

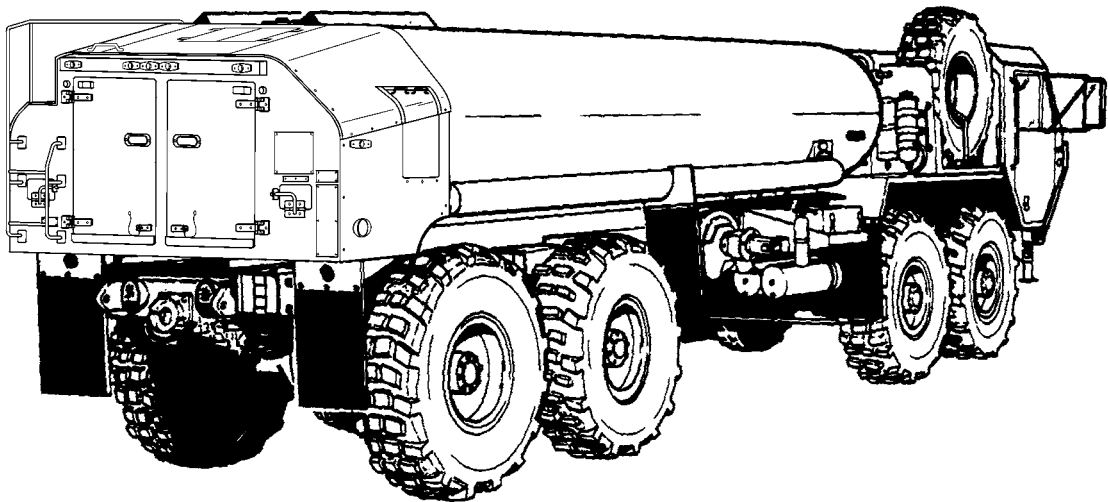
**TECHNICAL BULLETIN**

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

**FOR**

**HEAVY EXPANDED MOBILITY TACTICAL TRUCKS (HEMTT)  
TANKER ARMOR MODULE KIT**

<b>PART NUMBER</b>	<b>NOMENCLATURE</b>	<b>NSN</b>
<b>5SK319</b>	<b>KIT, ARMOR - TAN</b>	<b>2540-01-542-0885</b>
<b>5SK320</b>	<b>KIT, ARMOR - GREEN</b>	<b>2540-01-542-0889</b>



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

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**HEADQUARTERS, DEPARTMENT OF THE ARMY**  
**JANUARY 2007**



**WARNING SUMMARY**

**WARNING**

Due to the increased weight of HEMTT with Tanker Armor Module installed, operator should be aware of differences in vehicle's driving characteristics and adjust driving accordingly. Failure to follow this warning may cause an accident and injury or death to personnel.

**WARNING**

Due to the increased weight of rear doors, use extreme caution when opening and closing doors. If vehicle is parked on non-level ground, door may swing in direction of slope. Failure to follow this warning may cause injury to personnel.

**WARNING**

When servicing this machine, performing maintenance, or disposing of materials such as engine coolant, hydraulic fluid, lubricants, battery acids or batteries, and CARC paint, consult your unit/local hazardous waste disposal center or safety office for local regulatory guidance. If further information is needed, please contact The Army Environmental Hotline at 1-800-872-3845.

**WARNING**

Fuels are highly explosive. Do not smoke or use open flame when performing PMCS. Failure to comply may result in injury or death to personnel.

**WARNING**

Solvent cleaning compound MIL-PRF-680 Type III is an environmentally compliant and low toxic material. However, it may be irritating to the eyes and skin. Use protective gloves and goggles. Use in well-ventilated areas. Keep away from open flames and other sources of ignition. Failure to follow this warning may result in injury or death to personnel.

**WARNING**

Improper cleaning methods and use of unauthorized cleaning solvents may injure personnel and damage equipment. Refer to TM 9-247, *Materials Used for Cleaning, Preserving, Abrading, and Cementing Ordnance Materials and Related Materials Including Chemicals*, for correct information.

**WARNING**

Fire extinguishers should be placed nearby when using solvent cleaning compound. Failure to follow this warning may result in injury or death.

**WARNING**

Cloths or rags saturated with solvent cleaning compound must be disposed of in accordance with authorized facilities' procedures. Failure to follow this warning may result in injury.

**WARNING**

Eye shields must be worn when cleaning with a wire brush. Flying rust and metal particles may cause injury.

**WARNING**

Particles blown by compressed air are hazardous. DO NOT exceed 15 psi (103 kPa) nozzle pressure when drying parts with compressed air. Use a maximum of 30 psi (207 kPa) when cleaning components. DO NOT direct compressed air against human skin. Failure to follow this warning may result in injury or death. Make sure air stream is directed away from user and other personnel in the area. To prevent injury, user must wear protective goggles or face shield.

**WARNING**

To ensure survivability of personnel, welding repairs on armor kit are NOT authorized. If armor plates are damaged, they must be replaced. Failure to follow this warning may cause failure of armor, resulting in injury or death to personnel.

**WARNING**

Use caution when using adhesives and sealants. Prolonged inhalation of vapors can cause lung irritation. Contact with skin can cause dermatitis. Wear gloves and safety goggles and use product in a well-ventilated area away from open flame. If ingested, keep individual calm and seek medical attention. DO NOT induce vomiting. If contact with skin or eyes is made, flush thoroughly with water. Dispose of cleanup rags in accordance with local policy and ordinances. Failure to follow this warning may cause injury to personnel.

**WARNING**

Use extreme caution when handling heavy parts. Provide adequate support and use assistance during procedure. Ensure that any lifting device used is in good condition and of suitable load capacity. Keep clear of heavy parts supported only by lifting device. Failure to follow this warning may cause injury or death to personnel.

**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.

**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: 15 December 2006

Original 31 January 2007

**TOTAL NUMBER OF PAGES FOR FRONT AND REAR MATTER IS 12 AND TOTAL  
NUMBER OF WORK PACKAGES IS 40, CONSISTING OF THE FOLLOWING:**

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Chp 4 Title page .....	0	WP 0026 (6 pgs) .....	0		
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HEADQUARTERS  
DEPARTMENT OF THE ARMY  
WASHINGTON, DC, 31 JANUARY 2007

**TECHNICAL MANUAL**

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

**FOR**

**HEAVY EXPANDED MOBILITY TACTICAL TRUCKS (HEMTT),  
TANKER ARMOR MODULE KIT**

**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) Web site. The Internet address is <https://aeps.ria.army.mil>. The DA Form 2028 is located under the Public Applications section on the AEPS public home page. Fill out the form and click on SUBMIT. Using this form on the AEPS site will enable us to respond quicker to your comments and to better manage the DA Form 2028 program. You may also mail, fax, or e-mail your letter or DA Form 2028 directly to: AMSTA-LC-LMIT / TECH PUBS, TACOM-RI, 1 Rock Island Arsenal, Rock Island, IL 61299-7630. The e-mail 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 BULLETIN

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**NOTE**

If at any time you are unsure how to use this technical bulletin or you cannot locate the information you need, notify your supervisor.

**INTRODUCTION**

- a. This technical bulletin is designed to help you operate and maintain the HEMTT Tanker Armor Module Kit. It also provides installation instructions for the armor kit and includes the Repair Parts and Special Tools List (RPSTL).
- b. This technical bulletin is written in work package format:
  1. Chapters divide the technical bulletin into major categories of information (e.g., *General Information, Equipment Description and Data, and Theory of Operation; Operator Instruction; Operator Maintenance Instructions; Field Maintenance Instructions; and Supporting Information*).
  2. Each chapter is divided into work packages, which are identified by a 4-digit number (e.g., 0001, 0002, etc.) located on the upper right-hand corner of each page. The work package page number (e.g., 0001-1, 0001-2, etc.) is located center at the bottom of each page.
  3. If a Change Package is issued to this technical bulletin, added work packages use the 5th and 6th digits of their number to indicate new material. For instance, work packages inserted between WP 0001 and WP 0002 are numbered WP 0001 01, WP 0001 02, etc.
- c. Read through this technical bulletin to become familiar with its organization and contents before attempting to operate or maintain the armor kit.

**CONTENTS OF THIS TECHNICAL BULLETIN**

- a. A *Warning Summary* is located at the beginning of this technical bulletin. Become familiar with these warnings before operating or performing maintenance on the armor kit.
- b. A *Table of Contents*, located in the front of the technical bulletin, lists all chapters and work packages in the publication.
  1. The Table of Contents also provides *Reporting Errors and Recommending Improvements* information and DA Form 2028 addresses, for the submittal of corrections to this technical bulletin.
  2. If you cannot find what you are looking for in the Table of Contents, refer to the alphabetical *Index* at the back of the technical bulletin.
- c. Chapter 1, *General Information, Equipment Description, and Theory of Operation*, provides general information on the technical bulletin and the armor kit.
- d. Chapter 2, *Operator Instructions*, explains and illustrates all operator procedures for the armor kit: *Operation Under Usual Conditions* and *Operation Under Unusual Conditions*.
- e. Chapter 3, *Operator Maintenance Instructions*, includes *Operator Preventive Maintenance Checks and Services (PMCS) Introduction and Operator Preventive Maintenance Checks and Services (PMCS)*.

## CONTENTS OF THIS TECHNICAL BULLETIN - CONTINUED

- f. Chapter 4, *Field Maintenance Instructions* includes all field maintenance tasks.
- g. Chapter 5, *Supporting Information*, includes *References; Maintenance Allocation Chart (MAC) Introduction; Maintenance Allocation Chart (MAC); Expendable and Durable Items List; Torque Limits; Tanker Armor Module Kit Installation Instructions; Repair Parts and Special Tools List (RPSTL) Introduction; and Repair Parts and Special Tools List (RPSTL)*.

## FEATURES OF THIS TECHNICAL BULLETIN

- a. WARNINGS, CAUTIONS, NOTES, subject headings, and other important information are highlighted in **BOLD** print as a visual aid.

### WARNING

A WARNING indicates a hazard which may cause injury or death to personnel.

### CAUTION

A CAUTION is a reminder of safety practices or directs attention to usage practices that may cause damage to equipment.

### **NOTE**

A NOTE is a statement containing information that will make the procedures easier to perform.

- b. Statements and words of particular interest may be printed in CAPITAL LETTERS to create emphasis.
- c. Within a procedural step, reference may be made to another work package in this technical bulletin or to another manual. These references indicate where you should look for more complete information.
  - 1. If you are told: "Refer to *Tanker Armor Module Kit Installation Instruction* (WP 0040)," go to WP 0040 in this technical bulletin for instructions on this procedure.
  - 2. If you are told; "For complete information on HEMTT Operator PMCS, refer to TM 9-2320-279-10," go to *References* in WP 0032 for complete information on the cited reference.
- d. Illustrations are placed after, and as close to, the procedural steps to which they apply. Callouts placed on the art are text or numbers.
- e. Technical instructions include metric units as well as standard units. For your reference, a *Metric Conversion Chart* is located on the inside back cover of the technical bulletin.

## END OF WORK PACKAGE

**CHAPTER 1**  
**GENERAL INFORMATION, EQUIPMENT**  
**DESCRIPTION AND DATA, AND THEORY OF OPERATION**



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**OPERATOR MAINTENANCE****GENERAL INFORMATION**

---

**SCOPE**

This technical bulletin is for your use in operating and performing Operator, Unit, and Direct Support (Field) Maintenance on the Tanker Armor Module (TAM) installed on the M978 Fuel Tanker, 8 X 8, Heavy Expanded Mobility Tactical Trucks (HEMTT). This technical bulletin covers tanker armor module (TAM) installation instructions and the Repair Parts and Special Tools List (RPSTL).

**MAINTENANCE FORMS, RECORDS, AND REPORTS**

Department of the Army forms and procedures used for the equipment will be those prescribed by DA PAM 750-8, *The Army Maintenance Management System (TAMMS) Users Manual*.

**REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)**

If your armor kit needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design or performance. If you have Internet access, the easiest and fastest way to report problems or suggestions is to go to <https://aeps.ria.army.mil/aepspublic.cfm> (scroll down and choose the "Submit Quality Deficiency Report" bar). The Internet form lets you choose to submit an Equipment Improvement Recommendation (EIR), or a Product Quality Deficiency Report (PQDR). You may also submit your information using an SF Form 368 (*Product Quality Deficiency Report*). You can send your SF Form 368 via e-mail, regular mail, or facsimile using the addresses/facsimile numbers specified in DA PAM 750-8, *The Army Maintenance Management System (TAMMS) Users Manual*. We will send you a reply.

**CORROSION PREVENTION AND CONTROL (CPC)**

- a. Corrosion Prevention and Control (CPC) of Army materiel is a continuing concern. It is important that any corrosion problems with this item be reported so that the problem can be corrected and improvements can be made to prevent the problem in future items.
- b. While corrosion is typically associated with rusting of metals, it can also include deterioration of other materials, such as rubber and plastic. Unusual cracking, softening, swelling, or breaking of these materials may be a corrosion problem. If a corrosion problem is identified, it can be reported using SF Form 368 (Product Quality Deficiency Report). Use of key words such as "corrosion," "rust," "deterioration," or "cracking" will ensure that the information is identified as a CPC problem. The form should be submitted to the address specified in DA PAM 750-8.

**DESTRUCTION OF ARMY MATERIAL TO PREVENT ENEMY USE**

For destruction of Army material to prevent enemy use, refer to TM 750-244-6.

**PREPARATION FOR STORAGE OR SHIPMENT**

Refer to TM 9-2320-279-20 for preparation for storage or shipment.

**LIST OF ABBREVIATIONS/ACRONYMS**

**NOTE**

Refer to ASME Y14.38-1999 for standard abbreviations.

<b>ABBREVIATION/ACRONYM</b>	<b>DEFINITION</b>
cm.....	Centimeter
CPC.....	Corrosion Prevention and Control
EIR.....	Equipment Improvement Recommendation
GVW.....	Gross Vehicle Weight
HEMTT.....	Heavy Expanded Mobility Tactical Trucks
kg.....	Kilogram
lb.....	Pound
lb-ft.....	Pound Foot
lb-in.....	Pound Inch
MM.....	Millimeter
N•m.....	Newton Meter
PMCS.....	Preventive Maintenance Checks and Services
P/N.....	Part Number
PQDR.....	Product Quality Deficiency Report
RPSTL.....	Repair Parts and Special Tools List
TAM.....	Tanker Armor Module
TAMMS.....	The Army Maintenance Management System

**QUALITY OF MATERIAL**

Material used for replacement, repair or modification of the Tanker Armor Module (TAM) must meet the requirements of this technical bulletin. If quality of material requirements are not stated in this technical bulletin, the material must meet the requirements of the drawings, standards, specifications, or approved engineering change proposals applicable to the Tanker Armor Module (TAM).

**END OF WORK PACKAGE**

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**OPERATOR MAINTENANCE**  
**EQUIPMENT DESCRIPTION AND DATA**

---

**EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES**

**a. EQUIPMENT CHARACTERISTICS**

The Tanker Armor Module (TAM) provides the M978 Fuel Tanker, 8 X 8, Heavy Expanded Mobility Tactical Trucks (HEMTT) with improved protection of the pump module.

**b. CAPABILITIES**

The TAM consists of armor panels that are installed on the pump module of the M978 Fuel Tanker HEMTT.

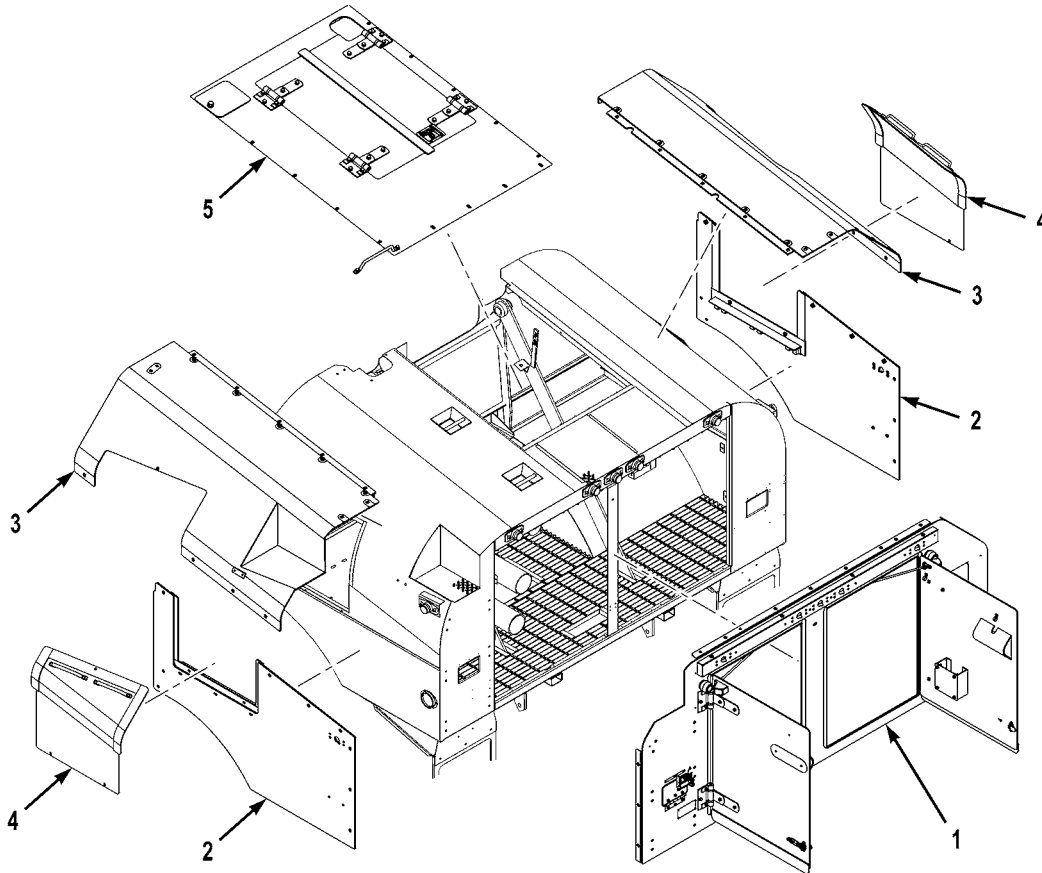
**c. FEATURES**

The TAM consists of the following:

1. Wheel well armor panel assemblies under the vehicle.
2. Front armor panel assemblies.
3. Rear armor panel assemblies.
4. Upper and lower side armor panel assemblies.
5. Top armor panel assembly.
6. Replacement ladder assembly.

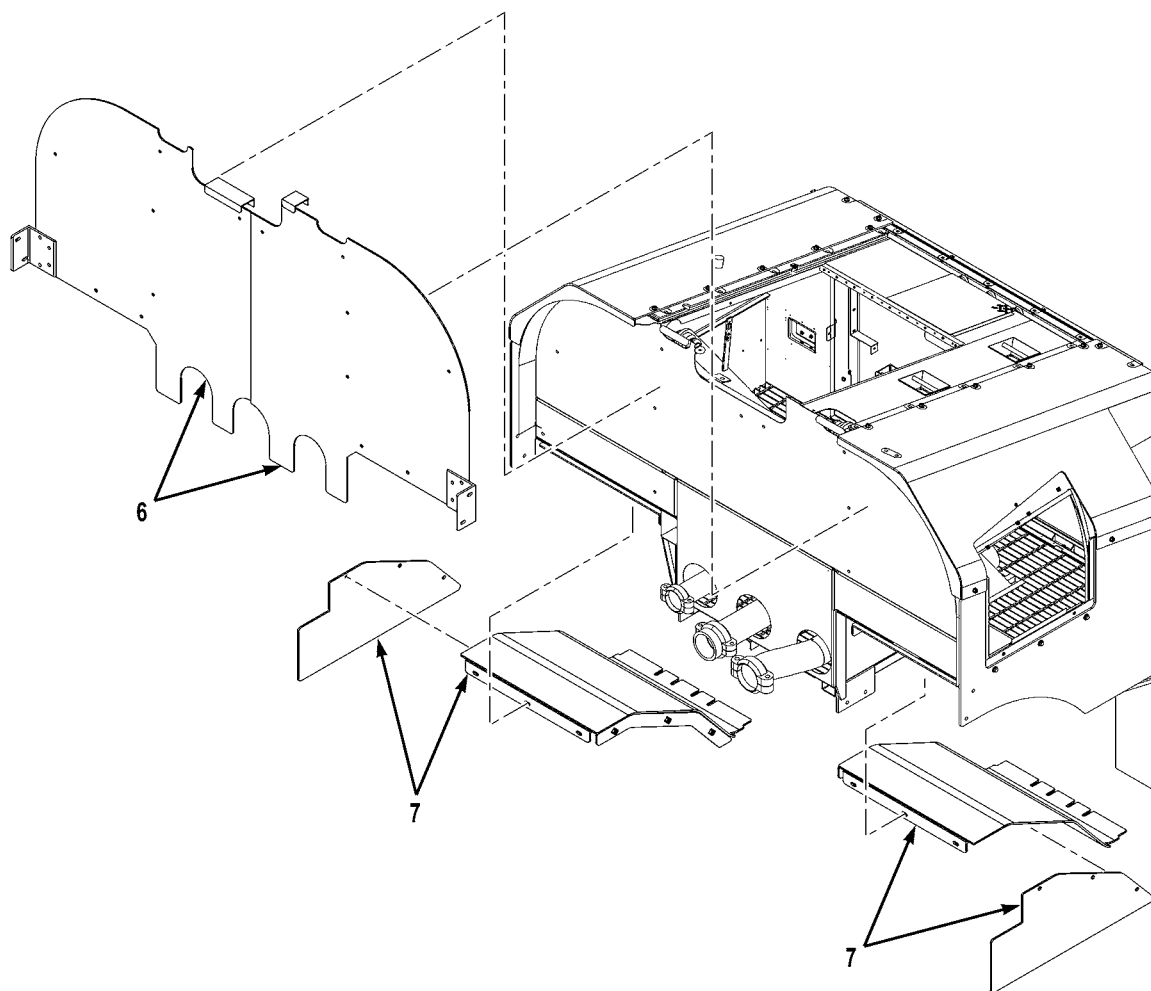
**LOCATION AND DESCRIPTION OF MAJOR COMPONENTS**

The illustration below shows major armor kit components and their location in relation to the M978 Fuel Tanker HEMTT TAM.



KEY	COMPONENT	QUANTITY
1	Panel Assembly, Rear	1
2	Panel Assembly, Side Lower	2
3	Panel Assembly, Side Upper	2
4	Panel Assembly, Side Access	2
5	Panel Assembly, Top	1





KEY	COMPONENT	QUANTITY
6	Panel Assembly, Front	2
7	Wheel Well Assembly	2

**EQUIPMENT DATA**

- a. Many components of the M978 Fuel Tanker HEMTT TAM are heavier than allowable for one or two persons to lift. To ensure personal safety during maintenance of the armor module, it is important to be aware of component weights.
- b. Table 1 below lists components of the armor module, their weights, and total armor module weight per vehicle.
- c. Table 2 lists components that are removed from the vehicle, their weights, and total weight per vehicle.

Table 1. M978 Fuel Tanker HEMTT Tanker Armor Module (TAM) Components.

COMPONENT DESCRIPTION	WEIGHT OF COMPONENT	QUANTITY PER VEHICLE	TOTAL WEIGHT PER VEHICLE
Panel Assembly, TAM-Rear	400 lb (181.4 kg)	1	400 lb (181.4 kg)
Bar, Rear Panel Assembly Attach	13 lb (5.9 kg)	2	26 lb (11.8 kg)
Panel Assembly, Side Lower-Left	105 lb (47.6 kg)	1	105 lb (47.6 kg)
Panel Assembly, Side Lower-Right	105 lb (47.6 kg)	1	105 lb (47.6 kg)
Panel Assembly, Side Upper-Left	165 lb (74.8 kg)	1	165 lb (74.8 kg)
Panel Assembly, Side Upper-Right	170 lb (77.1 kg)	1	170 lb (77.1 kg)
Panel Assembly, Side Access-Left	55 lb (24.9 kg)	1	55 lb (24.9 kg)
Panel Assembly, Side Access-Right	55 lb (24.9 kg)	1	55 lb (24.9 kg)
Panel Assembly, TAM-Top	230 lb (104.3 kg)	1	230 lb (104.3 kg)
Panel Assembly, Front-Right	145 lb (65.8 kg)	1	145 lb (65.8 kg)
Panel Assembly, Front-Left	145 lb (65.8 kg)	1	145 lb (65.8 kg)
Panel Wheel House, Inner	23 lb (10.4 kg)	2	46 lb (20.9 kg)
Wheel Well Assembly, Right	80 lb (36.3 kg)	1	80 lb (36.3 kg)
Wheel Well Assembly, Left	80 lb (36.3 kg)	1	80 lb (36.3 kg)
TOTAL WEIGHT OF TAM KIT			1807 lb (819.6 kg)

Table 2. Components Removed from Vehicle.

COMPONENT DESCRIPTION	WEIGHT OF COMPONENT	QUANTITY PER VEHICLE	TOTAL WEIGHT PER VEHICLE
Pump Module Door - Top	44 lb (20.0 kg)	1	44 lb (20.0 kg)
Pump Module Doors - Rear	45 lb (20.4 kg)	2	90 lb (40.8 kg)
Access Panels, Side	20 lb (9.1 kg)	2	40 lb (18.1 kg)
TOTAL WEIGHT REMOVED			174 lbs (78.9 kg)
TOTAL WEIGHT INCREASE TO VEHICLE			1633 lbs (740.7 kg)

**END OF WORK PACKAGE**



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**OPERATOR MAINTENANCE****THEORY OF OPERATION**

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**GENERAL**

The Heavy Expanded Mobility Tactical Trucks (HEMTT) Tanker Armor Module (TAM) consists of a rear panel assembly; left and right side lower, upper, and access panel assemblies; a top panel assembly; two front panel assemblies; two wheel well panel assemblies; and two wheel house panel assemblies.

The TAM consists of armor panels mounted to the existing tanker pump module to protect the components within the module. The rear panel assembly incorporates two swing out doors that replace the pump module rear (swing up) doors. The upper and lower side panel assemblies attach to the pump module and the rear panel. The top panel assembly includes two hinged access doors and is attached to the rear and upper side panels. The front and wheel well panel assemblies attach to the pump module.

All armor panels are attached to the pump module with brackets and hardware provided in the TAM kit. Replacement lights, ladder, and rail assembly are also provided with the TAM kit.

The armor panels require material handling equipment (hoist, forklift, etc.) to position on the pump module due to their weight. Armor panel weights are listed in WP 0002.

**END OF WORK PACKAGE**



**CHAPTER 2**  
**OPERATOR INSTRUCTIONS**





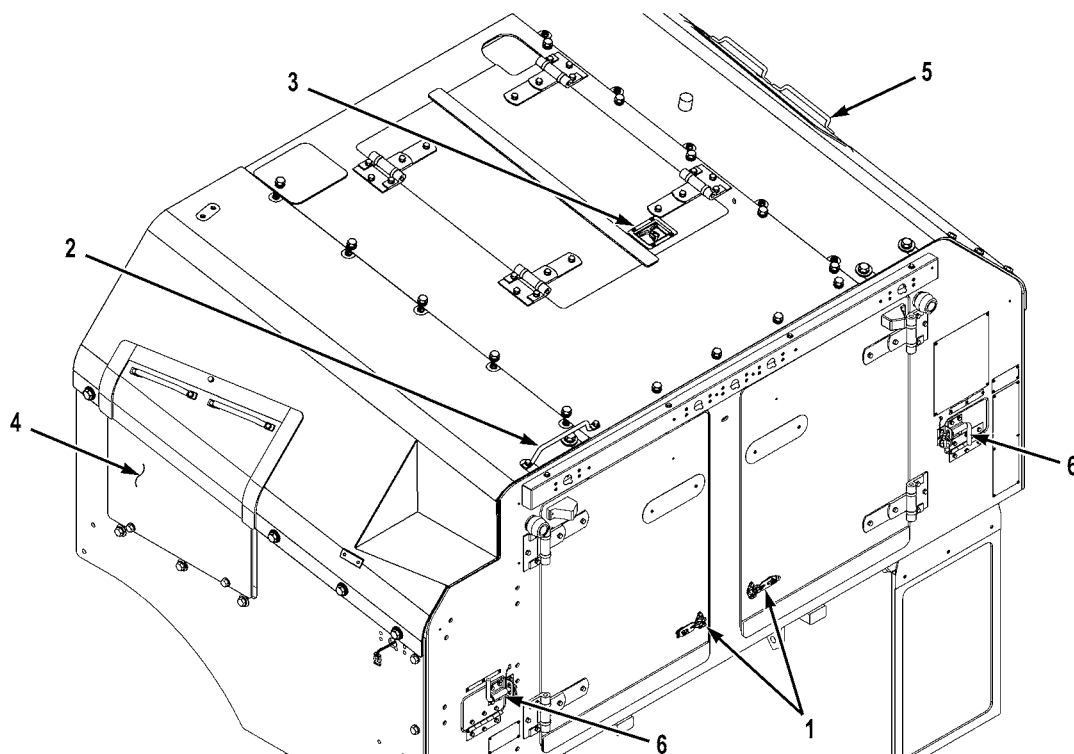
**OPERATOR MAINTENANCE**

**DESCRIPTION AND USE OF OPERATOR CONTROLS**

**GENERAL**

This work package describes all operator controls for the Tanker Armor Module (TAM). Do not attempt to operate the M978 Fuel Tanker HEMTT with the TAM until the locations and functions of all controls are known.

**OPERATOR CONTROLS**



KEY	CONTROL OR DEVICE	FUNCTION
1	Door Assembly with Latch (2)	Allows operator access to rear of pump module.
2	Grab/Pull Handle	Use grab/pull handle to assist in climbing on top of TAM.
3	Roof Door with Latch	Allows operator access to top of pump module.
4	Left Side Access Panel	Allows operator access to left side of pump module.
5	Right Side Access panel	Allows operator access to right side of pump module.
6	Rear Access Doors with Hasp (2)	Allows operator access to rear of pump module.

**END OF WORK PACKAGE**



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**OPERATOR MAINTENANCE**  
**OPERATION UNDER USUAL CONDITIONS**

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**GENERAL**

- a. This work package contains instructions for operating the M978 Fuel Tanker, 8 X 8, Heavy Expanded Mobility Tactical Trucks (HEMTT) with the Tanker Armor Module (TAM) kit installed.
- b. Read and follow the procedures in Operation under Usual Conditions in TM 9-2320-279-10 before operating with the Tanker Armor Module kit.

**INITIAL ADJUSTMENTS AND DAILY CHECKS****NOTE**

Refer to WP 0004 for the location and operation of operator controls.

Perform *Before* operation Preventive Maintenance Checks and Services (PMCS) before operating vehicle (WP 0008 and WP 0009).

**OPERATING HEMTT****WARNING**

- Due to the increased weight of HEMTT with Tanker Armor Module installed, operator should be aware of differences in vehicle's driving characteristics and adjust driving accordingly. Failure to follow this warning may cause an accident and injury or death to personnel.
  - Due to the increased weight of rear doors, use extreme caution when opening and closing doors. If vehicle is parked on non-level ground, door may swing in direction of slope. Failure to follow this warning may cause injury to personnel.
- a. With Tanker Armor Module installed, vehicle is heavier than usual by approximately 1633 lb (740.7 kg). Due to this increased weight, adjust driving to allow for greater stopping distance. Adjust vehicle speed accordingly and exercise caution.
  - b. Vehicle exhibits oversteer characteristics at Gross Vehicle Weight (GVW); it will turn tighter than expected. To recover an oversteering HEMTT, accelerate vehicle and/or reduce steering wheel angle.
  - c. Visibility rearward is reduced with Tanker Armor Module Kit installed. Use ground guides when backing the vehicle.

**END OF WORK PACKAGE**



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**OPERATOR MAINTENANCE**

**OPERATION UNDER UNUSUAL CONDITIONS**

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**GENERAL**

- a. Read and follow the procedures in Operation Under Unusual Conditions in TM 9-2320-279-10 before operating the M978 Fuel Tanker, 8 X 8, Heavy Expanded Mobility Tactical Trucks (HEMTT) with the Tanker Armor Module (TAM) kit installed
- b. There are no additional specific instructions for operation under unusual conditions for the M978 Fuel Tanker, HEMTT with the TAM.

**END OF WORK PACKAGE**



**OPERATOR MAINTENANCE**

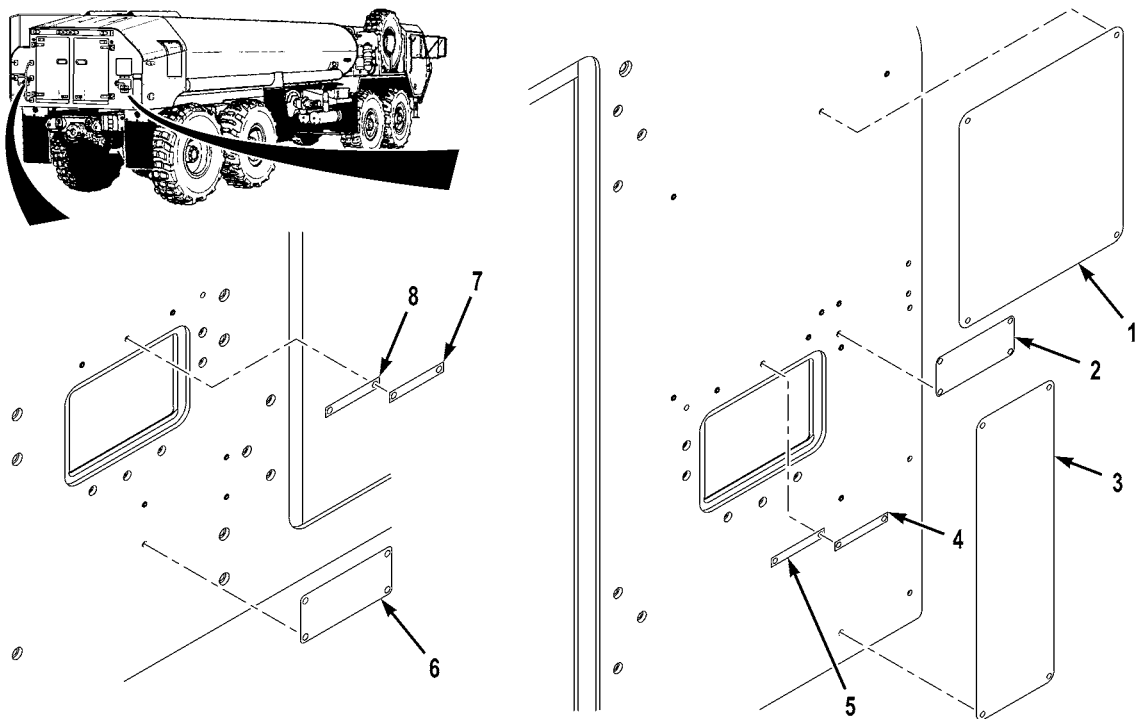
**STOWAGE AND DECAL/DATA PLATE GUIDE**

**STOWAGE AND DATA PLATES**

This work package shows the locations of data plates required to be in place on the M978 Fuel Tanker, 8 X 8, Heavy Expanded Mobility Tactical Trucks (HEMTT) with the Tanker Armor Module (TAM).

**GENERAL**

The locations of metal data plates used on the vehicle are shown below. These data plates contain information needed to operate the vehicle safely. The table below lists names/functions of data plates mounted on the rear of M978 Fuel Tanker, 8 X 8, Heavy Expanded Mobility Tactical Trucks (HEMTT) with TAM for operation under usual conditions.



KEY	PART NUMBER	COMPONENT	QUANTITY
1	2227220	Placard, Schematic	1
2	2227090	Plate, V-1 Valve Label	1
3	2227130	Plate, Operation Instructions	1
4	2226960	Plate, SR2 Static Label	1
5	2226950	Plate, SR1 Static Label	1
6	1356160	Plate, Tank Pump Label	1
7	2227000	Plate, HAVR Control Label	1
8	2227010	Plate, HAV Control Label	1

**END OF WORK PACKAGE**





**CHAPTER 3**  
**OPERATOR MAINTENANCE INSTRUCTIONS**



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**OPERATOR MAINTENANCE****OPERATOR PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) INTRODUCTION**

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**GENERAL****NOTE**

- Information in this PMCS Introduction applies only to preventive maintenance checks and services for the Tanker Armor Module Kit (TAM).
  - For information specific to the M978 Fuel Tanker, 8 X 8, Heavy Expanded Mobility Tactical Trucks (HEMTT), refer to the PMCS Introduction in TM 9-2320-279-10.
- a. To ensure that the Tanker Armor Module (TAM) is ready for operation at all times, it must be inspected on a regular basis so that defects may be found and corrected before they result in injury or death due to equipment failure.
  - b. The PMCS Table in WP 0009 contains systematic instructions for inspections and services to keep equipment in good operating condition and ready for its primary mission.

**EXPLANATION OF TABLE ENTRIES**

- a. Item Number (Item No.) Column.** Numbers in this column are for reference. When completing DA Form 2404 or DA Form 5988-E (Equipment Inspection and Maintenance Worksheet), include the item number for the check/service indicating a fault. Item numbers also appear in the order in which you must perform checks and services for the interval listed.
- b. Interval Column.** This column tells you when you must perform the procedure in the Procedure column. *Before* procedures must be done immediately before you operate vehicle with Tanker Armor Module Kit (TAM).
- c. Item to be Checked or Serviced Column.** This column provides the location and item to be checked or serviced.

**NOTE**

The WARNINGS and CAUTIONS appearing in your PMCS table should always be observed. WARNINGS and CAUTIONS appear before applicable procedures. You must observe these WARNINGS to prevent injury or death to personnel and CAUTIONS to prevent your equipment from being damaged.

- d. Crewmember Procedure Column.** This column includes the procedure you must perform to know if the equipment is ready or available for its intended mission. You must perform the procedure at the time stated in the Interval column.
- e. Not Fully Mission Capable If: Column.** Information in this column tells you what faults will keep your equipment from being capable of performing its primary mission. If you perform check/service procedures that show faults listed in this column, the equipment is not mission-capable. Follow standard operating procedures for maintaining the equipment or reporting equipment failure.

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## GENERAL PMCS PROCEDURES

Always perform PMCS in the same order. With experience, you should be able to identify problems easily. If anything looks wrong and you can't fix it, write it on your DA Form 2404 or DA Form 5988-E. If you find something seriously wrong, IMMEDIATELY report it to your supervisor. Before performing preventive maintenance, read all the checks required for the applicable interval and prepare everything needed to make all the checks. For example, you'll always need a rag or two.

### WARNING

Solvent cleaning compound MIL-PRF-680 Type III is an environmentally compliant and low toxic material. However, it may be irritating to the eyes and skin. Use protective gloves and goggles. Use in well-ventilated areas. Keep away from open flames and other sources of ignition. Failure to follow this warning may cause injury to personnel.

**a. *Keep It Clean.*** Dirt, grease, oil, and debris get in the way and may cover up a serious problem. Clean as you work and as needed. Use solvent cleaning compound (WP 0035, Item 3) on all metal surfaces. Use detergent (WP 0035, Item 6) and water when you clean rubber, plastic, and painted surfaces.

### WARNING

When servicing this machine, performing maintenance, or disposing of materials such as engine coolant, hydraulic fluid, lubricants, battery acids or batteries, and CARC paint, consult your unit/local hazardous waste disposal center or safety office for local regulatory guidance. If further information is needed, please contact The Army Environmental Hotline at 1-800-872-3845.

**b. *Hazardous Waste Disposal.*** Ensure all spills are cleaned up and disposed of IAW local policy and ordinances.

**c. *Rust and Corrosion.*** Check metal parts for rust and corrosion. If any bare metal or corrosion exists, clean and apply a light coat of clean lubricating oil (WP 0035, Item 8). Report it to your supervisor.

**d. *Bolts, Rivnuts, Nuts, and Screws.*** Check bolts, rivnuts, nuts, and screws for obvious loose, missing, bent, or broken condition. If you find loose or missing components, notify your supervisor.

**e. *Electric Wires and Connectors.*** Look for cracked or broken insulation, bare wires, and loose or broken connectors. Reconnect loose connectors. Ensure that wires are in good condition.

**f. *Welds.*** Look for loose or chipped paint, rust, or gaps where parts are welded together. If a bad weld is found, report it to Field Level Maintenance.

**g. *Damage is defined as:*** Any conditions that affect safety or would render the vehicle unserviceable for mission requirements.

**END OF WORK PACKAGE**

**OPERATOR MAINTENANCE**

**OPERATOR PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)**

**Table 1. Preventive Maintenance Checks and Services.**

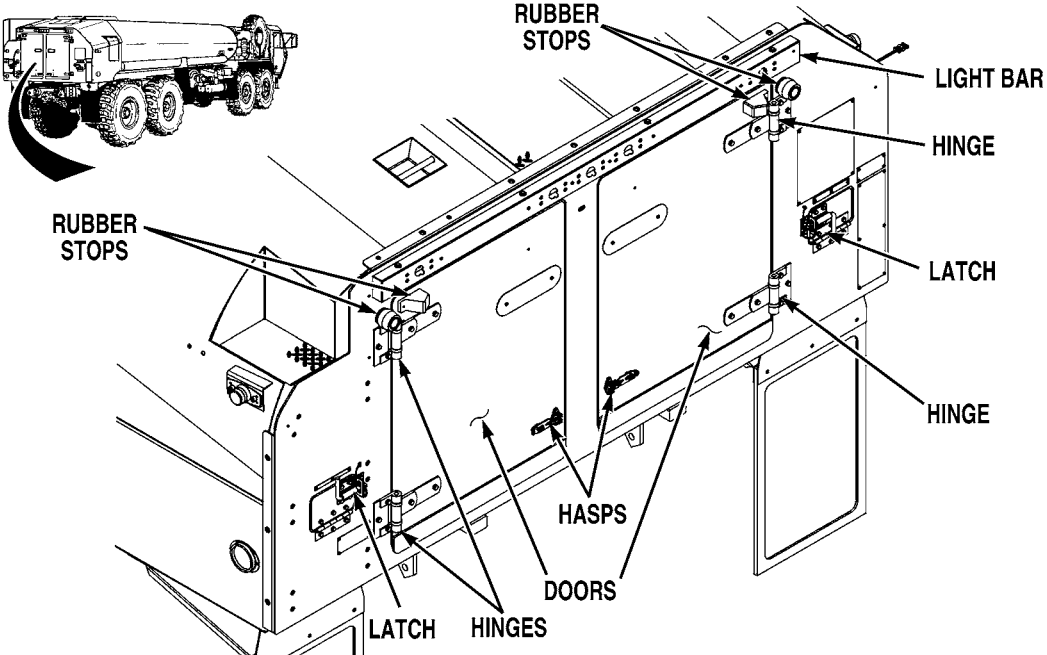
ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	NOT FULLY MISSION CAPABLE IF:
				
<p style="text-align: center;"><b><u>WARNING</u></b></p> <p>Fuels are highly explosive. Do not smoke or use open flame when performing PMCS. Failure to comply may result in injury or death to personnel.</p> <p style="text-align: center;"><b>NOTE</b></p> <ul style="list-style-type: none"> <li>• Perform PMCS for the Tanker Armor Module (TAM) installed on the M978 Fuel Tanker, 8 X 8, Heavy Expanded Mobility Tactical Trucks (HEMTT).</li> <li>• Review all WARNINGS, CAUTIONS, and NOTES before performing PMCS and operating the vehicle with the TAM.</li> <li>• Clean and lubricate moving parts more often when vehicle is operated in sandy or dusty conditions.</li> </ul>				

Table 1. Preventive Maintenance Checks and Services. (Continued)

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	NOT FULLY MISSION CAPABLE IF:
1	Before	TAM Rear Panel Assembly	a. Inspect rear armor panel assembly for damage or loose or missing mounting hardware.	Any rear armor panel assembly is damaged or loose or mounting hardware is loose or missing.
			b. Inspect rear armor door assemblies for damage or loose or missing mounting hardware.	Any rear armor door assembly is damaged or loose or mounting hardware is loose or missing.
			c. Inspect rear armor door rubber stops for damage or loose or missing mounting hardware.	Any rear armor door rubber stop is damaged, loose or mounting hardware is loose or missing.
			d. Inspect rear armor door hasps for damage or loose or missing mounting hardware.	Any rear armor door hasp is damaged, loose or mounting hardware is loose or missing.
			e. Inspect rear access door latches for damage or loose or missing mounting hardware.	Any rear armor door latch or component is damaged or loose or mounting hardware is loose or missing.
			f. Inspect rear light bar for damage or loose or missing mounting hardware.	Any rear light bar or component is damaged or loose or mounting hardware is loose or missing.
			g. Inspect rear armor door hold back assemblies for proper cleanliness, lubrication, and function. Inspect rear armor door hold back assembly for damage or loose or missing mounting hardware. If dirty, clean and lubricate hold back assembly springs (WP 0013).	Any rear armor hold back assembly is damaged or does not function. Any rear armor hold back assembly is damaged, loose or mounting hardware is loose or missing.

Table 1. Preventive Maintenance Checks and Services. (Continued)

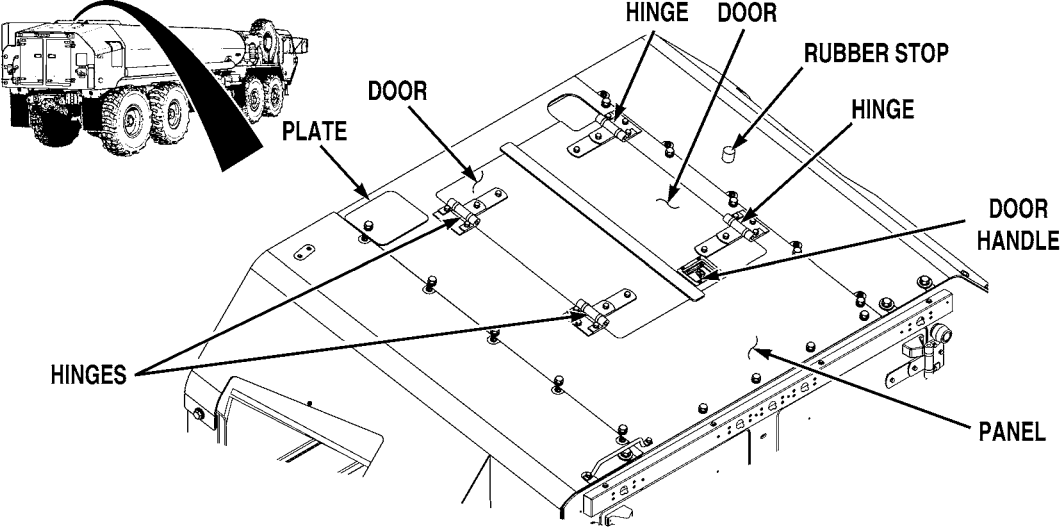
ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	NOT FULLY MISSION CAPABLE IF:
 <p>The diagram illustrates the TAM Top Panel Assembly. It shows a top-down view of the armor structure with various components labeled: HINGE, DOOR, RUBBER STOP, PLATE, DOOR HANDLE, and PANEL. A callout image shows a vehicle with the armor assembly highlighted by a black arrow.</p>				
2	Before	TAM Top Panel Assembly	a. Inspect top armor panel assembly for damage or loose or missing mounting hardware.	Any top armor panel assembly is damaged or loose or mounting hardware is loose or missing.
			b. Inspect top armor door assemblies for damage or loose or missing mounting hardware.	Any top armor door assembly is damaged or loose or mounting hardware is loose or missing.
			c. Inspect top armor access plate assembly for damage or loose or missing mounting hardware.	Any top armor plate assembly is damaged, or loose or mounting hardware is loose or missing.
			d. Inspect top armor door handle for damage or loose or missing mounting hardware.	Any top armor door handle or component is damaged or loose or mounting hardware is loose or missing.
			e. Inspect top armor door assembly for damage or loose or missing hardware.	Any top armor door assembly is damaged or loose, or mounting hardware is loose or missing.

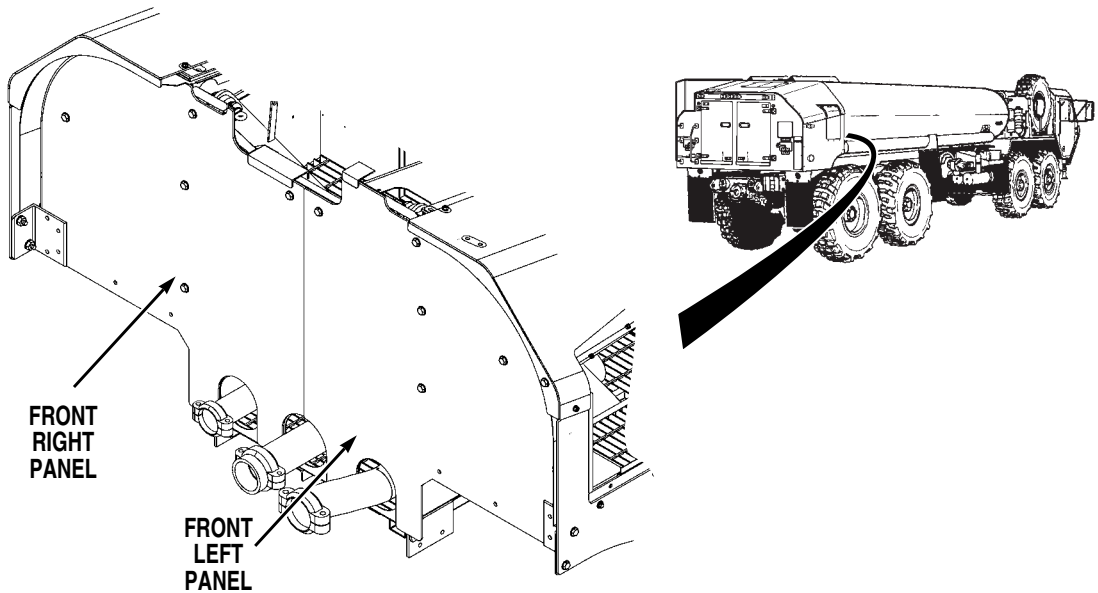
Table 1. Preventive Maintenance Checks and Services. (Continued)

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	NOT FULLY MISSION CAPABLE IF:
<p>The diagram illustrates the TAM Side Panel Assembly. Key components labeled include: SIDE UPPER ARMOR, SIDE LOWER ARMOR, SIDE ACCESS DOOR, SIDE LIGHT ASSEMBLY, HAND RAIL, and LADDER. A detailed view of the rubber stop on the right side upper armor panel is also shown.</p>				
3	Before	TAM Side Panel Assembly	a. Inspect side upper armor panels for damage or loose or missing mounting hardware.	Any side upper armor panel is damaged or loose or mounting hardware is loose or missing.
			b. Inspect rubber stop on right side upper armor panel for damage or loose or missing mounting hardware.	Rubber stop on right side upper armor panel is damaged or loose or mounting hardware is loose or missing.



Table 1. Preventive Maintenance Checks and Services. (Continued)

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	NOT FULLY MISSION CAPABLE IF:
3	Before (Cont)		c. Inspect side lower armor panels for damage or loose or missing mounting hardware.	Any side lower armor panel is damaged or loose or mounting hardware is loose or missing.
			d. Inspect side access doors for damage or loose or missing mounting hardware.	Any side access door is damaged or loose or mounting hardware is loose or missing.
			e. Inspect ladder and hand rail for damage or loose or missing mounting hardware.	Ladder or hand rail is damaged or loose or mounting hardware is loose or missing.
			f. Inspect side light assemblies for damage or loose or missing mounting hardware.	Any side light assembly is damaged or loose or mounting hardware is loose or missing.



4	Before	Front Panel Assemblies	Inspect front armor panels for damage or loose or missing mounting hardware.	Any front armor panel is damaged or loose or mounting hardware is loose or missing.
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Table 1. Preventive Maintenance Checks and Services. (Continued)

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	NOT FULLY MISSION CAPABLE IF:
5	Before	Wheel Well Assemblies	Inspect wheel well armor panels for damage or loose or missing panels or mounting hardware.	Any wheel well armor panel is damaged or loose or mounting hardware is loose or missing.

END OF WORK PACKAGE

**CHAPTER 4**  
**FIELD MAINTENANCE INSTRUCTIONS**



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**FIELD LEVEL MAINTENANCE****MAINTENANCE INTRODUCTION**

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**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanic's: Automotive  
(WP 0034, Item 3)

**Personnel Required**

MOS 63B Heavy-wheel vehicle mechanic

**Materials/Parts**

Adhesive, Thread (WP 0035, Item 2)  
Cleaning Compound, Solvent (WP 0035, Item 3)  
Cloth, Abrasive (WP 0035, Item 4)  
Detergent (WP 0035, Item 6)  
Oil, Lubricating (WP 0035, Item 8)  
Rag, Wiping (WP 0035, Item 9)  
Tag, Marker (WP 0035, Item 11)  
Tape, Pressure Sensitive Adhesive  
(WP 0035, Item 12)

**References**

TB 43-0209  
TB 43-0242  
TM 9-2320-279-10  
TM 9-2320-279-20  
TM 9-247

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**SCOPE**

1. The general maintenance instructions contain general shop practices and specific methods you must be familiar with to properly maintain the Tanker Armor Module (TAM) Kit.
2. Read and understand these practices and methods before starting maintenance tasks on the (TAM).

**WORK SAFETY**

1. Before starting a task, think about the risks and hazards to your safety as well as others. Wear protective gear such as safety goggles, face shield, safety shoes, and gloves. Protect yourself against injury.
2. Observe all WARNINGS and CAUTIONS.
3. When lifting heavy parts, always use assistance. Ensure that lifting equipment is working properly, suitable for the task assigned, of sufficient load capacity, and secured against slipping.
4. Always use power tools carefully.

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**WORK SAFETY - CONTINUED**

5. Before beginning a procedure, ensure that the following conditions have been observed, unless otherwise specified:
  - a. Vehicle must be parked on level ground with parking/emergency brake applied (TM 9-2320-279-10).
  - b. Transmission must be in N (Neutral) (TM 9-2320-279-10).
  - c. Engine must be off (TM 9-2320-279-10).
  - d. If equipped, battery disconnect switch must be in OFF position (TM 9-2320-279-10). If not equipped with battery disconnect switch, disconnect battery (TM 9-2320-279-20).

**GENERAL INFORMATION**

1. Before beginning a task, find out how much teardown is needed to fix the equipment as described in this manual. Sometimes complete teardown is not necessary. Remove components only as far as necessary to replace damaged or broken parts.
2. All tags and forms attached to the equipment must be checked to learn the reason for removal from service. Check all Modification Work Orders (MWOs) and Technical Bulletins (TBs) for equipment changes and updates.
3. Replace all locknuts and lockwashers.
4. Inspect seals for damage. Replace seals if damaged.

**CLEANING INSTRUCTIONS**

1. **General.**
  - a. The importance of cleaning must be thoroughly understood by maintenance personnel. Great care and effort are required in cleaning. Dirt and foreign material are a constant threat to satisfactory maintenance.
  - b. The following should apply to all cleaning operations:
    - (1) Keep all related parts and components together. Do not mix parts.
    - (2) Clean all parts before inspection and before installation.
    - (3) To prevent contamination, hands should be kept free of accumulation of grease, which can collect dust, dirt, or grit.

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**CLEANING INSTRUCTIONS - CONTINUED****2. Cleaning Instructions.****WARNING**

- Solvent cleaning compound MIL-PRF-680 Type III is an environmentally compliant and low toxic material. However, it may be irritating to the eyes and skin. Use protective gloves and goggles. Use in well-ventilated areas. Keep away from open flames and other sources of ignition. Failure to follow this warning may result in injury or death to personnel.
  - Improper cleaning methods and use of unauthorized cleaning solvents may injure personnel and damage equipment. Refer to TM 9-247, *Materials Used for Cleaning, Preserving, Abrading, and Cementing Ordnance Materials and Related Materials Including Chemicals*, for correct information.
  - 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 in accordance with 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 particles may cause injury.
  - Particles blown by compressed air are hazardous. DO NOT exceed 15 psi (103 kPa) nozzle pressure when drying parts with compressed air. Use a maximum of 30 psi (207 kPa) when cleaning components. DO NOT direct compressed air against human skin. Failure to follow this warning may result in injury or death. Make sure air stream is directed away from user and other personnel in the area. To prevent injury, user must wear protective goggles or face shield.
- a. Use solvent cleaning compound to clean any surface coated with grease or oil.
  - b. Clear out all drilled or tapped (threaded) holes with compressed air to remove dirt and solvent cleaning compound.
  - c. Use detergent and water to wash externally exposed parts that are not subject to grease and oil. Rinse thoroughly and air dry.
  - d. Use a wire brush and solvent cleaning compound to remove old sealing compound.
  - e. Use a wire brush and abrasive cloth to clean all rusted surfaces.
  - f. After cleaning, cover or wrap all parts to protect them from dust and dirt. Any part that is subject to rust should be lightly coated with clean lubricating oil.

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## INSPECTION INSTRUCTIONS

1. **General.** Inspect all components and parts carefully to determine if they are serviceable for reuse or if they must be replaced.
2. **Drilled and Tapped (Threaded) Holes.**
  - a. Inspect for wear, distortion (stretching), cracks, or any other damage in or around holes.
  - b. Inspect threaded areas for wear, distortion, or evidence of cross-threading.
  - c. If damage is noted, repair or replace as required.
3. **Armor Plates.**
  - a. Inspect for breaks, cracks, dents, and rust damage.
  - b. Particularly check area around studs, screw openings, and sharp corners.

### WARNING

To ensure survivability of personnel, welding repairs on armor kit are NOT authorized. If armor plates are damaged, they must be replaced. Failure to follow this warning may cause failure of armor, resulting in injury or death to personnel.

4. Replace any damaged armor plate. DO NOT repair by welding.
5. **Bolts and Screws.** Replace if threads are damaged, bent, loose, or stretched.
6. **Studs.** If studs are damaged, repair or replace as necessary.
7. **Rubber Seals.** Replace seal if damaged, cracked, or shows signs of excessive wear.

## PAINTING INSTRUCTIONS

### CAUTION

Whenever paint is applied, care must be taken to prevent covering up installation aid markings (**THIS SIDE UP**, up arrows, etc.). These installation aid markings must be protected during paint application by using masking tape, paper, etc.

Parts must be painted in accordance with TB 43-0209, *Color, Marking, and Camouflage Painting of Military Vehicles, Construction Equipment, and Materials Handling Equipment*, and TB 43-0242, *CARC Spot Painting*.



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## STANDARD TOOL REQUIREMENTS

1. The following are general practices regarding the use of tools:
  - a. Always use the proper tool kit and tools for the procedure being performed.
  - b. Ensure that tools are clean and lubricated to reduce wear and prevent rust.
  - c. Keep track of tools. Do not be careless with them.
  - d. Return tools to toolbox when finished with repair or maintenance,
  - e. Return toolboxes and tools to tool storage when not in use.
  - f. Inventory tools before and after each use.
2. Some maintenance tasks may require special or fabricated tools. The “Initial Setup” of the procedure will specify any special or fabricated tools needed to perform that procedure. Use these special tools only for the maintenance procedures for which they are designed or specified. If you are unfamiliar with the required tool, see your supervisor.

## USE OF THREAD ADHESIVE

### WARNING

Use caution when using adhesives and sealants. Prolonged inhalation of vapors can cause lung irritation. Contact with skin can cause dermatitis. Wear gloves and safety goggles and use product in a well-ventilated area away from open flame. If ingested, keep individual calm and seek medical attention. DO NOT induce vomiting. If contact with skin or eyes is made, flush thoroughly with water. Dispose of cleanup rags in accordance with local policy and ordinances. Failure to follow this warning may cause injury to personnel.

1. All nuts, bolts, and screws used in the installation of the armor kit or when replacing armor kit components must be coated with thread adhesive, unless otherwise stated.
2. Locknuts supplied with the kit do not require thread adhesive.

## USE OF SEALANT

1. When applying sealant, follow manufacturer’s instructions on label of container.
2. Sealant should be applied in an even and continuous 1/4 inch bead along mating surfaces.

## APPLYING TORQUE

1. When tightening fasteners, use torque value as specified in *Torque Limits* (WP 0037).
2. If a unique torque value is required, it will be provided in the procedural step of the task.

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**TAGGING INSTRUCTIONS**

1. Use marker tags to identify all electrical wires and any other parts that may be hard to identify or replace later. Fasten tags to parts during removal by wrapping wire fasteners around or through parts and twisting ends together. Position tags to be out of the way during cleaning, inspection, and repair. Mark tags with a pencil, pen, or marker.
2. Whenever possible, identify electrical wires with the number of the terminal of wire to which it connects. If no markings can be found, tag both wires or wire and terminal, and use the same identifying mark for both. If you cannot tag a wire because it must fit through a small hole or you cannot reach it, write down the description of the wire and the point to which it connects, or draw a simple diagram on paper. Be sure to write down enough information so you will be able to properly connect the wires during assembly. If you need to identify a loose wire, look for identifying number near end of the wire, stamped on a permanent metal tag. Compare the number to wire numbers on the appropriate electrical schematic.
3. Identify and tag other parts as required by name and installed location.

**END OF WORK PACKAGE**

## FIELD LEVEL MAINTENANCE

## REAR DOOR DEADBOLT LATCH AND LINCH PIN ASSEMBLY REPLACEMENT

## INITIAL SETUP:

**Tools and Special Tools**

Tool Kit, General Mechanic's: Automotive  
(WP 0034, Item 3)

**References**

None

**Materials/Parts**

Lockwasher (WP 0036, Item 6)  
Locknuts (2) (WP 0036, Item 3)

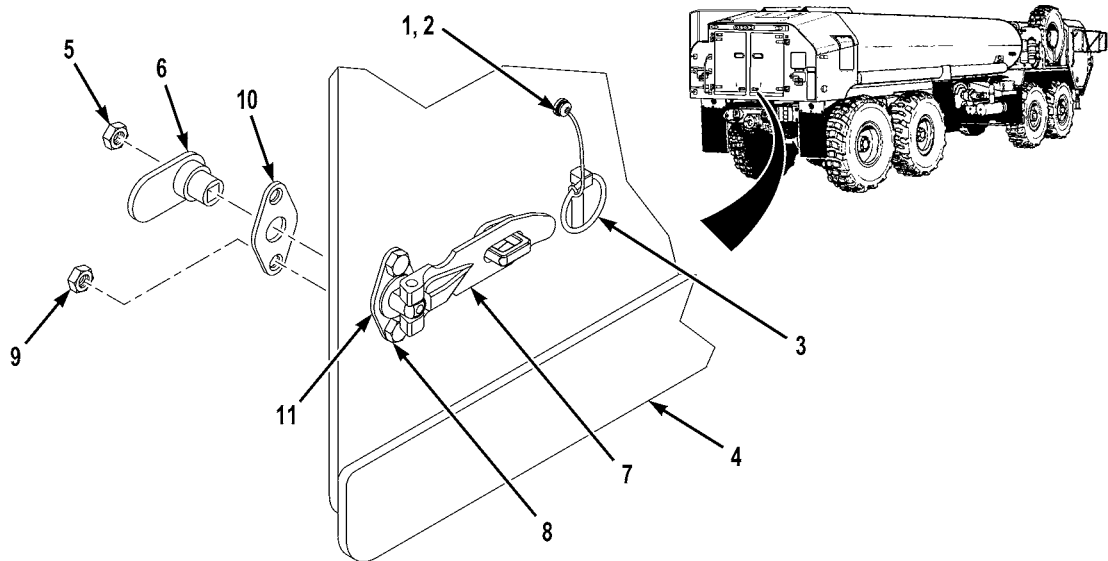
**Equipment Condition**

Vehicle parked on level ground or wheels  
chocked (TM 9-2320-279-10)  
Engine off (TM 9-2320-279-10)  
Batteries disconnected (TM 9-2320-279-20)

**Personnel Required**

MOS 63B Heavy-wheel vehicle mechanic

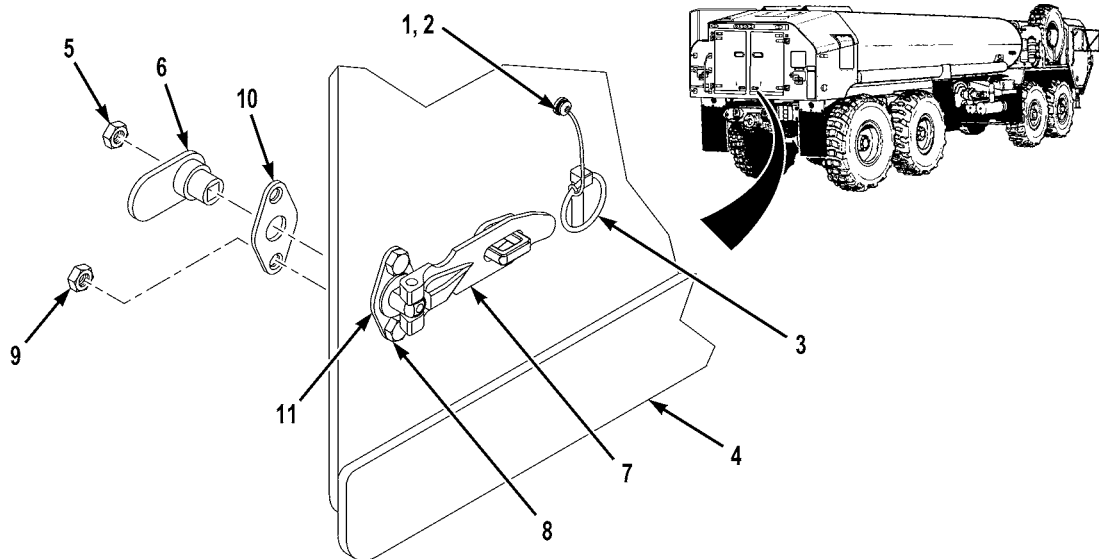
## REMOVAL

**NOTE**

Both right rear door deadbolt latch and linch pin and left rear door deadbolt latch and linch pin are removed the same way. Right rear door deadbolt latch and linch pin shown.

1. Remove screw (1), lockwasher (2), and linch pin (3) from rear door assembly (4). Discard lockwasher.
2. Remove nut (5) and cam latch (6) from deadbolt latch (7).
3. Remove two screws (8), locknuts (9), one rear plate (10), front plate (11), and deadbolt latch (7) from rear door assembly (4). Discard locknuts.

**END OF TASK**

**INSTALLATION****NOTE**

Both right rear door deadbolt latch and linch pin and left rear door deadbolt latch and linch pin are installed the same way. Right rear door deadbolt latch and linch pin shown.

1. Install deadbolt latch (7), front plate (11), rear plate (10) to rear door assembly (4) with two locknuts (9) and screws (8).
2. Install cam latch (6) on deadbolt latch (7) with nut (5).
3. Install linch pin (3) to rear door assembly (4) with lockwasher (2) and screw (1).

**END OF TASK****FOLLOW-ON MAINTENANCE**

1. Connect batteries (TM 9-2320-279-20).
2. Remove wheel chocks (TM 9-2320-279-10).

**END OF TASK****END OF WORK PACKAGE**

---

**FIELD LEVEL MAINTENANCE**  
**REAR DOOR HINGE REPLACEMENT**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanic's: Automotive  
(WP 0034, Item 3)

**Materials/Parts**

Lockwashers (2) (WP 0036, Item 9)

**Personnel Required**

MOS 63B Heavy-wheel vehicle mechanic

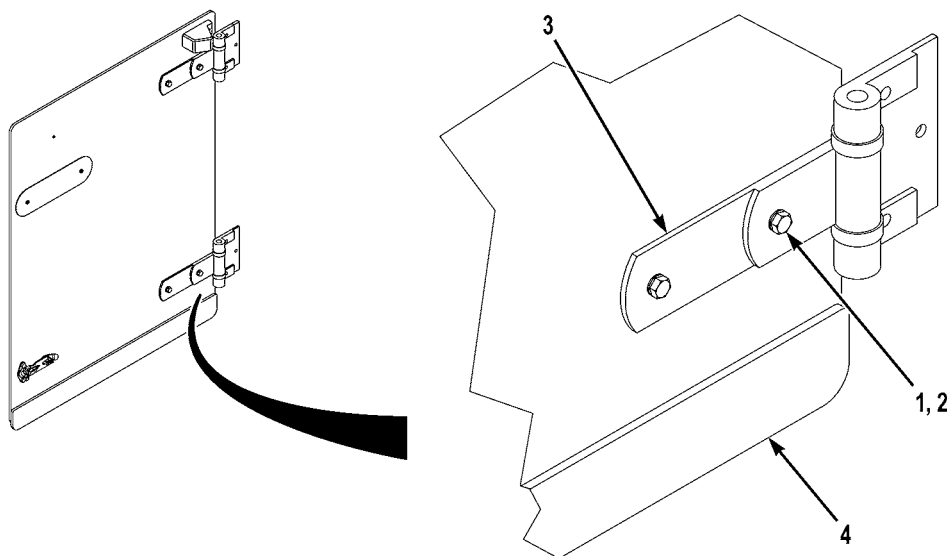
**References**

None

**Equipment Condition**

Rear door assembly removed (WP 0014)

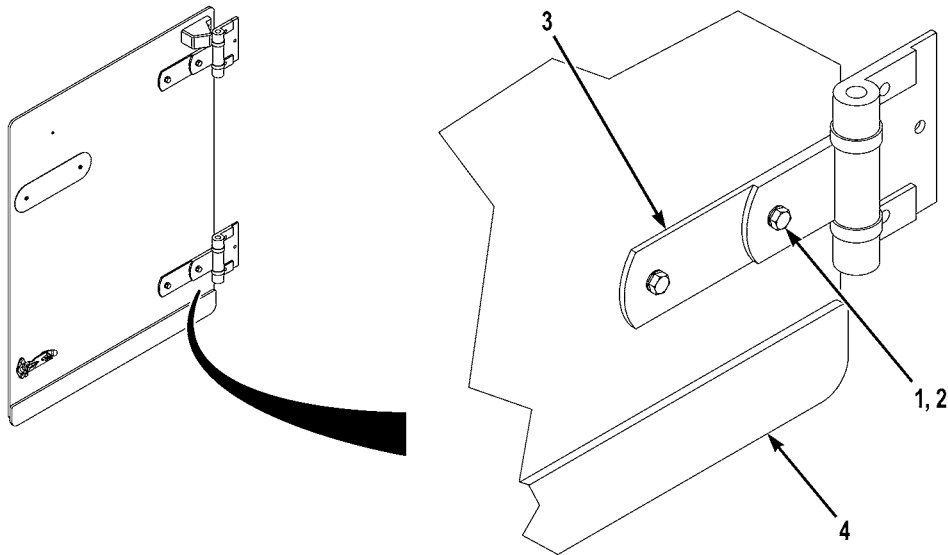
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**REMOVAL****NOTE**

All four door hinges are removed the same way. Lower right rear door hinge shown.

1. Remove two screws (1), lockwashers (2), and one door hinge (3) from rear door assembly (4). Discard lockwashers.

**END OF TASK**

**INSTALLATION****NOTE**

All four door hinges are installed the same way. Lower right rear door hinge shown.

1. Install door hinge (3), two lockwashers (2), and screws (1) on rear door assembly (4).

**END OF TASK****FOLLOW-ON MAINTENANCE**

1. Install rear door assembly (WP 0014).

**END OF TASK****END OF WORK PACKAGE**

---

**FIELD LEVEL MAINTENANCE****REAR DOOR CHECK AND HOLD BACK ASSEMBLY REPLACEMENT**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanic's: Automotive  
(WP 0034, Item 3)

**Materials/Parts**

Lockwashers (2) (WP 0036, Item 8)  
Locknuts (2) (WP 0036, Item 3)  
Grease, Automotive and Artillery  
(WP 0035, Item 7)

**Personnel Required**

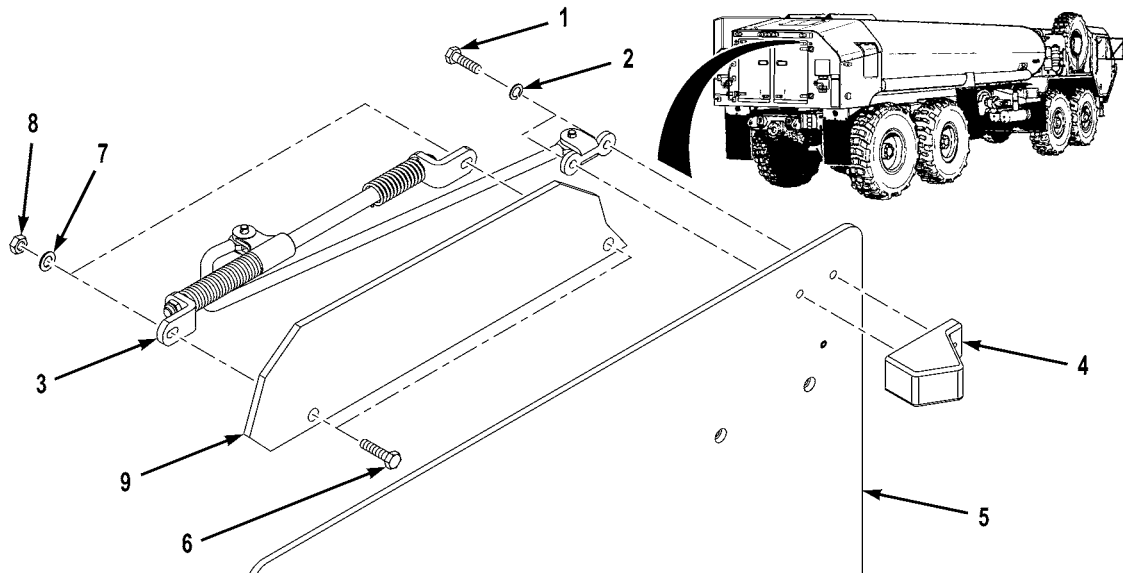
MOS 63B Heavy-wheel vehicle mechanic

**References**

None

**Equipment Condition**

Vehicle parked on level ground or wheels  
chocked (TM 9-2320-279-10)  
Engine off (TM 9-2320-279-10)  
Batteries disconnected (TM 9-2320-279-20)

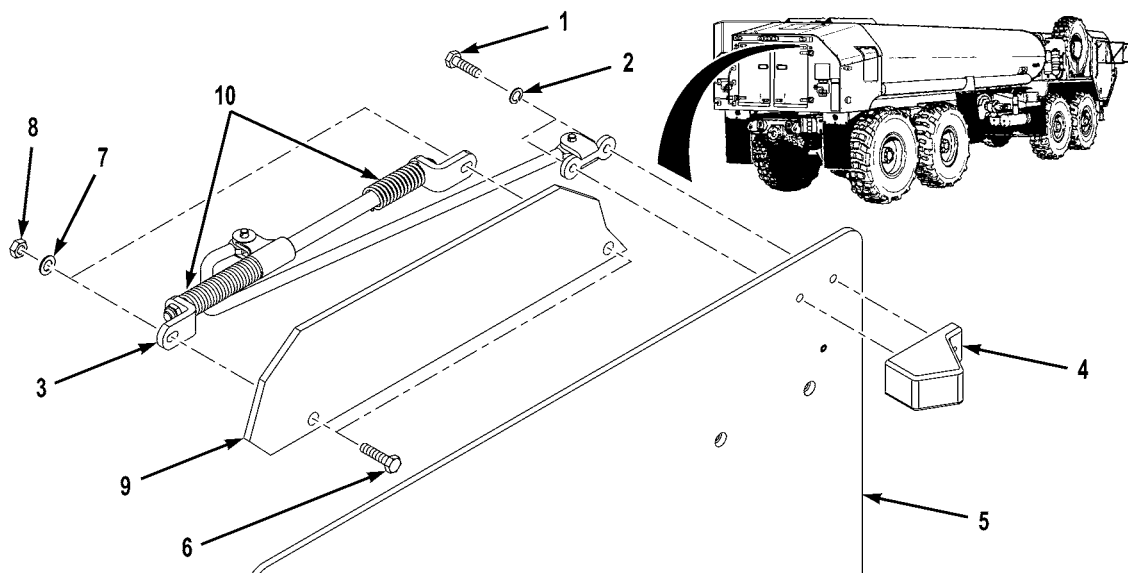
**REMOVAL****NOTE**

Both right rear door check and hold back assembly and left rear door check and hold back assembly are removed the same way. Right rear door check and hold back assembly shown.

1. Remove two screws (1), lockwashers (2), one door check and hold back assembly (3), and door stop bracket (4) from rear door assembly (5). Discard lockwashers.
2. Remove two screws (6), washers (7), locknuts (8) and one door check hold back assembly (3) from rear panel assembly (9). Discard locknuts.

**END OF TASK**



**INSTALLATION****NOTE**

Both right rear door check and hold back assembly and left rear door check and hold back assembly are installed the same way. Right rear door check and hold back assembly shown.

1. Install door check and hold back assembly (3) to rear panel assembly (9) with two locknuts (8), washers (7), and screws (6).
2. Install door check and hold back assembly (3) and door stop bracket (4) to rear door assembly (5) with two lockwashers (2) and screws (1).
3. Apply light coat of grease to springs (10) on door check and hold back assembly (3).

**END OF TASK****FOLLOW-ON MAINTENANCE**

1. Connect batteries (TM 9-2320-279-20).
2. Remove wheel chocks (TM 9-2320-279-10).

**END OF TASK****END OF WORK PACKAGE**



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**FIELD LEVEL MAINTENANCE****REAR DOOR ASSEMBLY REPAIR**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanic's: Automotive  
(WP 0034, Item 3)

Sling (WP 0034, Item 1)

Lifting Device, Minimum Capacity 100 lb (45 kg)

**Materials/Parts**

Lockwashers (10) (Left rear door only)  
(WP 0036, Item 9)

Lockwashers (14) (Right rear door only)  
(WP0036, Item 9)

**Personnel Required**

MOS 63B Heavy-wheel vehicle mechanic (2)

**References**

None

**Equipment Condition**

Vehicle parked on level ground or wheels  
chocked (TM 9-2320-279-10)

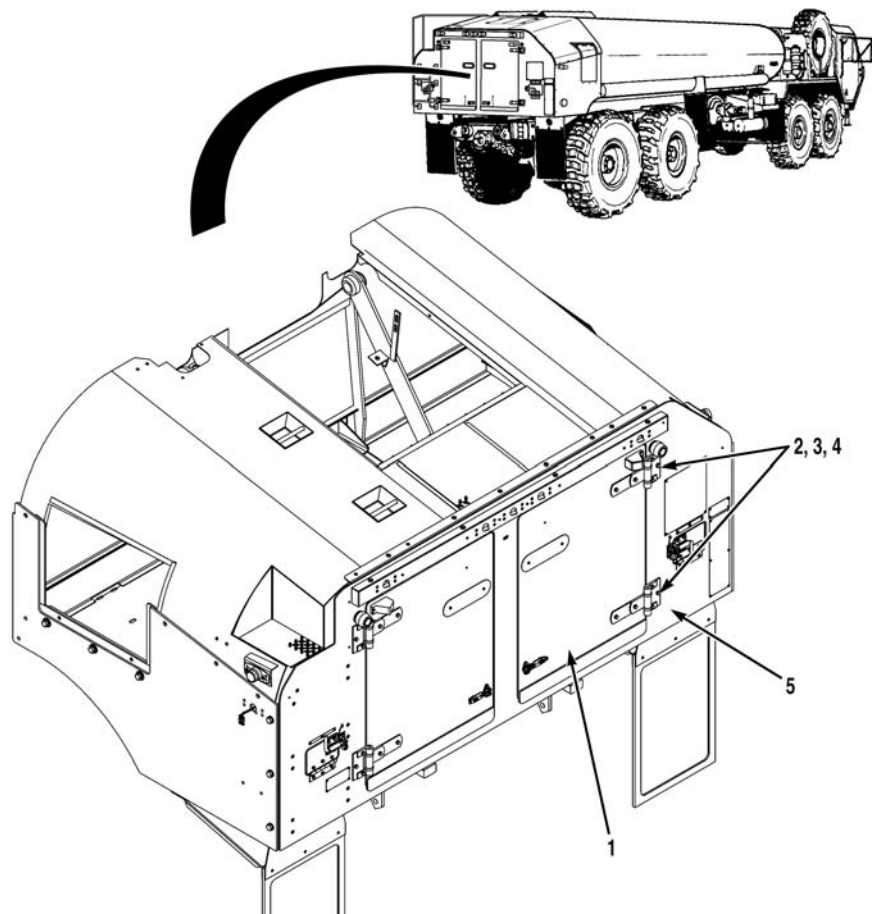
Engine off (TM 9-2320-279-10)

Batteries disconnected (TM 9-2320-279-20)

Rear door check and hold back assembly  
removed (WP 0013)

Rear door deadbolt latch and linch pin assembly  
removed (WP 0011)

High mount stop light removed (WP 0029)

**REMOVAL****WARNING**

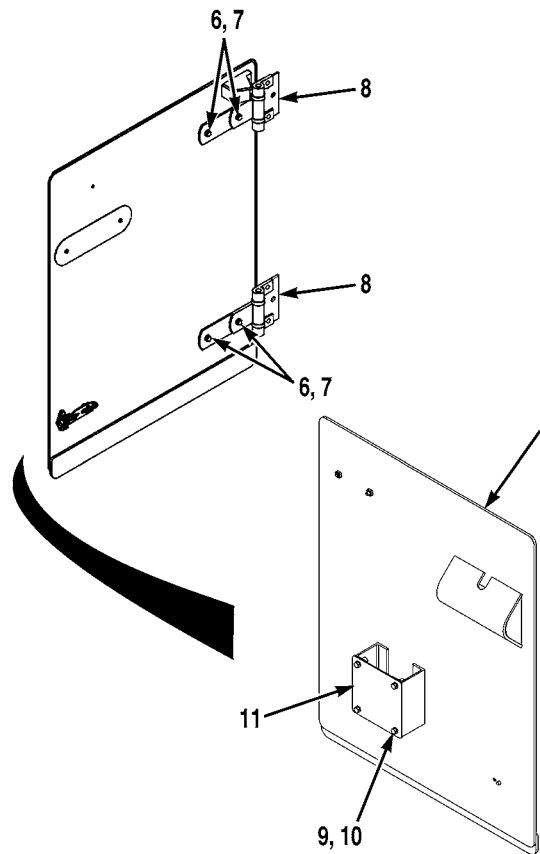
Use extreme caution when handling heavy parts. Provide adequate support and use assistance during procedure. Ensure that any lifting device used is in suitable load capacity. Keep clear of heavy parts supported only by lifting device. Failure to follow this warning may cause injury or death to personnel.

**NOTE**

- Rear door assembly weighs 90 lb (40.8 kg).
- Both left rear door assembly and right rear door assembly are removed the same way. Right rear door assembly is shown.

1. Attach sling and lifting device to rear door assembly (1).
2. Remove six screws (2), lockwashers (3), and two hinge spacer plates (4) from rear door assembly (1) and rear panel assembly (5). Discard lockwashers.
3. Using lifting device, remove rear door assembly (1) from rear panel assembly (5).

**END OF TASK**

**DISASSEMBLY**

1. Remove four screws (6), lockwashers (7), and two rear door hinges (8) from rear door assembly (1). Discard lockwashers.

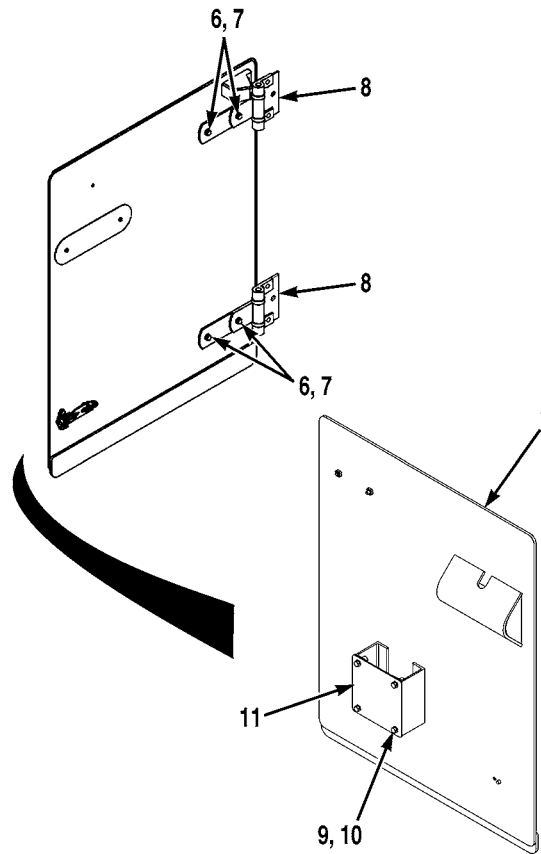
**NOTE**

Perform Step 2 for right rear door assembly only.

2. Remove four screws (9), lockwashers (10), and door shut-off bracket plate (11) from rear door assembly (1). Discard lockwashers.

**END OF TASK**

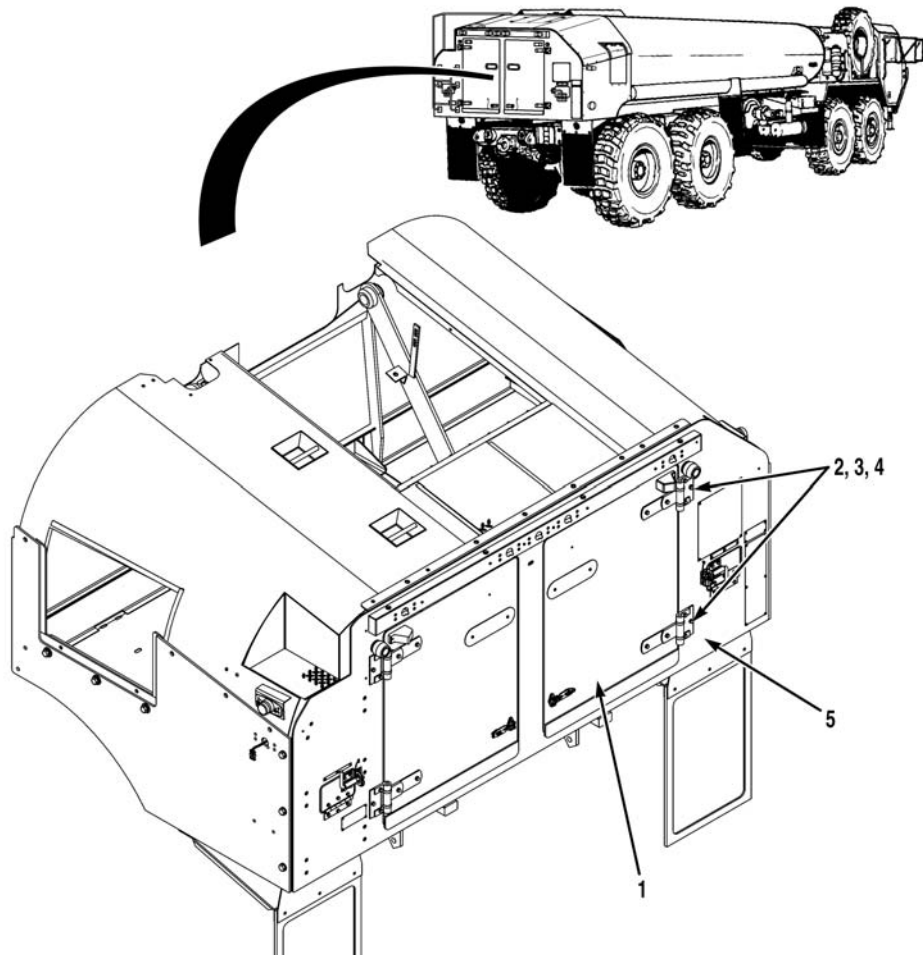
## ASSEMBLY

**NOTE**

Perform Step 1 for right rear door assembly only.

1. Install door shut-off bracket plate (11) on rear door assembly (1) with four lockwashers (10) and screws (9).
2. Install two rear door hinges (8) on rear door assembly (1) with four lockwashers (7) and screws (6).

**END OF TASK**

**INSTALLATION****WARNING**

Use extreme caution when handling heavy parts. Provide adequate support and use assistance during procedure. Ensure that any lifting device used is in suitable load capacity. Keep clear of heavy parts supported by lifting device. Failure to follow this warning may cause injury or death to personnel.

**NOTE**

- Rear door assembly weighs 90 lb (40.8 kg).
  - Both left rear door assembly and right rear door assembly are installed the same way. Right rear door assembly is shown.
1. Attach sling and lifting device to rear door assembly (1).
  2. Use lifting device to position rear door assembly (1) on rear panel assembly (5).
  3. Secure rear door assembly (1) to rear panel (5) with two hinge spacer plates (4), six lockwashers (3), and screws (2).

**END OF TASK**

**FOLLOW-ON MAINTENANCE**

1. Install high mount stop light (WP 0029).
2. Install rear door deadbolt latch and linch pin assembly (WP 0011).
3. Install rear door check and hold back assembly (WP 0013).
4. Connect batteries (TM 9-2320-279-20).
5. Remove wheel chocks (TM 9-2320-279-10).

**END OF TASK****END OF WORK PACKAGE**



---

**FIELD MAINTENANCE****REAR ACCESS DOOR ASSEMBLY REPAIR**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanic's: Automotive  
(WP 0034, Item 3)

**Materials/Parts**

Lockwashers (12) (WP 0036, Item 8)  
Lockwasher (WP 0036, Item 6)

**Personnel Required**

MOS 63S Heavy-wheel vehicle mechanic

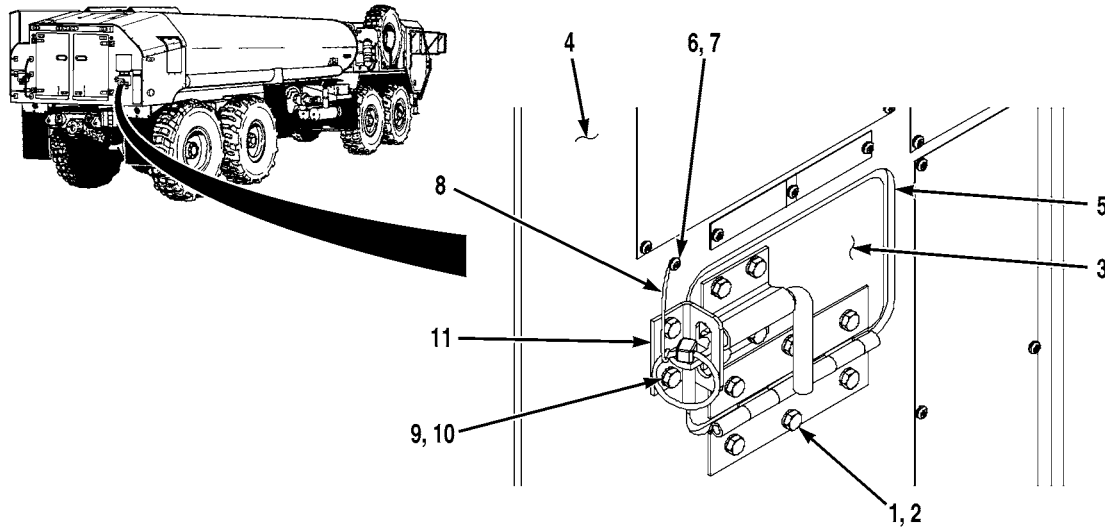
**References**

None

**Equipment Condition**

Vehicle parked on level ground or wheels  
chocked (TM 9-2320-279-10)  
Engine off (TM 9-2320-279-10)  
Batteries disconnected (TM 9-2320-279-20)

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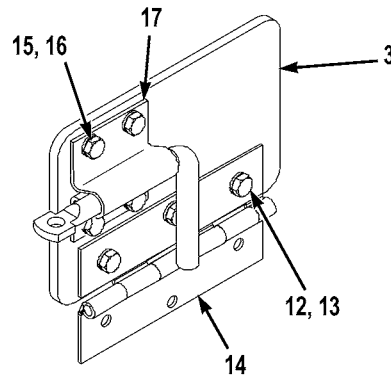
**REMOVAL****NOTE**

Both left rear access door assembly and right rear access door assembly are removed the same way. Right rear access door shown.

1. Remove three screws (1), lockwashers (2), and rear access door assembly (3) from rear panel assembly (4). Discard lockwashers.
2. Remove composite grommet edging (5) from rear panel assembly (4).
3. Remove screw (6), lockwasher (7), and linch pin assembly (8) from rear panel assembly (4). Discard lockwasher.
4. Remove two screws (9), lockwashers (10), and hasp receiver (11) from rear panel assembly (4). Discard lockwashers.

**END OF TASK**

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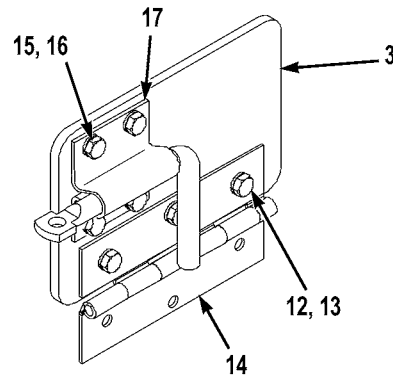
**DISASSEMBLY****NOTE**

Both left rear access door assembly and right rear access door assembly are disassembled the same way. Right rear access door shown.

1. Remove three screws (12), lockwashers (13), and rear access door hinge (14) from rear access door assembly (3). Discard lockwashers.
2. Remove four screws (15), lockwashers (16), and lockable hasp (17) from rear access door assembly (3). Discard lockwashers.

**END OF TASK**

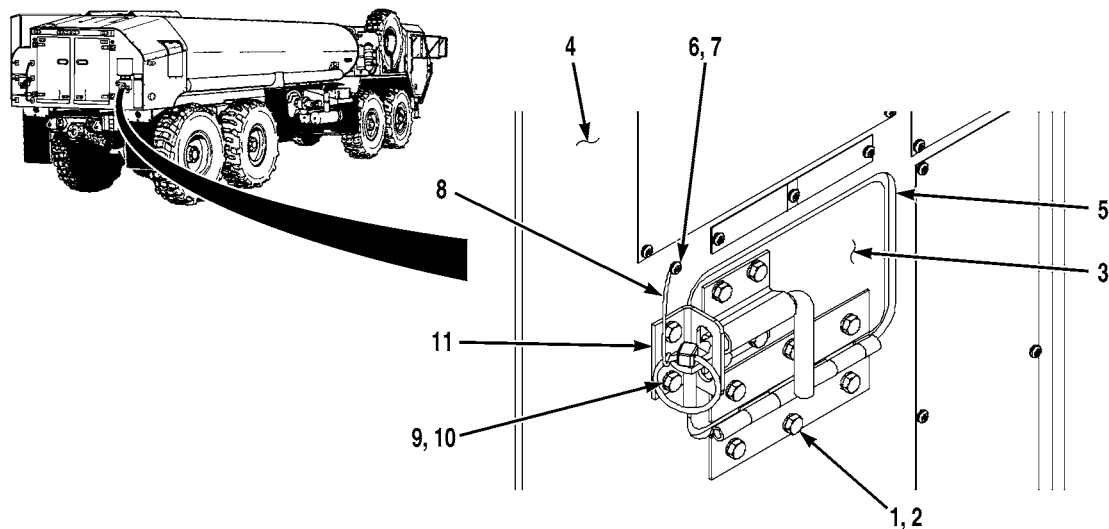
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**ASSEMBLY****NOTE**

Both left rear access door assembly and right rear access door assembly are assembled the same way. Right rear access door shown.

1. Install lockable hasp (17) on rear access door assembly (3) with four lockwashers (16) and screws (15).
2. Install rear access door hinge (14) on rear access door assembly (3) with three lockwashers (13) and screws (12).

**END OF TASK**

**INSTALLATION****NOTE**

Both left rear access door assembly and right rear access door assembly are installed the same way. Right rear access door shown.

1. Install hasp receiver (11) on rear panel assembly (4) with two lockwashers (10) and screws (9).
2. Install lynch pin assembly (8) on rear panel assembly (4) with lockwasher (7) and screw (6).
3. Install composite grommet edging (5) on rear panel assembly (4).
4. Install rear access door (3) on rear panel assembly (4) with three lockwashers (2) and screws (1).

**END OF TASK****FOLLOW-ON MAINTENANCE**

1. Connect batteries (TM 9-2320-279-20).
2. Remove wheel chocks (TM 9-2320-279-10).

**END OF TASK****END OF WORK PACKAGE**



---

**FIELD LEVEL MAINTENANCE**  
**REAR PANEL ASSEMBLY REPAIR**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanic's: Automotive  
(WP 0034, Item 3)

Sling (WP 0034, Item 1)

Wrench, Torque (0-75 lb-ft. [0-102 N•m])  
(WP 0034, Item 2)

Lifting Device, Minimum Capacity 250 lb (113 kg)

**Materials/Parts**

Locknut (WP 0036, Item 4)

Lockwashers (24) (WP 0036, Item 6)

Lockwashers (5) (WP 0036, Item 11)

**Personnel Required**

MOS 63B Heavy-wheel vehicle mechanic (2)

**References**

None

**Equipment Condition**

Vehicle parked on level ground or wheels  
chocked (TM 9-2320-279-10)

Engine off (TM 9-2320-279-10)

Batteries disconnected (TM 9-2320-279-20)

Rear door assemblies removed (WP 0014)

Rear access door assemblies removed  
(WP 0015)

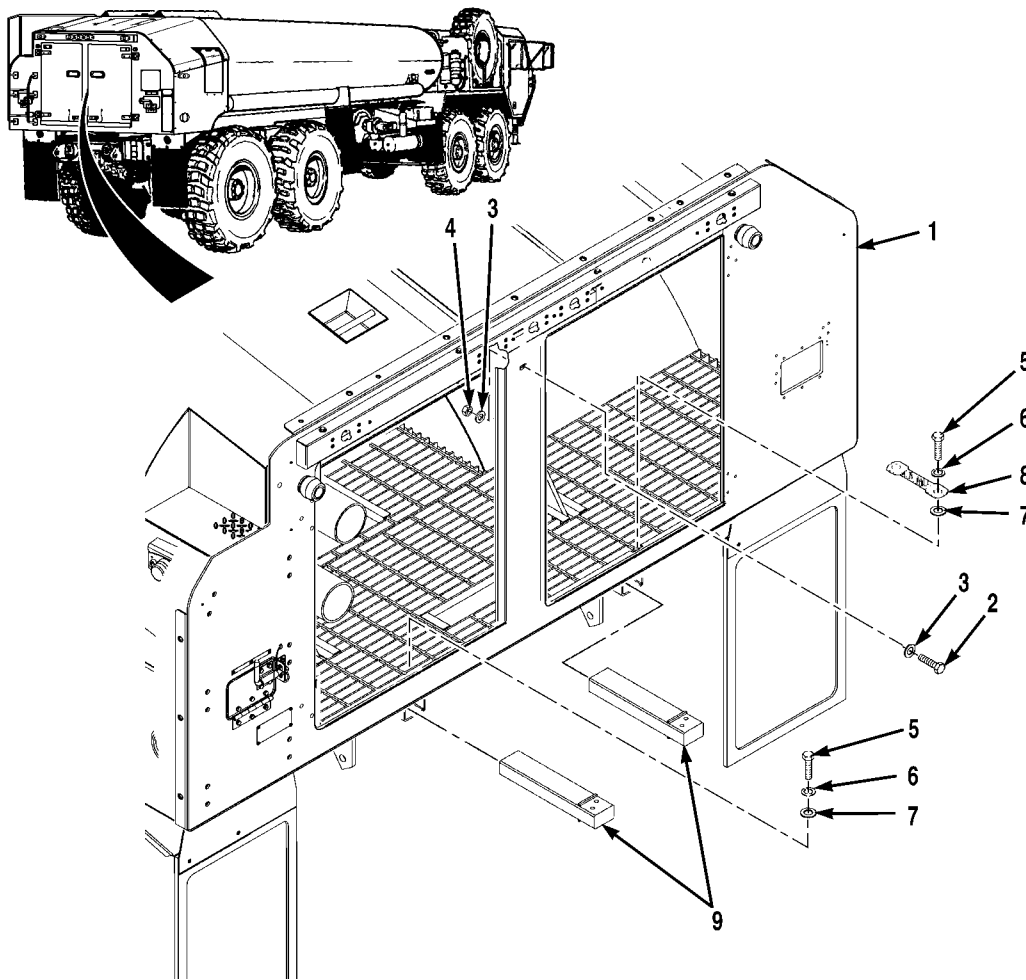
Lower side panel assemblies removed (WP 0017)

Ladder and rail assembly removed (WP 0027)

Lightbar panel assembly removed (WP 0030)

Five clamps removed from rear panel (WP 0031)

## REMOVAL

**WARNING**

Use extreme caution when handling heavy parts. Provide adequate support and use assistance during procedure. Ensure that any lifting device used is in good condition and of suitable load capacity. Keep clear of heavy parts supported only by lifting device. Failure to follow this warning may cause injury or death to personnel.

**NOTE**

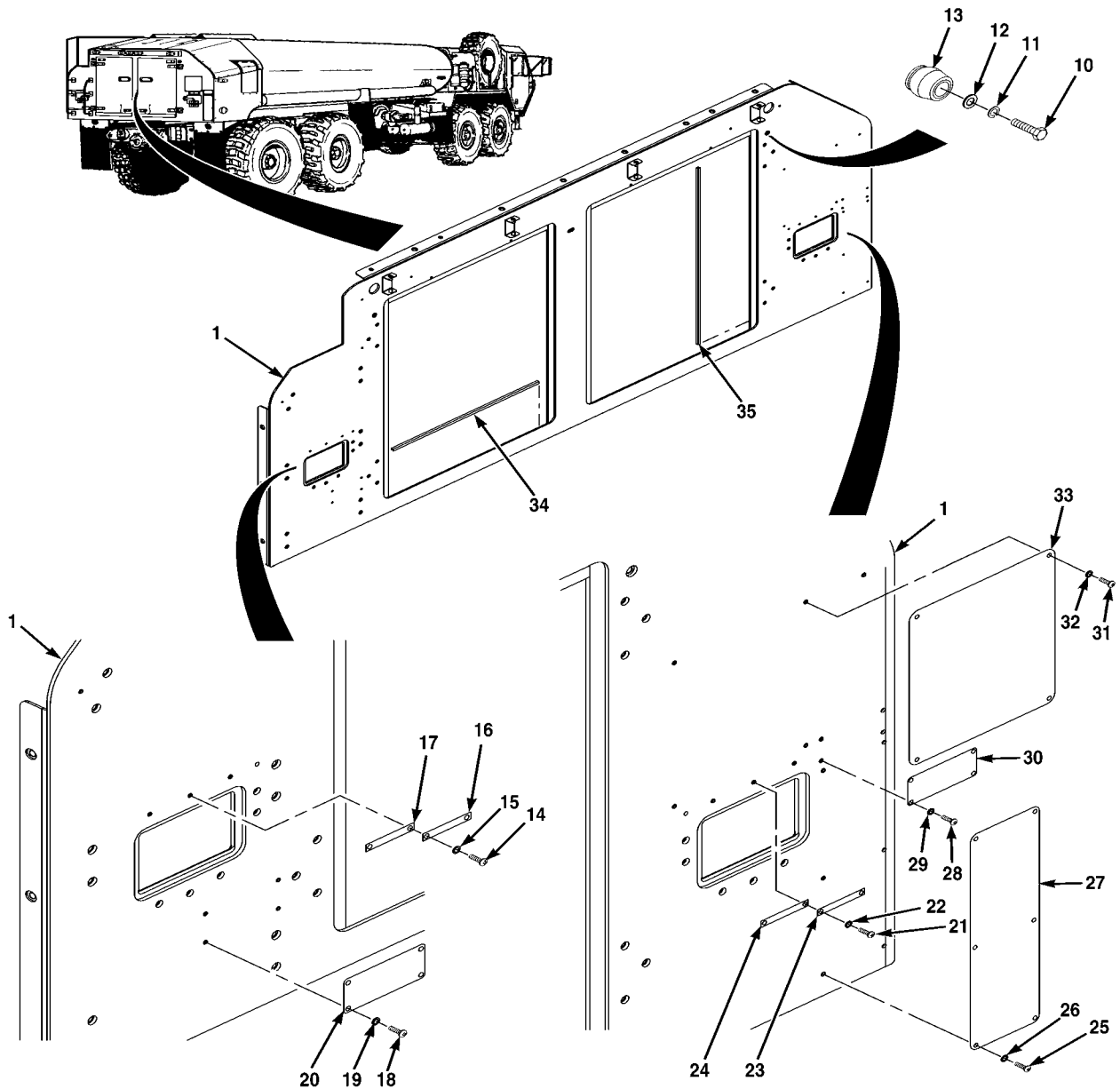
Rear panel assembly weighs 220 lb (100 kg).

1. Attach sling and lifting device to rear panel assembly (1).
2. Remove screw (2), two washers (3), and one locknut (4) from rear panel assembly (1). Discard locknut.
3. Remove four screws (5), lockwashers (6), washers (7), one ground strap (8), and rear panel assembly (1) from two rear panel assembly attach bars (9). Discard lockwashers.

**END OF TASK**



## DISASSEMBLY

**NOTE**

Both left side door stop bumper and right side door stop bumper are removed the same way. Right side door stop bumper shown.

1. Remove screw (10), lockwasher (11), washer (12), and door stop bumper (13) from rear panel assembly (1). Discard lockwasher.
2. Remove three screws (14), lockwashers (15), one HAVR Control label plate (16), and HAV Control label plate (17) from rear panel assembly (1). Discard lockwashers.
3. Remove four screws (18), lockwashers (19), and one Tank Pump label plate (20) from rear panel assembly (1). Discard lockwashers.

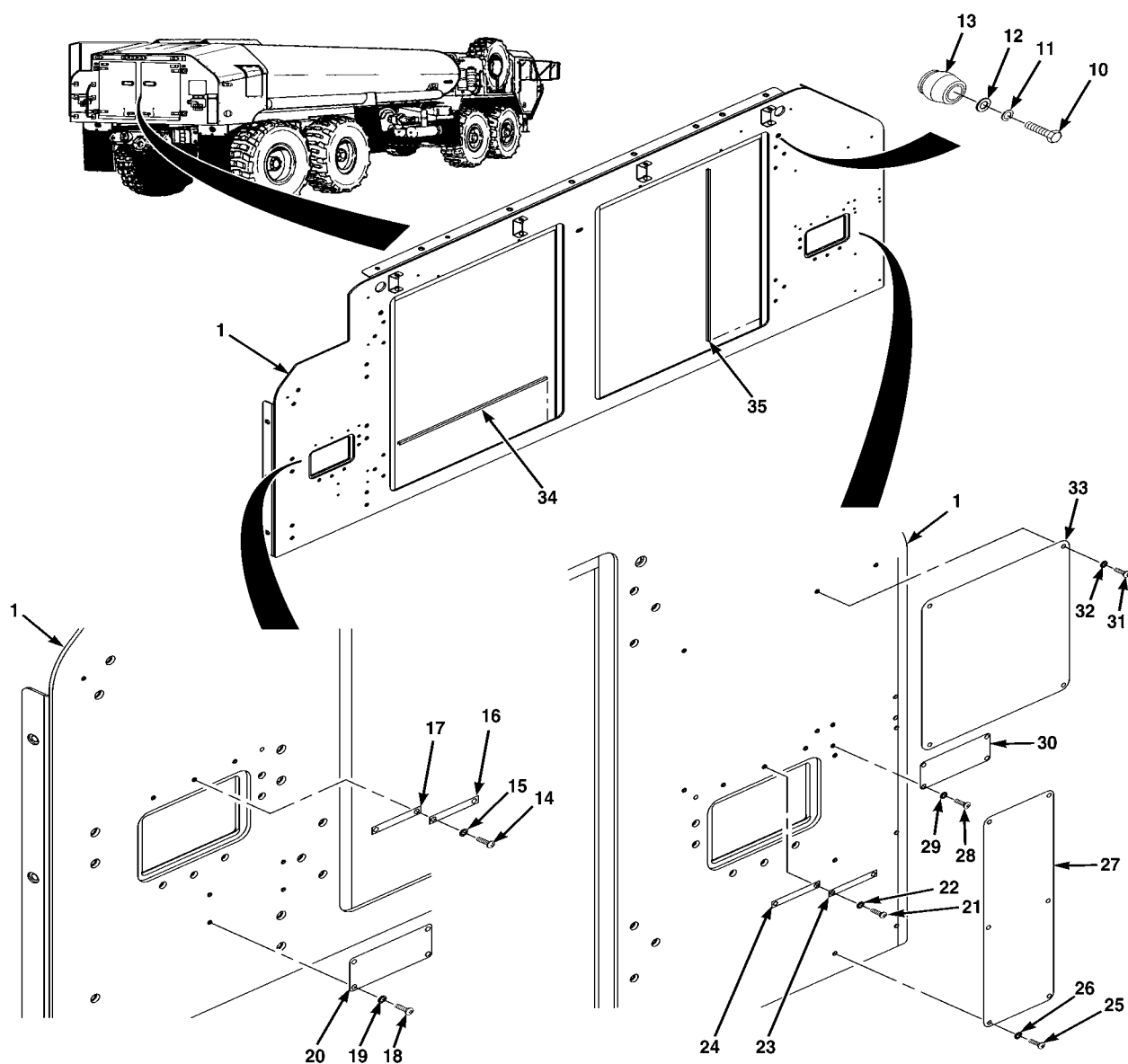
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**DISASSEMBLY - CONTINUED**

4. Remove three screws (21), lockwashers (22), one SR2 Static label plate (23), and SR1 Static Reel label plate (24) from rear panel assembly (1). Discard lockwashers.
5. Remove six screws (25), lockwashers (26), and one Operation Instruction plate (27) from rear panel assembly (1). Discard lockwashers.
6. Remove four screws (28), lockwashers (29), and one V-1 Valve label plate (30) from rear panel assembly (1). Discard lockwashers.
7. Remove four screws (31), lockwashers (32), and one Schematic placard (33) from rear panel assembly (1). Discard lockwashers.
8. Remove four composite grommet edgings (34) from rear panel assembly (1).
9. Remove four composite grommet edgings (35) from rear panel assembly (1).

**END OF TASK**

## ASSEMBLY



1. Install four composite grommet edgings (35) to rear panel assembly (1).
2. Install four composite grommet edgings (34) to rear panel assembly (1).
3. Install Schematic placard (33) on rear panel assembly (1) with four lockwashers (32) and screws (31).
4. Install V-1 Valve label plate (30) on rear panel assembly (1) with four lockwashers (29) and screws (28).
5. Install Operation Instructions plate (27) on rear panel assembly (1) with six lockwashers (26) and screws (25).

