

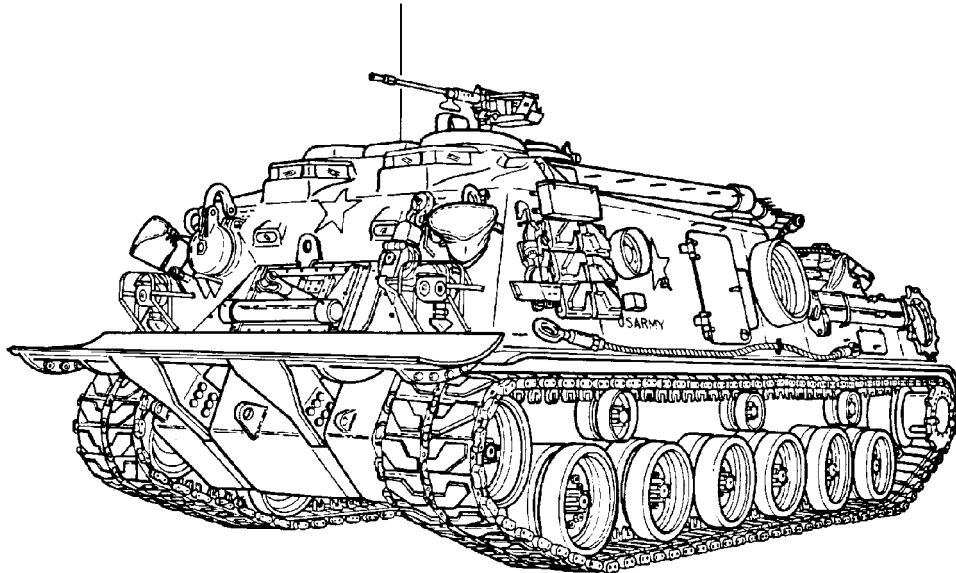
TM 9-2350-256-20-2

TECHNICAL MANUAL

**UNIT MAINTENANCE MANUAL
FOR**

**RECOVERY VEHICLE, FULL
TRACKED: MEDIUM, M88A1**

**NSN 2350-00-122-6826 (EIC AQA)
VOLUME II**



SUPERSEDURE NOTICE – This manual supersedes TM 9-2350-256-20, dated 15 July 1996, including all changes.

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

HEADQUARTERS, DEPARTMENT OF THE ARMY

27 JUNE 2005

WARNING SUMMARY

WARNING



Carbon monoxide is a colorless, odorless, deadly poisonous gas. Breathing air with carbon monoxide produces symptoms of headache, dizziness, loss of muscular control, and drowsiness. Brain damage or death can result from severe exposure.

The exhaust fumes of fuel-burning heaters and internal combustion engines produce carbon monoxide gas. Carbon monoxide can become dangerously concentrated without adequate ventilation.

To ensure crew safety when the personnel heater or main or auxiliary engine of any vehicle is operated for any purpose:

- Do not operate personnel heater or engine of vehicle in a closed area unless it is adequately ventilated.
- Do not idle engine for long periods without ventilation blower operation. If tactical situation permits, open hatches.

- Do not drive any vehicle with inspection plates, cover plates, or engine compartment doors removed unless necessary for maintenance purposes.

During vehicle operation be aware of exhaust odors and exposure symptoms. If either is present, immediately ventilate personnel compartments. If symptoms persist, remove affected personnel and:

- Expose to fresh air
- Keep warm
- Do not permit physical exercise
- Give artificial respiration (if necessary)
- Get immediate medical attention

Neither the gas/particulate filter unit nor the field protection mask for Nuclear, Biological, and Chemical (NBC) protection will protect you from carbon monoxide poisoning.

The best defense against carbon monoxide poisoning is adequate ventilation.

WARNING



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

WARNING SUMMARY–Continued

WARNING



Vehicles exposed to NBC must have all air filters replaced with extreme caution by experienced and trained personnel. Unprotected personnel may experience injury or death if residual toxic agents or radioactive materials are present.

Servicing personnel must wear:

- Protective mask
- Hood
- Protective overgarments
- Chemical-protective gloves and boots

Damaged or unusable filters are considered hazardous waste. Do not dispose of them like common trash.

Filters must be placed into double-lined plastic bags.

Filters must be moved to a temporary segregation area away from the work site.

Final disposal of contaminated air filters must be in accordance with local Standard Operating Procedures (SOP).

The same procedure applies for radioactive dust contamination; however, the company NBC team should measure the radiation prior to filter removal to determine the extent of safety procedures required per the NBC Annex to the unit SOP. The segregation area in which the contaminated air filters are temporarily stored must be marked with appropriate NBC placards.

WARNING



High voltage is used in the operation of some equipment. Serious injury may result if personnel fail to observe safety precautions.

Learn the areas containing high voltage in each piece of equipment.

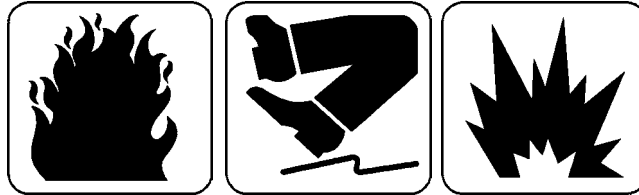
Do not contact high voltage connections when installing or operating this equipment.

Before working on electrical equipment, harnesses, battery cables, or starter cables turn MASTER switch to OFF position and disconnect battery ground cables.

Keep one hand away from the equipment to reduce the chances of current flowing through your body.

WARNING SUMMARY–Continued

WARNING



Fuel is very flammable and can explode easily. To avoid serious injury or death:

Keep fuel away from open flame

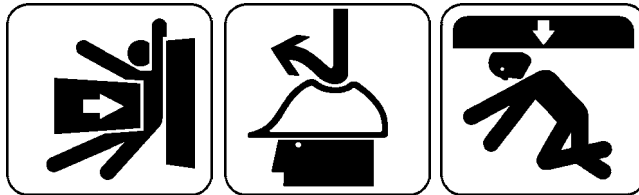
Keep fire extinguisher within easy reach

Do not work on fuel system when engine is hot (fuel can be ignited by a hot engine)

Post signs that read "NO SMOKING WITHIN 50 FEET OF VEHICLE"

Fuel and oil are also slippery and can cause falls. To avoid injury, wipe up spilled fuel or oil with rags.

WARNING

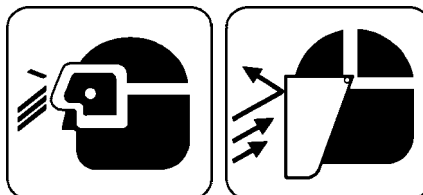


Do not stand on engine deck while operating the boom.

Do not use a 5-ton wrecker to remove engine deck and powerplant. Use only an M578 Light Recovery Vehicle or another M88A1 Medium Recovery Vehicle to remove the engine deck and powerplant.

The engine deck weighs approximately 1700 lb (771kg), and the powerplant weighs approximately 12,000 lb (5443kg). Use a lifting device with a capacity of at least 15,000 lb (6804kg) to remove engine deck and powerplant.

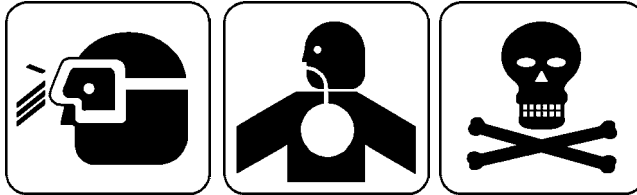
WARNING



Particles blown by compressed air can be dangerous. Be certain to direct airstream away from user and other personnel in the area. Compressed air used for cleaning will not exceed 30 psi (207 kPa).

WARNING SUMMARY–Continued

WARNING



Chemical Agent Resistant Coating (CARC) paint contains isocyanate, a constituent that can cause the following allergic reactions during and after the application of the material:

- Coughing
- Shortness of breath
- Pain on respiration
- Increased sputum
- Chest tightness
- Itching and reddening of the skin
- A burning sensation of the throat and nose
- Watering of the eyes

An allergic reaction may occur after initial exposure (ranging from a few days to a few months later) producing asthmatic symptoms including coughing, wheezing, tightness in the chest, or shortness of breath. The following precautions must be observed to ensure the safety of personnel when CARC paint is applied:

For spray/brush/roller painting in confined spaces, an air line respirator is required, unless an air sampling shows exposure to be below standards. If the air sampling is below standards, either the chemical cartridge or air line respirators are required.

Spot painters applying CARC paint by brush or roller must wear clothing and gloves affording full coverage. Personnel using touchup spray kits should wear an air line respirator and protective clothing. Do not use water, alcohol, or amine-based solvents to thin or remove CARC paint. Use of these solvents with CARC paint can produce chemical reactions resulting in nausea, disease, burns, or severe illness. Do not use paint solvents to remove paint/coating from your skin.

Mix paint/coating in a well-ventilated mixing room or spraying area away from open flames. Personnel mixing paint/coating should wear eye protection.

Use paint/coating with adequate ventilation.

Personnel grinding or sanding on painted equipment should use high-efficiency, air-purifying respirators. Do not weld, cut, or apply any form of heat to CARC-coated metal until the paint has been removed from a 4-in. (102-mm) area surrounding the rework site. Substances may be released that cause skin or respiratory irritation if this is not done. Sand or grind the paint down to the base metal in the surrounding area and also remove any paint from the other side of the metal.

When sanding any paint, use the wet sanding method. Older paints may contain lead, chromates, or other toxic material. Using wet or dry sandpaper, wet down the area before starting. Keep the sandpaper wet as you sand to keep down paint dust.

HEADQUARTERS,
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 27 JUNE 2005

TECHNICAL MANUAL
UNIT MAINTENANCE MANUAL
FOR
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826
(EIC AQA)

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TABLE OF CONTENTS

Volume 2

WARNING SUMMARY	<u>WP Sequence No.</u>
CHAPTER 7 – UNIT MAINTENANCE INSTRUCTIONS	
Engine Generator, Cradle, Support, and Related Parts Maintenance Removal, Disassembly, Assembly, Installation .....	.0150 00
Master Relay Housing (Dual and Single Voltage) Replacement Removal, Installation .....	.0151 00
Engine Starter, Solenoid Relay, and Bracket Replacement Removal, Installation .....	.0152 00
Batteries, Battery Trays, and Terminal Maintenance Removal, Repair, Installation .....	.0153 00
Voltage Regulator and Related Parts (Dual Voltage) (11672403) Replacement Removal, Installation .....	.0154 00
Voltage Regulator and Related Parts (Single Voltage) (11659111-1) Replacement Removal, Installation .....	.0155 00
Engine and APU Armature Relay (Single Voltage) Replacement Removal, Installation .....	.0156 00
Gage Panel Assembly Maintenance Removal, Disassembly, Assembly, Installation .....	.0157 00
Electrical Accessories Panel Maintenance Removal, Disassembly, Assembly, Installation .....	.0158 00
Main Switch Panel Assembly Maintenance Removal, Disassembly, Assembly, Installation .....	.0159 00
Flasher System Panel and Related Parts Replacement Removal, Installation .....	.0160 00
Heater Control Box Replacement Removal, Installation .....	.0161 00
Switching Relay Box Assembly (Single Voltage Regulator) Maintenance Removal, Disassembly, Assembly, Calibration, Installation .....	.0162 00
Neutral Safety Switch Maintenance Removal, Disassembly, Assembly, Installation, Adjustment .....	.0163 00
Driver’s Passive Night Viewer Switch and Light and B.O. Receiver Switch and Light Maintenance Removal, Disassembly, Assembly, Installation .....	.0164 00
Fire Extinguisher Interlock Switch Assembly Maintenance Removal, Disassembly, Assembly, Installation .....	.0165 00
Power Control Lever Switch Maintenance Removal, Disassembly, Assembly, Installation ..	.0166 00
Mechanical Transmission Lubrication Oil Low Pressure Switch Replacement Removal, Installation .....	.0167 00
Transmission Oil Pressure Sending Unit, Oil Temperature Sending Unit and Switch Replacement Removal, Installation .....	.0168 00
External Vehicle Warning Horn Maintenance Removal, Disassembly, Assembly, Installation .....	.0169 00
Powerplant Warning Horn Maintenance Removal, Disassembly, Assembly, Installation .....	.0170 00
Engine Oil Temperature Sending Unit, Engine Oil Pressure Sending Unit, and Switches Replacement Removal, Installation .....	.0171 00
Stoplight Switch Replacement Removal, Installation .....	.0172 00
Rigger’s Service Light Switch Replacement Removal, Installation .....	.0173 00
Driver’s Headlight Dimmer Switch and Mounting Bracket Replacement Removal, Installation .....	.0174 00
Front Headlight Assembly Maintenance Removal, Disassembly, Assembly, Installation .....	.0175 00
Repair Rigger’s Service Light Maintenance Removal, Disassembly, Assembly, Installation .....	.0176 00
Front Signal Light Assembly Maintenance Removal, Disassembly, Assembly, Installation .....	.0177 00
Spare Headlight Mount Base Assembly Replacement Removal, Installation .....	.0178 00
Stoplight-Taillight Assemblies Maintenance Removal, Disassembly, Assembly, Installation .....	.0179 00

TABLE OF CONTENTS—Continued

Volume 2

	<u>WP Sequence No.</u>
Troublelight Assembly Replacement Removal, Installation.....	0180 00
Rigger’s Fixed Spotlight and Related Parts Maintenance Removal, Disassembly, Assembly, Installation.....	0181 00
High Beam Indicator Light Assembly Maintenance Removal, Disassembly, Assembly, Installation.....	0182 00
Dome Light Maintenance Removal, Disassembly, Assembly, Installation.....	0183 00
Winch Illumination Lamp Assembly Maintenance Removal, Disassembly, Assembly, Installation.....	0184 00
Generator Power Lead Assembly (11671357) Maintenance Removal, Disassembly, As- sembly, Installation.....	0185 00
Master Relay to Rectifier Lead Assembly (Single Voltage) (10866904) Maintenance Removal, Disassembly, Assembly, Installation.....	0186 00
Battery to Circuit Breaker Lead Assembly (11671811) Maintenance Removal, Disassem- bly, Assembly, Installation.....	0187 00
Starter Lead Assembly (10887570) Maintenance Removal, Disassembly, Assembly, Installation.....	0188 00
Module Starter Wiring Harness (11671792) Maintenance Removal, Disassembly, Assem- bly, Installation.....	0189 00
Batteries to Master Relay, Voltage Regulators, Slave Receptacle, and Engine Disconnect Wiring Harness (Dual Voltage) (11672413) Maintenance Removal, Disassembly, Assembly, Installation.....	0190 00
Batteries to Master Relay, Voltage Regulators, Slave Receptacle, and Engine Disconnect Wiring Harness (Single Voltage) (11671791) Maintenance Removal, Disassembly, Assembly, Installation.....	0191 00
Engine Voltage Regulator to Engine Disconnect Wiring Harness (Dual Voltage) (11672415) Maintenance Removal, Assembly, Disassembly, Installation.....	0192 00
Gage Panel Wiring Harness (12322586) Maintenance Removal, Disassembly, Assembly, Installation.....	0193 00
Gage Panel to Bulkhead Wiring Harness (Dual Voltage) (12322587) Maintenance Removal, Disassembly, Assembly, Installation.....	0194 00
Gage Panel to Bulkhead Wiring Harness (Single Voltage) (11671807) Maintenance Re- moval, Disassembly, Assembly, Installation.....	0195 00
Electrical Accessories Panel Wiring Harness (10944744) Maintenance Removal, Disas- sembly, Assembly, Installation.....	0196 00
Flasher System Panel Wiring Harness (11672373) Maintenance Removal, Disassembly, Assembly, Installation.....	0197 00
Fuel Shutoff Switch Panel Lead Assembly (11671227-2) Maintenance Removal, Disas- sembly, Assembly, Installation.....	0198 00
Fuel Pump Switch Panel Lead Assembly (11671227-3) Maintenance Removal, Disassem- bly, Assembly, Installation.....	0199 00
Fuel Gage Panel Lead Assembly (10866881) Maintenance Removal, Disassembly, Assem- bly, Installation.....	0200 00
Switch Panel to Headlights and Bulkhead Wiring Harness (11671568) Maintenance Removal, Disassembly, Assembly, Installation.....	0201 00
Switch Panel, Radio, and Bilge Pump to Bulkhead Wiring Harness (11671798) Mainte- nance Removal, Disassembly, Assembly, Installation.....	0202 00
Switch Panel to Neutral Safety to Bulkhead Wiring Harness (11671420) Maintenance Removal, Disassembly, Assembly, Installation.....	0203 00

TABLE OF CONTENTS—Continued

Volume 2

	<u>WP Sequence No.</u>
Switch Panel to Gage Panel and Miscellaneous Switches Wiring Harness (Passive Night Viewer) (Dual Voltage) (12322547) Maintenance Removal, Disassembly, Assembly, Installation.....	0204 00
Switch Panel to Gage Panel and Miscellaneous Switches Wiring Harness (Infrared Night Viewer) (Single Voltage) (11671795) Maintenance Removal, Disassembly, Assembly, Installation.....	0205 00
Starter Switch Wiring Harness (11671226) Maintenance Removal, Disassembly, Assembly, Installation.....	0206 00
Engine Wiring Harness (Dual Voltage) (11672416) Maintenance Removal, Disassembly, Assembly, Installation.....	0207 00
Engine Wiring Harness (Single Voltage) (11671816) Maintenance Removal, Disassembly, Assembly, Installation.....	0208 00
Engine Disconnect to Pressure Switch Wiring Harness (12314651) Maintenance Removal, Disassembly, Assembly, Installation.....	0209 00
Engine Disconnect to Starter Wiring Harness (Dual Voltage) (12314745) Maintenance Removal, Disassembly, Assembly, Installation.....	0210 00
Engine Disconnect to Engine Generator Relay Lead (Single Voltage) (11671362) Maintenance Removal, Disassembly, Assembly, Installation.....	0211 00
Engine Disconnect Ground Lead Assembly (12322589) Maintenance Removal, Disassembly, Assembly, Installation.....	0212 00
Headlight Base Wiring Harness and Related Parts (7972352) Maintenance Removal, Disassembly, Assembly, Installation.....	0213 00
Headlight and Dimmer Switch Wiring Harness (10866950) Maintenance Removal, Disassembly, Assembly, Installation.....	0214 00
Red Flasher Breaker to Switch Wiring Harness (11672371) Maintenance Removal, Disassembly, Assembly, Installation.....	0215 00
Turn Signal Flasher Wiring Harness (11672273) Maintenance Removal, Disassembly, Assembly, Installation.....	0216 00
B.O. Selector Lead Assembly (10911920) Maintenance Removal, Disassembly, Assembly, Installation.....	0217 00
Main Lighting and B.O. Selector Switch Wiring Harness (11671796) Maintenance Removal, Disassembly, Assembly, Installation.....	0218 00
Main Lighting and Master Relay Wiring Harness (10866909) Maintenance Removal, Disassembly, Assembly, Installation.....	0219 00
Bulkhead to Master Relay and Left and Right Taillight Wiring Harness (11671813) Maintenance Removal, Disassembly, Assembly, Installation.....	0220 00
Bulkhead to Engine Wiring Harness and Starter Relay Wiring Harness (11671790) Maintenance Removal, Disassembly, Assembly, Installation.....	0221 00
Bulkhead to Engine Bracket and Rear Fuel Tank Transmitter Wiring Harness (Dual Voltage) (12322588) Maintenance Removal, Disassembly, Assembly, Installation.....	0222 00
Bulkhead to Engine Bracket and Rear Fuel Tank Transmitter Wiring Harness (Single Voltage) (11671789) Maintenance Removal, Disassembly, Assembly, Installation.....	0223 00
Bulkhead to APU, Master Relay, and Rigger's Lights Wiring Harness (Dual Voltage) (11672412) Maintenance Removal, Disassembly, Assembly, Installation.....	0224 00
Bulkhead to APU, Master Relay, and Rigger's Lights Wiring Harness (Single Voltage) (11671324) Maintenance Removal, Disassembly, Assembly, Installation.....	0225 00
Bulkhead Rear Slave Receptacle Wiring Harness (10894850-4) Maintenance Removal, Disassembly, Assembly, Installation.....	0226 00

TABLE OF CONTENTS—Continued

Volume 2

	<u>WP Sequence No.</u>
APU Wiring Harness (11672417) Maintenance Removal, Disassembly, Assembly, Installation.....	0227 00
APU Control Box to Foot Dimmer Switch and Bulkhead Wiring Harness (Dual Voltage) (11672466) Maintenance Removal, Disassembly, Assembly, Installation.....	0228 00
APU Control Box to Foot Dimmer Switch and Bulkhead Wiring Harness (Single Voltage) (11671799) Maintenance Removal, Disassembly, Assembly, Installation.....	0229 00
APU and Engine Generator Relays to Voltage Regulator Wiring Harness (Single Voltage) (11671793) Maintenance Removal, Disassembly, Assembly, Installation.....	0230 00
Air Cleaner Circuit Breaker Lead Assembly (11671794) Maintenance Removal, Disassembly, Assembly, Installation.....	0231 00
Bilge Pump and Generator Cutout Switch Lead (10945007) Maintenance Removal, Disassembly, Assembly, Installation.....	0232 00
Bilge Pump Main Power Wiring Harness (10945008) Maintenance Removal, Disassembly, Assembly, Installation.....	0233 00
Bilge Pump Circuit Breaker to Switch Panel Lead (10894546) Maintenance Removal, Disassembly, Assembly, Installation.....	0234 00
Bilge Pump Lead Relay Wiring Harness and Cap (10894548) Maintenance Removal, Disassembly, Assembly, Installation.....	0235 00
Heater Control Box to Heater Wiring Harness (11671353) Maintenance Removal, Disassembly, Assembly, Installation.....	0236 00
Hydraulic Oil Temperature Transmitter Housing Assembly Wiring Harness (11672366) Maintenance Removal, Disassembly, Assembly, Installation.....	0237 00
Diode Lead Assembly (12322604) Maintenance Removal, Disassembly, Assembly, Installation.....	0238 00
Engine Disconnect to Starter Ground Wiring Harness (Single Voltage) (11671356) Maintenance Removal, Disassembly, Assembly, Installation.....	0239 00
M239 Smoke Grenade Launcher System Wiring Harness (Single Voltage) (11672299) Maintenance Removal, Disassembly, Assembly, Installation.....	0240 00
Power Switch Box Assembly for M239 Smoke Grenade Launcher Wiring Harness (11672315) Maintenance Removal, Disassembly, Assembly, Installation.....	0241 00
Driver's Vehicle Exhaust Smoke Bracket to Bulkhead Connection Wiring Harness (11672382) Maintenance Removal, Disassembly, Assembly, Installation.....	0242 00
Commander's Switch Plate to Driver's Vehicle Exhaust Smoke Bracket (11372387) Maintenance Removal, Disassembly, Assembly, Installation.....	0243 00
Fuel Solenoid Wiring Harness (11672386) Maintenance Removal, Disassembly, Assembly, Installation.....	0244 00
Fuel/Water Separator Control Module to Solenoid Drain Valve Wiring Harness (11684127) Maintenance Removal, Disassembly, Assembly, Installation.....	0245 00
Exhaust Smoke Generating System Lead Assembly (11672385) Maintenance Removal, Disassembly, Assembly, Installation.....	0246 00
Smoke Generating System Lead Assembly (11672473-1) Maintenance Removal, Disassembly, Assembly, Installation.....	0247 00
Smoke Generating System Lead Assembly (11672473-2) Maintenance Removal, Disassembly, Assembly, Installation.....	0248 00
Driver's Periscope to Infrared Power Supply (Single Voltage) (10866967) Maintenance Removal, Disassembly, Assembly, Installation.....	0249 00
Ventilator Blower Assembly Replacement Removal, Installation.....	0250 00

TABLE OF CONTENTS—Continued

Volume 2

	<u>WP Sequence No.</u>
Bilge Pump Power Lead Relay, Mounting Plate, and Circuit Breaker Replacement Removal, Installation.....	0251 00
Fuel Injection Pump, Fuel Shutoff Solenoid, Lead, and Related Parts Replacement Removal, Installation.....	0252 00
Dummy Connector Assembly (Infrared and Passive Night Viewer) Replacement Removal, Installation.....	0253 00
Electrical Kit for M239 Smoke Grenade Launcher Discharger Feed Through Cable Assemblies (11672298-1 and 11672298-2) Replacement Removal, Installation.....	0254 00
Cable, Wire, Receptacle, and Plug Identifier Repair.....	0255 00
Terminal-Type Cable Connector Repair.....	0256 00
Male Cable Connector Repair.....	0257 00
Female Cable Connector (with Sleeve) Repair.....	0258 00
Typical Female-Type Panel Mounting Receptacle Repair Disassembly, Assembly.....	0259 00
Typical Male-Type Panel Mounting Receptacle Repair Disassembly, Assembly.....	0260 00
Typical Female-Type Panel Mounting Receptacle (with Ridged Locking Nut) Repair Disassembly, Assembly.....	0261 00
Typical Male-Type Panel Mounting Receptacle (with Ridged Locking Nut) Repair Disassembly, Assembly.....	0262 00
Typical Female-Type Plug Repair Disassembly, Assembly.....	0263 00
Typical Male-Type Plug Repair Disassembly, Assembly.....	0264 00
 CHAPTER 8 – UNIT MAINTENANCE INSTRUCTIONS	
Transmission Actuating Brake Air Valve Linkage Maintenance Removal, Installation, Adjustment.....	0265 00
Transmission Oil Filter Maintenance Removal, Service, Installation.....	0266 00
Transmission Roller Bracket Assembly Replacement Removal, Installation.....	0267 00
Transmission Torque Converter Drain Plugs Replacement Removal, Installation.....	0268 00
Transmission Gage Rod Replacement Removal, Installation.....	0269 00
Transmission Breather Assembly and Line Replacement Removal, Installation.....	0270 00
Transmission Oil Cooler Lines and Sampling Valve Replacement Removal, Installation.....	0271 00
Transmission Saddle Seals Replacement Removal, Installation.....	0272 00
Transmission Output Reduction Drives and Drive Couplings Replacement Removal, Installation.....	0273 00
 CHAPTER 9 – UNIT MAINTENANCE INSTRUCTIONS	
Roadwheel Replacement Removal, Installation.....	0274 00
Torsion Bar and Torsion Bar Anchors Replacement Removal, Installation.....	0275 00
Roadwheel Arm Assembly Replacement Removal, Installation.....	0276 00
Roadwheel Hub Assembly Maintenance Removal, Cleaning, Inspection, Installation.....	0277 00
Roadwheel Support Housing Replacement Removal, Installation.....	0278 00
Track Support Roller, Bracket, and Wheel Maintenance Removal, Disassembly, Cleaning, Inspection, Assembly, Installation.....	0279 00
Left Front Track Support Roller, Bracket, and Wheel Maintenance Removal, Disassembly, Cleaning, Inspection, Assembly, Installation.....	0280 00
Compensating Idler Arm Assembly Wheels, Hub Assembly, Links, and Link Bearings Replacement Removal, Installation.....	0281 00
Compensating Idler and Arm Assembly Maintenance Removal, Cleaning, Inspection, Installation.....	0282 00

TABLE OF CONTENTS—Continued

Volume 2

	<u>WP Sequence No.</u>
Final Drive Sprocket and Hub Replacement Removal, Installation	0283 00
Bumper Springs and Brackets Maintenance Removal, Disassembly, Assembly, Installation.....	0284 00
Shock Absorbers Replacement Removal, Installation.....	0285 00
 CHAPTER 10 – UNIT MAINTENANCE INSTRUCTIONS	
Right-Front Access Floor Plate Replacement Removal, Installation	0286 00
Right-Front Floor Plate Rear Access Replacement Removal, Installation.....	0287 00
Hydraulic Valve Forward Right Floor Plate Replacement Removal, Installation.....	0288 00
U-35 Winch Center Right Floor Plate Replacement Removal, Installation.....	0289 00
Intermediate Rear Right Floor Plate Replacement Removal, Installation	0290 00
Rear Right-Side Floor Plate Replacement Removal, Installation.....	0291 00
Hydraulic Connections Access Cover Replacement Removal, Installation	0292 00
Rear Intermediate Right Floor Plate Replacement Removal, Installation	0293 00
Rear Intermediate Right Access Cover Replacement Removal, Installation.....	0294 00
Rear Intermediate Right Access Floor Plate Replacement Replacement, Installation.....	0295 00
Hydraulic Line Intermediate Rear Right Center Floor Plate Replacement Removal, Instal- lation.....	0296 00
Rear Center Floor Plate Maintenance Removal, Disassembly, Assembly, Installation.....	0297 00
Rear Left-Side Intermediate Floor Plate Replacement Removal, Installation.....	0298 00
Fuel Transmitter Center Left Floor Access Plate Replacement Removal, Installation.....	0299 00
Rear Left-Side Floor Plate Replacement Removal, Installation.....	0300 00
Intermediate Rear Left-Side Floor Plate Replacement Removal, Installation.....	0301 00
Intermediate Rear Left-Center Floor Plate Replacement Removal, Installation	0302 00
Center Rear Floor Plate Replacement Removal, Installation	0303 00
Center Forward Floor Plate Replacement Removal, Installation	0304 00
Intermediate Rear Left Access Floor Plate Replacement Removal, Installation	0305 00
Stowage Basket Forward Intermediate Left Floor Plate Maintenance Removal, Disassem- bly, Assembly, Installation.....	0306 00
Floor and Light Mount Plate Maintenance Removal, Disassembly, Assembly, Installation ..	0307 00
Hydraulic Valve Forward Intermediate Right Floor Plate Replacement Removal, Installa- tion.....	0308 00
Front Subfloor Support Replacement Removal, Installation.....	0309 00
Center and Rear Subfloor Support Replacement Removal, Installation.....	0310 00
Fenders and Related Parts Replacement Removal, Installation.....	0311 00
Commander’s Cupola Assembly Maintenance Removal, Disassembly, Assembly, Installa- tion.....	0312 00
Driver’s Cab-Top Door and Related Parts Maintenance Removal, Disassembly, Assembly, Installation.....	0313 00
Mechanic’s Cab-Top Door and Related Parts Maintenance Removal, Disassembly, Assem- bly, Installation.....	0314 00
Rigger’s Cab-Top Door and Related Parts Maintenance Removal, Disassembly, Assembly, Installation.....	0315 00
Wire Rope Roller Access Door Replacement Removal, Installation.....	0316 00
Left and Right Stowage Compartment Doors Replacement Removal, Installation.....	0317 00
Left and Right Personnel Doors Replacement Removal, Installation.....	0318 00
Fuel Tank Filler Access Cover Replacement Replacement, Installation	0319 00
Bilge Pump Outlet Cover Replacement Removal, Installation.....	0320 00
Left- and Right-Side Air Cleaner Inlet Covers Replacement Removal, Installation	0321 00

TABLE OF CONTENTS—Continued

Volume 2

	<u>WP Sequence No.</u>
Left and Right Personnel Step Assemblies Replacement Removal, Installation	0322 00
Passive Night Viewer Mount and Related Parts Maintenance Removal, Disassembly, Assembly, Installation	0323 00
Infrared Power Supply Replacement Removal, Installation.....	0324 00
Periscope Quick-Release Mount (Infrared Night Viewer) Replacement Removal, Installa- tion.....	0325 00
Driver’s and Rigger’s Periscope Blocks and Vision Prisms Replacement Removal, Installa- tion.....	0326 00
Mechanic’s Periscope Block and Vision Prisms Replacement Removal, Installation.....	0327 00
Towing Pintle and Mount Maintenance Removal, Disassembly, Cleaning, Inspection, Assembly, Installation	0328 00
Boom Support and Related Parts Maintenance Removal, Installation, Adjustment.....	0329 00
Transmission Guide Bars Replacement Removal, Installation.....	0330 00
Antenna Base Covers Replacement Removal, Installation.....	0331 00
Acetylene Hose Adapter Replacement Removal, Installation.....	0332 00
Battery Tray Cleaning Tubes Replacement Removal, Installation.....	0333 00
APU Access Cover Assembly Replacement Removal, Installation.....	0334 00
APU Access Door Replacement Removal, Installation.....	0335 00
Engine Deck, Deck Base, and Related Parts Maintenance Removal, Disassembly, Assem- bly, Installation	0336 00
Right Engine Deck Door Maintenance Removal, Disassembly, Assembly, Installation	0337 00
Clamp Assembly Replacement Removal, Installation	0338 00
Insulation Retainer Replacement Removal, Installation	0339 00
Engine Transmission Access Doors Maintenance Removal, Disassembly, Assembly, Installation.....	0340 00
Air Inlet Doors Replacement Removal, Installation.....	0341 00
Left- and Center-Front Air Inlet Grilles Replacement Removal, Installation.....	0342 00
Deep Water Fording Exhaust Cover Plates Replacement Removal, Installation.....	0343 00
Exhaust Deflector Replacement Removal, Installation.....	0344 00
Left and Right Deck Air Inlet Doors Replacement Removal, Installation.....	0345 00
Left and Right Exhaust Doors Replacement Removal, Installation.....	0346 00
Center Exhaust Doors Replacement Removal, Installation.....	0347 00
Nonslip Walkway Coating Service.....	0348 00
Personnel Seat Assemblies Maintenance Removal, Disassembly, Assembly, Installation.....	0349 00
Commander’s Seat Assembly Maintenance Removal, Disassembly, Inspection, Repair, Assembly, Installation	0350 00
Rigger’s Seat Assembly Maintenance Removal, Disassembly, Inspection, Repair, Assem- bly, Installation	0351 00
Mechanic’s and Driver’s Seat Assemblies Maintenance Removal, Disassembly, Inspection, Repair, Assembly, Installation.....	0352 00
Drain Valves Maintenance Removal, Disassembly, Inspection, Assembly, Installation	0353 00
Drain Valve Controls Maintenance Removal, Inspection, Repair, Installation.....	0354 00
Drain Covers Replacement Removal, Installation.....	0355 00
Mechanical Tachometer and Speedometer Flexible Shafts and Fittings Maintenance Removal, Cleaning, Inspection, Installation.....	0356 00
Steering Controls and Linkages Maintenance Removal, Disassembly, Assembly, Installa- tion.....	0357 00
Steering Controls and Linkages Alignment.....	0358 00

TABLE OF CONTENTS—Continued

Volume 2

	<u>WP Sequence No.</u>
Steering Control Assembly Maintenance Removal, Disassembly, Assembly, Installation.....	0359 00
Steering Control Housing Assembly Maintenance Removal, Disassembly, Assembly, Installation.....	0360 00
Shifting Controls and Linkages Maintenance Removal, Disassembly, Assembly, Installation.....	0361 00
Shifting Controls and Linkages Alignment Alignment, Adjustment.....	0362 00
Accelerator Controls and Linkages Maintenance Removal, Disassembly, Cleaning, Inspection, Repair, Assembly, Installation.....	0363 00
Accelerator Controls and Linkages Alignment Alignment, Adjustment.....	0364 00
Brake Controls and Linkages Maintenance Removal, Disassembly, Assembly, Installation, Alignment, Adjustment.....	0365 00
Brake Pedal and Bracket Assembly Maintenance Removal, Disassembly, Assembly, Installation.....	0366 00
Brake Cam Assembly Maintenance Removal, Disassembly, Assembly, Installation.....	0367 00
Bearing Unit Housing Assembly Maintenance Removal, Disassembly, Assembly, Installation.....	0368 00
Plate Assembly Maintenance Removal, Disassembly, Assembly, Installation.....	0369 00
Lever Assembly Maintenance Disassembly, Assembly.....	0370 00
Linkage Roller Plates Replacement Removal, Installation.....	0371 00
Vise Mounting Hardware and Adapter Plate Replacement Removal, Installation.....	0372 00
Decontamination Apparatus Bracket Assembly Replacement Removal, Installation.....	0373 00
Tow Bar Assembly, Tow Bar Mounting Brackets, and Tow Chain Mounting Brackets Maintenance Removal, Disassembly, Assembly, Installation.....	0374 00
Bracket Assemblies For Side Tow Bar and Side Tow Cables Maintenance Removal, Disassembly, Assembly, Installation.....	0375 00
Tarpaulin Tray Replacement Removal, Installation.....	0376 00
10-Ton Snatch Block and Track Link Retainers Replacement Removal, Installation.....	0377 00
25-Ton Snatch Block Retainer Replacement Removal, Installation.....	0378 00
Oxygen Tank Strap Assemblies Replacement Removal, Installation.....	0379 00
Pioneer Tool Set Bracket Maintenance Removal, Disassembly, Assembly, Installation.....	0380 00
Roadwheel, Support Wheel, and Sprocket Attaching Hardware Replacement Removal, Installation.....	0381 00
Stowage Basket Replacement Removal, Installation.....	0382 00
Passive Night Viewer Stowage Box, Hand Grenade Boxes and Machine Gun and Rifle Holders Replacement Removal, Installation.....	0383 00
Hand Fire Extinguisher Brackets Replacement Removal, Installation.....	0384 00
Rocket Ammunition Stowage Box Assembly Replacement Removal, Installation.....	0385 00
Caliber .50 Ammunition Rack and Track Wrench Bracket Maintenance Removal, Disassembly, Assembly, Installation.....	0386 00
Acetylene and Compartment Door Hardware and Related Parts Replacement Removal, Installation.....	0387 00
Flasher Light Case Replacement Removal, Installation.....	0388 00
Toolbox Rack Replacement Removal, Installation.....	0389 00
Oddment Tray, Left Side Replacement Removal, Installation.....	0390 00
Caliber .50 Stowage Strap Replacement Removal, Installation.....	0391 00
Liquid Container Brackets Replacement Removal, Installation.....	0392 00
M72 LAW Rocket Launcher Brackets Maintenance Removal, Disassembly, Assembly, Installation.....	0393 00

TABLE OF CONTENTS—Continued

Volume 2

	<u>WP Sequence No.</u>
Interior and Exterior Straps Replacement Removal, Installation	0394 00
Vehicle ID Plate Replacement Removal, Installation	0395 00
CHAPTER 11 – UNIT MAINTENANCE INSTRUCTIONS	
Personnel Heater Replacement Removal, Installation	0396 00
Personnel Heater and APU Air Intake Water Deflector Replacement Removal, Installation	0397 00
Personnel Heater Fuel Pump Replacement Removal, Installation	0398 00
Personnel Heater Fuel Filter Replacement Removal, Installation	0399 00
Fixed Fire Extinguisher Cylinders Maintenance Removal, Inspection, Installation	0400 00
Fixed Fire Extinguisher Cylinder Controls Maintenance Removal, Inspection, Installation	0401 00
Fixed Fire Extinguisher System Controls and Linkages Maintenance Removal, Installation, Adjustment	0402 00
Fixed Fire Extinguisher System Lines and Nozzles Replacement Removal, Installation	0403 00
CHAPTER 12 – UNIT MAINTENANCE INSTRUCTIONS	
Main Winch Level Winder Cylinder Adjustment	0404 00
Main Winch Brake Band Adjustment	0405 00
Main Winch Manual Control and Linkage Replacement Removal, Installation	0406 00
Main Winch Controls and Hoses Replacement Removal, Installation	0407 00
Main Winch Cable Replacement Removal, Installation	0408 00
Hoist Winch Hose and Cable Assembly Replacement Removal, Installation	0409 00
Hoist Winch Brake Band Adjustment	0410 00
Hoist Winch Manual Control and Linkage Replacement Removal, Installation	0411 00
Wire Rope Shield Replacement Removal, Installation	0412 00
Wire Rope Roller Housing and Bearing Maintenance Removal, Disassembly, Assembly, Installation	0413 00
Hoisting Boom, Cylinders, and Related Parts Maintenance Removal, Installation, Inspec- tion	0414 00
Stayline Cylinder Limit Valve Adjustment	0415 00
CHAPTER 13 – UNIT MAINTENANCE INSTRUCTIONS	
Mechanical Transmission and Hydraulic Pump Hydraulic Lines and Fittings Replacement Removal, Installation	0416 00
Hydraulic Lines and Fittings Replacement Removal, Installation	0417 00
Hydraulic Connecting Panel Replacement Removal, Installation	0418 00
Fuel Transfer Pump and Flow Regulator Replacement Removal, Installation	0419 00
Hydraulic System Oil Filter Maintenance Removal, Disassembly, Assembly, Installation	0420 00
External Hydraulic Reservoir Components Replacement Removal, Installation	0421 00
Hydraulic Drain Valve and Related Parts Replacement Removal, Installation	0422 00
Hydraulic Subplate ID Plate Replacement Removal, Installation	0423 00
Hydraulic Oil Reservoir Strainer Replacement Removal, Installation	0424 00
Oil Temperature Transmitter and Switch Housing Assembly Maintenance Removal, Disassembly, Assembly, Installation	0425 00
Mechanical Transmission ID Plate Replacement Removal, Installation	0426 00
Mechanical Transmission Breather and Oil Level Gage Maintenance Removal, Disassem- bly, Assembly, Installation	0427 00
Spade Release and Lubrication Line (Hydraulic Spade Release) Replacement Removal, Installation	0428 00

TABLE OF CONTENTS—Continued

Volume 2

	<u>WP Sequence No.</u>
Spade Cable Lubrication Line (Manual Spade Release) Replacement Removal, Installation.....	0429 00
Spade Release Lubrication Fitting Replacement Removal, Installation.....	0430 00
Spade Cylinder Hoses Replacement Removal, Installation.....	0431 00
 CHAPTER 14 – UNIT MAINTENANCE INSTRUCTIONS	
APU Pressure Switch Assembly Replacement Removal, Installation.....	0432 00
Engine Air Cleaner, Filter, and Air Intake Tubes Maintenance Removal, Service, Installation.....	0433 00
APU Cooling Air Exhaust Replacement Removal, Installation.....	0434 00
APU Engine Crankcase Fill-and-Level ID Plate Replacement Removal, Installation.....	0435 00
APU Engine Fuel Filters Replacement Removal, Installation.....	0436 00
APU Engine Oil Filter Replacement Removal, Installation.....	0437 00
APU Control Box Maintenance Removal, Disassembly, Assembly, Installation.....	0438 00
 CHAPTER 15 – UNIT MAINTENANCE INSTRUCTIONS	
M8A3 Filter Unit System Maintenance Removal, Disassembly, Assembly, Installation, Test.....	0439 00
M8A3 Filter Unit M2A2 Air Purifier Maintenance Removal, Disassembly, Assembly, Installation.....	0440 00
M8A3 Filter Unit Switch Assembly Maintenance Removal, Disassembly, Assembly, Installation.....	0441 00
 CHAPTER 16 – UNIT MAINTENANCE INSTRUCTIONS	
M239 Launcher Power Switch Box Assembly Maintenance Removal, Disassembly, Assembly, Installation.....	0442 00
M239 Launcher Dischargers Replacement Removal, Installation.....	0443 00
M239 Launcher Stowage Boxes Replacement Removal, Installation.....	0444 00
 CHAPTER 17 – UNIT MAINTENANCE INSTRUCTIONS	
Exhaust Smoke Generating System Solenoid Valve Assemblies and Bracket Replacement Removal, Installation.....	0445 00
Exhaust Smoke Generating System Fuel Tube Assemblies Replacement Removal, Installation.....	0446 00
Exhaust Smoke Generating System Fuel Shutoff Valve Assembly Replacement Removal, Installation.....	0447 00
Exhaust Smoke Generating System Driver’s Bracket and Switch Assembly Maintenance Removal, Disassembly, Assembly, Installation.....	0448 00
Exhaust Smoke Generating System Commander’s Plate and Switch Assembly Maintenance Removal, Disassembly, Assembly, Installation.....	0449 00
 CHAPTER 18 – UNIT MAINTENANCE INSTRUCTIONS	
Stoptlight and Covers Maintenance Removal, Disassembly, Assembly, Installation.....	0450 00
Reflectors and Mounting Plates Replacement Removal, Installation.....	0451 00
Flasher Assembly and Related Parts Replacement Removal, Installation.....	0452 00
Directional Signal Control and Mount Assembly Replacement Removal, Installation.....	0453 00
Mirror and Mount Assemblies Replacement Removal, Installation.....	0454 00
Front Directional Signal Lamps and Related Parts Replacement Removal, Installation.....	0455 00
Directional Signal Control Wiring Harness (12322611) Maintenance Removal, Disassembly, Assembly, Installation.....	0456 00

TABLE OF CONTENTS—Continued

Volume 2

	<u>WP Sequence No.</u>
Right Tail Lamp to Left Tail Lamp To Bulkhead Wiring Harness (12322613) Maintenance Removal, Disassembly, Assembly, Installation.....	0457 00
Flasher Wiring Harness (12322612) Maintenance Removal, Disassembly, Assembly, Installation.....	0458 00
Directional Signal Control to Bulkhead Wiring Harness (12322614) Maintenance Removal, Disassembly, Assembly, Installation.....	0459 00
Main Lighting Switch Panel Wire Assemblies (12322615-1 and 12322615-2) Maintenance Removal, Disassembly, Assembly, Installation.....	0460 00
Headlight Base Assembly to Headlight and Dimmer Switch Wiring Harness (12322668) Maintenance Removal, Disassembly, Assembly, Installation.....	0461 00
Directional Signal Wiring Harness (12322660) Maintenance Removal, Disassembly, Assembly, Installation.....	0462 00
Directional Signal/Directional Signal Lamp Wire Assemblies (12322648) Maintenance Removal, Disassembly, Assembly, Installation.....	0463 00
Directional Signal Lamp Wire Assembly (12322658) Maintenance Removal, Disassembly, Assembly, Installation.....	0464 00
 CHAPTER 19 – UNIT MAINTENANCE INSTRUCTIONS	
Pre-Installation Procedures.....	0465 00
APU Installation.....	0466 00
Engine Generator Cooling Exhaust Installation.....	0467 00
Engine Exhaust Pipe Supports Installation.....	0468 00
Engine Air Inlet Pipes Installation.....	0469 00
Fuel Tank Vent Installation.....	0470 00
Acetylene Vent Installation.....	0471 00
Crew Fan and Boom Boot Drain Shutoff Clamp Installation.....	0472 00
Bilge Pump Installation.....	0473 00
Fire Extinguisher Nozzles and Electrical Connections in Engine Compartment Installation.....	0474 00
Exterior Fire Extinguisher Remote Control.....	0475 00
Other Applications of Caulking Compound.....	0476 00
Armament Protection.....	0477 00
Sealing Inspection.....	0478 00
Operations During Deep Water Fording.....	0479 00
Operations After Deep Water Fording.....	0480 00
Service After Deep Water Fording.....	0481 00
 CHAPTER 20 – UNIT MAINTENANCE INSTRUCTIONS	
Decal Markings Replacement Removal, Installation.....	0482 00
Preparation for Storage and Shipment.....	0483 00
Illustrated List of Manufactured Items.....	0484 00
Torque Limits.....	0485 00
 CHAPTER - 21 – UNIT SUPPORTING INFORMATION	
References.....	0486 00
Introduction to Maintenance Allocation Chart (MAC).....	0487 00
Maintenance Allocation Chart (MAC).....	0488 00
Expendable and Durable Items List.....	0489 00
Tool Identification List.....	0490 00

TABLE OF CONTENTS—Continued

Volume 2

	<u>WP Sequence No.</u>
Mandatory Replacement Parts List.....	0491 00
INDEX.....	INDEX-1
FOLDOUTS.....	FO-1

CHAPTER 7
UNIT MAINTENANCE
MAINTENANCE INSTRUCTIONS
FOR
ELECTRICAL SYSTEMS AND CIRCUITS
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
(NSN: 2350-00-122-6826)

CHAPTER 7
UNIT MAINTENANCE
MAINTENANCE INSTRUCTIONS

WORK PACKAGE INDEX

Title	WP Sequence No.
Engine Generator, Cradle, Support, and Related Parts Maintenance Removal, Disassembly, Assembly, Installation.....	0150 00
Master Relay Housing (Dual and Single Voltage) Replacement Removal, Installation.....	0151 00
Engine Starter, Solenoid Relay, and Bracket Replacement Removal, Installation.....	0152 00
Batteries, Battery Trays, and Terminal Maintenance Removal, Repair, Installation.....	0153 00
Voltage Regulator and Related Parts (Dual Voltage) (11672403) Replacement Removal, Installation.....	0154 00
Voltage Regulator and Related Parts (Single Voltage) (11659111-1) Replacement Removal, Installation.....	0155 00
Engine and APU Armature Relay (Single Voltage) Replacement Removal, Installation.....	0156 00
Gage Panel Assembly Maintenance Removal, Disassembly, Assembly, Installation.....	0157 00
Electrical Accessories Panel Maintenance Removal, Disassembly, Assembly, Installation.....	0158 00
Main Switch Panel Assembly Maintenance Removal, Disassembly, Assembly, Installation.....	0159 00
Flasher System Panel and Related Parts Replacement Removal, Installation.....	0160 00
Heater Control Box Replacement Removal, Installation.....	0161 00
Switching Relay Box Assembly (Single Voltage Regulator) Maintenance Removal, Disassembly, Assembly, Calibration, Installation.....	0162 00
Neutral Safety Switch Maintenance Removal, Disassembly, Assembly, Installation, Adjustment	0163 00
Driver's Passive Night Viewer Switch and Light and B.O. Receiver Switch and Light Maintenance Removal, Disassembly, Assembly, Installation.....	0164 00
Fire Extinguisher Interlock Switch Assembly Maintenance Removal, Disassembly, Assembly, Installation.....	0165 00
Power Control Lever Switch Maintenance Removal, Disassembly, Assembly, Installation.....	0166 00
Mechanical Transmission Lubrication Oil Low Pressure Switch Replacement Removal, Installation.....	0167 00
Transmission Oil Pressure Sending Unit, Oil Temperature Sending Unit and Switch Replacement Removal, Installation.....	0168 00
External Vehicle Warning Horn Maintenance Removal, Disassembly, Assembly, Installation.....	0169 00
Powerplant Warning Horn Maintenance Removal, Disassembly, Assembly, Installation.....	0170 00
Engine Oil Temperature Sending Unit, Engine Oil Pressure Sending Unit, and Switches Replacement Removal, Installation.....	0171 00
Stoplight Switch Replacement Removal, Installation.....	0172 00
Rigger's Service Light Switch Replacement Removal, Installation.....	0173 00
Driver's Headlight Dimmer Switch and Mounting Bracket Replacement Removal, Installation.....	0174 00
Front Headlight Assembly Maintenance Removal, Disassembly, Assembly, Installation.....	0175 00
Repair Rigger's Service Light Maintenance Removal, Disassembly, Assembly, Installation.....	0176 00
Front Signal Light Assembly Maintenance Removal, Disassembly, Assembly, Installation.....	0177 00
Spare Headlight Mount Base Assembly Replacement Removal, Installation.....	0178 00
Stoplight-Taillight Assemblies Maintenance Removal, Disassembly, Assembly, Installation.....	0179 00
Troublelight Assembly Replacement Removal, Installation.....	0180 00
Rigger's Fixed Spotlight and Related Parts Maintenance Removal, Disassembly, Assembly, Installation.....	0181 00
High Beam Indicator Light Assembly Maintenance Removal, Disassembly, Assembly, Installation.....	0182 00
Dome Light Maintenance Removal, Disassembly, Assembly, Installation.....	0183 00
Winch Illumination Lamp Assembly Maintenance Removal, Disassembly, Assembly, Installation.....	0184 00
Generator Power Lead Assembly (11671357) Maintenance Removal, Disassembly, Assembly, Installation.....	0185 00

CHAPTER 7
UNIT MAINTENANCE
MAINTENANCE INSTRUCTIONS

WORK PACKAGE INDEX—Continued

<u>Title</u>	<u>WP Sequence No.</u>
Master Relay to Rectifier Lead Assembly (Single Voltage) (10866904) Maintenance Removal, Disassembly, Assembly, Installation.....	0186 00
Battery to Circuit Breaker Lead Assembly (11671811) Maintenance Removal, Disassembly, Assembly, Installation.....	0187 00
Starter Lead Assembly (10887570) Maintenance Removal, Disassembly, Assembly, Installation.....	0188 00
Module Starter Wiring Harness (11671792) Maintenance Removal, Disassembly, Assembly, Installation.....	0189 00
Batteries to Master Relay, Voltage Regulators, Slave Receptacle, and Engine Disconnect Wiring Harness (Dual Voltage) (11672413) Maintenance Removal, Disassembly, Assembly, Installation.....	0190 00
Batteries to Master Relay, Voltage Regulators, Slave Receptacle, and Engine Disconnect Wiring Harness (Single Voltage) (11671791) Maintenance Removal, Disassembly, Assembly, Installation.....	0191 00
Engine Voltage Regulator to Engine Disconnect Wiring Harness (Dual Voltage) (11672415) Maintenance Removal, Assembly, Disassembly, Installation.....	0192 00
Gage Panel Wiring Harness (12322586) Maintenance Removal, Disassembly, Assembly, Installation.....	0193 00
Gage Panel to Bulkhead Wiring Harness (Dual Voltage) (12322587) Maintenance Removal, Disassembly, Assembly, Installation.....	0194 00
Gage Panel to Bulkhead Wiring Harness (Single Voltage) (11671807) Maintenance Removal, Disassembly, Assembly, Installation.....	0195 00
Electrical Accessories Panel Wiring Harness (10944744) Maintenance Removal, Disassembly, Assembly, Installation.....	0196 00
Flasher System Panel Wiring Harness (11672373) Maintenance Removal, Disassembly, Assembly, Installation.....	0197 00
Fuel Shutoff Switch Panel Lead Assembly (11671227-2) Maintenance Removal, Disassembly, Assembly, Installation.....	0198 00
Fuel Pump Switch Panel Lead Assembly (11671227-3) Maintenance Removal, Disassembly, Assembly, Installation.....	0199 00
Fuel Gage Panel Lead Assembly (10866881) Maintenance Removal, Disassembly, Assembly, Installation.....	0200 00
Switch Panel to Headlights and Bulkhead Wiring Harness (11671568) Maintenance Removal, Disassembly, Assembly, Installation.....	0201 00
Switch Panel, Radio, and Bilge Pump to Bulkhead Wiring Harness (11671798) Maintenance Removal, Disassembly, Assembly, Installation.....	0202 00
Switch Panel to Neutral Safety to Bulkhead Wiring Harness (11671420) Maintenance Removal, Disassembly, Assembly, Installation.....	0203 00
Switch Panel to Gage Panel and Miscellaneous Switches Wiring Harness (Passive Night Viewer) (Dual Voltage) (12322547) Maintenance Removal, Disassembly, Assembly, Installation.....	0204 00
Switch Panel to Gage Panel and Miscellaneous Switches Wiring Harness (Infrared Night Viewer) (Single Voltage) (11671795) Maintenance Removal, Disassembly, Assembly, Installation.....	0205 00
Starter Switch Wiring Harness (11671226) Maintenance Removal, Disassembly, Assembly, Installation.....	0206 00
Engine Wiring Harness (Dual Voltage) (11672416) Maintenance Removal, Disassembly, Assembly, Installation.....	0207 00

CHAPTER 7
UNIT MAINTENANCE
MAINTENANCE INSTRUCTIONS

WORK PACKAGE INDEX—Continued

<u>Title</u>	<u>WP Sequence No.</u>
Engine Wiring Harness (Single Voltage) (11671816) Maintenance Removal, Disassembly, Assembly, Installation.....	0208 00
Engine Disconnect to Pressure Switch Wiring Harness (12314651) Maintenance Removal, Disassembly, Assembly, Installation.....	0209 00
Engine Disconnect to Starter Wiring Harness (Dual Voltage) (12314745) Maintenance Removal, Disassembly, Assembly, Installation.....	0210 00
Engine Disconnect to Engine Generator Relay Lead (Single Voltage) (11671362) Maintenance Removal, Disassembly, Assembly, Installation.....	0211 00
Engine Disconnect Ground Lead Assembly (12322589) Maintenance Removal, Disassembly, Assembly, Installation.....	0212 00
Headlight Base Wiring Harness and Related Parts (7972352) Maintenance Removal, Disassembly, Assembly, Installation.....	0213 00
Headlight and Dimmer Switch Wiring Harness (10866950) Maintenance Removal, Disassembly, Assembly, Installation.....	0214 00
Red Flasher Breaker to Switch Wiring Harness (11672371) Maintenance Removal, Disassembly, Assembly, Installation.....	0215 00
Turn Signal Flasher Wiring Harness (11672273) Maintenance Removal, Disassembly, Assembly, Installation.....	0216 00
B.O. Selector Lead Assembly (10911920) Maintenance Removal, Disassembly, Assembly, Installation.....	0217 00
Main Lighting and B.O. Selector Switch Wiring Harness (11671796) Maintenance Removal, Disassembly, Assembly, Installation.....	0218 00
Main Lighting and Master Relay Wiring Harness (10866909) Maintenance Removal, Disassembly, Assembly, Installation.....	0219 00
Bulkhead to Master Relay and Left and Right Taillight Wiring Harness (11671813) Maintenance Removal, Disassembly, Assembly, Installation.....	0220 00
Bulkhead to Engine Wiring Harness and Starter Relay Wiring Harness (11671790) Maintenance Removal, Disassembly, Assembly, Installation.....	0221 00
Bulkhead to Engine Bracket and Rear Fuel Tank Transmitter Wiring Harness (Dual Voltage) (12322588) Maintenance Removal, Disassembly, Assembly, Installation.....	0222 00
Bulkhead to Engine Bracket and Rear Fuel Tank Transmitter Wiring Harness (Single Voltage) (11671789) Maintenance Removal, Disassembly, Assembly, Installation.....	0223 00
Bulkhead to APU, Master Relay, and Rigger's Lights Wiring Harness (Dual Voltage) (11672412) Maintenance Removal, Disassembly, Assembly, Installation.....	0224 00
Bulkhead to APU, Master Relay, and Rigger's Lights Wiring Harness (Single Voltage) (11671324) Maintenance Removal, Disassembly, Assembly, Installation.....	0225 00
Bulkhead Rear Slave Receptacle Wiring Harness (10894850-4) Maintenance Removal, Disassembly, Assembly, Installation.....	0226 00
APU Wiring Harness (11672417) Maintenance Removal, Disassembly, Assembly, Installation.....	0227 00
APU Control Box to Foot Dimmer Switch and Bulkhead Wiring Harness (Dual Voltage) (11672466) Maintenance Removal, Disassembly, Assembly, Installation.....	0228 00
APU Control Box to Foot Dimmer Switch and Bulkhead Wiring Harness (Single Voltage) (11671799) Maintenance Removal, Disassembly, Assembly, Installation.....	0229 00
APU and Engine Generator Relays to Voltage Regulator Wiring Harness (Single Voltage) (11671793) Maintenance Removal, Disassembly, Assembly, Installation.....	0230 00

CHAPTER 7
UNIT MAINTENANCE
MAINTENANCE INSTRUCTIONS

WORK PACKAGE INDEX—Continued

<u>Title</u>	<u>WP Sequence No.</u>
Air Cleaner Circuit Breaker Lead Assembly (11671794) Maintenance Removal, Disassembly, Assembly, Installation.....	0231 00
Bilge Pump and Generator Cutout Switch Lead (10945007) Maintenance Removal, Disassembly, Assembly, Installation.....	0232 00
Bilge Pump Main Power Wiring Harness (10945008) Maintenance Removal, Disassembly, Assembly, Installation.....	0233 00
Bilge Pump Circuit Breaker to Switch Panel Lead (10894546) Maintenance Removal, Disassembly, Assembly, Installation.....	0234 00
Bilge Pump Lead Relay Wiring Harness and Cap (10894548) Maintenance Removal, Disassembly, Assembly, Installation.....	0235 00
Heater Control Box to Heater Wiring Harness (11671353) Maintenance Removal, Disassembly, Assembly, Installation.....	0236 00
Hydraulic Oil Temperature Transmitter Housing Assembly Wiring Harness (11672366) Maintenance Removal, Disassembly, Assembly, Installation.....	0237 00
Diode Lead Assembly (12322604) Maintenance Removal, Disassembly, Assembly, Installation.....	0238 00
Engine Disconnect to Starter Ground Wiring Harness (Single Voltage) (11671356) Maintenance Removal, Disassembly, Assembly, Installation.....	0239 00
M239 Smoke Grenade Launcher System Wiring Harness (Single Voltage) (11672299) Maintenance Removal, Disassembly, Assembly, Installation.....	0240 00
Power Switch Box Assembly for M239 Smoke Grenade Launcher Wiring Harness (11672315) Maintenance Removal, Disassembly, Assembly, Installation.....	0241 00
Driver's Vehicle Exhaust Smoke Bracket to Bulkhead Connection Wiring Harness (11672382) Maintenance Removal, Disassembly, Assembly, Installation.....	0242 00
Commander's Switch Plate to Driver's Vehicle Exhaust Smoke Bracket (11372387) Maintenance Removal, Disassembly, Assembly, Installation.....	0243 00
Fuel Solenoid Wiring Harness (11672386) Maintenance Removal, Disassembly, Assembly, Installation.....	0244 00
Fuel/Water Separator Control Module to Solenoid Drain Valve Wiring Harness (11684127) Maintenance Removal, Disassembly, Assembly, Installation.....	0245 00
Exhaust Smoke Generating System Lead Assembly (11672385) Maintenance Removal, Disassembly, Assembly, Installation.....	0246 00
Smoke Generating System Lead Assembly (11672473-1) Maintenance Removal, Disassembly, Assembly, Installation.....	0247 00
Smoke Generating System Lead Assembly (11672473-2) Maintenance Removal, Disassembly, Assembly, Installation.....	0248 00
Driver's Periscope to Infrared Power Supply (Single Voltage) (10866967) Maintenance Removal, Disassembly, Assembly, Installation.....	0249 00
Ventilator Blower Assembly Replacement Removal, Installation.....	0250 00
Bilge Pump Power Lead Relay, Mounting Plate, and Circuit Breaker Replacement Removal, Installation.....	0251 00
Fuel Injection Pump, Fuel Shutoff Solenoid, Lead, and Related Parts Replacement Removal, Installation.....	0252 00
Dummy Connector Assembly (Infrared and Passive Night Viewer) Replacement Removal, Installation.....	0253 00

CHAPTER 7
UNIT MAINTENANCE
MAINTENANCE INSTRUCTIONS

WORK PACKAGE INDEX—Continued

<u>Title</u>	<u>WP Sequence No.</u>
Electrical Kit for M239 Smoke Grenade Launcher Discharger Feed Through Cable Assemblies (11672298-1 and 11672298-2) Replacement Removal, Installation.....	0254 00
Cable, Wire, Receptacle, and Plug Identifier Repair.....	0255 00
Terminal-Type Cable Connector Repair.....	0256 00
Male Cable Connector Repair.....	0257 00
Female Cable Connector (with Sleeve) Repair.....	0258 00
Typical Female-Type Panel Mounting Receptacle Repair Disassembly, Assembly.....	0259 00
Typical Male-Type Panel Mounting Receptacle Repair Disassembly, Assembly.....	0260 00
Typical Female-Type Panel Mounting Receptacle (with Ridged Locking Nut) Repair Disassembly, Assembly.....	0261 00
Typical Male-Type Panel Mounting Receptacle (with Ridged Locking Nut) Repair Disassembly, Assembly.....	0262 00
Typical Female-Type Plug Repair Disassembly, Assembly.....	0263 00
Typical Male-Type Plug Repair Disassembly, Assembly.....	0264 00

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

ENGINE GENERATOR, CRADLE, SUPPORT, AND RELATED PARTS MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)
 Wrench, box and open-end combination (item 61, WP 0490 00)

Materials/Parts

Clamps (5) (item 715, WP 0491 00)
 Gasket (item 51, WP 0491 00)
 Lockwashers (2) (item 135, WP 0491 00)
 Lockwashers (6) (item 638, WP 0491 00)
 Lockwashers (6) (item 639, WP 0491 00)
 Lockwire (item 485, WP 0491 00)
 Nuts (2) (item 436, WP 0491 00)
 Nuts (2) (item 488, WP 0491 00)
 Nuts, self-locking (2) (item 491, WP 0491 00)
 Nuts, self-locking (8) (item 492, WP 0491 00)

Materials/Parts (cont.)

Screws (4) (item 372, WP 0491 00)
 Screws (6) (item 383, WP 0491 00)
 Screws (2) (item 398, WP 0491 00)
 Screws (4) (item 402, WP 0491 00)
 Screws (2) (item 782, WP 0491 00)
 Washers, flat (4) (item 274, WP 0491 00)
 Washers, flat (6) (item 305, WP 0491 00)
 Washers, flat (2) (item 309, WP 0491 00)
 Washers, flat (2) (item 361, WP 0491 00)
 Washers, flat (2) (item 537, WP 0491 00)
 Washers, flat (2) (item 717, WP 0491 00)

Equipment Condition

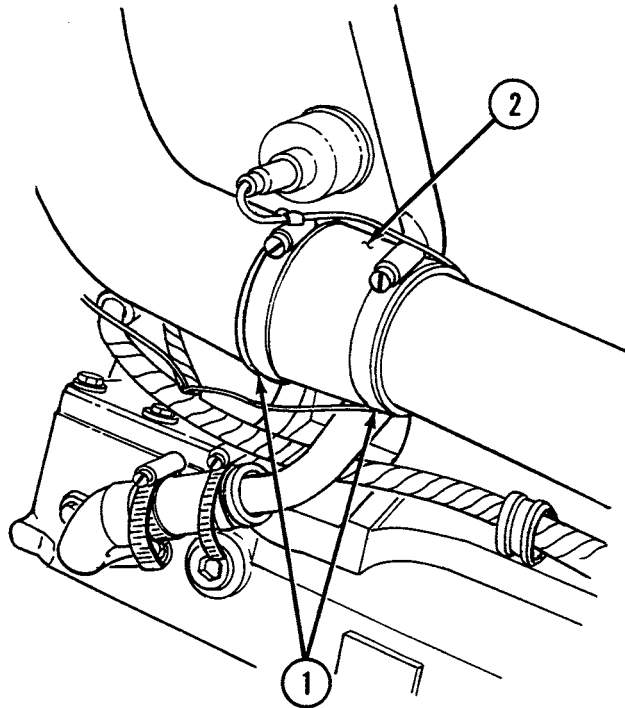
Powerplant removed (see WP 0098 00)

WARNING

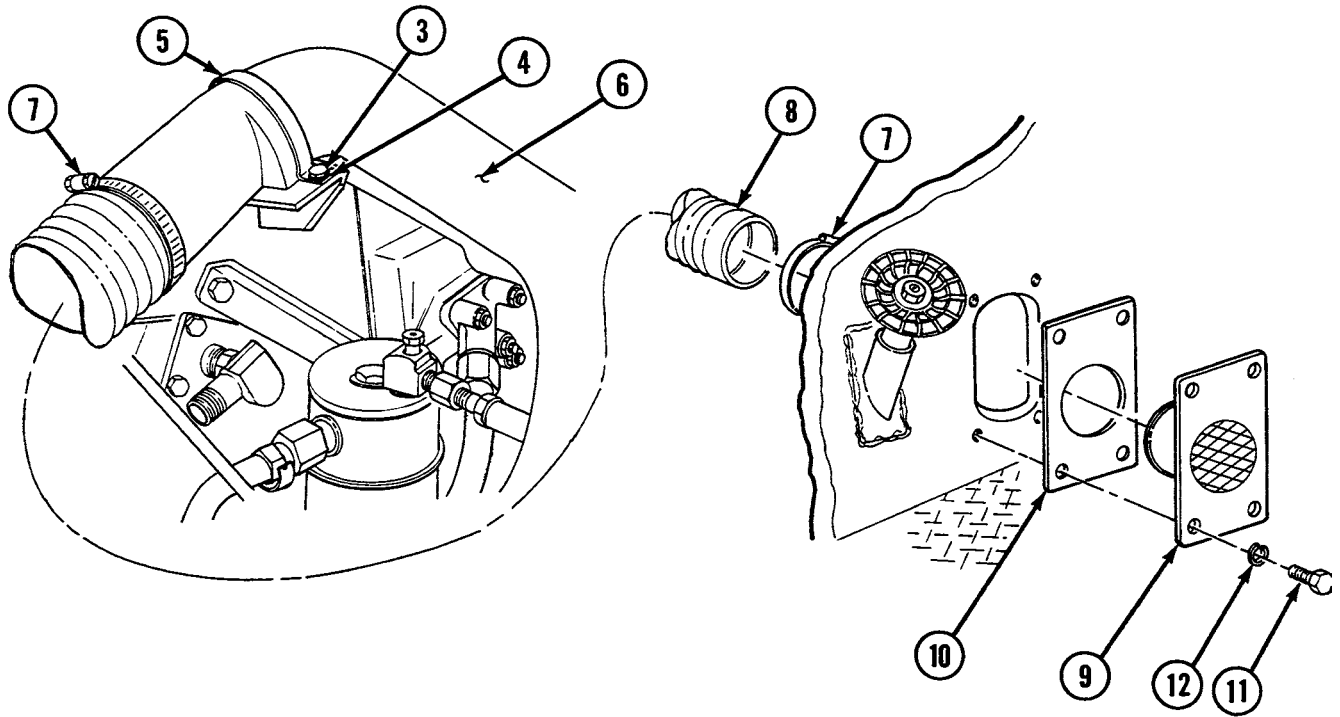
Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

Removal

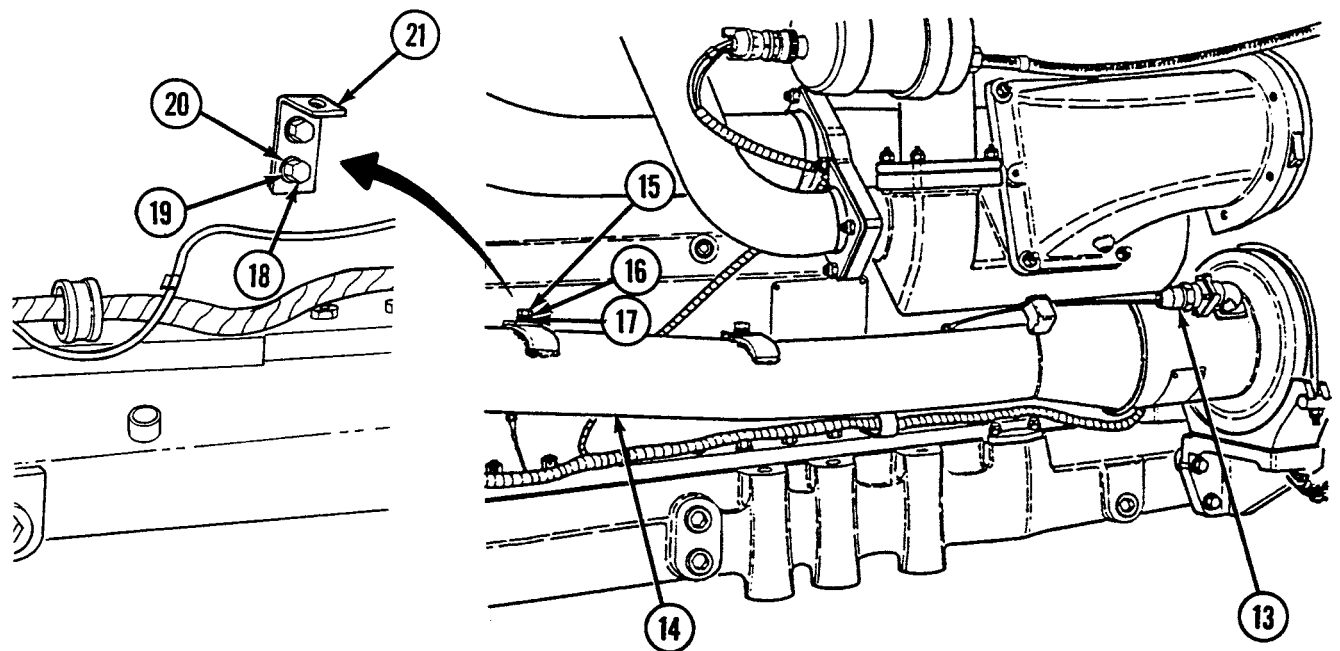
1. Remove two clamps (1) and hose (2).



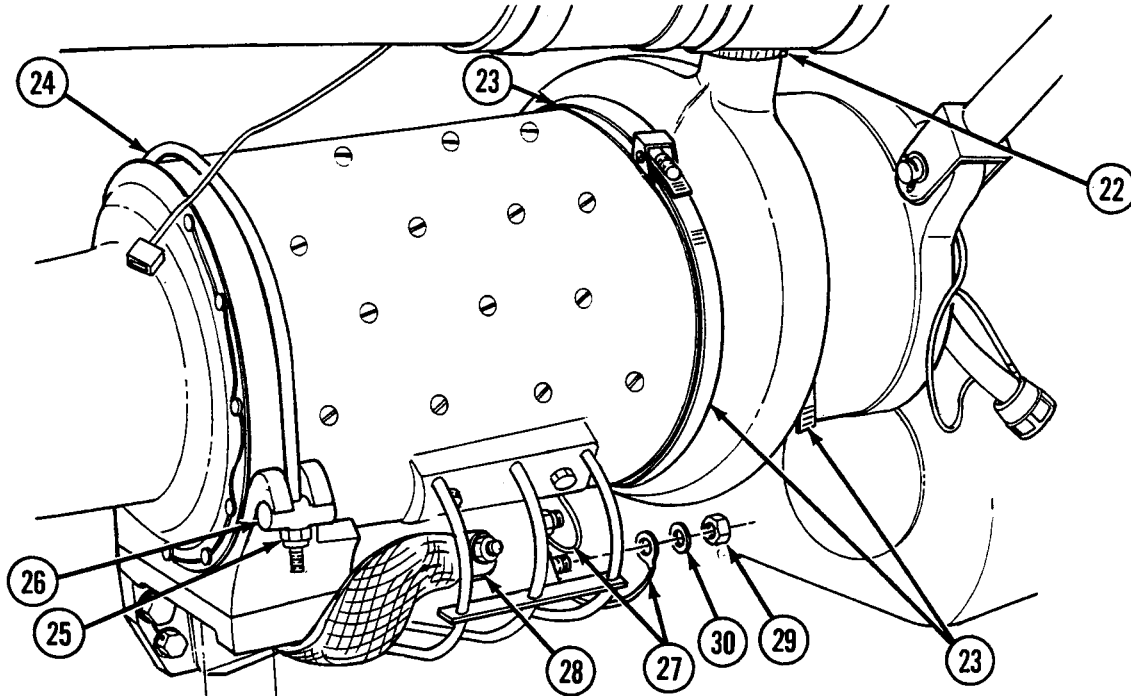
2. Remove two screws (3), two lockwashers (4), and bracket (5) securing tube (6) to engine.
3. Remove two clamps (7) and hose (8) from tube (6).
4. Remove tube (6).
5. Remove grille (9) and gasket (10) by removing four screws (11) and four lockwashers (12).



