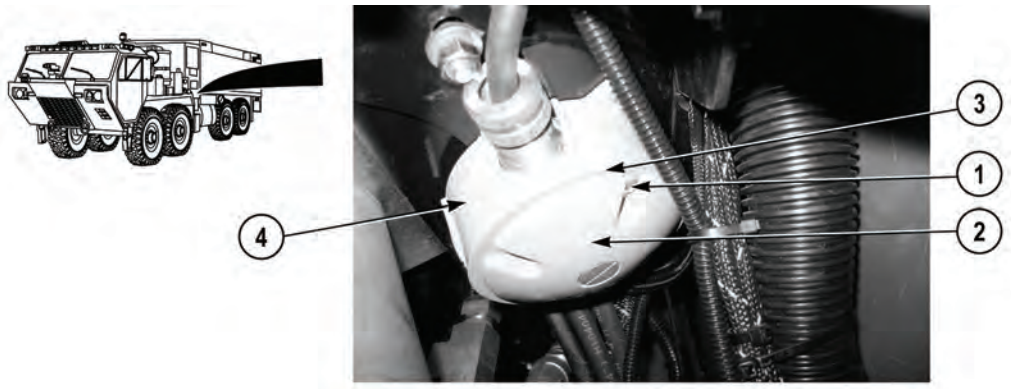
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)

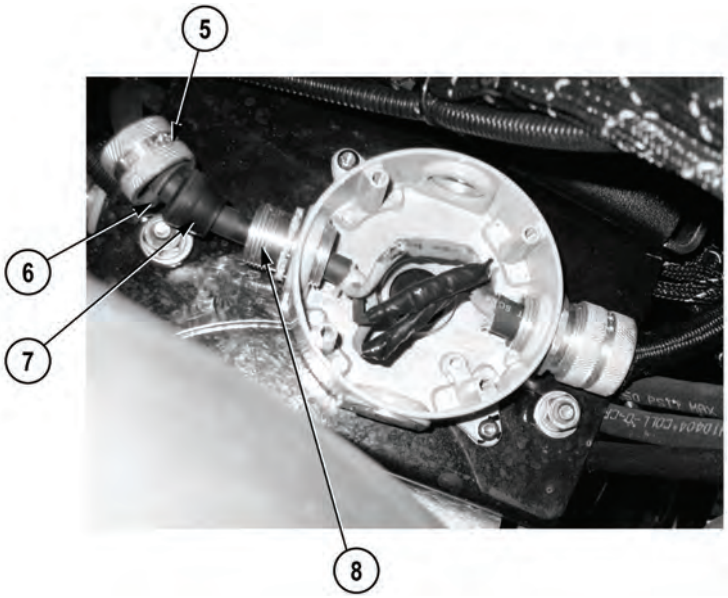
References
WP 0328
TM 9-2320-315-14&P

Equipment Conditions
Pump house panel B removed (WP 0341)

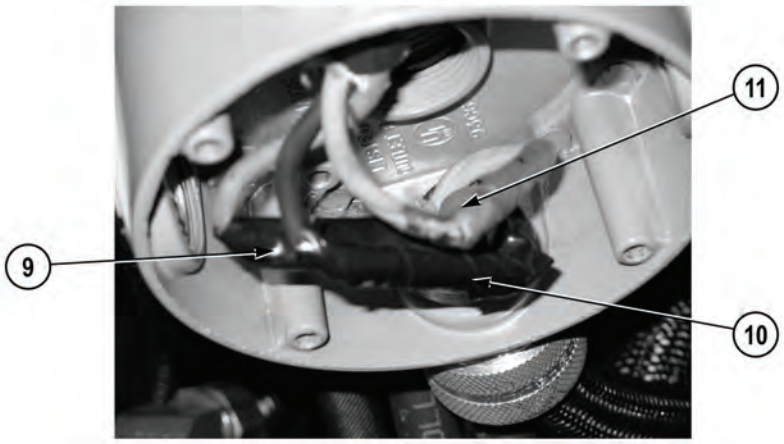
REMOVAL



1. Remove two screws (1), cover (2), and gasket (3) from waterproof splice box (4).



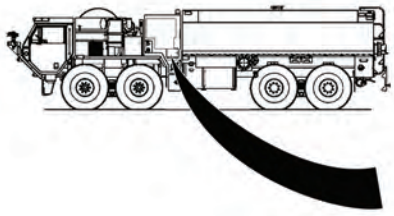
2. Remove strain relief (5), backing washer (6), and grommet (7) from fitting (8).



NOTE

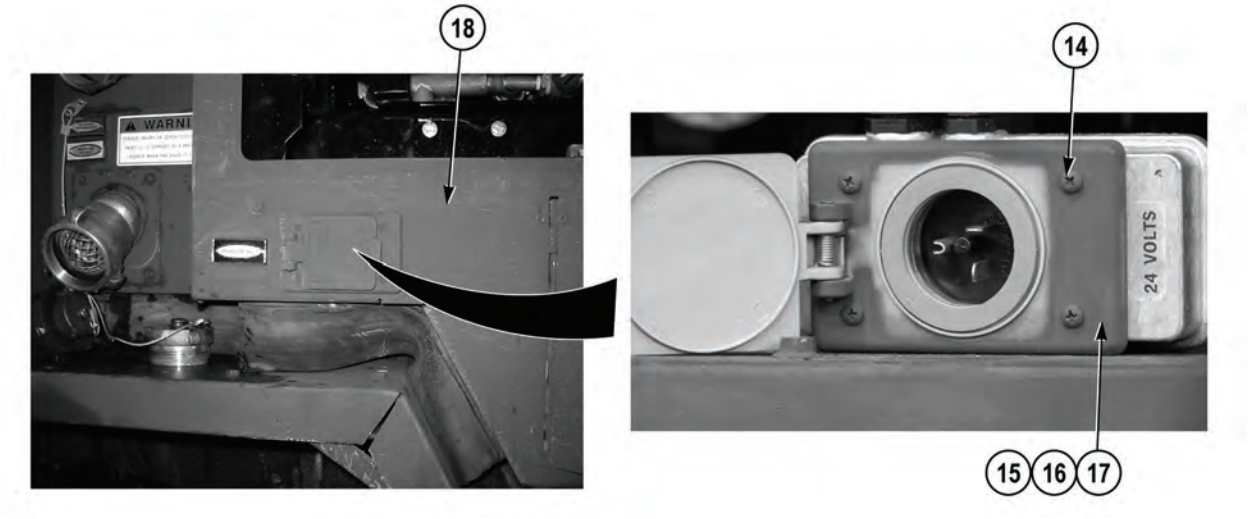
- Tag and mark wires prior to removal to ensure proper installation.
- Remove cable ties as required.

3. Cut green wire (9), black wire (10), and yellow wire (11) (TM 9-2320-315-14&P).





4. Cut yellow wire (12) and black wire (13) (TM 9-2320-315-14&P).

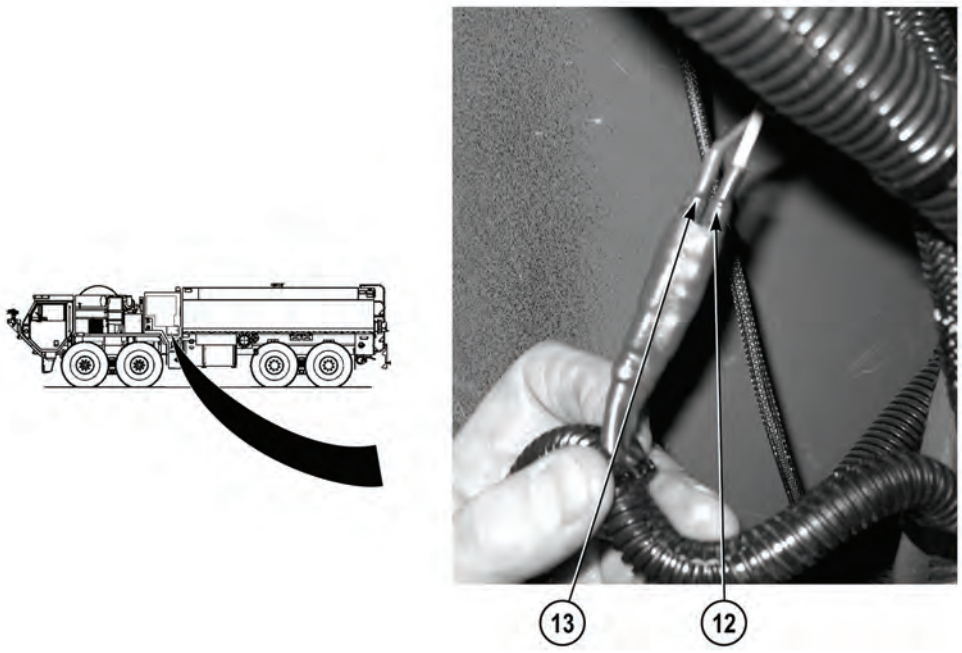


5. Remove four screws (14), cover plate (15), gasket (16), and shoreline inlet receptacle (17) from pump hose panel A (18).

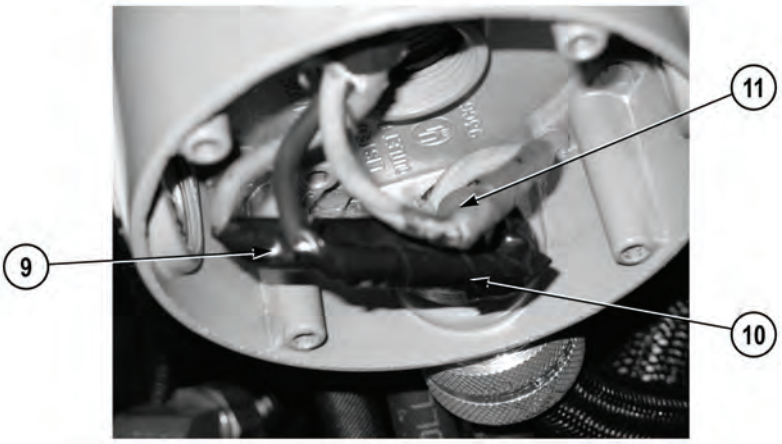
END OF TASK

INSTALLATION

1. Install shoreline inlet receptacle (17), gasket (16), and cover plate (15) on pump house panel A (18) with four screws (14).



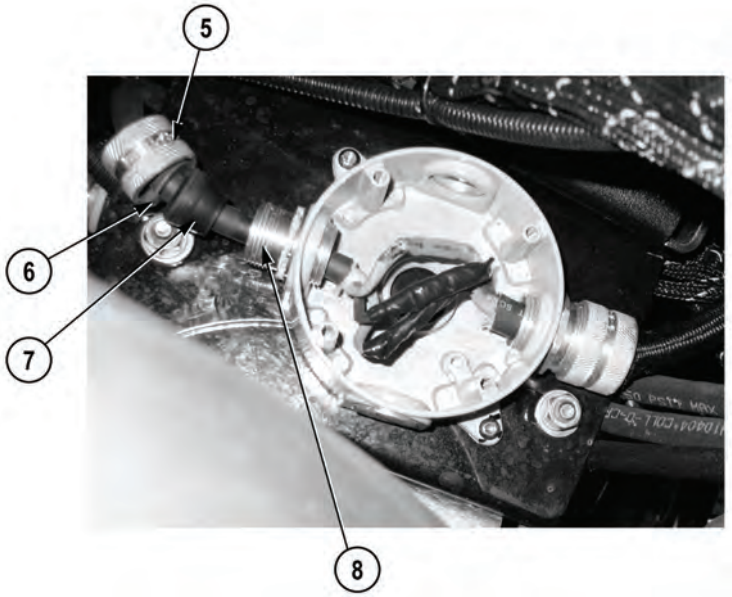
2. Repair black wire (13) and yellow wire (12) (TM 9-2320-315-14&P).



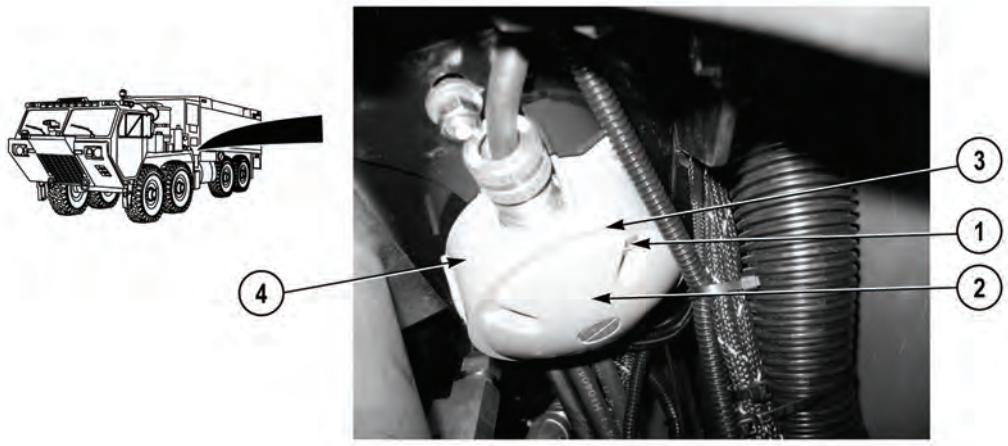
NOTE

Install cable ties as required.

3. Repair yellow wire (11), black wire (10), and green wire (9) (TM 9-2320-315-14&P).



4. Install grommet (7) and backing washer (6) on fitting (8) with strain relief (5).



5. Install gasket (3) and cover (2) on waterproof splice box (4) with two screws (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Install pump house panel B (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

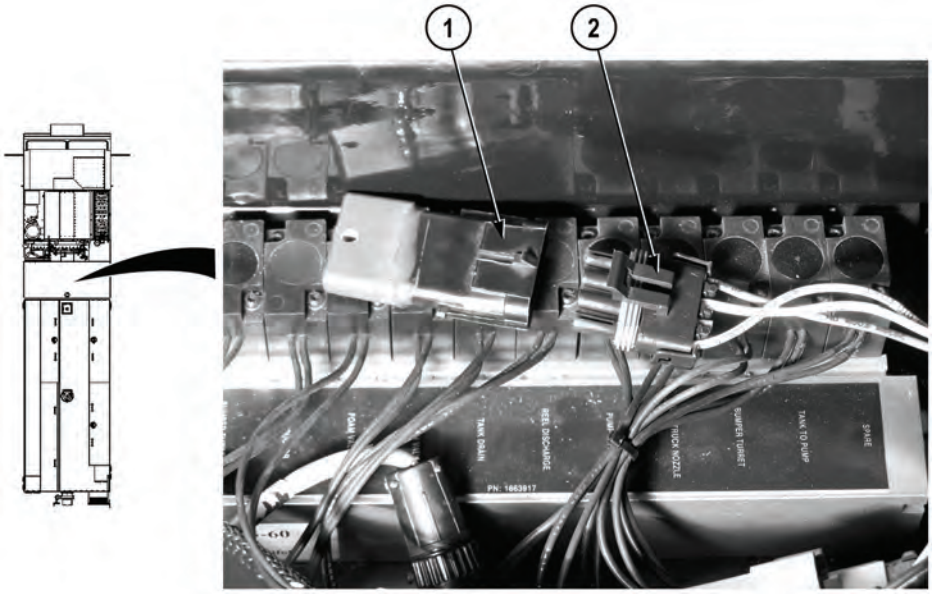
SHUTOFF CONTROL VALVE DIODE REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Equipment Conditions
Pump house panel K removed (WP 0341)

REMOVAL



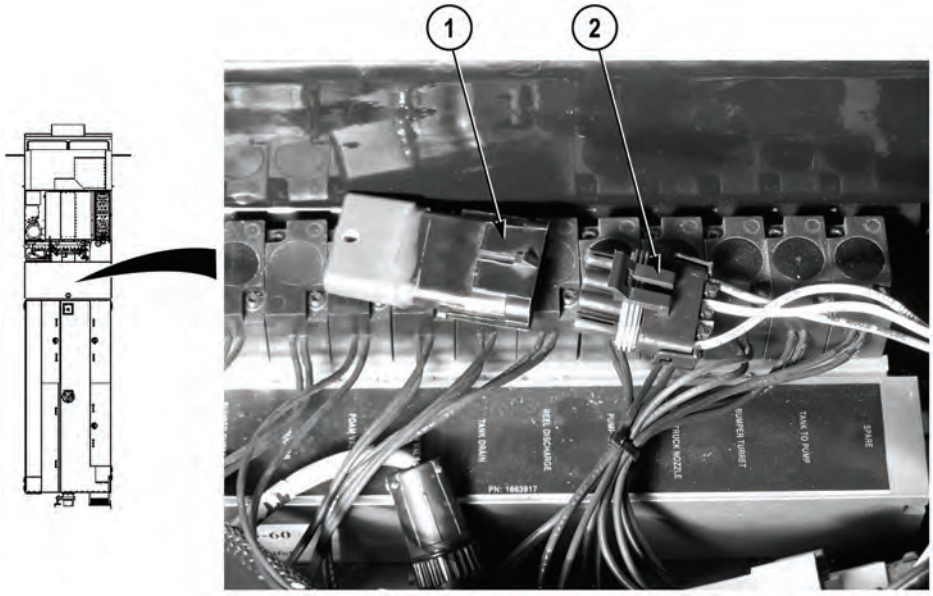
NOTE

- All shutoff control valve diode packs are removed the same way.
- Eductor control valve diode shown.

1. Remove shutoff control valve diode (1) from diode connector (2).

END OF TASK

INSTALLATION



1. Install shutoff control valve diode (1) on diode connector (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Install pump house panel K (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

SHUTOFF CONTROL VALVE MANIFOLD REPLACEMENT

INITIAL SETUP:

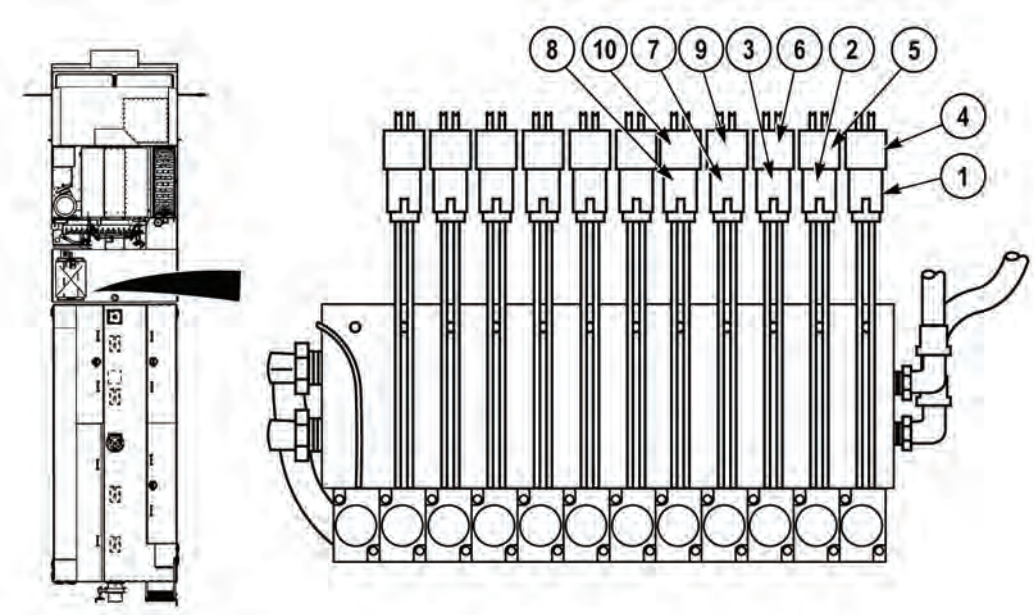
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tape, Teflon (WP 0401, Item 24)
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)
Lockwasher (2)

References
WP 0392, Fig. 3

Equipment Conditions
Air system drained (TM 9-2320-279-10)
Hose reel removed (WP 0246)

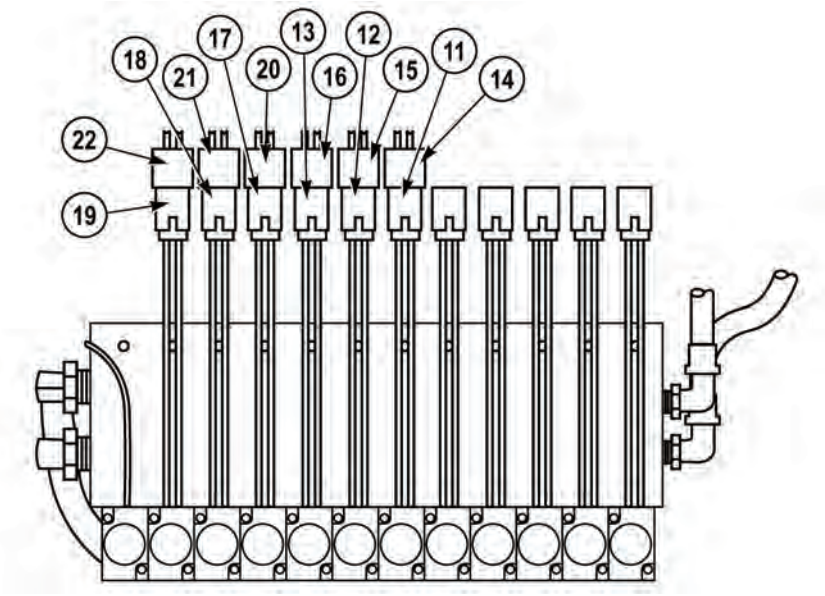
REMOVAL



NOTE

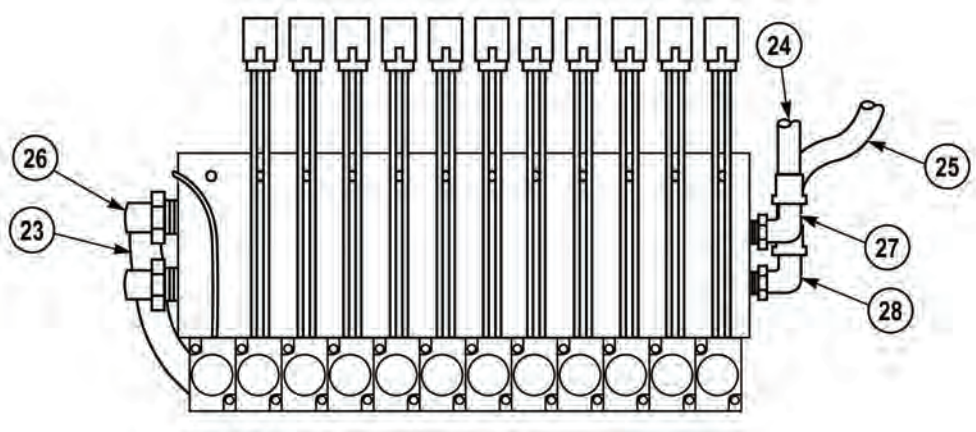
- Remove cable ties as required.
- Tag and mark connectors and air lines prior to removal to ensure proper installation.

1. Remove under truck nozzle foam valve connector (1), bumper turret foam valve connector (2), and eductor valve connector (3) from three valve control wire harness connectors (4), (5), and (6).
2. Remove foam valve connector (7) and flush valve connector (8) from two valve control wire harness connectors (9) and (10).

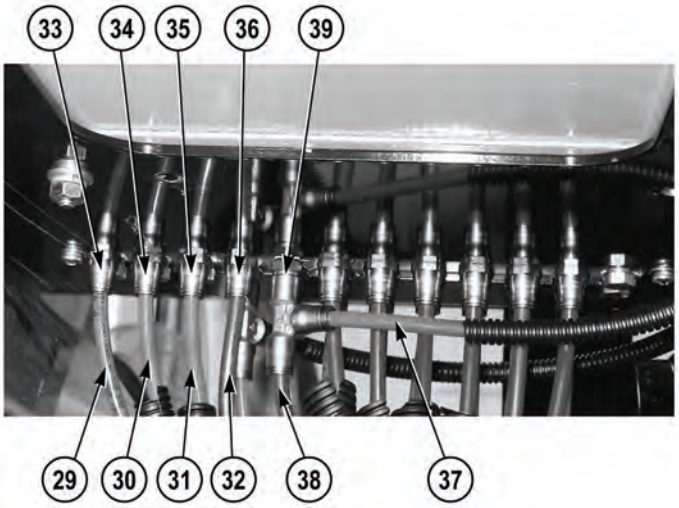


3. Remove tank drain valve connector (11), hose reel discharge valve connector (12), and pump cooler valve connector (13) from three valve control wire harness connectors (14), (15) and (16).

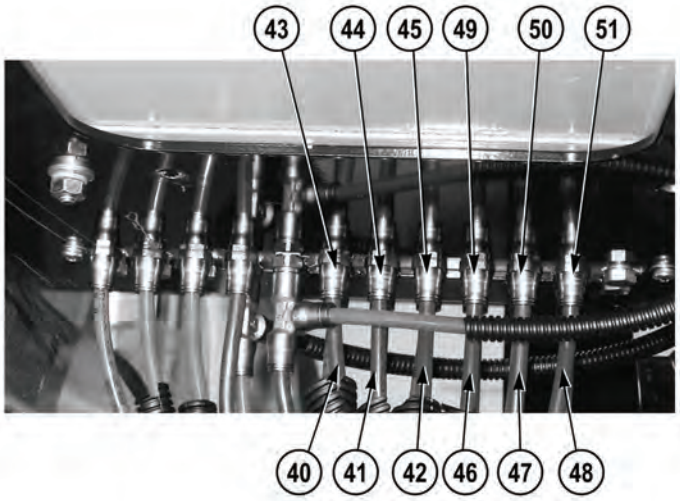
4. Remove under truck nozzles valve connector (17) bumper turret valve connector (18) and tank discharge valve connector (19) from three valve control wire harness connectors (20), (21), and (22).



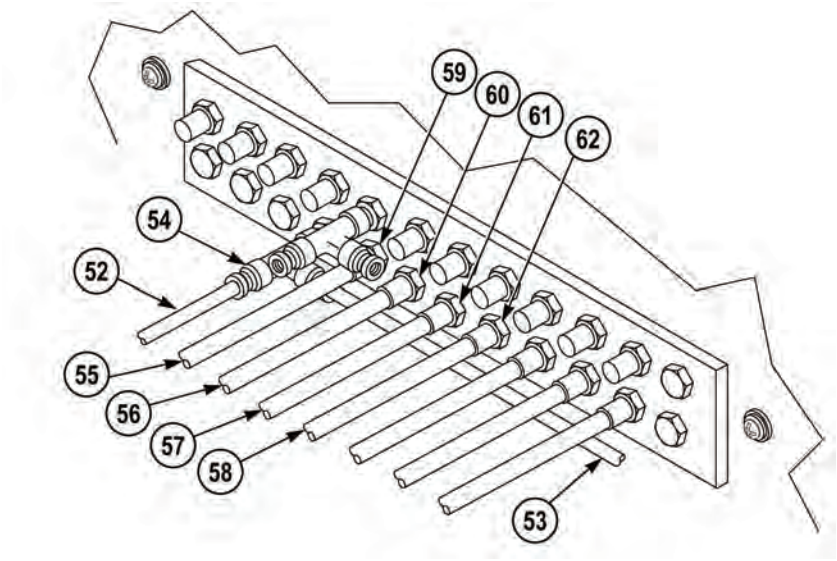
5. Remove three air lines (23), (24), and (25) from elbows (26), (27), and (28).



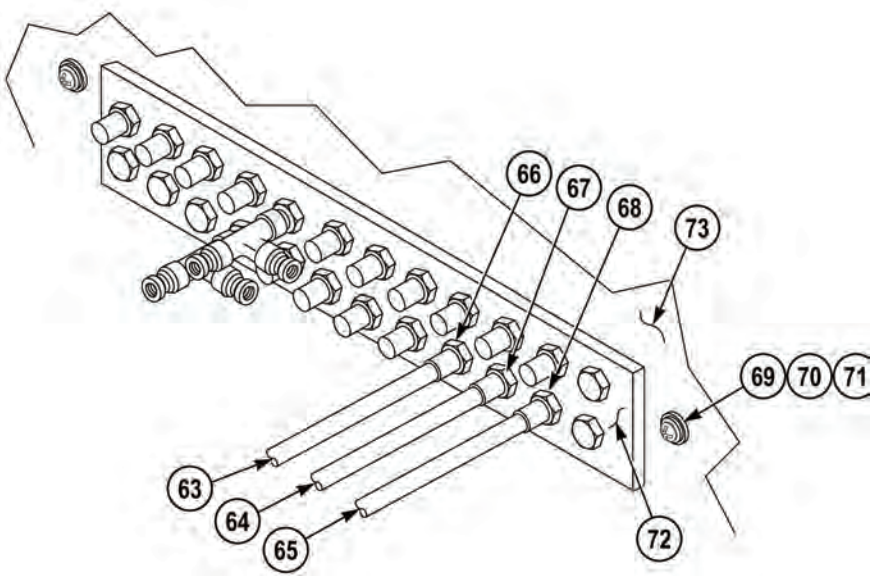
6. Remove four air lines (29), (30), (31), and (32) from fittings (33), (34), (35), and (36).
7. Remove two air lines (37) and (38) from tee (39).



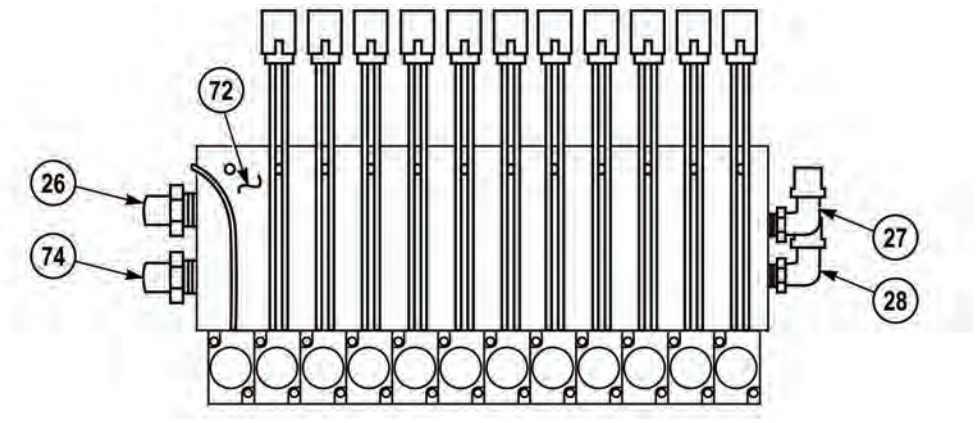
8. Remove three air lines (40), (41), and (42) from fittings (43), (44), and (45).
9. Remove three air lines (46), (47), and (48) from fittings (49), (50), and (51).



10. Remove two air lines (52), and (53) from tee (54).
11. Remove four air lines (55), (56), (57), and (58) from fittings (59), (60), (61), and (62).



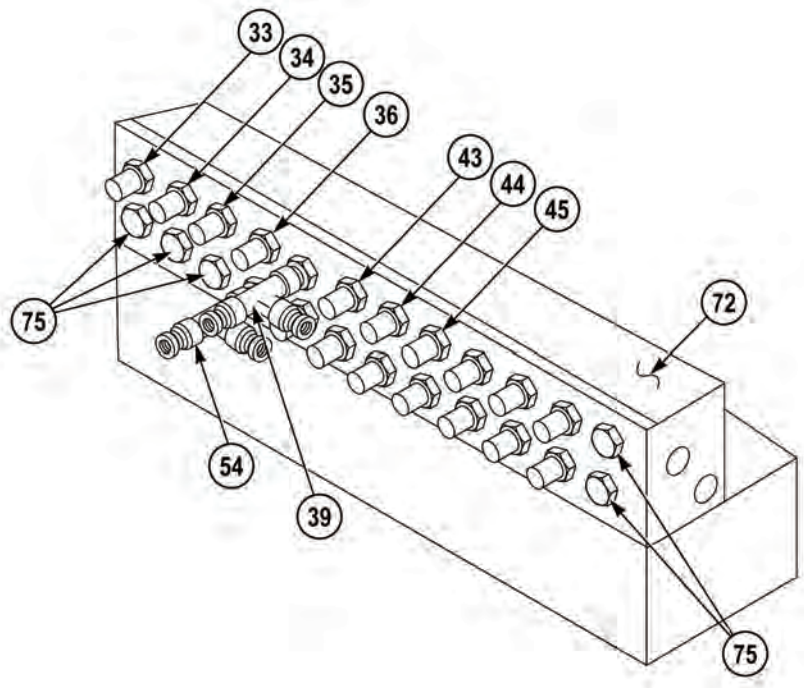
12. Remove three air lines (63), (64), and (65) from fittings (66), (67), and (68).
13. Remove two screws (69), lockwashers (70), washer (71), and control valve manifold (72) from bracket (73). Discard lockwashers.



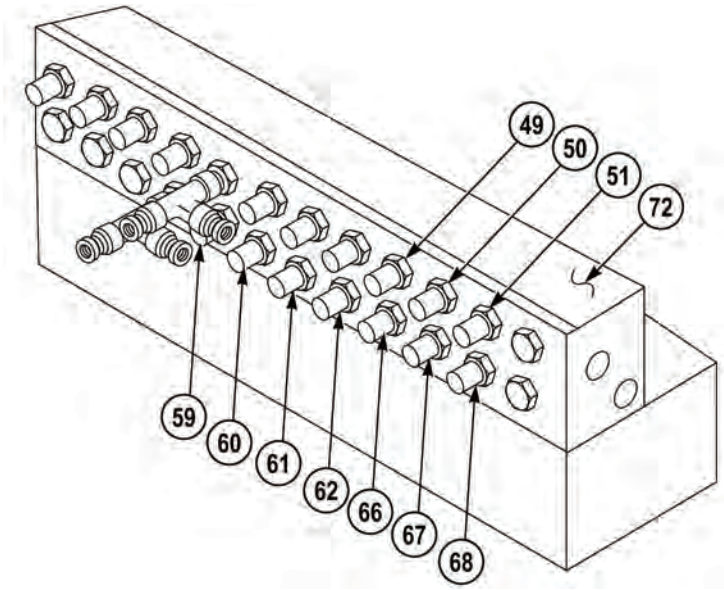
NOTE

Note position of elbows prior to removal to ensure proper installation.

14. Remove three elbows (26), (27), and (28) and muffler (74) from control valve manifold (72).



15. Remove five plugs (75) from control valve manifold (72).
16. Remove four fittings (33), (34), (35), and (36) and two tees (39) and (54) from control valve manifold (72).
17. Remove three fittings (43), (44), and (45) from control valve manifold (72).



18. Remove three fittings (49), (50), and (51) from control valve manifold (72).
19. Remove seven fittings (59), (60), (61), (62), (66), (67), and (68) from control valve manifold (72).

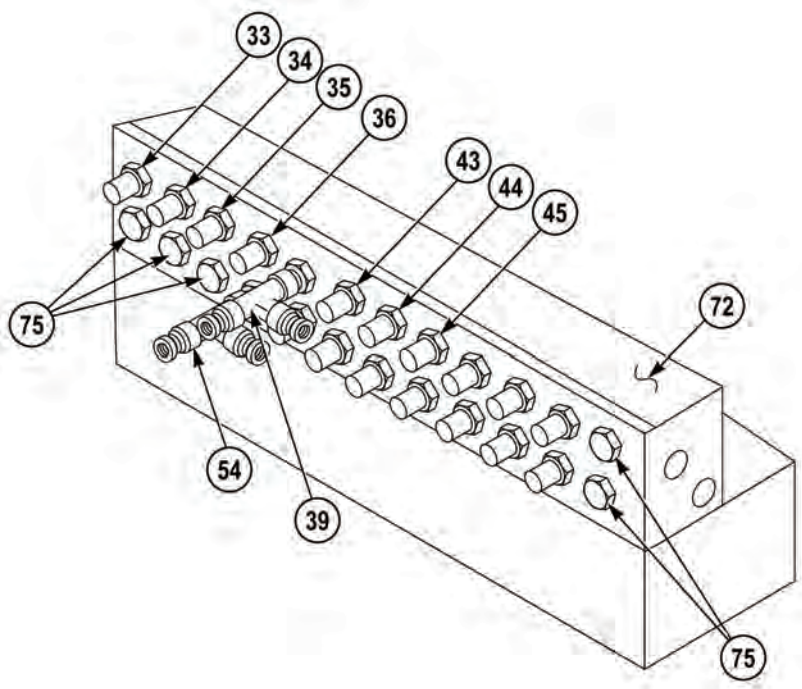
END OF TASK

INSTALLATION

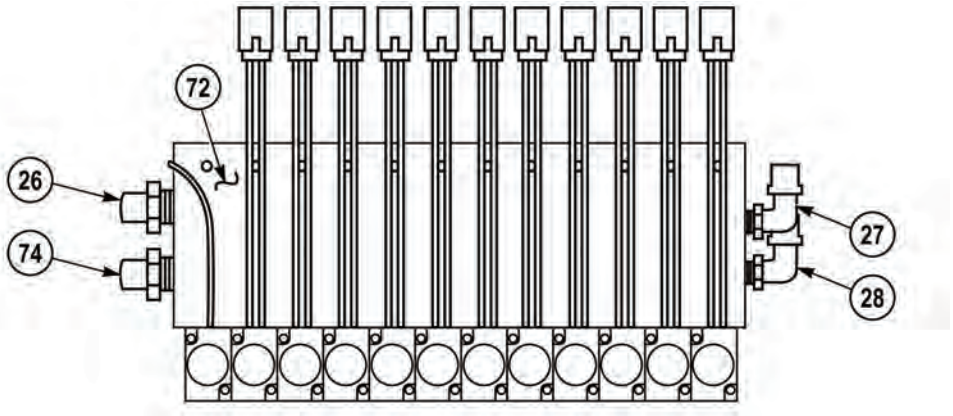
NOTE

Install cable ties as required.

1. Apply teflon tape to threads of ten fittings (49), (50), (51), (59), (60), (61), (62), (66), (67), and (68).
2. Install seven fittings (59), (60), (61), (62), (66), (67), and (68) on control valve manifold (72).
3. Install three fittings (49), (50), and (51) on control valve manifold (72).



4. Apply teflon tape to threads of seven fittings (33), (34), (35), (36), (43), (44), and (45) five plugs (75) and two tees (39) and (54).
5. Install three fittings (43), (44), and (45) on control valve manifold (72).
6. Install four fittings (33), (34), (35), and (36) and two tees (39) and (54) on control valve manifold (72).
7. Install five plugs (75) on control valve manifold (72).

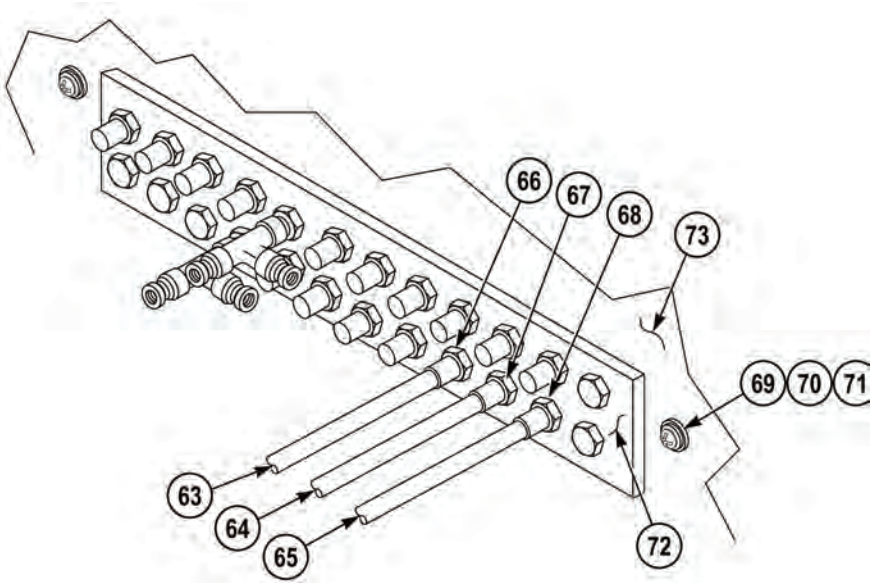


8. Apply teflon tape to threads of three elbows (26), (27), and (28) and muffler (74).

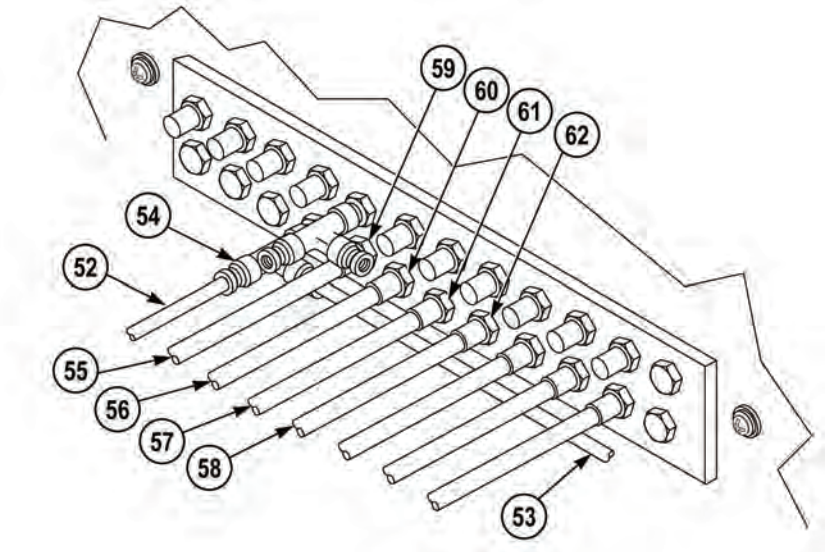
NOTE

Install elbows in same position as noted prior to removal.

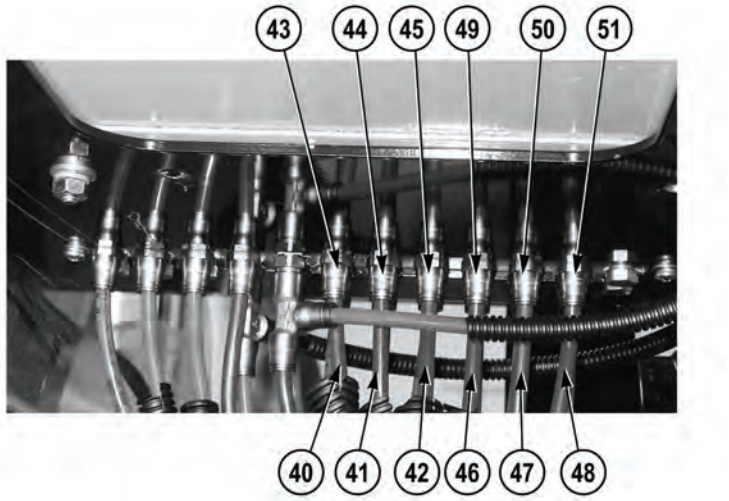
9. Install three elbows (26), (27), and (28) and muffler (74) on control valve manifold (72).



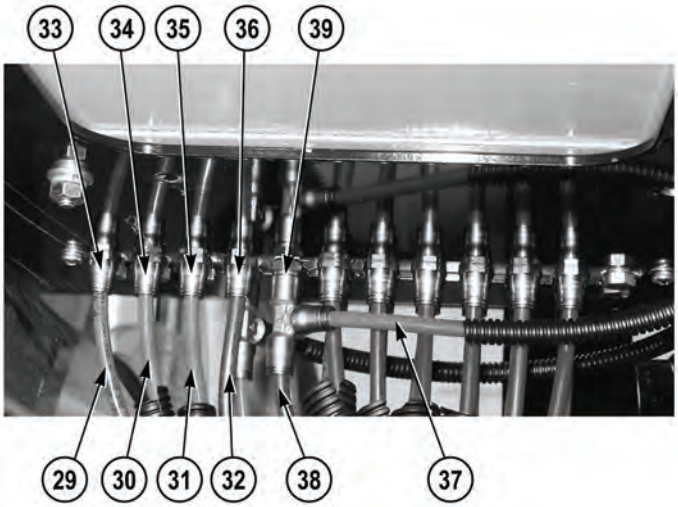
10. Install control valve manifold (72) on bracket (73) with two washers (71), lockwashers (70), and screws (69).
11. Install three air lines (63), (64), and (65) on fittings (66), (67), and (68).



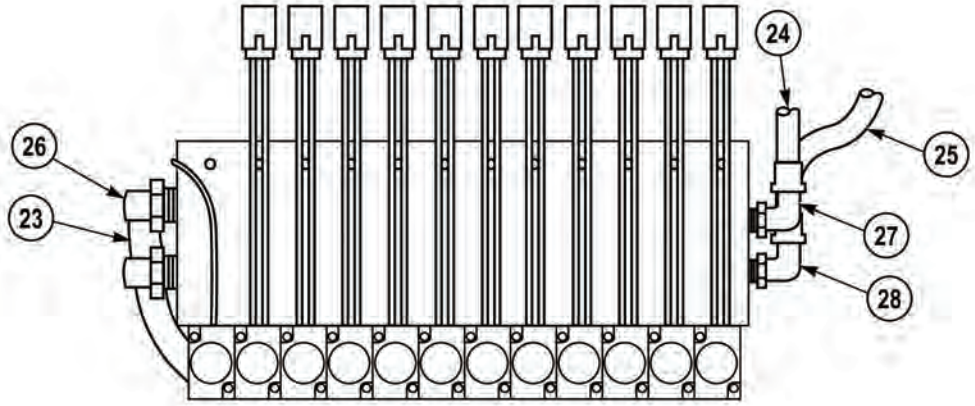
12. Install four air lines (55), (56), (57), and (58) on fittings (59), (60), (61), and (62).
13. Install two air lines (52) and (53) on tee fitting (54).



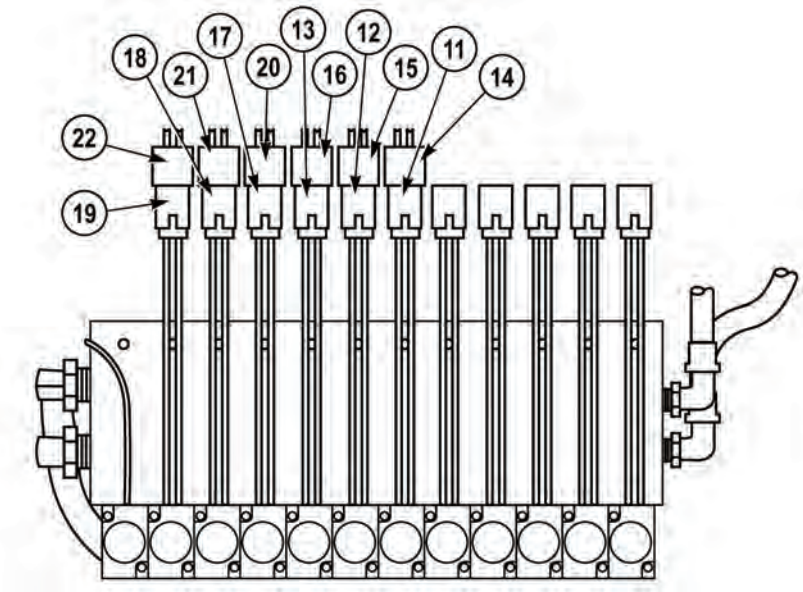
14. Install three air lines (46), (47), and (48) on fittings (49), (50), and (51).
15. Install three air lines (40), (41), and (42) on fittings (43), (44), and (45).



16. Install two air lines (37) and (38) on tee (39).
17. Install four air lines (29), (30), (31), and (32) on fittings (33), (34), (35), and (36).

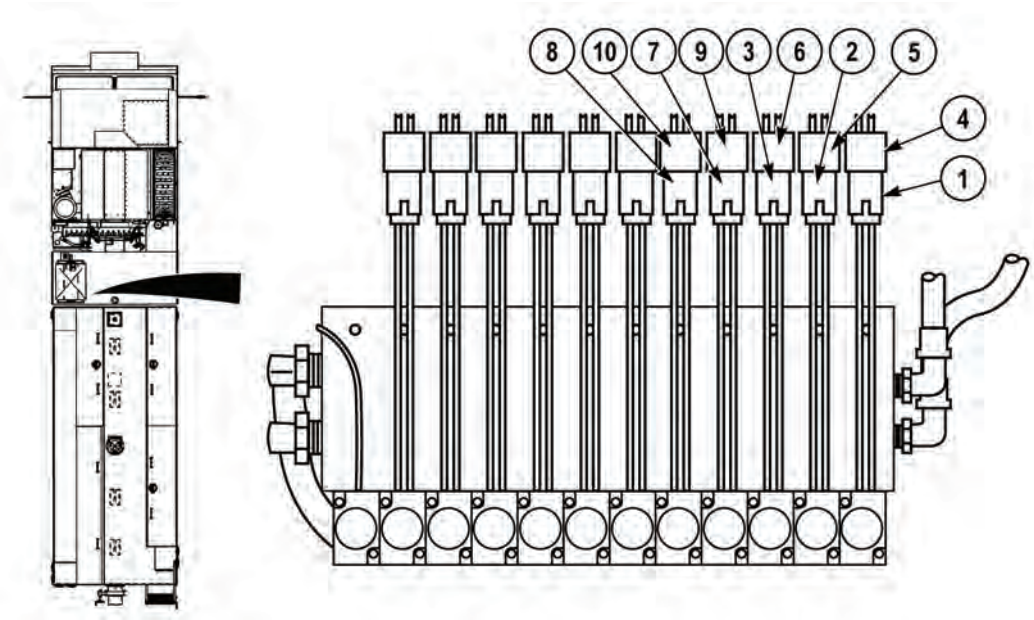


18. Install three air lines (23), (24), and (25) on elbows (26), (27), and (28).



19. Connect under truck nozzle valve connector (17), bumper turret valve connector (18), and tank discharge valve connector (19) on three valve control wire harness connectors (20), (21), and (22).

20. Connect tank drain valve connector (11), hose reel discharge valve connector (12), and pump cooler valve connector (13) on three valve control wire harness connectors (14), (15), and (16).



21. Connect foam valve connector (7) and flush valve connector (8) on two valve control wire harness connectors (9) and (10).

22. Connect under truck nozzle foam valve connector (1), bumper turret foam valve connector (2), and eductor valve connector (3) on three valve control wire harness connectors (4), (5), and (6).

END OF TASK

FOLLOW-ON MAINTENANCE

Install hose reel (WP 0246)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

SHUTOFF CONTROL VALVE REPLACEMENT

INITIAL SETUP:

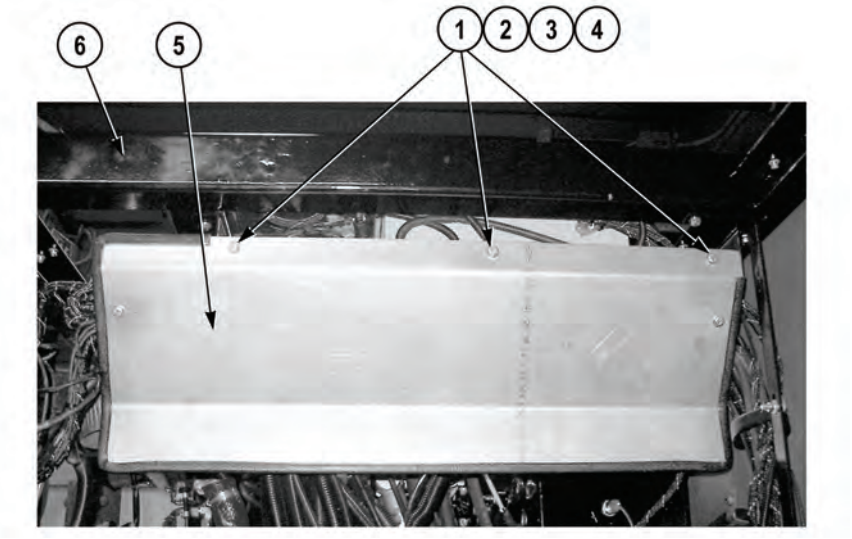
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Ties, Cable, Plastic (WP 0401, Item 25)
Lockwasher (3)
Preformed Packing (3)
Preformed Packing (1)

References
WP 0392, Fig. 3

Equipment Conditions
Air system drained (TM 9-2320-279-10)
Pump hose panels K and L removed (WP 0341)

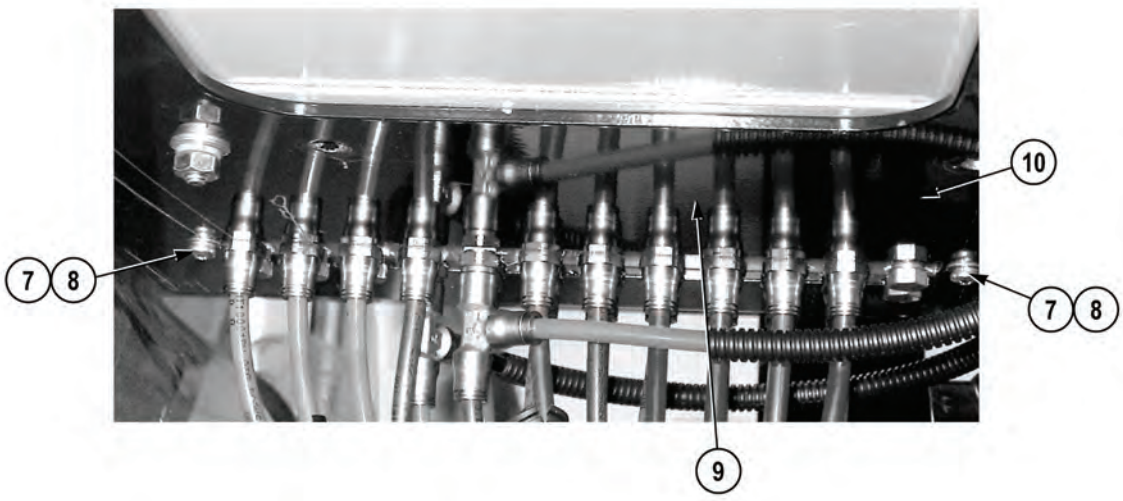
REMOVAL



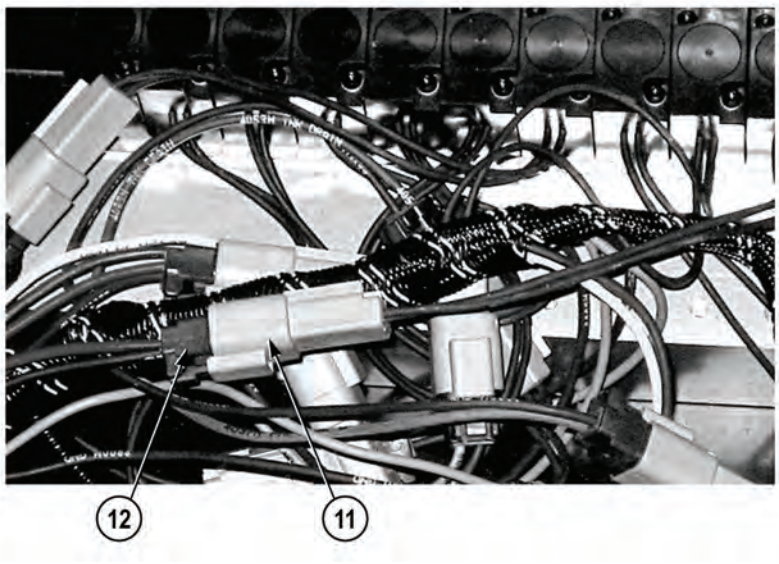
NOTE

- It is not necessary to remove cushion clips and wires attach to booster reel deflector.
- Booster reel deflector shield shown with hose reel removed.

1. Remove three nuts (1), lockwashers (2), six washers (3), three screws (4), and lower booster reel deflector (5) from pump house frame (6). Discard lockwashers.



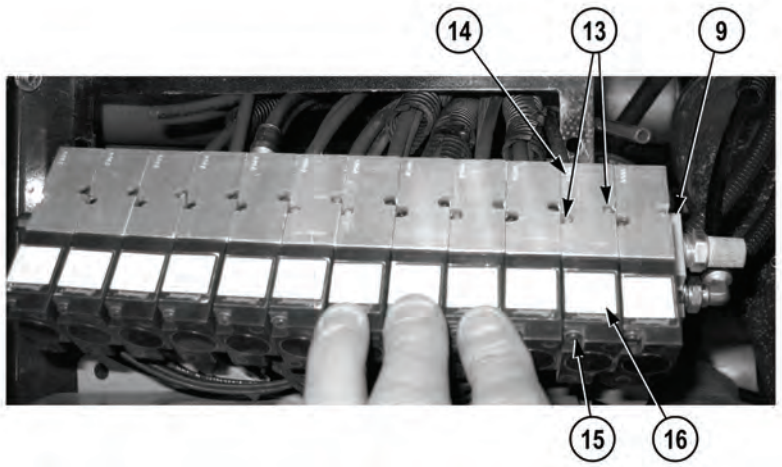
2. Remove two screws (7), washers (8), and shutoff control valve manifold (9) from bracket (10).



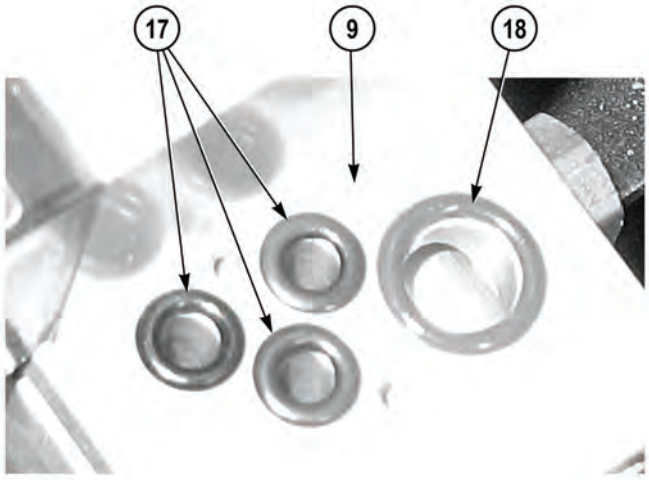
NOTE

All shutoff control valves are removed the same way. Tank to pump control valve shown.

3. Disconnect tank-to-pump valve connector (11) from tank-to-pump valve control wire harness connector (12).



4. Remove two screws (13) and tank-to-pump valve (14) from shutoff control valve manifold (9).
5. Remove two screws (15) and solenoid (16) from tank-to-pump valve (14).

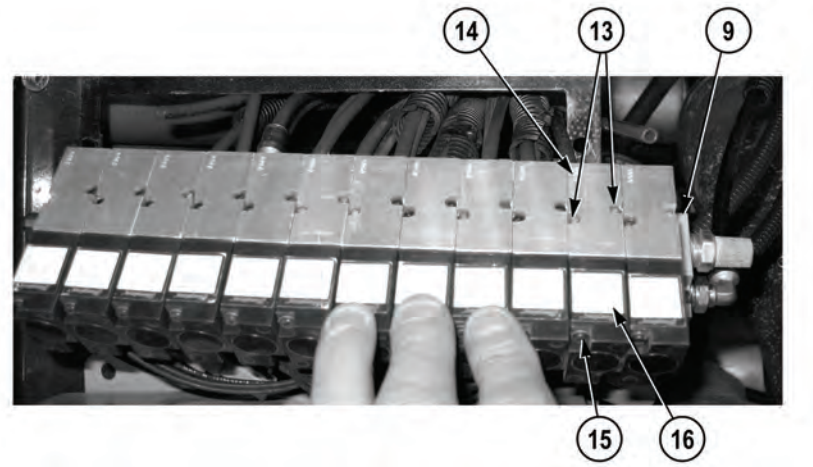


6. Remove three preformed packings (17) from shutoff control valve manifold (9). Discard preformed packing.
7. Remove preformed packing (18) from shutoff control valve manifold (9). Discard preformed packing.

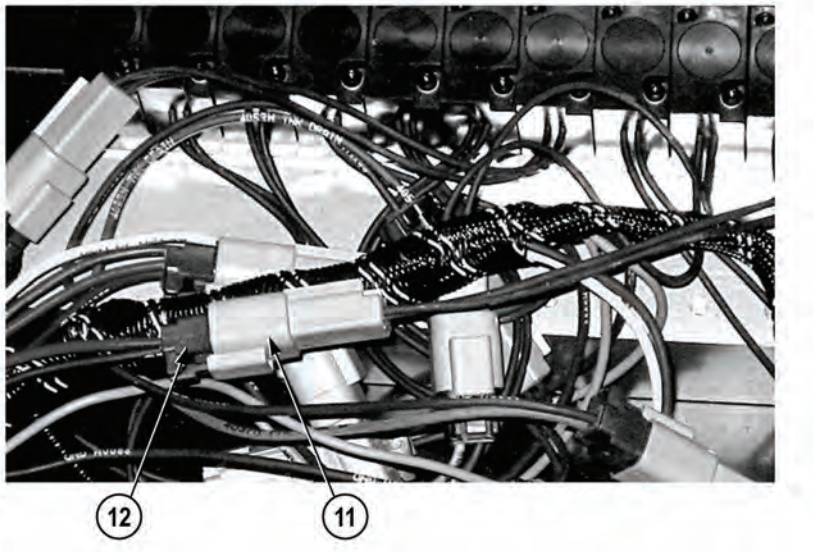
END OF TASK

INSTALLATION

1. Install preformed packing (18) on shutoff control valve manifold (9).
2. Install three preformed packing (17) on shutoff control valve manifold (9).



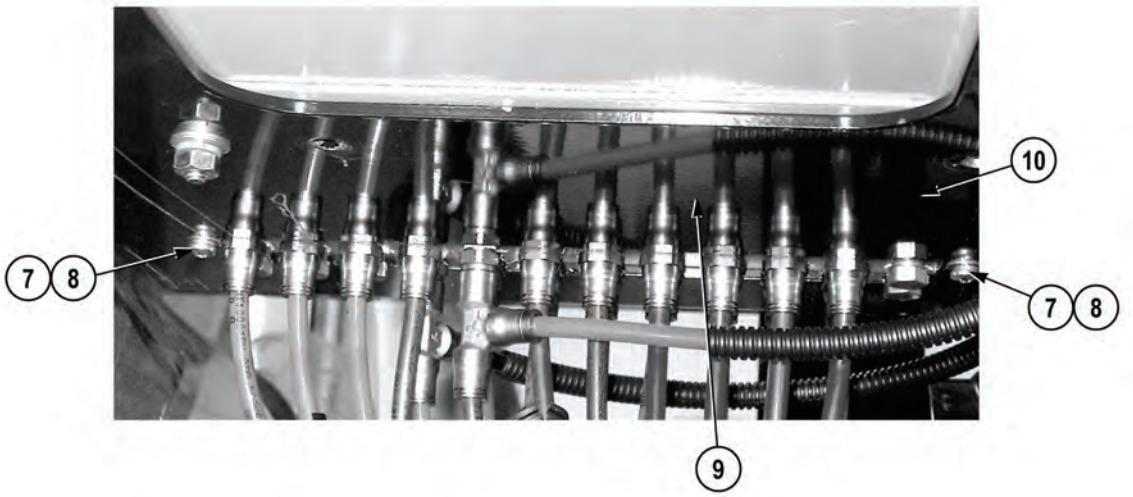
3. Install solenoid (16) on tank-to-pump valve (14) with two screws (15).
4. Install tank-to-pump valve (14) on shutoff control valve manifold (9) with two screws (13).



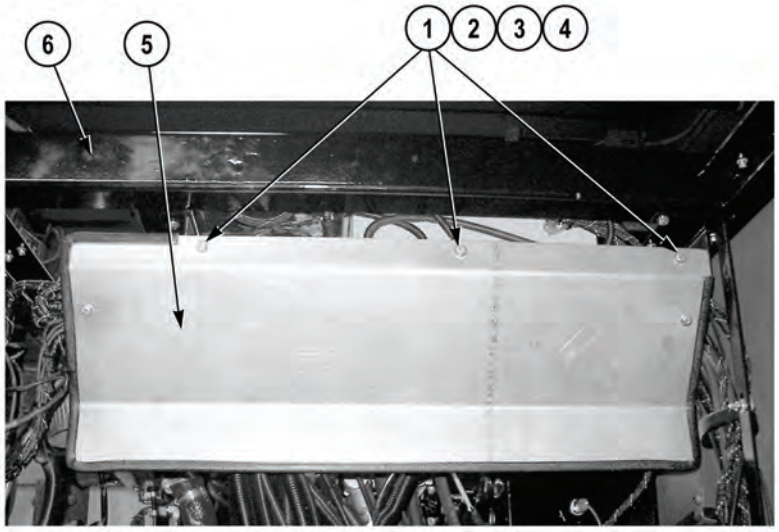
NOTE

Install cable ties as required.

5. Connect tank-to-pump valve control wire harness connector (12) to tank-to-pump valve connector (11).



6. Install shutoff control valve manifold (9) on bracket (10) with two washers (8) and screws (7).



7. Install booster reel deflector (5) on pump house frame (6) with three screws (4), six washers (3), three lockwashers (2), and nuts (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Install pump house panels L and K (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

COVER, DOOR, AND ELECTRONIC MOUNTING BASE REPLACEMENT (SINCGARS)

INITIAL SETUP:

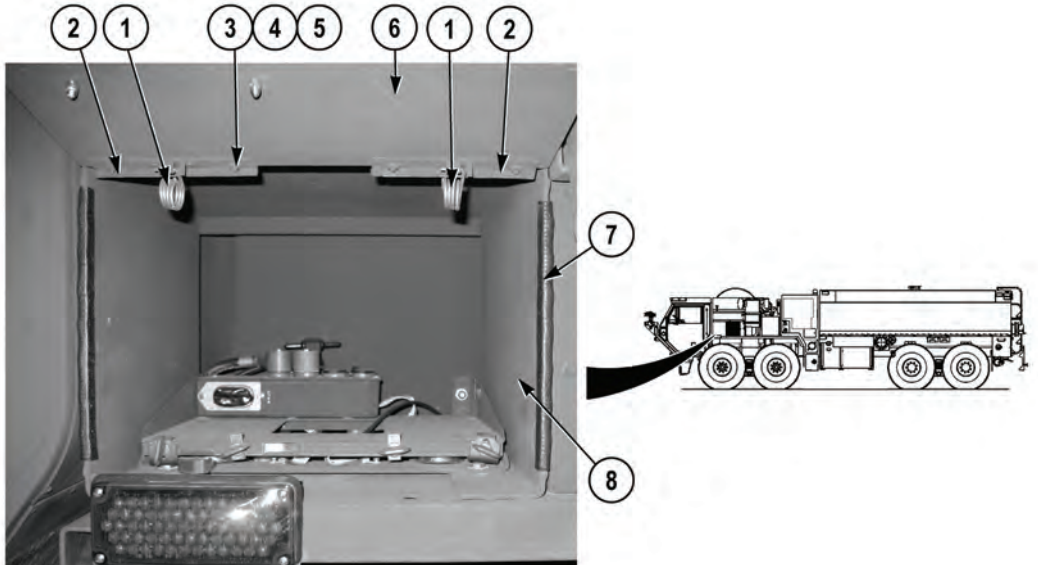
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Locknut (4)
Locknut (4)
Lockwasher (8)

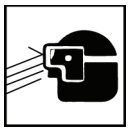
References
WP 0392, Fig. 37

Equipment Conditions
Radio/transmitter, amplifiers, and communication cables removed (TM 11 5820-890-10-1)
Power cable assembly (SINCGARS) removed (WP 0259)

REMOVAL



WARNING

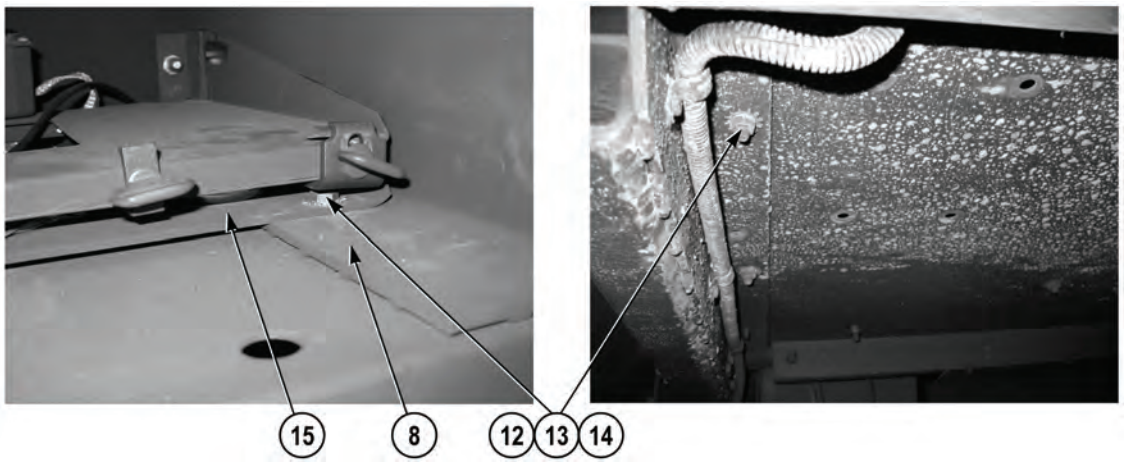


Springs are under pressure. Wear safety goggles and use caution when removing or installing springs, snaprings, retaining rings, and other parts under spring tension. These parts can act as projectiles, resulting in serious injury to personnel.

1. Remove two springs (1) from hinges (2).
2. Remove four locknuts (3), eight washers (4), four screws (5), and door (6) from two hinges (2). Discard locknuts.
3. Remove two door seals (7) from cover (8).



4. Remove four locknuts (9), eight washers (10), four screws (11), and two hinges (2) from cover (8). Discard locknuts.



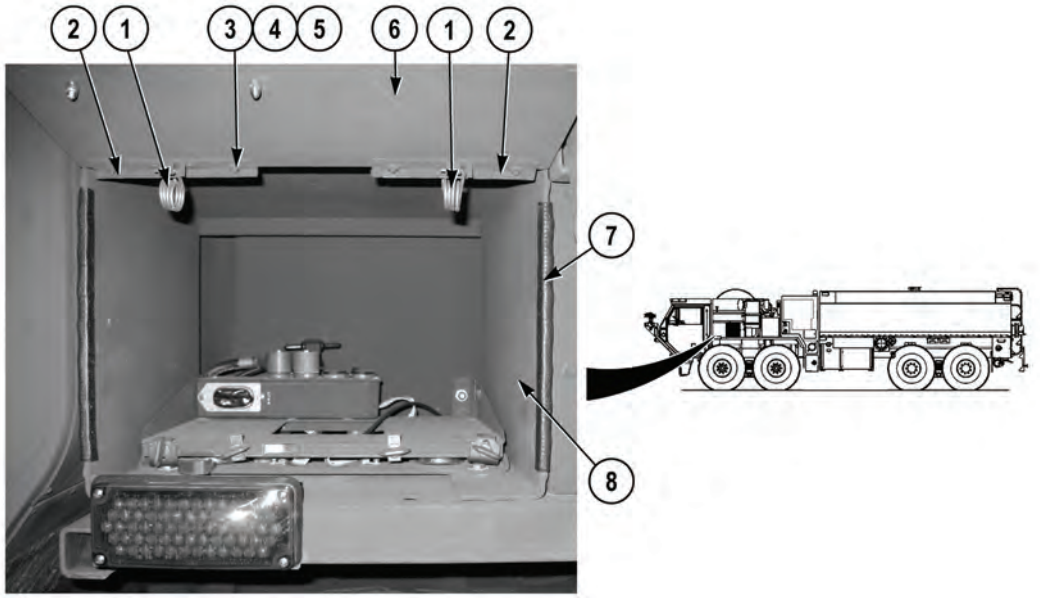
5. Remove four nuts (12), eight lockwashers (13), four screws (14), mounting base (15), and cover (8) from vehicle. Discard lockwashers.

END OF TASK

INSTALLATION

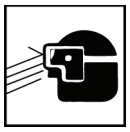
1. Install cover (8) and mounting base (15) on vehicle with four screws (14), eight lockwashers (13), and four nuts (12).

2. Install two hinges (2) on cover (8) with four screws (11), eight washers (10), and four locknuts (9).



3. Install two door seals (7) on cover (8).
4. Install door (6) on two hinges (2) with four screws (5), eight washers (4), and four locknuts (3).

WARNING



Springs are under pressure. Wear safety goggles and use caution when removing or installing springs, snaprings, retaining rings, and other parts under spring tension. These parts can act as projectiles, resulting in serious injury to personnel.

5. Install two springs (1) on hinges (2).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install power cable assembly (SINCGARS) (WP 0259)
2. Install radio/transmitter, amplifiers, and communication cables (TM 11-5820-890-10-1)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

SPEAKER REPLACEMENT

INITIAL SETUP:

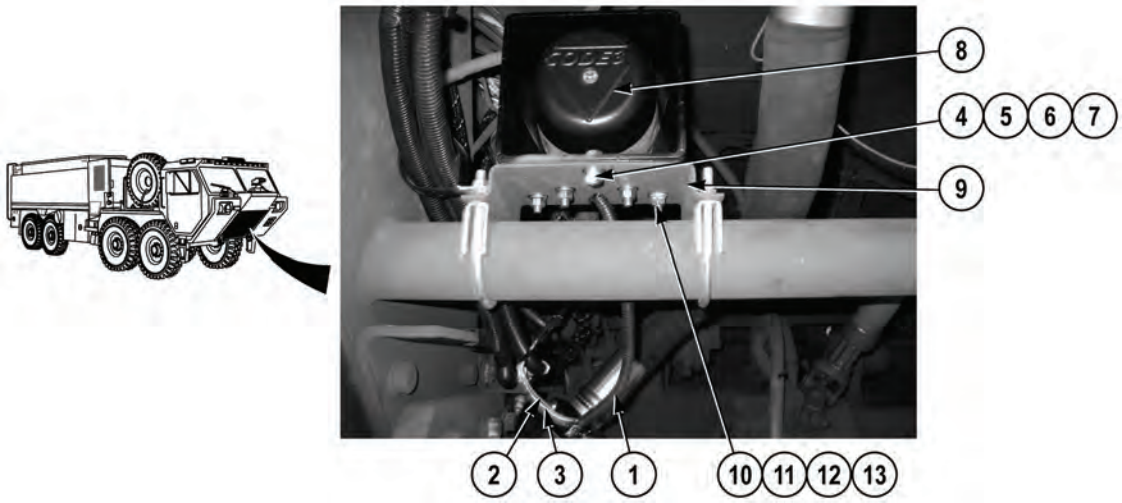
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Lockwasher (1)
Lockwasher (4)
Locknut (1)
Locknut (4)

References
WP 0392, Fig. 43

Equipment Conditions
Batteries disconnected (TM 9-2320-315-14&P)
Skid plate grille removed (WP 0350)

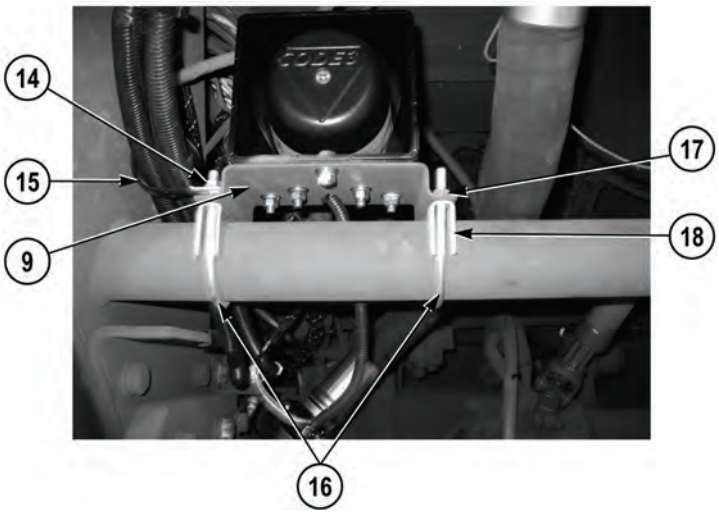
REMOVAL



NOTE

Tag and mark wires prior to removal to ensure proper installation.

1. Open loom (1) and cut wire 1052 (2) and wire 1053 (3) (TM 9-2320-315-14&P).
2. Remove nut (4), lockwasher (5), washer (6), and screw (7) from speaker (8) and bracket (9). Discard lockwasher.
3. Remove four nuts (10), lockwashers (11), washers (12), screws (13), and speaker (8) from bracket (9). Discard lockwashers.

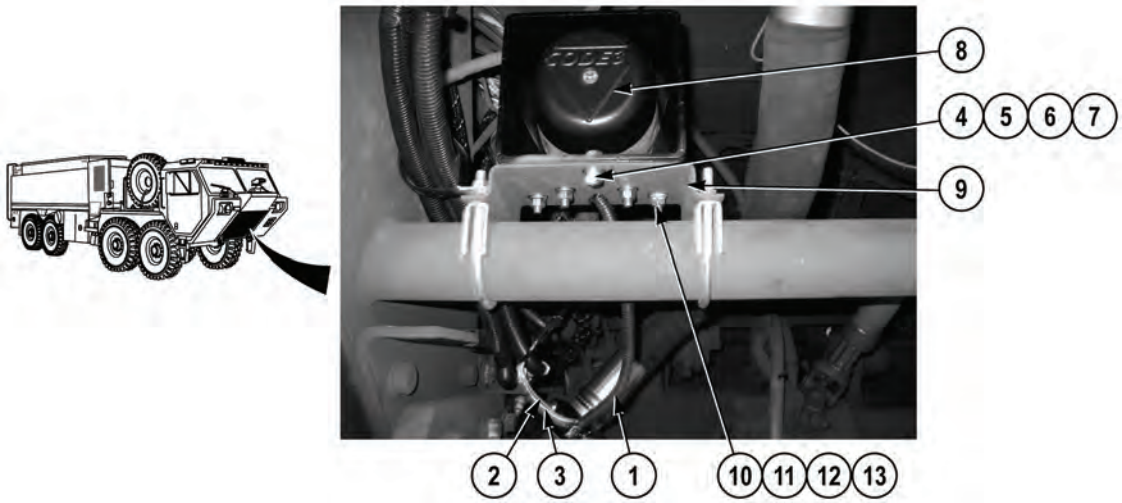


4. Remove locknut (14) and cushion clamp (15) from U-bolt (16). Discard locknut.
5. Remove four locknuts (17), two U-bolts (16), cradles (18), and bracket (9) from vehicle. Discard locknuts.

END OF TASK

INSTALLATION

1. Install bracket (9) on vehicle with two cradles (18), U-bolts (16), and four locknuts (17).
2. Install cushion clamp (15) on U-bolt (16) with locknut (14).



3. Install speaker (8) on bracket (9) with four screws (13), washers (12), lockwashers (11), and nuts (10).
4. Install screw (7), washer (6), lockwasher (5), and nut (4) on speaker (8) and bracket (9).
5. Repair wire 1052 (3) and wire 1053 (2) (TM 9-2320-315-14&P) and close loom (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install skid plate grille (WP 0350)
2. Connect batteries (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

TERMINAL BLOCK REPLACEMENT

INITIAL SETUP:

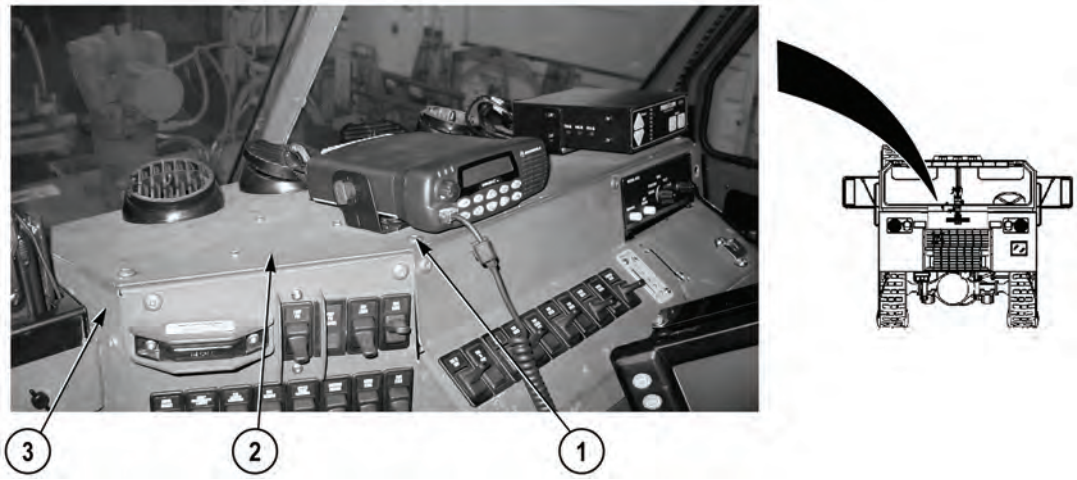
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)
Lockwasher (3)
Locknut (6)
Locknut (2)
Lockwasher (1)
Locknut (2)

References
WP 0392, Fig. 26

Equipment Conditions
Batteries disconnected (TM 9-2320-315-14&P)

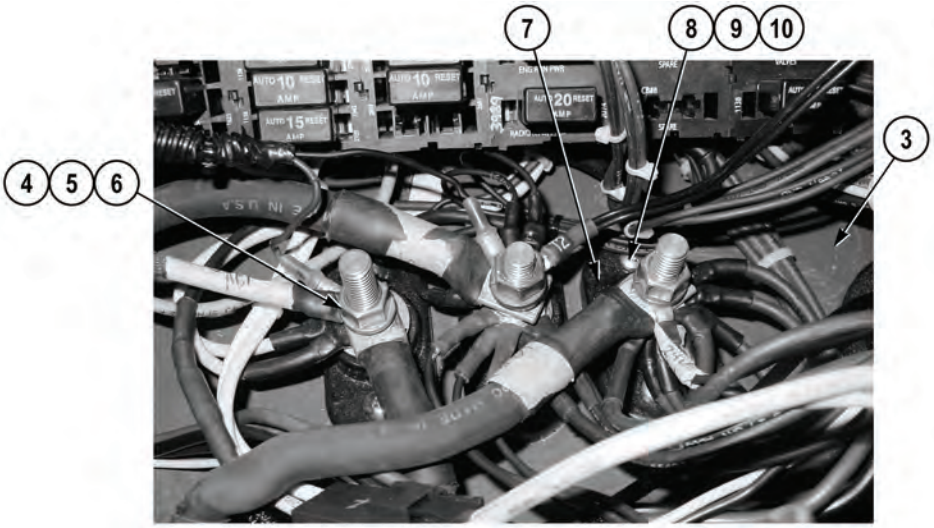
TERMINAL BLOCKS IN CAB REMOVAL



⚠ CAUTION

Wires are attached to cab instrument panel A. Lift panel only far enough to access terminal blocks. Failure to comply may cause damage to equipment.

1. Remove six screws (1) and lift cab instrument panel A (2) from cab instrument panel assembly (3).



NOTE

- Tag and mark wires prior to removal to ensure proper installation.
- Remove cable ties as required.

2. Remove three nuts (4), lockwashers (5), and wires (6) from three terminal blocks (7). Discard lockwashers.
3. Remove six locknuts (8), washers (9), screws (10), and three terminal blocks (7) from cab instrument panel assembly (3). Discard locknuts.

END OF TASK

TERMINAL BLOCKS IN CAB INSTALLATION

⚠ CAUTION

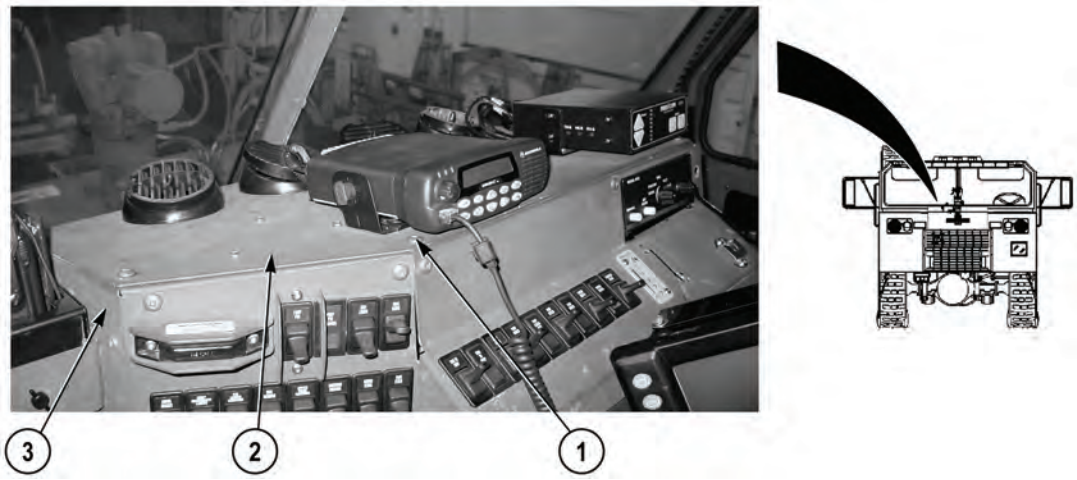
Do not overtighten locknuts when installing terminal blocks. Failure to comply may cause damage to equipment.

1. Install three terminal blocks (7) on cab instrument panel assembly (3) with six screws (10), washers (9), and locknuts (8).

NOTE

Install cable ties as required.

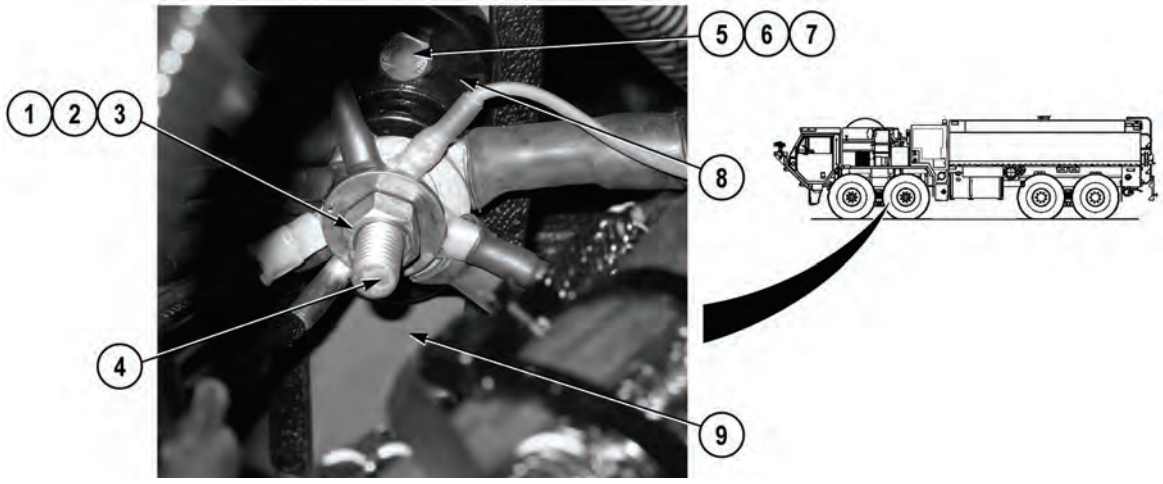
2. Install wires (6) on three terminal blocks (7) with three lockwashers (5) and nuts (4).



3. Install cab instrument panel A (2) on cab instrument panel assembly (3) with six screws (1).

END OF TASK

TERMINAL BLOCK ON FRAME RAIL BY BATTERY DISCONNECT SWITCH REMOVAL



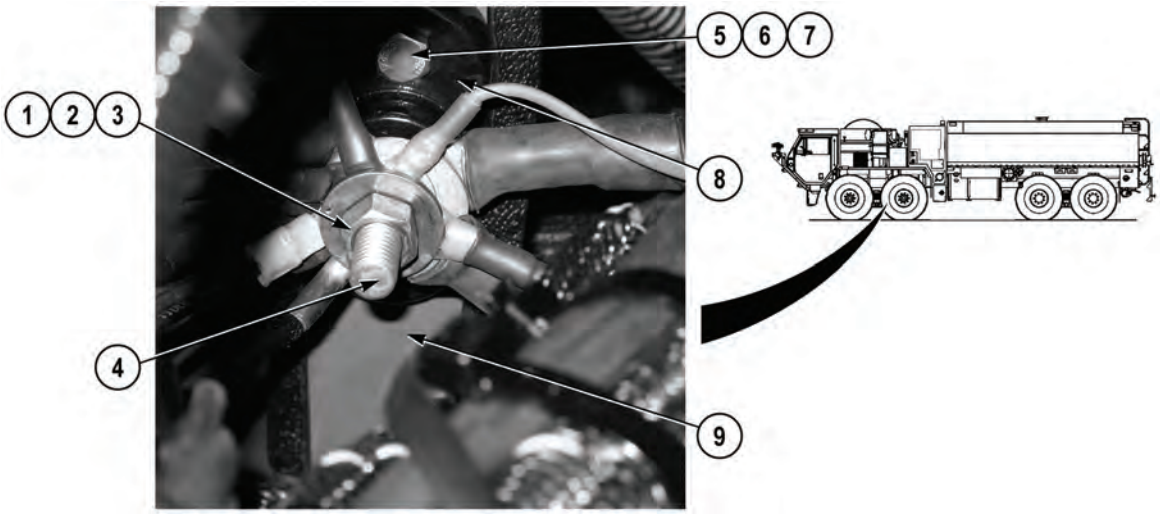
NOTE

- Tag and mark wires prior to removal to ensure proper installation.
- Remove cable ties as required.

1. Remove nut (1), washer (2), and wires (3) from screw (4).
2. Remove two locknuts (5), washers (6), screws (7), and terminal block (8) from wire harness bracket (9). Discard locknuts.

END OF TASK

TERMINAL BLOCK ON FRAME RAIL BY BATTERY DISCONNECT SWITCH INSTALLATION



CAUTION

Do not overtighten locknuts when installing terminal block. Failure to comply may cause damage to equipment.

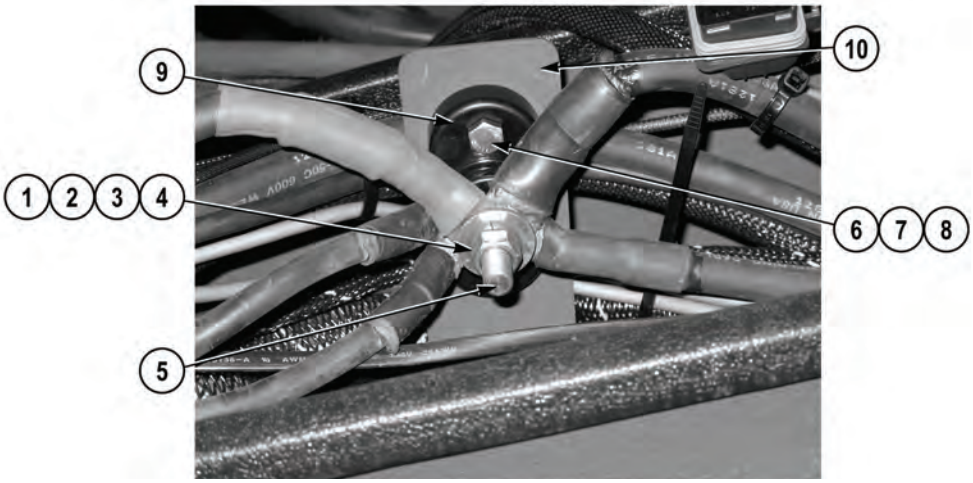
NOTE

Install cable ties as required.

1. Install terminal block (8) on write harness bracket (9) with two screws (7), washers (6), and locknuts (5).
2. Install wires (3) on screw (4) with washer (2) and nut (1).

END OF TASK

TERMINAL BLOCK AT D1 STOWAGE COMPARTMENT REMOVAL



NOTE

- Tag and mark wires prior to removal to ensure proper installation.
- Remove cable ties as required.

1. Remove nut (1), lockwasher (2), washer (3), and five wires (4) from screw (5). Discard lockwasher.
2. Remove two locknuts (6), washers (7), screws (8), and terminal block (9) from wire harness bracket (10). Discard locknuts

END OF TASK

TERMINAL BLOCK AT D1 STOWAGE COMPARTMENT INSTALLATION

CAUTION

Do not overtighten locknuts when installing terminal block. Failure to comply may cause damage to equipment.

NOTE

Install cable ties as required.

1. Install terminal block (9) on wire harness bracket (10) with two screws (8), washers (7), and locknuts (6).
2. Install five wires (4) on screw (5) with washer (3), lockwasher (2), and nut (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Connect batteries (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

THERMAL RELIEF VALVE SWITCH REPLACEMENT

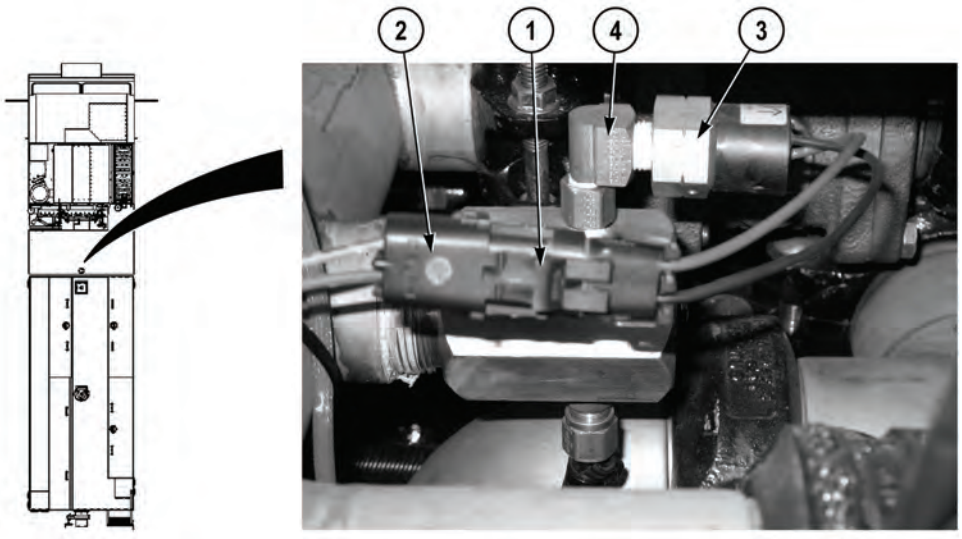
INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tape, Teflon (WP 0401, Item 17)

Equipment Conditions
Pump house panel G removed (WP 0341)

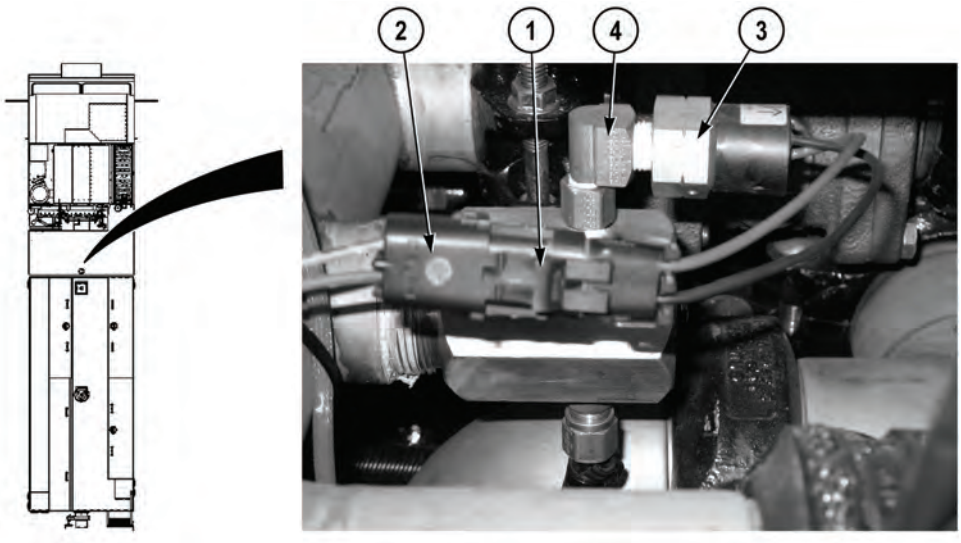
REMOVAL



1. Disconnect thermal relief valve switch connector (1) from pump house wire harness connector (2).
2. Remove thermal relief valve switch (3) from elbow (4).

END OF TASK

INSTALLATION



1. Apply teflon tape to threads of elbow (4).
2. Install thermal relief valve switch (3) on elbow (4).
3. Connect thermal relief valve switch connector (1) on pump house wire harness connector (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Install pump house panel G (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

TWO-WAY RADIO REPLACEMENT

INITIAL SETUP:

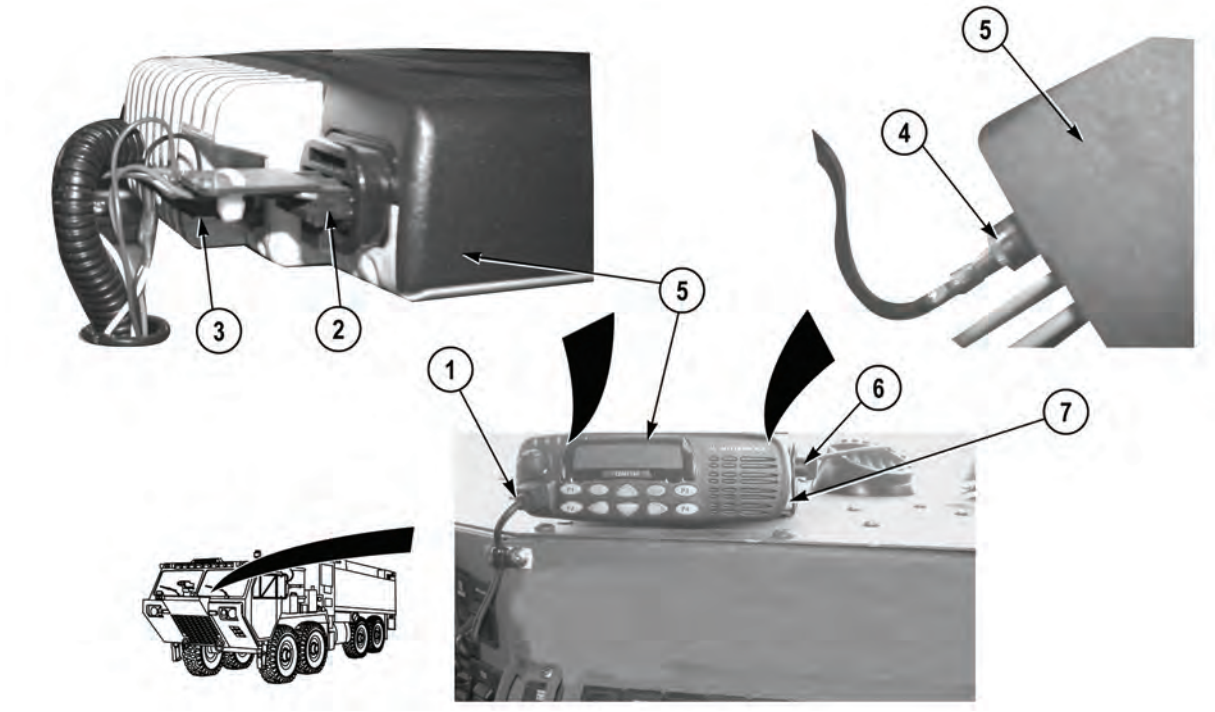
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Locknut (2)

References
WP 0392, Fig. 44

Equipment Conditions
Batteries disconnected (TM 9-2320-315-14&P)

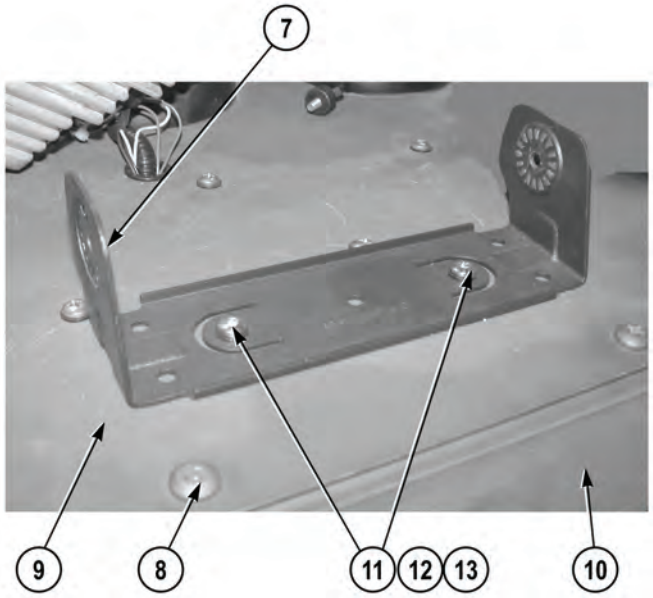
REMOVAL



NOTE

Tag and mark wire connectors prior to removal to ensure proper installation.

1. Disconnect four two-way radio connectors (1), (2), (3), and (4) from two-way radio (5).
2. Remove two screws (6) and two-way radio (5) from bracket (7).



NOTE

Perform Steps (3) and (4) if bracket needs to be removed.

3. Remove seven screws (8) and cab instrument panel A (9) from control panel (10).
4. Remove two locknuts (11), washers (12), screws (13), and bracket (7) from control panel (9). Discard locknuts.

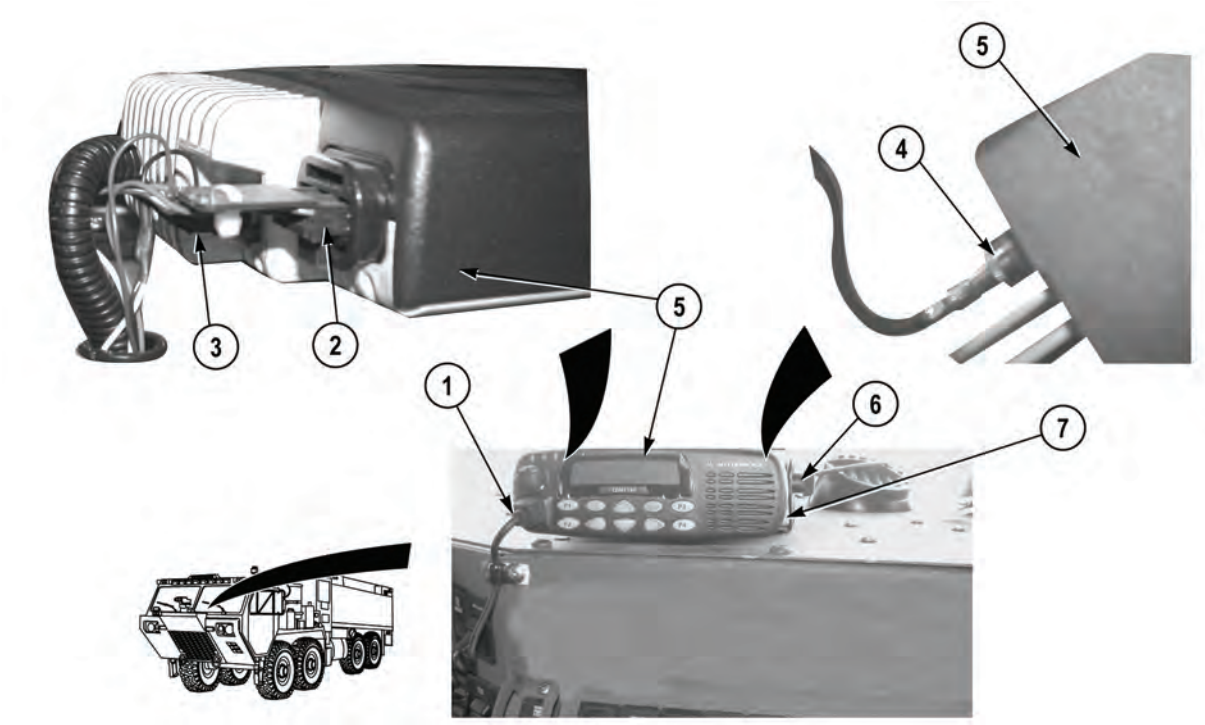
END OF TASK

INSTALLATION

NOTE

Perform Steps (1) and (2) if bracket was removed.

1. Install bracket (7) on control panel (9) with two screws (13), washers (12), and locknuts (11).
2. Install cab instrument panel A (9) on control panel (10) with seven screws (8).



3. Install two-way radio (5) on bracket (7) with two screws (6).
4. Connect four two-way radio connectors (1), (2), (3), and (4) on two-way radio (5).

END OF TASK

FOLLOW-ON MAINTENANCE

Connect batteries (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

WINDSHIELD DELUGE MOTOR REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

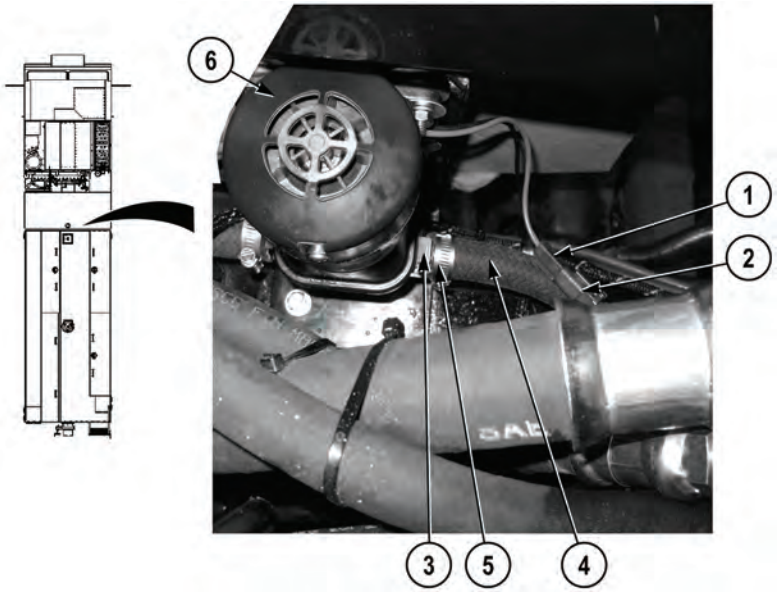
Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)
Preformed Packing (1)
Lockwasher (2)
Lockwasher (4)

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

References
WP 0392, Fig. 94

Equipment Conditions
Hydraulic reservoir removed (WP 0146)

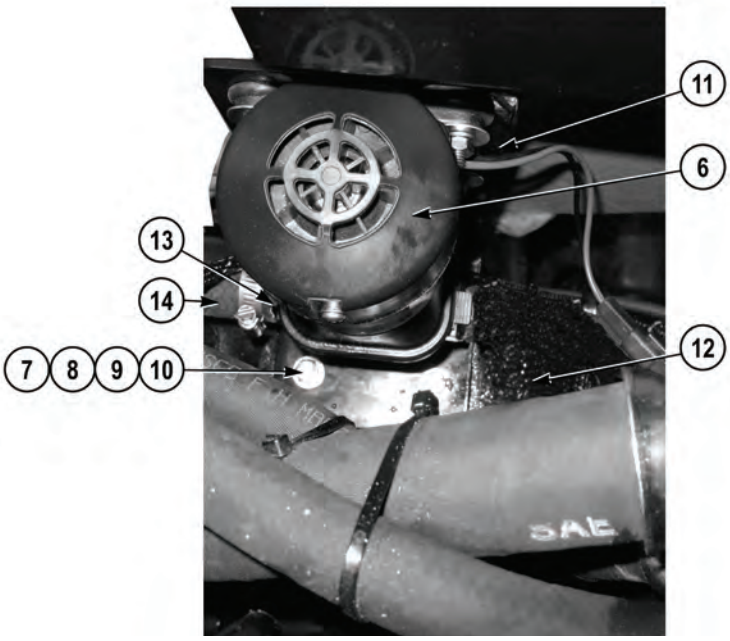
REMOVAL



NOTE

- Tag and mark hoses prior to removal to ensure proper installation.
- Remove cable ties as required.

1. Disconnect windshield deluge motor connector (1) from pump house wire harness connector (2).
2. Lift retainer clip (3), remove hose (4), and preformed packing (5) from windshield deluge motor (6). Discard preformed packing.

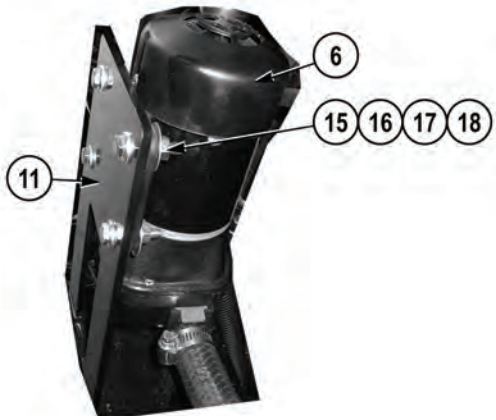


NOTE

Nuts, lockwashers, and washers holding windshield deluge motor support bracket to frame are removed from below with the aid of an assistant.

3. With the aid of an assistant, remove two nuts (7), lockwashers (8), four washers (9), and two screws (10) from windshield deluge motor support bracket (11) and frame rail (12). Discard lockwashers.

4. Lift retainer clip (13), and remove windshield deluge motor (6) from hose (14) and vehicle.



NOTE

Note position of washers prior to removal to ensure proper installation.

5. Remove four nuts (15), lockwashers (16), eight washers (17), four screws (18), and windshield deluge motor (6) from windshield deluge support bracket (11). Discard lockwashers.

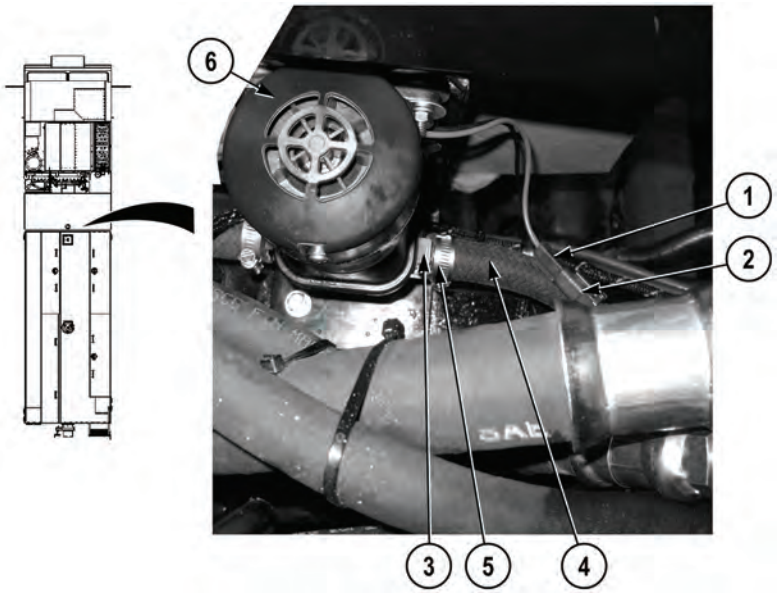
END OF TASK

INSTALLATION

NOTE

- Install washers as noted prior to removal.
- Install cable ties as required.

1. Install windshield deluge motor (6) on windshield deluge motor support bracket (11) with four screws (18), eight washers (17), four lockwashers (16), and nuts (15).
2. Install windshield deluge motor (6) on vehicle and hose (14) and secure with retainer clip (13).
3. With the aid of an assistant, install windshield deluge motor support bracket (11) on frame rail (12) with two screws (10), four washers (9), two lockwashers (8), and nuts (7).



4. Lightly lubricate preformed packing (5) with clean oil, and install preformed packing in hose (4).
5. Install hose (4) on windshield deluge motor (6) and secure with retainer clip (3).
6. Connect windshield deluge motor connector (1) on pump house wire harness connector (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Install hydraulic reservoir (WP 0146)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

BUMPER TURRET WIRE HARNESS REPLACEMENT

INITIAL SETUP:

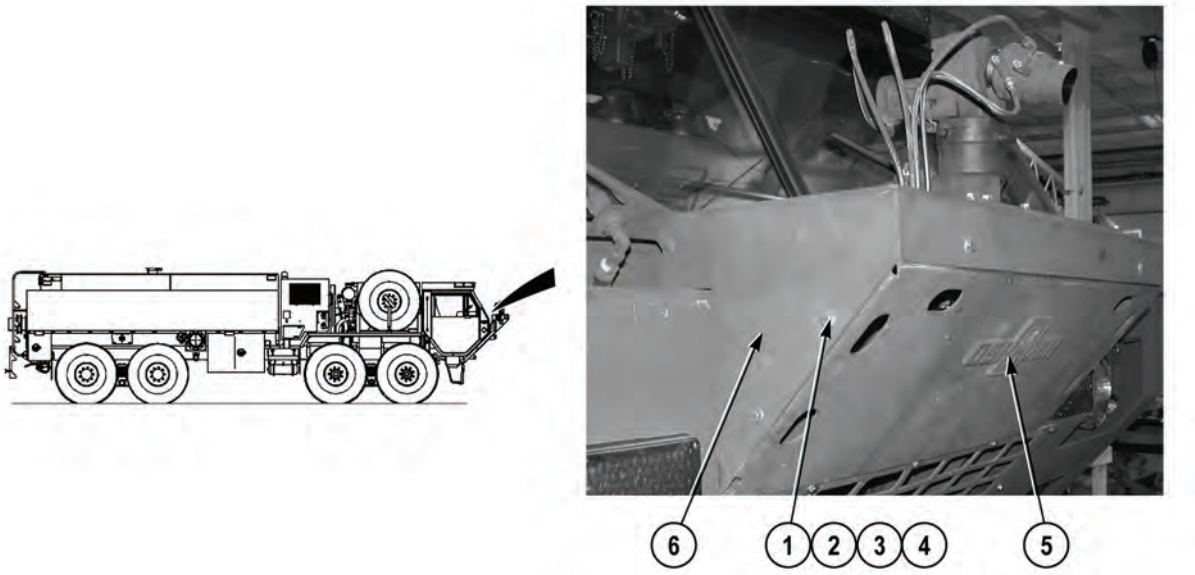
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Ties, Cable, Plastic (WP 0401, Item 25)
Lockwasher (6)

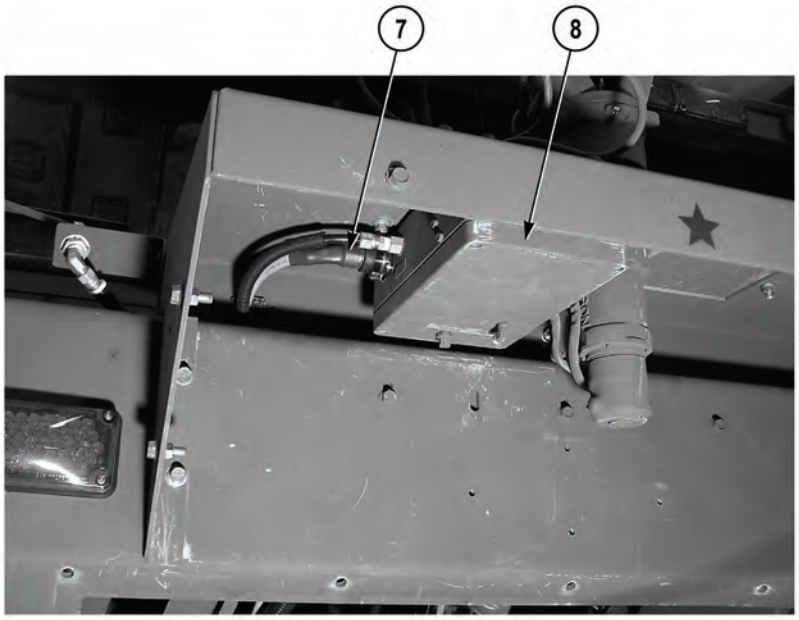
References
WP 0392, Fig. 92

Equipment Conditions
Cab instrument panel E removed (WP 0203)
Skid plate grille removed (WP 0350)

REMOVAL



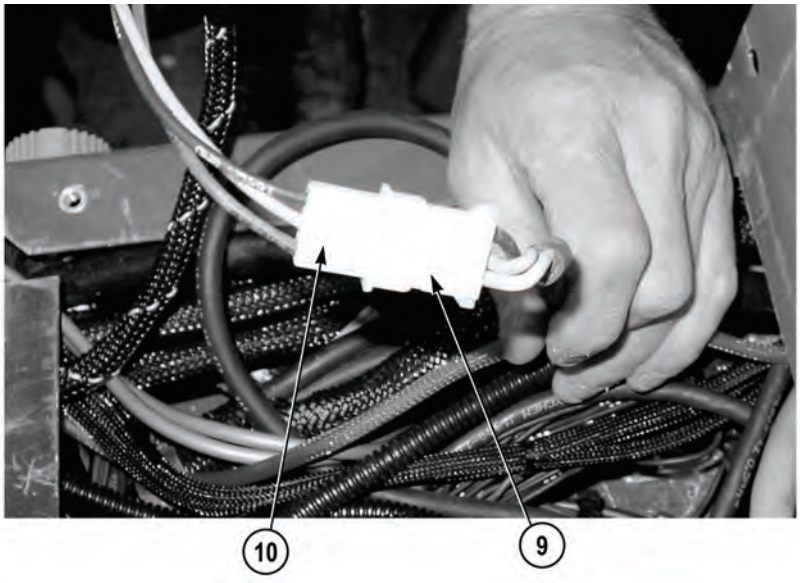
1. Remove six nuts (1), lockwashers (2), 12 washers (3), six screws (4), and cover (5) from bumper turret mount (6). Discard lockwashers.



NOTE

- Tag and mark wires prior to removal to ensure proper installation.
- Note routing of bumper turret wire harness prior to removal to ensure proper installation.
- Note position and remove cable ties, split loom, and cushion clips as required.

2. Disconnect bumper turret wire harness connector (7) from bumper turret junction box (8).



3. Disconnect bumper turret connector (9) from cab power distribution wire harness connector (10).



NOTE

Bumper turret wire harness must be routed into cab for removal from vehicle.

4. Remove bumper turret wire harness (11) from vehicle.

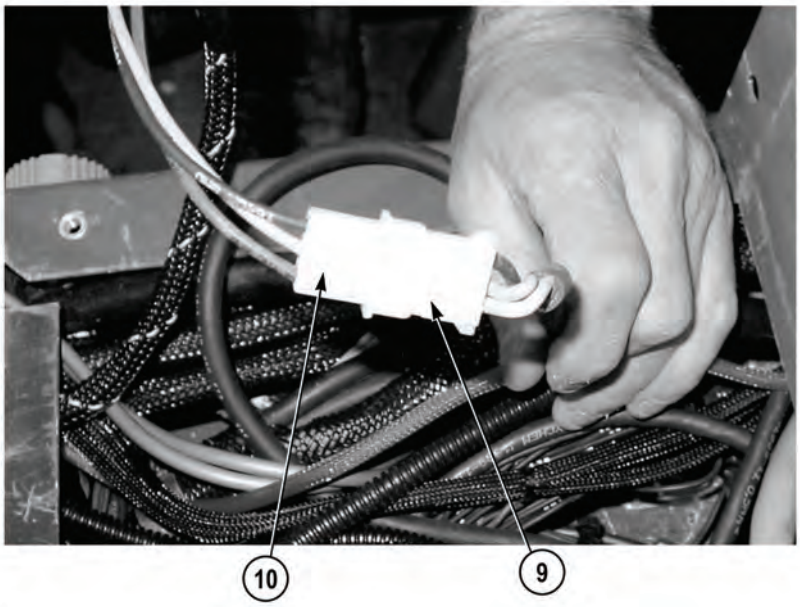
END OF TASK

INSTALLATION

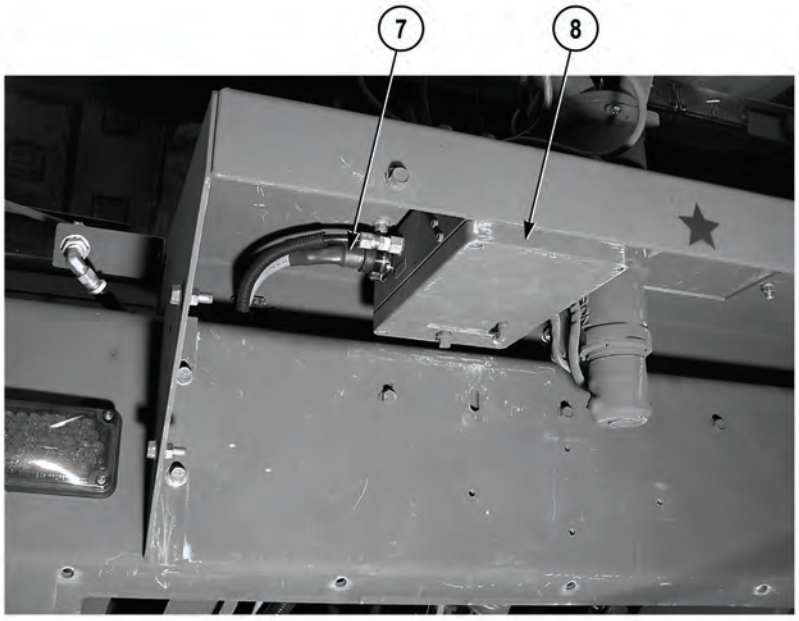
NOTE

- Route bumper turret wire harness on vehicle as noted prior to removal.
- Install cable ties, split loom, and cushion clips as required.

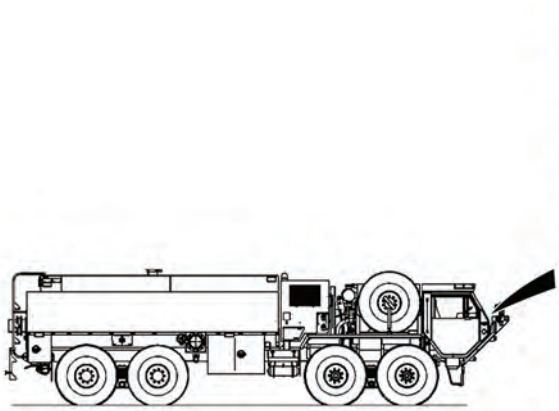
1. Install bumper turret wire harness (11) on vehicle.

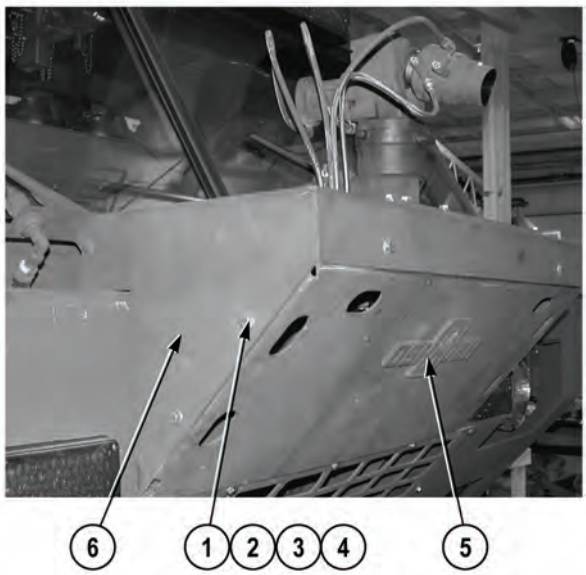


2. Connect bumper turret control connector (9) on cab power distribution wire harness connector (10).



3. Connect bumper turret wire harness connector (7) on bumper turret junction box (8).





4. Install cover (5) on bumper turret mount (6) with six screws (4), 12 washers (3), six lockwashers (2), and nuts (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install skid plate grille (WP 0350)
2. Install cab instrument panel E (WP 0203)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

CAB FOAM TANK LEVEL INDICATOR WIRE HARNESS REPLACEMENT

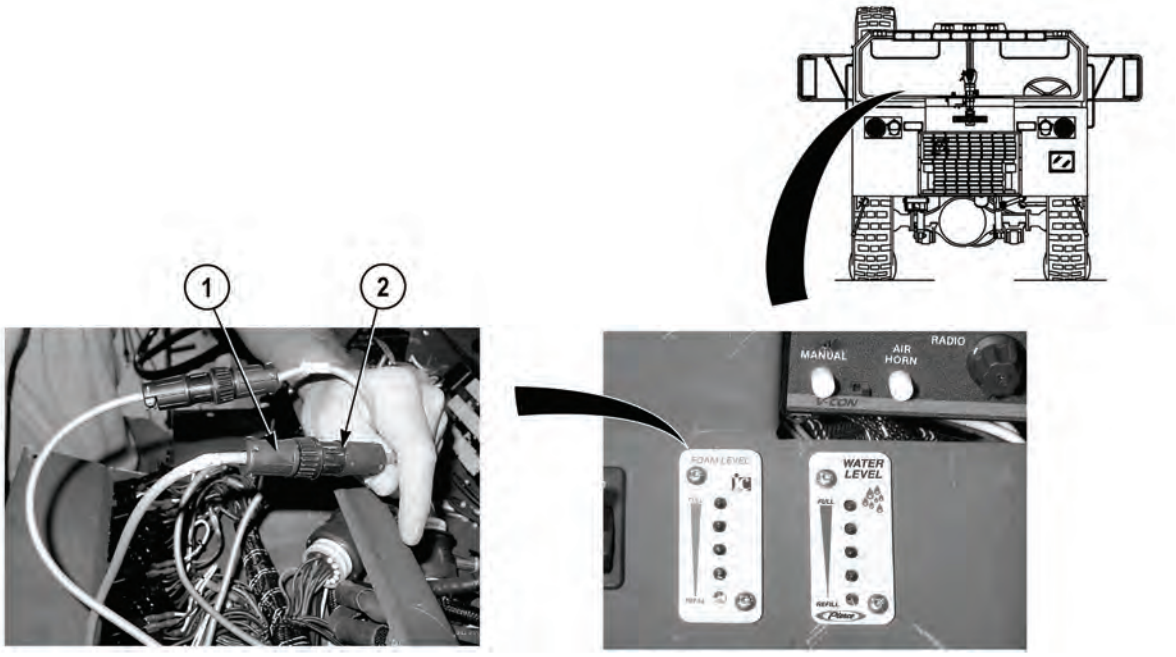
INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)

Equipment Conditions
Cab instrument panel B opened (WP 0203)
Pump operator's panel opened (WP 0205)

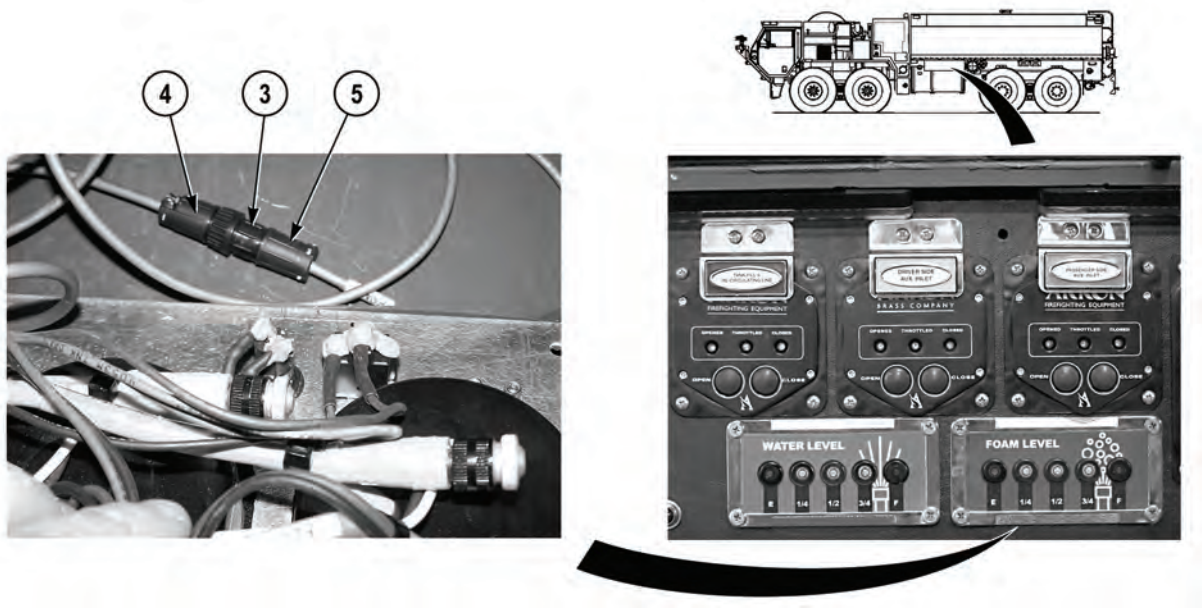
REMOVAL



NOTE

- Note routing of cab foam tank level indicator wire harness prior to removal to ensure proper installation.
- Cab foam tank level indicator wire harness is routed along driver side chassis, through pump house panel N, and pump operator's panel assembly.
- Note position and remove split looms, cushion clips, and cable ties as required.
- Tag and mark connectors prior to removal to ensure proper installation.

1. Disconnect cab foam tank level indicator wire harness connector (1) from cab foam tank level indicator gauge connector (2).



2. Disconnect cab foam tank level indicator wire harness connector (3) from cab foam tank level indicator gauge connector (4).
3. Remove cab foam tank level indicator wire harness connector (5) from vehicle.

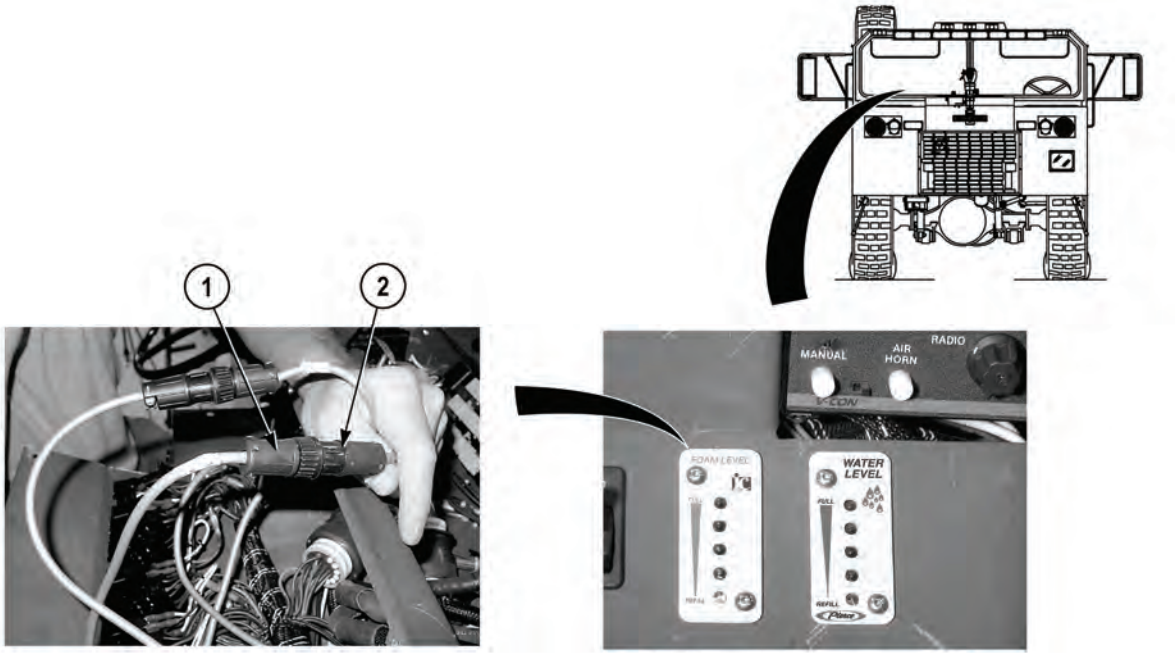
END OF TASK

INSTALLATION

NOTE

- Route cab foam tank level indicator wire harness as noted.
- Install cable ties, cushion clips, and split looms as noted.

1. Install cab foam tank level indicator wire harness connector (5) on vehicle.
2. Connect cab foam tank level indicator gauge connector (4) to cab foam tank level indicator wire harness connector (3).



3. Connect cab foam tank level indicator gauge connector (2) to cab foam tank level indicator wire harness connector (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Close pump operator's panel (WP 0205)
2. Close cab instrument panel B (WP 0203)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

CAB INSTRUMENT PANEL WIRE HARNESS REPLACEMENT

INITIAL SETUP:

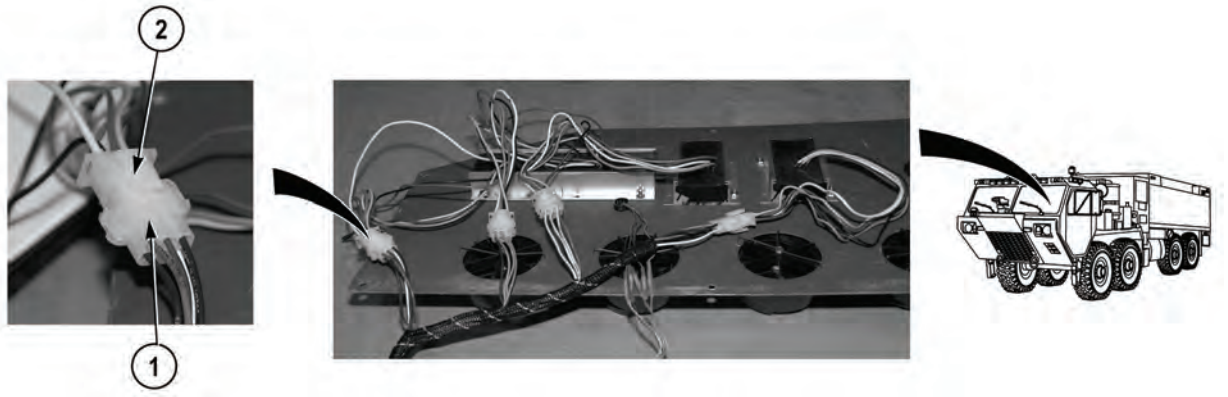
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)
Lockwasher (2)

References
TM 9-2320-315-14&P
WP 0392, Fig. 57

Equipment Conditions
Cab instrument panel assembly removed (WP 0202)
Blackout relays removed (WP 0238)

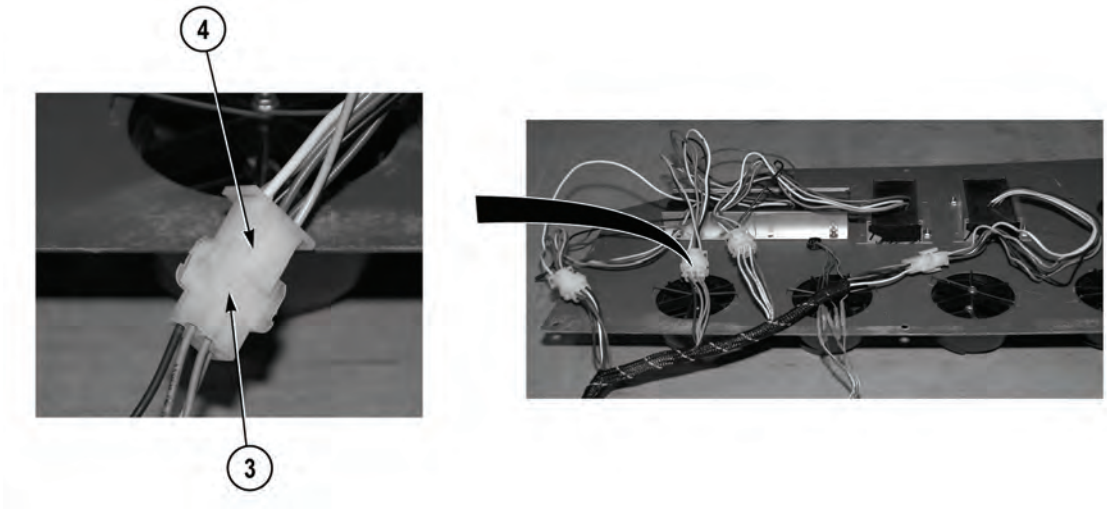
REMOVAL



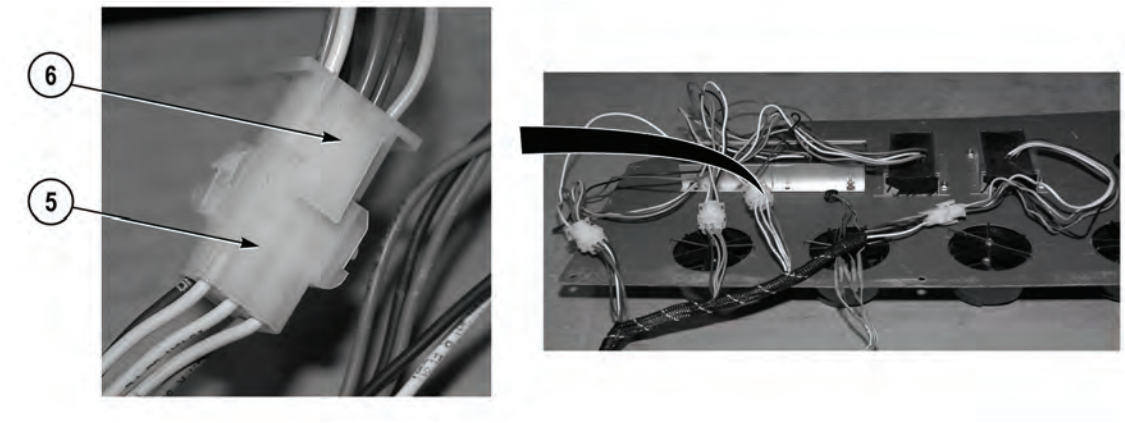
NOTE

- Tag and mark wires prior to removal to ensure proper installation.
- Note routing of cab power distribution wire harness to ensure correct installation.
- Note position and remove cable ties and cushion clips as required.
- Refer to schematic for wire locations.

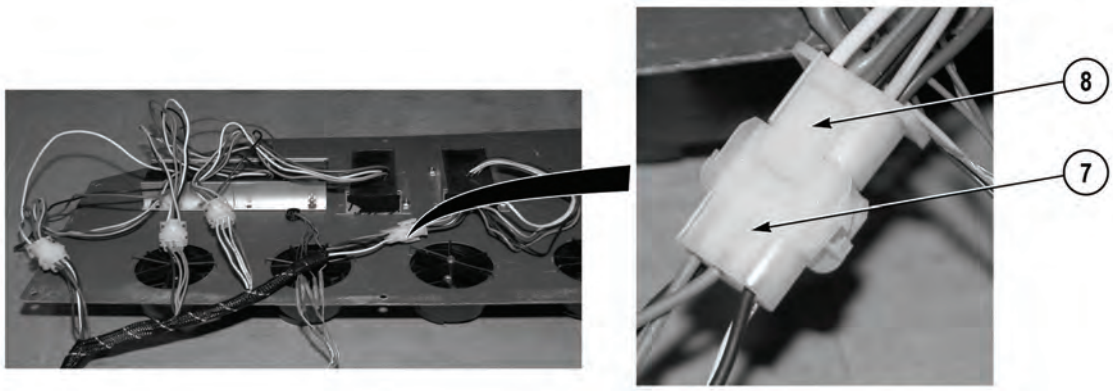
1. Disconnect cab instrument panel wire harness connector (1) from upper rear warning flasher unit (2).



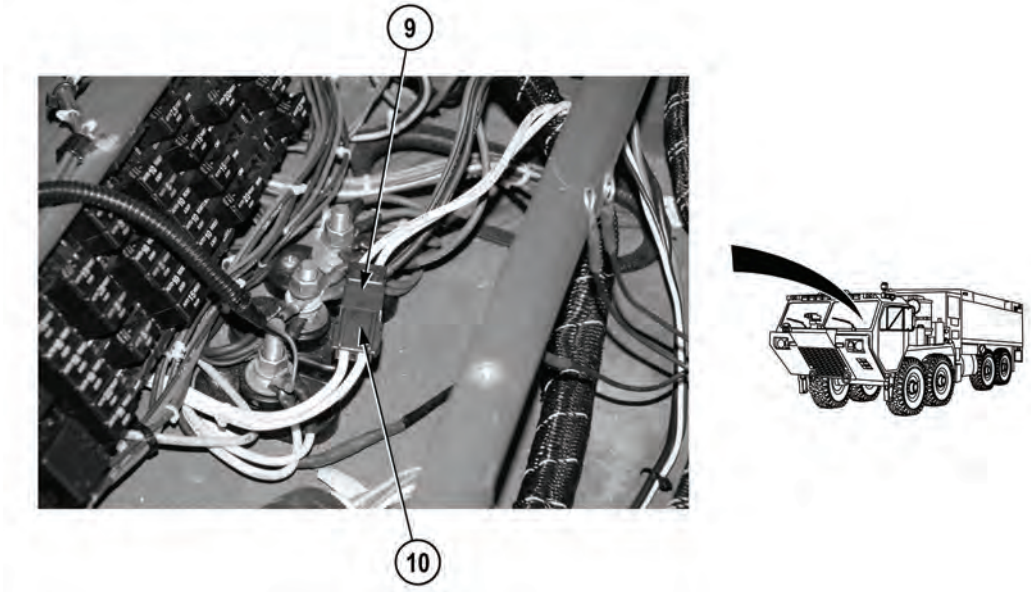
2. Disconnect cab instrument panel wire harness connector (3) from check for open compartment door when light is on flasher unit (4).



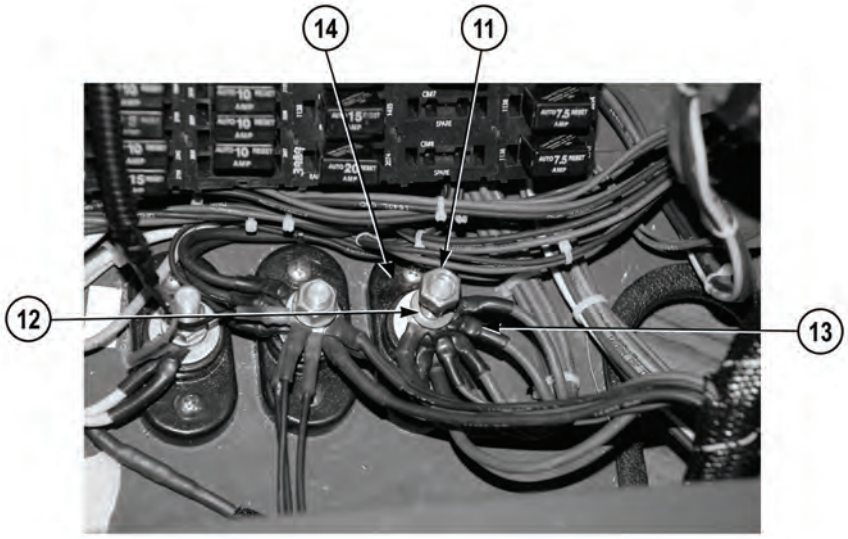
3. Disconnect cab instrument panel wire harness connector (5) from side warning flasher unit (6).



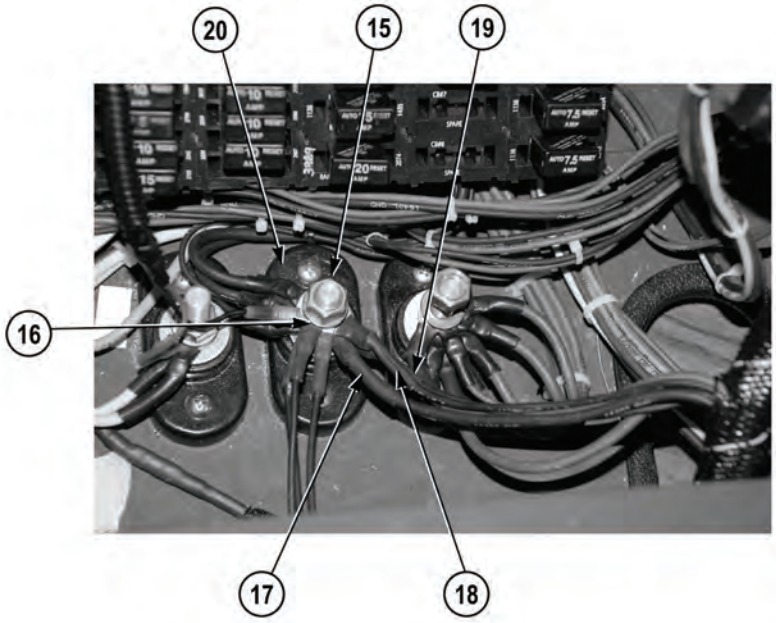
4. Disconnect cab instrument panel wire harness connector (7) from front and rear lower warning flasher unit (8).



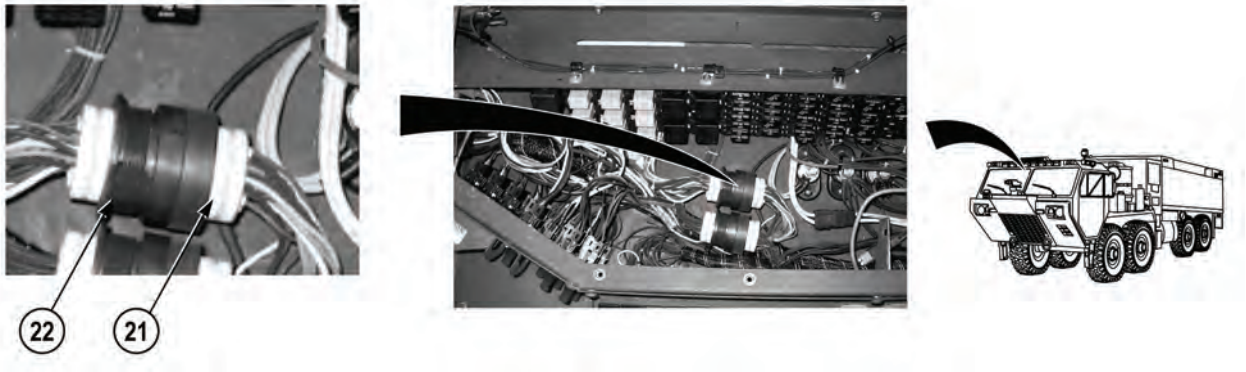
5. Disconnect cab instrument panel wire harness connector MP1 (9) from cab power distribution wire harness connector MP1 (10).



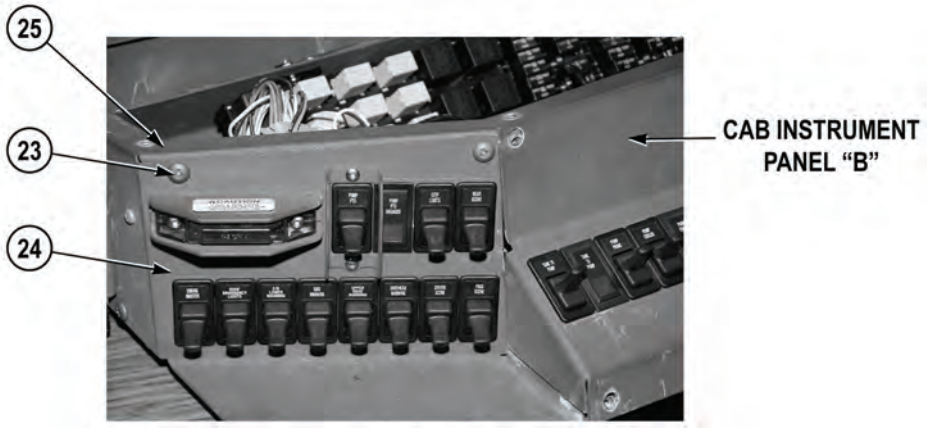
6. Remove nut (11), lockwasher (12), and two wires 1138 (13) from cab 24 VDC terminal block (14). Discard lockwasher.



7. Remove nut (15), lockwasher (16), wire 1640 (17), wire 1027 (18), and wire 2640 (19) from cab ground terminal block (20). Discard lockwasher.



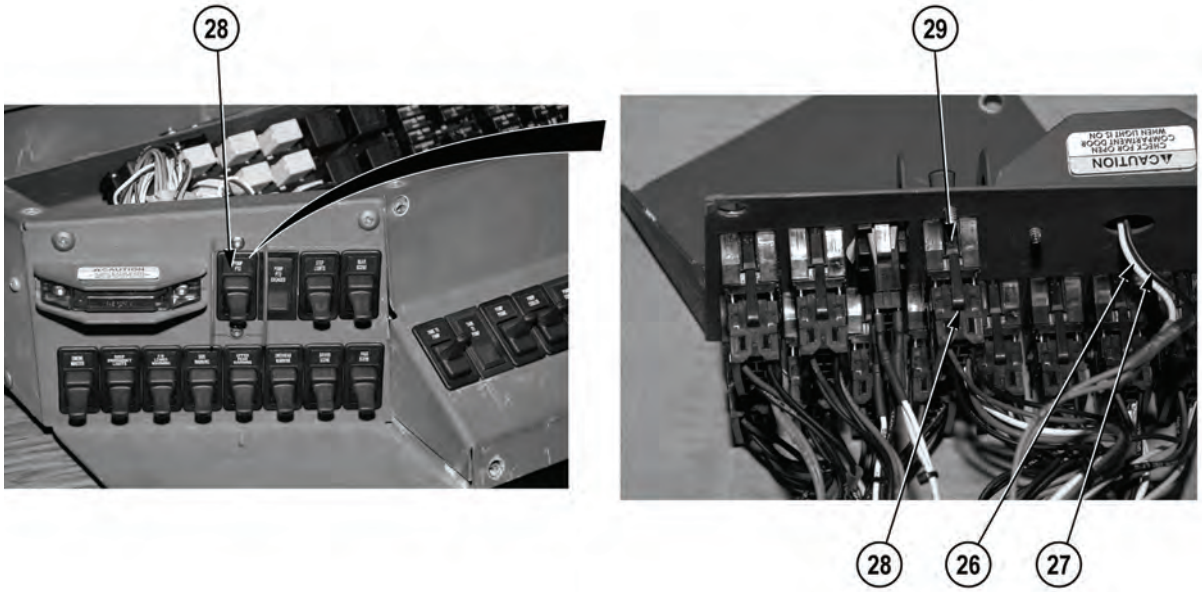
8. Disconnect cab instrument panel wire harness connector (21) from cab power distribution wire harness connector (22).



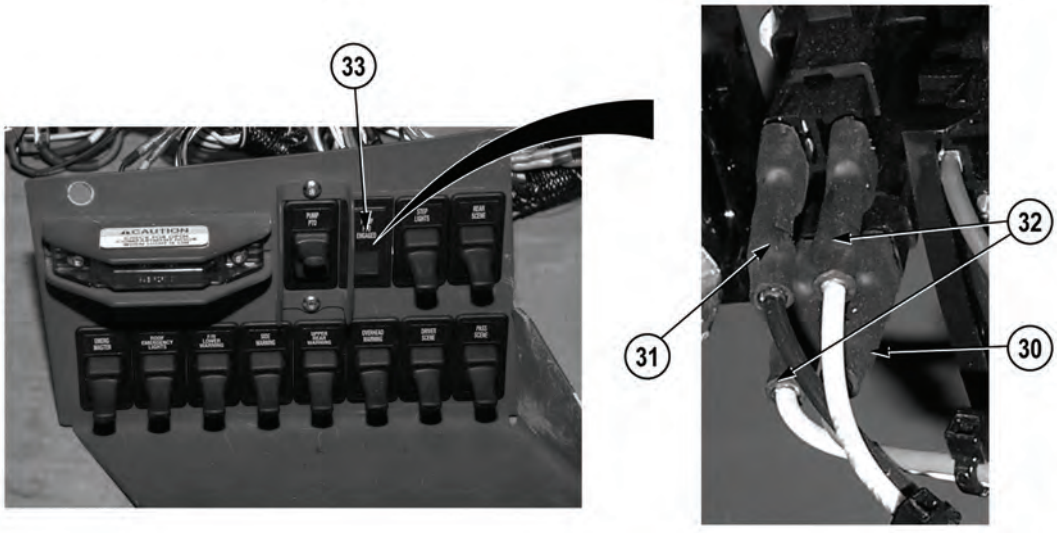
NOTE

Cab instrument panels B and C interlock. Lifting cab instrument panel B away from cab instrument panel assembly slightly, allows cab instrument panel C to move freely.

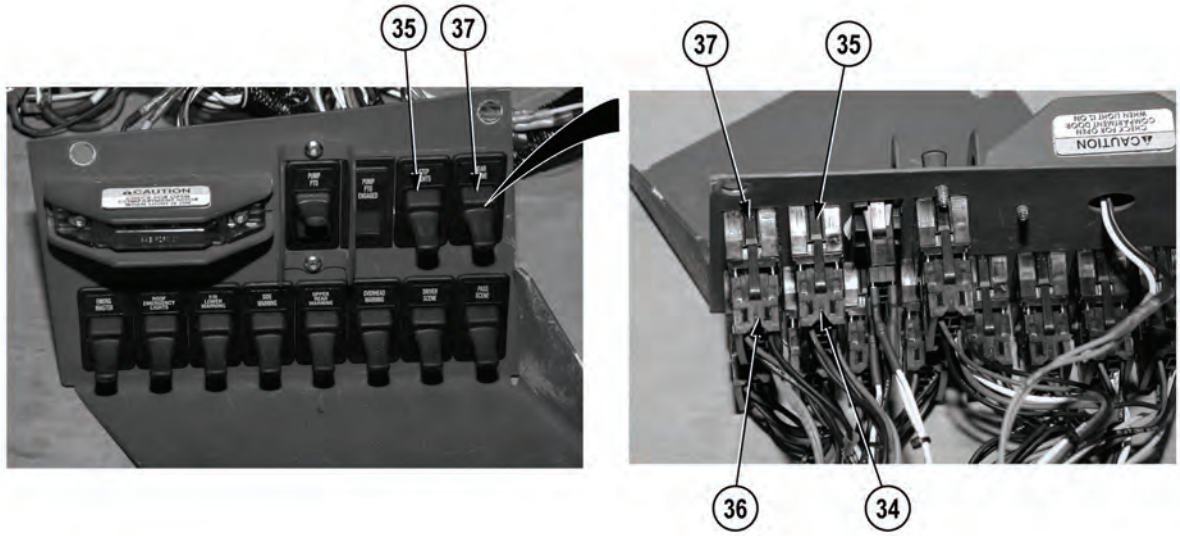
9. Remove two screws (23) and cab instrument panel C (24) from cab instrument panel assembly (25).



10. Cut wire 1187 (26) and wire 1592 (27) (TM 9-2320-315-14&P).
11. Disconnect cab instrument panel wire harness connector (28) from PUMP PTO switch (29).



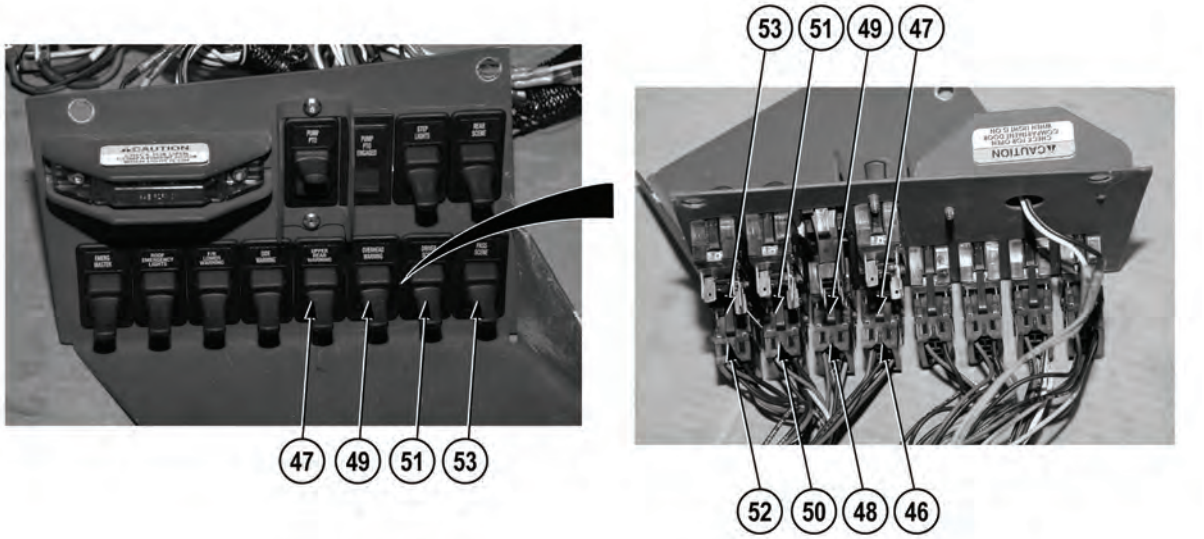
12. Disconnect wire 1677 (30), wire 1640 (31) and jumperwire 2768 (32) from PUMP PTO ENGAGED indicator light (33).



13. Disconnect cab instrument panel wire harness connector (34) from STEP LIGHTS switch (35).
14. Disconnect cab instrument panel wire harness connector (36) from REAR SCENE switch (37).



15. Disconnect cab instrument panel wire harness connector (38) from EMERG MASTER switch (39).
16. Disconnect cab instrument panel wire harness connector (40) from ROOF EMERGENCY LIGHTS switch (41).
17. Disconnect cab instrument panel wire harness connector (42) from F/R LOWER WARNING switch (43).
18. Disconnect cab instrument panel wire harness connector (44) from SIDE WARNING switch (45).



19. Disconnect cab instrument panel wire harness connector (46) from UPPER REAR WARNING switch (47).
20. Disconnect cab instrument panel wire harness connector (48) from OVERHEAD WARNING switch (49).
21. Disconnect cab instrument panel wire harness connector (50) from DRIVER SCENE switch (51).
22. Disconnect cab instrument panel wire harness connector (52) from PASS SCENE switch (53).

END OF TASK

INSTALLATION

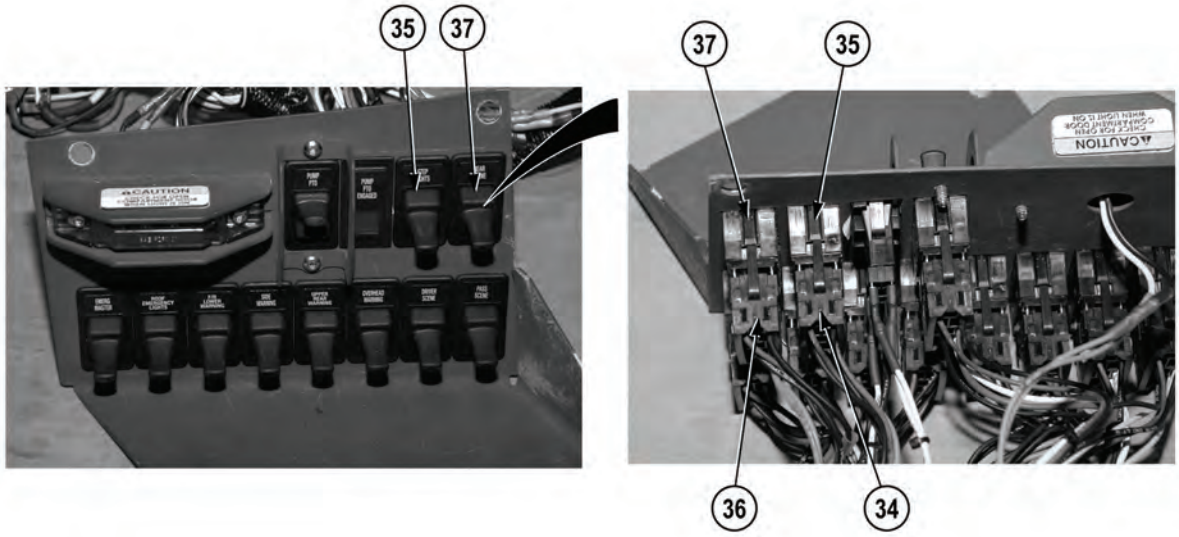
NOTE

Install cable ties and cushion clips as required.

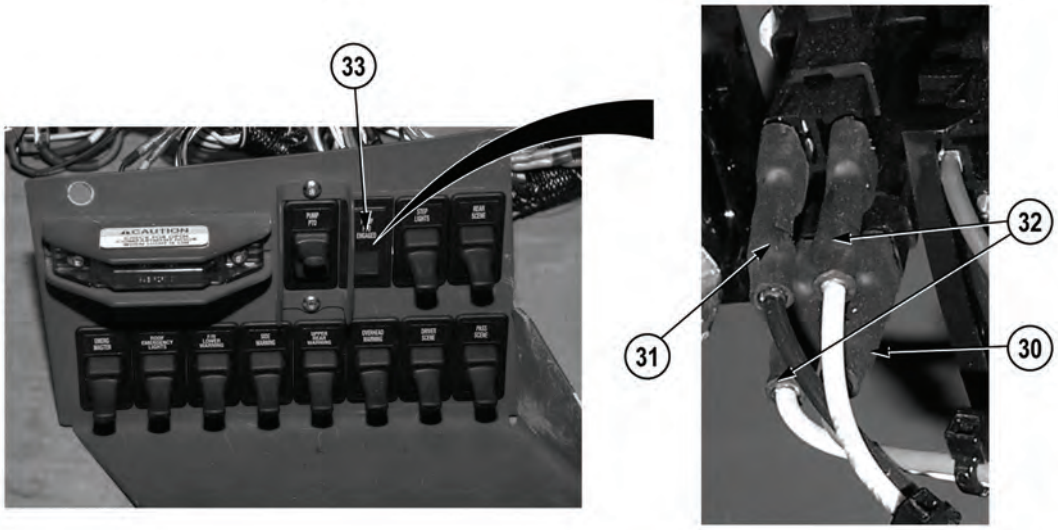
1. Connect cab instrument panel wire harness connector (52) on PASS SCENE switch (53).
2. Connect cab instrument panel wire harness connector (50) on DRIVER SCENE switch (51).
3. Connect cab instrument panel wire harness connector (48) on OVERHEAD WARNING switch (49).
4. Connect cab instrument panel wire harness connector (46) on UPPER REAR WARNING switch (47).



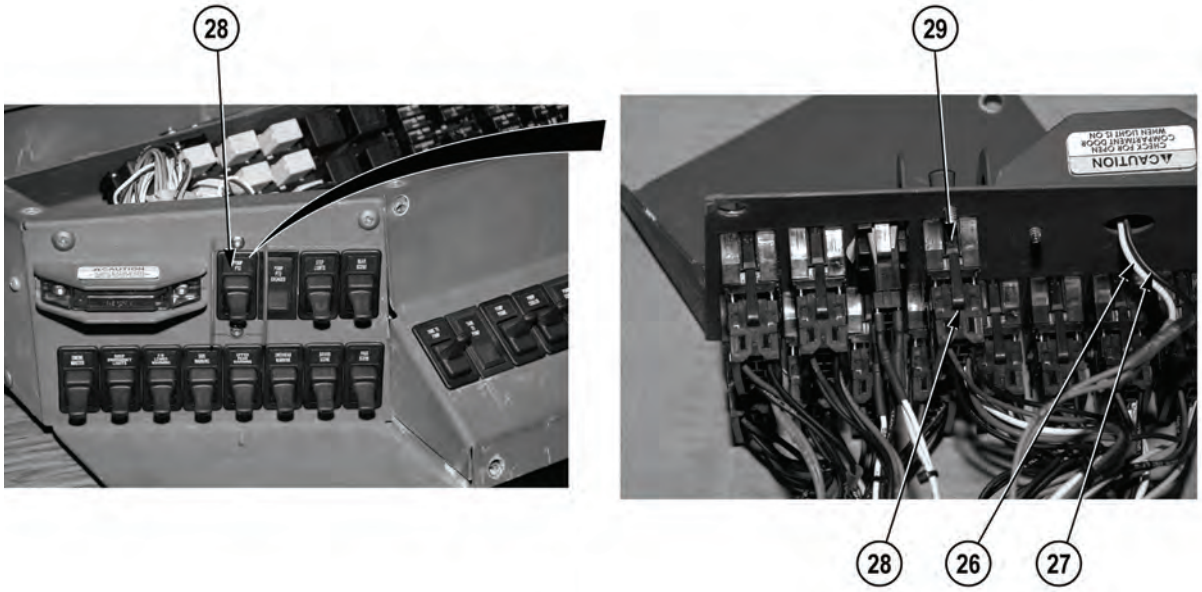
5. Connect cab instrument panel wire harness connector (44) on SIDE WARNING switch (45).
6. Connect cab instrument panel wire harness connector (42) on F/R LOWER WARNING switch (43).
7. Connect cab instrument panel wire harness connector (40) on ROOF EMERGENCY LIGHTS switch (41).
8. Connect cab instrument panel wire harness connector (38) on EMERG MASTER switch (39).



9. Connect cab instrument panel wire harness connector (36) on REAR SCENE switch (37).
10. Connect cab instrument panel wire harness connector (34) on STEP LIGHTS switch (35).



11. Connect wire 1677 (30), wire 1640 (31) and jumperwire 2768 (32) on PUMP PTO ENGAGED indicator light (33).



12. Connect cab instrument panel wire harness connector (28) on PUMP PTO switch (29).

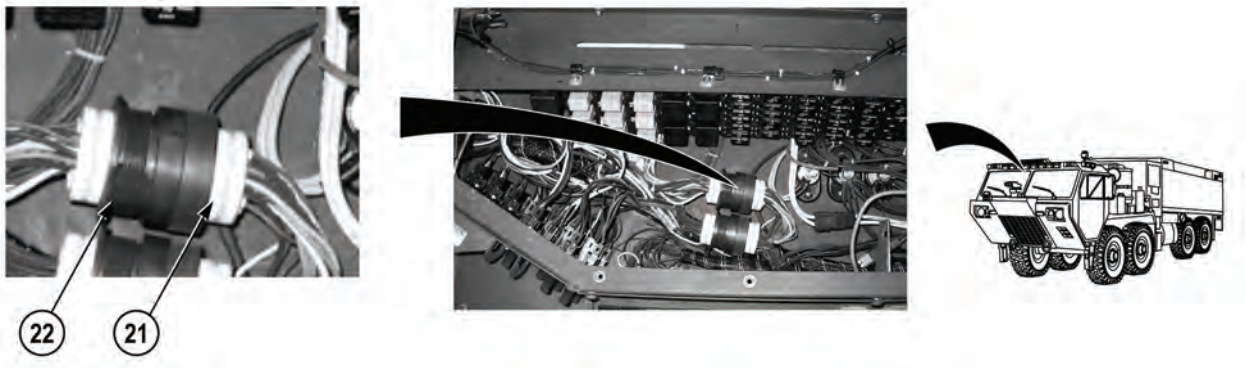
13. Repair wire 1187 (26) and wire 1592 (27) (TM 9-2320-315-14&P).



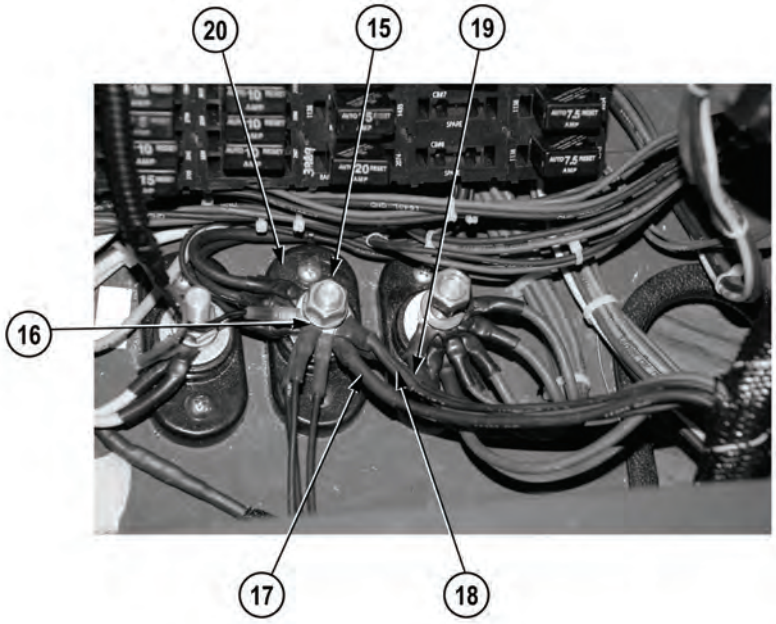
NOTE

Cab instrument panels B and C interlock.

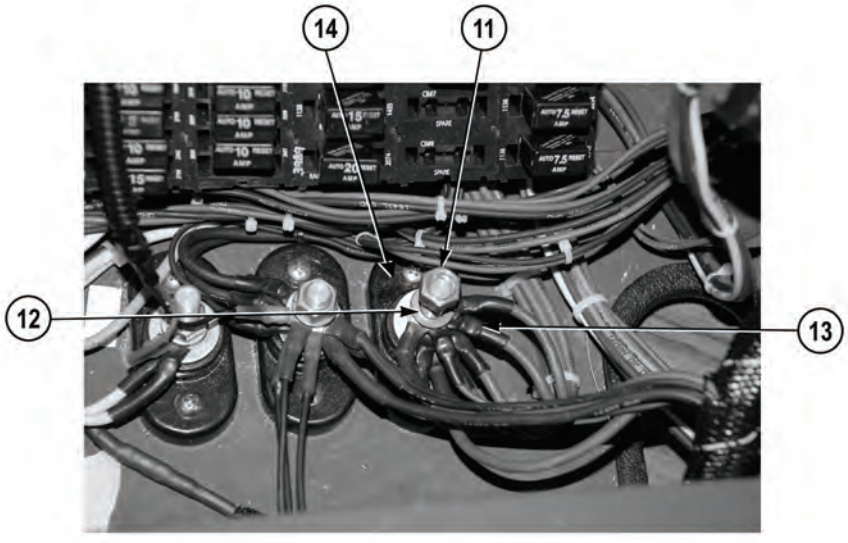
14. Install cab instrument panel C (24) on cab instrument panel assembly (25) with two screws (23).



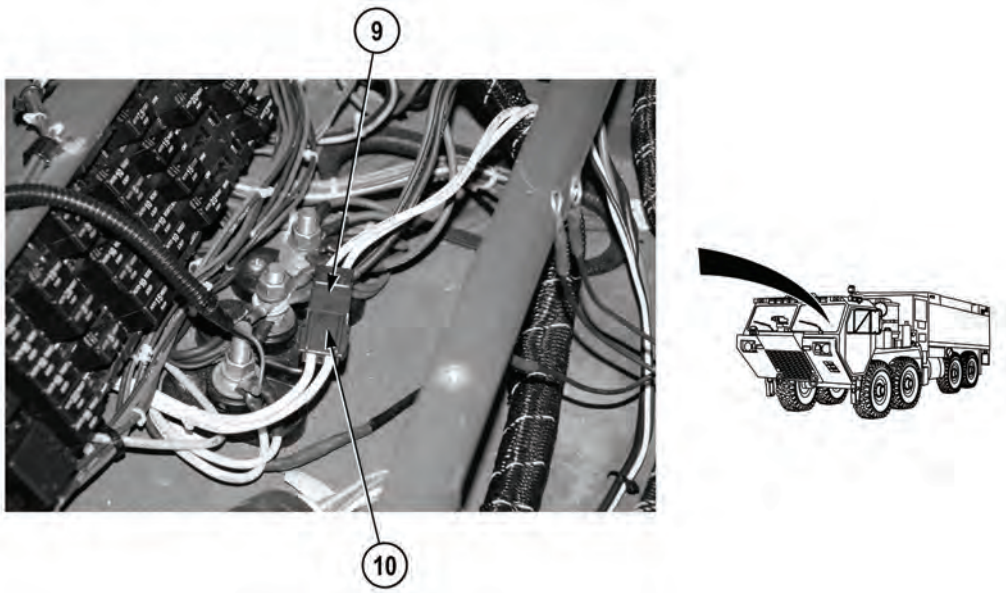
15. Connect cab instrument panel wire harness connector (21) on cab power distribution wire harness connector (22).



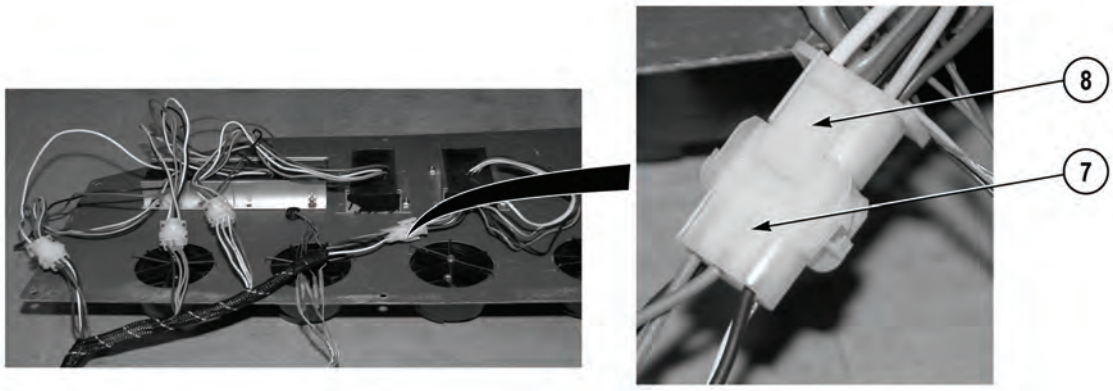
16. Install wire 1640 (17), wire 1027 (18), and wire 2640 (19) on cab ground terminal block (20) with lockwasher (16) and nut (15).



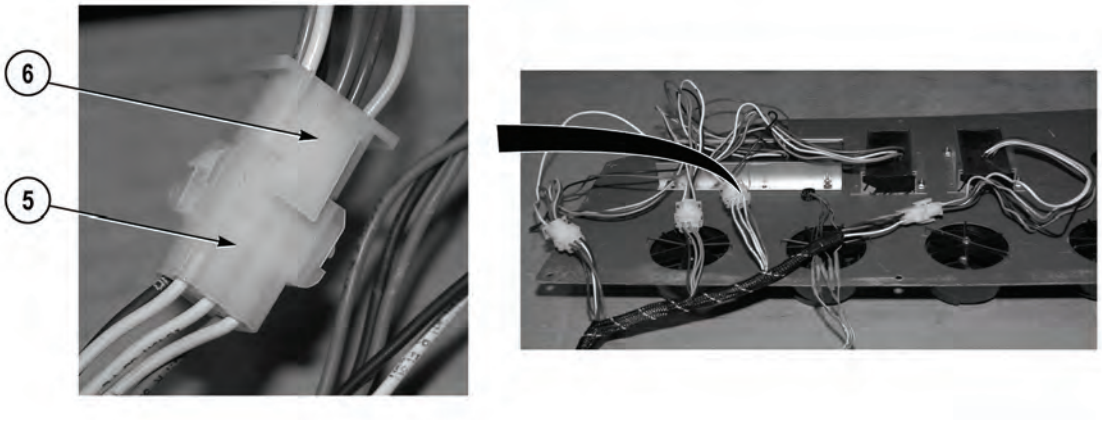
17. Install two wires 1138 (13) on cab 24 VDC terminal block (14) with lockwasher (12) and nut (11).



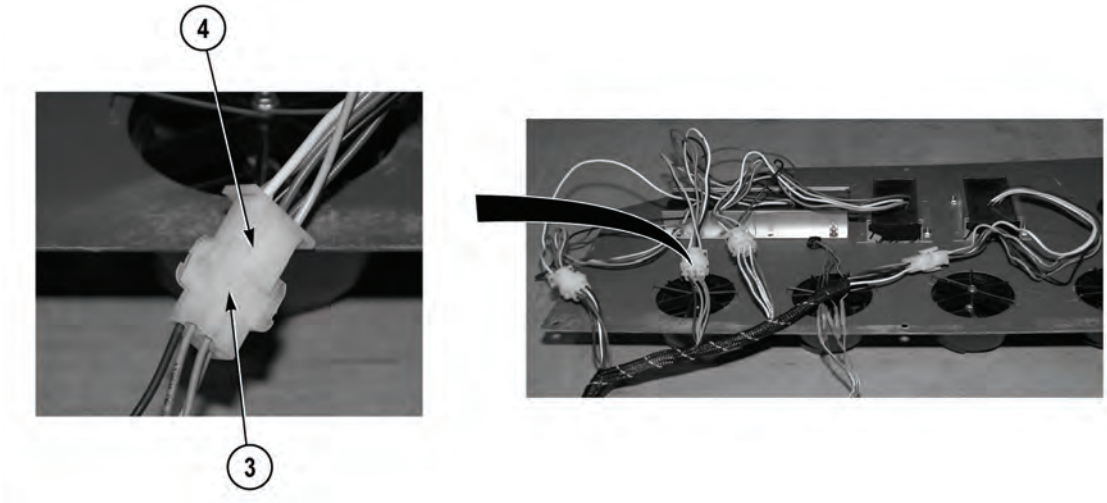
18. Connect cab instrument panel wire harness connector MP1 (9) on cab power distribution wire harness connector MP1 (10).



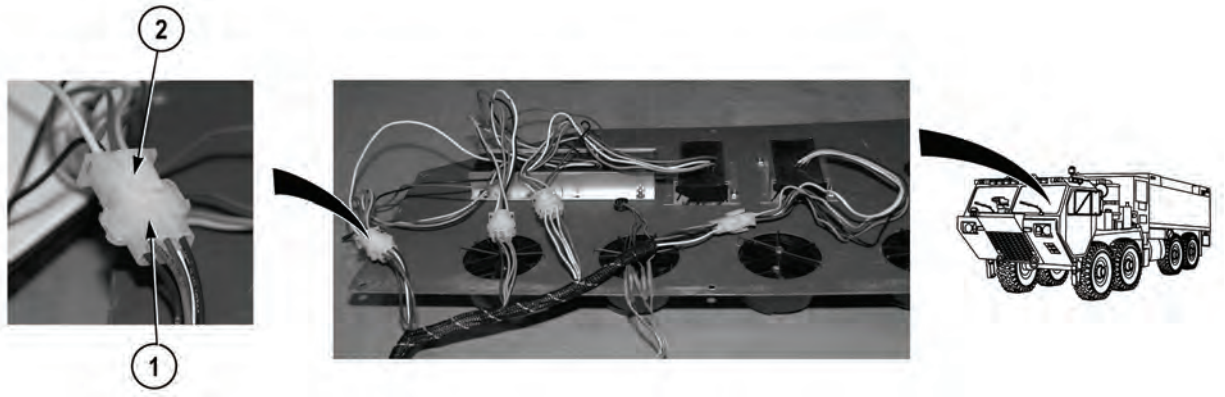
19. Connect cab instrument panel wire harness connector (7) on front and rear lower warning flasher unit (8).



20. Connect cab instrument panel wire harness connector (5) on side warning flasher unit (6).



21. Connect cab instrument panel wire harness connector (3) on check for open compartment door when light is on flasher unit (4).



22. Connect cab instrument panel wire harness connector (1) on upper rear warning flasher unit (2).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install blackout relays (WP 0238)
2. Install cab instrument panel assembly (WP 0202)

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

CAB POWER DISTRIBUTION WIRE HARNESS AND BLOCK REPLACEMENT

INITIAL SETUP:

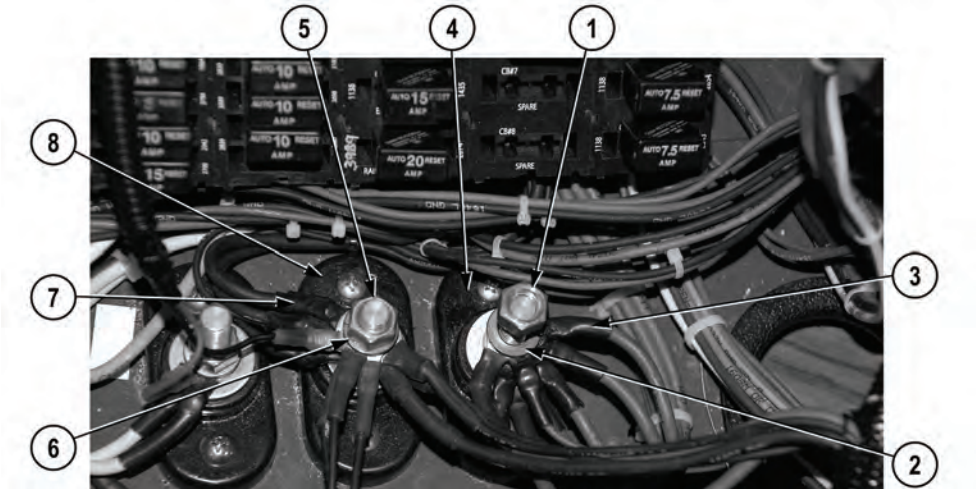
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)
Lockwasher (1)
Lockwasher (1)
Lockwasher (1)
Locknut (3)

References
TM 9-2320-315-14&P
WP 0392, Fig. 50

Equipment Conditions
Cab instrument panel assembly removed (WP 0202)
Cab power distribution block circuit breakers removed (WP 0240)
Cab power distribution block diode removed (WP 0241)
Cab power distribution block relays removed (WP 0242)

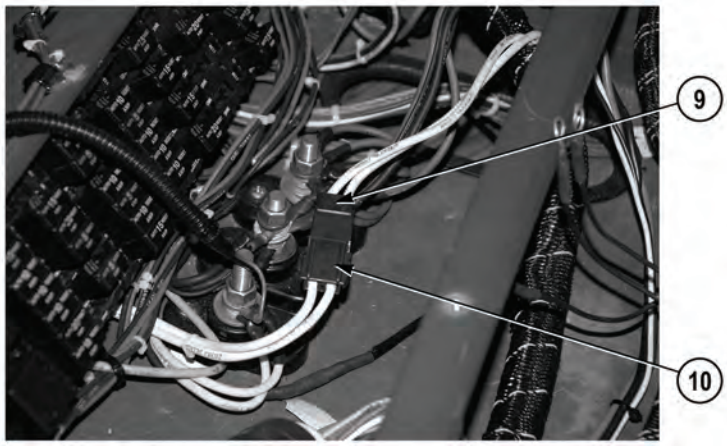
REMOVAL



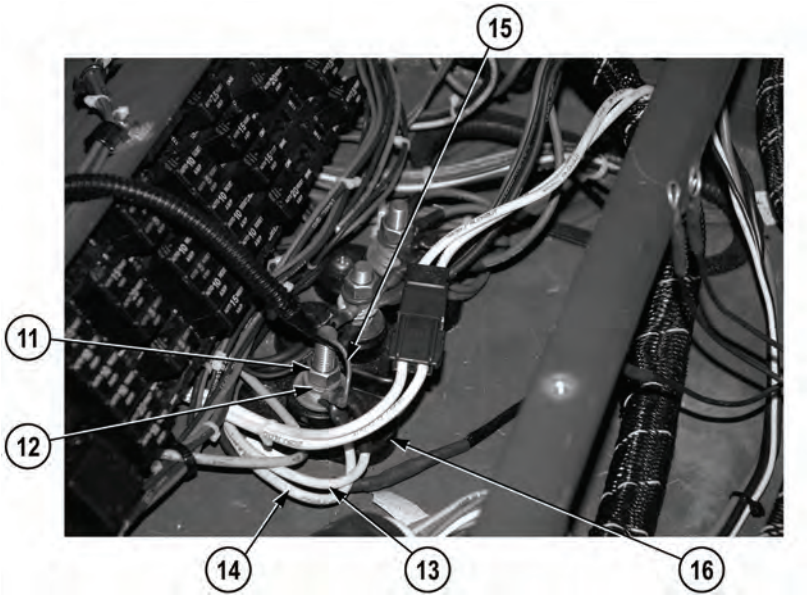
NOTE

- Tag and mark wires prior to removal to ensure proper installation.
- Note routing of cab power distribution wire harness prior to removal to ensure proper installation.
- Note position and remove cable ties, split loom, and cushion clips as required.

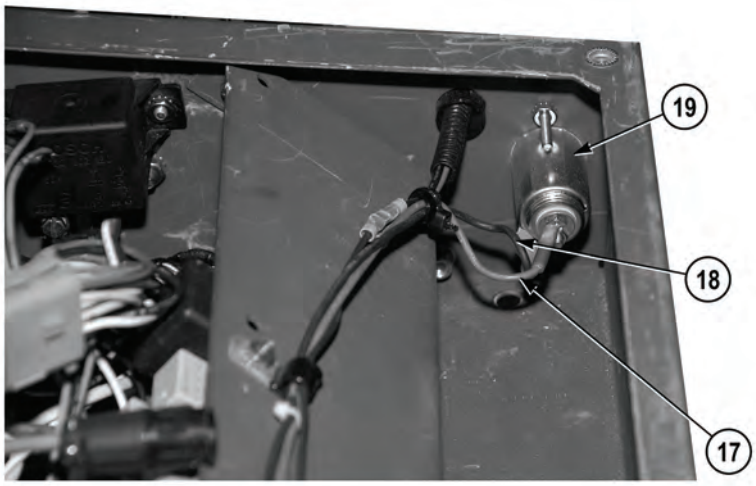
1. Remove nut (1), lockwasher (2), and seven wires 1138 (3) from cab 24 VDC terminal block (4). Discard lockwasher.
2. Remove nut (5), lockwasher (6), and five wires 1640 (7) from cab ground terminal block (8). Discard lockwasher.



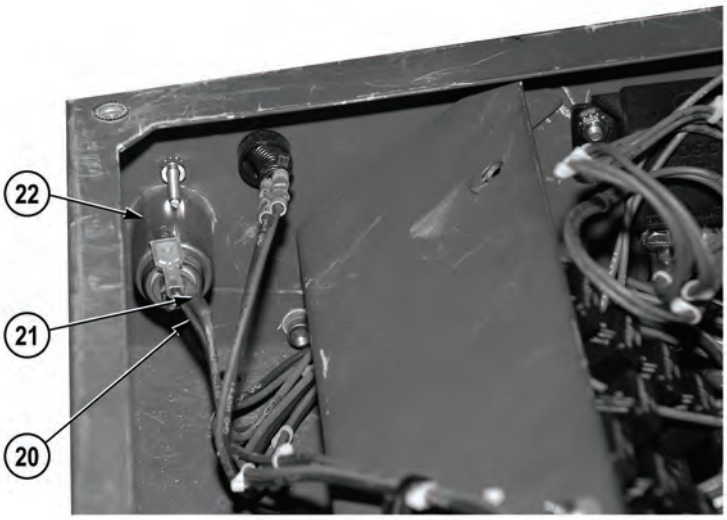
3. Disconnect cab instrument panel wire harness connector MP1 (9) from cab power distribution wire harness connector MP1 (10).



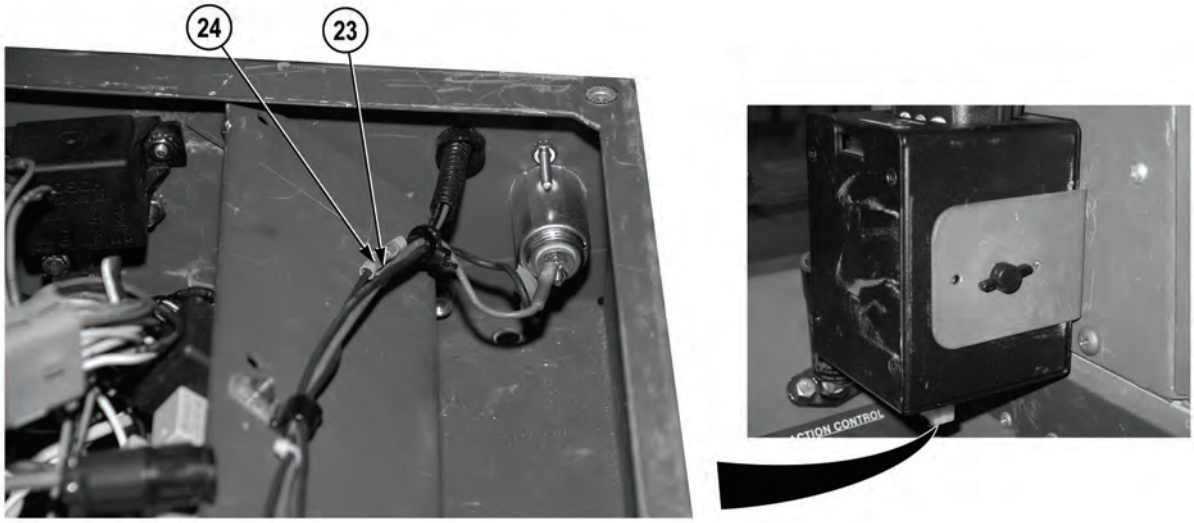
4. Remove nut (11), lockwasher (12), wire 3989 (13), wire 3990 (14), and wire 2138 (15), from cab 12 VDC terminal block (16). Discard lockwasher.



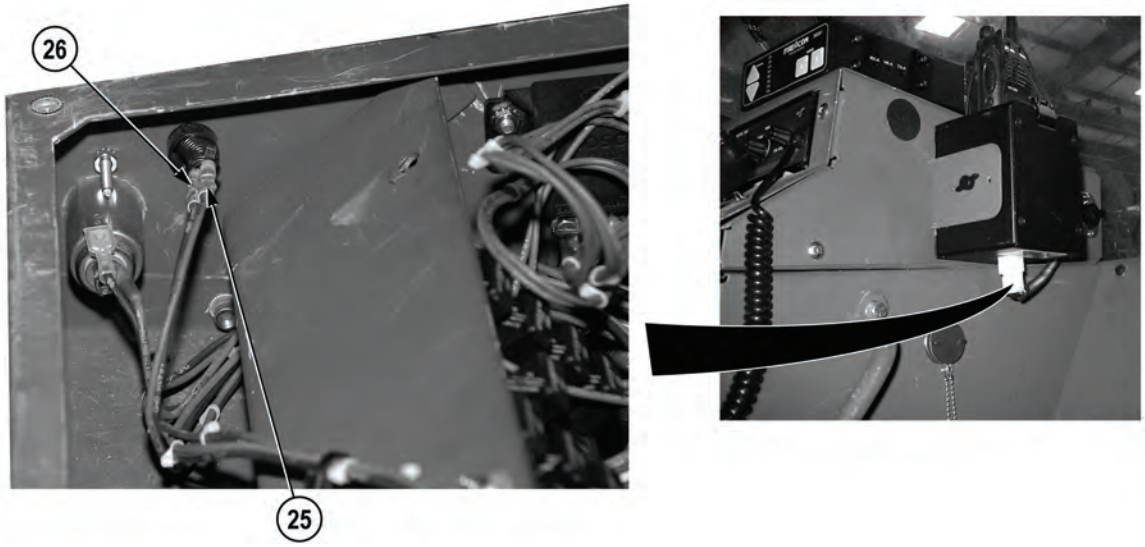
5. Disconnect wire 2074 (17) and wire 1640 (18) from driver side 12 VDC auxiliary outlet (19).



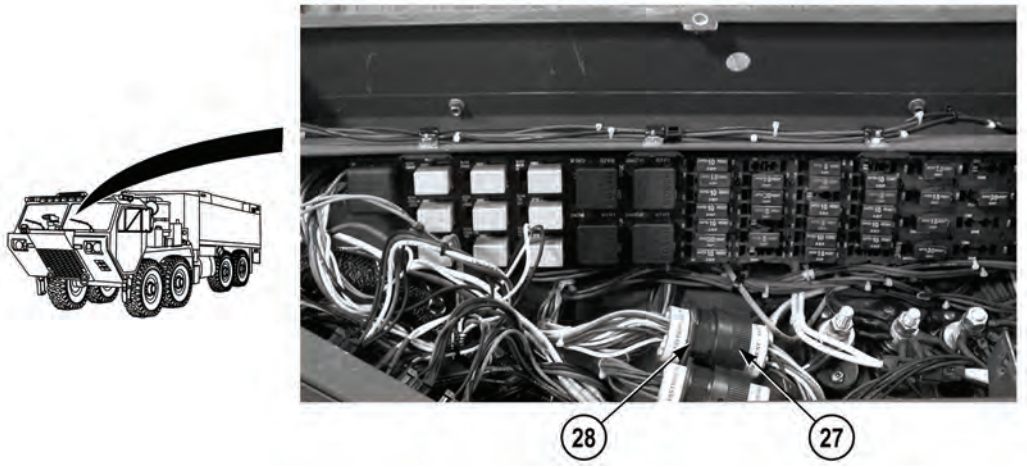
6. Disconnect wire 2074 (20) and wire 1640 (21) from passenger side 12 VDC auxiliary outlet (22).



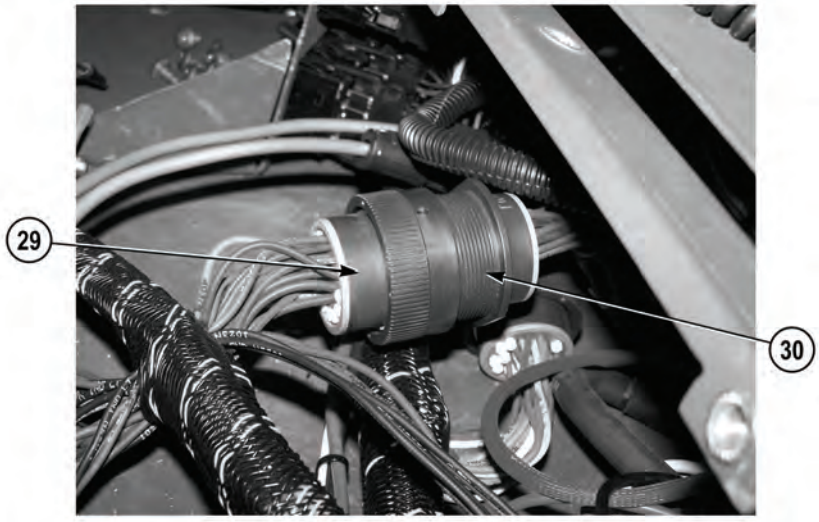
7. Cut wire 2074 (23) and wire 1640 (24) (TM 9-2320-315-14&P).



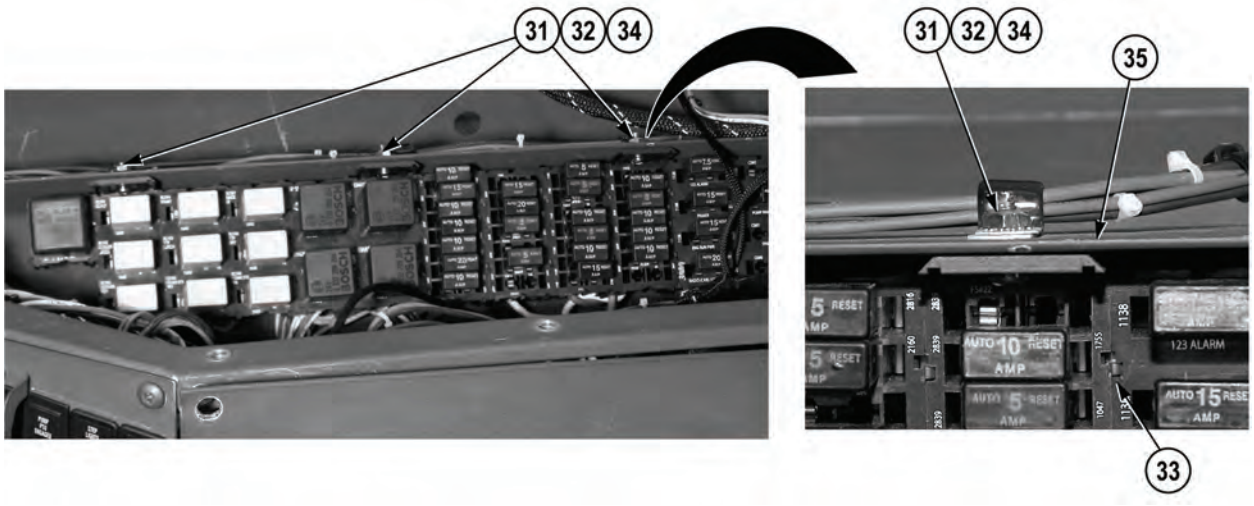
8. Cut wire 2074 (25) and wire 1640 (26) (TM 9-2320-315-14&P).



9. Disconnect cab instrument panel wire harness connector (27) from cab power distribution wire harness connector (28).



10. Disconnect cab pump control wire harness connector (29) from cab power distribution wire harness connector (30).



11. Remove three locknuts (31), cushion clips (32), cab power distribution wire harness block (33), and three screws (34) from cab instrument panel assembly (35). Discard locknuts.

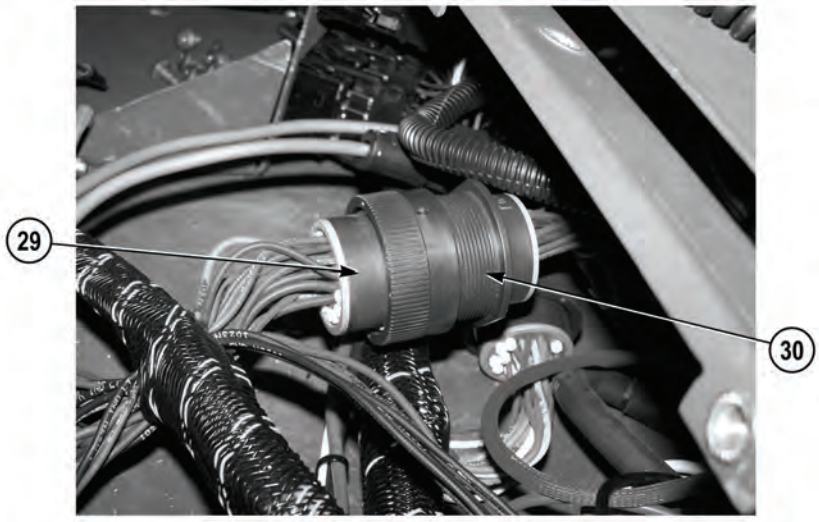
END OF TASK

INSTALLATION

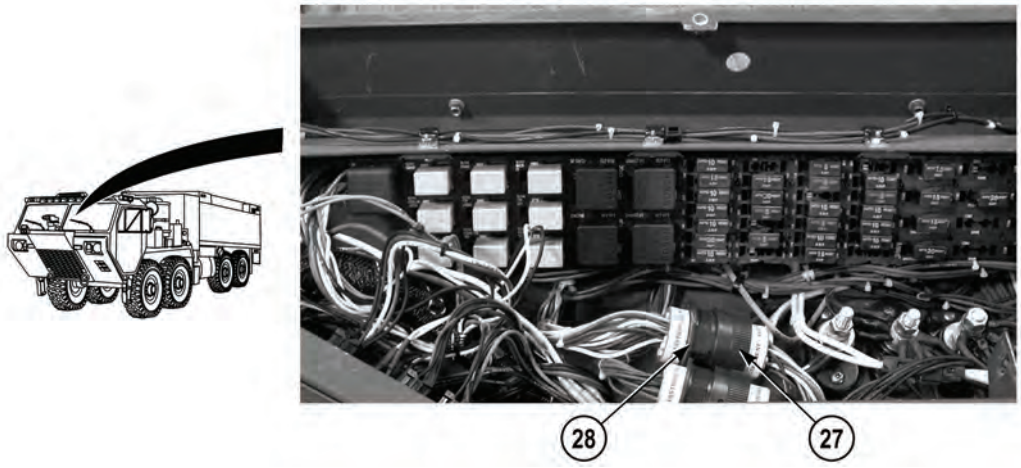
NOTE

- Route cab power distribution wire harness as noted prior to removal.
- Install cable ties, split loom, and cushion clips as required.

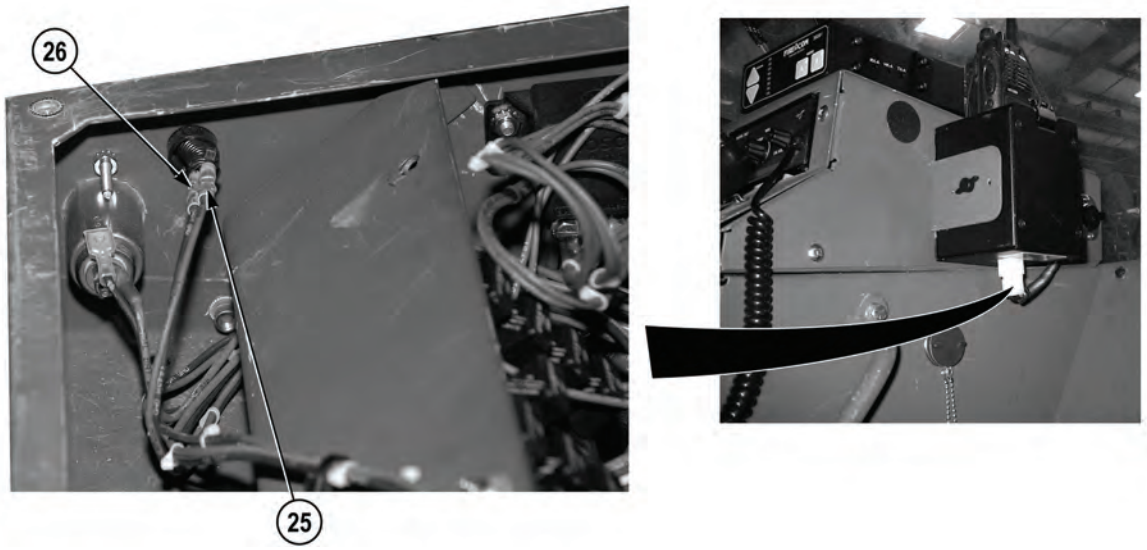
1. Install cab power distribution wire harness block (33), on cab instrument panel assembly (35) with three screws (34), cushion clips (32), and locknuts (31).



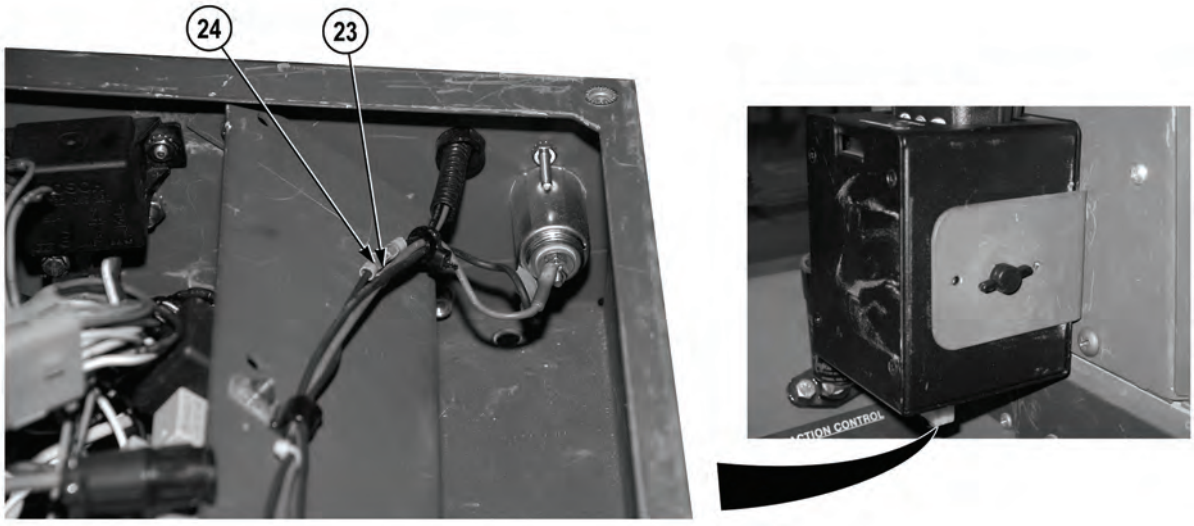
2. Connect cab pump control wire harness connector (29) on cab power distribution wire harness connector (30).



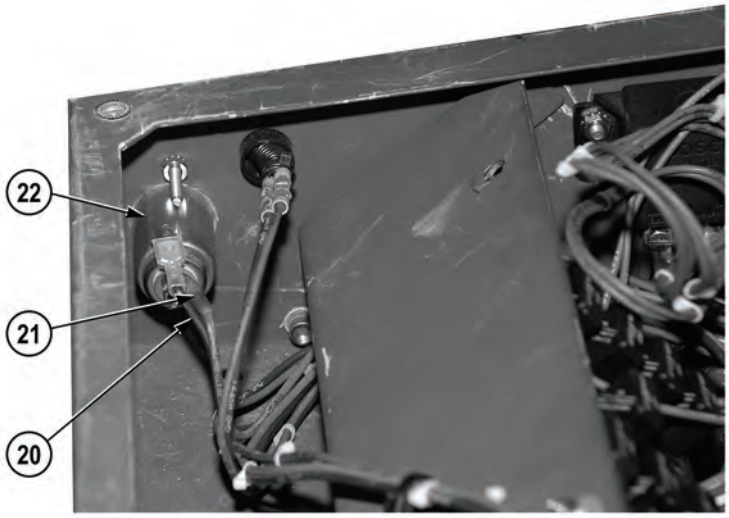
3. Connect cab instrument panel wire harness connector (27) on cab power distribution wire harness connector (28).



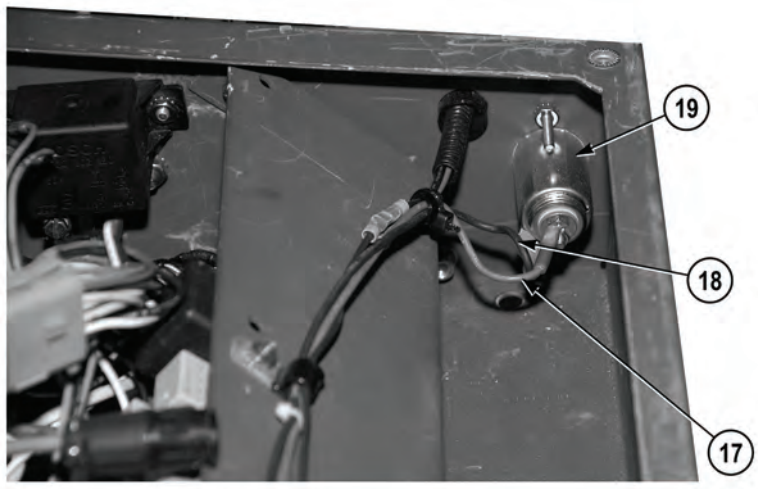
4. Repair wire 2074 (25) and wire 1640 (26) (TM 9-2320-315-14&P).



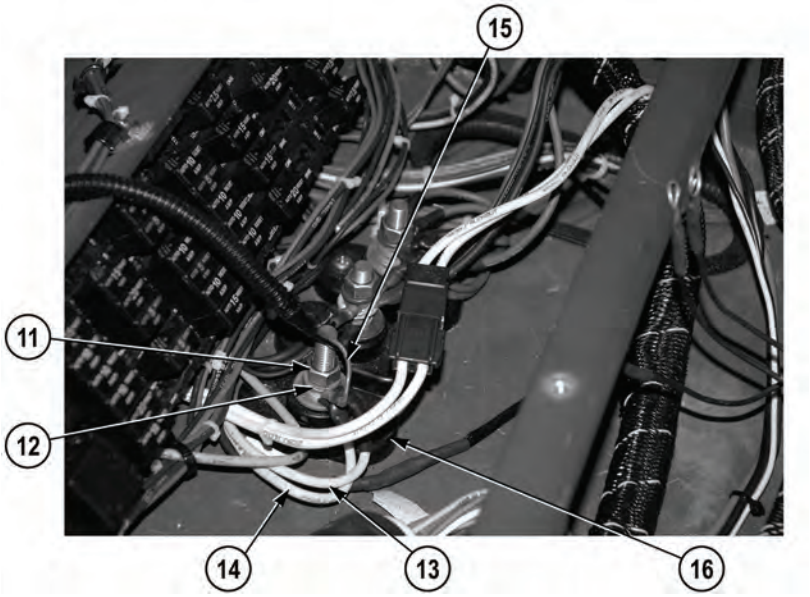
5. Repair wire 2074 (23) and wire 1640 (24) (TM 9-2320-315-14&P).



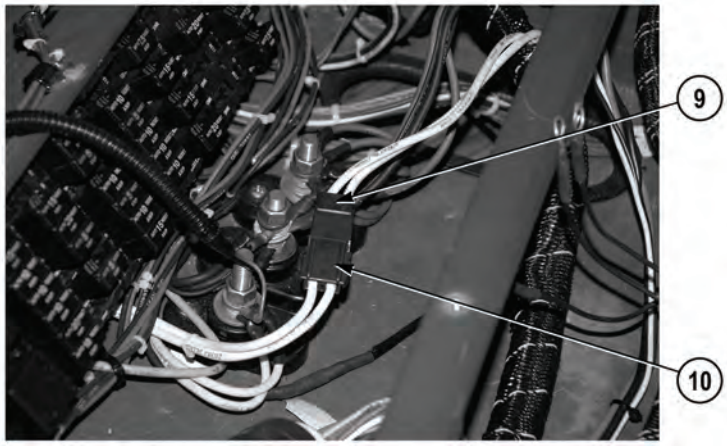
6. Connect wire 2074 (20) and wire 1640 (21) on passenger side 12 VDC auxiliary outlet (22).



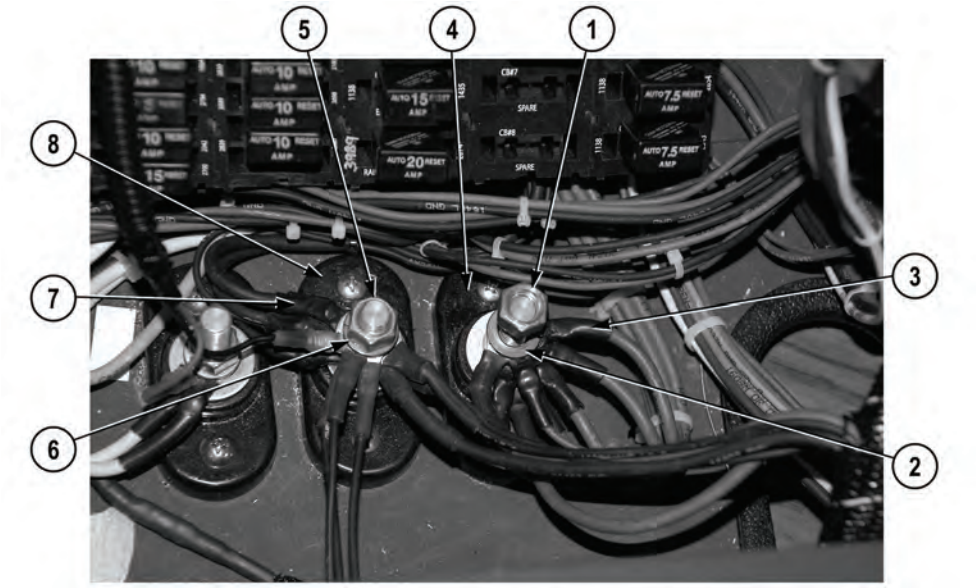
7. Connect wire 2074 (17) and wire 1640 (18) on driver side 12 VDC auxiliary outlet (19).



8. Install wire 3989 (13), wire 3990 (14), and wire 2138 (15) on cab 12 VDC terminal block (16) with lockwasher (12) and nut (11).



9. Connect cab instrument panel wire harness connector MP1 (9) on cab power distribution wire harness connector MP1 (10).



10. Install five wires 1640 (7) on cab ground terminal block (8) with lockwasher (6) and nut (5).
11. Install seven wires 1138 (3) on cab 24 VDC terminal block (4) with lockwasher (2) and nut (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install cab power distribution block relays (WP 0242)
2. Install cab power distribution block diode (WP 0241)
3. Install cab power distribution block circuit breakers (WP 0240)
4. Install cab instrument panel assembly (WP 0202)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

CAB PUMP CONTROL WIRE HARNESS REPLACEMENT

INITIAL SETUP:

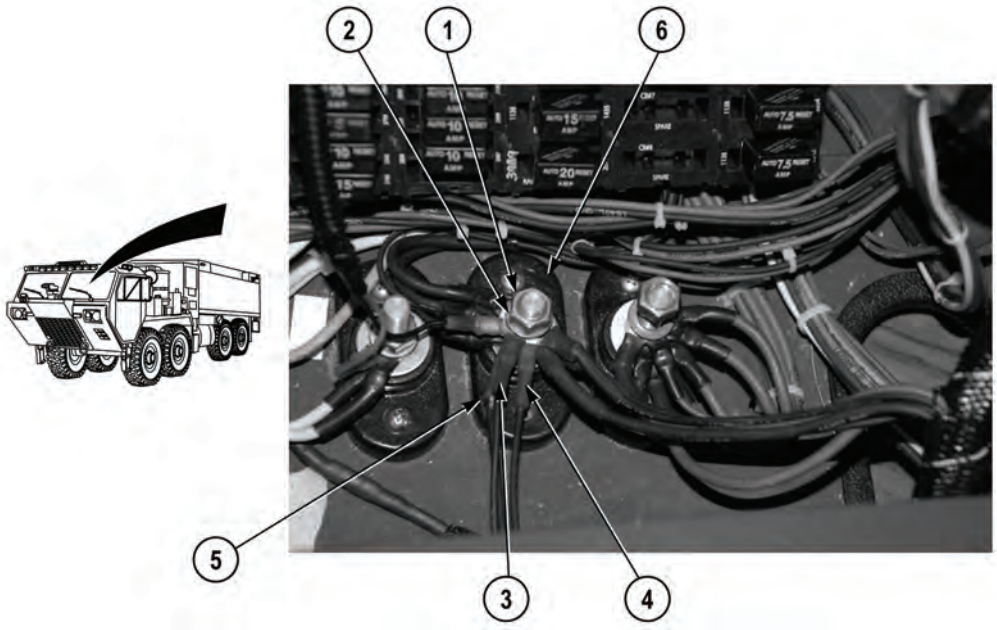
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)
Lockwasher (1)

References
WP 0392, Fig. 57

Equipment Conditions
Cab instrument panel assembly removed (WP 0202)

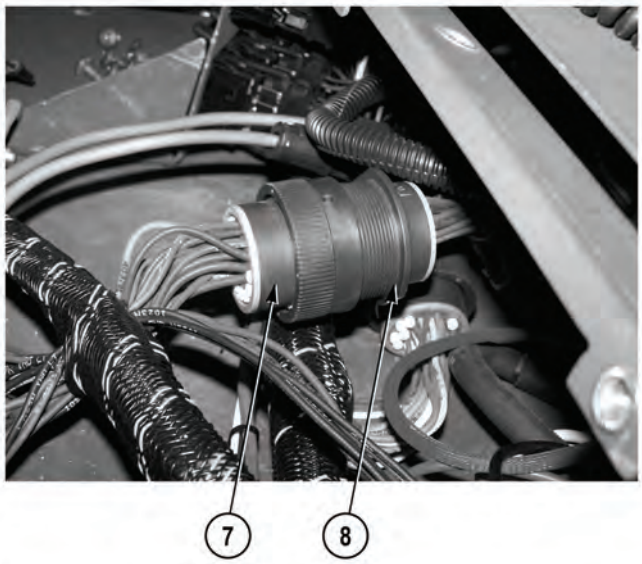
REMOVAL



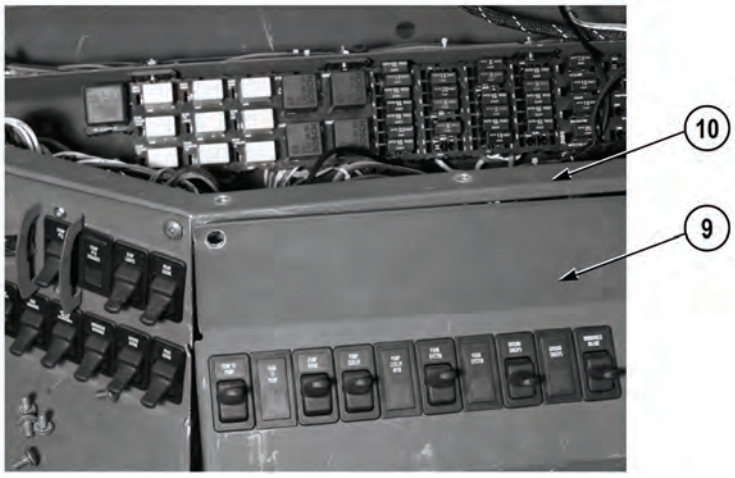
NOTE

- Tag and mark wires prior to removal to ensure proper installation.
- Note routing of cab pump control wire harness prior to removal to ensure proper installation.
- Note position and remove cable ties, split loom, and cushion clips as required.

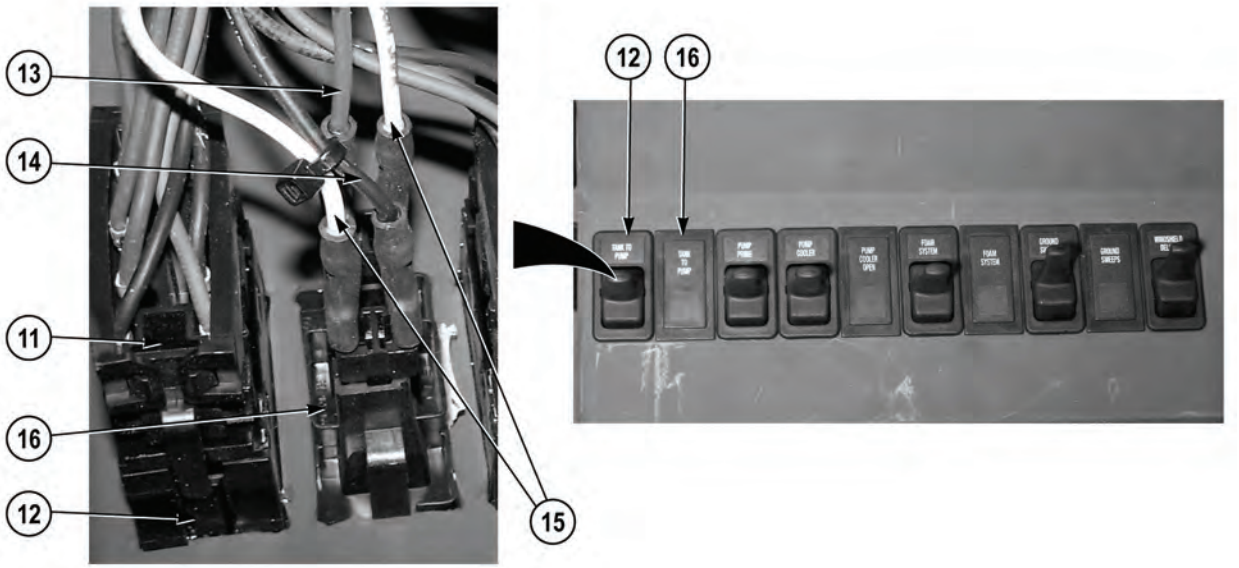
1. Remove nut (1), lockwasher (2), wire 1027 (3), wire 1640 (4), and wire 1023 (5) from cab ground terminal block (6). Discard lockwasher.



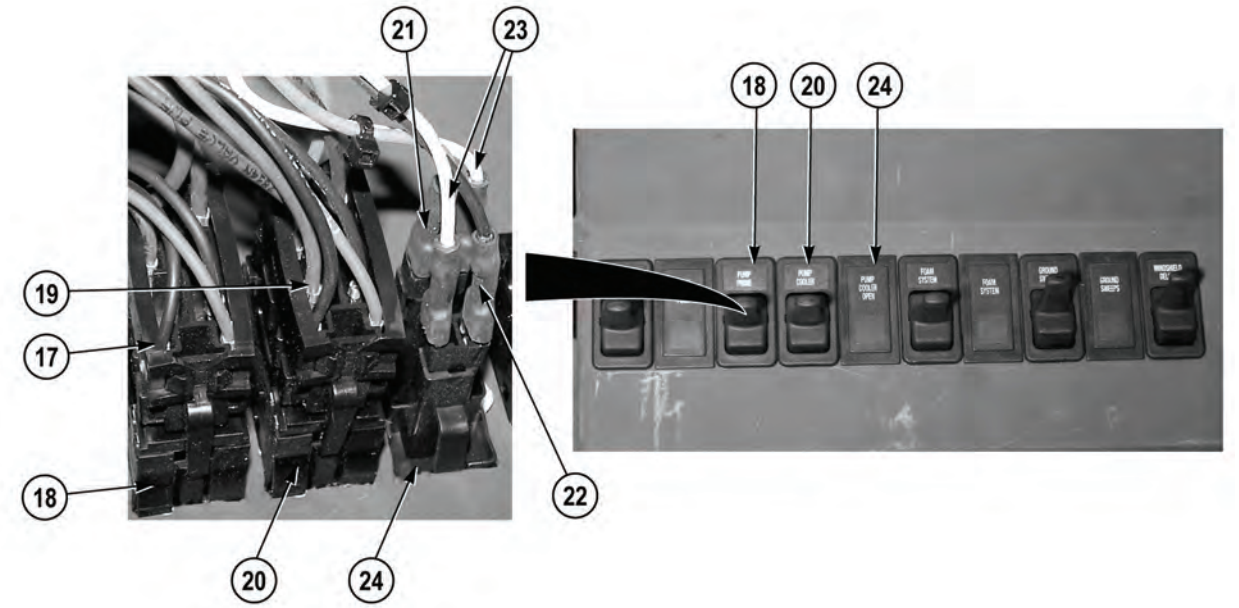
2. Disconnect cab pump control wire harness connector (7) from cab power distribution wire harness connector (8).



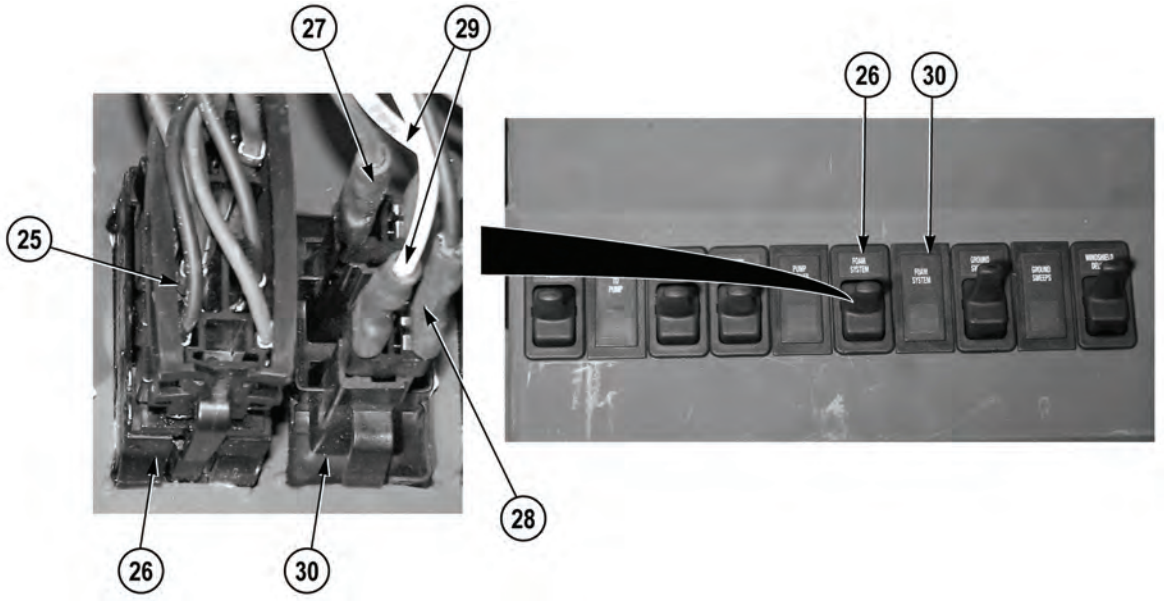
3. Remove cab instrument panel B (9) from cab instrument panel assembly (10).



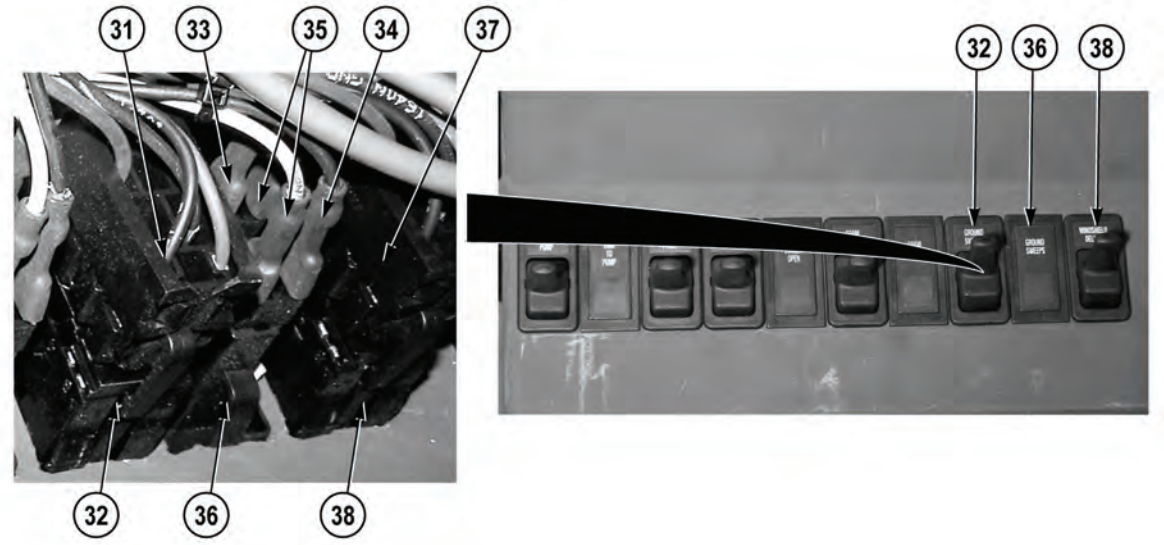
4. Disconnect cab pump control wire harness connector (11) from TANK TO PUMP switch (12).
5. Disconnect wire 2855 (13), wire 1023 (14), and jumperwire 2768 (15) from TANK TO PUMP indicator light (16).



6. Disconnect cab pump control wire harness connector (17) from PUMP PRIMER switch (18).
7. Disconnect cab pump control wire harness connector (19) from PUMP COOLER switch (20).
8. Disconnect wire 4037 (21), wire 1023 (22), and jumperwire 2768 (23) from PUMP COOLER OPEN indicator light (24).



9. Disconnect cab pump control wire harness connector (25) from FOAM SYSTEM switch (26).
10. Disconnect wire 2830 (27), wire 1023 (28), and jumperwire 2768 (29) from FOAM SYSTEM indicator light (30).



11. Disconnect cab pump control wire harness connector (31) from UNDER TRUCK NOZZLES switch (32).
12. Disconnect wire 2772 (33), wire 1023 (34), and jumperwire 2768 (35) from UNDER TRUCK NOZZLES indicator light (36).
13. Disconnect cab pump control wire harness connector (37) from WINDSHIELD DELUGE switch (38).

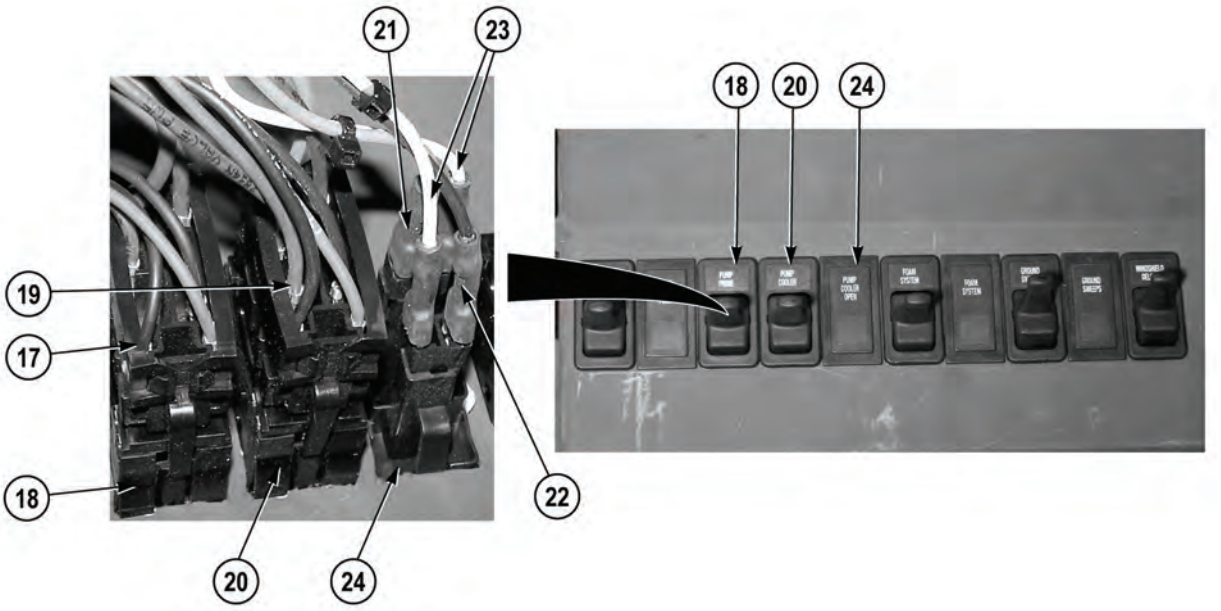
END OF TASK

INSTALLATION

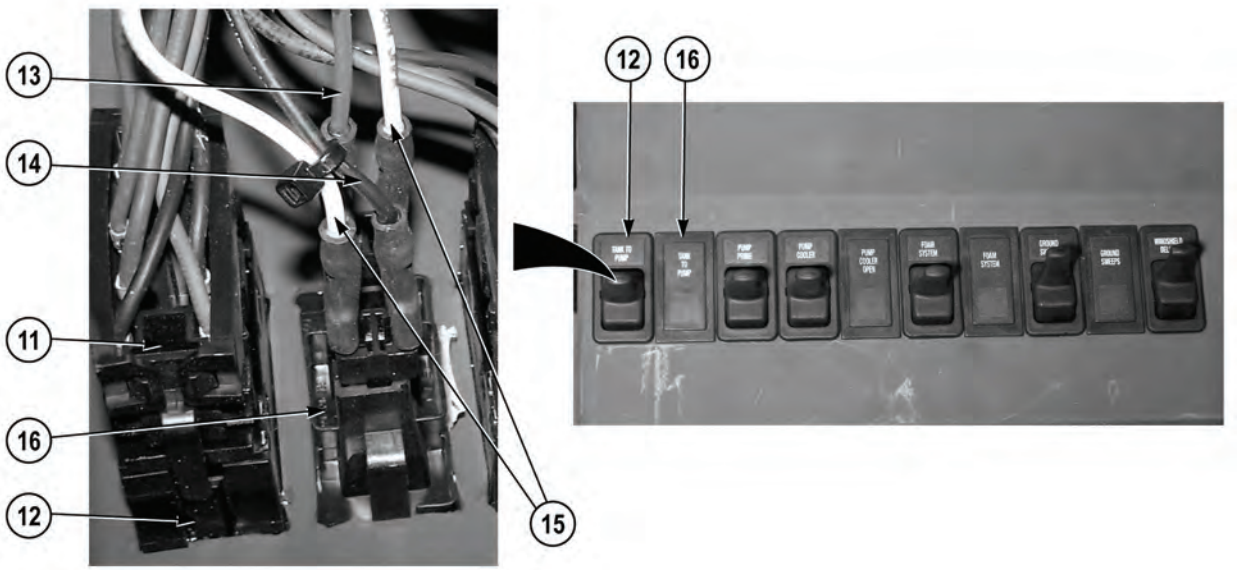
NOTE

- Route cab pump control wire harness as noted prior to removal.
- Install cable ties, split loom, and cushion clips as required.

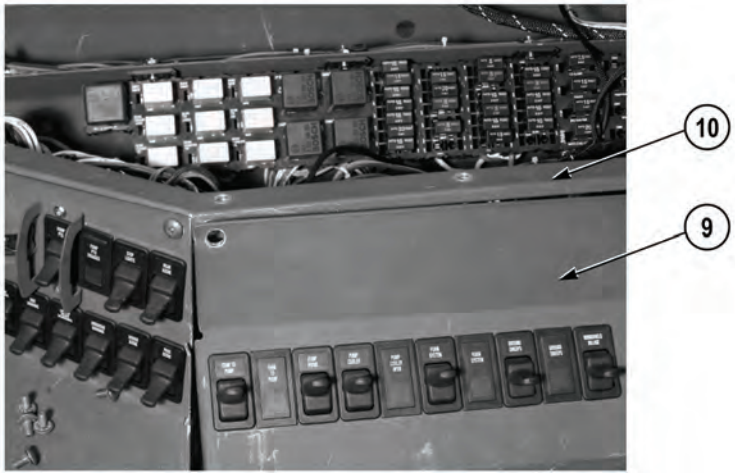
1. Connect cab pump control wire harness connector (37) on WINDSHIELD DELUGE switch (38).
2. Connect wire 2772 (33), wire 1023 (34), and jumperwire 2768 (35) on UNDER TRUCK NOZZLES indicator light (36).
3. Connect cab pump control wire harness connector (31) on UNDER TRUCK NOZZLES switch (32).
4. Connect wire 2830 (27), wire 1023 (28), and jumperwire 2768 (29) on FOAM SYSTEM indicator light (30).
5. Connect cab pump control wire harness connector (25) on FOAM SYSTEM switch (26).



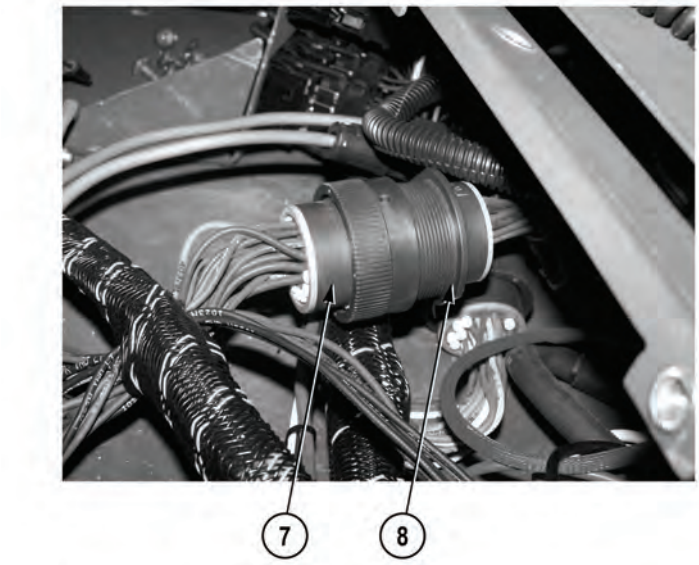
6. Connect wire 4037 (21), wire 1023 (22), and jumperwire 2768 (23) on PUMP COOLER OPEN indicator light (24).
7. Connect cab pump control wire harness connector (19) on PUMP COOLER switch (20).
8. Connect cab pump control wire harness connector (17) on PUMP PRIMER switch (18).



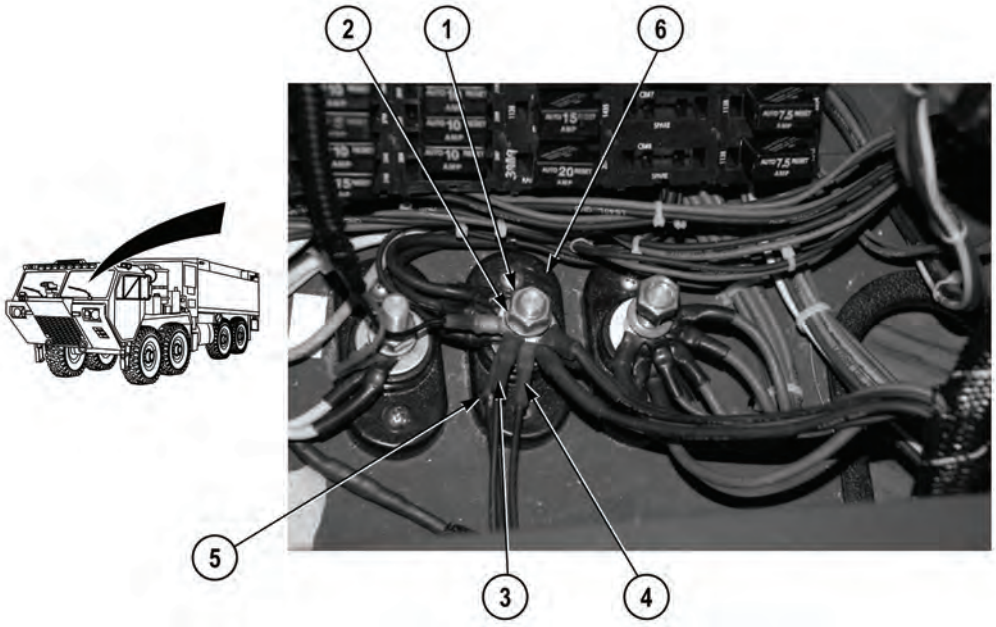
9. Connect wire 2855 (13), wire 1023 (14), and jumperwire 2768 (15) on TANK TO PUMP indicator light (16).
10. Connect cab pump control wire harness connector (11) on TANK TO PUMP switch (12).



11. Install cab instrument panel B (9) on cab instrument panel assembly (10).



12. Connect cab pump control wire harness connector (7) on cab power distribution wire harness connector (8).



CAUTION

Do not over tighten nut when installing cab ground terminal block. Failure to comply may result in damage to equipment.

13. Install wire 1027 (3), wire 1640 (4), and wire 1023 (5) on cab ground terminal block (6) with lockwasher (2) and nut (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Install cab instrument panel assembly (WP 0202)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

CAB ROOF WIRE HARNESS REPLACEMENT

INITIAL SETUP:

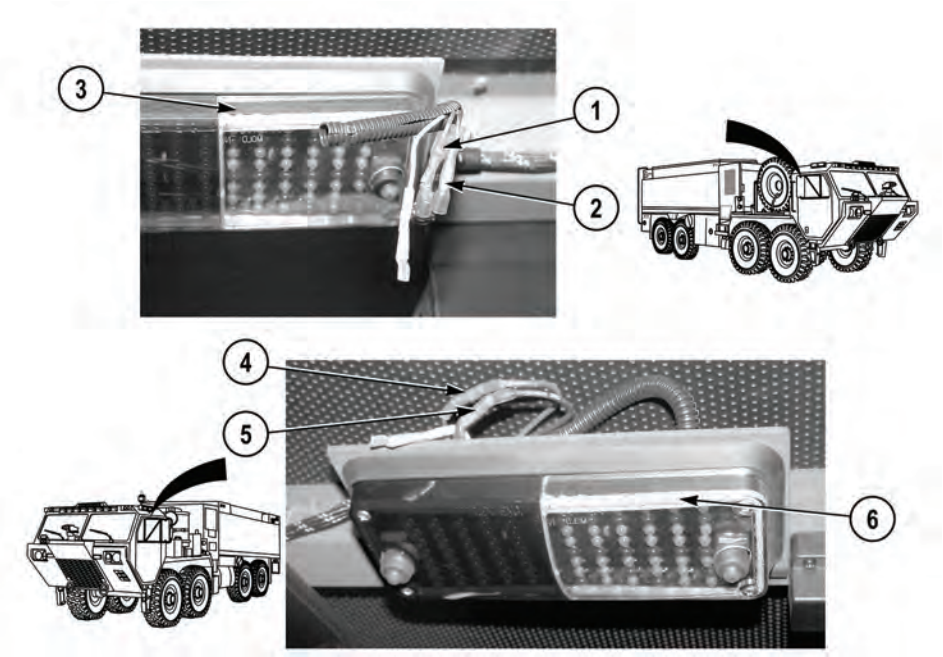
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Adhesive, RTV (WP 0401, Item 2)
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)
Locknut (2)

References
TM 9-2320-315-14&P
WP 0392, Fig. 58

Equipment Conditions
Cab instrument panel assembly removed (WP 0202)
Passenger side cab clearance light and bracket removed (WP 0221)

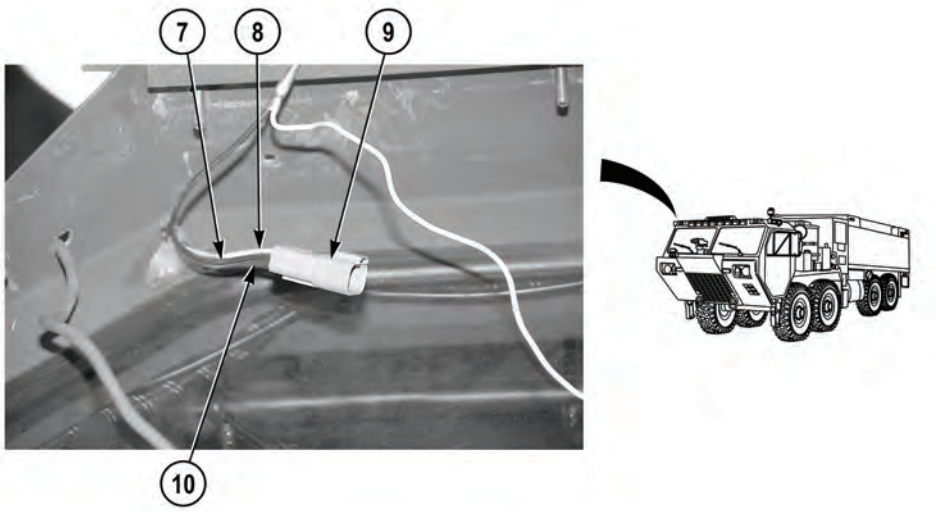
REMOVAL



NOTE

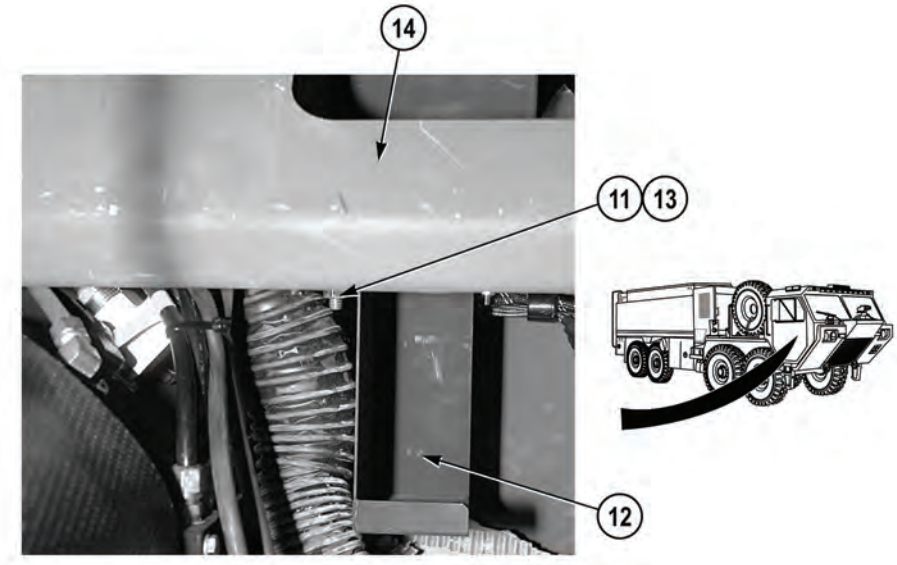
- Tag and mark wires prior to removal to ensure proper installation.
- Note routing of cab wire harness prior to removal to ensure proper installation.
- Note position and remove cable ties, split loom, and cushion clips as required.

1. Cut wire 1047 (1) and wire 2640 (2) from passenger side dome light (3) (TM 9-2320-315-14&P).
2. Cut wire 1047 (4) and wire 2640 (5) from driver side dome light (6) (TM 9-2320-315-14&P).

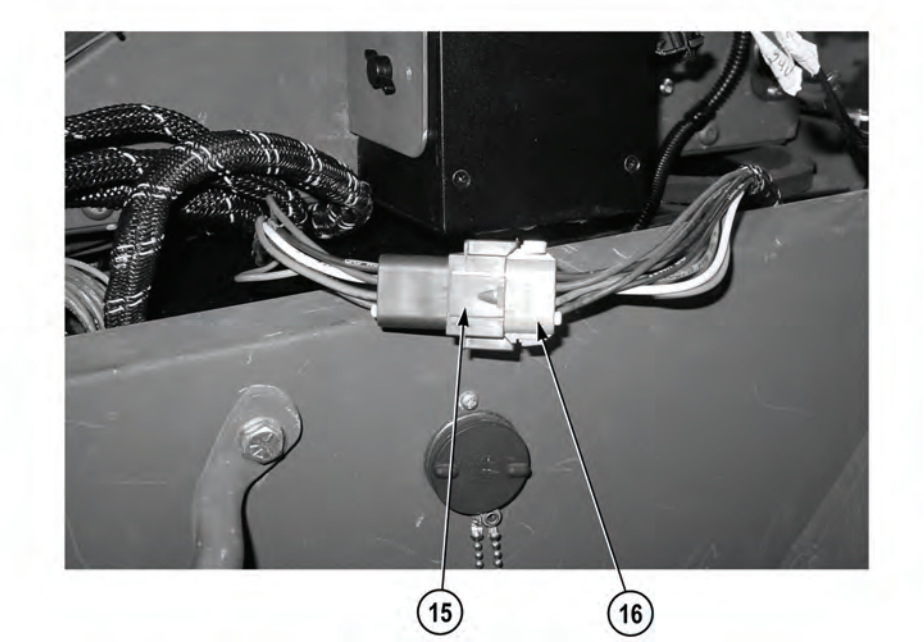


3. Cut cab roof wire harness (7) wire 1626 (8) from cab roof lightbar cable assembly connector (9) (TM 9-2320-315-14&P).

4. Cut cab roof wire harness (7) wire 1640 (10) from cab roof lightbar cable assembly connector (9) (TM 9-2320-315-14&P).