---

**ASSEMBLY - CONTINUED**

6. Install SR1 Static Reel label plate (24) and SR2 Static label plate (23) on rear panel assembly (1) with three lockwashers (22) and screws (21).
7. Install Tank Pump label plate (20) on rear panel assembly (1) with four lockwashers (19) and screws (18).
8. Install HAV Control label plate (17) and HAVR Control label plate (16) on rear panel assembly (1) with three lockwashers (15) and screws (14).

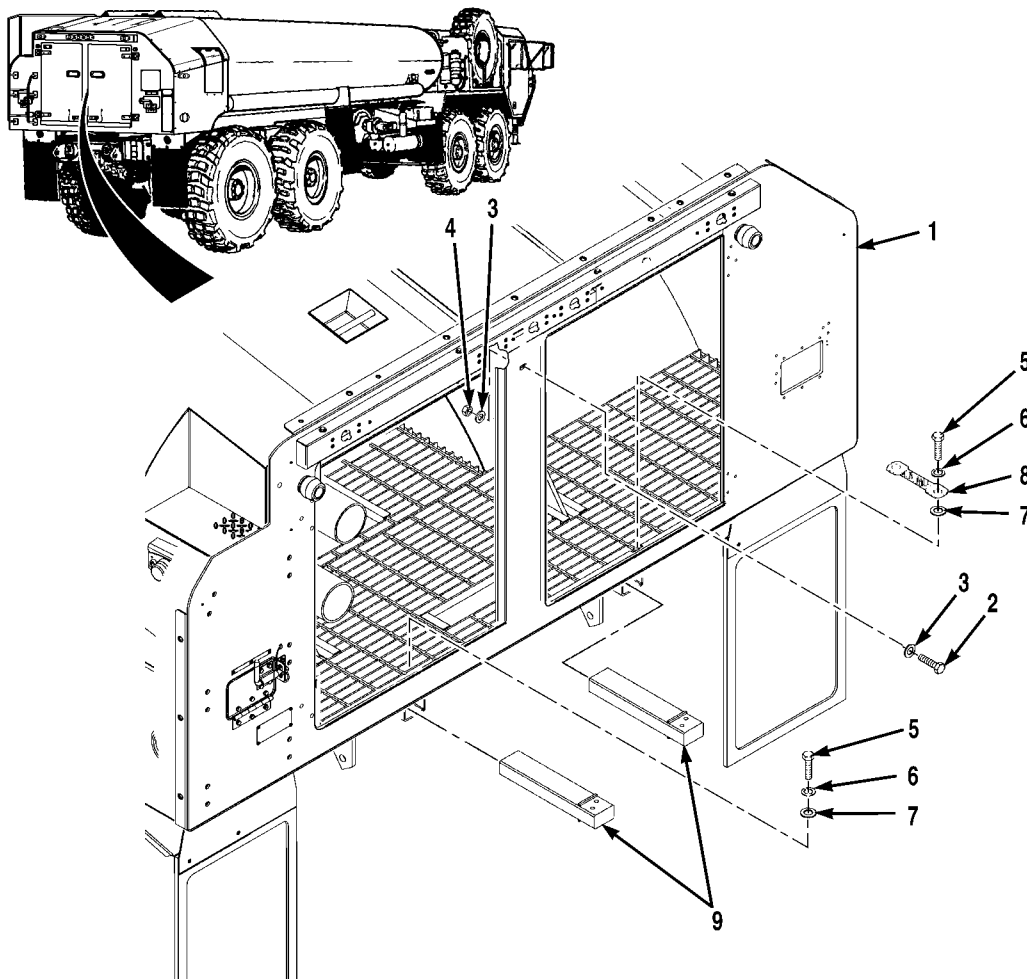
**NOTE**

Both left side door stop bumper and right side door stop bumper are installed the same way.  
Right side door stop bumper shown.

9. Install door stop bumper (13) on rear panel assembly (1) with washer (12), lockwasher (11), and screw (10).

**END OF TASK**

## INSTALLATION

**WARNING**

Use extreme caution when handling heavy parts. Provide adequate support and use assistance during procedure. Ensure that any lifting device used is in good condition and of suitable load capacity. Keep clear of heavy parts supported by lifting device. Failure to follow this warning may cause injury or death to personnel.

**NOTE**

Rear panel assembly weighs 220 lb (100 kg).

1. Attach sling and lifting device to rear panel assembly (1).
2. Use lifting device to position rear panel assembly (1) on two rear panel assembly attach bars (9).
3. Position ground strap (8) and secure rear panel assembly (1) to two rear panel assembly attach bars (9) with four washers (7), lockwashers (6), and screws (5). Do not tighten screws at this time.
4. Install locknut (4), two washers (3), and one screw (2) to rear panel assembly (1). Do not tighten locknut at this time.

---

**INSTALLATION - CONTINUED**

5. Tighten four screws (5) to 60 lb-ft. (81 N•m).
6. Tighten locknut (4) to 37 lb-ft. (50 N•m).

**END OF TASK****FOLLOW-ON MAINTENANCE**

1. Install five clamps on rear panel (WP 0031).
2. Install lightbar panel assembly (WP 0030).
3. Install ladder and rail assembly (WP 0027).
4. Install lower side panel assemblies (WP 0017).
5. Install rear access door assemblies (WP 0015).
6. Install rear door assemblies (WP 0014).
7. Connect batteries (TM 9-2320-279-20).
8. Remove wheel chocks (TM 9-2320-279-10).

**END OF TASK****END OF WORK PACKAGE**

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**FIELD LEVEL MAINTENANCE****LOWER SIDE PANEL ASSEMBLY REPLACEMENT**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanic's: Automotive  
(WP 0034, Item 3)

Sling (WP 0034, Item 1)

Wrench, Torque (0-75 lb-ft. [0-102 N•m])  
(WP 0035, Item 2)

Lifting Device, Minimum Capacity 150 lb (68kg)

**Materials/Parts**

Lockwashers (3) (WP 0036, Item 9)

Lockwashers (5) (WP 0036, Item 11)

Locknuts (2) (WP 0036, Item 5)

**Personnel Required**

MOS 63B Heavy-wheel vehicle mechanic (2)

**References**

None

**Equipment Condition**

Vehicle parked on level ground or wheels  
chocked (TM 9-2320-279-10)

Engine off (TM 9-2320-279-10)

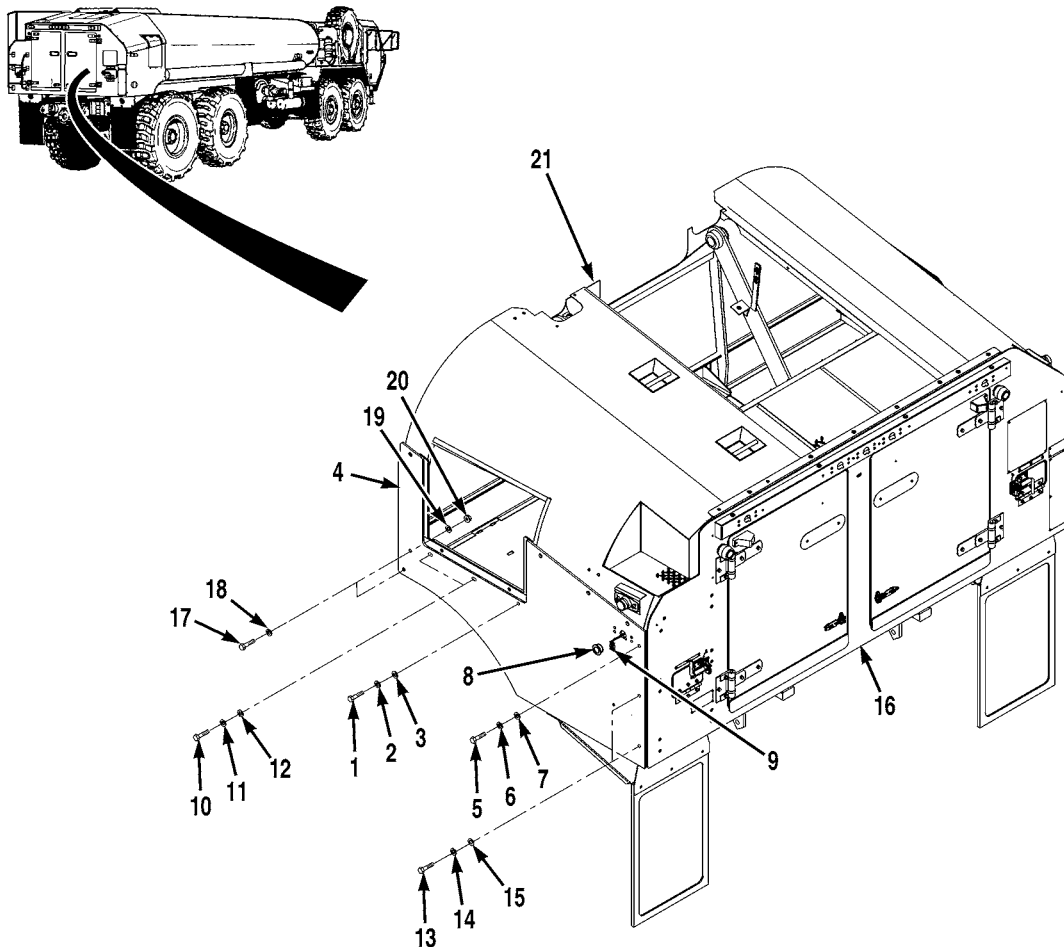
Batteries disconnected (TM 9-2320-279-20)

Left upper side panel assembly removed (for left  
lower side panel assembly) (WP 0018)

Right upper side panel assembly removed (for  
right lower side panel assembly) (WP 0019)

Reflector and side marker light removed  
(WP 0028)

## REMOVAL

**NOTE**

Both left lower side panel assembly and right lower side panel assembly are removed the same way. Left lower side panel assembly is shown.

1. Remove screw (1), lockwasher (2), and washer (3) from lower side panel assembly (4). Discard lockwasher.
2. Remove screw (5), lockwasher (6), and washer (7) from lower side panel assembly (4). Discard lockwasher.
3. Remove tanker light grommet (8) from lower side panel assembly (4) and wiring harness (9).
4. Remove two screws (10), lockwashers (11), and washers (12) from lower side panel assembly (4). Discard lockwashers.
5. Remove two screws (13), lockwashers (14), and washers (15) from rear panel assembly (16) and lower side panel assembly (4). Discard lockwashers.



---

**REMOVAL - CONTINUED**

6. Remove two screws (17), lockwashers (18), washers (19), and locknuts (20) from lower side panel assembly (4) and front panel assembly (21). Discard lockwashers and locknuts.
7. Route wire harness (9) through hole near upper rear corner of lower side panel assembly (4).

**WARNING**

Use extreme caution when handling heavy parts. Provide adequate support and use assistance during procedure. Ensure that any lifting device used is in suitable load capacity. Keep clear of heavy parts supported only by lifting device. Failure to follow this warning may cause injury or death to personnel.

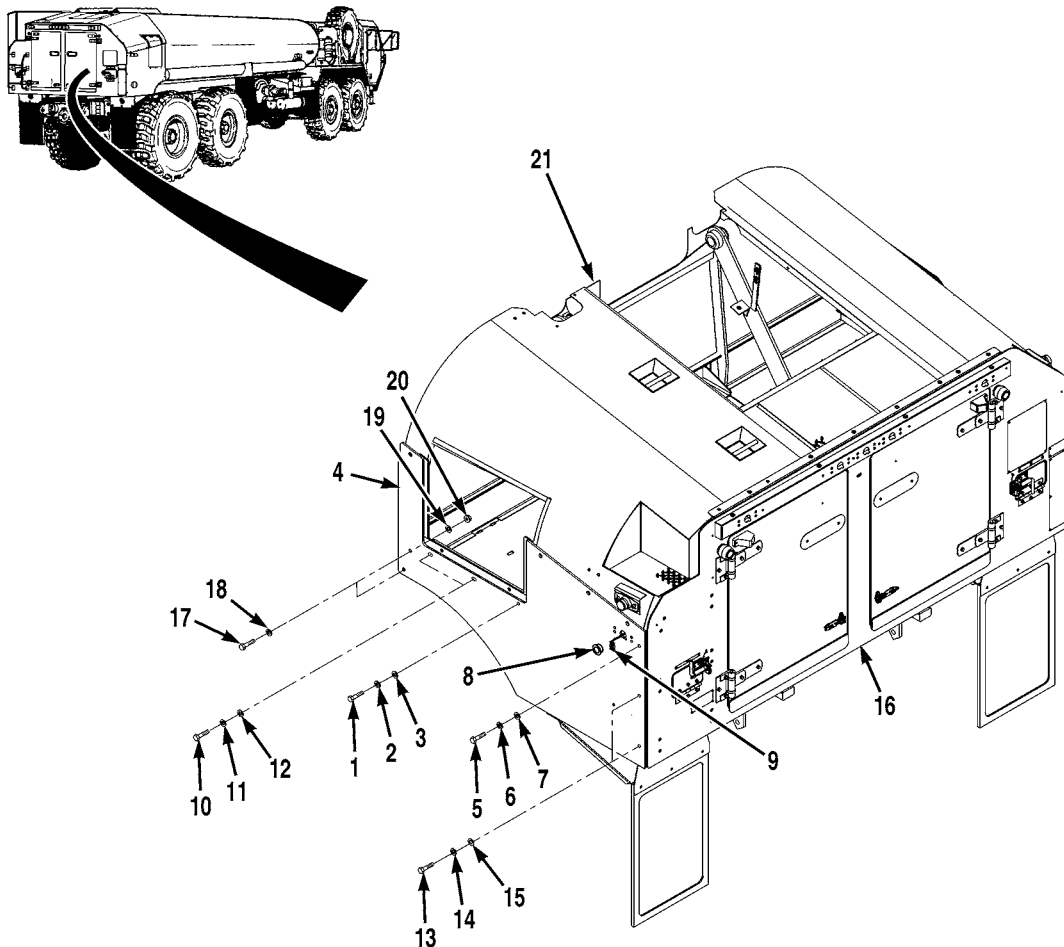
**NOTE**

Lower side panel assembly weighs 105 lbs (48 kg).

8. Attach sling and lifting device to lower side panel assembly (4).
9. Using lifting device, remove lower side panel assembly (4) from rear panel assembly (16).

**END OF TASK**

## INSTALLATION

**WARNING**

Use extreme caution when handling heavy parts. Provide adequate support and use assistance during procedure. Ensure that any lifting device used is in suitable load capacity. Keep clear of heavy parts supported only by lifting device. Failure to follow this warning may cause injury or death to personnel.

**NOTE**

- Both left lower side panel assembly and right lower side panel assembly are installed the same way. Left lower side panel assembly is shown.
  - Lower side panel assembly weighs 105 lbs (48 kg).
1. Attach sling and lifting device to lower side panel assembly (4).
  2. Use lifting device to position lower side panel assembly (4) on rear panel assembly (16).
  3. Route wire harness (9) through hole near upper rear corner of lower side panel assembly (4).

---

**INSTALLATION - CONTINUED**

4. Install lower side panel assembly (4) to front panel assembly (21) with two locknuts (20), washers (19), lockwashers (18), and screws (17). Do not tighten locknuts at this time.
5. Install lower panel assembly (4) on rear panel assembly (16) with two washers (15), lockwashers (14), and screws (13). Do not tighten screws at this time.
6. Install two washers (12), lockwashers (11), and screws (10) on lower panel assembly (4). Do not tighten screws at this time.
7. Route wiring harness through tanker light grommet (8) and install tanker light grommet in lower side panel assembly (4).
8. Install washer (7), lockwasher (6), and screw (5) in lower side panel assembly (4). Do not tighten screws at this time.
9. Install washer (3), lockwasher (2), and screw (1) in lower side panel assembly (4). Do not tighten screws at this time.
10. Tighten locknuts (20) to 60 lb-ft. (81 N•m).
11. Tighten screw (1) and two screws (10) to 37 lb-ft. (50 N•m).
12. Tighten screw (5) and two screws (13) to 60 lb-ft. (81 N•m).

**END OF TASK****FOLLOW-ON MAINTENANCE**

1. Install reflector and side marker light (WP 0028).
2. Install right upper side panel assembly (for right lower side panel assembly) (WP 0020).
3. Install left upper side panel assembly (for left lower side panel assembly) (WP 0019).
4. Connect batteries (TM 9-2320-279-20).
5. Remove wheel chocks (TM 9-2320-279-10).

**END OF TASK****END OF WORK PACKAGE**



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**FIELD LEVEL MAINTENANCE****LEFT UPPER SIDE PANEL ASSEMBLY REPAIR**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanic's: Automotive  
(WP 0034, Item 3)

Sling (WP 0034, Item 1)

Wrench, Torque (0-75 lb-ft. [0-102 N•m])  
(WP 0034, Item 2)

Lifting Device, Minimum Capacity 200 lb (91 kg)

**Materials/Parts**

Lockwashers (10) (WP 0036, Item 11)

**Personnel Required**

MOS 63S Heavy-wheel vehicle mechanic (2)

**References**

None

**Equipment Condition**

Vehicle parked on level ground or wheels  
chocked (TM 9-2320-279-10)

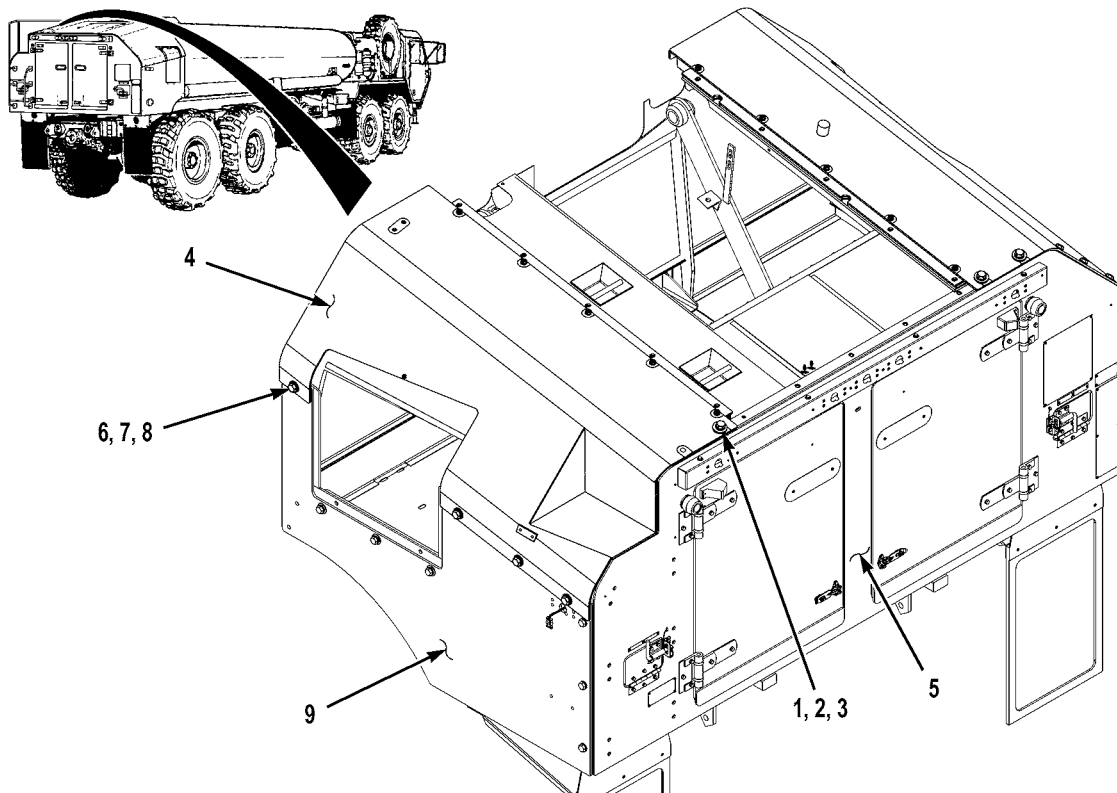
Engine off (TM 9-2320-279-10)

Batteries disconnected (TM 9-2320-279-20)

Top panel assembly removed (WP 0025)

Ladder and rail assembly removed (WP 0027)

Side access panel removed (WP 0020)

**REMOVAL****WARNING**

Use extreme caution when handling heavy parts. Provide adequate support and use assistance during procedure. Ensure that any lifting device used is in good condition and of suitable load capacity. Keep clear of heavy parts supported only by lifting device. Failure to follow this warning may cause injury or death to personnel.

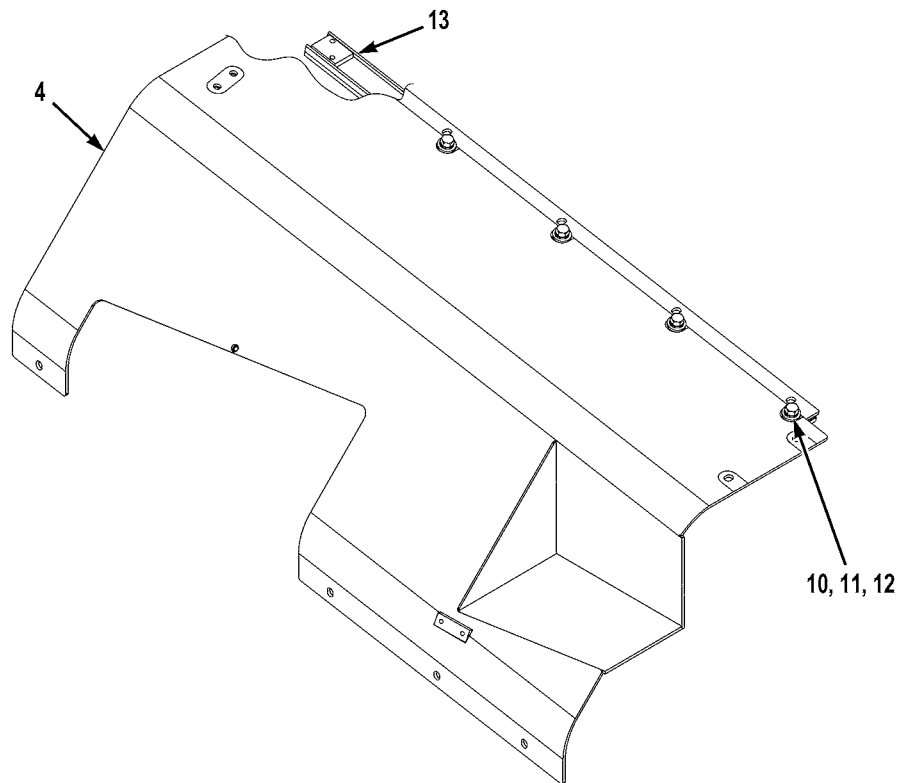
1. Remove screw (1), lockwasher (2), and washer (3) from left upper side panel assembly (4) and rear panel assembly (5). Discard lockwasher.
2. Remove four screws (6), lockwashers (7), washers (8) from left upper side panel assembly (4) and left lower side panel assembly (9). Discard lockwashers.

**NOTE**

Left upper side panel assembly weighs 165 lbs (75 kg).

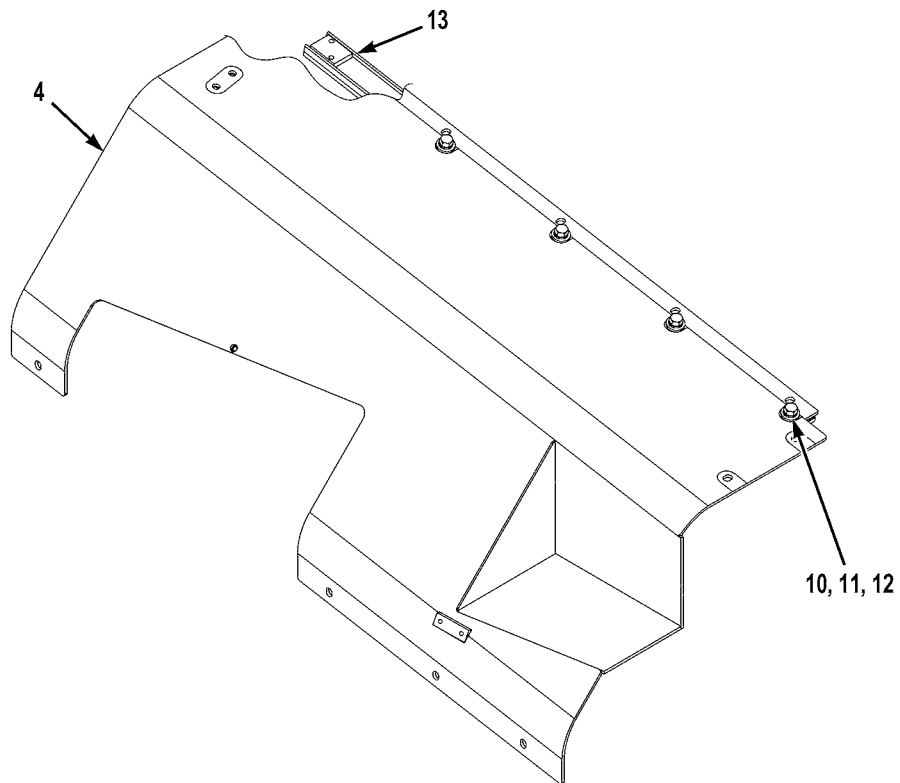
3. Attach sling and lifting device to left upper side panel assembly (4).
4. Using lifting device, remove left upper side panel assembly (4) from rear panel assembly (5) and left lower side panel assembly (9).

**END OF TASK**

**DISASSEMBLY**

1. Remove five screws (10), lockwashers (11), washers (12), and one tapping channel assembly (13) from left upper side panel assembly (4). Discard lockwashers.

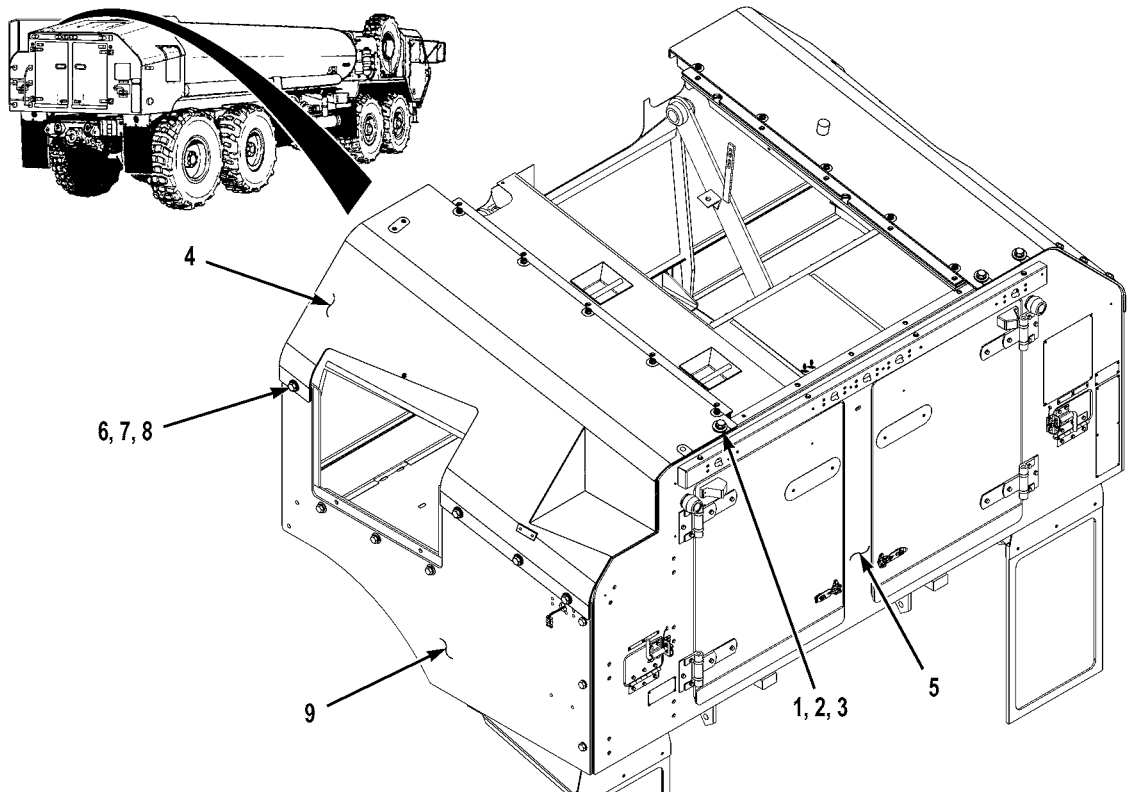
**END OF TASK**

**ASSEMBLY**

1. Install tapping channel assembly (13) on left upper side panel assembly (4) with five washers (12), lockwashers (11), and screws (10).
2. Tighten screws (10) to 60 lb-ft. (81 N•m).

**END OF TASK**



**INSTALLATION****WARNING**

Use extreme caution when handling heavy parts. Provide adequate support and use assistance during procedure. Ensure that any lifting device used is in good condition and of suitable load capacity. Keep clear of heavy parts supported only by lifting device. Failure to follow this warning may cause injury or death to personnel.

**NOTE**

Left upper side panel assembly weighs 165 lbs (75 kg).

1. Attach sling and lifting device to left upper side panel assembly (4).
2. Using lifting device, position left upper side panel assembly (4) on left lower side panel assembly (9) and rear panel assembly (5).
3. Install left upper side panel assembly (4) to left lower side panel assembly (9) with four washers (8), lockwashers (7) and screws (6). Do not tighten screws at this time.
4. Install washer (3), lockwasher (2), and screw (1) to left upper side panel assembly (4) and rear panel assembly (5). Do not tighten screws at this time.
5. Tighten screw (1) to 60 lb-ft. (81 N•m).
6. Tighten four screws (6) to 60 lb-ft. (81 N•m).

**END OF TASK**

**FOLLOW-ON MAINTENANCE**

1. Install side access panel (WP 0020).
2. Install ladder and rail assembly (WP 0027).
3. Install top panel assembly (WP 0025).
4. Connect batteries (TM 9-2320-279-20).
5. Remove wheel chocks (TM 9-2320-279-10).

**END OF TASK**

**END OF WORK PACKAGE**

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**FIELD LEVEL MAINTENANCE****RIGHT UPPER SIDE PANEL ASSEMBLY REPAIR**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanic's: Automotive  
(WP 0034, Item 3)

Sling (WP 0034, Item 1)

Wrench, Torque (0-75 lb-ft. [0-102 N•m])  
(WP 0034, Item 2)

Lifting Device, Minimum Capacity 200 lb (91 kg)

**Materials/Parts**

Lockwashers (14) (WP 0036, Item 11)

**Personnel Required**

MOS 63B Heavy-wheel vehicle mechanic (2)

**References**

None

**Equipment Condition**

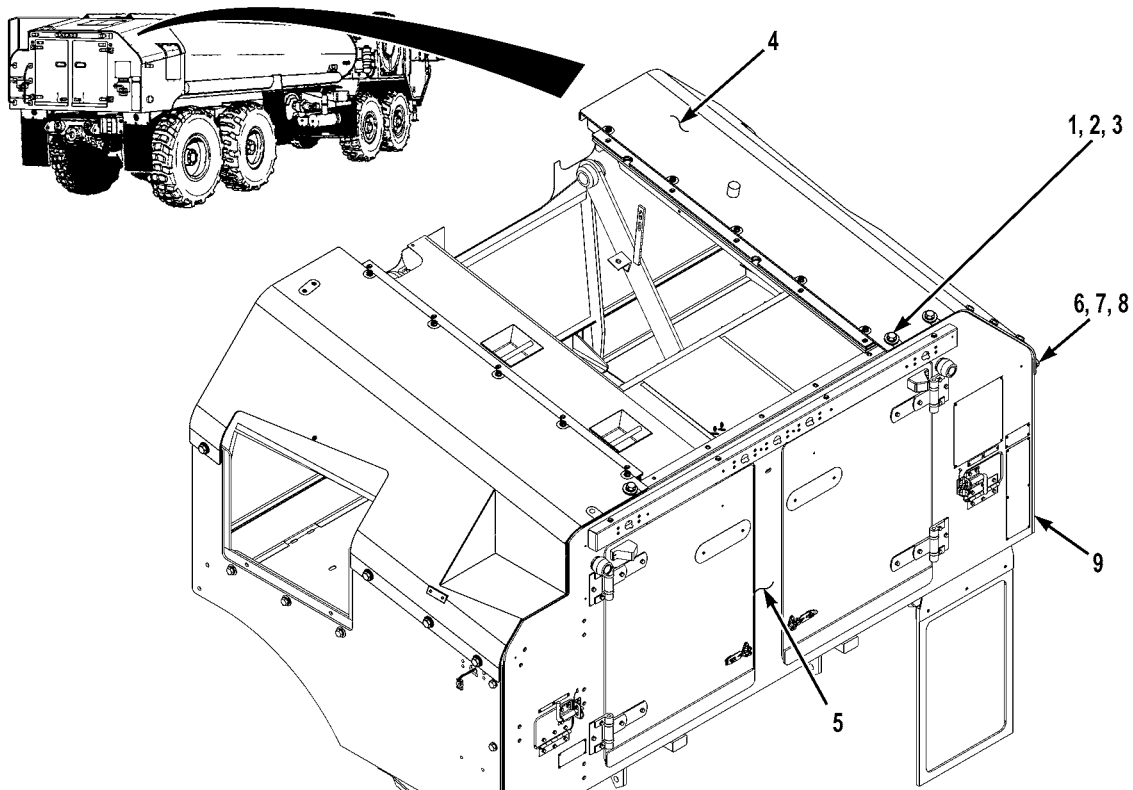
Vehicle parked on level ground or  
chock wheels (TM 9-2320-279-10)

Engine off (TM 9-2320-279-10)

Batteries disconnected (TM 9-2320-279-20)

Top panel assembly removed (WP 0025)

Side access panel removed (WP 0020)

**REMOVAL****WARNING**

Use extreme caution when handling heavy parts. Provide adequate support and use assistance during procedure. Ensure that any lifting device used is in good condition and of suitable load capacity. Keep clear of heavy parts supported only by lifting device. Failure to follow this warning may cause injury or death to personnel.

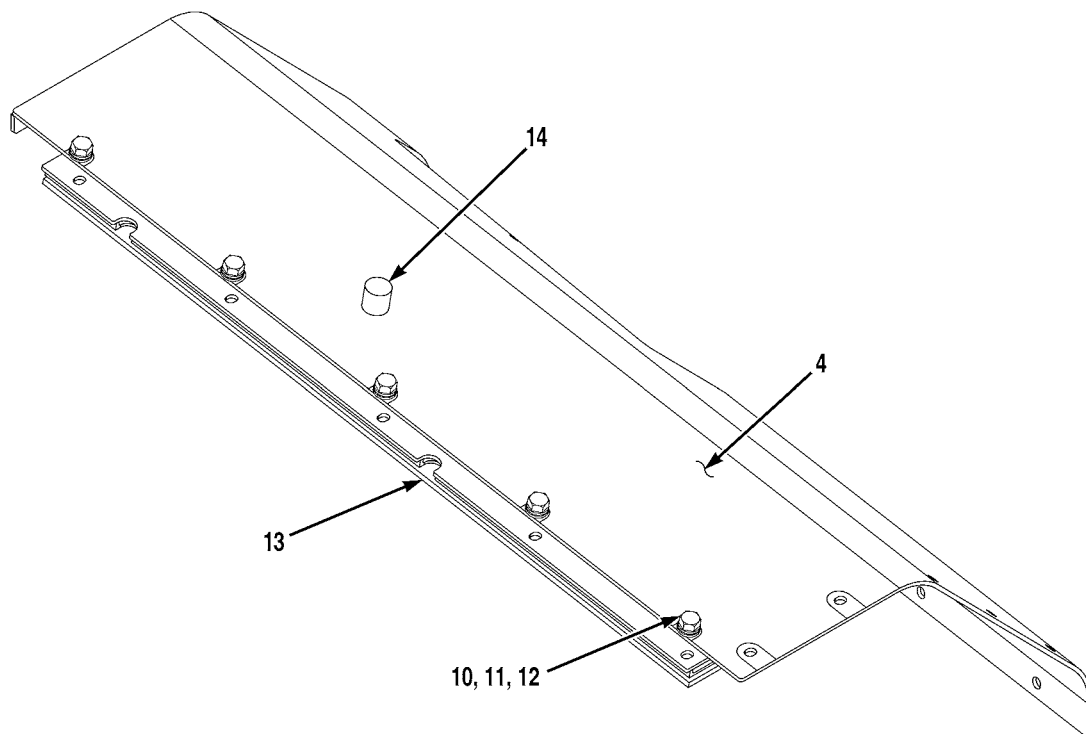
1. Remove five screws (1), lockwashers (2), and washers (3) from right upper side panel assembly (4) and rear panel assembly (5). Discard lockwashers.
2. Remove four screws (6), lockwashers (7), and washers (8) from right upper side panel assembly (4) and right lower side panel assembly (9). Discard lockwashers.

**NOTE**

Right upper side panel assembly weighs 170 lbs (77 kg).

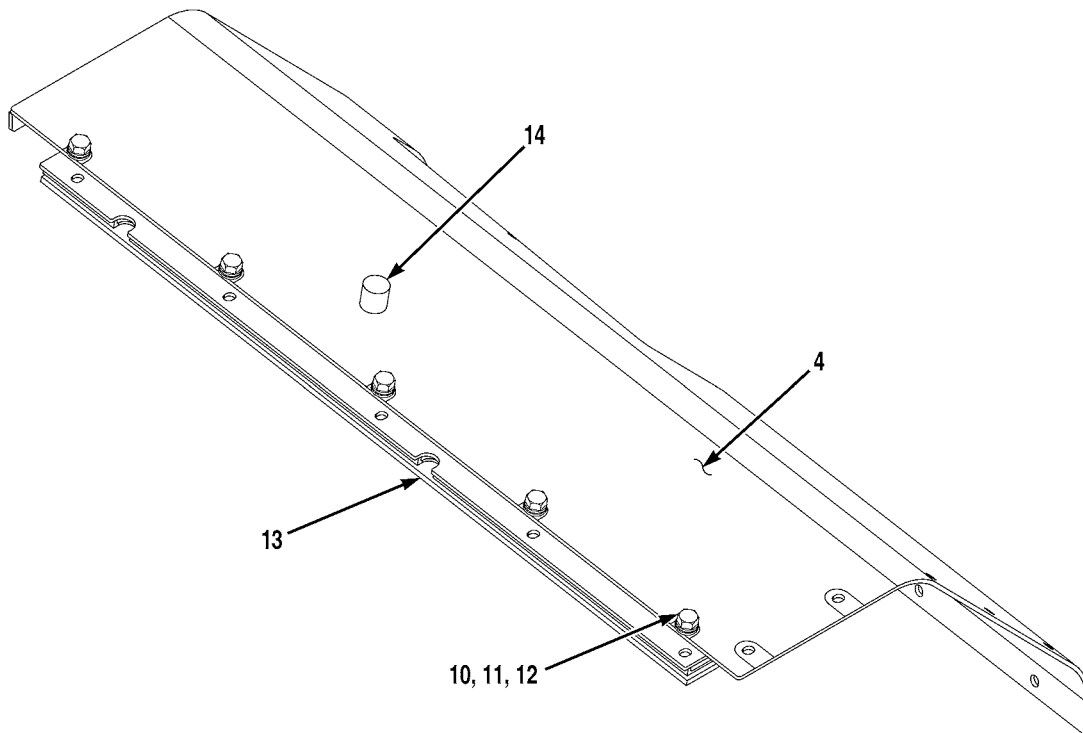
3. Attach sling and lifting device to right upper side panel assembly (4).
4. Using lifting device remove right upper side panel assembly (4) from rear panel assembly (5) and right lower side panel assembly (9).

**END OF TASK**

**DISASSEMBLY**

1. Remove five screws (10), lockwashers (11), washers (12), and one tapping channel assembly (13) from right upper side panel assembly (4). Discard lockwashers.
2. Remove round bumper (14) from right upper side panel assembly (4).

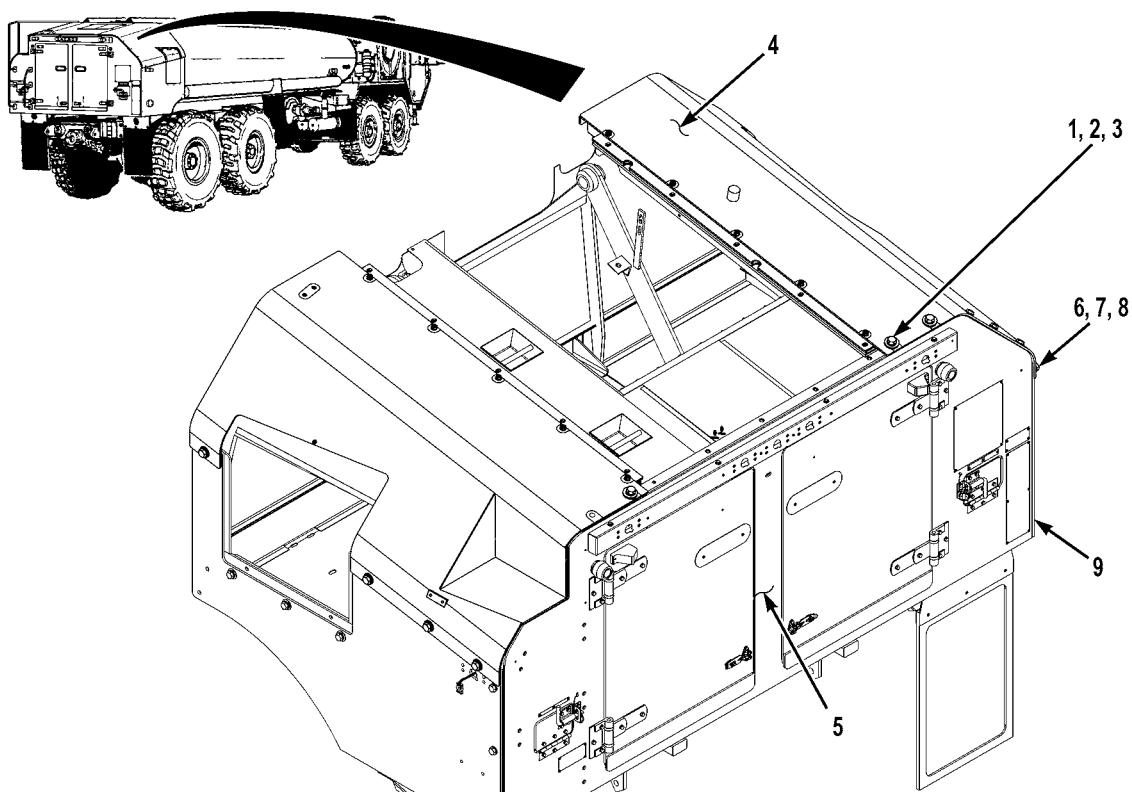
**END OF TASK**

**ASSEMBLY**

1. Install round bumper (14) to right upper side panel assembly (4).
2. Install tapping channel assembly (13) on right upper side panel assembly (4) with five washers (12), lockwashers (11), and screws (10).
3. Tighten screws (10) to 60 lb-ft. (81 N•m).

**END OF TASK**

## INSTALLATION



### **WARNING**

Use extreme caution when handling heavy parts. Provide adequate support and use assistance during procedure. Ensure that any lifting device used is in good condition and of suitable load capacity. Keep clear of heavy parts supported only by lifting device. Failure to follow this warning may cause injury or death to personnel.

### **NOTE**

Right upper side panel assembly weighs 170 lbs (77 kg).

1. Attach sling and lifting device to right upper side panel assembly (4).
2. Using lifting device, position right upper side panel assembly (4) on right lower side panel assembly (9) and rear panel assembly (5).
3. Install right upper side panel assembly (4) to right lower side panel assembly (9) with four washers (8), lockwashers (7), and screws (6). Do not tighten screws at this time.
4. Install five washers (3), lockwashers (2), and screws (1) to right upper side panel assembly (4) and rear panel assembly (5). Do not tighten screws at this time.
5. Tighten four screws (6) to 60 lb-ft. (81 N•m)
6. Tighten five screws (1) to 60 lb-ft. (81 N•m).

**END OF TASK**

**FOLLOW-ON MAINTENANCE**

1. Install side access panel (WP 0020).
2. Install top panel assembly (WP 0025).
3. Connect batteries (TM 9-2320-279-20).
4. Remove wheel chocks (TM 9-2320-279-10).

**END OF TASK**

**END OF WORK PACKAGE**



**FIELD LEVEL MAINTENANCE**  
**SIDE ACCESS PANEL ASSEMBLY REPAIR**

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanic's: Automotive  
(WP 0034, Item 3)

Wrench, Torque (0-75 lb-ft. [0-102 N•m])  
(WP 0034, Item 2)

**Materials/Parts**

Lockwashers (3) (WP 0036, Item 10)

Lockwashers (4) (WP 0036, Item 9)

**Personnel Required**

MOS 63B Heavy-wheel vehicle mechanic (2)

**References**

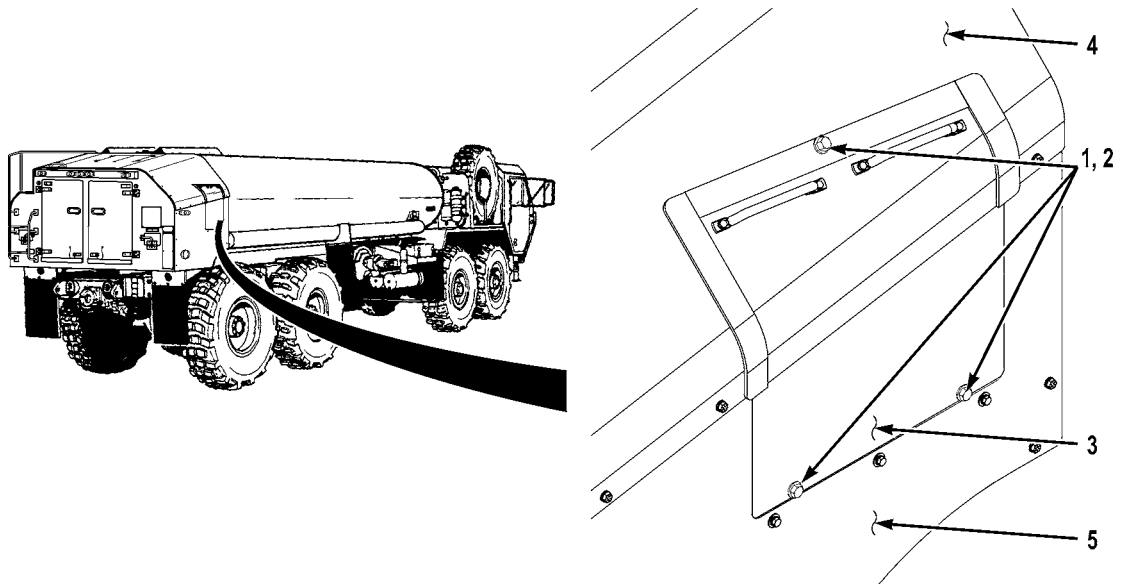
None

**Equipment Condition**

Vehicle parked on level ground or wheels  
chocked (TM 9-2320-279-10)

Engine off (TM 9-2303-279-10)

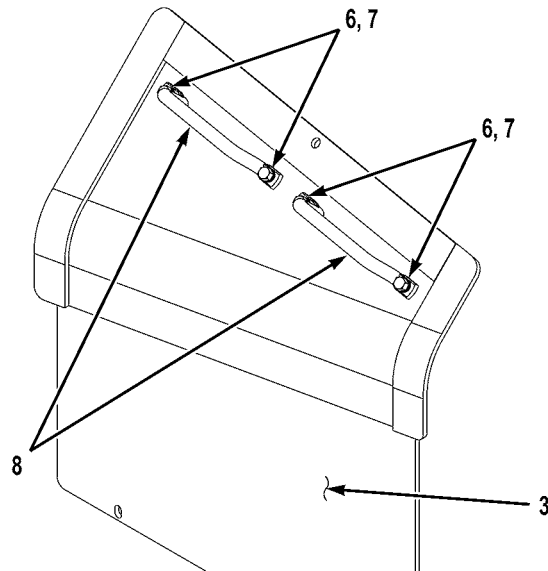
Batteries disconnected (TM 9-2320-279-20)

**REMOVAL****NOTE**

Both right side access door assembly and left side access door assembly are removed the same way. Right side access door assembly shown.

1. With the aid of an assistant, remove three screws (1), lockwashers (2), and one side access panel assembly (3) from side upper panel assembly (4) and side lower panel assembly (5). Discard lockwashers.

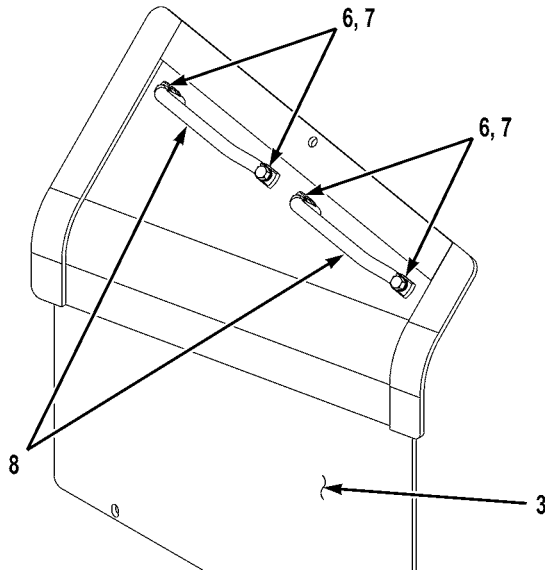
**END OF TASK**

**DISASSEMBLY****NOTE**

Both right side access door assembly and left side access door assembly are disassembled the same way. Right side access door shown.

1. Remove four screws (6), lockwashers (7), and two grab/pull handles (8) from side access panel assembly (3). Discard lockwashers.

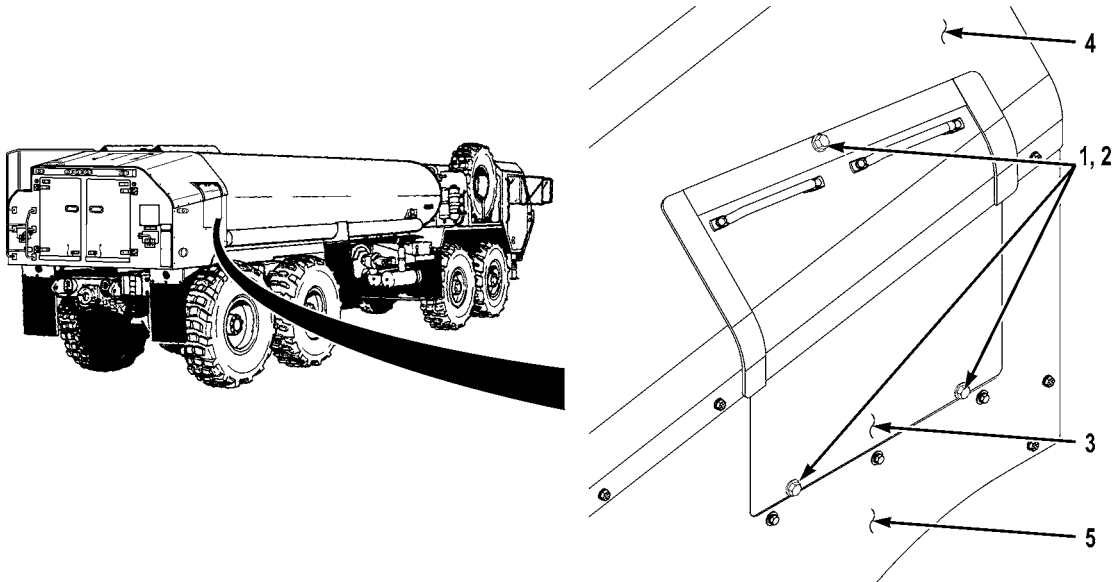
**END OF TASK**

**ASSEMBLY****NOTE**

Both right side access door and left side access door assembly are assembled the same way. Right side access door shown.

1. Install two grab/pull handles (8) to side access panel assembly (3) with four lockwashers (7) and screws (6).

**END OF TASK**

**INSTALLATION****NOTE**

Both right side access door assembly and left side access door assembly are installed the same way. Right side access door assembly shown.

1. With the aid of an assistant, install side access panel assembly (3) on side upper panel assembly (4) and side lower panel assembly (5) with three lockwashers (2) and screws (1).
2. Tighten three screws (1) to 37 lb-ft. (50 N•m).

**END OF TASK****FOLLOW-ON MAINTENANCE**

1. Connect batteries (TM 9-2320-279-20).
2. Remove wheel chocks (TM 9-2320-279-10).

**END OF TASK****END OF WORK PACKAGE**

---

**FIELD LEVEL MAINTENANCE**  
**FRONT PANEL ASSEMBLY REPLACEMENT**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanic's: Automotive  
(WP 0034, Item 3)

Sling (WP 0034, Item 1)

Wrench, Torque (0-75 lb-ft. [0-102 N•m])  
(WP 0034, Item 2)

Lifting Device, Minimum Capacity 200 lb (91 kg)

**Materials/Parts**

Lockwashers (8) (WP 0036, Item 11)

Locknuts (8) (WP 0036, Item 9)

**Personnel Required**

MOS 63B Heavy-wheel vehicle mechanic (2)

**References**

None

**Equipment Condition**

Vehicle parked on level ground or wheels  
chocked (TM 9-2320-279-10)

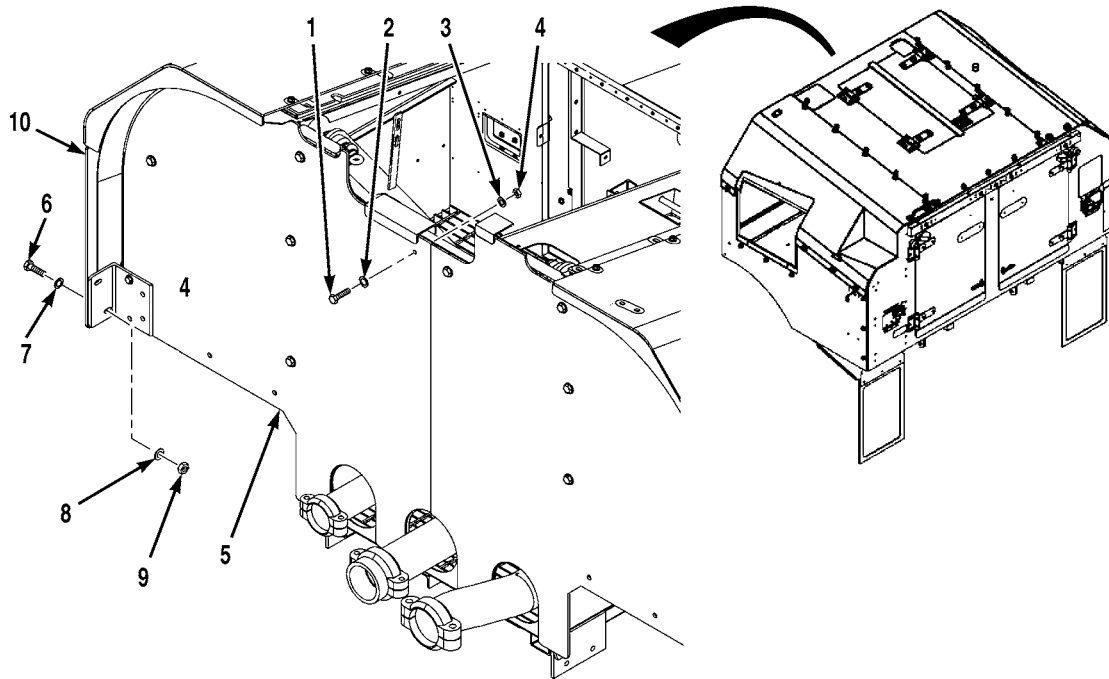
Engine off (TM 9-2320-279-10)

Batteries disconnected (TM 9-2320-279-20)

Top panel assembly removed (WP 0025)

2500 gallon tank removed (TM 9-2320-279-34)

Wheel well assemblies removed (WP 0026)

**REMOVAL****NOTE**

Both right front panel assembly and left front panel assembly are removed the same way. Right front panel assembly shown.

1. Remove six screws (1), lockwashers (2), washers (3), and locknuts (4) from front panel assembly (5). Discard lockwashers and locknuts.
2. Remove two screws (6), lockwashers (7), washers (8), and locknuts (9) from front panel assembly (5) and lower side panel assembly (10). Discard lockwashers and locknuts.

**WARNING**

Use extreme caution when handling heavy parts. Provide adequate support and use assistance during procedure. Ensure that any lifting device used is in good condition and of suitable load capacity. Keep clear of heavy parts supported only by lifting device. Failure to follow this warning may cause injury or death to personnel.

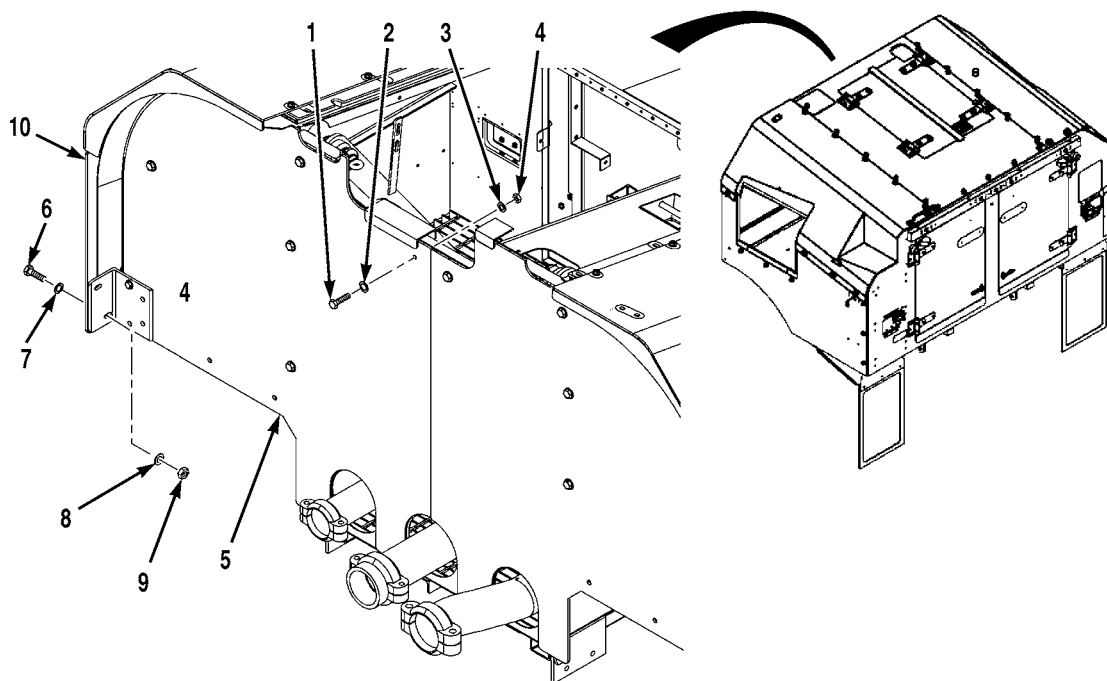
**NOTE**

Front panel assembly weighs 145 lbs (66 kg).

3. Attach sling and lifting device to front panel assembly (5).
4. Using lifting device, remove front panel assembly (5) from lower side panel assembly (10).

**END OF TASK**

## INSTALLATION



### **WARNING**

Use extreme caution when handling heavy parts. Provide adequate support and use assistance during procedure. Ensure that any lifting device used is in good condition and of suitable load capacity. Keep clear of heavy parts supported only by lifting device. Failure to follow this warning may cause injury or death to personnel.

### **NOTE**

- Both right front panel assembly and left front panel assembly are installed the same way. Right front panel assembly shown.
  - Front panel assembly weighs 145 lbs (66 kg).
5. Attach a sling and lifting device to front panel assembly (5).
  6. Using lifting device, position front panel assembly (5) on lower side panel assembly (10).
  7. Install front panel assembly (5) to lower side panel assembly (10) with two locknuts (9), washers (8), lockwashers (7) and screws (6). Do not tighten locknuts at this time.
  8. Secure front panel assembly with six locknuts (4), washers (3), lockwashers (2) and screws (1). Do not tighten locknuts at this time.
  9. Tighten six locknuts (4) to 60 lb-ft. (81 N•m).
  10. Tighten two locknuts (9) to 60 lb-ft. (81 N•m).

**END OF TASK**

**FOLLOW-ON MAINTENANCE**

1. Install wheel well assemblies (WP 0026).
2. Install 2500 gallon tank (TM 9-2320-279-34).
3. Install top panel assembly (WP 0025).
4. Connect batteries (TM 9-2320-279-20).
5. Remove wheel chocks (TM 9-2320-279-10).

**END OF TASK**

**END OF WORK PACKAGE**



## FIELD LEVEL MAINTENANCE

## ROOF DOOR LATCH ASSEMBLY REPLACEMENT

## INITIAL SETUP:

**Tools and Special Tools**

Tool Kit, General Mechanic's: Automotive  
(WP 0034, Item 3)

Wrench, Torque (0-75 lb-in. [0-8.5 N•m])  
(WP 0034, Item 2)

**Materials/Parts**

Lockwashers (4) (WP 0036, Item 7)

**Personnel Required**

MOS 63B Heavy-wheel vehicle mechanic

**References**

None

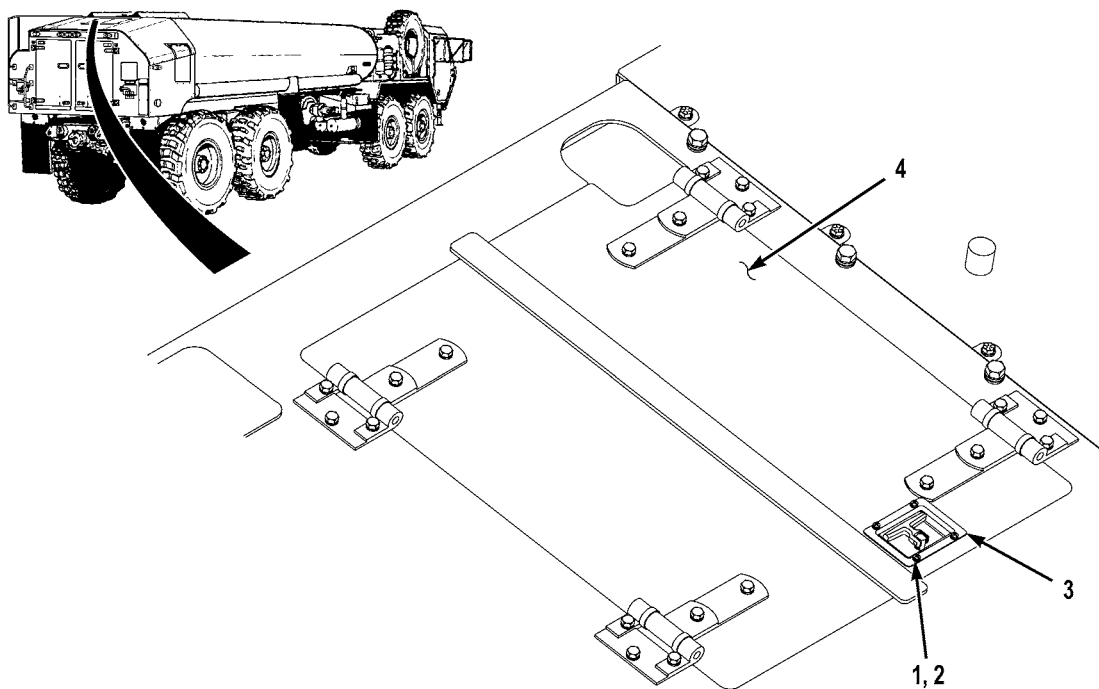
**Equipment Condition**

Vehicle parked on level ground or wheels  
chocked (TM 9-2320-279-10)

Engine off (TM 9-2320-279-10)

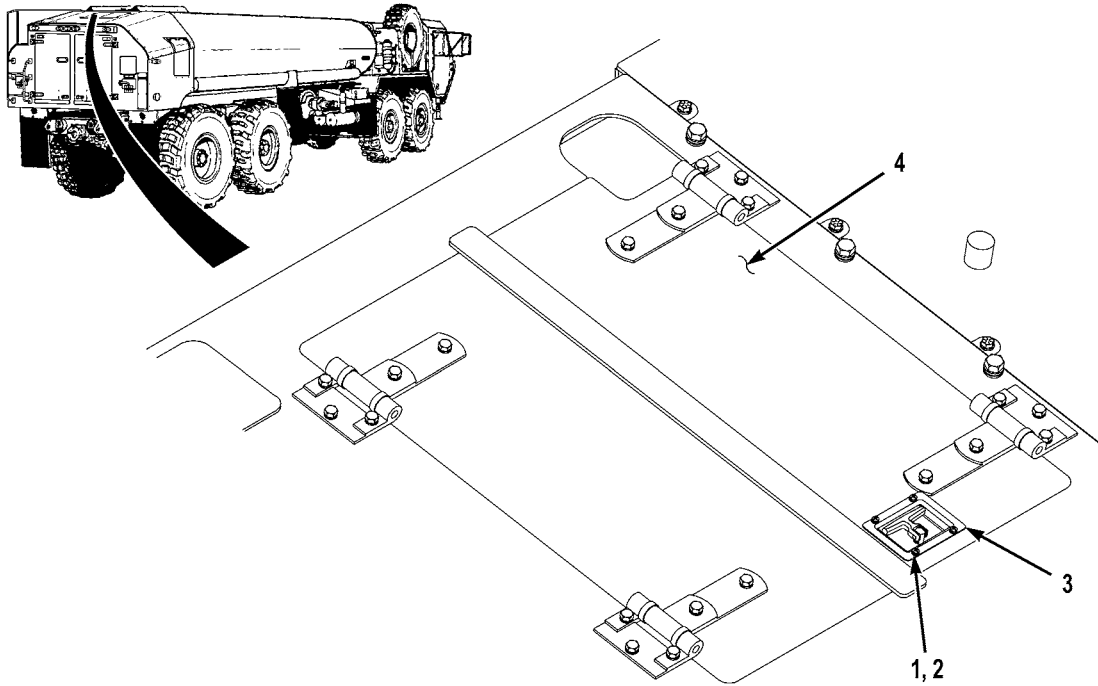
Batteries disconnected (TM 9-2320-279-20)

## REMOVAL



1. Remove four screws (1), lockwashers (2), and one roof door latch assembly (3) from right roof door assembly (4). Discard lockwashers.

## END OF TASK

**INSTALLATION**

1. Install roof door latch assembly (3), four lockwashers (2) and screws (1) on right roof door assembly (4).
2. Tighten screws (1) to 59 lb-in. (7 N•m).

**END OF TASK****FOLLOW-ON MAINTENANCE**

1. Connect batteries (TM 9-2320-279-20).
2. Remove wheel chocks (TM 9-2320-279-10).

**END OF TASK****END OF WORK PACKAGE**

---

**FIELD LEVEL MAINTENANCE**  
**ROOF DOOR HINGE REPLACEMENT**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanic's: Automotive  
(WP 0034, Item 3)

**Materials/Parts**

Lockwashers (2) (WP 0036, Item 9)

**Personnel Required**

MOS 63B Heavy-wheel vehicle mechanic

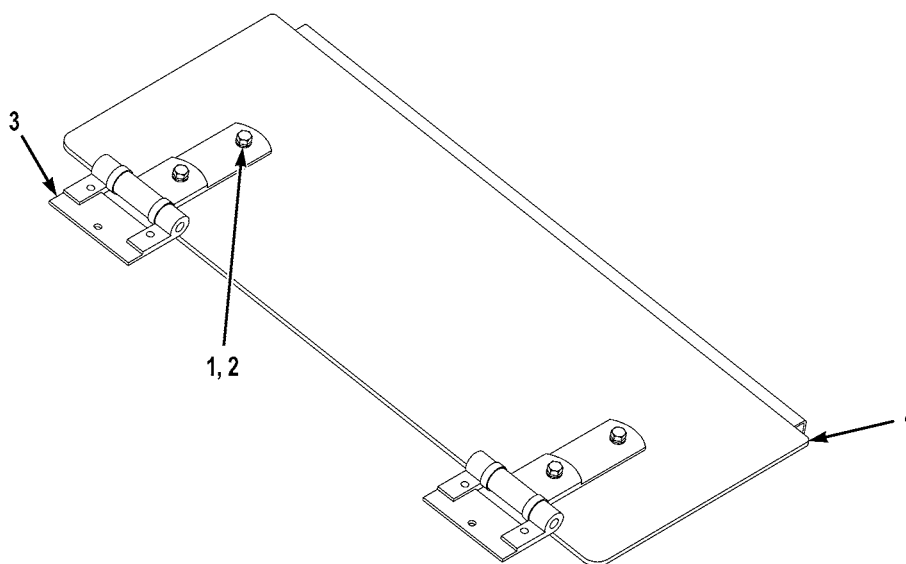
**References**

None

**Equipment Condition**

Roof door assembly removed (WP 0024)

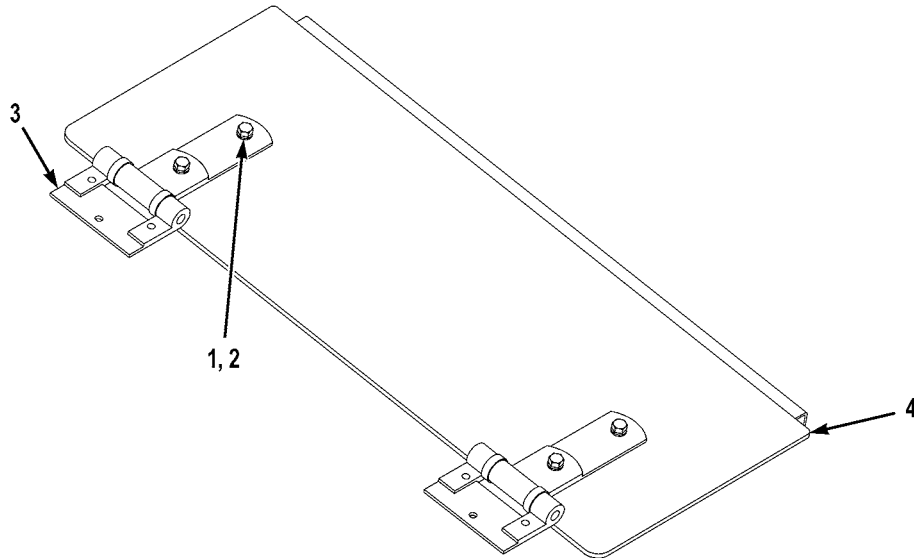
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**REMOVAL****NOTE**

All four door hinges are removed the same way. Upper left roof door hinge shown.

1. Remove two screws (1), lockwashers (2), and one door hinge (3) from roof door assembly (4). Discard lockwashers.

**END OF TASK**

**INSTALLATION****NOTE**

All four door hinges are installed the same way. Upper left roof hinge shown.

1. Install door hinge (3), two lockwashers (2), and screws (1) on roof door assembly (4).

**END OF TASK****FOLLOW-ON MAINTENANCE**

1. Install roof door assembly (WP 0024)

**END OF TASK****END OF WORK PACKAGE**

---

**FIELD LEVEL MAINTENANCE**  
**ROOF DOOR ASSEMBLY REPLACEMENT**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanic's: Automotive  
(WP 0034, Item 3)

Sling (WP 0034, Item 1)

Lifting Device, Minimum Capacity 100 lb (45 kg)

**Materials/Parts**

Lockwashers (6) (WP 0036, Item 9)

**Personnel Required**

MOS 63B Heavy-wheel vehicle mechanic (2)

**References**

None

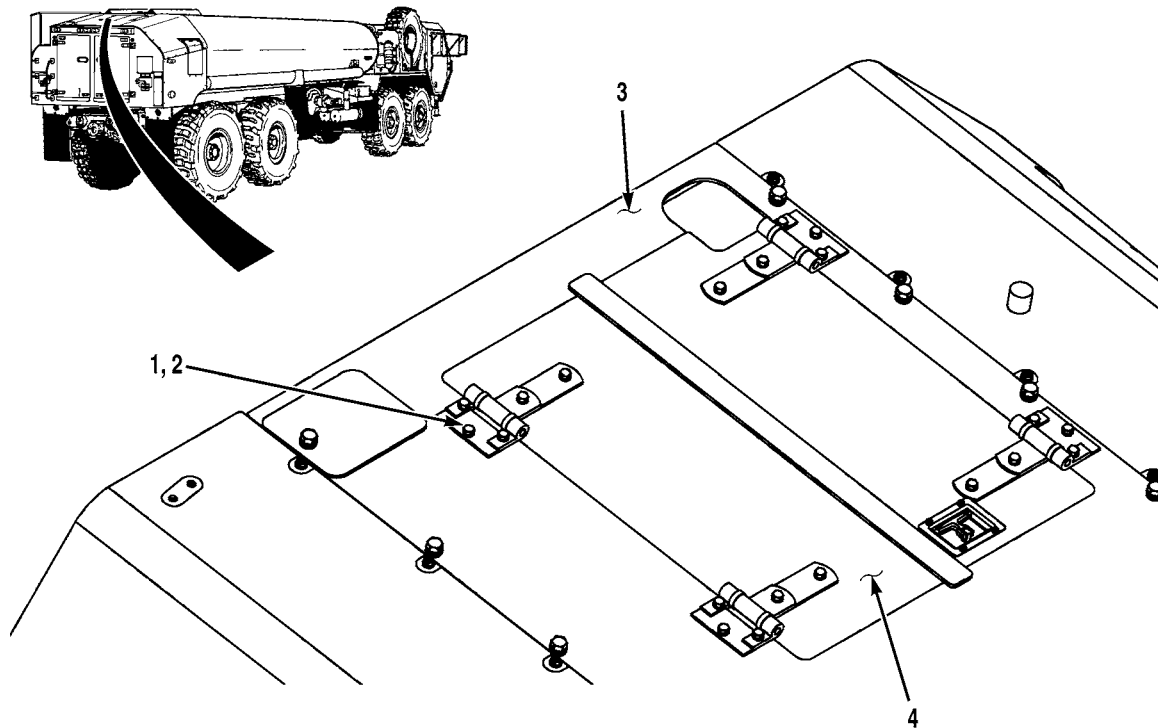
**Equipment Condition**

Vehicle parked on level ground or wheels  
chocked (TM 9-2320-279-10)

Engine off (TM 9-2320-279-10)

Batteries disconnected (TM 9-2320-279-20)

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**REMOVAL****WARNING**

Use extreme caution when handling heavy parts. Provide adequate support and use assistance during procedure. Ensure that any lifting device used is in good condition and of suitable load capacity. Keep clear of heavy parts supported only by lifting device. Failure to follow this warning may cause injury or death to personnel.

**NOTE**

Both left roof door assembly and right roof door assembly are removed the same way. Left roof door assembly is shown.

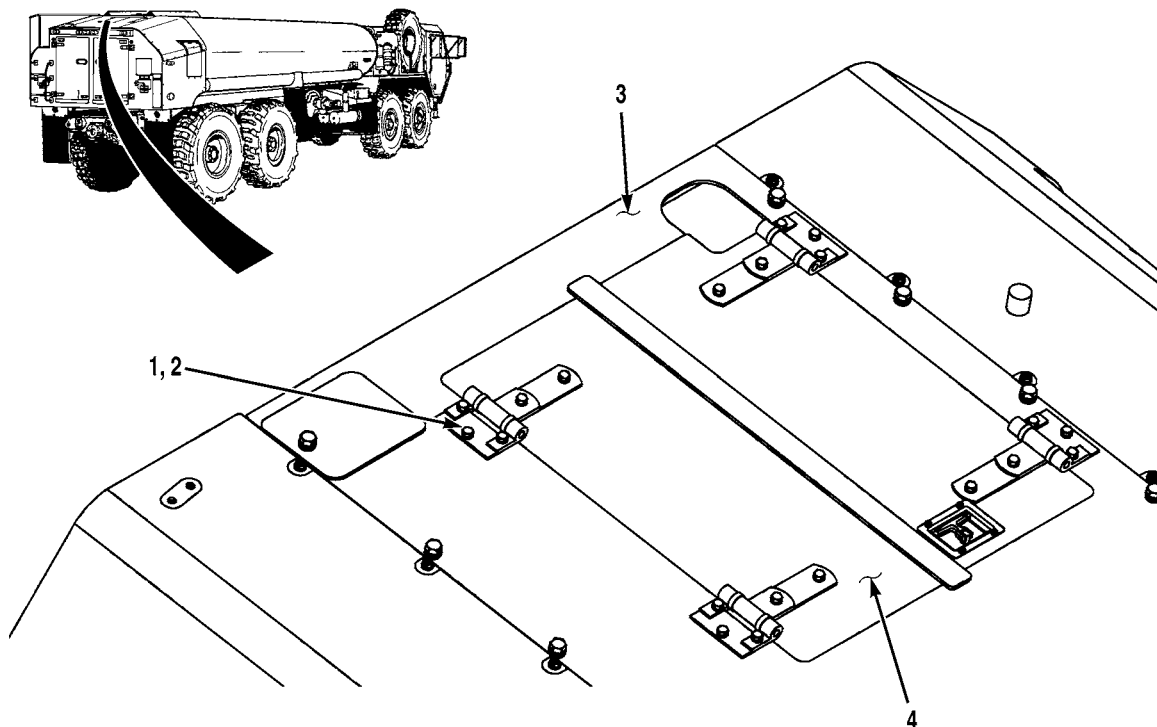
1. Remove six screws (1) and lockwashers (2) from top panel assembly (3) and roof door assembly (4). Discard lockwashers.

**NOTE**

Door assembly weighs 42 lb (19 kg).

2. Attach sling and lifting device to roof door assembly (4).
3. Using lifting device remove roof door assembly (4) from top panel assembly (3).

**END OF TASK**

**INSTALLATION****WARNING**

Use extreme caution when handling heavy parts. Provide adequate support and use assistance during procedure. Ensure that any lifting device used is in good condition and of suitable load capacity. Keep clear of heavy parts supported only by lifting device. Failure to follow this warning may cause injury or death to personnel.

**NOTE**

- Door assembly weighs 42 lb (19 kg).
  - Both left roof door assembly and right roof door assembly are installed the same way. Left roof door assembly is shown.
1. Attach sling and lifting device to roof door assembly (4).
  2. Use lifting device to position roof door assembly (4) on top panel assembly (3).
  3. Install six lockwashers (2) and screws (1) on top panel assembly (3) and roof door assembly (4).

**END OF TASK**

**FOLLOW-ON MAINTENANCE**

1. Connect batteries (TM 9-2320-279-20).
2. Remove wheel chocks (TM 9-2320-279-10).

**END OF TASK**

**END OF WORK PACKAGE**



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**FIELD LEVEL MAINTENANCE****TOP PANEL ASSEMBLY REPLACEMENT**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanic's: Automotive  
(WP 0034, Item 3)

Sling (WP 0034, Item 1)

Wrench, Torque (0-75 lb-ft. [0-102 N•m])  
(WP 0034, Item 2)

Lifting Device, Minimum Capacity 250 lb (113 kg)

**Materials/Parts**

Lockwashers (2) (WP 0036, Item 9)

Lockwashers (14) (WP 0036, Item 11)

**Personnel Required**

MOS 63B Heavy-wheel vehicle mechanic (2)

**References**

None

**Equipment Condition**

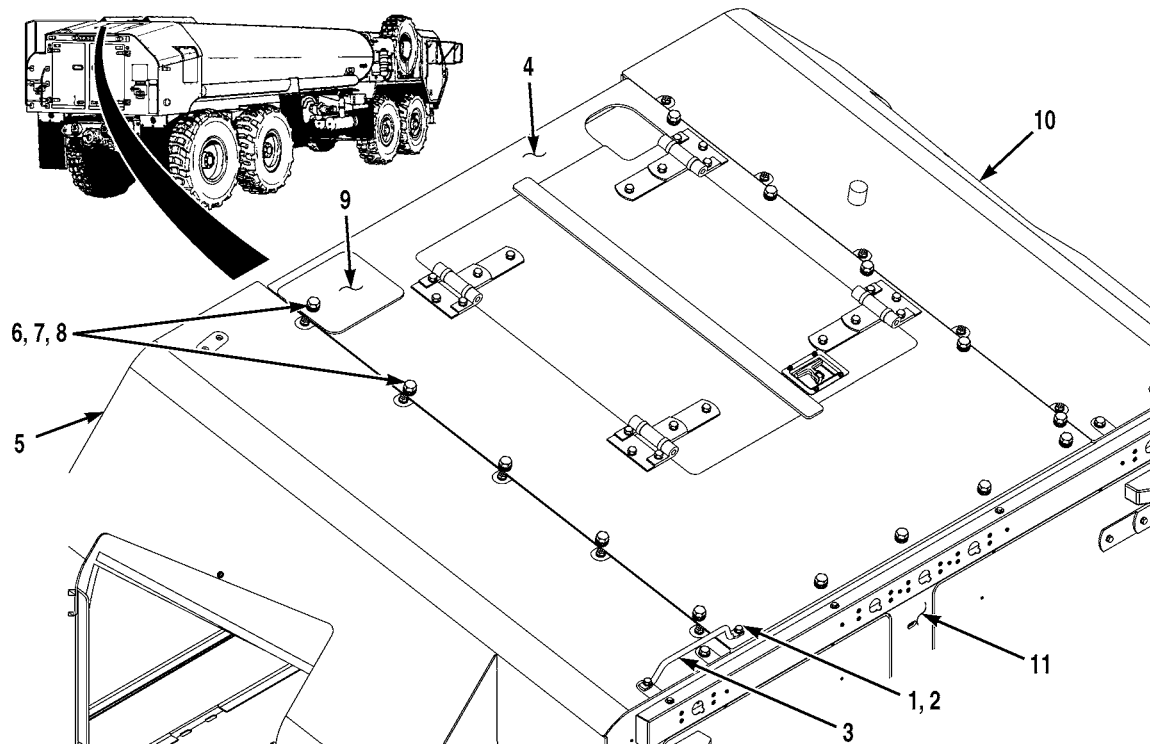
Vehicle parked on level ground or wheels  
chocked (TM 9-2320-279-10)

Engine off (TM 9-2320-279-10)

Batteries disconnected (TM 9-2320-279-20)

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## REMOVAL

**WARNING**

Use extreme caution when handling heavy parts. Provide adequate support and use assistance during procedure. Ensure that any lifting device used is in good condition and of suitable load capacity. Keep clear of heavy parts supported only by lifting device. Failure to follow this warning may cause injury or death to personnel.

1. Remove two screws (1), lockwashers (2), and one grab/pull handle (3) from top panel assembly (4) and left upper side panel assembly (5). Discard lockwashers.
2. Remove 14 screws (6), lockwashers (7), washers (8), and one shackle opening cover (9) from top panel assembly (4), left upper side panel assembly (5), right upper side panel assembly (10), and rear panel assembly (11). Discard lockwashers.

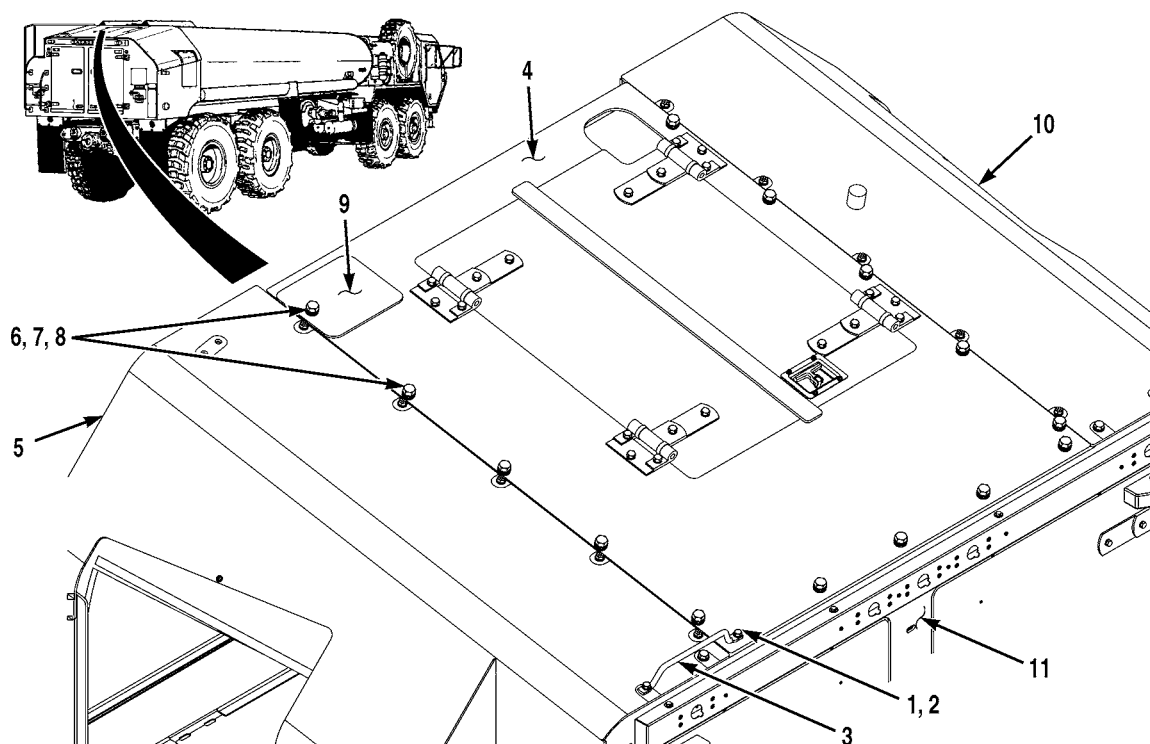
**NOTE**

Top panel assembly weighs 230 lb (104 kg).

3. Attach sling and lifting device to top panel assembly (4).
4. Using lifting device, remove top panel assembly (4) from left upper side panel assembly (5), right upper side panel assembly (10), and rear panel assembly (11).

## END OF TASK

## INSTALLATION

**WARNING**

Use extreme caution when handling heavy parts. Provide adequate support and use assistance during procedure. Ensure that any lifting device used is in good condition and of suitable load capacity. Keep clear of heavy parts supported only by lifting device. Failure to follow this warning may cause injury or death to personnel.

**NOTE**

Top panel assembly weighs 230 lb (104 kg).

1. Attach sling and lifting device to top panel assembly (4).
2. Use lifting device to position top panel assembly (4) on rear panel assembly (11), right upper side panel assembly (10), and left upper side panel assembly (5).
3. Install shackle opening cover (9), 14 washers (8), lockwashers (7), and screws (6) on top panel assembly (4). Do not tighten screws at this time.
4. Install grab/pull handle (3), two lockwashers (2), and screws (1) on top panel assembly (4), and left upper side panel assembly (5). Do not tighten screws at this time.
5. Tighten two screws (1) to 21 lb-ft. (28 N•m).
6. Tighten 14 screws (5) to 60 lb-ft. (81 N•m).

**END OF TASK**

**FOLLOW-ON MAINTENANCE**

1. Connect batteries (TM 9-2320-279-20).
2. Remove wheel chocks (TM 9-2320-279-10).

**END OF TASK**

**END OF WORK PACKAGE**

---

**FIELD MAINTENANCE****WHEEL WELL ASSEMBLY REPLACEMENT**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanic's: Automotive  
(WP 0034, Item 3)

Wrench, Torque (0-75 lb-ft. [0-102 N•m])  
(WP 0034, Item 2)

**Materials/Parts**

Lockwashers (6) (WP 0036, Item 11)  
Locknuts (3) (WP 0036, Item 4)  
Locknuts (3) (WP 0036, Item 5)

**Personnel Required**

MOS 63S Heavy-wheel vehicle mechanic (2)

**References**

None

**Equipment Condition**

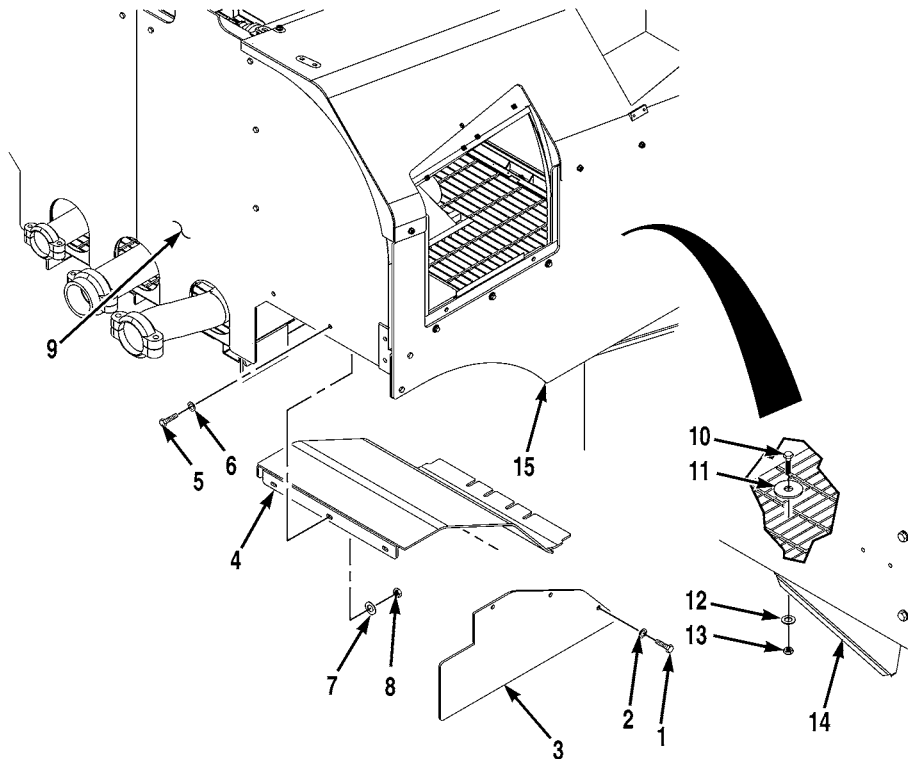
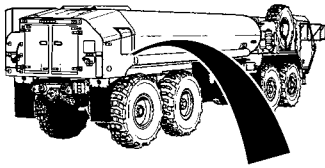
Vehicle parked on level ground or wheels  
chocked (TM 9-2320-279-10)

Engine off (TM 9-2320-279-10)

Batteries disconnected (TM 9-2320-279-20)

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## REMOVAL

**WARNING**

Use extreme caution when handling heavy parts. Provide adequate support and use assistance during procedure. Ensure that any lifting device used is in good condition and of suitable load capacity. Keep clear of heavy parts supported only by lifting device. Failure to follow this warning may cause injury or death to personnel.

**NOTE**

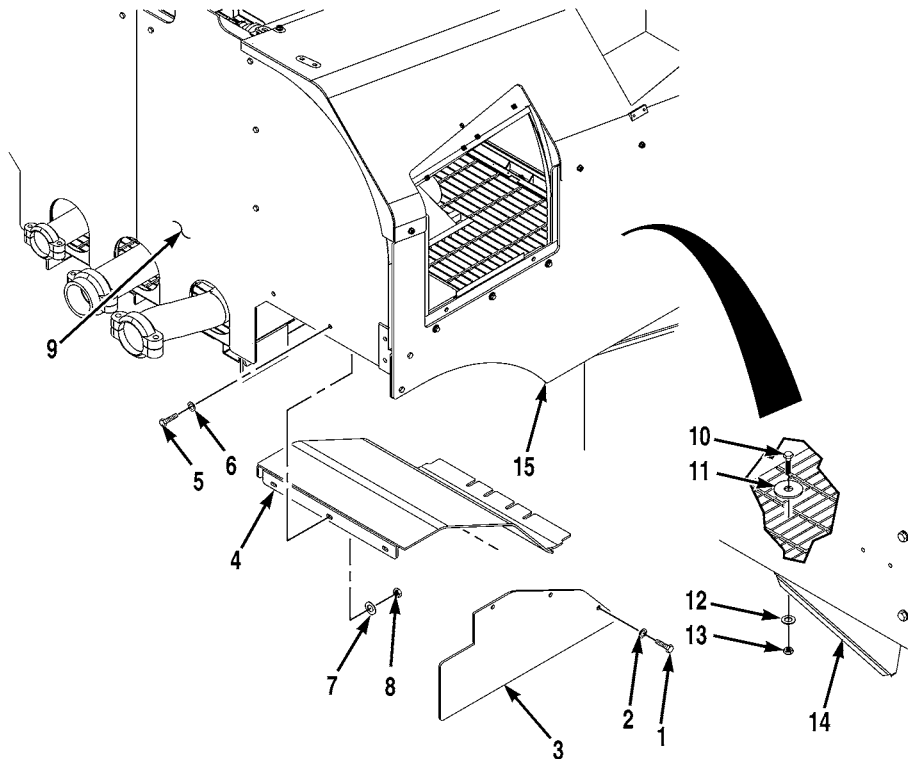
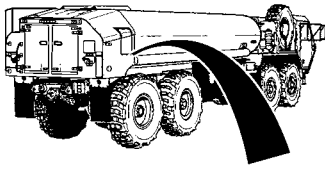
- Both left wheel well assembly and right wheel well assembly are removed the same way. Left wheel well shown.
  - Wheel well assembly weighs 80 lb (36 kg).
1. Remove three screws (1), lockwashers (2), and one inner wheel house assembly (3) from wheel well assembly (4). Discard lockwashers.
  2. Remove three screws (5), lockwashers (6), washers (7), and locknuts (8) from wheel well assembly (4) and front panel assembly (9). Discard lockwashers and locknuts.

**REMOVAL - CONTINUED**

3. Remove three screws (10), large washers (11), washers (12), and locknuts (13) from rear edge of wheel well assembly (4) and mudflap bracket (14). Discard locknuts.
4. With the aid of assistant, lower wheel well assembly (4) away from pump module (15) and mudflap bracket (14).

**END OF TASK**

## INSTALLATION

**WARNING**

Use extreme caution when handling heavy parts. Provide adequate support and use assistance during procedure. Ensure that any lifting device used is in good condition and of suitable load capacity. Keep clear of heavy parts supported only by lifting device. Failure to follow this warning may cause injury or death to personnel.

**NOTE**

- Both left wheel well assembly and right wheel well assembly are installed the same way. Left wheel well shown.
  - Wheel well assembly weighs 80 lb (36 kg).
1. With the aid of assistant, position wheel well assembly (4) between bottom of pump module (15) and mudflap bracket (14).
  2. Secure wheel well assembly (4) to mudflap bracket (14) with three locknuts (13), washers (12), large washers (11), and screws (10). Do not tighten screws at this time
  3. Position front side of wheel well assembly (4) to front panel assembly (9).



**INSTALLATION - CONTINUED**

4. Install wheel well assembly (4) to front panel assembly (9) with three locknuts (8), washers (7), lockwashers (6), and screws (5).
5. Tighten three locknuts (8) to 60 lb-ft. (81 N•m).
6. Tighten three locknuts (13) to 37 lb-ft. (50 N•m).
7. Install inner wheel housing assembly (3) and secure to wheel well assembly (4) with three lockwashers (2) and screws (1).

**END OF TASK****FOLLOW-ON MAINTENANCE**

1. Connect batteries (TM 9-2320-279-20).
2. Remove wheel chocks (TM 9-2320-279-10).

**END OF TASK****END OF WORK PACKAGE**



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**FIELD LEVEL MAINTENANCE**  
**LADDER AND RAIL ASSEMBLY REPLACEMENT**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanic's: Automotive  
(WP 0034, Item 3)

**Materials/Parts**

Lockwashers (16) (WP 0036, Item 10)  
Locknuts (2) (WP 0036, Item 1)

**Personnel Required**

MOS 63B Heavy-wheel vehicle mechanic

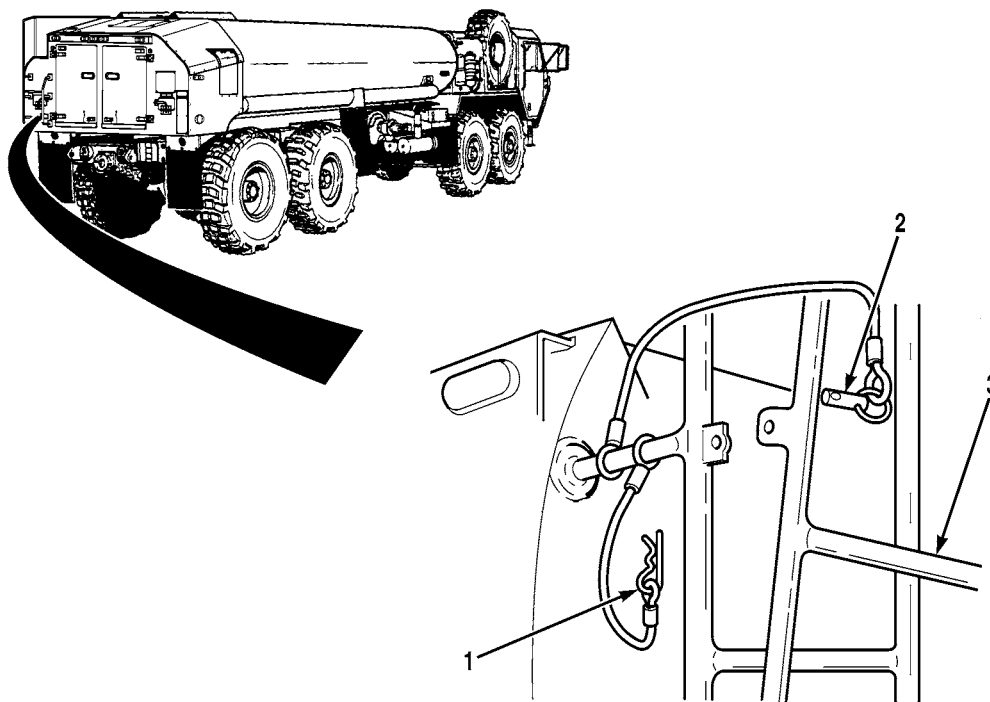
**References**

None

**Equipment Condition**

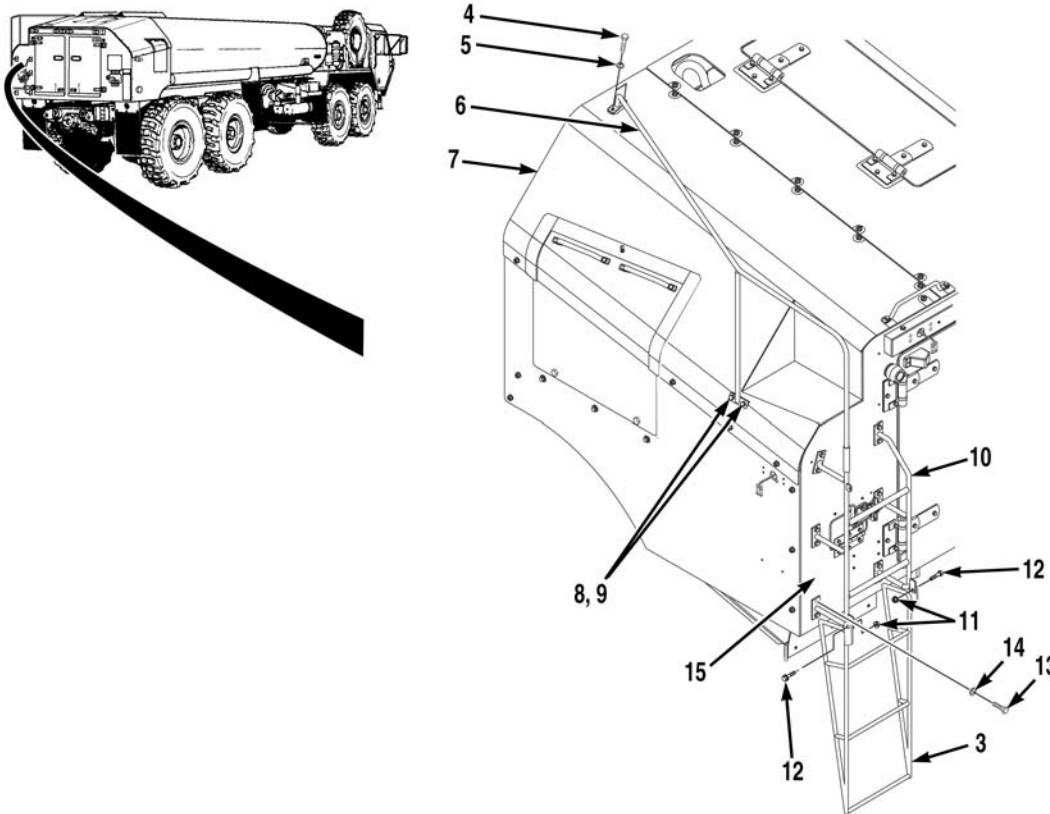
Vehicle parked on level ground or wheels  
chocked (TM 9-2320-279-10)  
Engine off (TM 9-2320-279-10)  
Batteries disconnected (TM 9-2320-279-20)

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**REMOVAL**

1. Remove safety pin (1) from pin (2).
2. Remove pin (2) and lower ladder assembly (3).

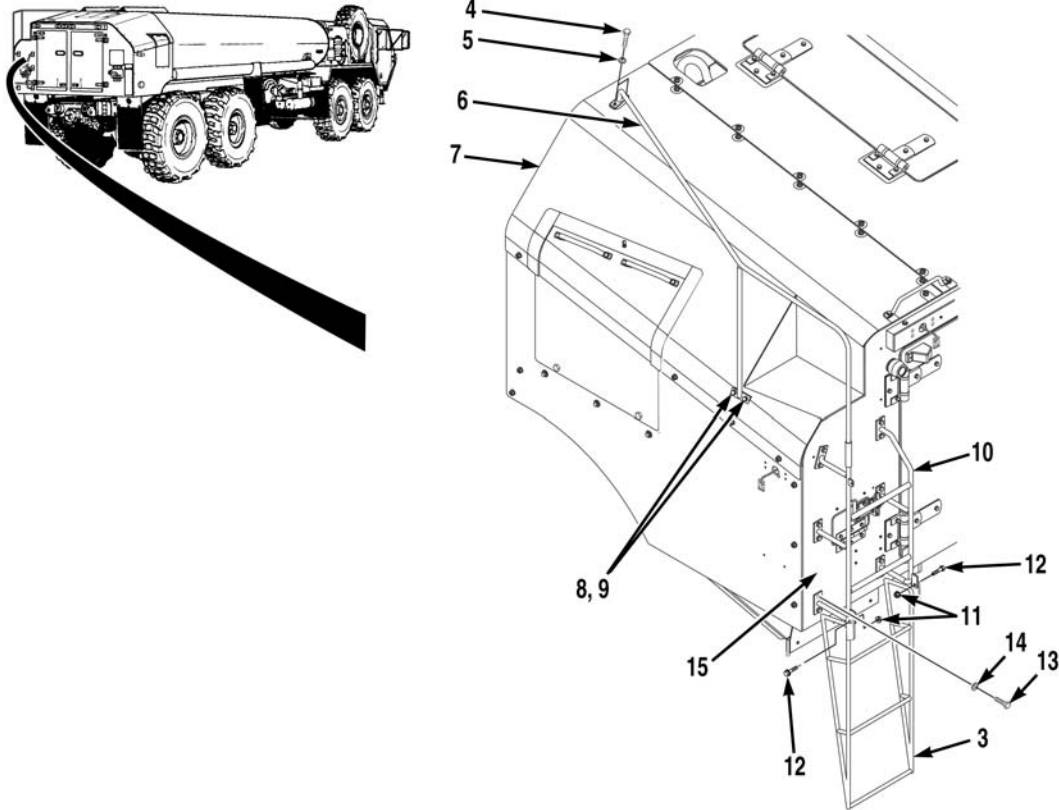
## REMOVAL - CONTINUED



3. Remove two screws (4) and lockwashers (5) from ladder rail (6) and left upper side panel assembly (7). Discard lockwashers.
4. Remove two screws (8) and lockwashers (9) from ladder rail (6) and left upper side panel assembly (7). Discard lockwashers.
5. Remove ladder rail (6) from bolt-on ladder assembly (10).
6. Remove two locknuts (11), screws (12), and one lower ladder assembly (3) from bolt-on ladder assembly (10). Discard locknuts.
7. Remove 12 screws (13), lockwashers (14), and bolt-on ladder assembly (3) from rear panel assembly (15). Discard lockwashers.

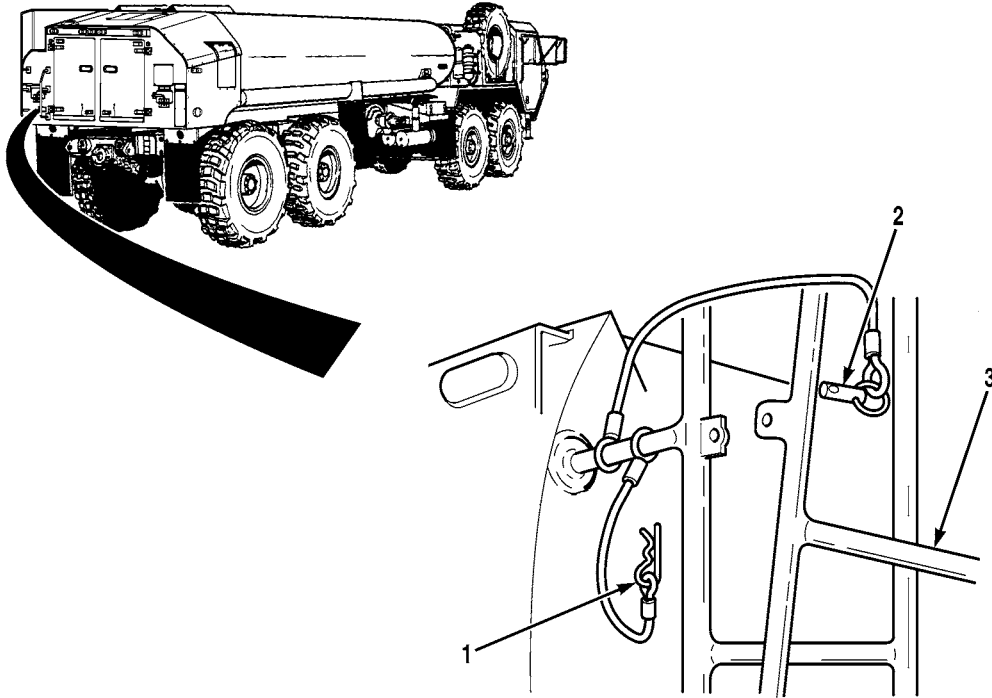
## END OF TASK

## INSTALLATION



1. Install bolt-on ladder assembly (3) on rear panel assembly (15) with 12 lockwashers (14) and screws (13).
2. Install lower ladder assembly (3) to bolt-on ladder assembly (10) with two screws (12) and locknuts (11).
3. Install ladder rail (6) to bolt-on ladder assembly (10).
4. Install ladder rail (6) to left upper side panel assembly (7) with two lockwashers (9) and screws (8).
5. Install ladder rail (6) to left upper side panel assembly (7) with two lockwashers (5) and screws (4).

---

**INSTALLATION - CONTINUED**

6. Raise lower ladder assembly (3) to bolt-on ladder assembly (10) and install pin (2).
7. Install safety pin (1) in pin (2).

**END OF TASK****FOLLOW-ON MAINTENANCE**

1. Connect batteries (TM 9-2320-279-20).
2. Remove wheel chocks (TM 9-2320-279-10).

**END OF TASK****END OF WORK PACKAGE**

---

**FIELD LEVEL MAINTENANCE**  
**SIDE/REAR MARKER LIGHT REPLACEMENT**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanic's: Automotive  
(WP 0034, Item 3)

**Materials/Parts**

Lockwashers (4) (WP 0036, Item 7)  
Sealant, RTV200 Electrical (WP 0035, Item 10)

**Personnel Required**

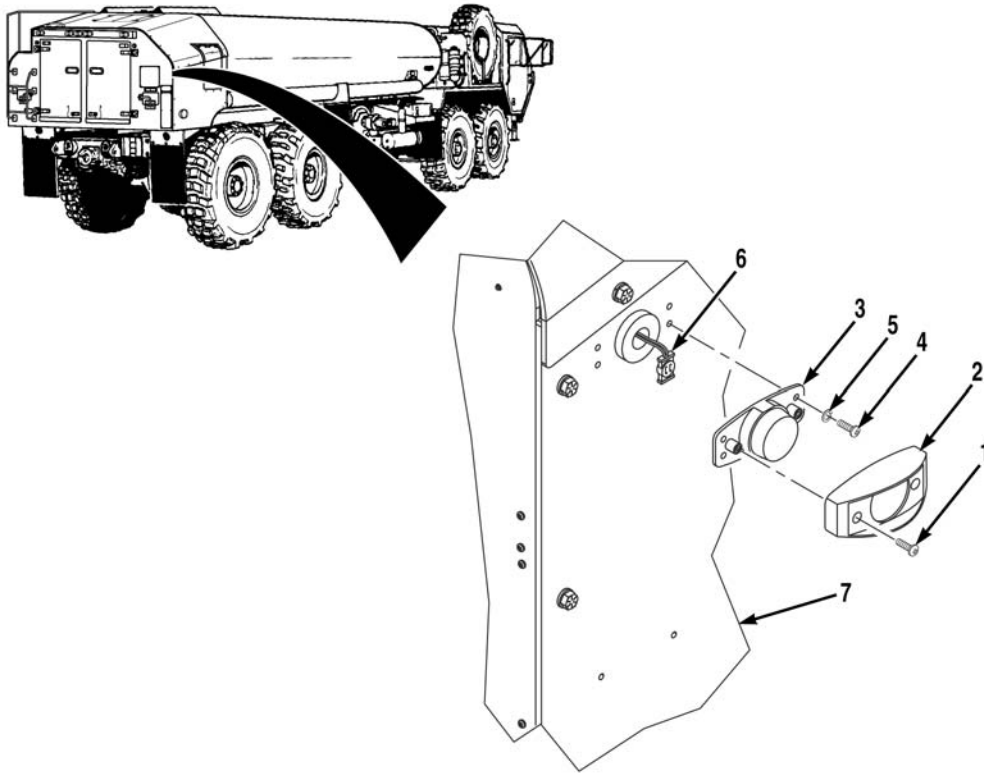
MOS 63B Heavy-wheel vehicle mechanic

**References**

None

**Equipment Condition**

Vehicle parked on level ground or wheels  
chocked (TM 9-2320-279-10)  
Engine off (TM 9-2320-279-10)  
Batteries disconnected (TM 9-2320-279-20)

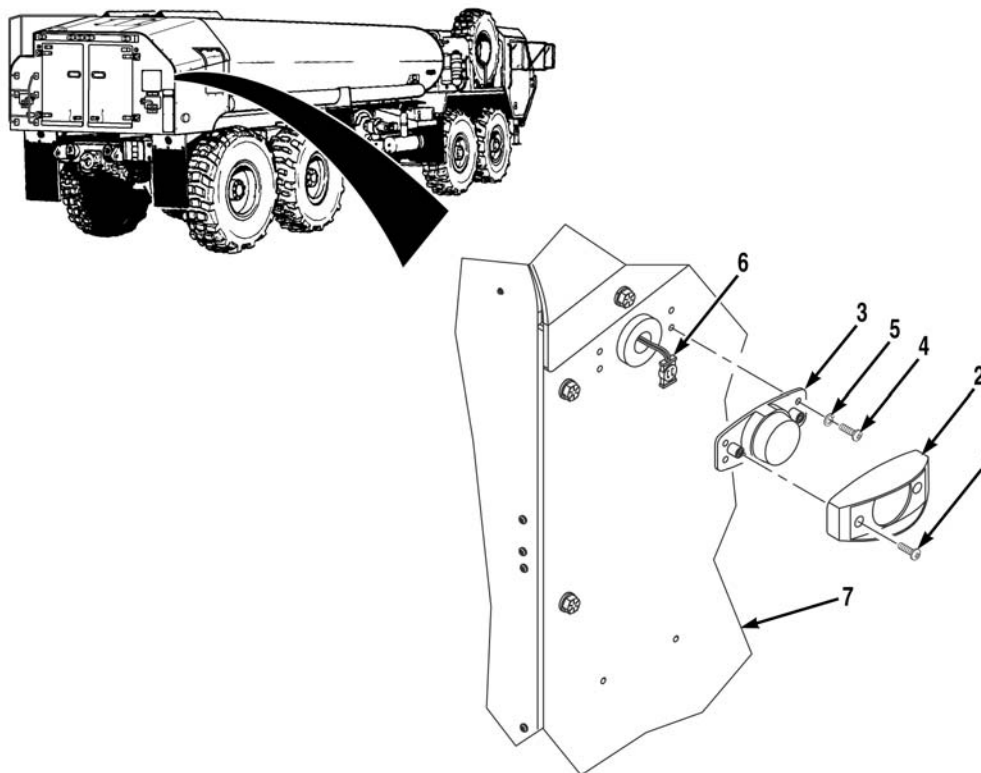
**REMOVAL****NOTE**

There are five marker lights on the rear lightbar panel and two marker lights on the lower side panels. All seven lamp assemblies are removed the same way. Right lower side panel lamp assembly shown.