6. Disconnect connector (13).
7. Remove air intake tube (14) by removing two screws (15), two lockwashers (16), and two flat washers (17).
8. Remove four bolts (18), four lockwashers (19), four flat washers (20), and two brackets (21).



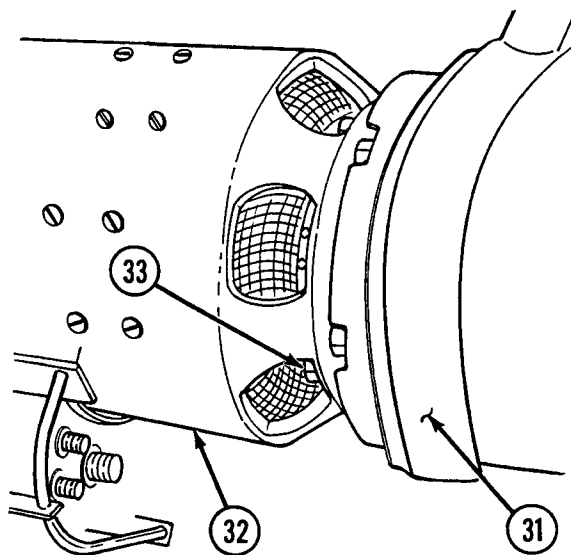
9. Remove clamp (22).
10. Remove four clamps (23).
11. Remove U-bolt (24) by removing two self-locking nuts (25) and two clamping bars (26).
12. Disconnect two leads (27) and ground strap (28) by removing nut (29) and flat washer (30) from each.



NOTE

Generator exhaust boot (31) is removed after removal of generator (32).

13. Slide generator exhaust boot (31) and remove six nuts (33) using wrench.

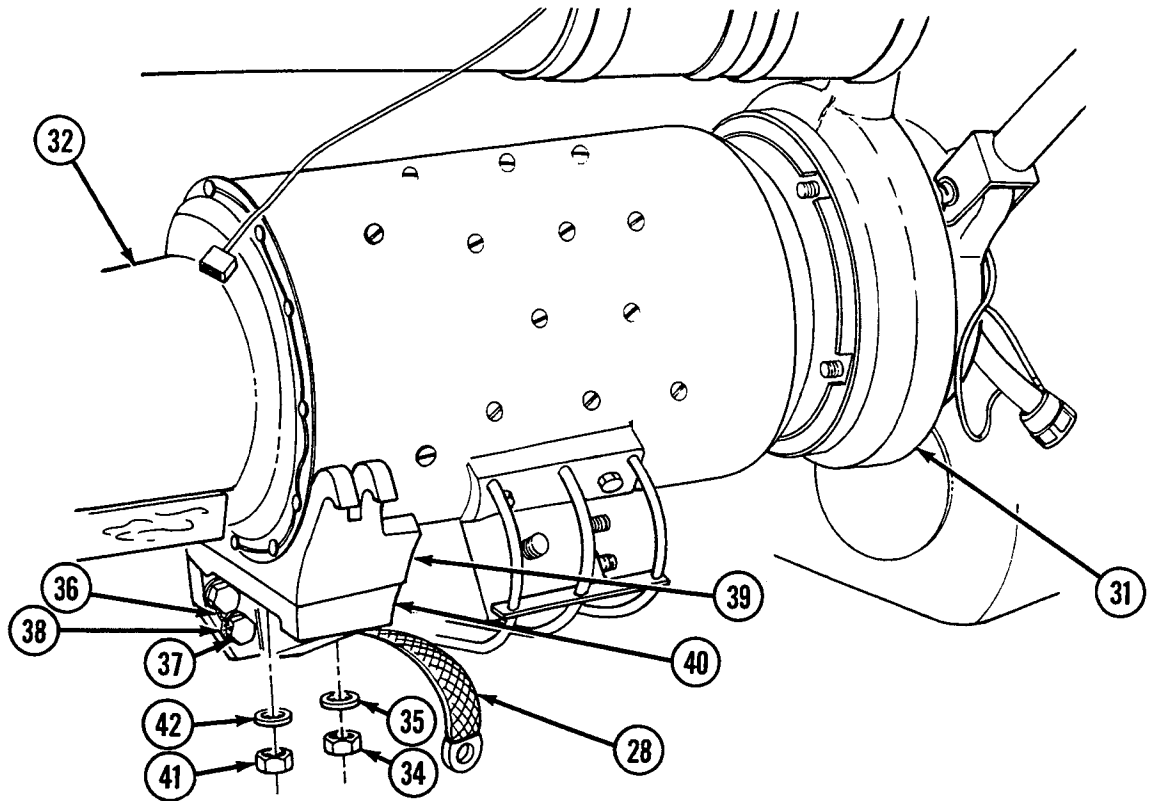


14. Disconnect ground strap (28) by removing self-locking nut (34) and flat washer (35).

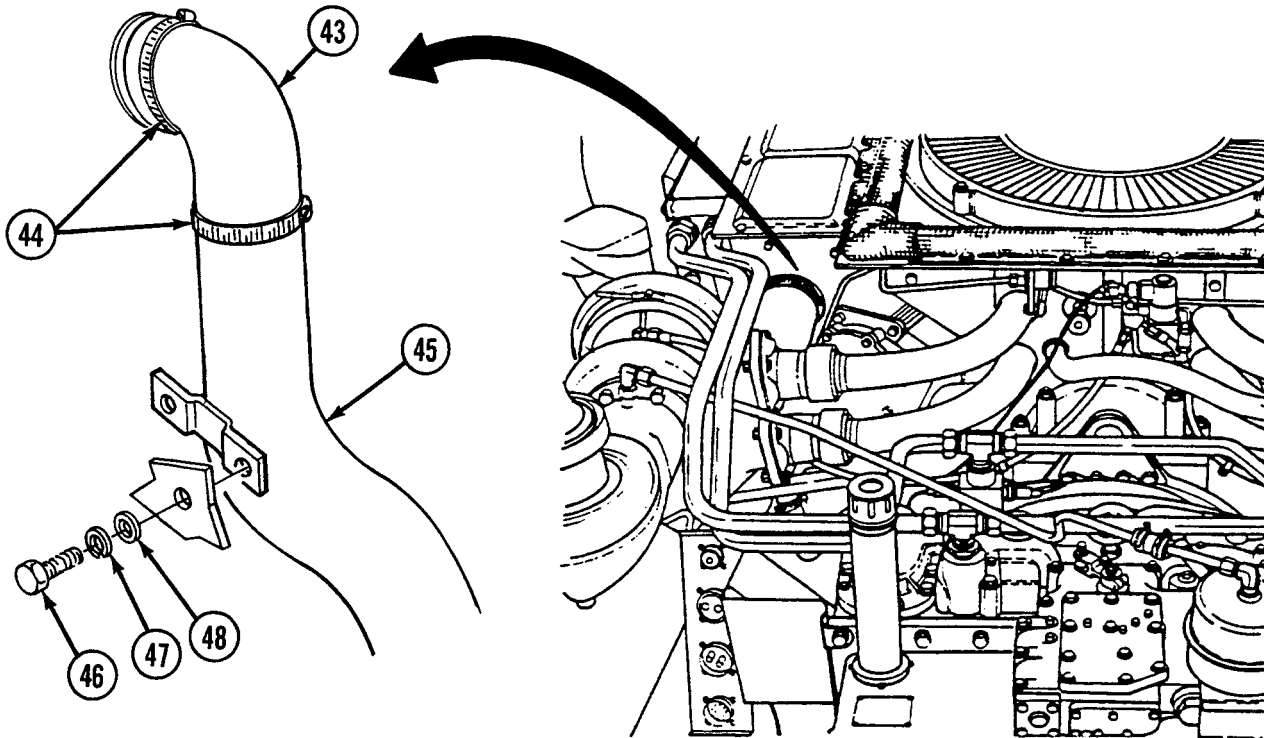
WARNING

To avoid damage to equipment and injury to personnel, generator must be supported.

15. Place board under end of generator (32) for support.
16. Cut lockwire (36) and remove four screws (37), four flat washers (38), and generator cradle (39).
17. Separate bracket (40) from generator cradle (39) by removing self-locking nut (41) and flat washer (42).
18. Remove generator (32) by turning counterclockwise.
19. Remove generator exhaust boot (31).

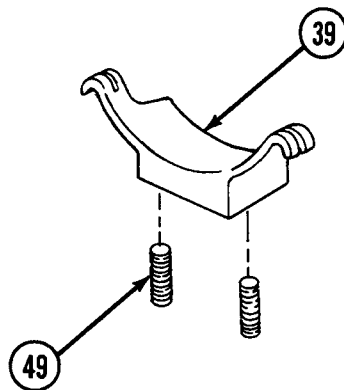


20. Remove generator air exhaust hose (43) by loosening two clamps (44).
21. Remove generator air exhaust pipe (45) by removing two screws (46), two lockwashers (47), and two flat washers (48).



Disassembly

1. Remove two studs (49) from generator cradle (39).



Test and Inspection

1. Inspect studs for damaged threads. If damaged, replace studs.

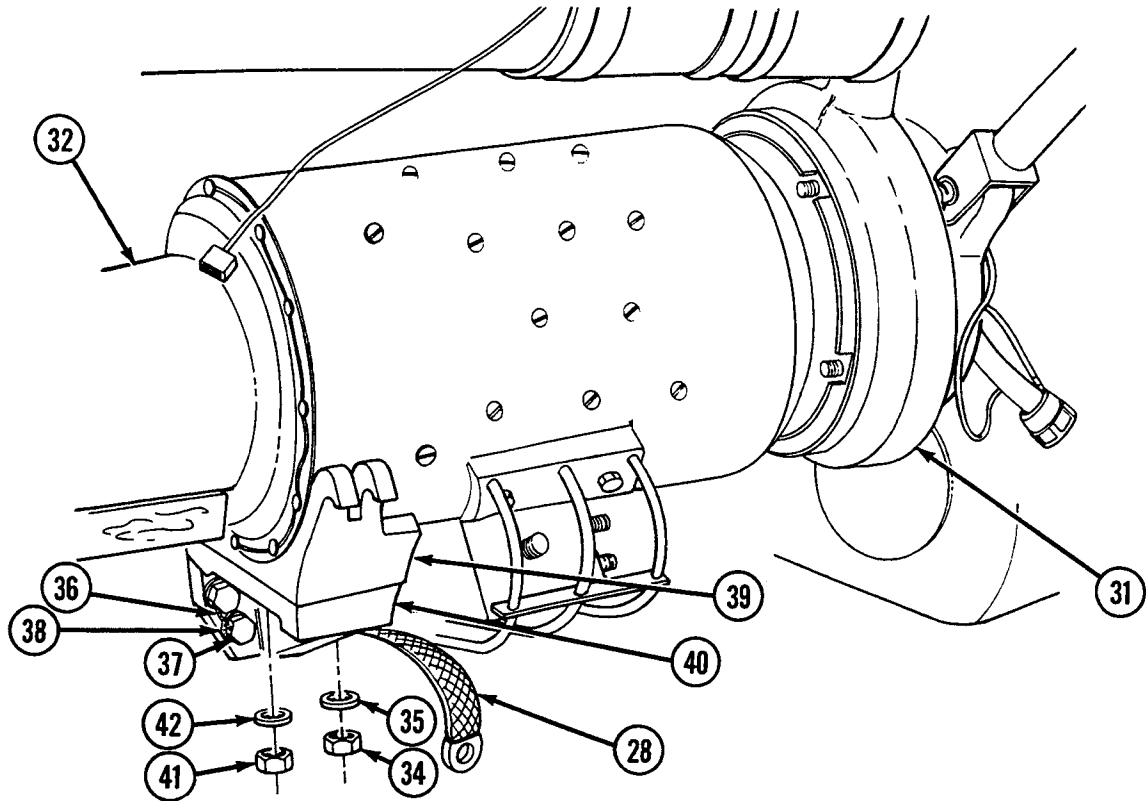
Assembly

1. Install two studs (49) to generator cradle (39).

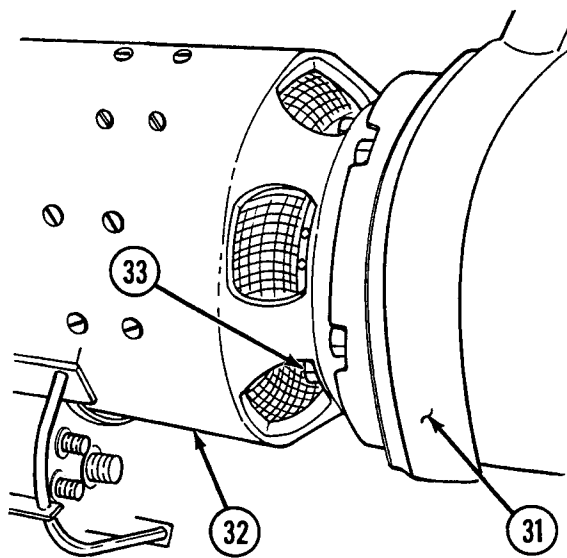
Installation

1. Install generator air exhaust pipe (45) using two screws (46), two lockwashers (47), and two flat washers (48).
2. Install generator air exhaust hose (43) by tightening two clamps (44).

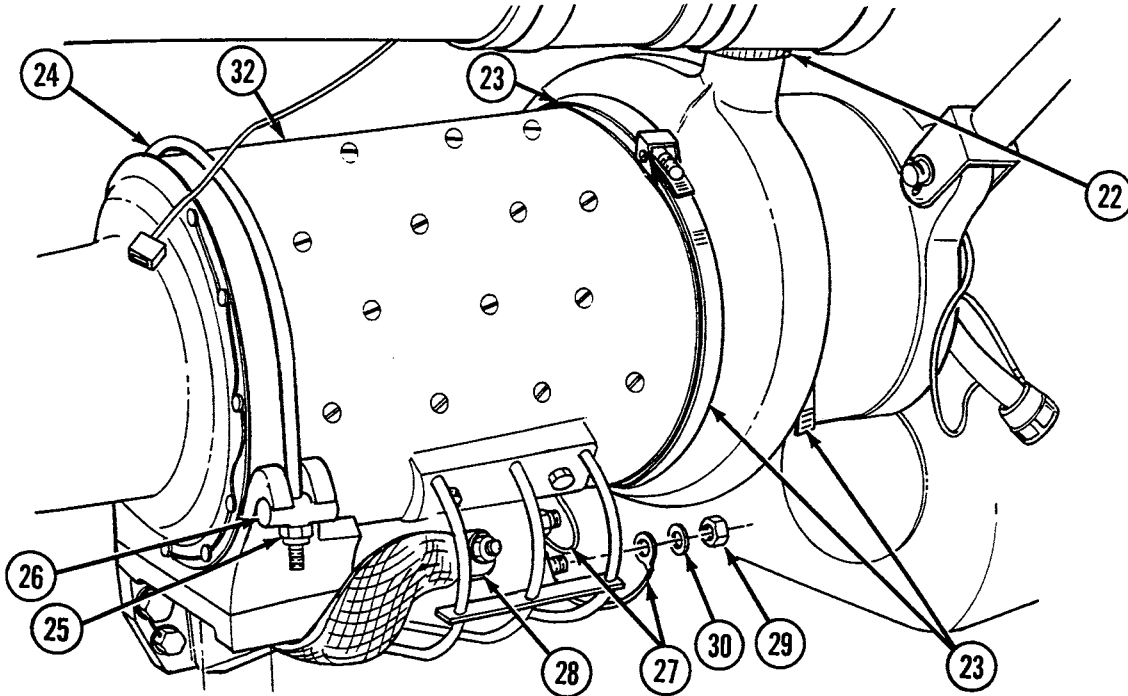
3. Install generator exhaust boot (31).
4. Place generator (32) into generator exhaust boot (31) and turn clockwise until generator is locked in place.
5. Assemble bracket (40) to generator cradle (39) using self-locking nut (41) and flat washer (42).
6. Install generator cradle (39) using four screws (37) and four flat washers (38). Secure screws using lockwire (36).
7. Install ground strap (28) using self-locking nut (34) and flat washer (35).



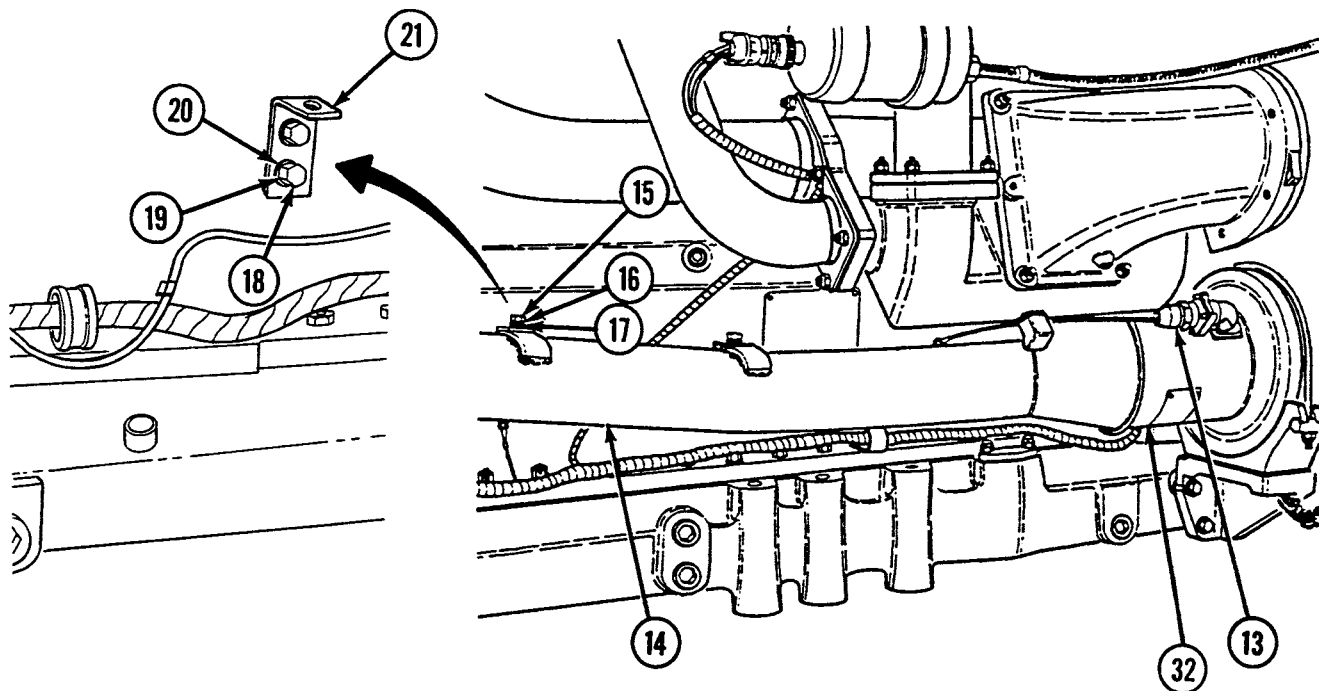
8. Install six nuts (33) using wrench and slide generator exhaust boot (31) into place.



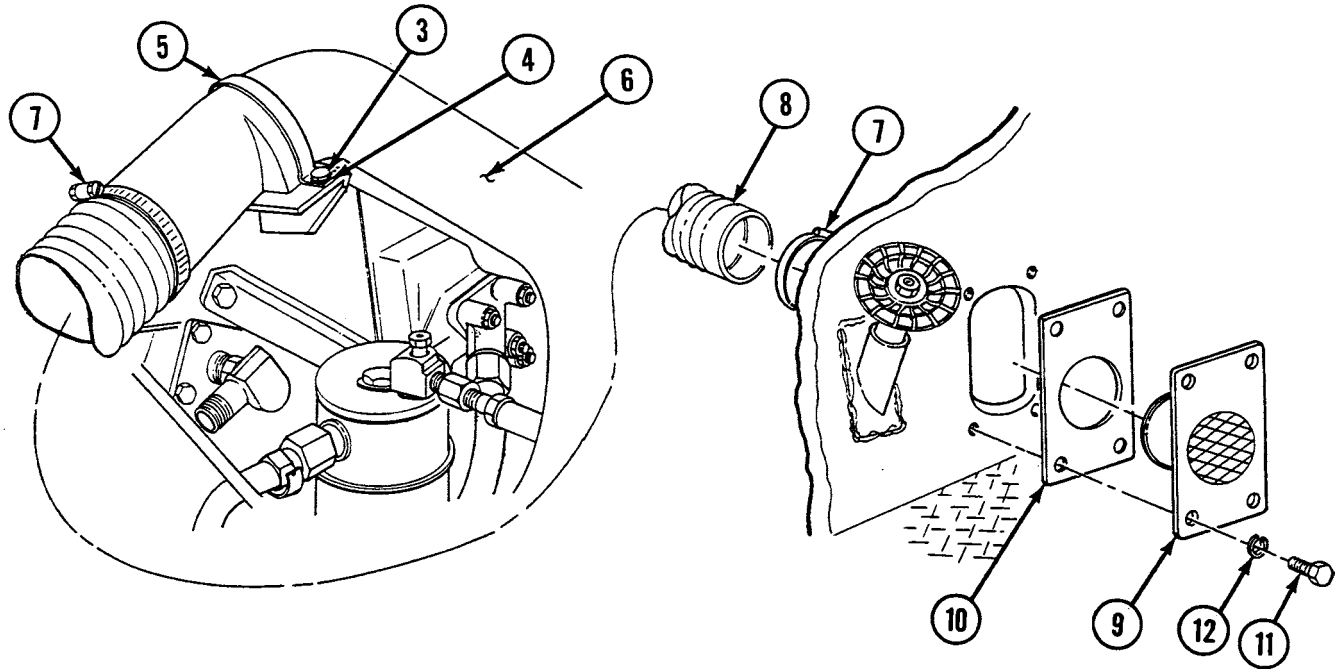
9. Connect two leads (27) and ground strap (28) on generator (32) using nut (29) and flat washer (30) for each.
10. Install U-bolt (24) using two self-locking nuts (25) and two clamping bars (26).
11. Install four clamps (23).
12. Install clamp (22).



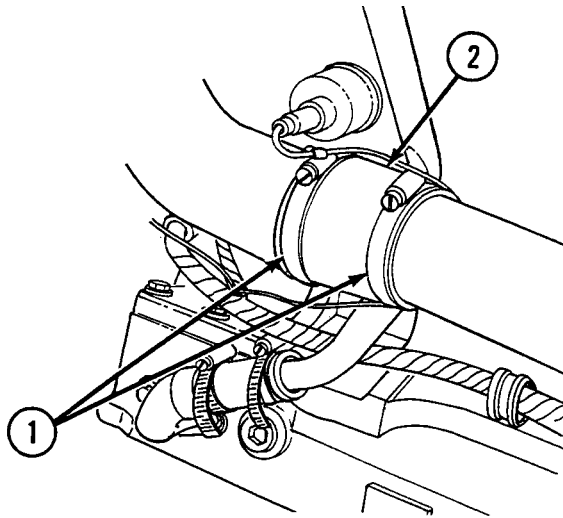
13. Install two brackets (21) using four lockwashers (19), four flat washers (20), and four bolts (18).
14. Install air intake tube (14) using two screws (15), two lockwashers (16), and two flat washers (17).
15. Connect connector (13) on generator (32).



16. Install gasket (10) and grille (9) using four lockwashers (12) and four screws (11).
17. Install hose (8) using two clamps (7).
18. Install tube (6) using two screws (3), two lockwashers (4), and bracket (5).



19. Install hose (2) using two clamps (1).



20. Install test cables and hoses. Test run engine prior to installation. Check for proper generator output.

NOTE

Follow-on maintenance: Install powerplant (see WP 0098 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
MASTER RELAY HOUSING (DUAL AND SINGLE VOLTAGE) REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

Grille removed (see WP 0300 00)

Battery ground cables disconnected (see WP 0153 00)

Materials/Parts

Bolts (2) (item 382, WP 0491 00)

Drivescrews (2) (item 499, WP 0491 00)

Lockwashers (4) (item 614, WP 0491 00)

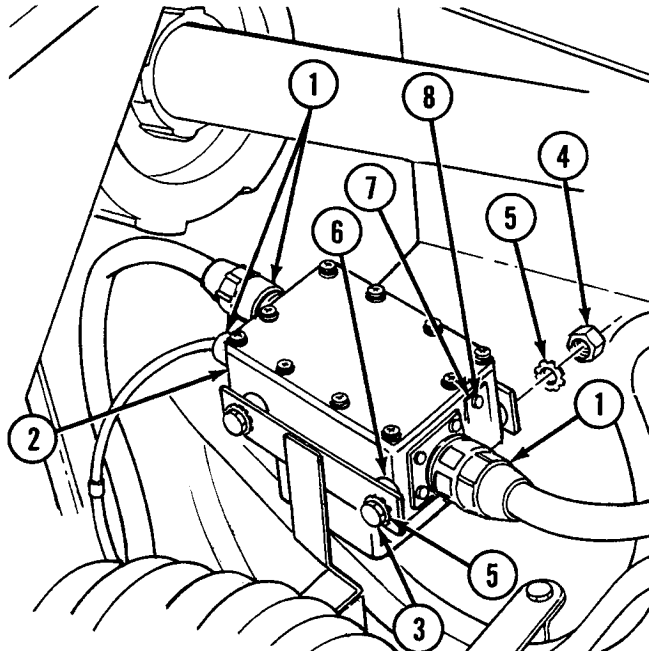
Nuts (2) (item 696, WP 0491 00)

WARNING

Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

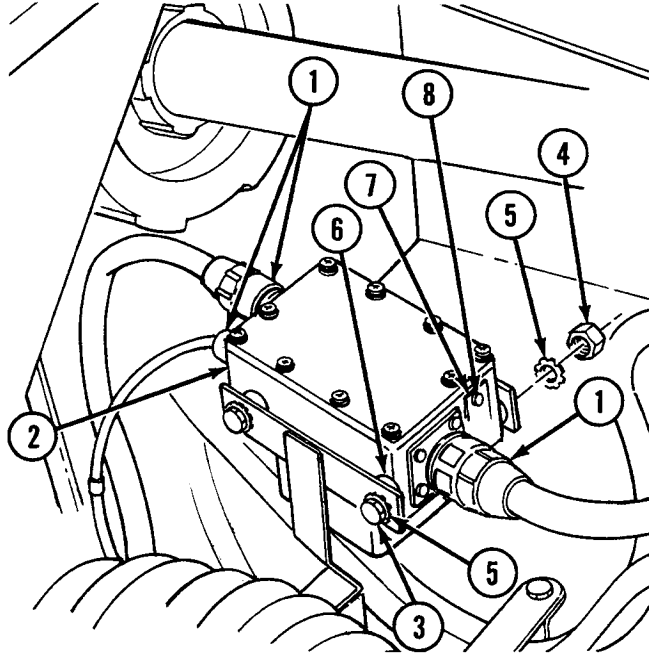
Removal

1. Disconnect three connectors (1).
2. Remove master relay (2) by removing two bolts (3), two nuts (4), four lockwashers (5), and two sleeve spacers (6).
3. Remove ID plate (7) by removing two drivescrews (8).



Installation

1. Install ID plate (7) using two drivescrews (8).
2. Install master relay (2) using two bolts (3), four lockwashers (5), two sleeve spacers (6), and two nuts (4).
3. Connect three connectors (1) to master relay (2).

**NOTE**

Follow-on maintenance: Install grille (see WP 0300 00); Connect battery ground cables (see WP 0153 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
ENGINE STARTER, SOLENOID RELAY, AND BRACKET REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Bolts (3) (item 331, WP 0491 00)
 Gasket (item 209, WP 0491 00)
 Lockwashers (4) (item 613, WP 0491 00)
 Lockwashers (4) (item 622, WP 0491 00)
 Lockwire (item 482, WP 0491 00)
 Nuts, self-locking (3) (item 489, WP 0491 00)
 Nuts, self-locking (2) (item 491, WP 0491 00)

Materials/Parts (cont.)

Nuts, self-locking (2) (item 494, WP 0491 00)
 Screws (2) (item 372, WP 0491 00)
 Screws (2) (item 383, WP 0491 00)
 Screws (4) (item 402, WP 0491 00)
 Screws (4) (item 404, WP 0491 00)
 Screws (2) (item 794, WP 0491 00)
 Washers, flat (8) (item 274, WP 0491 00)

Equipment Condition

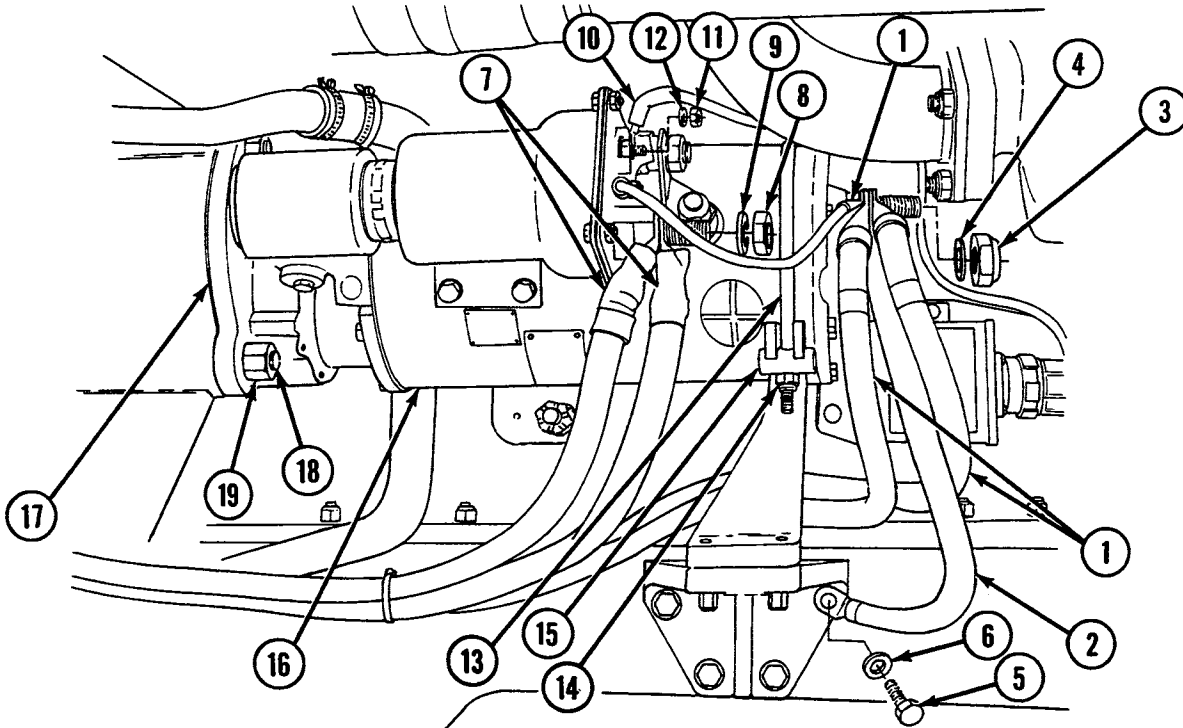
Powerplant removed (see WP 0098 00)

WARNING

Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

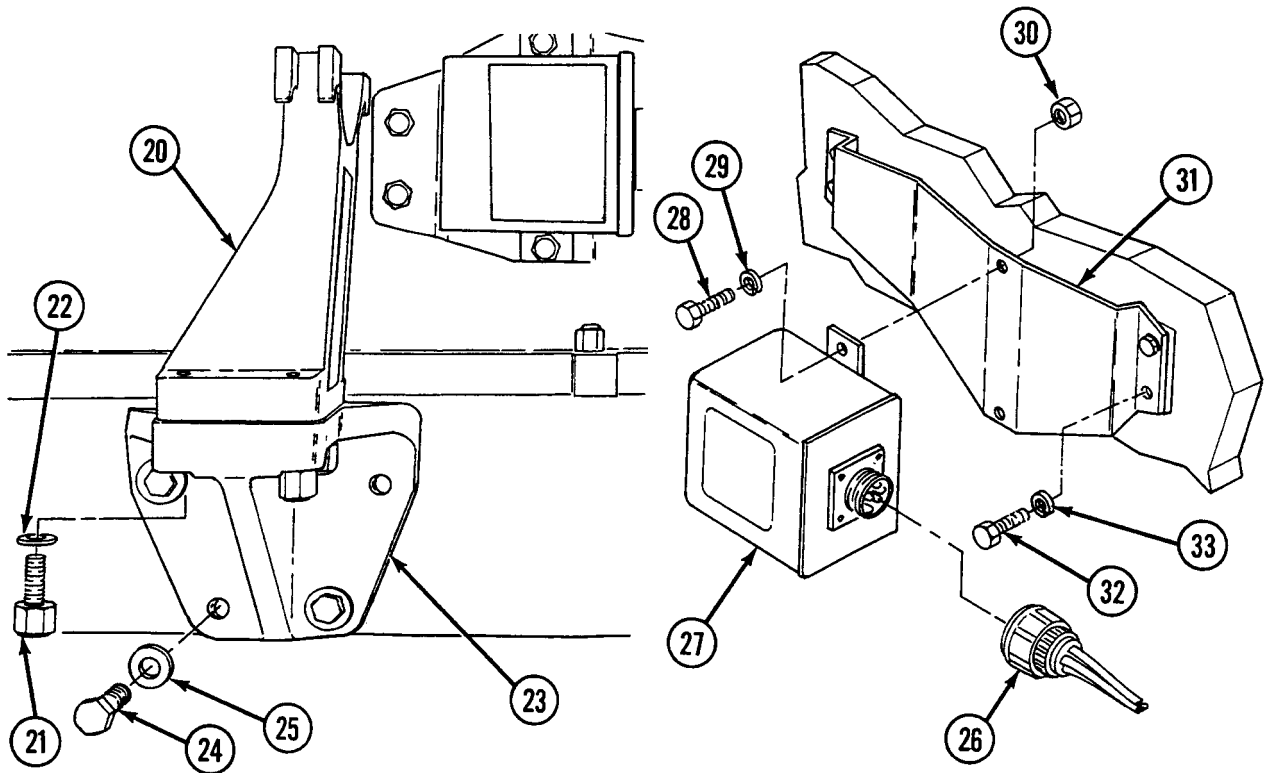
Removal

1. Disconnect three cables (1) and ground lead (2) by removing nut (3) and lockwasher (4).
2. Remove ground lead (2) by removing machine bolt (5) and flat washer (6).
3. Disconnect two cables (7) by removing nut (8) and lockwasher (9).
4. Disconnect lead (10) by removing nut (11) and lockwasher (12).
5. Remove U-bolt (13) by removing two self-locking nuts (14) and two clamping bars (15).
6. Remove starter (16) and gasket (17) by removing three bolts (18) and three self-locking nuts (19).



7. Remove starter cradle (20) by removing four screws (21) and four flat washers (22).
8. Remove starter support (23) by removing three machine bolts (24) and three flat washers (25).
9. Disconnect connector (26) from starter module (27).
10. Remove starter module (27) by removing two screws (28), four lockwashers (29), and two self-locking nuts (30).

11. Remove bracket (31) by removing four screws (32) and four lockwashers (33).



Installation

1. Install bracket (31) using four screws (32) and four lockwashers (33).
2. Install starter module (27) using two screws (28), four lockwashers (29), and two self-locking nuts (30).
3. Connect connector (26) to starter module (27).
4. Install starter support (23) using three machine bolts (24) and three flat washers (25).
5. Install starter cradle (20) using four screws (21) and four flat washers (22).
6. Install starter (16) and gasket (17) using three bolts (18) and three self-locking nuts (19).
7. Secure starter (16) to starter cradle (20) using U-bolt (13), two self-locking nuts (14), and two clamping bars (15).
8. Connect lead (10) using nut (11) and lockwasher (12).
9. Connect two cables (7) using nut (8) and lockwasher (9).
10. Connect ground lead (2) using machine bolt (5) and flat washer (6).
11. Connect three cables (1) and ground lead (2) using nut (3) and lockwasher (4).
12. Install test cables and hoses. Test run engine prior to installation and check for proper starter operation.

NOTE

Follow-on maintenance: Install powerplant (see WP 0098 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
BATTERIES, BATTERY TRAYS, AND TERMINAL MAINTENANCE
REMOVAL, REPAIR, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Paint, acid-resistant (item 8, WP 0489 00)
Bolt (item 84, WP 0491 00)
Bolts (2) (item 99, WP 0491 00)
Lockwashers (2) (item 615, WP 0491 00)
Lockwasher (item 641, WP 0491 00)
Lockwashers (12) (item 642, WP 0491 00)
Nuts (2) (item 769, WP 0491 00)

Materials/Parts (cont.)

Screws (3) (item 396, WP 0491 00)
Screws (10) (item 800, WP 0491 00)
Washers, flat (3) (item 537, WP 0491 00)

References

WP 0021 00
TM 9-6140-200-14

Equipment Condition

Left-side grille doors opened (see WP 0345 00)

WARNING

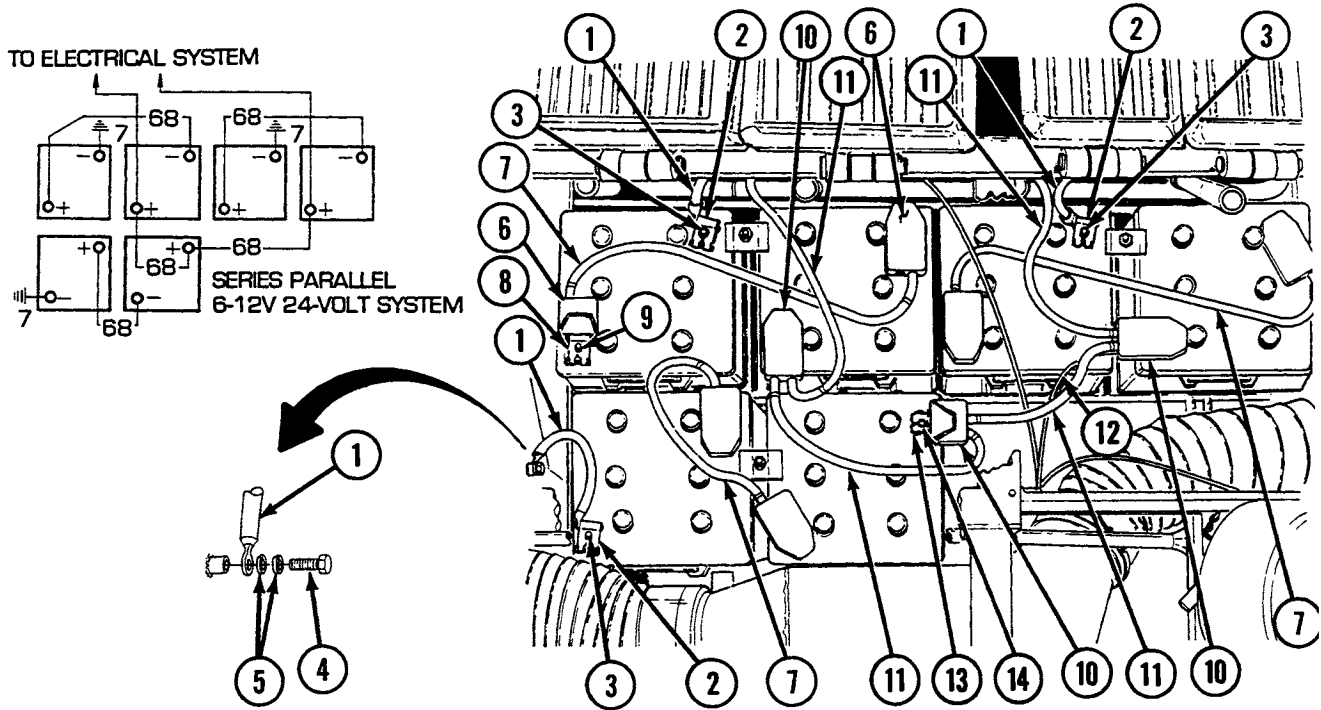
Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

Removal

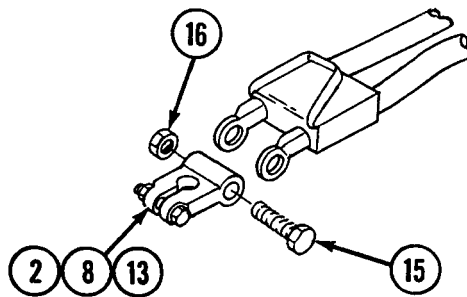
NOTE

Ground cables (1) must be disconnected prior to disconnecting positive leads.

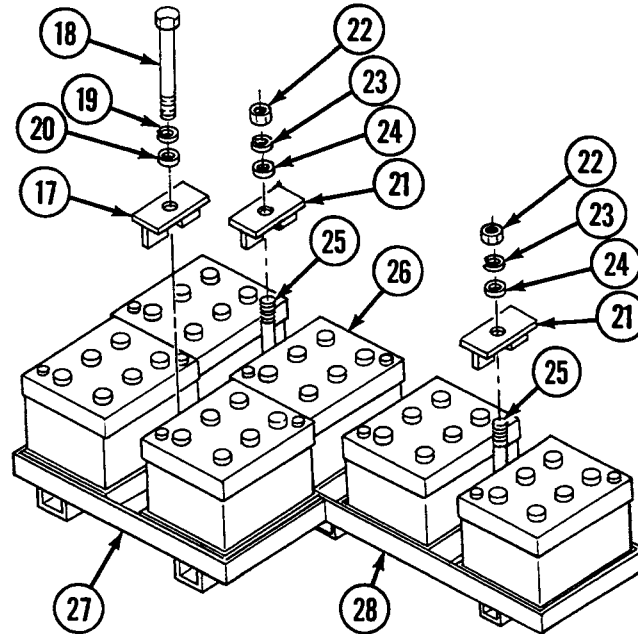
1. Disconnect three ground cables (1) with terminal adapters (2) from battery terminals (3). Remove three ground cables from vehicle by removing screw (4) and two lockwashers (5) from each.
2. Pull back six rubber insulators (6) and disconnect three (series) cables (7) with terminal adapters (8) from battery terminals (9).
3. Pull back three rubber insulators (10) and disconnect three (parallel) cables (11) and lead (12) with terminal adapters (13) from battery terminals (14).



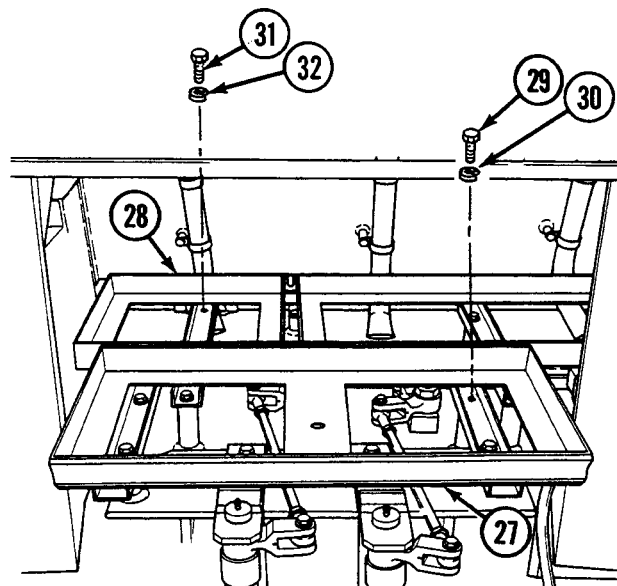
4. Remove 12 terminal adapters (2, 8, and 13) from battery cables by removing bolts (15) and nuts (16).



5. Remove battery (holddown) clamp (17) by removing bolt (18), lockwasher (19), and flat washer (20).
6. Remove two battery (holddown) clamps (21) by removing nut (22), lockwasher (23), flat washer (24), and bolt (25) from each.
7. Remove six batteries (26) from vehicle supports (27 and 28).



8. Remove forward support (27) by removing four screws (29) and four lockwashers (30).
9. Remove rear support (28) by removing six screws (31) and six lockwashers (32).



Repair or Replacement

1. Repair batteries in accordance with TM 9-6140-200-14

Installation

NOTE

Before installing batteries, perform serviceability check (see WP 0021 00).

NOTE

If supports (27 and 28) are corroded, clean using stiff brush and alkaline solution (bicarbonate of soda in water).

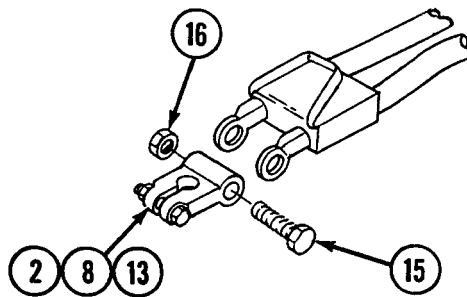
NOTE

Straighten or repair supports (27 and 28) as necessary.

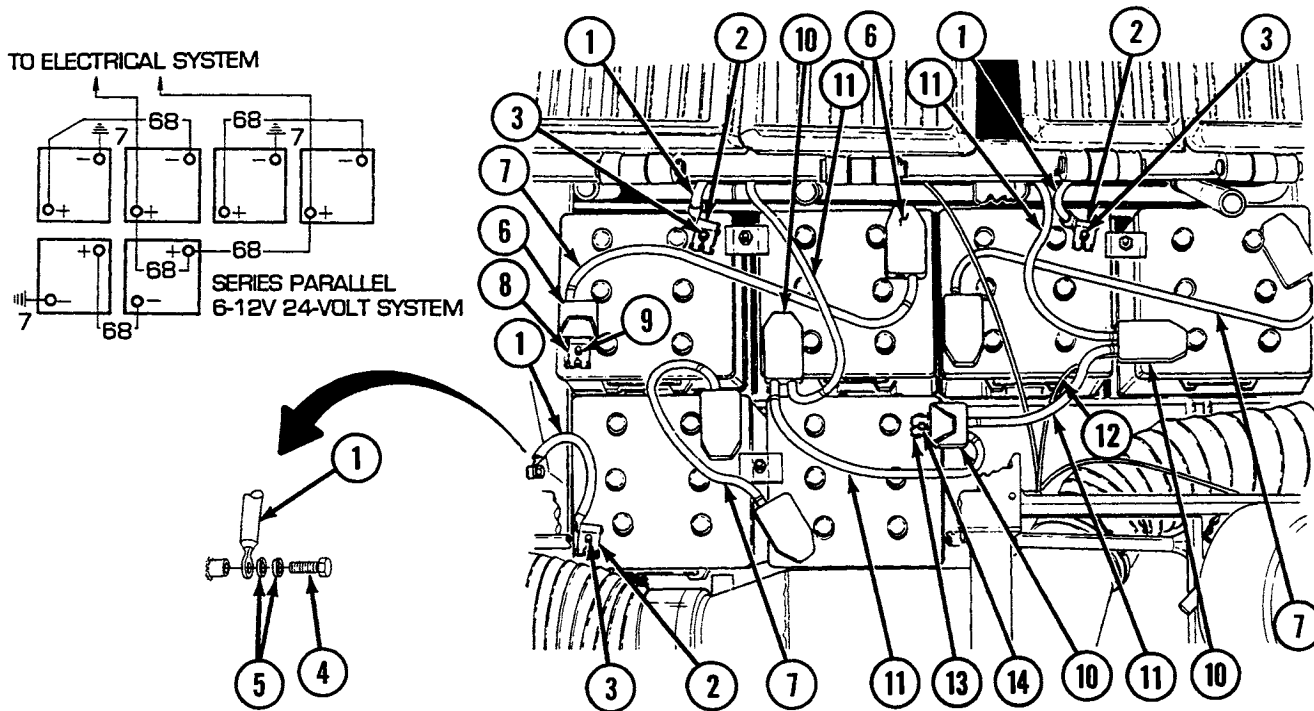
NOTE

Coat supports (27 and 28) using acid-resistant paint.

1. Install rear support (28) using six screws (31) and six lockwashers (32).
2. Install forward support (27) using four screws (29) and four lockwashers (30).
3. Install six batteries (26) on vehicle supports (27 and 28).
4. Install two battery (holddown) clamps (21) using bolt (25), flat washer (24), lockwasher (23), and nut (22) for each.
5. Install battery (holddown) clamp (17) using flat washer (20), lockwasher (19), and bolt (18).
6. Install 12 terminal adapters (2, 8, and 13) on battery cables using bolts (15) and nuts (16).



7. Connect three (parallel) cables (11) and lead (12) with terminal adapters (13) to battery terminals (14). Then push three rubber insulators (10) over battery terminals.
8. Connect three (series) cables (7) with terminal adapters (8) to battery terminals (9). Then push six rubber insulators (6) over battery terminals.
9. Install three ground cables (1) on vehicle using screw (4) and two lockwashers (5) for each. Then connect three ground cables with terminal adapters (2) to battery terminals (3).



NOTE

Follow-on maintenance: Close left-side grille doors (see WP 0345 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**VOLTAGE REGULATOR AND RELATED PARTS (DUAL VOLTAGE) (11672403) REPLACEMENT
REMOVAL, INSTALLATION**

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Drivescrews (2) (item 501, WP 0491 00)
Lockwashers (4) (item 612, WP 0491 00)
Lockwashers (4) (item 613, WP 0491 00)
Lockwashers (8) (item 638, WP 0491 00)
Lockwashers (4) (item 640, WP 0491 00)
Lockwasher (item 719, WP 0491 00)
Nuts, self-locking (6) (item 0490, WP 0491 00)
Screws (8) (item 101, WP 0491 00)
Screws (2) (item 146, WP 0491 00)
Screws (4) (item 392, WP 0491 00)

Materials/Parts (cont.)

Screws (4) (item 582, WP 0491 00)
Screws (4) (item 591, WP 0491 00)
Screws (8) (item 781, WP 0491 00)
Screws (2) (item 793, WP 0491 00)
Screw (item 801, WP 0491 00)
Washers, flat (4) (item 535, WP 0491 00)
Washers, flat (8) (item 548, WP 0491 00)

References

WP 0336 00

Equipment Condition

Air inlet doors removed (see WP 0341 00)

WARNING

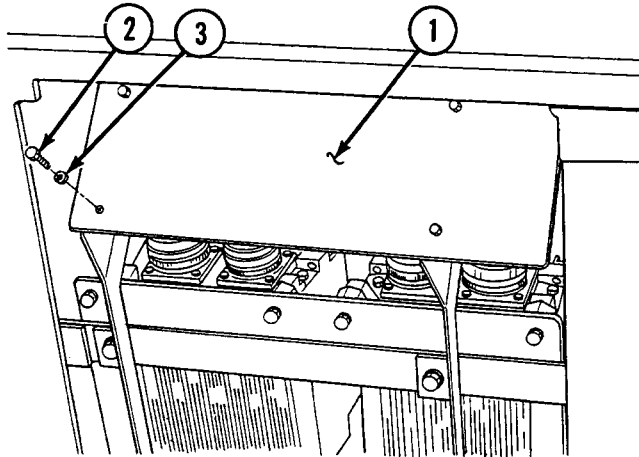
Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

NOTE

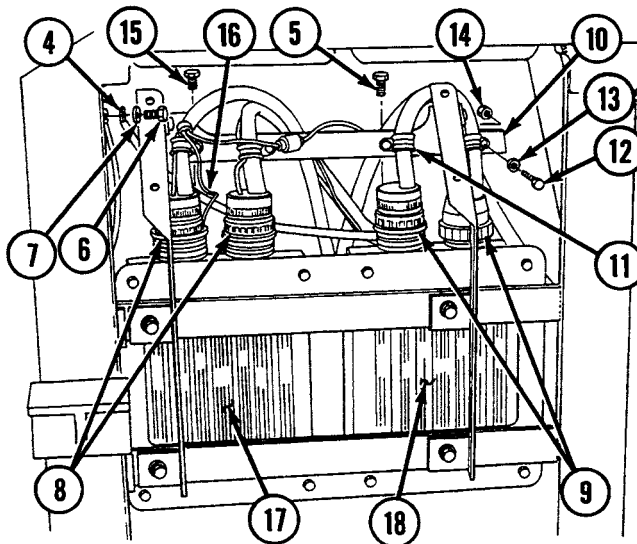
A single voltage regulator may be used as a replacement for the main engine regulator position only.

Removal

1. Open access door (see WP 0336 00).
2. Remove access cover (1) by removing four screws (2) and four lockwashers (3).



3. Remove ground strap (4) by removing screw (5) from one end of ground strap and screw (6) and lockwasher (7) from other end of ground strap.
4. Disconnect two wiring harnesses (8) and two wiring harnesses (9) from mounting bracket (10) by removing four clamps (11), four screws (12), four lockwashers (13), and four nuts (14).
5. Remove screw (15) and ground wire (16).
6. Remove two wiring harnesses (8) from APU voltage regulator (17) and two wiring harnesses (9) from main engine voltage regulator (18).

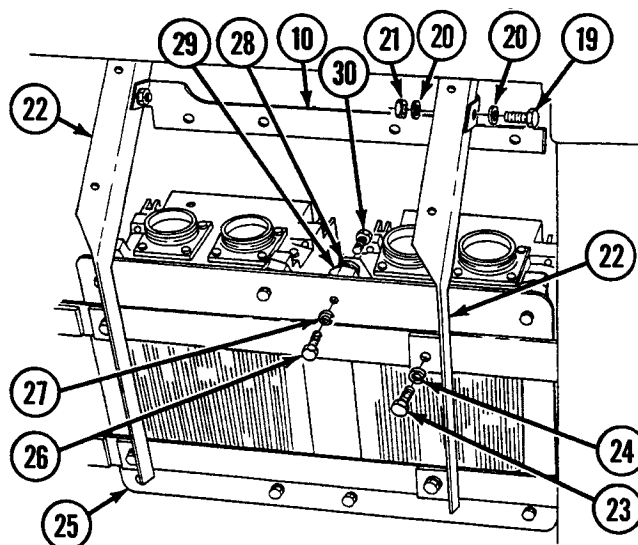


7. Remove mounting bracket (10) by removing two screws (19), four flat washers (20), and two nuts (21).
8. Remove two mounting brackets (22) by removing four screws (23) and four lockwashers (24).
9. Remove mounting plate (25) by removing eight screws (26) and eight lockwashers (27).

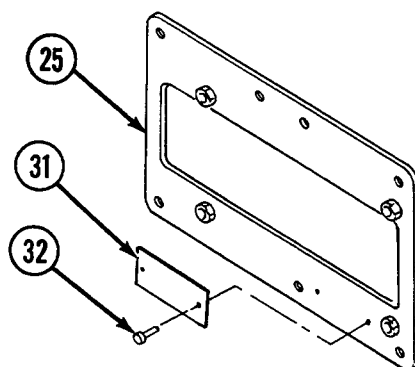
NOTE

Flat washers (28) are used in single voltage regulator configurations only.

10. Remove eight insulators (29) by removing eight screws (30) and flat washers (28) if required.



11. Remove instruction plate (31) from mounting plate (25) by removing two drivescrews (32).



Installation

1. Install instruction plate (31) to mounting plate (25) using two drivescrews (32).

NOTE

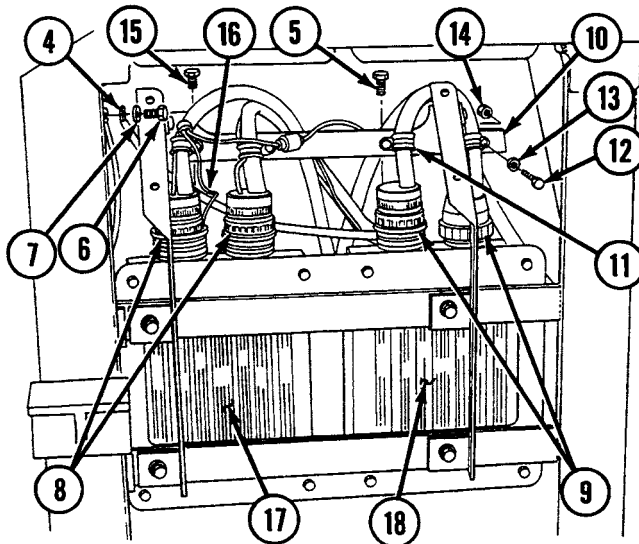
Shim single voltage regulators using flat washers (28) to provide solid mounting.

NOTE

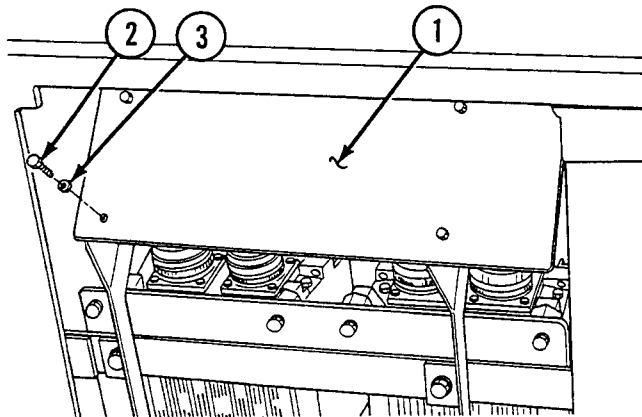
Flat washers (28) are used for single voltage regulator configurations only.

2. Install eight insulators (29) to voltage regulators (17 and 18) using eight screws (30) and flat washers (28) if required.
3. Install mounting plate (25) using eight screws (26) and eight lockwashers (27).
4. Install two mounting brackets (22) using four screws (23) and four lockwashers (24) each.
5. Install mounting bracket (10) using two screws (19), four flat washers (20), and two nuts (21).

6. Install two wiring harnesses (9) to main engine voltage regulator (18) and two wiring harnesses (8) to APU voltage regulator (17).
7. Install screw (15) and ground wire (16).
8. Connect two wiring harnesses (9) and two wiring harnesses (8) to mounting bracket (10) using four clamps (11), four screws (12), four lockwashers (13), and four nuts (14).
9. Install ground strap (4) using screw (5) at one end of ground strap and screw (6) and lockwasher (7) at other end of ground strap.



10. Install access cover (1) using four screws (2) and four lockwashers (3).



11. Close access door (see WP 0336 00).

NOTE

Follow-on maintenance: Install air inlet doors (see WP 0341 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**VOLTAGE REGULATOR AND RELATED PARTS (SINGLE VOLTAGE) (11659111-1) REPLACEMENT
REMOVAL, INSTALLATION**

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwasher (item 620, WP 0491 00)

Screws (4) (item 101, WP 0491 00)

Materials/Parts (cont.)

Screw (item 728, WP 0491 00)

Washers, flat (4) (item 548, WP 0491 00)

Equipment Condition

Air inlet doors removed (see WP 0341 00)

WARNING

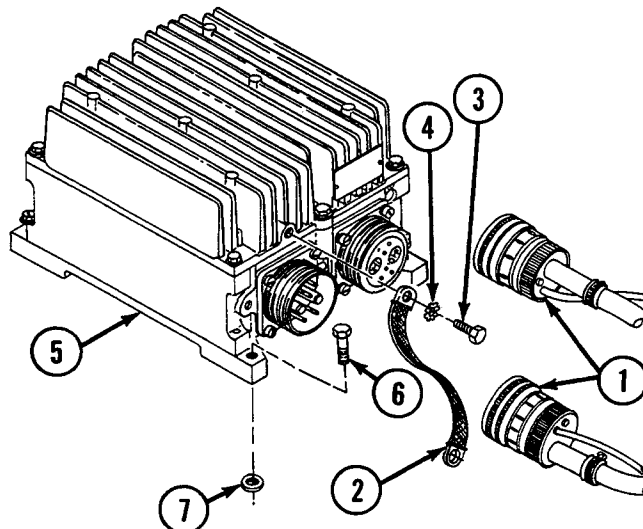
Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

NOTE

A single voltage regulator may be used in dual voltage regulators as a replacement for the main engine regulator only.

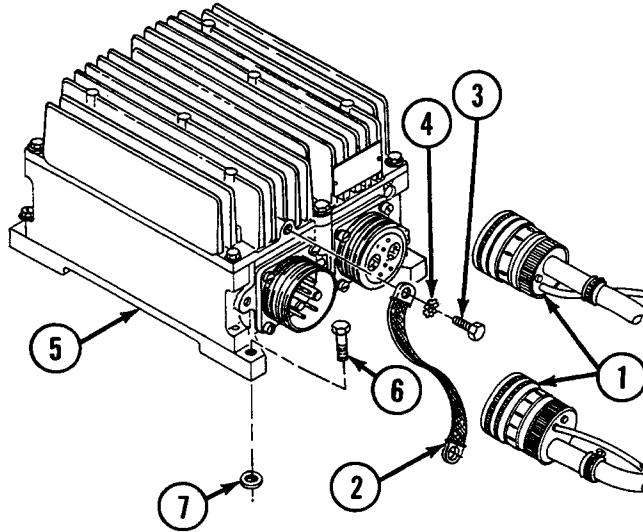
Removal

1. Disconnect two connectors (1).
2. Disconnect ground strap (2) by removing screw (3) and lockwasher (4).
3. Remove voltage regulator (5) by removing four screws (6) and four flat washers (7).



Installation

1. Install voltage regulator (5) using four flat washers (7) and four screws (6).
2. Connect ground strap (2) using lockwasher (4) and screw (3).
3. Connect two connectors (1).

**NOTE**

Follow-on maintenance: Install air inlet doors (see WP 0341 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
ENGINE AND APU ARMATURE RELAY (SINGLE VOLTAGE) REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

Air inlet doors removed (see WP 0341 00)

Materials/Parts

Lockwashers (2) (item 639, WP 0491 00)

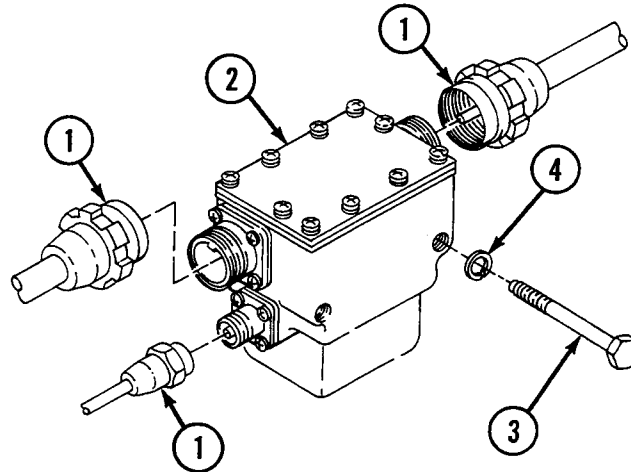
Screws (2) (item 797, WP 0491 00)

WARNING

Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

Removal

1. Disconnect three connectors (1).
2. Remove engine generator relay and housing (2) by removing two screws (3) and two lockwashers (4).

**Installation**

1. Install engine generator relay and housing (2) using two screws (3) and two lockwashers (4).
2. Connect three connectors (1).

NOTE

Follow-on maintenance: Close air inlet doors (see WP 0341 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

GAGE PANEL ASSEMBLY MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Drivescrews (6) (item 500, WP 0491 00)
 Gaskets (3) (item 71, WP 0491 00)
 Lockwashers (16) (item 611, WP 0491 00)
 Lockwashers (3) (item 613, WP 0491 00)
 Lockwashers (3) (item 638, WP 0491 00)
 Lockwashers (2) (item 640, WP 0491 00)

Materials/Parts (cont.)

Packings, preformed (5) (item 225, WP 0491 00)
 Screws (2) (item 134, WP 0491 00)
 Screws (2) (item 397, WP 0491 00)
 Screws (10) (item 573, WP 0491 00)
 Screws (6) (item 574, WP 0491 00)
 Screws (3) (item 830, WP 0491 00)

References

WP 0255 00 thru WP 0264 00

WARNING

Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

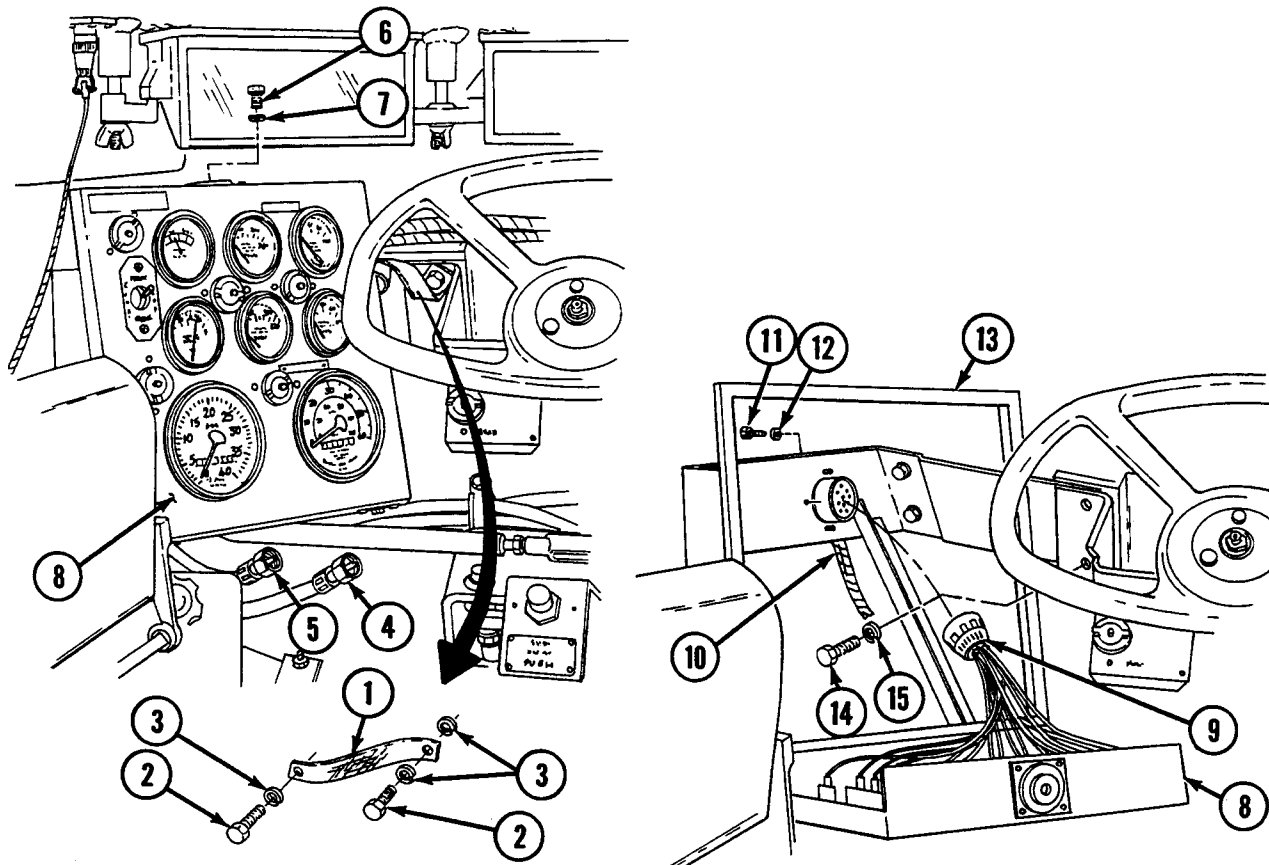
Removal

1. Remove ground strap (1) by removing two screws (2) and three lockwashers (3).
2. Disconnect tachometer connector (4) and speedometer connector (5).
3. Remove three screws (6) and three lockwashers (7).
4. Pull gage panel (8) forward and disconnect wiring harness (9).
5. Remove wiring harness (10) by removing four screws (11) and four lockwashers (12).
6. Remove gage panel (8).

NOTE

Screw (2) and lockwasher (3) were removed with ground strap (1).

7. Remove mounting bracket (13) by removing three screws (14) and three lockwashers (15).



Disassembly

1. Unscrew and remove five light lenses (16) with five preformed packings (17).
2. Remove five lamps (18) from indicator lights (19) by depressing and turning counterclockwise.

NOTE

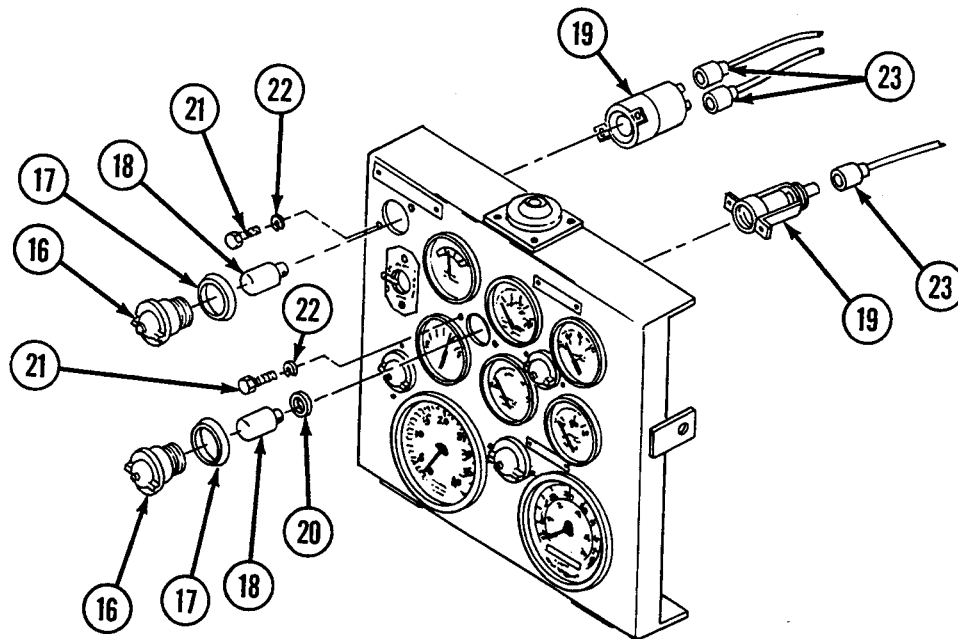
Gaskets (20) are present on three of the lamps (18).

3. Remove three gaskets (20).
4. Remove five indicator lights (19) by removing two screws (21) and two lockwashers (22) from each.

NOTE

Identify connectors upon removal to ensure proper installation.

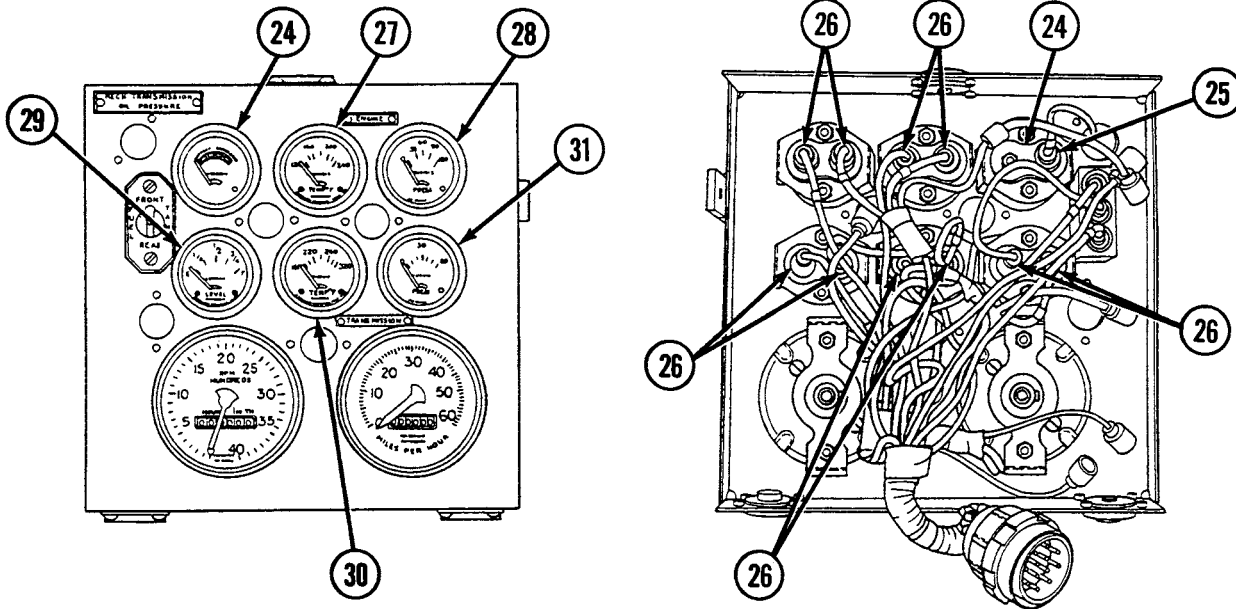
5. Disconnect connectors (23) from five indicator lights (19).



NOTE

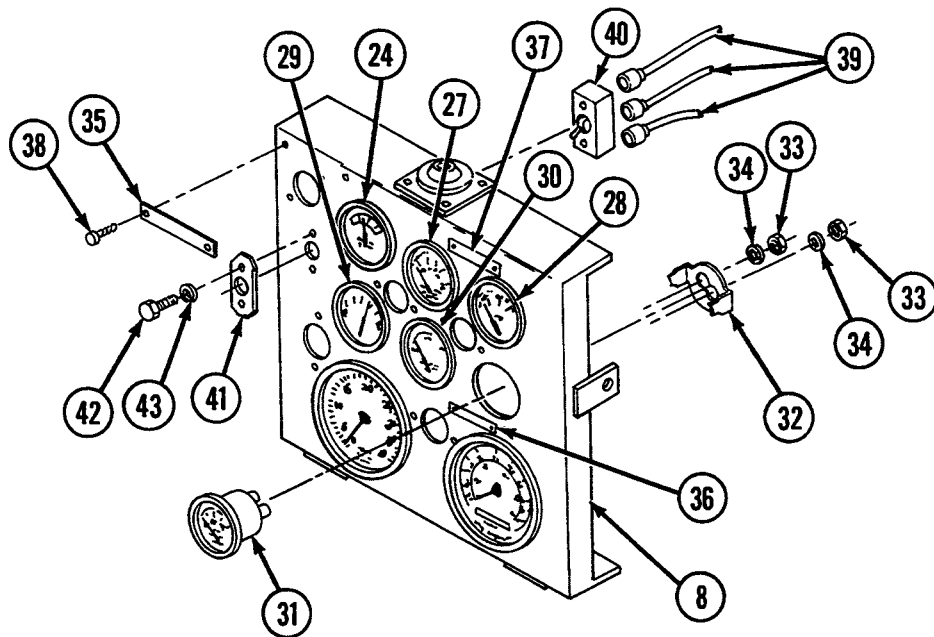
Battery generator indicator meter (24) has only one connector.

6. Disconnect connector (25) from battery generator indicator meter (24) and two connectors (26) from engine oil temperature gage (27), engine oil pressure gage (28), fuel tank level gage (29), transmission oil temperature gage (30), and transmission oil pressure gage (31).