5. Remove two locknuts (11), bracket (12), and two screws (13) from cab dash assembly (14). Discard locknuts.



6. Disconnect cab instrument panel wire harness connector (15) from cab roof wire harness connector (16).
7. Remove cab roof wire harness (7) from vehicle.

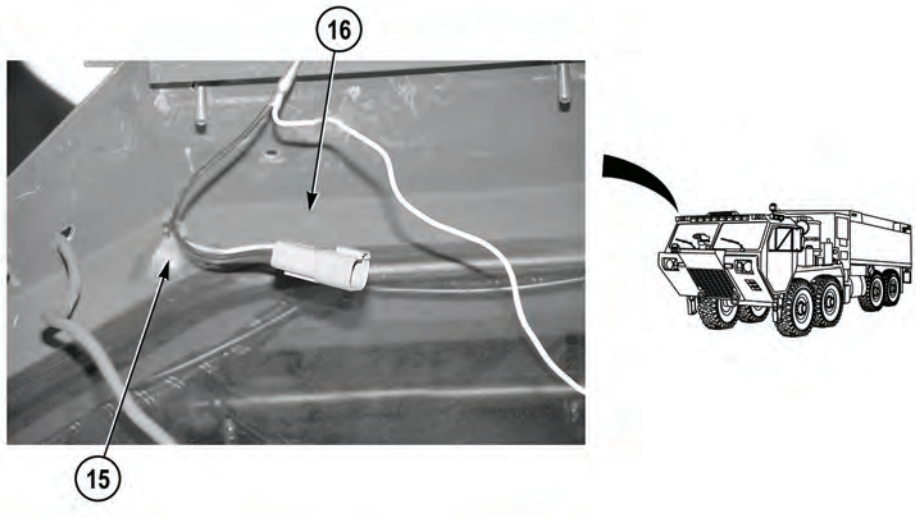
END OF TASK

INSTALLATION

NOTE

- Install cable ties, split loom, and cushion clips as required.
- Route cab roof wire harness as noted prior to removal.

1. Install cab roof wire harness (7) on vehicle.
2. Connect cab instrument panel wire harness connector (15) on cab roof wire harness connector (16).
3. Install bracket (12) on cab dash assembly (14) with two screws (13) and locknuts (11).
4. Repair cab roof wire harness (7) wire 1640 (10) on cab roof lightbar cable assembly connector (9) (TM 9-2320-315-14&P).
5. Repair cab roof wire harness (7) wire 1626 (8) on cab roof lightbar cable assembly connector (9) (TM 9-2320-315-14&P).



WARNING

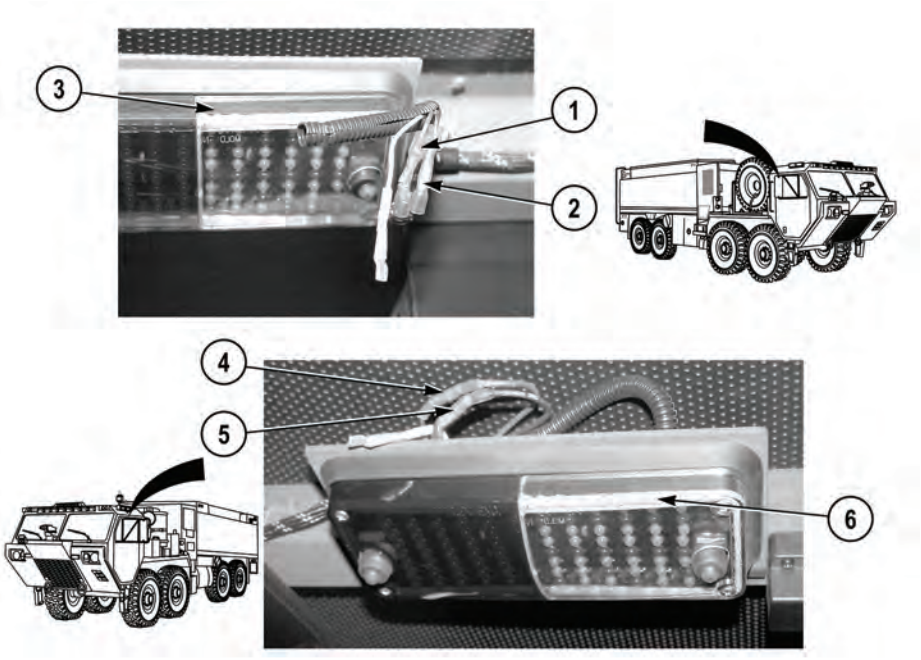


Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

NOTE

Apply a liberal amount of RTV adhesive around cab roof wire harness until cab is sealed.

6. Seal hole (15) in cab roof (16) with RTV adhesive.



7. Repair wire 1047 (4) and wire 2640 (5) on driver side dome light (6) (TM 9-2320-315-14&P).
8. Repair wire 1047 (1) and wire 2640 (2) on passenger side dome light (3) (TM 9-2320-315-14&P).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install cab instrument panel assembly (WP 0202)
2. Install passenger side cab clearance light and bracket (WP 0221)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

CAB WATER TANK LEVEL INDICATOR WIRE HARNESS REPLACEMENT

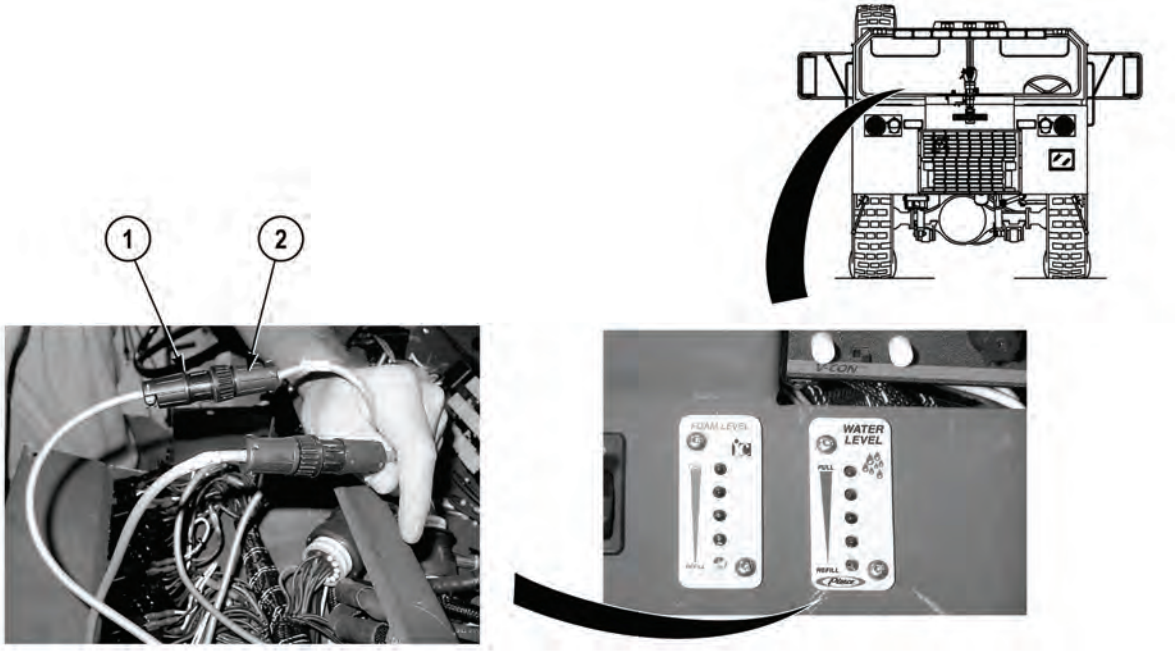
INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)

Equipment Conditions
Cab instrument panel B opened (WP 0203)
Pump operator's panel opened (WP 0205)

REMOVAL



NOTE

- Note routing of cab water tank level indicator wire harness prior to removal to ensure proper installation.
- Cab water tank level indicator wire harness is routed along driver side chassis, through pump house panel N, and pump operator's panel assembly.
- Note position and remove harness split looms, cushion clips, and cable ties as required.
- Tag and mark connectors prior to removal to ensure proper installation.

1. Disconnect cab water tank level indicator wire harness connector (1) from cab water tank level indicator gauge connector (2).



2. Disconnect cab water tank level indicator wire harness connector (3) from cab water tank level indicator gauge connector (4).
3. Remove cab water tank level indicator wire harness connector (5) from vehicle.

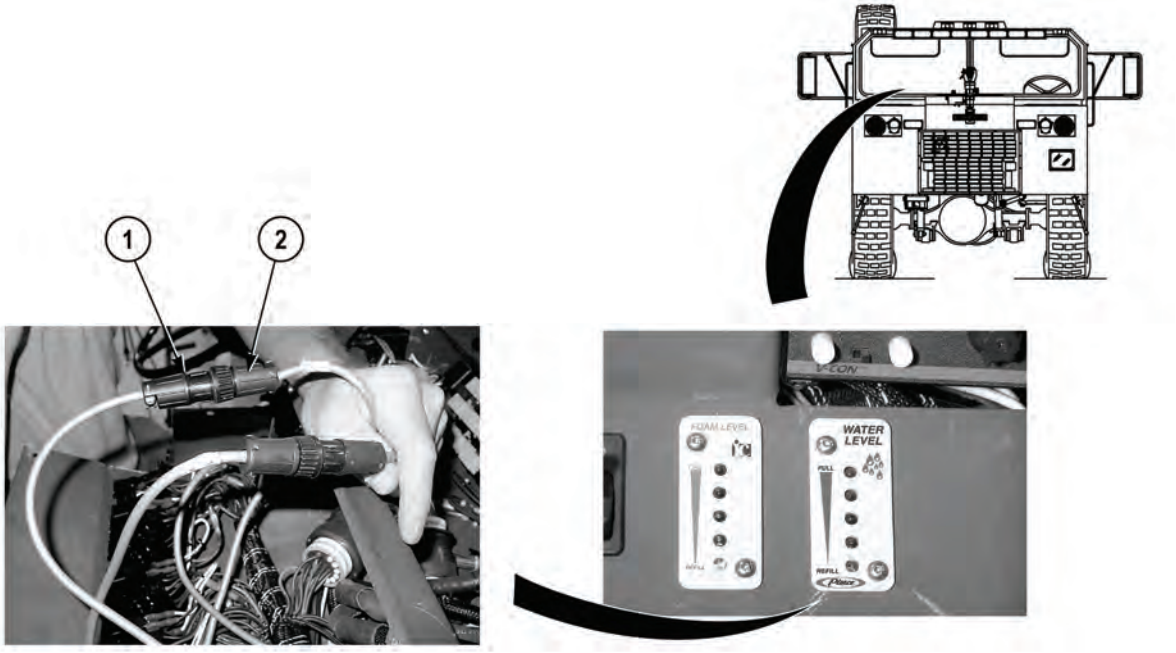
END OF TASK

INSTALLATION

NOTE

- Route cab water tank level indicator wire harness as noted.
- Install cable ties, cushion clips, and harness split looms as noted.

1. Install cab water tank level indicator wire harness connector (5) on vehicle.
2. Connect cab water tank level indicator gauge connector (4) to cab water tank level indicator wire harness connector (3).



3. Connect cab water tank level indicator gauge connector (2) to cab water tank level indicator wire harness connector (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Close pump operator's panel B (WP 0205)
2. Close cab instrument panel (WP 0203)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

DIRECT TANK FILL VALVE WIRE HARNESS REPLACEMENT

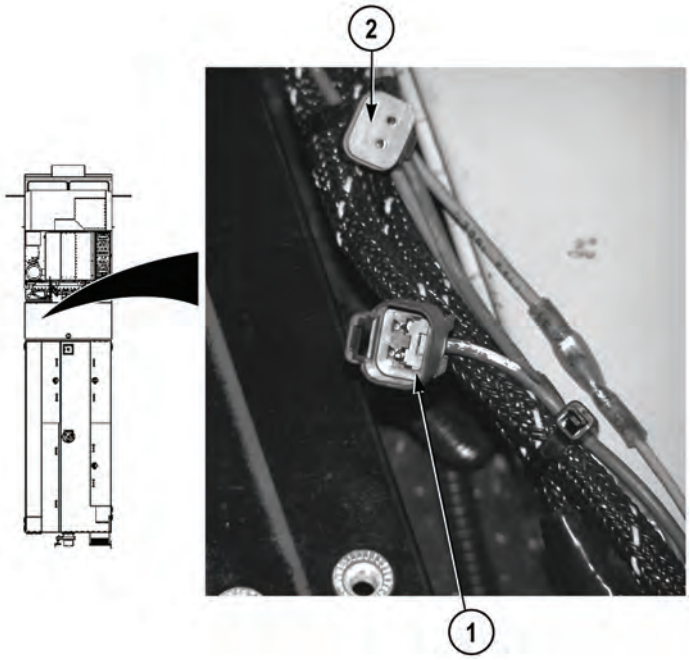
INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)

Equipment Conditions
Pump house panel K removed (WP 0341)

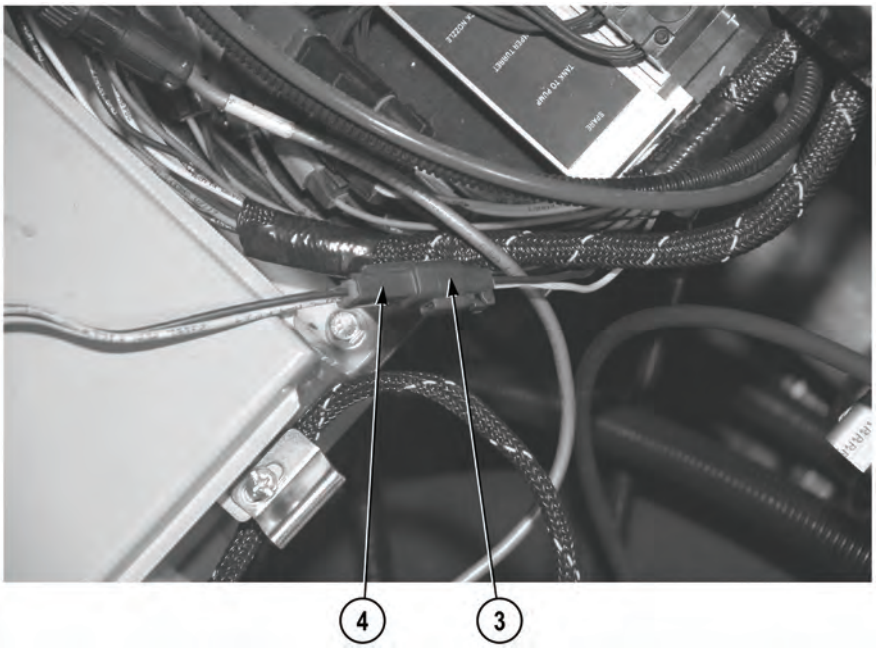
REMOVAL



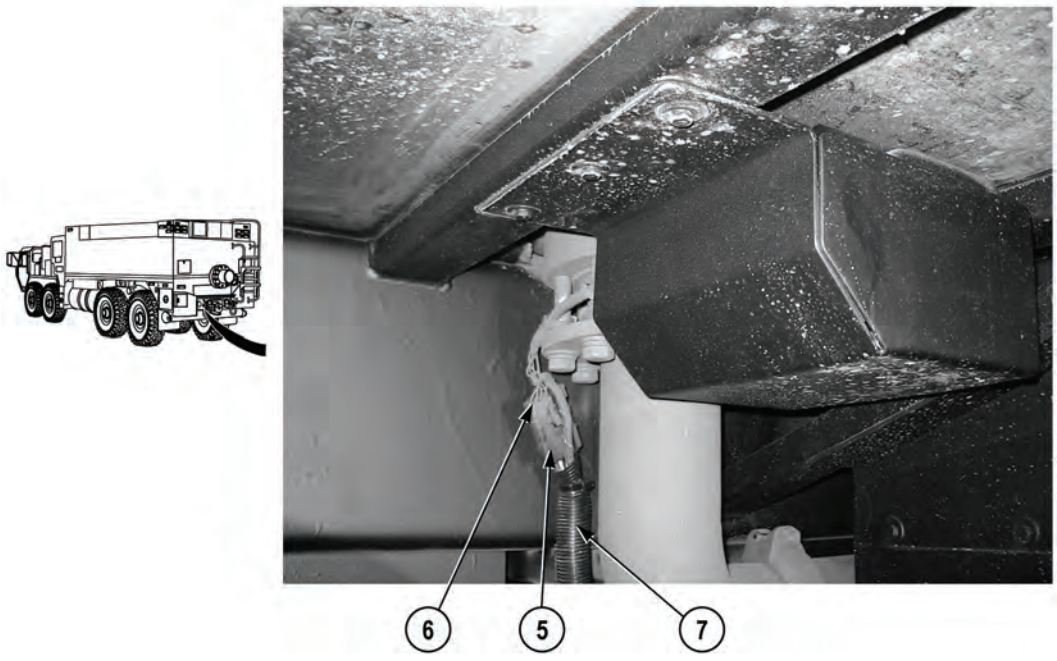
NOTE

- Note routing of direct tank fill valve wire harness prior to removal to ensure proper installation.
- Note position and remove split loom, cushion clips, and cable ties as required.
- Tag and mark connectors prior to removal to ensure proper installation.

1. Disconnect direct tank fill valve wire harness connector (1) from main wire harness connector (2).



2. Disconnect direct tank fill valve control wire harness connector (3) from pump operator's panel wire harness connector (4) and remove from vehicle.



3. Disconnect direct tank fill valve wire harness connector (5) from direct tank fill valve connector (6).
4. Remove direct tank fill valve wire harness (7) from vehicle.

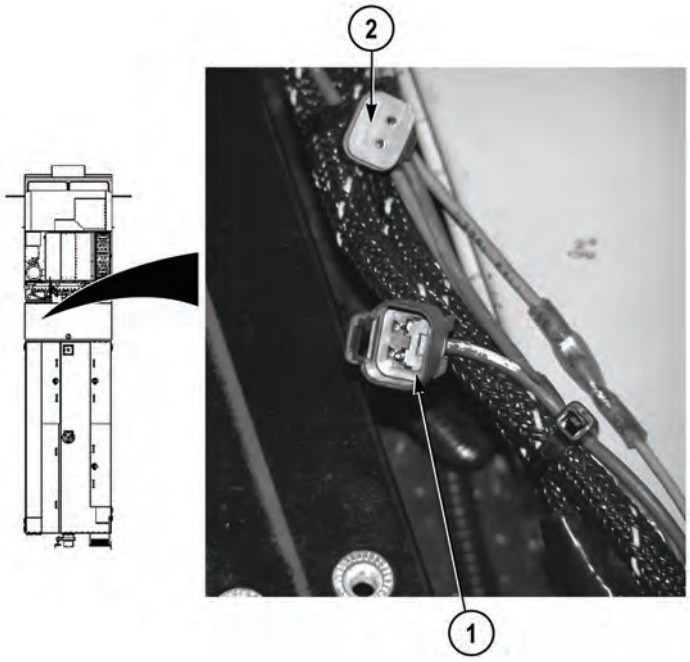
END OF TASK

INSTALLATION

NOTE

- Route direct tank fill valve control wire harness as noted.
- Install cable ties, cushion clips, and split loom as noted.

1. Install direct tank fill valve wire harness (7) on vehicle.
2. Connect direct tank fill valve connector (6) on direct tank fill valve wire harness connector (5).
3. Connect pump operator's panel wire harness connector (4) on direct tank fill valve control wire harness connector (3).



4. Connect main wire harness connector (2) on direct tank fill valve wire harness connector (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Install pump house panel K (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

DISCHARGE VALVE CONTROL WIRE HARNESS REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

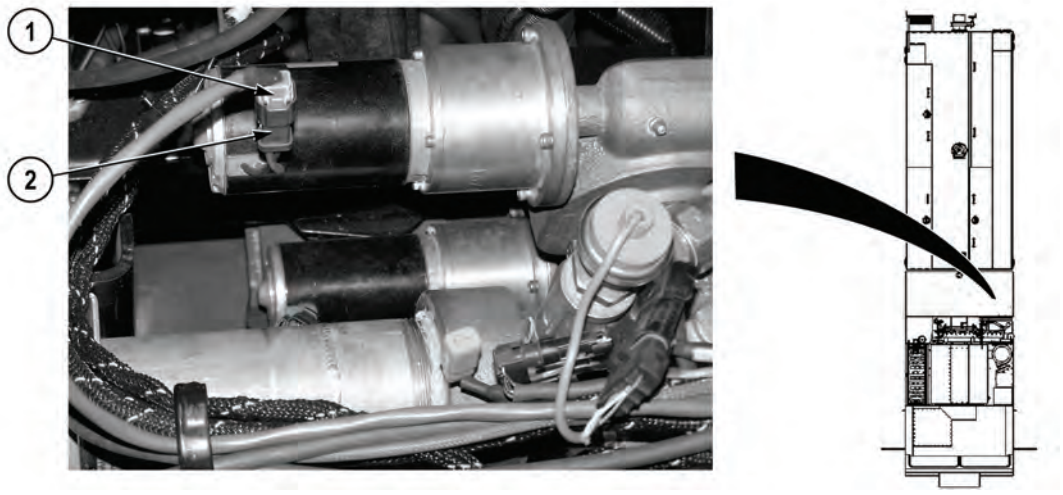
Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)
Lockwasher (2)

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

References
WP 0392, Fig. 72

Equipment Conditions
Pump operator's panel opened (WP 0205)
Pump house panel E or G removed (WP 0341)

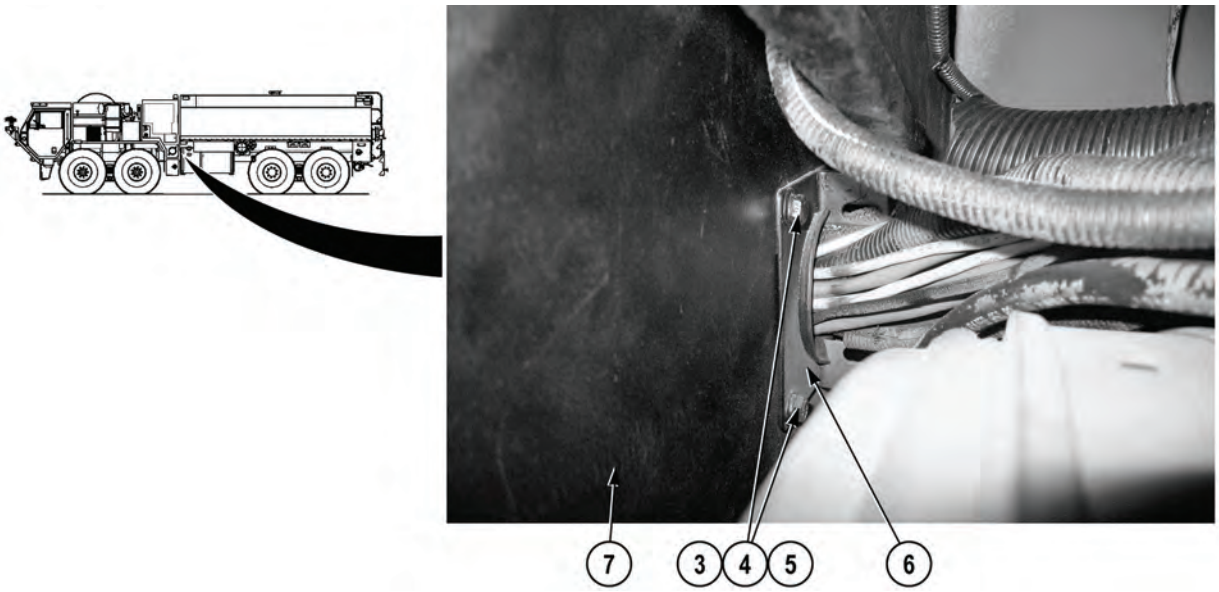
REMOVAL



NOTE

- Discharge valve control wire harnesses are routed through pump house panel N and pump operator's panel assembly.
- Note position and remove harness split looms, cushion clips, and cable ties as required.
- Note routing of discharge valve control wire harness prior to removal to ensure proper installation.
- Tag and mark connectors prior to removal to ensure proper installation.
- Driver side and passenger side discharge valve control wire harnesses are removed the same way. Driver side shown.

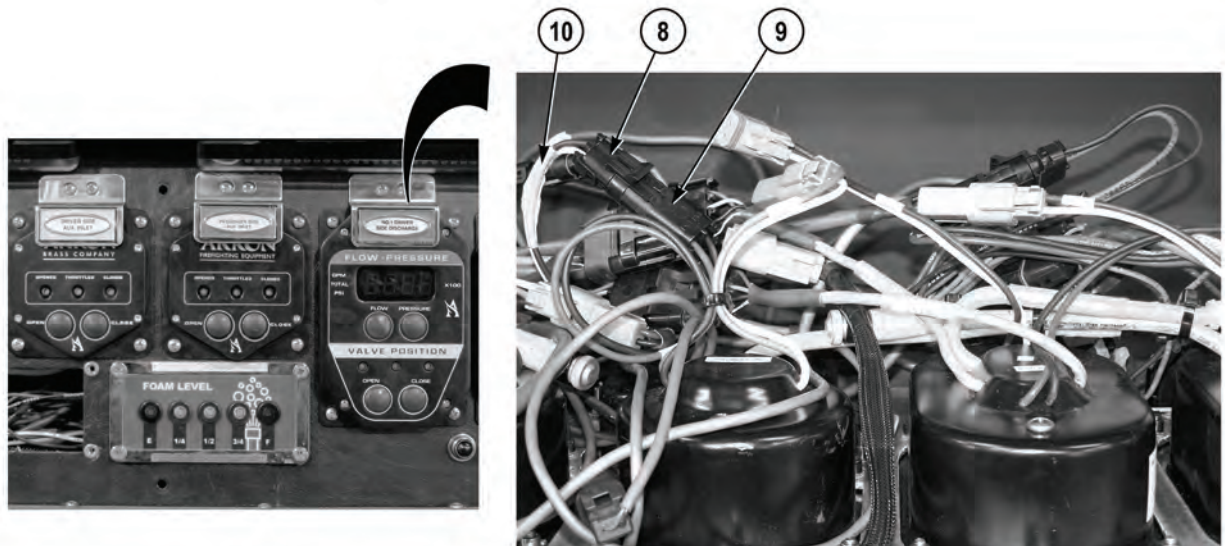
1. Disconnect discharge valve control wire harness connector (1) from discharge valve control connector (2).



NOTE

Route discharge valve control wire harness as noted prior to removal.

2. Remove two screws (3), lockwashers (4), washers (5), and bracket (6) from pump house panel N (7). Discard lockwashers.



NOTE

The aid of an assistant may be required to remove discharge valve control wire harness.

3. Disconnect discharge valve control wire harness connector (8) from discharge line connector (9) and remove discharge valve control wire harness (10) from vehicle.

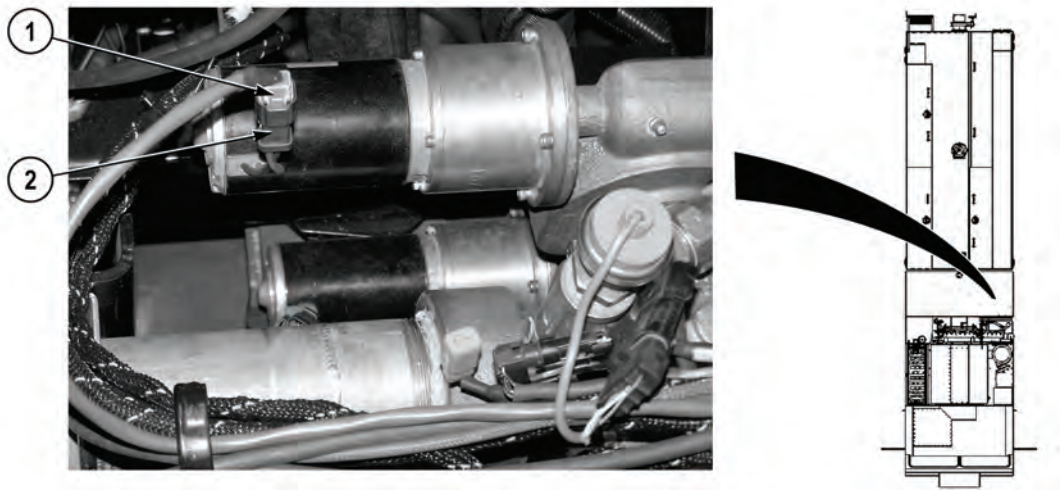
END OF TASK

INSTALLATION

NOTE

- Driver side and passenger side discharge valve control wire harnesses are installed the same way. Driver side shown.
- Install split looms, cushion clips, and cable ties as noted prior to removal.
- Route discharge valve control wire harness as noted prior to removal.

1. Connect discharge valve control wire harness connector (8) to discharge line connector (9) and route discharge valve control wire harness (10) on vehicle.
2. Install bracket (6) on pump house panel N (7) with two washers (5), lockwashers (6), and screws (3).



3. Connect discharge valve control connector (2) to discharge valve control wire harness connector (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install pump house panel E or G (WP 0341)
2. Close pump operator's panel (WP 0205)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

DRIVER SIDE AUXILIARY INLET VALVE CONTROL WIRE HARNESS REPLACEMENT

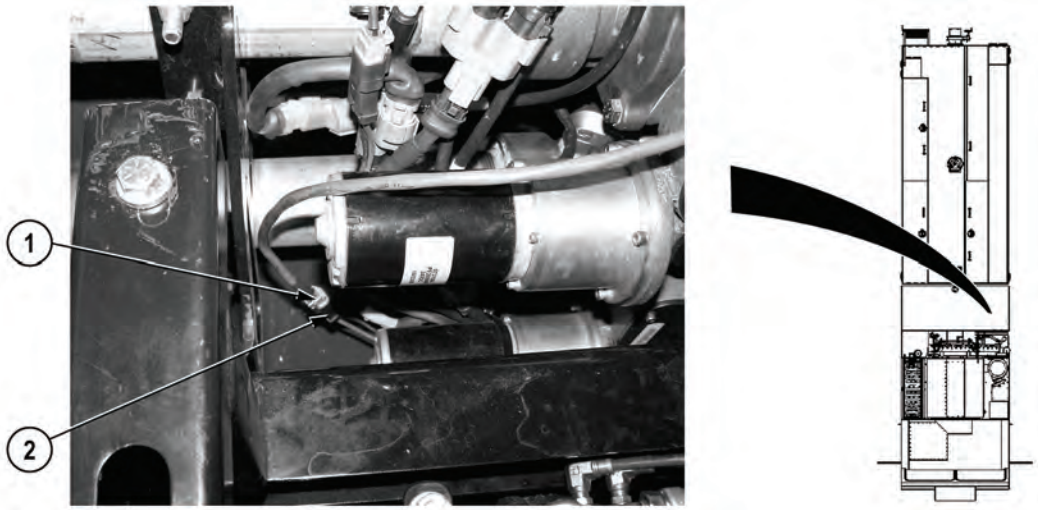
INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)

Equipment Conditions
Pump operator's panel opened (WP 0205)
Pump house panel E removed (WP 0341)

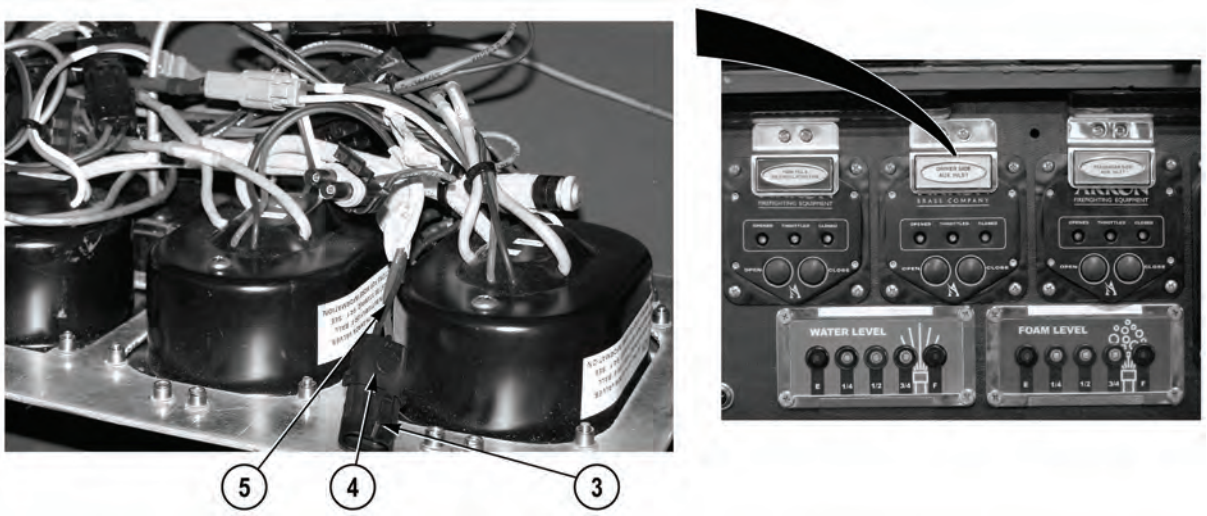
REMOVAL



NOTE

- Note routing of driver side auxiliary inlet valve control wire harness prior to removal to ensure proper installation.
- Driver side auxiliary inlet valve control wire harness is routed through pump house panel N and pump operator's panel assembly.
- Note position and remove harness split looms, cushion clips, and cable ties as required.
- Tag and mark connectors prior to removal to ensure proper installation.

1. Disconnect driver side auxiliary inlet valve wire harness connector (1) from driver side auxiliary inlet valve control connector (2).



2. Disconnect driver side auxiliary inlet valve wire harness connector (3) from driver side auxiliary inlet valve line connector (4).
3. Remove driver side auxiliary inlet valve wire harness (5) from vehicle.

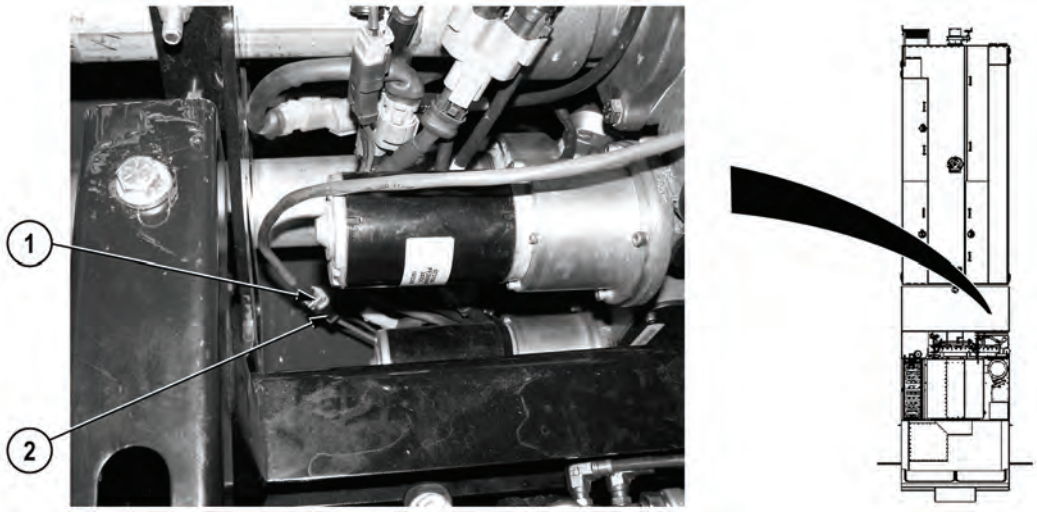
END OF TASK

INSTALLATION

NOTE

- Route driver side auxiliary inlet valve wire harness as noted prior to removal.
- Install cable ties, cushion clips, and harness split looms as noted.

1. Install driver side auxiliary inlet valve wire harness (5) on vehicle.
2. Connect driver side auxiliary inlet valve wire harness connector (3) to driver side auxiliary inlet valve line connector (4).



3. Connect driver side auxiliary inlet valve control connector (2) to driver side auxiliary inlet valve wire harness connector (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install pump house panel E (WP 0341)
2. Close pump operator’s panel (WP 0205)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

DRIVER SIDE BODY WIRE HARNESS REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

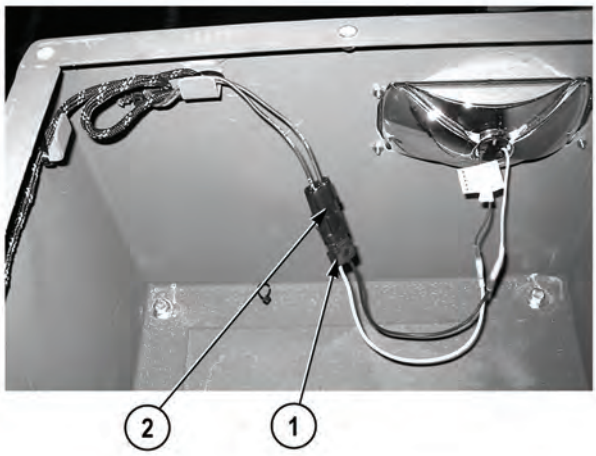
Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

Equipment Conditions
Driver side lower rear stowage compartment removed (WP 0357)
Driver side top stowage compartment door opened (WP 0008)
Front and rear driver side light bezel covers removed (WP 0337)

REMOVAL

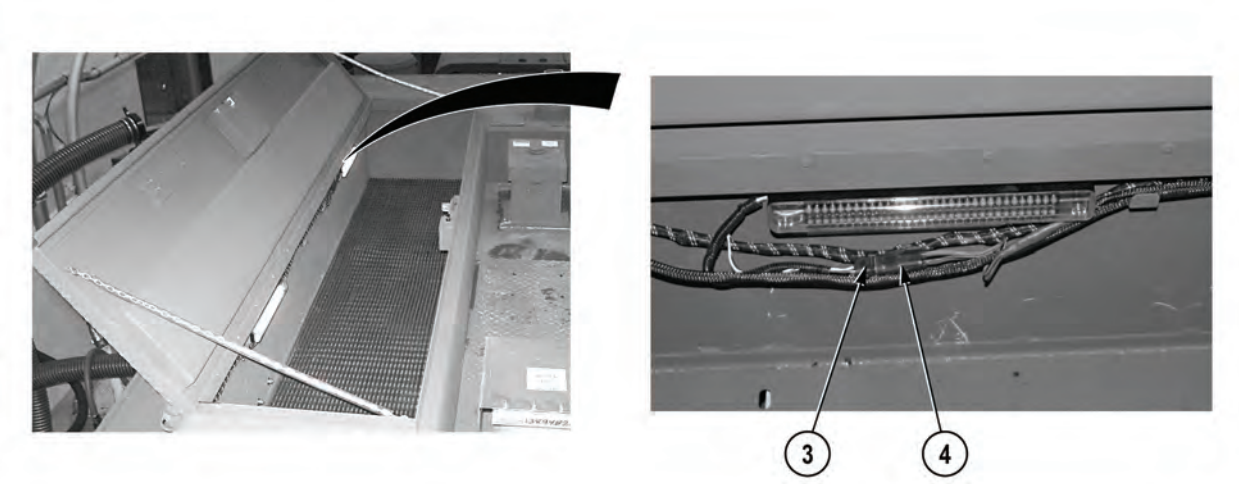




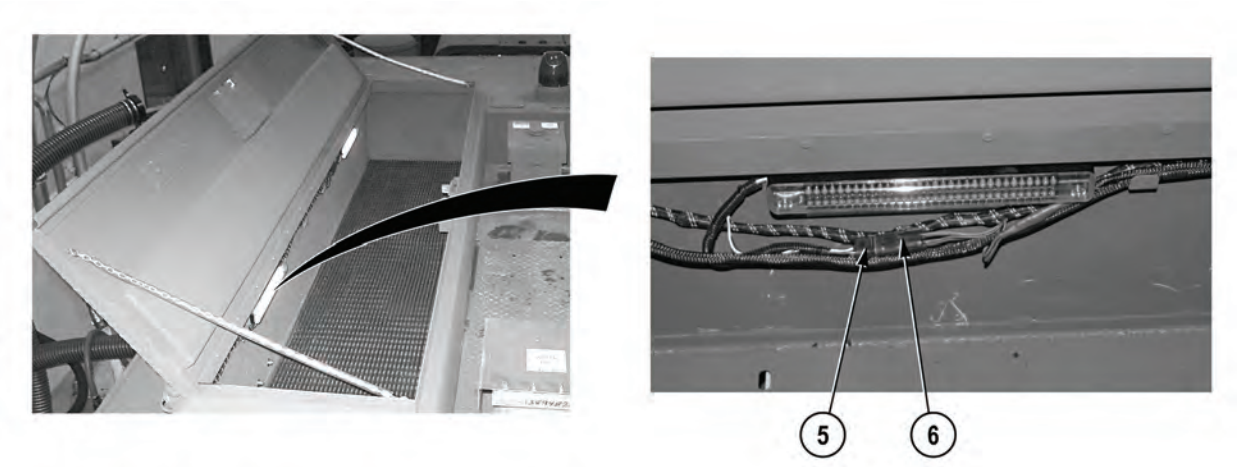
NOTE

- Tag and mark wires prior to removal to ensure proper installation.
- Note routing of driver side body wire harness prior to removal to ensure proper installation.
- Note position and remove cable ties, split looms, and cushion clips as required.
- Remove driver side body wire harness so that entire harness is routed into driver side rear light bezel box.

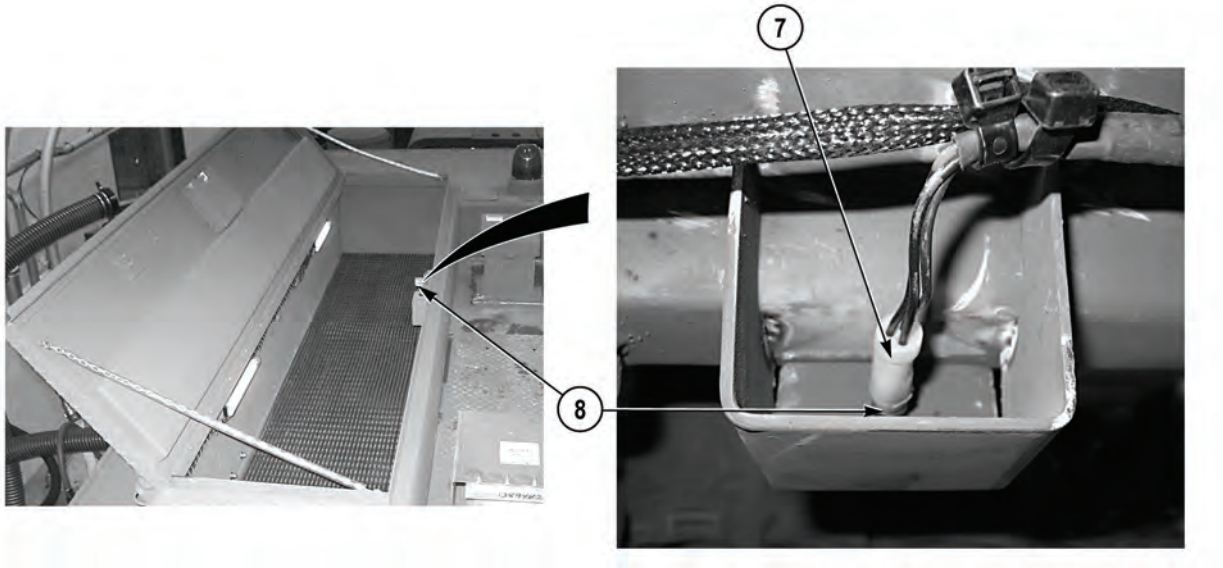
1. Disconnect scene light connector (1) from driver side body wire harness connector (2).



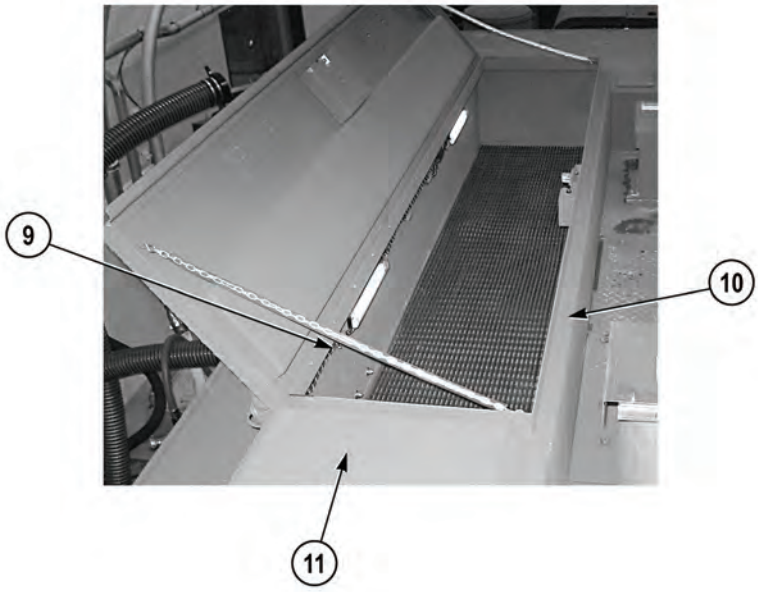
2. Disconnect striplight connector (3) from driver side body wire harness connector (4).



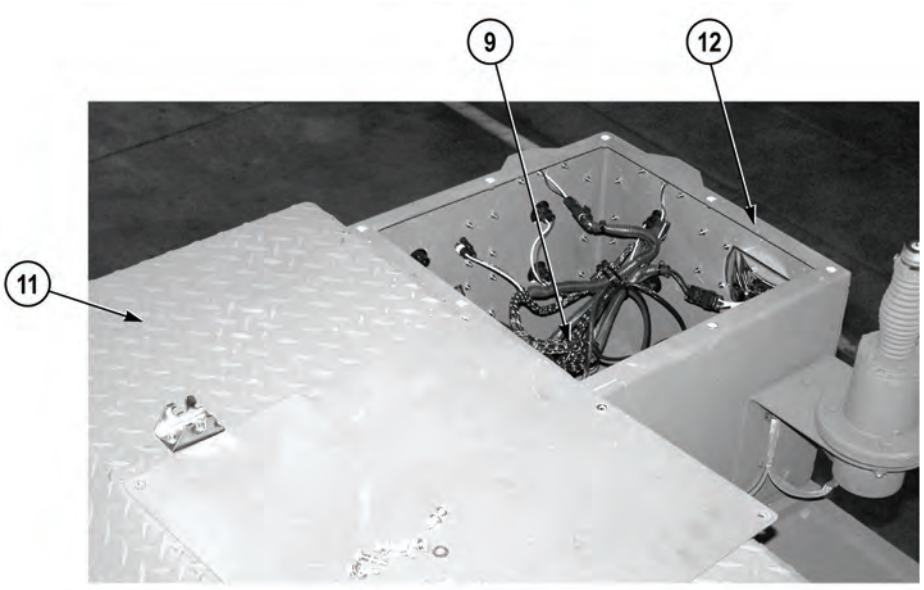
3. Disconnect striplight connector (5) from driver side body wire harness connector (6).



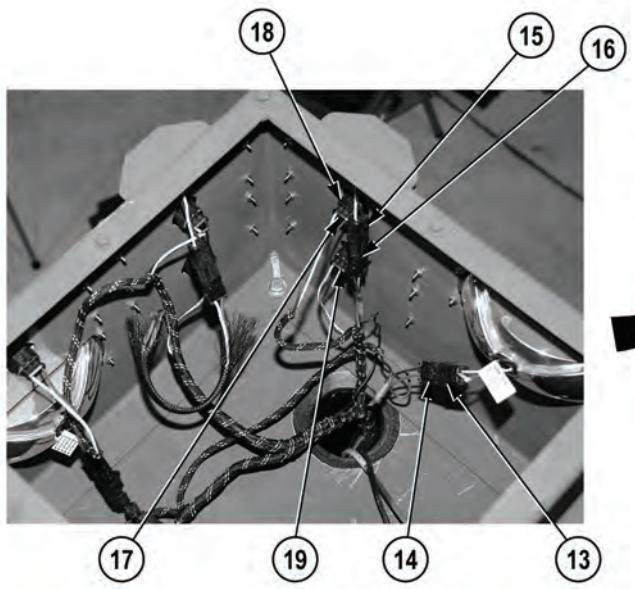
4. Disconnect driver side body wire harness connector (7) from front driver side top stowage compartment door switch (8).

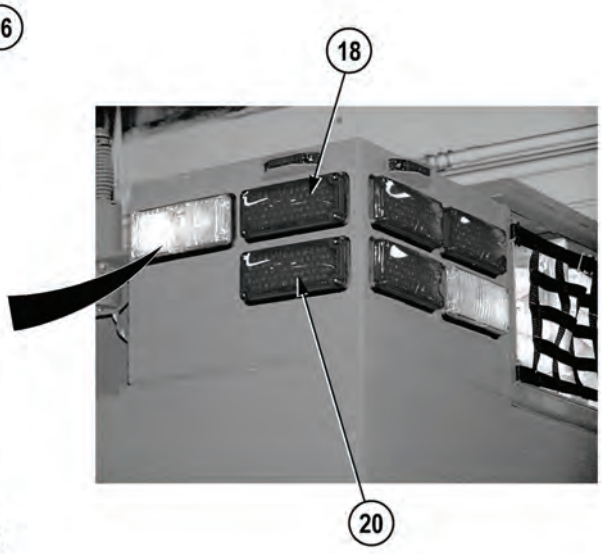


5. Remove driver side body wire harness (9) from front driver side top stowage compartment (10), routing harness into hose bed assembly (11).

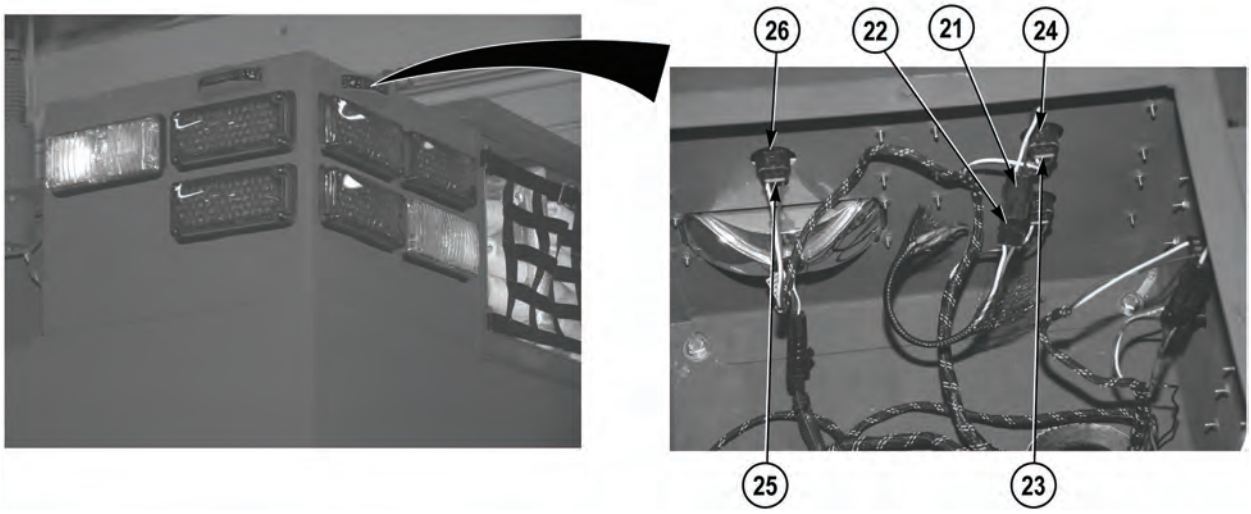


6. Remove driver side body wire harness (9) from hose bed assembly (11), routing harness into driver side rear bezel box (12).

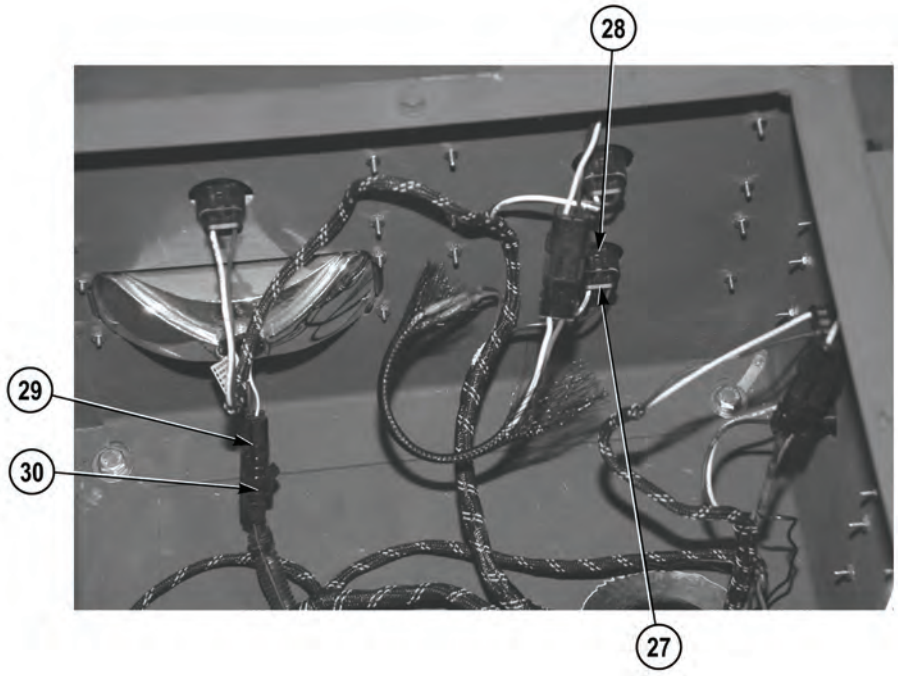




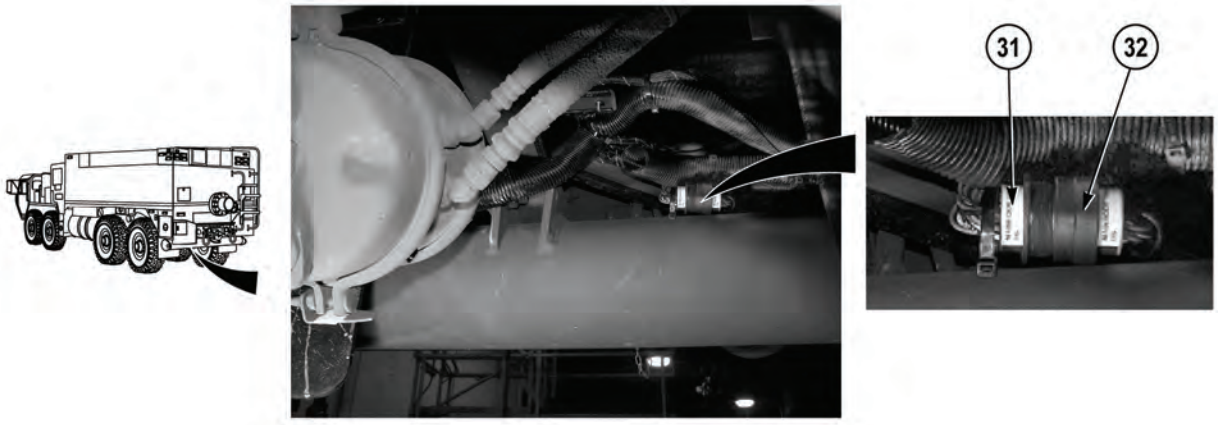
7. Disconnect scene light connector (13) from driver side body wire harness connector (14).
8. Disconnect clearance light connector (15) from driver side body wire harness connector (16).
9. Disconnect driver side body wire harness connector (17) from (top upper) side warning light (18).
10. Disconnect driver side body wire harness connector (19) from (bottom upper) side warning light (20).



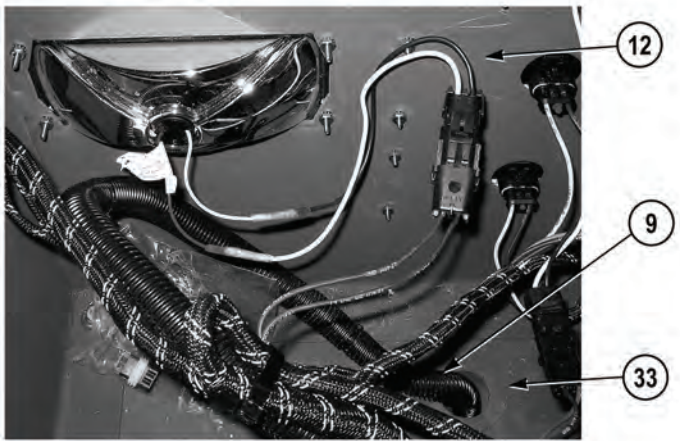
11. Disconnect clearance light connector (21) from driver side body wire harness connector (22).
12. Disconnect driver side body wire harness connector (23) from (top outer) upper rear warning light (24).
13. Disconnect driver side body wire harness connector (25) from (top inner) upper rear warning light (26).



14. Disconnect driver side body wire harness connector (27) from (bottom) upper rear warning light (28).
15. Disconnect scene light connector (29) from driver side body wire harness connector (30).



16. Disconnect driver side body wire harness connector (31) from main wire harness connector (32).



17. With the aid of an assistant, remove driver side body wire harness (9) from onboard water tank (33), routing harness into driver side rear light bezel box (12).
18. Remove driver side body wire harness (9) from vehicle.

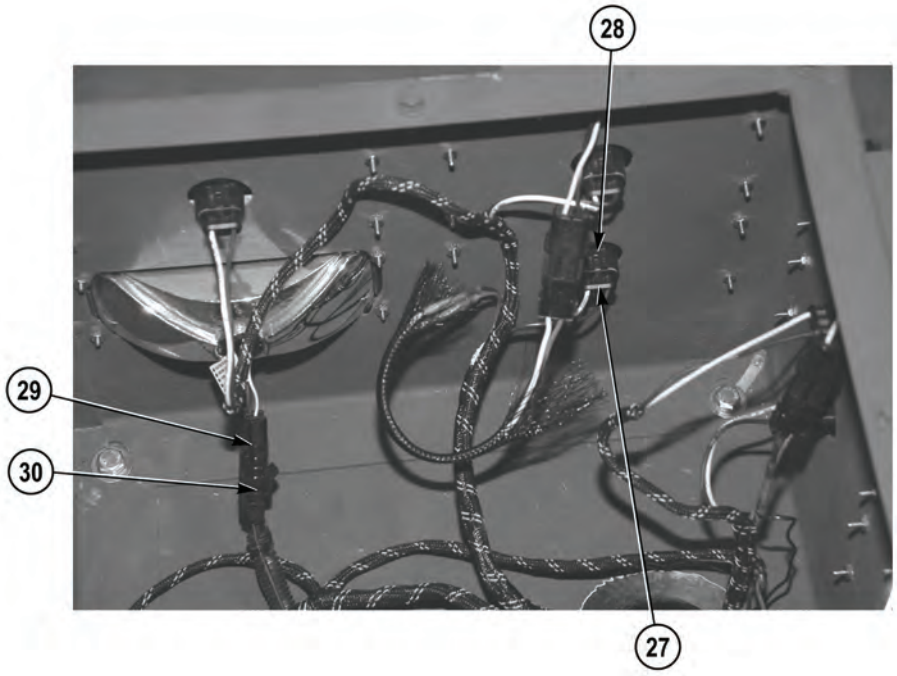
END OF TASK

INSTALLATION

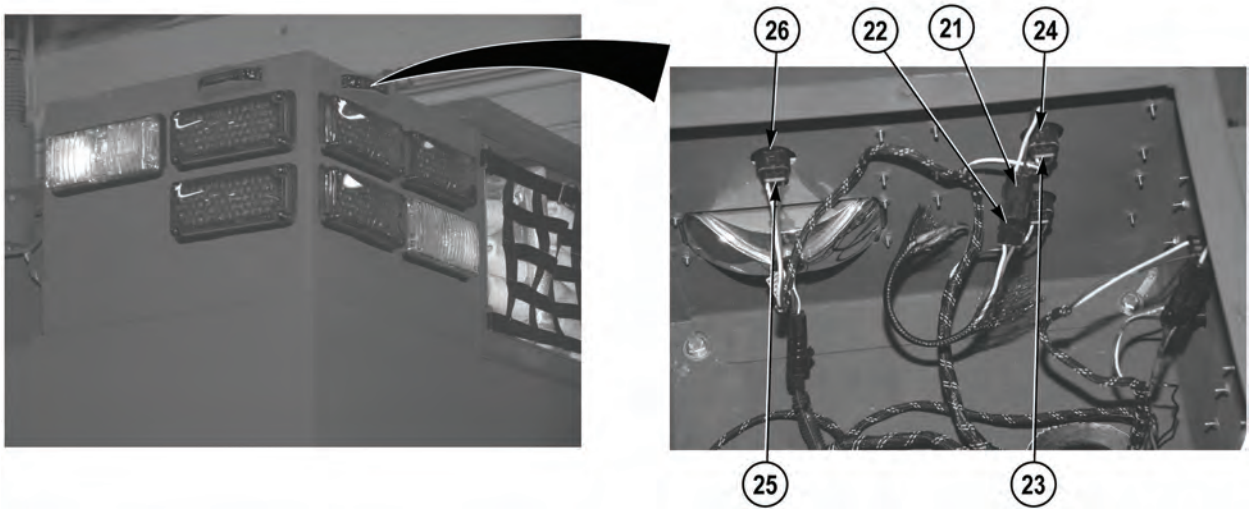
NOTE

- Install cable ties and cushion clips as required.
- Begin routing of driver side body wire harness at driver side rear light bezel box.

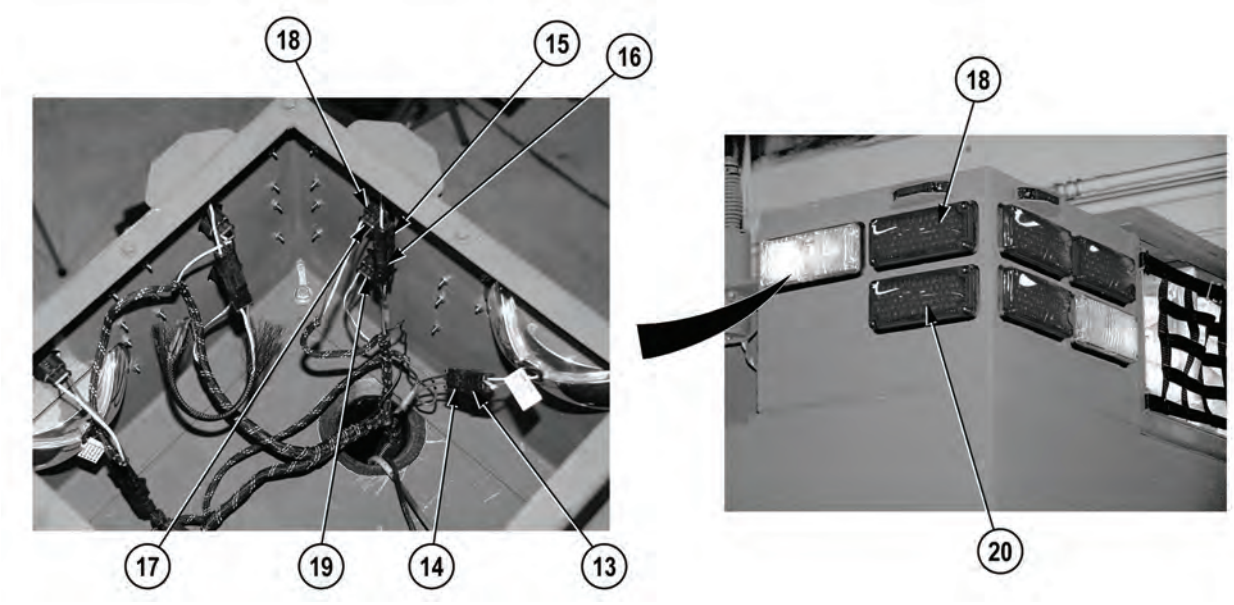
1. Install driver side body wire harness (9) on vehicle.
2. With the aid of an assistant, route and install driver side body wire harness (9) on onboard water tank (33).
3. Connect driver side body wire harness connector (31) on main wire harness connector (32).



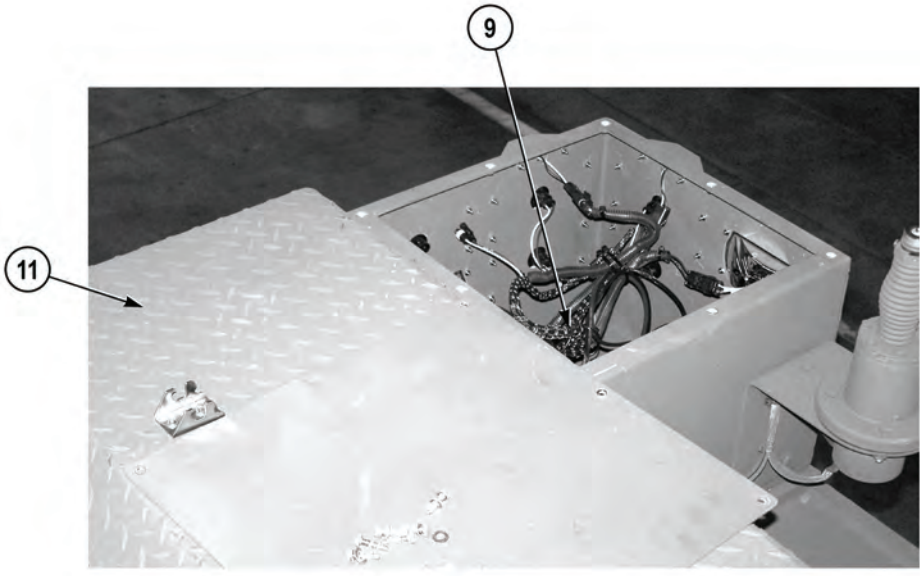
4. Connect driver side body wire harness connector (30) to scene light connector (29).
5. Connect driver side body wire harness connector (27) on (bottom) upper rear warning light (28).



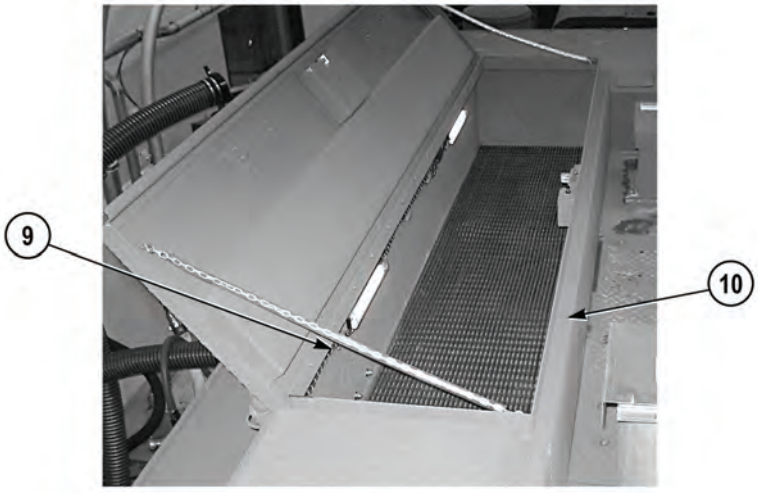
6. Connect driver side body wire harness connector (25) on (top inner) upper rear warning light (26).
7. Connect driver side body wire harness connector (23) on (top outer) upper rear warning light (24).
8. Connect driver side body wire harness connector (22) to clearance light connector (21).



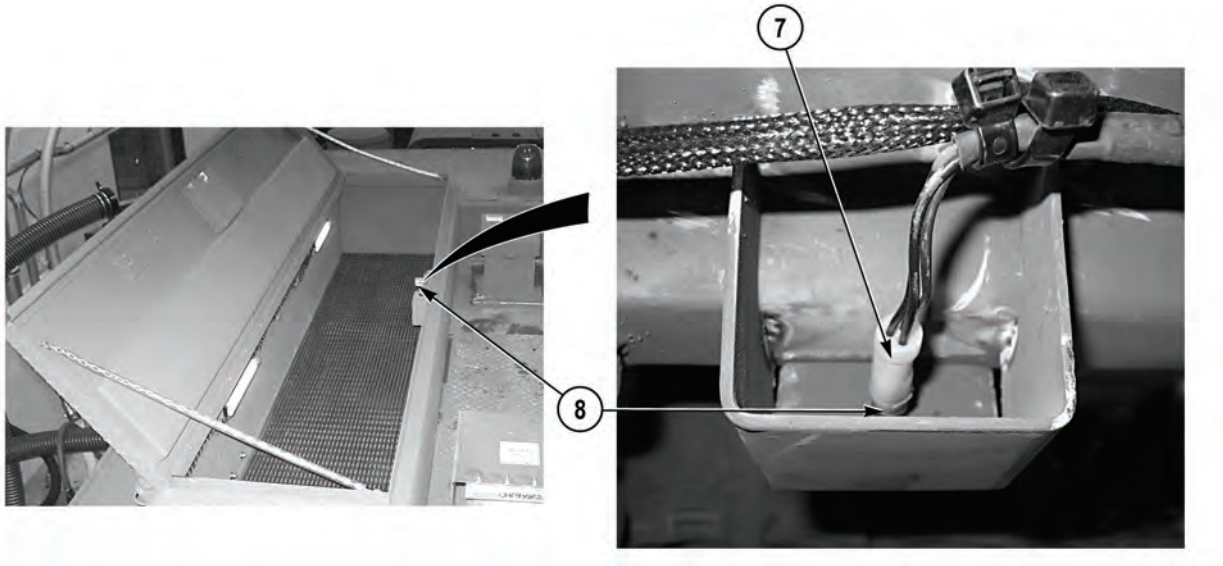
9. Connect driver side body wire harness connector (19) on (bottom upper) side warning light (20).
10. Connect driver side body wire harness connector (17) on (top upper) side warning light (18).
11. Connect driver side body wire harness connector (16) to clearance light connector (15).
12. Connect driver side body wire harness connector (14) to scene light connector (13).



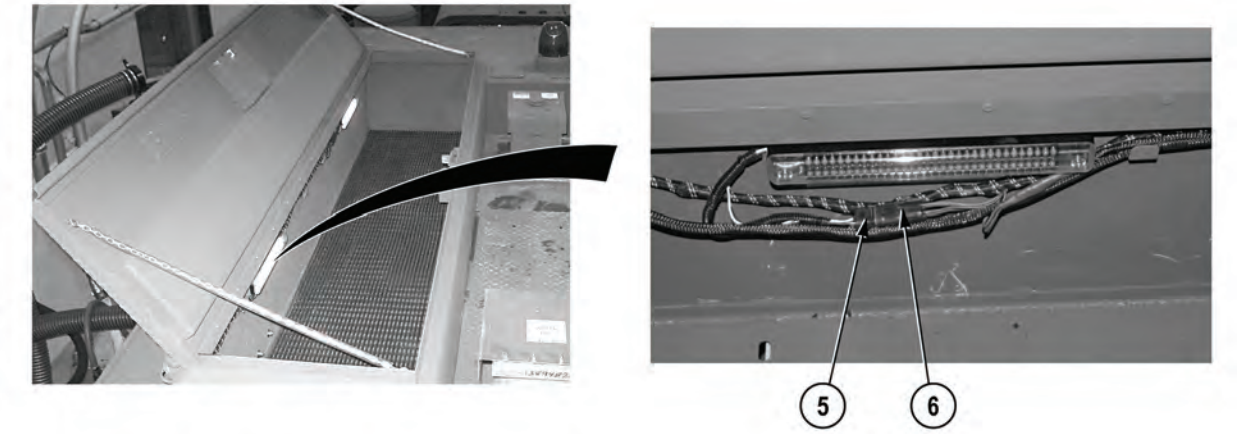
13. Route and install driver side body wire harness (9) on hose bed assembly (11).



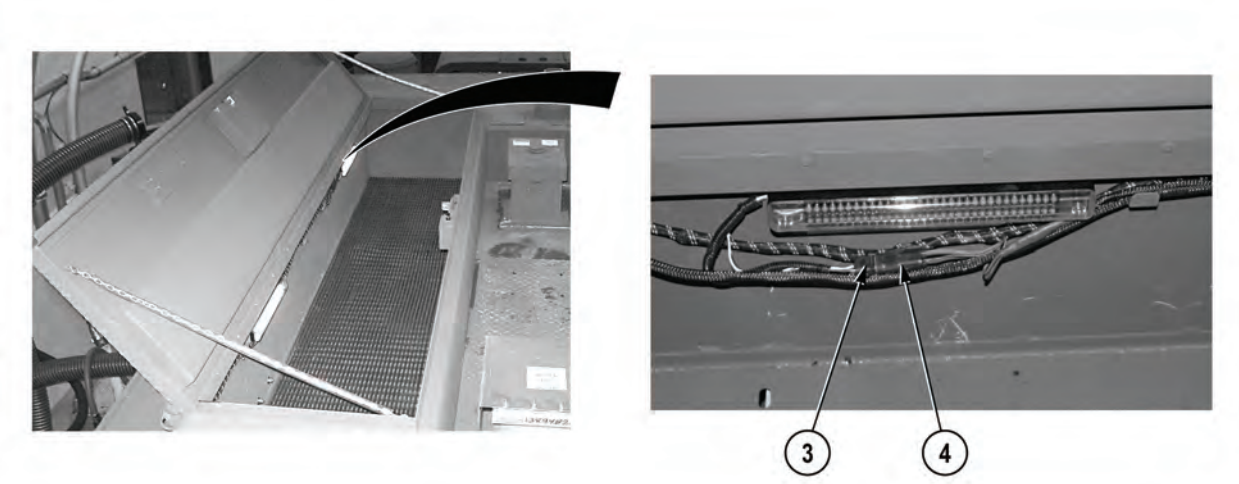
14. Route and install driver side body wire harness (9) on front driver side top stowage compartment (10).



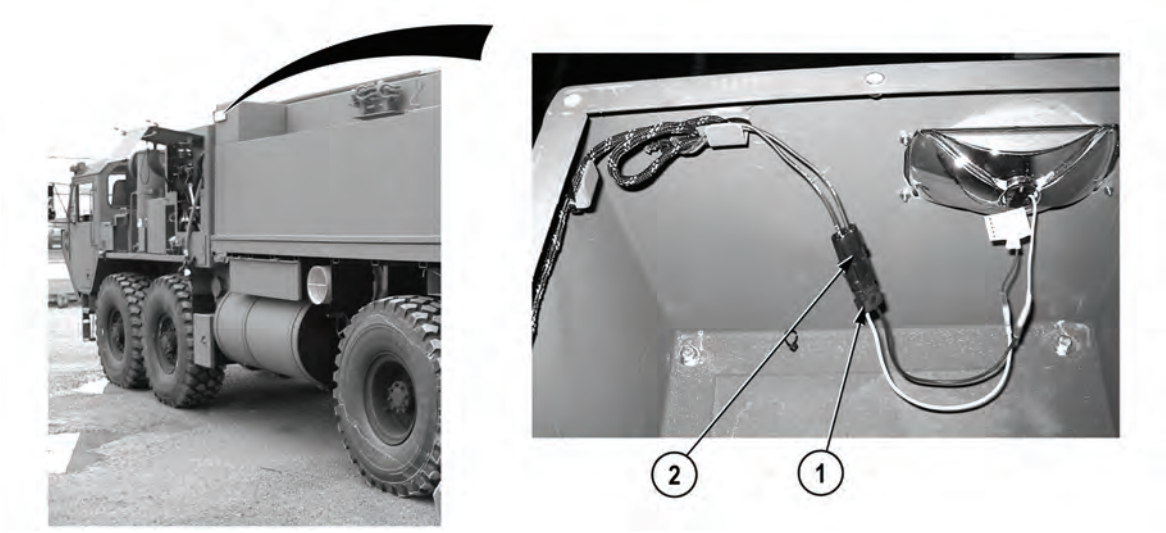
15. Connect driver side body wire harness connector (7) on front driver side top stowage compartment door switch (8).



16. Connect driver side body wire harness connector (6) to striplight connector (5).



17. Connect driver side body wire harness connector (4) to striplight connector (3).



18. Connect driver side body wire harness connector (2) to scene light connector (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install front and rear driver side light bezel covers (WP 0337)
2. Close driver side top stowage compartment door (WP 0008)
3. Install driver side lower rear stowage compartment (WP 0357)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

LIGHTBAR FLASHER UNIT REPLACEMENT

INITIAL SETUP:

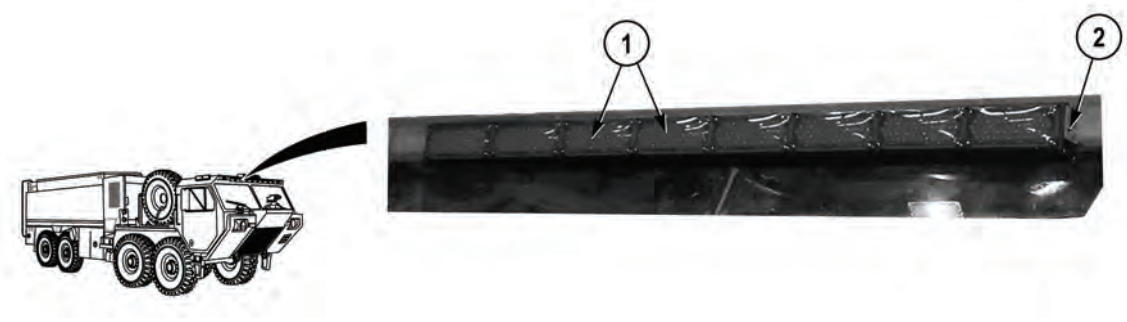
Tools and Special Tools
Drill, Electric, Portable 1/4 in. (WP 0399, Item 5)
Drill Set, Twist (WP 0399, Item 6)
Tool Kit, Blind Rivet (WP 0399, Item 16)

Materials/Parts
Tags, Identification (WP 0401, Item 22)

References
WP 0224

Equipment Conditions
Cab front lightbar removed (WP 0222)

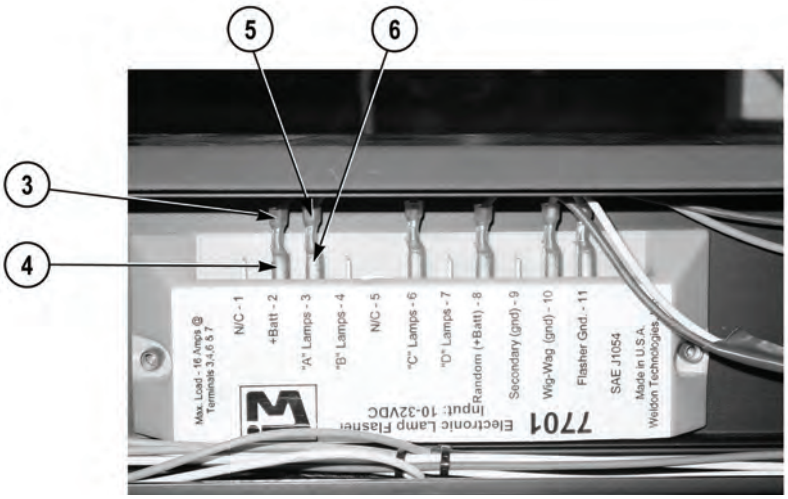
REMOVAL



NOTE

Lights removed in Step (1) are 3rd and 4th lights from driver side of vehicle.

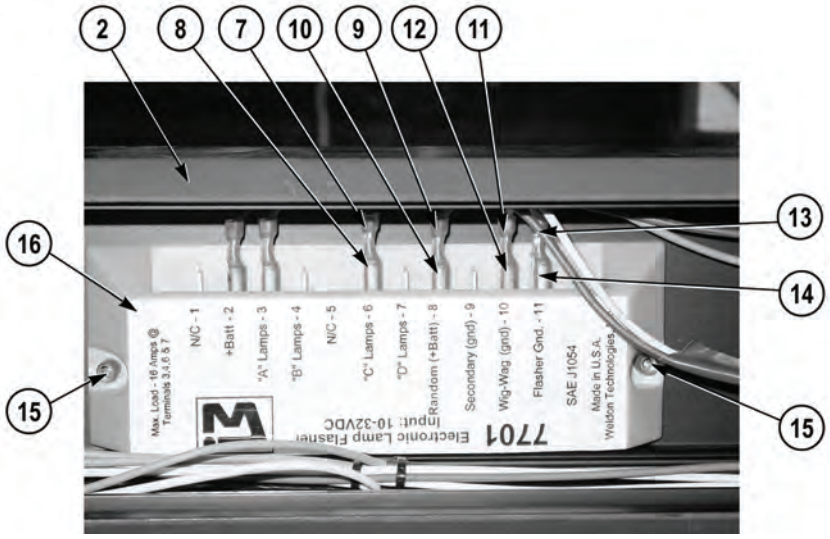
1. Remove two lights (1) from cab front lightbar (2) (WP 0224).



NOTE

Tag and mark wires prior to removal to ensure proper installation.

2. Remove red wire (3) from lightbar flasher unit, terminal 2 (4).
3. Remove green wire (5) from lightbar flasher unit, terminal 3 (6).

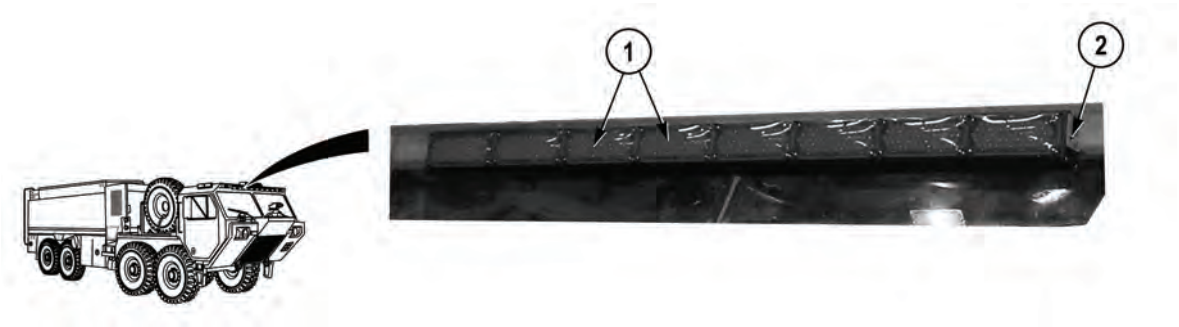


4. Remove blue wire (7) from lightbar flasher unit, terminal 6 (8).
5. Remove red wire (9) from lightbar flasher unit, terminal 8 (10).
6. Remove white wire (11) from lightbar flasher unit, terminal 10 (12).
7. Remove white wire (13) from lightbar flasher unit, terminal 11 (14).
8. Remove two rivets (15) and lightbar flasher unit (16) from cab front lightbar (2).

END OF TASK

INSTALLATION

1. Install lightbar flasher unit (16) on cab front lightbar (2) with two rivets (15).
2. Install white wire (13) on lightbar flasher unit, terminal 11 (14).
3. Install white wire (11) on lightbar flasher unit, terminal 10 (12).
4. Install red wire (9) on lightbar flasher unit, terminal 8 (10).
5. Install blue wire (7) on lightbar flasher unit, terminal 6 (8).
6. Install green wire (5) on lightbar flasher unit, terminal 3 (6).
7. Install red wire (3) on lightbar flasher unit, terminal 2 (4).



8. Install two lights (1) on front cab front lightbar (2) (WP 0224).

END OF TASK

FOLLOW-ON MAINTENANCE

Install cab front lightbar (WP 0222).

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PRESSURE GOVERNOR ECU REPLACEMENT

INITIAL SETUP:

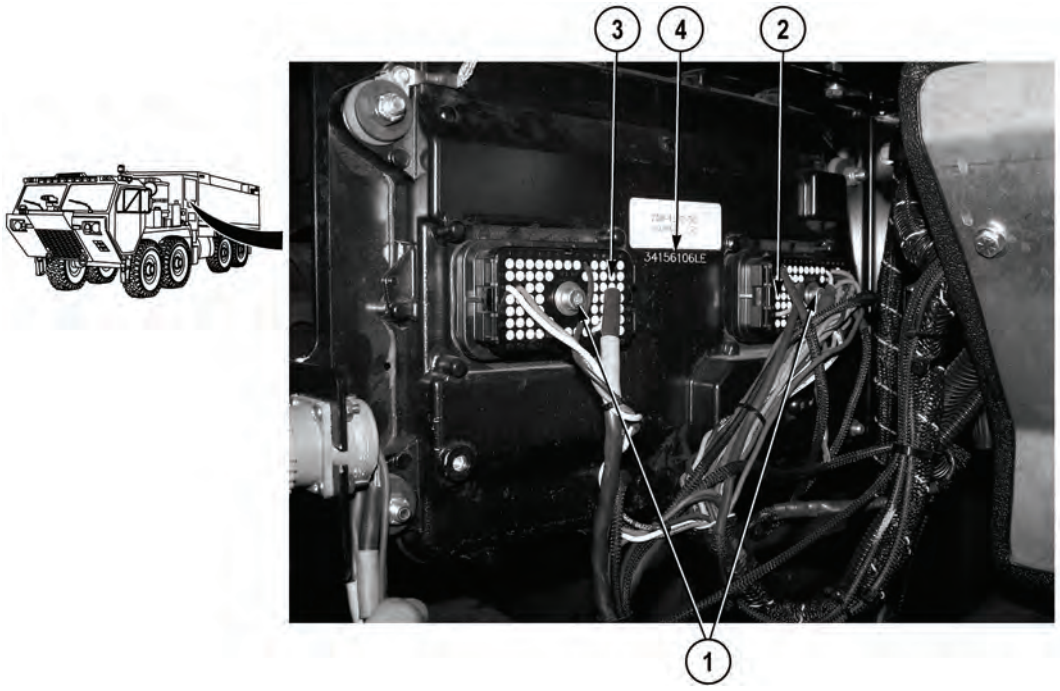
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Compound, Sealing (WP 0401, Item 10)
Lockwasher (1)
Locknut (4)
Lockwasher (4)
Lockwasher (4)

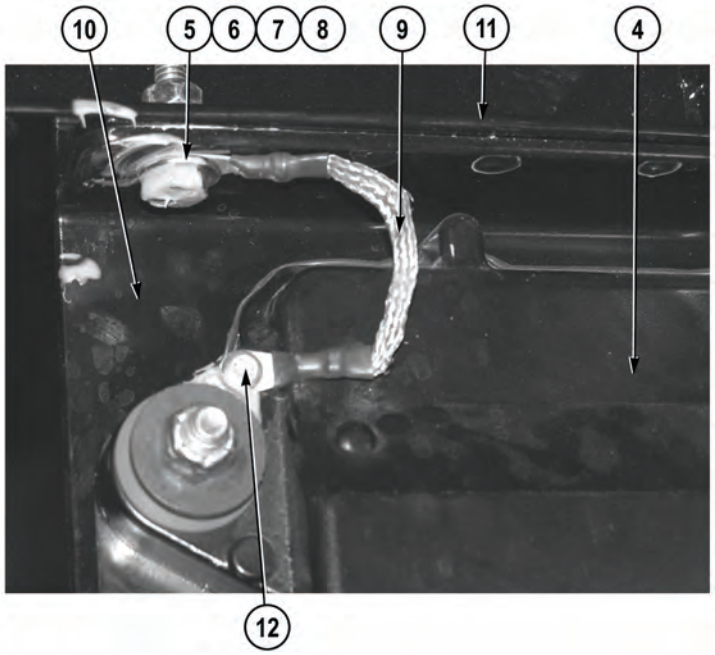
References
WP 0303
WP 0392, Fig. 36

Equipment Conditions
Pump house panels E and L removed (WP 0341)

REMOVAL

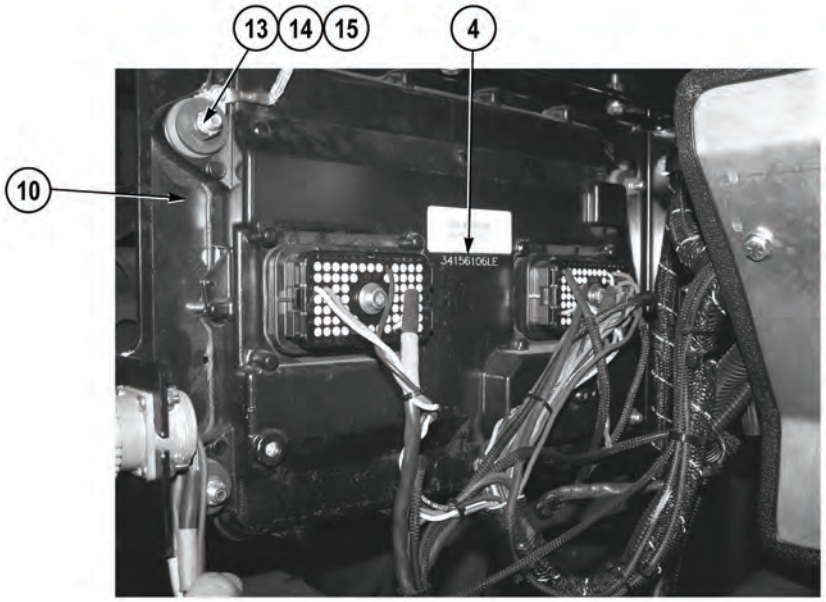


1. Loosen two screws (1) and remove J1 connector (2) and J2 connector (3) from pressure governor ECU (4).

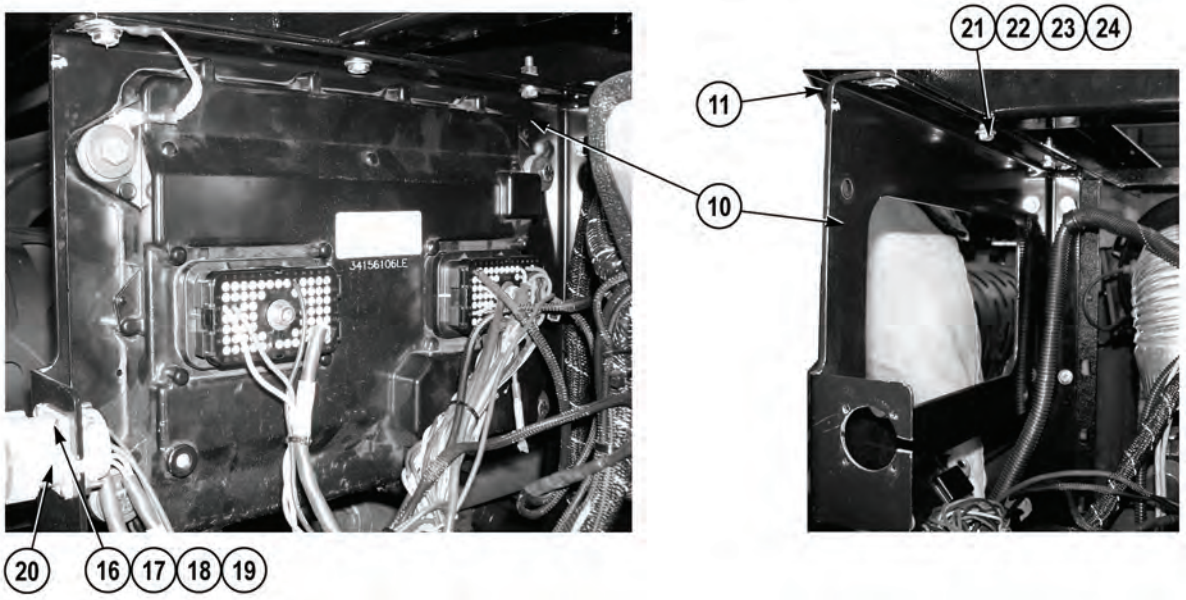


2. Remove nut (5), lockwasher (6), two washers (7), screw (8), and ground strap (9) from bracket (10) and pump house frame (11). Discard lockwasher.

3. Remove screw (12) and ground strap (9) from pressure governor ECU (4).



4. Remove four locknuts (13), eight washers (14), four screws (15), and pressure governor ECU (4) from bracket (10). Discard locknuts.



NOTE

Perform Steps (5) and (6) if bracket needs to be removed.

5. Remove four locknuts (16), lockwashers (17), washers (18), screws (19), and pressure governor ECU service connector (20) from bracket (10). Discard locknuts and lockwashers.
6. Remove four nuts (21), lockwashers (22), eight washers (23), four screws (24), and bracket (10) from pump house frame (11). Discard lockwashers.

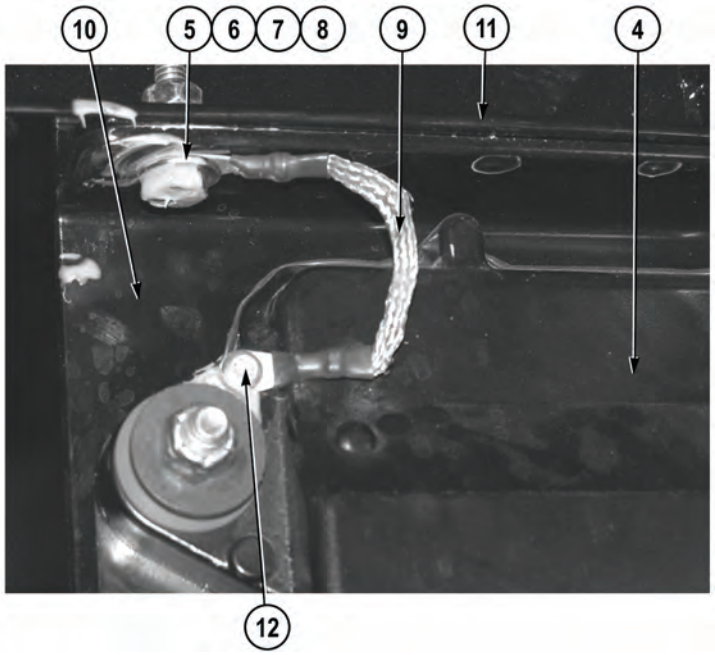
END OF TASK

INSTALLATION

NOTE

Perform Steps (1) and (2) if bracket was removed.

1. Install bracket (10) on pump house frame (11) with four screws (24), eight washers (23), four lockwashers (22), and nuts (21).
2. Install pressure governor ECU service connector (20) on bracket (10) with four screws (19), washers (18), lockwashers (17), and locknuts (16).
3. Install pressure governor ECU (4) on bracket (10) with four screws (15), eight washers (14), and four locknuts (13).



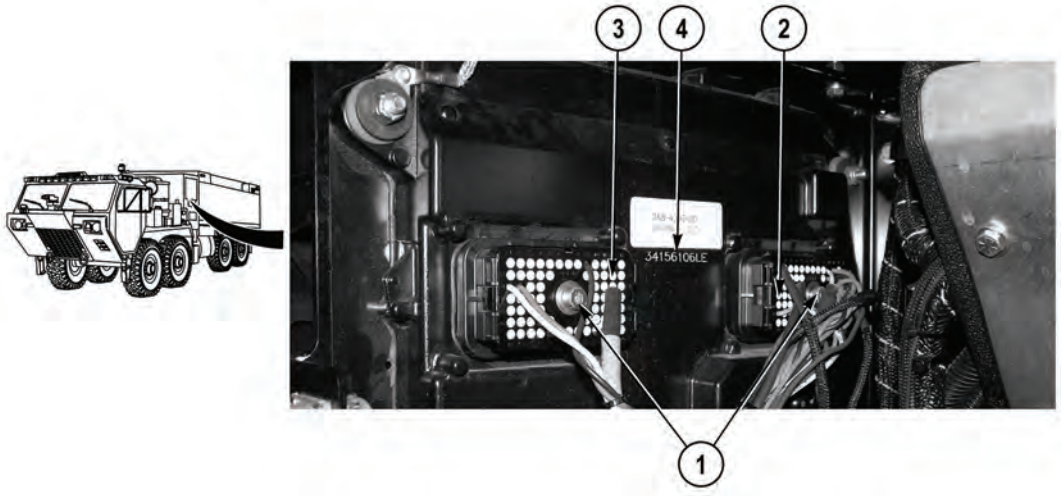
4. Install ground strap (9) on pressure governor ECU (4) with screw (12).
5. Install ground strap (9) on pump house frame (11) and pressure governor ECU bracket (10) with screw (8), two washers (7), lockwasher (6), and nut (5).

WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

6. Apply sealing compound to head of screw (8), washer (7), and ground strap (9).



7. Install J2 connector (3) and J1 connector (2) on pressure governor ECU (4) and tighten two screws (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Install pump house panels E and L (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

INTERCOM WIRE HARNESS REPLACEMENT

INITIAL SETUP:

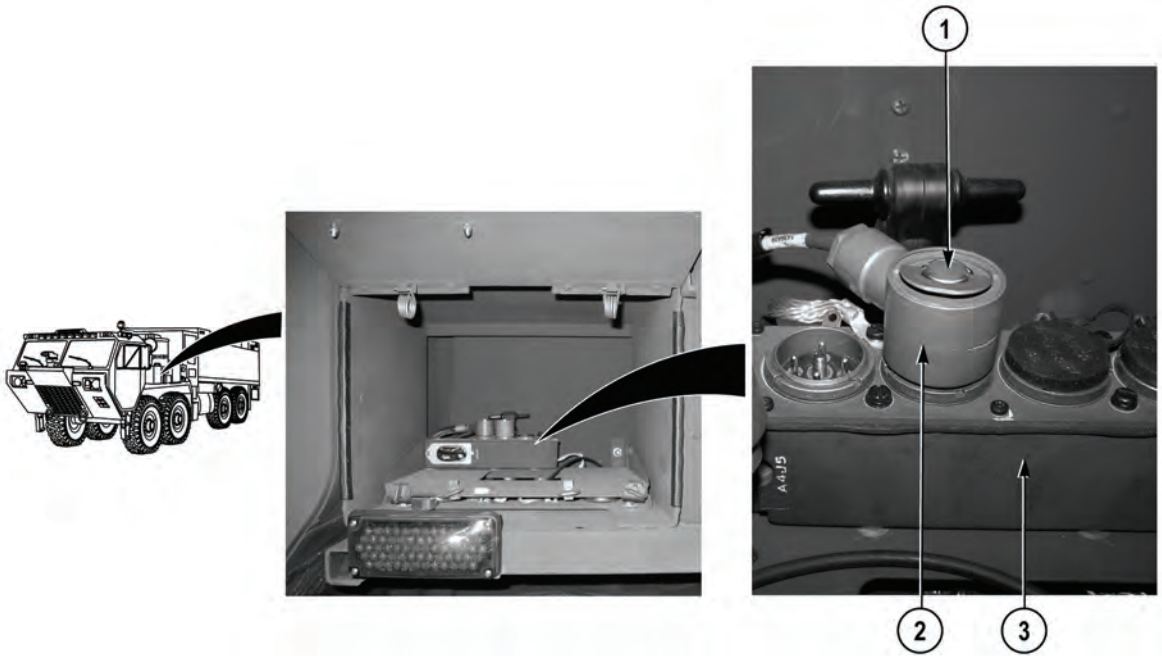
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)

References
TM 9-2320-315-14&P
TM 11-5820-890-10

Equipment Conditions
Intercom removed (WP 0255)

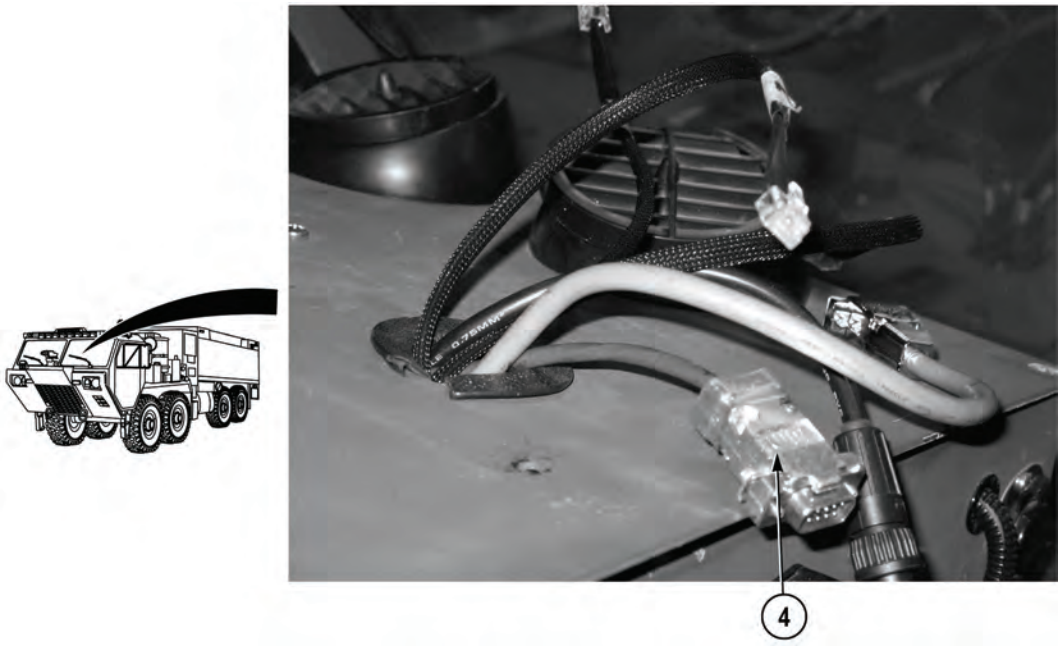
SINCGARS INTERFACE WIRE HARNESS REMOVAL



NOTE

- Tag and mark wires prior to removal to ensure proper installation.
- Note routing of intercom wire harness prior to removal to ensure proper installation.
- Note position and remove cable ties, split loom, and cushion clips as required.

1. Remove SINCGARS receiver transmitter and power adapter from electronic mounting base (TM 11-5820-890-10).
2. Loosen thumbscrew (1) and remove intercom wire harness connector (2) from electronic mounting base (3).



3. Remove intercom wire harness (4) from vehicle.

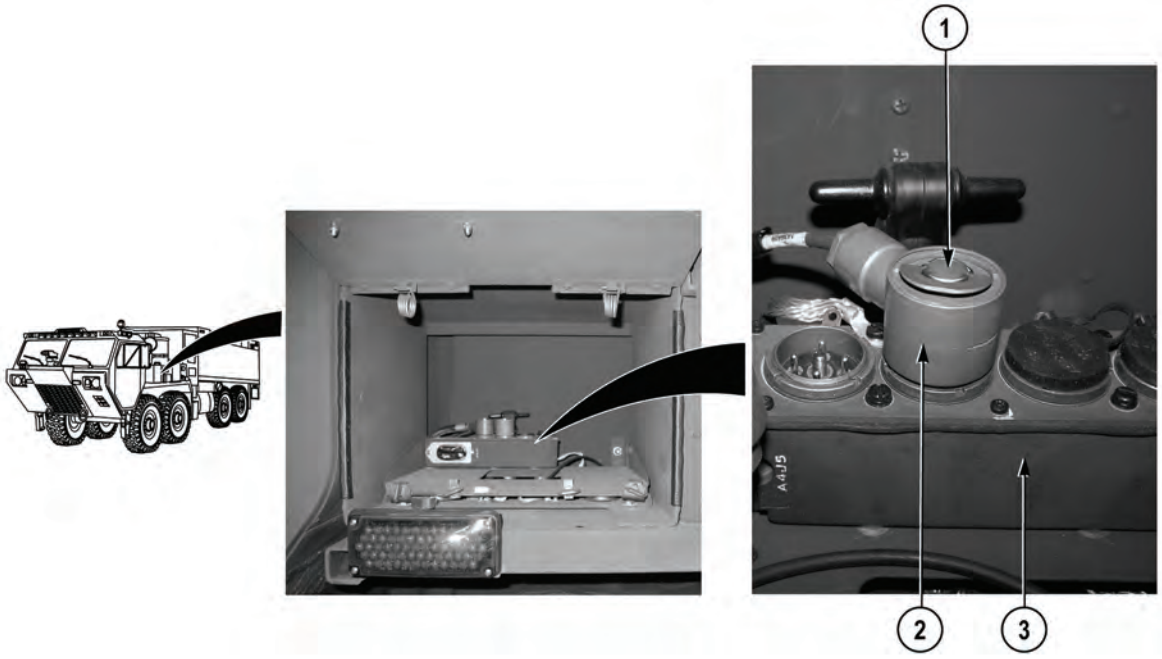
END OF TASK

SINCGARS INTERFACE WIRE HARNESS INSTALLATION

NOTE

- Route intercom wire harness on vehicle as noted prior to removal.
- Install cable ties, split loom, and cushion clips as required.

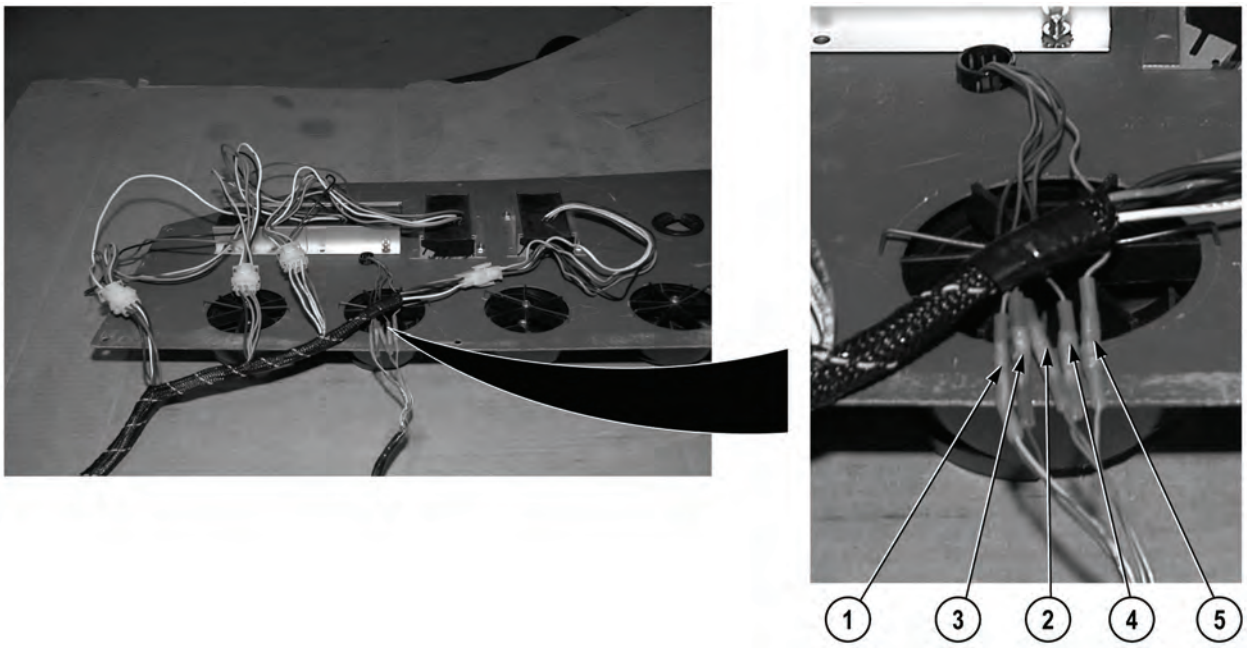
1. Install intercom wire harness (4) on vehicle.



2. Install intercom wire harness connector (2) on electronic mounting base (3) with thumbscrew (1).
3. Install power adapter and SINCGARS receiver transmitter on electronic mounting base (TM 11-5820-890-10).

END OF TASK

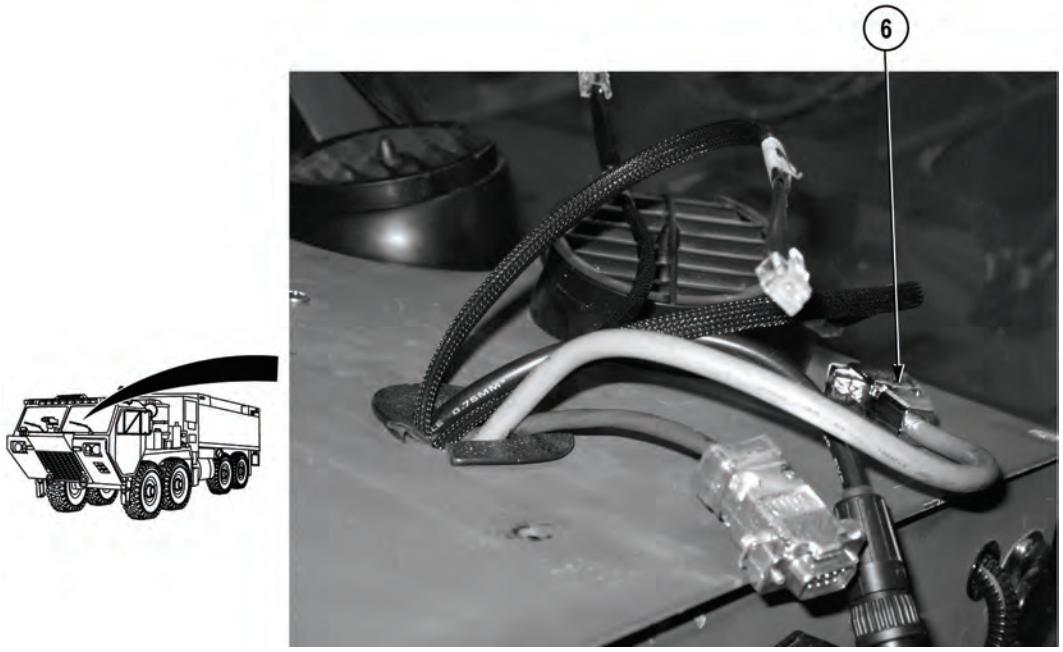
TWO-WAY RADIO INTERFACE WIRE HARNESS REMOVAL



NOTE

- Tag and mark wires prior to removal to ensure proper installation.
- Note routing of intercom wire harness prior to removal to ensure proper installation.
- Note position and remove cable ties as required.

1. Cut yellow wire (1), brown wire (2), blue wire (3), purple wire (4), and orange wire (5) (TM 9-2320-315-14&P).



2. Remove intercom wire harness (6) from vehicle.

END OF TASK

TWO-WAY RADIO INTERFACE WIRE HARNESS INSTALLATION

NOTE

- Route intercom wire harness as noted prior to removal.
- Install cable ties as required.

1. Install intercom wire harness (6) on vehicle.
2. Repair yellow wire (1), brown wire (2), blue wire (3), purple wire (4), and orange wire (5) (TM 9-2320-315-14&P).

FOLLOW-ON MAINTENANCE

Install intercom (WP 0255)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

LIGHTBAR CABLE ASSEMBLY BRANCH REPLACEMENT

INITIAL SETUP:

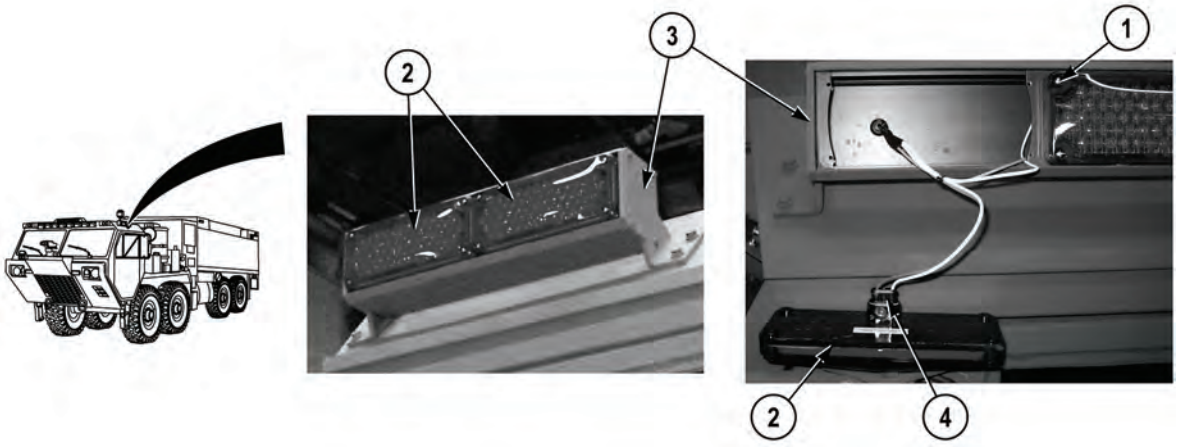
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)
Lockwasher (1)

References
WP 0392, Fig. 27

Equipment Conditions
Cab front lightbar removed driver side only (WP 0222)

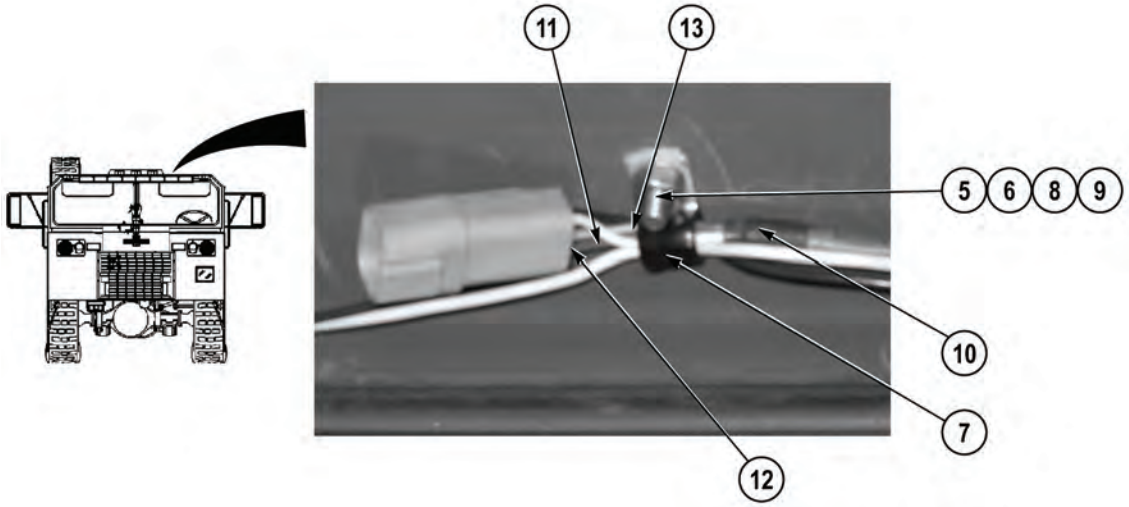
REMOVAL



NOTE

Both lightbar cable assembly branches are replaced the same way. Driver side shown.

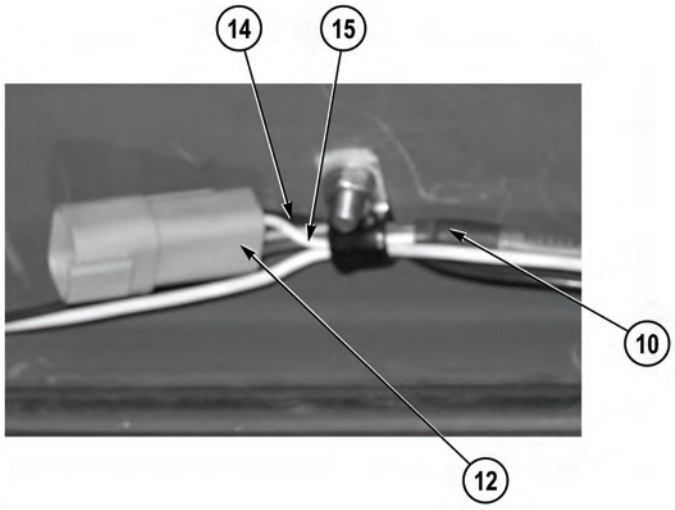
1. Remove eight screws (1) and two lights (2) from cab side lightbar (3).
2. Disconnect two lightbar cable assembly connectors (4) from lights (2).



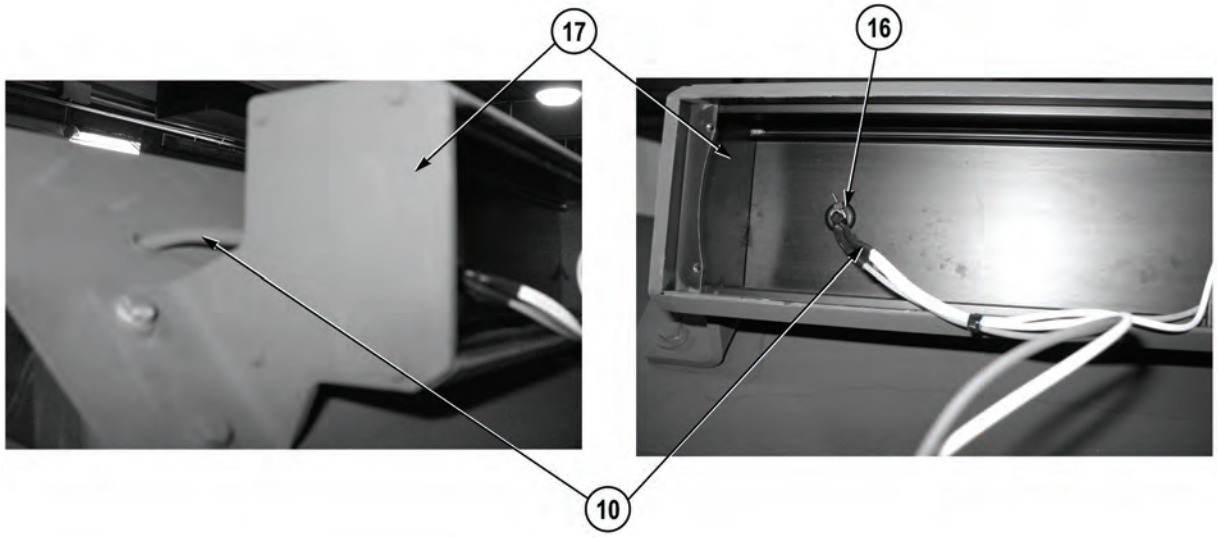
NOTE

- Tag and mark wires prior to removal to ensure proper installation.
- Remove cable ties as required.

3. Remove nut (5), lockwasher (6), cushion clip (7), washer (8), and screw (9) from vehicle. Discard lockwasher.
4. Cut lightbar cable assembly branch (10) red wire (11) from connector (12) (TM 9-2320-315-14&P).
5. Cut lightbar cable assembly branch (10) green wire (13) from connector (12) (TM 9-2320-315-14&P).



6. Cut lightbar cable assembly branch (10) black wire (14) from connector (12) (TM 9-2320-315-14&P).
7. De-pin lightbar cable assembly branch (10) white wire (15) from connector (12) (TM 9-2320-315-14&P).



8. Remove lightbar cable assembly branch (10) and grommet (16) from cab side lightbar (17).

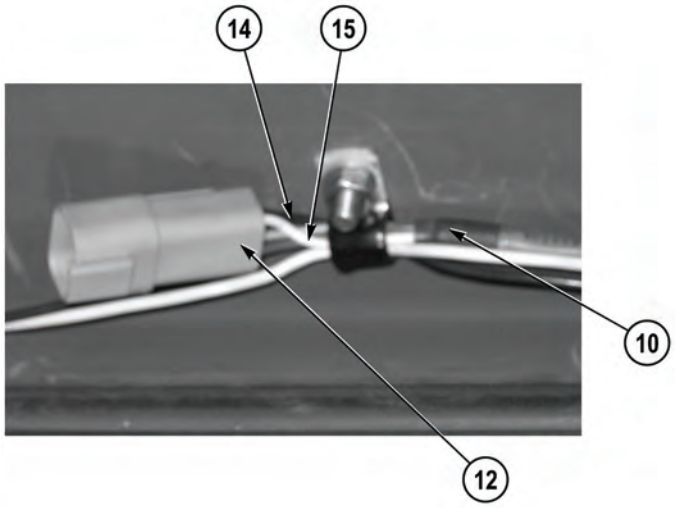
END OF TASK

INSTALLATION

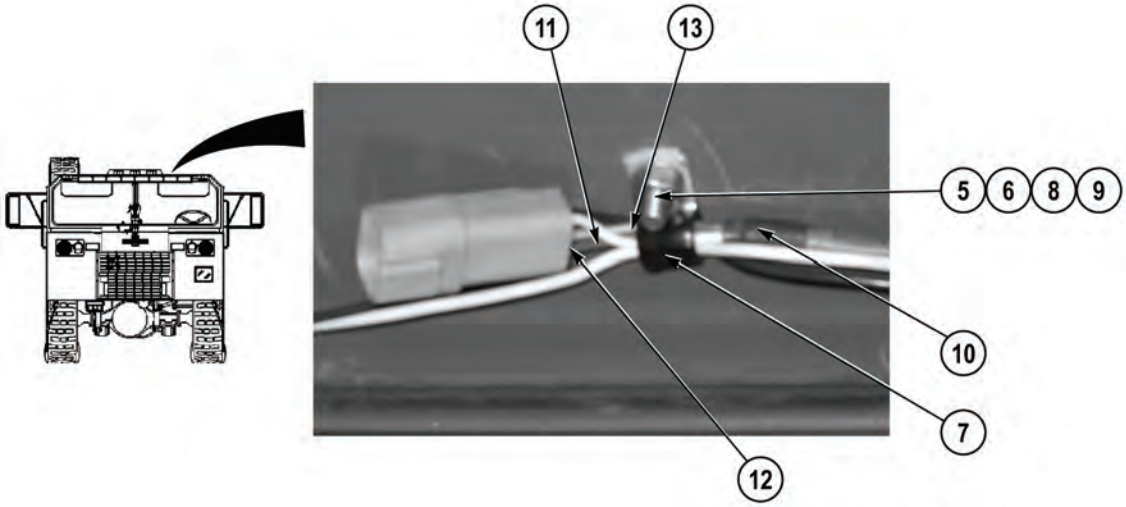
NOTE

- Both lightbar cable assembly branches are installed the same way. Driver side shown.
- Install cable ties as required.

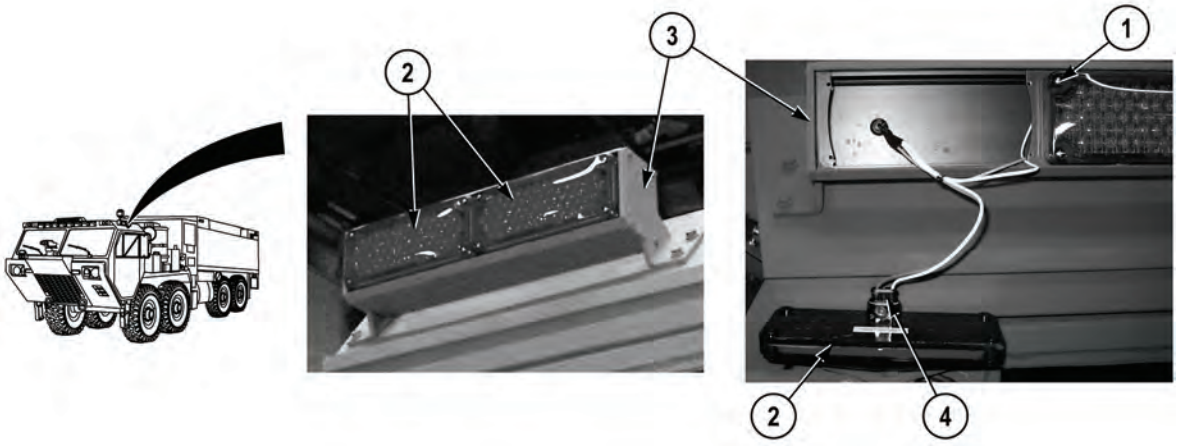
1. Install grommet (16) and lightbar cable assembly branch (10) on cab side lightbar (17).



2. Repair lightbar cable assembly branch (10) white wire (15) on connector (12) (TM 9-2320-315-14&P).
3. Repair lightbar cable assembly branch (10) black wire (14) on connector (12).



4. Repair lightbar cable assembly branch (10) green wire (13) on connector (12) (TM 9-2320-315-14&P).
5. Repair lightbar cable assembly branch (10) red wire (11) on connector (12) (TM 9-2320-315-14&P).
6. Position screw (9) on vehicle with washer (8), cushion clip (7), lockwasher (6), and nut (5).



7. Connect two lights (2) on lightbar cable assembly connectors (4).
8. Install two lights (2) on cab side lightbar (3) with eight screws (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Install cab front lightbar driver side only (WP 0222)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

LIGHTBAR CABLE ASSEMBLY REPLACEMENT

INITIAL SETUP:

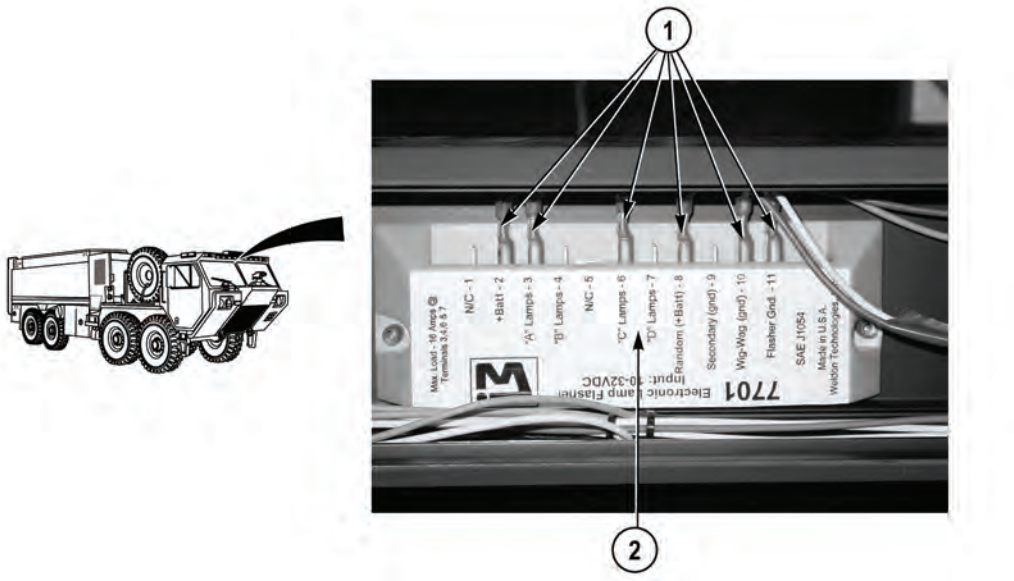
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)

References
TM 9-2320-315-14&P
WP 0288
WP 0392, Fig. 27

Equipment Conditions
Cab front lightbar removed (WP 0222)

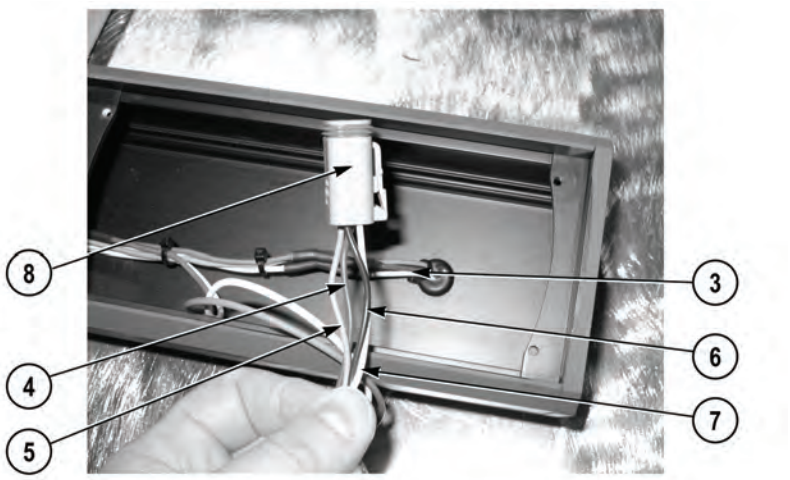
REMOVAL



NOTE

- Tag and mark wires prior to removal to ensure proper installation.
- Note routing of wires prior to removal to ensure proper installation.
- Remove cable ties as required.

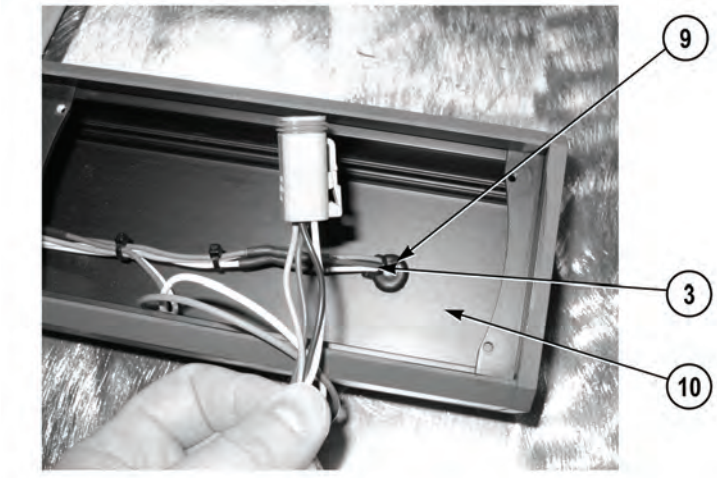
1. Remove six wires (1) from lightbar flasher unit (2) (WP 0288).



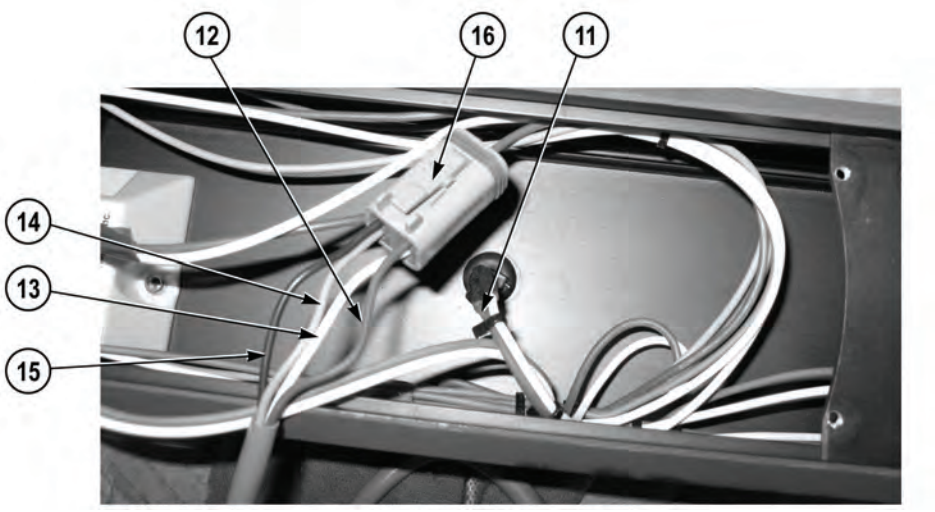
NOTE

Perform Steps (2) through (3) to remove driver side lightbar end cable.

2. Cut driver side lightbar end cable (3) red wire (4), green wire (5), black wire (6), and white wire (7) from connector (8) (TM 9-2320-315-14&P).



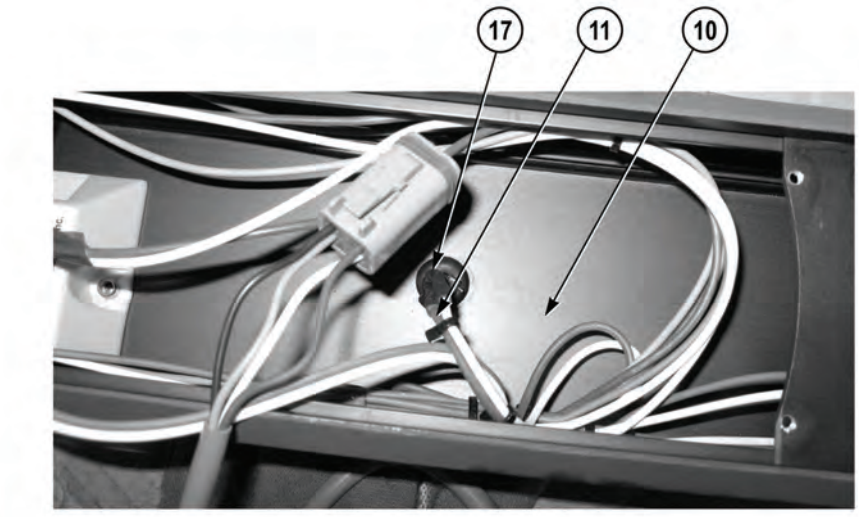
3. Remove driver side lightbar end cable (3) and grommet (9) from cab front lightbar (10).



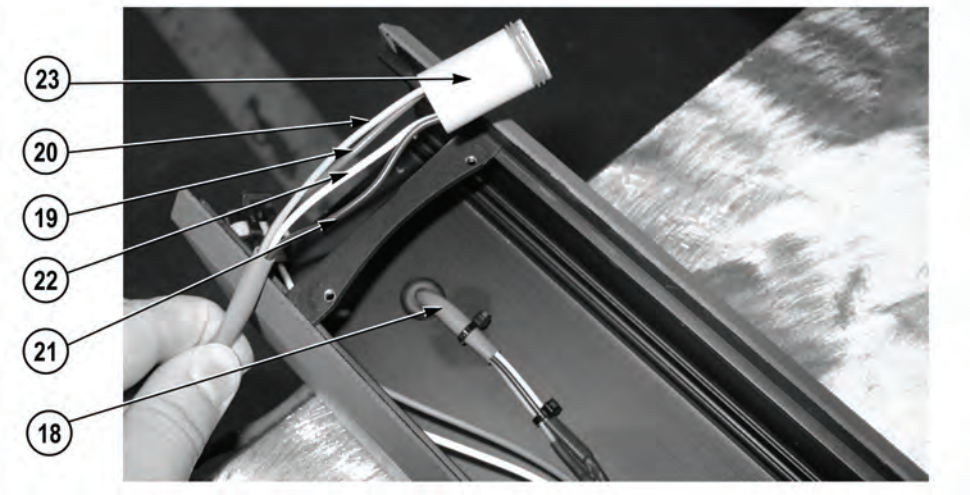
NOTE

Perform Steps (4) and (5) to remove center lightbar cable assembly.

4. Cut center cable (11) red wire (12), white wire (13), green wire (14), and black wire (15) from connector (16) (TM 9-2320-315-14&P).



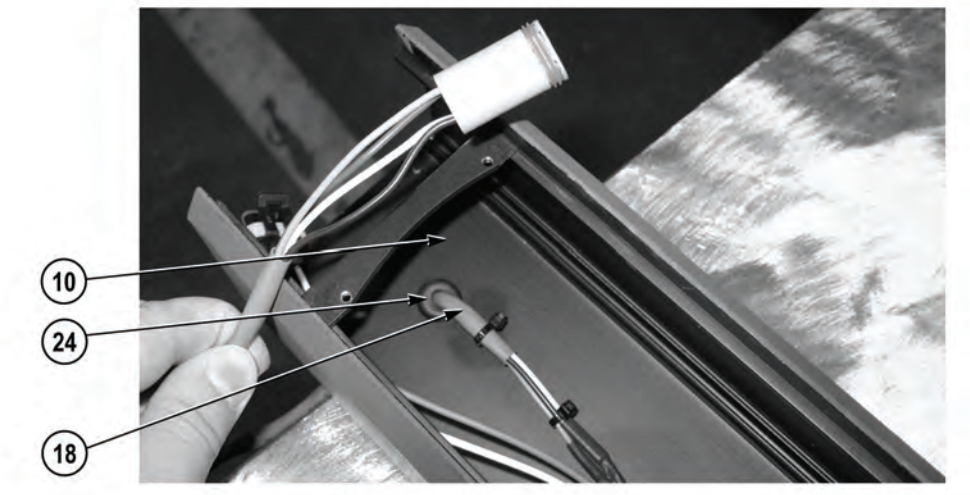
5. Remove lightbar center cable (11) and grommet (17) from cab front lightbar (10).



NOTE

Perform Steps (6) and (7) to remove passenger side lightbar cable.

6. Cut passenger side lightbar end cable (18), red wire (19), green wire (20), black wire (21), and white wire (22) from connector (23) (TM 9-2320-315-14&P).



7. Remove passenger side lightbar end cable (18) and grommet (24) from cab front lightbar (10).

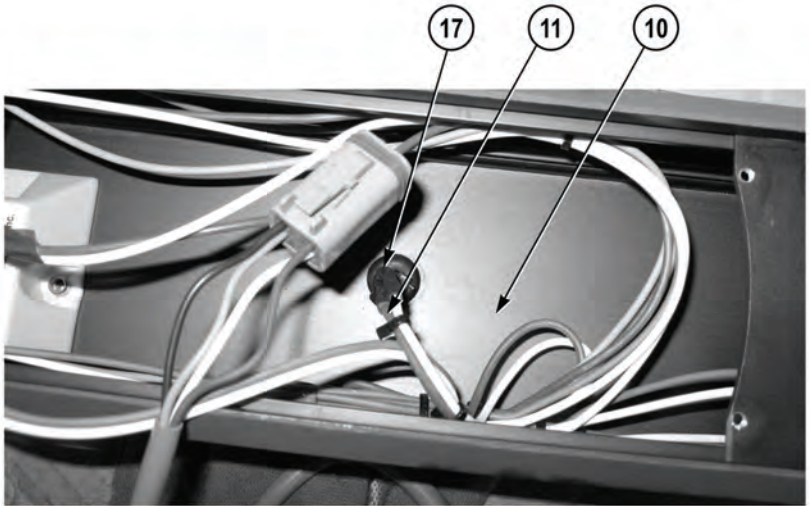
END OF TASK

INSTALLATION

NOTE

- Perform Steps (1) and (2) to install passenger side lightbar end cable.
- Install cable ties as required.
- Route wires as noted prior to removal.

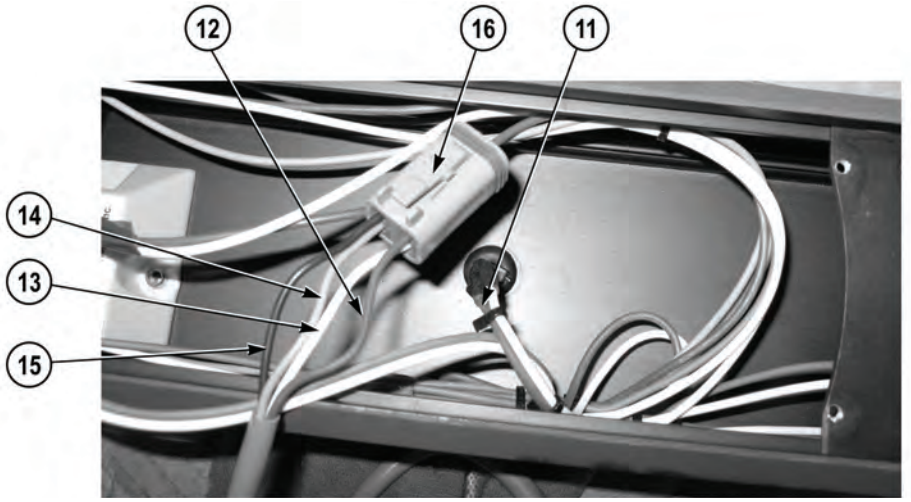
1. Install grommet (24) and passenger side lightbar end cable (18) on cab front lightbar (10).
2. Repair passenger side lightbar end cable (18) white wire (22), black wire (21), green wire (20), and red wire (19) on connector (23) (TM 9-2320-315-14&P).



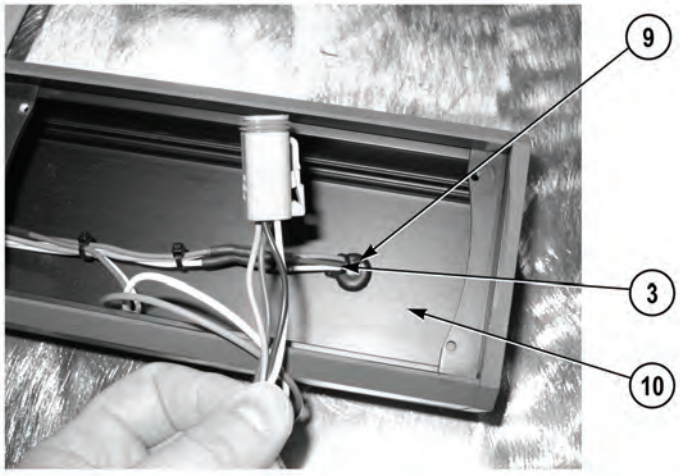
NOTE

Perform Steps (3) and (4) to install center lightbar cable.

3. Install grommet (17) and lightbar center cable (11) on cab front lightbar (10).



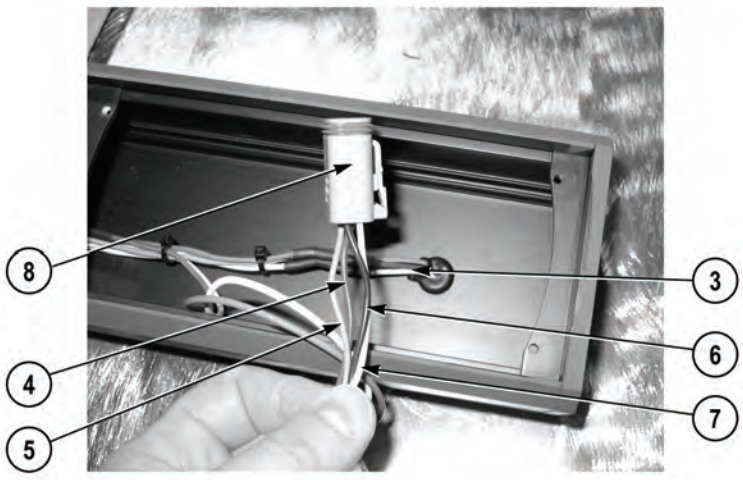
4. Repair center cable (11) black wire (15), green wire (14), white wire (13), and red wire (12) on connector (16) (TM 9-2320-315-14&P).



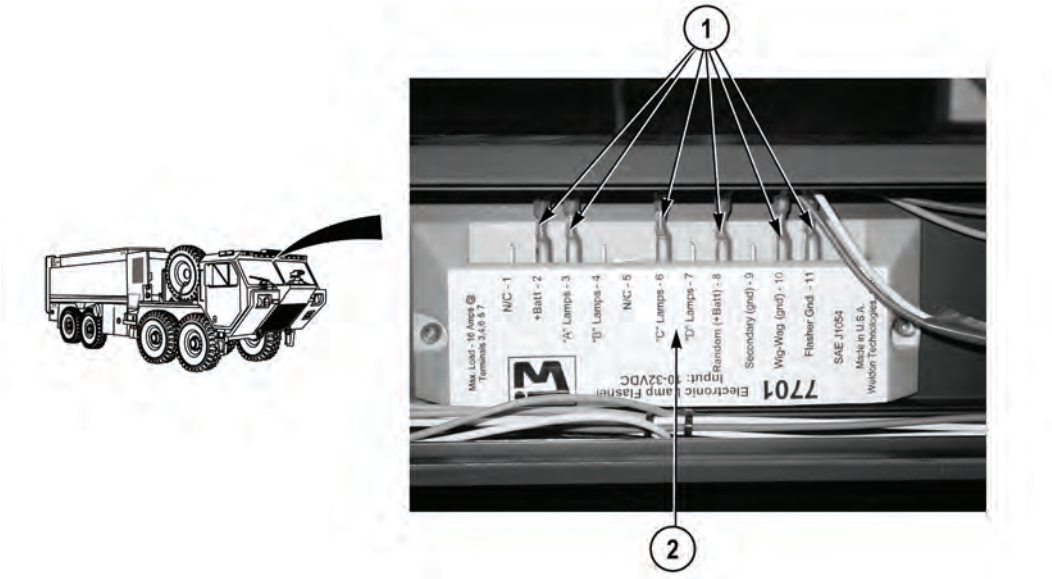
NOTE

Perform Steps (5) and (6) to install driver side lightbar end cable.

5. Install grommet (9) and driver side lightbar end cable (3) on cab front lightbar (10).



6. Repair driver side lightbar end cable (3) white wire (7), black wire (6), green wire (5), and red wire (4) on connector (8) (TM 9-2320-315-14&P).



7. Install six wires (1) on lightbar flasher unit (2) (WP 0288).

END OF TASK

FOLLOW-ON MAINTENANCE

Install cab front lightbar (WP 0222)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

MAIN WIRE HARNESS REPLACEMENT

INITIAL SETUP:

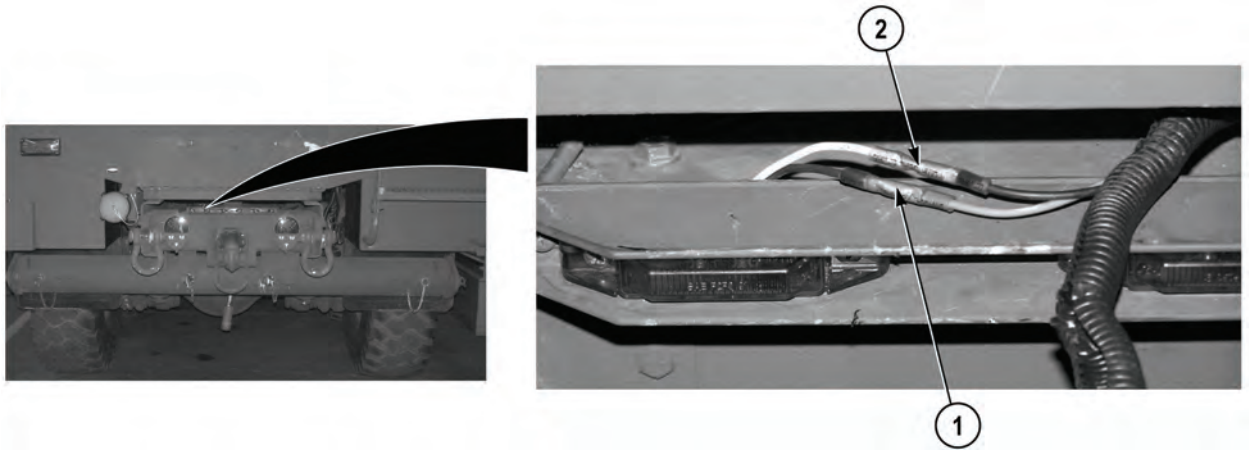
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)
Lockwasher (1)
Lockwasher (1)
Lockwasher (1)

References
WP 0392, Fig. 57

Equipment Conditions
Pump house panel K removed (WP 0341)
Cab instrument panel A, D, and E removed (WP 0203)
Skid plate grille removed (WP 0350)
Passenger side center lower stowage compartment door opened (WP 0008)
Driver side lower stowage compartment door opened (WP 0008)
Passenger side rear lower stowage compartment door opened (WP 0008)
Lower warning lights removed (WP 0229)

REMOVAL



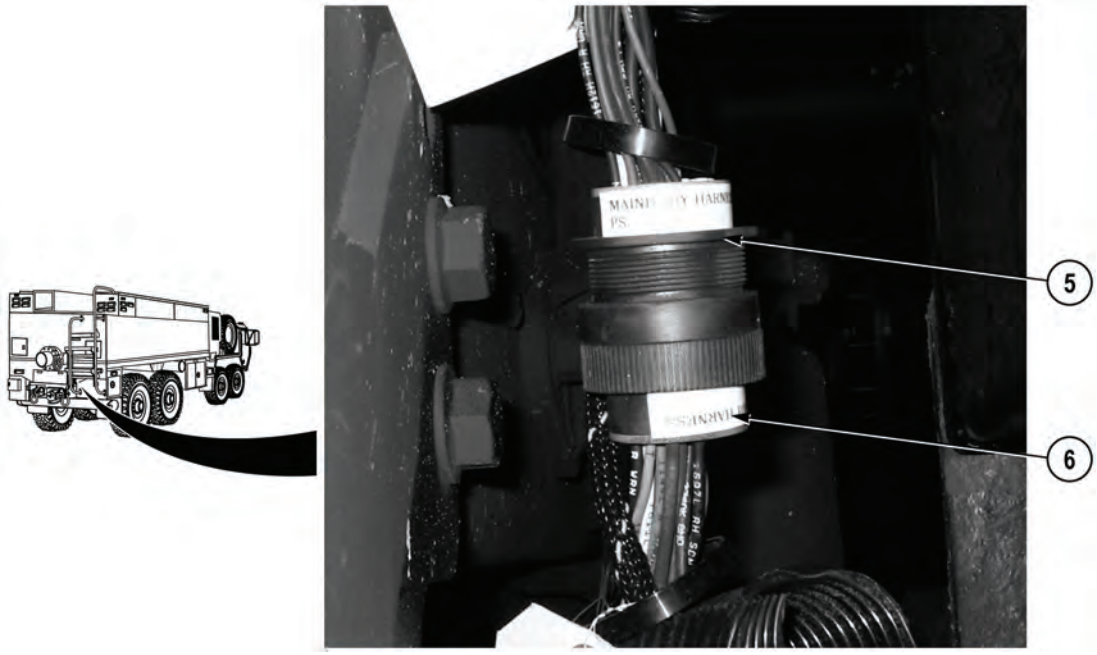
NOTE

- Tag and mark wires prior to removal to ensure proper installation.
- Note routing of main wire harness prior to removal to ensure proper installation.
- Note position and remove cable ties, split looms, and cushion clips as required.

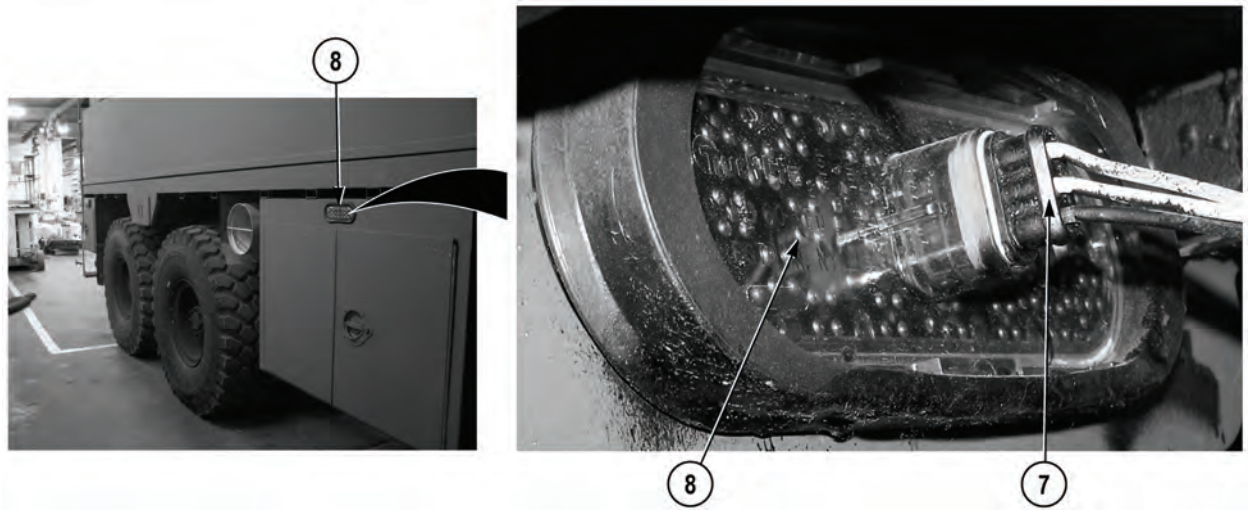
1. Cut wire 1606 (1) and wire 1640 (2) (TM 9-2320-315-14&P).



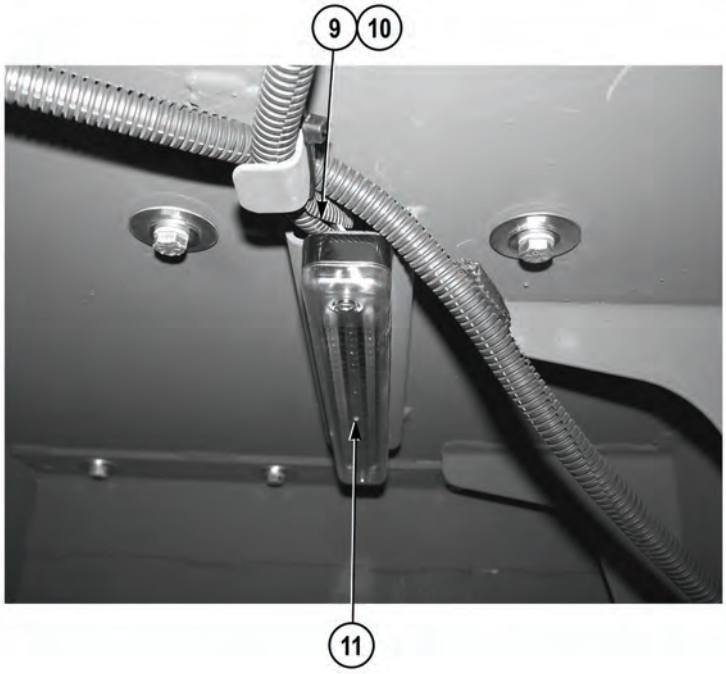
2. Disconnect driver side body wire harness connector (3) from main wire harness connector (4).



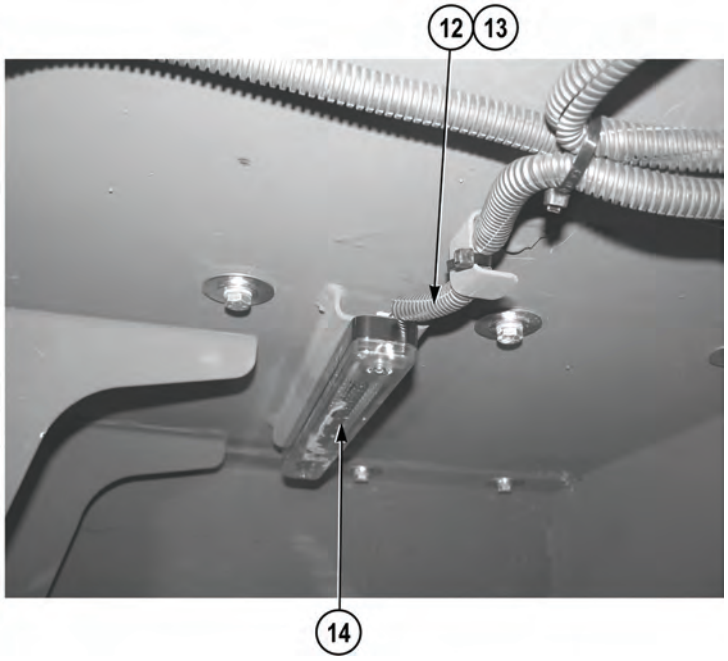
3. Disconnect passenger side body wire harness connector (5) from main wire harness connector (6).



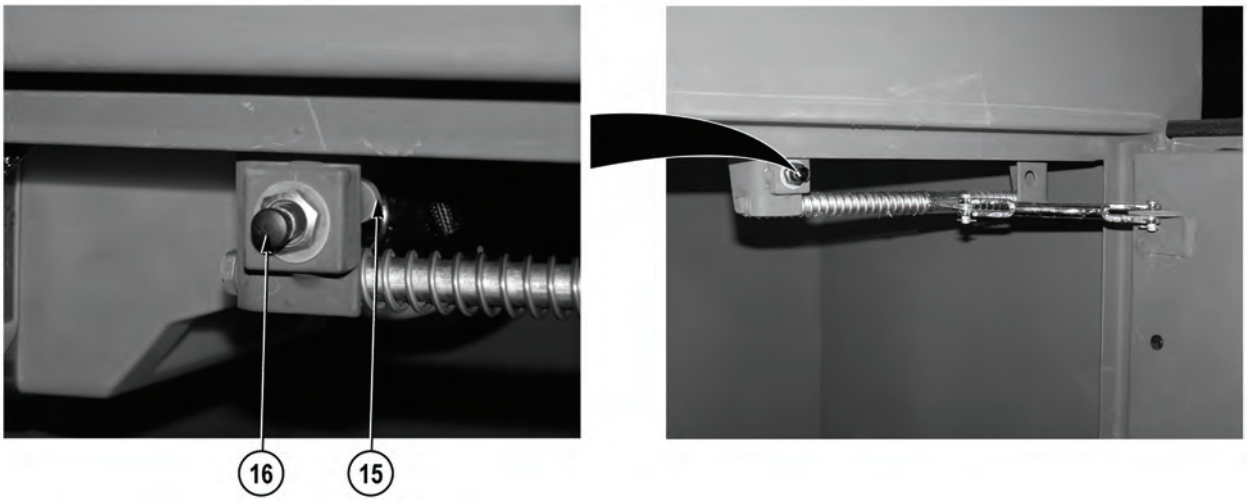
4. Disconnect main wire harness connector (7) from passenger side marker/clearance/side turn (amber) LED light assembly (8).



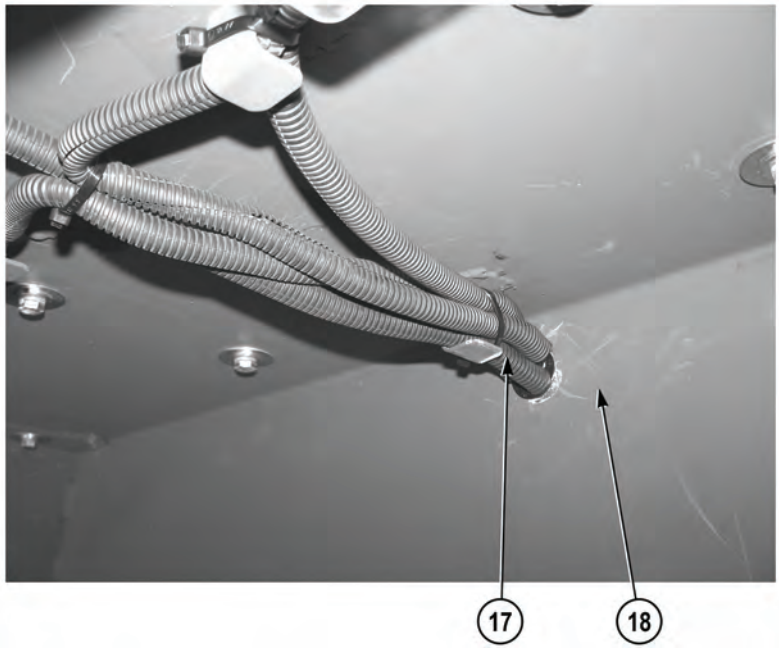
5. Cut wire 1189 (9) and wire 1479 (10) from passenger side center lower stowage compartment (forward) striplight (11) (TM 9-2320-315-14&P).



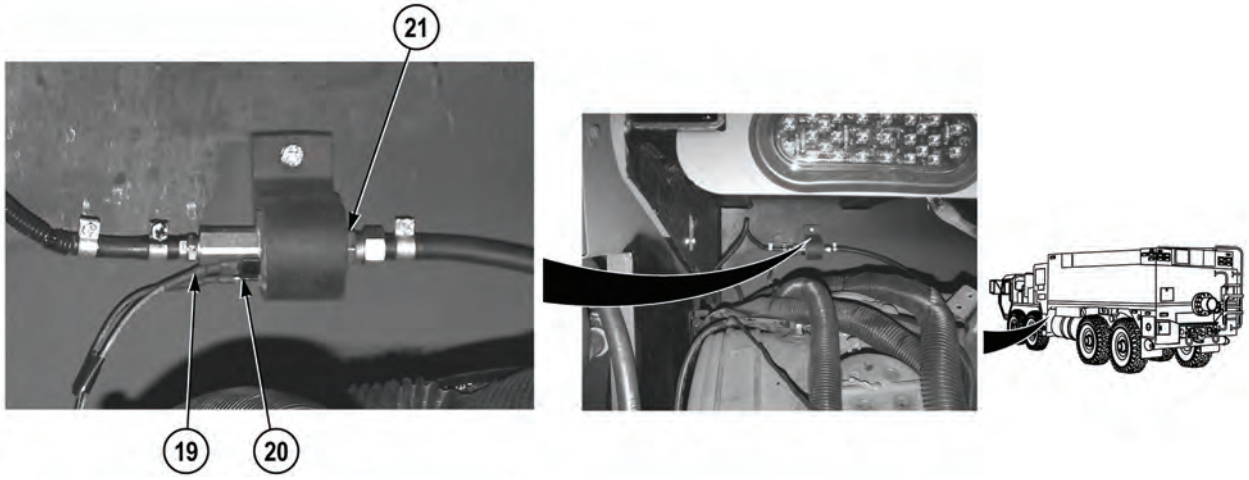
6. Cut wire 1189 (12) and wire 1479 (13) from passenger side center lower stowage compartment (rear) striplight (14) (TM 9-2320-315-14&P).



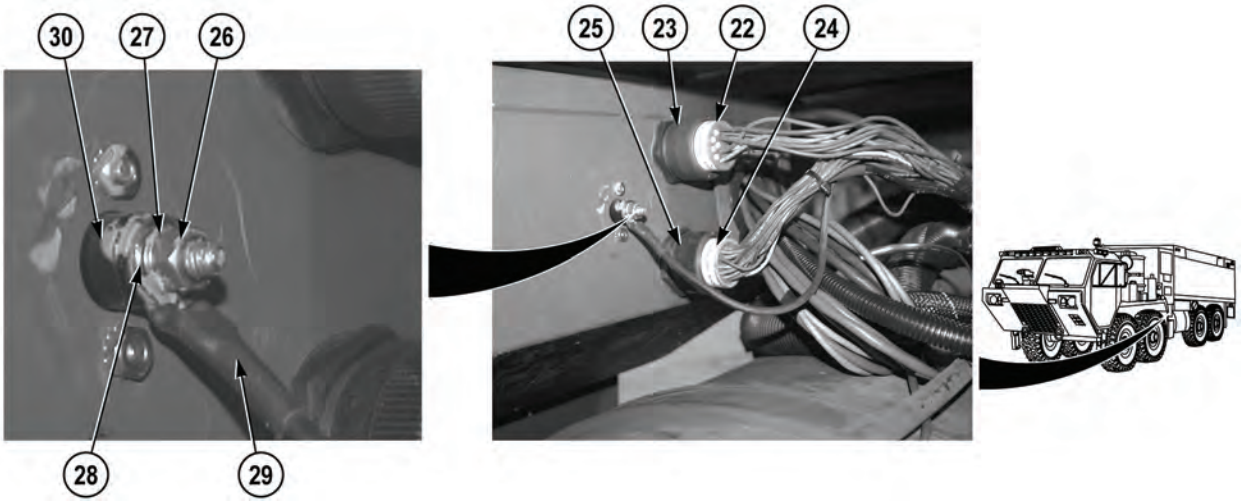
7. Disconnect main wire harness connector (15) from passenger side center lower stowage compartment door switch (16).



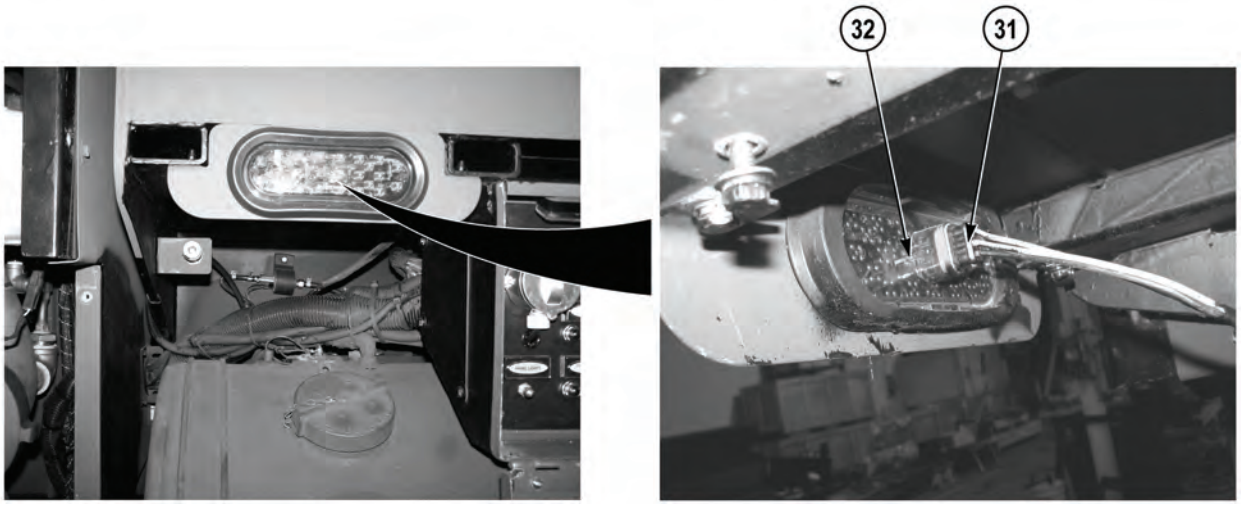
8. Remove main wire harness (17) from passenger side center lower stowage compartment (18).



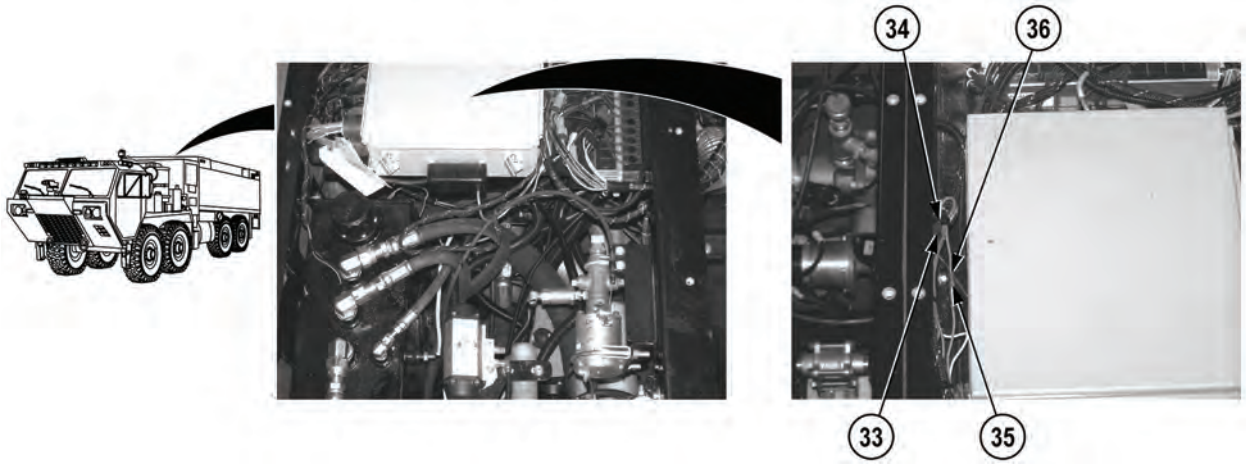
9. Disconnect wire 4089 (19) and wire 4090 (20) connector from pump house heater fuel pump (21).



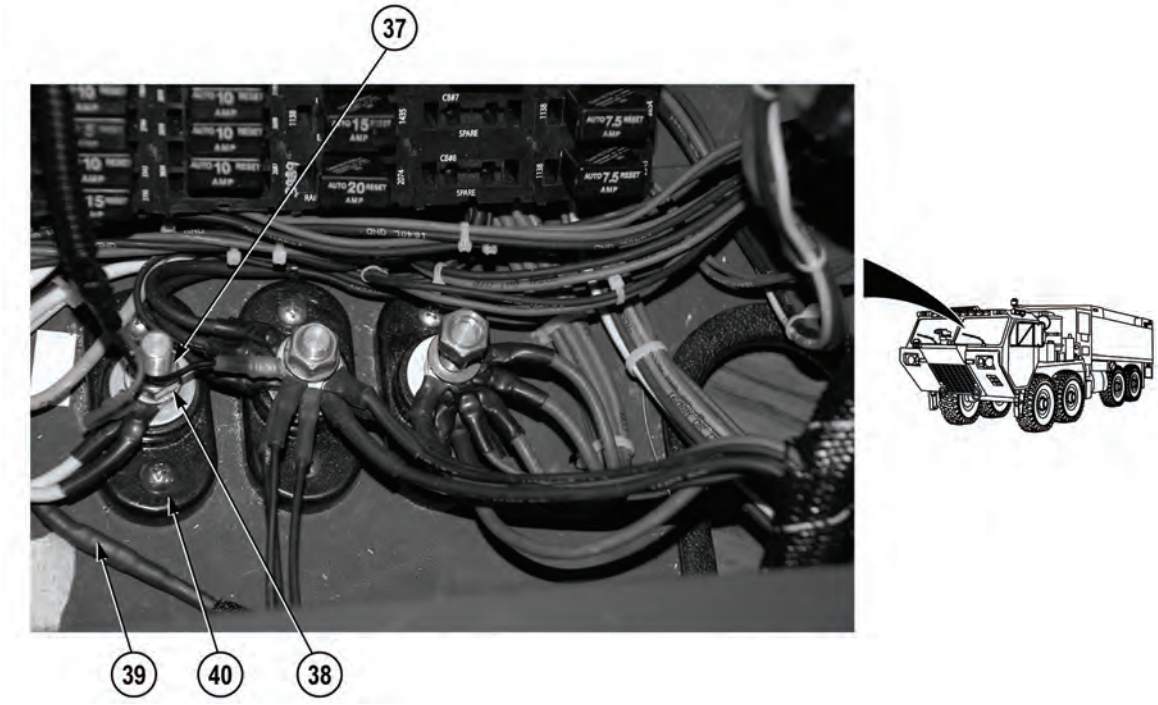
10. Disconnect main wire harness connector (22) from pump operator's panel wire harness connector (23).
11. Disconnect main wire harness connector (24) from pump operator's panel wire harness connector (25).
12. Remove nut (26), lockwasher (27), washer (28), and wire 3230 (29) from pump operator's panel ground terminal block (30). Discard lockwasher.



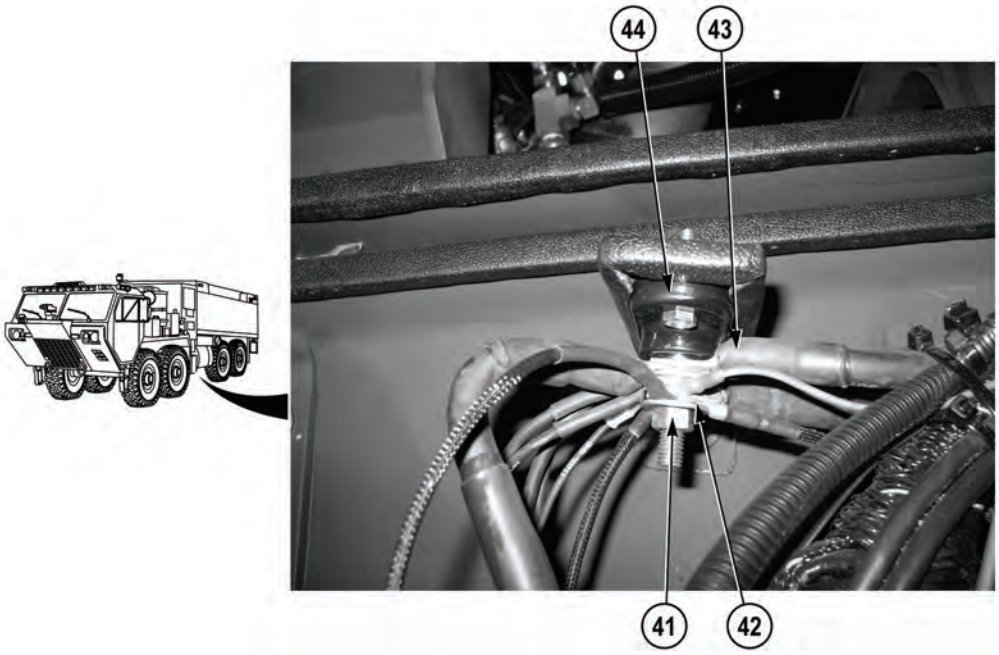
13. Disconnect main wire harness connector (31) from driver side marker/clearance/side turn (amber) LED light assembly (32).



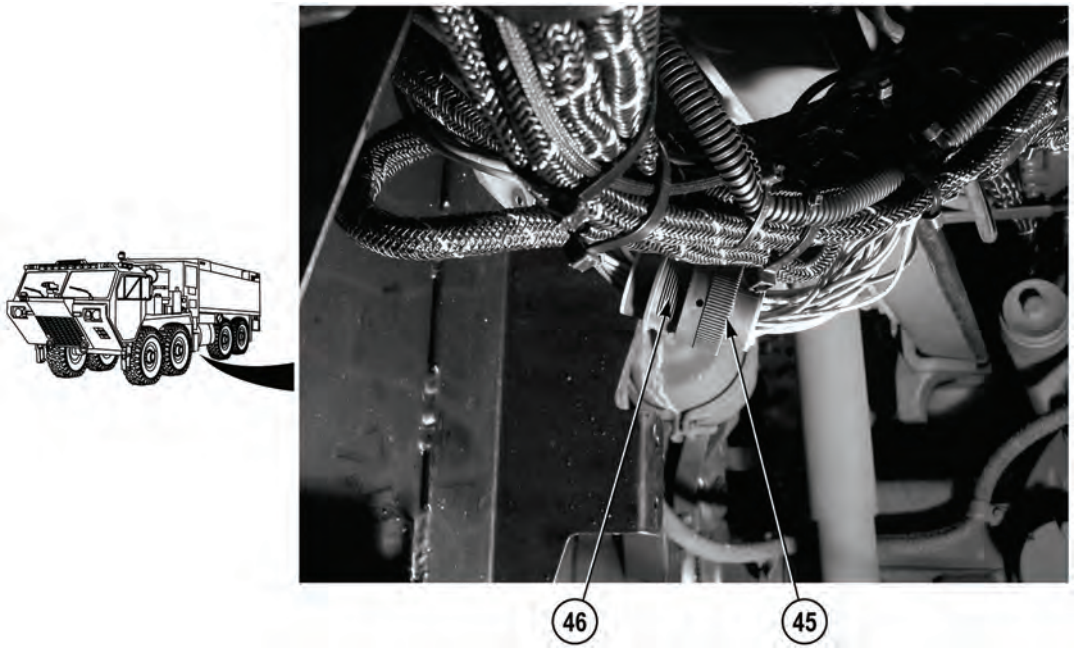
14. Disconnect main wire harness connector (33) from direct tank fill valve wire harness connector (34).
15. Disconnect main wire harness connector (35) from direct tank fill valve control connector (36).



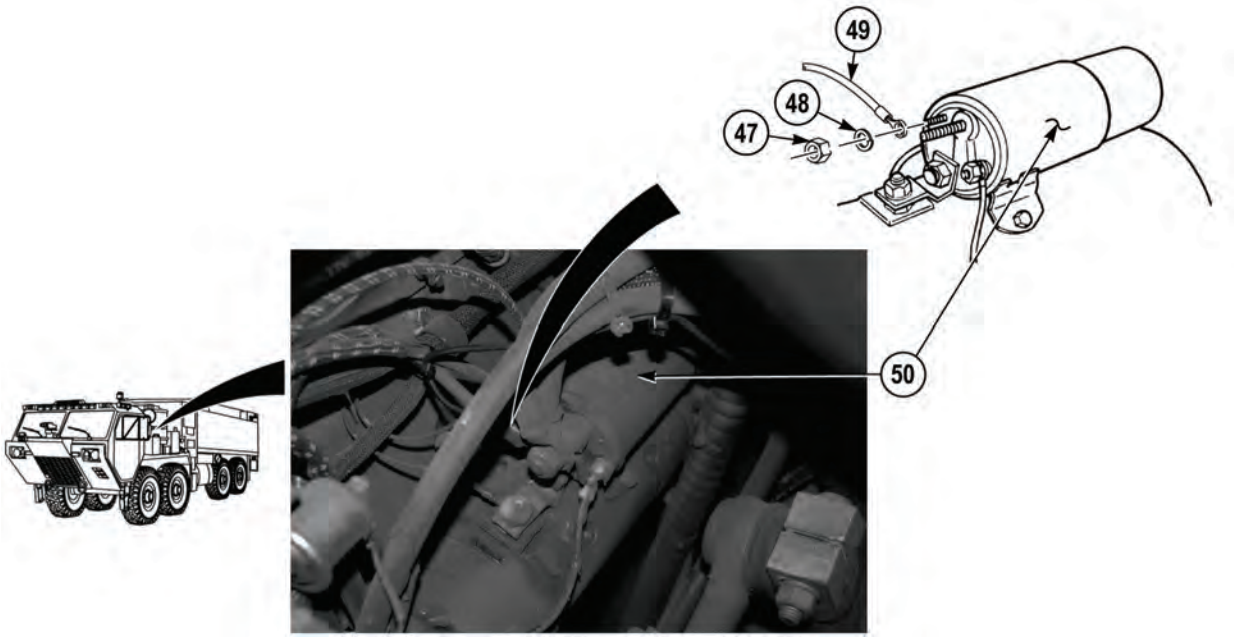
16. Remove nut (37), lockwasher (38), and wire 1663 (39) from 12 VDC cab terminal block (40). Discard lockwasher.



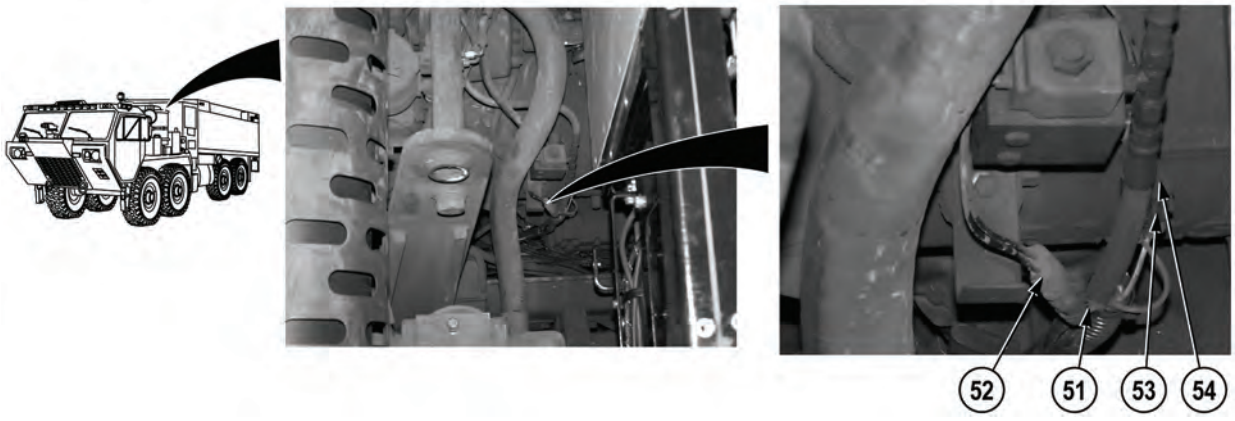
17. Remove nut (41), washer (42), and five wires (wire 3230, wire 1640, wire 1100, wire 2640, and wire 2740) (43) from ground terminal block (44).



18. Disconnect main wire harness connector (45) from pump house wire harness connector (46).



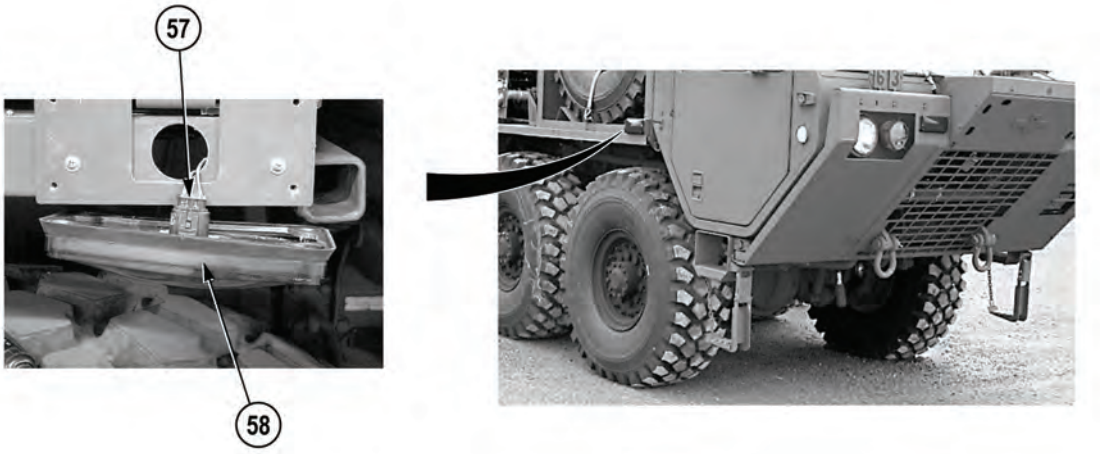
19. Remove nut (47), lockwasher (48), and wire 1013 (49) from starter solenoid (50). Discard lockwasher.



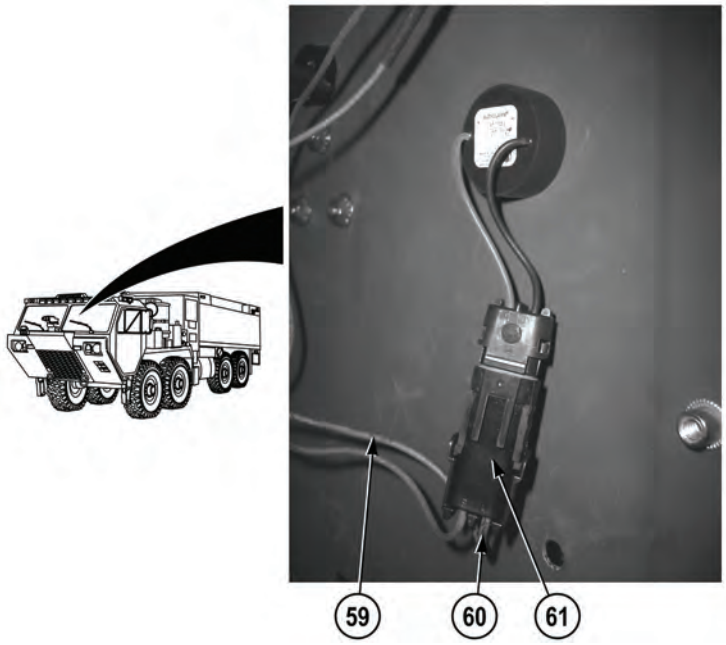
20. Disconnect main wire harness connector (51) from pump PTO solenoid connector (52).
21. Disconnect main wire harness connector (53) from pump PTO pressure switch connector (54).



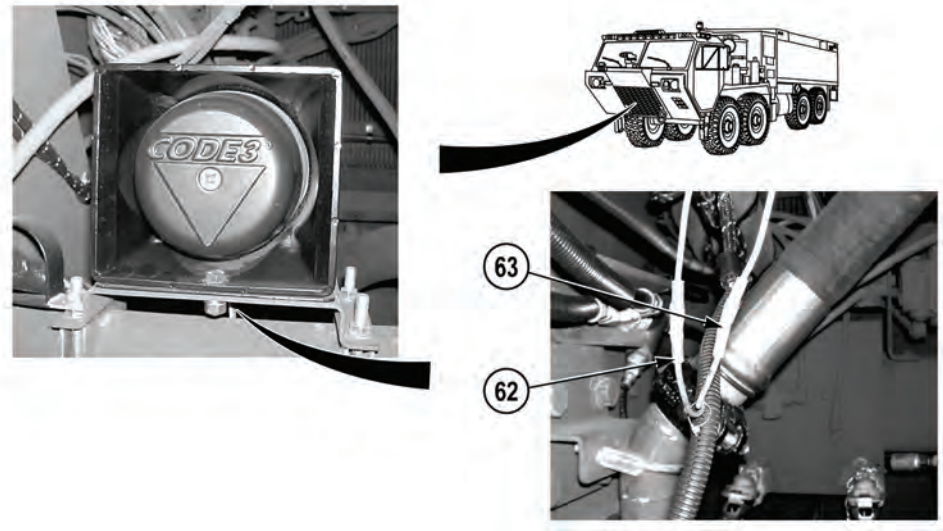
22. Disconnect main wire harness connector (55) from driver side front side warning light (56).



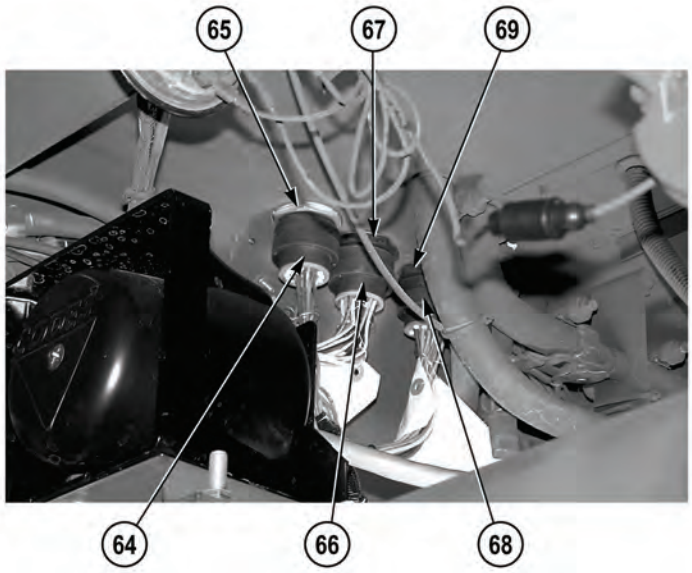
23. Disconnect main wire harness connector (57) from passenger side front side warning light (58).



24. De-pin cab power distribution wire harness (59) wire 1647 (60) from rear step buzzer audio alarm connector (61) (TM 9-2320-315-14&P).



25. Cut wire 1611 (62) and wire 1640 (63) (TM 9-2320-315-14&P).



26. Disconnect main wire harness connector (64) from main 3 connector (65).
27. Disconnect main wire harness connector (66) from main 2 connector (67).
28. Disconnect main wire harness connector (68) from main 1 connector (69).
29. Remove main wire harness from vehicle.

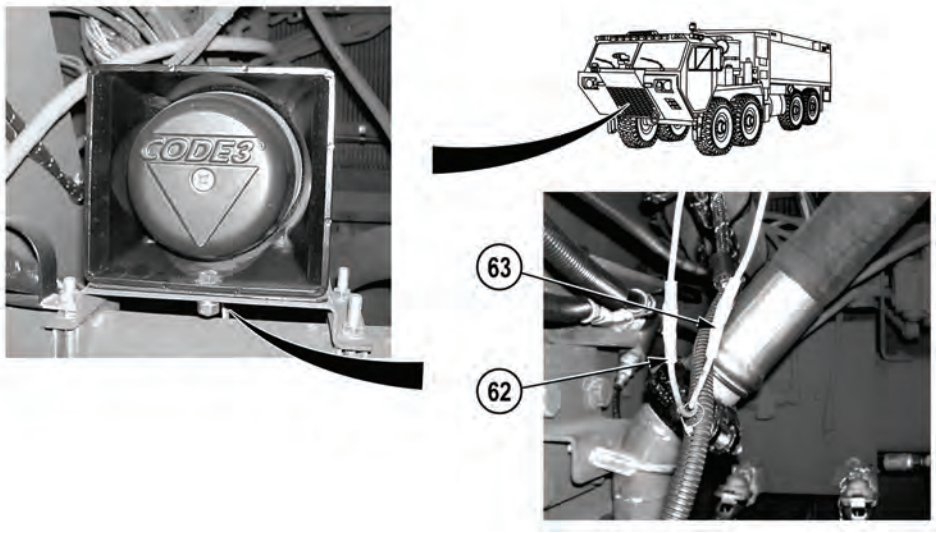
END OF TASK

INSTALLATION

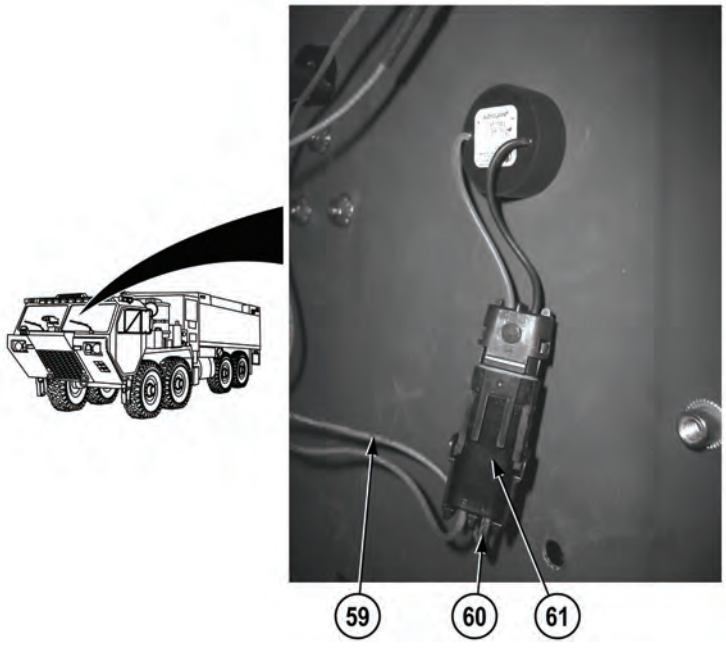
NOTE

- Route main wire harness on vehicle as noted prior to removal.
- Install cushion clips, split loom, and cable ties as required.

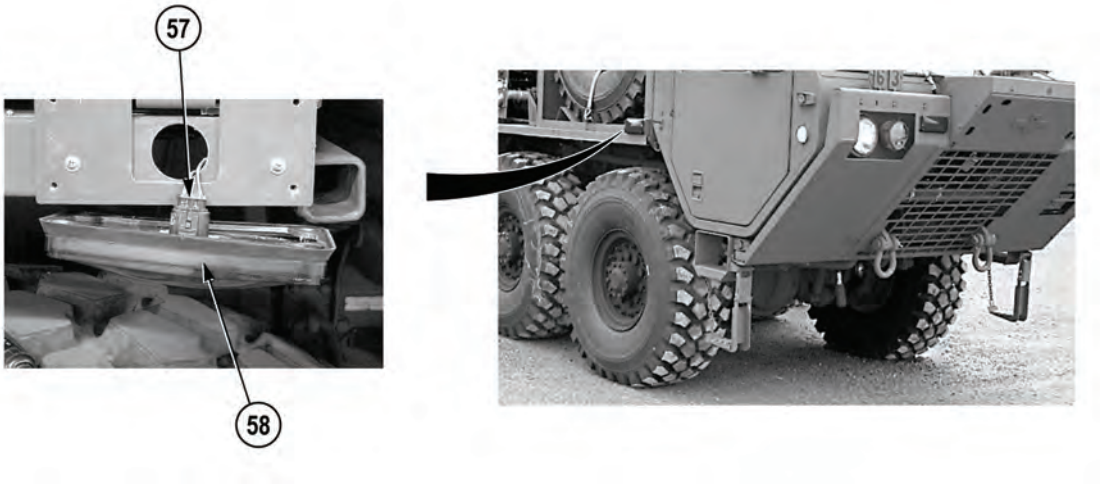
1. Install main wire harness on vehicle.
2. Connect main wire harness connector (68) on main 1 connector (69).
3. Connect main wire harness connector (66) on main 2 connector (67).
4. Connect main wire harness connector (64) on main 3 connector (65).



5. Repair wire 1611 (62) and wire 1640 (63) (TM 9-2320-315-14&P).



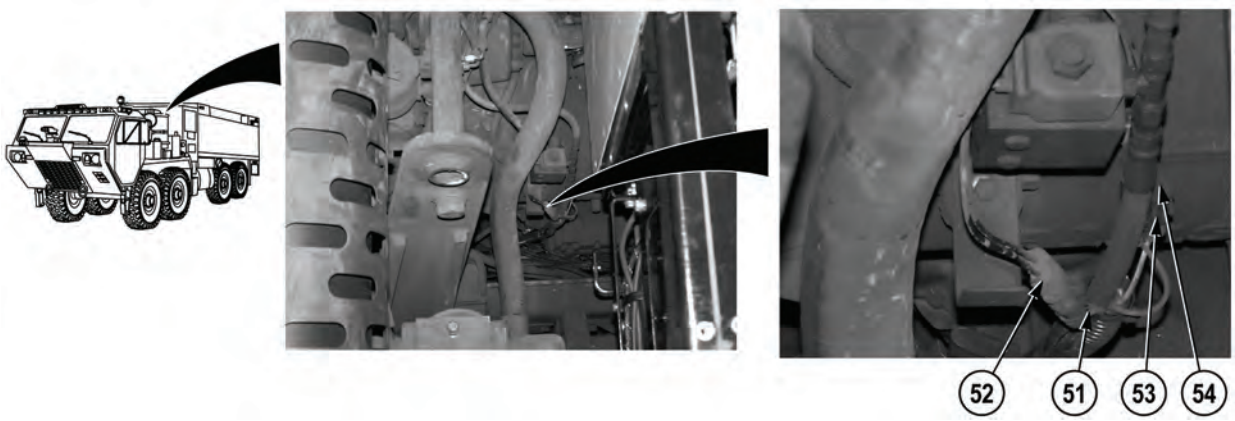
6. Pin cab power distribution wire harness (59) wire 1647 (60) on rear step buzzer audio alarm connector (61) (TM 9-2320-315-14&P).



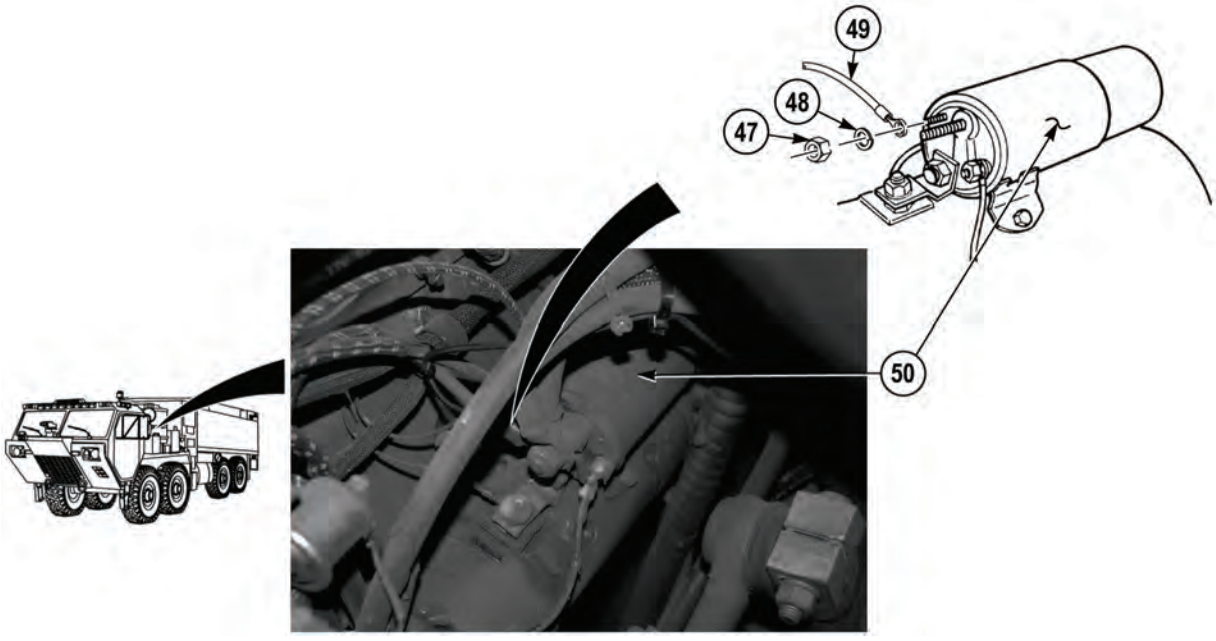
7. Connect main wire harness connector (57) on passenger side front side warning light (58).



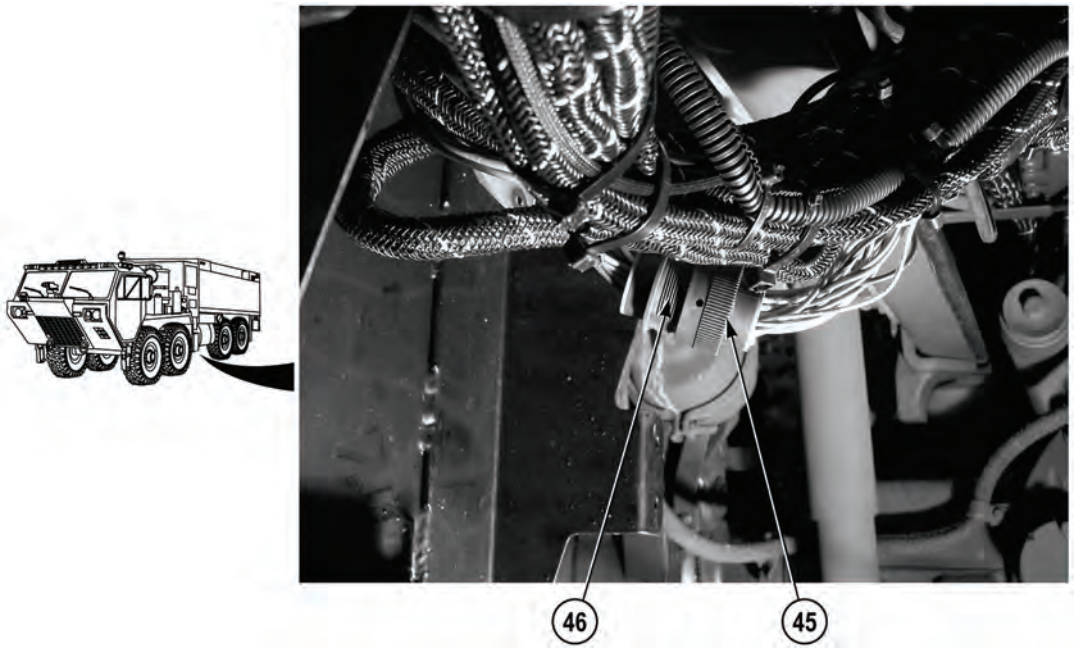
8. Connect main wire harness connector (55) on driver side front side warning light (56).



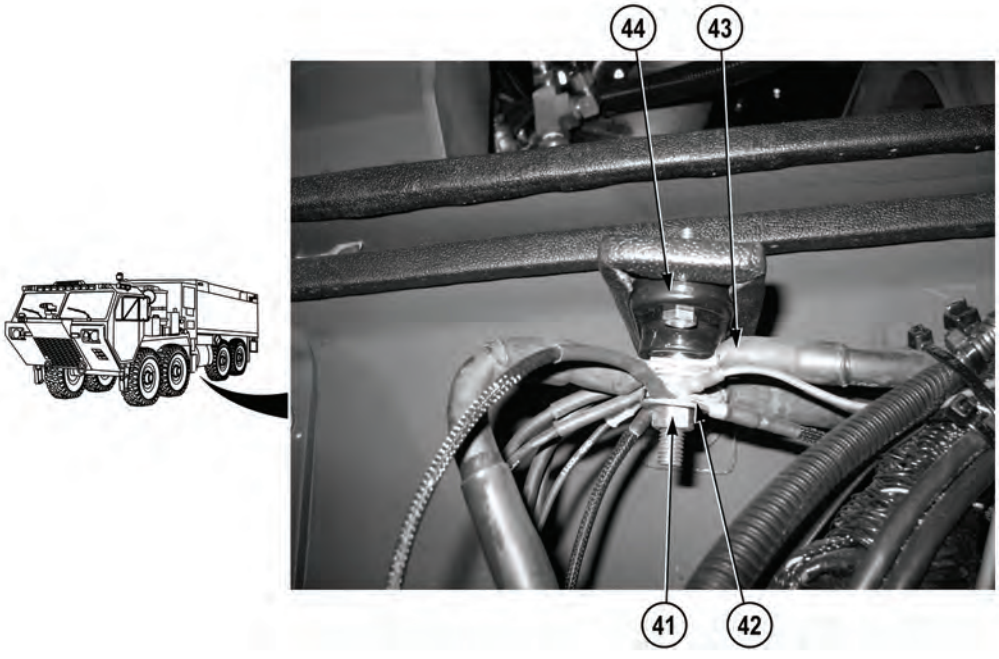
9. Connect main wire harness connector (53) on pump PTO pressure switch connector (54).
10. Connect main wire harness connector (51) on pump PTO solenoid connector (52).



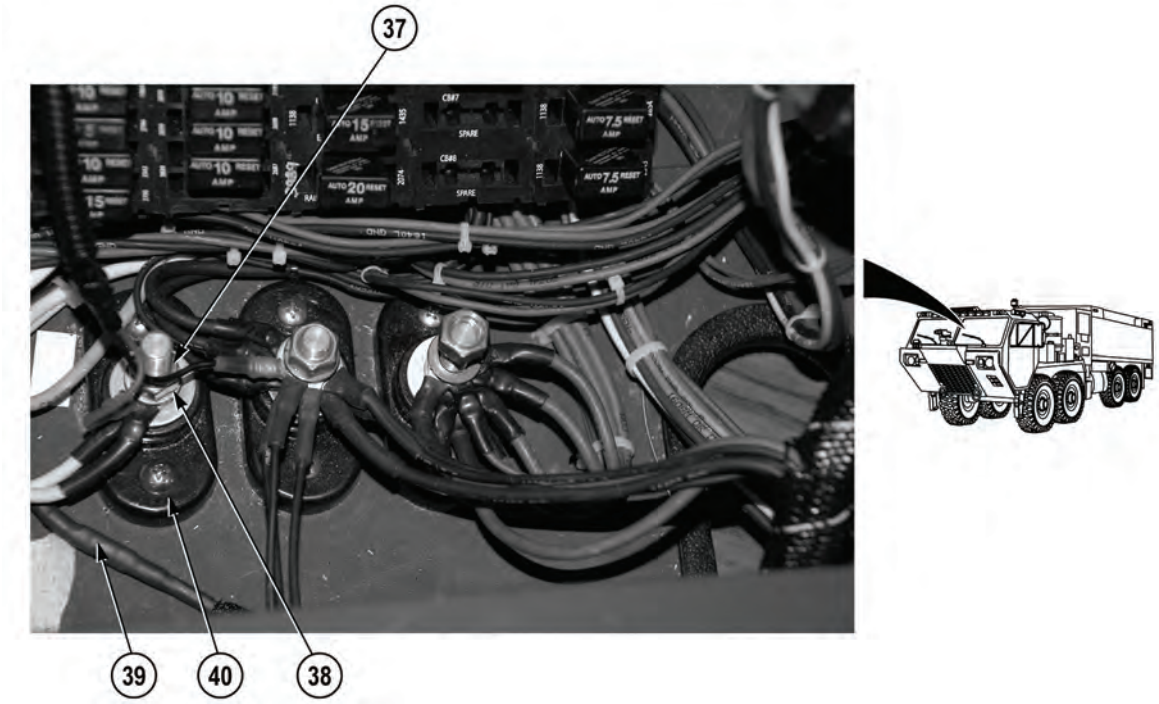
11. Install wire 1013 (49) on starter solenoid (50) with lockwasher (48) and nut (47).



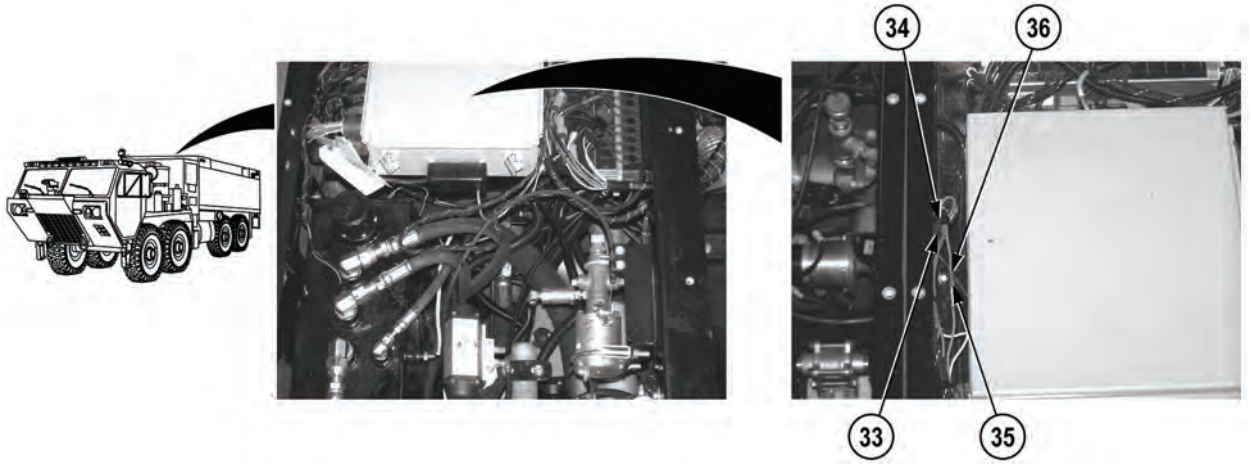
12. Connect main wire harness connector (45) on pump house wire harness connector (46).



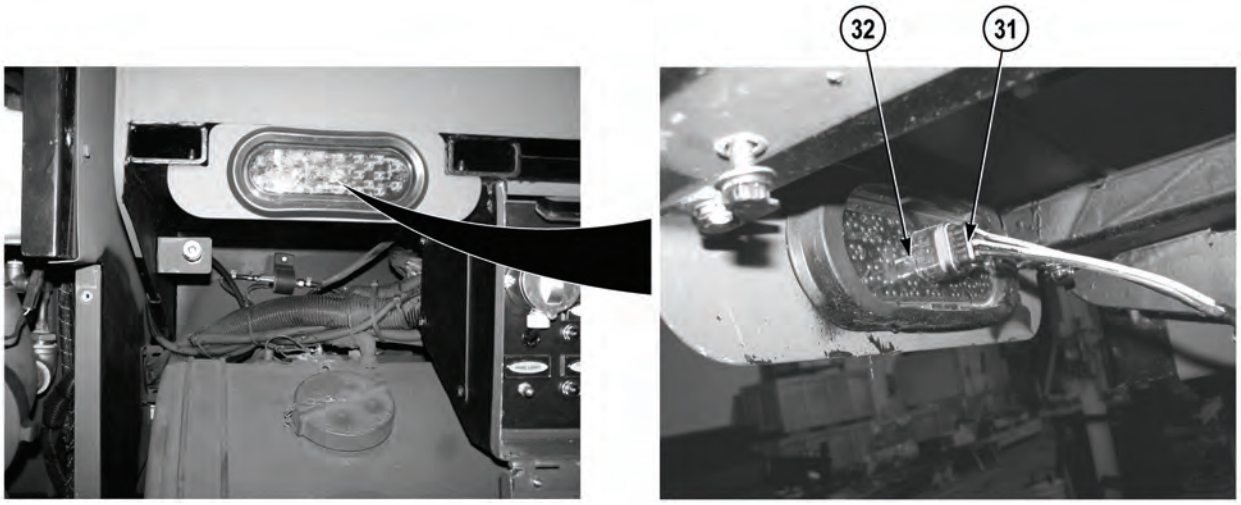
13. Install five wires (wire 3230, wire 1640, wire 1100, wire 2640, and wire 2740) (43) on ground terminal block (44) with washer (42) and nut (41).



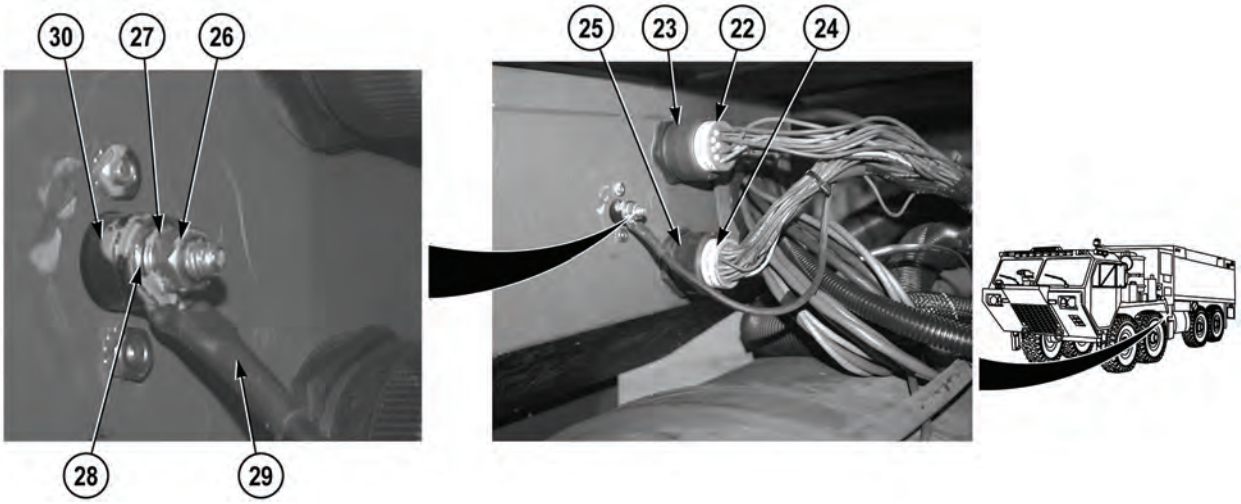
14. Install wire 1663 (39) on 12 VDC cab terminal block (40) with lockwasher (38) and nut (37).



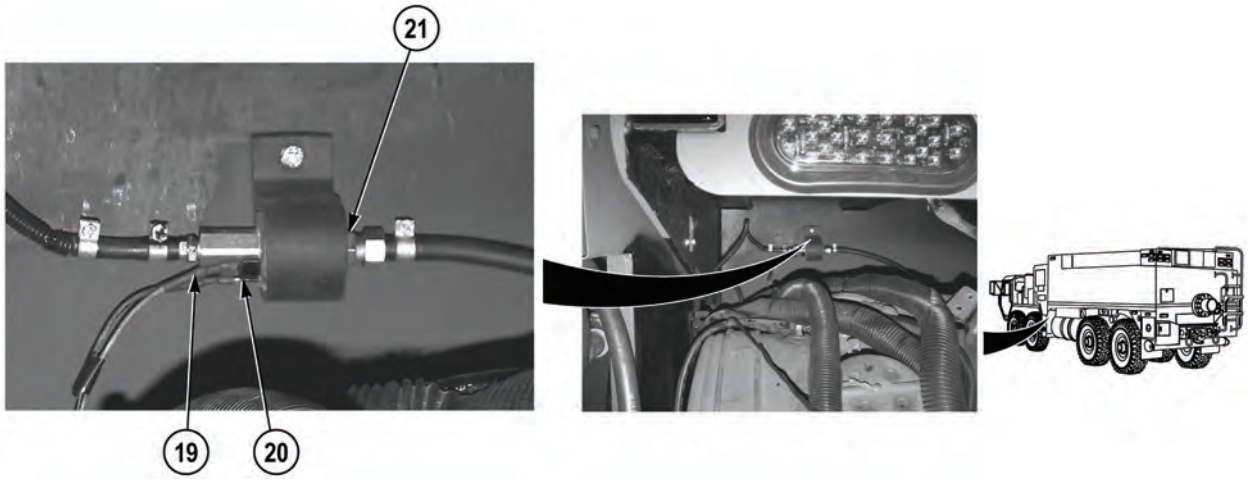
15. Connect main wire harness connector (35) on direct tank fill valve control connector (36).
16. Connect main wire harness connector (33) on direct tank fill valve wire harness connector (34).



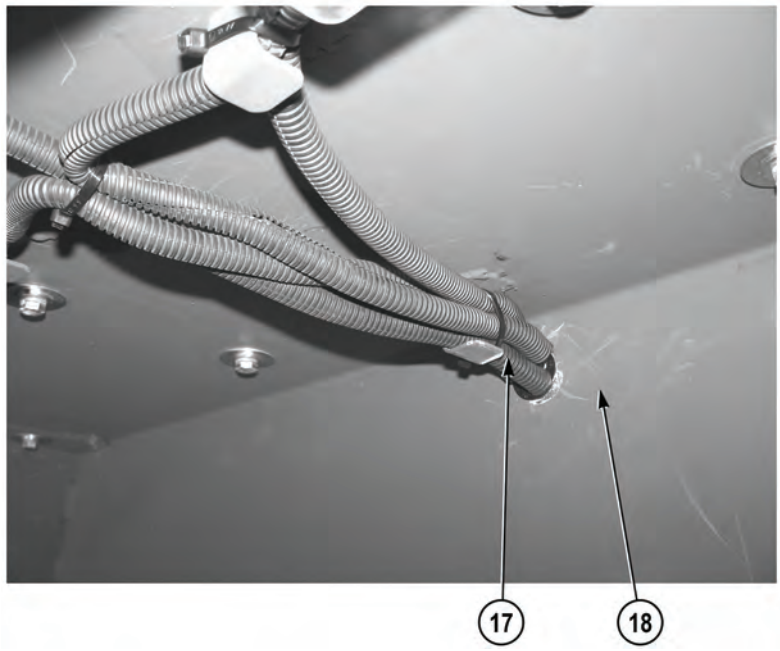
17. Connect main wire harness connector (31) on driver side marker/clearance/side turn (amber) LED light assembly (32).



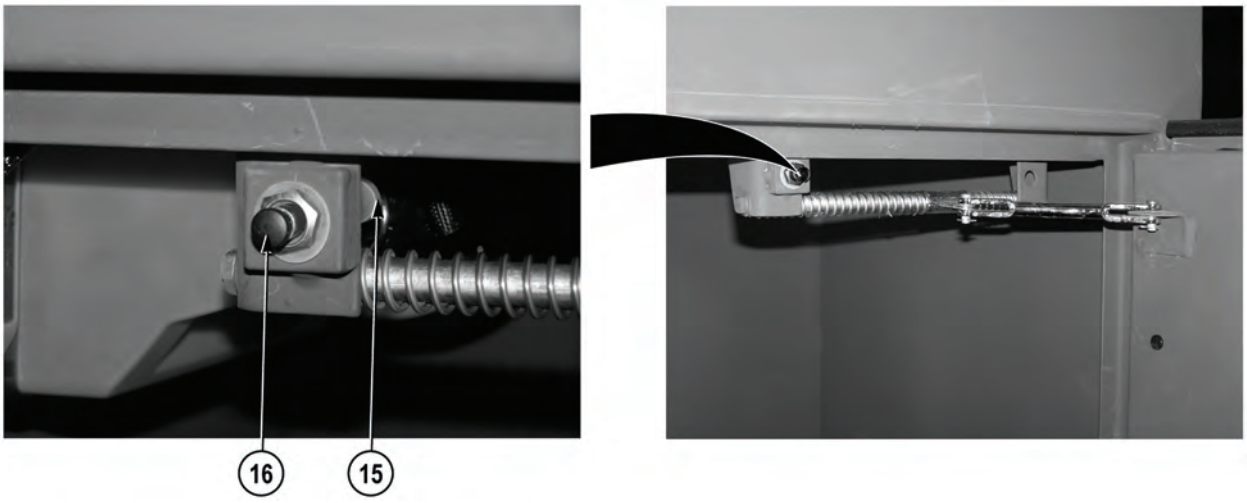
18. Install wire 3230 (29) on pump operator's panel ground terminal block (30) with washer (28), lockwasher (27), and nut (26).
19. Connect main wire harness connector (24) on pump operator's panel wire harness connector (25).
20. Connect main wire harness connector (22) on pump operator's panel wire harness connector (23).



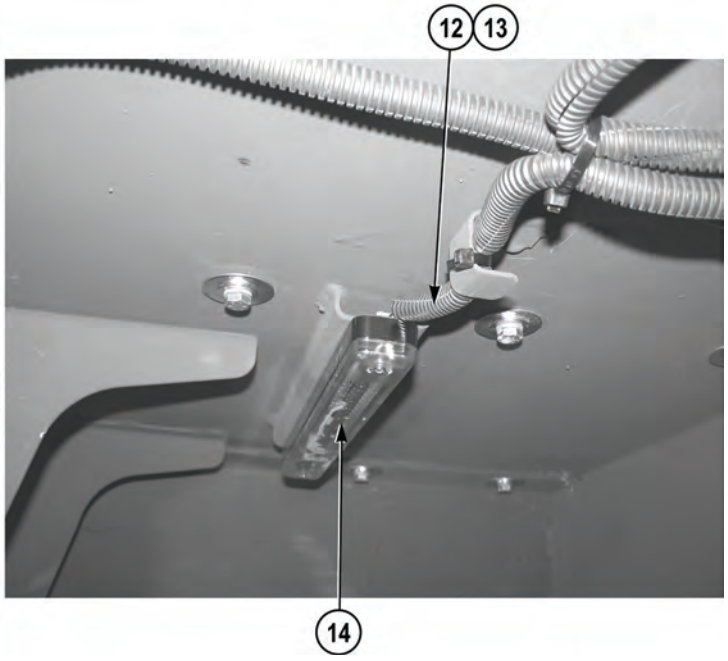
21. Connect wire 4089 (19) and wire 4090 (20) connectors on pump house heater fuel pump (21).



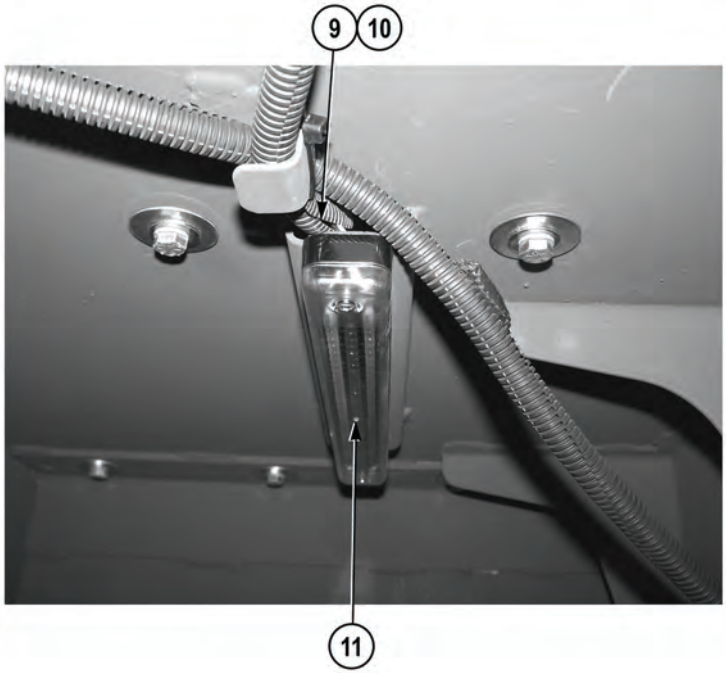
22. Route main wire harness (17) on passenger side center lower stowage compartment (18).



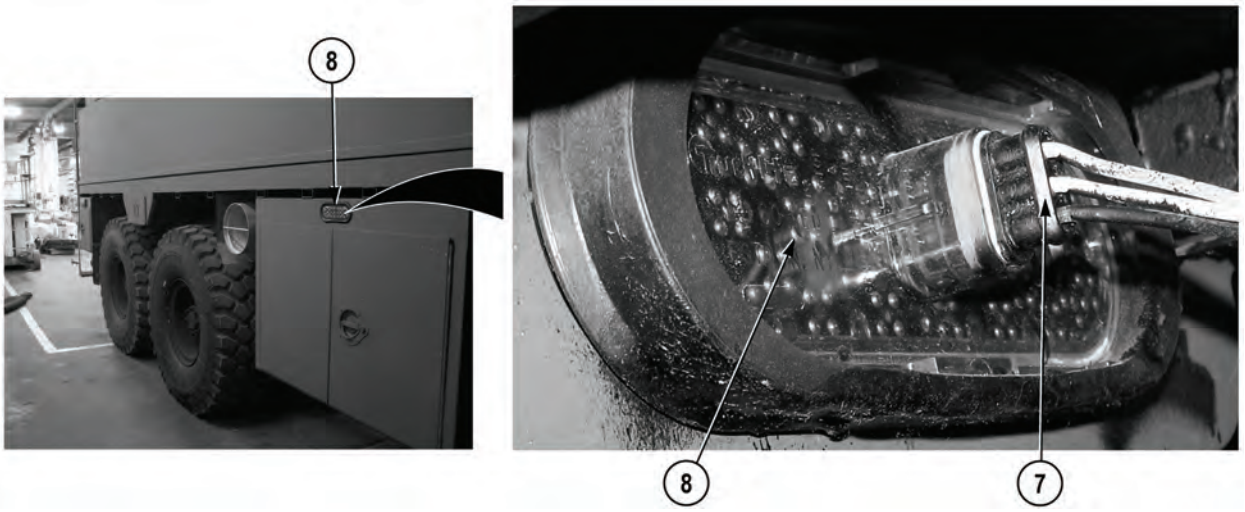
23. Connect main wire harness connector (15) on passenger side center lower stowage compartment door switch (16).



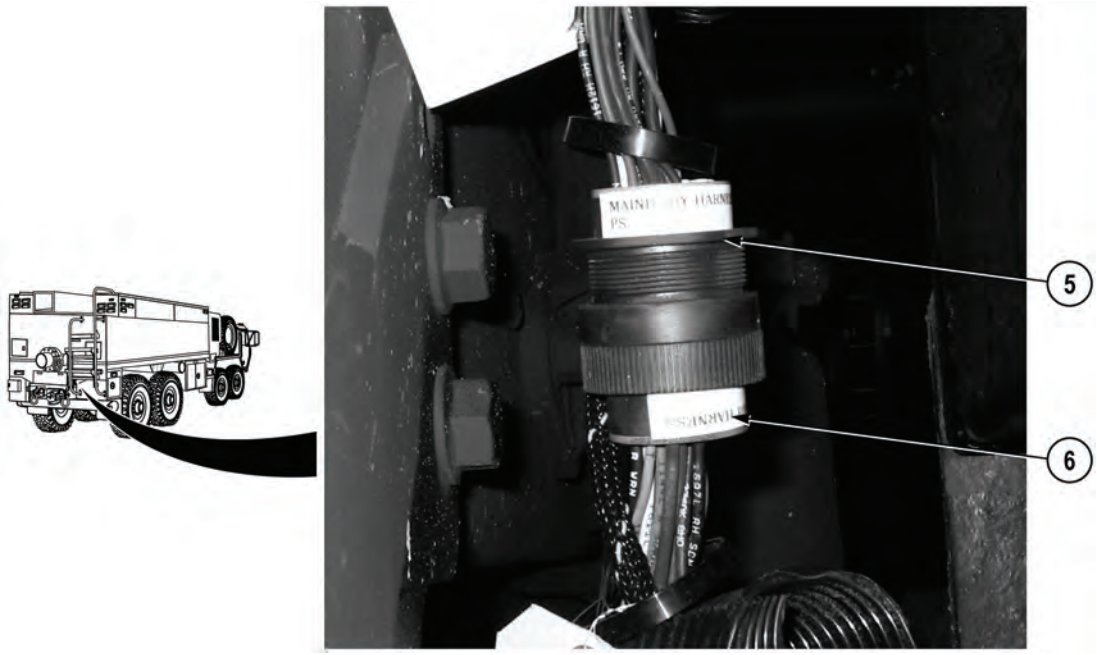
24. Repair wire 1189 (12) and wire 1479 (13) on passenger side center lower stowage compartment (rear) striplight (14).



25. Repair wire 1189 (9) and wire 1479 (10) on passenger side center lower stowage compartment (forward) striplight (11).



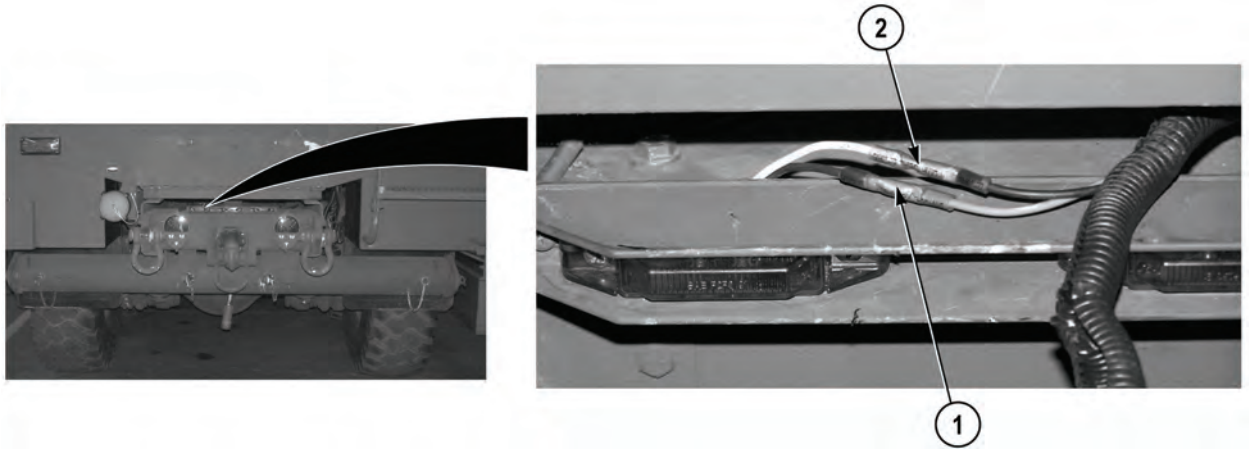
26. Connect main wire harness connector (7) on passenger side marker/clearance/side turn (amber) LED light assembly (8).



27. Connect passenger side body wire harness connector (5) on main wire harness connector (6).



28. Connect driver side body wire harness connector (3) on main wire harness connector (4).



29. Repair wire 1606 (1) and wire 1640 (2) (TM 9-2320-315-14&P).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install lower warning lights (WP 0229)
2. Close passenger side rear lower stowage compartment door (WP 0008)
3. Close driver side lower stowage compartment door (WP 0008)
4. Close passenger side center lower stowage compartment door (WP 0008)
5. Install skid plate grille (WP 0350)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

NO. 1 DRIVER SIDE FLOW SENSOR WIRE HARNESS REPLACEMENT

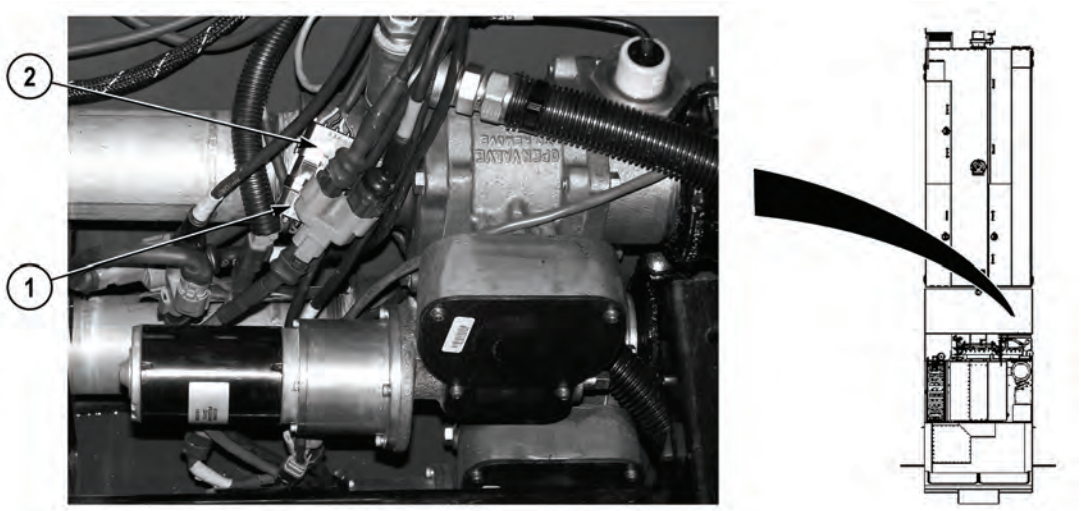
INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)

Equipment Conditions
Pump operator's panel opened (WP 0205)
Pump house panel K removed (WP 0341)

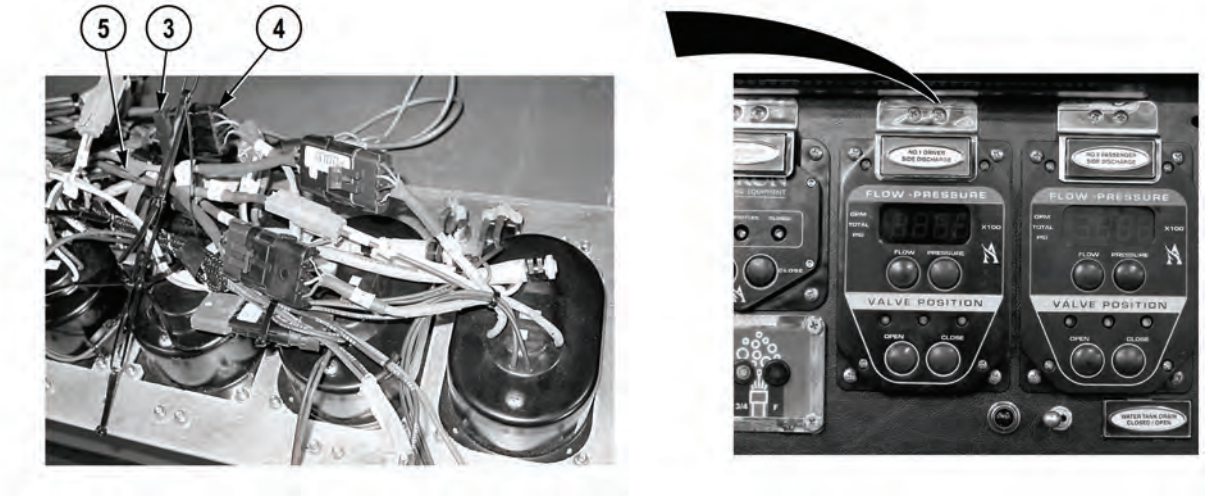
REMOVAL



NOTE

- Note routing of No. 1 driver side flow sensor wire harness prior to removal to ensure proper installation.
- No. 1 driver side flow sensor wire harness is routed through pump house panel N and pump operator's panel assembly.
- Note position and remove harness split looms, cushion clips, and cable ties as required.
- Tag and mark connectors prior to removal to ensure proper installation.

1. Disconnect No. 1 driver side flow sensor wire harness connector (1) from No. 1 driver side flow sensor valve control connector (2).



2. Disconnect No.1 driver side flow sensor wire harness connector (3) from No. 1 driver side flow sensor line connector (4).
3. Remove No. 1 driver side flow sensor wire harness (5) from vehicle.

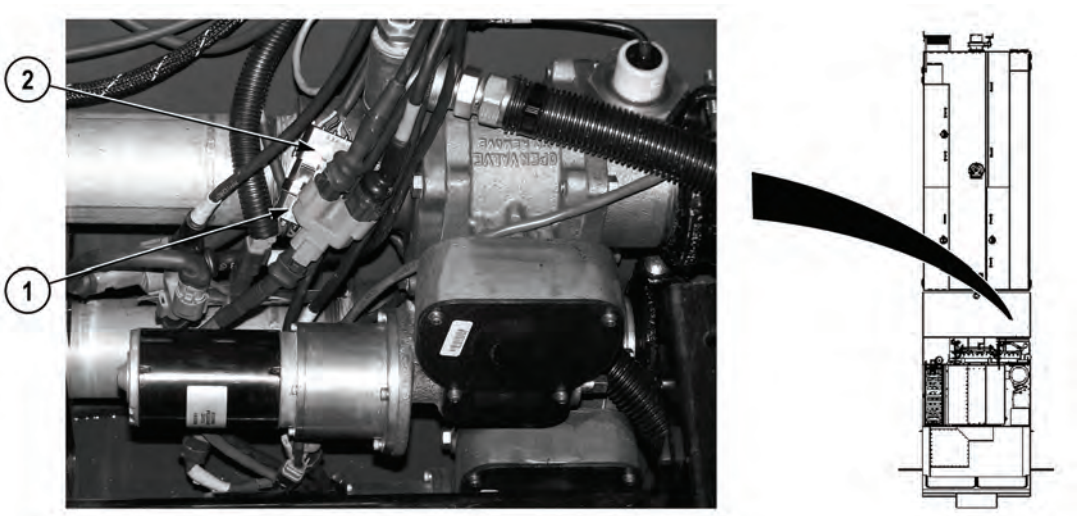
END OF TASK

INSTALLATION

NOTE

Route No. 1 driver side flow sensor wire harness as noted.

1. Install No. 1 driver side flow sensor wire harness (5) on vehicle.
2. Connect No. 1 driver side flow sensor wire harness connector (3) to No. 1 driver side flow sensor line connector (4).



3. Connect No. 1 driver side flow sensor valve control connector (2) to No. 1 driver side flow sensor wire harness connector (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Close pump house panel K (WP 0341)
2. Close pump operator's panel (WP 0205)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

NO. 1 DRIVER SIDE PRESSURE TRANSDUCER WIRE HARNESS REPLACEMENT

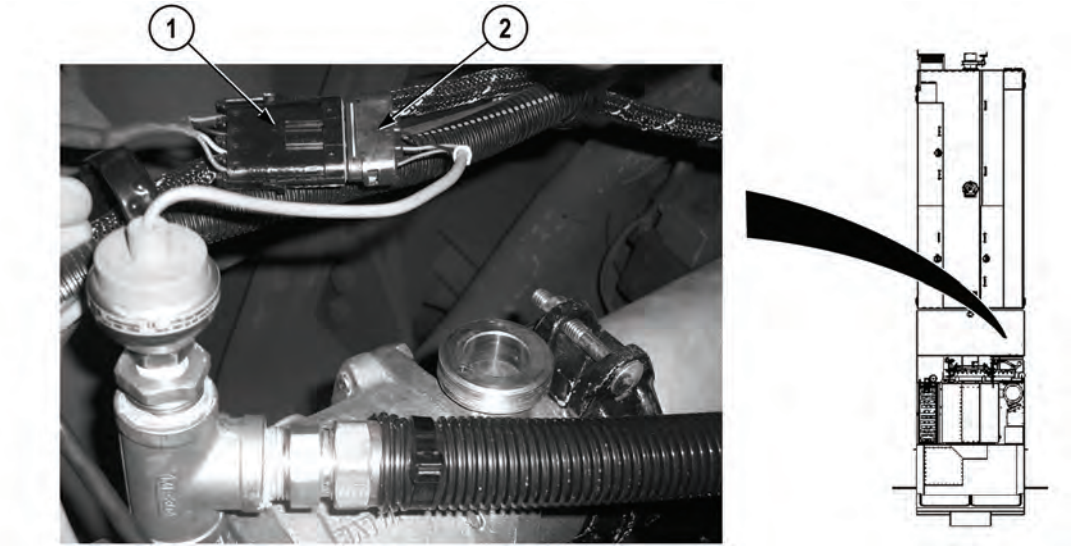
INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)

Equipment Conditions
Pump operator's panel opened (WP 0205)
Pump house panel K removed (WP 0341)

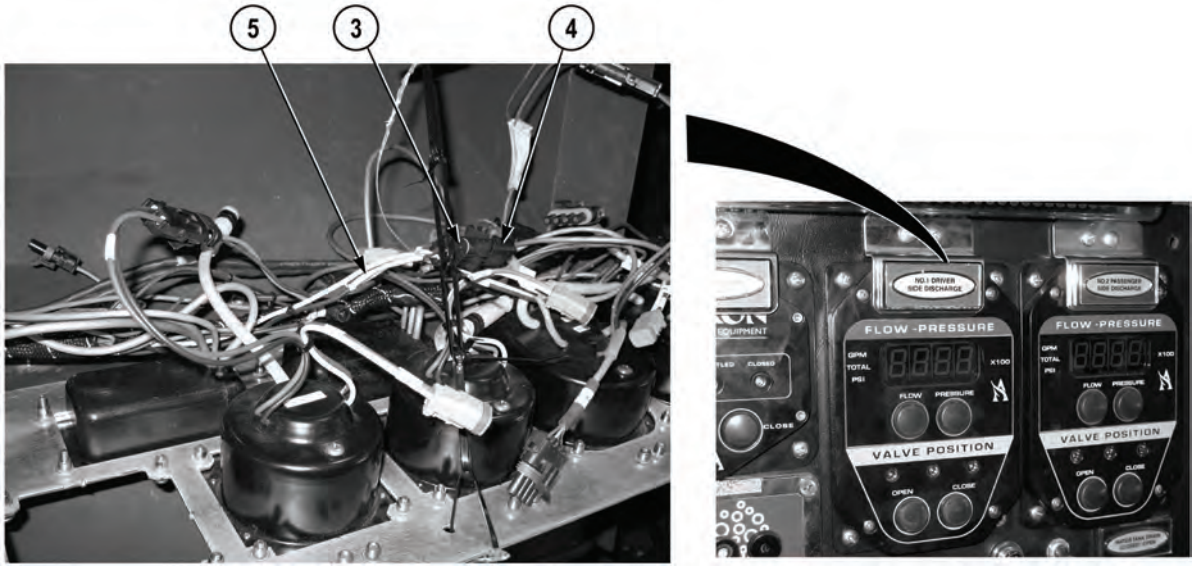
REMOVAL



NOTE

- Note routing of No. 1 driver side pressure transducer wire harness prior to removal to ensure proper installation.
- No. 1 driver side pressure transducer wire harness is routed through pump house panel N and pump operator's panel assembly.
- Note position and remove harness split looms, cushion clips, and cable ties as required.
- Tag and mark connectors prior to removal to ensure proper installation.

1. Disconnect No. 1 driver side pressure transducer wire harness connector (1) from No. 1 driver side pressure transducer valve control connector (2).



2. Disconnect No. 1 driver side pressure transducer wire harness connector (3) from No. 1 driver side pressure transducer line connector (4).
3. Remove No. 1 driver side pressure transducer wire harness (5) from vehicle.

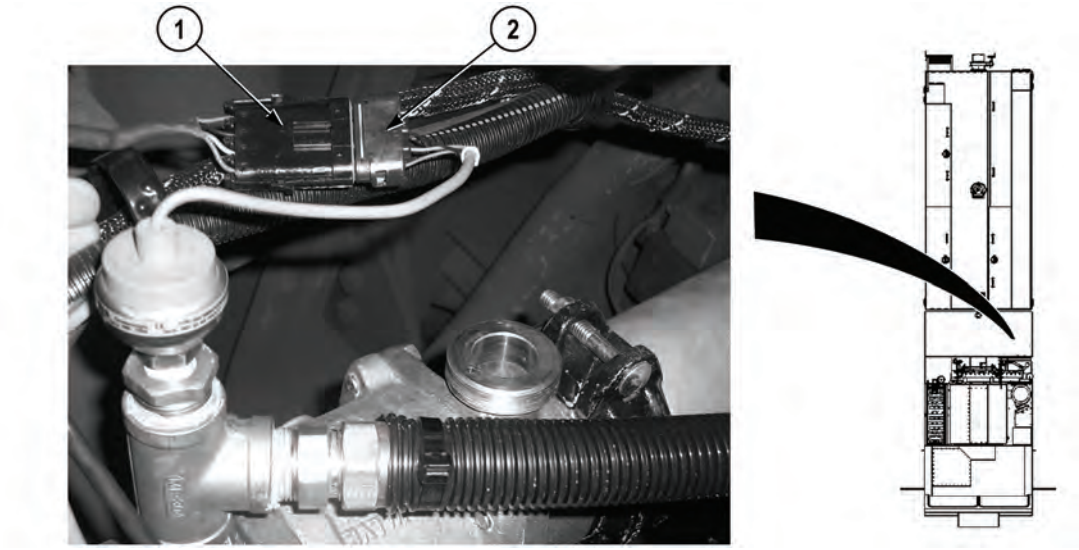
END OF TASK

INSTALLATION

NOTE

- Route No. 1 driver side pressure transducer wire harness as noted.
- Install cable ties, cushion clips, and harness split looms as noted.

1. Install No. 1 driver side pressure transducer wire harness (5) on vehicle.
2. Connect No. 1 driver side pressure transducer wire harness connector (3) to No. 1 driver side pressure transducer line connector (4).



3. Connect No. 1 driver side pressure transducer valve control connector (2) to No. 1 driver side pressure transducer wire harness connector (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install pump house panel K (WP 0341)
2. Close pump operator’s panel (WP 0205)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

NO. 2 PASSENGER SIDE FLOW SENSOR WIRE HARNESS REPLACEMENT

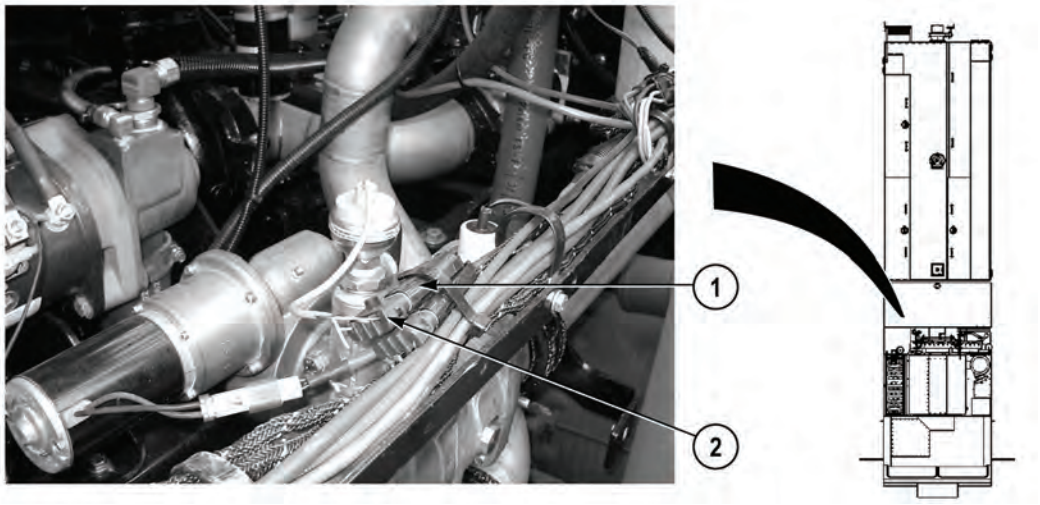
INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)

Equipment Conditions
Pump operator's panel opened (WP 0205)
Pump house panel G removed (WP 0341)

REMOVAL



NOTE

- Note routing of No. 2 passenger side flow sensor wire harness prior to removal to ensure proper installation.
- No. 2 passenger side flow sensor wire harness is routed through pump house panel N and pump operator's panel assembly.
- Note position and remove harness split looms, cushion clips, and cable ties as required.
- Tag and mark connectors prior to removal to ensure proper installation.

1. Disconnect No. 2 passenger side flow sensor wire harness connector (1) from No. 2 passenger side flow sensor control connector (2).



2. Disconnect No. 2 passenger side flow sensor wire harness connector (3) from No. 2 passenger side flow sensor line connector (4).
3. Remove No. 2 passenger side flow sensor wire harness (5) from vehicle.

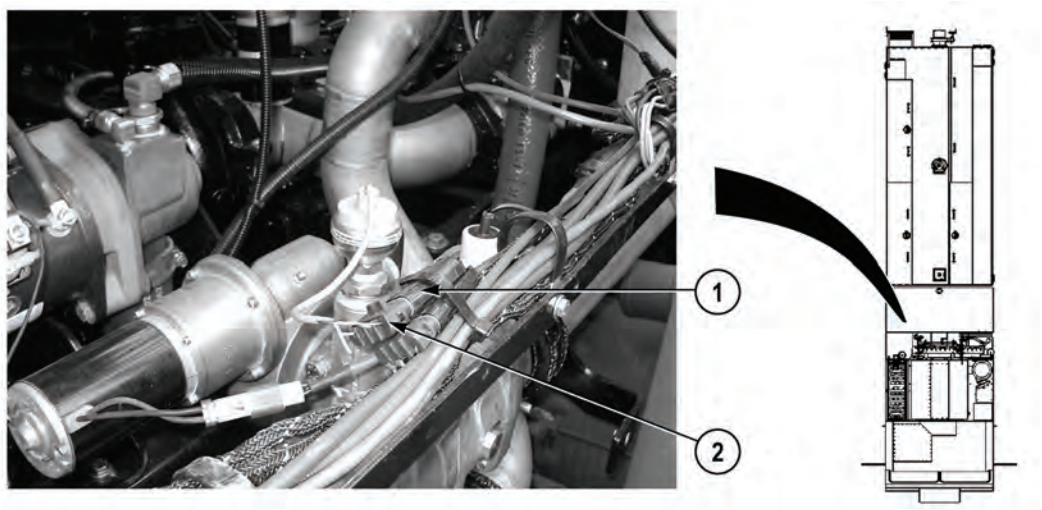
END OF TASK

INSTALLATION

NOTE

- Route No. 2 passenger side flow sensor wire harness as noted.
- Install cable ties, cushion clips, and harness split looms as noted.

1. Install No. 2 passenger side flow sensor wire harness (5) on vehicle.
2. Connect No. 2 passenger side flow sensor wire harness connector (3) to No. 2 passenger side flow sensor line connector (4).