1. Remove two screws (1) and lamp cover (2) from lamp assembly (3).
2. Remove four screws (4) and lockwashers (5) from lamp assembly (3). Discard lockwashers.
3. Disconnect light connector (6) from lamp assembly (3) and remove from module (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.

**NOTE**

There are five marker lights on the rear lightbar panel and two marker lights on the lower side panels. All seven lamp assemblies are installed the same way. Right lower side panel lamp assembly shown.

1. Apply electrical sealant to lamp assembly (3).
2. Connect light connector (6) to lamp assembly (3).
3. Install lamp assembly (3) to module (7) with four lockwashers (5) and screws (4).
4. Install lamp cover (2) on lamp assembly (3) with two screws (1).

**END OF TASK**

**FOLLOW-ON MAINTENANCE**

1. Connect batteries (TM 9-2320-279-20).
2. Remove wheel chocks (TM 9-2320-279-10).

**END OF TASK**

**END OF WORK PACKAGE**

---

**FIELD LEVEL MAINTENANCE****HIGH MOUNT STOP LIGHT REPLACEMENT (OPTIONAL)**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanic's: Automotive  
(WP 0034, Item 3)

Wrench, Torque (0-75 lb-in. [0-8.5 N•m])  
(WP 0034, Item 2)

**Materials/Parts**

Lockwashers (2) (WP 0036, Item 6)

Lockwashers (2) (WP 0036, Item 7)

Ties, Cable (WP 0035, Item 13)

**Personnel Required**

MOS 63B Heavy-wheel vehicle mechanic

**References**

None

**Equipment Condition**

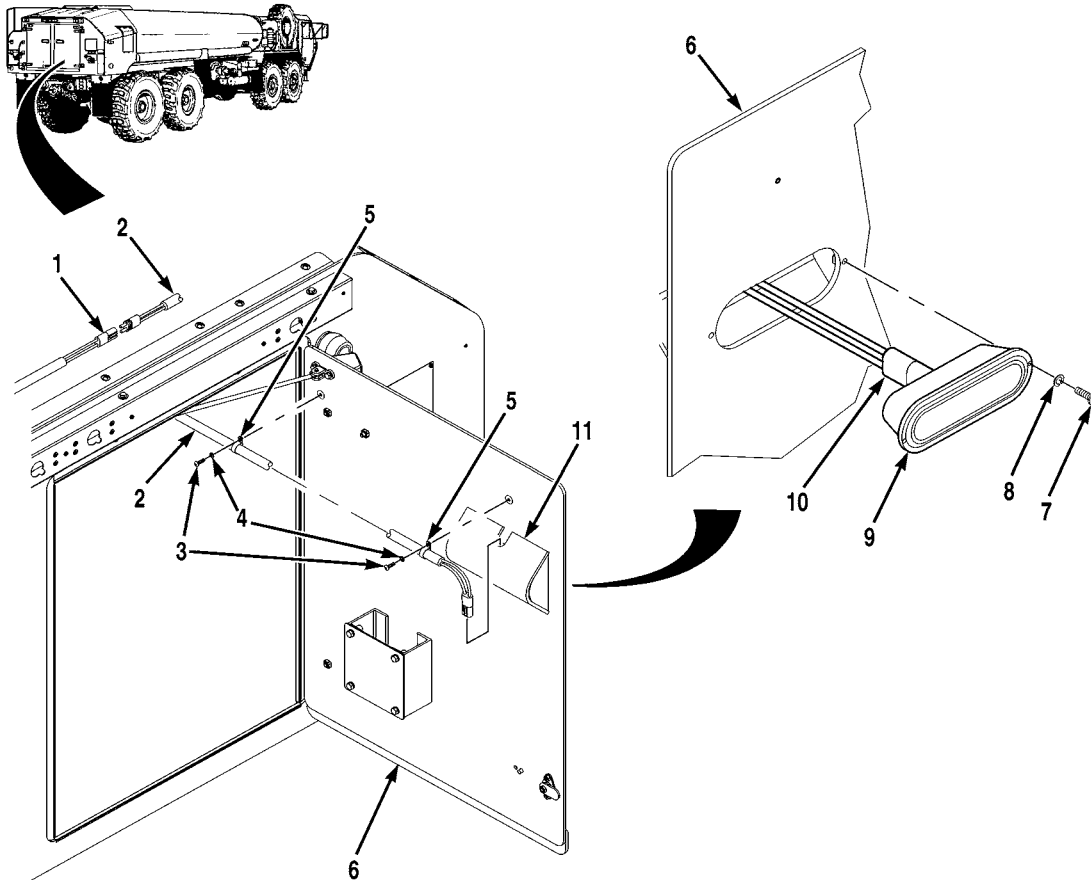
Vehicle parked on level ground or wheels  
chocked (TM 9-2320-279-10)

Engine off (TM 9-2320-279-10)

Batteries disconnected (TM 9-2320-279-20)

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## REMOVAL

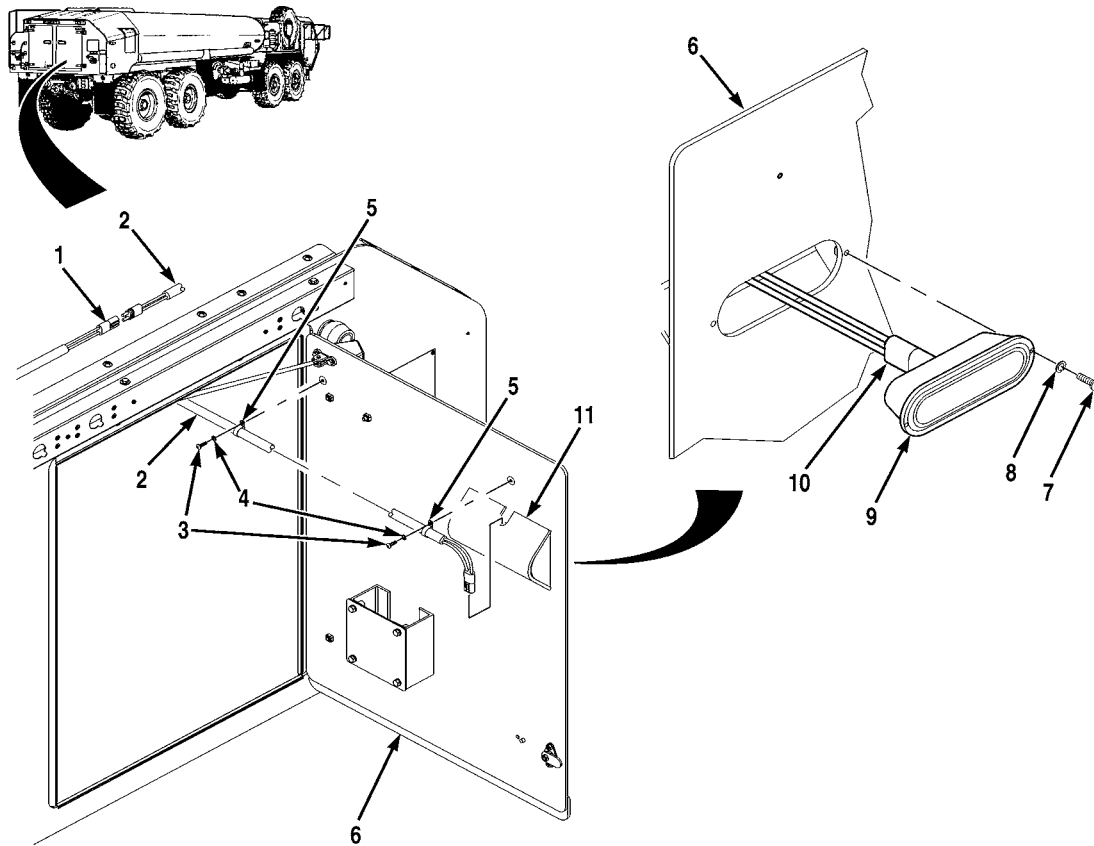
**NOTE**

- Both left side high mount stop light and right side high mount stop light are removed the same way. Right side high mount stop light shown.
- Remove cable ties as required.

1. Disconnect stop lamp harness connector (1) from stop lamp extension harness (2).
2. Remove two screws (3), lockwashers (4), loop straps (5), and one stop lamp extension harness (2) from rear door assembly (6). Discard lockwashers.
3. Remove two screws (7), lockwashers (8), and one high mount stop light (9) from rear door assembly (6). Discard lockwashers.
4. Disconnect stop lamp extension harness connector (10) from high mount stop light (9).
5. Remove stop lamp extension harness (2) through front side of rear door assembly (6) and lamp housing (11).

**END OF TASK**

## INSTALLATION

**NOTE**

- Both left side high mount stop light and right side high mount stop light are installed the same way. Right side high mount stop light shown.
- Install cable ties as required.

1. Install stop lamp extension harness connector (10) through lamp housing (11) and front side of rear door assembly (6).
2. Plug stop lamp extension harness connector (10) onto high mount stop light (9).
3. Install high mount stop light (9) into rear door assembly (6) with two lockwashers (8) and screws (7).
4. Tighten two screws (7) to 59 lb-in. (7 N•m).
5. Install two loop straps (5) around stop lamp extension harness (2) and secure to rear door assembly (6) with two lockwashers (4) and screws (3).
6. Tighten two screws (3) to 41 lb-in. (5 N•m).
7. Connect stop lamp extension harness (2) to stop lamp harness connector (1).

**END OF TASK**

**FOLLOW-ON MAINTENANCE**

1. Connect batteries (TM 9-2320-279-20).
2. Remove wheel chocks (TM 9-2320-279-10).

**END OF TASK**

**END OF WORK PACKAGE**

---

**FIELD LEVEL MAINTENANCE**  
**LIGHTBAR PANEL ASSEMBLY REPLACEMENT**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanic's: Automotive  
(WP 0034, Item 3)

**Materials/Parts**

Locknuts (6) (WP 0036, Item 2)

**Personnel Required**

MOS 63B Heavy-wheel vehicle mechanic

**References**

None

**Equipment Condition**

Vehicle parked on level ground or wheels  
chocked (TM 9-2320-279-10)

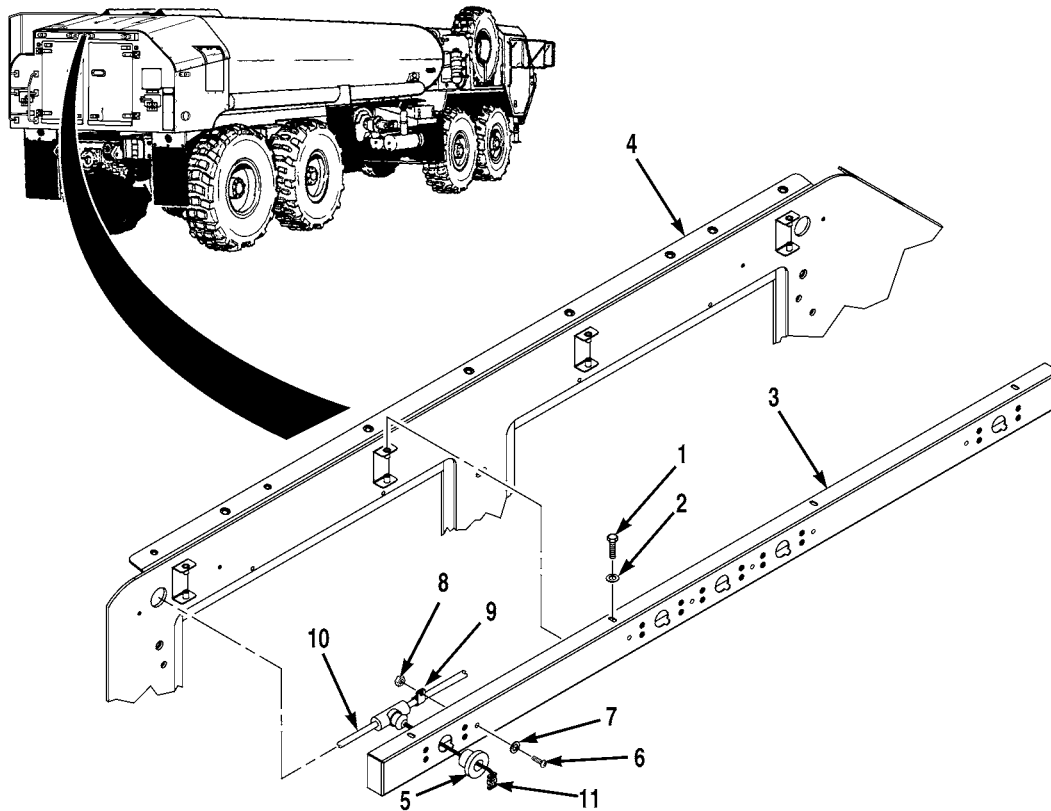
Engine off (TM 9-2320-279-10)

Batteries disconnected (TM 9-2320-279-20)

Lightbar lights removed (WP 0028)

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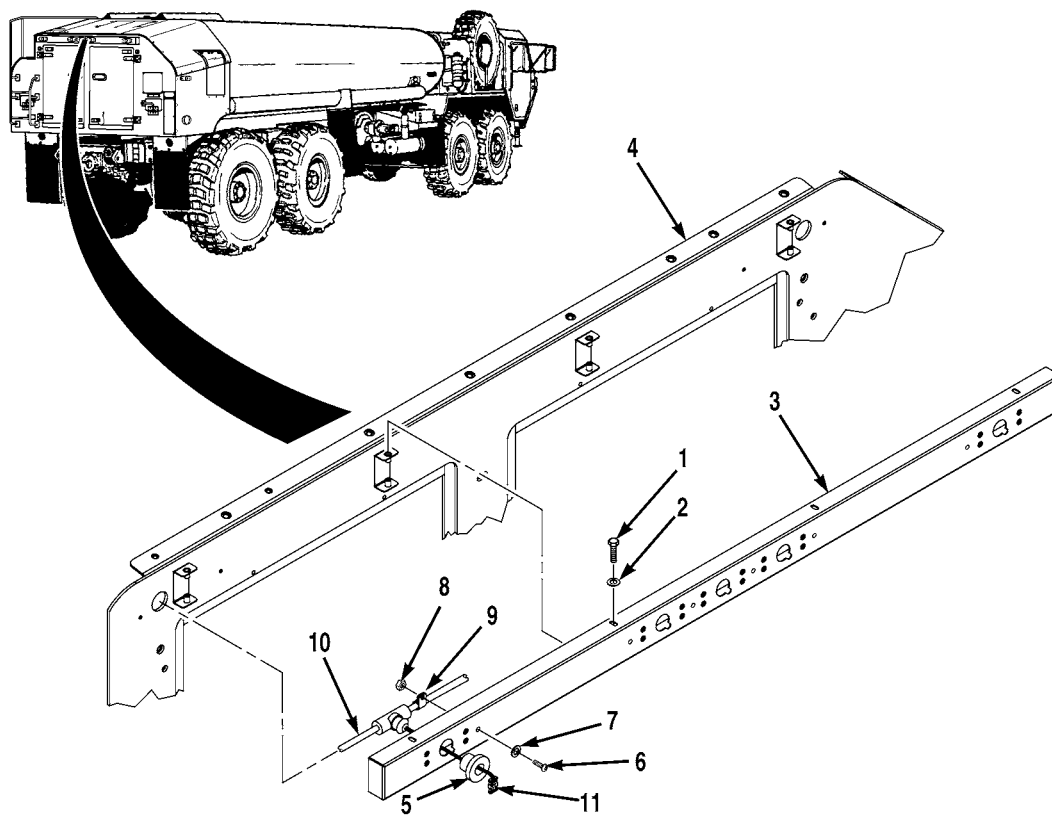
## REMOVAL



1. Remove eight screws (1), washers (2), and one lightbar panel assembly (3) from rear panel assembly (4).
2. Remove five tanker light grommets (5) from lightbar panel assembly (3).
3. Remove six screws (6), washers (7), locknuts (8), loop straps (9), and light harness (10) from lightbar panel assembly (3). Discard locknuts.
4. Pull five connectors (11) through lightbar panel assembly (3).

## END OF TASK



**INSTALLATION**

1. Install light harness (10) on lightbar panel assembly (3) with six loop straps (9), locknuts (8), washers (7), and screws (6).
2. Install five connectors (11) through lightbar panel assembly (3).
3. Install lightbar panel assembly (3) on rear panel assembly (4) with eight washers (2) and screws (1).
4. Install five tanker light grommets (5) in lightbar panel assembly (3).

**END OF TASK****FOLLOW-ON MAINTENANCE**

1. Install lightbar lights (WP 0028).
2. Connect batteries (TM 9-2320-279-20).
3. Remove wheel chocks (TM 9-2320-279-10).

**END OF TASK****END OF WORK PACKAGE**



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**FIELD LEVEL MAINTENANCE****TANKER MODULE LIGHTING HARNESS ASSEMBLY REPLACEMENT**

---

**INITIAL SETUP:****Tools and Special Tools**

Tool Kit, General Mechanic's: Automotive  
(WP 0034, Item 3)

**Materials/Parts**

Lockwashers (5) (WP 0036, Item 6)  
Ties, Cable (WP 0035, Item 13)  
Compound, sealing, pipe thread, Loctite  
(WP 0035, Item 5)  
Adhesive-sealant, silicone, RTV  
(WP 0036, Item 1)

**Personnel Required**

MOS 63B Heavy-wheel vehicle mechanic

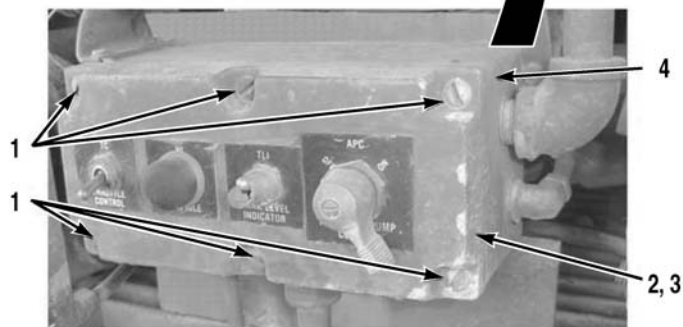
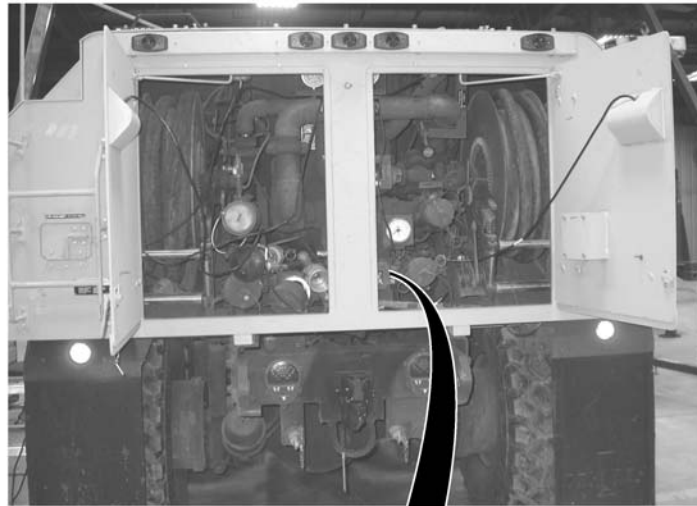
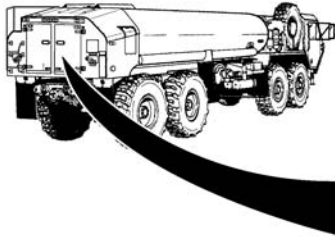
**References**

None

**Equipment Condition**

Vehicle parked on level ground or wheels  
chocked (TM 9-2320-279-10)  
Engine off (TM 9-2320-279-10)  
Batteries disconnected (TM 9-2320-279-20)  
Left upper side panel assembly removed  
(WP 0018)  
Right upper side panel assembly removed  
(WP 0019)  
Side/rear marker lights removed (WP 0028)  
Lightbar panel assembly removed (WP 0030)

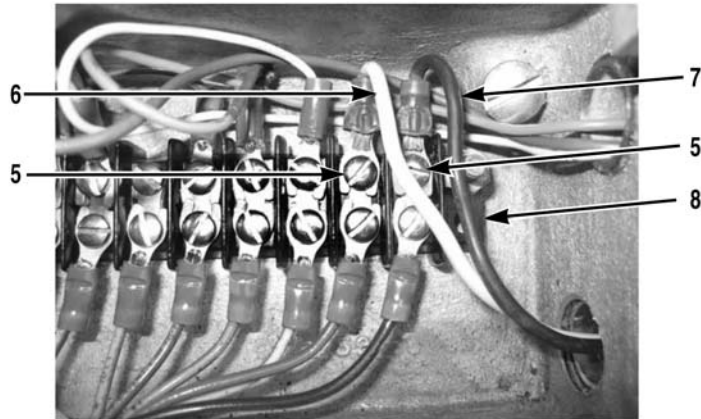
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**REMOVAL - MODEL A (OLDER VEHICLES)****NOTE**

- Note position of harness prior to removal to ensure proper installation.
- Remove cable ties as required.

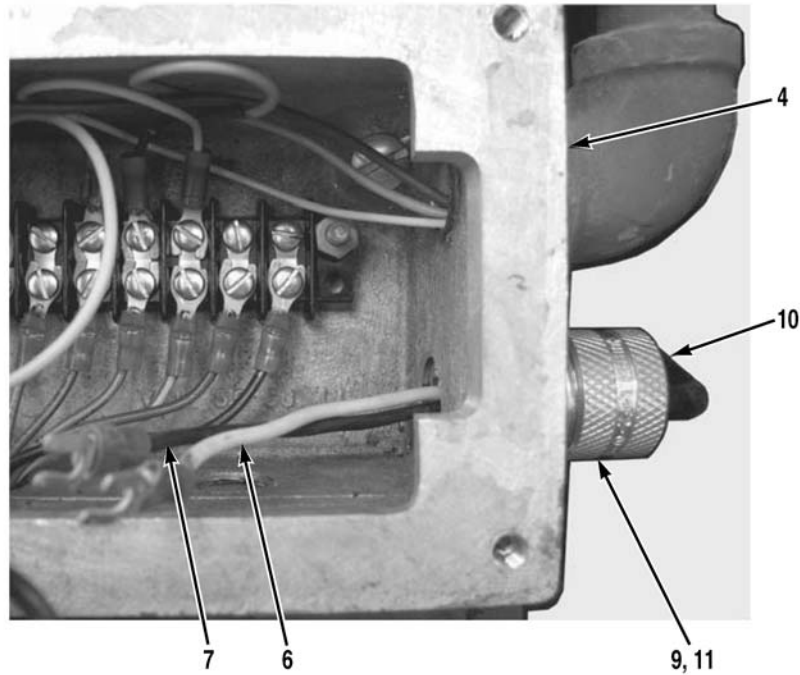
1. Remove six screws (1), one cover (2), and gasket (3) from control junction box (4).

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**REMOVAL - MODEL A (OLDER VEHICLES) - CONTINUED**

2. Loosen two screws (5) and remove the white wire with brown tape (6) and black wire (7) from terminal board (8).

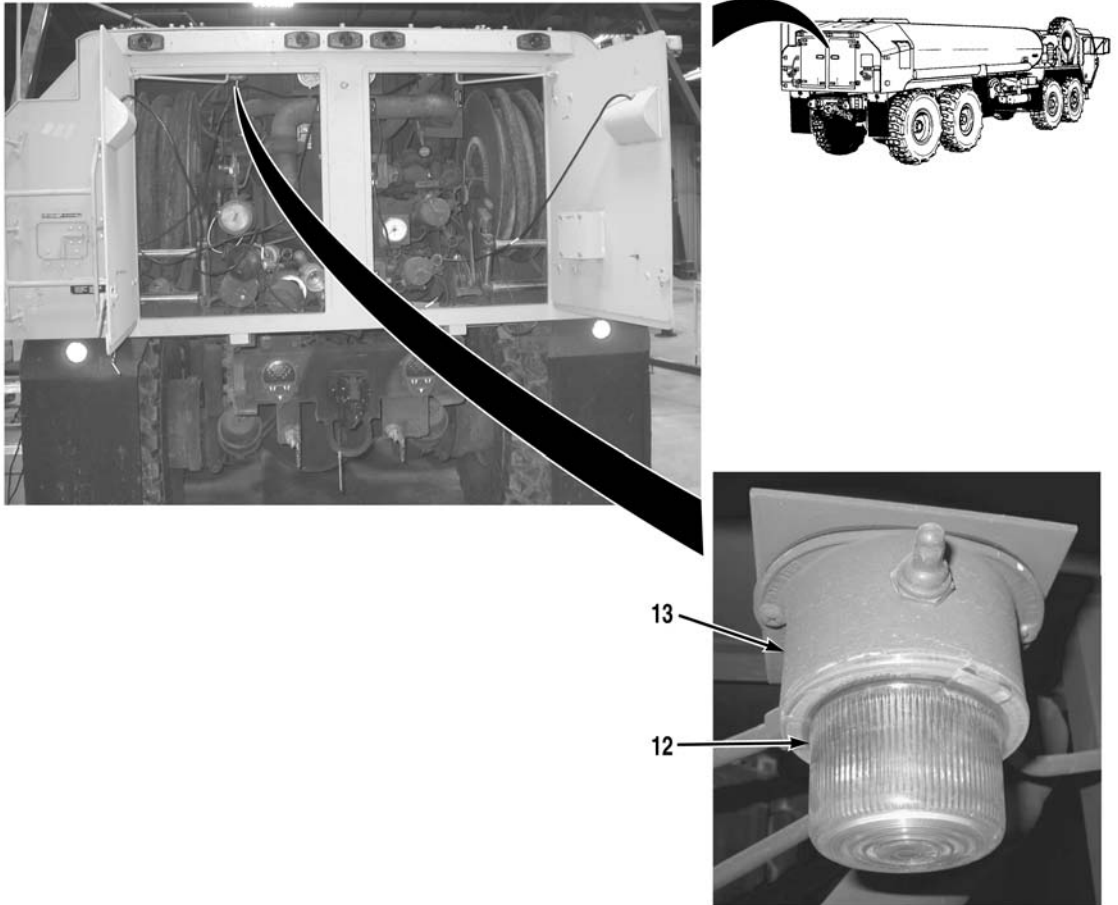
## REMOVAL - MODEL A (OLDER VEHICLES) - CONTINUED



3. Loosen compression nut (9). Remove cable (10), white wire with brown tape (6), black wire (7), plastic washer (11), and compression nut (9) from control junction box (4).



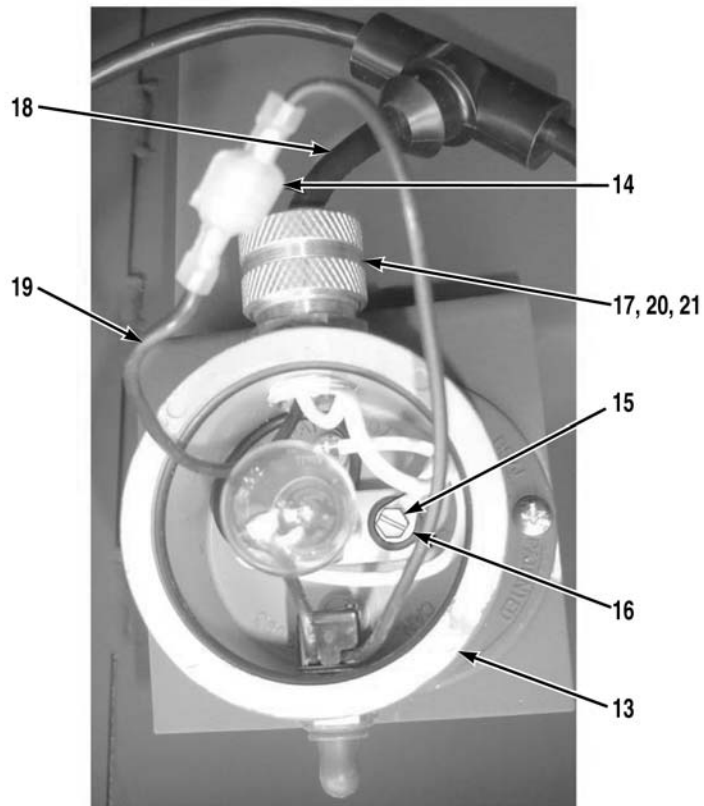
4. Remove plastic washer (11) and compression nut (9) from white wire with brown tape (6) and black wire (7).

**REMOVAL - MODEL A (OLDER VEHICLES) - CONTINUED****NOTE**

Both passenger side compartment light harness and driver side compartment light harness are removed the same way. Driver side compartment light harness shown.

5. Remove compartment light lens (12) from compartment light base (13).

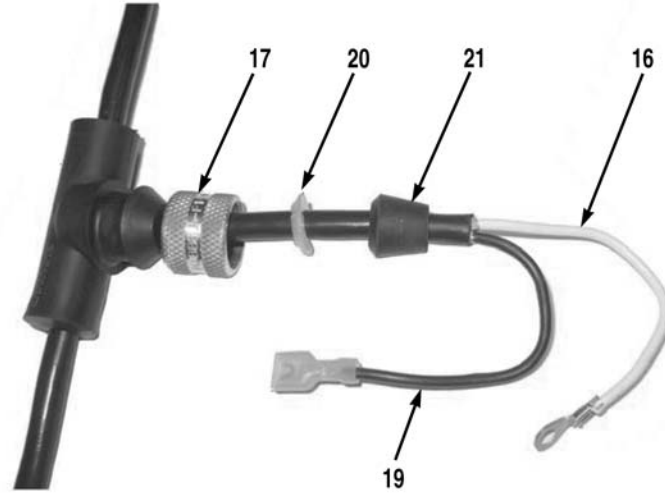
## REMOVAL - MODEL A (OLDER VEHICLES) - CONTINUED



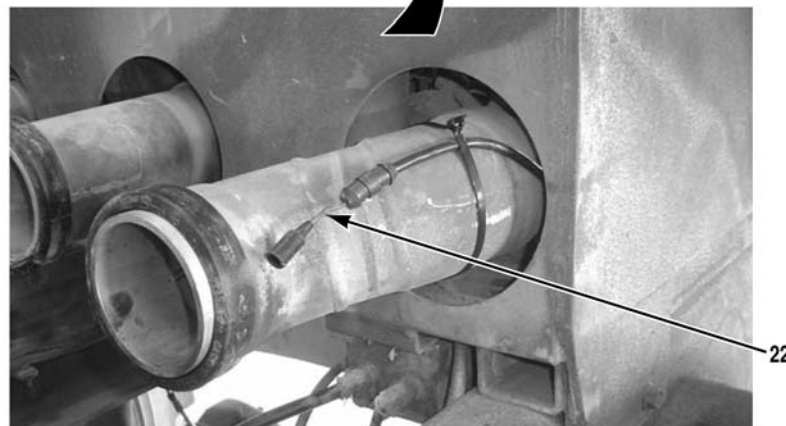
6. Disconnect black wire blade connector (14).
7. Remove screw (15) and white wire (16).
8. Loosen compression nut (17). Remove cable (18), black wire (19), white wire (16), plastic washer (20), rubber seal (21) and compression nut (17) from compartment light base (13).



## REMOVAL - MODEL A (OLDER VEHICLES) - CONTINUED

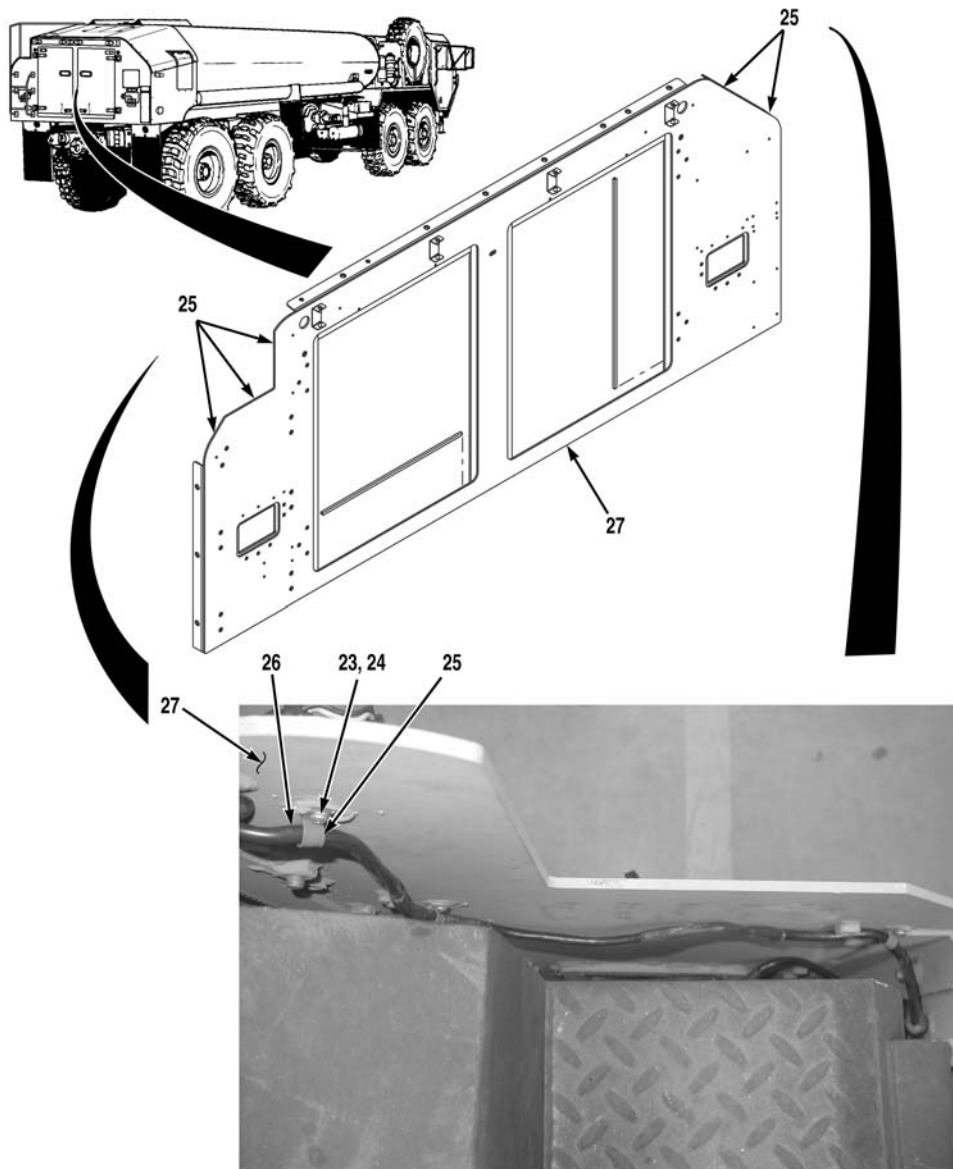


9. Remove rubber seal (21), plastic washer (20), and compression nut (17) from black wire (19) and white wire (16).



10. Disconnect tank connector (22) from existing chassis harness.

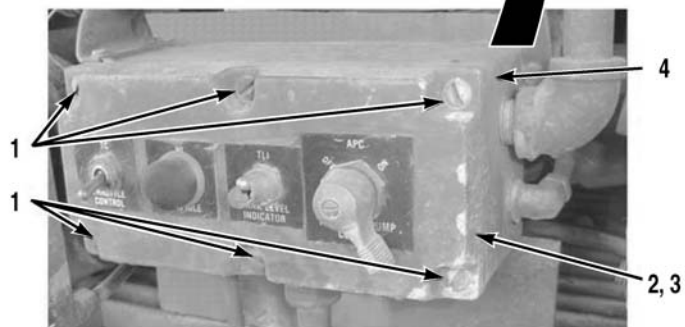
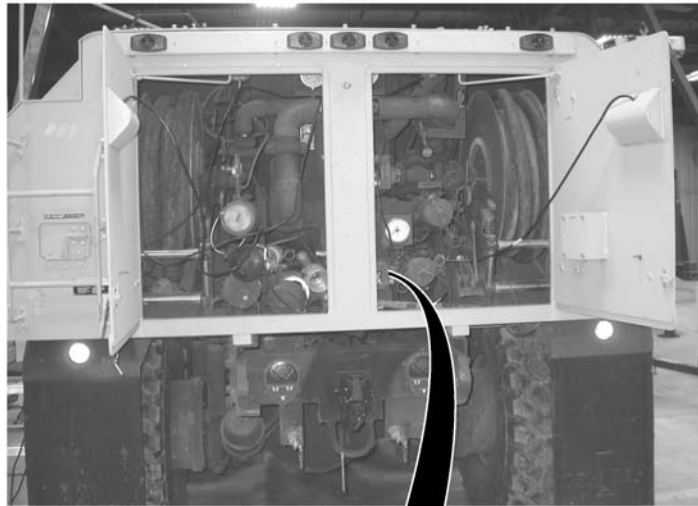
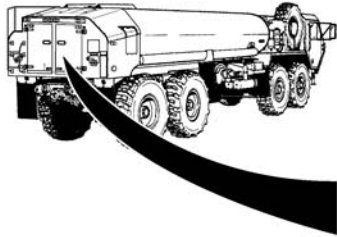
## REMOVAL - MODEL A (OLDER VEHICLES) - CONTINUED

**NOTE**

All five loop straps are removed the same way.

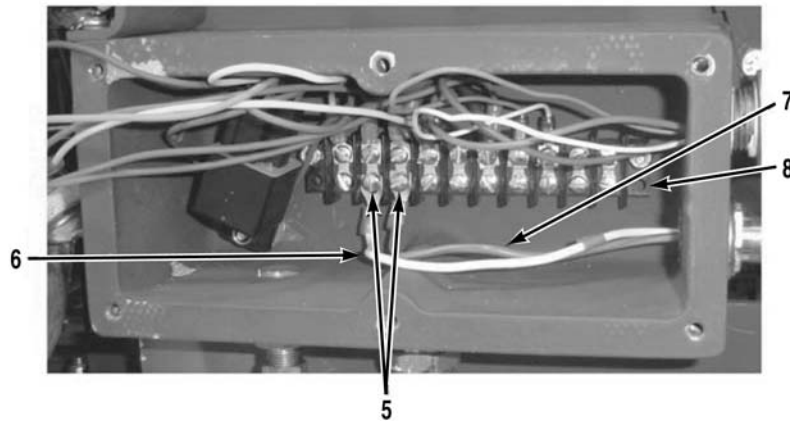
11. Remove five screws (23), lockwashers (24), loop straps (25), and one wire harness (26) from rear panel assembly (27). Discard lockwashers.
12. Remove wire harness (26) from vehicle.

**END OF TASK**

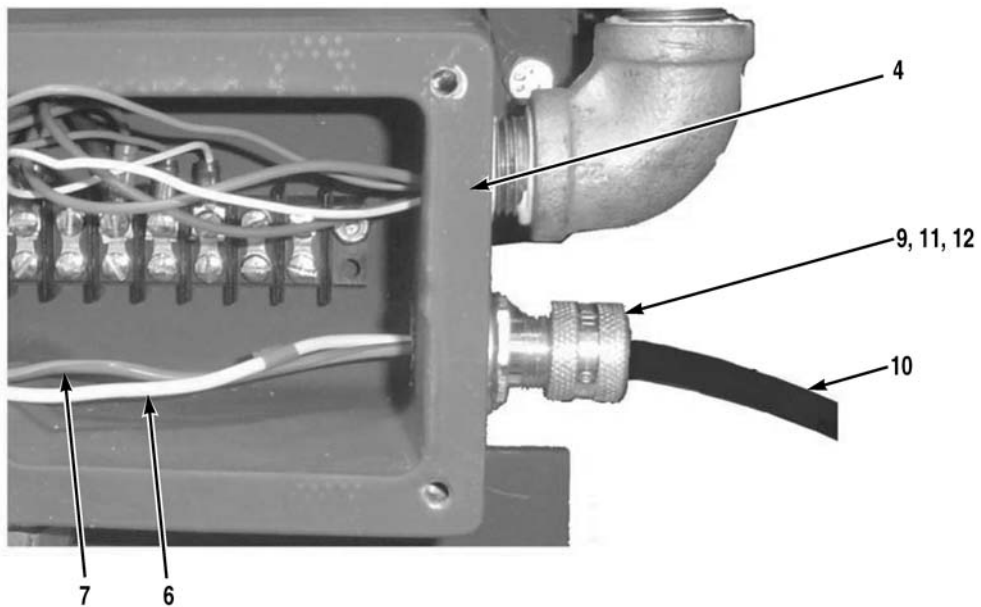
**REMOVAL - MODEL B (A2 VEHICLE)****NOTE**

- Note position of harness prior to removal to ensure proper installation.
  - Remove cable ties as required.
1. Remove six screws (1), one cover (2), and gasket (3) from control junction box (4).

## REMOVAL - MODEL B (A2 VEHICLE) - CONTINUED

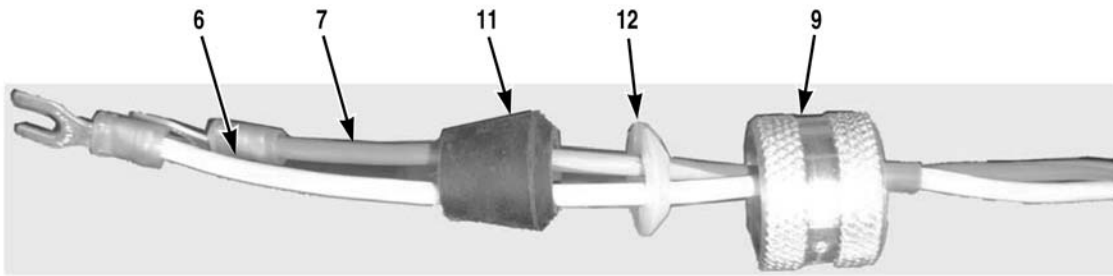


2. Loosen two screws (5) and remove white wire with green tape (6) and red and blue wire (7) from terminal board (8).



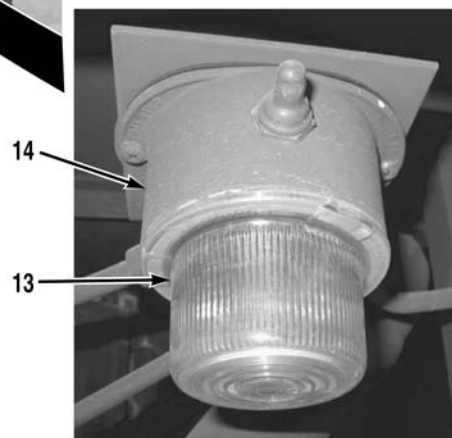
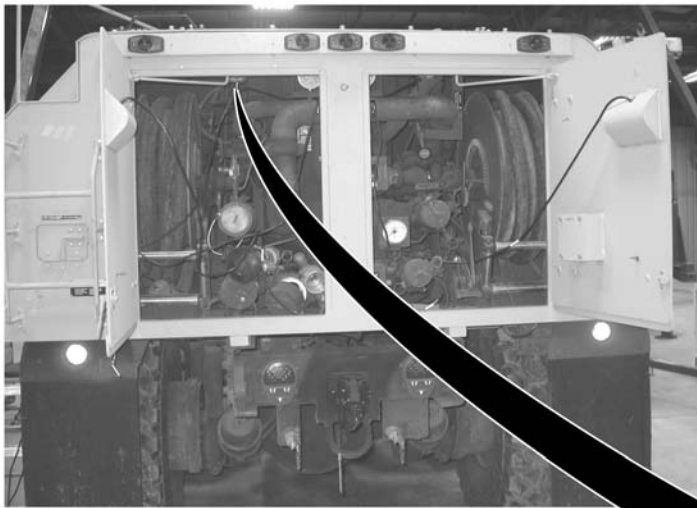
3. Loosen compression nut (9). Remove cable (10), white wire with green tape (6), red and blue wire (7), rubber seal (11), plastic washer (12), and compression nut (9) from control junction box (4).

---

**REMOVAL - MODEL B (A2 VEHICLE) - CONTINUED**

4. Remove rubber seal (11), plastic washer (12), and compression nut (9) from white wire with green tape (6) and red and blue wire (7).

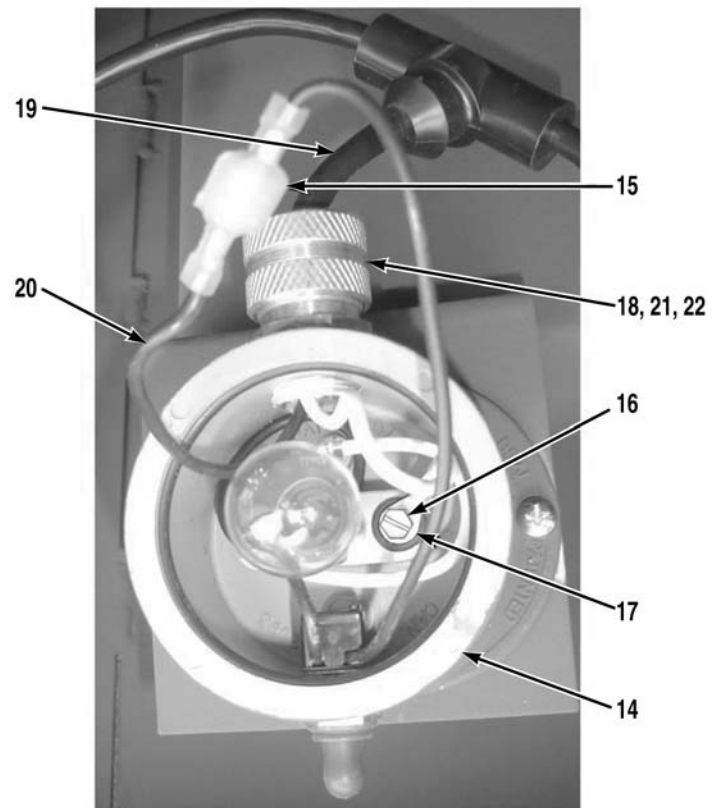
## REMOVAL - MODEL B (A2 VEHICLE) - CONTINUED

**NOTE**

Both passenger side compartment light harness and driver side compartment light harness are removed the same way. Driver side compartment light harness shown.

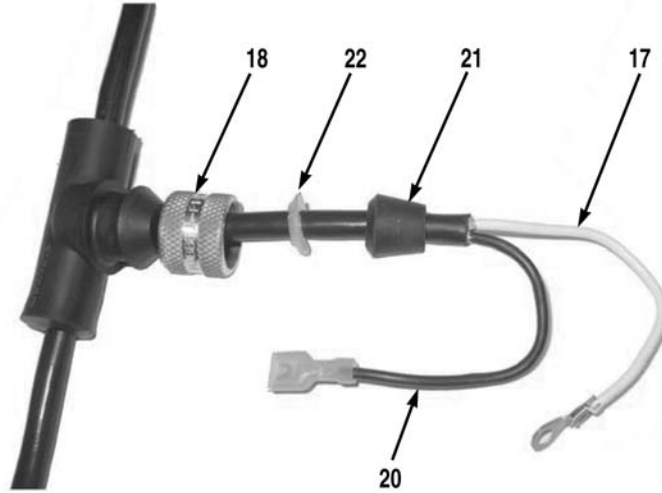
5. Remove compartment light lens (13) from compartment light base (14).

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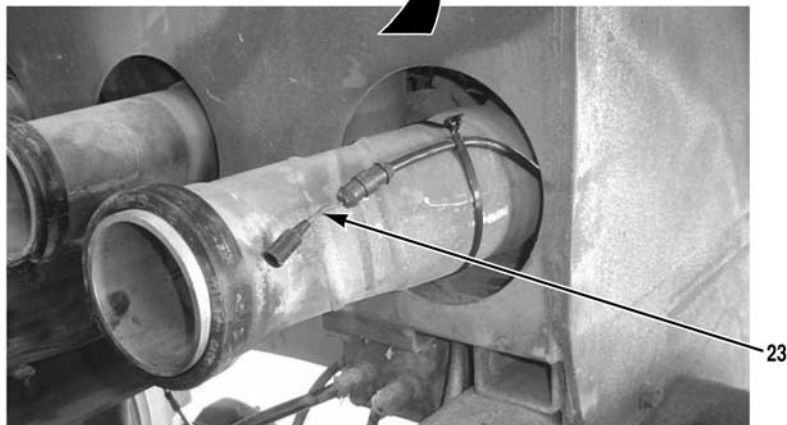
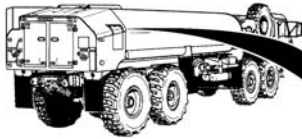
**REMOVAL - MODEL B (A2 VEHICLE) - CONTINUED**

6. Disconnect black wire blade connector (15).
7. Remove screw (16) and white wire connector (17).
8. Loosen compression nut (18). Remove cable (19), black wire (20), white wire (17), rubber seal (21), plastic washer (22), and compression nut (18), from compartment light base (14).

## REMOVAL - MODEL B (A2 VEHICLE) - CONTINUED



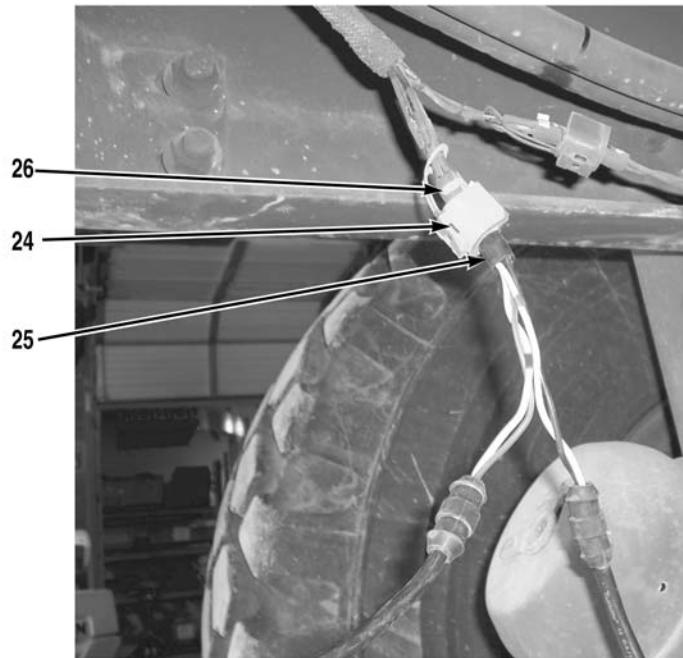
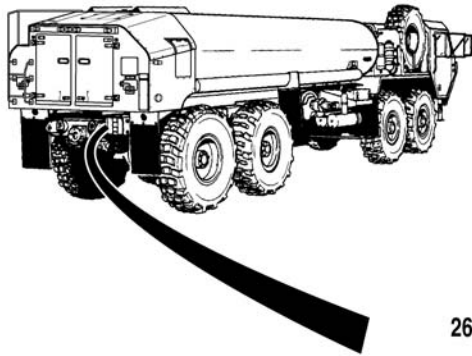
9. Remove rubber seal (21), plastic washer (22), and compression nut (18) from black wire (20) and white wire (17).



10. Disconnect tank connector (23) from existing chassis harness.

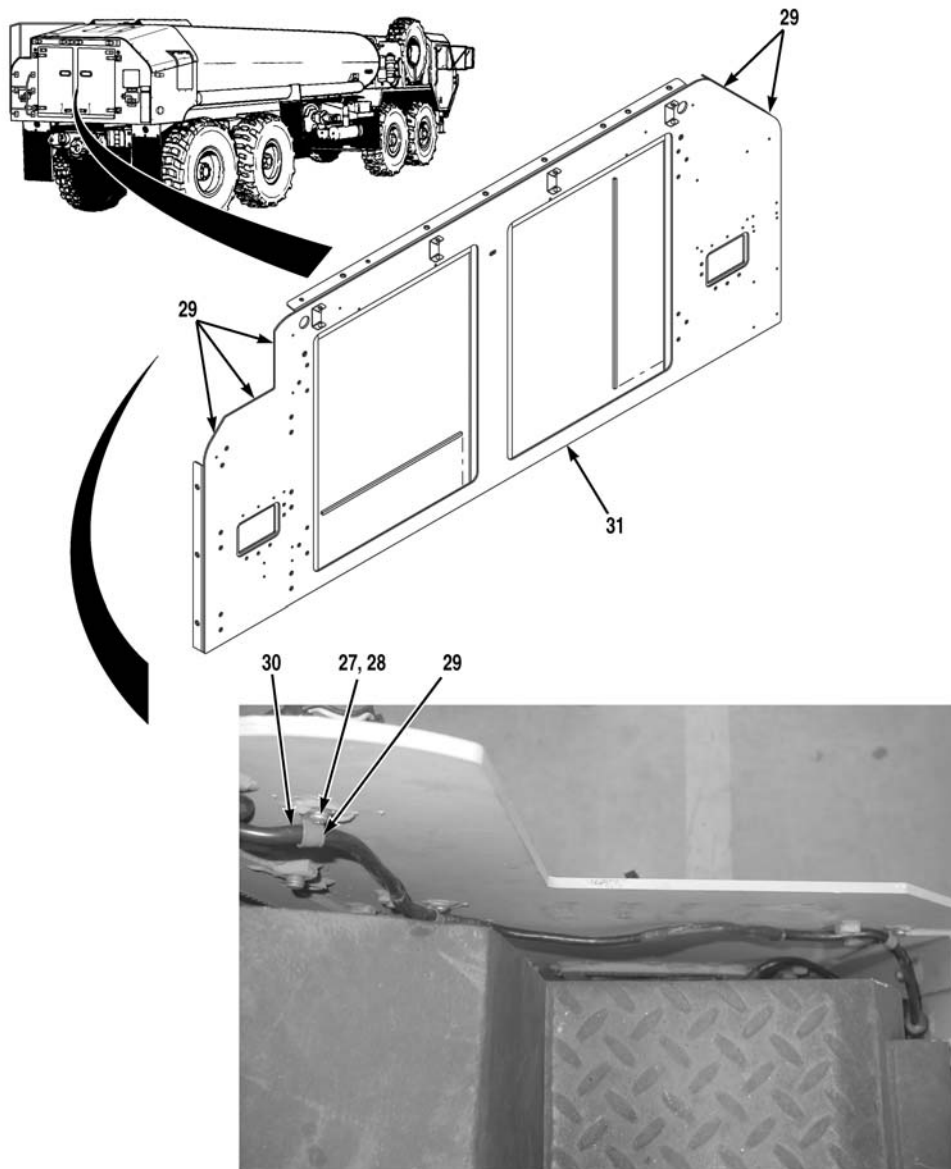


## REMOVAL - MODEL B (A2 VEHICLE) - CONTINUED



11. Disconnect locking device (24) from tanker module connector (25).
12. Disconnect tanker module connector (25) from connector (26).

## REMOVAL - MODEL B (A2 VEHICLE) - CONTINUED

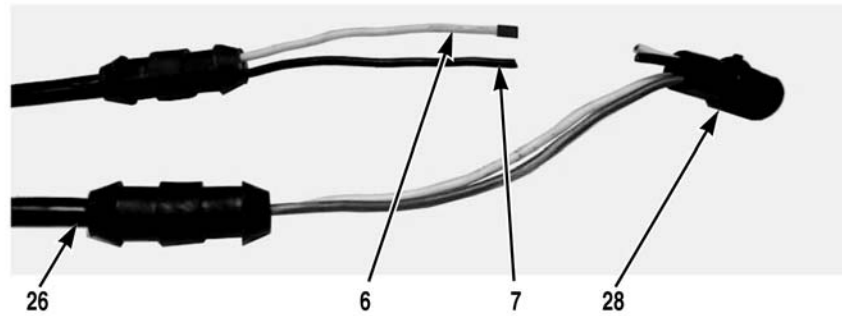
**NOTE**

All five loop straps are removed the same way.

13. Remove five screws (27), lockwashers (28), loop straps (29), and one wire harness (30) from rear panel assembly (31). Discard lockwashers.
14. Remove wire harness (30) from vehicle.

**END OF TASK**

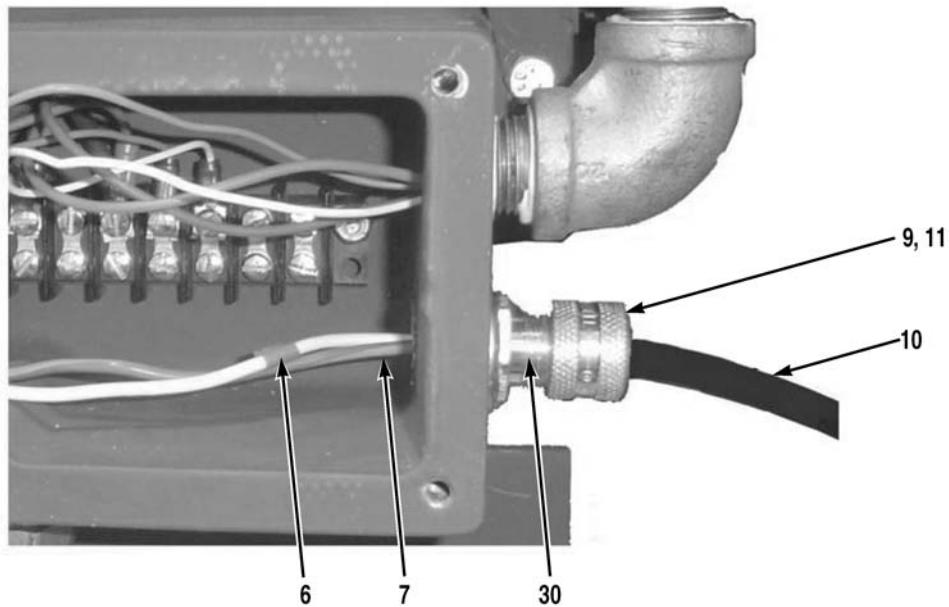
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**INSTALLATION - MODEL A (OLDER VEHICLES)**


1. Locate four wire connectors (28) on replacement wire harness (26). Cut black wire (7) and white wire with brown tape (6). Discard four wire connector (28) and remaining short end of replacement harness.

**NOTE**

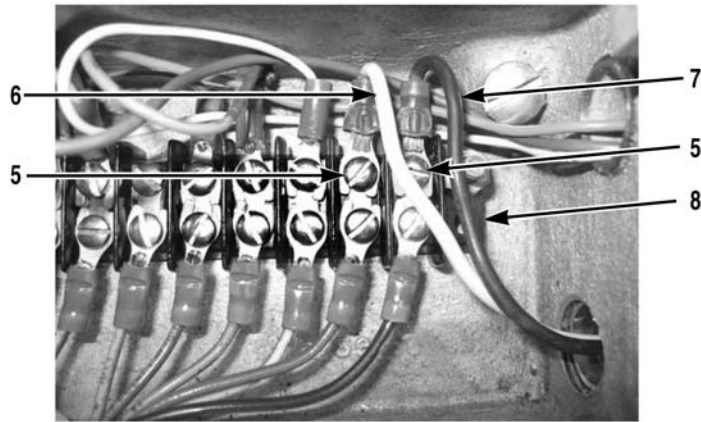
- Install harness as noted prior to removal.
  - Install cable ties as required.
2. Install compression nut (9) and plastic washer (11) on cable (10).
  3. Install terminals (29) on black wire (7) and white wire with brown tape (6).

**INSTALLATION - MODEL A (OLDER VEHICLE) - CONTINUED****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.

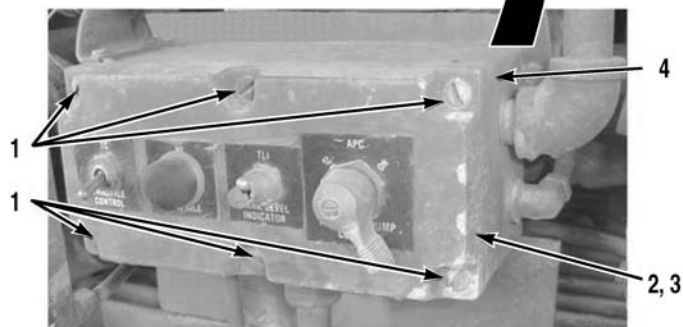
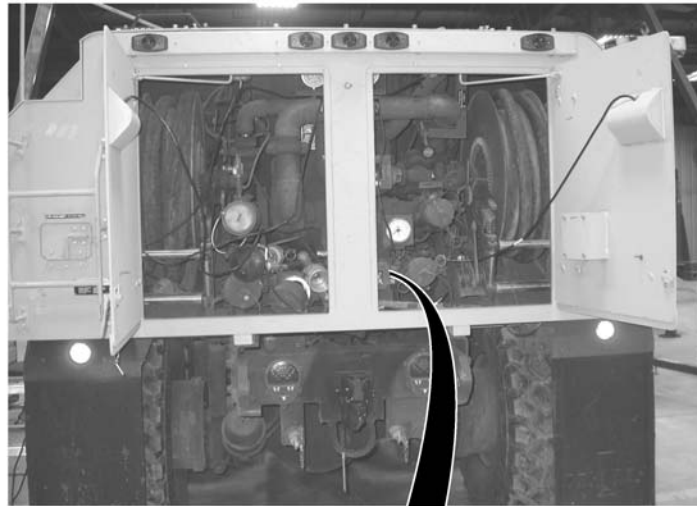
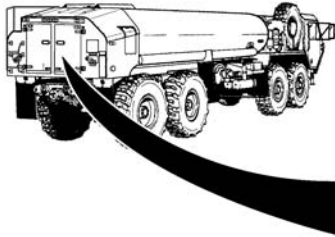
4. Apply pipe thread sealing compound to threads of large compression fitting base (30).
5. Route black wire (7) and white wire with brown tape (6) through compression fitting base (30) and install cable (10), plastic washer (11), and compression nut (9).

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**INSTALLATION - MODEL A (OLDER VEHICLE) - CONTINUED**

6. Install black wire (7) and white wire with brown tape (6) on terminal board (8) with two screws (5).

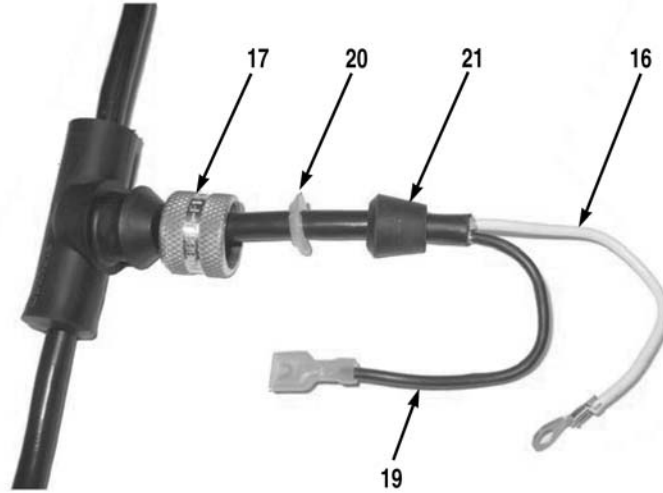
## INSTALLATION - MODEL A (OLDER VEHICLE) - CONTINUED

**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. Coat gasket (3) with silicon adhesive-sealant.
8. Install gasket (3) and cover (2) on control junction box (4) with six screws (1).

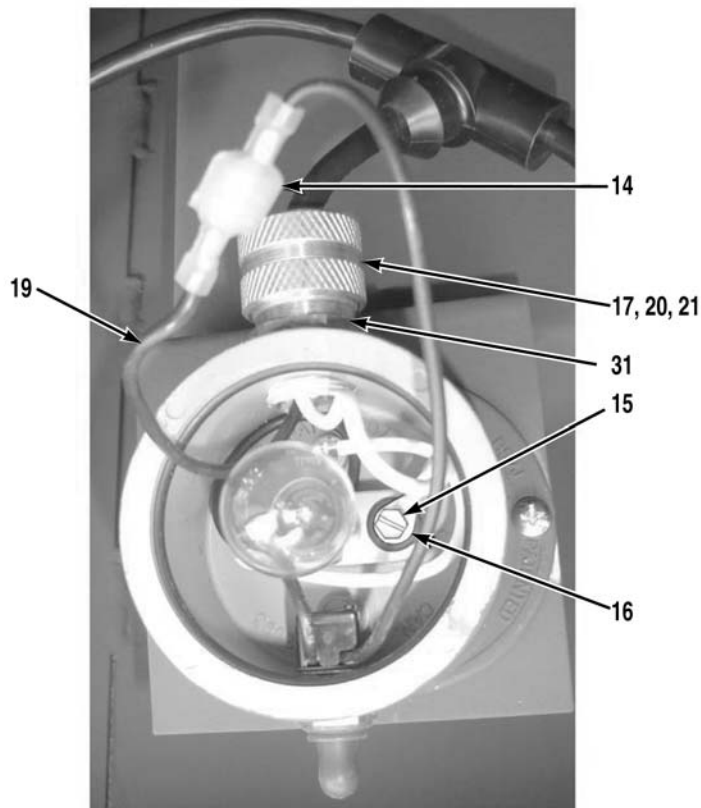
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**INSTALLATION - MODEL A (OLDER VEHICLE) - CONTINUED****NOTE**

Both passenger side compartment light harness and driver side compartment light harness are installed the same way. Driver side compartment light shown.

9. Install compression nut (17), plastic washer (20), and rubber seal (21) on black wire (19) and white wire (16).

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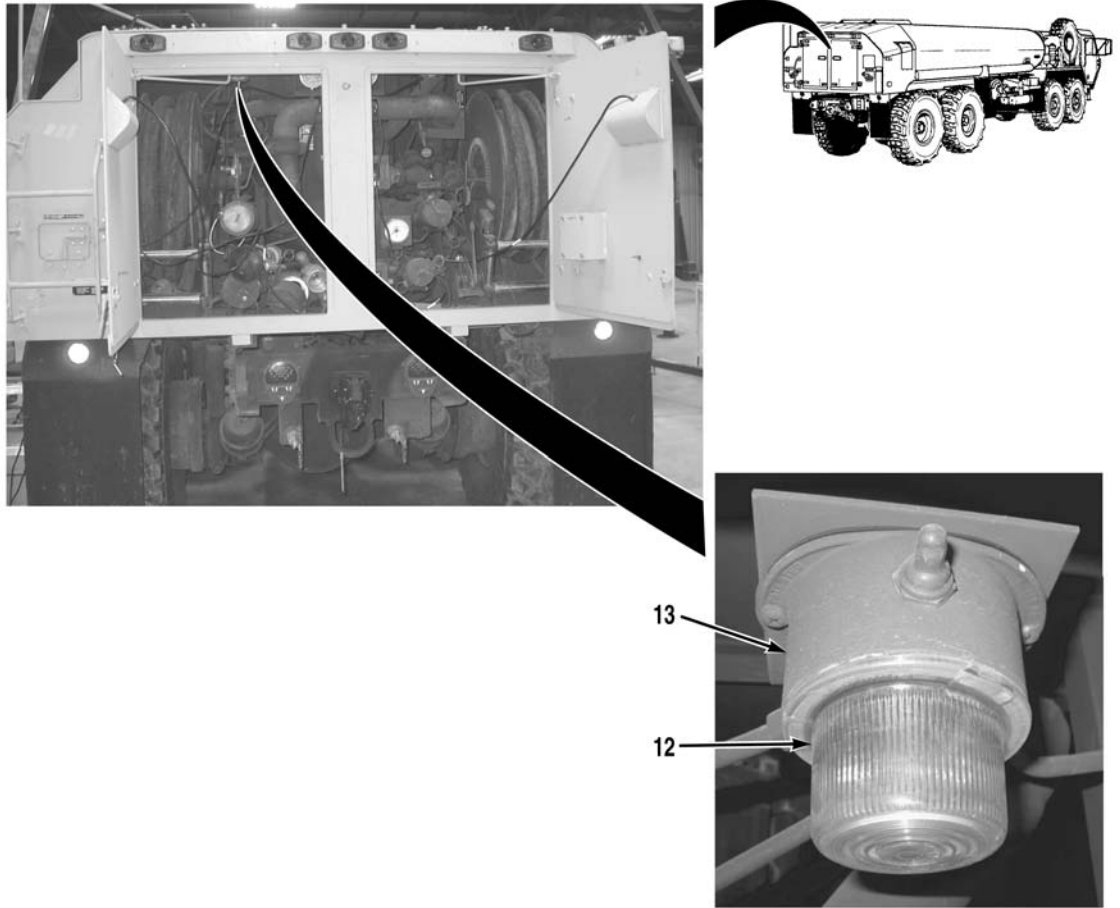
**INSTALLATION - MODEL A (OLDER VEHICLE) - CONTINUED****WARNING**

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.

10. Apply pipe thread sealing compound to the thread of the small compression fitting base (31).
11. Route black wire (19) and white wire (16) through compression fitting base (31) and install plastic washer (20), rubber seal (21), and compression nut (17).
12. Connect black wire (19) with blade connector to existing blade connector (14). If connectors do not mate, remove both blade connectors and connect wires with butt slice connector. Cover with heat shrink.
13. Install white wire connector (16) with screw (15).

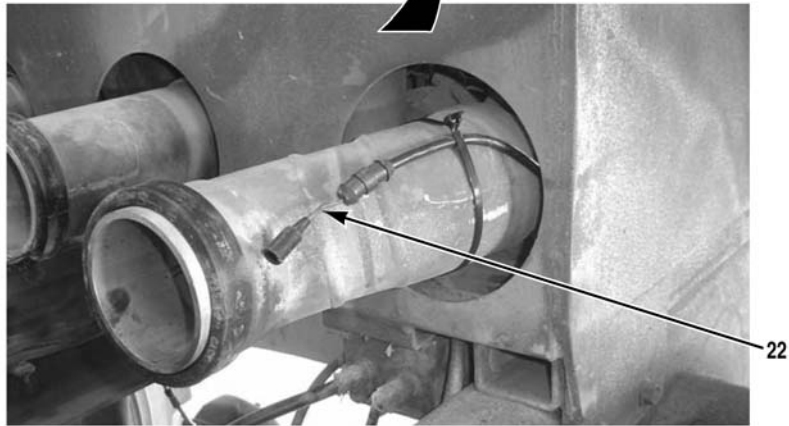
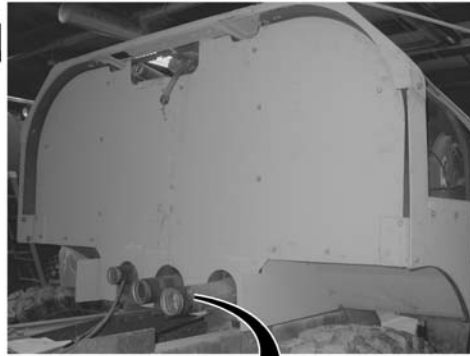


## INSTALLATION - MODEL A (OLDER VEHICLE) - CONTINUED



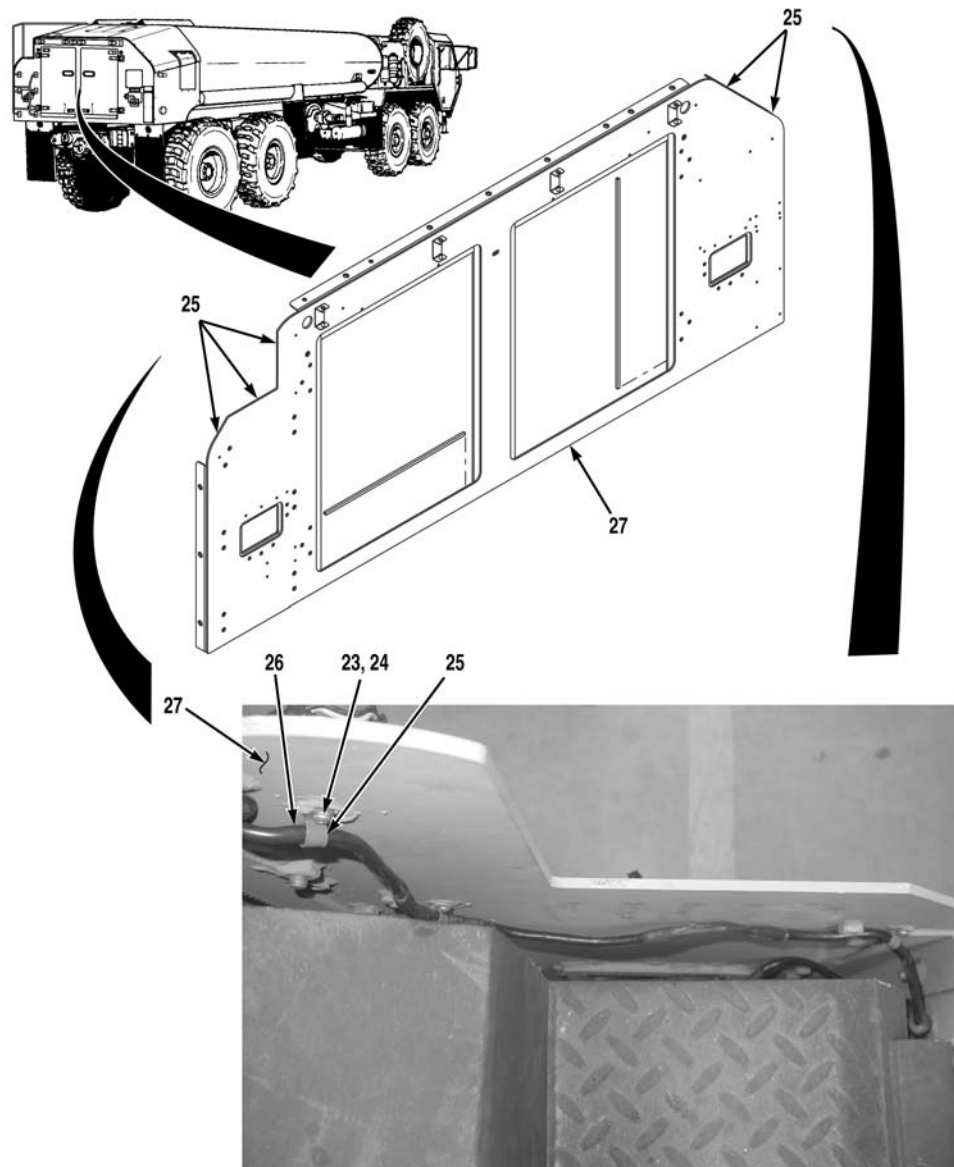
14. Install compartment light lens (12) on compartment light base (13).

## INSTALLATION - MODEL A (OLDER VEHICLE) - CONTINUED



15. Connect tank connector (22) to existing chassis harness.

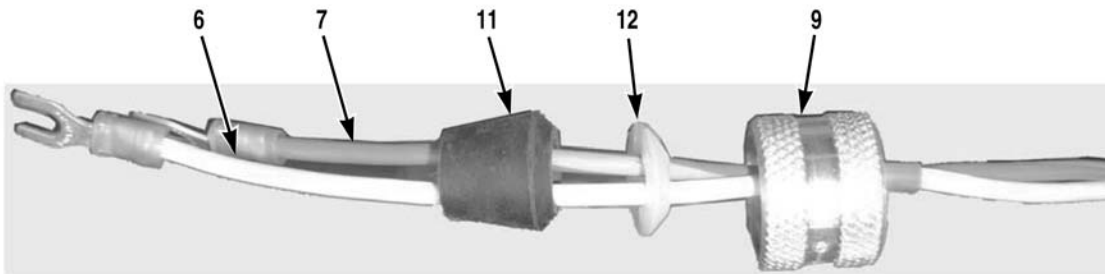
## INSTALLATION - MODEL A (OLDER VEHICLE) - CONTINUED

**NOTE**

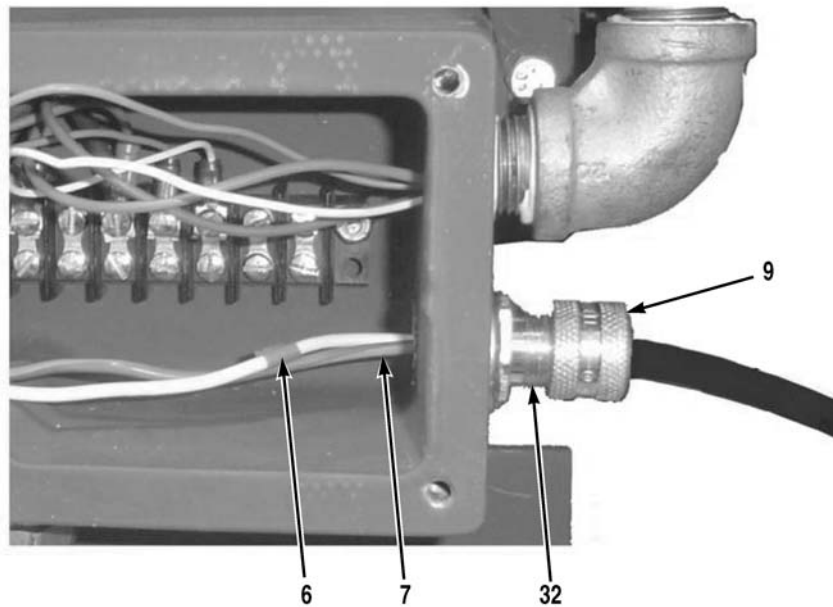
All five loop straps are installed the same way.

16. Install wire harness (26) to rear panel assembly (27) with five loop straps (25), lockwashers (24) and screws (23).

**END OF TASK**

**INSTALLATION - MODEL B (A2 VEHICLE)****NOTE**

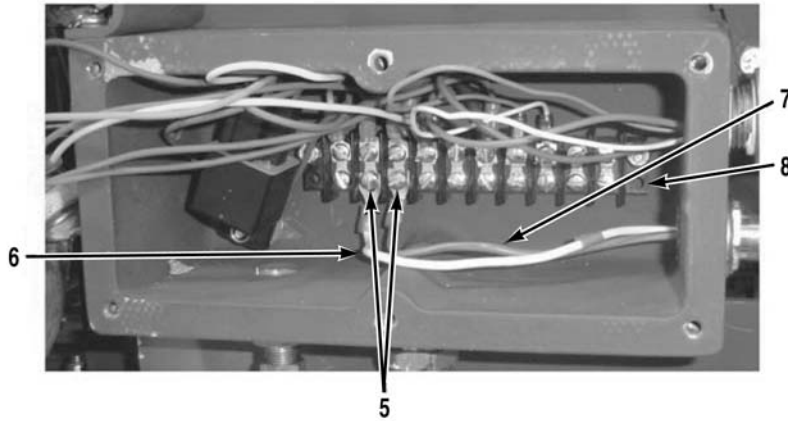
- Install harness as noted prior to removal.
  - Install cable ties as required.
1. Install compression nut (9), plastic washer (12), and rubber seal (11) on white wire with green tape (6) and red and blue wire (7).

**INSTALLATION - MODEL B (A2 VEHICLE) - CONTINUED****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.

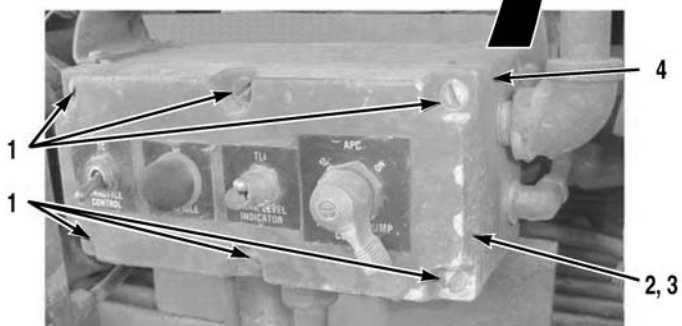
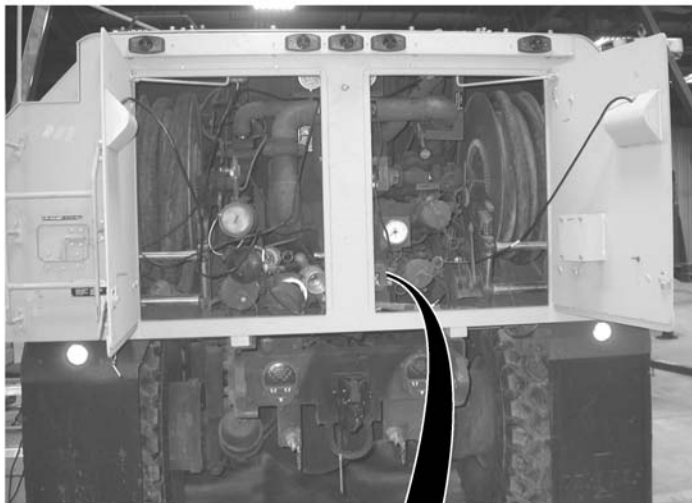
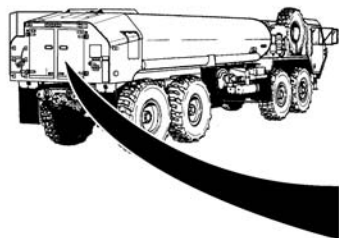
2. Apply pipe thread sealing compound to threads of large compression fitting base (32).
3. Route white wire with green tape (6) and red and blue wire (7) through compression fitting base (32) and install compression nut (9).

## INSTALLATION - MODEL B (A2 VEHICLE) - CONTINUED



4. Install white wire with green tape (6) and red and blue wire (7) on terminal board (8) with two screws (5).

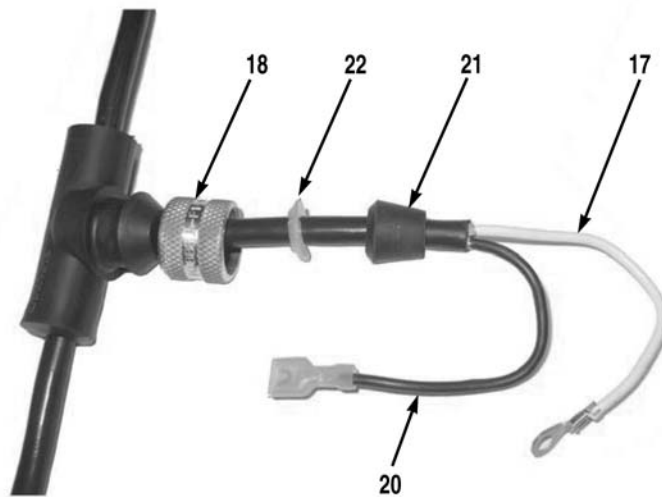
## INSTALLATION - MODEL B (A2 VEHICLE) - CONTINUED

**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. Coat gasket (3) with silicon adhesive-sealant.
6. Install gasket (3) and cover (2) on control junction box (4) with six screws (1).

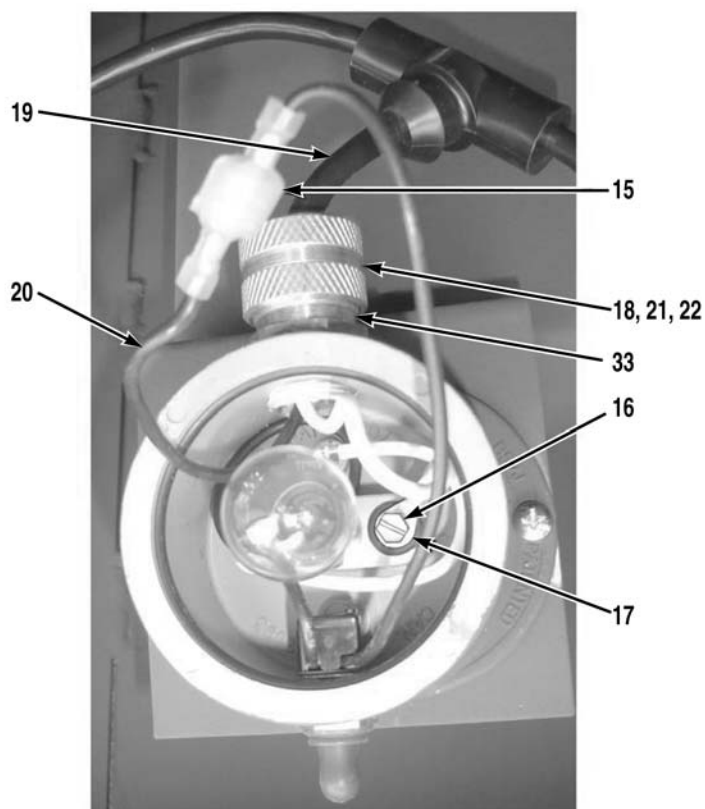
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**INSTALLATION - MODEL B (A2 VEHICLE) - CONTINUED****NOTE**

Both passenger side compartment light harness and driver side compartment light harness are installed the same way. Driver side compartment light shown.

7. Install compression nut (18), plastic washer (22), and rubber seal (21) on black wire (20) and white wire (17).

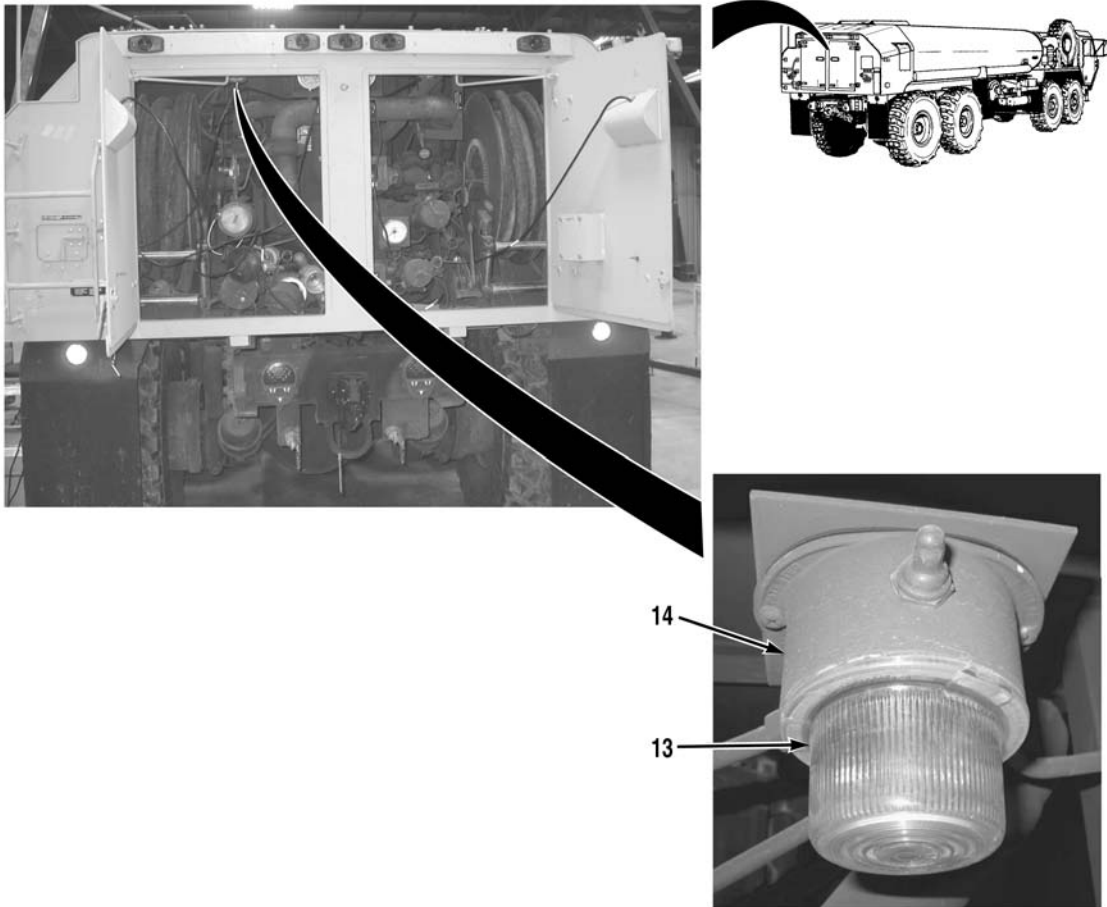


**INSTALLATION - MODEL B (A2 VEHICLE) - CONTINUED****WARNING**

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.

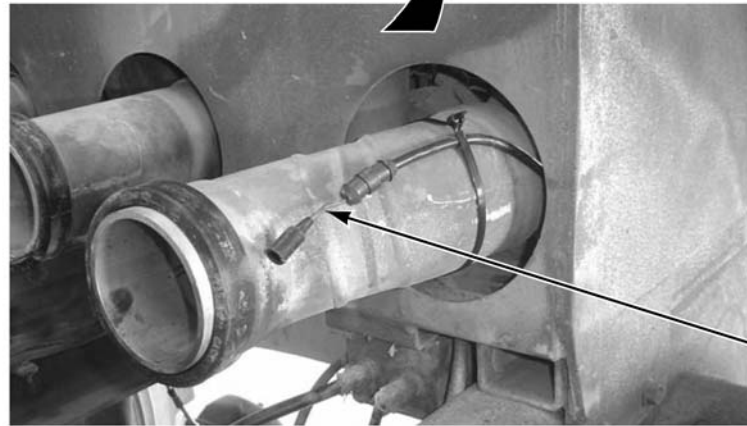
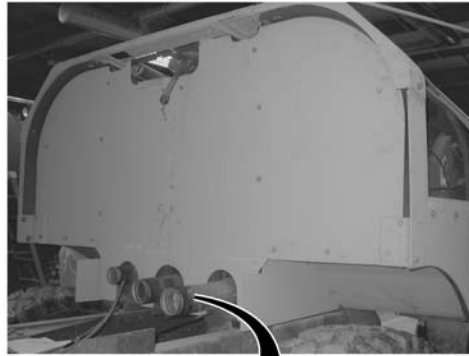
8. Apply pipe thread sealing compound to the thread of the small compression fitting base (33).
9. Route black wire (20) and white wire (17) through compression fitting base (33) and install cable (19), rubber seal (21), plastic washer (22), and compression nut (18).
10. Connect black wire (20) with blade connector to existing blade connector (15). If connectors do not mate, remove both blade connectors and connect wires with butt splice connector. Cover with heat-shrink.
11. Install white wire connector (17) with screw (16).

## INSTALLATION - MODEL B (A2 VEHICLE) - CONTINUED



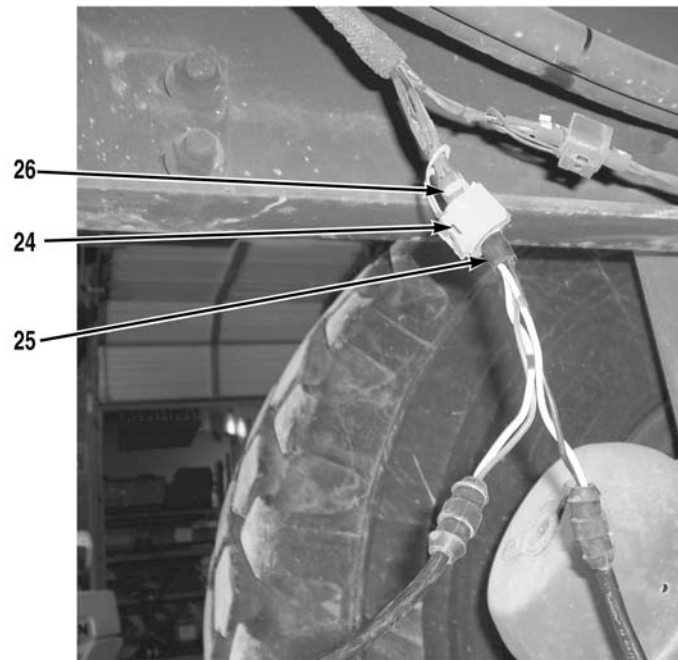
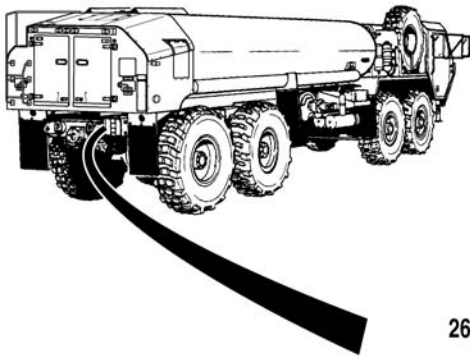
12. Install compartment light lens (13) on compartment light base (14).

## INSTALLATION - MODEL B (A2 VEHICLE) - CONTINUED



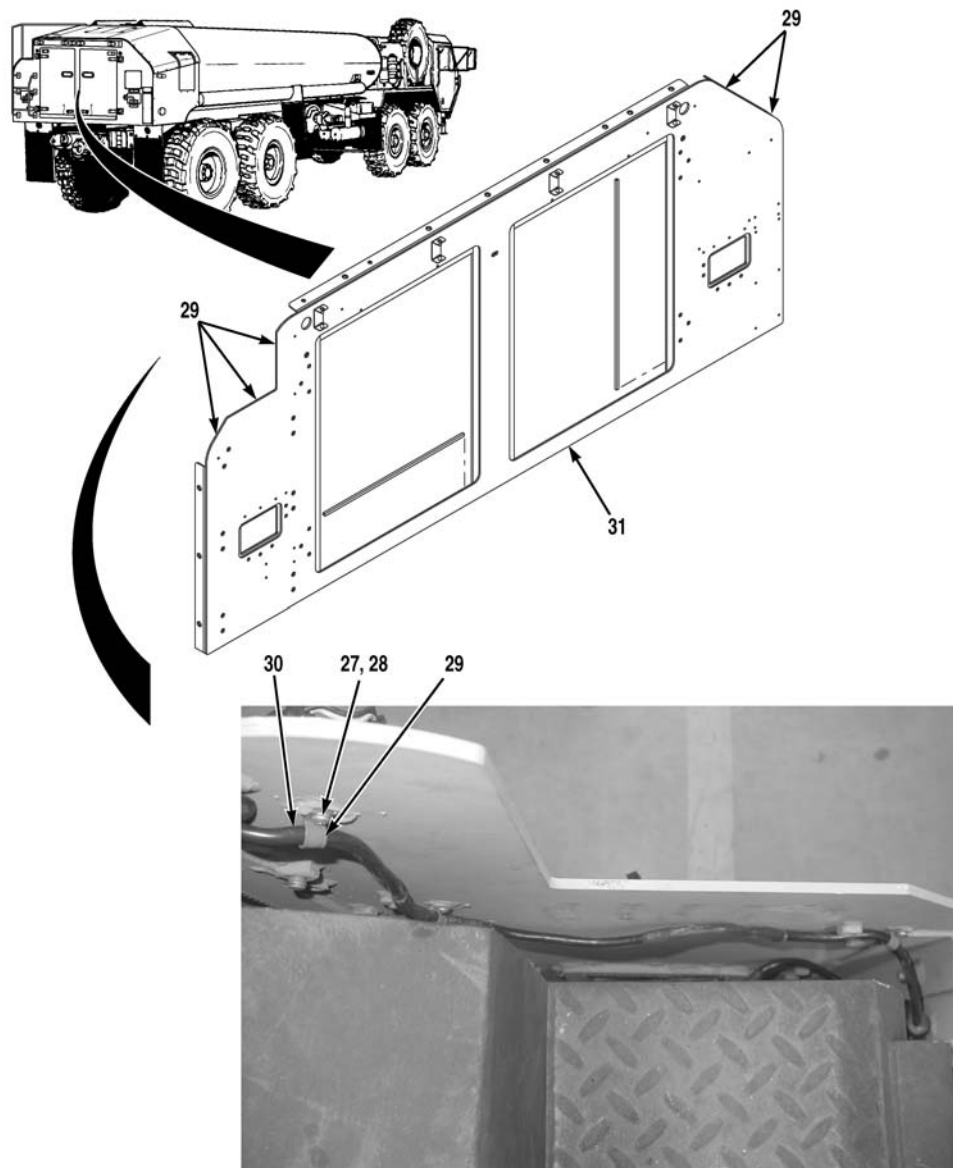
13. Connect tank connector (23) to existing chassis harness.

## INSTALLATION - MODEL B (A2 VEHICLE) - CONTINUED



14. Connect tanker module connector (25) to connector (26).
15. Connect locking device (24) to tanker module connector (25).

## INSTALLATION - MODEL B (A2 VEHICLE) - CONTINUED

**NOTE**

All five loop straps are installed the same way.

16. Install wire harness (30) to rear panel assembly (31) with five loop straps (29), lockwashers (28), and screws (27).

**END OF TASK**

**FOLLOW-ON MAINTENANCE**

1. Install lightbar panel assembly (WP 0030).
2. Install side/rear marker lights (WP 0028).
3. Install right upper side panel assembly (WP 0019).
4. Install left upper side panel assembly (WP 0018).
5. Connect batteries (TM 9-2320-279-20).
6. Remove wheel chocks (TM 9-2320-279-10).

**END OF TASK****END OF WORK PACKAGE**

**CHAPTER 5**  
**SUPPORTING INFORMATION**





**SUPPORTING INFORMATION**

**REFERENCES**

**SCOPE**

This work package lists all publication indexes, forms, field manuals, technical bulletins, technical manuals, and other publications that are referenced in this manual and that apply to operation and maintenance of the M978 Fuel Tanker HEMTT Tanker Armor Module (TAM) kit.

**PUBLICATION INDEXES**

The following indexes should be consulted frequently for latest changes or revisions and for new publications relating to material covered in this technical manual.

Consolidated Army Publications and Forms Index . . . . . DA PAM 25-30

The Army Maintenance Management System (TAMMS) Users Manual . . . . . DA PAM 750-8

**FORMS**

**NOTE**

Refer to DA PAM 750-8, The Army Maintenance Management System (TAMMS) Users Manual, for instructions on the use of maintenance forms.

Equipment Inspection and Maintenance Worksheet . . . . . DA Form 2404, DA Form 5988-E

Product Quality Deficiency Report. . . . . SF Form 368

Recommended Changes to Publications and Blank Forms. . . . . DA Form 2028

**FIELD MANUALS**

First Aid. . . . . FM 4-25.11

**TECHNICAL BULLETINS**

CARC Spot Painting . . . . . TB 43-0242

Color, Marking, and Camouflage Painting of Military Vehicles, Construction Equipment, and Materials Handling Equipment . . . . . TB 43-0209

**TECHNICAL MANUALS**

Maintenance Instructions for Organizational Maintenance, M977 Series, 8 X 8, Heavy Expanded Mobility Tactical Trucks (HEMTT). . . . . TM 9-2320-279-20

Materials Used for Cleaning, Preserving, Abrading, and Cementing Ordnance Materiel and Related Materiels Including Chemicals . . . . . TM 9-247

Operator's Manual for M977 Series, 8 X 8, Heavy Expanded Mobility Tactical Trucks (HEMTT) . . . . . TM 9-2320-279-10

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Procedures for Destruction of Tank-automotive Equipment to Prevent Enemy Use  
(U. S. Army Tank-automotive Command) . . . . . TM 750-244-6

Unit, Direct Support and General Support Maintenance Repair Parts and Special Tools List for the  
M977 Series, 8 X 8, Heavy Expanded Mobility Tactical Trucks (HEMTT) . . . . . TM 9-2320-279-24P

**OTHER PUBLICATIONS**

Standard Abbreviations . . . . . ASME Y14.38-1999

Army Medical Department Expendable/Durable Items . . . . .CTA 8-100

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

**END OF WORK PACKAGE**

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**FIELD LEVEL MAINTENANCE****MAINTENANCE ALLOCATION CHART (MAC) INTRODUCTION**

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**THE ARMY MAINTENANCE SYSTEM MAC**

This introduction provides a general explanation of all maintenance and repair functions authorized at the two maintenance levels under the Two-Level Maintenance System concept.

This MAC (immediately following the introduction) designates overall authority and responsibility for the performance of maintenance functions on the identified end item or component. The application of the maintenance functions to the end item or component levels, which are shown on the MAC in column (4) as:

**Field** – includes two columns, Unit maintenance and Direct Support maintenance. The Unit maintenance column is divided again into two more subcolumns, C for Operator or Crew and O for Unit maintenance.

**Sustainment** – includes two subcolumns, General Support (H) and Depot (D).

The tools and test equipment requirements (immediately following the MAC) list the tools and test equipment (both special tools and common tool sets) required for each maintenance function as referenced from the MAC.

The remarks (immediately following the tools and test equipment requirements) contain supplemental instructions and explanatory notes for a particular maintenance function.

**MAINTENANCE FUNCTIONS**

Maintenance functions are limited to and defined as follows:

1. **Inspect.** To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination (e.g., by sight, sound, or feel).
2. **Test.** To verify serviceability by measuring the mechanical, pneumatic, hydraulic, or electrical characteristics of an item and comparing those characteristics with prescribed standards on a scheduled basis, e.g., load testing of lift devices and hydrostatic testing of pressure hoses.
3. **Service.** Operations required periodically to keep an item in proper operating condition; e.g., to clean (includes decontaminate, when required), to preserve, to drain, to paint, or to replenish fuel, lubricants, chemical fluids, or gases.
  - a. **Unpack.** To remove from packing box for service or when required for the performance of maintenance operations.
  - b. **Repack.** To return item to packing box after service and other maintenance operations.
  - c. **Clean.** To rid the item of contamination.
  - d. **Touch up.** To spot paint scratched or blistered surfaces.
  - e. **Mark.** To restore obliterated identification.

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**MAINTENANCE FUNCTIONS - CONTINUED**

4. **Adjust.** To maintain or regulate, within prescribed limits, by bringing into proper position, or by setting the operating characteristics to specified parameters.
5. **Align.** To adjust specified variable elements of an item to bring about optimum or desired performance.
6. **Calibrate.** To determine and cause corrections to be made or to be adjusted on instruments of test, measuring, and diagnostic equipment used in precision measurement. Consists of comparisons of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.
7. **Remove/install.** To remove and install the same item when required to perform service or other maintenance functions. Install may be the act of emplacing, seating, or fixing into position a spare, repair part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.
8. **Paint.** To prepare and spray color coats of paint so that the vehicle can be identified and protected. The color indicating primary use is applied, preferably, to the entire exterior surface as the background color of the item. Other markings are to be repainted as original so as to retain proper vehicle identification.
9. **Replace.** To remove an unserviceable item and install a serviceable counterpart in its place. "Replace" is authorized by the MAC and assigned maintenance level is shown as the third position code of the Source, Maintenance, and Recoverability (SMR) code.
10. **Repair.** The application of maintenance services, including fault location/troubleshooting, removal/installation, disassembly/assembly procedures, and maintenance actions to identify troubles and restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

**NOTE**

- The following definitions are applicable to the "repair" maintenance function: Inspect, test, service, adjust, align, calibrate, and/or replace.
  - Fault location/troubleshooting. The process of investigating and detecting the cause of equipment malfunctioning; the act of isolating a fault within a system or Unit Under Test (UUT).
  - Disassembly/assembly. The step-by-step breakdown (taking apart) of a spare/functional group coded item to the level of its least component, that is assigned as SMR code for the level of maintenance under consideration (i.e., identified as maintenance significant).
  - Actions. Welding, grinding, riveting, straightening, facing, machining, and/or resurfacing.
1. **Overhaul.** That maintenance effort (service/action) prescribed to restore an item to a completely serviceable/operational condition as required by maintenance standards in appropriate technical publications. Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like new condition.
  2. **Rebuild.** Consists of those services/actions necessary for the restoration of unserviceable equipment to a like new condition in accordance with original manufacturing standards. Rebuild is the highest degree of materiel maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (e.g., hours/miles) considered in classifying Army equipment/components.

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## EXPLANATION OF COLUMNS IN THE MAC

**Column (1) Group Number.** Column (1) lists Functional Group Code (FGC) numbers, the purpose of which is to identify maintenance significant components, assemblies, subassemblies, and modules with the Next Higher Assembly (NHA).

**Column (2) Component/Assembly.** Column (2) contains the item names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

**Column (3) Maintenance Function.** Column (3) lists the functions to be performed on the item listed in column (2). (For a detailed explanation of these functions refer to "Maintenance Functions" outlined above).

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

Field:

C = Operator or Crew maintenance

O = Unit maintenance

F = Direct Support maintenance

Sustainment:

L = Specialized Repair Activity

H = General Support maintenance

D = Depot maintenance

### NOTE

The "L" maintenance level is not included in column (4) of the MAC. Functions to this level of maintenance are identified by work time figure in the "H" column of column (4), and an associated reference code is used in the REMARKS column (6). This code is keyed to the remarks, and the SRA complete repair application is explained there.

**Column (5) Tools and Equipment Reference Code.** Column (5) specifies, by code, those common tool sets (not individual tools), common Test, Measurement, and Diagnostic Equipment (TMDE), and special tools, special TMDE and special support equipment required to perform the designated function. Codes are keyed to the entries in the tools and test equipment table.

**Column (6) Remarks Code.** When applicable, this column contains a letter code, in alphabetical order, which is keyed to the remarks table entries.

**END OF WORK PACKAGE**



**FIELD LEVEL MAINTENANCE**  
**MAINTENANCE ALLOCATION CHART (MAC)**

**Table 1. Two-Level Maintenance Allocation Chart for M978 Tanker Armor Module Kit.**

(1)  <b>GROUP NUMBER</b>	(2)  <b>COMPONENT/ ASSEMBLY</b>	(3)  <b>MAINTENANCE FUNCTION</b>	(4) <b>MAINTENANCE LEVEL</b>				(5)  <b>TOOLS AND EQUIPMENT REF CODE</b>	(6)  <b>REMARKS CODE</b>	
			FIELD		SUSTAINMENT				
			UNIT		DS	GS			DEPOT
			C	O	F	H			D
<b>33</b>	<b>SPECIAL PURPOSE KITS</b>								
3307	Tanker Armor Module Kit	Install		*					
	Rear Door Assembly	Inspect Replace	0.1	0.5			1,2,3	A	
	Rear Door Deadbolt Latch and Linch Pin Assembly	Inspect Replace	0.1	0.2			3	A	
	Rear Door Hinge	Inspect Replace	0.1	0.4			3	A	
	Rear Door Check and Hold Back Assembly	Inspect Service Replace	0.1	0.1 0.4			3	A	
	Rear Access Door Assembly	Inspect Replace	0.1	0.3			3	A	
	Rear Panel Assembly	Inspect Install Repair	0.1	0.9 1.7			1,2,3	A	
	Lower Side Panel Assembly (LH and RH)	Inspect Install Replace	0.1	0.3 0.5			1,2,3	A	
	Left Upper Side Panel Assembly	Inspect Install Repair	0.1	0.6 1.1			1,2,3	A	
	Right Upper Side Panel Assembly	Inspect Install Repair	0.1	0.6 1.1			1,2,3	A	

Table 1. Two-Level Maintenance Allocation Chart for M978 Tanker Armor Module Kit. (Continued)

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE	
			MAINTENANCE LEVEL						
			FIELD		SUSTAINMENT				
			UNIT		DS	GS			DEPOT
			C	O	F	H			D
	Side Access Panel	Inspect Install Repair	0.1	0.1 0.2				2,3	A
	Front Panel Assembly	Inspect Install Replace	0.1	2.2 4.4				1,2,3	A
	Roof Door Latch Assembly	Inspect Replace	0.1	0.2				2,3	A
	Roof Door Hinge	Inspect Replace	0.1	0.8				3	A
	Roof Door Assembly	Inspect Replace	0.1	0.7				1,3	A
	Top Panel Assembly	Inspect Install Replace	0.1	0.3 0.5				1,2,3	A
	Wheel Well Assembly (LH and RH)	Inspect Install Replace	0.1	0.3 0.5				2,3	A
	Ladder and Rail Assembly	Inspect Replace	0.1	0.3				3	A
	Side/Rear Marker Light	Inspect Replace	0.1	0.1				3	A
	Lightbar Panel Assembly	Inspect Replace	0.1	0.6				3	A
	High Mount Stop Light (Optional)	Inspect Replace	0.1	0.2				2,3	A
	Tanker Module Lighting Harness Assembly	Inspect Replace	0.1	4.8				3	A



Table 2. Tools and Test Equipment for M978 Tanker Armor Module Kit.

(1) TOOLS OR TEST EQUIPMENT REFERENCE CODE	(2) MAINTENANCE LEVEL	(3) NOMENCLATURE	(4) NATIONAL STOCK NUMBER (NSN)	(5) TOOL NUMBER (CAGEC)
1	O	Sling	2835-01-078-2081	4-8FTX2IN
2	O	Standard Automotive Tool Set	4910-01-490-6453	SC 4910-95-A81 (59678)
3	O	Tool Kit, General Mechanic's: Automotive	5180-01-454-3787	12B470000

Table 3. Remarks for M978 Tanker Armor Module Kit.

(1) REMARKS CODE	(2) REMARKS
A	Refer to Operator PMCS.

END OF WORK PACKAGE



**SUPPORTING INFORMATION**  
**EXPENDABLE AND DURABLE ITEMS LIST**

**SCOPE**

This work package lists expendable and durable supplies and materials you will need to operate and maintain the Tanker Armor Module (TAM) mounted on the M978 Fuel Tanker, 8 X 8, Heavy Expanded Mobility Tactical Trucks (HEMTT). This listing is for informational purposes only and is not authority to requisition the listed items. These items are authorized to you by CTA 50-970, *Expendable/Durable Items (Except Medical, Class V, Repair Parts, and Heraldic Items)*, or CTA 8-100, *Army Medical Department Expendable/Durable Items*.