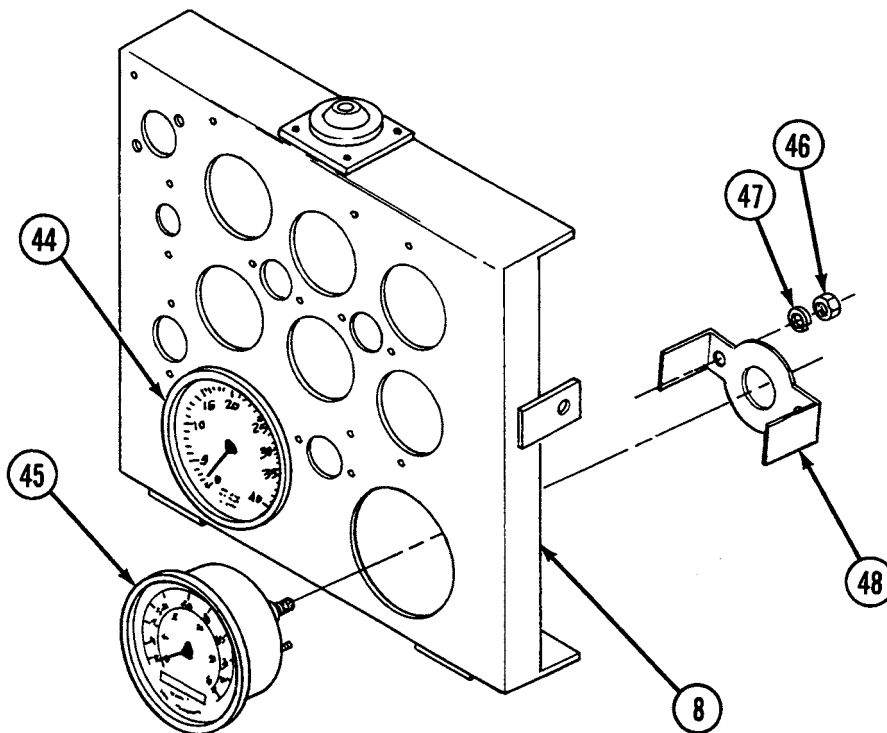


7. Remove six clamps (32) by removing two nuts (33) and two lockwashers (34) from each.
8. Remove each indicating meter (24 and 27 through 31) from front of gage panel (8).
9. Remove ID plates (35, 36, and 37) by removing two drivescrews (38) from each.
10. Disconnect three connectors (39) from fuel selector switch (40).

11. Remove fuel selector switch instruction plate (41) and fuel selector switch (40) from gage panel (8) by removing two screws (42) and two lockwashers (43).

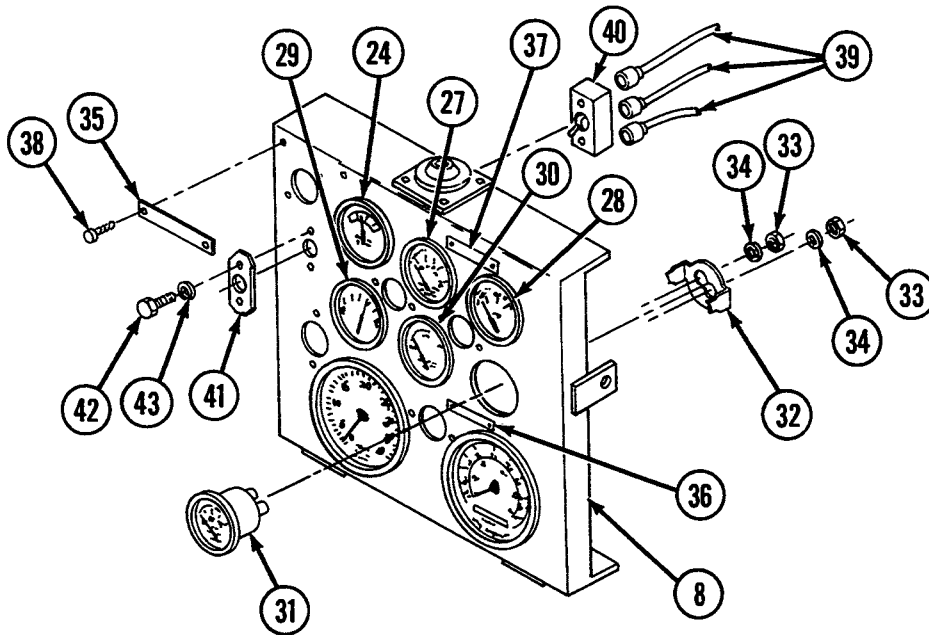


12. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).
13. Remove speedometer (44) and tachometer (45) by removing two nuts (46), two lockwashers (47), and bracket (48). Pull speedometer and tachometer from front of gage panel (8).



Assembly

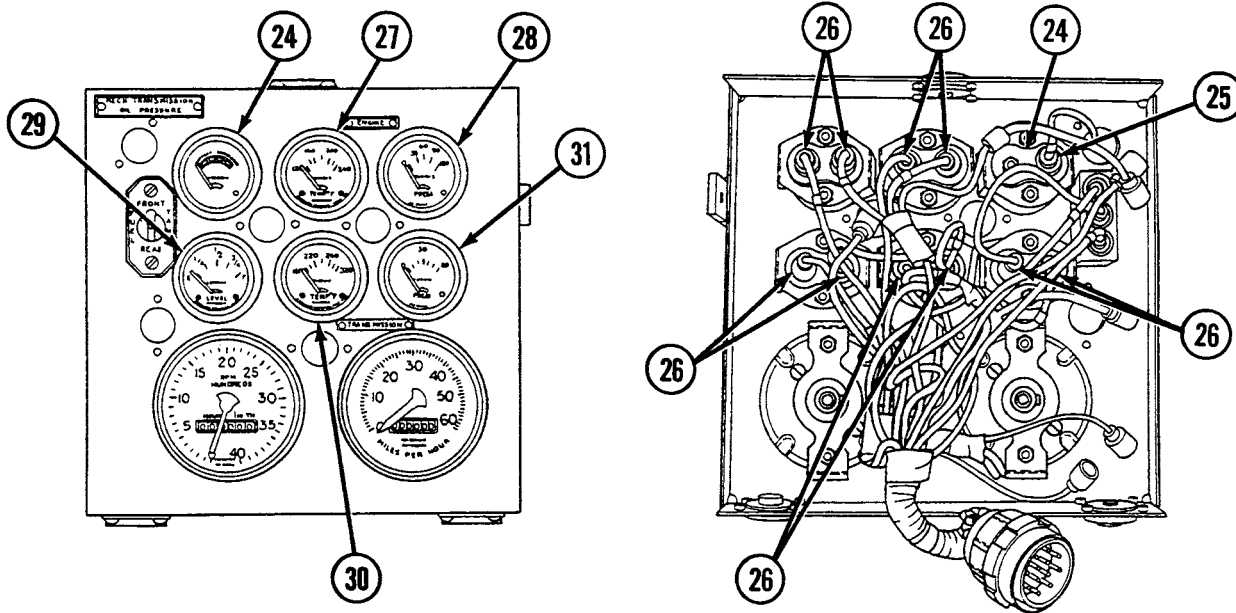
1. Insert speedometer (44) and tachometer (45) through front of gage panel (8). Install speedometer and tachometer using bracket (48), two nuts (46), and two lockwashers (47) for each.
2. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).
3. Install fuel selector switch (40) and fuel selector switch instruction plate (41) to gage panel (8) using two screws (42) and two lockwashers (43). Connect three connectors (39) to fuel selector switch.
4. Install ID plates (35, 36, and 37) using two drivescrews (38) for each.
5. Install battery generator indicator meter (24), engine oil temperature gage (27), engine oil pressure gage (28), fuel tank level gage (29), transmission oil temperature gage (30), and transmission oil pressure gage (31) through front of gage panel (8).
6. Install six clamps (32) using two lockwashers (34) and two nuts (33) for each.



NOTE

Battery generator indicator meter (24) has only one connector.

7. Connect connector (25) to battery generator indicator meter (24) and two connectors (26) to each indicating meter (27 through 31).

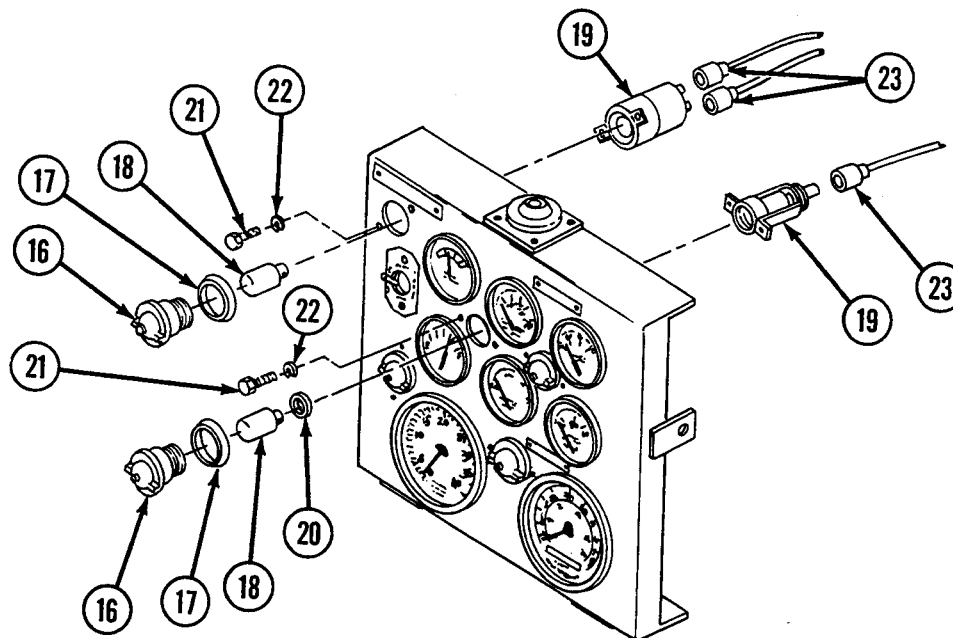


8. Install five indicator lights (19) using two screws (21) and two lockwashers (22) for each.
9. Connect connectors (23) to each of five indicator lights (19).

NOTE

Gaskets (20) are present on three of the lamps (18).

10. Install three gaskets (20).
11. Install five lamps (18) to indicator lights (19) by depressing and turning clockwise.
12. Install five preformed packings (17) and five light lenses (16).

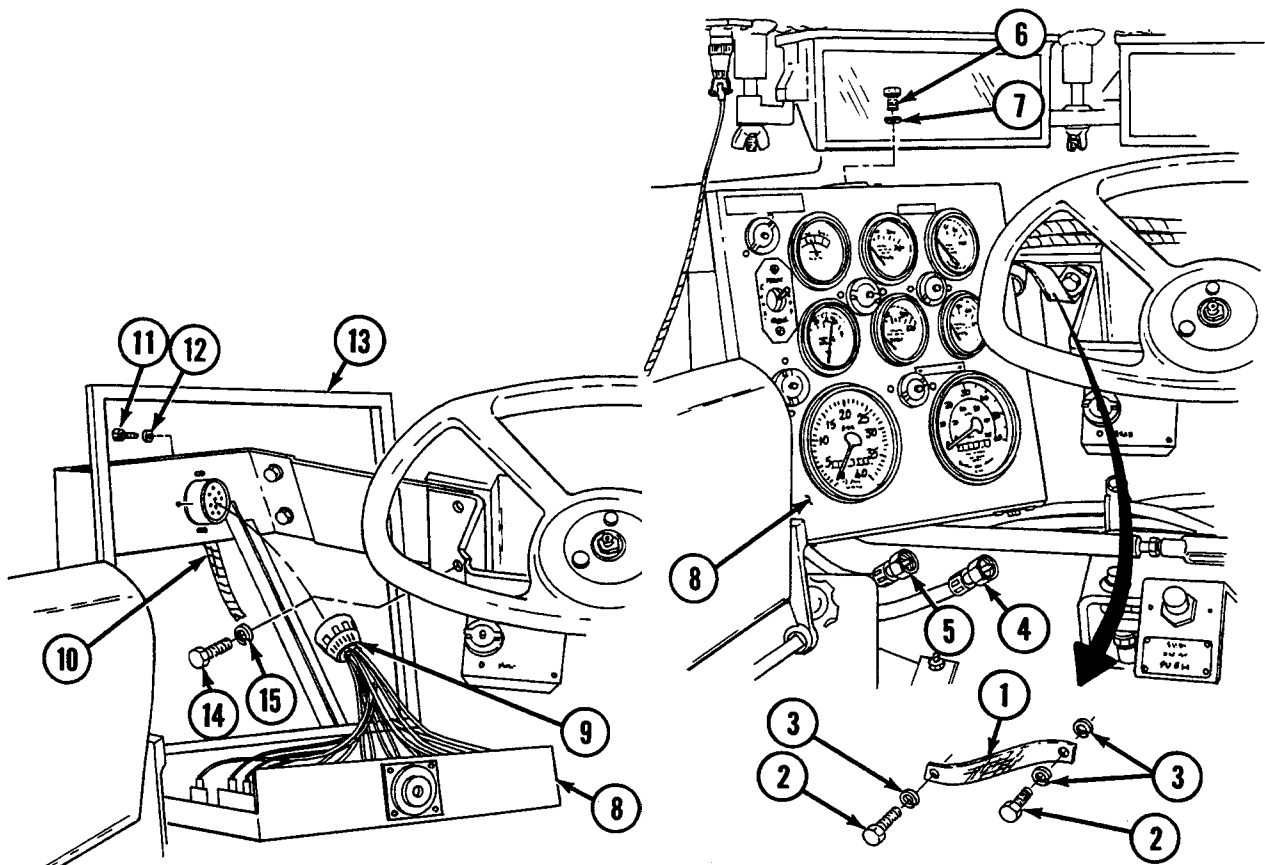


Installation

NOTE

Screw (2) and lockwasher (3) are installed with ground strap (1).

1. Install mounting bracket (13) using three screws (14) and three lockwashers (15).
2. Install wiring harness (10) using four screws (11) and four lockwashers (12).
3. Connect wiring harness (9).
4. Place gage panel (8) into position and secure using three screws (6) and three lockwashers (7).
5. Connect tachometer connector (4) and speedometer connector (5).
6. Install ground strap (1) using screw (2) and three lockwashers (3).



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

ELECTRICAL ACCESSORIES PANEL MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Gaskets (2) (item 71, WP 0491 00)
 Lockwashers (2) (item 618, WP 0491 00)
 Lockwashers (22) (item 619, WP 0491 00)
 Lockwashers (4) (item 621, WP 0491 00)
 Nuts (10) (item 671, WP 0491 00)

Materials/Parts (cont.)

Packings, preformed (2) (item 225, WP 0491 00)
 Screws (2) (item 568, WP 0491 00)
 Screws (16) (item 573, WP 0491 00)
 Screws (6) (item 577, WP 0491 00)
 Screws (4) (item 731, WP 0491 00)

References

WP 0255 00 thru WP 0264 00

WARNING

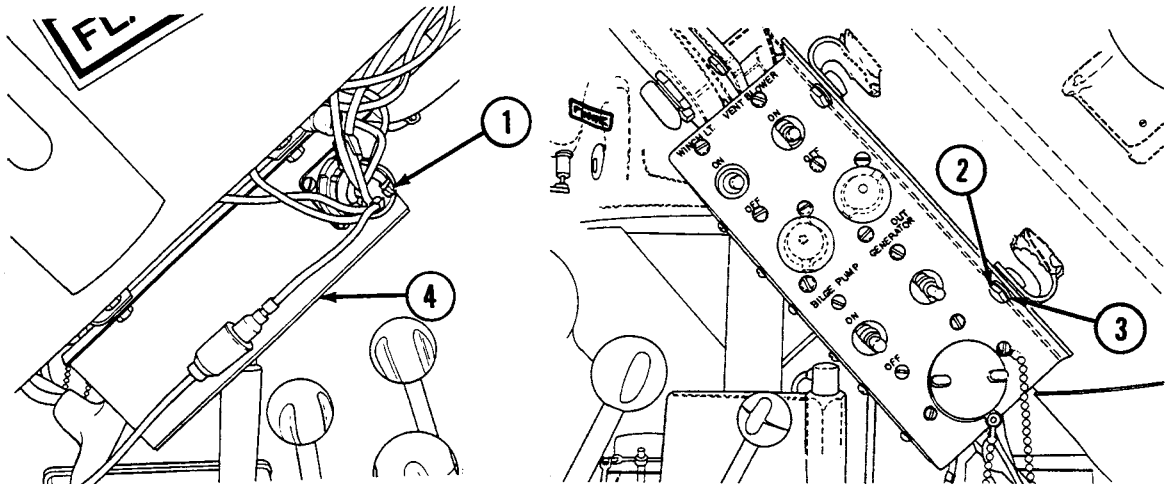
Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

NOTE

Identify connectors upon removal to ensure proper installation.

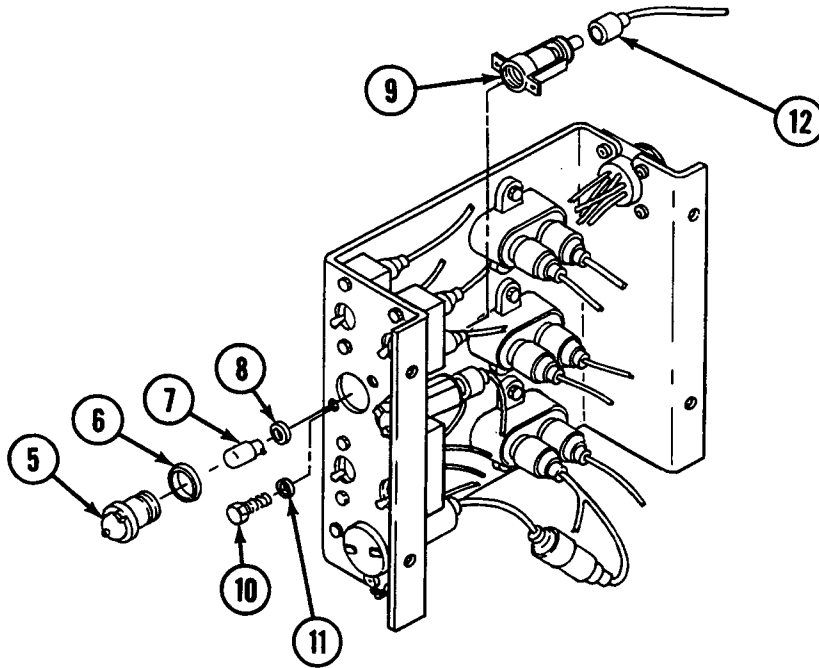
Removal

1. Disconnect connector (1).
2. Remove four screws (2), four lockwashers (3), and accessories panel (4).



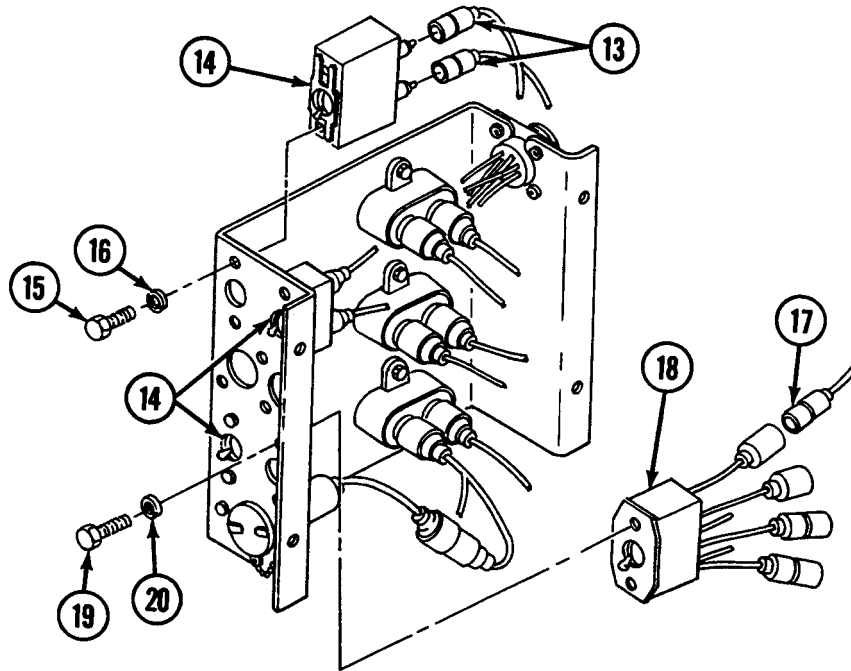
Disassembly

1. Unscrew and remove two light lenses (5) and two preformed packings (6).
2. Remove two lamps (7) by depressing and turning counterclockwise.
3. Remove two gaskets (8).
4. Remove two indicator lights (9) by removing two screws (10) and two lockwashers (11) from each.
5. Disconnect connector (12) from each indicator light (9).

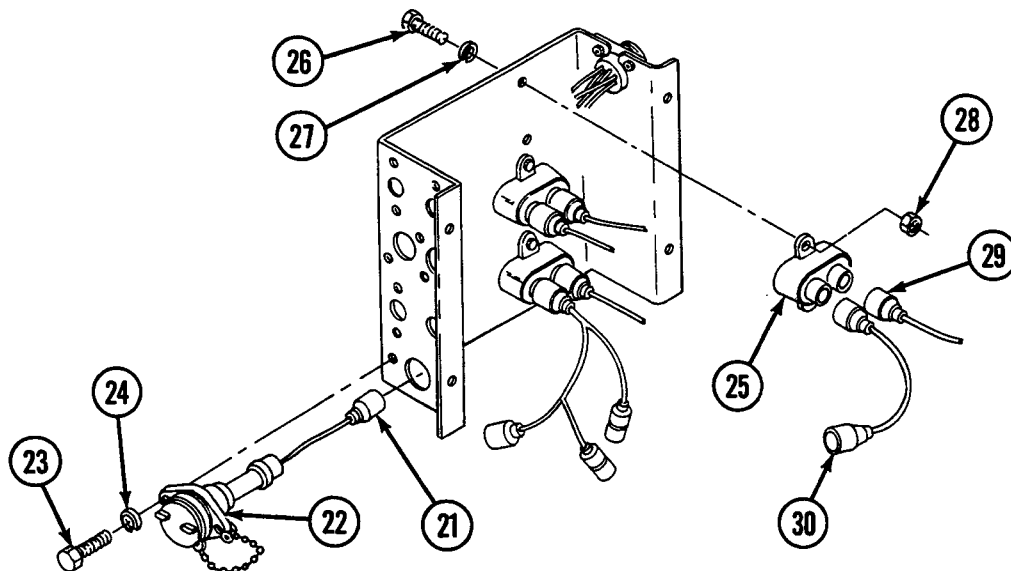


6. Disconnect two connectors (13) from three switches (14).
7. Remove three switches (14) by removing two screws (15) and two lockwashers (16) from each.

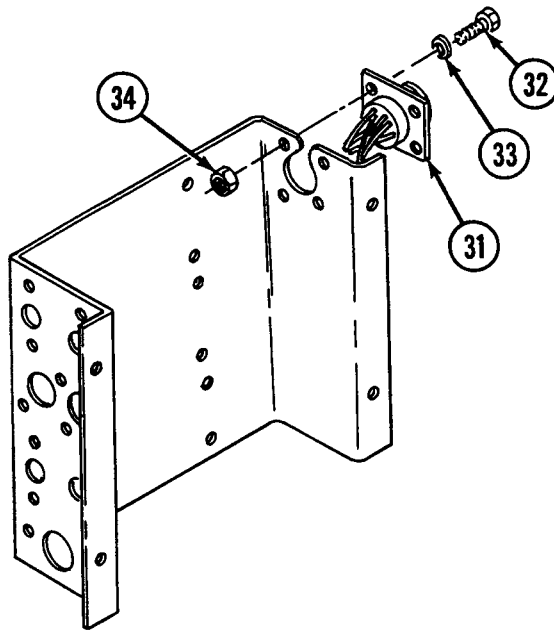
8. Disconnect four connectors (17) from switch (18).
9. Remove switch (18) by removing two screws (19) and two lockwashers (20).



10. Disconnect connector (21) and remove lamp holder (22) by removing two screws (23) and two lockwashers (24).
11. Remove three circuit breakers (25) by removing two screws (26), two lockwashers (27), and two nuts (28) from each.
12. Disconnect six connectors (29) and remove two lead assemblies (30).



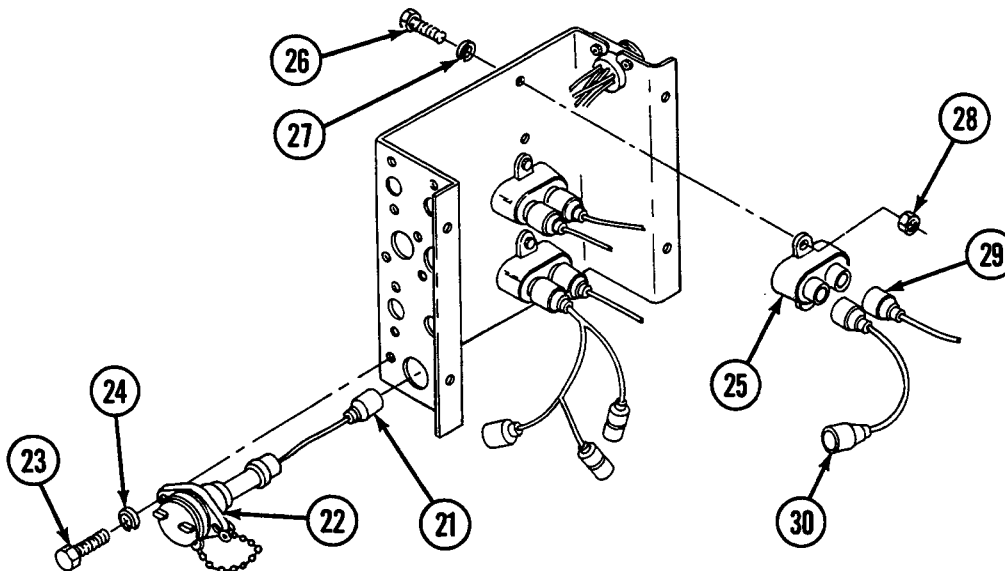
13. Remove wiring harness (31) by removing four screws (32), four lockwashers (33), and four nuts (34).



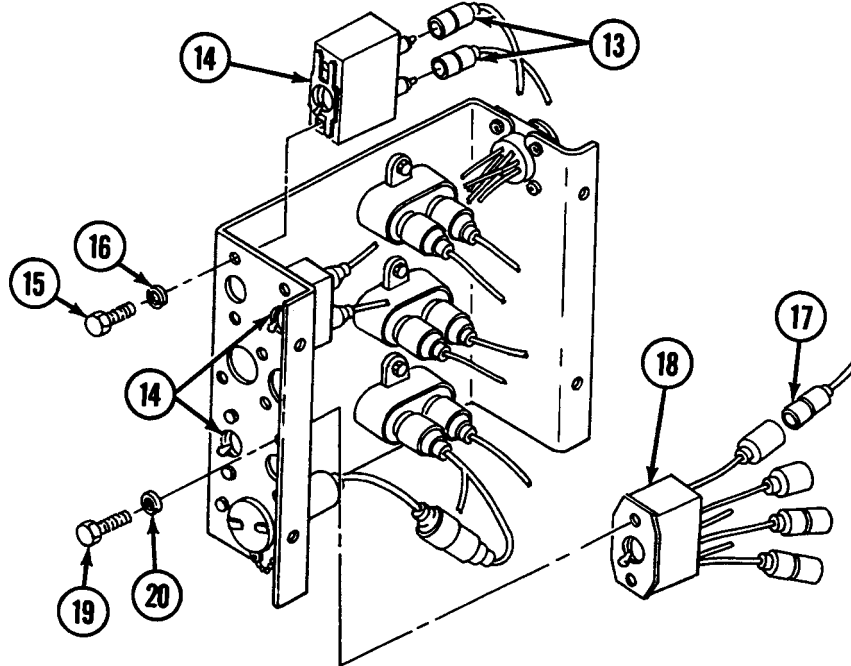
14. Disassemble connectors (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

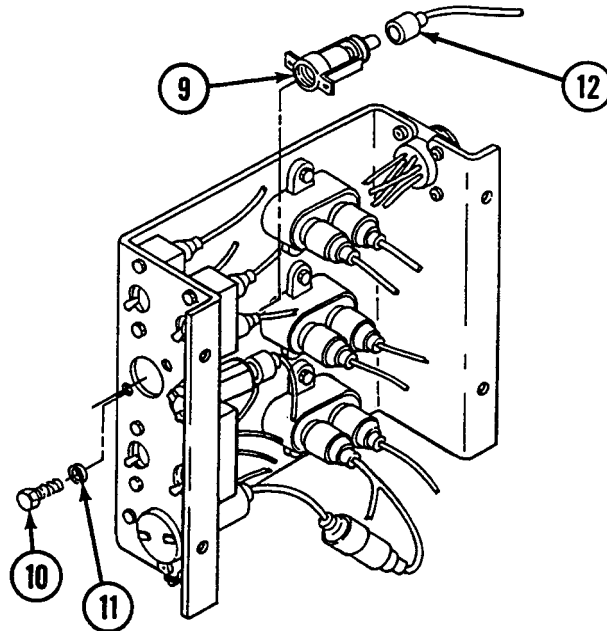
1. Assemble connectors (see WP 0255 00 thru 0264 00, as appropriate).
2. Install wiring harness (31) using four screws (32), four lockwashers (33), and four nuts (34).
3. Connect six connectors (29) and install two lead assemblies (30).
4. Install three circuit breakers (25) using two screws (26), two lockwashers (27), and two nuts (28) for each.
5. Install lamp holder (22) using two screws (23) and two lockwashers (24), and connect connector (21).



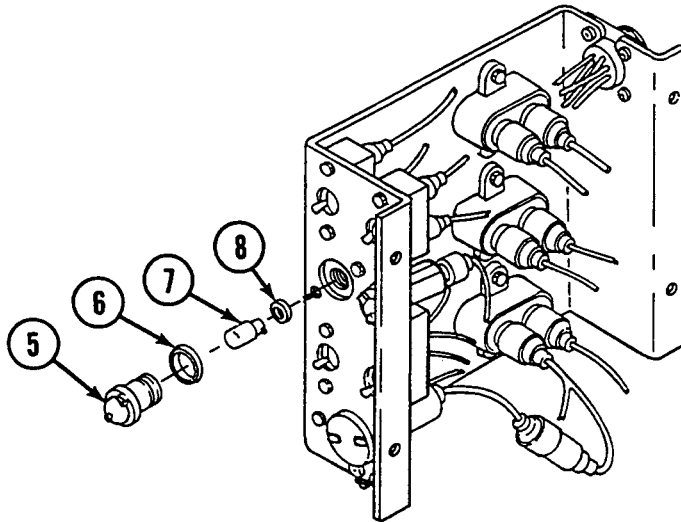
6. Install switch (18) using two screws (19) and two lockwashers (20).
7. Connect four connectors (17) to switch (18).
8. Install three switches (14) using two screws (15) and two lockwashers (16) for each.
9. Connect two connectors (13) to three switches (14).



10. Connect connector (12) to each indicator light (9).
11. Install two indicator lights (9) using two screws (10) and two lockwashers (11) for each.

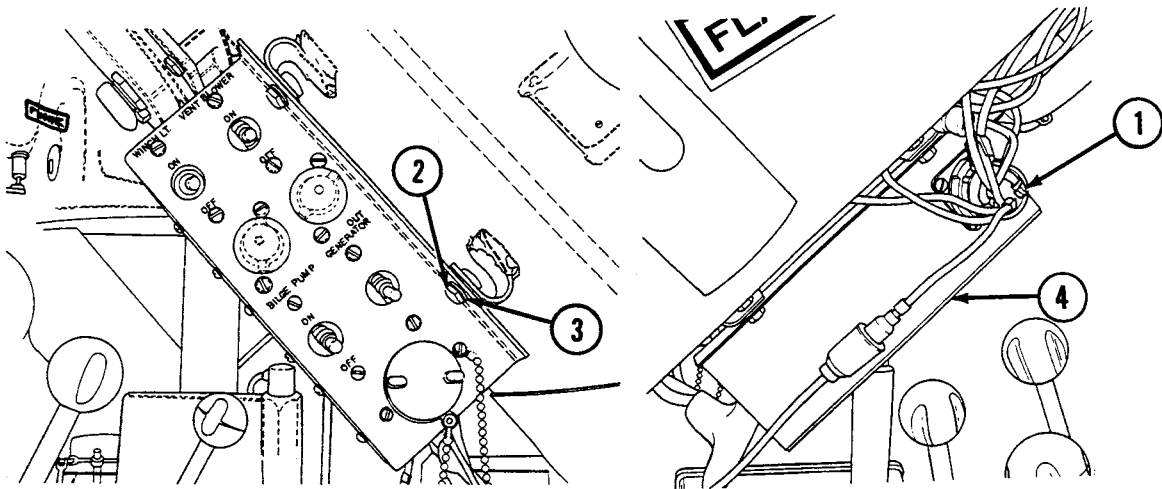


12. Install two gaskets (8).
13. Install two lamps (7) by depressing and turning clockwise.
14. Install two preformed packings (6) and two light lenses (5).



Installation

1. Install accessories panel (4) using four screws (2) and four lockwashers (3).
2. Connect connector (1).



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

MAIN SWITCH PANEL ASSEMBLY MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)
 Riveter, blind (item 48, WP 0490 00)

Materials/Parts

Drivescrews (2) (item 506, WP 0491 00)
 Gasket (item 71, WP 0491 00)
 Lockwashers (12) (item 611, WP 0491 00)
 Lockwashers (2) (item 641, WP 0491 00)
 Lockwashers (2) (item 718, WP 0491 00)
 Nuts (12) (item 351, WP 0491 00)
 Nuts (10) (item 676, WP 0491 00)
 Nuts (2) (item 768, WP 0491 00)
 Packing, preformed (item 225, WP 0491 00)

Materials/Parts (cont.)

Rivets (4) (item 848, WP 0491 00)
 Screws (2) (item 371, WP 0491 00)
 Screws (3) (item 375, WP 0491 00)
 Screws (8) (item 573, WP 0491 00)
 Screws (2) (item 574, WP 0491 00)
 Screws (12) (item 587, WP 0491 00)
 Screws (10) (item 588, WP 0491 00)
 Screws (4) (item 592, WP 0491 00)
 Screws (2) (item 794, WP 0491 00)
 Washers, flat (3) (item 534, WP 0491 00)

References

WP 0255 00 thru WP 0264 00

WARNING

Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

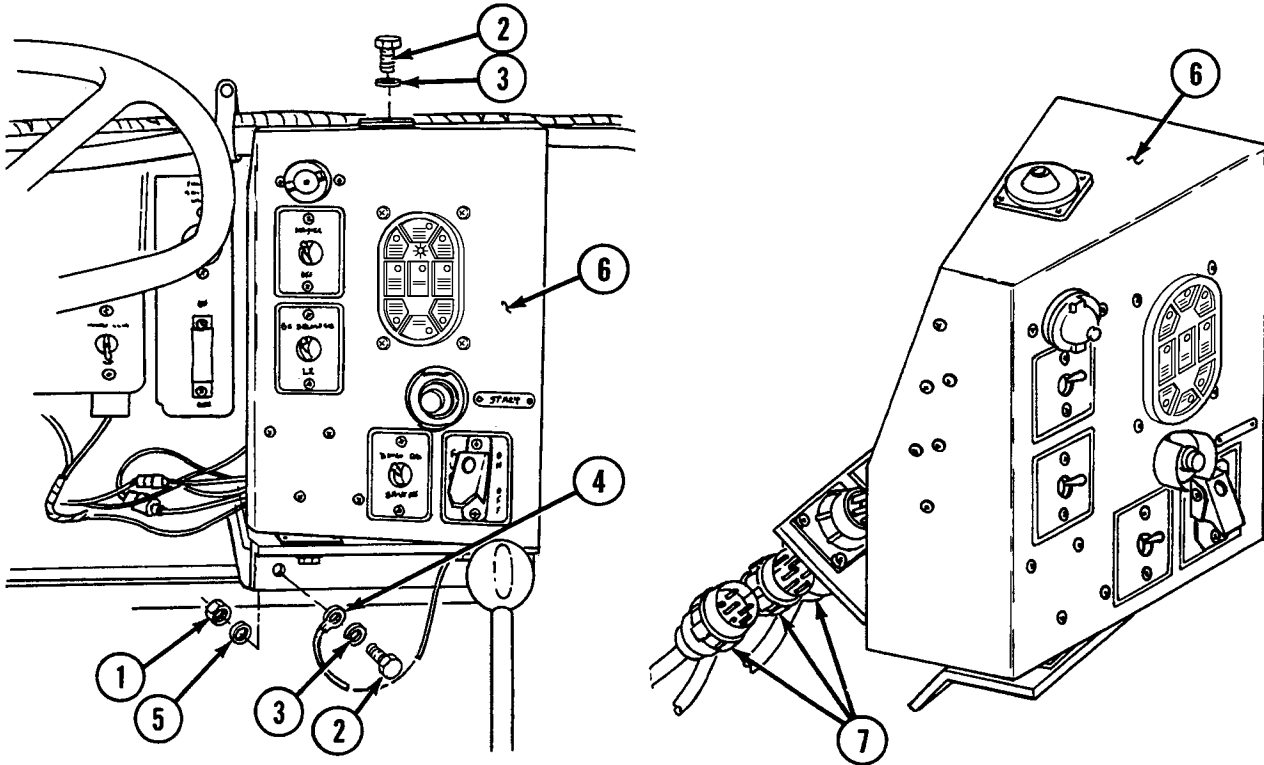
Removal

1. Remove two nuts (1), three screws (2), three lockwashers (3), end of ground lead (4), and flat washer (5) from main switch panel (6).

NOTE

Identify connectors upon removal to ensure proper installation.

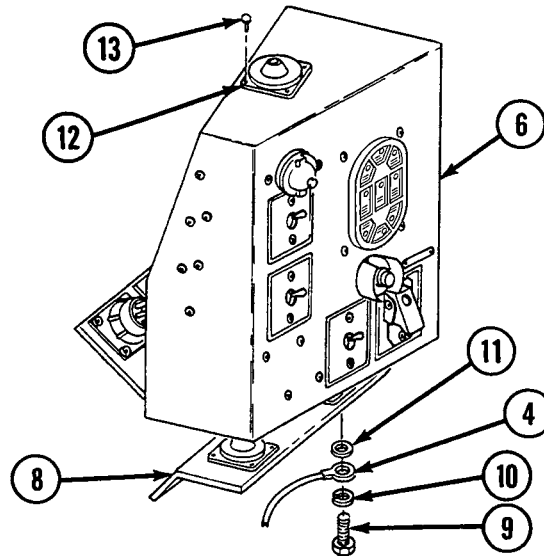
2. Pull main switch panel (6) forward and disconnect three connectors (7).



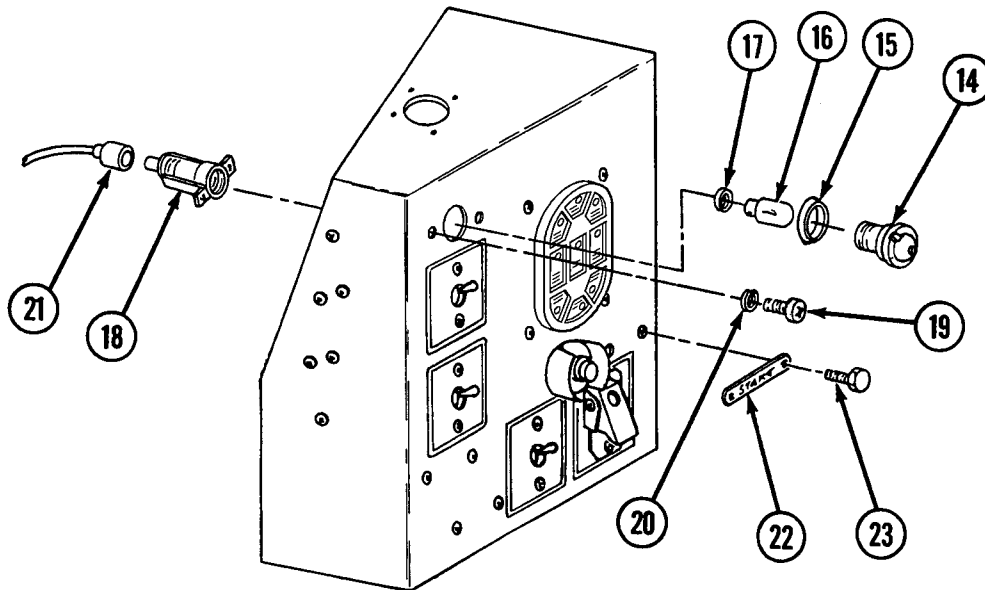
Disassembly

1. Remove ground strap (4) and retainer (8) by removing two screws (9), lockwasher (10), and two flat washers (11) from main switch panel (6).

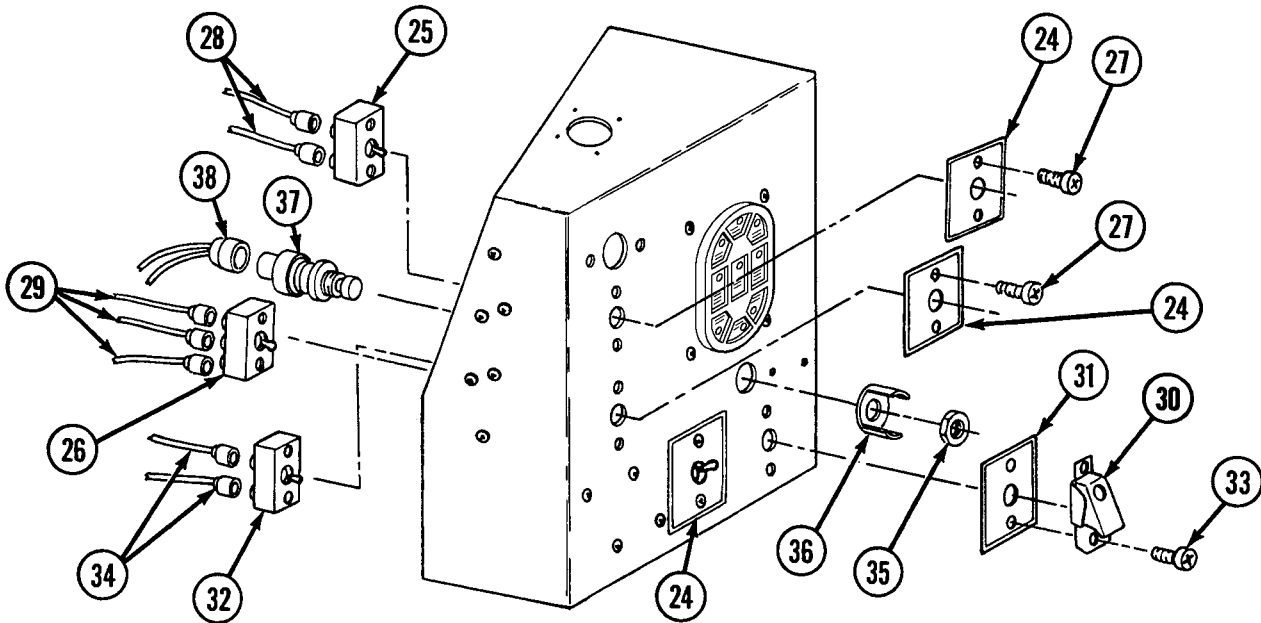
2. Remove mount (12) by removing four rivets (13).



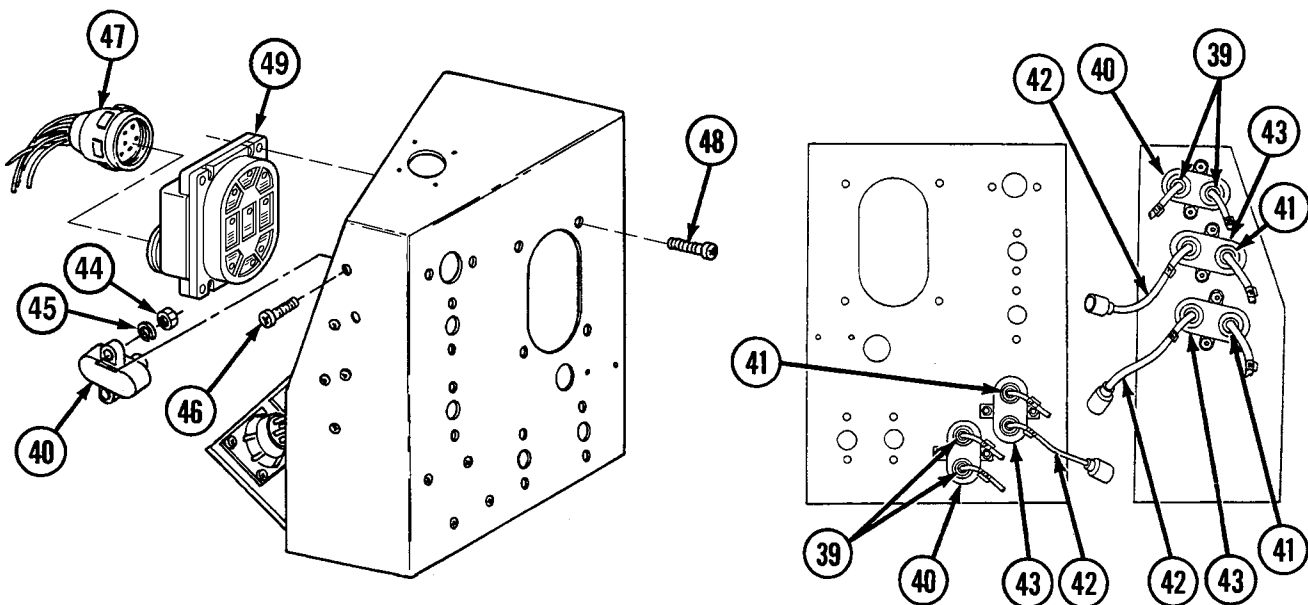
3. Unscrew and remove light lens (14) and preformed packing (15).
4. Remove lamp (16) by depressing and turning counterclockwise.
5. Remove gasket (17).
6. Remove indicator light (18) by removing two screws (19) and two lockwashers (20).
7. Disconnect connector (21) from indicator light (18).
8. Remove ID plate (22) by removing two drivescrews (23).



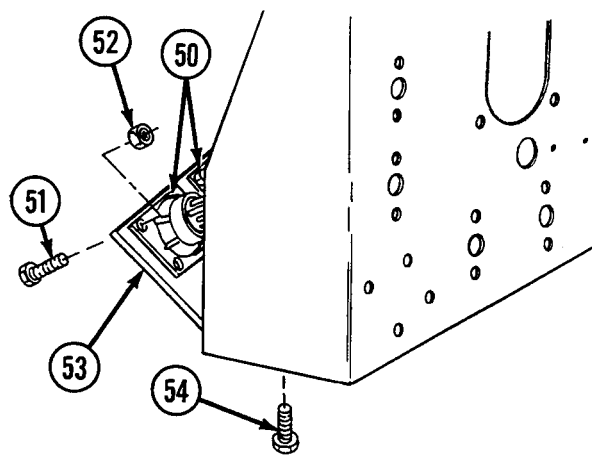
9. Remove three ID plates (24), two switches (25), and switch (26) by removing two screws (27) from each.
10. Disconnect two connectors (28) from two switches (25) and three connectors (29) from switch (26).
11. Remove switch guard (30), ID plate (31), and switch (32) by removing two screws (33).
12. Disconnect two connectors (34) from switch (32).
13. Remove nut (35), switch guard (36), pull switch (37), and disconnect connector (38).



14. Disconnect two connectors (39) from two circuit breakers (40).
15. Disconnect connector (41) and remove lead assembly (42) from three circuit breakers (43).
16. Remove five circuit breakers (40 and 43) by removing two nuts (44), two lockwashers (45), and two screws (46) from each.
17. Disconnect connector (47) and remove four screws (48) and switch (49).



18. Remove three connectors (50) by removing four screws (51) and four nuts (52) from each.
19. Remove panel (53) by removing two screws (54).

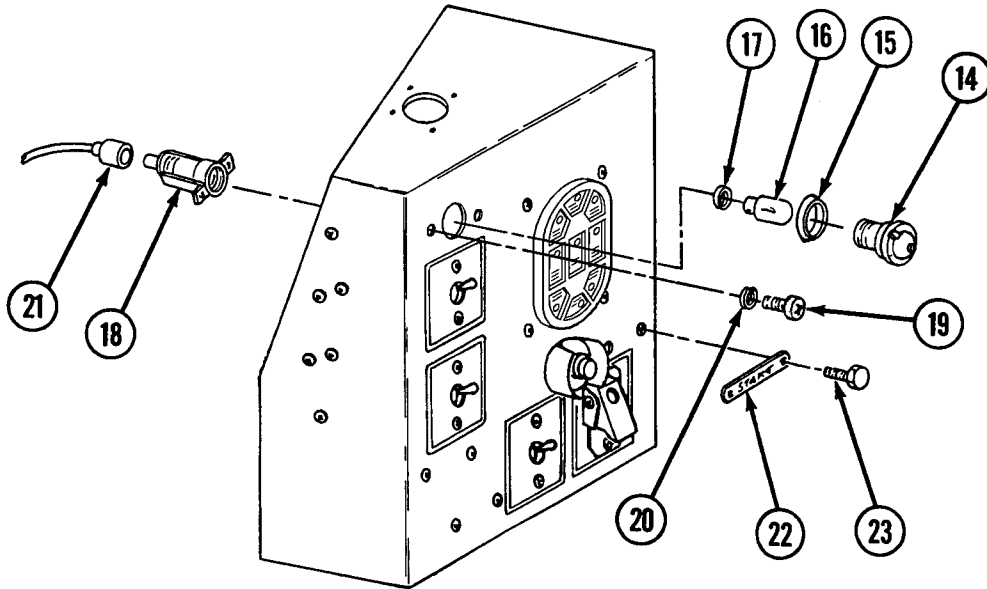


20. Disassemble wiring harnesses and lead assembly (see WP 0255 00 thru 0264 00, as appropriate).

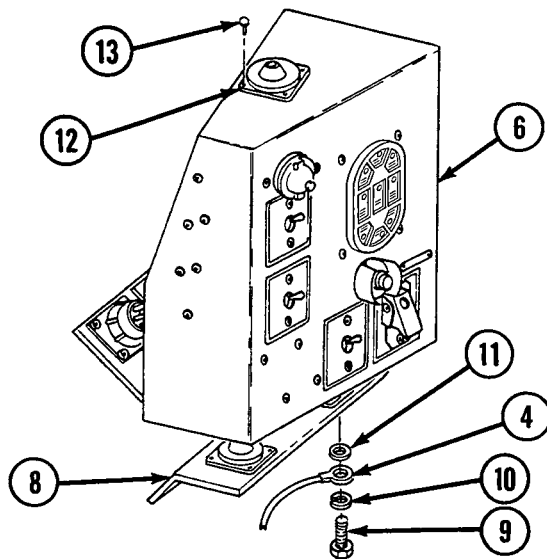
Assembly

1. Assemble wiring harnesses and lead assembly (see WP 0255 00 thru 0264 00, as appropriate).
2. Install panel (53) using two screws (54).
3. Install three connectors (50) using four screws (51) and four nuts (52) for each.
4. Install switch (49) using four screws (48), and connect connector (47).
5. Install five circuit breakers (40 and 43) using two screws (46), two lockwashers (45), and two nuts (44) for each.
6. Install lead assembly (42) to three circuit breakers (43), and connect connector (41).
7. Connect two connectors (39) to two circuit breakers (40).
8. Install switch guard (36), pull switch (37), nut (35), and connect connector (38).
9. Connect two connectors (34) to switch (32).
10. Install switch (32), ID plate (31), and switch guard (30) using two screws (33).
11. Connect three connectors (29) to switch (26) and two connectors (28) to two switches (25).
12. Install two switches (25), switch (26), and three ID plates (24) using two screws (27) for each.

13. Install ID plate (22) using two drivescrews (23).
14. Connect connector (21) to indicator light (18).
15. Install indicator light (18) using two screws (19) and two lockwashers (20).
16. Install gasket (17).
17. Install lamp (16) by depressing and turning clockwise.
18. Install preformed packing (15) and light lens (14).

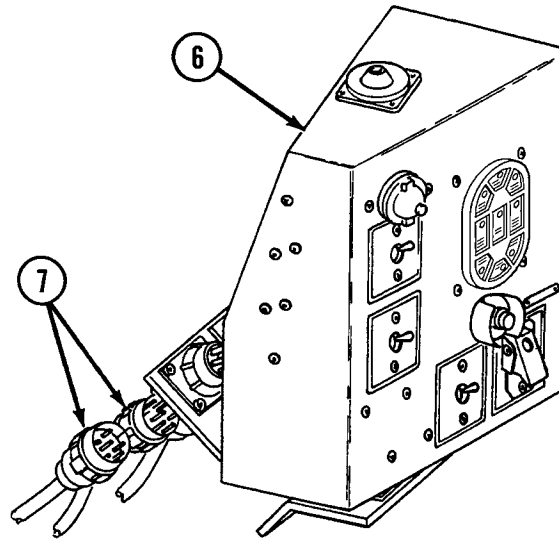


19. Install mount (12) using four rivets (13).
20. Install ground strap (4) and retainer (8) to main switch panel (6) using two screws (9), two flat washers (11), and lockwasher (10).

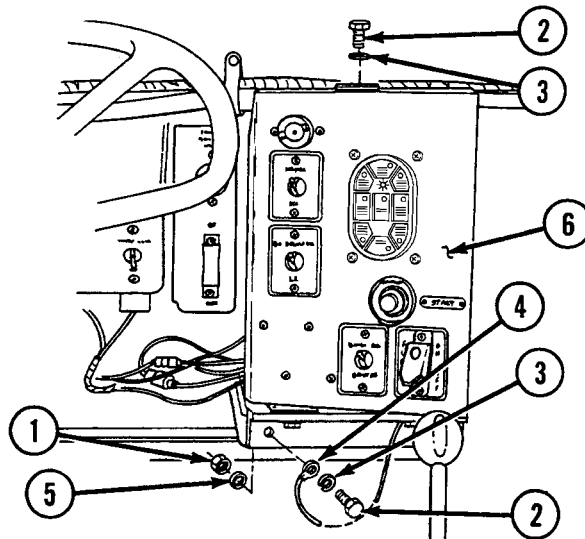


Installation

1. Place main switch panel (6) in position and connect three connectors (7).



2. Install end of ground lead (4), three lockwashers (3), flat washer (5), three screws (2), and two nuts (1) to main switch panel (6).



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
FLASHER SYSTEM PANEL AND RELATED PARTS REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Gaskets (3) (item 71, WP 0491 00)
 Lockwashers (10) (item 611, WP 0491 00)
 Lockwashers (3) (item 619, WP 0491 00)
 Lockwashers (2) (item 621, WP 0491 00)
 Nuts (2) (item 676, WP 0491 00)
 Nuts, self-locking (2) (item 493, WP 0491 00)

Materials/Parts (cont.)

Packings, preformed (4) (item 225, WP 0491 00)
 Screws (2) (item 574, WP 0491 00)
 Screws (10) (item 575, WP 0491 00)
 Screws (2) (item 589, WP 0491 00)
 Screws (2) (item 731, WP 0491 00)

References

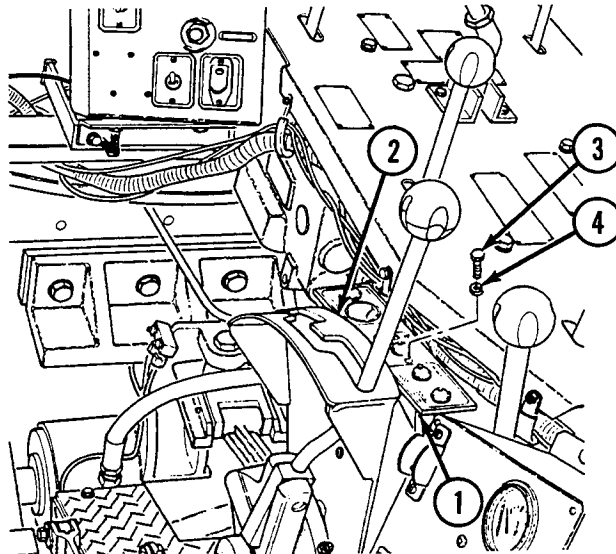
WP 0255 00 thru WP 0264 00

WARNING

Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

Removal

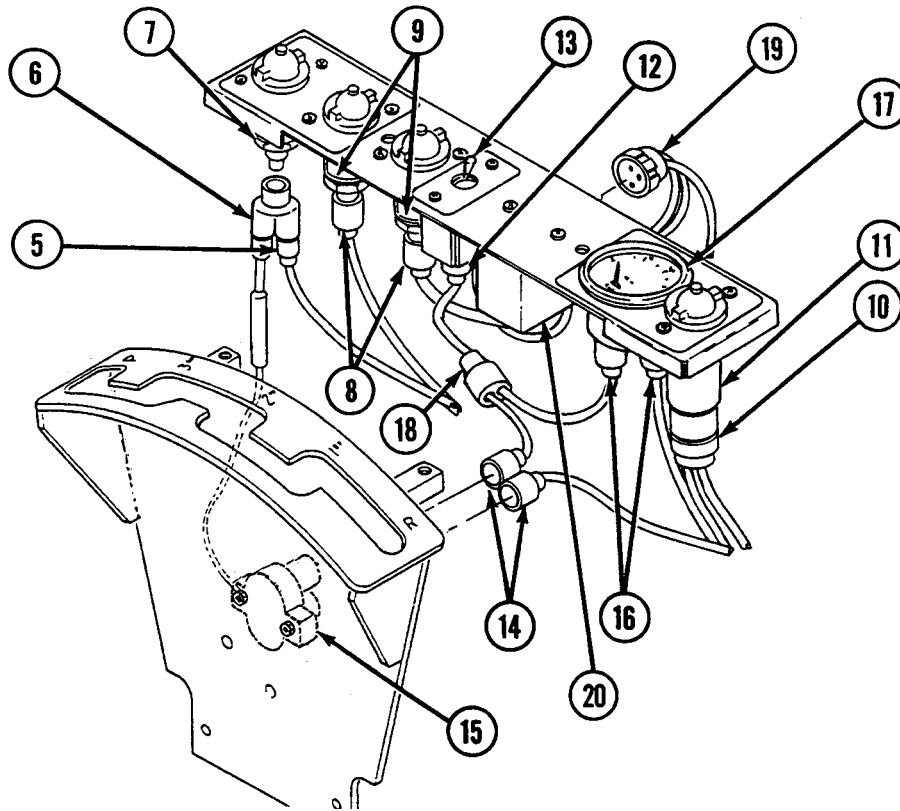
1. Remove flasher system panel (1) from transmission shift lever bracket (2) by removing two screws (3) and two lockwashers (4).



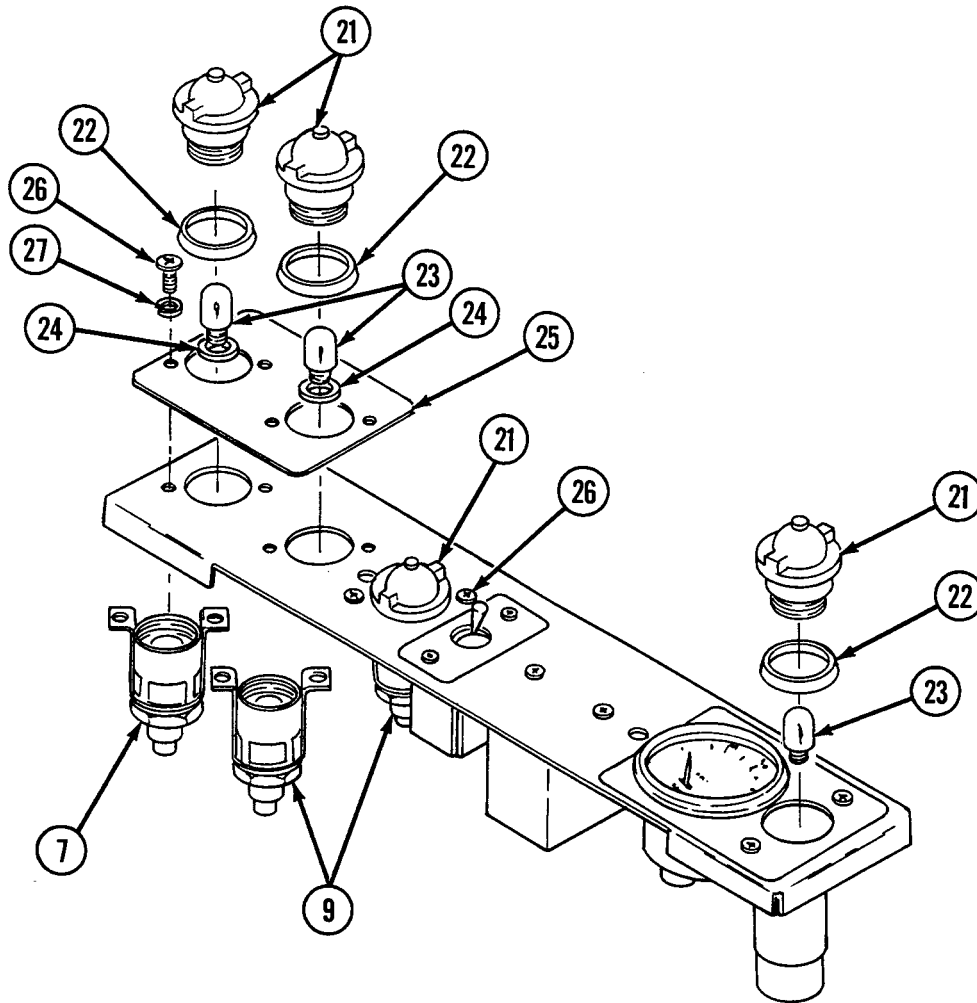
NOTE

Identify connectors upon removal to ensure proper installation.

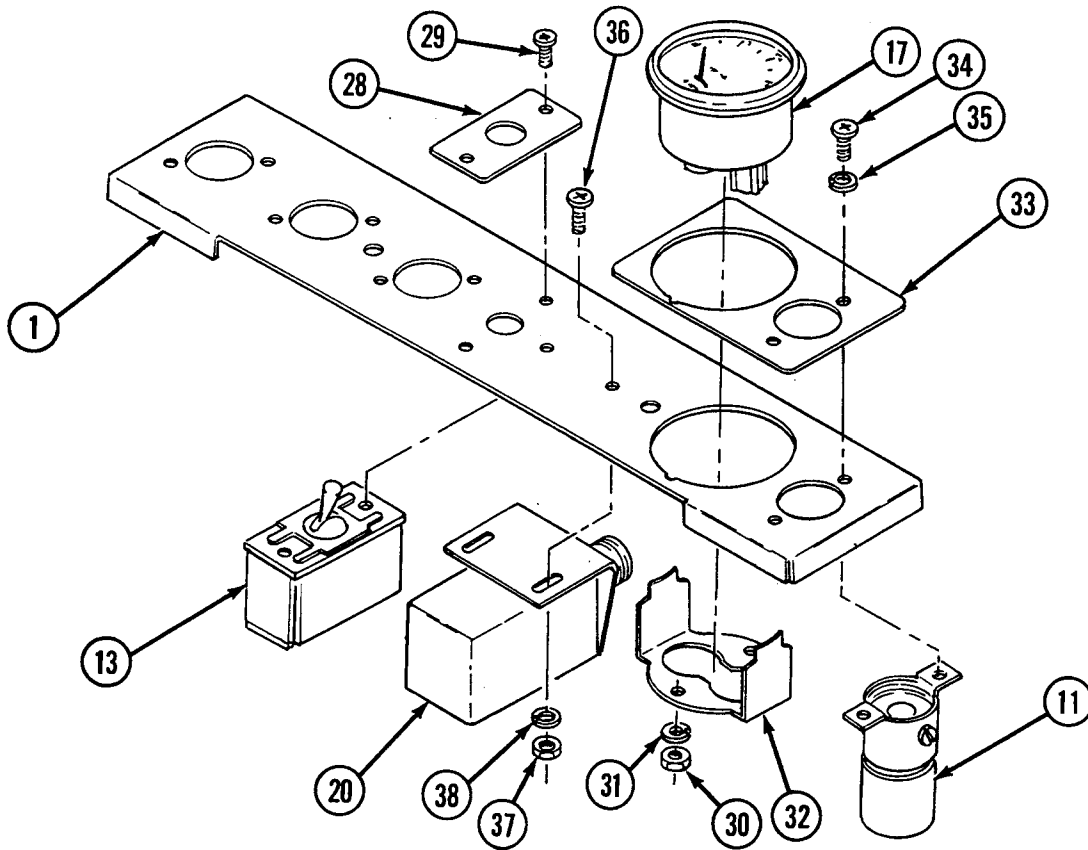
2. Disconnect connector (5) from Y-connector (6) and Y-connector from indicator light (7).
3. Disconnect two connectors (8) from two indicator lights (9).
4. Disconnect connector (10) from indicator light (11).
5. Disconnect two connectors (12) from switch (13).
6. Disconnect two connectors (14) from circuit breaker (15).
7. Disconnect two connectors (16) from gage (17), and remove lead assembly (18).
8. Disconnect connector (19) from thermal flasher (20).



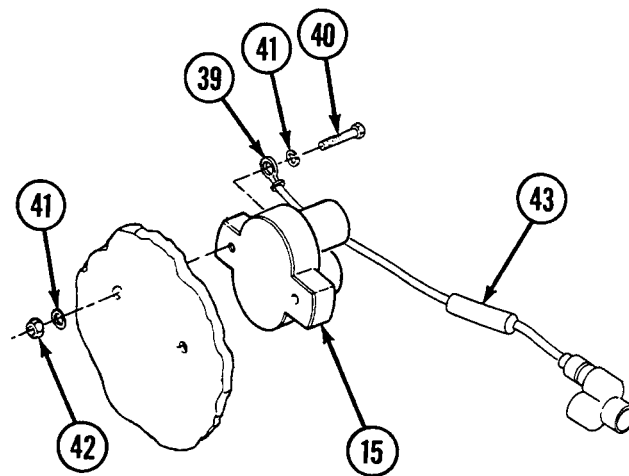
9. Unscrew and remove four light lenses (21) and four preformed packings (22).
10. Remove four lamps (23) by depressing and turning counterclockwise.
11. Remove three gaskets (24).
12. Remove ID plate (25) and three indicator lights (7 and 9) by removing two screws (26) and two lockwashers (27) from each indicator light.



13. Remove switch (13) and ID plate (28) by removing two screws (29).
14. Remove gage (17) from front of flasher system panel (1) by removing two nuts (30), two lockwashers (31), and bracket (32).
15. Remove ID plate (33) and indicator light (11) by removing two screws (34), and two lockwashers (35).
16. Remove thermal flasher (20) by removing two screws (36), two nuts (37), and two lockwashers (38).



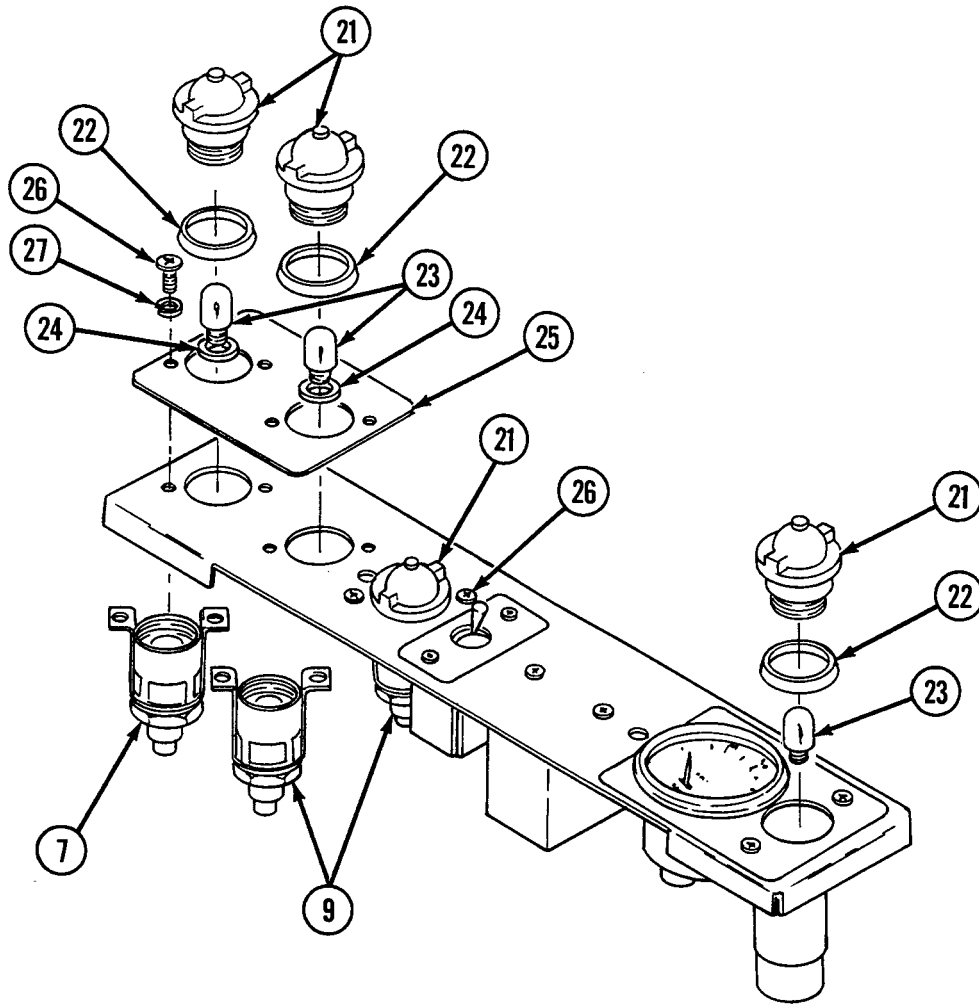
17. Remove circuit breaker (15) and disconnect ground lead (39) by removing two screws (40), three lockwashers (41), and two nuts (42). Remove diode assembly (43).



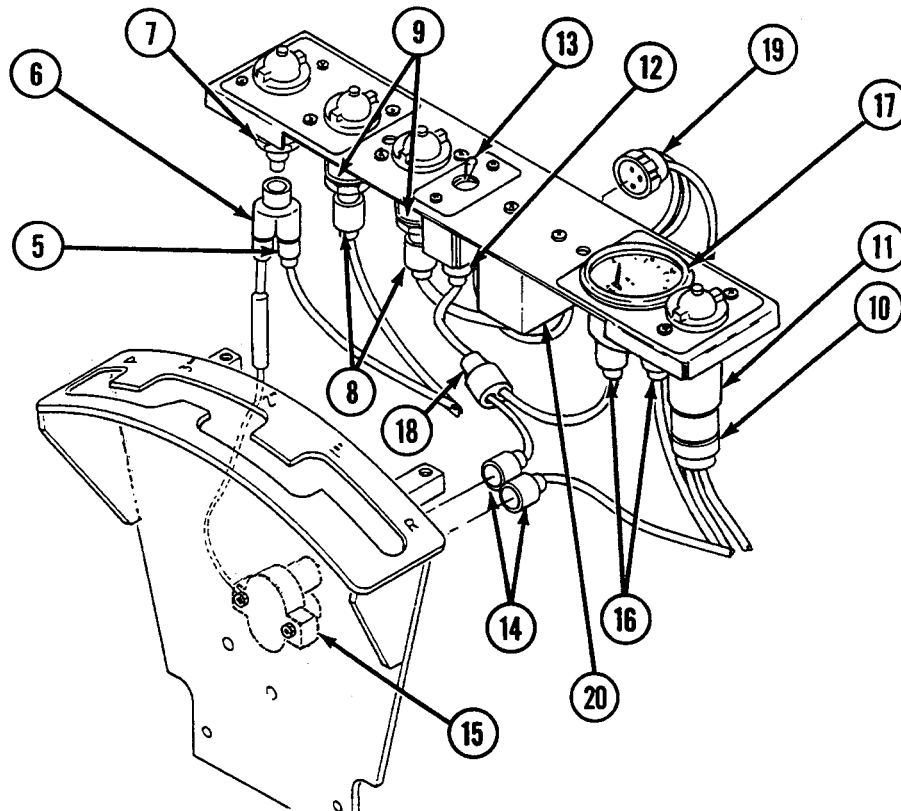
18. Disassemble wiring harnesses and lead assembly (see WP 0255 00 thru 0264 00, as appropriate).

Installation

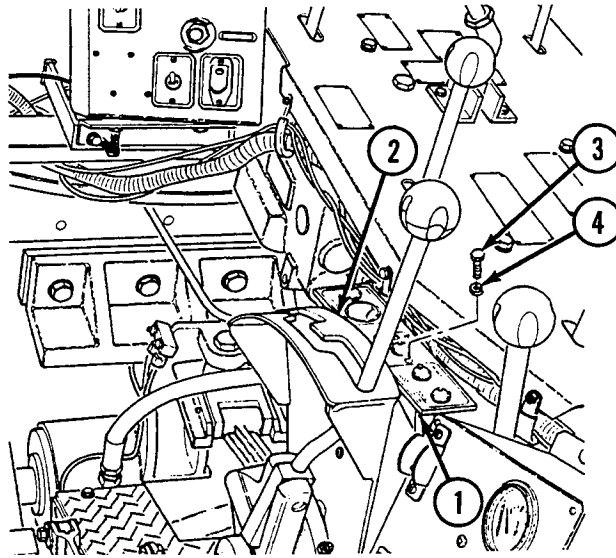
1. Install diode assembly (43). Install circuit breaker (15) and connect ground lead (39) using two screws (40), three lockwashers (41), and two nuts (42).
2. Install thermal flasher (20) using two screws (36), two nuts (37), and two lockwashers (38).
3. Install ID plate (33) and indicator light (11) using two screws (34) and two lockwashers (35).
4. Install gage (17) to front of flasher system panel (1) using two nuts (30), two lockwashers (31), and bracket (32).
5. Install switch (13) and ID plate (28) using two screws (29).
6. Install ID plate (25) and three indicator lights (7 and 9) using two screws (26) and two lockwashers (27).
7. Install three gaskets (24).
8. Install four lamps (23) by depressing and turning clockwise.
9. Install four performed packings (22) and four light lenses (21).