3. Connect No. 2 passenger side flow sensor control connector (2) to No. 2 passenger side flow sensor wire harness connector (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Close pump house panel G (WP 0341)
2. Close pump operator’s panel (WP 0205)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PASSENGER SIDE AUXILIARY INLET VALVE CONTROL WIRE HARNESS REPLACEMENT

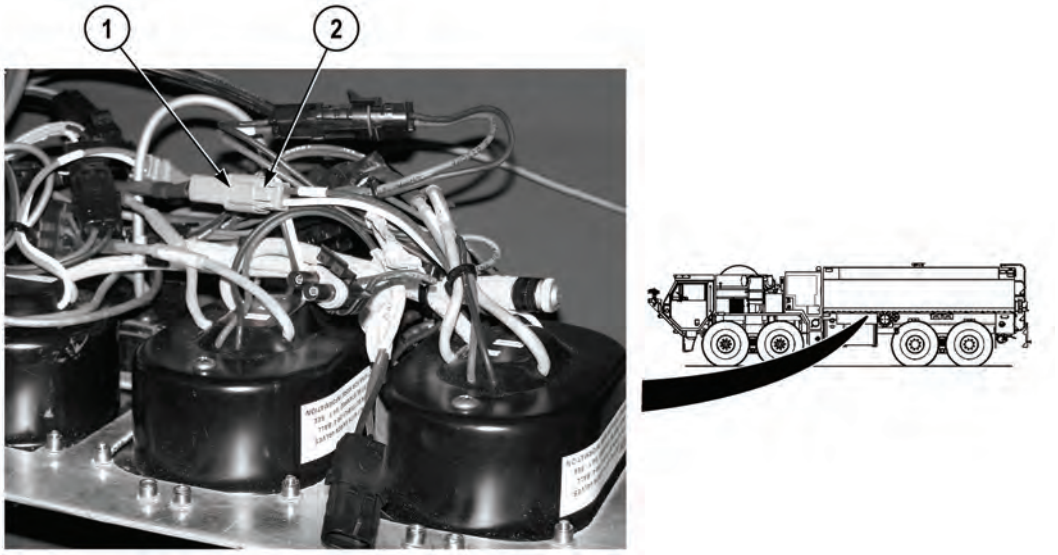
INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)

Equipment Conditions
Pump operator's panel opened (WP 0205)
Pump house panel F removed (WP 0341)

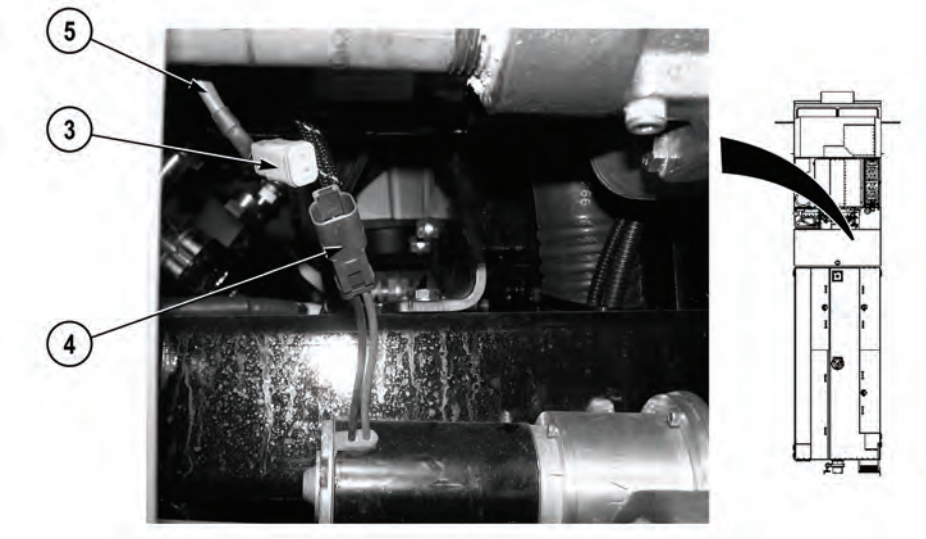
REMOVAL



NOTE

- Note routing of passenger side auxiliary inlet valve control wire harness prior to removal to ensure proper installation.
- Passenger side auxiliary inlet valve control wire harness is routed through pump house panel N and pump operator's panel assembly.
- Note position and remove split loom, cushion clips, and cable ties as required.
- Tag and mark connectors prior to removal to ensure proper installation.

1. Disconnect passenger side auxiliary inlet valve control wire harness connector (1) from passenger side auxiliary inlet valve control gauge connector (2).



2. Disconnect passenger side auxiliary inlet valve control wire harness connector (3) from passenger side auxiliary inlet valve control connector (4).
3. Remove passenger side auxiliary inlet valve control wire harness (5) from vehicle.

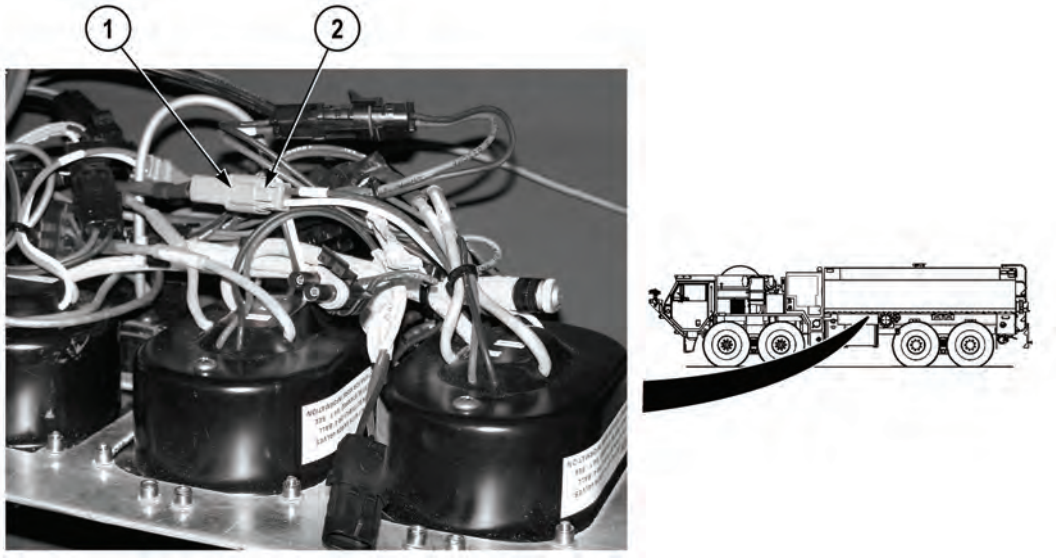
END OF TASK

INSTALLATION

NOTE

- Route passenger side auxiliary inlet valve control wire harness as noted.
- Install cable ties, cushion clips, and split loom as required.

1. Install passenger side auxiliary inlet valve control wire harness (5) on vehicle.
2. Connect passenger side auxiliary inlet valve control connector (4) to passenger side auxiliary inlet valve control wire harness connector (3).



3. Connect passenger side auxiliary inlet valve control gauge connector (2) to passenger side auxiliary inlet valve control wire harness connector (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install pump house panel F (WP 0341)
2. Close pump operator’s panel (WP 0205)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

NO. 2 PASSENGER SIDE PRESSURE TRANSDUCER WIRE HARNESS REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)

Equipment Conditions
Pump operator's panel opened (WP 0205)
Pump house panel G removed (WP 0341)

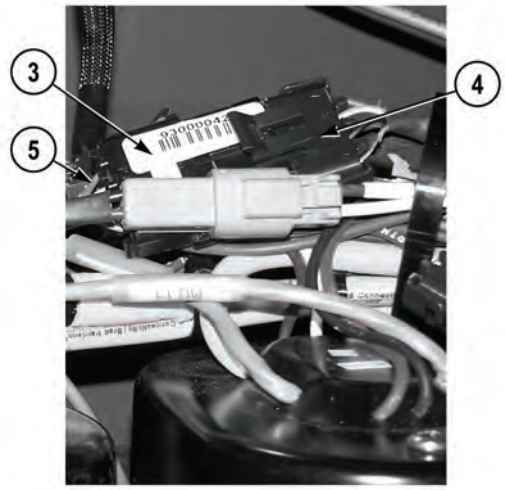
REMOVAL



NOTE

- Note routing of No. 2 passenger side pressure transducer wire harness prior to removal to ensure proper installation.
- No. 2 passenger side pressure transducer wire harness is routed through pump house panel N and pump operator's panel assembly.
- Note position and remove split looms, cushion clips, and cable ties as required.
- Tag and mark connectors prior to removal to ensure proper installation.

1. Disconnect No. 2 passenger side pressure transducer wire harness connector (1) from No. 2 passenger side pressure transducer valve control connector (2).



2. Disconnect No. 2 passenger side pressure transducer wire harness connector (3) from No. 2 passenger side pressure transducer line connector (4).
3. Remove No. 2 passenger side pressure transducer wire harness (5) from vehicle.

END OF TASK

INSTALLATION

NOTE

- Route No. 2 passenger side pressure transducer wire harness as noted.
- Install cable ties, cushion clips, and split looms as noted.

1. Install No. 2 passenger side pressure transducer wire harness (5) on vehicle.
2. Connect No. 2 passenger side pressure transducer wire harness connector (3) to No. 2 passenger side pressure transducer line connector (4).



3. Connect No. 2 passenger side pressure transducer valve control connector (2) to No. 2 passenger side pressure transducer wire harness connector (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Close pump house panel G (WP 0341)
2. Close pump operator’s panel (WP 0205)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PASSENGER SIDE BODY WIRE HARNESS REPLACEMENT

INITIAL SETUP:

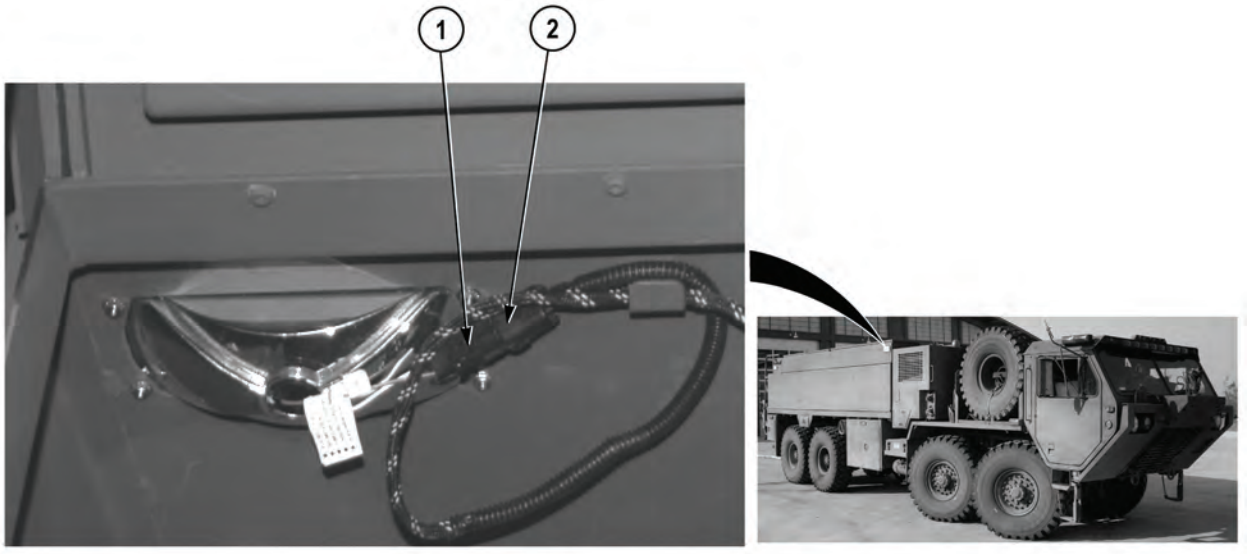
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

Equipment Conditions
Stowage compartment (lower rear passenger side) removed (WP 0358)
Passenger side top stowage compartment doors opened (WP 0008)
Light bezel cover (passenger side) removed (WP 0337)

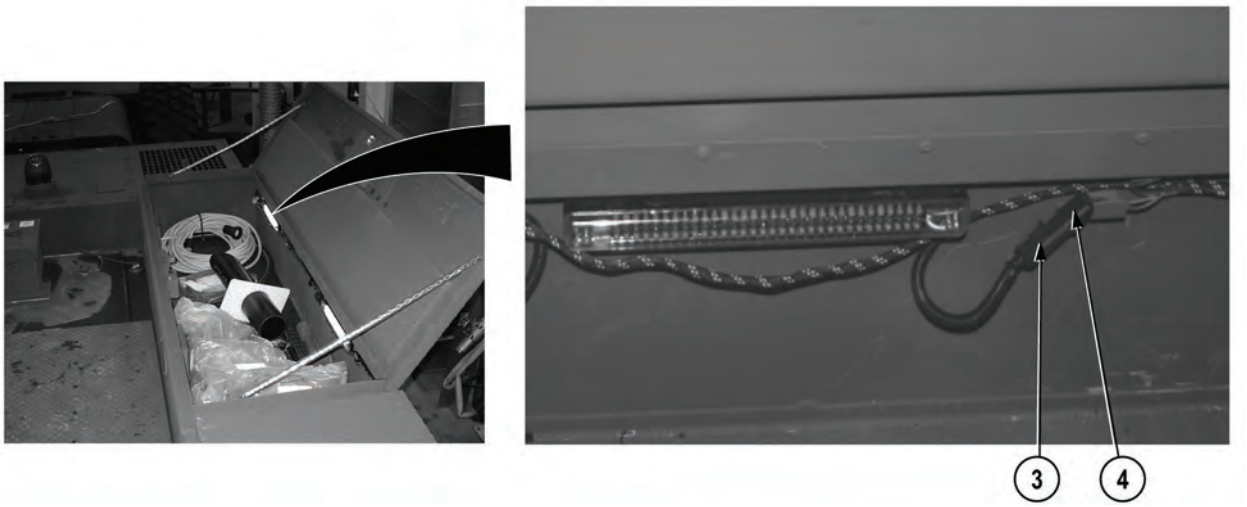
REMOVAL



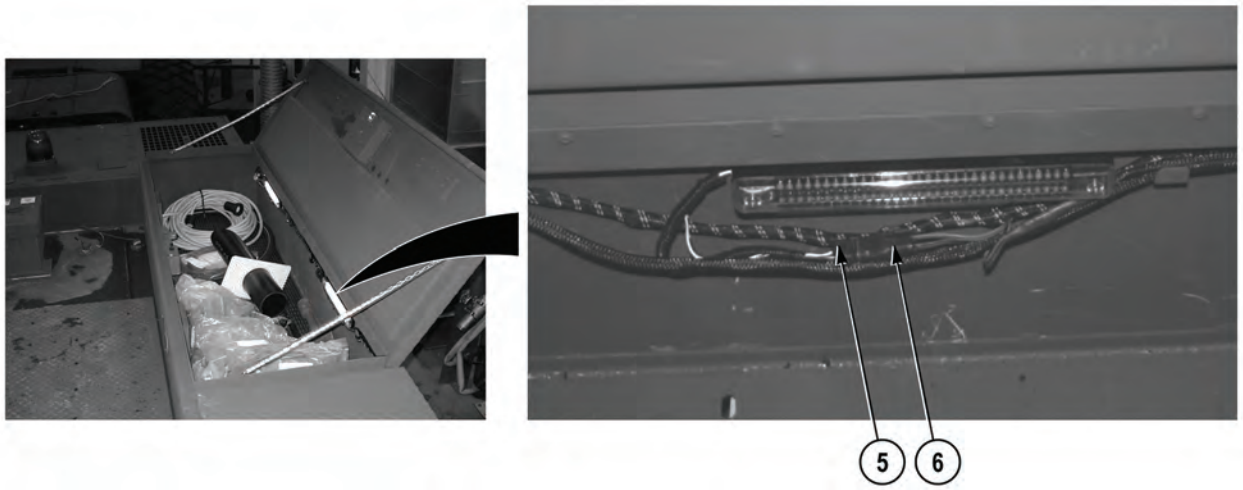
NOTE

- Tag and mark wires prior to removal to ensure proper installation.
- Note routing of passenger side body wire harness prior to removal to ensure proper installation.
- Note position and remove cable ties, split loom, and cushion clips as required.
- Passenger side body wire harness is removed so that entire harness is routed into passenger side light bezel box.

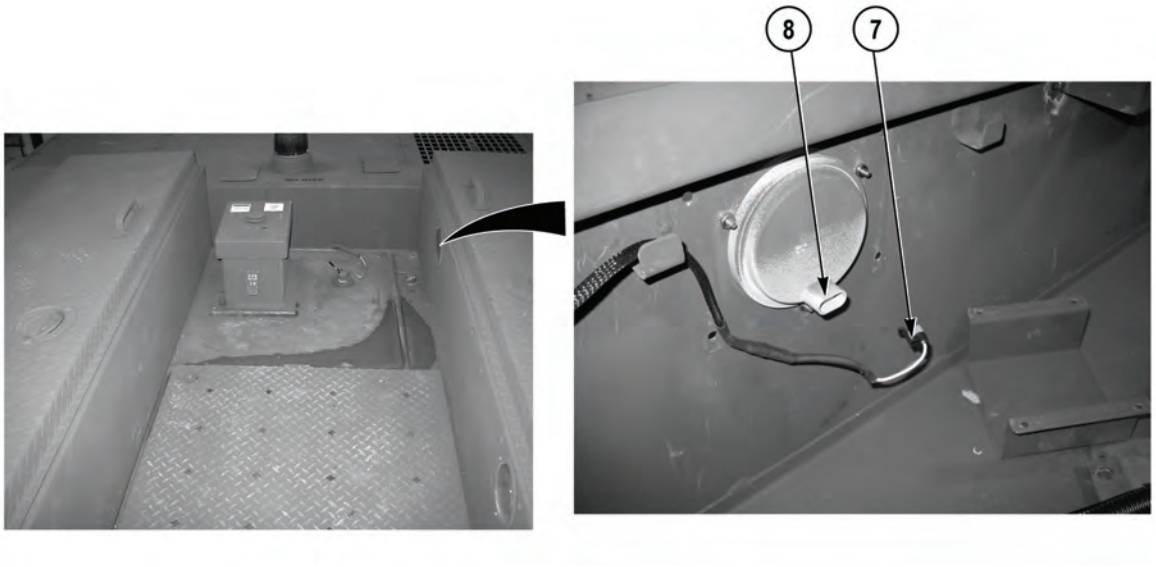
1. Disconnect scene light connector (1) from passenger side body wire harness connector (2).



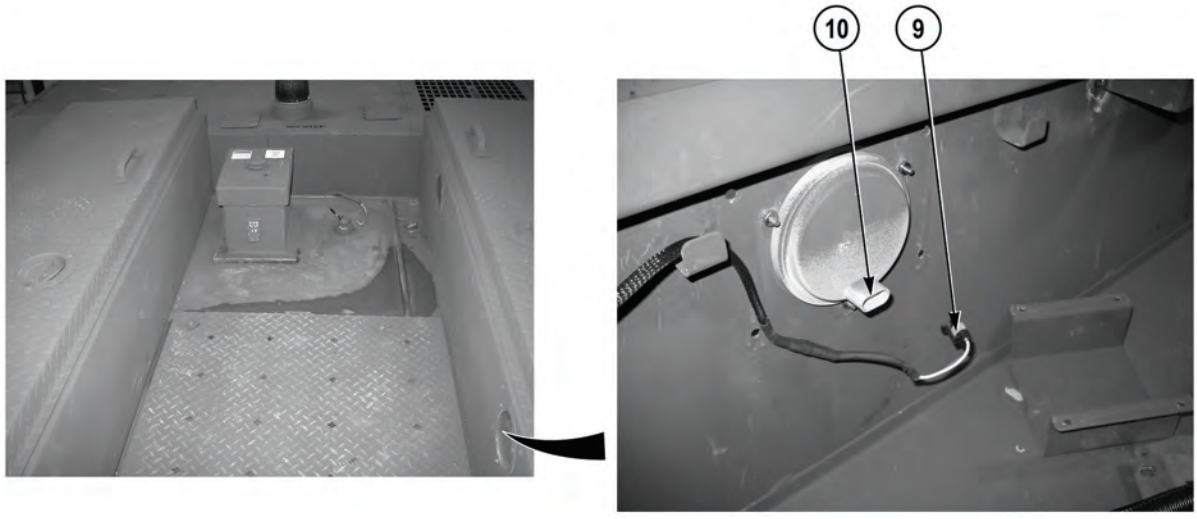
2. Disconnect striplight connector (3) from passenger side body wire harness connector (4).



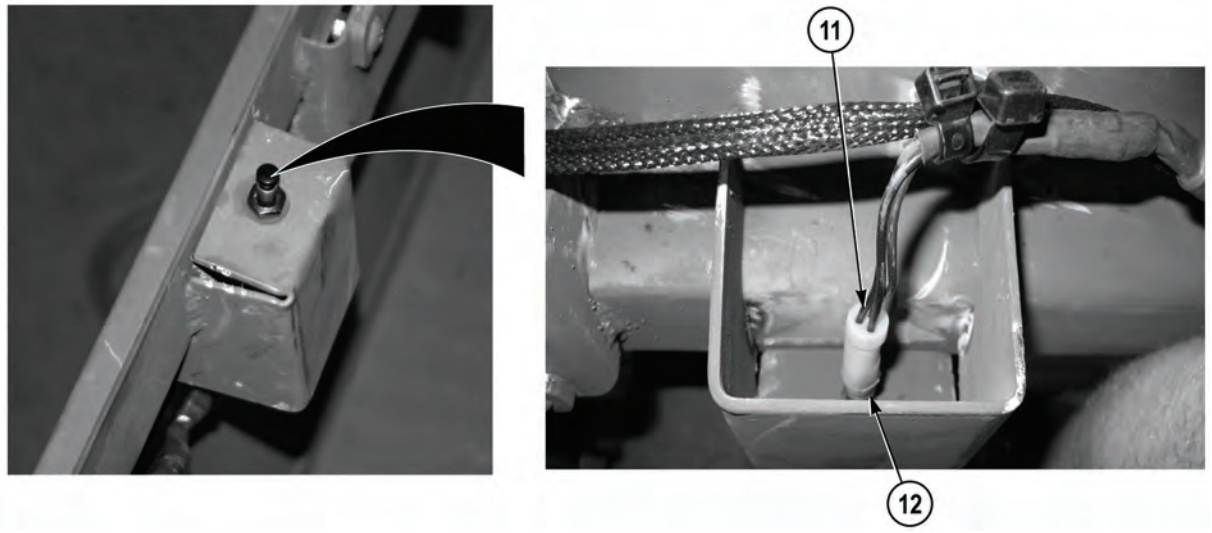
3. Disconnect striplight connector (5) from passenger side body wire harness connector (6).



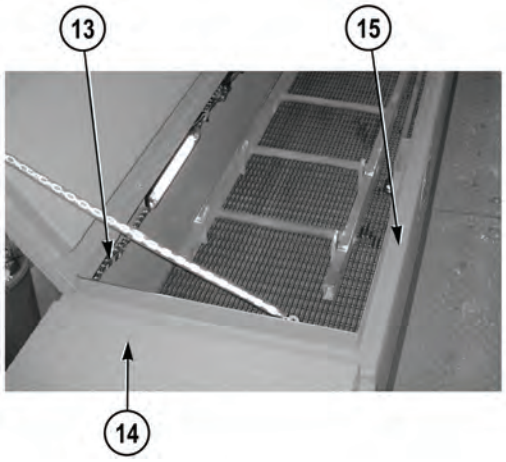
4. Disconnect passenger side body wire harness connector (7) from step light



5. Disconnect passenger side body wire harness connector (9) from step light (10).



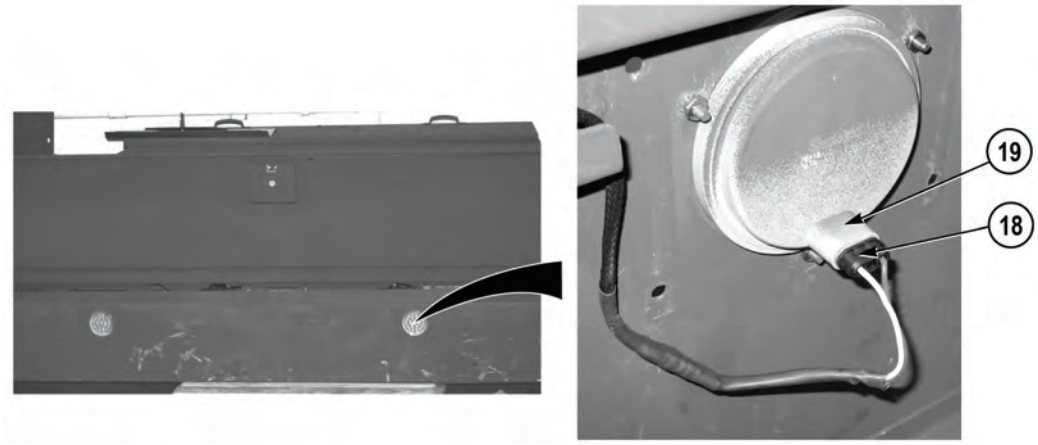
6. Disconnect passenger side body wire harness connector (11) from front passenger side top stowage compartment door switch (12).



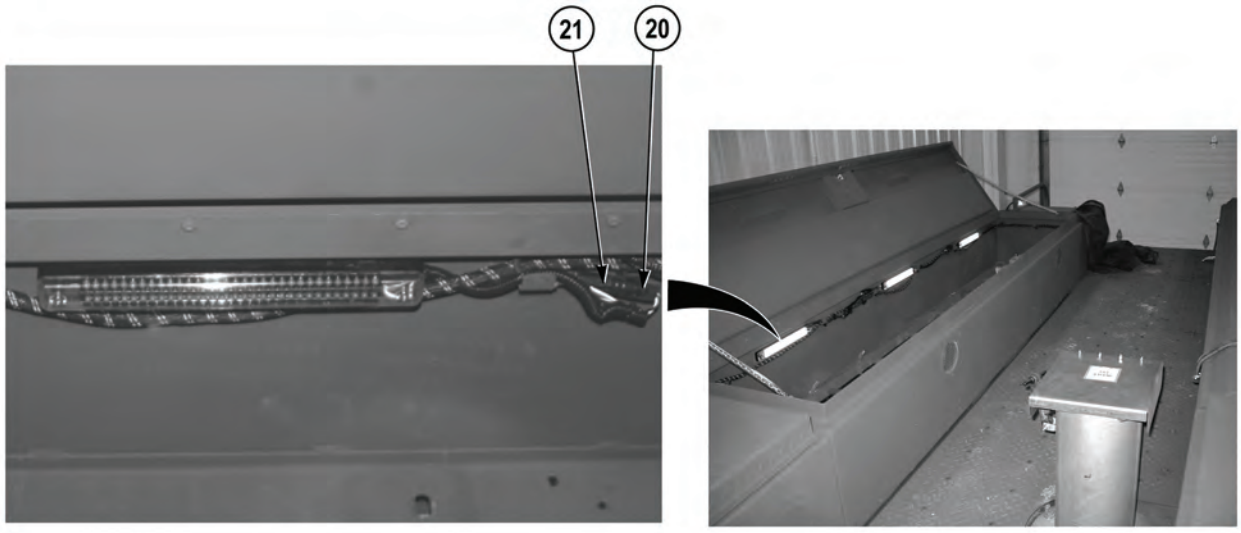
7. Remove passenger side body wire harness (13) from front passenger side top stowage compartment (14), routing harness into rear passenger side top stowage compartment (15).



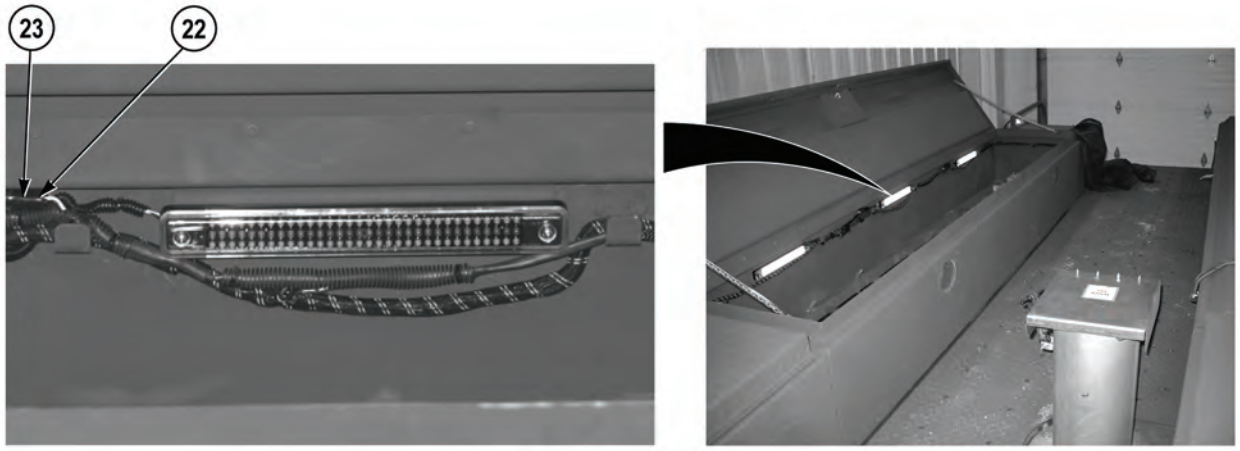
8. Disconnect passenger side body wire harness connector (16) from step light (17).



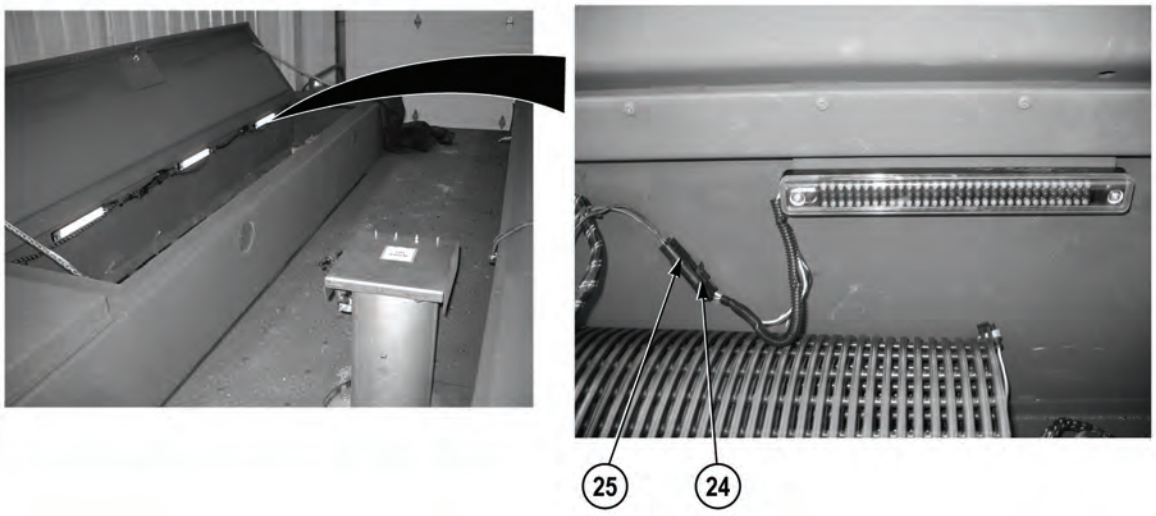
9. Disconnect passenger side body wire harness connector (18) form step light (19).



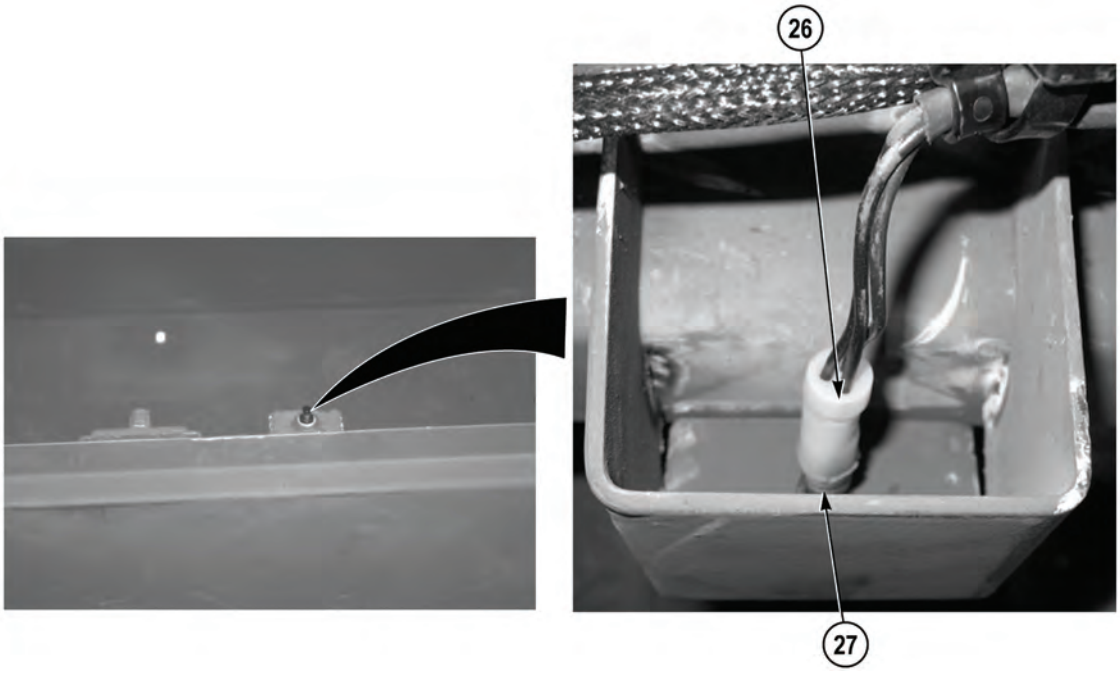
10. Disconnect striplight connector (20) from passenger side body wire harness connector (21).



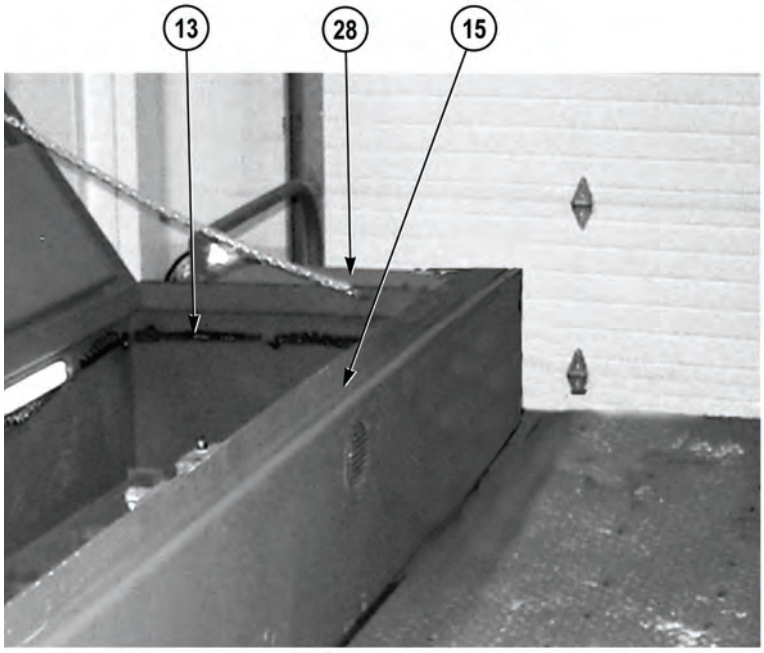
11. Disconnect striplight connector (22) from passenger side body wire harness connector (23).



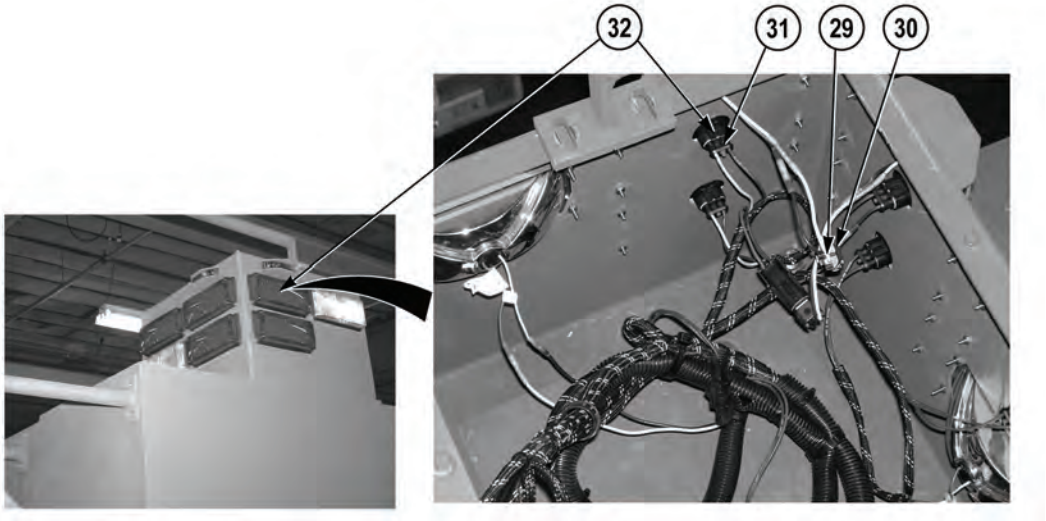
12. Disconnect striplight connector (24) from passenger side body wire harness connector (25).



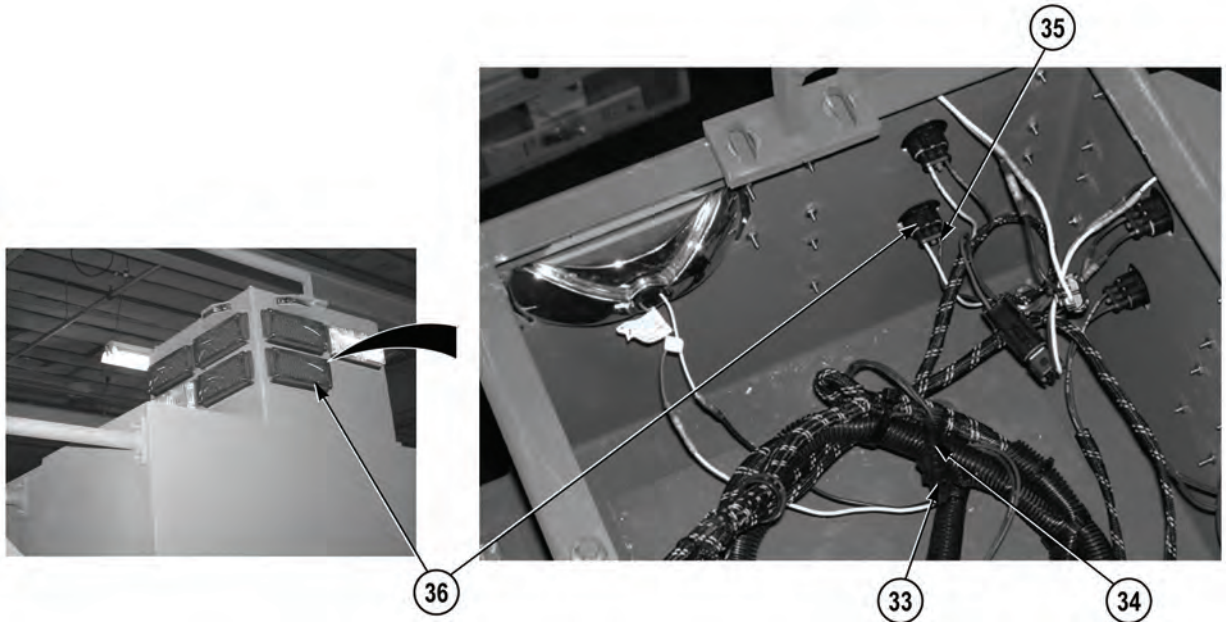
13. Disconnect passenger side body wire harness connector (26) from rear passenger side top stowage compartment door switch (27).



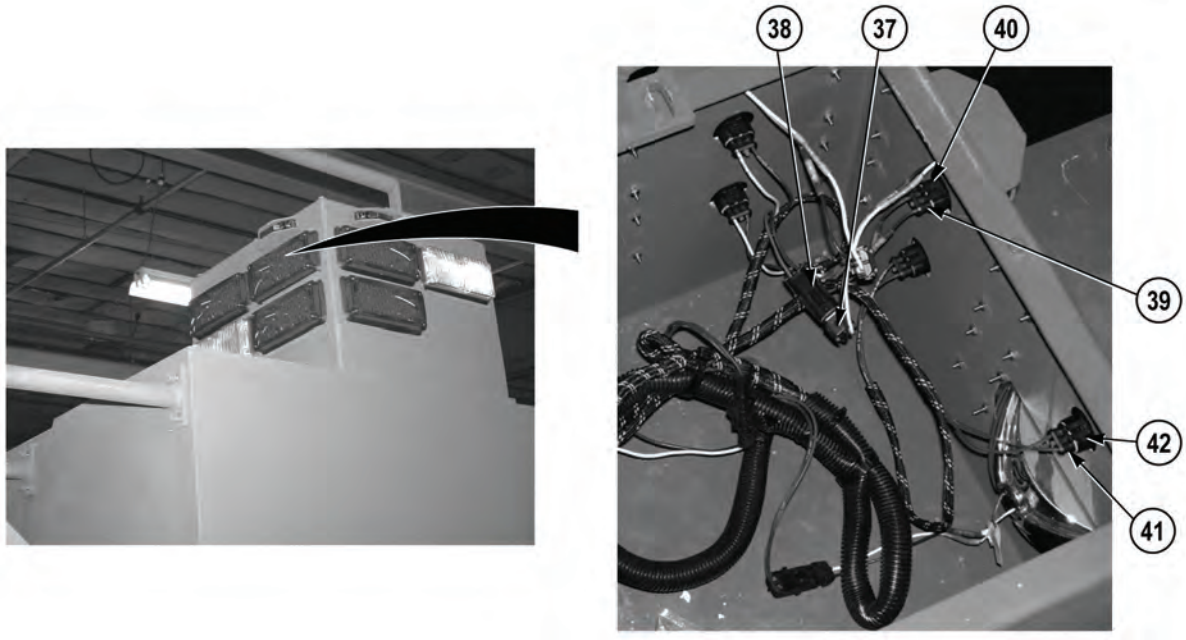
14. Remove passenger side body wire harness (13) from rear passenger side top stowage compartment (15), routing harness into passenger side light bezel box (28).



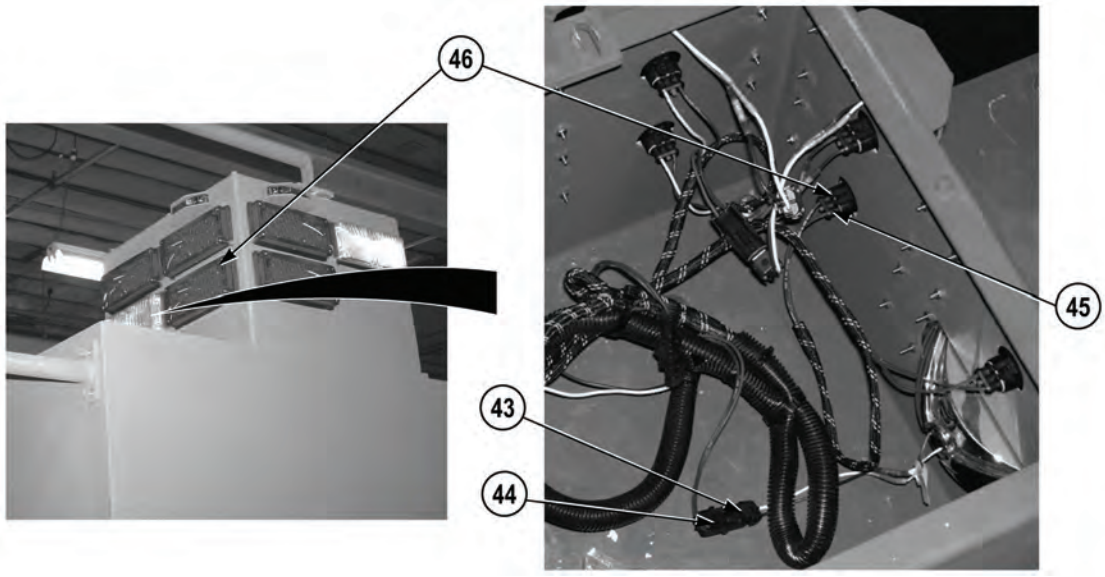
15. Disconnect clearance light connector (29) from passenger side body wire harness connector (30).
16. Disconnect passenger side body wire harness connector (31) from (top upper) side warning light (32).



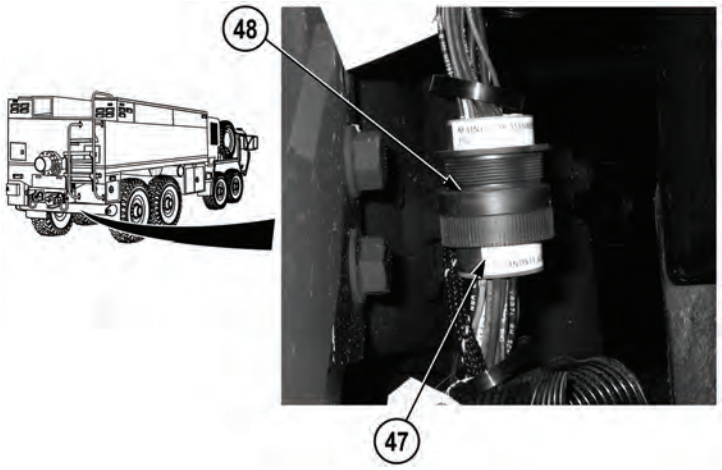
17. Disconnect scene light connector (33) from passenger side body wire harness connector (34).
18. Disconnect passenger side body wire harness connector (35) from (bottom upper) side warning light (36).



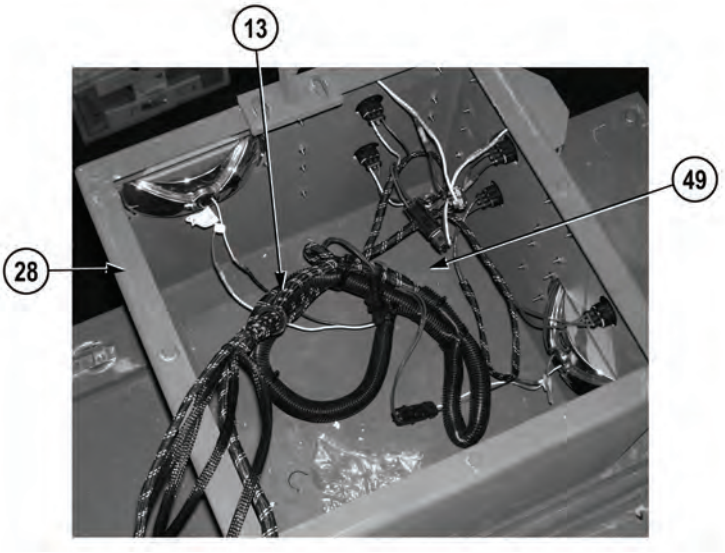
19. Disconnect clearance light connector (37) from passenger side body wire harness connector (38).
20. Disconnect passenger side body wire harness connector (39) from (top outer) upper rear warning light (40).
21. Disconnect passenger side body wire harness connector (41) from (top inner) upper rear warning light (42).



22. Disconnect scene light connector (43) from passenger side body wire harness connector (44).
23. Disconnect passenger side body wire harness connector (45) from (bottom) upper rear warning light (46).



24. Disconnect passenger side body wire harness connector (47) from main wire harness connector (48).



25. With aid of an assistant, remove passenger side body wire harness (13) from onboard water tank (49), routing harness through passenger side light bezel box (28).
26. Remove passenger side body wire harness (13) from vehicle.

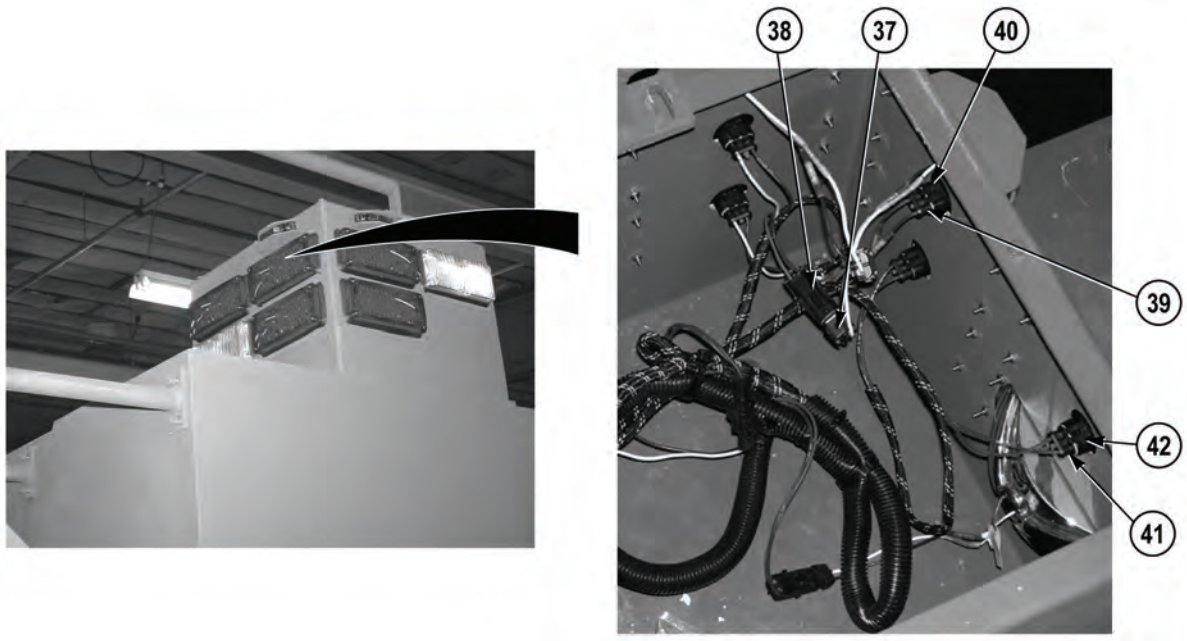
END OF TASK

INSTALLATION

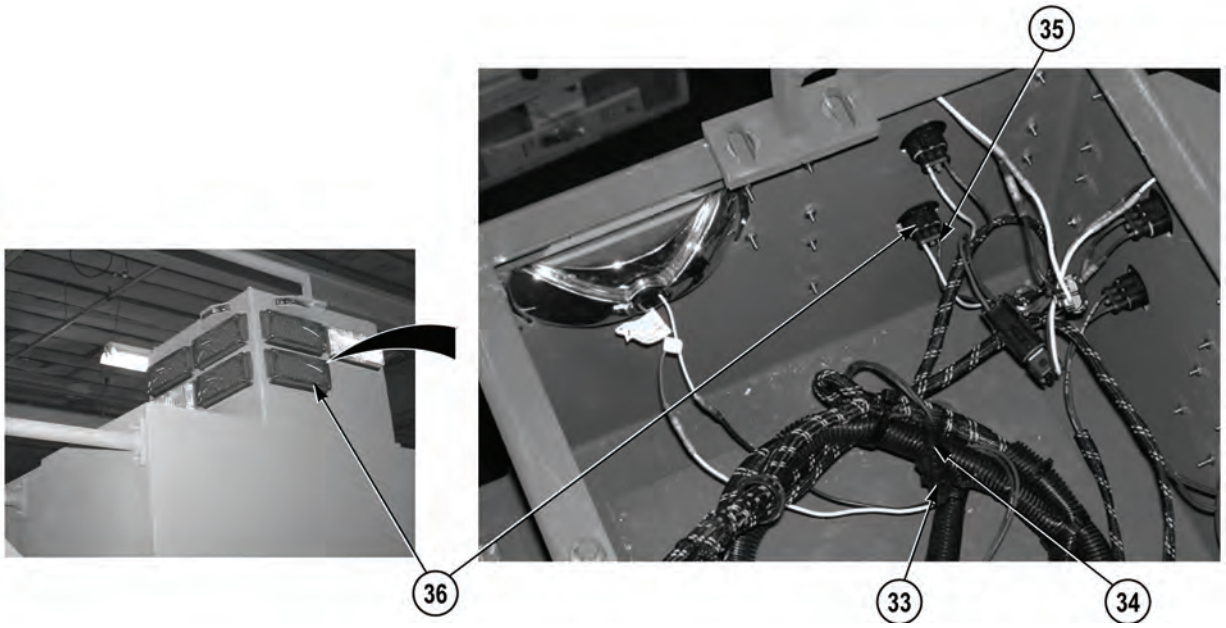
NOTE

- Route passenger side body wire harness as noted prior to removal.
- Install cable ties, split loom, and cushion clips as required.

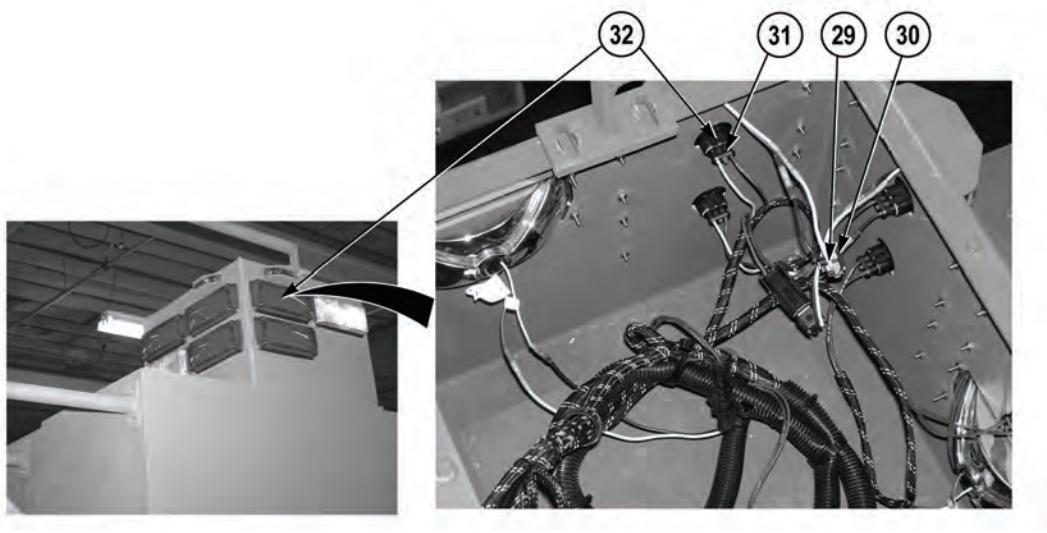
1. Install passenger side body wire harness (13) on vehicle.
2. With aid of an assistant, route and position passenger side body wire harness (13) on passenger side light bezel box (28) and onboard water tank (49).
3. Connect passenger side body wire harness connector (47) on main wire harness connector (48).
4. Connect passenger side body wire harness connector (45) on (bottom) upper rear warning light (46).
5. Connect passenger side body wire harness connector (44) to scene light connector (43).



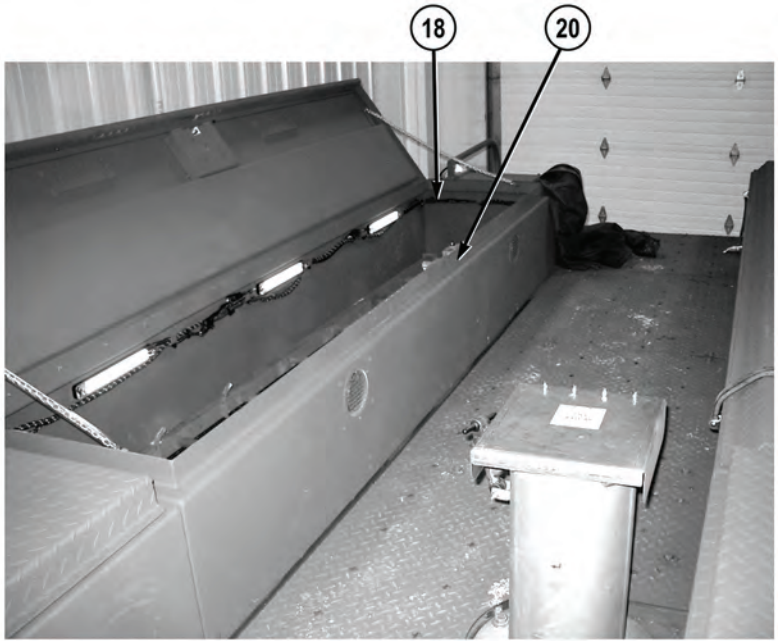
6. Connect passenger side body wire harness connector (41) on (top inner) upper rear warning light (42).
7. Connect passenger side body wire harness connector (39) on (top outer) upper rear warning light (40).
8. Connect passenger side body wire harness connector (38) to clearance light connector (37).



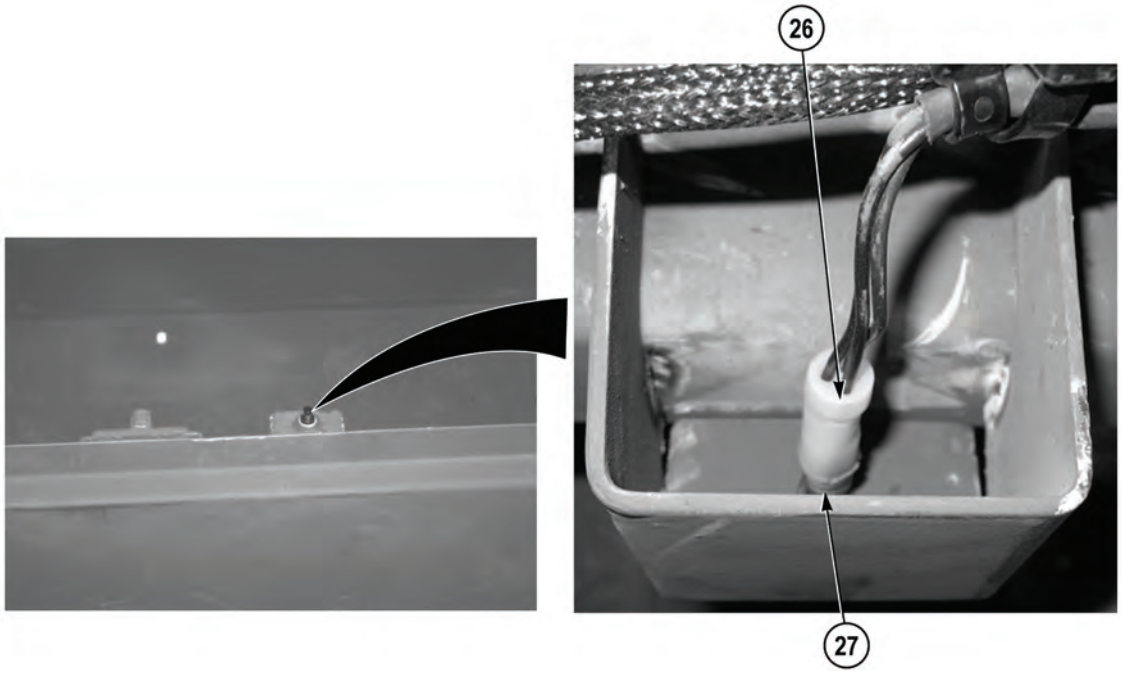
9. Connect passenger side body wire harness connector (35) on (bottom upper) side warning light (36).
10. Connect passenger side body wire harness connector (34) to scene light connector (33).



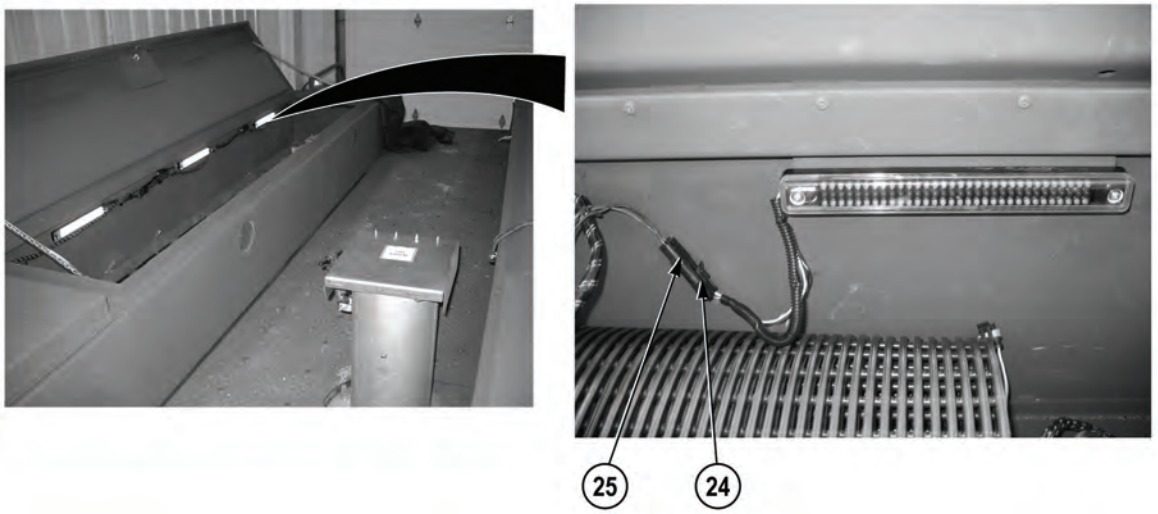
11. Connect passenger side body wire harness connector (31) on (top upper) side warning light (32).
12. Connect passenger side body wire harness connector (30) to clearance light connector (29).



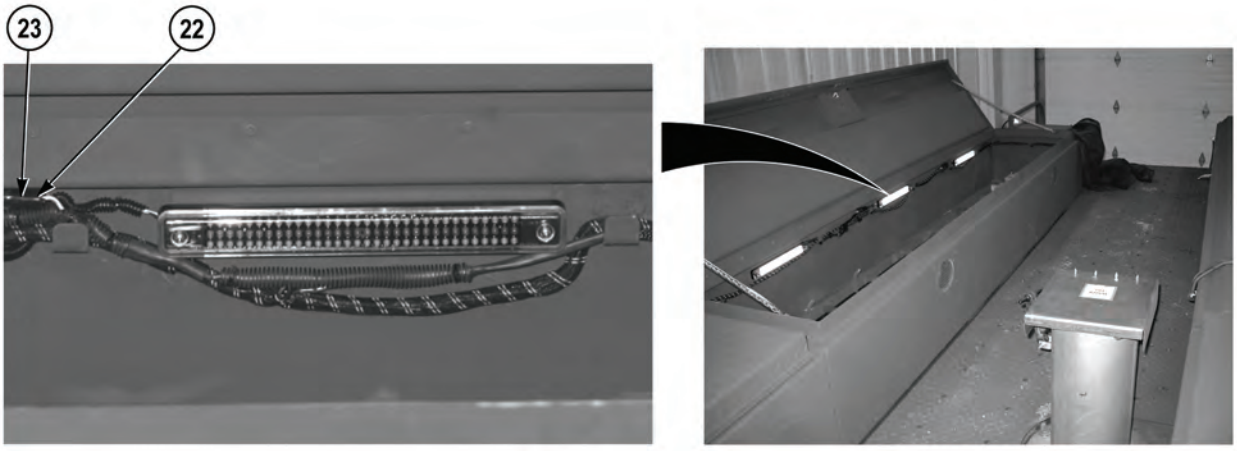
13. Route and install passenger side body wire harness (13) on rear passenger side top stowage compartment (15).



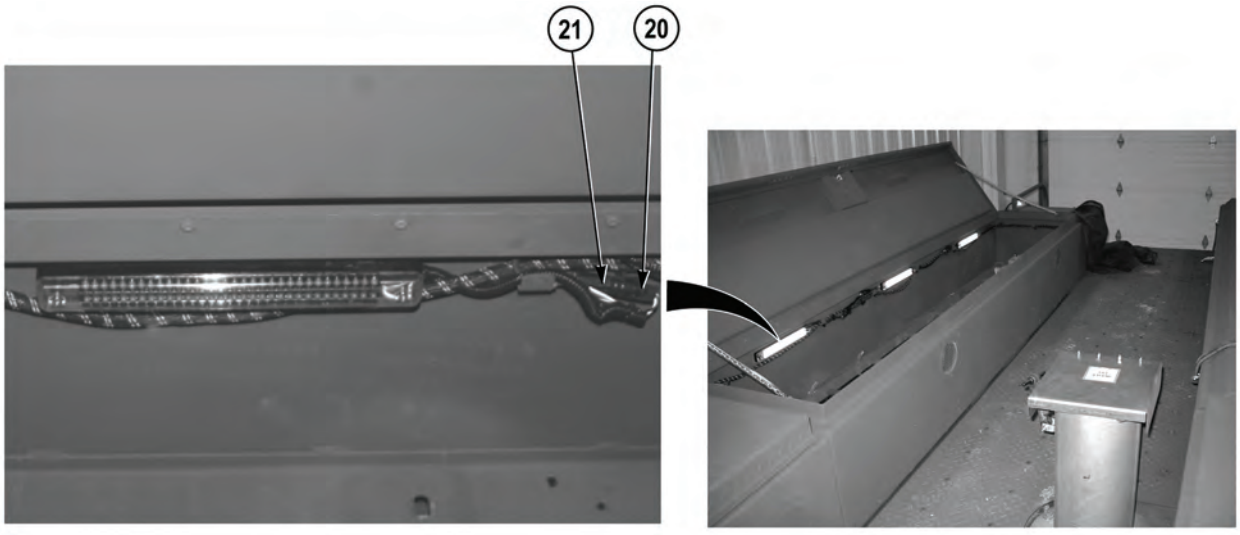
14. Connect passenger side body wire harness connector (26) on rear passenger side top stowage compartment door switch (27).



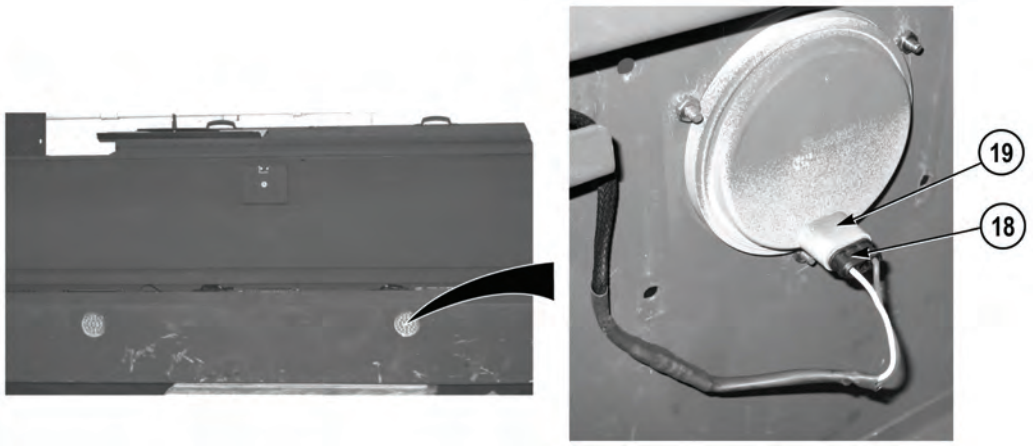
15. Connect passenger side body wire harness connector (25) to striplight connector (24).



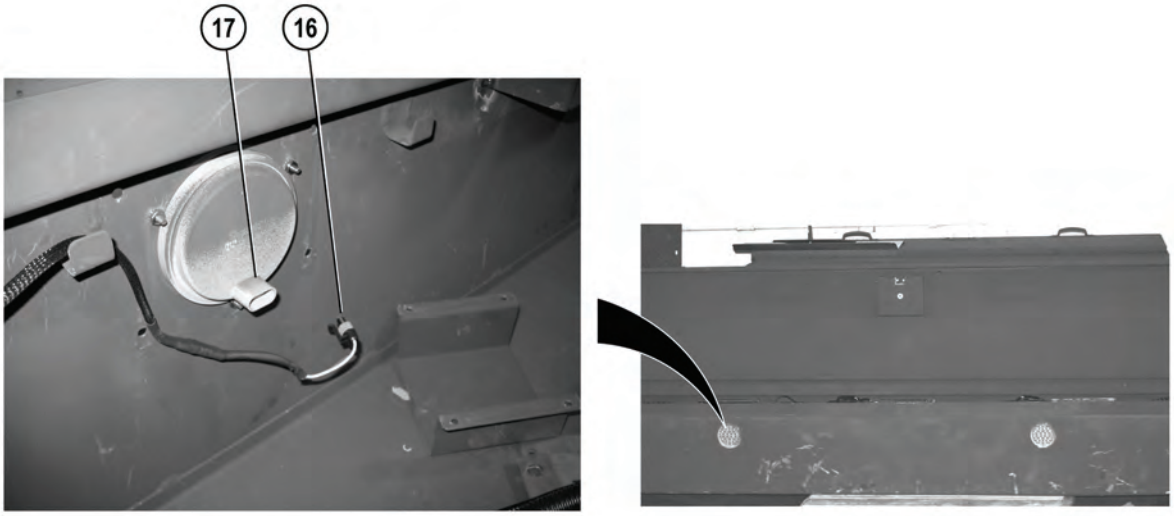
16. Connect passenger side body wire harness connector (23) to striplight connector (22).



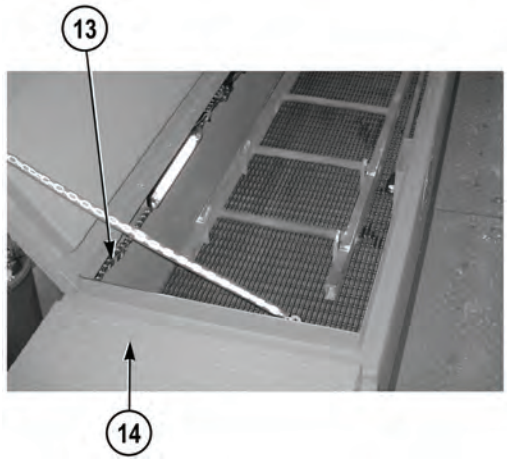
17. Connect passenger side body wire harness connector (21) to striplight connector (20).



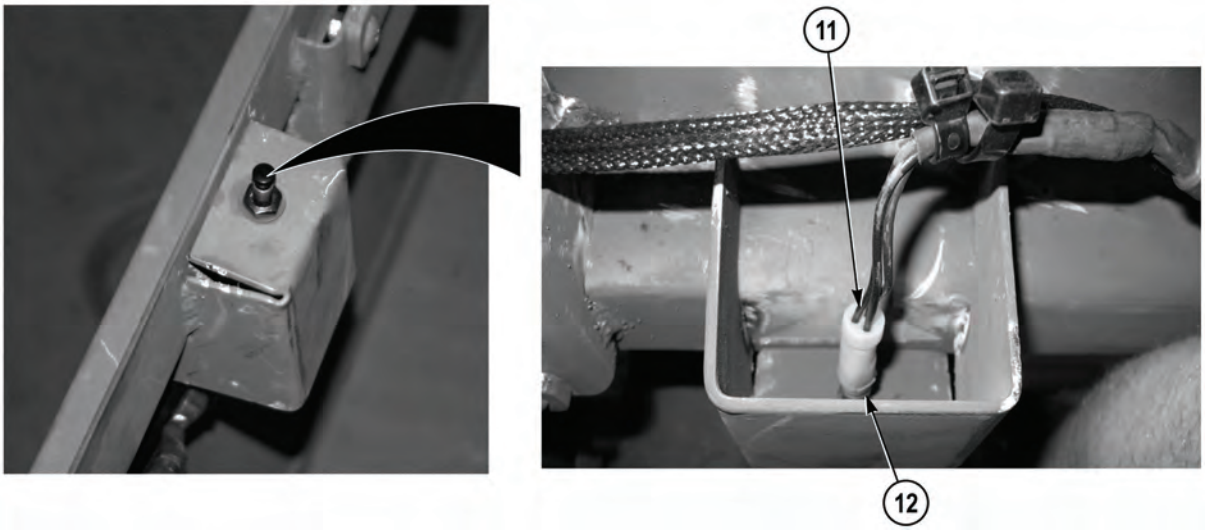
18. Connect passenger side body wire harness connector (18) to step light (19).



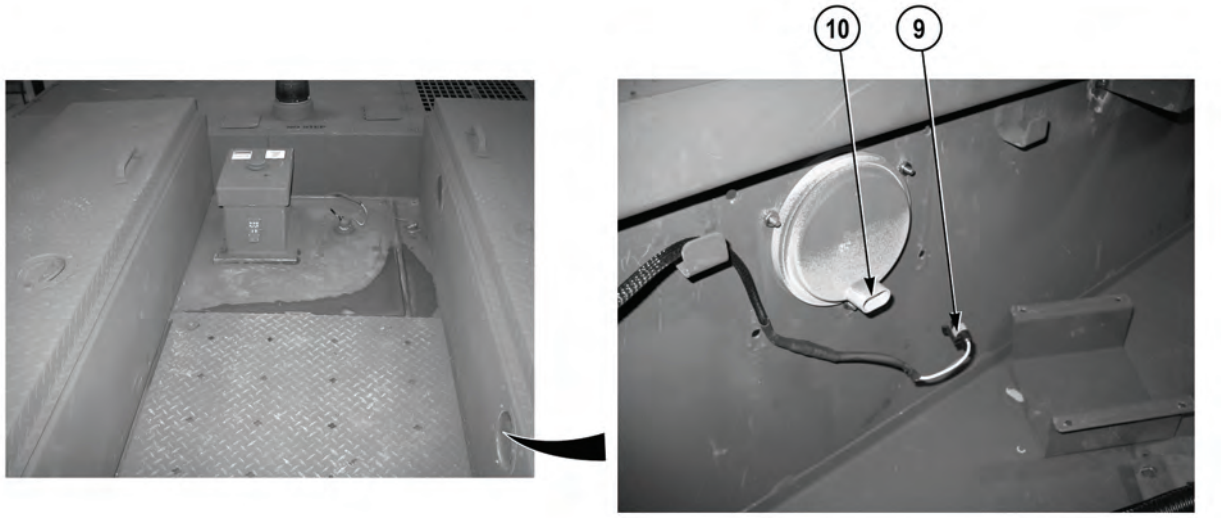
19. Connect passenger side body wire harness connector (16) to step light (17).



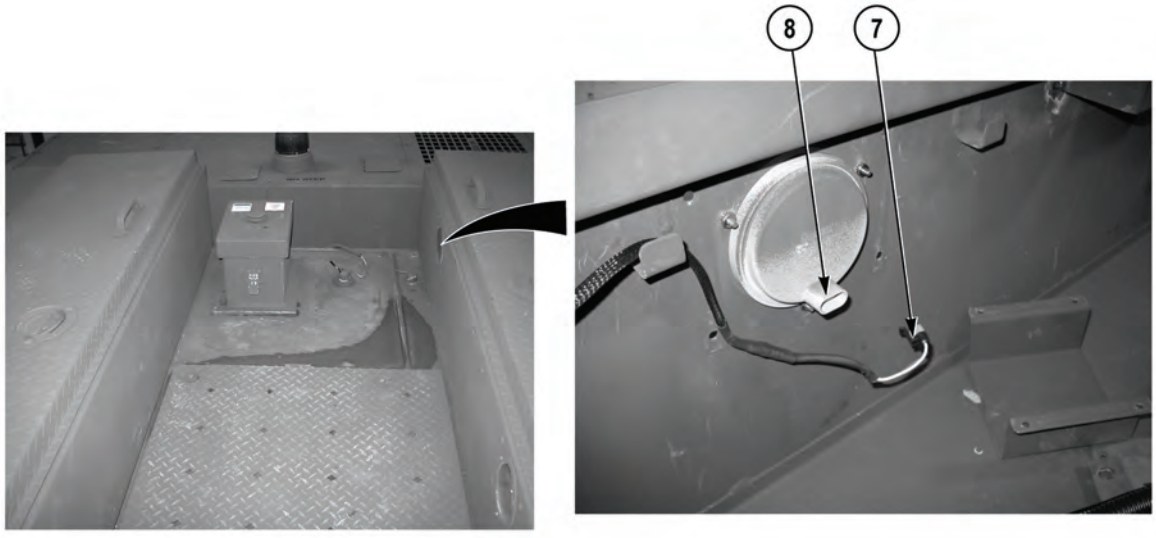
20. Route and install passenger side body wire harness (13) on front passenger side top stowage compartment (14).



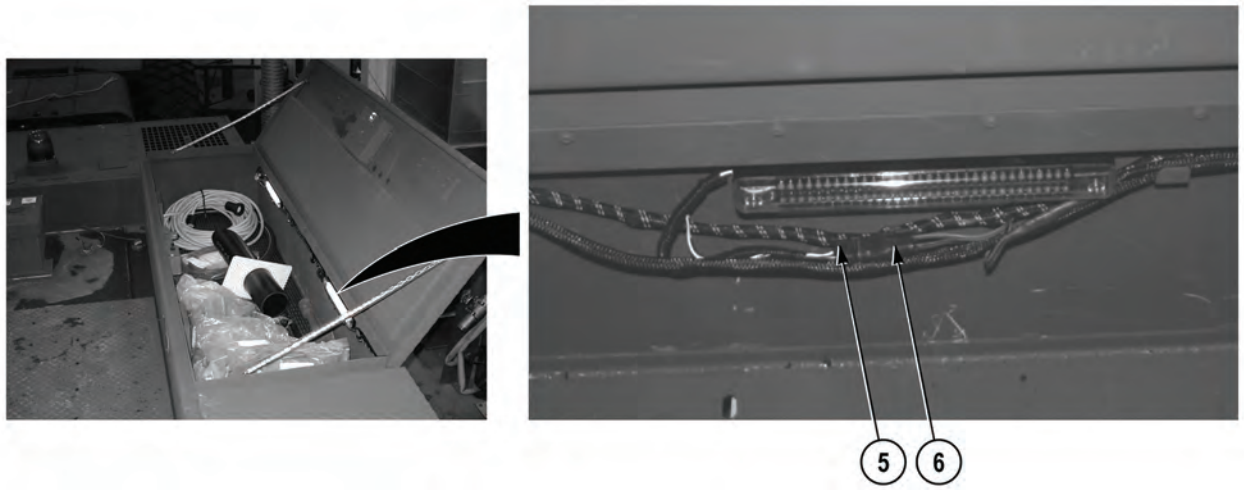
21. Connect passenger side body wire harness connector (11) on front passenger side top stowage compartment door switch (12).



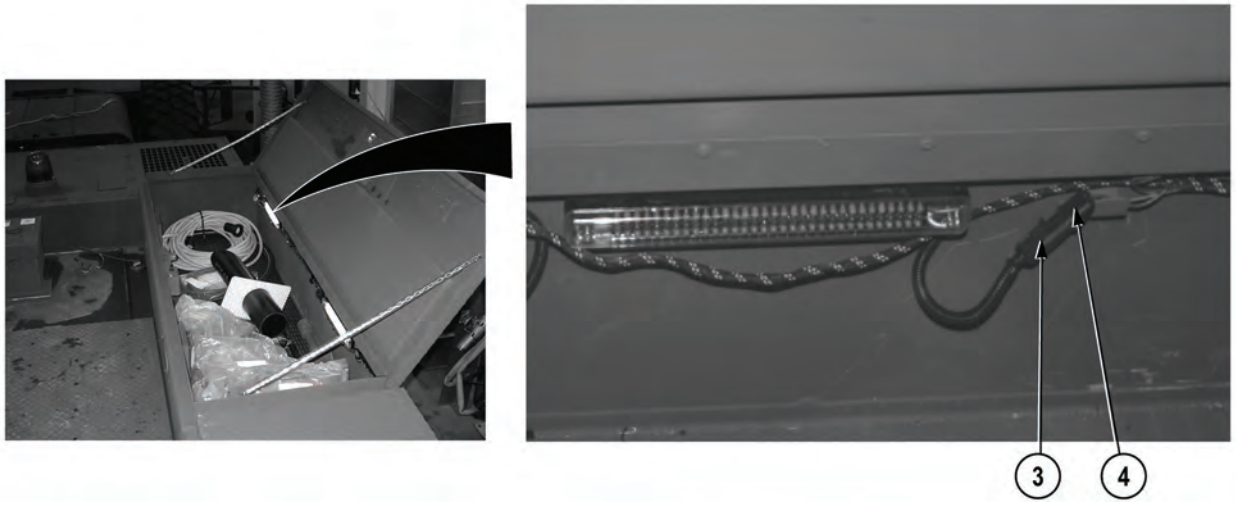
22. Connect passenger side body wire harness connector (9) to step light (10).



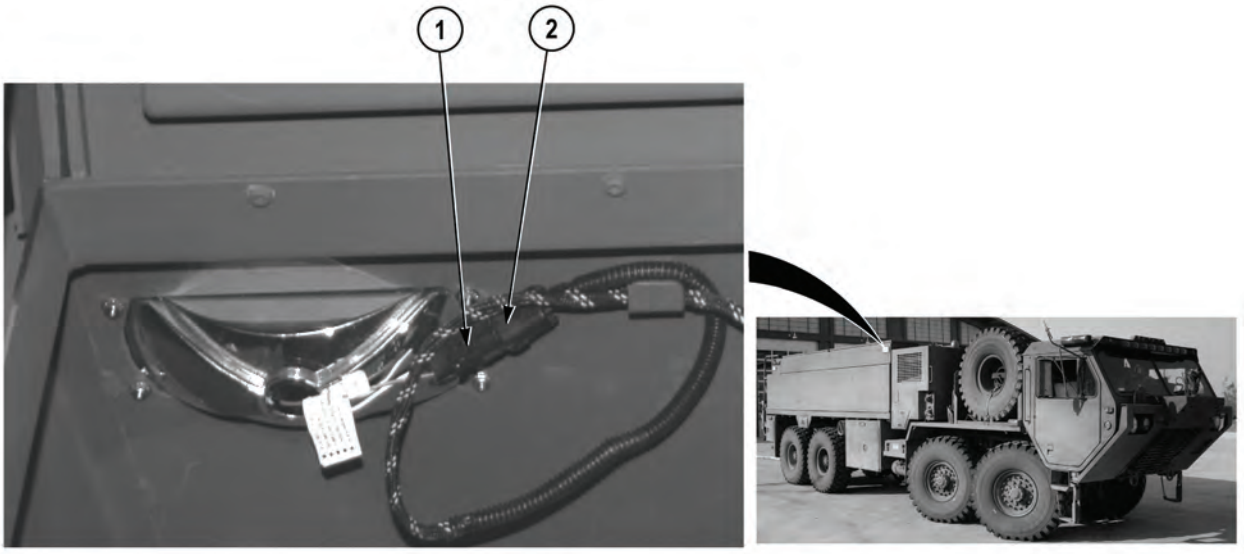
23. Connect passenger side body wire harness connector (7) to step light (8).



24. Connect passenger side body wire harness connector (6) to striplight connector (5).



25. Connect passenger side body wire harness connector (4) to striplight connector (3).



26. Connect passenger side body wire harness connector (2) to scene light connector (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install stowage compartment (lower rear passenger side) (WP 0358)
2. Install passenger side light bezel cover (WP 0337)
3. Close passenger side top stowage compartment doors (WP 0008)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PUMP HOUSE POWER DISTRIBUTION WIRE HARNESS AND BLOCK REPLACEMENT

INITIAL SETUP:

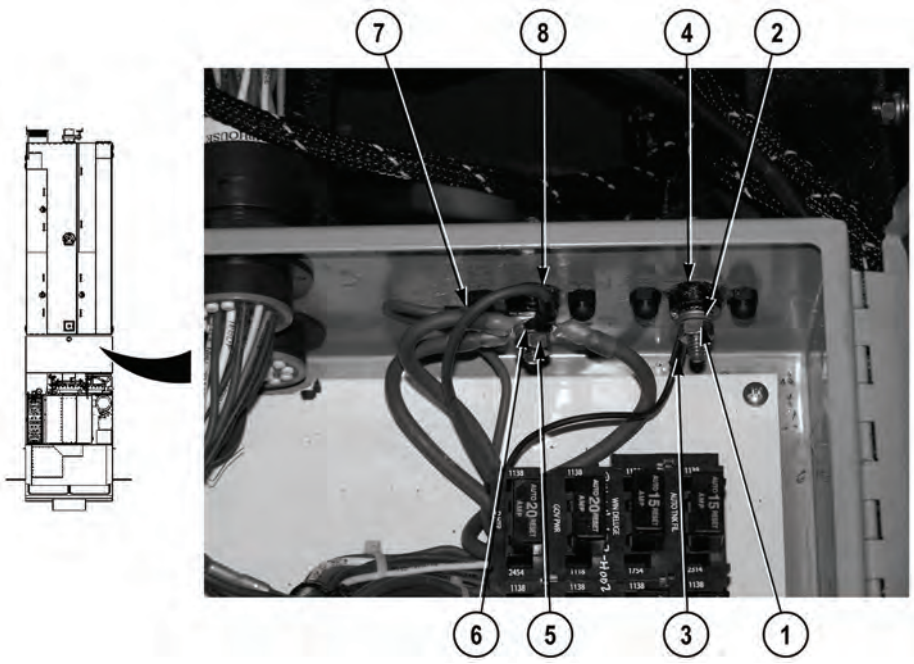
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)
Lockwasher (2)
Lockwasher (2)

References
WP 0392, Fig. 54

Equipment Conditions
Pump house panel K removed (WP 0341)

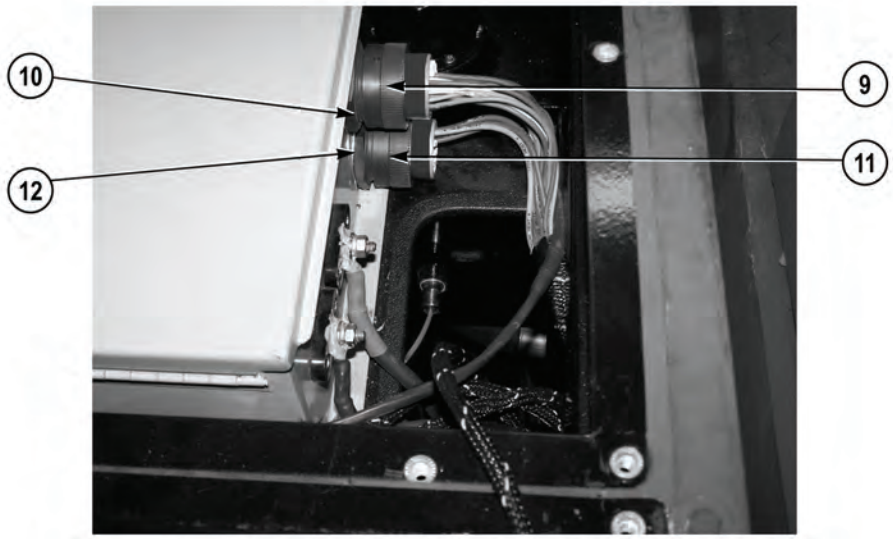
REMOVAL



NOTE

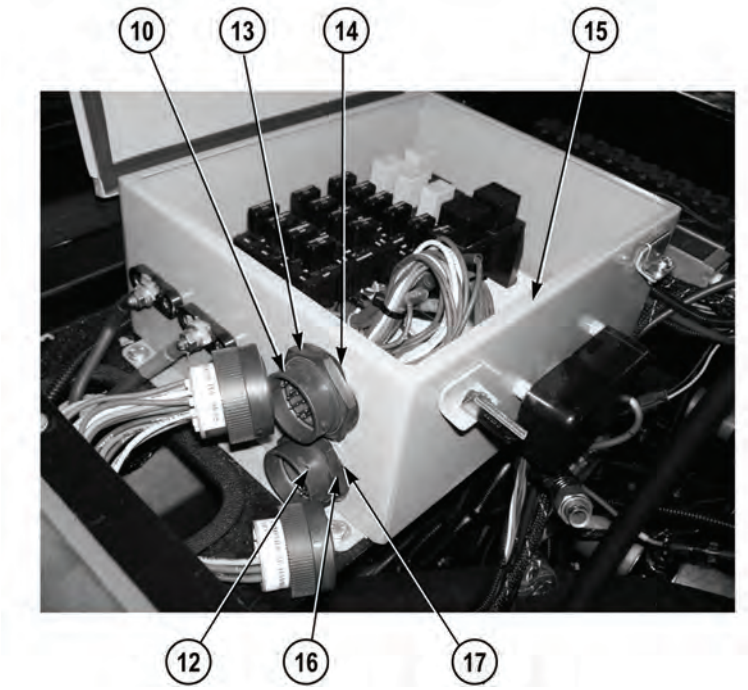
- Tag and mark wires prior to removal to ensure proper installation.
- Remove cable ties as required.

1. Remove nut (1), lockwasher (2), and wire 1640 (3) from pass-through terminal block (4). Discard lockwasher.
2. Remove nut (5), lockwasher (6), and five wires 1138 (7) from pass-through terminal block (8). Discard lockwasher.



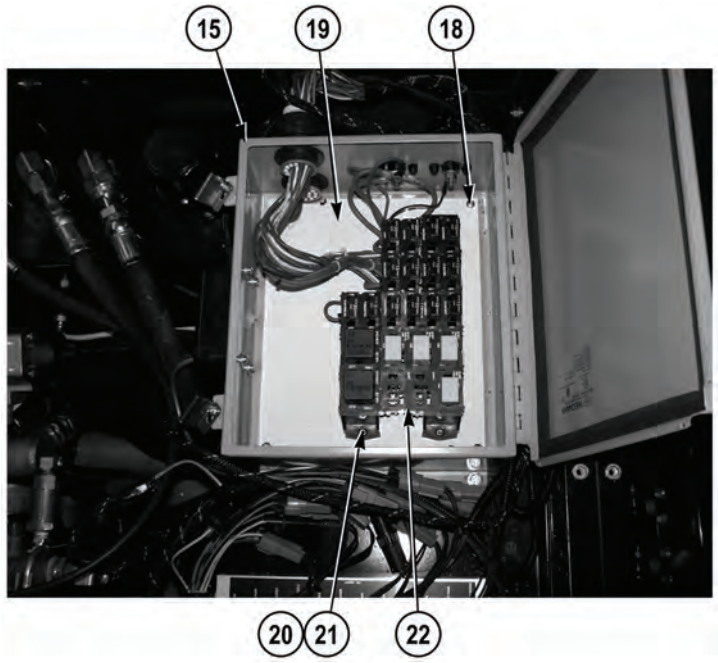
3. Disconnect pump house wire harness connector (9) from pump house power distribution wire harness connector DP2 (10).

4. Disconnect pump house wire harness connector (11) from pump house power distribution wire harness connector DP1 (12).

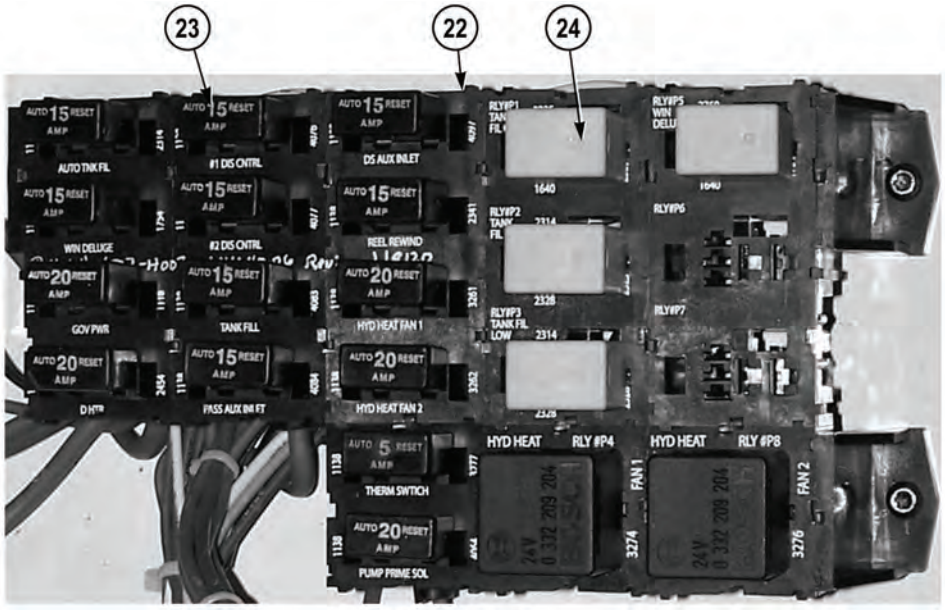


5. Remove nut (13), lockwasher (14), and pump house power distribution wire harness connector DP2 (10) from power distribution box (15). Discard lockwasher.

6. Remove nut (16), lockwasher (17), and pump house power distribution wire harness connector DP1 (12) from power distribution box (15). Discard lockwasher.



7. Remove four screws (18) and plate (19) from pump house power distribution box (15).
8. Remove three screws (20), washers (21), and pump house power distribution wire harness block (22) from plate (19).



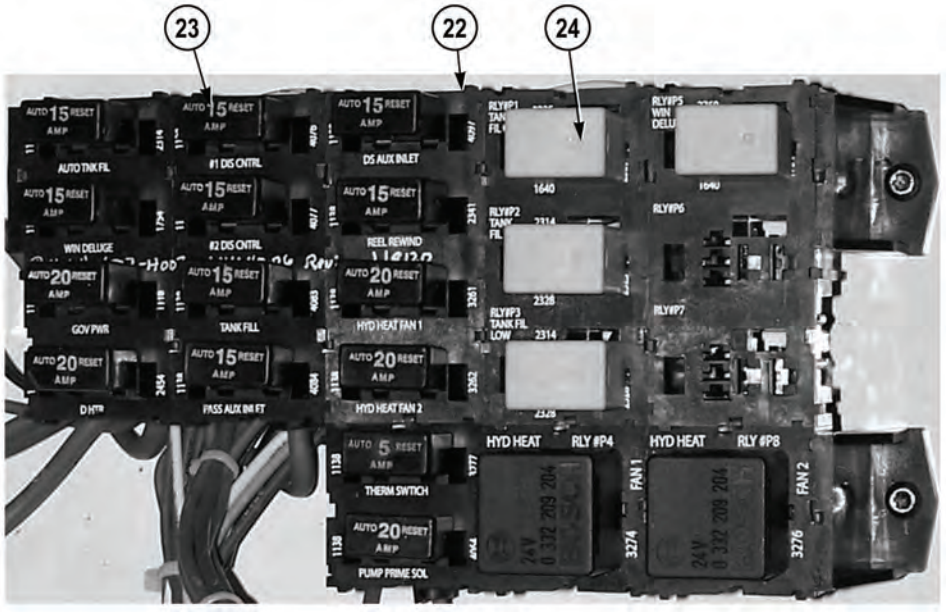
NOTE

Note position of circuit breakers and relays prior to removal to ensure proper installation.

9. Remove 14 circuit breakers (23) and six relays (24), from pump house power distribution block (22).

END OF TASK

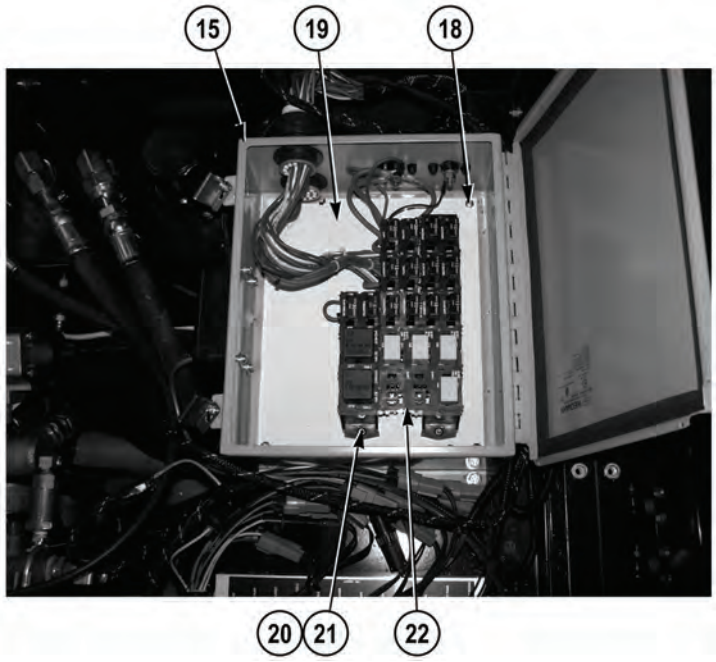
INSTALLATION



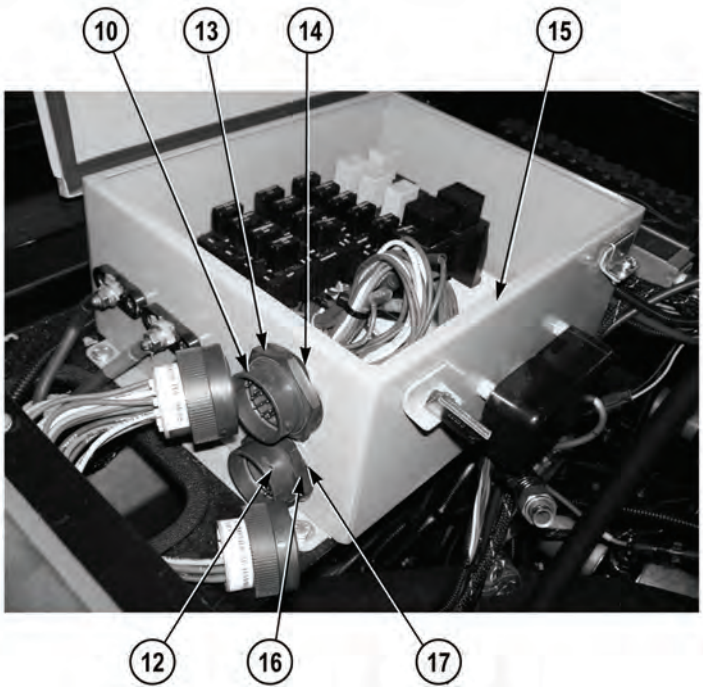
NOTE

- Install circuit breakers and relays in same position as noted prior to removal.
- Install cable ties as required.

1. Install six relays (24) and 14 circuit breakers (23) on pump house power distribution wire harness block (22).

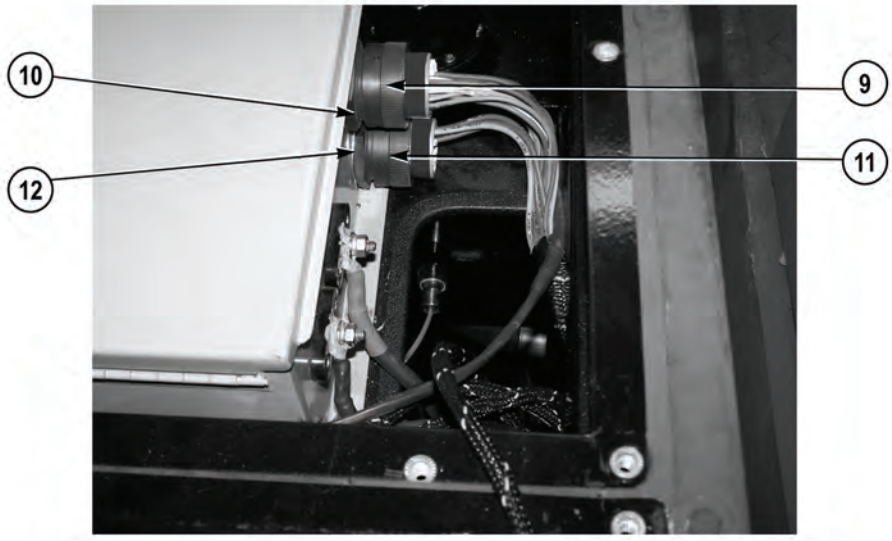


2. Install pump house power distribution wire harness block (22) on plate (17) with three washers (21) and screws (20).
3. Install plate (19) on pump house power distribution box (15) with four screws (18).



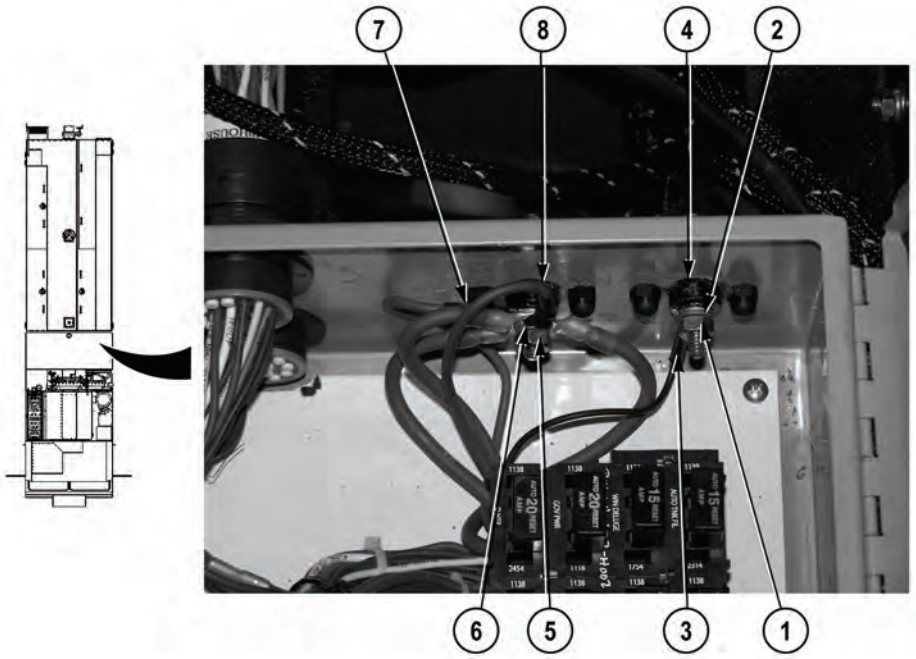
4. Install pump house power distribution wire harness connector DP1 (12) on power distribution box (15) with lockwasher (17) and nut (16).

5. Install pump house power distribution wire harness connector DP2 (10) on power distribution box (15) with lockwasher (14) and nut (13).



6. Connect pump house wire harness connector (11) on pump house power distribution wire harness connector DP1 (12).

7. Connect pump house wire harness connector (9) on pump house power distribution wire harness connector DP2 (10).



8. Install five wires 1138 (7) on pass-through terminal block (8) with lockwasher (6) and nut (5).
9. Install wire 1640 (3) on pass-through terminal block (4) with lockwasher (2) and nut (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Install pump house panel K (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PRIMER PUMP CONTROL SOLENOID REPLACEMENT

INITIAL SETUP:

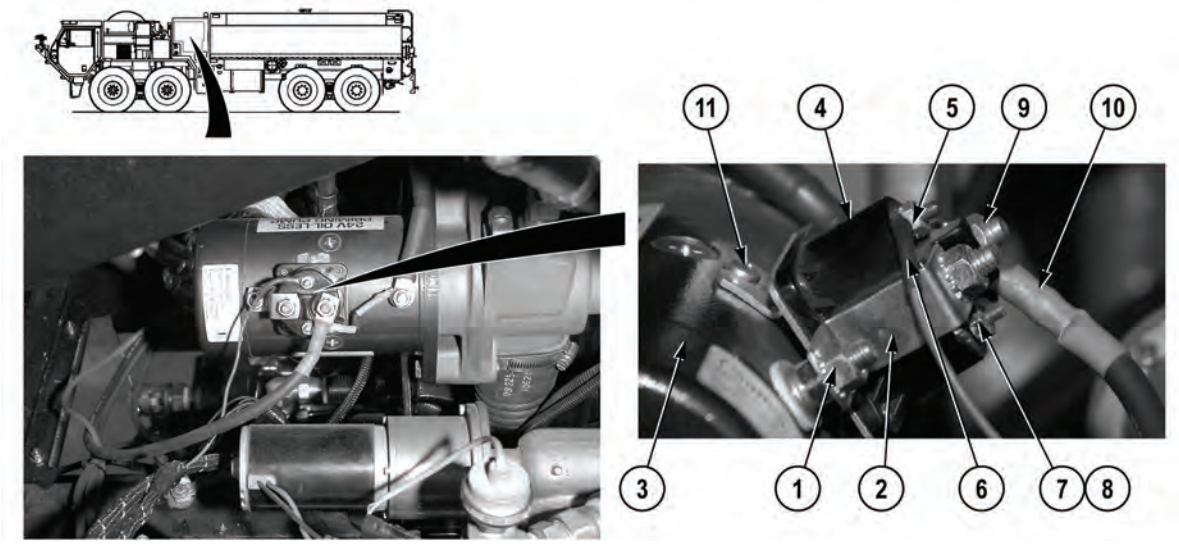
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Locknut (2)
Locknut (1)
Locknut (1)
Locknut (1)

References
WP 0392, Fig. 17

Equipment Conditions
Pump house panel G removed (WP 0341)

REMOVAL



1. Remove two locknuts (1) and electrical strip (2) from primer pump motor (3) and primer pump control solenoid (4). Discard locknuts.

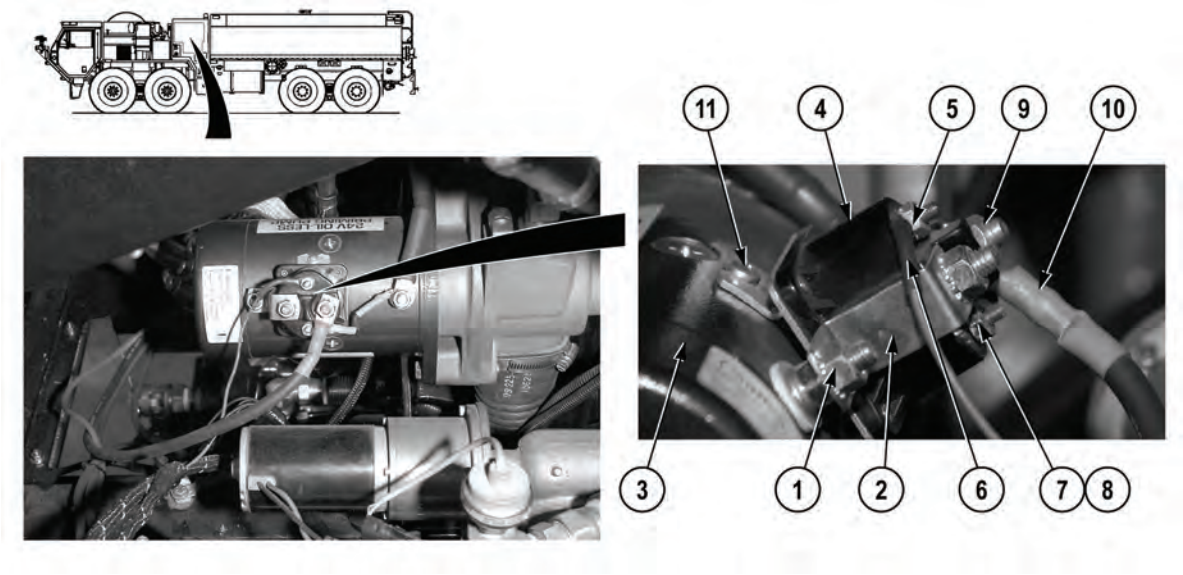
NOTE

Tag and mark wires prior to removal to ensure proper installation.

2. Remove locknut (5) and wire 2774 (6) from primer pump control solenoid (4). Discard locknut.
3. Remove locknut (7) and jumperwire (8) from primer pump control solenoid (4). Discard locknut.
4. Remove locknut (9) and wire (10) from primer pump control solenoid (4). Discard locknut.
5. Remove two screws (11) and primer pump control solenoid (4) from primer pump motor (3).

END OF TASK

INSTALLATION



1. Install primer pump control solenoid (4) on primer pump motor (3) with two screws (11).
2. Install wire (10) on primer pump control solenoid (4) with locknut (9).
3. Install jumperwire (8) on primer pump control solenoid (4) with locknut (7).
4. Install wire 2774 (6) on primer pump control solenoid (4) with locknut (5).
5. Install electrical strip (2) on primer pump motor (3) and primer pump control solenoid (4) with two locknuts (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Install pump house panel G (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PUMP HOUSE B+ STUD REPLACEMENT

INITIAL SETUP:

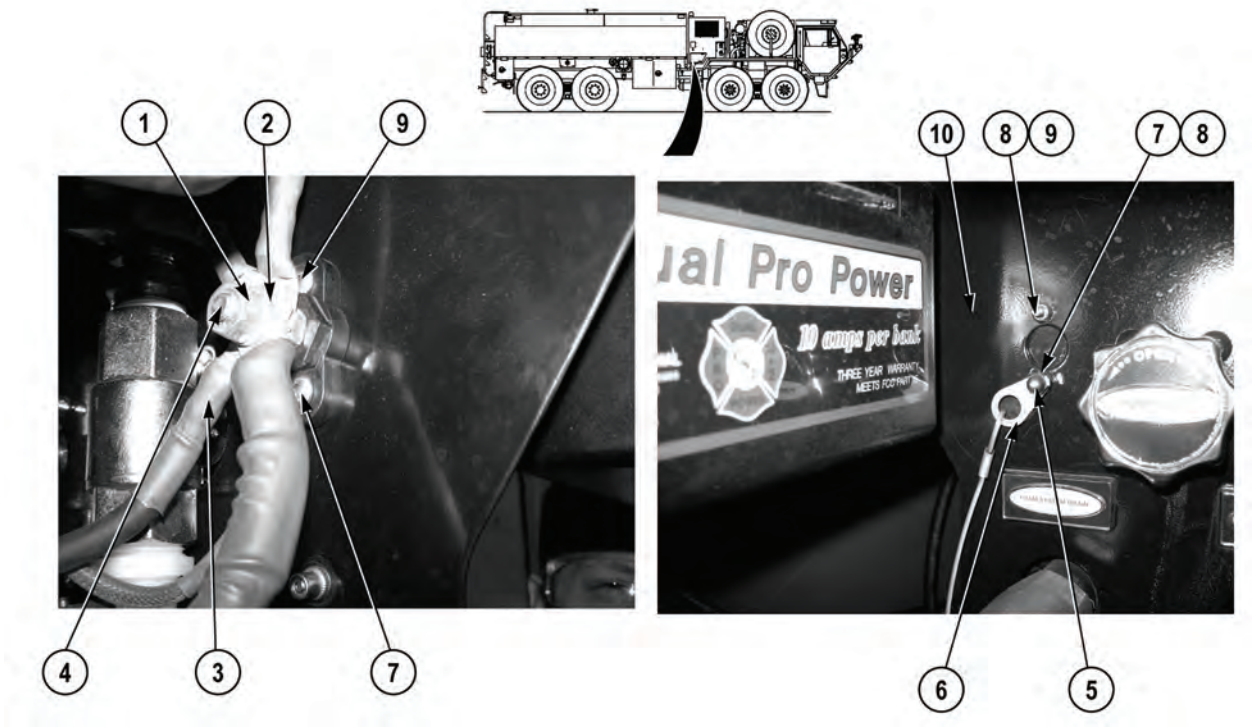
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Locknut (1)
Locknut (2)

References
WP 0392, Fig. 14

Equipment Conditions
Batteries disconnected (TM 9-2320-315-14&P)
Pump house compartment door P opened (WP 0008)

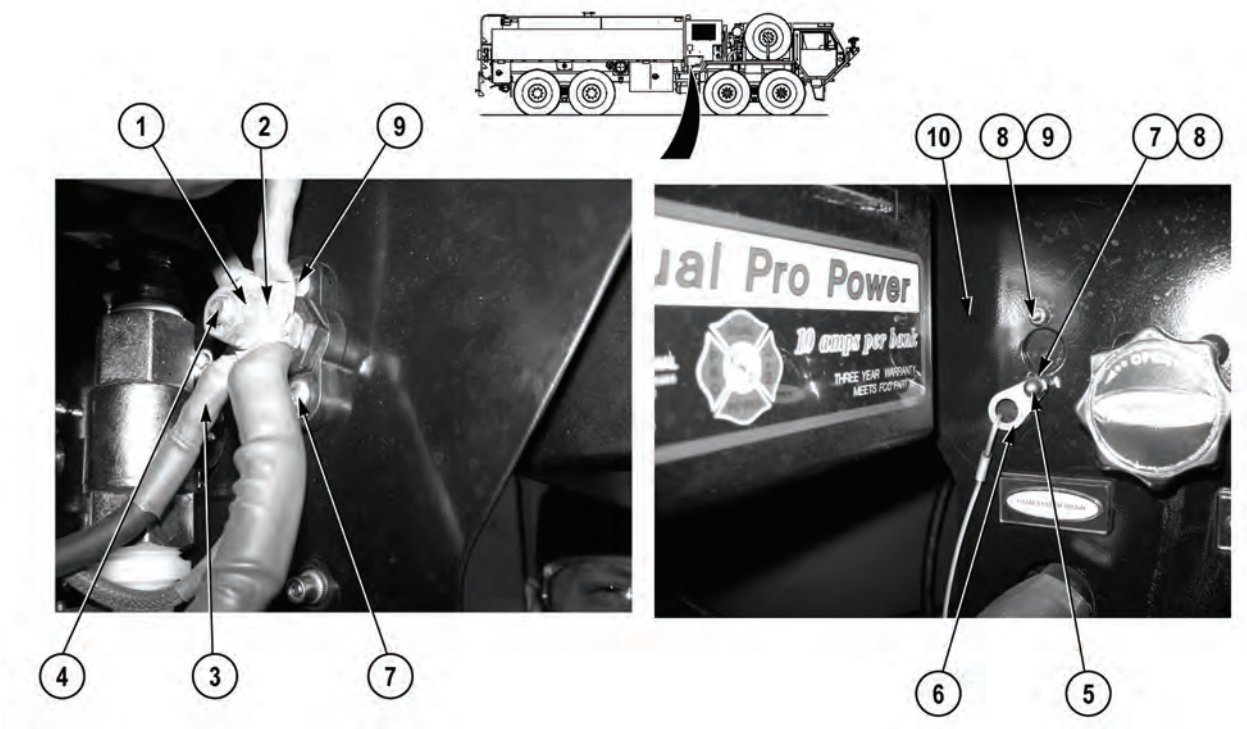
REMOVAL



1. Remove nut (1), washer (2), and five wires (3) from B+ stud (4).
2. Remove locknut (5) and anchor clip (6) from screw (7). Discard locknut.
3. Remove two locknuts (8), screws (7) and (9), and B+ stud (4) from bracket (10). Discard locknuts.

END OF TASK

INSTALLATION



1. Install B+ stud (4) on bracket (10) with two screws (9) and (7) and locknuts (8).
2. Install anchor clip (6) on screw (7) with locknut (5).

CAUTION

Do not overtighten nut on B+ stud when installing wires. Failure to comply may cause damage to equipment.

3. Install five wires (3) on B+ stud (4) with washer (2) and nut (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Close pump house compartment door P (WP 0008)
2. Connect batteries (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PUMP HOUSE WIRE HARNESS REPLACEMENT

INITIAL SETUP:

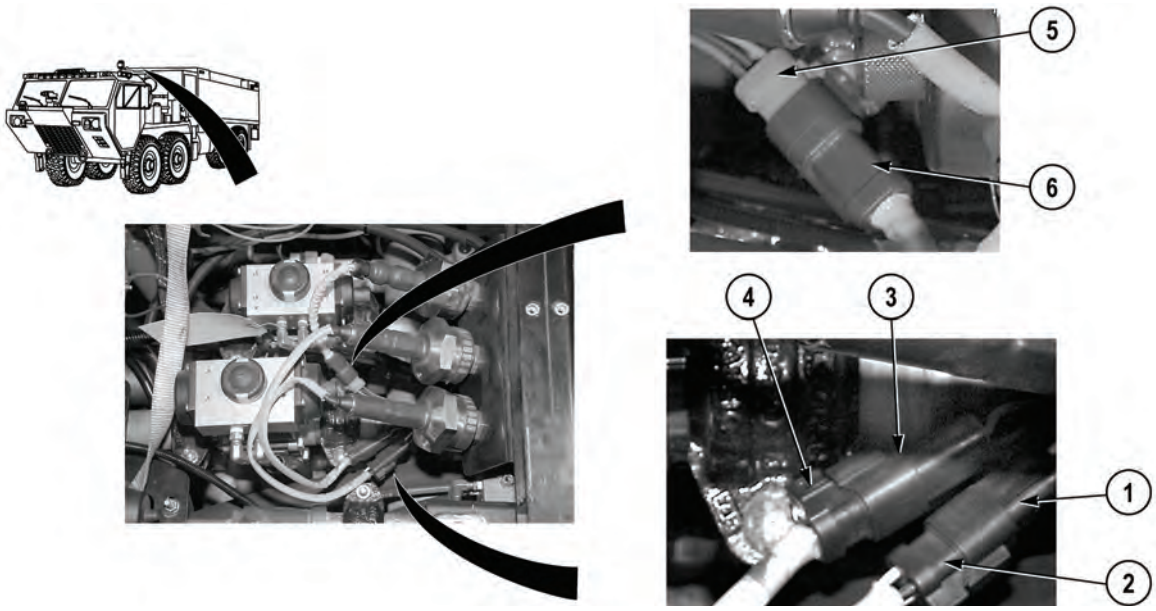
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)
Lockwasher (1)
Lockwasher (1)
Locknut (1)
Locknut (4)
Lockwasher (4)

References
TM 9-2320-315-14&P
WP 0392, Fig. 18, 55

Equipment Conditions
Pump house panel A, E, G, H, and K removed (WP 0341)
Reel rewind switch removed (WP 0252)
Hose reel removed (WP 0246)

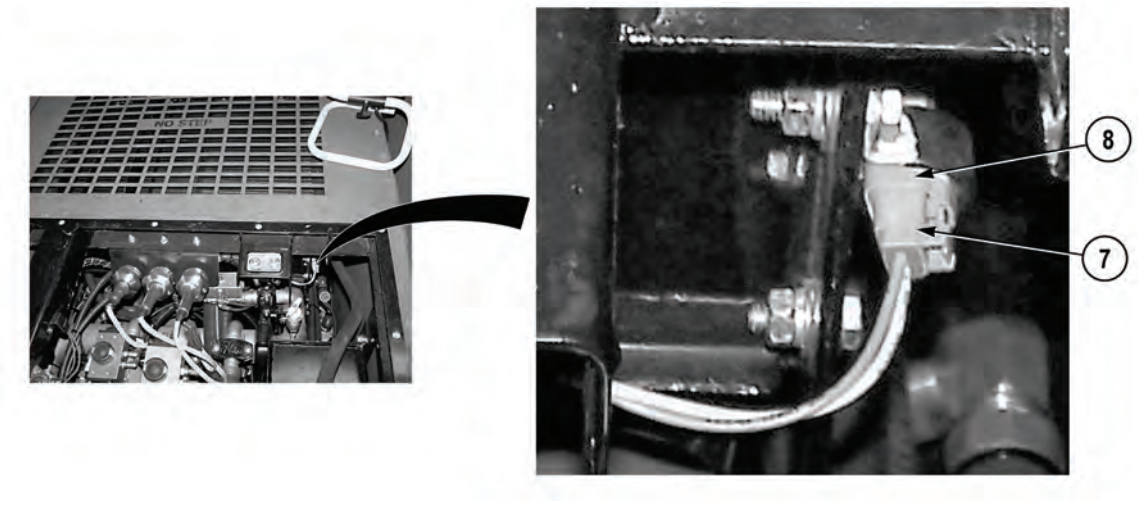
REMOVAL



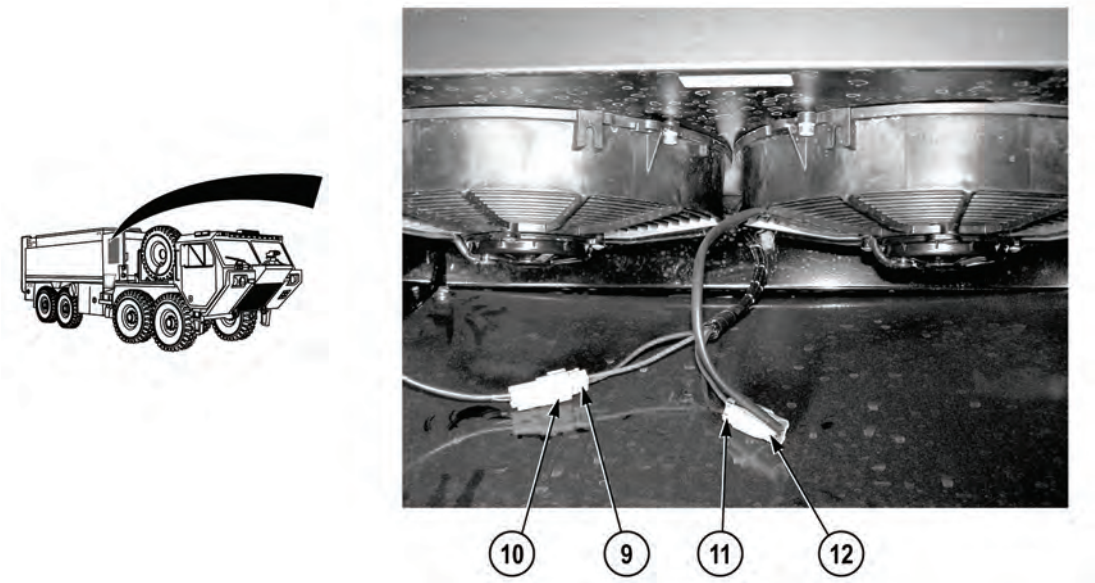
NOTE

- Tag and mark wires prior to removal to ensure proper installation.
- Note routing of pump house wire harness prior to removal to ensure proper installation.
- Note position and remove cable ties, split loom, and cushion clips as required.

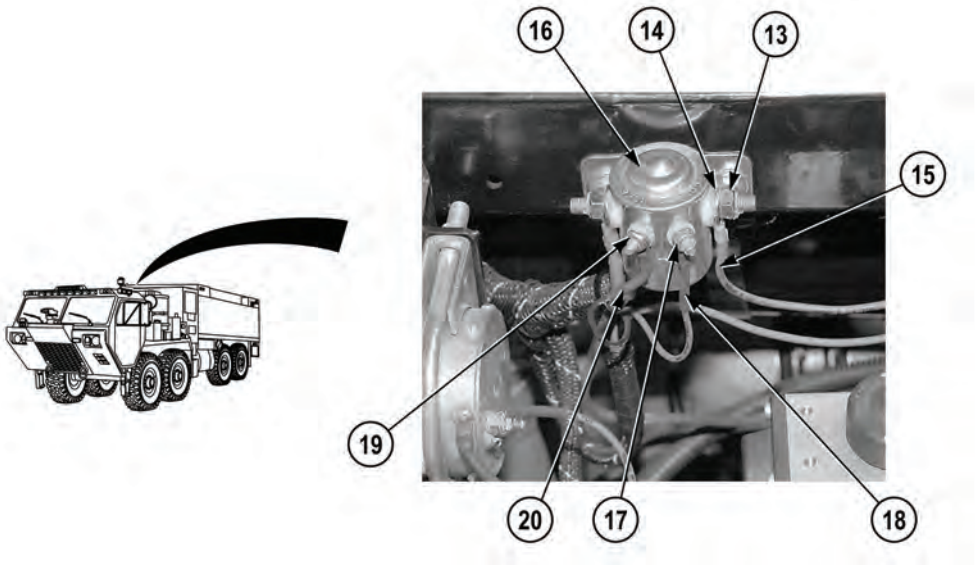
1. Disconnect pump house wire harness connector (1) from discharge pressure transducer connector (2).
2. Disconnect pump house wire harness connector (3) from intake pressure transducer connector (4).
3. Disconnect pump house wire harness (5) from intake vacuum transducer connector (6).



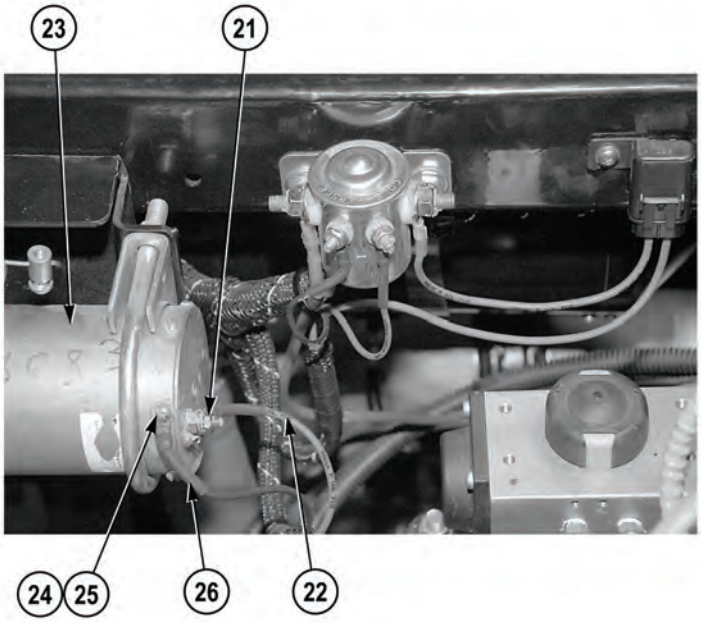
4. Disconnect pump house wire harness connector (7) from hydraulic heat exchanger thermal switch connector (8).



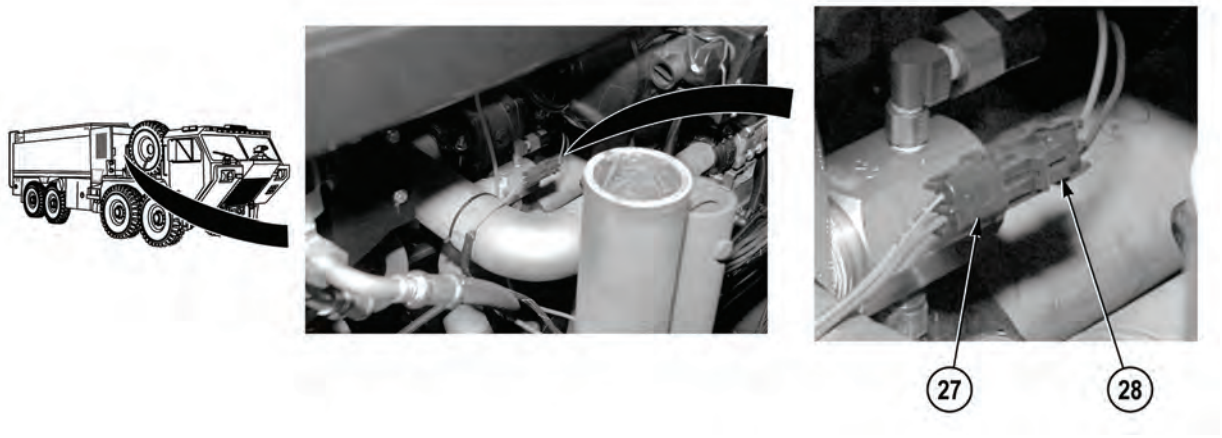
5. Disconnect pump house wire harness connector (9) from hydraulic heat exchanger fan 1 connector (10).
6. Disconnect pump house wire harness connector (11) from hydraulic heat exchanger fan 2 connector (12).



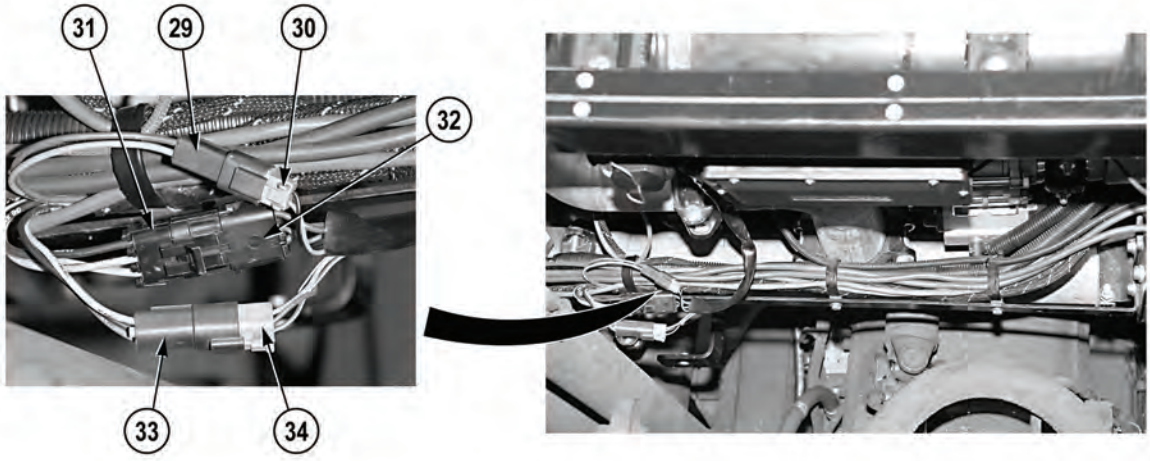
7. Remove nut (13), washer (14), and wire 4064 (15) from primer valve control solenoid (16).
8. Remove nut (17) and wire 1590 (18) from primer valve control solenoid (16).
9. Remove nut (19) and wire 1640 (20) from primer valve control solenoid (16).



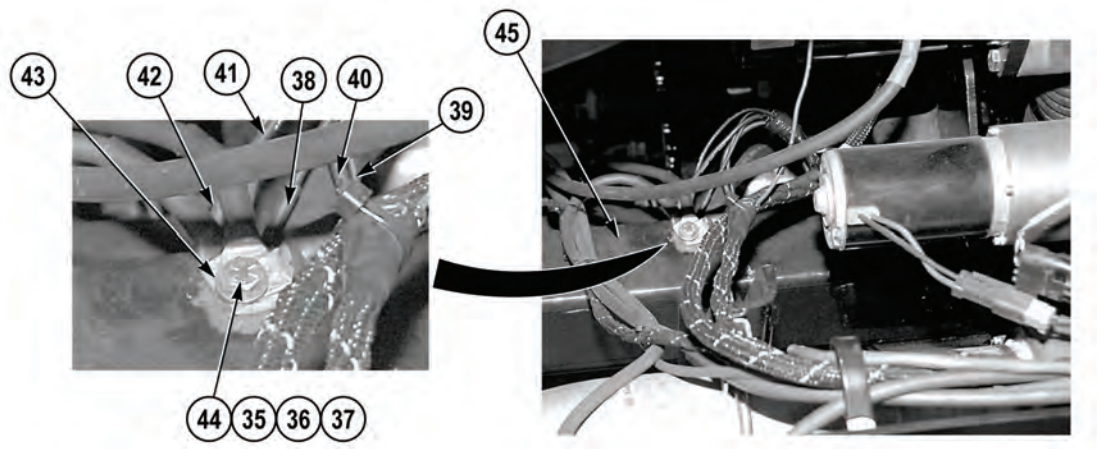
10. Remove locknut (21) and wire 4065 (22) from primer valve (23). Discard locknut.
11. Remove screw (24), lockwasher (25), and wire 4068 (26) from primer valve (23). Discard lockwasher.



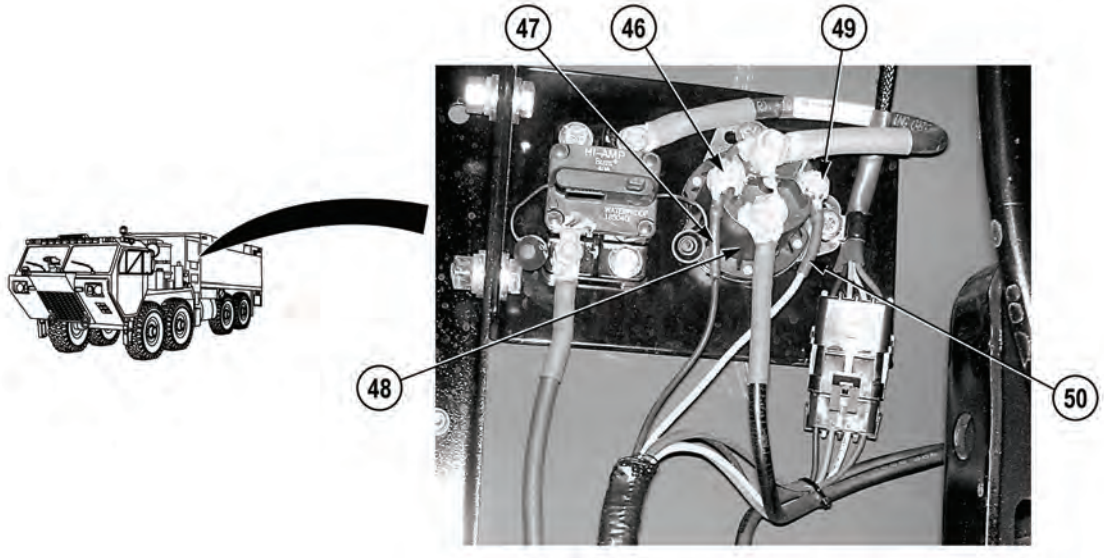
12. Disconnect pump house wire harness connector (27) from thermal relief sensor connector (28).



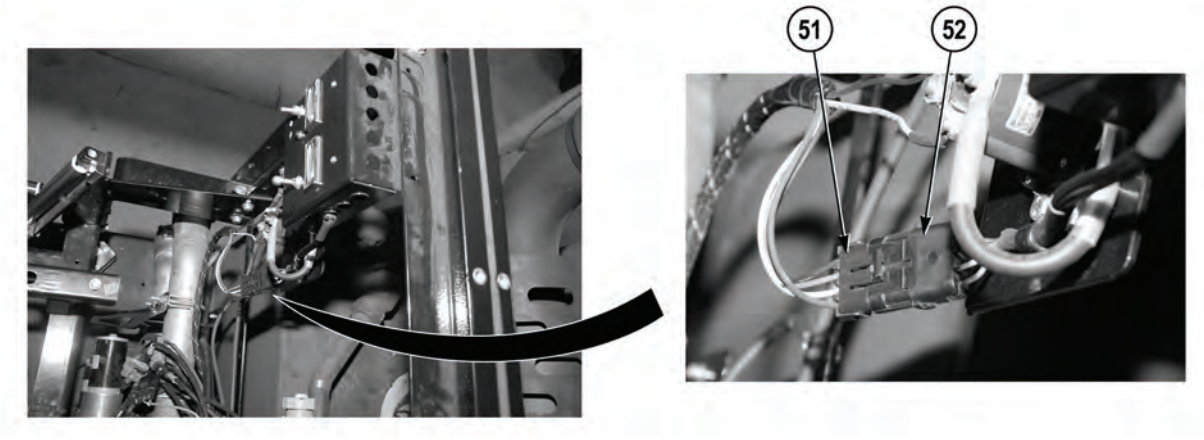
13. Disconnect pump house wire harness connector (29) from diesel heater connector (30).
14. Disconnect pump house wire harness connector (31) from diesel heater connector (32).
15. Disconnect pump house wire harness connector (33) from diesel heater connector (34).



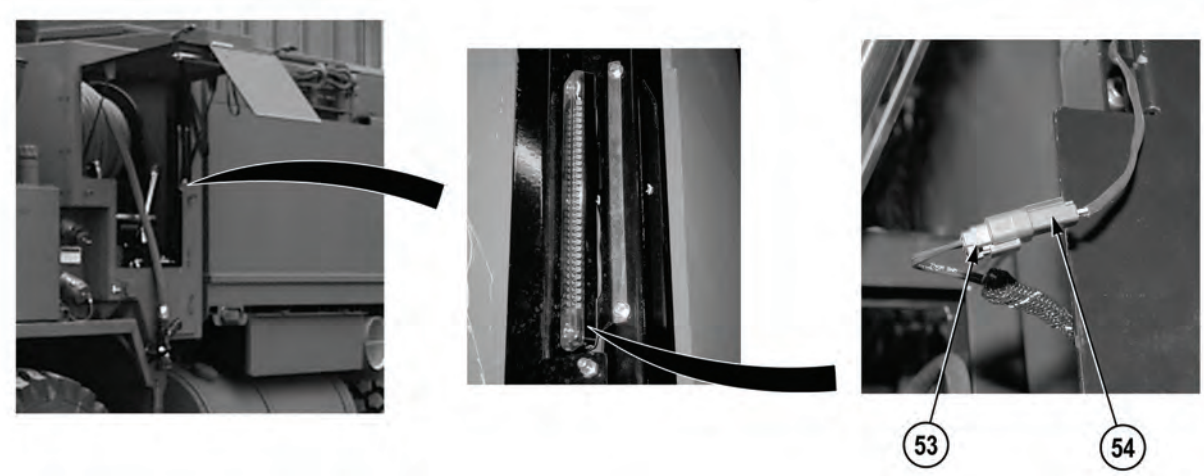
16. Remove nut (35), lockwasher (36), washer (37), wire 4068 (38), wire 2640 (39), wire 2740 (40), wire 2200 (41), wire 1640 (42), washer (43), and screw (44) from frame rail (45). Discard lockwasher.



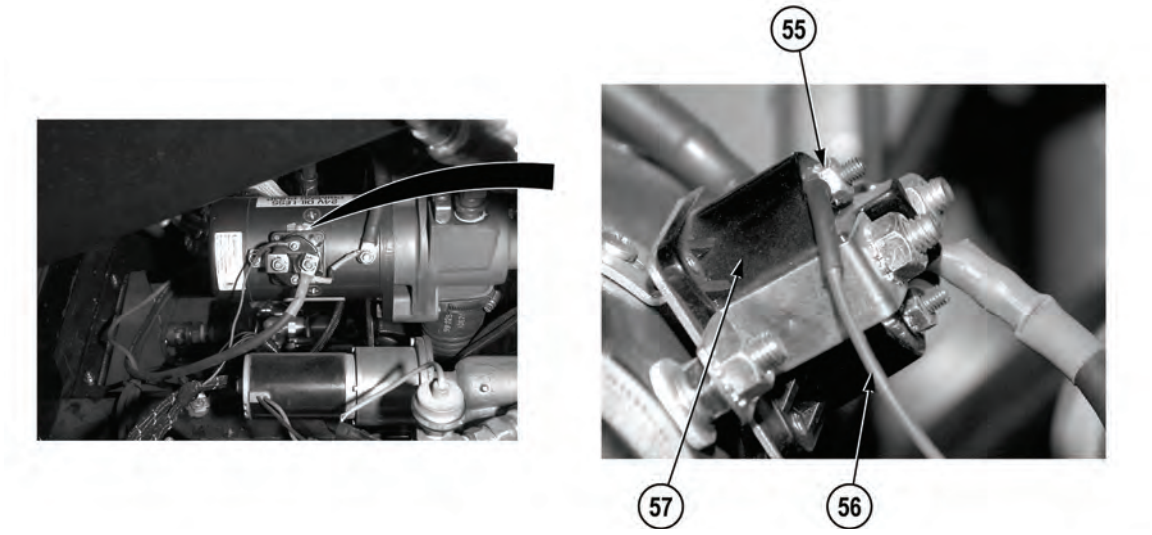
17. Remove nut (46) and wire 1640 (47) from hose reel rewind solenoid (48).
18. Remove nut (49) and wire 1664 (50) from hose reel rewind solenoid (48).



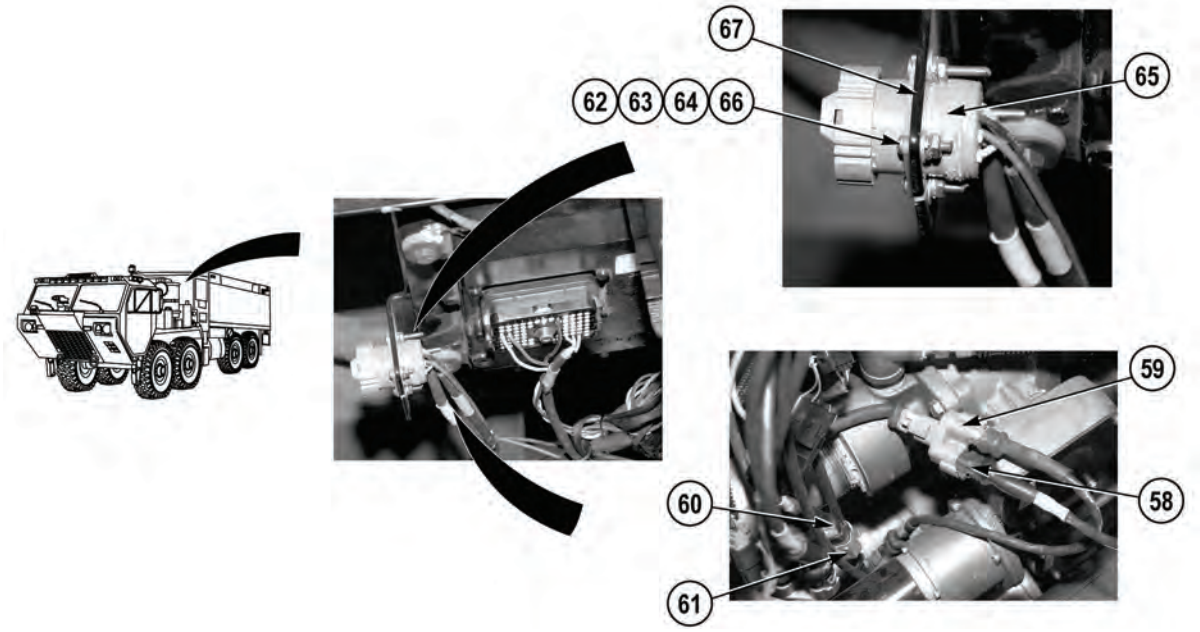
19. Disconnect pump house wire harness connector (51) from diesel heater control connector (52).



20. Disconnect pump house wire harness connector (53) from pump house hose reel striplight connector (54).



21. Remove locknut (55) and wire 2774 (56) from primer pump solenoid (57). Discard locknut.



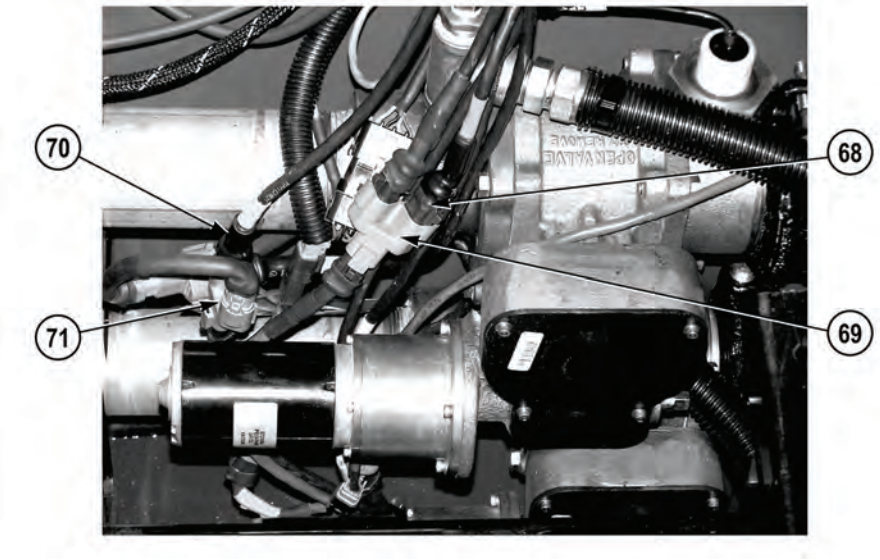
NOTE

To locate correct datalink cable, follow yellow and green banded datalink cables from pressure governor ECU service connector to first Y connector in series.

22. Disconnect pump house wire harness connector (58) from pressure governor control ECU datalink Y connector (59).

23. Disconnect pump house wire harness connector (60) from chassis datalink Y connector (61).

24. Remove four locknuts (62), lockwashers (63), washers (64), pressure governor ECU service connector (65), and four screws (66) from bracket (67). Discard locknuts and lockwashers.

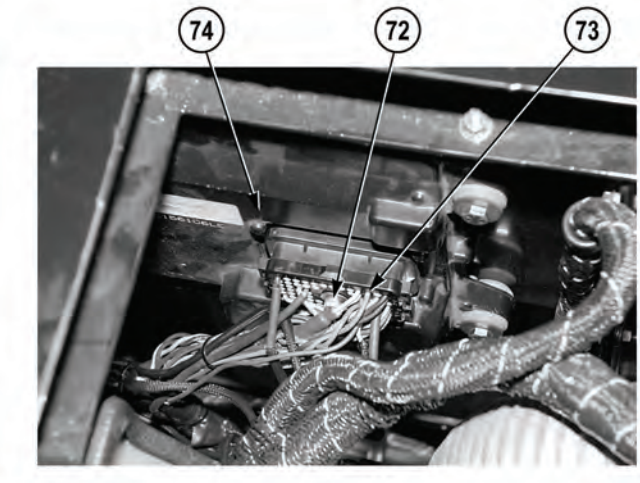


NOTE

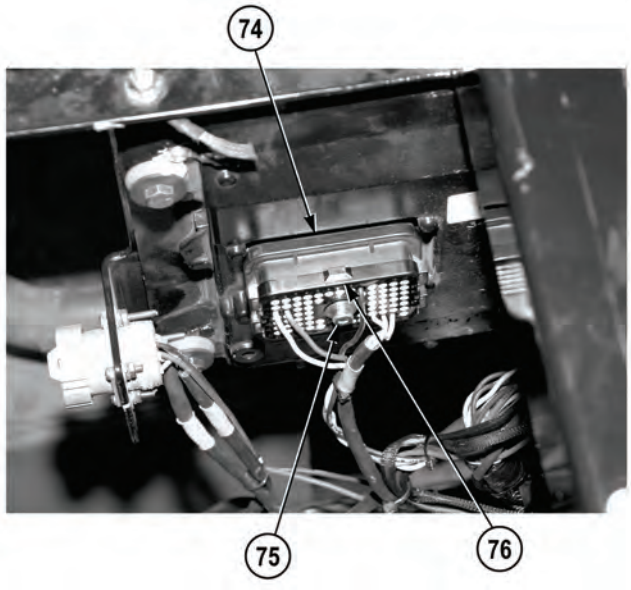
To locate correct datalink cable, follow yellow and green banded datalink cables from pressure governor ECU, J1 and J2 connectors, to first Y connector in series.

25. Disconnect pump house wire harness connector (68) from pressure governor control ECU datalink Y connector (69).

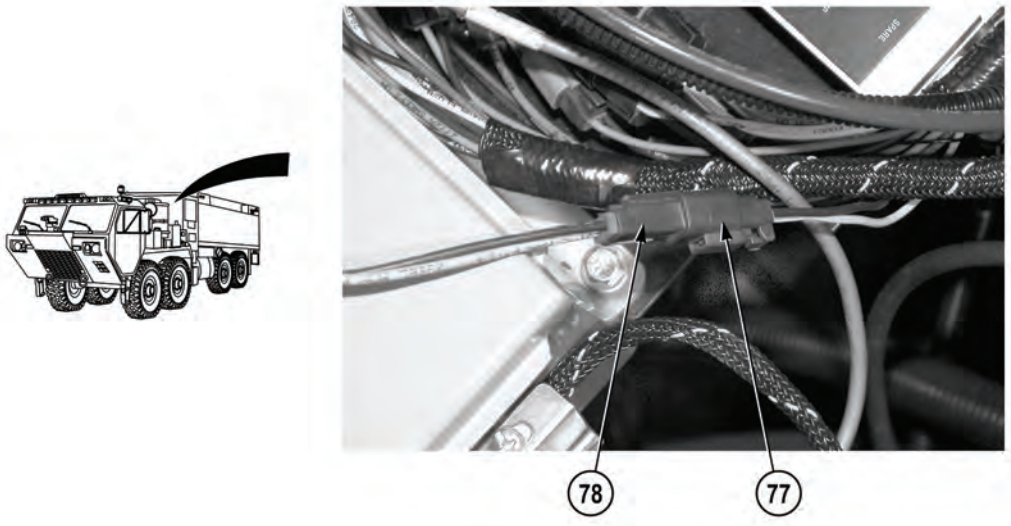
26. Disconnect pump house wire harness connector (70) from chassis datalink Y connector (71).



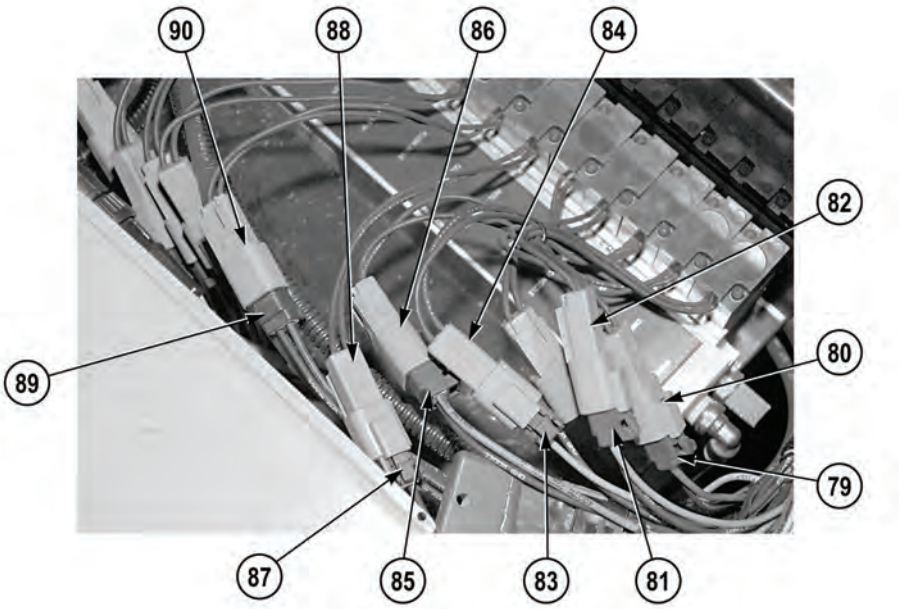
27. Loosen screw (72) and remove pump house wire harness J1 connector (73) from pressure governor ECU (74).



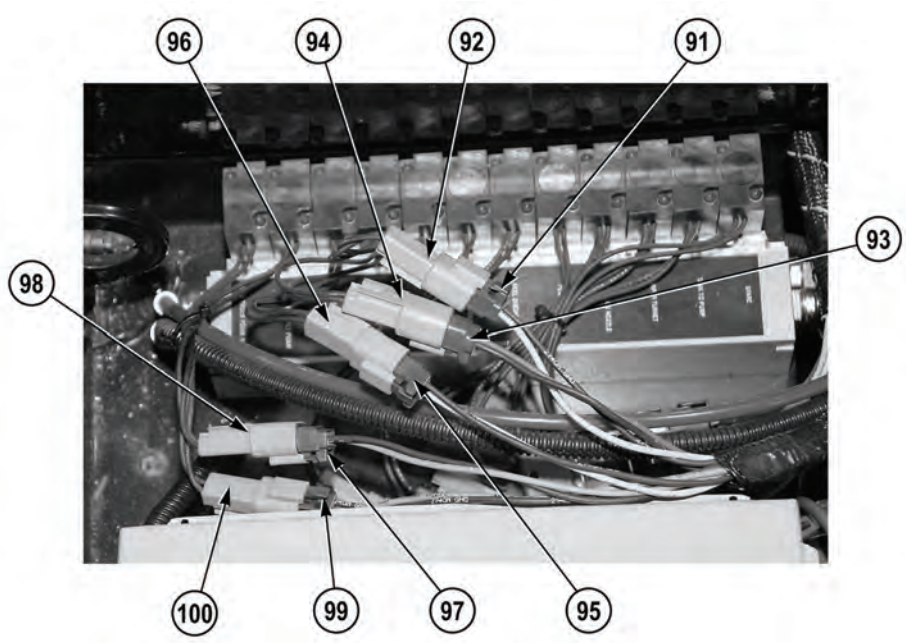
28. Loosen screw (75) and remove pump house wire harness J2 connector (76) from pressure governor ECU (74).



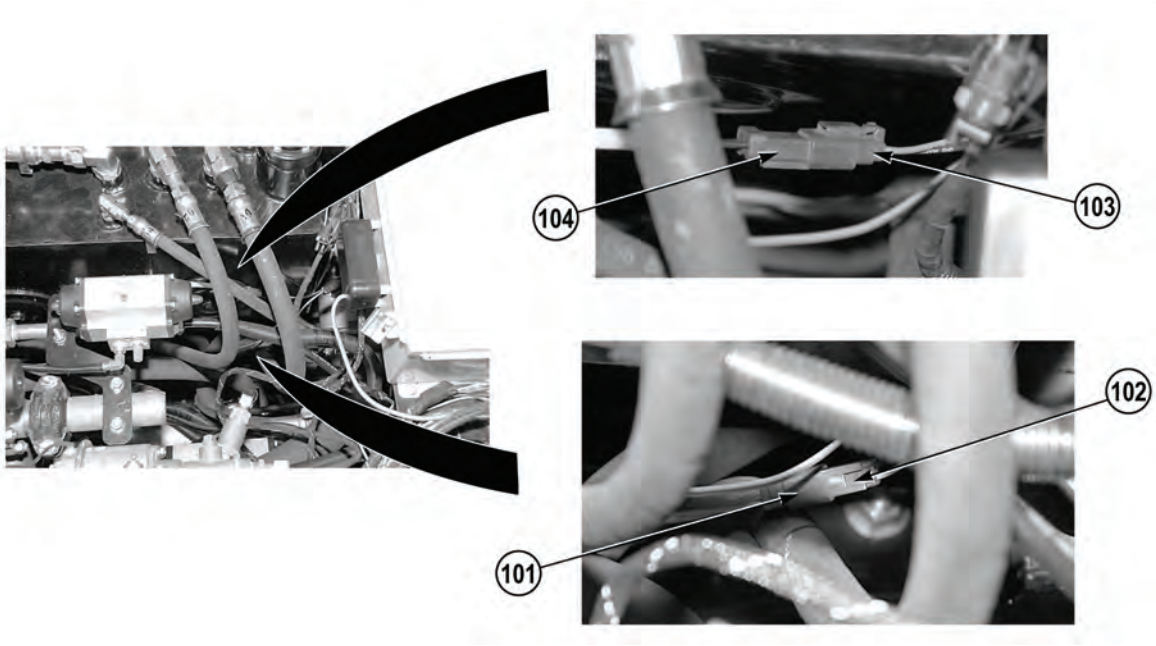
29. Disconnect pump house wire harness connector (77) from direct tank fill valve wire harness connector (78).



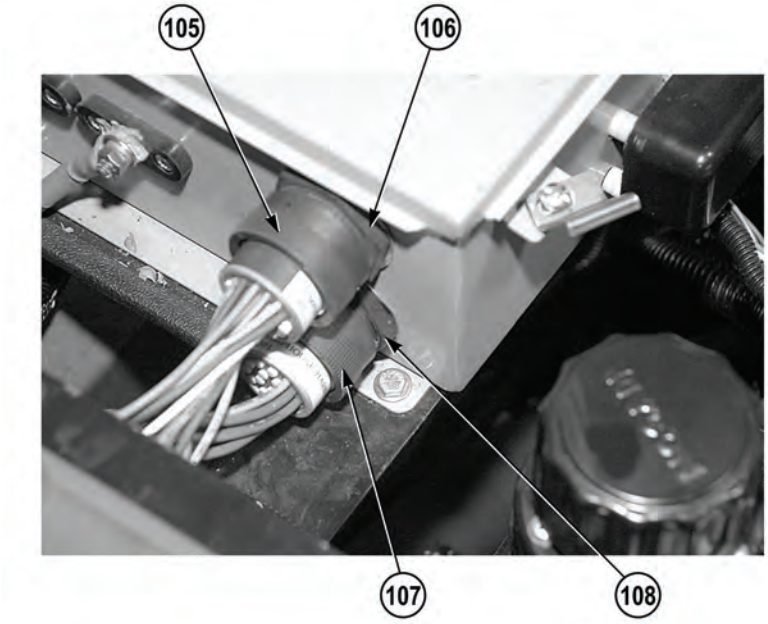
30. Disconnect pump house wire harness connector (79) from tank-to-pump valve control connector (80).
31. Disconnect pump house wire harness connector (81) from bumper turret valve control connector (82).
32. Disconnect pump house wire harness connector (83) from under truck nozzles valve control connector (84).
33. Disconnect pump house wire harness connector (85) from pump cooler valve control connector (86).
34. Disconnect pump house wire harness connector (87) from hose reel valve control connector (88).
35. Disconnect pump house wire harness connector (89) from water tank drain valve control connector (90).



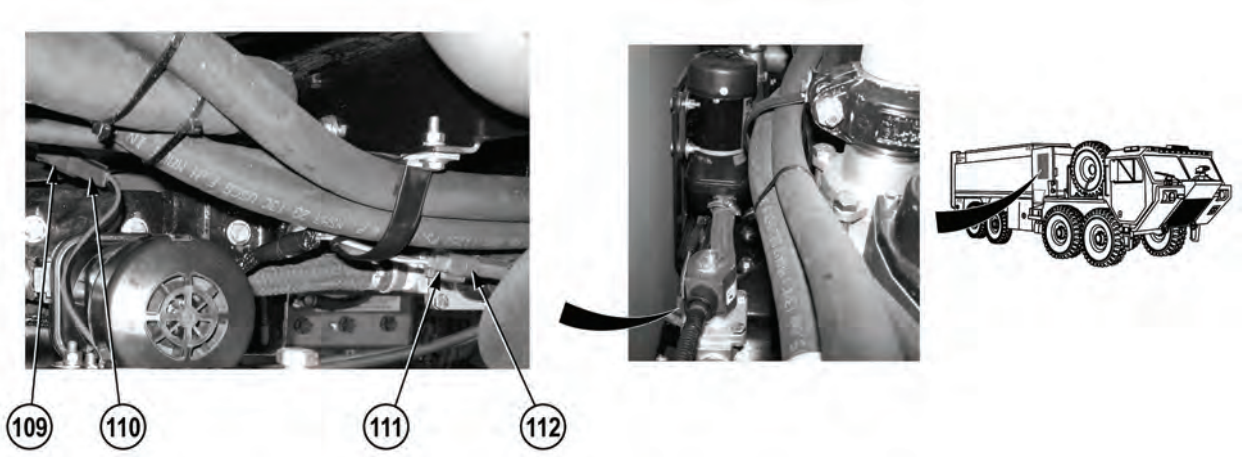
36. Disconnect pump house wire harness connector (91) from foam flush valve control connector (92).
37. Disconnect pump house wire harness connector (93) from foam system valve control connector (94).
38. Disconnect pump house wire harness connector (95) from eductor valve control connector (96).
39. Disconnect pump house wire harness connector (97) from bumper turret foam valve control connector (98).
40. Disconnect pump house wire harness connector (99) from under truck nozzles foam valve control connector (100).



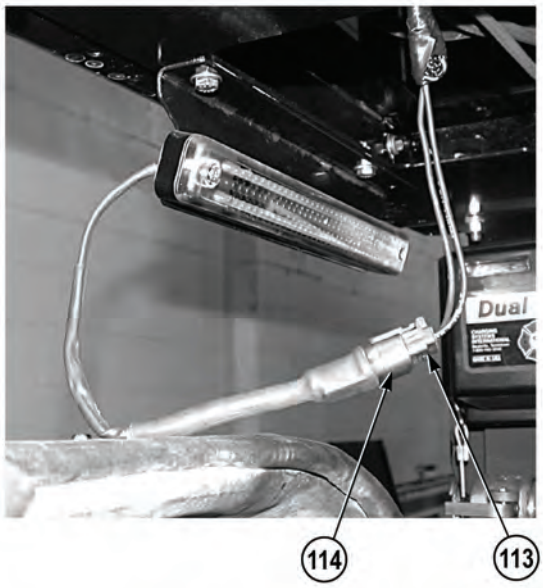
41. Disconnect pump house wire harness connector (101) from hydraulic oil level sensor connector (102).
42. Disconnect pump house wire harness connector (103) from hydraulic oil temperature sensor connector (104).



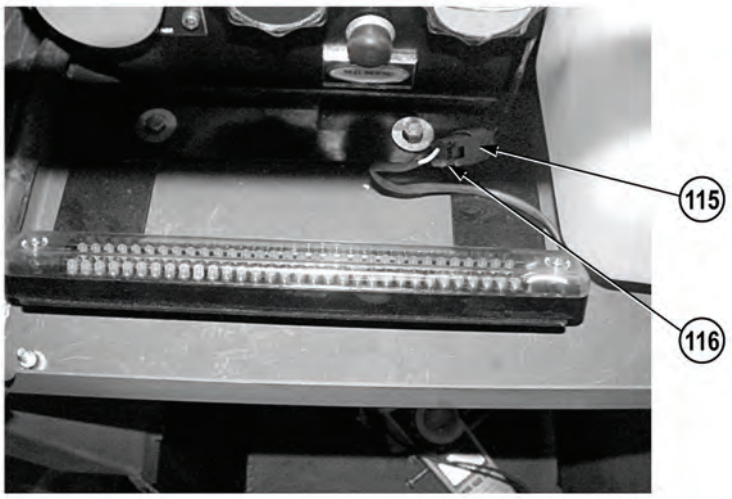
43. Disconnect pump house wire harness connector (105) from pump house power distribution wire harness connector DP2 (106).
44. Disconnect pump house wire harness connector (107) from pump house power distribution wire harness connector DP1 (108).



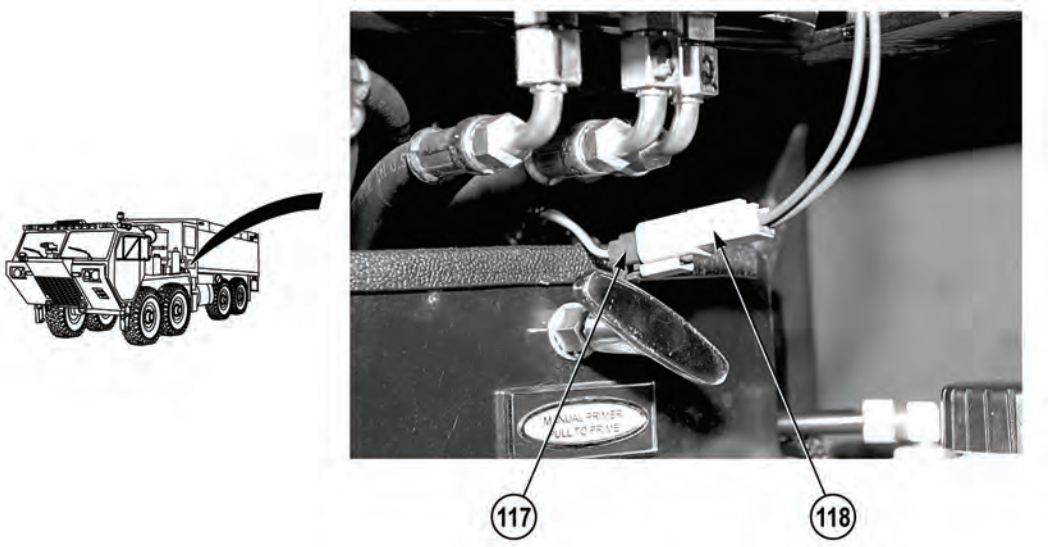
45. Disconnect pump house wire harness connector (109) from windshield deluge pump connector (110).
46. Disconnect pump house wire harness connector (111) from windshield shutoff valve connector (112).



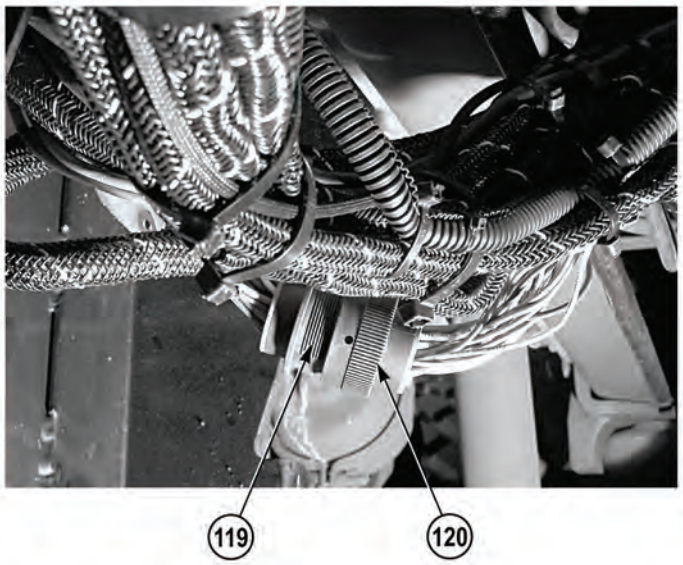
47. Disconnect pump house wire harness connector (113) from passenger side pump house striplight connector (114).



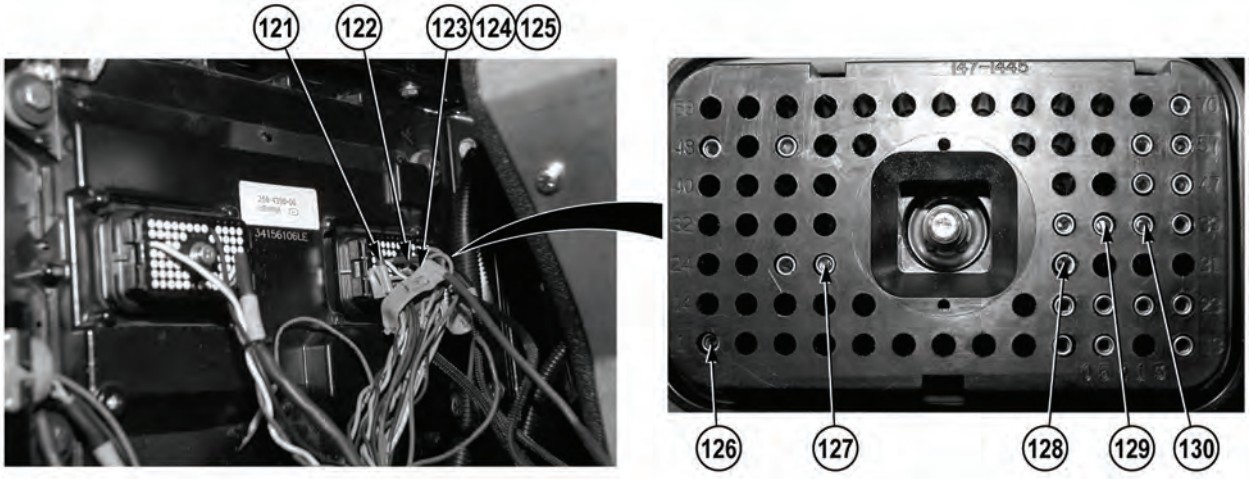
48. Disconnect pump house wire harness connector (115) from driver side pump house striplight connector (116).



49. Disconnect pump house wire harness connector (117) from manual override manifold solenoid connector (118).



50. Disconnect pump house wire harness connector (119) from main wire harness connector (120).



NOTE

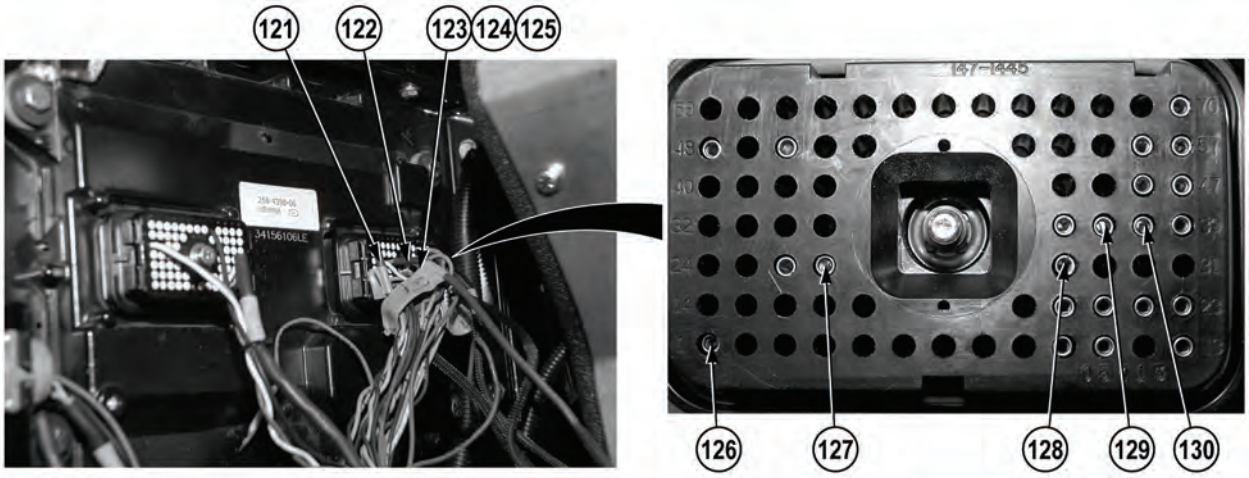
Wires in Step (51) are located on J1 connector.

51. Cut five wires (121), (122), (123), (124), and (125) on pin 1 (126), pin 27 (128), pin 37 (129), and pin 38 (130) (TM 9-2320-315-14&P).

52. Remove pump house wire harness from pump house.

END OF TASK

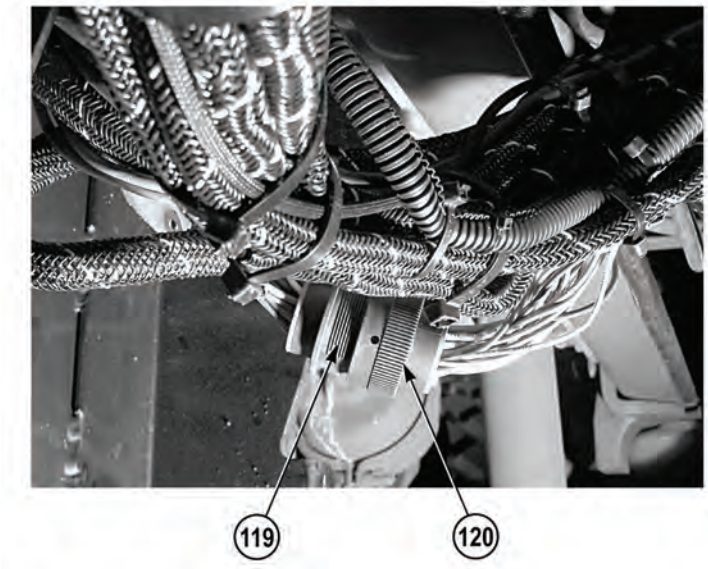
INSTALLATION



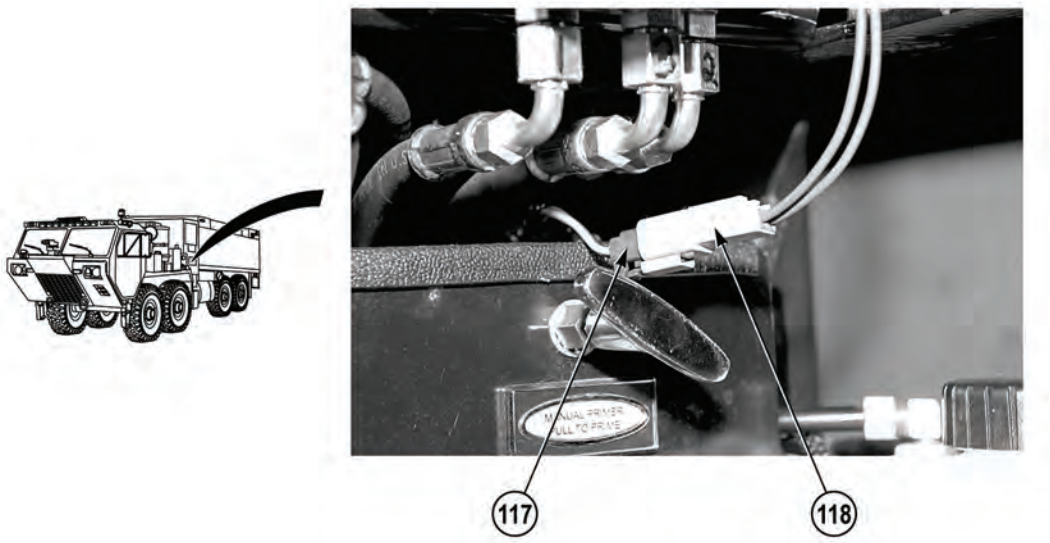
NOTE

- Route pump house wire harness as noted prior to removal.
- Install cable ties, split loom, and cushion clips as required.

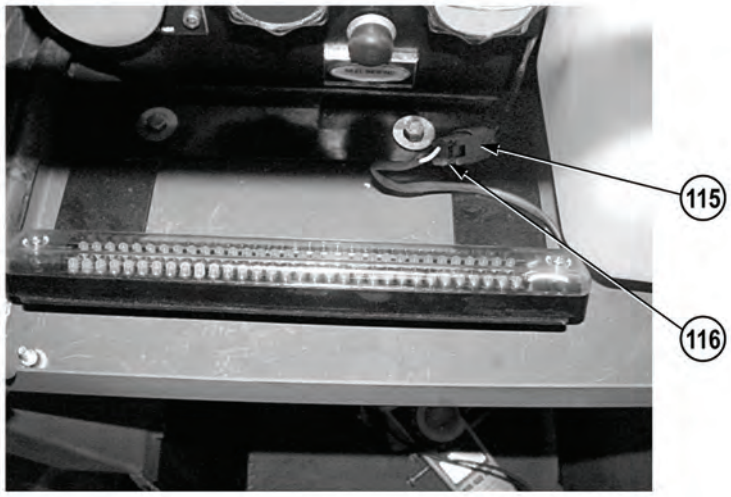
1. Install pump house wire harness on pump house.
2. Repair five wires (125), (124), (123), (122), and (121) on pin 38 (130), pin 37 (129), pin 28 (128), pin 27 (127), and pin 1 (126) (TM 9-2320-315-14&P).



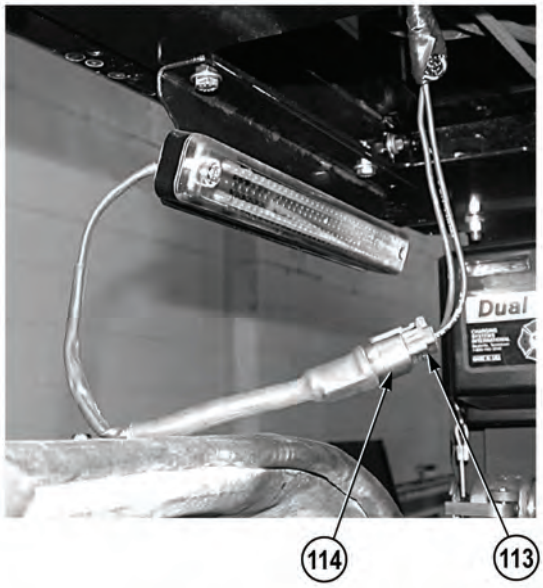
3. Connect pump house wire harness connector (119) on main wire harness connector (120).



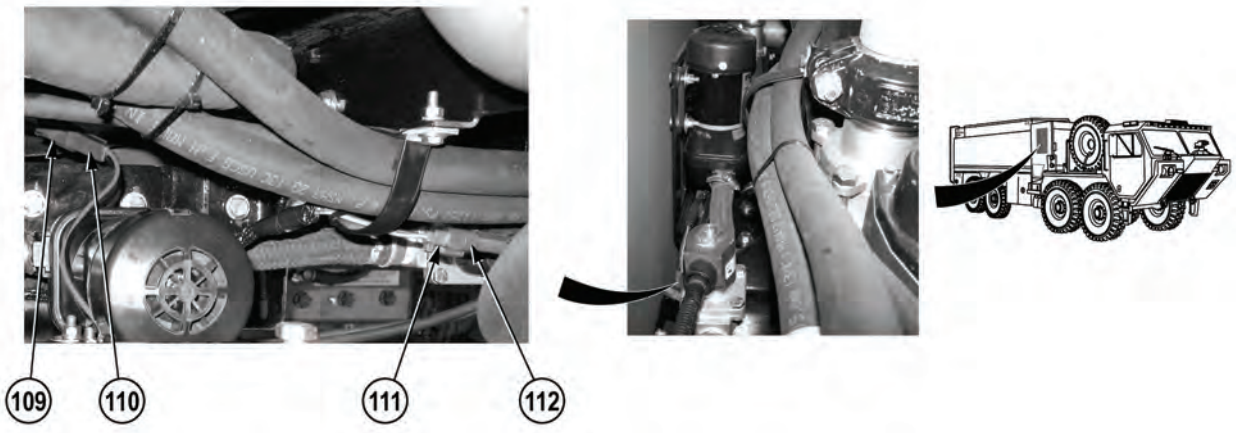
4. Connect pump house wire harness connector (117) on manual override manifold solenoid connector (118).



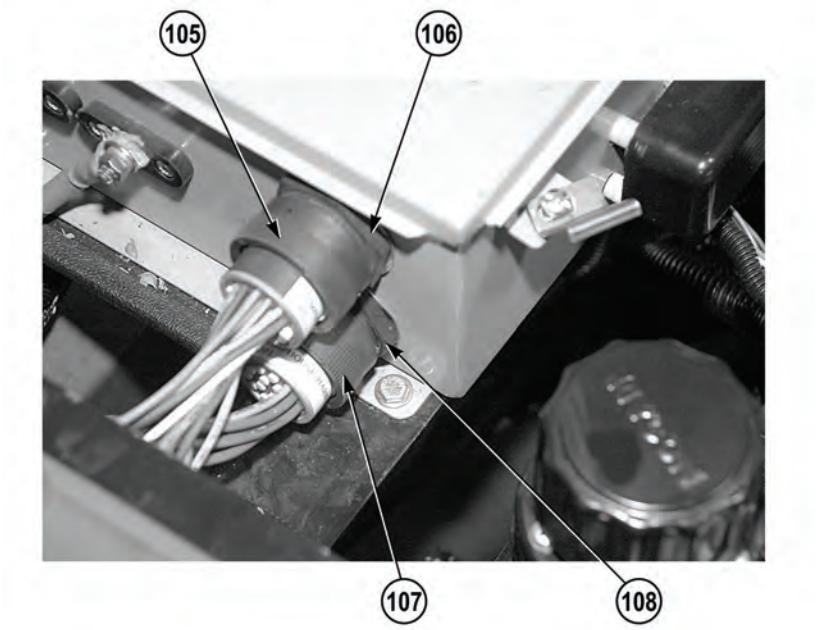
5. Connect pump house wire harness connector (115) on driver side pump house striplight connector (116).



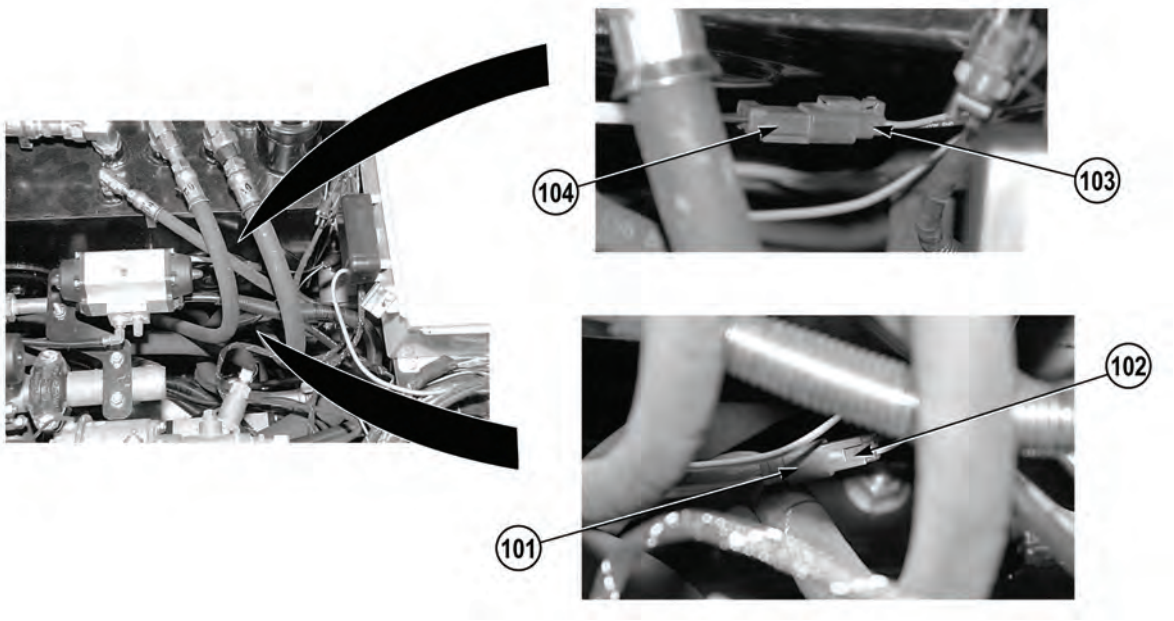
6. Connect pump house wire harness connector (113) on passenger side pump house striplight connector (114).



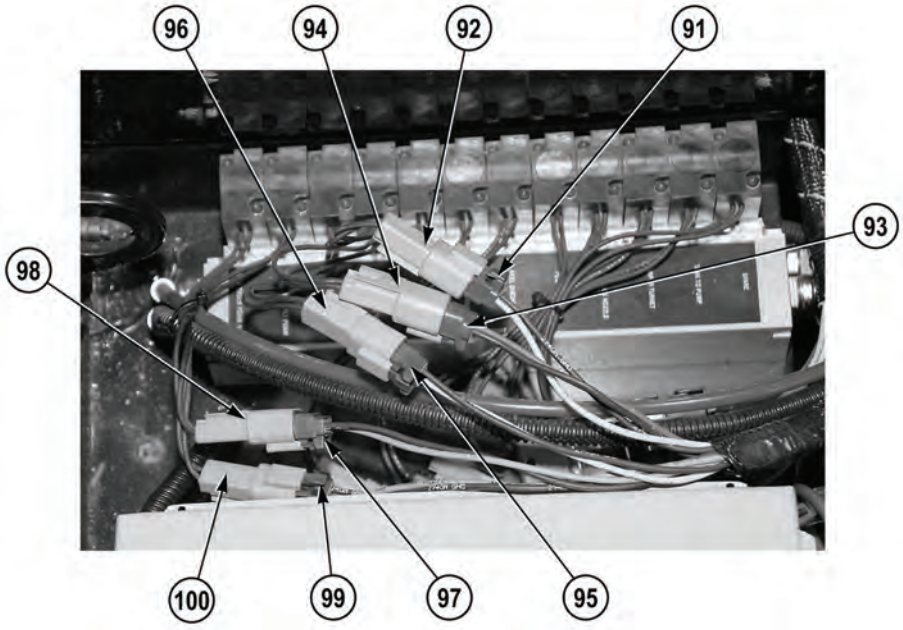
7. Connect pump house wire harness connector (111) on windshield deluge shutoff valve connector (112).
8. Connect pump house wire harness connector (109) on windshield deluge pump connector (110).



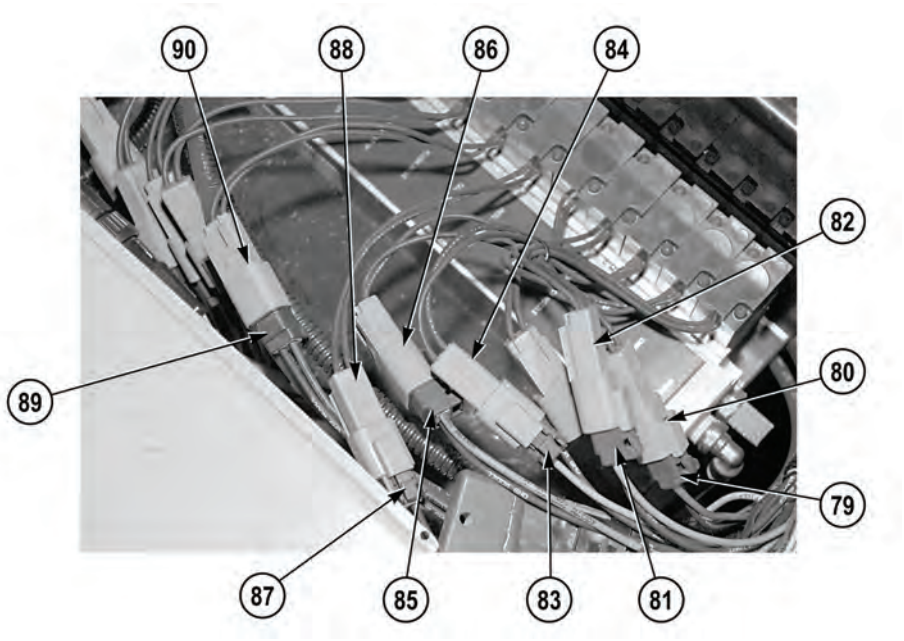
9. Connect pump house wire harness connector (107) on pump house power distribution wire harness connector DP1 (108).
10. Connect pump hose wire harness connector (105) on pump house power distribution wire harness connector DP2 (106).



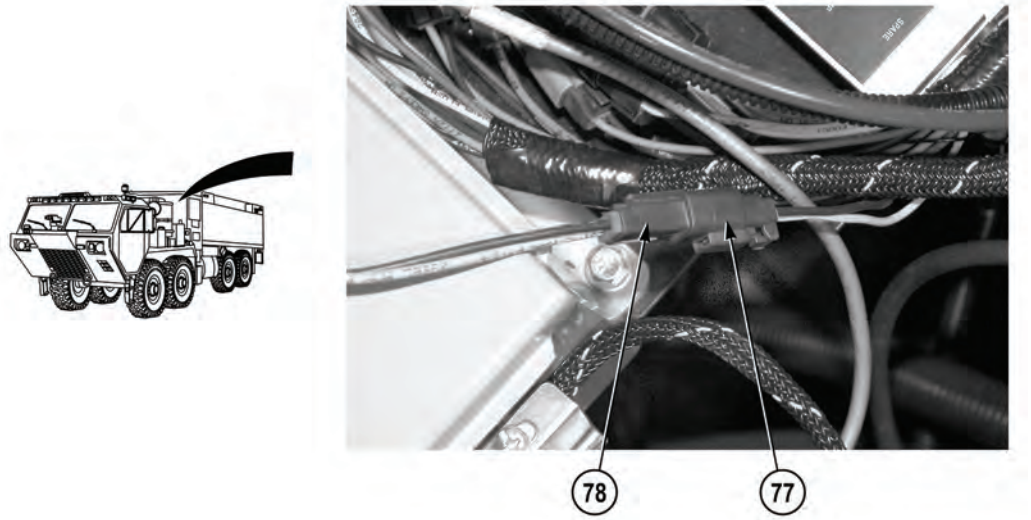
11. Connect pump house wire harness connector (103) on hydraulic oil temperature sensor connector (104).
12. Connect pump house wire harness connector (101) on hydraulic oil level sensor connector (102).



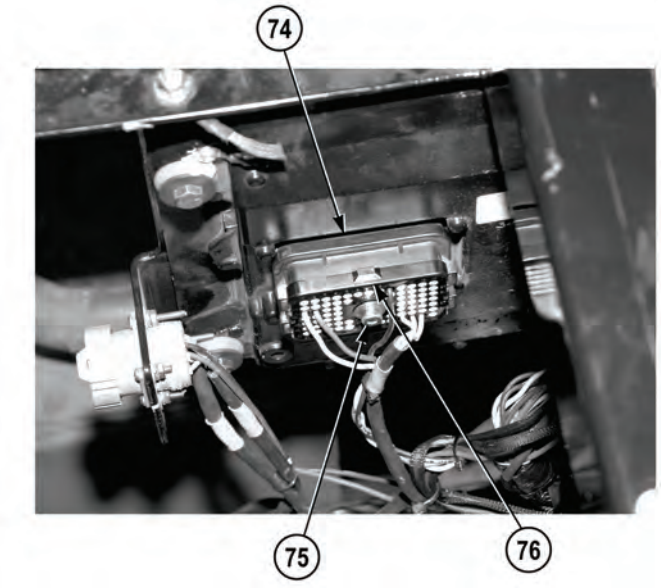
13. Connect pump house wire harness connector (99) on under truck nozzles foam valve control connector (100).
14. Connect pump house wire harness connector (97) on bumper turret foam valve control connector (98).
15. Connect pump house wire harness connector (95) on eductor valve control connector (96).
16. Connect pump house wire harness connector (93) on foam system valve control connector (94).
17. Connect pump house wire harness connector (91) on foam flush valve control connector (92).



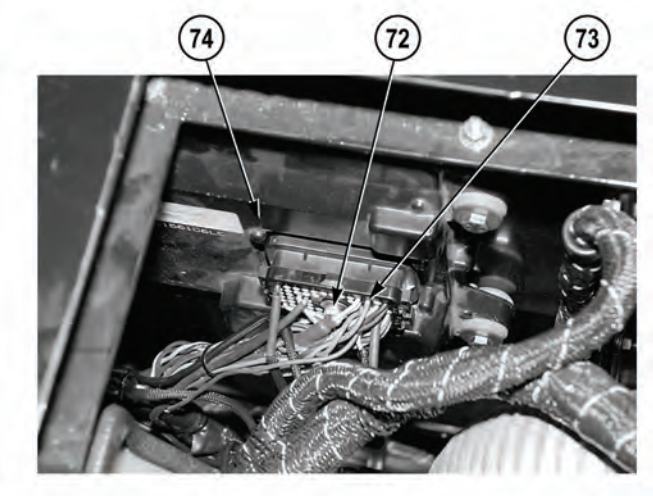
18. Connect pump house wire harness connector (89) on water tank drain valve control connector (90).
19. Connect pump house wire harness connector (87) on hose reel valve control connector (88).
20. Connect pump house wire harness connector (85) on pump cooler valve control connector (86).
21. Connect pump house wire harness connector (83) on under truck nozzles valve control connector (84).
22. Connect pump house wire harness connector (81) on bumper turret valve control connector (82).
23. Connect pump house wire harness connector (79) on tank-to-pump valve control connector (80).



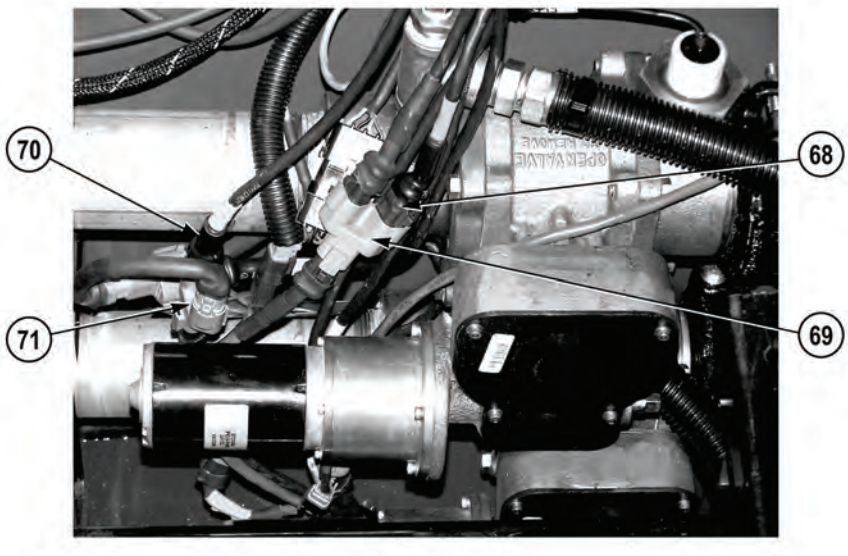
24. Connect pump house wire harness connector (77) on direct tank fill valve wire harness connector (78).



25. Install pump house wire harness J2 connector (76) on pressure governor ECU (74) with screw (75).

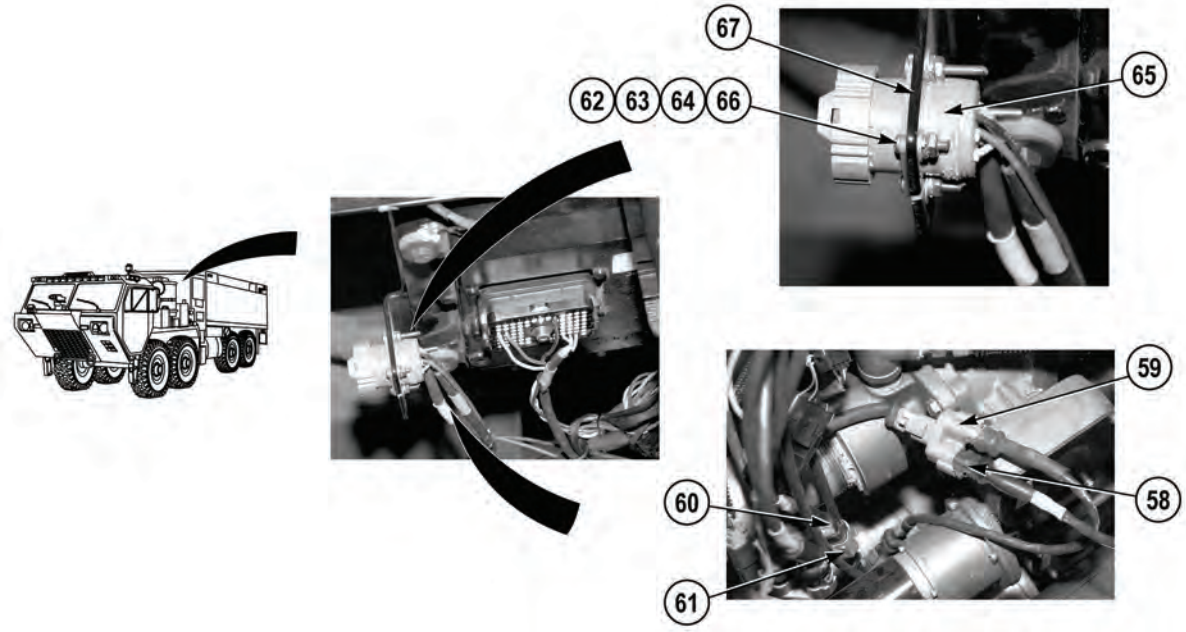


26. Install pump house wire harness J1 connector (73) on pressure governor ECU (74) with screw (72).



27. Connect pump house wire harness connector (70) on chassis datalink Y connector (71).

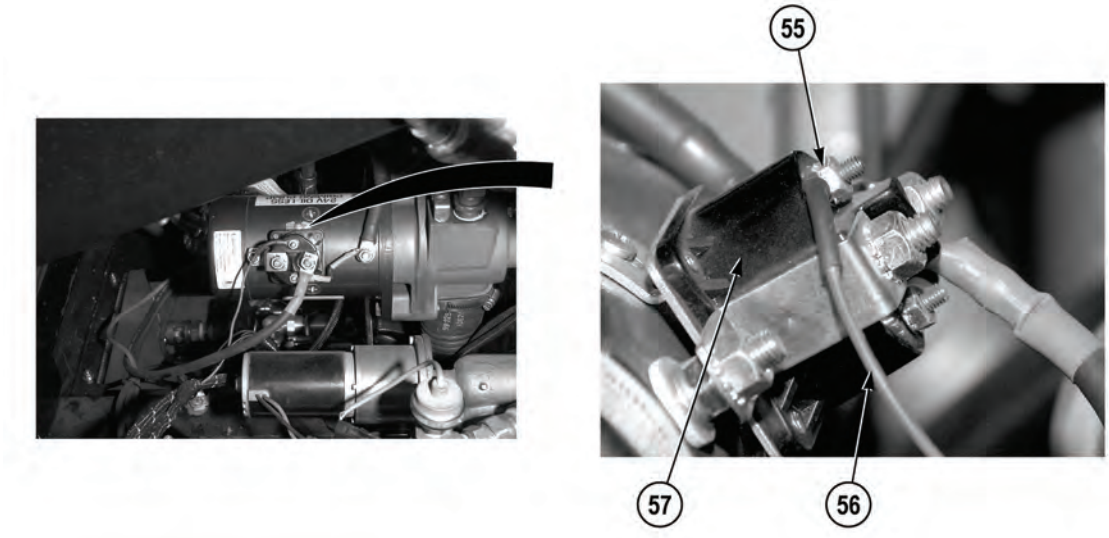
28. Connect pump house wire harness connector (68) on pressure governor control ECU datalink Y connector (69).



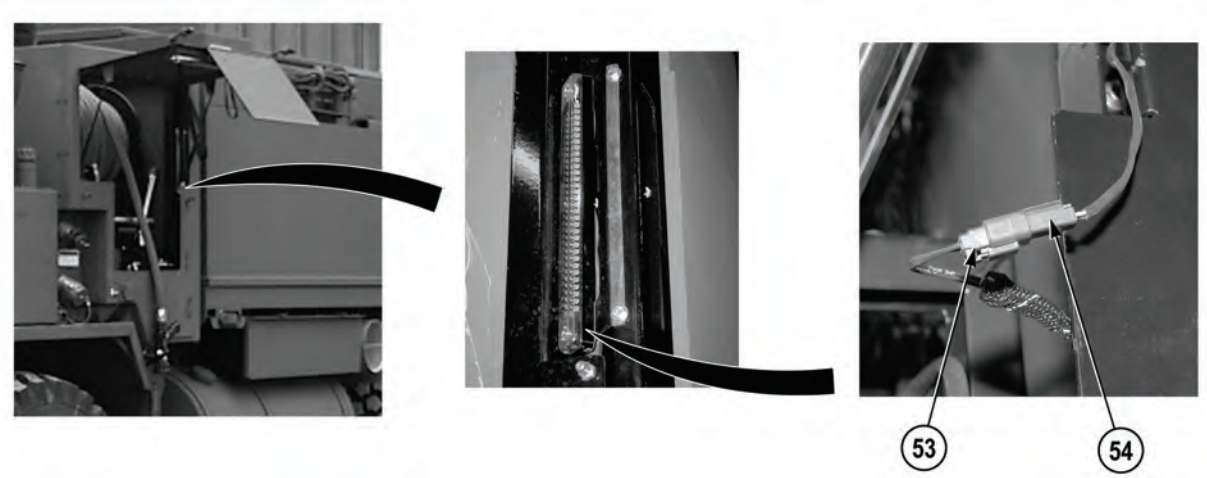
29. Install pressure governor ECU service connector (65) on bracket (67) with four screws (66), lockwashers (63), washers (64), and locknuts (62).

30. Connect pump hose wire harness connector (60) on chassis datalink Y connector (61).

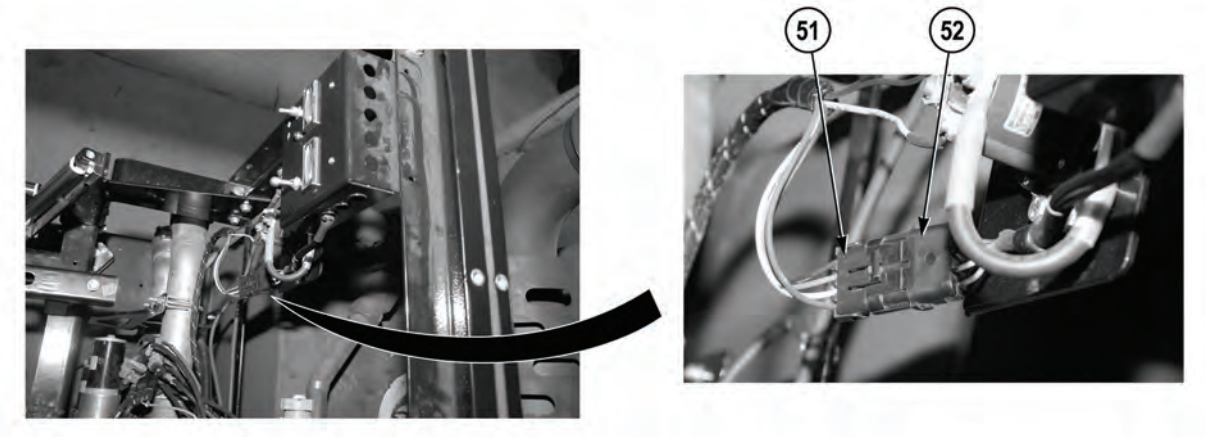
31. Connect pump house wire harness connector (58) on pressure governor control ECU datalink Y connector (59).



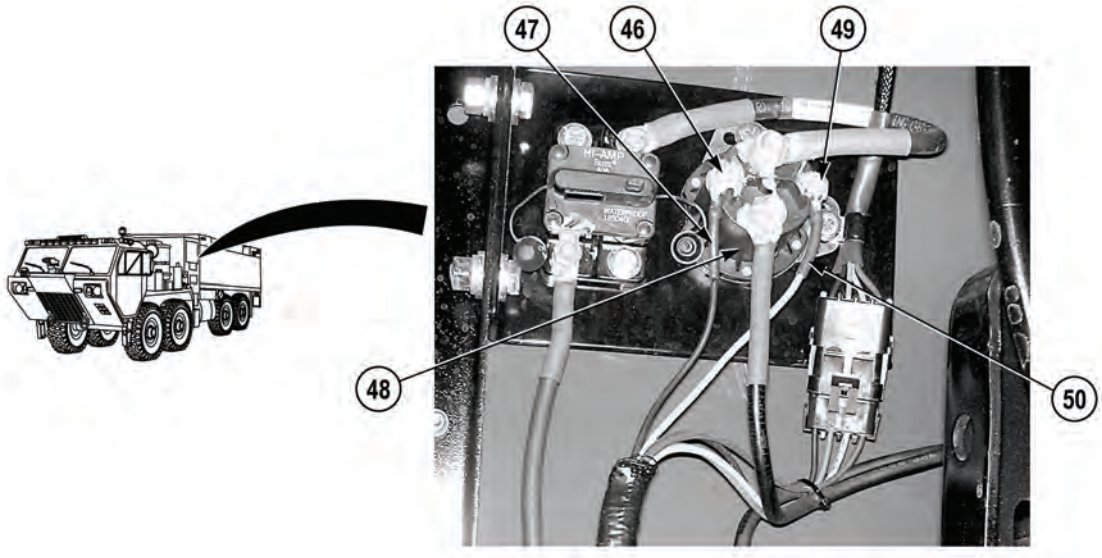
32. Install wire 2774 (56) on primer pump solenoid (57) with locknut (55).



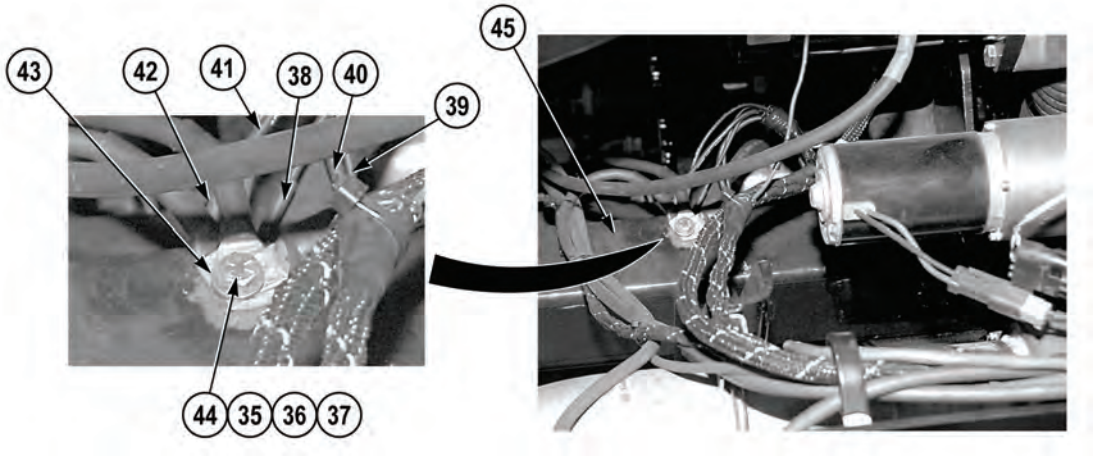
33. Connect pump house wire harness connector (53) on pump house hose reel striplight connector (54).



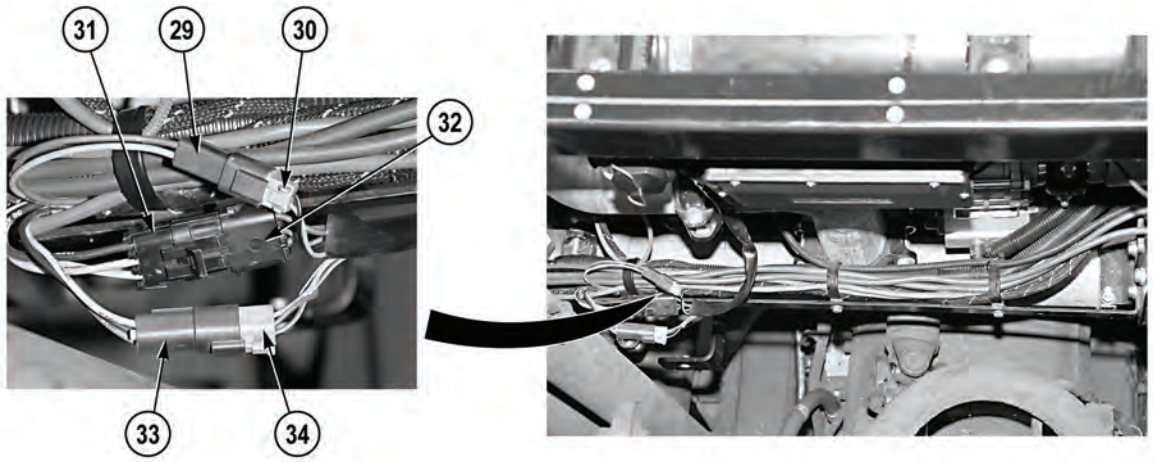
34. Connect pump hose wire harness connector (51) on diesel heater control connector (52).



35. Install wire 1664 (50) on hose reel rewind solenoid (48) with nut (49).
36. Install wire 1640 (47) on hose reel rewind solenoid (48) with nut (46).



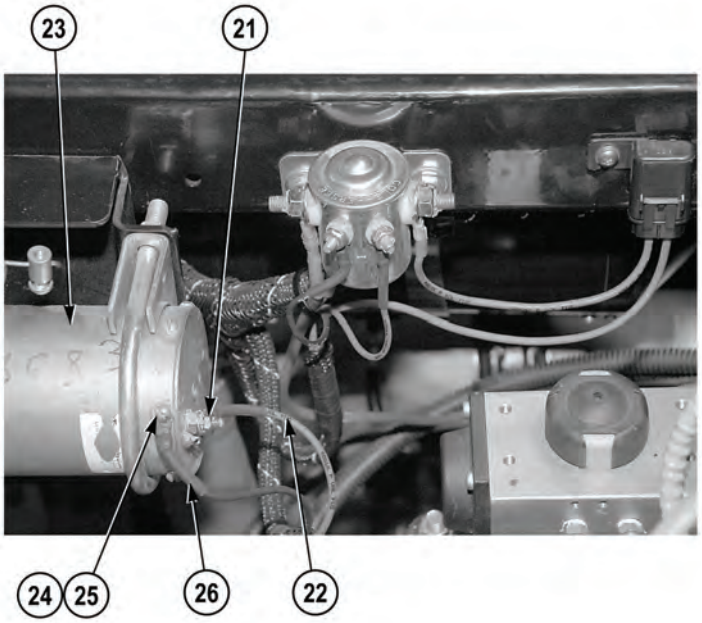
37. Install wire 4068 (38), wire 2640 (39), wire 2740 (40), wire 2200 (41), and wire 1640 (42) on frame rail (45) with screw (44), washer (43), washer (37), lockwasher (36), and nut (35).



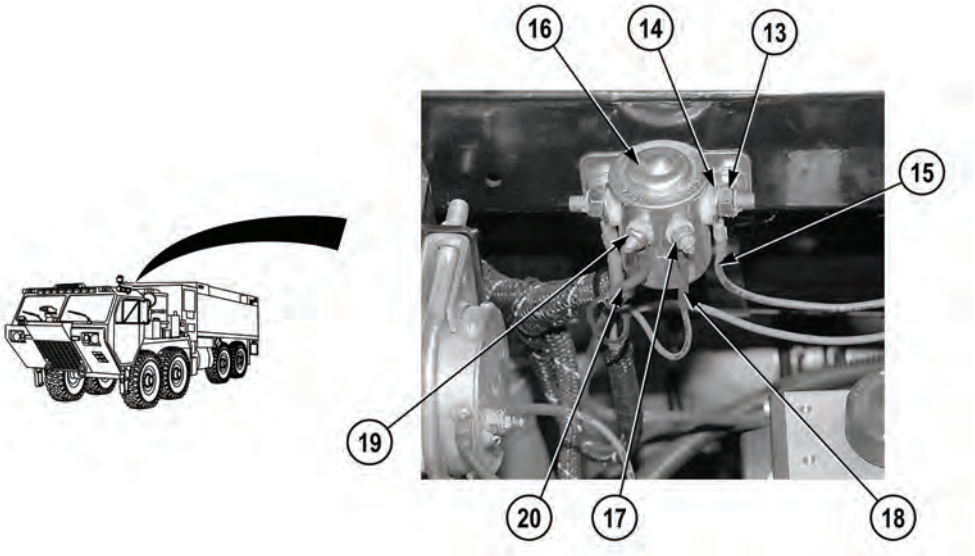
38. Connect pump house wire harness connector (33) on diesel heater connector (34).
39. Connect pump house wire harness connector (31) on diesel heater connector (32).
40. Connect pump house wire harness connector (29) on diesel heater connector (30).



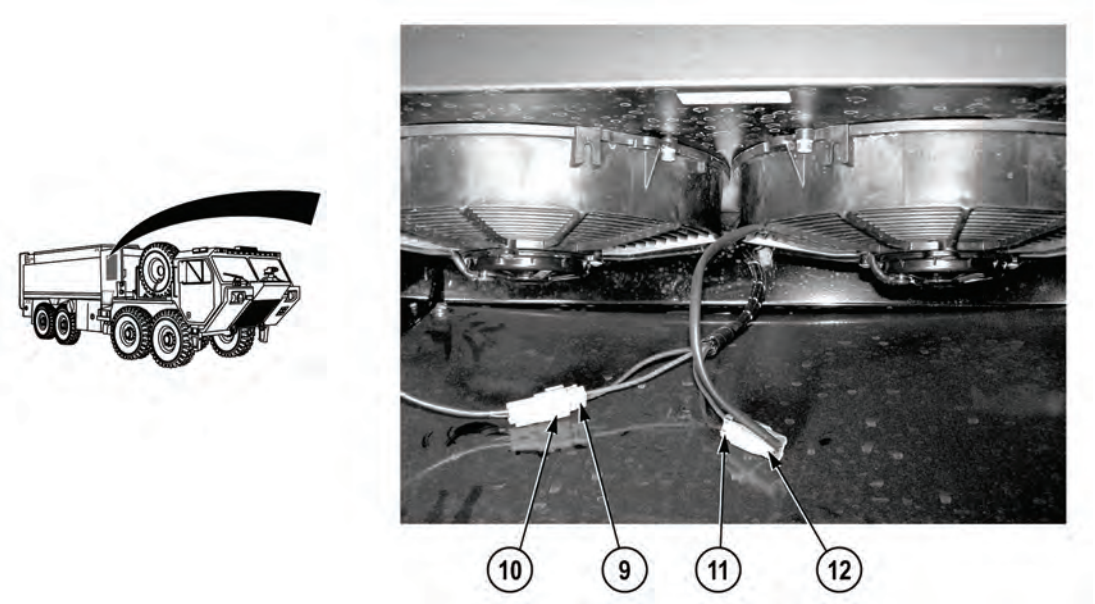
41. Connect pump house wire harness connector (27) on thermal relief sensor connector (28).



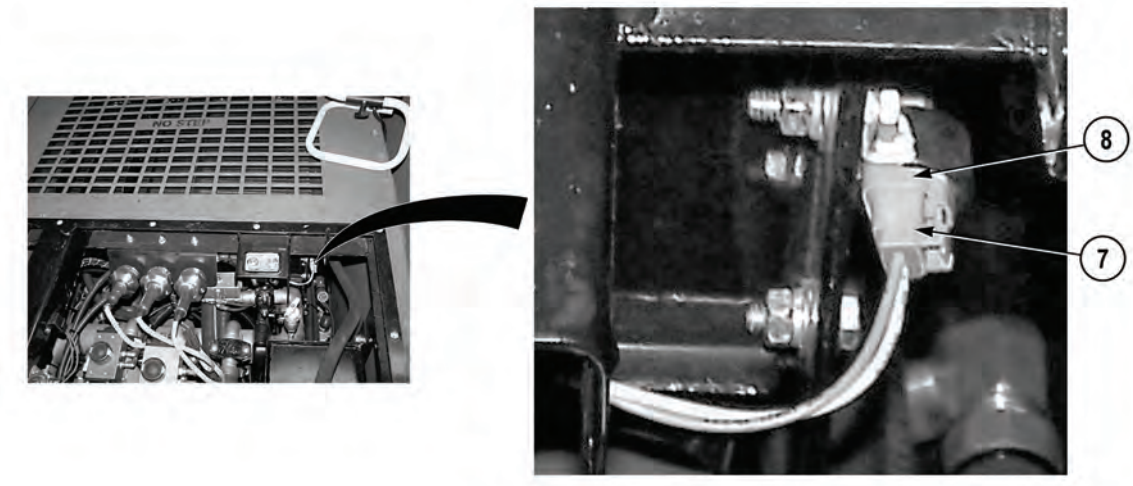
42. Install wire 4068 (26) on primer valve (23) with lockwasher (25) and screw (24).
43. Install wire 4065 (22) on primer valve (23) with locknut (21).



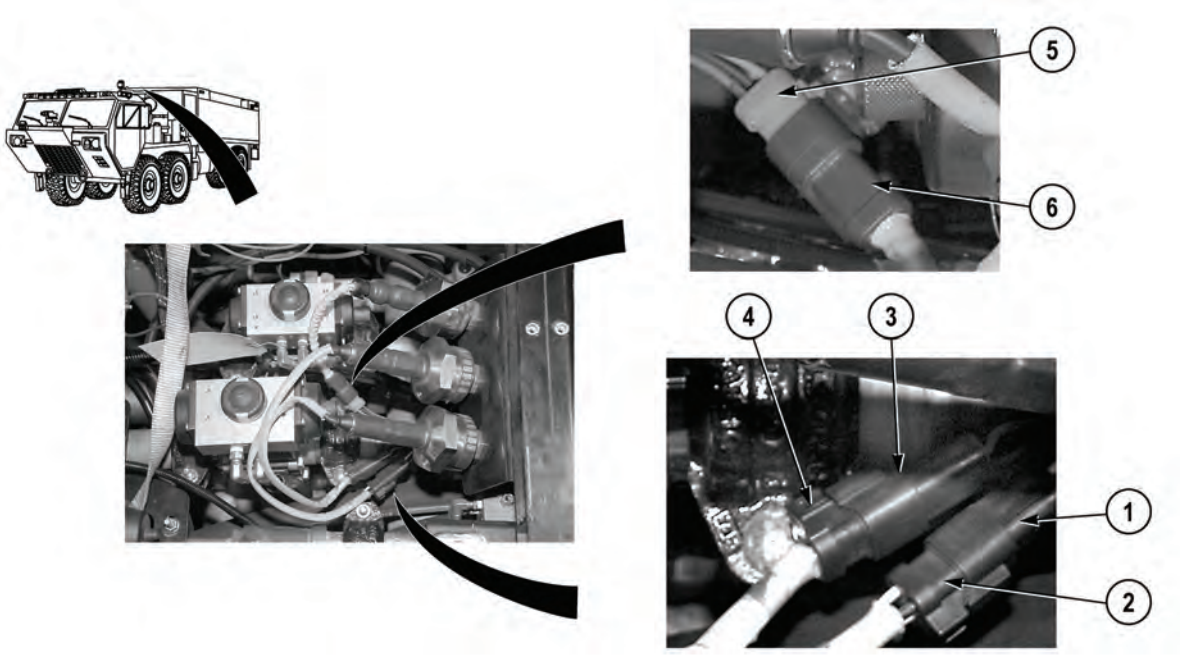
44. Install wire 1640 (20) on primer valve control solenoid (16) with nut (19).
45. Install wire 1591 (18) on primer valve control solenoid (16) with nut (17).
46. Install wire 4064 (15) on primer valve control solenoid (16) with washer (14) and nut (13).



47. Connect pump house wire harness connector (11) on hydraulic heat exchanger fan 2 connector (12).
48. Connect pump house wire harness connector (9) on hydraulic heat exchanger fan 1 connector (10).



49. Connect pump house wire harness connector (7) on hydraulic heat exchanger thermal switch connector (8).



50. Connect pump house wire harness connector (5) on intake vacuum transducer connector (6).
51. Connect pump house wire harness connector (3) on intake pressure transducer connector (4).
52. Connect pump house wire harness connector (1) on discharge pressure transducer connector (2).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install hose reel (WP 0246)
2. Install reel rewind switch (WP 0252)
3. Install pump house panel A, E, G, H, and K (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PUMP OPERATOR'S PANEL WIRE HARNESS REPLACEMENT

INITIAL SETUP:

Tools and Special Tools

Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts

Compound, Sealing (WP 0401, Item 10)
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)
Lockwasher (1)
Lockwasher (1)
Lockwasher (1)
Lockwasher (1)
Lockwasher (1)
Lockwasher (1)
Lockwasher (1)
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Materials/Parts (continued)

Lockwasher (1)
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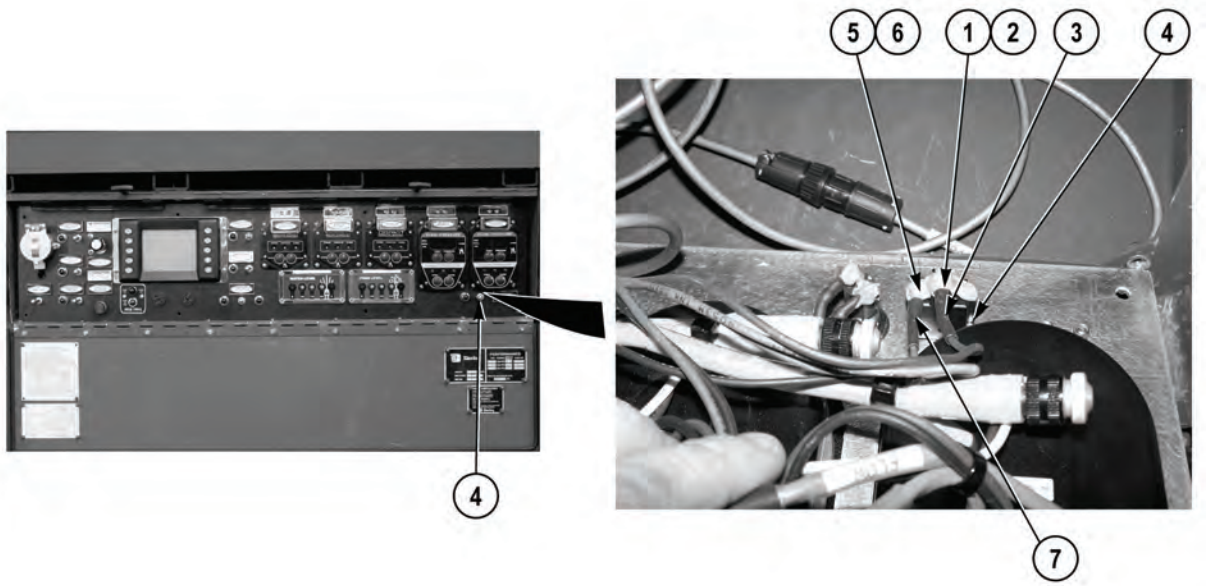
References

WP 0392, Fig. 55, 56

Equipment Conditions

Pump operator's panel opened (WP 0205)

REMOVAL



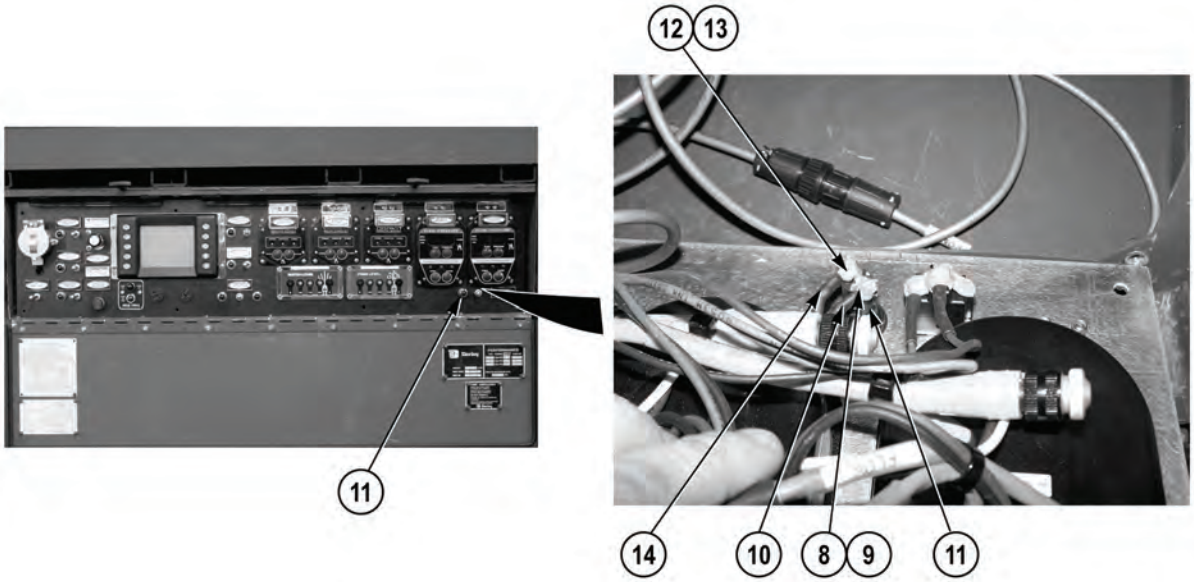
CAUTION

Care must be taken to ensure electronic parts do not come in contact with other parts of vehicle. Damage to equipment may result.

NOTE

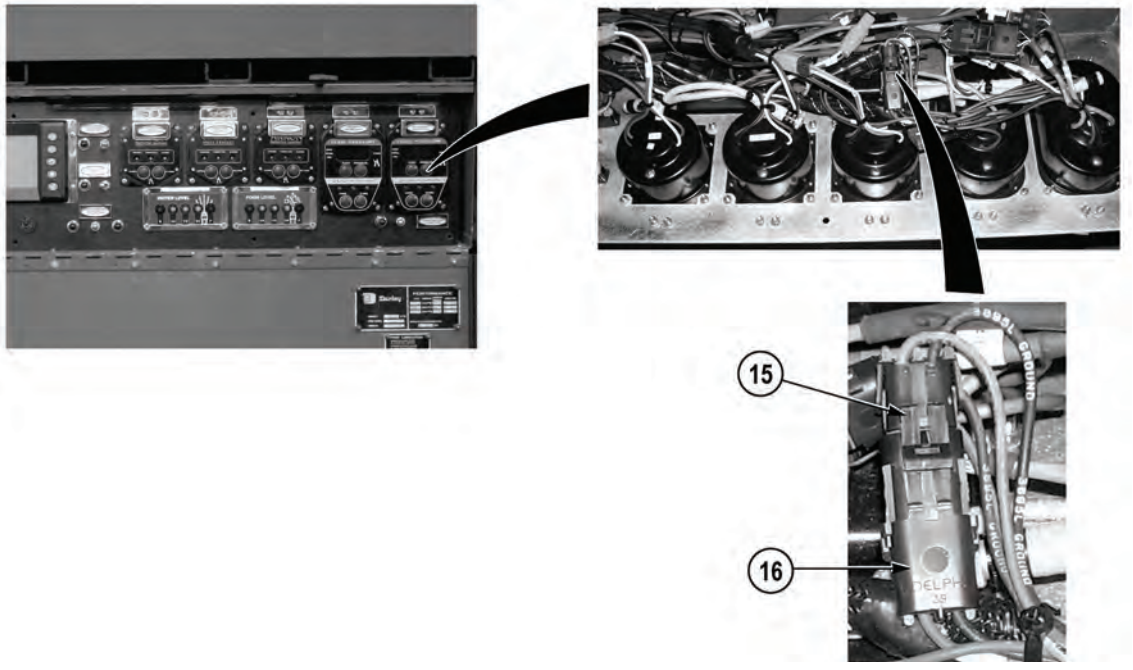
- Tag and mark wires prior to removal to ensure proper installation.
- Note routing of pump operator's panel wire harness to ensure correct installation.
- Note position and remove cable ties and cushion clips as required.
- An assistant may be required.

1. Remove screw (1), lockwasher (2), and wire 2834 (3) from WATER TANK DRAIN switch (4). Discard lockwasher.
2. Remove screw (5), lockwasher (6), and wire 4053 (7) from WATER TANK DRAIN switch (4). Discard lockwasher.

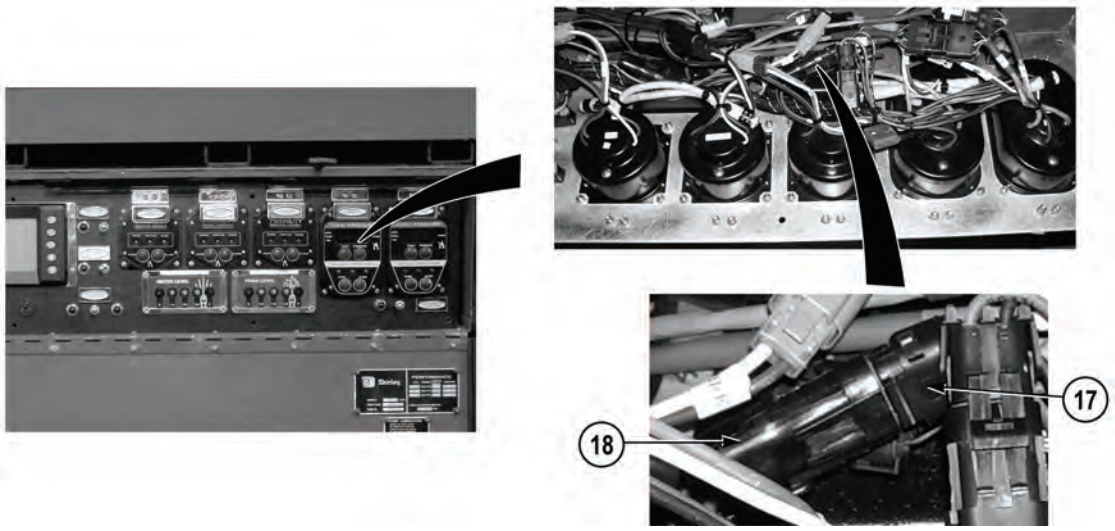


3. Remove screw (8), lockwasher (9), and wire 4053 (10) from WATER TANK DRAIN indicator (11). Discard lockwasher.

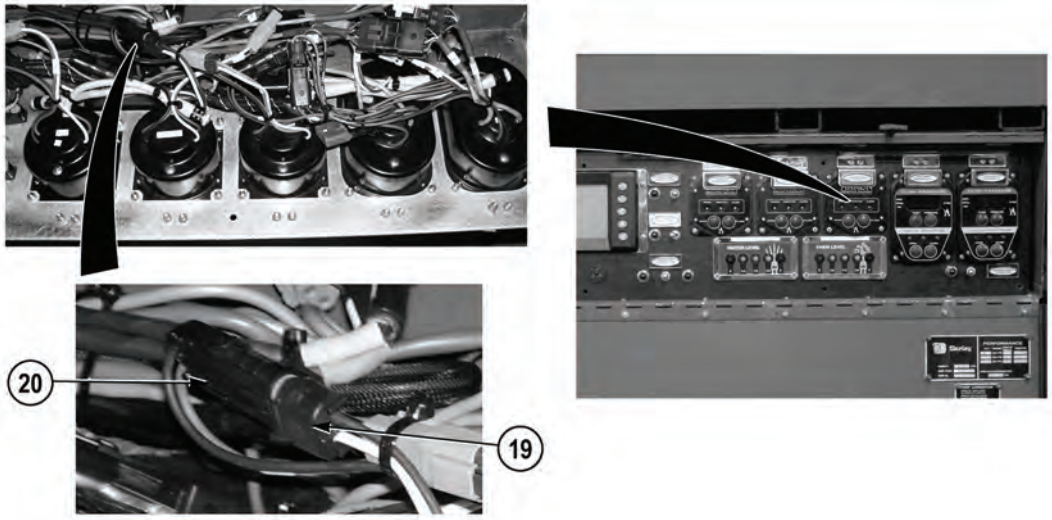
4. Remove screw (12), lockwasher (13), and wire 3895 (14) from WATER TANK DRAIN indicator (11). Discard lockwasher.



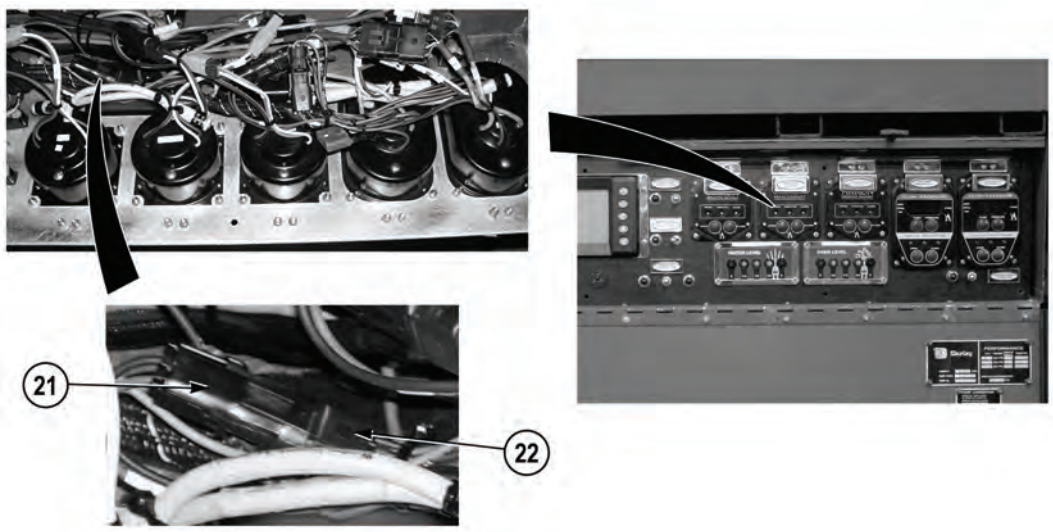
5. Disconnect pump operator's panel wire harness connector (15) from No. 2 passenger side discharge valve control connector (16).



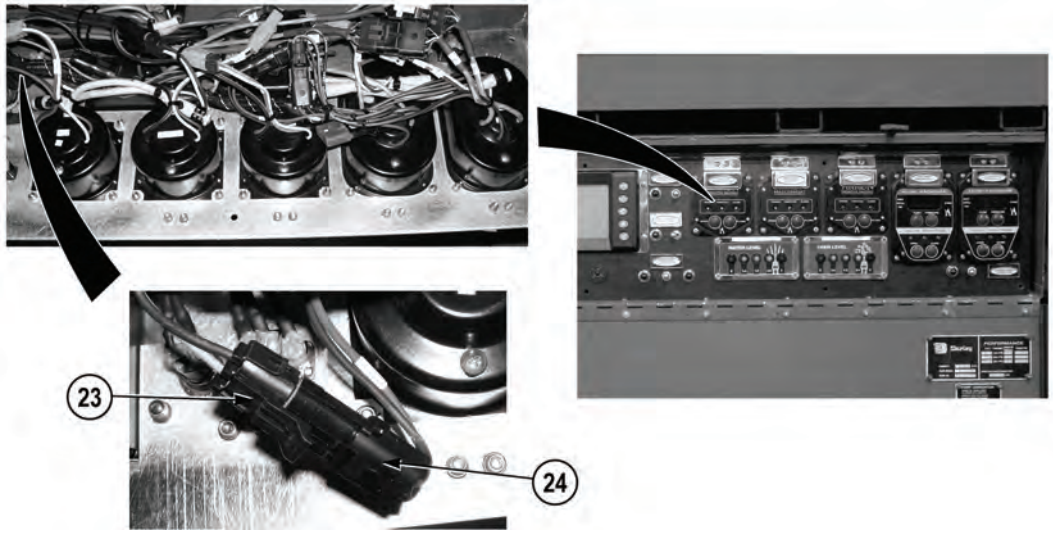
6. Disconnect pump operator's panel wire harness connector (17) from No. 1 driver side discharge valve control connector (18).



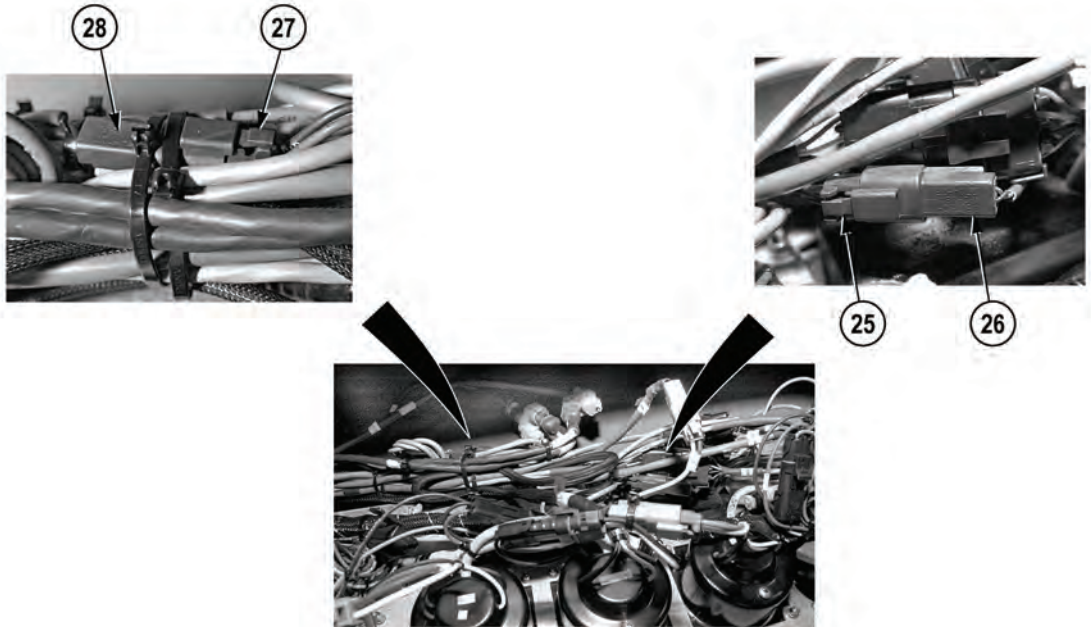
7. Disconnect pump operator's panel wire harness connector (19) from passenger side auxiliary inlet valve control connector (20).



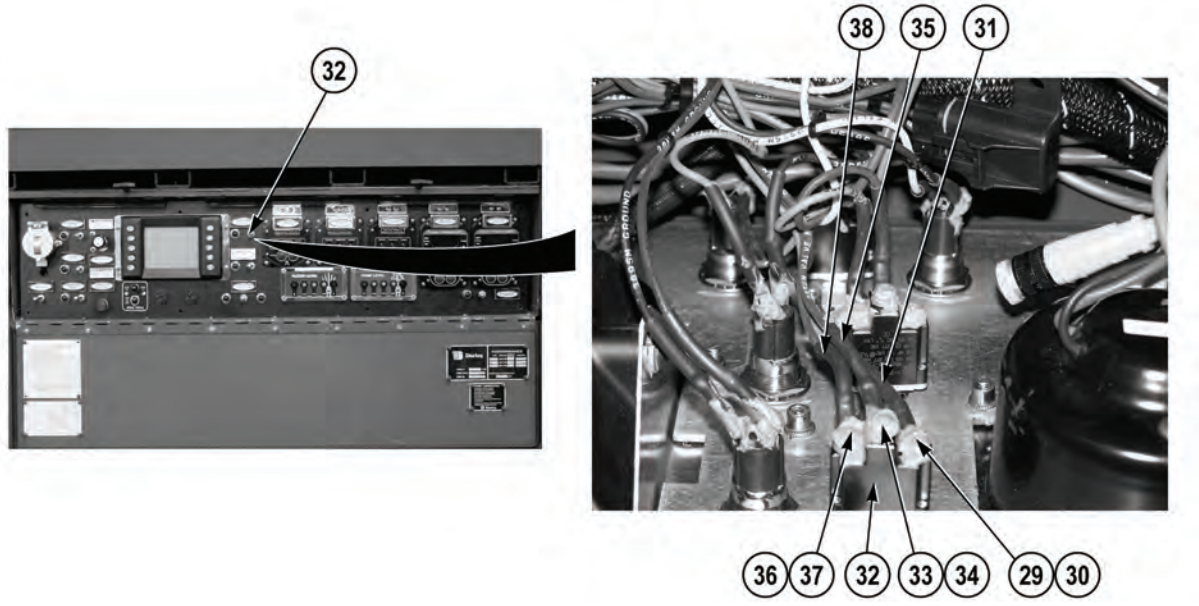
8. Disconnect pump operator's panel wire harness connector (21) from driver side auxiliary inlet valve control connector (22).



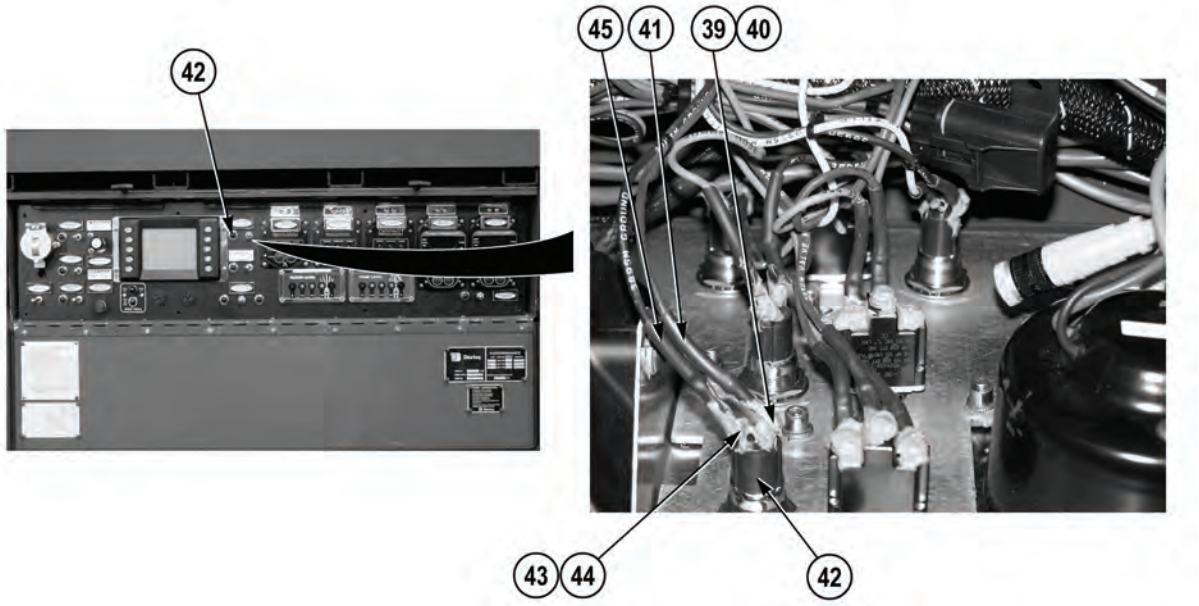
9. Disconnect pump operator's panel wire harness connector (23) from tank fill & re-circulating line valve control connector (24).



10. Disconnect pump operator's panel wire harness connector (25) from foam level gauge connector (26).
11. Disconnect pump operator's panel wire harness connector (27) from water level gauge connector (28).

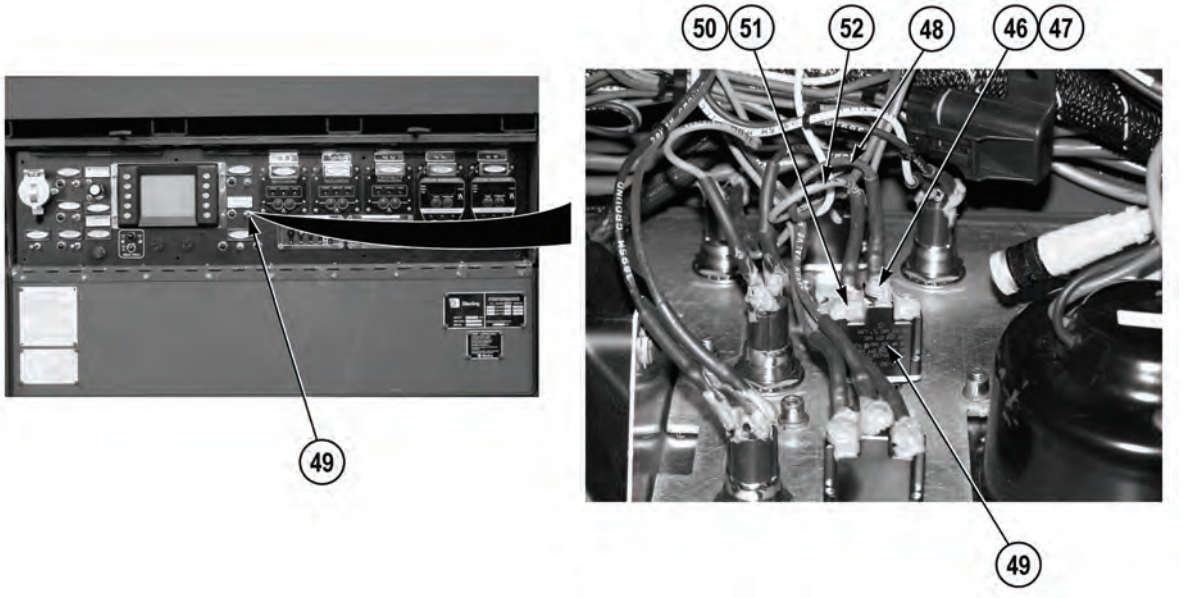


12. Remove screw (29), lockwasher (30), and wire 2770 (31) from TANK TO PUMP switch (32). Discard lockwasher.
13. Remove screw (33), lockwasher (34), and wire 2854 (35) from TANK TO PUMP switch (32). Discard lockwasher.
14. Remove screw (36), lockwasher (37), and wire 2855 (38) from TANK TO PUMP switch (32). Discard lockwasher.



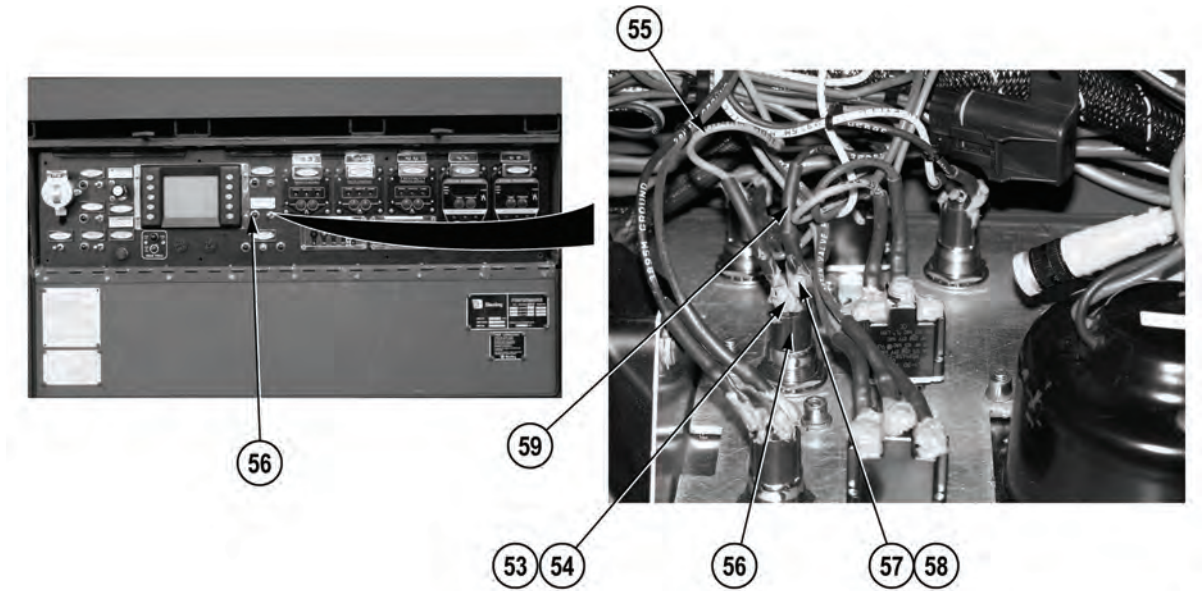
15. Remove screw (39), lockwasher (40), and wire 2855 (41) from TANK TO PUMP indicator (42). Discard lockwasher.