**EXPLANATION OF COLUMNS**

**a. Column (1) - Item Number.** This number is assigned to the entry in the listing and is referenced in Initial Setup to identify the material (e.g., Cloth, Abrasive (WP 0035, Item 4).

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

C - Operator/Crew

F - Field Level Maintenance

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

**d. Column (4) - Description, CAGEC, and Part Number.** Indicates the Federal Item name, part number, and the Commercial and Government Entity (CAGE) Code.

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

**Table 1. Expendable and Durable Items.**

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description	(5) U/M
1	F		Adhesive-Sealant, RTV 108 (01139)	
2	F		Adhesive, Thread (05972) 242	
		8040-01-250-3969	50 Milliliter Bottle	BT
3	F		Cleaning Compound, Solvent, Type III (81349) MIL-PRF-680	
		6850-01-474-2318	1 Gallon Can	CN
		6850-01-474-2320	5 Gallon Can	CN
		6850-01-474-2321	55 Gallon Drum	DR

Table 1. Expendable and Durable Items. (Continued)

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description	(5) U/M
4	F		Cloth, Abrasive (80204) ANSI B74.18	
		5350-00-584-4654	50 Sheet Package	PK
5	F		Compound, Sealing, Pipe Thread, Loctite 567	
			(No. 56707), 6 ml tube	ml
		8030-01-166-0675	(No. 56747), 50 ml tube (05972)	ml
			(No. 56765), 250 ml tube	ml
6	C		Detergent: General Purpose, Liquid (83421) 7930-00-282-9699	
		7930-00-282-9699	1 Gallon Can	CN
		9140-00-286-5294	Bulk	GL
		9140-00-286-5295	5 Gallon Can	CN
		9140-00-286-5296	55 Gallon Drum	DR
7	C		Grease, Automotive and Artillery GAA (MIL-G-10924)	
		9150-00-065-0029 9150-01-197-7688	2-1/4-oz tube	oz
		9150-01-197-7693	14-oz cartridge (81349), M-10924-B	oz
		9150-01-197-7690	1-lb can (81349), M-10924-C	lb
		9150-01-197-7689	6.5-lb can (81349), M-10924-D	lb
		9150-01-197-7692	35-lb can (81349), M-10924-E	lb
		9150-01-197-1691	120-lb can (81349), M-10924-F	lb
8	C		Oil, Lubricating, OE/HDO-10 (81349) MIL-PRF-2104	
		9150-00-189-6727	1 Quart Can	CN
		9150-00-186-6668	5 Gallon Can	CN
		9150-00-191-2772	55 Gallon Drum	DR

Table 1. Expendable and Durable Items. (Continued)

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description	(5) U/M
9	C		Rag, Wiping (64067) A-A-531	
		7920-00-205-1711	50 Pound Bale	BL
10	F	9160-01-515-2484	Sealant, RTV200 Electrical (OTC P/N 3119525) (45152)	EA
11	F		Tag, Marker (64067) 9905-00-537-8954	
		9905-00-537-8954	Bundle of 50	BD
12	F		Tape, Pressure Sensitive Adhesive (81349) MIL-T-23397	
		7510-00-473-9513	60 Yard Roll	RL
13	F	5975-01-034-5871	Ties, Cable, Plastic (81343), MS3367-0-7	HD

END OF WORK PACKAGE



**SUPPORTING INFORMATION**  
**MANDATORY REPLACEMENT PARTS**

**SCOPE**

This appendix lists all mandatory replacement parts required for performance of Field Level Maintenance of the Tanker Armor Module (TAM) mounted on the M978 Fuel Tanker, 8 X 8, Heavy Expanded Mobility Tactical Trucks (HEMTT). It authorizes the requisitioning, issue, and disposition of consumable repair parts. All consumable repair parts that are listed in the maintenance tasks are listed here for ease of reference.

**EXPLANATION OF COLUMNS**

- a. Column (1) - Index No.** This number is assigned to the entry in the listing and is referenced in the narrative task box to identify the part, e.g., Locknut (WP 0036, Item 5).
- b. Column (2) - Nomenclature.** Indicates the federal item name and, if required, a description to identify the item.
- c. Column (3) - Part Number.** This is the vendor number assigned to the item.
- d. Column (4) - National Stock Number.** This is the National Stock Number assigned to the item; use it to request or requisition the item.

**Table 1. Mandatory Replacement Parts List.**

(1) Index No.	(2) Nomenclature	(3) Part Number	(4) National Stock Number
1	Nut, Self-locking, Hex	108708A	5310-01-177-4625
2	Nut, Self-locking, Hex	4397020-022	5310-01-421-6085
3	Nut, Self-locking, Hex	4397064-001	5310-01-439-8173
4	Nut, Self-locking, Hex	4397064-005	5310-01-439-8177
5	Nut, Self-locking, Hex	4397064-007	5310-01-513-4636
6	Washer, Lock	4397004-004	5310-01-417-7275
7	Washer, Lock	4397004-005	5310-01-434-1385
8	Washer, Lock	4397004-006	5310-01-433-0941
9	Washer, Lock	4397004-007	5310-01-471-9942
10	Washer, Lock	4397004-008	5310-01-417-7273
11	Washer, Lock	4397004-009	- - -

**END OF WORK PACKAGE**





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**SUPPORTING INFORMATION****TORQUE LIMITS**

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**SCOPE**

This work package lists standard torque values and provides general information for applying torque. Special torque values and tightening sequences are indicated in the maintenance procedures for applicable components.

**GENERAL****CAUTION**

If replacement capscrews are of higher grade than originally supplied, use torque specifications for the original. This will prevent equipment damage due to overtorquing.

- a. Always use torque values listed in Tables 1 and 2 when a maintenance procedure does not give a specific torque value.
  1. Table 1 provides torque limits for SAE standard fasteners.
  2. Table 2 provides torque limits for metric fasteners.
- b. Unless otherwise indicated, standard torque tolerance shall be  $\pm 10$  percent.
- c. Torque values listed are based on clean, dry threads. Reduce torque by 10 percent when engine oil is used as a lubricant. Reduce torque by 20 percent if new plated capscrews are used.

Table 1. Torque Limits - SAE Standard Fasteners.


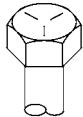


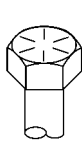
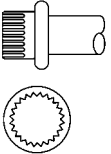
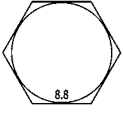
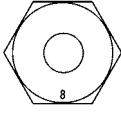
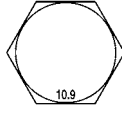
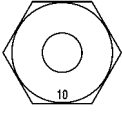
CURRENT USAGE		MUCH USED		MUCH USED		USED AT TIMES		USED AT TIMES	
QUALITY OF MATERIAL		INTERMEDIATE		MINIMUM COMMERCIAL		MEDIUM COMMERCIAL		BEST COMMERCIAL	
SAE Grade Number		1 or 2		5		6 or 7		8	
Capscrew Head Markings						 		 	
Manufacturer's marks may vary									
These are all SAE Grade 5 (3 line)									
		TORQUE		TORQUE		TORQUE		TORQUE	
Dia. Inches	Threads per Inch	Pounds Feet	Newton Meters	Pounds Feet	Newton Meters	Pounds Feet	Newton Meters	Pounds Feet	Newton Meters
1/4	20	5	7	8	11	10	14	12	16
1/4	28	6	8	10	14			14	19
5/16	18	11	15	17	23	19	26	24	33
5/16	24	13	18	19	26			27	37
3/8	16	18	24	31	42	39	53	44	60
3/8	24	20	27	35	47			49	66
7/16	14	28	38	49	66	55	75	70	95
7/16	20	30	41	55	75			78	106
1/2	13	39	53	75	102	85	115	105	142
1/2	20	41	56	85	115			120	163
9/16	12	51	69	110	149	120	163	155	210
9/16	18	55	75	120	163			170	230
5/8	11	83	113	150	203	167	226	210	285
5/8	18	95	129	170	230			240	325
3/4	10	105	142	270	366	280	380	375	508
3/4	16	115	156	295	400			420	569
7/8	9	160	217	395	536	440	597	605	820
7/8	14	175	237	435	590			675	915
1	8	235	319	590	800	660	895	910	1234
1	14	250	339	660	895			990	1342

Table 2. Torque Limits - Metric Fasteners.

TORQUE VALUES FOR METRIC THREAD FASTENERS WITH LUBRICATED* OR PLATED THREADS**				
Thread Diameter-Pitch				
	Class 8.8 Bolt	Class 8 Nut	Class 10.9 Bolt	Class 10 Nut
	Pounds Feet	Newton Meters	Pounds Feet	Newton Meters
M6	5	7	7	9
M8	12	16	17	23
M8x1	13	18	18	24
M10	24	33	34	46
M10x1.25	27	37	38	52
M12	42	57	60	81
M12x1.5	43	58	62	84
M14	66	89	95	129
M14x1.5	72	98	103	140
M16	103	140	148	201
M16x1.5	110	149	157	213
M18	147	199	203	275
M18x1.5	165	224	229	310
M20	208	282	288	390
M20x1.5	231	313	320	434
M22	283	384	392	531
M22x1.5	315	427	431	584
M24	360	488	498	675
M24x2	392	531	542	735
M27	527	715	729	988
M27x2	569	771	788	1068
M30	715	969	990	1342
M30x2	792	1074	1096	1486

\* All plated and unplated fasteners should be coated with oil before installation.

\*\* Use these torque values if either the bolt or nut is lubricated or plated (zinc-phosphate conversion-coat, cadmium-plated, or waxed).

**END OF WORK PACKAGE**



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 SUPPORTING INFORMATION

 FIELD MAINTENANCE RPSTL INTRODUCTION
 

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## SCOPE

This RPSTL lists and authorizes spares and repair parts required for performance of Field Level Maintenance of the Tanker Armor Module (TAM) mounted on the M978 Fuel Tanker, 8 X 8, Heavy Expanded Mobility Tactical Trucks (HEMTT). It authorizes the requisitioning, issue, and disposition of spares and repair parts as indicated by the source, maintenance, and recoverability (SMR) codes. The TAM Kit consist of the following:

TAM Kit (Green)	5SK319
.Push Kit (Green)	3593395
.Ancillary Kit (Green)	3593368
.Armor Kit (Green)	3640451

TAM Kit (Tan)	5SK320
.Push Kit (Tan)	3593395
.Ancillary Kit (Tan)	3593368
.Armor Kit (Tan)	3593367

## GENERAL

In addition to this Introduction work package, this RPSTL includes the following work package:

- a. Repair Parts Lists Work Package.** Work package containing lists of spares and repair parts authorized by this RPSTL for use in the performance of maintenance. This work package also includes parts which must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in ascending alpha-numeric sequence, with the parts in each group listed in ascending figure and item number sequence. Repair parts kits are listed separately in their own functional group. Items listed are shown on the associated illustrations.
- b. Special Tools List Work Package.** There are no special tools for the Tanker Armor Module (TAM) mounted on the M978 Fuel Tanker, 8 X 8, Heavy Expanded Mobility Tactical Trucks (HEMTT).
- c. Cross-Reference Indexes Work Package.** There are two cross-reference indexes in this RPSTL: National Stock Number Index and Part Number Index.

**EXPLANATION OF COLUMNS IN THE REPAIR PARTS LISTS WORK PACKAGES**

- a. **ITEM (Column 1).** Indicates the number used to identify items called out in the illustration.
- b. **SMR (Column 2).** The SMR code containing supply/requisitioning information, maintenance level authorization criteria, and disposition instruction, as shown in the following breakout.

SOURCE CODE	MAINTENANCE CODE	RECOVERABILITY CODE
XXxxx	xxXXx	xxxxX
1st two positions	3rd position                      4th position	5th position
How you get an item.	Who can install, replace or use the item.      Who can do complete repair* on the item.	Who determines disposition action on an unserviceable item.

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

1. **Source Code.** The source code tells you how to get an item needed for maintenance, repair, or overhaul of an end item/equipment. Explanations of source codes follow:

Code	Application/Explanation
PA PB PC PD PE PF PG	Stocked items; use the applicable NSN to request/requisition items with these source codes. They are authorized to the maintenance category indicated by the code entered in the third position of the SMR code.  Items coded PC are subject to deterioration.
KD KF KB	Items with these codes are not to be requested/requisitioned individually. They are part of a kit which is authorized to the maintenance level indicated in the third position of the SMR code. The complete kit must be requisitioned and applied.
MO - Made at Unit/AVUM level MF - Made at DS/AVIM Level MH - Made at GS Level ML - Made at SRA MD - Made at Depot	Items with these codes are not to be requested/requisitioned individually. They must be made from bulk material which is identified by the part number in the DESCRIPTION AND USABLE ON CODE (UOC) column and listed in the bulk material group work package of the RPSTL. If the item is authorized to you by the third position of the SMR code, but the source code indicates it is made at a higher level, order the item from the higher level of maintenance.
AO-Assembled by Unit/AVUM level AF-Assembled by DS/AVIM level AH-Assembled by GS level AL-Assembled by SRA AD-Assembled by Depot	Items with these codes are not to be requested/requisitioned individually. The parts that make up the assembled item must be requisitioned or fabricated and assembled at the level of maintenance indicated by the source code. If the third position of the SMR code authorizes you to replace the item, but the source code indicates the item is assembled at a higher level, order the item from the higher level of maintenance.

**EXPLANATION OF COLUMNS IN THE REPAIR PARTS LISTS WORK PACKAGES - CONTINUED**

<b>Code</b>	<b>Application/Explanation</b>
XA	Do not requisition an "XA" coded item. Order the next higher assembly. (Refer to NOTE below).
XB	If an item is not available from salvage, order it using the CAGEC and P/N.
XC	Installation drawings, diagrams, instruction sheets, field service drawings; identified by manufacturer's P/N.
XD	Item is not stocked. Order an XD-coded item through normal supply channels using the CAGEC and P/N given, if no NSN is available.
<b>NOTE</b>	
Cannibalization of controlled exchange, when authorized, may be used as a source of supply for items with the above source codes, except for those source coded "XA" or those aircraft support items restricted by requirements of AR 750-1.	

2. **Maintenance Code.** Maintenance codes tell you the level(s) of maintenance authorized to use and repair support items. The maintenance codes are entered in the third and fourth positions of the SMR code as follows:
- (a) **Third Position.** The maintenance code entered in the third position tells you the lowest maintenance level authorized to remove, replace, and use an item. The maintenance code entered in the third position will indicate authorization to one of the following levels of maintenance:

<b>Code</b>	<b>Application/Explanation</b>
C	Crew or Operator maintenance done within Field maintenance.
O	Unit Level maintenance can remove, replace, and use the item.
F	Direct Support maintenance can remove, replace, and use the item.
H	General Support maintenance can remove, replace, and use the item.
L	Specialized Repair Activity (SRA) can remove, replace, and use the item.
D	Depot Maintenance can remove, replace, and use the item.

- (b) **Fourth Position.** The maintenance code entered in the fourth position tells you whether or not the item is to be repaired and identifies the lowest maintenance level with the capability to do complete repair (perform all authorized repair functions).

## EXPLANATION OF COLUMNS IN THE REPAIR PARTS LISTS WORK PACKAGES - CONTINUED

**NOTE**

Some limited repair may be done on the item at a lower level of maintenance, if authorized by the Maintenance Allocation Chart (MAC) and SMR codes.

Code	Application/Explanation
O	Unit is the lowest level that can do complete repair of the item.
F	Direct Support is the lowest level that can do complete repair of the item.
H	General Support is the lowest level that can do complete repair of the item.
L	Specialized Repair Activity (SRA) is the lowest level that can do complete repair of the item.
D	Depot is the lowest level that can do complete repair of the item.
Z	Nonreparable. No repair is authorized.
B	No repair is authorized. No parts or special tools are authorized for the maintenance of a "B" coded item. However, the item may be reconditioned by adjusting, lubricating, etc., at the user level.

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

Code	Application/Explanation
Z	Nonreparable item. When unserviceable, condemn and dispose of the item at the level of maintenance shown in the third position of the SMR code.
O	Reparable item. When uneconomically repairable, condemn and dispose of the item at the Unit level maintenance.
F	Reparable item. When uneconomically repairable, condemn and dispose of the item at Direct Support level.
H	Reparable item. When uneconomically repairable, condemn and dispose of the item at General Support level.
D	Reparable item. When beyond lower level repair capability, return to depot. Condemnation and disposal of item are not authorized below depot level.
L	Reparable item. Condemnation and disposal of item not authorized below Specialized Repair Activity (SRA).
A	Item requires special handling or condemnation procedures because of specific reasons (e.g., precious metal content, high dollar value, critical material, or hazardous material). Refer to appropriate manuals/directives for specific instructions.

c. **NSN - (Column 3).** The NSN for the item is listed in this column.

d. **CAGEC (Column 4).** The Commercial and Government Entity Code (CAGEC) is a five-digit code which is used to identify the manufacturer, distributor, or Government agency/activity that supplies the item.



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**EXPLANATION OF COLUMNS IN THE REPAIR PARTS LISTS WORK PACKAGES - CONTINUED**

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

**NOTE**

When you use an NSN to requisition an item, the item you receive may have a different part number from the part ordered.

**f. DESCRIPTION AND USABLE ON CODE (UOC) (Column 6).** This column includes the following information:

1. The Federal item name and, when required, a minimum description to identify the item.
2. Part numbers of bulk materials are referenced in this column in the line entry to be manufactured or fabricated.
3. Hardness Critical Item (HCI). A support item that provides the equipment with special protection from electromagnetic pulse (EMP) damage during a nuclear attack.
4. The statement END OF FIGURE appears just below the last item description in column (6) for a given figure in the repair parts list.

**g. QTY (Column 7).** The QTY (quantity per figure) column indicates the quantity of the item used in the breakout shown on the illustration/figure, which is prepared for a functional group, subfunctional group, group or an assembly. A "V" appearing in this column in lieu of a quantity indicates that the quantity is variable and the quantity may vary from application to application.

**EXPLANATION OF CROSS-REFERENCE INDEXES WORK PACKAGE FORMAT AND COLUMNS****a. National Stock Number (NSN) Index Work Package.**

1. **STOCK NUMBER Column.** This column lists the NSN by National Item Identification Number (NIIN) sequence. The NIIN consists of the last nine digits of the NSN (i.e., NSN 5305-01-674-1467). When using this column to locate an item, ignore the first four digits of the NSN. However, the complete NSN should be used when ordering items by stock number.
2. **FIG. Column.** This column lists the number of the figure where the item is identified/located. The figures are in numerical order in WP 0038 00.
3. **ITEM Column.** The item number identifies the item associated with the figure listed in the adjacent FIG. column. This item is also identified by the NSN listed on the same line.

**b. Part Number (P/N) Index Work Package.**

Part numbers in this index are listed in ascending alphanumeric sequence (i.e., vertical arrangement of letter and number combination which places the first letter or digit of each group in order A through Z, followed by the numbers 0 through 9 and each following letter or digit in like order).

1. **PART NUMBER Column.** Indicates the P/N assigned to the item.
2. **FIG. Column.** This column lists the number of the figure where the item is identified/located in the repair parts list and special tools list work packages.

**EXPLANATION OF COLUMNS IN THE REPAIR PARTS LISTS WORK PACKAGES - CONTINUED**

3. **ITEM Column.** The item number is the number assigned to the item as it appears in the figure referenced in the adjacent figure number column.

**SPECIAL INFORMATION**

**a. Usable On Code (UOC).** The UOC appears in the lower left corner of the DESCRIPTION column heading. Usable on codes are shown as "UOC:" in the Description Column (justified left) on the first line under the applicable item/nomenclature. Uncoded items are applicable to all models. Identification of the UOC's used in the RPSTL are:

Code	Used On
ARM	HEMTT

**b. Associated Publications.** The publication(s) listed below pertain to the Heavy Expanded Mobility Tactical Trucks.

TM 9-2320-279 Series of Technical Manuals	HEMTT
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**HOW TO LOCATE REPAIR PARTS****a. When National Stock Number is Known:**

1. First. If you have the NSN, look in the STOCK NUMBER column of the NSN index work package. The NSN is arranged in NIIN sequence. Note the figure and item number next to the NSN.
2. Second. Turn to the figure and locate the item number. Verify that the item is the one you are looking for.

**b. When Part Number is Known.**

1. First. If you have the P/N and not the NSN, look in the PART NUMBER column of the P/N index work package. Identify the figure and item number.
2. Second. Look up the item on the figure in the applicable repair parts list work package.

**ABBREVIATIONS**

For standard abbreviations see ASME Y14.38-1999, *Abbreviations and Acronyms*.

Abbreviations	Explanation
NIIN	National Item Identification Number (consists of the last 9 digits of the NSN)
RPSTL	Repair Parts and Special Tools Lists
SMR	Source, Maintenance, and Recoverability Code

**END OF WORK PACKAGE**

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**SUPPORTING INFORMATION****FIELD MAINTENANCE RPSTL**

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	<b>Figure</b>	<b>Page</b>
<b>HEMTT Tanker Armor Module</b>		
Rear Panel Assembly (Sheet 1 of 3)	1	0039-2
Lower Panel Assembly	2	0039-8
Upper Side Panel Assembly	3	0039-10
Side Access Panel	4	0039-12
Front Panel Assembly	5	0039-14
Top Panel Assembly (Sheet 1 of 2)	6	0039-17
Wheel Well Assembly	7	0039-20
Tanker Module Lighting Harness Assembly (Sheet 1 of 3)	8	0039-22
Ladders and Brackets (Sheet 1 of 3)	9	0039-28
Couplings (Sheet 1 of 2)	10	0039-35
Fig. Kits		0039-38
NSN Index		0039-40
Part Number Index		0039-42

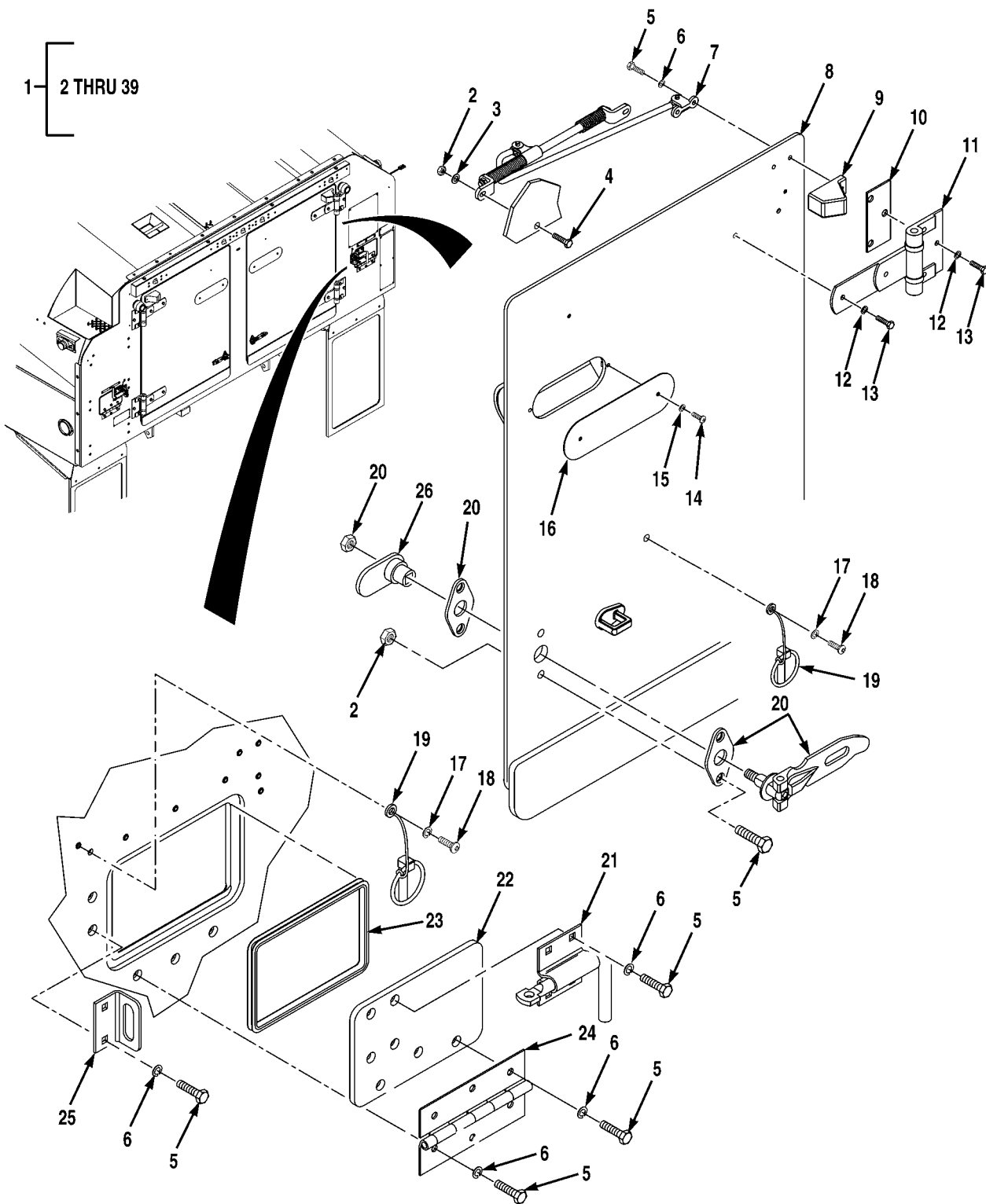


FIG. 1 REAR PANEL ASSEMBLY (SHEET 1 OF 3)

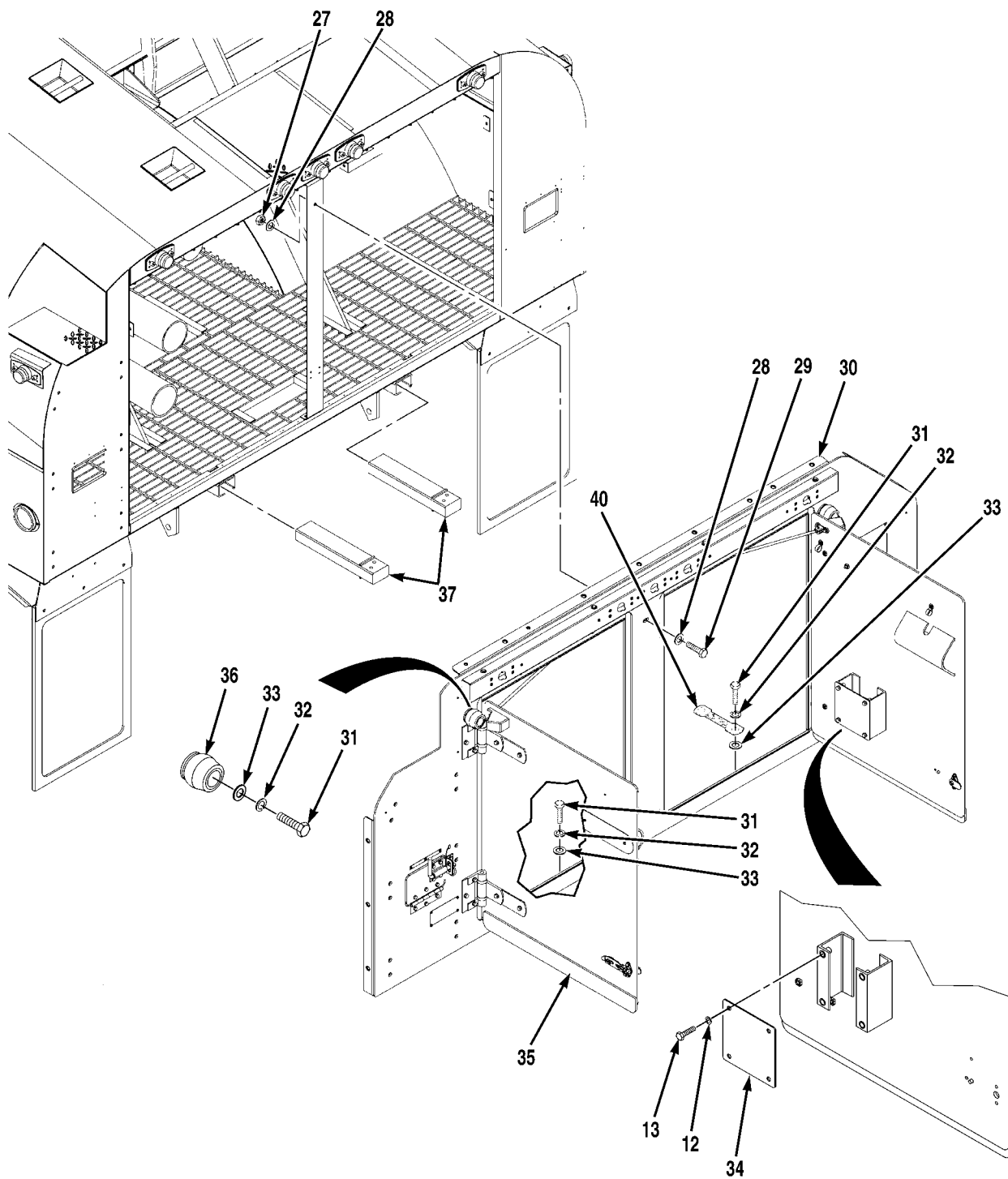


FIG. 1 REAR PANEL ASSEMBLY (SHEET 2 OF 3)

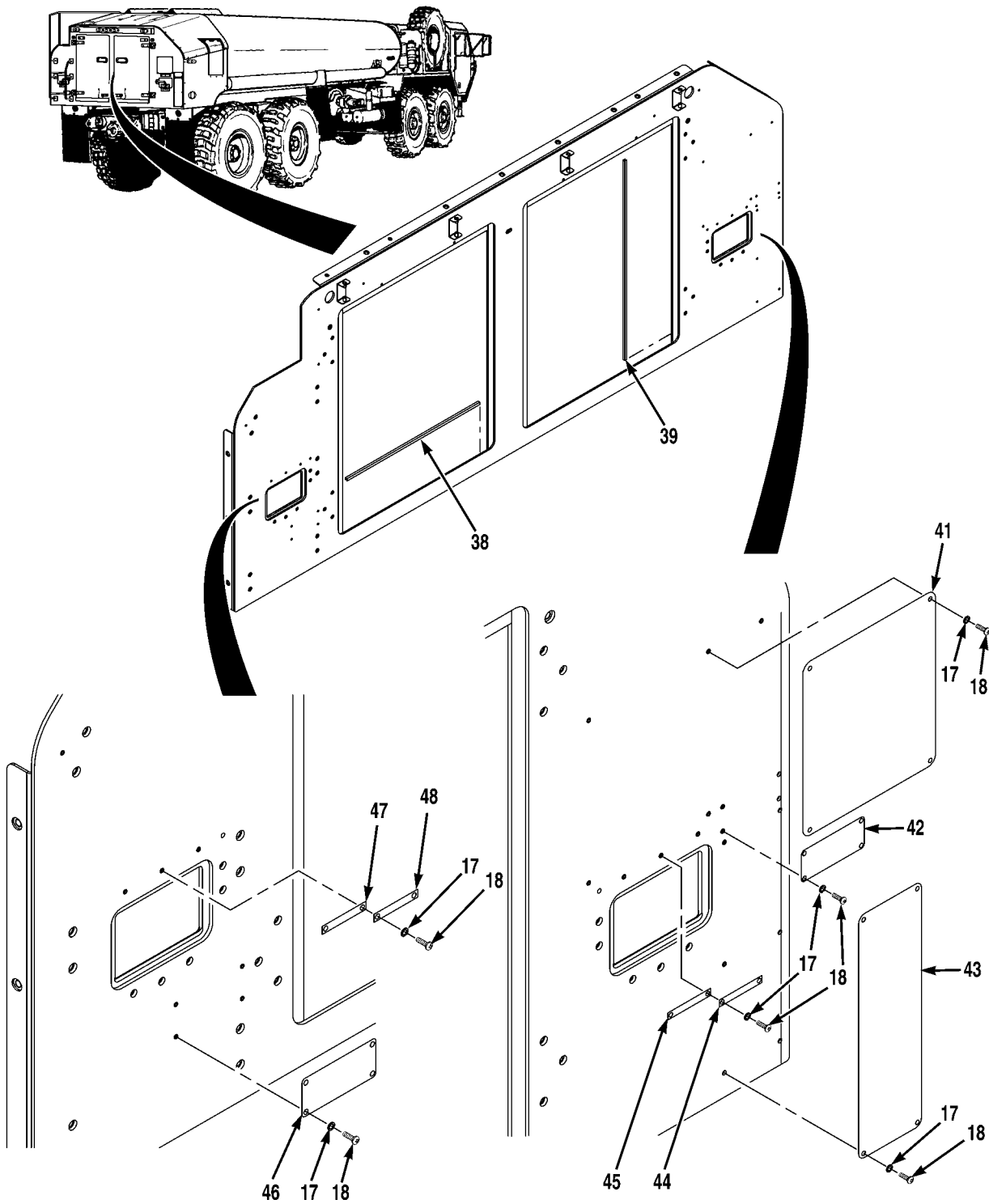


FIG. 1 REAR PANEL ASSEMBLY (SHEET 3 OF 3)

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
					FIG. 1 REAR PANEL ASSEMBLY	
1	PAFZZA		45152	5KP733	PANEL ASSEMBLY REAR, GREEN . . . . .	1
1	PAFZZA		45152	5KP717	PANEL ASSEMBLY REAR,TAN . . .	1
2	PAFZZA	5310-01-439-8173	6W728	4397064-001	.NUT,SELF-LOCKING,HE, 1/4-20 . .	8
3	PAFZZA	5340-01-417-8995	6W728	4397005-011	.WASHER,FLAT 1/4 USS, .312 X .734 X .065 . . . . .	4
4	PAFZZA	5306-01-436-5392	6W728	4397000-010	.SCREW,CAP,HEX HD, .250-20 X 1.25 . . . . .	4
5	PAFZZA	5306-01-430-7399	6W728	4397000-006	.BOLT,MACHINE, .250-20 X .75 . . .	28
6	PAFZZA	5310-01-433-0941	6W728	4397004-006	.WASHER,LOCK, 1/4 . . . . .	28
7	PAFZZA		6W728	6433279-01M1	.DOOR CHECK AND HOLD,LH, GREEN . . . . .	1
7	PAFZZA		6W728	6433278-01M1	.DOOR CHECK AND HOLD,RH, GREEN . . . . .	1
7	PAFZZA		6W728	6433279-200M1	.DOOR CHECK AND HOLD,LH, TAN . . . . .	1
7	PAFZZA		6W728	6433278-200M1	.DOOR CHECK AND HOLD,RH, TAN . . . . .	1
8	PAFZZA		6W728	6433088-01M1	.DOOR,REAR ACCESS,RH, GREEN . . . . .	1
8	PAFZZA		6W728	6433088-200M1	.DOOR,REAR ACCESS,RH,TAN . .	1
9	PAFZZA		6W728	6433317-01M1	.BRACKET,DOOR STOP,GREEN . .	2
9	PAFZZA		6W728	6433317-200M1	.BRACKET,DOOR STOP,TAN . . . . .	2
10	PAFZZA		6W728	6433267-01M1	.PLATE,SPACER,HINGE,GREEN . .	4
10	PAFZZA		6W728	6433267-200M1	.PLATE,SPACER,HINGE,TAN . . . . .	4
11	PAFZZA		6W728	6433082-01M1	.HINGE,DOOR,GREEN . . . . .	4
11	PAFZZA		6W728	6433082-200M1	.HINGE,DOOR,TAN . . . . .	4
12	PAFZZA	5310-01-417-9942	6W728	4397004-007	.WASHER,LOCK, 5/16 . . . . .	20
13	PAFZZA	5305-01-420-6637	6W728	4397000-034	.SCREW,CAP,HEXAGON H, .313-18 X 1.00 . . . . .	20
14	PAFZZA	5305-01-513-5883	6W728	4397012-076	.SCREW,MACHINE,PAN H, 10-24 X 1.00 . . . . .	4
15	PAFZZA	5310-01-434-1385	6W728	4397004-005	.WASHER,LOCK, NO. 10 . . . . .	4
16	PAFZZA		6W728	6433129-200M1	.COVER,LIGHT OPENING,TAN . . .	2
16	PAFZZA		6W728	6433129-01M1	.COVER,LIGHT OPENING, GREEN . . . . .	2
17	PAFZZA	5310-01-417-7575	6W728	4397004-004	.WASHER,LOCK, NO. 8 . . . . .	26
18	PAFZZA	5305-01-434-0830	6W728	4397012-054	.SCREW,MACHINE, 8-32 X .500 . .	26

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
19	PAFZZA		6W728	6433289-01M1	.PIN,LINCH, 5/16 . . . . .	4
20	PAFZZA		6W728	6433134-02M1	.HASP,LATCH BOX, DOOR LOCK, GREEN . . . . .	2
20	PAFZZA		6W728	6433134-202M1	.HASP,LATCH BOX, DOOR LOCK, TAN . . . . .	2
21	PAFZZA		6W728	6433123-203M1	.LATCH ASSEMBLY, SLIDING PADLOCKABLE, GREEN . . . . .	2
21	PAFZZA		6W728	6433123-03M1	.LATCH ASSEMBLY, SLIDING PADLOCKABLE, TAN . . . . .	2
22	PAFZZA		6W728	6433086-200M1	.DOOR, REAR ACCESS, RH, TAN .	1
22	PAFZZA		6W728	6433087-200M1	.DOOR, REAR ACCESS, LH, TAN . .	1
22	PAFZZA		6W728	6433086-01M1	.DOOR, REAR ACCESS, RH, GREEN . . . . .	1
22	PAFZZA		6W728	6433087-01M1	.DOOR, REAR ACCESS, LH, GREEN . . . . .	1
23	PAFZZA		6W728	6433284-03M1	.EDGING, COMPOSITE, GR 20.25 IN . . . . .	2
24	PAFZZA		6W728	6433085-200M1	.HINGE, REAR ACCESS, TAN . . . .	2
24	PAFZZA		6W728	6433085-01M1	.HINGE, REAR ACCESS, GREEN .	2
25	PAFZZA		6W728	6433123-02M1	.BRACKET, SLIDING, LATCH ASSEMBLY, GREEN. . . . .	2
25	PAFZZA		6W728	6433123-202M1	.BRACKET, SLIDING, LATCH ASSEMBLY, TAN. . . . .	2
26	PAFZZA		6W728	6433268-200M1	.SPACER, DOOR LATCH, TAN . . . .	2
26	PAFZZA		6W728	6433268-01M1	.SPACER, DOOR LATCH, GREEN .	2
27	PAFZZA	5310-01-439-8177	6W728	4397064-005	.NUT, SELF-LOCKING, HE, 3/8-16 .	1
28	PAFZZA	5310-01-436-3742	6W728	4397005-015	.WASHER, FLAT, 3/8 USS .438 X 1.00 X .083 . . . . .	2
29	PAFZZA	5305-01-475-0404	6W728	4397000-072	.SCREW, CAP, HEX HD, .375-16 X 3.50 . . . . .	1
30	PAFZZA		6W728	6433045-01M1	.PANEL, REAR, GREEN . . . . .	1
30	PAFZZA		6W728	6433045-200M1	.PANEL, REAR, TAN . . . . .	1
31	PAFZZA		6W728	4397000-381	.SCREW, CAP, HEX HD, .438-14 X 1.25 . . . . .	6
32	PAFZZA		6W728	4397004-009	.WASHER, LOCK . . . . .	6
33	PAFZZA	5310-01-417-7334	6W728	4397005-016	.WASHER, FLAT, 7/16 SAE .469 X .922 X .065 . . . . .	6
34	PAFZZA		6W728	6433273-200M1	.PLATE, DOOR SHUT-OFF BRACKET, TAN. . . . .	1
34	PAFZZA		6W728	6433273-01M1	.PLATE, DOOR SHUT-OFF BRACKET, GREEN. . . . .	1



(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
35	PAFZZA		6W728	6433089-01M1	.DOOR,REAR ACCESS,LH, GREEN . . . . .	1
35	PAFZZA		6W728	6433089-200M1	.DOOR,REAR ACCESS,LH,TAN. . .	1
36	PAFZZA		6W728	6133318-01M1	.BUMPER,DOOR STOP, GBA-10 . .	2
37	PAFZZA		6W728	6433044-200M1	.BAR, REAR PANEL, ATTACH,TAN	2
37	PAFZZA		6W728	6433044-01M1	.BAR, REAR PANEL, ATTACH, GREEN . . . . .	2
38	PAFZZA		6W728	6433284-01M1	.EDGING,COMPOSITE, GR 26 IN .	4
39	PAFZZA		6W728	6433284-02M1	.EDGING,COMPOSITE, GR 33.75 IN. . . . .	4
40	PAFZZA	5999-01-336-9216	45152	1660500	STRIP,ELECTRICAL, GR . . . . .	1
41	PAFZZA	9905-01-500-7550	45152	2227220	PLATE,INSTRUCTION, SCHEMATIC,AL . . . . .	1
42	PAFZZA	7690-01-459-5469	45152	2227090	MARKER,IDENTIFICAT CAUTION,V1 VALVE & PUMP . . . .	1
43	PAFZZA	9905-01-156-7292	45152	2BA764	TAG,MARKER INSTR, OPERATING,AL . . . . .	1
44	PAFZZA	9905-01-155-3223	45152	2BA731	TAG,MARKER REEL STATIC SR2,AL . . . . .	1
45	PAFZZA	9905-01-154-9262	1DK67	2226950	TAG,MARKER REEL STATIC SR1,AL . . . . .	1
46	PAFZZA	9905-01-151-6886	45152	1356160	PLATE,INSTRUCTION . . . . .	1
47	PAFZZA	9905-01-157-5358	45152	2BA724	TAG,MARKER CNTRL HAND ACTIVATED . . . . .	1
48	PAFZZA	9905-01-155-8338	45152	2BA725	TAG,MARKER REEL HAND ACT CNTRL. . . . .	1
<b>END OF FIGURE</b>						

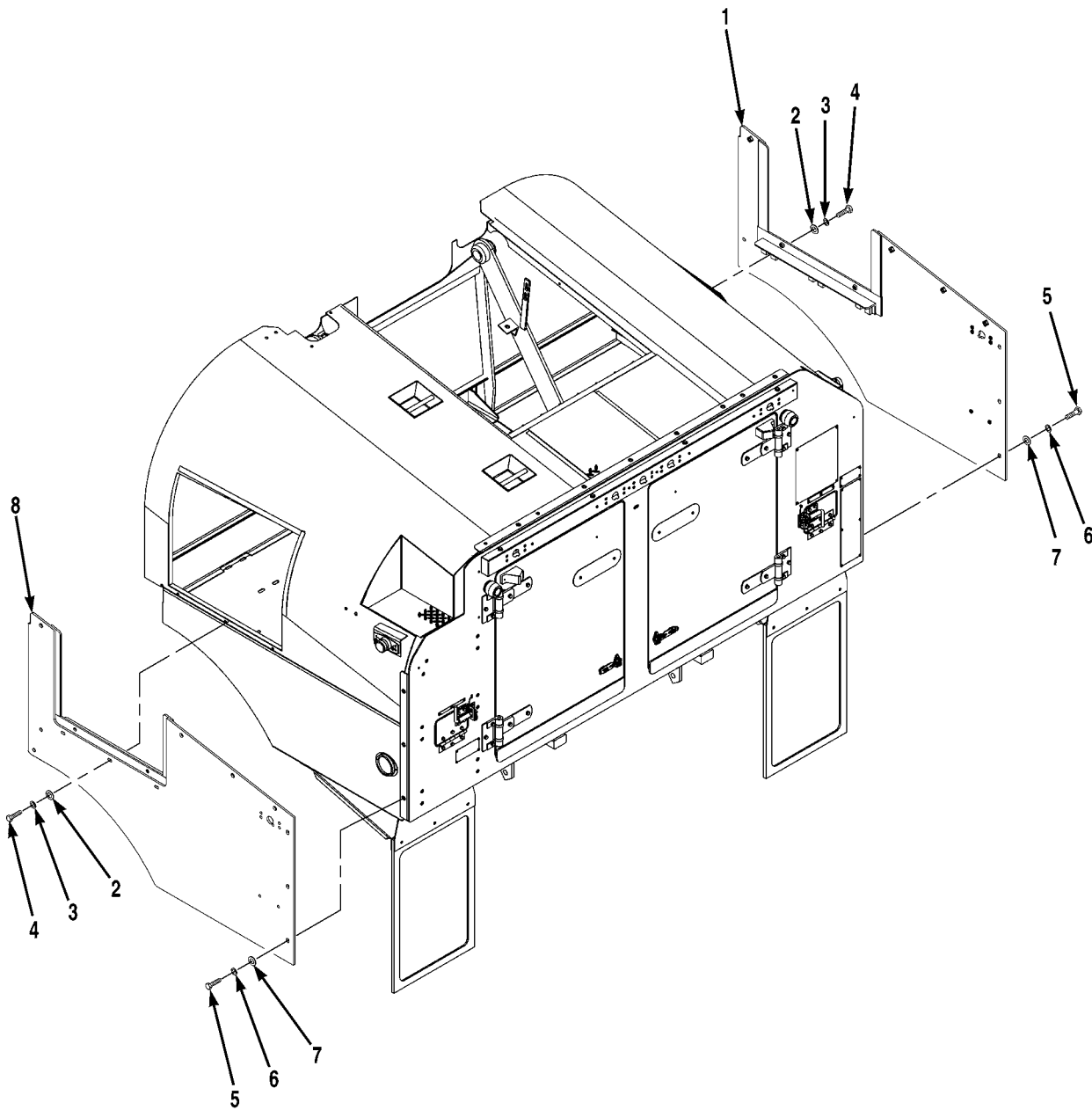


FIG. 2 LOWER PANEL ASSEMBLY

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
FIG. 2 LOWER PANEL ASSEMBLY						
1	PAFZZA		6W728	6433058-01M1	PANEL SIDE,LOWER,RH,GREEN .	1
1	PAFZZA		6W728	6433058-200M1	PANEL SIDE,LOWER,RH,TAN	1
2	PAFZZA	5340-01-417-8995	6W728	4397005-011	WASHER,FLAT, 1/4 USS .312 X .734 X .065 . . . . .	6
3	PAFZZA	5310-01-417-9942	6W728	4397004-007	WASHER,LOCK, 5/16 . . . . .	6
4	PAFZZA	5305-01-530-5159	6W728	4397000-041	SCREW,CAP,HEXAGON H, .312-18X2.25 . . . . .	6
5	PAFZZA		6W728	4397000-382	SCREW,CAP,HEX HD, .438-14 X 1.50 . . . . .	6
6	PAFZZA		6W728	4397004-009	WASHER,LOCK . . . . .	6
7	PAFZZA	5310-01-417-7334	6W728	4397005-016	WASHER,FLAT, 7/16 SAE .469 X .922 X .065 . . . . .	6
8	PAFZZA		6W728	6433059-200M1	PANEL SIDE,LOWER,LH,TAN . . . .	1
8	PAFZZA		6W728	6433059-01M1	PANEL SIDE,LOWER,LH,GREEN .	1
<b>END OF FIGURE</b>						

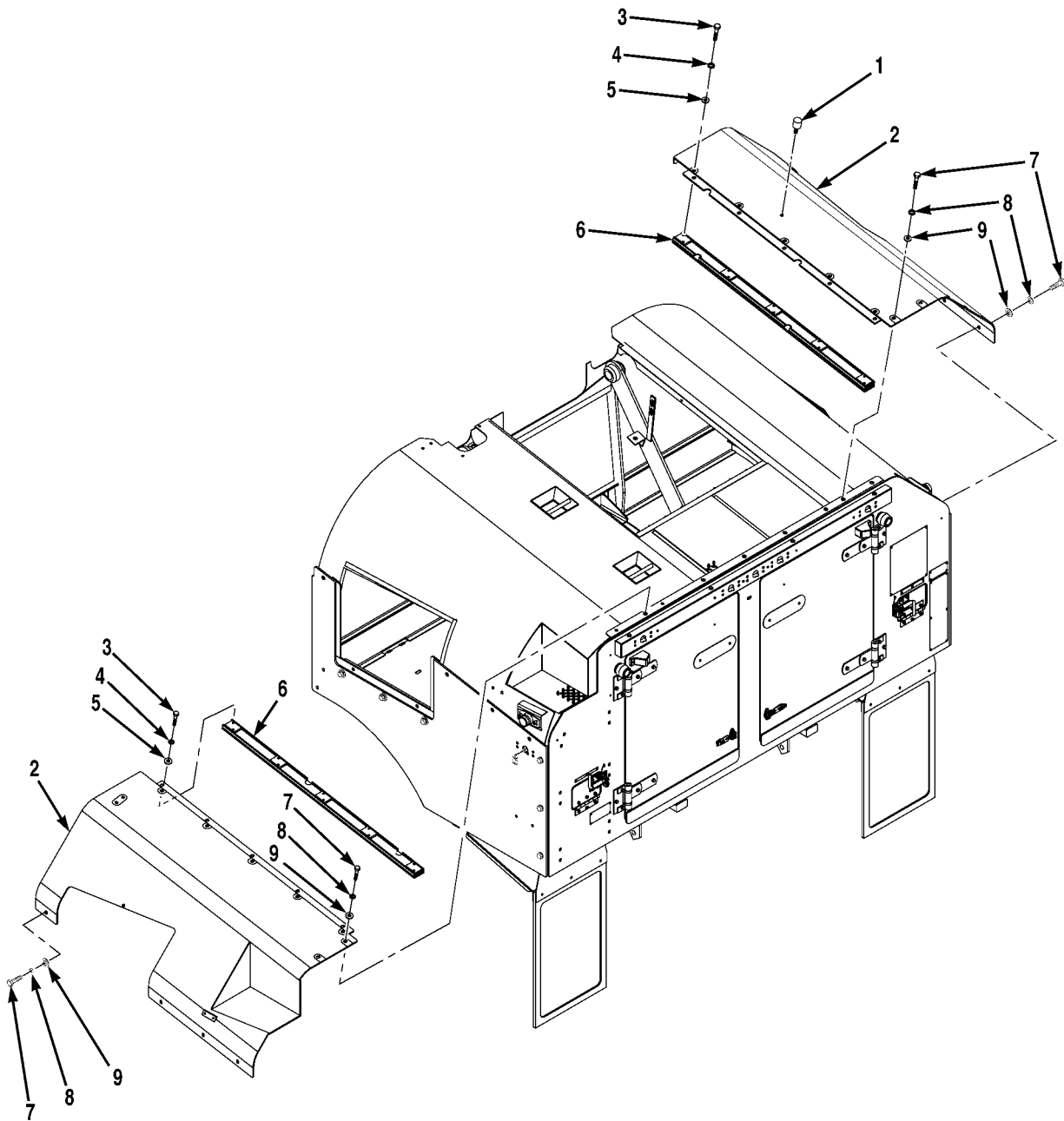


FIG. 3 UPPER SIDE PANEL ASSEMBLY

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
					FIG. 3 UPPER SIDE PANEL ASSEMBLY	
1	PAFZZA		6W728	6433261-01M1	BUMPER ROUND, WITH THREADED STUD . . . . .	1
2	PAFZZA		6W728	6433061-200M1	PANEL,SIDE,UPPER,LH,TAN. . . . .	1
2	PAFZZA		6W728	6433061-01M1	PANEL,SIDE,UPPER,LH,GREEN. . . . .	1
2	PAFZZA		6W728	6433060-01M1	PANEL,SIDE,UPPER,RH,GREEN . . . . .	1
2	PAFZZA		6W728	6433060-200M1	PANEL,SIDE,UPPER,RH,TAN . . . . .	1
3	PAFZZA		6W728	4397000-381	SCREW,CAP,HEX HD, .438-14 X 1.25 . . . . .	10
4	PAFZZA		6W728	4397004-009	WASHER,LOCK . . . . .	10
5	PAFZZA	5310-01-417-7334	6W728	4397005-016	WASHER,FLAT, 7/16 SAE .469 X .922 X .065 . . . . .	10
6	PAFZZA		6W728	6433076-200M1	CHANNEL,TAPPING,TAN . . . . .	2
6	PAFZZA		6W728	6433076-01M1	CHANNEL,TAPPING,GREEN . . . . .	2
7	PAFZZA		6W728	4397000-382	SCREW,CAP,HEX HD, .438-14 X 1.50 . . . . .	14
8	PAFZZA		6W728	4397004-009	WASHER,LOCK . . . . .	14
9	PAFZZA	5310-01-417-7334	6W728	4397005-016	WASHER,FLAT, 7/16 SAE .469 X .922 X .065 . . . . .	14
					<b>END OF FIGURE</b>	

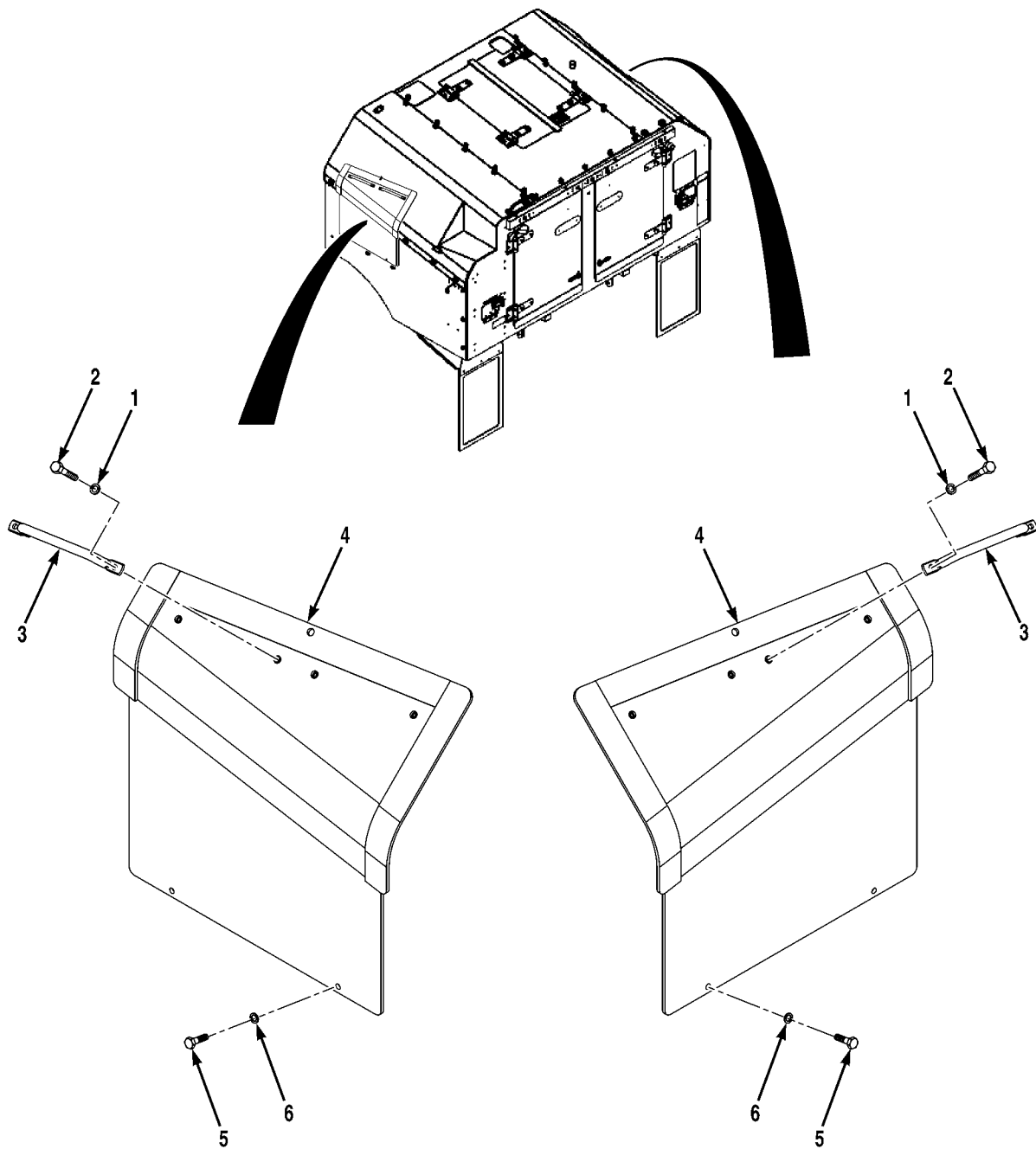


FIG. 4 SIDE ACCESS PANEL

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
FIG. 4 SIDE ACCESS PANEL						
1	PAFZZA	5310-01-417-9942	6W728	4397004-007	WASHER, LOCK 5/16 .....	8
2	PAFZZA	5306-01-433-9183	6W728	4397000-036	SCREW, CAP, HEX HD, .313-18 X 1.25 .....	8
3	PAFZZA		6W728	6433195-200M1	HANDLE, GRAB SIDE, ACCESS DOOR, TAN .....	4
3	PAFZZA		6W728	6433195-01M1	HANDLE, GRAB SIDE ACCESS DOOR, GREEN .....	4
4	PAFZZA		6W728	6433091-200M1	DOOR, LH, SIDE ACCESS, TAN . . . .	1
4	PAFZZA		6W728	6433090-01M1	DOOR, RH, SIDE ACCESS, GREEN .....	1
4	PAFZZA		6W728	6433091-01M1	DOOR, LH, SIDE ACCESS, GREEN .....	1
4	PAFZZA		6W728	6433090-200M1	DOOR, RH, SIDE ACCESS, TAN. . . .	1
5	PAFZZA	5306-01-433-9196	6W728	4397000-060	BOLT, MACHINE, .375-16X1.00. . . .	6
6	PAFZZA	5310-01-417-7273	6W728	4397004-008	WASHER, LOCK, .375 .....	6
END OF FIGURE						

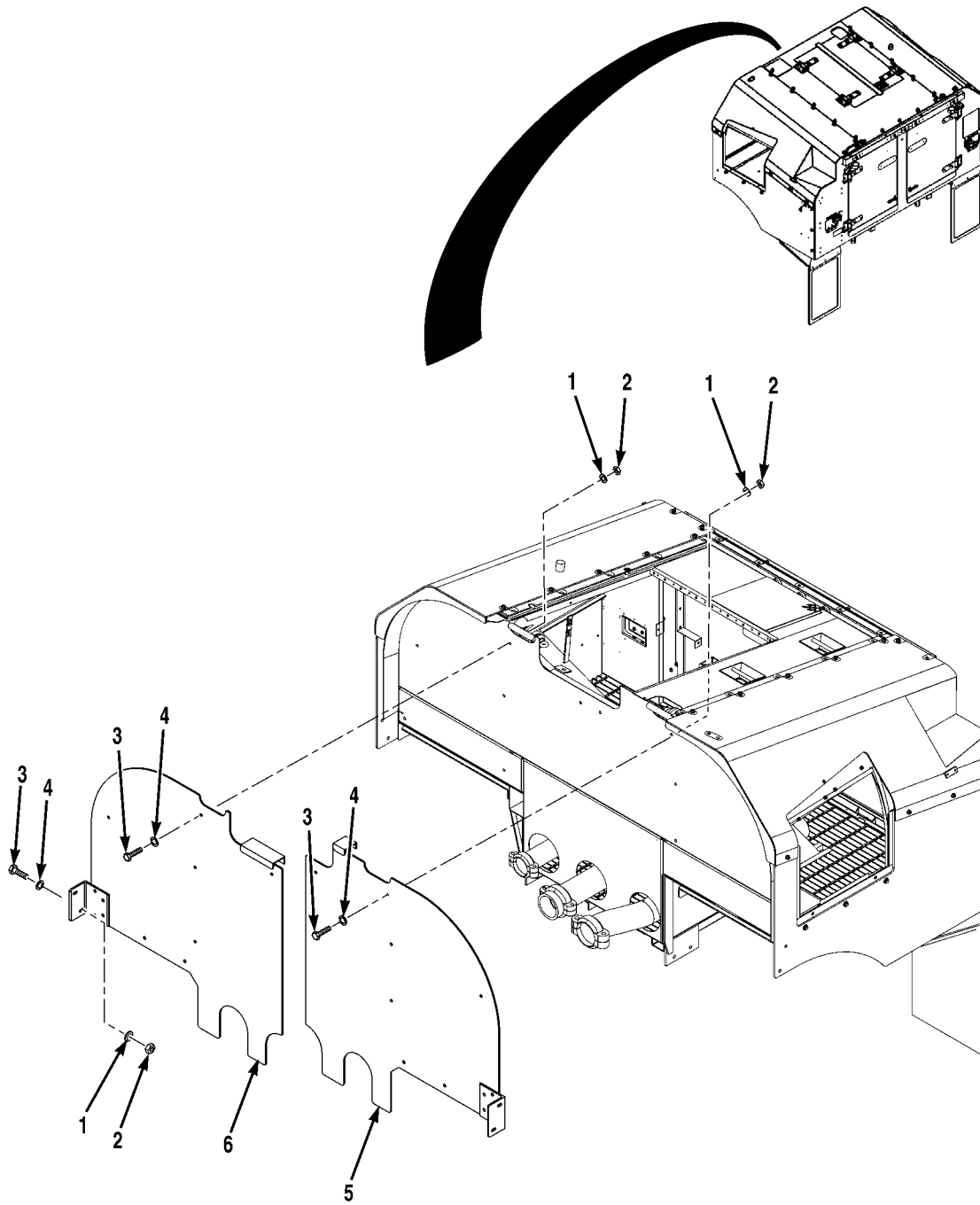


FIG. 5 FRONT PANEL ASSEMBLY



(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
FIG. 5 FRONT PANEL ASSEMBLY						
1	PAFZZA		6W728	4397005-017	WASHER,FLAT, 7/16 USS .500 X 1.25 X .083.....	16
2	PAFZZA	5310-01-513-4636	6W728	4397064-007	NUT,SELF-LOCKING,HE,7/16-14 ..	16
3	PAFZZA		6W728	4397000-382	SCREW,CAP,HEX HD, .438-14 X 1.50.....	16
4	PAFZZA		6W728	4397004-009	WASHER,LOCK .....	16
5	PAFZZA		6W728	6433257-01M1	PANEL FRONT LH,GREEN .....	1
5	PAFZZA		6W728	6433257-200M1	PANEL,FRONT LH,TAN .....	1
6	PAFZZA		6W728	6433258-200M1	PANEL,FRONT RH,TAN .....	1
6	PAFZZA		6W728	6433258-01M1	PANEL,FRONT RH,GREEN .....	1
<b>END OF FIGURE</b>						



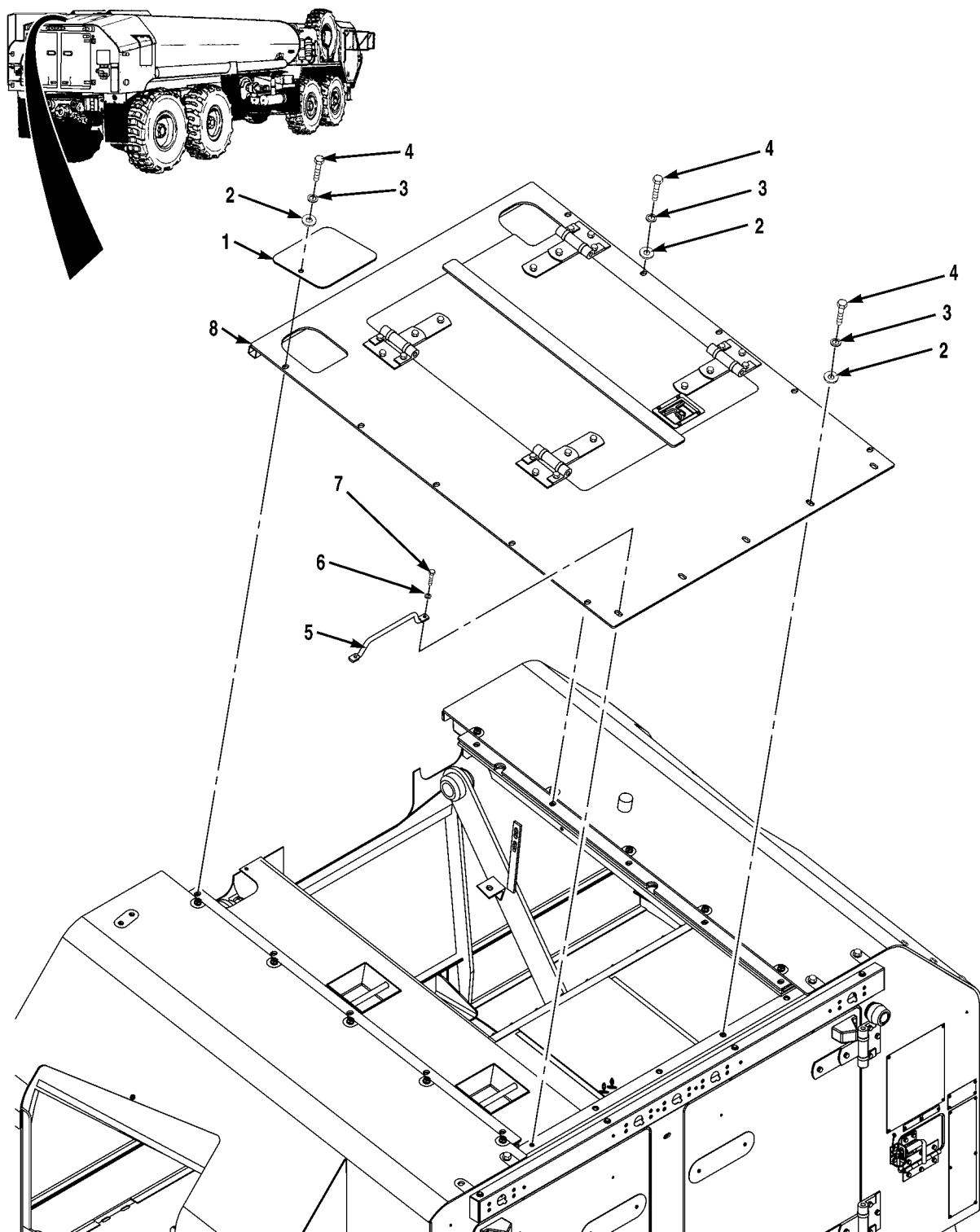


FIG. 6 TOP PANEL ASSEMBLY (SHEET 1 OF 2)

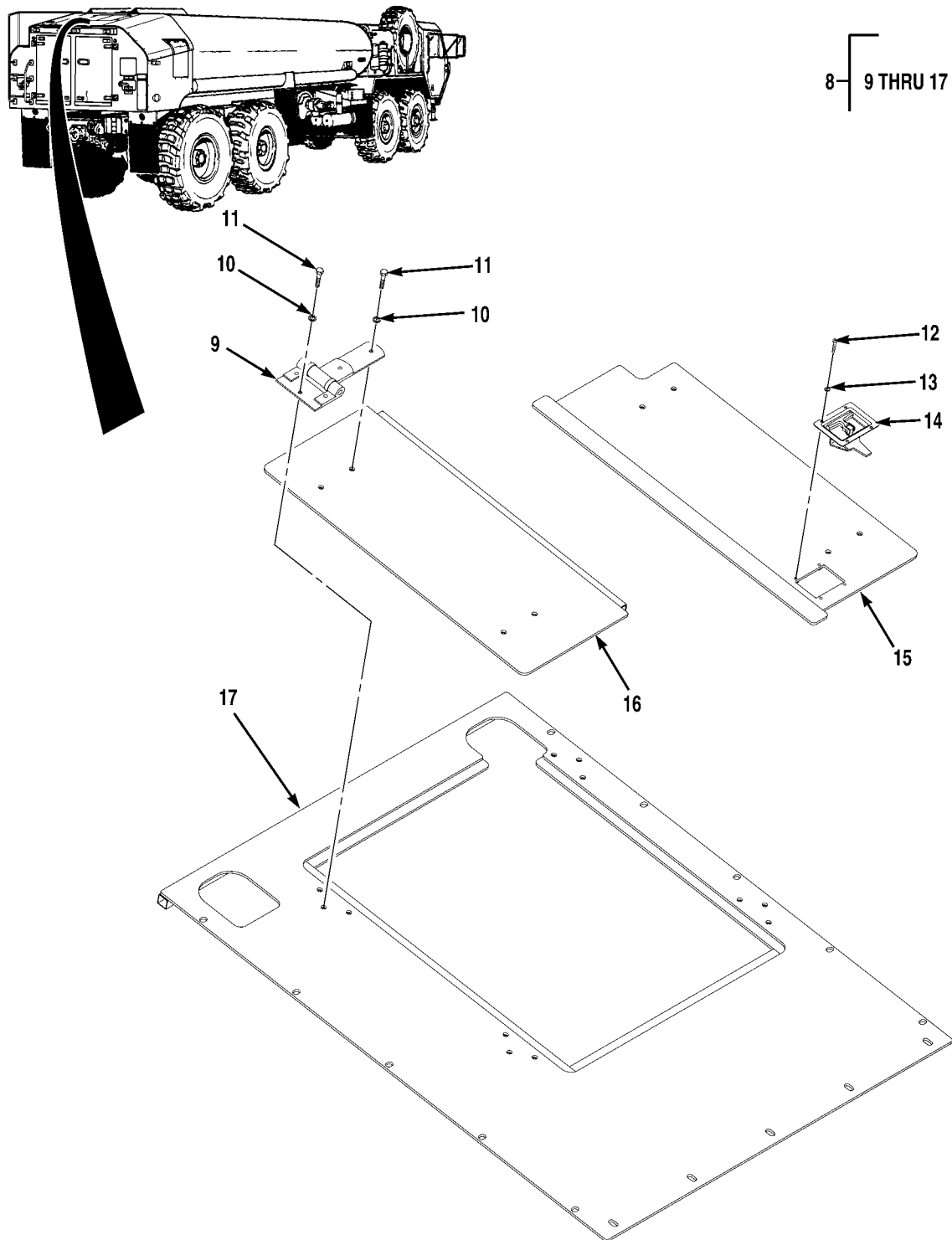


FIG. 6 TOP PANEL ASSEMBLY (SHEET 2 OF 2)

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
					FIG. 6 TOP PANEL ASSEMBLY	
1	PAFZZA		6W728	6433300-200M1	COVER,SHACKLE,OPENING, TAN .....	1
1	PAFZZA		6W728	6433300-02M1	COVER,SHACKLE,OPENING, GREEN .....	1
2	PAFZZA	5310-01-417-7334	6W728	4397005-016	WASHER,FLAT,7/16 SAE .469 X .922 X .065.....	14
3	PAFZZA		6W728	4397004-009	WASHER,LOCK, .438	14
4	PAFZZA		6W728	4397000-381	SCREW,CAP,HEX HD, .438-14 X 1.25.....	14
5	PAFZZA		6W728	6433120-01M1	HANDLE,GRAB/PULL.....	1
6	PAFZZA	5310-01-417-9942	6W728	4397004-007	WASHER,LOCK, 5/16.....	2
7	PAFZZA	5306-01-433-9183	6W728	4397000-036	SCREW,CAP,HEX HD, .313-18 X 1.25.....	2
8	PAFZZA		45152	5KP738	PANEL ASSEMBLY,TOP,TAN .....	1
8	PAFZZA		45152	5KP734	PANEL ASSEMBLY,TOP,GREEN ..	1
9	PAFZZA		6W728	6433082-200M1	.HINGE,DOOR,TAN.....	4
9	PAFZZA		6W728	6433082-01M1	.HINGE,DOOR,GREEN.....	4
10	PAFZZA	5310-01-417-9942	6W728	4397004-007	.WASHER,LOCK, 5/16 .....	20
11	PAFZZA	5305-01-420-6637	6W728	4397000-034	.SCREW,CAP,HEXAGON H, .313-18 X 1.00.....	20
12	PAFZZA		6W728	4397012-074	.SCREW,MACHINE,PAN, H 10-24 X .750.....	4
13	PAFZZA	5310-01-434-1385	6W728	4397004-005	.WASHER,LOCK, NO. 10 .....	4
14	PAFZZA		6W728	6433101-200M1	.LATCH ROOF DOOR POCKET, TAN .....	1
14	PAFZZA		6W728	6433101-01M1	.LATCH ROOF DOOR POCKET, GREEN .....	1
15	PAFZZA		6W728	6433092-200M1	.DOOR,RH ROOF,TAN .....	1
15	PAFZZA		6W728	6433092-01M1	.DOOR,RH ROOF,GREEN .....	1
16	PAFZZA		6W728	6433093-200M1	.DOOR,LH ROOF,TAN .....	1
16	PAFZZA		6W728	6433093-01M1	.DOOR,LH ROOF,GREEN.....	1
17	PAFZZA		6W728	6433080-200M1	.PANEL,TOP,TAN .....	1
17	PAFZZA		6W728	6433080-01M1	.PANEL,TOP,GREEN.....	1
					END OF FIGURE	

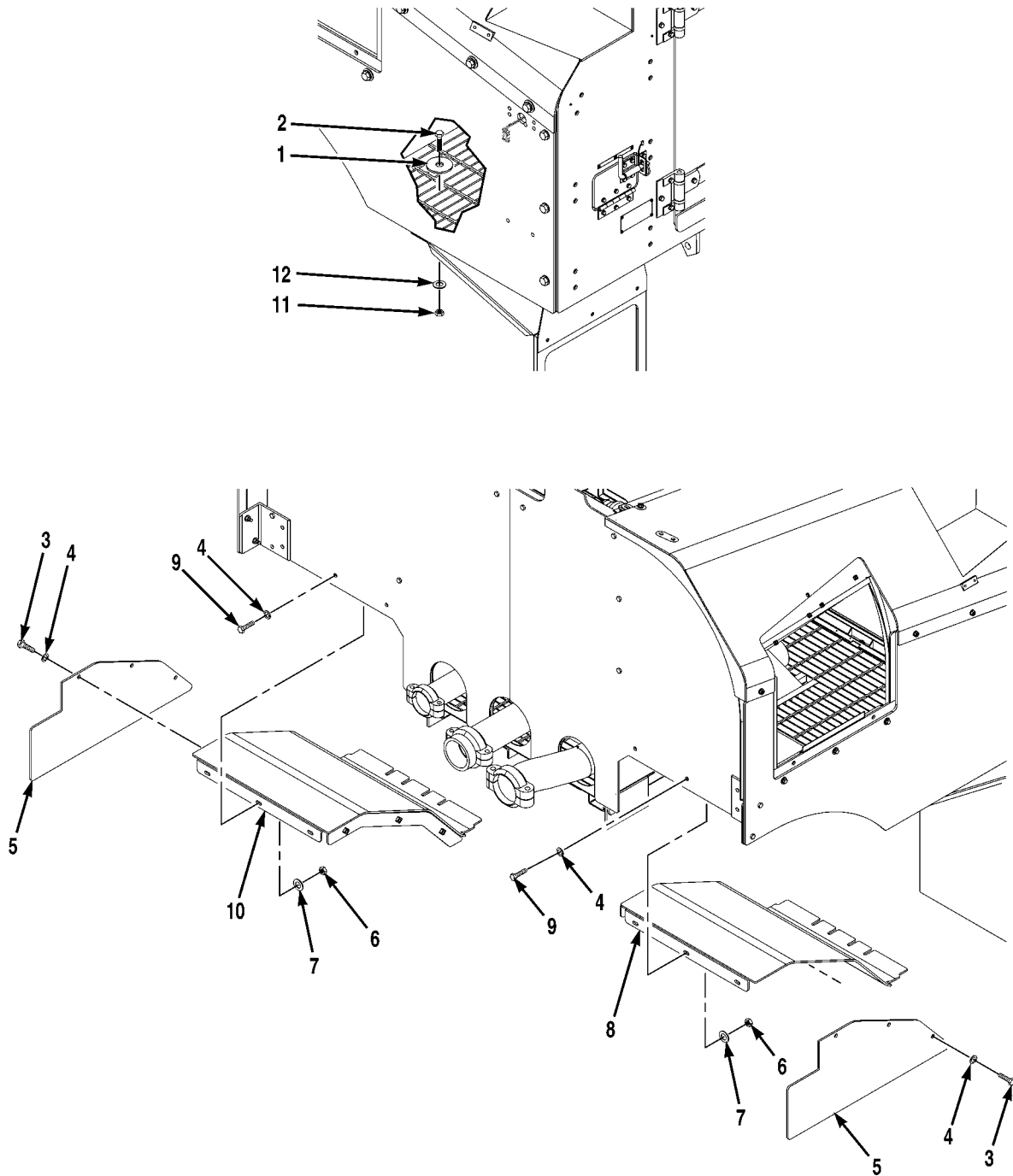


FIG. 7 WHEEL WELL ASSEMBLY

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
					FIG. 7 WHEEL WELL ASSEMBLY	
1	PAFZZA	5310-01-160-3972	45152	56765AX	WASHER,FLAT . . . . .	6
2	PAFZZA	5305-01-436-6375	6W728	4397000-068	SCREW,CAP,HEX HD, .375-16 X 2.50 . . . . .	6
3	PAFZZA		6W728	4397000-380	SCREW,CAP,HEX HD, .438-14 X 1.00 . . . . .	6
4	PAFZZA		6W728	4397004-009	WASHER,LOCK . . . . .	12
5	PAFZZA		6W728	6433264-200M1	PANEL,WHEEL HOUSE INNER, TAN . . . . .	2
5	PAFZZA		6W728	6433264-01M1	PANEL,WHEEL HOUSE INNER, GREEN . . . . .	2
6	PAFZZA	5310-01-513-4636	6W728	4397064-007	NUT,SELF-LOCKING,HE,7/16-14 . .	6
7	PAFZZA		6W728	4397005-017	WASHER,FLAT 7/16 USS .500 X 1.25 X .083 . . . . .	6
8	PAFZZA		6W728	6433113-01M1	WHEELWELL,LH,GREEN . . . . .	1
8	PAFZZA		6W728	6433113-200M1	WHEELWELL,LH,TAN	1
9	PAFZZA		6W728	4397000-382	SCREW,CAP,HEX HD, .438-14 X 1.50 . . . . .	6
10	PAFZZA		6W728	6433112-01M1	WHEELWELL,RH,GREEN . . . . .	1
10	PAFZZA		6W728	6433112-200M1	WHEELWELL,RH,TAN . . . . .	1
11	PAFZZA	5310-01-439-8177	6W728	4397064-005	NUT,SELF-LOCKING,HE, 3/8-16 . .	6
12	PAFZZA	5310-01-436-3742	6W728	4397005-015	WASHER,FLAT, 3/8 USS .438 X 1.00 X .083 . . . . .	6
					<b>END OF FIGURE</b>	

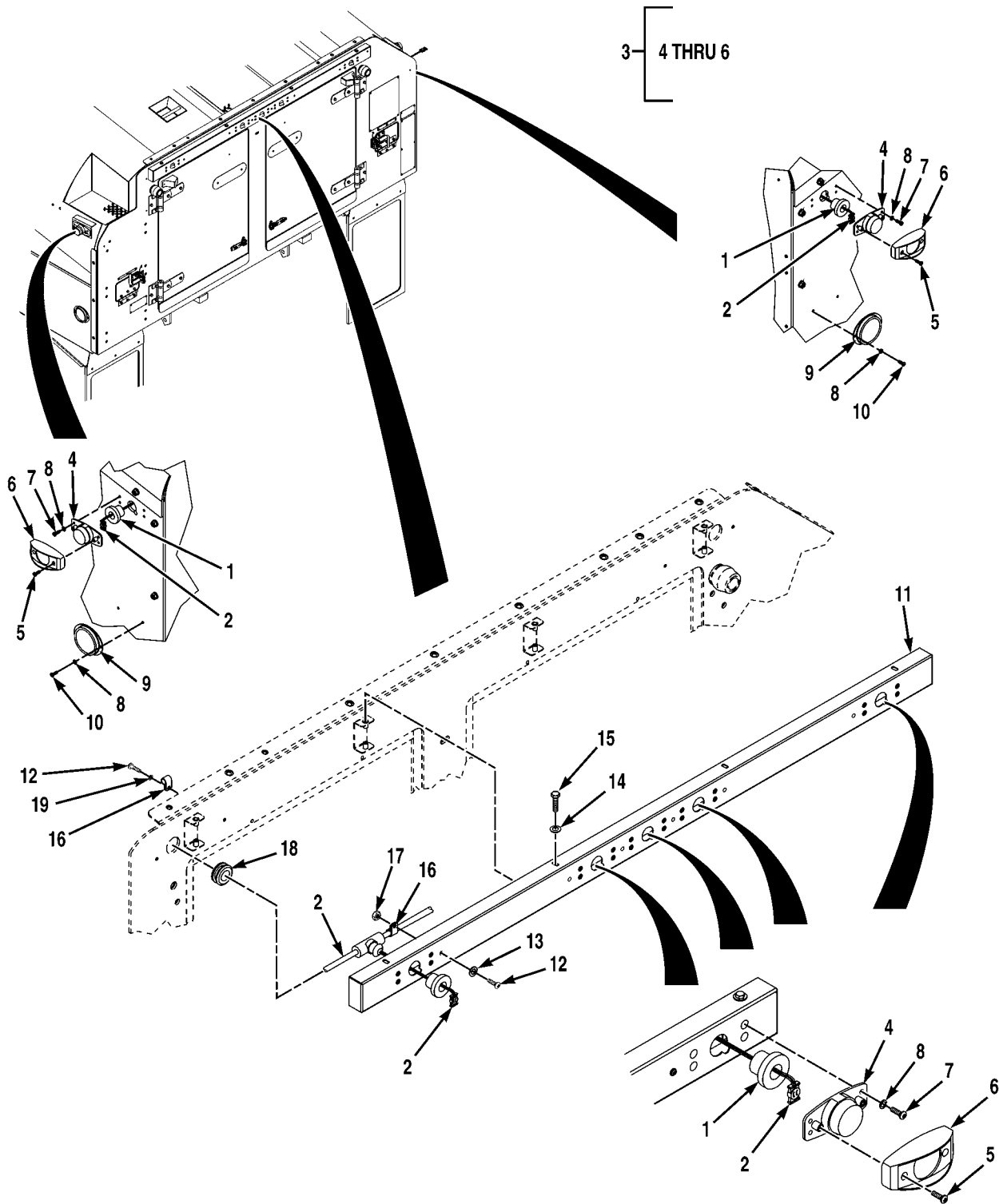


FIG. 8 TANKER MODULE LIGHTING HARNESS ASSEMBLY (SHEET 1 OF 3)



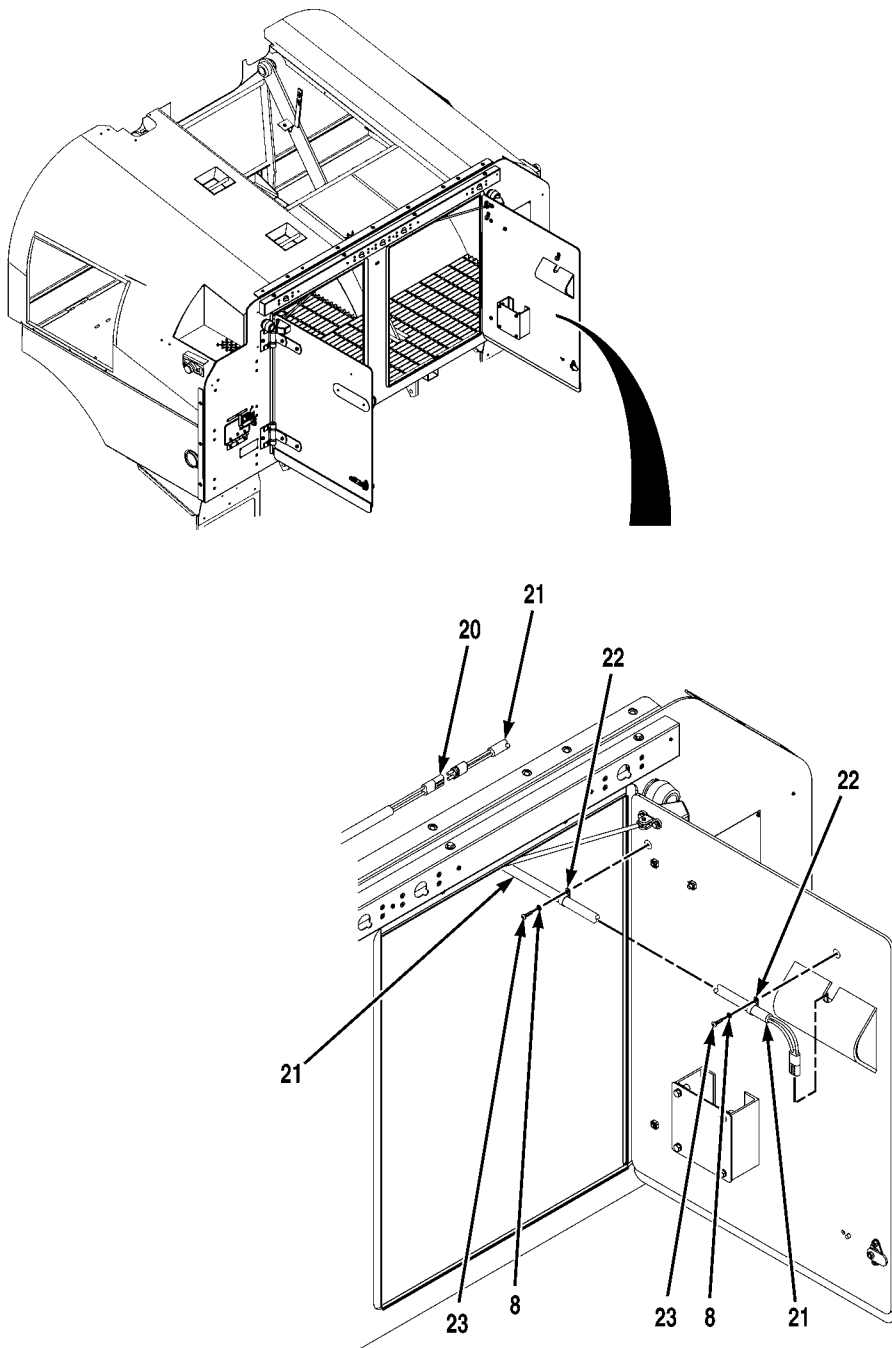


FIG. 8 TANKER MODULE LIGHTING HARNESS ASSEMBLY (SHEET 2 OF 3)

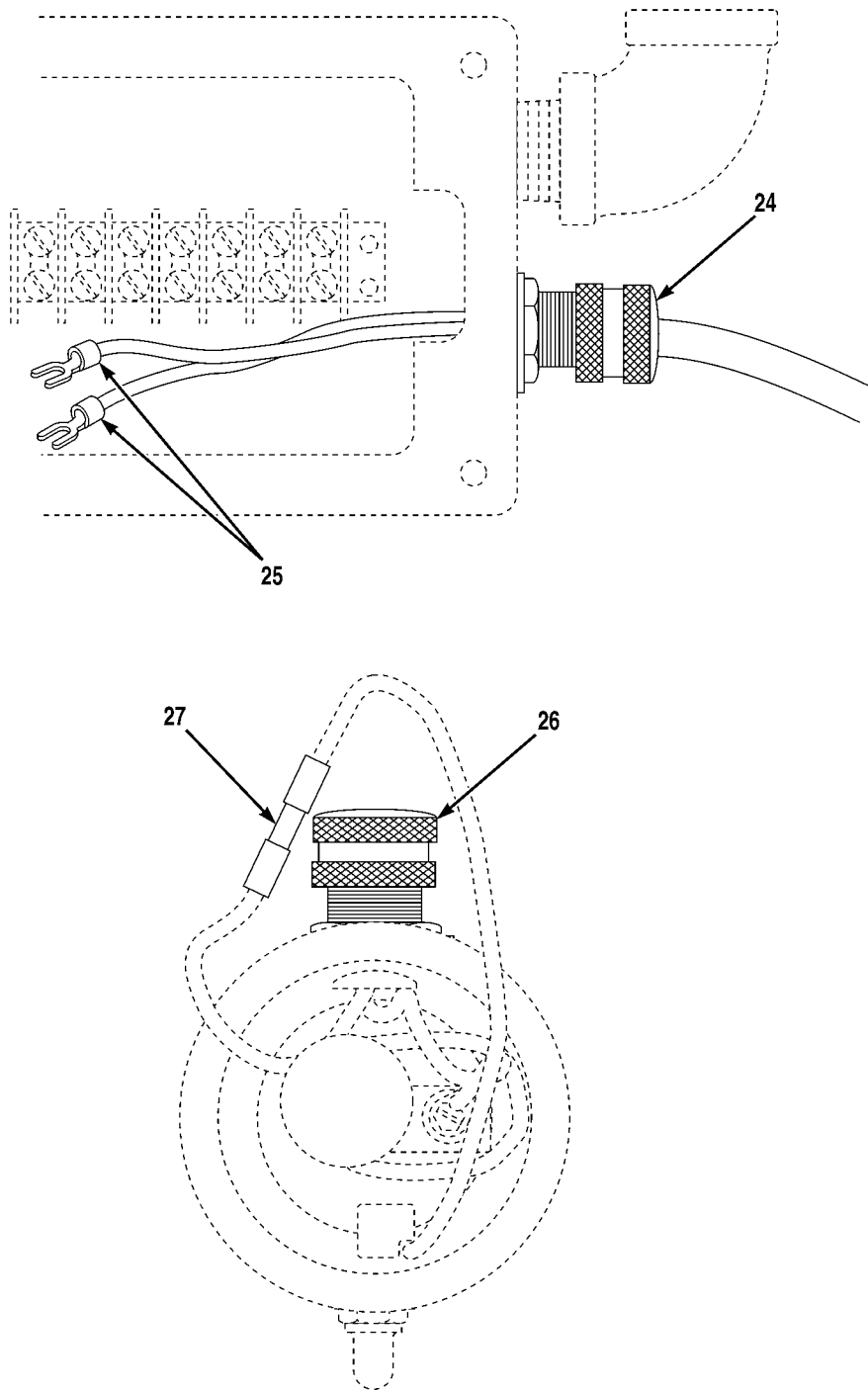


FIG. 8 TANKER MODULE LIGHTING HARNESS ASSEMBLY (SHEET 3 OF 3)

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
					FIG. 8 TANKER MODULE LIGHT- ING HARNESS ASSEMBLY	
1	PAFZZA	5325-01-519-3824	3A054	9280K32	GROMMET, NONMETALLIC PART OF KIT P/N 3593368. . . . .	7
2	PAFZZA		13548	95988	HARNESS, MODULE LIGHT . . . . .	1
3	PAFZZA	6220-01-505-3356	13548	07184	LIGHT, MARKER, CLEARANCE PART OF KIT P/N 3593368. . . . .	7
4	XAFZZA	5975-01-485-8769	13548	07197	.BASE, MOUNTING, ELECTRICAL. . . . .	1
5	PAFZZA	5305-00-059-3660	80205	MS51958-64	.SCREW, MACHINE. . . . .	2
6	PAFZZA	5340-01-527-9898	13548	07198	.BRACKET, MULTIPLE . . . . .	1
7	PAFZZA	5305-01-513-5883	6W728	4397012-076	SCREW, MACHINE, PAN H, 10-24 X 1.00 . . . . .	28
8	PAFZZA	5310-01-434-1385	6W728	4397004-005	WASHER, LOCK, NO. 10. . . . .	35
9	PAFZZA	9905-00-205-2795	58536	AA52428-1	REFLECTOR, INDICATING PART OF KIT P/N 3593368. . . . .	2
10	PAFZZA		6W728	4397012-074	SCREW, MACHINE, PAN H, 10-24 X .750 . . . . .	4
11	PAFZZA		6W728	6433083-01M1	PANEL, LIGHTBAR, GREEN . . . . .	1
11	PAFZZA		6W728	6433083-200M1	PANEL, LIGHTBAR, TAN . . . . .	1
12	PAFZZA	5305-01-434-0830	6W728	4397012-054	SCREW, MACHINE, 8-32 X .500 . . . . .	17
13	PAFZZA	5310-01-433-6379	6W728	4397005-005	WASHER, FLAT . . . . .	6
14	PAFZZA	5340-01-417-8995	6W728	4397005-011	WASHER, FLAT, 1/4 USS .312 X .734 X .065. . . . .	12
15	PAFZZA	5306-01-430-7399	6W728	4397000-006	BOLT, MACHINE, .250-20 X .75. . . . .	4
16	PAFZZA		6W728	6433316-05M1	STRAP, LOOP . . . . .	17
17	PAFZZA	5310-01-421-6085	6W728	4397020-022	NUT, SELF-LOCKING, HEXAGON, 8-32 . . . . .	6
18	PAFZZA		6W728	6430151-60M1	GROMMET, RUBBER, 1.63 PANEL HOLE X .25 PANEL THK. . . . .	2
19	PAFZZA	5310-01-417-7575	6W728	4397004-004	WASHER, LOCK, NO. 8 . . . . .	11
20	PAFZZA		45152	3593652	HARNESS ASSEMBLY, STOP LAMP EXTENSION, LH PART OF KIT P/N 3593368. . . . .	1
21	PAFZZA		45152	3593651	HARNESS ASSEMBLY, STOP LAMP EXTENSION, RH PART OF KIT P/N 3593368. . . . .	1
22	PAFZZA	5340-00-990-7610	80205	MS2133-66	CLAMP, LOOP PART OF KIT P/N 3593368. . . . .	3

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
23	PAFZZA	5305-01-249-8564	45152	59031AX	SCREW,MACHINE, #10-24 X .75 NS ZC PART OF KIT P/N 3593368 . . . . .	3
24	PAFZZA	5975-00-519-9060	49367	DB-9	BOX CONNECTOR,ELECT PART OF KIT P/N 3593368 . . . . .	2
25	PAFZZA	5940-01-386-0872	00779	34166	TERMINAL,LUG PART OF KIT P/N 3593368 . . . . .	2
26	PAFZZA	5975-01-165-0111	74545	SHC-1017	BOX,CONNECTOR,ELECT PART OF KIT P/N 3593368 . . . . .	1
27	PAFZZA	5940-01-368-9579	00779	327025	SPLICE,CONDUCTOR PART OF KIT P/N 3593368 . . . . .	2
<b>END OF FIGURE</b>						



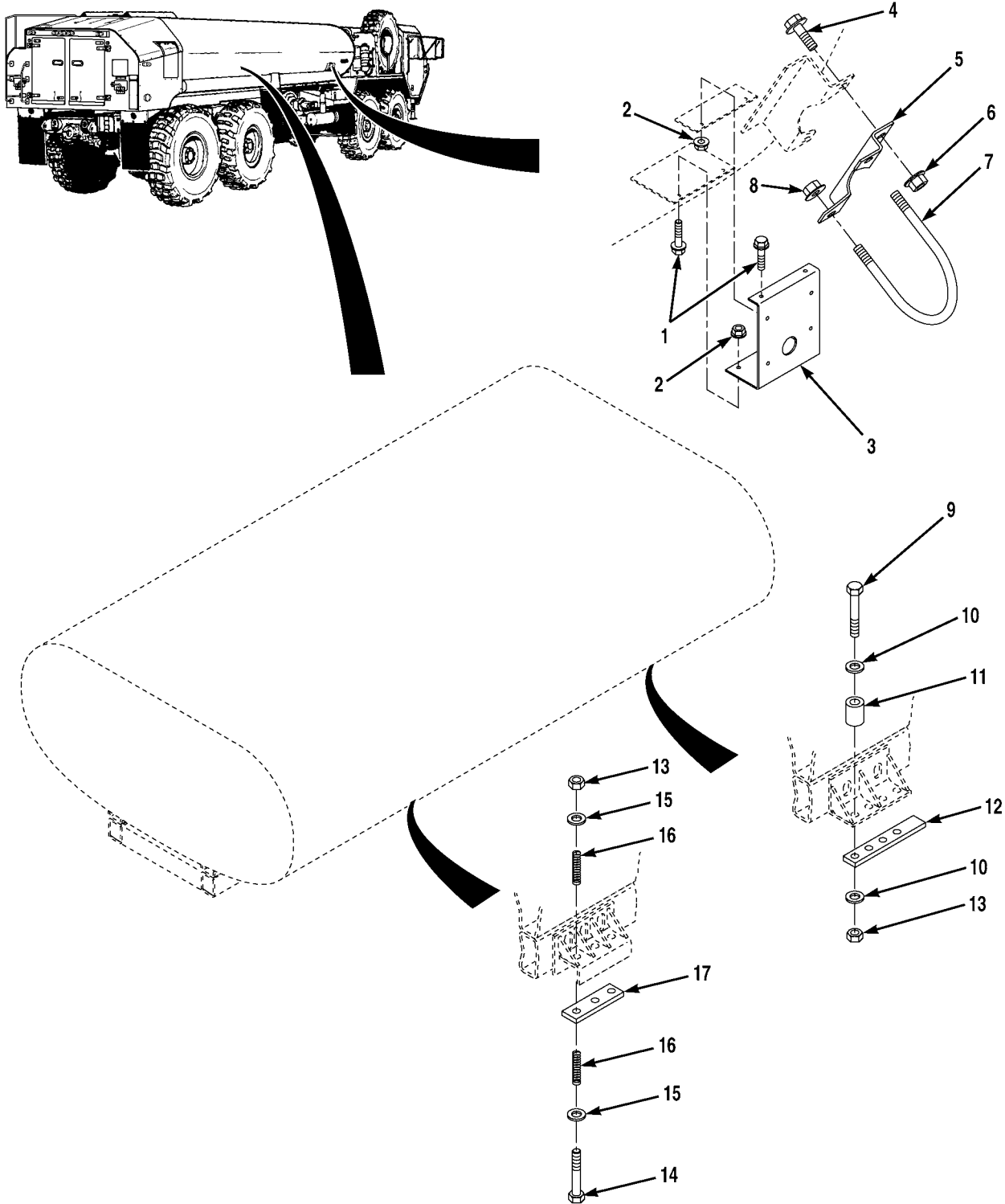


FIG. 9 LADDERS AND BRACKETS (SHEET 1 OF 3)

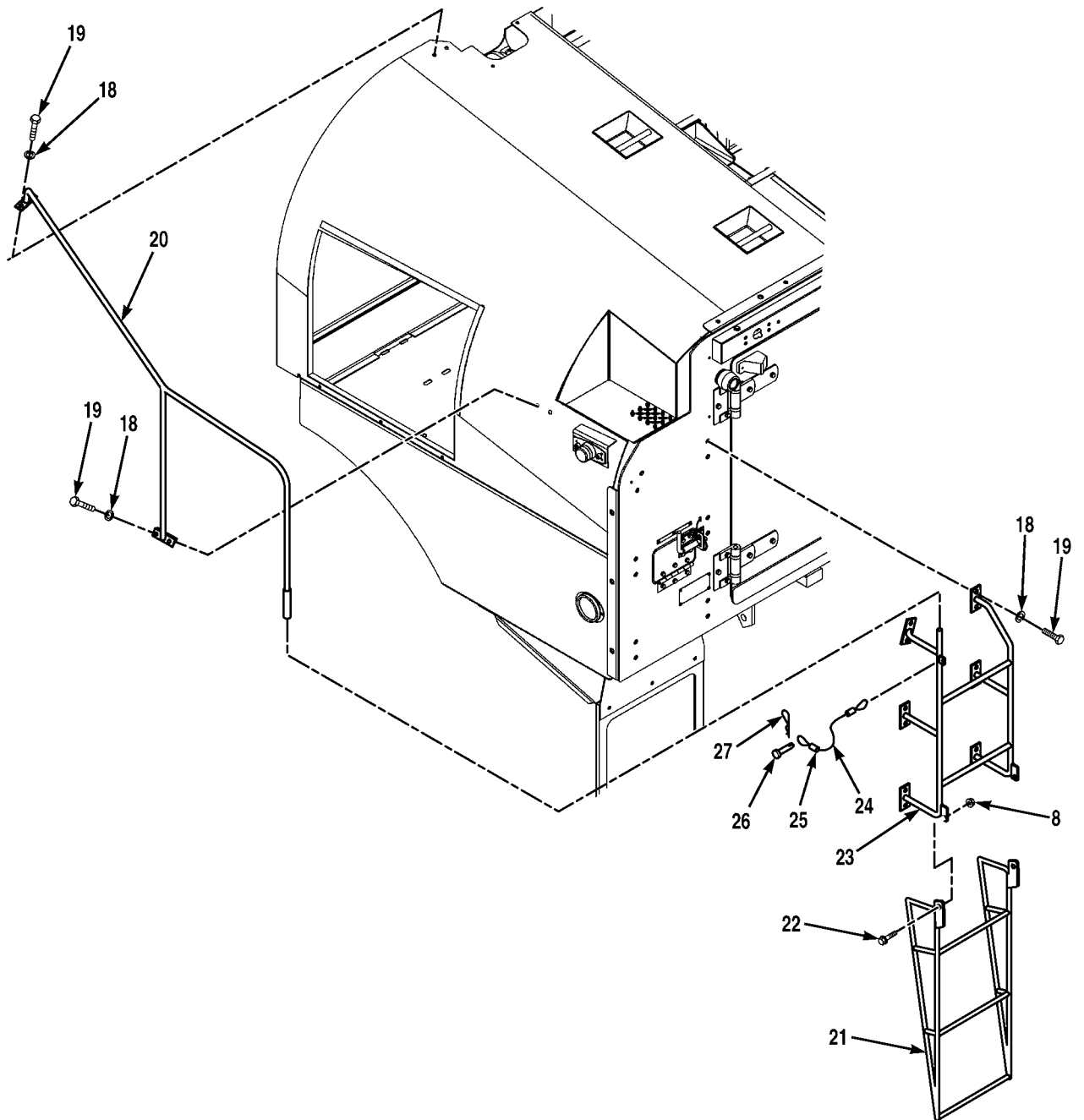


FIG. 9 LADDERS AND BRACKETS (SHEET 2 OF 3)

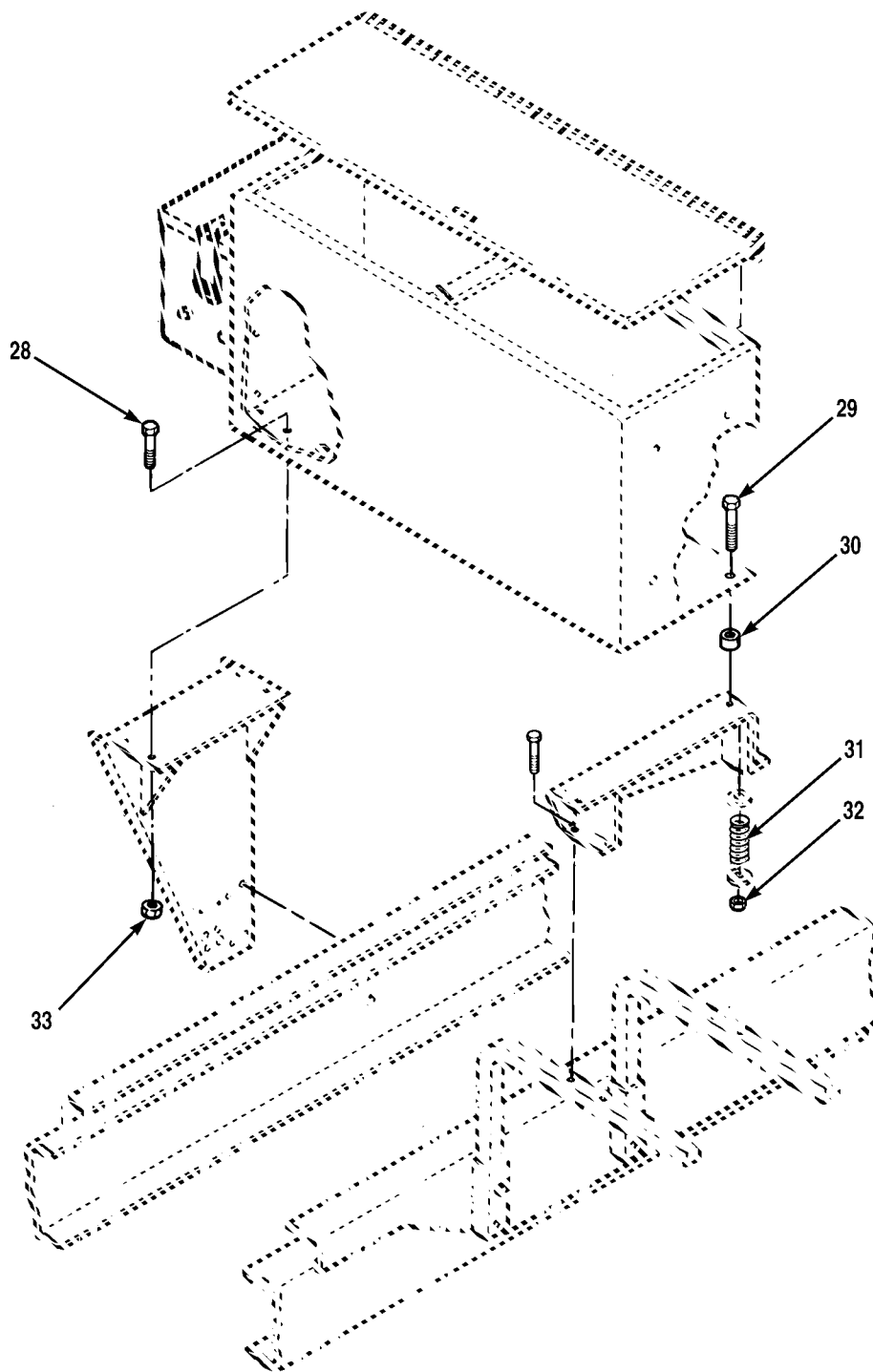


FIG. 9 LADDERS AND BRACKETS (SHEET 3 OF 3)



(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
					FIG. 9 LADDERS AND BRACKETS	
1	PAFZZA	5305-01-344-8899	45152	1606140	SCREW,CAP,HEXAGON H, .25-20 X .75 PART OF KIT P/N 3593395.....	8
2	PAFZZA	5310-01-346-9445	45152	1600460	NUT,SELF-LOCKING,CL, .25-20 PART OF KIT P/N 3593395.....	8
3	PAFZZA		45152	3585336	BRACKET,CLEARANCE LIGHT PART OF KIT P/N 3593395.....	2
4	PAFZZA	5306-01-287-5714	45152	1614120	BOLT,MACHINE, .38-16 X 1.00 PART OF KIT P/N 3593395.....	10
5	PAFZZA		45152	3585337	BRACKET,STORAGE TUB PART OF KIT P/N 3593395.....	5
6	PAFZZA	5310-01-288-1116	45152	1437220	NUT,SELF-LOCKING,EX, .38-16 PART OF KIT P/N 3593395.....	10
7	PAFZZA	5306-01-165-7526	45152	1335830	BOLT,U PART OF KIT P/N 3593395.....	5
8	PAFZZA	5310-01-177-4625	45152	108708A	NUT,SELF-LOCKING,HE, .38-16 PART OF KIT P/N 3593395.....	12
9	PAFZZA	5305-00-424-7247	80204	B1821BH063C35 ON	SCREW,CAP,HEXAGON H, .62-11 X 3.50 PART OF KIT P/N 3593395.....	8
10	PAFZZA		45152	1387HX	WASHER,FLAT, .69 X 1.75 X .13 PART OF KIT P/N 3593395.....	16
11	PAFZZA	5365-01-174-0596	45152	1400930	SPACER,SLEEVE PART OF KIT P/N 3593395.....	8
12	PAFZZA	2590-01-189-1059	45152	2BE427	PAD,CUSHIONING PART OF KIT P/N 3593395.....	3
13	PAFZZA	5310-01-055-0901	45152	2881HX	NUT,SELF-LOCKING,HE, .62-11 PART OF KIT P/N 3593395.....	14
14	PAFZZA	5305-01-194-7049	45152	1404290	SCREW,CAP,HEXAGON H, .62-11 X 11 PART OF KIT P/N 3593395.....	6
15	PAFZZA	5310-01-061-5301	45152	8865GX	WASHER,FLAT, .62 X 1.31 X .10 PART OF KIT P/N 3593395.....	18
16	PAFZZA	5360-01-157-5046	45152	2AH450	SPRING,HELICAL,COMP PART OF KIT P/N 3593395.....	12
17	PAFZZA	2590-01-155-2398	45152	2246140	PAD,CUSHIONING PART OF KIT P/N 3593395.....	2
18	PAFZZA	5310-01-417-7273	6W728	4397004-008	WASHER,LOCK, 3/8.....	16
19	PAFZZA	5306-01-433-9196	6W728	4397000-060	BOLT,MACHINE, .375-16 X 1.00...	16
20	PAFZZA	2540-01-165-5993	45152	2BA702	LADDER,RAIL PART OF KIT P/N 3593368.....	1

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
21	PAFZZA	2540-01-155-3662	16236	CS-2540-SV-0727	LADDER,VEHICLE BOAR LOWER PART OF KIT P/N 3593368 . . . . .	1
22	PAFZZA	5306-01-084-5390	78500	S-268-1	BOLT,MACHINE, .38-16 X 1.00 G5 PART OF KIT P/N 3593368 . . . . .	2
23	PAFZZA	2540-01-521-6664	45152	3238118	LADDER,WELDMENT UPPER PART OF KIT P/N 3593368 . . . . .	1
24	MFFZZA		81349	M83420-4-010-14	ROPE,WIRE, MAKE FROM WIRE ROPE P/N M83420-4-010 (81349) PART OF KIT P/N 3593368 . . . . .	1
25	PAFZZA	4030-01-517-7356	80967	1864270	SWAGING SLEEVE,WIRE PART OF KIT P/N 3593368 . . . . .	2
26	PAFZZA	5315-00-197-0608	45152	2BA704	PIN,CLEVIS PART OF KIT P/N 3593368 . . . . .	1
27	PAFZZA	5340-01-155-3590	45152	2BA705	CLIP,LADDER,VEHICLE, .25 PART OF KIT P/N 3593368 . . . . .	1
28	PAFZZA	5305-01-340-0225	45152	1754210	SCREW,CAP,HEXAGON H, .31-18 X 1.00 PART OF KIT P/N 3593395 . . . . .	4
29	PAFZZA	5306-01-169-6379	45152	124125A	BOLT,MACHINE, .62-11 X 6.00 PART OF KIT P/N 3593395 . . . . .	2
30	PAFZZA	5365-01-201-4780	45152	1404120	BUSHING,NONMETALLIC PART OF KIT P/N 3593395 . . . . .	2
31	PAFZZA	5360-01-167-6410	45152	1401740	SPRING,HELICAL,COMP PART OF KIT P/N 3593395 . . . . .	2
32	PAFZZA	5310-01-111-0645	45152	110311A	NUT,SELF-LOCKING,EX, .62-11 PART OF KIT P/N 3593395 . . . . .	2
33	PAFZZA	5310-01-340-5671	45152	1333510	NUT,SELF-LOCKING,EX, .31-18 PART OF KIT P/N 3593395 . . . . .	4
<b>END OF FIGURE</b>						