10. Assemble wiring harnesses and lead assembly (see WP 0255 00 thru 0264 00, as appropriate).
11. Connect connector (19) to thermal flasher (20).
12. Connect two connectors (16) to gage (17), and install lead assembly (18).
13. Connect two connectors (14) to circuit breaker (15).
14. Connect two connectors (12) to switch (13).
15. Connect connector (10) to indicator light (11).
16. Connect two connectors (8) to two indicator lights (9).
17. Connect connector (5) to Y-connector (6) and Y-connector to indicator light (7).



18. Install flasher system panel (1) to transmission shift lever bracket (2) using two screws (3) and two lockwashers (4).



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

HEATER CONTROL BOX REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (2) (item 621, WP 0491 00)

Materials/Parts (cont.)

Nuts (2) (item 756, WP 0491 00)

Screws (2) (item 568, WP 0491 00)

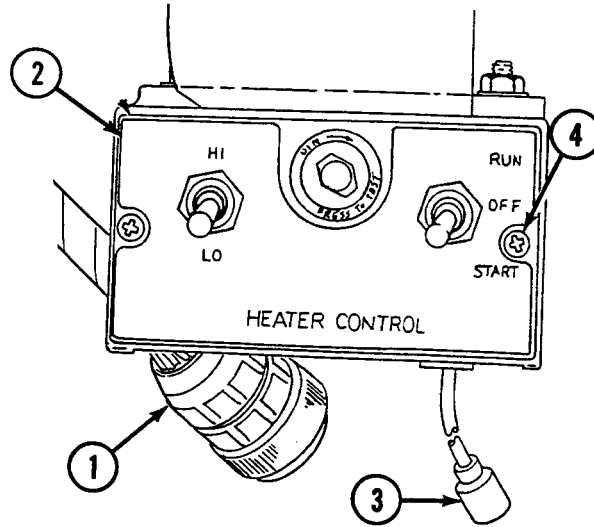
Screws (2) (item 783, WP 0491 00)

WARNING

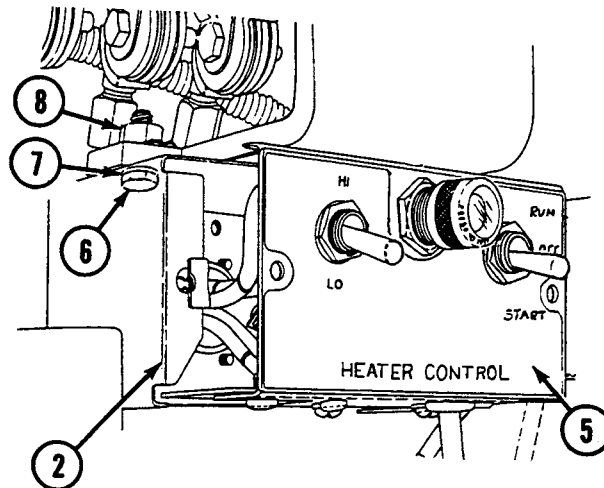
Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

Removal

1. Disconnect wiring harness (1) from heater control box (2).
2. Disconnect lead (3).
3. Remove two screws (4) from heater control box front panel (5).



4. Slide heater control box front panel (5) forward out of heater control box (2).
5. Remove heater control box (2) by removing two screws (6), two lockwashers (7), and two nuts (8).



Installation

1. Install heater control box (2) using two screws (6), two lockwashers (7), and two nuts (8).
2. Slide heater control box front panel (5) into position on heater control box (2) and install two screws (4).
3. Connect lead (3).
4. Connect wiring harness (1) to heater control box (2).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

SWITCHING RELAY BOX ASSEMBLY (SINGLE VOLTAGE REGULATOR) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, CALIBRATION, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Gasket (item 82, WP 0491 00)
 Gaskets (2) (item 774, WP 0491 00)
 Gasket (item 775, WP 0491 00)
 Lockwashers (2) (item 610, WP 0491 00)
 Lockwashers (4) (item 611, WP 0491 00)
 Lockwashers (4) (item 613, WP 0491 00)
 Lockwashers (5) (item 615, WP 0491 00)
 Lockwashers (12) (item 634, WP 0491 00)
 Lockwasher (item 635, WP 0491 00)
 Lockwashers (8) (item 636, WP 0491 00)
 Lockwashers (20) (item 638, WP 0491 00)

Materials/Parts (cont.)

Nuts (2) (item 675, WP 0491 00)
 Nuts (4) (item 676, WP 0491 00)
 Nuts (4) (item 763, WP 0491 00)
 Screws (4) (item 370, WP 0491 00)
 Screws (16) (item 372, WP 0491 00)
 Screws (5) (item 389, WP 0491 00)
 Screws (12) (item 566, WP 0491 00)
 Screws (8) (item 573, WP 0491 00)
 Screws (2) (item 584, WP 0491 00)
 Screws (4) (item 586, WP 0491 00)

Equipment Condition

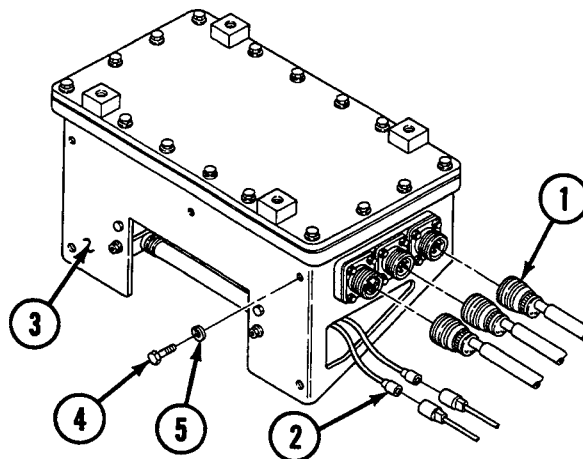
Left-rear air inlet doors removed (see WP 0341 00)

WARNING

Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

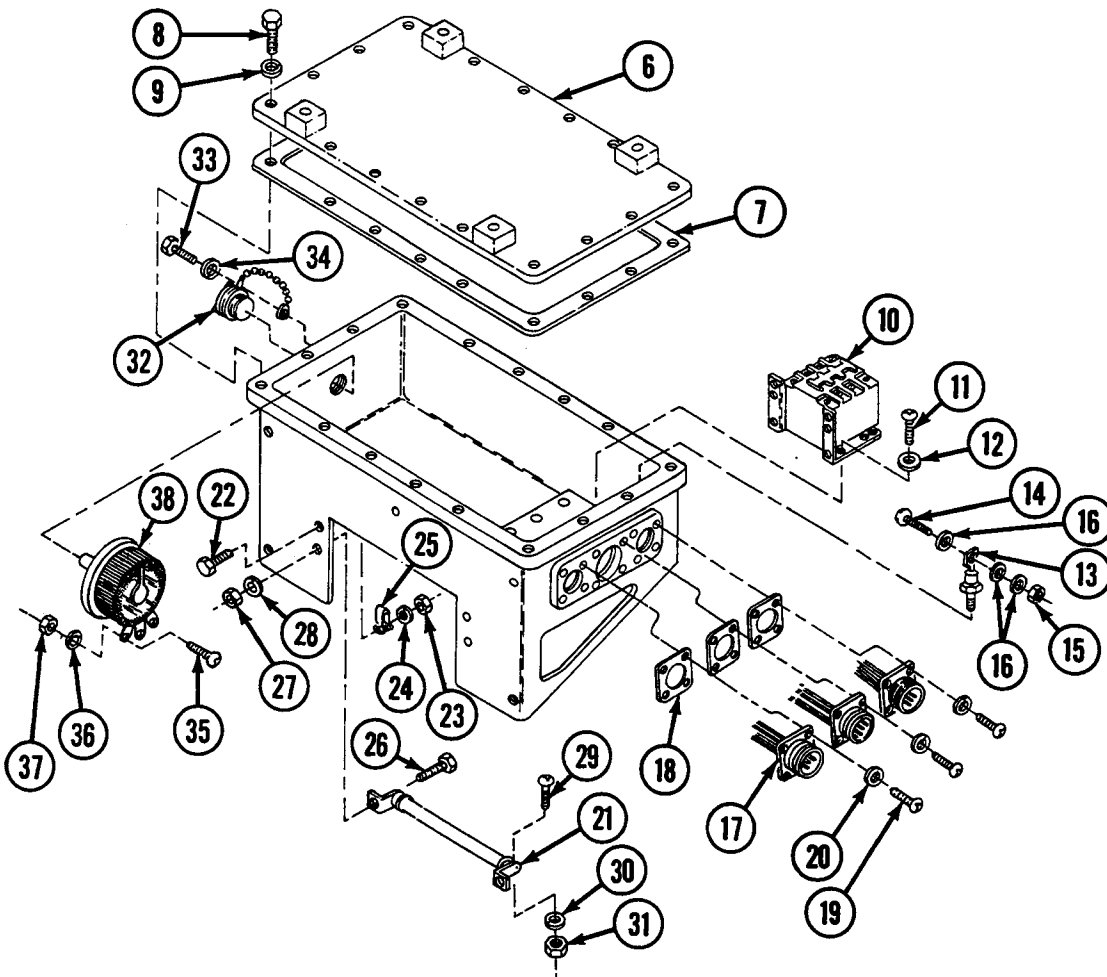
Removal

1. Disconnect three connectors (1).
2. Disconnect two leads (2).
3. Remove switching relay box (3) by removing five screws (4) and five lockwashers (5).



Disassembly

1. Remove relay switch cover (6) and gasket (7) by removing 16 screws (8) and 16 lockwashers (9).
2. Remove relay (10) by removing eight screws (11) and eight lockwashers (12).
3. Remove two diodes (13) by removing two screws (14), two nuts (15), and six lockwashers (16).
4. Remove 3 connectors (17) and 3 gaskets (18) by removing 12 screws (19) and 12 lockwashers (20).
5. Remove bracket assembly (21) by removing two screws (22), two nuts (23), two lockwashers (24), two loop clamps (25), two screws (26), two nuts (27), and two lockwashers (28).
6. Remove screw (29), lockwasher (30), and nut (31).
7. Remove cap assembly (32), screw (33), and lockwasher (34).
8. Remove three screws (35), three nuts (36), three lockwashers (37), and rheostat (38).



Assembly

1. Install rheostat (38), using three screws (35), three lockwashers (37), and three nuts (36).
2. Install cap (32), lockwasher (34), and screw (33).
3. Install screw (29), lockwasher (30), and nut (31).
4. Install bracket assembly (21) using two screws (26), two lockwashers (28), two nuts (27), two loop clamps (25), two screws (22), two lockwashers (24), and two nuts (23).
5. Install 3 gaskets (18) and 3 connectors (17), using 12 screws (19) and 12 lockwashers (20).

6. Install two diodes (13) using two screws (14), six lockwashers (16), and two nuts (15).
7. Install relay (10) using eight screws (11) and eight lockwashers (12).
8. Install gasket (7) and relay switch cover (6) using 16 lockwashers (9) and 16 screws (8).

Calibration

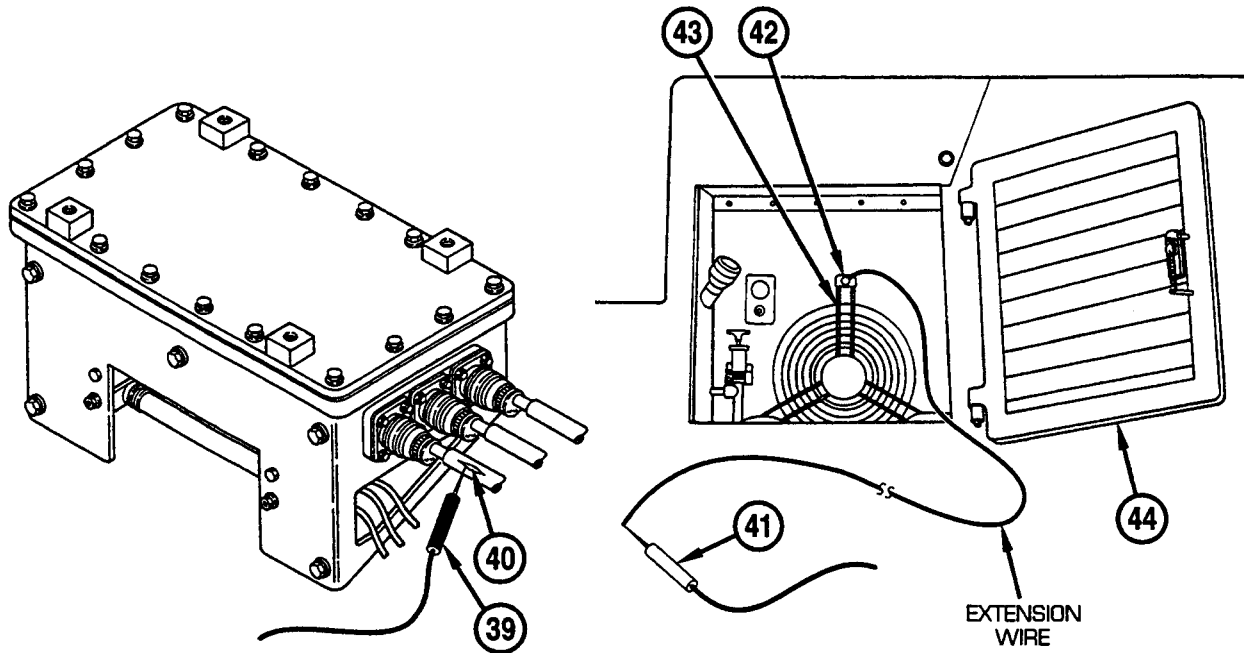
NOTE

No calibration is required if APU or switching relay box is removed and reinstalled with no change being affected.

NOTE

System must not be operated four hours prior to performing this calibration procedure.

1. Place multimeter on one volt scale, and connect black lead (39) to wire of circuit 478A (40) at switching relay box (3) (i.e., sharpen tip with file, and puncture circuit 478A insulation).
2. Connect red lead (41) of multimeter onto a piece of extension wire, and connect other end of wire to mounting screw (42) of APU flywheel guard (43) inside APU access door (44).

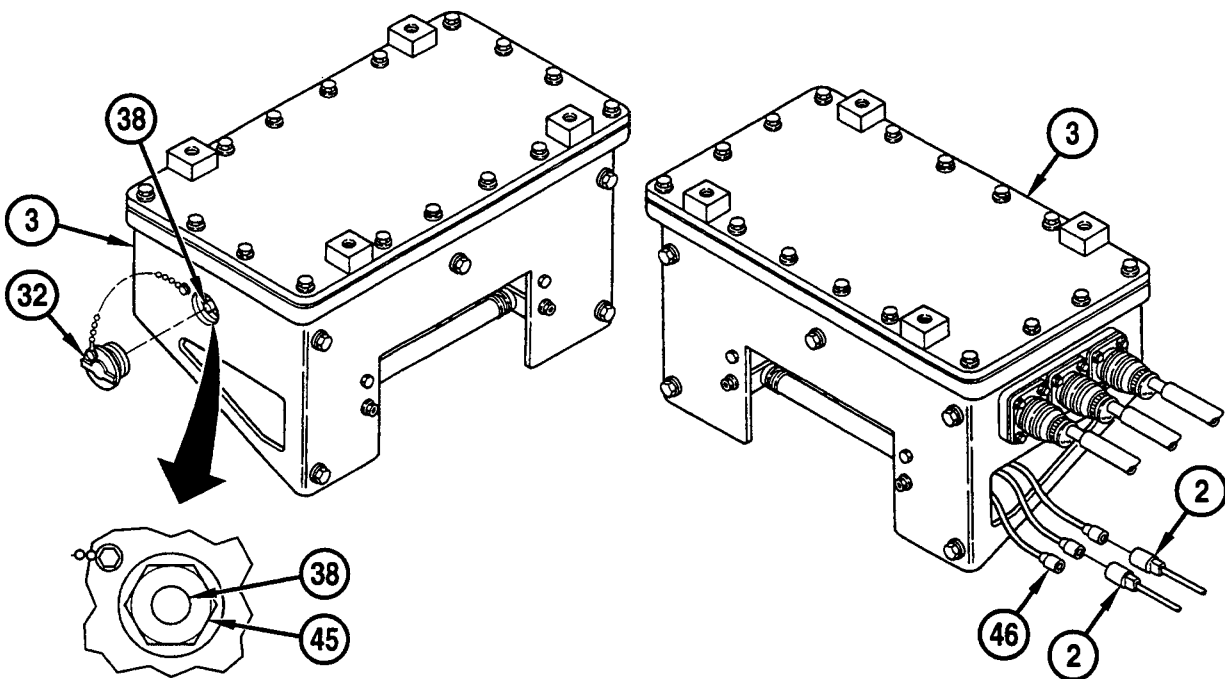


3. Remove cap assembly (32) from end of switching relay box (3), loosen rheostat locknut (45) with screwdriver, and turn rheostat (38) fully counterclockwise.
4. Connect only the 61A leads (2) of resistor beneath switching relay box (3), leaving 61A (46) open.
5. Start main engine, operate at approximately 1000 rpm and charge batteries for 30 minutes, then turn off engine.
6. Leave main engine fuel turned off, and crank starter for three cycles of 15 seconds on and 3 minutes off.
7. Start APU and warm up unloaded for one minute
8. Turn on generator switch and quickly (within 15 seconds) adjust rheostat for 0.50 volts on meter before movement of rheostat no longer produces a voltage change, or voltage begins to decrease. Then turn off APU generator and engine.

NOTE

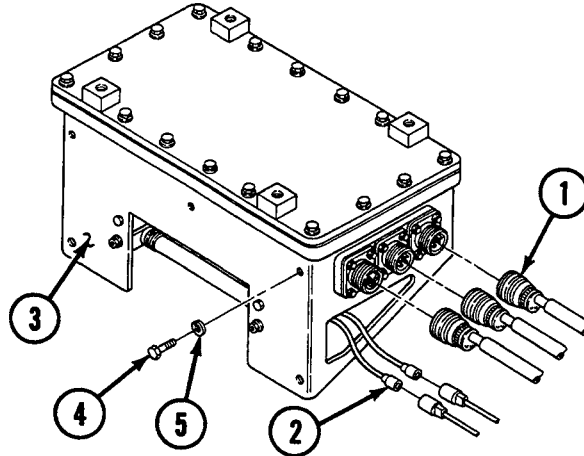
If adjustment of rheostat cannot be made to obtain 0.50 volts, turn off generator and engine, return rheostat counterclockwise, replace 61A lead on resistor with 61AC lead, then continue with step 9.

9. Repeat steps 6,7, and 8 to make final adjustment of rheostat so as to obtain 0.50 volts on multimeter.
10. Tighten rheostat locknut (45), replace cap assembly (32) on switching relay box (3). Disconnect leads (2). Remove multimeter. System is calibrated.



Installation

1. Install switching relay box (3) using five lockwashers (5) and five screws (4).
2. Connect two leads (2).
3. Connect three connectors (1).

**NOTE**

Follow-on maintenance: Install left-rear air inlet doors (see WP 0341 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
NEUTRAL SAFETY SWITCH MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION, ADJUSTMENT

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru WP 0264 00

Materials/Parts

Lockwashers (4) (item 839, WP 0491 00)

Screws (4) (item 580, WP 0491 00)

WARNING

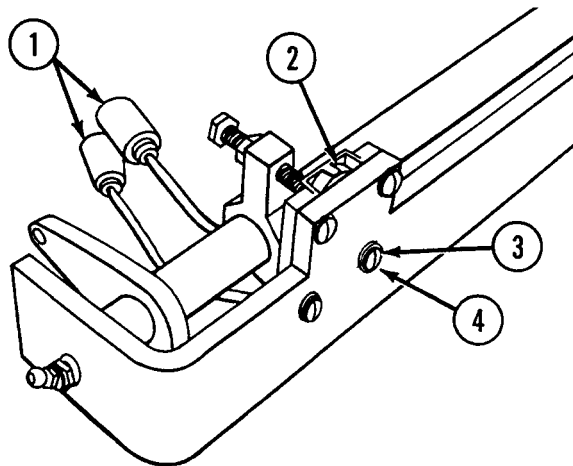
Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

NOTE

Switch and mounting removed to show switch, normally located beneath switch panel on bracket assembly.

Removal

1. Disconnect two connectors (1).
2. Remove neutral safety switch (2) by removing four screws (3) and four lockwashers (4).



Disassembly

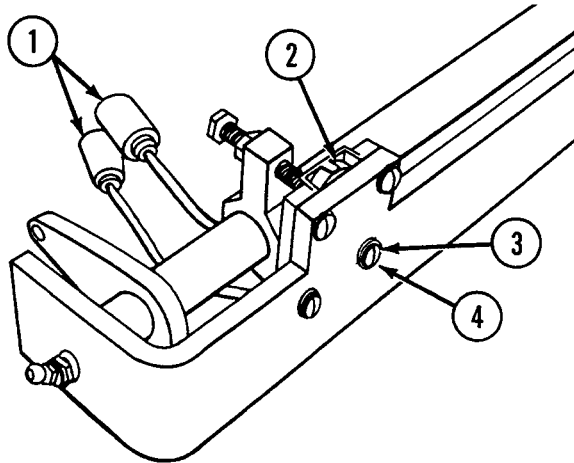
1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

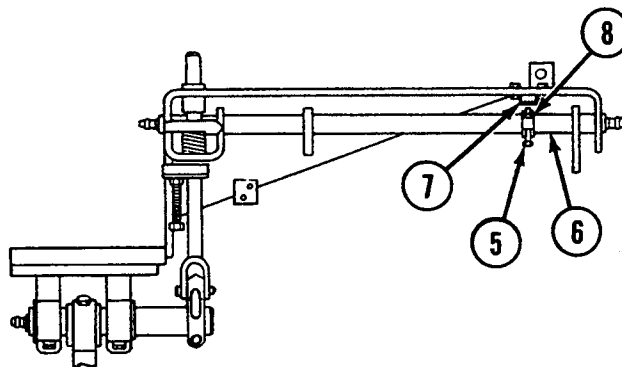
1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Install neutral safety switch (2) using four screws (3) and four lockwashers (4).
2. Connect two connectors (1).

**Adjustment**

1. Check adjustment screw (5) on neutral safety switch lever cross shaft (6) for contact with neutral safety switch (7). If the adjustment screw is not in contact with neutral safety switch, loosen locknut (8) on adjustment screw. Adjust length of screw until neutral safety switch is engaged. Tighten locknut.

**END OF WORK PACKAGE**

UNIT MAINTENANCE**RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1****NSN 2350-00-122-6826, EIC AQA****DRIVER'S PASSIVE NIGHT VIEWER SWITCH AND LIGHT
AND B.O. RECEIVER SWITCH AND LIGHT MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION**

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Bond nut (item 223, WP 0491 00)

Gasket (item 71, WP 0491 00)

Materials/Parts (cont.)

Lockwasher (item 224, WP 0491 00)

Lockwashers (4) (item 611, WP 0491 00)

Packing, preformed (item 225, WP 0491 00)

Screws (2) (item 574, WP 0491 00)

Screws (2) (item 575, WP 0491 00)

WARNING

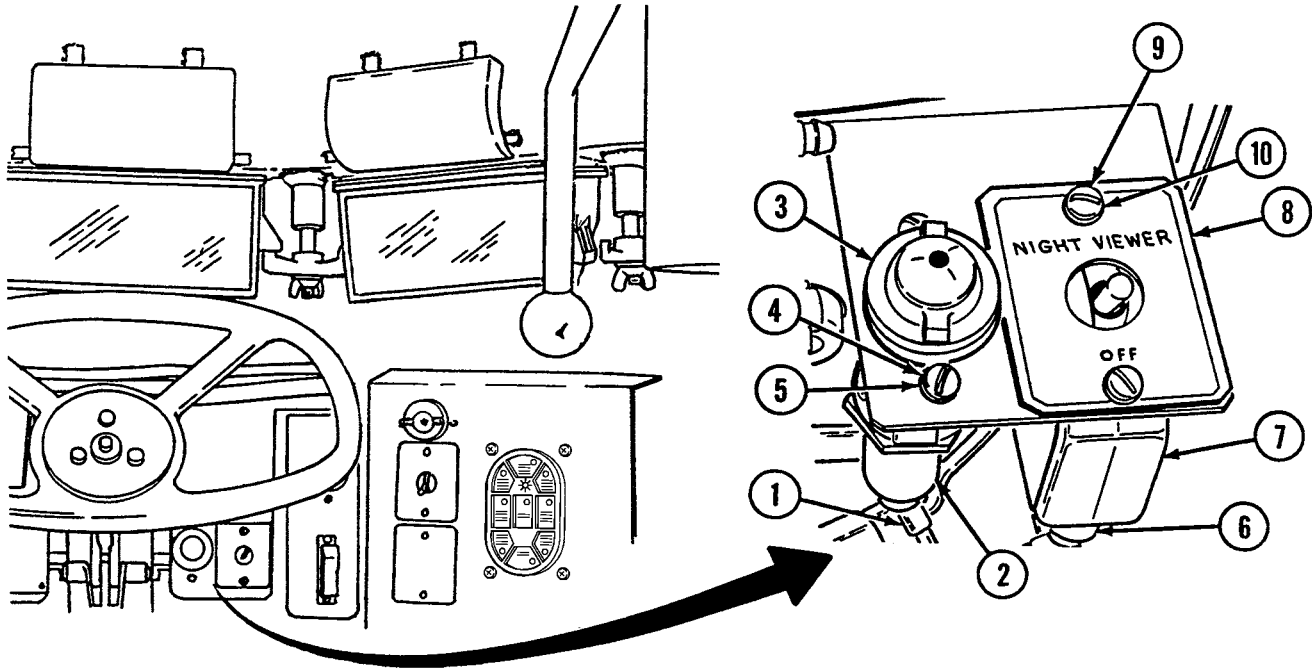
Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

NOTE

Driver's passive night viewer switch and light and B.O. receiver switch and light are removed and installed in the same manner.

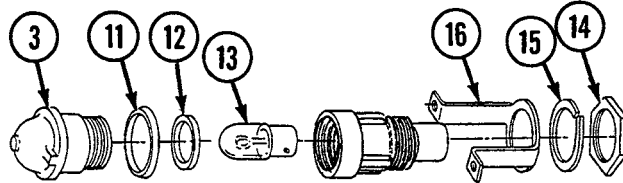
Removal

1. Disconnect connector (1) from driver's night viewer light (2).
2. Remove light cover (3) by turning counterclockwise.
3. Remove driver's night viewer light (2) by removing two screws (4) and two lockwashers (5).
4. Disconnect two connectors (6) from driver's night viewer switch (7).
5. Remove driver's night viewer switch (7) and ID plate (8) by removing two screws (9) and two lockwashers (10).



Disassembly

1. Remove preformed packing (11) from light cover (3).
2. Remove gasket (12) and lamp (13).
3. Remove bondnut (14), lockwasher (15), and retaining bracket (16).

**Assembly**

1. Install retaining bracket (16), lockwasher (15), and bondnut (14).
2. Install lamp (13) and gasket (12).
3. Install preformed packing (11) on light cover (3).

Installation

1. Install driver's night viewer switch (7) and ID plate (8) using two screws (9) and two lockwashers (10).
2. Connect two connectors (6) to driver's night viewer switch (7).
3. Install driver's night viewer light (2) using two screws (4) and two lockwashers (5).
4. Install light cover (3) by turning clockwise.
5. Connect connector (1) to driver's night viewer light (2).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
FIRE EXTINGUISHER INTERLOCK SWITCH ASSEMBLY MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

References

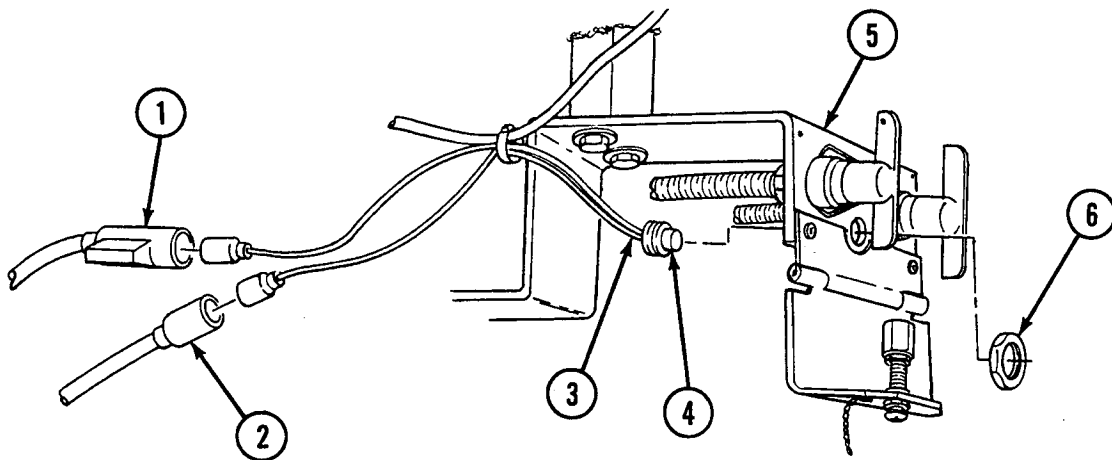
WP 0255 00 thru WP 0264 00

WARNING

Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

Removal

1. Disconnect two connectors (1 and 2) from fire extinguisher interlock (3).
2. Remove push switch (4) from bracket (5) by loosening locknut (6).

**Disassembly**

1. Disassemble switch assembly (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble switch assembly (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect push switch (4) to bracket (5) by tightening locknut (6).
2. Connect two connectors (1 and 2) to fire extinguisher interlock (3).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

POWER CONTROL LEVER SWITCH MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru WP 0264 00

Materials/Parts

Lockwashers (4) (item 637, WP 0491 00)

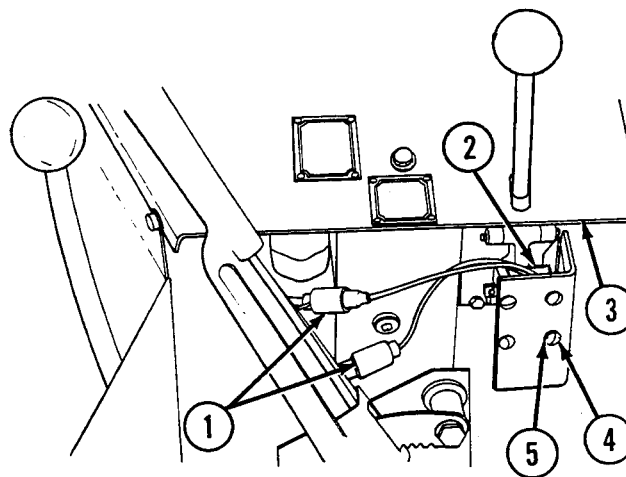
Screws (4) (item 580, WP 0491 00)

WARNING

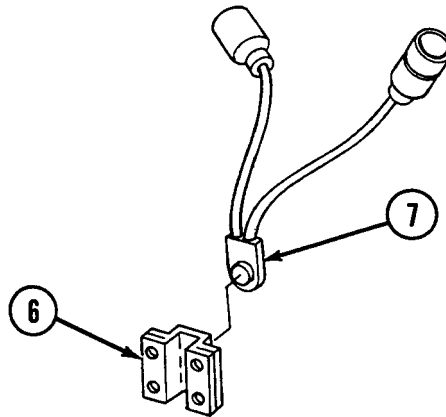
Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

Removal

1. Disconnect two connectors (1).
2. Remove power control lever switch (2) from hydraulic system control panel (3) by removing four screws (4) and four lockwashers (5).



3. Disconnect contact assembly (6) from sensitive switch (7).



Disassembly

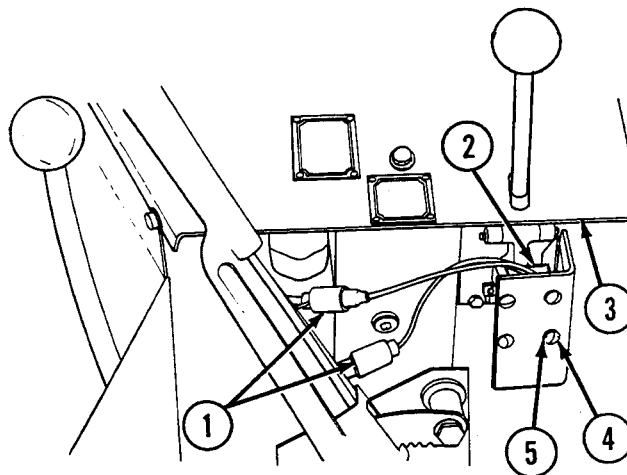
1. Disassemble two lead assemblies (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble two lead assemblies (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect contact assembly (6) to sensitive switch (7).
2. Install power control lever switch (2) to hydraulic system control panel (3) using four screws (4) and four lockwashers (5).
3. Connect two connectors (1).



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**MECHANICAL TRANSMISSION LUBRICATION OIL LOW PRESSURE SWITCH REPLACEMENT
REMOVAL, INSTALLATION**

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

Subfloor plates removed as required (see WP 0286 00
thru 0310 00)

Materials/Parts

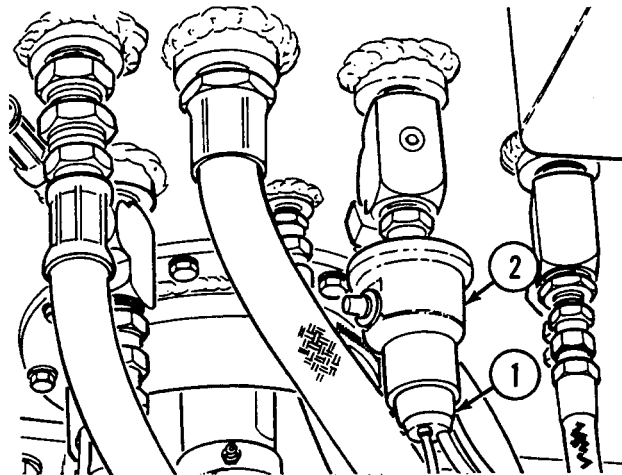
Compound, sealing (item 29, WP 0489 00)

WARNING

Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

Removal

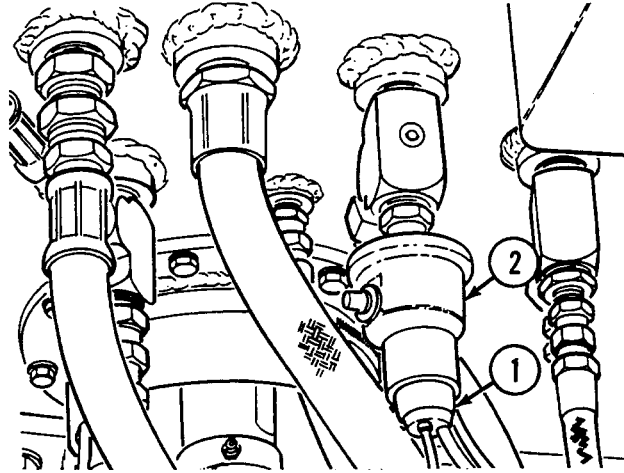
1. Disconnect connector (1) from mechanical transmission lubrication oil low pressure switch (2).
2. Unscrew and remove mechanical transmission lubrication oil low pressure switch (2).



Installation**NOTE**

Coat threads of mechanical transmission lubrication oil low pressure switch with sealing compound during installation.

1. Install mechanical transmission lubrication oil low pressure switch (2).
2. Connect connector (1) to mechanical transmission lubrication oil low pressure switch (2).

**NOTE**

Follow-on maintenance: Install subfloor plates if removed (see WP 0286 00 thru 0310 00, as appropriate).

END OF WORK PACKAGE

UNIT MAINTENANCE**RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1****NSN 2350-00-122-6826, EIC AQA****TRANSMISSION OIL PRESSURE SENDING UNIT, OIL
TEMPERATURE SENDING UNIT AND SWITCH REPLACEMENT
REMOVAL, INSTALLATION**

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

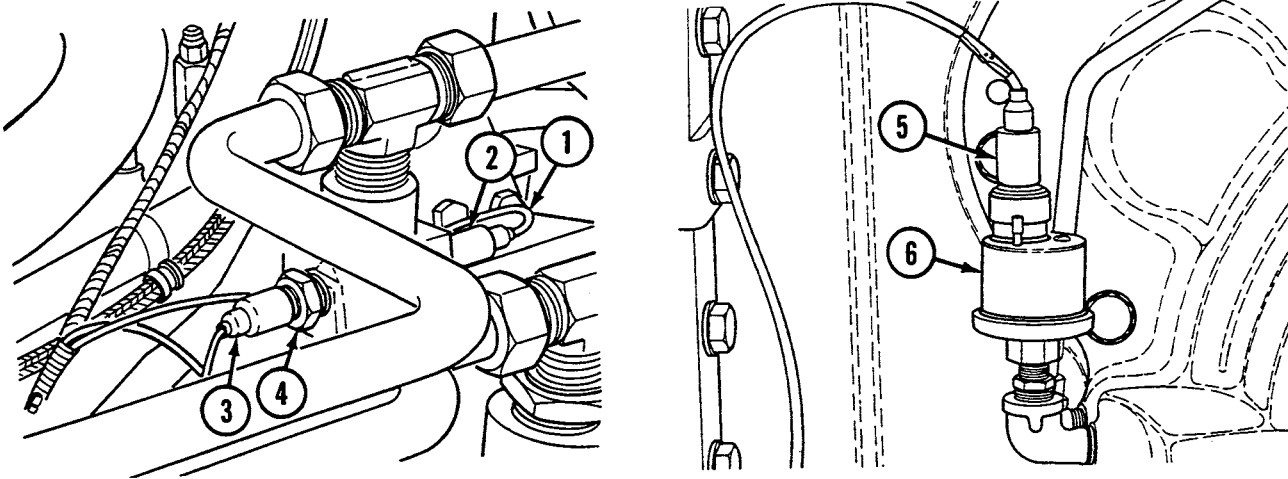
Equipment ConditionPowerplant removed (see WP 0098 00)

WARNING

Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

Removal

1. Disconnect connector (1) from thermostatic switch (2). Unscrew and remove thermostatic switch.
2. Disconnect connector (3) from temperature transmitter (4). Unscrew and remove temperature transmitter.
3. Disconnect connector (5) from pressure transmitter (6). Unscrew and remove pressure transmitter.

**Installation**

1. Install pressure transmitter (6) and connect connector (5).
2. Install temperature transmitter (4) and connect connector (3).
3. Install thermostatic switch (2) and connect connector (1).

NOTE

Follow-on maintenance: Install powerplant (see WP 0098 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

EXTERNAL VEHICLE WARNING HORN MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (2) (item 612, WP 0491 00)

Lockwashers (3) (item 638, WP 0491 00)

Materials/Parts (cont.)

Screws (3) (item 376, WP 0491 00)

Screws (2) (item 728, WP 0491 00)

References

WP 0255 00 thru WP 0264 00

WARNING

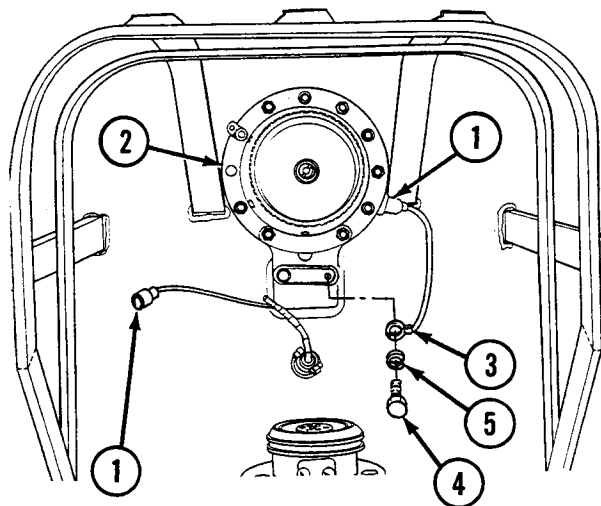
Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

Removal

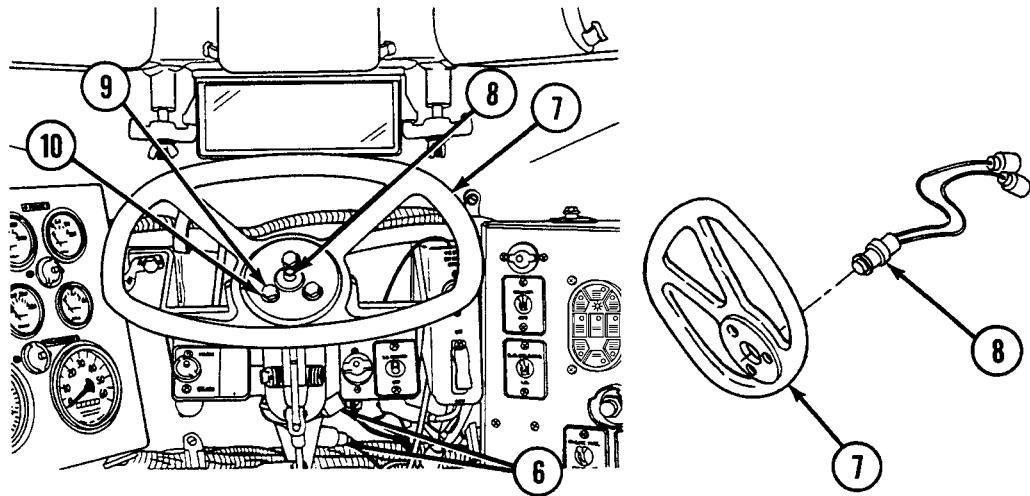
NOTE

Headlight removed for clarity only.

1. Disconnect two connectors (1) from external vehicle warning horn (2).
2. Remove external vehicle warning horn (2) and ground lead (3) by removing two screws (4) and two lockwashers (5).



3. Disconnect connectors (6).
4. Remove wheel (7) with horn switch (8) by removing three screws (9) and three lockwashers (10).
5. Remove horn switch (8) from wheel (7).



Disassembly

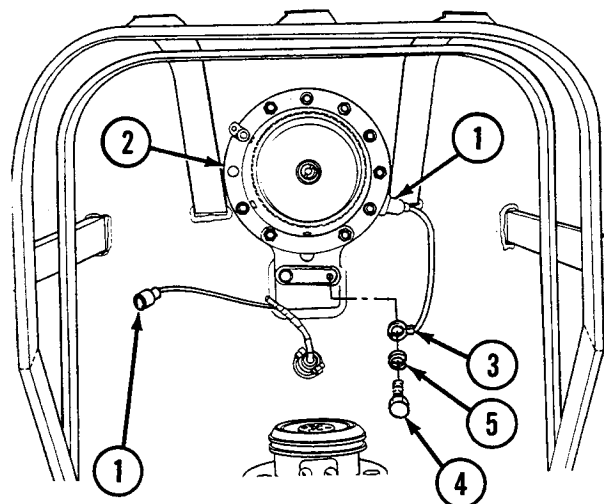
1. Disassemble leads (see WP 0255 00 thru 0264 00).

Assembly

1. Assemble leads (see WP 0255 00 thru 0264 00).

Installation

1. Install wheel (7) to horn switch (8).
2. Install wheel (7) with horn switch (8) using three screws (9) and three lockwashers (10).
3. Connect connectors (6).
4. Install external vehicle warning horn (2) and ground lead (3) using two screws (4) and two lockwashers (5).
5. Connect two connectors (1) to external vehicle warning horn (2).



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
POWERPLANT WARNING HORN MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (2) (item 612, WP 0491 00)

Lockwashers (2) (item 621, WP 0491 00)

Materials/Parts (cont.)

Screws (2) (item 728, WP 0491 00)

Screws (2) (item 731, WP 0491 00)

References

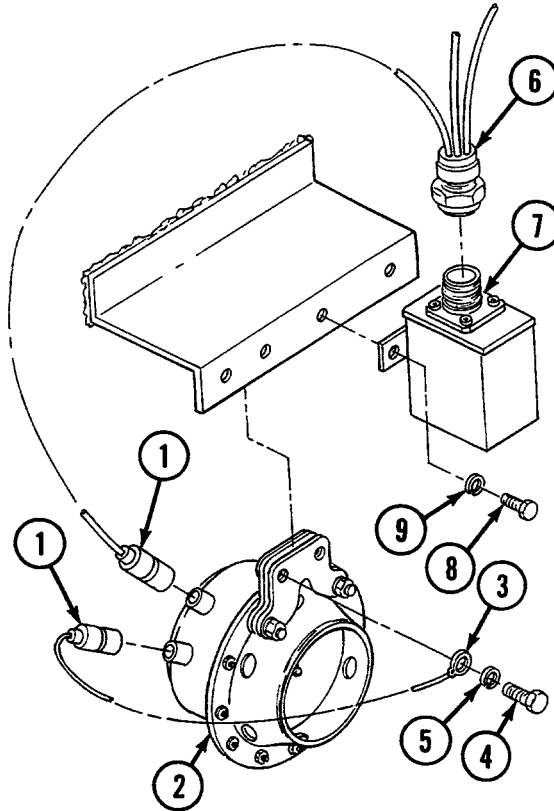
WP 0255 00 thru WP 0264 00

WARNING

Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

Removal

1. Disconnect two connectors (1) from powerplant warning horn (2).
2. Remove powerplant warning horn (2) and ground lead (3) by removing two screws (4) and two lockwashers (5).
3. Disconnect connector (6) from warning horn relay (7).
4. Remove warning horn relay (7) by removing two screws (8) and two lockwashers (9).



Disassembly

1. Disassemble lead (see WP 0255 00 thru WP 0264 00).

Assembly

1. Assemble lead (see WP 0255 00 thru WP 0264 00).

Installation

1. Install warning horn relay (7) using two screws (8) and two lockwashers (9).
2. Connect connector (6) to warning horn relay (7).
3. Install powerplant warning horn (2) and ground lead (3) using two screws (4) and two lockwashers (5).
4. Connect two connectors (1) to powerplant warning horn (2).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**ENGINE OIL TEMPERATURE SENDING UNIT, ENGINE OIL
 PRESSURE SENDING UNIT, AND SWITCHES REPLACEMENT
 REMOVAL, INSTALLATION**

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

Powerplant removed (see WP 0098 00)

Materials/Parts

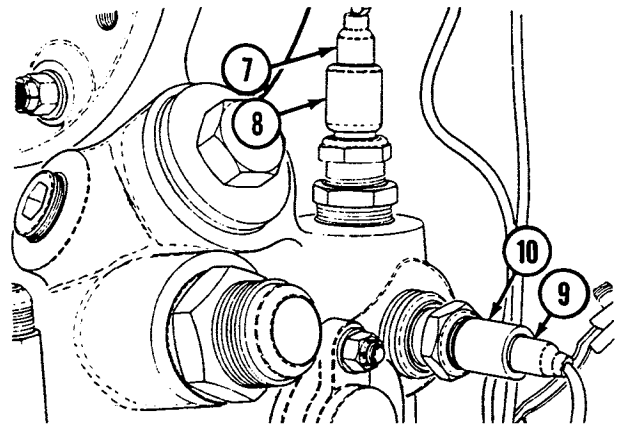
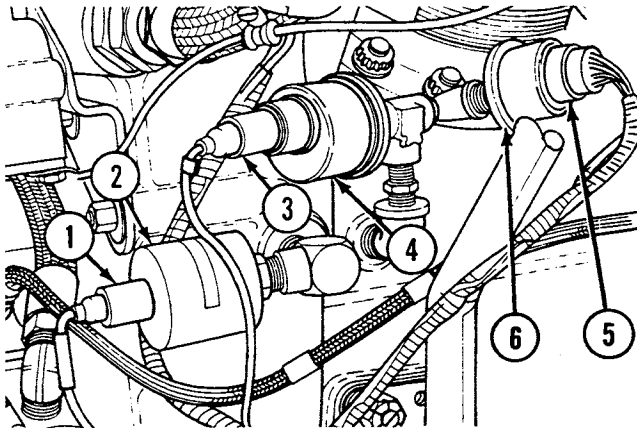
Compound, sealing (item 29, WP 0489 00)

WARNING

Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

Removal

1. Disconnect connector (1) from switch (2). Remove switch.
2. Disconnect connector (3) from engine oil pressure sending unit (4). Remove engine oil pressure sending unit.
3. Disconnect connector (5). Remove main engine oil pressure switch (6).
4. Disconnect connector (7) from engine oil temperature sending unit (8).
5. Disconnect connector (9) from switch (10). Remove engine oil temperature sending unit (8).
6. Remove switch (10).

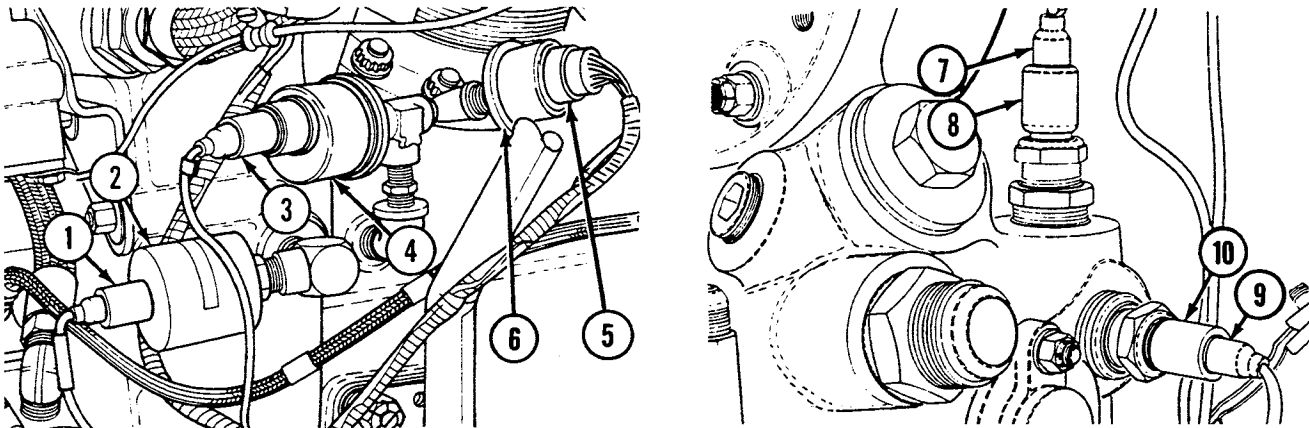


Installation

NOTE

Apply sealing compound to threads of all sending units (4 and 8) and switches (2 and 10).

1. Install switch (10).
2. Install engine oil temperature sending unit (8) and connect connector (9) to switch (10).
3. Connect connector (7) to engine oil temperature sending unit (8).
4. Install main engine oil pressure switch (6) and connect connector (5).
5. Install engine oil pressure sending unit (4) and connect connector (3).
6. Install switch (2) and connect connector (1).



7. Install test cables and hoses. Test run engine prior to installation. Observe for leaks.

NOTE

Follow-on maintenance: Install powerplant (see WP 0098 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

STOPLIGHT SWITCH REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (2) (item 621, WP 0491 00)

Screws (2) (item 731, WP 0491 00)

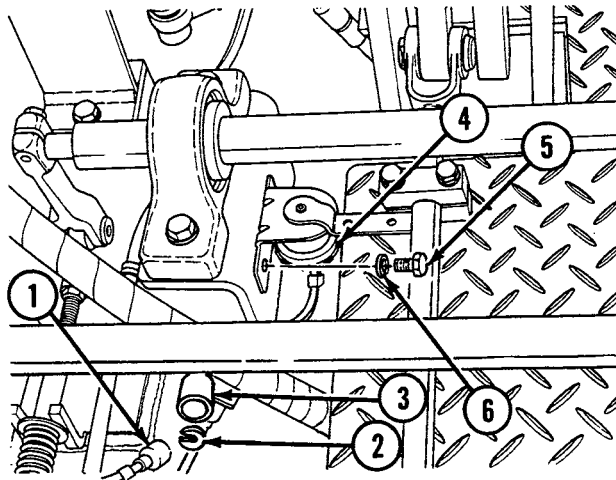
Washers, slotted (2) (item 293, WP 0491 00)

WARNING

Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

Removal

1. Disconnect two connectors (1) and remove two slotted washers (2) and two connector shells (3).
2. Remove stoplight switch (4) by removing two screws (5) and two lockwashers (6).

**Installation**

1. Install stoplight switch (4) using two lockwashers (6) and two screws (5).
2. Assemble two connector shells (3) and two slotted washers (2) to two connectors (1) and connect connectors.

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
RIGGER'S SERVICE LIGHT SWITCH REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (2) (item 621, WP 0491 00)

Screws (2) (item 574, WP 0491 00)

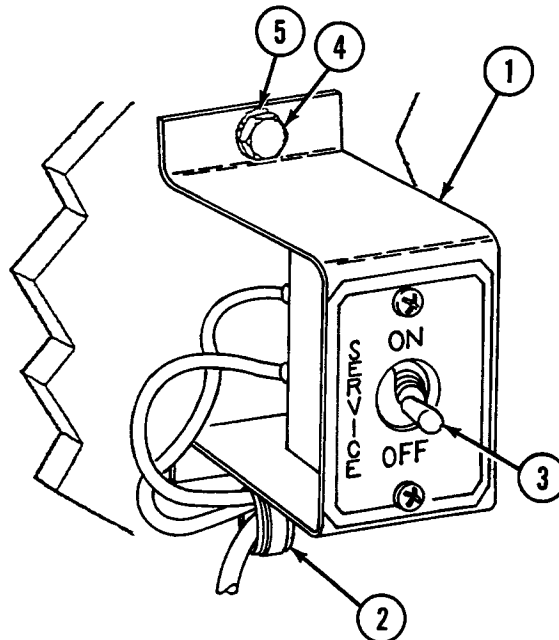
Screws (2) (item 731, WP 0491 00)

WARNING

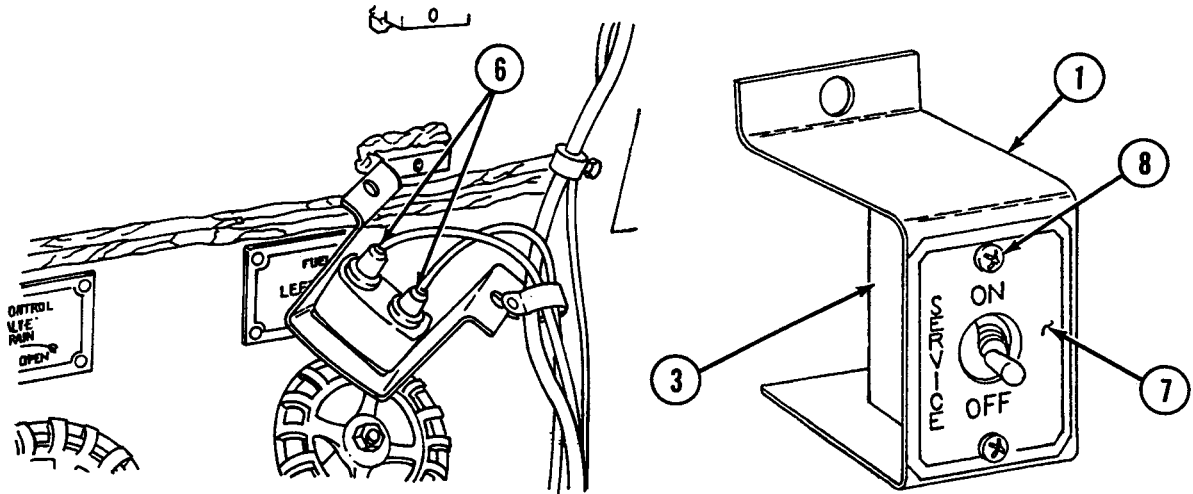
Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

Removal

1. Remove switch mount (1) and clamp (2) with rigger's light selector switch (3) from hull wall by removing two screws (4) and two lockwashers (5).

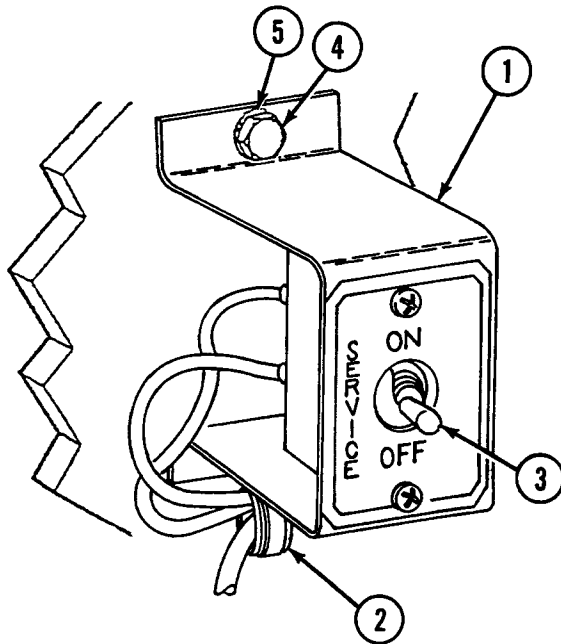


2. Disconnect two connectors (6) from rigger's light selector switch (3).
3. Remove rigger's light selector switch (3) and ID plate (7) from switch mount (1) by removing two screws (8).



Installation

1. Install rigger's light selector switch (3) and ID plate (7) on switch mount (1) using two screws (8).
2. Connect two connectors (6) to rigger's light selector switch (3).
3. Install switch mount (1) and clamp (2) on hull wall using two screws (4) and two lockwashers (5).



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**DRIVER'S HEADLIGHT DIMMER SWITCH AND MOUNTING BRACKET REPLACEMENT
REMOVAL, INSTALLATION**

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (3) (item 613, WP 0491 00)

Materials/Parts (cont.)

Lockwashers (2) (item 623, WP 0491 00)

Screws (2) (item 396, WP 0491 00)

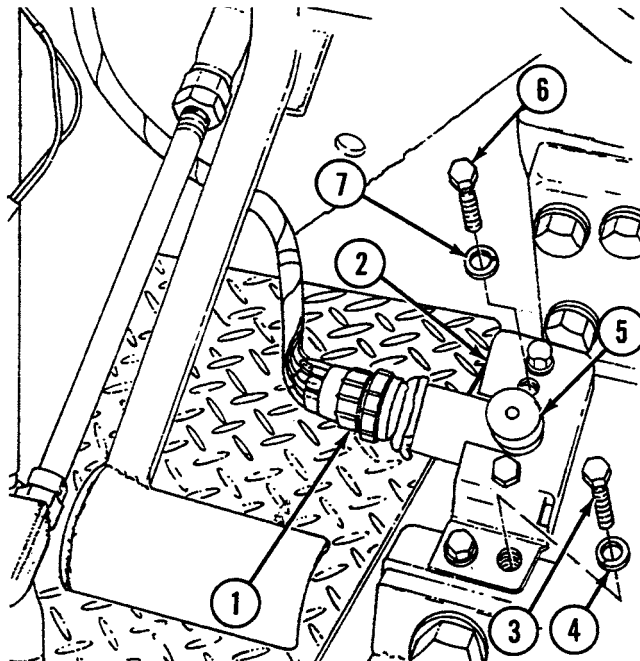
Screws (3) (item 778, WP 0491 00)

WARNING

Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

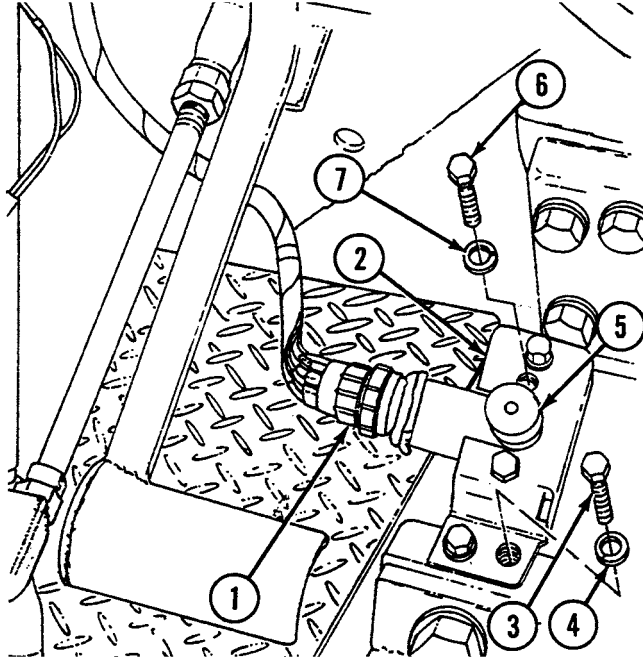
Removal

1. Disconnect connector (1).
2. Remove mounting bracket (2) by removing three screws (3) and three lockwashers (4).
3. Remove dimmer switch (5) by removing two screws (6) and two lockwashers (7).



Installation

1. Assemble dimmer switch (5) to mounting bracket (2) using three screws (6) and three lockwashers (7).
2. Install mounting bracket (2) using two screws (3) and two lockwashers (4).
3. Connect connector (1).

**END OF WORK PACKAGE**

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

FRONT HEADLIGHT ASSEMBLY MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Adhesive (item 5, WP 0489 00)
 Grease, aircraft (item 14, WP 0489 00)
 Silicone compound (item 32, WP 0489 00)
 Gaskets (2) (item 118, WP 0491 00)
 Gasket (item 280, WP 0491 00)
 Gaskets (2) (item 281, WP 0491 00)
 Gaskets (2) (item 282, WP 0491 00)

Materials/Parts (cont.)

Gasket (item 283, WP 0491 00)
 Gasket (item 284, WP 0491 00)
 Lockwashers (4) (item 121, WP 0491 00)
 Lockwashers (2) (item 610, WP 0491 00)
 Lockwashers (8) (item 611, WP 0491 00)
 Screws (4) (item 279, WP 0491 00)
 Screws (2) (item 569, WP 0491 00)
 Screws (6) (item 572, WP 0491 00)
 Screws (3) (item 575, WP 0491 00)

WARNING

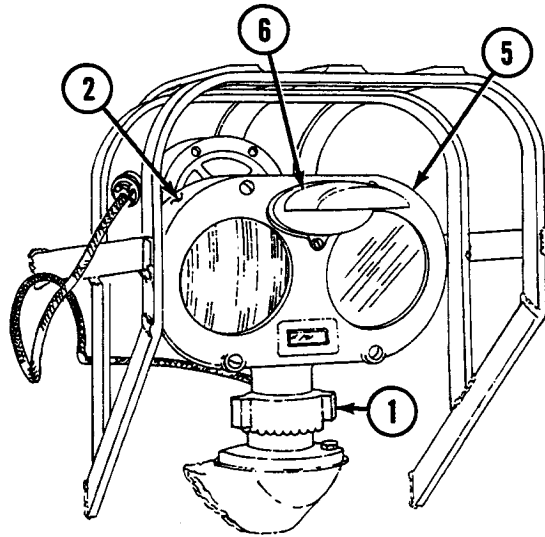
Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

NOTE

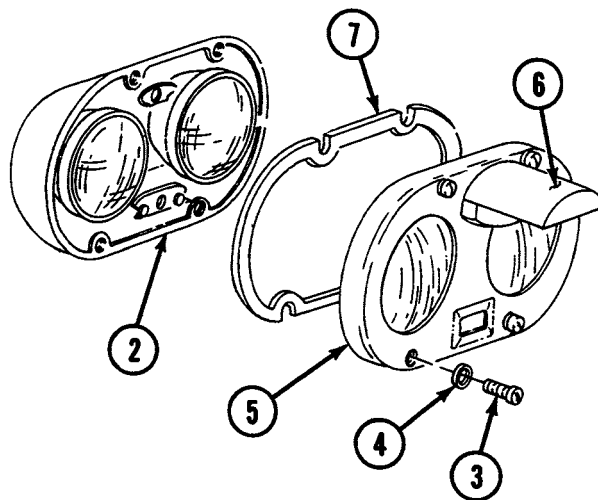
Removal and installation procedures are the same for both left and right headlights.

Removal

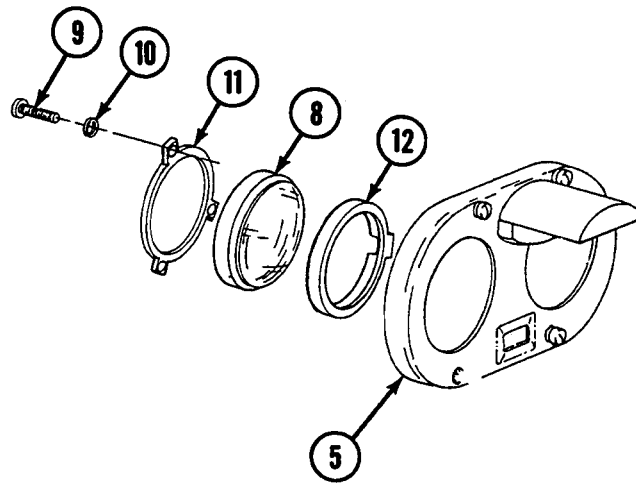
1. Loosen adjustment nut (1) and remove headlight assembly (2).

**Disassembly**

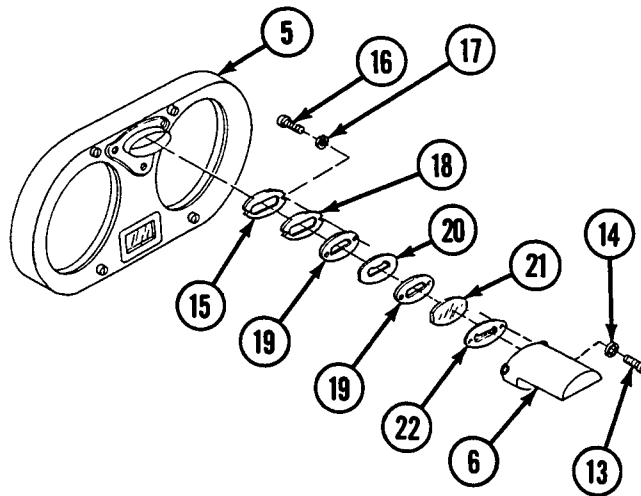
1. Remove four screws (3), four lockwashers (4), and cover (5) with shield (6) from headlight assembly (2).
2. Remove and discard gasket (7).



3. Remove two lenses (8) by removing six screws (9), six lockwashers (10), and two retainers (11) from cover (5).
4. Remove two gaskets (12) from two lenses (8).



5. Remove shield (6) from cover (5) by removing three screws (13) and three lockwashers (14).
6. Remove and discard gasket (15).
7. Remove two screws (16), two lockwashers (17), retainer (18), two gaskets (19), filter (20), lens (21), and gasket (22) from shield (6). Discard gasket (22).

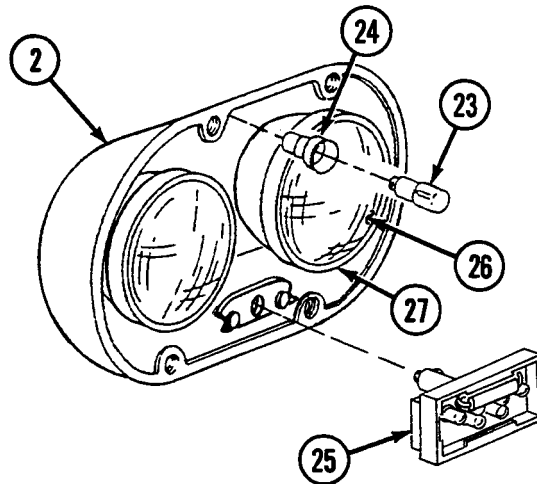


8. Remove B.O. lamp (23) from headlight assembly (2) by depressing and turning counterclockwise.

NOTE

Reflector (24) is located on left headlight assembly (2) only.

9. Remove reflector (24) and marker light (25).
10. Remove two lamps (26) and two gaskets (27) from headlight assembly (2). Discard two gaskets (27).



Assembly

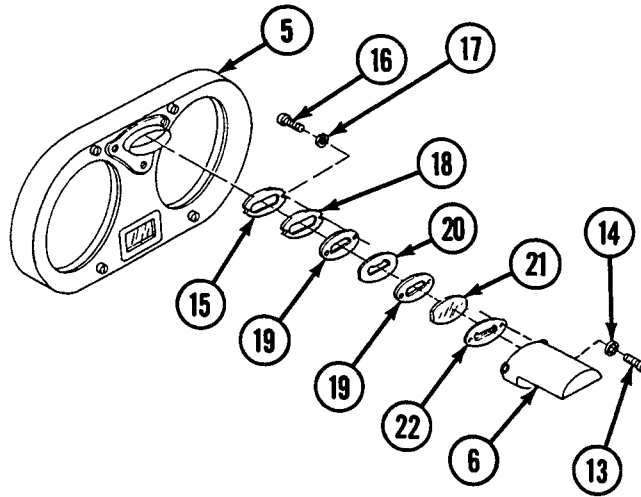
1. Install two gaskets (27) and two lamps (26) to headlight assembly (2).

NOTE

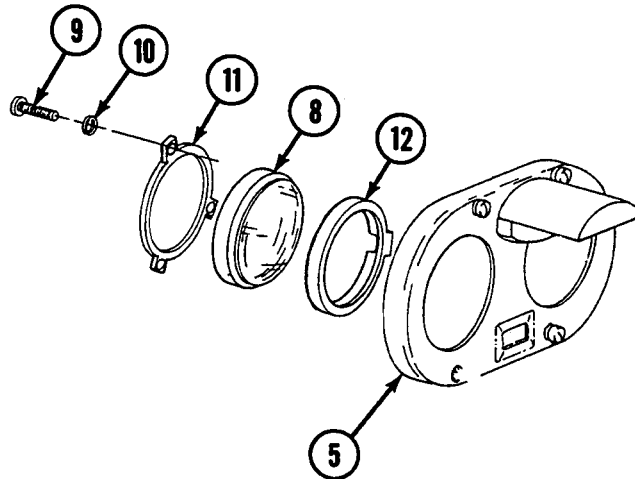
Reflector (24) is located on left headlight assembly (2) only.

2. Install reflector (24) and marker light (25).
3. Apply light coating of silicone compound to socket and install B.O. lamp (23) by depressing and turning clockwise.
4. Apply light coating of adhesive then grease to mating sealing surface and install gasket (22), lens (21), filter (20), two gaskets (19), retainer (18), two lockwashers (17), and two screws (16) to shield (6).
5. Install gasket (15).

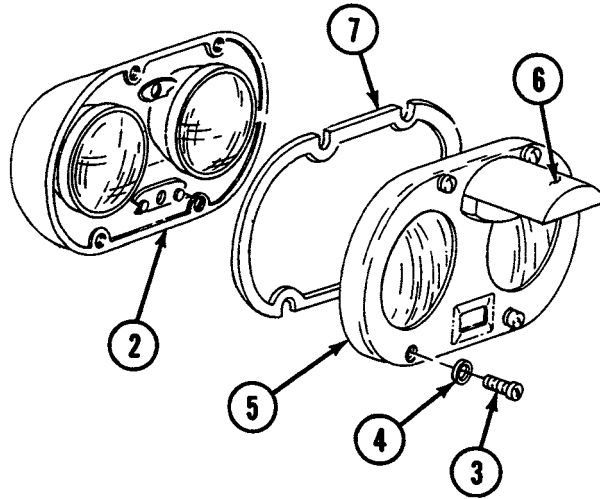
6. Install shield (6) to cover (5) using three lockwashers (14) and three screws (13).



7. Install two gaskets (12) to two lenses (8).
8. Install two lenses (8) to cover (5) using two retainers (11), six lockwashers (10), and six screws (9).

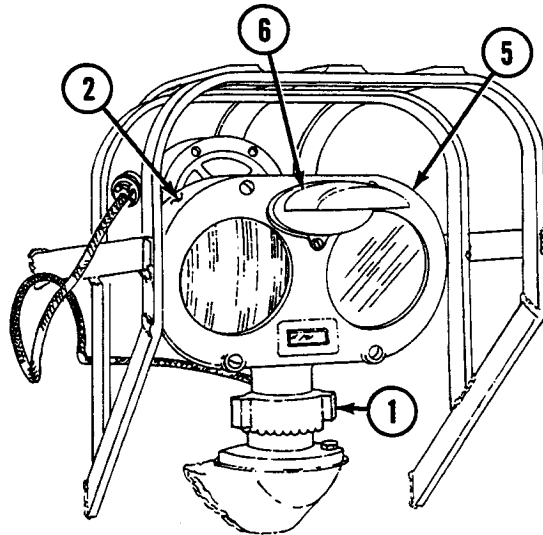


9. Install gasket (7).
10. Apply light coating of grease to mating surface and install cover (5) using four lockwashers (4) and four screws (3) to headlight assembly (2).



Installation

1. Install headlight assembly (2) by tightening adjustment nut (1).



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

REPAIR RIGGER'S SERVICE LIGHT MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Gasket (item 278, WP 0491 00)

Gasket (item 727, WP 0491 00)

Materials/Parts (cont.)