16. Remove screw (43), lockwasher (44), and wire 3895 (45) from TANK TO PUMP indicator (42). Discard lockwasher.



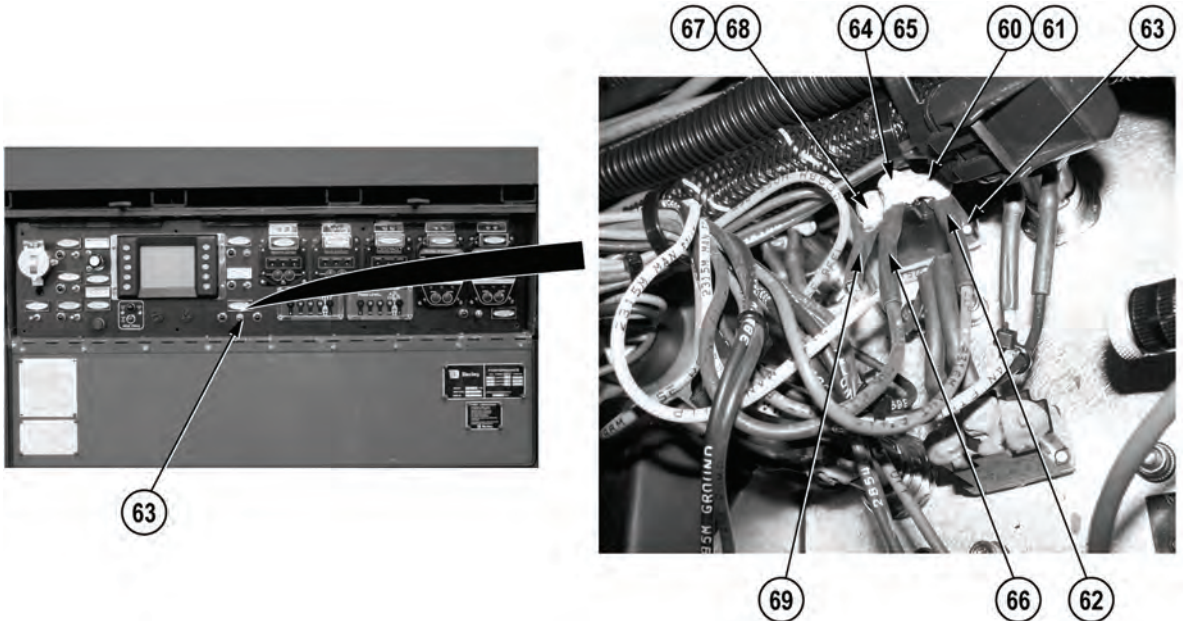
17. Remove screw (46), lockwasher (47), and wire 2834 (48) from REEL DISCHARGE switch (49). Discard lockwasher.

18. Remove screw (50), lockwasher (51), and wire 4098 (52) from REEL DISCHARGE switch (49). Discard lockwasher.



19. Remove screw (53), lockwasher (54), and wire 4098 (55) from REEL DISCHARGE indicator (56). Discard lockwasher.

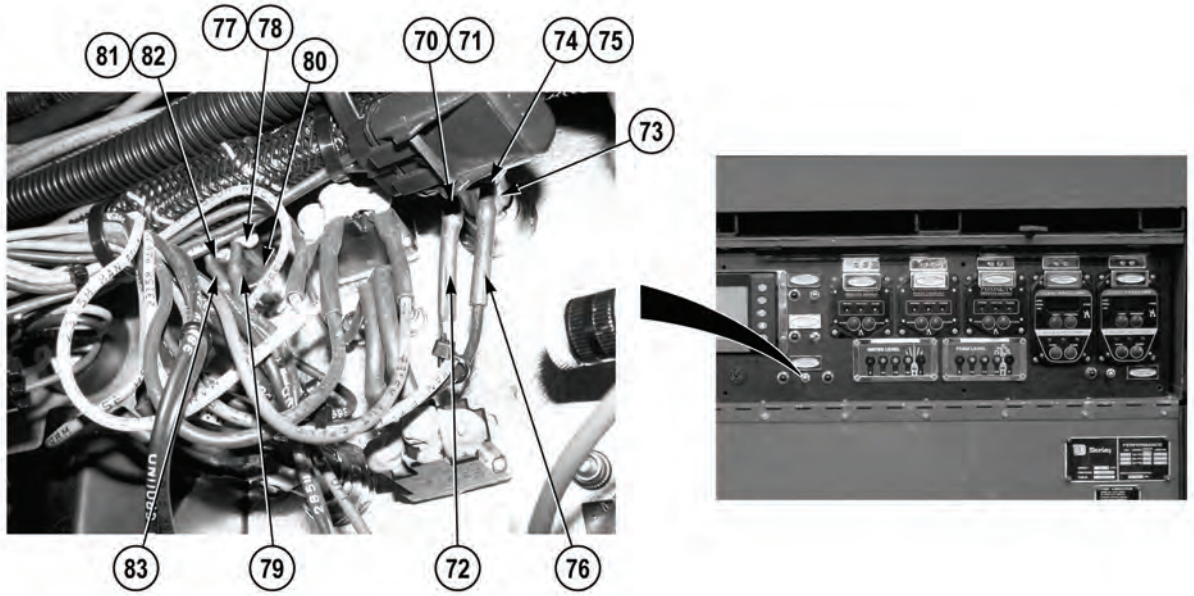
20. Remove screw (57), lockwasher (58), and wire 3895 (59) from REEL DISCHARGE indicator (56). Discard lockwasher.



21. Remove screw (60), lockwasher (61), and wire 2316 (62) from DIRECT TANK FILL switch (63). Discard lockwasher.

22. Remove screw (64), lockwasher (65), and wire 2314 (66) from DIRECT TANK FILL switch (63). Discard lockwasher.

23. Remove screw (67), lockwasher (68), and wire 2315 (69) from DIRECT TANK FILL switch (63). Discard lockwasher.

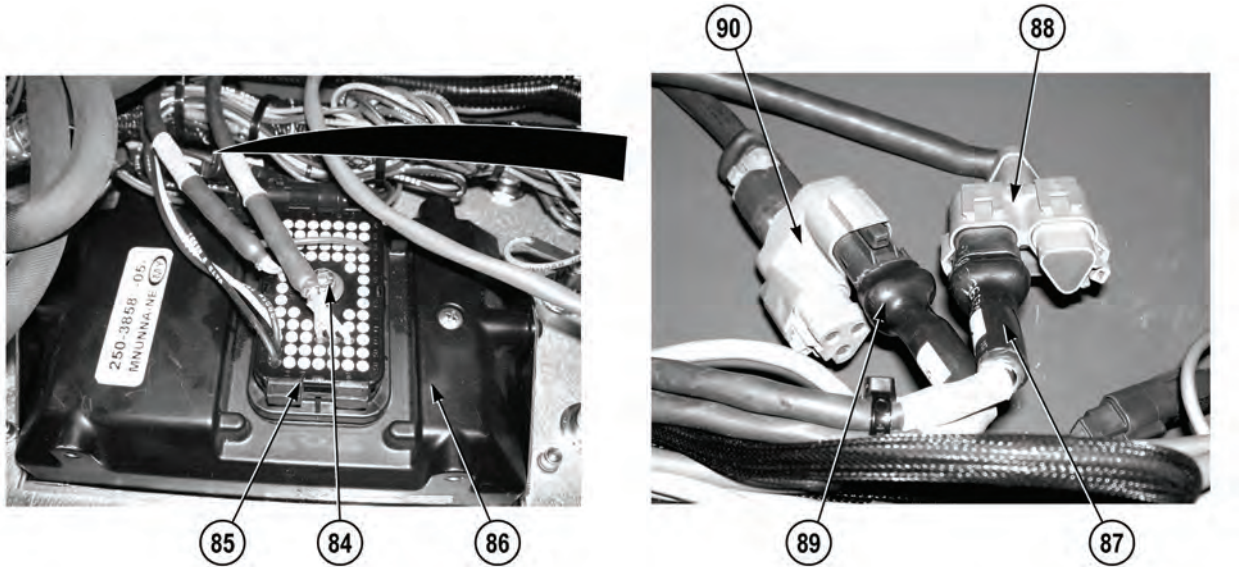


24. Remove screw (70), lockwasher (71), and wire 2315 (72) from DIRECT TANK FILL open indicator (73). Discard lockwasher.

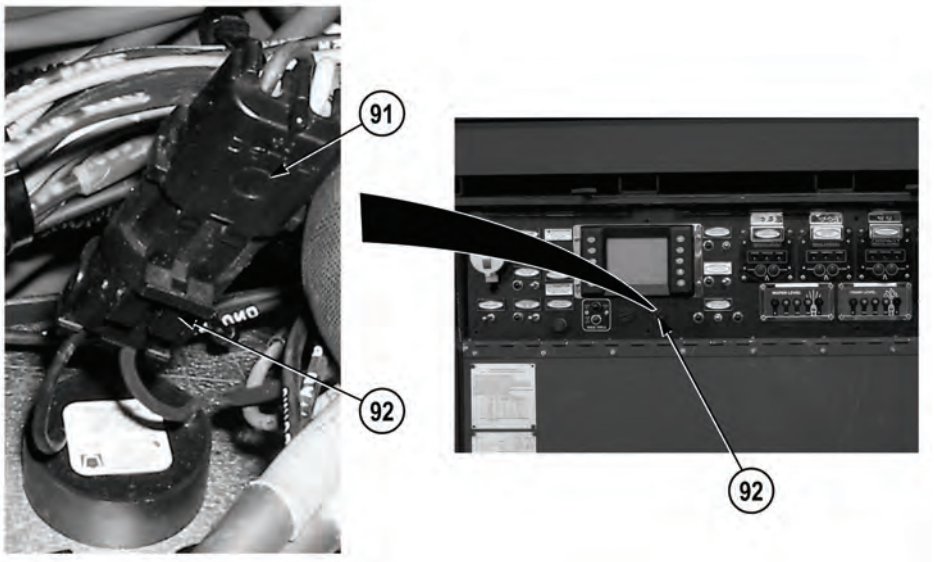
25. Remove screw (74), lockwasher (75), and wire 3895 (76) from DIRECT TANK FILL open indicator (73). Discard lockwasher.

26. Remove screw (77), lockwasher (78), and wire 2316 (79) from DIRECT TANK FILL auto indicator (80). Discard lockwasher.

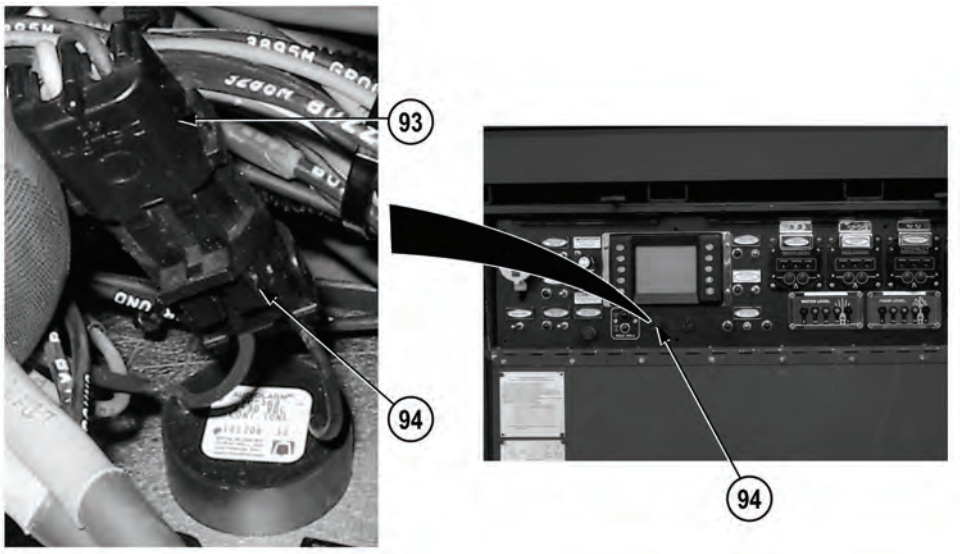
27. Remove screw (81), lockwasher (82), and wire 3895 (83) from DIRECT TANK FILL auto indicator (80). Discard lockwasher.



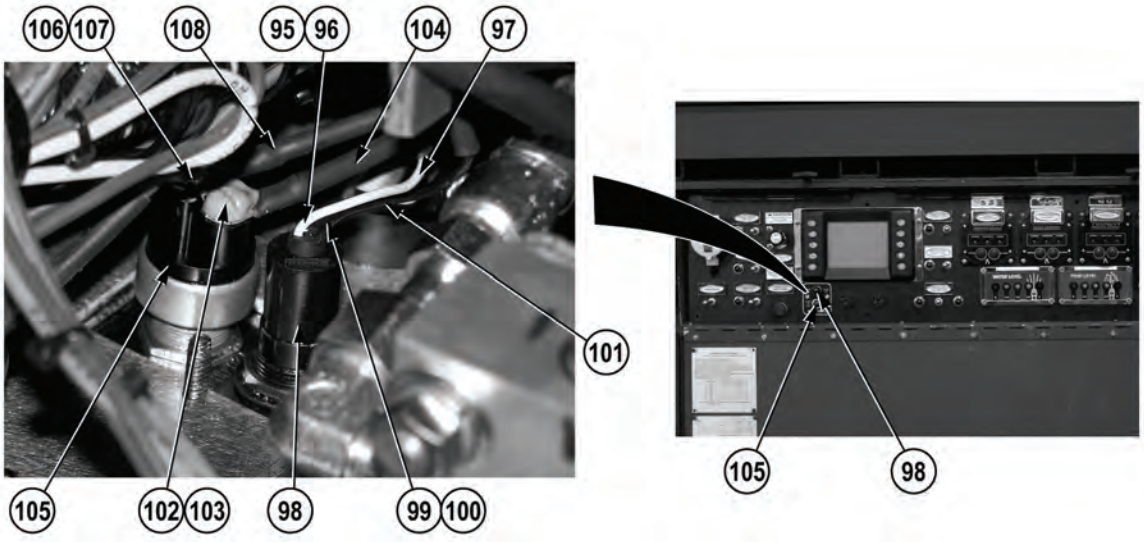
28. Loosen screw (84) and remove pump operator's panel wire harness connector (85) from pressure governor control (86).
29. Disconnect pump operator's panel wire harness connector (87) from pressure governor control ECU datalink Y connector (88).
30. Disconnect pump operator's panel wire harness connector (89) from chassis datalink Y connector (90).



31. Disconnect pump operator's panel wire harness connector (91) from pressure governor control audio alarm (92).



32. Disconnect pump operator's panel wire harness connector (93) from pump hot audio alarm (94).

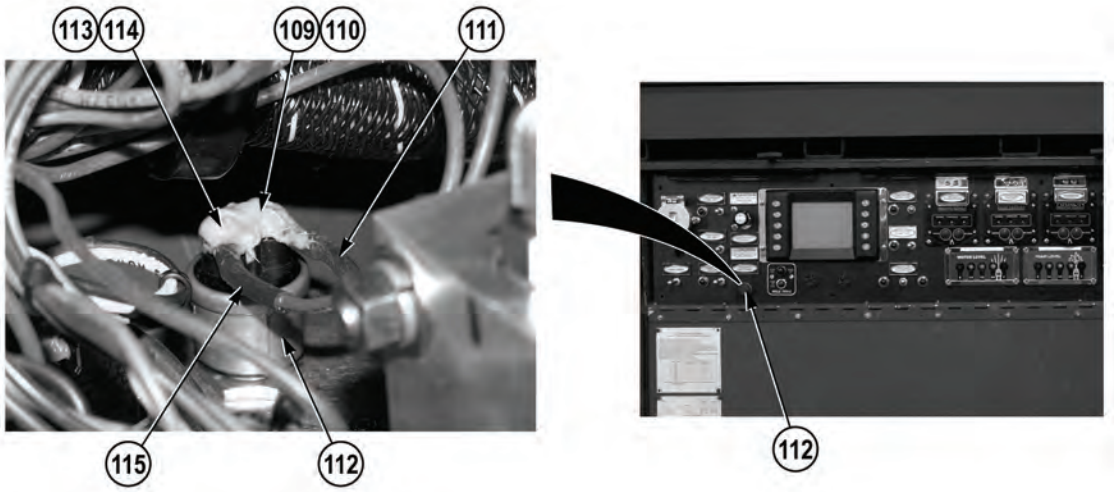


33. Remove screw (95), lockwasher (96), and wire 1405 at butt splice (97) from PUMP HOT indicator (98). Discard lockwasher.

34. Remove screw (99), lockwasher (100), and wire 3895 at butt splice (101) from PUMP HOT indicator (98). Discard lockwasher.

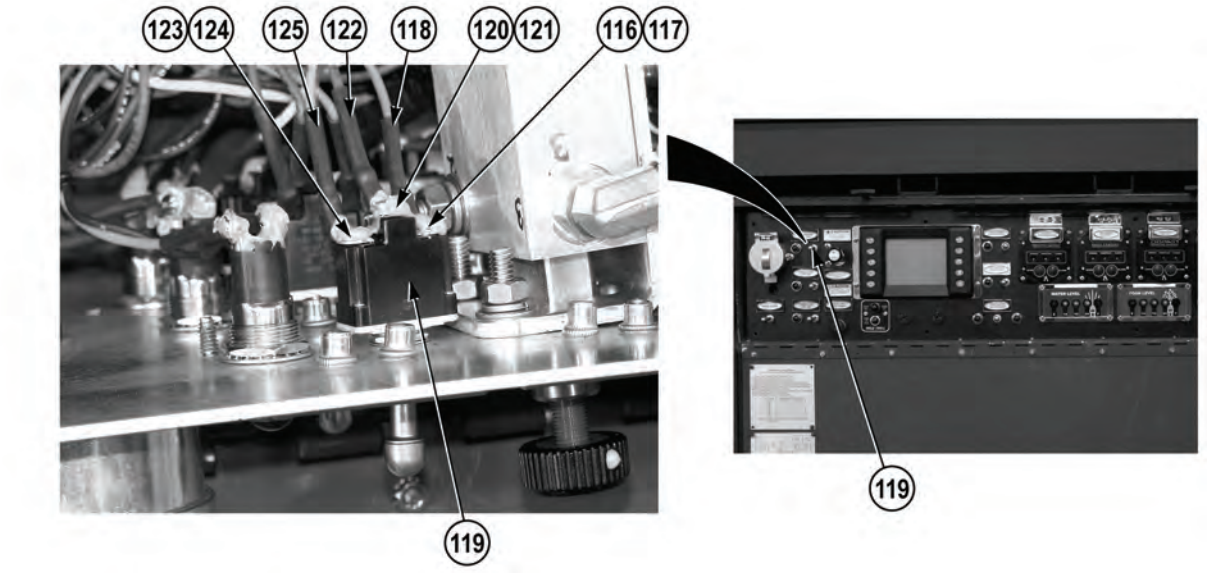
35. Remove screw (98), lockwasher (99), and wire 4085 (100) from PUMP HOT PUSH TO TEST button (101). Discard lockwasher.

36. Remove screw (102), lockwasher (103), and wire 1405 (104) from PUMP HOT PUSH TO TEST button (101). Discard lockwasher.



37. Remove screw (109), lockwasher (110), and wire 2773 (111) from DRIVER MAIN INLET PRIMER button (112). Discard lockwasher.

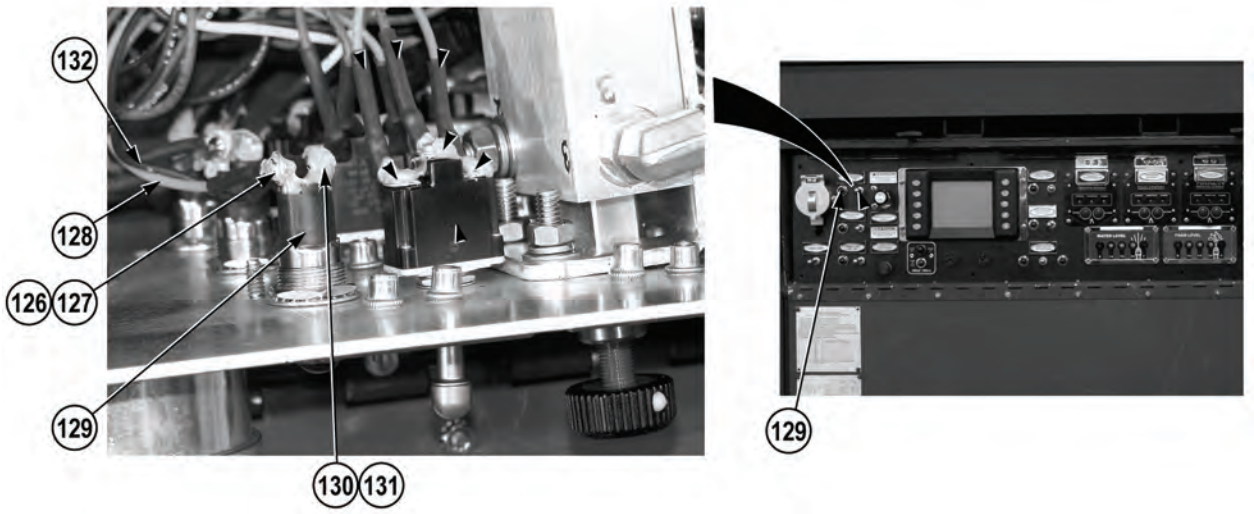
38. Remove screw (113), lockwasher (114), and wire 1590 (115) from DRIVER MAIN INLET PRIMER button (112). Discard lockwasher.



39. Remove screw (116), lockwasher (117), and wire 4038 (118) from PUMP COOLER switch (119). Discard lockwasher.

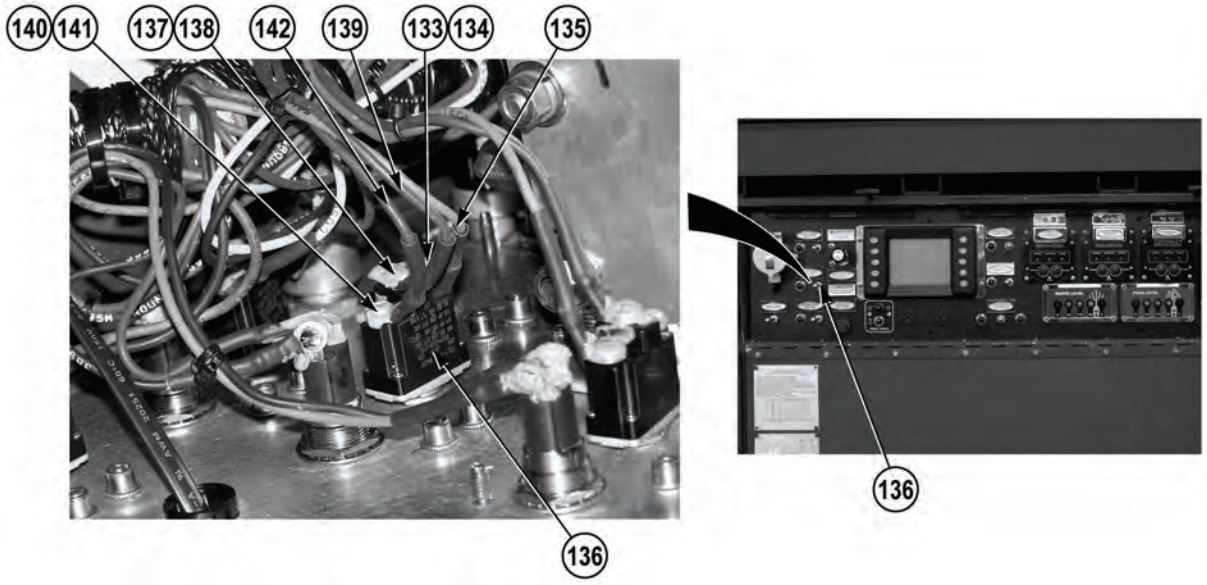
40. Remove screw (120), lockwasher (121), and wire 2834 (122) from PUMP COOLER switch (119). Discard lockwasher.

41. Remove screw (123), lockwasher (124), and wire 4037 (125) from PUMP COOLER switch (119). Discard lockwasher.



42. Remove screw (126), lockwasher (127), and wire 4037 (128) from PUMP COOLER indicator (129). Discard lockwasher.

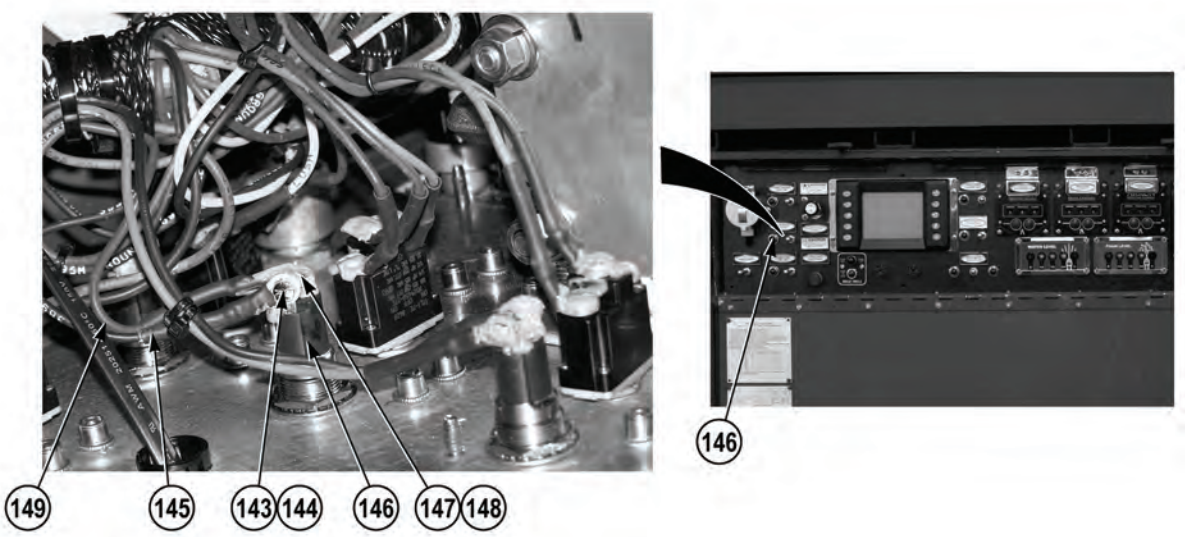
43. Remove screw (130), lockwasher (131), and wire 3895 (132) from PUMP COOLER indicator (129). Discard lockwasher.



44. Remove screw (133), lockwasher (134), and wire 2831 (135) from FOAM SYSTEM switch (136). Discard lockwasher.

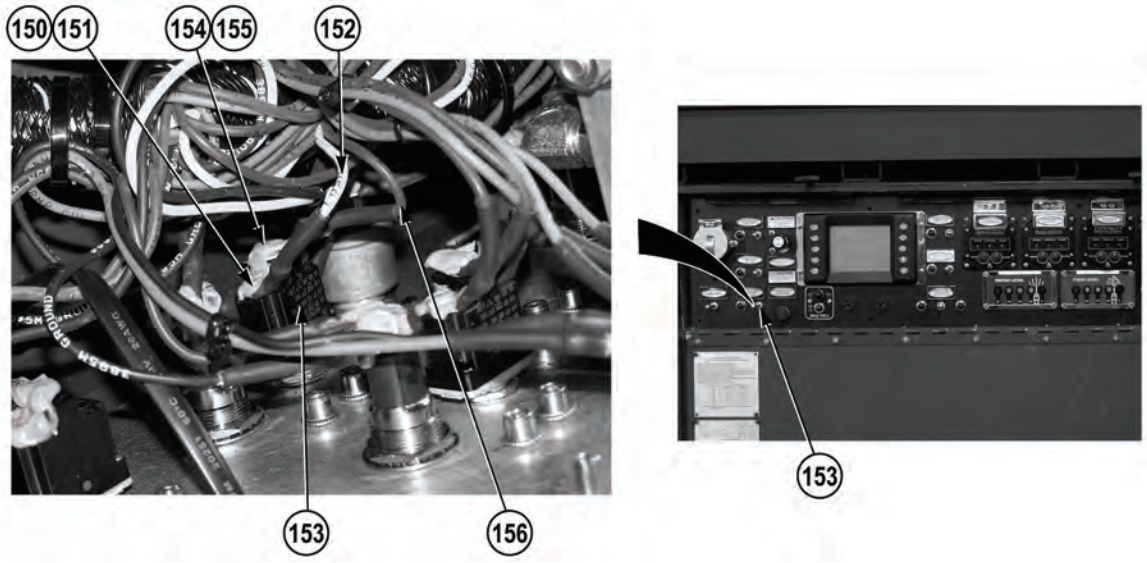
45. Remove screw (137), lockwasher (138), and wire 2830 (139) from FOAM SYSTEM switch (136). Discard lockwasher.

46. Remove screw (140), lockwasher (141), and wire 2816 (142) from FOAM SYSTEM switch (136). Discard lockwasher.



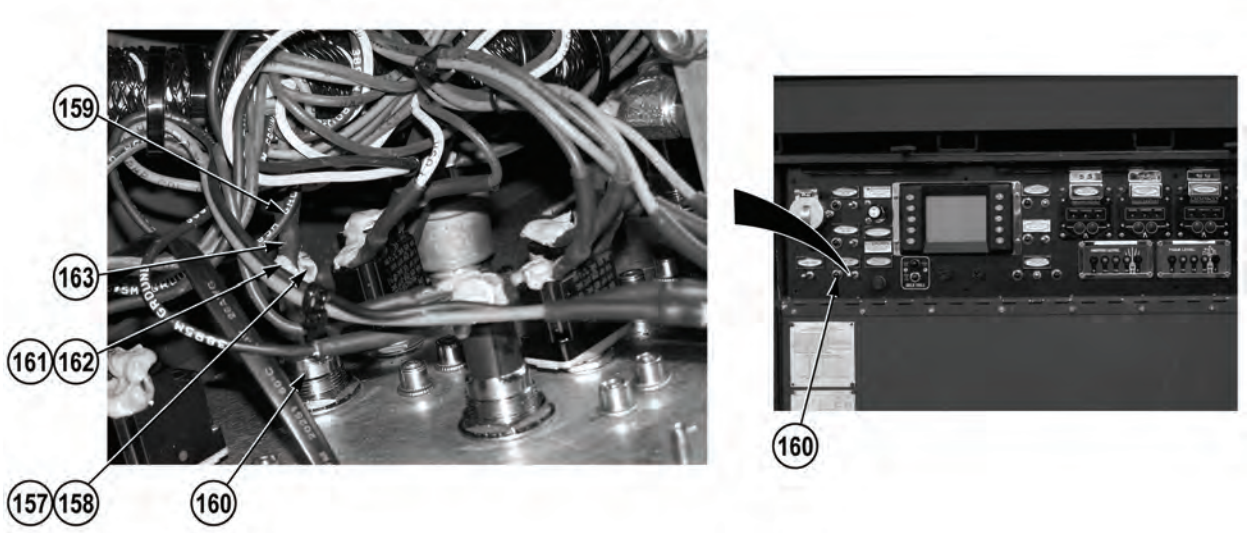
47. Remove screw (143), lockwasher (144), and wire 2830 (145) from FOAM SYSTEM indicator (146). Discard lockwasher.

48. Remove screw (147), lockwasher (148), and wire 3895 (149) from FOAM SYSTEM indicator (146). Discard lockwasher.



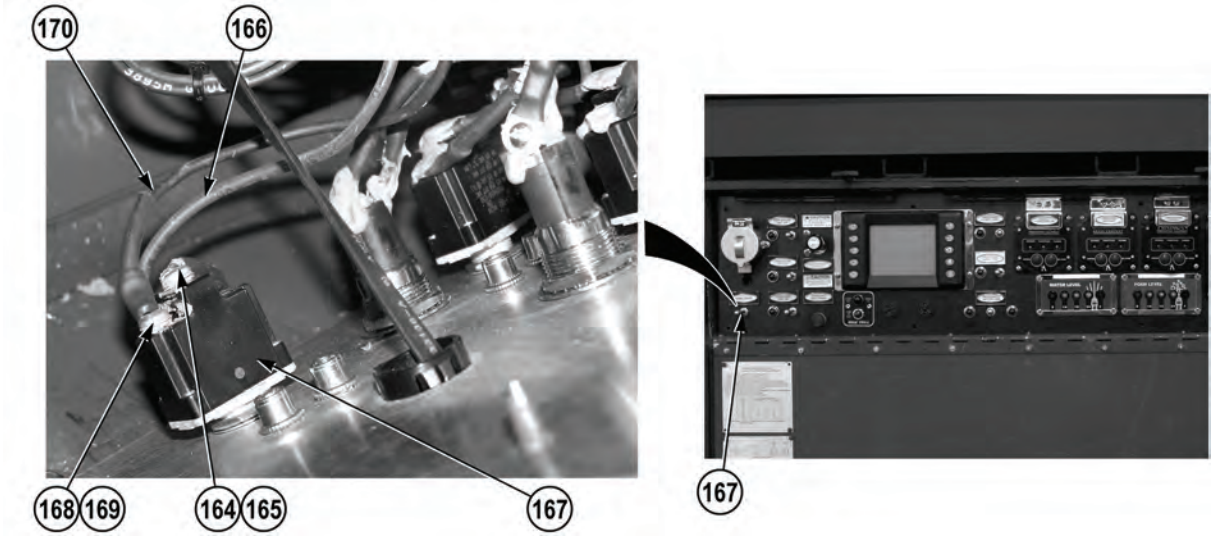
49. Remove screw (150), lockwasher (151), and wire 2849 (152) from FOAM FLUSH switch (153). Discard lockwasher.

50. Remove screw (154), lockwasher (155), and wire 2834 (156) from FOAM FLUSH switch (153). Discard lockwasher.



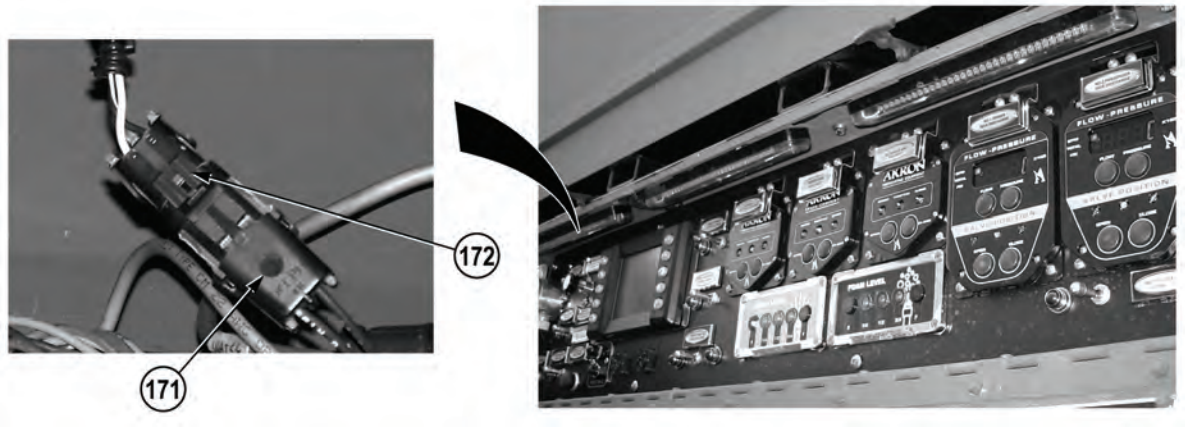
51. Remove screw (157), lockwasher (158), and wire 2849 (159) from FOAM FLUSH indicator (160). Discard lockwasher.

52. Remove screw (161), lockwasher (162), and wire 3895 (163) from FOAM FLUSH indicator (160). Discard lockwasher.

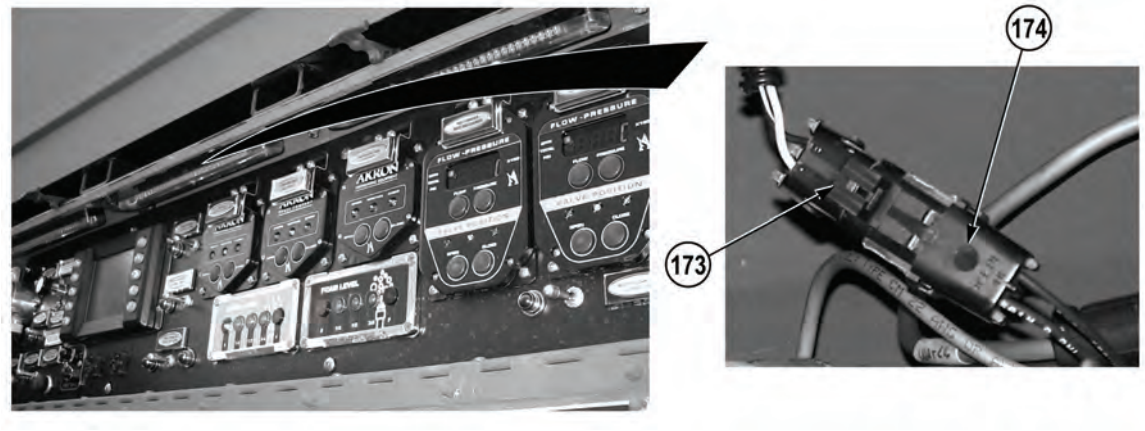


53. Remove screw (164), lockwasher (165), and wire 2346 (166) from PANEL LIGHTS switch (167). Discard lockwasher.

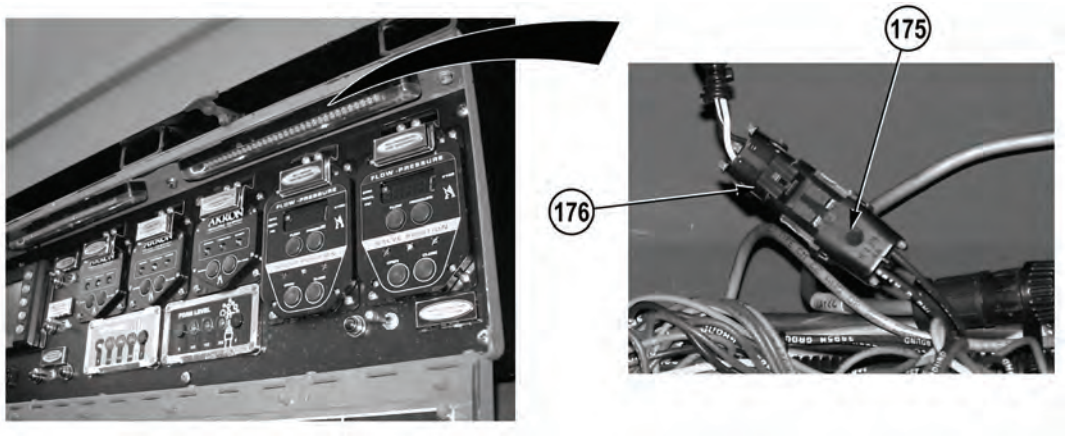
54. Remove screw (168), lockwasher (169), and wire 1661 (170) from PANEL LIGHTS switch (167). Discard lockwasher.



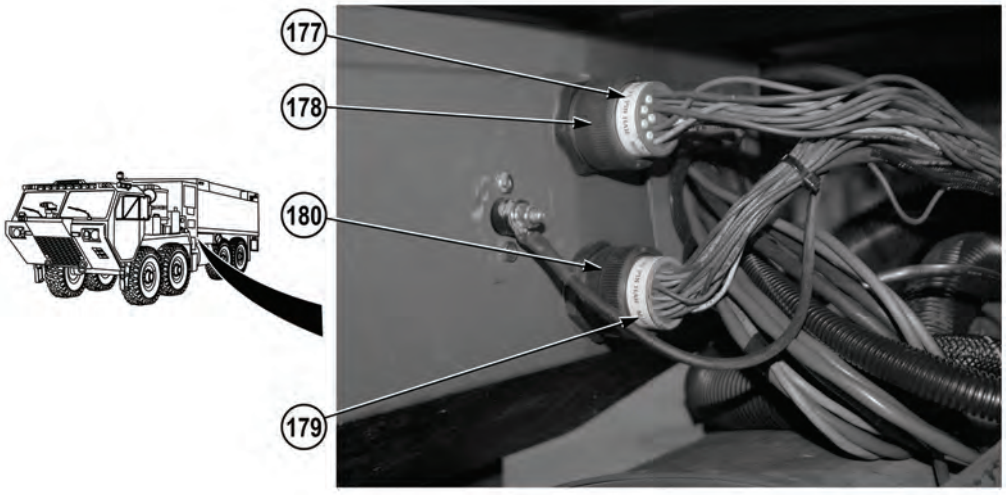
55. Disconnect pump operator's panel wire harness connector (171) from (forward) pump operator's panel striplight connector (172).



56. Disconnect pump operator's panel wire harness connector (173) from (center) pump operator's panel striplight connector (174).

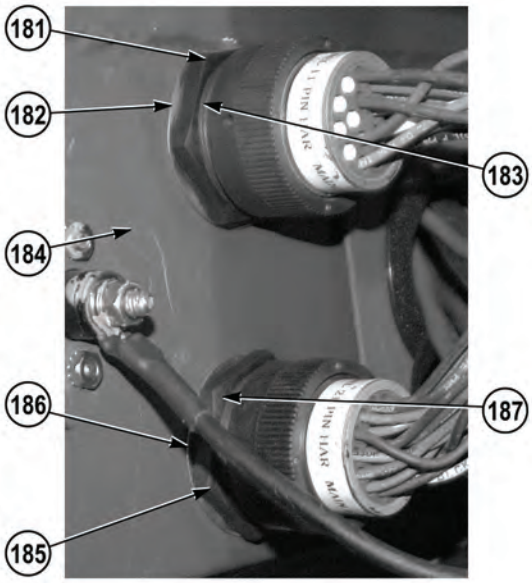


57. Disconnect pump operator's panel wire harness connector (175) from (rear) pump operator's panel striplight connector (176).



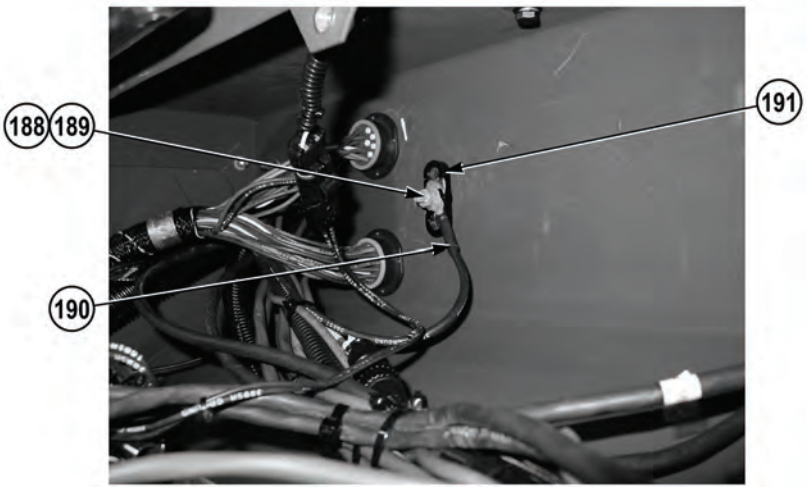
58. Disconnect main wire harness connector (177) from pump operator's panel wire harness connector (178).

59. Disconnect main wire harness connector (179) from pump operator's panel wire harness connector (180).



60. Remove nut (181), lockwasher (182), and pump operator's panel wire harness connector (183) from pump operator's panel housing (184).

61. Remove nut (185), lockwasher (186), and pump operator's panel wire harness connector (187) from pump operator's panel housing (184).



62. Remove nut (188), lockwasher (189), and wire 3895 (190) from terminal block (191). Discard lockwasher.

63. Remove pump operator's panel wire harness (188) from vehicle.

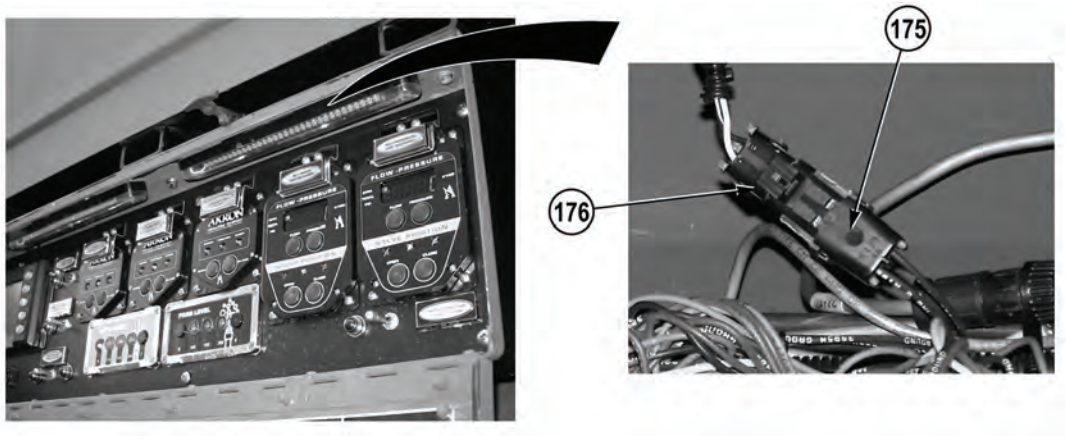
END OF TASK

INSTALLATION

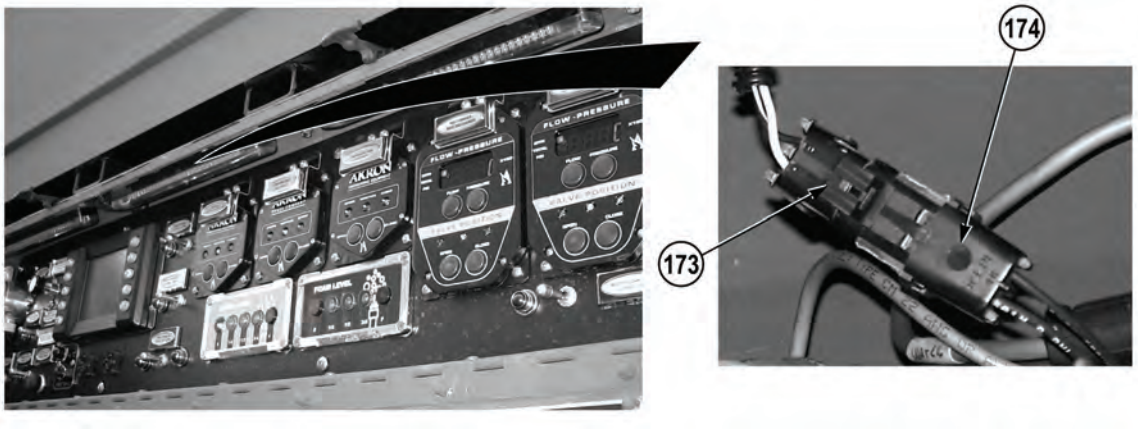
NOTE

- Route pump operator's panel wire harness as noted prior to removal.
- Install cable ties and cushion clips as required.

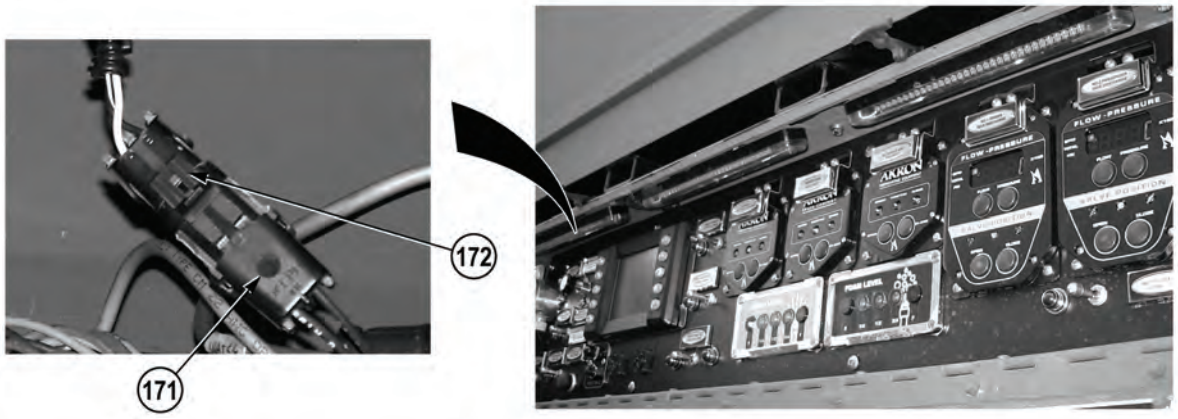
1. Install wire 3895 (190) on terminal block (191) with lockwasher (189) and nut (188).
2. Install pump operator's panel wire harness connector (187) on pump operator's panel housing (184) with lockwasher (182) and nut (181).
3. Install pump operator's panel wire harness connector (183) on pump operator's panel housing (184) with lockwasher (182) and nut (181).
4. Connect main wire harness connector (179) on pump operator's panel 21 pin wire harness connector (180).
5. Connect main wire harness connector (177) on pump operator's panel 11 pin wire harness connector (178).



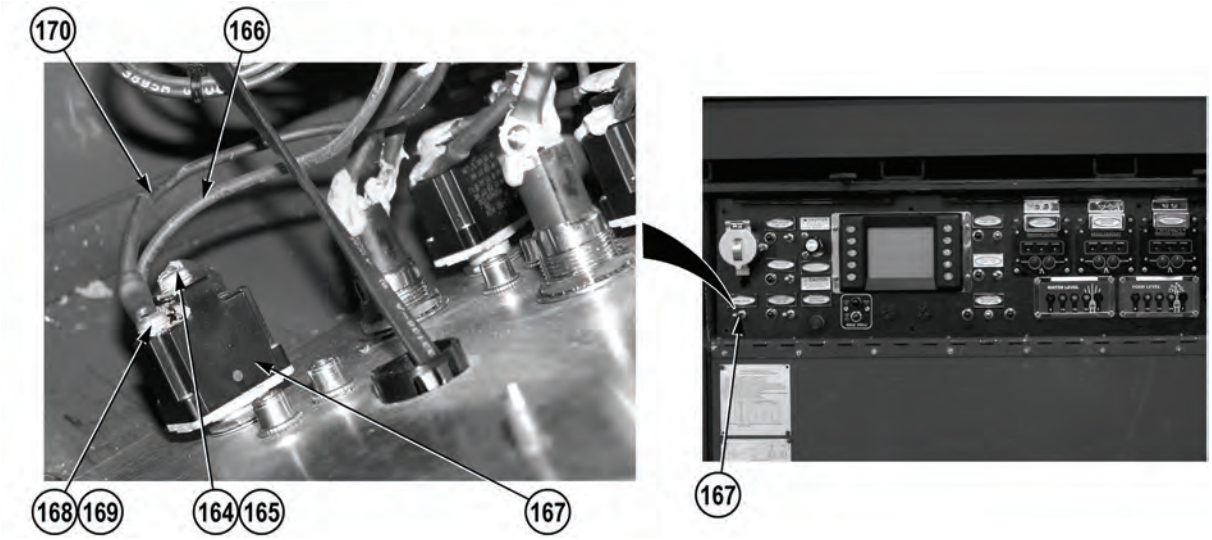
6. Connect pump operator's panel wire harness connector (175) on (rear) pump operator's panel striplight connector (176).



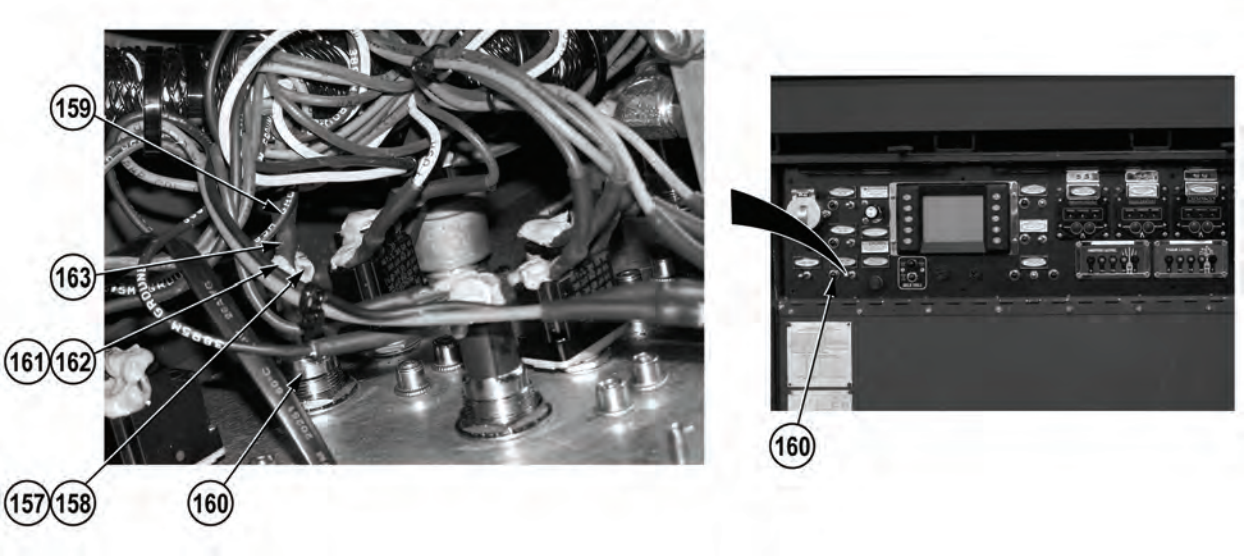
7. Connect pump operator’s panel wire harness connector (173) on (center) pump operator’s panel striplight connector (174).



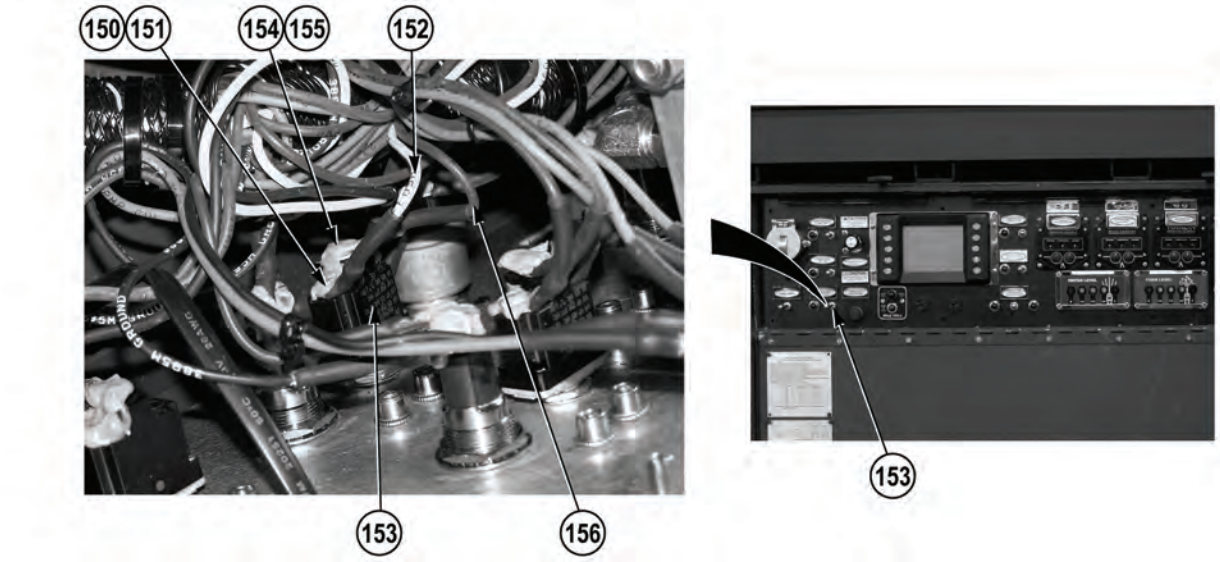
8. Connect pump operator’s panel wire harness connector (171) on (forward) pump operator’s panel striplight connector (172).



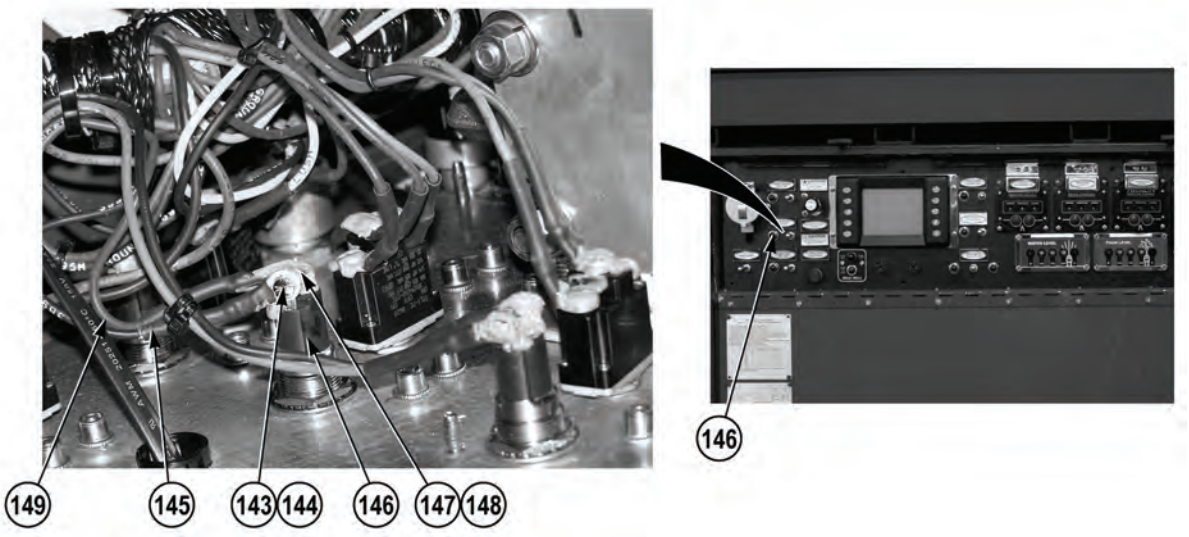
9. Install wire 1661 (170) on PANEL LIGHTS switch (167) with lockwasher (169) and screw (168).
10. Install wire 2346 (166) on PANEL LIGHTS switch (167) with lockwasher (165) and screw (164).



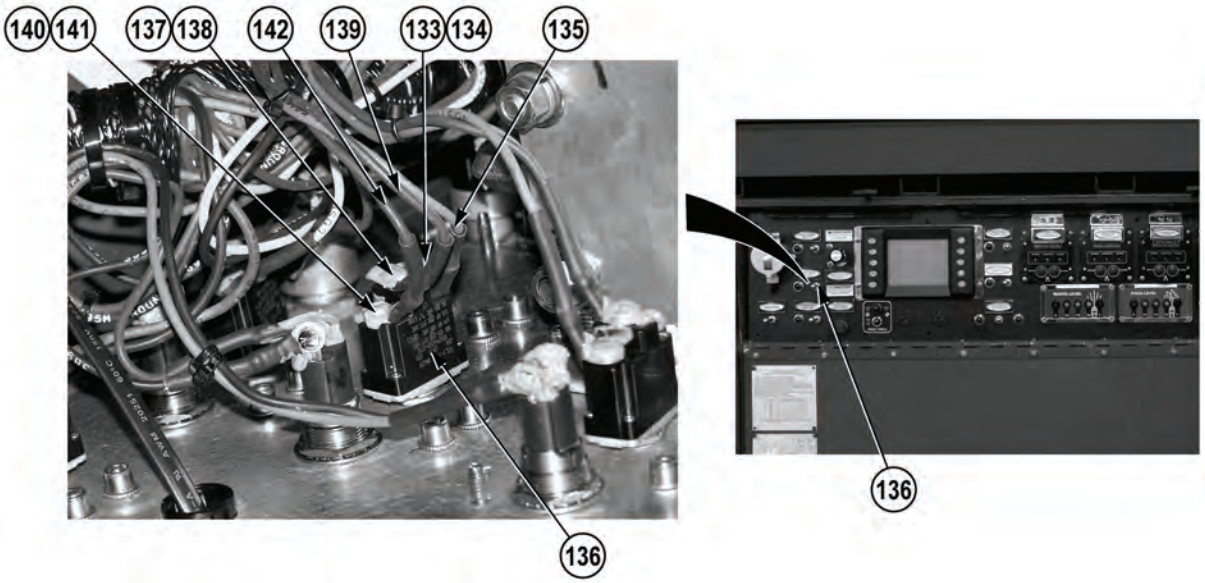
11. Install wire 3895 (163) on FOAM FLUSH indicator (160) with lockwasher (162) and screw (161).
12. Install wire 2849 (159) on FOAM FLUSH indicator (160) with lockwasher (158) and screw (157).



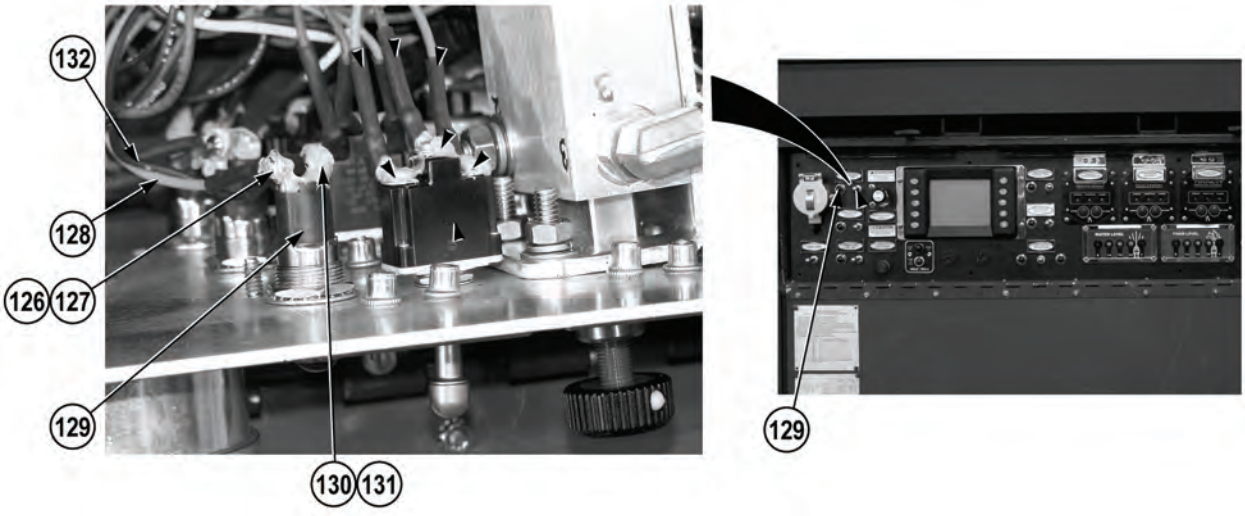
13. Install wire 2834 (156) on FOAM FLUSH switch (153) with lockwasher (155) and screw (154).
14. Install wire 2849 (152) on FOAM FLUSH switch (153) with lockwasher (151) and screw (150).



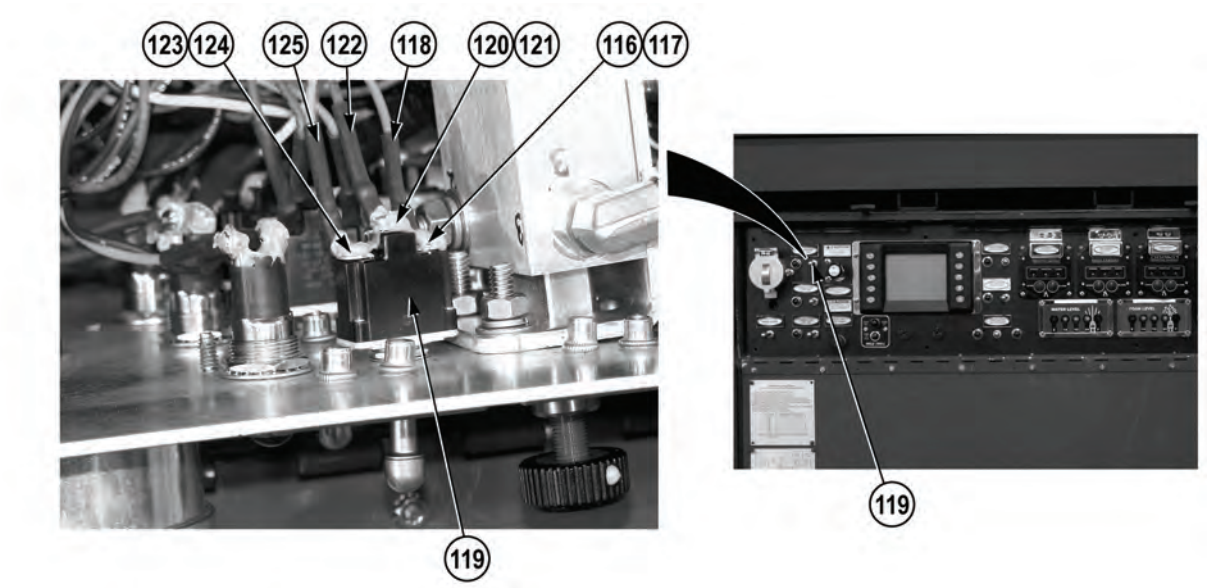
15. Install wire 3895 (149) on FOAM SYSTEM indicator (146) with lockwasher (148) and screw (147).
16. Install wire 2830 (145) on FOAM SYSTEM indicator (146) with lockwasher (144) and screw (143).



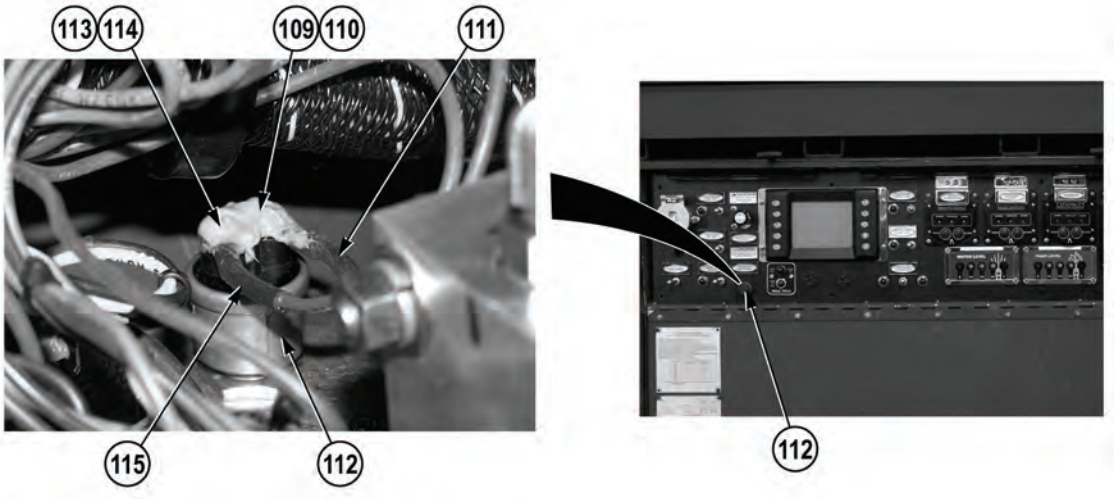
17. Install wire 2816 (142) on FOAM SYSTEM switch (136) with lockwasher (141) and screw (140).
18. Install wire 2830 (139) on FOAM SYSTEM switch (136) with lockwasher (138) and screw (137).
19. Install wire 2831 (135) on FOAM SYSTEM switch (136) with lockwasher (134) and screw (133).



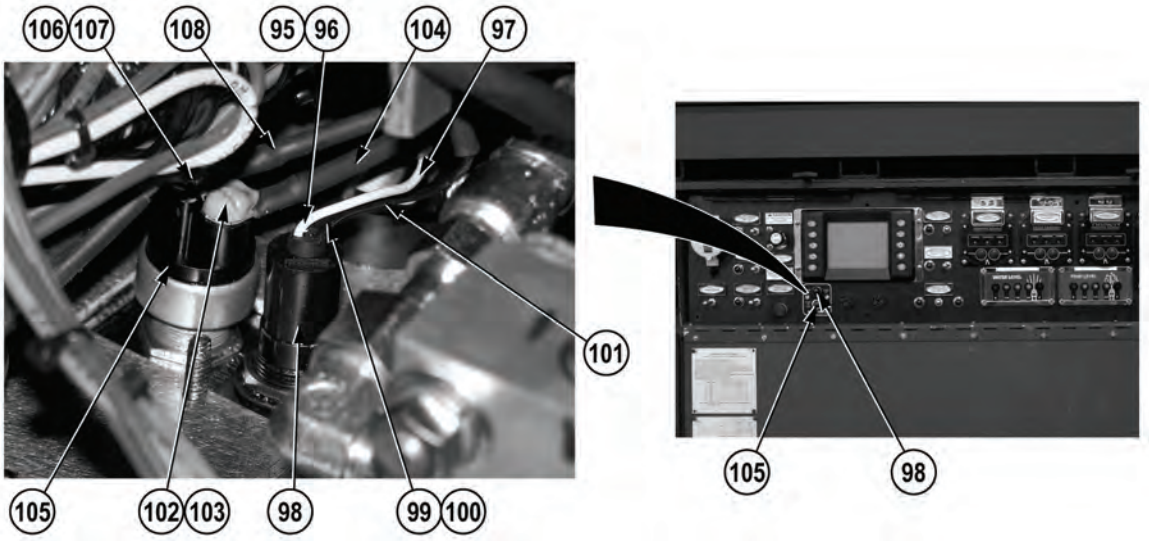
20. Install wire 3895 (132) on PUMP COOLER indicator (129) with lockwasher (131) and screw (130).
21. Install wire 4037 (128) on PUMP COOLER indicator (129) with lockwasher (127) and screw (126).



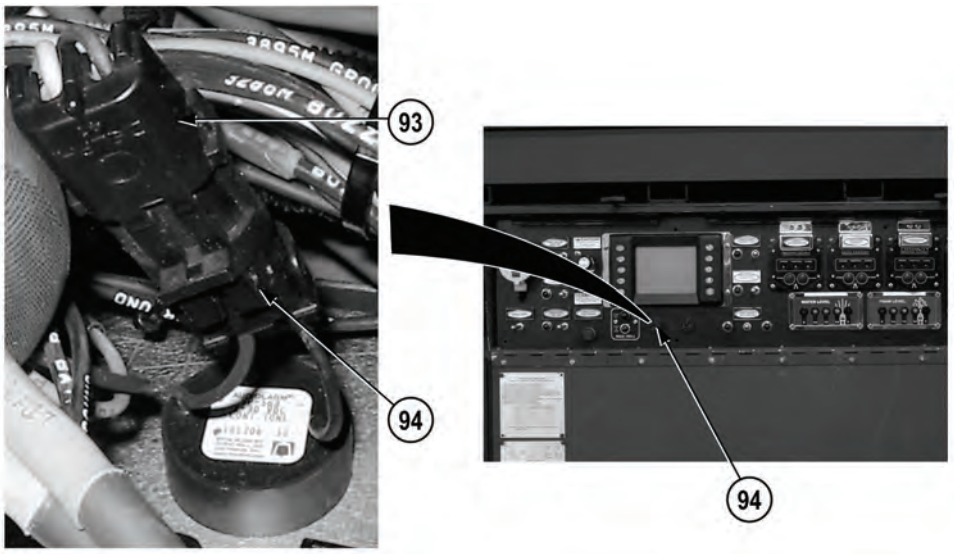
22. Install wire 4037 (125) on PUMP COOLER switch (119) with lockwasher (124) and screw (123).
23. Install wire 2834 (122) on PUMP COOLER switch (119) with lockwasher (121) and screw (120).
24. Install wire 4038 (118) on PUMP COOLER switch (119) with lockwasher (117) and screw (116).



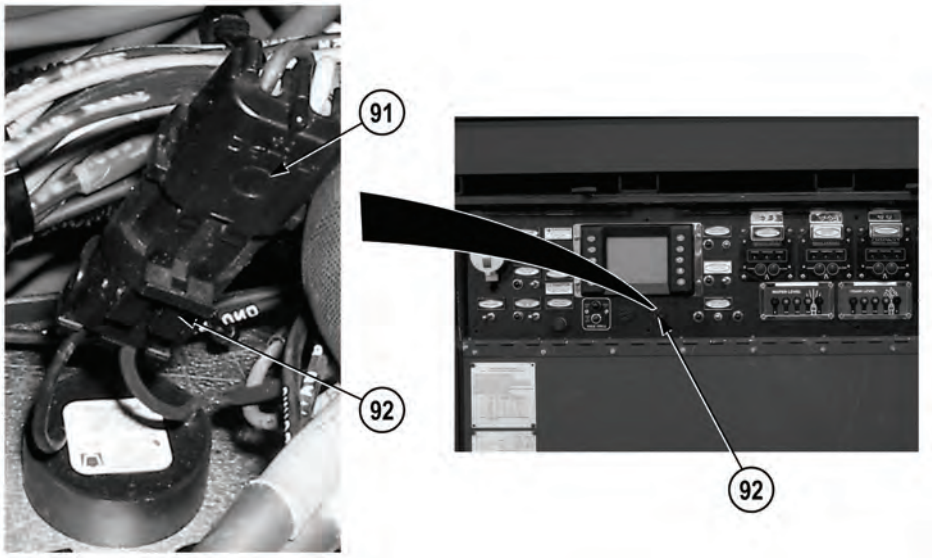
25. Install wire 1590 (115) on DRIVER MAIN INLET PRIMER button (112) with lockwasher (114) and screw (113).
26. Install wire 2773 (111) on DRIVER MAIN INLET PRIMER button (112) with lockwasher (110) and screw (109).



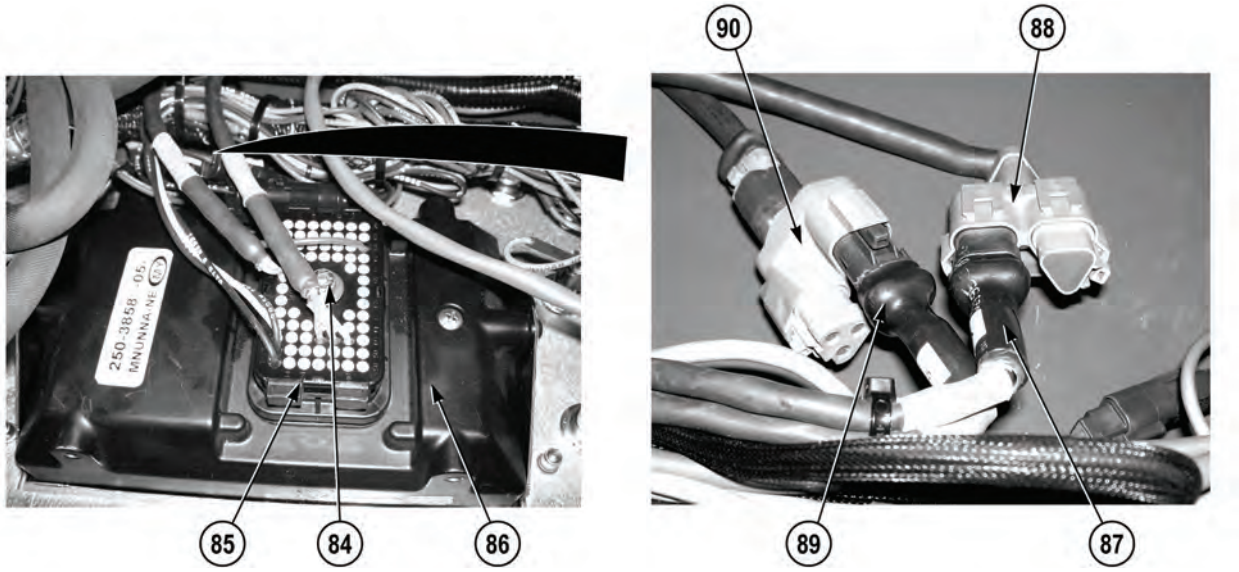
27. Install wire 1405 (108) on PUMP HOT PUSH TO TEST button (105) with lockwasher (107) and screw (106).
28. Install wire 4085 (104) on PUMP HOT PUSH TO TEST button (105) with lockwasher (103) and screw (102).
29. Install wire 3895 (101) on PUMP HOT indicator (98) with lockwasher (100) and screw (99).
30. Install wire 1405 (97) on PUMP HOT indicator (98) with lockwasher (96) and screw (95).



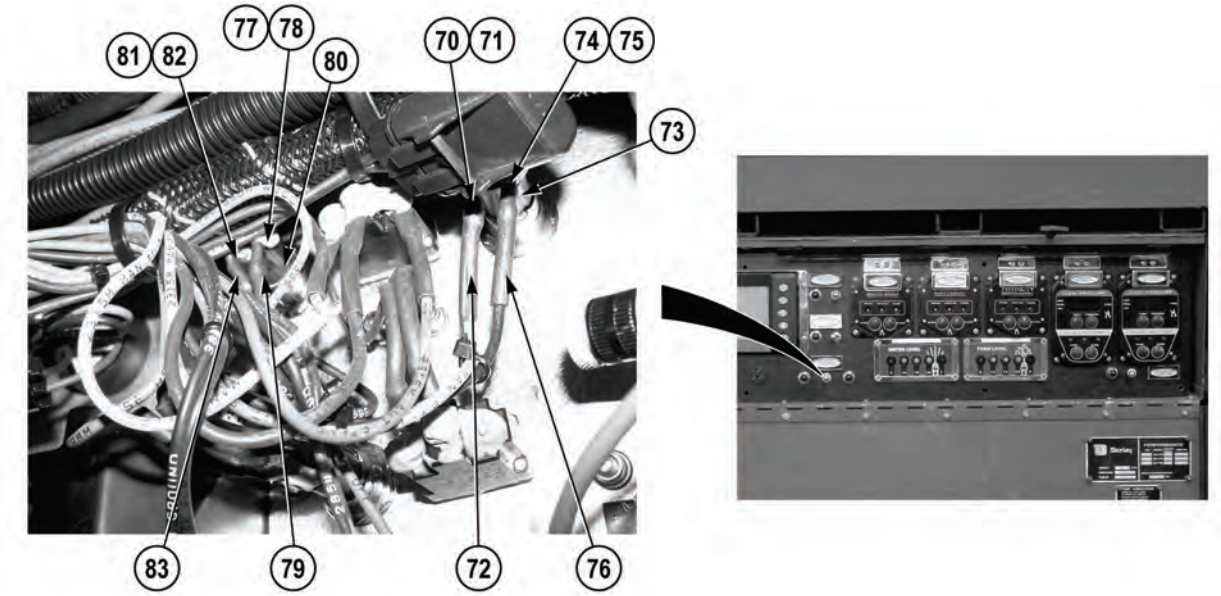
31. Connect pump operator’s panel wire harness connector (93) on pump hot audio alarm. (94).



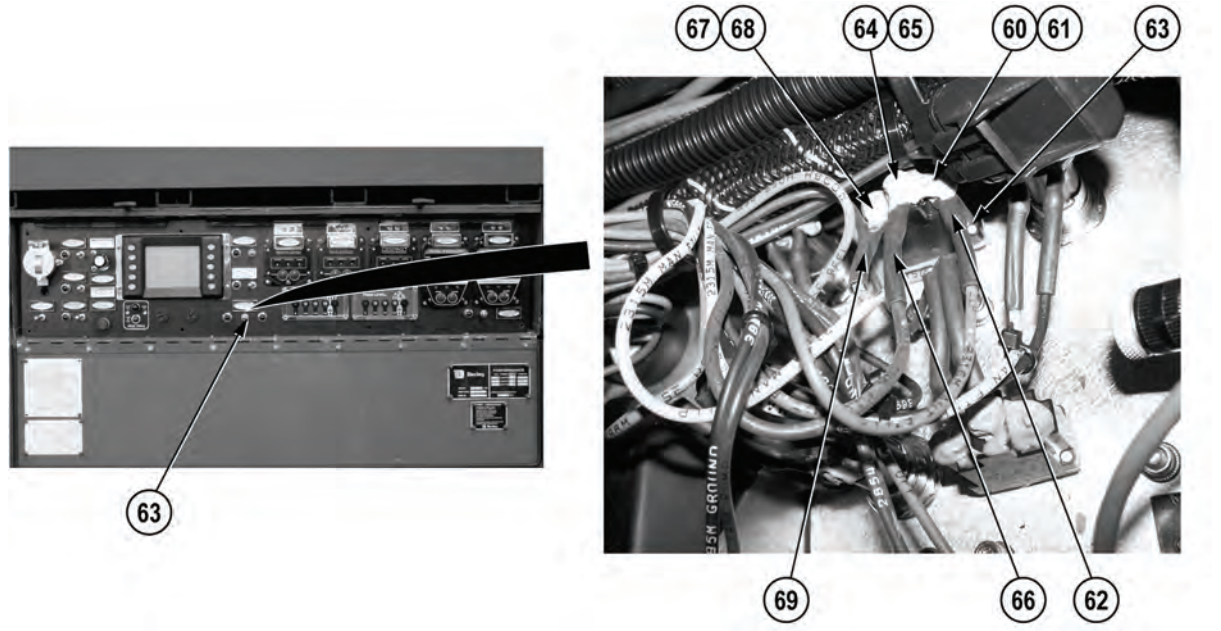
32. Connect pump operator’s panel wire harness connector (91) on pressure governor control audio alarm (92).



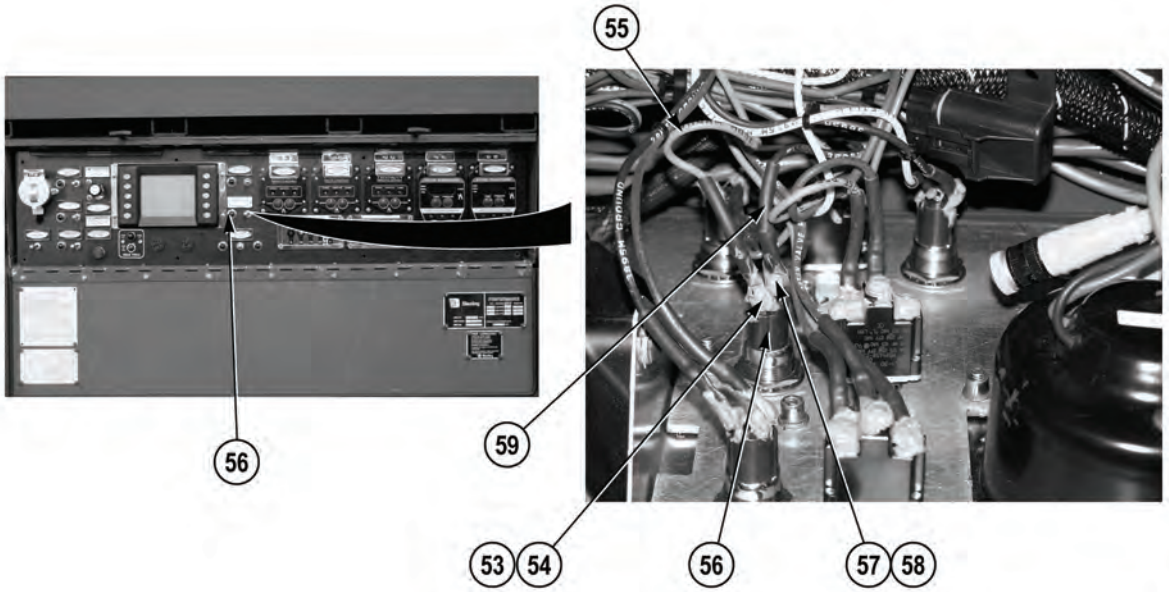
33. Connect pump operator’s panel wire harness connector (89) on chassis datalink Y connector (90).
34. Connect pump operator’s panel wire harness connector (87) on pressure governor control ECU datalink Y connector (88).
35. Install pump operator’s panel wire harness connector (85) on pressure governor control (86) with screw (84).



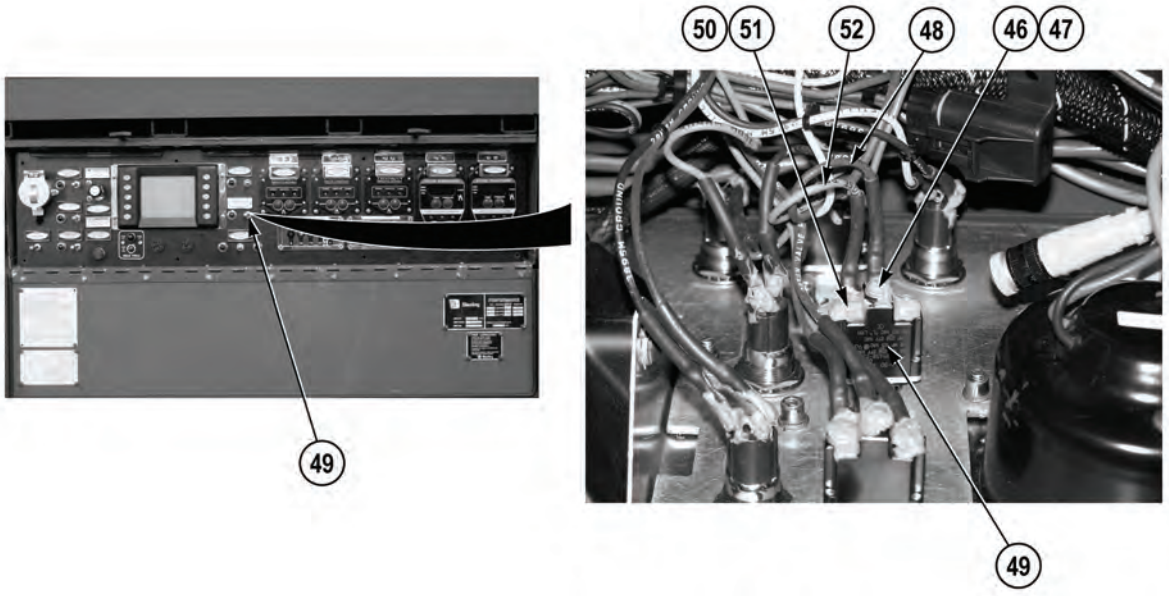
36. Install wire 3895 (83) on DIRECT TANK FILL auto indicator (80) with lockwasher (82) and screw (81).
37. Install wire 3895 (79) on DIRECT TANK FILL auto indicator (80) with lockwasher (78) and screw (77).
38. Install wire 3895 (76) on DIRECT TANK FILL open indicator (73) with lockwasher (75) and screw (74).
39. Install wire 2315 (72) on DIRECT TANK FILL open indicator (73) with lockwasher (71) and screw (70).



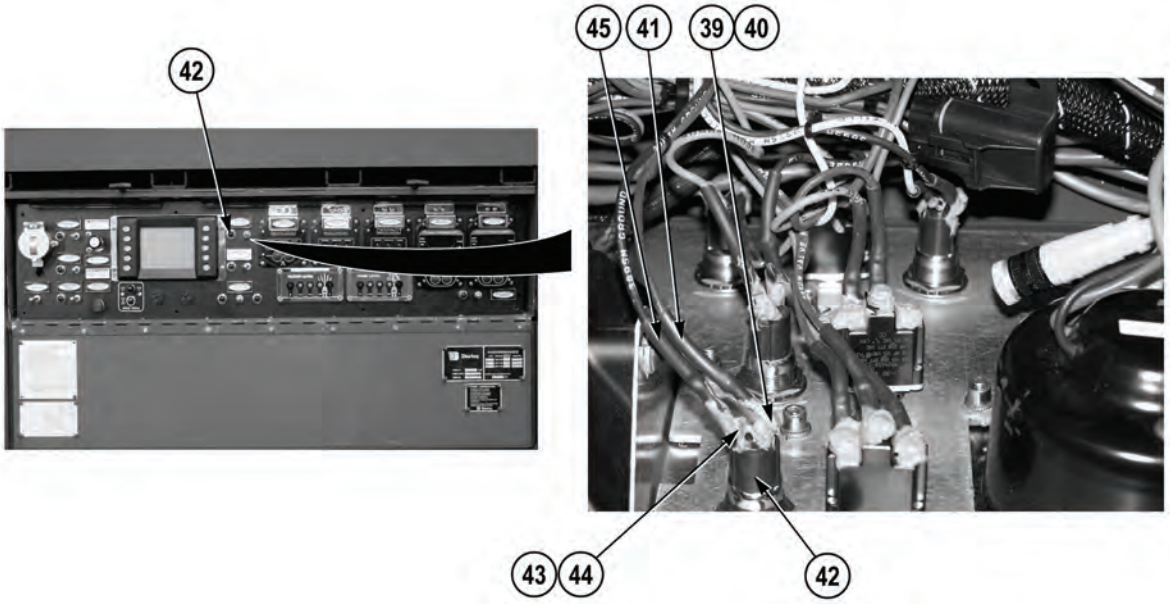
40. Install wire 2315 (69) on DIRECT TANK FILL switch (63) with lockwasher (68) and screw (67).
41. Install wire 2314 (66) on DIRECT TANK FILL switch (63) with lockwasher (65) and screw (64).
42. Install wire 2316 (62) on DIRECT TANK FILL switch (63) with lockwasher (61) and screw (60).



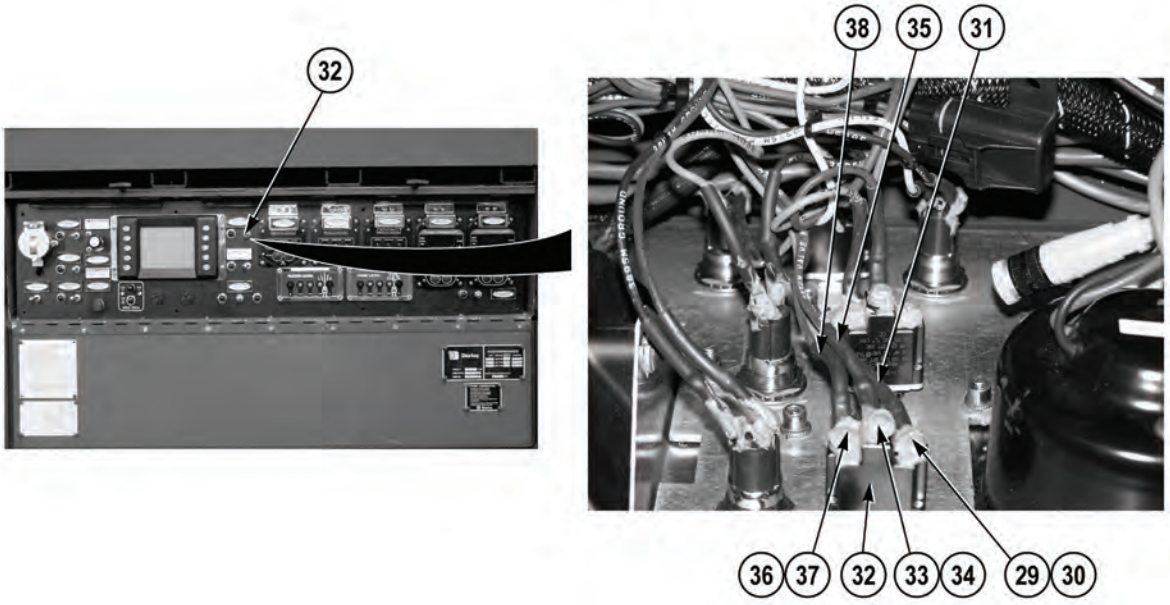
43. Install wire 3895 (59) on REEL DISCHARGE indicator (56) with lockwasher (58) and screw (57).
44. Install wire 4098 (55) on REEL DISCHARGE indicator (56) with lockwasher (54) and screw (53).



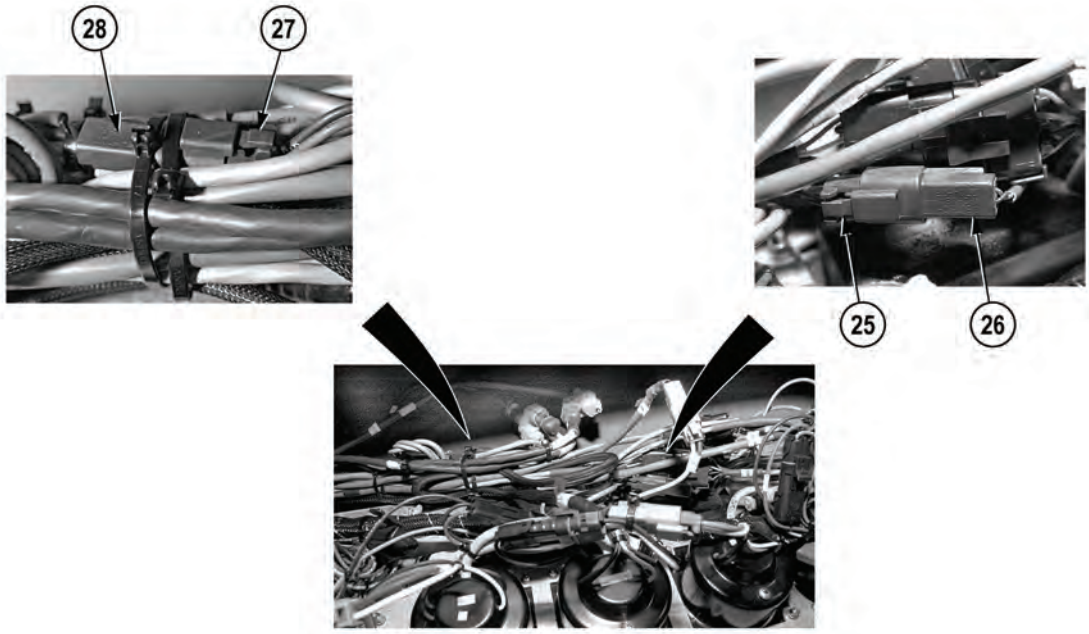
45. Install wire 4098 (52) on REEL DISCHARGE switch (49) with lockwasher (51) and screw (50).
46. Install wire 2834 (48) on REEL DISCHARGE switch (49) with lockwasher (47) and screw (46).



47. Install wire 3895 (45) on TANK TO PUMP indicator (42) with lockwasher (44) and screw (43).
48. Install wire 2855 (41) on TANK TO PUMP indicator (42) with lockwasher (40) and screw (39).

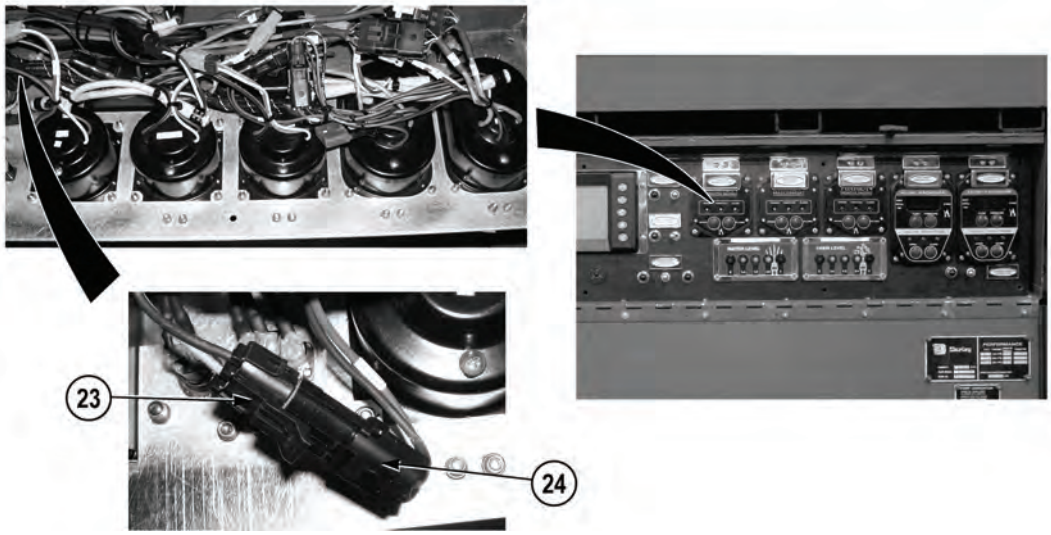


49. Install wire 2855 (38) on TANK TO PUMP switch (32) with lockwasher (37) and screw (36).
50. Install wire 2854 (35) on TANK TO PUMP switch (32) with lockwasher (34) and screw (33).
51. Install wire 2770 (31) on TANK TO PUMP switch (32) with lockwasher (30) and screw (29).

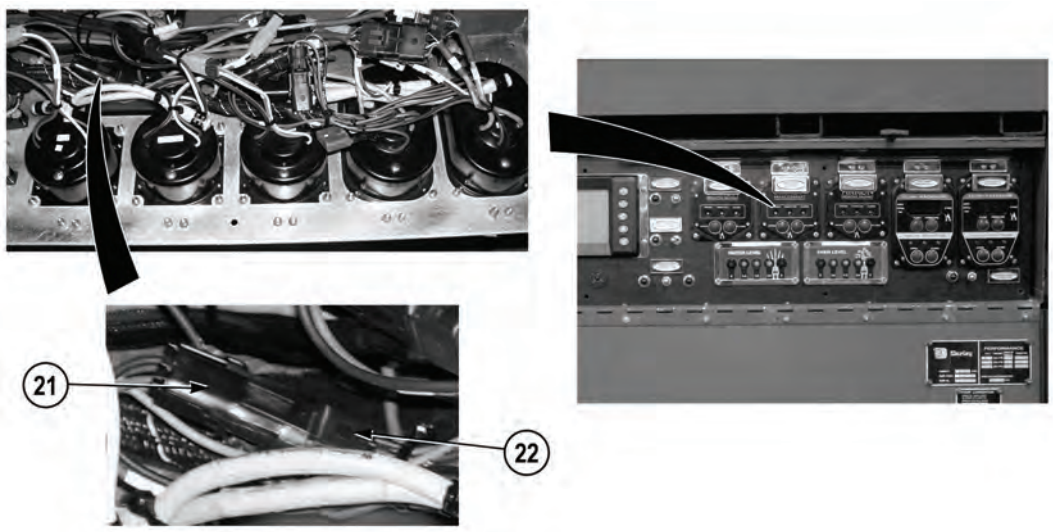


52. Connect pump operator’s panel wire harness connector (27) on water level gauge connector (28).

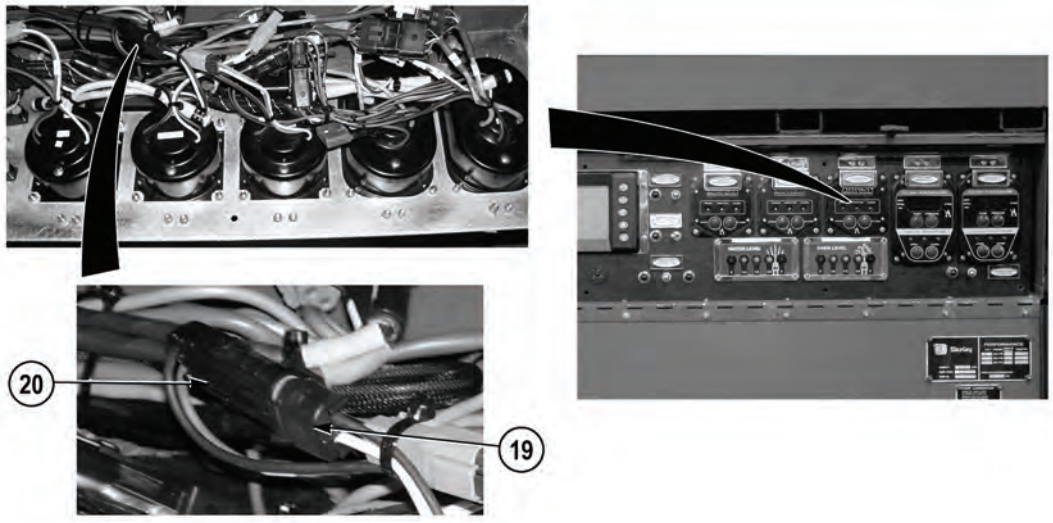
53. Connect pump operator’s panel wire harness connector (25) on foam level gauge connector (26).



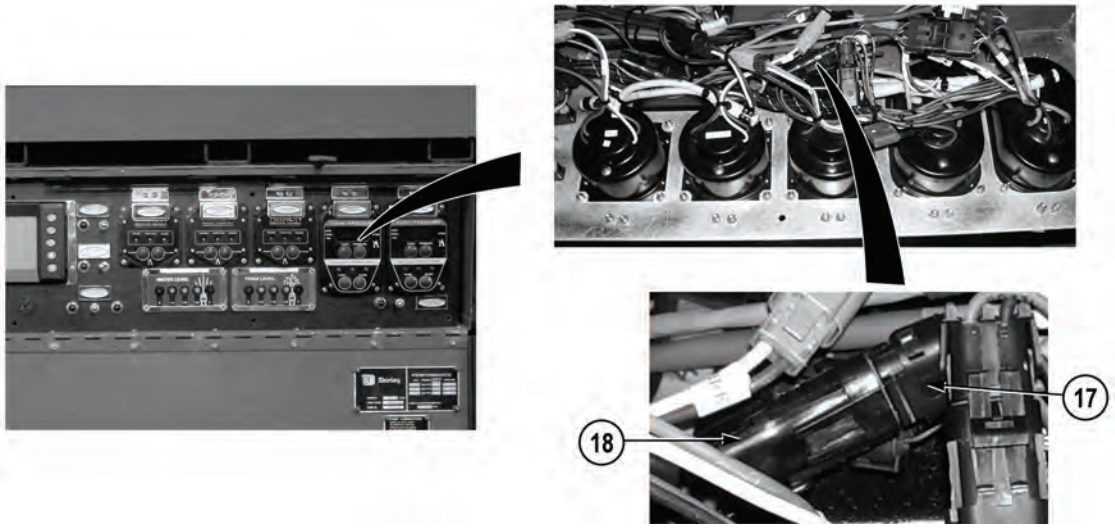
54. Connect pump operator’s panel wire harness connector (23) on tank fill & re-circulating line valve control connector (24).



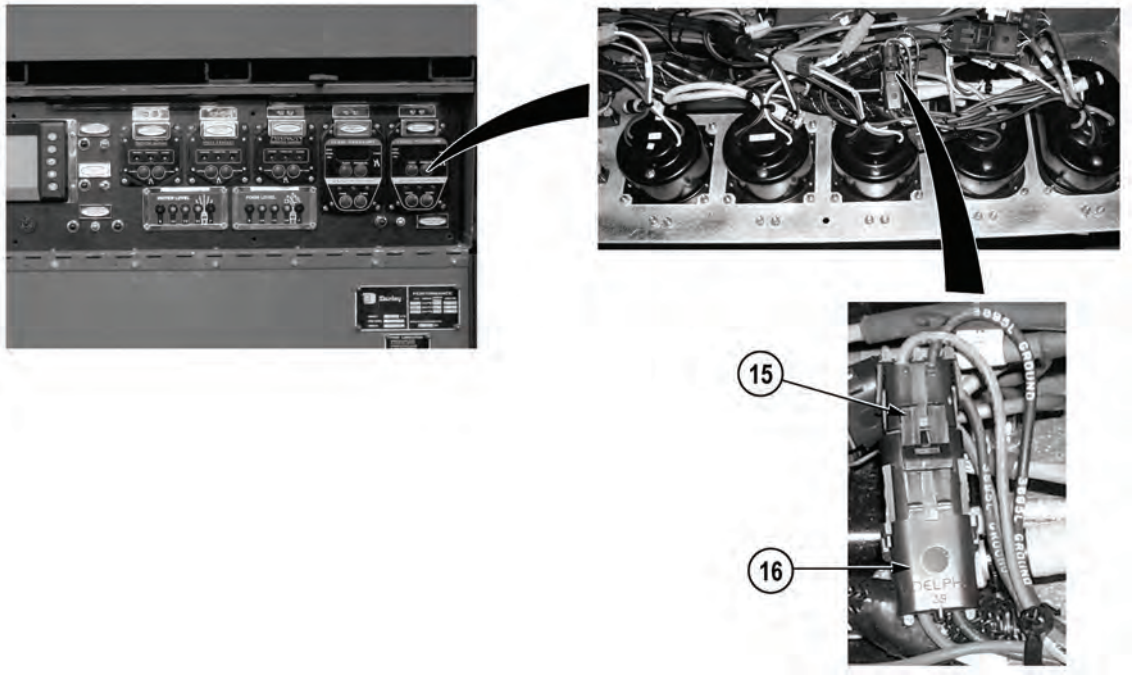
55. Connect pump operator's panel wire harness connector (21) on driver side auxiliary inlet valve control connector (22).



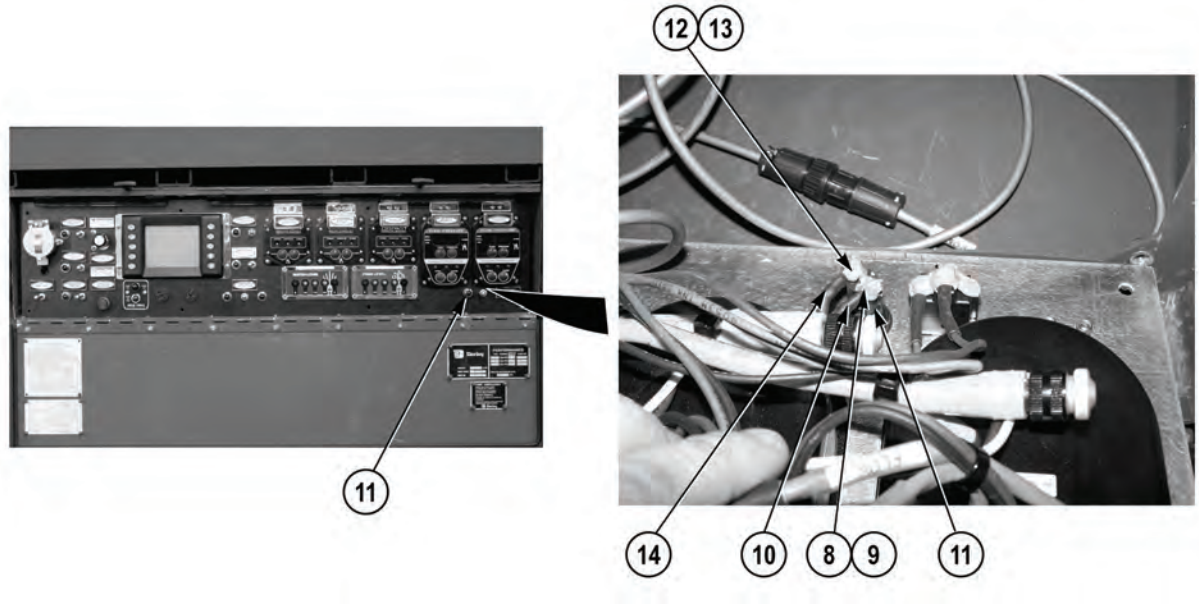
56. Connect pump operator's panel wire harness connector (19) on passenger side auxiliary inlet valve control connector (20).



57. Connect pump operator's panel wire harness connector (17) on No. 1 driver side discharge valve control connector (18).

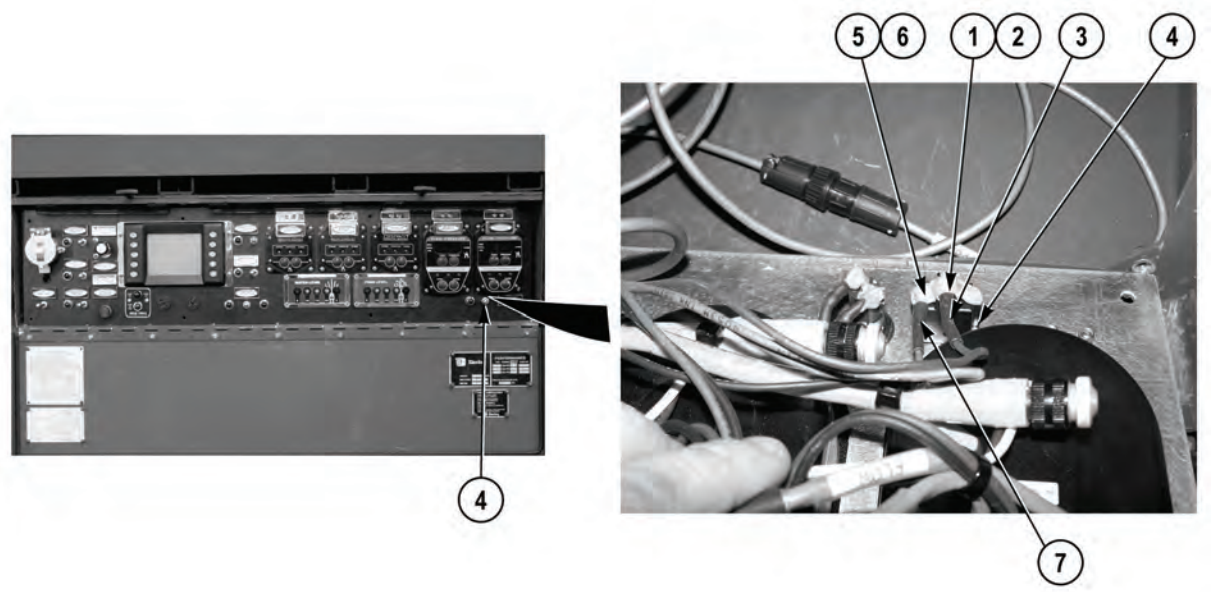


58. Connect pump operator's panel wire harness connector (15) on No. 2 passenger side discharge valve control connector (16).



59. Install wire 3895 (14) on WATER TANK DRAIN indicator (11) with lockwasher (13) and screw (12).

60. Install wire 4053 (10) on WATER TANK DRAIN indicator (11) with lockwasher (9) and screw (8).



61. Install wire 4053 (7) on WATER TANK DRAIN switch (4) with lockwasher (6) and screw (5).

62. Install wire 2834 (3) on WATER TANK DRAIN switch (4) with lockwasher (2) and screw (1).

WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

63. Apply sealing compound to all switches and indicators that have exposed terminals.

END OF TASK

FOLLOW-ON MAINTENANCE

Close pump operator’s panel (WP 0205)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

WATER TANK FILL & RE-CIRCULATING LINE VALVE CONTROL WIRE HARNESS REPLACEMENT

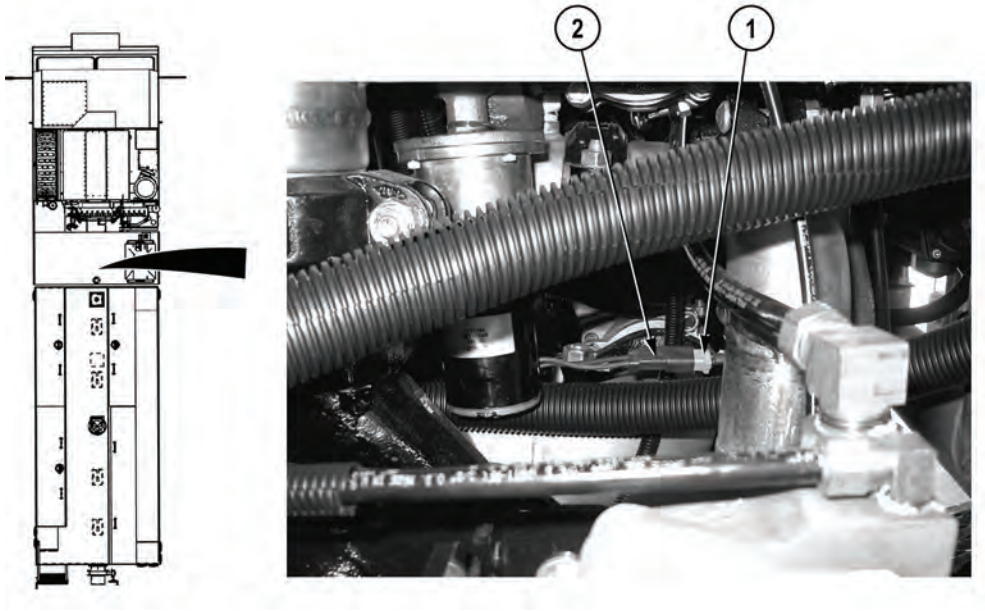
INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification, (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)

Equipment Conditions
Pump operator's panel opened (WP 0205)
Pump house panel K removed (WP 0341)

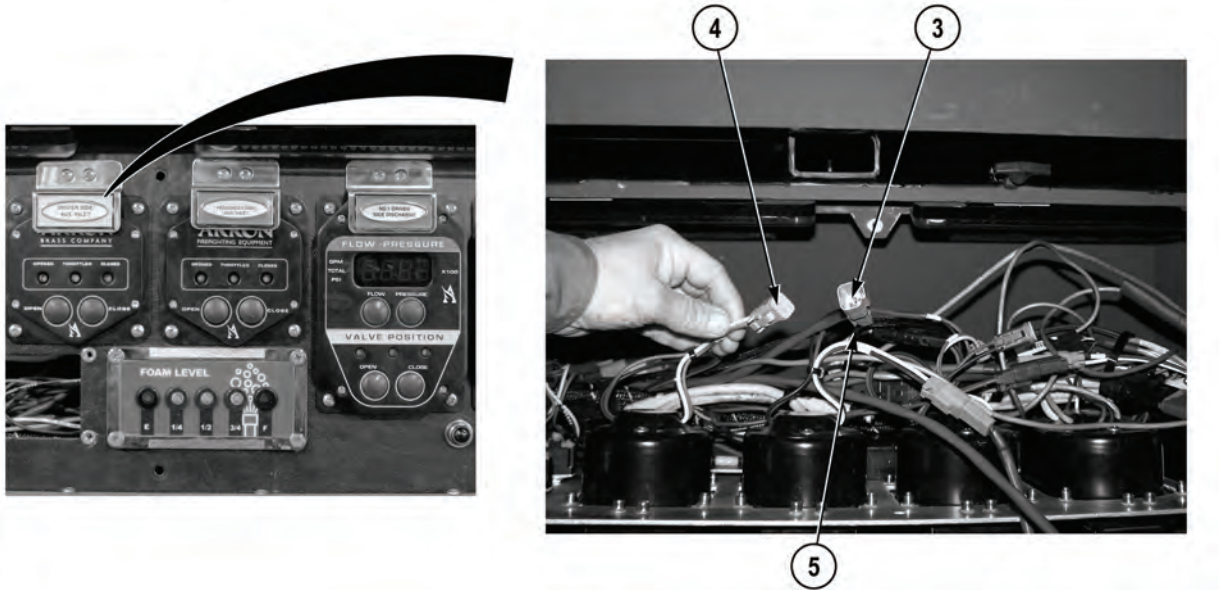
REMOVAL



NOTE

- Note routing of tank fill and re-circulating line valve control wire harness prior to removal to ensure proper installation.
- Tank fill and re-circulating line valve control wire harness is routed through pump house panel N and pump operator's panel assembly.
- Remove split looms, cushion clips, and cable ties as required.
- Tag and mark connectors prior to removal to ensure proper installation.

1. Disconnect tank fill and re-circulating line valve control wire harness connector (1) from tank fill and re-circulating line valve control connector (2).



2. Disconnect tank fill and re-circulating line valve control wire harness connector (3) from tank fill and re-circulating line connector (4).
3. Remove tank fill and re-circulating line valve control wire harness (5) from vehicle.

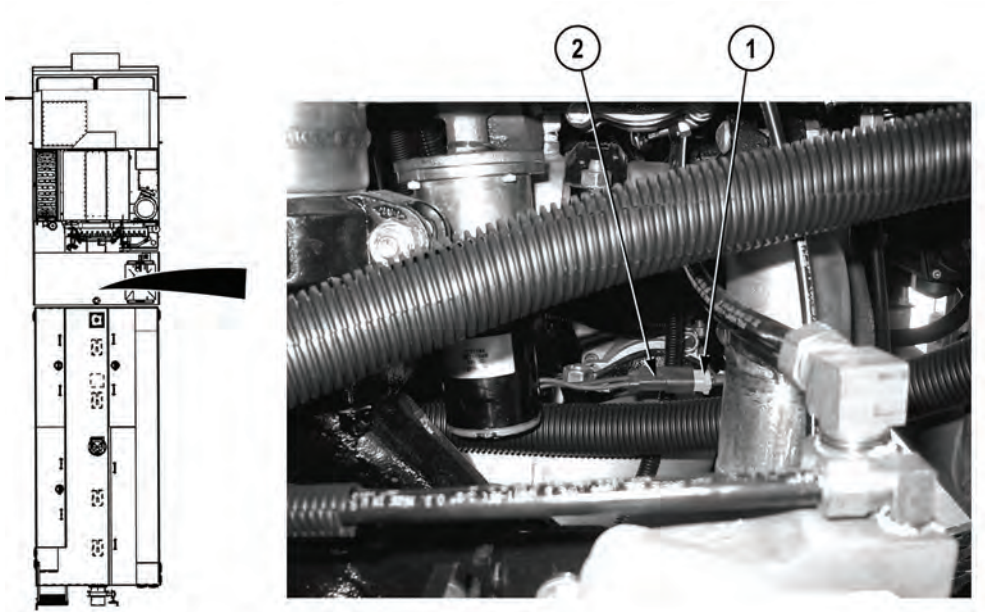
END OF TASK

INSTALLATION

NOTE

Route tank fill and re-circulating line valve control wire harness as noted.

1. Install tank fill and re-circulating line valve control wire harness (5) on vehicle.
2. Connect tank fill and re-circulating line valve control wire harness connector (3) to tank fill and re-circulating line connector (4).



3. Connect tank fill and re-circulating line valve control connector (2) to tank fill and re-circulating line valve control wire harness connector (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install pump house panel K (WP 0341)
2. Close pump operator’s panel (WP 0205)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

WATER TANK LEVEL AUTO FILL CONTROL WIRE HARNESS REPLACEMENT

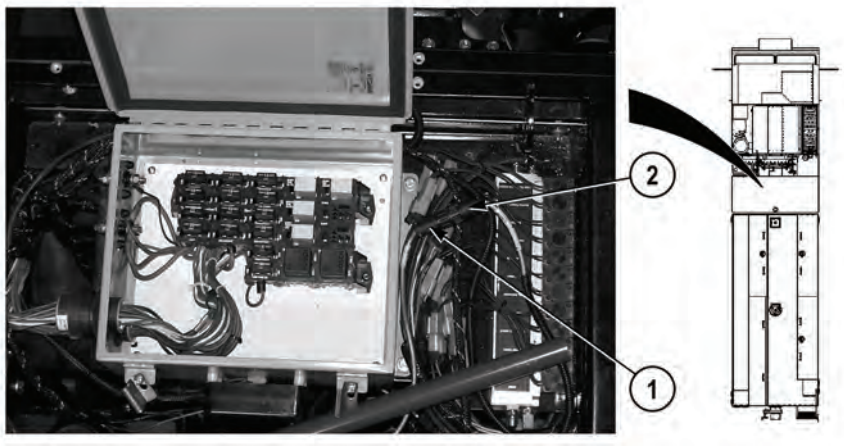
INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)

Equipment Conditions
Pump operator's panel opened (WP 0205)
Pump house panel K removed (WP 0341)

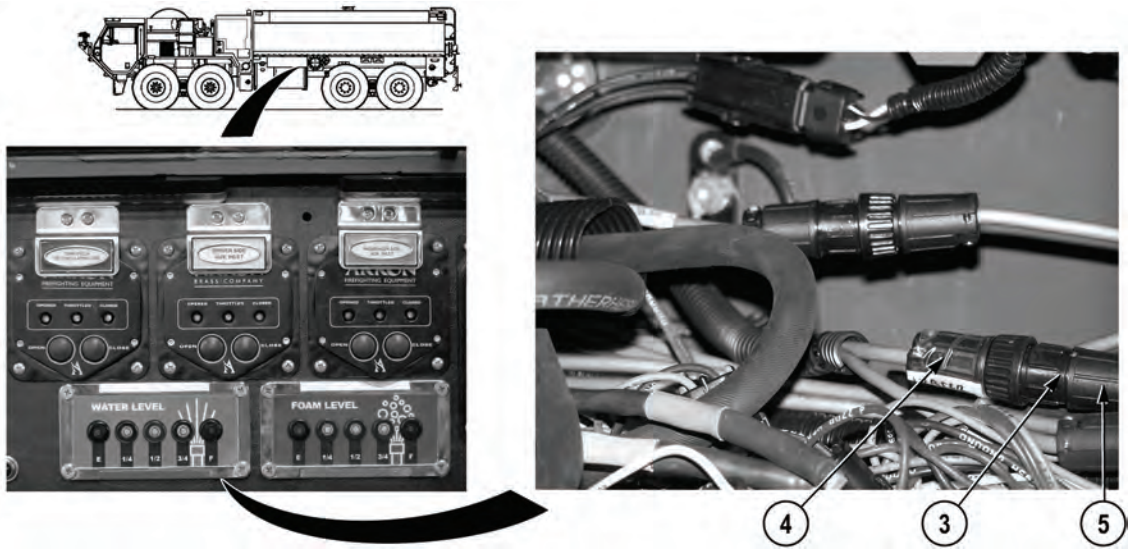
REMOVAL



NOTE

- Note routing of wire harness prior to removal to ensure proper installation.
- Water tank level auto fill control wire harness is routed through pump house panel N and pump operator's panel assembly.
- Note position and remove split looms, cushion clips, and cable ties as required.
- Tag and mark connectors prior to removal to ensure proper installation.

1. Disconnect water tank level auto fill connector (1) from water tank level auto fill control wire harness connector (2).



2. Disconnect water level gauge connector (3) from water tank level auto fill control wire harness connector (4).
3. Remove water tank level auto fill control wire harness (5) from vehicle.

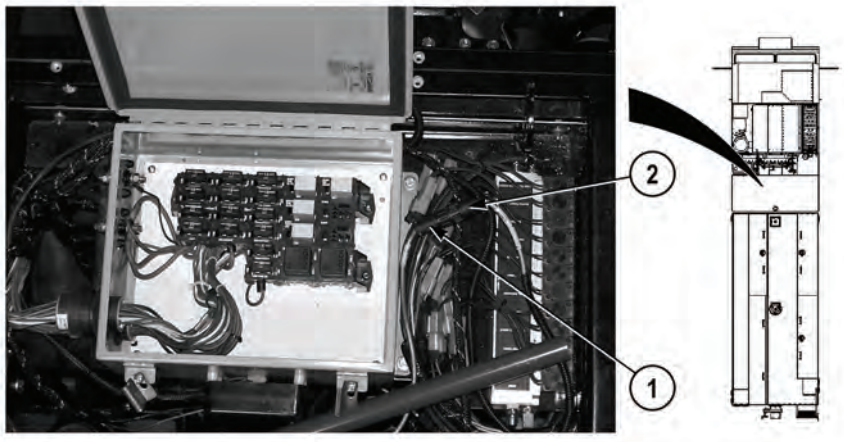
END OF TASK

INSTALLATION

NOTE

- Route water tank level auto fill control wire harness as noted.
- Install cable ties, cushion clips, and split looms as noted.

1. Install water tank level auto fill control wire harness (5) on vehicle.
2. Connect water tank level auto fill wire harness connector (4) to water level gauge connector (3).



3. Connect water tank level auto fill control wire harness connector (2) to water tank level auto fill connector (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install pump house panel K (WP 0341)
2. Close pump operator’s panel (WP 0205)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

WATERPROOF SPLICE BOX REPLACEMENT

INITIAL SETUP:

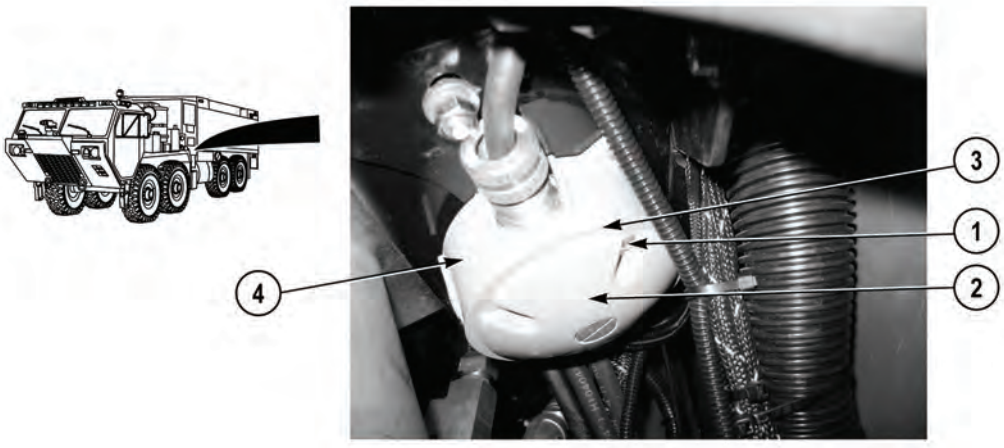
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Gasket (1)

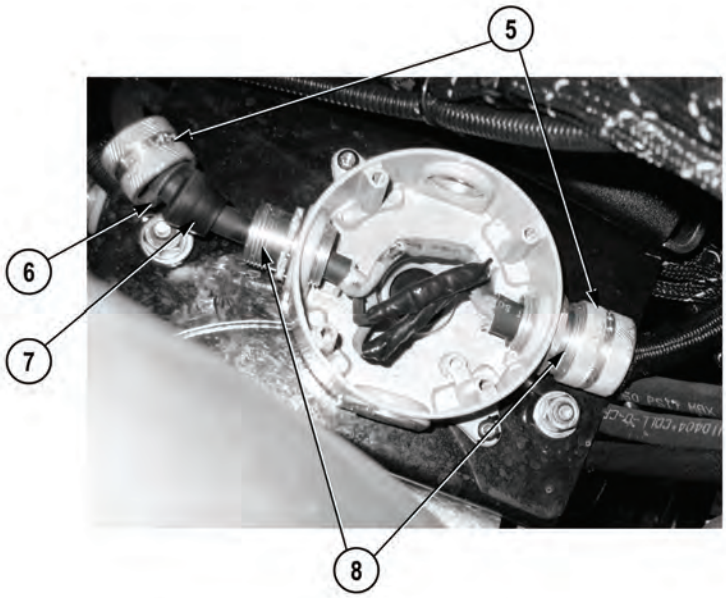
References
WP 0392, Fig. 41
TM 9-2320-315-14&P

Equipment Conditions
Pump house panel B removed (WP 0341)
Shoreline inlet unplugged (WP 0004)

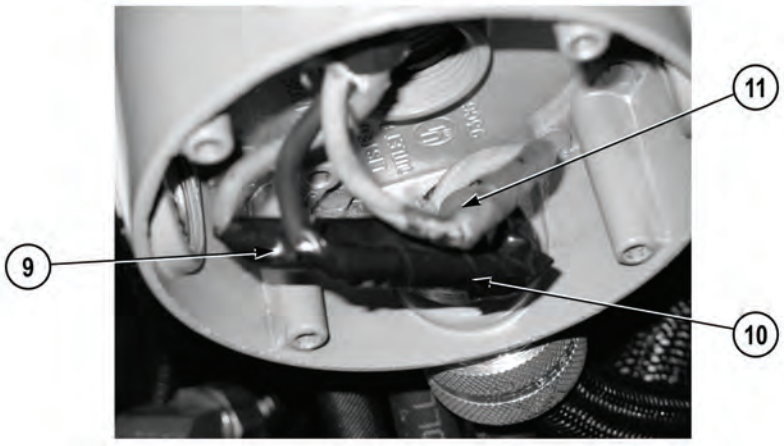
REMOVAL



1. Remove two screws (1), cover (2), and gasket (3) from waterproof splice box (4). Discard gasket.



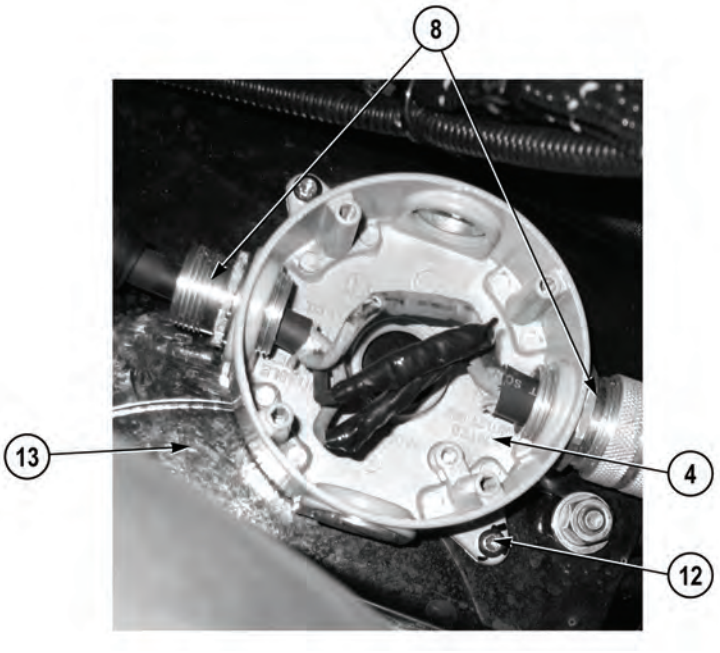
2. Remove two strain relief's (5), plastic backers (6), and rubber compression grommets (7) from fittings (8).



NOTE

Tag and mark wires prior to removal to ensure proper installation.

3. Cut green wire (9), black wire (10), yellow wire (11) (TM 9-2320-315-14&P).

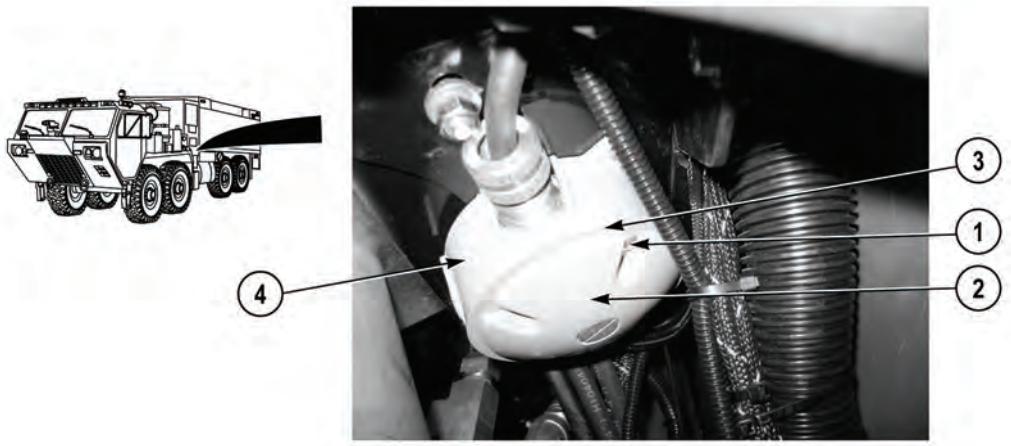


4. Remove two screws (12) and waterproof splice box (4) from bracket (13).
5. Remove two fittings (8) from waterproof splice box (4).

END OF TASK

INSTALLATION

1. Install two fittings (8) on waterproof splice box (4).
2. Install waterproof splice box (4) on bracket (13) with two screws (12).
3. Install two rubber compression grommets (7), plastic backers (6), and strain relief's (5) on fittings (8).
4. Repair yellow wire (11), black wire (10), and green wire (9) (TM 9-2320-315-14&P).



5. Install gasket (3) and cover (2) on waterproof splice box (4) with two screws (1).

END OF TASK

FOLLOW ON MAINTENANCE

Install pump house panel B (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PUMP HOUSE HEATER TEST SWITCH REPLACEMENT

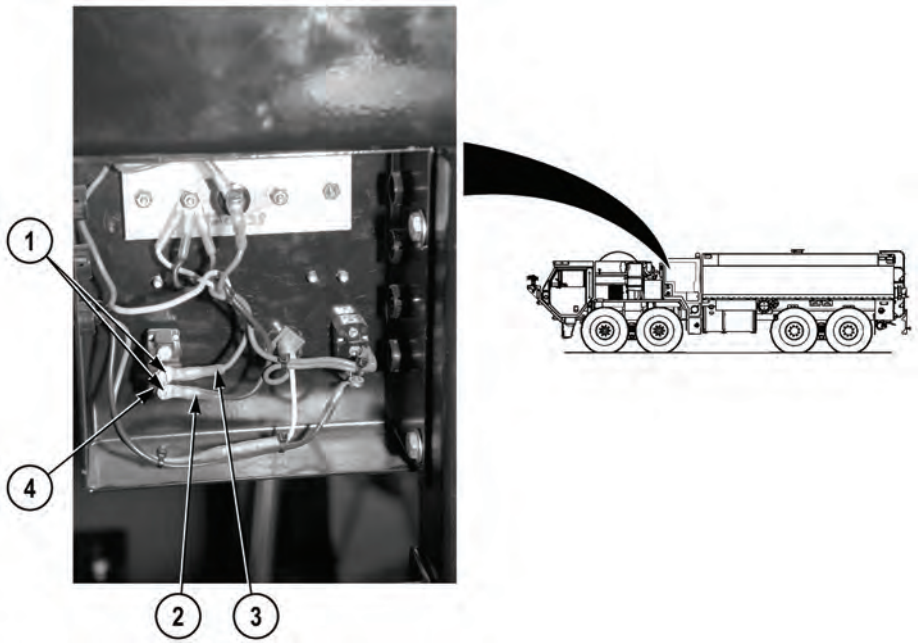
INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)

Equipment Conditions
Pump house panel E removed (WP 0341)
Pump house access door assembly opened (WP 0009)

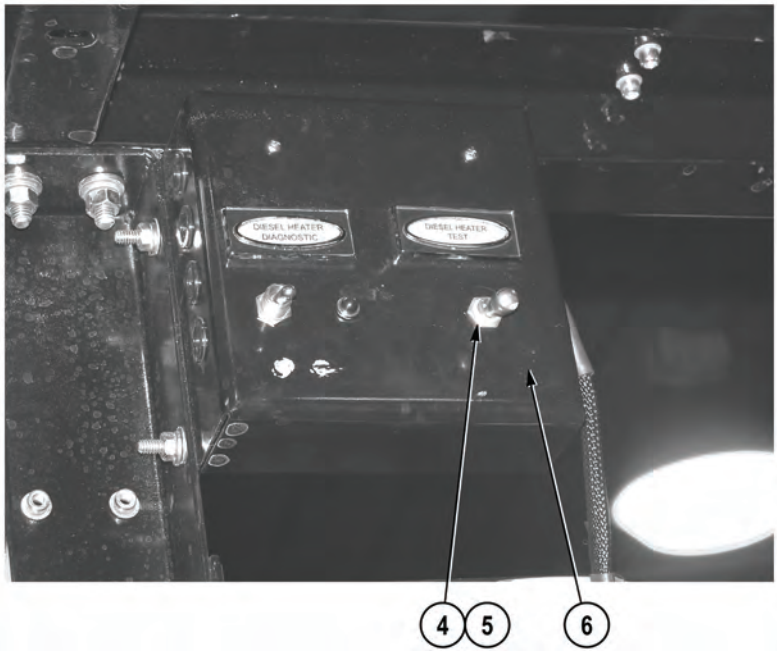
REMOVAL



NOTE

- Tag and mark wires prior to removal to ensure proper installation.
- Remove cable ties as required.

1. Remove two screws (1), black wire (2), and red wire (3) from pump house heater test switch (4).



2. Remove nut (5) and pump house heater test switch (4) from bracket (6).

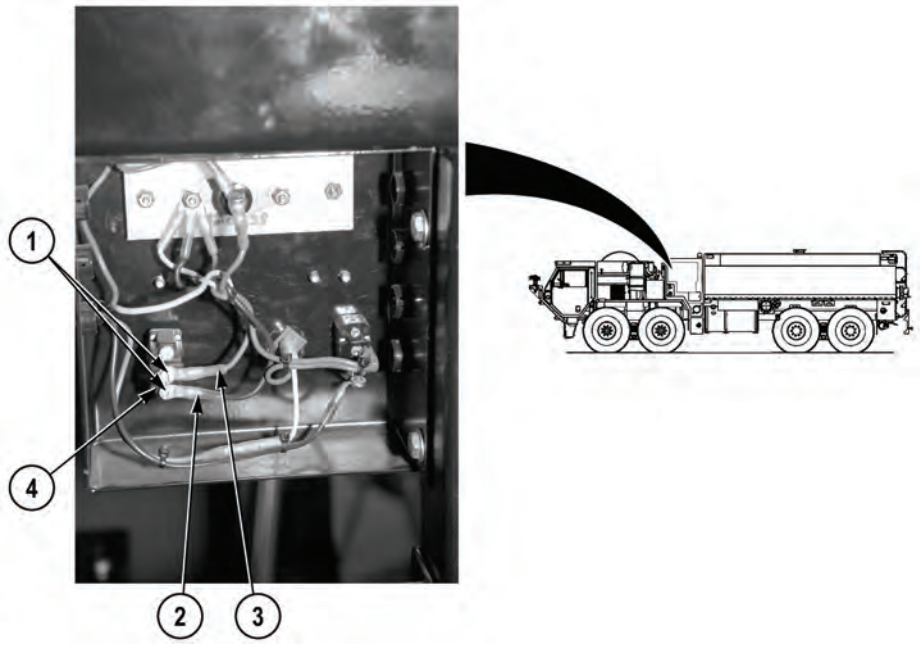
END OF TASK

INSTALLATION

NOTE

Install cable ties as necessary.

1. Install pump house heater test switch (4) on bracket (6) with nut (5).



2. Install red wire (3) and black wire (2) on pump house heater test switch (4) with two screws (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Close pump house access door assembly (WP 0009)
2. Install pump house panel E (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PUMP HOUSE HEATER DIAGNOSTIC AND THERMAL SWITCH(ES) REPLACEMENT

INITIAL SETUP:

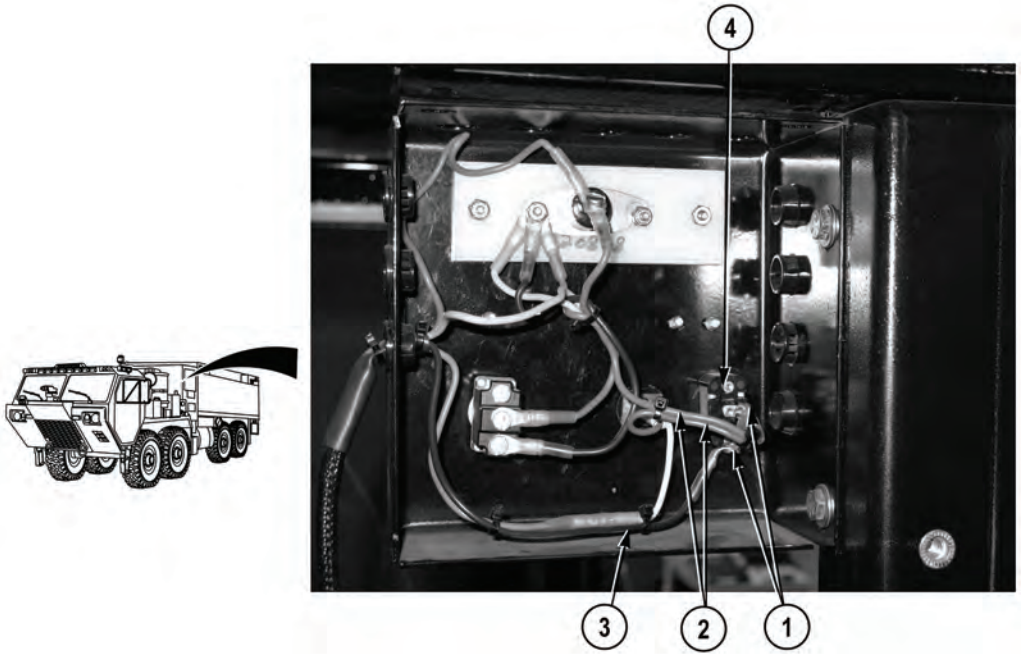
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)
Locknut (1)
Lockwasher (1)
Locknut (1)
Lockwasher (2)

References
WP 0308
WP 0392, Fig. 63

Equipment Conditions
Pump house access door assembly opened (WP 0008)
Pump house panel E removed (WP 0341)

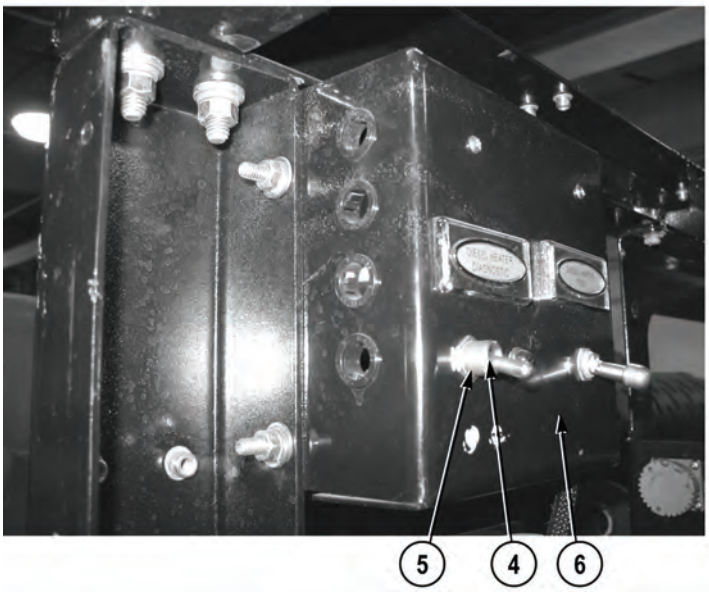
REMOVAL



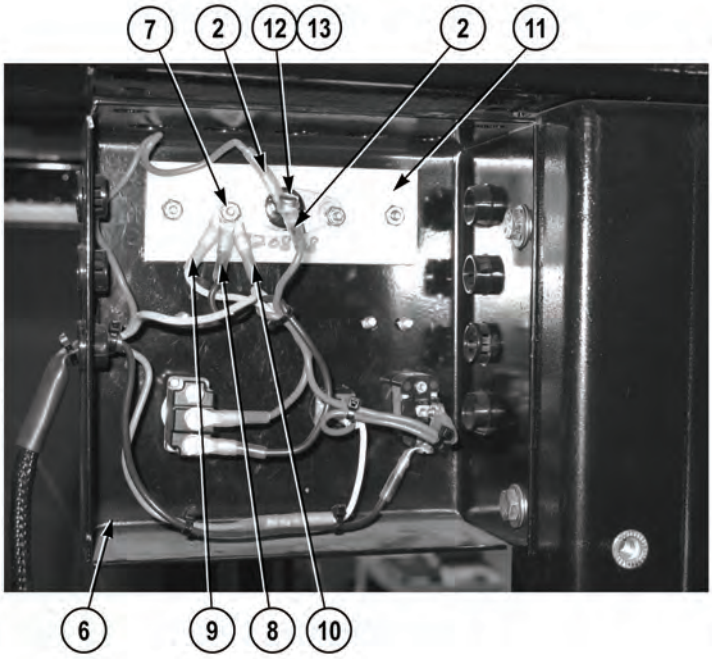
NOTE

- Tag and mark wires prior to removal to ensure proper installation.
- Remove cable ties as required.

1. Remove two screws (1), two wires 2852 (2) and wire 4088 (3) from heater diagnostic switch (4).



2. Remove nut (5) and heater diagnostic switch (4) from heater diagnostic switch box (6).

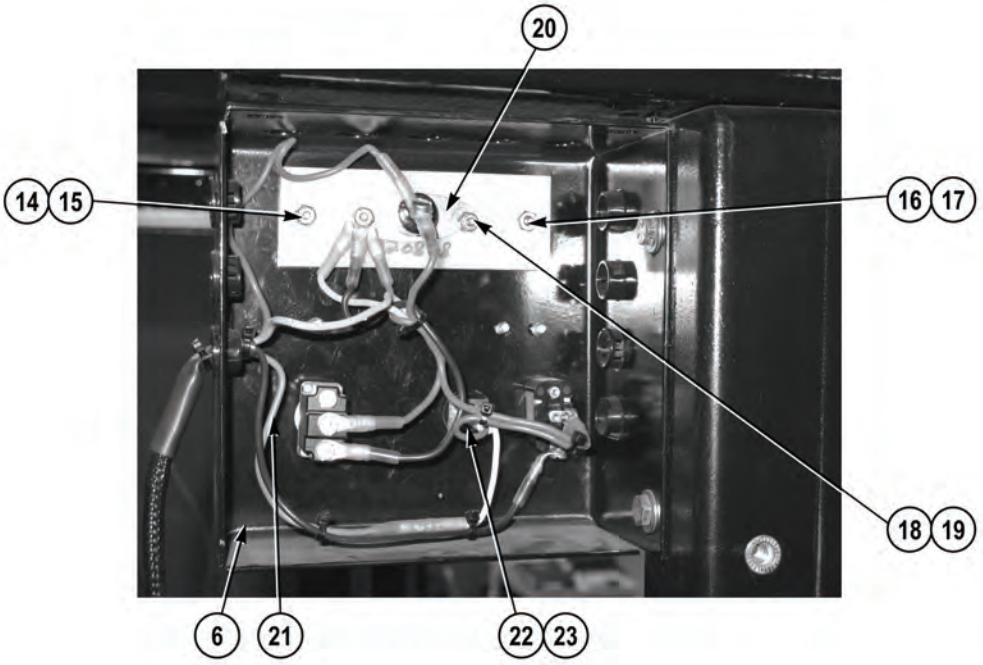


NOTE

Perform Steps (3) through (9) if thermostatic switch must be removed.

3. Remove locknut (7), wire 4088 (8), wire 4086 (9), and wire 2852 (10) from isolator (11). Discard locknut.

4. Remove screw (12), lockwasher (13), two wires 2852 (2) from isolator (11). Discard lockwasher.

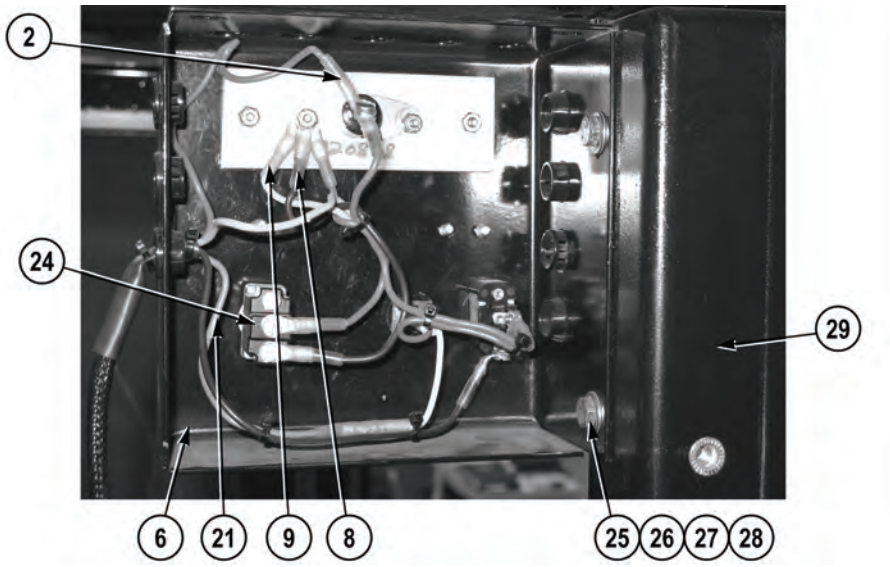


5. Remove and discard locknut (14) from screw (15).
6. Remove nut (16) from screw (17) and isolator (11) from heater diagnostic switch box (6).
7. Remove locknut (18) from screw (19) and thermostatic switch (20) from isolator (11). Discard locknut.

NOTE

Perform Steps (8) through (12) if heater diagnostic switch box needs to be removed.

8. Cut wire 4087 (21) (TM 9-2320-315-14&P).
9. Remove clip (22) and LED indicator light (23) from heater diagnostic switch box (6).



NOTE

Note location of switch prior to removal to ensure proper installation.

10. Remove pump house heater test switch (24) from heater diagnostic switch box (6) (WP 0308).

NOTE

Note routing of wires prior to removal to ensure proper installation.

11. Remove wire 4088 (8), wire 4086 (9), wire 4087 (21), and wire 2852 (2) from heater diagnostic switch box (6).

12. Remove two nuts (25), lockwashers (26), four washers (27) two screws (28) and heater diagnostic switch box (6) from pump house frame (29). Discard lockwashers.

END OF TASK

INSTALLATION

NOTE

Perform Steps (1) through (5) if heater diagnostic switch box was removed.

1. Install heater diagnostic switch box (6) on pump house frame (29) with two screws (28), four washers (27), two lockwashers (26) and nuts (25).

NOTE

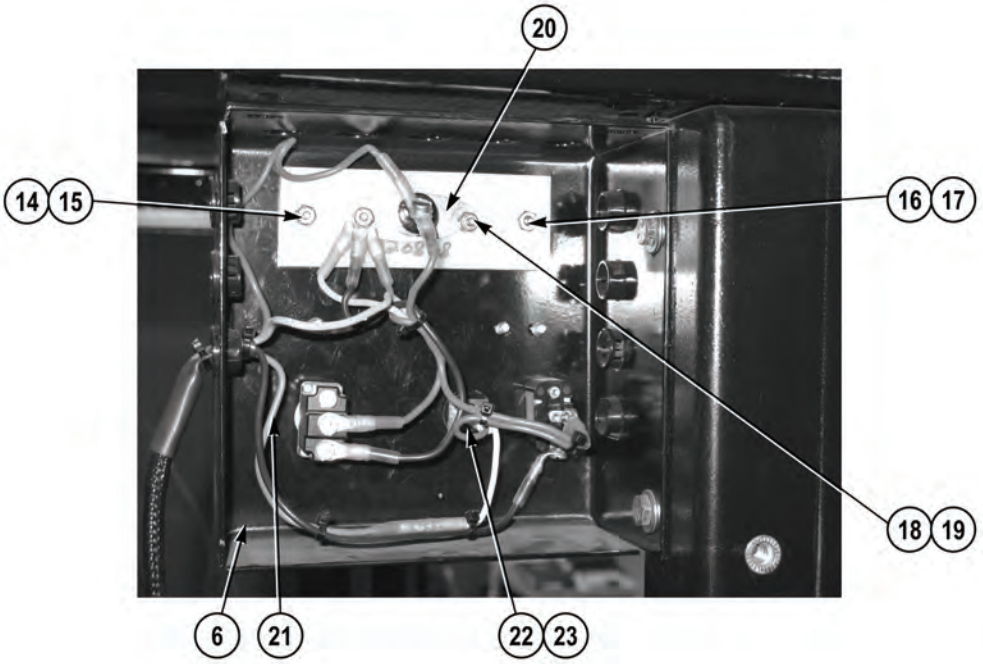
Route wires as noted prior to removal.

2. Route wire 2852 (2), wire 4087 (21), wire 4086 (9), and wire 4088 (3) in heater diagnostic switch box (6).

NOTE

Install switch in same position as noted.

3. Install pump house heater test switch (24) on heater diagnostic switch box (6) (WP 0308).

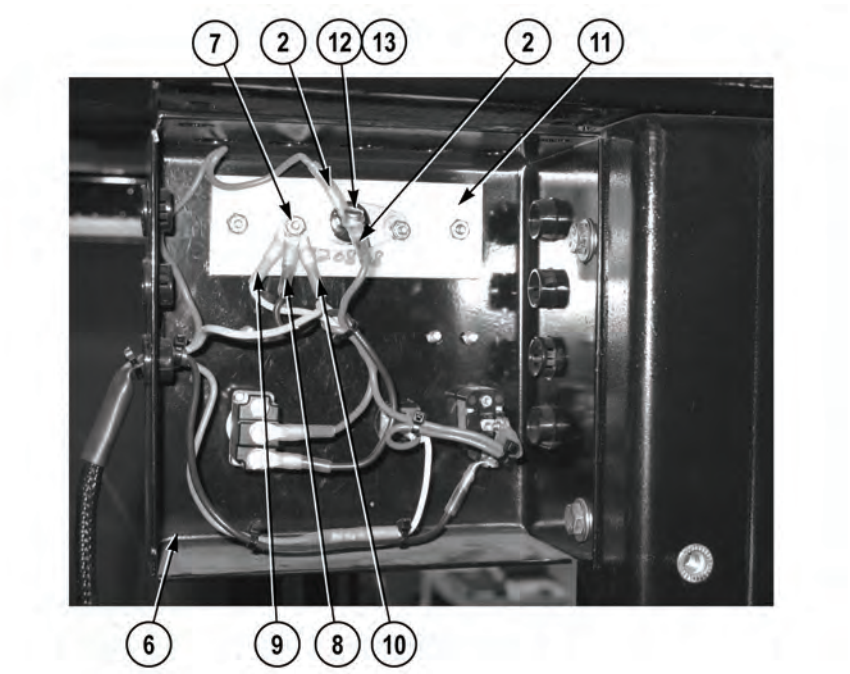


4. Install LED indicator light (23) and clip (22) on bracket (6).
5. Repair wire 4087 (21) (TM 9-2320-315-14&P).

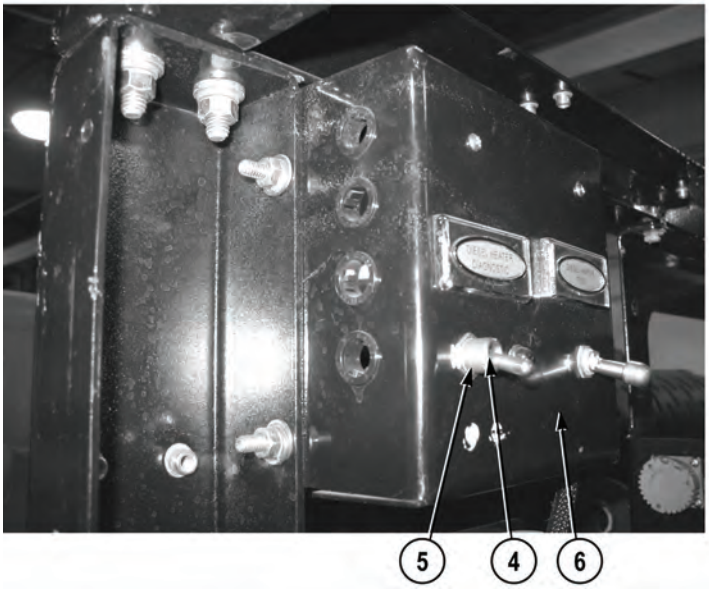
NOTE

Perform Steps (6) through (10) if thermostatic switch was removed.

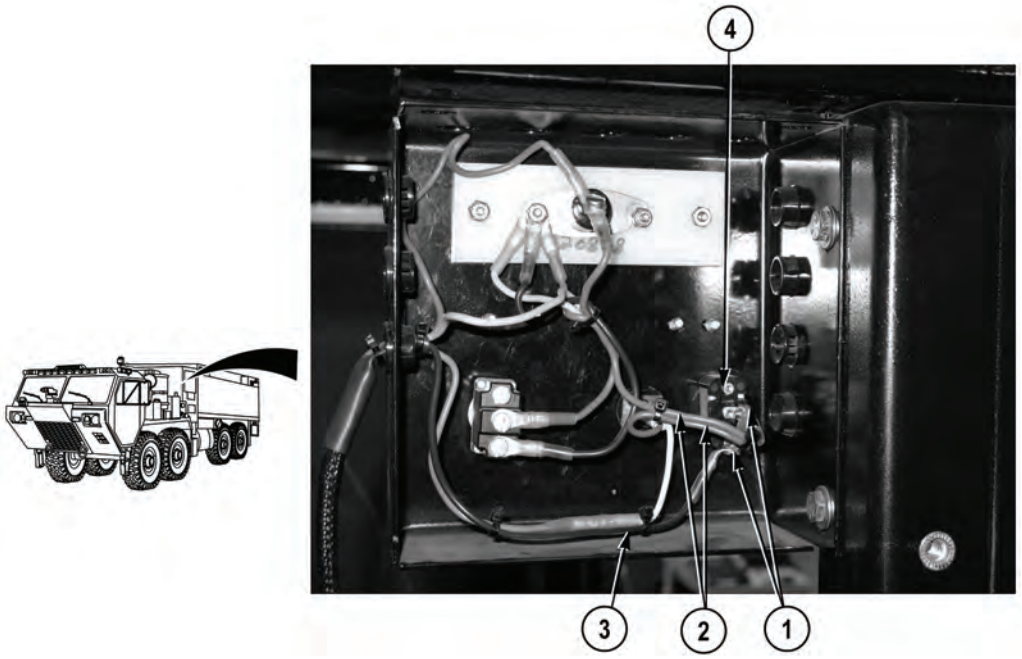
6. Install thermostatic switch (20) on isolator (11) with screw (19) and locknut (18).
7. Install isolator (11) on bracket (6) with screw (17) and nut (16).
8. Install locknut (14) on screw (15).



9. Install two wires 2852 (2), lockwasher (13) and screw (12) on isolator (11).
10. Install wire 2852 (10), wire 4086 (9), and wire 4088 (8) on isolator (11) with locknut (7).



11. Install heater diagnostic switch (4) on bracket (6) with nut (5).



12. Install wire 4088 (3) and two wires 2852 (2) on heater diagnostic switch (4) with two screws (1).

FOLLOW-ON MAINTENANCE

1. Install pump house panel E (WP 0341)
2. Close pump house access door assembly (WP 0008)
3. Connect batteries (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

HEATER FUEL PUMP REPLACEMENT

INITIAL SETUP:

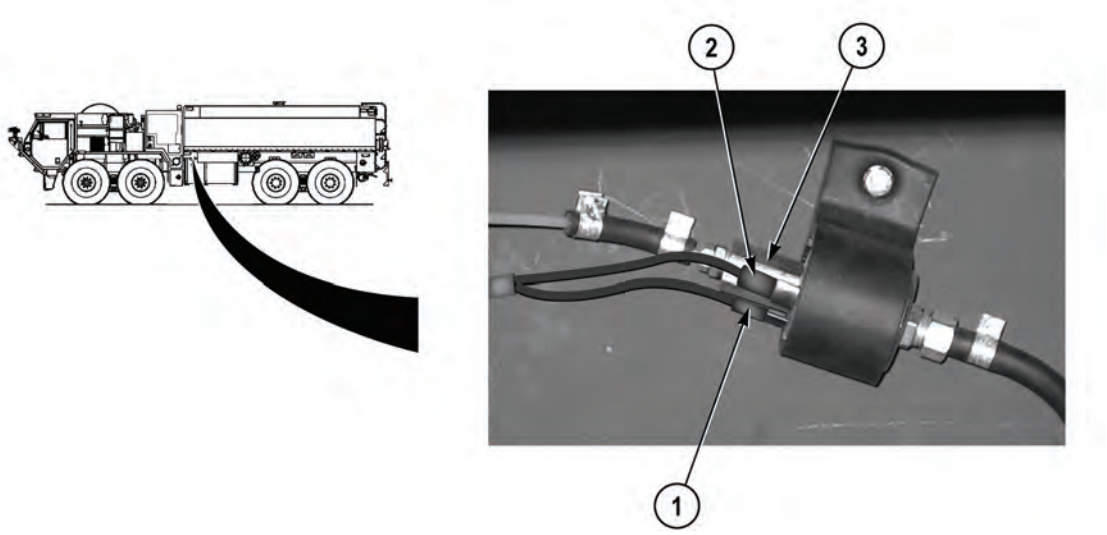
Tools and Special Tools
Drain Pan (WP 0399, Item 4)
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Locknut (1)

References
WP 0392, Fig. 63

Equipment Conditions
Batteries disconnected (TM 9-2320-315-14&P)

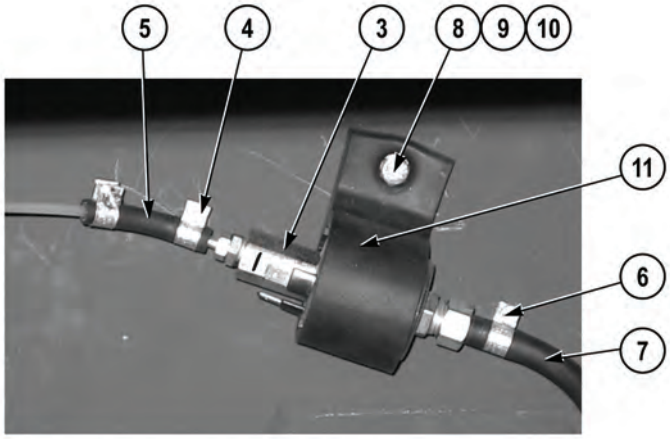
REMOVAL



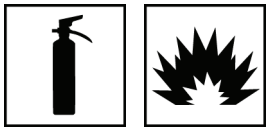
NOTE

Tag and mark hoses and wires prior to removal to ensure proper installation.

1. Remove wire 4089 (1) and wire 4090 (2) from heater fuel pump (3).



WARNING



Fuel is very flammable and can explode easily. To avoid serious injury or death, keep fuel away from open fire and keep fire extinguisher within easy reach when working with fuel. Do not work on fuel system when engine is hot. Fuel can be ignited by hot engine. When working with fuel, post signs that read NO SMOKING WITHIN 50 FEET of vehicle.

NOTE

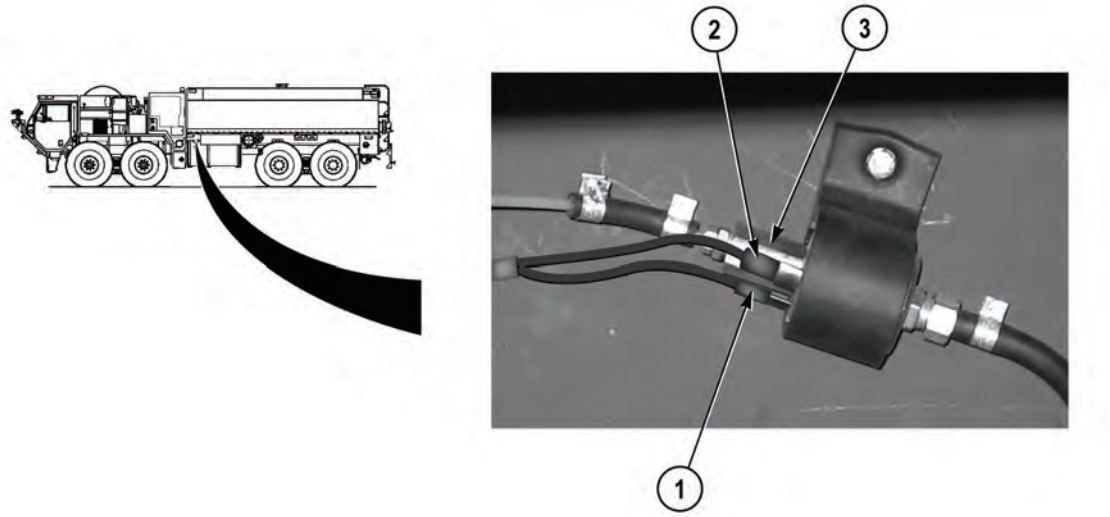
- Fuel may spill when clamps and hoses are removed.
- Position suitable drain pan under hoses to catch excess fuel.

2. Remove clamp (4) and hose (5) from heater fuel pump (3).
3. Remove clamp (6) and hose (7) from heater fuel pump (3).
4. Remove locknut (8), washer (9), screw (10), clamp (11), and heater fuel pump (3) from vehicle. Discard locknut.
5. Remove pump (3) from clamp (11).

END OF TASK

INSTALLATION

1. Position clamp (11) on heater fuel pump (3).
2. Install clamp (11) and heater fuel pump (3) on vehicle with screw (10) and washer (9) and locknut (8).
3. Install hose (7) on heater fuel pump (3) with clamp (6).
4. Install hose (5) on heater fuel pump (3) with clamp (4).



5. Install wire 4089 (1) and wire 4090 (2) on heater fuel pump (3).

END OF TASK

FOLLOW-ON MAINTENANCE

Connect batteries (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

HEATER FUEL TANK PICKUP REPLACEMENT

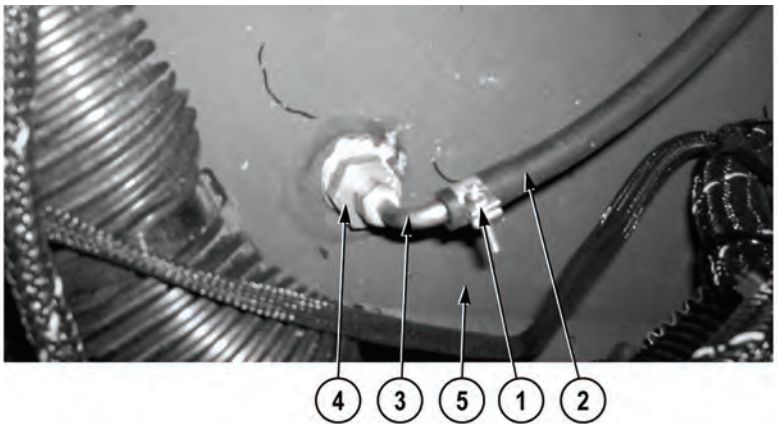
INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive
(WP 0399, Item 17)

Materials/Parts
Compound, Sealing, Pipe Thread
(WP 0401, Item 11)

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)

REMOVAL





WARNING

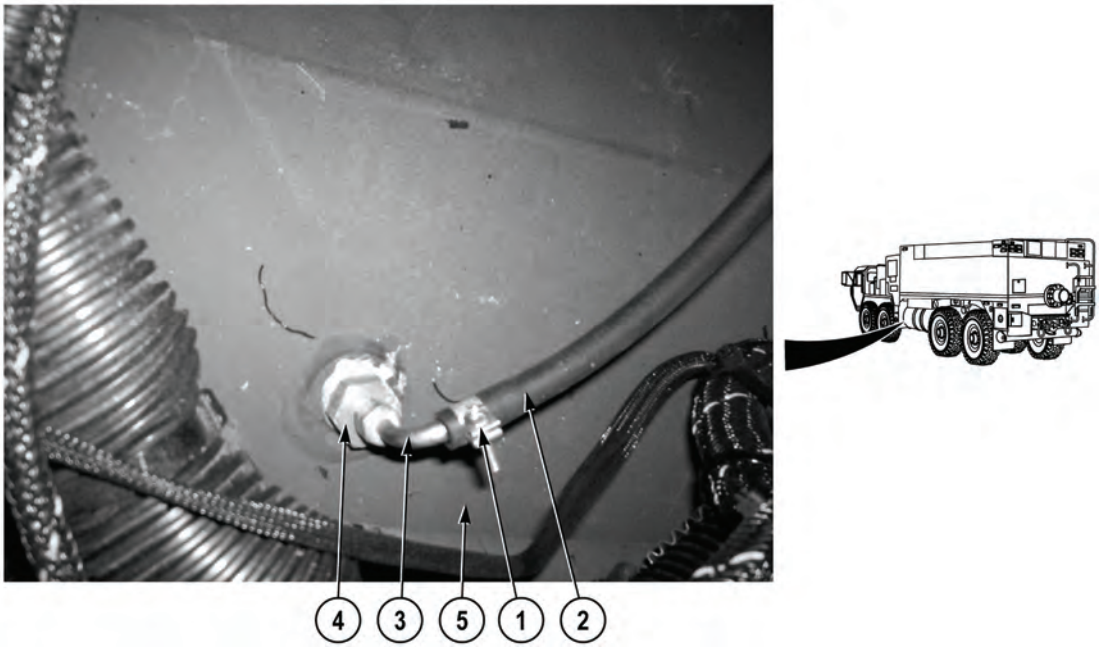


Fuel is very flammable and can explode easily. To avoid serious injury or death, keep fuel away from open fire and keep fire extinguisher within easy reach when working with fuel. Do not work on fuel system when engine is hot. Fuel can be ignited by hot engine. When working with fuel, post signs that read NO SMOKING WITHIN 50 FEET OF VEHICLE.

1. Remove clamp (1) and hose (2) from heater fuel tank pickup (3).
2. Remove fuel tank (TM 9-2320-315-14&P).
3. Remove bushing (4) and heater fuel tank pickup (3) from fuel tank (5).
4. Remove heater fuel tank pickup (3) from bushing (4).

END OF TASK

INSTALLATION



WARNING



Fuel is very flammable and can explode easily. To avoid serious injury or death, keep fuel away from open fire and keep fire extinguisher within easy reach when working with fuel. Do not work on fuel system when engine is hot. Fuel can be ignited by hot engine. When working with fuel, post signs that read NO SMOKING WITHIN 50 FEET OF VEHICLE.

1. Install bushing (4) on heater fuel tank pickup (3).

WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

2. Apply sealing compound to threads of bushing (4).
3. Install heater fuel tank pickup (3) on fuel tank (5) with bushing (4).
4. Install fuel tank (TM 9-2320-315-14&P).
5. Install hose (2) and clamp (1) on heater fuel tank pickup (3).

END OF TASK

FOLLOW-ON MAINTENANCE

Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PUMP HOUSE HEATER REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

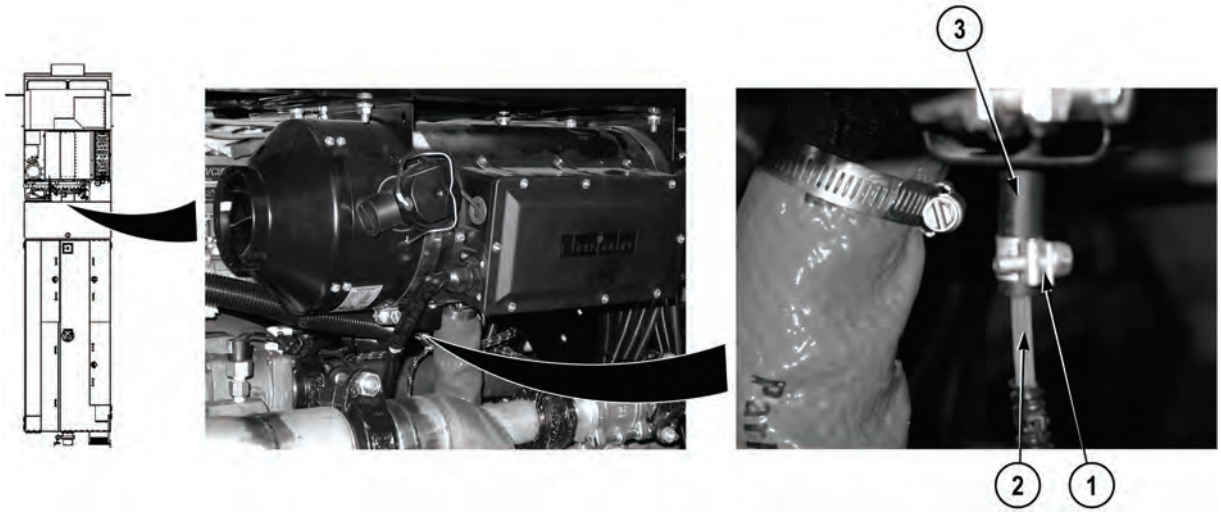
Materials/Parts
Tags, Identification (WP 0401, Item 22)
Lockwasher (4)

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

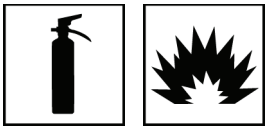
References
WP 0392, Fig. 63

Equipment Conditions
Pump house panels K, G, and E removed (WP 0341)

REMOVAL

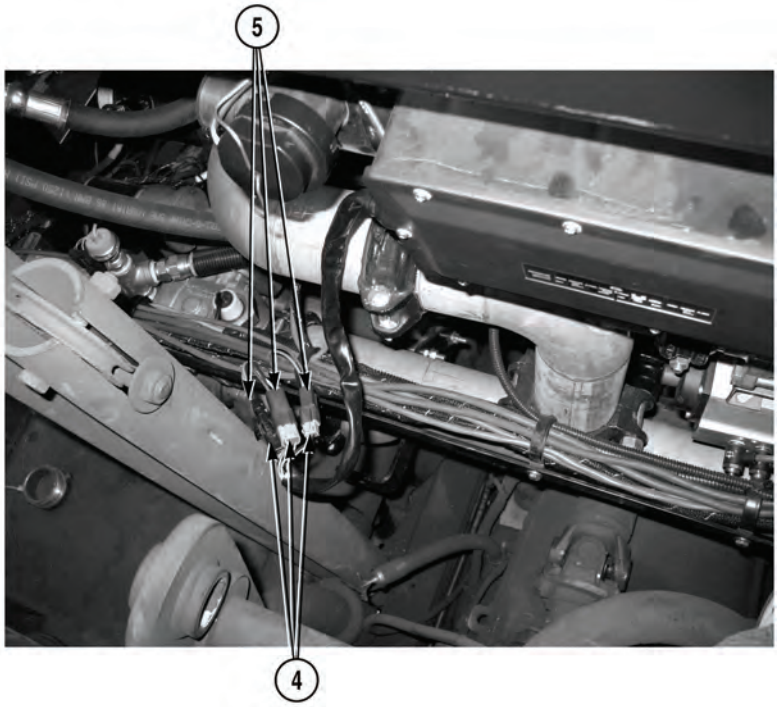


WARNING



Fuel is very flammable and can explode easily. To avoid serious injury or death, keep fuel away from open fire and keep fire extinguisher within easy reach when working with fuel. Do not work on fuel system when engine is hot. Fuel can be ignited by hot engine. When working with fuel, post signs that read NO SMOKING WITHIN 50 FEET OF VEHICLE.

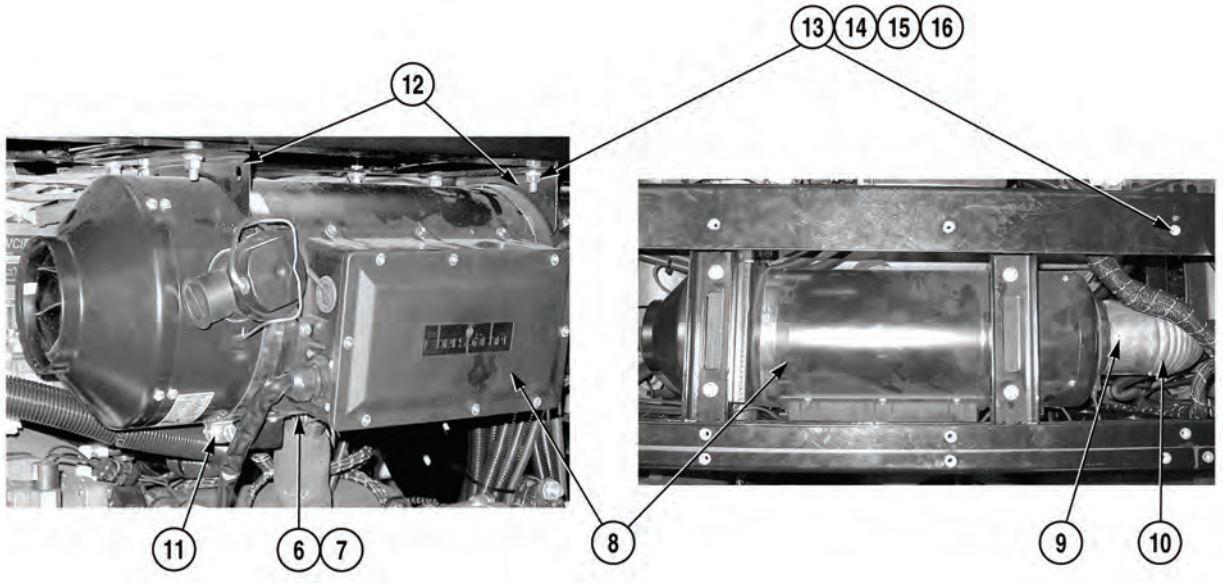
1. Loosen clamp (1) and remove fuel line (2) from tube (3).



NOTE

Tag and mark wires prior to removal to ensure proper installation.

2. Disconnect three heater wire harness connectors (4) from pump house wire harness connectors (5).



3. Loosen clamp (6) and exhaust tube (7) from pump house heater (8).

4. Remove screw (9) and elbow (10) from pump house heater (8).
5. With the aid of an assistant, remove two clamps (11) and pump house heater (8) from two brackets (12) and vehicle.

NOTE

- Perform Step (6) if brackets need to be removed.
- Note position of brackets prior to removal to ensure proper installation.

6. Remove four nuts (13), lockwashers (14), eight washers (15), four screws (16), and two brackets (10) from vehicle. Discard lockwashers.

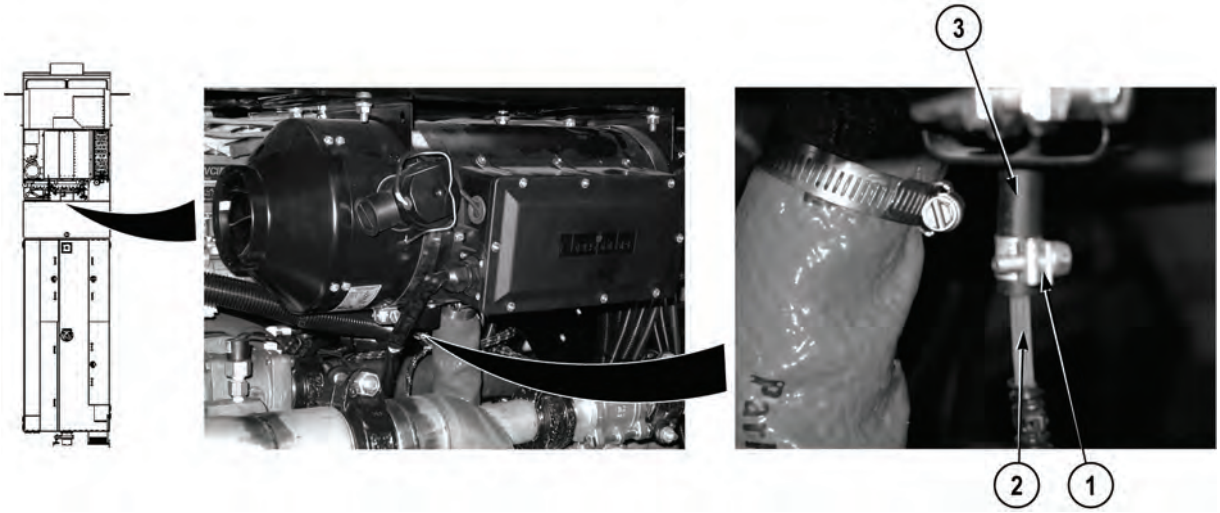
END OF TASK

INSTALLATION

NOTE

- Perform Step (1) if brackets were removed.
- Install brackets as noted prior to removal.

1. Install two brackets (10) on vehicle with four screws (16), eight washers (15), four lockwashers (14), and nuts (13).
2. With the aid of an assistant, install pump house heater (8) on two brackets (12) with two clamps (11).
3. Install elbow (10) on pump house heater (8) with screw (9).
4. Install exhaust tube (7) on pump house heater (8) and tighten clamp (6).
5. Connect three pump house wire harness connectors (5) to three pump house heater wire harness connectors (4).



6. Install fuel line (2) on tube (3) and tighten clamp (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Install pump house on panels K, G, and E (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

DIRECT TANK FILL VALVE REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Standard Automotive Tool Set (SATS), (WP 0399, Item 15)
• Wrench, Torque, Click, Ratcheting, 3/8” Drive, 75 ft-lb
Tool Kit, General Mechanic’s: Automotive (WP 0399, Item 17)

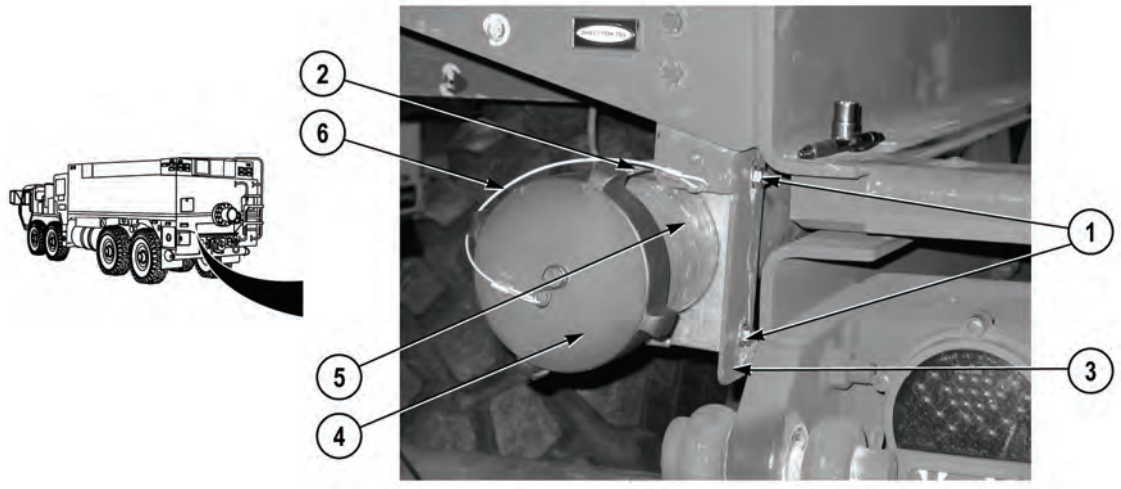
Materials/Parts
Adhesive, Sealant, Silicone RTV (WP 0401, Item 3)
Ties, Cable, Plastic (WP 0401, Item 25)
Locknut (2)
Lockwasher (3)
Lockwasher (8)
Gasket (3)

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

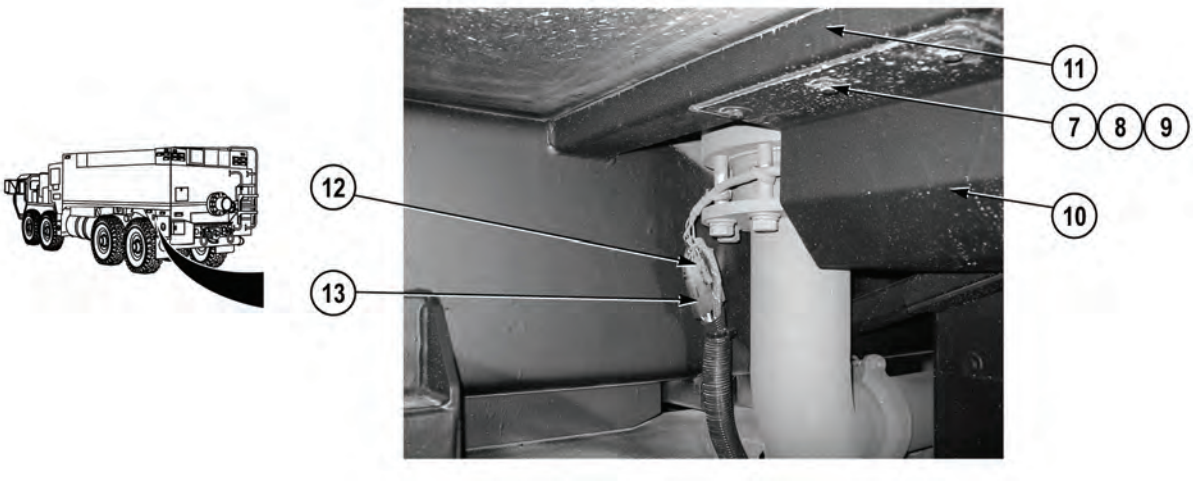
References
WP 0370
WP 0392, Fig. WP 23

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)
Water system drained (WP 0029)

REMOVAL



1. Remove two locknuts (1) and clamp (2) from bracket (3). Discard locknuts.
2. Remove cap (4) from direct tank fill pipe (5).
3. Remove wire rope (6) from cap (4) and vehicle (WP 0370).

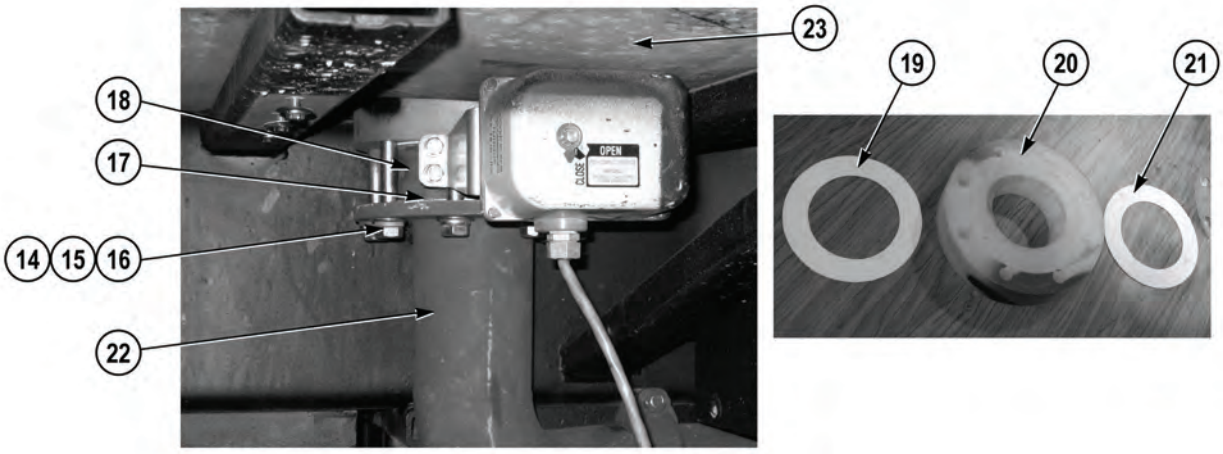


4. Remove three screws (7), lockwashers (8), washers (9), and guard (10) from water tank cradle (11). Discard lockwashers.

NOTE

Remove cable ties as required.

5. Disconnect direct tank fill valve connector (12) from direct tank fill valve wire harness connector (13).



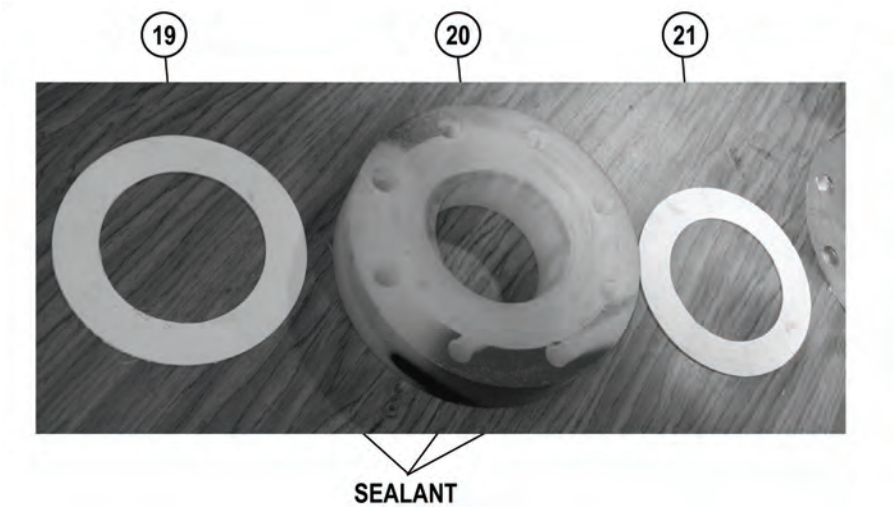
NOTE

- Note position of gaskets prior to removal to ensure proper installation.
- Note orientation of valve prior to removal to ensure proper installation.

6. With the aid of an assistant, remove eight screws (14), lockwashers (15), washers (16), gasket (17), valve (18), gasket (19), spacer (20), and gasket (21) from flange (22) and water tank (23). Discard lockwashers and gaskets.

END OF TASK

INSTALLATION



WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

NOTE

Install gaskets as noted prior to removal.

1. Apply silicone sealant to both sides of spacer (20).
2. Position gasket (21) and gasket (19) on spacer (20).
3. Apply silicone sealant to gasket (19) and gasket (21).

NOTE

Install valve as noted prior to removal.

4. With the aid of an assistant, position gasket (21), spacer (20), gasket (19), valve (18), and gasket (17) on water tank (23) and flange (22).

NOTE

- All torque values will need to be verified and retorqued if necessary after a minimum 24 hours.
- Retorque screws to torque valve in Step (5).

5. Install eight washers (16), lockwashers (15), and screws (14) on water tank (17) and flange (16). Tighten screws (14) to 18 lb-ft (24.4 N•m).

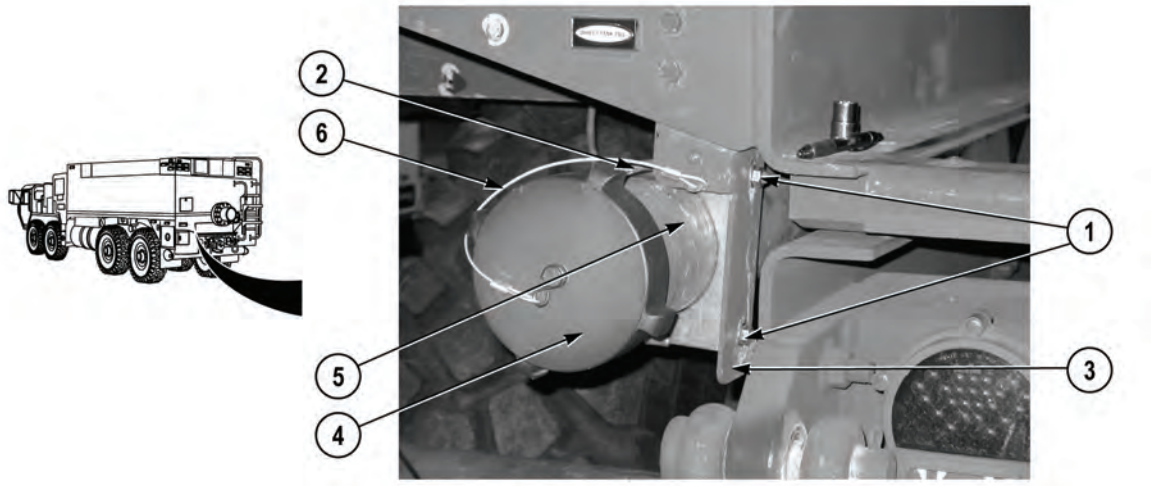


6. Connect direct tank fill valve wire harness connector (13) on direct tank fill valve connector (12).

NOTE

Install cable ties as required.

7. Install guard (10) on water tank cradle (11) with three washers (9), lockwashers (8), and screws (7).



8. Install wire rope (6) on cap (4) and vehicle (WP 0370).
9. Install cap (4) on direct tank fill pipe (5).
10. Install clamp (2) on bracket (3) with two locknuts (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

BUMPER TURRET VALVE REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

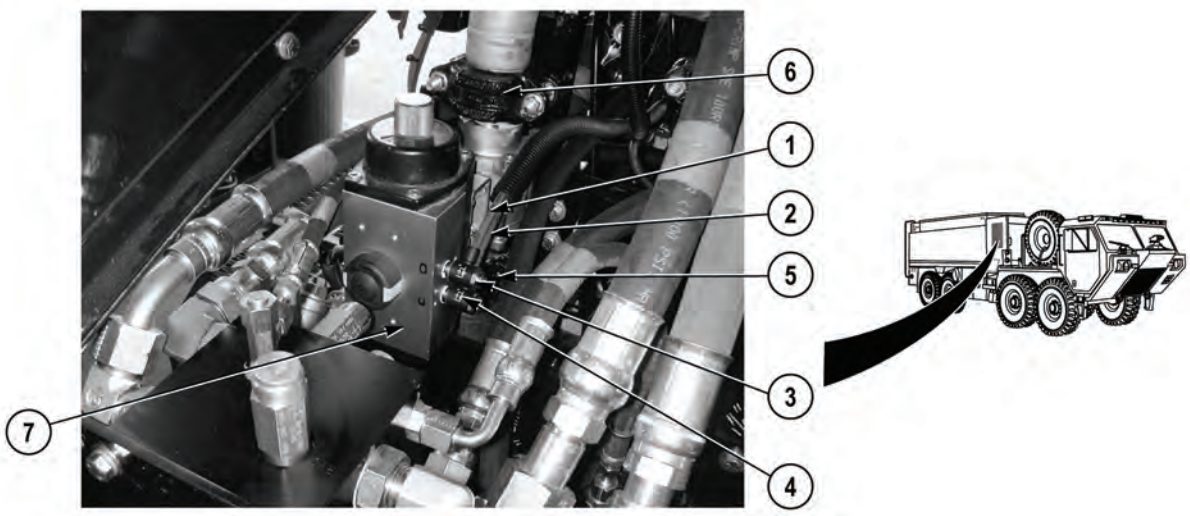
Materials/Parts
Compound, Sealing, Pipe Thread (WP 0401, Item 11)
Tags, Identification (WP 0401, Item 22)

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

References
WP 0315

Equipment Conditions
Air system drained (TM 9-2320-279-10)
Lower heat exchanger shroud removed (WP 0133)

REMOVAL



NOTE

Tag and mark air lines prior to removal to ensure proper installation.

1. Remove two air lines (1) and (2) from fittings (3) and (4).
2. With the aid of an assistant, remove two couplings (5) and (6) and bumper turret valve (7) from vehicle (WP 0315).

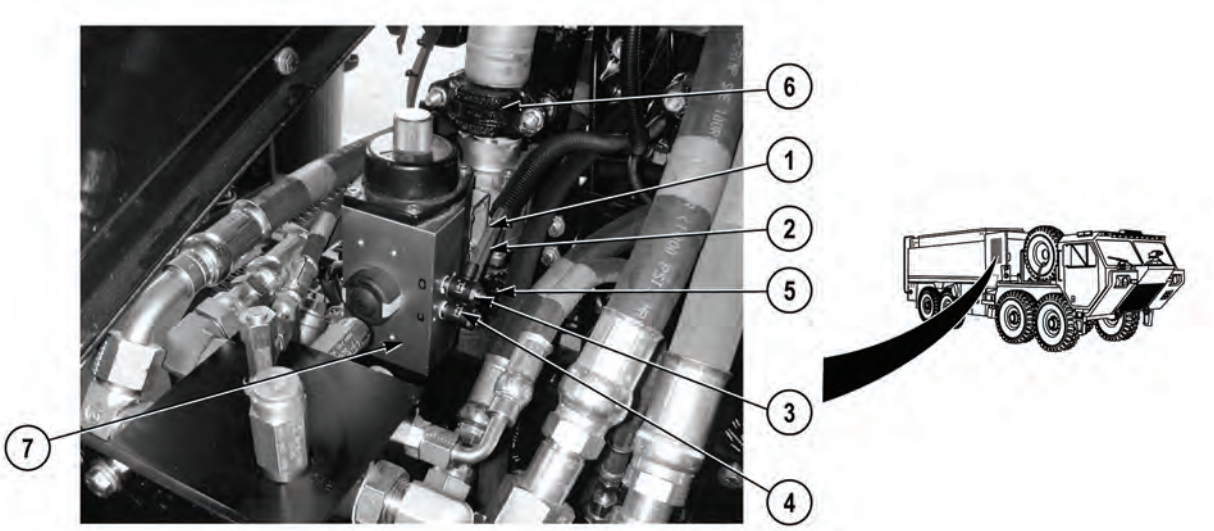
NOTE

Tag and mark fittings prior to removal to ensure proper installation.

3. Remove two fittings (3) and (4) from bumper turret valve (7).

END OF TASK

INSTALLATION



WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

CAUTION

Use pipe thread sealing compound sparingly only on pipe threads. Do not apply compound to hose connections. Damage to equipment may result.

1. Apply sealing compound on threads of two fittings (3) and (4).
2. Install two fittings (4) and (3) on bumper turret valve (7).
3. With the aid of an assistant, install bumper turret valve (7) and two couplings (6) and (5) on vehicle (WP 0315).
4. Install two air lines (2) and (1) on fittings (4) and (3).

END OF TASK

FOLLOW-ON MAINTENANCE

Install lower heat exchanger shroud (WP 0135)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

COUPLING REPLACEMENT

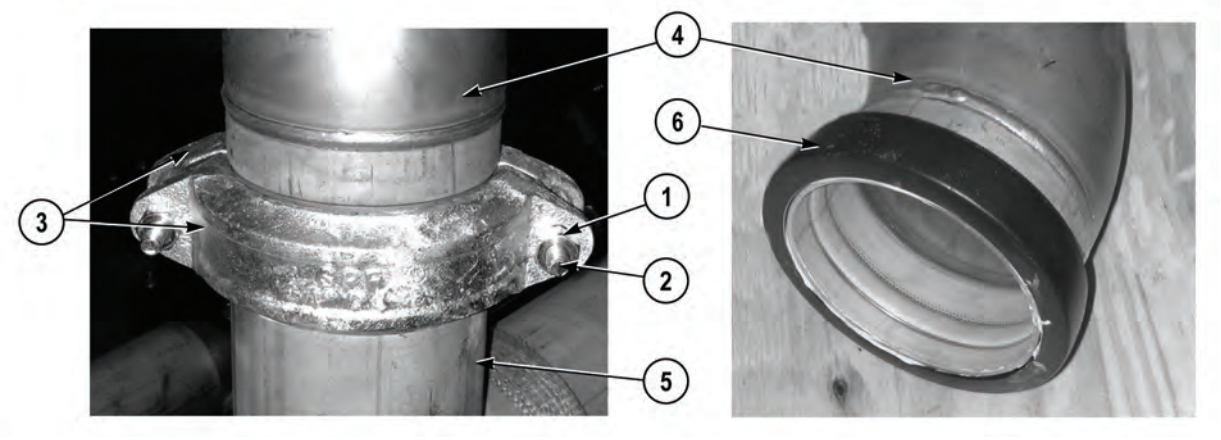
INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Grease, Spline Lubricant (WP 0401, Item 16)

Equipment Conditions
Water tank drained (WP 0014)
Foam tank drained (WP 0021)

REMOVAL



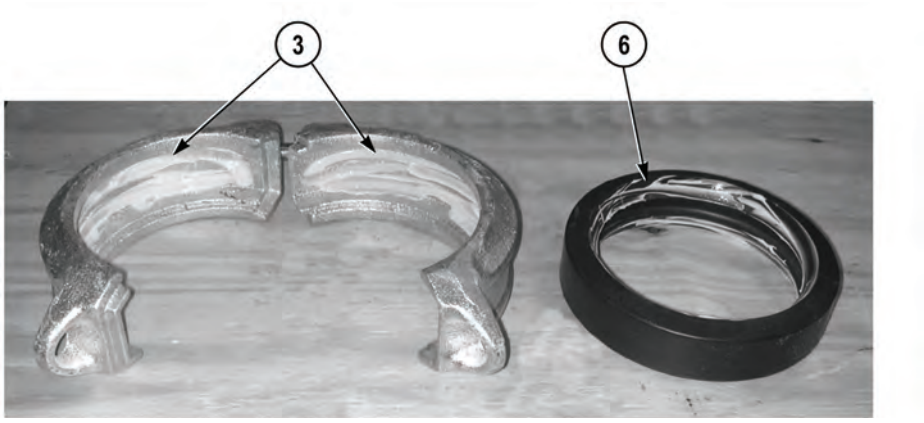
NOTE

- Coupling consists of two coupling halves.
- Coupling replacement can be made to a valve, pipe, manifold, adapter, elbow, or weldment.

1. Remove two nuts (1), screws (2), and coupling halves (3) from elbow (4) and pipe (5).
2. Remove gasket (6) from pipe (5) and elbow (4).

END OF TASK

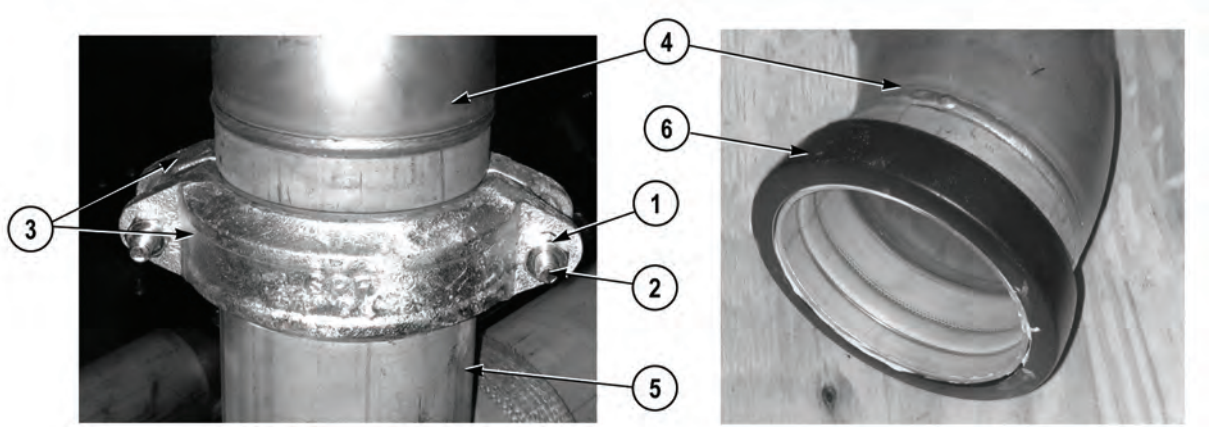
INSTALLATION



NOTE

- Sealing surface must be clean prior to installing gasket.
- Inspect gasket for damage. If damaged, replace gasket.

1. Apply light coat of grease to inside of gasket (6) and two coupling halves (3).



2. Install gasket (6) on elbow (4).

NOTE

Gasket is properly positioned when half of the gasket is on elbow and the other half of the gasket is on pipe.

3. Position pipe (5) against elbow (4), and install gasket (6) on pipe (5).

NOTE

Tighten screws equally on each side of clamp.

4. Install two coupling halves (3) on elbow (4) and pipe (5) with two screws (2) and nuts (1).

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

NO. 1 DRIVER SIDE DISCHARGE VALVE REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

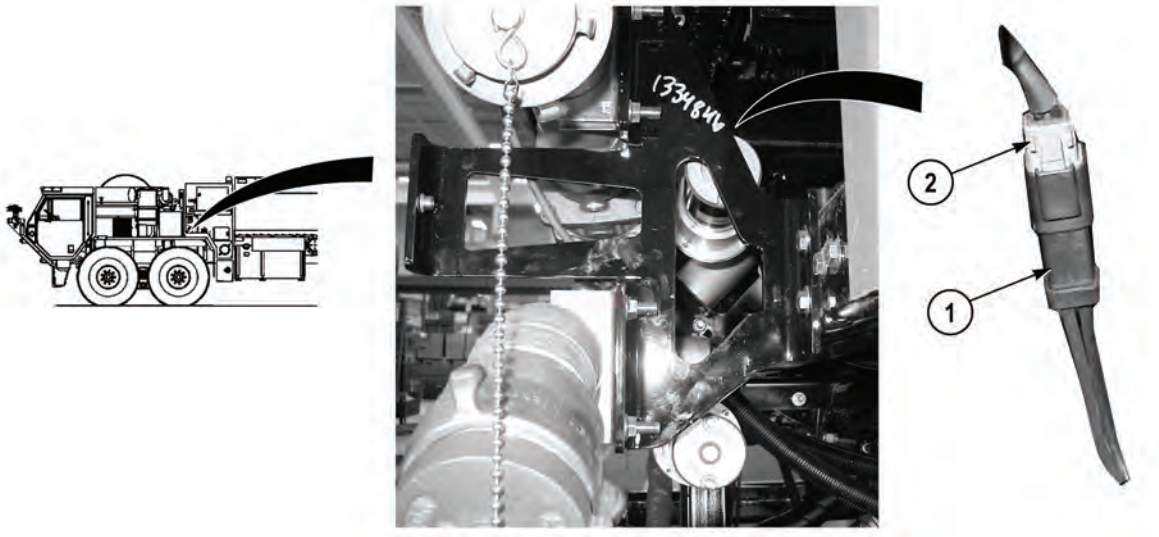
Materials/Parts
Compound, Sealing, Pipe Thread (WP 0401, Item 7)
Ties, Cable, Plastic (WP 0401, Item 25)
Locknut (2)
Lockwasher (2)
Locknut (2)

Personnel Required
MOS 63B Wheeled vehicle mechanic (2)

References
WP 0247
WP 0315
WP 0320
WP 0392, Fig. 65

Equipment Conditions
Discharge pressure transducer removed (WP 0244)
Flow sensor removed (WP 0249)
Pump house panels C and E removed (WP 0341)

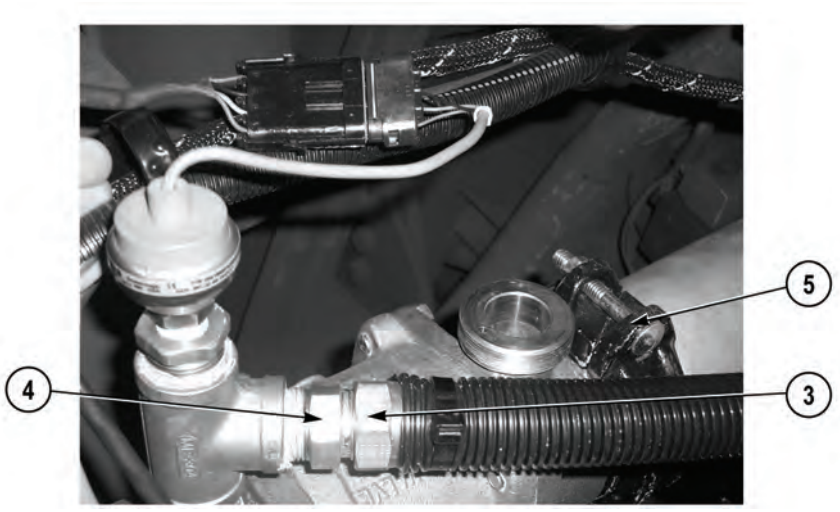
REMOVAL



NOTE

Remove cable ties as required.

1. Disconnect electric motor connector (1) from electric motor wire harness connector (2).



2. Remove hose (3) from fitting (4).
3. Remove coupling (5) from vehicle (WP 0315).

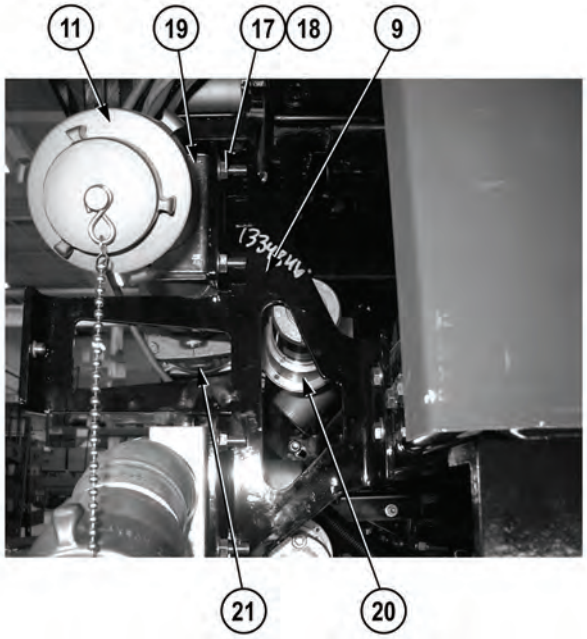


4. Remove two locknuts (6), U-bolt (7), and cradle (8) from bracket (9) and pipe (10). Discard locknuts.

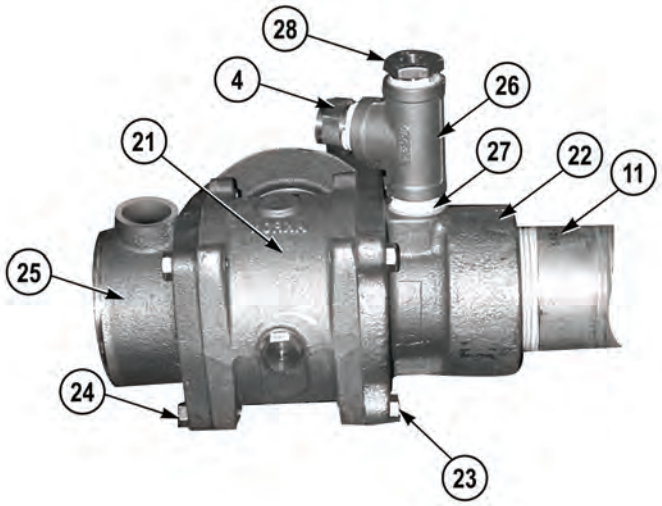
NOTE

Pipe, valve, and bracket are removed as an assembly.

5. With the aid of an assistant, support pipe (11) and remove two nuts (12), lockwashers (13), four washers (14), and two screws (15) from bracket (9) and channel bracket (16). Discard lockwashers.
6. With the aid of an assistant, remove pipe (11) and bracket (9) from vehicle.



7. Remove two locknuts (17), U-bolt (18), cradle (19), and bracket (9) from pipe (11). Discard locknuts.
8. Remove electric motor and drive assembly (20) from valve (21) (WP 0247).



9. Remove pipe (11) from adapter (22).
10. Remove four screws (23) and adapter (22) from valve (21).
11. Remove four screws (24) and adapter (25) from valve (21).

NOTE

Note position of fittings prior to removal to ensure proper installation.

12. Remove tee (26) and nipple (27) from adapter (22).
13. Remove nipple (27) and two fittings (4) and (28) from tee (26).

END OF TASK

INSTALLATION

WARNING



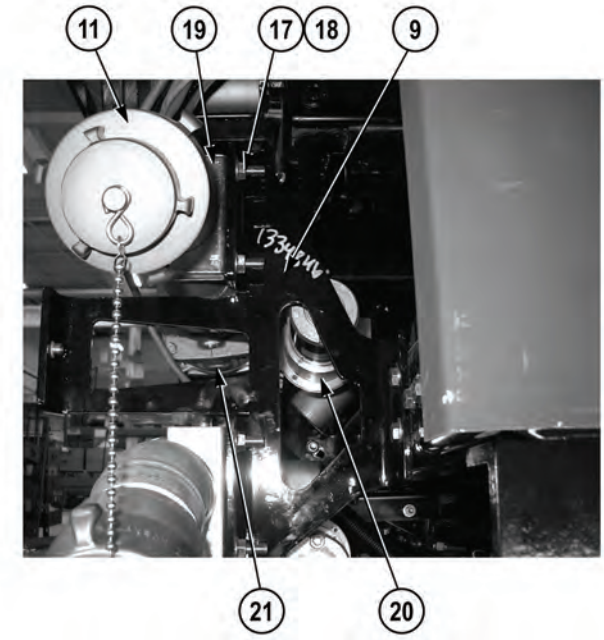
Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

NOTE

- Install cable ties as required.
- Install fittings as noted prior to removal.

1. Apply sealing compound to threads of nipple (27) and two fittings (28) and (4).

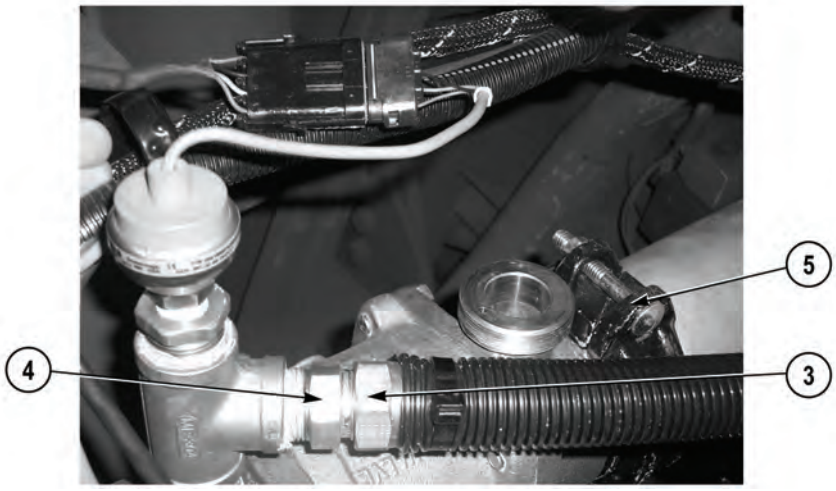
2. Install nipple (27) and two fittings (28) and (4) on tee (26) (WP 0320).
3. Install tee (26) and nipple (27) on adapter (22) (WP 0320).
4. Install adapter (25) on valve (21) with four screws (24).
5. Install adapter (22) on valve (21) with four screws (23).
6. Install pipe (11) on adapter (22) (WP 0320).



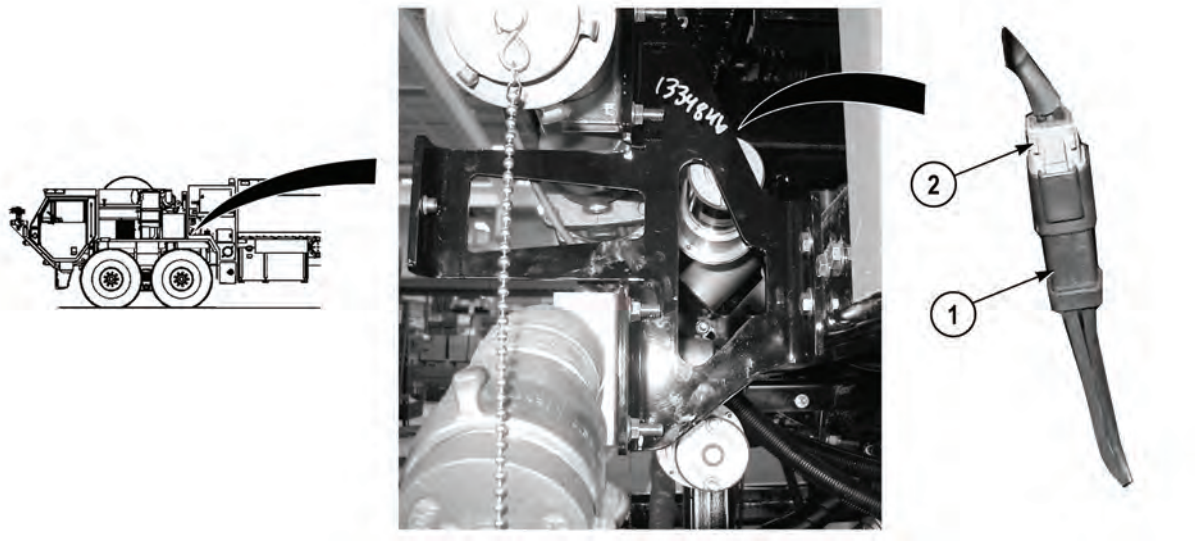
7. Install electric motor and drive assembly (20) on valve (21) (WP 0247).
8. Install pipe (11) on bracket (9) with cradle (19), U-bolt (18), and two locknuts (17). Do not tighten locknuts.
9. With the aid of an assistant, position pipe (11) and bracket (9) on vehicle.



10. With the aid of an assistant, install bracket (9) on channel bracket (16) with two screws (15), four washers (14), two lockwashers (13), and nuts (12).
11. Install bracket (9) on pipe (10) with U-bolt (7), cradle (8), and two locknuts (6).
12. Tighten two locknuts (17).



13. Install coupling (5) on vehicle (WP 0315).
14. Install hose (3) on fitting (4).



15. Connect electric motor connector (1) on electric motor wire harness connector (2).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install flow sensor (WP 0249)
2. Install discharge pressure transducer (WP 0244)
3. Install pump house panels C and E (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

NO. 2 PASSENGER SIDE DISCHARGE VALVE REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

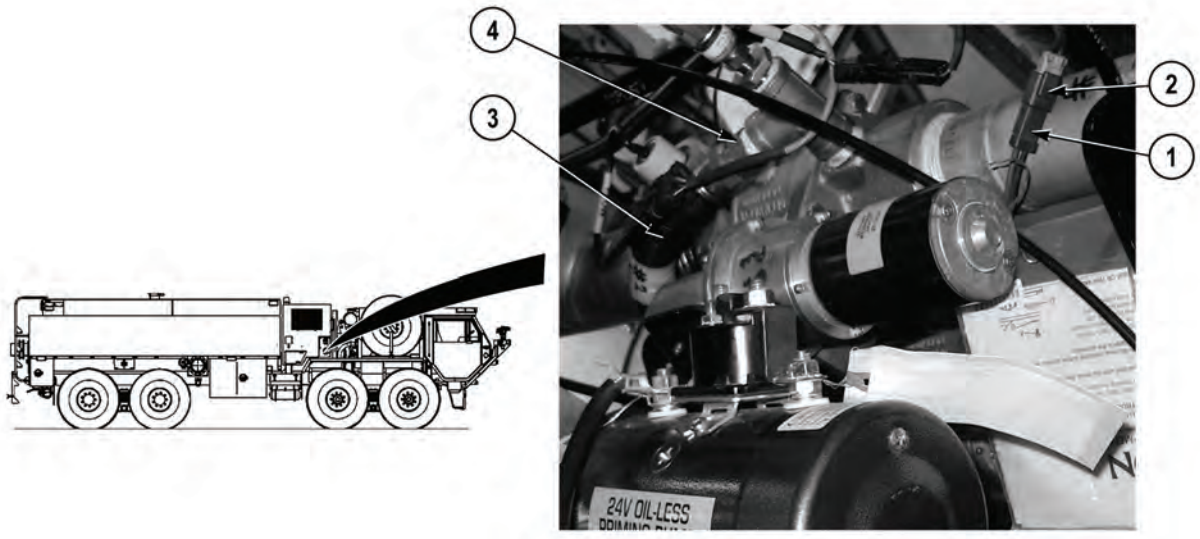
Materials/Parts
Compound, Sealing, Pipe Thread (WP 0401, Item 11)
Ties, Cable, Plastic (WP 0401, Item 25)
Locknut (2)

Personnel Required
MOS 63B Wheeled vehicle mechanic (2)

References
WP 0247
WP 0315
WP 0320
WP 0392, Fig. 65

Equipment Conditions
Discharge pressure transducer removed (WP 0244)
Flow sensor removed (WP 0249)

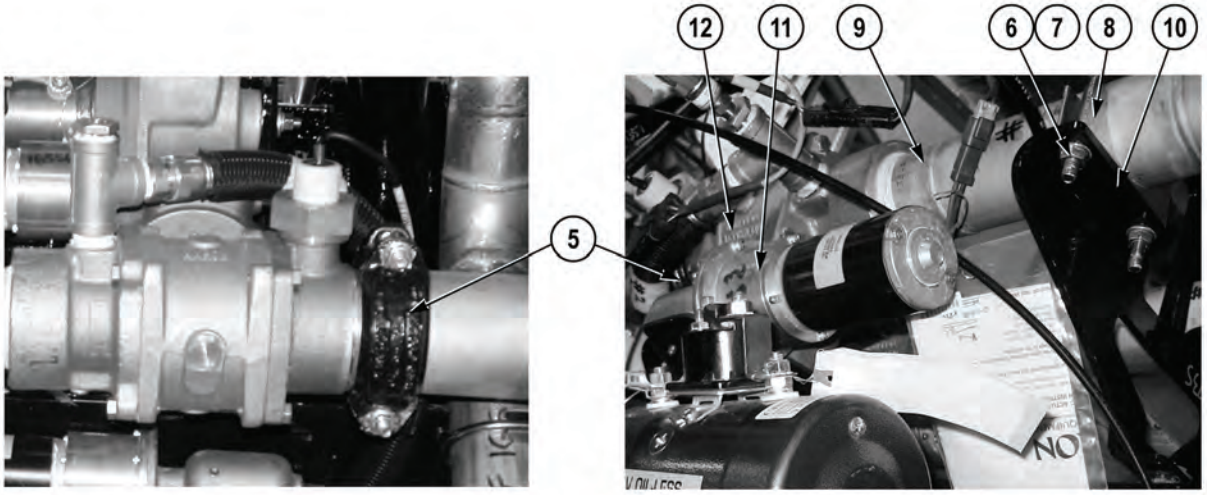
REMOVAL



NOTE

Remove cable ties as required.

1. Disconnect electric motor connector (1) from electric motor harness connector (2).
2. Remove hose (3) from fitting (4).



3. Remove coupling (5) from vehicle (WP 0315).

CAUTION

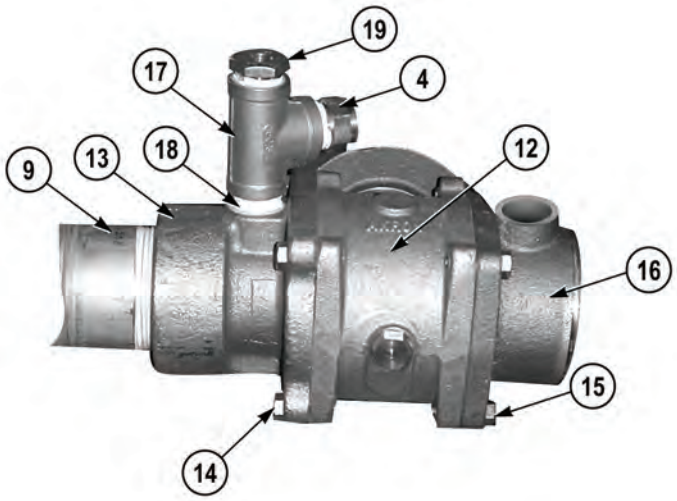
Pipe and valve assembly is awkward. Do not remove pipe assembly without the aid of an assistant. Failure to comply may cause damage to equipment.

NOTE

Pipe and valve are removed as an assembly.

4. With the aid of an assistant, remove two locknuts (6), U-bolt (7), cradle (8), and pipe (9) from bracket (10) and vehicle. Discard locknuts.

5. Remove electric motor and drive assembly (11) from valve (12) (WP 0247).



6. Remove pipe (9) from adapter (13).
7. Remove four screws (14) and adapter (13) from valve (12).
8. Remove four screws (15) and adapter (16) from valve (12).

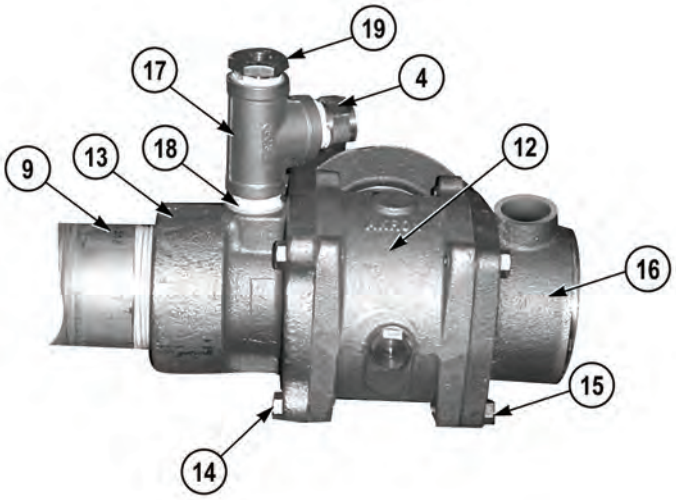
NOTE

Note position of elbows and fittings prior to removal to ensure proper installation.

9. Remove tee (17) and nipple (18) from adapter (13).
10. Remove nipple (18) and two fittings (4) and (19) from tee (17).

END OF TASK

INSTALLATION



WARNING



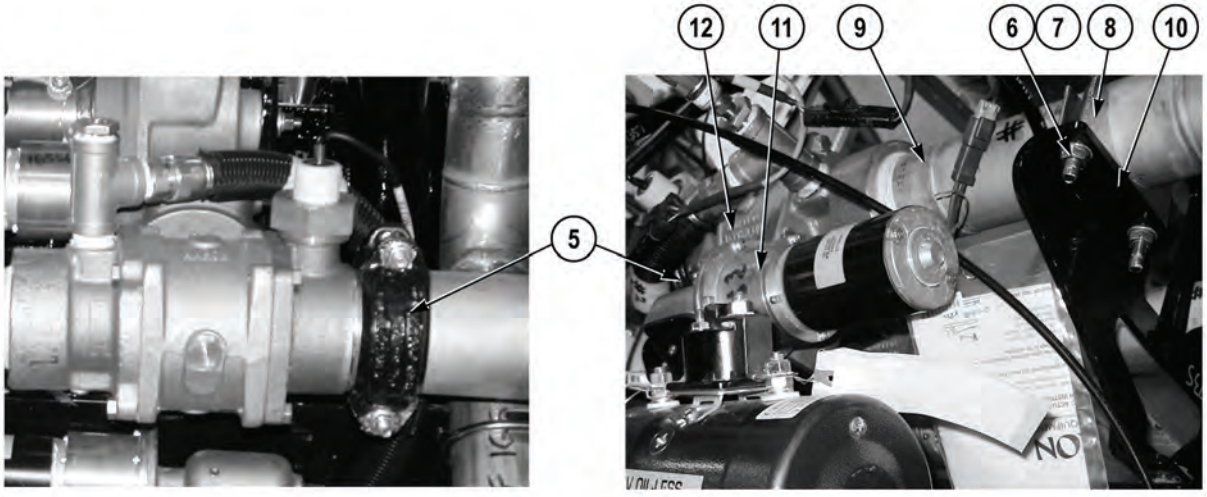
Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

1. Apply sealing compound to threads of nipple (18) and two fittings (4) and (19).

NOTE

- Install cable ties as required.
- Install elbows and fittings as noted prior to removal.

2. Install nipple (18) and two fittings (19) and (4) on tee (17).
3. Install tee (17) and nipple (18) on adapter (13).
4. Install adapter (16) on valve (12) with four screws (15).
5. Install adapter (13) on valve (12) with four screws (14).
6. Install pipe (9) on adapter (13) (WP 0320).

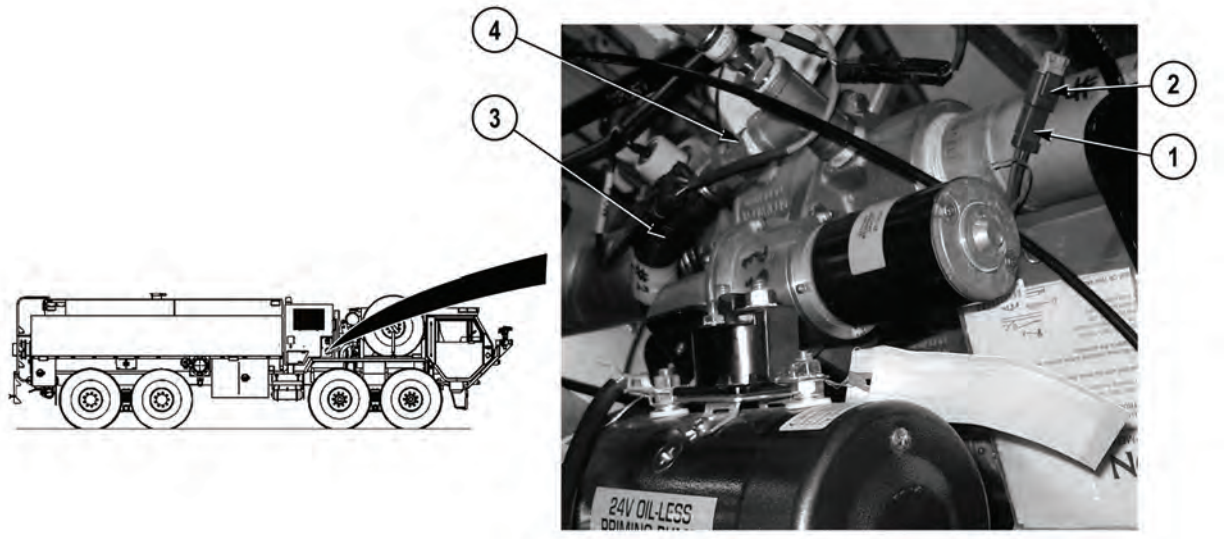


7. Install electric motor and drive assembly (11) (WP 0247) on valve (12).

CAUTION

Pipe and valve assembly is awkward, do not install pipe and valve assembly without the aid of an assistant. Failure to comply may result in damage to equipment.

8. With the aid of an assistant, install pipe (9) on bracket (10) with cradle (8), U-bolt (7), and two locknuts (6). Do not tighten locknuts.
9. Install coupling (5) on vehicle (WP 0315).
10. Tighten two locknuts (6).



11. Install hose (3) on fitting (4).
12. Connect electric motor connector (1) on electric motor harness connector (2).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install flow sensor (WP 0249)
2. Install discharge pressure transducer (WP 0244)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

HOSE REEL HOSE REPLACEMENT

INITIAL SETUP:

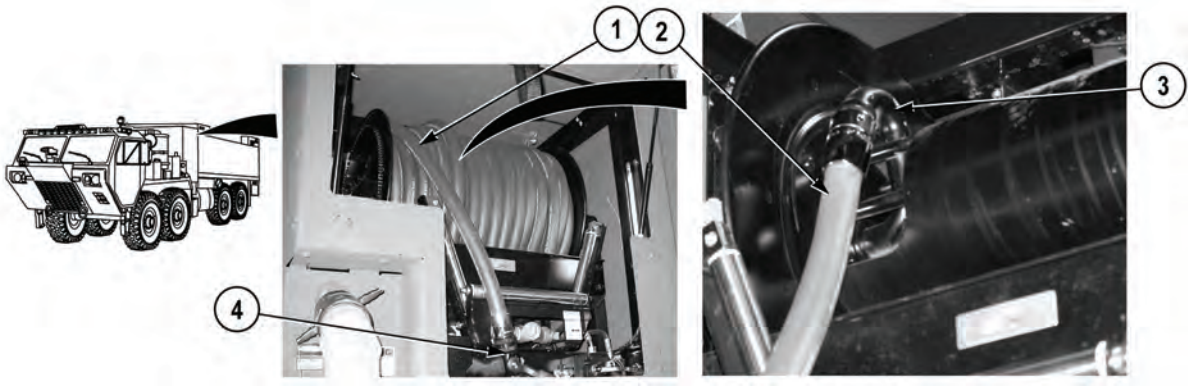
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Preformed Packing (1)
Lockwasher (4)
Lockwasher (1)

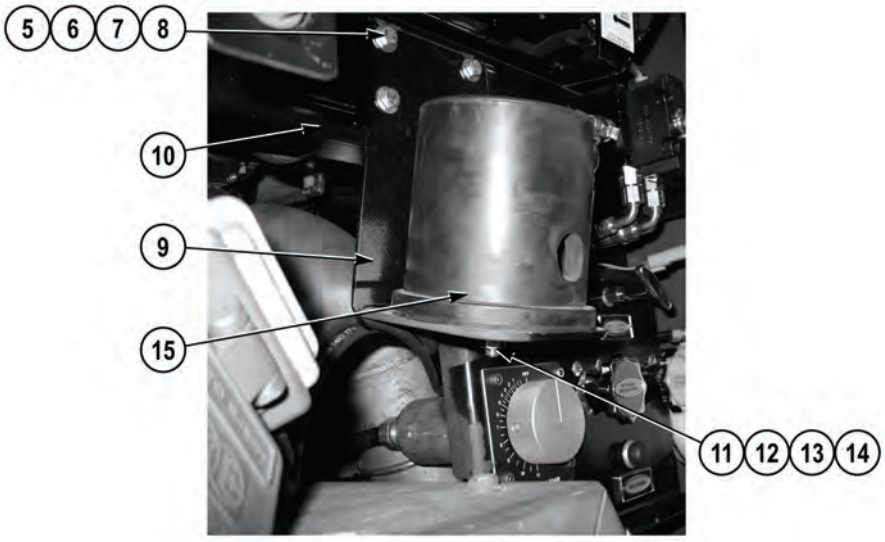
References
WP 0392, Fig. 40

Equipment Conditions
Hose reel hose unwound (WP 0024)

REMOVAL



1. Remove hose (1) and preformed packing (2) from hose reel (3). Discard preformed packing.
2. Remove nozzle (4) from hose (1).



NOTE

Perform Steps (3) and (4) if nozzle cup bracket needs to be removed.

3. Remove four nuts (5), lockwashers (6), eight washers (7), four screws (8), and nozzle cup bracket (9) from pump house frame (10) and vehicle. Discard lockwashers.
4. Remove nut (11), lockwasher (12), washer (13), screw (14), and nozzle cup (15) from nozzle cup bracket (9). Discard lockwasher.

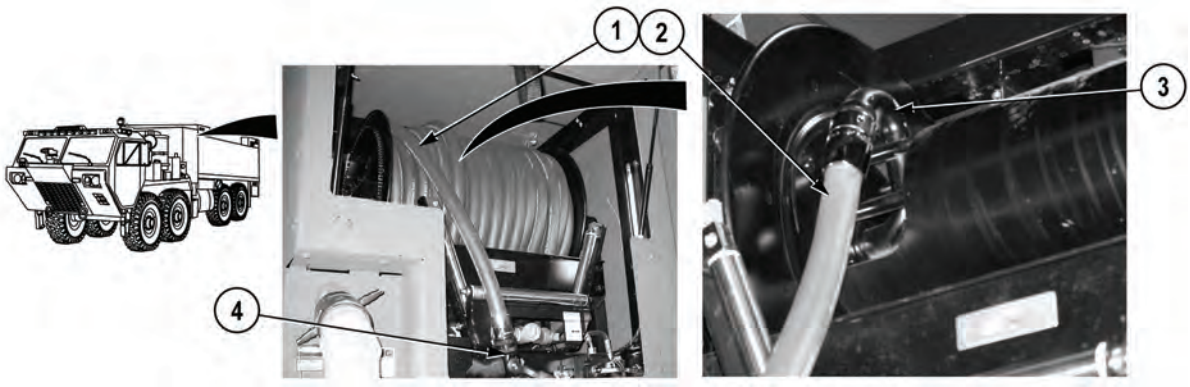
END OF TASK

INSTALLATION

NOTE

Perform Steps (1) and (2) if nozzle cup bracket was removed.

1. Install nozzle cup (15) on nozzle cup bracket (9) with screw (14), washer (13), lockwasher (12), and nut (11).
2. Install nozzle cup bracket (9) on pump house frame (10) with four screws (8), eight washers (7), four lockwashers (6), and nuts (5).



3. Install nozzle (4) on hose (1).
4. Install hose (1) and preformed packing (2) on hose reel (3).

END OF TASK

FOLLOW-ON MAINTENANCE

Wind hose reel hose (WP 0024)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

HOSE REEL DISCHARGE VALVE REPLACEMENT

INITIAL SETUP:

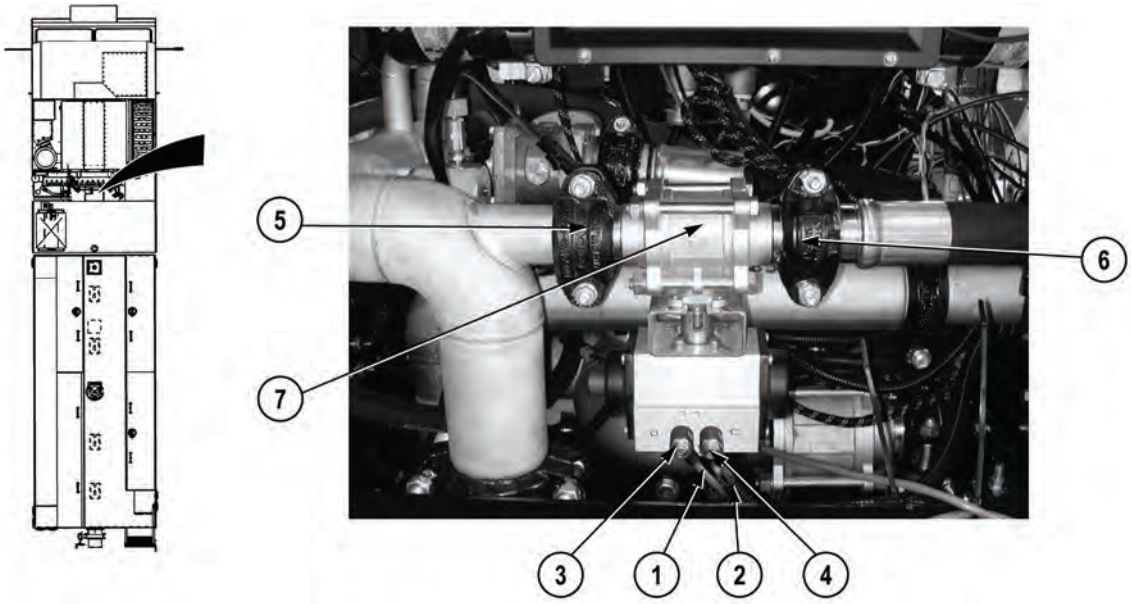
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Compound, Sealing, Pipe Thread (WP 0401, Item 11)
Tags, Identification (WP 0401, Item 22)

References
WP 0315

Equipment Conditions
Air system drained (TM 9-2320-279-10)
Pump house panel G removed (WP 0341)

REMOVAL



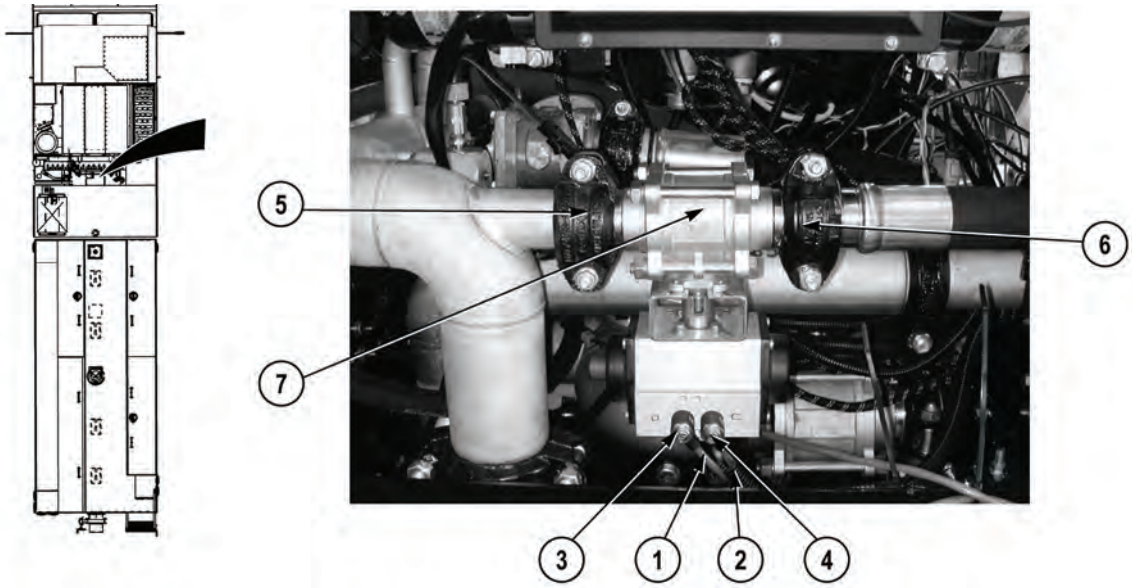
NOTE

Tag and mark air lines prior to removal to ensure proper installation.

1. Remove two air lines (1) and (2) from fittings (3) and (4).
2. Remove two couplings (5) and (6) and valve (7) from vehicle (WP 0315).
3. Remove two fittings (3) and (4) from valve (7).

END OF TASK

INSTALLATION



WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

CAUTION

Use sealing compound sparingly only on pipe threads. Do not apply compound to hose connections. Failure to comply may cause damage to equipment.

1. Apply sealing compound to threads of two fittings (3) and (4).
2. Install two fittings (4) and (3) on valve (7).
3. Install valve (7) and two couplings (6) and (5) on vehicle (WP 0315).
4. Install two air lines (2) and (1) on fittings (4) and (3).

END OF TASK

FOLLOW-ON MAINTENANCE

Install pump house panel G (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PIPING ASSEMBLY (PIPE THREAD SEALING COMPOUND)

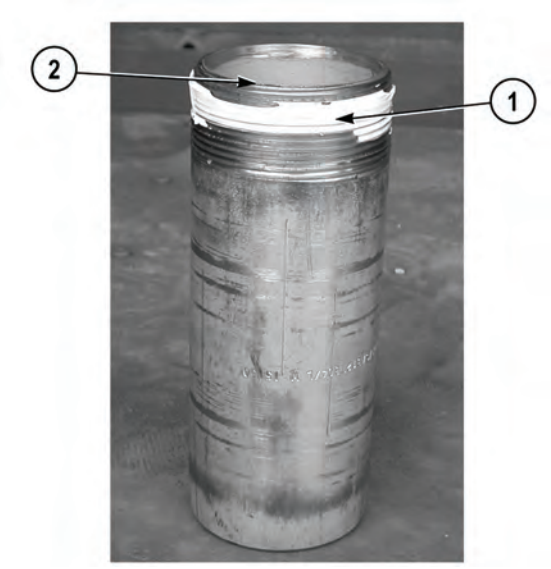
INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Compound, Sealing, Pipe Thread (WP 0401, Item 11)
Tape, Teflon (WP 0401, Item 24)

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)

ASSEMBLY

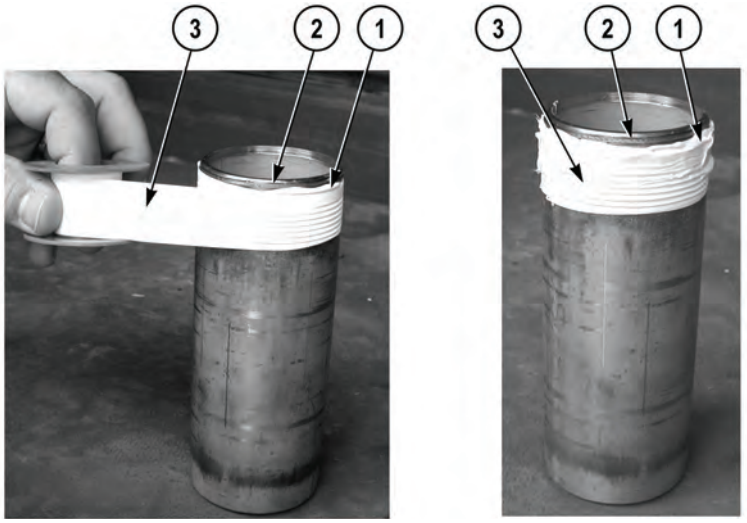


WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

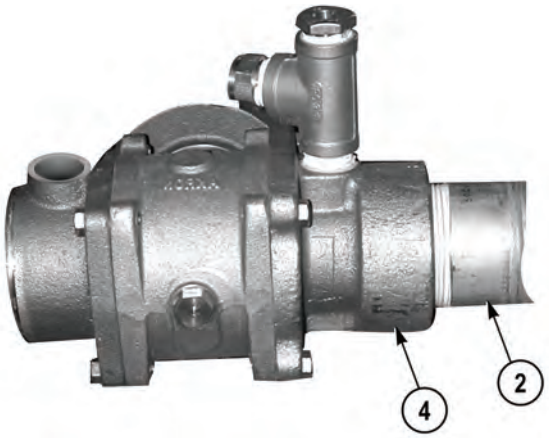
1. Apply pipe sealant (1) to threads of pipe (2).



NOTE

- Pipes under 1.5 in. (38.1 mm) diameter, apply pipe sealant only.
- Pipes 1.5 in. (38.1 mm) diameter or over, apply pipe sealant and Teflon tape.
- Leave first two or three threads exposed when applying pipe sealant and Teflon tape.

2. Apply four to five wraps of Teflon tape (3) over threads of pipe (2) where pipe sealant (1) was applied.
3. Apply pipe sealant (1) over threads of pipe (2) again, where Teflon tape (3) was applied.



4. Install pipe (2) in adapter (4). Screw pipe until completely tight and desired position is obtained.

END OF TASK

FOLLOW-ON MAINTENANCE

Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PUMP COOLER (DUMP-TO-GROUND) VALVE REPLACEMENT

INITIAL SETUP:

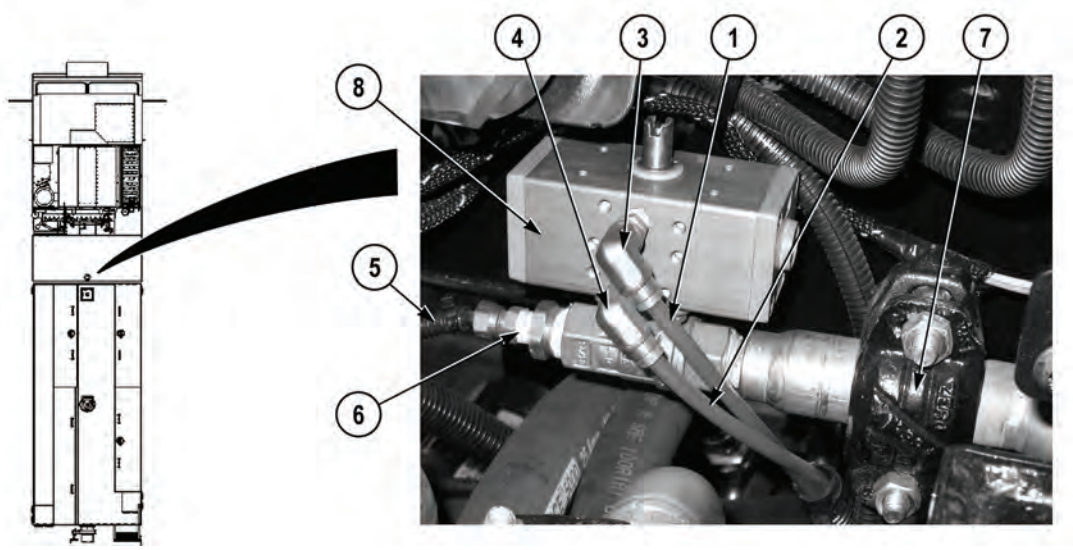
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Compound, Sealing, Pipe Thread (WP 0401, Item 11)
Tags, Identification (WP 0401, Item 22)
Ties, Cable (WP 0401, Item 25)

References
WP 0315

Equipment Conditions
Air system drained (TM 9-2320-279-10)
Pump house panel K removed (WP 0341)

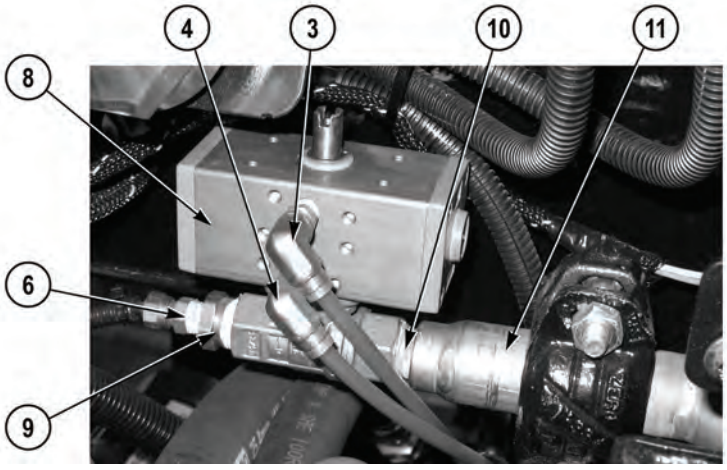
REMOVAL



NOTE

- Tag and mark air lines and drain line prior to removal to ensure proper installation.
- Remove cable ties as required.