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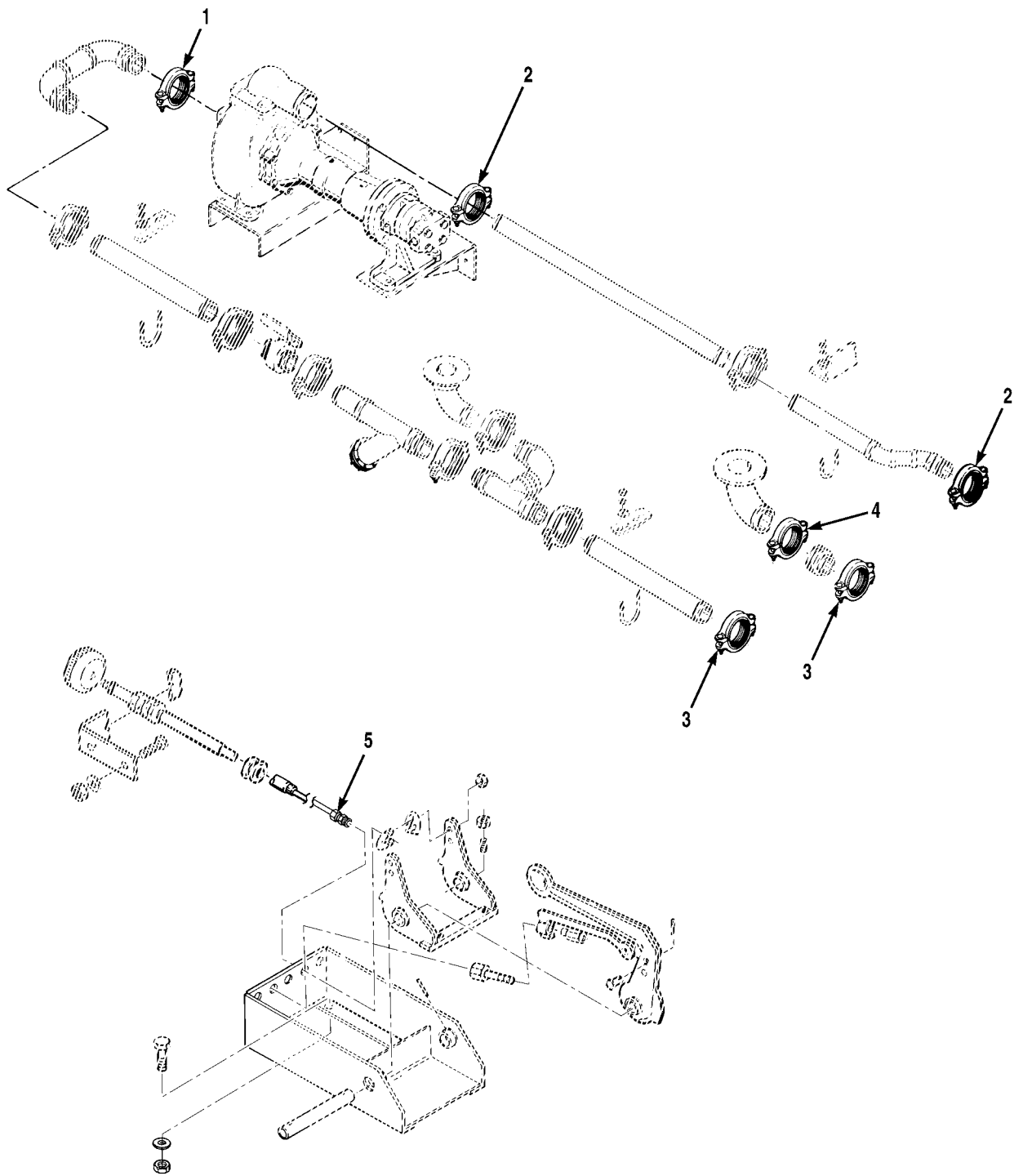


FIG. 10 COUPLINGS (SHEET 1 OF 2)

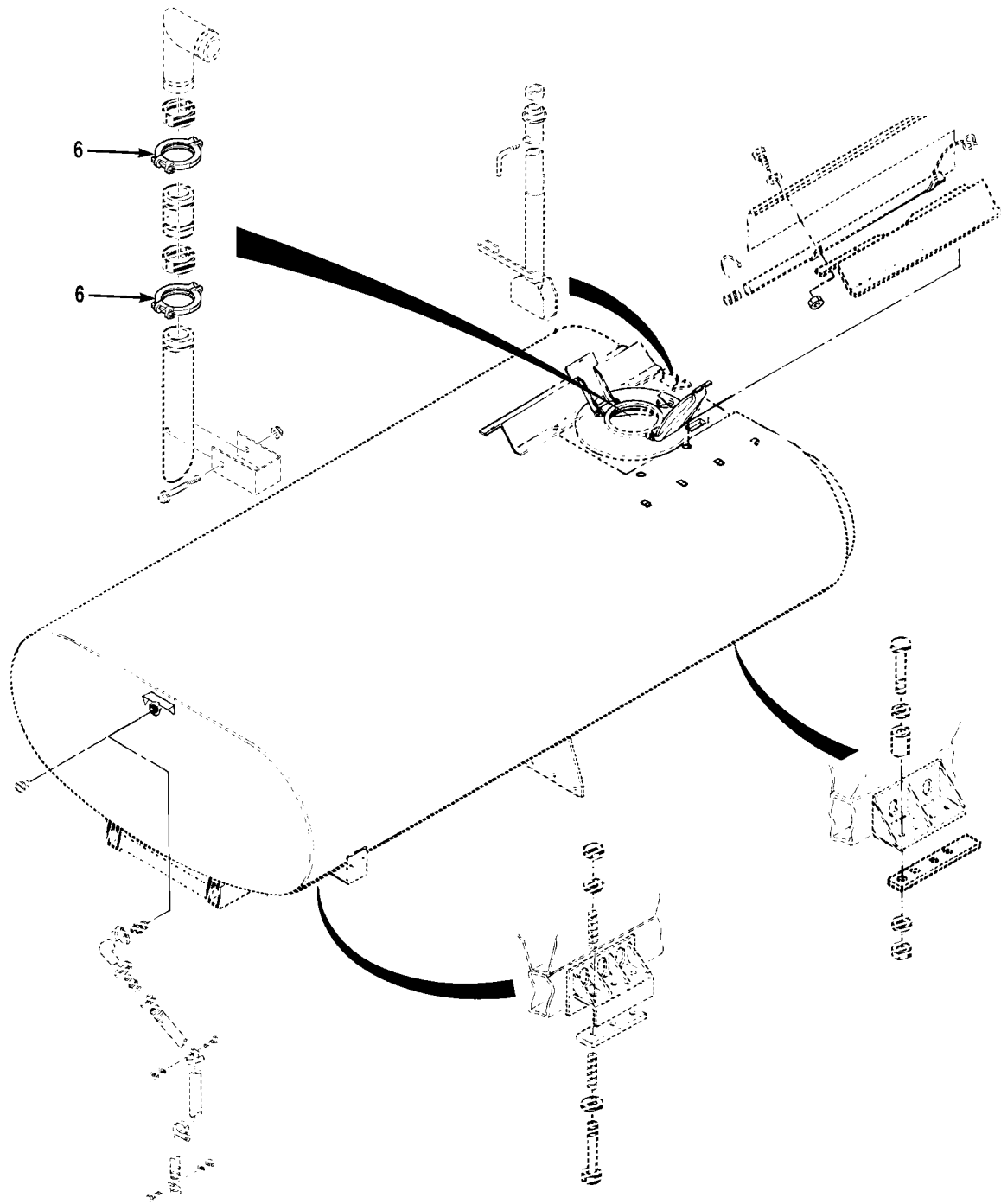


FIG. 10 COUPLINGS (SHEET 2 OF 2)

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
					FIG. 10 COUPLINGS	
1	PAFZZA	4730-01-161-6679	79154	LD44750PT0	COUPLING,CLAMP,PIPE PART OF KIT P/N 3593395.....	1
2	PAFZZA	4730-00-142-1589	79154	3-75T	COUPLING,CLAMP,PIPE PART OF KIT P/N 3593395.....	2
3	PAFZZA		79154	4-75T	COUPLING PART OF KIT P/N 3593395.....	2
4	PAFZZA		79154	4.50-75T	COUPLING PART OF KIT P/N 3593395.....	1
5	PAFZZA	5325-01-229-8283	45152	1512860	RECEPTACLE,TURNLOCK PART OF KIT P/N 3593395.....	1
6	PAFZZA	4730-01-152-8526	45152	1992360	COUPLING,CLAMP,PIPE PART OF KIT P/N 3593395.....	2
					END OF FIGURE	

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	QTY
					FIG. KITS	
1	PAFFFA		45152	3593368	KIT,ARMOR ANCILLARY.....	1
					GROMMET,NONMETALLIC (7) 8-1	
					LIGHT,MARKER,CLEARANCE (7) 8-3	
					REFLECTOR,INDICATING (2) 8-9	
					HARNESS ASSEMBLY (1) 8-20	
					HARNESS ASSEMBLY (1) 8-21	
					CLAMP,LOOP (3) 8-22	
					SCREW,MACHINE (3) 8-23	
					BOX CONNECTOR,ELECT (2) 8-24	
					TERMINAL,LUG (2) 8-25	
					BOX,CONNECTOR,ELECT (1) 8-26	
					SPLICE,CONDUCTOR (2) 8-27	
					LADDER,RAIL (1) 9-20	
					LADDER,VEHICLE BOAR LOWER (1) 9-21	
					BOLT,MACHINE (2) 9-22	
					LADDER,WELDMENT UPPER (1) 9-23	
					ROPE,WIRE (1) 9-24	
					SWAGING SLEEVE,WIRE (2) 9-25	
					PIN,CLEVIS (1) 9-26	
					CLIP,LADDER,VEHICLE (1) 9-27	
2	PAFFFA		45152	3593395	KIT,ARMOR, PUSH PACKAGE.....	1
					SCREW,CAP,HEXAGON H (8) 9-1	
					NUT,SELF-LOCKING,CL (8) 9-2	
					BRACKET,CLEARANCE LIGHT (2) 9-3	
					BOLT,MACHINE (10) 9-4	
					BRACKET,STORAGE TUBE (5) 9-5	
					NUT,SELF-LOCKING,EX (10) 9-6	
					BOLT,U (5) 9-7	
					NUT,SELF-LOCKING,HE (12) 9-8	
					SCREW,CAP,HEXAGON H (8) 9-9	
					WASHER,FLAT (16) 9-10	
					SPACER,SLEEVE (8) 9-11	
					PAD,CUSHIONING (3) 9-12	



(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	QTY
					NUT,SELF-LOCKING,HE	(14) 9-13
					SCREW,CAP,HEXAGON H	(6) 9-14
					WASHER,FLAT	(18) 9-15
					SPRING,HELICAL,COMP	(12) 9-16
					PAD,CUSHIONING	(2) 9-17
					SCREW,CAP,HEXAGON H	(4) 9-28
					BOLT,MACHINE	(2) 9-29
					BUSHING,NONMETALLIC	(2) 9-30
					SPRING,HELICAL,COMP	(2) 9-31
					NUT,SELF-LOCKING,EX	(2) 9-32
					NUT,SELF-LOCKING,EX	(4) 9-33
					COUPLING,CLAMP,PIPE	(1) 10-1
					COUPLING,CLAMP,PIPE	(2) 10-2
					COUPLING	(2) 10-3
					COUPLING	(1) 10-4
					RECEPTACLE,TURNLOCK	(1) 10-5
					COUPLING,CLAMP,PIPE	(2) 10-6
<b>END OF FIGURE</b>						

## NSN INDEX

STOCK NUMBER	FIG.	ITEM	STOCK NUMBER	FIG.	ITEM
5305-00-059-3660	8	5	5305-01-249-8564	8	23
4730-00-142-1589	10	2	5306-01-287-5714	9	4
5315-00-197-0608	9	26	5310-01-288-1116	9	6
9905-00-205-2795	8	9	5999-01-336-9216	1	40
5305-00-424-7247	9	9	5305-01-340-0225	9	28
5975-00-519-9060	8	24	5310-01-340-5671	9	33
5340-00-990-7610	8	22	5305-01-344-8899	9	1
5310-01-055-0901	9	13	5310-01-346-9445	9	2
5310-01-061-5301	9	15	5940-01-368-9579	8	27
5306-01-084-5390	9	22	5940-01-386-0872	8	25
5310-01-111-0645	9	32	5310-01-417-7273	4	6
9905-01-151-6886	1	46	5310-01-417-7273	9	18
4730-01-152-8526	10	6	5310-01-417-7334	1	33
9905-01-154-9262	1	45	5310-01-417-7334	2	7
2590-01-155-2398	9	17	5310-01-417-7334	3	5
9905-01-155-3223	1	44	5310-01-417-7334	3	9
5340-01-155-3590	9	27	5310-01-417-7334	6	2
2540-01-155-3662	9	21	5310-01-417-7575	1	17
9905-01-155-8338	1	48	5310-01-417-7575	8	19
9905-01-156-7292	1	43	5340-01-417-8995	1	3
5360-01-157-5046	9	16	5340-01-417-8995	2	2
9905-01-157-5358	1	47	5340-01-417-8995	8	14
5310-01-160-3972	7	1	5310-01-417-9942	1	12
4730-01-161-6679	10	1	5310-01-417-9942	2	3
5975-01-165-0111	8	26	5310-01-417-9942	4	1
2540-01-165-5993	9	20	5310-01-417-9942	6	6
5306-01-165-7526	9	7	5310-01-417-9942	6	10
5360-01-167-6410	9	31	5305-01-420-6637	1	13
5306-01-169-6379	9	29	5305-01-420-6637	6	11
5365-01-174-0596	9	11	5310-01-421-6085	8	17
5310-01-177-4625	9	8	5306-01-430-7399	1	5
2590-01-189-1059	9	12	5306-01-430-7399	8	15
5305-01-194-7049	9	14	5310-01-433-0941	1	6
5365-01-201-4780	9	30	5310-01-433-6379	8	13
5325-01-229-8283	10	5	5306-01-433-9183	4	2

STOCK NUMBER	FIG.	ITEM	STOCK NUMBER	FIG.	ITEM
5306-01-433-9183	6	7	7690-01-459-5469	1	42
5306-01-433-9196	4	5	5305-01-475-0404	1	29
5306-01-433-9196	9	19	5975-01-485-8769	8	4
5305-01-434-0830	1	18	9905-01-500-7550	1	41
5305-01-434-0830	8	12	6220-01-505-3356	8	3
5310-01-434-1385	1	15	5310-01-513-4636	5	2
5310-01-434-1385	6	13	5310-01-513-4636	7	6
5310-01-434-1385	8	8	5305-01-513-5883	1	14
5310-01-436-3742	1	28	5305-01-513-5883	8	7
5310-01-436-3742	7	12	4030-01-517-7356	9	25
5306-01-436-5392	1	4	5325-01-519-3824	8	1
5305-01-436-6375	7	2	2540-01-521-6664	9	23
5310-01-439-8173	1	2	5340-01-527-9898	8	6
5310-01-439-8177	1	27	5305-01-530-5159	2	4
5310-01-439-8177	7	11			

## PART NUMBER INDEX

CAGE	PART NUMBER	STOCK NUMBER	FIG.	ITEM
58536	AA52428-1	9905-00-205-2795	8	9
80204	B1821BH063C350N	5305-00-424-7247	9	9
16236	CS-2540-SV-0727	2540-01-155-3662	9	21
49367	DB-9	5975-00-519-9060	8	24
79154	LD44750PT0	4730-01-161-6679	10	1
80205	MS2133-66	5340-00-990-7610	8	22
80205	MS51958-64	5305-00-059-3660	8	5
81349	M83420-4-010-14		9	24
78500	S-268-1	5306-01-084-5390	9	22
74545	SHC-1017	5975-01-165-0111	8	26
13548	07184	6220-01-505-3356	8	3
13548	07197	5975-01-485-8769	8	4
13548	07198	5340-01-527-9898	8	6
45152	108708A	5310-01-177-4625	9	8
45152	110311A	5310-01-111-0645	9	32
45152	124125A	5306-01-169-6379	9	29
45152	1333510	5310-01-340-5671	9	33
45152	1335830	5306-01-165-7526	9	7
45152	1356160	9905-01-151-6886	1	46
45152	1387HX		9	10
45152	1400930	5365-01-174-0596	9	11
45152	1401740	5360-01-167-6410	9	31
45152	1404120	5365-01-201-4780	9	30
45152	1404290	5305-01-194-7049	9	14
45152	1437220	5310-01-288-1116	9	6
45152	1512860	5325-01-229-8283	10	5
45152	1600460	5310-01-346-9445	9	2
45152	1606140	5305-01-344-8899	9	1
45152	1614120	5306-01-287-5714	9	4
45152	1660500	5999-01-336-9216	1	40
45152	1754210	5305-01-340-0225	9	28
80967	1864270	4030-01-517-7356	9	25
45152	1992360	4730-01-152-8526	10	6
45152	2AH450	5360-01-157-5046	9	16
45152	2BA702	2540-01-165-5993	9	20

CAGE	PART NUMBER	STOCK NUMBER	FIG.	ITEM
45152	2BA704	5315-00-197-0608	9	26
45152	2BA705	5340-01-155-3590	9	27
45152	2BA724	9905-01-157-5358	1	47
45152	2BA725	9905-01-155-8338	1	48
45152	2BA731	9905-01-155-3223	1	44
45152	2BA764	9905-01-156-7292	1	43
45152	2BE427	2590-01-189-1059	9	12
1DK67	2226950	9905-01-154-9262	1	45
45152	2227090	7690-01-459-5469	1	42
45152	2227220	9905-01-500-7550	1	41
45152	2246140	2590-01-155-2398	9	17
45152	2881HX	5310-01-055-0901	9	13
79154	3-75T	4730-00-142-1589	10	2
45152	3238118	2540-01-521-6664	9	23
00779	327025	5940-01-368-9579	8	27
00779	34166	5940-01-386-0872	8	25
45152	3585336		9	3
45152	3585337		9	5
45152	3593368		KIT	1
45152	3593395		KIT	2
45152	3593651		8	21
45152	3593652		8	20
79154	4.50-75T		10	4
79154	4-75T		10	3
6W728	4397000-006	5306-01-430-7399	1	5
6W728	4397000-006	5306-01-430-7399	8	15
6W728	4397000-010	5306-01-436-5392	1	4
6W728	4397000-034	5305-01-420-6637	1	13
6W728	4397000-034	5305-01-420-6637	6	11
6W728	4397000-036	5306-01-433-9183	4	2
6W728	4397000-036	5306-01-433-9183	6	7
6W728	4397000-041	5305-01-530-5159	2	4
6W728	4397000-060	5306-01-433-9196	4	5
6W728	4397000-060	5306-01-433-9196	9	19
6W728	4397000-068	5305-01-436-6375	7	2
6W728	4397000-072	5305-01-475-0404	1	29
6W728	4397000-380		7	3

CAGE	PART NUMBER	STOCK NUMBER	FIG.	ITEM
6W728	4397000-381		1	31
6W728	4397000-381		3	3
6W728	4397000-381		6	4
6W728	4397000-382		2	5
6W728	4397000-382		3	7
6W728	4397000-382		5	3
6W728	4397000-382		7	9
6W728	4397004-004	5310-01-417-7575	1	17
6W728	4397004-004	5310-01-417-7575	8	19
6W728	4397004-005	5310-01-434-1385	1	15
6W728	4397004-005	5310-01-434-1385	6	13
6W728	4397004-005	5310-01-434-1385	8	8
6W728	4397004-006	5310-01-433-0941	1	6
6W728	4397004-007	5310-01-417-9942	1	12
6W728	4397004-007	5310-01-417-9942	2	3
6W728	4397004-007	5310-01-417-9942	4	1
6W728	4397004-007	5310-01-417-9942	6	6
6W728	4397004-007	5310-01-417-9942	6	10
6W728	4397004-008	5310-01-417-7273	4	6
6W728	4397004-008	5310-01-417-7273	9	18
6W728	4397004-009		1	32
6W728	4397004-009		2	6
6W728	4397004-009		3	4
6W728	4397004-009		3	8
6W728	4397004-009		5	4
6W728	4397004-009		6	3
6W728	4397004-009		7	4
6W728	4397005-005	5310-01-433-6379	8	13
6W728	4397005-011	5340-01-417-8995	1	3
6W728	4397005-011	5340-01-417-8995	2	2
6W728	4397005-011	5340-01-417-8995	8	14
6W728	4397005-015	5310-01-436-3742	1	28
6W728	4397005-015	5310-01-436-3742	7	12
6W728	4397005-016	5310-01-417-7334	1	33
6W728	4397005-016	5310-01-417-7334	2	7
6W728	4397005-016	5310-01-417-7334	3	5
6W728	4397005-016	5310-01-417-7334	3	9

CAGE	PART NUMBER	STOCK NUMBER	FIG.	ITEM
6W728	4397005-016	5310-01-417-7334	6	2
6W728	4397005-017		5	1
6W728	4397005-017		7	7
6W728	4397012-054	5305-01-434-0830	1	18
6W728	4397012-054	5305-01-434-0830	8	12
6W728	4397012-074		6	12
6W728	4397012-074		8	10
6W728	4397012-076	5305-01-513-5883	1	14
6W728	4397012-076	5305-01-513-5883	8	7
6W728	4397020-022	5310-01-421-6085	8	17
6W728	4397064-001	5310-01-439-8173	1	2
6W728	4397064-005	5310-01-439-8177	1	27
6W728	4397064-005	5310-01-439-8177	7	11
6W728	4397064-007	5310-01-513-4636	5	2
6W728	4397064-007	5310-01-513-4636	7	6
45152	5KP733		1	1
45152	5KP717		1	1
45152	5KP734		6	8
45152	5KP738		6	8
45152	56765AX	5310-01-160-3972	7	1
45152	59031AX	5305-01-249-8564	8	23
6W728	6133318-01M1		1	36
6W728	6430151-60M1		8	18
6W728	6433044-01M1		1	37
6W728	6433044-200M1		1	37
6W728	6433045-01M1		1	30
6W728	6433045-200M1		1	30
6W728	6433058-01M1		2	1
6W728	6433058-200M1		2	1
6W728	6433059-01M1		2	8
6W728	6433059-200M1		2	8
6W728	6433060-01M1		3	2
6W728	6433060-200M1		3	2
6W728	6433061-01M1		3	2
6W728	6433061-200M1		3	2
6W728	6433076-01M1		3	6
6W728	6433076-200M1		3	6

CAGE	PART NUMBER	STOCK NUMBER	FIG.	ITEM
6W728	6433080-01M1		6	17
6W728	6433080-200M1		6	17
6W728	6433082-01M1		1	11
6W728	6433082-01M1		6	9
6W728	6433082-200M1		1	11
6W728	6433082-200M1		6	9
6W728	6433083-01M1		8	11
6W728	6433083-200M1		8	11
6W728	6433085-01M1		1	24
6W728	6433085-200M1		1	24
6W728	6433086-01M1		1	22
6W728	6433086-200M1		1	22
6W728	6433087-01M1		1	22
6W728	6433087-200M1		1	22
6W728	6433088-01M1		1	8
6W728	6433088-200M1		1	8
6W728	6433089-01M1		1	35
6W728	6433089-200M1		1	35
6W728	6433090-01M1		4	4
6W728	6433090-200M1		4	4
6W728	6433091-01M1		4	4
6W728	6433091-200M1		4	4
6W728	6433092-01M1		6	15
6W728	6433092-200M1		6	15
6W728	6433093-01M1		6	16
6W728	6433093-200M1		6	16
6W728	6433101-01M1		6	14
6W728	6433101-200M1		6	14
6W728	6433112-01M1		7	10
6W728	6433112-200M1		7	10
6W728	6433113-01M1		7	8
6W728	6433113-200M1		7	8
6W728	6433120-01M1		6	5
6W728	6433123-02M1		1	25
6W728	6433123-03M1		1	21
6W728	6433123-202M1		1	25
6W728	6433123-203M1		1	21



CAGE	PART NUMBER	STOCK NUMBER	FIG.	ITEM
6W728	6433129-01M1		1	16
6W728	6433129-200M1		1	16
6W728	6433134-02M1		1	20
6W728	6433134-202M1		1	20
6W728	6433195-01M1		4	3
6W728	6433195-200M1		4	3
6W728	6433257-01M1		5	5
6W728	6433257-200M1		5	5
6W728	6433258-01M1		5	6
6W728	6433258-200M1		5	6
6W728	6433261-01M1		3	1
6W728	6433264-01M1		7	5
6W728	6433264-200M1		7	5
6W728	6433267-01M1		1	10
6W728	6433267-200M1		1	10
6W728	6433268-01M1		1	26
6W728	6433268-200M1		1	26
6W728	6433273-01M1		1	34
6W728	6433273-200M1		1	34
6W728	6433278-01M1		1	7
6W728	6433278-200M1		1	7
6W728	6433279-01M1		1	7
6W728	6433279-200M1		1	7
6W728	6433284-01M1		1	38
6W728	6433284-02M1		1	39
6W728	6433284-03M1		1	23
6W728	6433289-01M1		1	19
6W728	6433300-02M1		6	1
6W728	6433300-200M1		6	1
6W728	6433316-05M1		8	16
6W728	6433317-01M1		1	9
6W728	6433317-200M1		1	9
45152	8865GX	5310-01-061-5301	9	15
3A054	9280K32	5325-01-519-3824	8	1
13548	95988		8	2

END OF WORK PACKAGE



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FIELD MAINTENANCE

TANKER ARMOR MODULE KIT INSTALLATION INSTRUCTIONS

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**9-9 Tactical Trucks****ITEM:** HEMTT M978 Tanker**SUBJECT:** HEMTT Tanker Pump Module Protection Kit Installation and Spare Parts**POC:**

**COMMENTS:** An armored protection kit has been developed to help protect the pump module of the HEMTT M978 tanker. Procedures and spare parts information have been documented for installation and support of this kit.

**MATERIALS/PARTS:**

<b>NSN (PART NUMBER)</b>	<b>NOMENCLATURE</b>	<b>QTY</b>
(6433100-01M1) Green 383 or (6433100-200M1) Tan 686A	Kit, HEMTT Tanker Pump Module Protection	1
Consisting of:		
(6433285-01M1) Green 383 or (6433285-200M1) Tan 686A	Panel Assembly, TAM – Rear	1
(6433286-01M1) Green 383 or (6433286-200M1) Tan 686A	Panel Assembly, TAM – Top	1
(6433306-01M1) Green 383 or (6433306-200M1) Tan 686A	Panel Assembly, Side Upper – Right	1
(6433307-01M1) Green 383 or (6433307-200M1) Tan 686A	Panel Assembly, Side Upper – Left	1
(6433308-01M1) Green 383 or (6433308-200M1) Tan 686A	Panel Assembly, Side Access – Right	1
(6433309-01M1) Green 383 or (6433309-200M1) Tan 686A	Panel Assembly, Side Access – Left	1
(6433059-01M1) Green 383 or (6433059-200M1) Tan 686A	Panel Assembly, Side Lower – Left	1
(6433058-01M1) Green 383 or (6433058-200M1) Tan 686A	Panel Assembly, Side Lower – Right	1
(6433258-01M1) Green 383 or (6433258-200M1) Tan 686A	Panel Assembly, Front – Right	1
(6433257-01M1) Green 383 or (6433257-200M1) Tan 686A	Panel Assembly, Front – Left	1
(6433112-01M1) Green 383 or (6433112-200M1) Tan 686A	Wheelwell Assembly – Right	1
(6433113-10M1) Green 383 or (6433113-200M1) Tan 686A	Wheelwell Assembly – Left	1
(6433264-01M1) Green 383 or (6433264-200M1) Tan 686A	Panel, Wheel House – Inner	2
(6433120-01M1)	Handle, Grab/Pull	1
(6433044-01M1) Green 383 or (6433044-200M1) Tan 686A	Bar, Rear Panel Assembly Attach	2

**MATERIALS/PARTS (Cont'd):**

<b>NSN (PART NUMBER)</b>	<b>NOMENCLATURE</b>	<b>QTY</b>
(6433300-02M1) Green 383 or (6433300-200M1) Tan 686A	Cover, Shackle Opening - Top	1
(6433315)	Kit, TAM Installation Hardware	1
Consisting of:		
5310-01-513-4636 (4397064-007)	Nut, Hex Lock, .438-14	22
5310-01-439-8177 (4397064-005)	Nut, Hex Lock, .375-16	7
(4397012-074)	Screw, Pan Hd, #10-24 X .750	4
5305-01-513-5383 (4397012-076)	Screw, Pan Hd, #10-24 X 1.00	28
(4397005-017)	Washer, Flat, .438 USS	22
5310-01-417-7334 (4397005-016)	Washer, Flat, .438 SAE	38
5310-01-436-3742 (4397005-015)	Washer, Flat, .375 USS	8
(4397004-009)	Washer, Lock, .438	68
5310-01-417-7273 (4397004-008)	Washer, Lock, .375	22
5310-01-417-9942 (4397004-007)	Washer, Lock, .313	8
5310-01-434-1385 (4397004-005)	Washer, Lock, .190	32
(4397000-382)	Screw, Cap Hex Hd, .437-14 X 1.50	42
(4397000-381)	Screw, Cap Hex Hd, .437-14 X 1.25	18
(4397000-380)	Screw, Cap Hex Hd, .437-14 X 1.00	6
5305-01-475-0404 (4397000-072)	Screw, Cap Hex Hd, .375-16 X 3.50	1
(4397000-041)	Screw, Cap Hex Hd, .313-18 X 2.25	6
5305-01-436-6375 (4397000-068)	Screw, Cap Hex Hd, .375-16 X 2.50	6
5306-01-433-9196 (4397000-060)	Screw, Cap Hex Hd, .375-16 X 1.00	22
5306-01-433-9183 (4397000-036)	Screw, Cap Hex Hd, .312-18 X 1.25	2
5310-01-436-3741 (4397005-013)	Washer, Flat, .313 USS	6

**PROCEDURES:**

A. Prepare vehicle as follows:

**NOTE**

The following vehicle preconditions shall be met before installation of armor kit (Refer to Appendix A):

- If vehicle is so equipped, remove high mount stop lamp assemblies and retain lamps for installation.
- Remove pump module top and rear doors.
- Remove left and right side access panels.
- Remove ladder rail and ladder.
- Remove 2500 gallon fuel tank.
- Remove BII box.
- Remove sling point cover.

1. Remove capscrew (2) and locknut (3) from pump module rear center support brace (1) as shown in figure 1. Discard capscrew (2) and locknut (3).

2. Remove three capscrews (7), large washers (6), and locknuts (5) from forward edge of left and right mudflap brackets (4) as shown in figure 1. Retain large washers (6) for installation and discard capscrews (7) and locknuts (5).

### WARNING

All armor panel assemblies are extremely heavy and must be supported during installation. Failure to do so may cause injury to personnel or damage to equipment.

- B. Install rear panel assembly as follows:

### NOTE

It is possible to install rear panel assembly attach bars incorrectly. Install rear panel assembly attach bars with mounting holes oriented as shown in figure 2.

1. Install two 6433044-01M1 or 6433044-200M1 rear panel assembly attach bars (12) in frame rails (13) at rear of pump module (3) as shown in figure 2.
2. Open left door assembly (10) and right door assembly (4) of 6433285-01M1 or 6433285-200M1 rear panel assembly (11) as shown in figure 2.
3. Remove paint to bare metal around ground strap mounting hole in lower flange of 6433285-01M1 or 6433285-200M1 rear panel assembly (11). Refer to figure 2.
4. Install 6433285-01M1 or 6433285-200M1 rear panel assembly (11) on top of rear panel assembly attach bars (12) and secure with four 4397000-381 capscrews (6), 4397004-009 lockwashers (7), 4397005-016 washers (9), and one 1660500 ground strap (8) as shown in figure 2. Do not tighten capscrews (6) at this time.
5. Install 4397000-072 capscrew (5), two 4397005-015 washers (2), and 4397064-005 locknut (1) as shown in figure 2. Do not tighten locknut (1) at this time. If capscrew cannot be installed, perform steps B.6. through B.9.
6. If necessary, loosen two locknuts (15) and rotate clamp (17) and bracket (14) away from pump module center support (16). Refer to figure 2.

### CAUTION

Limit drilling depth to avoid possible damage to equipment behind area being drilled.

7. Match drill 13/32 inch diameter hole through center support of rear panel assembly (11) and pump module center support (16). Repair finish all edges that have been drilled using appropriate primer specified per MIL-C-53072. Refer to figure 2.

8. If necessary, rotate clamp (17) and bracket (14) to align slotted hole in bracket (14) with mounting holes in pump module center support (16) and center support or rear panel assembly (11). Tighten two locknuts (15) to 37 lb-ft. Refer to figure 2.
  9. Install 4397000-072 capscrew (5), two 4397005-015 washers (2), and 4397064-005 locknut (1) as shown in figure 2. Do not tighten locknut (1) at this time.
  10. Remove locknut (22) and star washer (21) from capscrew (20) in static reel mount (19) as shown in figure 2.
  11. Route ground strap (8) under pump module (3) and up through floor grate (18) near static reel mount (19). Refer to figure 2.
  12. Install ground strap (8) on capscrew (20) and secure with star washer (21) and locknut (22) as shown in figure 2. Tighten locknut (22) to 37 lb-ft.
- C. Install lower side panel assemblies as follows:
1. Install 6433059-01M1 or 6433059-200M1 left lower side panel assembly (31) and route lamp wiring harness connector (29) through hole near upper rear corner as shown in figure 3.
  2. Secure lower rear edge of left lower side panel assembly (31) to rear panel assembly (16) with two 4397000-382 capscrews (19), 4397004-009 lockwashers (18), and 4397005-016 washers (17) as shown in figure 3. Do not tighten capscrews (19) at this time.
  3. Install two 4397000-041 capscrews (26), 4397004-007 lockwashers (28), and 4397005-013 washers (27) as shown in figure 3. Do not tighten capscrews (26) at this time.
  4. Install 3286740 tanker light grommet (30) in left lower side panel assembly (31) and snap wiring harness into grommet (30). Refer to figure 3.
  5. Install 4397000-382 capscrew (22), 4397004-009 lockwasher (21), and 4397005-016 washer (20) in upper rear edge of left lower side panel assembly (31) as shown in figure 3. Do not tighten capscrew (22) at this time.
  6. Install 4397000-041 capscrew (23), 4397004-007 lockwasher (24), and 4397005-013 washer (25) as shown in figure 3. Do not tighten capscrew (23) at this time.
  7. Install 6433058-01M1 or 6433058-200M1 right lower side panel assembly (1) and route lamp wiring harness connector (15) through hole near upper rear corner as shown in figure 3.
  8. Secure lower rear edge of right lower side panel assembly (1) to rear panel assembly (16) with two 4397000-382 capscrews (12), 4397004-009 lockwashers (13), and 4397005-016 washers (14) as shown in figure 3. Do not tighten capscrews (12) at this time.



9. Install two 4397000-041 capscrews (4), 4397004-007 lockwashers (3), and 4397005-013 washers (2) as shown in figure 3. Do not tighten capscrews (4) at this time.
10. Install 3286740 tanker light grommet (8) in right lower side panel assembly (1) and snap wiring harness into grommet (8). Refer to figure 3.
11. Install 4397000-382 capscrew (10), 4397004-009 lockwasher (11), and 4397005-016 washer (9) in upper rear edge of right lower side panel assembly (1) as shown in figure 3. Do not tighten capscrew (10) at this time.
12. Install 4397000-041 capscrew (7), 4397004-007 lockwasher (6), and 4397005-013 washer (5) as shown in figure 3. Do not tighten capscrew (7) at this time.

D. Install upper side panel assemblies as follows:

1. Install 6433307-01M1 or 6433307-200M1 left upper side panel assembly (12) and secure to left lower side panel (7) with four 4397000-382 capscrews (11), 4397004-009 lockwashers (10), and 4397005-016 washers (16) as shown in figure 4. Do not tighten capscrews (11) at this time.
2. Install 4397000-382 capscrew (8), 4397004-009 lockwasher (9), and 4397005-016 washer (15) in rear edge of left upper side panel assembly (12) as shown in figure 4. Do not tighten capscrew (8) at this time.
3. Install 6433306-01M1 or 6433306-200M1 right upper side panel assembly (1) and secure to right lower side panel (6) with four 4397000-382 capscrews (5), 4397004-009 lockwashers (4), and 4397005-016 washers (14) as shown in figure 4. Do not tighten capscrews (5) at this time.
4. Install five 4397000-382 capscrews (3), 4397004-009 lockwashers (2), and 4397005-016 washers (13) in rear edge of right upper side panel assembly (1) as shown in figure 4. Do not tighten capscrews (3) at this time.

E. Install front panel assemblies as follows:

NOTE

If pump module rear flange interferes with installation of left or right front panel assemblies, remove material to shorten pump module flange as required.

1. Install 6433257-01M1 or 6433257-200M1 left front panel assembly (9) and secure to left lower side panel assembly (4) with two 4397000-382 capscrews (5), 4397004-009 lockwashers (6), 4397005-017 washers (7), and 4397064-007 locknuts (8) as shown in figure 5. Do not tighten locknuts (8) at this time.

2. Install 6433258-01M1 or 6433258-200M1 right front panel assembly (12) and secure to right lower side panel assembly (1) with two 4397000-382 capscrews (16), 4397004-009 lockwashers (15), 4397005-017 washers (14), and 4397064-007 locknuts (13) as shown in figure 5. Do not tighten locknuts (13) at this time.

CAUTION

Limit drilling depth to avoid possible damage to equipment behind area being drilled.

3. Clamp front panel assemblies (9 and 12) in place as required, and match drill six 15/32 inch diameter holes through each front panel assembly (9 and 12) as shown in figure 5.
  4. Repair finish all edges that have been drilled using appropriate primer specified per MIL-C-53072.
  5. Secure each front panel assembly (9 and 12) with six 4397000-382 capscrews (11), 4397004-009 lockwashers (10), 4397005-017 washers (2), and 4397064-007 locknuts (3) as shown in figure 5. Tighten locknuts (3) to 60 lb-ft.
- F. Install top panel assembly and grab/pull handle as follows:
1. Install 6433286-01M1 or 6433286-200M1 top panel assembly (6) and 6433300-02M1 or 6433300-200M1 shackle opening cover (17), and secure to left upper side panel assembly (9) with five 4397000-381 capscrews (1), 4397004-009 lockwashers (13), and 4397005-016 washers (16) as shown in figure 6. Do not tighten capscrews (1) at this time.
  2. Secure top panel assembly (6) to right upper side panel assembly (7) with five 4397000-381 capscrews (2), 4397004-009 lockwashers (3), and 4397005-016 washers (14) as shown in figure 6. Do not tighten capscrews (2) at this time.
  3. Secure top panel assembly (6) to rear panel assembly (8) with four 4397000-381 capscrews (4), 4397004-009 lockwashers (5), and 4397005-016 washers (15) as shown in figure 6. Do not tighten capscrews (4) at this time.
  4. Install 6433120-01M1 grab/pull handle (10) and secure with two 4397000-036 capscrews (12) and 4397004-007 lockwashers (11) as shown in figure 6. Do not tighten capscrews (12) at this time.
- G. Install wheelwell armor as follows:
1. Install 6433113-01M1 or 6433113-200M1 left wheelwell assembly (7) and secure to left front panel assembly (8) with one 4397000-382 capscrew (10), 4397004-009 lockwasher (9), 4397005-017 washer (22), and 4397064-007 locknut (21) installed in center mounting hole as shown in figure 7. Do not tighten locknut (21) at this time.

2. Raise left wheelwell assembly (7) and position rear edge between bottom of pump module (2) and mudflap bracket (3). Refer to figure 7.
  3. Secure rear edge of left wheelwell assembly (7) and mudflap bracket (3) with three 4397000-068 capscrews (1), existing large washers (20), 4397005-015 washers (19), and 4397064-005 locknuts (18). Do not tighten locknuts (18) at this time. Refer to figure 7.
  4. Install remaining two 4397000-382 capscrews (10), 4397004-009 lockwashers (9), 4397005-017 washers (22), and 4397064-007 locknuts (21) to secure left wheelwell assembly (7) to left front panel assembly (8). Tighten three locknuts (21) to 60 lb-ft and three locknuts (18) to 37 lb-ft. Refer to figure 7.
  5. Install 6433264-01M1 or 6433264-200M1 inner wheel house panel (6) and secure to left wheelwell assembly (7) with three 4397000-380 capscrews (4) and 4397004-009 lockwashers (5) as shown in figure 7. Tighten capscrews (4) to 60 lb-ft.
  6. Install 6433112-01M1 or 6433112-200M1 right wheelwell assembly (11) and secure to right front panel assembly (13) with one 4397000-382 capscrew (15), 4397004-009 lockwasher (16), 4397005-017 washer (24), and 4397064-007 locknut (23) installed in center mounting hole as shown in figure 7. Do not tighten locknut (23) at this time.
  7. Raise right wheelwell assembly (11) and position rear edge between bottom of pump module (2) and mudflap bracket (3). Refer to figure 7.
  8. Secure rear edge of right wheelwell assembly (11) and mudflap bracket (3) with three 4397000-068 capscrews (1), existing large washers (20), 4397005-015 washers (19), and 4397064-005 locknuts (18). Do not tighten locknuts (18) at this time. Refer to figure 7.
  9. Install remaining two 4397000-382 capscrews (15), 4397004-009 lockwashers (16), 4397005-017 washers (24), and 4397064-007 locknuts (23) to secure right wheelwell assembly (11) to right front panel assembly (13). Tighten three locknuts (23) to 60 lb-ft and three locknuts (18) to 37 lb-ft. Refer to figure 7.
  10. Install 6433264-01M1 or 6433264-200M1 inner wheel house panel (12) and secure to right wheelwell assembly (11) with three 4397000-380 capscrews (17) and 4397004-009 lockwashers (14) as shown in figure 7. Tighten capscrews (17) to 60 lb-ft.
- H. Install 6433309-01M1 or 6433309-200M1 left side access panel assembly (3) and secure with three 4397000-060 capscrews (9) and 4397004-008 lockwashers (8) as shown in figure 8. Tighten capscrews (9) to 37 lb-ft.
- I. Install 6433308-01M1 or 6433308-200M1 right side access panel assembly (22) and secure with three 4397000-060 capscrews (20) and 4397004-008 lockwashers (21) as shown in figure 8. Tighten capscrews (20) to 37 lb-ft.

- J. Install ladder and rail assembly (4) and secure with sixteen 4397000-060 capscrews (6) and 4397004-008 lockwashers (5) as shown in figure 8. Tighten capscrews (6) to 37 lb-ft.
- K. Install lower ladder assembly, safety pins, and cables. Refer to Appendix A.
- L. Install lamp assemblies and reflectors as follows:
1. Install EE34609 reflector (25) on left lower side panel assembly (7) and secure with two 4397012-074 screws (24) and 4397004-005 lockwashers (23) as shown in figure 8. Tighten screws (24) to 59 lb-in.
  2. Connect wiring harness connector (29) to lamp base assembly (28). Ensure positive to positive and negative to negative installation. Refer to figure 8.
  3. Install lamp base assembly (28) on left lower side panel assembly (7) and secure with four 4397012-076 screws (1) and 4397004-005 lockwashers (2) as shown in figure 8. Tighten screws (1) to 59 lb-in.
  4. Install lamp cover (27) and secure with two screws (26) as shown in figure 8.
  5. Install EE34609 reflector (14) on right lower side panel assembly (17) and secure with two 4397012-074 screws (16) and 4397004-005 lockwashers (15) as shown in figure 8. Tighten screws (16) to 59 lb-in.
  6. Connect wiring harness connector (19) to lamp base assembly (18). Ensure positive to positive and negative to negative installation. Refer to figure 8.
  7. Install lamp base assembly (18) on right lower side panel assembly (17) and secure with four 4397012-076 screws (11) and 4397004-005 lockwashers (10) as shown in figure 8. Tighten screws (11) to 59 lb-in.
  8. Install lamp cover (13) and secure with two screws (12) as shown in figure 8.
  9. Connect wiring harness connector (16) to lamp base assembly (15). Ensure positive to positive and negative to negative installation. Refer to figure 9. Repeat procedure for four remaining rear lamps.
  10. Install lamp base assembly (15) on lightbar panel assembly (1) and secure with four 4397012-076 screws (17) and 4397004-005 lockwashers (18) as shown in figure 9. Tighten screws (17) to 59 lb-in. Repeat procedure for four remaining rear lamps.
  11. Install lamp cover (14) and secure with two screws (13) as shown in figure 9. Repeat procedure for four remaining rear lamps.

## NOTE

This procedure covers installation of one high mount stop lamp assembly. Installation procedures are the same for both.

12. If pump module was equipped with high mount stop lamp assemblies, reinstall lamps in new rear doors as follows:

- a. Remove two screws (10), lockwashers (9), and rear light cover panel (19) from rear door assembly (2) as shown in figure 9. Retain all fasteners for installation and return cover panel (19) to stock.
- b. Install lamp connector end of 3593651 right hand stop lamp extension harness (4) or 3593652 left hand stop lamp extension harness (4) through lamp housing (6) on front side of rear door assembly (2). Refer to figure 9.
- c. Plug extension harness connector (12) onto stop light (11) and install stop light (11) into rear door assembly (2). Secure stop light (11) with two screws (10) and lockwashers (9) as shown in figure 9. Tighten screws (10) to 59 lb-in.
- d. Remove two screws (8), lockwashers (7), and loop straps (5) from front side of rear door assembly (2). Retain all parts for installation. Refer to figure 9.
- e. Install two loop straps (5) around stop lamp extension harness (4) and secure to front side of rear door assembly (2) with two screws (8) and lockwashers (7). Tighten screws (8) to 41 lb-in. Refer to figure 9.
- f. Route stop lamp extension harness (4) as required, in order to connect to existing stop lamp harness connector (3). Secure stop lamp extension harness (4) with wire ties as required. Refer to figure 9.

M. Complete fastener tightening sequence as follows:

1. Tighten two capscrews (12) securing grab/pull handle (10) to 21 lb-ft. Refer to figure 6.
2. Tighten four capscrews (4) securing top panel assembly (6) to rear panel assembly (8) to 60 lb-ft. Refer to figure 6.
3. Tighten five capscrews (2) securing top panel assembly (6) to right upper side panel assembly (7) to 60 lb-ft. Refer to figure 6.
4. Tighten five capscrews (1) securing top panel assembly (6) to left upper side panel assembly (9) to 60 lb-ft. Refer to figure 6.
5. Tighten two locknuts (13) securing right front panel assembly (12) to right lower side panel assembly (1) to 60 lb-ft. Refer to figure 5.

6. Tighten two locknuts (8) securing left front panel assembly (9) to left lower side panel assembly (4) to 60 lb-ft. Refer to figure 5.
  7. Tighten five capscrews (3) in rear edge of right upper side panel assembly (1) to 60 lb-ft. Refer to figure 4.
  8. Tighten four capscrews (5) securing right upper side panel assembly (1) to right lower side panel assembly (6) to 60 lb-ft. Refer to figure 4.
  9. Tighten capscrew (8) in rear edge of left upper side panel assembly (12) to 60 lb-ft. Refer to figure 4.
  10. Tighten four capscrews (11) securing left upper side panel assembly (12) to left lower side panel assembly (7) to 60 lb-ft. Refer to figure 4.
  11. Tighten three capscrews (4) to 37 lb-ft. Refer to figure 3.
  12. Tighten three capscrews (5) securing rear edge of right lower side panel assembly (1) to rear panel assembly (8) to 60 lb-ft. Refer to figure 3.
  13. Tighten three capscrews (13) to 37 lb-ft. Refer to figure 3.
  14. Tighten three capscrews (10) securing rear edge of left lower side panel assembly (15) to rear panel assembly (8) to 60 lb-ft. Refer to figure 3.
  15. Tighten locknut (1) to 37 lb-ft. Refer to figure 2.
  16. Tighten four capscrews (6) securing rear panel assembly (11) to rear panel assembly attach bars (12) to 60 lb-ft. Refer to figure 2.
- N. Complete installation as follows:
1. Repair finish area on rear panel assembly (11) where ground strap (8) is attached, using appropriate primer specified per MIL-C-53072. Refer to figure 2.
  2. Paint exposed parts of all new fasteners using appropriate primer specified per MIL-C-53072.
  3. Install BII box. Refer to Appendix A.
  4. Install 2500 gallon fuel tank. Refer to Appendix A.

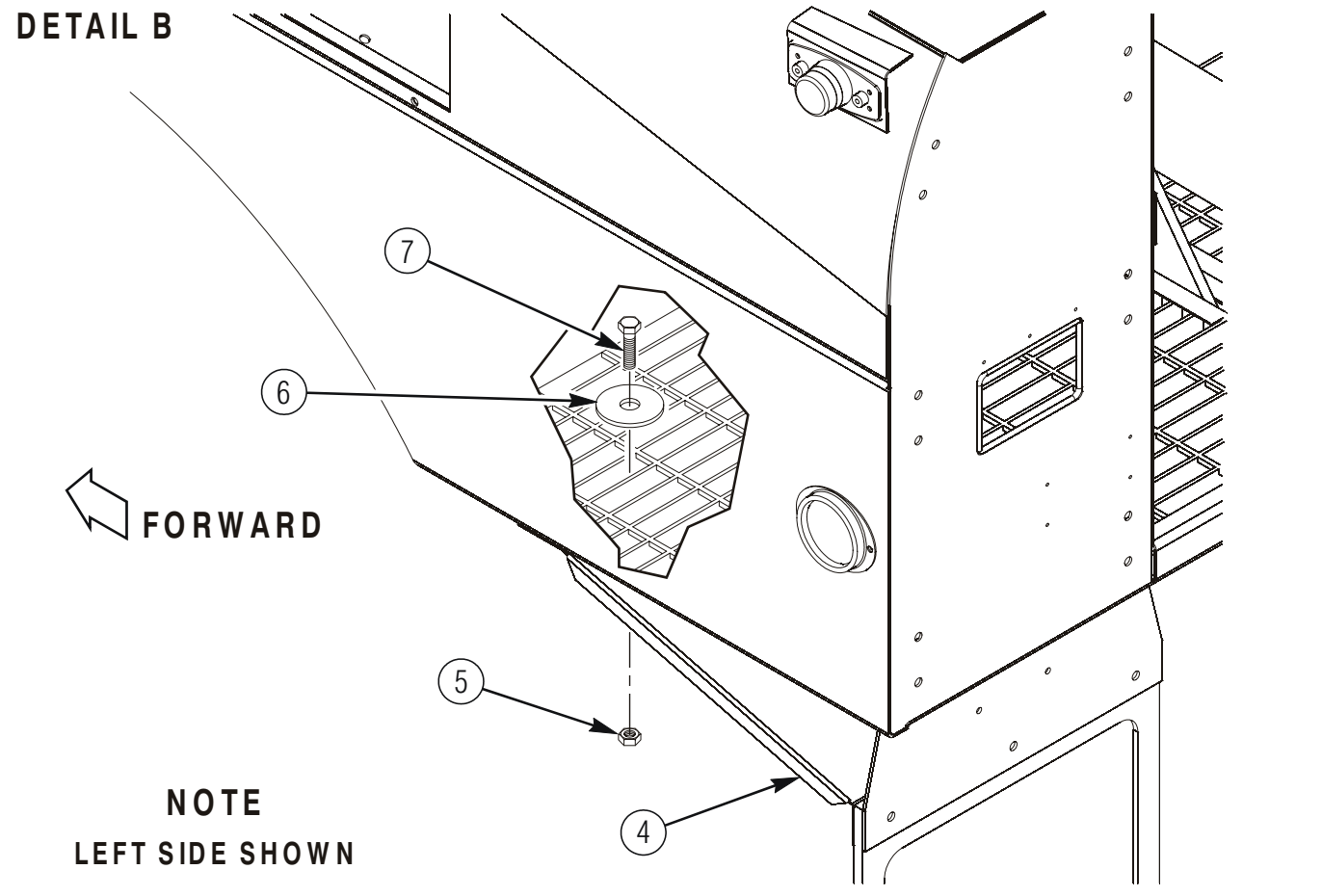
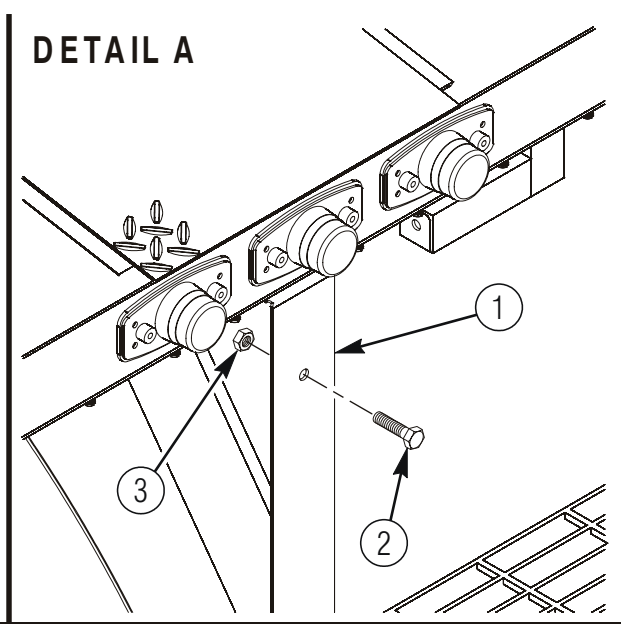
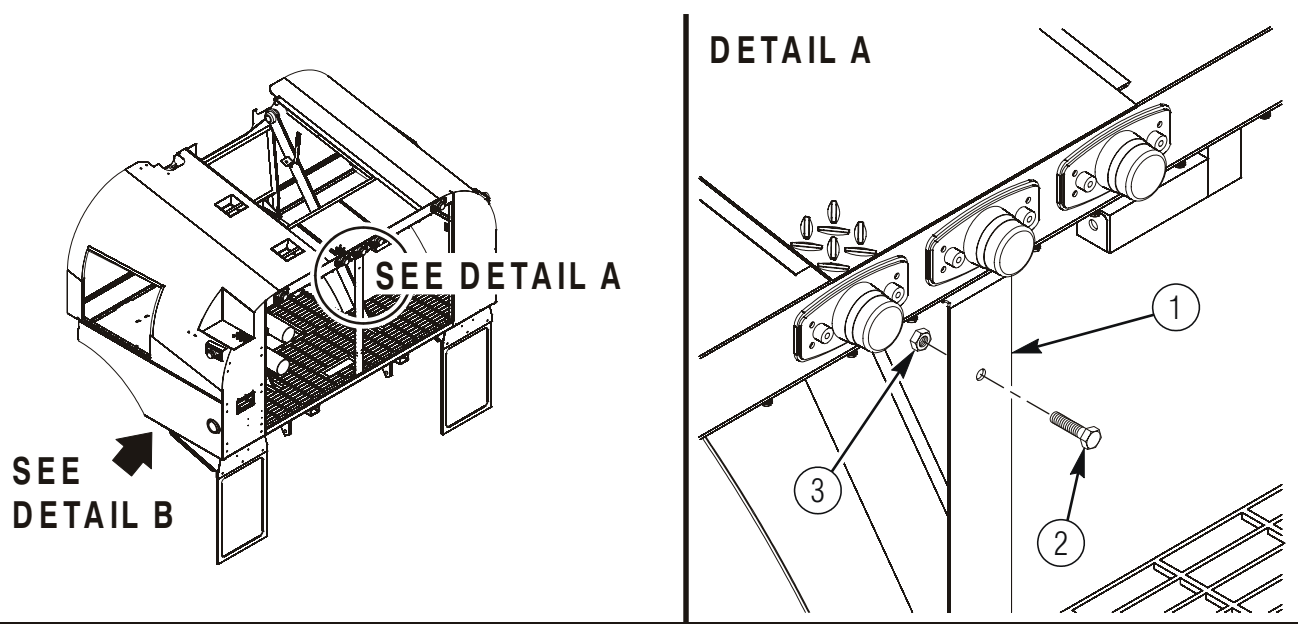


Figure 1.

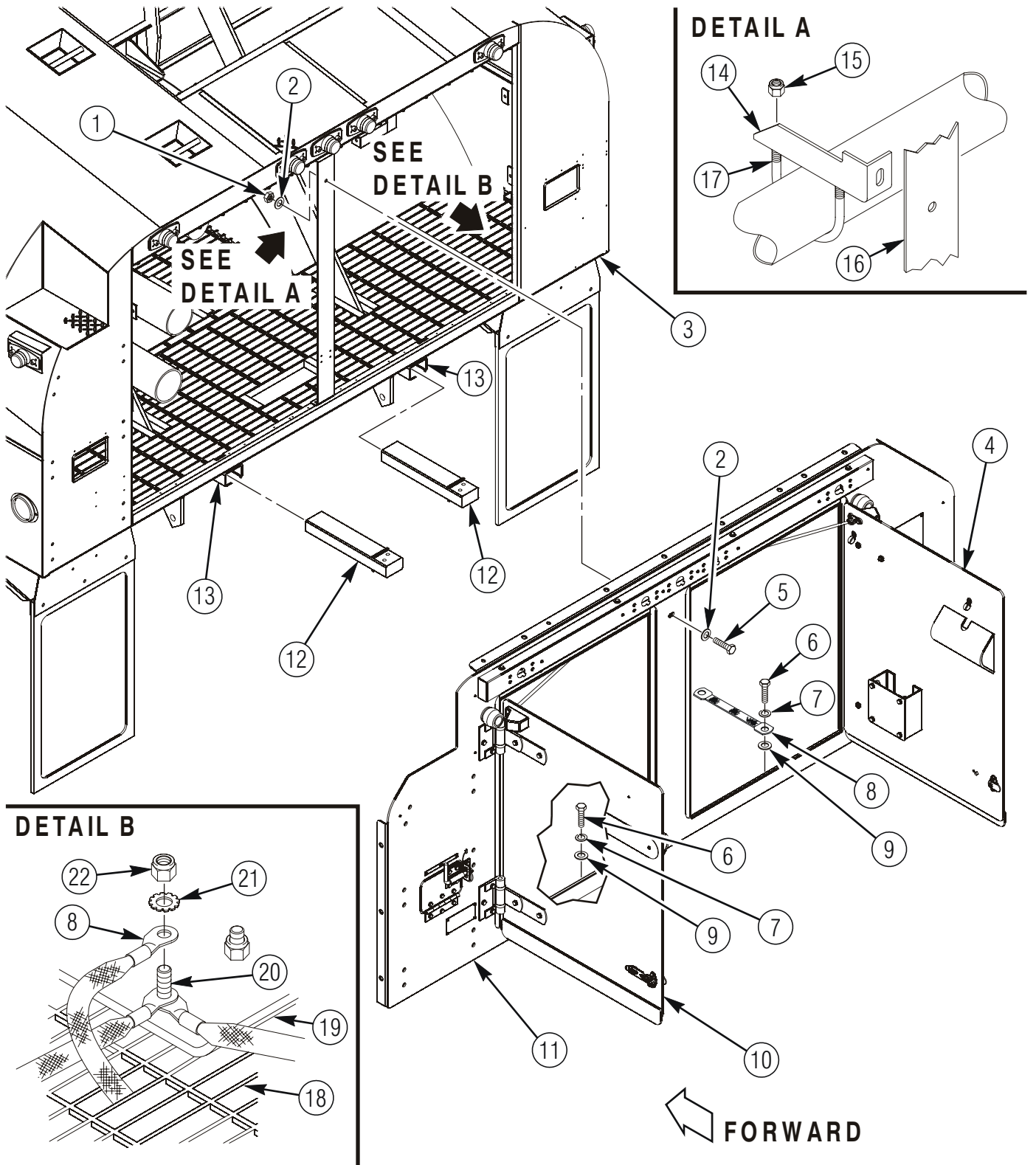


Figure 2.



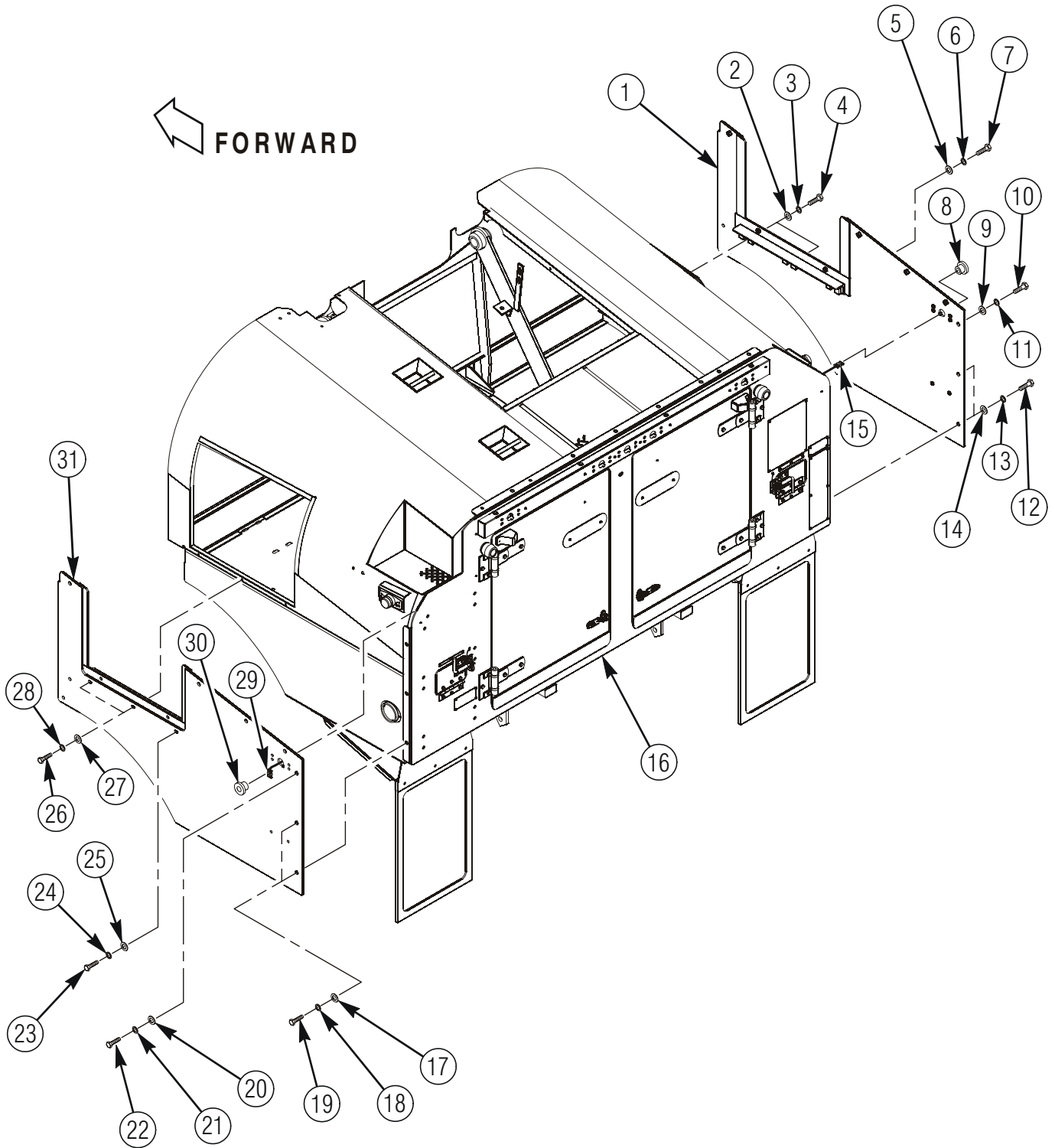


Figure 3.

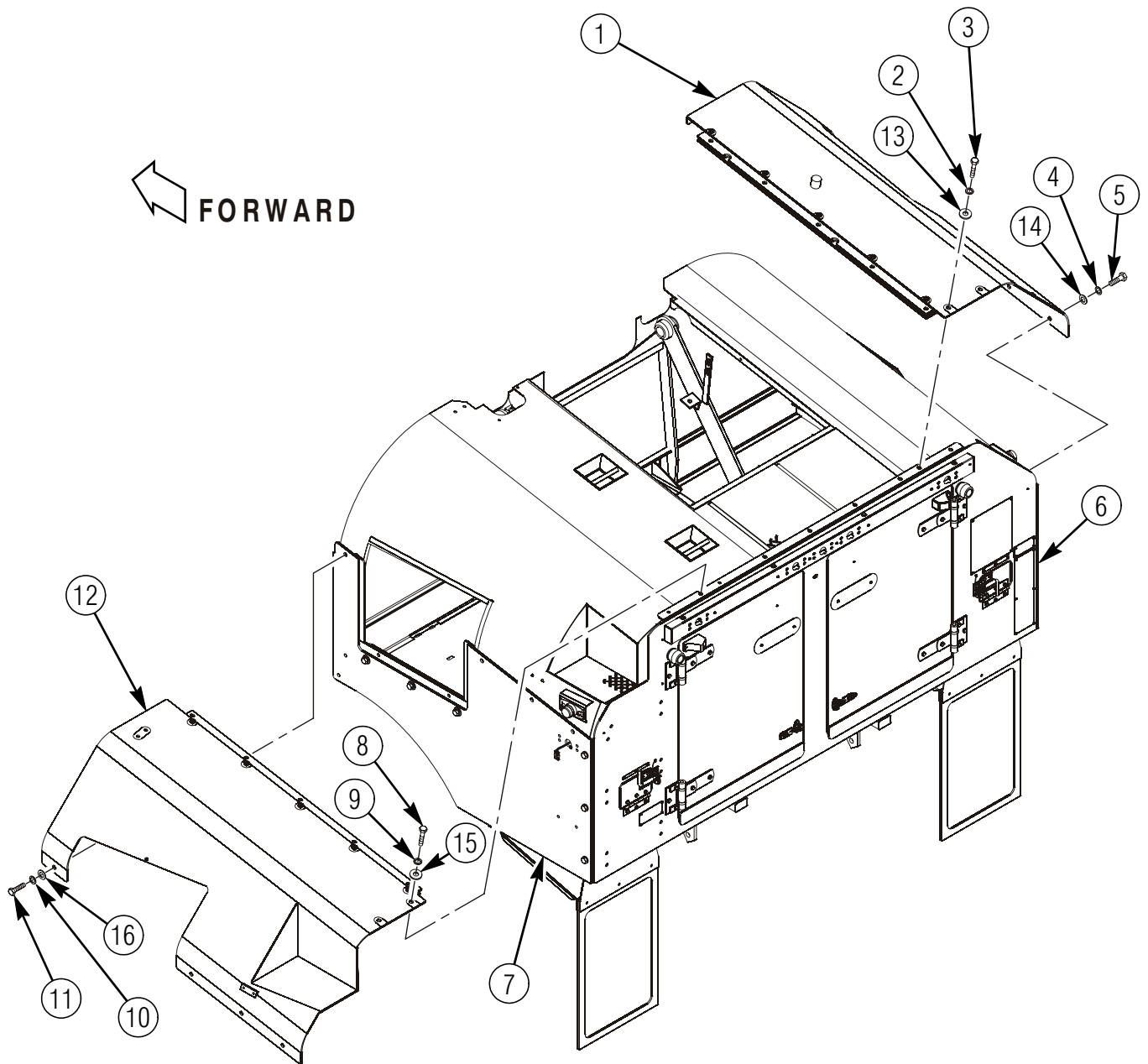


Figure 4.

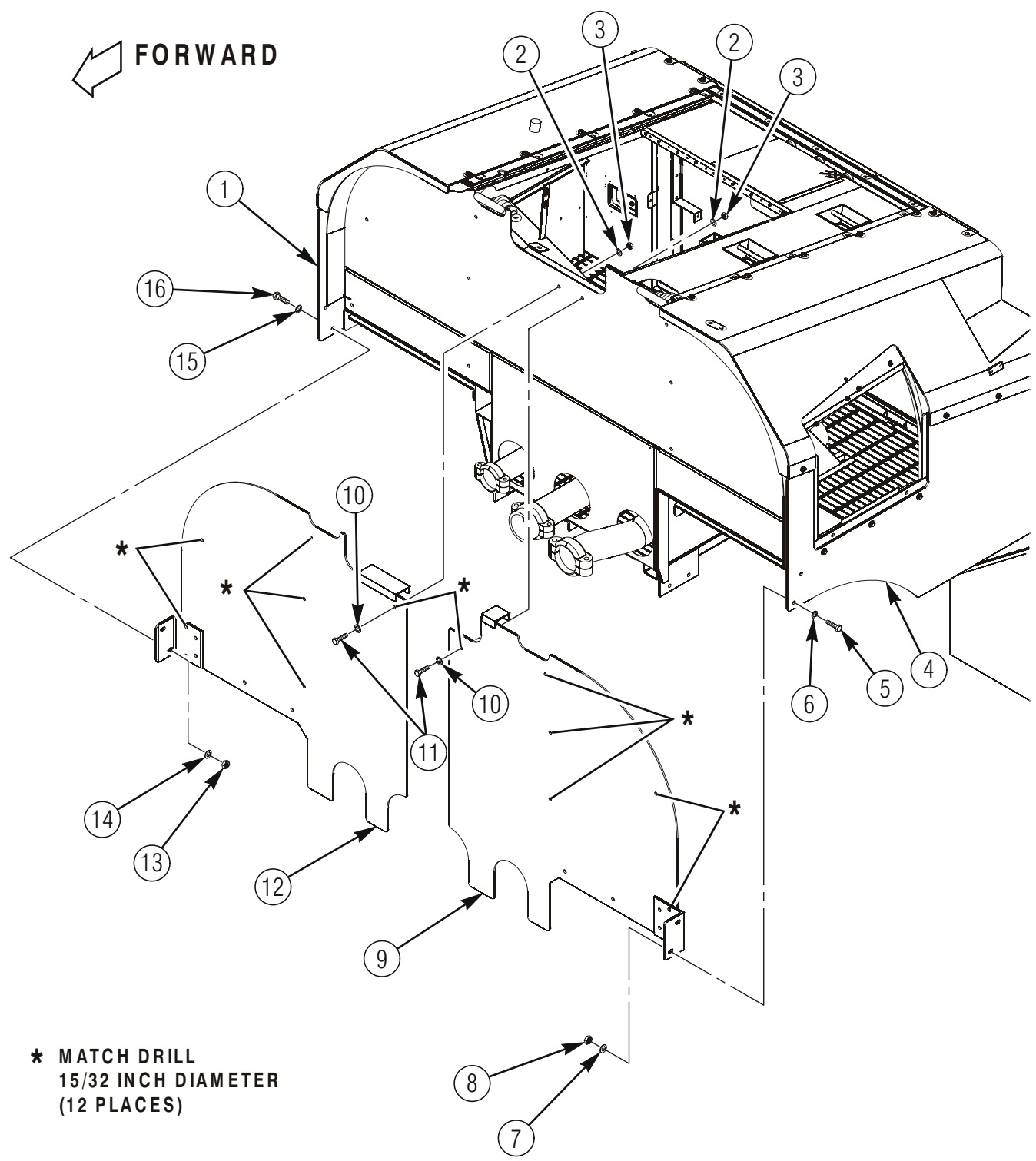


Figure 5.

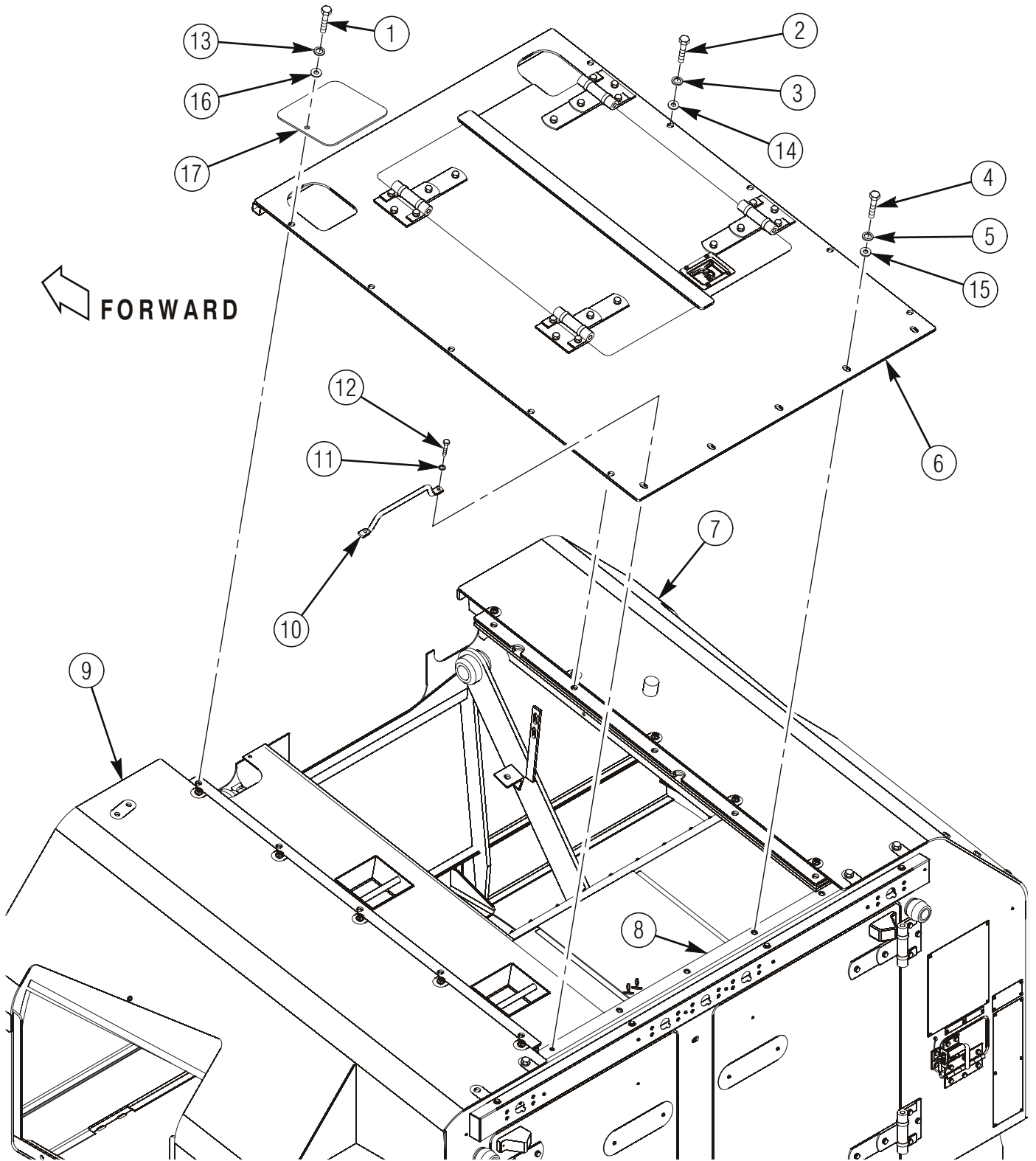


Figure 6.

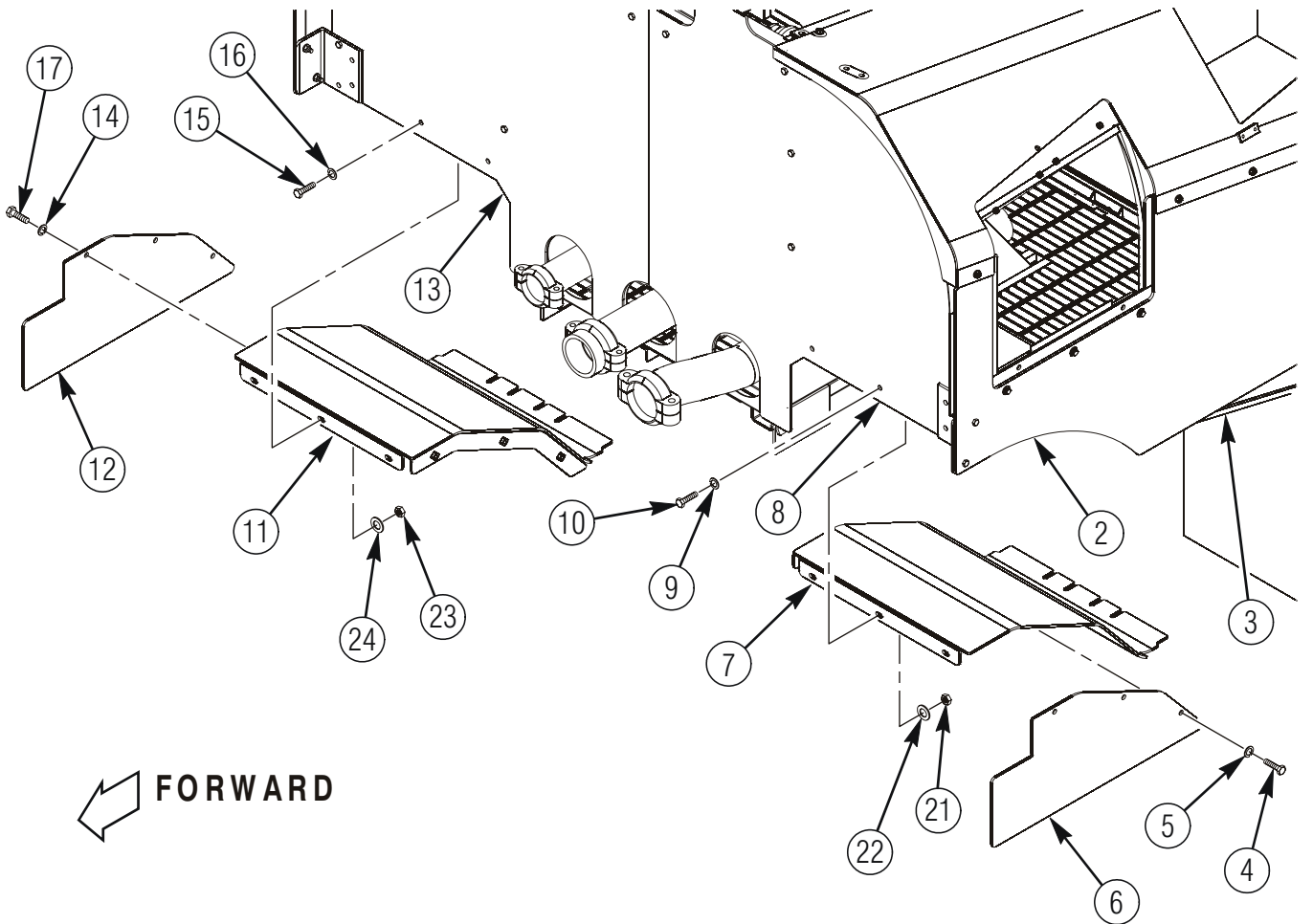
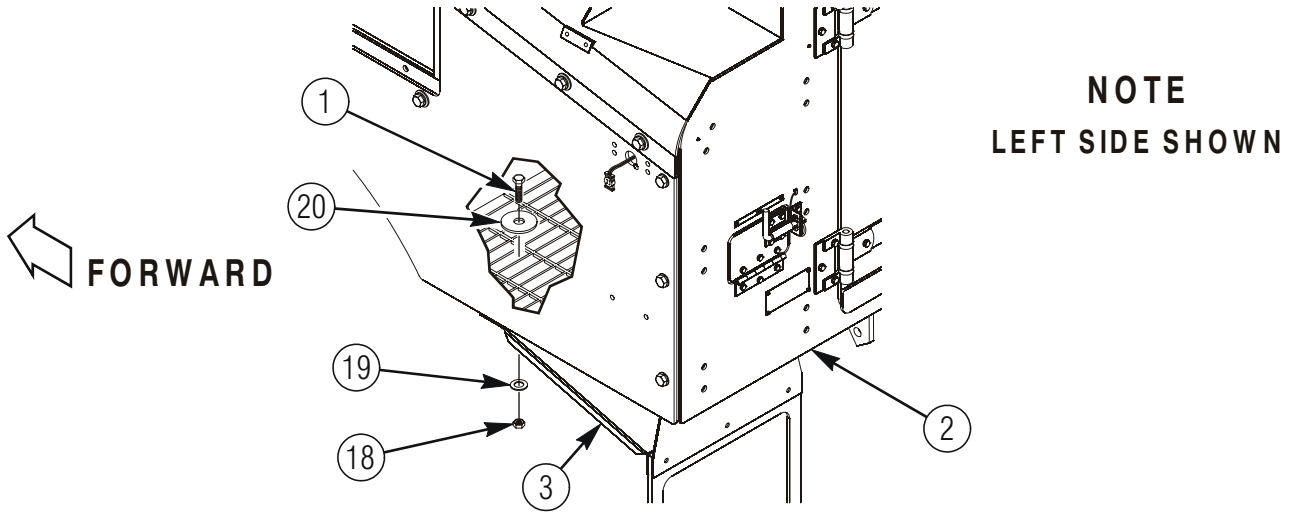
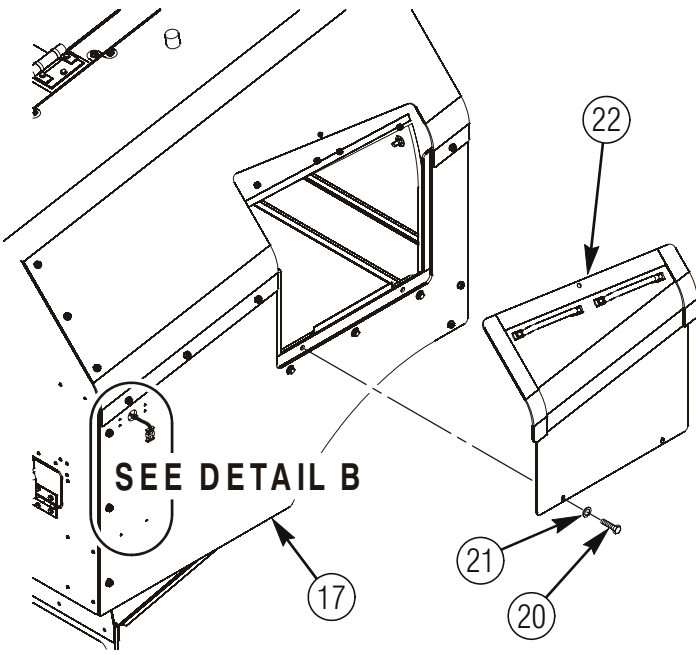
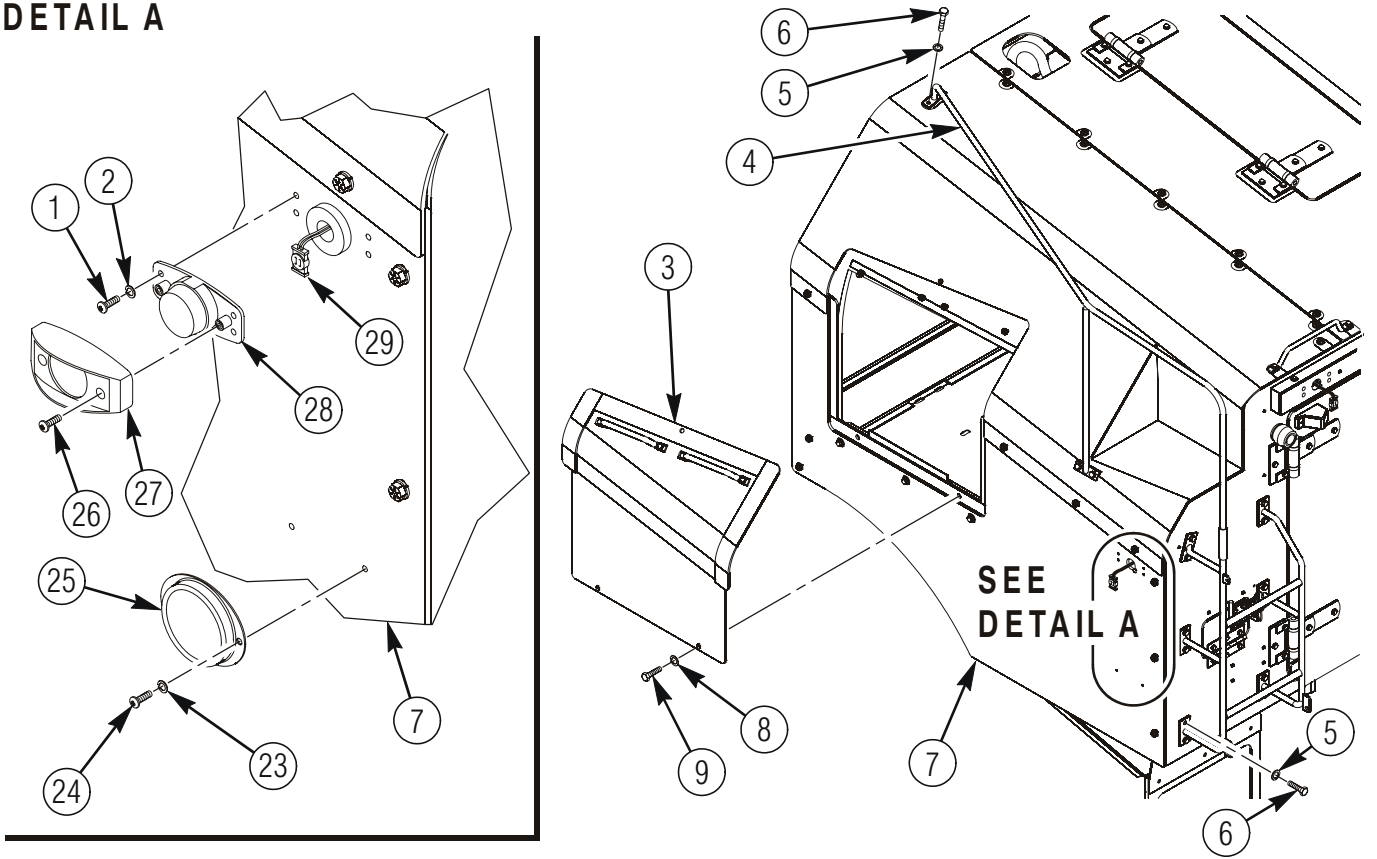


Figure 7.

DETAIL A



DETAIL B

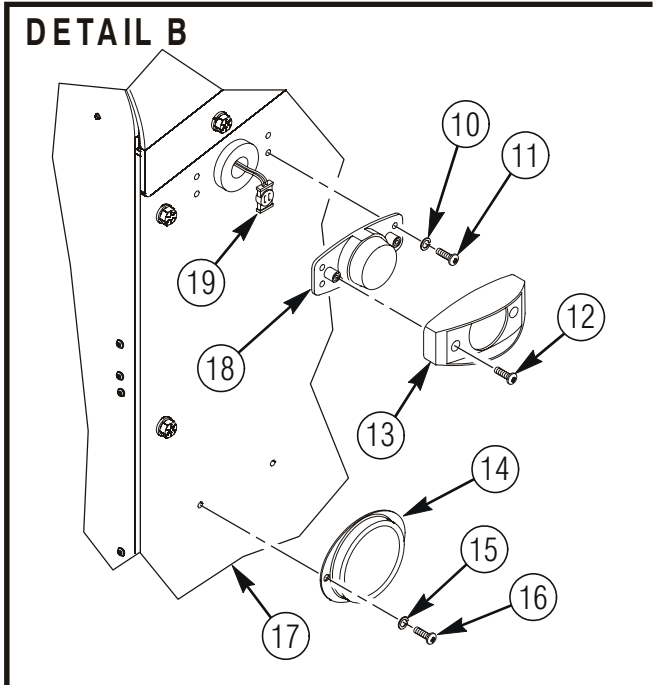


Figure 8.

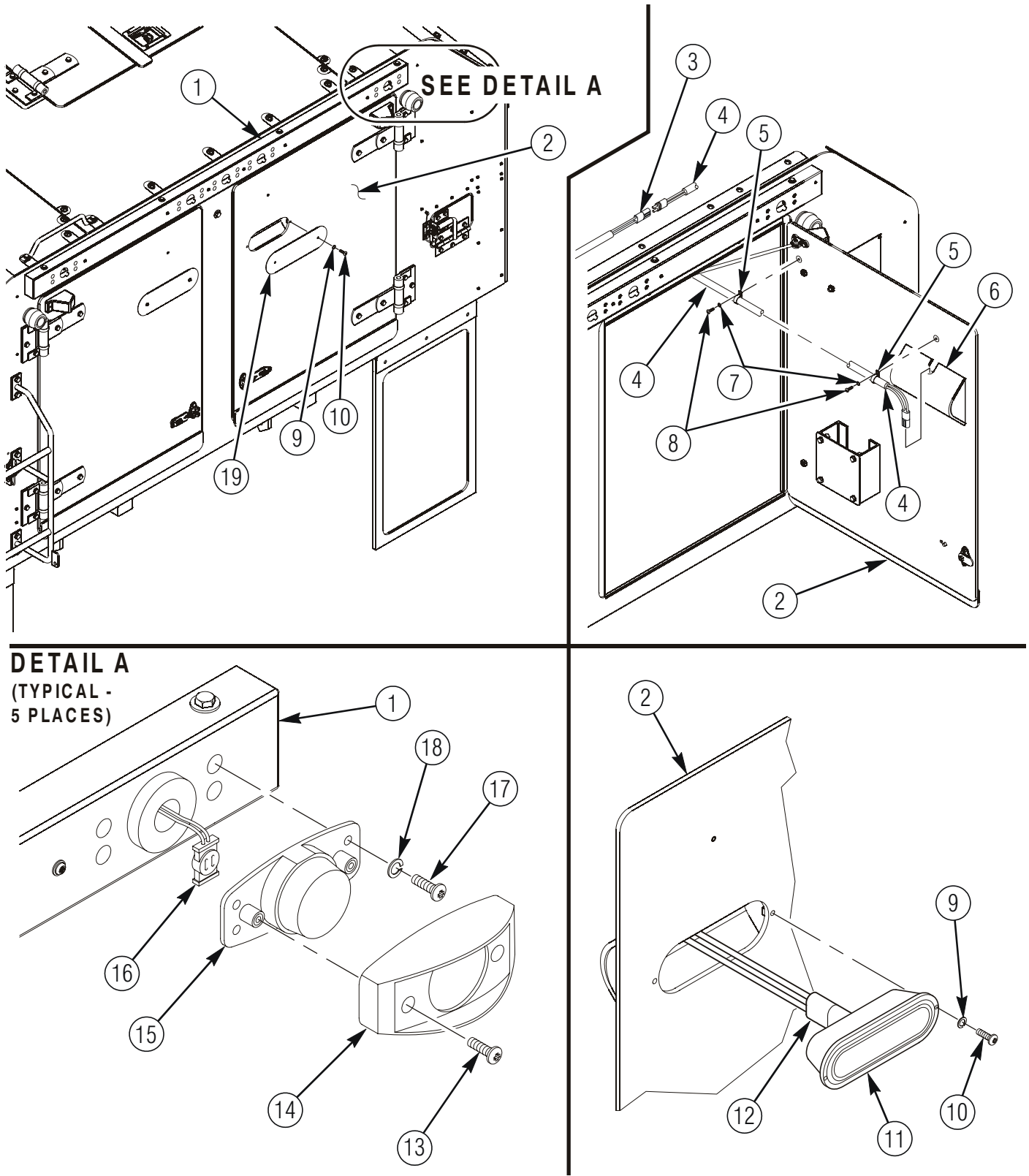


Figure 9.

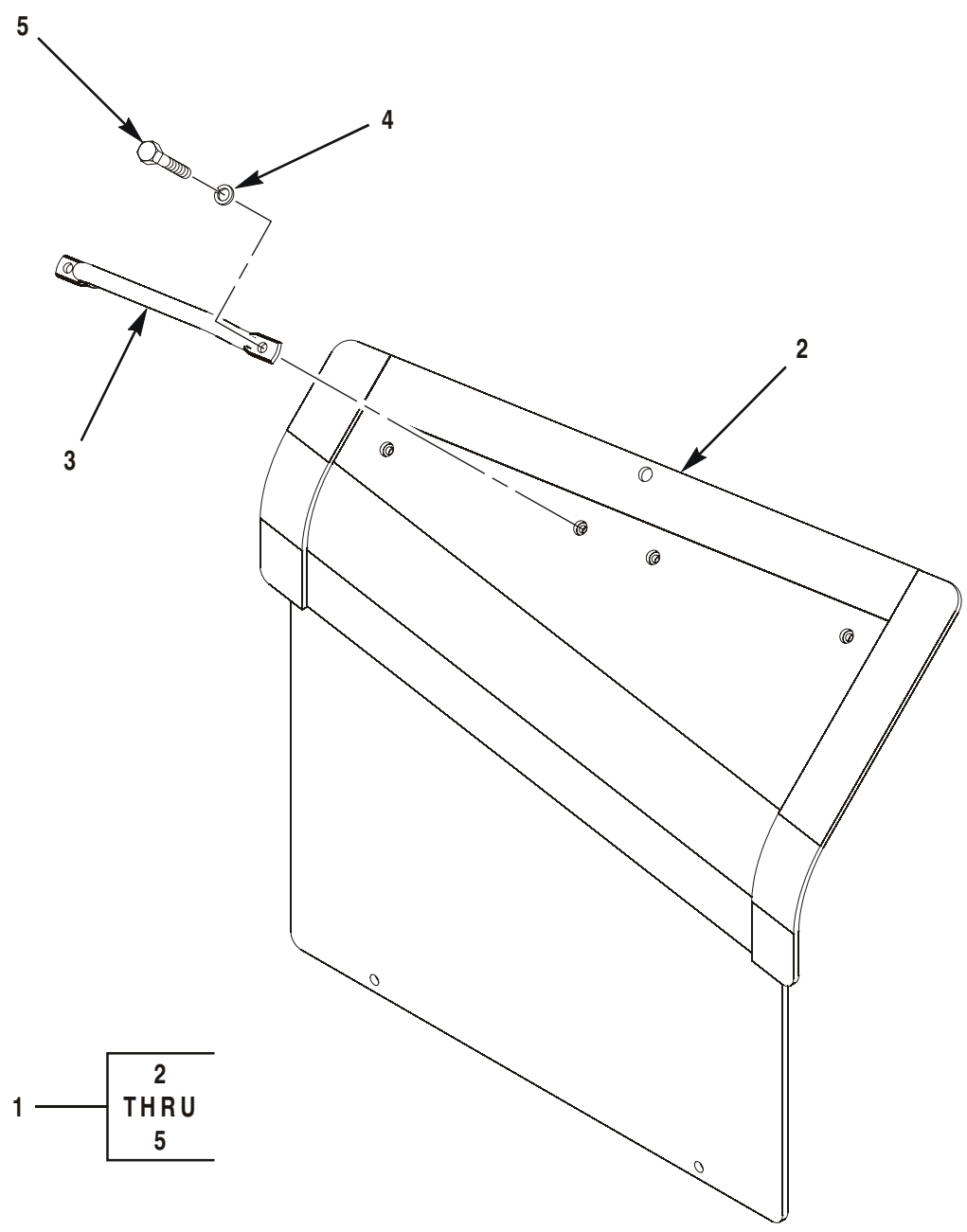


Figure 10.

(1) ITEM	(2) SMR	(3)	(4)	(5) PART	(6)	(7)
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NO	CODE	NSN	CAGEC	NUMBER	DESCRIPTION	QTY
					FIG. 10 LEFT SIDE ACCESS PANEL ASSEMBLY	
1			6W728	6433309-01M1	PANEL ASSEMBLY, SIDE ACCESS – LEFT (GREEN 383)	1
1			6W728	6433309-200M1	PANEL ASSEMBLY, SIDE ACCESS – LEFT (TAN 686A)	1
2			6W728	6433091-01M1	DOOR ASSEMBLY, SIDE ACCESS – LEFT (GREEN 383)	1
2			6W728	6433091-200M1	DOOR ASSEMBLY, SIDE ACCESS – LEFT (TAN 686A)	1
3			6W728	6433195-01M1	HANDLE, GRAB/PULL (GREEN 383)	2
3			6W728	6433195-200M1	HANDLE, GRAP/PULL (TAN 686A)	2
4		5310014179942	6W728	4397004-007	WASHER, LOCK, .313	4
5		5306014339183	6W728	4397000-036	SCREW, CAP HEX HD, .312-18 X 1.25	4
					END OF FIGURE	

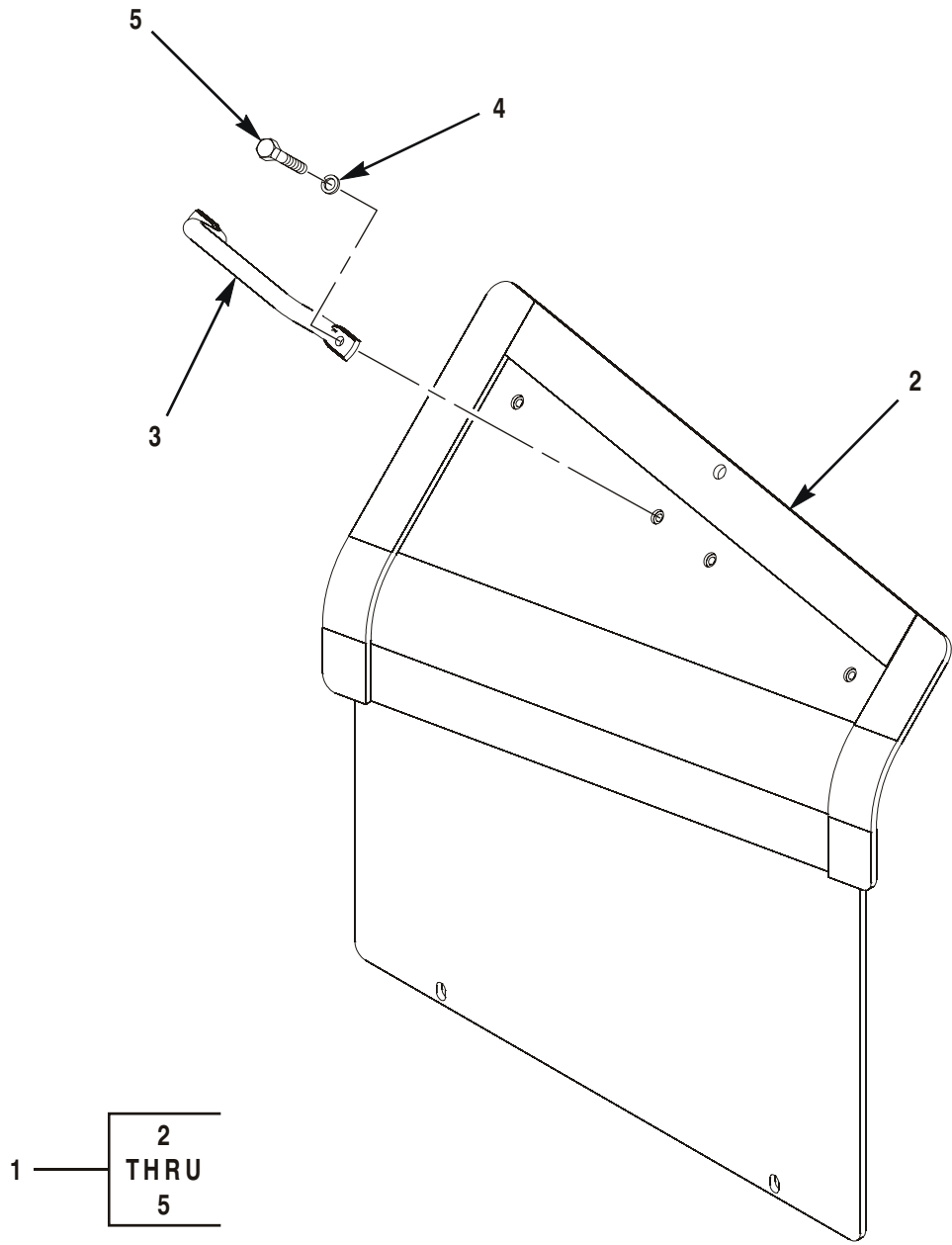


Figure 11.

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION	(7) QTY
					FIG. 11 RIGHT SIDE ACCESS PANEL ASSEMBLY	
1			6W728	6433308-01M1	PANEL ASSEMBLY, SIDE ACCESS – RIGHT (GREEN 383)	1
1			6W728	6433308-200M1	PANEL ASSEMBLY, SIDE ACCESS – RIGHT (TAN 686A)	1
2			6W728	6433090-01M1	DOOR ASSEMBLY, SIDE ACCESS – RIGHT (GREEN 383)	1
2			6W728	6433090-200M1	DOOR ASSEMBLY, SIDE ACCESS – RIGHT (TAN 686A)	1
3			6W728	6433195-01M1	HANDLE, GRAB/PULL (GREEN 383)	2
3			6W728	6433195-200M1	HANDLE, GRAP/PULL (TAN 686A)	2
4		5310014179942	6W728	4397004-007	WASHER, LOCK, .313	4
5		5306014339183	6W728	4397000-036	SCREW, CAP HEX HD, .312-18 X 1.25	4
					END OF FIGURE	

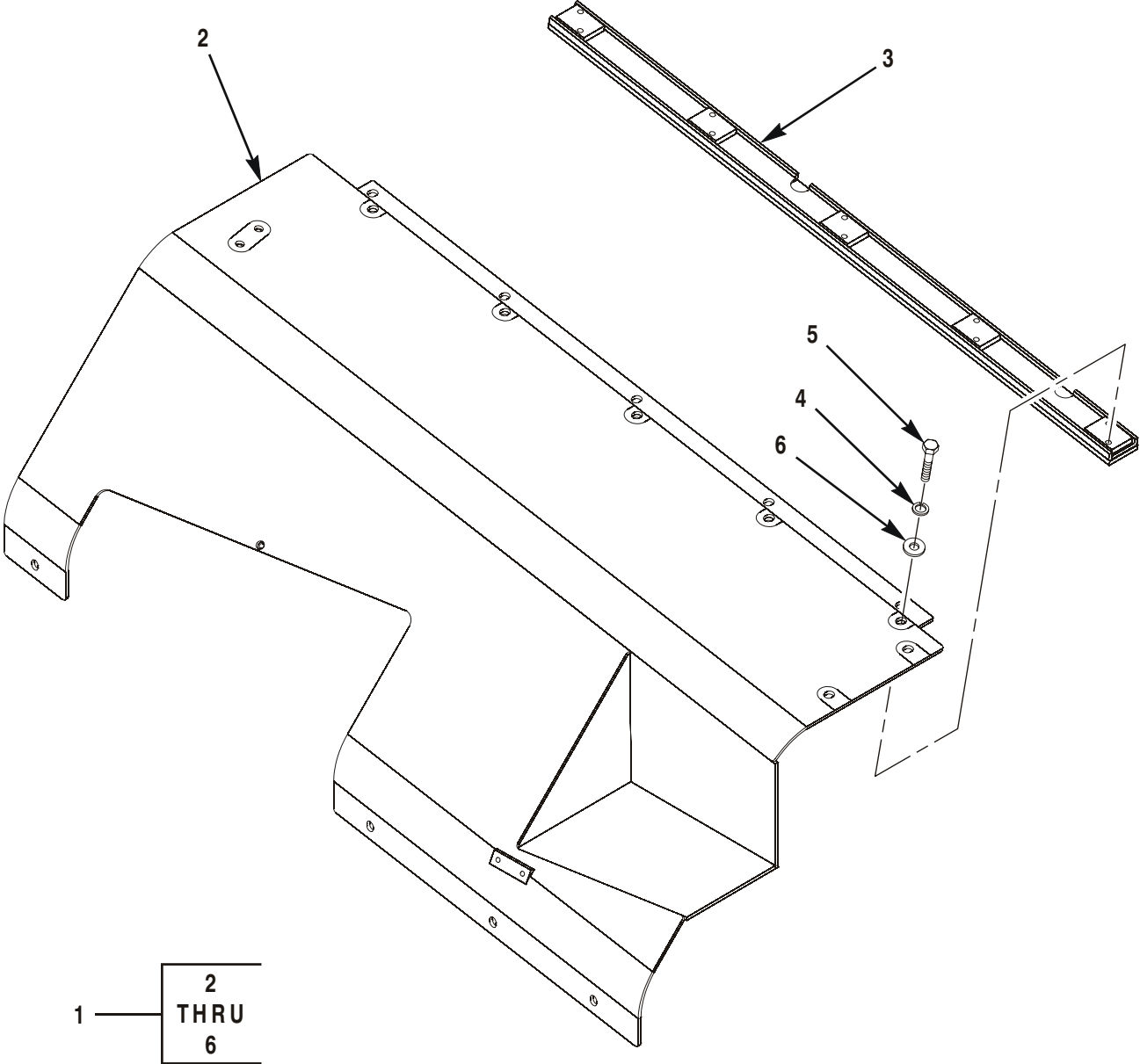


Figure 12.

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION	(7) QTY
					FIG. 12 LEFT UPPER SIDE PANEL ASSEMBLY	
1			6W728	6433307-01M1	PANEL ASSEMBLY, SIDE UPPER - LT (GREEN 383)	1
1			6W728	6433307-200M1	PANEL ASSEMBLY, SIDE UPPER - LT (TAN 686A)	1
2			6W728	6433061-01M1	PANEL ASSEMBLY, SIDE UPPER (GREEN 383)	1
2			6W728	6433061-200M1	PANEL ASSEMBLY, SIDE UPPER (TAN 686A)	1
3			6W728	6433076-01M1	CHANNEL ASSEMBLY, TAPPING (GREEN 383)	1
3			6W728	6433076-200M1	CHANNEL ASSEMBLY, TAPPING (TAN 686A)	1
4			6W728	4397004-009	WASHER, LOCK, .438	5
5			6W728	4397000-381	SCREW, CAP HEX HD, .437-14 X 1.25	5
6		5310014177334	6W728	4397005-016	WASHER, FLAT, .438 SAE	5
					END OF FIGURE	

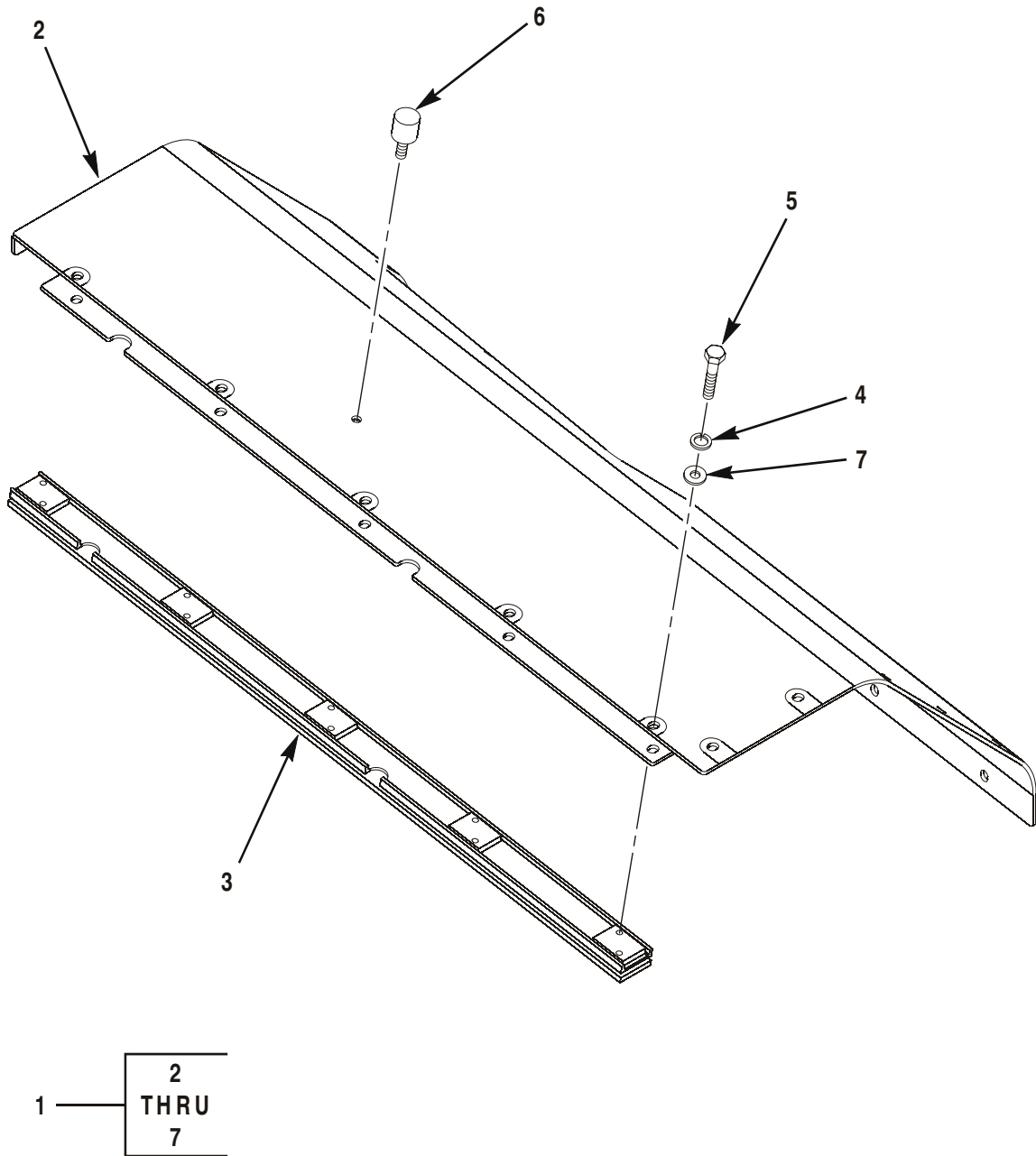


Figure 13.