Lockwasher (item 641, WP 0491 00)

Nut (item 760, WP 0491 00)

Screws (4) (item 212, WP 0491 00)

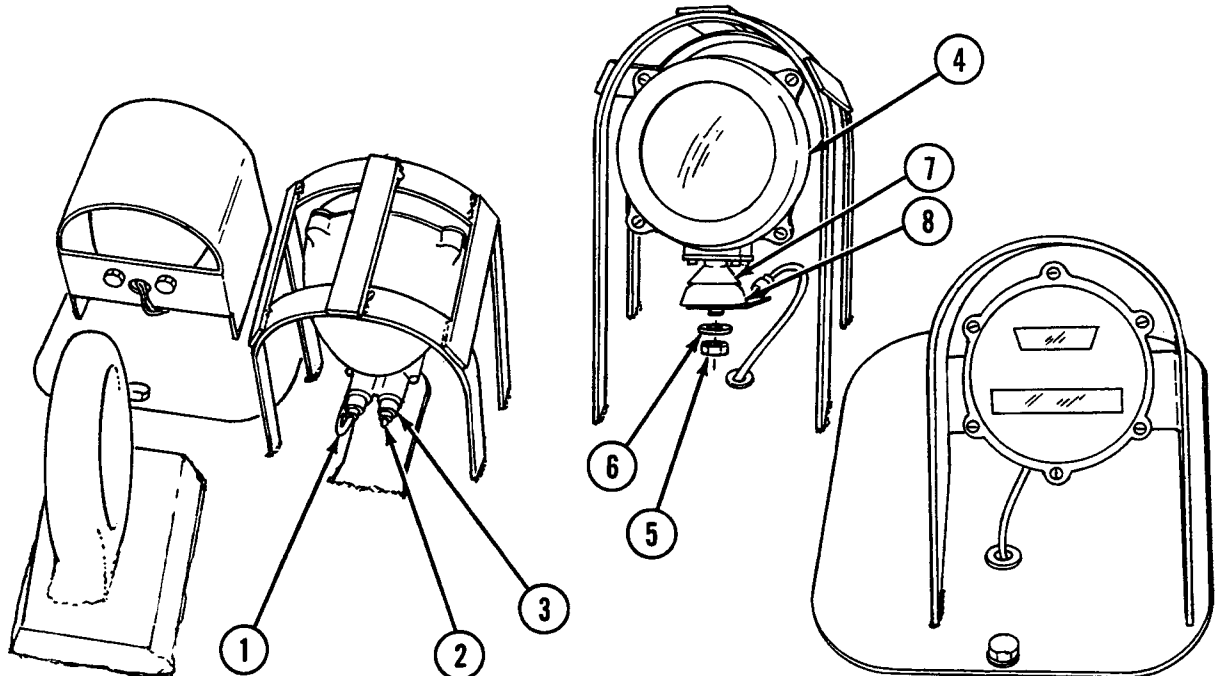
Screws (4) (item 213, WP 0491 00)

WARNING

Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

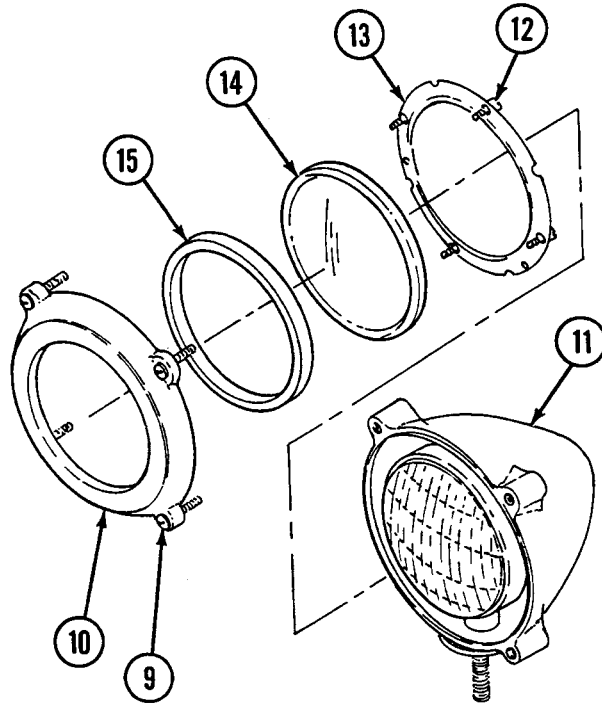
Removal

1. Disconnect connector (1).
2. Remove dummy plug (2) and connector (3).
3. Remove rigger's service headlight (4) by removing nut (5), lockwasher (6), finishing washer (7), and recessed washer (8).

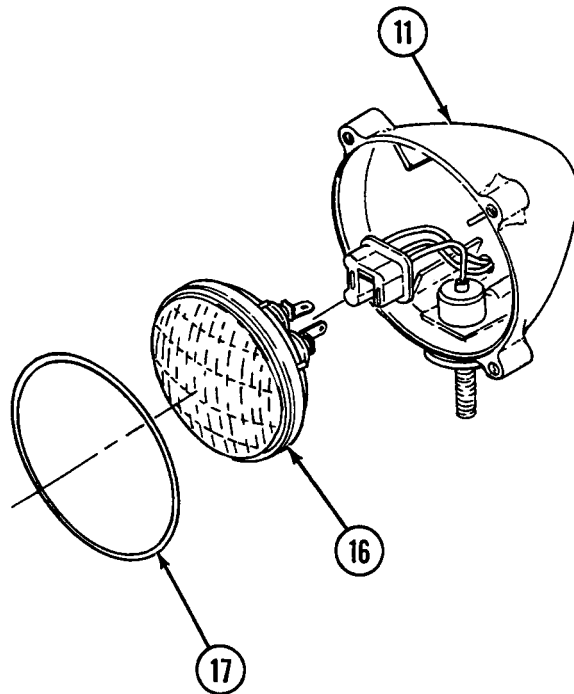


Disassembly

1. Loosen four screws (9) and remove door (10) from body (11).
2. Loosen four screws (12) and remove lens retainer (13), light lens (14), and gasket (15). Discard gasket.



3. Remove lamp (16) from body (11).
4. Remove and discard gasket (17).

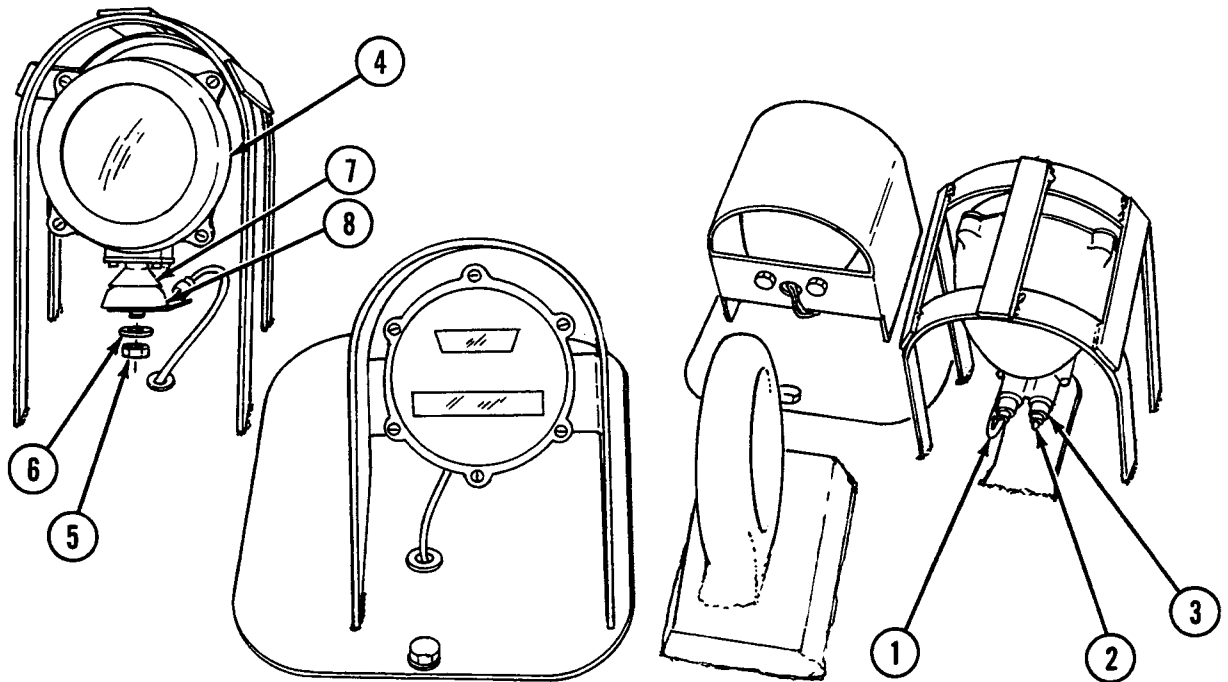


Assembly

1. Install gasket (17) to body (11).
2. Install lamp (16) to body (11).
3. Install gasket (15), light lens (14), and lens retainer (13) to door (10). Tighten four screws (12).
4. Install door (10) to body (11) tighten four screws (9).

Installation

1. Install rigger's service headlight (4) using nut (5), lockwasher (6), finishing washer (7), and recessed washer (8).
2. Install connector (3) and dummy plug (2).
3. Connect connector (1).

**END OF WORK PACKAGE**

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

FRONT SIGNAL LIGHT ASSEMBLY MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Grommet (item 326, WP 0491 00)
Lockwasher (item 640, WP 0491 00)

Materials/Parts (cont.)

Nut (item 758, WP 0491 00)
Springs, retaining (3) (item 216, WP 0491 00)

References

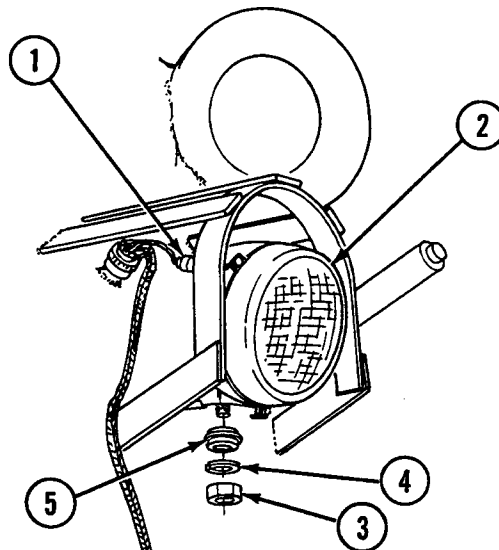
WP 0255 00 thru 0264 00

WARNING

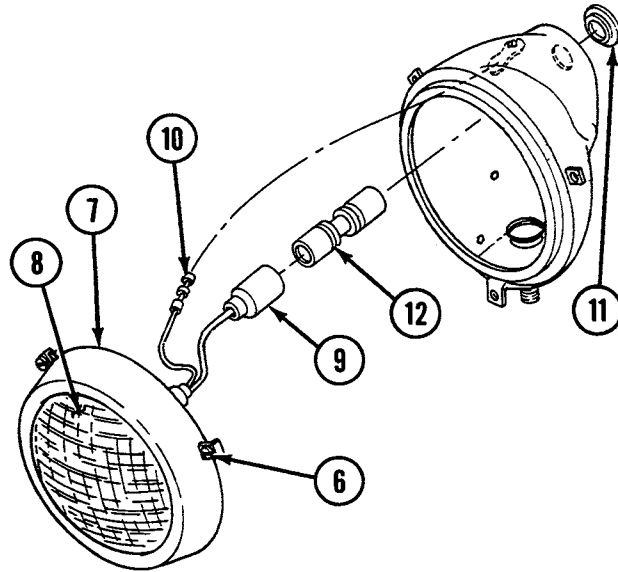
Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

Removal

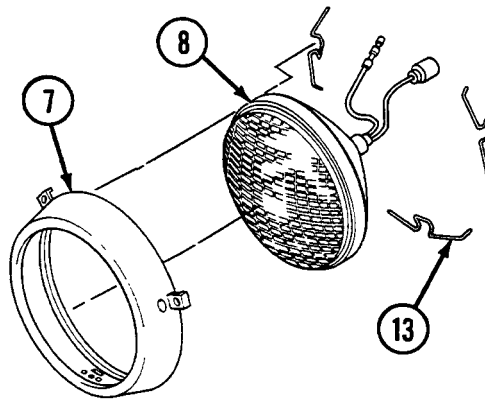
1. Disconnect connector (1).
2. Remove front signal light (2) by removing nut (3), lockwasher (4), and finishing washer (5).



3. Loosen three captive screws (6) and pull forward light door (7) with lamp (8).
4. Disconnect connector (9) and electrical cable (10) and remove light door (7) with lamp (8).
5. Remove grommet (11) and connector (12).



6. Remove three retaining springs (13) from light door (7).
7. Remove lamp (8) from light door (7).



Disassembly

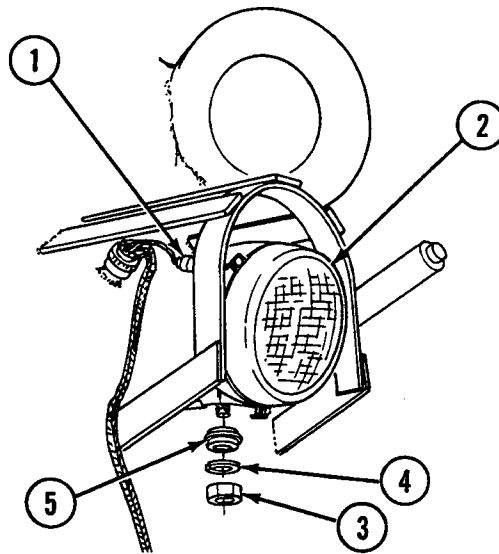
1. Disassemble connectors (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble connectors (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Install lamp (8) in light door (7).
2. Install three retaining springs (13) in lamp body (7).
3. Install grommet (11) and connector (12).
4. Connect connector (9) and electrical cable (10).
5. Install light door (7) with lamp (8) and tighten three captive screws (6).
6. Install front signal light (2) using nut (3), lockwasher (4), and finishing washer (5).
7. Connect connector (1).



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
SPARE HEADLIGHT MOUNT BASE ASSEMBLY REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (2) (item 618, WP 0491 00)

Materials/Parts (cont.)

Lockwashers (3) (item 621, WP 0491 00)

Screws (2) (item 567, WP 0491 00)

Screws (3) (item 731, WP 0491 00)

Washers, flat (3) (item 534, WP 0491 00)

WARNING

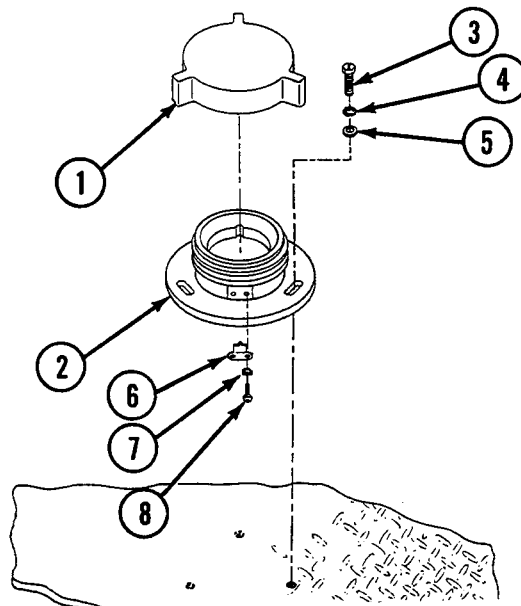
Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

NOTE

Removal and installation procedures are the same for both spare headlight mount base assemblies.

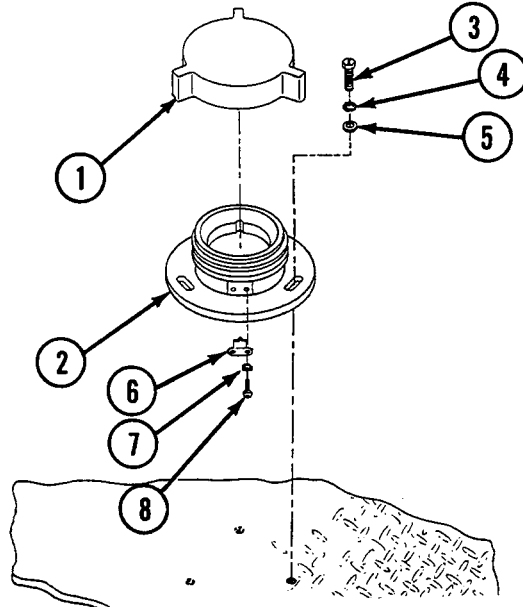
Removal

1. Remove protective cap (1).
2. Remove base (2) by removing three screws (3), three lockwashers (4), and three flat washers (5).
3. Remove clip (6) by removing two screws (7) and two lockwashers (8).



Installation

1. Install clip (6) using two lockwashers (8) and two screws (7).
2. Install base (2) using three flat washers (5), three new lockwashers (4), and three screws (3).
3. Install protective cap (1).

**END OF WORK PACKAGE**

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

STOPLIGHT-TAILLIGHT ASSEMBLIES MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Grommet (item 25, WP 0491 00)
Lockwashers (4) (item 615, WP 0491 00)
Lockwashers (4) (item 642, WP 0491 00)

Materials/Parts (cont.)

Packings, preformed (2) (item 214, WP 0491 00)
Screws (4) (item 387, WP 0491 00)
Screws (4) (item 416, WP 0491 00)

References

WP 0255 00 thru 0264 00

WARNING

Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

NOTE

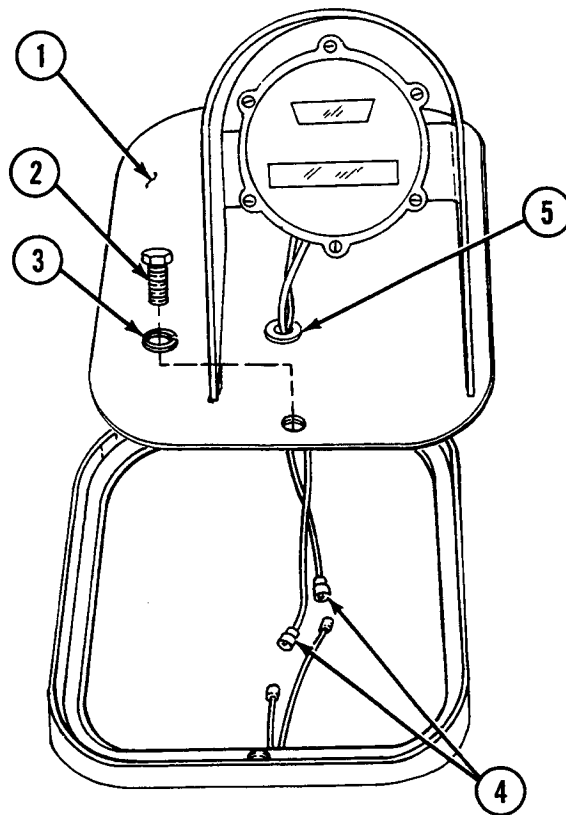
The following procedures are the same for both left and right taillights.

NOTE

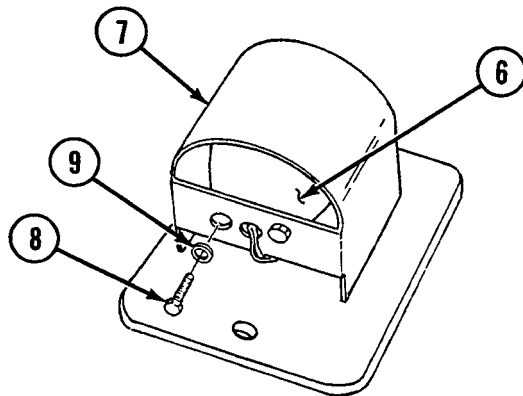
Left taillight requires three lamps and right taillight requires two lamps.

Removal

1. Remove hydraulic access plate (1) by removing two screws (2) and two lockwashers (3).
2. Disconnect two connectors (4). Remove grommet (5) from each lead and pull connectors through grommet hole.

**RIGHT TAILLIGHT**

3. Remove taillight (6) from support bracket (7) by removing two screws (8) and two lockwashers (9).

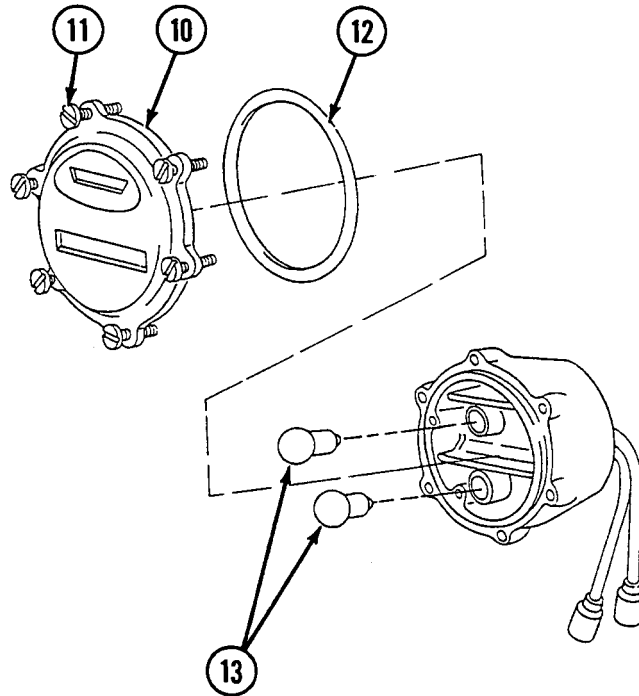


NOTE

Clean and dry all parts, paying particular attention to contacts.

Disassembly

1. Remove door light assembly (10) by loosening six captive screws (11).
2. Remove and discard preformed packing (12).
3. Remove two lamps (13) by depressing and turning counterclockwise.



4. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).
2. Install two lamps (13) by depressing and turning clockwise.
3. Install preformed packing (12).
4. Install door light assembly (10) by tightening six captive screws (11).

Installation

1. Install taillight (6) on support bracket (7) using two screws (8) and two lockwashers (9).
2. Install grommet (5) over two connectors (4) and then place grommet into hole on hydraulic access plate (1). Connect connectors.
3. Install hydraulic access plate (1) using two screws (2) and two lockwashers (3).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

TROUBLELIGHT ASSEMBLY REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (2) (item 615, WP 0491 00)

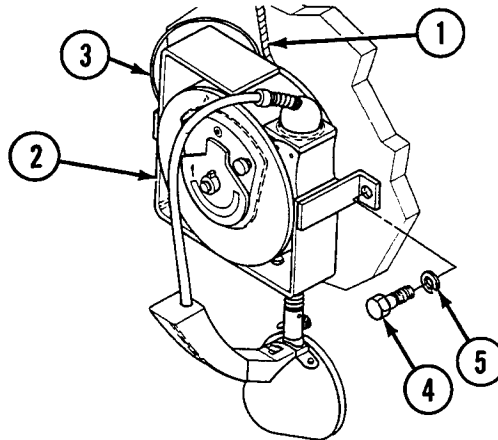
Screws (2) (item 397, WP 0491 00)

WARNING

Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

Removal

1. Disconnect connector (1).
2. Remove troublelight assembly (2) and ground lead (3) by removing two screws (4) and two lockwashers (5).

**Installation**

1. Install troublelight assembly (2) and ground lead (3) using two screws (4) and two lockwashers (5).
2. Connect connector (1).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
RIGGER'S FIXED SPOTLIGHT AND RELATED PARTS MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Collet (item 23, WP 0491 00)

Nut (item 24, WP 0491 00)

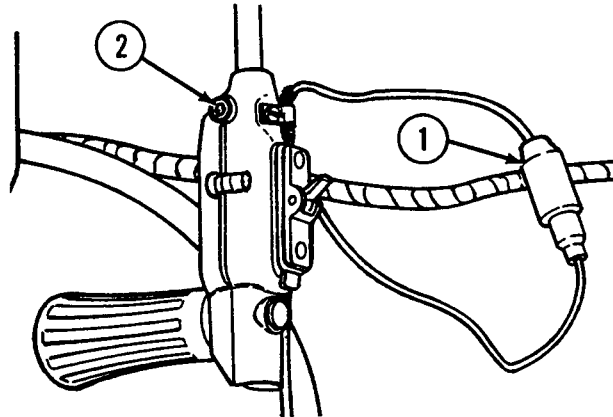
Nut (item 689, WP 0491 00)

WARNING

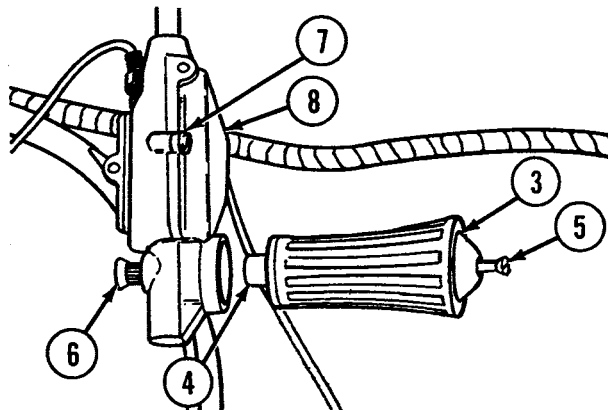
Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

Removal

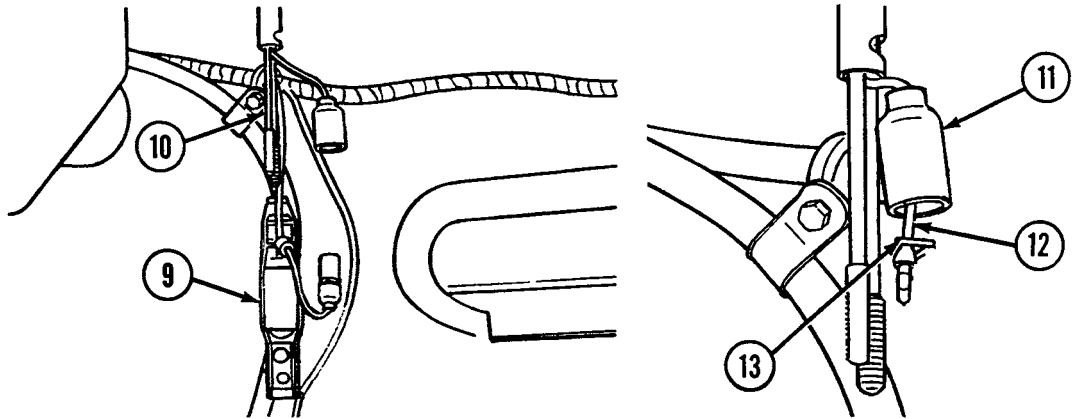
1. Disconnect connector (1) and remove socket head screw (2).



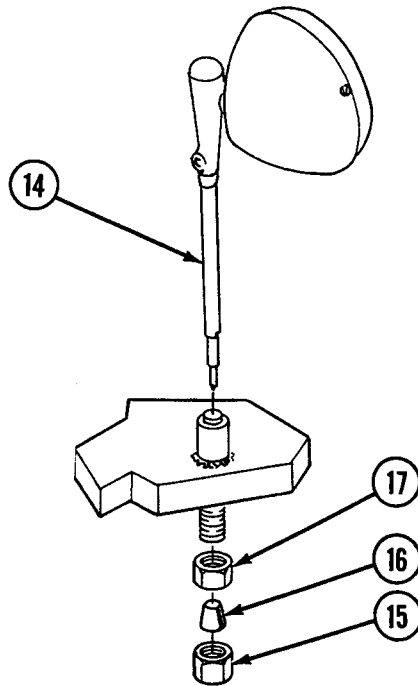
2. Remove handle (3) and spacer (4) by loosening screw (5).
3. Remove gear bolt (6) and two screws (7) from body (8).



4. Pull switch assembly (9) off shaft (10).
5. Remove connector shell (11) from wire (12) by removing C-washer (13).

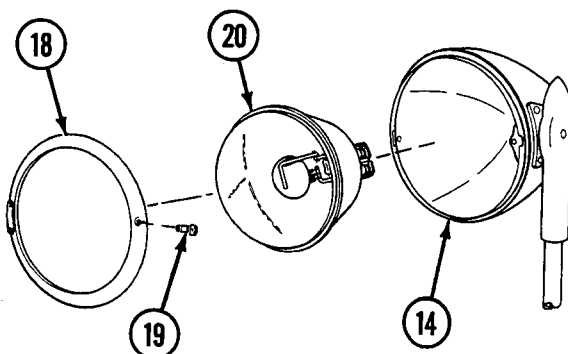


6. Pull riggers' fixed spotlight (14) out of cab opening by removing nut (15), collet (16), and nut (17).



Disassembly

1. Remove lens retainer (18) by removing screw (19).
2. Disconnect and remove lamp (20) from rigger's fixed spotlight (14).

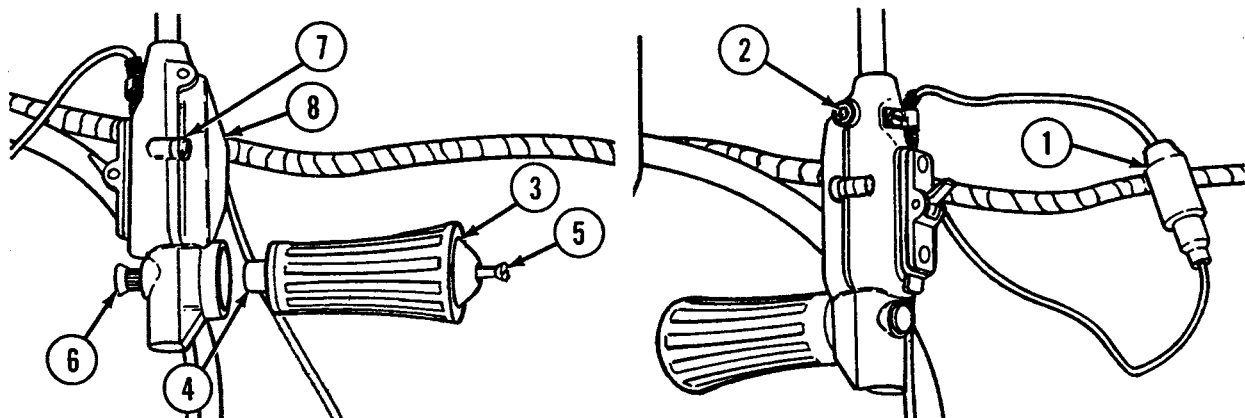
**Assembly**

1. Install and connect lamp (20) to rigger's fixed spotlight (14).
2. Install lens retainer (18) using screw (19).

Installation**NOTE**

Clean and dry all parts.

1. Install rigger's fixed spotlight (14) in cab opening using nut (15), collet (16), and nut (17).
2. Install connector shell (11) over wire (12) and secure using C-washer (13).
3. Install switch assembly (9) on shaft (10).
4. Install body (8) using two screws (7).
5. Install gear bolt (6).
6. Install handle (3) and spacer (4) by tightening screw (5).
7. Install socket head screw (2) and connect connector (1).



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
HIGH BEAM INDICATOR LIGHT ASSEMBLY MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Drivescrews (2) (item 501, WP 0491 00)

Materials/Parts (cont.)

Lockwashers (2) (item 611, WP 0491 00)

Packing, preformed (item 225, WP 0491 00)

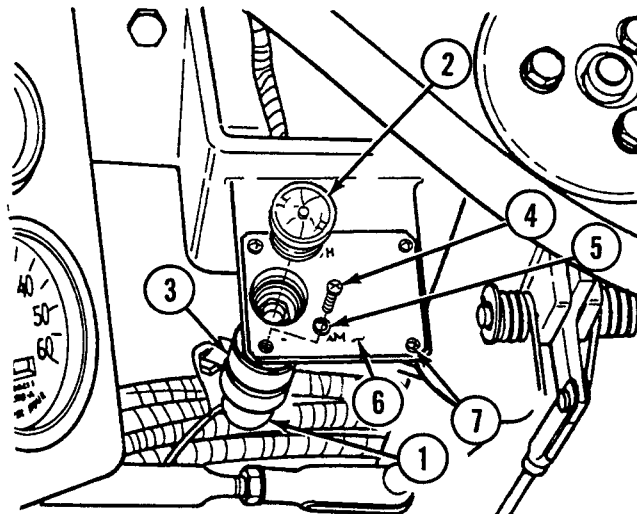
Screws (2) (item 575, WP 0491 00)

WARNING

Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

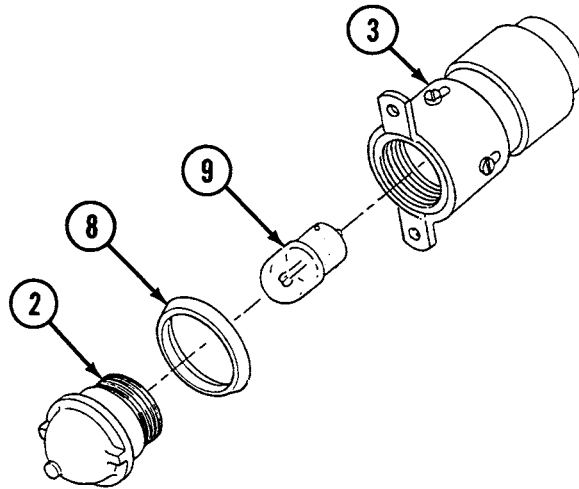
Removal

1. Disconnect connector (1).
2. Remove light lens (2) from indicator light (3) by turning counterclockwise.
3. Remove indicator light (3) by removing two screws (4) and two lockwashers (5).
4. Remove ID plate (6) by removing two drive screws (7).



Disassembly

1. Remove preformed packing (8) from light lens (2).
2. Remove lamp (9) from indicator light (3) by depressing and turning counterclockwise.

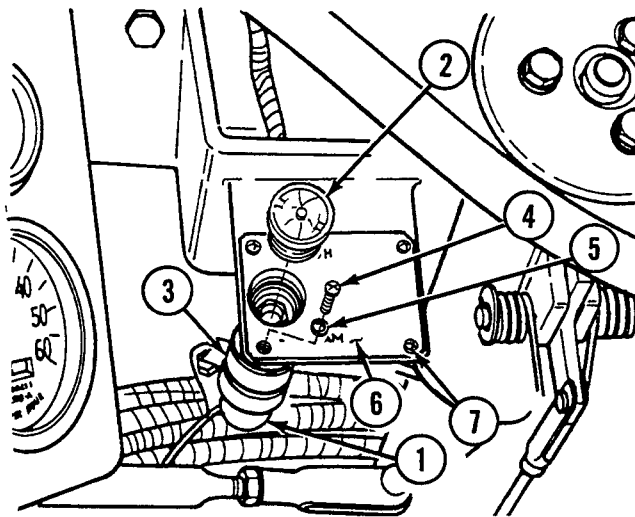


Assembly

1. Install lamp (9) to indicator light (3) by depressing and turning clockwise.
2. Install preformed packing (8) to light lens (2).

Installation

1. Install ID plate (6) using two drive screws (7).
2. Install indicator light (3) using two screws (4) and two lockwashers (5).
3. Install light lens (2) to indicator light (3).
4. Connect connector (1).



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

DOMELIGHT MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (16) (item 634, WP 0491 00)

Lockwires (4) (item 327, WP 0491 00)

Materials/Parts (cont.)

Rings, retaining (32) (item 213, WP 0491 00)

Screws (32) (item 212, WP 0491 00)

Screws (4) (item 215, WP 0491 00)

Screws (16) (item 778, WP 0491 00)

Seal, rubber (4) (item 276, WP 0491 00)

WARNING

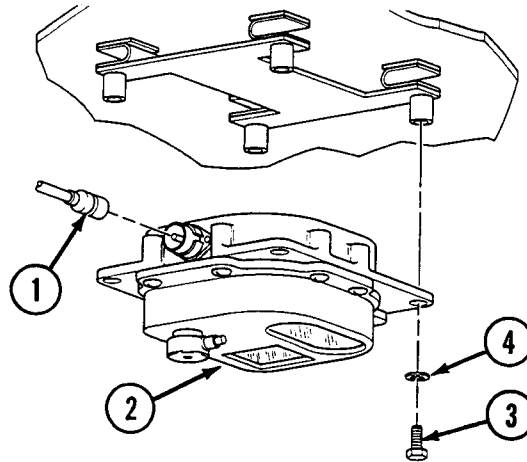
Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

NOTE

The following procedures are the same for all four dome lights.

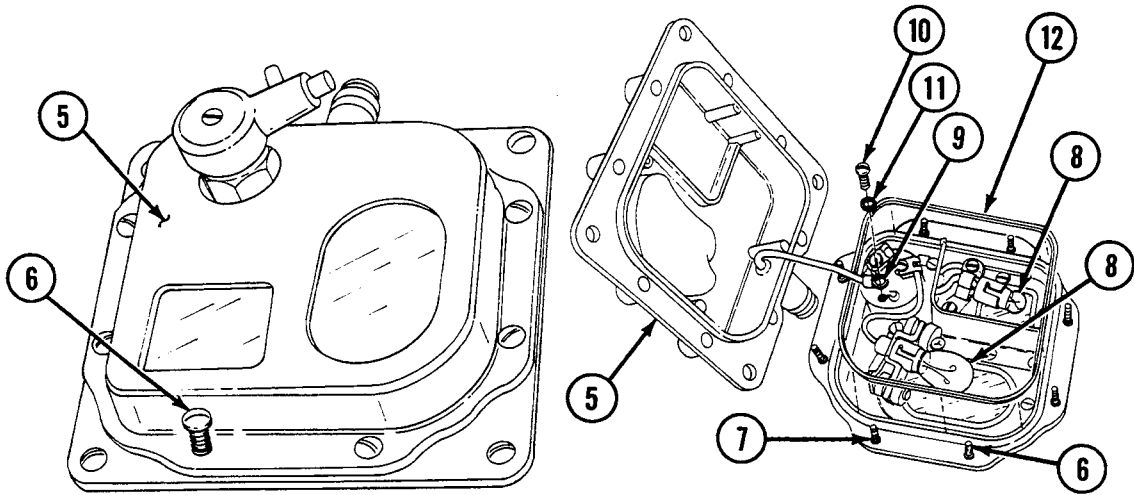
Removal

1. Disconnect connector (1).
2. Remove dome light (2) by removing four screws (3) and four lockwashers (4).



Disassembly

1. Remove door assembly (5) by loosening eight screws (6) with retaining rings (7).
2. Remove two lamps (8) by depressing and turning counterclockwise.
3. Disconnect lead (9) by removing screw (10) and lockwasher (11).
4. Remove and discard rubber seal (12) from door assembly (5).

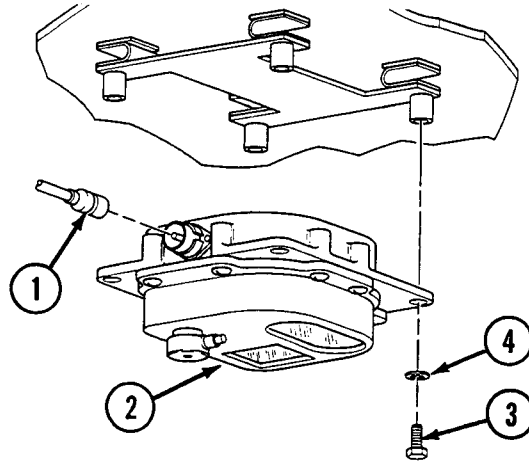
**Assembly****NOTE**

Clean and dry all parts, paying particular attention to contacts.

1. Install rubber seal (12) in door assembly (5).
2. Connect lead (9) using screw (10) and lockwasher (11).
3. Install two lamps (8) by depressing and turning clockwise.
4. Install door assembly (5) using eight screws (6) and retaining rings (7).

Installation

1. Install dome light (2) on vehicle using four screws (3) and four lockwashers (4).
2. Connect connector (1).

**END OF WORK PACKAGE**

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
WINCH ILLUMINATION LAMP ASSEMBLY MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00

Materials/Parts

Grommet (item 326, WP 0491 00)
Lockwasher (item 640, WP 0491 00)
Nut (item 758, WP 0491 00)
Spacer (item 170, WP 0491 00)
Springs, retaining (3) (item 216, WP 0491 00)

Equipment Condition

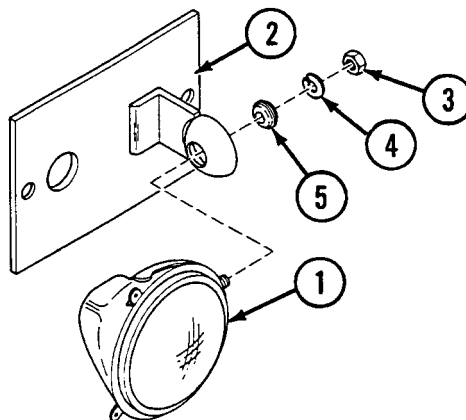
Stowage basket intermediate forward floor plate removed
(see WP 0306 00)

WARNING

Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock or burns.

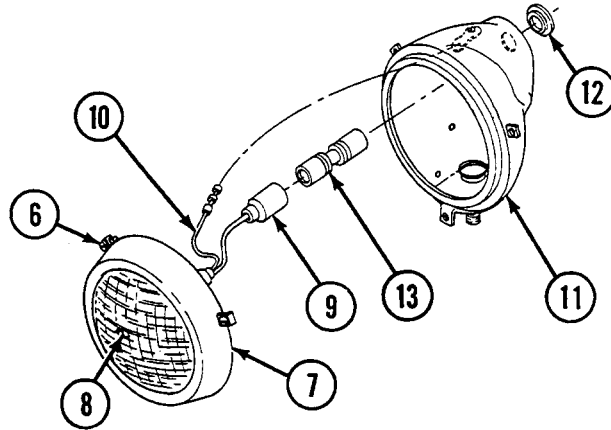
Removal

1. Remove winch compartment light (1) from floor plate (2), by removing nut (3), lockwasher (4), and spacer (5).

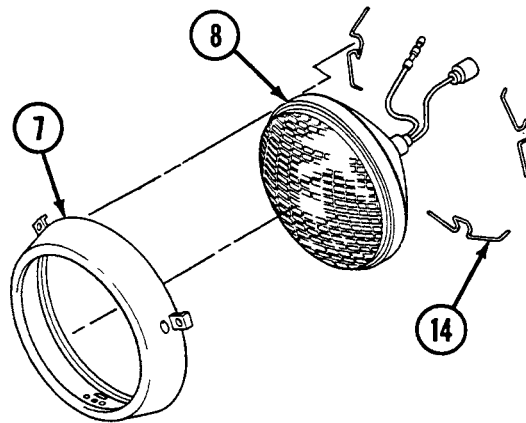


Disassembly

1. Loosen three captive screws (6) and pull forward light door (7) with lamp (8).
2. Disconnect connector (9) and electrical cable (10) and remove light door (7) with lamp (8) from body (11).
3. Remove grommet (12) and connector (13) from body (11).



4. Remove three retaining springs (14) from light door (7).
5. Remove lamp (8) from light door (7).



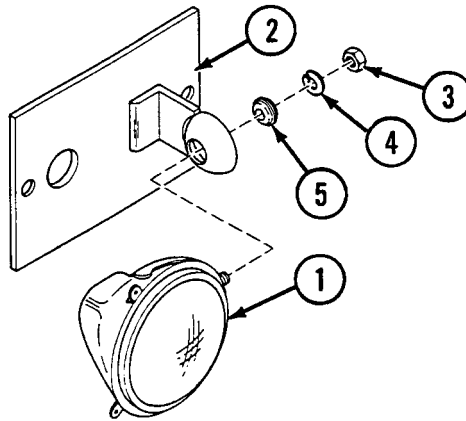
6. Disassemble two connectors (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble two connectors (see WP 0255 00 thru 0264 00, as appropriate).
2. Install lamp (8) to light door (7).
3. Install three retaining springs (14) to light door (7).
4. Install grommet (12) and connector (13) to body (11).
5. Connect connector (9) and electrical cable (10) to body (11).
6. Install light door (7) with lamp (8) and tighten three captive screws (6).

Installation

1. Install winch compartment light (1) to floor plate (2) using spacer (5), lockwasher (4), and nut (3).

**NOTE**

Follow-on maintenance: Install stowage basket intermediate forward floor plate (see WP 0306 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

GENERATOR POWER LEAD ASSEMBLY (11671357) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts (cont.)

Washer, flat (item 841, WP 0491 00)

Materials/Parts

Wire, electrical (item 37, WP 0489 00)
 Lockwashers (4) (item 636, WP 0491 00)
 Nut (item 436, WP 0491 00)
 Nuts (4) (item 668, WP 0491 00)
 Screws (4) (item 600, WP 0491 00)

References

WP 0255 00 thru 0264 00

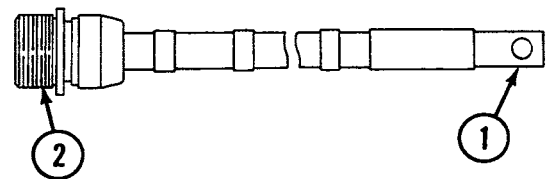
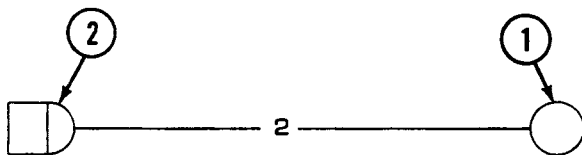
Equipment Condition

Powerplant removed (see WP 0098 00)

WARNING

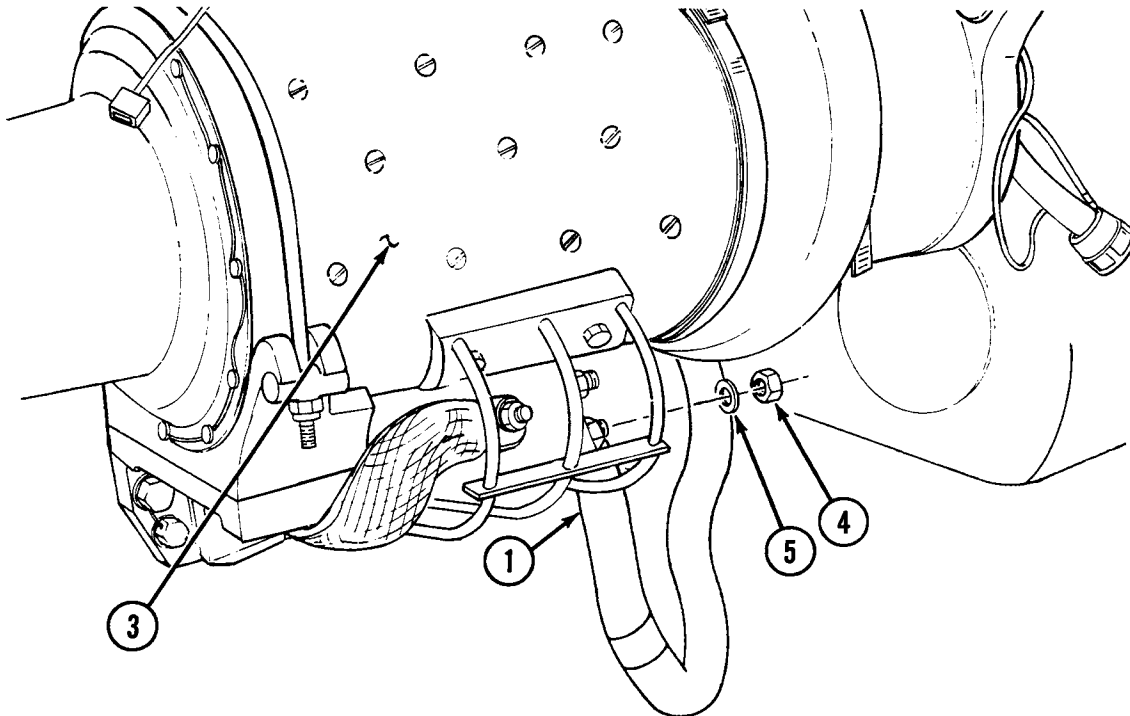
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Generator	2
2	Engine disconnect	2

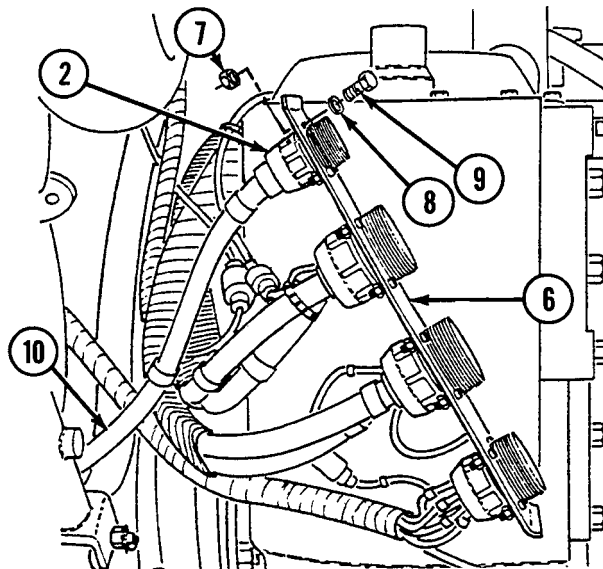


Removal

1. Remove lead (1) from generator (3) by removing nut (4) and flat washer (5).



2. Remove connector (2) from engine disconnect (6) by removing four nuts (7), four lockwashers (8), four screws (9), and lead assembly (10).



Disassembly

1. Disassemble lead assembly (10) (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble lead assembly (10) (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Install connector (2) at engine disconnect (6) using four screws (9), four lockwashers (8), and four nuts (7).
2. Install lead (1) on generator (3) using flat washer (5) and nut (4).

NOTE

Follow-on maintenance: Install powerplant (see WP 0098 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**MASTER RELAY TO RECTIFIER LEAD ASSEMBLY (SINGLE VOLTAGE) (10866904) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION**

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

References

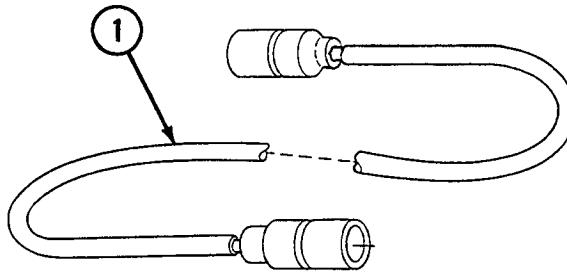
WP 0255 00 thru 0264 00

WARNING

Be certain MASTER switch is OFF and negative battery leads are disconnected to avoid electrical shock and burns.

Removal

1. Remove lead assembly (1).



Disassembly

1. Disassemble lead assembly (1) (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble lead assembly (1) (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Install lead assembly (1).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

BATTERY TO CIRCUIT BREAKER LEAD ASSEMBLY (11671811) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

Air inlet doors opened (see WP 0205 00)

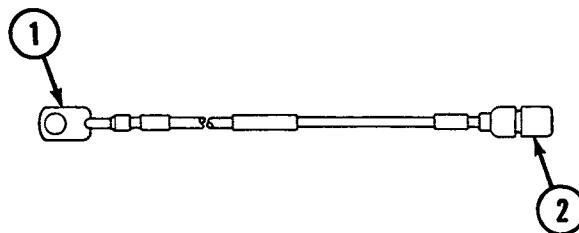
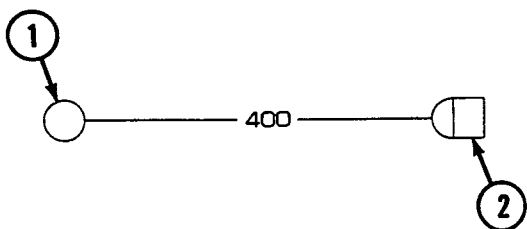
References

WP 0153 00
 WP 0255 00 thru 0264 00

WARNING

Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Battery terminal	400
2	Circuit breaker	400

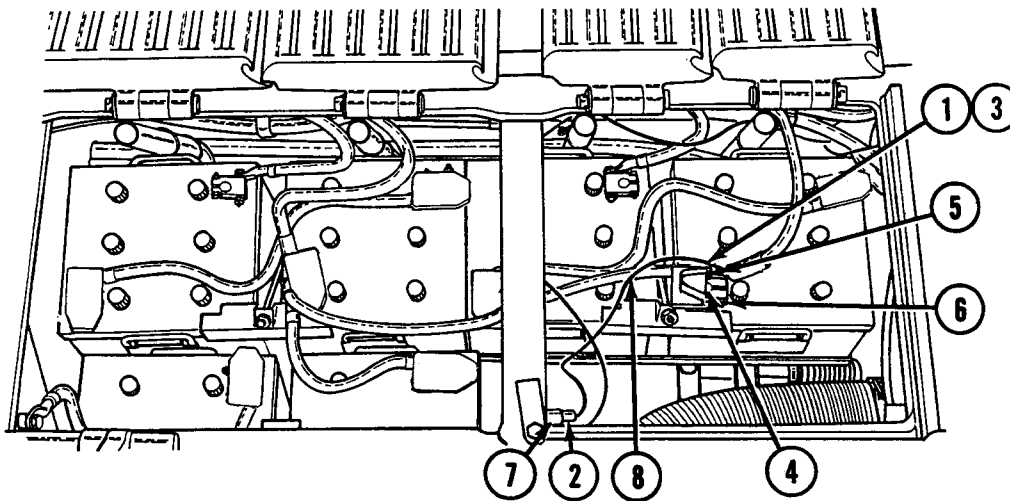


Removal

CAUTION

Ground cables must be disconnected prior to disconnecting positive leads to prevent damage to batteries.

1. Pull back rubber insulator (3).
2. Remove lead (1) from battery terminal (4) (see WP 0153 00) by removing bolt (5) and nut (6).
3. Disconnect connector (2) from circuit breaker (7). Remove lead assembly (8).



Disassembly

1. Disassemble lead assembly (8) (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble lead assembly (8) (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Install lead (1) at battery terminal (4) (see WP 0153 00) using bolt (5) and nut (6).
2. Push rubber insulator (3) over battery terminal (4).
3. Connect connector (2) to circuit breaker (7).

NOTE

Follow-on maintenance: Close air inlet doors (see WP 0205 00).

END OF WORK PACKAGE

UNIT MAINTENANCE

RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1

NSN 2350-00-122-6826, EIC AQA

**STARTER LEAD ASSEMBLY (10887570) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION**

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00

Materials/Parts

- Lockwasher (item 642, WP 0491 00)
- Nut (item 684, WP 0491 00)
- Screw (item 402, WP 0491 00)
- Washer, flat (item 274, WP 0491 00)

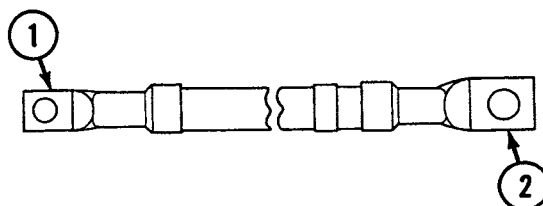
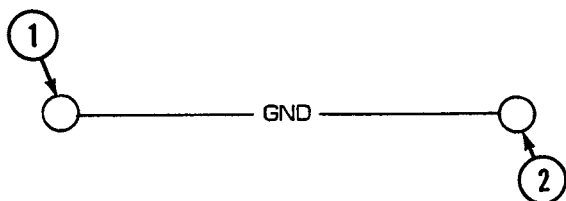
Equipment Condition

Powerplant removed (see WP 0098 00)

WARNING

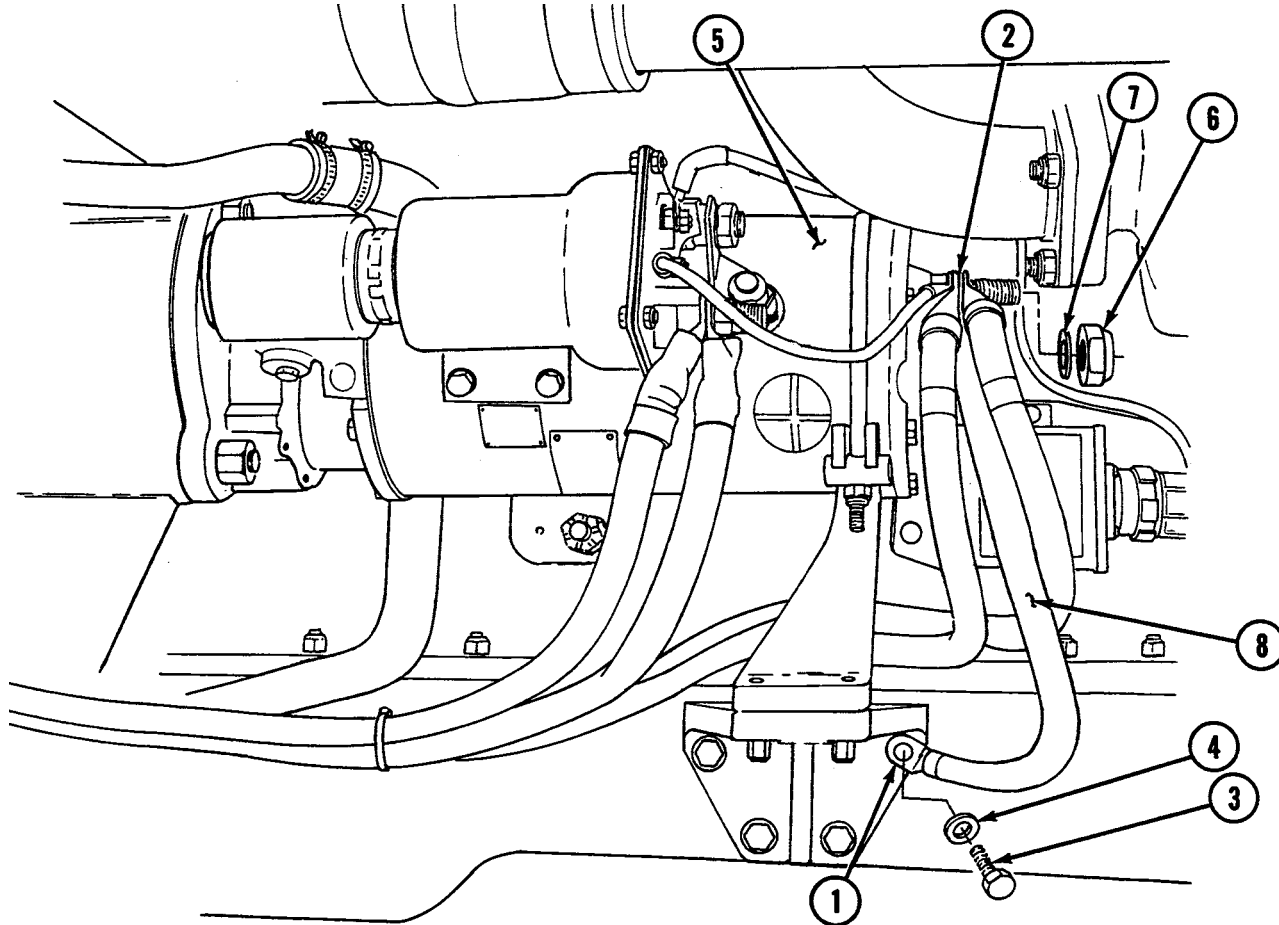
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Starter support bracket	GND
2	Starter	GND



Removal

1. Remove lead (1) from starter support bracket by removing machine bolt (3) and flat washer (4).
2. Remove lead (2) from starter (5) by removing nut (6) and lockwasher (7). Remove lead assembly (8).



Disassembly

1. Disassemble lead assembly (8) (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble lead assembly (8) (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Install lead (2) to starter (5) using nut (6) and lockwasher (7).
2. Install lead (1) to starter support bracket using machine bolt (3) and flat washer (4).

NOTE

Follow-on maintenance: Install powerplant (see WP 0098 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

MODULE STARTER WIRING HARNESS (11671792) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00

Materials/Parts

- Lockwashers (4) (item 637, WP 0491 00)
- Lockwasher (item 639, WP 0491 00)
- Nuts (4) (item 666, WP 0491 00)
- Screw (item 383, WP 0491 00)
- Screws (4) (item 601, WP 0491 00)

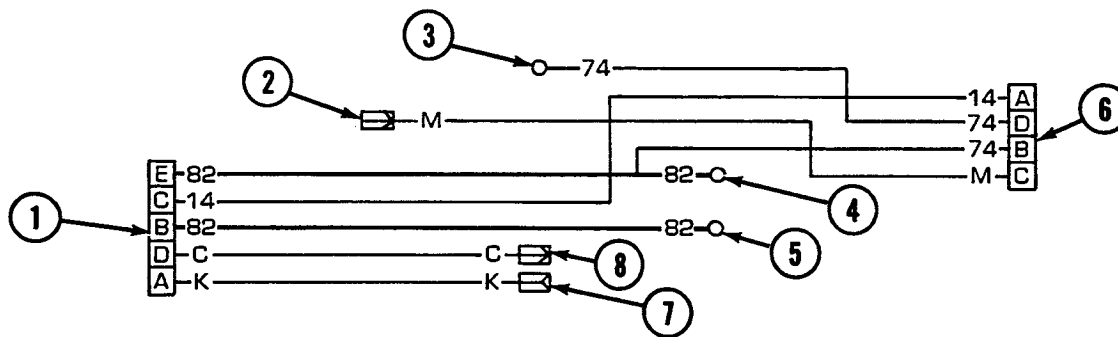
Equipment Condition

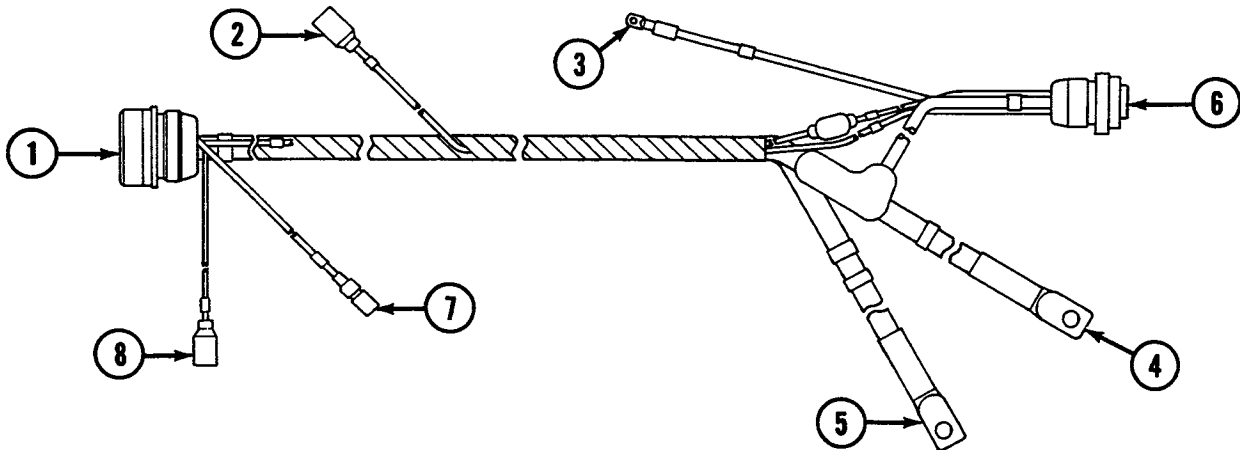
Powerplant removed (see WP 0098 00)

WARNING

Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

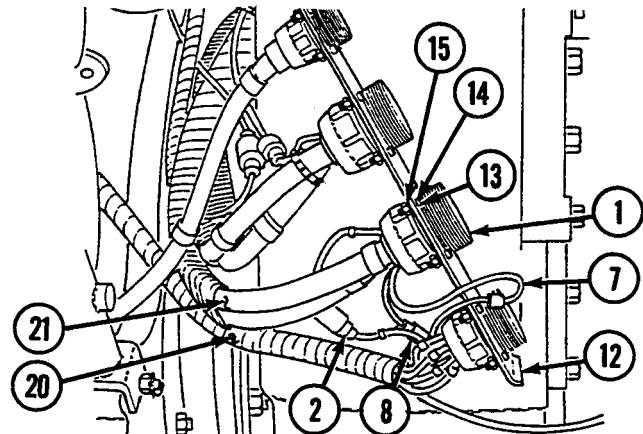
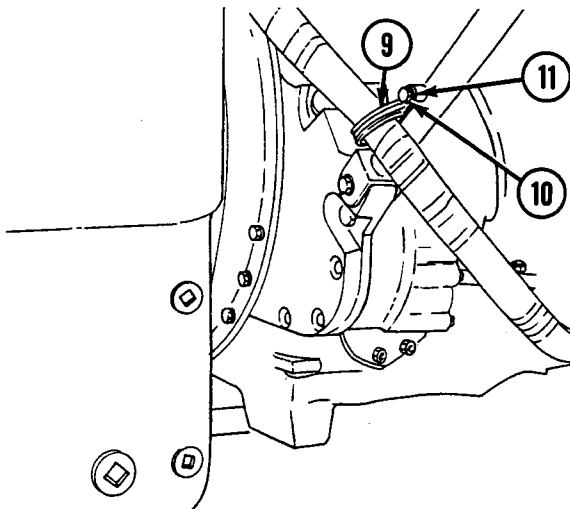
Connector No.	Electrical Lead To:	Wire No.
1	Engine disconnect	82, 14, C, K
2	Main engine wiring harness	M
3	Starter solenoid	74
4	Starter solenoid	82
5	Starter solenoid	82
6	Module starter low voltage protective system	14, 74, M
7	Main engine wiring harness	K
8	Main engine wiring harness	C



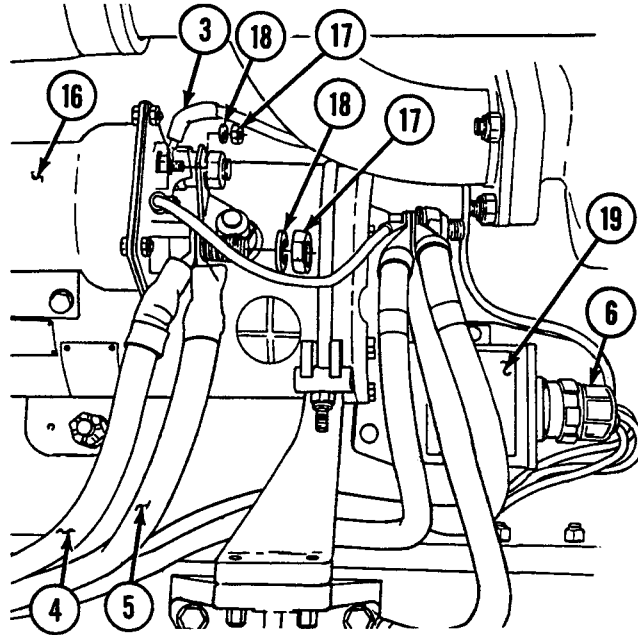


Removal

1. Remove clamp (9) by removing screw (10) and lockwasher (11).
2. Remove wiring harness connector (1) from engine disconnect (12) by removing four screws (13), four lockwashers (14), and four nuts (15).



3. Remove three leads (3, 4, and 5) from starter solenoid (16) by removing two nuts (17) and two lockwashers (18).
4. Disconnect connector (6) from starter module low voltage protective system (19).



5. Disconnect three connectors (2, 7, and 8) from main engine wiring harness (20). Remove wiring harness (21).

Disassembly

1. Disassemble wiring harness (21) (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble wiring harness (21) (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect three connectors (2, 7, and 8) to main engine wiring harness (20).
2. Connect connector (6) to starter module low voltage protective system (19).
3. Install three leads (3, 4, and 5) to starter solenoid (17) using lockwasher (18) and nut (19).
4. Install wiring harness connector (1) to engine disconnect (12) using four nuts (15), four lockwashers (14), and four screws (13).
5. Install clamp (9) using lockwasher (11) and screw (10).

NOTE

Follow-on maintenance: Install powerplant (see WP 0098 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**BATTERIES TO MASTER RELAY, VOLTAGE REGULATORS, SLAVE RECEPTACLE, AND
ENGINE DISCONNECT WIRING HARNESS (DUAL VOLTAGE) (11672413) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION**

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Clamps (4) (item 507, WP 0491 00)
Lockwashers (4) (item 613, WP 0491 00)
Lockwashers (2) (item 615, WP 0491 00)
Screw (item 146, WP 0491 00)
Screws (4) (item 582, WP 0491 00)

Materials/Parts (cont.)

Screws (2) (item 721, WP 0491 00)

References

WP 0255 00 thru 0264 00

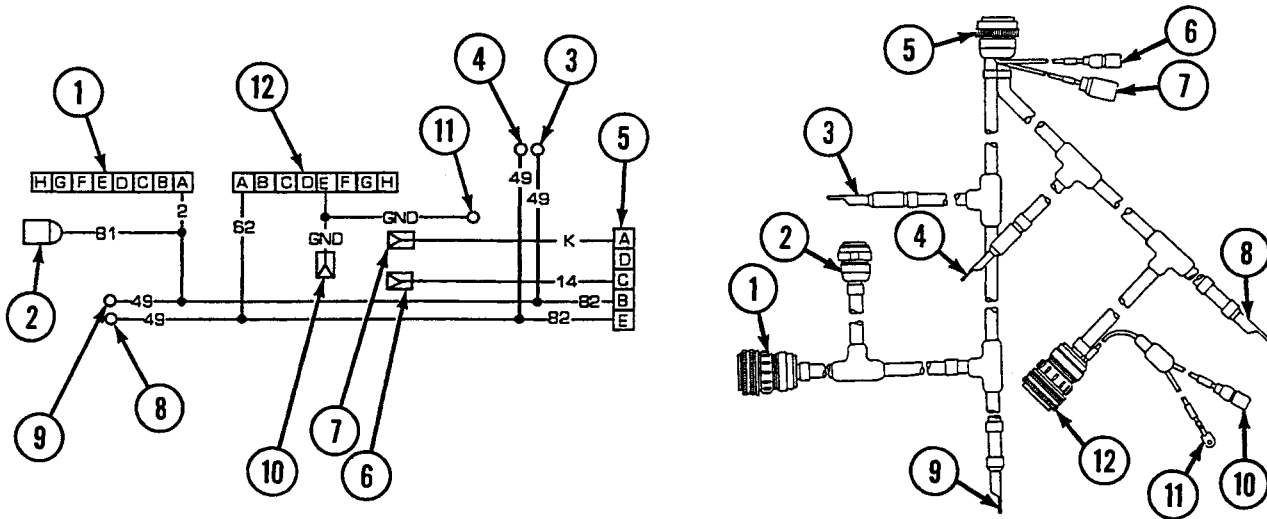
Equipment Condition

Air inlet doors removed as necessary (see WP 0341 00)

WARNING

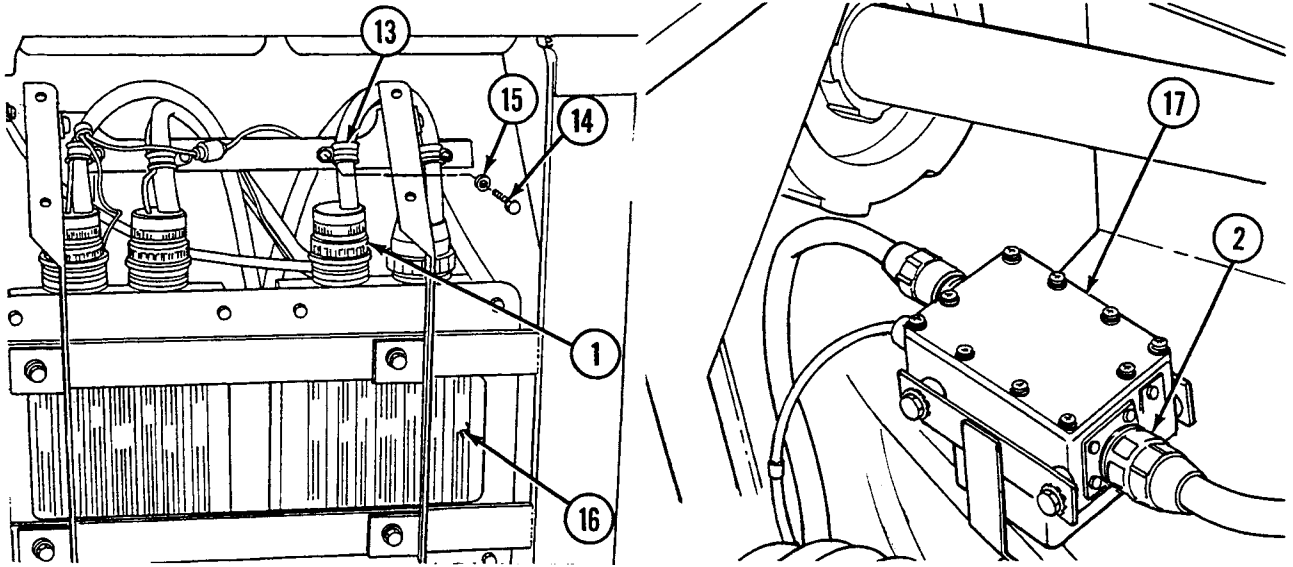
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Main engine voltage regulator	2
2	Master relay	81
3	Slave receptacle	49
4	Slave receptacle	49
5	Main engine disconnect	82, 14, K
6	Bulkhead to main engine bracket and rear fuel tank transmitter wiring harness	14
7	Bulkhead to main engine bracket and rear fuel tank transmitter wiring harness	K
8	Battery	49
9	Battery	49
10	Bulkhead to APU, master relay, and rigger's lights wiring harness (dual voltage) (11672412)	GND
11	APU voltage regulator	GND, 62
12	APU voltage regulator	62

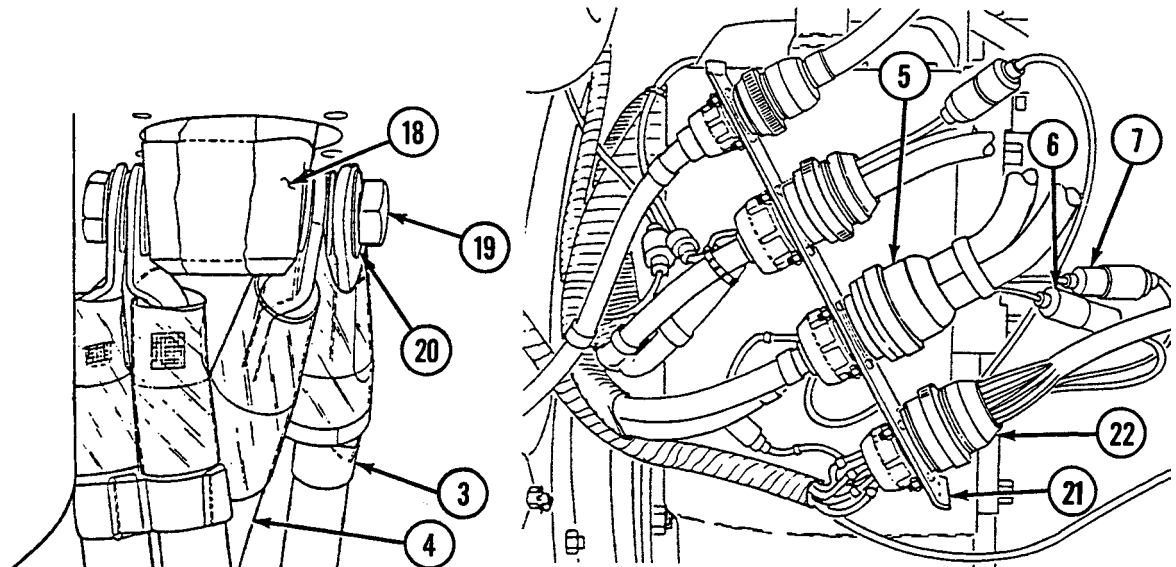


Removal

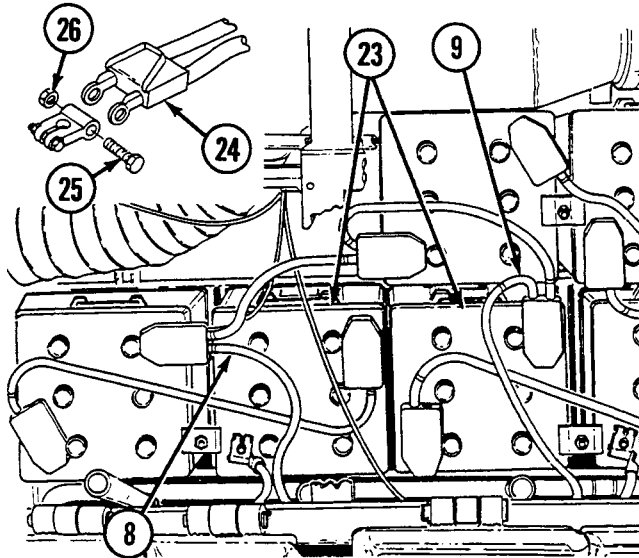
1. Remove eight clamps (13) by removing screw (14) and lockwasher (15) from each.
2. Disconnect connector (1) from main engine voltage regulator (16).
3. Disconnect connector (2) from master relay (17).