1. Remove two air lines (1) and (2) from elbows (3) and (4).
2. Remove drain line (5) from fitting (6).
3. Remove coupling (7) and valve (8) from vehicle (WP 0315).



4. Remove two elbows (3) and (4) from valve (8).
5. Remove fitting (9) from valve (8).
6. Remove nipple (10) and pipe (11) from valve (8).
7. Remove nipple (10) from pipe (11).
8. Remove fitting (6) from fitting (9).

END OF TASK

INSTALLATION

WARNING

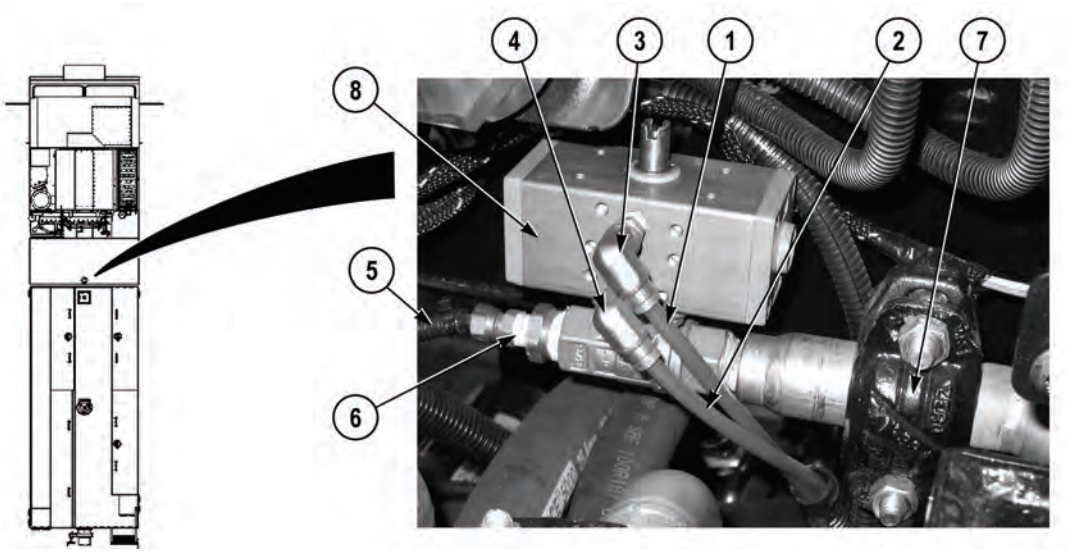


Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

NOTE

Install cable ties as required.

1. Apply sealing compound to threads of two fittings (6) and (9), elbows (3) and (4), and nipple (10).
2. Install fitting (6) on fitting (9).
3. Install fitting (9) on valve (8).
4. Install nipple (10) on fitting (11).
5. Install nipple (10) and pipe (11) on valve (8).
6. Install two elbows (4) and (3) on valve (8).



7. Install valve (8) and coupling (7) on vehicle (WP 0315).
8. Install drain line (5) on fitting (6).
9. Install two air lines (2) and (1) on elbows (4) and (3).

END OF TASK

FOLLOW-ON MAINTENANCE

Install pump house panel K (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PLUMBING, HOSES, AND PIPING REPLACEMENT

INITIAL SETUP:

Tools and Special Tools

Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Equipment Conditions

Water tank drained (WP 0014)
Foam tank drained (WP 0021)
Pump house panels removed (WP 0341)
Coupling(s) removed (WP 0315)

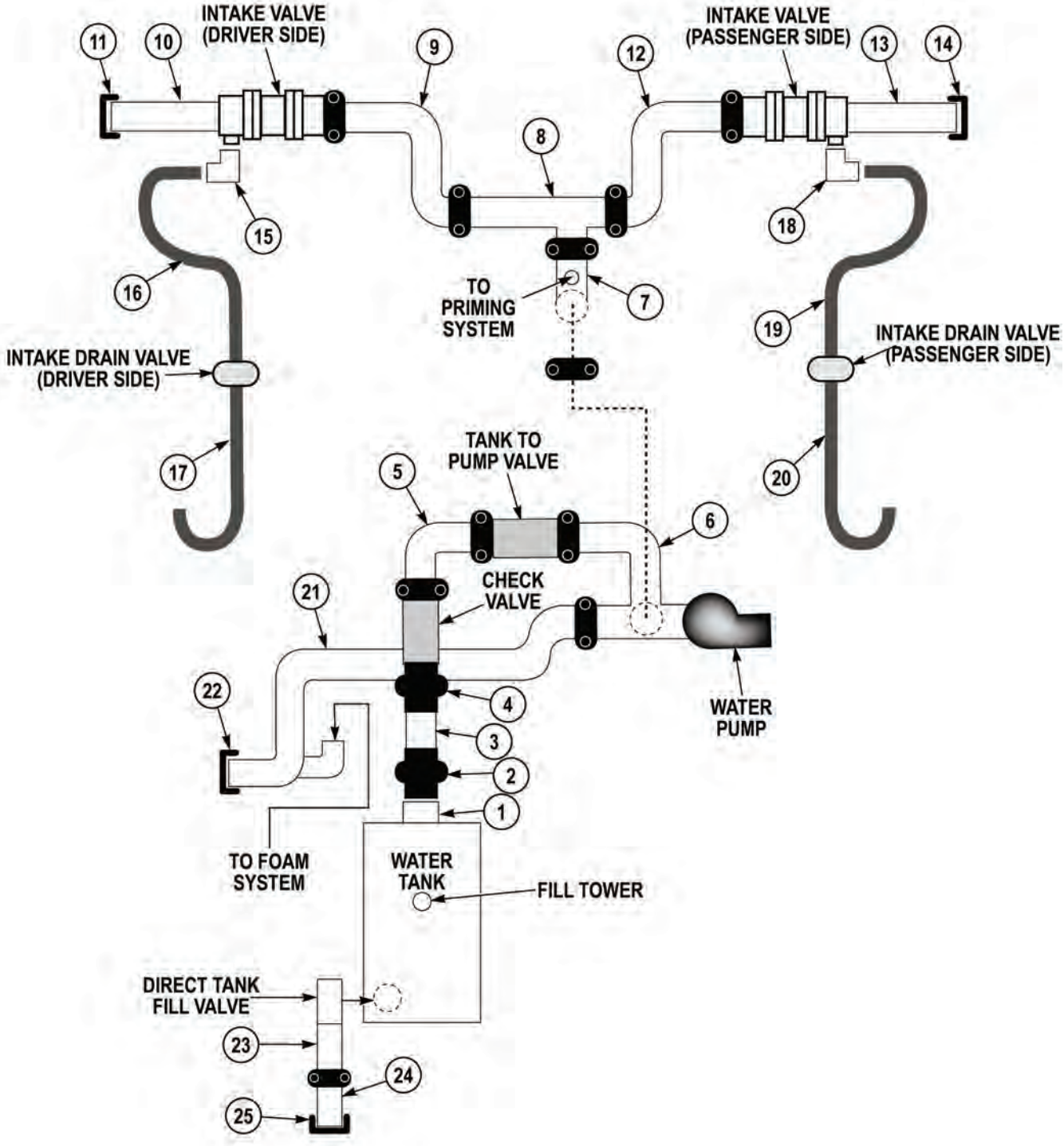


Figure 1. Water Intake System.

Item	Water Intake System - Description
1	Pipe (Part of Tank)
2	Flexible Coupling
3	Pipe Weldment
4	Flexible Coupling
5	Elbow Weldment
6	Manifold Weldment
7	Elbow Weldment
8	Manifold Weldment
9	Inlet Weldment (Driver Side)
10	Elbow Weldment (Driver Side)
11	Cap/Adapter
12	Inlet Weldment (Passenger Side)
13	Elbow Weldment (Passenger Side)
14	Cap/Adapter
15	Elbow
16	Intake Drain Valve Hose (Driver Side)
17	Intake Drain Valve Hose (Driver Side) To Ground
18	Elbow
19	Intake Drain Valve Hose (Passenger Side)
20	Intake Drain Valve Hose (Passenger Side) To Ground
21	Main Inlet Manifold
22	Cap
23	Pipe Weldment
24	Pipe Weldment
25	Cap

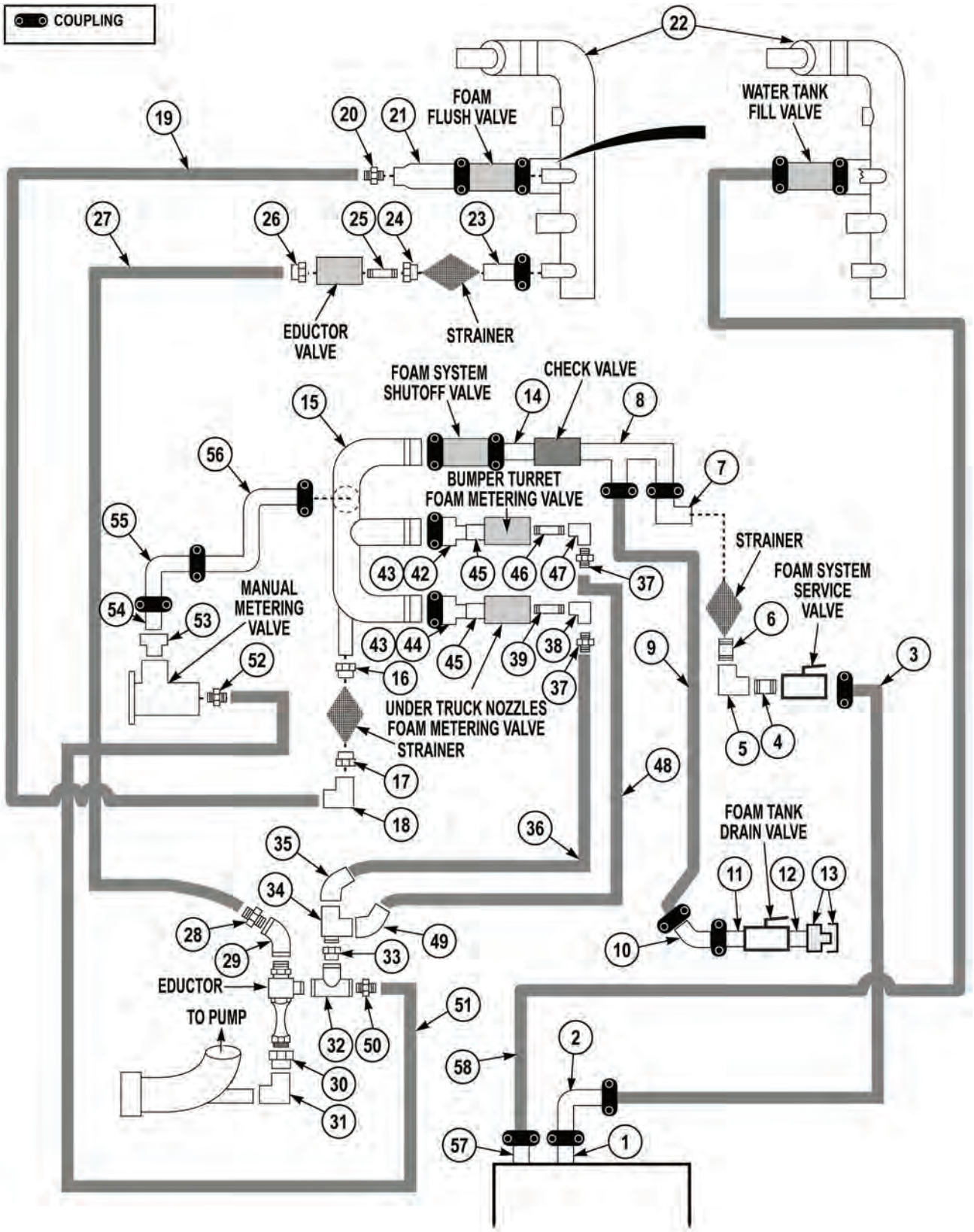


Figure 2. Foam and Water Tank Fill Systems.

Item	Foam and Water Tank Fill Systems - Description
1	Pipe
2	Hose
3	Pipe Nipple
4	Nipple
5	Elbow
6	Nipple
7	Elbow
8	Foam Supply/Drain Weldment
9	Hose
10	Foam Drain Valve Weldment
11	Nipple
12	Foam Drain, Cap, and Fitting
13	Weldment
14	Main Foam Manifold Weldment
15	Reducer
16	Reducer
17	Elbow
18	Line
19	Fitting
20	Reducer
21	Pump Discharge Manifold
22	Weldment
23	Reducer
24	Nipple
25	Reducer
26	Line
27	Fitting
28	Elbow
29	Reducer
30	Elbow
31	Tee
32	Fitting
33	Tee
34	Elbow

Item	Foam and Water Tank Fill Systems - Description (Continued)
35	Line
36	Fittings
37	Elbow
38	Nipple (Pipe)
39	Nipple
40	Adapter
41	Orifice Fitting
42	Adapter
43	Orifice Fitting
44	Nipple
45	Nipple (Pipe)
46	Elbow
47	Nipple
48	Line
49	Elbow
50	Fitting
51	Line
52	Fitting
53	Fitting
54	Weldment
55	Weldment
56	Weldment
57	Pipe
58	Hose

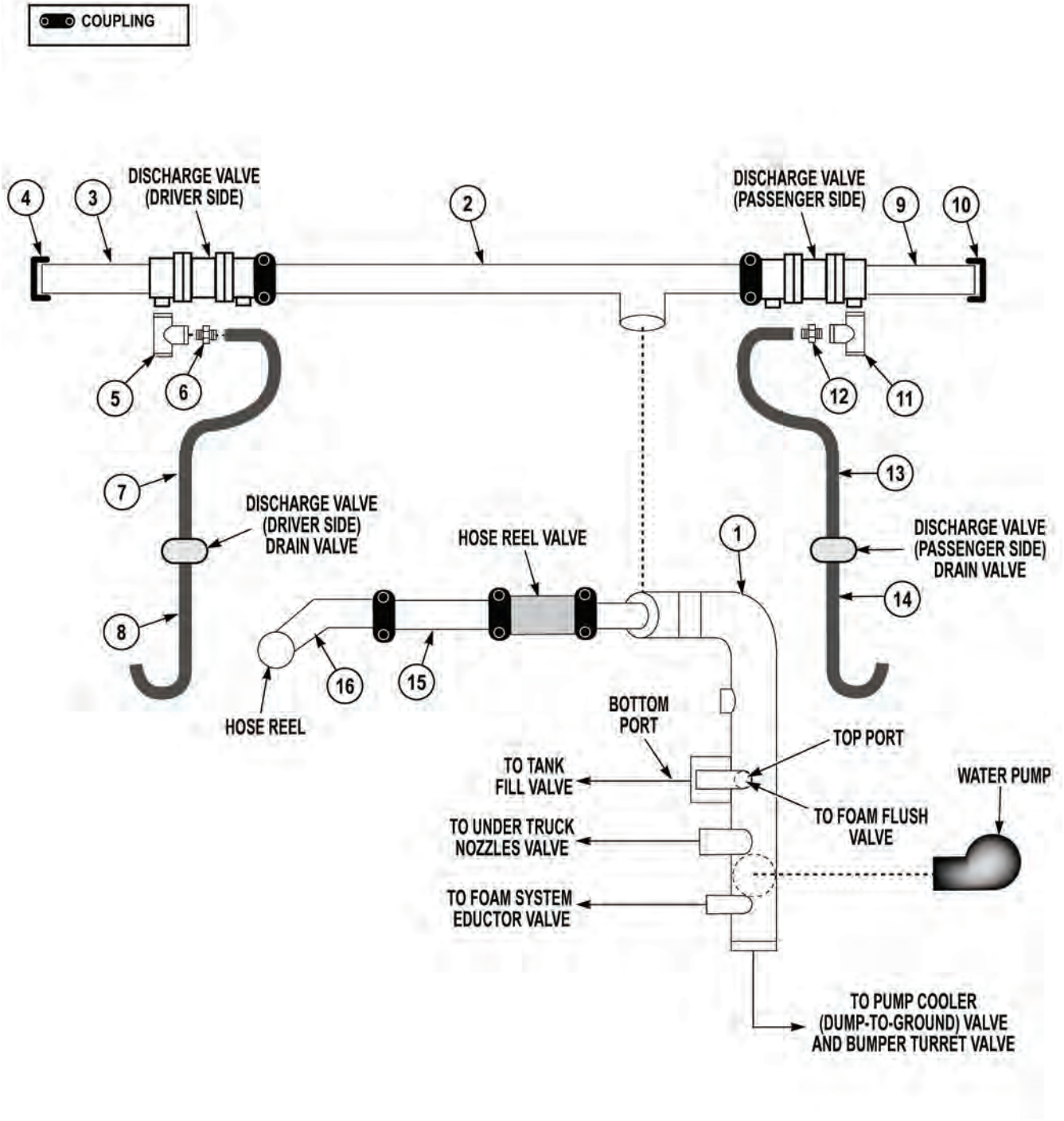


Figure 3. Side and Hose Reel Discharge System.

Item	Side and Hose Reel Discharge System - Description
1	Pump Discharge Manifold
2	Discharge Elbow
3	Driver Side/Passenger Side Discharge Manifold
4	Side Outlet Weldment
5	Cap/Adapter
6	Nipple
7	Tee
8	Fitting
9	Discharge Drain Valve Hose (Driver Side)
10	Discharge Drain Valve Hose (Driver Side) To Ground
11	Side Outlet Weldment
12	Cap/Adapter
13	Nipple
14	Tee
15	Fitting
16	Discharge Drain Valve Hose (Passenger Side)
17	Discharge Drain Valve Hose (Passenger Side) To Ground
18	Hose
19	Hose Reel Discharge Elbow

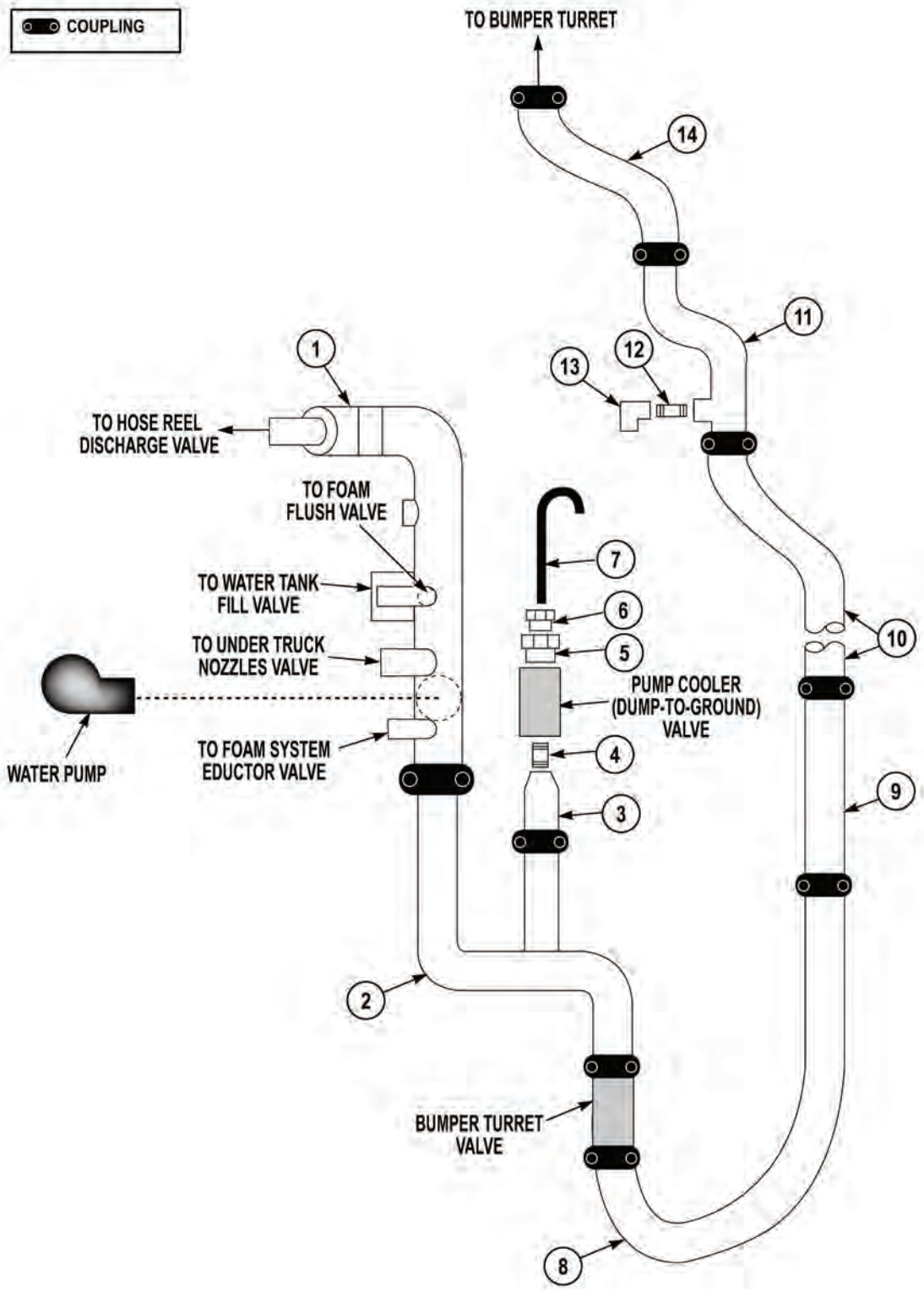


Figure 4. Pump Cooler (Dump-To-Ground) and Bumper Turret System.

1. Remove brackets and clamps as required.

Item	Pump Cooler (Dump-To-Ground) and Bumper Turret System - Description
1	Pump Discharge Manifold
2	Turret/Cooler Elbow
3	Reducer Weldment
4	Nipple
5	Reducer
6	Reducer
7	Pump Cooler (Dump-To-Ground) Valve Hose
8	Hose
9	Pipe
10	Pipe
11	Pipe
12	Fitting
13	Drain Valve
14	Hose
15	Pipe

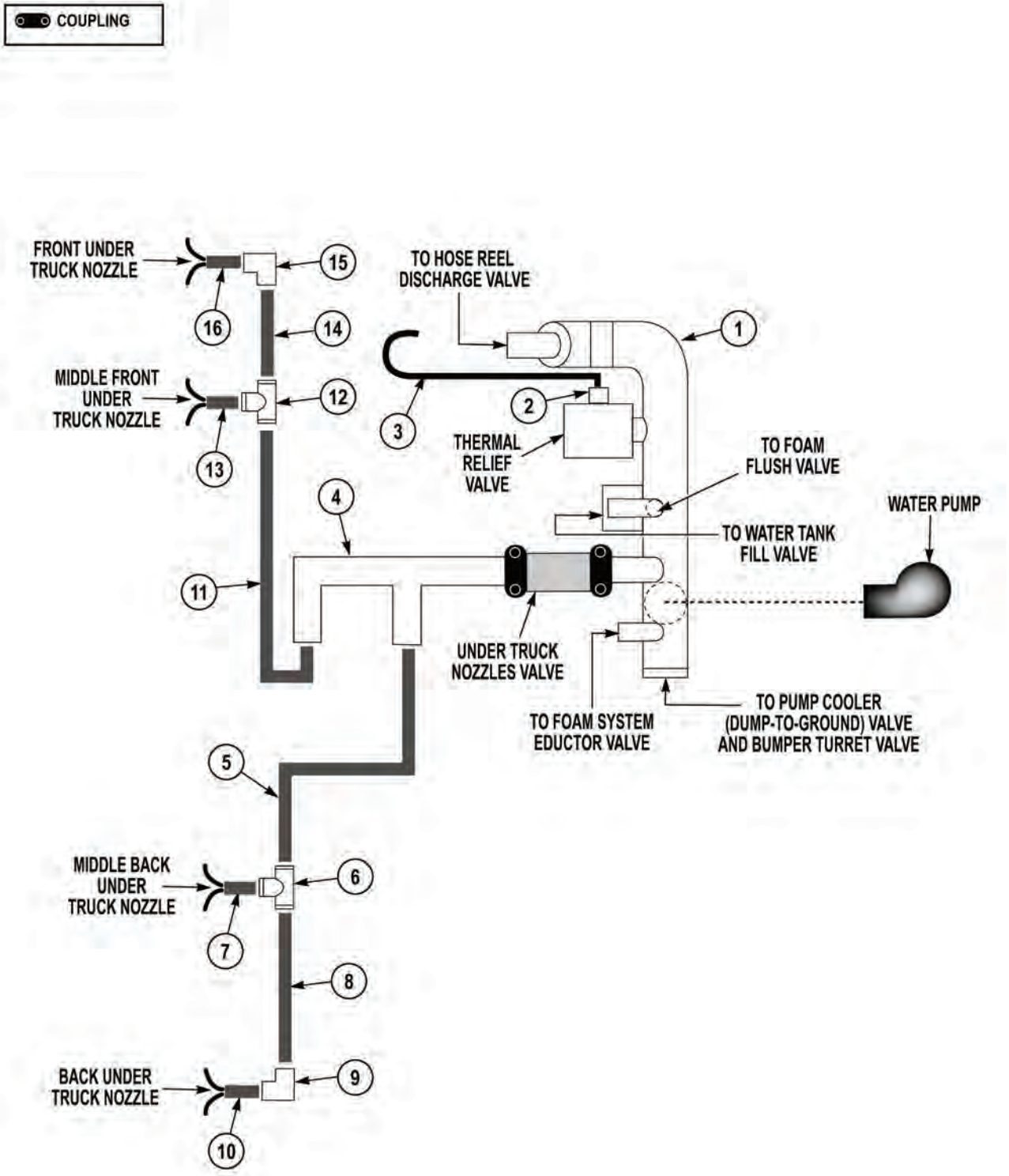


Figure 5. Under Truck Nozzles and Thermal Relief System.

Item	Under Truck Nozzles and Thermal Relief System - Description
1	Pump Discharge Manifold
2	Fitting
3	Hose
4	Under Truck Nozzles Weldment
5	Fitting
6	Fitting
7	Hose
8	Tee
9	Hose
10	Hose
11	Elbow
12	Hose
13	Hose
14	Tee
15	Hose
16	Hose
17	Elbow
18	Hose

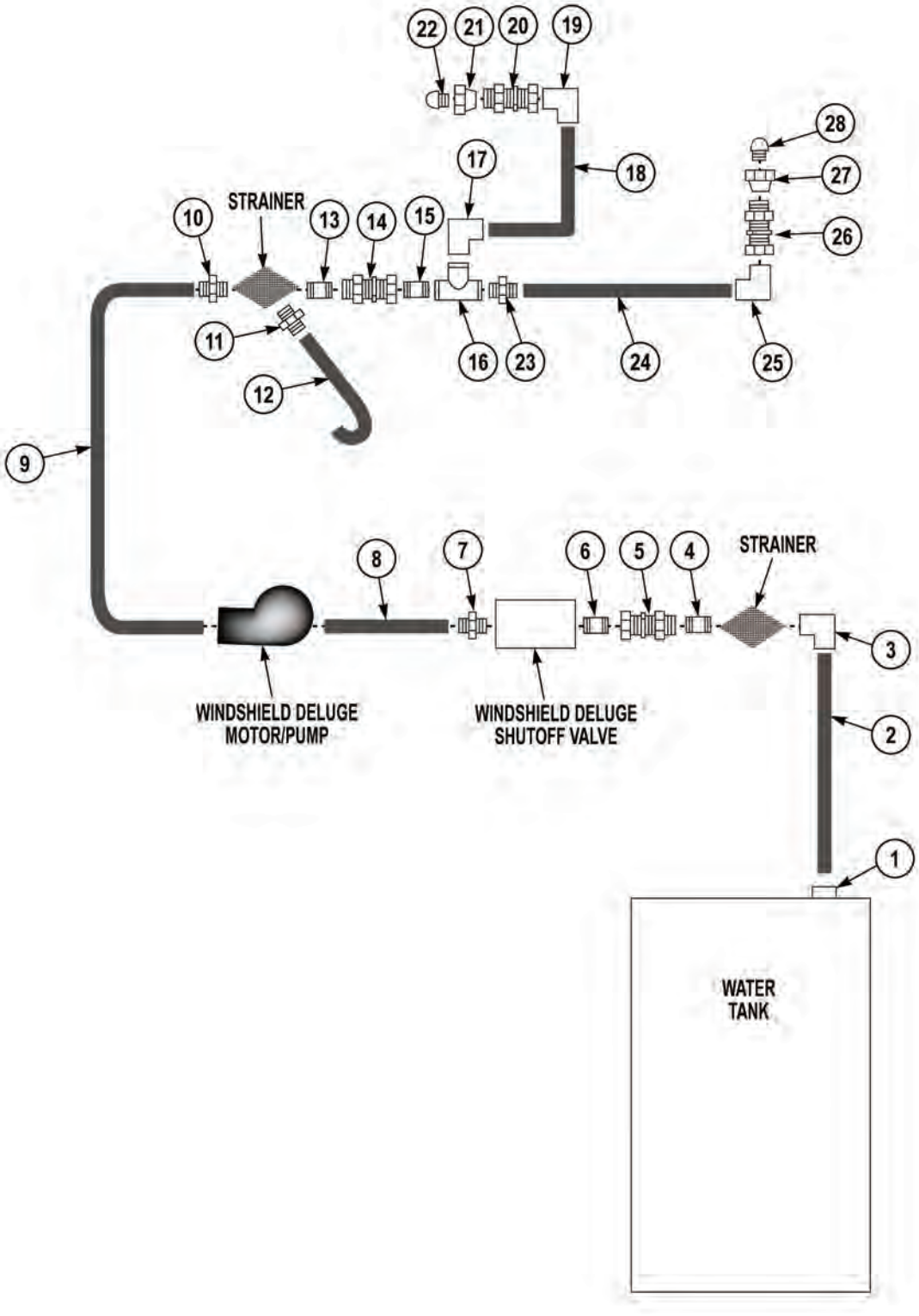


Figure 6. Windshield Deluge System.

Item	Windshield Deluge System - Description
1	Fitting
2	Hose
3	Elbow
4	Nipple
5	Bulkhead Fitting
6	Nipple
7	Fitting
8	Hose
9	Hose
10	Fitting
11	Fitting
12	Fitting
13	Fitting
14	Drain
15	Drain Hose
16	Nipple
17	Bulkhead Fitting
18	Nipple
19	Tee
20	Elbow
21	Hose
22	Elbow
23	Bulkhead Fitting
24	Nozzle
25	Adjustable Ball Fitting
26	Fitting
27	Hose
28	Elbow
29	Bulkhead Fitting
30	Nozzle
31	Adjustable Ball Fitting

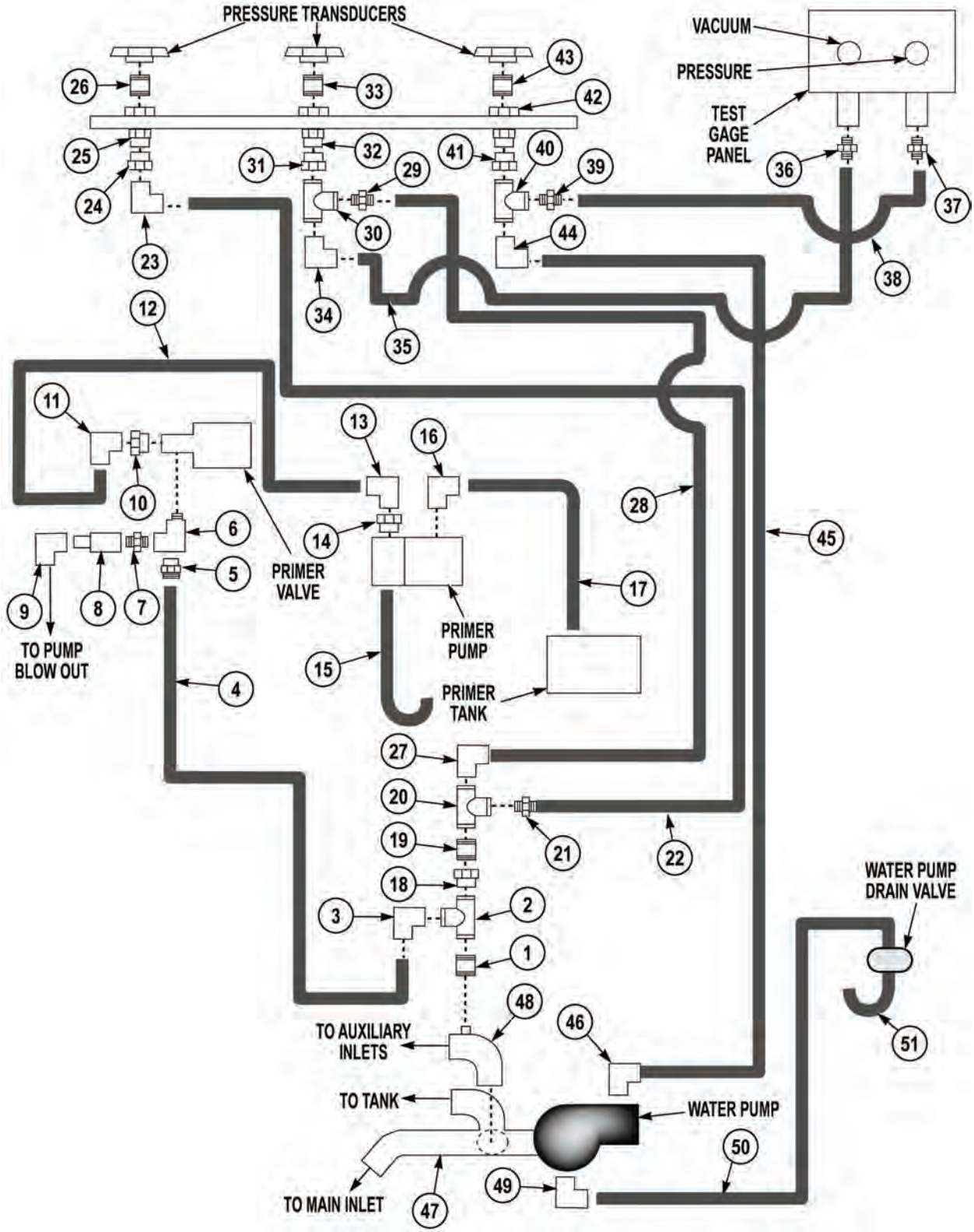


Figure 7. Priming and Pump Drain Systems.

Item	Priming and Pump Drain Systems - Description
1	Nipple
2	Tee
3	Elbow
4	Line
5	Fitting
6	Tee
7	Fitting
8	Check Valve
9	Elbow
10	Fitting
11	Elbow
12	Line
13	Elbow
14	Fitting
15	Drain Hose
16	Elbow
17	Line
18	Fitting
19	Nipple
20	Tee
21	Fitting
22	Line
23	Elbow
24	Fitting
25	Bulkhead Fitting
26	Nipple
27	Elbow
28	Line
29	Fitting
30	Tee
31	Fitting
32	Bulkhead Fitting
33	Nipple
34	Elbow

Item	Priming and Pump Drain Systems - Description
35	Line
36	Fitting
37	Fitting
38	Line
39	Fitting
40	Tee
41	Fitting
42	Bulkhead Fitting
43	Nipple
44	Elbow
45	Line
46	Elbow
47	Main Inlet Manifold
48	Elbow Weldment
49	Elbow
50	Line
51	Line

END OF TASK

FOLLOW-ON MAINTENANCE

1. Piping Assembly (Pipe Thread Sealing Compound) (WP 0320)
2. Install coupling(s) (WP 0315)
3. Install pump house panels (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PUMP DRAIN VALVE REPLACEMENT

INITIAL SETUP:

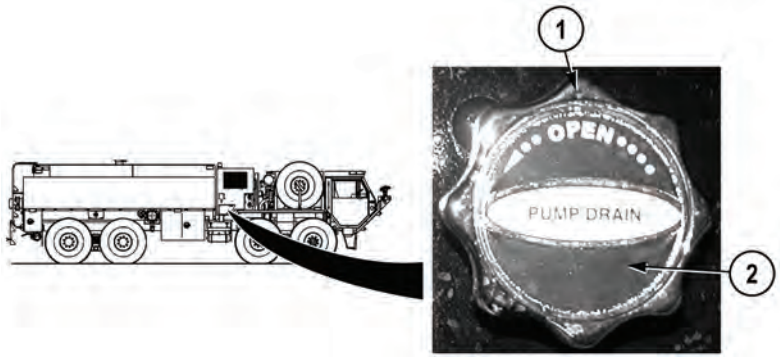
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Adhesive, Spray (WP 0401, Item 5)
Tape, Teflon (WP 0401, Item 24)
Tags, Identification (WP 0401, Item 22)
Locknut (1)

References
WP 0392, Fig. 14

Equipment Conditions
Pump house panel H access door opened (WP 0008)
Pump house panel P removed (WP 0341)

REMOVAL

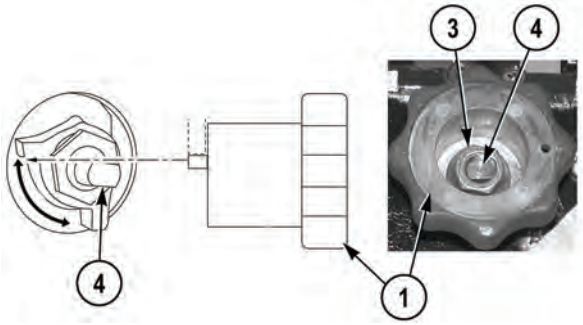


1. Turn valve handle (1) clockwise to closed position.

NOTE

- Cover is attached to valve handle with adhesive.
- Note position of cover prior to removal to ensure proper installation.
- Use care when removing cover.

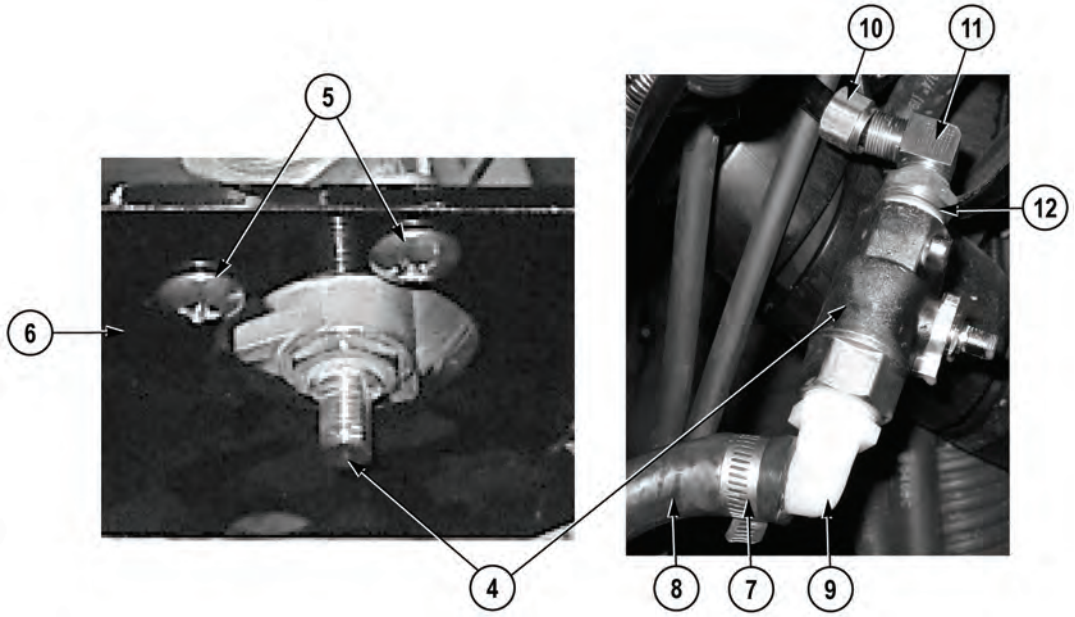
2. Pry cover (2) from valve handle (1).



NOTE

- Stop on valve handle is positioned between 90 degree indent on valve.
- Note position of valve handle on valve prior to removal to ensure proper installation.

3. Remove locknut (3) and valve handle (1) from valve (4). Discard locknut.



4. Remove two screws (5) and valve (4) from manual valve control mounting bracket (6).
5. Loosen clamp (7) and remove hose (8) from elbow (9).
6. Remove hose (10) from elbow (11).

NOTE

Note location of elbow and adapter prior to removal to ensure proper installation.

7. Remove elbow (11) from adapter (12).
8. Remove elbow (9) and adapter (12) from valve (4).

END OF TASK

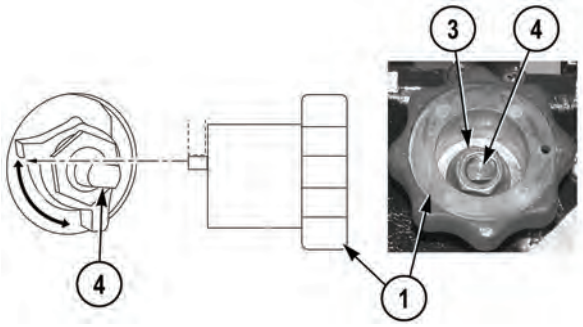
INSTALLATION

1. Apply teflon tape to threads of elbow (9), elbow (11), and adapter (12).

NOTE

Install elbow and adapter as noted prior to removal.

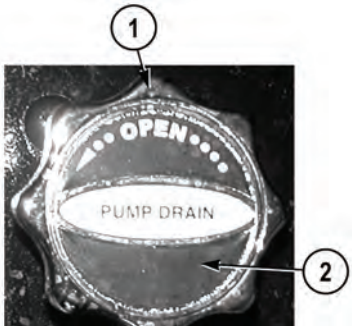
2. Install adapter (12) on valve (4).
3. Install elbow (11) on adapter (12).
4. Install elbow (9) on valve (4).
5. Install hose (10) on fitting (11).
6. Install hose (8) on fitting (9) and tighten clamp (7).
7. Install valve (4) on manual valve control mounting bracket (6) with two screws (5).



NOTE

Install handle in the position as noted prior to removal.

8. Install valve handle (1) on valve (4) with locknut (3).



WARNING



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9. Apply adhesive to back of cover (2).

NOTE

Install cover on handle as noted prior to removal.

10. Install cover (2) on handle (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Close pump house panel H access door (WP 0008)
2. Install pump house panel P (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

TANK-TO-PUMP VALVE REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

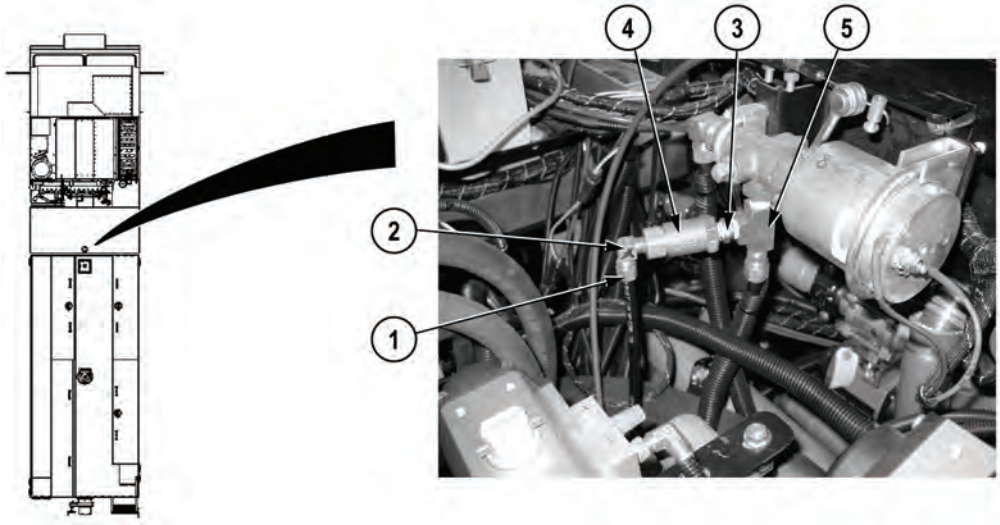
Materials/Parts
Compound, Sealing, Pipe Thread (WP 0401, Item 11)
Tags, Identification (WP 0401, Item 22)

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

References
WP 0315

Equipment Conditions
Air system drained (TM 9-2320-279-10)
Water tank drained (WP 0014)
Pump house panels K and G removed (WP 0341)

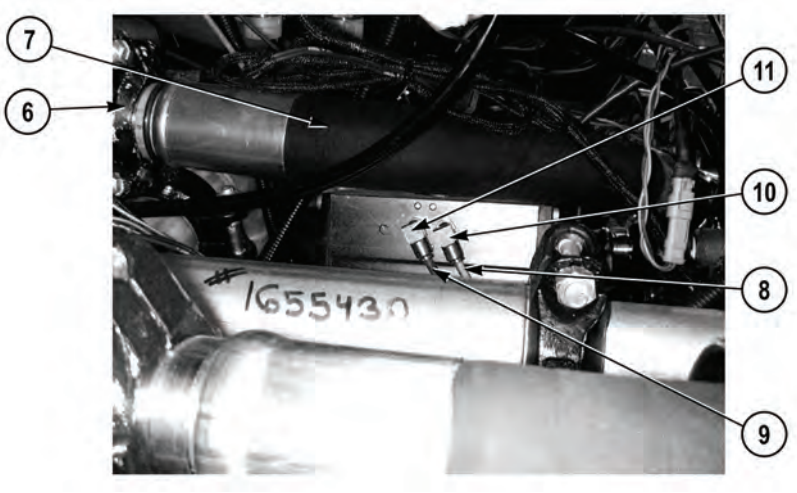
REMOVAL



NOTE

- Check valve and fitting must be removed in order to provide clearance when removing tank-to-pump valve.
- Tag and mark air lines prior to removal to ensure proper installation.

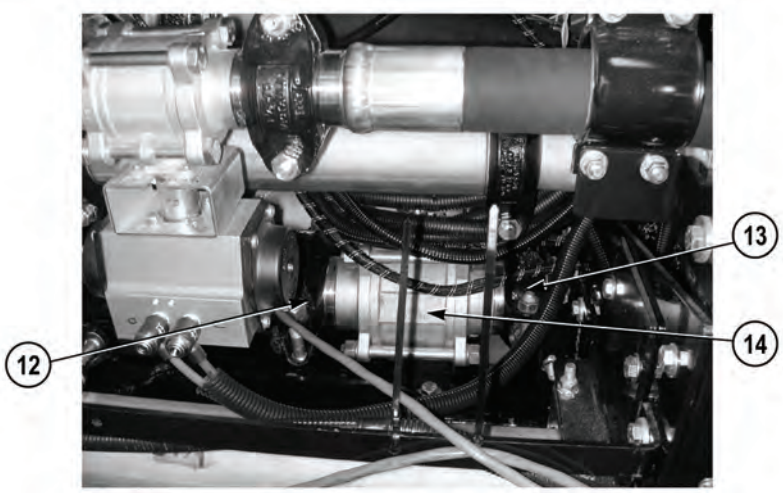
1. Remove line (1) from elbow (2).
2. Remove fitting (3) and check valve (4) from tee (5).



NOTE

Hose to water tank valve needs to be removed from water tank fill valve in order to remove tank-to-pump valve.

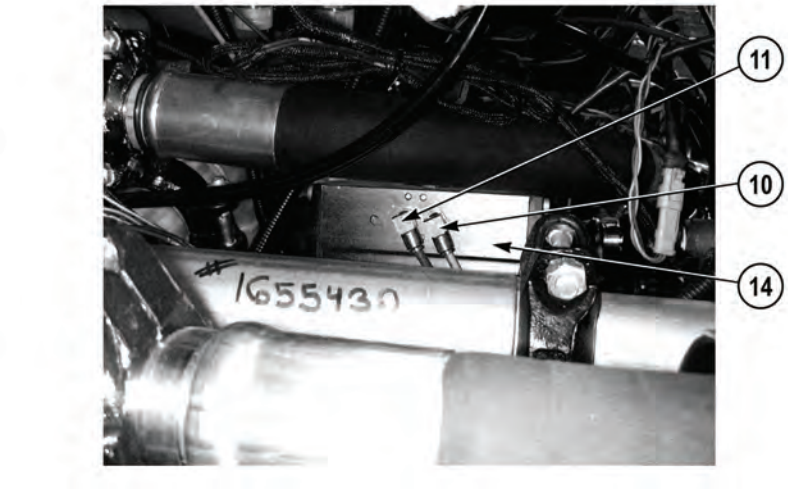
3. Remove coupling (6) and reposition hose (7) (WP 0315).
4. Remove two air lines (8) and (9) from elbows (10) and (11).



NOTE

- Driver side coupling needs to be removed from below tank-to-pump valve.
- Tank-to-pump valve is awkward and needs to be removed with the aid of an assistant.

5. With the aid of an assistant, remove two couplings (12) and (13) (WP 0315) and tank-to-pump valve (14) from vehicle.



6. Remove two elbows (10) and (11) from tank-to-pump valve (14).

END OF TASK

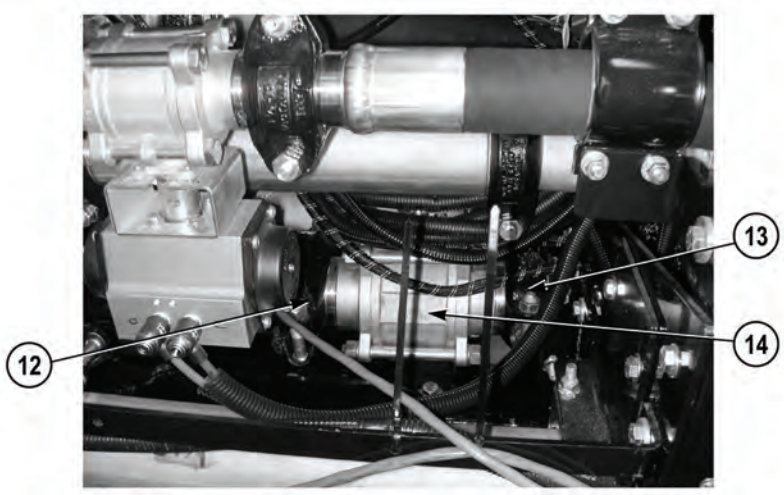
INSTALLATION

WARNING

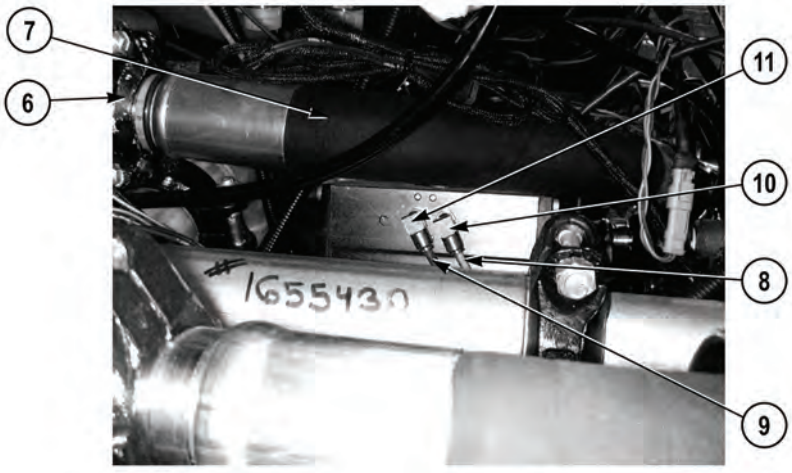


Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

1. Apply sealing compound to threads of two elbows (10) and (11).
2. Install two elbows (11) and (10) on tank-to-pump valve (14).

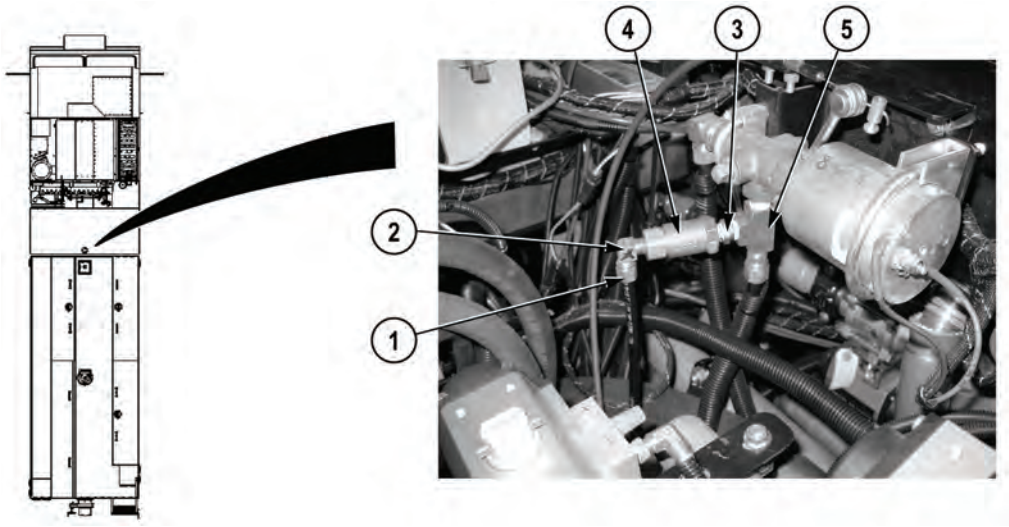


3. With the aid of an assistant, install two couplings (13) and (12) (WP 0315) and tank-to-pump valve (14) on vehicle.



4. Install two air lines (9) and (8) on elbows (11) and (10).

5. Position hose (7) and install coupling (6) (WP 0315).



WARNING



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6. Apply sealing compound to threads of fitting (3).
7. Install fitting (3) and check valve (4) on tee (5).
8. Install line (1) on elbow (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Install pump house panels K and G (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

UNDER TRUCK NOZZLES VALVE REPLACEMENT

INITIAL SETUP:

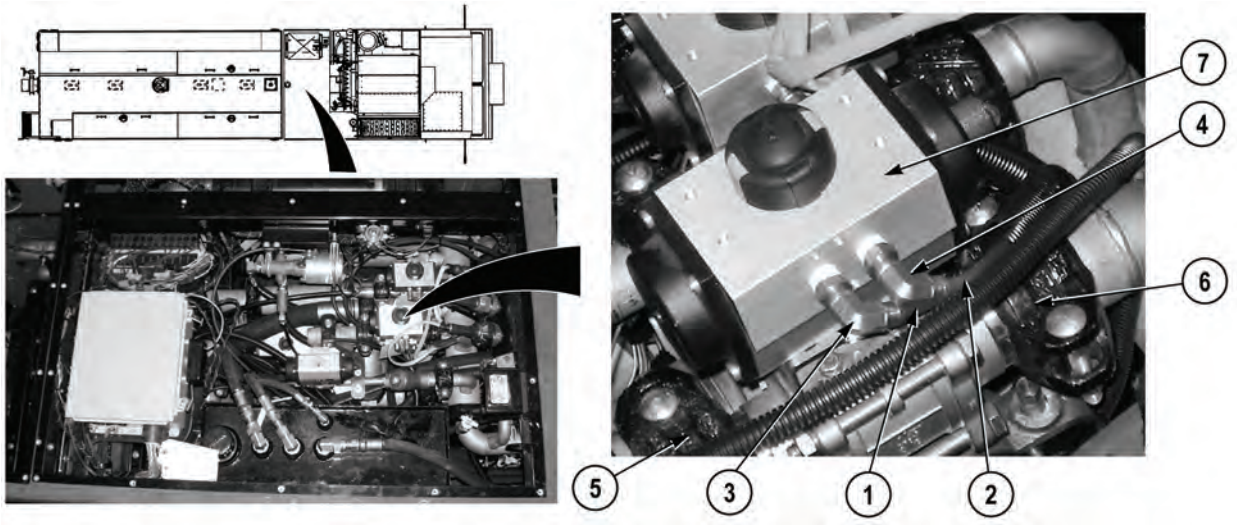
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Compound, Sealing, Pipe Thread (WP 0401, Item 11)
Tags, Identification (WP 0401, Item 22)

References
WP 0315

Equipment Conditions
Air system drained (TM 9-2320-279-10)
Pump house panel K removed (WP 0341)

REMOVAL



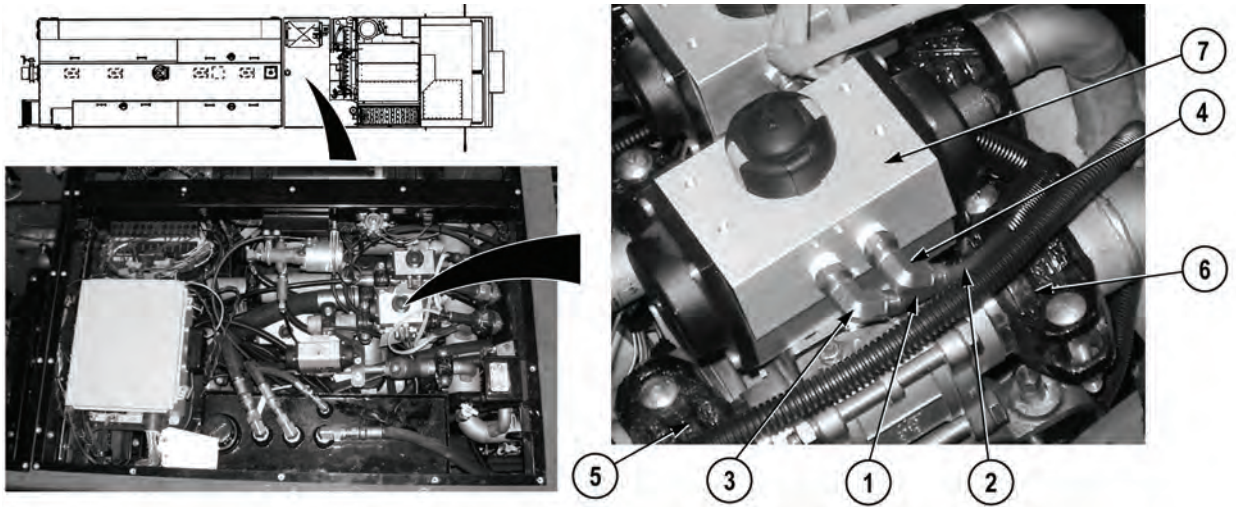
NOTE

- Note position of elbows prior to removal to ensure proper installation.
- Tag and mark air lines prior to removal to ensure proper installation.

1. Remove two air lines (1) and (2) from elbows (3) and (4).
2. Remove two couplings (5) and (6) and valve (7) from vehicle (WP 0315).
3. Remove two elbows (3) and (4) from valve (7).

END OF TASK

INSTALLATION



WARNING



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CAUTION

Use sealing compound sparingly only on pipe threads. Do not apply compound to hose connections. Failure to comply may result in damage to equipment.

1. Apply sealing compound to threads of two elbows (3) and (4).

NOTE

Install elbows in same position as noted prior to removal.

2. Install two elbows (4) and (3) on valve (7).
3. Install valve (7) and two couplings (6) and (5) (WP 0315) on vehicle.
4. Install two air lines (2) and (1) on elbows (4) and (3).

END OF TASK

FOLLOW-ON MAINTENANCE

Install pump house panel K (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

WINDSHIELD DELUGE AUTOMATIC DRAIN VALVE REPLACEMENT

INITIAL SETUP:

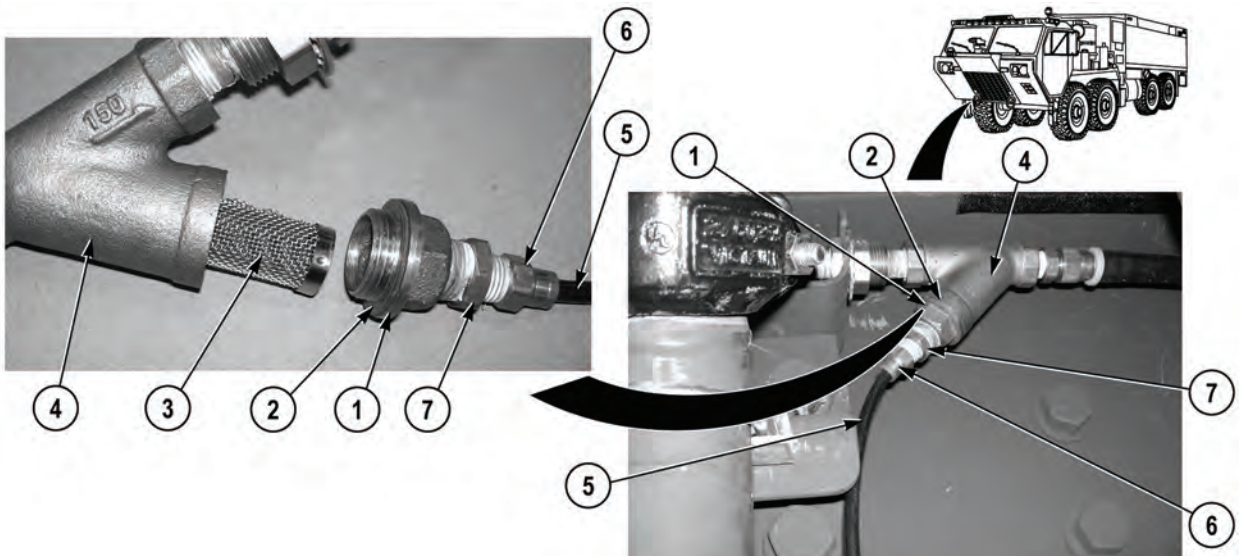
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Compound, Sealing, Pipe Thread (WP 0401, Item 11)
Tags, Identification (WP 0401, Item 22)
Gasket (1)
Lockwasher (1)
Locknut (1)
Lockwasher (1)

References
WP 0392, Fig. 94

Equipment Conditions
Skid plate grille removed (WP 0350)

STRAINER REMOVAL



1. Remove fitting (1), gasket (2), and strainer (3) from strainer body (4). Discard gasket.

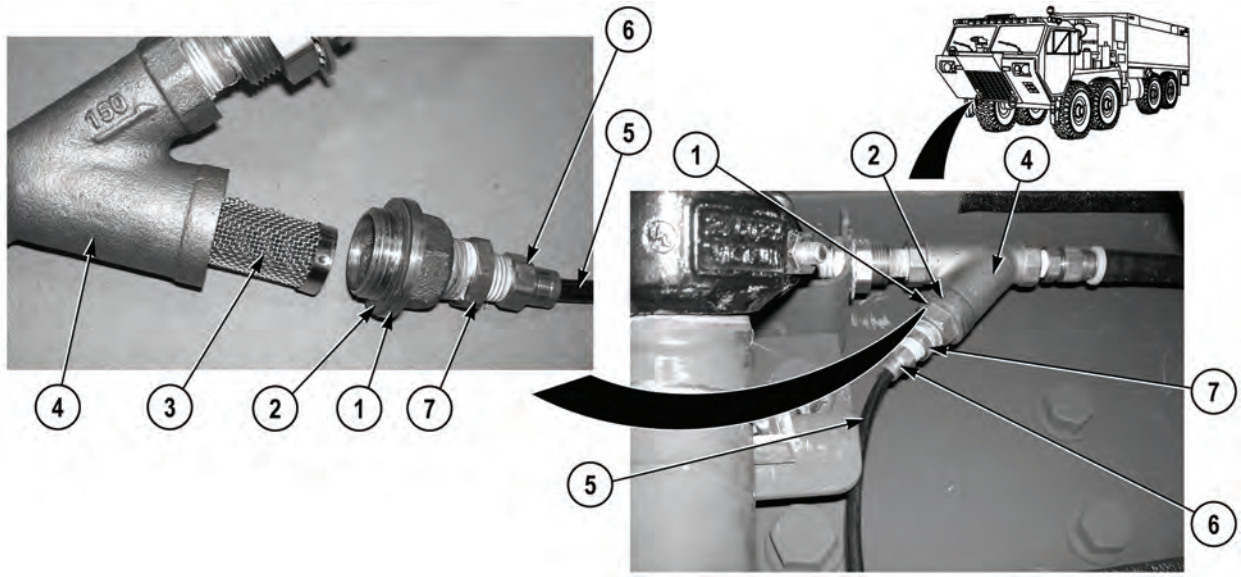
NOTE

- Note position of fitting and reducer prior to removal to ensure proper installation.
- Perform Steps (2) through (4) if fittings need to be removed.

2. Remove line (5) from fitting (6).
3. Remove fitting (6) from reducer (7).
4. Remove reducer (7) from fitting (1).

END OF TASK

STRAINER INSTALLATION



WARNING



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NOTE

Perform Steps (1) through (4) if fittings were removed.

1. Apply sealing compound to threads of reducer (7).

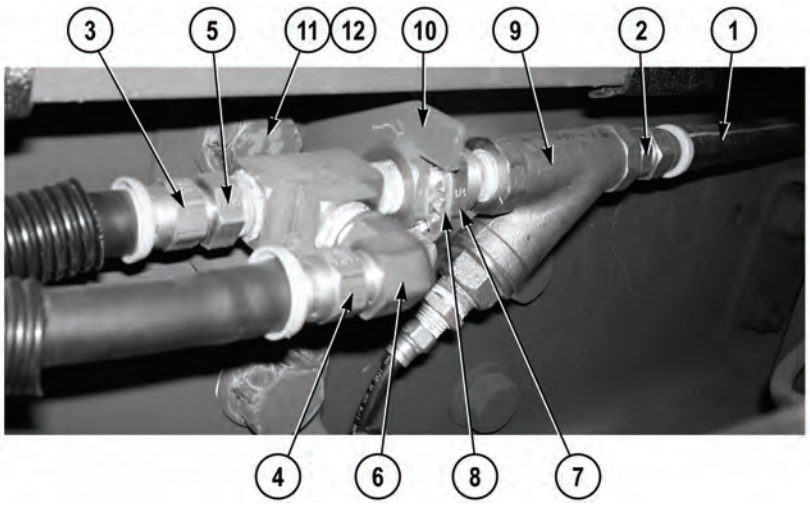
NOTE

Install reducer and fitting as noted prior to removal.

2. Install reducer (7) on fitting (1).
3. Install fitting (6) on reducer (7).
4. Install line (5) on fitting (6).
5. Install strainer (3), gasket (2), and fitting (1) on strainer body (4).

END OF TASK

STRAINER BODY AND TEE ASSEMBLY REMOVAL



NOTE

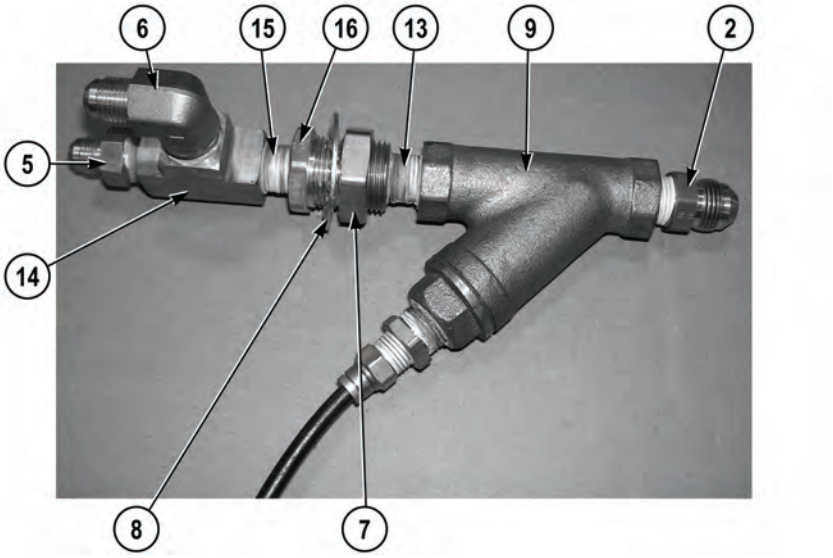
- Tag and mark hoses prior to removal to ensure proper installation.
- Note position of elbows and fittings prior to removal to ensure proper installation.

1. Remove hose (1) from fitting (2).
2. Remove two hoses (3) and (4) from fitting (5) and elbow (6).
3. Loosen jam nut (7), lockwasher (8), and remove strainer body (9) from bracket (10). Discard lockwasher.

NOTE

- Perform Step (4) if bracket needs to be removed.
- Note position of bracket prior to removal to ensure proper installation.

4. Remove locknut (11), screw (12), and bracket (10) from vehicle. Discard locknut.



5. Remove fitting (2) from strainer body (9).
6. Remove nipple (13) from strainer body (9).
7. Remove fitting (5) and elbow (6) from tee (14).
8. Remove tee (14) from nipple (15).
9. Remove two nipples (13) and (15) from bulkhead fitting (16).
10. Remove jam nut (7) and lockwasher (8) from bulkhead fitting (16). Discard lockwasher.

END OF TASK

STRAINER BODY AND TEE ASSEMBLY INSTALLATION

1. Install lockwasher (8) and jam nut (7) on bulk head fitting (16).

WARNING



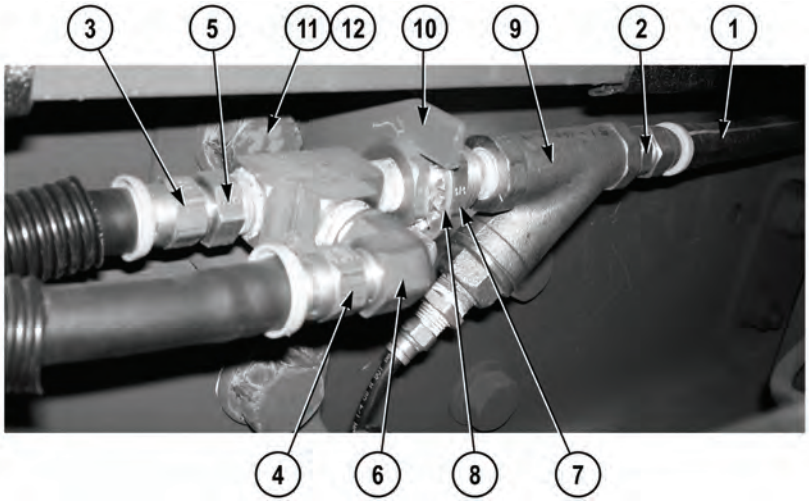
Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

NOTE

Install elbows and fittings as noted prior to removal.

2. Apply sealing compound to threads of two fittings (2) and (5), two nipples (15) and (13), and elbow (6).

3. Install two nipples (15) and (13) on bulkhead fitting (16).
4. Install tee (14) on nipple (15).
5. Install elbow (6) and fitting (5) on tee (14).
6. Install nipple (13) on strainer body (9).
7. Install fitting (2) on strainer body (9).



NOTE

Perform Step (8) if bracket was removed.

8. Install bracket (10) on vehicle with screw (12) and locknut (11).
9. Install strainer body (9) on bracket (10) with lockwasher (8) and jam nut (7).
10. Install two hoses (4) and (3) on elbow (6) and fitting (5).
11. Install hose (1) on fitting (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Install skid plate grille (WP 0350)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

CAB STEP REPLACEMENT

INITIAL SETUP:

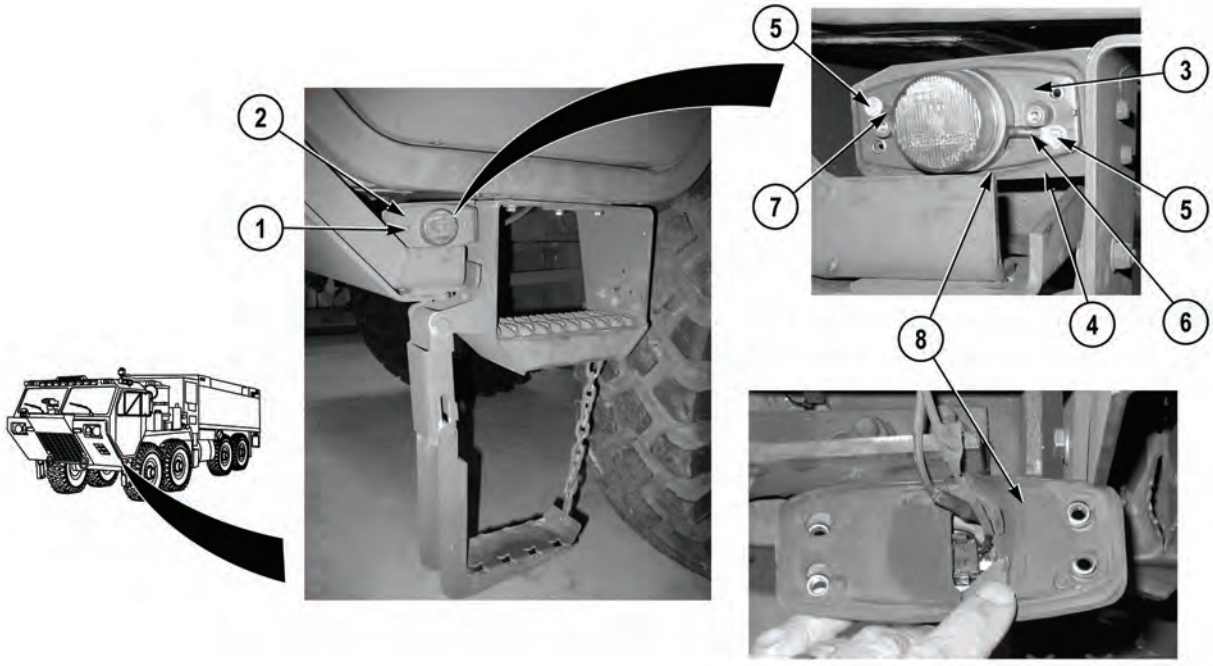
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Lockwasher (4)
Locknut (2)
Locknut (3)
Locknut (2)

References
WP 0392, Fig. 80

Equipment Conditions
Batteries disconnected (TM 9-2320-315-14&P)

REMOVAL



NOTE

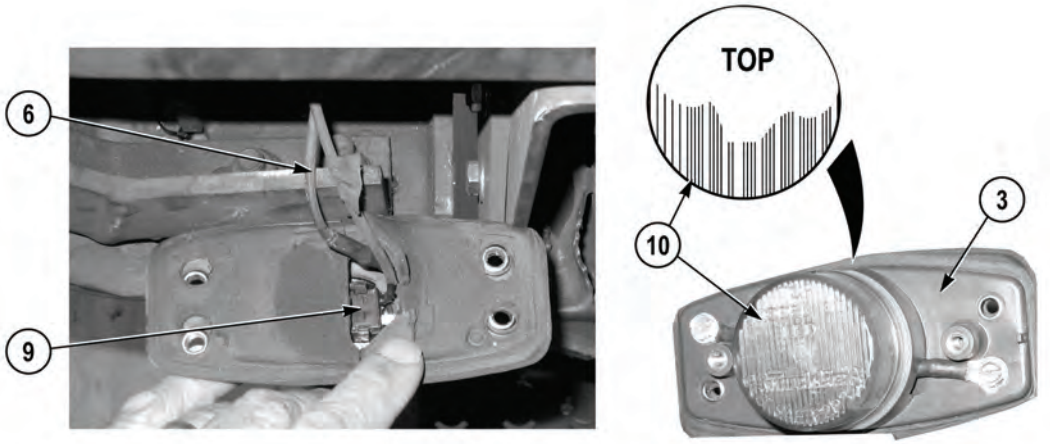
Driver and passenger side steps are removed the same way. Driver side shown.

1. Remove two screws (1) and light cover (2) from mounting base (3) and bracket (4).

NOTE

Tag and mark wires prior to removal to ensure proper installation.

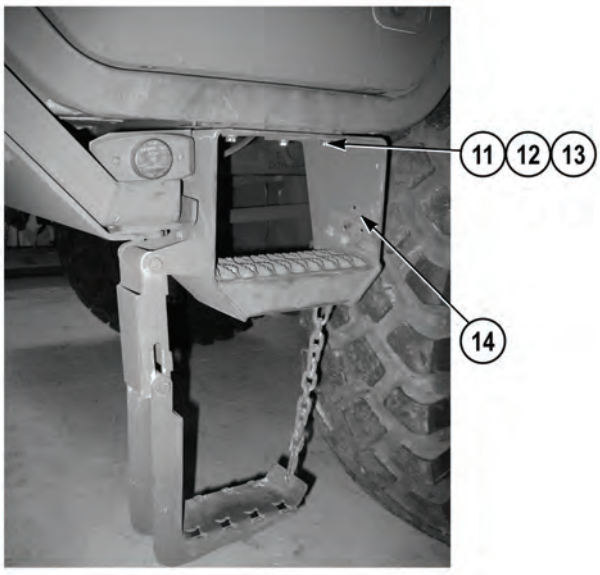
2. Remove two screws (5), wire 1435 (6), wire (7), mounting base (3), and seal (8) from bracket (4).



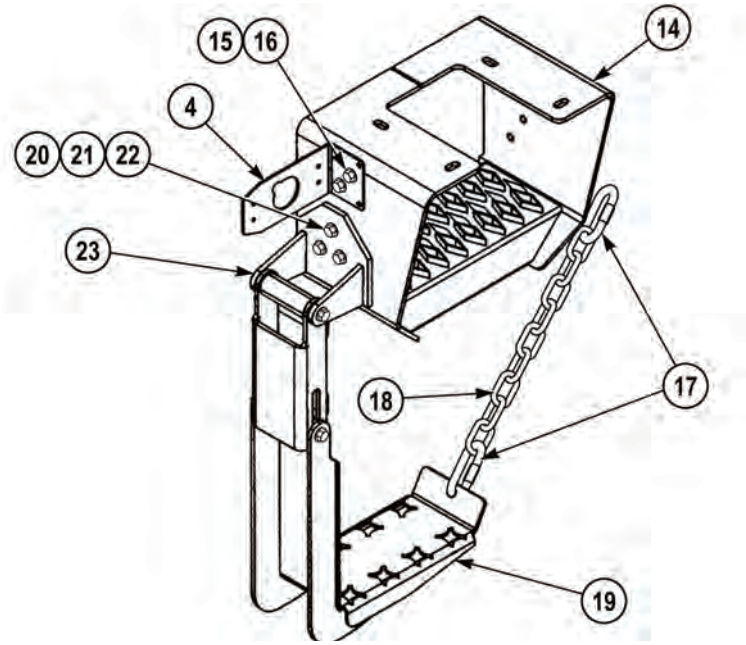
NOTE

- Lamp will only function if correctly installed on rubber mounting of pigtail. Plastic tabs on lamp must align with openings on rubber mounting of pigtail. It is possible to force lamp on rubber mounting of pigtail in opposite position, which will not allow lamp to operate.
- Note position of lamp on rubber mounting of pigtail and light cover prior to removal to ensure proper installation.
- Wire and rubber mounting of pigtail is routed through bracket after removal.

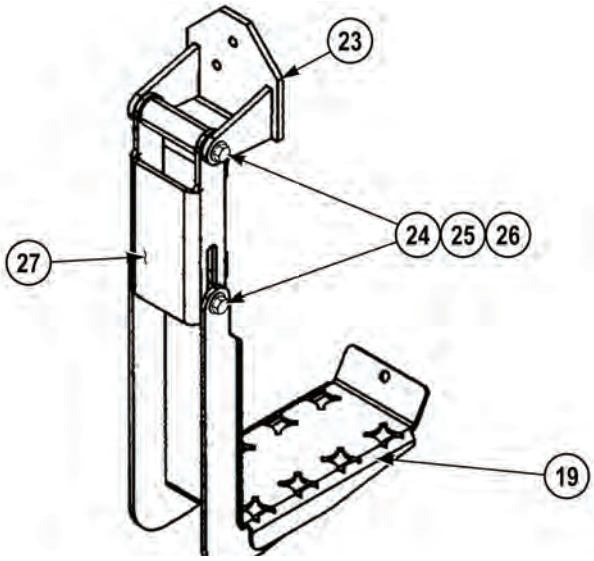
3. Remove rubber mounting of pigtail (9) and wire (6) from lamp (10) and mounting base (3).



4. Remove four screws (11), lockwashers (12), washers (13), and upper step mounting bracket (14) from vehicle. Discard lockwashers.



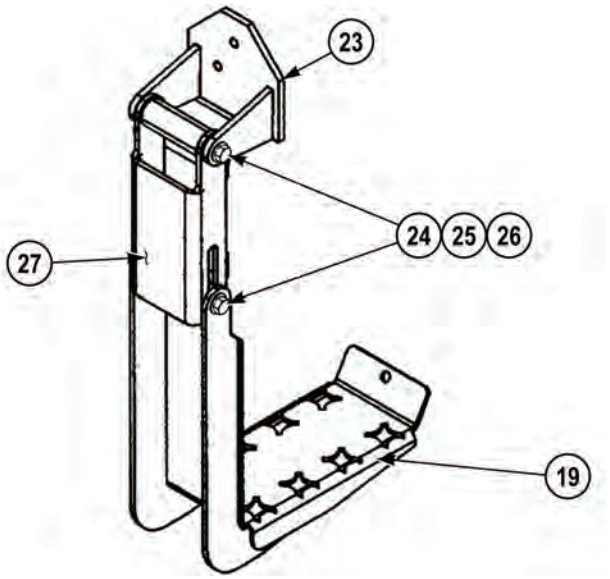
5. Remove two locknuts (15), screws (16), and bracket (4) from upper step mounting bracket (14). Discard locknuts.
6. Remove two links (17) and chain (18) from upper step (14) and lower step (19).
7. Remove two links (17) from chain (18).
8. Remove three locknuts (20), six washers (21), three screws (22), and bracket (23) from upper step mounting bracket (14). Discard locknuts.



9. Remove two locknuts (24), four washers (25), two screws (26), and bracket (27) from bracket (23) and lower step (19). Discard locknuts.

END OF TASK

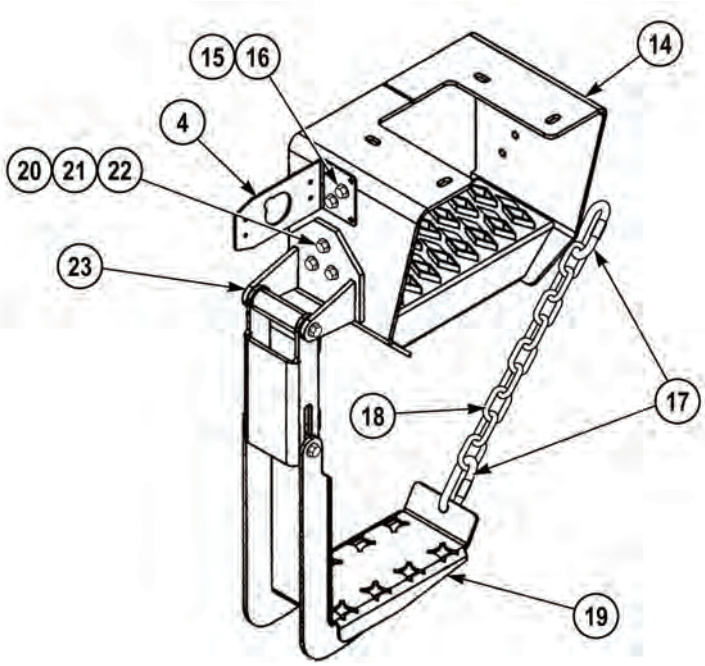
INSTALLATION



NOTE

Driver and passenger side steps are installed the same way. Driver side shown.

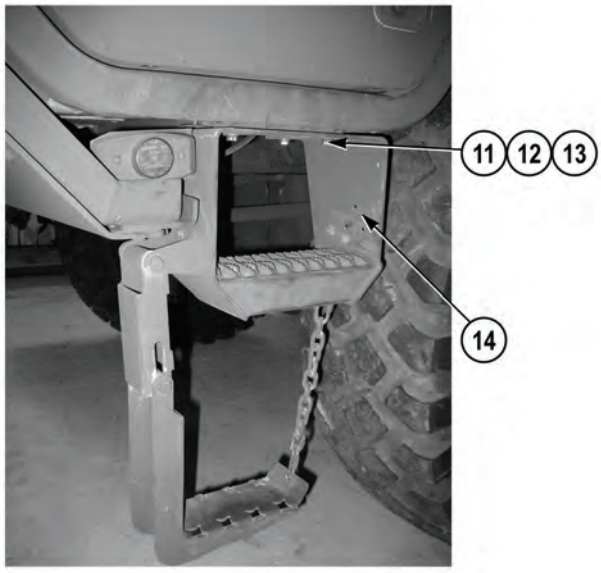
1. Install bracket (27) on lower step (19) and bracket (23) with two screws (26), four washers (25), and locknuts (24).



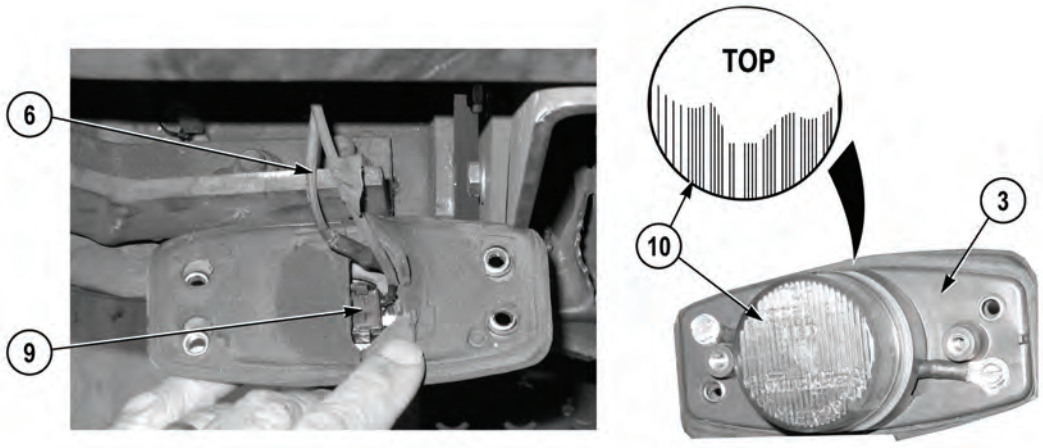
2. Install bracket (23) on upper step mounting bracket (14) with three screws (22), six washers (21), and three locknuts (20).

3. Position two links (17) on chain (18).

4. Install chain (18) on lower step (19) and upper step mounting bracket (14) with two links (17).
5. Install bracket (4) on upper step mounting bracket (14) with two screws (16) and locknuts (15).



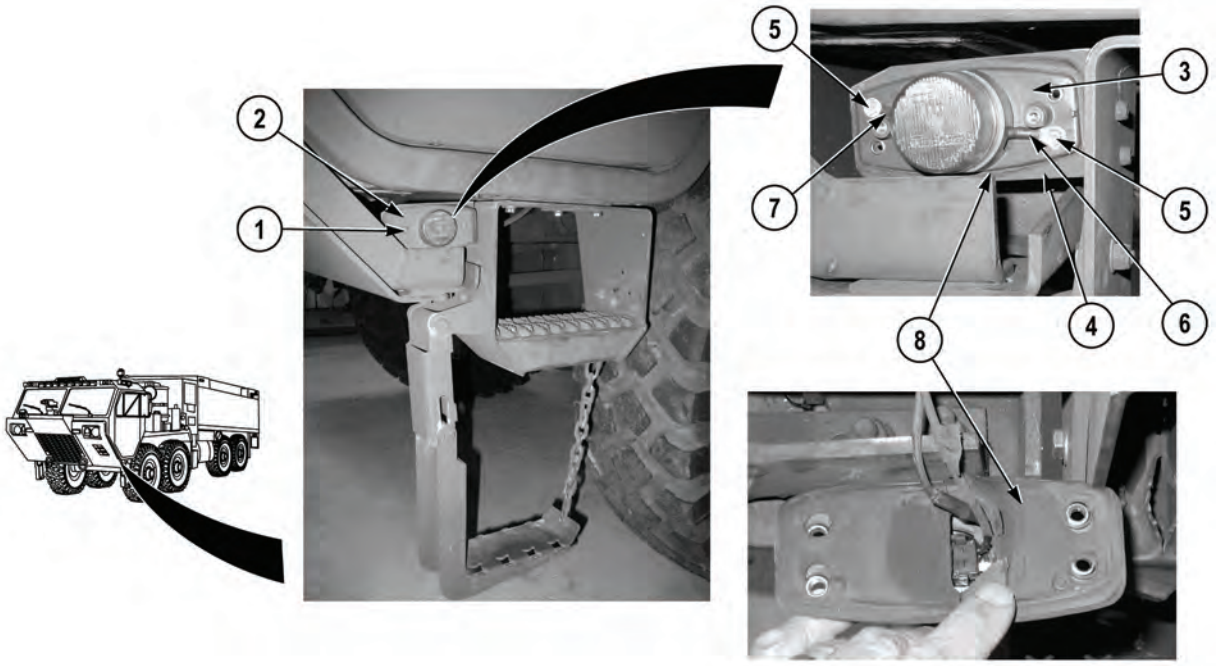
6. Install upper step mounting bracket (14) on vehicle with four washers (13), lockwashers (12), and screws (11).



NOTE

- Lamp will only function if correctly installed on rubber mounting of pigtail. Plastic tabs on lamp must align with openings on rubber mounting of pigtail. It is possible to force lamp on rubber mounting of pigtail in opposite position, which will not allow lamp to operate.
- Install lamp on rubber mounting of pigtail and light cover as noted prior to removal.

7. Install rubber mounting of pigtail (9) and wire (6) on lamp (10) and mounting base (3).



8. Install seal (8), mounting base (3), wire (7), and wire 1435 (6) on bracket (4) with two screws (5).
9. Install light cover (2) on mounting base (3) and bracket (4) with two screws (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Connect batteries (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

DECAL AND DATA PLATE REPLACEMENT

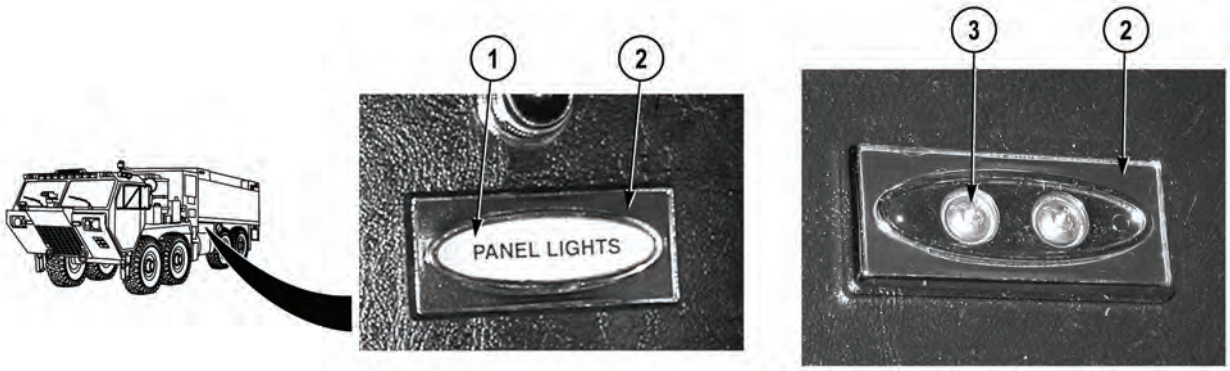
INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Adhesive, Spray (WP 0401, Item 5)
Cleaning Compound, Solvent (WP 0401, Item 8)
Cloth, Cleaning, Low-lint (WP 0401, Item 9)

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)

DECAL PLATE REMOVAL



⚠ CAUTION

If replacing more than one decal plate, note position of decal before removal to ensure proper installation. Damage to equipment may occur if decal plates are not put in right position.

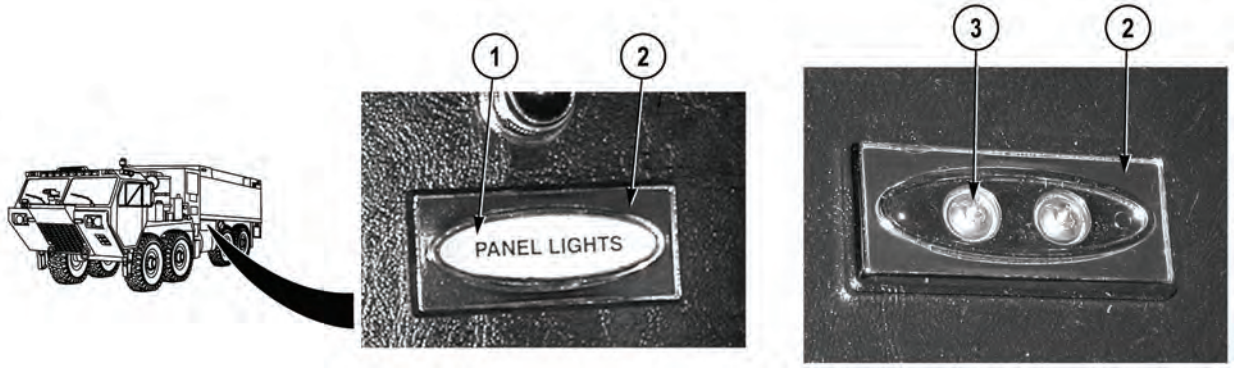
NOTE

All decal plates are removed the same way. Panel lights decal shown.

1. Remove decal (1) from bezel (2).
2. Remove two screws (3) and bezel (2) from vehicle.

END OF TASK

DECAL PLATE INSTALLATION



1. Install bezel (2) on vehicle with two screws (3).

WARNING



Solvent cleaning compound MIL-PRF-680 Type II and III may be irritating to the eyes and skin. Use protective gloves and goggles. Use in well-ventilated areas. Use respirator as needed. Accidental ingestion can cause irritation of digestive tract and respiratory tract, may cause lung and central nervous system damage. Can be fatal if swallowed. Inhalation of high/massive concentrations can cause coma or be fatal. First aid for ingestion: do not induce vomiting. Seek immediate medical attention. First aid for skin contact: remove contaminated clothing. Wash skin thoroughly with soap and water. If symptoms persist, seek medical attention. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If symptoms persist, seek medical attention. First aid for inhalation: move to fresh air. If not breathing, provide artificial respiration. If symptoms persist, seek medical attention. Keep away from open flames and other sources of ignition. Failure to follow this warning may result in injury or death to personnel.

- **The flashpoint for Type II solvent cleaning compound is 141-198°F (61-92°C) and Type III is 200-241°F (93-116°C).**
- **Improper cleaning methods and use of unauthorized cleaning solvents may injure personnel and damage equipment.**
- **Fire extinguishers should be placed nearby when using solvent cleaning compound. Failure to follow this warning may result in injury or death.**
- **Cloths or rags saturated with solvent cleaning compound must be disposed of IAW authorized facilities' procedures. Failure to follow this warning may result in injury.**
- **Eye shields must be worn when cleaning with a wire brush. Flying rust and metal particle may cause injury.**

2. Clean bezel (2) with solvent cleaning compound.

WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

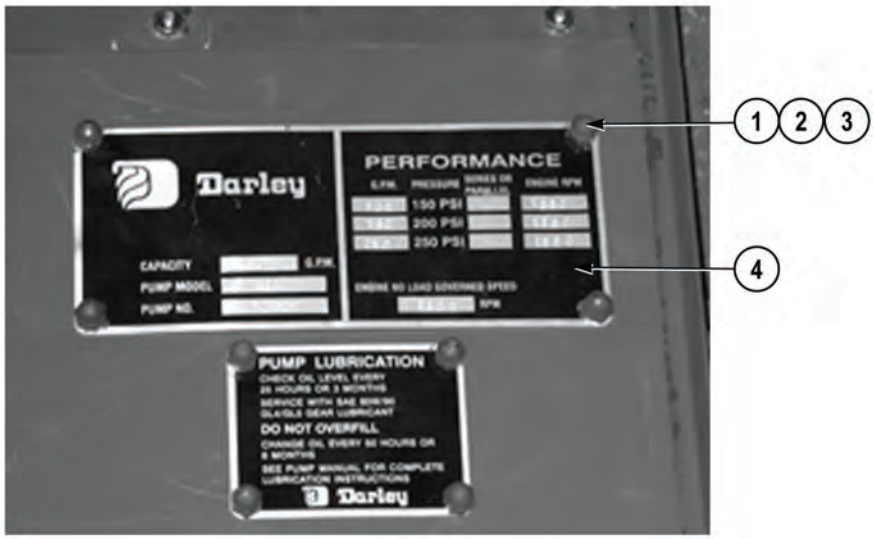
NOTE

- If reusing decal, apply adhesive to back of decal.
- Install decal as noted prior to removal.

3. Install decal (1) on bezel (2).

END OF TASK

DATA PLATE REMOVAL



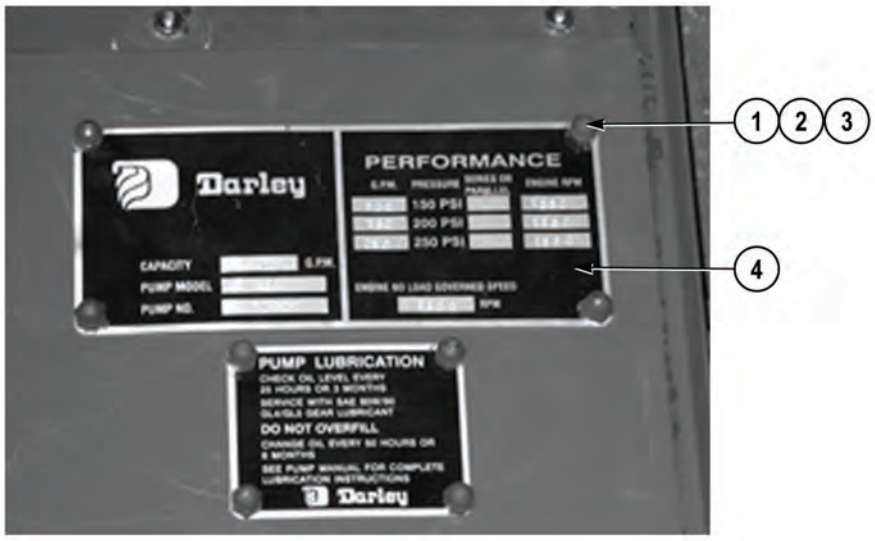
NOTE

All data plates are removed the same way.

Remove four nuts (1), washers (2), screws (3), and data plate (4) from vehicle.

END OF TASK

DATA PLATE INSTALLATION



NOTE

All data plates are installed the same way.

Install data plate (4) on vehicle with four screws (3), washers (2), and nuts (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

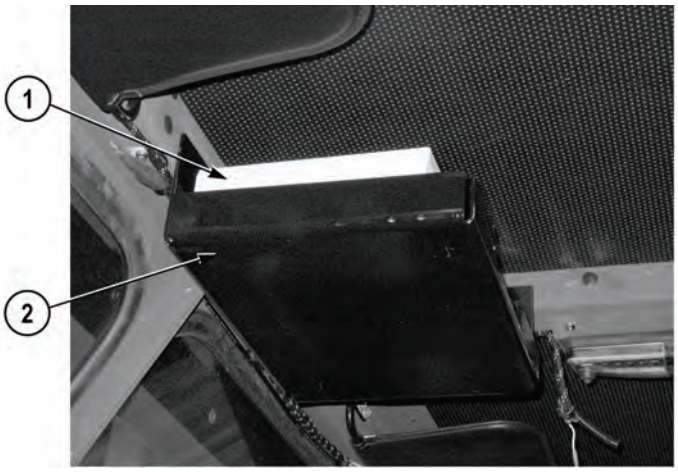
FIRST AID KIT MOUNTING BRACKET REPLACEMENT

INITIAL SETUP:

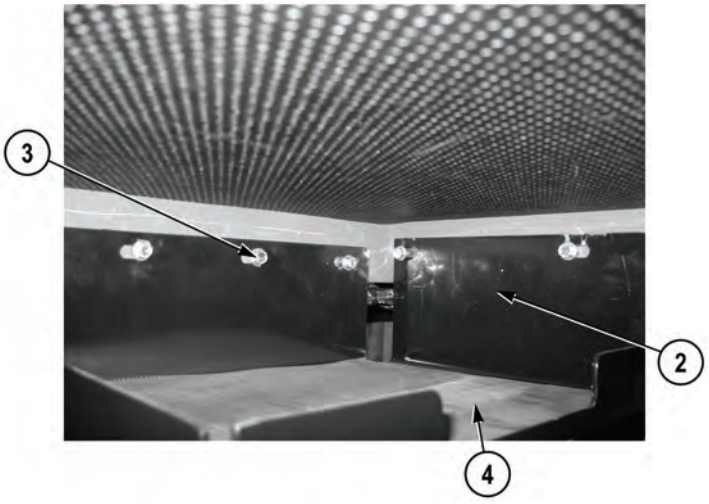
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive
(WP 0399, Item 17)

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)

REMOVAL



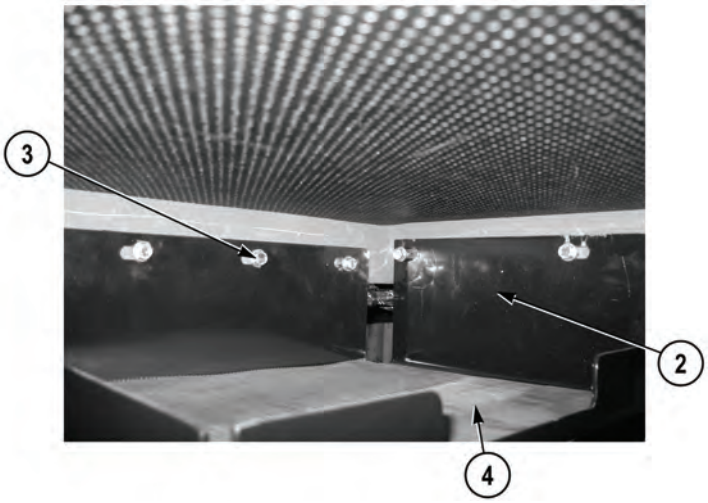
1. Remove first aid kit (1) from bracket (2).



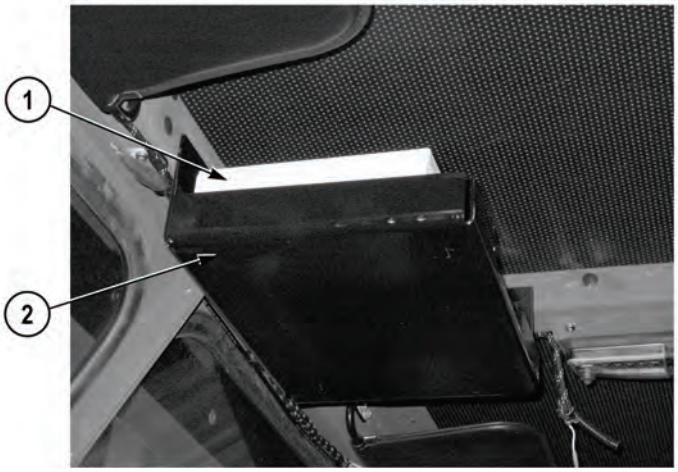
2. Remove five screws (3) and bracket (2) from vehicle.
3. Remove mat (4) from bracket (2).

END OF TASK

INSTALLATION



1. Install mat (4) on bracket (2).
2. Install bracket (2) on vehicle with five screws (3).



3. Install first aid kit (1) on bracket (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

GRAB HANDLE REPLACEMENT

INITIAL SETUP:

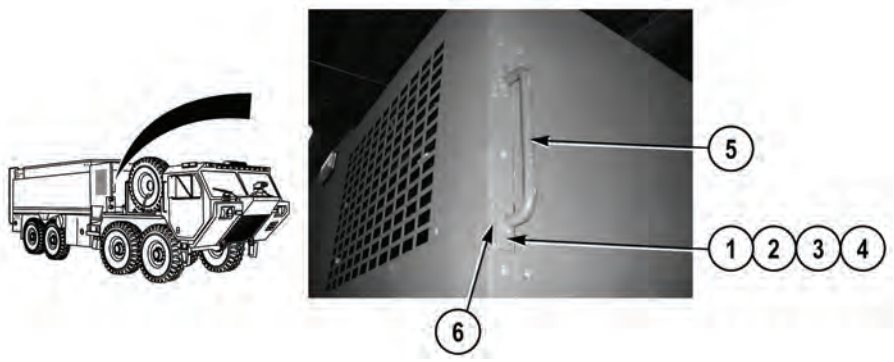
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Lockwasher (2)

References
WP 0392, Fig. 72

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)

REMOVAL



Remove two nuts (1), lockwashers (2), washers (3), screws (4), and grab handle (5) from pump house assembly (6). Discard lockwashers.

END OF TASK

INSTALLATION

Install grab handle (5) on pump house assembly (6) with two screws (4), washers (3), lockwashers (2), and nuts (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

HOSE BED ASSEMBLY REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

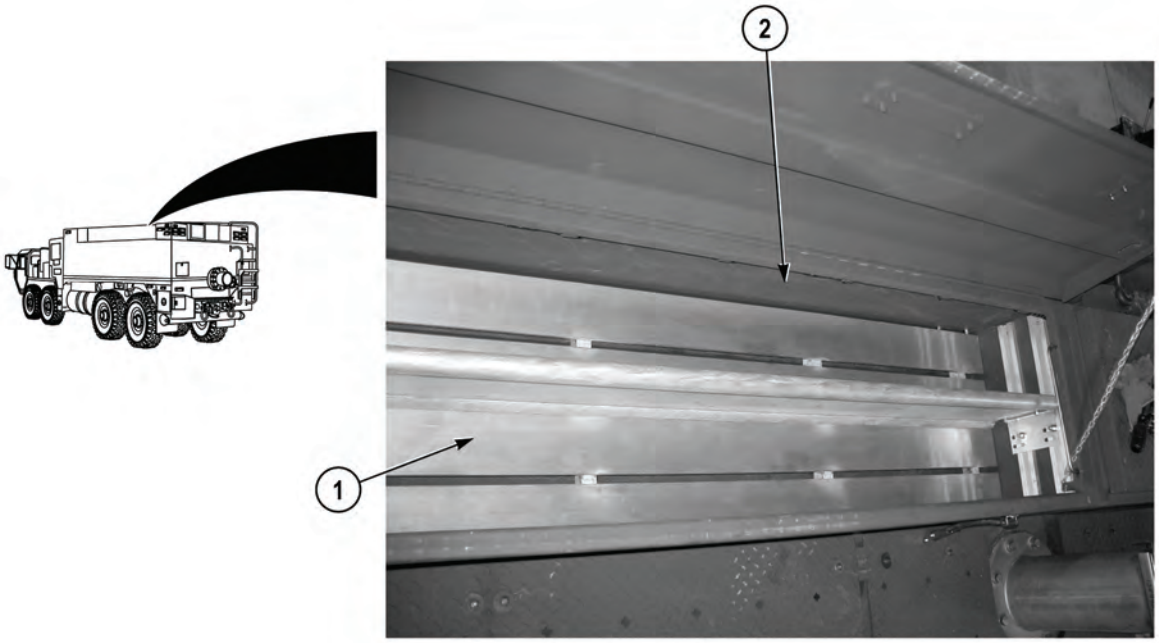
Materials/Parts
Lockwasher (6)
Lockwasher (2)
Lockwasher (10)
Locknut (1)
Locknut (37)
Lockwasher (8)
Lockwasher (4)
Lockwasher (4)

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

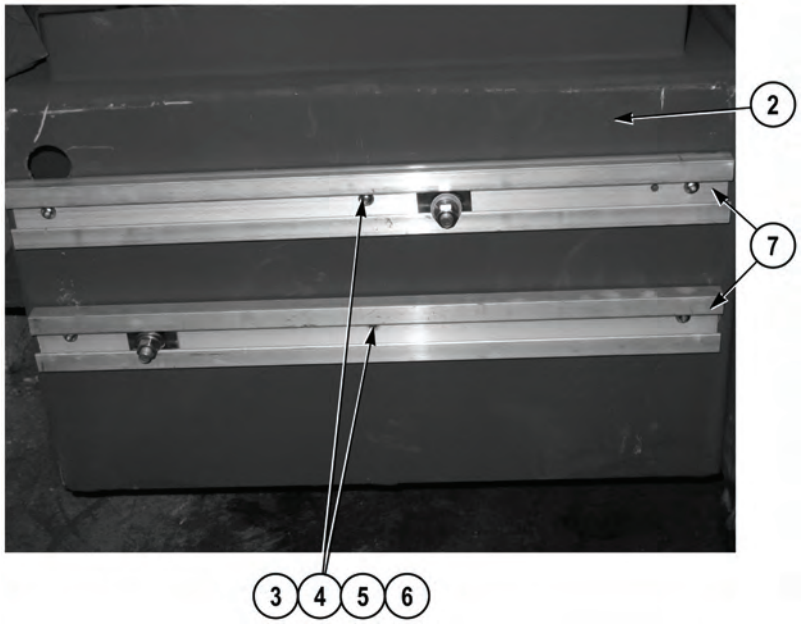
References
WP 0392, Fig. 88

Equipment Conditions
Spreader bar brackets removed (WP 0352)
Hose restraint net removed (WP 0335)
Hose bed divider removed (WP 0332)
Passenger side wire harness removed (WP 0299)
Top driver side front stowage compartment door opened (WP 0008)

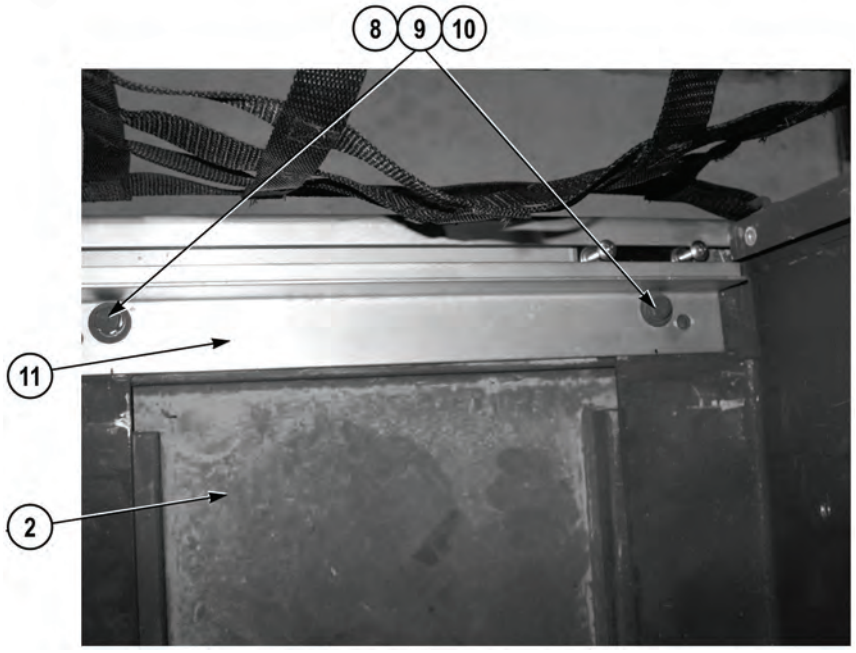
REMOVAL



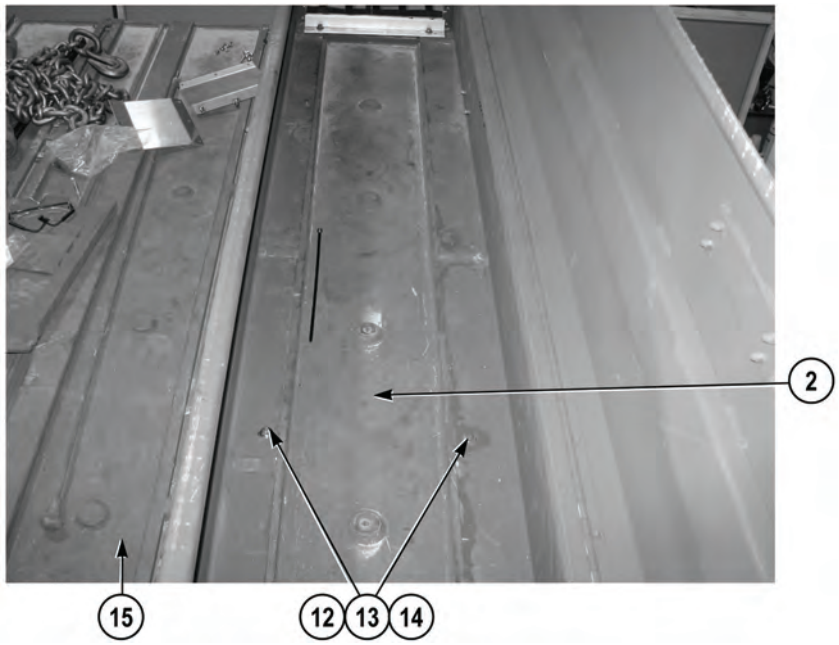
1. Remove hose bed grating (1) from hose bed assembly (2).



2. Remove six nuts (3), lockwashers (4), 12 washers (5), six screws (6), and two brackets (7) from hose bed assembly (2). Discard lockwashers.



3. Remove two screws (8), lockwashers (9), washers (10), and bracket (11) from hose bed assembly (2). Discard lockwashers.

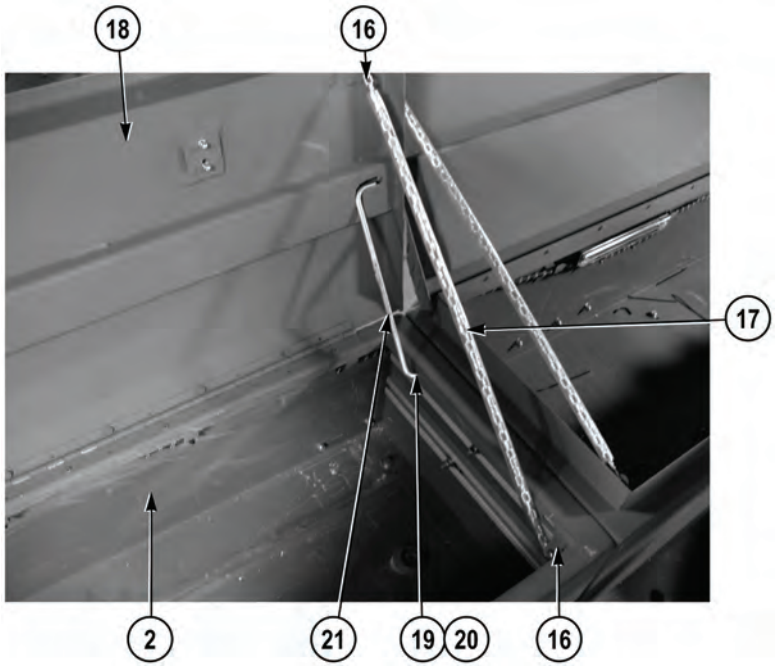


WARNING



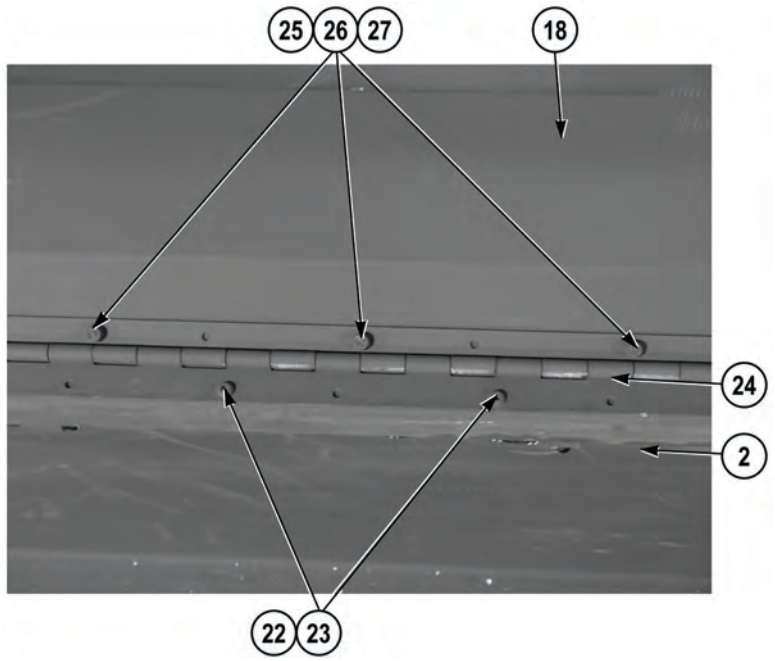
Hose bed assembly weighs approximately 265 lb. (120 kg). Do not attempt to lift or move hose bed assembly without the aid of an assistant and a suitable lifting device. Failure to comply may result in injury or death to personnel.

4. With the aid of an assistant and a suitable lifting device, remove ten screws (12), lockwashers (13), washers (14), and hose bed assembly (2) from water tank (15). Discard lockwashers.



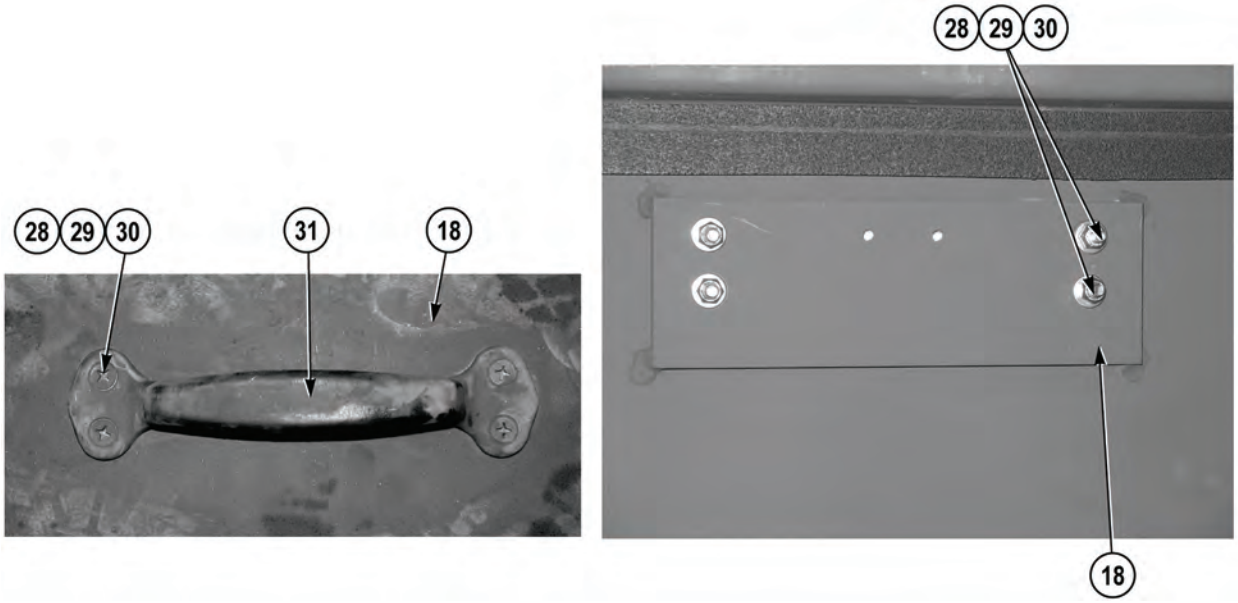
5. Remove two fasteners (16) and chain (17) from hose bed assembly (2) and door (18).

6. Remove locknut (19), washer (20), and stay arm (21) from hose bed assembly (2) and door (18). Discard locknut.

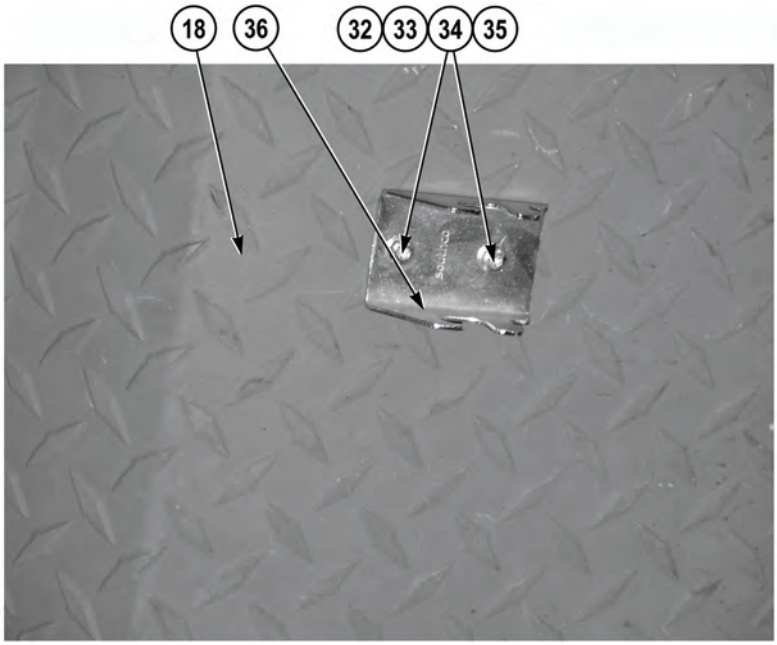


7. With the aid if an assistant, remove 19 locknuts (22), screws (23), hinge (24), and door (18) from hose bed assembly (2). Discard locknuts.

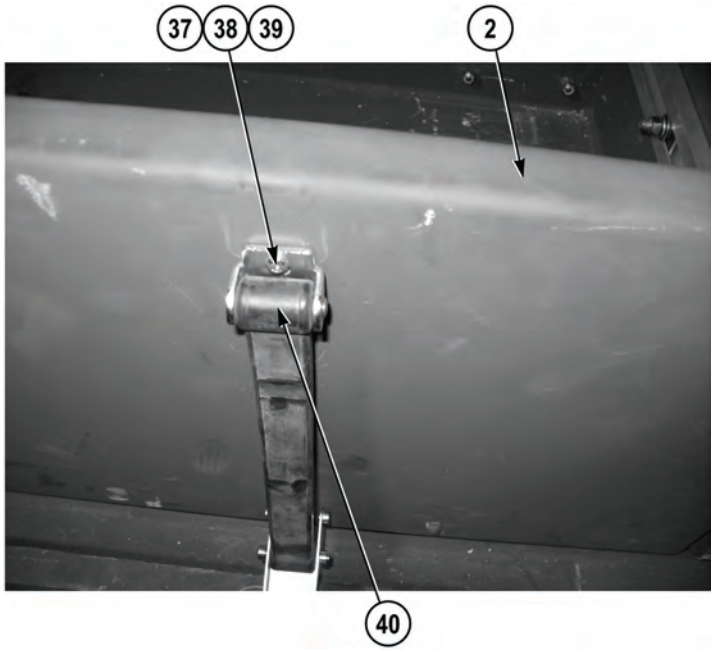
8. Remove 18 locknuts (25), washers (26), screws (27), and hinge (24) from door (18). Discard locknuts.



9. Remove eight nuts (28), lockwashers (29), screws (30), and two handles (31) from door (18). Discard lockwashers.



10. Remove four nuts (32), lockwashers (33), washers (34), screws (35), and two latches (36) from door (18). Discard lockwashers.

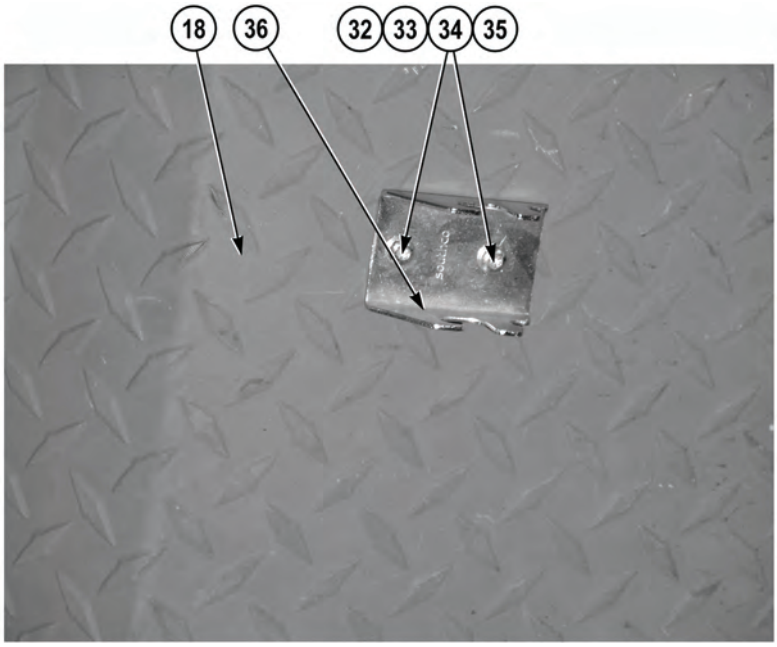


11. Remove four nuts (37), lockwashers (38), screws (39), and two rubber hooks (40) from hose bed assembly (2). Discard lockwashers.

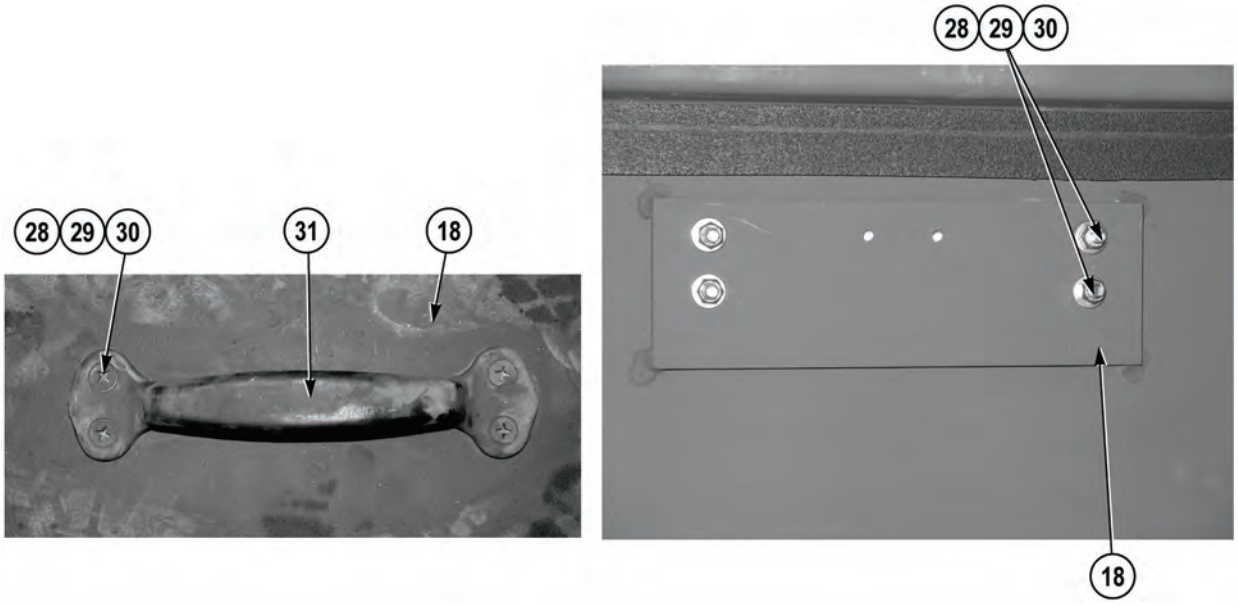
END OF TASK

INSTALLATION

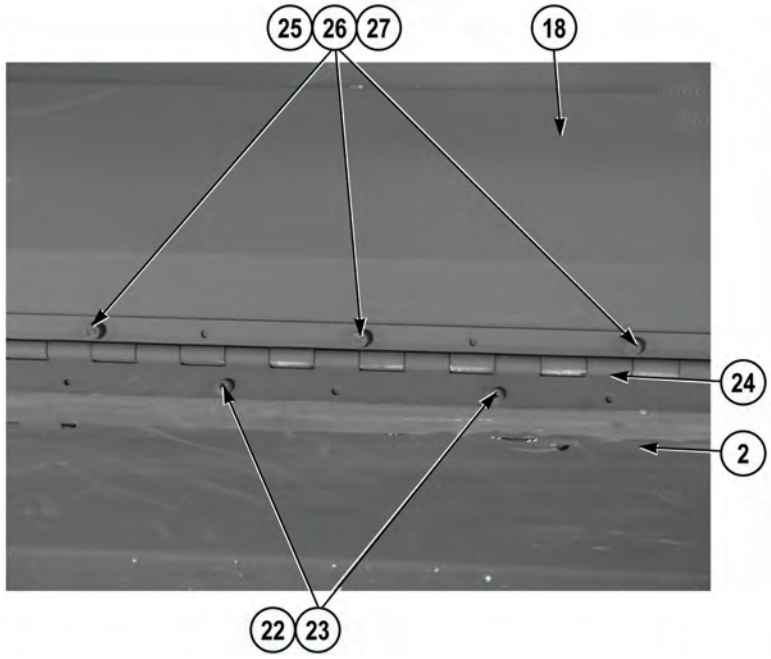
1. Install two rubber hooks (40) on hose bed assembly (2) with four screws (39), lockwashers (38), and nuts (37).



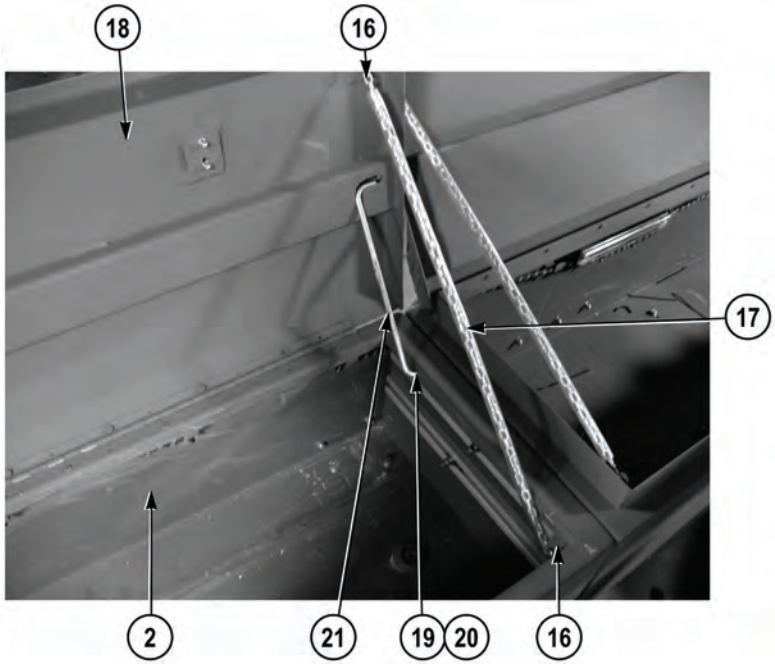
2. Install two latches (36) on door (18) with four screws (35), washers (34), lockwashers (33), and nuts (32).



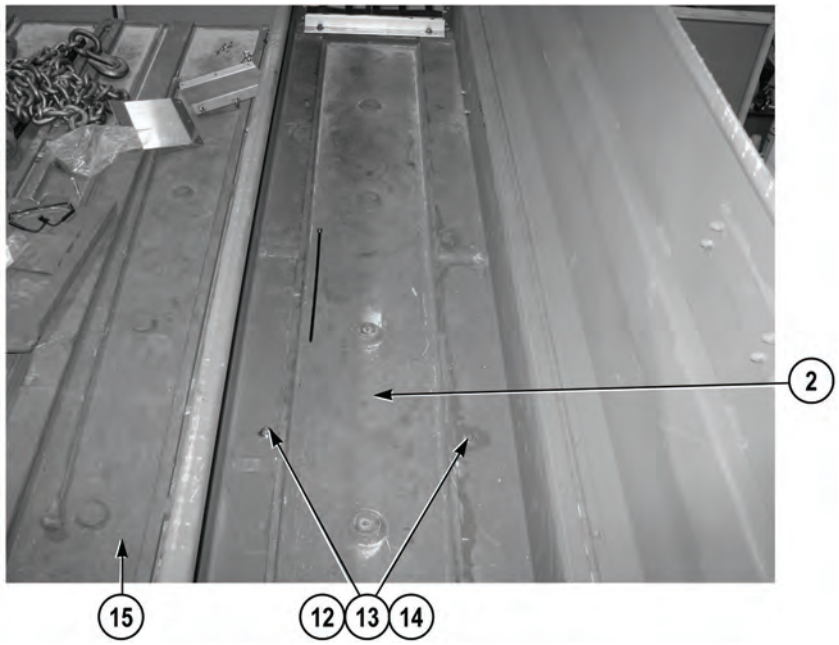
3. Install two handles (31) on door (18) with eight screws (30), lockwashers (29), and nuts (28).



4. Install hinge (24) on door (18) with 18 screws (27), washers (26), and locknuts (25).
5. With the aid of an assistant, install hinge (24) and door (18) on hose bed assembly (2) with 19 screws (23) and locknuts (22).



6. Install stay arm (21) on hose bed assembly (2) and door (18) with washer (20) and locknut (19).
7. Install chain (17) on door (18) and hose bed assembly (2) with two fasteners (16).

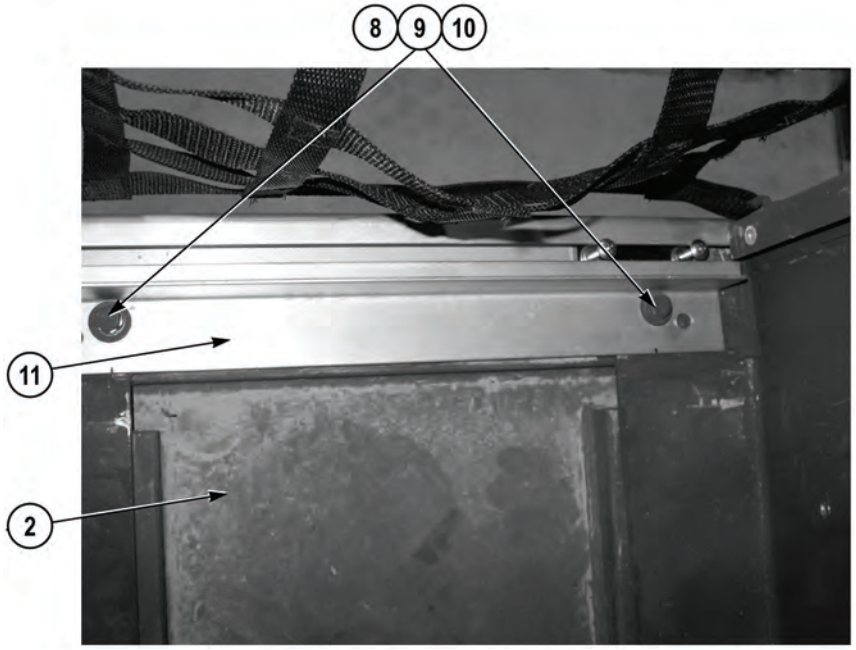


WARNING

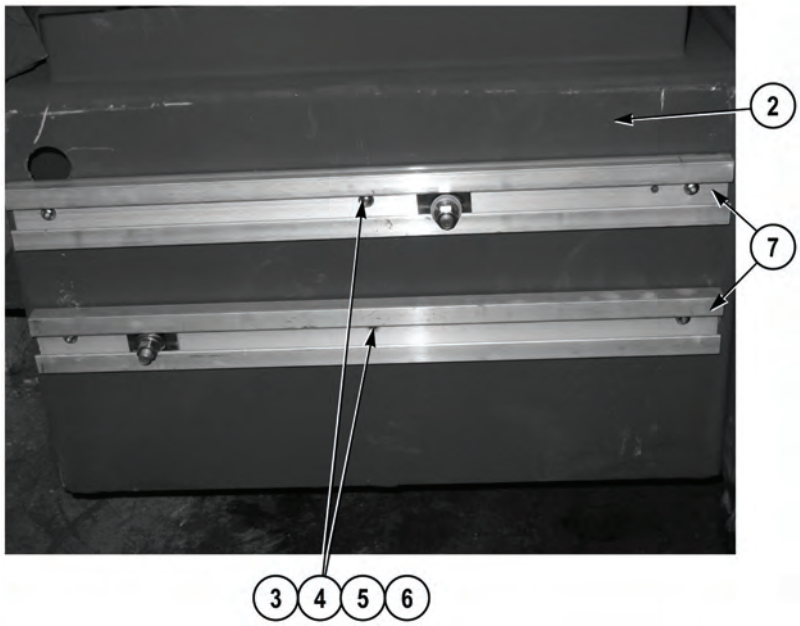


Hose bed assembly weighs approximately 265 lb. (120 kg). Do not attempt to lift or move hose bed assembly without the aid of an assistant and a suitable lifting device. Failure to comply may result in injury or death to personnel.

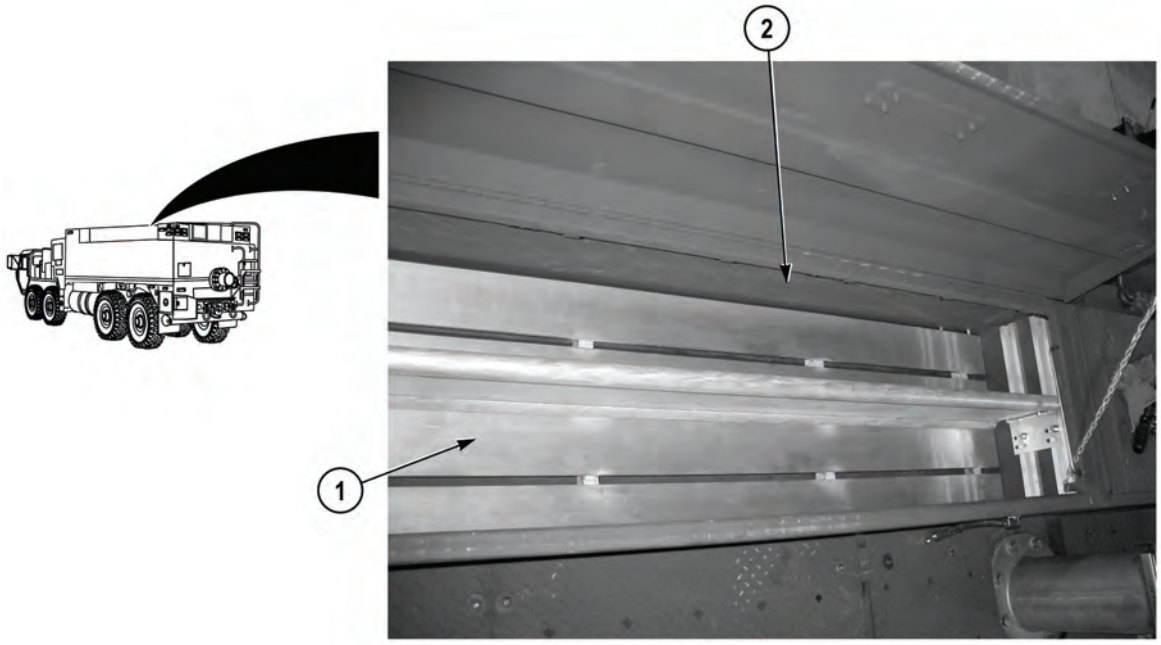
8. With the aid of an assistant and a suitable lifting device, install hose bed assembly (2) on water tank (15) with ten washers (14), lockwashers (13), and screws (12).



9. Install bracket (11) on hose bed assembly (2) with two washers (10), lockwashers (9), and screws (8).



10. Install two brackets (7) on hose bed assembly (2) with six screws (6), 12 washers (5), six lockwashers (4), and nuts (3).



11. Install hose bed grating (1) on hose bed assembly (2).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Close top driver side front stowage compartment door (WP 0008)
2. Install passenger side wire harness (WP 0299)
3. Install hose bed divider (WP 0332)
4. Install hose restraint net (WP 0335)
5. Install spreader bar brackets (WP 0352)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

HOSE BED DIVIDER REPLACEMENT

INITIAL SETUP:

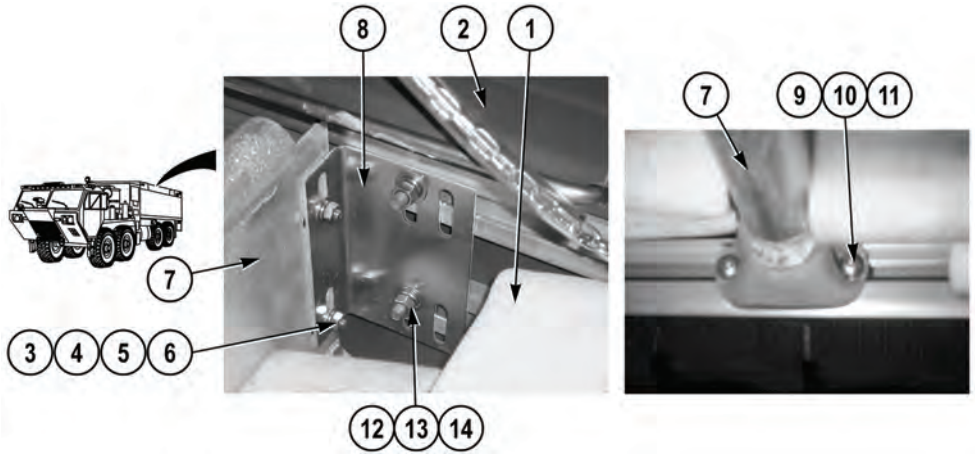
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Lockwasher (2)
Lockwasher (2)
Lockwasher (2)

References
WP 0392, Fig. 74

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)
Hose bed compartment door opened (WP 0008)

REMOVAL



NOTE

Number of fire hoses may vary.

1. Remove all fire hoses (1) from hose bed compartment (2).
2. Remove two nuts (3), lockwashers (4), washers (5), screws (6), and hose bed divider (7) from hose bed divider bracket (8). Discard lockwashers.
3. Remove two screws (9), lockwashers (10), washers (11), and hose bed divider (7) from vehicle. Discard lockwashers.

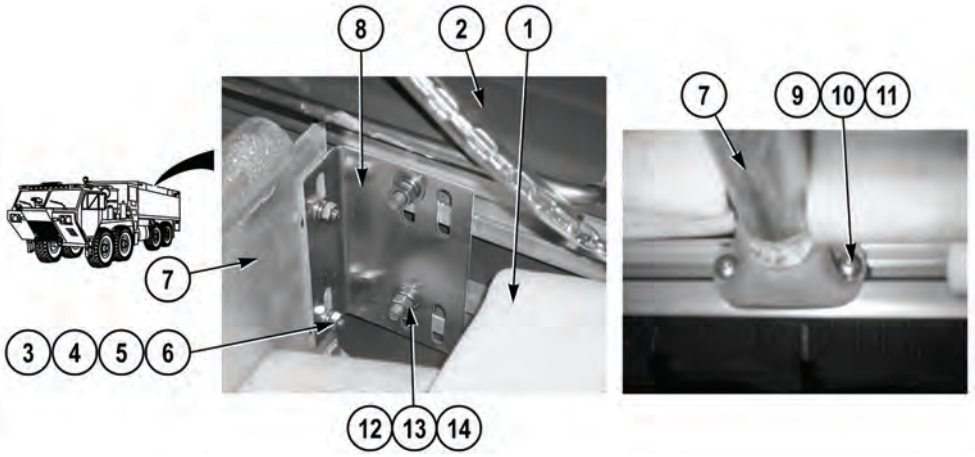
NOTE

- Perform Step (4) if hose bed divider bracket must be removed.
- Screws to fasten hose bed divider bracket remain on vehicle.

4. Remove two nuts (12), lockwashers (13), washers (14), and hose bed divider bracket (8) from vehicle. Discard lockwashers.

END OF TASK

INSTALLATION



NOTE

Perform Step (1) if hose bed divider bracket was removed.

1. Install hose bed divider bracket (8) on vehicle with two washers (14), lockwashers (13), and nuts (12).
2. Install hose bed divider on vehicle with two washers (11), lockwashers (10), and screws (9).
3. Install hose bed divider (7) on hose bed divider bracket (8) with two screws (6), washers (5), lockwashers (4), and nuts (3).
4. Install all fire hoses (1) in hose bed compartment (2).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Close hose bed compartment door (WP 0008)
2. Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

HOSE REEL GUIDES REPLACEMENT

INITIAL SETUP:

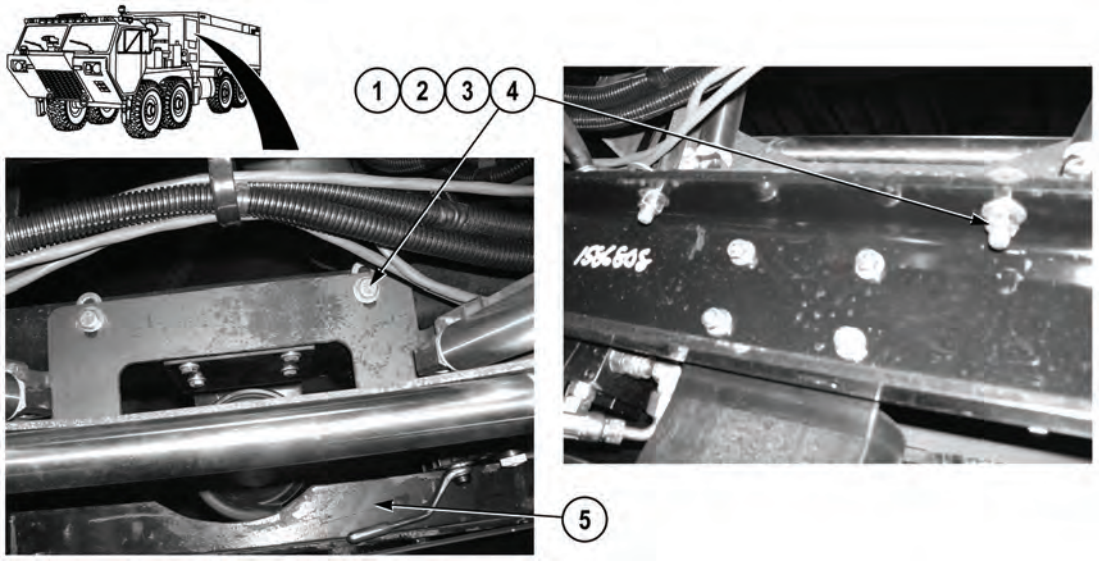
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Lockwasher (2)
Lockwasher (2)
Lockwasher (1)
Lockwasher (1)
Lockwasher (2)

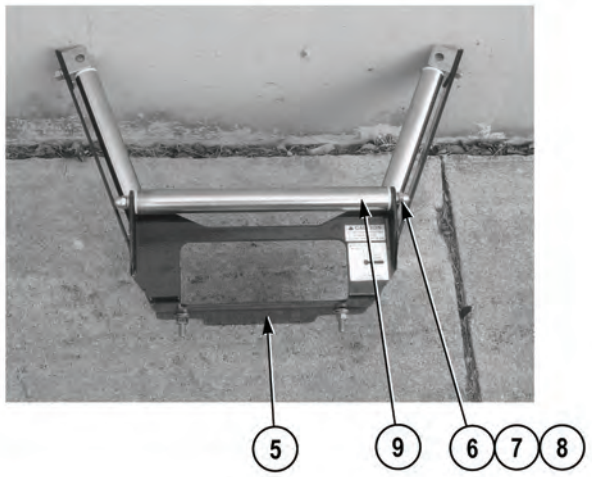
References
WP 0392, Fig. 40

Equipment Conditions
Batteries disconnected (TM 9-2320-315-14&P)
Pump house access door assembly opened (WP 0009)

REMOVAL



1. Remove two nuts (1), lockwashers (2), four washers (3), two screws (4) and mounting bracket (5) from vehicle. Discard lockwashers.



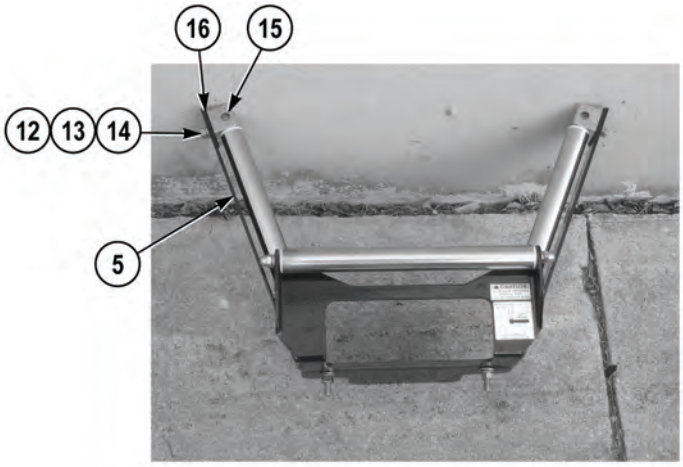


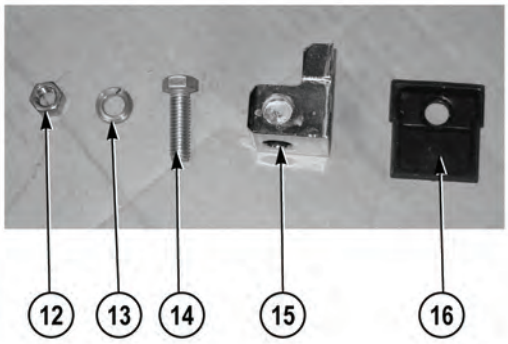
NOTE

Perform Steps (2) and (3) if lower guide needs to be removed.

2. Remove two nuts (6), lockwashers (7), washers (8), and lower guide (9) from mounting bracket (5). Discard lockwashers.

3. Remove threaded rod (10) and two bushings (11) from lower guide (9).

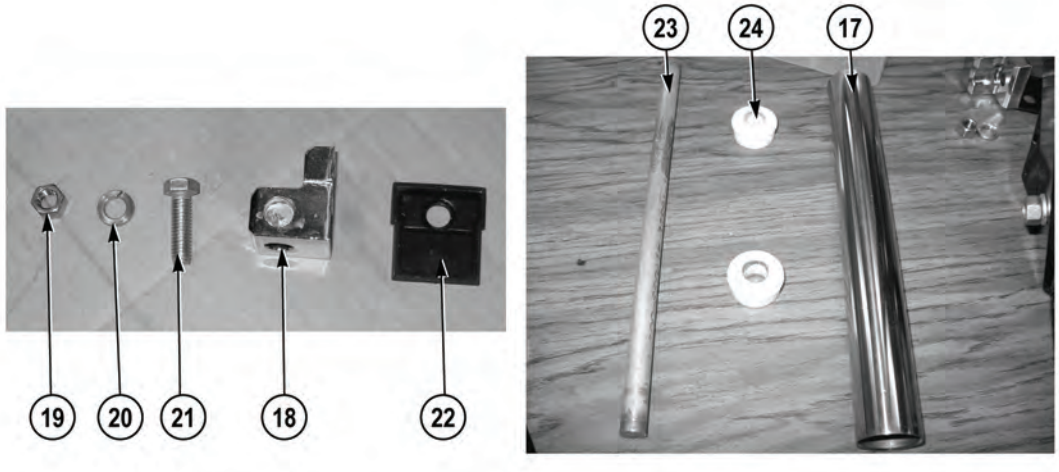




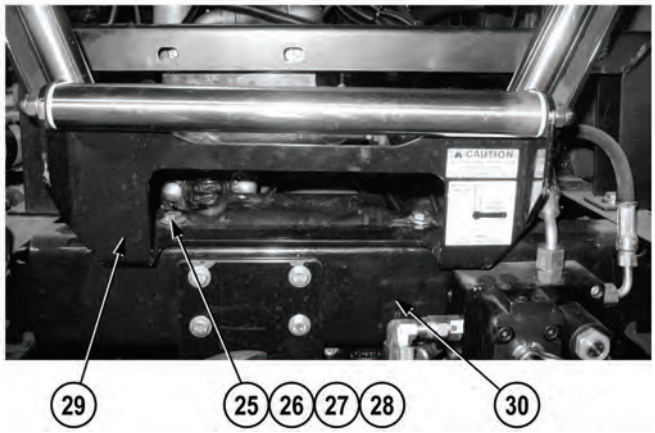
NOTE

Repeat Steps (4) through (7) if vertical guides need to be removed.

4. Remove nut (12), lockwasher (13), screw (14), top mounting block (15), and gasket (16) from mounting bracket (5). Discard lockwasher.



5. Remove guide (17) from lower mounting block (18).
6. Remove nut (19), lockwasher (20), screw (21), lower mounting block (18), and gasket (22) from mounting bracket (5). Discard lockwashers.
7. Remove rod (23) and two bushings (24) from guide (17).



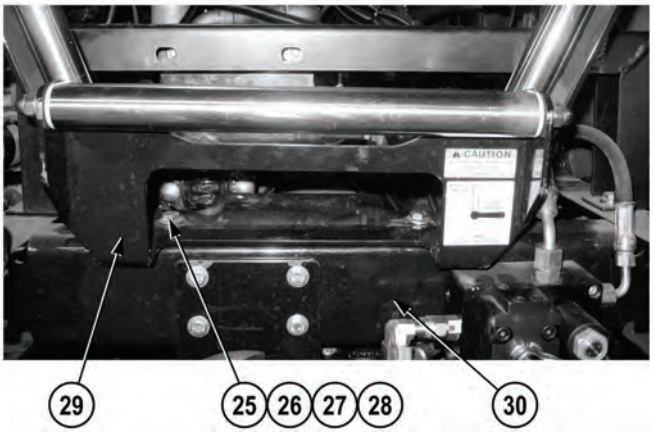
NOTE

Perform Step (8) if bracket needs to be removed.

8. Remove two nuts (25), lockwashers (26), four washers (27), two screws (28), and bracket (29) from pump house frame (30) and vehicle. Discard lockwashers.

END OF TASK

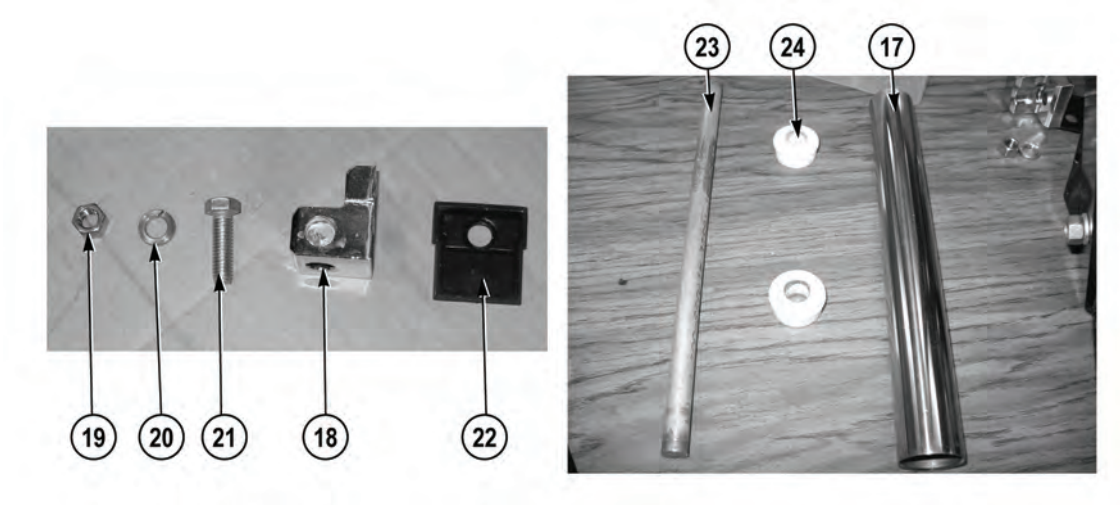
INSTALLATION



NOTE

Remove Step (1) if bracket was removed.

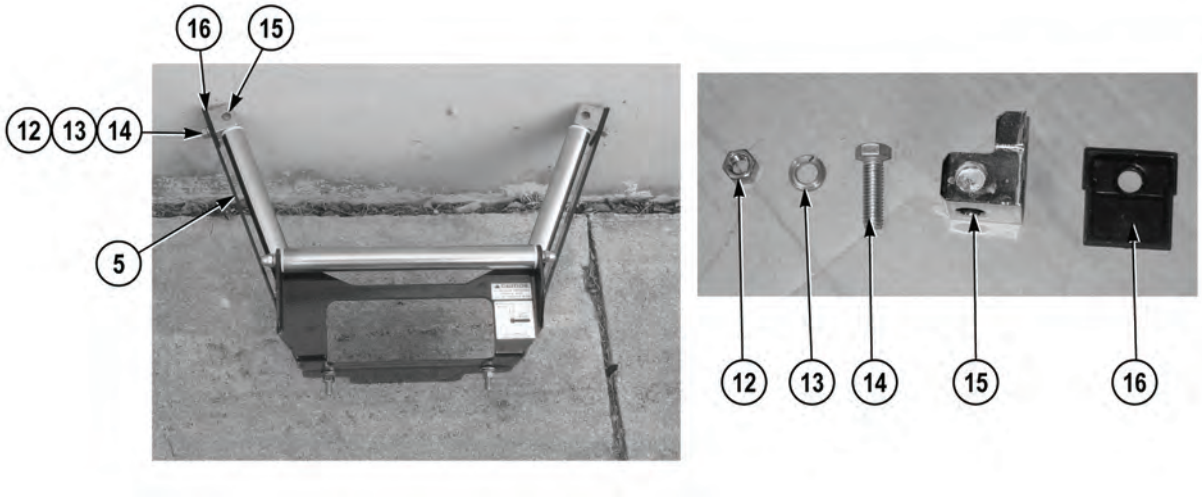
1. Install bracket (29) on pump house frame (30) with two screws (28), four washers (27), two lockwashers (26), and nuts (25).



NOTE

Repeat Steps (2) through (5) if vertical guides were removed.

2. Install two bushings (24) and rod (23) in guide (17).
3. Install gasket (22) and lower mounting block (18) on mounting bracket (5) with screw (21), lockwasher (20), and nut (19).
4. Install guide (17) on lower mounting block (18).



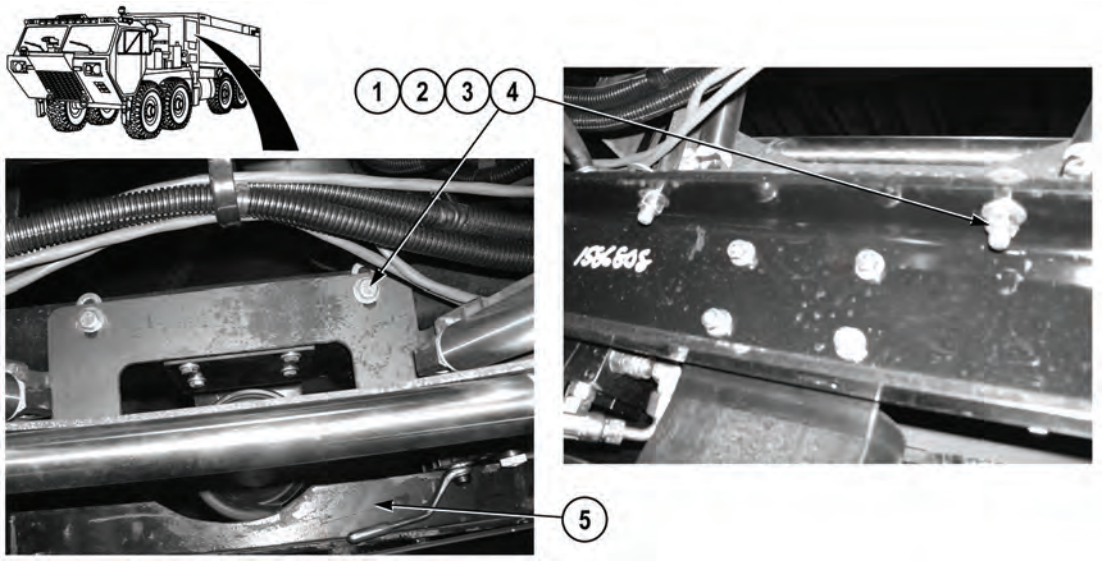
5. Install gasket (16) and top mounting block (15) on mounting bracket (5) with screw (14), lockwasher (13), and nut (12).

NOTE

Perform Steps (6) and (7) if lower guide was removed.

6. Install two bushings (11) and threaded rod (10) in lower guide (9).

7. Install lower guide (9) on mounting bracket (5) with two washers (8), lockwashers (7), and nuts (6).



8. Install mounting bracket (5) on vehicle with two screws (4), four washers (3), two lockwashers (2), and nuts (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Close pump house access door assembly (WP 0009)
2. Connect batteries (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

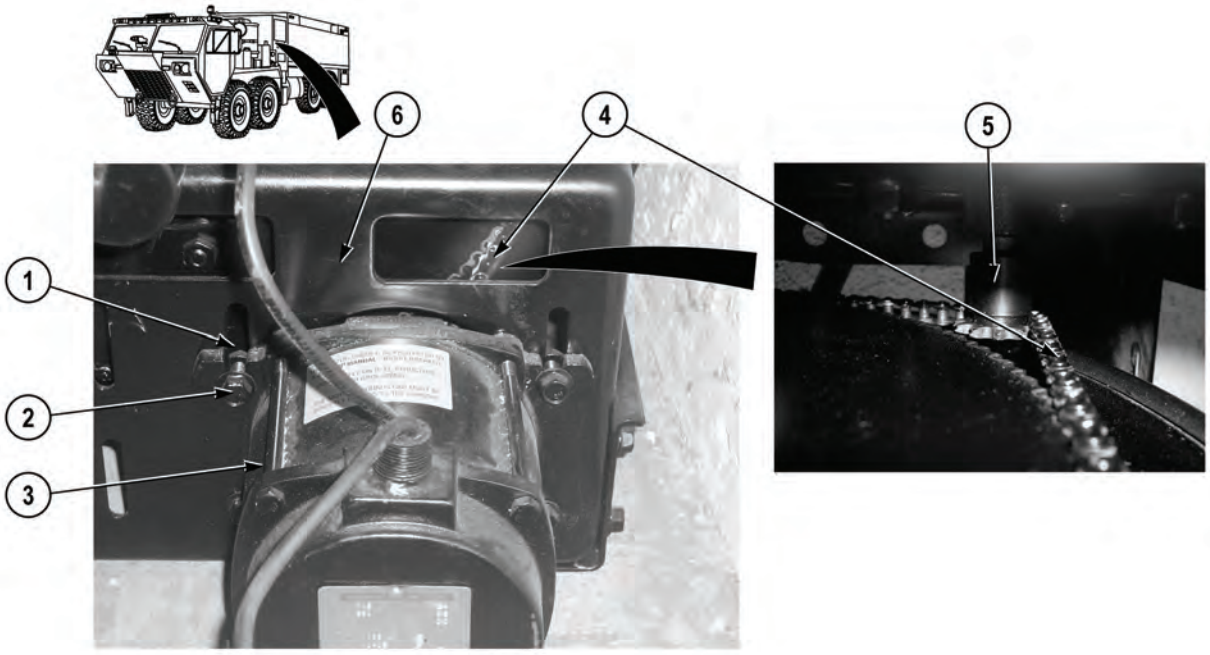
HOSE REEL MOTOR REPLACEMENT

INITIAL SETUP:

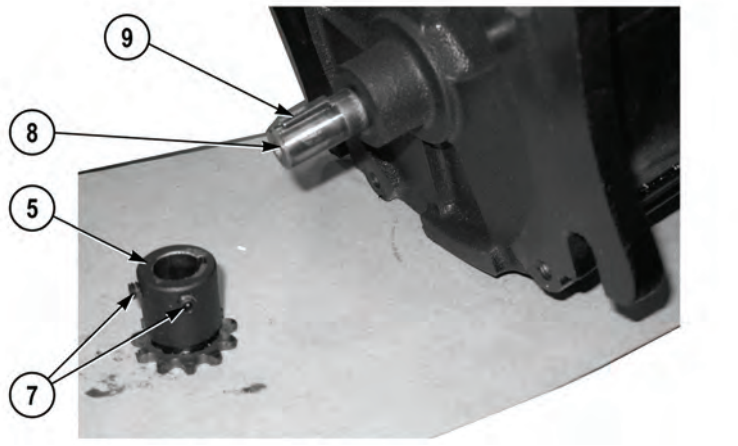
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Equipment Conditions
Hose reel removed (WP 0246)

REMOVAL



1. Loosen four nuts (1) and screws (2) on hose reel motor (3).
2. Slide hose reel motor (3) to remove hose reel chain (4) from sprocket (5).
3. Remove four nuts (1), screws (2), and hose reel motor (3) from hose reel motor mount (6).



NOTE

Note position of sprocket prior to removal to ensure correct chain alignment.

4. Remove two setscrews (7) and sprocket (5) from shaft (8).
5. Remove key (9) from shaft (8).

END OF TASK

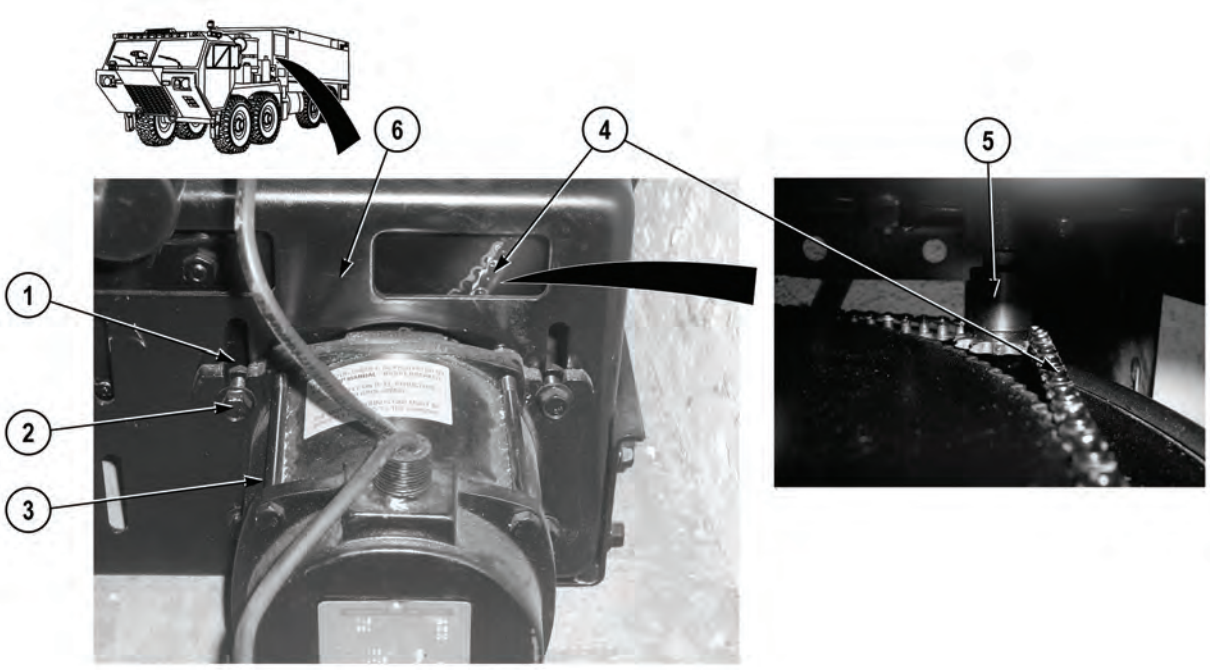
INSTALLATION

1. Install key (9) on shaft (8).

NOTE

Install sprocket as noted prior to removal.

2. Install sprocket (5) on shaft (8) with two setscrews (7).



3. Position hose reel motor (3) on hose reel motor mount (6) with four screws (2) and nuts (1).
4. Position hose reel chain (4) on sprocket (5).
5. Tighten four screws (2) and nuts (1) on hose reel motor (3) and hose reel motor mount (6).

END OF TASK

FOLLOW-ON MAINTENANCE

Install hose reel (WP 0246)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

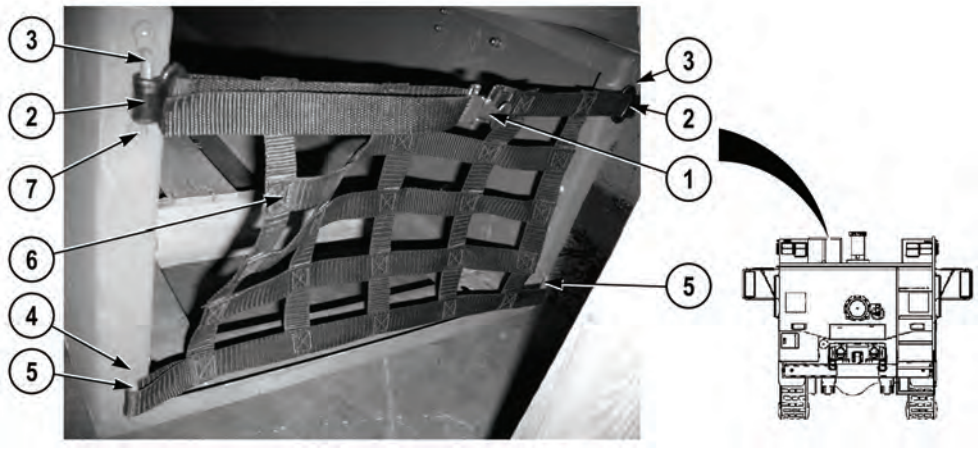
HOSE RESTRAINT NETTING REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive
(WP 0399, Item 17)

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)

REMOVAL



1. Loosen net fastener (1).
2. Remove two latches (2) from brackets (3).
3. Remove four screws (4), two brackets (5), and net (6) from vehicle.
4. Remove two brackets (5) from net (6).

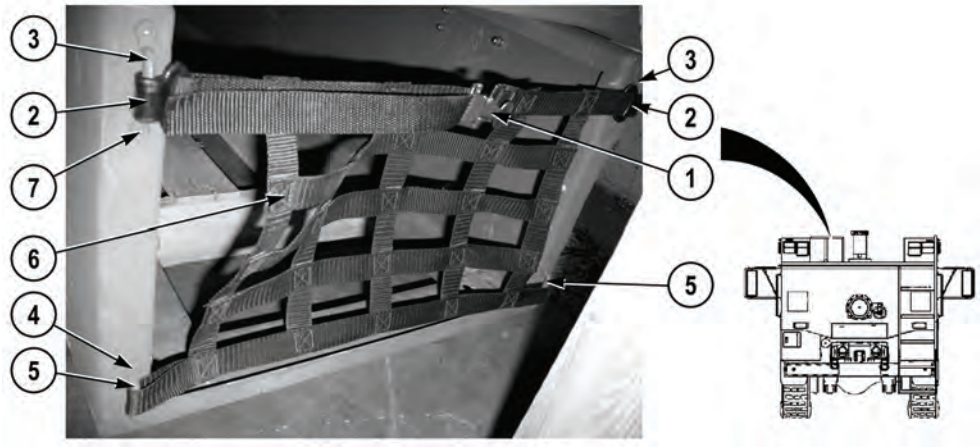
NOTE

Perform Step (5) if brackets need to be removed.

5. Remove four screws (7) and two brackets (3) from vehicle.

END OF TASK

INSTALLATION



NOTE

Perform Step (1) if brackets were removed.

1. Install two brackets (3) on vehicle with four screws (7).
2. Install two brackets (5) on net (6).
3. Install net (6) and two brackets (5) on vehicle with four screws (4).
4. Install two latches (2) on brackets (3).
5. Tighten net fastener (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

LIGHT BEZEL(S) REPLACEMENT

INITIAL SETUP:

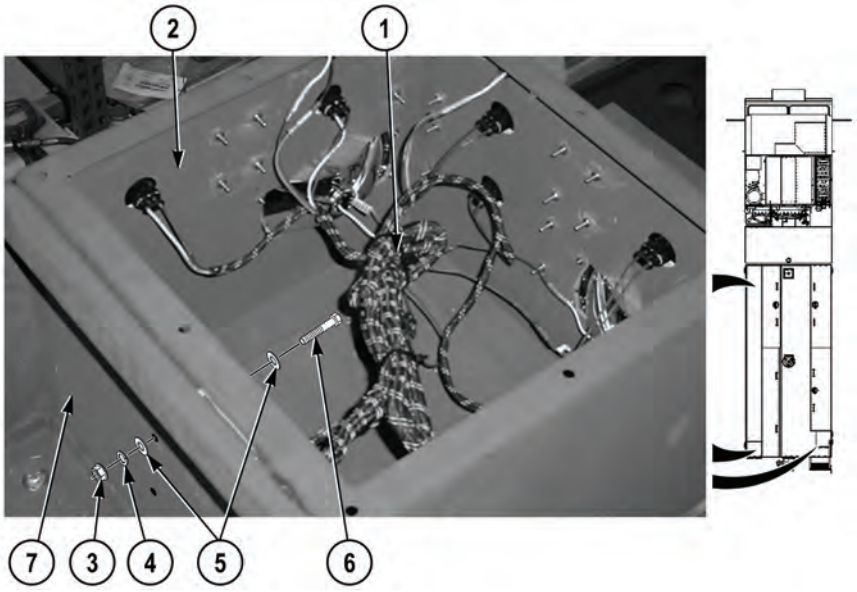
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Lockwasher (3)
Lockwasher (4)

References
WP 0287
WP 0392, Fig. 29

Equipment Conditions
Hose bed compartment opened (driver side rear light bezel)(WP 0008)
SINCGARS antenna bracket removed (driver side light bezel) (TM 11-5820-498-12)
Light bezel cover removed (driver side light bezel) (WP 0337)
Marker/clearance LED removed (WP 0227)
Warning lights removed (rear light bezels) (WP 0229)
Scene lights removed (WP 0231)

REMOVAL



NOTE

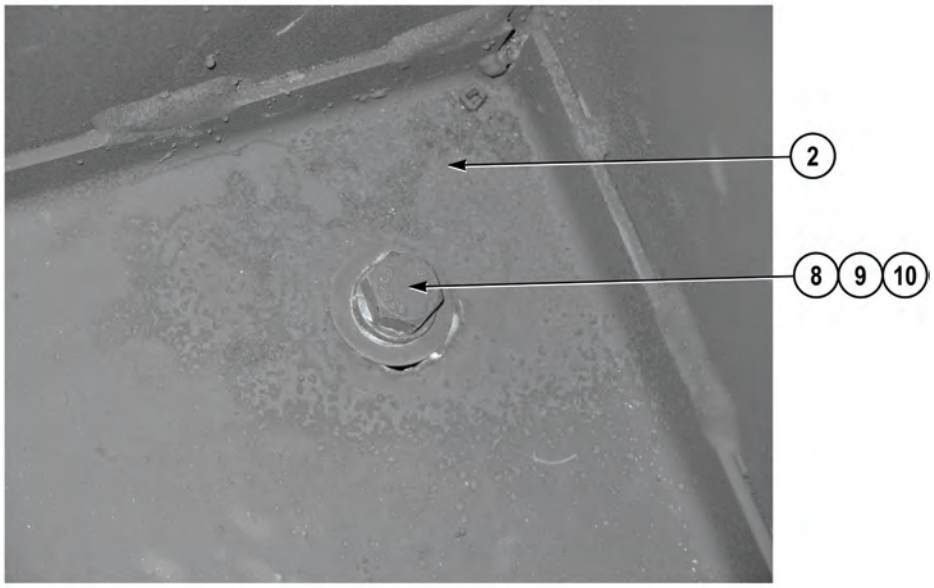
All light bezel boxes are removed the same way except as noted. Driver side rear light bezel box shown.

1. Remove driver side body wire harness (1) from light bezel box (2) (WP 0287).

NOTE

Perform Step (2) for driver side rear light bezel box only.

2. Remove three nuts (3), lockwashers (4), six washers (5), and three screws (6) from light bezel box (2) and hose bed compartment (7).



3. Remove four screws (8), lockwashers (9), washers (10), and light bezel box (2) from vehicle.

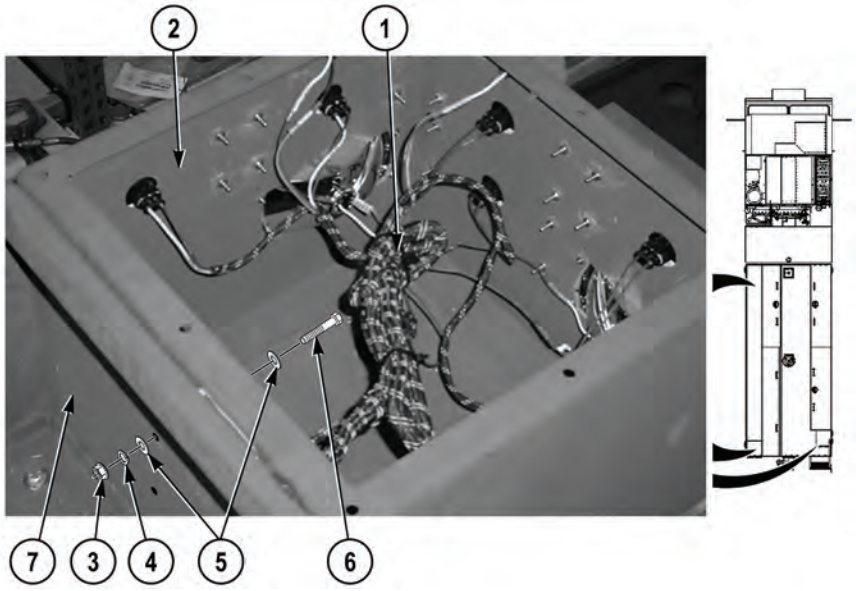
END OF TASK

INSTALLATION

NOTE

All light bezel boxes are installed the same way except as noted. Driver side rear light bezel shown.

1. Install four washers (10), lockwashers (9), screws (8), and light bezel box (2) on vehicle.



NOTE

Perform Step (2) for driver side rear light bezel only.

2. Install three screws (6), six washers (5), three lockwashers (4), and nuts (3) on hose bed compartment (7) and light bezel box (2).
3. Install driver side body wire harness (1) on light bezel box (2) (WP 0287).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install scene lights (WP 0231)
2. Install warning lights (rear light bezels) (WP 0229)
3. Install marker/clearance LED (rear light bezels) (WP 0227)
4. Install light bezel cover (WP 0337)
5. Install SINCGARS antenna bracket (driver side rear light bezel) (TM 11-5820-498-12)
6. Close hose bed compartment (driver side rear light bezel) (WP 0008)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

LIGHT BEZEL COVER(S) REPLACEMENT

INITIAL SETUP:

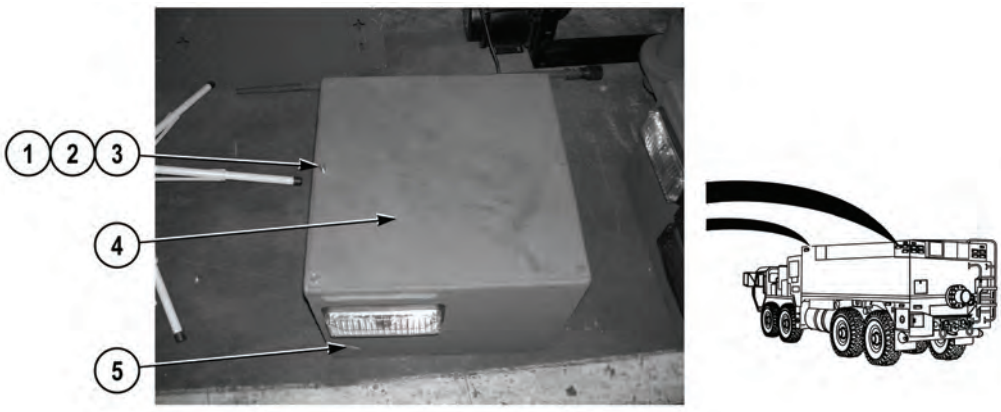
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Lockwasher (8)
Lockwasher (10)

References
WP 0392, Fig. 29

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)

DRIVER SIDE LIGHT BEZEL COVER REMOVAL



NOTE

Both driver side light bezel covers are removed the same way.

Remove eight screws (1), lockwashers (2), washer (3), and light bezel cover (4) from light bezel (5). Discard lockwashers.

END OF TASK

DRIVER SIDE LIGHT BEZEL COVER INSTALLATION

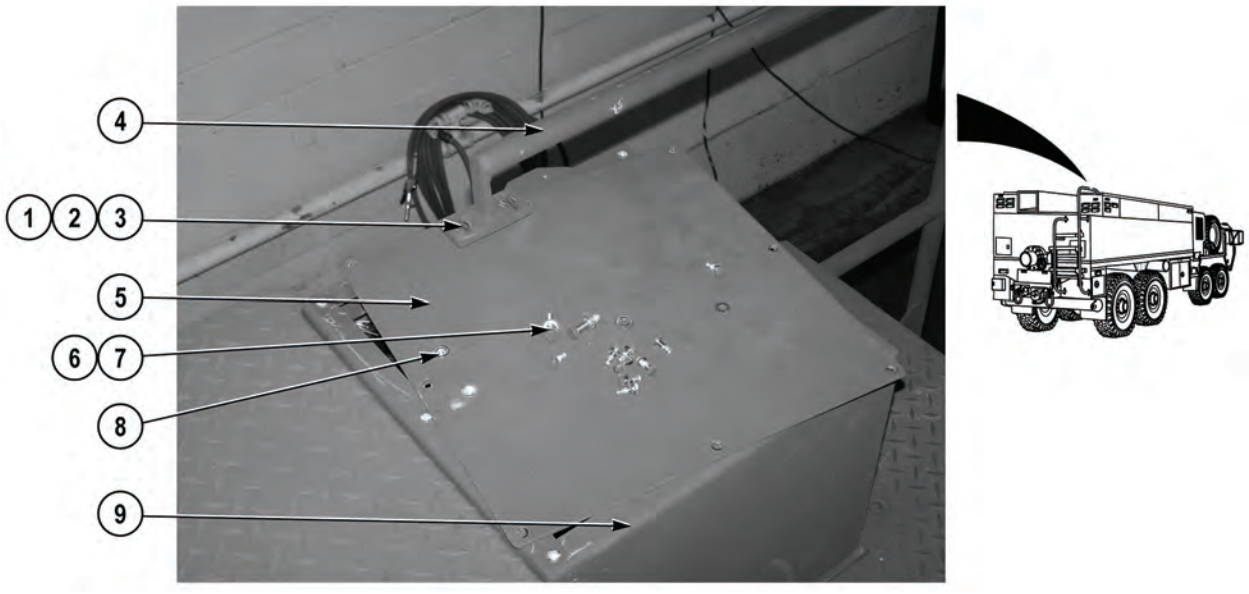
NOTE

Both driver side light bezel covers are installed the same way.

Install light bezel cover (4) on light bezel (5) with eight washers (3), lockwashers (2), and screws (1).

END OF TASK

PASSENGER SIDE LIGHT BEZEL COVER REMOVAL



1. Remove two screws (1), lockwashers (2), washers (3), and rear access ladder (4) from light bezel cover (5). Discard lockwashers.
2. Remove eight screws (6), lockwashers (7), washers (8), and light bezel cover (5) from light bezel (9). Discard lockwashers.

END OF TASK

PASSENGER SIDE LIGHT BEZEL COVER INSTALLATION

1. Install light bezel cover (5) on light bezel (9) with eight washers (8), lockwashers (7), and screws (6).
2. Install rear access ladder (4) on light bezel cover (5) with two washers (3), lockwashers (2), and screws (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PNEUMATIC SPRING REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Locknut (2)
Lockwasher (2)

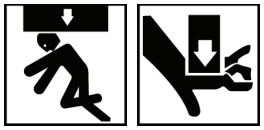
Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

References
WP 0392, Fig. 72

Equipment Conditions
Hose reel cover opened (WP 0009)

REMOVAL

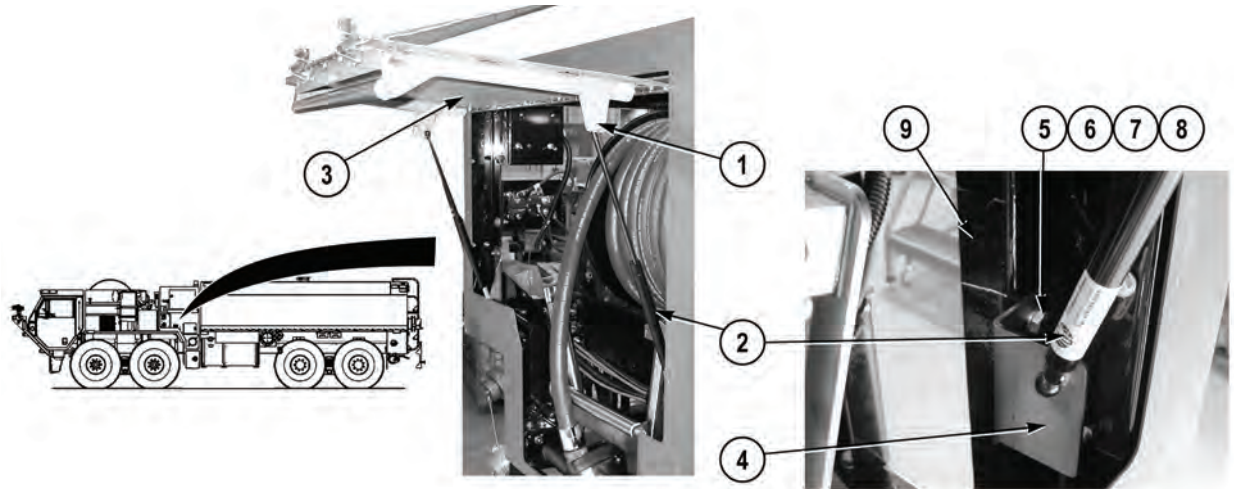
WARNING



- **Pneumatic springs must be replaced when module doors start to drift down when in open position or when they are no longer able to push up on module door when opening. Failure to comply may result in injury to personnel or damage to equipment.**
- **Do not allow pump house access door to drop. Pump house access doors are heavy and can cause injury to personnel or damage to equipment.**

NOTE

- Note position of pneumatic spring prior to removal to ensure proper installation.
- Both pneumatic springs and are replaced the same way.
- Rear pneumatic spring shown.

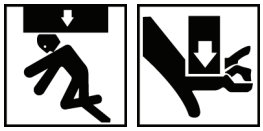


1. With the aid of an assistant, remove two locknuts (1) and pneumatic spring (2) from door (3) and bracket (4). Discard locknuts.
2. Remove two nuts (5), lockwashers (6), four washers (7), two screws (8), and bracket (4) from frame rail (9). Discard lockwashers.

END OF TASK

INSTALLATION

WARNING



Do not allow pump house access door to drop. Pump house access doors are heavy and can cause injury to personnel or damage equipment.

1. With the aid of an assistant, install bracket (4) on frame rail (9) with two screws (8), four washers (7), two lockwashers (6) and nuts (5).

NOTE

Install pneumatic spring as noted prior to removal.

2. With the aid of an assistant, install pneumatic spring (2) on bracket (4) and door (3), with two locknuts (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Close hose reel cover (WP 0009)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PORTABLE WATER TANK STOWAGE COMPARTMENT REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

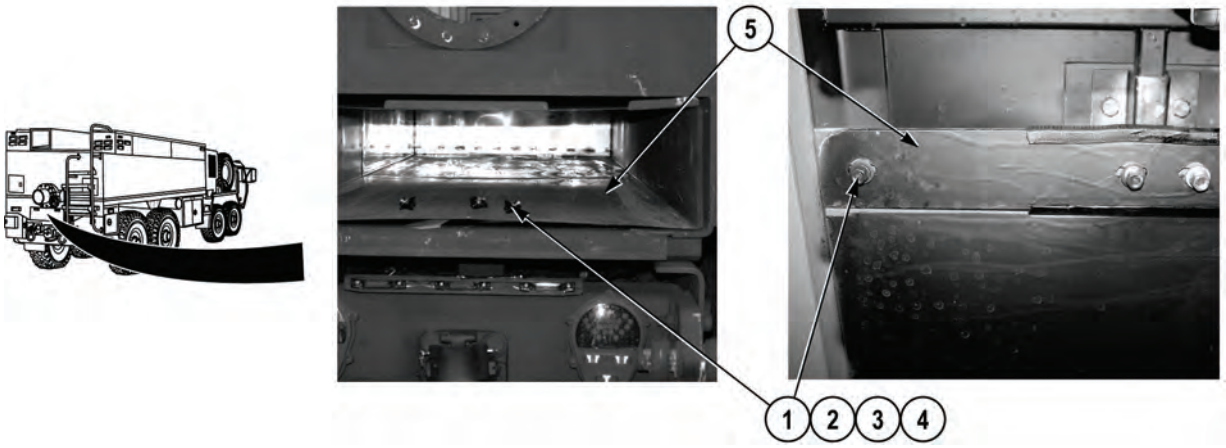
Materials/Parts
Lockwasher (8)

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

References
WP 0392, Fig. 89

Equipment Conditions
Portable water tank stowage compartment door removed (WP 0351)
Portable water tank unstowed (WP 0013)

REMOVAL



WARNING

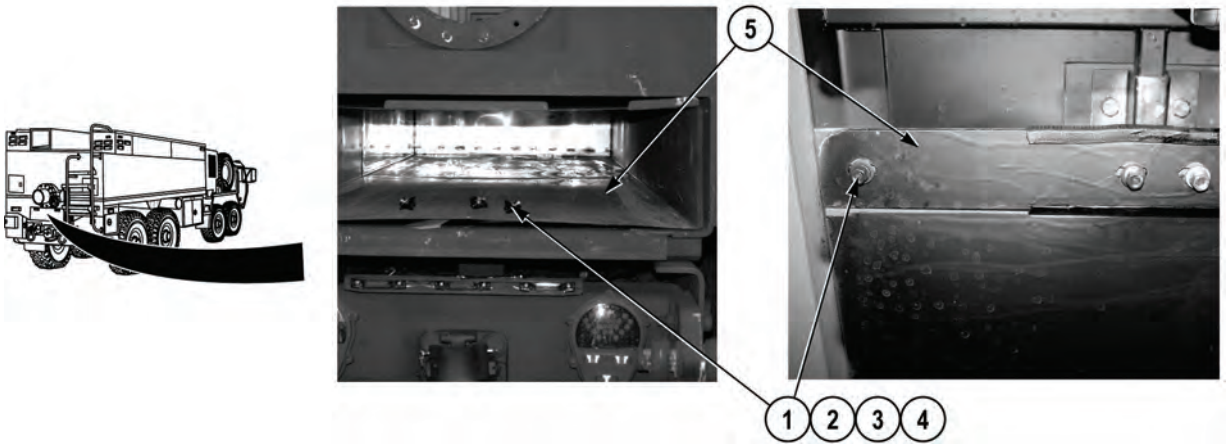


Stowage compartment weighs approximately 225 lb. (102 kg). Do not attempt to lift or move stowage compartment without the aid of an assistant and a lifting device. Failure to comply may result in injury or death to personnel.

With the aid of an assistant and a suitable lifting device, remove eight nuts (1), lockwashers (2), 16 washers (3), eight screws (4), and stowage compartment (5) from vehicle. Discard lockwashers.

END OF TASK

INSTALLATION



WARNING



Stowage compartment weighs approximately 225 lb. (102 kg). Do not attempt to lift or move stowage compartment without the aid of an assistant and a lifting device. Failure to comply may result in injury or death to personnel.

With the aid if an assistant and a suitable lifting device, install stowage compartment (5) on vehicle with eight screws (4), 16 washers (3), eight lockwashers (2), and nuts (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Stow portable water tank (WP 0013)
2. Install portable water tank stowage compartment door (WP 0351)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PUMP HOUSE ACCESS DOOR(S) REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Locknut (5)
Locknut (5)
Lockwasher (1)
Locknut (12)
Lockwasher (23)
Locknut (4)
Lockwasher (2)

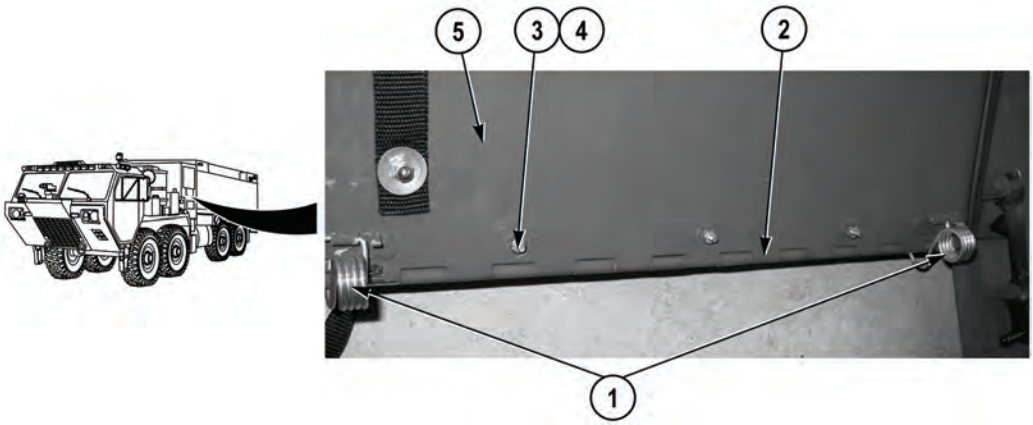
Materials/Parts (continued)
Locknut (2)
Lockwasher (2)

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

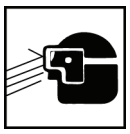
References
WP 0392, Fig. 72

Equipment Conditions
Pneumatic springs removed (WP 0338)

REMOVAL



WARNING

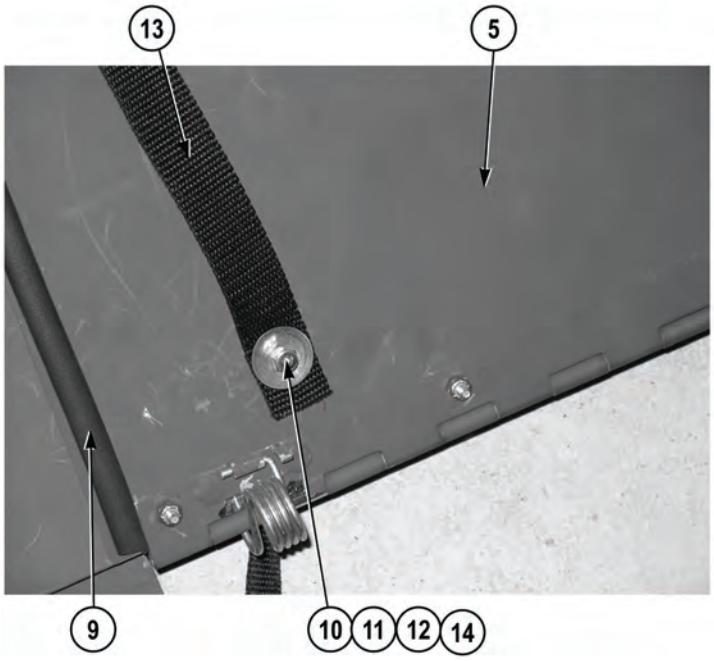


Wear safety goggles and use care when removing springs. Springs are under tension and can act as projectiles when released causing injury to personnel and damage to equipment.

1. Remove two springs (1) from hinge (2).
2. With the aid of an assistant, remove five locknuts (3), screws (4), and lower door (5) from hinge (2). Discard locknuts.

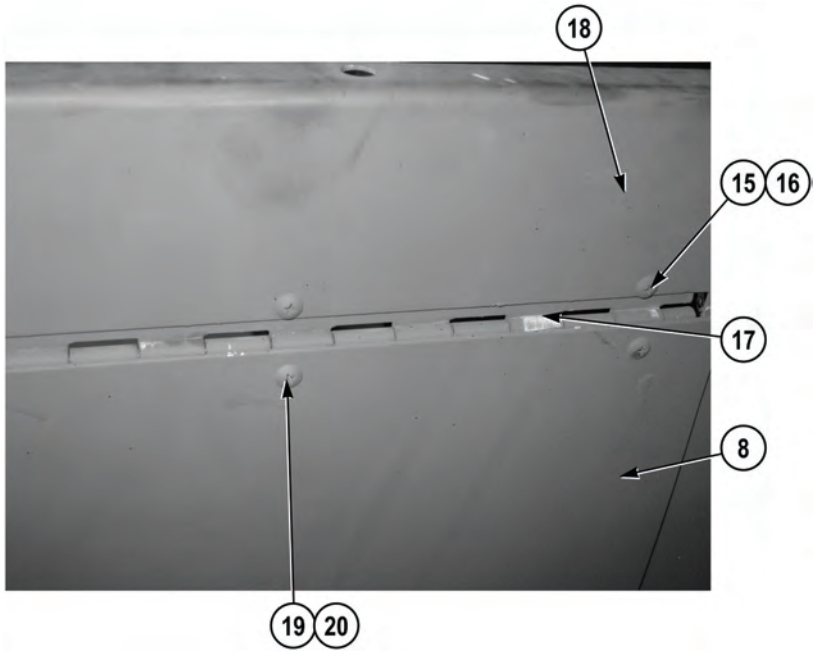


3. Remove five locknuts (6), screws (7), and hinge (2) from upper door (8). Discard locknuts.



4. Remove seal (9) from lower door (5).

5. Remove nut (10), lockwasher (11), washer (12), strap (13), and screw (14) from lower door (5). Discard lockwasher.



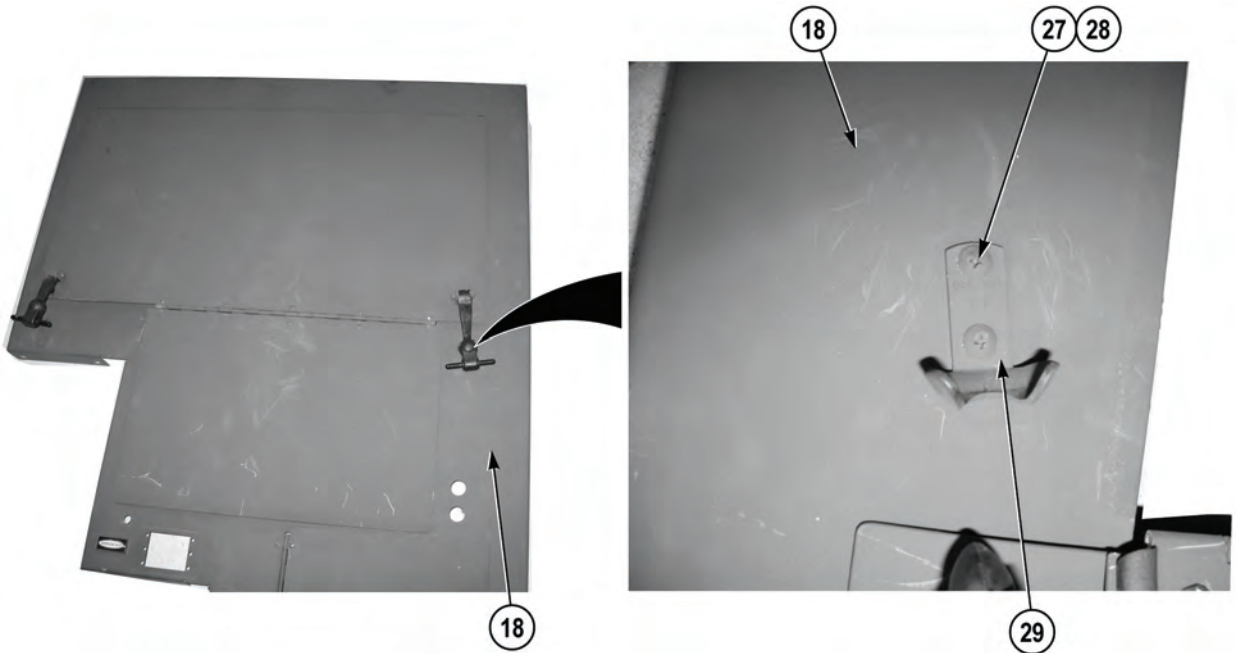
6. With the aid of an assistant, remove six locknuts (15), screws (16), hinge (17), and upper door (8) from pump house panel A (18). Discard locknuts.

7. Remove six locknuts (19), screws (20), and hinge (17) from upper door (8). Discard locknuts.

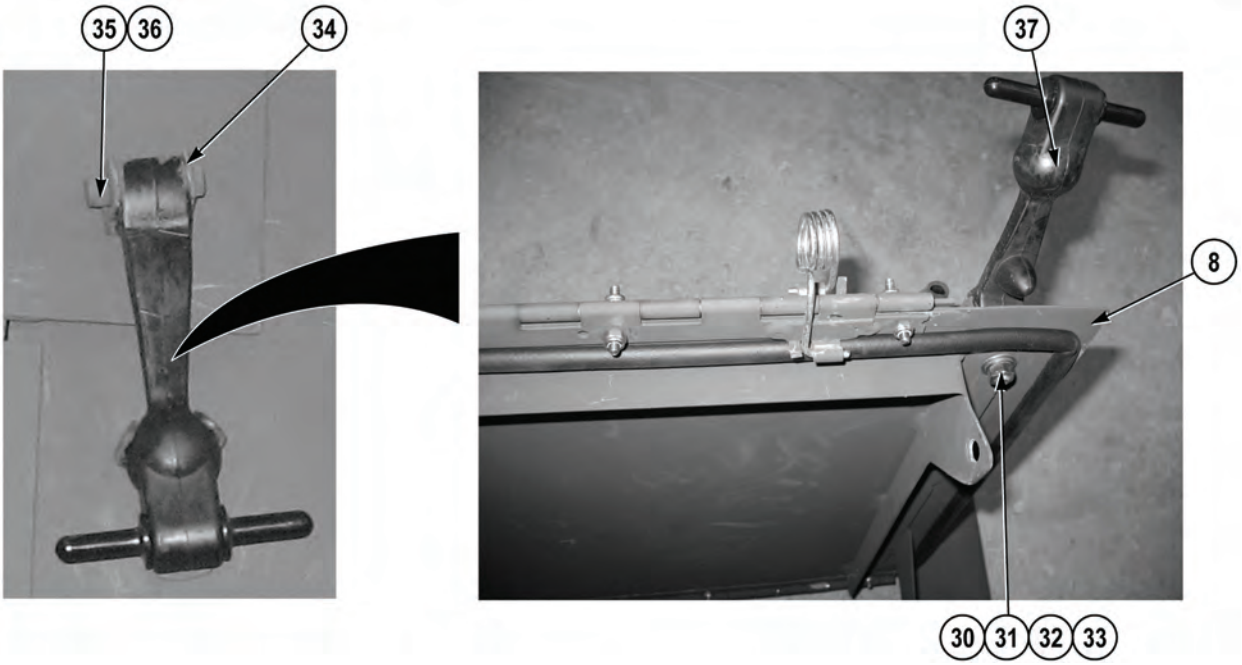


8. Remove seal (21) from upper door (8).

9. Remove nut (22), lockwasher (23), washer (24), strap (25), and screw (26) from upper door (8). Discard lockwasher.

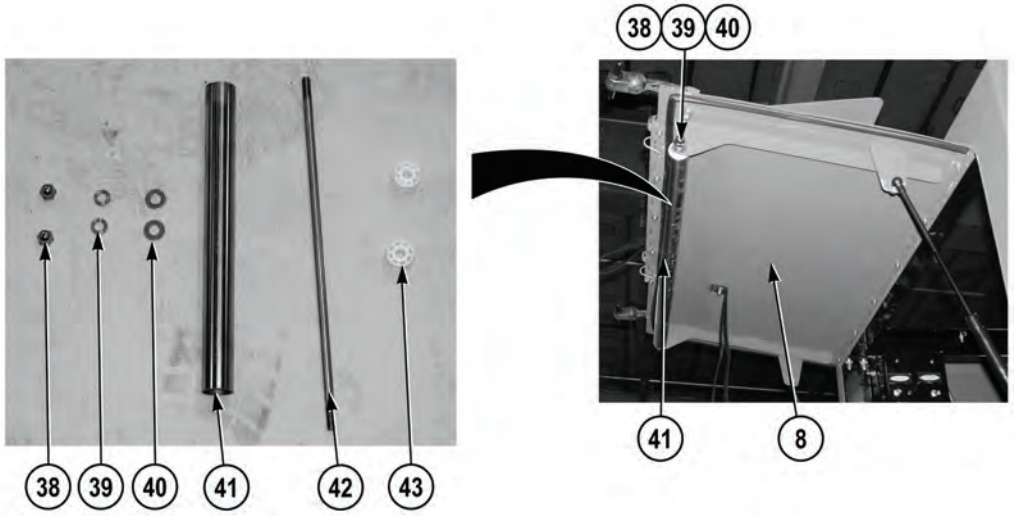


10. Remove four locknuts (27), screws (28), and two latches (29) from pump house panel A (18). Discard locknuts.



11. Remove two nuts (30), lockwashers (31), four washers (32), two screws (33), and two brackets (34) from upper door (8). Discard lockwashers.

12. Remove two locknuts (35), screws (36), and rubber hooks (37) from brackets (34). Discard locknuts.



13. Remove two nuts (38), lockwashers (39), washers (40), and guide (41) from upper door (8). Discard lockwashers.
14. Remove rod (42) and two plastic inserts (43) from guide (41).

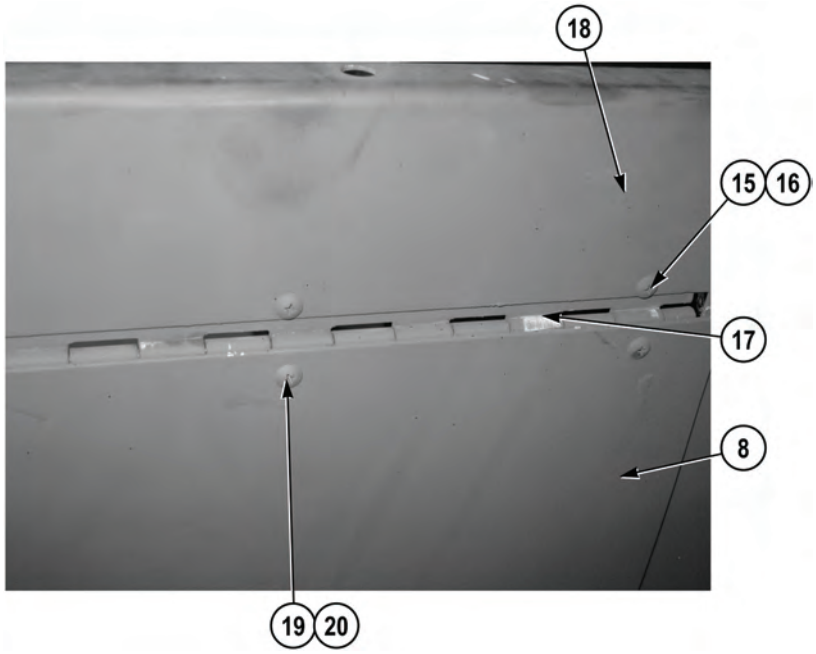
END OF TASK

INSTALLATION

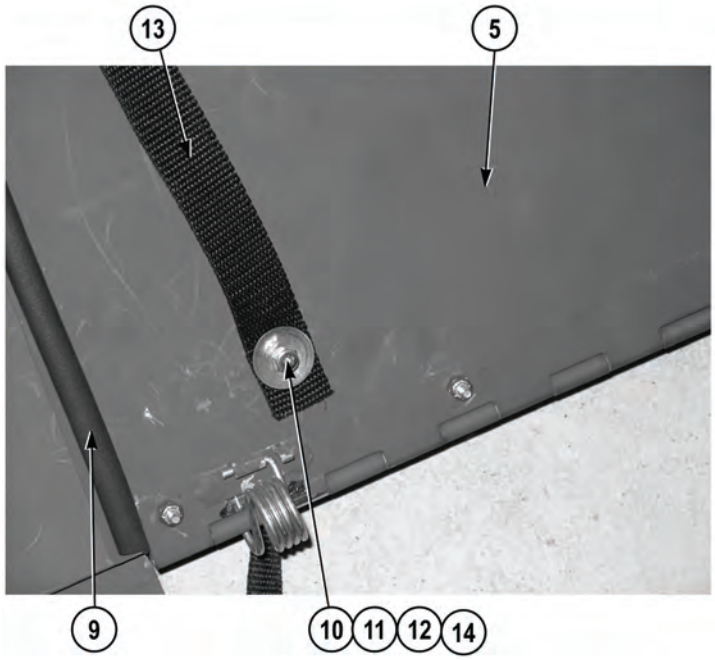
1. Install two plastic inserts (43) and rod (42) on guide (41).
2. Install guide (41) on upper door (8) with two washers (40), lockwashers (39), and nuts (38).
3. Install two rubber hooks (37) on brackets (34) with two screws (36) and locknuts (35).
4. Install two brackets (34) on upper door (8) with two screws (33), four washers (32), two lockwashers (31), and nuts (30).
5. Install two latches (29) on pump house panel A (18) with four screws (28) and locknuts (27).



6. Install screw (26) and strap (25) on upper door (8) with washer (24), lockwasher (23), and nut (22).
7. Install seal (21) on upper door (8).



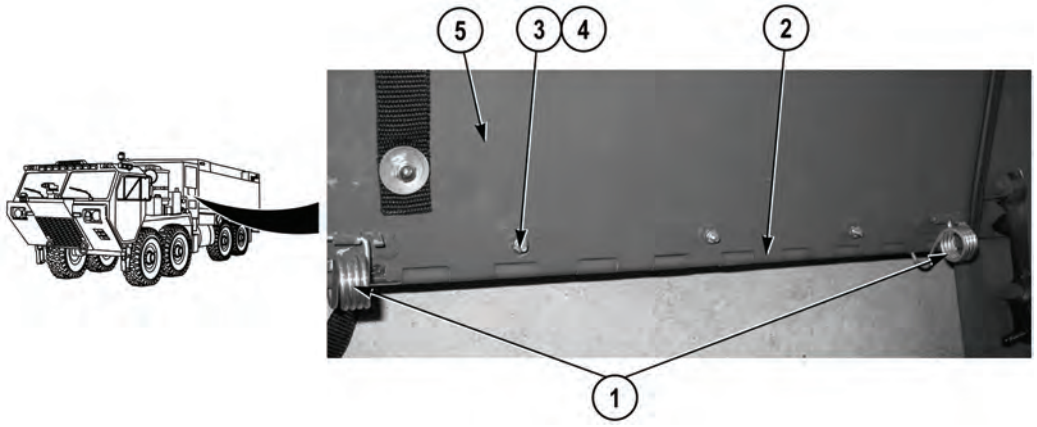
8. Install hinge (17) on upper door (8) with six screws (20) and locknuts (19).
9. With the aid of an assistant, install upper door (8) and hinge (17) on pump house panel A (18) with six screws (16) and locknuts (15).



10. Install screw (14) and strap (13) on lower door (5) with washer (12), lockwasher (11), and nut (10).
11. Install seal (9) on lower door (5).



12. Install hinge (2) on upper door (8) with five screws (7) and locknuts (6).



13. With the aid of an assistant, install lower door (5) on hinge (2) with five screws (4) and locknuts (3).
14. Install two springs (1) on hinge (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Install pneumatic springs (WP 0338)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PUMP HOUSE PANEL(S) REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Lockwasher (1)
Lockwasher (1)
Lockwasher (2)
Lockwasher (12)
Lockwasher (2)
Lockwasher (2)
Lockwasher (1)
Lockwasher (2)
Lockwasher (2)
Lockwasher (2)
Lockwasher (4)
Lockwasher (8)
Lockwasher (4)
Lockwasher (8)
Lockwasher (8)
Lockwasher (6)
Lockwasher (5)
Lockwasher (13)
Lockwasher (5)
Lockwasher (2)
Lockwasher (2)
Lockwasher (4)
Lockwasher (19)
Locknut (2)

Materials/Parts (continued)
Lockwasher (12)
Lockwasher (12)
Lockwasher (7)
Lockwasher (4)
Lockwasher (2)
Lockwasher (9)
Lockwasher (9)
Lockwasher (5)
Lockwasher (5)

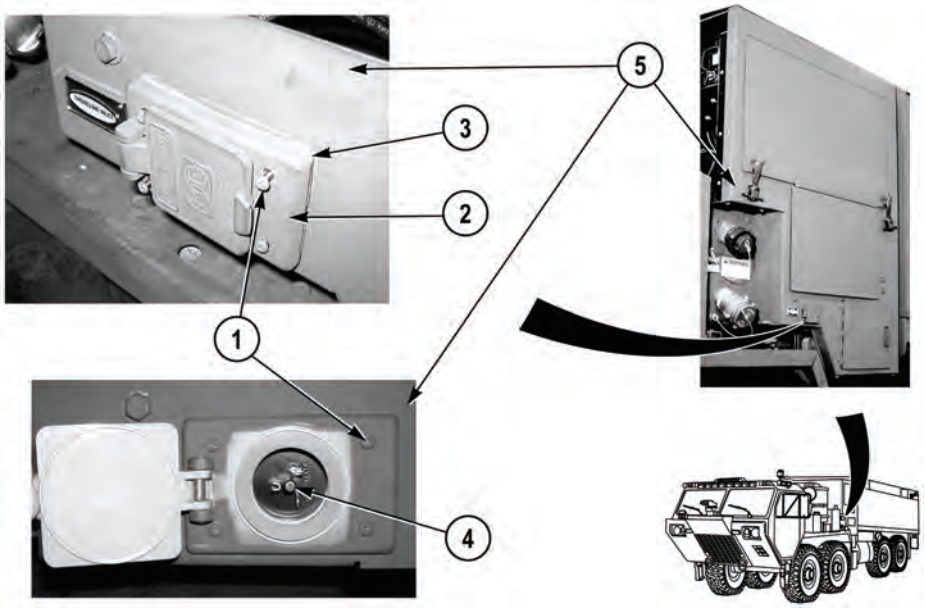
References
TM 9-2320-315-14&P
WP 0014
WP 0021
WP 0246
WP 0315
WP 0320
WP 0328
WP 0340
WP 0351
WP 0370
WP 0392, Fig. 72

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)
Batteries disconnected (TM 9-2320-315-14&P)
Pump house access doors from pump panel A removed (WP 0340)

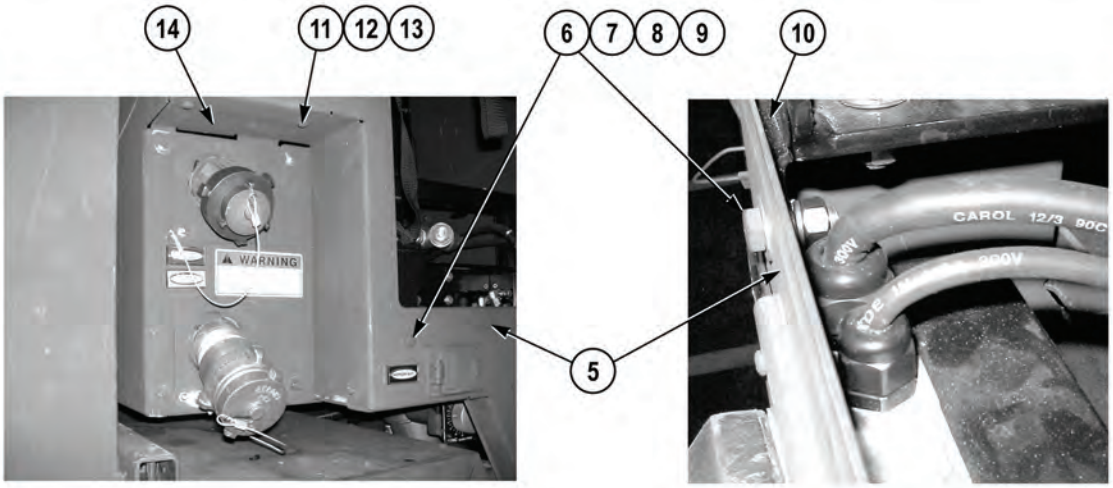
Table 1. Pump House Panels Location.

Location	Panels
Driver Side	A through D
Front	E through G
Passenger Side	H through J
Top	K through M
Back	N through O
Bottom	P

PUMP HOUSE PANEL A REMOVAL

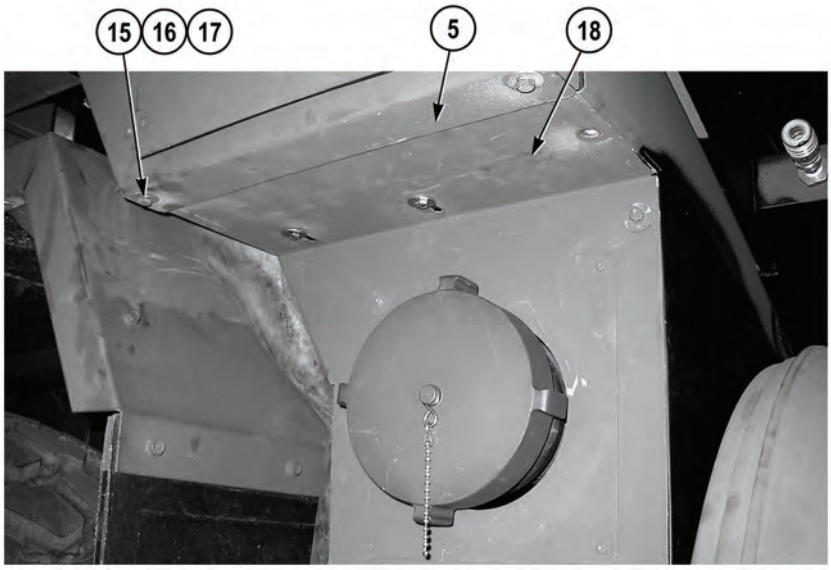


1. Remove four screws (1), cover (2), gasket (3), and receptacle (4) from pump house panel A (5).

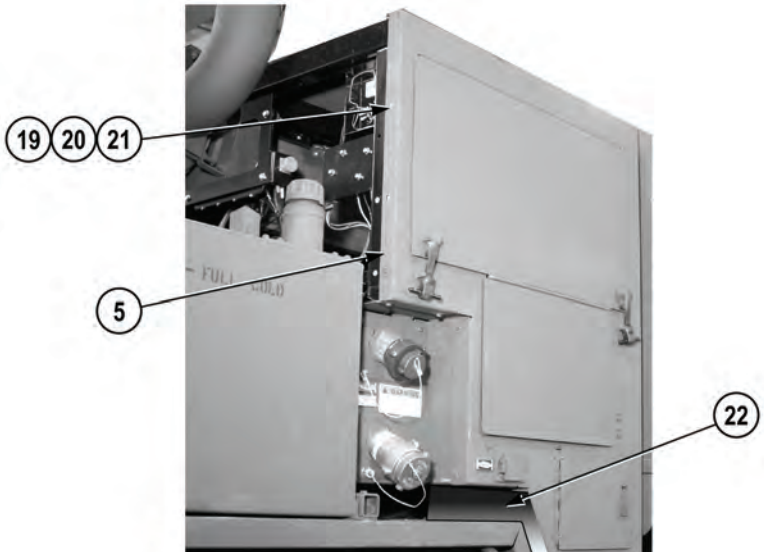


2. Remove nut (6), lockwasher (7), two washers (8), and screw (9) from pump house panel A (5) and bracket (10). Discard lockwasher.

3. Remove four screws (11), lockwasher (12), and washer (13) from pump house panel A (5) and panel D (14). Discard lockwasher.



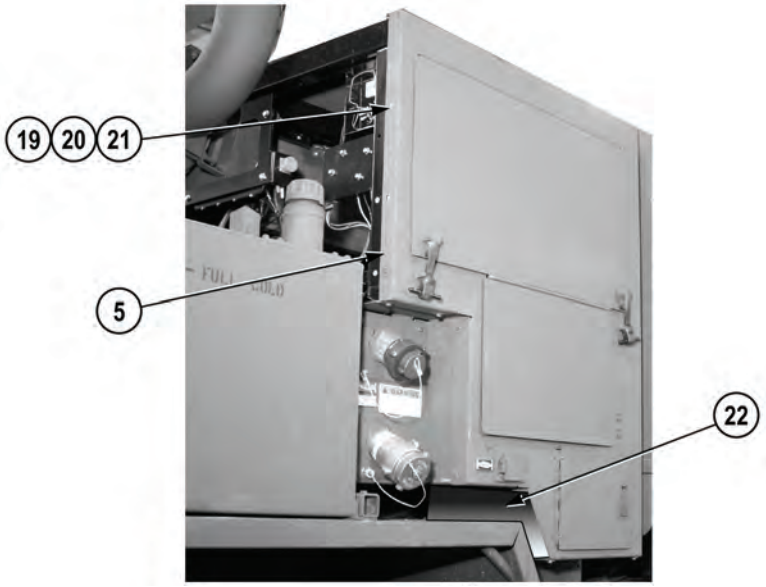
4. Remove two screws (15), lockwashers (16), and washers (17) from pump house panel A (5) and pump panel B (18). Discard lockwashers.



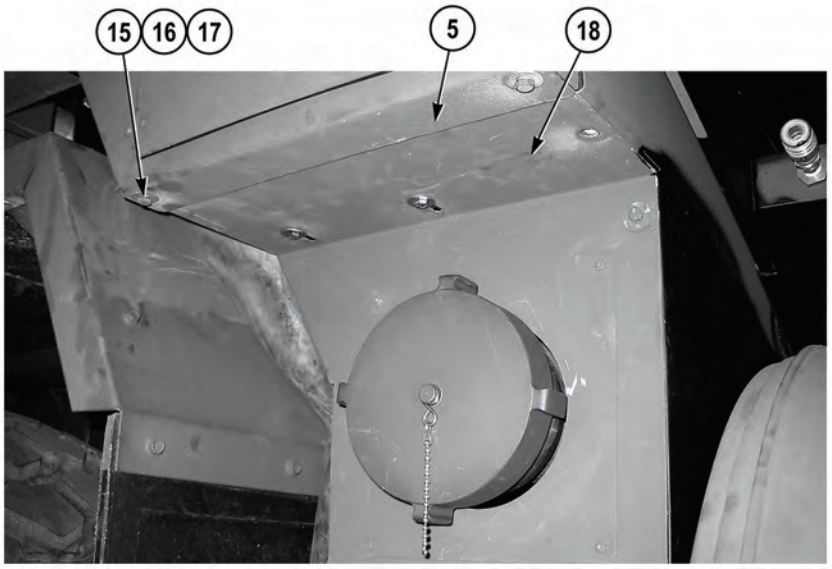
5. Remove 12 screws (19), lockwashers (20), washers (21), and pump house panel A (5) from vehicle. Discard lockwashers.
6. Remove rubber guard (22) from pump house panel A (5).
7. Remove small compartment door from pump house panel A (5) (WP 0351).
8. Remove decal and plate from pump house panel A (5) (WP 0328).

END OF TASK

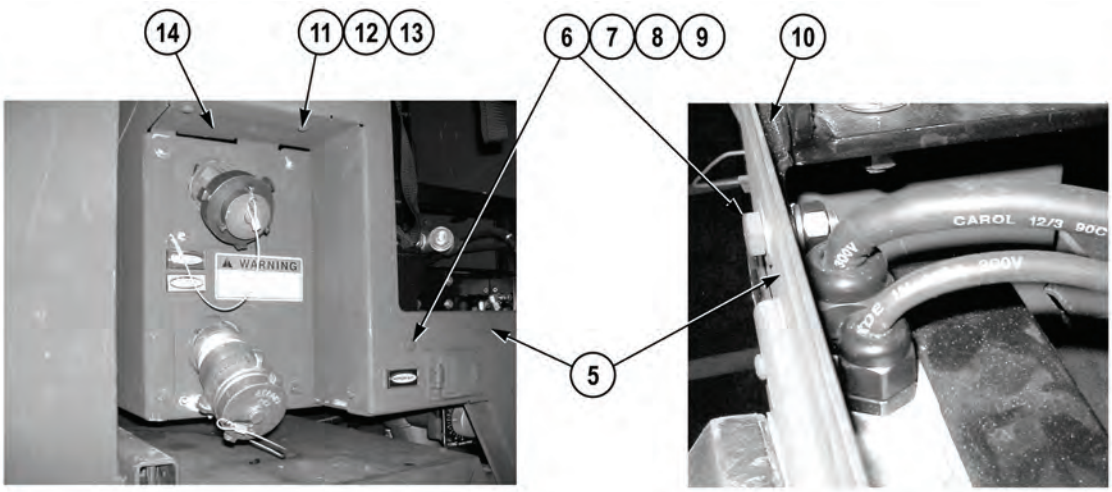
PUMP HOUSE PANEL A INSTALLATION



1. Install decal and plate on pump house panel A (5) (WP 0328).
2. Install small compartment door on pump house panel A (5) (WP 0351).
3. Install rubber guard (22) on pump house panel A (5).
4. Install pump house panel A (5) on vehicle with 12 washers (21), lockwashers (20), and screws (19).

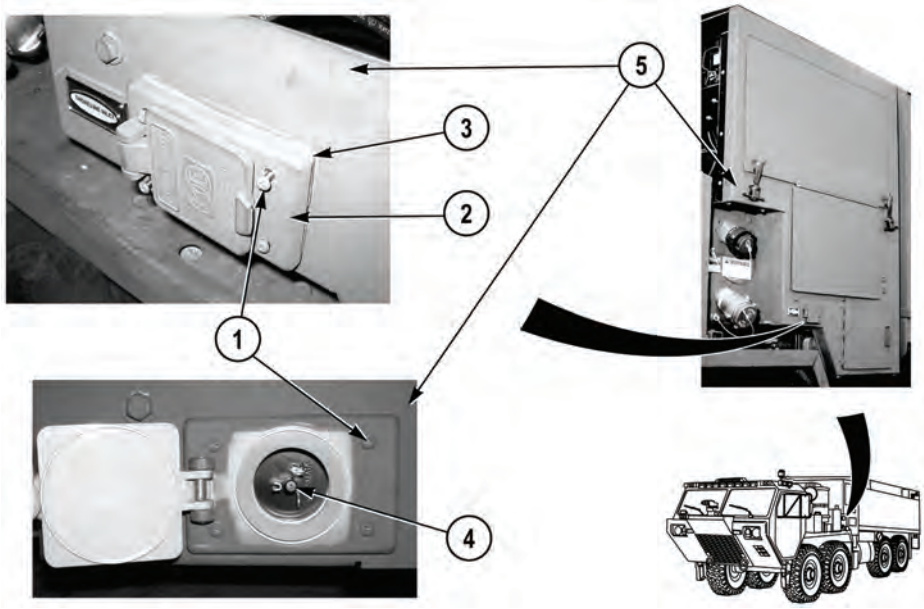


5. Install pump house panel A (5) on pump house panel B (18) with two washers (17), lockwashers (16), and screws (15).



6. Install pump house panel A (5) on pump panel D (14) with four washers (13), lockwashers (12), and screws (11).

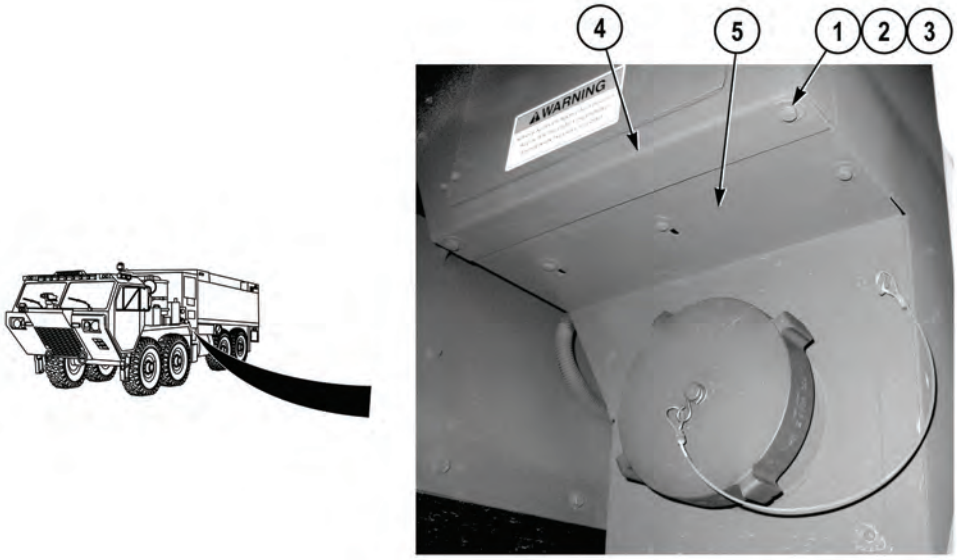
7. Install screw (9), two washers (8), lockwasher (7), and nut (6) on pump house panel A (5) and bracket (10).



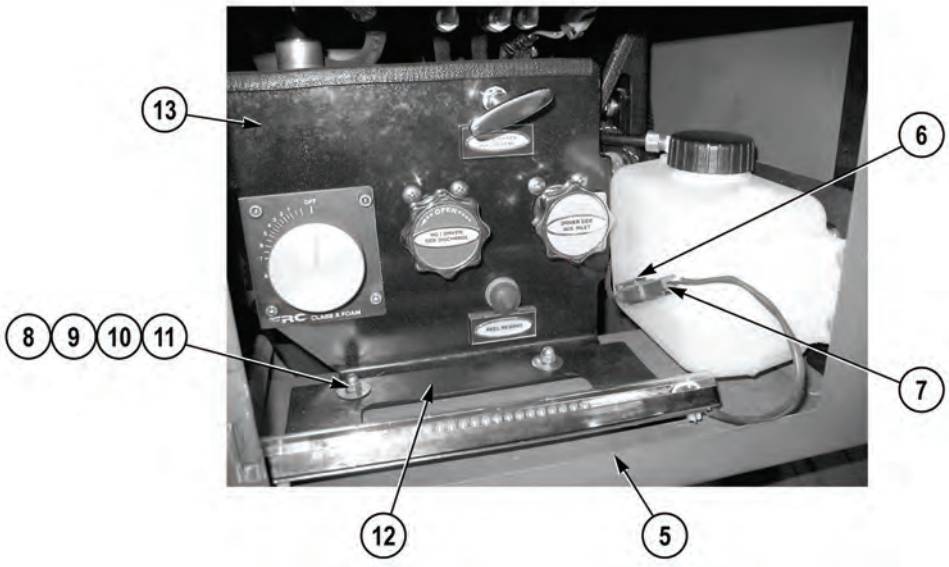
8. Install receptacle (5), gasket (4), and cover (3) on pump house panel A (5) with four screws (2).

END OF TASK

PUMP PANEL B REMOVAL

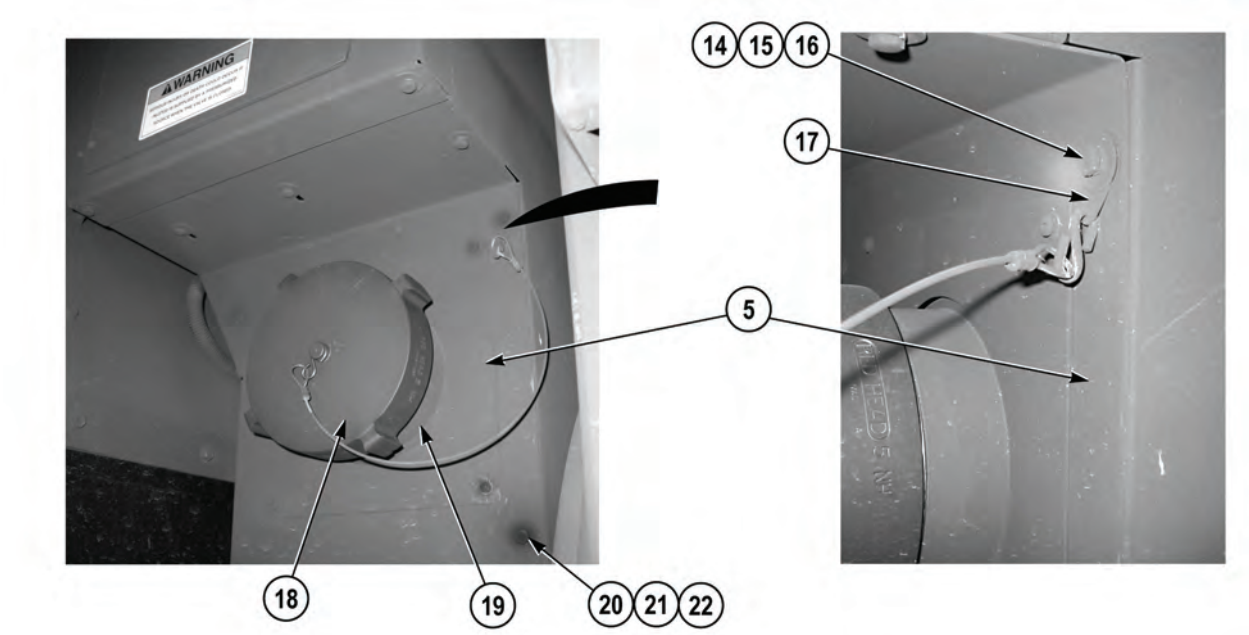


1. Remove two screws (1), lockwashers (2), and washers (3) from pump house panel A (4) and pump house panel B (5). Discard lockwashers.

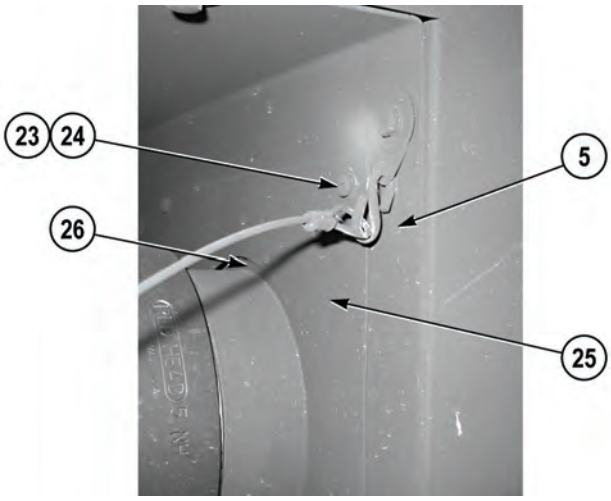


2. Disconnect pump house wire harness connector (6) from striplight connector (7).

3. Remove two nuts (8), lockwashers (9), four washers (10), two screws (11), and bracket (12) from bracket (13) and pump house panel B (5). Discard lockwashers.



4. Remove screw (14), lockwasher (15), washer (16), and clip (17) from pump house panel B (5). Discard lockwasher.
5. Remove cap (18) from pipe (19).
6. Remove two screws (20), lockwashers (21), washers (22), and pump house panel B (5) from vehicle. Discard lockwashers.

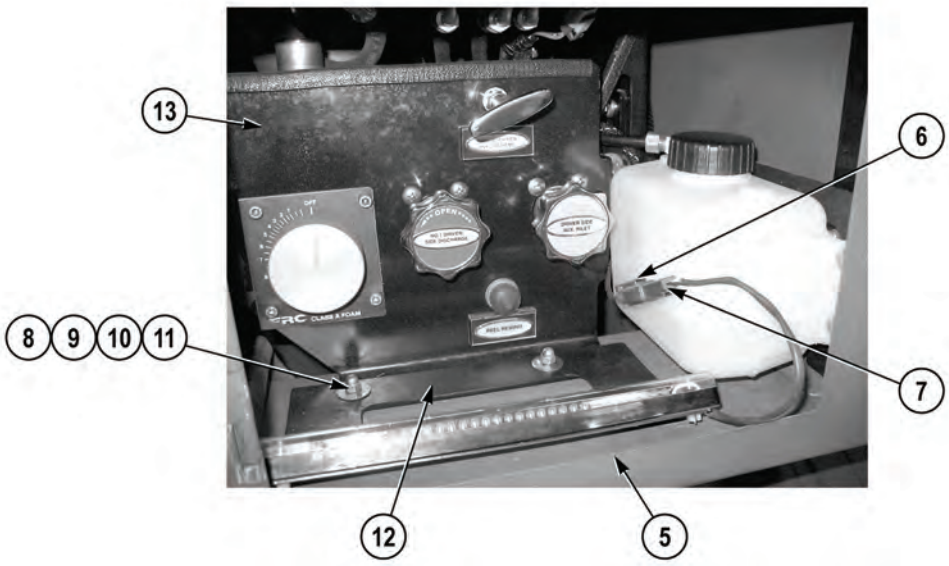


7. Remove four screws (23), washers (24), cover plate (25), and gasket (26) from pump house panel B (5).
8. Remove wire rope from cap (18) (WP 0370).

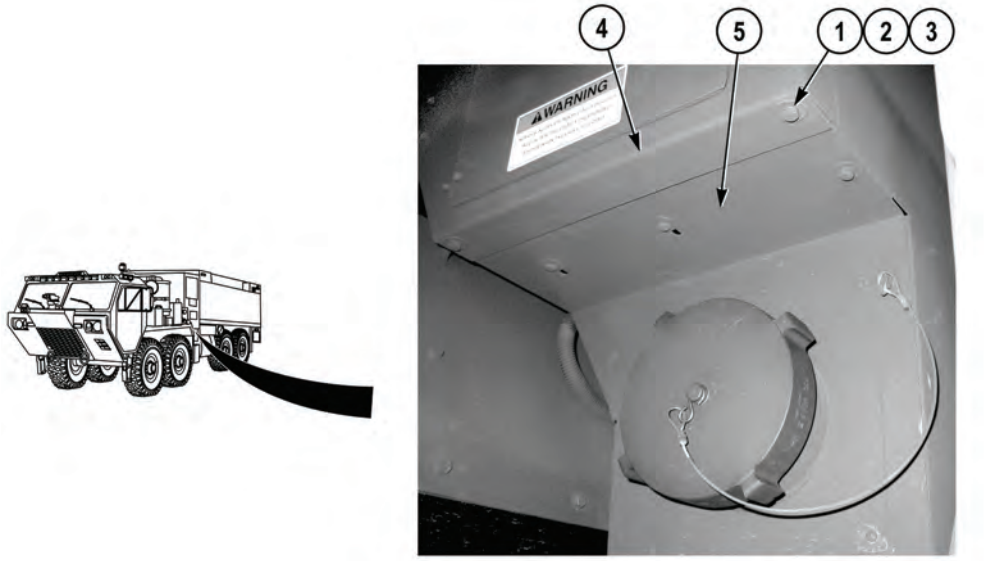
END OF TASK

PUMP HOUSE PANEL B INSTALLATION

1. Install wire rope on cap (18) (WP 0370).
2. Install gasket (26), cover plate (25) on pump house panel B (5) with four washers (24) and screws (23).
3. Install pump house panel B (5) on vehicle with two washers (22), lockwashers (21), and screws (20).
4. Install cap (18) on pipe (19).
5. Install clip (17) on pump house panel B (5) with washer (16), lockwasher (15), and screw (14).



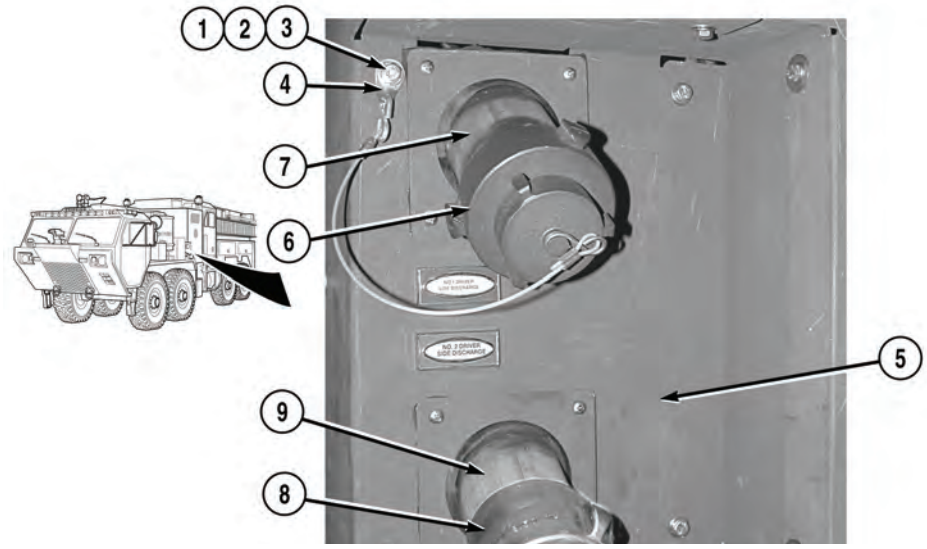
6. Install bracket (12) on bracket (13) and pump house panel B (5) with two screws (11), four washers (10), two lockwashers (9), and nuts (8).
7. Connect pump house wire harness connector (6) on striplight connector (7).



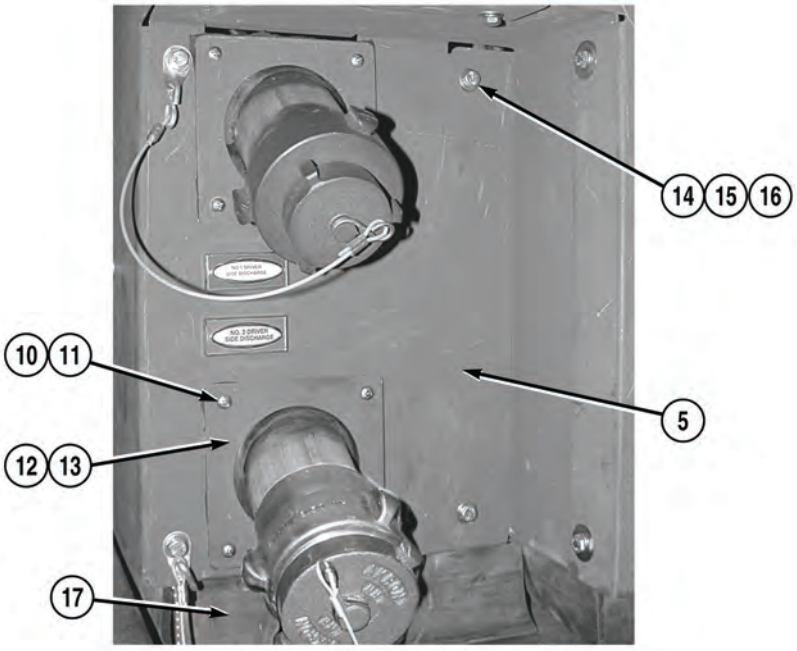
8. Install two washers (3), lockwashers (2), and screws (1) on pump house panel A (4) and pump house panel B (5).

END OF TASK

PUMP HOUSE PANEL C REMOVAL



1. Remove two screws (1), lockwashers (2), washers (3), and clips (4) from pump house panel C (5). Discard lockwashers.
2. Remove coupling (6) from pipe (7).
3. Remove coupling (8) from pipe (9).

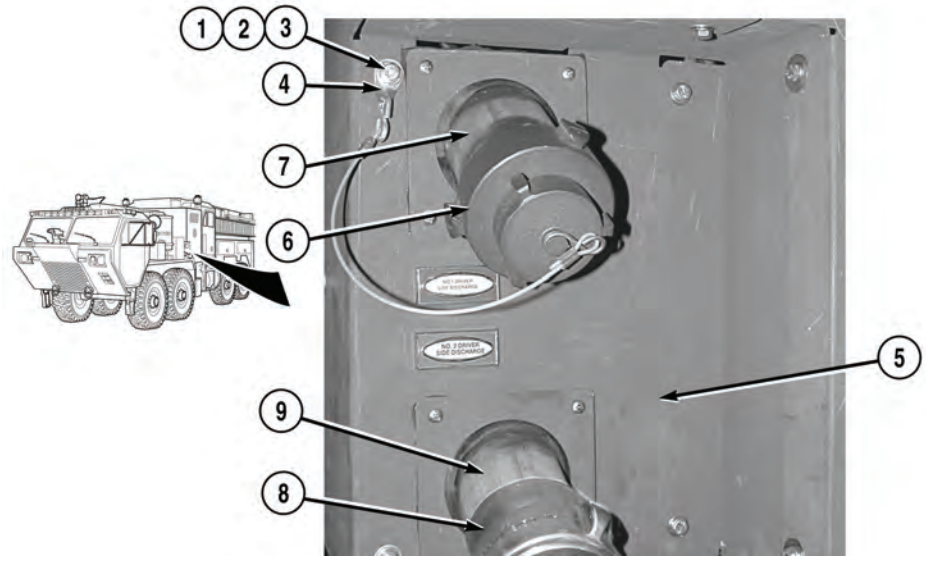


4. Remove eight screws (10), washers (11), two cover plates (12), and gasket (13) from pump house panel C (5).
5. Remove two screws (14), lockwashers (15), washers (16), and pump house panel (5) from vehicle. Discard lockwashers.
6. Remove rubber guard (17) from pump house panel C (5).
7. Remove two decals and plates from pump house panel C (5) (WP 0328).