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION	(7) QTY
					FIG. 13 RIGHT UPPER SIDE PANEL ASSEMBLY	
1			6W728	6433306-01M1	PANEL ASSEMBLY, SIDE UPPER - RT (GREEN 383)	1
1			6W728	6433306-200M1	PANEL ASSEMBLY, SIDE UPPER - RT (TAN 686A)	1
2			6W728	6433060-01M1	PANEL ASSEMBLY, SIDE UPPER (GREEN 383)	1
2			6W728	6433060-200M1	PANEL ASSEMBLY, SIDE UPPER (TAN 686A)	1
3			6W728	6433076-01M1	CHANNEL ASSEMBLY, TAPPING (GREEN 383)	1
3			6W728	6433076-200M1	CHANNEL ASSEMBLY, TAPPING (TAN 686A)	1
4			6W728	4397004-009	WASHER, LOCK, .438	5
5			6W728	4397000-381	SCREW, CAP HEX HD, .437-14 X 1.25	5
6			6W728	6433261-01M1	BUMPER, ROUND, 1.50 X 1.50	1
7		5310014177334	6W728	4397005-016	WASHER, FLAT, .438 SAE	5
					END OF FIGURE	

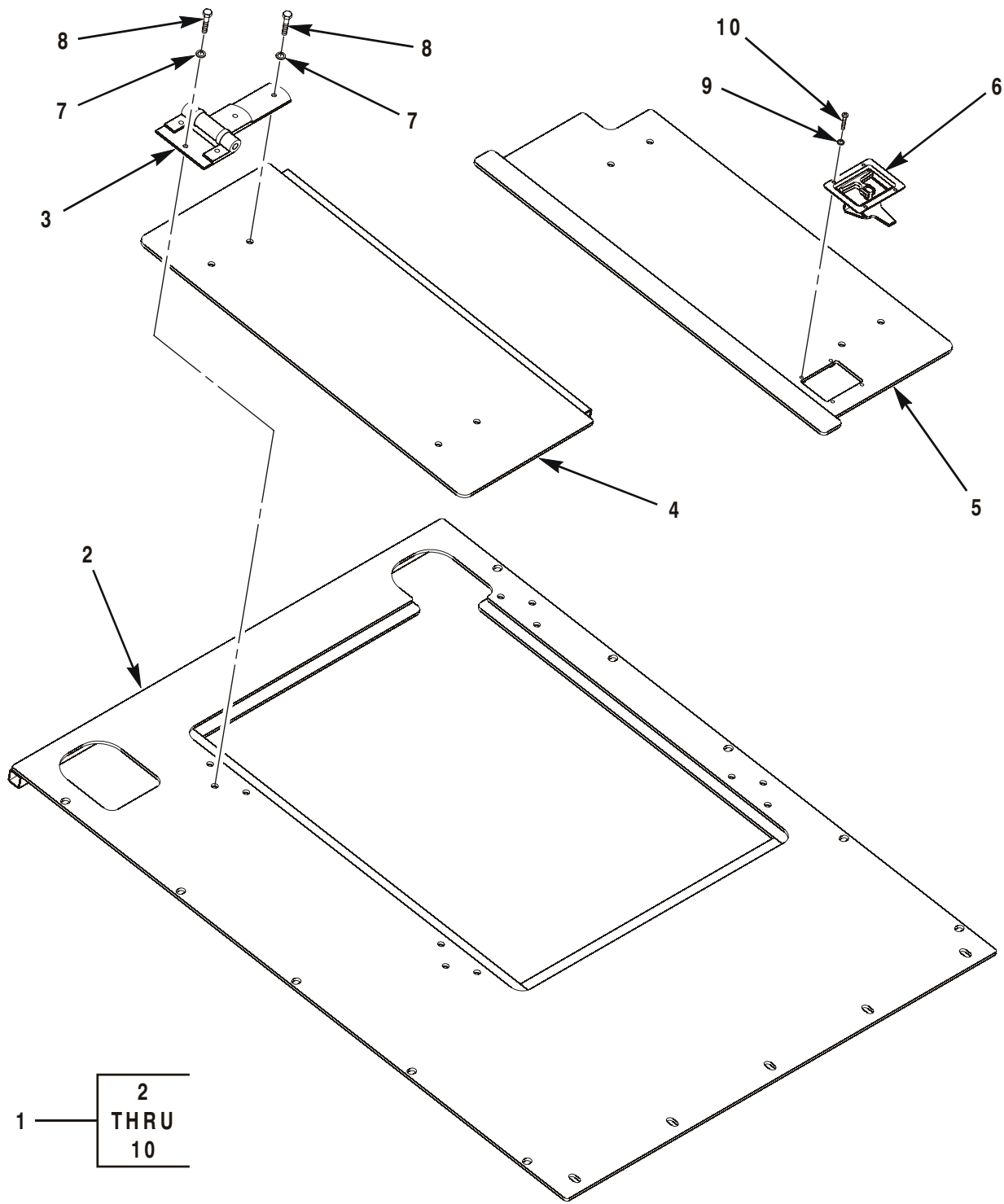


Figure 14.



(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION	(7) QTY
					FIG. 14 TOP PANEL ASSEMBLY	
1			6W728	6433286-01M1	ASSEMBLY, PANEL TAM TOP (GREEN 383)	1
1			6W728	6433286-200M1	ASSEMBLY, PANEL TAM TOP (TAN 686A)	1
2			6W728	6433080-01M1	PANEL ASSEMBLY, TOP (GREEN 383)	1
2			6W728	6433080-200M1	PANEL ASSEMBLY, TOP (TAN 686A)	1
3			6W728	6433082-01M1	HINGE, DOOR (GREEN 383)	4
3			6W728	6433082-200M1	HINGE, DOOR (TAN 686A)	4
4			6W728	6433093-01M1	DOOR ASSEMBLY, ROOF – LEFT (GREEN 383)	1
4			6W728	6433093-200M1	DOOR ASSEMBLY, ROOF – LEFT (TAN 686A)	1
5			6W728	6433092-01M1	DOOR ASSEMBLY, ROOF – RIGHT (GREEN 383)	1
5			6W728	6433092-200M1	DOOR ASSEMBLY, ROOF – RIGHT (TAN 686A)	1
6			6W728	6433101-01M1	LATCH ASSEMBLY, ROOF DOOR (GREEN 383)	1
6			6W728	6433101-200M1	LATCH ASSEMBLY, ROOF DOOR (TAN 686A)	1
7		5310014179942	6W728	4397004-007	WASHER, LOCK, .313	20
8		5305014206637	6W728	4397000-034	SCREW, CAP HEX HD, .312-18 X 1.00	20
9		5310014341385	6W728	4397004-005	WASHER, LOCK, .190	4
10			6W728	4397012-074	SCREW, PAN HD, #10-24 X .750	4
					END OF FIGURE	

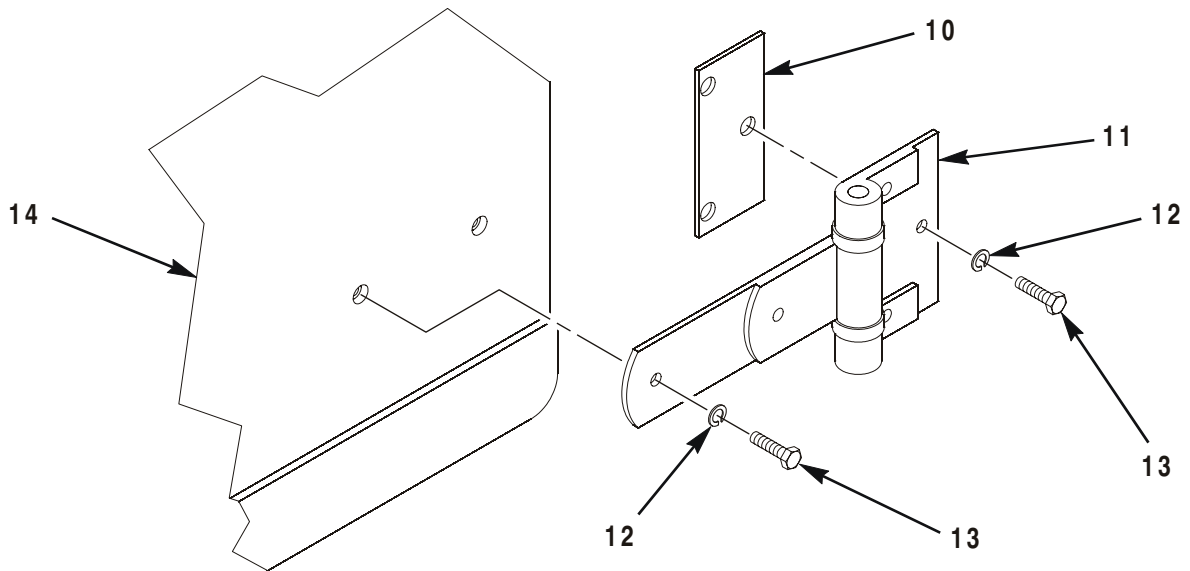
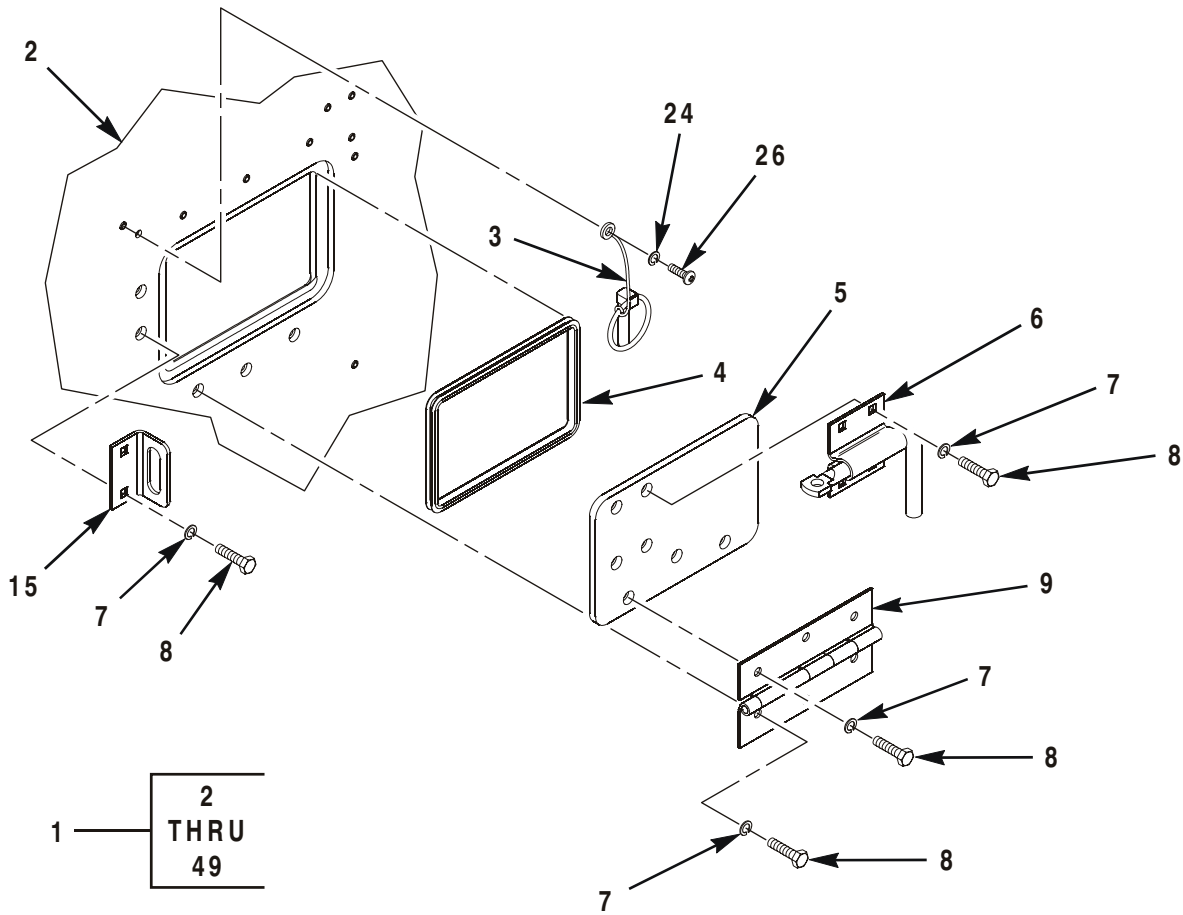
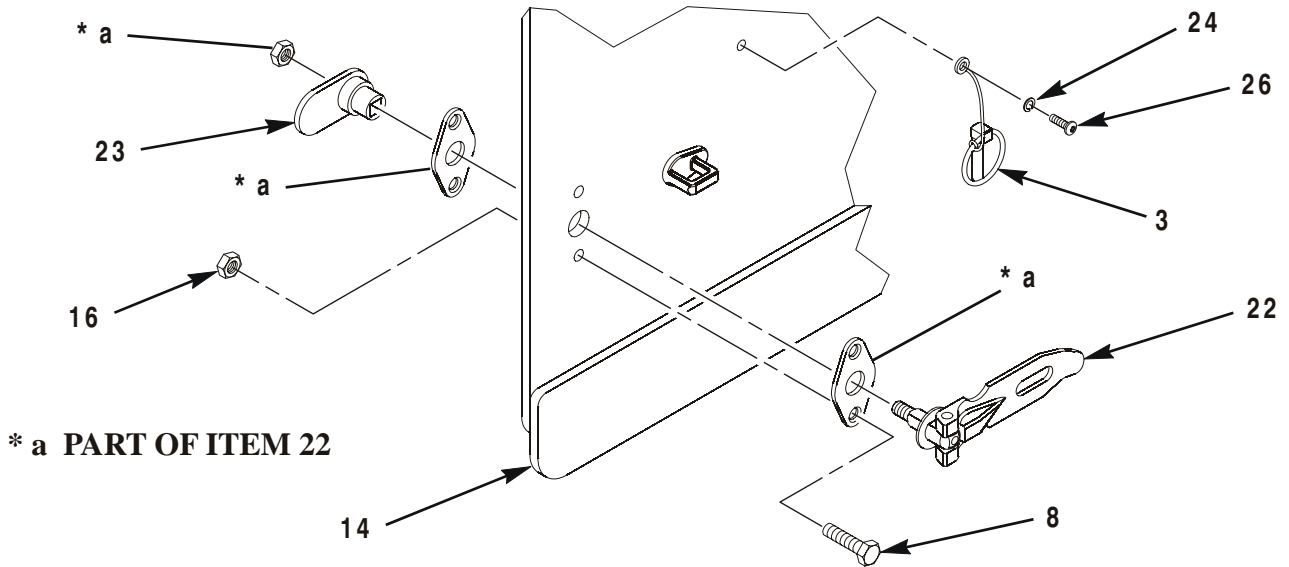
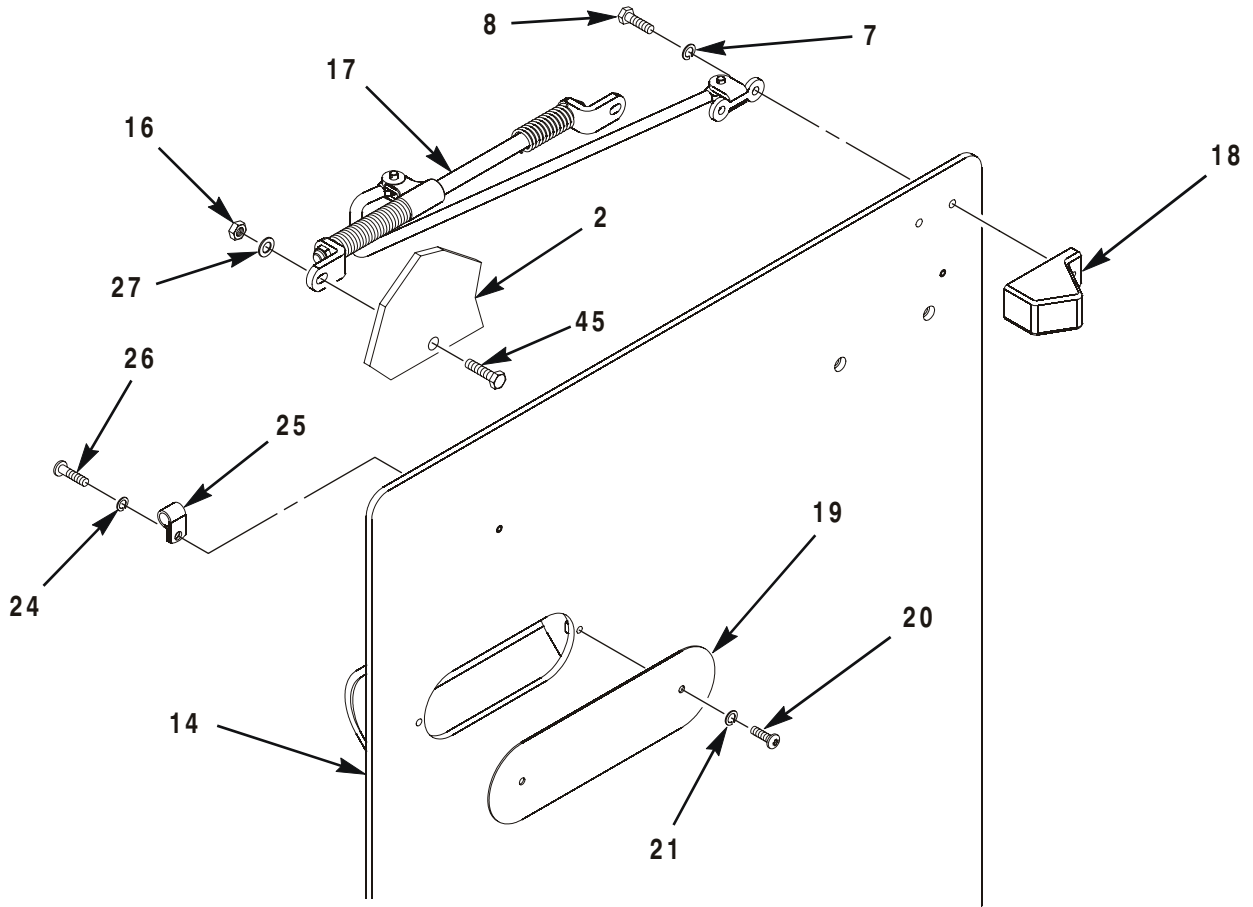
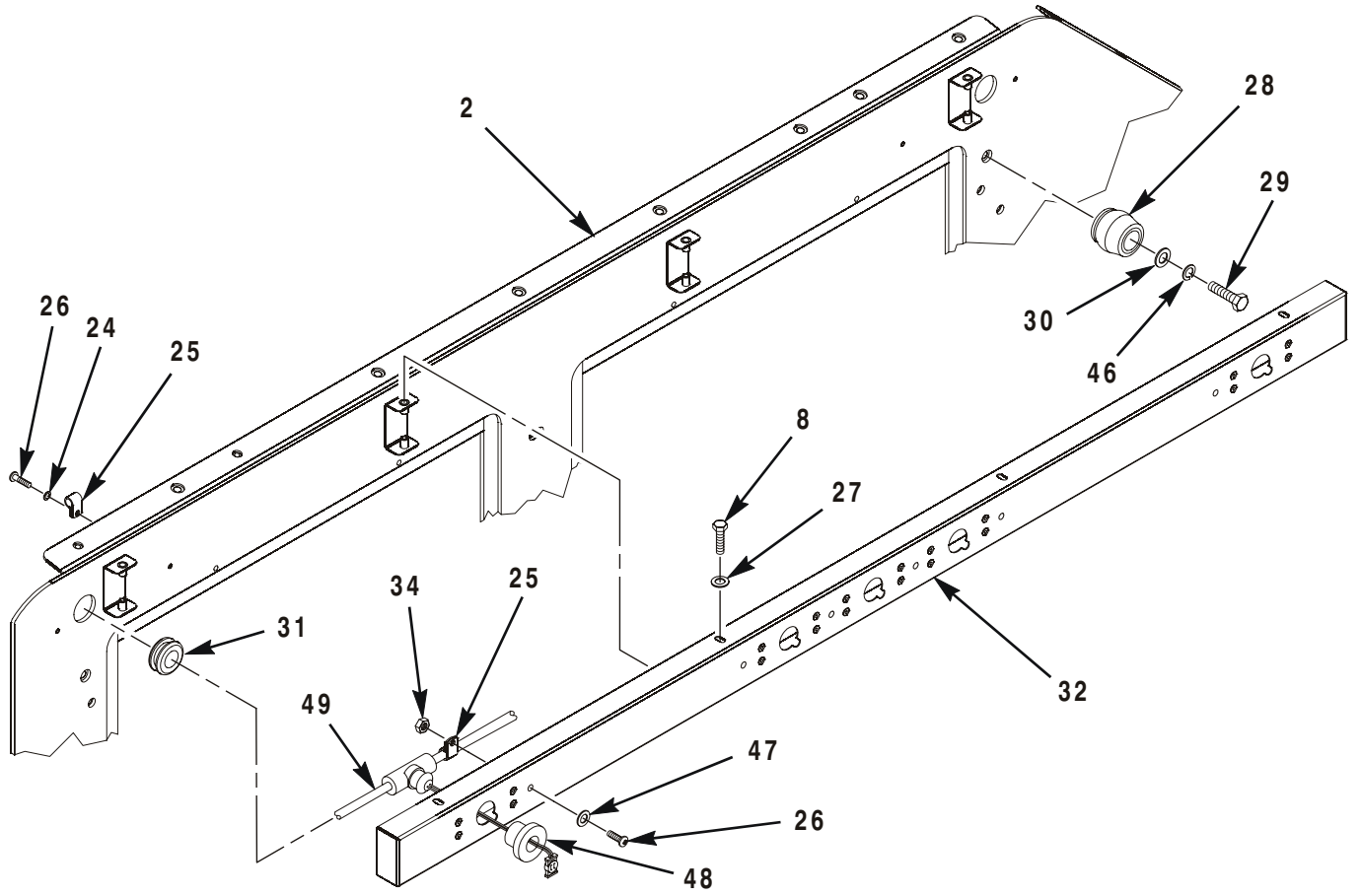


Figure 15 (Sheet 1 of 4).



\* a PART OF ITEM 22

Figure 15 (Sheet 2 of 4).



**RIGHT SIDE ONLY**

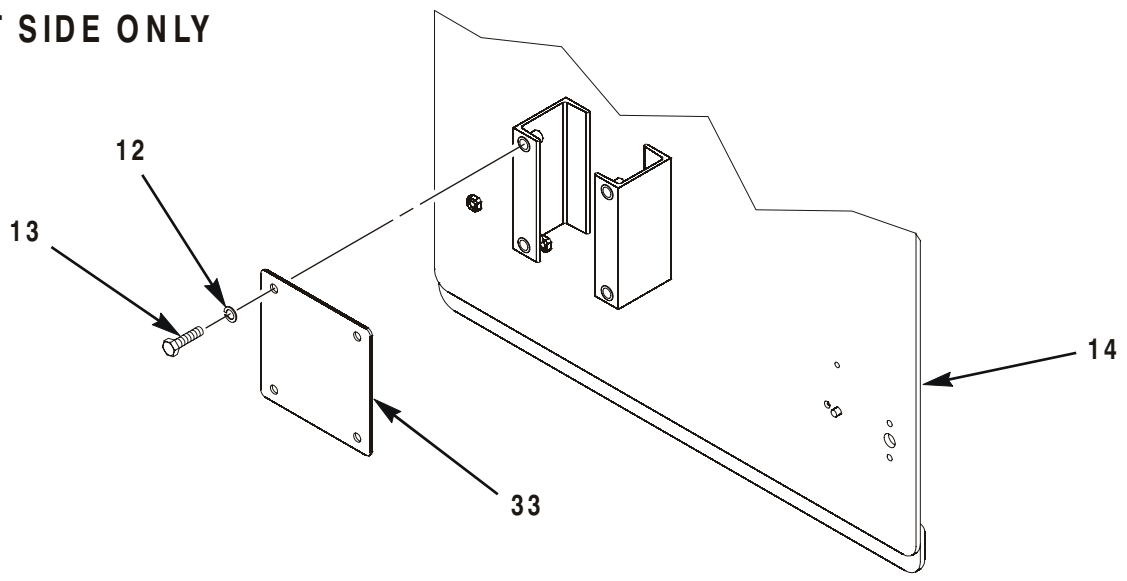
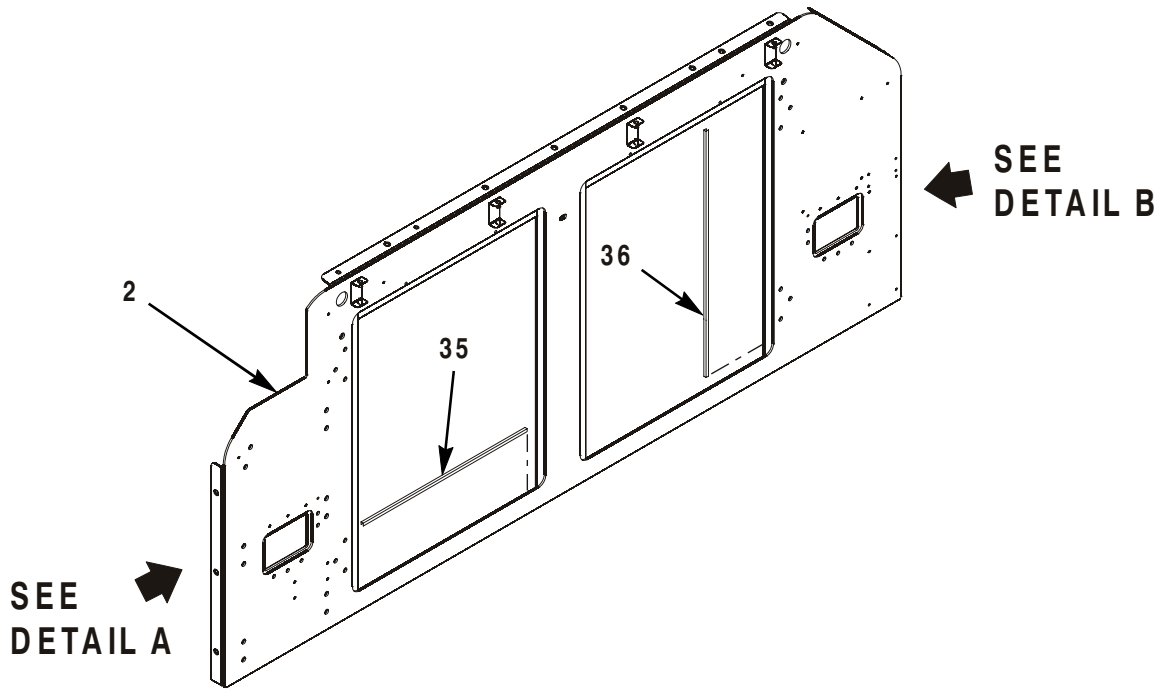
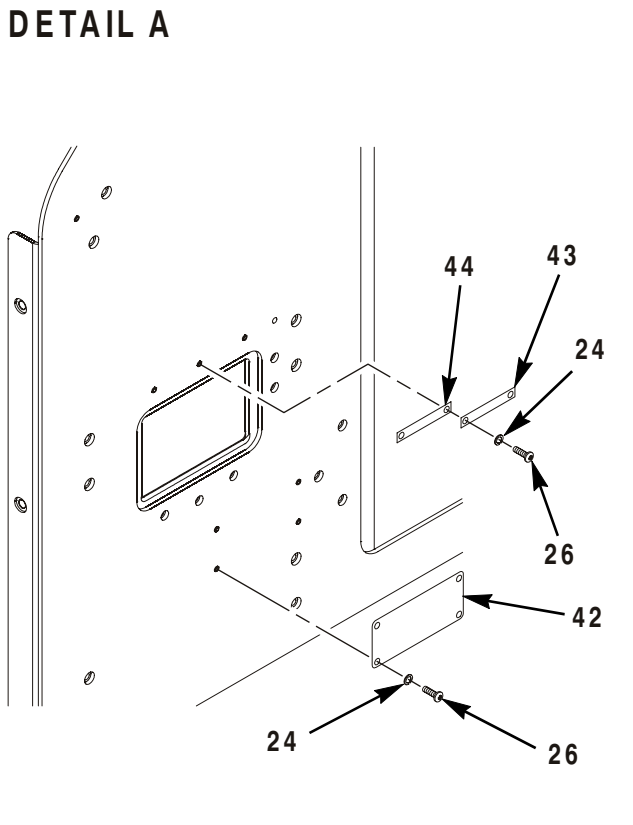


Figure 15 (Sheet 3 of 4).



DETAIL A



DETAIL B

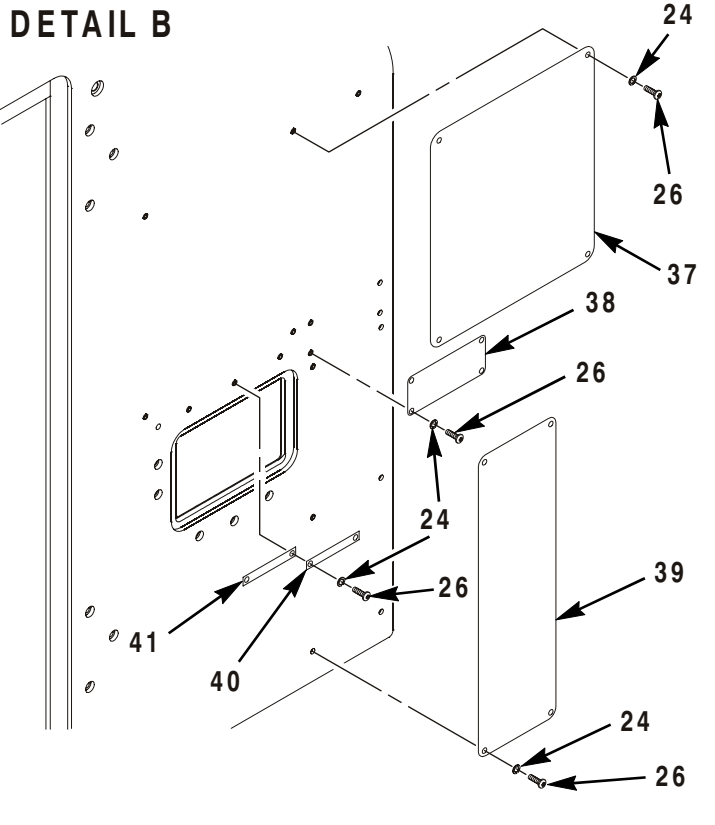


Figure 15 (Sheet 4 of 4).

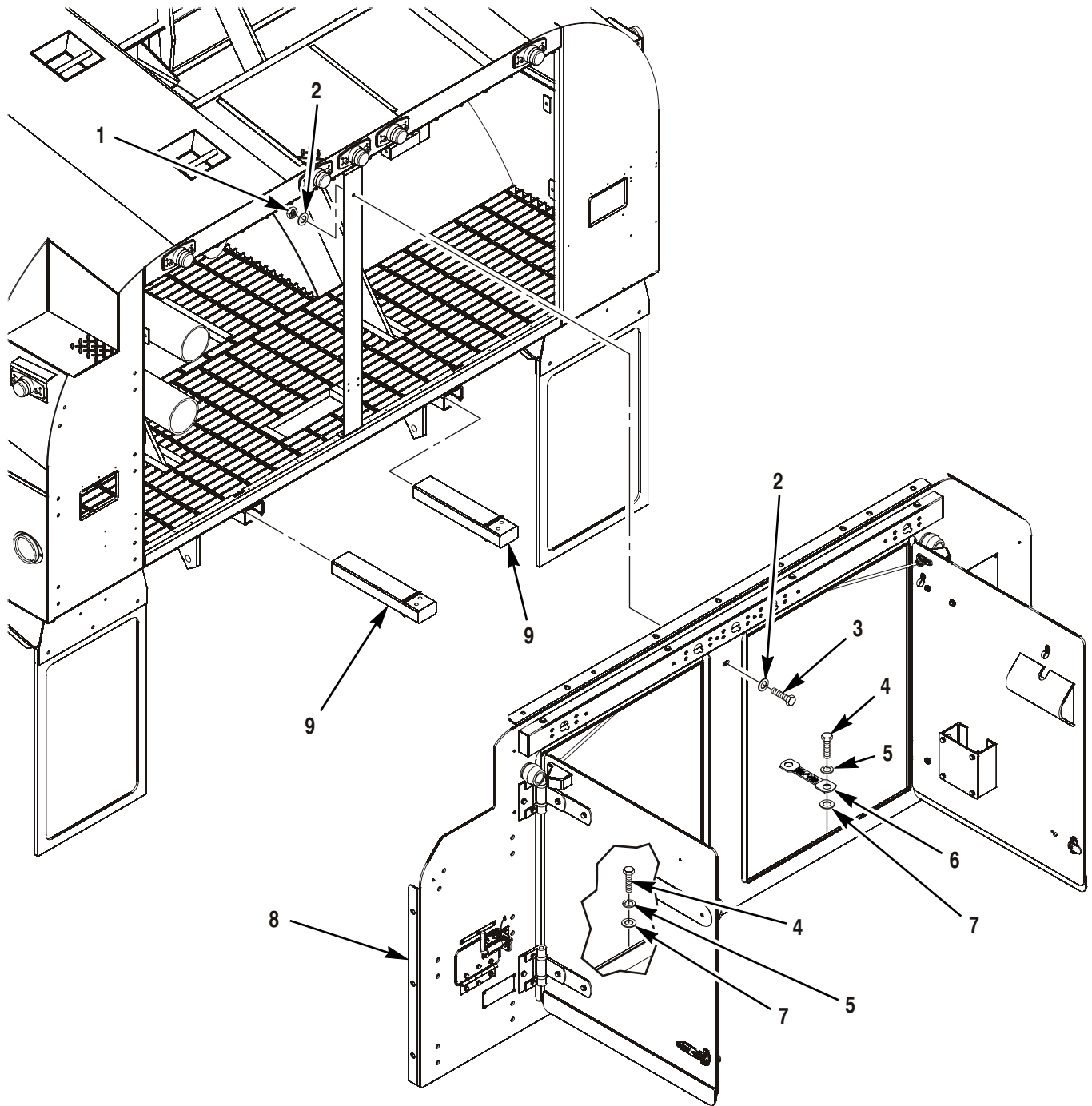
(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION	(7) QTY
					FIG. 15 REAR PANEL ASSEMBLY	
1			6W728	6433285-01M1	PANEL, ASSEMBLY TAM REAR (GREEN 383)	1
1			6W728	6433285-200M1	PANEL, ASSEMBLY TAM REAR (TAN 686A)	1
2			6W728	6433045-01M1	PANEL ASSEMBLY, REAR (GREEN 383)	1
2			6W728	6433045-200M1	PANEL ASSEMBLY, REAR (TAN 686A)	1
3			6W728	6433289-01M1	PIN, LINCH	4
4			6W728	6433284-03M1	COMPOSITE GROMMET EDGING	2
5			6W728	6433087-01M1	DOOR ASSEMBLY, REAR ACCESS – LEFT (GREEN 383)	1
5			6W728	6433087-200M1	DOOR ASSEMBLY, REAR ACCESS - LEFT (TAN 686A)	1
5			6W728	6433086-01M1	DOOR ASSEMBLY, REAR ACCESS – RIGHT (GREEN 383)	1
5			6W728	6433086-200M1	DOOR ASSEMBLY, REAR ACCESS – RIGHT (TAN 686A)	1
6			6W728	6433123-03M1	HASP LOCKABLE (GREEN 383)	2
6			6W728	6433123-203M1	HASP LOCKABLE (TAN 686A)	2
7		5310014330941	6W728	4397004-006	WASHER, LOCK, .250	28
8		5306014307399	6W728	4397000-006	SCREW, CAP HEX HD, .250-20 X .750	40
9			6W728	6433085-01M1	HINGE, REAR ACCESS DOOR (GREEN 383)	2
9			6W728	6433085-200M1	HINGE, REAR ACCESS DOOR (TAN 686A)	2
10			6W728	6433267-01M1	PLATE, HINGE SPACER (GREEN 383)	4
10			6W728	6433267-200M1	PLATE, HINGE SPACER (TAN 686A)	4
11			6W728	6433082-01M1	HINGE, DOOR (GREEN 383)	4
11			6W728	6433082-200M1	HINGE, DOOR (TAN 686A)	4

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION	(7) QTY
12		5310014179942	6W728	4397004-007	WASHER, LOCK, .313	24
13		5305014206637	6W728	4397000-034	SCREW, CAP HEX HD, .312-18 X 1.00	24
14			6W728	6433089-01M1	DOOR ASSEMBLY, REAR – LEFT (GREEN 383)	1
14			6W728	6433089-200M1	DOOR ASSEMBLY, REAR – LEFT (TAN 686A)	1
14			6W728	6433088-01M1	DOOR ASSEMBLY, REAR – RIGHT (GREEN 383)	1
14			6W728	6433088-200M1	DOOR ASSEMBLY, REAR – RIGHT (TAN 686A)	1
15			6W728	6433123-02M1	HASP, RECEIVER (GREEN 383)	2
15			6W728	6433123-202M1	HASP, RECEIVER (TAN 686A)	2
16		5310014398173	6W728	4397064-001	NUT, HEX LOCKING, .250-20	8
17			6W728	6433279-01M1	DOOR CHECK AND HOLD BACK – LEFT (GREEN 383)	1
17			6W728	6433279-200M1	DOOR CHECK AND HOLD BACK – LEFT (TAN 686A)	1
17			6W728	6433278-01M1	DOOR CHECK AND HOLD BACK – RIGHT (GREEN 383)	1
17			6W728	6433278-200M1	DOOR CHECK AND HOLD BACK – RIGHT (TAN 686A)	1
18			6W728	6433317-01M1	BRACKET, DOOR STOP (GREEN 383)	2
18			6W728	6433317-200M1	BRACKET, DOOR STOP (TAN 686A)	2
19			6W728	6433129-01M1	PANEL, REAR LIGHT COVER (GREEN 383)	2
19			6W728	6433129-200M1	PANEL, REAR LIGHT COVER (TAN 686A)	2
20		5305015135383	6W728	4397012-076	SCREW, PAN HD, #10-24 X 1.00	4
21		5310014341385	6W728	4397004-005	WASHER, LOCK, .190	4
22			6W728	6433134-01M1	LATCH, DEADBOLT, PADLOCKABLE (GREEN 383)	2
22			6W728	6433134-200M1	LATCH, DEADBOLT, PADLOCKABLE (TAN 686A)	2

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION	(7) QTY
23			6W728	6433268-01M1	CAM, REAR DOOR LATCH (GREEN 383)	2
23			6W728	6433268-200M1	CAM, REAR DOOR LATCH (TAN 686A)	2
24		5310014177275	6W728	4397004-004	WASHER, LOCK, #8	39
25			6W728	6433316-05M1	LOOP STRAP, .375	17
26		5305014340830	6W728	4397012-054	SCREW, PAN HD, .164-32 X .500	45
27		5340014178995	6W728	4397005-011	WASHER, FLAT, .250 USS	12
28			6W728	6433318-01M1	BUMPER, DOOR STOP GBA-10	2
29			6W728	4397000-381	SCREW, CAP HEX HD, .437-14 X 1.25	2
30		5310014177334	6W728	4397005-016	WASHER, FLAT, .438 SAE	2
31			6W728	6430151-60M1	GROMMET, RUBBER	2
32			6W728	6433083-01M1	PANEL ASSEMBLY, LIGHTBAR (GREEN 383)	1
32			6W728	6433083-200M1	PANEL ASSEMBLY, LIGHTBAR (TAN 686A)	1
33			6W728	6433273-01M1	PLATE, DOOR SHUT-OFF BRACKET (GREEN 383)	1
33			6W728	6433273-200M1	PLATE, DOOR SHUT-OFF BRACKET (TAN 686A)	1
34		5310014216085	6W728	4397020-022	NUT, HEX LOCKING, .164-32	6
35			6W728	6433284-01M1	COMPOSITE GROMMET EDGING	4
36			6W728	6433284-02M1	COMPOSITE GROMMET EDGING	4
37			45152	2227220	PLACARD, SCHEMATIC	1
38			45152	2227090	PLATE, V-1 VALVE LABEL	1
39			45152	2227130	PLATE, OPERATION INSTRUCTIONS	1
40			45152	2226960	PLATE, SR2 STATIC LABEL	1
41			45152	2226950	PLATE, SR1 STATIC REEL LABEL	1
42			45152	1356160	PLATE, TANK PUMP LABEL	1
43			45152	2227000	PLATE, HAVR CONTROL LABEL	1



(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION	(7) QTY
44			45152	2227010	PLATE, HAV CONTROL LABEL	1
45		5306014365392	6W728	4397000-010	SCREW, CAP HEX HD, .250-20 X 1.25	4
46			6W728	4397004-009	WASHER, LOCK, .438	2
47			6W728	4397005-005	WASHER, FLAT, #8 SAE	6
48				3286740	GROMMET, TANKER LIGHT	5
49				3597513	HARNES, MODULE LIGHTING, TAM	1
					END OF FIGURE	



FOR BREAKDOWN OF ITEM 8, SEE FIGURE 15

Figure 16.

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION	(7) QTY
					FIG. 16 REAR PANEL ASSEMBLY AND RELATED PARTS	
1		5310014398177	6W728	4397064-005	NUT, HEX LOCKING, .375-16	1
2		5310014363742	6W728	4397005-015	WASHER, FLAT, .375 USS	2
3		5305014750404	6W728	4397000-072	SCREW, CAP HEX HD, .375-16 X 3.50	1
4			6W728	4397000-381	SCREW, CAP HEX HD, .437-14 X 1.25	4
5			6W728	4397004-009	WASHER, LOCK, .438	4
6				1660500	STRAP, GROUND	1
7		5310014177334	6W728	4397005-016	WASHER, FLAT, .438 SAE	4
8			6W728	6433285-01M1	PANEL, ASSEMBLY TAM REAR (GREEN 383)	1
8			6W728	6433285-200M1	PANEL, ASSEMBLY TAM REAR (TAN 686A)	1
9			6W728	6433044-01M1	BAR, REAR PANEL ASSEMBLY ATTACH (GREEN 383)	2
9			6W728	6433044-200M1	BAR, REAR PANEL ASSEMBLY ATTACH (TAN 686A)	2
					END OF FIGURE	

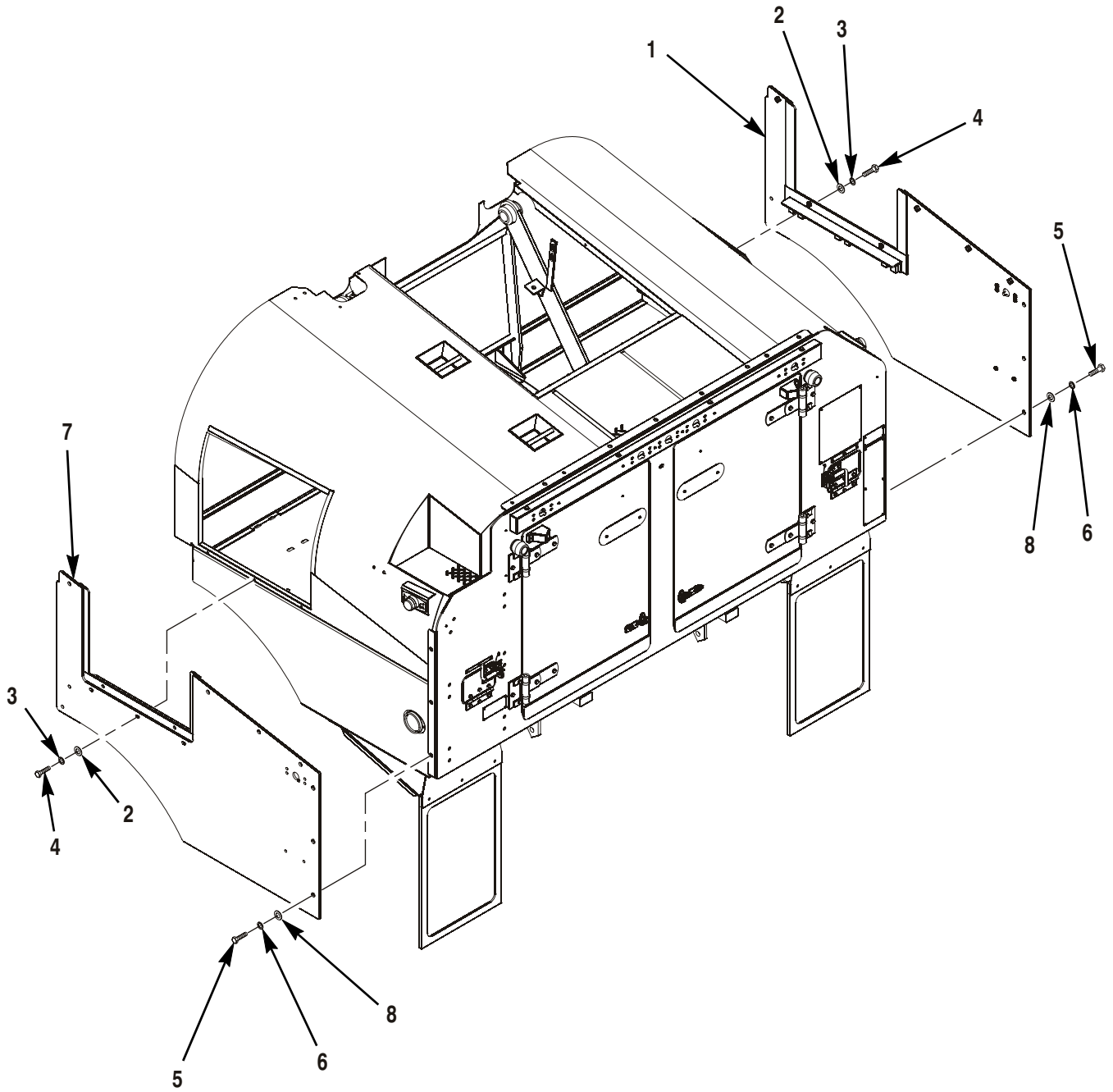
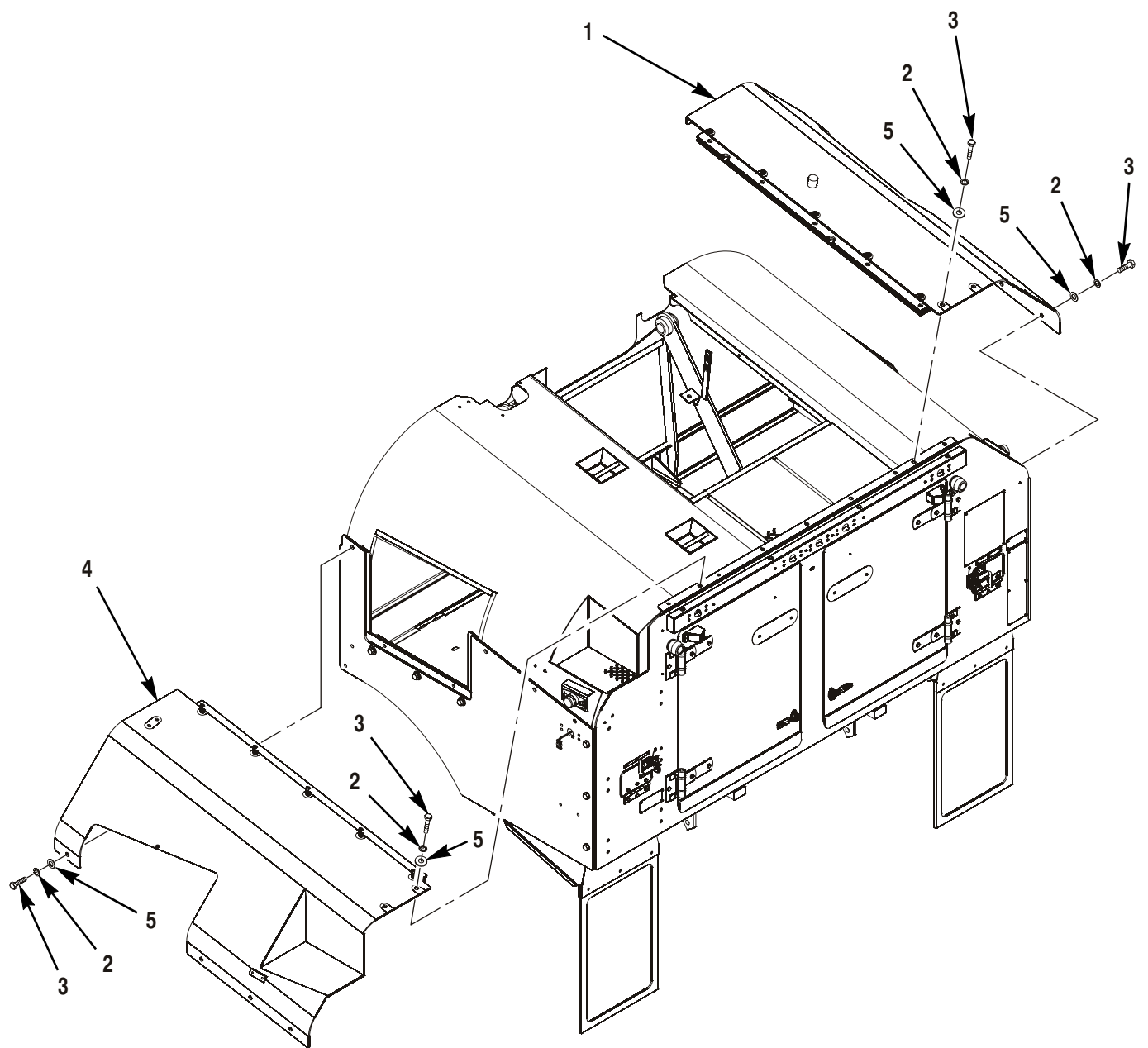


Figure 17.

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION	(7) QTY
					FIG. 17 LOWER SIDE PANEL ASSEMBLIES AND RELATED PARTS	
1			6W728	6433058-01M1	PANEL ASSEMBLY, SIDE LOWER – RIGHT (GREEN 383)	1
1			6W728	6433058-200M1	PANEL ASSEMBLY, SIDE LOWER – RIGHT (TAN 686A)	1
2		5310014363741	6W728	4397005-013	WASHER, FLAT, .312 USS	6
3		5310014179942	6W728	4397004-007	WASHER, LOCK, .312	6
4			6W728	4397000-041	SCREW, CAP HEX HD, .312-18 X 2.25	6
5			6W728	4397000-382	SCREW, CAP HEX HD, .437-14 X 1.50	6
6			6W728	4397004-009	WASHER, LOCK, .438	6
7			6W728	6433059-01M1	PANEL ASSEMBLY, SIDE LOWER – LEFT (GREEN 383)	1
7			6W728	6433059-200M1	PANEL ASSEMBLY SIDE LOWER - LEFT (TAN 686A)	1
8		5310014177334	6W728	4397005-016	WASHER, FLAT, .438 SAE	6
					END OF FIGURE	



**FOR BREAKDOWN OF ITEM 1, SEE FIGURE 13  
FOR BREAKDOWN OF ITEM 4, SEE FIGURE 12**

*Figure 18.*

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION	(7) QTY
					FIG. 18 UPPER SIDE PANEL ASSEMBLIES AND RELATED PARTS	
1			6W728	6433306-01M1	PANEL ASSEMBLY, SIDE UPPER – RIGHT (GREEN 383)	1
1			6W728	6433306-200M1	PANEL ASSEMBLY, SIDE UPPER – RIGHT (TAN 686A)	1
2			6W728	4397004-009	WASHER, LOCK, .438	14
3			6W728	4397000-382	SCREW, CAP HEX HD, .437-14 X 1.50	14
4			6W728	6433307-01M1	PANEL ASSEMBLY, SIDE UPPER – LEFT (GREEN 383)	1
4			6W728	6433307-200M1	PANEL ASSEMBLY, SIDE UPPER – LEFT (TAN 686A)	1
5		5310014177334	6W728	4397005-016	WASHER, FLAT, .438 SAE	14
					END OF FIGURE	

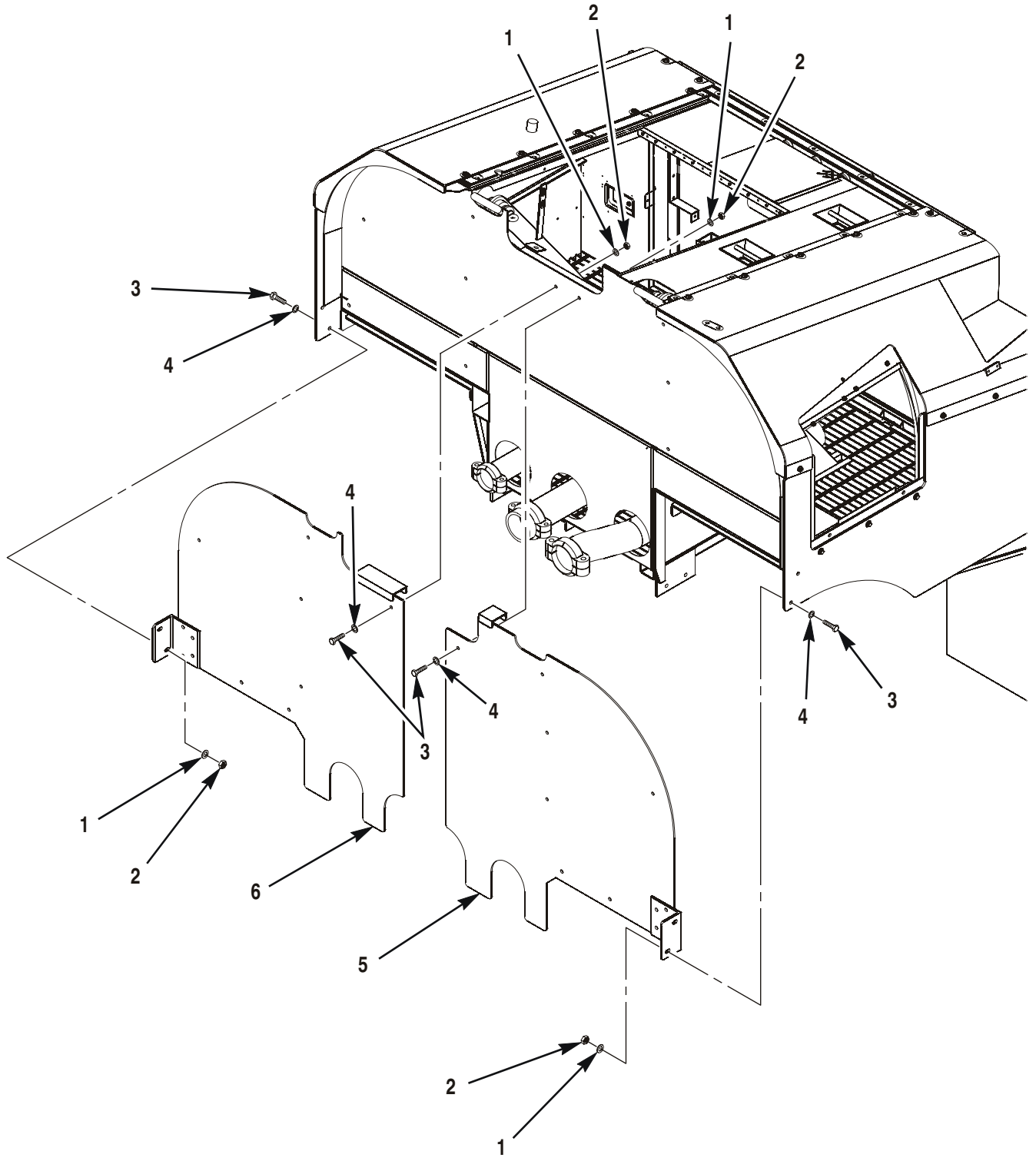
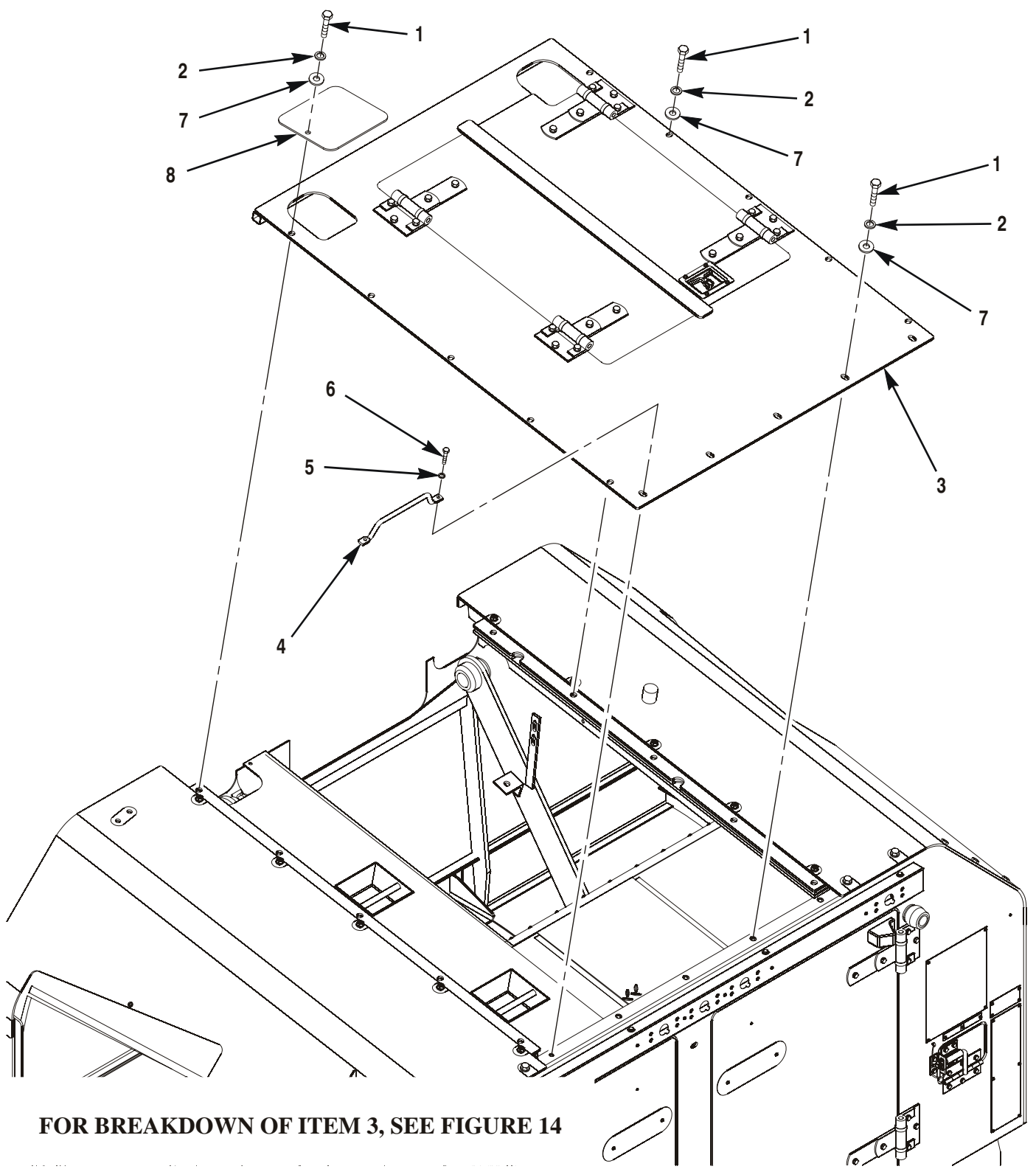


Figure 19.



(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION	(7) QTY
					FIG. 19 FRONT PANEL ASSEMBLIES AND RELATED PARTS	
1			6W728	4397005-017	WASHER, FLAT, .438 USS	16
2		5310015134636	6W728	4397064-007	NUT, HEX LOCKING, .438-14	16
3			6W728	4397000-382	SCREW, CAP HEX HD, .437-14 X 1.50	16
4			6W728	4397004-009	WASHER, LOCK, .438	16
5			6W728	6433257-01M1	PANEL ASSEMBLY, FRONT – LEFT (GREEN 383)	1
5			6W728	6433257-200M1	PANEL ASSEMBLY, FRONT – LEFT (TAN 686A)	1
6			6W728	6433258-01M1	PANEL ASSEMBLY, FRONT – RIGHT (GREEN 383)	1
6			6W728	6433258-200M1	PANEL ASSEMBLY, FRONT – RIGHT (TAN 686A)	1
					END OF FIGURE	



**FOR BREAKDOWN OF ITEM 3, SEE FIGURE 14**

*Figure 20.*

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION	(7) QTY
					FIG. 20 TOP PANEL ASSEMBLY AND RELATED PARTS	
1			6W728	4397000-381	SCREW, CAP HEX HD, .437-14 X 1.25	14
2			6W728	4397004-009	WASHER, LOCK, .438	14
3			6W728	6433286-01M1	PANEL ASSEMBLY, TAM – TOP (GREEN 383)	1
3			6W728	6433286-200M1	PANEL ASSEMBLY, TAM – TOP (TAN 686A)	1
4			6W728	6433120-01M1	HANDLE, GRAB/PULL	1
5		5310014179942	6W728	4397004-007	WASHER, LOCK, .313	2
6		5306014339183	6W728	4397000-036	SCREW, CAP HEX HD, .312-18 X 1.25	2
7		5310014177334	6W728	4397005-016	WASHER, FLAT, .438 SAE	14
8			6W728	6433300-02M1	COVER, SHACKLE OPENING – TOP (GREEN 383)	1
8			6W728	6433300-200M1	COVER, SHACKLE OPENING – TOP (TAN 686A)	1
					END OF FIGURE	

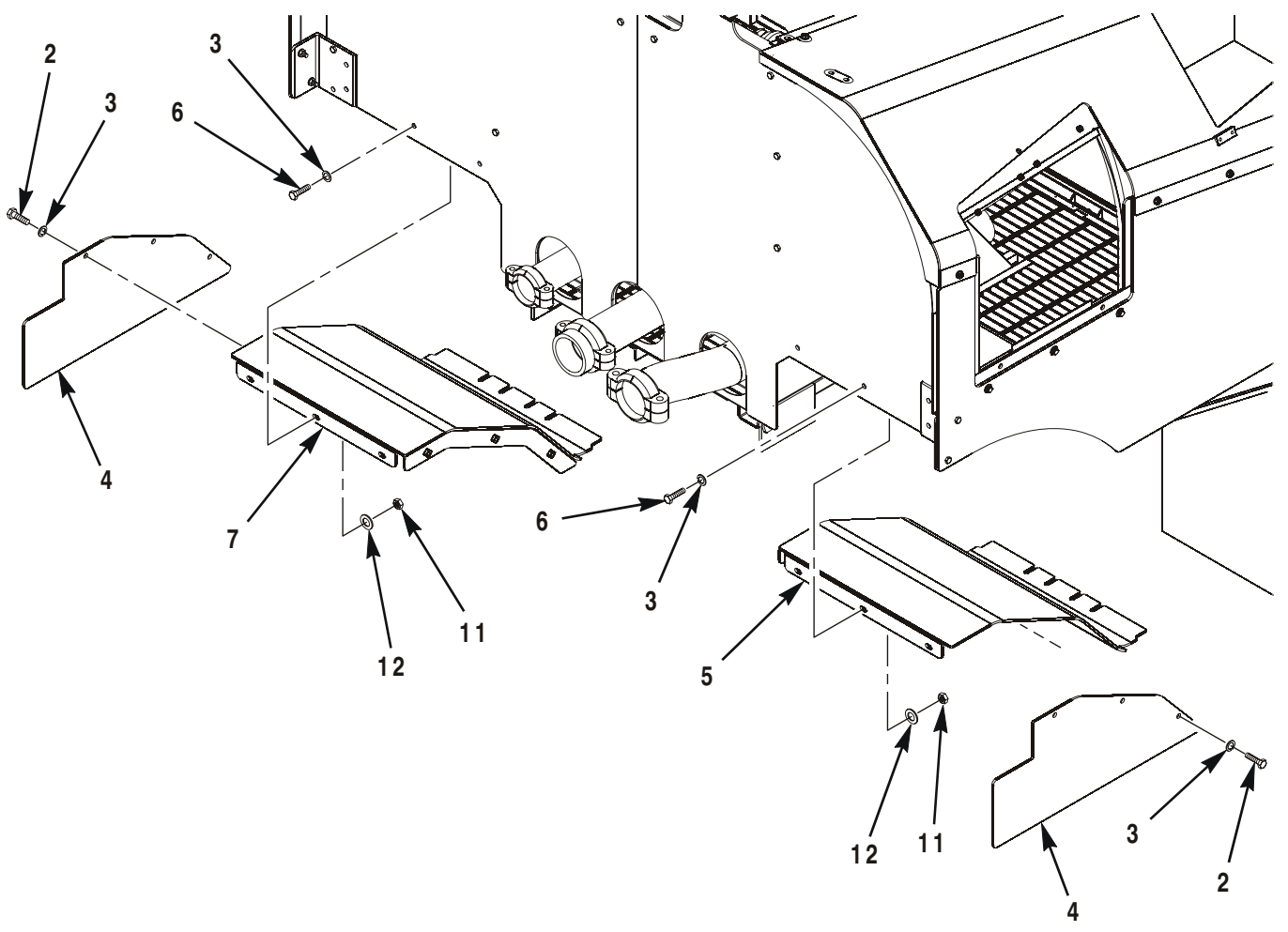
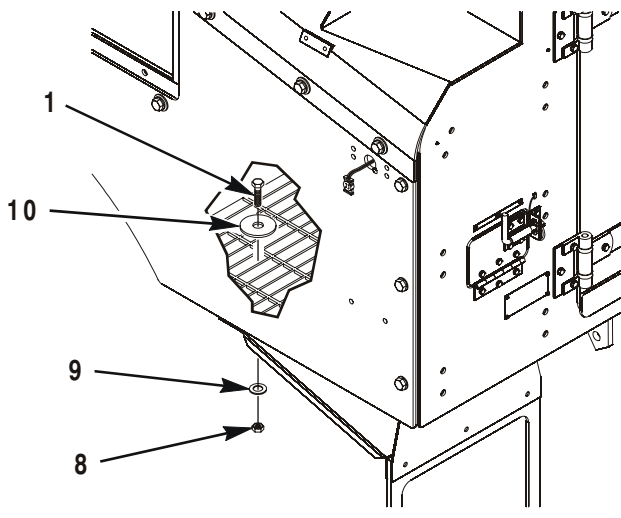
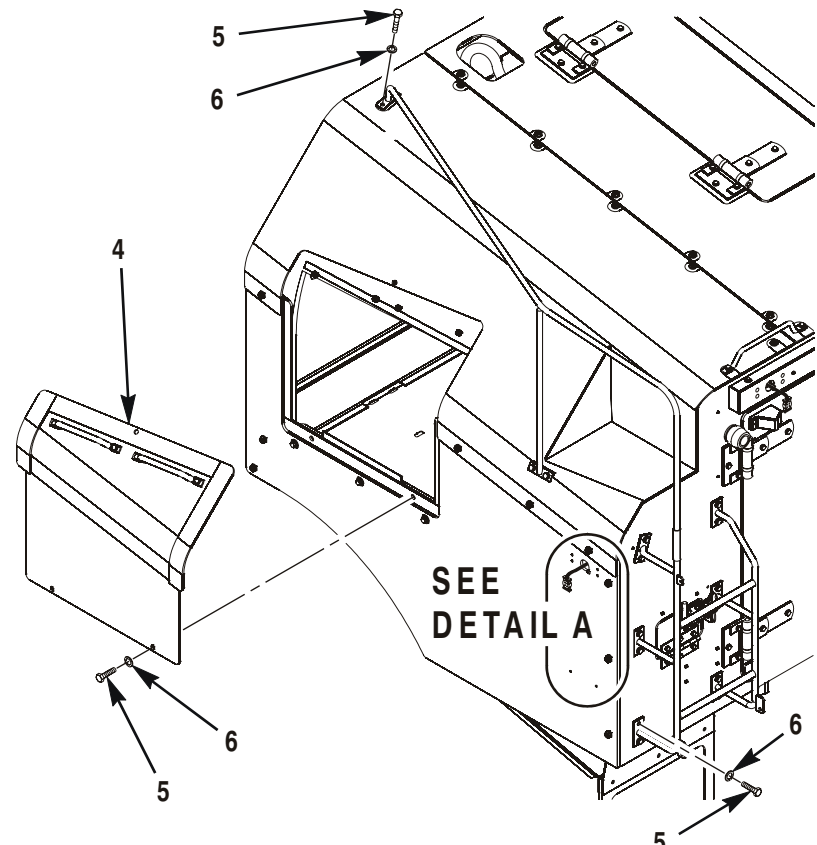
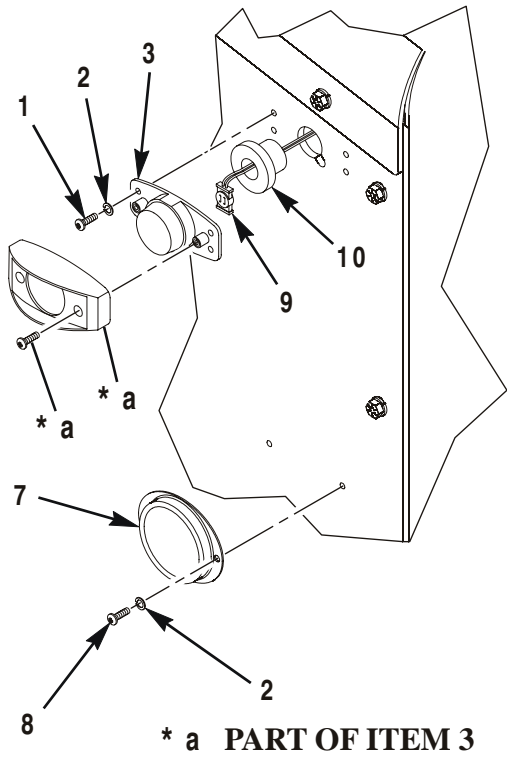


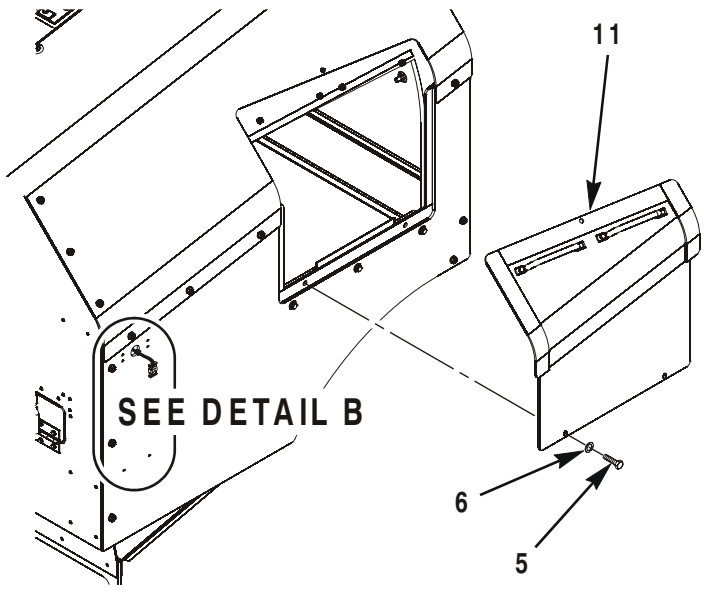
Figure 21.

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION	(7) QTY
					FIG. 21 WHEELWELL ASSEMBLIES AND RELATED PARTS	
1		5305014366375	6W728	4397000-068	SCREW, CAP HEX HD, .375-16 X 2.50	6
2			6W728	4397000-380	SCREW, CAP HEX HD, .437-14 X 1.00	6
3			6W728	4397004-009	WASHER, LOCK, .438	12
4			6W728	6433264-01M1	PANEL, WHEEL HOUSE INNER (GREEN 383)	2
4			6W728	6433264-200M1	PANEL, WHEEL HOUSE INNER (TAN 686A)	2
5			6W728	6433113-01M1	WHEELWELL ASSEMBLY, LEFT (GREEN 383)	1
5			6W728	6433113-200M1	WHEELWELL ASSEMBLY, LEFT (TAN 686A)	1
6			6W728	4397000-382	SCREW, CAP HEX HD, .437-14 X 1.50	6
7			6W728	6433112-01M1	WHEELWELL ASSEMBLY, RIGHT (GREEN 383)	1
7			6W728	6433112-200M1	WHEELWELL ASSEMBLY, RIGHT (TAN 686A)	1
8		5310014398177	6W728	4397064-005	NUT, HEX LOCKING, .375-16	6
9		5310014363742	6W728	4397005-015	WASHER, FLAT, .375 USS	6
10				56765AX	WASHER, FLAT	6
11		5310015134636	6W728	4397064-007	NUT, HEX LOCKING, .438-14	6
12			6W728	4397005-017	WASHER, FLAT, .438 USS	6
					END OF FIGURE	

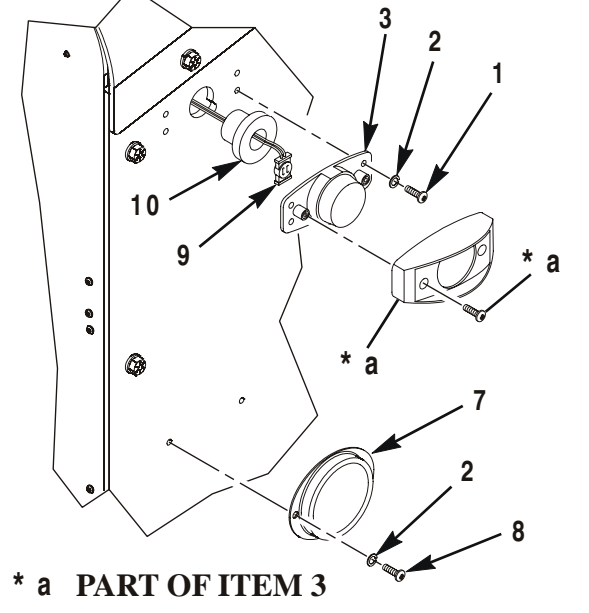
**DETAIL A**



**FOR BREAKDOWN OF ITEM 4, SEE FIGURE 10  
FOR BREAKDOWN OF ITEM 11, SEE FIGURE 11**

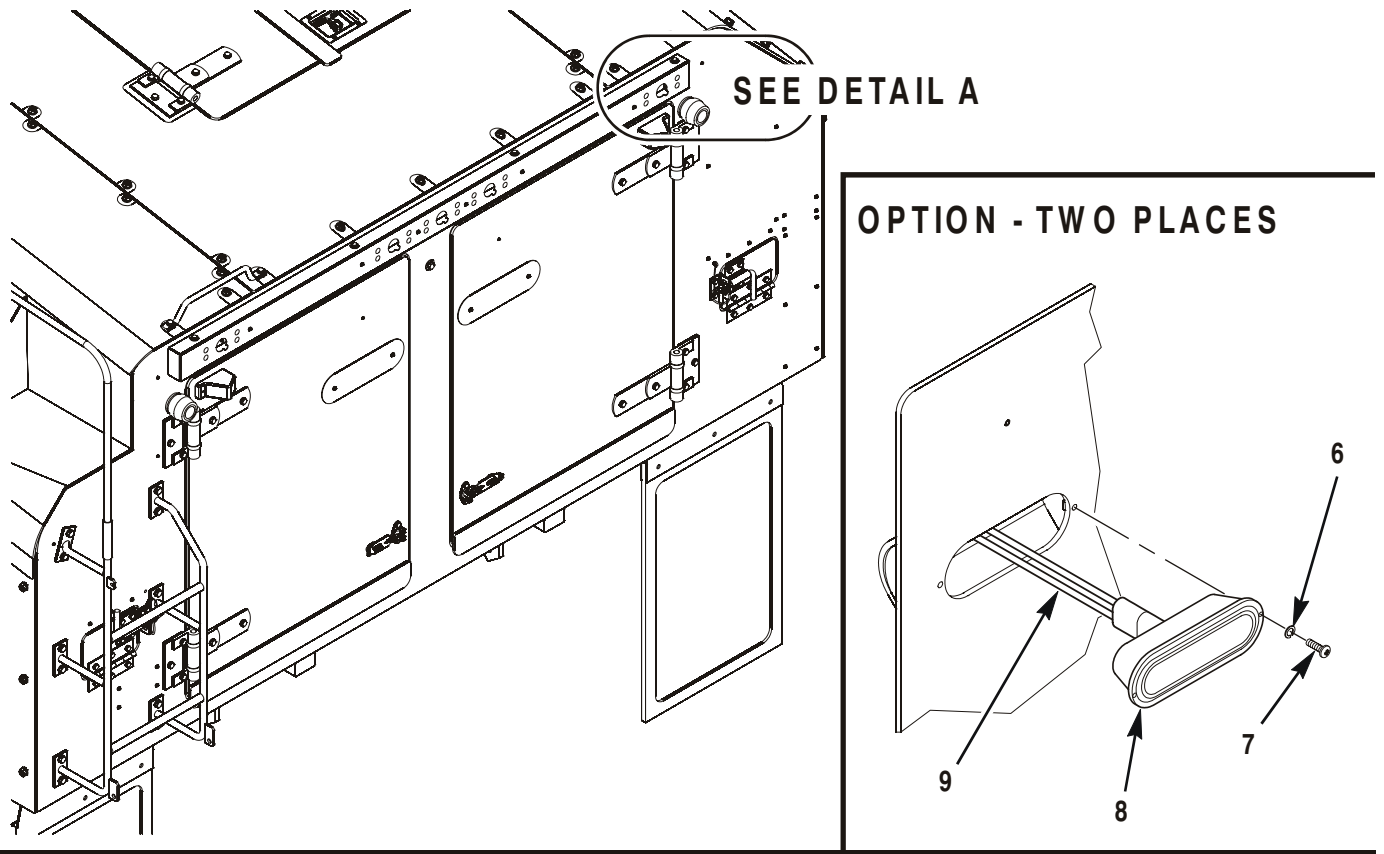


**DETAIL B**



*Figure 22.*

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION	(7) QTY
					FIG. 22 ACCESS PANEL ASSEMBLIES, SIDE LAMPS, REFLECTORS, AND RELATED PARTS	
1		5305015135383	6W728	4397012-076	SCREW, PAN HD, #10-24 X 1.00	8
2		5310014341385	6W728	4397004-005	WASHER, LOCK, .190	12
3				3486738	LAMP ASSEMBLY	2
4			6W728	6433309-01M1	PANEL ASSEMBLY, SIDE ACCESS - LEFT (GREEN 383)	1
4			6W728	6433309-200M1	PANEL ASSEMBLY, SIDE ACCESS - LEFT (TAN 686A)	1
5		5306014339196	6W728	4397000-060	SCREW, CAP HEX HD, .375-16 X 1.00	22
6		5310014177273	6W728	4397004-008	WASHER, LOCK, .375	22
7				EE34609	REFLECTOR, RED	2
8			6W728	4397012-074	SCREW, PAN HD, #10-24 X .750	4
9				3597513	HARNESS, MODULE LIGHTING, TAM	REF
10				3286740	GROMMET, TANKER LIGHT	2
11			6W728	6433308-01M1	PANEL ASSEMBLY, SIDE ACCESS - RIGHT (GREEN 383)	1
11			6W728	6433308-200M1	PANEL ASSEMBLY, SIDE ACCESS - RIGHT (TAN 686A)	1
					END OF FIGURE	



**DETAIL A**  
(TYPICAL -  
5 PLACES)

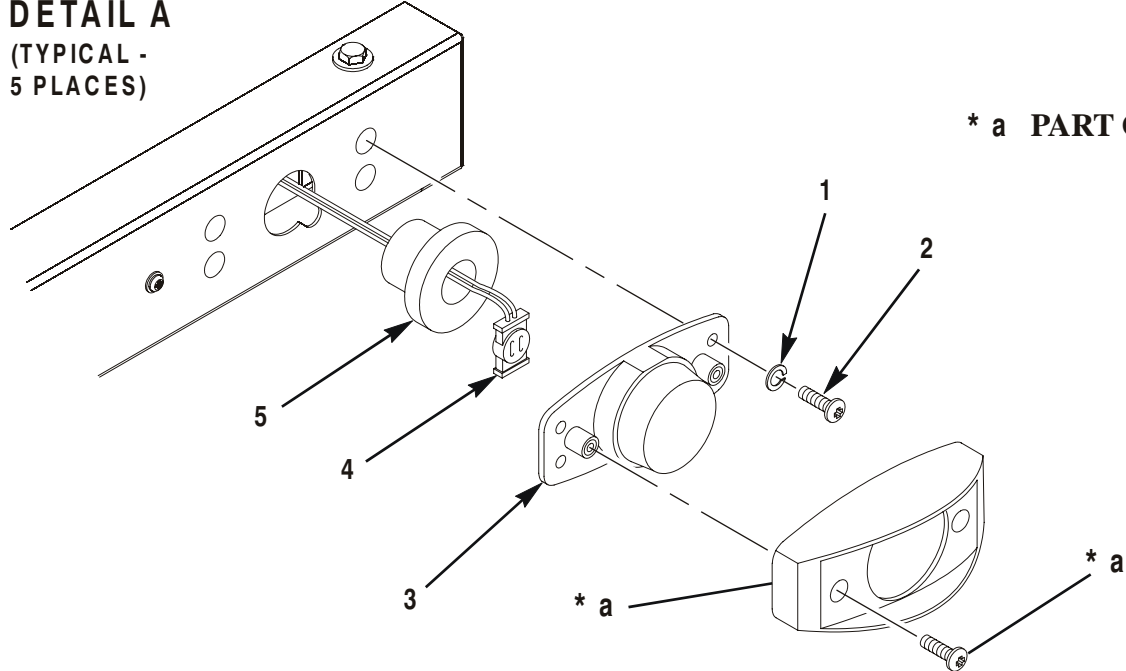


Figure 23.

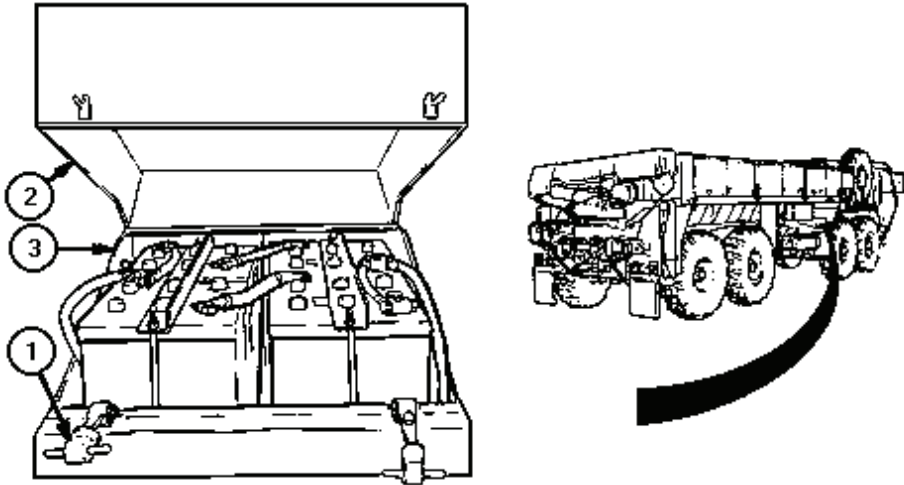


(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION	(7) QTY
					FIG. 23 REAR LAMPS AND RELATED PARTS	
1		5310014341385	6W728	4397004-005	WASHER, LOCK, .190	4
2		5305015135383	6W728	4397012-076	SCREW, PAN HD, #10-24 X 1.00	4
3				3486738	LAMP ASSEMBLY	1
4				3597513	HARNESS, MODULE LIGHTING, TAM	REF
5				3286740	GROMMET, TANKER LIGHT	REF
6		5310014341385	6W728	4397004-005	WASHER, LOCK, .190	4
7		5305015135383	6W728	4397012-076	SCREW, PAN HD, #10-24 X 1.00	4
8				3199428	LIGHT, STOP, RED LED	2
9				3593651	HARNESS, STOP LAMP EXTENSION - RH	1
9				3593652	HARNESS, STOP LAMP EXTENSION - LH	1
					END OF FIGURE	

# NEGATIVE BATTERY CABLES DISCONNECT

Shut off engine

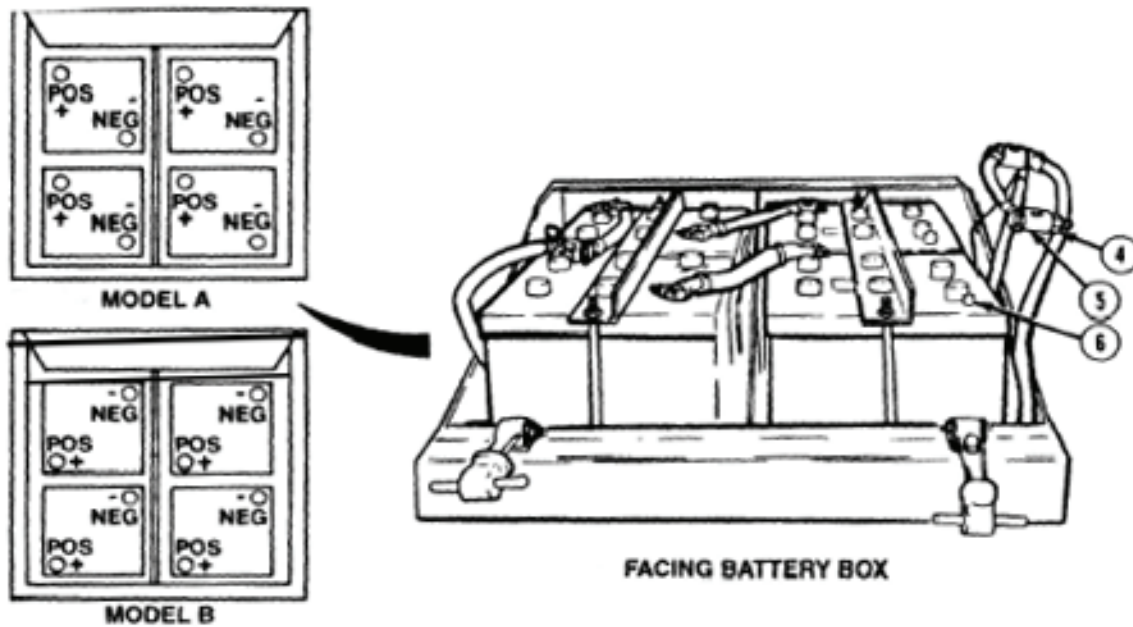
Release two rubber hooks (1).



Remove battery box cover (2) from battery box (3).

There are two types of batteries. Model A is identified by a 6TN printed on the side of the battery, while Model B has a 6TL printed on the side of the battery. Refer to the illustrations for Models A and B for proper positioning of batteries. The battery caps of Model B do not protrude through the bracket. If Models A and B are combined on the same vehicle, all batteries will be positioned as shown for Model B.

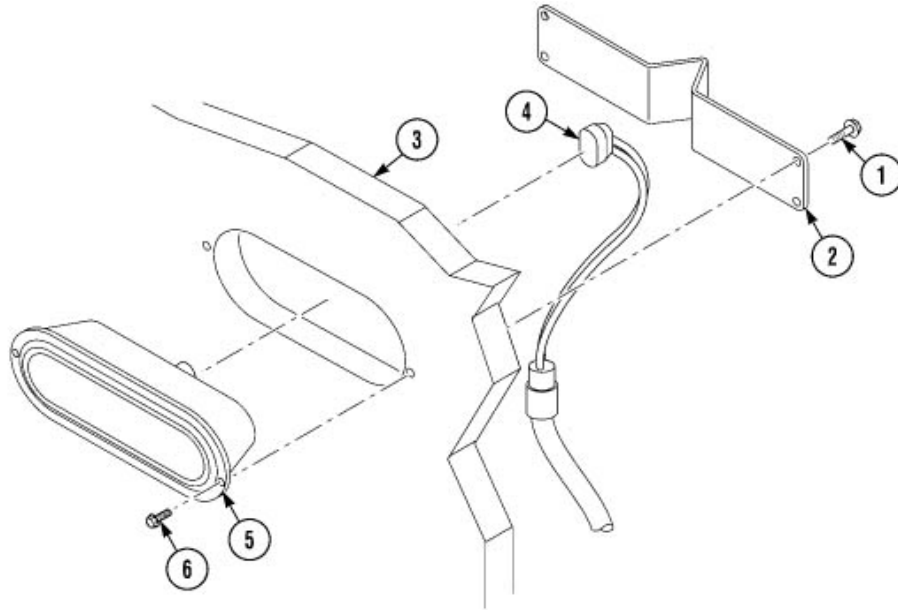
Loosen two nuts (4).



Disconnect two negative cable terminals (5) from battery posts (6).

## HIGH MOUNT STOP LAMP ASSEMBLY REMOVAL

Vehicle may be equipped with two high mount stop lamps on rear of vehicle.  
Removal and installation procedures are the same for both.



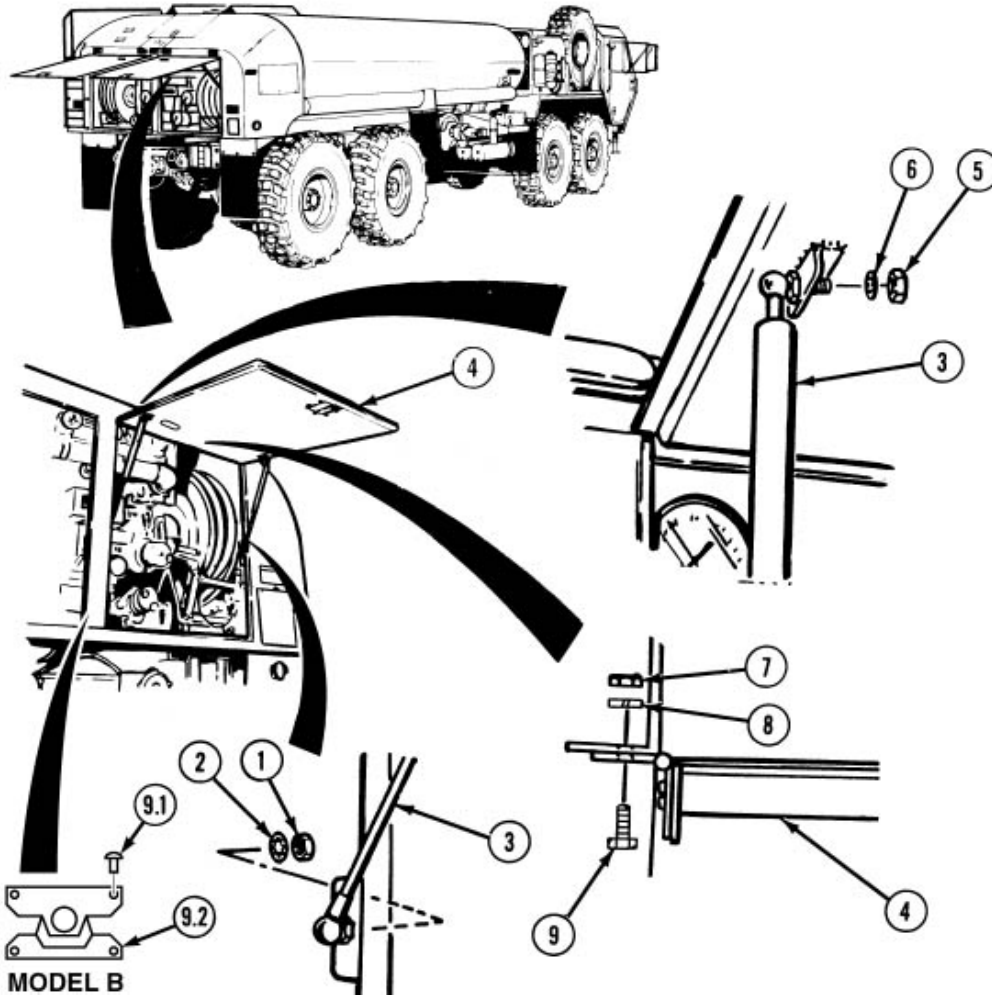
Tag and mark wires before disconnecting.

- Remove four screws (1) and guard (2) from rear door (3).
- Disconnect connector (4) from high mount stop lamp (5).
- Remove two screws (6), and high mount stop lamp (5) from rear door (9)

## Pump Module Top And Rear Doors Removal

Remove cushion clip for high mount stop lamp harness as required  
 Pump module top door has only one push rod.

Soldier A removes nuts (1) and lockwashers (2) from lower end of both push rods (3) while Soldier B supports door (4).



Remove nuts (5) and lockwashers (6) from upper end of both push rods (3).  
 Remove eight nuts (7), lockwashers (8), and screws (9). Remove door (4).

Model B has a hasp and lock to secure rear doors.

Drill out four rivets (9.1) and remove staple (9.2) from center post.

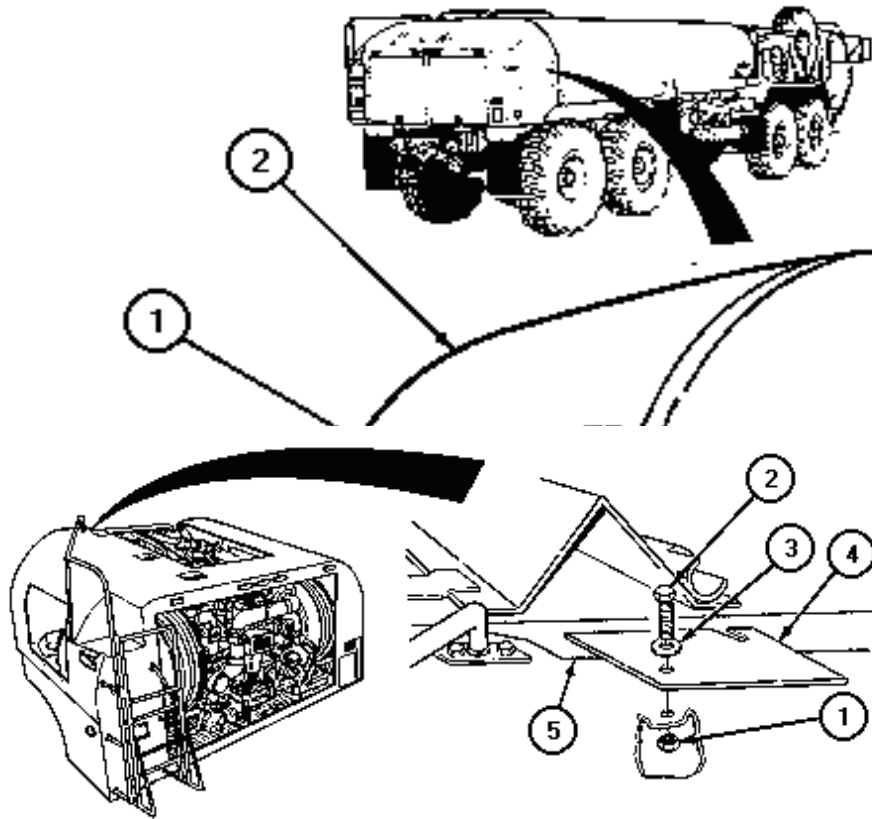
Follow same process for rear and top doors.

# Pump Module Top And Side Access Panel Removal

## Left and Right Side Access Panel Removal.

Both side access panels are removed and installed in the same manner.

Hold access panel (1) against pump module (2).



Remove three screws (3) and lockwashers (4). Remove access panel (1) from pump module (2).

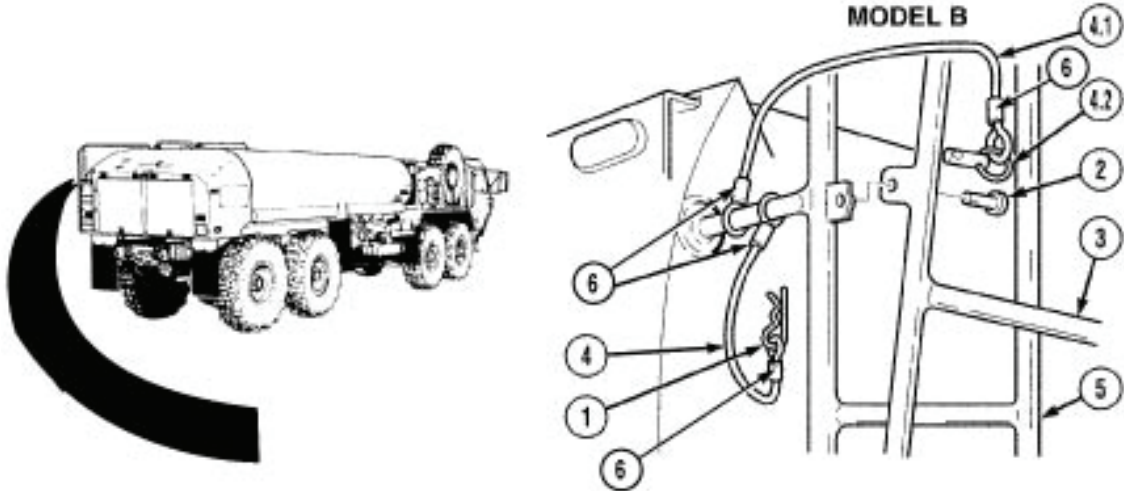
## Top Access Panel Removal.

Remove two locknuts (1), screws (2), washers (3), and top access panel (4) from pump module (5).

**Ladder Rail And Ladder Removal (M978-Models A & B)**

**Removal (Model A and Model B).**

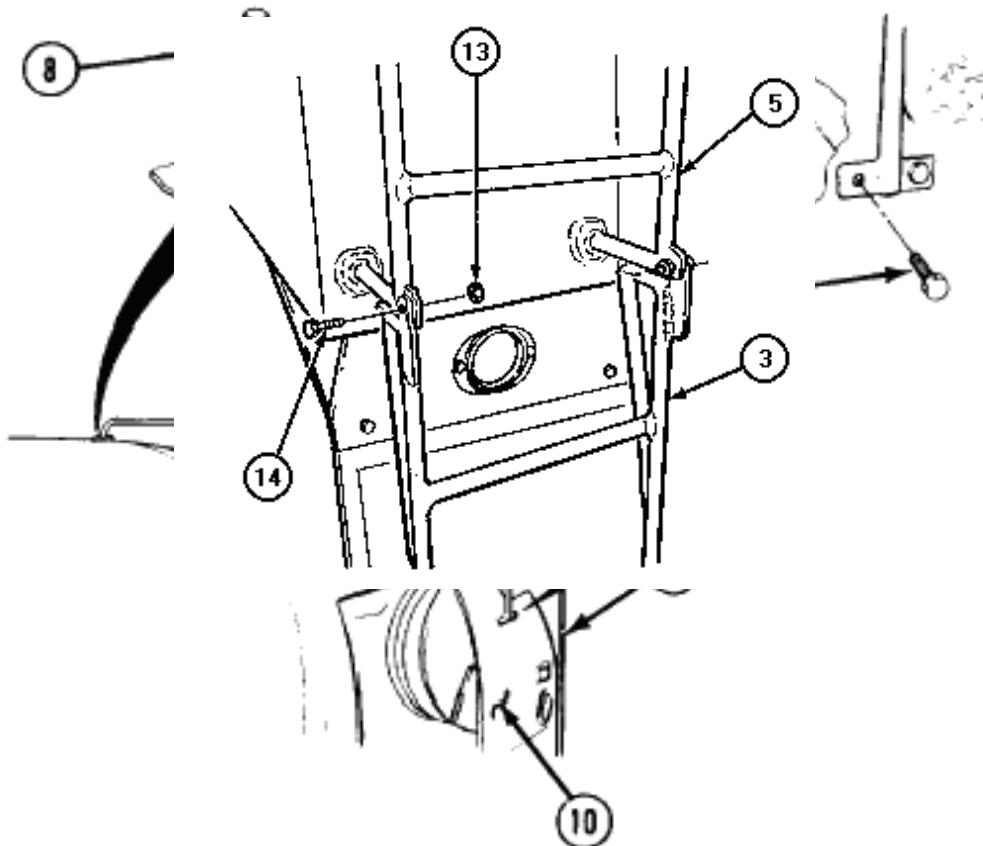
Remove safety pin (1) from pin (2).



Remove pin (2) and deploy lower ladder assembly (3).

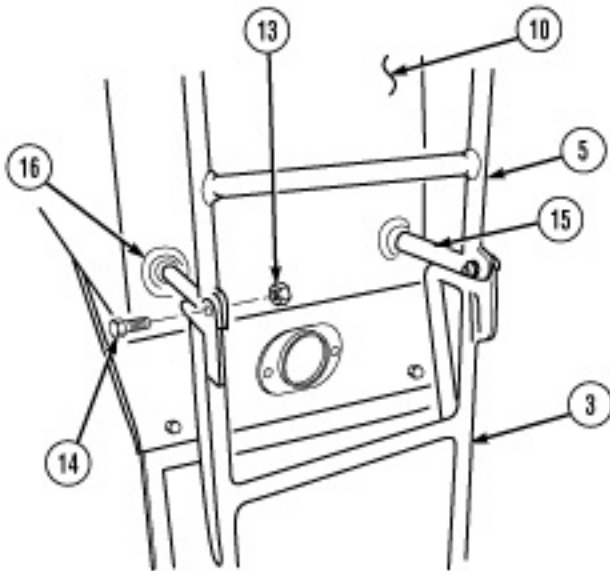
Remove two locknuts (7) and screws (8) from ladder rail (9) and pump module (10).

Remove two locknuts (11), screws (12), and ladder rail (9) from pump module (10) and upper ladder assembly (5).



Remove two locknuts (13), screws (14), and lower ladder assembly (3) from upper ladder assembly (5).

Remove ladder supports as close to welded plates as possible, to reduce amount of grinding required.



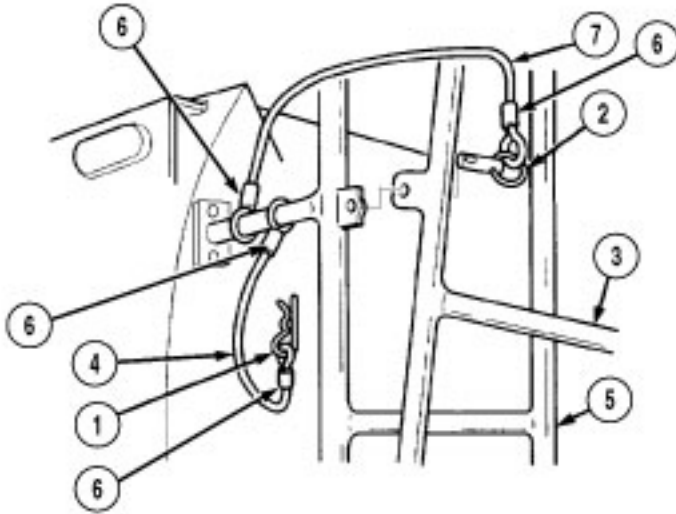
Use cutting wheel and angle grinder to remove ladder supports (15) at pump module (10) and remove upper ladder assembly (5) from pump module (10).

Use angle grinder to remove welding material from six ladder support attachment points (16) until flush with surface of pump module (10).

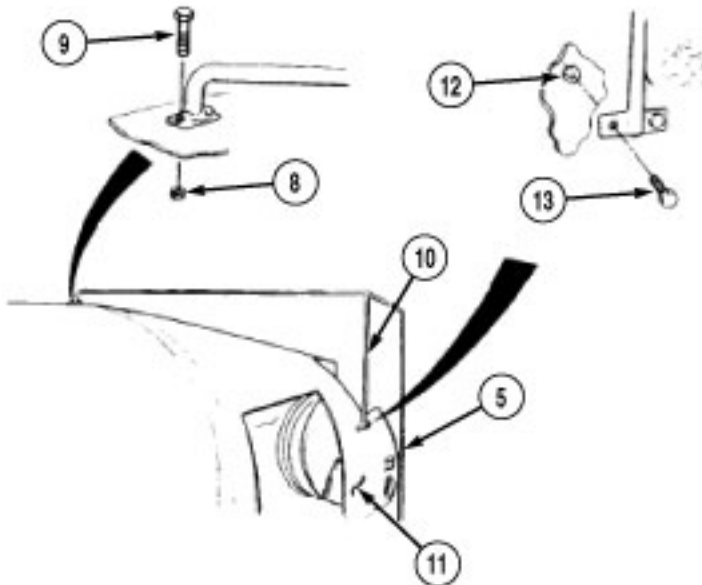
## Ladder Rail and Bolt-On Ladder Removal (M978-Model C)

Removal (Model C).

Remove safety pin (1) from pin (2).

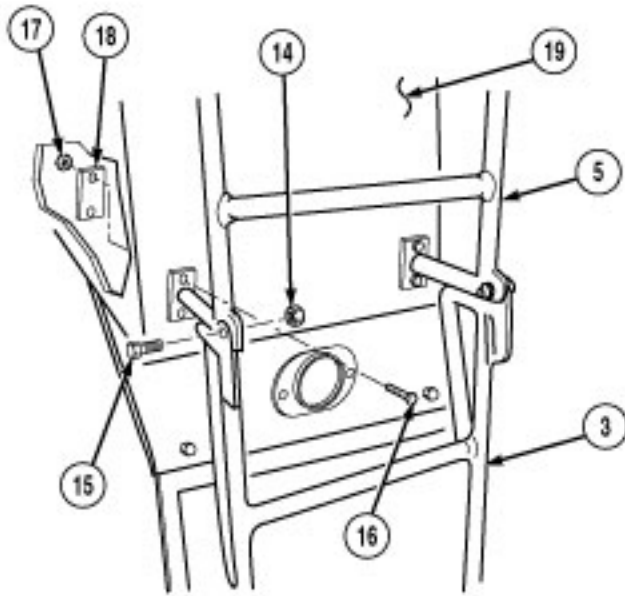


Remove pin (2) and deploy lower ladder assembly (3).



Remove two locknuts (8) and screws (9) from ladder rail (10) and pump module (11).  
Remove two locknuts (12), screws (13), and ladder rail (10) from pump module (11).  
Remove ladder rail (10) from bolt-on ladder assembly (5).

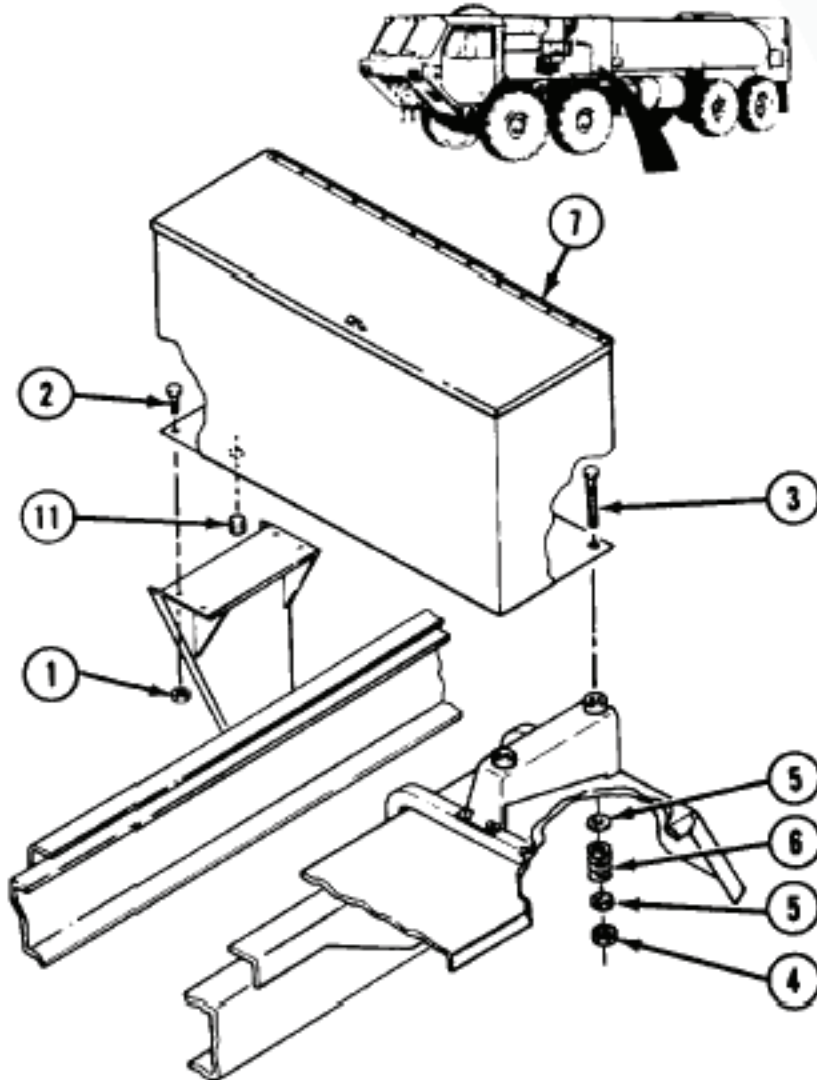




Remove two locknuts (14), screws (15), and lower ladder assembly (3) from bolt-on ladder assembly (5). Remove 12 screws (16), locknuts (17), and six mounting plates (18) from pump module panel (19) and bolt-on ladder assembly (5). Remove bolt-on ladder assembly (5) from vehicle.

**Stowage Box Removal**  
**Fuel Can Stowage Box Removal.**

Remove plug (11) from stowage box (7) and drain fuel into suitable container. Soldier A removes four locknuts (1) while Soldier B removes four screws (2). Remove two screws (3), nuts (4), washers (5), and spring (6).



Soldier A operates lifting device and removes stowage box (7) guided by Soldier B. Remove two rubber mounts (8).

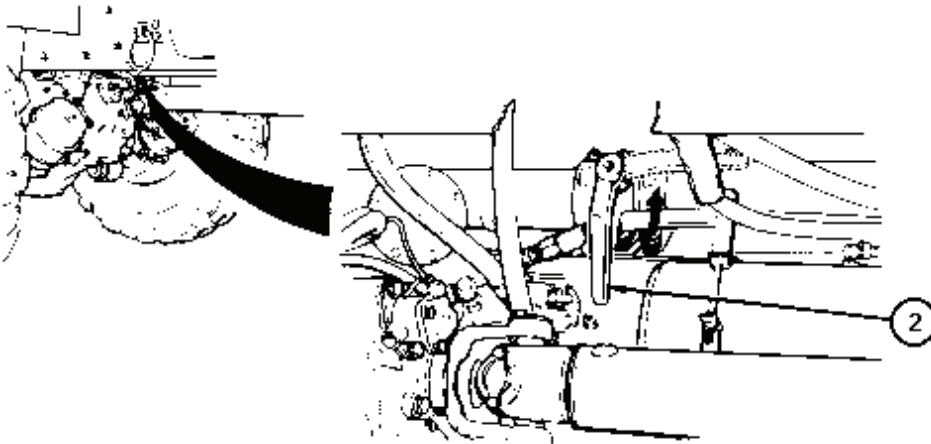
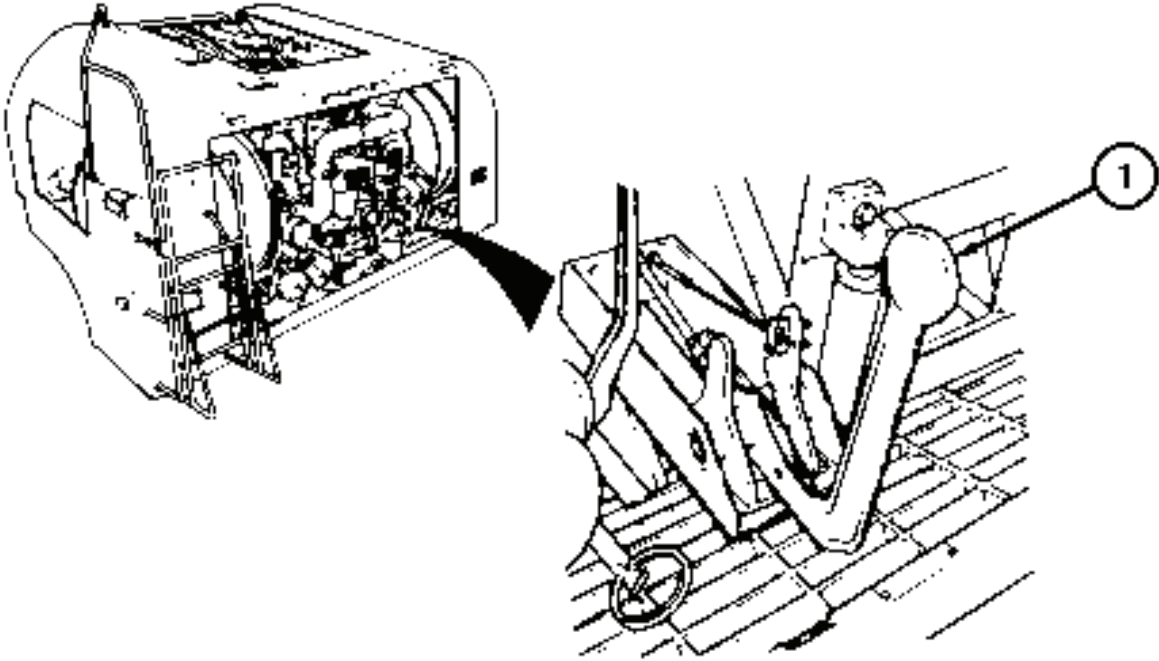
## 2500-Gallon Tank Removal Conditions

### 2500 GALLON TANK/DRAIN

Vehicle system air pressure built up to 100 psi (690 kPa).