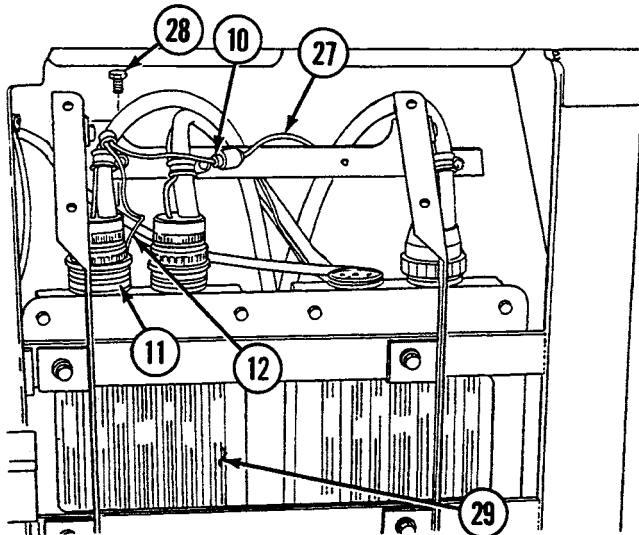
4. Disconnect two leads (3 and 4) from slave receptacle (18) by removing screw (19) and lockwasher (20).
5. Disconnect connector (5) from main engine disconnect (21).
6. Disconnect two connectors (6 and 7) from bulkhead to main engine bracket and rear fuel tank transmitter wiring harness (22).



- Disconnect two connectors (8 and 9) from batteries (23) by pulling back rubber insulator (24) and removing bolt (25) and nut (26).



- Disconnect connector (10) from bulkhead to APU, master relay, and rigger's lights wiring harness (27).
- Disconnect connector (11) and lead (12) by removing screw (28) from APU voltage regulator (29).



Disassembly

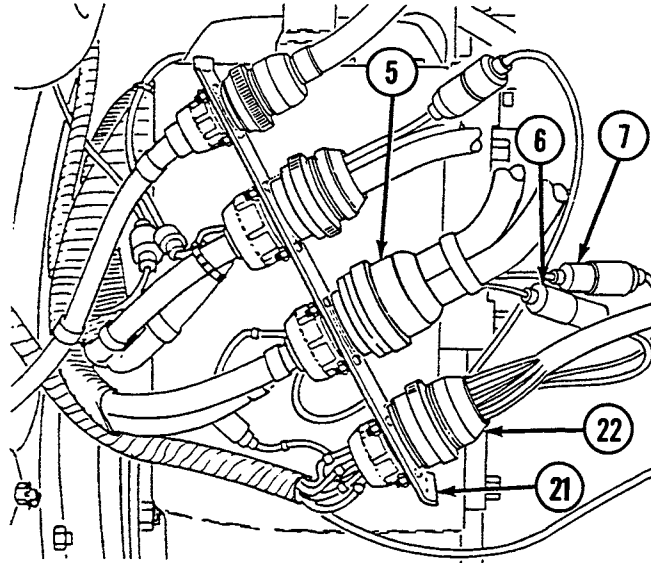
- Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

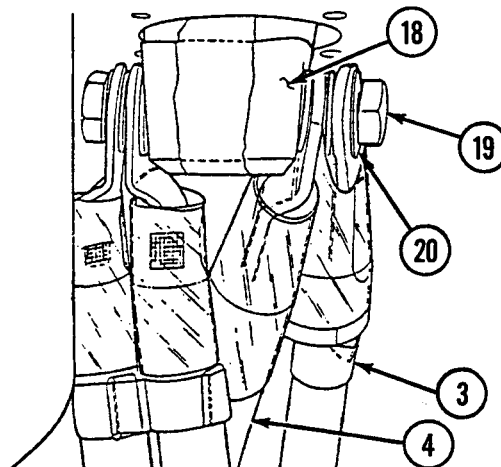
- Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

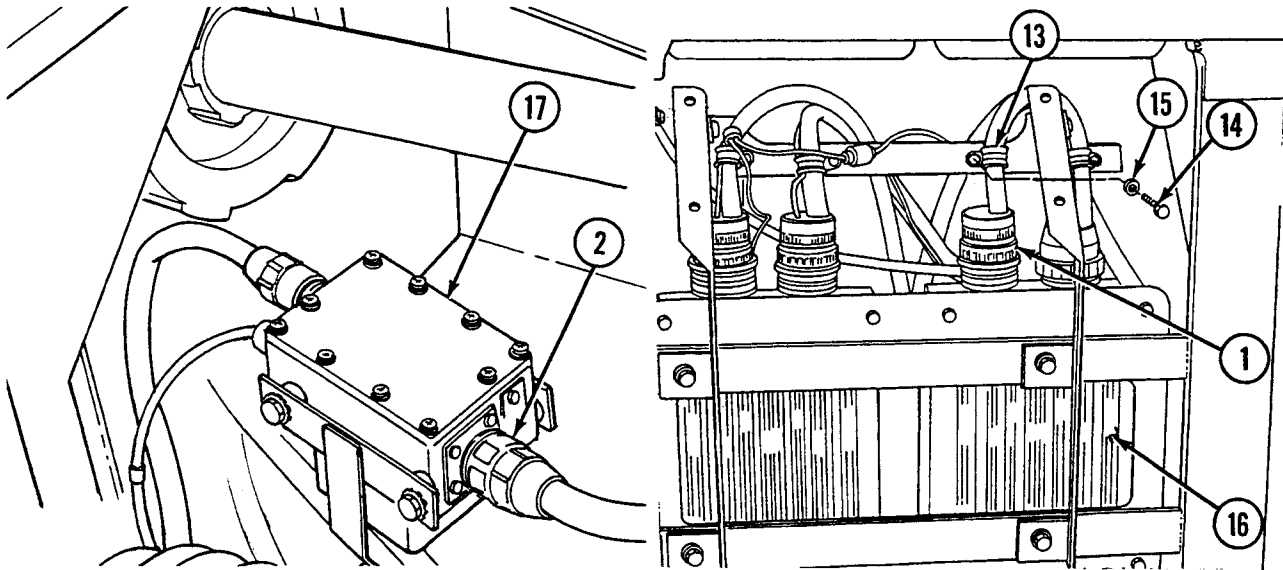
1. Connect connector (11) and lead (12) with screw (28) to APU voltage regulator (29).
2. Connect connector (10) to bulkhead to APU, master relay, and rigger's lights wiring harness (27).
3. Connect two connectors (8 and 9) to batteries (23) using bolt (25) and nut (26). Push insulator (24) back on battery terminal.
4. Connect two connectors (6 and 7) to bulkhead to main engine bracket and rear fuel tank transmitter wiring harness (22).
5. Connect connector (5) to main engine disconnect (21).



6. Connect two leads (3 and 4) to slave receptacle (18) using lockwasher (21) and screw (19).



7. Connect connector (2) to master relay (17).
8. Connect connector (1) to main engine voltage regulator (16).
9. Install eight clamps (13) using lockwasher (15) and screw (14) for each.



NOTE

Follow-on maintenance: Install air inlet doors if removed (see WP 0341 00).

END OF WORK PACKAGE

UNIT MAINTENANCE**RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1****NSN 2350-00-122-6826, EIC AQA****BATTERIES TO MASTER RELAY, VOLTAGE REGULATORS, SLAVE RECEPTACLE,
AND ENGINE DISCONNECT WIRING HARNESS (SINGLE VOLTAGE) (11671791) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION**

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00

Materials/Parts

Lockwashers (8) (item 613, WP 0491 00)

Lockwashers (2) (item 615, WP 0491 00)

Screws (8) (item 582, WP 0491 00)

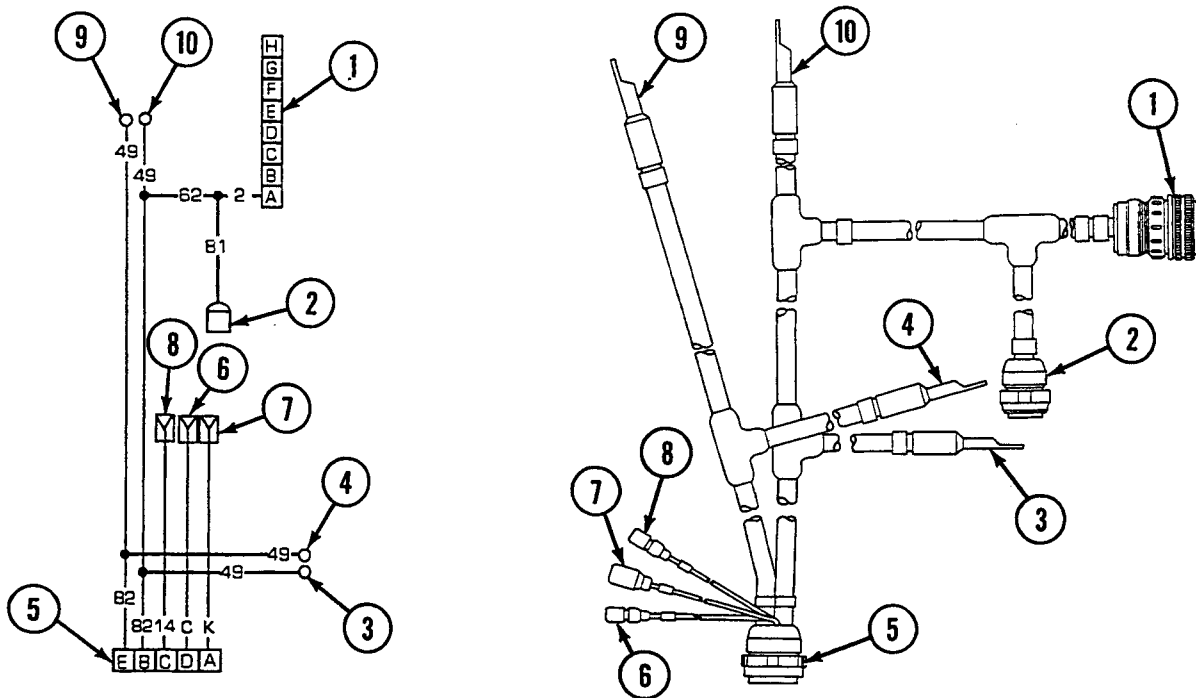
Screws (2) (item 721, WP 0491 00)

Equipment ConditionAir inlet doors removed as necessary (see WP 0341 00)

WARNING

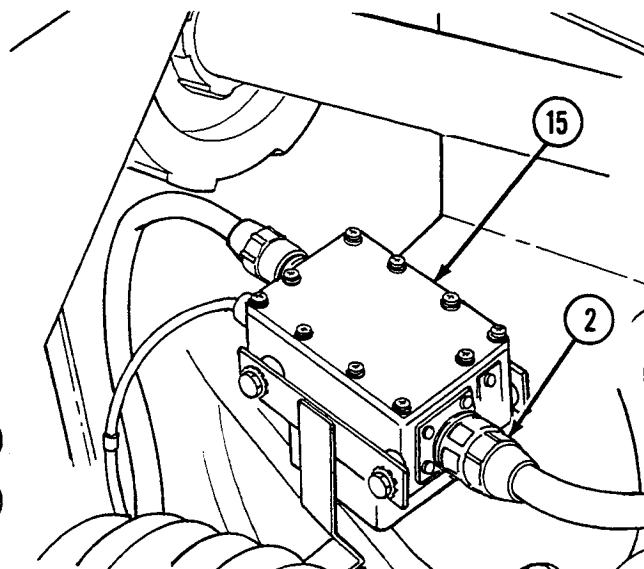
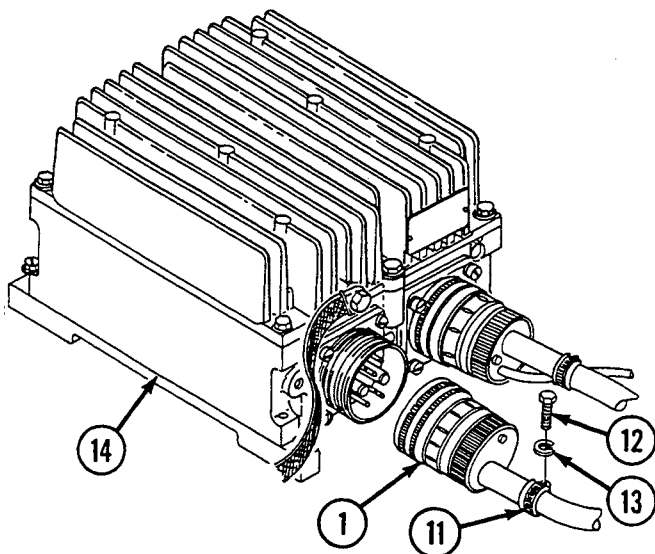
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Voltage regulator	2/62
2	Master relay	81
3	Slave receptacle	49
4	Slave receptacle	49
5	Engine disconnect	82, 14, C, K, 82
6	Bulkhead to main engine bracket and rear fuel tank transmitter wiring harness (single voltage) (11671789)	C
7	Bulkhead to main engine bracket and rear fuel tank transmitter wiring harness (single voltage) (11671789)	K
8	Bulkhead to main engine bracket and rear fuel tank transmitter wiring harness (single voltage) (11671789)	14
9	Battery	49
10	Battery	49

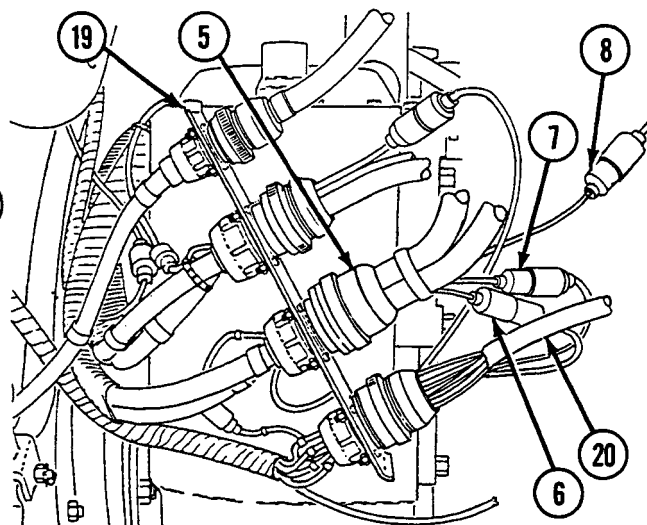
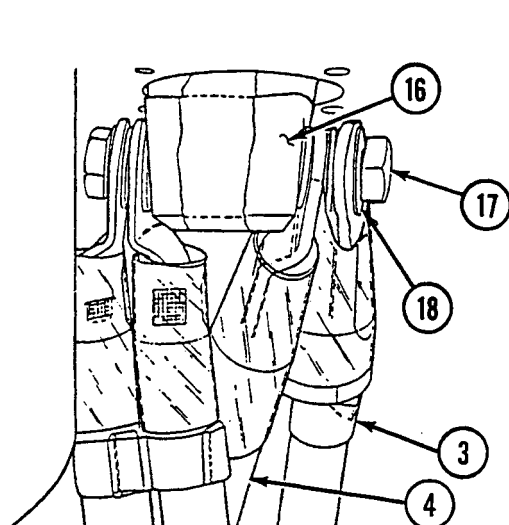


Removal

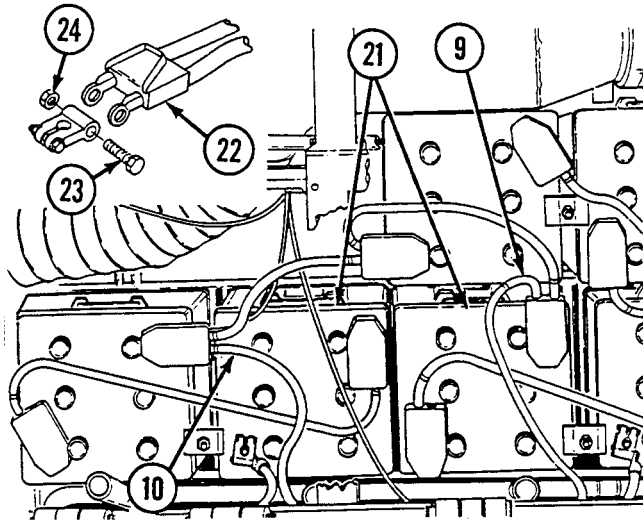
1. Remove eight clamps (11) by removing screw (12) and lockwasher (13) from each.
2. Disconnect connector (1) from voltage regulator (14).
3. Disconnect connector (2) from master relay (15).



4. Disconnect two leads (3 and 4) from slave receptacle (16) by removing screw (17) and lockwasher (18).
5. Disconnect connector (5) from engine disconnect (19).
6. Disconnect three connectors (6, 7, and 8) from bulkhead to main engine bracket and rear fuel tank transmitter wiring harness (20).



7. Disconnect two connectors (9 and 10) from battery (21) by pulling back rubber insulators (22) and removing bolt (23) and nut (24).



Disassembly

1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

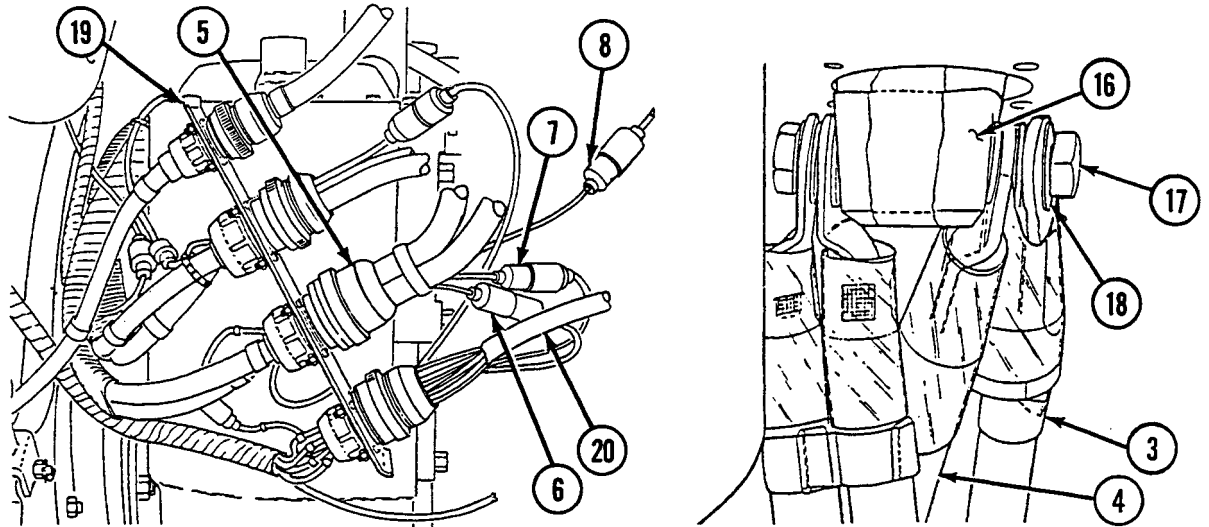
Assembly

1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

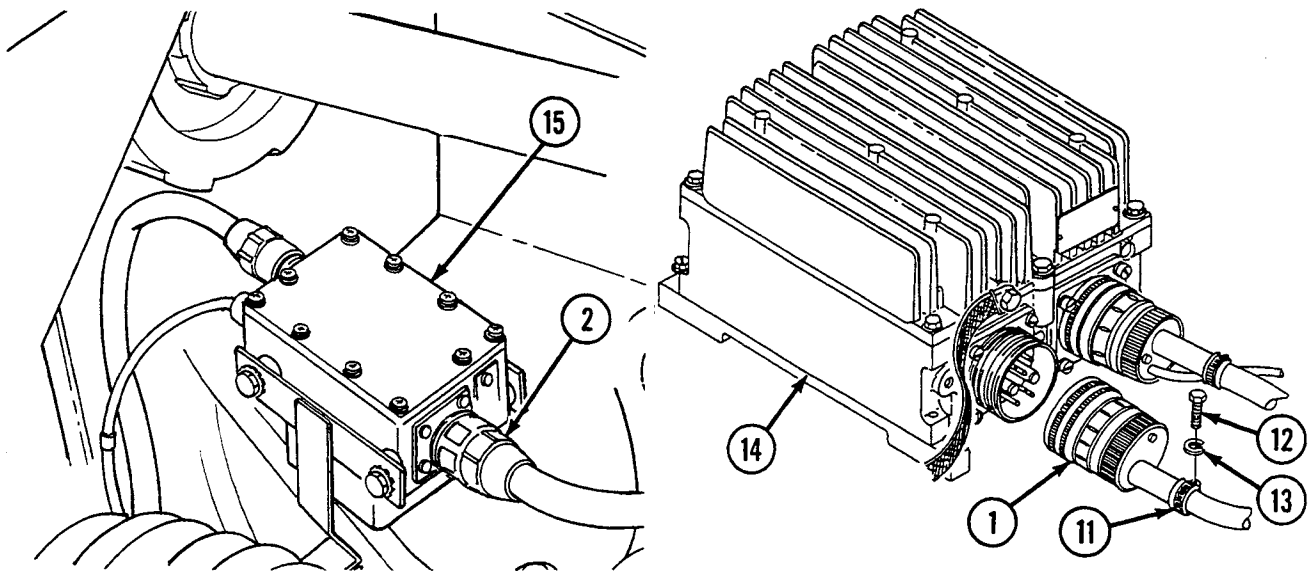
Installation

1. Connect two connectors (9 and 10) to batteries (19) using bolt (23) and nut (24). Push rubber insulators (22) back on battery terminal.
2. Connect three connectors (6, 7, and 8) to bulkhead to main engine bracket and rear fuel tank transmitter wiring harness (20).
3. Connect connector (5) to engine disconnect (19).

4. Connect two leads (3 and 4) to slave receptacle (16) using lockwasher (18) and screw (17).



5. Connect connector (2) to master relay (15).
6. Connect connector (1) to voltage regulator (14).
7. Install eight clamps (11) using lockwasher (13) and screw (12) for each.



NOTE

Follow-on maintenance: Install air inlet doors if removed (see WP 0341 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

ENGINE VOLTAGE REGULATOR TO ENGINE DISCONNECT
WIRING HARNESS (DUAL VOLTAGE) (11672415) MAINTENANCE
REMOVAL, ASSEMBLY, DISASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00

Materials/Parts

- Lockwasher (item 613, WP 0491 00)
- Lockwashers (2) (item 621, WP 0491 00)
- Nut, self-locking (item 490, WP 0491 00)
- Screw (item 582, WP 0491 00)
- Screws (2) (item 731, WP 0491 00)

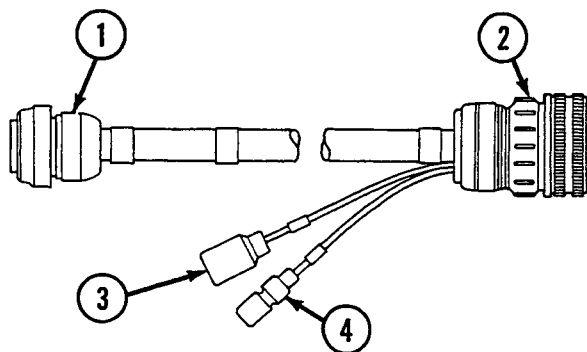
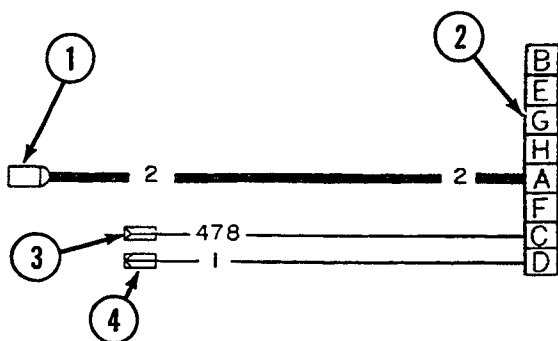
Equipment Condition

- Engine deck removed (see WP 0336 00)
- Voltage regulator access cover removed (see WP 0154 00)

WARNING

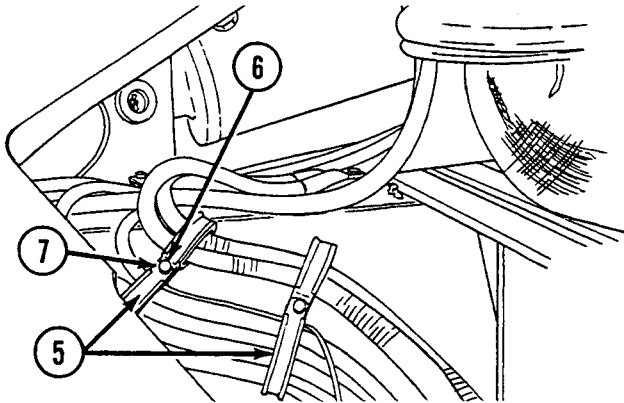
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Engine disconnect	2
2	Main engine voltage regulator	2, 478, 1
3	Bulkhead to main engine bracket and rear fuel tank transmitter wiring harness (dual voltage) (12322588)	1
4	Bulkhead to main engine bracket and rear fuel tank transmitter wiring harness (dual voltage) (12322588)	478

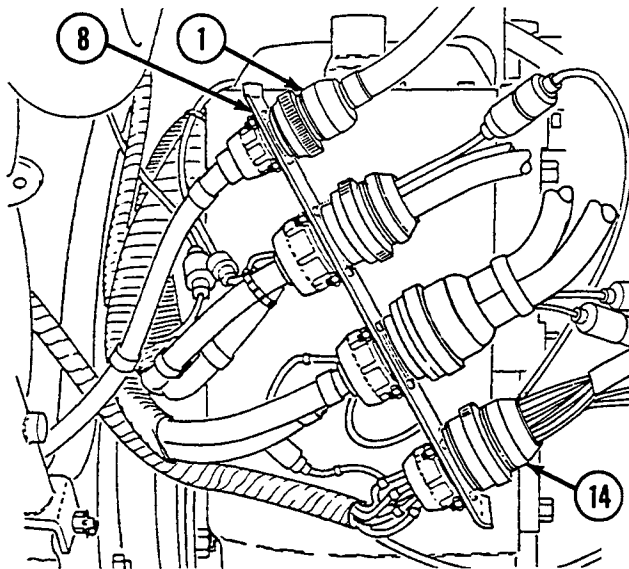


Removal

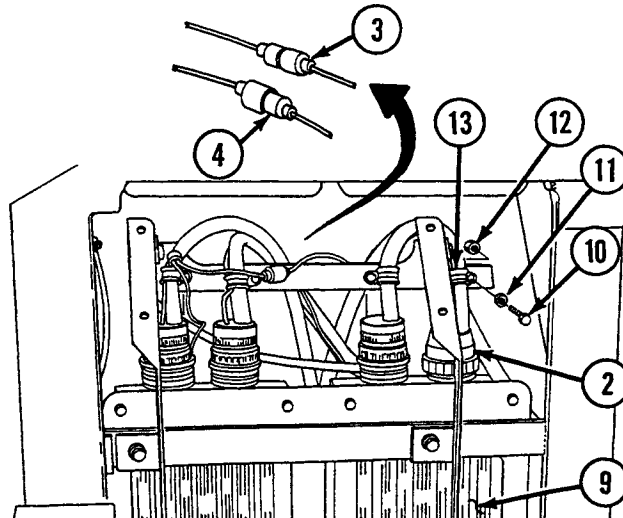
1. Remove two clamps (5) by removing screw (6) and lockwasher (7) from each.



2. Disconnect connector (1) from engine disconnect bracket (8).



3. Disconnect connector (2) from main engine voltage regulator (9) by removing screw (10), lockwasher (11), nut (12), and clamp (13).
4. Disconnect connectors (3 and 4) from bulkhead to main engine bracket and rear fuel tank transmitter wiring harness (14).



Disassembly

1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect connectors (3 and 4) to bulkhead to main engine bracket and rear fuel tank transmitter wiring harness (14).
2. Connect connector (2) to main engine dual voltage regulator (9).
3. Connect connector (1) to engine disconnect bracket (8).
4. Install two clamps (5) using lockwasher (7) and screw (6) for each.

NOTE

Follow-on maintenance: Install voltage regulator access cover (see WP 0154 00); Install engine deck (see WP 0336 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
GAGE PANEL WIRING HARNESS (12322586) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

Gage panel removed as necessary (see WP 0157 00)

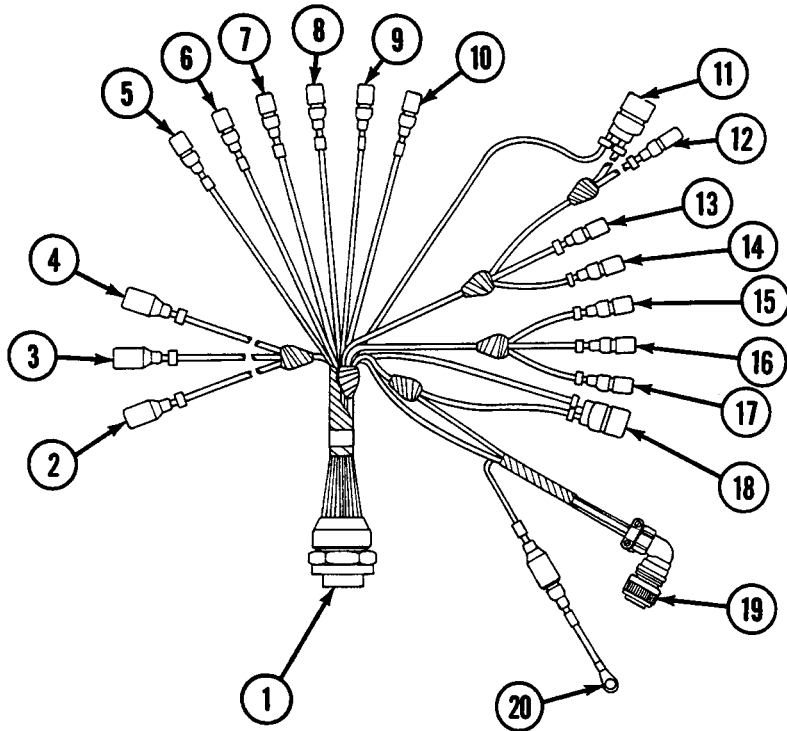
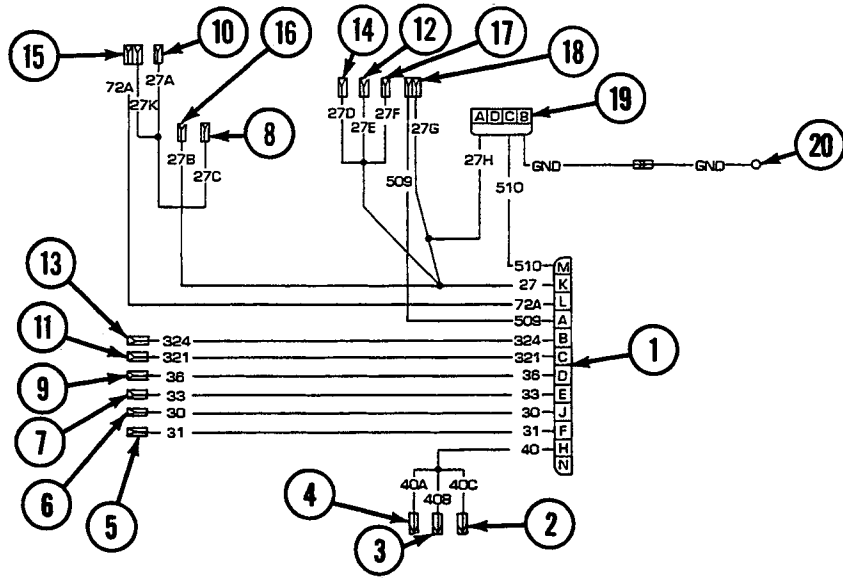
References

WP 0255 00 thru 0264 00

WARNING

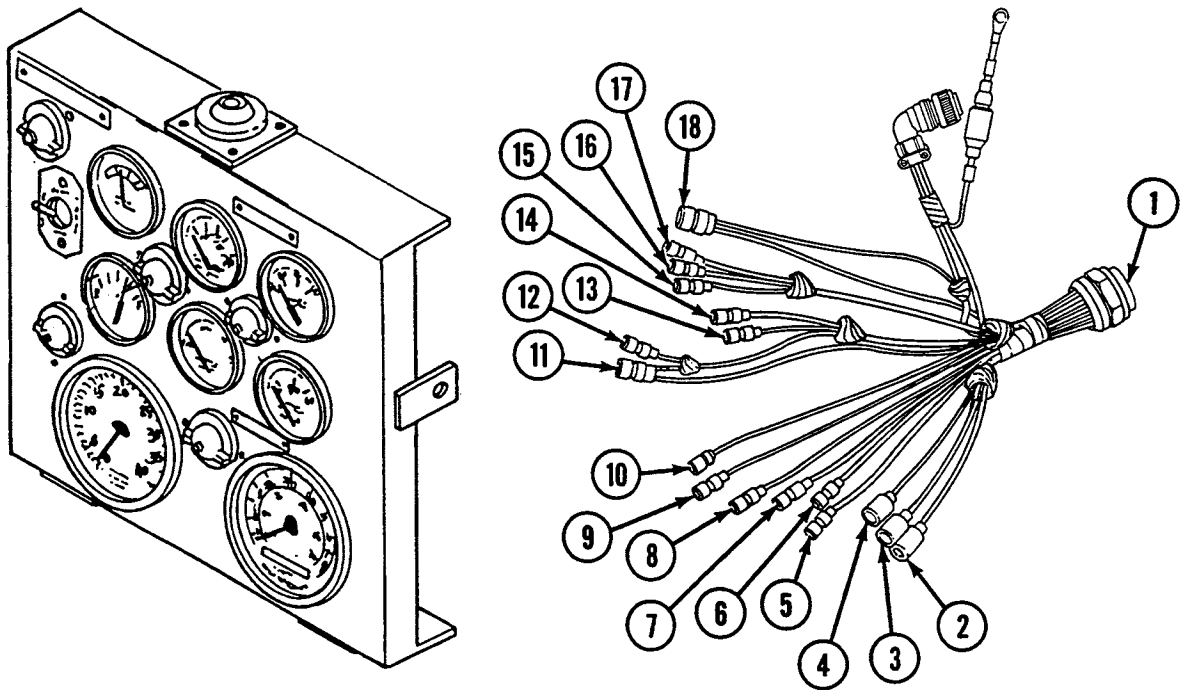
Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Gage panel to bulkhead wiring harness (dual voltage)	510, 27, 72A, 509, 324, 321, 36, 33, 30, 31, 40
2	Panel lights	40C
3	Panel lights	40B
4	Panel lights	40A
5	Fuel selector switch—rear	31
6	Fuel selector switch—forward	30
7	Engine oil temperature gage	33
8	Engine oil temperature gage	27C
9	Engine oil pressure gage	36
10	Engine oil pressure gage	27A
11	Transmission oil pressure gage	321
12	Transmission oil pressure gage	27E
13	Transmission oil temperature gage	324
14	Transmission oil temperature gage	27D
15	Mechanical transmission oil pressure indicator light	72A, 27K
16	Generator indicator	27B
17	Fuel level gage	27F
18	Master warning light	509, 27G
19	Capped	27H, 510
20	Capped	GND



Removal

1. Disconnect three connectors (2, 3, and 4) from panel lights (21).
2. Disconnect two connectors (5 and 6) from fuel selector switch (22).
3. Disconnect two connectors (7 and 8) from engine oil temperature gage (23).
4. Disconnect two connectors (9 and 10) from engine oil pressure gage (24).
5. Disconnect two connectors (11 and 12) from transmission oil pressure gage (25).
6. Disconnect two connectors (13 and 14) from transmission oil temperature gage (26).
7. Disconnect connector (15) from mechanical transmission oil pressure indicator light (27).
8. Disconnect connector (16) from generator indicator (28).
9. Disconnect connector (17) from fuel level gage (29).
10. Disconnect connector (18) from master warning light (30).



Disassembly

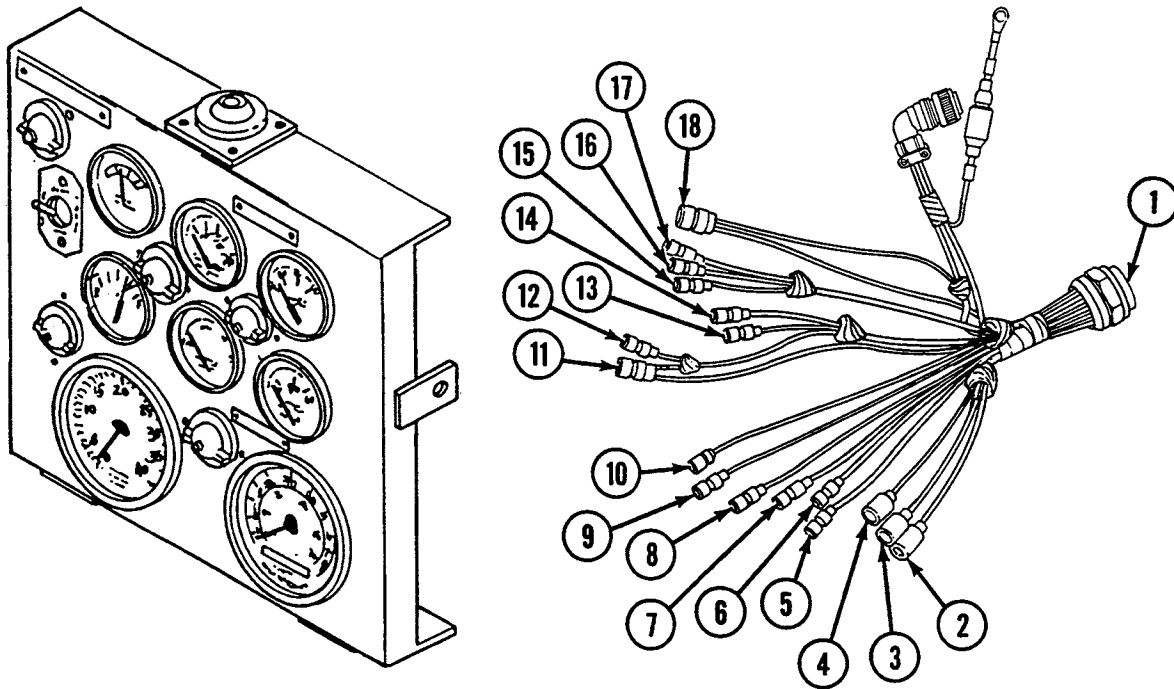
1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect connector (18) to master warning light (30).
2. Connect connector (17) to fuel level gage (29).
3. Connect connector (16) to generator indicator (28).
4. Connect connector (15) to mechanical transmission oil pressure indicator light (27).
5. Connect two connectors (13 and 14) to transmission oil temperature gage (26).
6. Connect two connectors (11 and 12) to transmission oil pressure gage (25).
7. Connect two connectors (9 and 10) to engine oil pressure gage (24).
8. Connect two connectors (7 and 8) to engine oil temperature gage (23).
9. Connect two connectors (5 and 6) to fuel selector switch (22).
10. Connect three connectors (2, 3, and 4) to panel lights (21).



NOTE

Follow-on maintenance: Install gage panel if removed (see WP 0157 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**GAGE PANEL TO BULKHEAD WIRING HARNESS (DUAL VOLTAGE) (12322587) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION**

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts (cont.)

Screws (4) (item 575, WP 0491 00)

Screw (item 732, WP 0491 00)

Materials/Parts

Gasket (item 341, WP 0491 00)

Lockwashers (8) (item 611, WP 0491 00)

Lockwasher (item 621, WP 0491 00)

Screw (item 384, WP 0491 00)

Screws (4) (item 574, WP 0491 00)

References

WP 0255 00 thru 0264 00

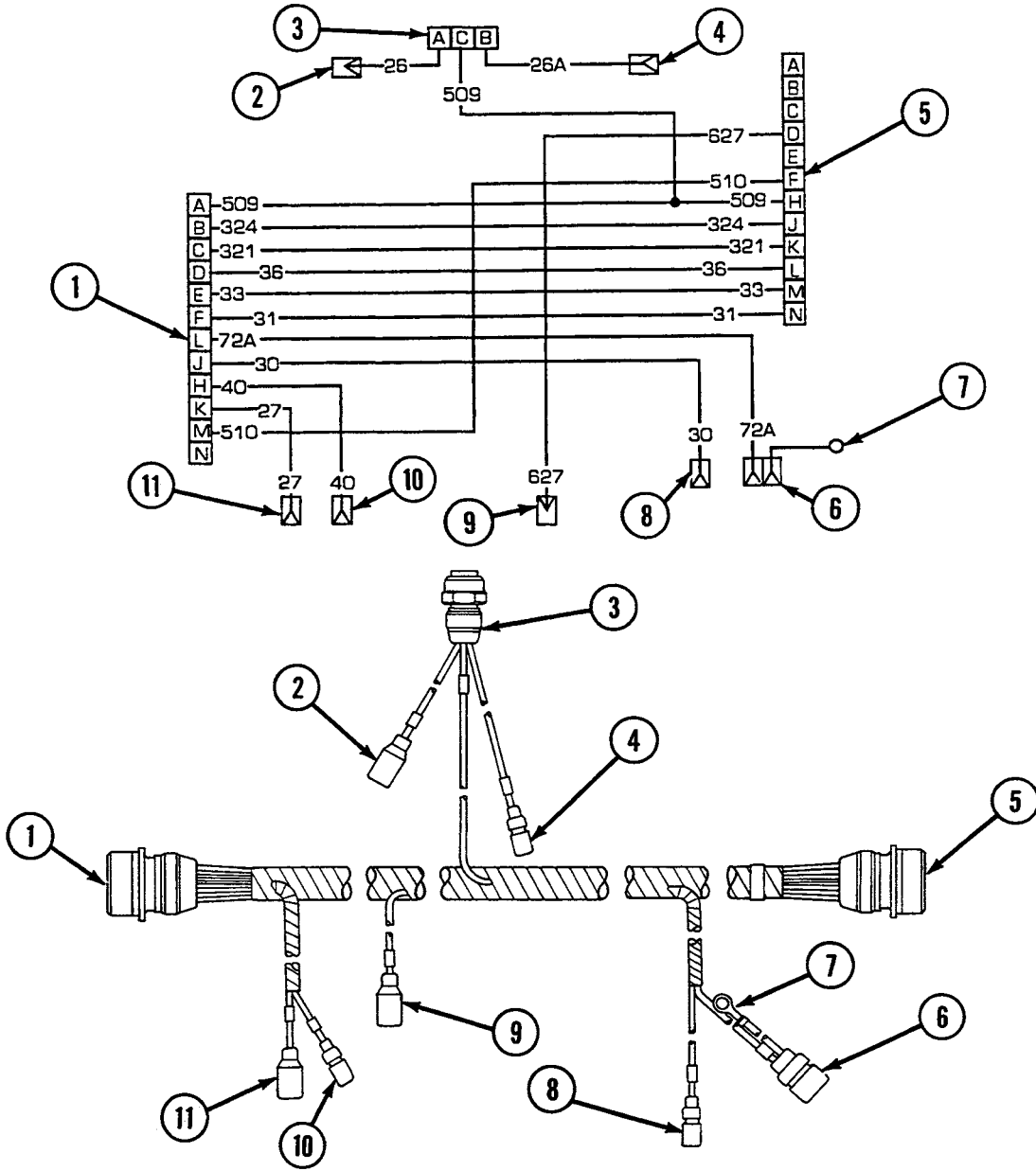
Equipment Condition

Air cleaner removed (see WP 0137 00)

WARNING

Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Gage panel	509, 324, 321, 36, 33, 31, 72A, 30, 40, 27, 510
2	APU control box to foot dimmer switch and bulkhead wiring harness (dual voltage) (11672466)	26
3	Powerpack warning horn relay	509, 26, 26A
4	Powerpack warning horn assembly	26A
5	Bulkhead disconnect	627, 510, 509, 324, 321, 36, 33, 31
6	Mechanical transmission low oil pressure switch	72A, GND
7	Ground	GND
8	Fuel tank transmitter	30
9	Power control switch	627
10	Switch panel to gage panel and miscellaneous switches wiring harness (12322547)	40
11	Switch panel to gage panel and miscellaneous switches wiring harness (12322547)	27

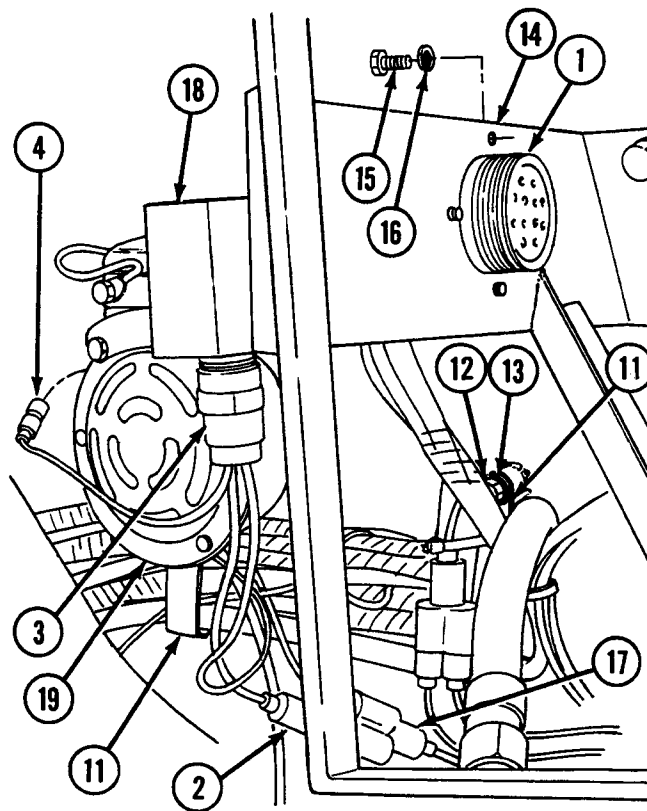


Removal

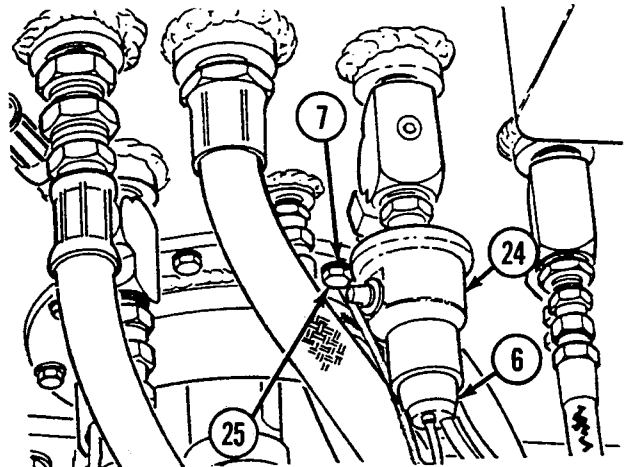
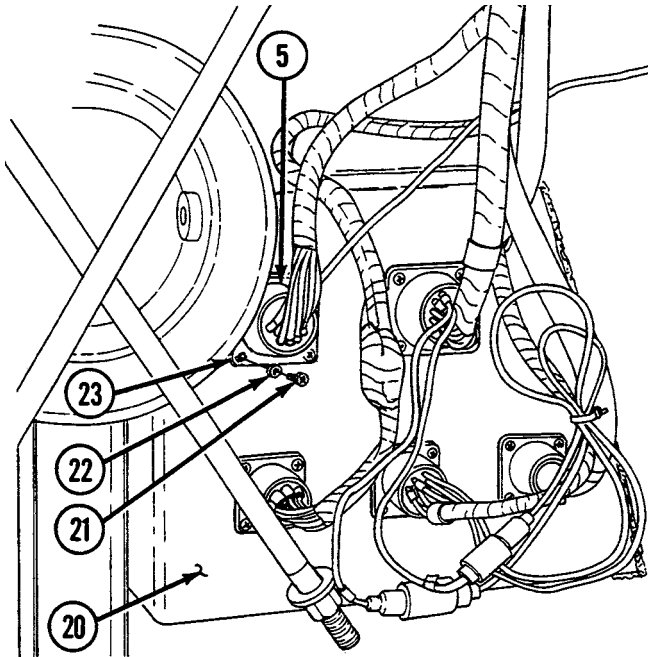
NOTE

Gage panel shown removed for clarity.

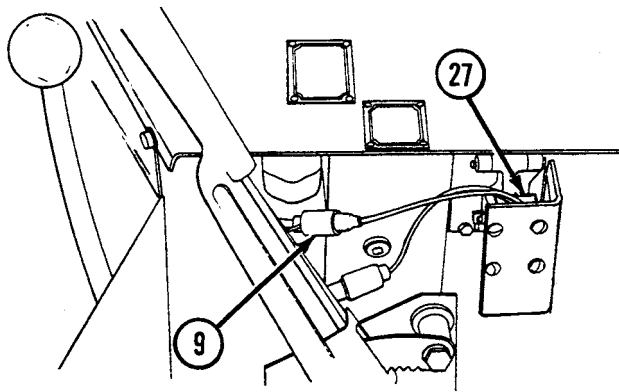
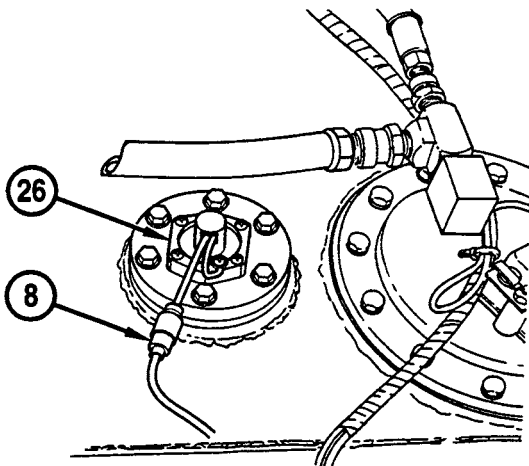
1. Remove 19 clamps (11) by removing screw (12) and lockwasher (13) from each.
2. Remove connector (1) from gage panel bracket (14) by removing four screws (15) and four lockwashers (16).
3. Disconnect connector (2) from APU control box to foot dimmer switch and bulkhead wiring harness (17).
4. Disconnect connector (3) from powerpack warning horn relay (18).
5. Disconnect connector (4) from powerpack warning horn assembly (19).



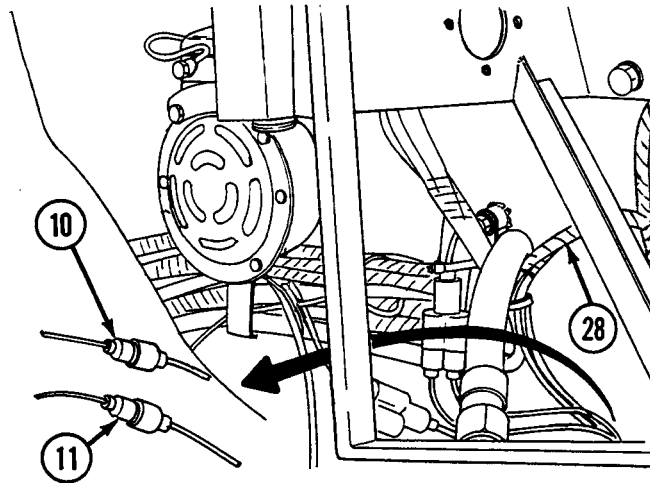
6. Remove connector (5) from bulkhead disconnect (20) by removing four screws (21), four lockwashers (22), and gasket (23).
7. Disconnect connector (6) from mechanical transmission low oil pressure switch (24).
8. Remove ground lead (7) by removing bolt (25).



9. Disconnect connector (8) from fuel tank transmitter (26).
10. Disconnect connector (9) from power control switch (27).



11. Disconnect two connectors (10 and 11) from switch panel to gage panel and miscellaneous switches wiring harness (28).



Disassembly

1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

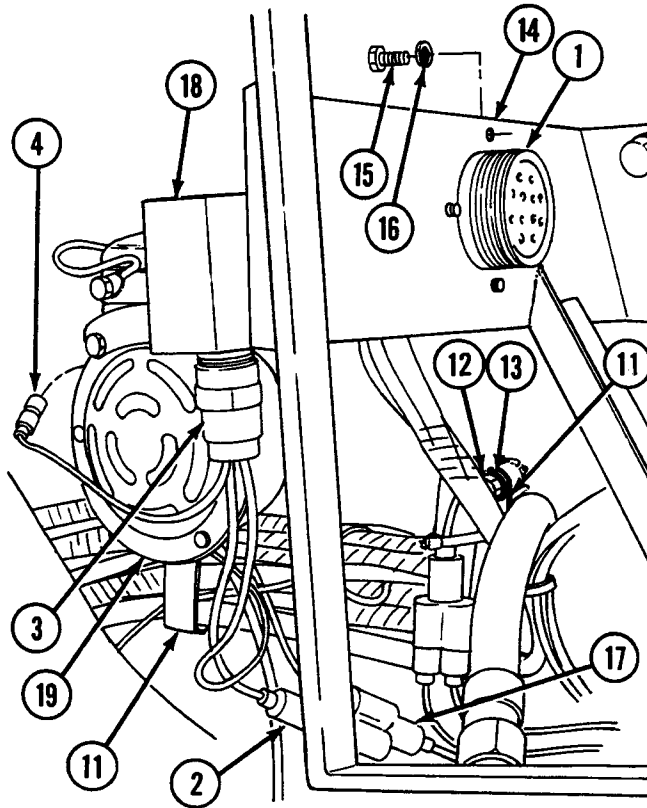
Assembly

1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect two connectors (10 and 11) to switch panel to gage panel and miscellaneous switches wiring harness (28).
2. Connect connector (9) to power control switch (27).
3. Connect connectors (8) to fuel tank transmitter (26).
4. Install ground lead (7) using bolt (25).
5. Connect connector (6) to mechanical transmission low oil pressure switch (24).
6. Install connector (5) and gasket (23) to bulkhead disconnect (20) using four screws (21) and four lockwashers (22).

7. Connect connector (4) to powerpack warning horn assembly (19).
8. Connect connector (3) to powerpack warning horn (18).
9. Connect connector (2) to APU control box to foot dimmer switch and bulkhead wiring harness (17).
10. Install connector (1) to gage panel bracket (14) using four lockwashers (16) and four screws (15).
11. Install 19 clamps (11) using lockwasher (13) and screw (12) for each.

**NOTE**

Follow-on maintenance: Install air cleaner (see WP 0137 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**GAGE PANEL TO BULKHEAD WIRING HARNESS (SINGLE VOLTAGE) (11671807) MAINTENANCE
 REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION**

INITIAL SETUP:

Tools and Special Tools

Tool kit general mechanic's (item 59, WP 0490 00)

Materials/Parts (cont.)

Screws (5) (item 575, WP 0491 00)
 Screw (item 732, WP 0491 00)

Materials/Parts

Gasket (item 341, WP 0491 00)
 Lockwashers (9) (item 611, WP 0491 00)
 Lockwasher (item 621, WP 0491 00)
 Screw (item 384, WP 0491 00)
 Screws (4) (item 574, WP 0491 00)

References

WP 0255 00 thru 0264 00

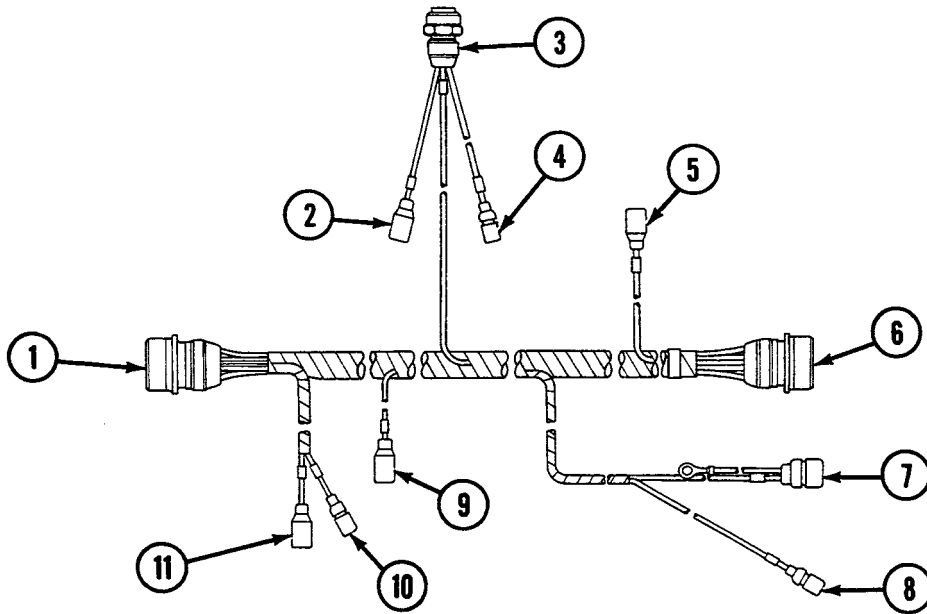
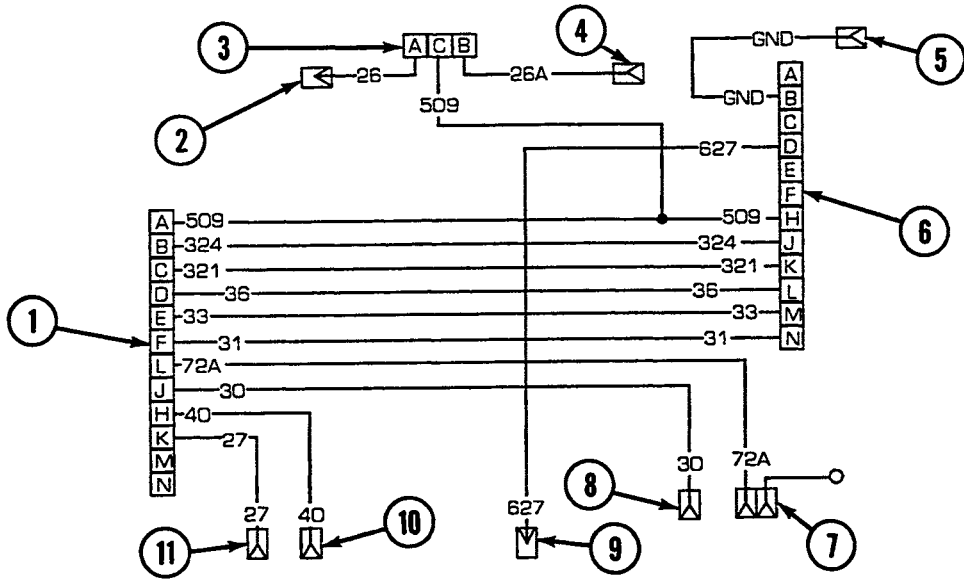
Equipment Condition

Air cleaner removed (see WP 0137 00)

WARNING

Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Gage panel	509, 324, 321, 36, 33, 31, 72A, 30, 40, 27
2	APU control box to foot dimmer switch and bulkhead wiring harness (single voltage) (11671799)	26
3	Powerpack warning horn relay	509, 26, 26A
4	Powerpack warning horn relay assembly	26A
5	Ground	GND
6	Bulkhead disconnect	GND, 627, 509, 324, 321, 36, 33, 31
7	Mechanical transmission low oil pressure switch	72A
8	Ground	GND
9	Fuel tank transmitter	30
10	Power control switch	627
11	Switch panel to gage panel and miscellaneous switches wiring harness (single voltage) (11671795)	40
12	Switch panel to gage panel and miscellaneous switches wiring harness (single voltage) (11671795)	27

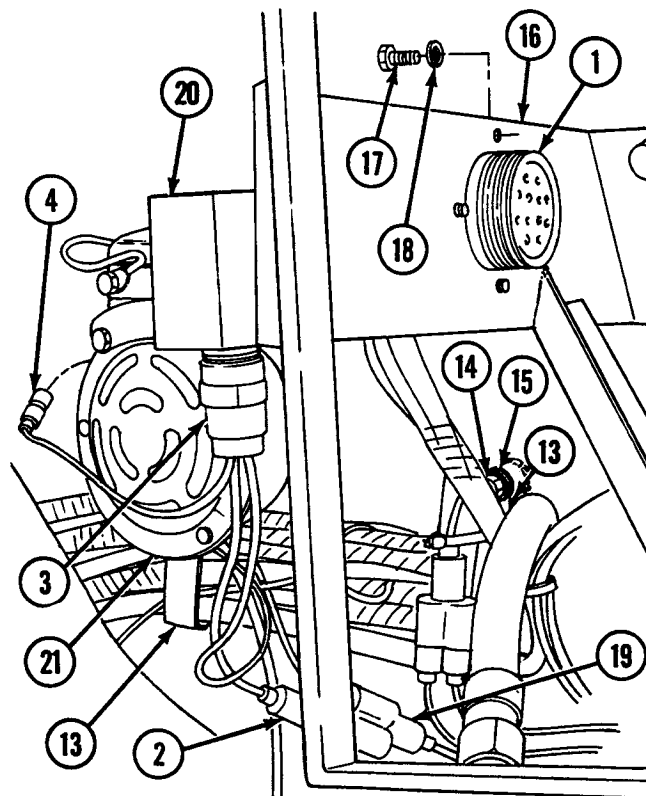


Removal

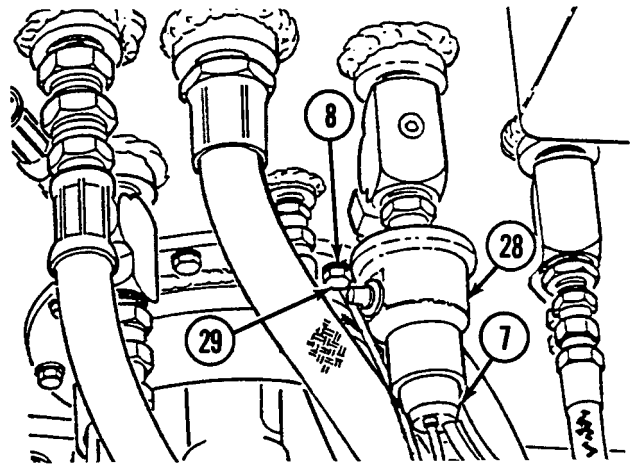
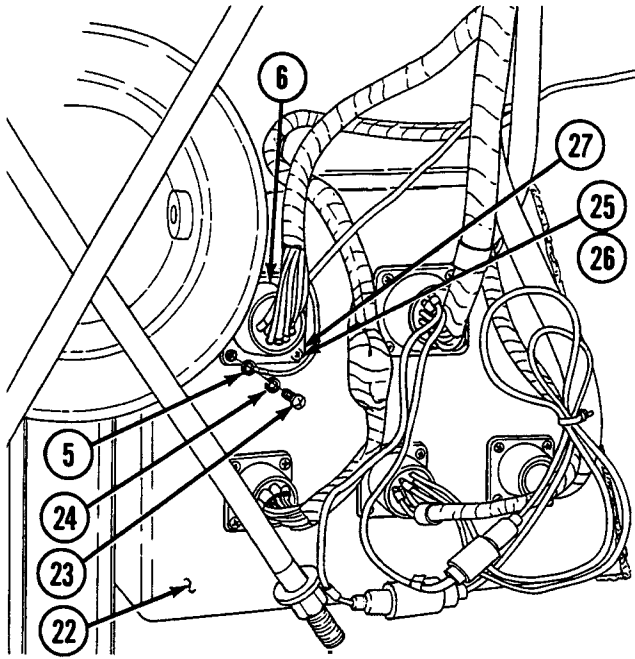
NOTE

Gage panel shown removed for clarity.

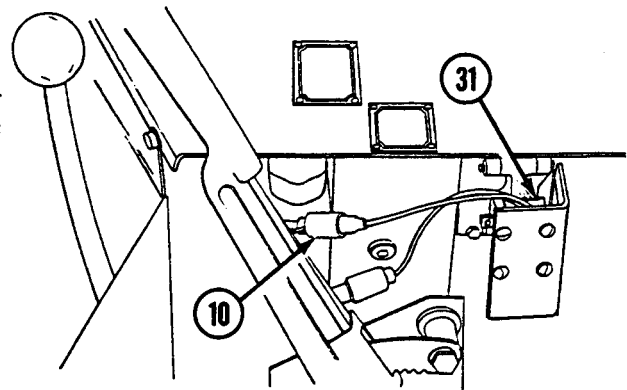
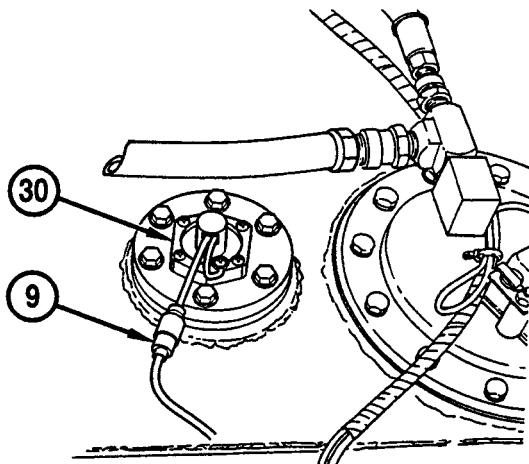
1. Remove 19 clamps (13) by removing screw (14) and lockwasher (15).
2. Remove connector (1) from gage panel bracket (16) by removing four screws (17) and four lockwashers (18).
3. Disconnect connector (2) from APU control box to foot dimmer switch and bulkhead wiring harness (19).
4. Disconnect connector (3) from powerpack warning horn relay (20).
5. Disconnect connector (4) from powerpack warning horn assembly (21).



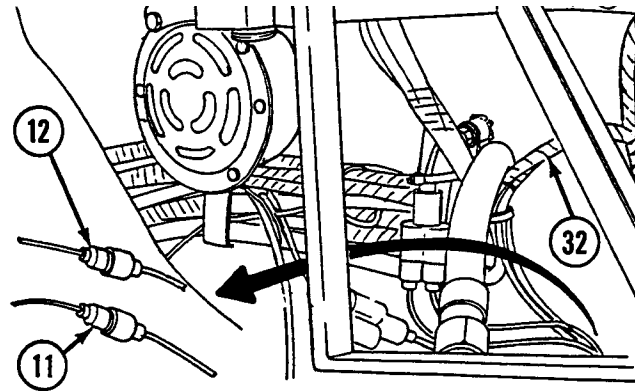
6. Remove ground lead (5) from bulkhead (22) by removing screw (23) and lockwasher (24).
7. Remove connector (6) from bulkhead disconnect (22) by removing three screws (25), three lockwashers (26), and gasket (27).
8. Disconnect connector (7) from mechanical transmission low oil pressure switch (28).
9. Remove ground lead (8) by removing bolt (29).



10. Disconnect connector (9) from fuel tank transmitter (30).
11. Disconnect connector (10) from power control switch (31).



12. Disconnect two connectors (11 and 12) from switch panel to gage panel and miscellaneous switches wiring harness (32).



Disassembly

1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

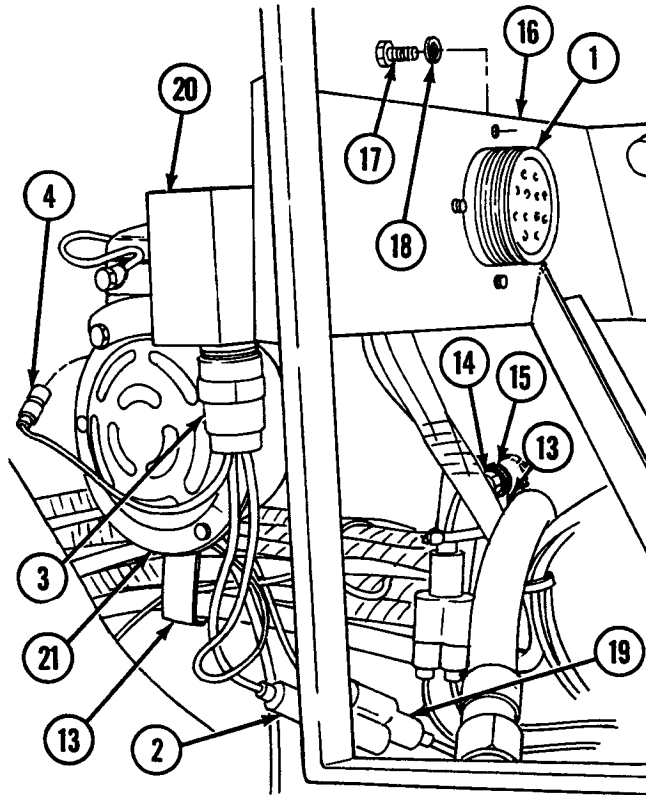
Assembly

1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect two connectors (11 and 12) to switch panel to gage panel and miscellaneous switches wiring harness (32).
2. Connect connectors (10) to power control switch (31).
3. Connect connector (9) to fuel tank transmitter (30).
4. Install ground lead (8) using bolt (29).
5. Connect connector (7) to mechanical transmission low oil pressure switch (28).
6. Install connector (6) and gasket (27) to bulkhead disconnect (22) using three screws (25) and three lockwashers (26).
7. Install ground lead (5) to bulkhead disconnect (22) using screw (23) and lockwasher (24).

8. Connect connector (4) to powerpack warning horn assembly (21).
9. Connect connector (3) to powerpack warning horn (20).
10. Connect connector (2) to APU control box to foot dimmer switch and bulkhead wiring harness (19).
11. Install connector (1) to gage panel bracket (16) using four lockwashers (18) and four screws (17).
12. Install 19 clamps (13) using lockwasher (15) and screw (14) for each.