END OF TASK

PUMP HOUSE PANEL C INSTALLATION

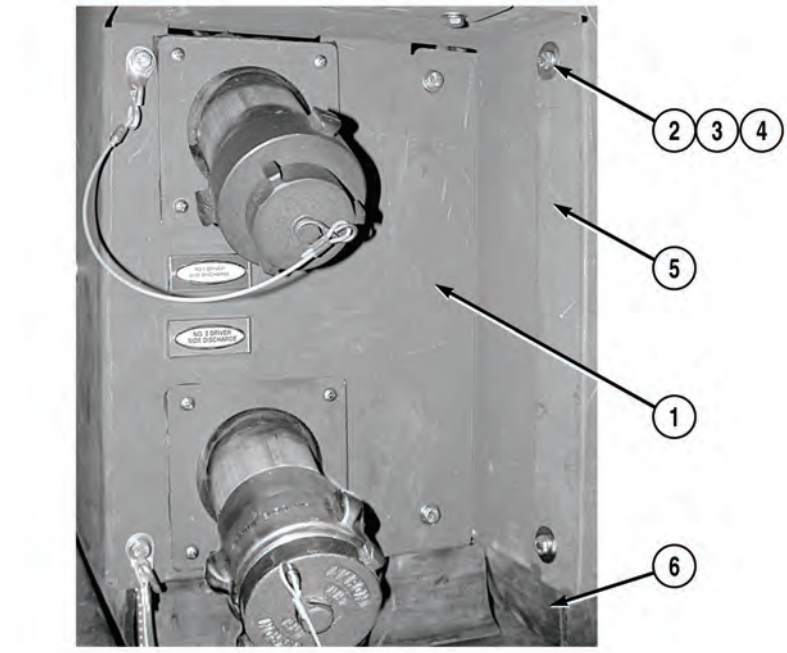
1. Install two decals and plates on pump house panel C (5) (WP 0328).
2. Install rubber guard (17) on pump house panel C (5).
3. Install pump house panel C (5) on vehicle with two washers (16), lockwashers (15), and screws (14).
4. Install two gaskets (13) and cover plates (12) on pump house panel C (5) with eight washers (11) and screws (10).



5. Install coupling (8) on pipe (9).
6. Install coupling (6) on pipe (7).
7. Install two clips (4) on pump house panel C (5) with two washers (3), lockwashers (2), and screws (1).

END OF TASK

PUMP HOUSE PANEL D REMOVAL



1. Remove pump house panel C (1).
2. Remove four screws (2), lockwashers (3), washers (4), and pump house panel D (5) from vehicle. Discard lockwashers.
3. Remove rubber guard (6) from pump house panel D (5).

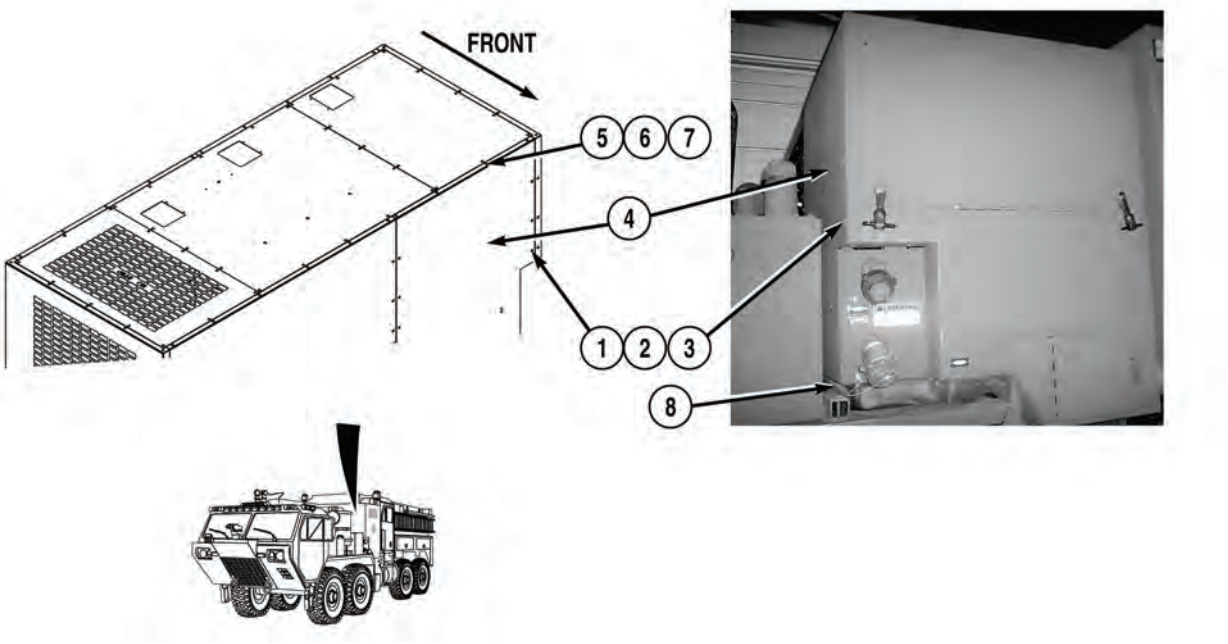
END OF TASK

PUMP HOUSE PANEL D INSTALLATION

1. Install rubber guard (6) on pump house panel D (5).
2. Install pump house panel D (5) on vehicle with four washers (4), lockwashers (3), and screws (2).
3. Install pump house panel C (1).

END OF TASK

PUMP HOUSE PANEL E REMOVAL



1. Remove eight screws (1), lockwashers (2), and washers (3) from front of pump house panel E (4). Discard lockwashers.
2. Remove four screws (5), lockwashers (6), washers (7), and pump house panel E (4) from vehicle. Discard lockwashers.
3. Remove rubber guard (8) from pump house panel E (4).

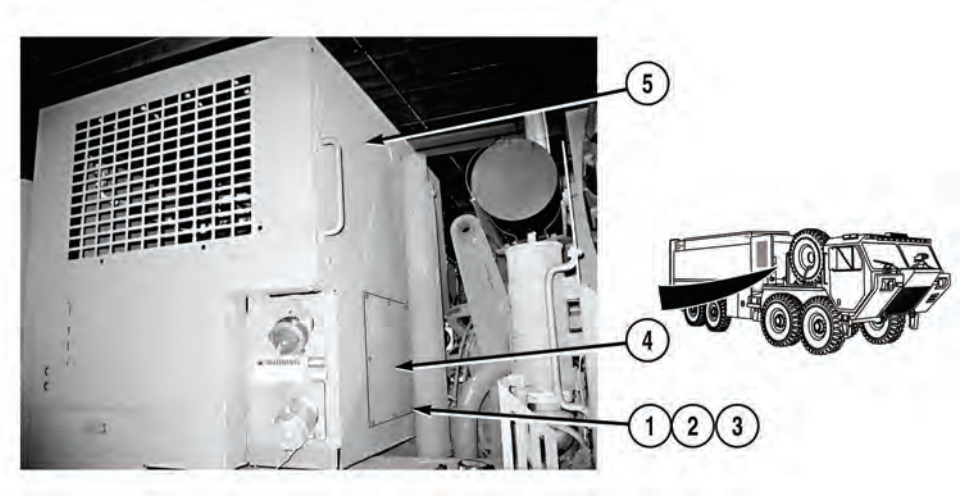
END OF TASK

PUMP HOUSE PANEL E INSTALLATION

1. Install rubber guard (8) on pump house panel E (4).
2. Install pump house panel E (4) on vehicle with four washers (7), lockwashers (6), and screws (5).
3. Install eight washers (3), lockwashers (2), and screws (1) on front of pump house panel E (4).

END OF TASK

PUMP HOUSE PANEL F REMOVAL



Remove eight screws (1), lockwashers (2), washers (3), and pump house panel F (4) from pump house panel G (5). Discard lockwashers.

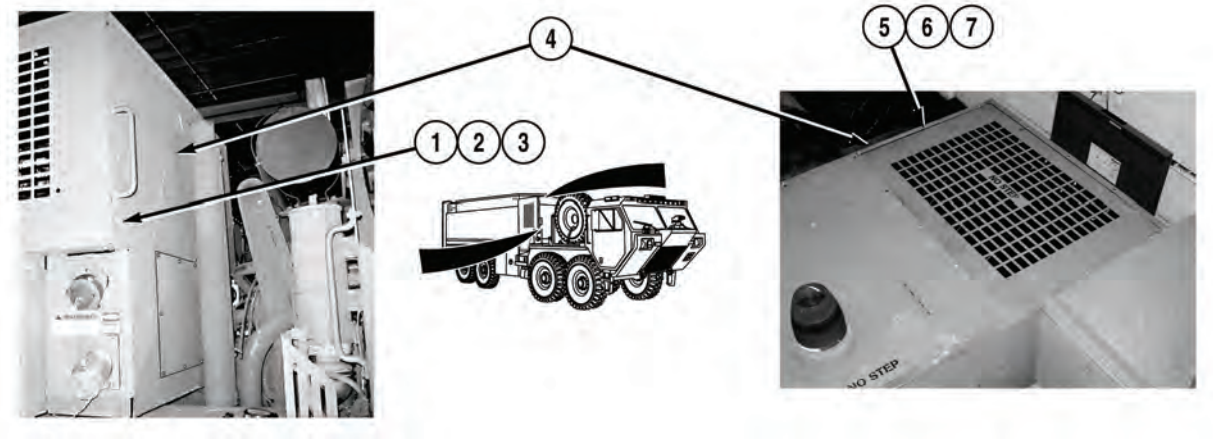
END OF TASK

PUMP HOUSE PANEL F INSTALLATION

Install pump house panel F (4) on pump house panel G (5) with eight washers (3), lockwashers (2), and screws (1).

END OF TASK

PUMP HOUSE PANEL G REMOVAL



1. Remove ten screws (1), lockwashers (2), and washers (3) from front of pump house panel G (4). Discard lockwashers.
2. Remove six screws (5), lockwashers (6), washers (7), and pump house panel G (4) from vehicle. Discard lockwashers.

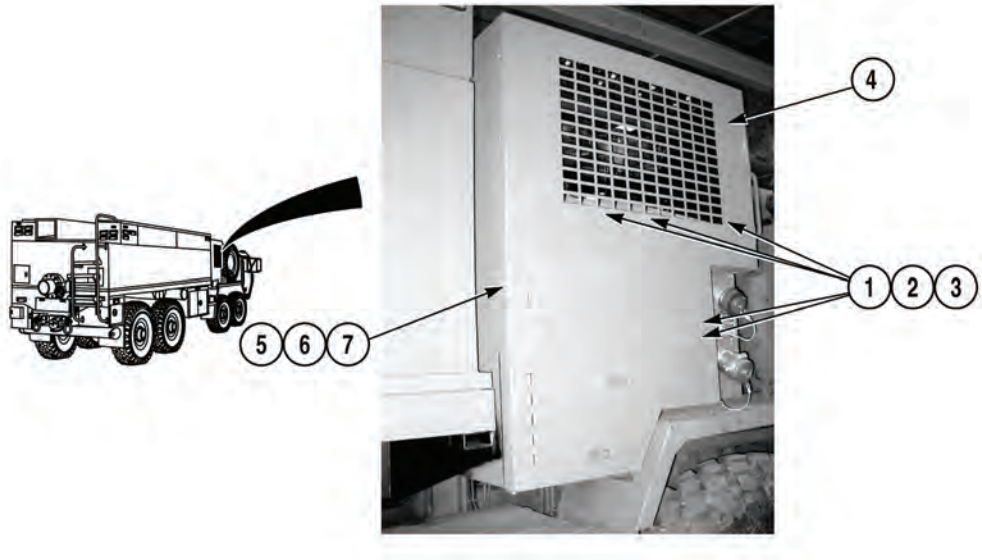
END OF TASK

PUMP HOUSE PANEL G INSTALLATION

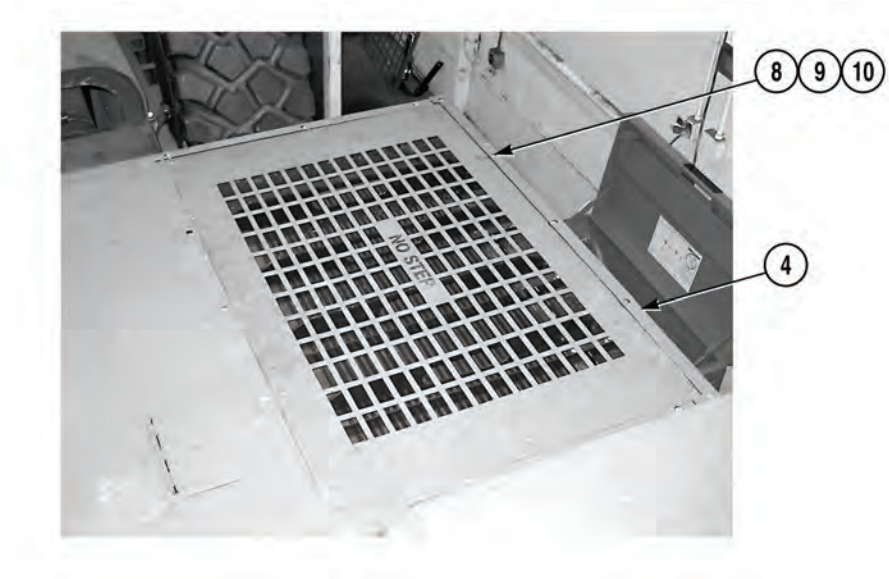
1. Install pump house panel G (4) or vehicle with six washers (7), lockwashers (6), and screws (5).
2. Install ten washers (3), lockwashers (2), and screws (1) on front of pump house panel G (4).

END OF TASK

PUMP HOUSE PANEL H REMOVAL



1. Remove five screws (1), lockwashers (2), and washers (3) from front of pump house panel H (4). Discard lockwashers.
2. Remove 13 screws (5), lockwashers (6), and washers (7) from bottom and sides of pump house panel H (4). Discard lockwashers.



3. With the aid if an assistant remove five screws (8), lockwashers (9), washers (10), and pump house panel H (4) from vehicle. Discard lockwashers.
4. Remove two small compartment doors from pump house panel H (WP 0351).

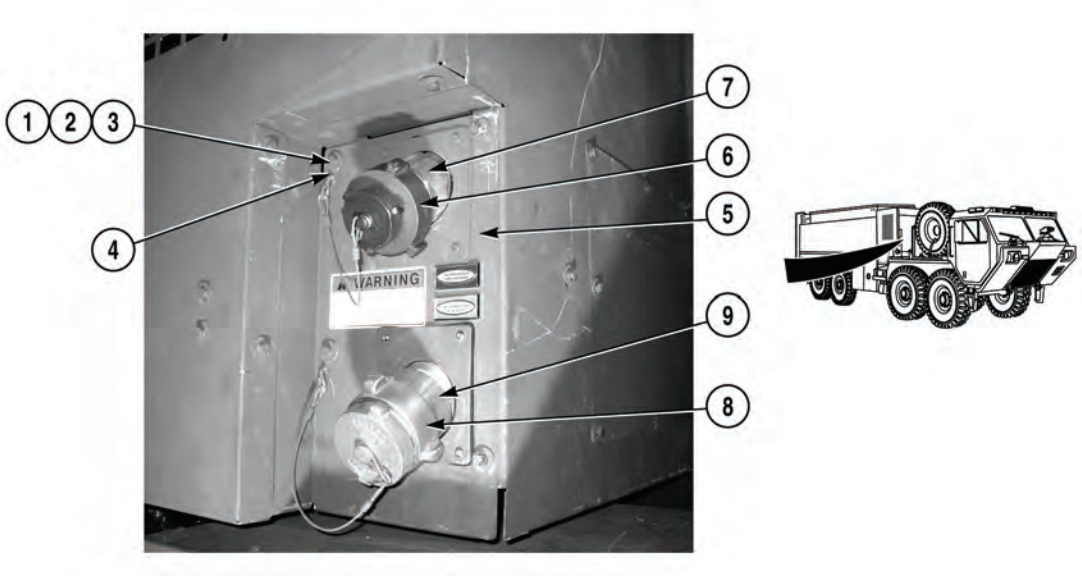
END OF TASK

PUMP HOUSE PANEL H INSTALLATION

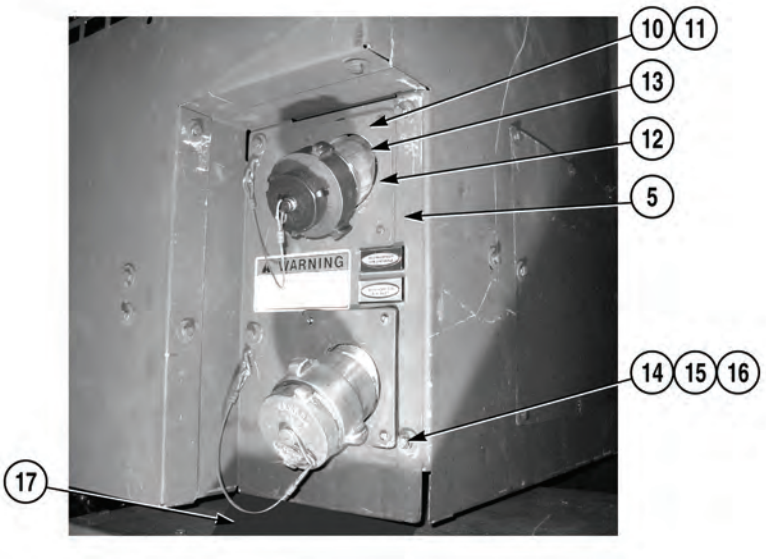
1. Install two small compartment doors on pump house panel H (WP 0351).
2. With the aid of an assistant, install pump house panel H (4) on vehicle with five washers (10), lockwashers (9), and screws (8).
3. Install 13 washers (7), lockwashers (6), and screws (5) on bottom and sides of pump house panel H (4).
4. Install five washers (3), lockwashers (2), and screws (1) on front of pump house panel H (4).

END OF TASK

PUMP HOUSE PANEL I REMOVAL



1. Remove two screws (1), lockwashers (2), washers (3), and clips (4) from pump house panel I (5). Discard lockwashers.
2. Remove coupling (6) from pipe (7).
3. Remove coupling (8) from pipe (9).

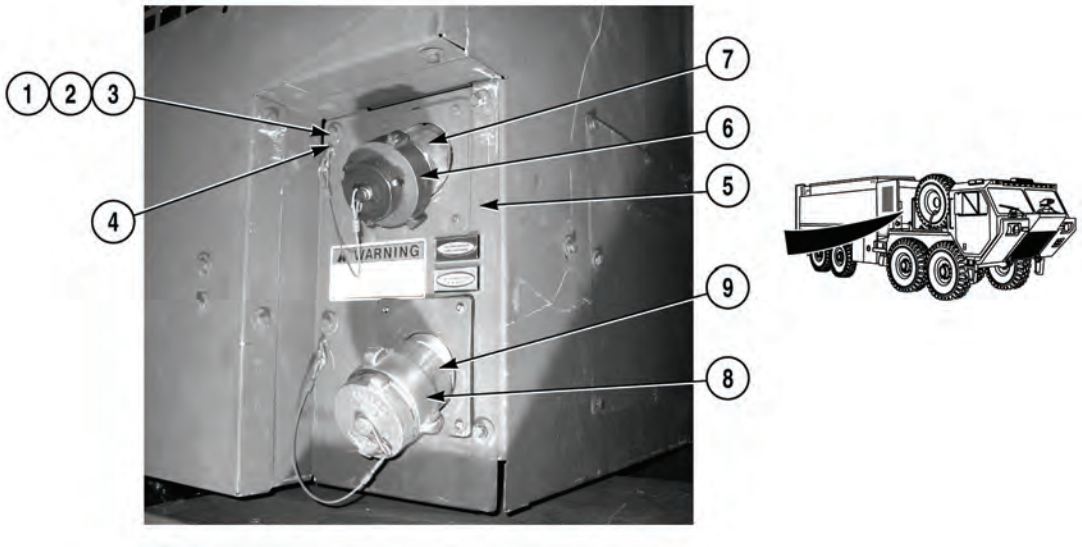


4. Remove eight screws (10), washers (11), two cover plates (12) and gaskets (13) from pump house panel I (5).
5. Remove two screws (14), lockwashers (15), washers (16), and pump house panel I (5) from vehicle. Discard lockwashers.
6. Remove rubber guard (17) from pump house panel I (5).
7. Remove three decals and two plates from pump house panel I (5) (WP 0328).

END OF TASK

PUMP HOUSE PANEL I INSTALLATION

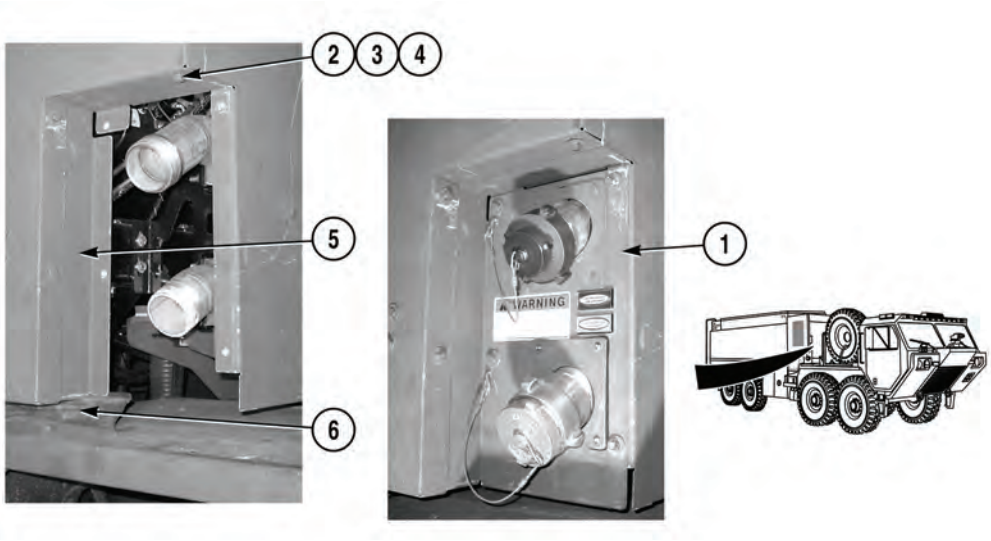
1. Install two decals and plates on pump house panel I (5) (WP 0328).
2. Install rubber guard (17) on pump house panel I (5).
3. Install pump house panel I (5) on vehicle with two washers (16), lockwashers (15), and screws (14).
4. Install two gaskets (13) and cover plates (12) on pump house panel I (5) with eight washers (11) and screws (10).



5. Install coupling (8) on pipe (9).
6. Install coupling (6) on pipe (7).
7. Install two clips (4) on pump house panel I (5) with two washers (3), lockwashers (2), and screws (1).

END OF TASK

PUMP HOUSE PANEL J REMOVAL



1. Remove pump house panel I (1) from vehicle.
2. Remove four screws (2), lockwashers (3), washers (4), and pump house panel J (5) from vehicle. Discard lockwashers.
3. Remove rubber guard (6) from pump house panel J (5).

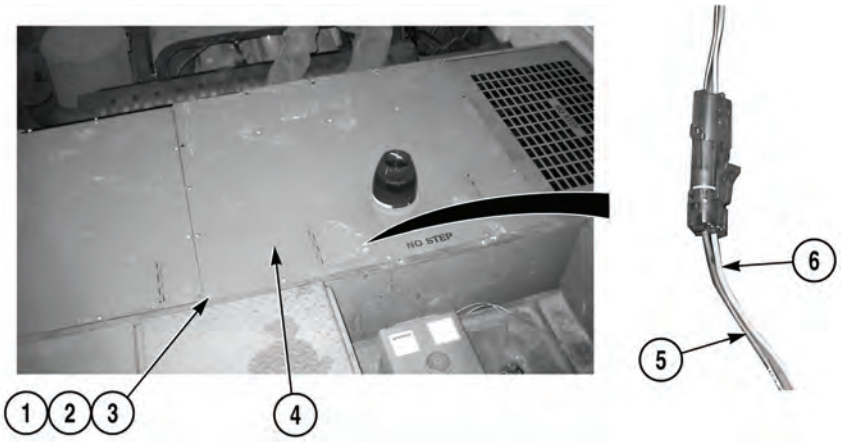
END OF TASK

PUMP HOUSE PANEL J INSTALLATION

1. Install rubber guard (6) on pump house panel J (5).
2. Install pump house panel J (5) on vehicle with four washers (4), lockwashers (3), and screws (2).
3. Install pump house panel I (1) on vehicle.

END OF TASK

PUMP HOUSE PANEL K REMOVAL



CAUTION

Pump house panel must only be lifted far enough to disconnect wires for beacon light, failure to comply may cause damage to equipment.

1. Remove 19 screws (1), lockwashers (2), and washers (3) from pump house panel K (4) and vehicle. Disconnect lockwashers.
2. With the aid of an assistant, lift pump house panel K (4) and cut wire 1640 (5) and wire 1630 (6).



3. Remove two locknuts (7), screws (8), and beacon light (9) from pump house panel K (4). Discard locknuts.
4. Remove two small compartment doors from pump house panel K (WP 0351).

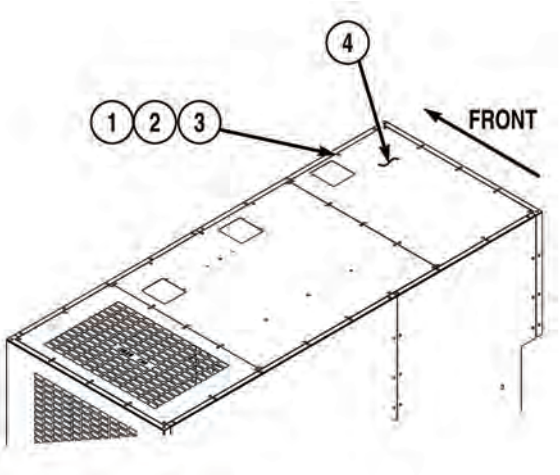
END OF TASK

PUMP HOUSE PANEL K INSTALLATION

1. Install two small compartment doors on pump house panel K (WP 0351).
2. Install beacon light (9) on pump house panel K (4) with two screws (8) and locknuts (7).
3. With the aid of an assistant, repair wire 1630 (6) and wire 1640 (5) (TM 9-2320-315-14&P).
4. Install pump house panel K (4) on vehicle with 19 washers (3), lockwashers (2), and screws (1).

END OF TASK

PUMP HOUSE PANEL L REMOVAL



1. Remove 12 screws (1), lockwashers (2), washers (3), and pump house panel L (4) from vehicle. Discard lockwashers.
2. Remove small compartment door from pump house panel L (WP 0351).

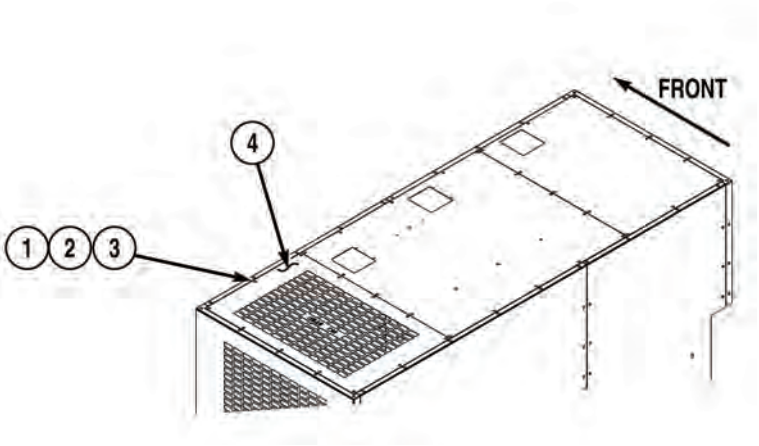
END OF TASK

PUMP HOUSE PANEL L INSTALLATION

1. Install small compartment door on pump house panel L (WP 0351).
2. Install pump house panel L (4) on vehicle with 12 washers (3), lockwashers (2), and screws (1).

END OF TASK

PUMP HOUSE PANEL M REMOVAL



Remove 12 screws (1), lockwashers (2), washers (3), and pump house panel M (4) from vehicle. Discard lockwashers.

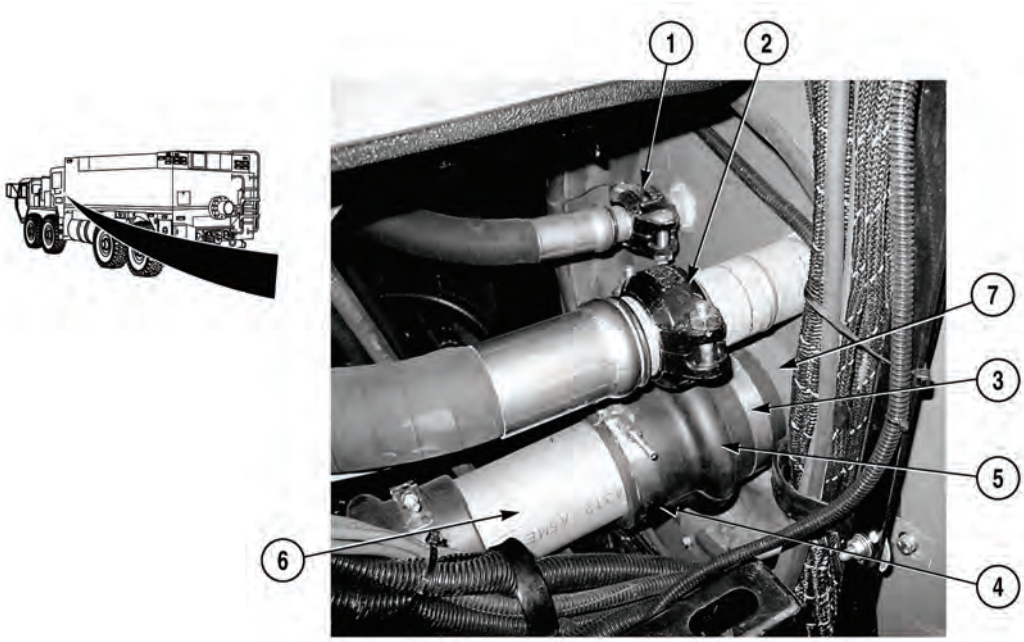
END OF TASK

PUMP HOUSE PANEL M INSTALLATION

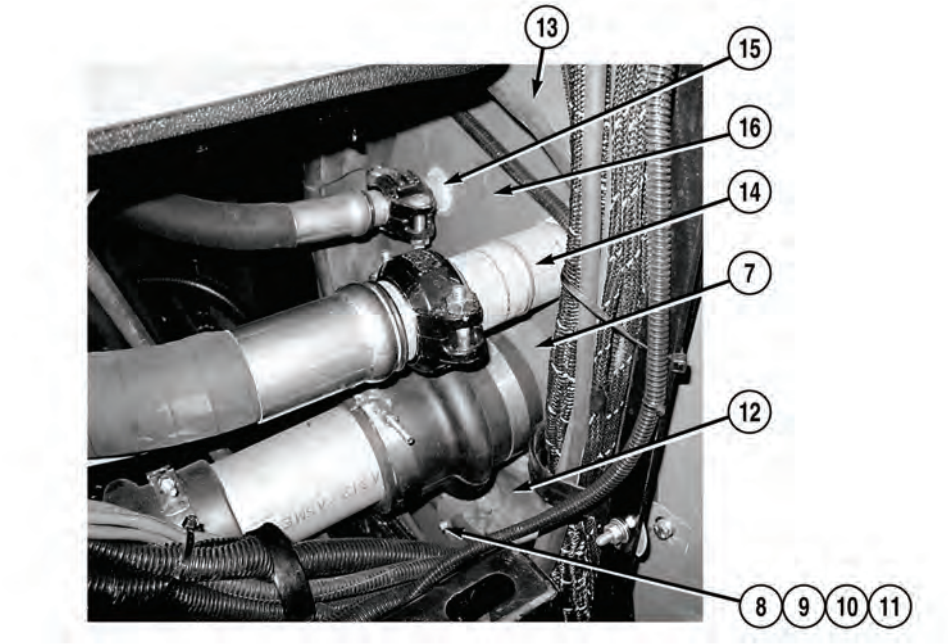
Install pump house panel M (4) on vehicle with 12 washers (3), lockwashers (2), and screws (1).

END OF TASK

PUMP HOUSE PANEL N REMOVAL

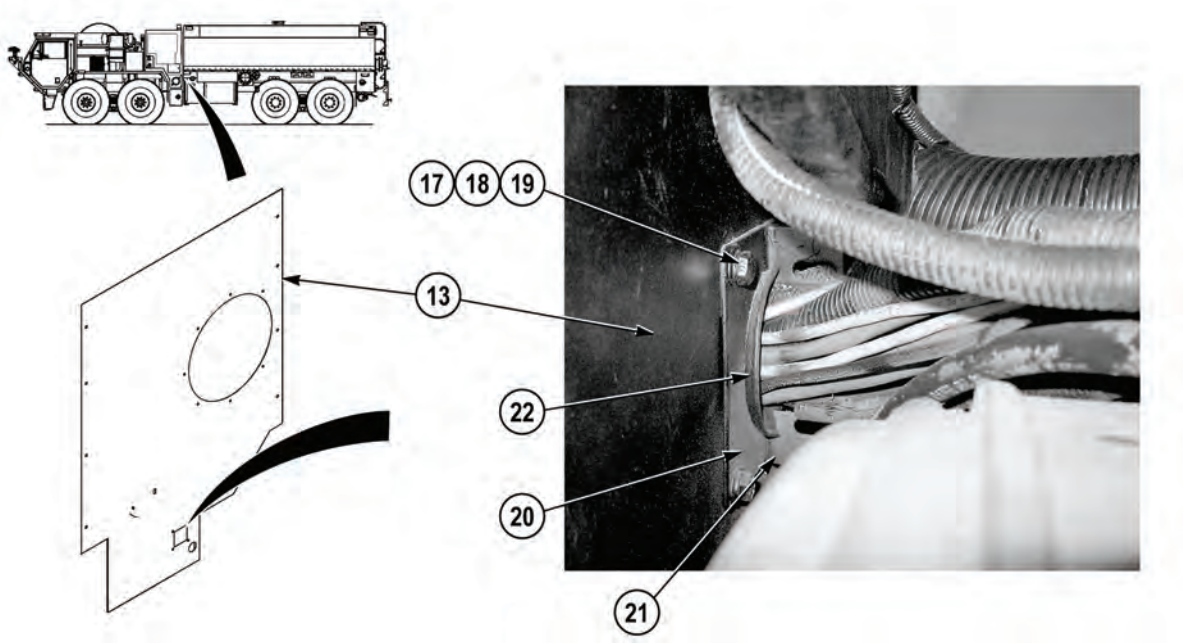


1. Remove hose reel from vehicle (WP 0246).
2. Drain water tank (WP 0014).
3. Drain foam tank (WP 0021).
4. Remove two couplings (1) and (2) from vehicle (WP 0315).
5. Loosen two clamps (3) and (4) and remove hump hose (5) from pipe (6) and pipe (7).



6. Remove seven screws (8), lockwashers (9), washers (10), clips (11), and rubber guard (12) from pump house panel N (13). Discard lockwashers.

7. Remove three pipes (14), (7), and (15) from water tank (16).

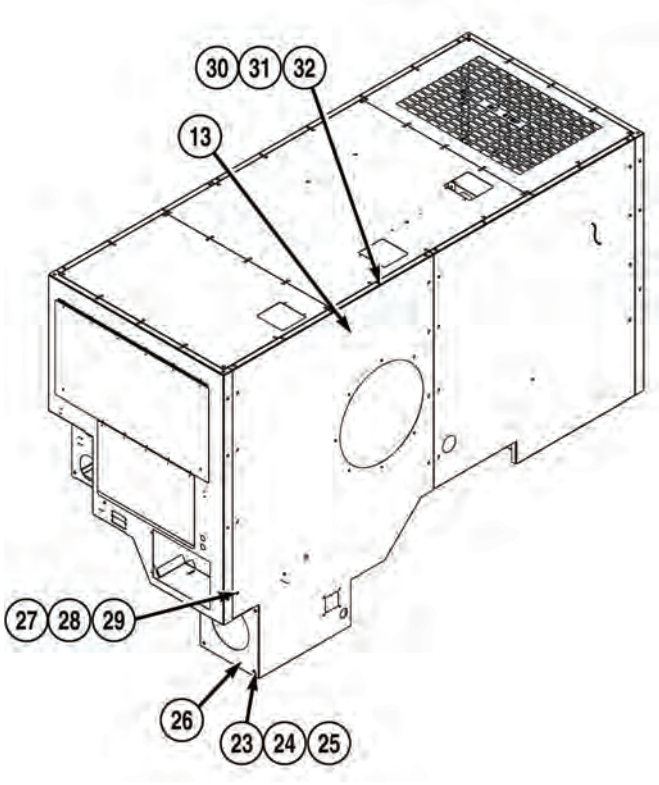


NOTE

Note position of brackets prior to removal to ensure proper installation.

8. Remove four screws (17), lockwashers (18), washers (19), and two brackets (20) and (21) from pump house panel N (13). Discard lockwashers.

9. Remove quick edge (22) from two brackets (20) and (21).



10. Remove two screws (23), lockwashers (24), and washers (25), from pump house panel B (26). Discard lockwashers.
11. Remove nine screws (27), lockwashers (28), and washers (29) from pump house panel N (13). Discard lockwashers.

NOTE

An assistant is required to help route wires and hoses from pump house panel N during removal.

12. With the aid of an assistant, remove five screws (30), lockwashers (31), washers (32), and pump house panel N (13) from vehicle.

END OF TASK

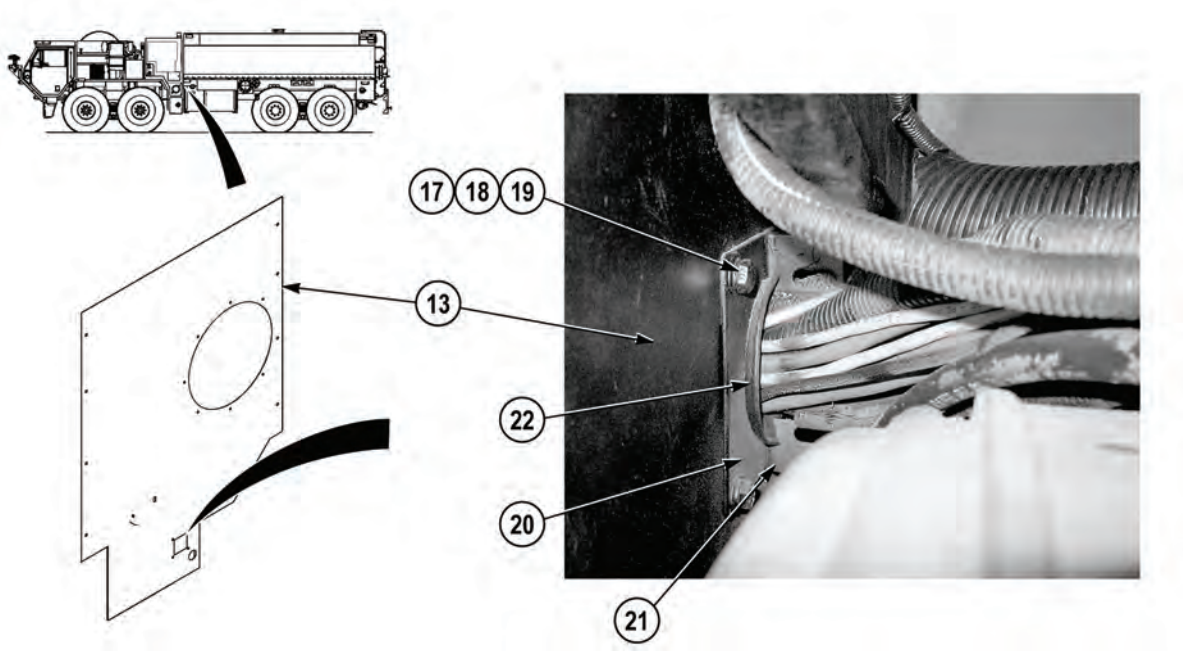
PUMP HOUSE PANEL N INSTALLATION

NOTE

An assistant is required to help route wires and hoses on pump house panel N.

1. With the aid of an assistant, instill pump house panel N (13) on vehicle with five washers (32), lockwashers (31), and screws (30).
2. Install nine washers (29), lockwashers (28), and screws (27) on pump house panel N (13).

3. Install two washers (25), lockwashers (24), and screws (23) on pump house panel B (26).

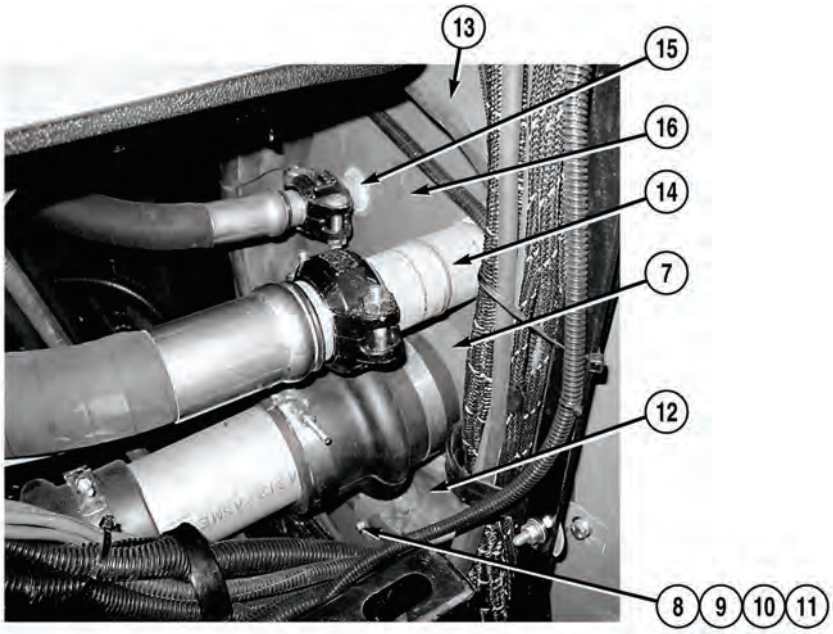


4. Install quick edge (22) on two brackets (20) and (21).

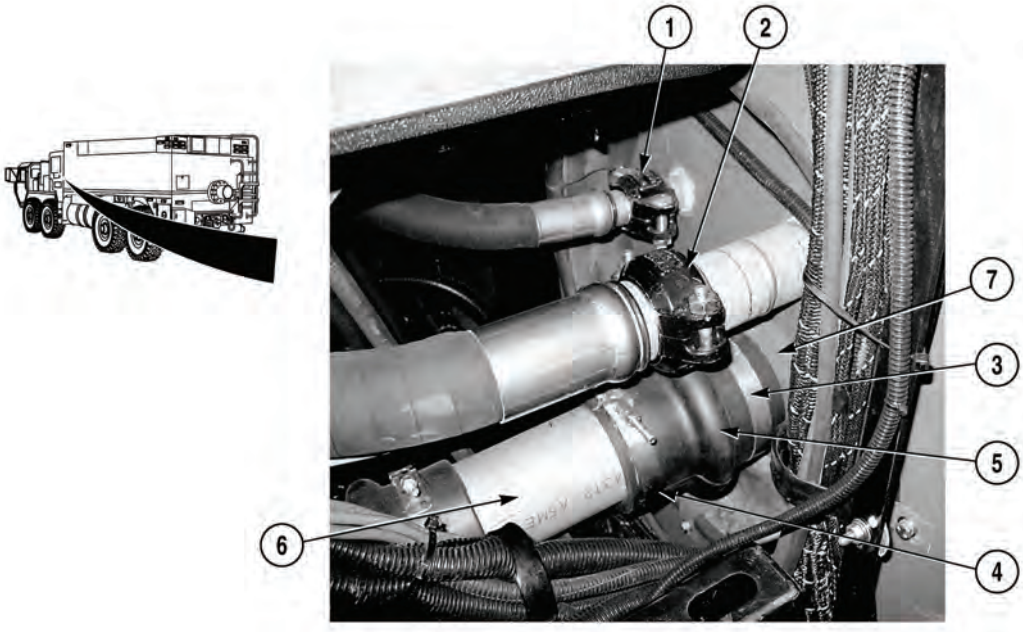
NOTE

Install brackets as noted prior to removal.

5. Install two brackets (21) and (20) on pump house panel N (13) with four washers (19), lockwashers (18), and screws (17).



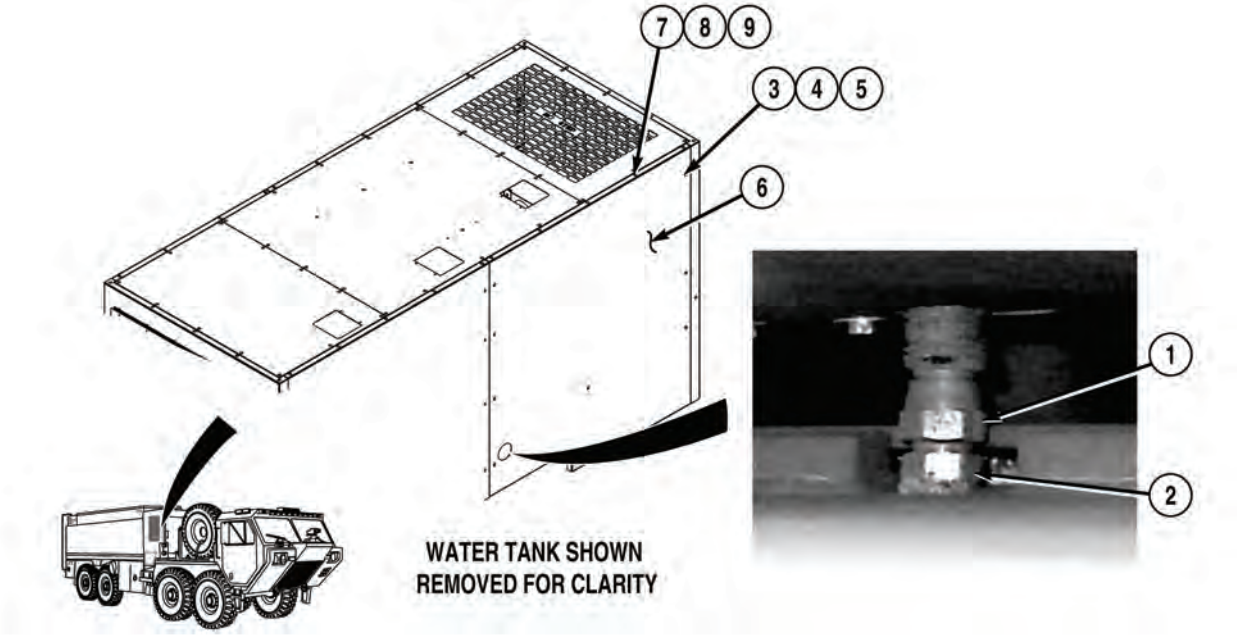
6. Install three pipes (15), (7), and (14) on vehicle (WP 0320).
7. Install rubber guard (12) on pump house panel N (13) with seven clips (11), washers (10), lockwashers (9), and screws (8).



8. Install hump hose (5) on pipe (7) and pipe (6) and tighten two clamps (4) and (3).
9. Install two couplings (2) and (1) on vehicle (WP 0315).
10. Install hose reel on vehicle (WP 0246).

END OF TASK

PUMP HOUSE PANEL O REMOVAL



1. Drain water tank (WP 0014).
2. Remove hose (1) from fitting (2).
3. Remove nine screws (3), lockwashers (4), and washers (5) from pump house panel O (6). Discard lockwashers.
4. Remove five screws (7), lockwashers (8), washers (9), and pump house panel O (6) from vehicle. Discard lockwashers.

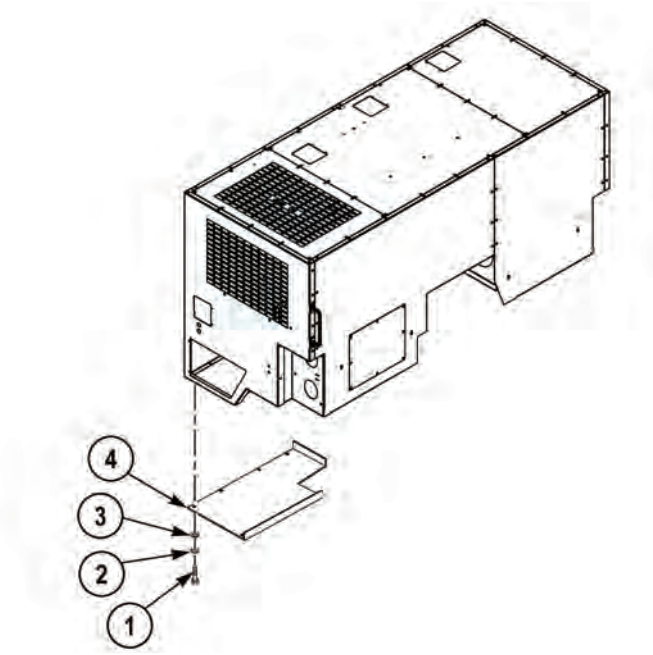
END OF TASK

PUMP HOUSE PANEL O INSTALLATION

1. Install pump house panel O (6) on vehicle with five washers (9), lockwashers (8), and screws (7).
2. Install pump house panel O (6) on vehicle with nine washers (5), lockwashers (4), and screws (3).
3. Install hose (1) on fitting (2).

END OF TASK

PUMP HOUSE PANEL P REMOVAL



Remove five screws (1), lockwashers (2), washers (3), and pump house panel P (4) from vehicle. Discard lockwashers.

END OF TASK

PUMP HOUSE PANEL P INSTALLATION

Install pump house panel P (4) on vehicle with five washers (3), lockwashers (2), and screws (1). Discard lockwashers.

END OF TASK

END OF WORK PACKAGE

.FIELD LEVEL MAINTENANCE

PUMP HOUSE ASSEMBLY REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
- Cap Set, Protective (WP 0399, Item 1)
- Drain Pan (WP 0399, Item 4)
- Standard Automotive Tool Set (SATS), (WP 0399, Item 15)
  - Wrench, Torque, Click, Ratcheting 1/2” Drive, 250 ft-lb
- Tool Kit, General Mechanic’s: Automotive (WP 0399, Item 17)

Materials/Parts
- Tags, Identification (WP 0401, Item 22)
- Ties, Cable, Plastic (WP 0401, Item 25)
- Compound, Sealing (WP 0401, Item 10)
- Preformed Packing (1)
- Preformed Packing (1)
- Preformed Packing (1)
- Lockwasher (2)
- Lockwasher (1)
- Lockwasher (4)
- Lockwasher (1)
- Locknut (2)
- Locknut (4)
- Locknut (1)
- Locknut (4)

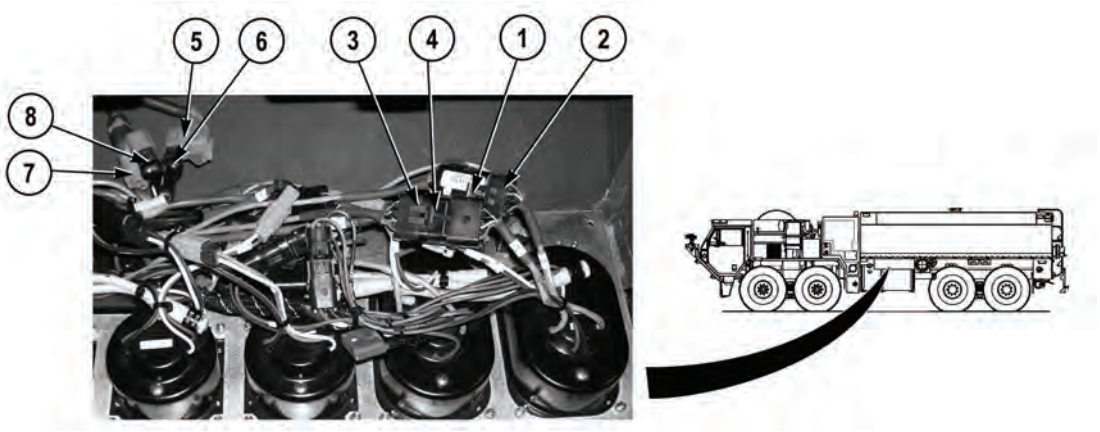
Materials/Parts (continued)
- Locknut (4)
- Locknut (3)
- Locknut (3)
- Locknut (1)
- Locknut (1)

Personnel Required
- MOS 63B Wheeled Vehicle Mechanic (4)

References
- WP 0315
- WP 0392, Fig. 70, 71, 72

Equipment Conditions
- Water system drained (WP 0014)
- Foam system drained (WP 0021)
- Hydraulic reservoir drained (WP 0143)
- Power take off (PTO) drive shaft removed (WP 0152)
- Pump house panels B, E, G, H, K, and L removed (WP 0341)
- Battery box removed (WP 0236)
- Foam system eductor removed (WP 0175)
- Pump operator’s panel opened (WP 0205)

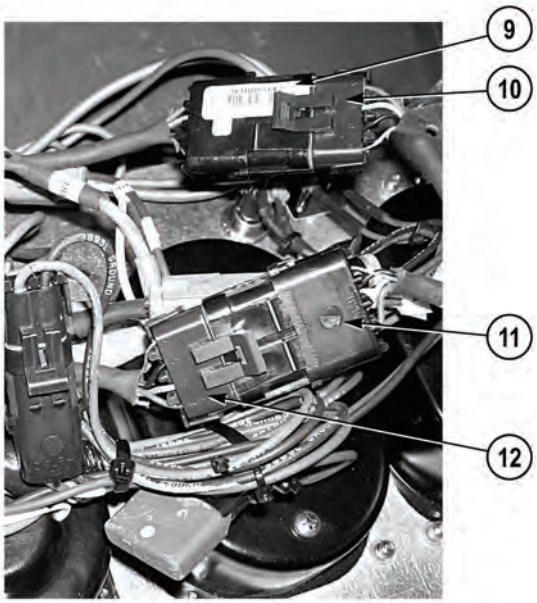
REMOVAL



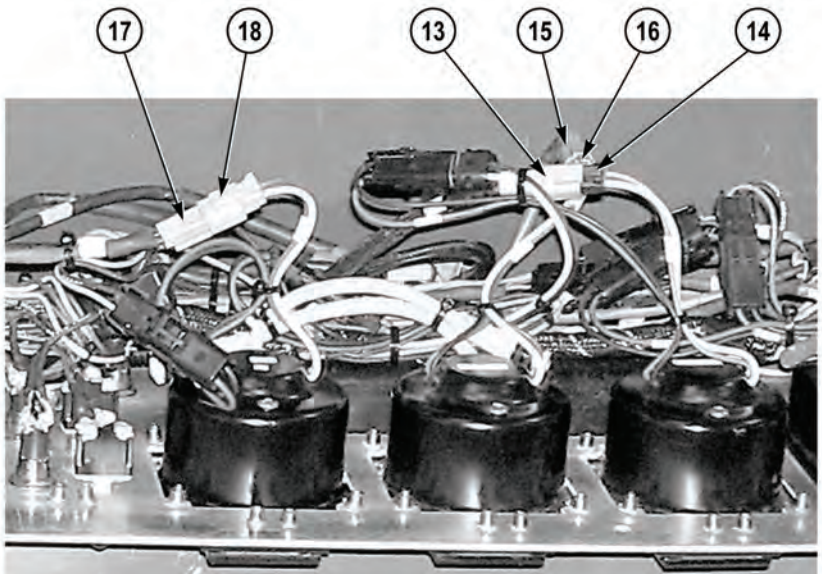
NOTE

- Tag and mark wires prior to removal to ensure proper installation.
- Remove cable ties as required.
- Note routing of wires prior to removal to ensure proper installation.

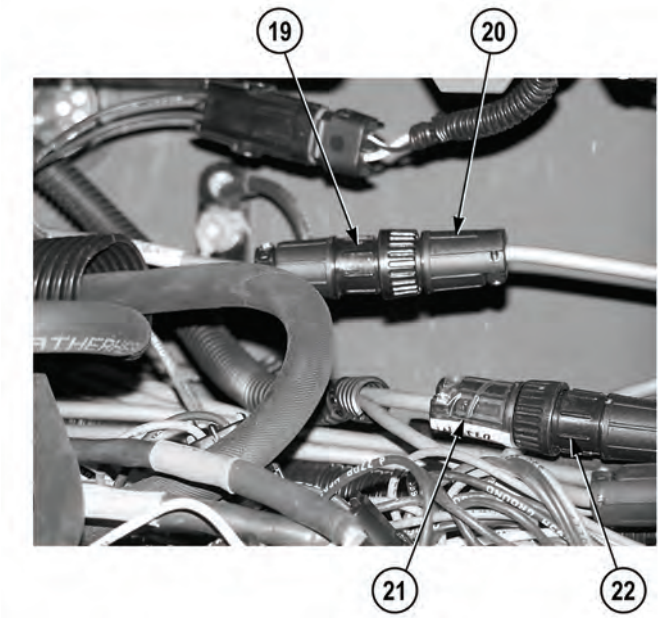
1. Disconnect No. 2 passenger side flow sensor wire harness connector (1) from No. 2 passenger side flow sensor line connector (2).
2. Disconnect No. 2 passenger side pressure transducer wire harness connector (3) from No. 2 passenger side pressure transducer line connector (4).
3. Disconnect cat datalink (yellow) connector (5) from Cat datalink line connector (6).
4. Disconnect chassis datalink (green) connector (7) from chassis datalink line connector (8).



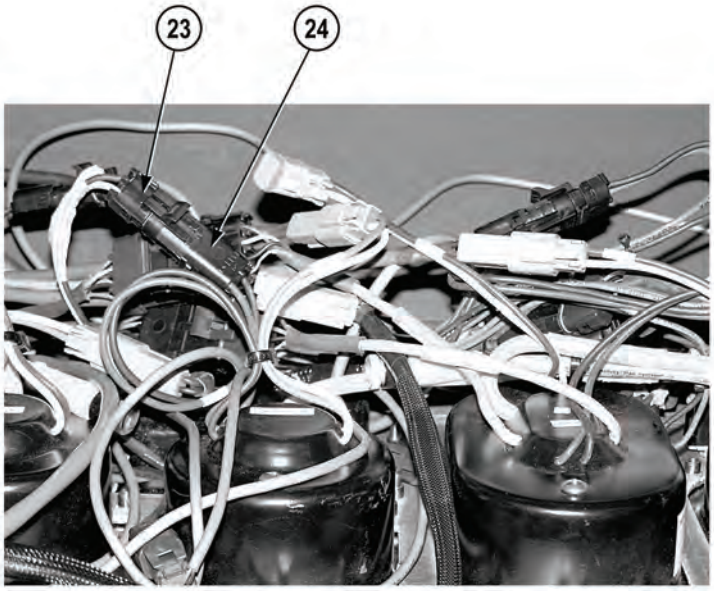
5. Disconnect No. 1 driver side flow sensor wire harness connector (9) from No. 1 driver side flow sensor line connector (10).
6. Disconnect No. 1 driver side pressure transducer wire harness connector (11) from No. 1 driver side pressure transducer line connector (12).



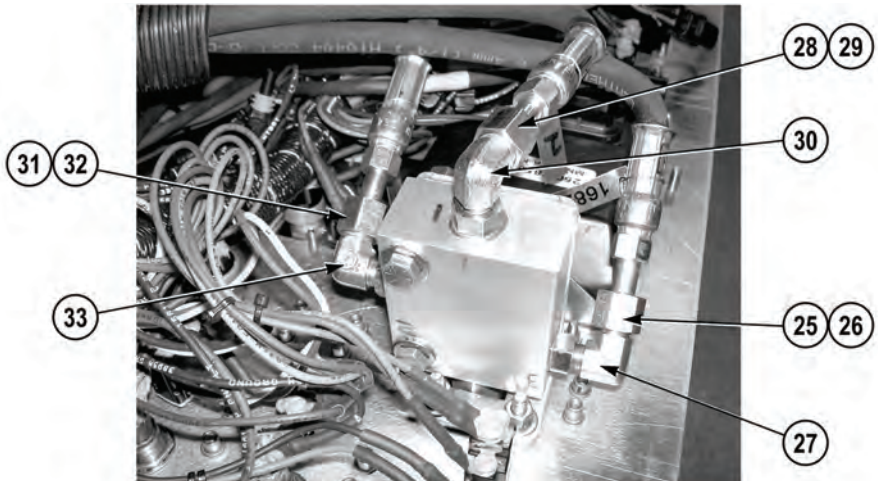
7. Disconnect passenger side auxiliary inlet valve wire harness connector (13) from passenger side auxiliary inlet valve line connector (14).
8. Disconnect driver side auxiliary inlet valve wire harness connector (15) from driver side auxiliary inlet valve line connector (16).
9. Disconnect tank fill and re-circulating line wire harness connector (17) from tank fill and re-circulating line connector (18).



10. Disconnect cab foam tank level indicator wire harness connector (19) from cab foam tank level indicator gauge connector (20).
11. Disconnect cab water tank level indicator wire harness connector (21) from cab water tank level indicator gauge connector (22).



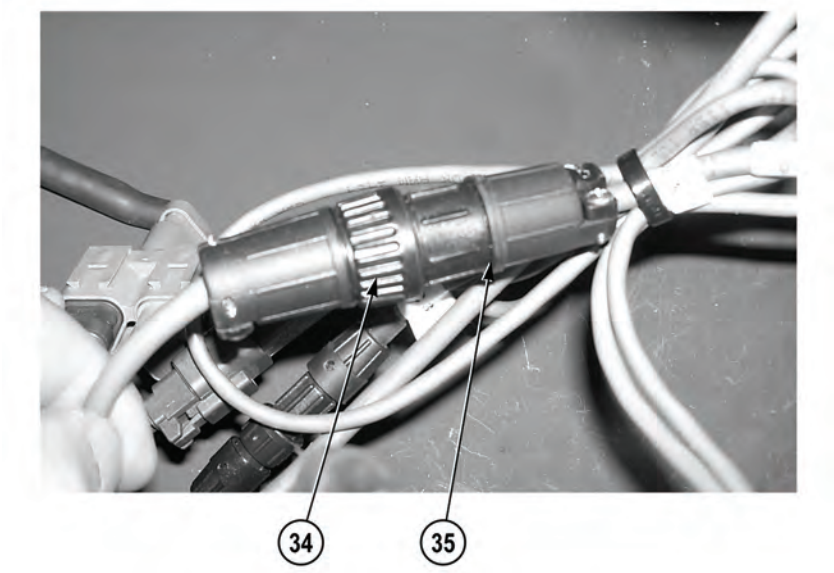
12. Disconnect discharge valve control wire harness connector (23) from discharge valve control line connector (24).



NOTE

- Tag and mark hoses prior to removal to ensure proper installation.
- Cap and plug hoses upon removal.

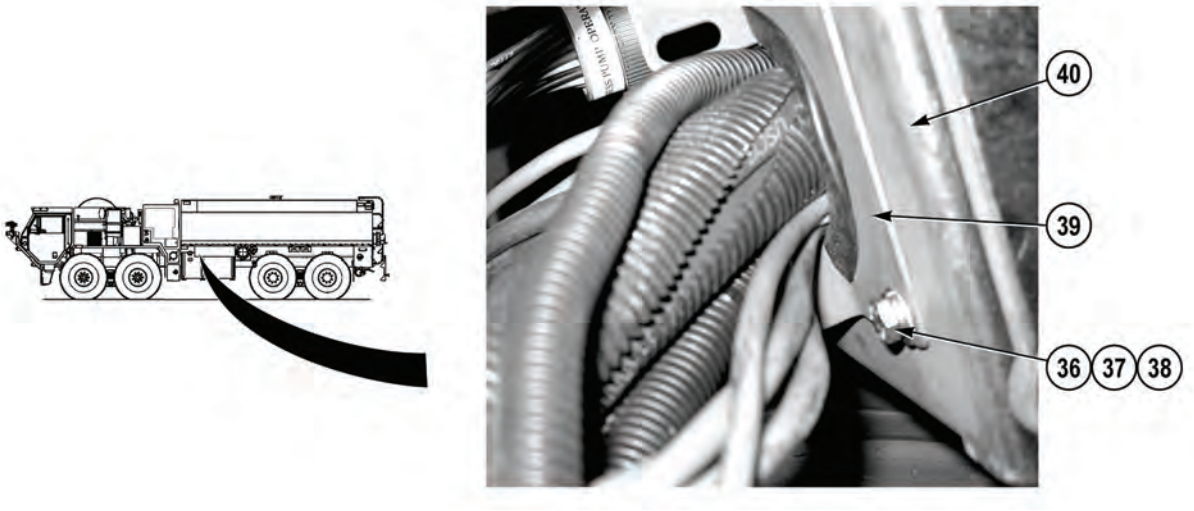
13. Remove hose 1682914 (25) and preformed packing (26) from elbow (27). Discard preformed packing.
14. Remove hose 1682914 (28) and preformed packing (29) from elbow (30). Discard preformed packing.
15. Remove hose 1682914 (31) and preformed packing (32) from elbow (33). Discard preformed packing.



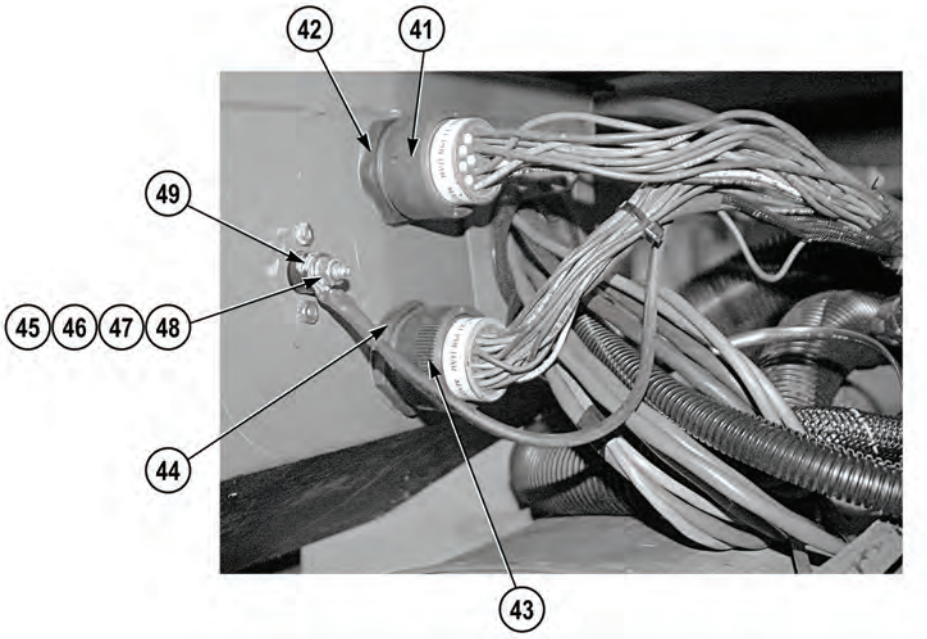
NOTE

Tag and mark wires prior to removal to ensure proper installation.

16. Disconnect water tank level auto fill control wire harness connector (34) from water level gauge connector (35).



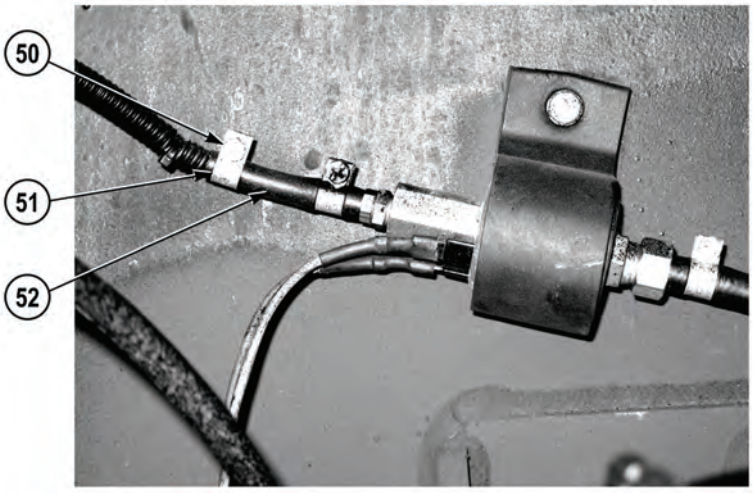
17. Remove two screws (36), lockwashers (37), washers (38), and wire-routing trim plate (39) from pump operator's panel housing (40). Discard lockwashers.



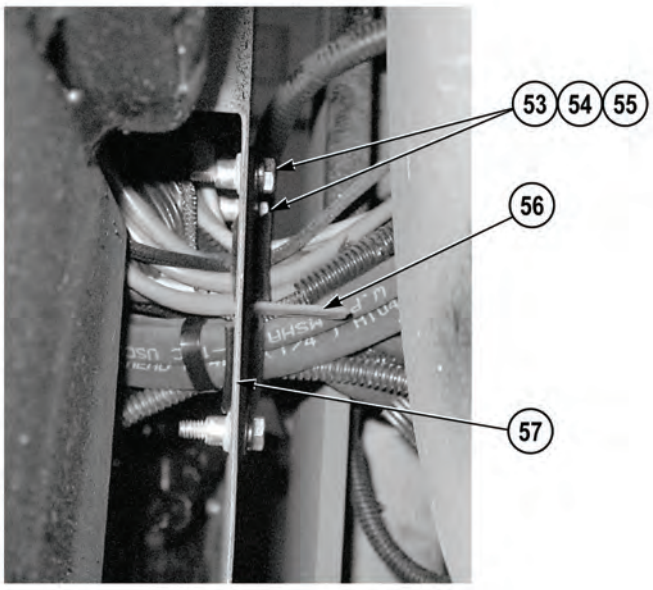
18. Disconnect main wire harness connector (41) from pump operator's panel connector (42).

19. Disconnect main wire harness connector (43) from pump operator's panel connector (44).

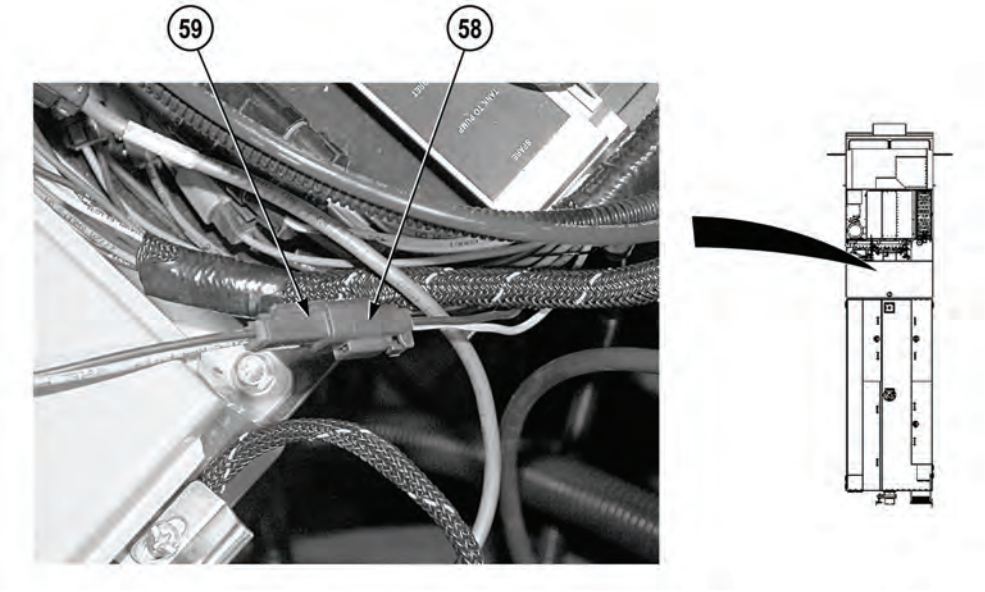
20. Remove nut (45), lockwasher (46), washer (47), and wire 3230 (48) from block terminal (49). Discard lockwasher.



21. Place suitable drain pan under hose clamp (50).
22. Loosen hose clamp (50) and remove fuel line (51) from adapter (52).



23. Remove four screws (53), lockwashers (54), washers (55), and two wire-routing trim plates (56) from pump house panel N (57). Discard lockwashers.



NOTE

Tag and mark wires prior to removal to ensure proper installation.

24. Disconnect direct tank fill valve wire harness connector (58) from pump house wire harness connector (59).



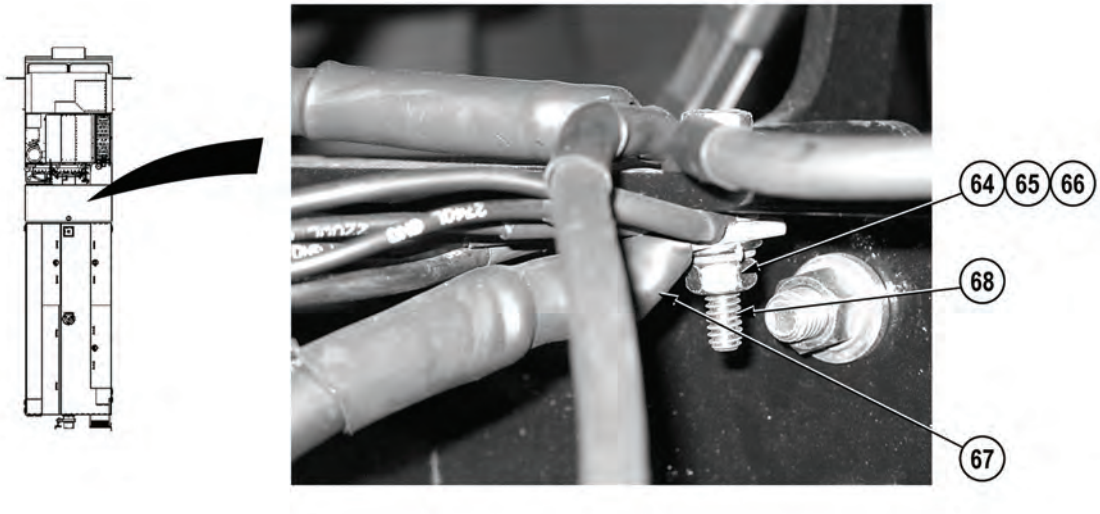
25. Disconnect direct tank fill valve wire harness connector (60) from main wire harness connector (61).



NOTE

Cap and plug hoses upon removal.

26. Disconnect two under truck nozzle hoses (62) from fittings (63).

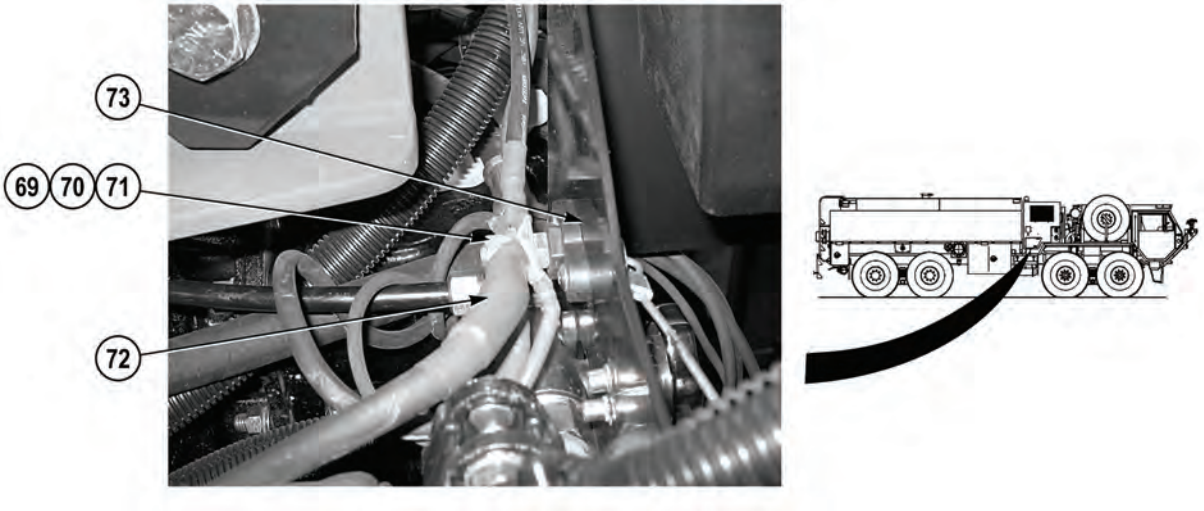


NOTE

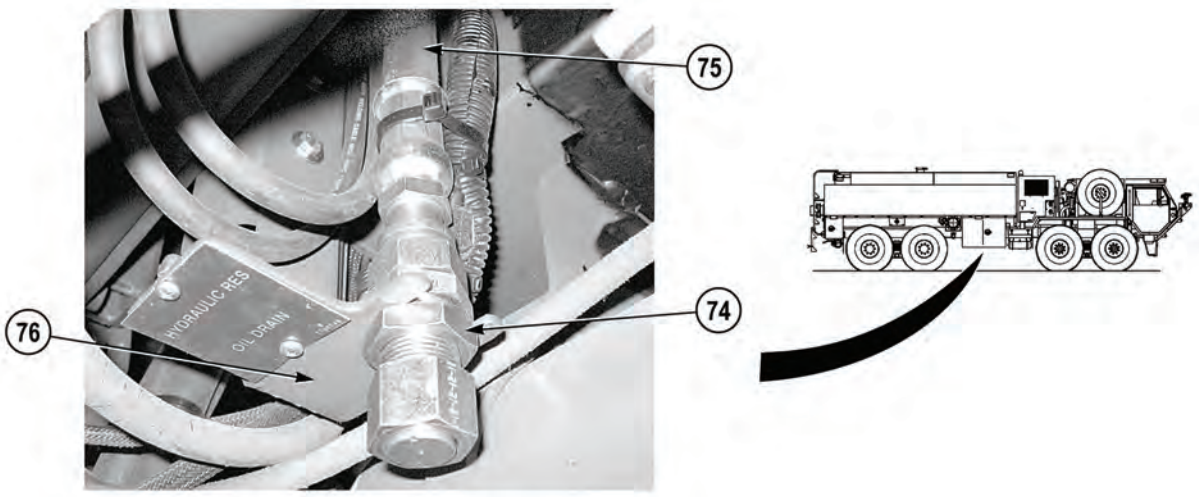
Tag and mark wires prior to removal to ensure proper installation.

27. Remove nut (64), lockwasher (65), washer (66), and ground wire (67) from ground stud (68).

28. Install washer (66), lockwasher (65), and nut (64) on ground stud (68).



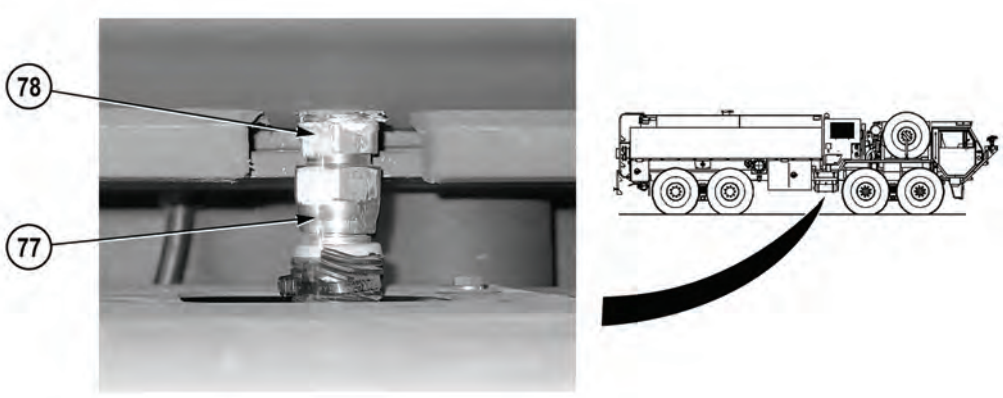
29. Remove nut (69), washer (70), lockwasher (71), and positive battery cable (72) from B+ stud (73).
30. Install lockwasher (71), washer (70), and nut (69) on B+ stud (73).



NOTE

- Tag and mark drain lines and hoses prior to removal to ensure proper installation.
- Cap and plug drain lines and hoses upon removal.

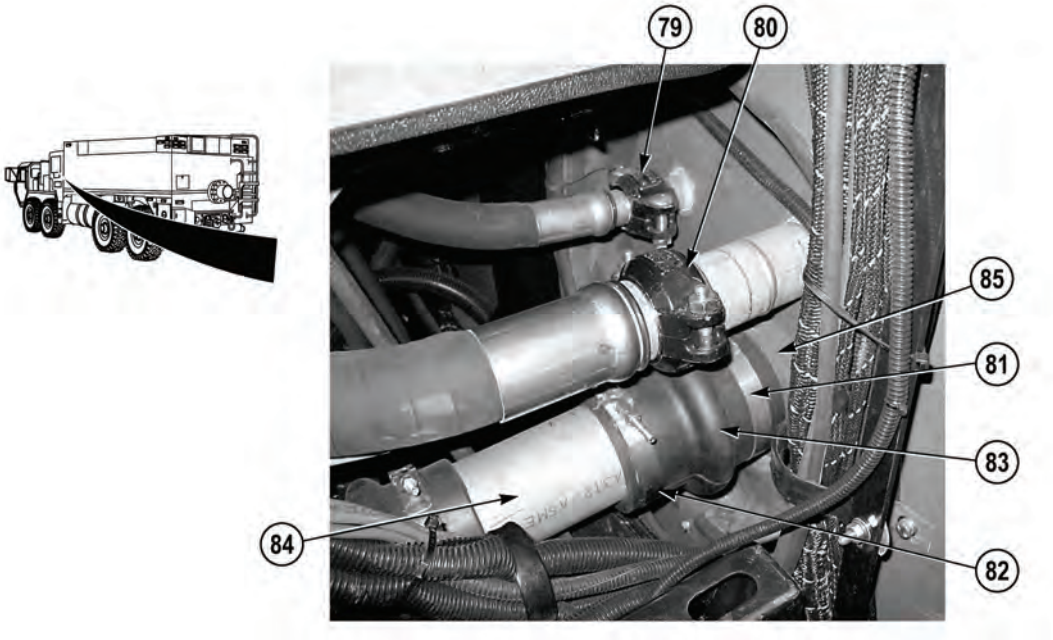
31. Loosen jam nut (74) and remove hydraulic drain line (75) from hydraulic drain line mounting bracket (76).



NOTE

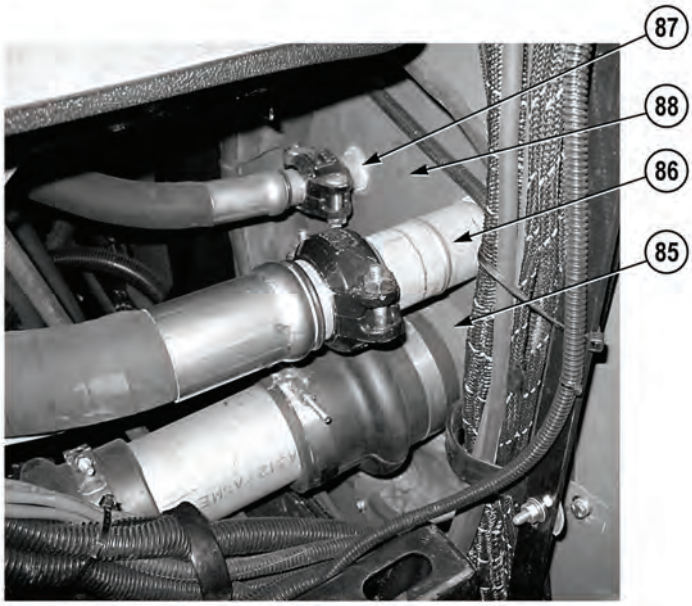
Windshield deluge hose connection to water tank goes through pump house panel O and is accessed from under vehicle.

32. Remove windshield deluge hose (77) from fitting (78).

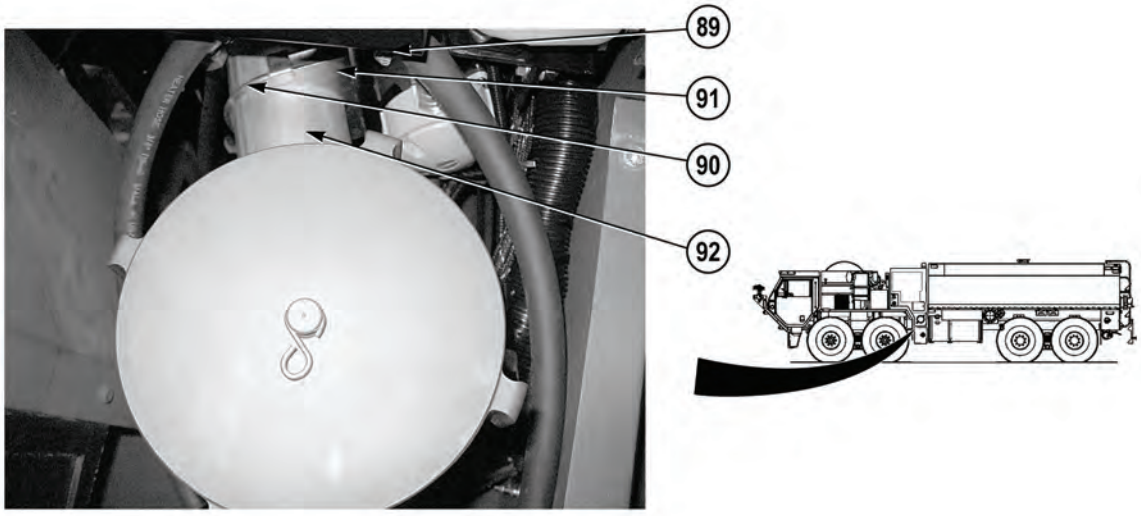


33. Remove two couplings (79) and (80) from vehicle (WP 0315).

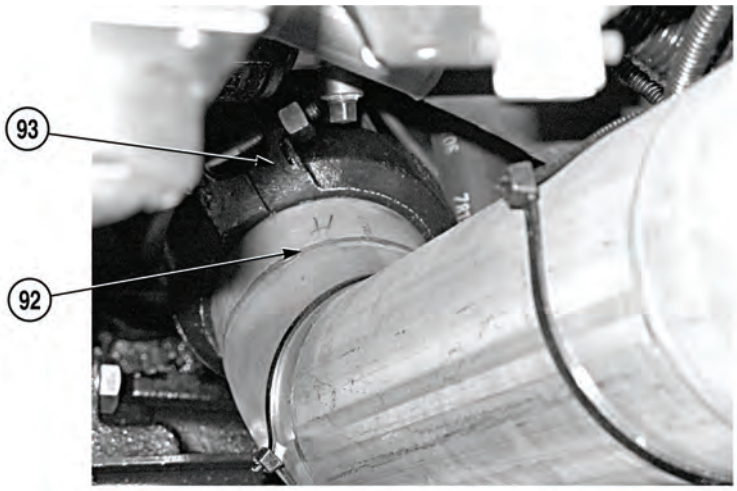
34. Loosen two clamps (81) and (82) and remove hump hose (83) from two pipes (84) and (85).



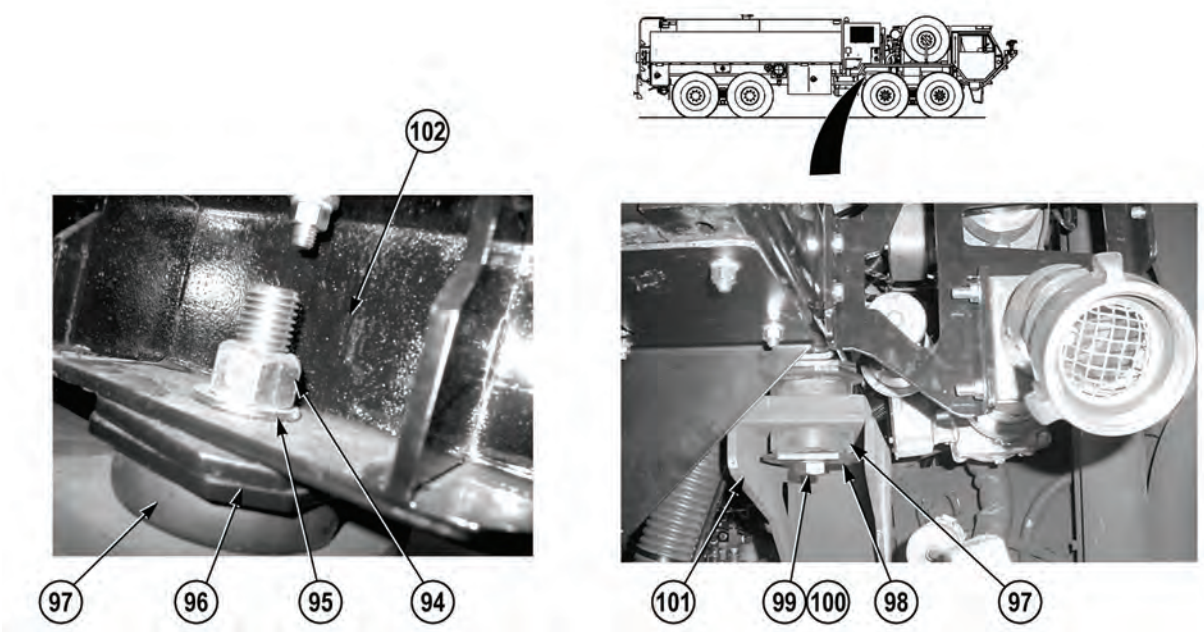
35. Remove three pipes (85), (86), and (87) from water tank (88).



36. With the aid of an assistant, remove two locknuts (89), U-bolt (90), clamp (91) from main inlet pipe (92). Discard locknuts.



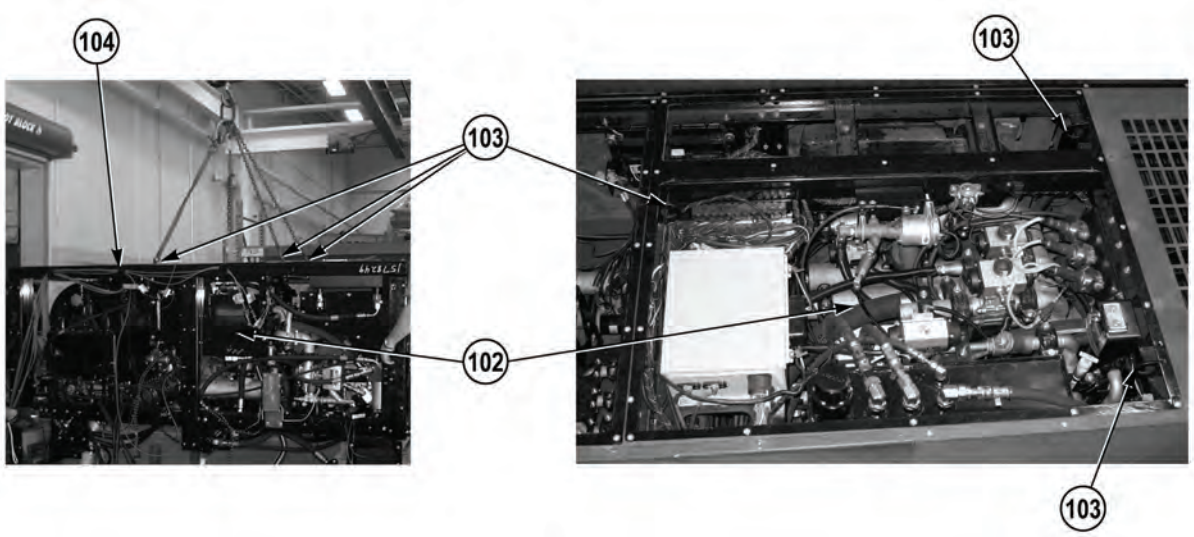
37. Remove coupling (93) and main inlet pipe (92) from vehicle (WP 0315).



NOTE

- Note position of isolators and snubbing washers prior to removal to ensure proper installation.
- All four pump house mounting brackets are removed the same way. Passenger side front bracket shown.
- Number of snubbing washers may vary.

38. Remove four locknuts (94), washers (95), eight snubbing washers (96), isolators (97), four snubbing washers (98), washers (99), and screws (100) from four pump house mounting brackets (101) and pump house assembly (102). Discard locknuts.



WARNING



Pump house assembly is VERY heavy. Do not attempt to lift or move pump house assembly without the aid of three assistants and a suitable lifting device. Use extreme caution when lifting or moving pump house assembly. Failure to comply may result in damage to equipment and/or death or injury to personnel.

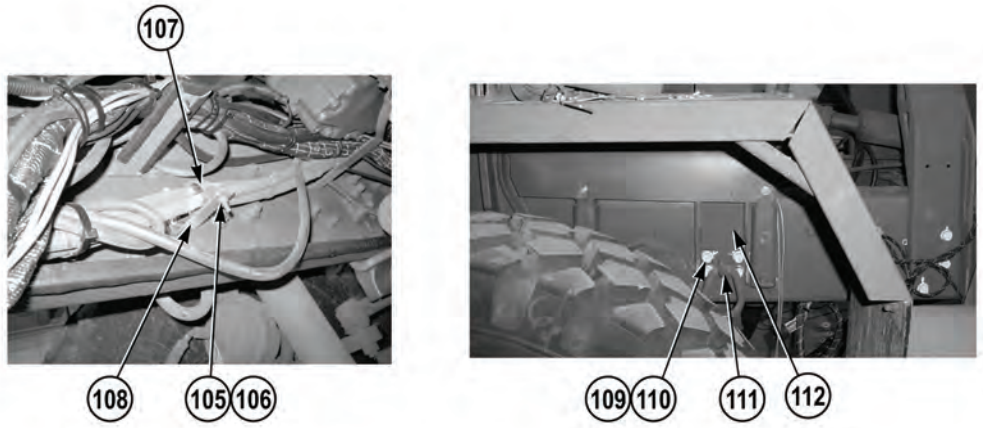
CAUTION

Care must be taken when removing hoses and wires from pump operator's panel housing and through pump house panel N. Failure to comply may cause damage to equipment.

NOTE

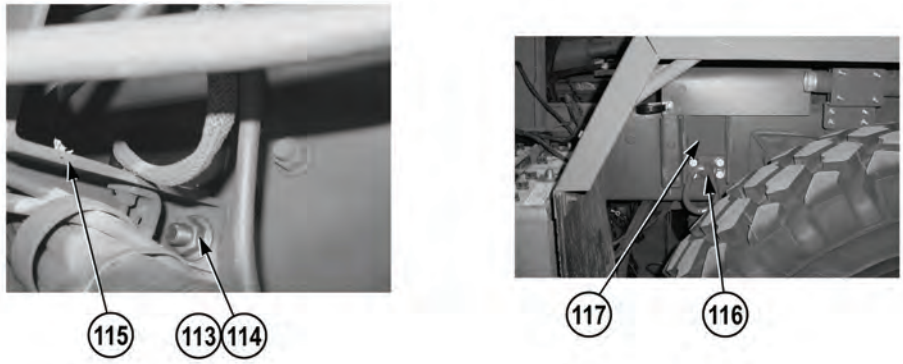
- Note position and remove split loom, cushion clips, and cable ties as required.
- Note routing of wires and hoses prior to removal to ensure proper installation.

39. With the aid of three assistants, attach a suitable lifting device to three lift points (103) on pump house frame (104) and carefully remove pump house assembly (102) from vehicle.

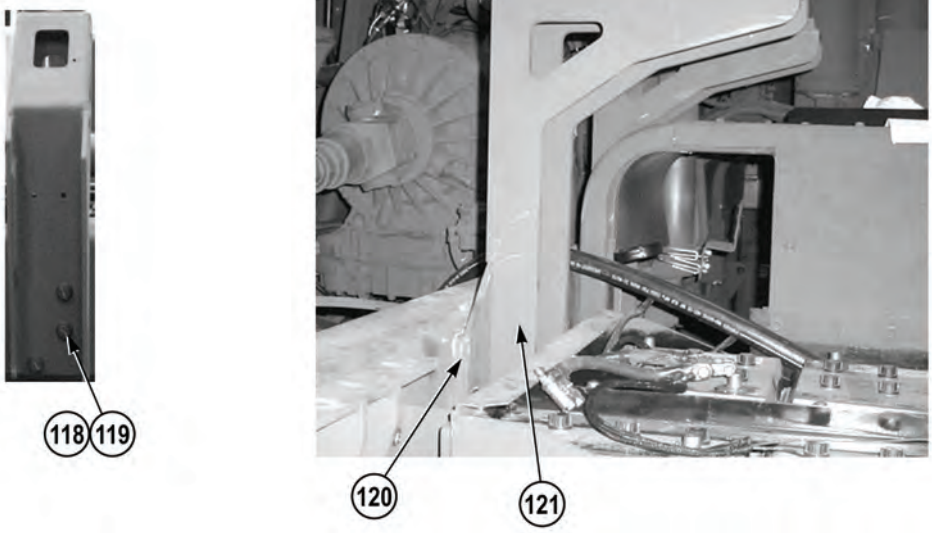


40. Remove locknut (105), screw (106), and cushion clip (107) from wire harness bracket (108). Discard locknut.

41. Remove four locknuts (109), screws (110), wire harness bracket (108), tie down bracket (111), and driver side front pump house mounting bracket (112) from vehicle. Discard locknuts.



42. Remove four locknuts (113), screws (114), brake line bracket (115), tie down bracket (116), and passenger side front pump house mounting bracket (117) from vehicle. Discard locknuts.



NOTE

Note orientation of bracket prior to removal to ensure proper installation.

43. Remove three locknuts (118), screws (119), shim plate (120), and passenger side rear pump house mounting bracket (121) from vehicle. Discard locknuts.



44. Remove three locknuts (122), screws (123), and driver side rear pump house mounting bracket (124) from vehicle. Discard locknuts.

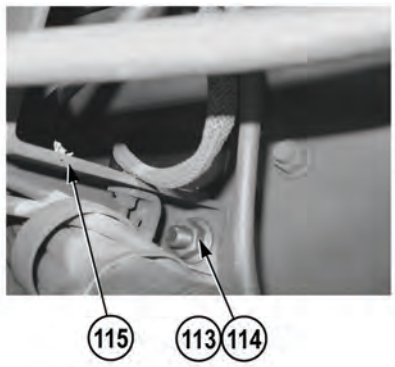
END OF TASK

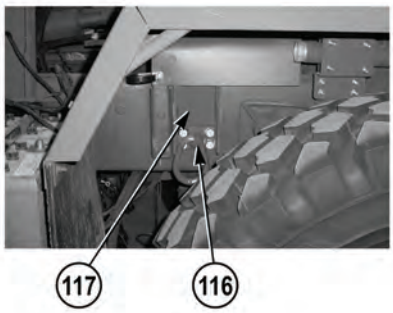
INSTALLATION

NOTE

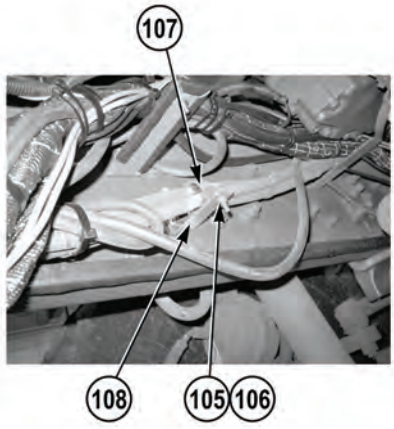
Install mounting brackets in same orientation as noted prior to removal.

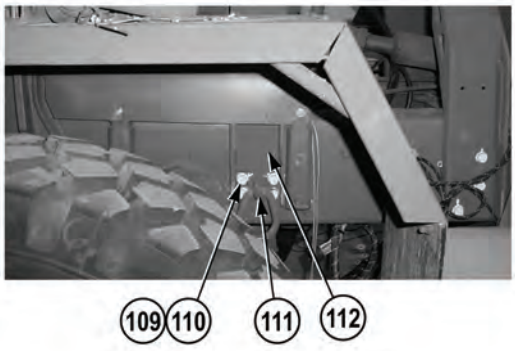
1. Install driver side rear pump house mounting bracket (124) on vehicle with three screws (123) and locknuts (122). Tighten screws to 191 lb-ft (259 N•m).
2. Install passenger side rear pump house mounting bracket (121) and shim plate (120) on vehicle with three screws (119) and locknuts (118). Tighten screws to 191 lb-ft (259 N•m).



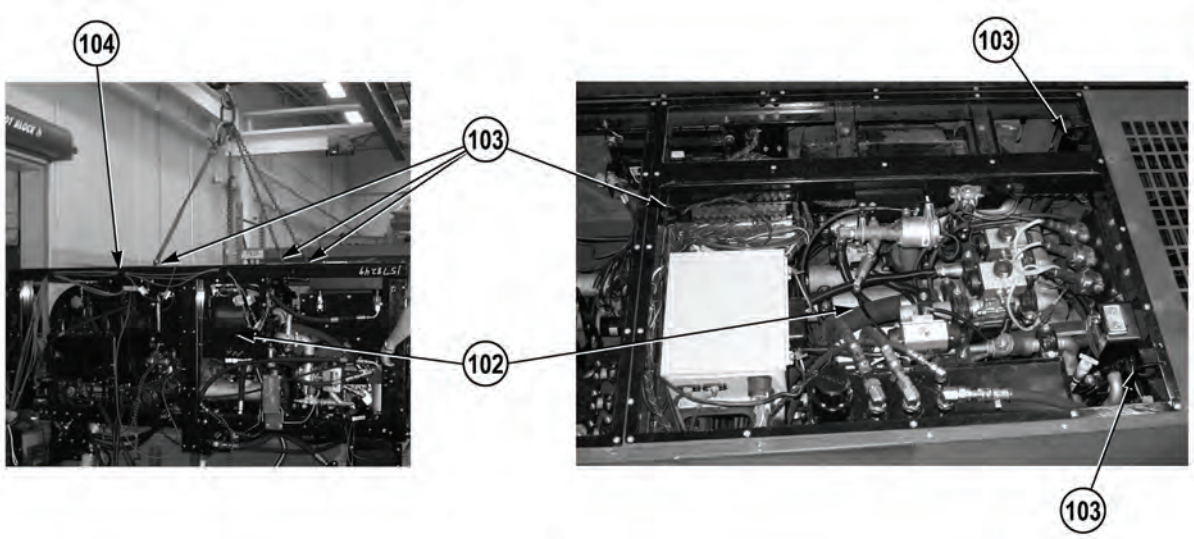


3. Install passenger side front pump house mounting bracket (117), tie down bracket (116), and brake line bracket (115) on vehicle with four screws (114) and locknuts (113). Tighten Screws to 191 lb-ft (259 N•m).

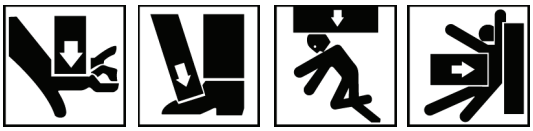




4. Install driver side front pump house mounting bracket (112), tie down bracket (111), and wire harness bracket (108) on vehicle with four screws (110) and locknuts (109). Tighten screws to 191 lb-ft (259 N•m).
5. Install cushion clip (107) on wire harness bracket (108) with screw (106) and locknut (105).



WARNING



Pump house assembly is VERY heavy. Do not attempt to lift or move pump house assembly without the aid of three assistants and a suitable lifting device. Use extreme caution when lifting or moving pump house assembly. Failure to comply may result in damage to equipment and/or death or injury to personnel.

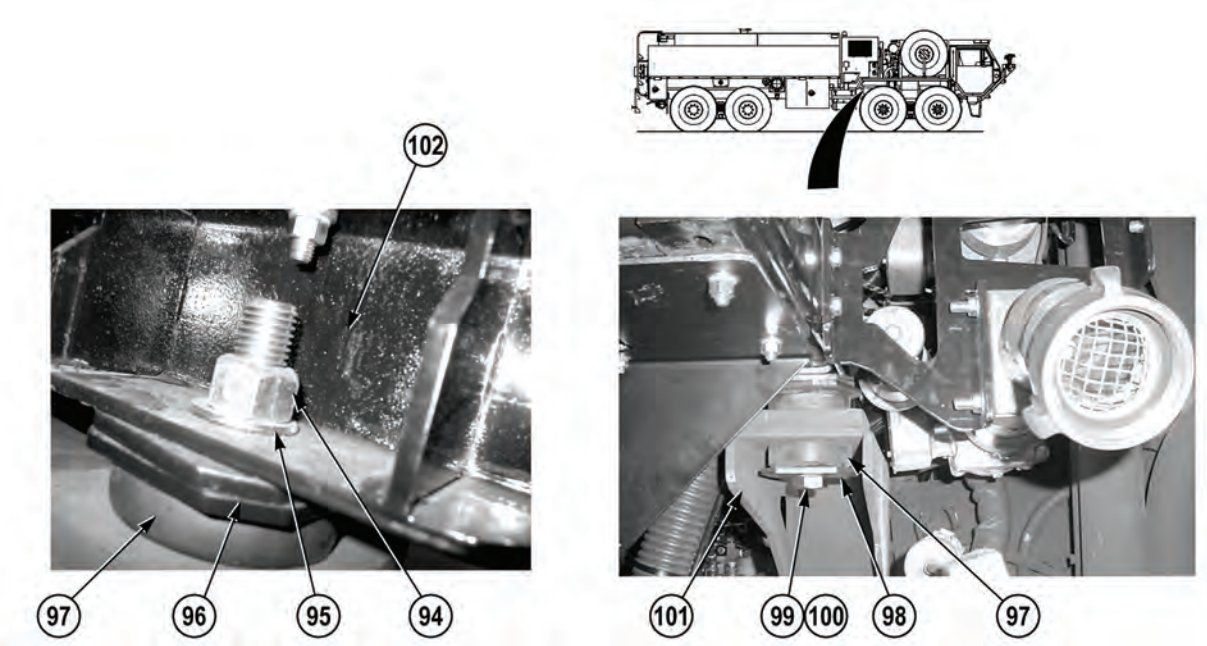
CAUTION

Care must be taken when installing hoses and wires through pump house panel N and pump operator's panel N. Failure to comply may result in damage to equipment.

NOTE

- Install cable ties, cushion clips, and split looms as required.
- Route hoses and wires as noted.

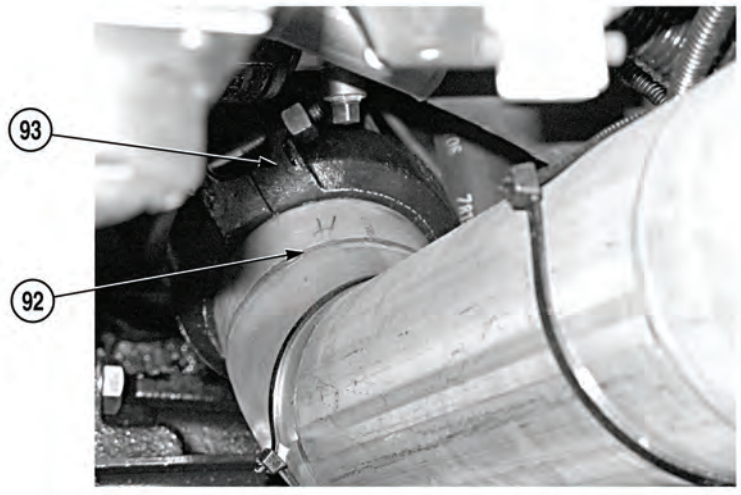
6. With the aid of three assistants, attach a suitable lifting device to three lift points (103) on pump house frame (104) and carefully install pump house assembly (102) on vehicle.



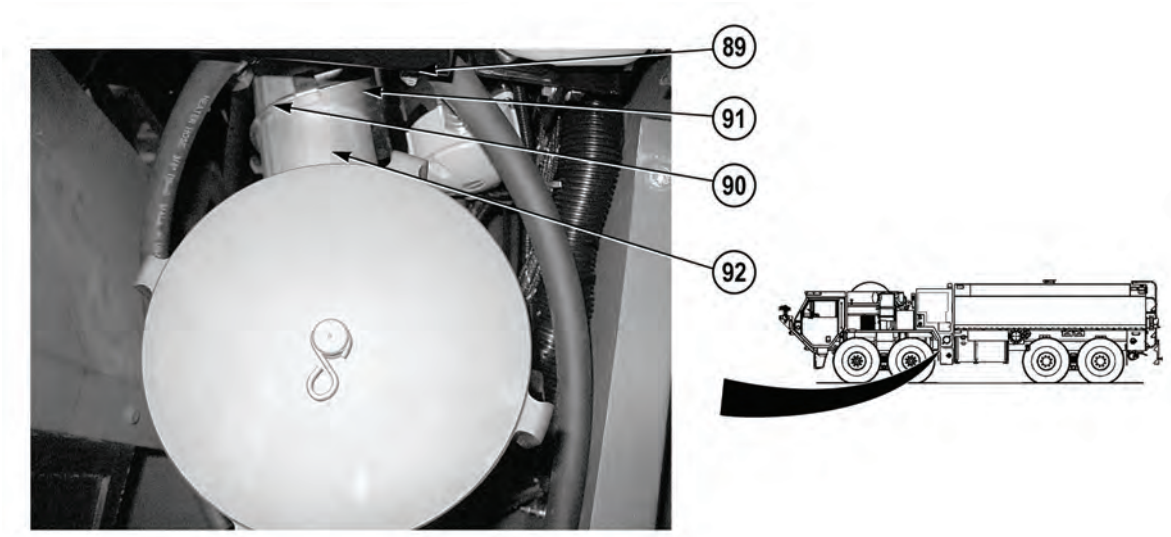
NOTE

Install snubbing washers and isolators as noted.

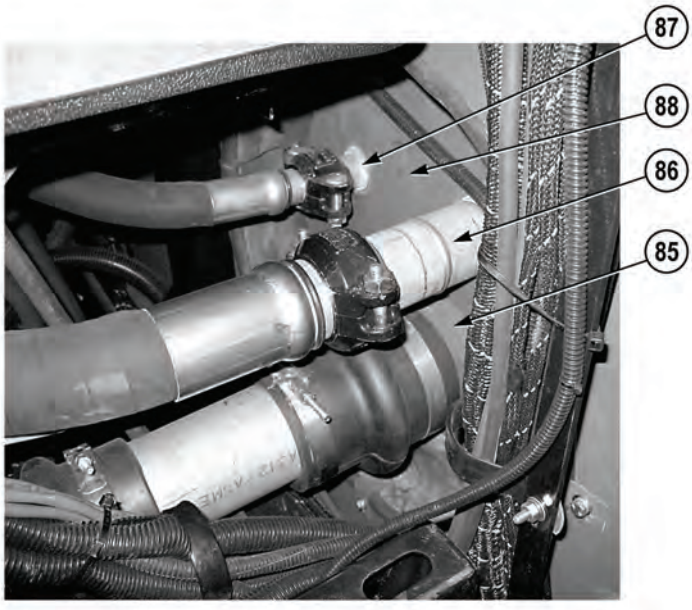
7. Install pump house assembly (102) on four pump house mounting brackets (101) with four screws (100), washers (99), eight snubbing washers (98), isolators (97), washers (95), and four locknuts (94).



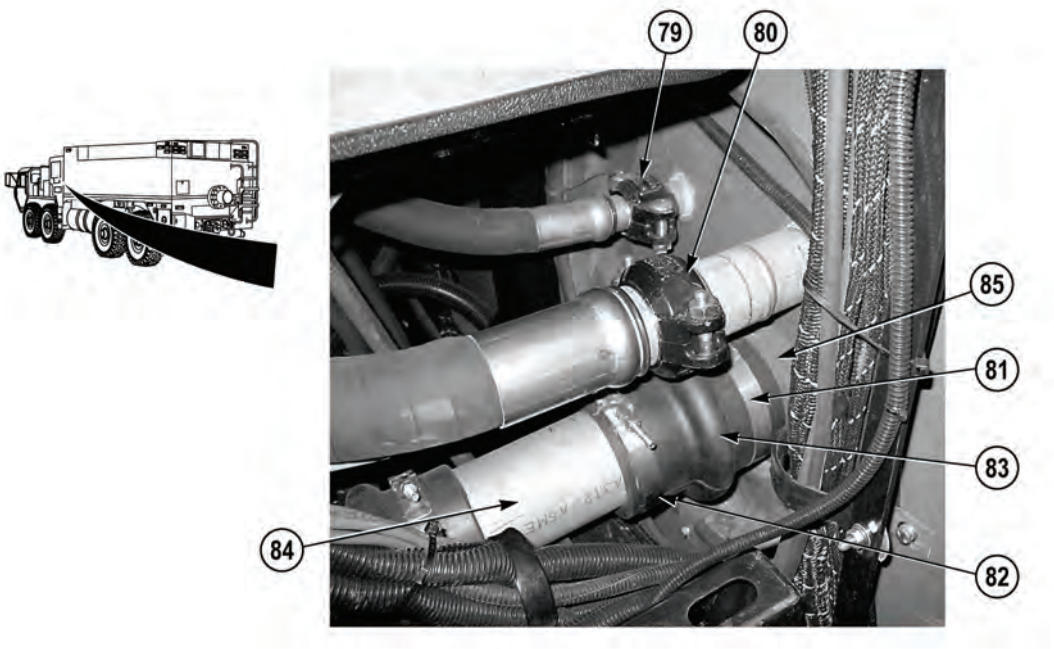
8. With the aid of an assistant, install main inlet pipe (92) on vehicle with coupling (93) (WP 0315).



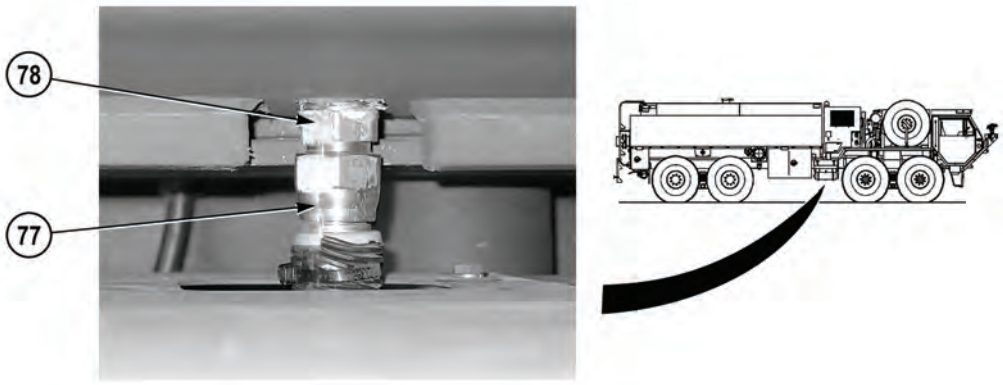
9. Install clamp (91) on main inlet pipe (92) with U-bolt (90) and two locknuts (89).



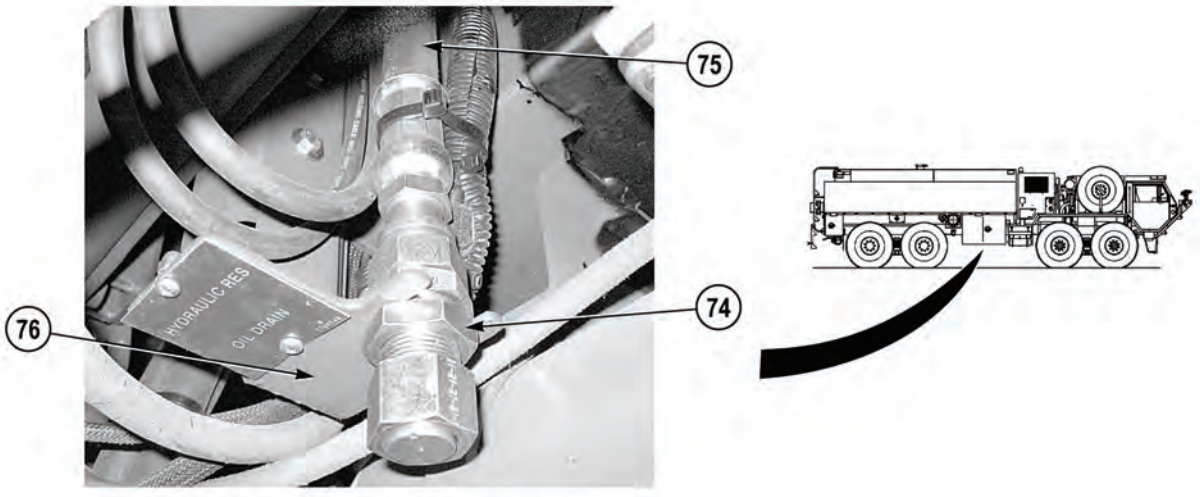
10. Install three pipes (87), (86), and (85) on water tank (88).



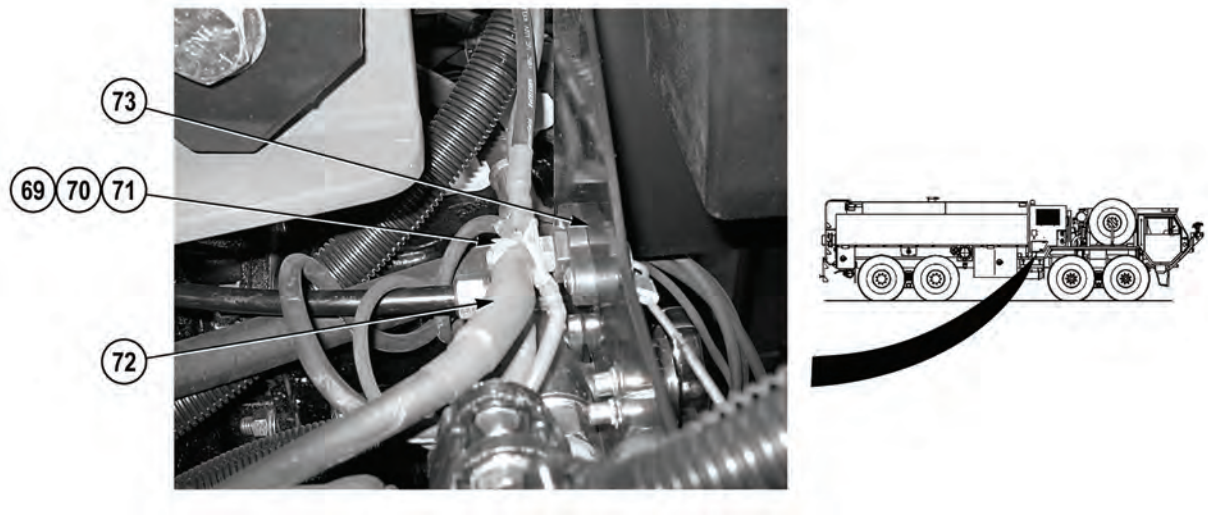
11. Install hump hose (83) on two pipes (85) and (84) and tighten two clamps (82) and (81).
12. Install two couplings (80) and (79) on vehicle (WP 0315).



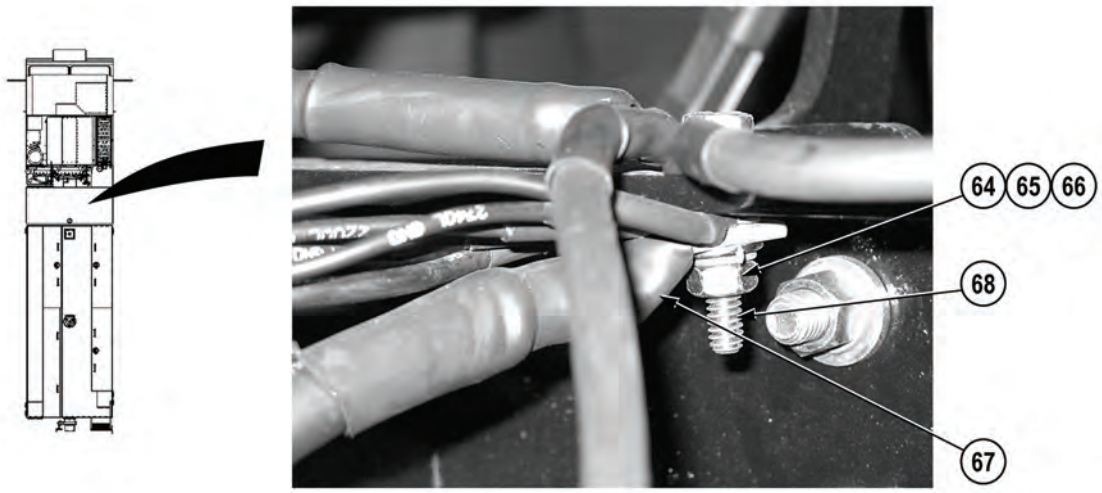
13. Install windshield deluge hose (77) on fitting (78).



14. Install hydraulic drain line (75) on hydraulic drain line mounting bracket (76) and tighten jam nut (74).



15. Remove nut (69), washer (70), and lockwasher (71) from B+ stud (73). Discard lockwasher.
16. Install positive battery cable (72) on B+ stud (73) with lockwasher (71), washer (70), and nut (69).



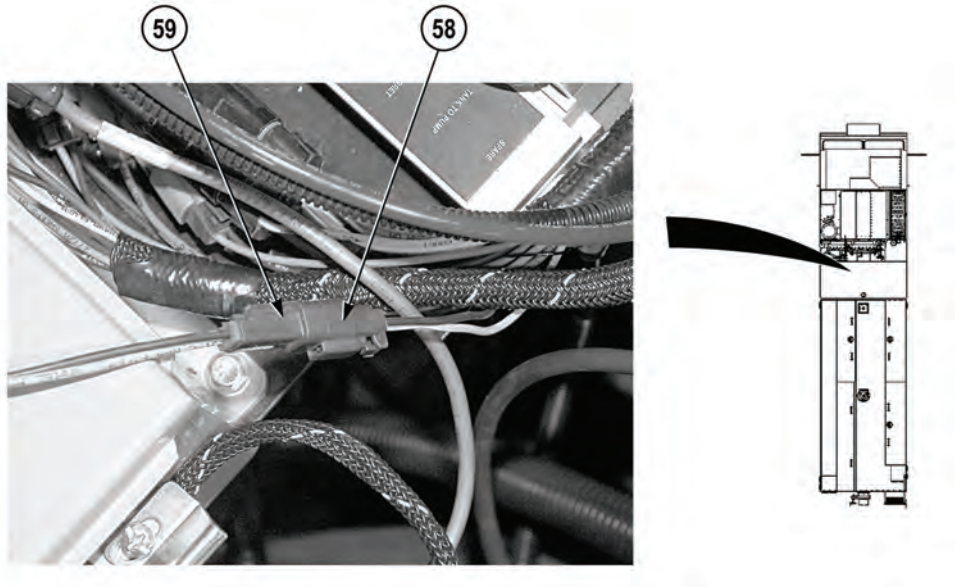
17. Remove nut (64), lockwasher (65), and washer (66) from ground stud (68). Discard lockwasher.
18. Install ground wire (67) on ground stud (68) with washer (66), lockwasher (65), and nut (65).



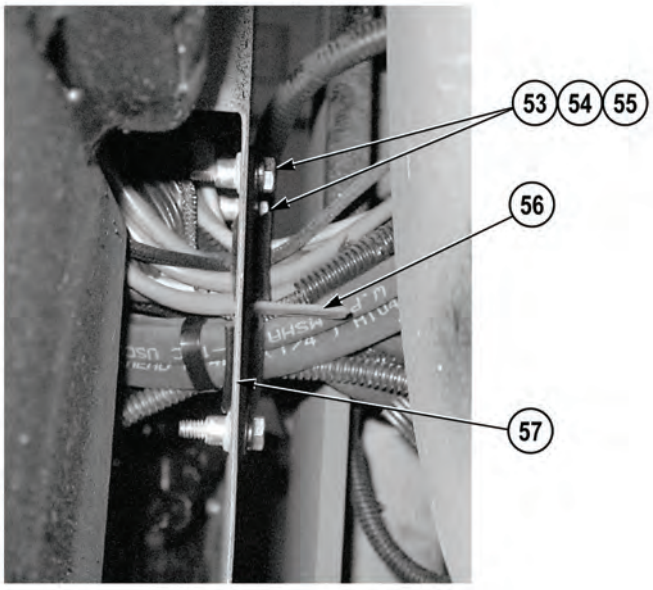
19. Connect two under truck nozzle hoses (62) to fittings (63).



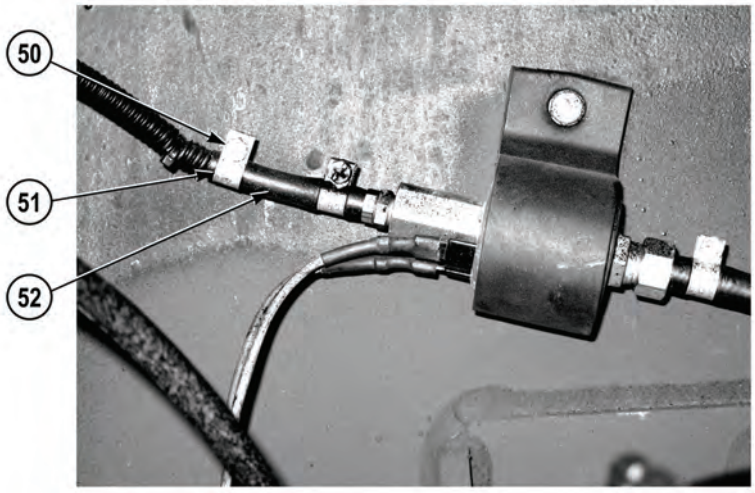
20. Connect main wire harness connector (61) to direct tank fill valve wire harness connector (60).



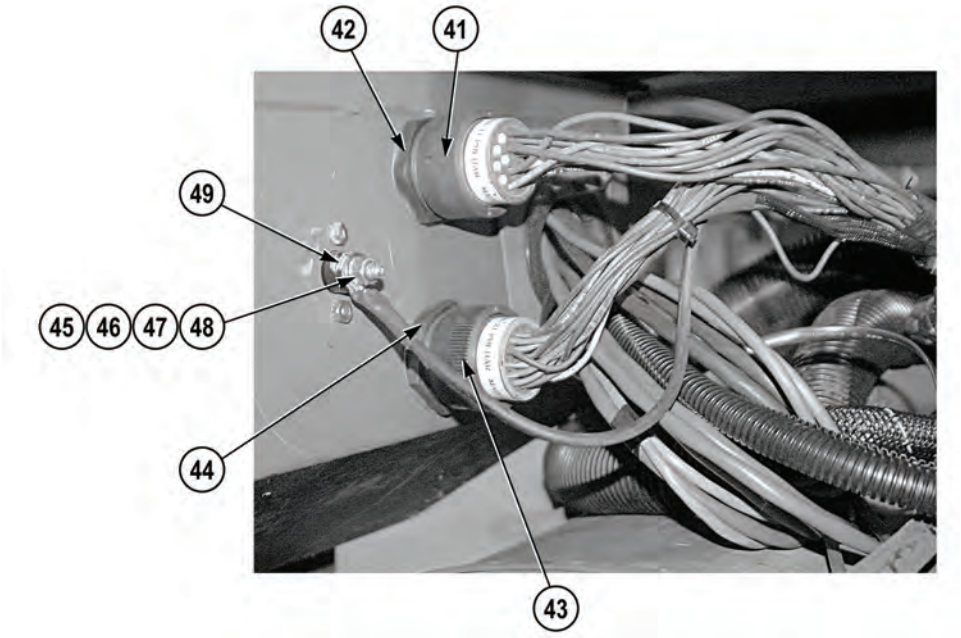
21. Connect pump house wire harness connector (59) to direct tank fill valve wire harness connector (58).



22. Install wire-routing trim plate (56) on pump house panel N (57) with four washers (55), lockwashers (54), and screws (53).



23. Install diesel fuel line (51) on rubber tube adapter (52) and lighten clamp (50).



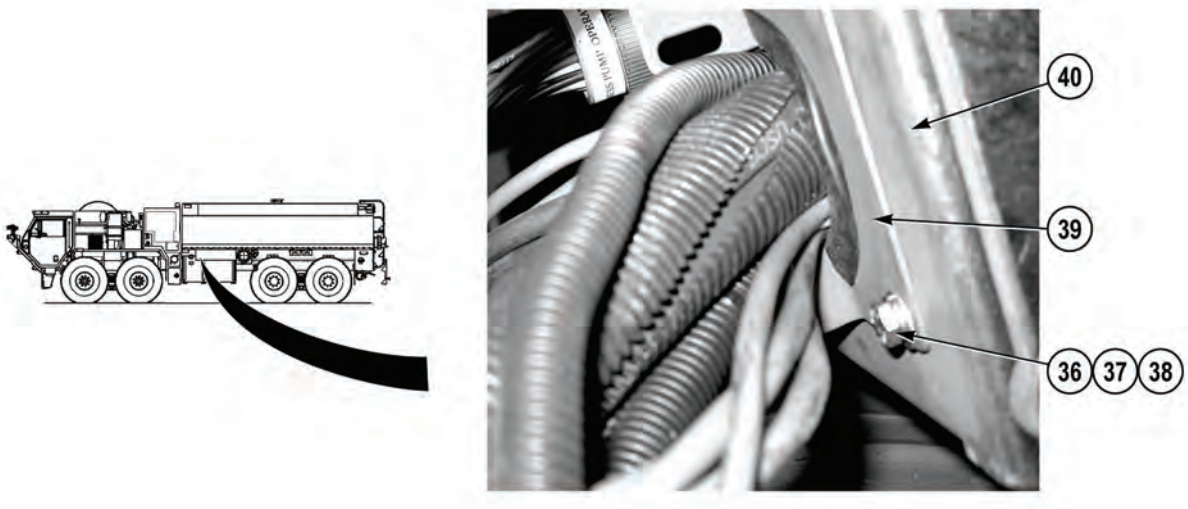
24. Install wire 3230 (48), washer (47), lockwasher (46), and nut (45) on block terminal (49).

WARNING

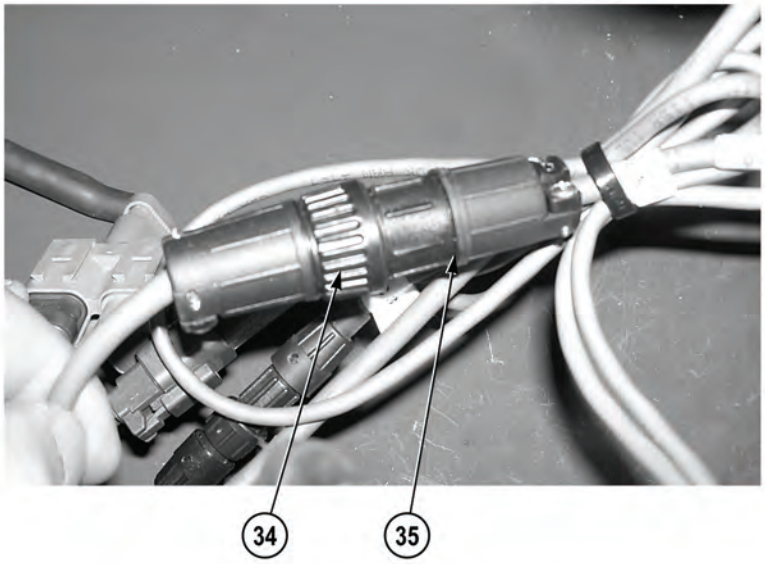


Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

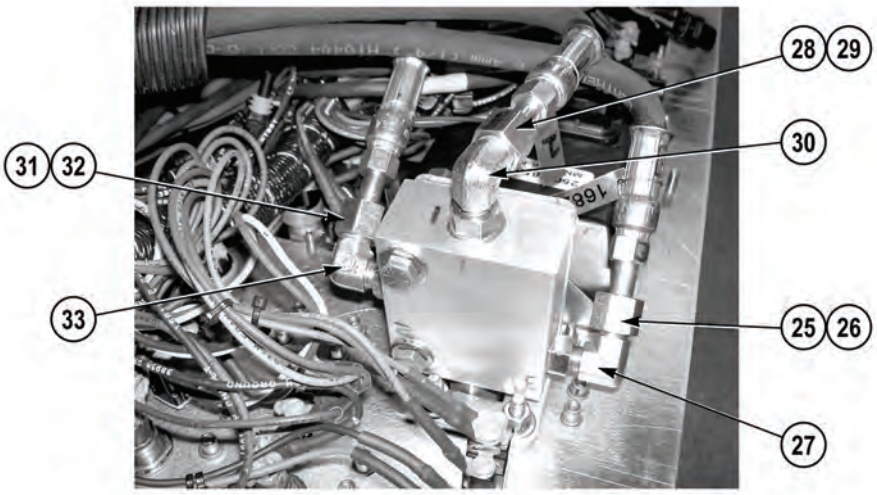
25. Apply sealing compound to electrical connection on block terminal (49).
26. Connect pump operator's connector (44) to main wire harness connector (43).
27. Connect pump operator's connector (42) to main wire harness connector (41).



28. Install wire-routing trim plate (39), two washers (38), lockwashers (37), and screws (36) on pump operator's panel housing (40).



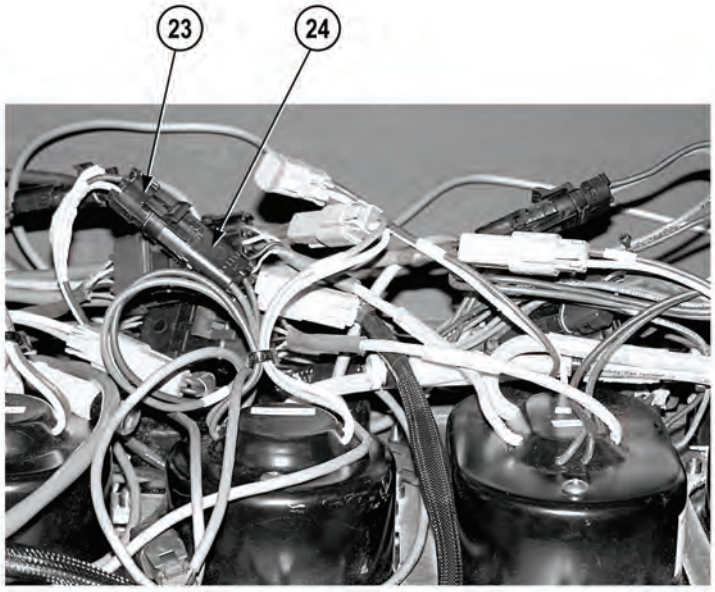
29. Connect water level gauge connector (35) to water tank level auto fill control wire harness connector (34).



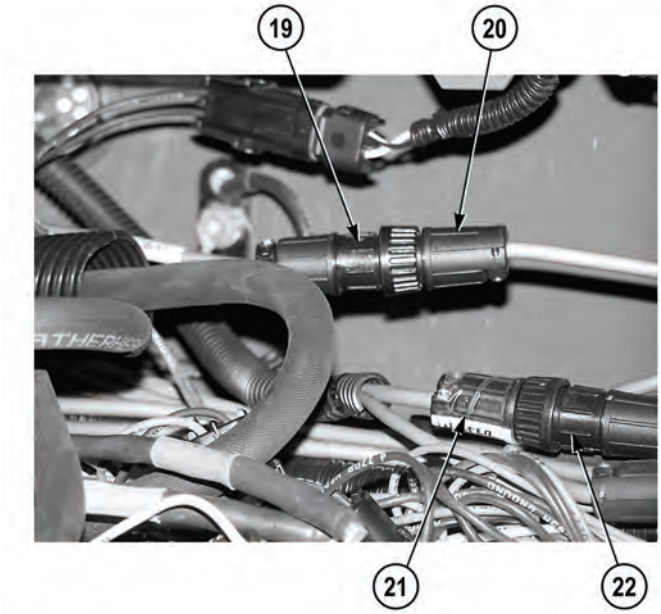
30. Lightly lubricate preformed packing (32) with clean oil, and install preformed packing (32) and hose 1682914 (31) on elbow (33).

31. Lightly lubricate preformed packing (29) with clean oil, and install preformed packing (29) and hose 1682914 (28) on elbow (30).

32. Lightly lubricate preformed packing (26) with clean oil, and install preformed packing (26) and hose 1682914 (25) on elbow (27).

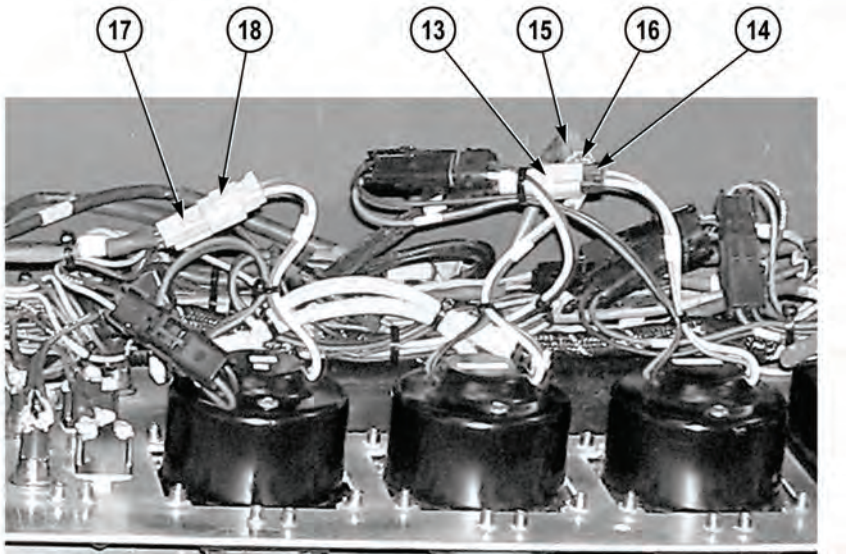


33. Connect discharge valve control line connector (24) to discharge valve control wire harness connector (23).



34. Connect cab water tank level indicator gauge connector (22) to cab water tank level indicator wire harness connector (21).

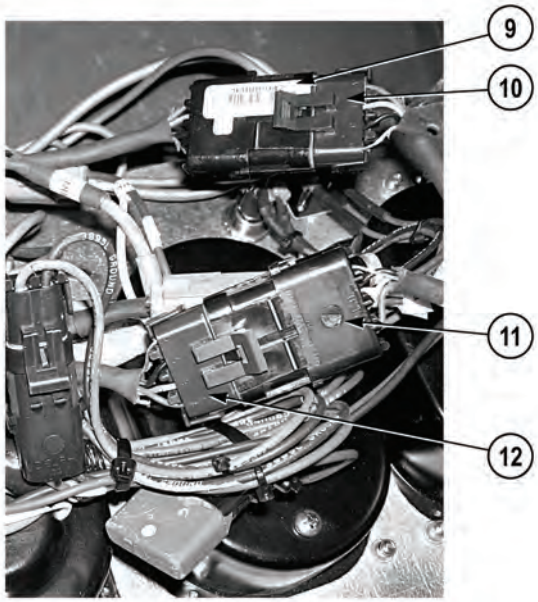
35. Connect cab foam tank level indicator gauge connector (20) to cab foam tank level indicator wire harness connector (19).



36. Connect tank fill and re-circulating line connector (18) to tank fill and re-circulating line wire harness connector (17).

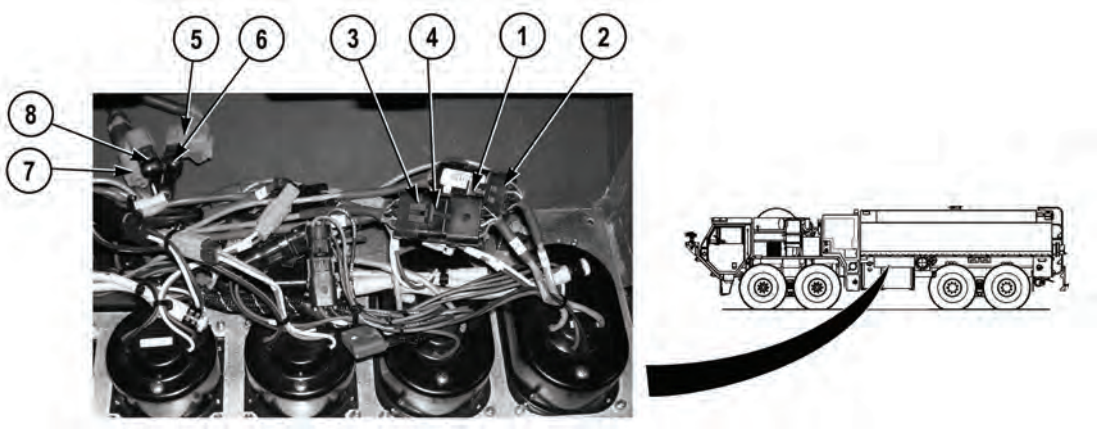
37. Connect driver side auxiliary inlet valve line connector (16) to driver side auxiliary inlet valve wire harness connector (15).

38. Connect passenger side auxiliary inlet valve connector (14) to passenger side auxiliary inlet valve wire harness connector (13).



39. Connect No. 1 driver side pressure transducer line connector (12) to No. 1 driver side pressure transducer wire harness connector (11).

40. Connect No. 1 driver side flow sensor line connector (10) to No. 1 driver side flow sensor wire harness connector (9).



41. Connect chassis datalink line connector (8) to chassis datalink (green) connector (7).
42. Connect Cat datalink line connector (6) to Cat datalink (yellow) connector (5).
43. Connect No. 2 passenger side pressure transducer line connector (4) to No. 2 passenger side pressure transducer wire harness connector (3).
44. Connect No. 2 passenger side flow sensor line connector (2) to No.2 passenger side flow sensor wire harness connector (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Close pump operator's panel (WP 0205)
2. Install foam system eductor (WP 0175)
3. Install battery box (WP 0236)
4. Install pump house panels L, K, H, G, E, and B (WP 0341)
5. Install power take off (PTO) drive shaft (WP 0152)
6. Fill hydraulic reservoir (WP 0143)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PUMP HOUSE FRAME REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive
(WP 0399, Item 17)

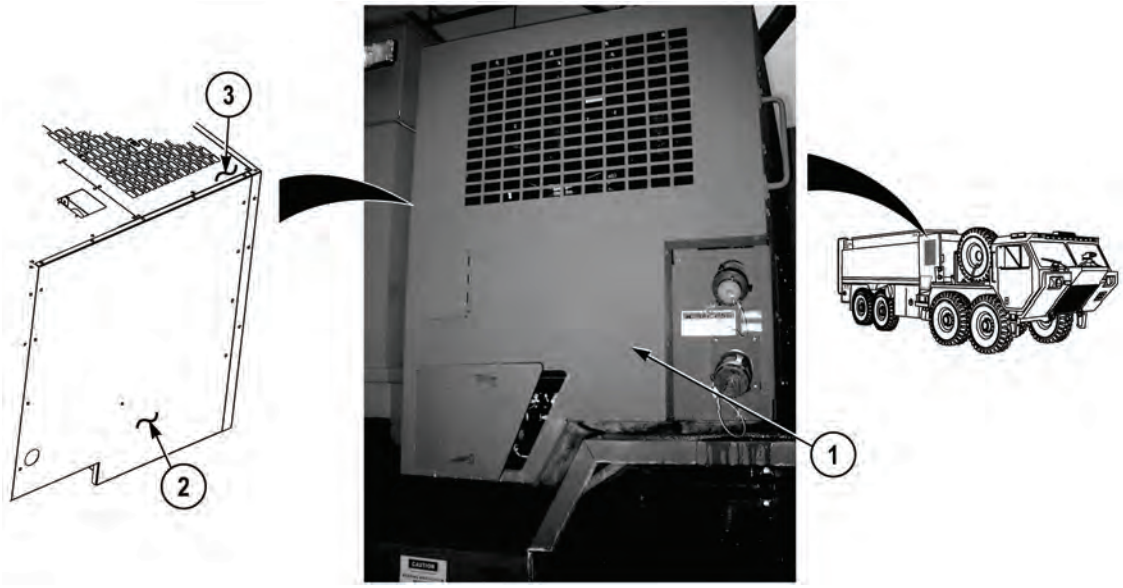
Materials/Parts
Ties, Cable, Plastic
(WP 0401, Item 25) (if required)
Lockwasher (5)

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)
(Number of personnel required will vary with member being replaced)

References
WP 0392, Fig. 70

Equipment Conditions
Pump hose panels removed (WP 0341) (Panels will vary with member being replaced)

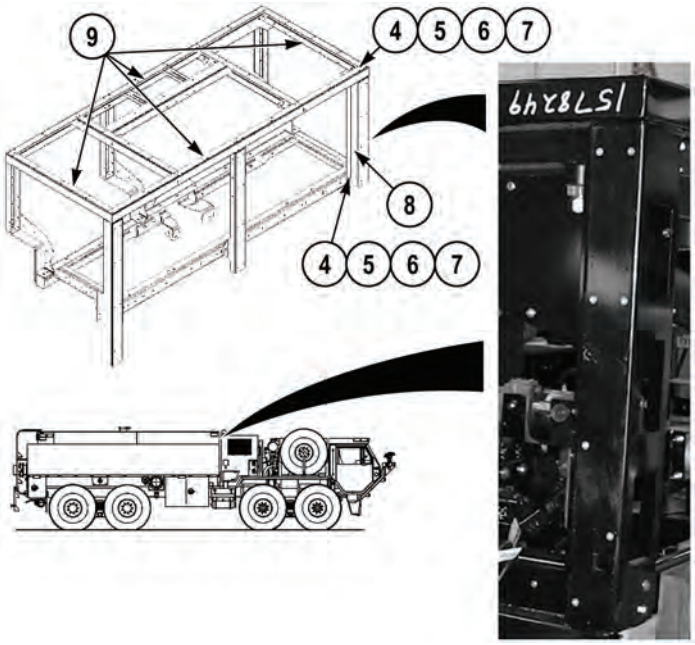
REMOVAL



NOTE

- All pump house frame members are removed the same way. Number of fasteners per member vary with the number of attached components.
- Equipment conditions will vary depending on the member being removed.
- Remove split loom, cushion clips, and cable ties as required.
- Passenger side rear frame support shown.

1. Remove pump house panels H (1), O (2), and M (3) from vehicle (WP 0341).

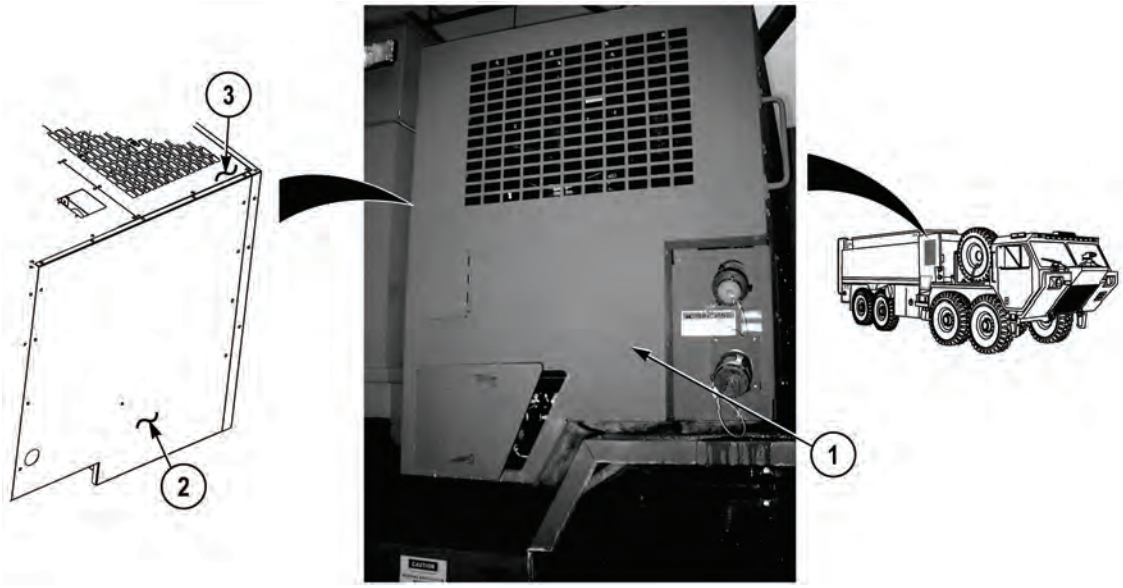


2. Remove five nuts (4), lockwashers (5), ten washers (6), five screws (7), and passenger side rear frame support (8) from pump house frame (9). Discard lockwashers.

END OF TASK

INSTALLATION

1. Install passenger side rear frame support (8) on pump house frame (9) with five screws (7), ten washers (6), five lockwashers (5), and nuts (4).



2. Install pump house panels M (3), O (2), and H (1) on vehicle (WP 0341).

END OF TASK

FOLLOW-ON MAINTENANCE

Install pump house panels (as required) (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

PUMP OPERATOR'S PANEL HOUSING REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Drain Pan (WP 0399, Item 4)
Tool Kit, General Mechanic's:
Automotive (WP 0399, Item 17)

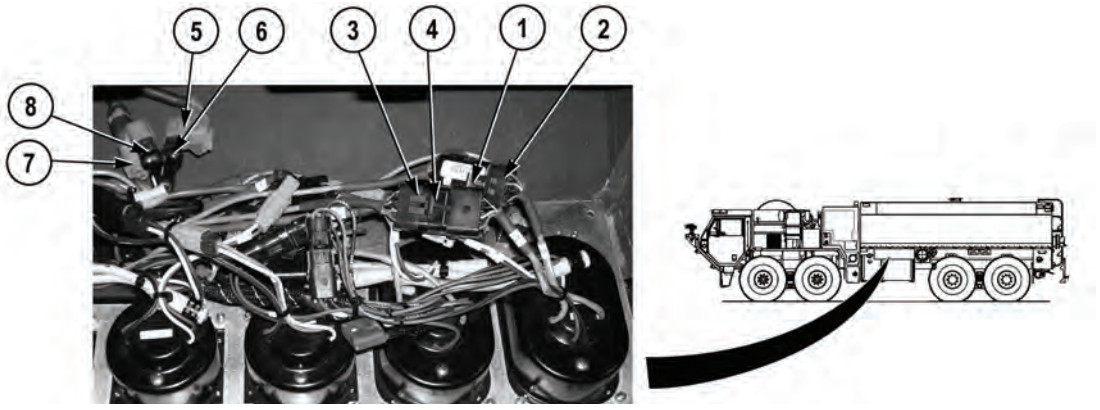
Materials/Parts
Compound, Sealing (WP 0401, Item 10)
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)
Performed Packing (3)
Lockwasher (2)
Lockwasher (1)
Lockwasher (1)
Lockwasher (1)
Lockwasher (1)

Materials/Parts (continued)
Lockwasher (1)
Lockwasher (7)
Lockwasher (4)
Locknut (2)
Locknut (4)

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

Equipment Conditions
Pump operator's panel cover opened (WP 0010)
Striplights removed (WP 0213)
Pump operator's panel opened (WP 0205)

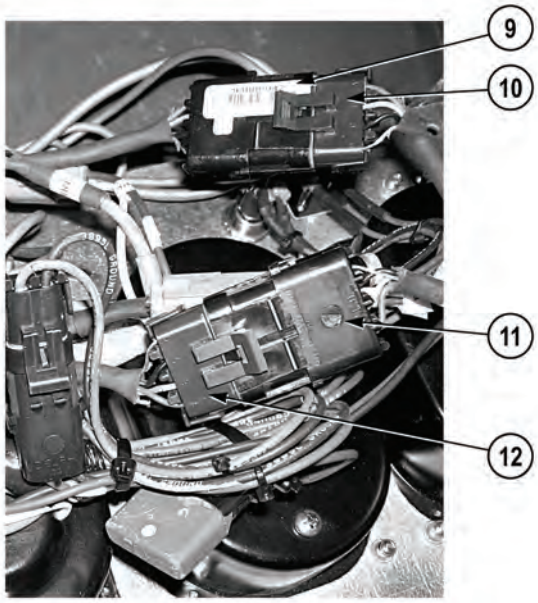
REMOVAL



NOTE

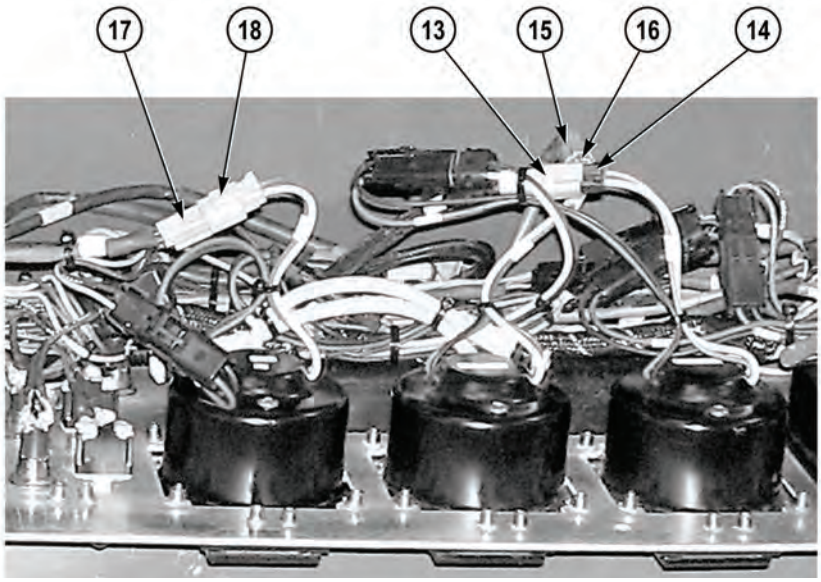
- Tag and mark hoses and wires prior to removal to ensure proper installation.
- Remove cable ties and split loom as required.
- Not routing of hoses and wires prior to removal to ensure proper installation.

1. Disconnect No. 2 passenger side flow sensor wire harness connector (1) from No. 2 passenger side flow sensor line connector (2).
2. Disconnect No. 2 passenger side pressure transducer wire harness connector (3) from No. 2 passenger side pressure transducer line connector (4).
3. Disconnect cat data link (yellow) connector (5) from cat data link line connector (6).
4. Disconnect chassis data link (green) connector (7) from chassis data link line connector (8).



5. Disconnect No. 1 driver side flow sensor wire harness connector (9) from No. 1 driver side flow sensor line connector (10).

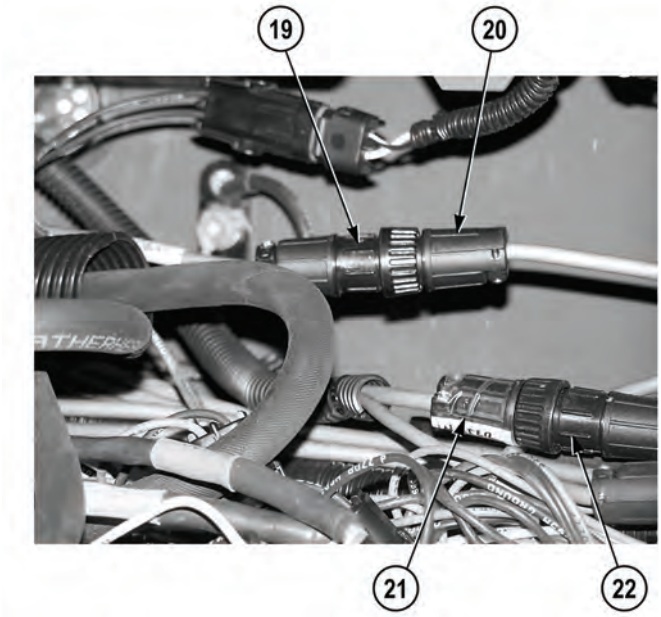
6. Disconnect No. 1 driver side pressure transducer wire harness connector (11) from No. 1 driver side pressure transducer line connector (12).



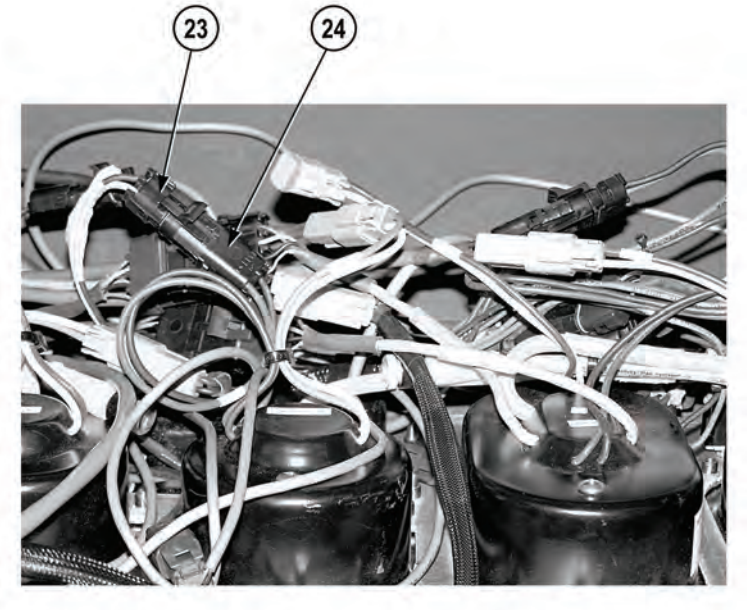
7. Disconnect passenger side auxiliary inlet valve wire harness connector (13) from passenger side auxiliary inlet valve line connector (14).

8. Disconnect driver side auxiliary inlet valve wire harness connector (15) from driver side auxiliary inlet valve line connector (16).

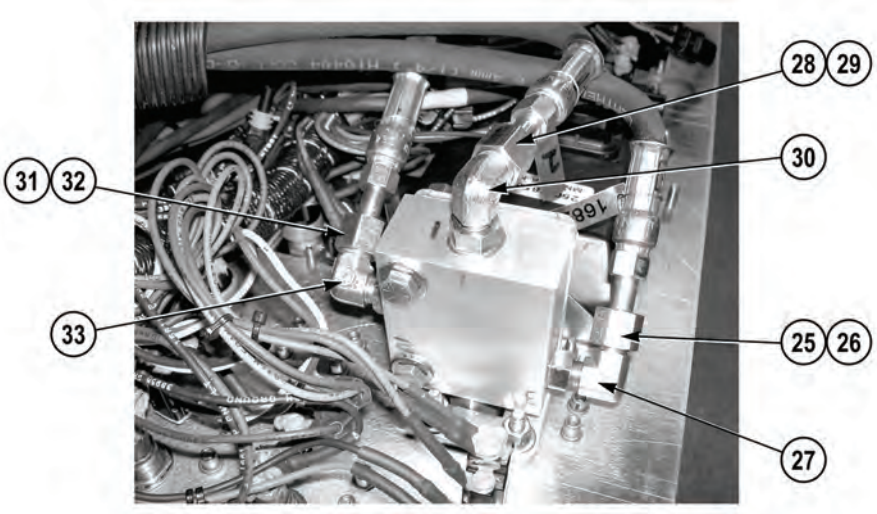
9. Disconnect tank fill and re-circulating line wire harness connector (17) from tank fill and re-circulating line connector (18).



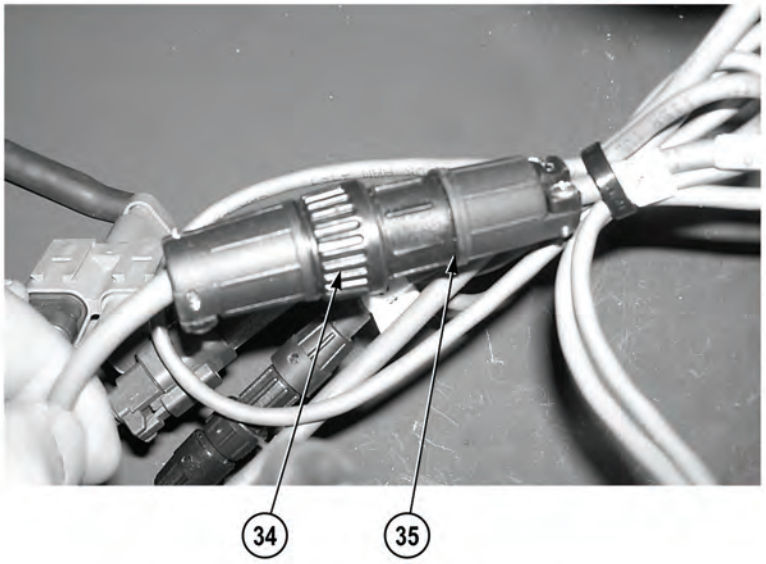
10. Disconnect cab foam tank level indicator wire harness connector (19) from cab foam tank level indicator gauge connector (20).
11. Disconnect cab water tank level indicator wire harness connector (21) from cab water tank level indicator gauge connector (22).



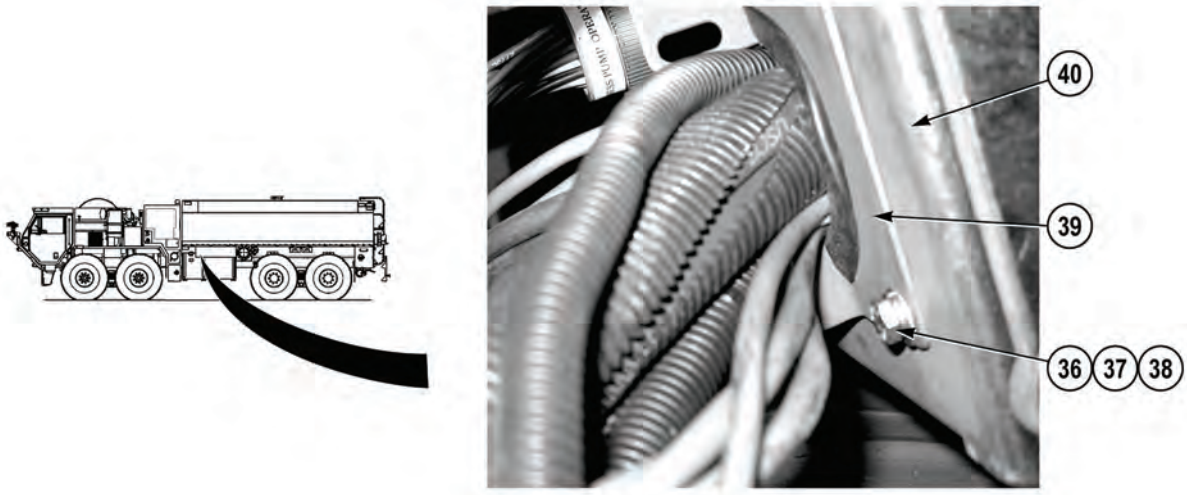
12. Disconnect discharge valve control wire harness connector (23) from discharge valve control line connector (24).



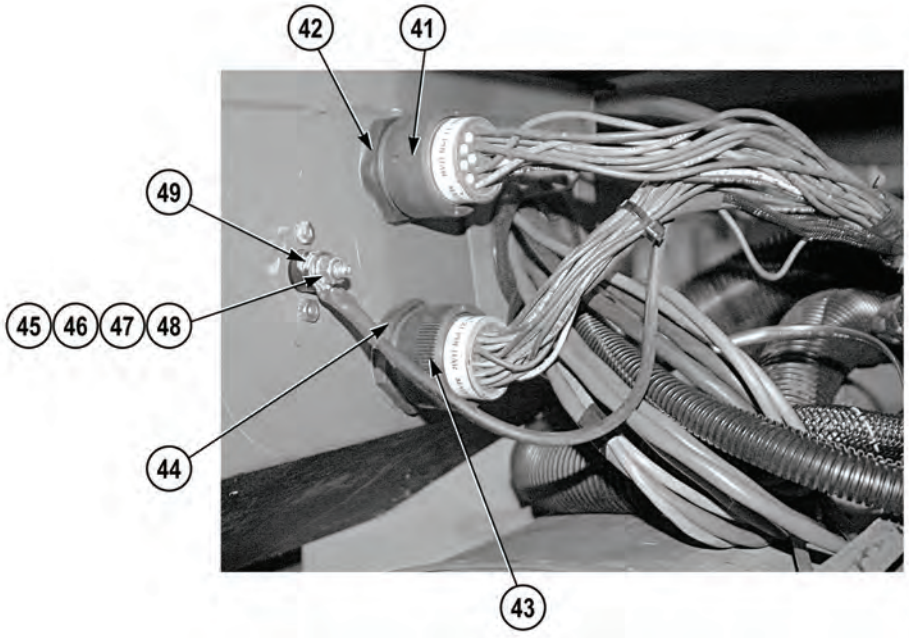
13. Remove hose 1682914 (25) and preformed packing (26) from elbow (27). Discard preformed packing.
14. Remove hose 1682914 (28) and preformed packing (19) from elbow (30). Discard preformed packing.
15. Remove hose 1682914 (31) and preformed packing (32) from elbow (33). Discard preformed packing.



16. Disconnect water tank level auto fill control wire harness connector (34) from water level gauge connector (35).



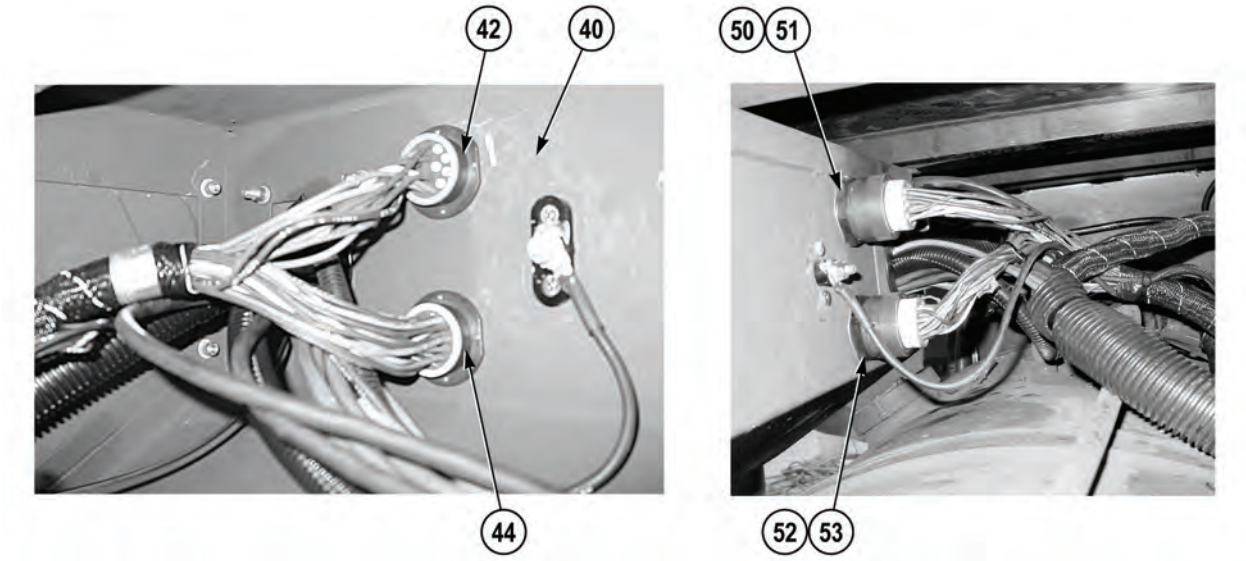
17. Remove two screws (36), lockwashers (37), washers (38), and wire-routing trim plate (39) from pump operator's panel housing (40). Discard lockwashers.



18. Disconnect main wire harness connector (41) from pump operator's panel connector (42).

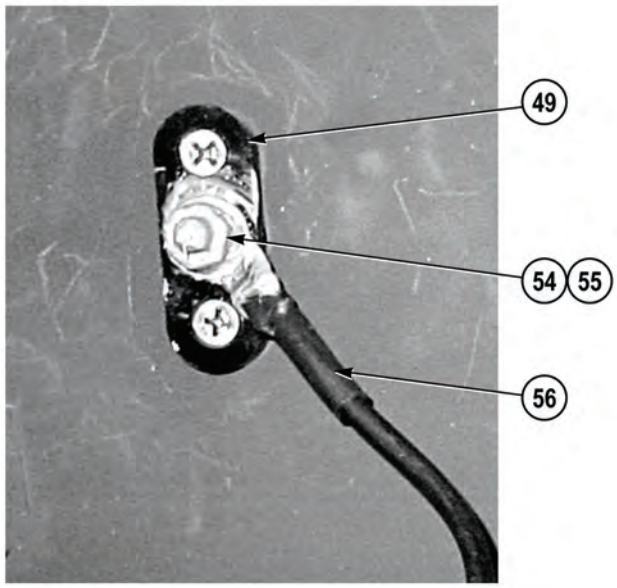
19. Disconnect main wire harness connector (43) from pump operator's panel connector (44).

20. Remove nut (45), lockwasher (46), washer (47), and wire 3230 (48) from block terminal (49). Discard lockwasher.

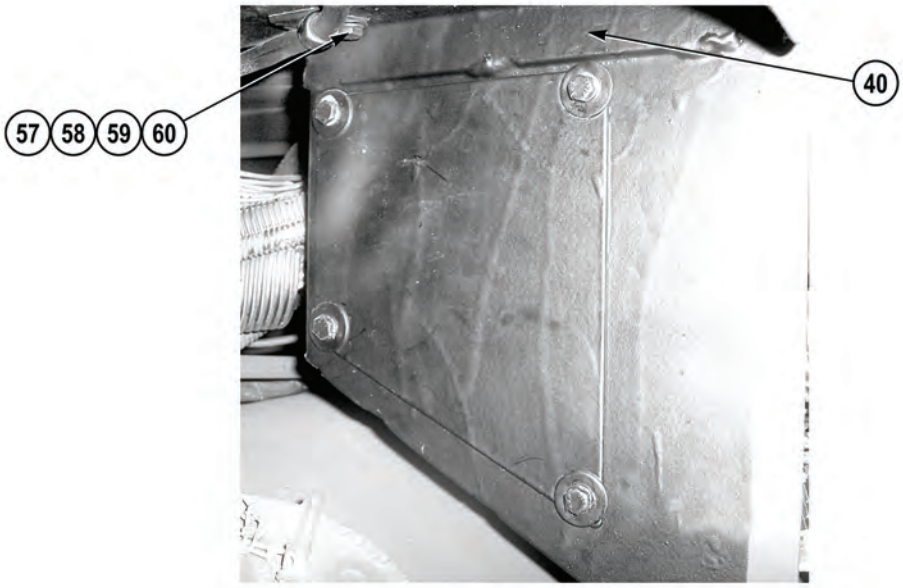


21. Remove nut (50), lockwasher (51), and pump operator's panel connector (42) from pump operator's panel housing (40). Discard lockwasher.

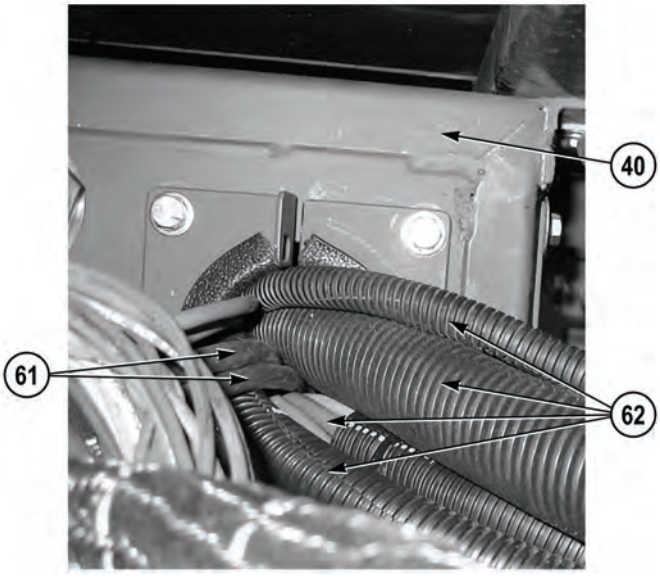
22. Remove nut (52), lockwasher (53), and pump operator's panel connector (44) from pump operator's panel housing (40). Discard lockwasher.



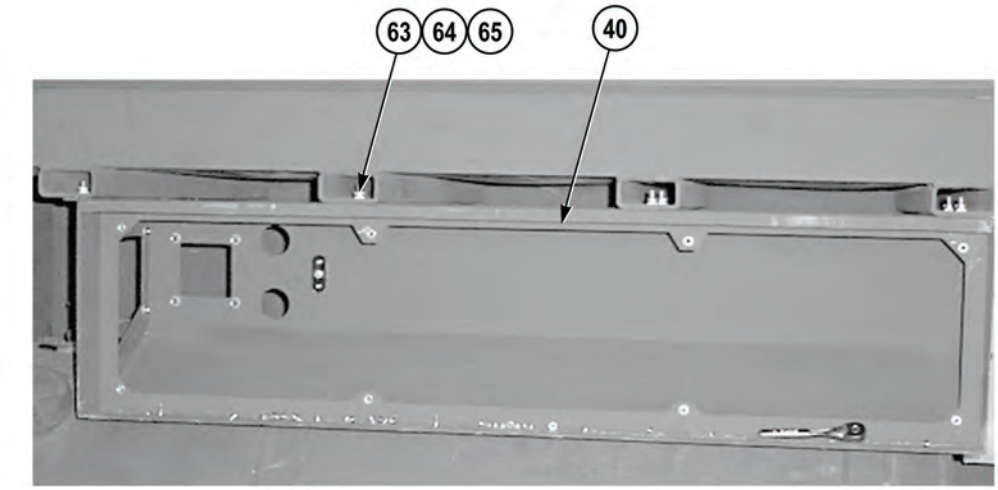
23. Remove nut (54), lockwasher (55), and wire 3895 (56) from block terminal (49). Discard lockwasher.



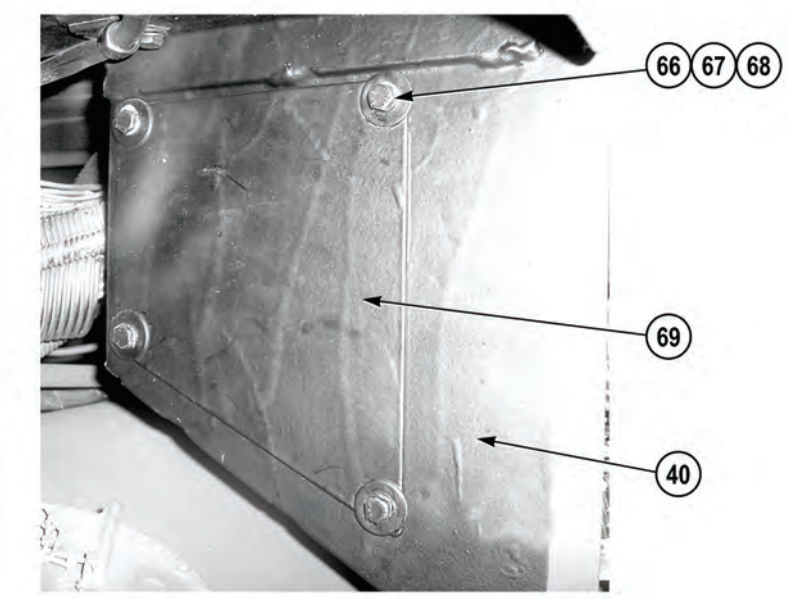
24. Remove screw (57), lockwasher (58), washer (59), and cushion clip (60) from pump operator's panel housing (40). Discard lockwasher.



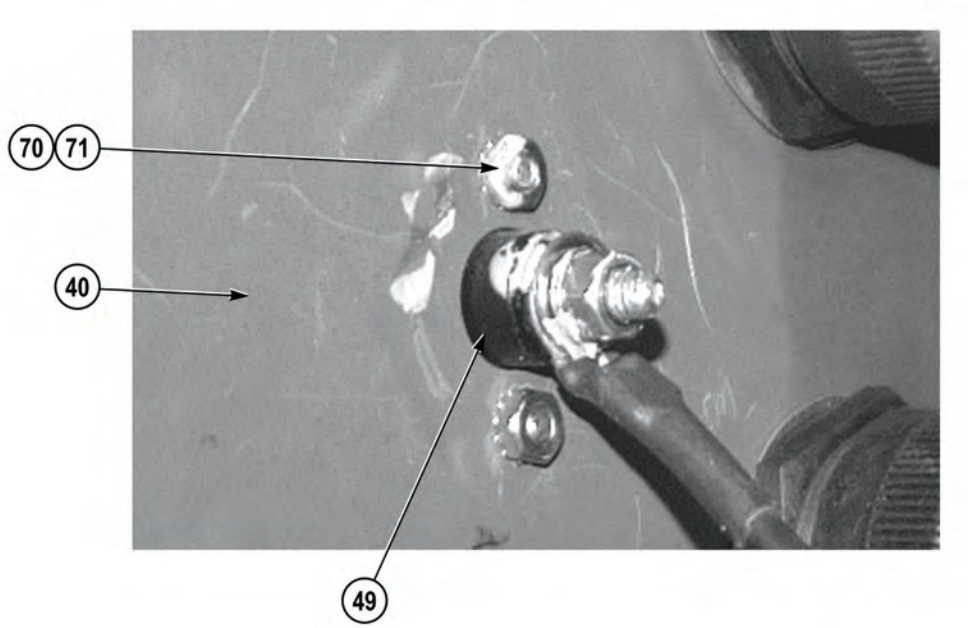
25. Carefully remove all hoses (61) and wires (62) from pump operator's panel housing (40).



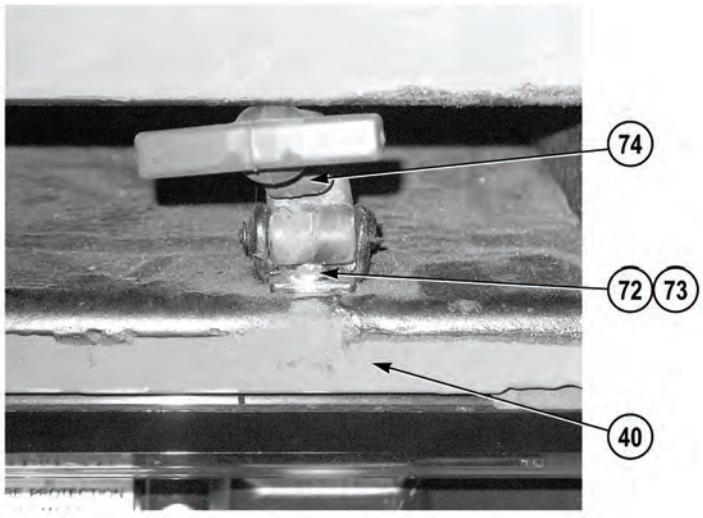
26. With the aid of an assistant, remove seven screws (63), lockwashers (64), washers (65), and pump operator's panel housing (40) from vehicle. Discard lockwasher.



27. Remove four screws (66), lockwashers (67), washers (68), and access trim plate (69) from pump operator's panel housing (40). Discard lockwasher.



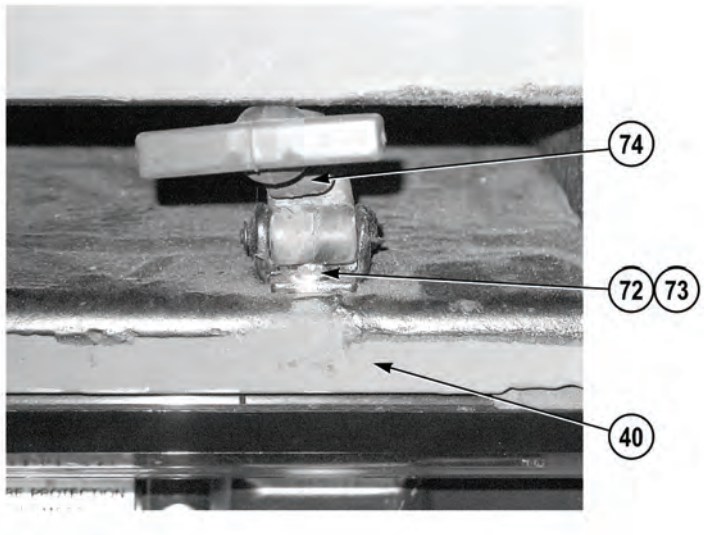
28. Remove two locknuts (70), screws (71), and block terminal (49) from pump operator's panel housing (40). Discard lockwasher.



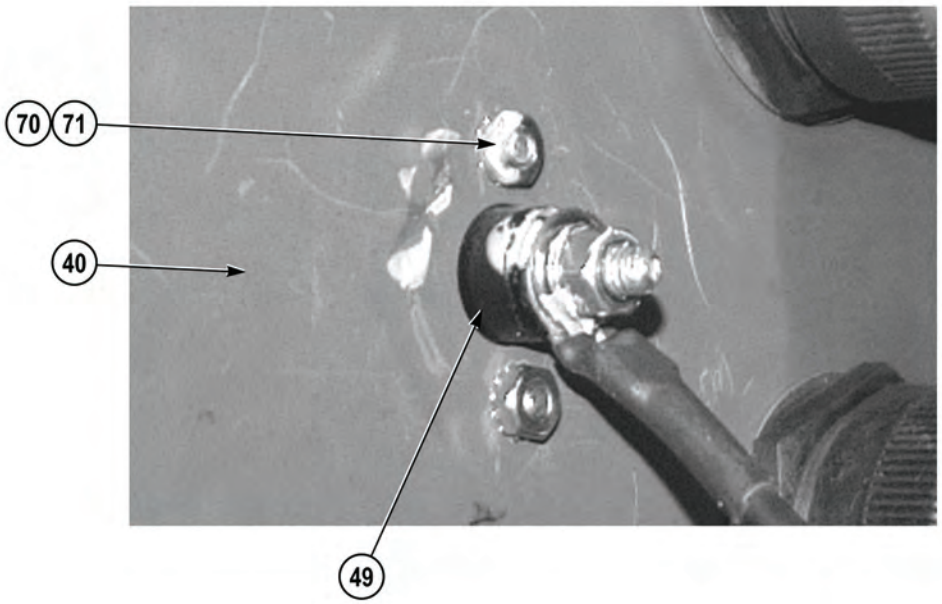
29. Remove four locknuts (72), screws (73), and two rubber hood latches (74) from pump operator's panel housing (40). Discard lockwasher.

END OF TASK

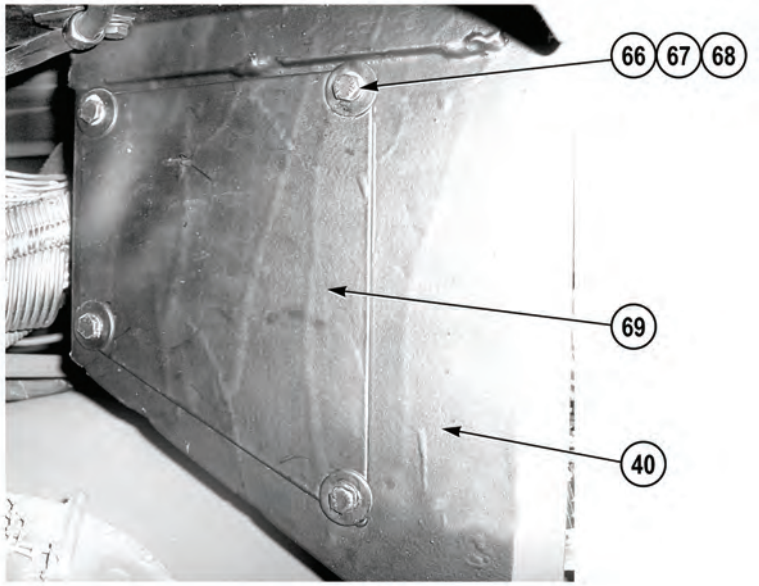
INSTALLATION



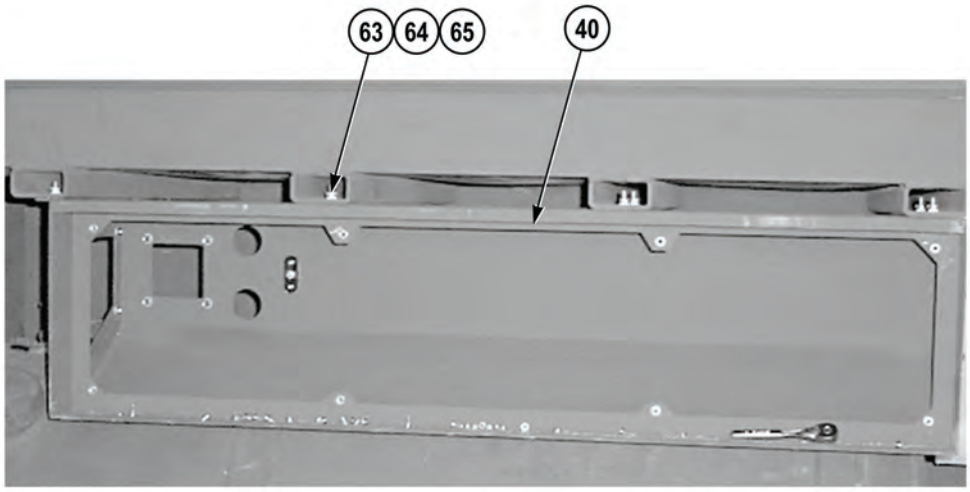
1. Install two rubber hood latches (74) on pump operator's panel housing (40) with four screws (73) and locknuts (72).



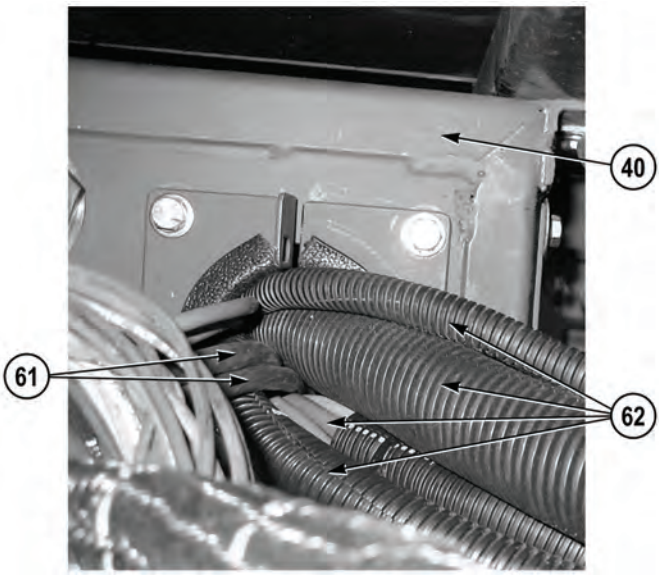
2. Install block terminal (49) on pump operator's panel housing (40) with two screws (71) and locknuts (70).



3. Install access trim plate (69) on pump operator's panel housing (40) with four washers (68), lockwashers (67), and screws (66).



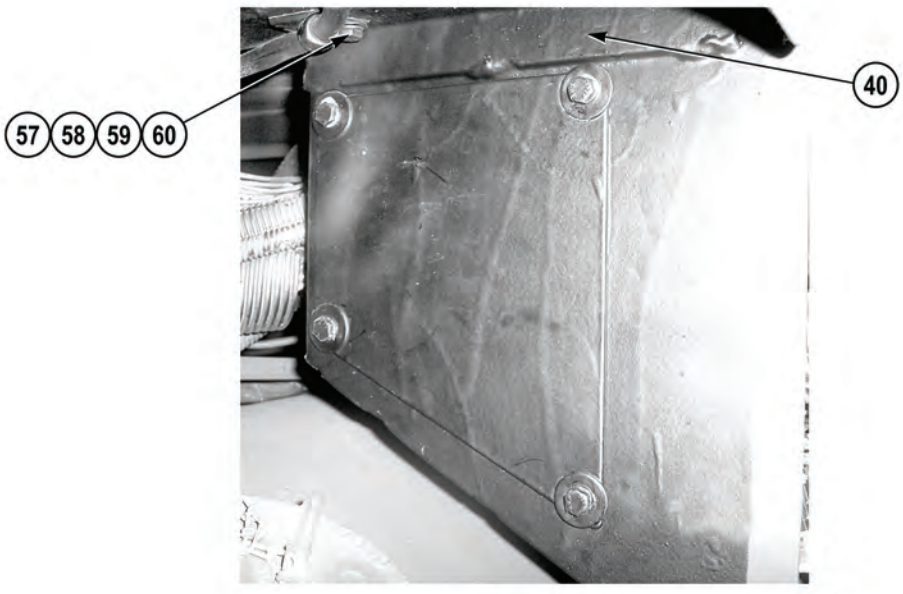
4. With the aid of an assistant, install pump operator's panel housing (40) on vehicle with seven washers (65), lockwashers (64), and screws (63).



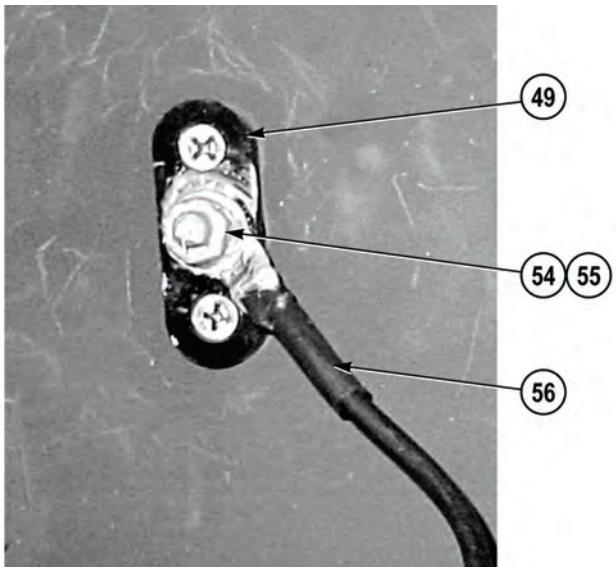
NOTE

- Install cable ties and split loom as required.
- Route hoses and wires as noted prior to removal.

5. Carefully install all wires (62) and hoses (61) in pump operator's panel housing (40).



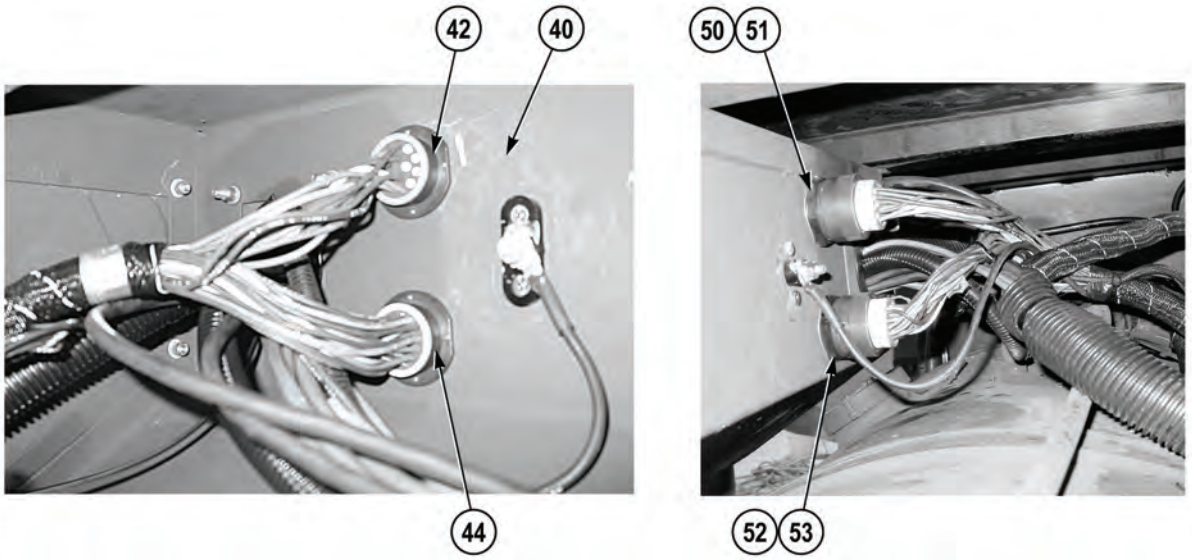
6. Install cushion clip on pump operator's panel housing (40) with washer (59), lockwasher (5), and screw (57).



CAUTION

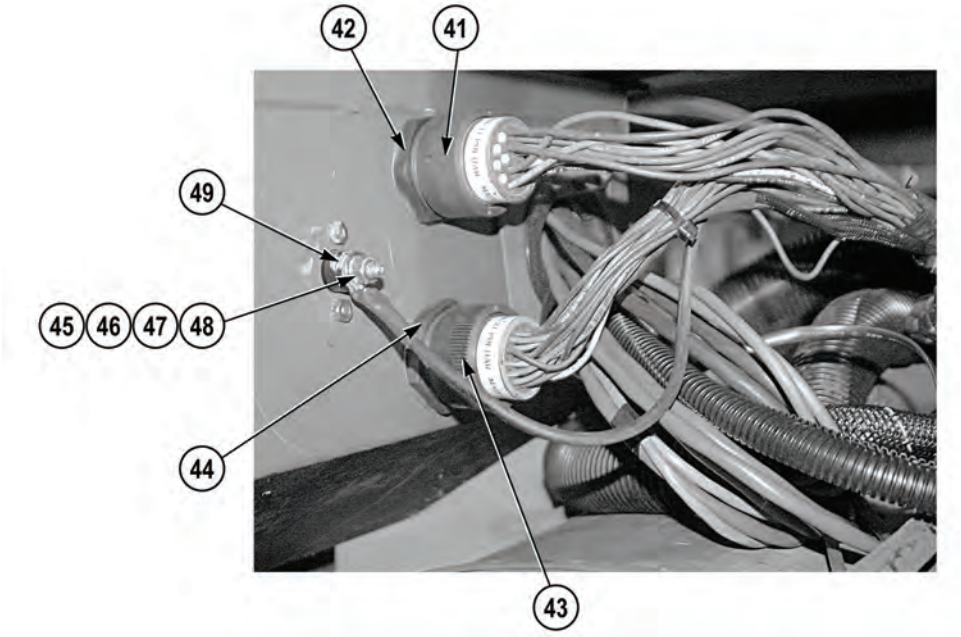
Do not overtighten nut on block terminal. Failure to comply may result in damage to equipment.

7. Install wire 3895 (56) on block terminal (49) with lockwasher (55) and nut (54).



8. Install pump operator's panel connector (44) on pump operator's panel housing (40) with lockwasher (53) and nut (52).

9. Install pump operator's panel connector (42) on pump operator's panel housing (40) with lockwasher (51) and nut (50).



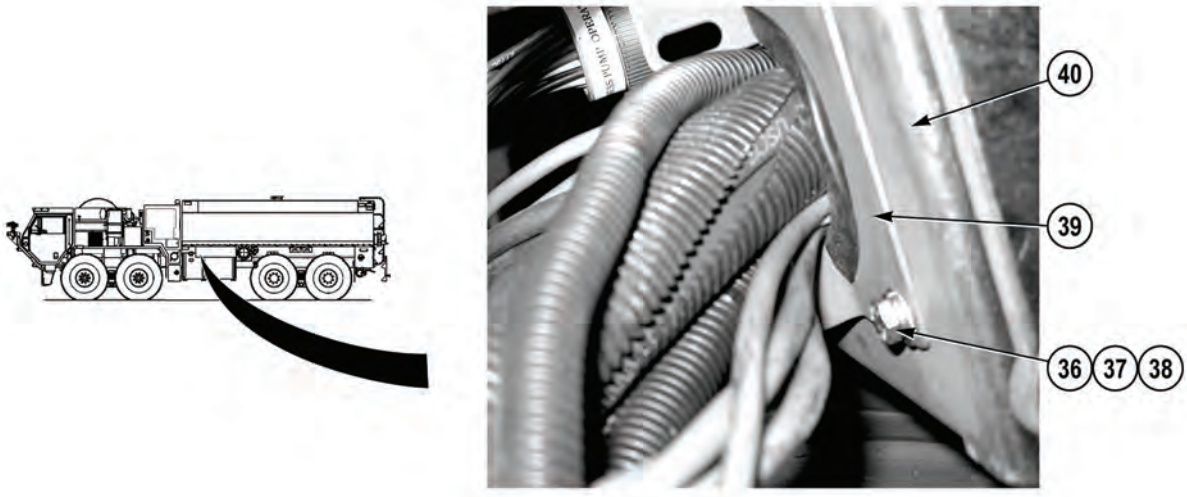
10. Install wire 3230 (48), washer (47), lockwasher (46), and nut (45) on block terminal (49).

WARNING

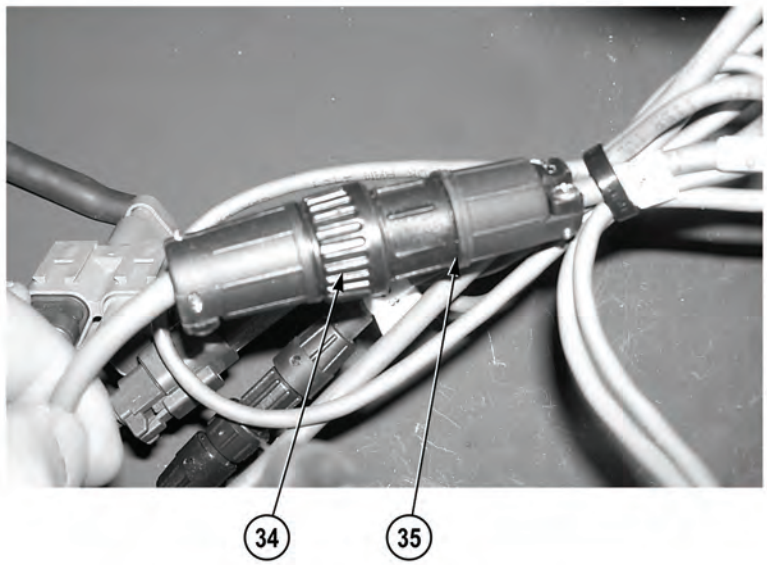


Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

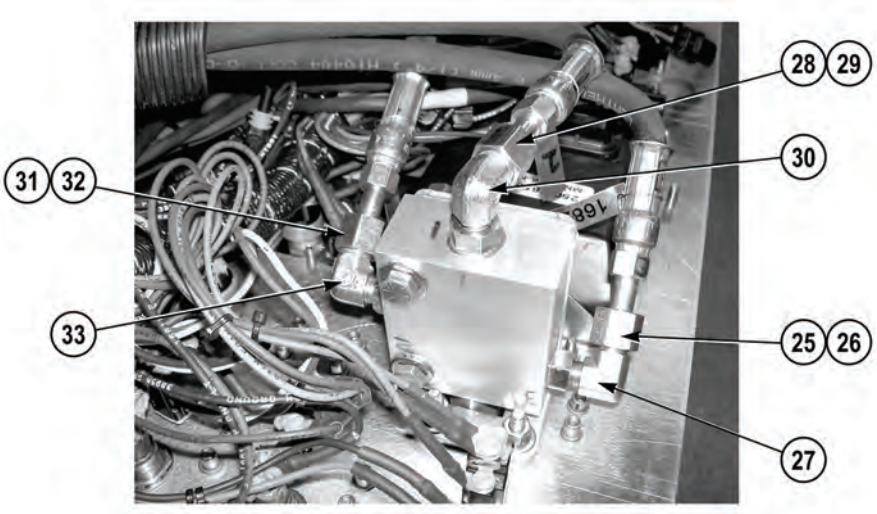
11. Apply sealing compound to electrical connection on block terminal (49).
12. Connect pump operator's connector (44) to main wire harness connector (43).
13. Connect pump operator's connector (42) to main wire harness connector (41).



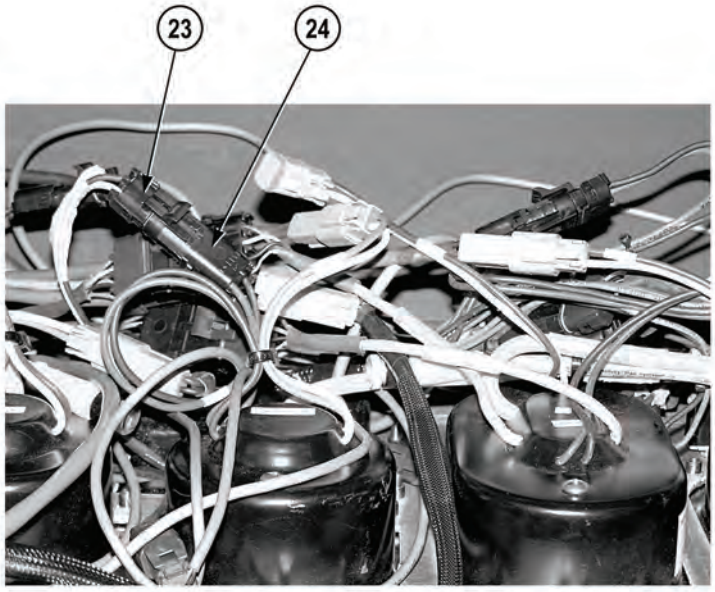
14. Install wire routing trim plate (39), two washers (38), lockwashers (37), and screws (36) on pump operator's panel housing (40).



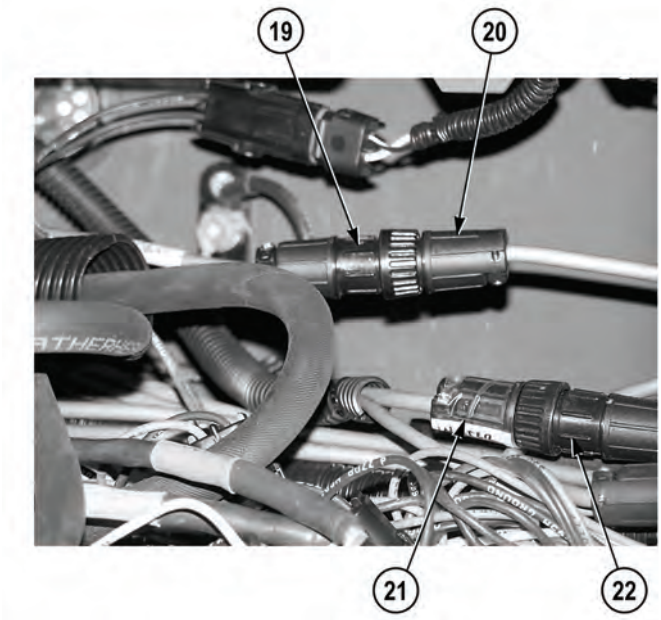
15. Connect water level gauge connector (35) to water tank level auto fill control wire harness connector (34).



16. Install preformed packing (32) and hose 1682914 (31) on elbow (33).
17. Install preformed packing (29) and hose 1682914 (28) on elbow (30).
18. Install preformed packing (26) and hose 1682914 (25) on elbow (27).

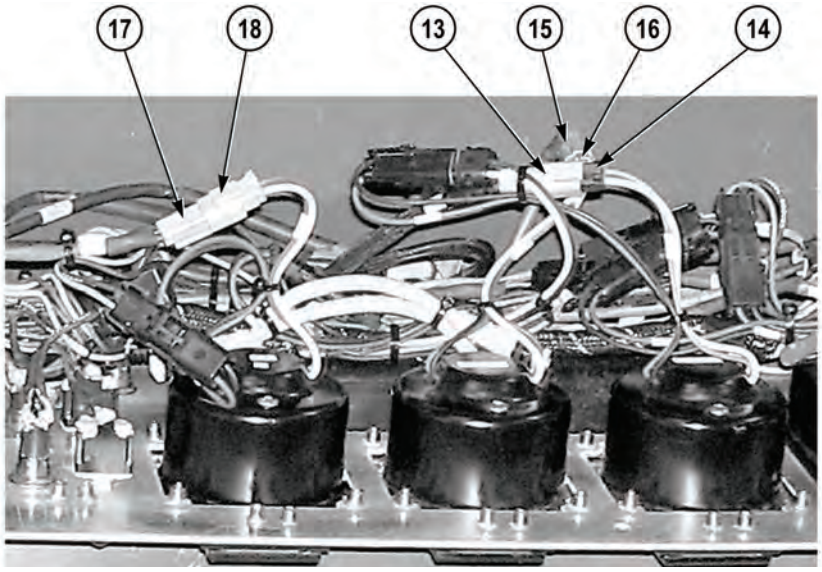


19. Connect discharge valve control line connector (24) to discharge valve control wire harness connector (23).



20. Connect cab water tank level indicator gauge connector (22) to cab water tank level indicator wire harness connector (21).

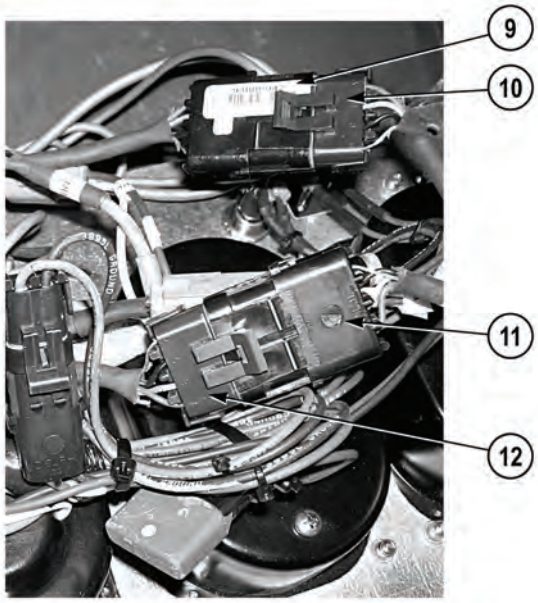
21. Connect cab foam tank level indicator gauge connector (20) to cab foam tank level indicator wire harness connector (19).



22. Connect tank fill and re-circulating line connector (18) to tank fill and re-circulating line wire harness connector (17).

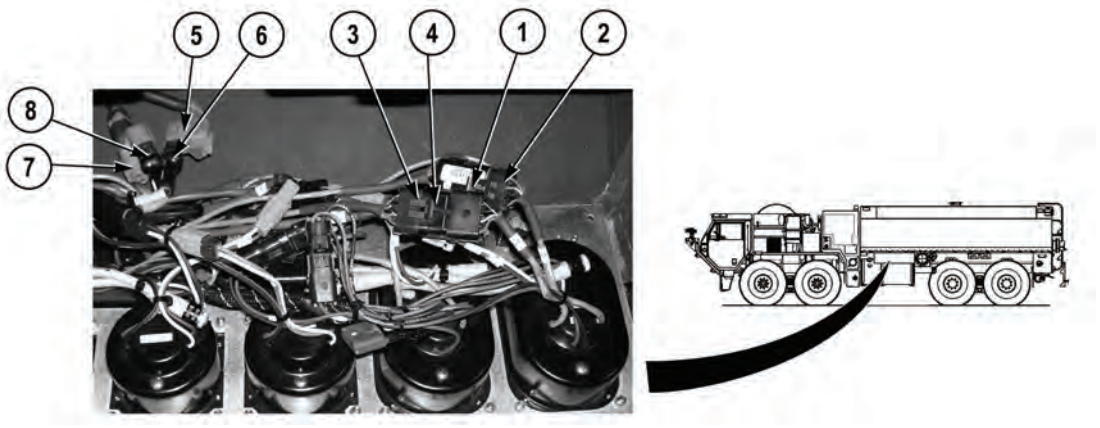
23. Connect driver side auxiliary inlet valve line connector (16) to driver side auxiliary inlet valve wire harness connector (15).

24. Connect passenger side auxiliary inlet valve connector (14) to passenger side auxiliary inlet valve wire harness connector (13).



25. Connect No. 1 driver side pressure transducer line connector (12) to No. 1 driver side pressure transducer wire harness connector (11).

26. Connect No. 1 driver side flow sensor line connector (10) to No. 1 driver side flow sensor wire harness connector (9).



27. Connect chassis data link line connector (8) to chassis data link (green) connector (7).
28. Connect cat data link line connector (6) to cat data link (yellow) connector (5).
29. Connect No. 2 passenger side pressure transducer line connector (4) to No. 2 passenger side pressure transducer wire harness connector (3).
30. Connect No. 2 passenger side flow sensor line connector (2) to No. 2 passenger side flow sensor wire harness connector (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Close pump operator's panel (WP 0213)
2. Install striplights (WP 0213)
3. Close pump operator's panel cover (WP 0010)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

REAR ACCESS LADDER REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Lockwasher (10)
Locknut (2)
Lockwasher (4)
Locknut (1)
Locknut (1)
Locknut (2)

References
WP 0392, Fig. 75

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)

REMOVAL

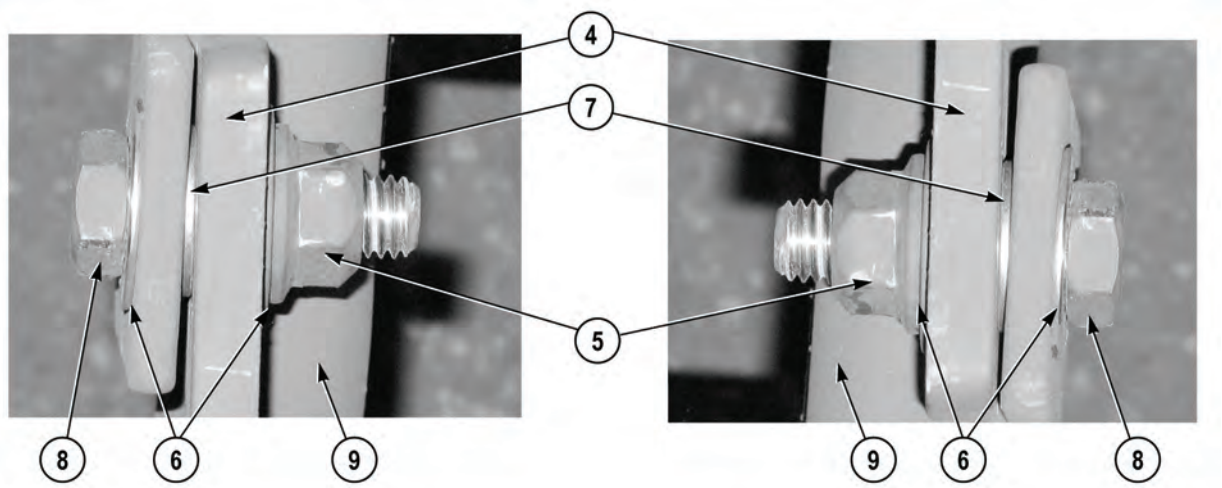


WARNING



Rear access ladder weighs approximately 80 lb. (36 kg). Do not attempt to lift or move rear access ladder without the aid of an assistant and a suitable lifting device. Failure to comply may result in serious injury to personnel or damage to equipment.

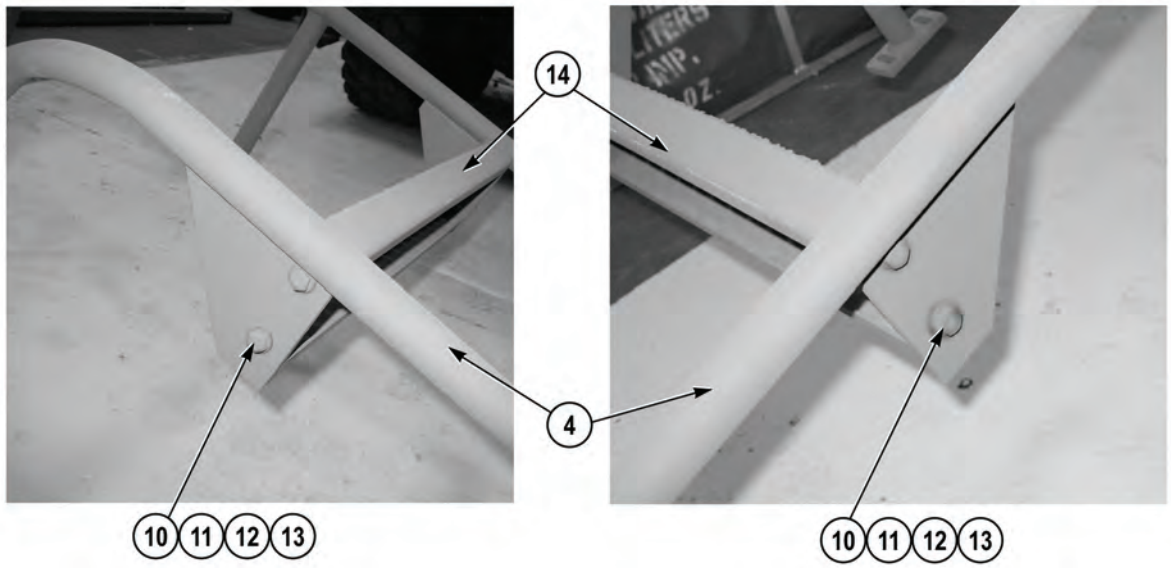
1. With the aid of an assistant and suitable lifting device, remove 10 screws (1), lockwashers (2), washers (3) and rear access ladder (4) from vehicle. Discard lockwashers.



NOTE

Note position of washers prior to removal to ensure proper installation.

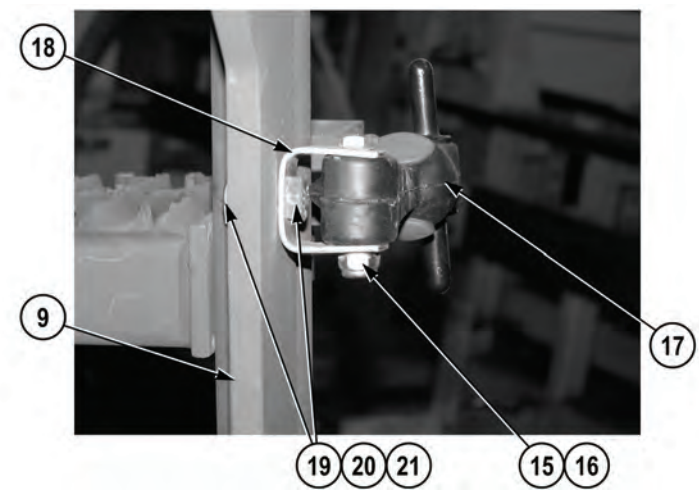
2. Remove two locknuts (5), four washers (6), two thrust washers (7), screws (8), and lower ladder section (9) from rear access ladder (4). Discard locknuts.



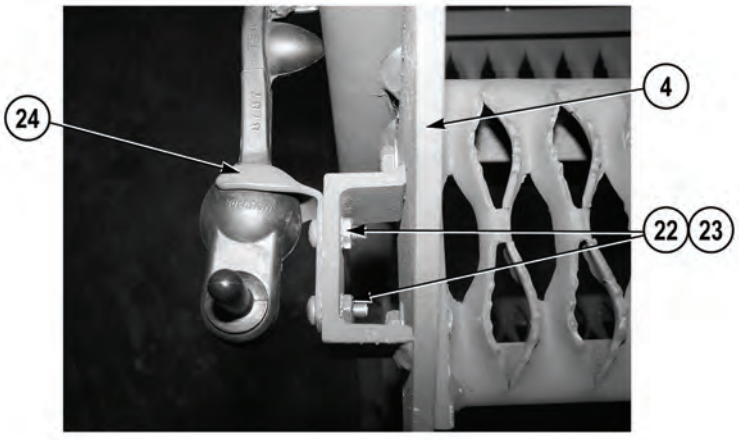
NOTE

- All steps are removed the same way.
- Steps on swing down lower ladder section are not removable.

3. Remove four nuts (10), lockwashers (11), eight washers (12), four screws (13), and step (14) from rear access ladder (4). Discard lockwashers.



4. Remove locknut (15), screw (16), and rubber draw latch (17) from bracket (18). Discard locknut.
5. Remove locknut (19), washer (20), screw (21), and bracket (18) from lower ladder section (9). Discard locknut.

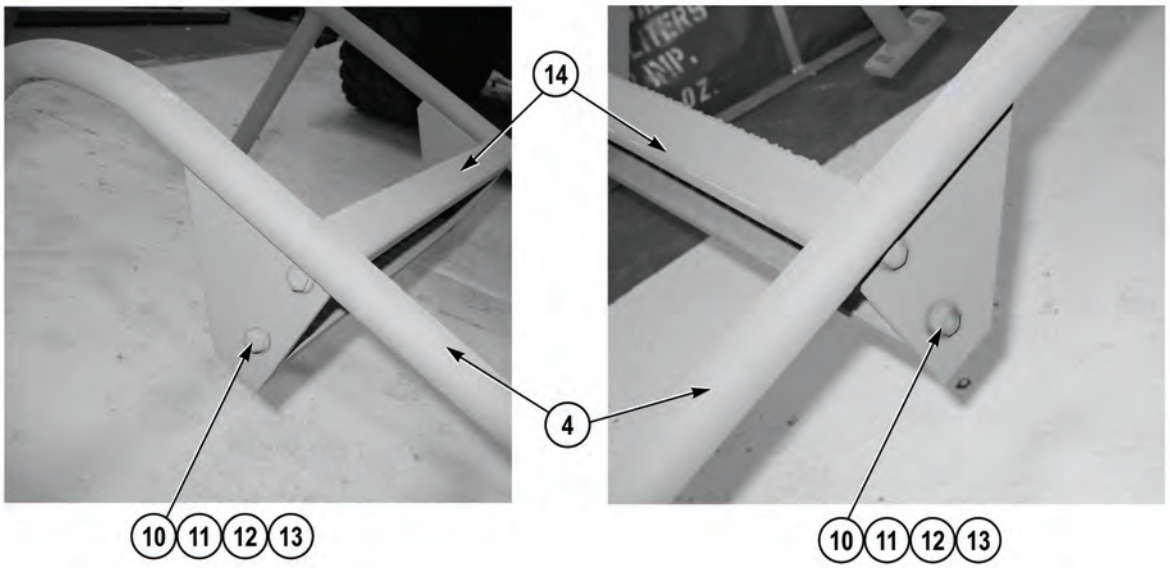


6. Remove two locknuts (22), screws (23), and bracket (24) from rear access ladder (4). Discard locknuts.

END OF TASK

INSTALLATION

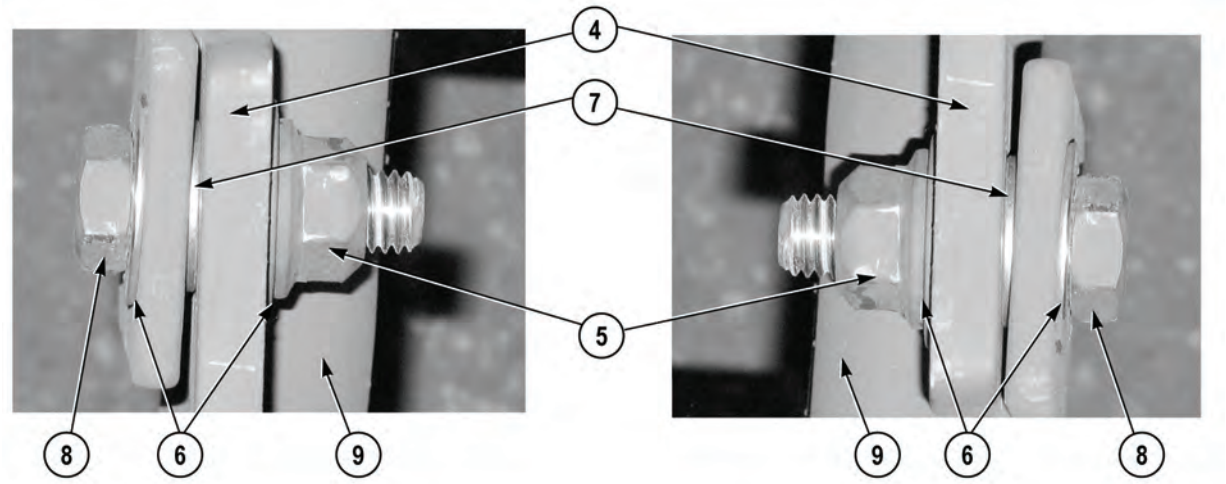
1. Install bracket (24) on rear access ladder (4) with two screws (23) and locknuts (22).
2. Install bracket (18) on lower ladder section (9) with screw (21), washer (20), and locknut (19).
3. Install rubber draw latch (17) on bracket (18) with screw (16) and locknut (15).



NOTE

All steps are installed the same way.

4. Install step (14) on rear access ladder (4) with four screws (13), eight washers (12), four lockwashers (11), and nuts (10).



NOTE

Install washers in same position as noted prior to removal.

5. Install swing down lower ladder section (9) on rear access ladder (4) with two screws (8), four washers (6), two thrust washers (7), and two locknuts (5).



WARNING



Rear access ladder weighs approximately 80 lb. (36 kg). Do not attempt to lift or move rear access ladder without the aid of an assistant and a suitable lifting device. Failure to comply may result in serious injury to personnel or damage to equipment.

6. With the aid of an assistant and suitable lifting device, install rear access ladder (4) on vehicle with 10 washers (3), lockwashers (2), and screws (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

REAR HARD LIFT REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Standard Automotive Tool Set (SATS), (WP 0399, Item 15)
• Wrench, Torque, Click, Ratchet, 3/4” Drive, 600 ft-lb
Tool Kit, General Mechanic’s: Automotive (WP 0399, Item 17)

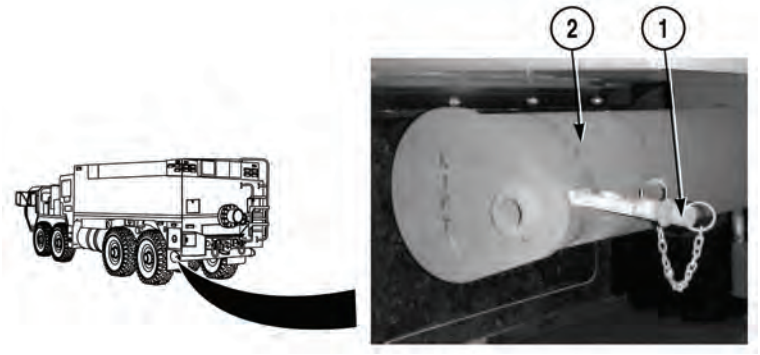
Materials/Parts
Locknut (8)
Locknut (4)

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

References
WP 0392, Fig. 77

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)

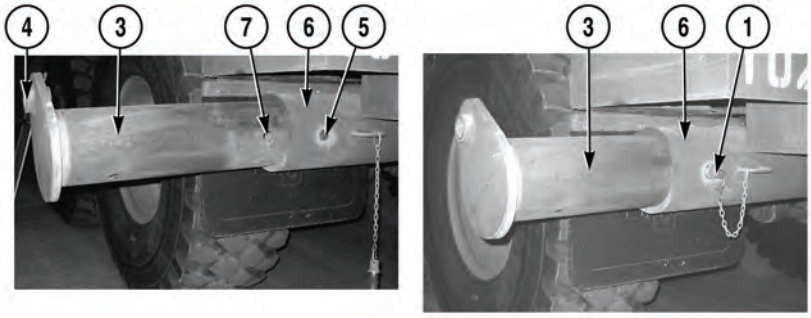
REMOVAL



NOTE

- Perform Steps (1) through (4) to position end plate lift tubes in lift position.
- Driver side and passenger side end plate tubes are installed the same way. Driver side shown.

1. Remove lockpin (1) from rear hard lift assembly (2).

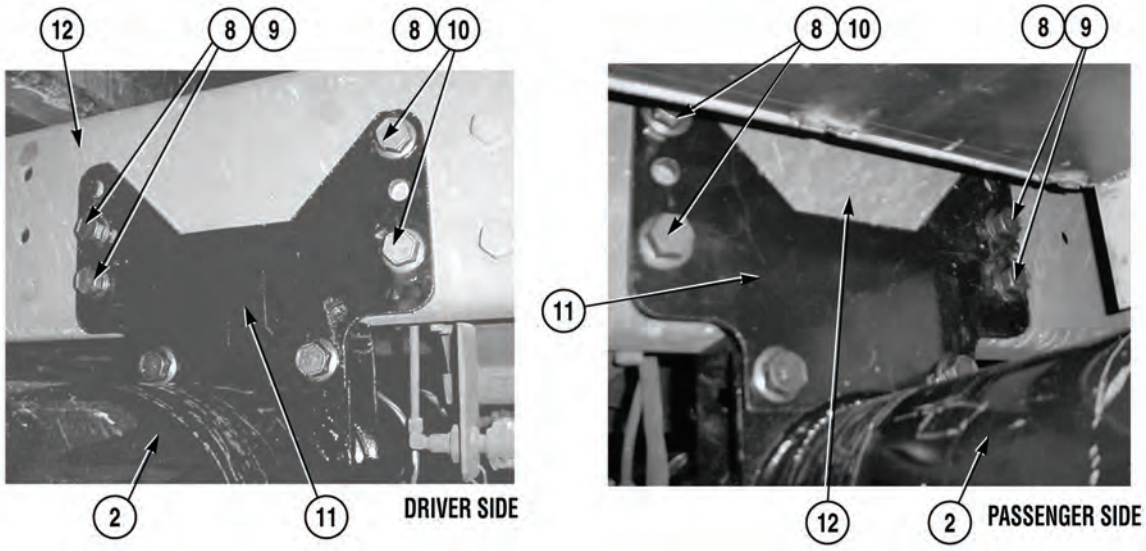


WARNING

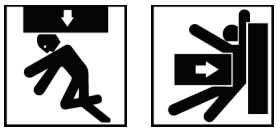


Do not extend end plate tube too far out of rear hard lift tube. End plate tube weighs approximately 70 lb. (31.8 kg) and may come out of rear hard lift tube and drop suddenly causing injury to personnel.

2. Pull end plate tube (3) out and rotate until bushing (4) on end plate tube (3) is pointing toward the 11 o'clock position.
3. Push end plate tube (3) in, and align hole (5) in rear hard lift tube (6) with hole (7) in end plate tube (3).
4. Install lockpin (1) in rear hard lift tube (6) and end plate tube (3).



WARNING

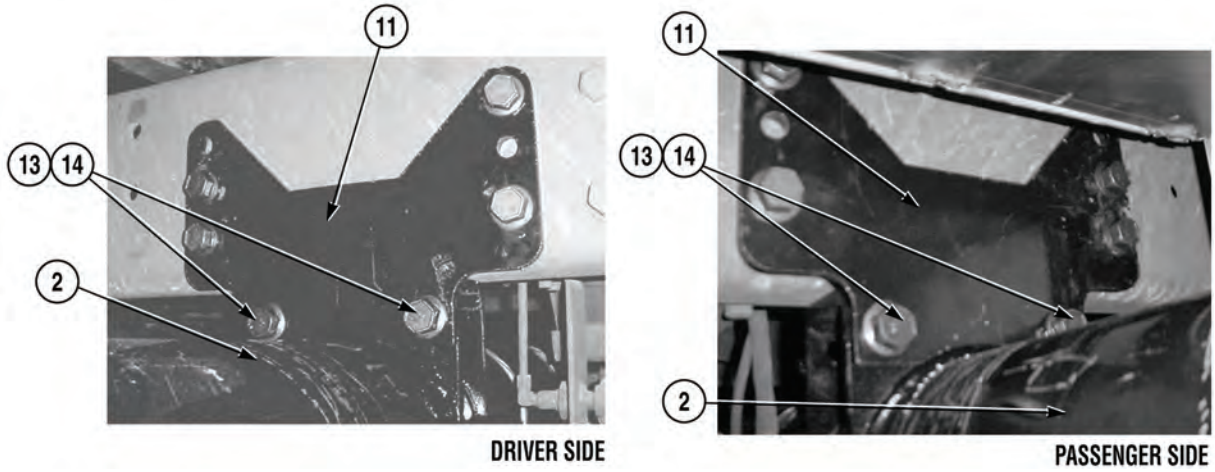


- **Do not stand between vehicle and rear hard lift assembly or under hard lift assembly when removing hard lift assembly from brackets. Hard lift assembly may swing toward vehicle or fall, causing injury or death to personnel.**
- **Hard lift assembly weighs approximately 1,000 lb. (454 kg). Do not attempt to lift or move hard lift assembly without the aid of an assistant and/or suitable lifting device. Failure to comply may result in injury or death to personnel.**
- **All personnel must stand clear during lifting operations. A swinging or shifting load may cause injury or death to personnel.**

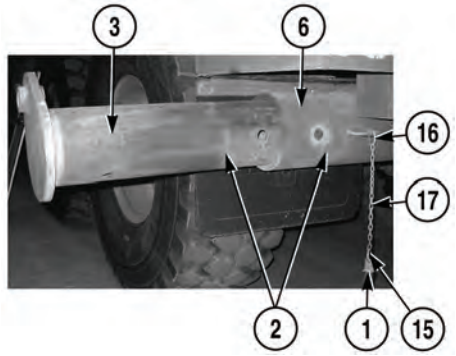
NOTE

Note locations of screws prior to removal to ensure proper installation.

5. With the aid of an assistant and a suitable lifting device, remove eight locknuts (8), four screws (9), four screws (10), and two brackets (11) from frame (12). Discard locknuts.
6. Using a suitable lifting device, remove rear hard lift assembly (2) from vehicle.



7. Remove four locknuts (13), screws (14), and two brackets (11) from rear hard lift assembly (2). Discard locknuts.



WARNING



End plate tube weighs approximately 70 lb. (31.8 kg). Do not attempt to lift or move end plate tube without the aid of an assistant. Failure to comply may result in injury to personnel.

NOTE

Driver side and passenger side end plate tube assemblies are removed the same way. Driver side shown.

8. Remove lockpin (1) from rear hard lift assembly (2).
9. With the aid of an assistant, remove end plate tube (3) from rear hard lift tube (6).
10. Remove keyring (15) from lockpin (1).

11. Remove keyring (16) from rear hard lift tube (6).
12. Remove two keyrings (15) and (16) from chain (17).

END OF TASK

INSTALLATION

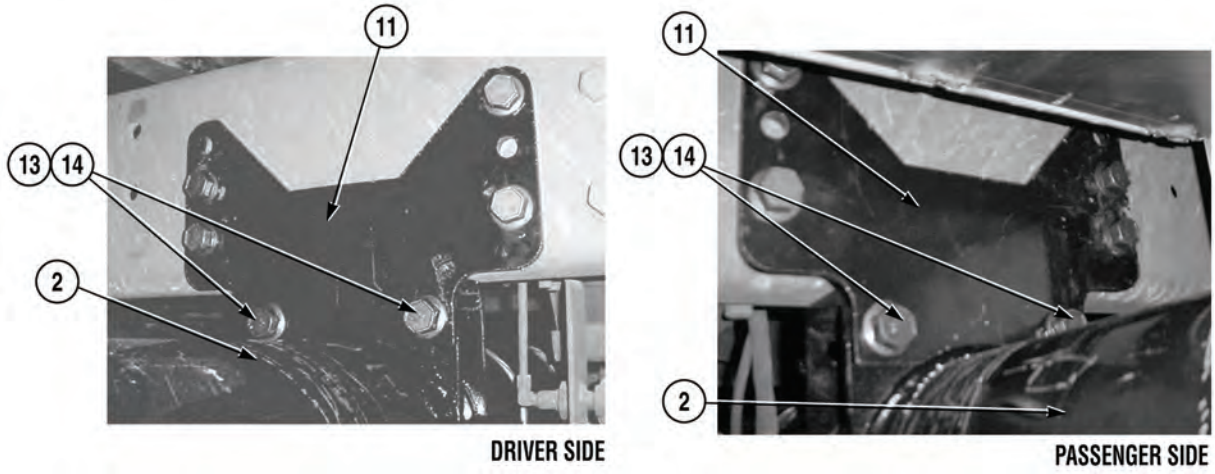
1. Install two keyrings (16) and (15) on chain (17).
2. Install keyring (16) on rear hard lift tube (6).
3. Install keyring (15) on lockpin (1).

WARNING

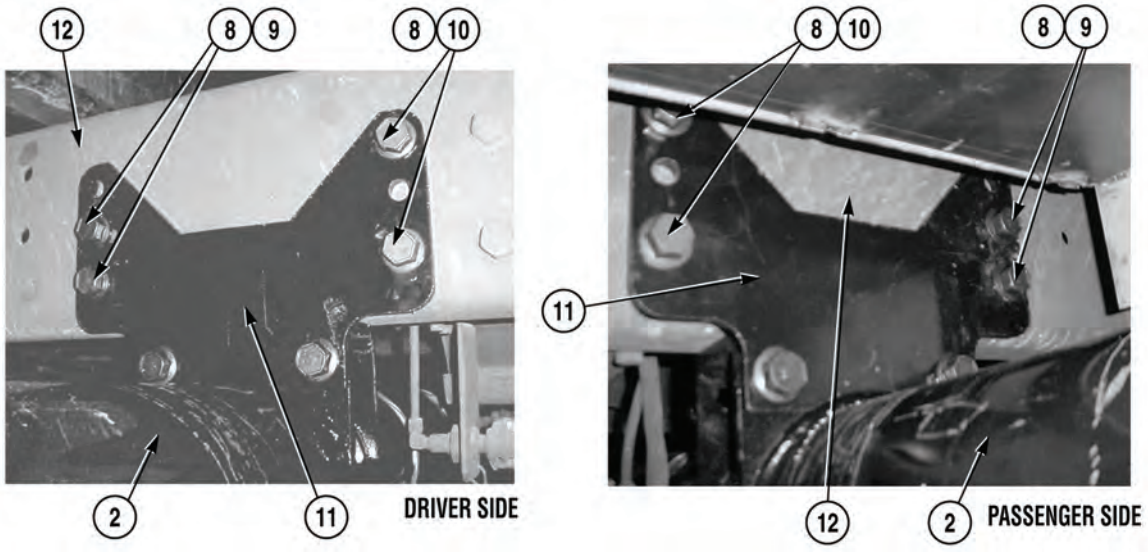


- **End plate tube weighs approximately 70 lb. (31.8 kg). Do not attempt to lift or move end plate tube without the aid of an assistant. Failure to comply may result in injury to personnel.**
- **Ensure end plate tube bushings are in the lift position as noted prior to removal.**

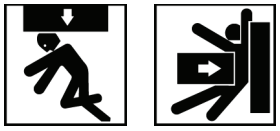
4. With the aid of an assistant, install end plate tube (3) in rear hard lift tube (6).
5. Install lockpin (1) in rear hard lift assembly (2).



6. Install two brackets (11) on rear hard lift assembly (2) with four screws (14) and locknuts (13).
7. Tighten locknuts (13) and screws (14) to 339 lb-ft (460 N•m).



WARNING

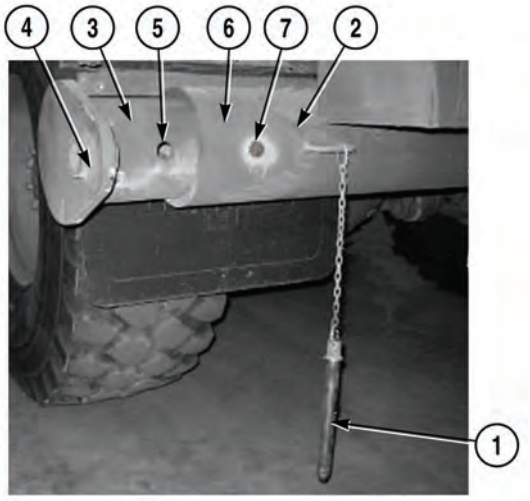


- **Hard lift assembly weighs approximately 1,000 lb. (454 kg). Do not attempt to lift or move hard lift assembly without the aid of an assistant and a suitable lifting device. Failure to comply may result in injury to personnel.**
- **All personnel must stand clear during lifting operations. A swinging or shifting load may cause injury or death to personnel.**

NOTE

Note locations of screws (9) and (10) as noted prior to removal.

8. With the aid of an assistant and a suitable lifting device, place rear hard lift assembly (2) into position and install two brackets (11) on frame (12) with four screws (10), four screws (9), and eight locknuts (8). Tighten locknuts (8) to 339 lb-ft (460 N•m).



NOTE

- Perform Steps (10) through (13) to place rear hard lift assembly in operating position.
- Driver side and passenger side end plate tubes are installed the same way. Driver side shown.

9. Remove lockpin (1) from rear hard lift assembly (2).
10. Push end plate tube (3) in and rotate until bushing (4) on end plate tube (3) is pointing toward the 3 o'clock position.
11. Align hole (5) in rear hard lift tube (6) with hole (7) in end plate tube (3).
12. Install lockpin (1) in rear hard lift tube (6) and end plate tube (3).

END OF TASK

FOLLOW-ON MAINTENANCE

Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

REAR SPLASH GUARD REPLACEMENT

INITIAL SETUP:

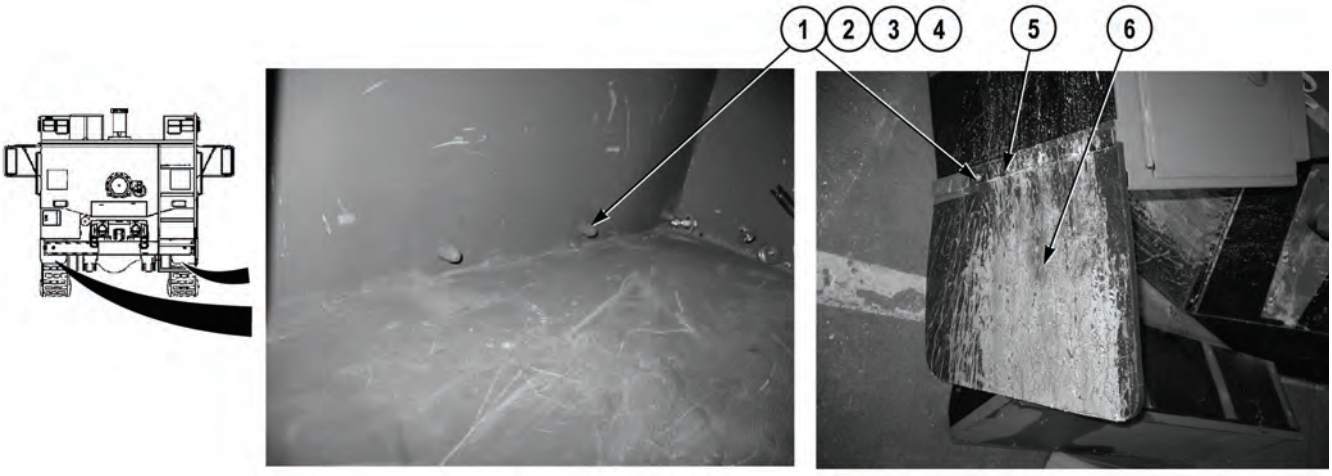
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Lockwasher (4)

References
WP 0392, Fig. 76

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)
Compartment doors P1 and D1 opened (WP 0008)

REMOVAL



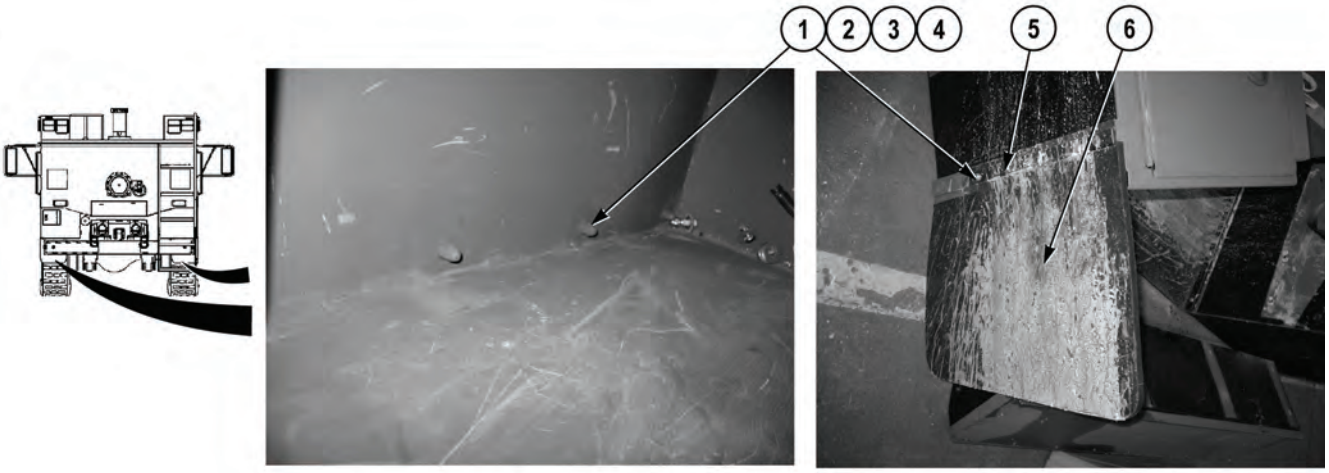
NOTE

Passenger side and driver side rear splash guards are removed the same way.
Passenger side rear splash guard shown.

Remove four nuts (1), lockwashers (2), eight washers (3), four screws (4), bracket (5), and splash guard (6) from vehicle. Discard lockwashers.

END OF TASK

INSTALLATION



NOTE

Passenger side and driver side rear splash guards are installed the same way. Passenger side rear splash guard shown.

Install splash guard (6) and bracket (5) on vehicle with four screws (4), eight washers (3), four lockwashers (2), and nuts (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Close compartment door P1 and D1 (WP 0008)
2. Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

SCBA SEAT REPLACEMENT

INITIAL SETUP:

Tools and Special Tools

Standard Automotive Tool Set (SATS), (WP 0399, Item 15)
- Wrench, Torque, Ratcheting, 3/8” Drive, 75 ft-lb

Tool Kit, General Mechanic’s: Automotive (WP 0399, Item 17)

Materials/Parts

Locknut (4)
Locknut (2)

Personnel Required

MOS 63B Wheeled vehicle mechanic (2)

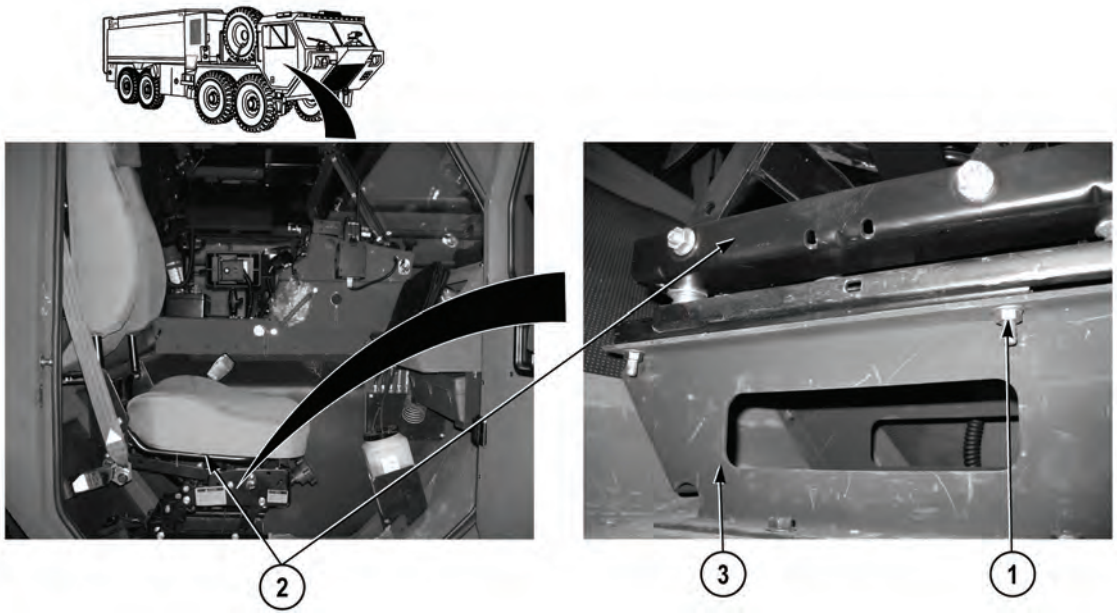
References

WP 0392, Fig. 69

Equipment Conditions

SCBA seat belt removed (WP 0349)

REMOVAL



WARNING

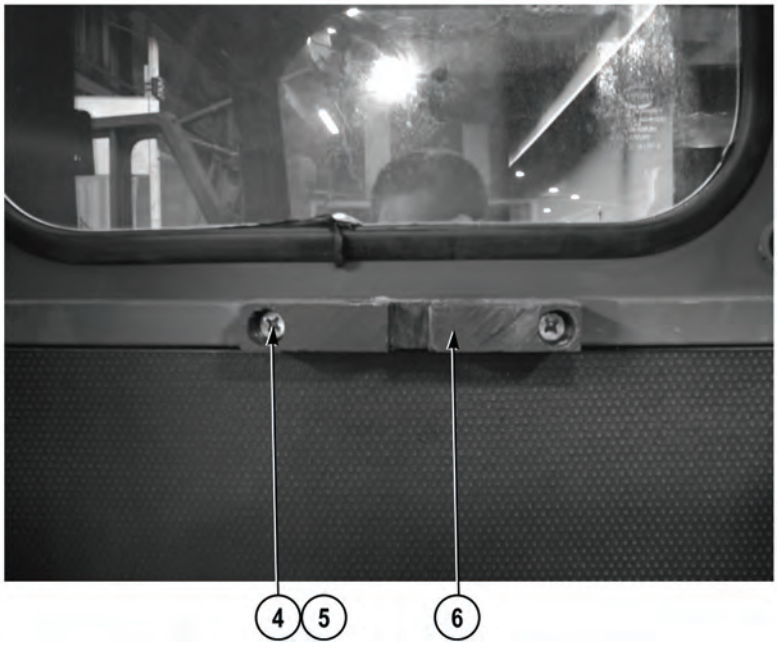


SCBA seat weighs approximately 90 lb. (41 kg). Do not attempt to lift SCBA seat without the aid of an assistant and suitable lifting device. Failure to comply may result in serious injury to personnel or damage to equipment.

NOTE

If seat mount is to be replaced refer to TM 9-2320-315-14&P.