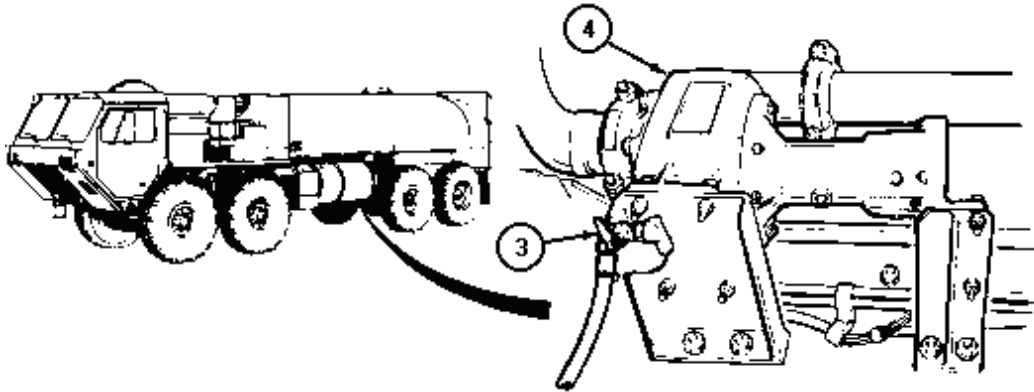
#### Drain 2500 Gallon Tank.

1. Pull MC MANUAL CONTROL EM VALVE lever (1) back to OPEN position.

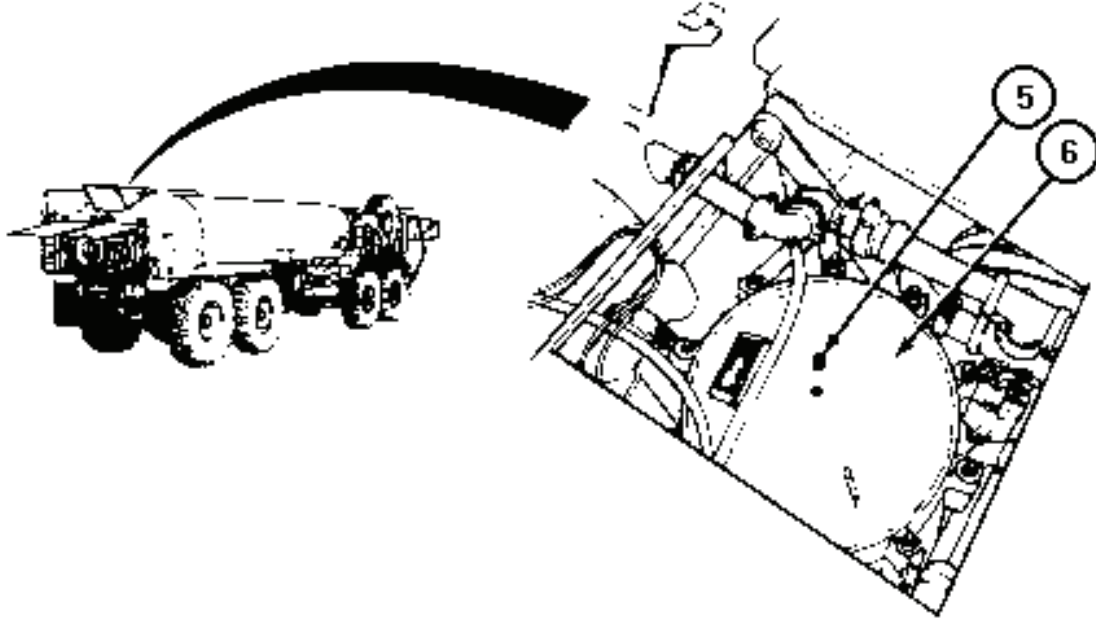


2. Set V3 suction line valve handle (2) to OPEN position.

Primary pump and piping may contain approximately 50 to 60 gallons (190 to 230 liters) of fuel. Dispose of all drained fuel in accordance with unit standard operating procedures.



3. Open drain valve (3) in primary pump (4) to drain fuel from piping.

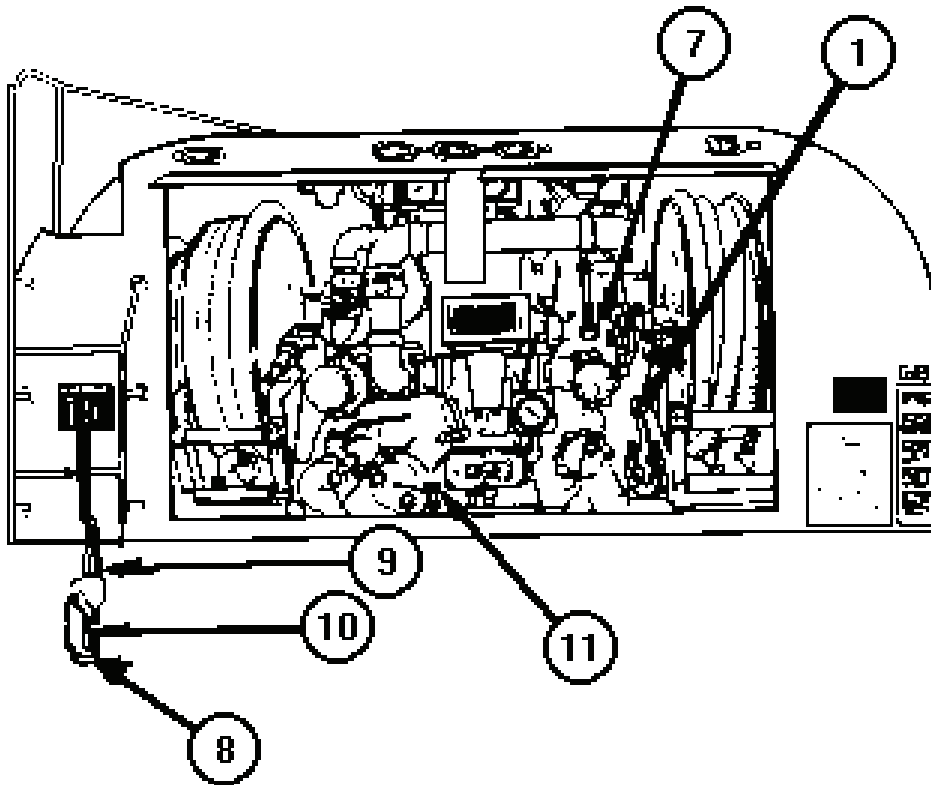


4. Remove plug (5) from filter-separator cover (6).

5. Pull out on V6 FUEL/DEFUEL CONTROL VALVE handle (7).
6. Remove HAV HAND ACTUATED CONTROL VALVE (8) and hoses (9) from pump module.

Filter-separator may contain 20 to 30 gallons (75 to 115 liters) of fuel.  
 HAV HAND ACTUATED CONTROL VALVE lever must be squeezed through step (25) for fuel to drain.

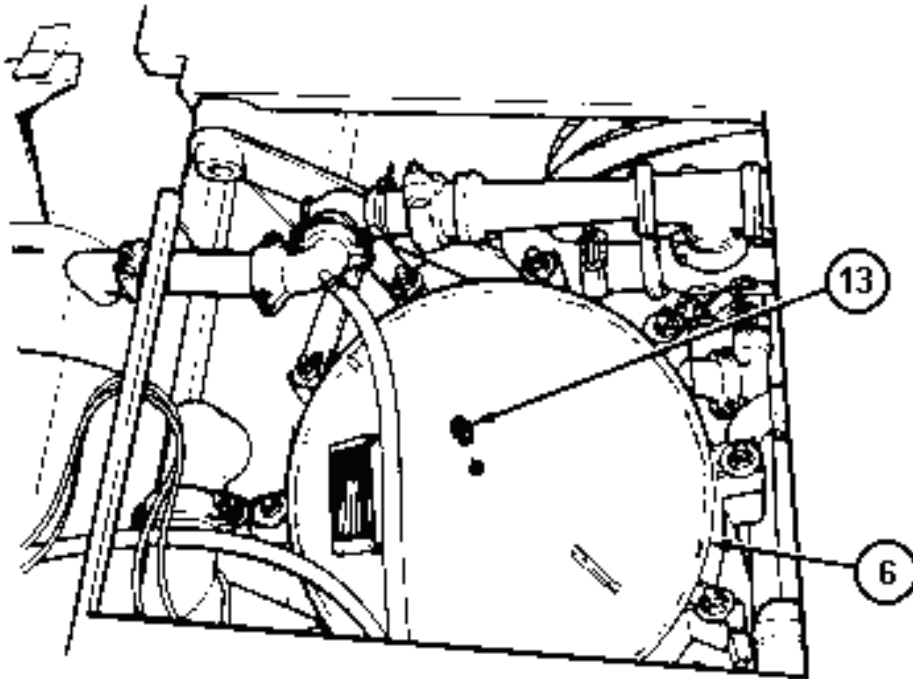
7. Squeeze and hold lever (10).



8. Open V15 DRAIN VALVE (11).  
 Remove filter-separator elements.

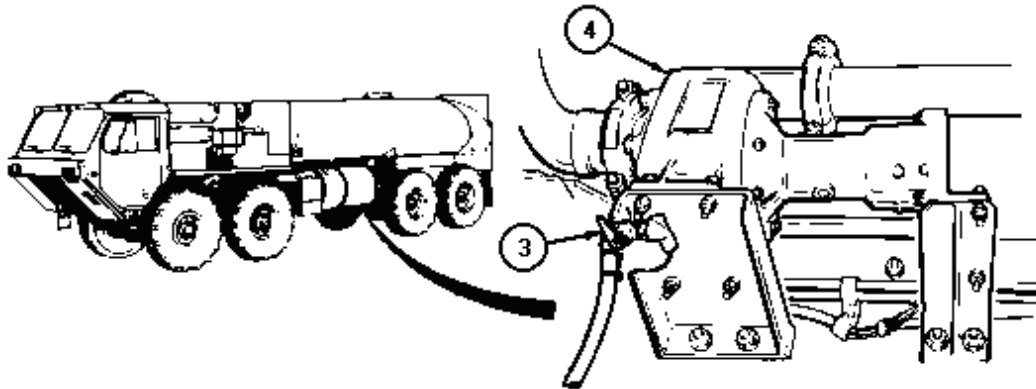
Continue with step 10 after fuel stops draining from primary pump and filter-separator.

10. Close V15 DRAIN VALVE (11).
11. Push MC MANUAL CONTROL EM VALVE lever (1) full forward and down to CLOSE position.



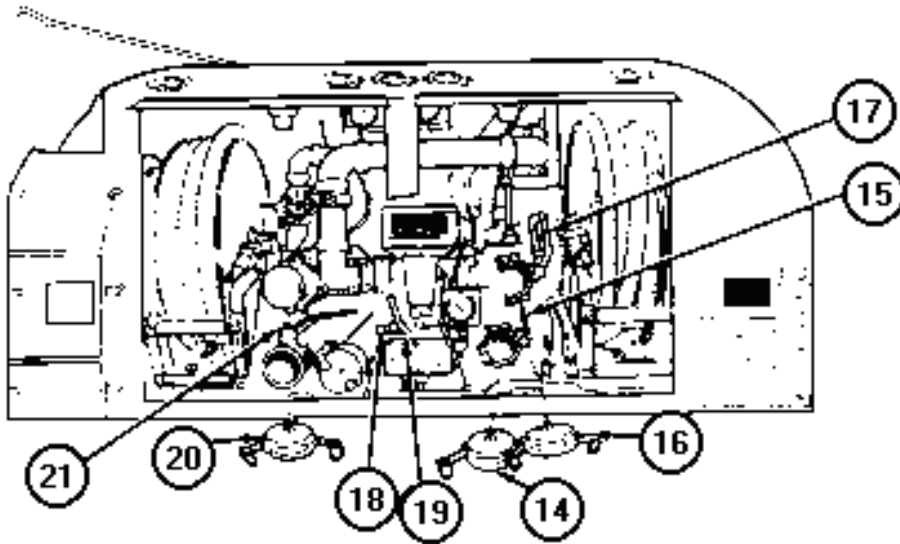
12. Install adapter fitting (13) in filter-separator cover (6).
13. Apply compressed air to adapter fitting (13) and pressurize filter-separator to 10 to 50 psi (69 to 345 kPa).

Continue with step 14 after fuel stops draining from primary pump.



14. Close drain valve (3) on primary pump (4).

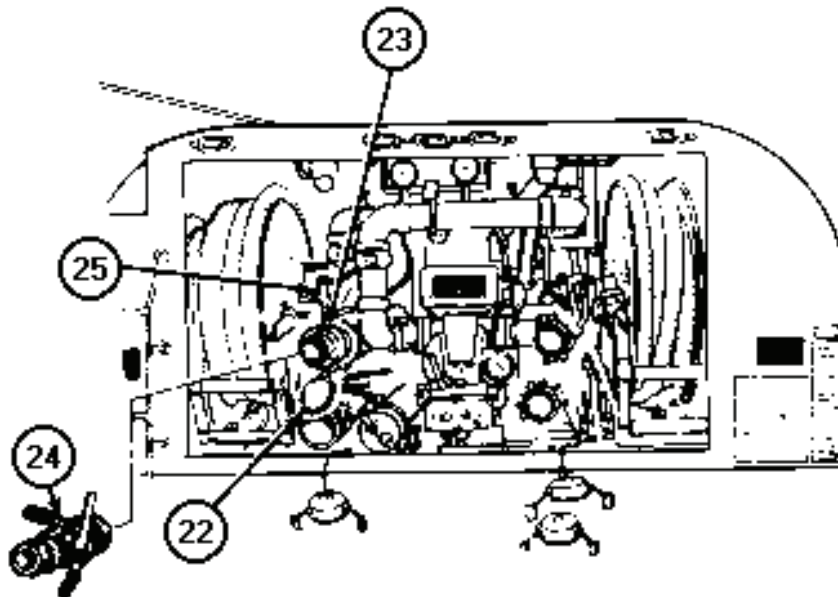
15. Remove cap (14), open V18 BULK DELIVERY valve (15), and drain fuel.



16. Remove cap (16), open V11 FLOW VALVE (REG) (17), and drain fuel.

17. Remove cap (18), open SP SAMPLING PROBE (19), and drain fuel.

18. Remove cap (20), open V17 GRAVITY VALVE (21), and drain fuel.

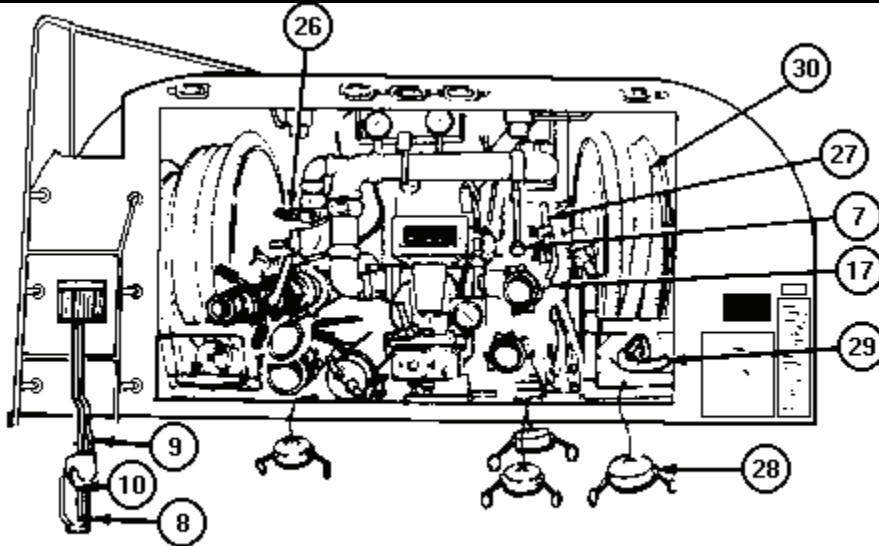


19. Remove dust cap (22) from V2 bottom load adapter (23) and install D1 adapter (24).

20. Open V12 bottom load CHECK VALVE (25), D1 adapter (24), and drain fuel.

21. Open V7 REEL VALVE (26) and V8 REEL VALVE (27).

Do steps 22 and 23 for left and right fuel service hoses.



22. Remove cap (28) and install fuel service nozzle (29).

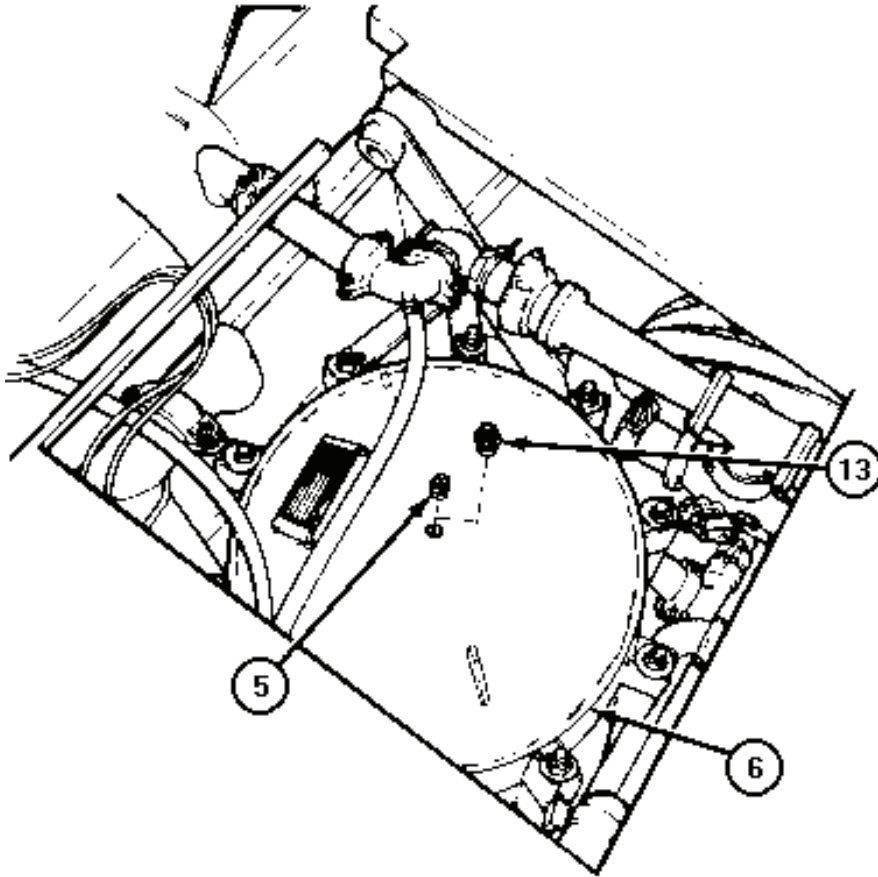
23. Squeeze lever on fuel service nozzle (29) and drain fuel from hose (30). Release lever.

24. Push in on V6 FUEL/DEFUEL CONTROL VALVE handle (7) and drain fuel from V11 FLOW VALVE (REG) (17).

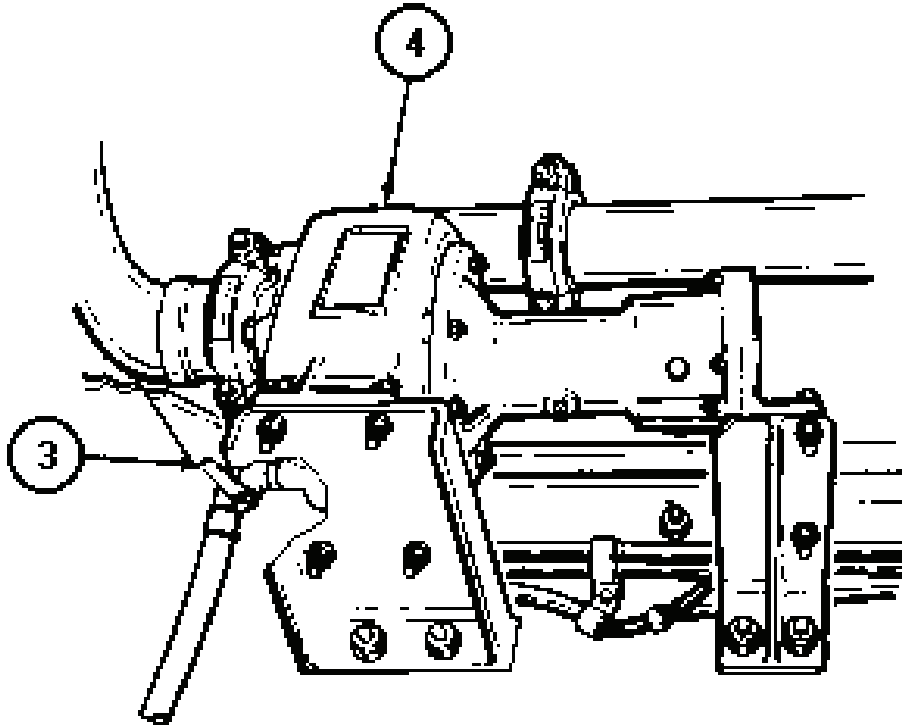
25. Pull out on V6 FUEL/DEFUEL CONTROL VALVE handle (7) after fuel stops draining.

26. Release lever (10). Rewind hoses (9) and HAV HAND ACTUATED CONTROL VALVE (8) in pump module.

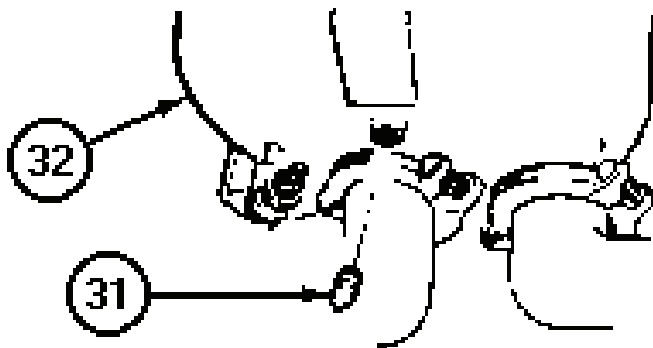
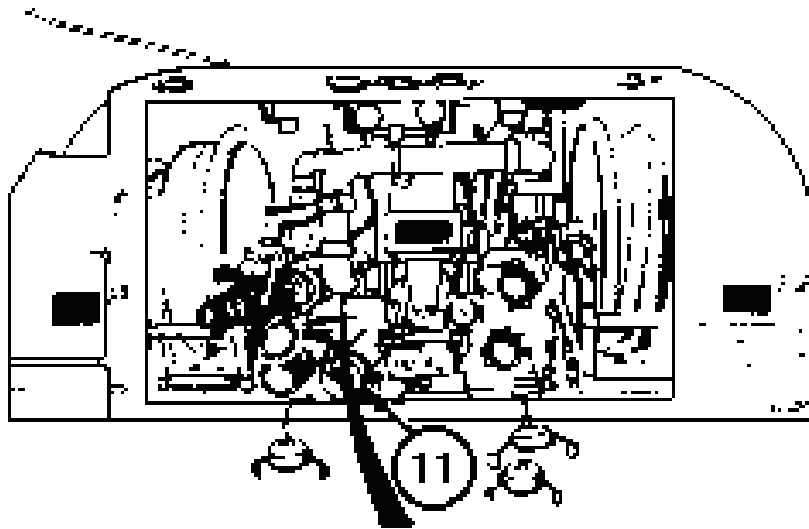




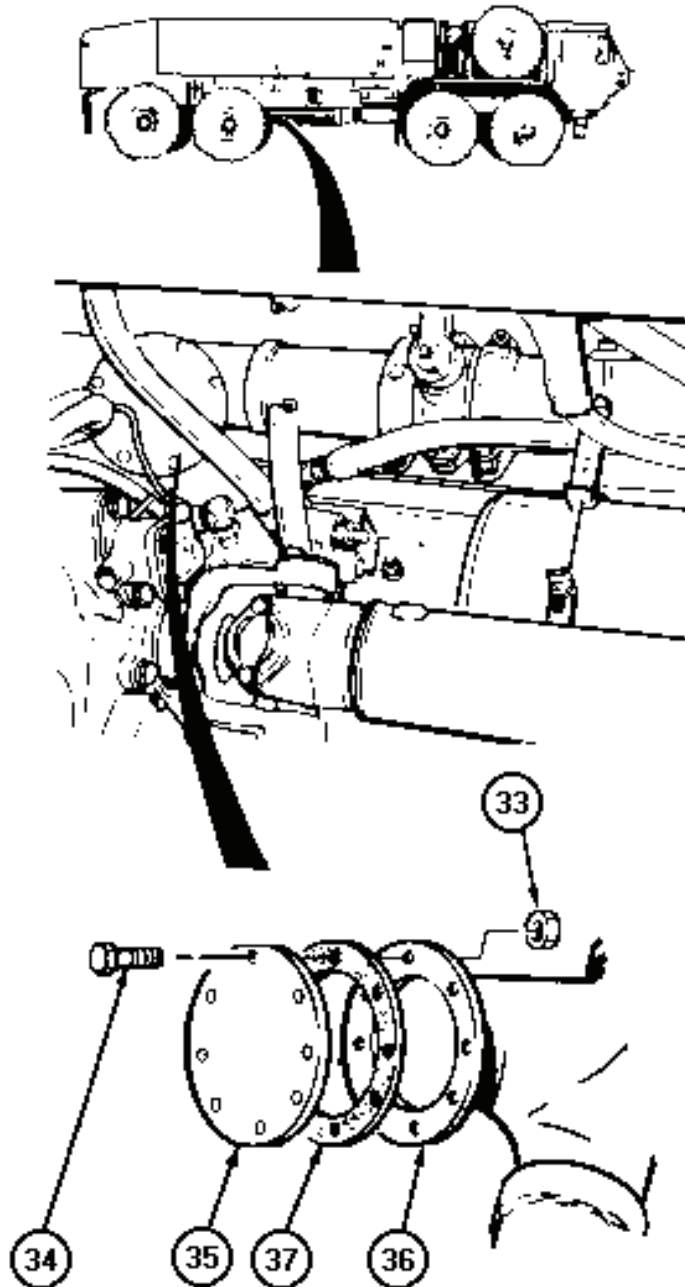
27. Discontinue compressed air and remove adapter fitting (13) from filter-separator cover (6).
28. Apply pipe thread sealing compound to threads of plug (5) and install in filter-separator cover (6).



29. Open drain valve (3) on primary pump (4) and drain remaining fuel.



30. Open V15 DRAIN VALVE (11) and drain remaining fuel.
31. Remove plug (31) from bottom of filter-separator (32) and drain remaining fuel.
32. Coat threads with pipe thread sealing compound and install plug (31) in bottom of filter-separator (32) when fuel stops draining.

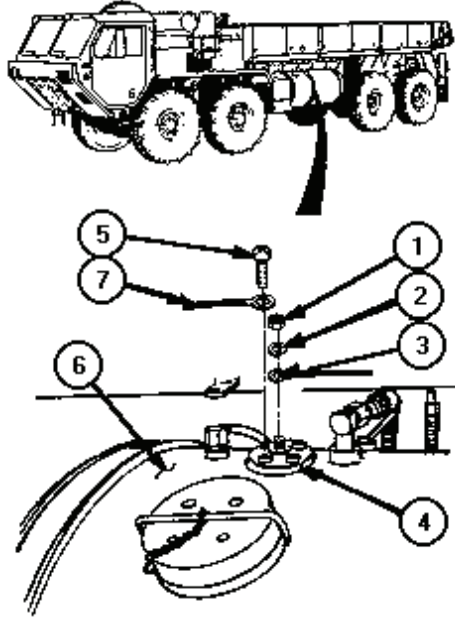


33. Remove eight nuts (33) and screws (34) from cover (35) and tank fuel strainer (36).
34. Remove cover (35) and gasket (37) from tank fuel strainer (36) and let fuel drain.
35. Coat both sides of gasket (37) with adhesive-sealant and position gasket and cover (35) on tank fuel strainer (36).
36. Install eight screws (34) and nuts (33).

**FUEL LEVEL SENDING UNIT REMOVAL**

Tag and mark wires before removing.

Remove nut (1), lockwasher (2), and disconnect wire (3) from fuel sending unit (4).



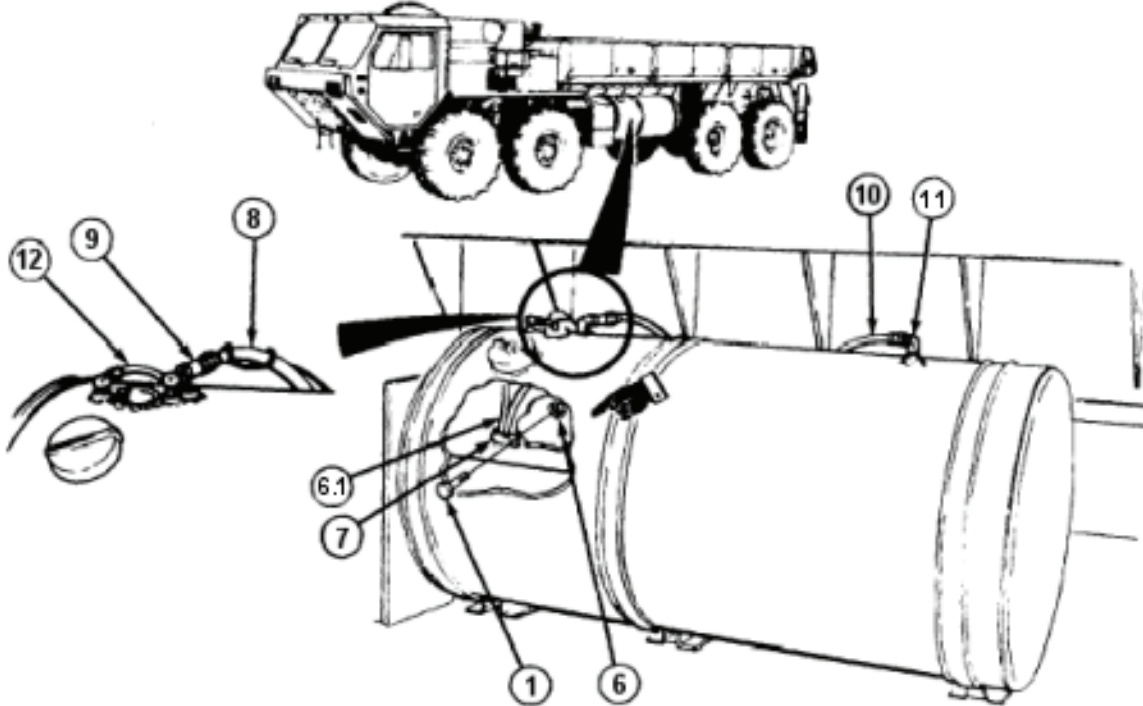
Remove one screw (5) holding fuel level sending unit (4) to fuel tank (6). Remove ground wire (7).

## Fuel Tank Removal

Cut plastic ties as required.

Some vehicles have a screw, lockwasher, washer, lockwasher, lockwasher and nut. Others have a flanged screw and flanged nut.

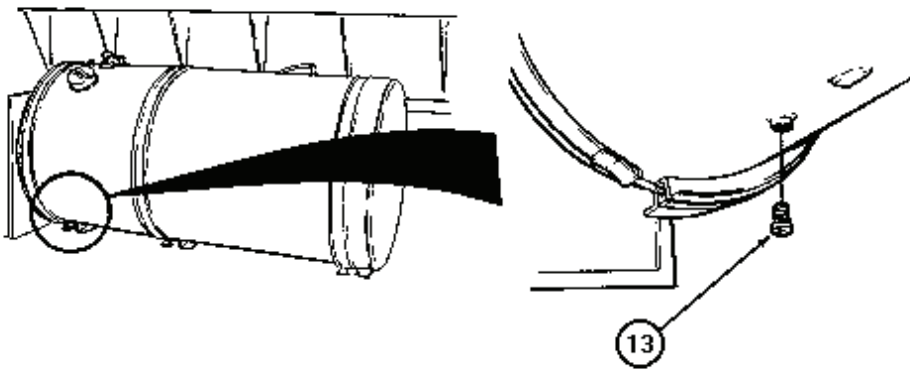
Remove screw (1), locknut (6), and ground wire (6.1) from cushion clip (7). Remove cushion clip (7).



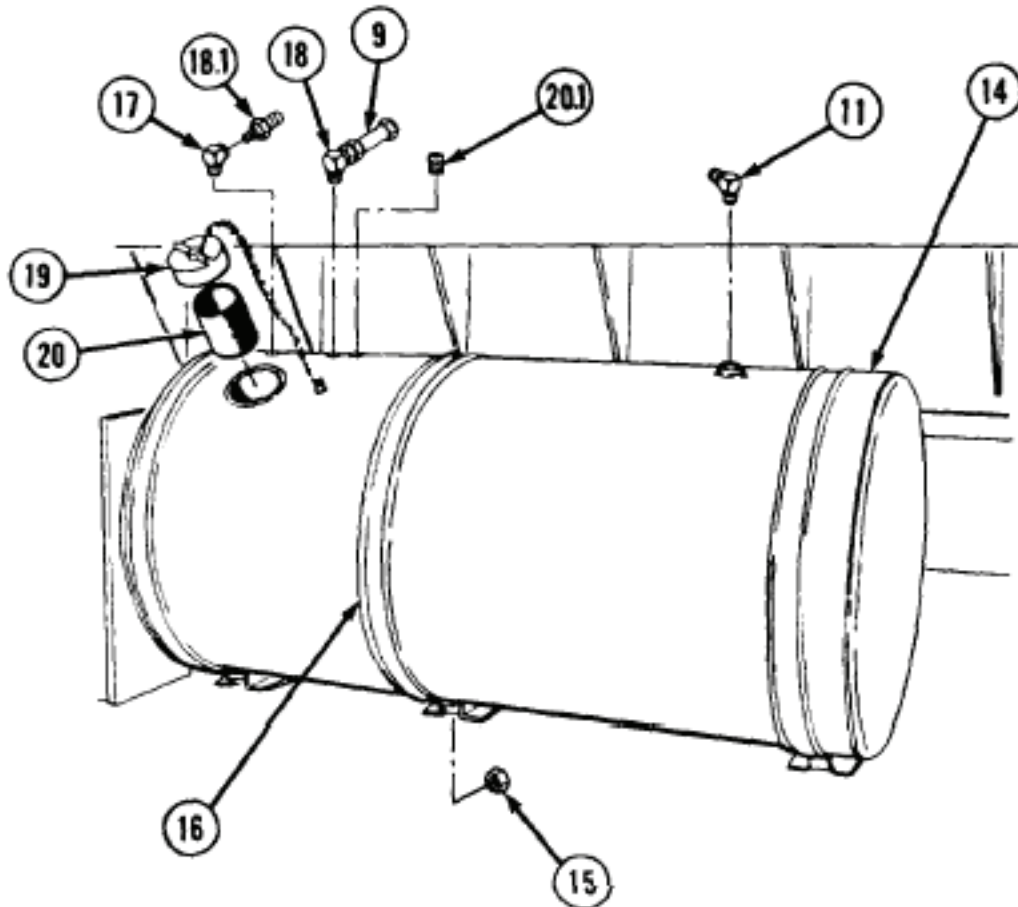
Disconnect fuel supply line (8) from check valve (9). Disconnect fuel return line (10) from elbow (11). Drain fuel from lines (8 and 10) into suitable container.

There are two types of air vents. Model A is 12 in. (304.8 mm) long while Model B is a 24 in. (609.6 mm) long. Both are removed the same way.

Remove air vent line (12).



Remove drain plug (13), and drain fuel into container.



Support fuel tank (14).  
 Remove three nuts (15) from three fuel tank straps (16).  
 Pull fuel tank straps (16) outward and remove fuel tank (14).

There are two types of air vents. Model A has a removable hose fitting and a 12 in. (304.8 mm) long air vent line. Model B uses a 24 in. (609.6 mm) long air vent line and does not have a removable hose fitting. Both models are removed the same way.

Remove air vent (17) and two elbows (11 and 18).  
 Remove fitting (18.1) from air vent (17).  
 Remove tank cap (19) and fuel strainer (20).  
 Remove check valve (9) from elbow (18).

Some models of fuel tanks contain a socket head pipe plug.

Remove socket head pipe plug (20.1).

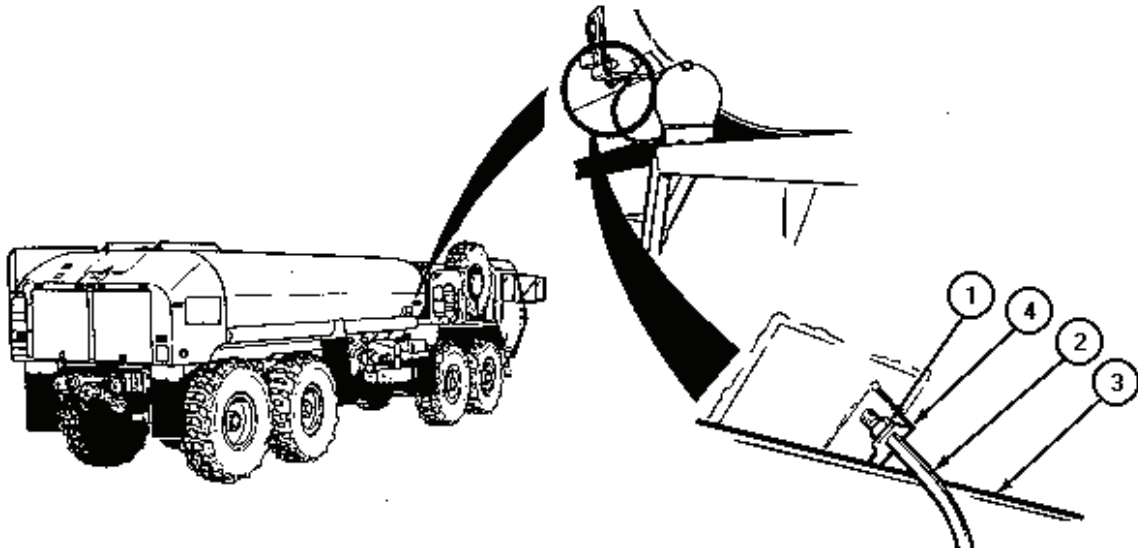
### **Cleaning/Inspection.**

Clean fuel tank straps and fuel tank brackets with dry cleaning solvent, wire brush, and cloth. Clean liners with soapy water. Rinse liners clean with clear water.  
 Inspect fuel tank brackets and fuel tank straps for cracks, breaks, and badly rusted areas. Inspect bracket liners for brittleness, cracks, and breaks.  
 Purge and clean fuel tank, as required.  
 Inspect fuel tank for cracks, broken welds, and stripped threads.

## STOWAGE TUBE REMOVAL

There are two models of covers: Model A and Model B.  
 Do steps 1, 2, and 3 for Model A. Do steps 1, 3, 4, and 5 for Model B.

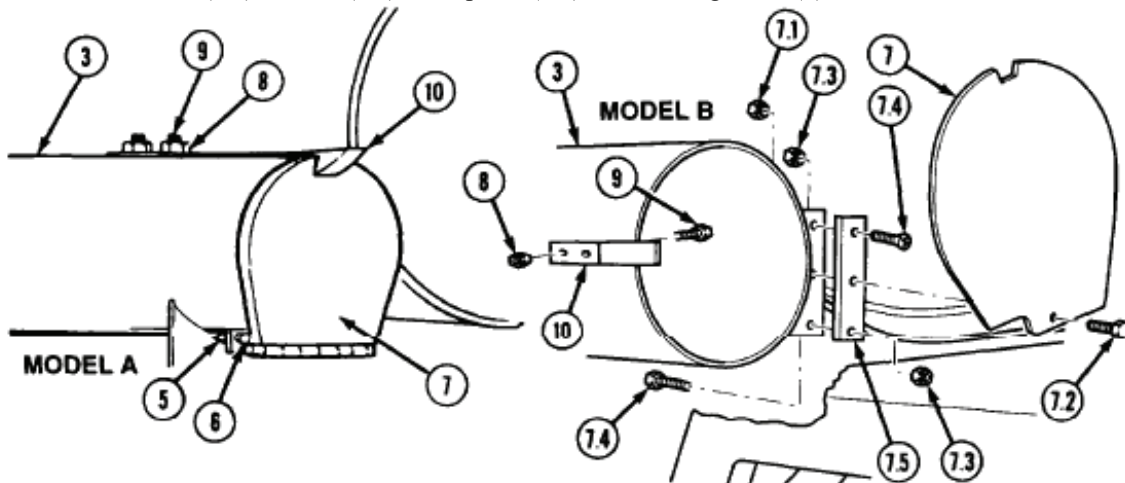
1. Remove 10 locknuts (1), five U-bolts (2), and stowage tube (3) from tank mounting brackets (4).



2. Remove three nuts (5), screws (6), and tube cover (7) from stowage tube (3).

Note and mark placement and direction of screws during removal.

3. Remove nut (7.1), screw (7.2), and cover (7) from stowage tube (3).
4. Remove two nuts (7.3), screws (7.4), and spacer (7.5) from stowage tube (3).



5. Remove two nuts (8) and screws (9) to detach spring catch (10) from stowage tube (3).

## TANK VENT DRAIN REMOVAL

There are two configurations of vents that may be installed on the tank.

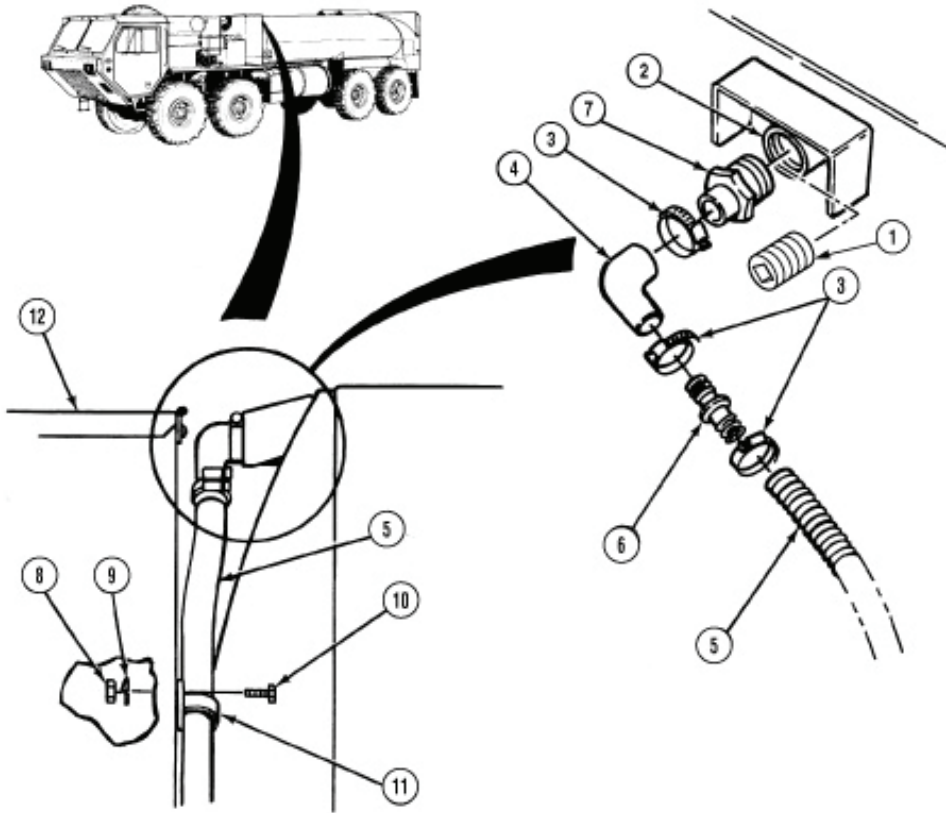
Model A, vent valve and vent drain hose.

Model B, plug only.

Note which configuration is removed to ensure same configuration is installed.

### Removal.

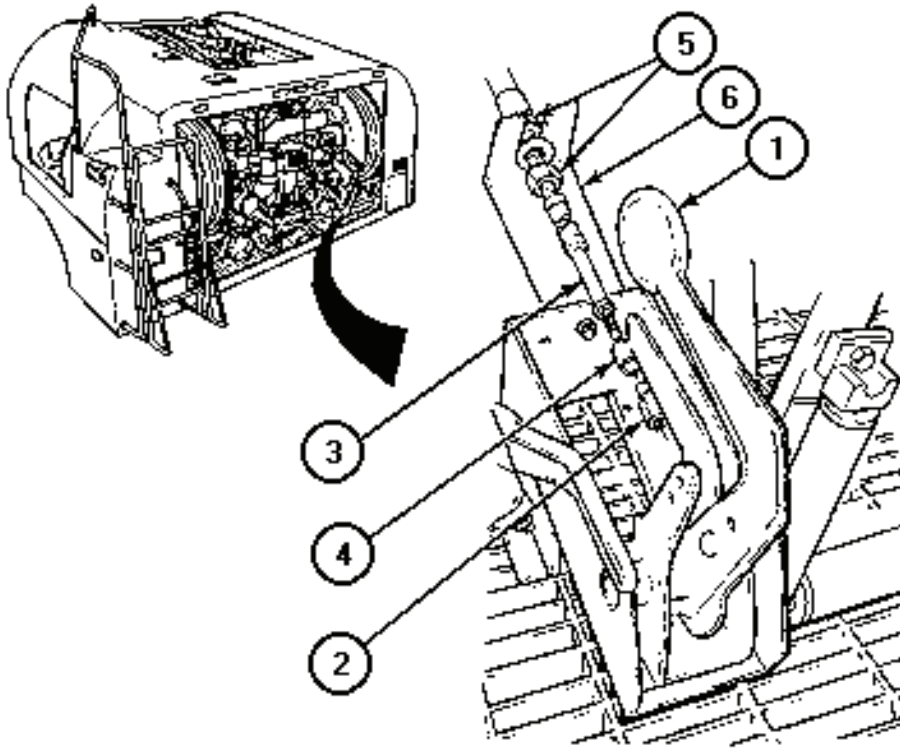
For Model A, remove reducer bushing (7) from tank vent opening (2).





**V1 EMERGENCY VALVE CABLE REMOVAL**

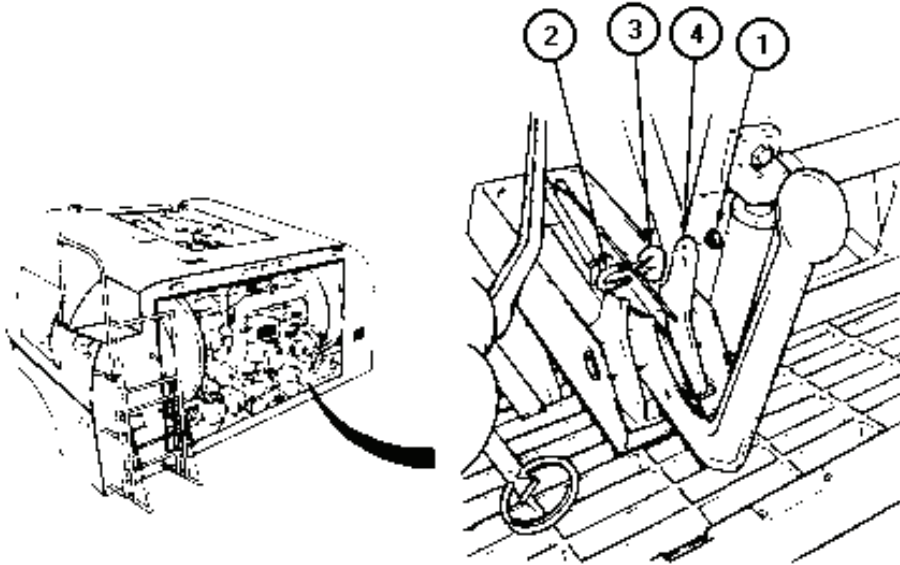
Push MC MANUAL CONTROL EM VALVE lever (1) full forward and down to closed position.



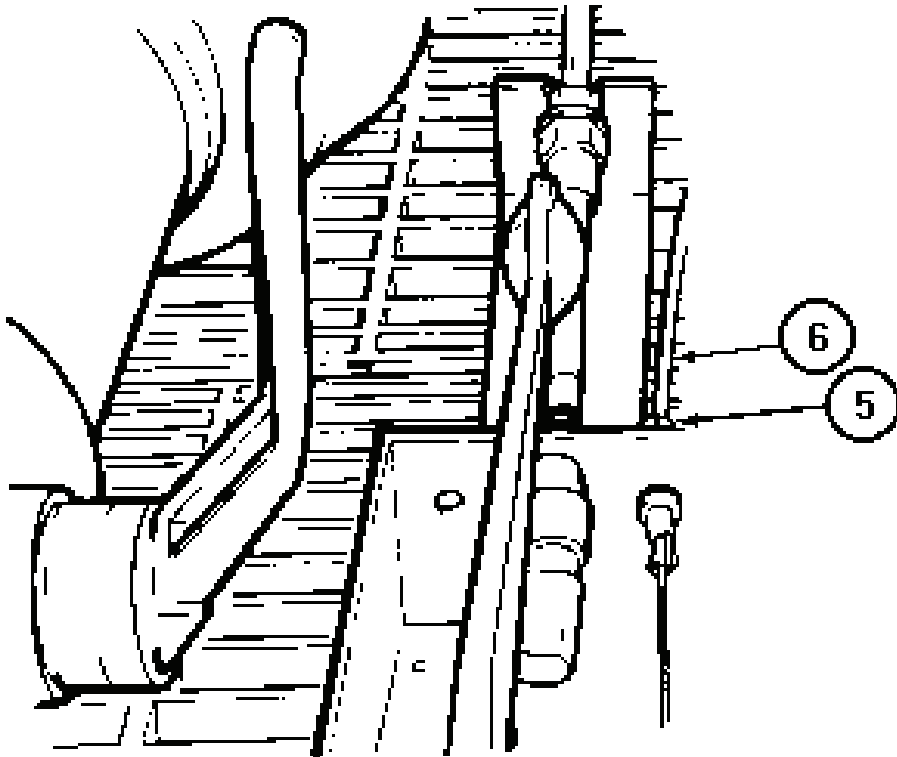
Remove nut (2) and cable (3) from offset link (4).  
Loosen two nuts (5) and remove cable (3) from bracket (6).

**EMERGENCY SHUT-OFF CABLE REMOVAL**

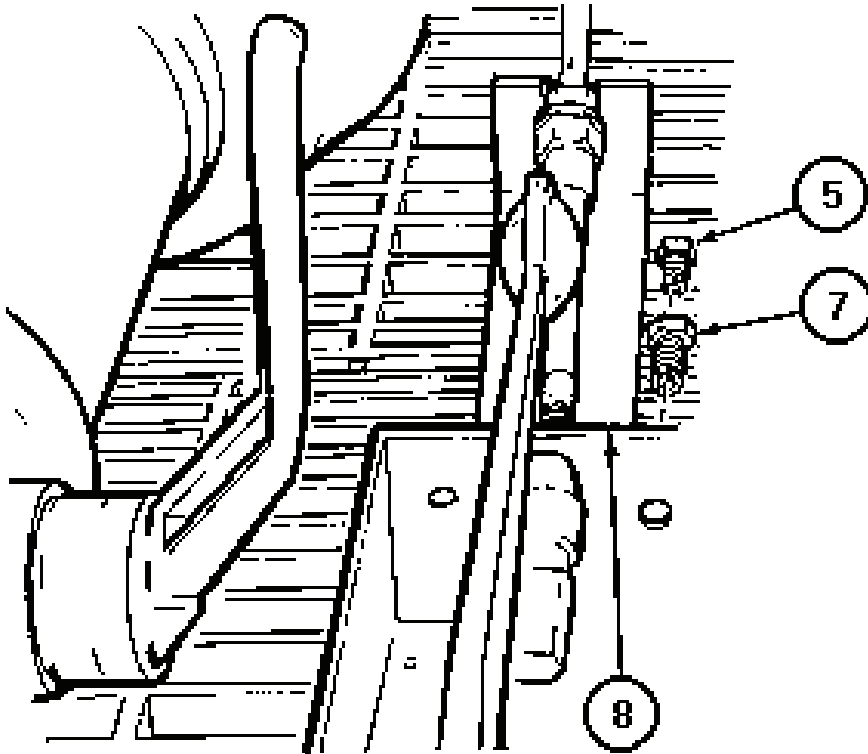
Remove two nuts (1), U-bolt (2), and clamp (3) from trip bar (4).



Loosen nut (5) and remove cable (6).



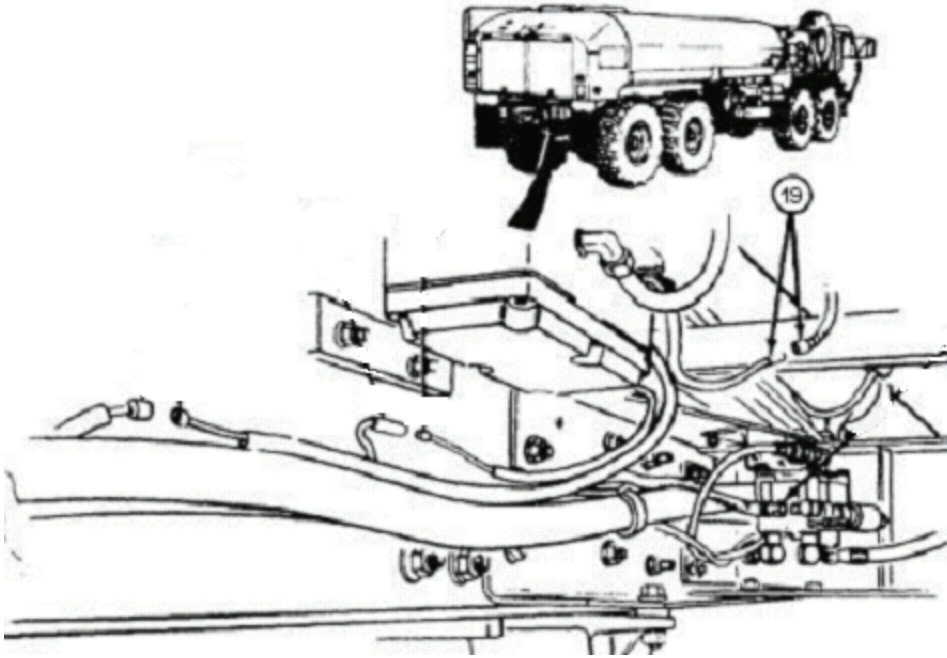
Remove nut (5) and fitting (7) from frame (8).



**TANK MARKER LIGHT HARNESS REMOVAL**

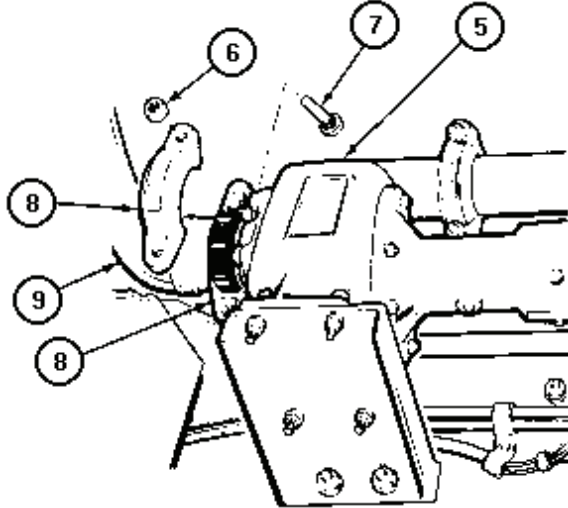
Wire and connector is located on inside of left chassis rail above and behind fourth axle.

Disconnect connector (19) between tank and module.

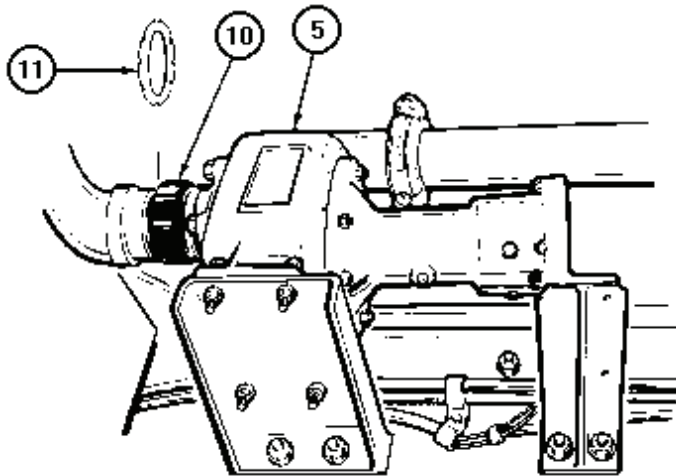


## PRIMARY PUMP PIPING REMOVAL

Pump is located inside right frame rail in front of No. 3 axle. Pump area is shown with crossmember removed for clarity.

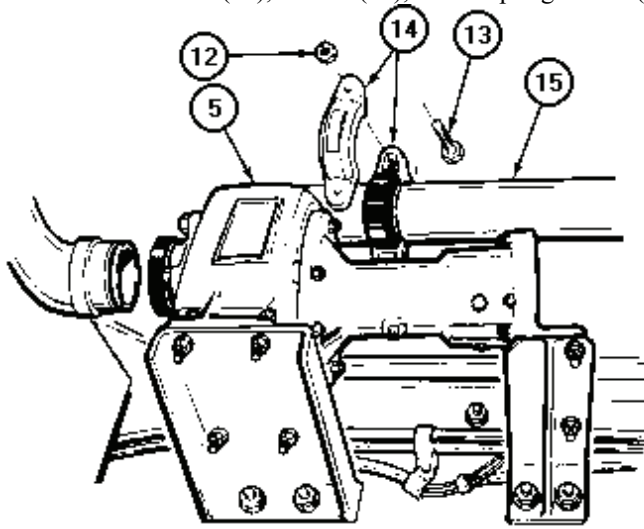


Remove two nuts (6), screws (7), and coupling halves (8) from suction pipe (9) and pump (5).



Push coupling gasket (10) onto pump (5).  
Remove reducer (11) from coupling gasket (10).

Remove two nuts (12), screws (13), and coupling halves (14) from discharge pipe (15) and pump (5).



Push coupling gasket back onto discharge elbow.

## TANKER PIPING REMOVAL/INSTALLATION

### Typical Pipe Coupling and Coupling Gasket Removal.

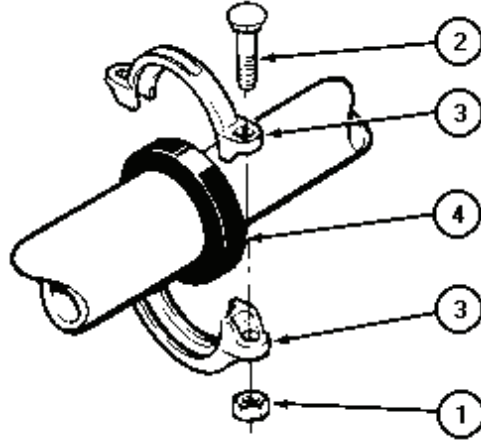
It will never be necessary to remove all the piping at one time.

All piping sections on the M978 tanker are joined with pipe couplings. Five sizes of standard couplings and two sizes of reducing coupling are used: 1-1/4-inch, 2-inch, 3-inch, 4-inch, and 4-1/2-inch standard couplings, and 4 X 3-inch, 3 X 2-inch reducing couplings.

Read paragraph "b." before removing piping, valves, adapters, and couplings.

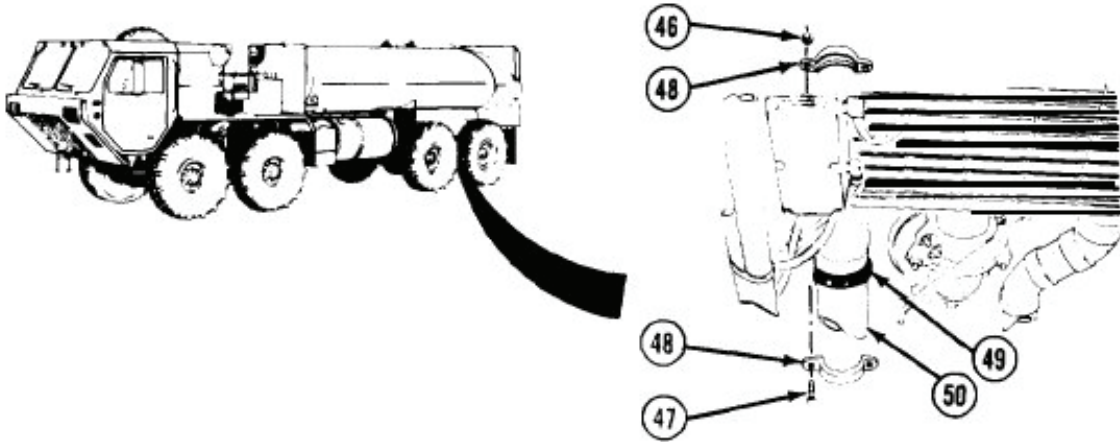
Remove two nuts (1), screws (2), and coupling halves (3) from coupling gasket (4).

Push coupling gasket (4) onto pipe (5) and remove pipe (6).

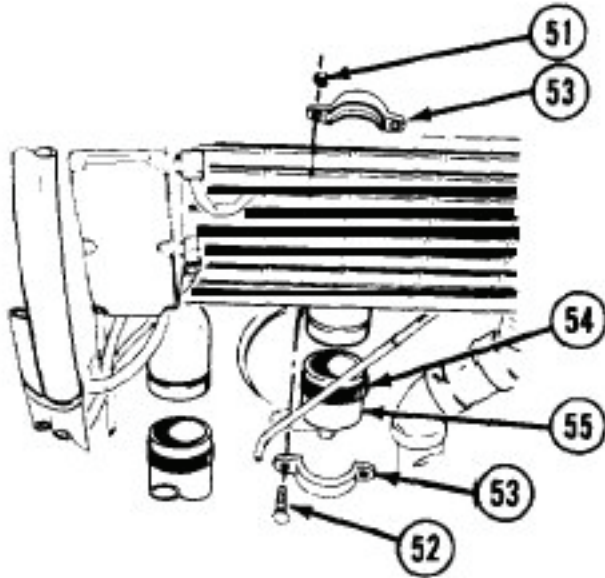


Remove coupling gasket (4) from pipe.

Remove two nuts (46), screws (47), and coupling halves (48) from coupling gasket (49).

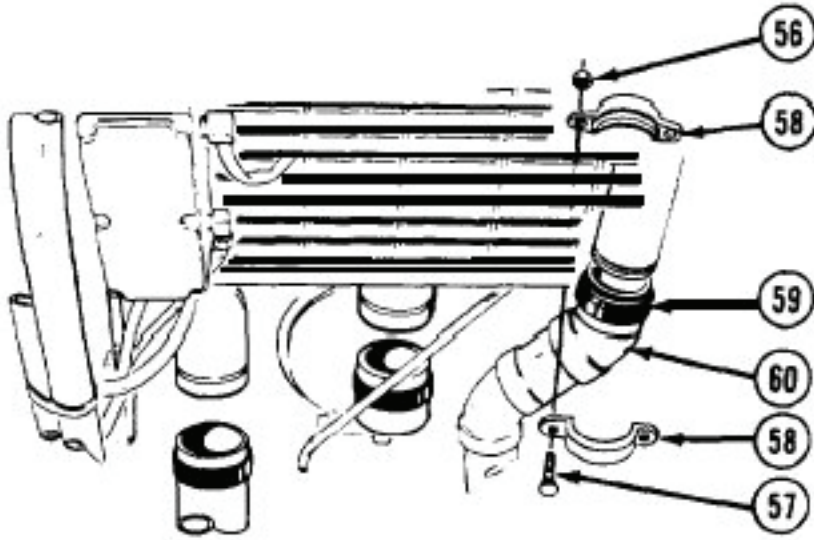


Push coupling gasket (49) onto pipe (50).  
Remove two nuts (51), screws (52), and coupling halves (53) from coupling gasket (54).



Push coupling gasket (54) onto pipe (55).  
Remove two nuts (56), screws (57), and coupling halves (58) from coupling gasket (59).





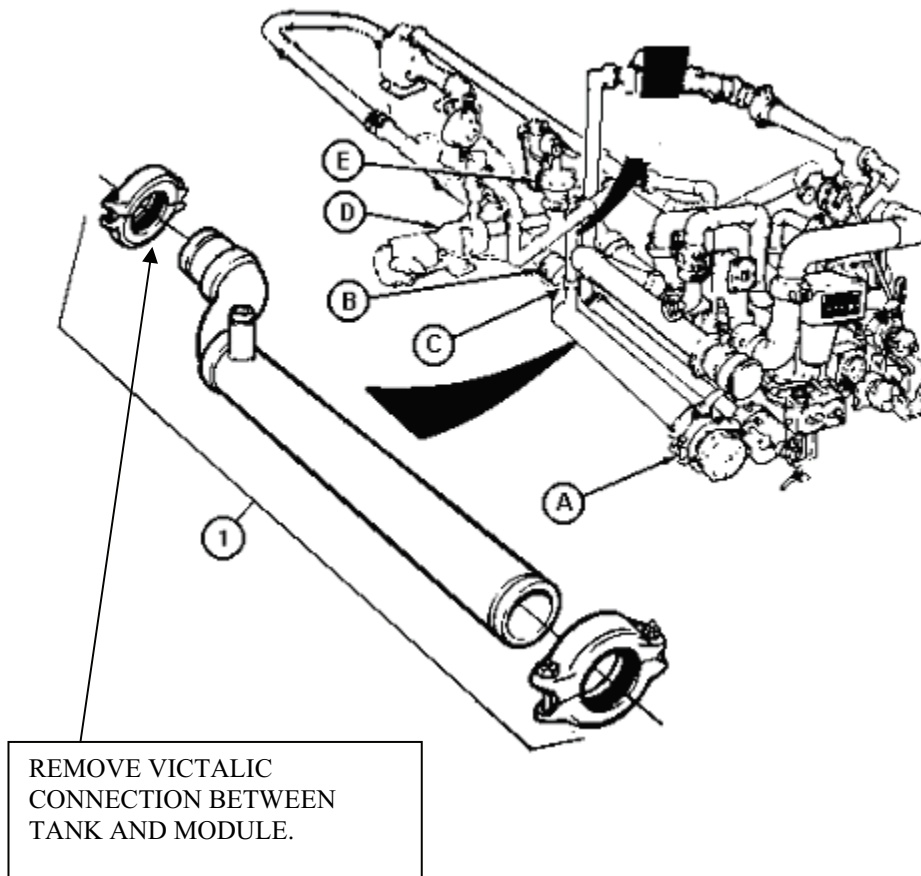
Push coupling gasket (59) onto pipe (60).

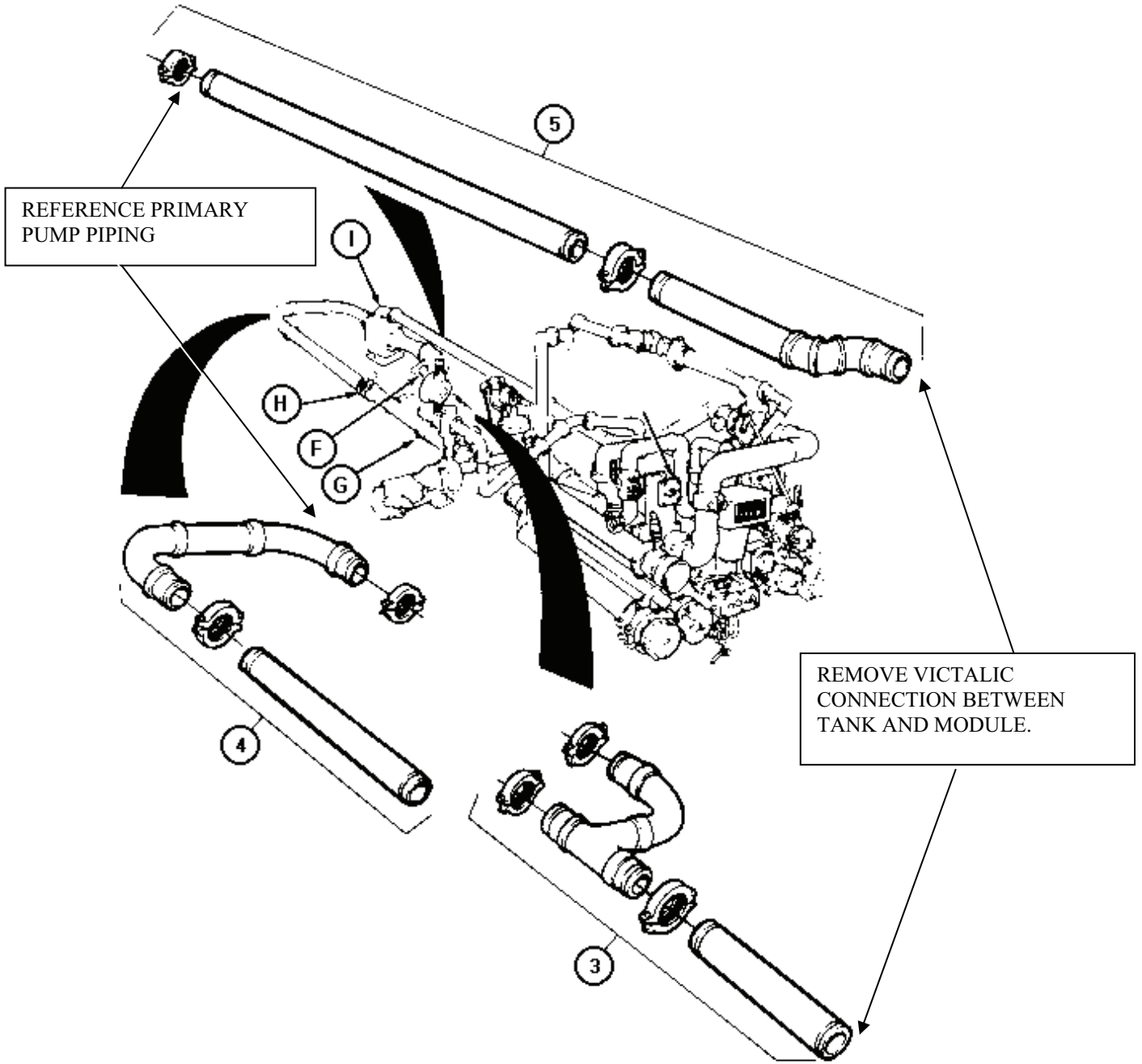
**Tanker Piping.**

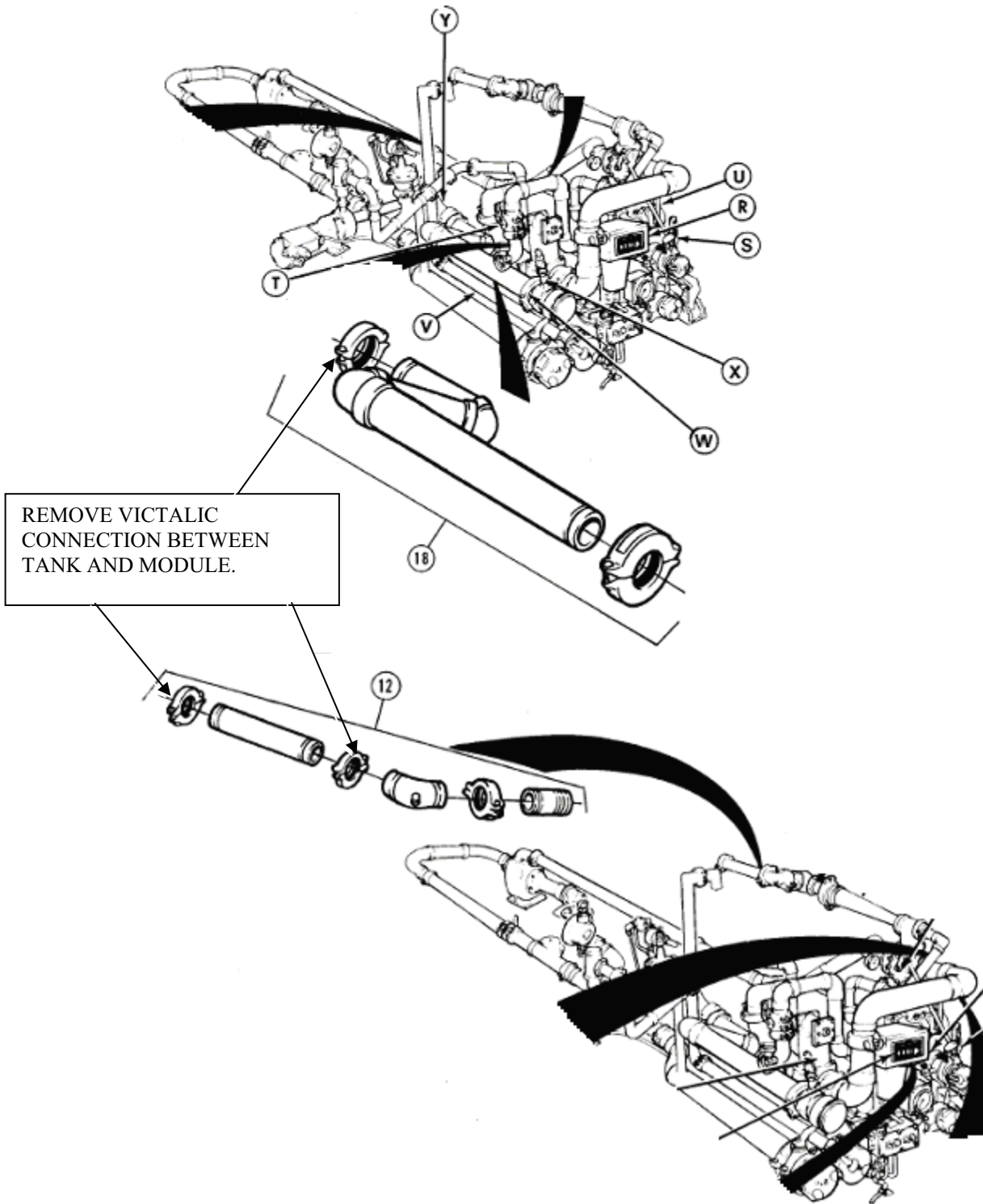
Refer to the table and figures below for locations of specific piping sections.

**Tanker Piping**

Line No.	From	To	Equipment Condition Description
1	V17 GRAVITY VALVE (A)	Emergency Valve Outlet Piping (B)	<i>V3 Suction Valve Closed. MC MANUAL CONTROL EM VALVE Lever Full Forward .</i>
3	V1 Emergency Valve (F)	Line Strainer (G)/V3 Suction Line Valve (H)	<i>V3 Suction Valve Closed. MC MANUAL CONTROL EM VALVE Lever Full Forward, Down, and Closed.</i>
4	V3 Suction Line Valve (A)	Primary Pump (I)	<i>V3 Suction Valve Closed. MC MANUAL CONTROL EM VALVE Lever Full Forward, Down, and Closed</i>
5	Primary Pump (I)	Flow Limiting Valve (J)	
18	V2 Bottom Load Adapter (W)/V12 Bottom Load PRECHECK VALVE (X)	V10 Bottom Load Valve (Y)	



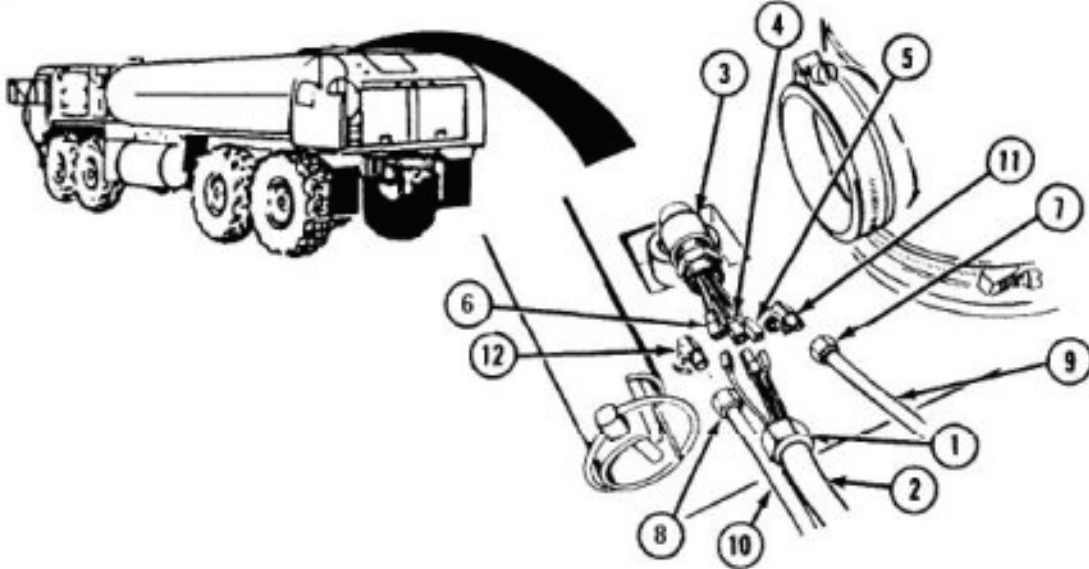




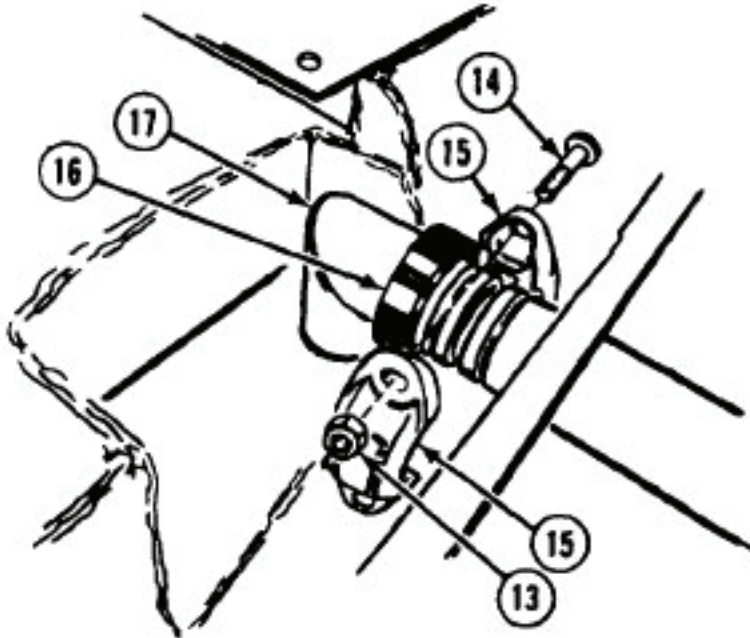
## 2500 Gallon Tank Removal

Tag and mark all piping, tubes, and electrical conduit tubing before removal.

- Remove nut (1) and hose (2) from tank level sensor (3).
- Disconnect three connectors (4, 5, and 6).



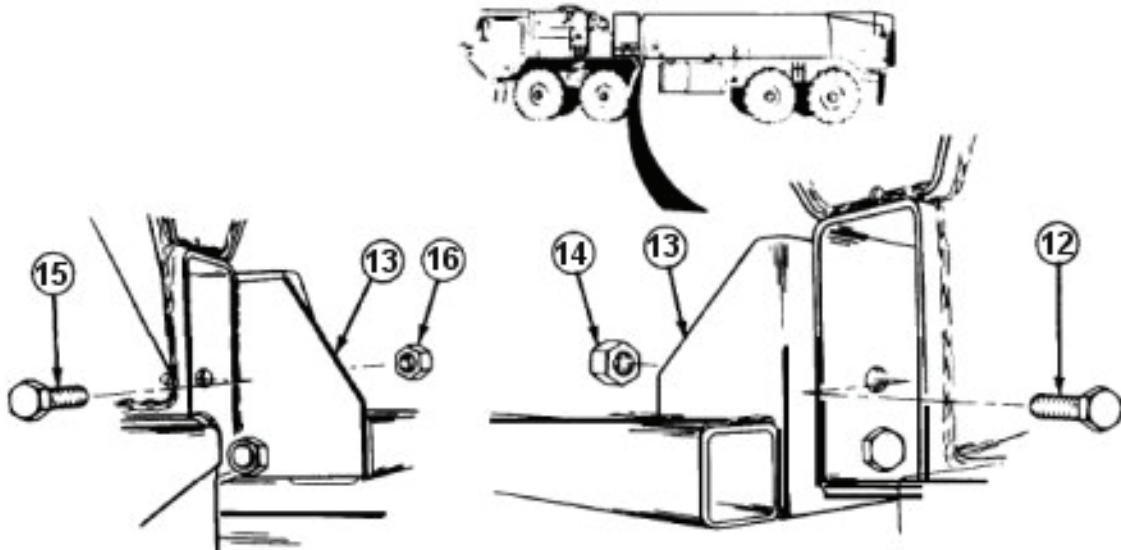
- Remove two nuts (7 and 8) and tubes (9 and 10) from elbows (11 and 12).
- Remove two nuts (13) screws (14) and coupling halves (15) from coupling gasket (16).



- Push coupling gasket (16) onto pipe (17).

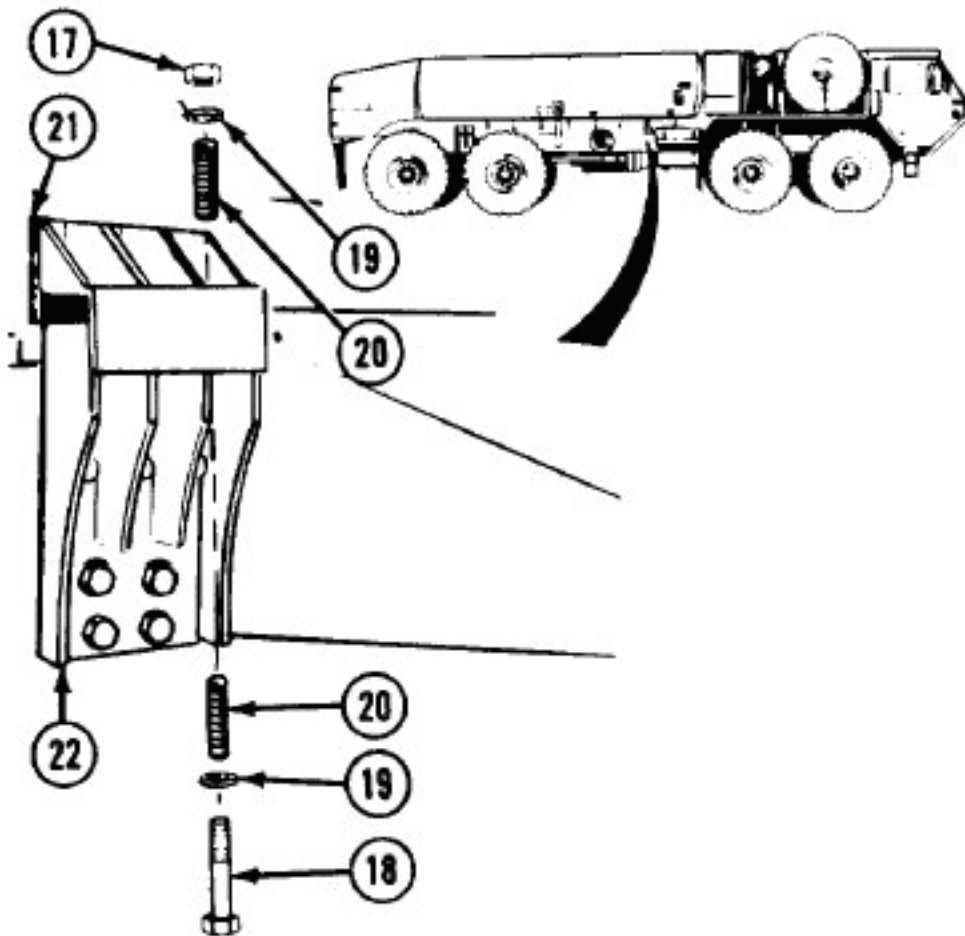
Screws are inside tank mounting rail.

Soldier A removes two screws (12) from left side of tank front crossmember (13) while Soldier B holds and removes locknuts (14).



Soldier A removes three screws (15) from right side of tank front crossmember (13) while Soldier B holds and removes locknuts (16).

Soldier A and Soldier B remove tank front crossmember (13) from vehicle.

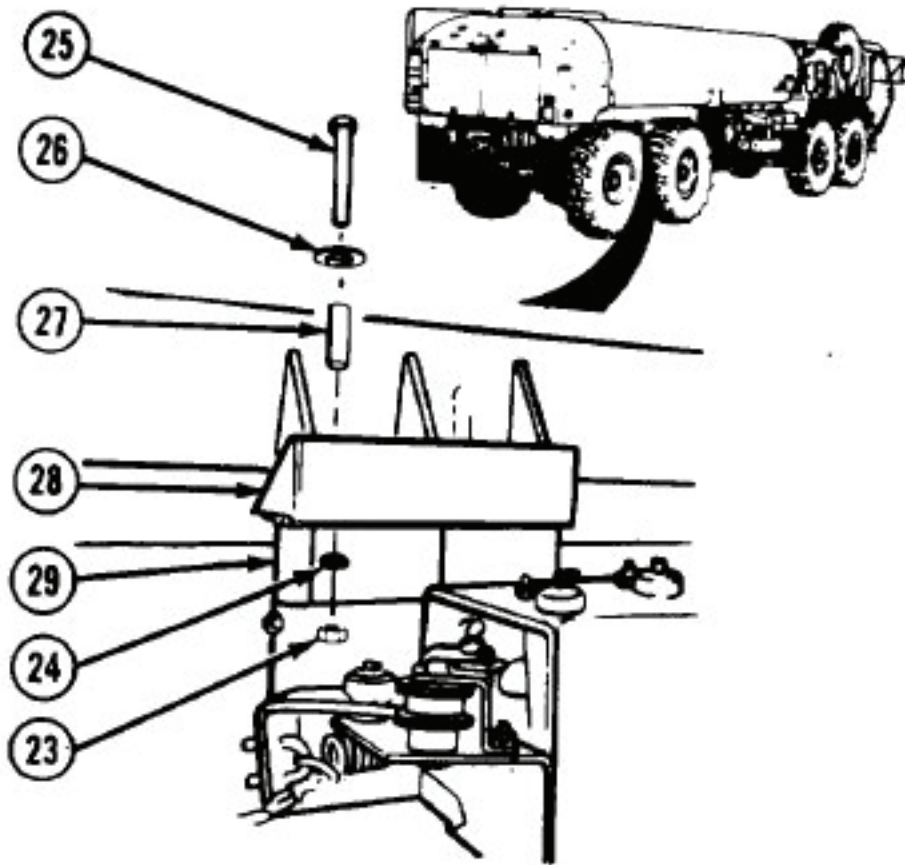


Both left and right front tank mounts are removed the same way.

Remove three locknuts (17), screws (18), six washers (19), and springs (20) from front tank mounting bracket (21) and frame mounting bracket (22).

Both left and right rear tank mounts are removed the same way.

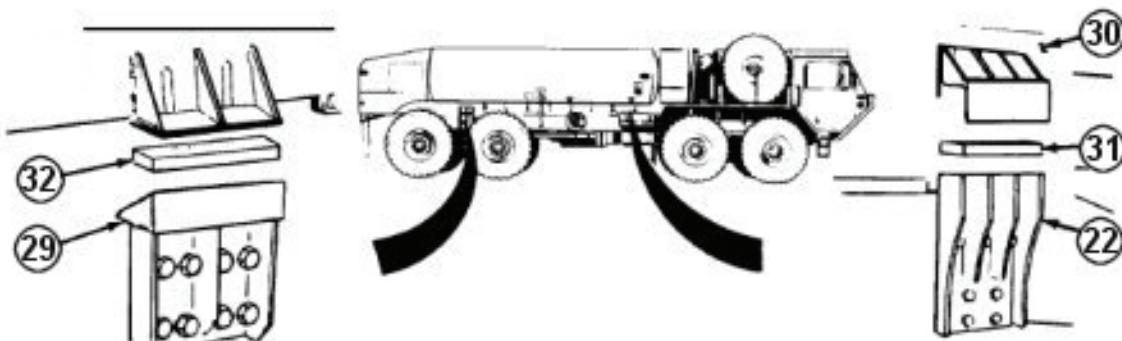
Remove four locknuts (23), washers (24), screws (25), washers (26), and spacers (27) from rear tank mounting bracket (28) and frame mounting bracket (29).



Tank must be lifted slowly and carefully. Make sure no wires, hoses, or linkages are caught during removal, or severe damage to tank and chassis will result.

Rubber pads may fall out of front mounting brackets when tank is lifted.

Attach suitable lifting device to tank (30).  
 Soldier A operates lifting device while Soldier B and Soldier C guide tank (30) from vehicle.  
 Soldier A lowers tank (30) onto suitable blocking, while Soldier B and Soldier C guide tank.

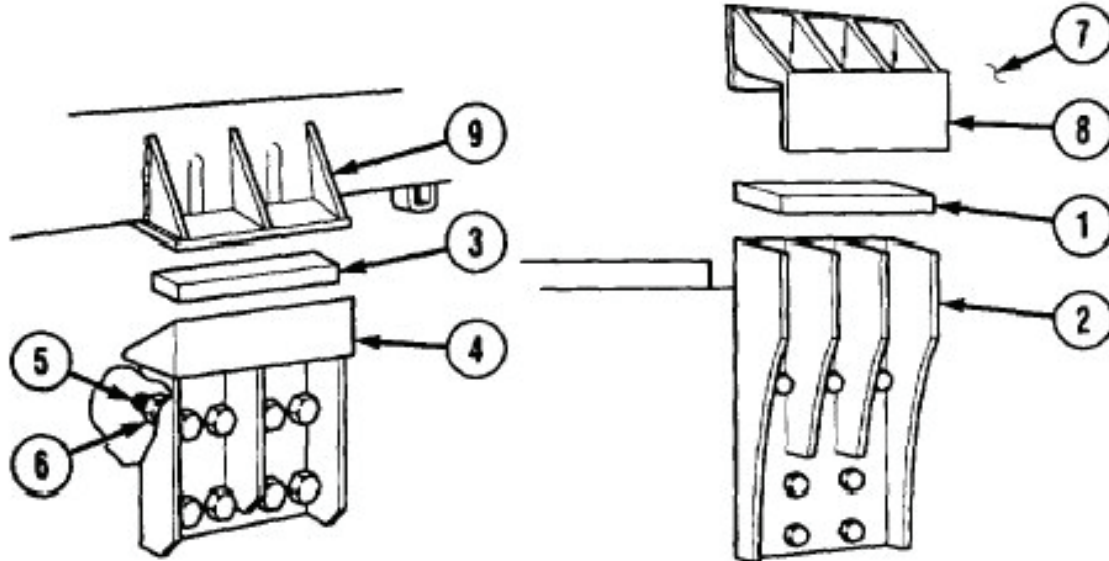


Remove lifting device from tank (30).  
 Remove four rubber pads (31 and 32) from front and rear frame mounting brackets (22 and 29).



## 2500 GALLON TANK INSTALLATION

Install two rubber pads (1) on two front frame mounting brackets (2).



Install two rubber pads (3) on two rear frame mounting brackets (4).

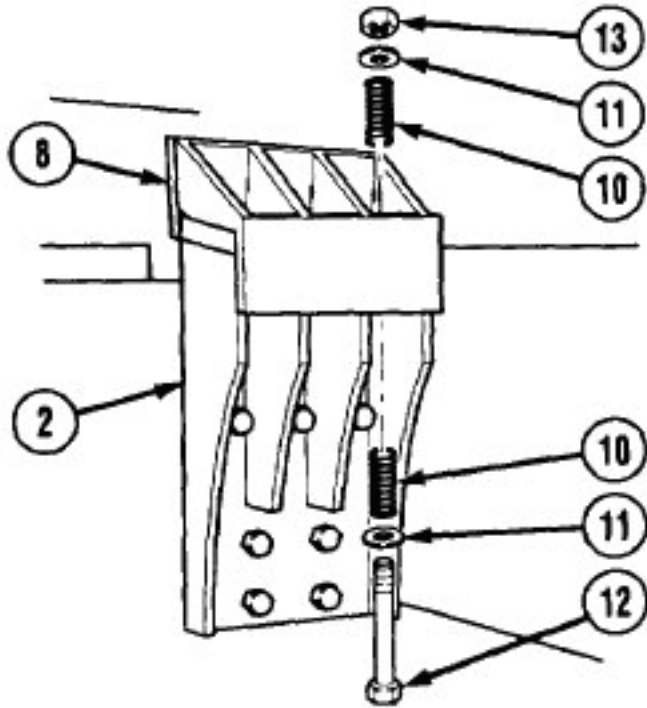
Soldier A holds eight screws (5) on two rear frame mounting brackets (4) while Soldier B loosens nuts (6).

Tank must be lowered slowly and carefully into place while Soldier B and Soldier C make sure tank does not collide with module or other vehicle components causing damage to tank, module, or other vehicle components.

Attach suitable lifting device to tank (7).

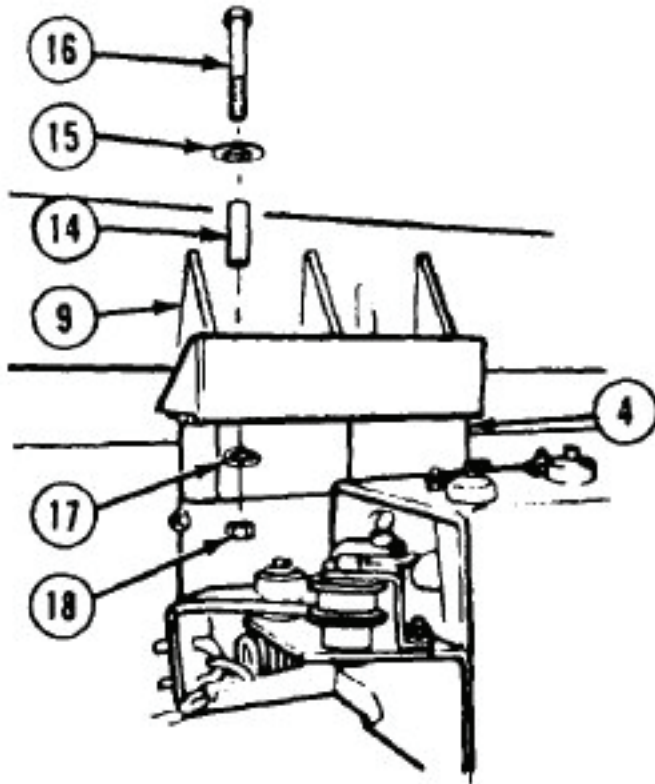
Soldier A operates lifting device while Soldier B and Soldier C guide tank (7) so front tank mounting brackets (8) and rubber pads (1) align with front frame mounting brackets (2), and rear tank mounting brackets (9) and rubber pads (3) align with rear frame mounting brackets (4).

Both left and right mounts are installed the same way.



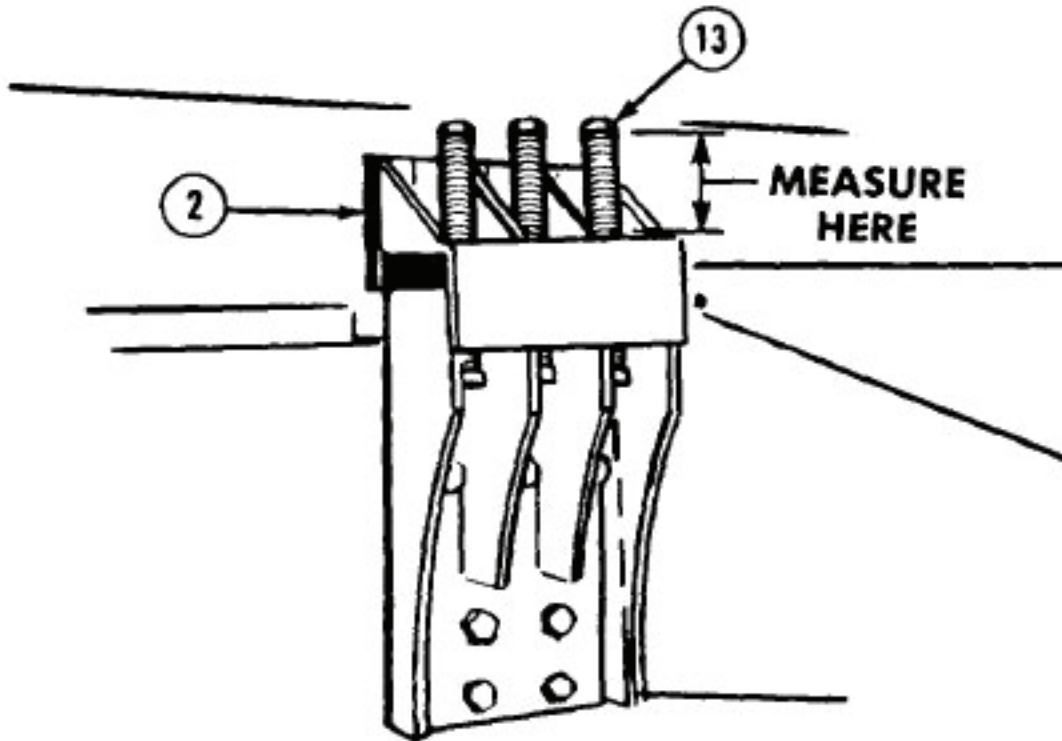
Install six springs (10), washers (11), three screws (12), and locknuts (13) in front tank mounting bracket (8) and frame mounting bracket (2).

Both left and right mounts are installed the same way.

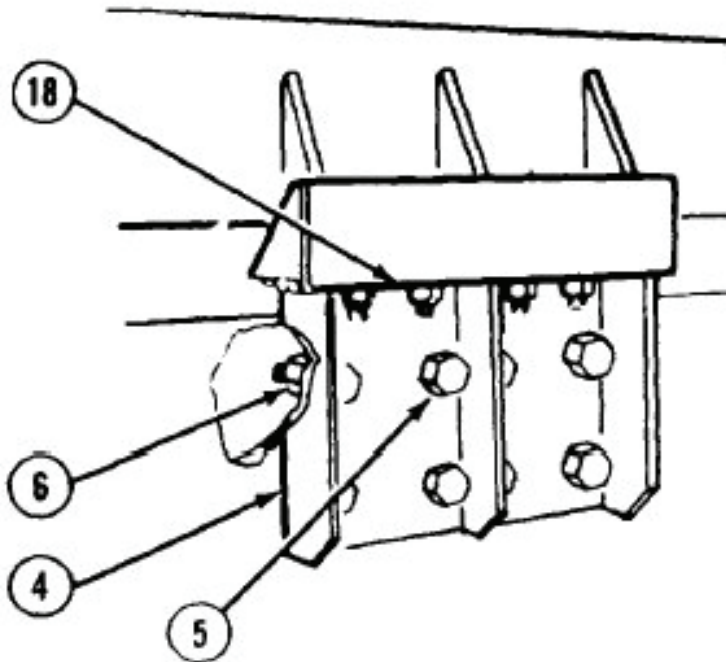


Install four spacers (14), washers (15), screws (16), washers (17), and locknuts (18) in rear tank mounting bracket (9) and frame mounting bracket (4). Do not tighten locknuts.

Compress springs on both left and right front tank mounts  $3\text{-}5/8\text{ in.} \pm 1/8\text{ in.}$  ( $92\text{ mm} \pm 3\text{ mm}$ ).

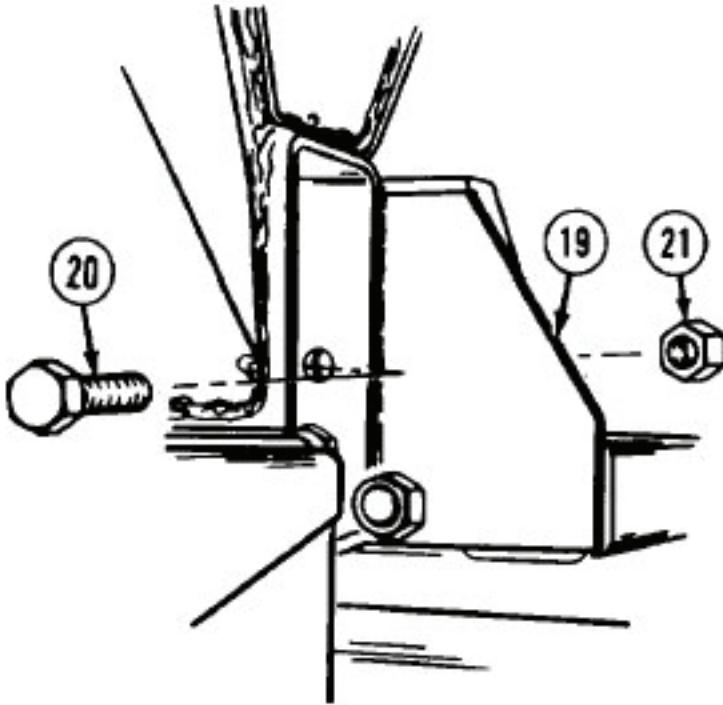


Tighten three locknuts (13) on front tank mounting brackets (2).  
Tighten four locknuts (18) on rear frame mounting brackets (4). Torque to 150 lb-ft (203 N•m).

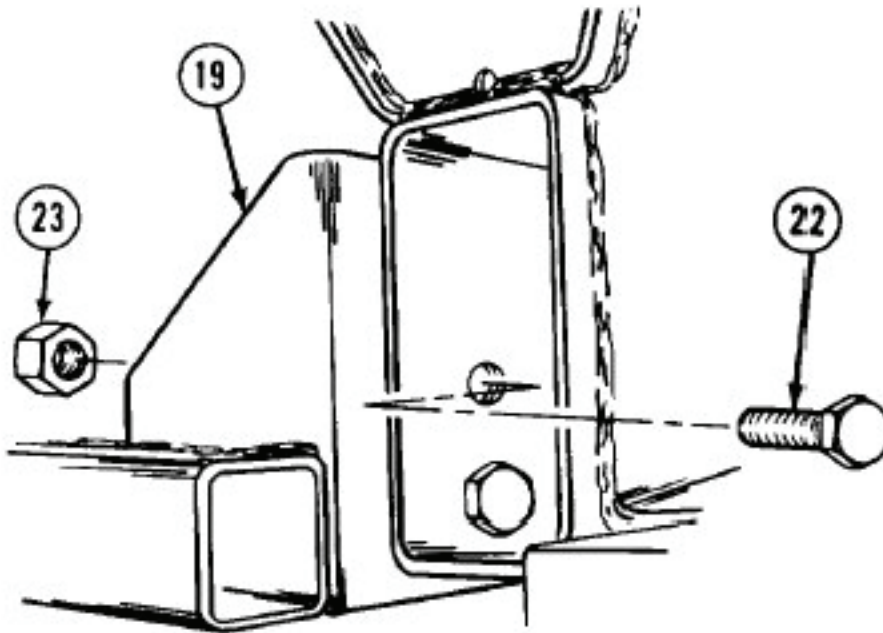


Soldier A holds eight screws (5) while Soldier B tightens nuts (6) behind rear frame mounting bracket (4).

Soldier A and Soldier B position tank front crossmember (19) on vehicle.



Soldier A installs three screws (20) in right side of tank front crossmember (19) while Soldier B installs and holds nuts (21).

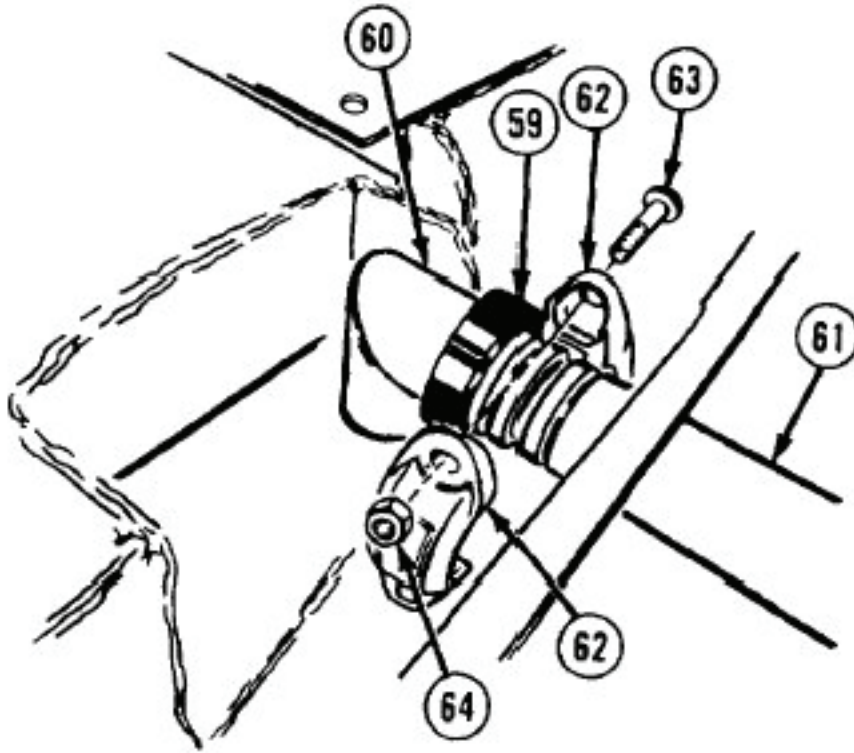


Soldier A installs two screws (22) in left side of tank front crossmember (19) while Soldier B installs and holds nuts (23).

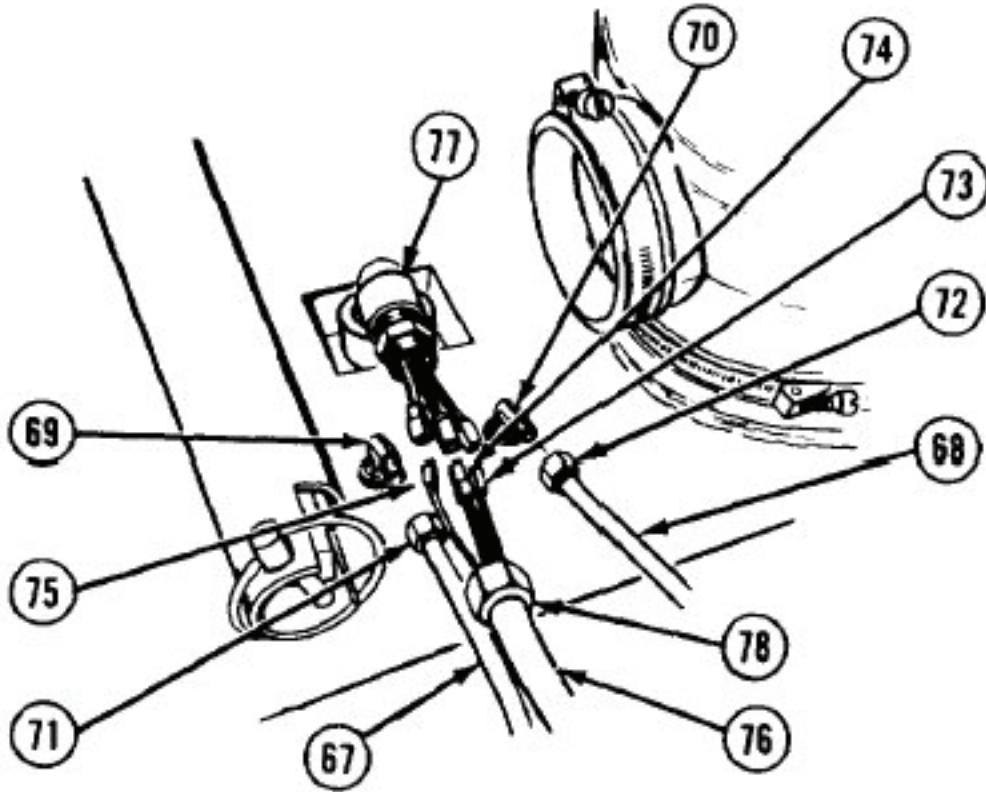
Position coupling gaskets (24) over connection of pipes (25 and 26).

Do not pinch or pull coupling gasket off center when coupling halves are installed. If gasket is damaged or moved out of position, piping connection will leak.

Install two coupling halves (62) on coupling gasket (59) with two screws (63) and nuts (64).



Install two tubes (67 and 68) on elbows (69 and 70) with nuts (71 and 72).  
Connect three connectors (73, 74, and 75).

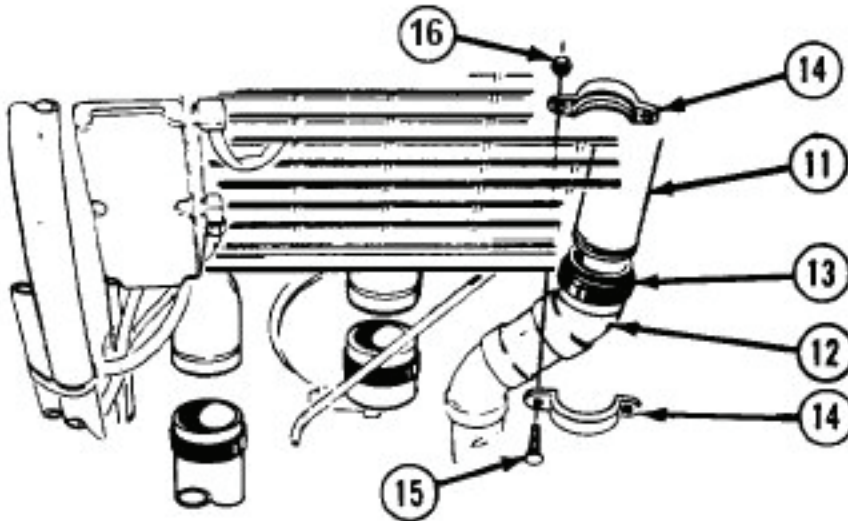


Install hose (76) on tank level sensor (77) with nut (78).