NOTE

Follow-on maintenance: Install air cleaner (see WP 0137 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

ELECTRICAL ACCESSORIES PANEL WIRING HARNESS (10944744) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00

Materials/Parts

Lockwasher (item 615, WP 0491 00)
Lockwashers (20) (item 621, WP 0491 00)
Screw (item 397, WP 0491 00)
Screws (20) (item 731, WP 0491 00)

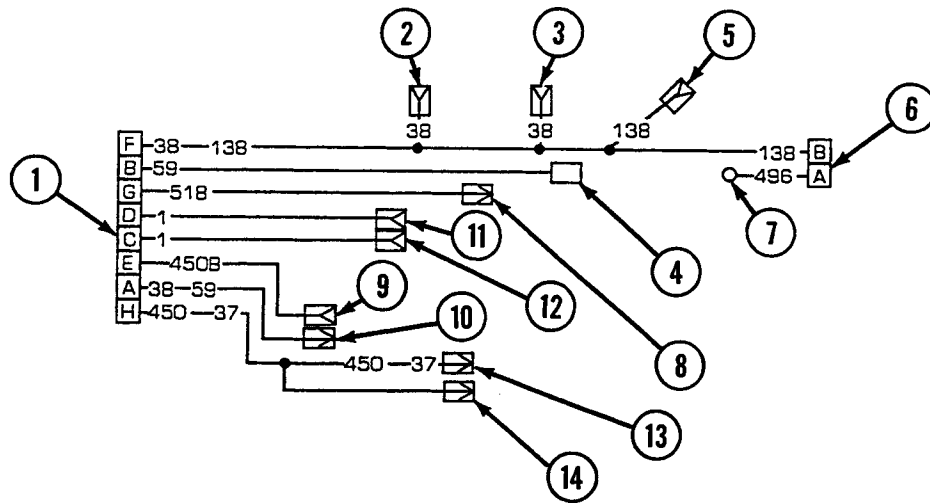
Equipment Condition

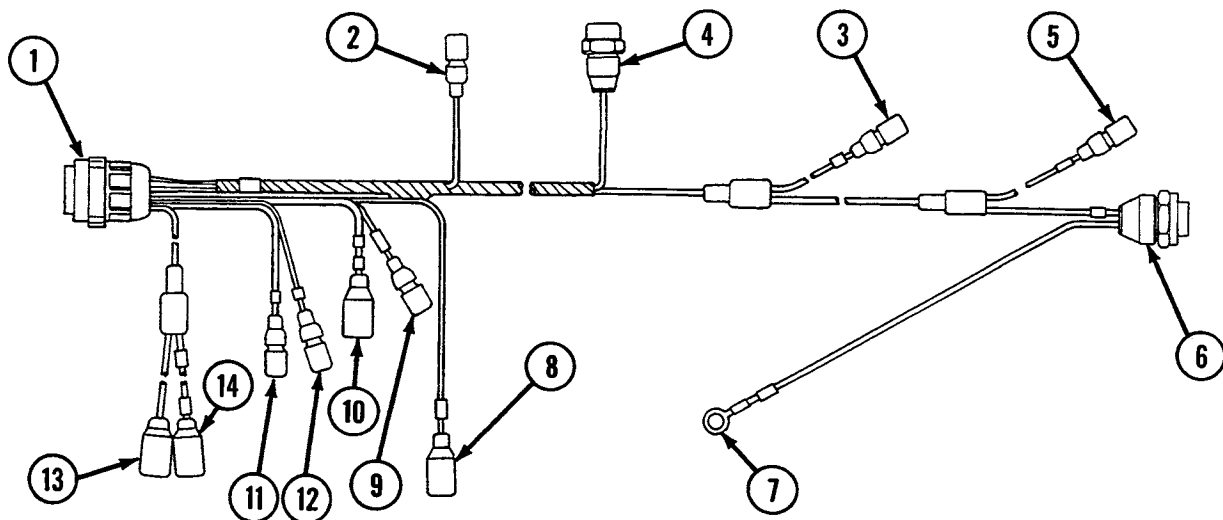
Stowage basket intermediate forward floor plate removed
(see WP 0306 00)

WARNING

Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

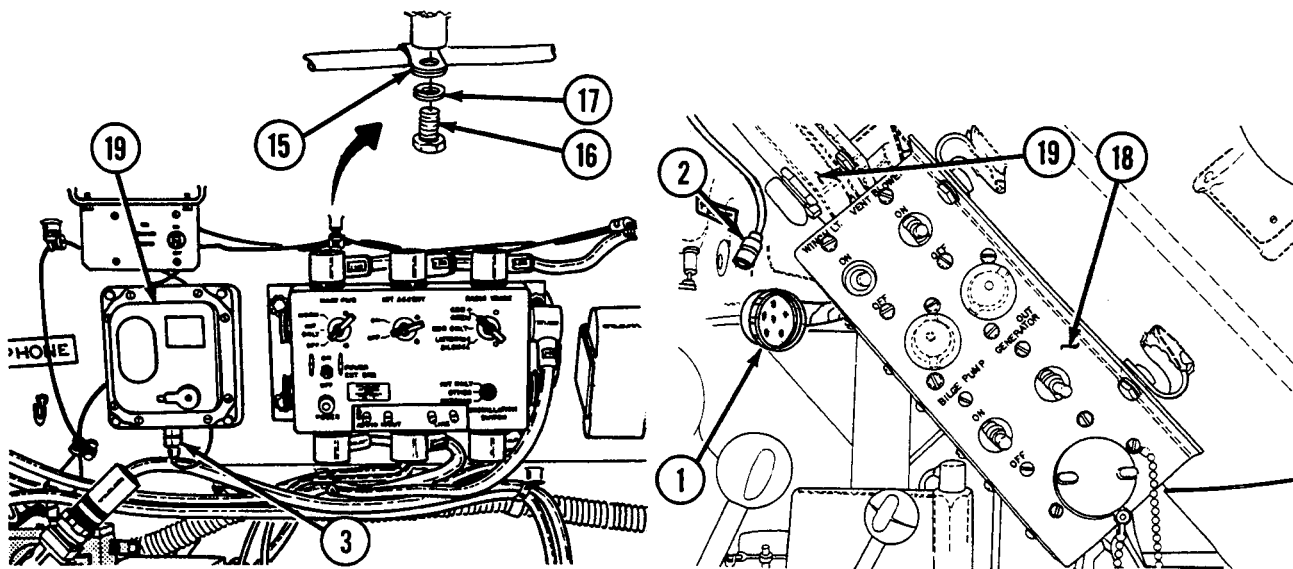
Connector No.	Electrical Lead To:	Wire No.
1	Electrical accessories panel	38, 138, 59, 518, 1, 1, 450B, 38/59, 450/37
2	Dome light	38
3	Dome light	38
4	Ventilator blower	59
5	Rigger's fixed spotlight	138
6	Troublelight assembly	138, 496
7	Ground	496
8	Winch illumination lamp assembly	518
9	Bilge pump lead relay wiring harness (10894548)	450B
10	Switch panel, radio, and bilge pump to bulkhead wiring harness	38, 59
11	Switch panel to neutral safety switch to bulkhead wiring harness (11671420)	1
12	Switch panel to neutral safety switch to bulkhead wiring harness (11671420)	1
13	Switch panel, radio, and bilge pump to bulkhead wiring harness	37, 450
14	Switch panel, radio, and bilge pump to bulkhead wiring harness	37, 450



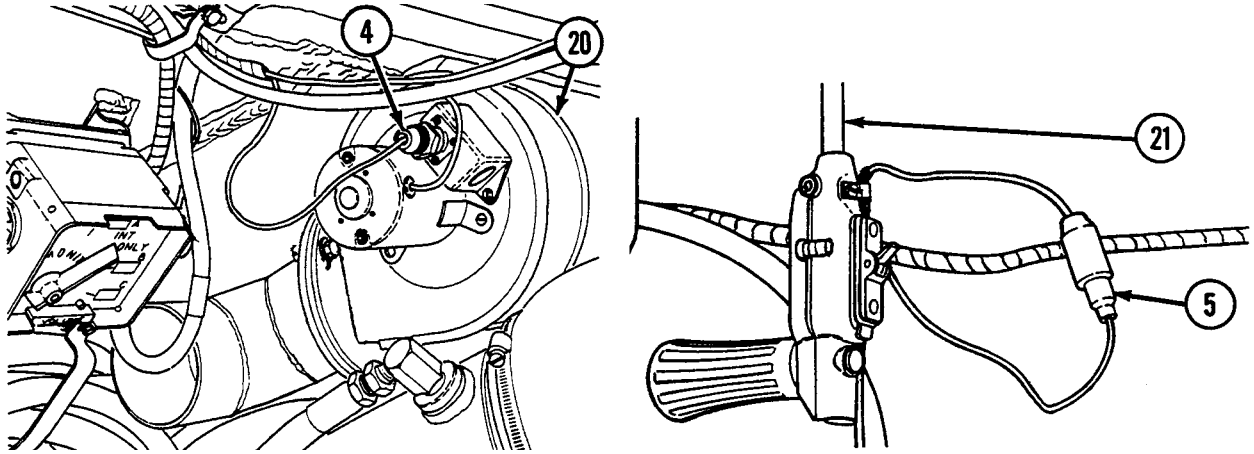


Removal

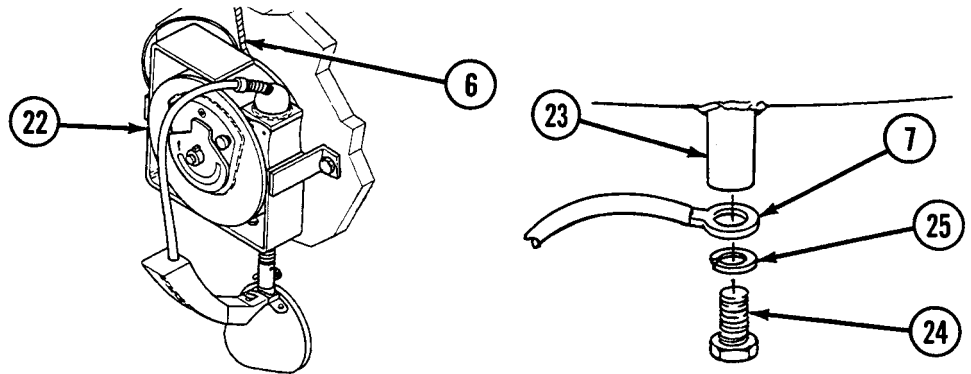
1. Remove 20 clamps (15) by removing screws (16) and lockwasher (17) from each.
2. Disconnect connector (1) from electrical accessories panel (18).
3. Disconnect connectors (2 and 3) from two dome lights (19).



4. Disconnect connector (4) from ventilator blower (20).
5. Disconnect connector (5) from rigger's fixed spotlight (21).

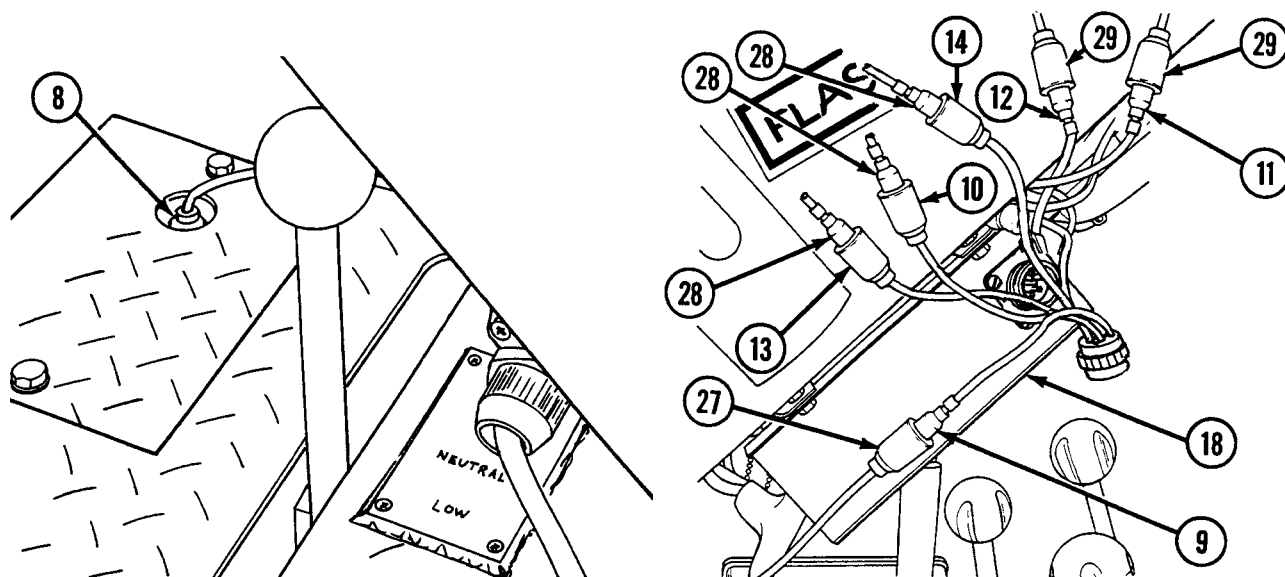


6. Disconnect connector (6) from troublelight assembly (22).
7. Remove ground lead (7) from hull (23) by removing screw (24) and lockwasher (25).



8. Disconnect connector (8) from winch illumination lamp assembly (26).
9. Disconnect connector (9) from bilge pump lead relay wiring harness (27).
10. Disconnect connector (10) from switch panel, radio, and bilge pump to bulkhead wiring harness (28).
11. Disconnect connectors (11 and 12) from switch panel to neutral safety switch to bulkhead wiring harness (29).

- Disconnect connectors (13 and 14) from switch panel, radio, and bilge pump to bulkhead wiring harness (28).



Disassembly

- Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

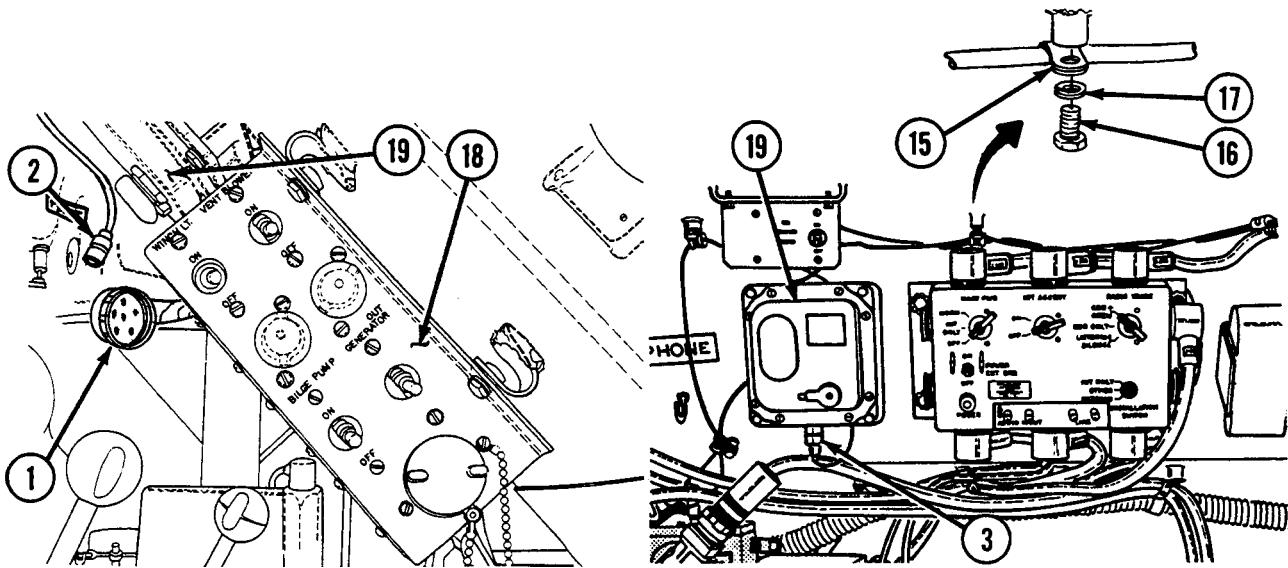
Assembly

- Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

- Connect connectors (13 and 14) to switch panel, radio, and bilge pump to bulkhead wiring harness (28).
- Connect connectors (11 and 12) to switch panel to neutral safety switch to bulkhead wiring harness (29).
- Connect connectors (10) to switch panel, radio, and bilge pump to bulkhead wiring harness (28).
- Connect connector (9) to bilge pump lead relay wiring harness (27).
- Connect connectors (8) to winch illumination lamp assembly (26).
- Install ground lead (7) to hull (23) using lockwasher (25) and screw (24).
- Connect connector (6) to troublelight assembly (22).
- Connect connector (5) to rigger's fixed spotlight (21).
- Connect connector (4) to ventilator blower (20).

10. Connect connectors (2 and 3) to two dome lights (19).
11. Connect connector (1) to electrical accessories panel (18).
12. Install 20 clamps (15) each with lockwasher (17) and screw (16).



NOTE

Follow-on maintenance: Install stowage basket intermediate forward floor plate (see WP 0306 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
FLASHER SYSTEM PANEL WIRING HARNESS (11672373) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00

Equipment Condition

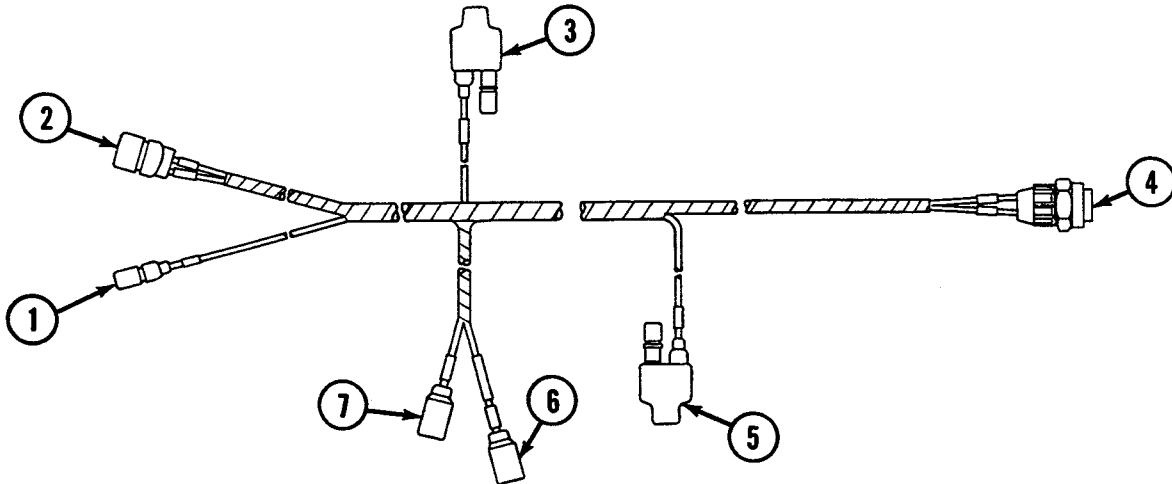
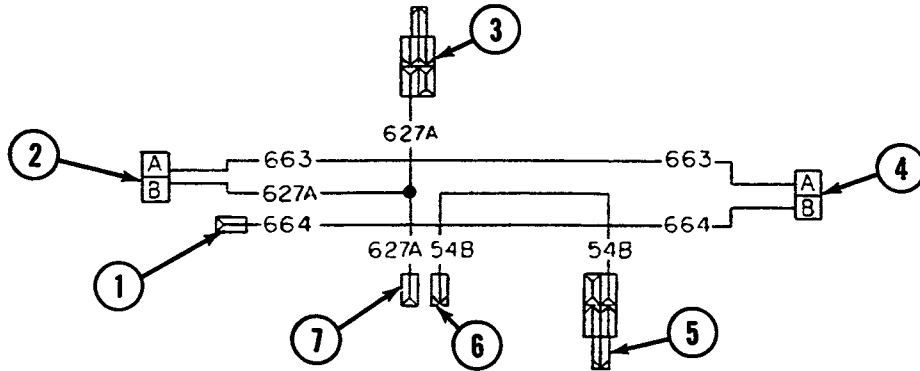
Subfloor plates removed as necessary (see WP 0286 00 thru 0307 00)

Rear intermediate right access floor plate removed (see WP 0296 00)

WARNING

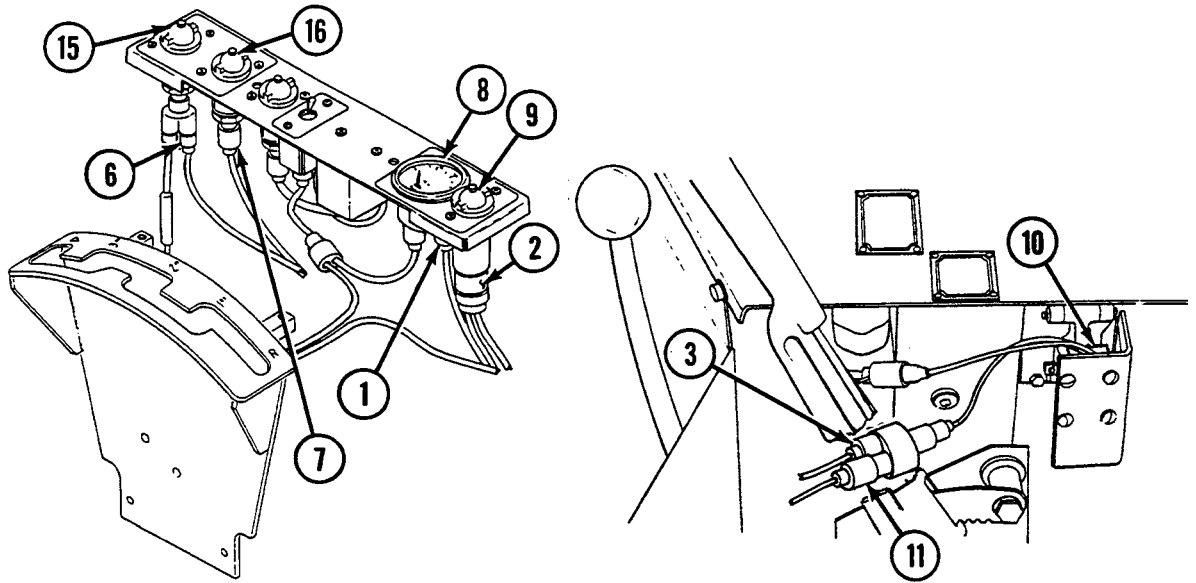
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Hydraulic oil temperature gage	664
2	Hydraulic oil temperature light	663, 627A
3	Governor control switch	627A
4	Hydraulic oil temperature transmitter housing assembly wiring harness at hydraulic reservoir disconnect	663, 664
5	Fire extinguisher engine shutoff switch	54B
6	Fire extinguisher engine shutoff light	54B
7	PTO engage light	627A

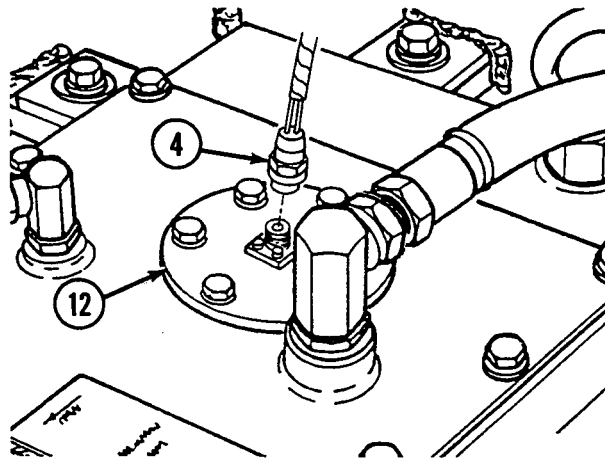


Removal

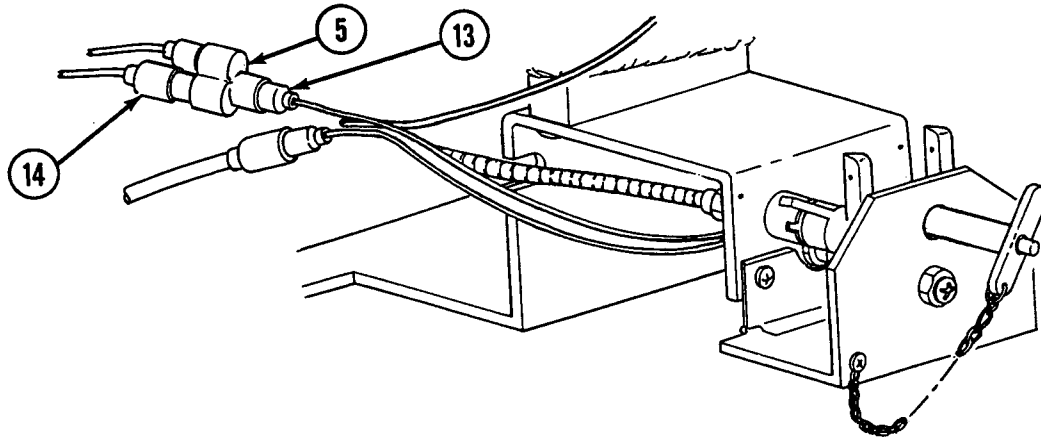
1. Disconnect connector (1) from hydraulic oil temperature gage (8).
2. Disconnect connector (2) from hydraulic oil temperature light (9).
3. Disconnect Y-connector (3) from governor control switch (10) and connector (11).



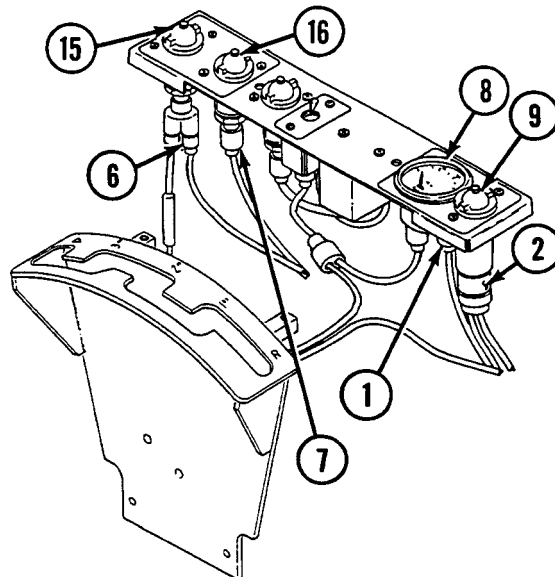
4. Disconnect connector (4) from hydraulic reservoir disconnect (12).



5. Disconnect Y-connector (5) from fire extinguisher engine shutoff switch (13) and connector (14).



6. Disconnect connector (6) from fire extinguisher engine shutoff light (15).
7. Disconnect connector (7) from PTO engage light (16).



Disassembly

1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

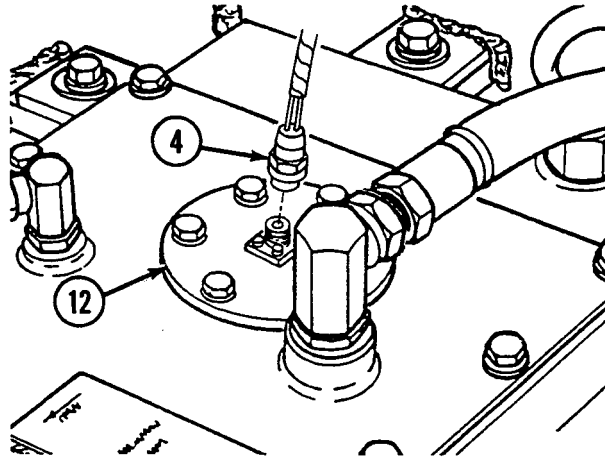
Assembly

1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

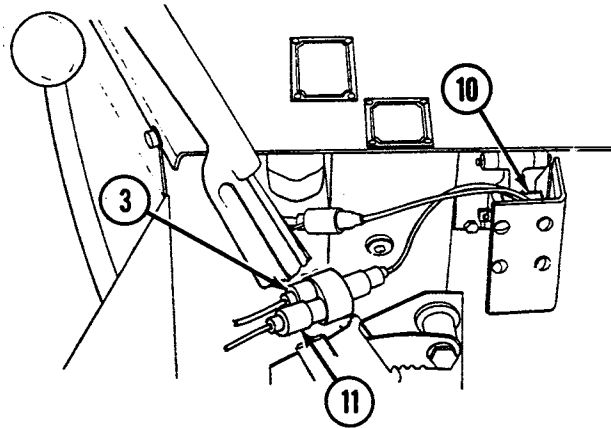
Installation

1. Connect connector (7) to PTO engage light (16).
2. Connect connector (6) to fire extinguisher engine shutoff light (15).

3. Connect Y-connector (5) to fire extinguisher engine shutoff switch (13) and connector (14).
4. Connect connector (4) to hydraulic reservoir disconnect (12).



5. Connect Y-connector (3) to governor control switch (10) and connector (11).



6. Connect connector (2) to hydraulic oil temperature light (9).
7. Connect connector (1) to hydraulic oil temperature gage (8).

NOTE

Follow-on maintenance: Install rear intermediate right access floor plate (see WP 0296 00); Install subfloor plates if removed (see WP 0286 thru 0307 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

FUEL SHUTOFF SWITCH PANEL LEAD ASSEMBLY (11671227-2) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

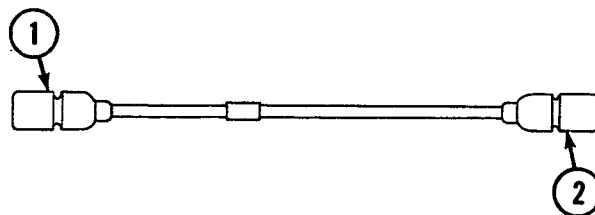
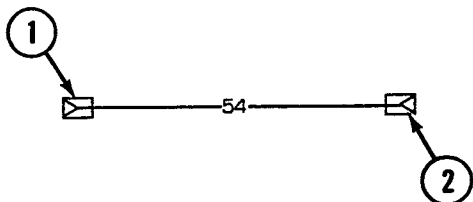
References

WP 0255 00 thru 0264 00

WARNING

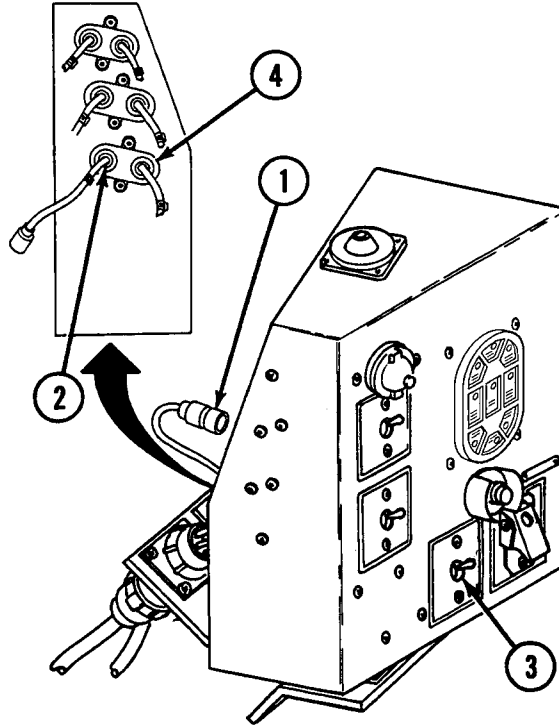
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Fuel shutoff switch	54
2	Circuit breaker	54



Removal

1. Disconnect connector (1) from fuel shutoff switch (3).
2. Disconnect connector (2) from circuit breaker (4).

**Disassembly**

1. Disassemble lead assembly (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble lead assembly (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect connector (2) to circuit breaker (4).
2. Connect connector (1) to fuel shutoff switch (3).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

FUEL PUMP SWITCH PANEL LEAD ASSEMBLY (11671227-3) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

Main switch panel removed (see WP 0159 00)

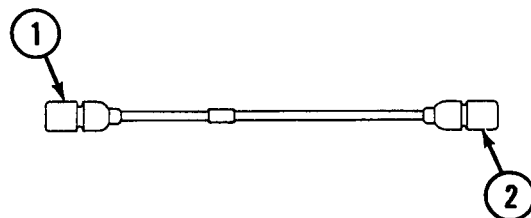
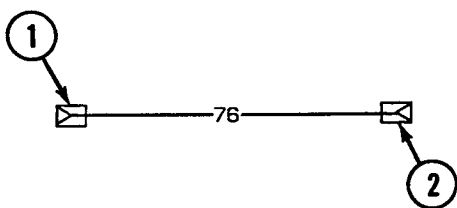
References

WP 0255 00 thru 0264 00

WARNING

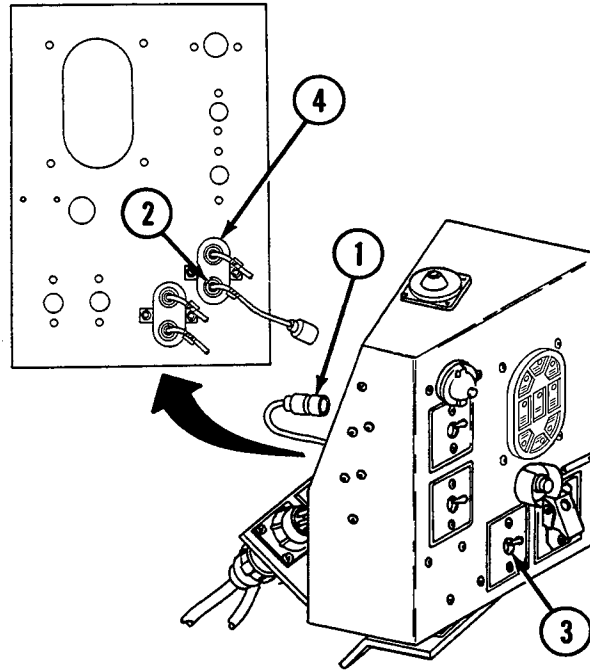
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Switch, fuel pump	76
2	Circuit breaker	76



Removal

1. Disconnect connector (1) from fuel pump switch (3).
2. Disconnect connector (2) from circuit breaker (4).

**Disassembly**

1. Disassemble lead assembly (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble lead assembly (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect connector (2) to circuit breaker (4).
2. Connect connector (1) to fuel pump switch (3).

NOTE

Follow-on maintenance: Install main switch panel (see WP 0159 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

FUEL GAGE PANEL LEAD ASSEMBLY (10866881) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

Gage panel assembly removed (see WP 0157 00)

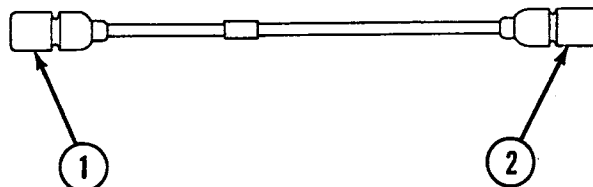
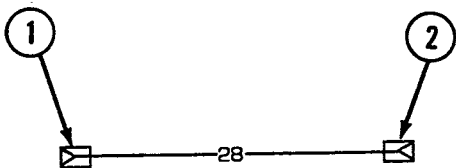
References

WP 0255 00 thru 0264 00

WARNING

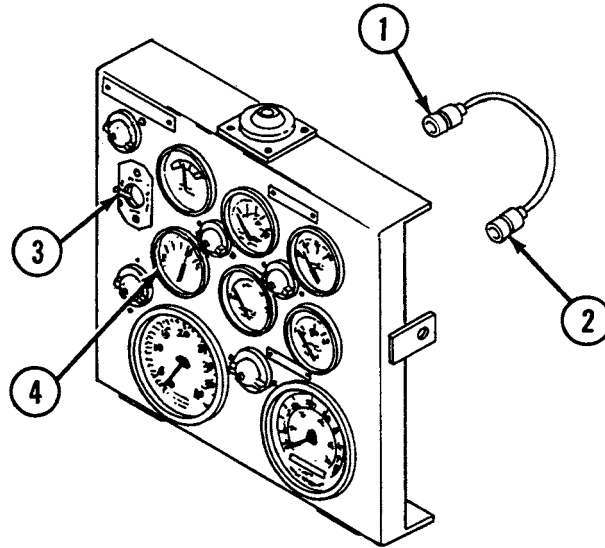
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Fuel selector switch	28
2	Fuel gage	28



Removal

1. Disconnect connector switch (1) from fuel selector switch (3).
2. Disconnect connector switch (2) from fuel gage (4).

**Disassembly**

1. Disassemble lead assembly (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble lead assembly (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect connector (2) to fuel gage (4).
2. Connect connector (1) to fuel selector switch (3).

NOTE

Follow-on maintenance: Install gage panel assembly (see WP 0157 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**SWITCH PANEL TO HEADLIGHTS AND BULKHEAD WIRING HARNESS (11671568) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION**

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00

Materials/Parts

Gasket (item 234, WP 0491 00)
Lockwashers (4) (item 611, WP 0491 00)
Lockwashers (24) (item 621, WP 0491 00)
Screws (4) (item 575, WP 0491 00)
Screws (24) (item 731, WP 0491 00)

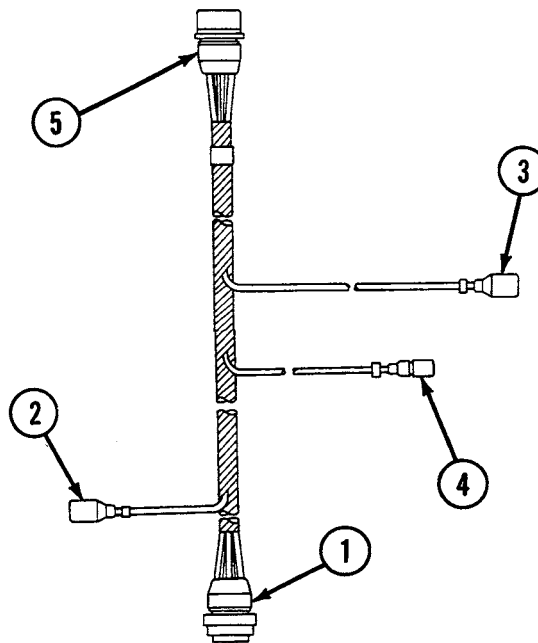
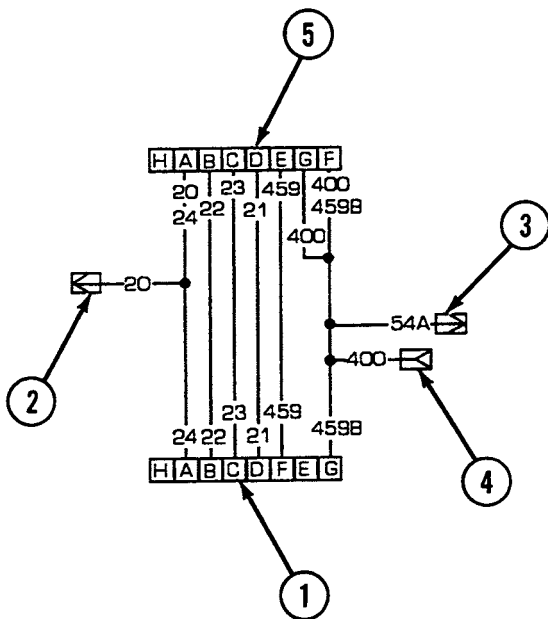
Equipment Condition

Air cleaner assembly removed (see WP 0137 00)

WARNING

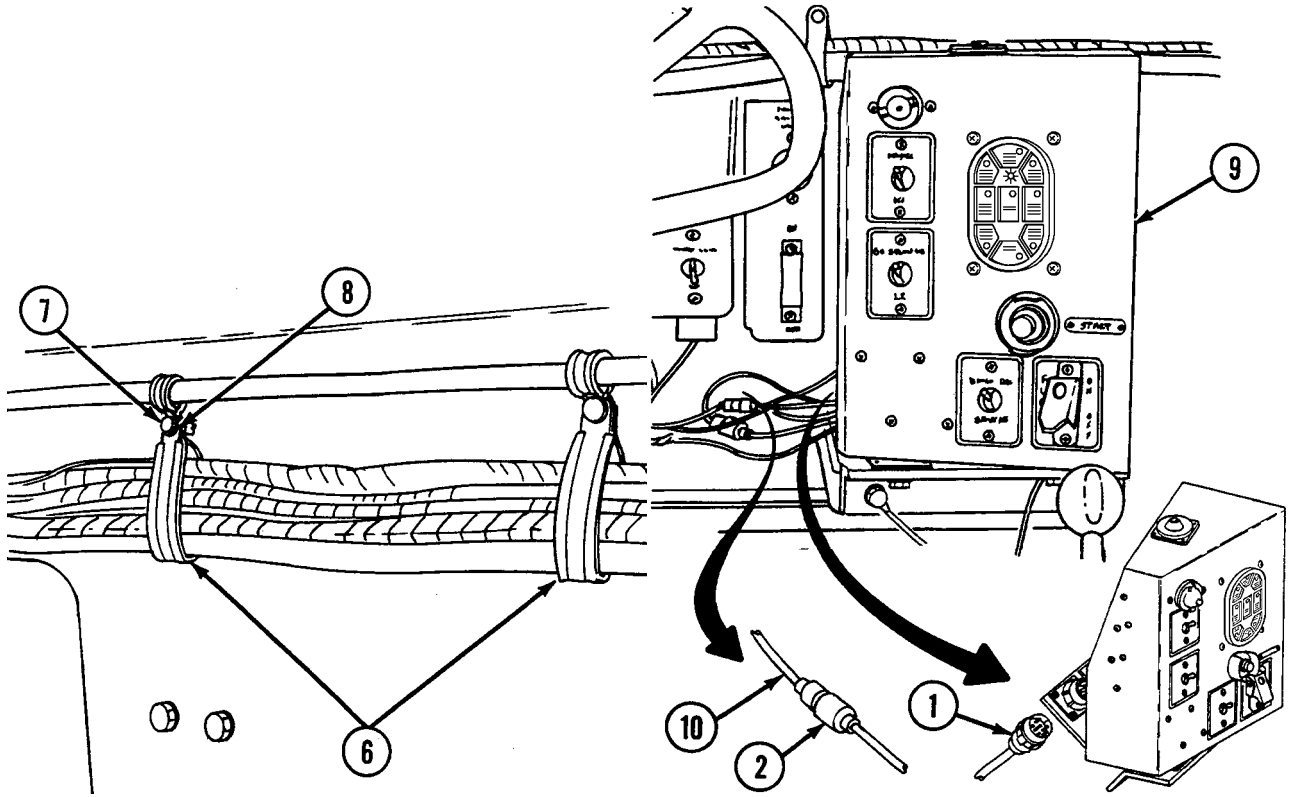
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Main switch panel assembly	24, 22, 23, 21, 459, 459B
2	Headlight and dimmer switch wiring harness	20
3	Fire extinguisher interlock switch	54A
4	Heater control box	400
5	Bulkhead disconnect	20, 24, 22, 23, 21, 459, 400, 459B

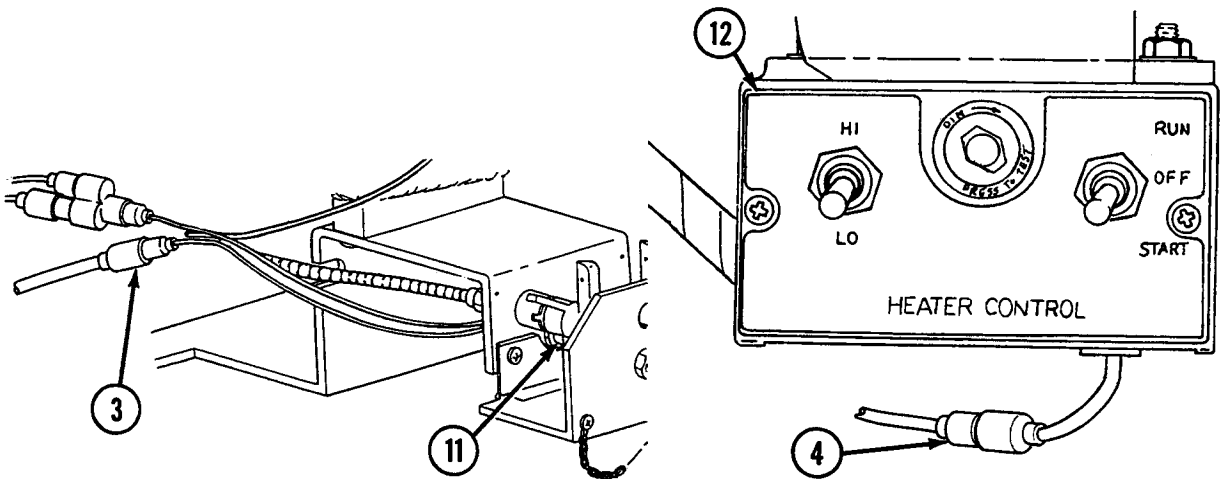


Removal

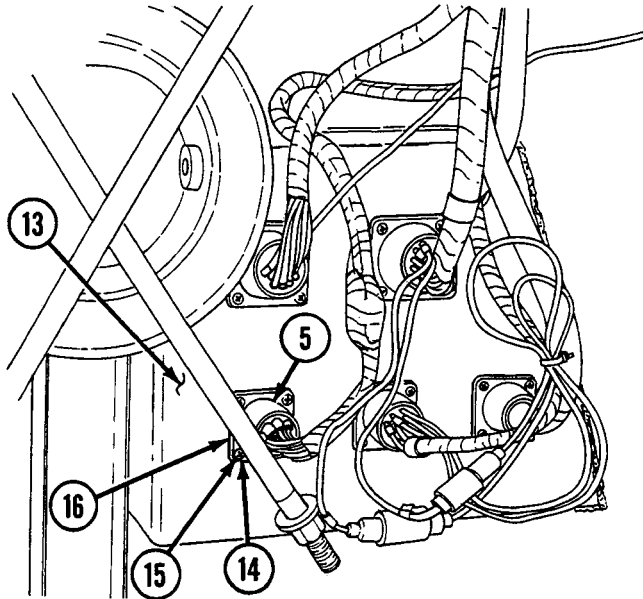
1. Remove 24 clamps (6) by removing screw (7) and lockwasher (8) from each.
2. Disconnect connector (1) from main switch panel (9).
3. Disconnect connector (2) from headlight and dimmer switch wiring harness (10).



4. Disconnect connector (3) from fire extinguisher interlock switch (11).
5. Disconnect connector (4) from heater control box (12).



6. Remove connector (5) from bulkhead disconnect (13) by removing four screws (14), four lockwashers (15), and gasket (16).



Disassembly

1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Install connector (5) and gasket (16) to bulkhead disconnect (13) using four screws (14) and four lockwashers (15).
2. Connect connector (4) to heater control box (12).
3. Connect connector (3) to fire extinguisher interlock switch (11).
4. Connect connector (2) to headlight and dimmer switch wiring harness (10).
5. Connect connector (1) to main switch panel (9).
6. Install 24 clamps (6) using lockwasher (8) and screw (7) for each.

NOTE

Follow-on maintenance: Install air cleaner assembly (see WP 0137 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**SWITCH PANEL, RADIO, AND BILGE PUMP TO BULKHEAD WIRING HARNESS (11671798) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION**

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00

Materials/Parts

Gasket (item 234, WP 0491 00)
Lockwashers (4) (item 611, WP 0491 00)
Lockwashers (32) (item 621, WP 0491 00)
Screws (4) (item 575, WP 0491 00)
Screws (32) (item 731, WP 0491 00)

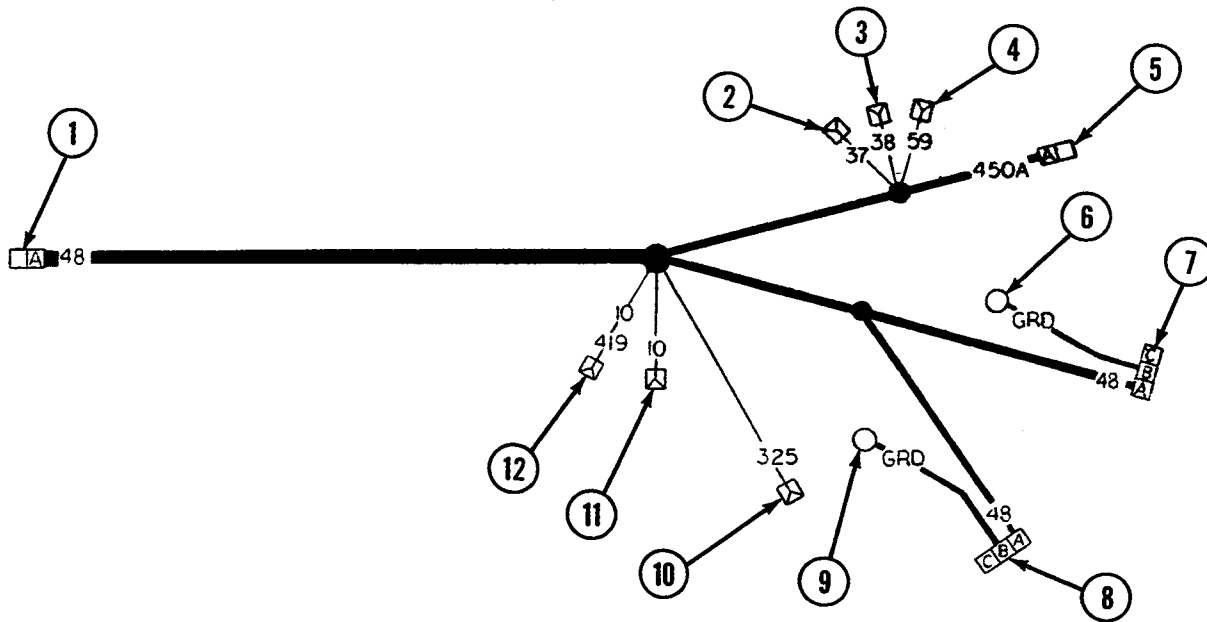
Equipment Condition

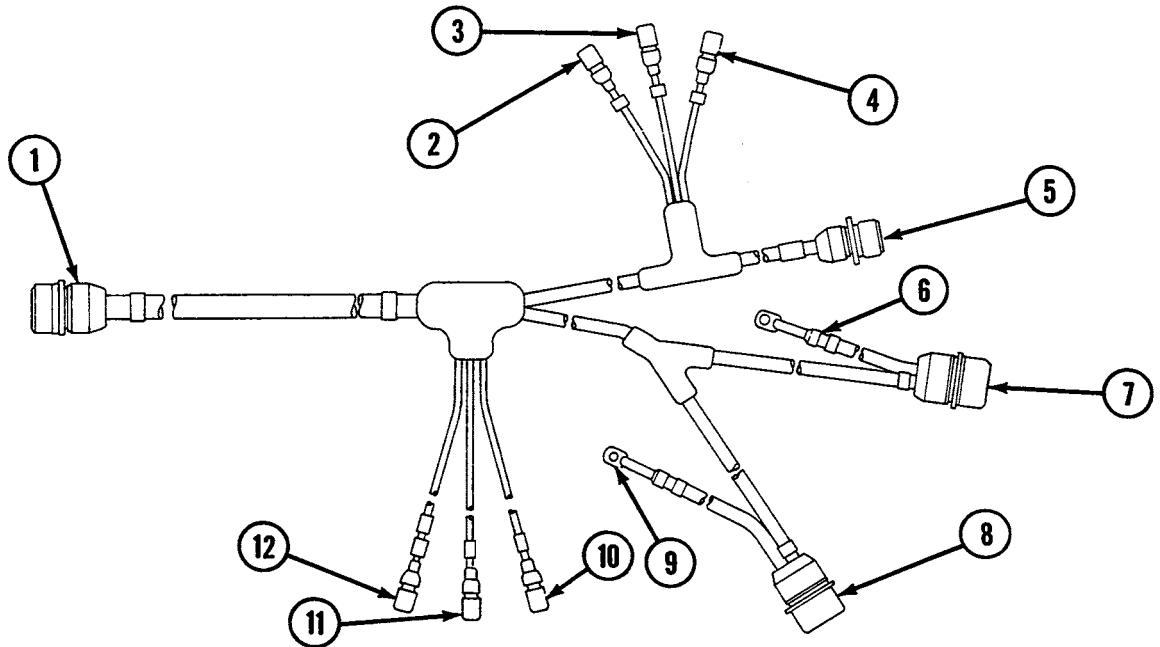
Air cleaner assembly removed (see WP 0137 00)

WARNING

Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

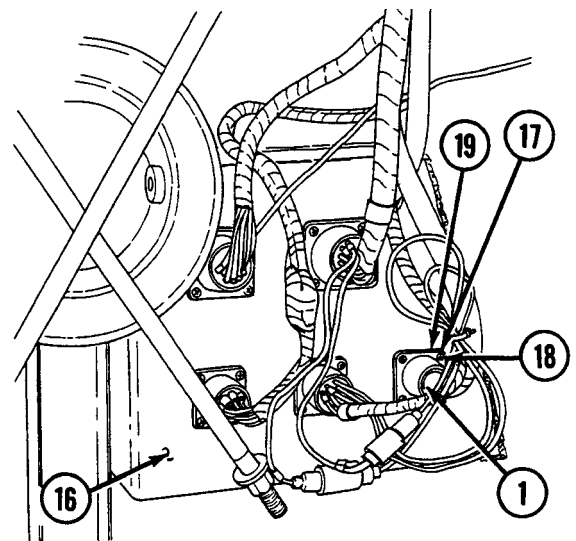
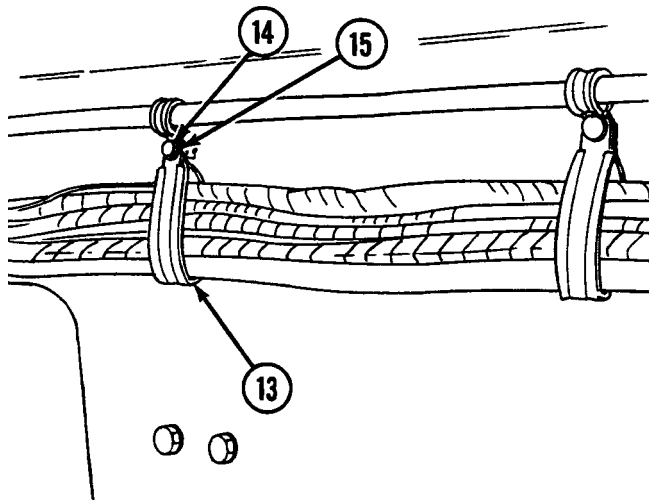
Connector No.	Electrical Lead To:	Wire No.
1	Bulkhead disconnect	48
2	Electrical accessories panel wiring harness	37
3	Electrical accessories panel wiring harness	38
4	Electrical accessories panel wiring harness	59
5	Bilge pump circuit breaker to switch panel lead assembly	450A
6	Ground	GND
7	Communication system	48
8	Communication system	48
9	Ground	GND
10	Red flasher circuit breaker	325
11	Switch panel to gage panel and miscellaneous switches wiring harness	10
12	Switch panel to gage panel and miscellaneous switches wiring harness	419, 10



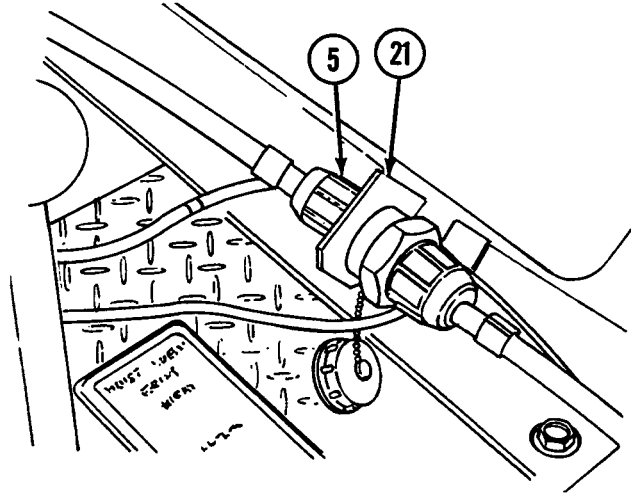
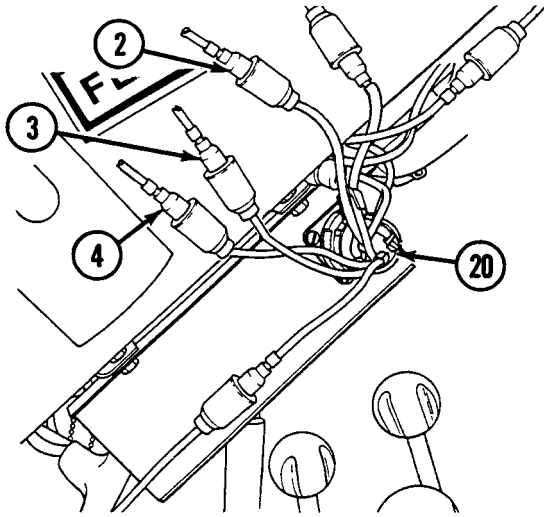


Removal

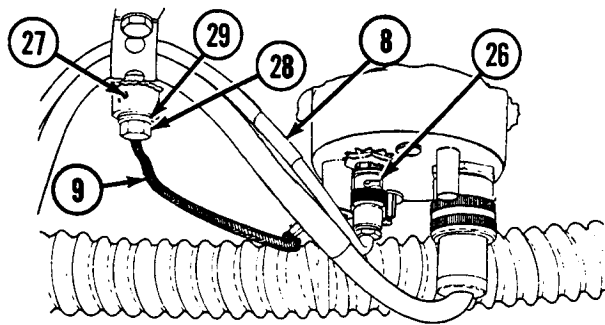
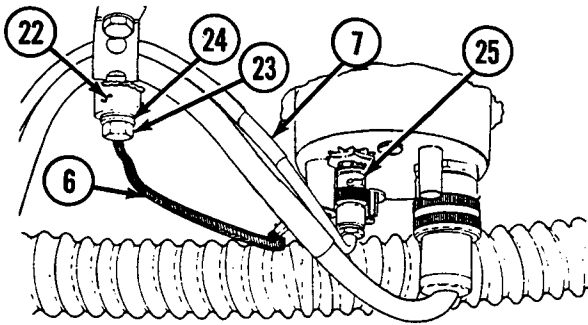
1. Remove 30 clamps (13) by removing screw (14) and lockwasher (15) from each.
2. Remove connector (1) from bulkhead disconnect (16) by removing four screws (17), four lockwashers (18), and gasket (19).



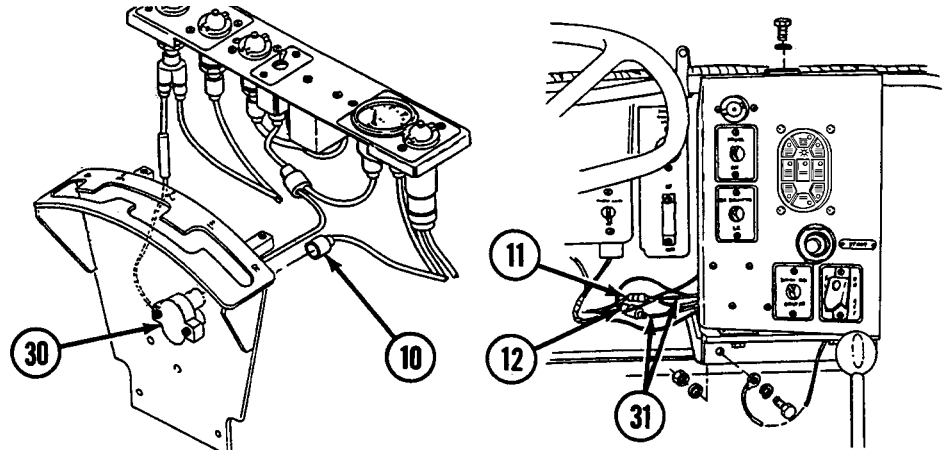
3. Disconnect connectors (2, 3, and 4) from accessories panel wiring harness (20).
4. Disconnect connector (5) from bilge pump circuit breaker to switch panel lead assembly (21).



5. Remove ground lead (6) from hull (22) by removing screw (23) and lockwasher (24).
6. Disconnect connector (7) from communication system (25).
7. Disconnect connector (8) from communication system (26).
8. Remove ground lead (9) from hull (27) by removing screw (28) and lockwasher (29).



9. Disconnect connector (10) from red flasher circuit breaker (30).
10. Disconnect connectors (11 and 12) from switch panel to gage panel and miscellaneous switches wiring harness (31).



Disassembly

1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

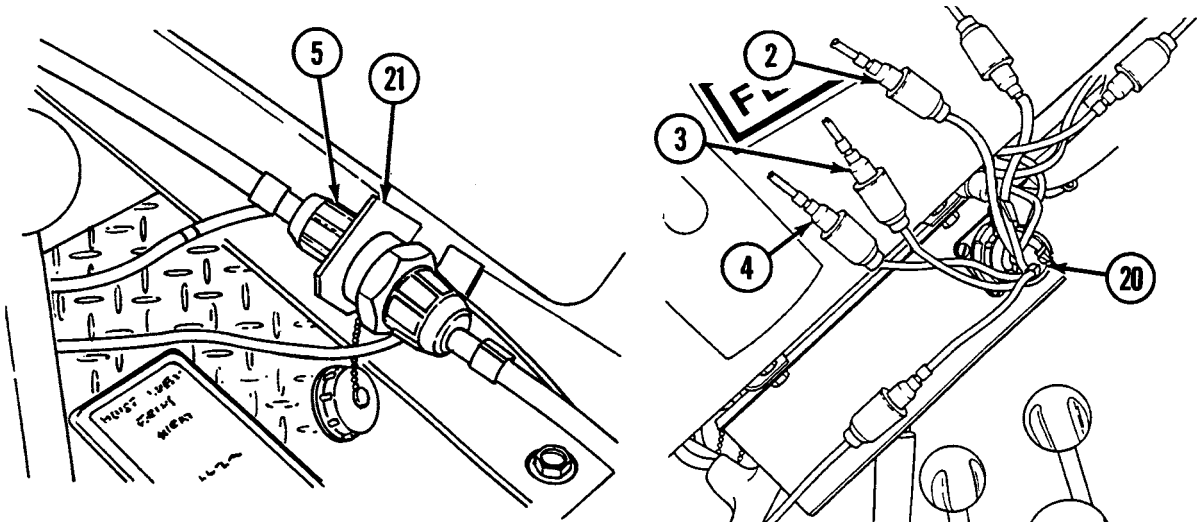
Assembly

1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

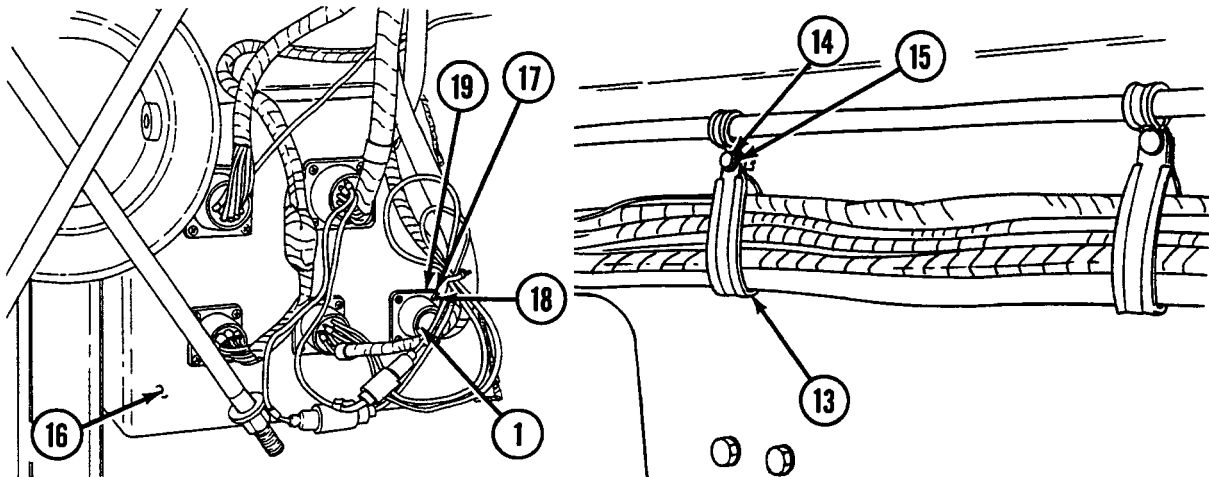
Installation

1. Connect connectors (11 and 12) to switch panel to gage panel and miscellaneous switches wiring harness (31).
2. Connect connector (10) to red flasher circuit breaker (30).
3. Install ground lead (9) to hull (27) using lockwasher (29) and screw (28).
4. Connect connector (8) to communication system (26).
5. Connect connector (7) to communication system (25).
6. Install ground lead (6) to hull (22) using lockwasher (24) and screw (23).

7. Connect connector (5) to bilge pump circuit breaker to switch panel lead assembly (21).
8. Connect connectors (2, 3, and 4) to accessories panel wiring harness (20).



9. Install connector (1) with gasket (19) to bulkhead (16) using four lockwashers (18) and four screws (17).
10. Install 30 clamps (13) using lockwasher (15) and screw (14) for each.



NOTE

Follow-on maintenance: Install air cleaner assembly (see WP 0137 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**SWITCH PANEL TO NEUTRAL SAFETY TO BULKHEAD WIRING HARNESS (11671420) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION**

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Gasket (item 234, WP 0491 00)
Lockwashers (4) (item 611, WP 0491 00)
Lockwashers (19) (item 621, WP 0491 00)
Lockwasher (item 642, WP 0491 00)
Screw (item 383, WP 0491 00)

Materials/Parts (cont.)

Screws (4) (item 575, WP 0491 00)
Screws (19) (item 731, WP 0491 00)

References

WP 0255 00 thru 0264 00

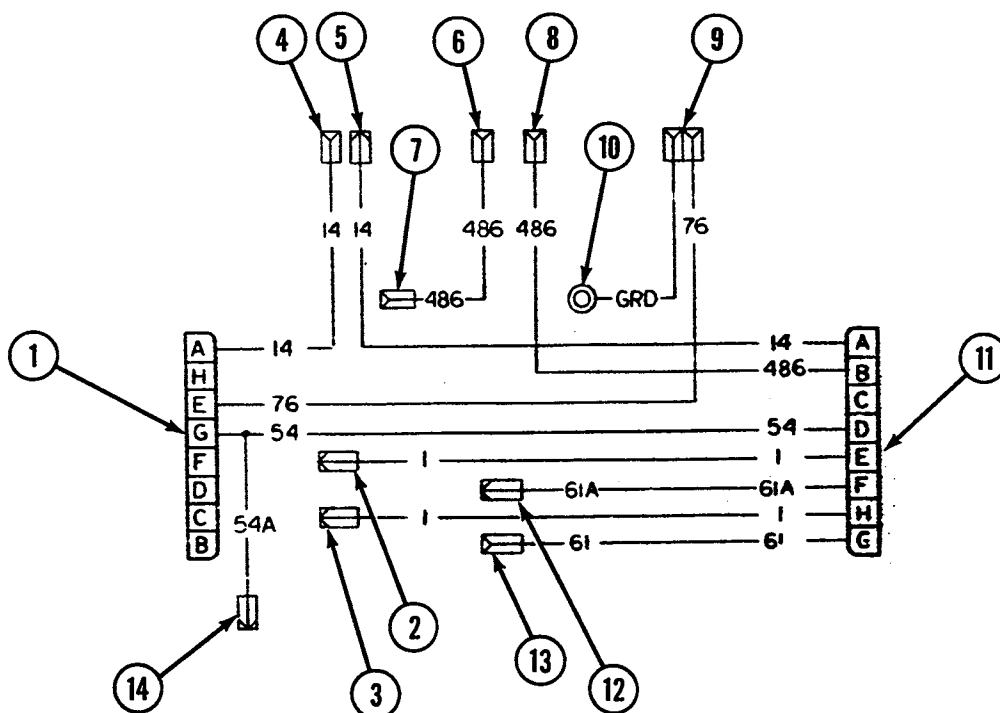
Equipment Condition

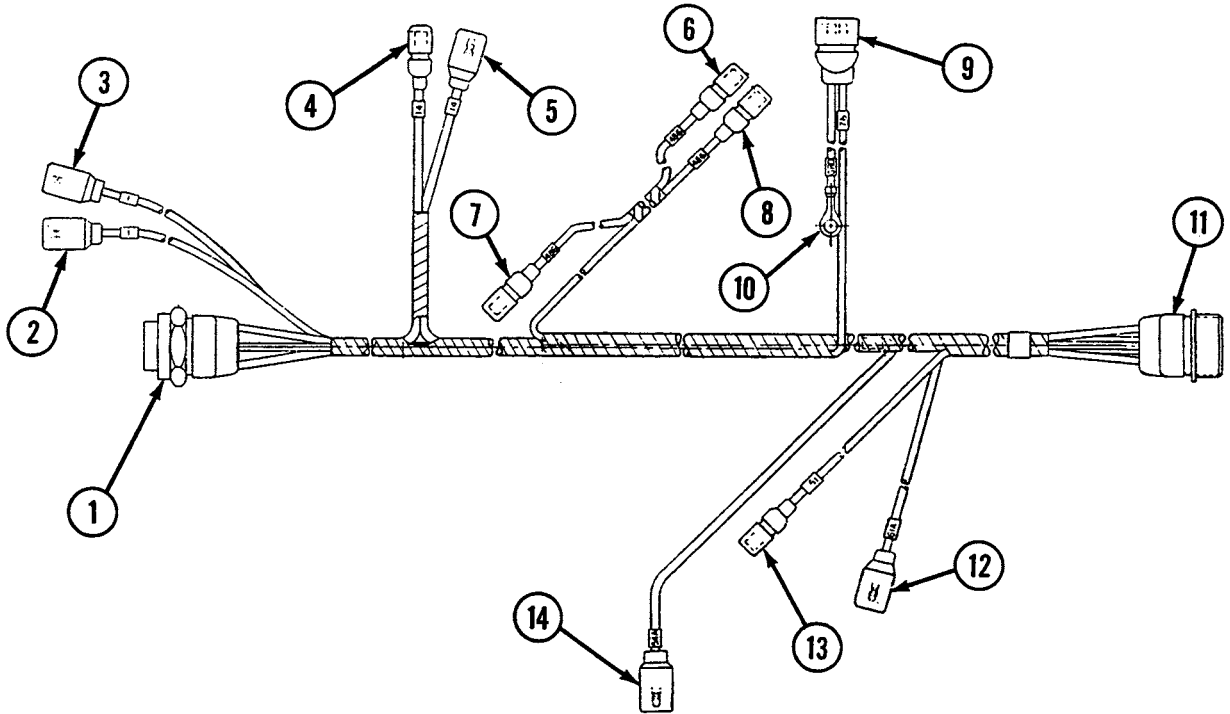
Air cleaner assembly removed (see WP 0137 00)

WARNING

Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

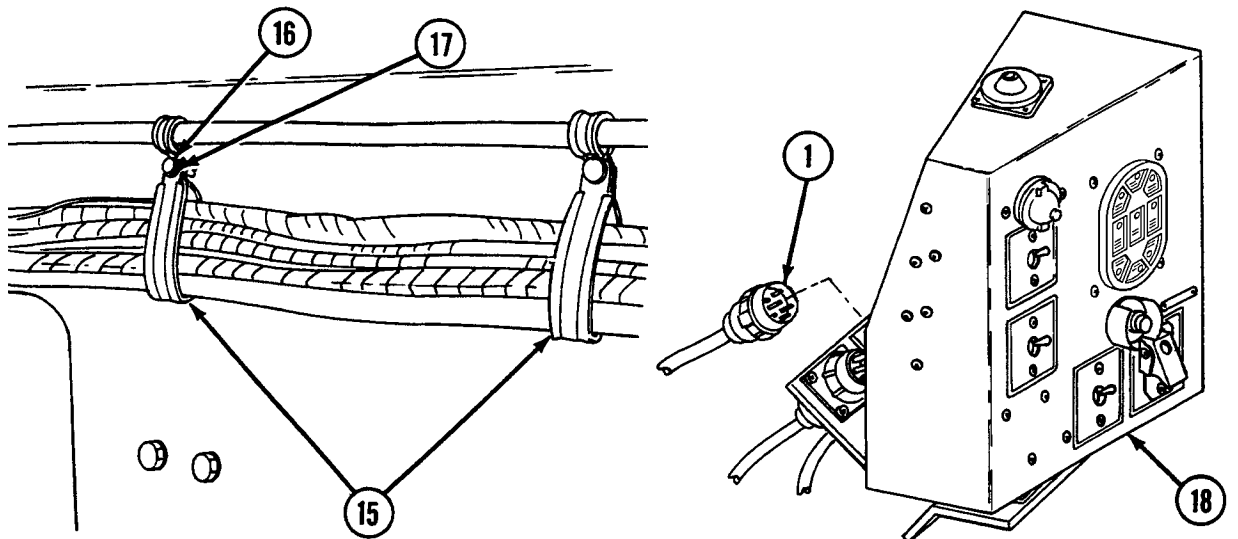
Connector No.	Electrical Lead To:	Wire No.
1	Main switch panel	14, 76, 54
2	Electrical accessories panel wiring harness	1
3	Electrical accessories panel wiring harness	1
4	Neutral safety switch	14
5	Neutral safety switch	14
6	Manifold preheat switch assembly	486
7	Circuit breaker	486
8	Manifold preheat switch assembly	486
9	Electrical fuel pump	GND, 76
10	Ground	GND
11	Bulkhead disconnect	14, 486, 54, 1, 61A, 1, 61
12	APU control box to foot dimmer switch and bulkhead wiring harness	61A
13	APU control box to foot dimmer switch and bulkhead wiring harness	61
14	Fire extinguisher engine shutoff switch	54A



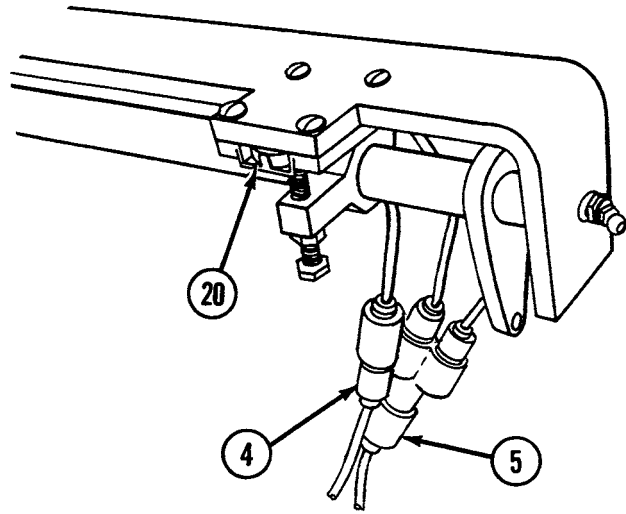
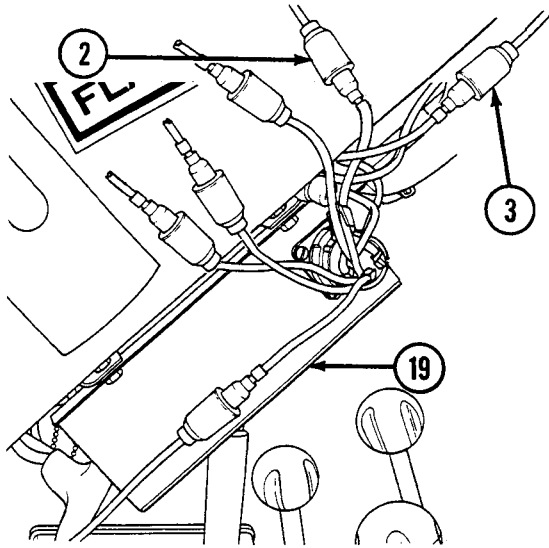


Removal

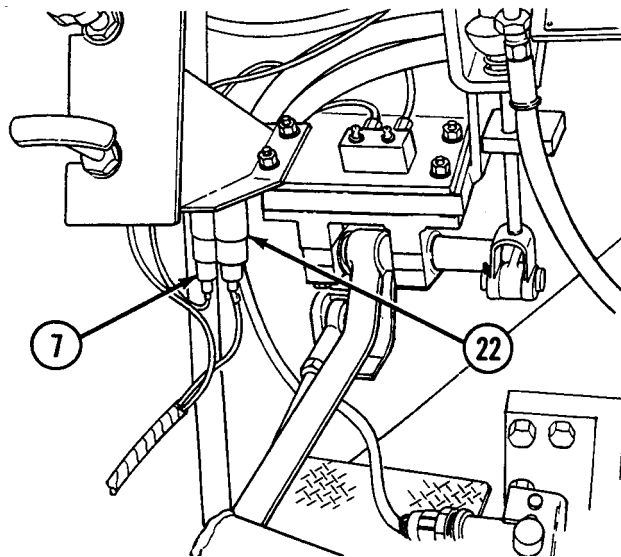
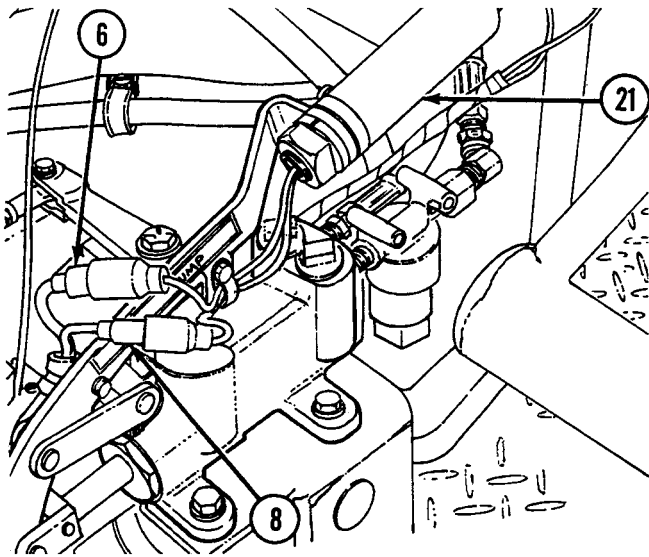
1. Remove 19 clamps (15) by removing screw (16) and lockwasher (17) from each.
2. Disconnect connector (1) from main switch panel (18).



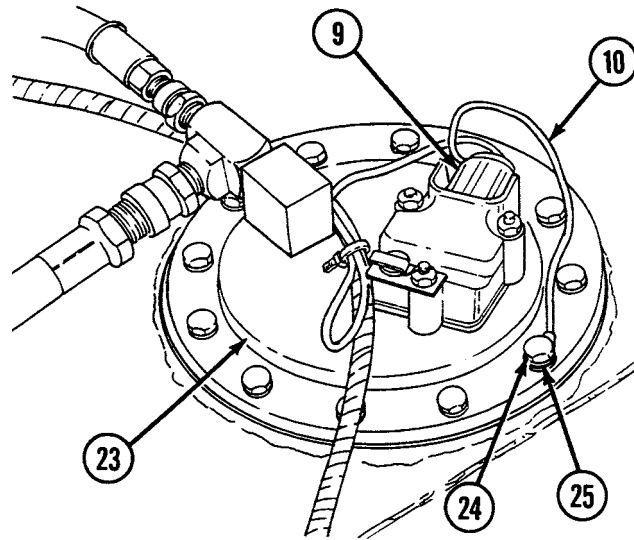
3. Disconnect two connectors (2 and 3) from electrical accessories panel wiring harness (19).
4. Disconnect two connectors (4 and 5) from neutral safety switch (20).