1. With the aid of an assistant and a suitable lifting device, remove four locknuts (1) and SCBA seat (2) from seat mount (3). Discard locknuts.



NOTE

Perform Step (2) if wear bar requires removal.

2. Remove two locknuts (4), screws (5), and wear bar (6) from vehicle. Discard locknuts.

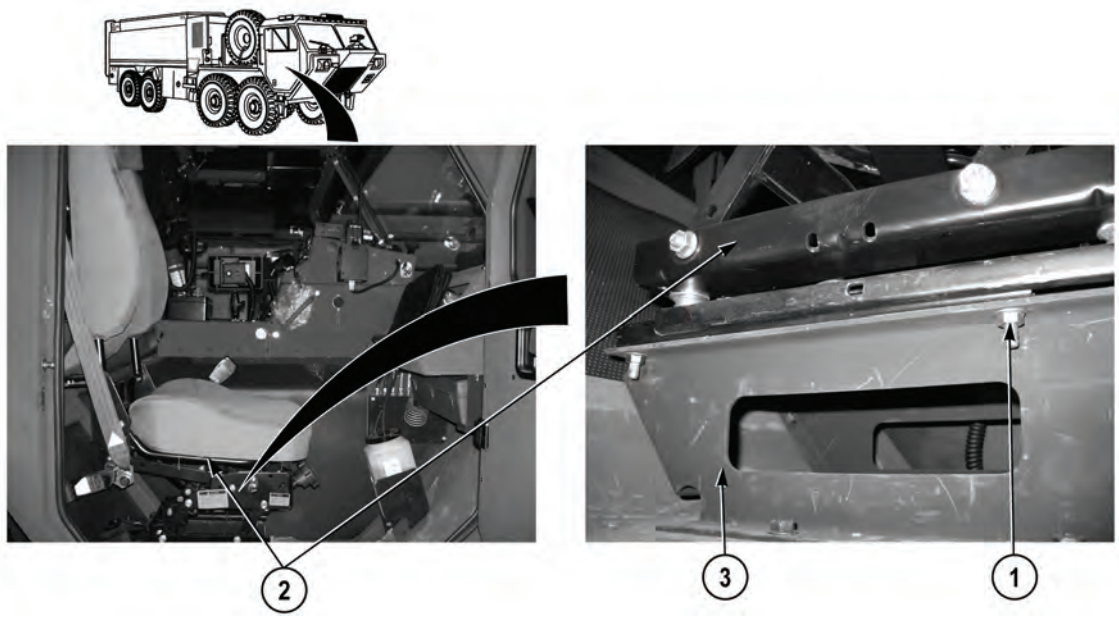
END OF TASK

INSTALLATION

NOTE

Perform Step (1) if wear bar was removed.

1. Install wear bar (6) on vehicle with two screws (5), and locknuts (4).



WARNING



- **Grade 8 hardware must only be used. Do not use stainless steel! Failure to comply may result in serious injury to personnel or damage to equipment.**
- **SCBA seat weighs approximately 90 lb. (41 kg). Do not attempt to lift SCBA seat without the aid of an assistant and suitable lifting device. Failure to comply may result in serious injury to personnel or damage to equipment.**

2. With the aid of an assistant and a suitable lifting device, install SCBA seat (2) on SCBA seat mount (3) with four locknuts (1) and tighten to 70 lb-ft (95 N•m).

END OF TASK

FOLLOW-ON MAINTENANCE

Install SCBA seat belt (WP 0349)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

SCBA SEAT BELT REPLACEMENT

INITIAL SETUP:

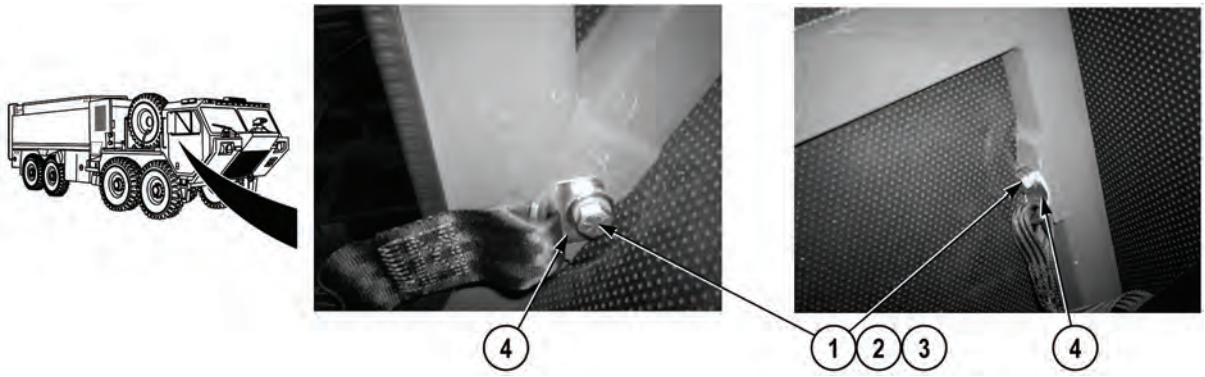
Tools and Special Tools
Standard Automotive Tool Set (SATS), (WP 0399, Item 15)
• Wrench, Torque, Ratcheting, 1/2” Drive, 250 lb-ft
Tool Kit, General Mechanic’s: Automotive (WP 0399, Item 17)

Materials/Parts
Lockwasher (2)
Locknut (2)
Locknut (1)
Locknut (1)

References
WP 0392, Fig. 69

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)

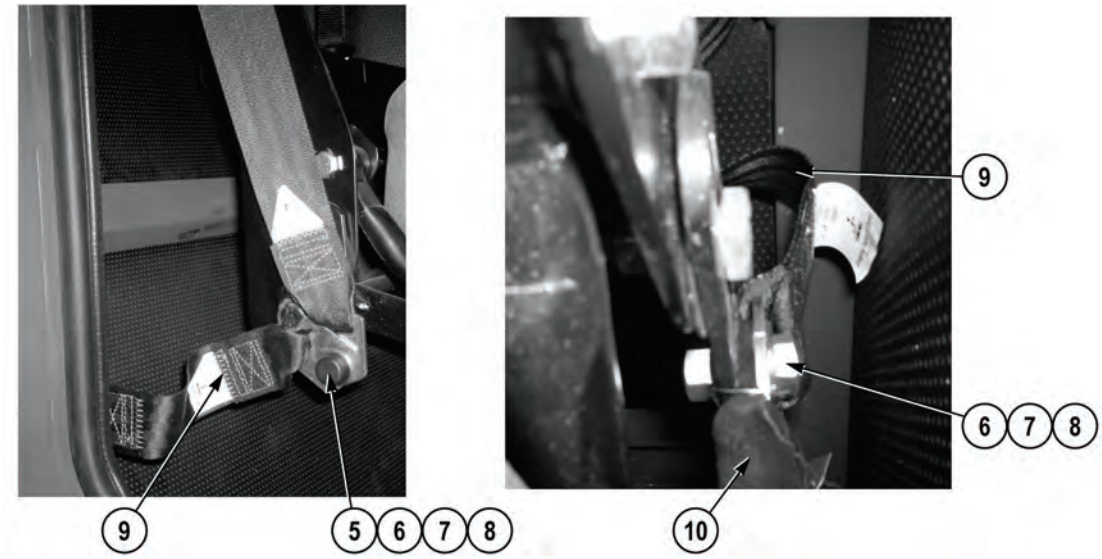
REMOVAL



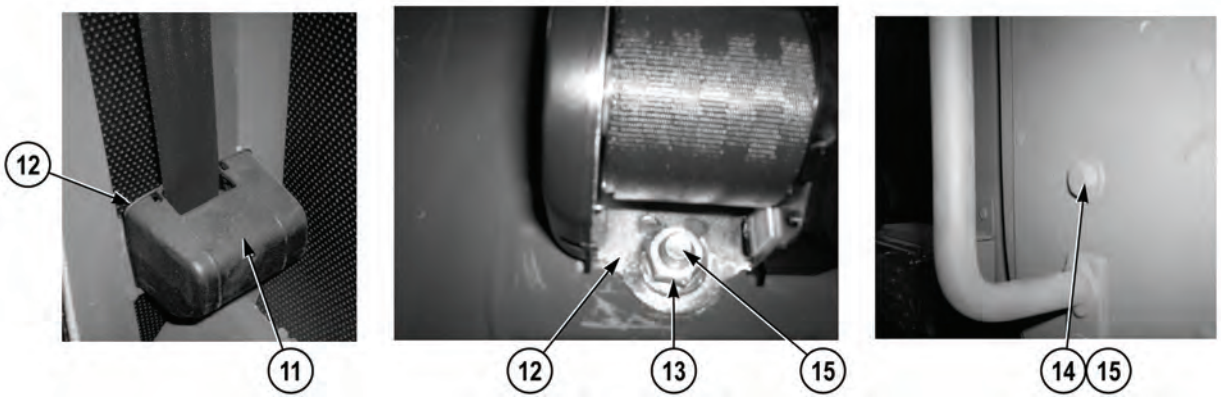
NOTE

Note position of seat belt anchor prior to removal to ensure proper installation.

1. Remove two screws (1), lockwashers (2), washers (3), and seat belt anchors (4) from vehicle. Discard lockwashers.

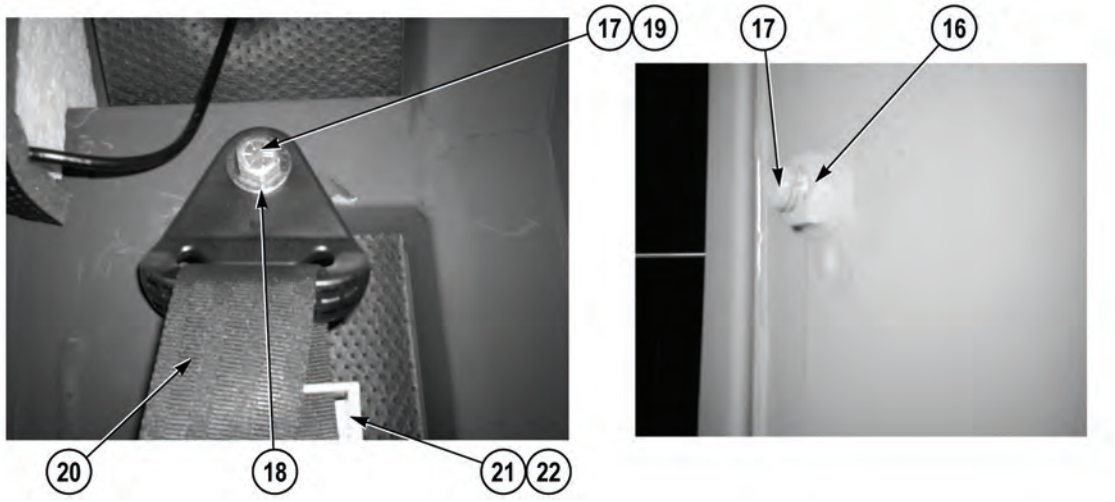


2. Remove plastic cap (5), two locknuts (6), washers (7), screws (8), tethers (9), and seat belt buckle (10) from vehicle. Discard locknuts.



3. Remove plastic cover (11) from retractor (12).

4. Remove locknut (13), washer (14), screw (15), and retractor (12) from vehicle. Discard locknut.



5. Remove locknut (16), screw (17), washer (18), bushing (19), seat belt (20), seat belt lock (21) and bracket (22) from vehicle. Discard locknut.

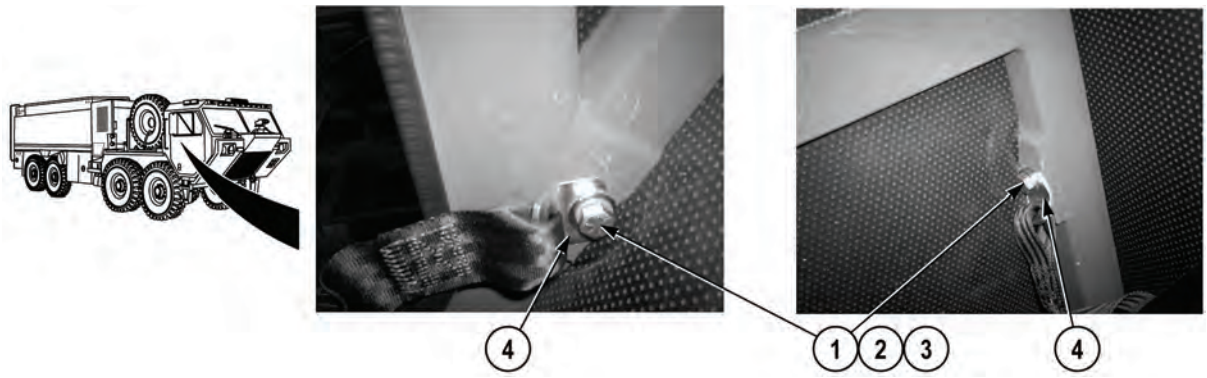
END OF TASK

INSTALLATION

WARNING

All screws must be grade 8 material. Do not use stainless steel. Failure to comply may result in severe injury or death to personnel.

1. Install seat belt lock bracket (22), seat belt lock (21), and seat belt (20) on vehicle with bushing (19), washer (18), screw (17), and locknut (16). Tighten to 70 lb-ft (95 N•m).
2. Install retractor (12) on vehicle with screw (15), washer (14), and locknut (13). Tighten locknut 70 lb-ft (95 N•m).
3. Install plastic cover (11) on retractor (12).
4. Install seat belt buckle (10) and two tethers (9) on vehicle with washers (7), screws (8), and locknuts (6). Tighten locknuts 70 lb-ft (95 N•m).
5. Install plastic cap (5) on screw (8).



NOTE

Install seat belt anchors in same position as noted prior to removal.

6. Install two seat belt anchors (4) on vehicle with washers (3), lockwashers (2), and screws (1). Tighten screws to 70 lb-ft (95 N•m).

END OF TASK

FOLLOW-ON MAINTENANCE

Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

SKID PLATE GRILLE REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

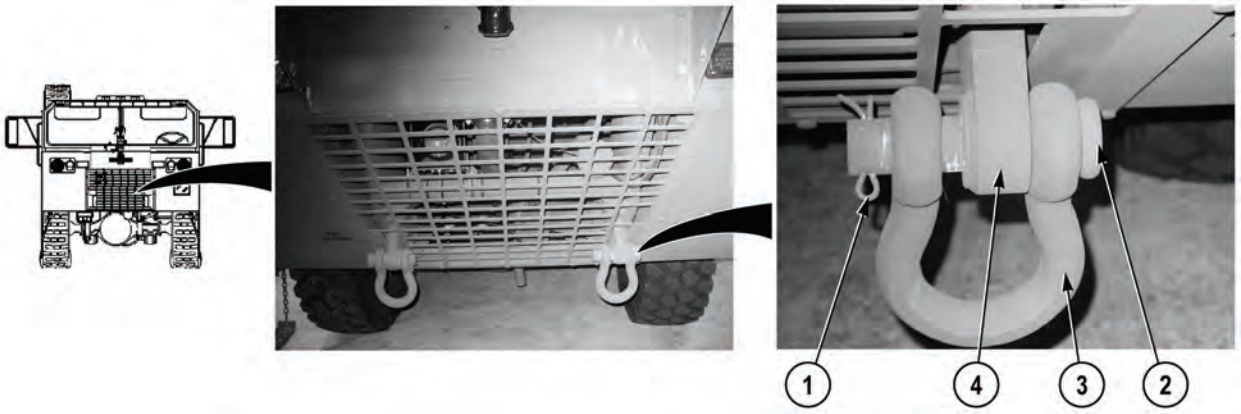
Materials/Parts
Cotter Pin (2)
Locknut (22)

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

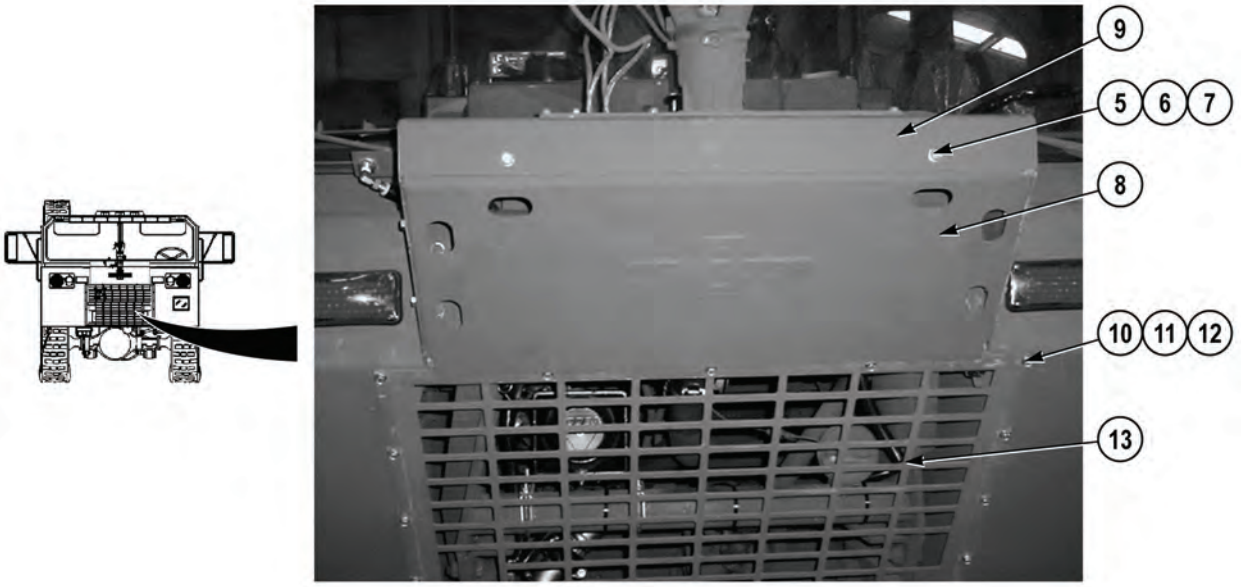
References
TM 9-2320-315-14&P

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)

REMOVAL



1. Remove two cotter pins (1), pins (2), and clevises (3) from brackets (4). Discard cotter pins.



2. With the aid of an assistant, remove six locknuts (5), 12 washers (6), six screws (7), and cover (8) from turret bumper mount (9). Discard locknuts.

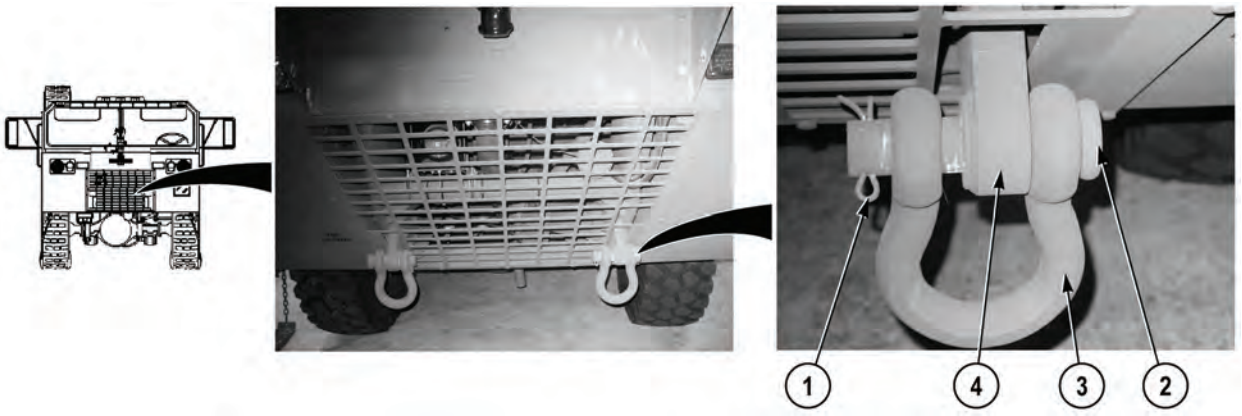
3. With the aid of assistant, remove 16 screws (10), washers (11), locknuts (12), and skid plate (13) from vehicle. Discard locknuts.

END OF TASK

INSTALLATION

1. With the aid of an assistant, install skid plate (13) on vehicle with 16 locknuts (12), washers (11), and screws (10).

2. With the aid of an assistant, install cover (8) on turret bumper mount (9) with six screws (7), 12 washers (6), and locknuts (5).



3. Install two clevises (3) on brackets (4) with two pins (2) and cotter pins (1).

FOLLOW-ON MAINTENANCE

Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

SMALL COMPARTMENT DOOR(S) REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

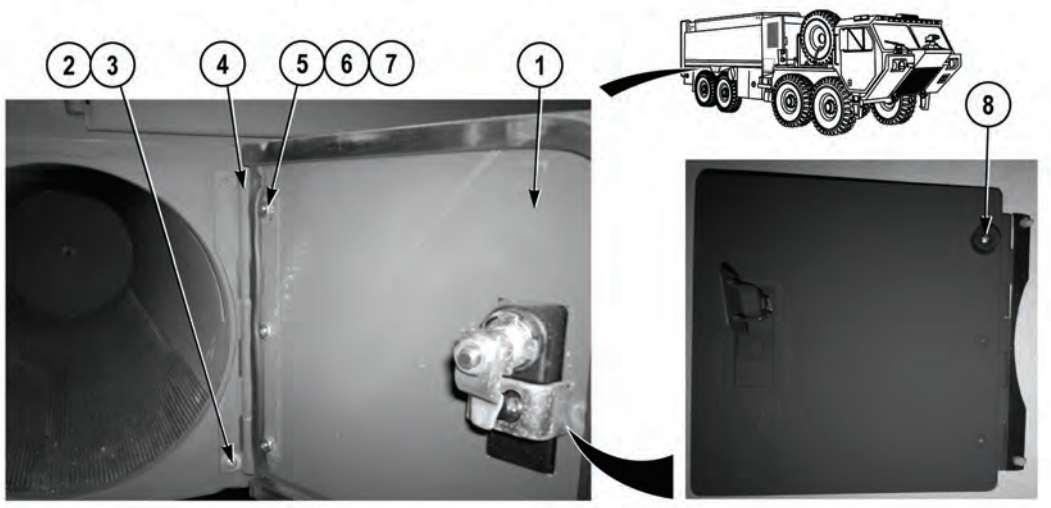
Materials/Parts
Mineral Spirits (WP 0401, Item 19)
Locknut (3)
Lockwasher (1)
Locknut (4)
Lockwasher (4)
Lockwasher (2)
Locknut (2)
Locknut (2)
Lockwasher (1)
Locknut (2)

Materials/Parts (continued)
Locknut (2)
Lockwasher (2)
Lockwasher (3)
Lockwasher (1)
Lockwasher (1)

References
WP 0008
WP 0392, Fig. 72, 78, 79, 89

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)

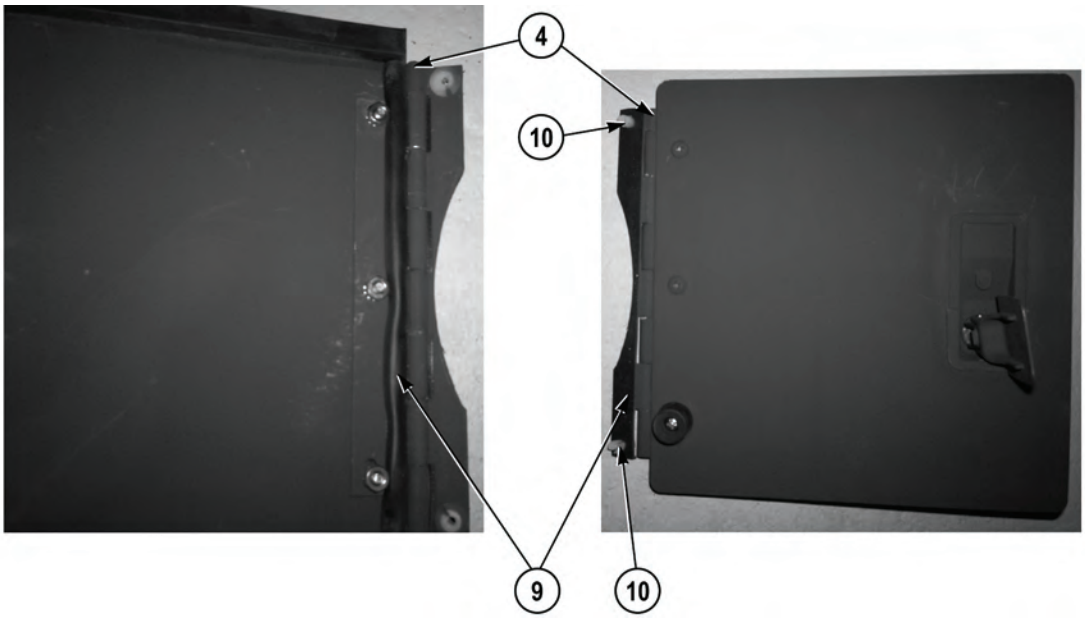
SCBA TANK ACCESS DOOR/REAR STEP BUZZER COMPARTMENT DOOR REMOVAL



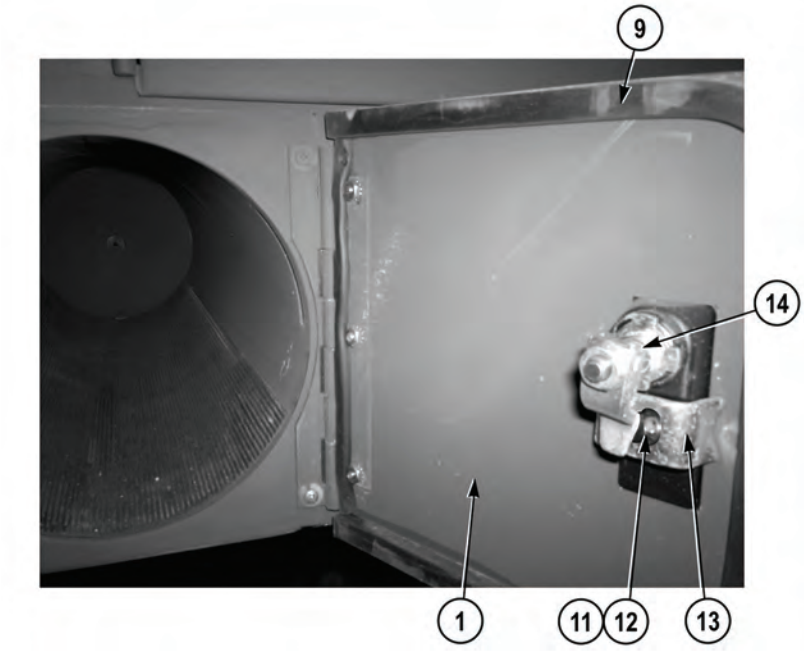
NOTE

Both SCBA tank compartment doors and rear step buzzer compartment door are removed the same way. Front air tank compartment door shown.

1. Open SCBA tank compartment door (1) (WP 0008).
2. Remove two screws (2), inserts (3), hinge (4), and SCBA tank compartment door (1) from vehicle.
3. Remove three locknuts (5), washers (6), screws (7), rubber bumper (8), and hinge (4) from SCBA tank compartment door (1). Discard locknuts.



4. Remove two seals (9) from hinge (4).
5. Remove two inserts (10) from hinge (4).



6. Remove screw (11), lockwasher (12), retainer (13), and twist lock (14) from SCBA tank compartment door (1). Discard lockwasher.
7. Remove seal (9) from SCBA tank compartment door (1).

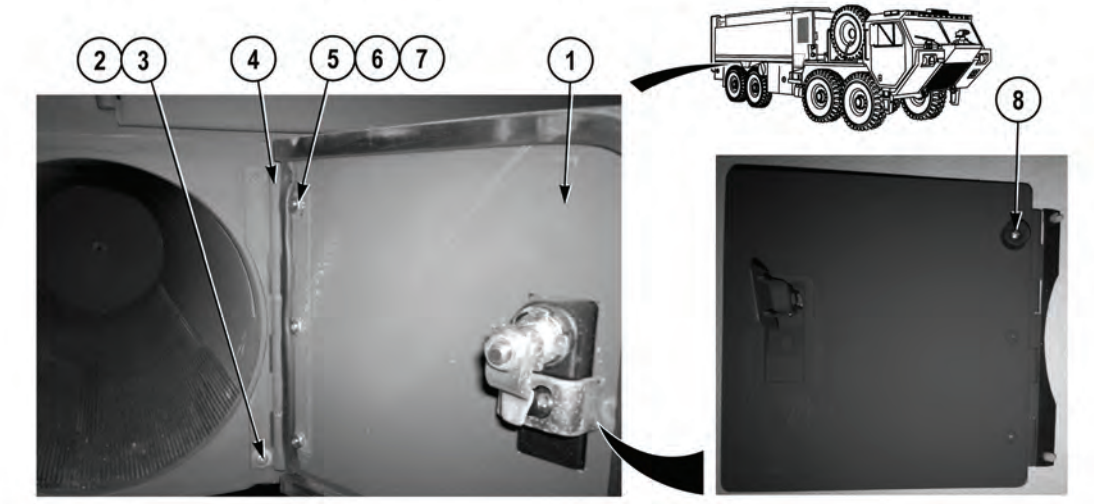
END OF TASK

SCBA TANK ACCESS DOOR/REAR STEP BUZZER COMPARTMENT DOOR INSTALLATION

NOTE

Both SCBA tank compartment doors and rear step buzzer compartment door are installed the same way. Front SCBA tank compartment door shown.

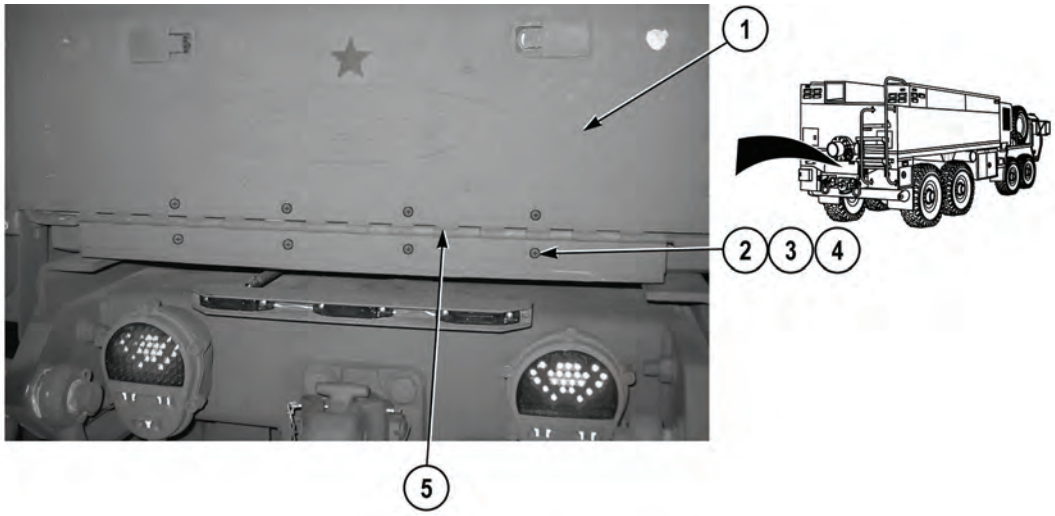
1. Install seal (9) on SCBA tank compartment door (1).
2. Install twist lock (14) on SCBA tank compartment door (1) with retainer (13), lockwasher (12), and screw (11).
3. Install two inserts (10) on hinge (4).
4. Install two seals (9) on hinge (4).



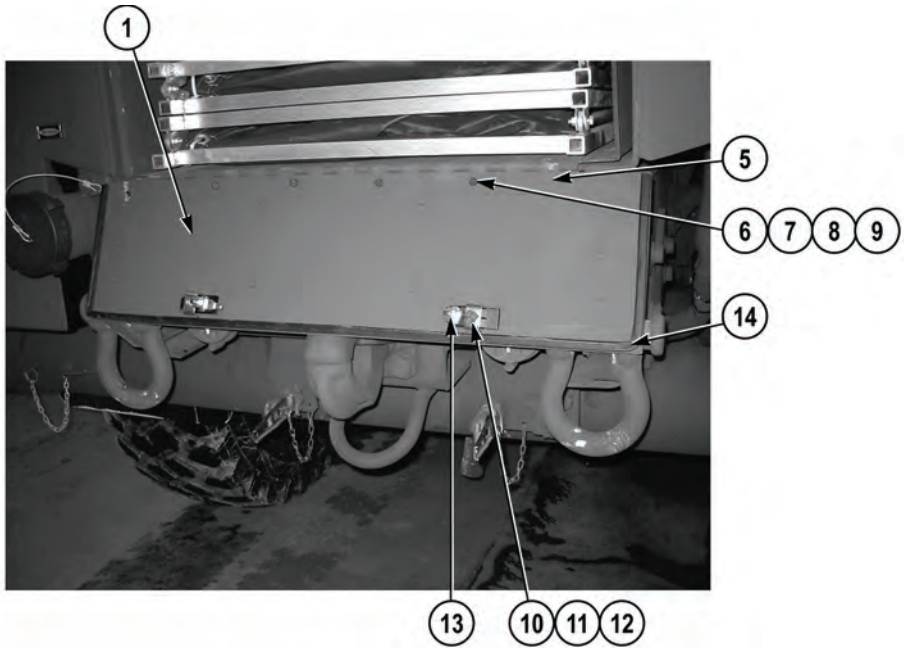
5. Install hinge (4) on SCBA tank compartment door (1) with rubber bumper (8), three screws (7), washers (6), and locknuts (5).
6. Install SCBA tank compartment door (1) and hinge (4) on vehicle with two inserts (3) and screws (2).
7. Close SCBA tank compartment door (1) (WP 0008).

END OF TASK

PORTABLE WATER TANK COMPARTMENT DOOR REMOVAL



1. Open portable water tank compartment door (1) (WP 0008).
2. Remove four locknuts (2), washers (3), screws (4), hinge (5), and portable water tank compartment door (1) from vehicle. Discard locknuts.

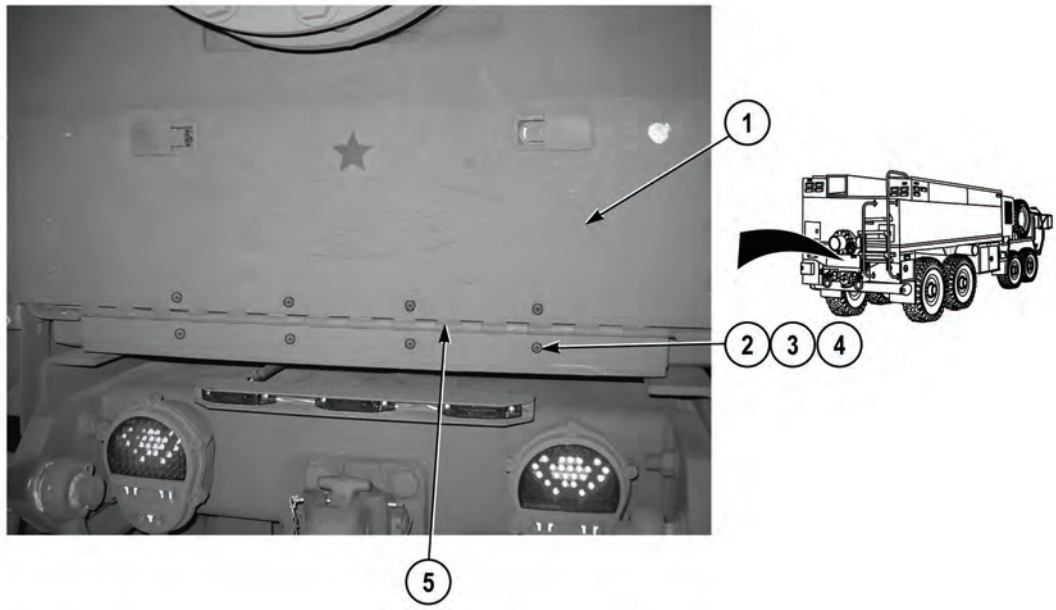


3. Remove four nuts (6), lockwashers (7), washers (8), screws (9), and hinge (5) from portable water tank compartment door (1). Discard lockwashers.
4. Remove two screws (10), lockwashers (11), retainers (12), and twist locks (13) from portable water tank compartment door (1). Discard lockwashers.
5. Remove seal (14) from portable water tank compartment door (1).

END OF TASK

PORTABLE WATER TANK COMPARTMENT DOOR INSTALLATION

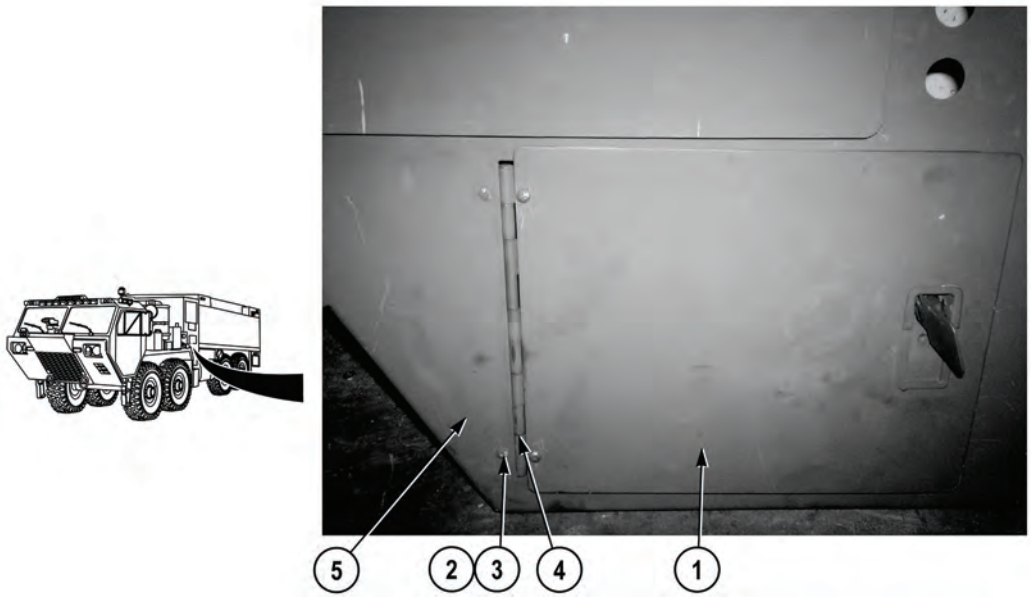
1. Install seal (14) on portable water tank compartment door (1).
2. Install two twist locks (13) on portable water tank compartment door (1) with two retainers (12), lockwashers (11), and screws (10).
3. Install hinge (5) on portable water tank compartment door (1) with four screws (9), washers (8), lockwashers (7), and nuts (6).



4. Install portable water tank compartment door (1) and hinge (5) on vehicle with four screws (4), washers (3), and locknuts (2).
5. Close portable water tank compartment door (1) (WP 0008).

END OF TASK

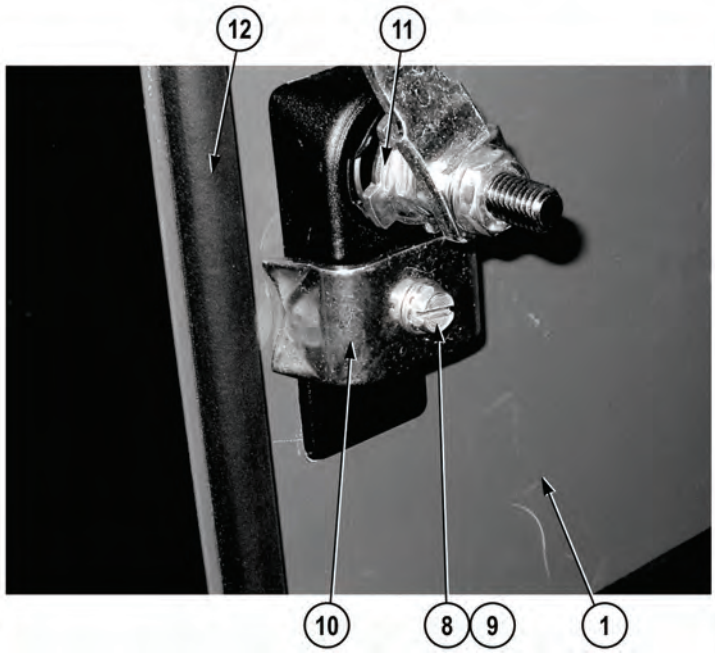
PUMP HOUSE PANEL A ACCESS DOOR REMOVAL



1. Open pump house panel A access door (1) (WP 0008).
2. Remove two locknuts (2), screws (3), hinge (4), and pump house panel A access door (1) from pump house panel A (5). Discard locknuts.



3. Remove two locknuts (6), screws (7), and hinge (4) from pump house panel A access door (1). Discard locknuts.

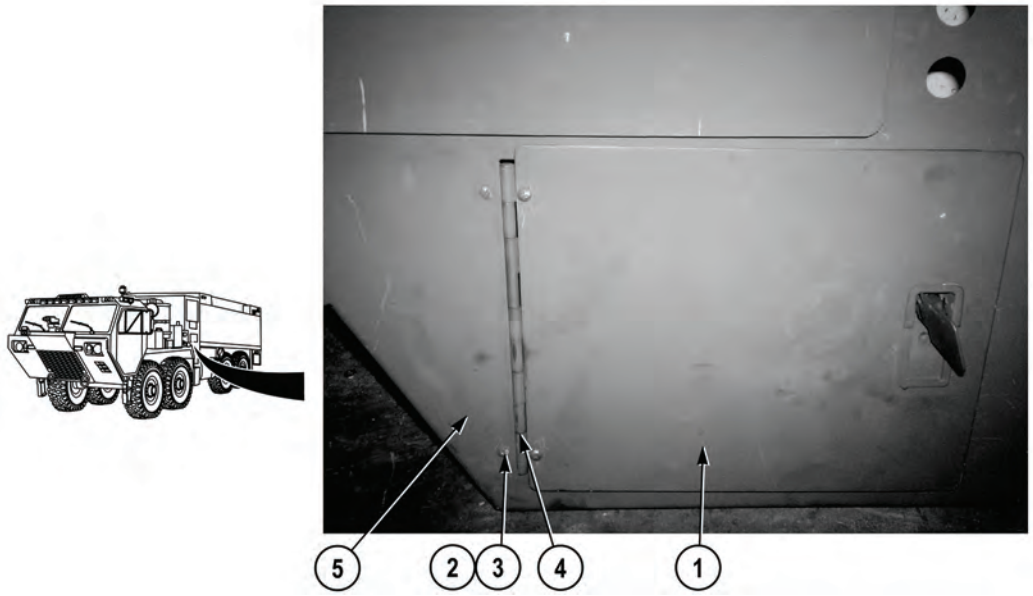


4. Remove screw (8), lockwasher (9), retainer (10), and twist lock (11) from pump house panel A access door (1). Discard lockwasher.
5. Remove seal (12) from pump house panel A access door (1).

END OF TASK

PUMP HOUSE PANEL A ACCESS DOOR INSTALLATION

1. Install seal (12) on pump house panel A access door (1).
2. Install twist lock (11) on pump house panel A access door (1), with retainer (10), lockwasher (9), and screw (8).
3. Install hinge (4) on pump house panel A access door (1) with two screws (7) and locknuts (6).

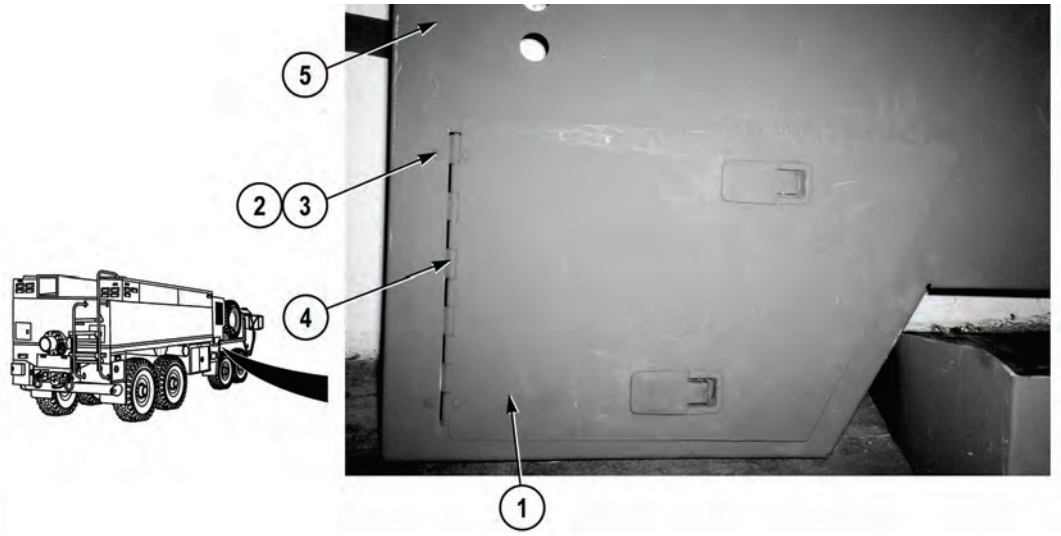


4. Install hinge (4) and pump house panel A access door (1) on pump house panel A (5) with two screws (3) and locknuts (2).

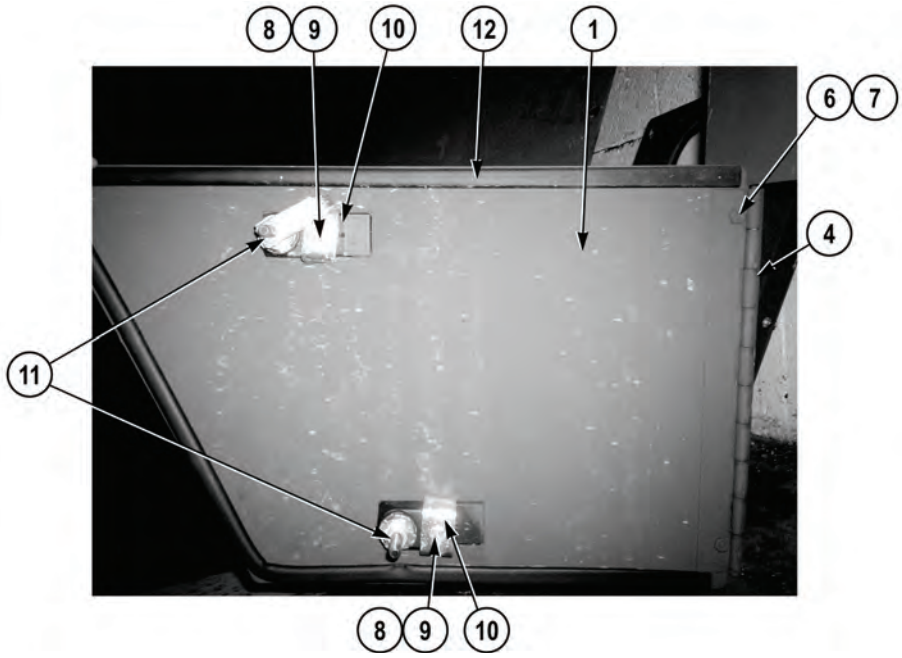
5. Close pump house panel A access door (1) (WP 0008).

END OF TASK

PUMP HOUSE PANEL H ACCESS DOOR REMOVAL



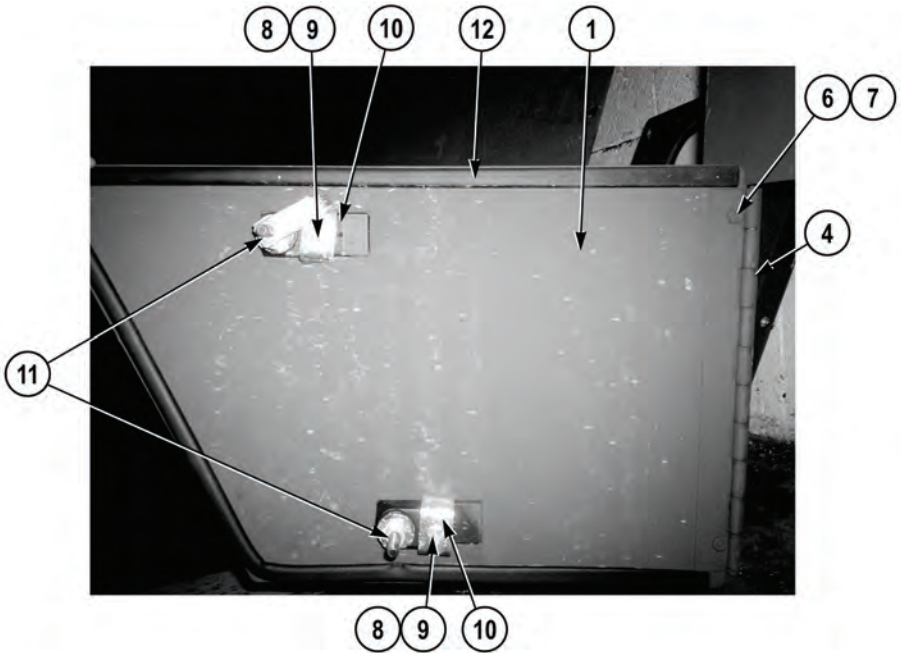
1. Open pump house panel H access door (1) (WP 0008).
2. Remove two locknuts (2), screws (3), and hinge (4) from pump house panel H (5). Discard locknuts.



3. Remove two locknuts (6), screws (7), and hinge (4) from pump house panel H access door (1). Discard locknuts.
4. Remove two screws (8), lockwashers (9), retainers (10), and twist locks (11) from pump house panel H access door (1). Discard lockwashers.
5. Remove seal (12) from pump house panel H access door (1).

END OF TASK

PUMP HOUSE PANEL H ACCESS DOOR INSTALLATION



1. Install seal (12) on pump house panel H access door (1).
2. Install two twist locks (11) on pump house panel H access door (1), with retainers (10), lockwashers (9), and screws (8).
3. Install hinge (4) on pump house panel H access door (1) with two screws (7) and locknuts (6).
4. Install hinge (4) and pump house panel H access door (1) on pump house panel H (5) with two screws (3) and locknuts (2).
5. Close pump house panel H access door (1) (WP 0009).

END OF TASK

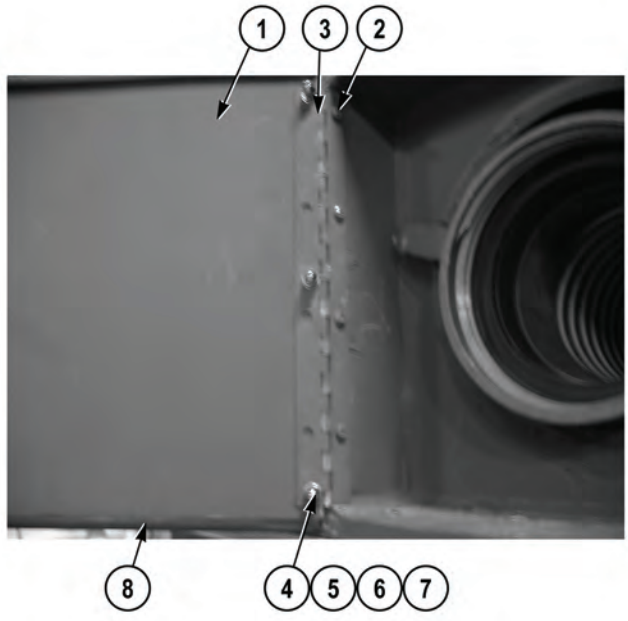
HARD SUCTION HOSE COMPARTMENT DOOR REMOVAL



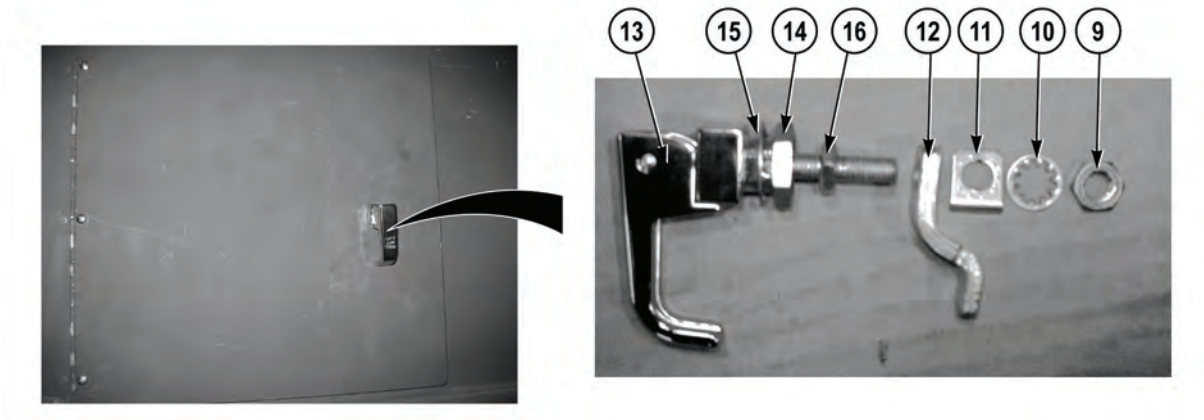
NOTE

Both hard suction hose compartment doors are removed the same way. Driver side shown.

1. Open driver side hard suction hose compartment door (1).



2. Remove four screws (2), hinge (3), and driver side hard suction hose compartment door (1) from vehicle.
3. Remove three nuts (4), lockwashers (5), six washers (6), three screws (7), and hinge (3) from driver side hard suction hose compartment door (1). Discard lockwashers.
4. Remove seal (8) from driver side hard suction hose compartment door (1).



NOTE

Perform Steps (5) through (7) if door latch need to be removed.

5. Remove nut (9), lockwasher (10), keeper (11), and latch bar (12) from door latch (13). Discard lockwasher.
6. Remove nut (14), lockwasher (15), and door latch (13) from driver side hard suction hose compartment door (1). Discard lockwasher.

NOTE

Note position of nut prior to removal to ensure proper installation.

7. Remove nut (16) from door latch (13).

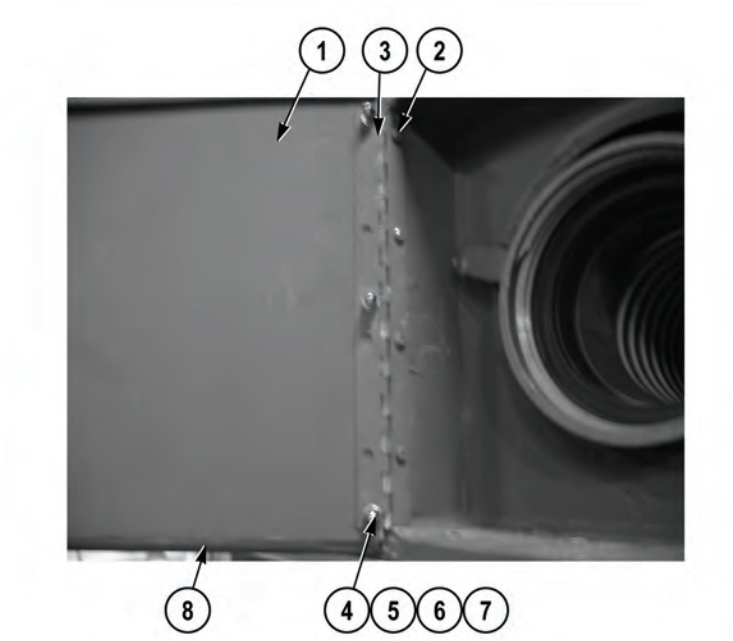
END OF TASK

HARD SUCTION HOSE COMPARTMENT DOOR INSTALLATION

NOTE

- Both hard suction hose compartment doors are installed the same way. Driver side shown.
- Perform Steps (1) through (3) if door latch was removed.
- Install nut as noted in removal.

1. Install nut (16) on door latch (13).
2. Install latch (13) on driver side hard suction hose compartment door (1) with lockwasher (15) and nut (14).
3. Install latch bar (12) on door latch (13) with keeper (11), lockwasher (10), and nut (9).



WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

4. Clean seal (8) residue from driver side hard suction hose compartment door (1) with mineral spirits.
5. Install seal (8) on driver side hard suction hose compartment door (1).
6. Install hinge (3) on driver side hard suction hose compartment door (1) with three screws (7), six washers (6), three lockwashers (5), and nuts (4).
7. Install hinge (3) and driver side hard suction hose compartment door (1) on vehicle with four screws (2).



8. Close driver side hard suction hose compartment door (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

SPREADER BAR BRACKET REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

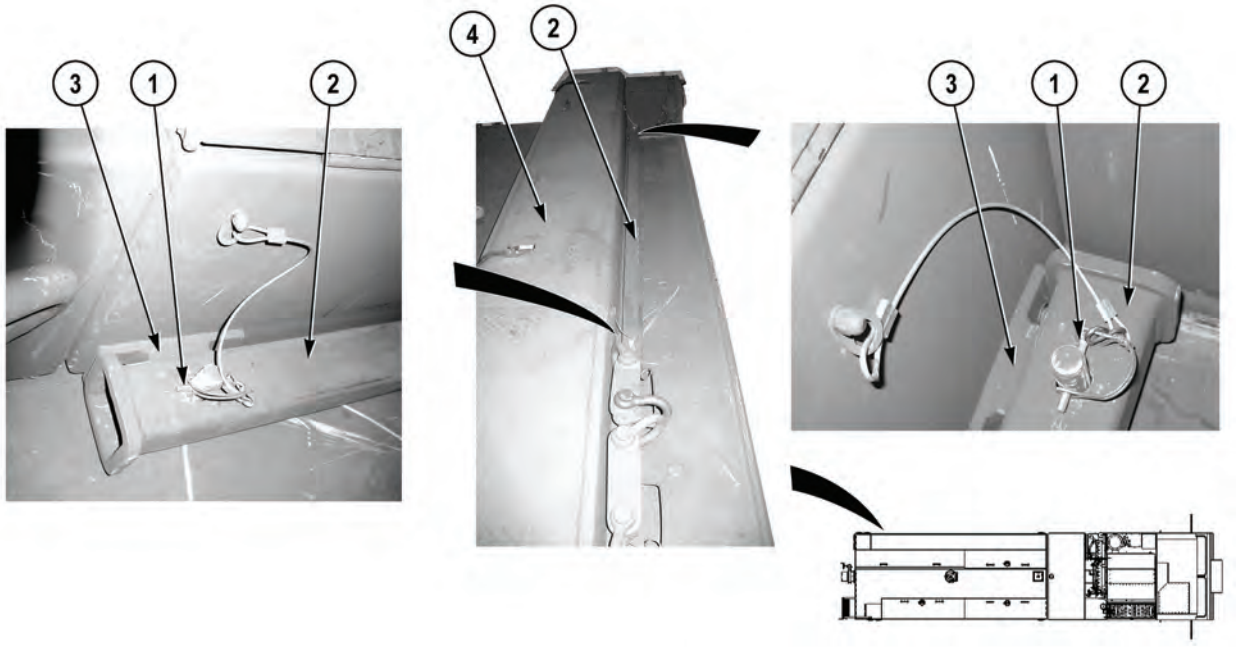
Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

References
WP 0008
WP 0392, Fig. 88

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)

Lockwasher (2)
Locknut (4)
Locknut (4)
Locknut (3)
Cotter Pin (4)

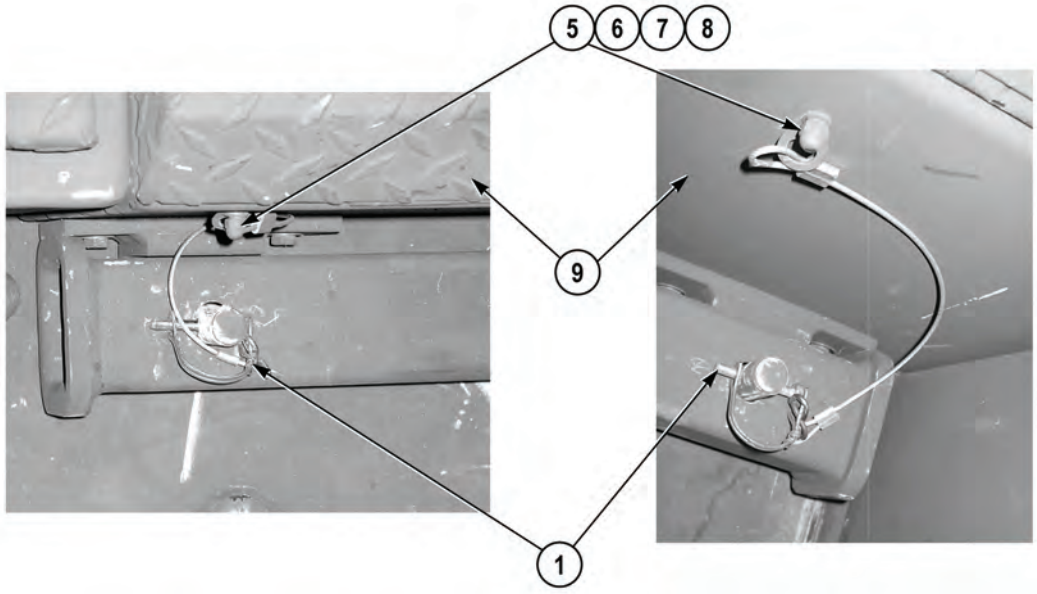
REMOVAL



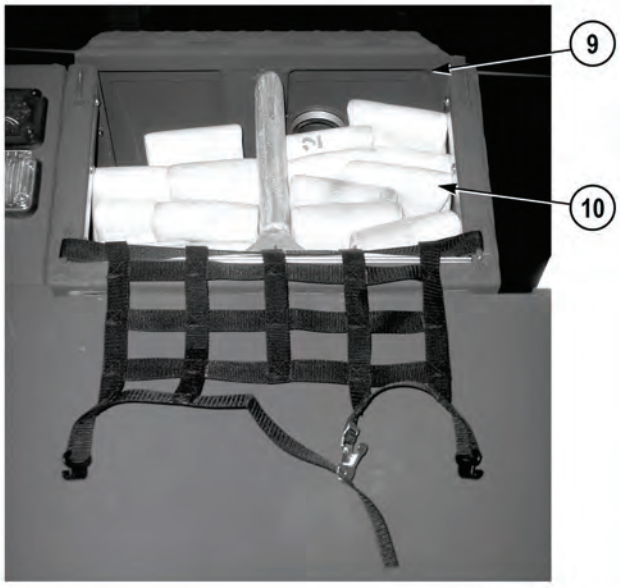
NOTE

Spreader bar must be lifted evenly to avoid binding on the brackets.

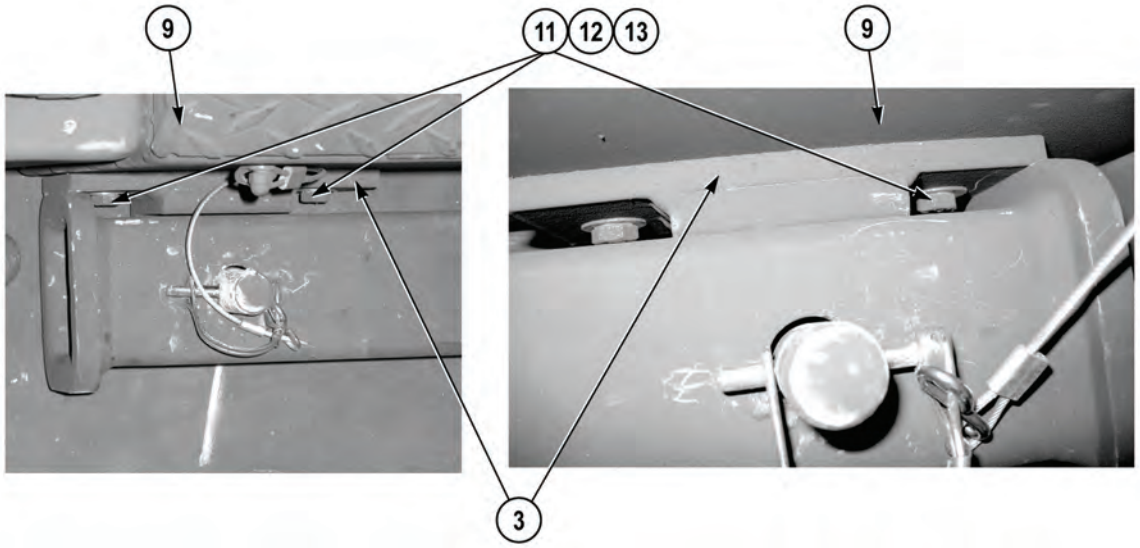
1. With the aid of an assistant, remove two latch pins (1) and spreader bar (2) from two brackets (3).
2. Open hose bed assembly door (4) (WP 0008).



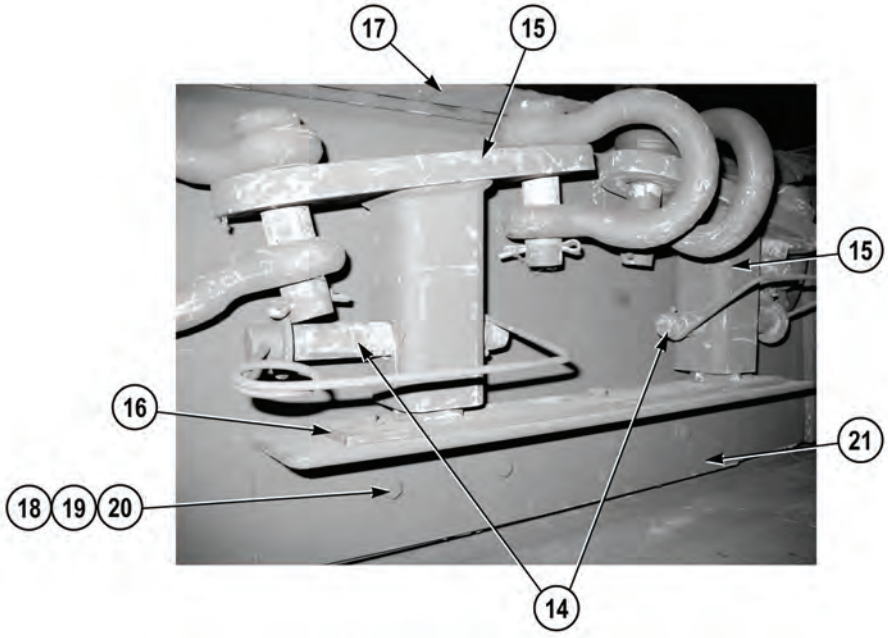
3. Remove two nuts (5), lockwashers (6), washers (7), clips (8), and latch pins (1) from hose bed assembly (9). Discard lockwashers.



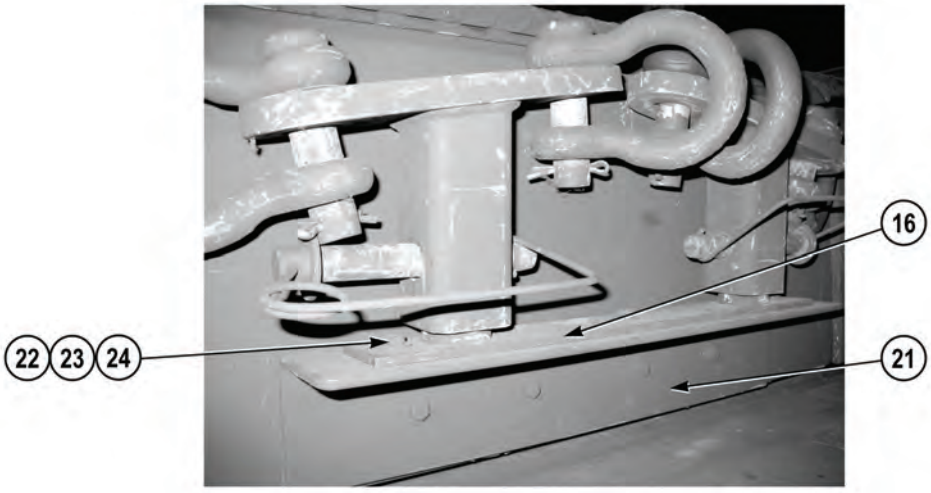
4. Remove hoses (10) from hose bed assembly (9).



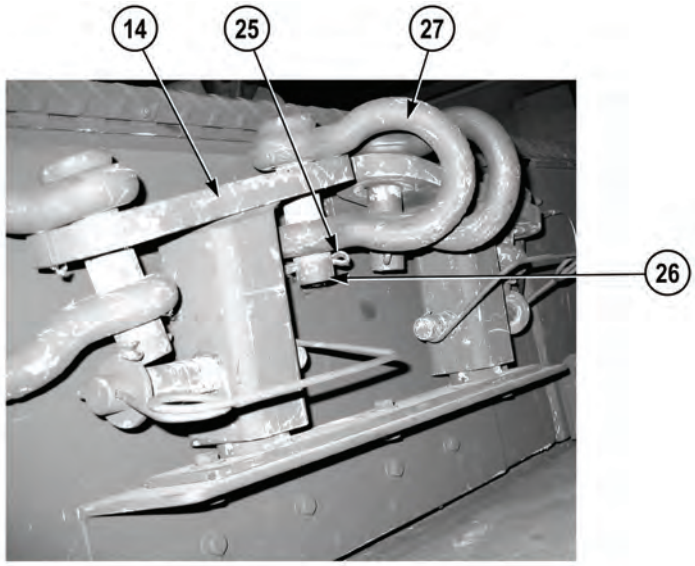
5. Remove four locknuts (11), eight washers (12), four screws (13), and two brackets (3) from hose bed assembly (9). Discard locknuts.



6. Remove two safety pins (14) and spreader bar end links (15) from bracket (16).
7. Open driver side upper stowage compartment (17) (WP 0008).
8. Remove four locknuts (18), eight washers (19), four screws (20), and bracket (21) from upper driver side stowage compartment (17). Discard locknuts.



9. Remove three locknuts (22), washers (23), screws (24), and bracket (16) from bracket (21). Discard locknuts.

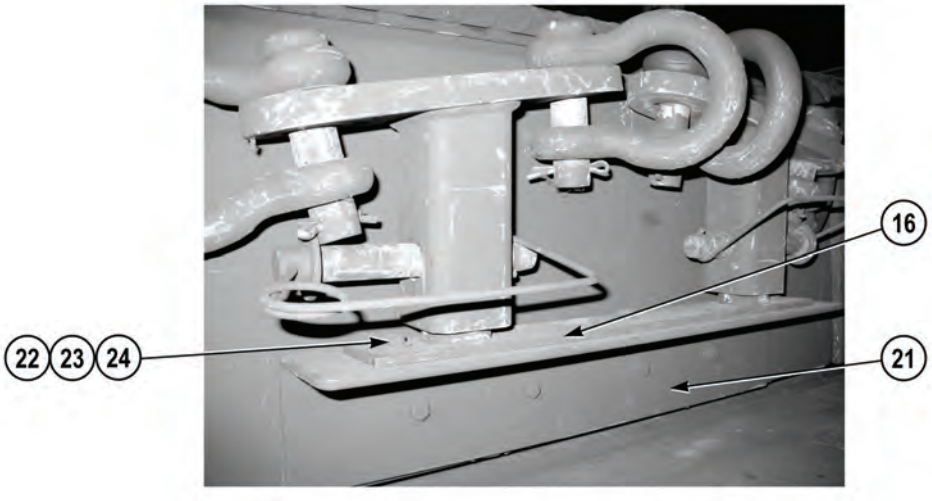


10. Remove four cotter pins (25) from shackle pins (26). Discard cotter pins.
11. Remove four shackle pins (26) and shackles (27) from two spreader bar end links (14).

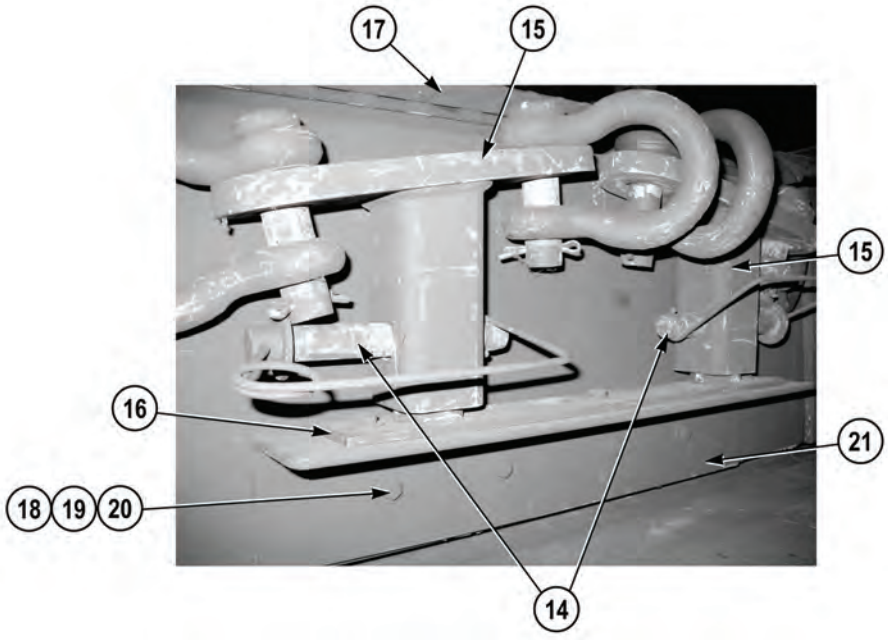
END OF TASK

INSTALLATION

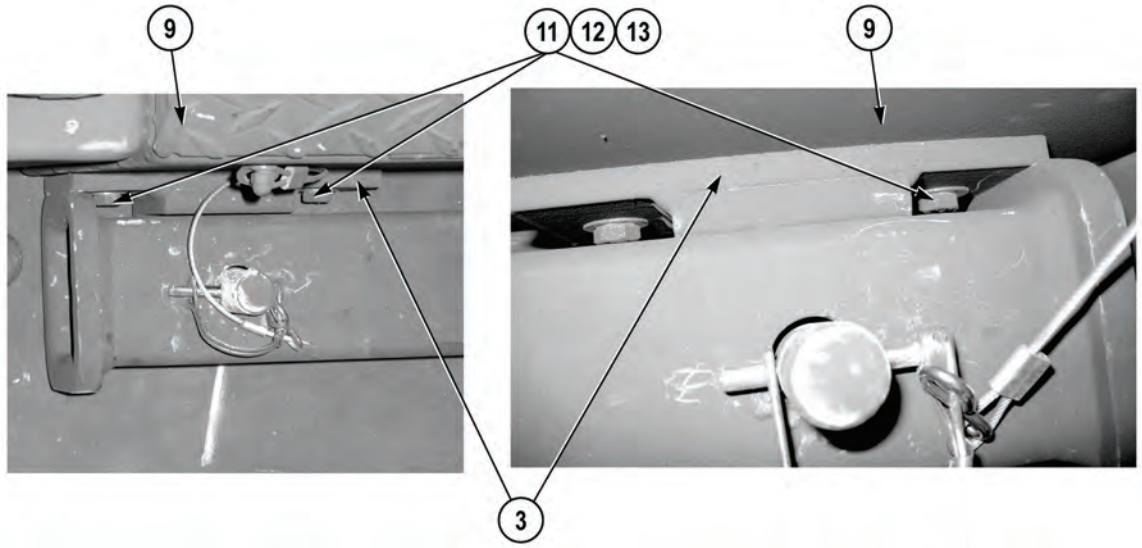
1. Install four shackles (27) on two spreader bar end links (14) with four shackle pins (26).
2. Install four cotter pins (25) in shackle pins (26).



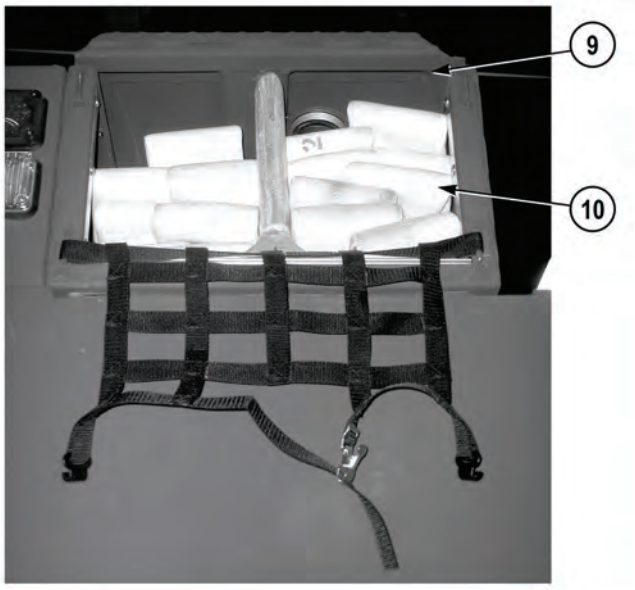
3. Install bracket (16) on bracket (21) with three screws (24), washers (23), and locknuts (22).



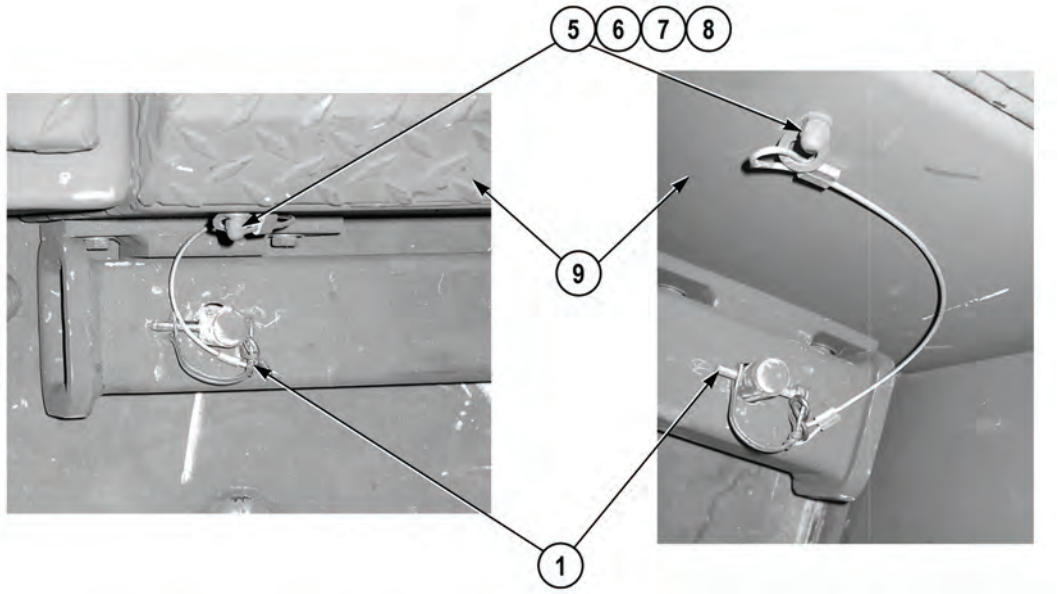
4. Install bracket (21) on upper driver side stowage compartment (17) with four screws (20), eight washers (19), and four locknuts (18).
5. Close driver side upper stowage compartment (17) (WP 0008).
6. Install two spreader bar end links (15) on bracket (16) with two safety pins (14).



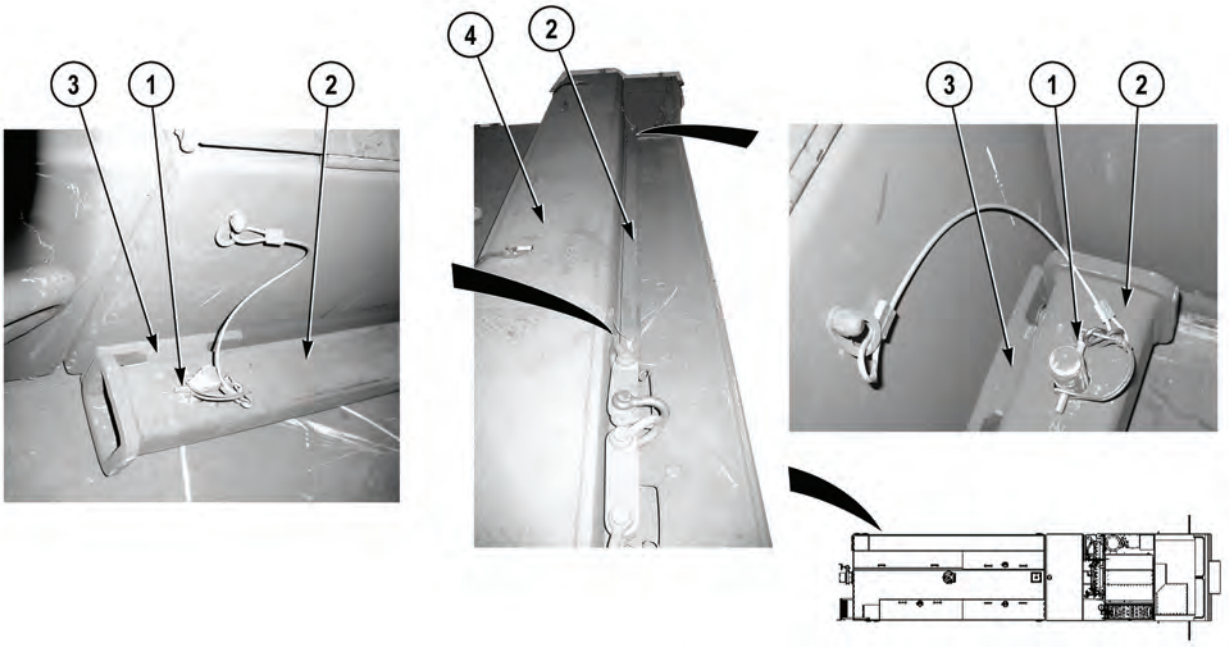
7. Install two brackets (3) on hose bed assembly (9) with four screws (13), eight washers (12) and four locknuts (11).



8. Install hoses (10) in hose bed assembly (9).



9. Install two latch pins (1) on hose bed assembly (9) with two clips (8), washers (7), lockwashers (6), and nuts (5).



10. Close hose bed assembly door (4) (WP 0008).

NOTE

Spreader bar must be installed evenly to avoid binding on the brackets.

11. With the aid of an assistant, install spreader (2) on two brackets (3) with latch pins (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

STOWAGE COMPARTMENT DOOR(S) AND STAY ARM REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

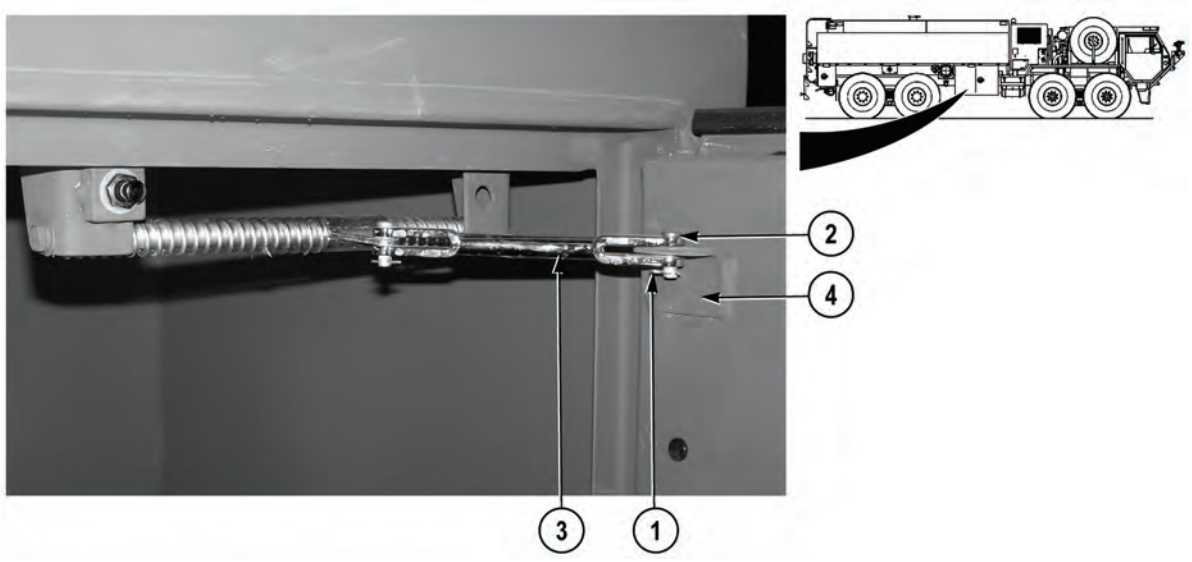
Materials/Parts
Lockwasher (2)

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

References
WP 0354
WP 0392, Fig. 84, 85

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)

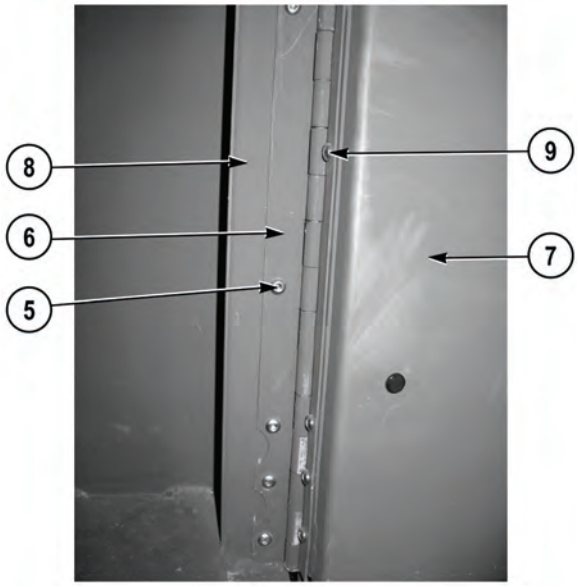
STOWAGE COMPARTMENT DOOR REMOVAL



NOTE

- All stowage compartment doors are removed the same way. Passenger side front shown.
- Number of fasteners may vary.

1. Remove quick release pin (1) from pin (2).
2. Remove pin (2) and stay arm connecting rod (3) from stay arm door bracket (4).



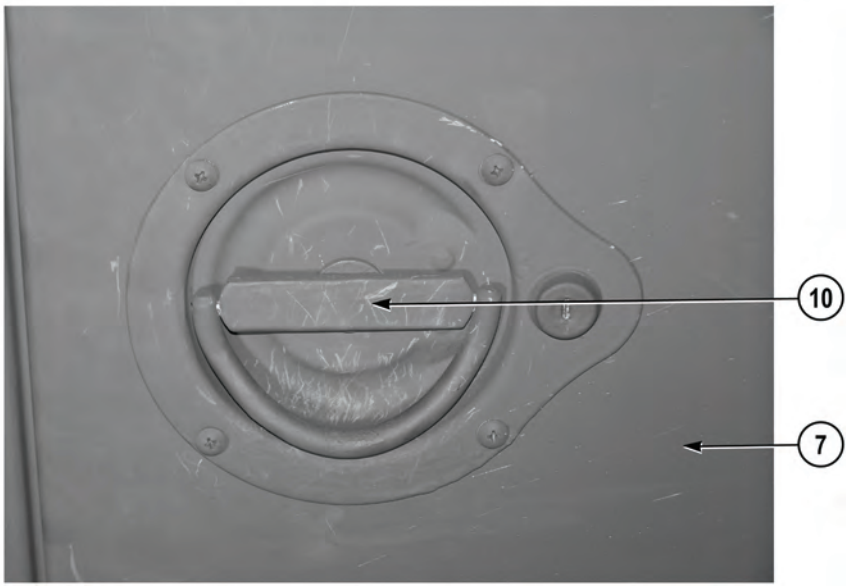
WARNING



Stowage compartment doors are heavy. Do not attempt to lift or move stowage compartment doors without the aid of an assistant. Failure to comply may result in serious injury to personnel or damage to equipment.

3. With the aid of an assistant, remove eight screws (5), door hinge (6), and door (7) from stowage compartment (8).

4. Remove eight screws (9) and door hinge (6) from door (7).



5. Remove door lock (10) from door (7) (WP 0354).

END OF TASK

STOWAGE COMPARTMENT DOOR INSTALLATION

NOTE

- All stowage compartment doors are installed the same way. Passenger side shown.
- Number of fasteners may vary.

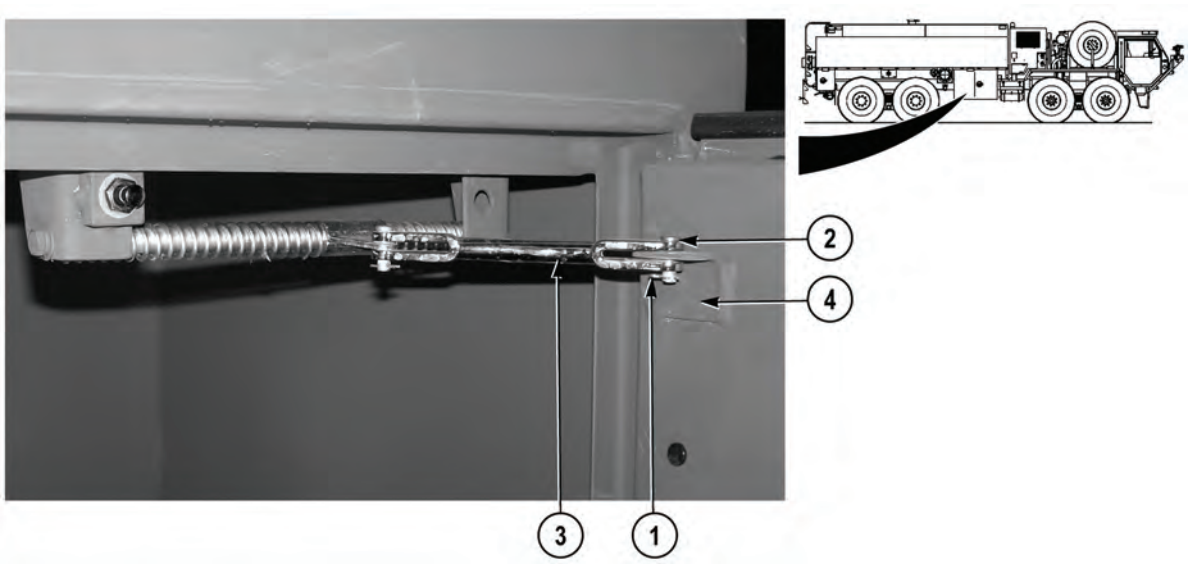
1. Install door lock (10) on door (7) (WP 0354).
2. Install door hinge (6) on door (7) with eight screws (9).

WARNING



Stowage compartment doors are heavy. Do not attempt to lift or move stowage compartment doors without the aid of an assistant. Failure to comply may result in serious injury to personnel or damage to equipment.

3. With the aid of an assistant, install door (7) and door hinge (6) on stowage compartment (8) with eight screws (5).



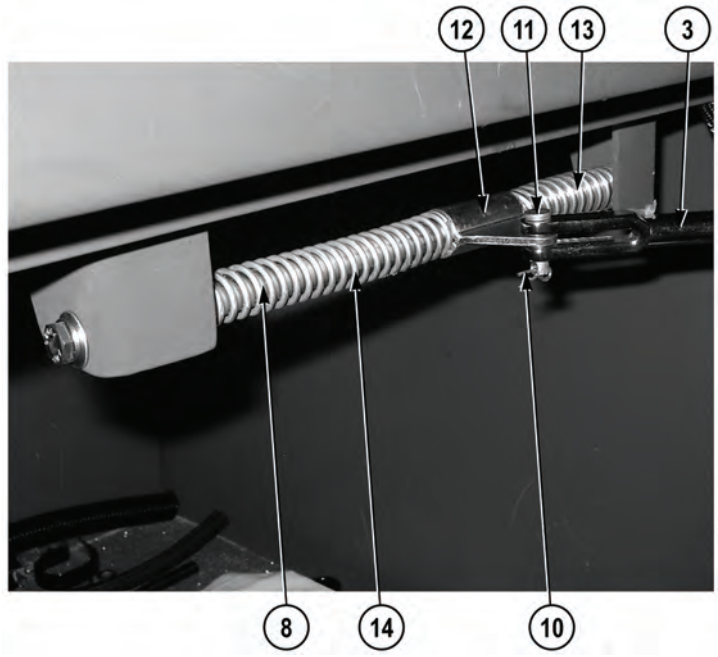
4. Install stay arm connecting rod (3) on stay arm door bracket (4) with pin (2).
5. Install quick release pin (1) in pin (2).

END OF TASK

STAY ARM REMOVAL



1. Remove quick release pin (1) from pin (2).
2. Remove pin (2) and stay arm connecting rod (3) from stay arm door bracket (4).
3. Remove two screws (5), lockwashers (6), washers (7), and stay arm (8) from two stay arm brackets (9). Discard lockwashers.



4. Remove quick release pin (10) from pin (11).
5. Remove pin (11) and stay arm connecting rod (3) from door slide (12).

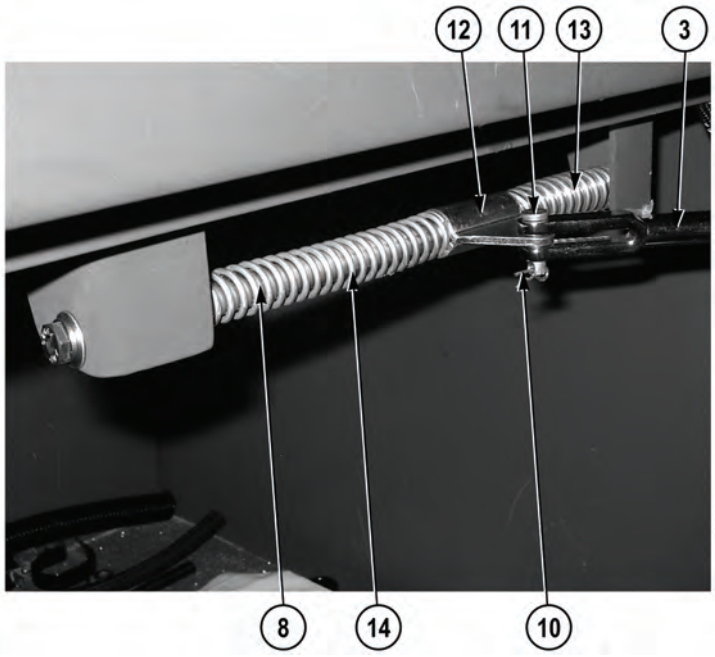
NOTE

Note position of springs prior to removal to ensure proper installation.

6. Remove two springs (13) and (14) from stay arm (8).
7. Remove door slide (12) from stay arm (8).

END OF TASK

STAY ARM INSTALLATION



1. Install door slide (12) on stay arm (8).

NOTE

Install springs as previously noted.

2. Install two springs (14) and (13) on stay arm (8).
3. Install pin (11) and stay arm connecting rod (3) on door slide (12).
4. Install quick release pin (10) in pin (11).



5. Install stay arm (8) on two stay arm brackets (9) with two washers (7), lockwashers (6) and screws (5).
6. Install stay arm connecting rod (3) on stay arm door bracket (4) with pin (2).
7. Install quick release pin (1) in pin (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

STOWAGE COMPARTMENT DOOR(S) LATCH REPLACEMENT

INITIAL SETUP:

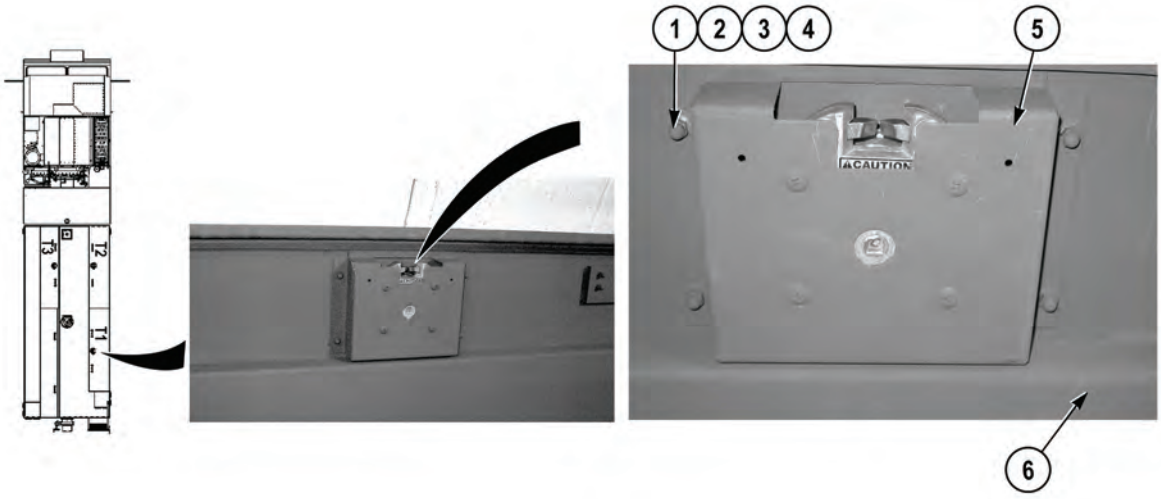
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Lockwasher (4)
Lockwasher (4)
Lockwasher (2)
Locknut (4)
Locknut (4)
Cotter Pin (1)
Lockwasher (2)

References
WP 0129
WP 0392, Fig. 86

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)
Stowage compartment door opened (WP 0008)

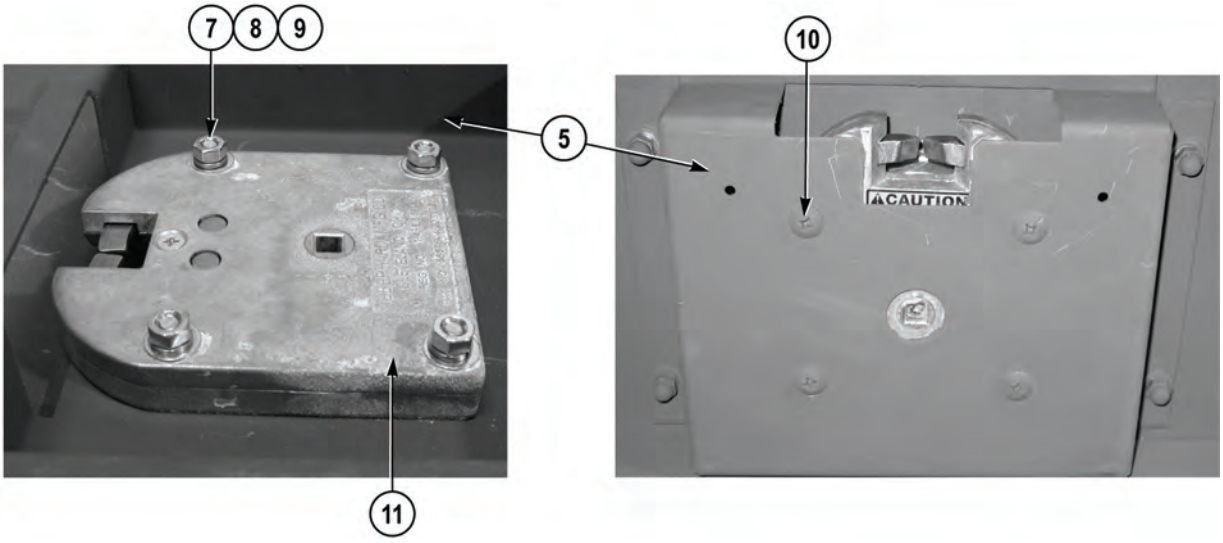
TOP STOWAGE COMPARTMENT DOOR LATCH REMOVAL



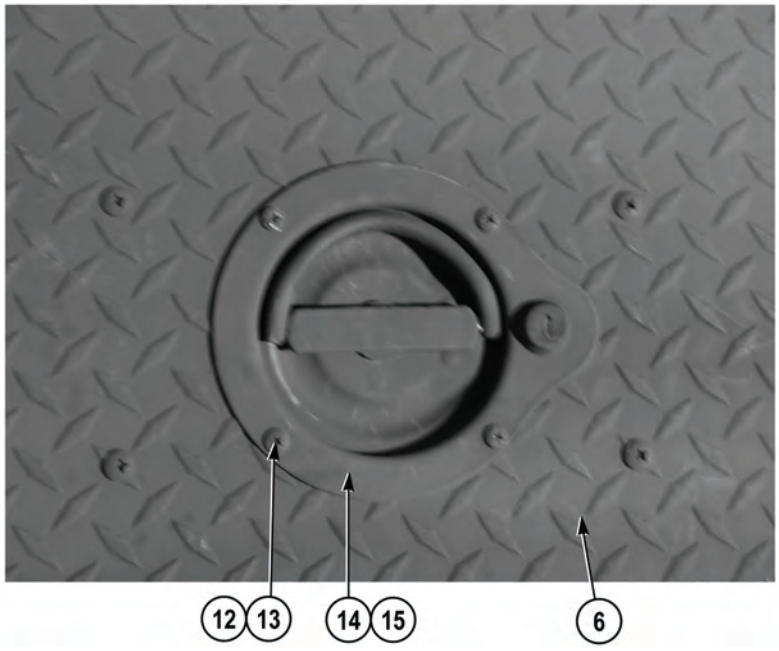
NOTE

All top stowage compartment door latches are removed the same way. Top passenger rear stowage compartment shown.

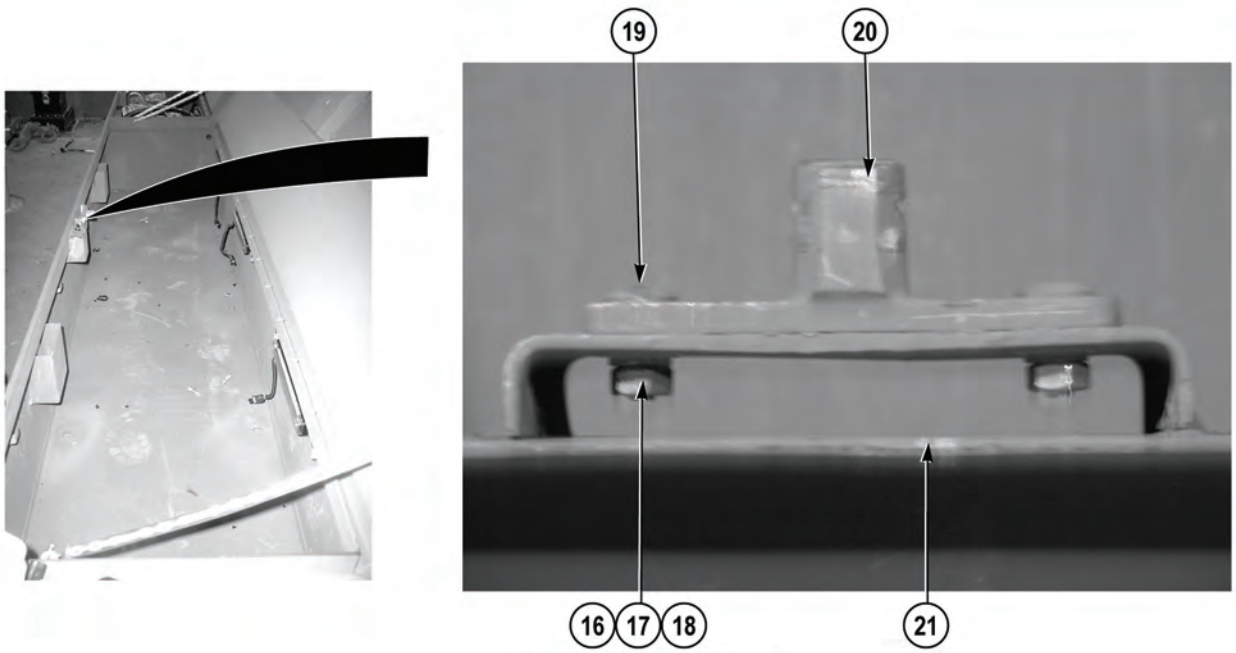
1. Remove four nuts (1), lockwashers (2), washers (3), screws (4), and door latch cover (5) from stowage compartment door (6). Discard lockwashers.



2. Remove four nuts (7), lockwashers (8), washers (9), screws (10), and door latch (11) from door latch cover (5). Discard lockwashers.



3. Remove four screws (12), washers (13), handle (14), and gasket (15) from door (6).



4. Remove two nuts (16), lockwashers (17), washers (18), screws (19), and door latch striker (20) from compartment (21). Discard lockwashers.

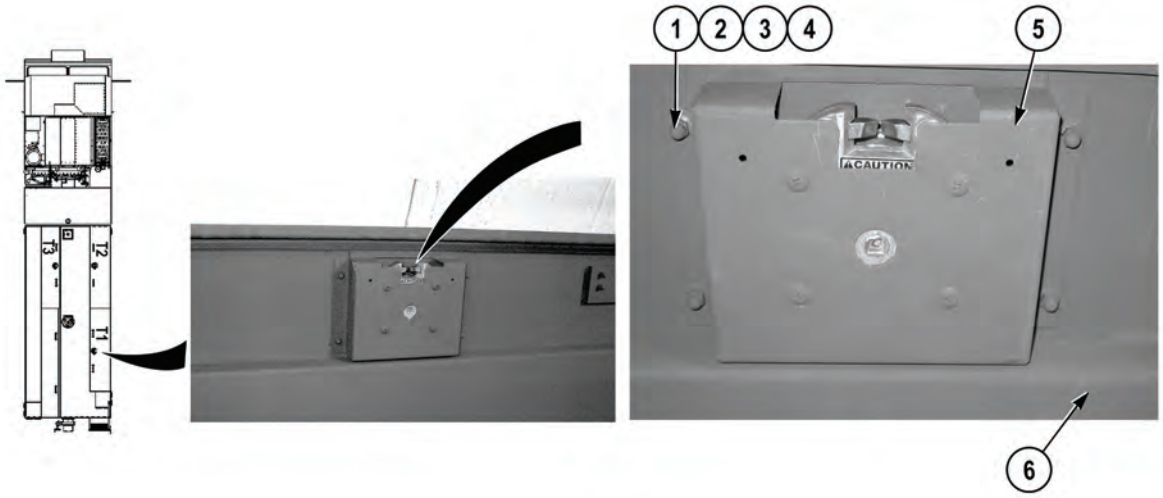
END OF TASK

TOP STOWAGE COMPARTMENT DOOR LOCK INSTALLATION

NOTE

All top stowage compartment door latches are installed the same way. Top passenger rear stowage compartment shown.

1. Install door latch striker (20) on compartment (21) with two screws (19), washers (18), lockwashers (17), and nuts (16).
2. Install gasket (15) and handle (14) on door (6) with four washers (13) and screws (12).
3. Install door latch (11) on door latch cover (5) with four screws (10), washers (9), lockwashers (8), and nuts (7).



4. Install door latch cover (5) on stowage compartment door (6) with four screws (4), washers (3), lockwashers (2), and nuts (1).

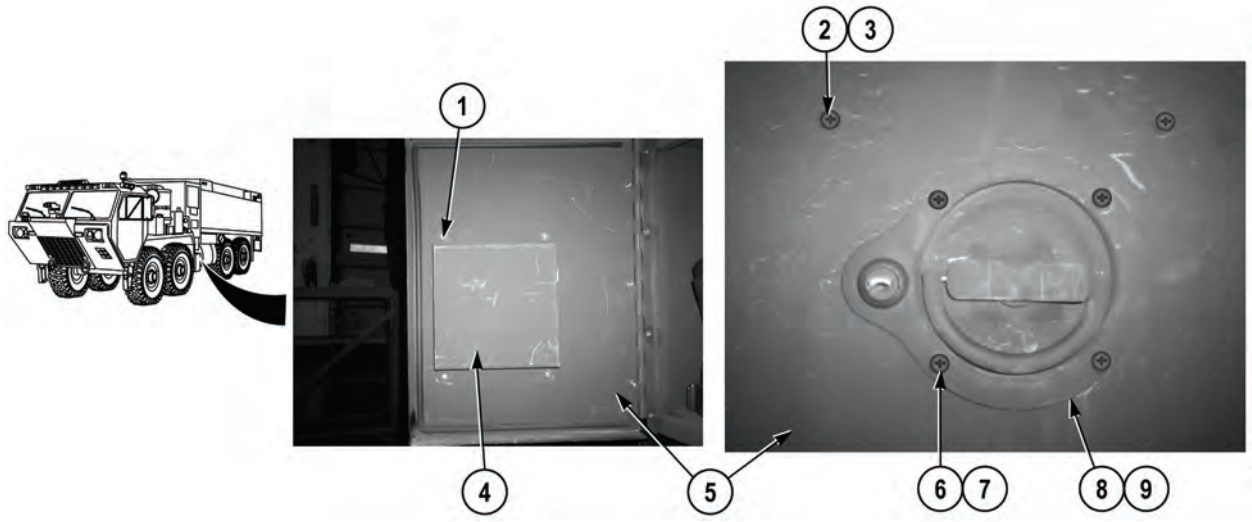
NOTE

Perform Step (5) if door latch striker requires adjustment.

5. Perform Stowage Compartment Door Latch Striker Adjustment (WP 0129).

END OF TASK

DRIVER SIDE FRONT LOWER STOWAGE COMPARTMENT DOOR LATCH REMOVAL



1. Remove four locknuts (1), washers (2), screws (3), and handle guard (4) from door (5). Discard locknuts.
2. Remove four screws (6), washers (7), door latch (8), and gasket (9) from door (5).

END OF TASK

DRIVER SIDE FRONT LOWER STOWAGE COMPARTMENT DOOR LATCH INSTALLATION

1. Install gasket (9) and door latch (8) on door (5) with four washers (7) and screws (6).
2. Install handle guard (4) on door (5) with four screws (3), washers (2), and locknuts (1).

END OF TASK

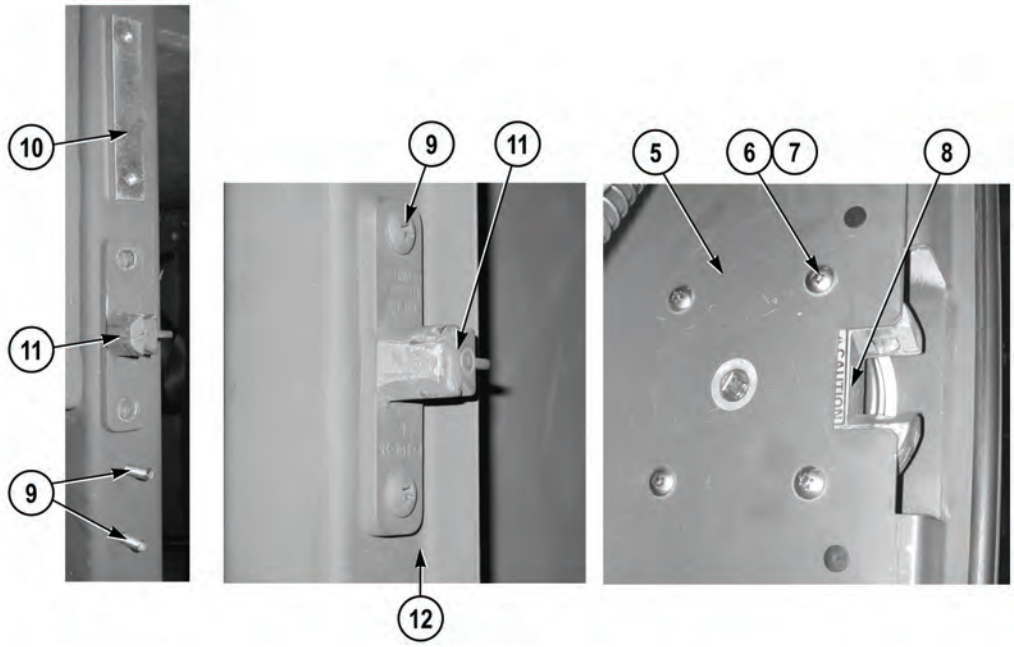
LOWER STOWAGE COMPARTMENT DOOR LATCH REMOVAL



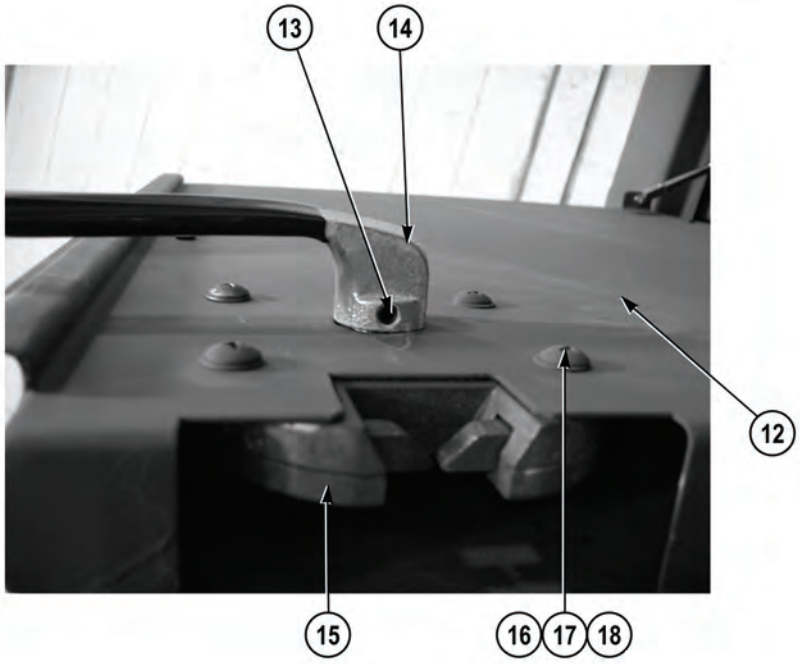
NOTE

Both lower passenger side and lower rear driver side stowage compartment door latches are removed the same way. Passenger side lower front stowage compartment is shown.

1. Remove four screws (1), washers (2), handle (3), and gasket (4) from door (5).



2. Remove four screws (6), washers (7), and door latch (8) from door (5).
3. Remove two screws (9), plate (10), and door latch striker (11) from door (12).

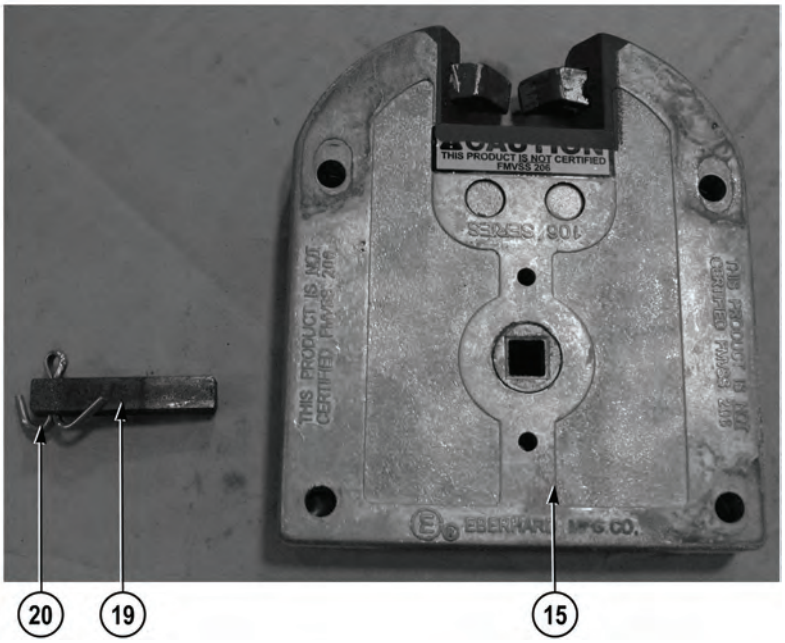


NOTE

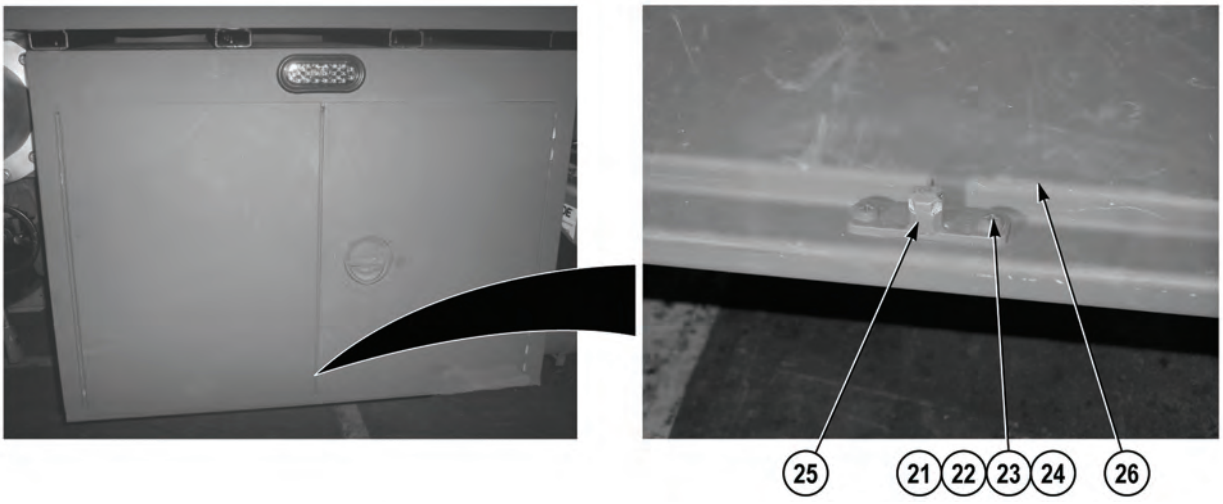
Perform Steps (4) through (8) only if removing second door latch on passenger side front lower stowage compartment.

4. Remove setscrew (13) and handle (14) from door latch (15).

5. Remove four locknuts (16), washers (17), screws (18), and door latch (15) from door (12). Discard locknuts.



6. Remove handle shaft (19) from door latch (15).
7. Remove and discard cotter pin (20) from handle shaft (19).



8. Remove two nuts (21), lockwashers (22), washers (23), screws (24), and door latch striker (25) from compartment (26). Discard lockwashers.

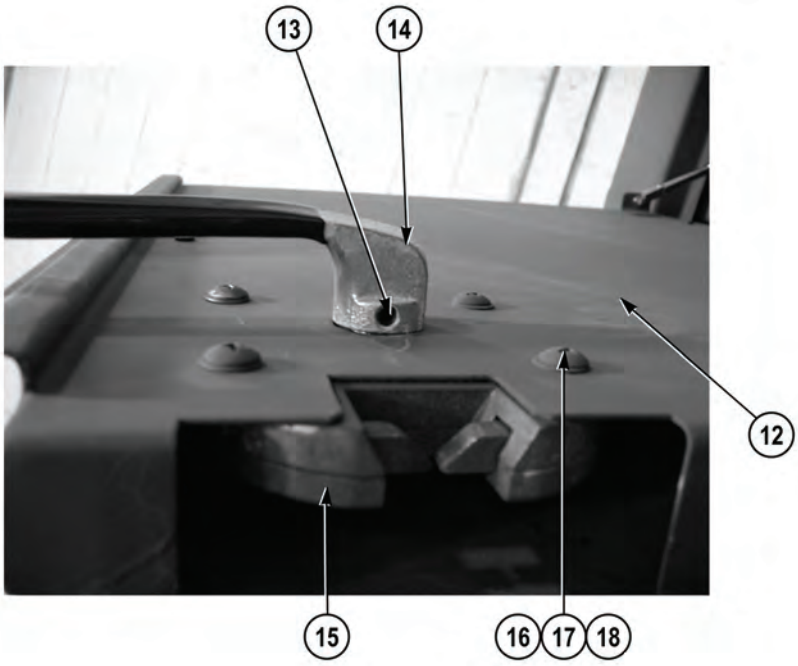
END OF TASK

LOWER STOWAGE COMPARTMENT DOOR LATCH INSTALLATION

NOTE

- Both lower passenger side and lower rear driver side stowage compartment door latches are removed the same way. Passenger side lower front stowage compartment is shown.
- Perform Steps (1) through (6) only if installing second door latch on passenger side front lower stowage compartment.

1. Install door latch striker (25) on compartment (26) with two screws (24), washers (23), lockwashers (22), and nuts (21).
2. Install cotter pin (20) on handle shaft (19).
3. Install handle shaft (19) in door latch (15).

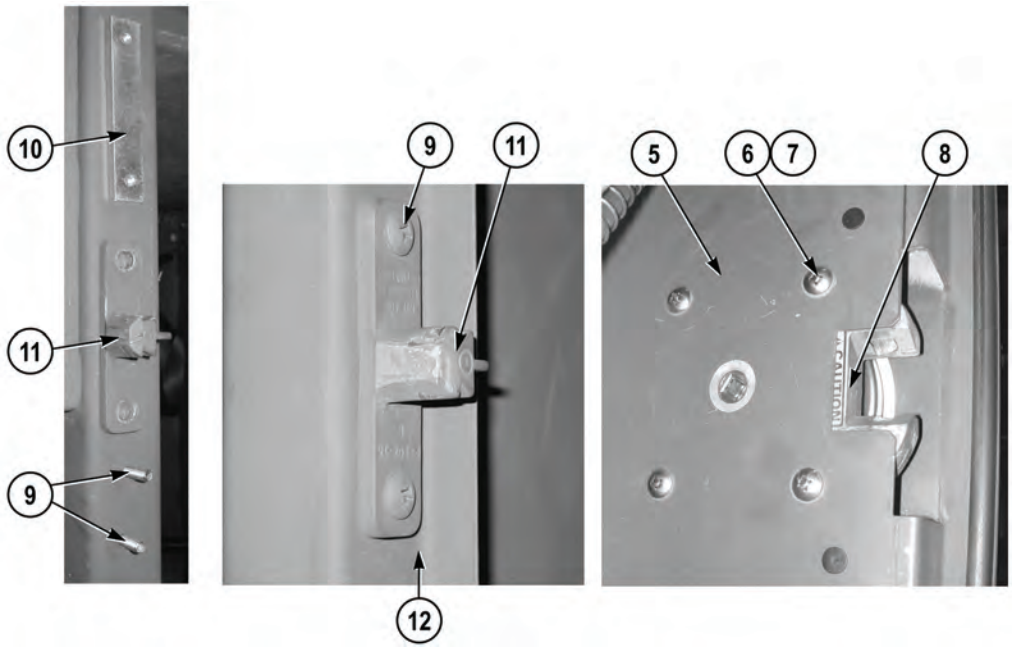


4. Install door latch (15) on door (12) with four screws (18), washers (17), and locknuts (16).
5. Install handle (14) on door latch (15) with setscrew (13).

NOTE

Perform Step (6) if door latch striker requires adjustment.

6. Perform Stowage Compartment Door Latch Striker Adjustment (WP 0129).



7. Install door latch striker (11) and plate (10) on door (12) with two screws (9).
8. Install door latch (8) on door (5) with four washers (7) and screws (6).



9. Install gasket (4) and handle (3) on door (5) with four washers (2) and screws (1).

NOTE

Perform Step (10) if door latch striker requires adjustment.

10. Perform Stowage Compartment Door Latch Striker Adjustment (WP 0129).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Close stowage compartment doors (WP 0008)
2. Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

STOWAGE COMPARTMENT (BOTTOM FRONT PASSENGER SIDE) REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

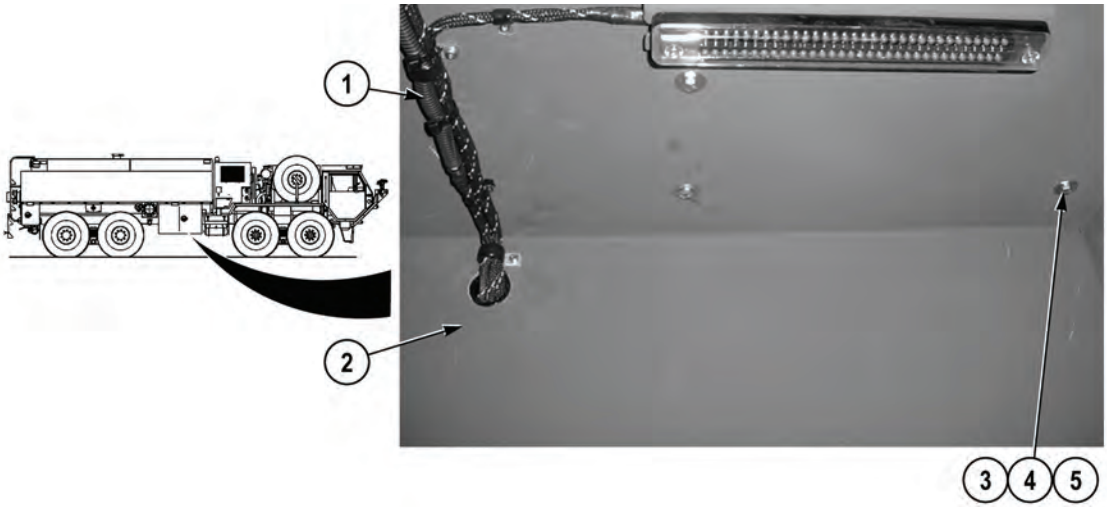
Materials/Parts
Lockwasher (16)
Lockwasher (4)

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

References
WP 0299
WP 0392, Fig. 85

Equipment Conditions
Stowage compartment doors and stay arms removed (WP 0353)
Clearance light removed (WP 0221)
Door switches removed (WP 0245)
Striplights removed (WP 0213)

REMOVAL



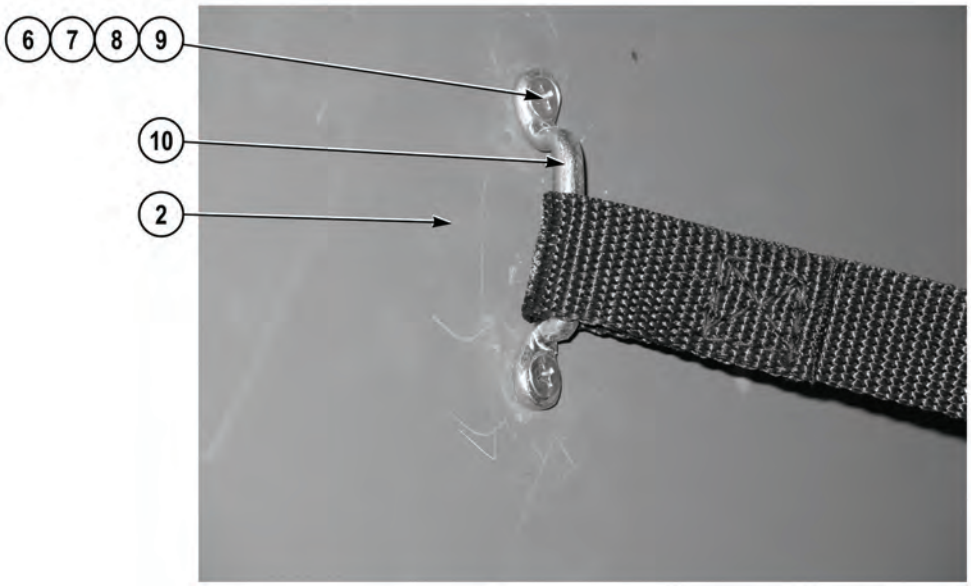
1. Remove passenger side body wire harness (1) from stowage compartment (2) (WP 0299).

WARNING



Stowage compartment weighs approximately 162 lb. (73 kg). Do not attempt to lift or move compartment without the aid of an assistant and suitable lifting device. Failure to comply may result in serious injury to personnel or damage to equipment.

2. With the aid of an assistant and a suitable lifting device, remove 16 screws (3), lockwashers (4), washers (5), and stowage compartment (2) from vehicle. Discard lockwashers.

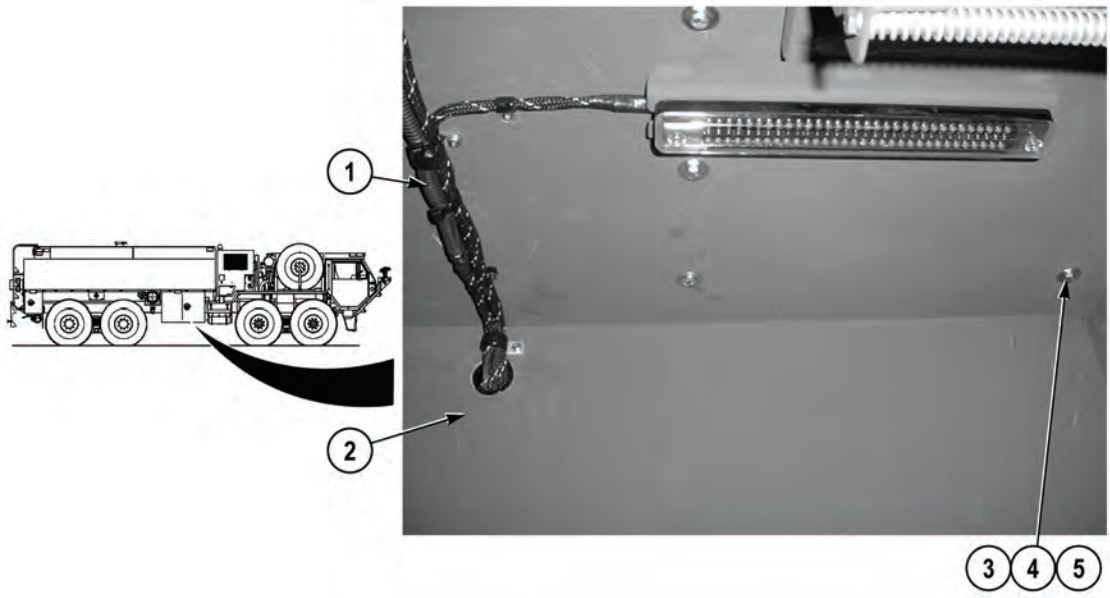


3. Remove four nuts (6), lockwashers (7), washers (8), screws (9), and two brackets (10) from stowage compartment (2). Discard lockwashers.

END OF TASK

INSTALLATION

1. Install two brackets (10) on stowage compartment (2) with four screws (9), washers (8), lockwashers (7), and nuts (6).



WARNING



Stowage compartment weighs approximately 162 lb. (73 kg). Do not attempt to lift or move compartment without the aid of an assistant and suitable lifting device. Failure to comply may result in serious injury to personnel or damage to equipment.

2. With the aid of an assistant and a suitable lifting device, install stowage compartment (2) on vehicle with 16 washers (5), lockwashers (4), and screws (3).
3. Install passenger side body wire harness (1) in stowage compartment (2) (WP 0299).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install striplights (WP 0213)
2. Install door switches (WP 0245)
3. Install clearance light (WP 0221)
4. Install compartment doors and stay arms (WP 0353)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

STOWAGE COMPARTMENT (LOWER FRONT DRIVER SIDE) REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

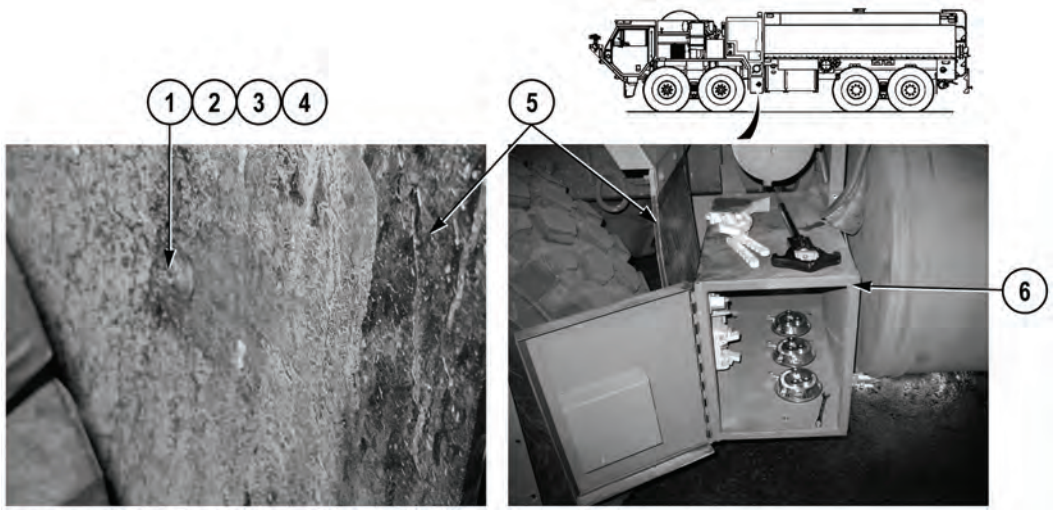
Materials/Parts
Lockwasher (1)
Locknut (4)

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

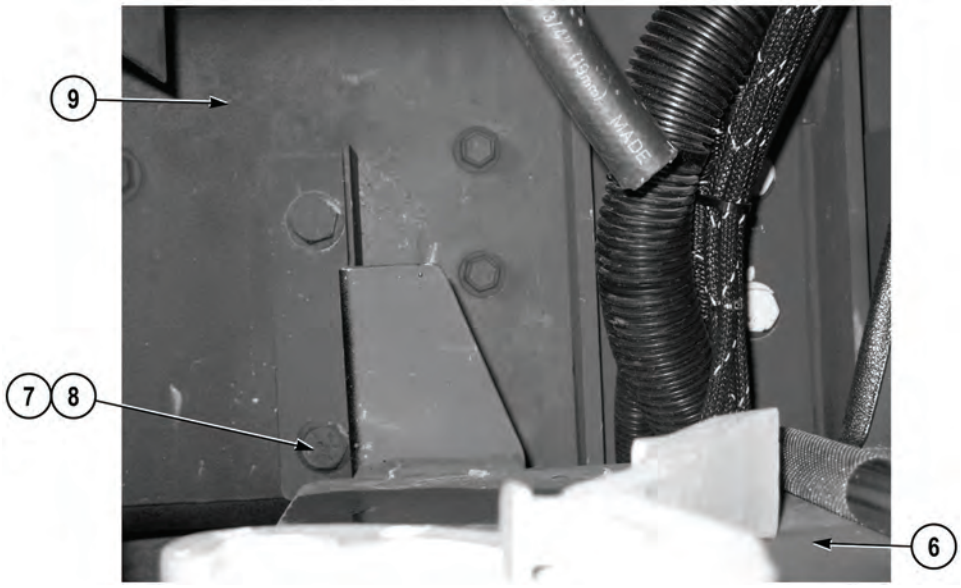
References
WP 0392, Fig. 84

Equipment Conditions
Stowage compartment door and stay arm removed (WP 0353)

REMOVAL



1. Remove nut (1), lockwasher (2), washer (3), screw (4), and splash guard (5) from stowage compartment (6). Discard lockwasher.



WARNING



Stowage compartment is heavy. Do not attempt to lift or move without the aid of an assistant and suitable lifting device. Failure to comply may result in serious injury to personnel or damage to equipment.

2. With the aid of an assistant and a suitable lifting device, remove four locknuts (7), screws (8), and stowage compartment (6) from frame rail (9). Discard locknuts.

END OF TASK

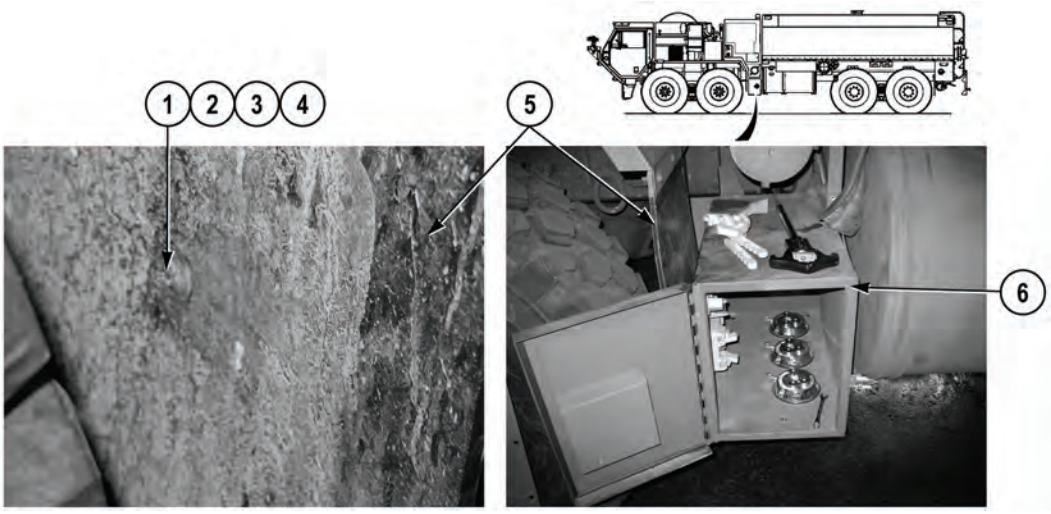
INSTALLATION

WARNING



Stowage compartment is heavy. Do not attempt to lift or move without the aid of an assistant and suitable lifting device. Failure to comply may result in serious injury to personnel or damage to equipment.

1. With the aid of an assistant and a suitable lifting device, install stowage compartment (6) on frame rail (9) with four screws (8) and locknuts (7).



2. Install splash guard (5) on stowage compartment (6) with screw (4), washer (3), lockwasher (2), and nut (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Install stowage compartment door (WP 0353)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

STOWAGE COMPARTMENT (LOWER REAR DRIVER SIDE) REPLACEMENT

INITIAL SETUP:

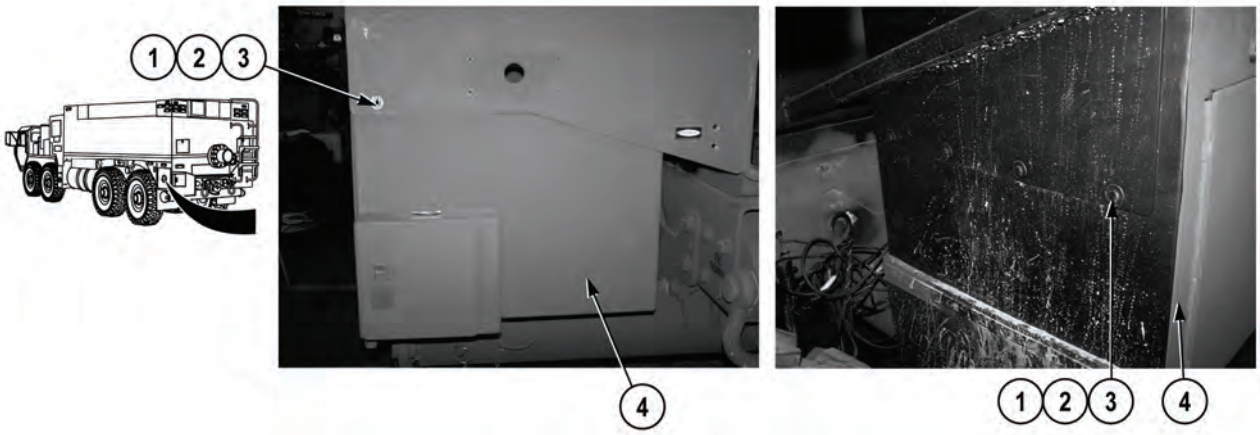
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

References
WP 0129
WP 0353
WP 0354

Equipment Conditions
Door switch removed (WP 0245)
Striplights removed (WP 0213)
Rear step buzzer box removed (WP 0266)
Driver side rear splash guard removed (WP 0347)
Rear and side warning lights removed (WP 0229)

REMOVAL

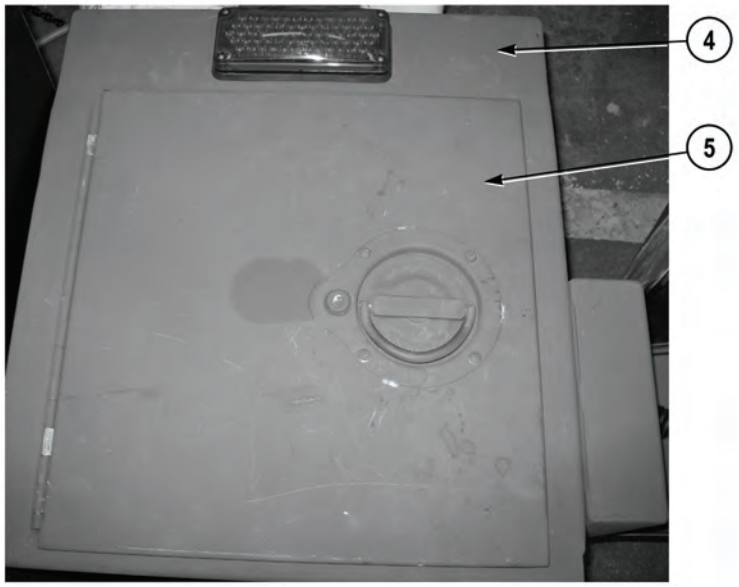


WARNING

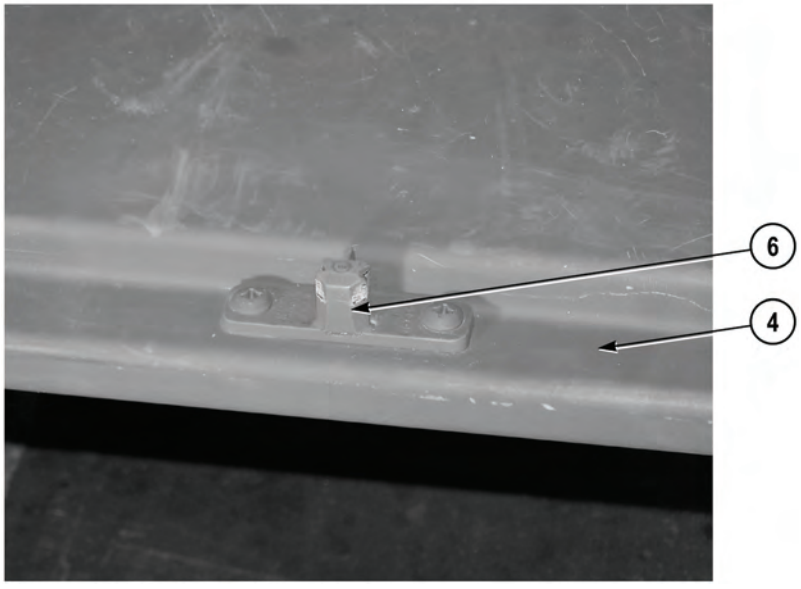


Stowage compartment weighs approximately 105 lb. (47 kg). Do not attempt to lift or move stowage compartment without the aid of an assistant and suitable lifting device. Failure to comply could result in injury to personnel or damage to equipment.

1. With the aid of an assistant and a suitable lifting device, remove eight nuts (1), 16 washers (2), eight screws (3), and stowage compartment (4) from vehicle.



2. Remove stowage compartment door (5) from stowage compartment (4) (WP 0353).

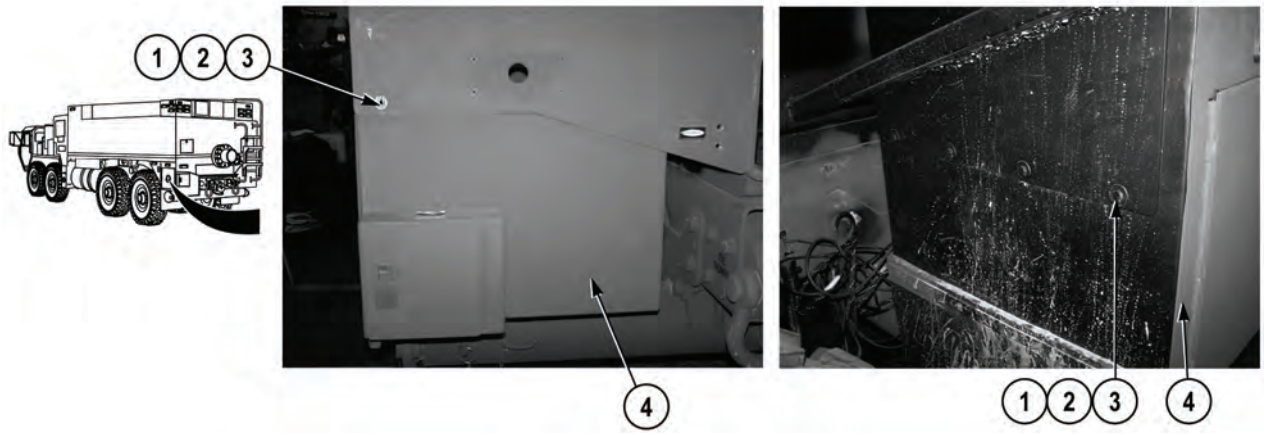


3. Remove stowage compartment door striker (6) from stowage compartment (4) (WP 0354).

END OF TASK

INSTALLATION

1. Install stowage compartment door striker (6) on stowage compartment (4) (WP 0354).
2. Install stowage compartment door (5) on stowage compartment (4).



WARNING



Stowage compartment weighs approximately 105 lb. (47 kg). Do not attempt to lift or move stowage compartment without the aid of an assistant and suitable lifting device. Failure to comply could result in injury to personnel or damage to equipment.

3. With the aid of an assistant and a suitable lifting device, install stowage compartment (4) on vehicle with eight screws (3), 16 washers (2), and eight nuts (1).
4. Adjust stowage compartment door striker (6) (WP 0129).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install striplights (WP 0213)
2. Install rear and side warning lights (WP 0229)
3. Install rear step buzzer box (WP 0266)
4. Install driver side rear splash guard (WP 0347)
5. Install door switch (WP 0245)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

STOWAGE COMPARTMENT (LOWER REAR PASSENGER SIDE) REPLACEMENT

INITIAL SETUP:

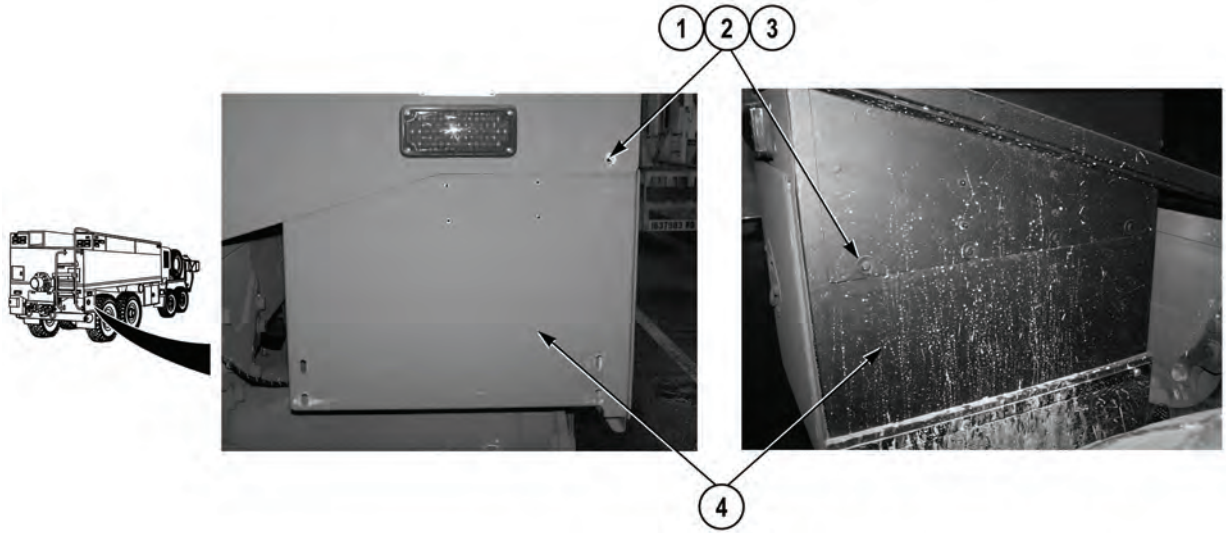
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

References
WP 0353

Equipment Conditions
Rear and side warning lights removed (WP 0229)
Door switch removed (WP 0245)
Striplights removed (WP 0213)
Streamlight charger removed (WP 0260)
Splash guard removed (WP 0347)

REMOVAL

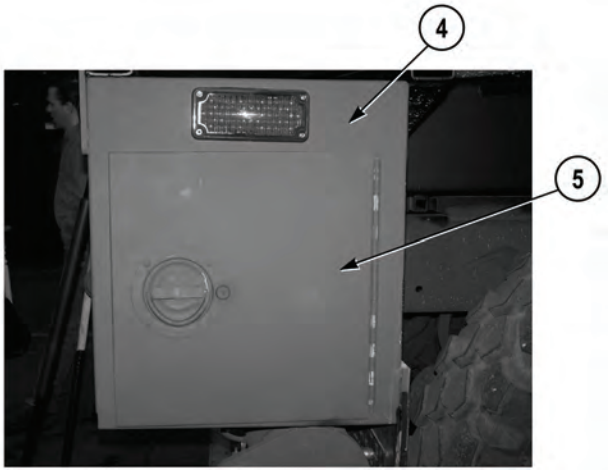


WARNING

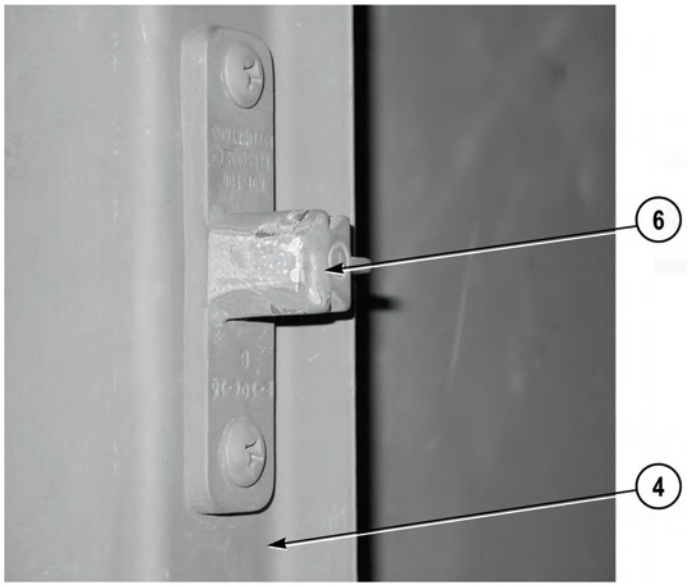


Stowage compartment weighs approximately 105 lb. (47.67 kg). Do not attempt to lift or move stowage compartment without the aid of an assistant and suitable lifting device. Failure to comply could result in injury to personnel or damage to equipment.

1. With the aid of an assistant and a suitable lifting device, remove eight nuts (1), 16 washers (2), and eight screws (3) from vehicle stowage compartment (4).



2. Remove stowage compartment door (5) from stowage compartment (4) (WP 0353).



3. Remove stowage compartment door striker (6) from stowage compartment (4) (WP 0354).

END OF TASK

INSTALLATION

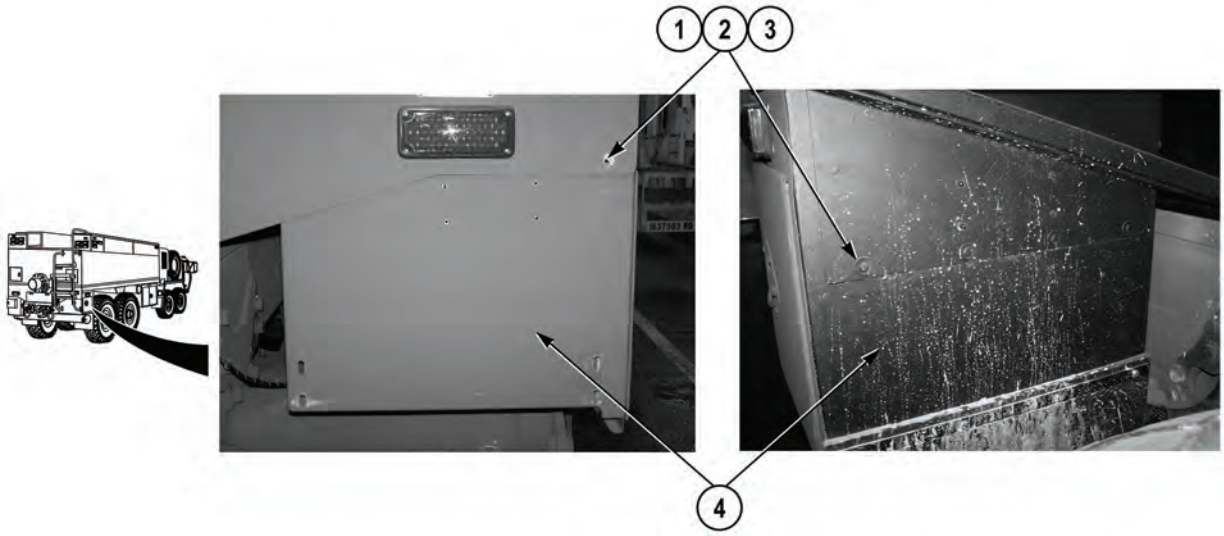
1. Install stowage compartment door striker (6) on stowage compartment (4) (WP 0354).

WARNING



Stowage compartment weighs approximately 105 lb. (47.67 kg). Removal will require the aid of an assistant and the use of a suitable lifting device. Failure to comply could result in injury to personnel or damage to equipment.

2. Install stowage compartment door (5) (WP 0353) on stowage compartment (4).



3. With the aid of an assistant and a suitable lifting device, install stowage compartment (4) on vehicle with eight screws (3), 16 washers (2), eight nuts (1), and stowage compartment (4).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install striplights (WP 0213)
2. Install rear and side warning lights (WP 0229)
3. Install door switch (WP 0245)
4. Install streamlight charger (WP 0260)
5. Install splash guard (WP 0347)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

STOWAGE COMPARTMENT (TOP FRONT DRIVER SIDE) REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

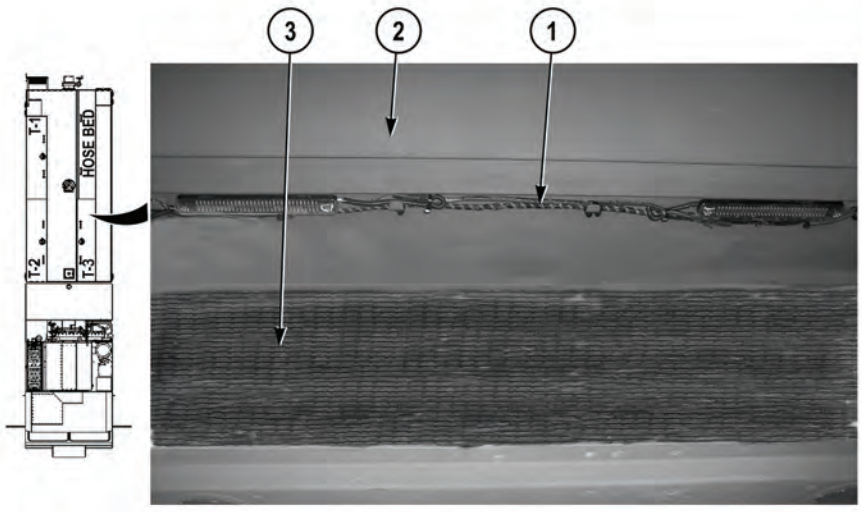
Materials/Parts
Lockwasher (6)
Lockwasher (8)

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

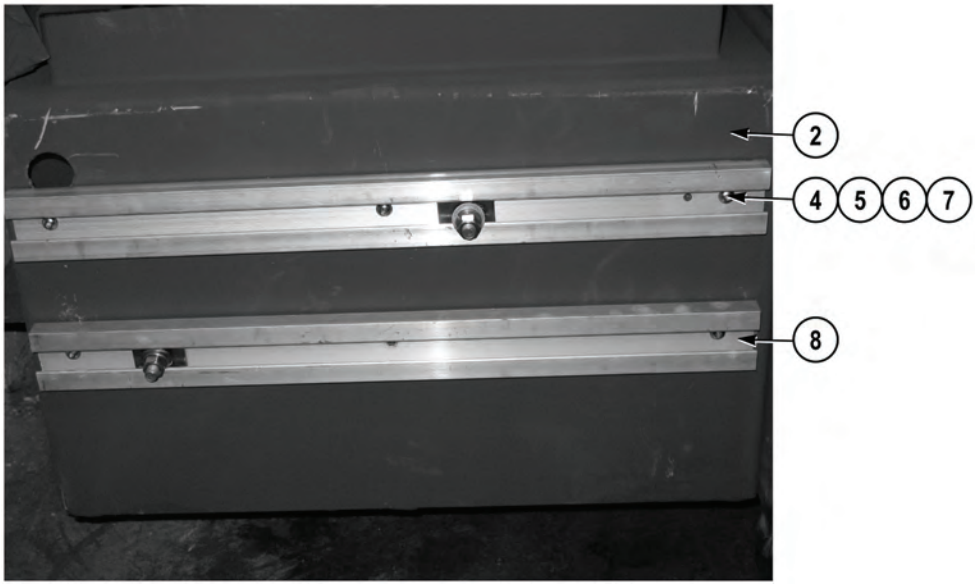
References
WP 0287
WP 0362
WP 0392, Fig. 88

Equipment Conditions
Door switch removed (WP 0245)
Striplights removed (WP 0213)
Spreader bar brackets removed (WP 0352)
Hose bed compartment door opened (WP 0008)
Hose bed divider removed (WP 0332)

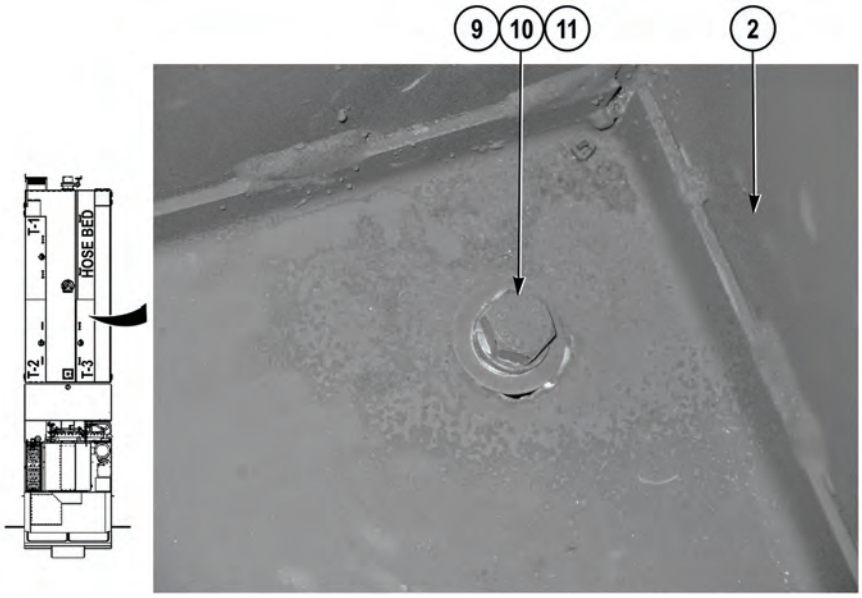
REMOVAL



1. Remove driver side body wire harness (1) from stowage compartment (2) (WP 0287).
2. Remove rubber matting (3) from stowage compartment (2).



3. Remove six nuts (4), lockwashers (5), 12 washers (6), six screws (7), and two hose bed divider brackets (8) from stowage compartment (2). Discard lockwashers.



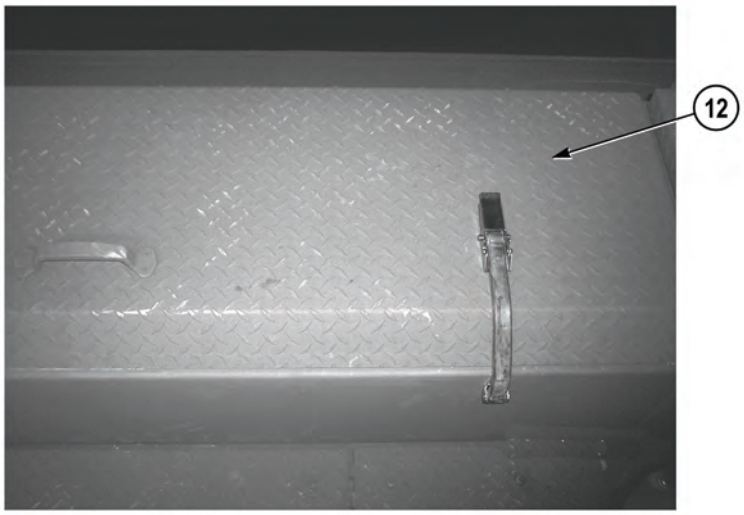
4. Remove eight screws (9), lockwashers (10), and washers (11) from stowage compartment (2) and vehicle. Discard lockwashers.

WARNING



Stowage compartment weighs approximately 200 lb. (91 kg). Do not attempt to lift or move without the aid of an assistant and suitable lifting device. Failure to comply may result in serious injury to personnel or damage to equipment.

5. With the aid of an assistant and a suitable lifting device, remove stowage compartment (2) from vehicle.



NOTE

Perform Step (6) if stowage compartment door needs to be removed.

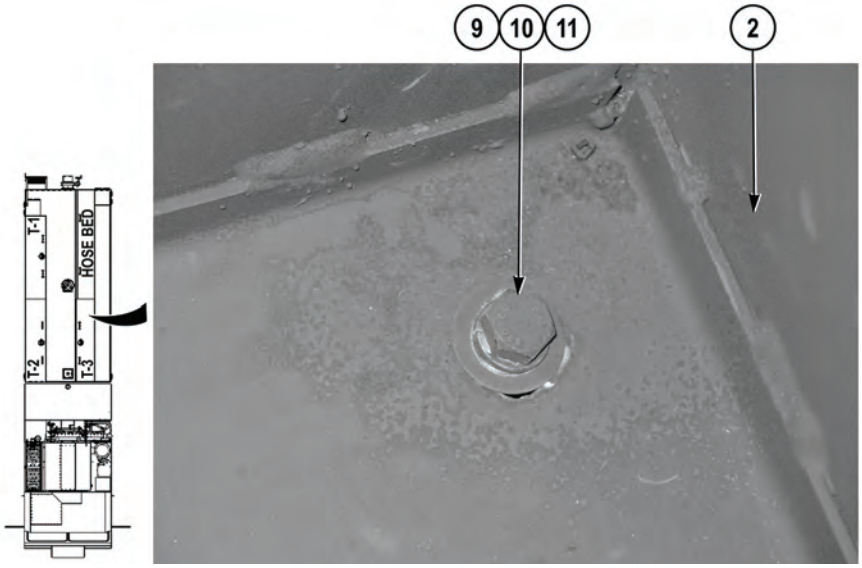
6. Remove stowage compartment door (12) (WP 0362).

INSTALLATION

NOTE

Perform Step (1) if stowage compartment door was removed.

1. Install stowage compartment door (12) (WP 0362).

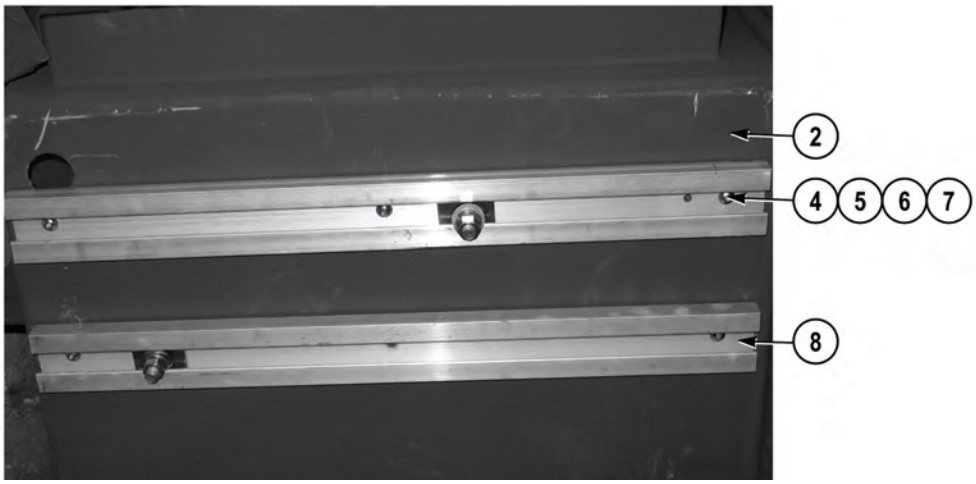


WARNING

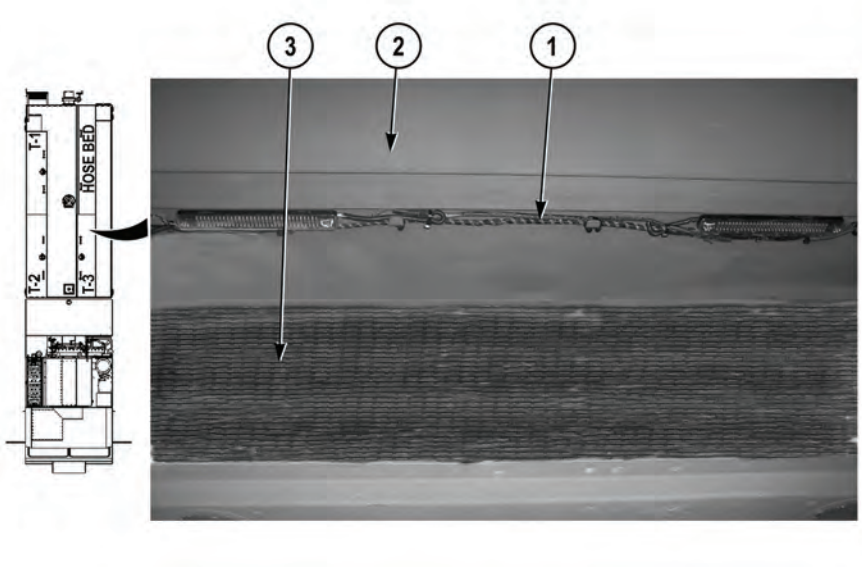


Stowage compartment weighs approximately 200 lb. (91 kg). Do not attempt to lift or move without the aid of an assistant and suitable lifting device. Failure to comply may result in serious injury to personnel or damage to equipment.

2. With the aid of an assistant and a suitable lifting device, position stowage compartment (2) on vehicle.
3. Install stowage compartment (2) on vehicle with eight washers (11), lockwashers (10), and screws (9).



4. Install two hose bed divider brackets (8) on stowage compartment (2) with six screws (7), 12 washers (6), six lockwashers (5), and nuts (4).



5. Install rubber matting (3) in stowage compartment (2).
6. Install driver side body wire harness (1) in stowage compartment (2) (WP 0287).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install hose bed divider (WP 0332)
2. Close hose bed compartment (WP 0008)
3. Install spreader bar brackets (WP 0352)
4. Install striplights (WP 0213)
5. Install door switch (WP 0245)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

STOWAGE COMPARTMENT (TOP FRONT PASSENGER SIDE) REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

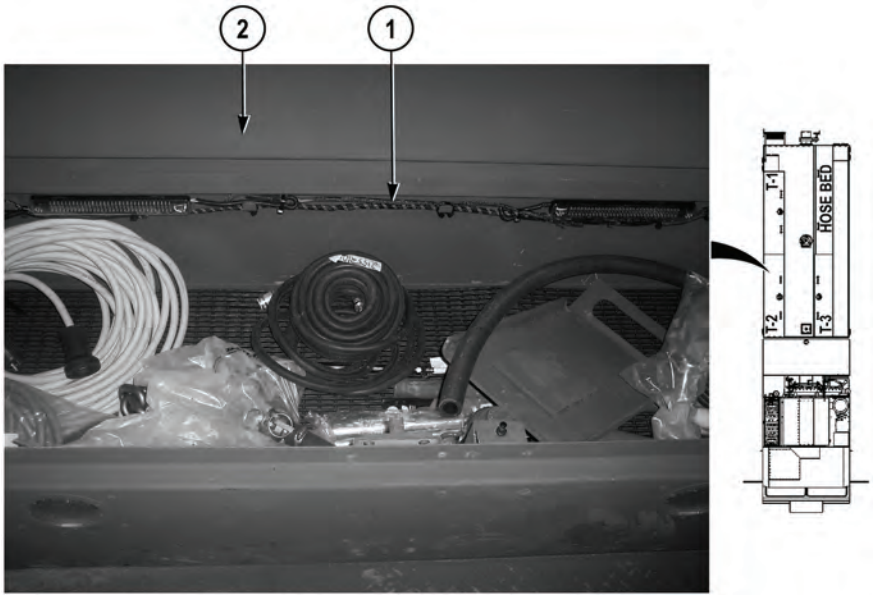
Materials/Parts
Lockwasher (8)

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

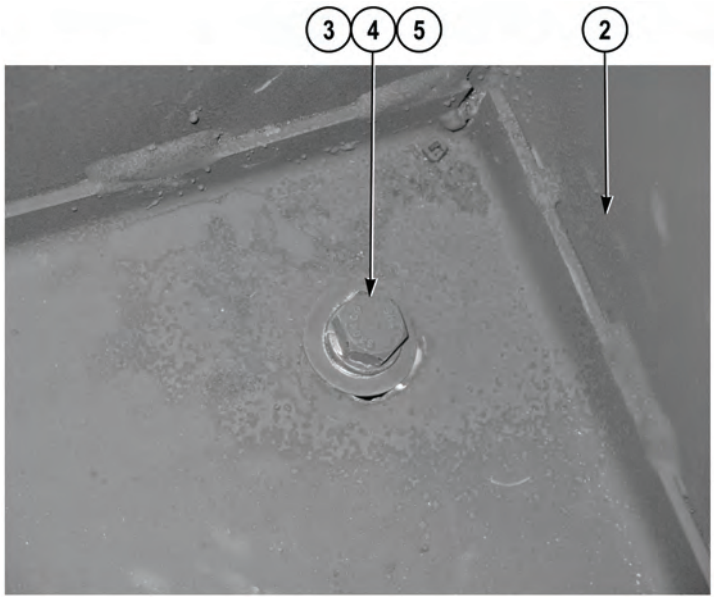
References
WP 0299
WP 0362
WP 0392, Fig. 87

Equipment Conditions
Scene light removed (WP 0231)
Step light(s) removed (WP 0232)
Lock striker removed (WP 0354)
Striplights removed (WP 0213)
Door switch removed (WP 0245)

REMOVAL



1. Remove passenger side body wire harness (1) from stowage compartment (2) (WP 0299).



WARNING



Stowage compartment weighs approximately 200 lb. (91 kg). Do not attempt to lift or move compartment without the aid of an assistant and suitable lifting device. Failure to comply may result in serious injury to personnel or damage to equipment.

2. With the aid of an assistant and a suitable lifting device, remove eight screws (3), lockwashers (4), washers (5), and stowage compartment (2) from vehicle. Discard lockwashers.



NOTE

Perform Step (3) if stowage compartment door needs to be removed.

3. Remove stowage compartment door (6) (WP 0362).

END OF TASK

INSTALLATION

NOTE

Perform Step (1) if stowage compartment door was removed.

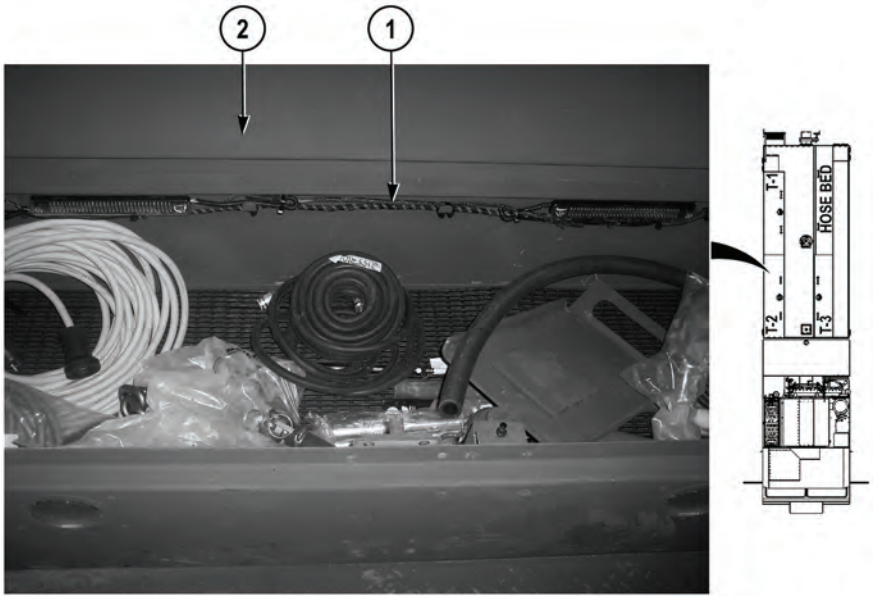
1. Install stowage compartment door (6) (WP 0362).

WARNING



Stowage compartment weighs approximately 200 lb. (91 kg). Do not attempt to lift or move compartment without the aid of an assistant and suitable lifting device. Failure to comply may result in serious injury to personnel or damage to equipment.

2. With the aid of an assistant and a suitable lifting device, install stowage compartment (2) on vehicle with eight washers (5), lockwashers (4), and screws (3).



3. Install passenger side body harness (1) in stowage compartment (2) (WP 0299).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install door switch (WP 0245)
2. Install striplights (WP 0213)
3. Install lock striker (WP 0354)
4. Install step light(s) (WP 0232)
5. Install scene light (WP 0231)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

STOWAGE COMPARTMENT (TOP REAR PASSENGER SIDE) REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

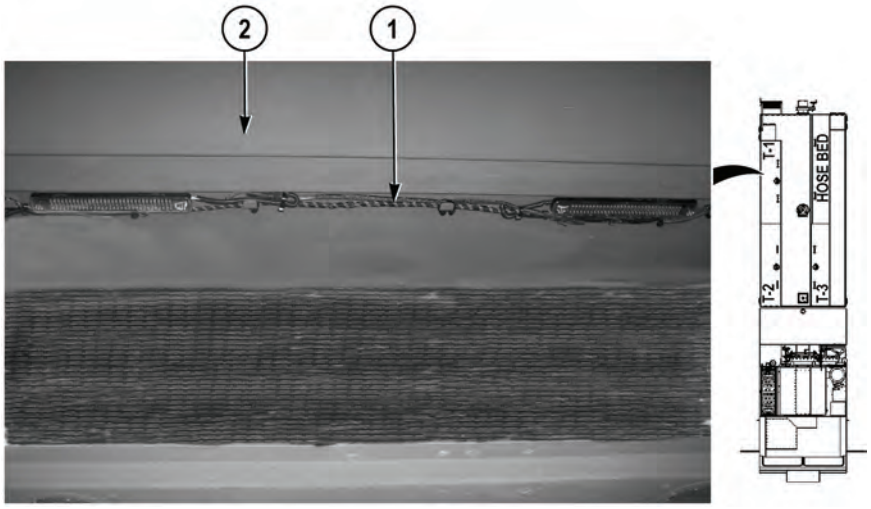
Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

Materials/Parts
Lockwasher (10)

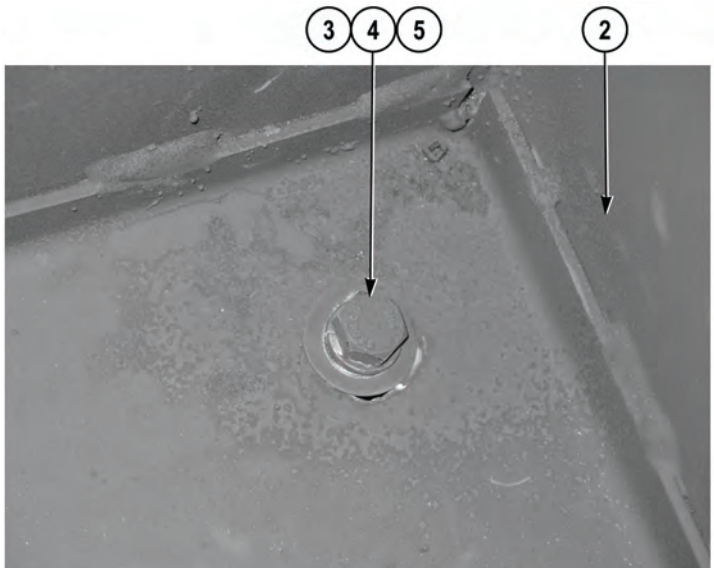
References
WP 0299
WP 0362
WP 0392, Fig. 86

Equipment Conditions
Step lights removed (WP 0232)
Lock striker removed (WP 0354)
Striplights removed (WP 0213)
Door switch removed (WP 0245)

REMOVAL



1. Remove passenger side body wire harness (1) from stowage compartment (2) (WP 0299).



WARNING



Stowage compartment weighs approximately 200 lb. (91 kg). Do not attempt to lift or move stowage compartment without the aid of an assistant and a suitable lifting device. Failure to comply may result in serious injury to personnel or damage to equipment.

2. With the aid of an assistant and a suitable lifting device, remove ten screws (3), lockwashers (4), washers (5), and stowage compartment (2) from vehicle. Discard lockwashers.



NOTE

Perform Step (3) if stowage compartment door needs to be replaced.

3. Remove stowage compartment door (6) (WP 0362).

END OF TASK

INSTALLATION

NOTE

Perform Step (1) if stowage compartment door was removed.

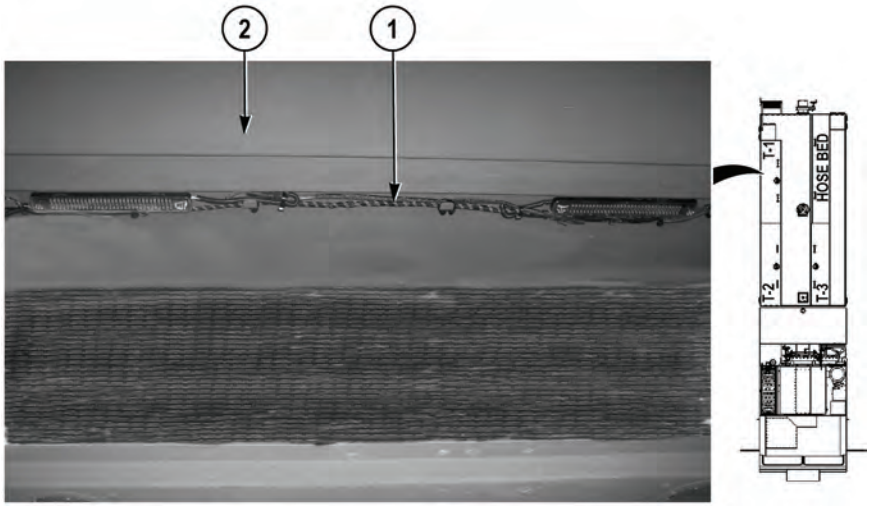
1. Install stowage compartment door (6) (WP 0362).

WARNING



Stowage compartment weighs approximately 200 lb. (91 kg). Do not attempt to lift or move stowage compartment without the aid of an assistant and a suitable lifting device. Failure to comply may result in serious injury to personnel or damage to equipment.

2. With the aid of an assistant and a suitable lifting device, install stowage compartment (2) on vehicle with ten washers (5), lockwashers (4), and screws (3).



3. Install passenger side body harness (1) in stowage compartment (2) (WP 0299).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install door switch (WP 0245)
2. Install striplights (WP 0213)
3. Install lock striker (WP 0354)
4. Install step lights (WP 0232)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

TOP STOWAGE COMPARTMENT DOOR(S) REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

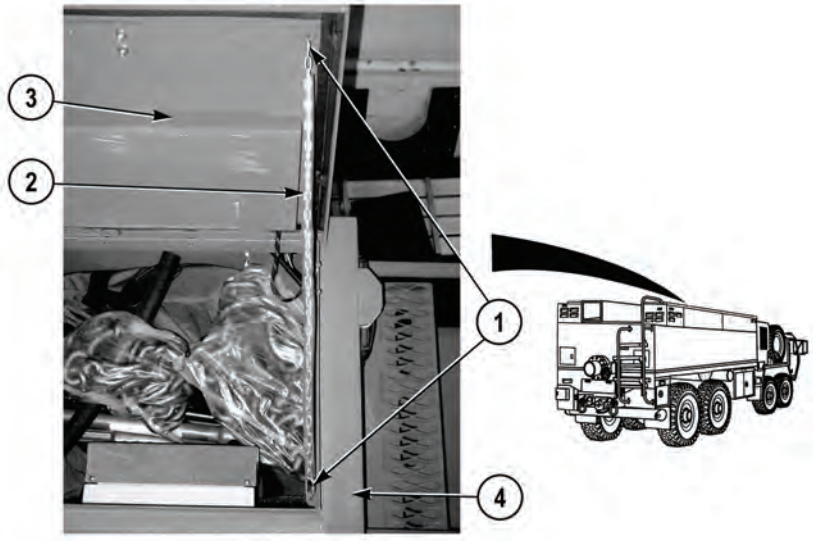
Materials/Parts
Lockwasher (11)
Lockwasher (12)
Lockwasher (8)
Lockwasher (4)
Door Seal (1)
Lockwasher (4)
Gasket (1)

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

References
WP 0392, Fig. 87

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)

REMOVAL



1. Remove four fasteners (1) and two chains (2) from top stowage compartment door (3) and stowage compartment (4).



WARNING



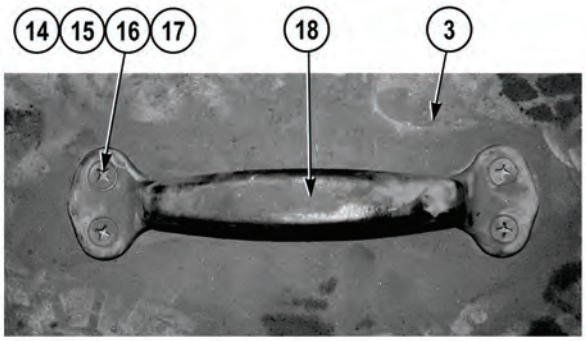
Top stowage compartment doors are heavy. Do not attempt to lift without the aid of an assistant and a suitable lifting device. Failure to comply may result in serious injury to personnel or damage to equipment.

NOTE

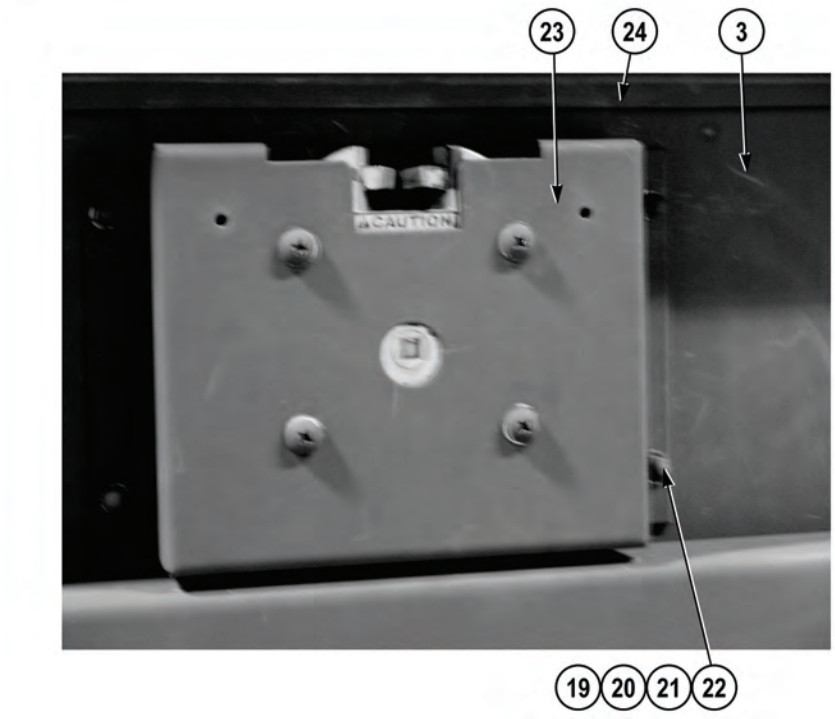
All top stowage compartment doors are removed the same way. Number of nuts, lockwashers, washers, and screws may vary with the size of the top stowage compartment door.

2. With the aid of an assistant and a suitable lifting device, remove 11 nuts (5), lockwashers (6), washers (7), screws (8), and top stowage compartment door (3) from top stowage compartment (4). Discard lockwashers.

3. Remove 12 nuts (9), lockwashers (10), washers (11), screws (12), and hinge (13) from top stowage compartment door (3). Discard lockwashers.

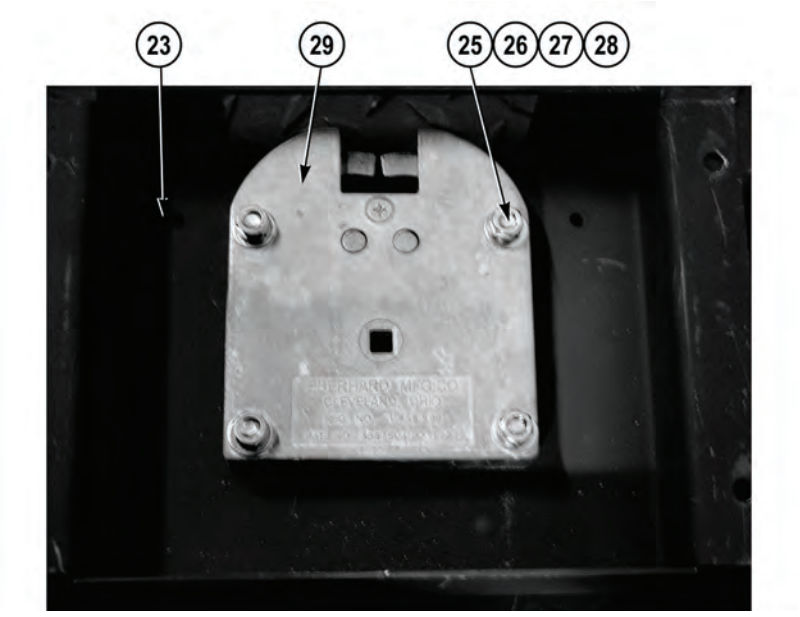


4. Remove eight nuts (14), lockwashers (15), washers (16), screws (17), and two grab handles (18) from top stowage compartment door (3). Discard lockwashers.

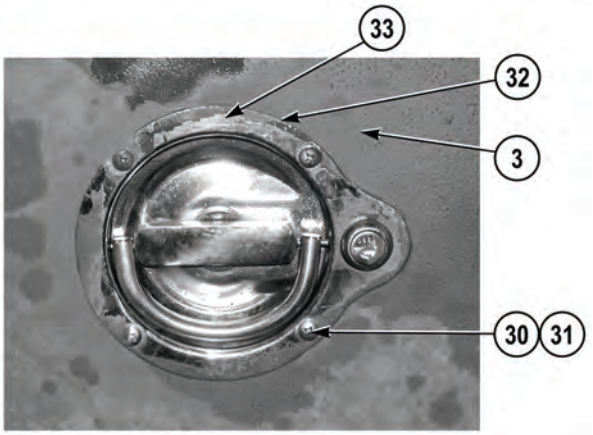


5. Remove four nuts (19), lockwashers (20), washers (21), screws (22), and lock cover (23) from top stowage compartment door (3). Discard lockwashers.

6. Remove door seal (24) from top stowage compartment door (3). Discard door seal.



7. Remove four nuts (25), lockwashers (26), washers (27), screws (28), and door lock (29) from lock cover (23). Discard lockwashers.

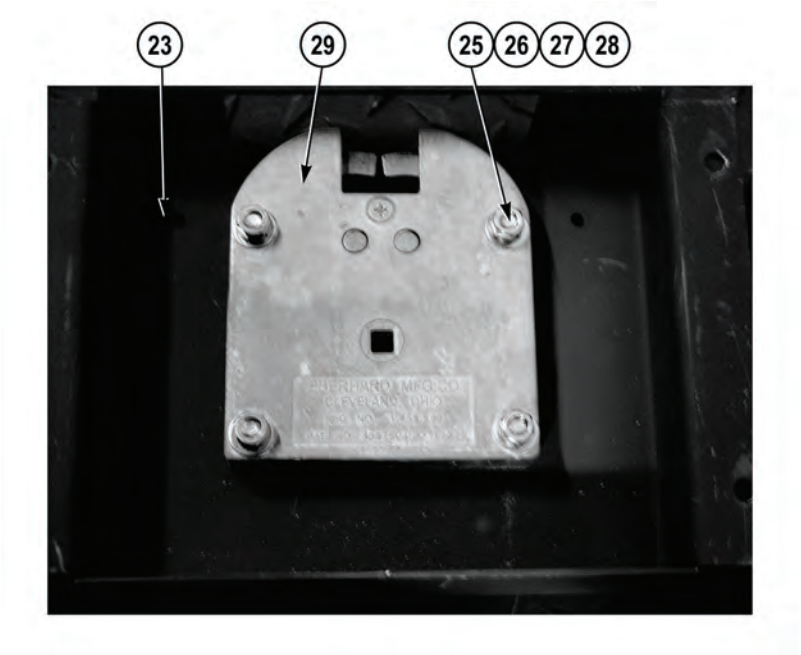


8. Remove four screws (30), washers (31), gasket (32), and handle assembly (33) from top stowage compartment door (3). Discard gasket.

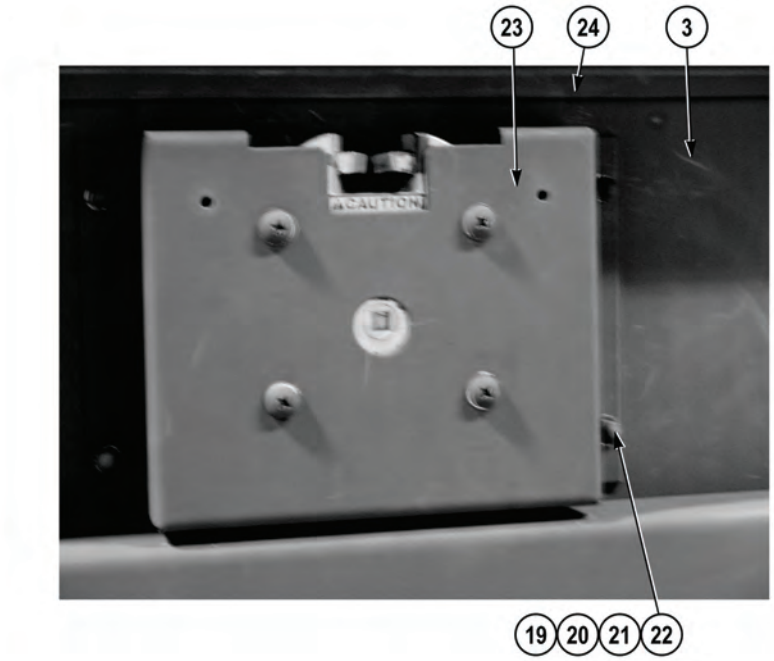
END OF TASK

INSTALLATION

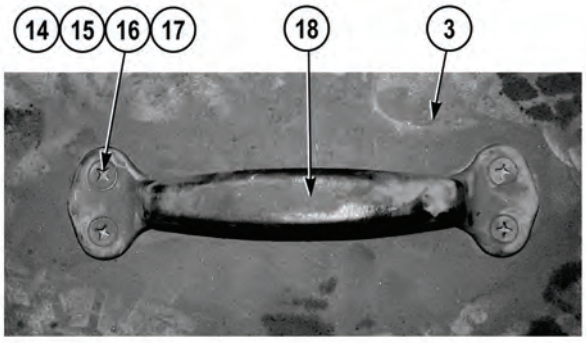
1. Install gasket (32) and handle assembly (33) on top stowage compartment door (3) with four washers (31) and screws (30).



2. Install door lock (29) on lock cover (23) with four screws (28), washers (27), lockwashers (26), and nuts (25).



3. Install door seal (24) on top stowage compartment door (3).
4. Install lock cover (23) on top stowage compartment door (3) with four screws (22), washers (21), lockwashers (20), and nuts (19).



5. Install two grab handles (18) on top stowage compartment door (3) with eight screws (17), washers (16), lockwashers (15), and nuts (14).



6. Install hinge (13) on top stowage compartment door (3) with 12 screws (12), washers (11), lockwashers (10), and nuts (9).

WARNING

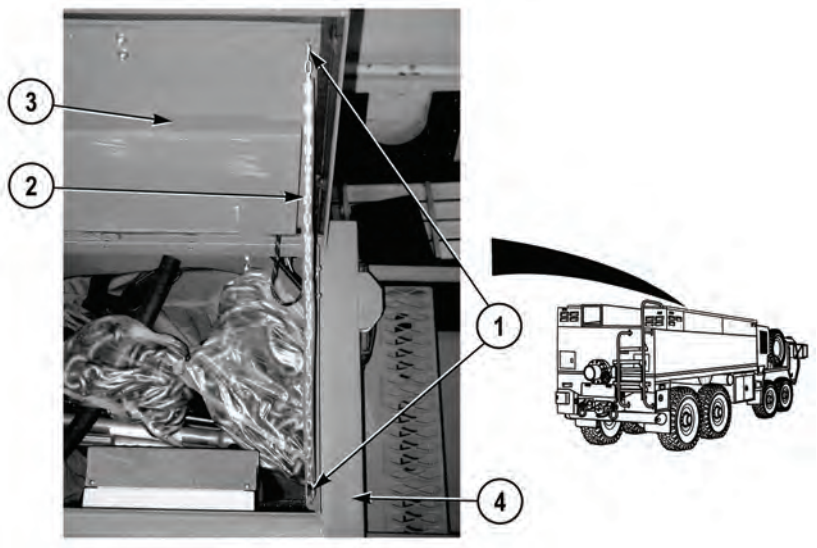


Top stowage compartment doors are heavy. Do not attempt to lift without the aid of an assistant and a suitable lifting device. Failure to comply may result in serious injury to personnel or damage to equipment.

NOTE

All top stowage compartment doors are installed the same way. Number of nuts, lockwashers, washers, and screws may vary with the size of the top stowage compartment door.

7. With the aid of an assistant and a suitable lifting device, install top stowage compartment door (3) on top stowage compartment (4) with 11 screws (8), washers (7), lockwashers (6), and nuts (5).



8. Install two chains (2) on top stowage compartment (4) and top stowage compartment door (3) with four fasteners (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

THREADED SCREW INSERT REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Installation Tool, (AVK) (WP 0399, Item 13)
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)

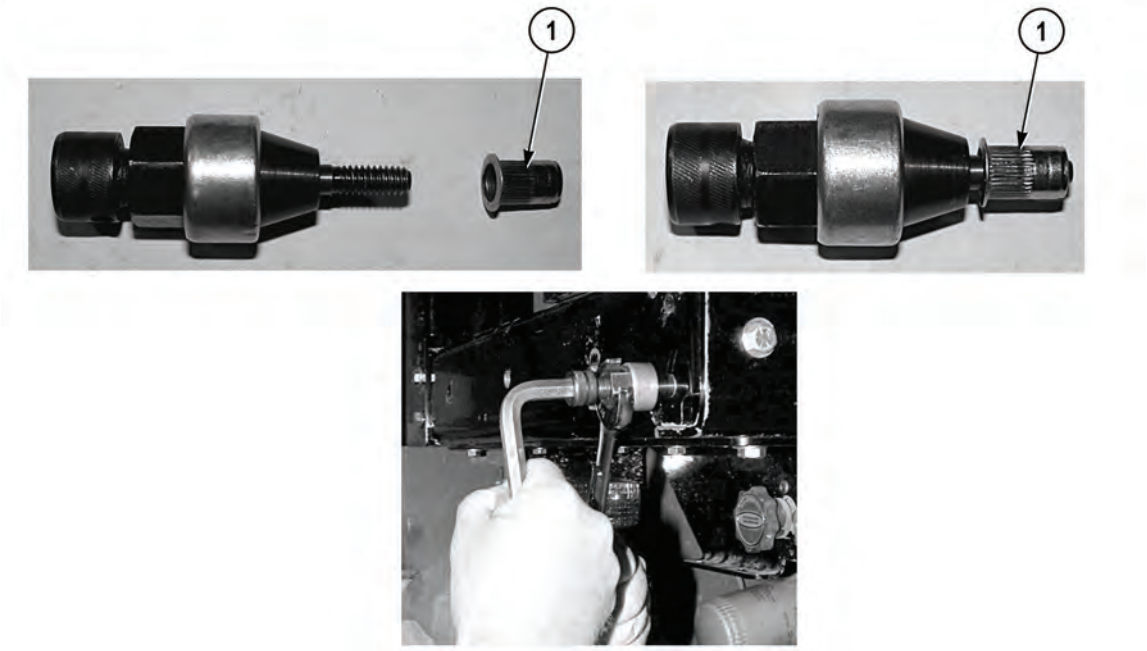
REMOVAL

NOTE

- All threaded screw inserts are replaced the same way.
- When replacing threaded screw inserts, refer to table below to determine which twist drill to use.

Table 1. Threaded Screw Insert Replacement Parts.

Part Number	Twist Drill Size (In.)	Thread Size
95-1598	17/64	8-32
82-0260-0002	19/64	10-24
82-0260-0003	19/64	10-24
82-0257-002	25/64	1/4-20
82-0257-003	25/64	1/4-20
82-0258-002	14/32	5/16-18
82-0258-003	17/32	5/16-18



CAUTION

When drilling out threaded screw insert, do not enlarge existing hole. The new threaded screw insert will not seat properly if hole is enlarged.

NOTE

Threaded screw inserts are used in various locations throughout the vehicle.

Drill out damaged threaded screw insert (1).

END OF TASK

INSTALLATION

Using installation tool, install threaded screw insert (1) in hole.

END OF TASK

FOLLOW-ON MAINTENANCE

Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

TRANSMISSION DIPSTICK AND TUBE REPLACEMENT

INITIAL SETUP:

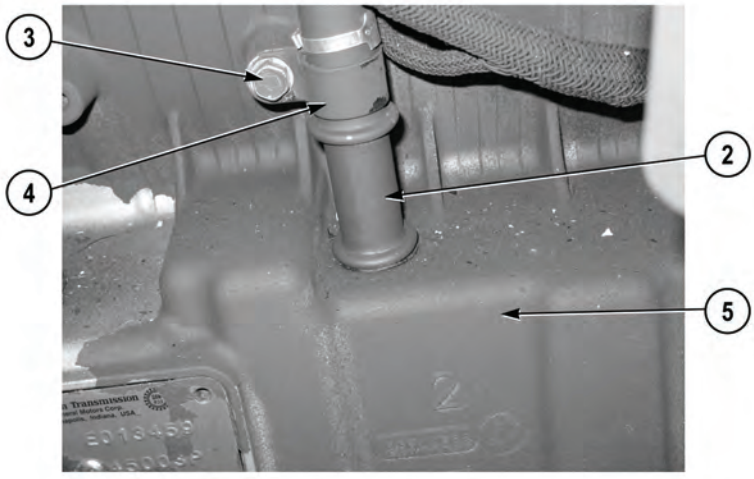
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Equipment Conditions
Transmission drained (TM 9-2320-315-14&P)
Pump house panel K removed (WP 0341)

REMOVAL



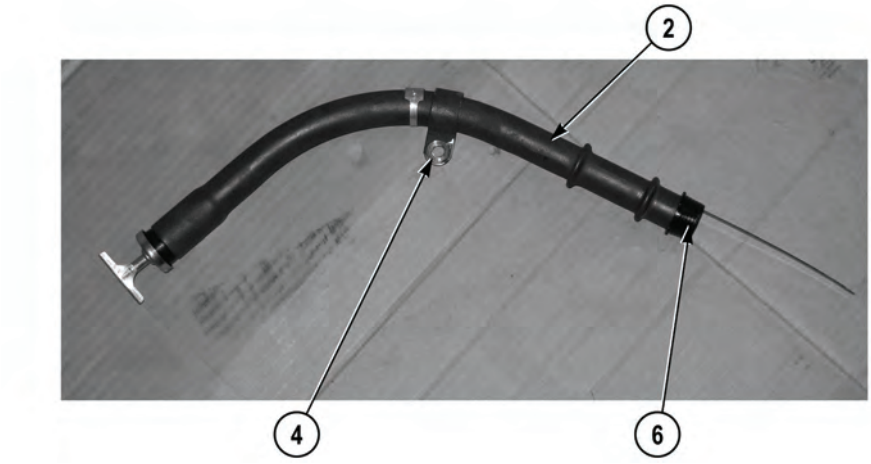
1. Remove dipstick (1) from dipstick tube (2).



NOTE

Note position of dipstick tube prior to removal to ensure proper installation.

2. Remove screw (3), dipstick tube bracket (4), and dipstick tube (2) from transmission (5).



NOTE

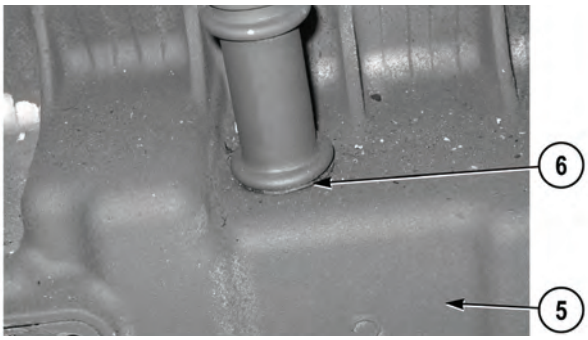
Gasket may be removed with dipstick tube or remain in transmission. Gasket shown on dipstick tube.

3. Remove gasket (6) from dipstick tube (2).
4. Remove dipstick tube bracket (4) from dipstick tube (2).

END OF TASK

INSTALLATION

1. Install dipstick tube bracket (4) on dipstick tube (2).



NOTE

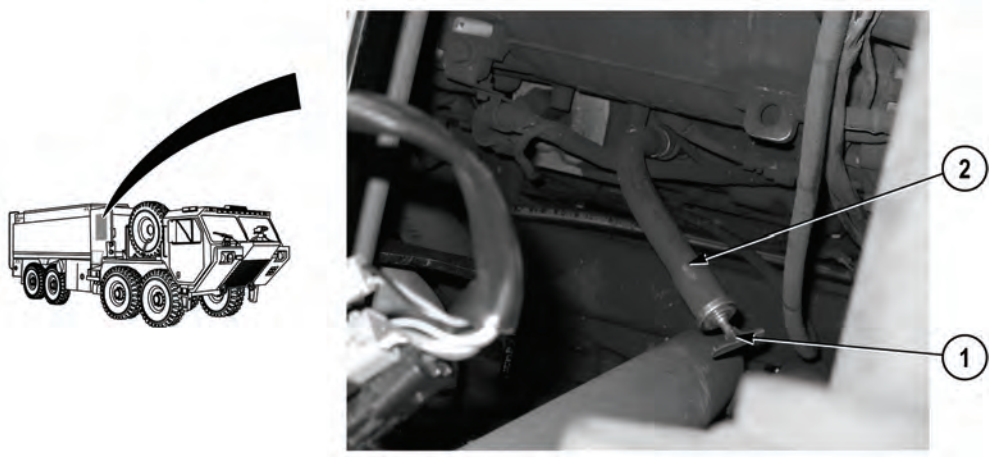
Inspect gasket for damage or wear marks. If gasket is damaged or worn, replace with new gasket.

2. Install gasket (6) in transmission (5).

NOTE

Install dipstick tube as noted during removal.

3. Install dipstick tube bracket (4) and dipstick tube (2) on transmission (5) with screw (3).



4. Install dipstick (1) in dipstick tube (2).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Fill transmission (TM 9-2320-315-14&P)
2. Install pump house panel K (WP 0341)

END OF TASK

END OF WORK PACKAGE

0FIELD LEVEL MAINTENANCE

WALKWAY GRATING REPLACEMENT

INITIAL SETUP:

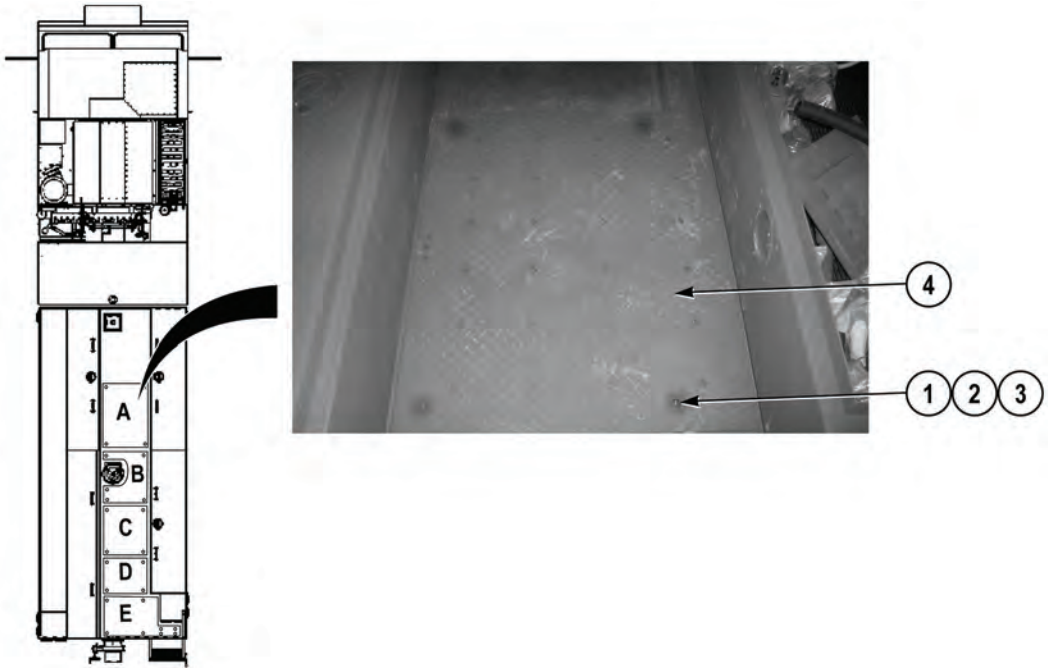
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Lockwasher (4)

References
WP 0392, Fig. 73

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)

REMOVAL



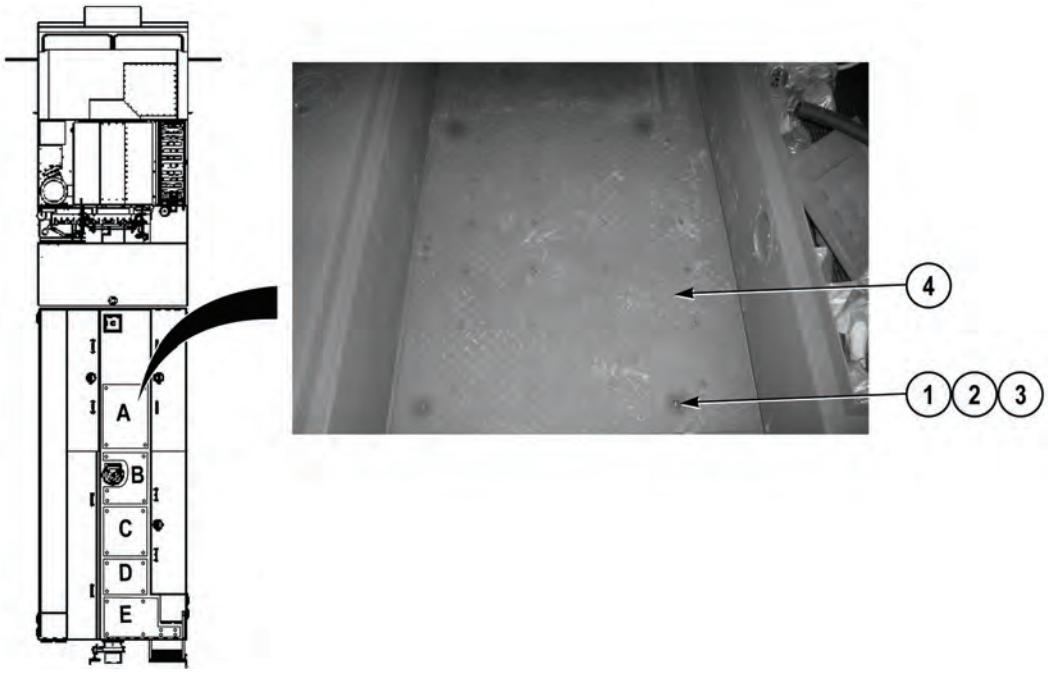
NOTE

- All walkway grating panels are removed the same way.
- Number of screws, lockwashers, and washers may vary.
- Walkway grating panel A shown.

Remove four screws (1), lockwashers (2), washers (3), and walkway grating panel A (4) from vehicle. Discard lockwashers.

END OF TASK

INSTALLATION



NOTE

All walkway grating panels are installed the same way.

Install walkway grating panel A (4) on vehicle with four washers (3), lockwashers (2), and screws (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

WHEEL CHOCKS STOWAGE COMPARTMENT REPLACEMENT

INITIAL SETUP:

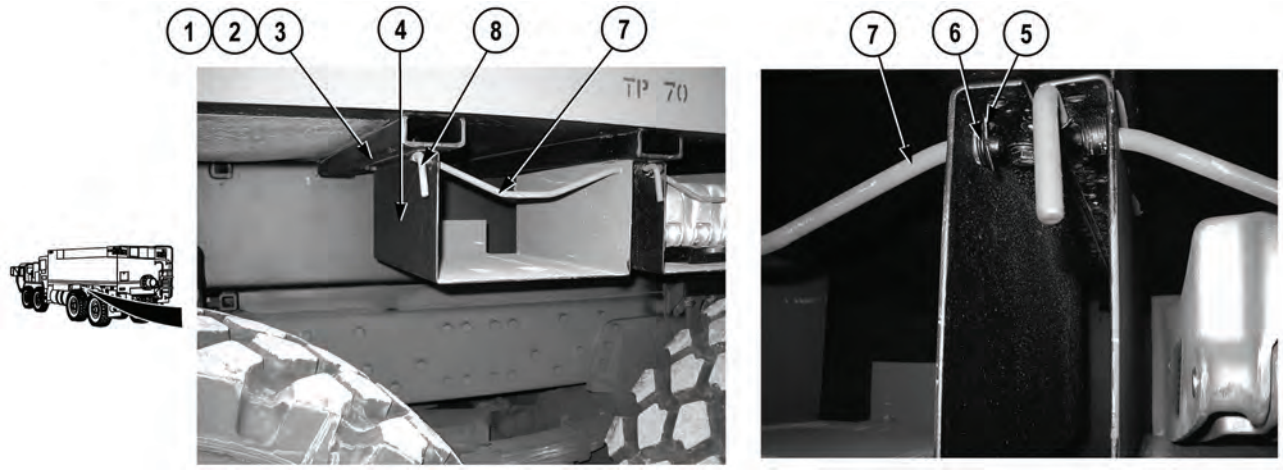
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Lockwasher (4)
Cotter Pin (1)
Locknut (2)

References
WP 0392, Fig. 81

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)

REMOVAL



NOTE

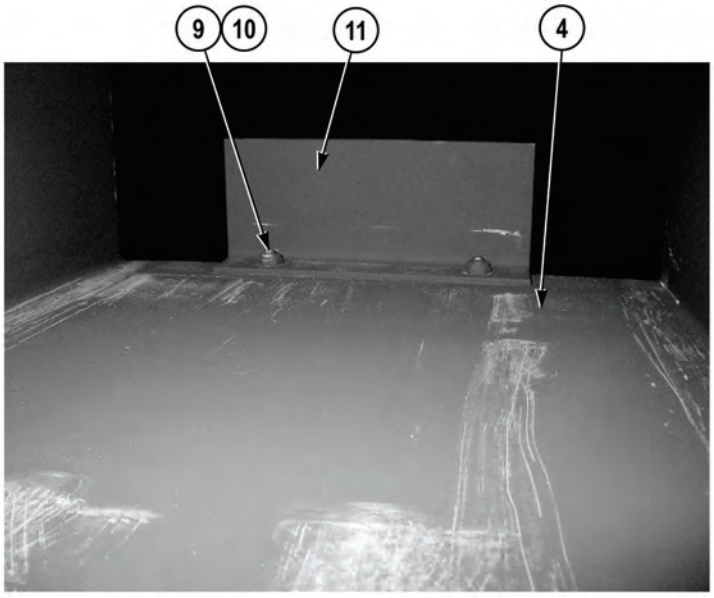
Both wheel chock stowage compartments are removed the same way. Front stowage compartment shown.

1. Remove four screws (1), lockwashers (2), washers (3), and stowage compartment (4) from vehicle. Discard lockwashers.
2. Remove cotter pin (5) and two washers (6) from rod (7). Discard cotter pin.

NOTE

Note position of spring prior to removal to ensure proper installation.

3. Remove rod (7) and spring (8) from stowage compartment (4).
4. Remove spring (8) from rod (7).



5. Remove two locknuts (9), screws (10), and stop angle (11) from stowage compartment (4). Discard locknuts.

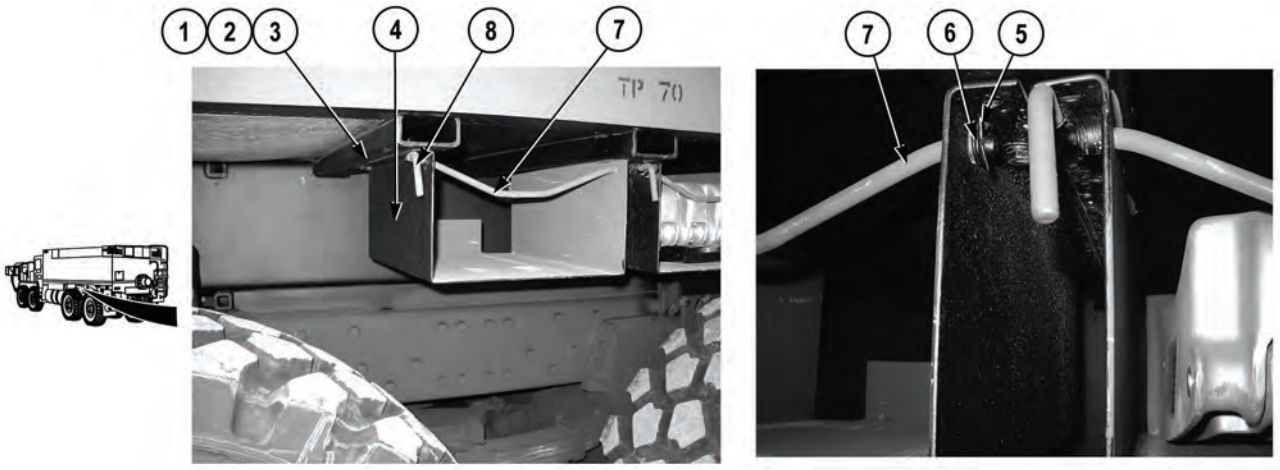
END OF TASK

INSTALLATION

NOTE

Both wheel chock stowage compartments are installed the same way. Front stowage compartment is shown.

1. Install stop angle (11) on stowage compartment (4) with two screws (10), and locknuts (9).



NOTE

Note position of spring as noted prior to removal.

2. Position spring (8) on rod (7) and install on stowage compartment (4).
3. Install two washers (6) and cotter pin (5) on rod (7).
4. Install stowage compartment (4) on vehicle with four washers (3), lockwashers (2), and screws (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

WINDSHIELD DELUGE PUMP HOUSE STRAINER SCREEN REPLACEMENT

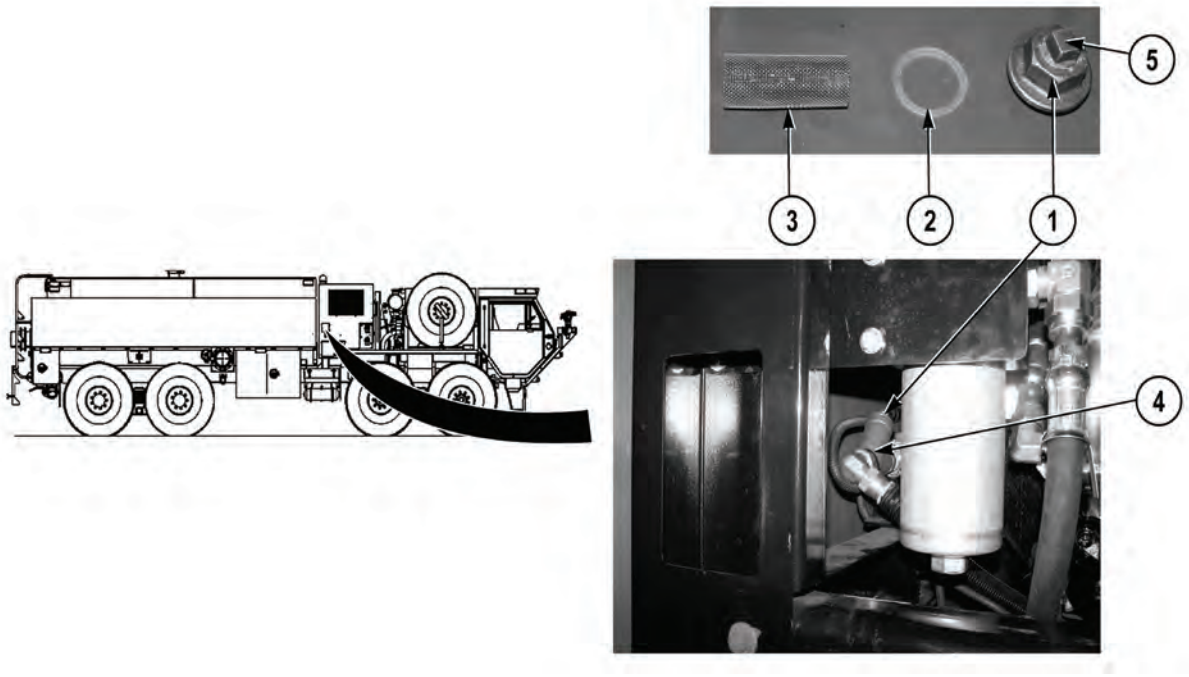
INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive
(WP 0399, Item 17)

Materials/Parts
Compound, Sealing, Pipe Thread
(WP 0401, Item 11)

Equipment Conditions
Hydraulic heat exchanger bottom shroud panel removed (WP 0133)

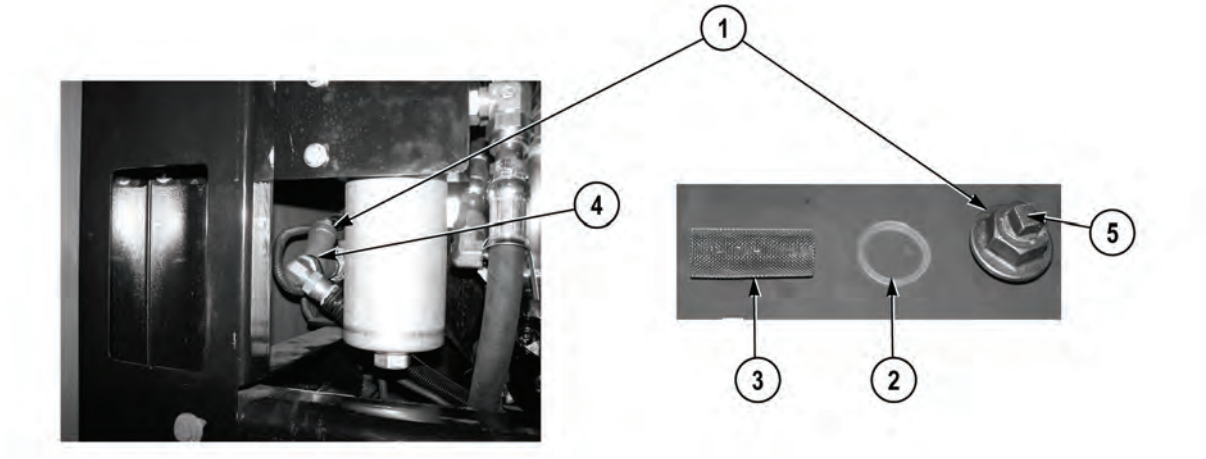
REMOVAL



1. Remove cap (1), gasket (2), and screen (3) from strainer (4).
2. Remove plug (5) from cap (1).

END OF TASK

INSTALLATION



WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

CAUTION

Use sealing compound sparingly only on pipe threads. Do not apply compound to hose connections. Damage to equipment may result.

1. Apply sealing compound to threads of plug (5).
2. Install plug (5) on cap (1).

CAUTION

Do not damage screen when positioning screen in cap and strainer. Failure to comply may result in damage to screen.

3. Install screen (3), gasket (2), and cap (1) on strainer (4).

END OF TASK

FOLLOW-ON MAINTENANCE

Install hydraulic heat exchanger bottom shroud panel (WP 0133)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

WINDSHIELD DELUGE NOZZLE(S) REPLACEMENT

INITIAL SETUP:

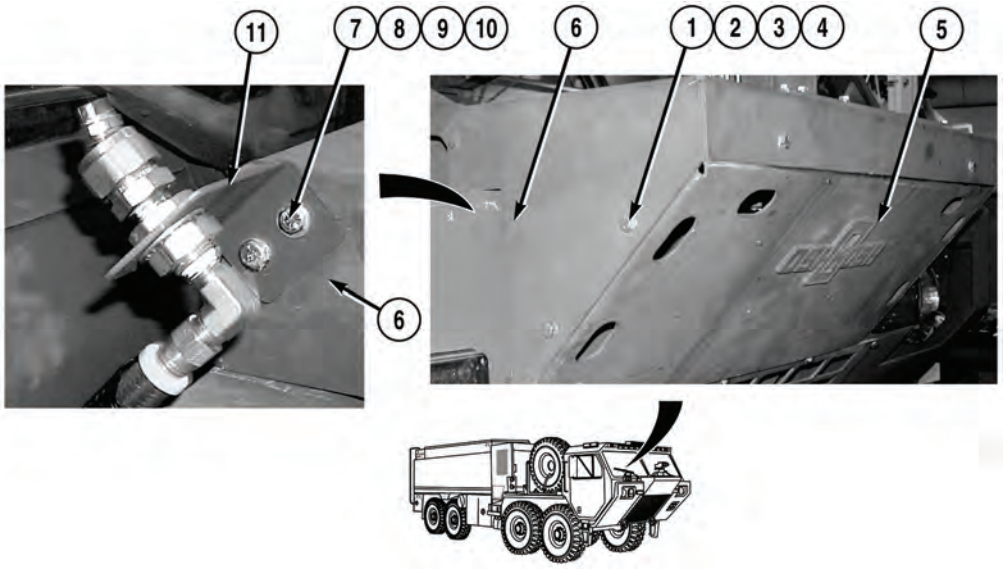
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Compound, Sealing, Pipe Thread (WP 0401, Item 11)
Lockwasher (6)
Lockwasher (2)
Lockwasher (1)

References
WP 0392, Fig. 94

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)

REMOVAL

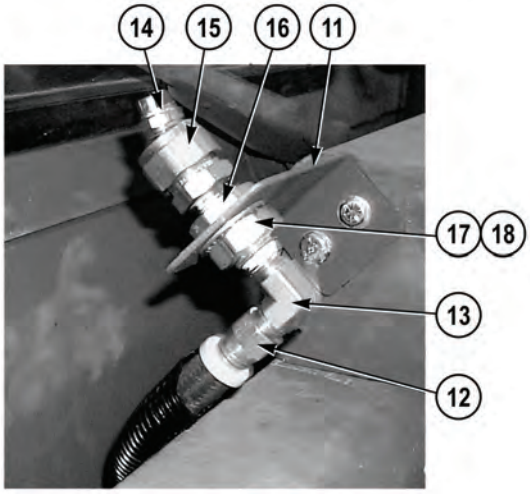


1. Remove six nuts (1), lockwashers (2), 12 washers (3), six screws (4), and cover (5) from turret bumper mount (6). Discard lockwashers.

NOTE

Driver side and passenger side nozzle assemblies are removed the same way. Passenger side shown.

2. Remove two nuts (7), lockwashers (8), four washers (9), two screws (10), and bracket (11) from turret bumper mount (6). Discard lockwashers.



3. Remove hose (12) from elbow (13).

NOTE

Note position and direction of nozzle prior to removal to ensure proper installation.

4. Remove nozzle (14) from swivel fitting (15).
5. Remove swivel fitting (15) from bulkhead fitting (16).
6. Remove elbow (13) from bulkhead fitting (16).
7. Remove jam nut (17), lockwasher (18), and bulkhead fitting (16) from bracket (11). Discard lockwasher.

INSTALLATION

1. Install bulkhead fitting (16) on bracket (11) with lockwasher (18) and jam nut (17).

WARNING



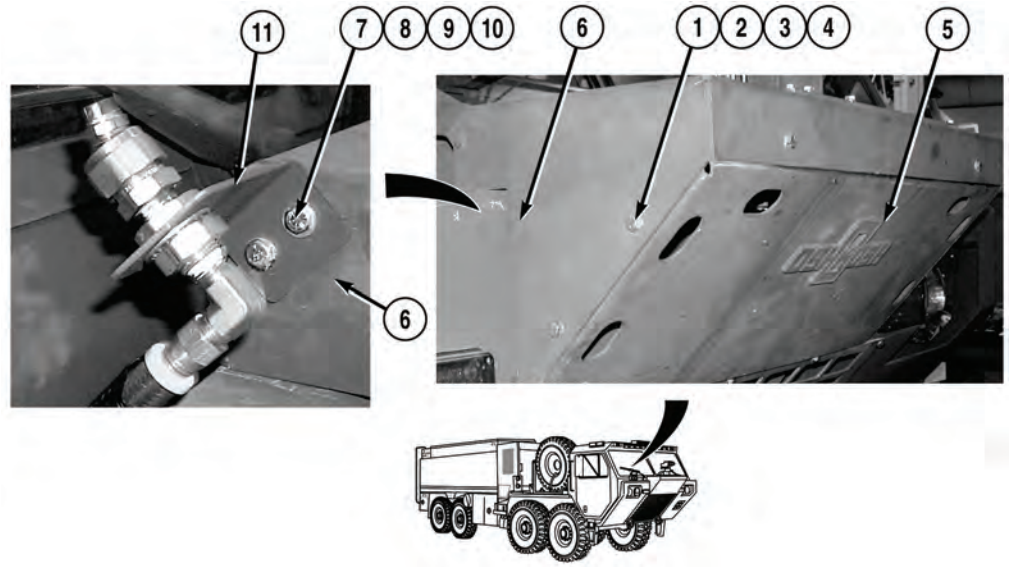
Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

2. Apply sealing compound to threads of elbow (13).
3. Install elbow (13) on bulkhead fitting (16).
4. Install swivel fitting (15) on bulkhead fitting (16).

NOTE

Install nozzle as noted prior to removal.

5. Install nozzle (14) on swivel fitting (15).
6. Install hose (12) on elbow (13).



7. Install bracket (11) on turret bumper mount (6) with two screws (10), four washers (9), two lockwashers (8), and nuts (7).
8. Install cover (5) on turret bumper mount (6) with six screws (4), 12 washers (3), six lockwashers (2), and nut (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

WIRE HARNESS MOUNTING BRACKET REPLACEMENT

INITIAL SETUP:

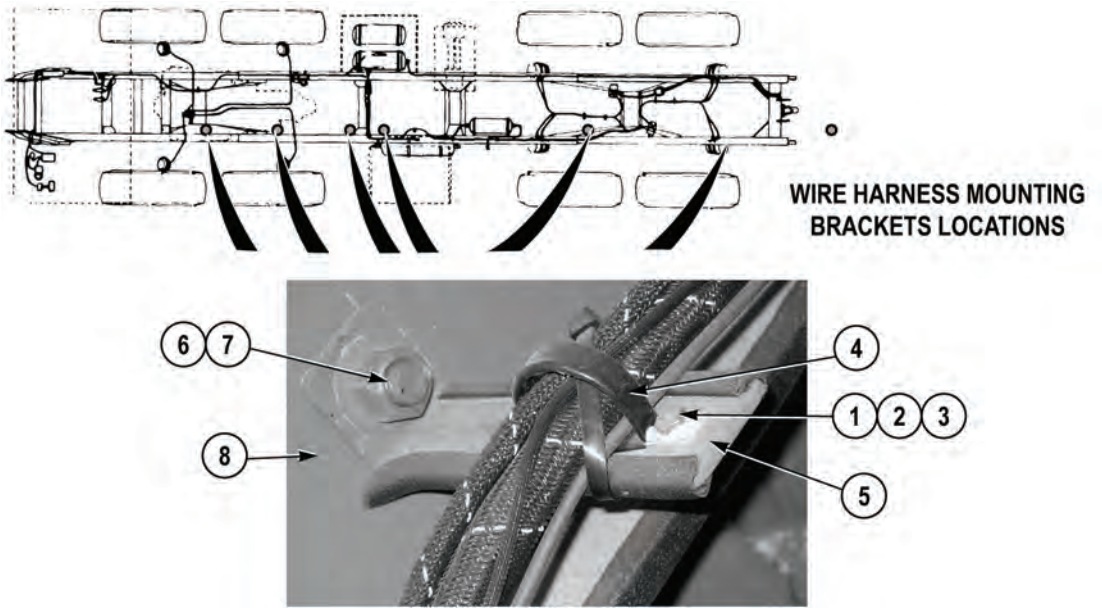
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Ties, Cable, Plastic (WP 0401, Item 25)
Lockwasher (1)
Locknut (1)

References
WP 0392, Fig. 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)

REMOVAL



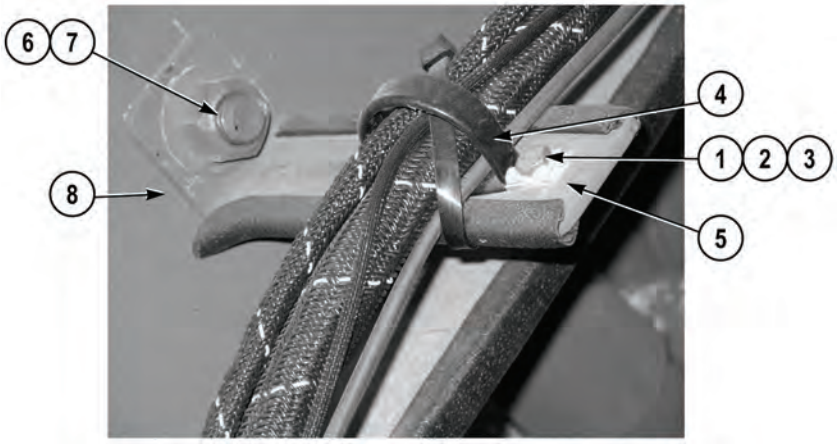
NOTE

- All wire harness brackets are removed the same way. Driver side rear wire harness bracket shown.
- Remove cable ties as required.
- All wire harness brackets are located along vehicle frame rails.

1. Remove nut (1), lockwasher (2), screw (3), and cushion clip (4) from wire harness bracket (5). Discard lockwasher.
2. Remove locknut (6), screw (7), and wire harness bracket (5) from frame rail (8). Discard locknut.

END OF TASK

INSTALLATION



NOTE

- All wire harness brackets are installed the same way. Driver side rear wire harness bracket shown.
- Install cable ties as required.

1. Install wire harness bracket (5) on frame rail (8) with screw (7) and locknut (6).
2. Install cushion clip (4) on wire harness bracket (5) with screw (3), lockwasher (2) and nut (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

WIRE ROPE REPLACEMENT

INITIAL SETUP:

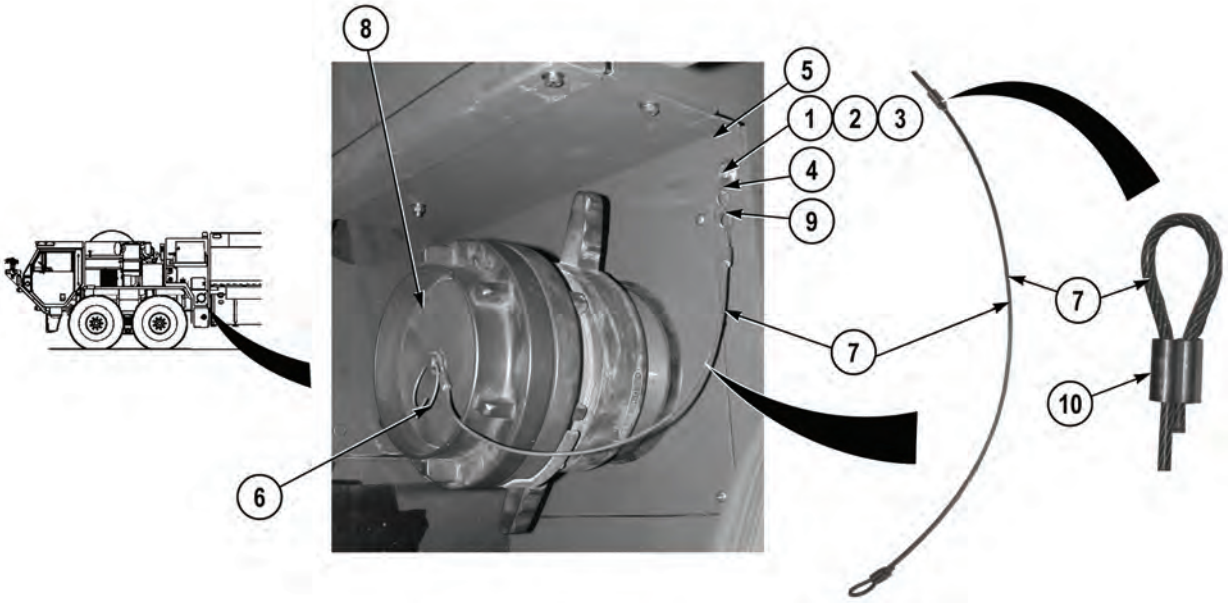
Tools and Special Tools
Crimping Tool (WP 0399, Item 2)
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Lockwasher (1)
Lockwasher (1)

References
WP 0392, Fig. 65

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)

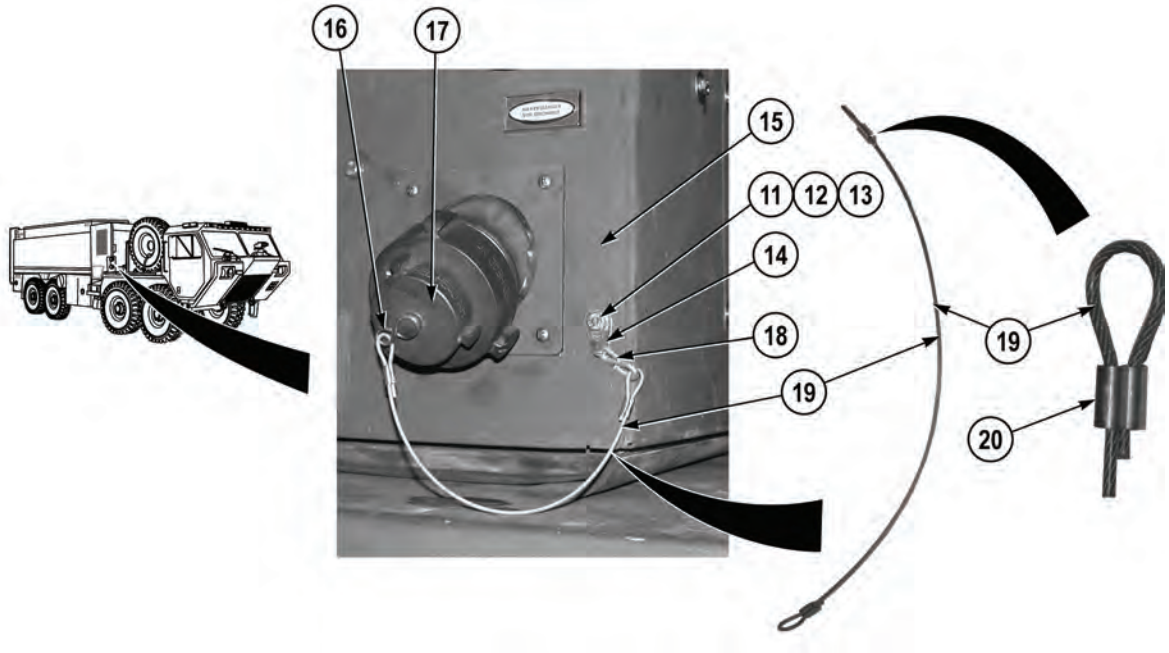
REMOVAL



NOTE

Perform Steps (1) through (5) to remove wire rope from driver side main inlet cap.

1. Remove screw (1), lockwasher (2), washer (3), and clip (4) from panel (5). Discard lockwasher.
2. Remove ring (6) and wire rope (7) from cap (8).
3. Remove clip (4) from S-hook (9).
4. Remove S-hook (9) from wire rope (7).
5. Remove two swaging sleeves (10) from wire rope (7).



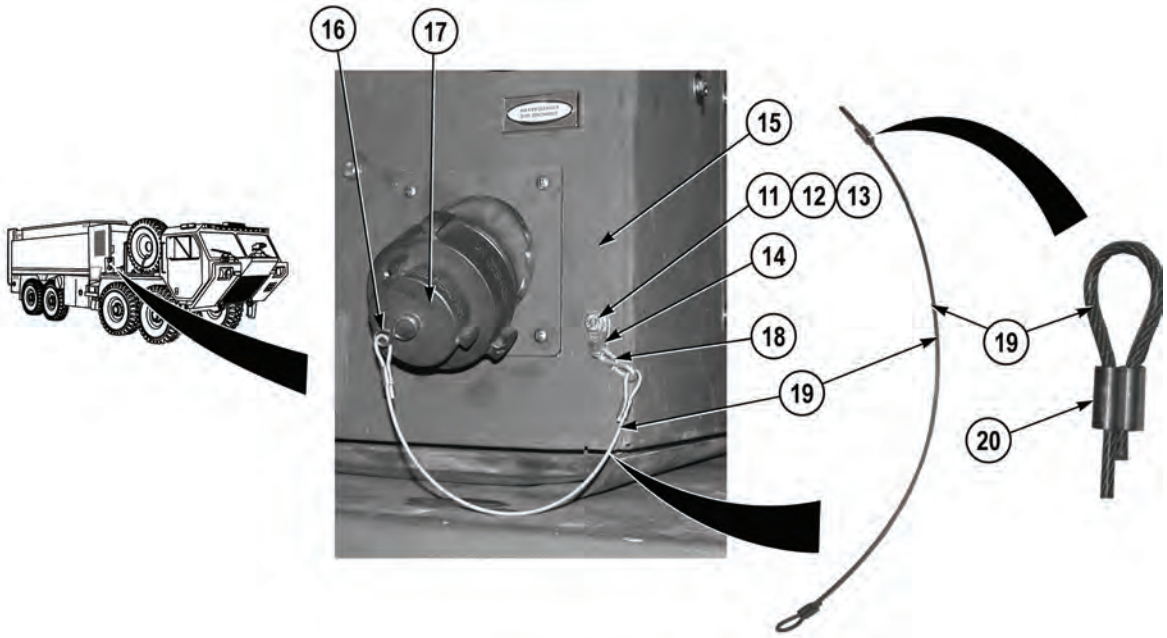
NOTE

Perform Steps (6) through (10) to remove wire rope from driver or passenger side discharge or auxiliary inlet caps. Passenger side inlet cap shown.

6. Remove screw (11), lockwasher (12), washer (13), and clip (14) from panel (15). Discard lockwasher.
7. Remove S-hook (16) from cap (17).
8. Remove clip (14) from S-hook (18).
9. Remove two S-hooks (16) and (18) from wire rope (19).
10. Remove two swaging sleeves (20) from wire rope (19).

END OF TASK

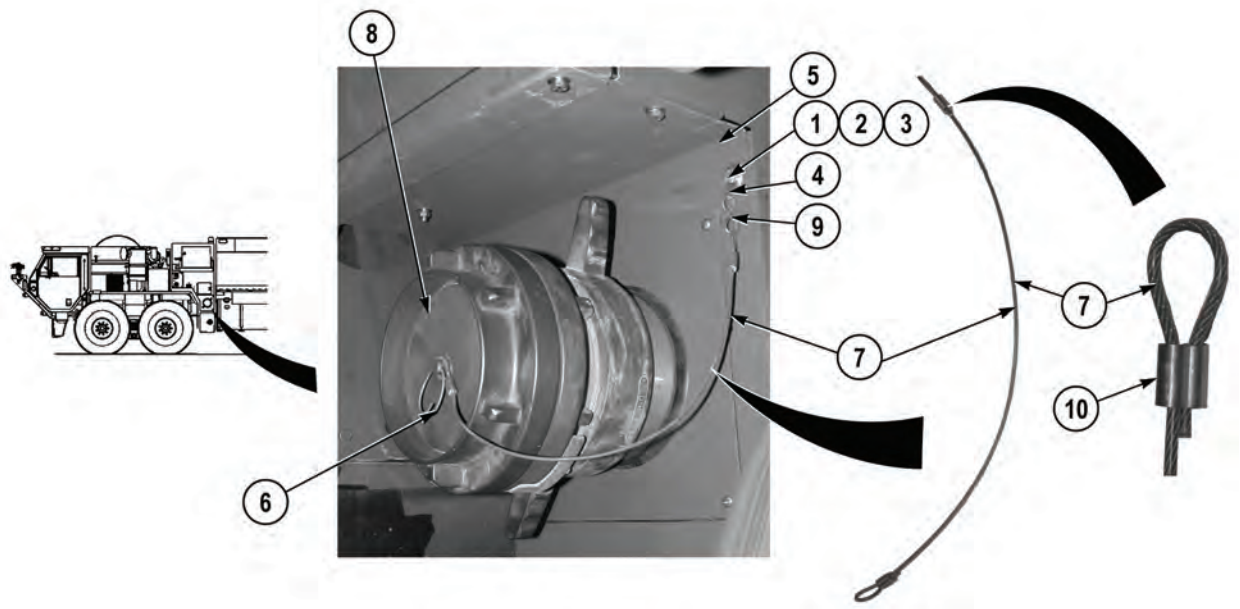
INSTALLATION



NOTE

- Perform Steps (1) through (6) to install wire rope on driver or passenger side discharge or auxiliary inlet caps. Passenger side inlet cap shown.
- Wire rope needs to run through one side of swaging sleeve then back through other side of swaging sleeve.

1. Install two swaging sleeves (20) on wire rope (19).
2. Crimp two swaging sleeves (20).
3. Install two S-hooks (16) and (18) on wire rope (19).
4. Install clip (14) on S-hook (18).
5. Install S-hook (16) on cap (17).
6. Install clip (14) on panel (15) with washer (13), lockwasher (12), and screw (11).



NOTE

- Perform Steps (7) through (12) to install wire rope on driver side main inlet cap.
- Wire rope needs to run through one side of swaging sleeve then back through other side of swaging sleeve.

7. Install two swaging sleeves (10) on wire rope (7).
8. Crimp two swaging sleeves (10).
9. Install S-hook (9) on wire rope (7).
10. Install clip (4) on S-hook (9).
11. Install wire rope (7) on cap (8) with ring (6).
12. Install clip (4) on panel (5) with washer (3), lockwasher (2), and screw (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

AIR RESERVOIR REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Personnel Required
MOS 63B Wheeled Vehicle Mechanic (2)

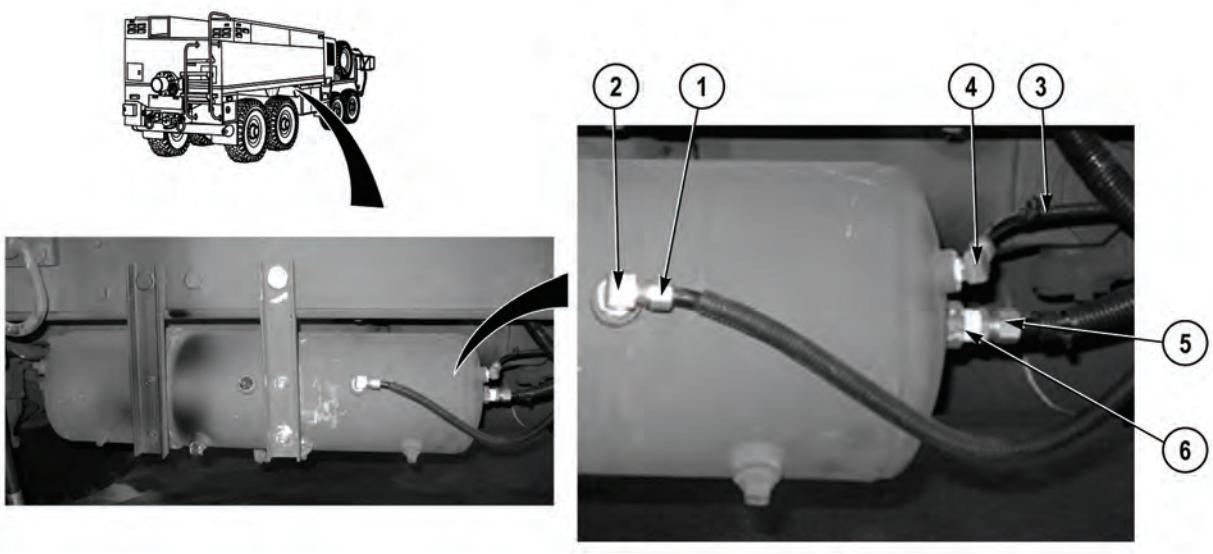
Materials/Parts
Compound, Sealing, Pipe Thread (WP 0401, Item 11)
Tags, Identification (WP 0401, Item 22)
Locknut (2)

Materials/Parts (continued)
Locknut (2)
Locknut (2)
Locknut (2)

References
WP 0390, Fig. 1

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)
Air system drained (TM 9-2320-279-10)

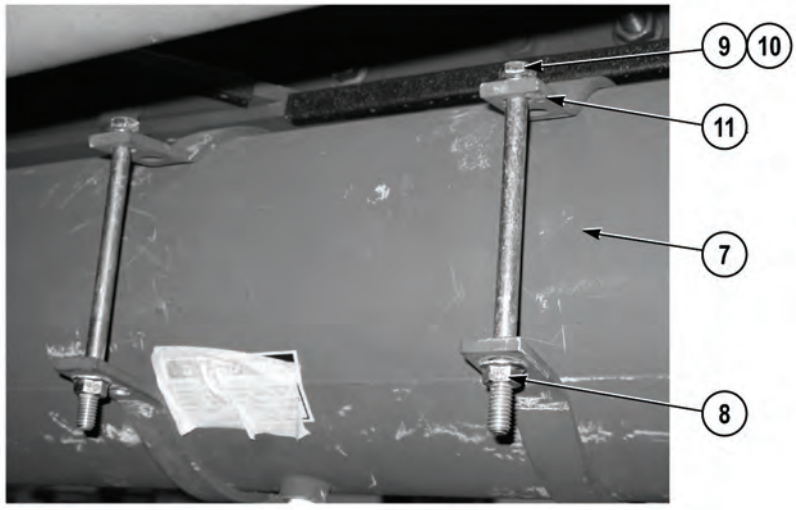
REMOVAL



NOTE

Tag and mark air lines prior to removal to ensure proper installation.