## TANKER PIPING INSTALLATION

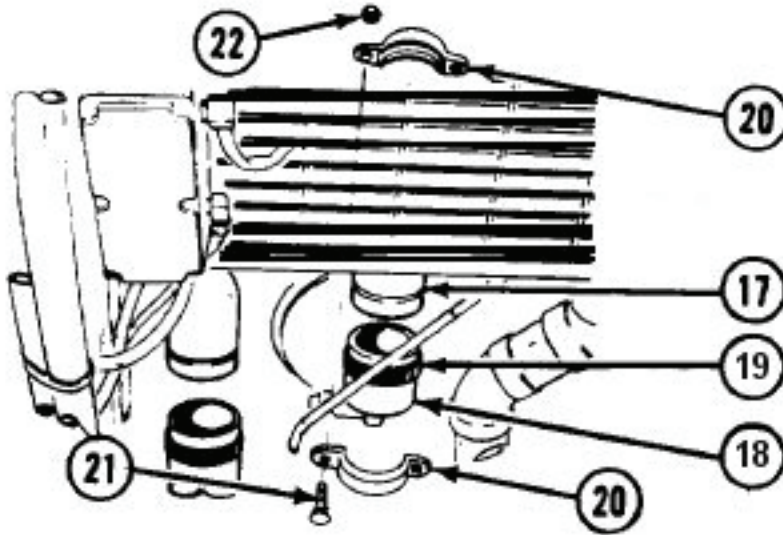
3. Do not tear or otherwise damage coupling gaskets during installation. If damaged coupling gasket is used, piping connection will leak.
4. Do not pinch or pull coupling gaskets off center when coupling halves are installed. If gasket is damaged or moved out of position, piping connection will leak.
5. Use petroleum jelly to lubricate gasket.

Align pipes (11 and 12) and install coupling gasket (13) over connections of pipes.

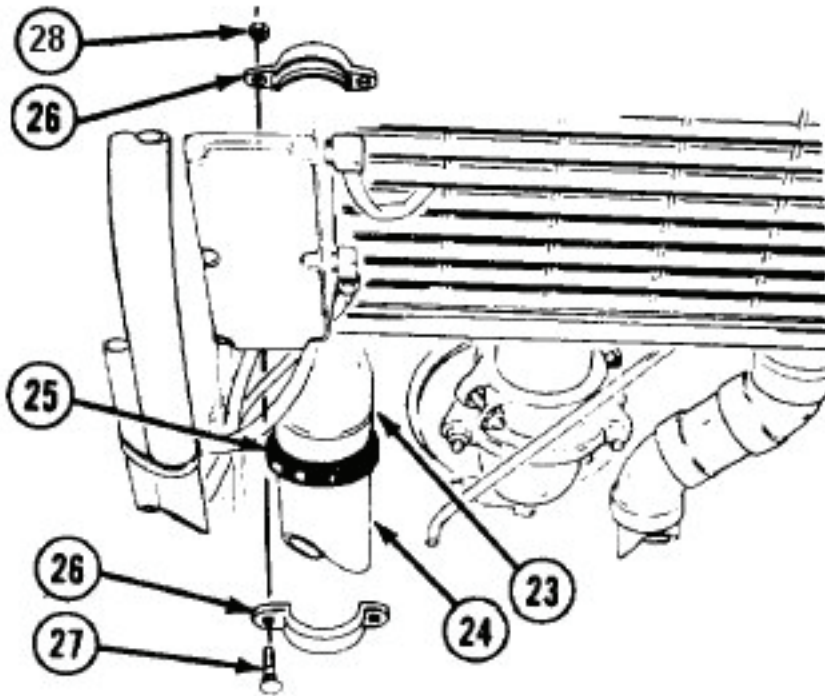


Install two coupling halves (14) on coupling gasket (13) with two screws (15) and nuts (16).

Align pipes (17 and 18) and install coupling gasket (19) over connections of pipes.



Install two coupling halves (20) on coupling gasket (19) with two screws (21) and nuts (22). Align pipes (23 and 24) and install coupling gasket (25) over connections of pipes.



Install two coupling halves (26) on coupling gasket (25) with two screws (27) and nuts (28).

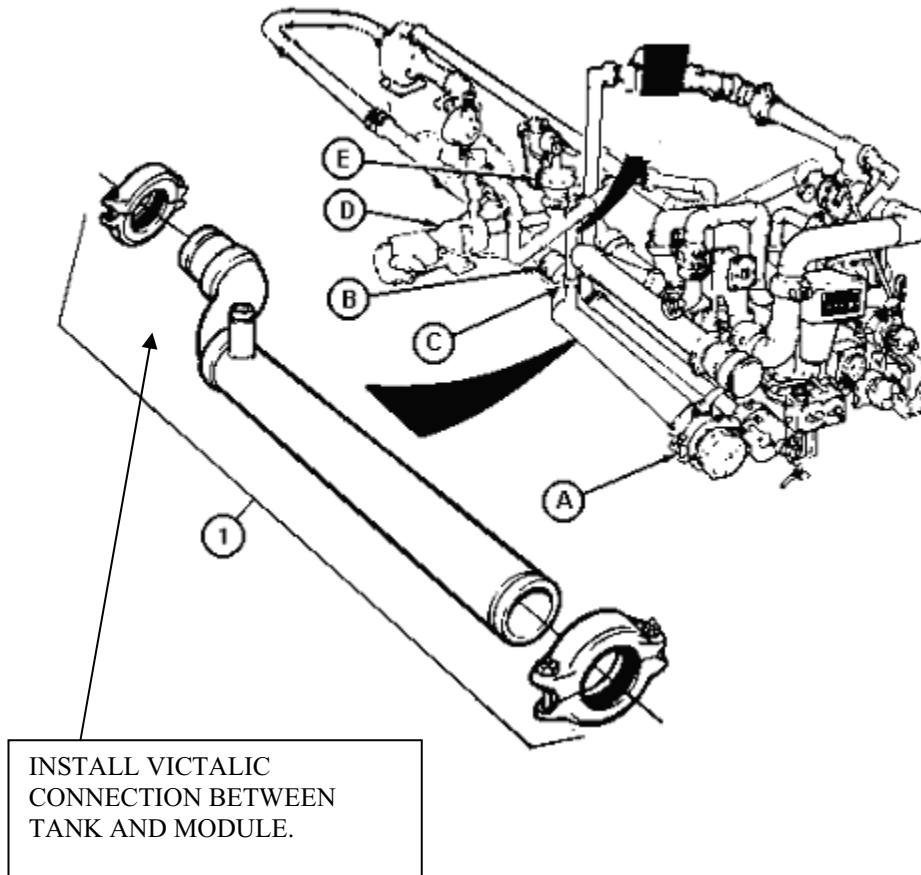


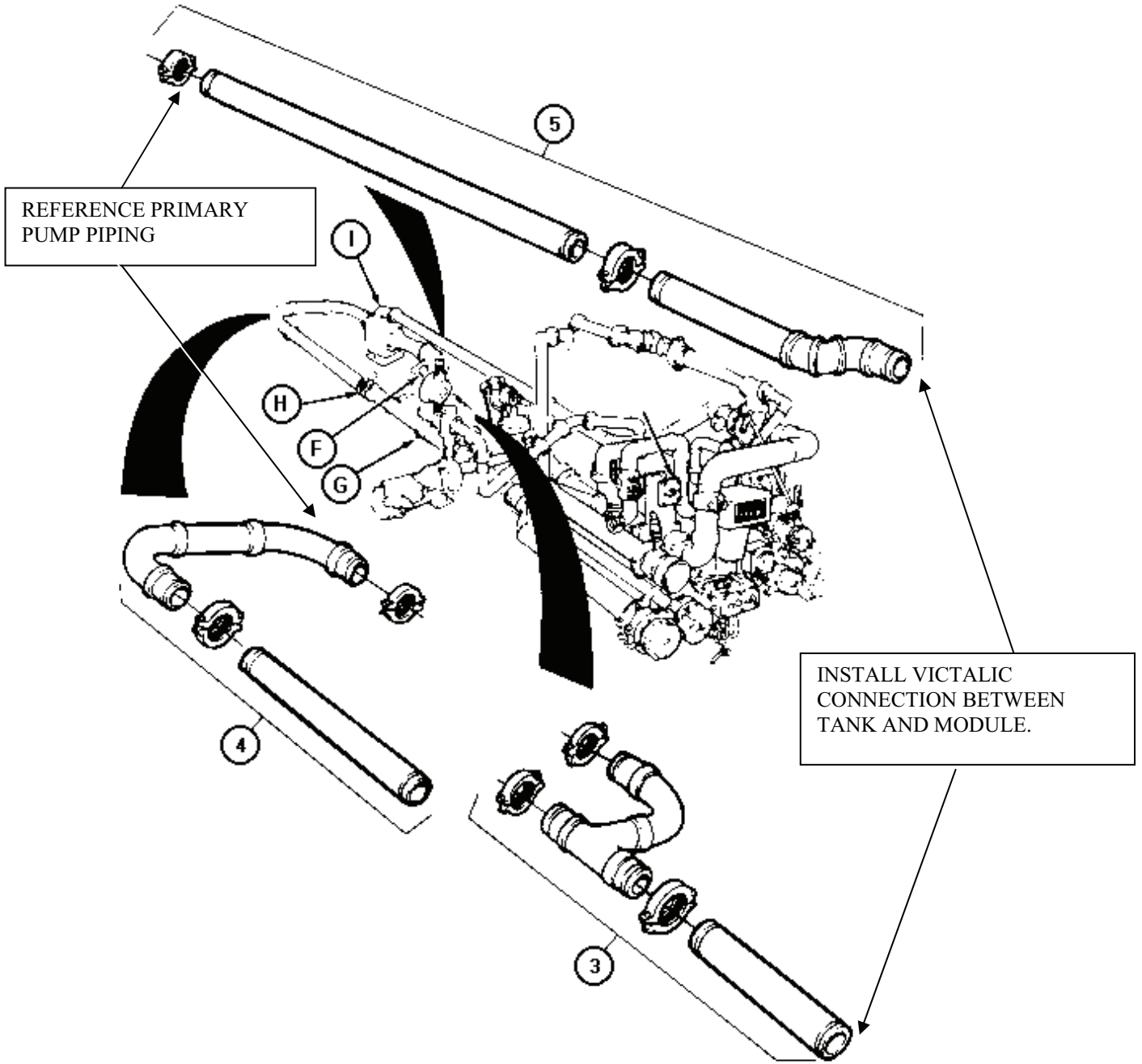
**Tanker Piping.**

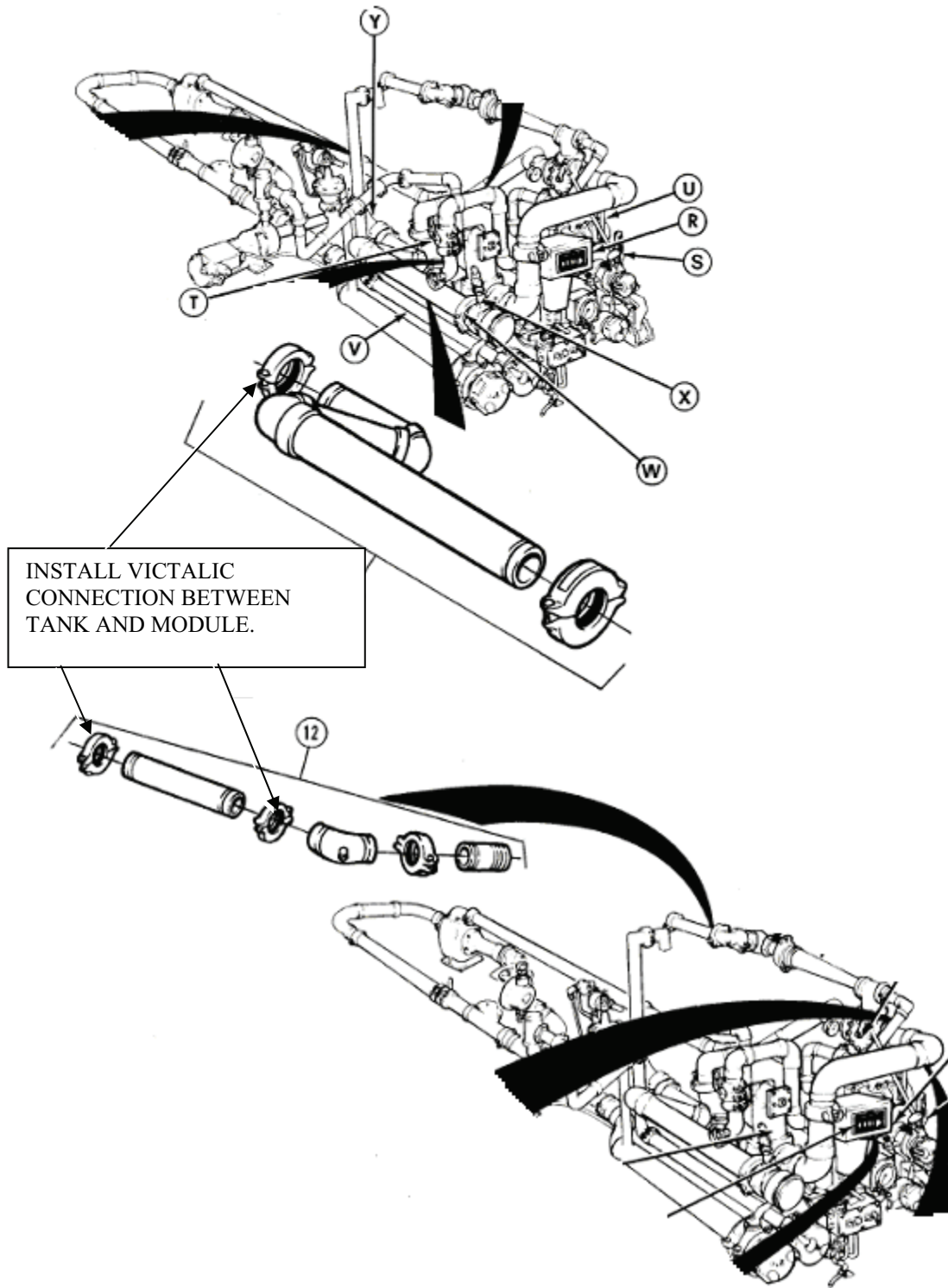
Refer to the table and figures below for locations of specific piping sections.

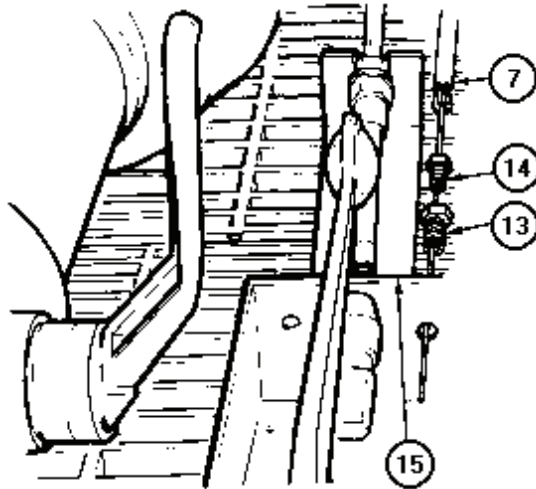
**Tanker Piping**

Line No.	From	To	Equipment Condition Description
1	V17 GRAVITY VALVE (A)	Emergency Valve Outlet Piping (B)	<i>V3 Suction Valve Closed. MC MANUAL CONTROL EM VALVE Lever Full Forward .</i>
3	V1 Emergency Valve (F)	Line Strainer (G)/V3 Suction Line Valve (H)	<i>V3 Suction Valve Closed. MC MANUAL CONTROL EM VALVE Lever Full Forward, Down, and Closed.</i>
4	V3 Suction Line Valve (A)	Primary Pump (I)	<i>V3 Suction Valve Closed. MC MANUAL CONTROL EM VALVE Lever Full Forward, Down, and Closed</i>
5	Primary Pump (I)	Flow Limiting Valve (J)	
18	V2 Bottom Load Adapter (W)/V12 Bottom Load PRECHECK VALVE (X)	V10 Bottom Load Valve (Y)	

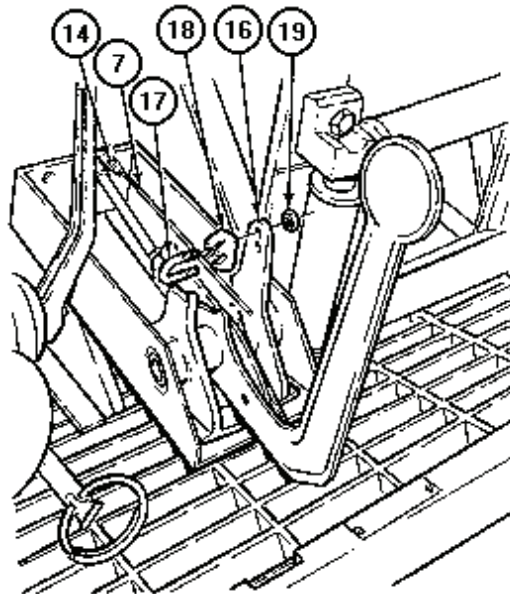






**EMERGENCY SHUT-OFF CABLE INSTALLATION**

Install fitting (13) and nut (14) in frame (15). Do not tighten fitting.  
Install cable (7) through nut (14) and fitting (13).  
Tighten nut (14).

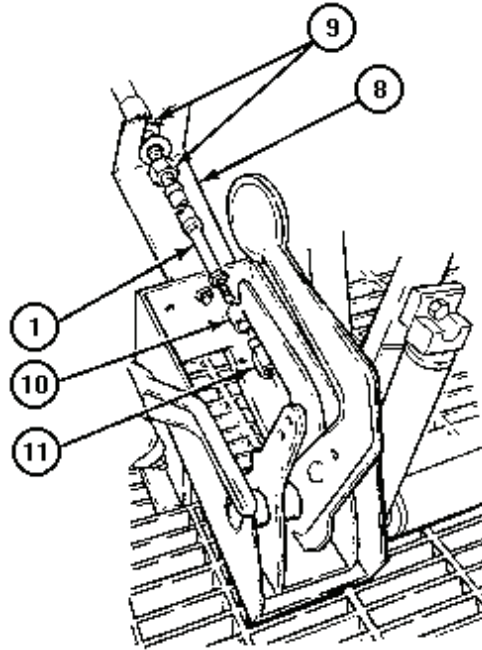


Connect cable (7) to trip bar (16) with U-bolt (17), clamp (18), and two nuts (19).

**Adjust cable**

### V1 EMERGENCY VALVE CABLE INSTALLATION

Install cable (1) in bracket (8) and tighten two nuts (9).

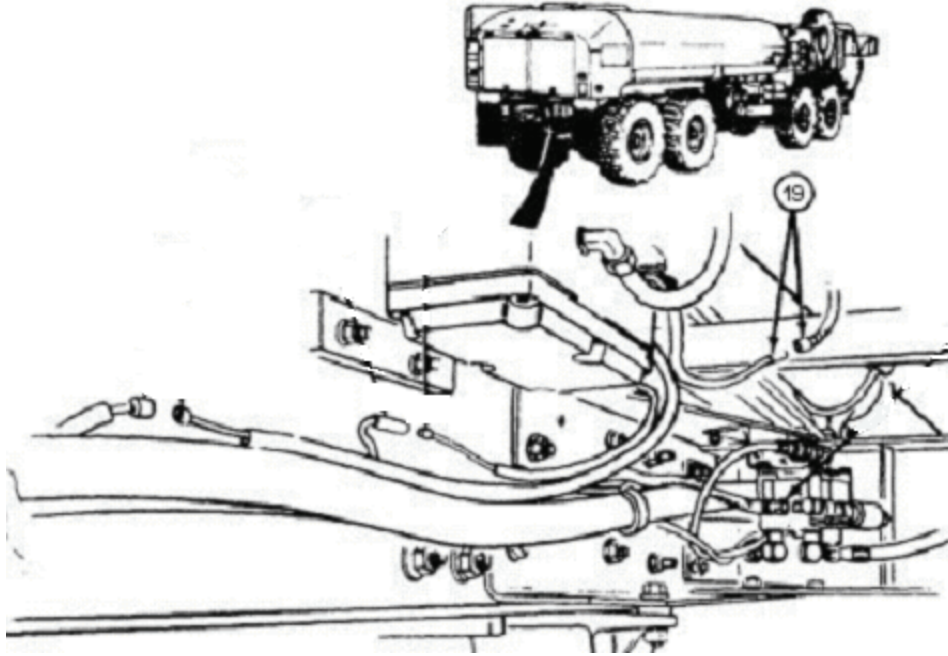


Install cable (1) in offset link (10) with nut (11).

**TANK MARKER LIGHT HARNESS CONNECTION**

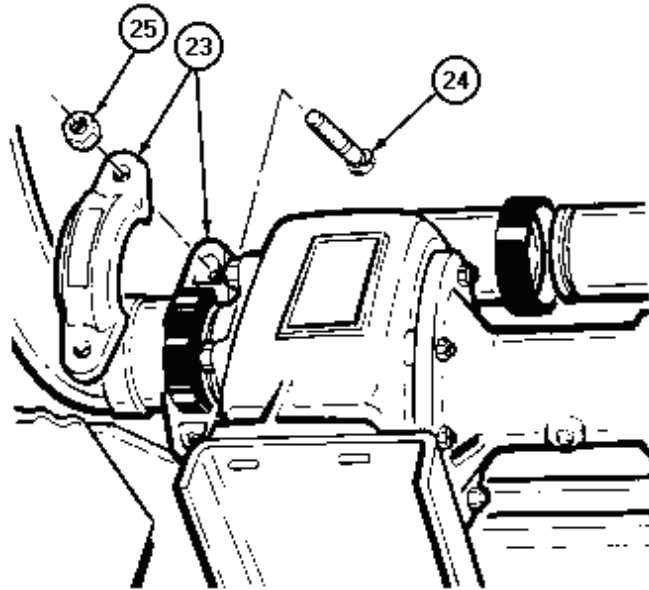
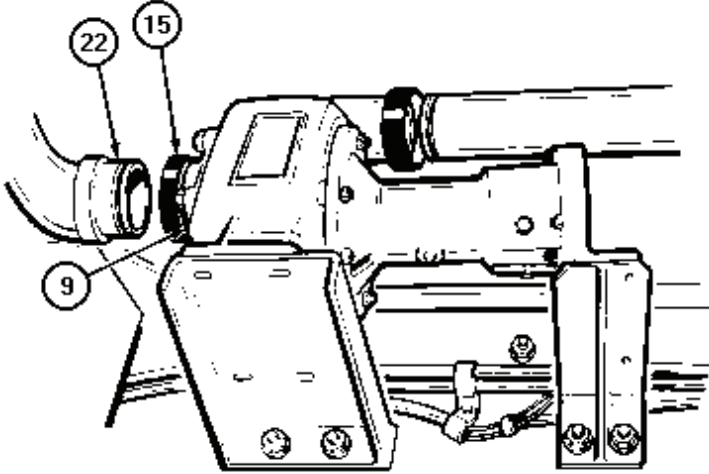
Wire and connector is located on inside of left chassis rail above and behind fourth axle.

Connect connector (19) between tank and module.

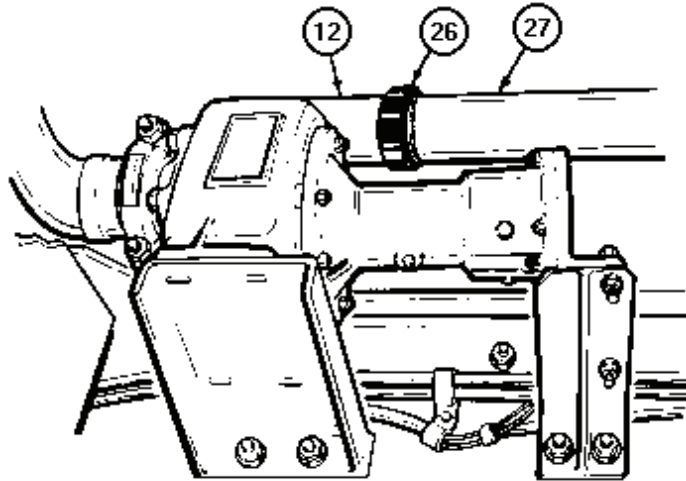


## PRIMARY PUMP PIPING INSTALLATION

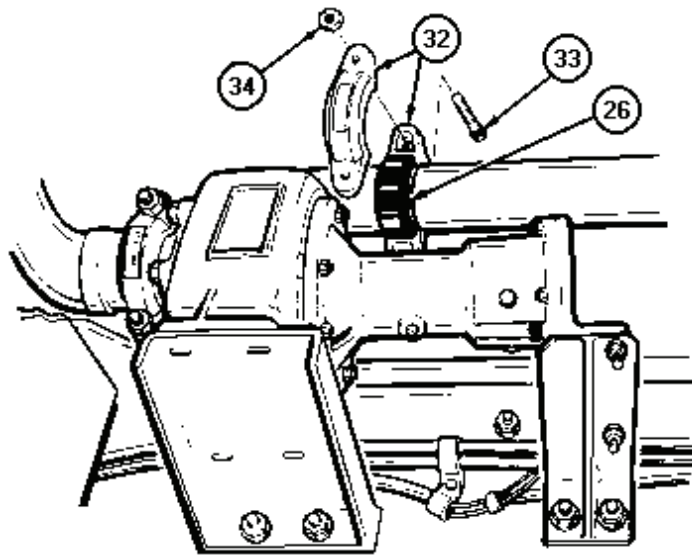
Position coupling gasket (15) on suction flange (9) and suction pipe (22).



Install two coupling halves (23) with screws (24) and nuts (25).



Position coupling gasket (26) over ends of discharge elbow (12) and discharge pipe (27).



Install two coupling halves (32) on coupling gasket (26) with two screws (33) and nuts (34).

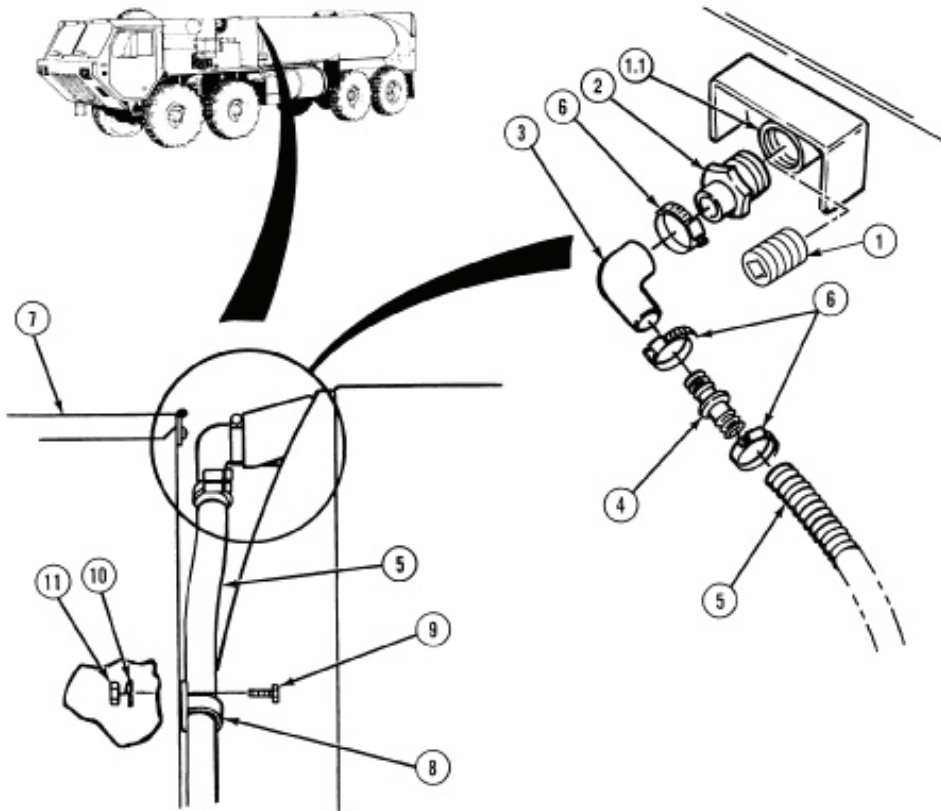
Inspect primary pump for leaks.



**TANK VENT DRAIN INSTALLATION****Installation.**

For Model A, perform steps (2) through (4).  
 For Model B, perform step (1).

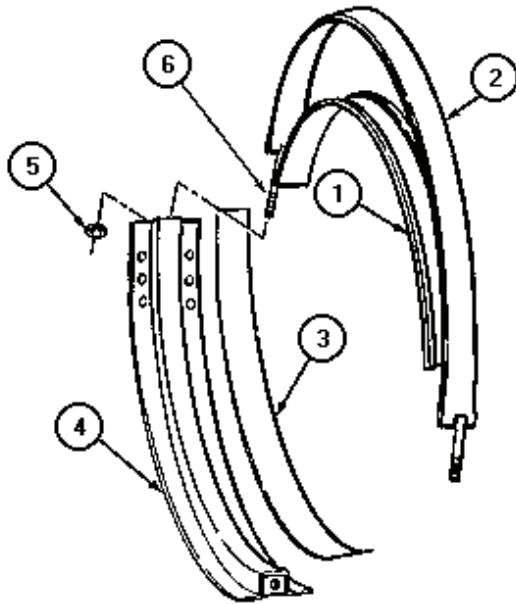
1. Coat threads of plug (1) with pipe sealant and install plug (1) into tank vent opening (1.1).



2. Coat threads of reducer bushing (2) with pipe sealant and install reducer bushing (2) into tank vent opening (1.1).
3. Assemble elbow (3), hose mender (4), and vent hose (5). Secure with two clamps (6).
4. Install elbow (3) to reducer bushing (2) with clamp (6).

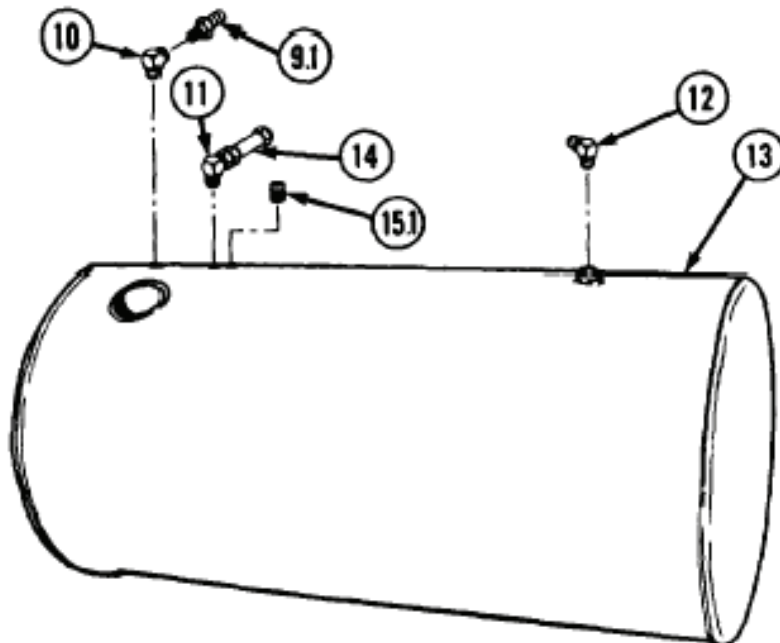
## Fuel Tank Installation

Install three fuel tank straps (2) on fuel tank brackets (4) with nuts (5) on tee bolts (6).



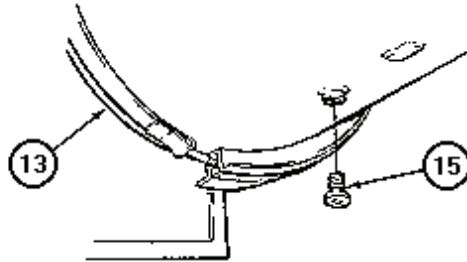
There are two types of air vents. Model A has a removable hose fitting and a 12 in. (304.8 mm) long air vent line. Model B uses a 24 in. (609.9 mm) long air vent line and does not have a removable hose fitting. Both models are installed the same way.

Install fitting (9.1) into air vent (10).

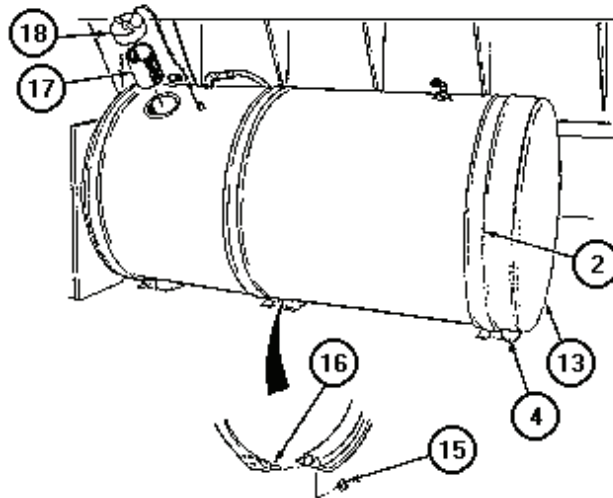


Coat air vent (10) and two elbows (11 and 12) with pipe thread sealing compound and install elbows in fuel tank (13).

Coat check valve (14) with pipe thread sealing compound and install on elbow (11).



Coat drain plug (15) with pipe thread sealing compound and install plug in fuel tank (13).



Some models of fuel tanks contain a socket head pipe plug.

Coat socket head pipe plug (15.1) with pipe thread sealing compound and install plug in fuel tank (13).

Coat liners on straps (2) and brackets (4) with a soap solution.

Raise fuel tank (13) with suitable lifting device and position fuel tank on fuel tank brackets (4). Install three nuts (15) loosely on three tee bolts (16).

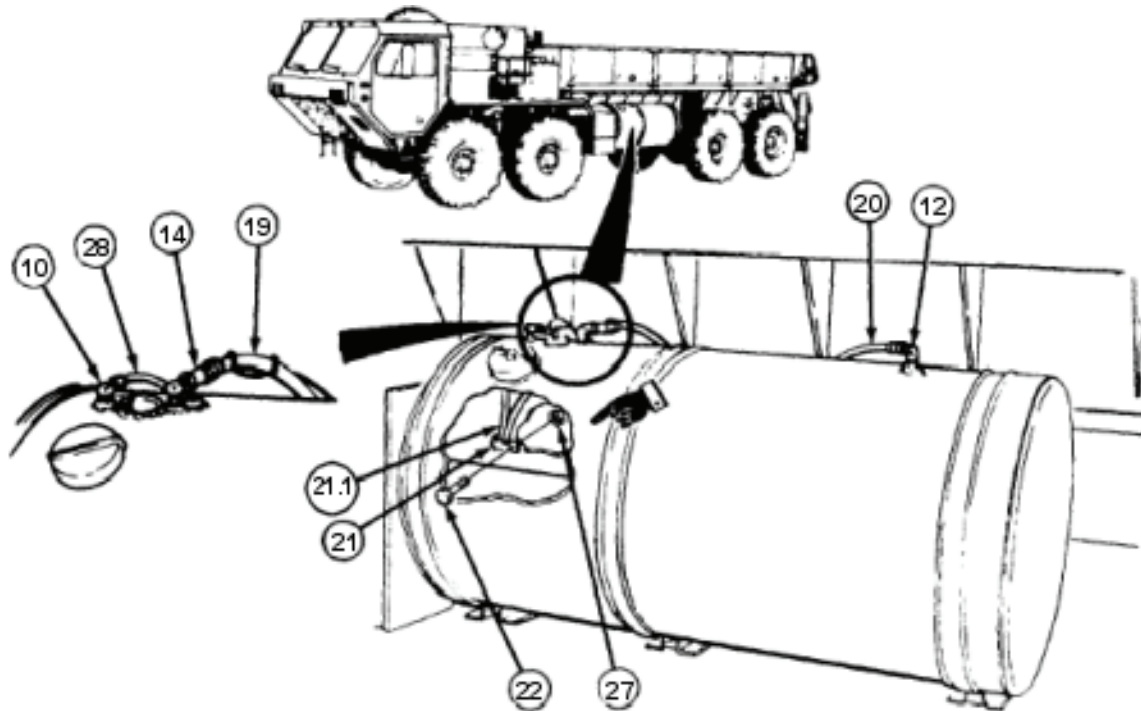
Adjust fuel tank (13) with fuel tank brackets (4) so fuel lines will reach elbows.

Tighten nuts (15) to 50 lb-ft. (67.8 N•m).

Tap strap (2) with a mallet and check torque on nuts (15).

Repeat step (14) until nuts (15) remain at 50 lb-ft. (67.8 N•m).

Install fuel strainer (17) and tank cap (18).



Coat threads of check valve (14) and elbow (12) with pipe thread sealing compound.

Connect fuel supply line (19) to check valve (14).

Connect fuel return line (20) to elbow (12).

To ensure a good ground, clean area around cushion clip to expose bare metal before attaching ground wire.

Some vehicles have a screw, lockwasher, washer, lockwasher, lockwasher and nut. Others have a flanged screw and flanged nut.

Install cushion clip (21) and ground wire (21.1) with screw (22) and locknut (27).

Apply corrosion preventive compound to ground wire (21.1) and locknut (27).

Use plastic ties as required to support hoses and wires behind fuel tank and under chassis.

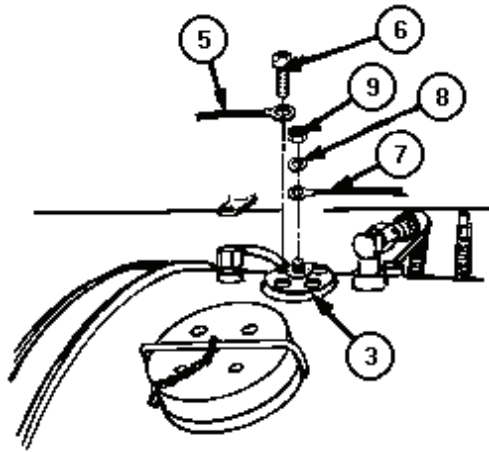
Install air vent line (28) to vent valve (10).

**Bleed fuel system of air.**

Check fuel tank and connections for leaks.

**FUEL LEVEL SENDING UNIT INSTALLATION**

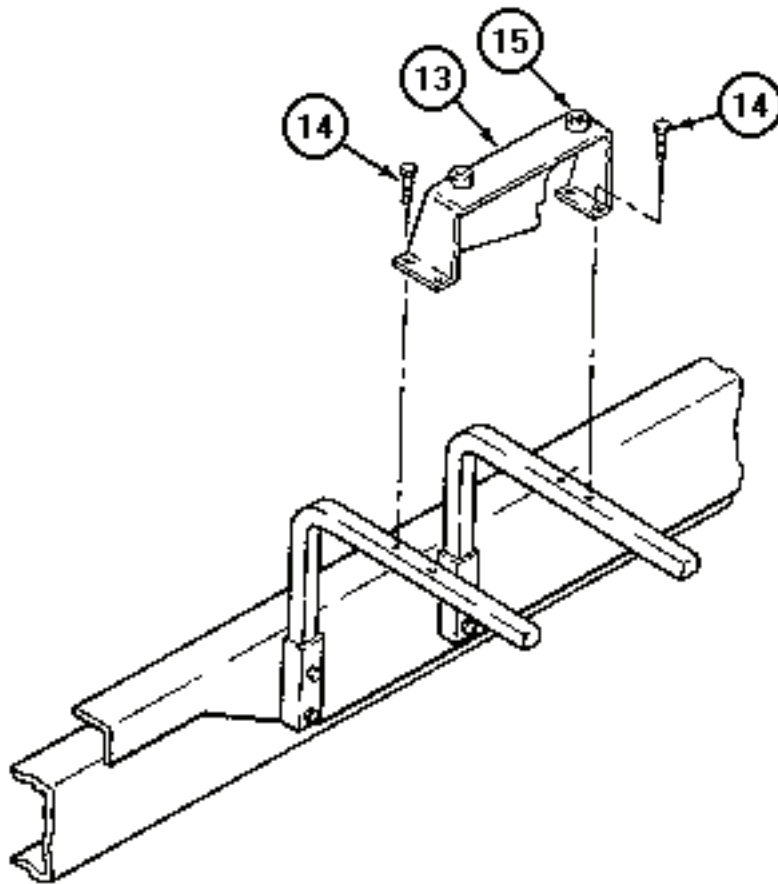
Install ground wire (5) on one of five screws (6) and tighten screw.

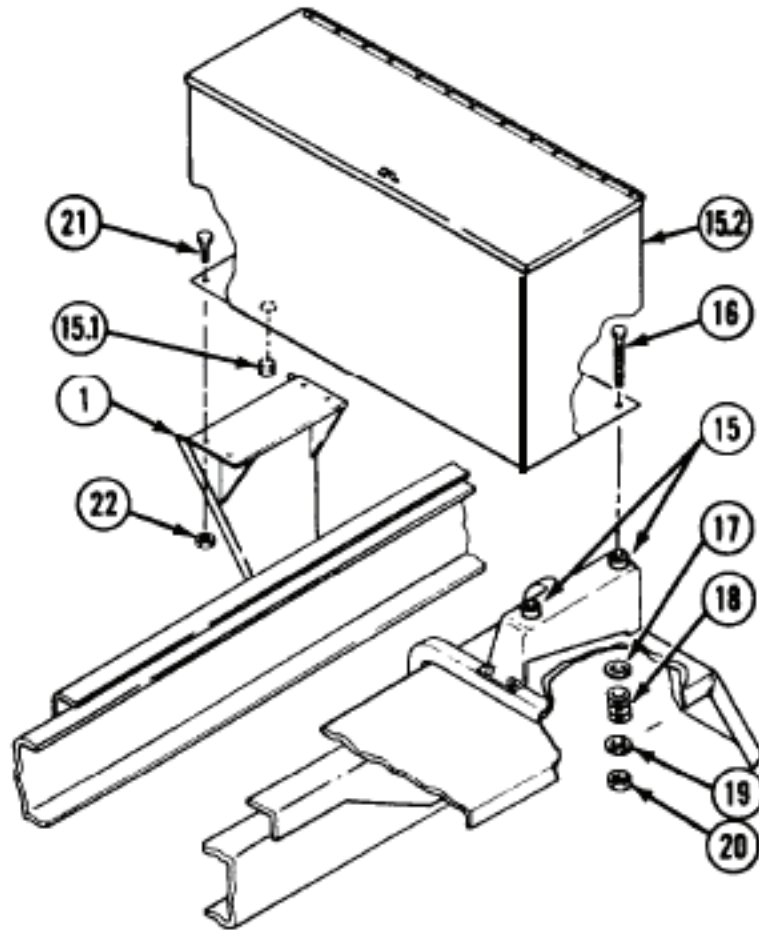


Install wire (7) with lockwasher (8) and nut (9) on fuel level sending unit (3).

**Fuel Can Stowage Box Installation.**

Install two rubber mounts (15).





Install plug (15.1) into stowage box (15.2).

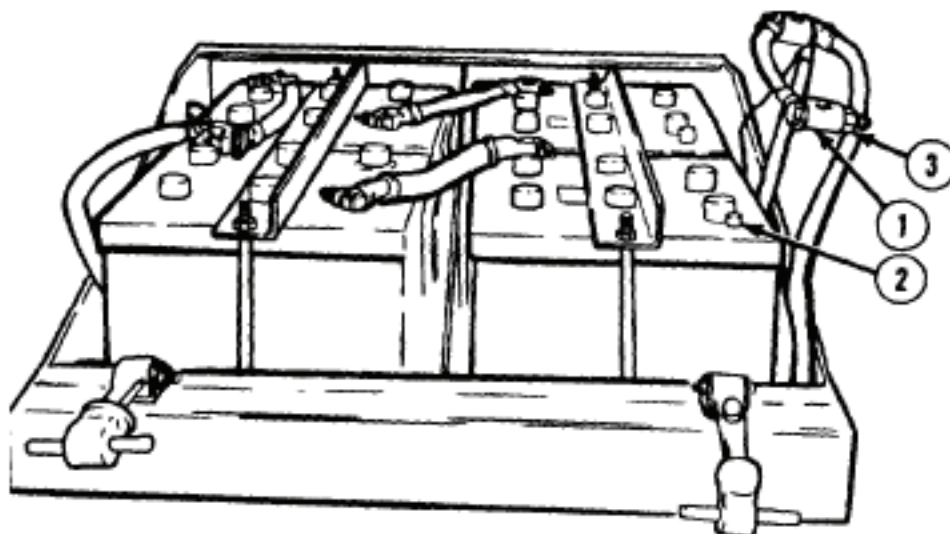
Soldier A operates lifting device while Soldier B aligns mounting bracket (1) and rubber mounts (15).

Install two screws (16), washer (17), spring (18), washer (19), and two nuts (20).

Soldier A installs four screws (21) while Soldier B installs four locknuts (22).

**NEGATIVE BATTERY CABLES CONNECT**

Connect two negative cable terminals (1) to battery posts (2).

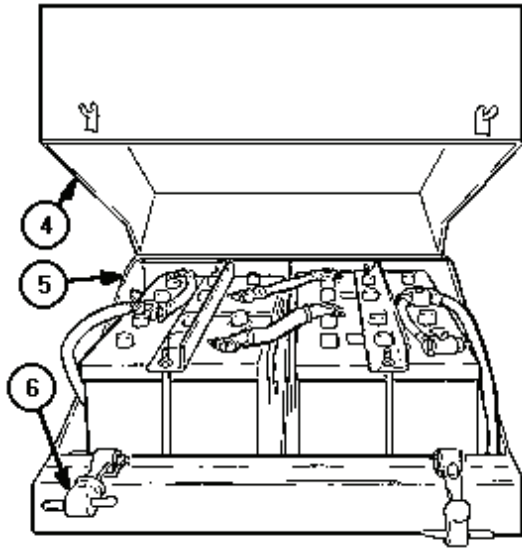


Tighten two nuts (3).

Apply corrosion preventive compound to negative battery terminals and cable connections.

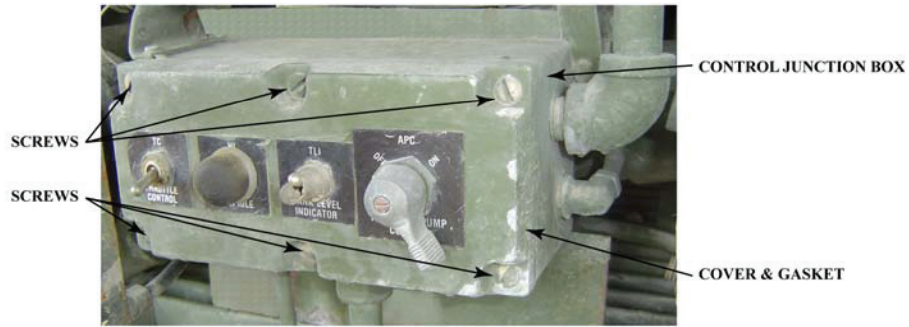
Install battery box cover (4) on battery box (5) with rubber hood hooks (6).



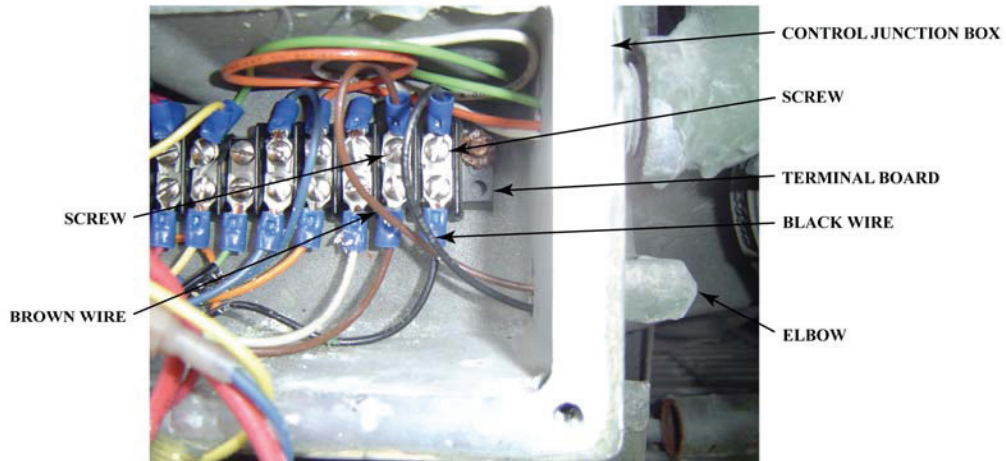


*Harness Removal - Model A*

1. Disconnect batteries per TM.
2. Remove 6 screws, cover, and gasket from control junction box.



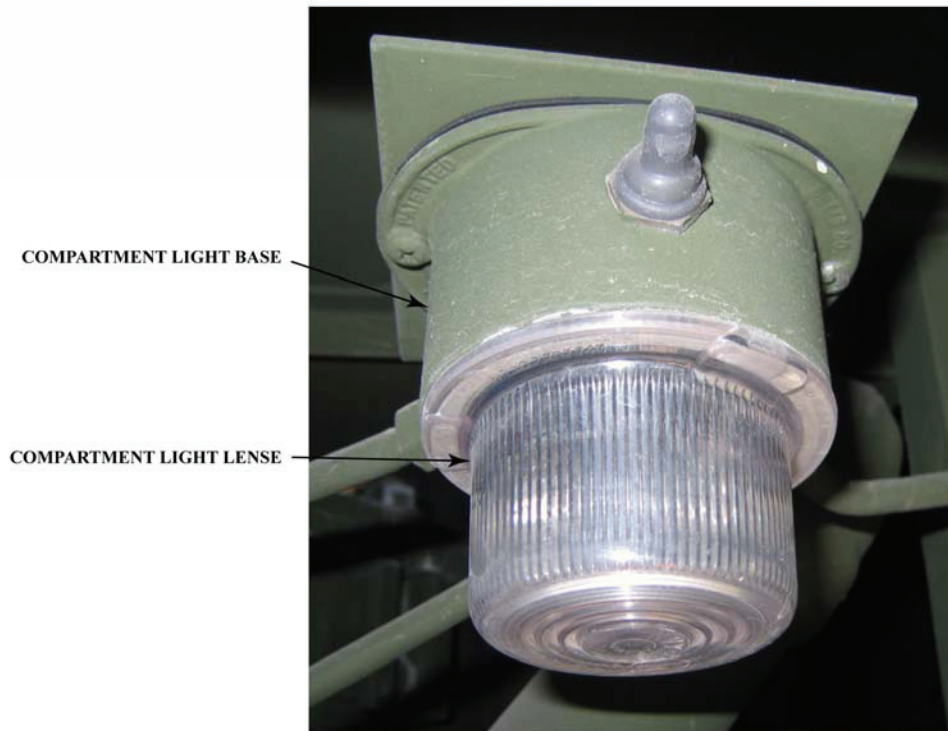
3. Loosen two screws, and the brown wire and black wire from the elbow, from terminal board.



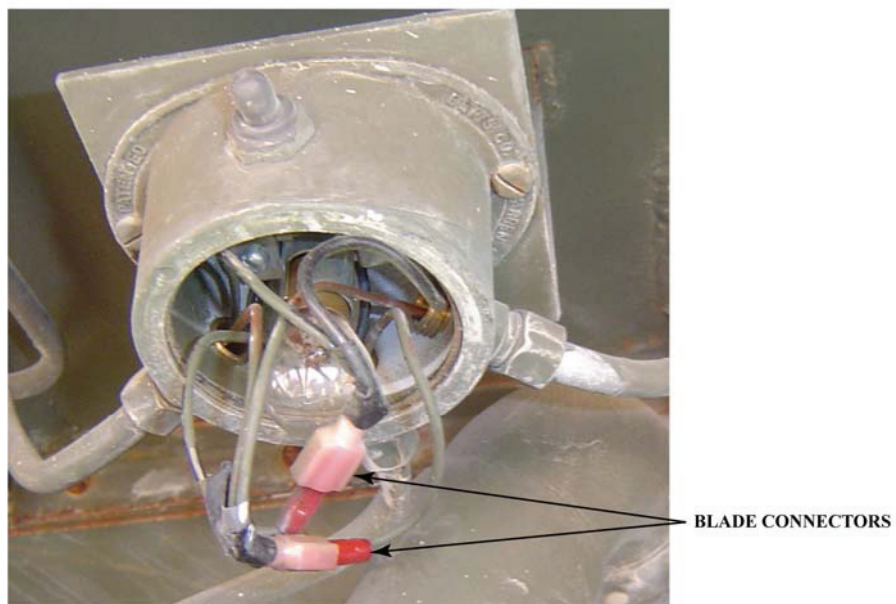
4. Loosen nut and remove conduit tube from elbow. Pull brown wire and black wire out through elbow. Remove elbow from control junction box.



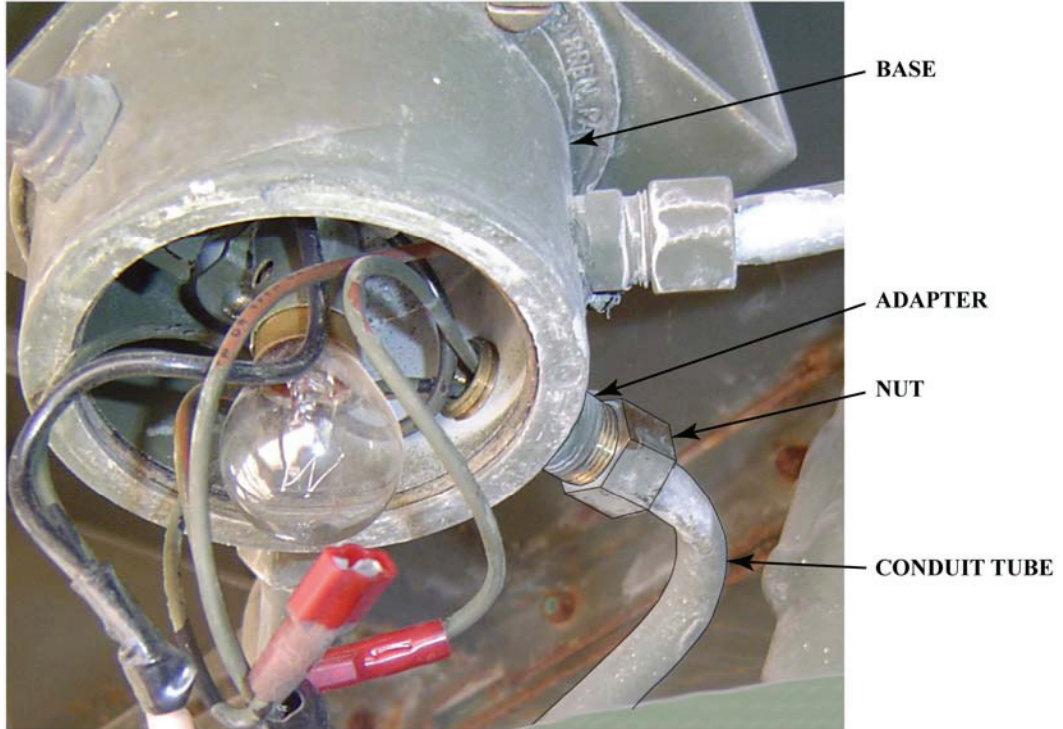
- Remove compartment light lens from base of passenger side compartment light assembly.



- Disconnect two blade connectors.



- Remove nut and conduit tube from center adapter. Pull wires from conduit through adapter. Remove center adapter from compartment light base.



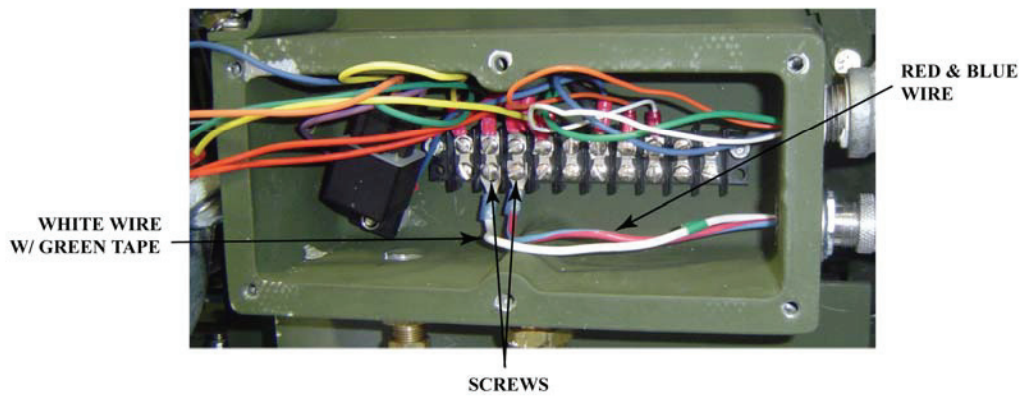
8. Repeat steps 5-7 for driver side compartment light.

***Harness Removal – Model B (A2 vehicles)***

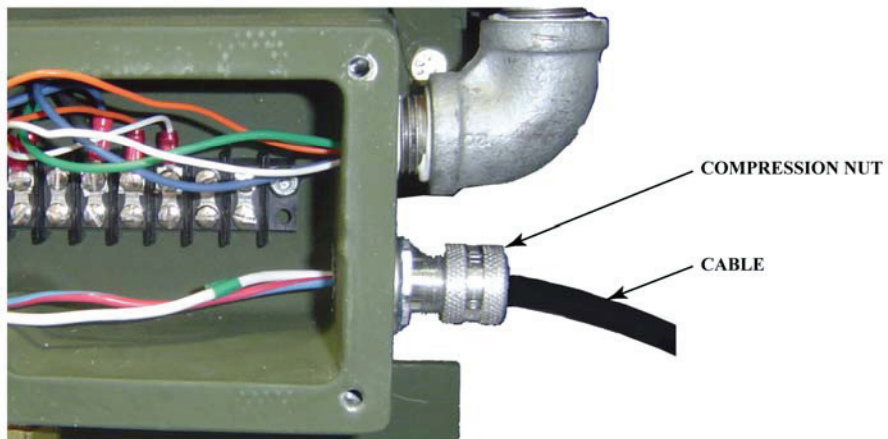
1. Battery disconnect switch to OFF position.
2. Remove 6 screws, cover, and gasket from control junction box.



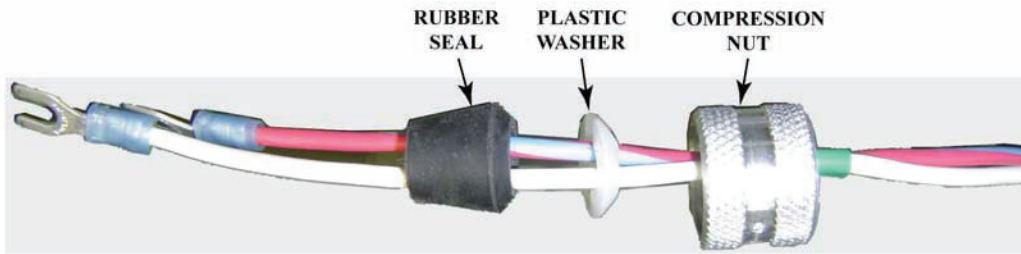
3. Loosen two screws, white wire with green tape from side conduit, and red and blue wire from side conduit, from lower half of terminal board. Shown with other wires removed for clarity.



4. Loosen compression nut. Remove cable, wires, rubber seal, plastic washer, and compression nut from control junction box.



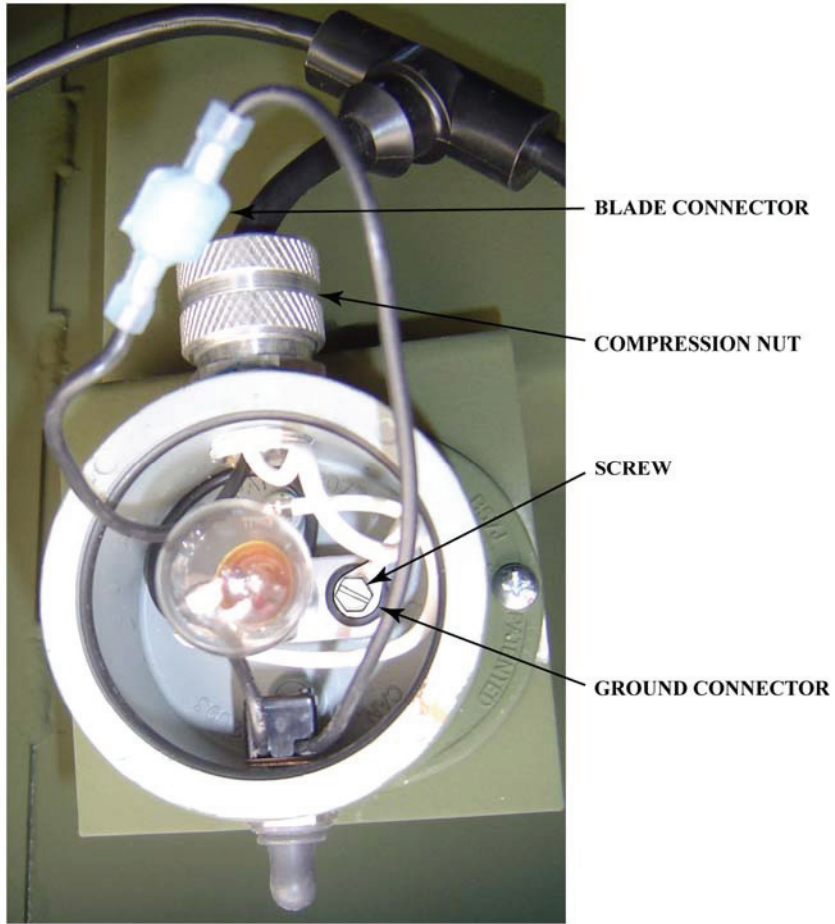
5. Remove rubber seal, plastic washer, and compression nut from wires.



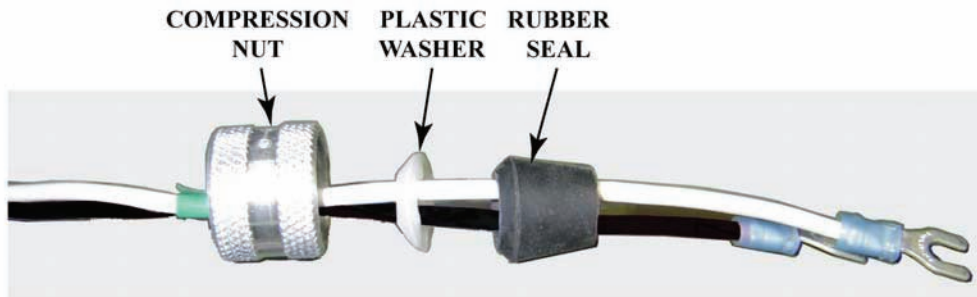
6. Remove compartment light lens from passenger side compartment light.



7. Disconnect blade connector.



8. Remove screw and connector.
9. Loosen compression nut. Remove cable, wires, rubber seal, plastic washer, and compression nut from compartment light base.
10. Remove rubber seal, plastic washer, and compression nut from wires.



11. Repeat steps 6-10 for driver side compartment light.



***INSTALL NEW HARNESS- Model A (older vehicles)***

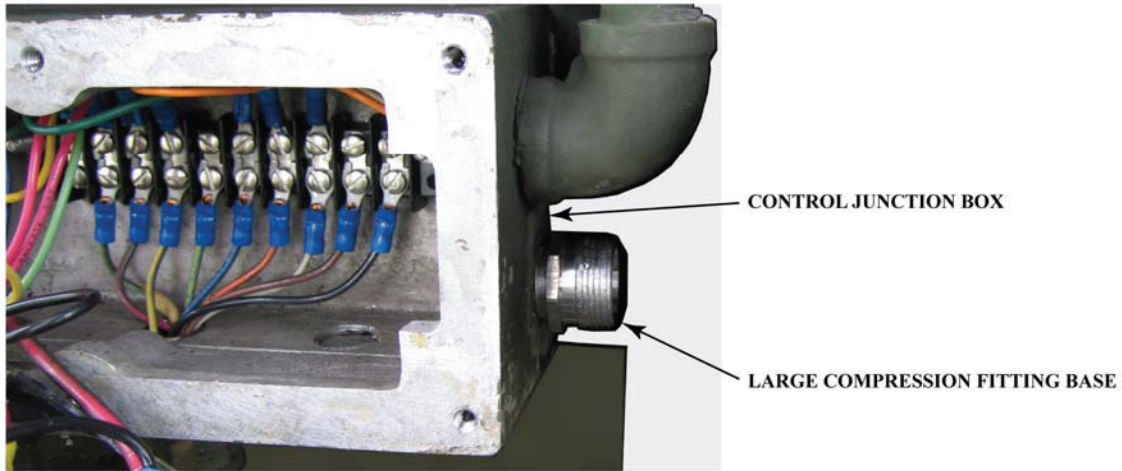
## Material:

Ties, cable, plastic NSN 5975-01-034-5871

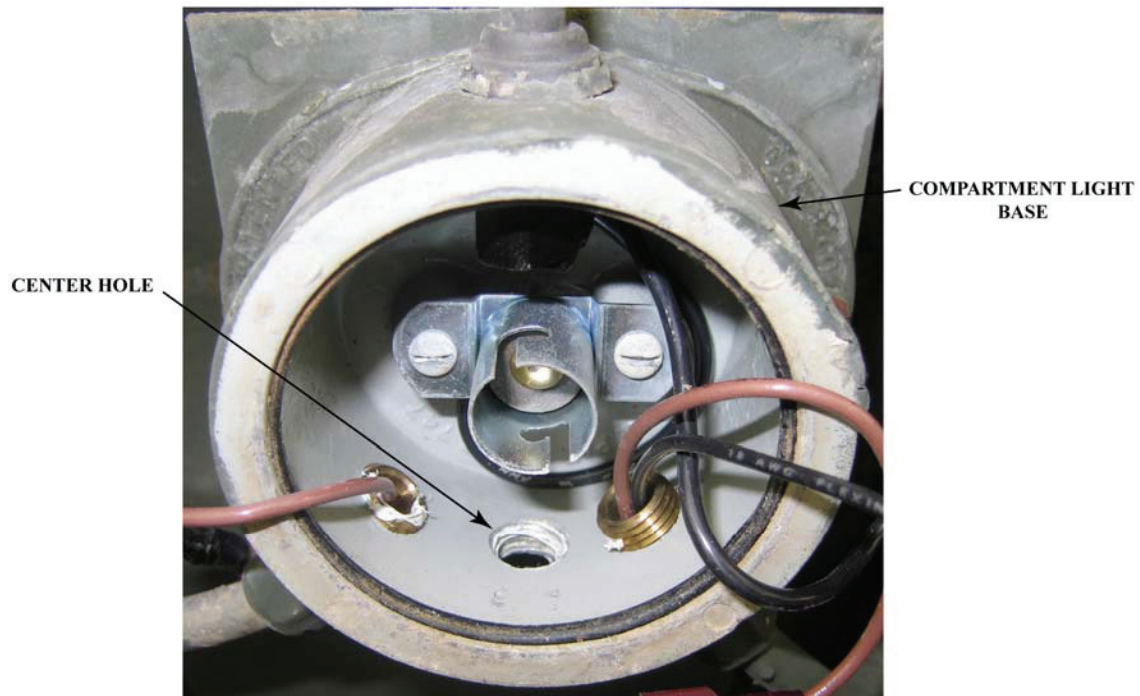
Adhesive-sealant, silicone, RTV General purpose, Silastic 132 RTV NSN 8040-00-995-0590

Compound, sealing, pipe thread, Loctite 592 NSN 8030-01-054-0740

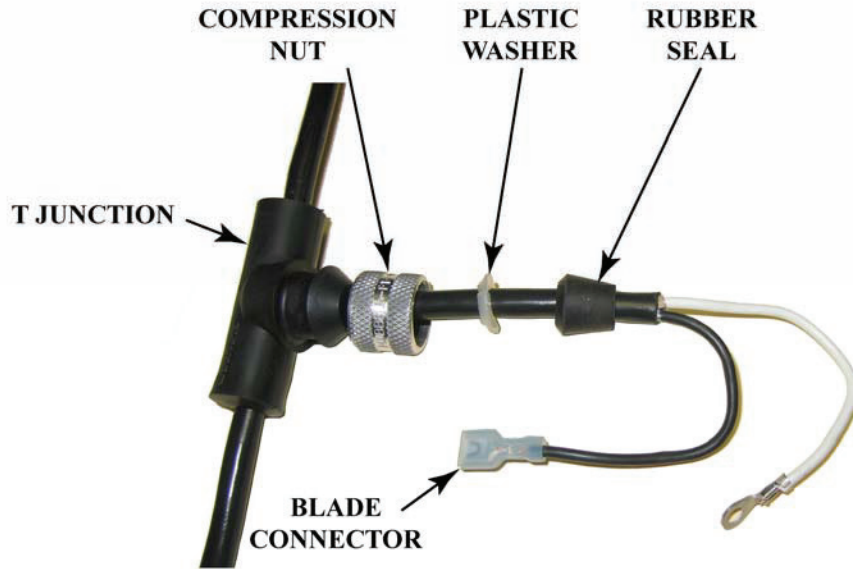
1. Apply pipe thread sealing compound to threads of large compression fitting base.
2. Install large compression fitting base on control junction box.



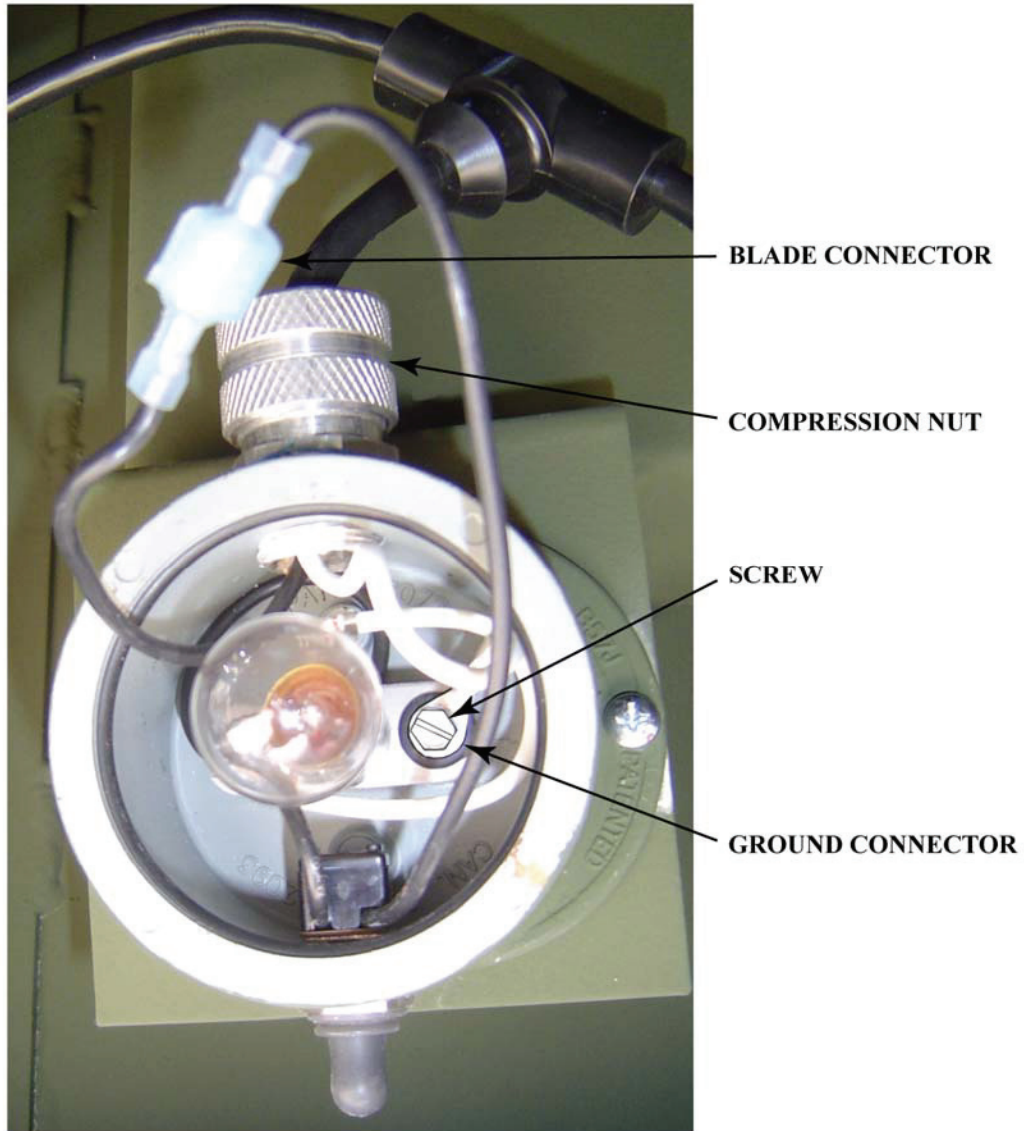
3. Test-fit smaller compression fitting in forward center hole of driver side compartment light base. If the compression fitting can be installed, proceed to step 5. Bulb shown removed for clarity.



4. Drill the center hole to 45/64" and tap 0.5" NPT.
5. Apply pipe thread sealing compound to the threads of the small compression fitting base.
6. Install small compression fitting base in center hole of compartment light base.
7. Repeat steps 3-6 for passenger side compartment light base.
  
8. Install compression nut, plastic washer, and rubber gasket on black wire and white wire at end of replacement harness off of T junction.



- Route black wire and white wire through compression fitting on driver side compartment light base, and install compression nut on compression nut base. A2 model shown; previous models similar.

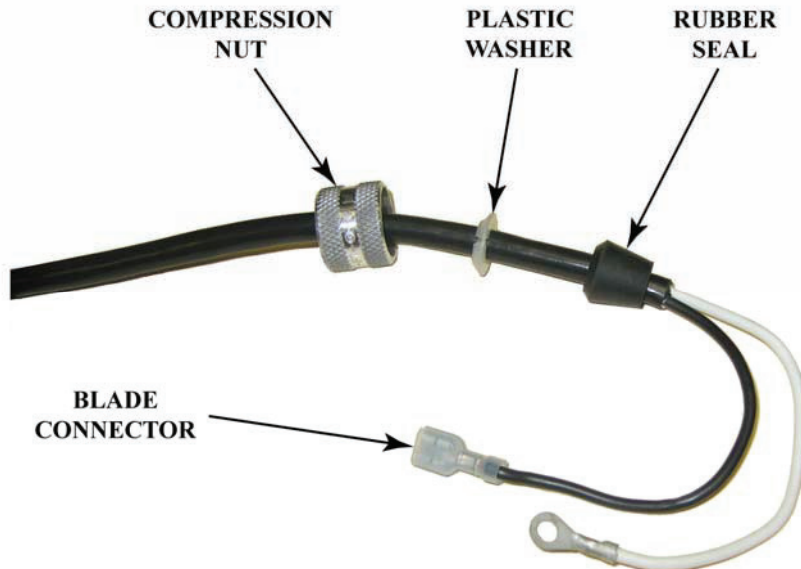


- Connect black wire with blade connector to existing blade connector. If connectors will not mate, remove both blade connectors and connect black wires with butt splice connector, cover with heat-shrink.
- Install white wire ring terminal ground connector on screw.

12. Install compartment light lens on compartment light base.



13. Install compression nut, plastic washer, and rubber gasket on black wire and white wire at end of replacement harness near T fitting from step 6.



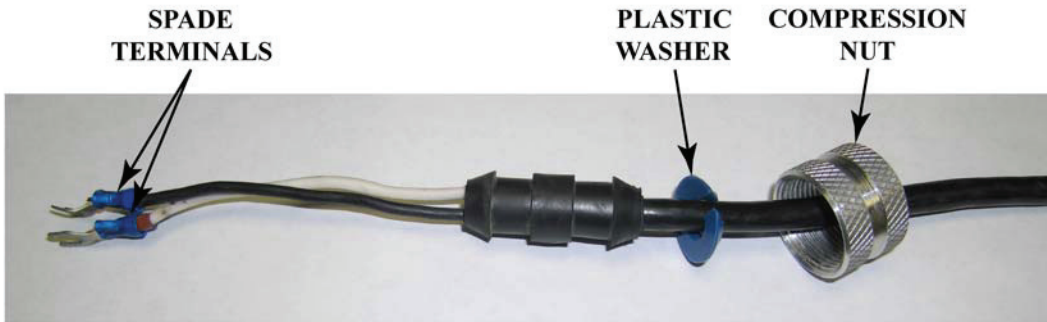
14. Repeat steps 9-12 for passenger side compartment light.

15. On replacement harness, locate four wire connector (wires are black, white with brown tape, red and blue, and white with green tape) as shown. Cut black wire and white with brown tape wire as illustrated. Discard four wire connector and remaining short end of replacement harness.



FOUR WIRE CONNECTOR

16. Install spade terminals on black wire and white with brown tape wire.

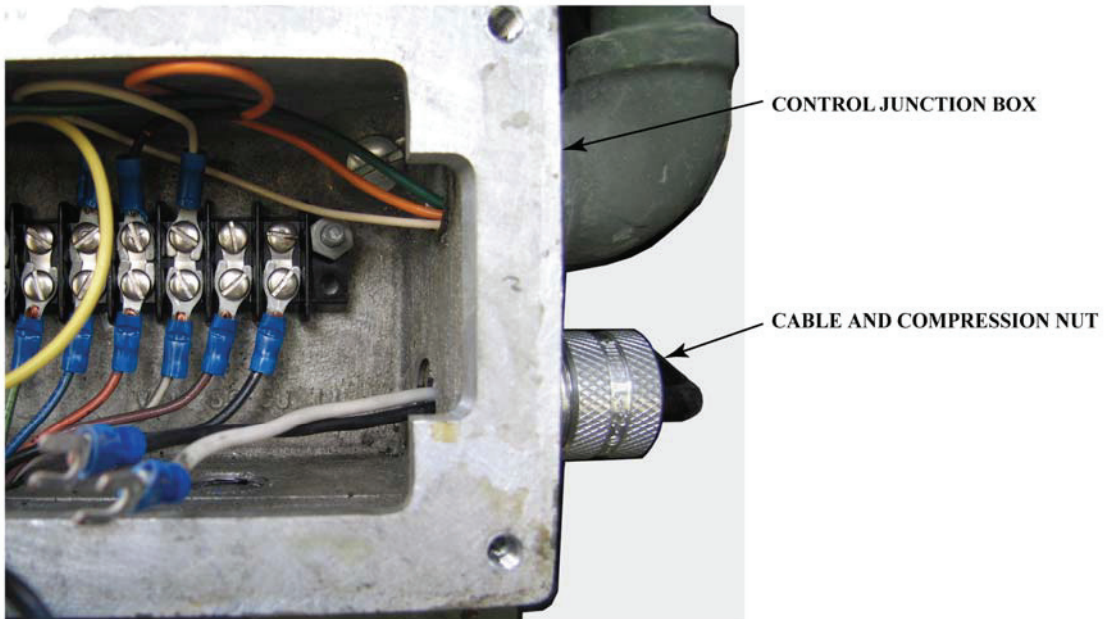


SPADE  
TERMINALS

PLASTIC  
WASHER

COMPRESSION  
NUT

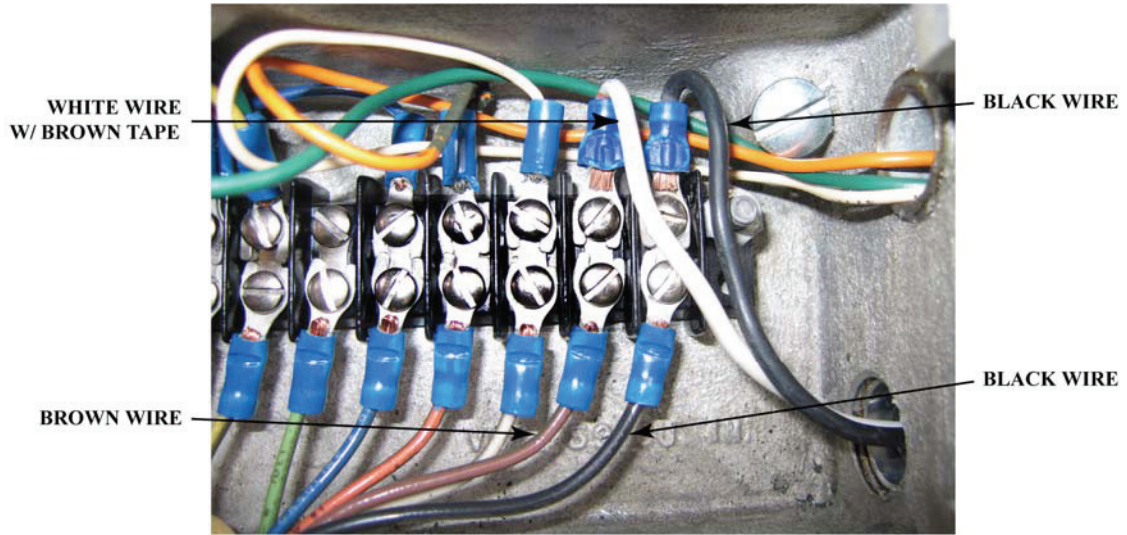
17. Install compression nut and plastic washer on replacement harness.
18. Route black wire and white with brown tape wire through compression fitting base and install compression nut on compression fitting base.



CONTROL JUNCTION BOX

CABLE AND COMPRESSION NUT

19. Install black wire on terminal block, matched to existing black wire.



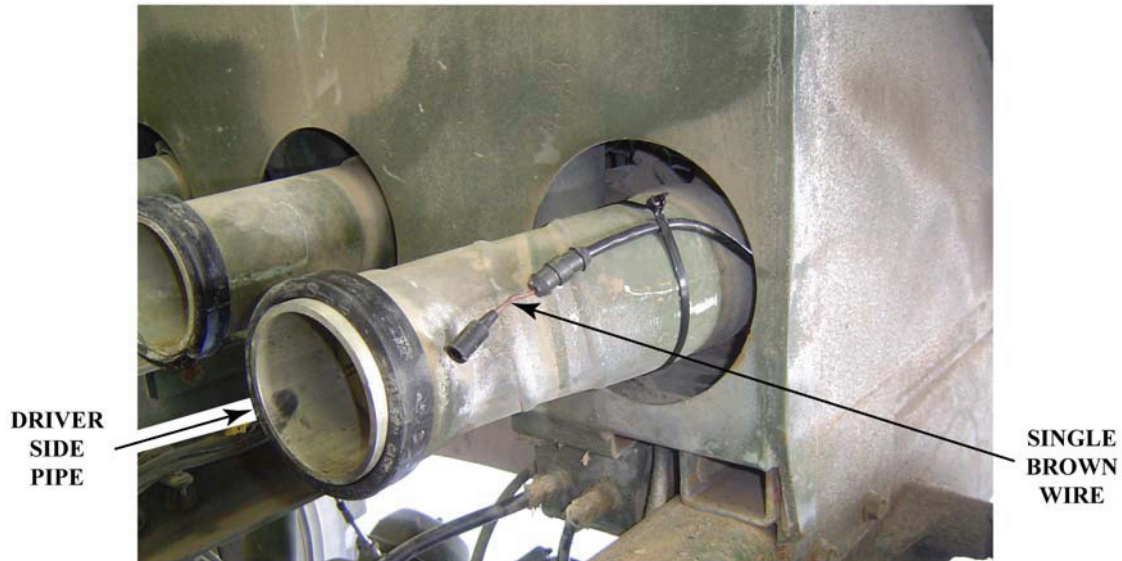
20. Install white wire with brown tape on terminal block, matched to existing brown wire.

21. Coat gasket with silicon adhesive-sealant.

22. Install gasket and cover on control junction box with six screws.



23. There are three pipes exiting the front of the pump module. The new harness has an end with a single brown wire and weather resistant connection. Route this end through pump module along the pipe that is farthest toward the driver's side of vehicle. Secure it with cable ties, approximately even with the end of the pipe.



24. Secure all loose cables to existing hardware with cable ties.

## Harness Installation – Model B (A2 vehicles)

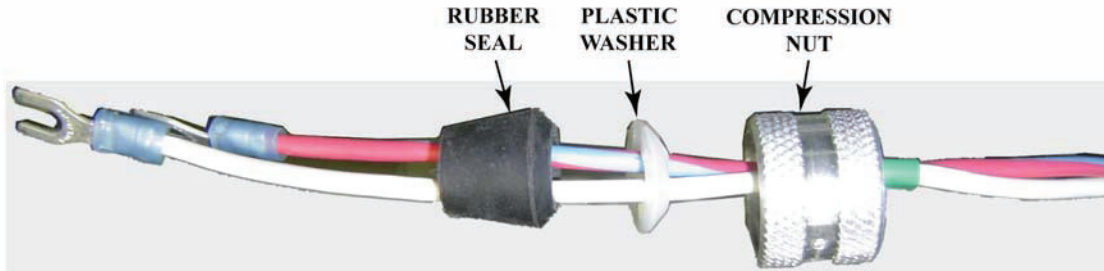
### Material:

Ties, cable, plastic NSN 5975-01-034-5871

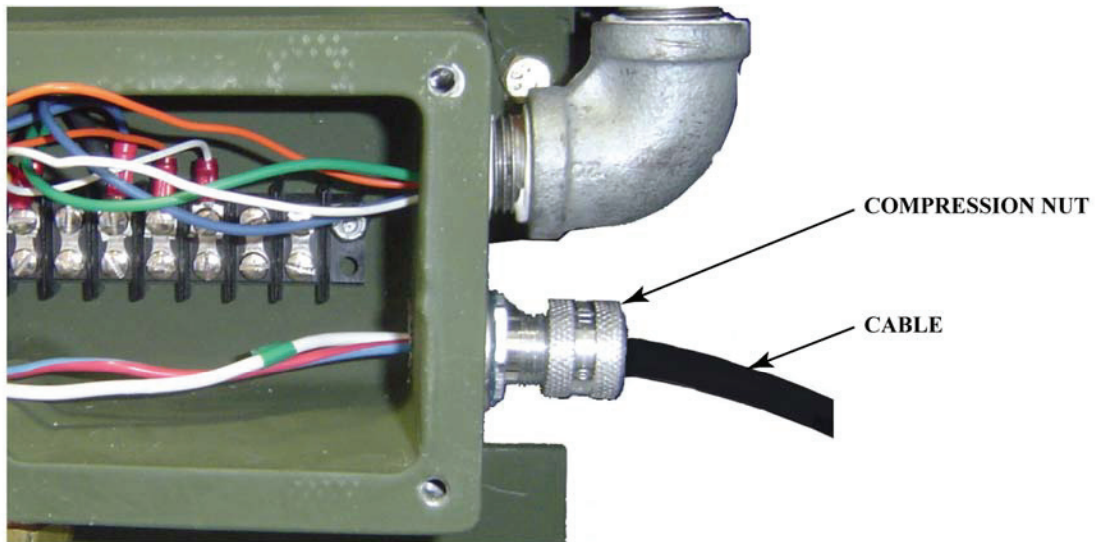
Adhesive-sealant, silicone, RTV General purpose, Silastic 132 RTV NSN 8040-00-995-0590

Compound, sealing, pipe thread, Loctite 592 NSN 8030-01-054-0740

1. Install compression nut, plastic washer, and rubber seal on white wire with green tape, and red and blue wire on replacement harness.

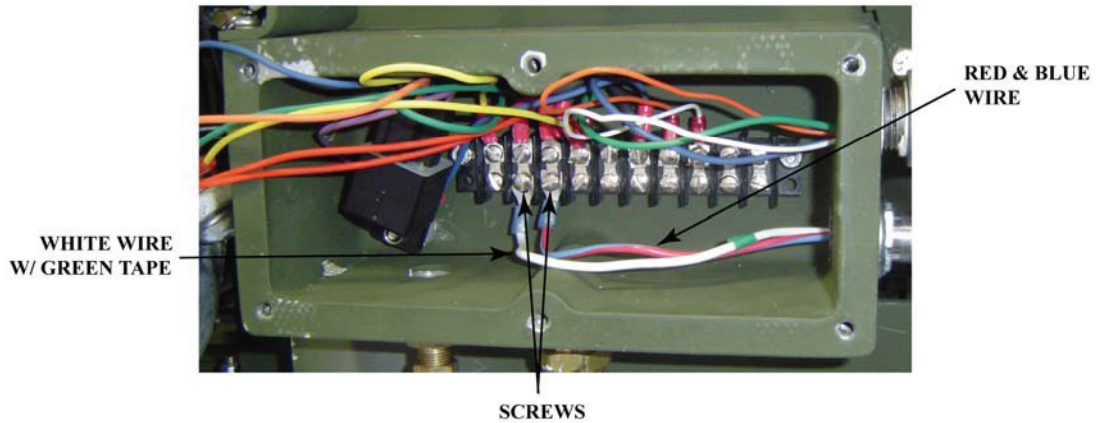


2. Route white wire with green tape, and red and blue wire through compression fitting base and install compression nut on compression fitting base.

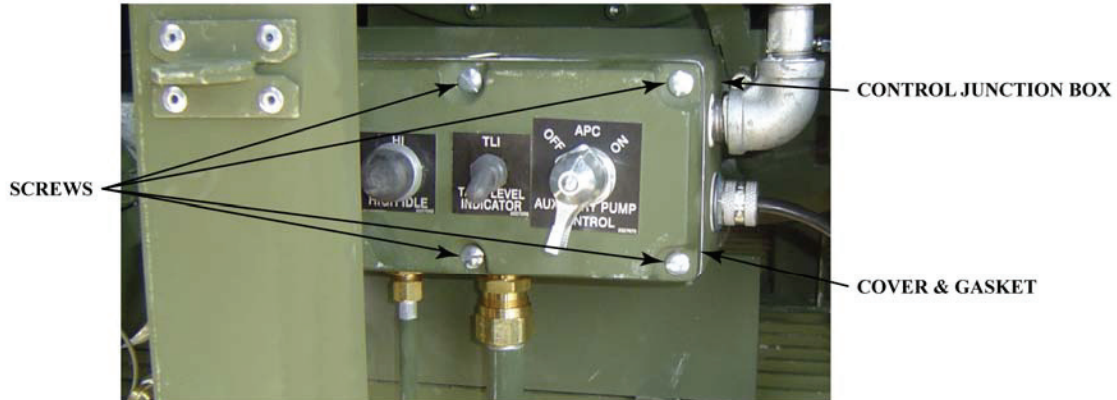




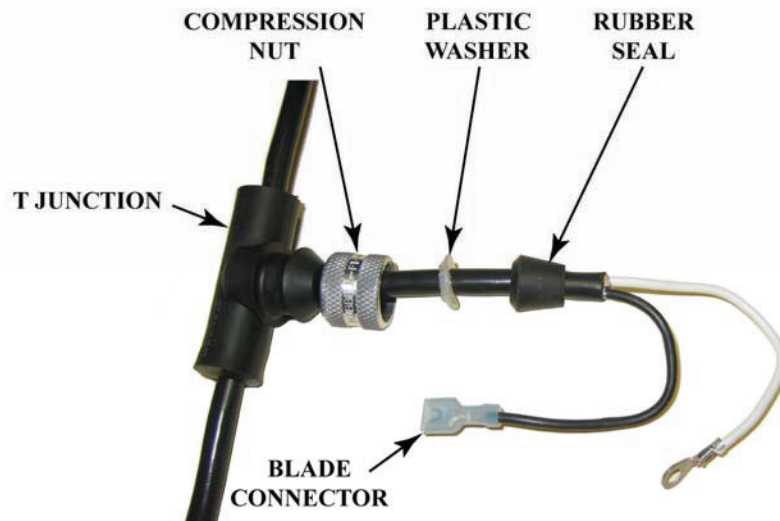
3. Install red and blue wire on terminal block, matched to existing red and blue wire. Install white wire with green tape on terminal block, matched to existing green wire. Other wires shown removed for clarity.



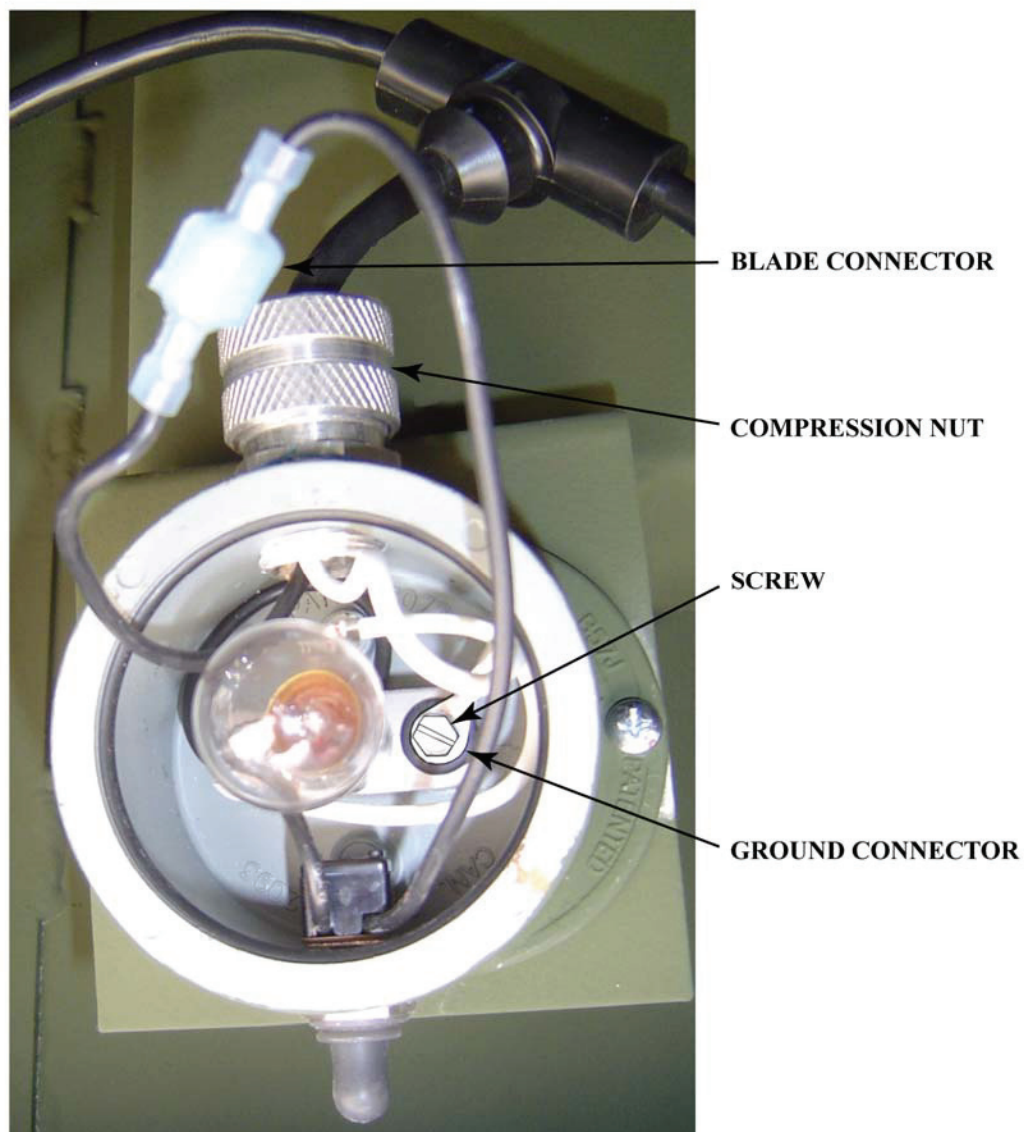
4. Coat gasket with silicon adhesive-sealant.
5. Install gasket and cover on control junction box with six screws.



6. Install compression nut, plastic washer, and rubber gasket on black wire and white wire at end of replacement harness off of T junction.



7. Route black wire and white wire through compression fitting on driver side compartment light base, and install compression nut on compression nut base.

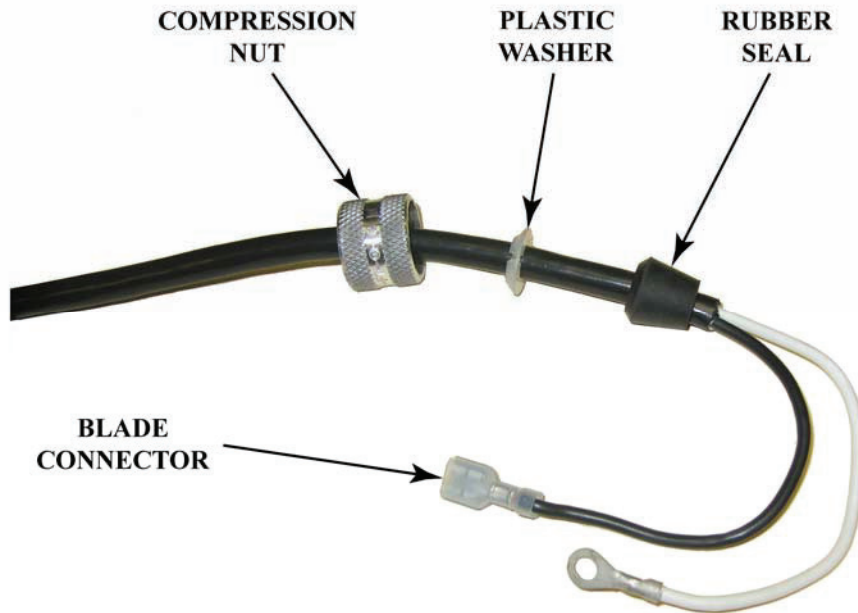


8. Connect black wires with blade connectors.
9. Use screw to install white wire ring terminal ground connector on compartment light base.

10. Install compartment light lens on compartment light base.

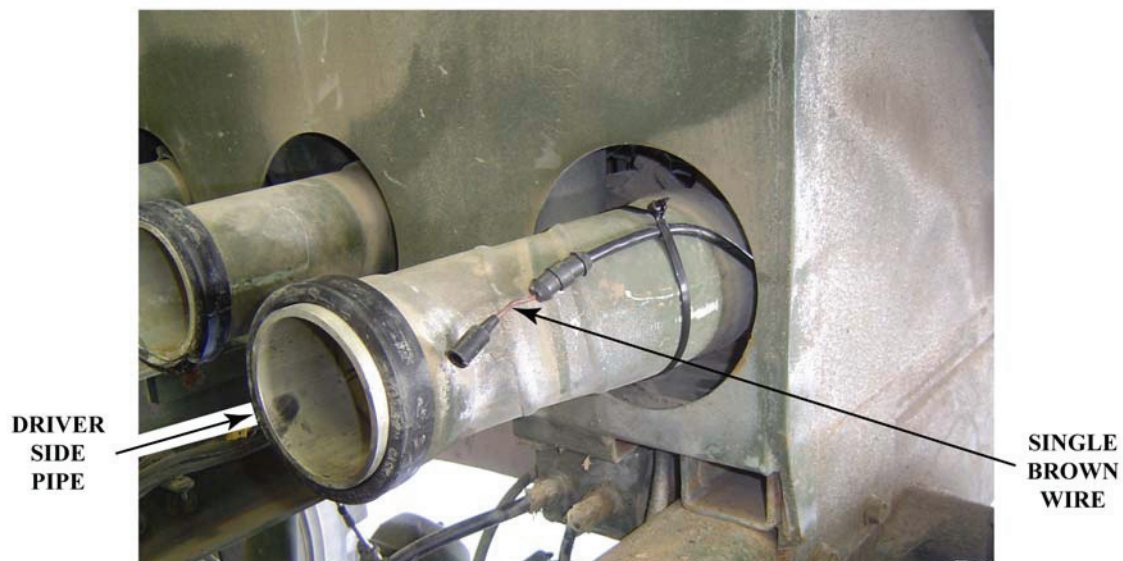


11. Install compression nut, plastic washer, and rubber gasket on black wire and white wire at end of replacement harness near T fitting from step 6.

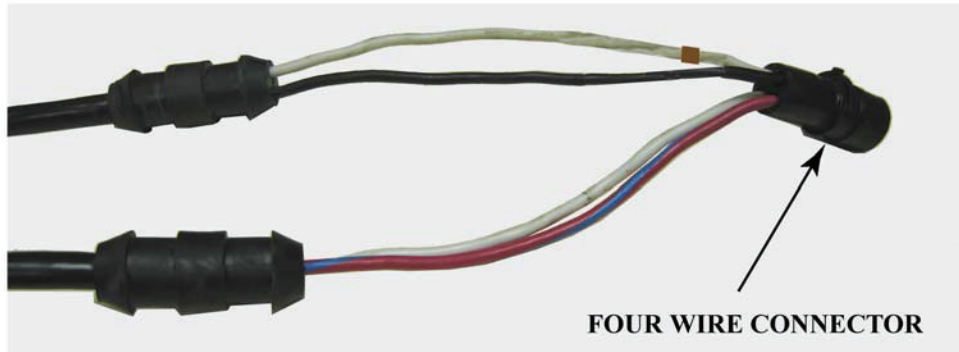


12. Repeat steps 7-10 for passenger side compartment light.

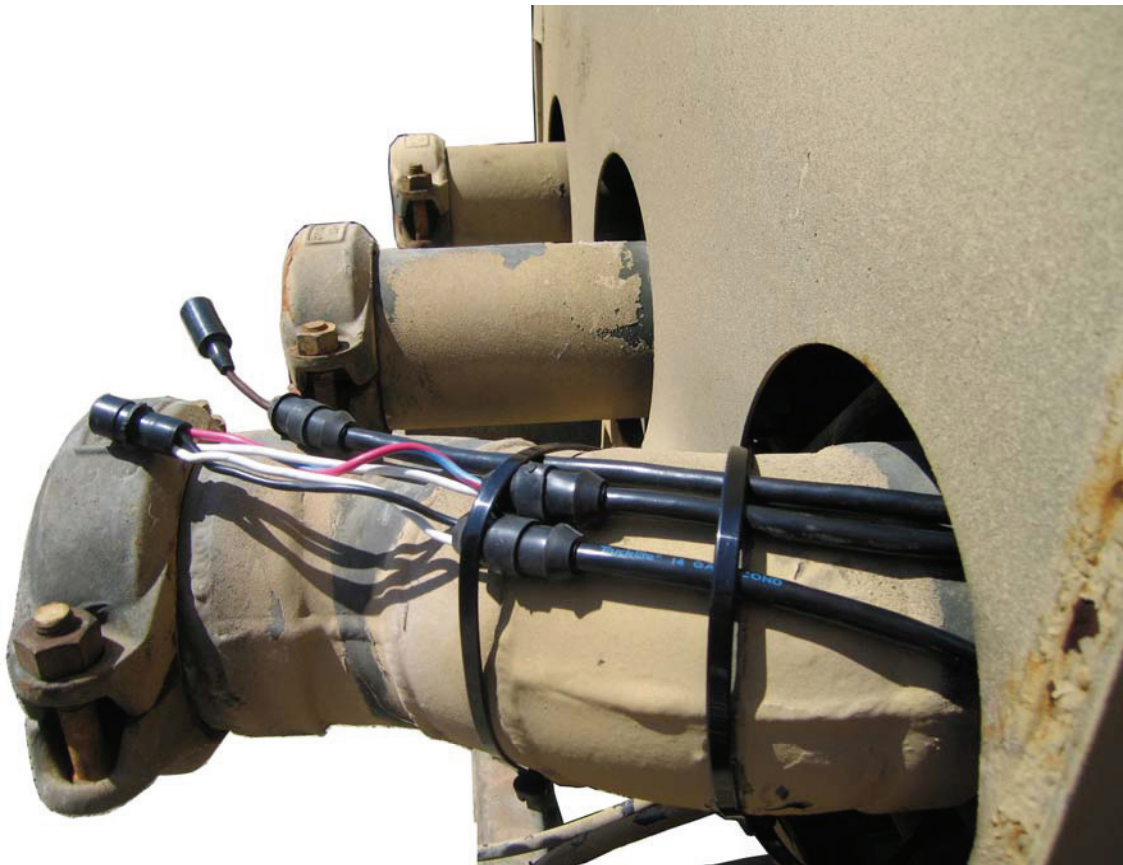
13. There are three pipes exiting the front of the pump module. The new harness has an end with a single brown wire and weather resistant connection. Route this end through pump module along the pipe that is farthest toward the driver's side of vehicle. Secure it with cable ties, approximately even with the end of the pipe.



14. Locate four wire connector on new harness.



15. Route four wire connector through pump module along the pipe that is farthest toward the driver's side of vehicle. Secure it adjacent to the single brown wire with cable ties, approximately even with the end of the pipe, as shown. Connect four wire connector to matching connector end on existing chassis harness.



16. Secure all loose cables to existing hardware with cable ties.



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By Order of the Secretary of the Army:

PETER J. SCHOOMAKER  
*General, United States Army*  
*Chief of Staff*

Official:  
  
JOYCE E. MORROW  
*Administrative Assistant to the*  
*Secretary of the Army*  
0617201

Distribution:

To be distributed in accordance with the initial distribution number (IDN) 344857,  
requirements for TB 9-2320-279-13&P-3.



## THE METRIC SYSTEM AND EQUIVALENTS

### LINEAR MEASURE

1 Centimeter = 10 Millimeters = 0.01 Meter = 0.3937 Inch  
 1 Decimeter = 10 Centimeters = 3.94 Inches  
 1 Meter = 10 Decimeters = 100 Centimeters  
           = 1000 Millimeters = 39.37 Inches  
 1 Dekameter = 10 Meters = 32.8 Feet  
 1 Hectometer = 10 Dekameters = 328.08 Feet  
 1 Kilometer = 10 Hectometers = 1000 Meters  
               = 0.621 Mile = 3,280.8 Feet  
 Millimeters = Inches times 25.4  
 Inches = Millimeters divided by 25.4

### WEIGHTS

1 Centigram = 10 Milligrams = 0.154 Grain  
 1 Decigram = 10 Centigrams = 1.543 Grains  
 1 Gram = 0.001 Kilogram = 10 Decigrams  
           = 1000 Milligrams = 0.035 Ounce  
 1 Dekagram = 10 Grams = 0.353 Ounce  
 1 Hectogram = 10 Dekagrams = 3.527 Ounces  
 1 Kilogram = 10 Hectograms = 1000 Grams = 2.205 Pounds  
 1 Quintal = 100 Kilograms = 220.46 Pounds  
 1 Metric Ton = 10 Quintals = 1000 Kilograms = 1.1 Short Tons

### LIQUID MEASURE

1 Milliliter = 0.001 Liter = 0.034 Fluid Ounce  
 1 Centiliter = 10 Milliliters = 0.34 Fluid Ounce  
 1 Deciliter = 10 Centiliters = 3.38 Fluid Ounces  
 1 Liter = 10 Deciliters = 1000 Milliliters = 33.82 Fluid Ounces  
 1 Dekaliter = 10 Liters = 2.64 Gallons  
 1 Hectoliter = 10 Dekaliters = 26.42 Gallons  
 1 Kiloliter = 10 Hectoliters = 264.18 Gallons

### SQUARE MEASURE

1 Sq Centimeter = 100 Sq Millimeters = 0.155 Sq Inch  
 1 Sq Decimeter = 100 Sq Centimeters = 15.5 Sq Inches  
 1 Sq Meter (Centare) = 10 Sq Decimeters  
                               = 10,000 Sq Centimeters = 10.764 Sq Feet  
 1 Sq Dekameter (Are) = 100 Sq Meters = 1,076.4 Sq Feet  
 1 Sq Hectometer (Hectare) = 100 Sq Dekameters  
                                   = 2.471 Acres  
 1 Sq Kilometer = 100 Sq Hectometers  
                               = 1,000,000 Sq Meters = 0.386 Sq Mile

### CUBIC MEASURE

1 Cu Centimeter = 1000 Cu Millimeters = 0.061 Cu Inches  
 1 Cu Decimeter = 1000 Cu Centimeters = 61.02 Cu Inches  
 1 Cu Meter = 1000 Cu Decimeters  
                   = 1,000,000 Cu Centimeters = 35.31 Cu Feet

### TEMPERATURE

$5/9 (°F - 32°) = °C$   
 $(9/5 \times °C) + 32° = °F$   
 -35° Fahrenheit is equivalent to -37° Celsius  
 0° Fahrenheit is equivalent to -18° Celsius  
 32° Fahrenheit is equivalent to 0° Celsius  
 90° Fahrenheit is equivalent to 32.2° Celsius  
 100° Fahrenheit is equivalent to 38° Celsius  
 212° Fahrenheit is equivalent to 100° Celsius

## APPROXIMATE CONVERSION FACTORS

<u>TO CHANGE</u>	<u>TO</u>	<u>MULTIPLY BY</u>	<u>TO CHANGE</u>	<u>TO</u>	<u>MULTIPLY BY</u>
Inches.....	Centimeters.....	2.540	Centimeters.....	Inches.....	0.394
Feet.....	Meters.....	0.305	Meters.....	Feet.....	3.280
Yards.....	Meters.....	0.914	Meters.....	Yards.....	1.094
Miles.....	Kilometers.....	1.609	Kilometers.....	Miles.....	0.621
Square Inches.....	Square Centimeters.....	6.451	Square Centimeters.....	Square Inches.....	0.155
Square Feet.....	Square Meters.....	0.093	Square Meters.....	Square Feet.....	10.764
Square Yards.....	Square Meters.....	0.836	Square Meters.....	Square Yards.....	1.196
Square Miles.....	Square Kilometers.....	2.590	Square Kilometers.....	Square Miles.....	0.386
Acres.....	Square Hectometers.....	0.405	Square Hectometers.....	Acres.....	2.471
Cubic Feet.....	Cubic Meters.....	0.028	Cubic Meters.....	Cubic Feet.....	35.315
Cubic Yards.....	Cubic Meters.....	0.765	Cubic Meters.....	Cubic Yards.....	1.308
Fluid Ounces.....	Milliliters.....	29.573	Milliliters.....	Fluid Ounces.....	0.034
Pints.....	Liters.....	0.473	Liters.....	Pints.....	2.113
Quarts.....	Liters.....	0.946	Liters.....	Quarts.....	1.057
Gallons.....	Liters.....	3.785	Liters.....	Gallons.....	0.264
Ounces.....	Grams.....	28.349	Grams.....	Ounces.....	0.035
Pounds.....	Kilograms.....	0.454	Kilograms.....	Pounds.....	2.205
Short Tons.....	Metric Tons.....	0.907	Metric Tons.....	Short Tons.....	1.102
Pound-Feet.....	Newton-Meters.....	1.356	Newton-Meters.....	Pound-Feet.....	0.738
Pound-Inches.....	Newton-Meters.....	0.11375	Kilopascals.....	Pounds per Square Inch.....	0.145
Pounds per Square Inch.....	Kilopascals.....	6.895	Kilometers per Liter.....	Miles per Gallon.....	2.354
Ounce-Inches.....	Newton-Meters.....	0.007062	Kilometers per Hour.....	Miles per Hour.....	0.621
Miles per Gallon.....	Kilometers per Liter.....	0.425	°Fahrenheit.....	°Celsius.....	°C = (°F-32)x5/9
Miles per Hour.....	Kilometers per Hour.....	1.609	°Celsius.....	°Fahrenheit.....	°F = (9/5x°C)+32