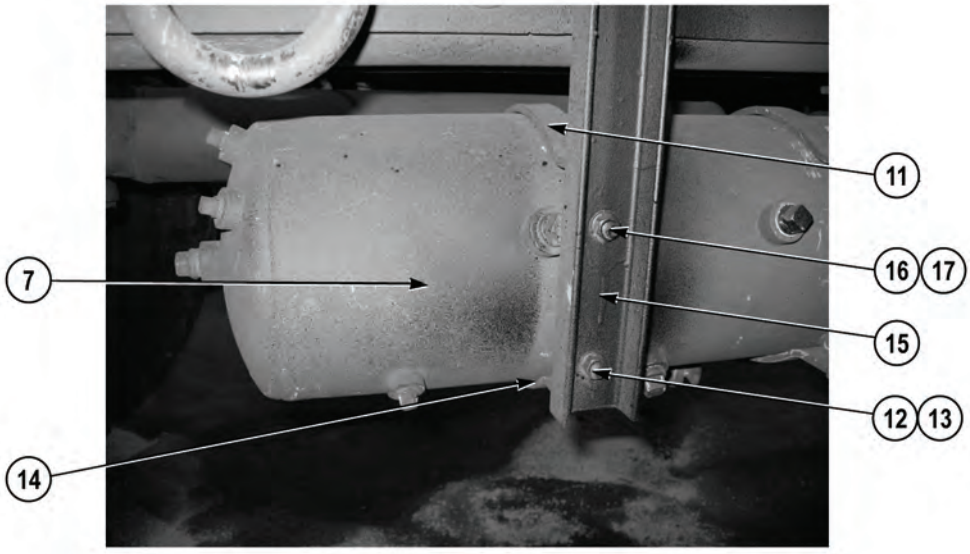
1. Remove air line (1) from elbow (2).
2. Remove air line (3) from elbow (4).
3. Remove air line (5) from fitting (6).



NOTE

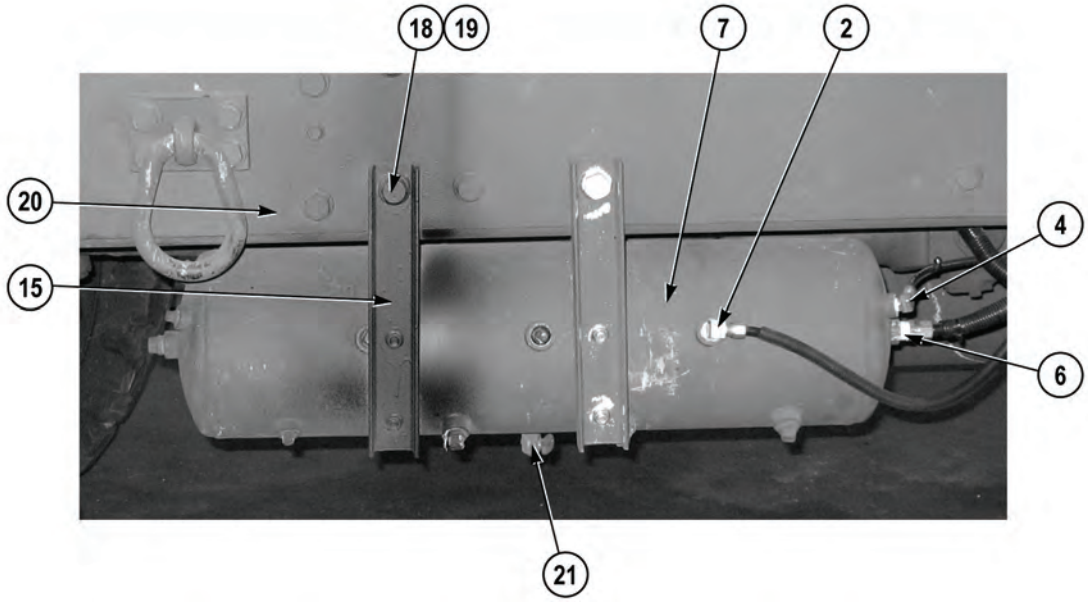
Note position of air tank prior to removal of reservoir brackets to ensure proper installation.

4. With the aid of an assistant, support air reservoir (7) and remove two locknuts (8), washers (9), and screws (10) from upper clamps (11). Discard locknuts.



5. With the aid of an assistant, remove two locknuts (12), screws (13), lower clamps (14), and air reservoir (7) from air reservoir mounting brackets (15). Discard locknuts.

6. Remove two locknuts (16), screws (17), and upper clamps (11) from air reservoir mounting brackets (15). Discard locknuts.

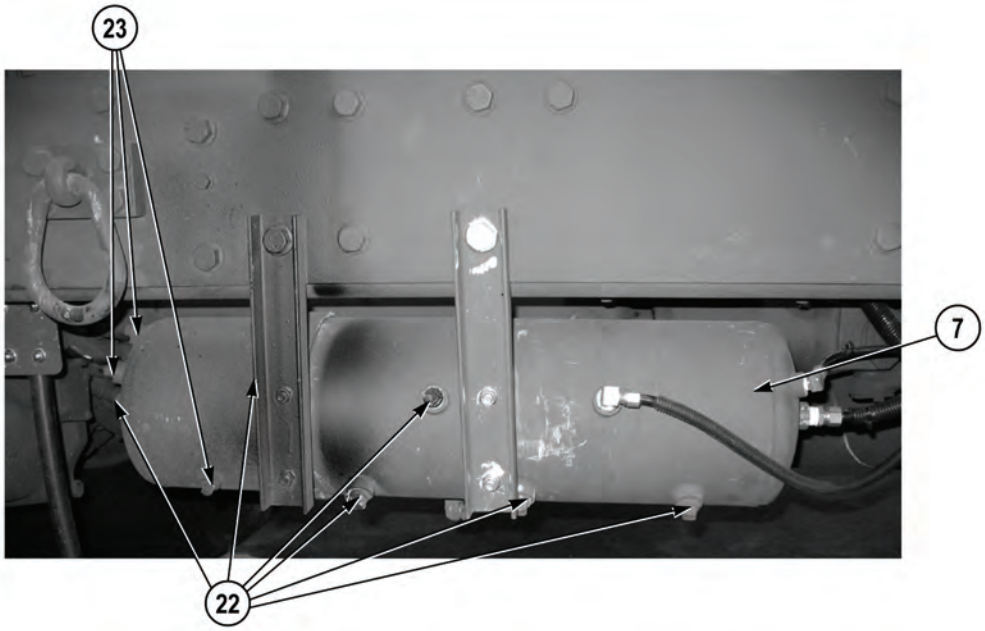


7. Remove two locknuts (18), screws (19), and tank reservoir mounting brackets (15) from frame rail (20). Discard locknuts.

NOTE

Note position of plugs, elbows, and fittings prior to removal to ensure proper installation.

8. Remove two elbows (2) and (4) from air reservoir (7).
9. Remove fitting (6) from air reservoir (7).
10. Remove drain cock (21) from air reservoir (7).



11. Remove six plugs (22) from air reservoir (7).
12. Remove three plugs (23) from air reservoir (7).

END OF TASK

INSTALLATION

WARNING



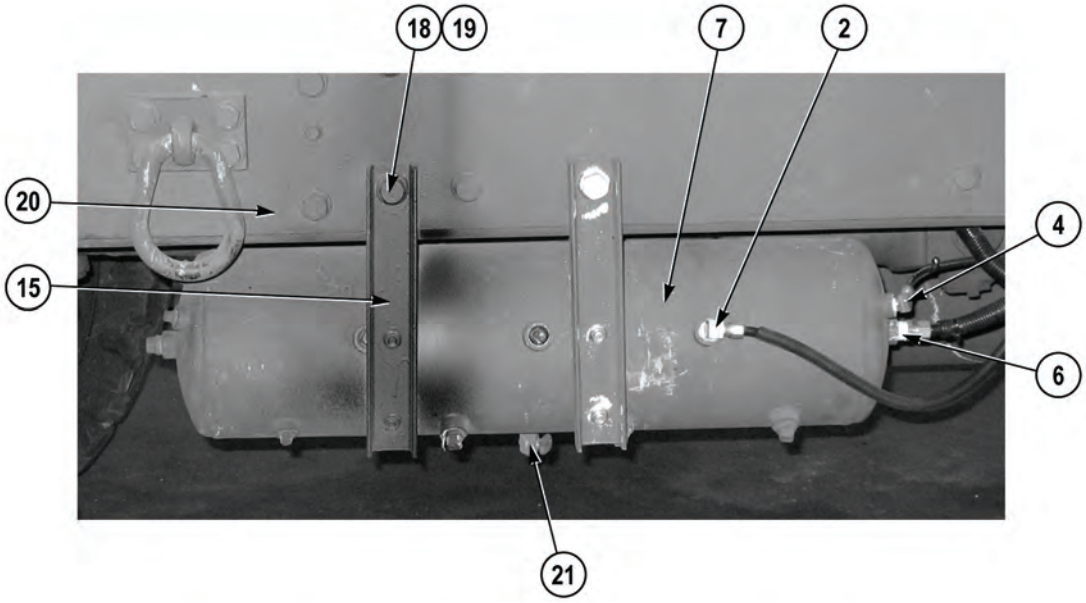
Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

1. Apply sealing compound to thread of three plugs (23), five plugs (22), drain cock (21), fitting (6), and two elbows (2) and (4).

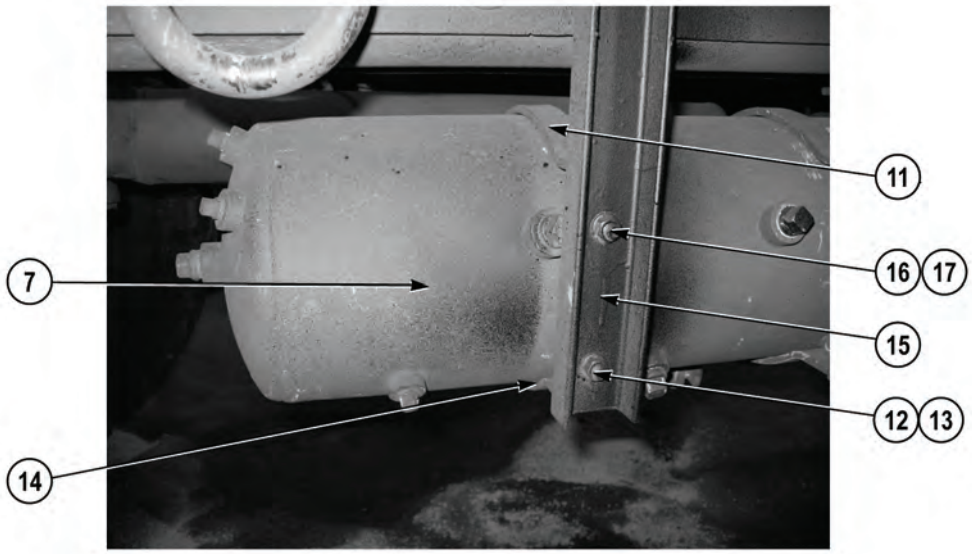
NOTE

Install plugs, elbows, and fittings as noted prior to removal.

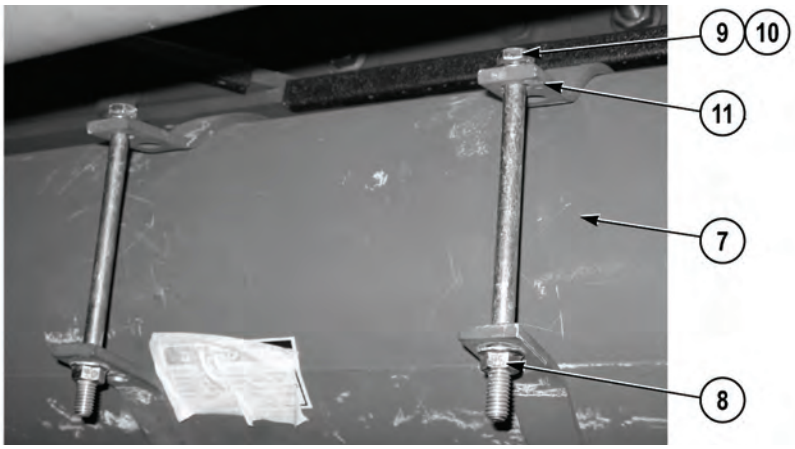
2. Install three plugs (23) on air reservoir (7).
3. Install six plugs (22) on air reservoir (7).



4. Install drain cock (21) on air reservoir (7).
5. Install fitting (6) on air reservoir (7).
6. Install two elbows (2) and (4) on air reservoir (7).
7. Install tank reservoir mounting brackets (15) on frame rail (20) with two screws (19) and locknuts (18).



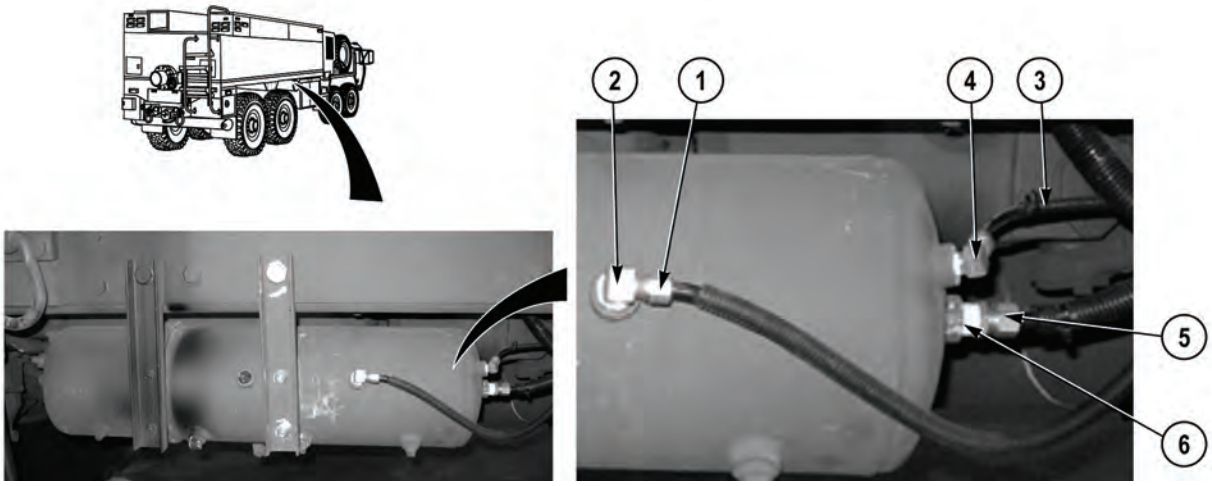
8. Install two upper clamps (11) on air reservoir mounting brackets (15) with two screws (17) and locknuts (16).
9. With the aid of an assistant, install two lower clamps (14) and air reservoir (7) on air reservoir mounting brackets (15) with two screws (13), and locknuts (12).



NOTE

Install air reservoir as noted prior to removal.

10. With the aid of an assistant, support air reservoir (7) and install two upper clamps (11) with two screws (10), washers (9), and locknuts (8).



11. Install air line (5) on fitting (6).
12. Install air line (3) on elbow (4).
13. Install air line (1) on elbow (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

BUMPER TURRET MOUNT REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

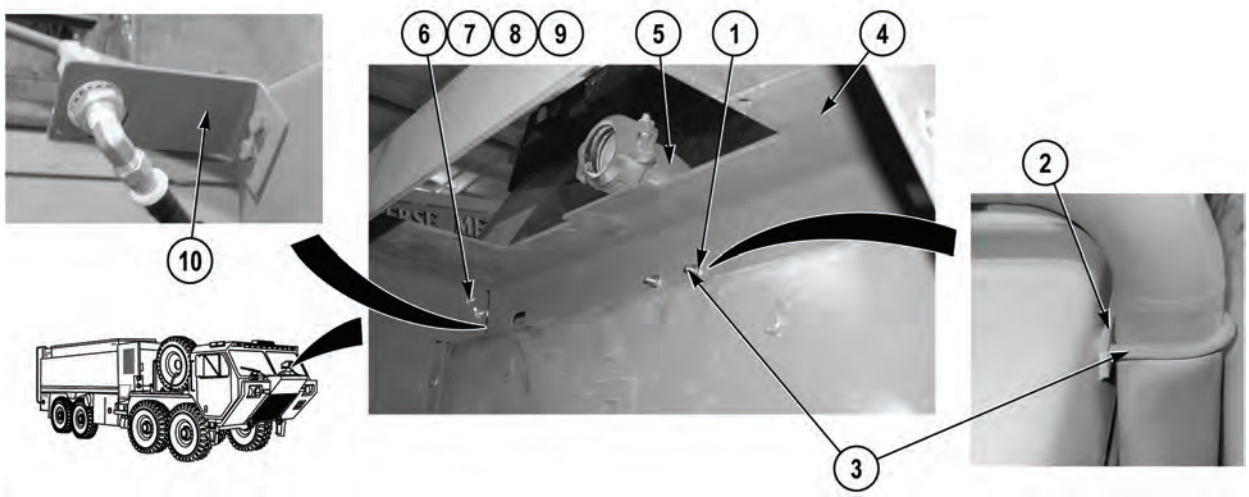
Materials/Parts
Locknut (2)
Lockwasher (4)
Lockwasher (2)

Personnel Required
MOS 63B Wheeled vehicle mechanic (2)

References
WP 0392, Fig. 91, 94

Equipment Conditions
Bumper turret removed (WP 0379)
Skid plate grille removed (WP 0350)

REMOVAL



NOTE

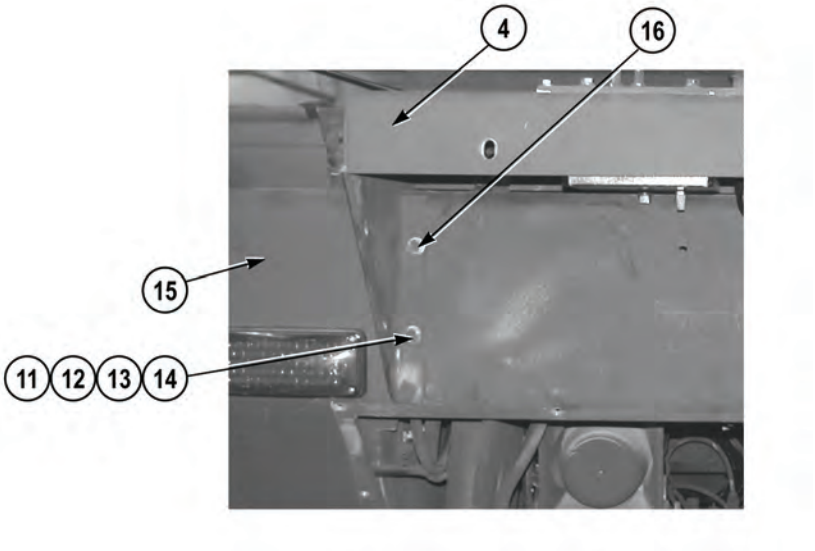
- Note quantity and position of shims prior to removal to ensure proper installation.
- Shims are positioned between bumper turret mount, and bumper turret pipe.

1. Remove two locknuts (1), three shims (2), and U-bolt (3) from bumper turret mount (4) and bumper turret pipe (5). Discard locknuts.

NOTE

- Note position of washers prior to removal to ensure proper installation.
- Window deluge brackets are attached to outside of bumper turret mount.

2. Remove four nuts (6), lockwashers (7), eight washers (8), four screws (9), and two window deluge brackets (10) from bumper turret mount (4). Discard lockwashers.

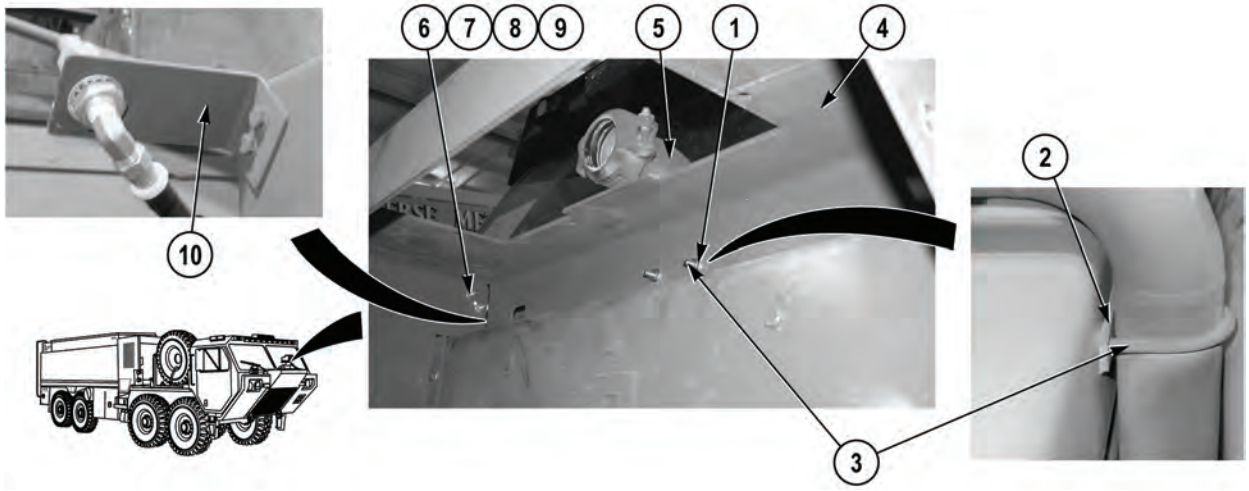


3. Remove two nuts (11), lockwashers (12), four washers (13), and two screws (14) from bumper turret mount (4) and skid plate (15). Discard lockwashers.
4. With the aid of an assistant, remove two screws (16) and bumper turret mount (4) from skid plate (15).

END OF TASK

INSTALLATION

1. With the aid of an assistant, install bumper turret mount (4) on skid plate (15) with two screws (16).
2. Install two screws (14), four washers (13), two lockwashers (12), and nuts (11) on bumper turret mount (4) and skid plate (15).



NOTE

Install washers as noted prior to removal.

3. Install two window deluge brackets (10) on bumper turret mount (4) with four screws (9), eight washers (8), four lockwashers (7), and nuts (6).

NOTE

Install shims as noted prior to removal.

4. Install three shims (2) and U-bolt (3) on bumper turret pipe (5) and bumper turret mount (4) with two locknuts (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install bumper turret (WP 0379)
2. Install skid plate grille (WP 0350)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

FUEL TANK BRACKET REPLACEMENT

INITIAL SETUP:

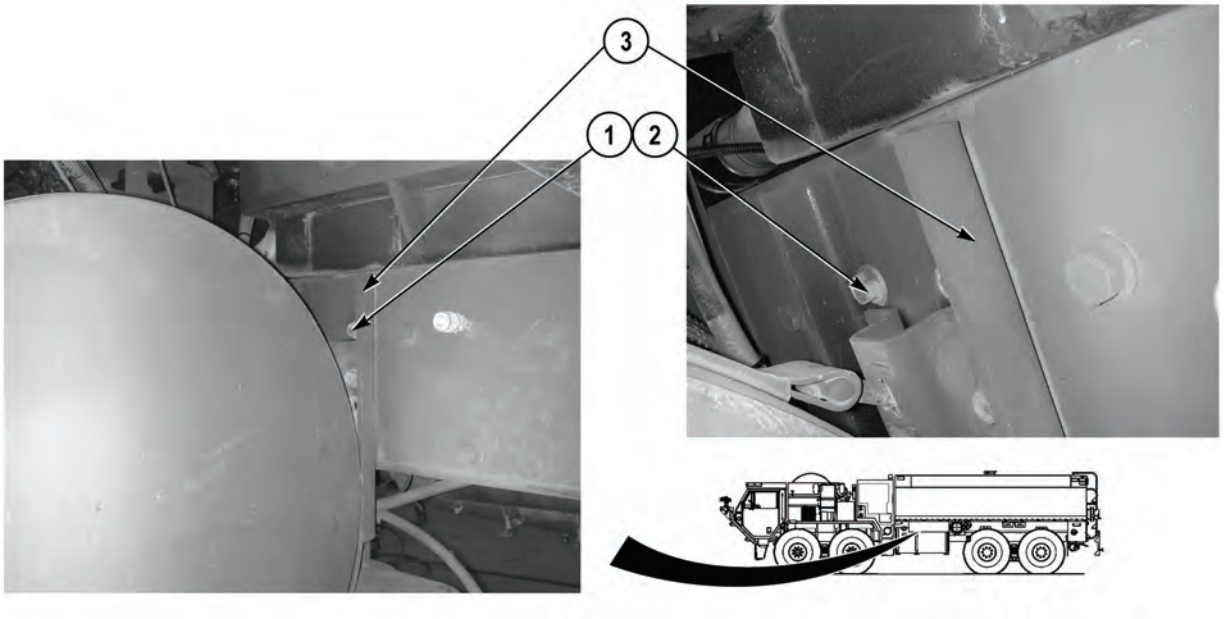
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive
(WP 0399, Item 17)

Materials/Parts
Locknut (6)

References
WP 0392, Fig. 90

Equipment Conditions
Heater fuel tank pickup removed (WP 0311)
Fuel tank and brackets removed
(TM 9-2320-315-14&P)

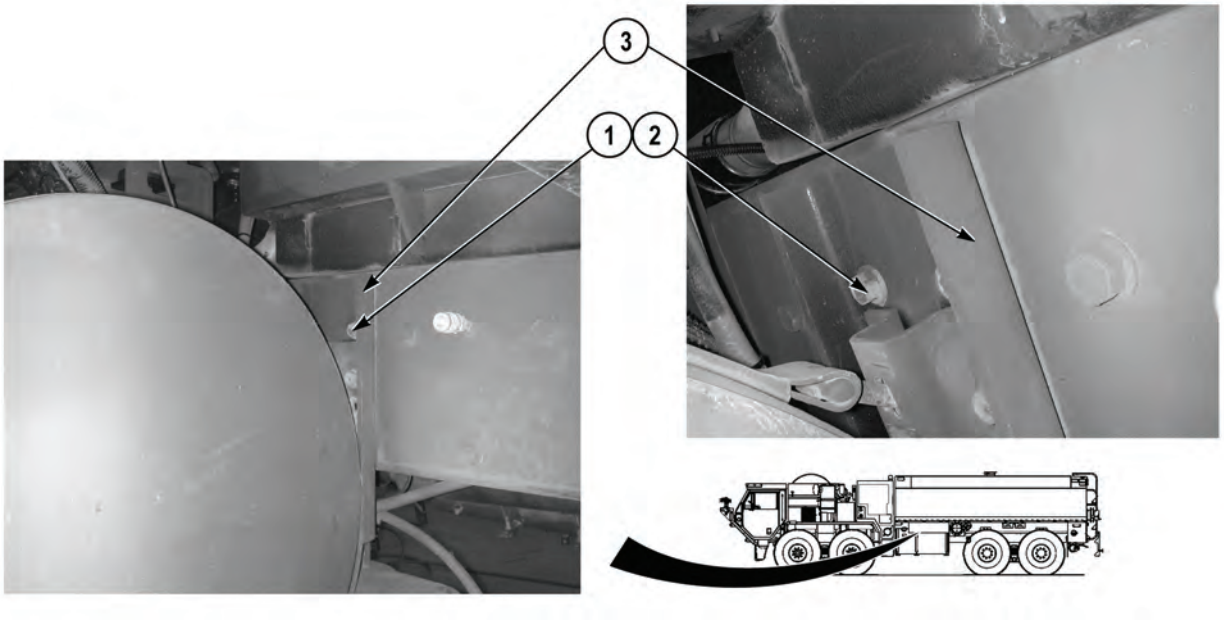
REMOVAL



Remove six locknuts (1), screws (2), and three brackets (3) from vehicle. Discard locknuts.

END OF TASK

INSTALLATION



Install three brackets (3) on vehicle with six screws (2) and locknuts (1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install fuel tank and brackets (TM 9-2320-315-14&P)
2. Install heater fuel tank pickup (WP 0311)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

SPANNER AND HYDRANT WRENCH HOLDER REPLACEMENT

INITIAL SETUP:

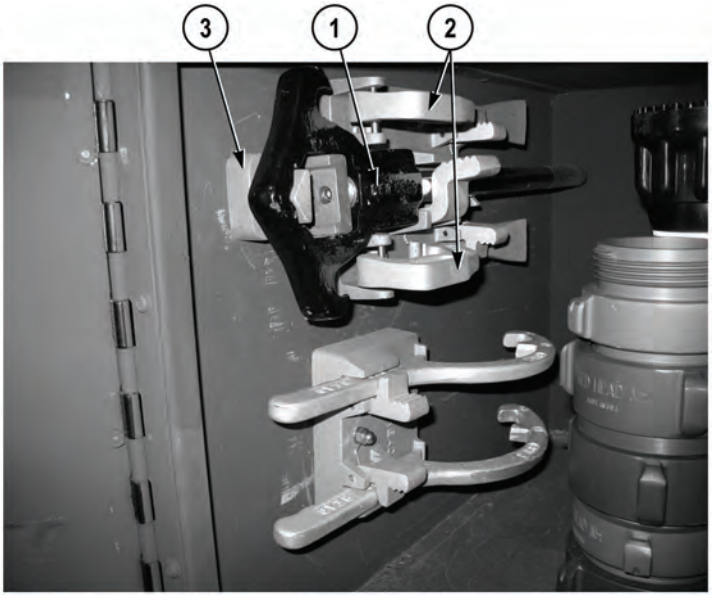
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Lockwasher (2)

References
WP 0392, Fig. 84

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)
Compartment door opened (WP 0008)

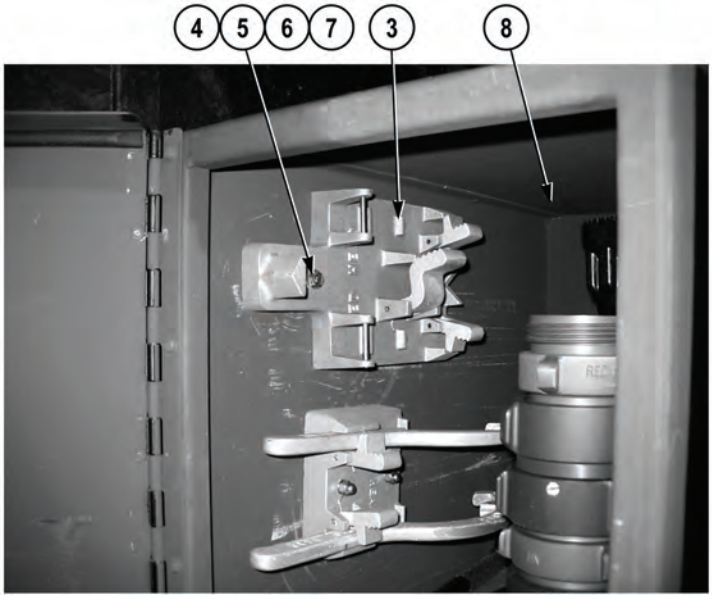
REMOVAL



NOTE

Both spanner and hydrant wrench holders are removed the same way.

1. Remove hydrant wrench (1) and two spanner wrenches (2) from holder (3).



2. Remove two nuts (4), lockwashers (5), washers (6), screws (7), and holder (3) from stowage compartment box (8). Discard lockwashers.

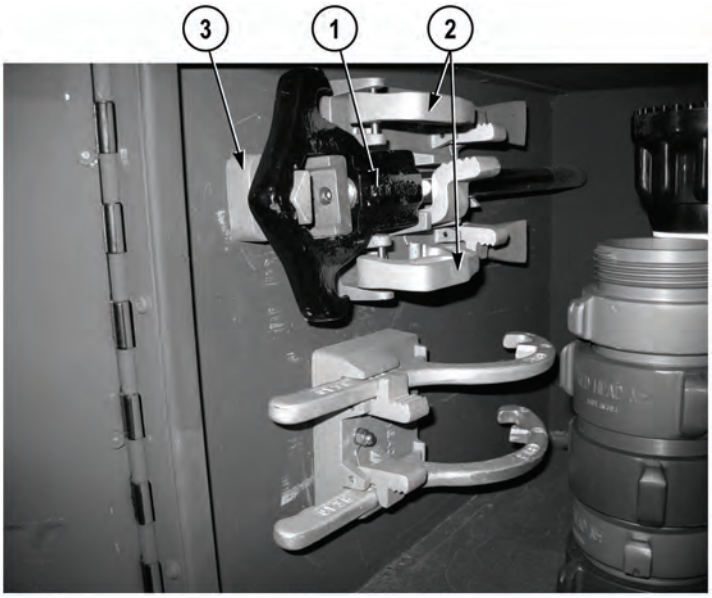
END OF TASK

INSTALLATION

NOTE

Both spanner and hydrant wrench holders are installed the same way.

1. Install holder (3) on stowage compartment box (8) with two screws (7), washers (6), lockwashers (5), and nuts (4).



2. Install two spanner wrenches (2) and hydrant wrench (1) in holder (3).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Close compartment door (WP 0008)
2. Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

AIR LINES AND FITTINGS REPLACEMENT

INITIAL SETUP:

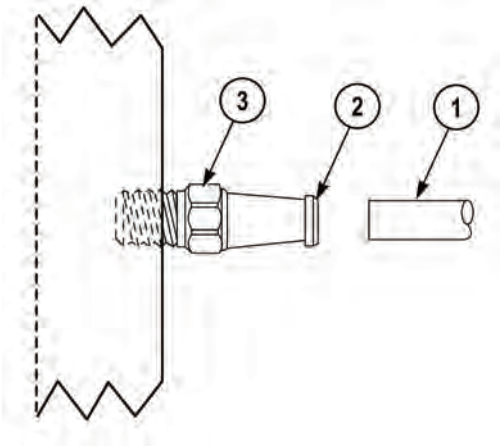
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Compound, Sealing, Pipe Thread (WP 0401, Item 11)
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)

Equipment Conditions
Pump house panels A, D, E G, H, K, L removed (if necessary) (WP 0341)
Air system drained (TM 9-2320-279-10)
Bumper turret cover removed (if required) (WP 0379)

AIR HOSE FITTINGS

1. **Removing Air Line From Fitting.**



⚠ CAUTION

Air lines may be removed directly from elbows and fittings, or may remain attached to elbows and fittings and removed as an assembly. If air lines are removed from elbows and fittings, care must be taken not to damage air line. If sealing surface of air line is damaged air line must be repaired or replaced.

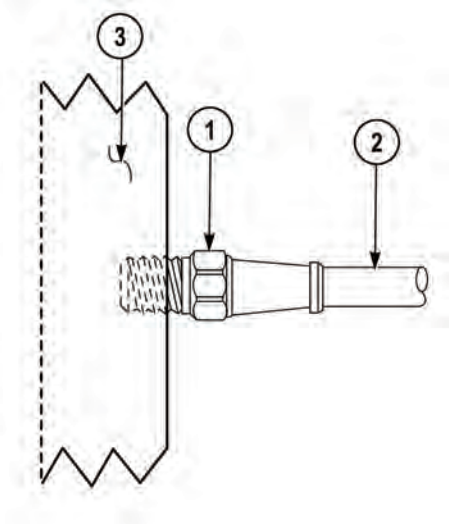
NOTE

- Air line fitting shown, shows straight fitting located on shutoff control valve manifold.
- Air lines attached to elbows and tees on air valves and shutoff control valve manifold are replaced the same way.

a. Remove air line (1) by pushing release button (2) towards body of fitting (3) and removing air line (1).

b. Install air line (1) on fitting (3) until air line (1) bottoms in fitting (3).

2. **Removing Fitting and Air Line From Component With Air Line Remaining Attached To Fitting.**



NOTE

Internal swivel in fitting allows air line to remain in fitting while fitting is removed from component.

a. Remove fitting (1) and air line (2) from component (3).

WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

CAUTION

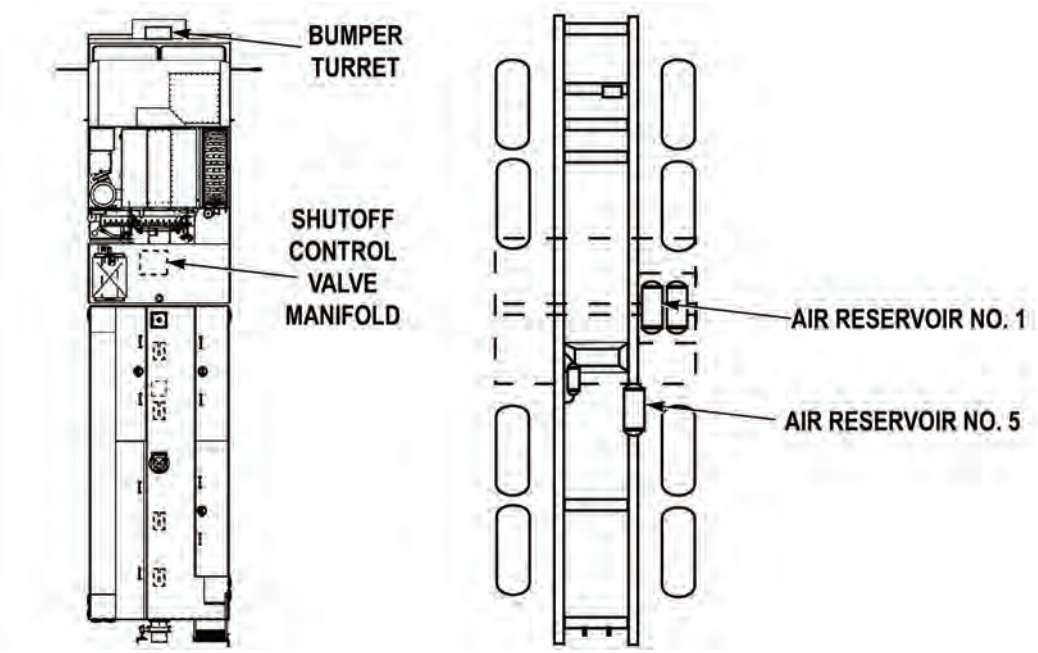
Use sealing compound sparingly only on pipe threads. Do not apply compound to hose connections. Failure to comply may result in damage to equipment.

b. Apply sealing compound to threads of fitting (1).

c. Install fitting (1) and air line (2) on component (3).

END OF TASK

AIR HOSE REPLACEMENT



NOTE

- Tag and mark air lines before removal.
- Remove cable ties as required.
- Remove split tubing as required.
- To aid in installation, route new air line along side of old air line prior to removal of old air line.

Table 1. Air Supply Air Lines.

Hose Item No.	From	To
1	Air Reservoir No. 1	Air Reservoir No. 5
2	Air Reservoir No. 5	Bumper Turret
3	Air Reservoir No. 5	Shutoff Control Valve Manifold

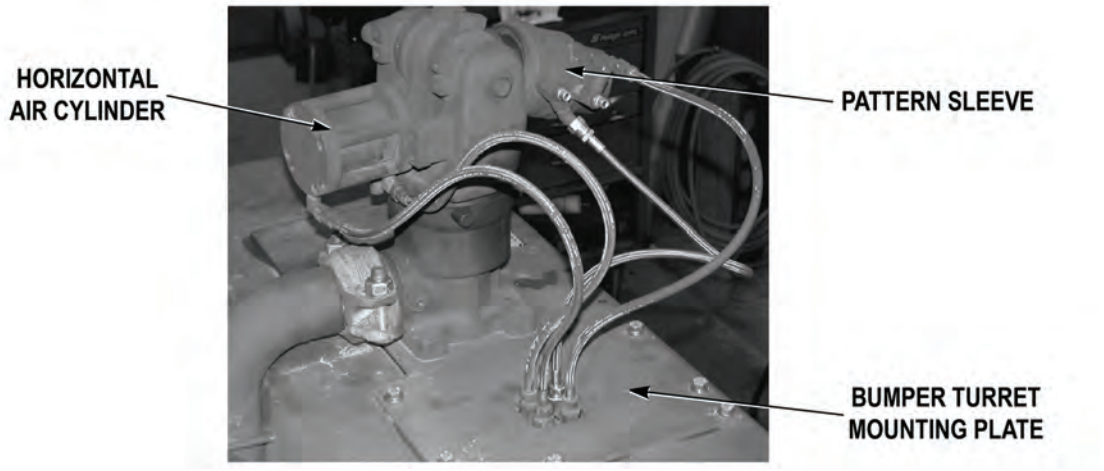


Table 2. Bumper Turret Braided Air Lines.

Hose Item No.	From	To
1	Bumper Turret Mounting Plate	Horizontal Air Cylinder
2	Bumper Turret Mounting Plate	Horizontal Air Cylinder
3	Bumper Turret Mounting Plate	Pattern Sleeve
4	Bumper Turret Mounting Plate	Pattern Sleeve

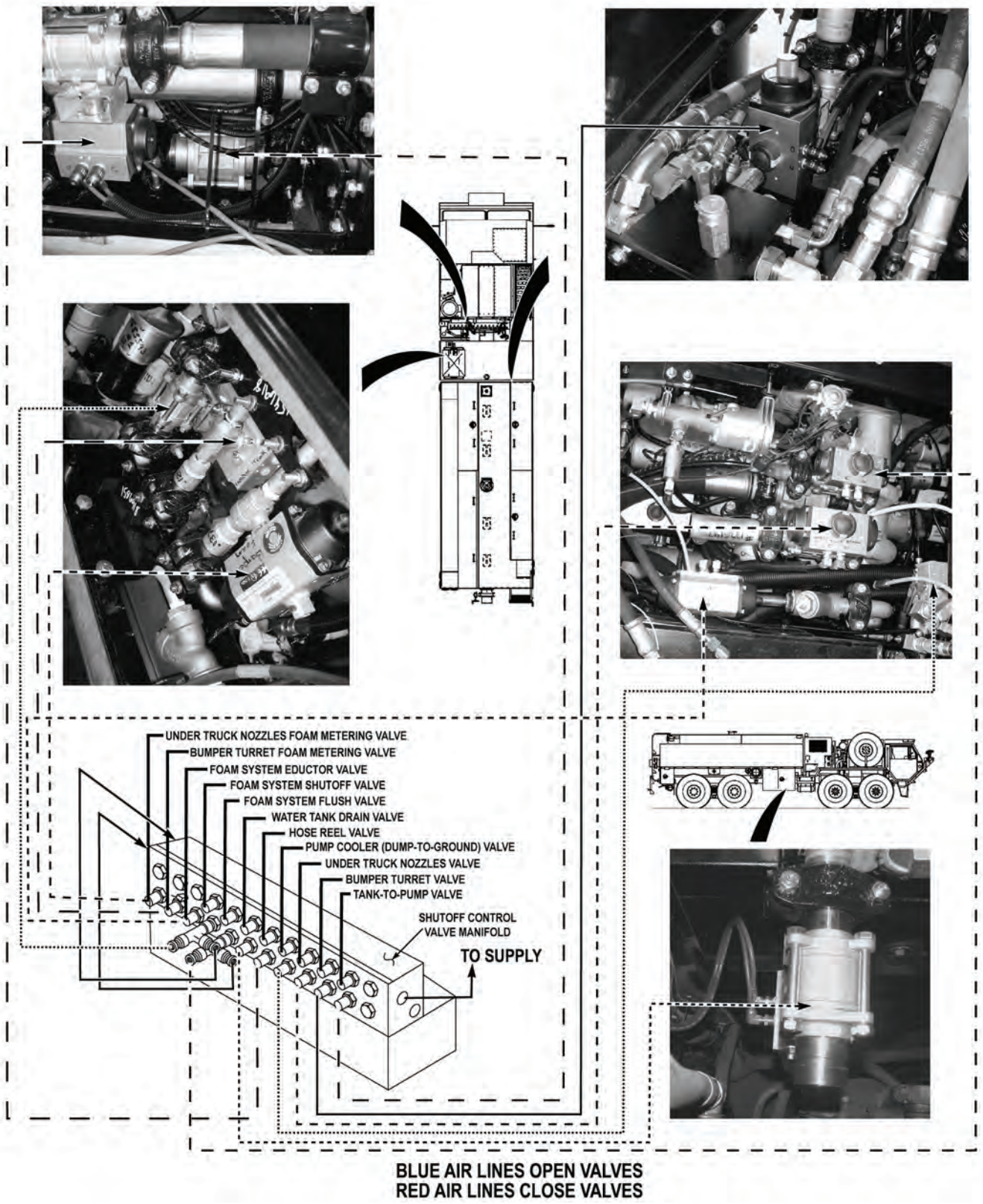

UNDER TRUCK NOZZLES FOAM METERING VALVE
BUMPER TURRET FOAM METERING VALVE
FOAM SYSTEM EDUCTOR VALVE
FOAM SYSTEM SHUTOFF VALVE
FOAM SYSTEM FLUSH VALVE
WATER TANK DRAIN VALVE
HOSE REEL VALVE
PUMP COOLER (DUMP-TO-GROUND) VALVE
UNDER TRUCK NOZZLES VALVE
BUMPER TURRET VALVE
TANK-TO-PUMP VALVE
SHUTOFF CONTROL VALVE MANIFOLD
TO SUPPLY
BLUE AIR LINES OPEN VALVES
RED AIR LINES CLOSE VALVES

Table 3. Shutoff Control Valve Manifold and Valve(s) Air Lines.

Hose Item No.	Color	From	To
1	Blue	Shutoff Control Valve Manifold	Under Truck Nozzles Foam Metering Valve (Open)
2	Blue	Shutoff Control Valve Manifold	Bumper Turret Foam Metering Valve (Open)
3	Blue	Shutoff Control Valve Manifold	Foam System Eductor Valve (Open)
4	Red	Shutoff Control Valve Manifold	Foam System Shutoff Valve (Close)
5	Blue	Shutoff Control Valve Manifold (tee/bottom)	Foam System Shutoff Valve (Open)
6	Black	Shutoff Control Valve Manifold (tee/side)	Shutoff Control Valve Manifold (Top Side Port/Elbow)
7	Red	Shutoff Control Valve Manifold	Foam System Flush Valve (Close)
8	Blue	Shutoff Control Valve Manifold (tee/bottom)	Foam System Flush Valve (Open)
9	Blue	Shutoff Control Valve Manifold (tee/side)	Shutoff Control Valve Manifold (Bottom Side Port/Elbow)
10	Red	Shutoff Control Valve Manifold	Water Tank Drain Valve (Close)
11	Blue	Shutoff Control Valve Manifold	Water Tank Drain Valve (Open)
12	Red	Shutoff Control Valve Manifold	Hose Reel Valve (Close)
13	Blue	Shutoff Control Valve Manifold	Hose Reel Valve (Open)
14	Red	Shutoff Control Valve Manifold	Pump Cooler (Dump-To-Ground) Valve (Close)
15	Blue	Shutoff Control Valve Manifold	Pump Cooler (Dump-To-Ground) Valve (Open)
16	Red	Shutoff Control Valve Manifold	Under Truck Nozzles Valve (Close)
17	Blue	Shutoff Control Valve Manifold	Under Truck Nozzles Valve (Open)
18	Red	Shutoff Control Valve Manifold	Bumper Turret Valve (Close)
19	Blue	Shutoff Control Valve Manifold	Bumper Turret Valve (Open)
20	Red	Shutoff Control Valve Manifold	Tank-To-Pump Valve (Close)
21	Blue	Shutoff Control Valve Manifold	Tank-To-Pump Valve (Open)
22	Black	Shutoff Control Valve Manifold	Air Reservoir (Supply)

NOTE

Red (close) air lines not shown for clarity.

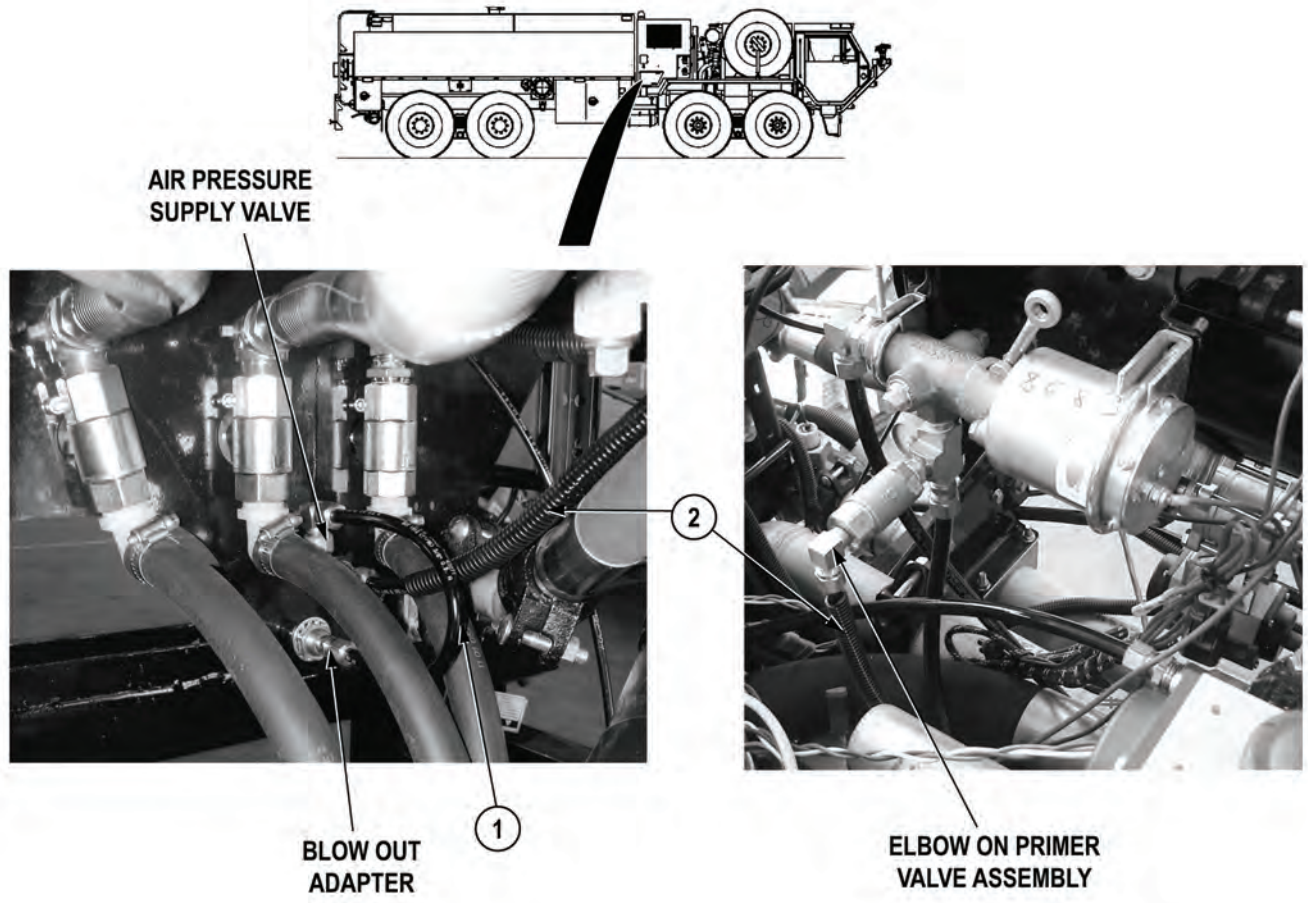


Table 4. Water Pump Blow Out Air Lines.

Hose Item No.	Color	From	To
1	Black	Blow Out Adapter	Air Pressure Supply Valve
2	Black	Air Pressure Supply Valve	Elbow on Primer Valve Assembly

NOTE

- Install cable ties as required.
- Install split tubing as required.

FOLLOW-ON MAINTENANCE

1. Install bumper turret cover (if required) (WP 0379)
2. Install pump house panels A, D, E, G, H, K, L (if necessary) (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

BUMPER TURRET CONTROLS REPLACEMENT

INITIAL SETUP:

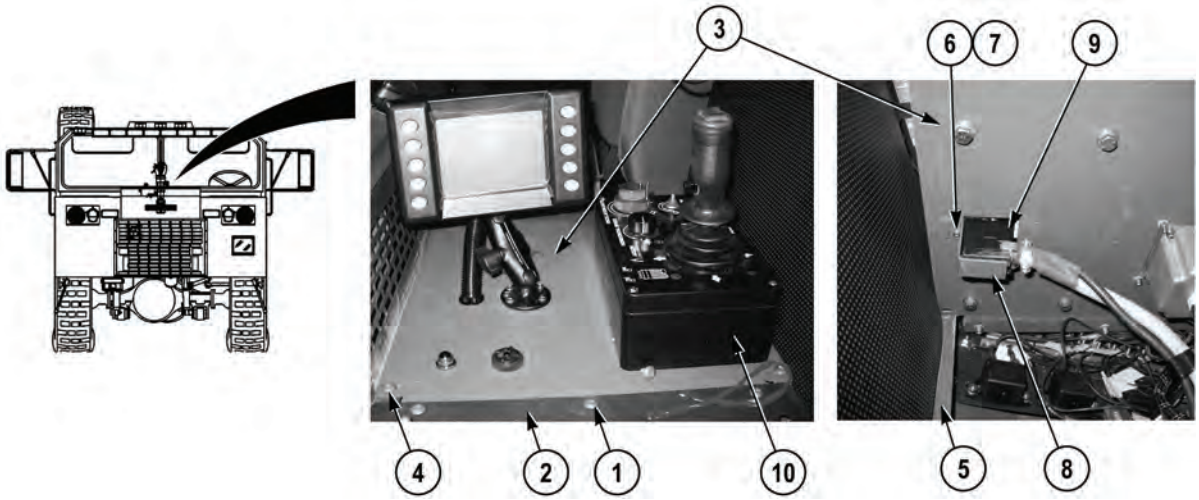
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Lockwasher (1)
Lockwasher (4)

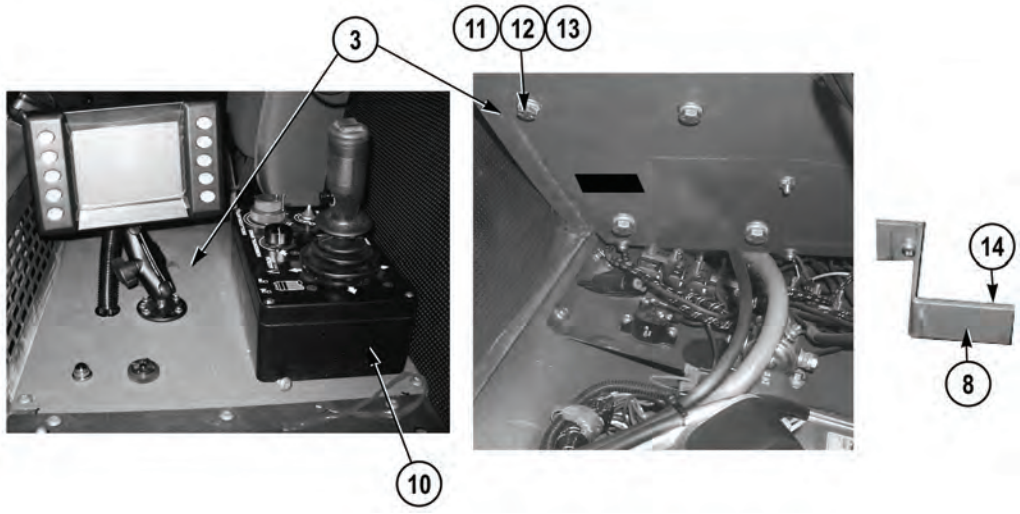
References
WP 0392, Fig. 92

Equipment Conditions
Batteries disconnected (TM 9-2320-315-14&P)

REMOVAL



1. Remove three screws (1) from two covers (2) and (3).
2. Remove five screws (4) and cover (3) from cover (2) and side support (5).
3. Remove screw (6), lockwasher (7), and bracket (8) from bumper turret connector (9) and cover (3). Discard lockwasher.
4. Disconnect bumper turret connector (9) from bumper turret control (10).

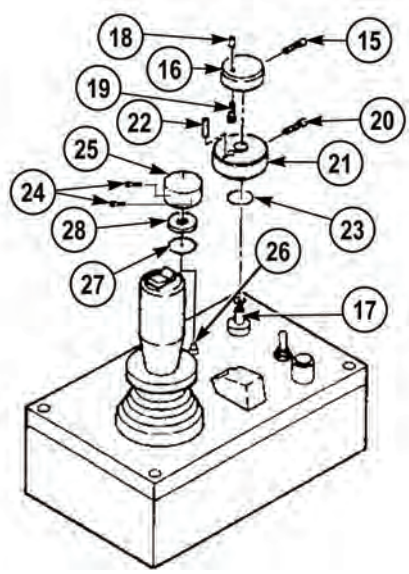


5. Remove four screws (11), lockwashers (12), washers (13), and bumper turret control (10) from cover (3). Discard lockwashers.

NOTE

Perform Step (6) if seal needs to be removed from bracket.

6. Remove seal (14) from bracket (8).

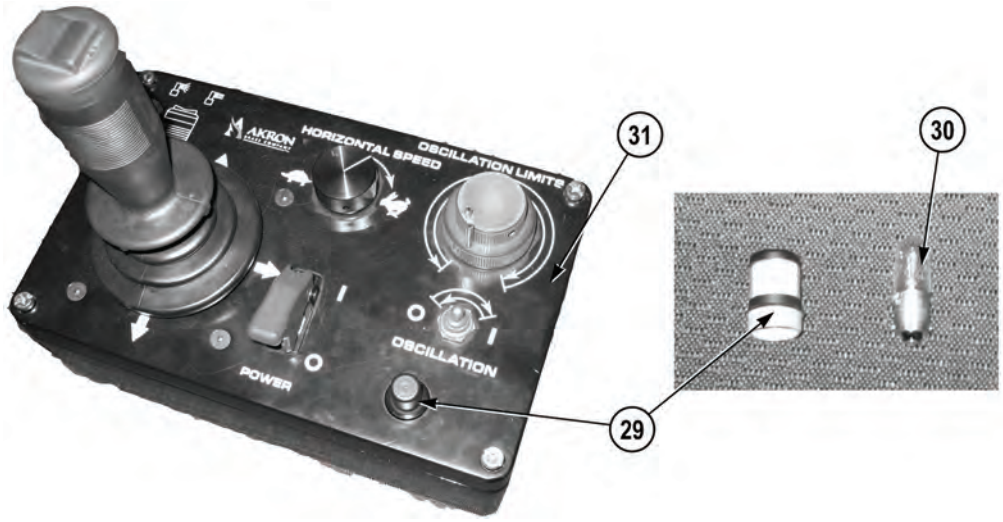


NOTE

- Perform Steps (7) through (12) if control knobs need to be removed.
- Note position of control knobs on switches prior to removal to ensure proper installation.

7. Loosen setscrew (15) and remove control knob (16) from switch (17).

8. Remove roll pin (18) and screw (19) from control knob (16).
9. Loosen setscrew (20) and remove control knob (21) from switch (17).
10. Remove roll pin (22) and preformed packing (23) from control knob (21).
11. Loosen two setscrews (24) and remove control knob (25) from switch (26).
12. Remove preformed packing (27) and spacer (28) from control knob (25).



13. Remove guard (29) and lamp (30) from bumper turret control box cover (31).

END OF TASK

INSTALLATION

1. Install lamp (30) and guard (29) on bumper turret control box cover (31).

NOTE

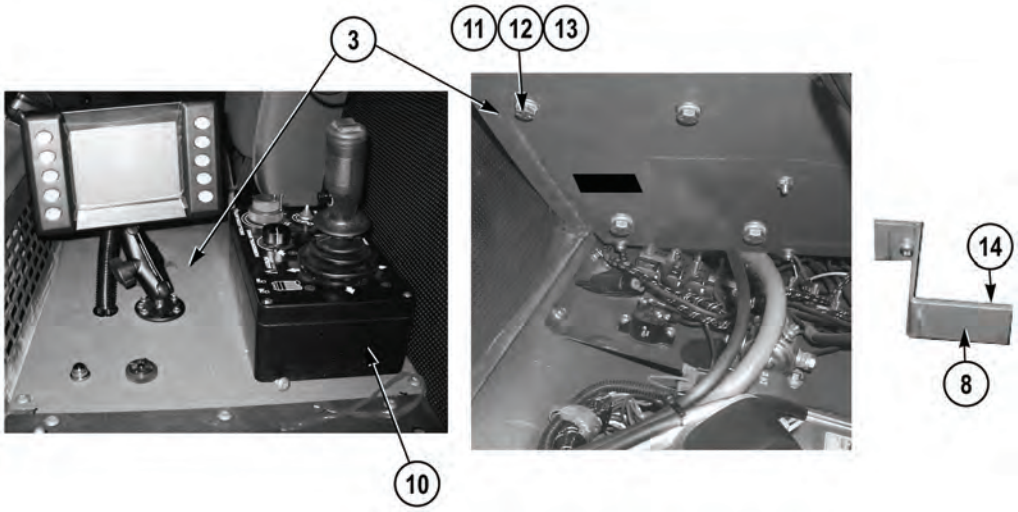
Perform Steps (2) through (7) if control knobs were removed.

2. Install spacer (28) and preformed packing (27) on control knob (25).

NOTE

Install control knobs on switches as noted prior to removal.

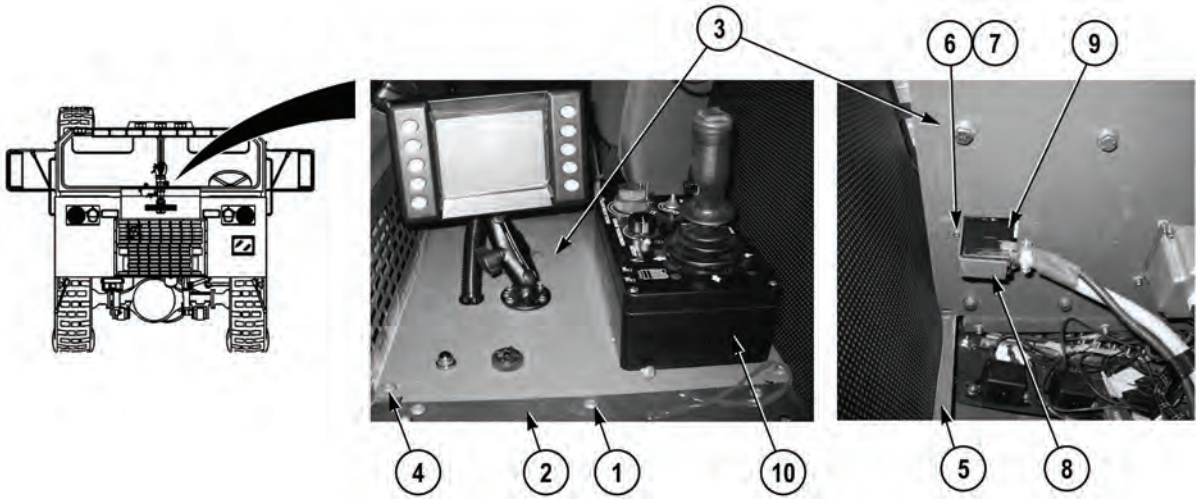
3. Install control knob (25) on switch (26) and tighten two setscrews (24).
4. Install preformed packing (23) and roll pin (22) on control knob (21).
5. Install control knob (21) on switch (17) and tighten setscrew (20).
6. Install screw (19) and roll pin (18) on control knob (16).
7. Install control knob (16) on switch (17) and tighten setscrew (15).



NOTE

Perform Step (7) if seal was removed from bracket.

8. Install seal (14) on bracket (8).
9. Install bumper turret control (10) on cover (3) with four washers (13), lockwashers (12), and screws (11).



10. Connect bumper turret connector (9) on bumper turret control (10).
11. Install bracket (8) on cover (3) and bumper turret connector (9) with lockwasher (7) and screw (6).
12. Install cover (3) on cover (2) and side support (5) with five screws (4).
13. Install three screws (1) on two covers (2) and (3).

END OF TASK

FOLLOW-ON MAINTENANCE

Connect batteries (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

BUMPER TURRET JUNCTION BOX REPLACEMENT

INITIAL SETUP:

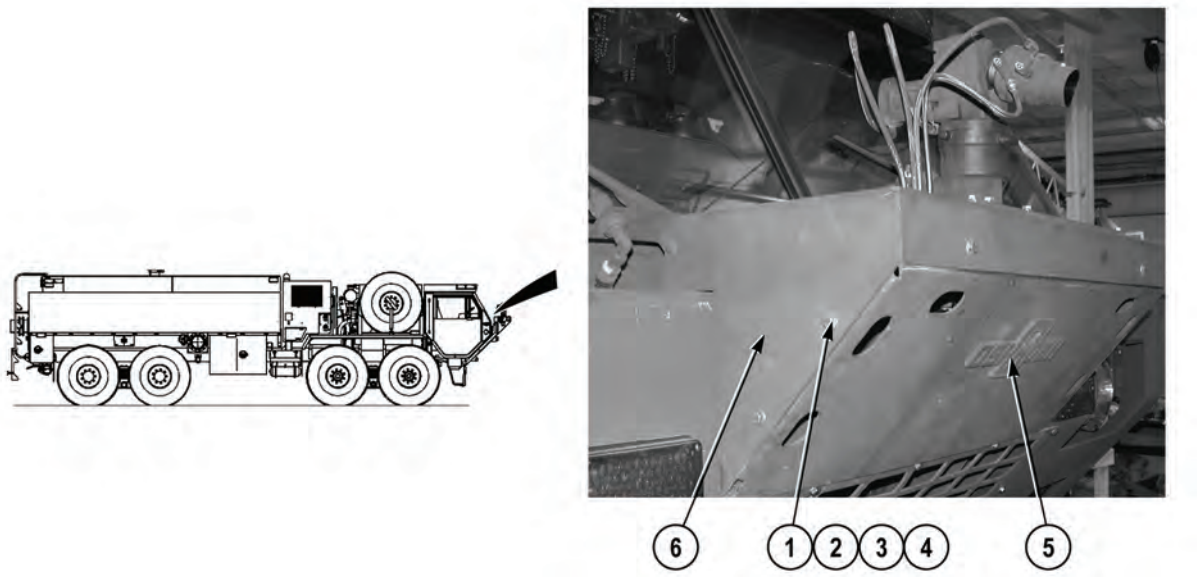
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Lockwasher (6)

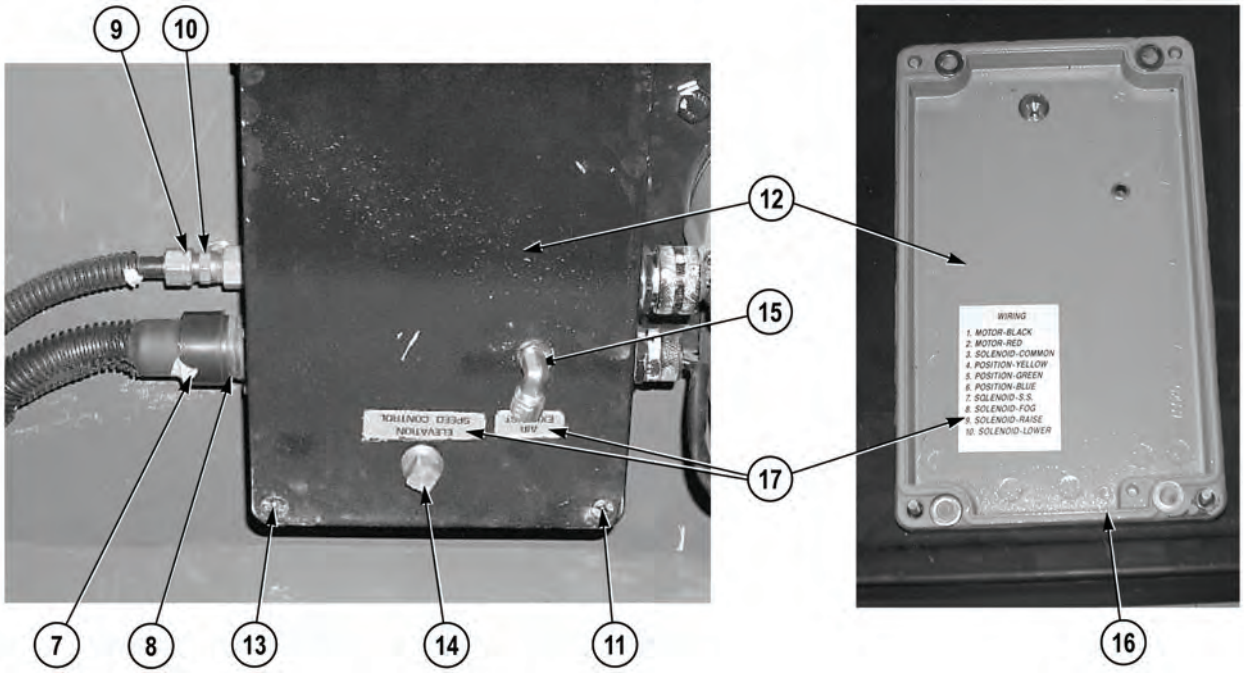
References
WP 0328
WP 0392, Fig. 92

Equipment Conditions
Batteries disconnected (TM 9-2320-315-14&P)
Air system drained (TM 9-2320-279-10)

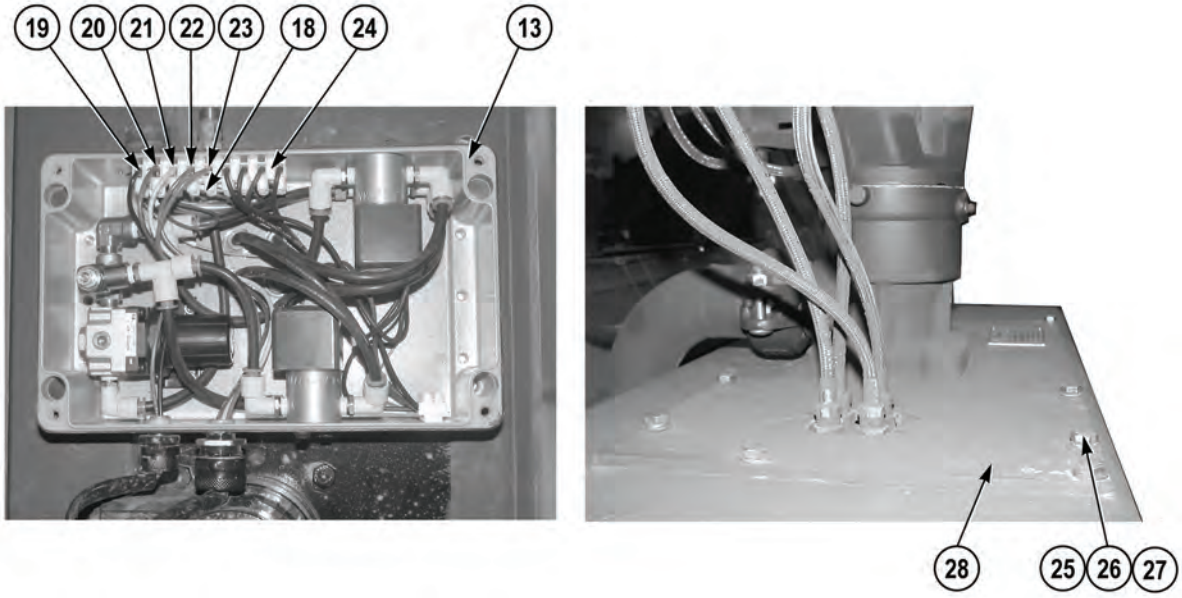
REMOVAL



1. Remove six nuts (1), lockwashers (2), 12 washers (3), six screws (4), and cover (5) from bumper turret mount (6). Discard lockwashers.



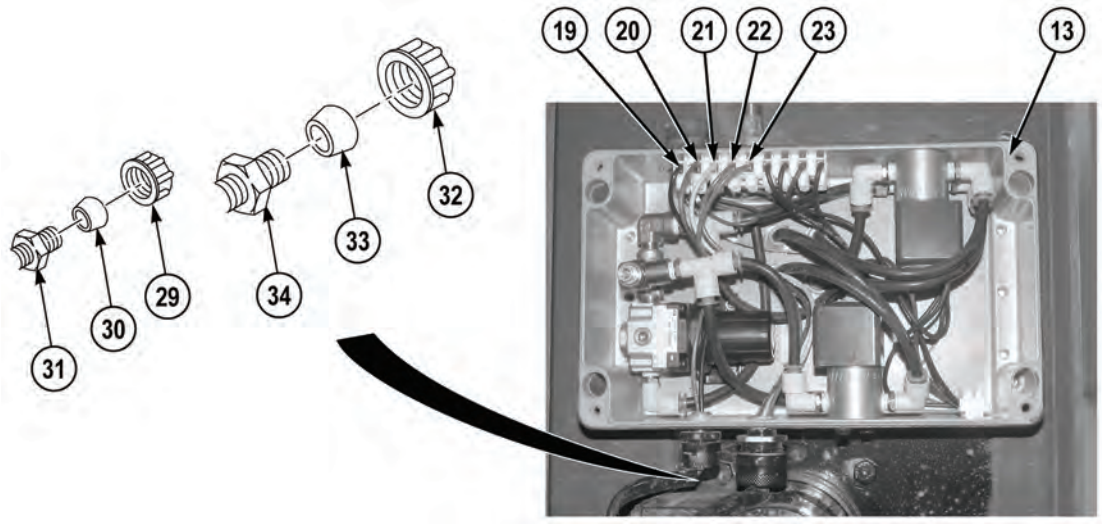
2. Remove bumper turret wire harness (7) from bulkhead connector (8).
3. Remove air line (9) from fitting (10).
4. Remove four screws (11) and junction box cover (12) from junction box (13).
5. Remove plug (14) and elbow (15) from junction box cover (12).
6. Remove seal (16) from junction box cover (12).
7. Remove three decals (17) from junction box cover (12) (WP 0328).



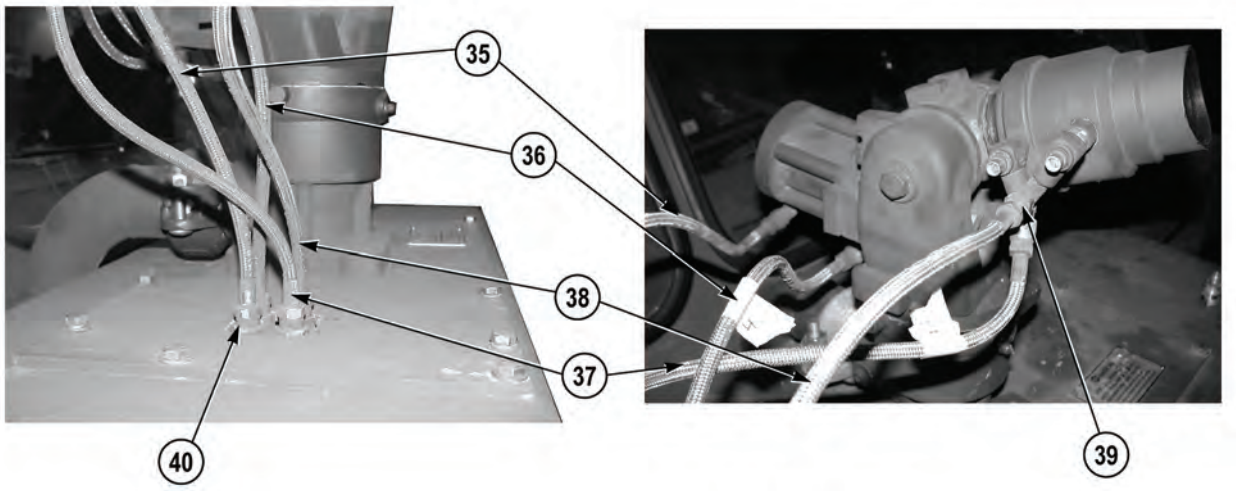
NOTE

Tag and mark wires prior to removal to ensure proper installation.

8. Remove five screws (18) and wires (19), (20), (21), (22), and (23) from terminal block (24).
9. Remove four screws (25), lockwashers (26), washers (27), and junction box (13) from turret bumper mount plate (28).



10. Remove collar (29), bushing (30), and two wires (19) and (20) from fitting (31) and junction box (13).
11. Remove bushing (30) and collar (29) from two wires (19) and (20).
12. Remove collar (32), bushing (33), and three wires (21), (22), and (23) from fitting (34) and junction box (13).
13. Remove bushing (33) and collar (32) from three wires (21), (22), and (23).



NOTE

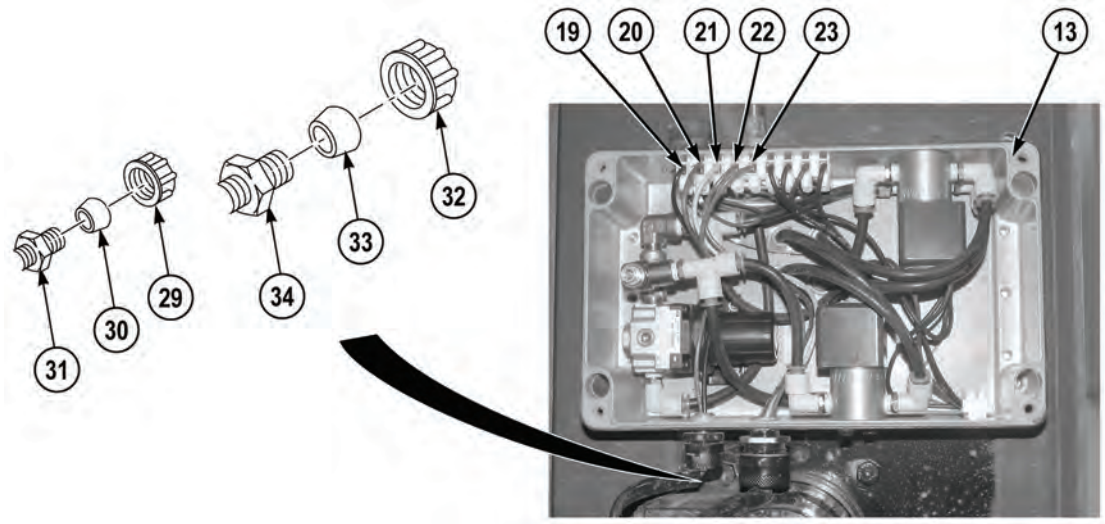
Tag and mark airlines prior to removal to ensure proper installation.

14. Remove four air lines (35), (36), (37), and (38) from elbows (39).
15. Remove four air lines (35), (36), (37), and (38) from fittings (40).

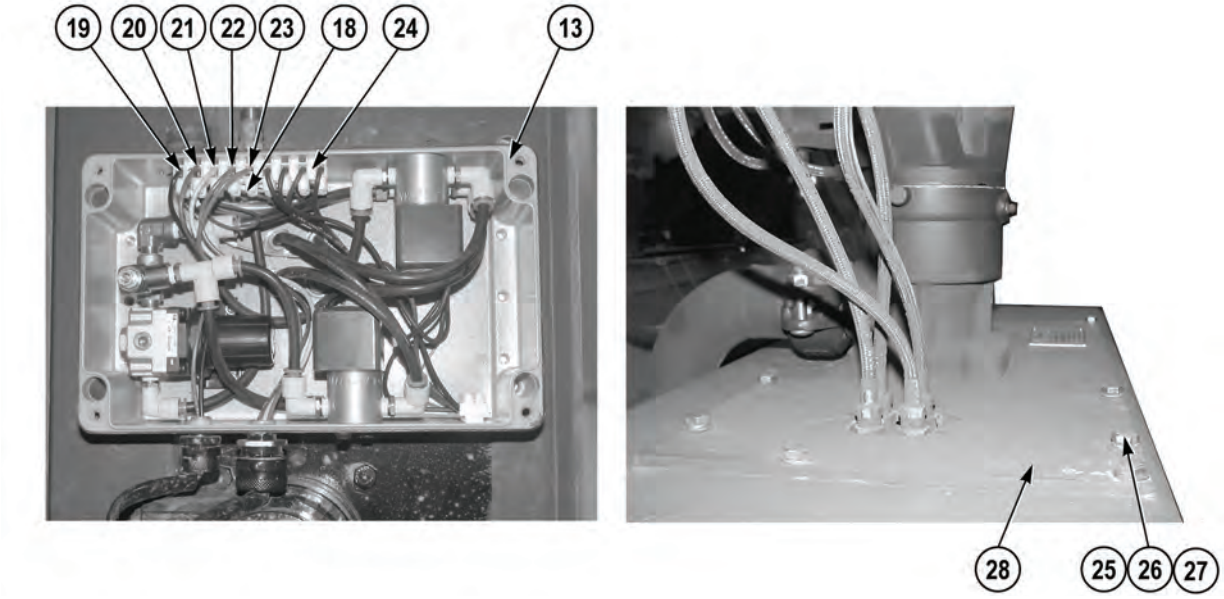
END OF TASK

INSTALLATION

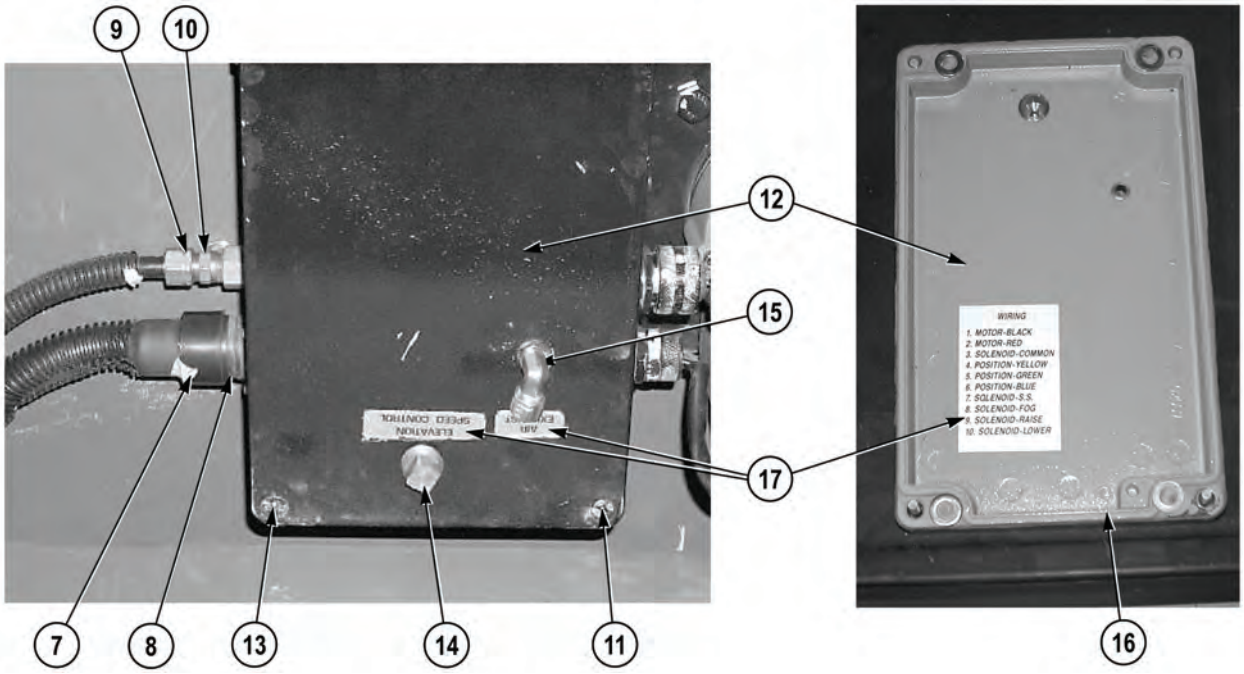
1. Install four air lines (35), (36), (37), and (38) on fittings (40).
2. Install four air lines (35), (36), (37), and (38) on elbows (39).



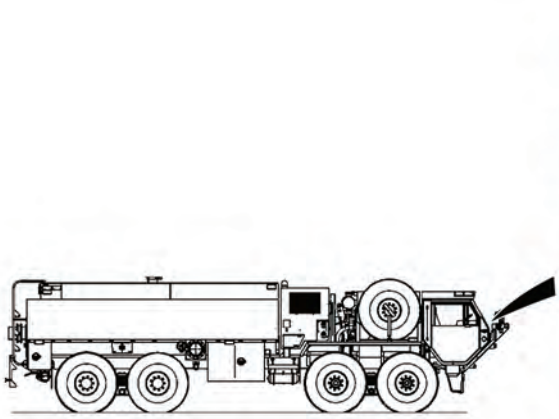
3. Install collar (32) and bushing (33) on three wires (21), (22), and (23).
4. Install three wires (21), (22), and (23), bushing (33), and collar (32) on junction box (13) and fitting (34).
5. Install collar (29) and bushing (30) on two wires (19) and (20).
6. Install two wires (19) and (20), bushing (30), and collar (29) on junction box (13) and fitting (31).

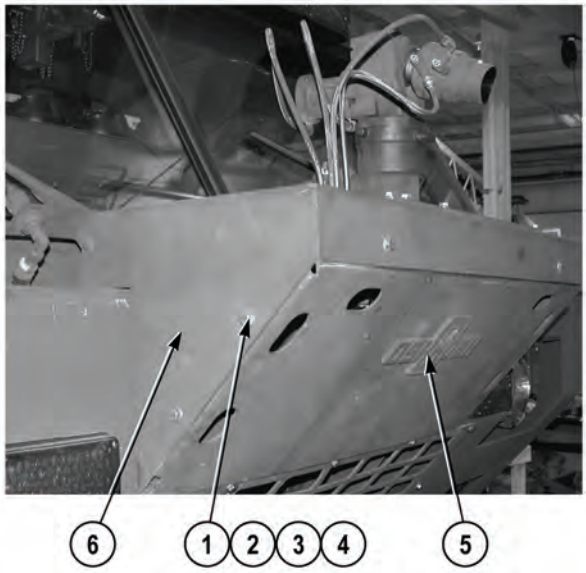


7. Install junction box (13) on turret bumper mount plate (28) with four washers (27), lockwashers (26), and screws (25).
8. Install five wires (19), (20), (21), (22), and (23) on terminal block (24) with five screws (18).



9. Install three decals (17) on junction box cover (12) (WP 0328).
10. Install seal (16) on junction box cover (12).
11. Install elbow (15) and plug (14) on junction box cover (12).
12. Install junction box cover (12) on junction box (13) with four screws (11).
13. Install air line (9) on fitting (10).
14. Install bumper turret wiring harness (7) on bulkhead connector (8).





15. Install cover (5) on bumper turret mount (6) with six screws (4), 12 washers (3), six lockwashers (2) and nuts (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Connect batteries (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

BUMPER TURRET JUNCTION BOX REPAIR

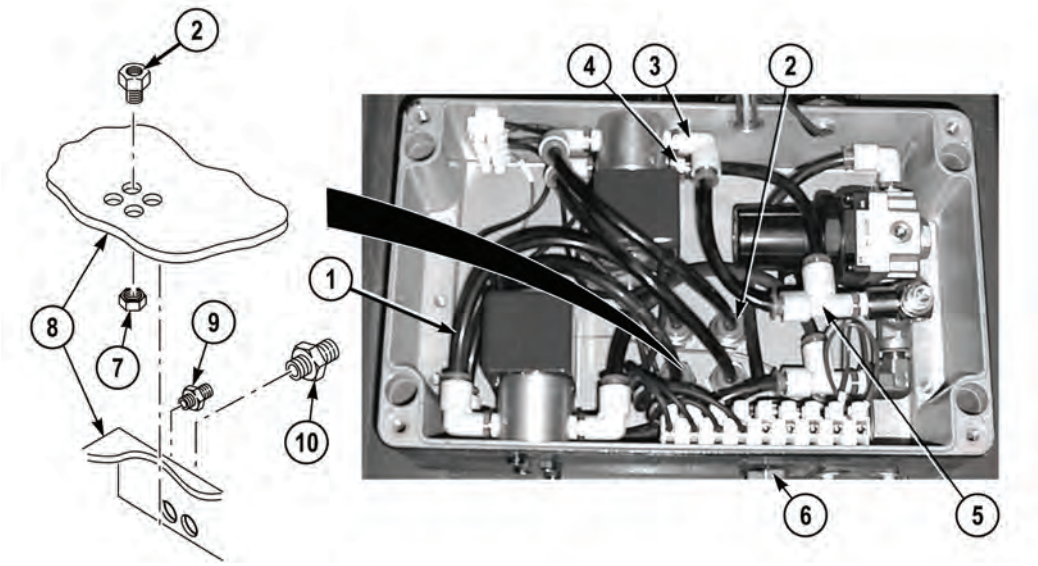
INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Compound, Sealing (WP 0401, Item 10)
Tags, Identification (WP 0401, Item 22)
Tape, Teflon (WP 0401, Item 24)

Equipment Conditions
Bumper turret junction box removed (WP 0377)

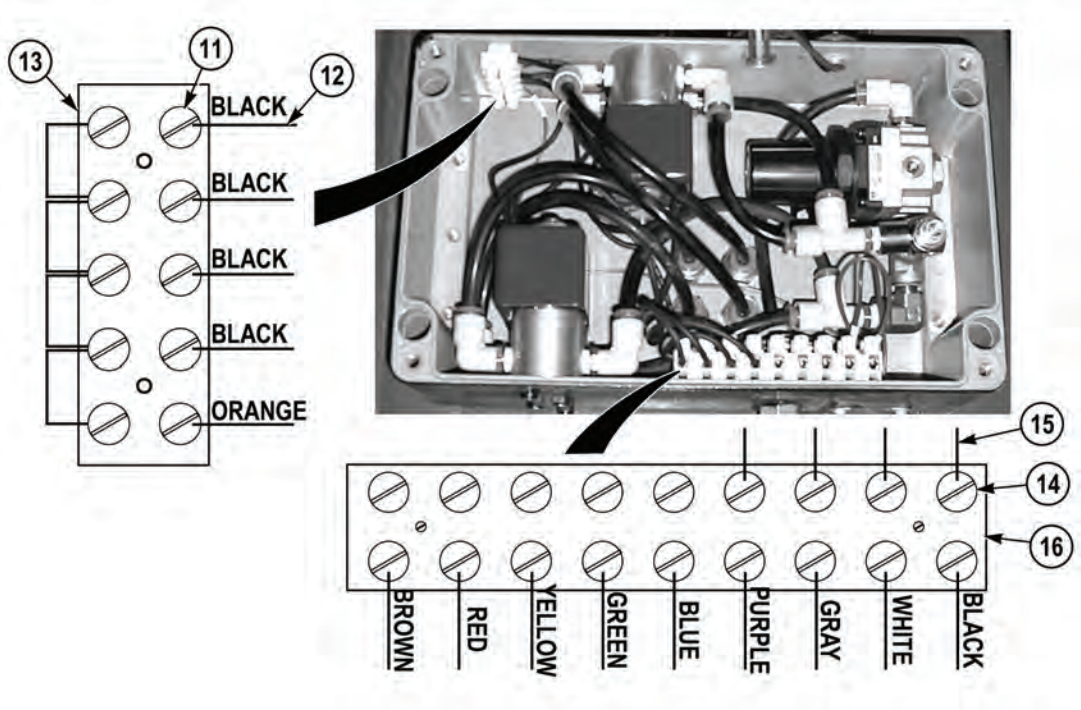
REMOVAL



NOTE

Tag and mark air lines prior to removal to ensure proper installation.

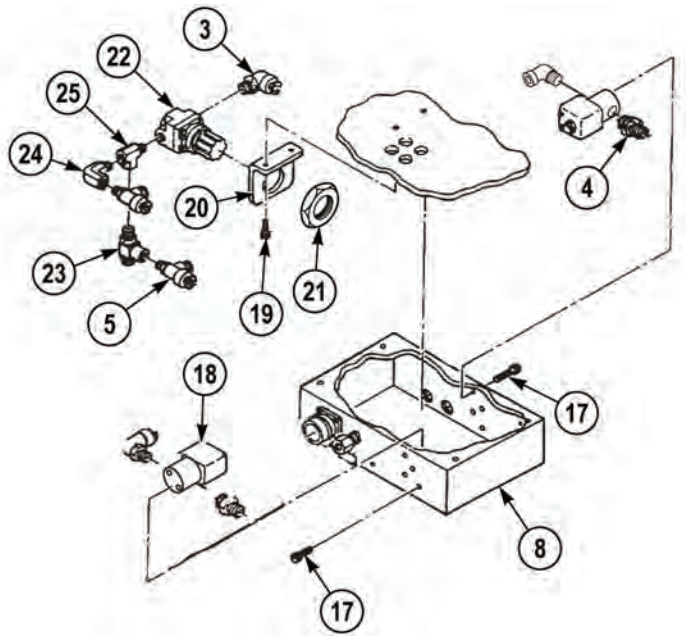
1. Remove nine air lines (1) from four fittings (2), seven elbows (3), two fittings (4), two tees (5), and fitting (6).
2. Remove four nuts (7) and fittings (2) from junction box (8).
3. Remove fitting (9) from junction box (8).
4. Remove fitting (10) from junction box (8).



NOTE

Tag and mark wire prior to removal to ensure proper installation.

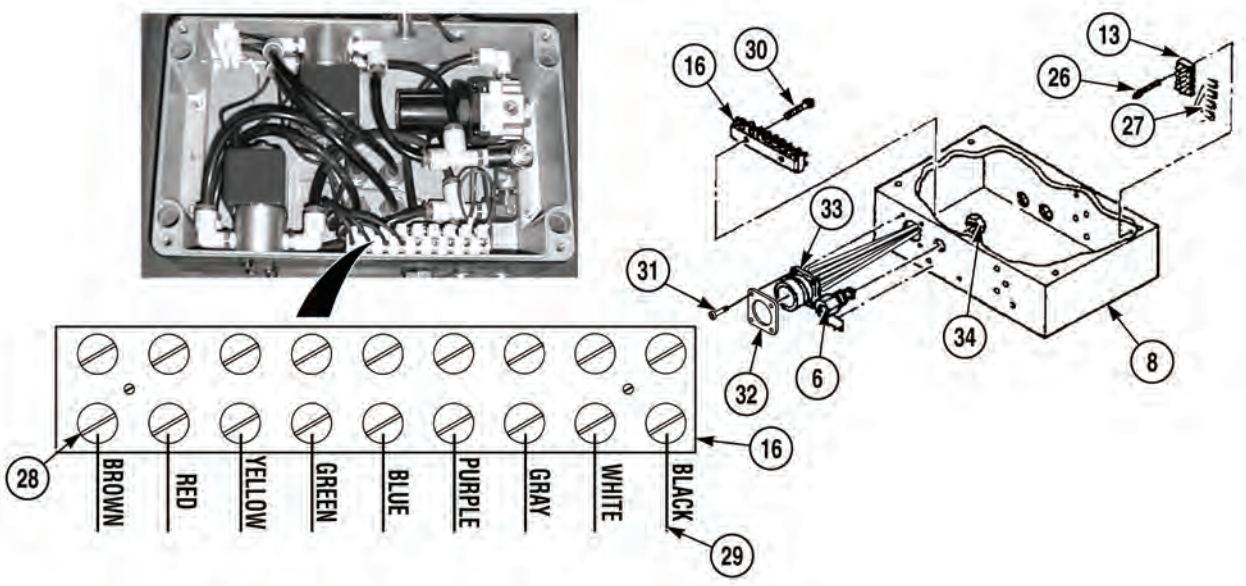
5. Loosen five screws (11) and remove five wires (12) from terminal block (13).
6. Loosen four screws (14) and remove four wires (15) from terminal block (16).



NOTE

Note position of solenoid valves, control valve, air regulator, elbows, and fittings prior to removal to ensure proper installation.

7. Remove eight screws (17) and four solenoid valves (18) from junction box (8).
8. Remove two screws (19) and regulator bracket (20) from junction box (8).
9. Remove nut (21) and air regulator (22) from regulator bracket (20).
10. Remove seven elbows (3) and two fittings (4) from four solenoid valves (18) and air regulator (22).
11. Remove two tees (5), control valve (23), elbow (24), and tee (25) from air regulator (22).



12. Remove two screws (26) and terminal block (13) from junction box (8).
13. Remove four jumpers (27) from terminal block (13).
14. Loosen nine screws (28) and remove nine wires (29) from terminal block (16).
15. Remove two screws (30) and terminal block (16) from junction box (8).
16. Remove four screws (31), retainer (32), and junction box wire harness connector (33) from junction box (8).
17. Remove nut (34) and fitting (6) from junction box (8).

END OF TASK

INSTALLATION

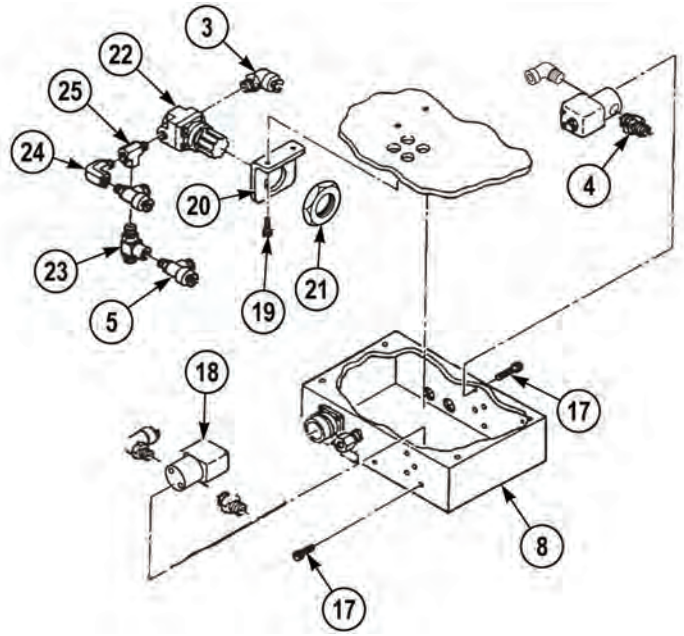
1. Install fitting (6) on junction box (8) with nut (34).

WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

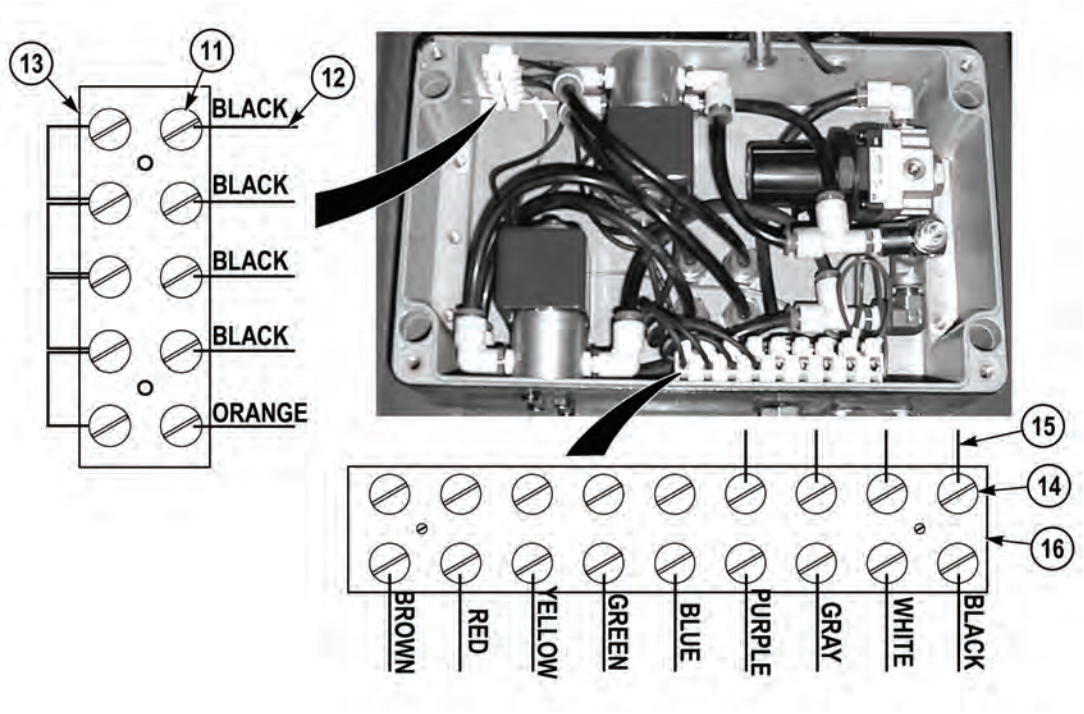
2. Apply sealant to junction box wire harness connector (33).
3. Install junction box wire harness connector (33) and retainer (32) on junction box (8) with four screws (31).
4. Install terminal block (16) on junction box (8) with two screws (30).
5. Install nine wires (29) on terminal block (16) with nine screws (28).
6. Install four jumpers (27) on terminal block (13).
7. Install terminal block (13) on junction box (8) with two screws (26).



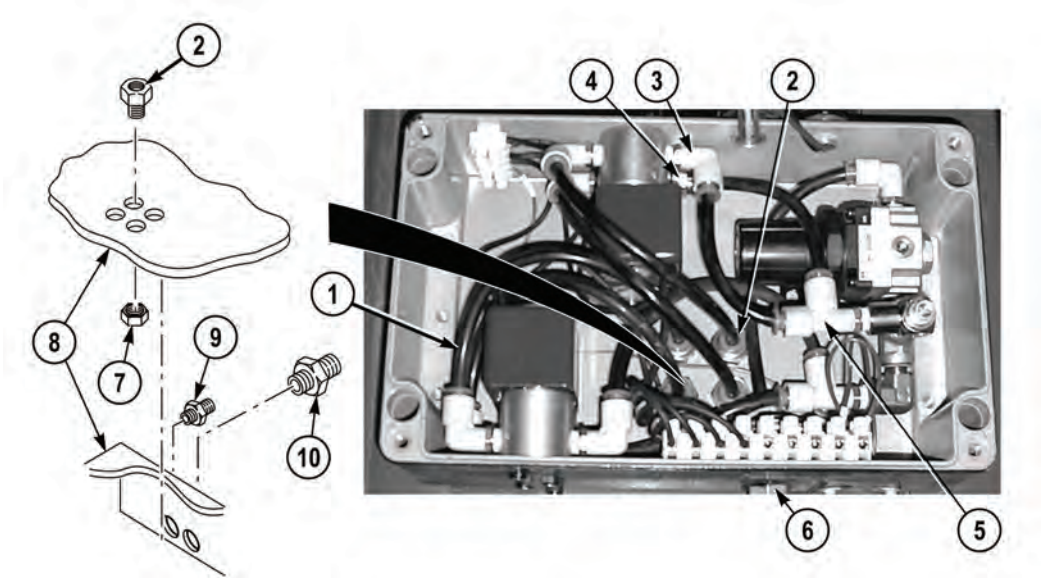
NOTE

Position solenoid valves, control valve, air regulator, elbows, and fittings as noted prior to removal.

8. Apply Teflon tape to threads of seven elbows (3), two tee fittings (5), and fittings (4).
9. Install tee (25), elbow (24), control valve (23), and two tees (5) on air regulator (22).
10. Install two fittings (4) and seven elbows (3) on four solenoid valves (18) and air regulator (22).
11. Install air regulator (22) on air regulator bracket (20) with nut (21).
12. Install regulator bracket (20) on junction box (8) with two screws (19).
13. Install four solenoid valves (18) on junction box (8) with eight screws (17).



14. Install four wires (15) on terminal block (16) with four screws (14).
15. Install five wires (12) on terminal block (13) with five screws (11).



16. Install fitting (10) on junction box (8).
17. Install fitting (9) on junction box (8).
18. Install four fittings (2) on junction box (8) with four nuts (7).
19. Install nine air lines (1) on fitting (6), two tee fittings (5), fittings (4), seven elbows (3), and four fittings (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Install bumper turret junction box (WP 0377)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

BUMPER TURRET REPLACEMENT

INITIAL SETUP:

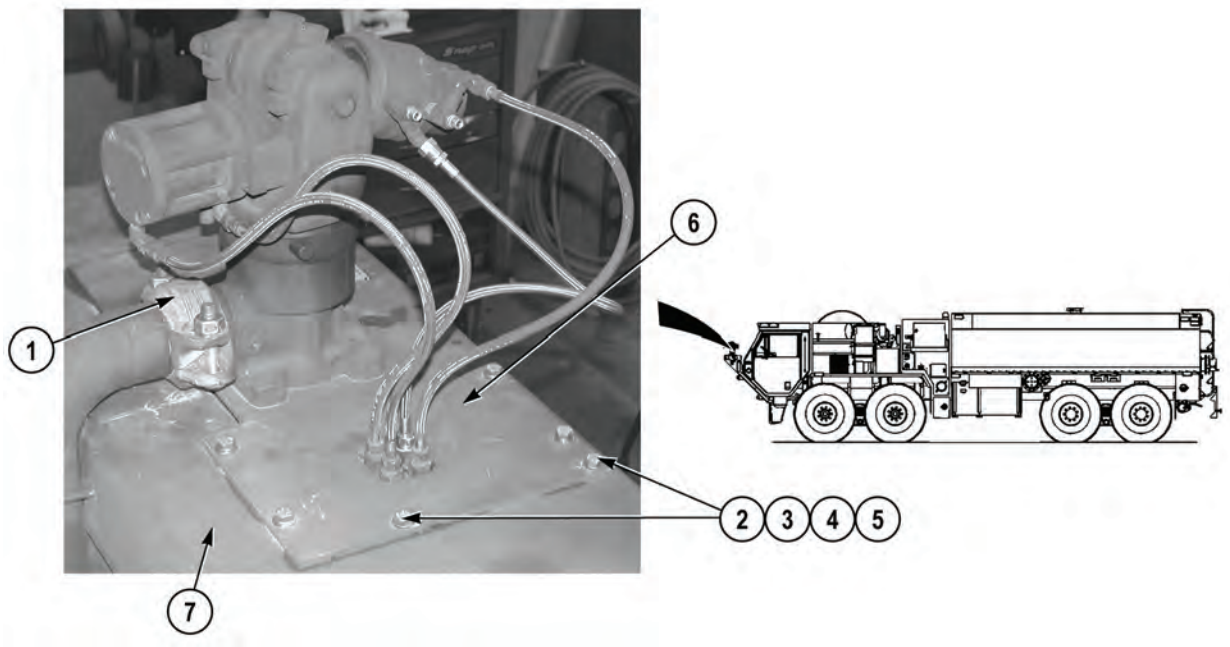
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Lockwasher (4)

References
WP 0315
WP 0392, Fig. 92

Equipment Conditions
Bumper turret junction box removed (WP 0377)

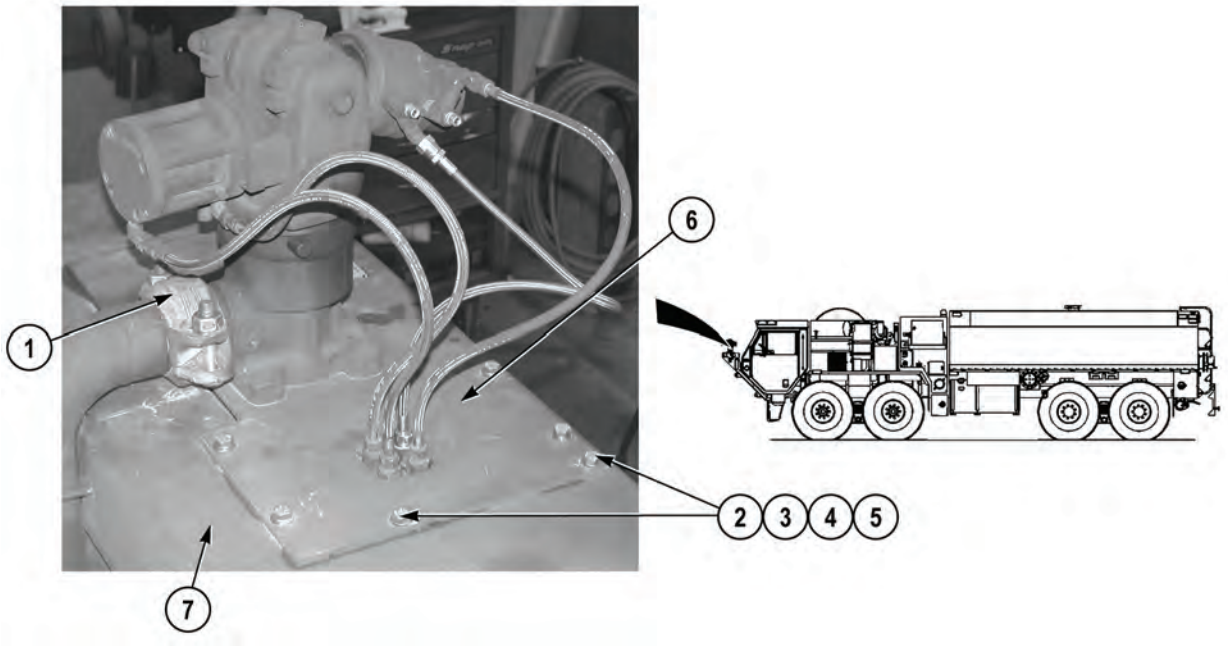
REMOVAL



1. Remove coupling (1) from vehicle (WP 0315).
2. Remove four nuts (2), lockwashers (3), eight washers (4), four screws (5), and mounting plate (6) from bumper turret mount (7). Discard lockwashers.

END OF TASK

INSTALLATION



1. Install mounting plate (6) on bumper turret mount (7) with four screws (5), eight washers (4), four lockwashers (3), and nuts (2).
2. Install coupling (1) on vehicle (WP 0315).

END OF TASK

FOLLOW-ON MAINTENANCE

Install bumper turret junction box (WP 0377)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

BUMPER TURRET REPAIR

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

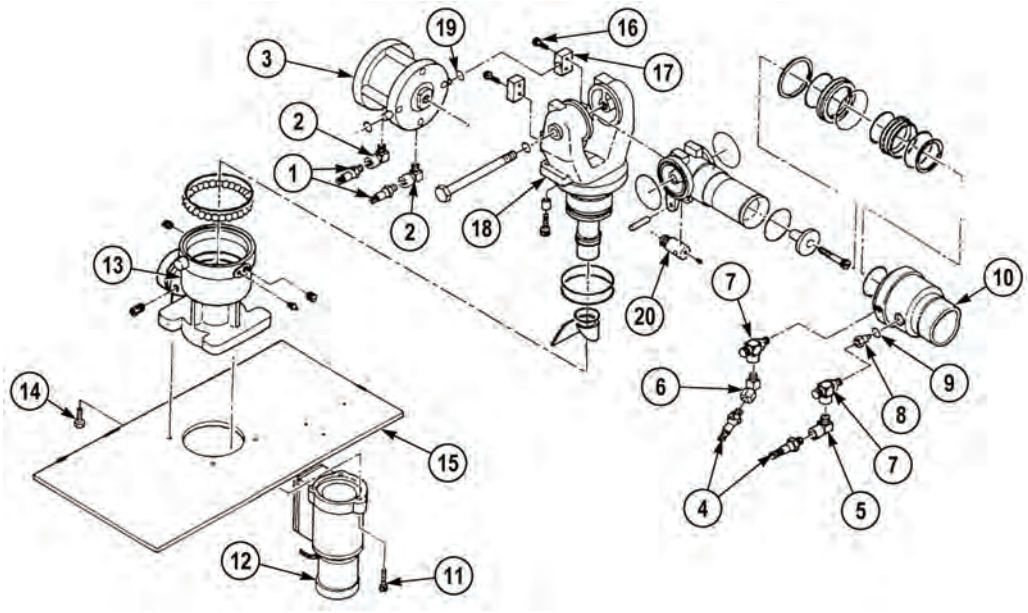
Materials/Parts
Preformed Packing (1)
Preformed Packing (2)
Preformed Packing (1)
Preformed Packing (2)
Preformed Packing (1)
Preformed Packing (1)

Materials/Parts (continued)
Preformed Packing (2)
Preformed Packing (2)
Preformed Packing (1)
Preformed Packing (3)

References
WP 0392, Fig. 92

Equipment Conditions
Bumper turret removed (WP 0379)

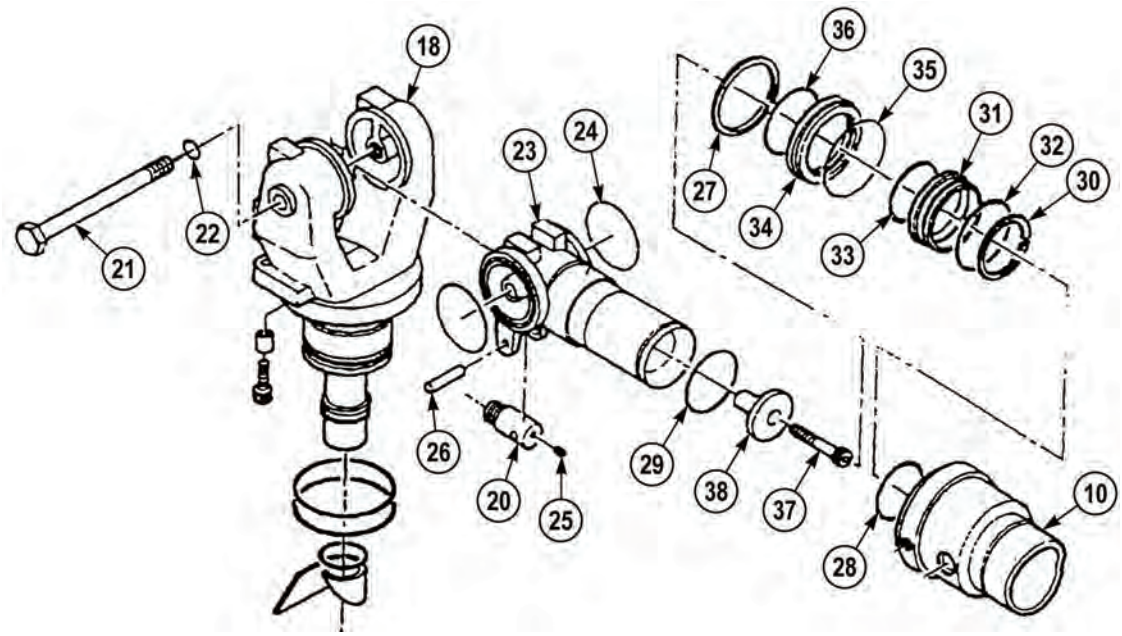
REMOVAL



NOTE

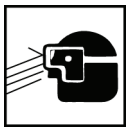
- Note position of elbows and fittings prior to removal to ensure proper installation.
- Tag and mark hoses prior to removal to ensure proper installation.

1. Remove two hoses (1) and elbows (2) from air cylinder (3).
2. Remove two hoses (4), elbow (5), fitting (6), two control valves (7), connector (8), and preformed packing (9) from pattern sleeve (10). Discard preformed packing.
3. Remove three screws (11) and turret motor (12) from elbow (13).
4. Remove four screws (14) and elbow (13) from mounting plate (15).
5. Remove four screws (16) from two cylinder pivots (17) and reducer (18).
6. Remove two cylinder pivots (17) and preformed packings (19) from air cylinder (3). Discard preformed packings.
7. Remove air cylinder eye (3) from cylinder eye (20).



8. Remove screw (21), preformed packing (22), and outlet tee (23) from reducer (18). Discard preformed packing.
9. Remove two preformed packings (24) from outlet tee (23). Discard preformed packings.
10. Remove setscrew (25) from cylinder eye (20).
11. Remove pin (26) and cylinder eye (20) from outlet tee (23).

WARNING



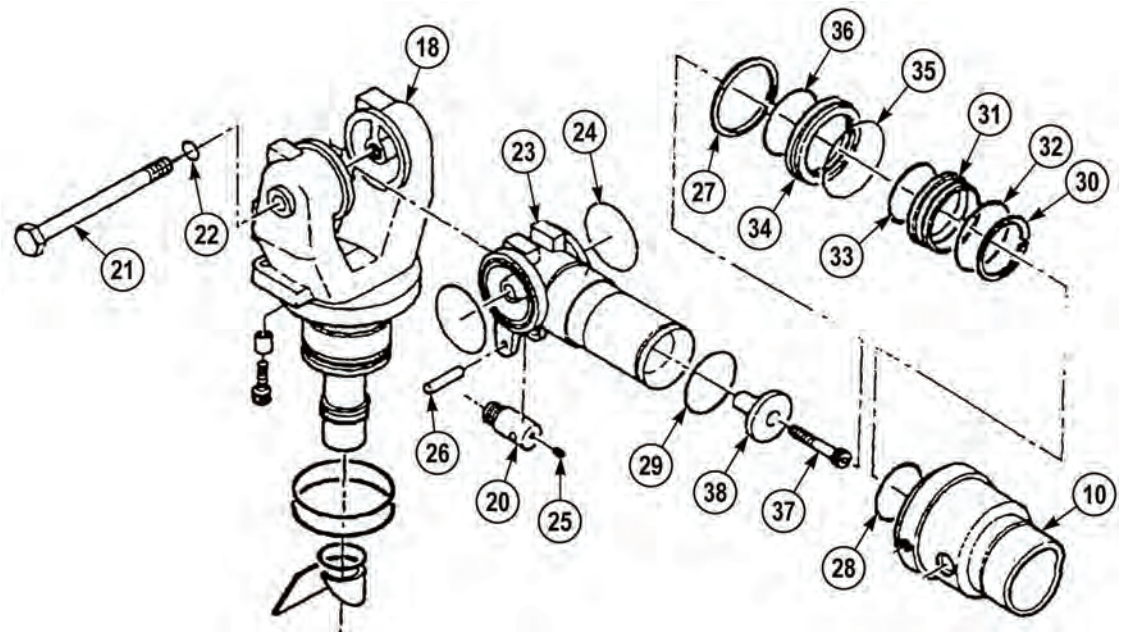
Wear safety goggles and use care when removing retaining rings. Retaining rings are under tension and can act as projectiles when released causing injury to personnel.

12. Remove retaining ring (27) and pattern sleeve (10) from outlet tee (23).

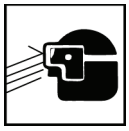
NOTE

Note position of preformed packing prior to removal to ensure proper installation.

13. Remove and discard preformed packing (28) from pattern sleeve (10).
14. Remove and discard preformed packing (29) from outlet tee (23).

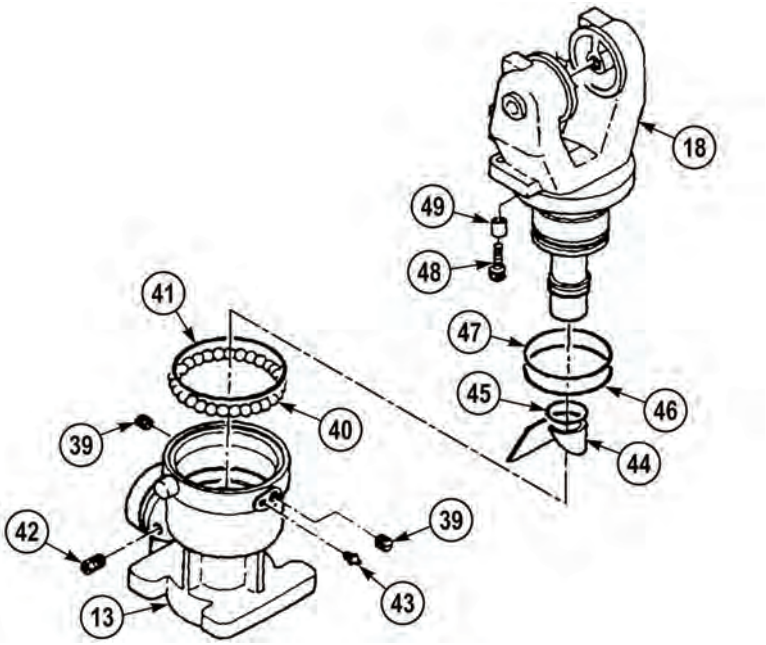


WARNING



Wear safety goggles and use care when removing retaining rings. Retaining rings are under tension and can act as projectiles when released causing injury to personnel.

15. Remove retaining ring (30) from outlet tee (23).
16. Remove piston (31) from outlet tee (23).
17. Remove and discard two preformed packings (32) and (33) from piston (31).
18. Remove piston (34) from outlet tee (23).
19. Remove and discard two preformed packings (35) and (36) from piston (34).
20. Remove screw (37) and baffle (38) from outlet tee (23).



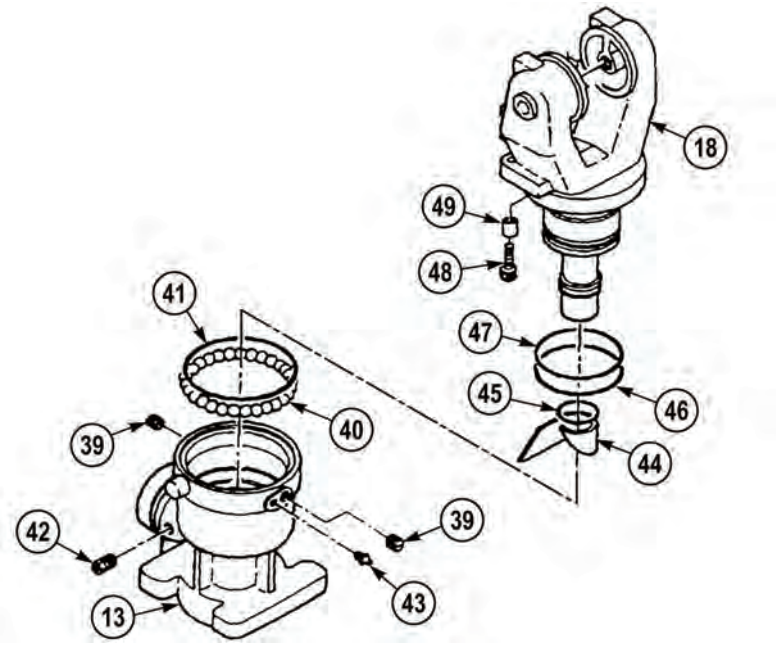
NOTE

Elbow is removed from reducer by removing ball bearings through plug openings.

21. Remove two plugs (39) and 29 ball bearings (40) from elbow (13).
22. Remove elbow (13) from reducer (18).
23. Remove preformed packing (41), plug (42), and grease fitting (43) from elbow (13). Discard preformed packing.
24. Remove bearing (44), three preformed packings (45), (46), and (47), screw (48), and spacer (49) from reducer (18). Discard preformed packings.

END OF TASK

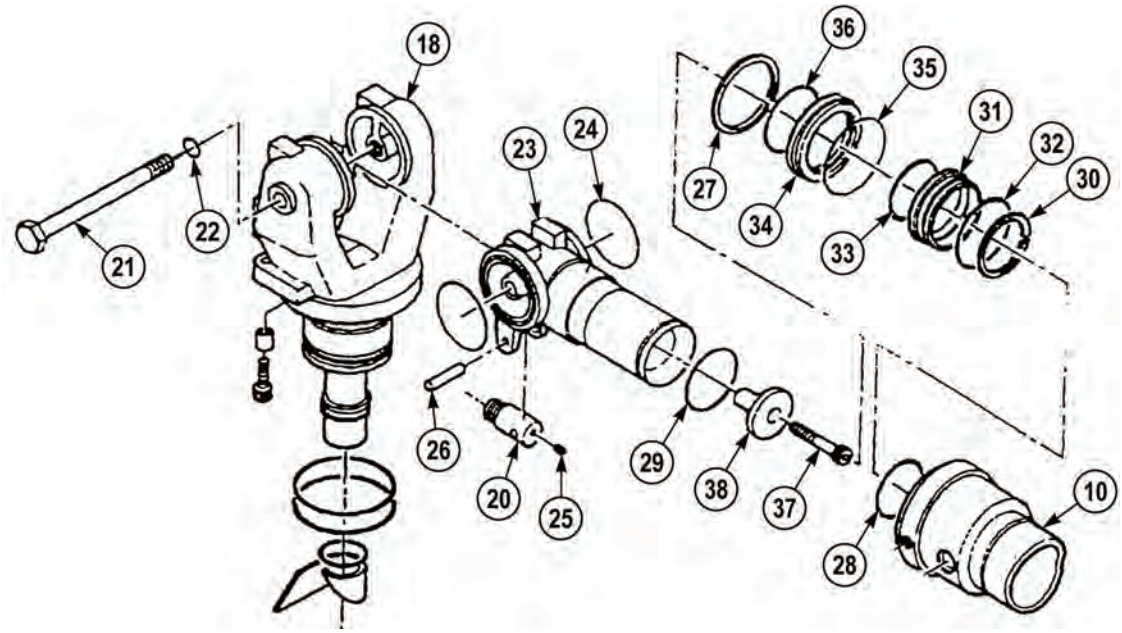
INSTALLATION



NOTE

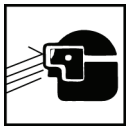
Install preform packing, hoses, and fittings as noted prior to removal.

1. Install spacer (49), screw (48), three preformed packings (47), (46), and (45), and bearing (44) on reducer (18).
2. Install grease fitting (43), plug (42), and preformed packing (41) on elbow (13).
3. Position reducer (18) on elbow (13) and install 29 ball bearings (40) and two plugs (39) on elbow (13).



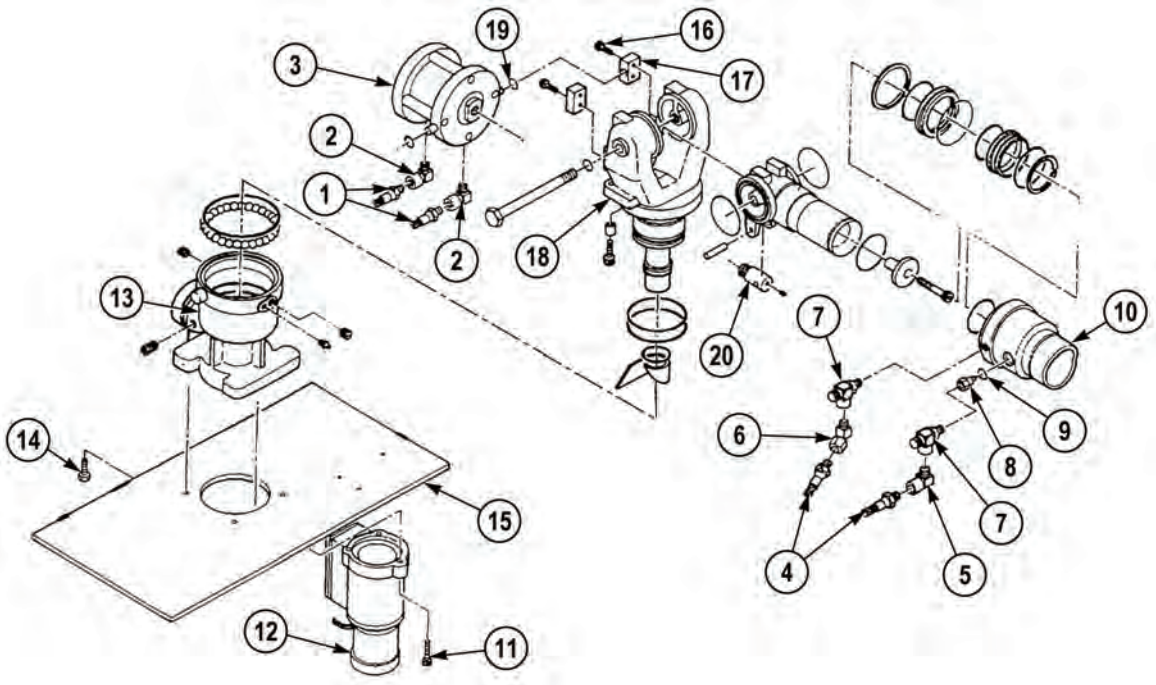
4. Install baffle (38) on outlet tee (23) with screw (37).
5. Install two preformed packings (36) and (35) on piston (34).
6. Install piston (34) on outlet tee (23).
7. Install two preformed packings (33) and (32) on piston (31).
8. Install piston (31) on outlet tee (23).

WARNING



Wear safety goggles and use care when installing retaining rings. Retaining rings are under tension and can act as projectiles when released causing injury to personnel.

9. Install retaining ring (30) on outlet tee (23).
10. Install preformed packing (29) on outlet tee (23).
11. Install preformed packing (28) on pattern sleeve (10).
12. Install pattern sleeve (10) on outlet tee (23) with retaining ring (27).
13. Install cylinder eye (20) on outlet tee (23) with pin (26).
14. Install setscrew (25) on cylinder eye (20).
15. Install two preformed packings (24) on outlet tee (23).
16. Install outlet tee (23) on reducer (18) with preformed packing (22) and screw (21).



17. Install air cylinder (3) on cylinder eye (20).
18. Install two preformed packings (19) and cylinder pivots (17) on air cylinder (3).
19. Install two cylinder pivots (17) on reducer (18) with four screws (16).
20. Install elbow (13) on mounting plate (15) with four screws (14).
21. Install turret motor (12) on elbow (13) with three screws (11).
22. Install preformed packing (9), connector (8), two control valves (7), fitting (6), elbow (5), and two hoses (4) on pattern sleeve (10).
23. Install two elbows (2) and hoses (1) on air cylinder (3).

END OF TASK

FOLLOW-ON MAINTENANCE

Install bumper turret (WP 0310)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

SIREN CONTROL REPLACEMENT

INITIAL SETUP:

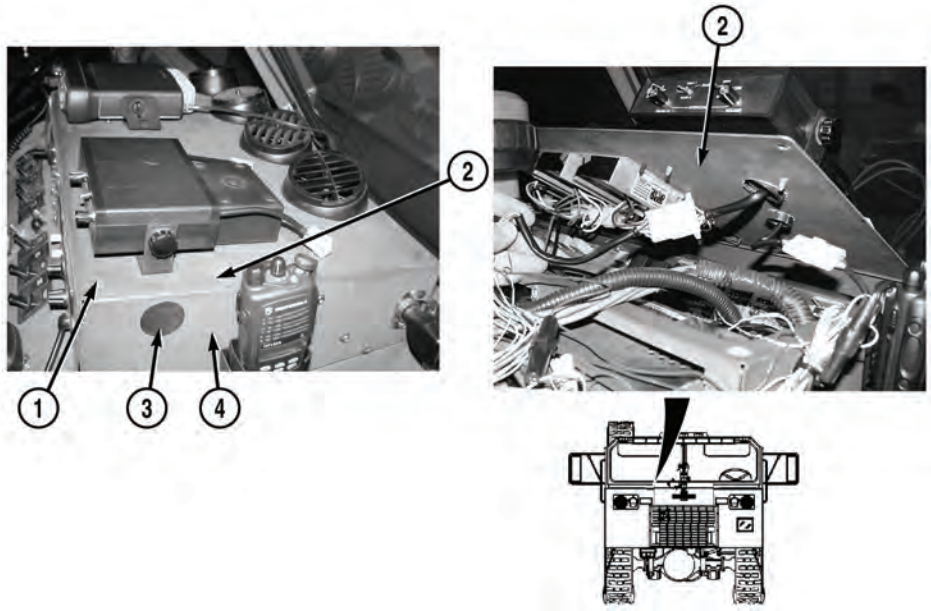
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tags, Identification (WP 0401, Item 22)
Lockwasher (2)

References
WP 0392, Fig. 26

Equipment Conditions
Batteries disconnected (TM 9-2320-315-14&P)

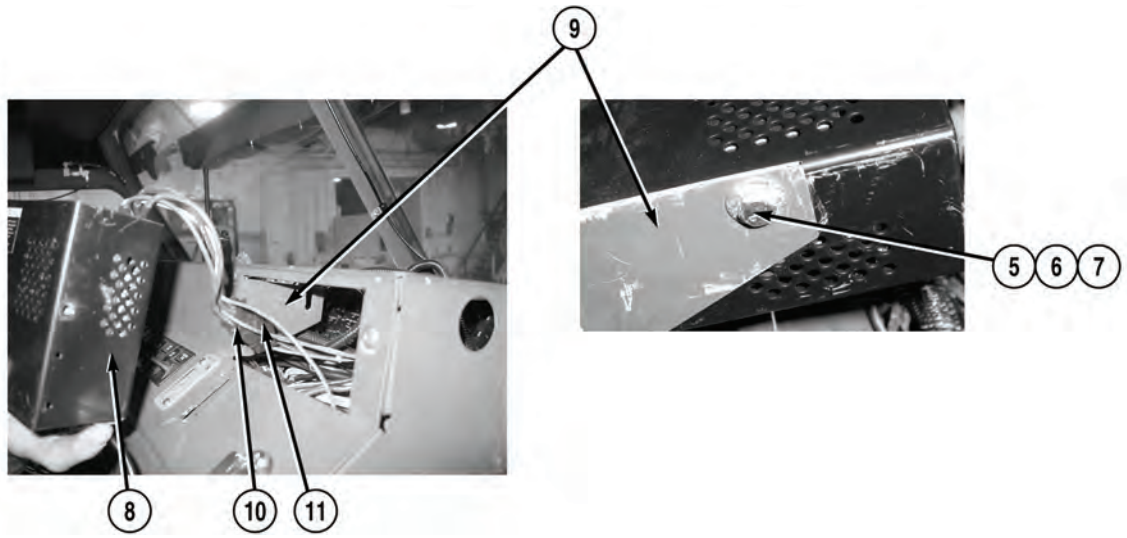
REMOVAL



NOTE

Raise cab instrument panel A only enough to access screws.

1. Remove seven screws (1) and raise cab instrument panel A (2).
2. Remove plug (3) from cab instrument panel assembly (4).



NOTE

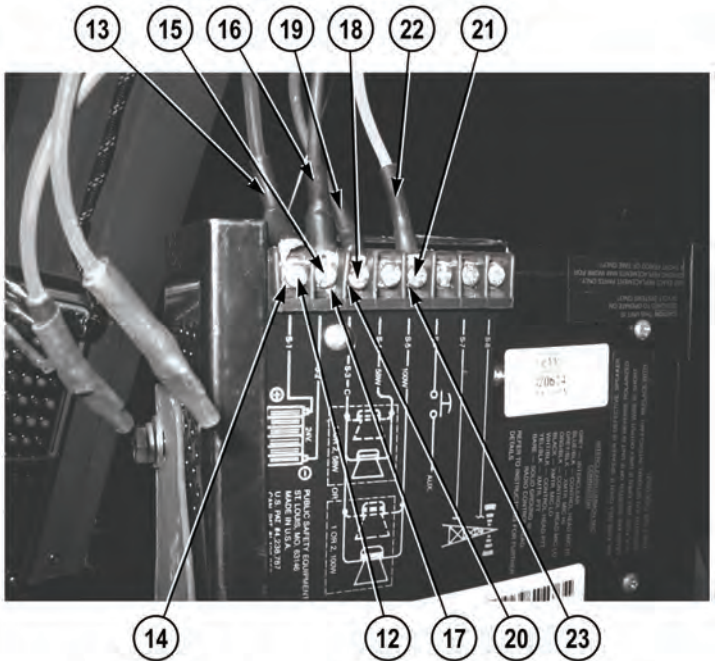
Wires are attached to siren control. Only remove siren control enough to access wires.

3. Remove two screws (5), lockwashers (6), washers (7), and siren control (8) from cab instrument panel B (9). Discard lockwashers.

NOTE

Tag and mark wires prior to removal to ensure proper installation.

4. Disconnect siren control connector (10) from cab power distribution wire harness connector (11).



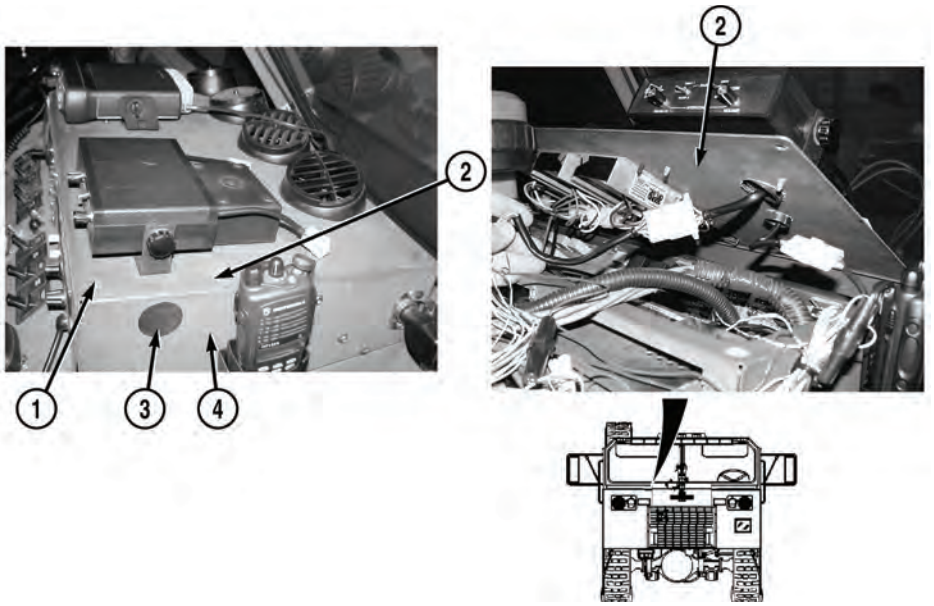
5. Loosen screw (12) and remove wire 1637 (13) from siren control terminal S-1 (14).

6. Loosen screw (15) and remove wire 1640 (16) from siren control terminal S-2 (17).
7. Loosen screw (18) and remove wire 1052 (19) from sire control terminal S-3 (20).
8. Loosen screw (21) and remove wire 1053 (22) from siren control terminal S-5 (23).

END OF TASK

INSTALLATION

1. Install wire 1053 (22) on siren control terminal S-5 (23) with screw (21).
2. Install wire 1052 (19) on siren control terminal S-3 (20) with screw (18).
3. Install wire 1640 (16) on siren control terminal S-2 (17) with screw (15).
4. Install wire 1637 (13) on siren control terminal S-1 (14) with screw (12).
5. Connect cab power distribution wire harness connector (11) on siren control wire connector (10).
6. Install siren control (8) on cab instrument panel B (9) with two washers (7), lockwashers (6) and screws (5).



7. Install plug (3) in cab instrument panel assembly (4).
8. Install cab instrument panel A (2) on cab instrument panel assembly (4) with seven screws (1).

END OF TASK

FOLLOW ON MAINTENANCE

Connect batteries (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

TEST GAUGE PANEL REPLACEMENT

INITIAL SETUP:

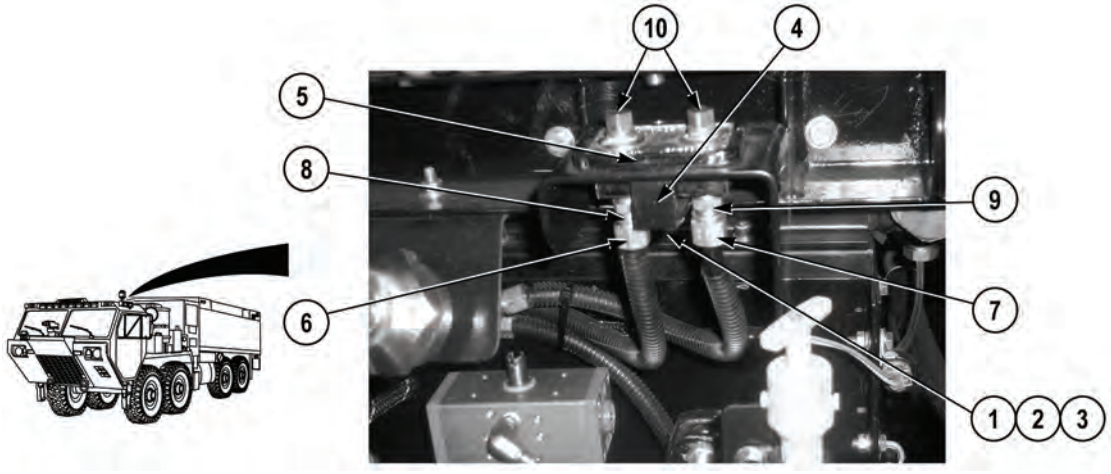
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Compound, Sealing, Pipe Thread (WP 0401, Item 11)
Tags, Identification (WP 0401, Item 22)
Ties, Cable, Plastic (WP 0401, Item 25)
Lockwasher (1)

References
WP 0392, Fig. 38

Equipment Conditions
Pump house panel removed K (WP 0341)

REMOVAL



1. Remove screw (1), lockwasher (2), washer (3), and bracket (4) from test gauge panel (5). Discard lockwasher.

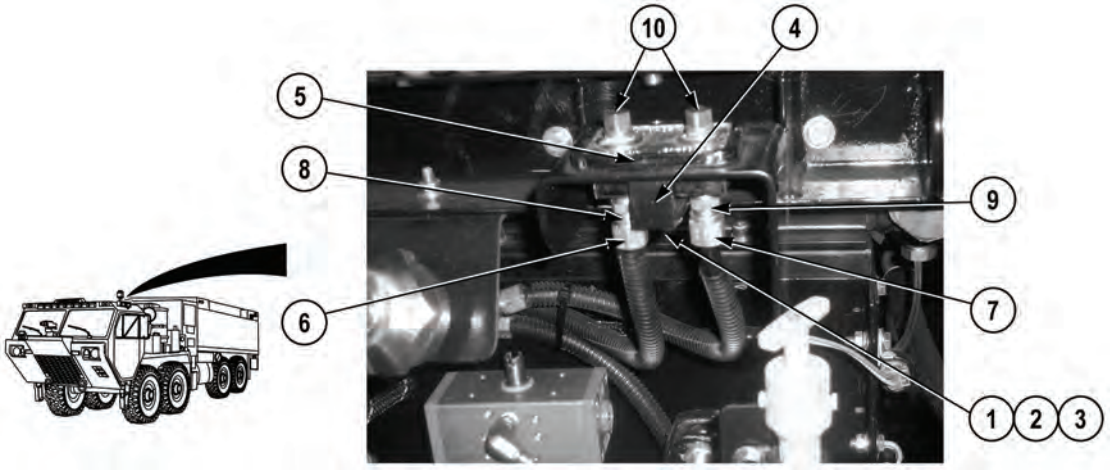
NOTE

- Tag and mark air lines prior to removal to ensure proper installation.
- Remove cable ties as required.

2. Remove two air lines (6) and (7) from fittings (8) and (9).
3. Remove test gauge panel (5) from vehicle.
4. Remove two fittings (8) and (9) from test gauge panel (5).
5. Remove two plugs (10) from test gauge panel (5).

END OF TASK

INSTALLATION



WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

1. Apply sealing compound to threads of two fittings (8), (9), and plugs (10).
2. Install two plugs (10) on test panel (5).
3. Install two fittings (9) and (8) on test gauge panel (5).
4. Position test gauge panel (5) on vehicle.

NOTE

Install cable ties as required.

5. Install two air lines (7) and (6) on fittings (9) and (8).
6. Install bracket (4) on test gauge panel (5) with washer (3), lockwasher (2), and screw (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Install pump house panel K (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

TIRE INFLATOR CONNECTORS REPLACEMENT

INITIAL SETUP:

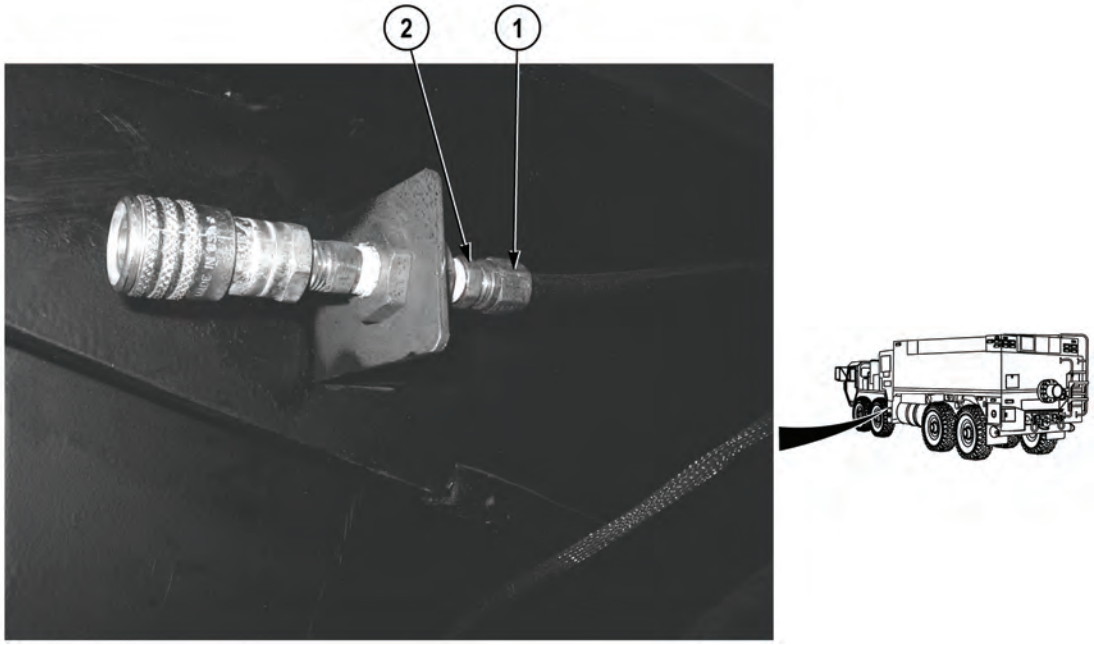
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Tape, Teflon (WP 0401, Item 24)
Lockwasher (1)
Locknut (2)

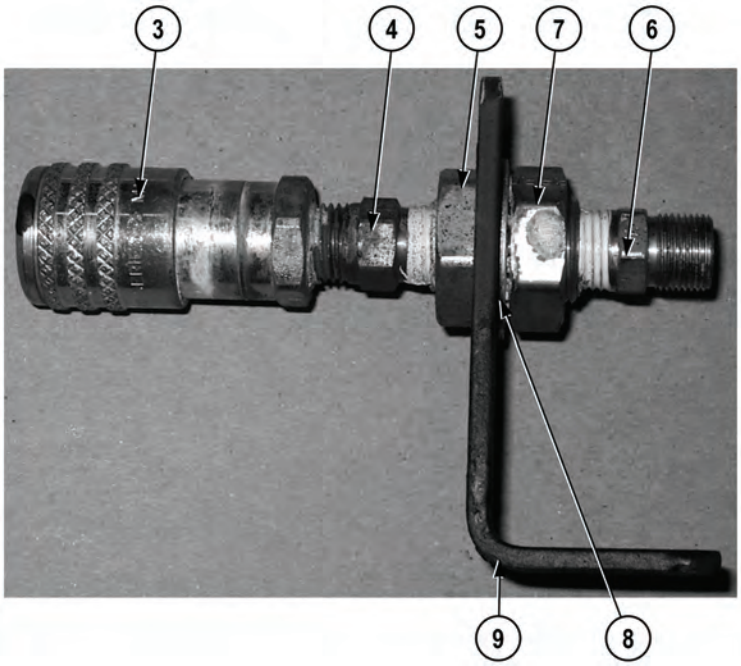
References
WP 0390, Fig. 1

Equipment Conditions
Air system drained (TM 9-2320-279-10)

REMOVAL



1. Remove air line (1) from fitting (2).

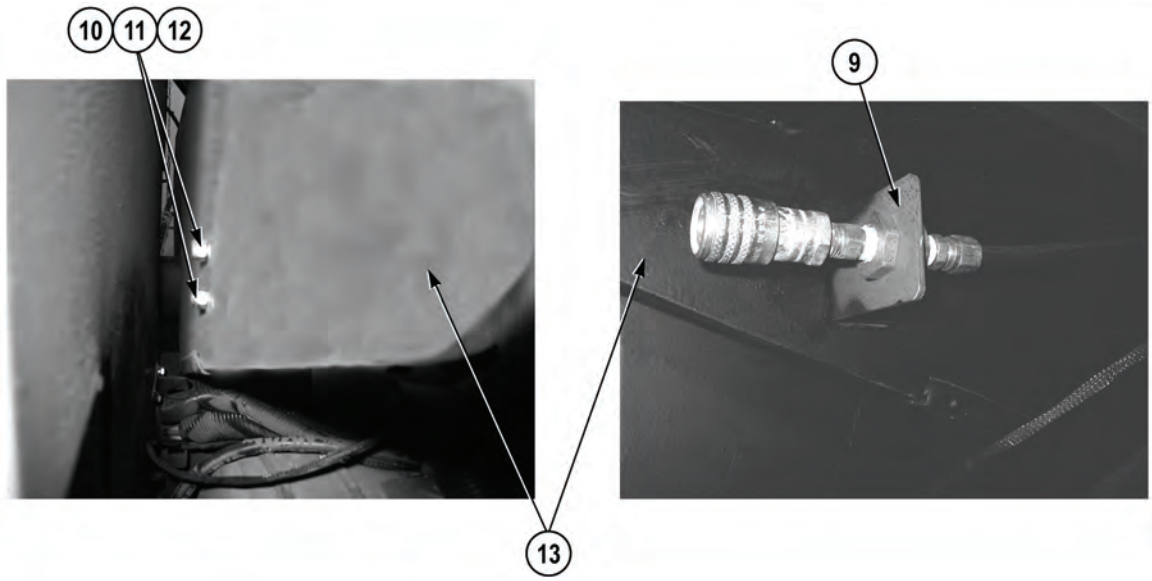


2. Remove tire inflator connector (3) from fitting (4).

NOTE

Note location of fittings and orientation of adapter prior to removal to ensure proper installation.

3. Remove fitting (4) from adapter (5).
4. Remove fitting (6) from adapter (5).
5. Remove nut (7), lockwasher (8), and adapter (5) from tire inflator connector bracket (9). Discard lockwasher.

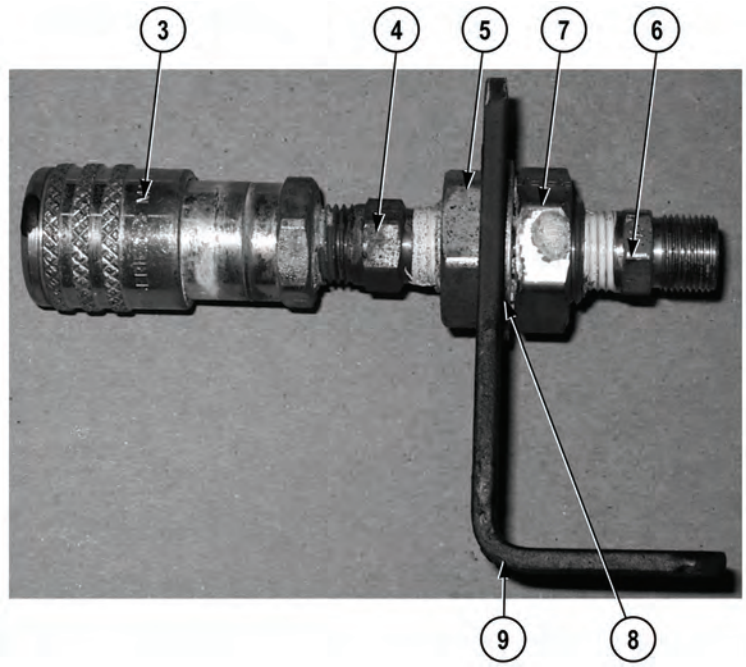


6. Remove two locknuts (10), washers (11), screws (12), and tire inflator connector bracket (9) from water tank cradle (13). Discard locknuts.

END OF TASK

INSTALLATION

1. Install tire inflator connector bracket (9) on water tank cradle (13) with two screws (12), washers (11), and locknuts (10).

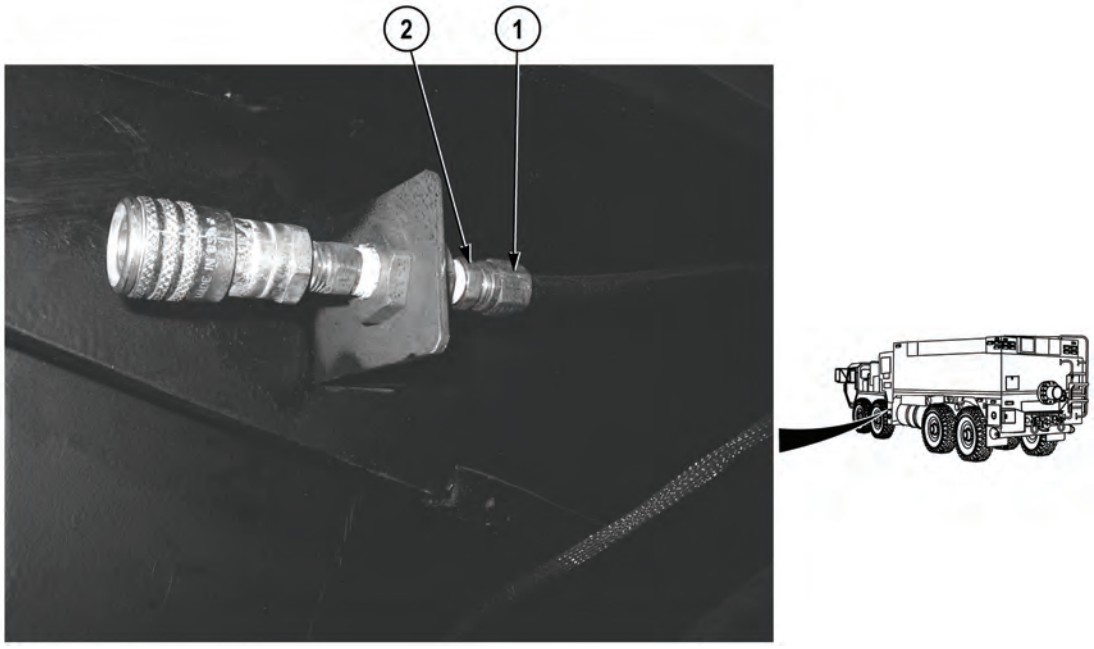


2. Apply teflon tape to threads of fitting (4) and adapter (5).

NOTE

Install adapter and fittings as noted prior to removal.

3. Install adapter (5) on tire inflator connector bracket (9) with lockwasher (8) and nut (7).
4. Apply teflon tape to threads of fitting (6).
5. Install fitting (6) on adapter (5).
6. Install fitting (4) on adapter (5).
7. Install tire inflator connector (3) on fitting (4).



NOTE

Do not use teflon tape on air line to fitting connection.

8. Connect air line (1) on fitting (2).

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

UNDER TRUCK NOZZLES ASSEMBLY REPLACEMENT

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive
(WP 0399, Item 17)

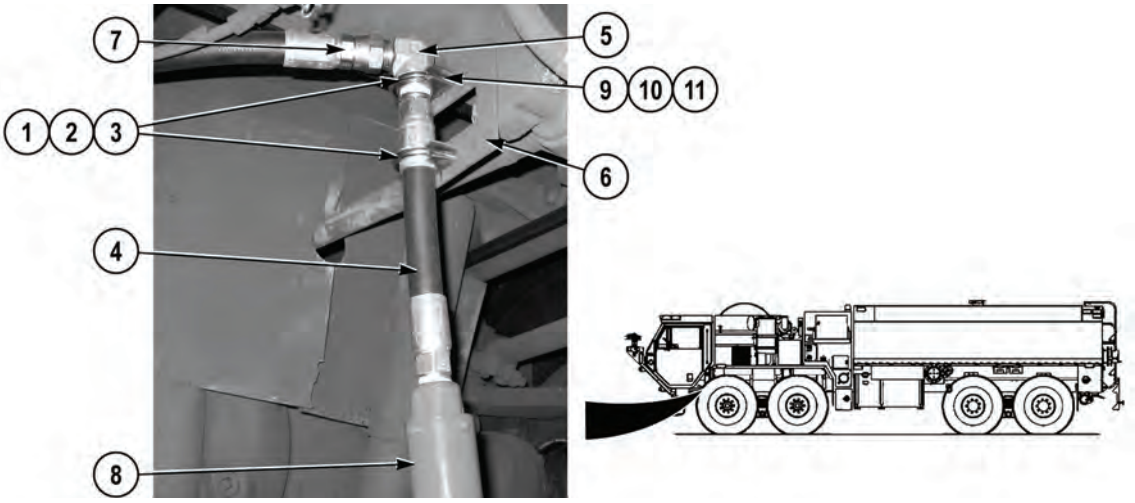
Materials/Parts
Compound, Sealing, Pipe Thread
(WP 0401, Item 11)
Locknut (4)
Locknut (1)
Locknut (2)
Locknut (2)
Locknut (1)
Locknut (2)

Materials/Parts (continued)
Locknut (2)
Locknut (2)
Locknut (4)
Lockwasher (2)

References
WP 0392, Fig. 93

Equipment Conditions
Engine OFF (TM 9-2320-279-10)
Wheels chocked (TM 9-2320-279-10)

FRONT UNDER TRUCK NOZZLE REMOVAL



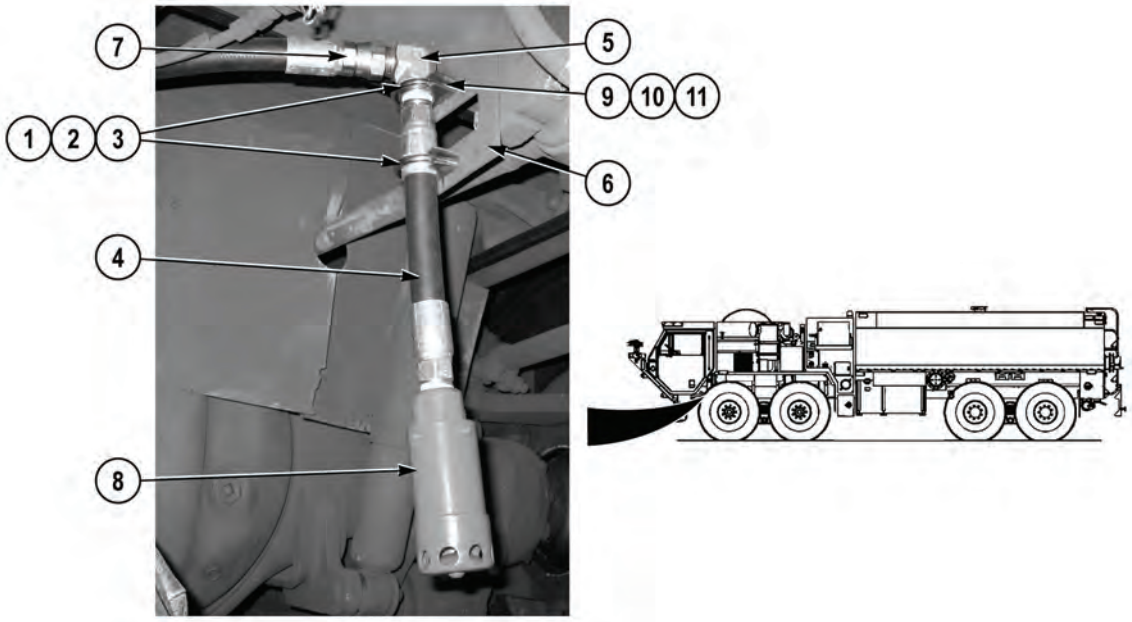
NOTE

Note position of elbow prior to removal to ensure proper installation.

1. Remove four locknuts (1), two U-bolts (2), cradles (3), hose (4), and elbow (5) from mounting bracket (6). Discard locknuts.
2. Remove hose (7) from elbow (5).
3. Remove elbow (5) from hose (4).
4. Remove nozzle (8) from hose (4).
5. Remove locknut (9), washer (10), and mounting bracket (6) from screw (11). Discard locknut.

END OF TASK

FRONT UNDER TRUCK NOZZLE INSTALLATION



1. Install mounting bracket (6) on screw (11) with washer (10) and locknut (9).

WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

CAUTION

Use sealing compound sparingly only on pipe threads. Do not apply compound to hose connections. Damage to equipment may result.

2. Apply sealing compound to threads of hose (4).
3. Install nozzle (8) on hose (4).
4. Install elbow (5) on hose (4).
5. Install hose (7) on elbow (5).

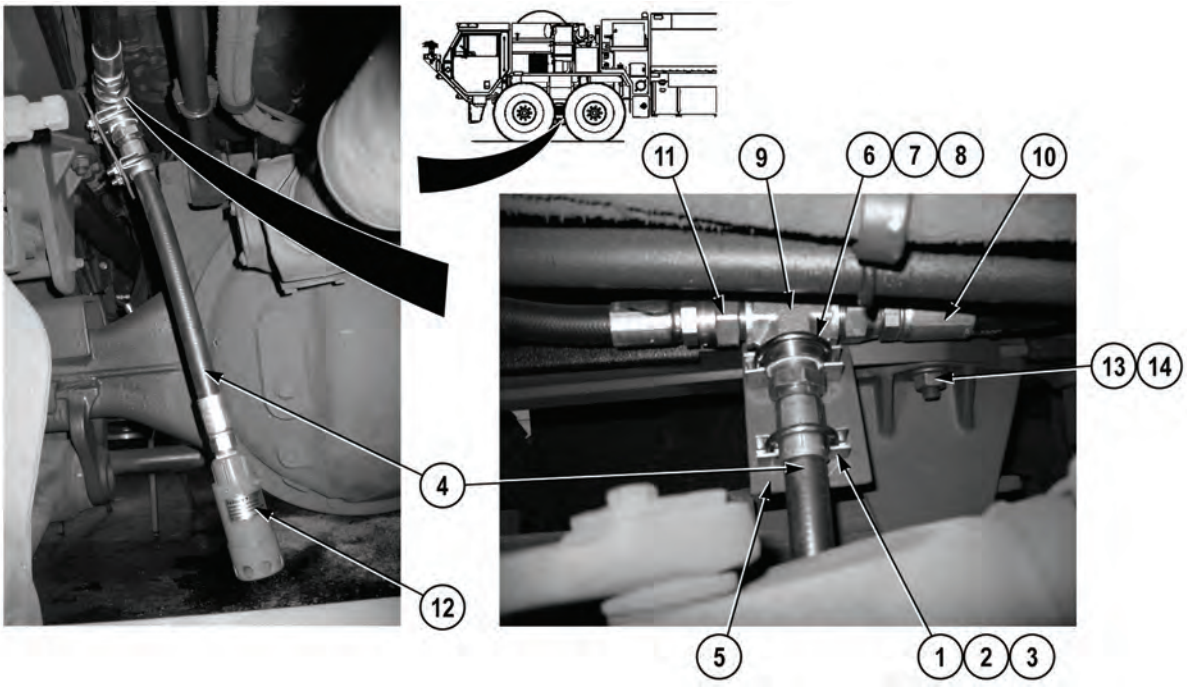
NOTE

Install elbow as noted prior to removal.

6. Install hose (4) and elbow (5) on mounting bracket (6) with two U-bolts (2), cradles (3), and locknuts (1).

END OF TASK

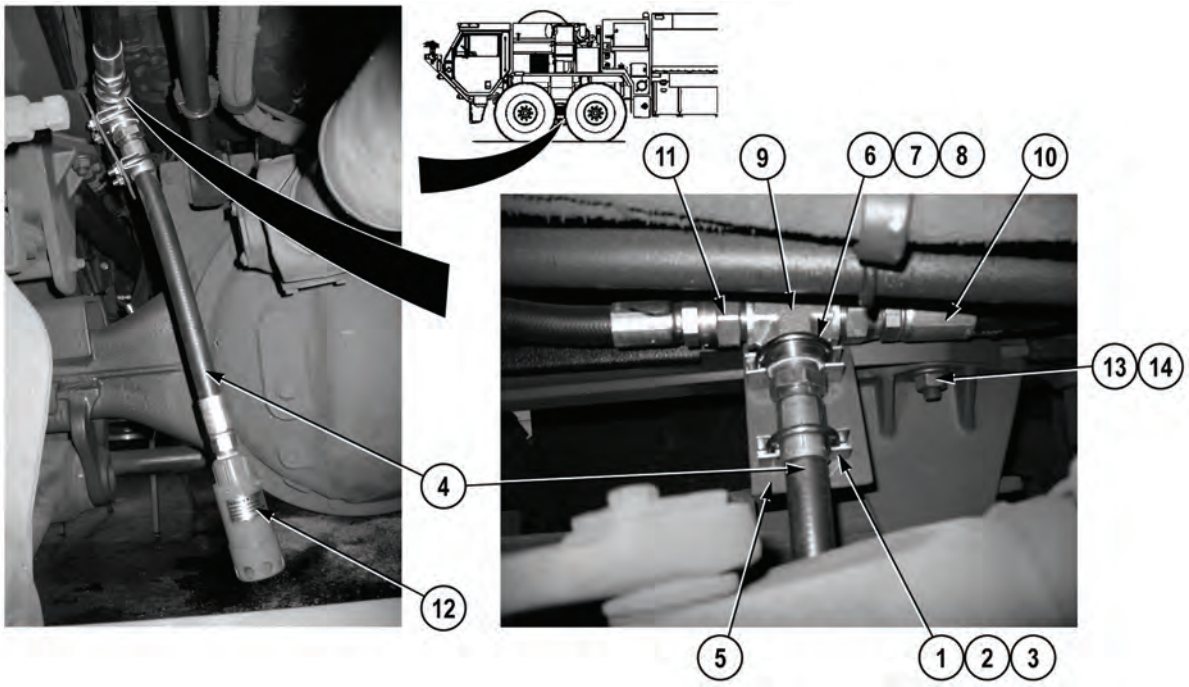
MIDDLE FRONT UNDER TRUCK NOZZLE REMOVAL



1. Remove two locknuts (1), U-bolt (2), and cradle (3) from hose (4) and mounting bracket (5). Discard locknuts.
2. Remove two locknuts (6), U-bolt (7), cradle (8), and tee (9) from mounting bracket (5). Discard locknuts.
3. Remove hose (10) from tee (9).
4. Remove hose (11) from tee (9).
5. Remove tee fitting (9) from hose (4).
6. Remove nozzle (12) from hose (4).
7. Remove locknut (13), screw (14), and mounting bracket (5) from vehicle. Discard locknut.

END OF TASK

MIDDLE FRONT UNDER TRUCK NOZZLE INSTALLATION



1. Install mounting bracket (5) on vehicle with screw (14) and locknut (13).

WARNING



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CAUTION

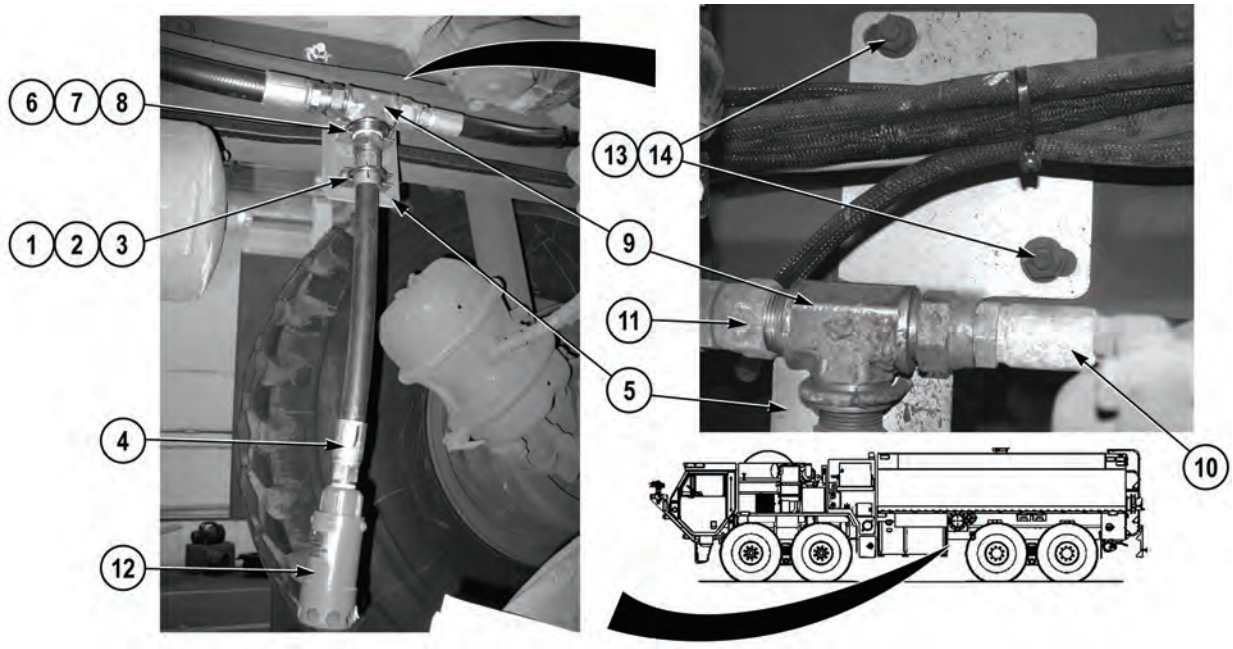
Use sealing compound sparingly only on pipe threads. Do not apply compound to hose connections. Damage to equipment may result.

2. Apply sealing compound to threads of hose (4).
3. Install nozzle (12) on hose (4).
4. Install tee (9) on hose (4).
5. Install hose (11) on tee (9).
6. Install hose (10) on tee (9).

7. Install tee (9) on bracket (5) with U-bolt (7), cradle (8), and two locknuts (6).
8. Install U-bolt (2), cradle (3), and two locknuts (1) on hose (4) and bracket (5).

END OF TASK

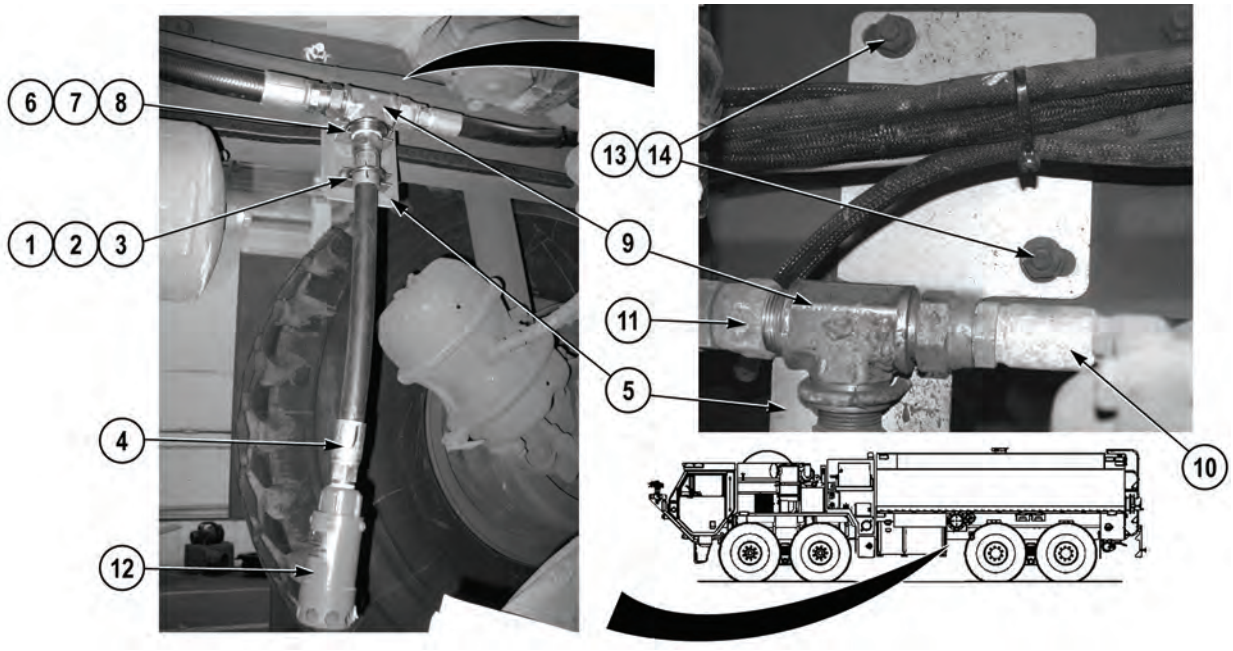
MIDDLE BACK UNDER TRUCK NOZZLE REMOVAL



1. Remove two locknuts (1), U-bolt (2), and cradle (3) from hose (4) and mounting bracket (5). Discard locknuts.
2. Remove two locknuts (6), U-bolt (7), cradle (8), and tee fitting (9) from bracket (5). Discard locknuts.
3. Remove hose (10) from tee (9).
4. Remove hose (11) from tee (9).
5. Remove tee fitting (9) from hose (4).
6. Remove nozzle (12) from hose (4).
7. Remove two locknuts (13), screws (14), and mounting bracket (5) from vehicle. Discard locknuts.

END OF TASK

MIDDLE BACK UNDER TRUCK NOZZLE INSTALLATION



1. Install mounting bracket (5) on vehicle with two screws (14) and locknuts (13).

WARNING



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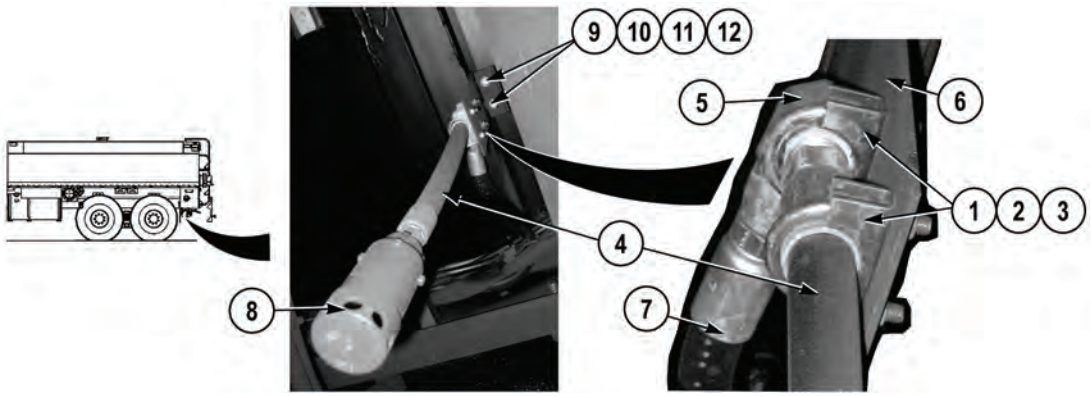
CAUTION

Use sealing compound sparingly only on pipe threads. Do not apply compound to hose connections. Damage to equipment may result.

2. Apply sealing compound to threads of hose (4).
3. Install nozzle (12) on hose (4).
4. Install tee (9) on hose (4).
5. Install hose (11) on tee (9).
6. Install hose (10) on tee (9).
7. Install tee fitting (9) on bracket (5) with U-bolt (7), cradle (8), and two locknuts (6).
8. Install U-bolt (2), cradle (3), and two locknuts (1) on hose (4) and bracket (5).

END OF TASK

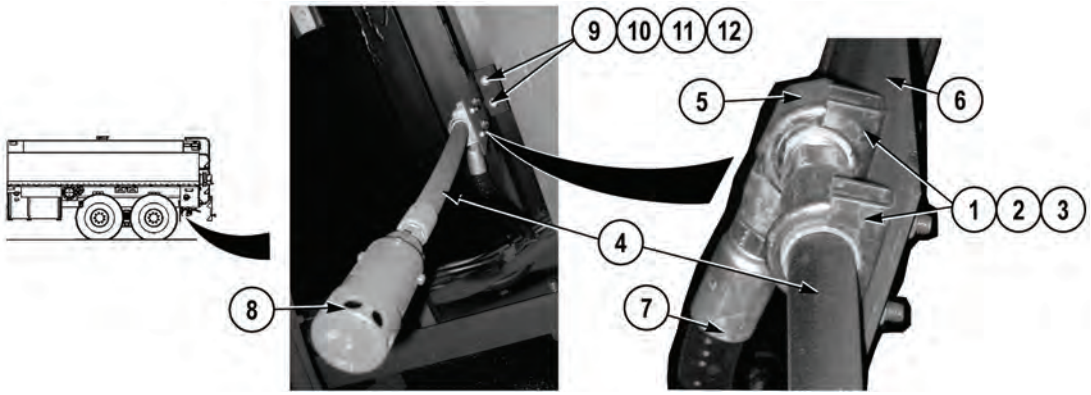
BACK UNDER TRUCK NOZZLE REMOVAL



1. Remove four locknuts (1), two U-bolts (2), cradles (3), hose (4), and elbow (5) from mounting bracket (6). Discard locknuts.
2. Remove hose (7) from elbow (5).
3. Remove elbow (5) from hose (4).
4. Remove nozzle (8) from hose (4).
5. Remove two nuts (9), lockwashers (10), four washers (11), two screws (12), and mounting bracket (6) from vehicle. Discard lockwashers.

END OF TASK

BACK UNDER TRUCK NOZZLE INSTALLATION



1. Install mounting bracket (6) on vehicle with two screws (12), four washers (11), two lockwashers (10), and nuts (9).

WARNING



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CAUTION

Use sealing compound sparingly only on pipe threads. Do not apply compound to hose connections. Damage to equipment may result.

2. Apply sealing compound to threads of hose (4).
3. Install nozzle (8) on hose (4).
4. Install elbow (5) on hose (4).
5. Install hose (7) on elbow (5).
6. Install elbow (5) and hose (4) on mounting bracket (6) with two U-bolts (2), cradles (3), and locknuts (1).

END OF TASK

FOLLOW-ON MAINTENANCE

Remove wheel chocks (TM 9-2320-279-10)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

WATER PUMP BLOW-OUT COMPONENT(S) REPLACEMENT

INITIAL SETUP:

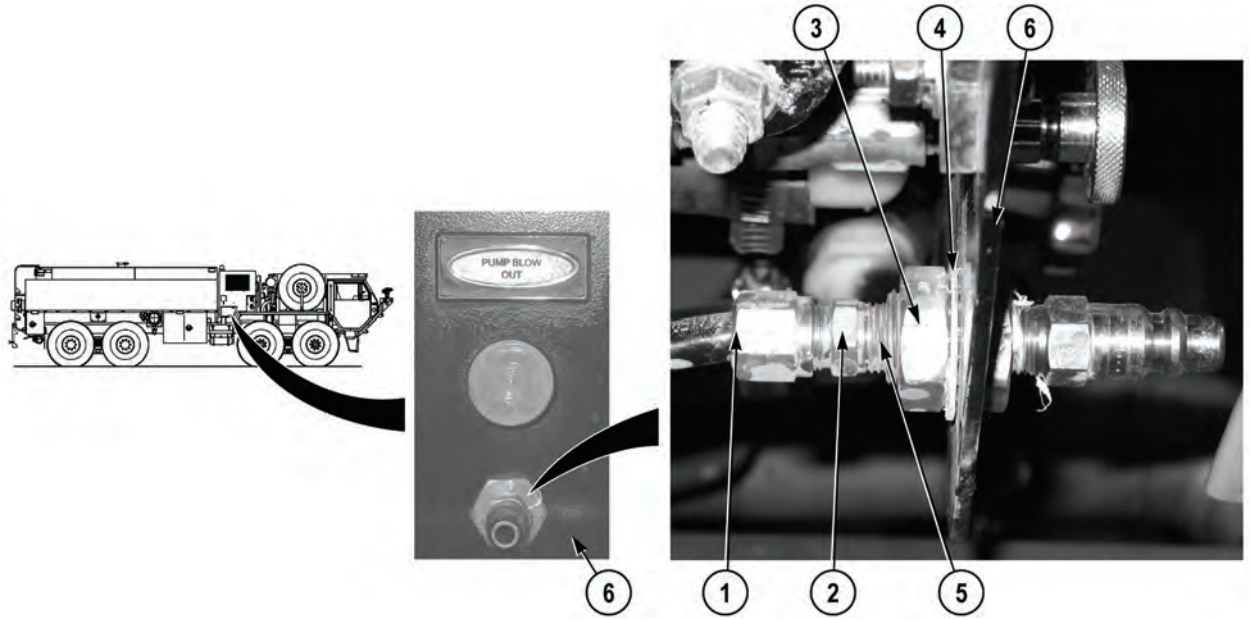
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Adhesive, Spray (WP 0401, Item 5)
Tags, Identification (WP 0401, Item 22)
Tape, Teflon (WP 0401, Item 24)
Lockwasher (1)

References
WP 0328
WP 0392, Fig. 14

Equipment Conditions
Pump house panels H and P removed (WP 0341)

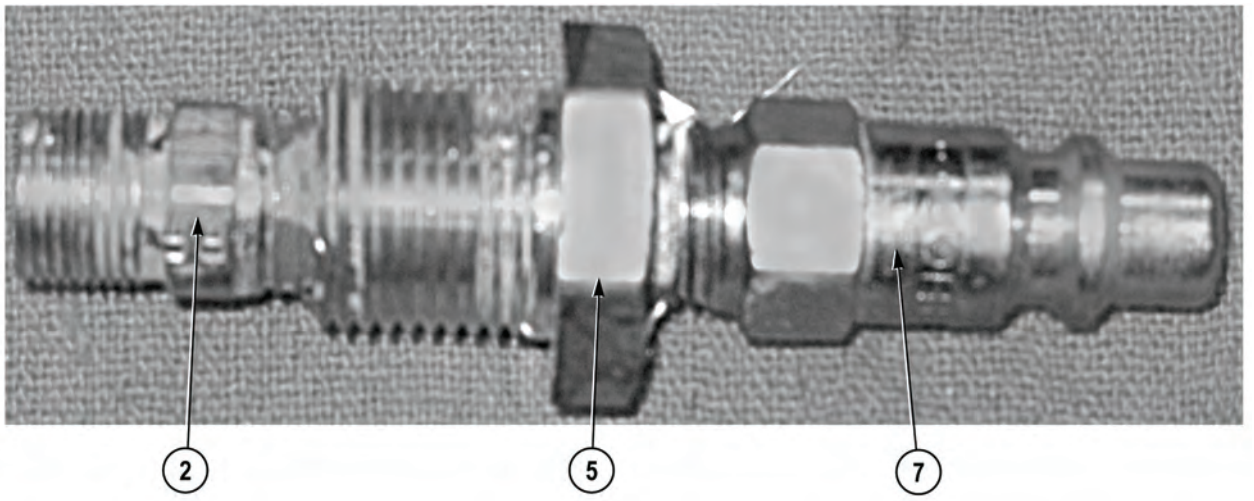
REMOVAL



NOTE

Tag and mark lines prior to removal to ensure proper installation.

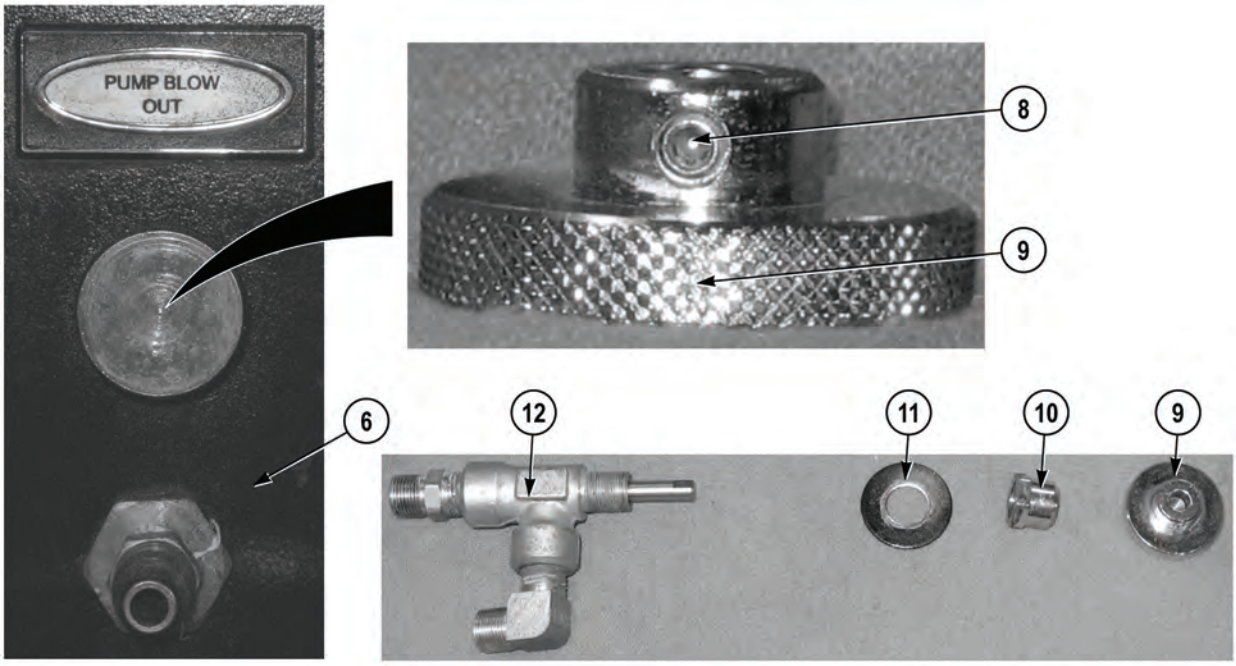
1. Remove line (1) from fitting (2).
2. Remove nut (3), lockwasher (4) and bulkhead fitting (5) from pump house bracket (6). Discard lockwasher.



NOTE

Note position of fitting and nipple on adapter prior to removal to ensure proper installation.

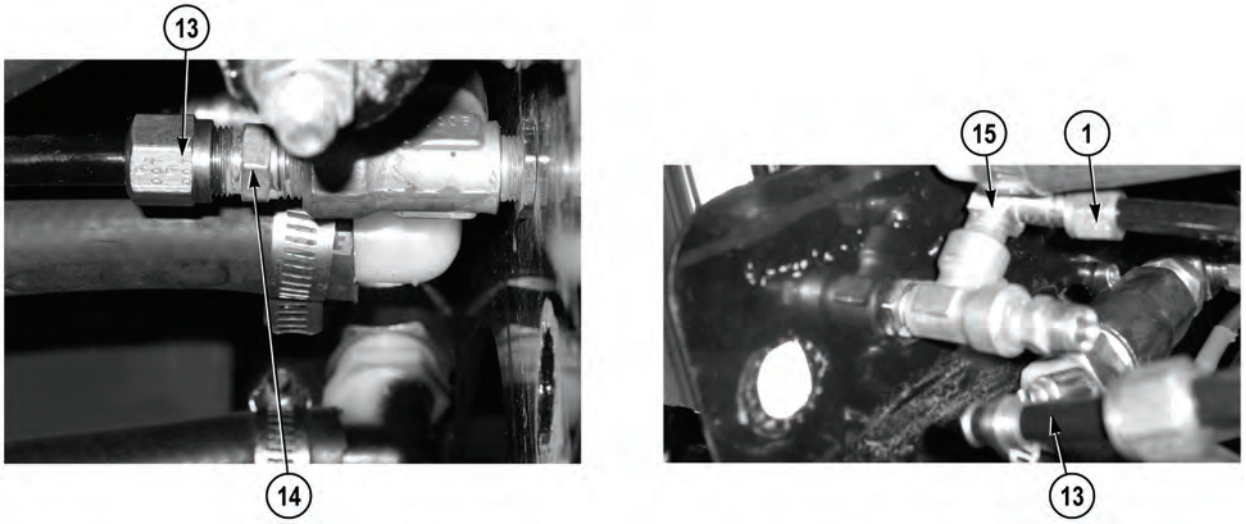
3. Remove fitting (2) from bulkhead fitting (5).
4. Remove nipple (7) from bulkhead fitting (5).



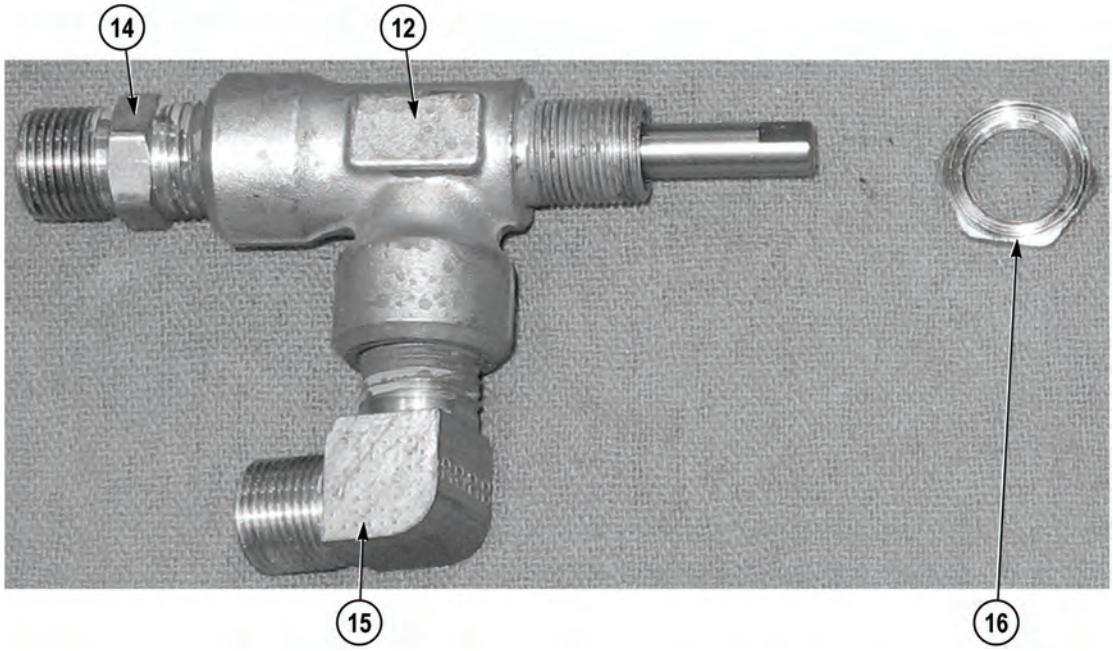
NOTE

Note position of handle on valve prior to removal to ensure proper installation.

5. Loosen setscrew (8) on handle (9).
6. Remove handle (9), keeper nut (10), washer (11), and pump blow-out valve (12) from pump house bracket (6).



7. Remove line (13) from fitting (14).
8. Remove line (1) from elbow (15).

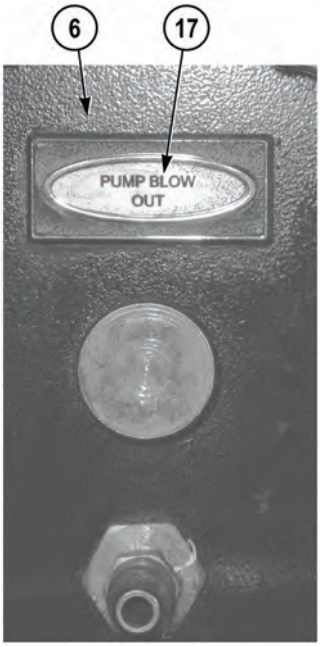


9. Remove jam nut (16) from pump blow-out valve (12).

NOTE

Note position of fitting and elbow prior to removal to ensure proper installation.

10. Remove fitting (14) from pump blow-out valve (12).
11. Remove elbow (15) from pump blow-out valve (12).



NOTE

Perform Step (12) if decal and bezel needs to be removed.

12. Remove decal and bezel (17) from pump house bracket (6) (WP 0328).

END OF TASK

INSTALLATION

WARNING

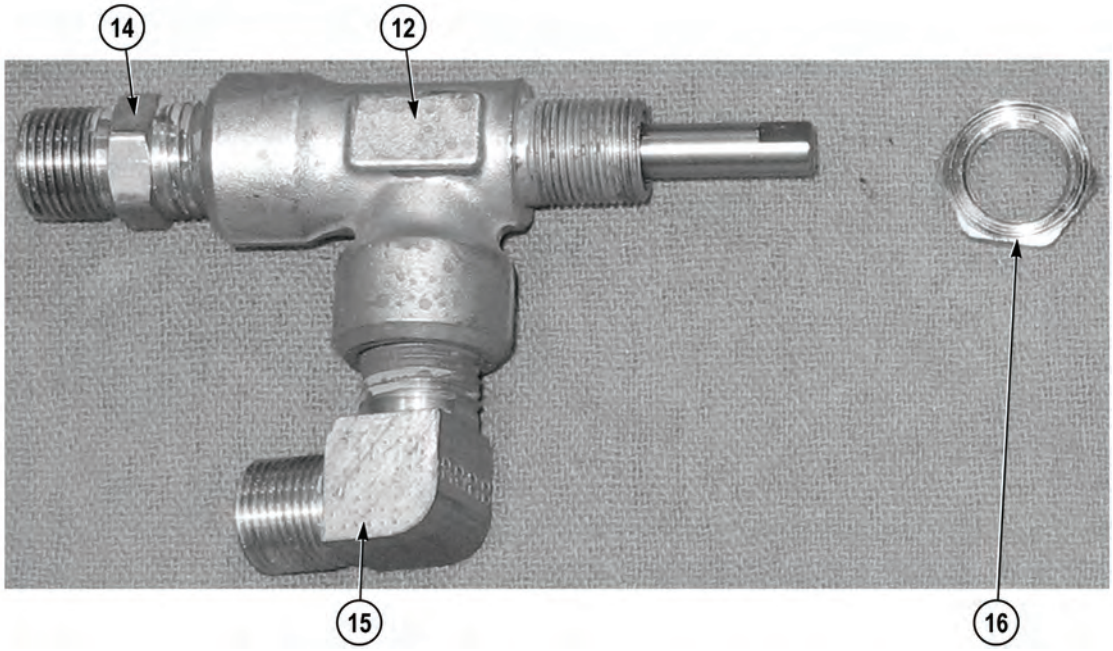


Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water.

NOTE

Perform Steps (1) and (2) if pump blow out decal and bezel were removed.

1. Apply spray adhesive to back of decal and bezel (17)
2. Install decal and bezel (17) on pump house bracket (6) (WP 0328).



3. Apply teflon tape to threads of fitting (14) and elbow (15).

NOTE

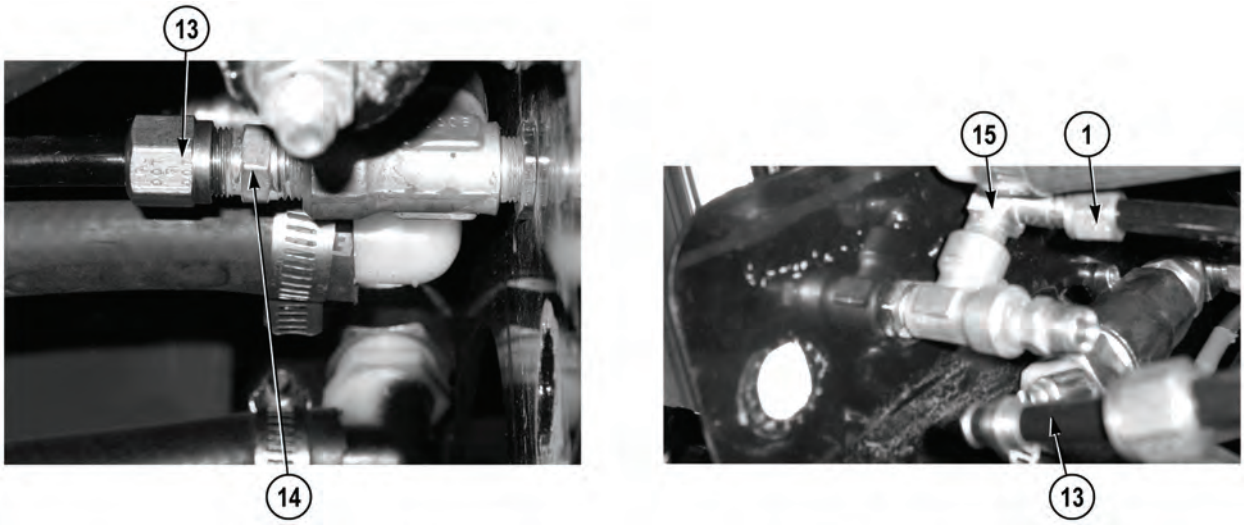
Install fitting and elbow as noted prior to removal.

4. Install elbow (15) on pump blow-out valve (12).
5. Install fitting (14) on pump blow-out valve (12).

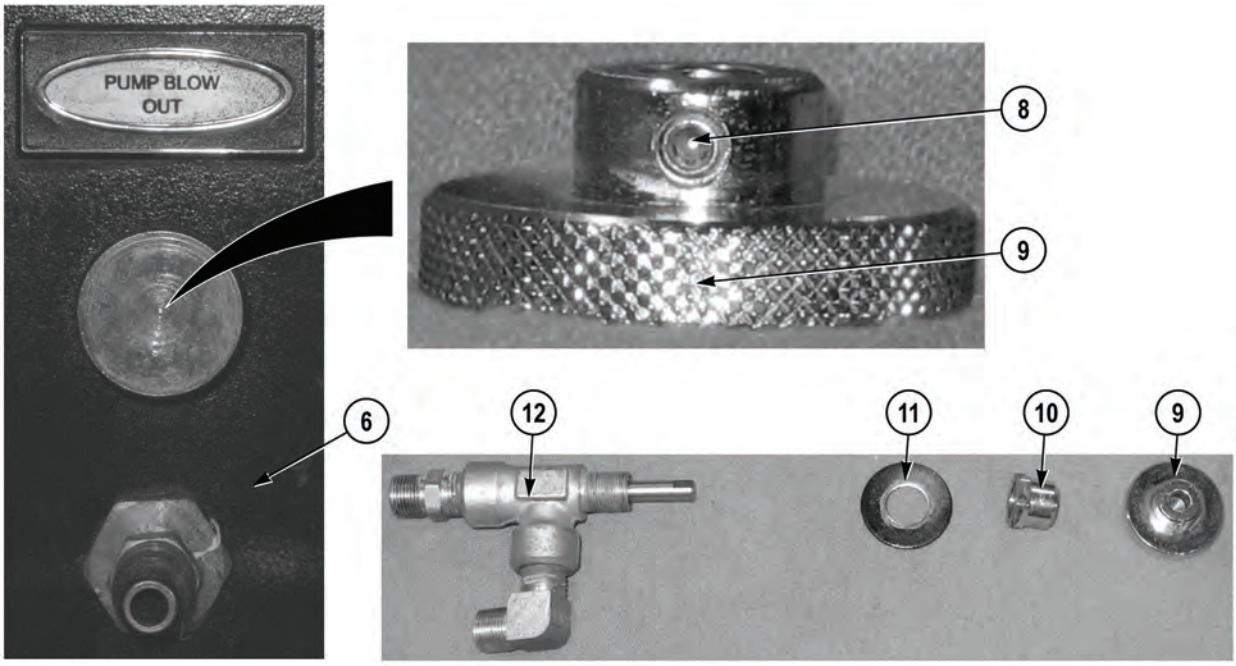
NOTE

Jam nut will be tightened when pump blow-out valve is positioned on pump house bracket.

6. Position jam nut (16) on pump blow-out valve (12). Do not tighten jam nut (16).



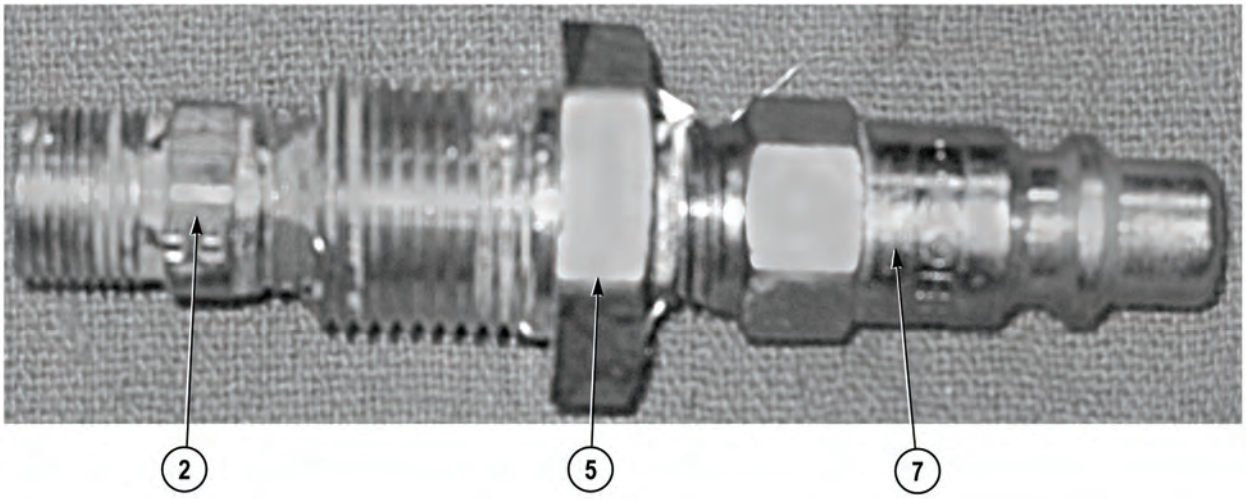
7. Install line (1) on elbow (15).
8. Install line (13) on fitting (14).



NOTE

Install handle on valve as noted prior to removal.

9. Position pump blow-out valve (12) on pump house bracket (6) with washer (11), keeper nut (10), and handle (9). Tighten jam nut (16).
10. Tighten setscrew (8) on handle (9).



NOTE

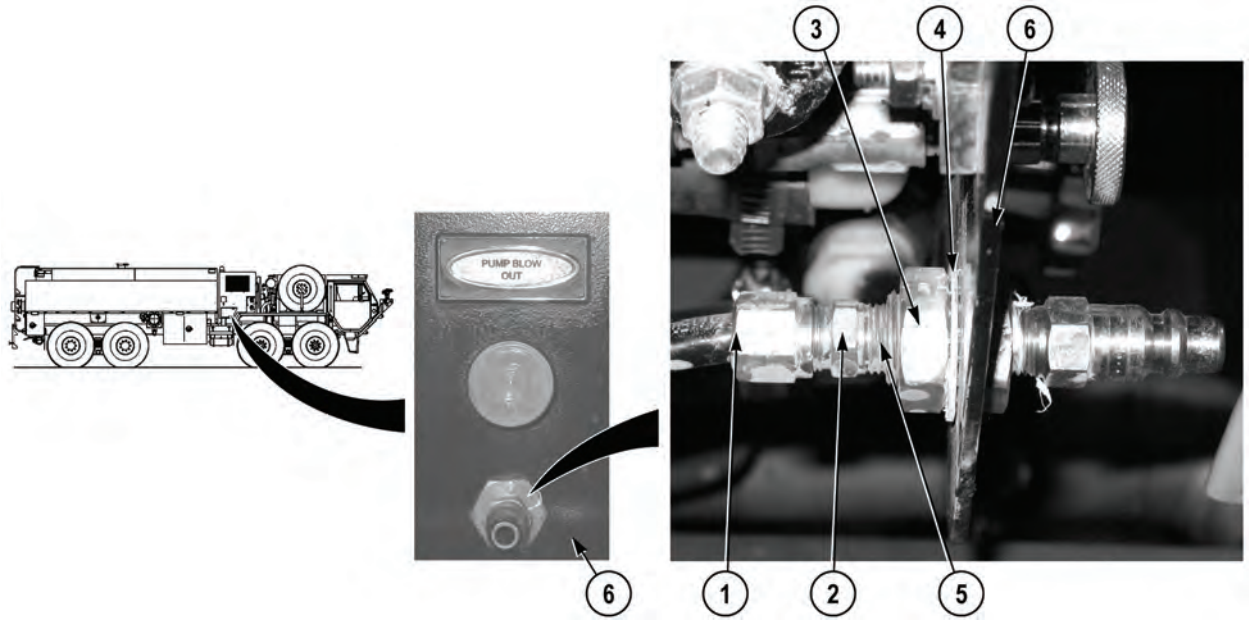
Do not apply teflon tape to hose side of fitting (2) threads.

11. Apply teflon tape to threads of fitting (2) and nipple (7).

NOTE

Install fitting and nipple on adapter as noted prior to removal.

12. Install nipple (7) on bulkhead fitting (5).
13. Install fitting (2) on bulkhead fitting (5).



14. Position bulkhead fitting (5) on pump house bracket (6) with lockwasher (4) and nut (3).
15. Install line (1) on fitting (2).

END OF TASK

FOLLOW-ON MAINTENANCE

Install Pump house panels H and P (WP 0341)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

WINDSHIELD DELUGE SHUTOFF VALVE AND STRAINER ASSEMBLY REPLACEMENT

INITIAL SETUP:

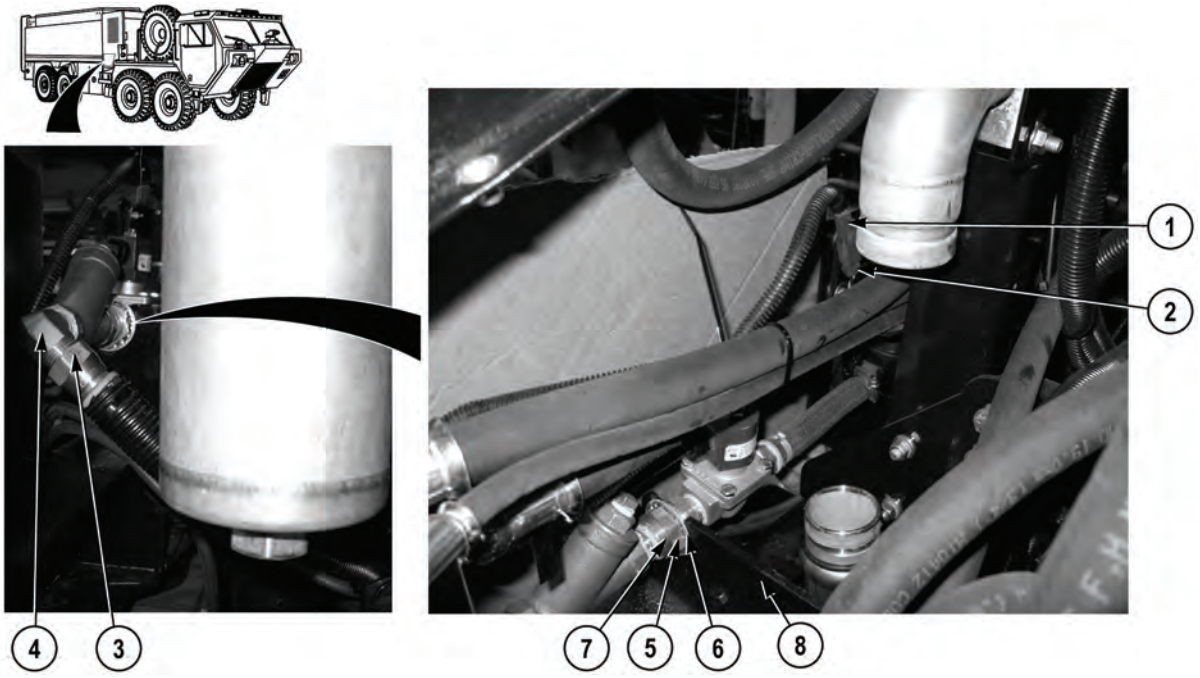
Tools and Special Tools
Tool Kit, General Mechanic's: Automotive (WP 0399, Item 17)

Materials/Parts
Compound, sealing, pipe thread (WP 0401, Item 11)
Tags, Identification (WP 0401, Item 22)
Ties, Cable (WP 0401, Item 25)
Lockwasher (1)

References
WP 0392, Fig. 94

Equipment Conditions
Batteries disconnected (TM 9-2320-315-14&P)
Water tank drained (WP 0014)
Bumper turret valve removed (WP 0314)

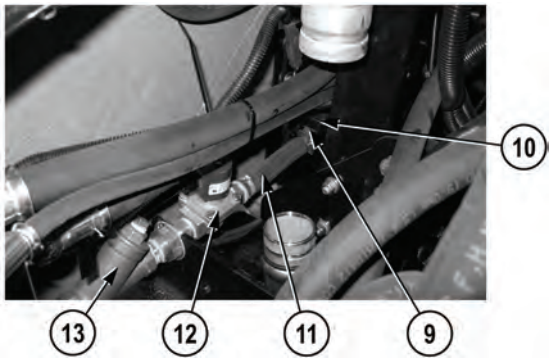
REMOVAL



NOTE

- Remove cable ties as required.
- Tag and mark hoses prior to removal to ensure proper installation.

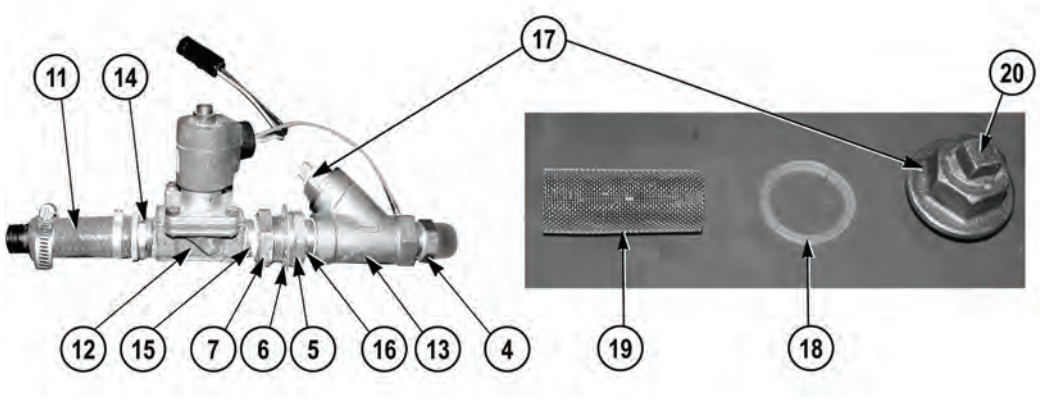
1. Disconnect windshield deluge motor connector (1) from pump house wire harness connector (2).
2. Remove hose (3) from elbow (4).
3. Loosen nut (5) and lockwasher (6), and remove bulkhead fitting (7) from bracket (8).



NOTE

Removal of windshield deluge shutoff valve and strainer assembly requires lifting retainer clip on side of windshield deluge motor and removing hose and adapter from windshield deluge motor.

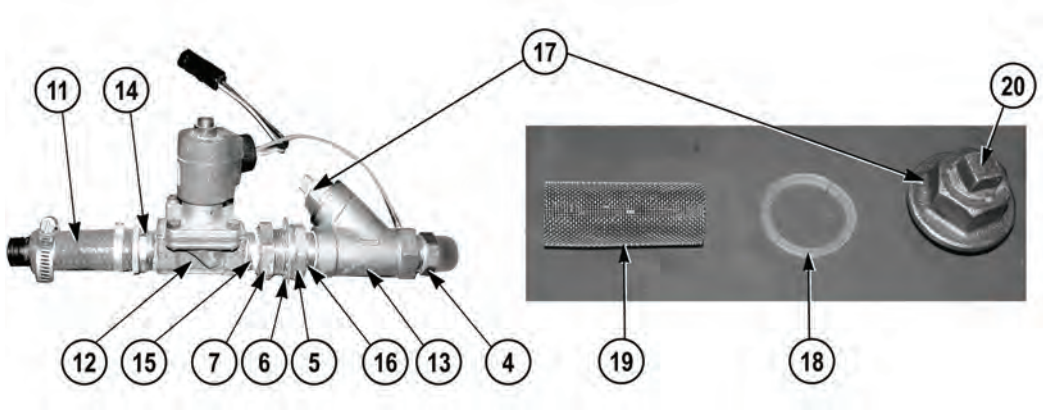
4. Lift retainer clip (9) on windshield deluge motor (10) and remove hose (11), windshield deluge shutoff valve (12), and strainer (13) from vehicle.



5. Remove hose (11) from fitting (14).
6. Remove fitting (14) from windshield deluge shutoff valve (12).
7. Remove bulkhead fitting (7) and nipple (15) from windshield deluge shutoff valve (12).
8. Remove elbow (4) from strainer (13).
9. Remove bulkhead fitting (7) and nipple (16) from strainer (13).
10. Remove cap (17), gasket (18), and screen (19) from strainer (13).
11. Remove plug (20) from cap (17).
12. Remove two nipples (15) and (16) from bulkhead fitting (7).
13. Remove nut (5) and lockwasher (6) from bulkhead fitting (7). Discard lockwasher.

END OF TASK

INSTALLATION



1. Position lockwasher (6) and nut (5) on fitting (7).

WARNING



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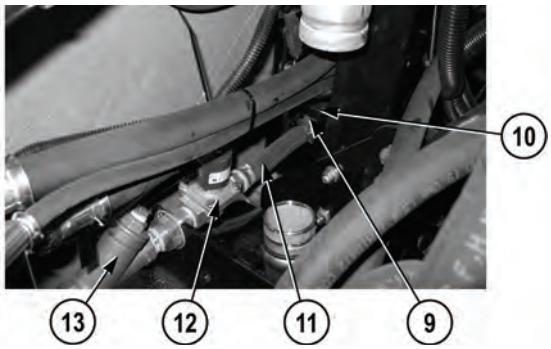
CAUTION

Use sealing compound sparingly only on pipe threads. Do not apply compound to hose connections. Damage to equipment may result.

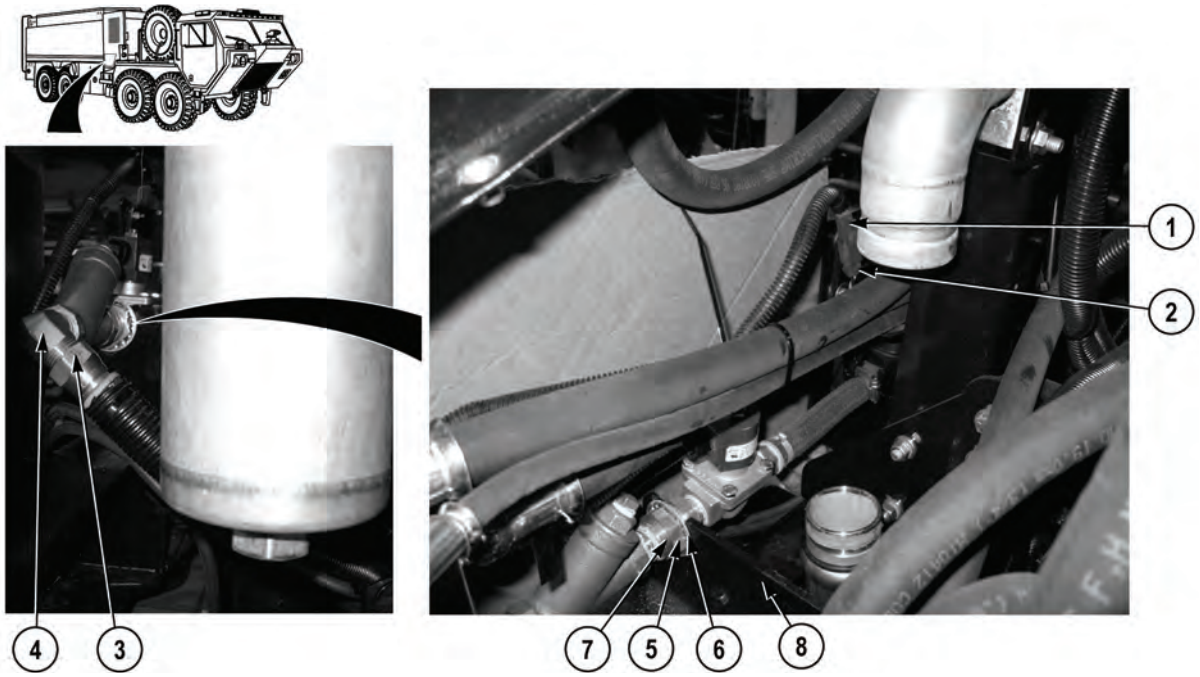
NOTE

Install cable ties and cushion clips as required.

2. Apply sealing compound to threads of plug (20), two nipples (15) and (16), fitting (14), and elbow (4).
3. Install two nipples (16) and (15) on bulkhead fitting (7).
4. Install plug (20) on cap (17).
5. Install screen (19), gasket (18), and cap (17) on strainer (13).
6. Install nipple (16) and bulkhead fitting (7) on strainer (13).
7. Install elbow (4) on strainer (13).
8. Install nipple (15) and bulkhead fitting (7) on windshield deluge shutoff valve (12).
9. Install fitting (14) on windshield deluge shutoff valve (12).
10. Install hose (11) on fitting (14).



11. Install windshield deluge shutoff valve (12), strainer (13), and hose (11) on windshield deluge motor (10) and secure retainer clip (9).



12. Install bulkhead fitting (7) on bracket (8) and tighten lockwasher (6) and nut (5).
13. Install hose (3) on elbow (4).
14. Connect windshield deluge motor connector (1) on pump house connector (2).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install bumper turret valve (WP 0314)
2. Connect batteries (TM 9-2320-315-14&P)

END OF TASK

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

ILLUSTRATED LIST OF MANUFACTURED ITEMS

INITIAL SETUP:

Tools and Special Tools
Tool Kit, General Mechanic's: Automotive
(WP 0399, Item 17)

ILLUSTRATED LIST OF MANUFACTURED ITEMS INTRODUCTION

a. Scope.

This work package includes complete instructions for making items authorized to be manufactured or fabricated at the field level.

b. How To Use the Index of Manufactured Items.

A part number index in alphanumeric order is provided for cross-referencing the part number of the item to be manufactured to the page which covers fabrication criteria.

c. Explanation of the Illustrations of Manufactured Items.

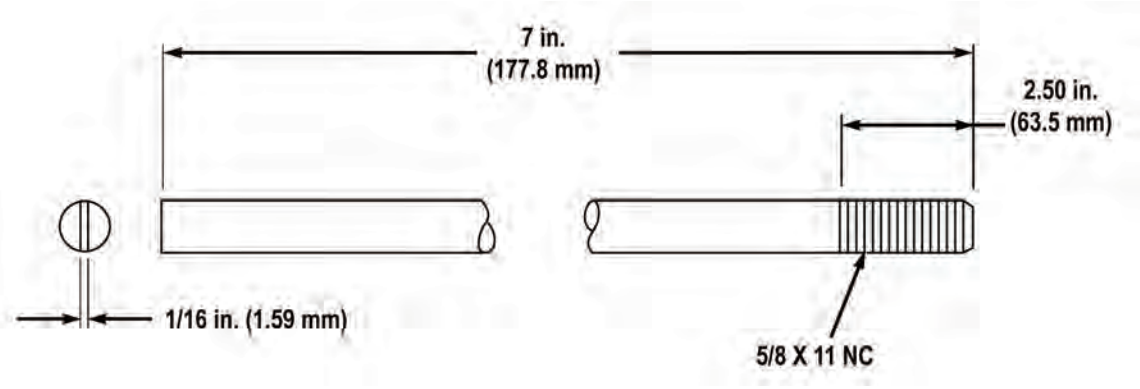
All instructions needed by maintenance personnel to manufacture the item are included on the illustrations. All bulk materials needed for manufacture of an item are listed by part number or specification number in a tabular list of the illustration.

MANUFACTURED ITEMS PART NUMBER INDEX

Part Number or Drawing Number	Manufactured Item	Page Number
N/A	Guide Pin	0387-2

ILLUSTRATED LIST OF MANUFACTURED ITEMS

a. Guide Pin.



(1) Fabricate from 7 in. (177.8 mm) 5/8 x 11 NC screw.

(2) Cut head off screw.

(3) Cut 1/16 in. (1.59 mm) slot in end of screw as shown.

(4) Dimensions are in inches (mm).

Table 1. Guide Pin.

Item Number	Work Package Reference	Finished Dimensions	Quantity
a-1	WP 0186	5/8 in. x 7 in. (15.9 mm x 177.8 mm)	4

END OF WORK PACKAGE

FIELD LEVEL MAINTENANCE

TORQUE LIMITS

SCOPE

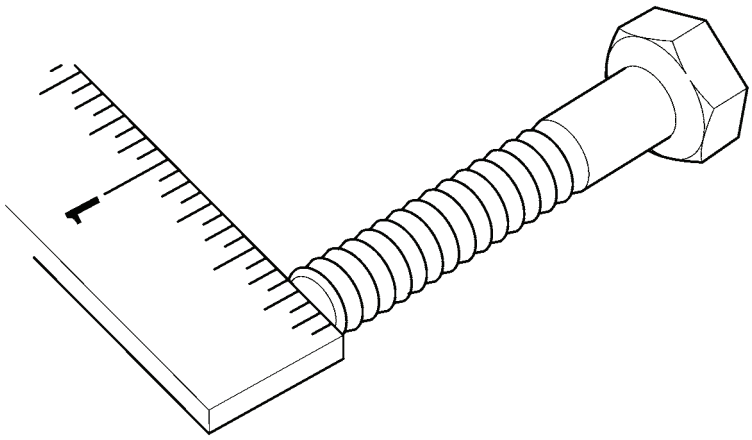
This section provides general torque limits for the screws, hoses, and fittings used on the vehicle. Special torque limits are listed in the maintenance procedures for applicable components. The general torque limits given in this work package shall be used when specific torque limits are not indicated in the maintenance procedure. These general torque limits cannot be applied to screws that retain rubber components. The rubber components will be damaged before the torque limit is reached. If a special torque limit is not given in the maintenance instructions, tighten the screw or nut until it touches the metal bracket then tighten it one more turn.

TORQUE LIMITS

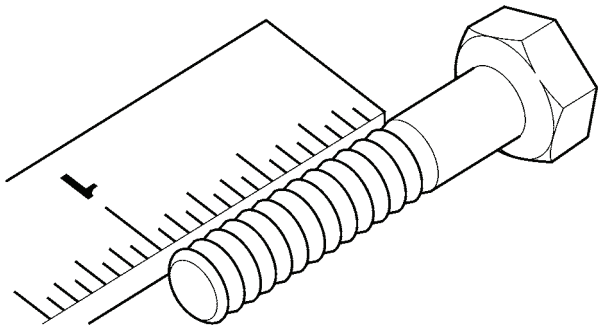
Table 1 lists the torque limits for wet flange nuts. Table 2 lists the torque limits for wet socket head capscrews. Table 3 lists torque limits for dry fasteners. Dry torque limits are used on screws that do not have high pressure lubricants applied to the threads. Table 4 lists torque limits for wet fasteners. Wet torque limits are used on screws that have high pressure lubricants applied to the threads. Table 5 lists the torque limits for SAE 37-degree flare hose connections. Table 6 lists the torque limits for SAE 45-degree flare hose connections. Table 7 lists the torque limits for ORS preformed packing face seal hose connections. Table 8 lists the torque limits for NPSM swivel connections.

HOW TO USE TORQUE TABLES

a. Screws and Nuts.

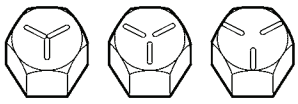
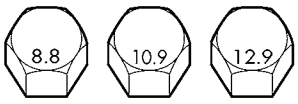


1. Measure the diameter of the screw you are installing with a ruler.



2. Measure out one inch with a ruler and count the number of threads per inch.
3. Under the heading SIZE, look down the left-hand column until you find the diameter of the screw you are installing (there will usually be two lines beginning with the same size).
4. In the second column under SIZE, find the number of threads per inch that matches the number of threads per inch you counted in step (2). (Not required for metric screws).

CAPSCREW HEAD MARKINGS

Manufacturer's marks may vary. These are all SAE Grade 5 (3-line).	Metric screws are of three grades: 8.8, 10.9, & 12.9. Manufacturer's marks & Grades appear on the screw head.
	
STANDARD	**METRIC**

5. To find the grade screw you are installing, match the markings on the head with the correct picture of CAPSCREW HEAD MARKINGS on the torque table.
6. Look down the column under the picture you found in step (5) until you find the torque limit (lb-ft or N•m) for the diameter and threads per inch of the screw you are installing.
7. Use wet torque values.

Table 1. Torque Limits for Wet Flange Nuts.

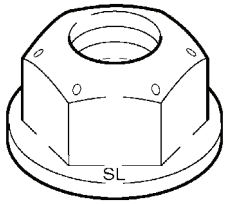
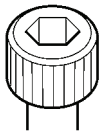
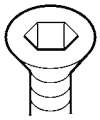
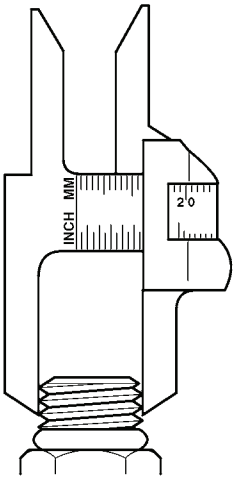
SPIRALOCK FLANGE NUT MARKINGS GRADE 8	DIAMETER		THREADS PER INCH	TORQUE	
	in.	mm		lb-ft	N•m
	1/4	6.35	20	15	20
	5/16	7.94	18	25	34
	3/8	9.53	16	45	61
	1/2	12.70	13	110	149
	5/8	15.87	11	210	285
	3/4	19.05	10	375	508

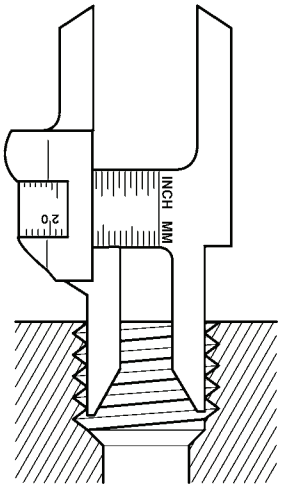
Table 2. Torque Limits for Wet Socket Head Capscrews.

	TORQUE IN FT. LBS (CAPSCREWS) LUBED		
	SIZE	SOC HD OR 12 PT	SOC FLAT HD
SOC HEAD/12 PT. 	.10-24	55	2.5
	.25-20	12	6
	.31-18	25	12
	.38-16	44	22
	.50-13	70	36
SOC FLAT HEAD 	.56-12	106	53
	.62-11	212	106
	.75-10	375	187
	1.00-8	781	

b. Hoses and Fittings.



O.D.
(MALE THREADS)

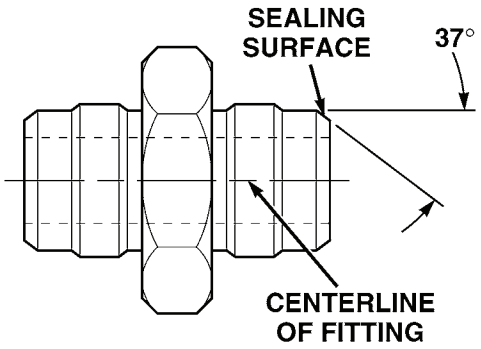


I.D.
(FEMALE THREADS)

NOTE

Most fluid piping system sizes are measured by dash numbers. These are universally used abbreviations for the size of the component expressed as the numerator of the fraction with the denominator always being 16. For example, a -04 port is 4/16 or 1/4-inch. Dash numbers are usually nominal (in name only) and are abbreviations that make ordering of components easier.

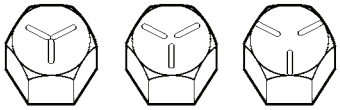
1. Measure the I.D./O.D. diameter with a caliper as shown.
2. Under the heading MALE THREAD O.D. and FEMALE THREAD I.D., match the measurements with the row in table to determine proper torque.



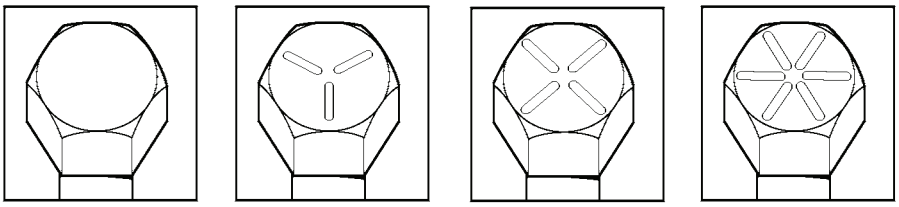
3. To find the sealing surface angle, use a protractor and measure the sealing surface parallel to the centerline of the fitting.

Table 3. Torque Limits for Dry Fasteners.

CAPSCREW HEAD MARKINGS



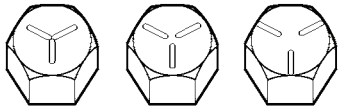
Manufacturer's marks may vary.
These are all SAE Grade 5 (3-line).



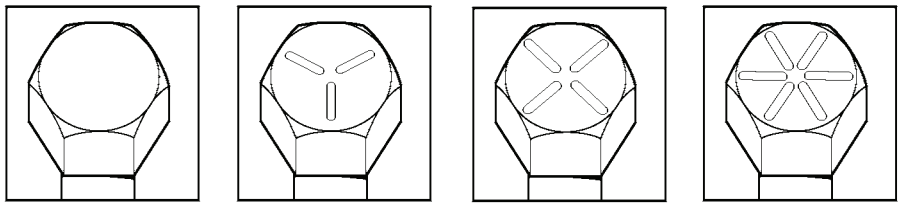
SIZE			TORQUE							
			SAE GRADE NO. 2		SAE GRADE NO. 5		SAE GRADE NO. 6 or 7		SAE GRADE NO. 8	
DIA. INCHES	THREADS PER INCH	MILLI-METERS	POUNDS FEET	NEWTON METERS	POUNDS FEET	NEWTON METERS	POUNDS FEET	NEWTON METERS	POUNDS FEET	NEWTON METERS
1/4	20	6.35	5	7	8	11	12	14	12	16
1/4	28	6.35	6	9	10	14	12	16	14	19
5/16	18	7.94	11	15	17	23	21	28	25	34
5/16	24	7.94	12	16	19	26	24	33	25	34
3/8	16	9.53	20	27	30	41	40	54	45	61
3/8	24	9.53	23	31	35	47	45	61	50	68
7/16	14	11.11	30	41	50	68	60	81	70	95
7/16	20		35	47	55	75	70	95	80	108
1/2	13	12.70	50	68	75	102	95	129	110	149
1/2	20		55	75	90	122	100	136	120	163
9/16	12	14.29	65	88	110	149	135	183	150	203
9/16	12		75	102	120	163	150	203	170	231
5/8	11	15.88	90	122	150	203	190	258	220	298
5/8	18		100	136	180	244	210	285	240	325
3/4	10	19.05	160	217	260	353	320	434	380	515
3/4	16		180	244	300	407	360	488	420	570
7/8	9	22.23	140	190	400	542	520	705	600	814
7/8	14		155	210	440	597	580	786	660	895
1	8	25.40	220	298	580	786	800	1085	900	1220
1	12		240	325	640	868	860	1166	1000	1356
1-1/8	7	25.58	300	407	800	1085	1120	1519	1280	1736
1-1/8	12		340	461	880	1193	1260	1709	1440	1953
1-1/4	7	31.75	420	570	1120	1519	1580	2142	1820	2468
1-1/4	12		460	624	1240	1681	1760	2387	2000	2712
1-3/8	6	34.93	560	759	1460	1980	2080	2820	2380	3227
1-3/8	12		640	868	1680	2278	2380	3227	2720	3688
1-1/2	6	38.10	740	1003	1940	2631	2780	3770	3160	4285
1-1/2	12		840	1139	2200	2983	3100	4204	3560	4827

Table 4. Torque Limits for Wet Fasteners.

CAPSCREW HEAD MARKINGS

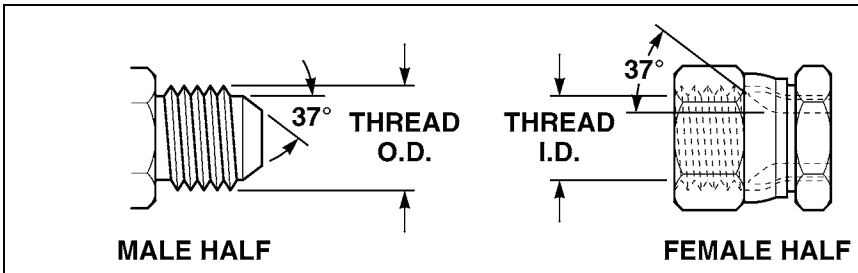


Manufacturer's marks may vary.
These are all SAE Grade 5 (3-line).



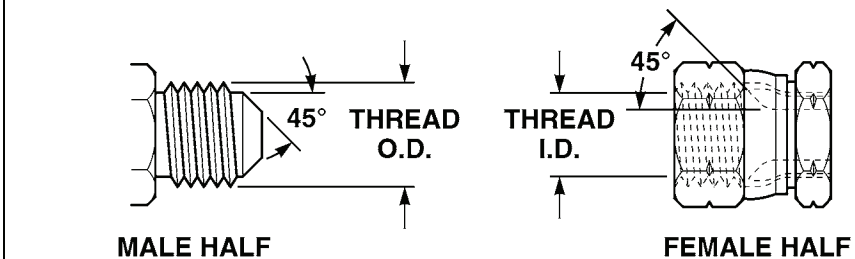
SIZE			TORQUE							
			SAE GRADE NO. 2		SAE GRADE NO. 5		SAE GRADE NO. 6 or 7		SAE GRADE NO. 8	
DIA. INCHES	THREADS PER INCH	MILLI-METERS	POUNDS FEET	NEWTON METERS	POUNDS FEET	NEWTON METERS	POUNDS FEET	NEWTON METERS	POUNDS FEET	NEWTON METERS
1/4	20	6.35	4	6	6	8	8	11	9	12
1/4	28	6.35	5	7	7	9	9	12	10	14
5/16	18	7.94	8	11	13	18	16	22	18	24
5/16	24	7.94	9	12	14	19	18	24	20	27
3/8	16	9.53	15	20	23	31	30	41	35	47
3/8	24	9.53	17	23	25	34	30	41	35	47
7/16	14	11.11	24	33	35	47	45	61	55	75
7/16	20		25	34	40	54	50	68	60	81
1/2	13	12.70	35	47	55	75	70	95	80	108
1/2	20		40	54	65	88	80	108	90	122
9/16	12	14.29	50	68	80	108	100	136	110	149
9/16	12		55	75	90	122	110	149	130	176
5/8	11	15.88	70	95	110	149	140	190	170	231
5/8	18		80	108	130	176	160	218	180	244
3/4	10	19.05	120	163	200	271	240	325	280	380
3/4	16		140	190	220	298	280	380	320	434
7/8	9	22.23	110	149	300	407	400	542	460	624
7/8	14		120	163	320	434	440	597	500	678
1	8	25.40	160	217	440	597	600	814	680	922
1	12		170	231	480	651	660	895	740	1003
1-1/8	7	25.58	220	298	600	814	840	1139	960	1320
1-1/8	12		260	353	660	895	940	1275	1080	1464
1-1/4	7	31.75	320	434	840	1139	1100	1492	1360	1844
1-1/4	12		360	488	920	1248	1320	1709	1500	2034
1-3/8	6	34.93	420	570	1100	1492	1560	2115	1780	2414
1-3/8	12		460	624	1260	1709	1780	2414	2040	2776
1-1/2	6	38.10	560	760	1460	1980	2080	2820	2360	3200
1-1/2	12		620	841	1640	2224	2320	3146	2660	3607

Table 5. Torque Limits for SAE 37-Degree Flare Hose Connections.



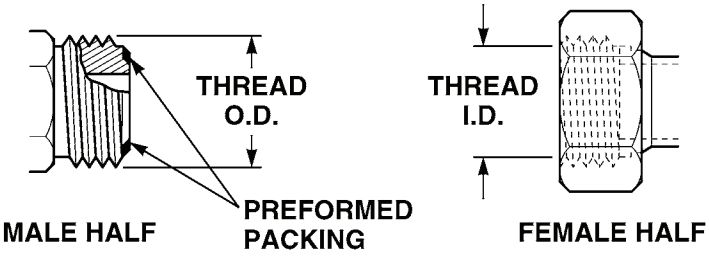
INCH SIZE	DASH NO.	THREAD SIZE	TORQUE LB-FT	TORQUE N•M
1/4	04	7/16 - 20	11-12	15-16
3/8	06	9/16 - 18	18-21	24-28
1/2	08	3/4 - 16	26-39	49-53
5/8	10	7/8 - 14	57-62	77-84
3/4	12	1-1/16 - 12	79-87	107-118
7/8	14	1-3/16 - 12	83-91	113-123
1	16	1-5/16 - 12	108-113	146-153
1-1/4	20	1-5/8 - 12	127-133	172-180
1-1/2	24	1-7/8 - 12	158-167	214-224
2	32	2-1/2 - 12	245-258	332-350

Table 6. Torque Limits for SAE 45-Degree Flare Hose Connections.



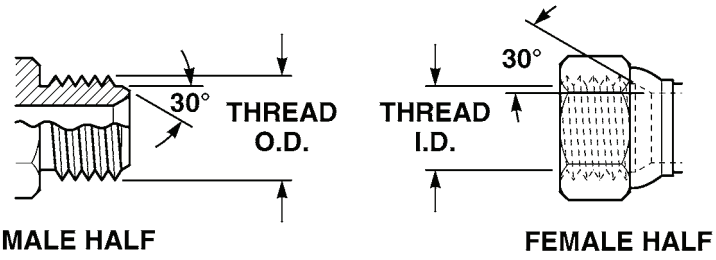
INCH SIZE	DASH NO.	THREAD SIZE	TORQUE LB-FT	TORQUE N•M
1/4	04	7/16 - 20	8-9	11-12
3/8	06	5/8 - 18	18-20	24-27
1/2	08	3/4 - 16	36-38	49-51
5/8	10	7/8 - 14	52-54	70-73
3/4	12	1-1/16 - 14	71-74	97-100

Table 7. Torque Limits for ORS Preformed Packing Face Seal Hose Connections.



INCH SIZE	DASH NO.	THREAD SIZE	TORQUE LB-FT	TORQUE N•M
1/4	04	9/16 - 18	10-12	14-16
3/8	06	11/16 - 16	18-20	24-27
1/2	08	13/16 - 16	32-35	43-47
5/8	10	1 - 14	46-50	62-68
3/4	12	1-3/16 - 12	65-70	88-95
1	16	1-7/16 - 12	108-113	146-153
1-1/4	20	1-11/16 - 12	127-133	172-180
1-1/2	24	2 - 12	158-167	214-226

Table 8. Torque Limits for NPSM Swivel Connections.



INCH SIZE	DASH NO.	THREAD SIZE	TORQUE LB-FT	TORQUE N•M
1/8	02	1/8 - 27	3-4	4-5
1/4	04	1/4 - 18	10-11	14-15
3/8	06	3/8 - 18	16-18	22-24
1/2	08	1/2 - 14	25-27	34-37
3/4	12	3/4 - 14	46-48	62-65
1	16	1 - 1-1/2	80-83	108-113
1-1/4	20	1-1/4 - 11-1/2	127-133	172-180
1-1/2	24	1-1/2 - 11-1/2	160-164	217-222
2	32	2 - 11-1/2	170-174	231-240

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12-Volt Streamlight Charger(s) Does Not Operate . . . . . WP 0112-1
24-Volt Battery Charger
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24-Volt Battery Charger Does Not Operate . . . . . WP 0043-1
24-Volt Battery Charger Does Not Operate Properly . . . . . WP 0113-1

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Battery Disconnect Switch
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Bumper Turret Nozzle Speed Adjustment . . . . . WP 0130-4
Bumper Turret Vertical Speed Adjustment . . . . . WP 0130-1
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PART I – ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS

PUBLICATION/FORM NUMBER	DATE	Title
TM 9-2320-328-13&P-2	30 Apr 08	Operator & Maintenance Manual w/RPSTL for Hemtt-Based Water Tender M1158

ITEM NO.	PAGE NO.	PARA-GRAPH	LINE NO. *	FIGURE NO.	TABLE NO.	RECOMMENDED CHANGES AND REASON (Provide exact wording of recommended changes, if possible).

SAMPLE

**Reference to line numbers within the paragraph or subparagraph.*

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	Signature
Your Name		*Your Signature*

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AMSTA-LC-LMPP / TECH PUBS, TACOM-RI 1 Rock Island Arsenal Rock Island, IL 61299-7630	Your address	Date you filled out this form

PART II – REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION NUMBER	DATE	TITLE
TM 9-2320-328-13&P-2	30 Apr 08	Operator & Maintenance Manua l w/RPSTL for HEWATT M1158

PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION

SAMPLE

PART III – REMARKS **(Any general remarks or recommendations, or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed.)**

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE
Your Name		Your Signature

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PART I – ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS

PUBLICATION/FORM NUMBER	DATE	TITLE
TM 9-2320-328-13&P-2	30 Apr 08	Operator & Maintenance Manual w/RPSTL for Hemtt-Based Water Tender (HEWTT) M1158

ITEM NO.	PAGE NO.	PARA-GRAPH	LINE NO. *	FIGURE NO.	TABLE NO.	RECOMMENDED CHANGES AND REASON (Provide exact wording of recommended changes, if possible).

TYPED NAME, GRADE OR TITLE	**Reference to line numbers within the paragraph or subparagraph.* TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE

TO: (Forward direct to addressee listed in publication) AMSTA-LC-LMPP / TECH PUBS, TACOM-RI 1 Rock Island Arsenal Rock Island, IL 61299-7630	FROM: (Activity and location) (Include ZIP Code)	DATE

PART II – REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION NUMBER	DATE	TITLE
TM 9-2320-328-13&P-2	30 Apr 08	Operator and Maintenance Manual w/ RPSTL for Hewatt M1158

PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION

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By order of the Secretary of the Army:

GEORGE W. CASEY, JR.
General, United States Army
Chief of Staff

Official:



JOYCE E. MORROW
Administrative Assistant to the
Secretary of the Army
0801104

Distribution: To be distributed in accordance with the initial distribution number (IDN) 381179, requirements for TM 9-2320-328-13&P-2.

THE METRIC SYSTEM AND EQUIVALENTS

LINEAR MEASURE
1 Centimeter=10 Millimeters=0.01 Meters=0.3937 Inches
1 Meter=100 Centimeters=1000 Millimeters=39.37 Inches
1 Kilometer=1000 Meters=0.621 Miles

WEIGHTS
1 Gram=0.001 Kilograms=1000 Milligrams=0.035 Ounces
1 Kilogram=1000 Grams=2.2 Lb
1 Metric Ton=1000 Kilograms=1 Megagram=1.1 Short Tons

LIQUID MEASURE
1 Milliliter=0.001 Liters=0.0338 Fluid Ounces
1 Liter=1000 Milliliters=33.82 Fluid Ounces

SQUARE MEASURE
1 Sq Centimeter=100 Sq Millimeters=0.155 Sq Inches
1 Sq Meter=10,000 Sq Centimeters=10.76 Sq Feet
1 Sq Kilometer=1,000,000 Sq Meters=0.386 Sq Miles

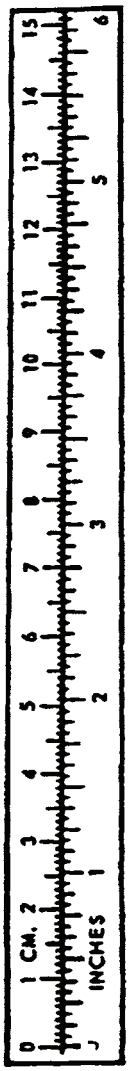
CUBIC MEASURE
1 Cu Centimeter=1000 Cu Millimeters=0.06 Cu Inches
1 Cu Meter=1,000,000 Cu Centimeters=35.31 Cu Feet

TEMPERATURE
5/9 (°F − 32) = °C
212° Fahrenheit is equivalent to 100° Celsius
90° Fahrenheit is equivalent to 32.2° Celsius
32° Fahrenheit is equivalent to 0° Celsius
9/5 C° + 32 = F°

APPROXIMATE CONVERSION FACTORS

TO CHANGE	TO	MULTIPLY BY
Inches	Centimeters	2.540
Feet	Meters	0.305
Yards	Meters	0.914
Miles	Kilometers	1.609
Square Inches	Square Centimeters	6.451
Square Feet	Square Meters	0.093
Square Yards	Square Meters	0.836
Square Miles	Square Kilometers	2.590
Acres	Square Hectometers	0.405
Cubic Feet	Cubic Meters	0.028
Cubic Yards	Cubic Meters	0.765
Fluid Ounces	Milliliters	29.573
Pints	Liters	0.473
Quarts	Liters	0.946
Gallons	Liters	3.785
Ounces	Grams	28.349
Pounds	Kilograms	0.454
Short Tons	Metric Tons	0.907
Pound-Feet	Newton-Meters	1.356
Pounds/Sq 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
Sq Centimeters	Square Inches	0.155
Square Meters	Square Feet	10.764
Square Meters	Square Yards	1.196
Square Kilometers	Square Miles	0.386
Sq 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 Sq Inch	0.145
Km per Liter	Miles per Gallon	2.354
Km per Hour	Miles per Hour	0.621



PIN: 084555-000