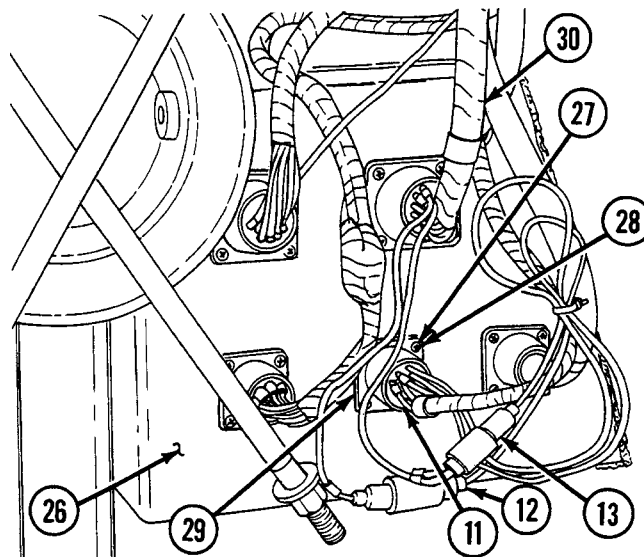
5. Disconnect two connectors (6 and 8) from manifold preheat switch (21).
6. Disconnect connector (7) from circuit breaker (22).



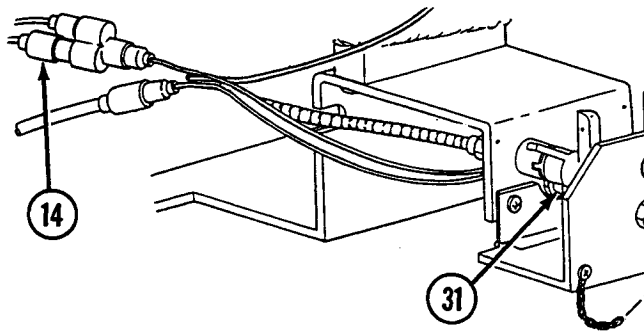
7. Disconnect connector (9) from electrical fuel pump (23).
8. Remove ground lead (10) by removing screw (24) and lockwasher (25).



9. Remove connector (11) from bulkhead disconnect (26) by removing four screws (27), four lockwashers (28), and gasket (29).
10. Disconnect connector (12 and 13) from APU control box to foot dimmer switch and bulkhead wiring harness (30).



- Disconnect connector (14) from fire extinguisher engine shutoff switch (31).



Disassembly

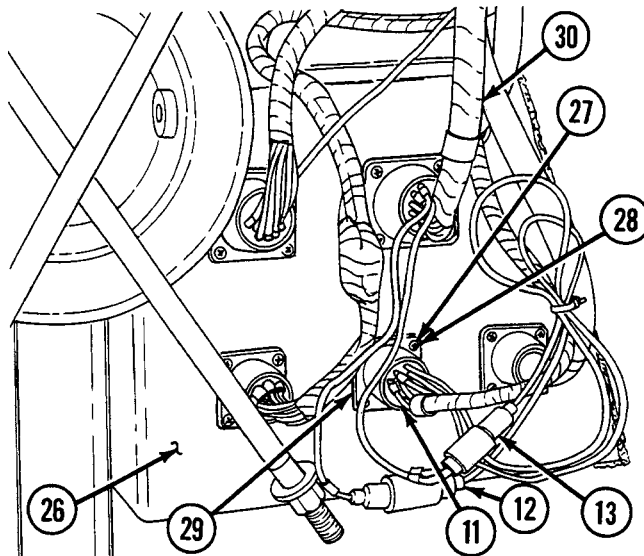
- Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

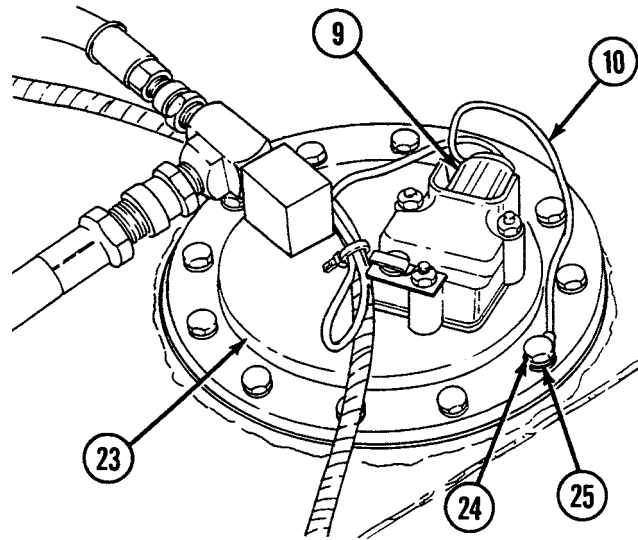
- Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

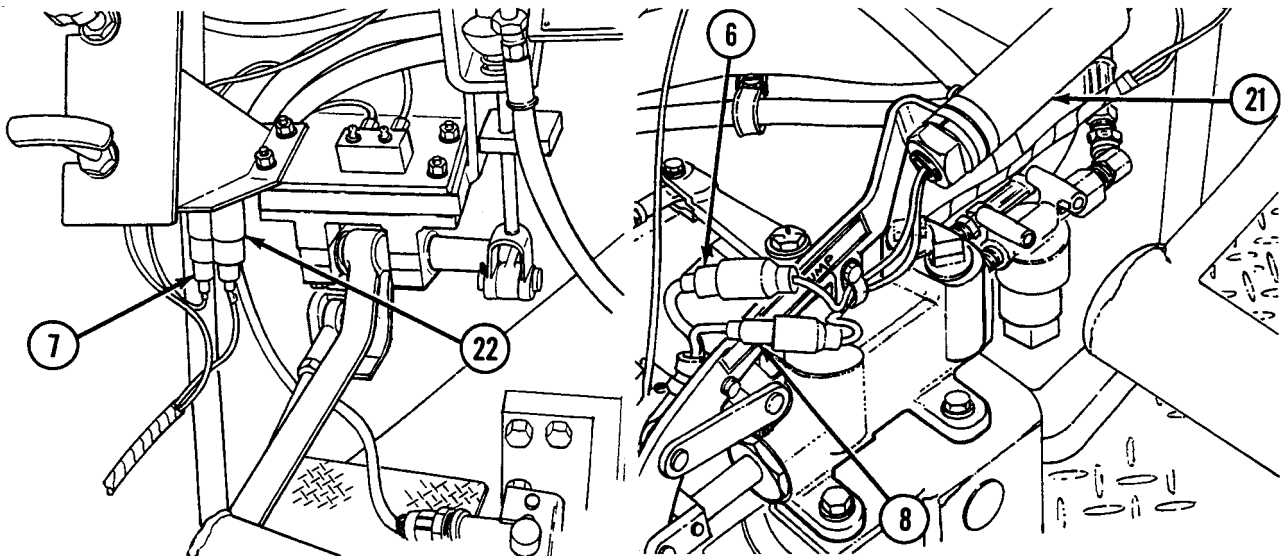
- Connect connector (14) to fire extinguisher engine shutoff switch (31).
- Connect two connectors (12 and 13) to APU control box to foot dimmer switch and bulkhead wiring harness (30).
- Install connector (11) to bulkhead disconnect (26) using four lockwashers (28) and four screws (27).



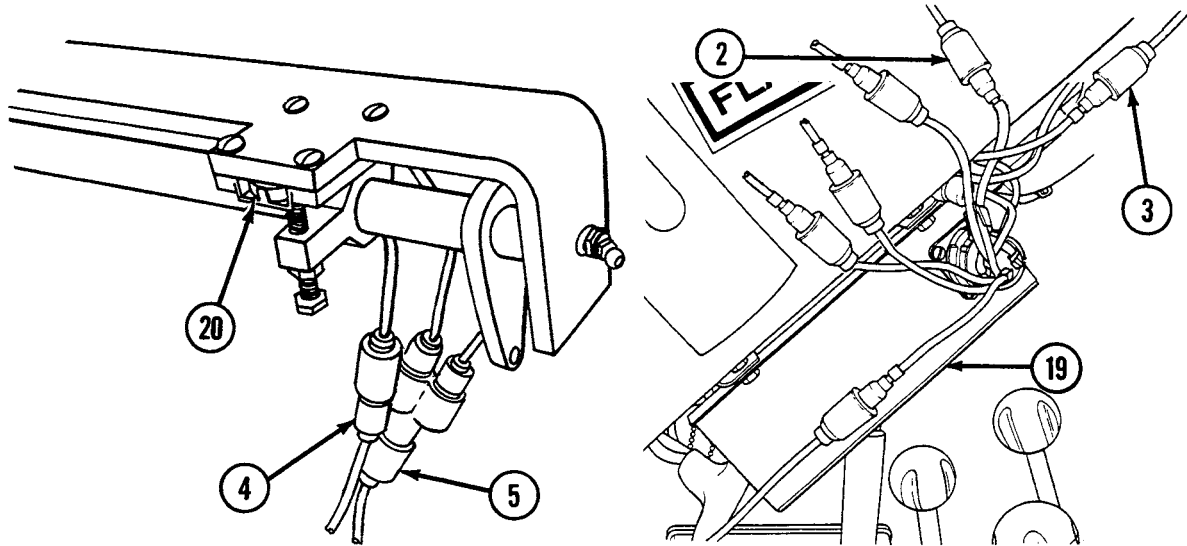
4. Install ground lead (10) using screw (24) and lockwasher (25).
5. Connect connector (9) to electrical fuel pump (23).



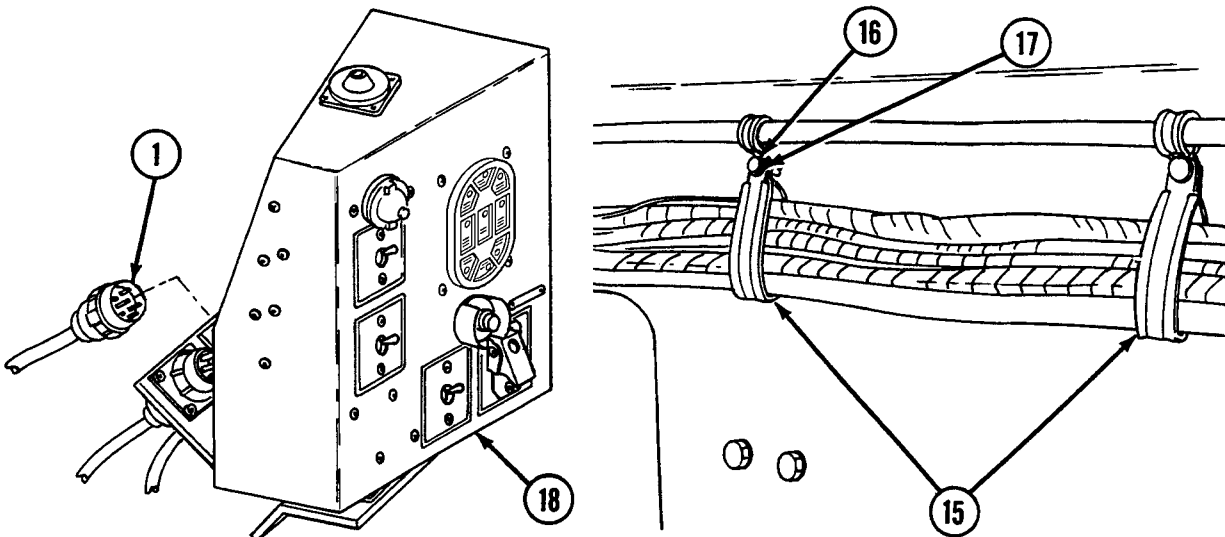
6. Connect connector (7) to circuit breaker (22).
7. Connect two connectors (6 and 8) to manifold preheat switch (21).



8. Connect two connectors (4 and 5) to neutral safety switch (20).
9. Connect two connectors (2 and 3) to electrical accessories panel wiring harness (19).



10. Connect connector (1) to main switch panel (18).
11. Install 19 clamps (15) using lockwasher (17) and screw (16) for each.



NOTE

Follow-on maintenance: Install air cleaner assembly (see WP 0137 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**SWITCH PANEL TO GAGE PANEL AND MISCELLANEOUS SWITCHES WIRING
 HARNESS (PASSIVE NIGHT VIEWER) (DUAL VOLTAGE) (12322547) MAINTENANCE
 REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION**

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00

Materials/Parts

Lockwashers (11) (item 621, WP 0491 00)
 Screws (11) (item 731, WP 0491 00)

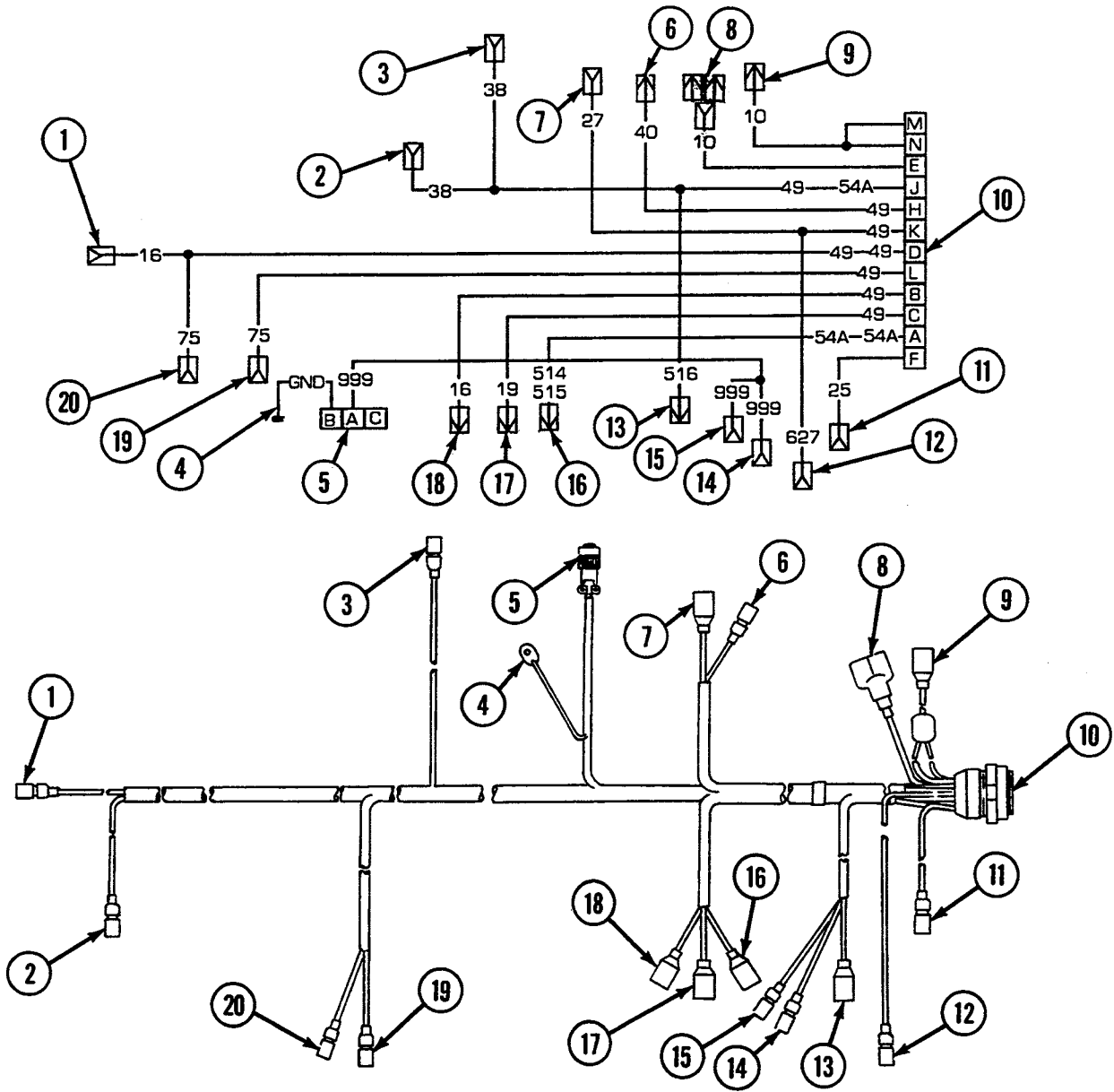
Equipment Condition

Gage panel removed (see WP 0157 00)
 Switch panel removed (see WP 0159 00)

WARNING

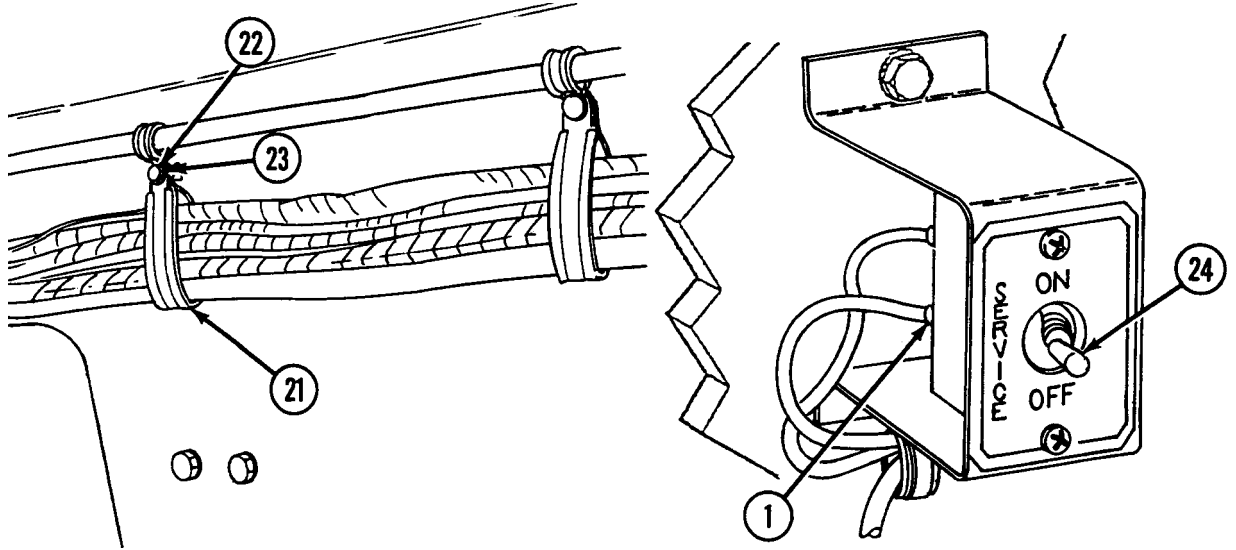
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
10	Main switch panel	10, 10, 38/999, 40, 27, 75/16, 75, 16, 19, 514, 51, 25
11	Horn switch	25
12	Power control switch	627
13	Passive night viewer indicator light	516
14	Passive night viewer switch	999
15	Passive night viewer switch	999
16	Headlight and dimmer switch wiring harness	514, 515
17	Headlight and dimmer switch wiring harness	19
18	Headlight and dimmer switch wiring harness	16
19	Stoplight switch	75
20	Stoplight switch	75/16

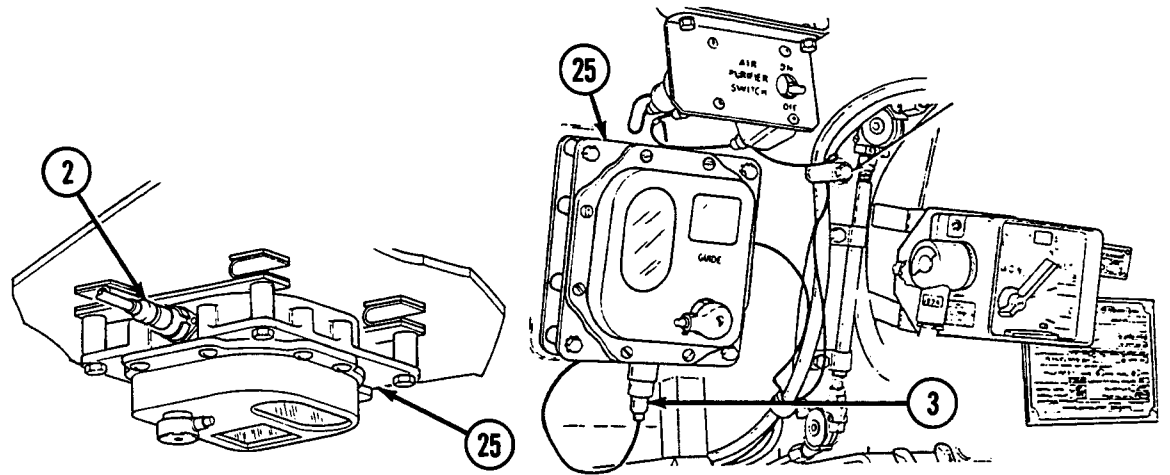


Removal

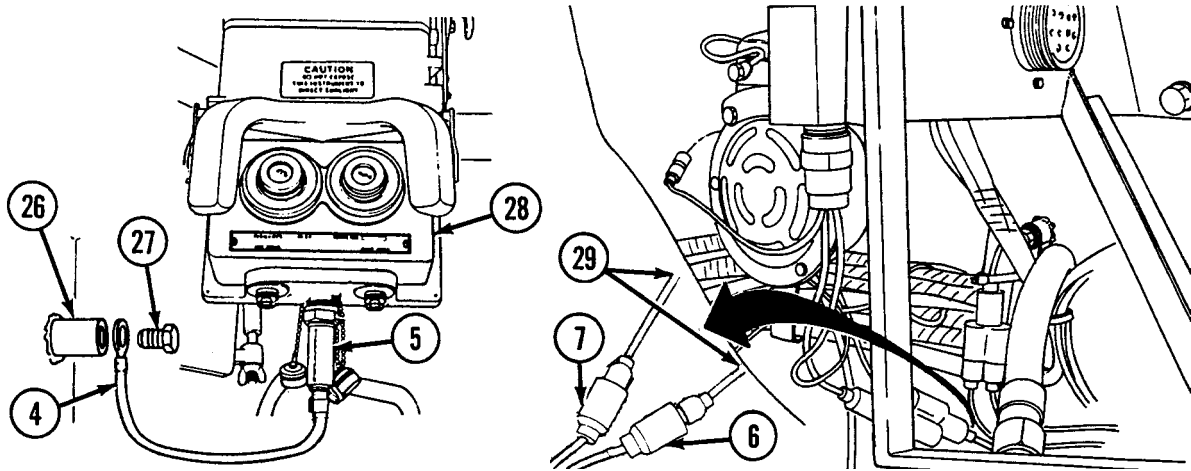
1. Remove 11 clamps (21) by removing screw (22) and lockwasher (23) from each.
2. Disconnect connector (1) from rigger's service light switch (24).



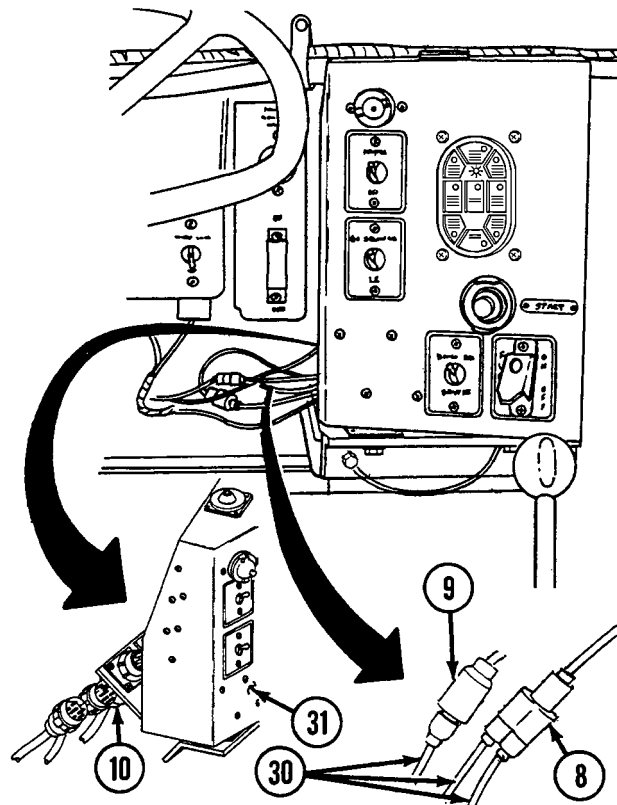
3. Disconnect two connectors (2 and 3) from dome light (25).



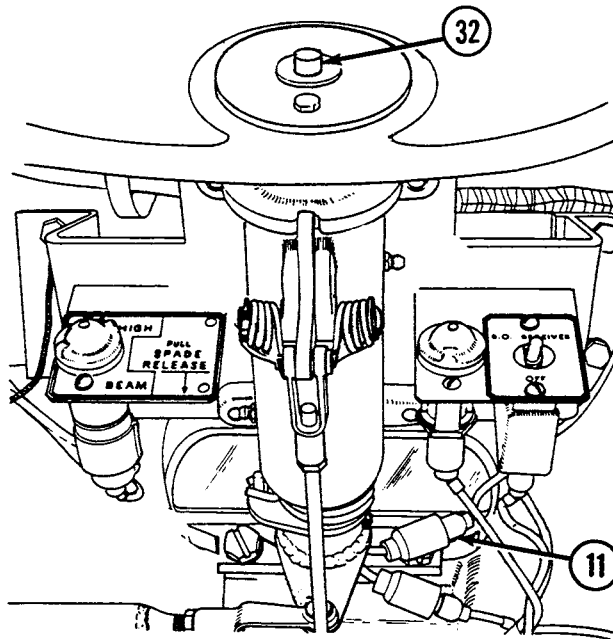
4. Disconnect ground (4) from hull (26) by removing screw (27).
5. Disconnect connector (5) from passive night viewer (28).
6. Disconnect two connectors (6 and 7) from gage panel to bulkhead wiring harness (29).



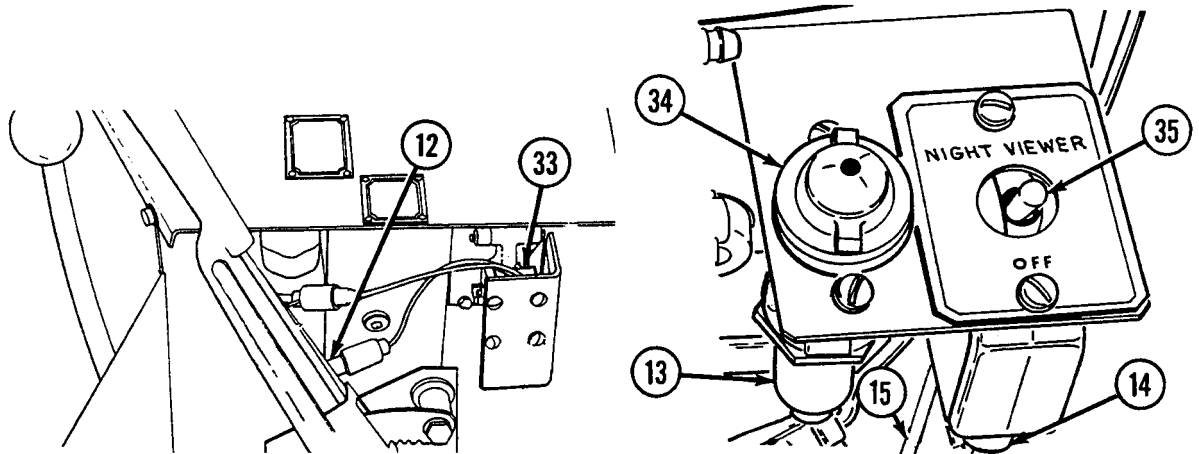
7. Disconnect two connectors (8 and 9) from switch panel, radio, and bilge pump to bulkhead wiring harness (30).
8. Disconnect connector (10) from main switch panel (31).



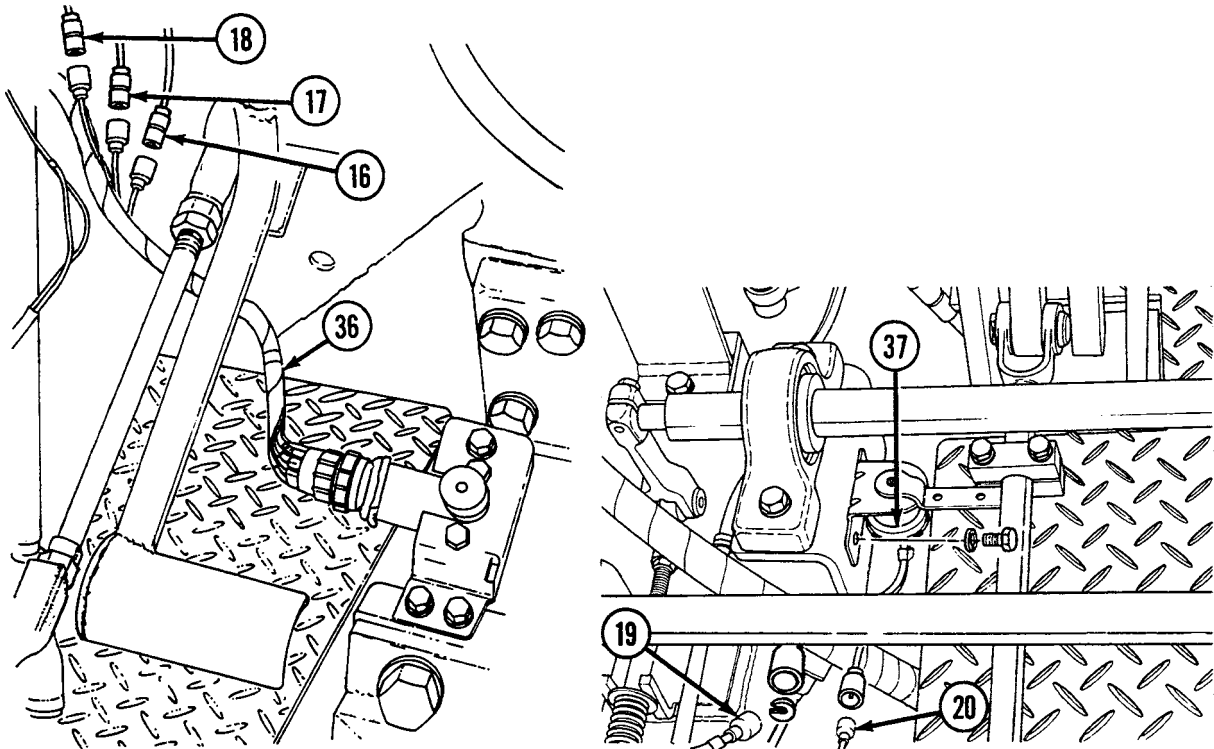
9. Disconnect connector (11) from horn switch (32).



10. Disconnect connector (12) from power control switch (33).
11. Disconnect connector (13) from passive night viewer indicator light (34).
12. Disconnect two connectors (14 and 15) from passive night viewer switch (35).



13. Disconnect three connectors (16, 17, and 18) from headlight dimmer switch and wiring harness (36).
14. Disconnect two connectors (19 and 20) from stoplight switch (37).



Disassembly

1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

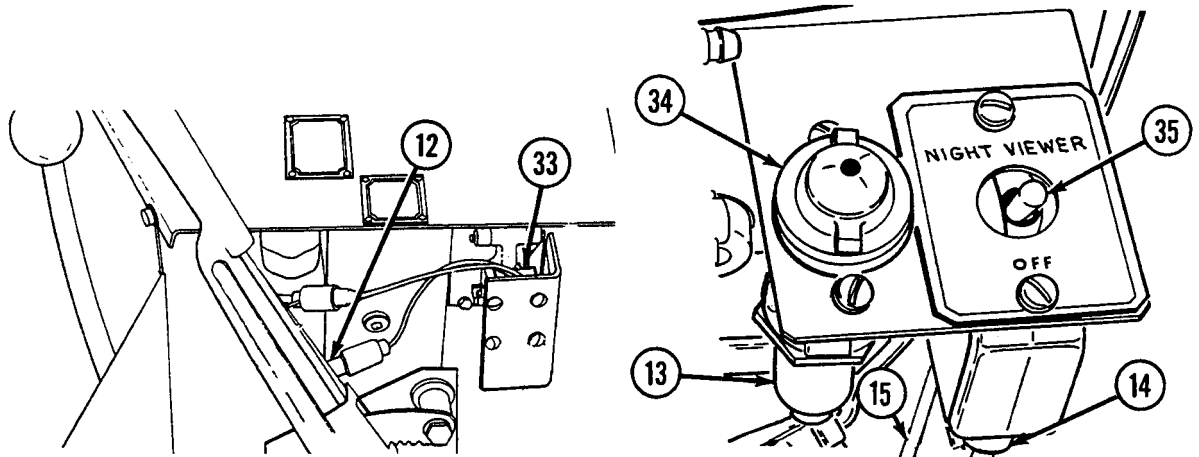
Assembly

1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

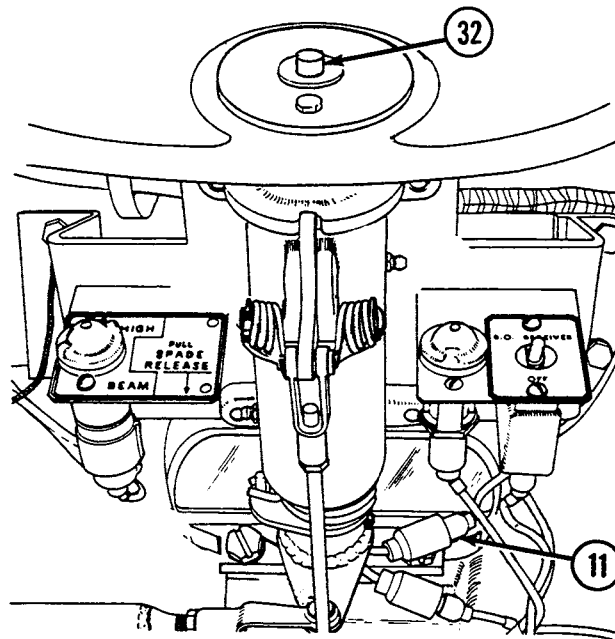
Installation

1. Connect connectors (19 and 20) to stoplight switch (37).
2. Connect three connectors (16, 17, and 18) to headlight dimmer switch wiring harness (36).

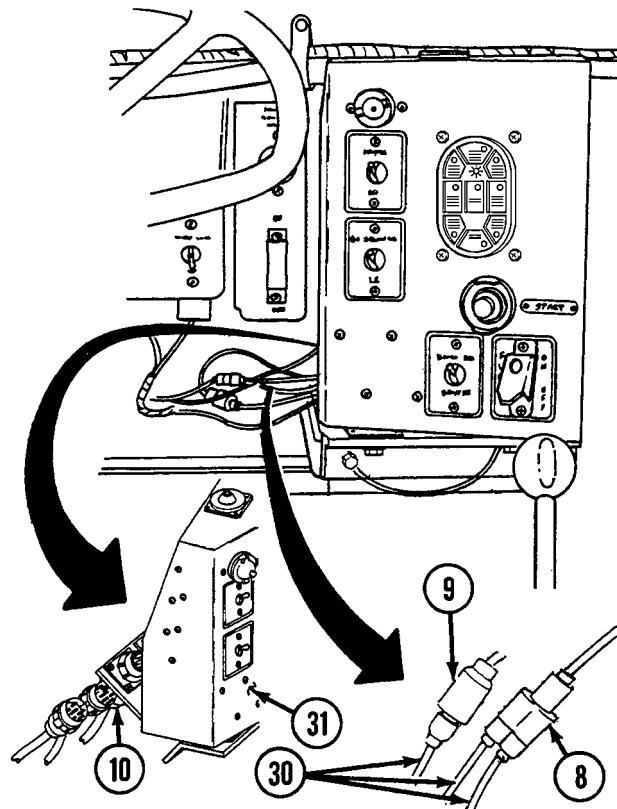
3. Connect two connectors (14 and 15) to passive night viewer switch (35).
4. Connect connector (13) to passive night viewer indicator light (34).
5. Connect connector (12) to power control switch (33).



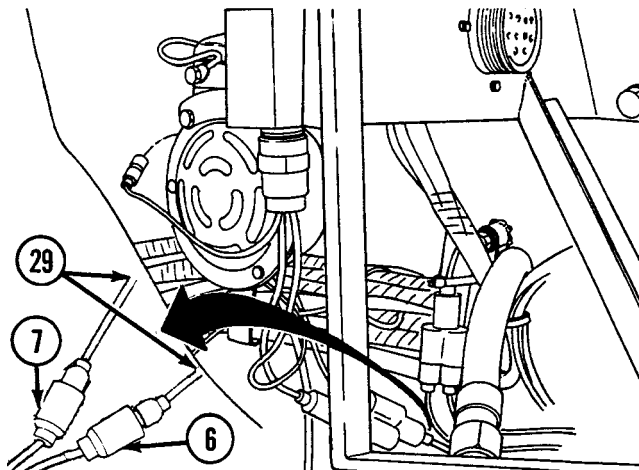
6. Connect connector (11) to horn switch (32).



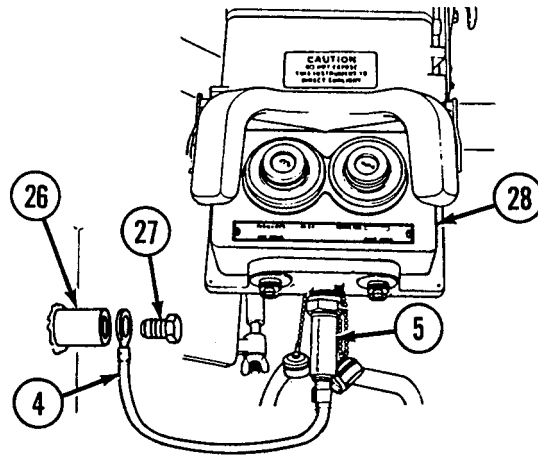
7. Connect connector (10) to main switch panel (31).
8. Connect two connectors (8 and 9) to switch panel, radio, and bilge pump to bulkhead wiring harness (30).



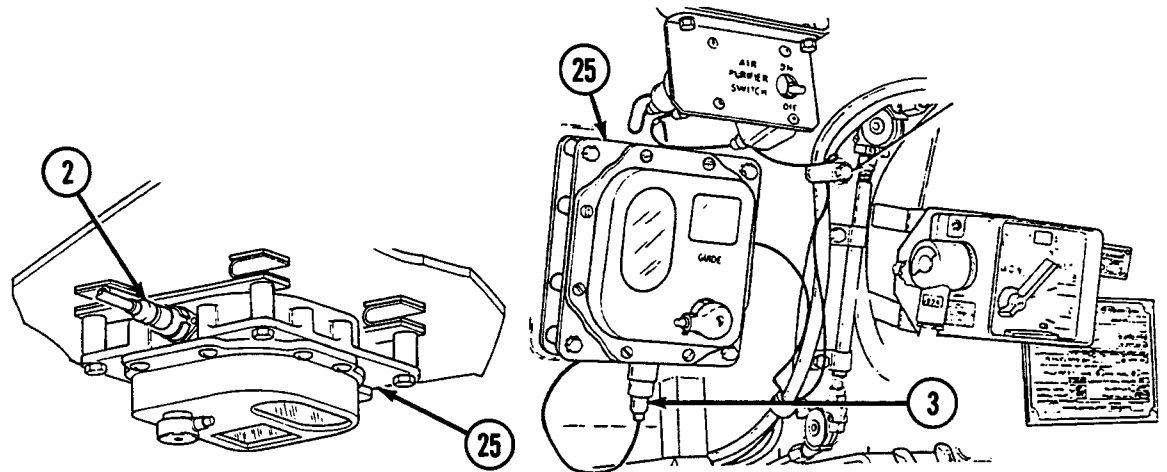
9. Connect two connectors (6 and 7) to gage panel to bulkhead wiring harness (29).



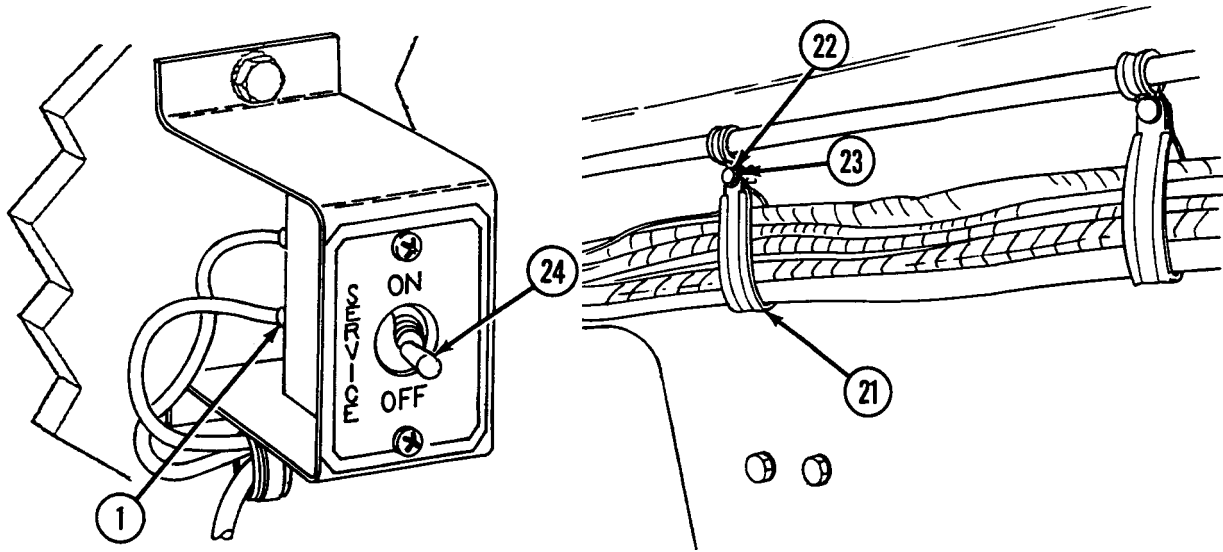
10. Connect connector (5) to passive night viewer (28).
11. Connect ground (4) to hull (26) using screw (27).



12. Connect two connectors (2 and 3) to two dome lights (25).



13. Connect connector (1) to rigger's service light switch (24).
14. Install 11 clamps (21) using screw (22) and lockwasher (23) for each.

**NOTE**

Follow-on maintenance: Install switch panel (see WP 0159 00); Install gage panel (see WP 0157 00).

END OF WORK PACKAGE

UNIT MAINTENANCE**RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1****NSN 2350-00-122-6826, EIC AQA****SWITCH PANEL TO GAGE PANEL AND MISCELLANEOUS SWITCHES WIRING
HARNESS (INFRARED NIGHT VIEWER) (SINGLE VOLTAGE) (11671795) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION**

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00

Materials/Parts

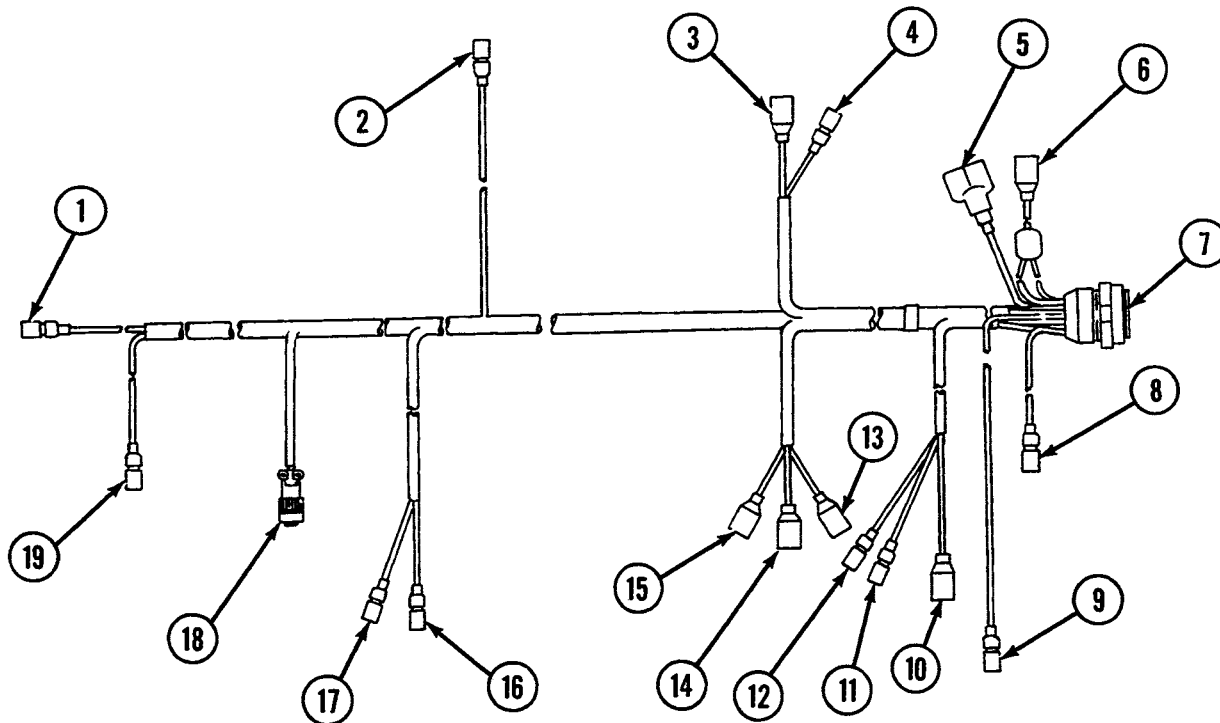
Lockwashers (11) (item 621, WP 0491 00)

Screws (11) (item 731, WP 0491 00)

Equipment ConditionAir inlet grilles removed as necessary (see WP 0342 00)

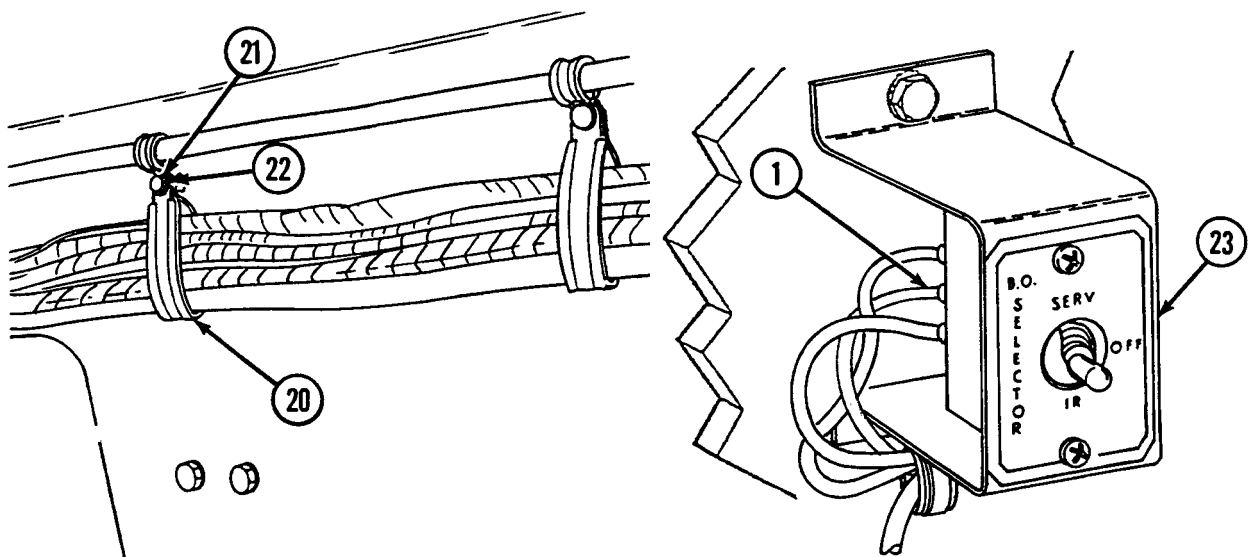
WARNING

Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

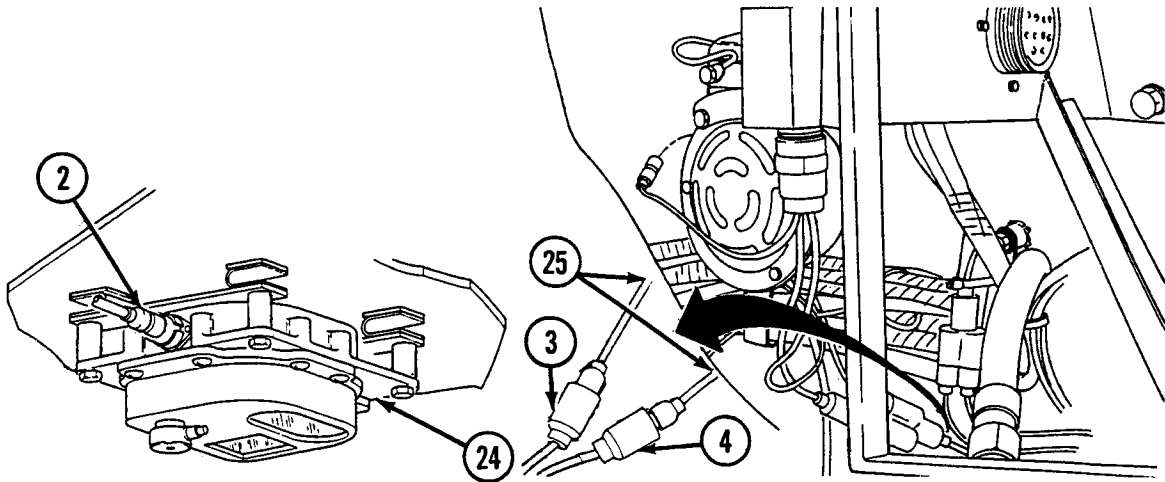


Removal

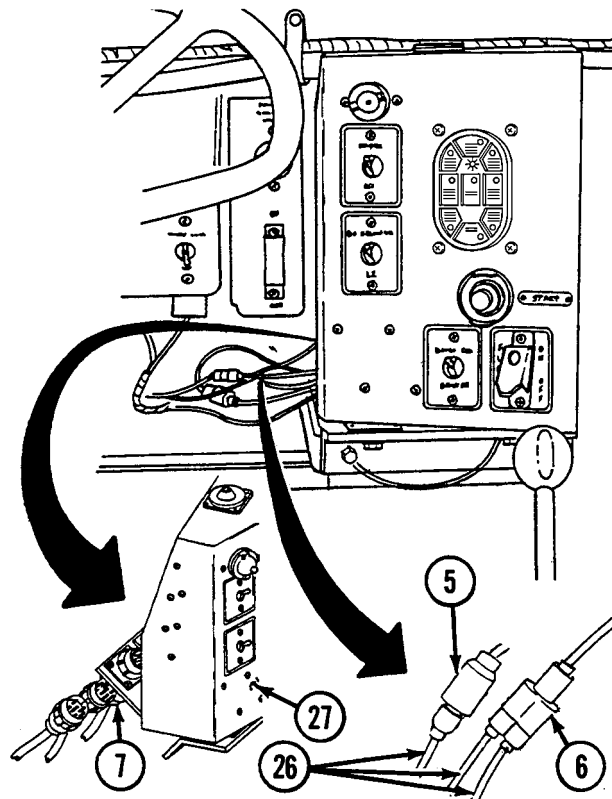
1. Remove 11 clamps (20) by removing screw (21) and lockwasher (22) from each.
2. Disconnect connector (1) from rigger's service light switch (23).



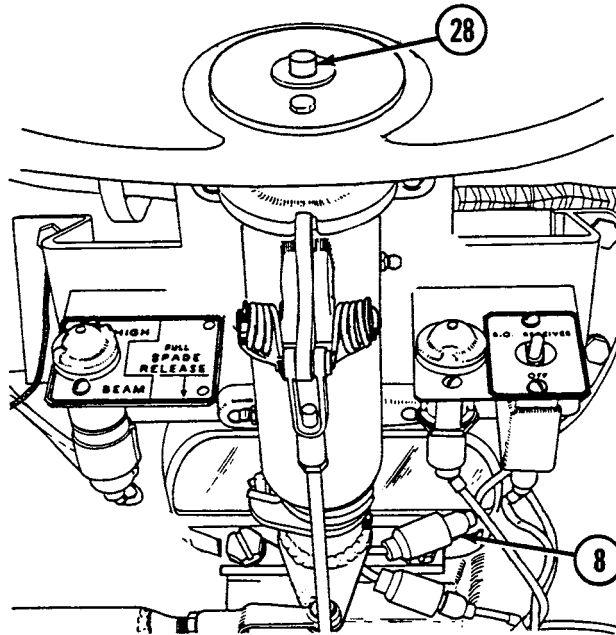
3. Disconnect connector (2) from dome light (24).
4. Disconnect two connectors (3 and 4) from gage panel to bulkhead wiring harness (25).



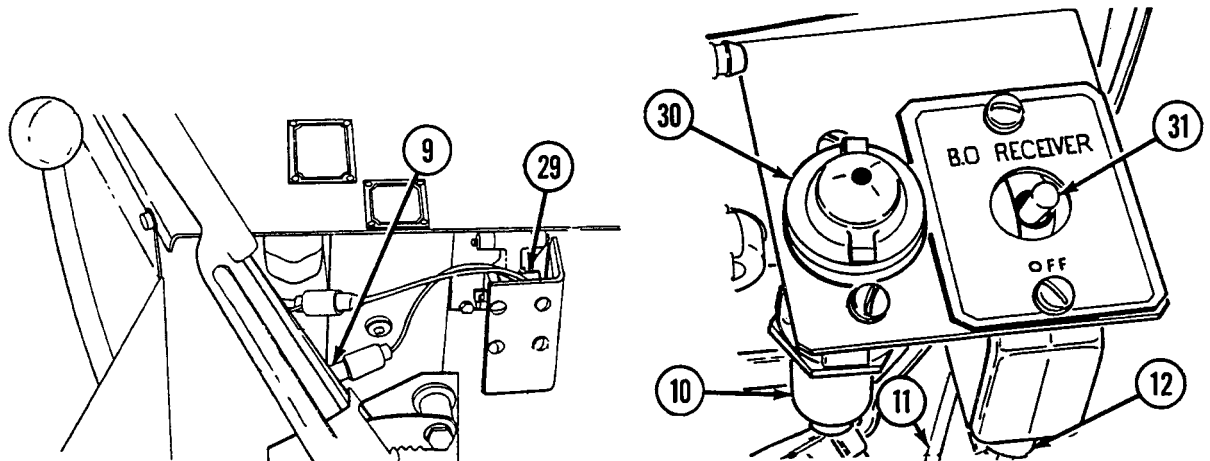
5. Disconnect two connectors (5 and 6) from switch panel, radio, and bilge pump to bulkhead wiring harness (26).
6. Disconnect connector (7) from main switch panel (27).



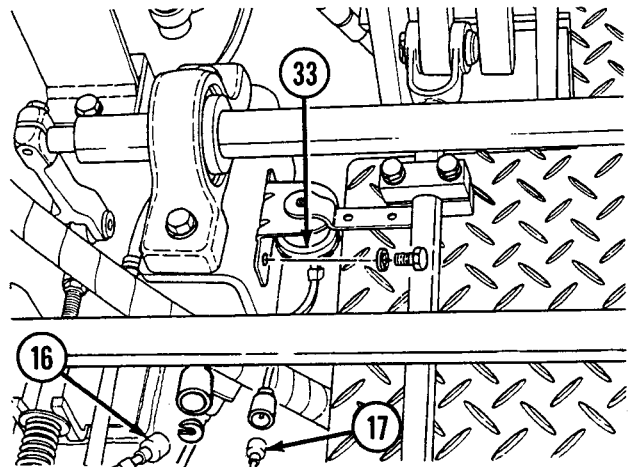
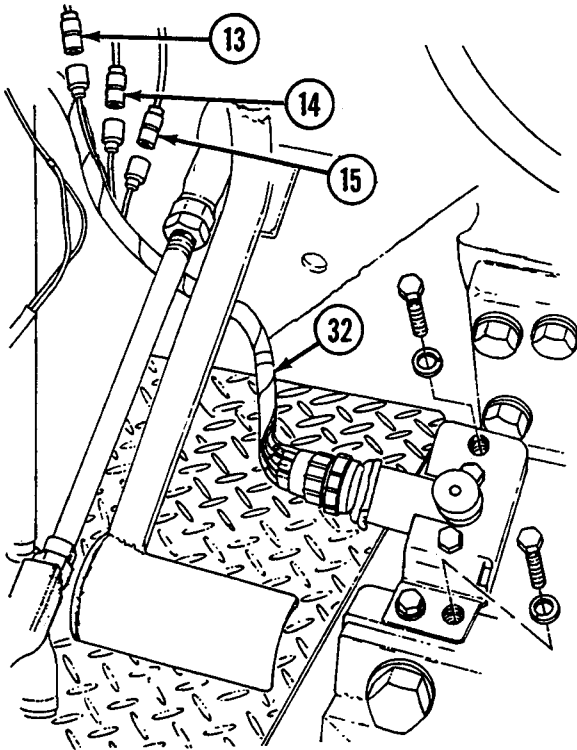
7. Disconnect connector (8) from horn switch (28).



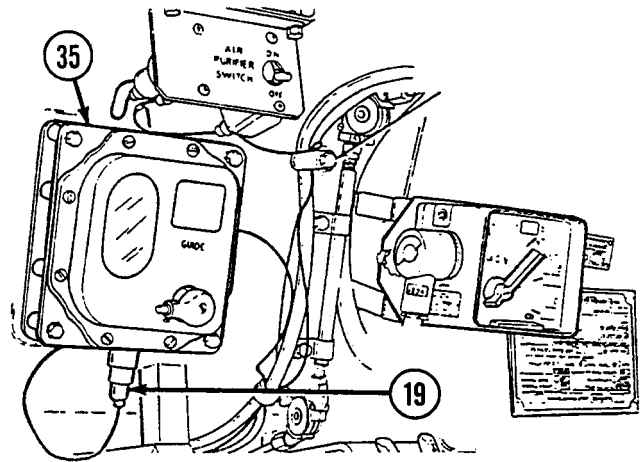
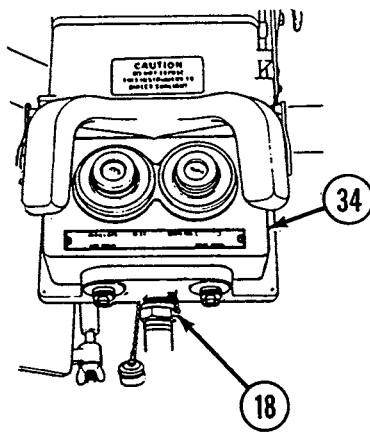
8. Disconnect connector (9) from power control switch (29).
9. Disconnect connector (10) from driver's B.O. receiver indicator light (30).
10. Disconnect two connectors (11 and 12) from driver's B.O. receiver switch (31).



11. Disconnect three connectors (13, 14, and 15) from headlight and dimmer switch wiring harness (32).
12. Disconnect connectors (16 and 17) from stoplight switch (33).



13. Disconnect connector (18) from infrared periscope (34).
14. Disconnect connector (19) from dome light (35).



Disassembly

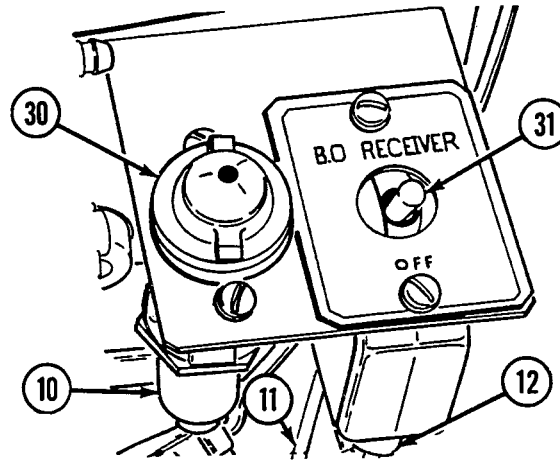
1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

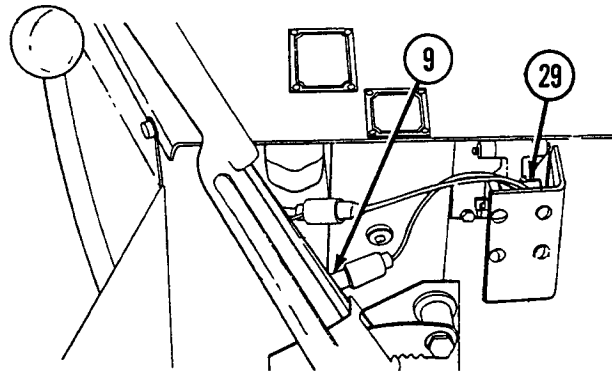
1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

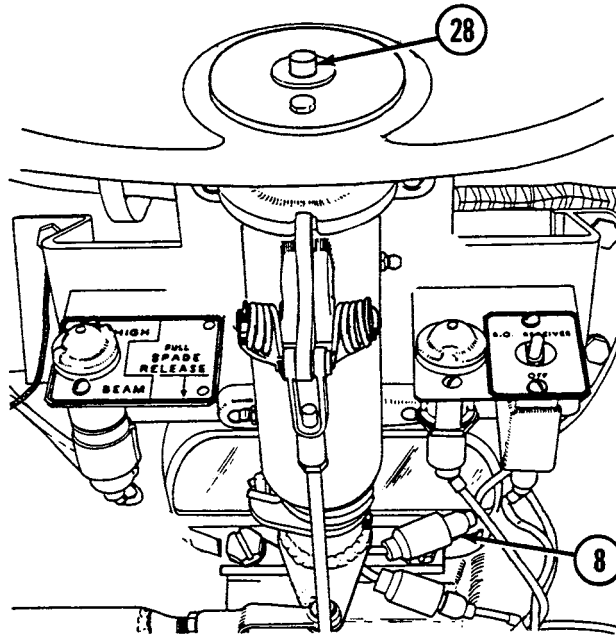
1. Connect connector (19) to dome light (35).
2. Connect connector (18) to infrared periscope (34).
3. Connect two connectors (16 and 17) to stoplight switch (33).
4. Connect three connectors (13, 14, and 15) to headlight and dimmer switch wiring harness (32).
5. Connect two connectors (11 and 12) to driver's B.O. receiver switch (31).
6. Connect connector (10) to driver's B.O. receiver indicator light (30).



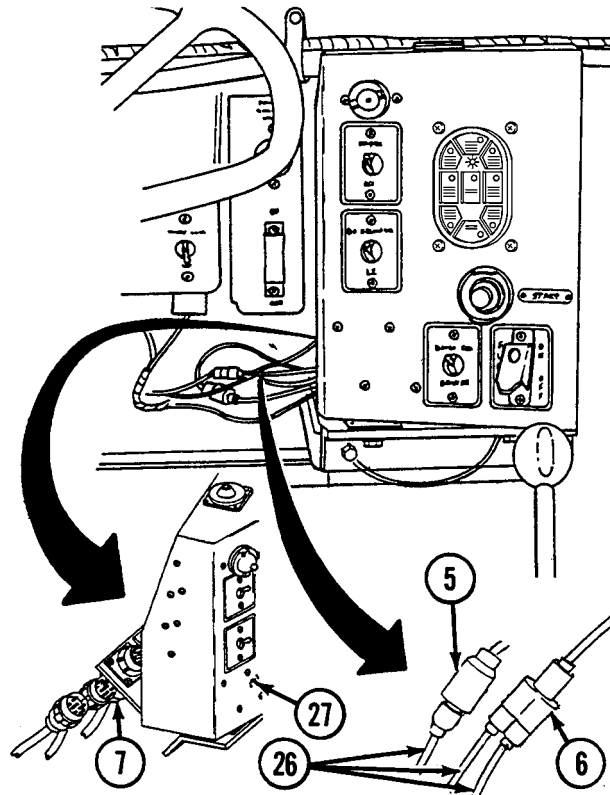
7. Connect connector (9) to power control switch (29).



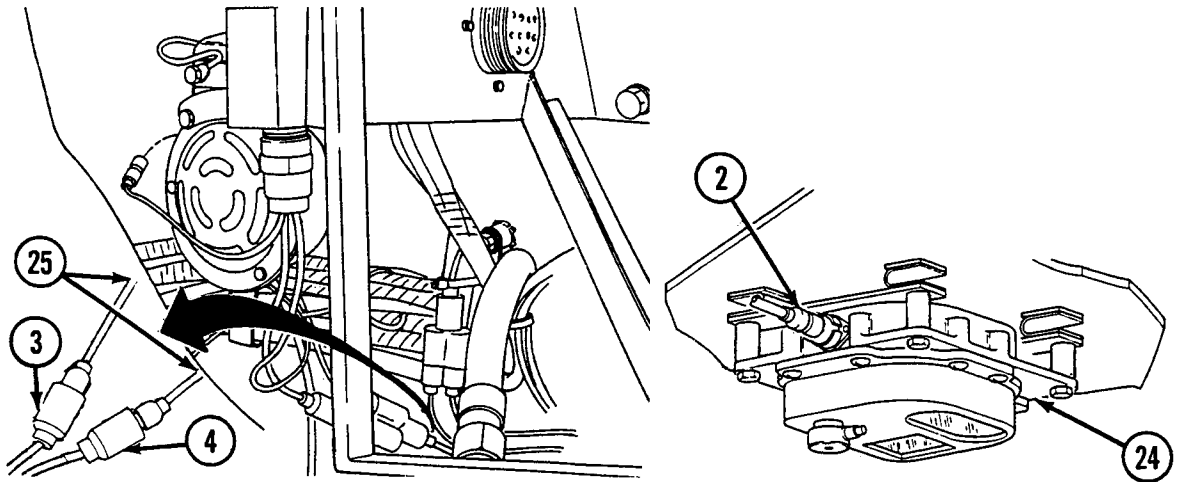
8. Connect connector (8) to horn switch (28).



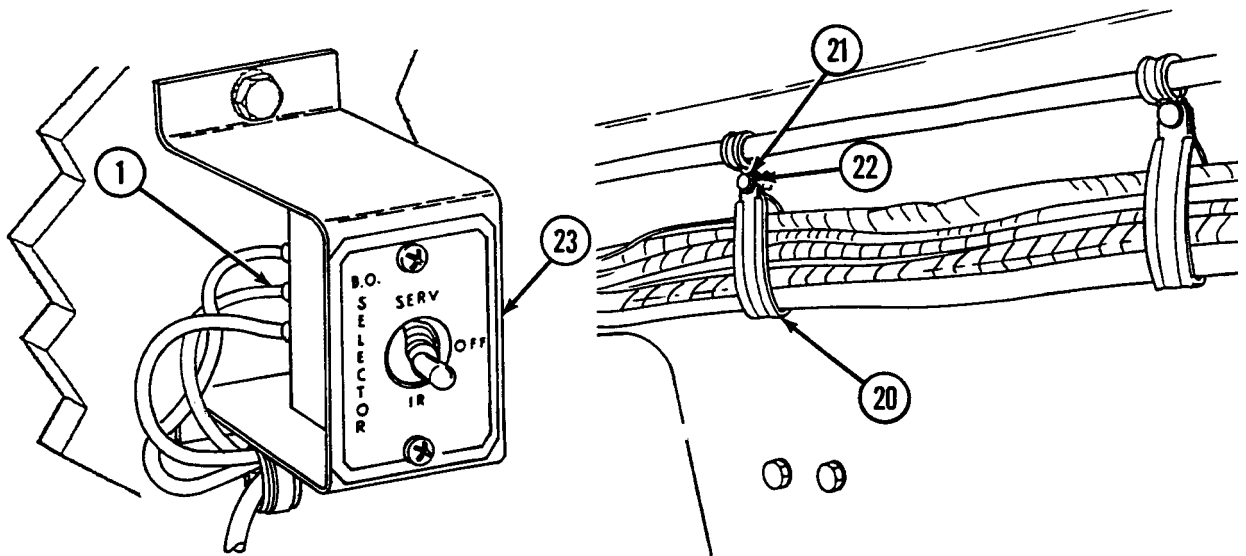
9. Connect connector (7) to main switch panel (27).
 10. Connect two connectors (5 and 6) to switch panel, radio, and bilge pump to bulkhead wiring harness (26).



11. Connect two connectors (3 and 4) to gage panel to bulkhead wiring harness (25).
12. Connect connector (2) to dome light (24).



13. Connect connector (1) to rigger's service light switch (23).
14. Install 11 clamps (20) using screw (21) and lockwasher (22) for each.



NOTE

Follow-on maintenance: Install air inlet grille if removed (see WP 0342 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

STARTER SWITCH WIRING HARNESS (11671226) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00

Materials/Parts

Nuts (4) (item 351, WP 0491 00)
 Screws (4) (item 587, WP 0491 00)

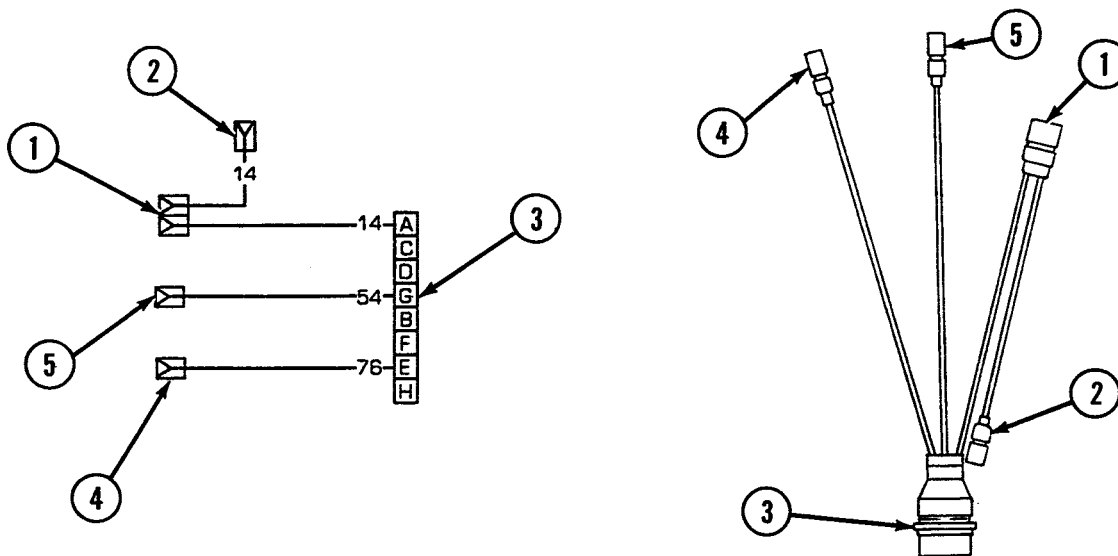
Equipment Condition

Main switch panel removed (see WP 0159 00)

WARNING

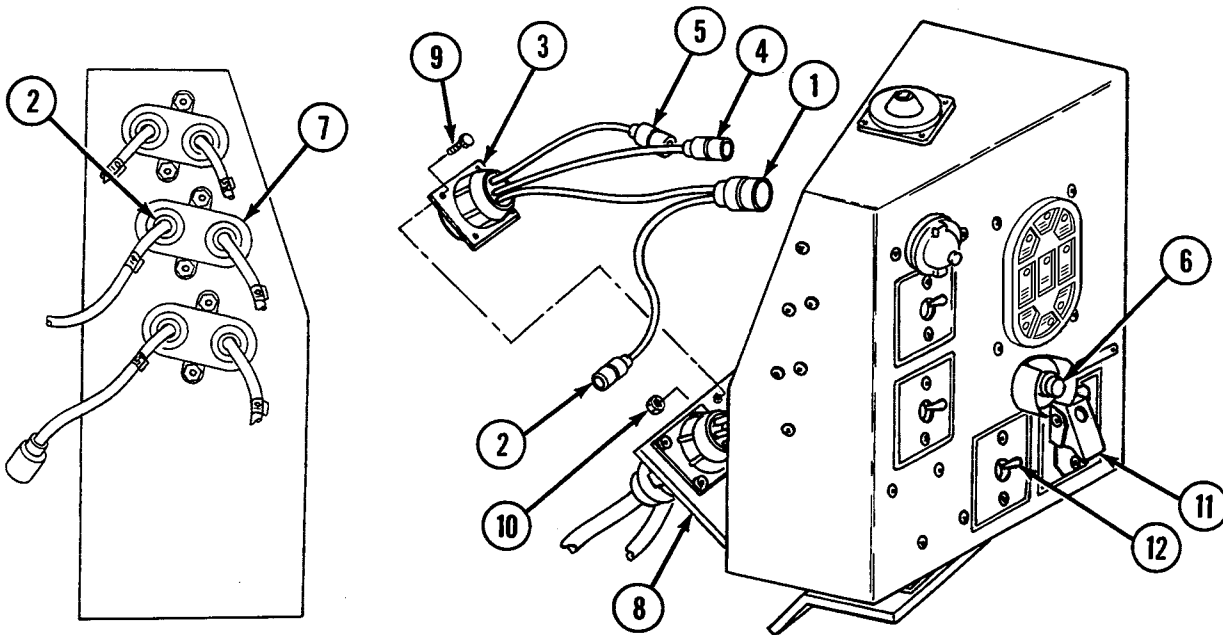
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Starter switch	14
2	Circuit breaker	14
3	Main switch panel outlet	54, 14, 76
4	Fuel pump switch	76
5	Fuel shutoff switch	54



Removal

1. Disconnect connector (1) from starter switch (6).
2. Disconnect connector (2) from circuit breaker (7).
3. Remove connector (3) from main switch panel outlet (8) by removing four screws (9) and four nuts (10).
4. Disconnect connector (4) from fuel pump switch (11).
5. Disconnect connector (5) from fuel shutoff switch (12).



Disassembly

1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect connector (5) to fuel shutoff switch (12).
2. Connect connector (4) to fuel pump switch (11).
3. Install connector (3) to main switch panel outlet (8) using four nuts (10) and four screws (9).
4. Connect connector (2) to circuit breaker (7).
5. Connect connector (1) to starter switch (6).

NOTE

Follow-on maintenance: Install main switch panel (see WP 0159 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
ENGINE WIRING HARNESS (DUAL VOLTAGE) (11672416) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (4) (item 637, WP 0491 00)
Lockwashers (2) (item 719, WP 0491 00)
Nut (item 436, WP 0491 00)
Nut (item 488, WP 0491 00)
Nuts (4) (item 666, WP 0491 00)
Nut, self-locking (item 492, WP 0491 00)
Screw (item 383, WP 0491 00)
Screws (2) (item 405, WP 0491 00)
Screws (4) (item 601, WP 0491 00)

Materials/Parts (cont.)

Screws (7) (item 856, WP 0491 00)
Strap (item 863, WP 0491 00)
Washers (2) (item 614, WP 0491 00)
Washers, flat (4) (item 274, WP 0491 00)
Washer, flat (item 361, WP 0491 00)
Washer, flat (item 717, WP 0491 00)

References

WP 0255 00 thru 0264 00

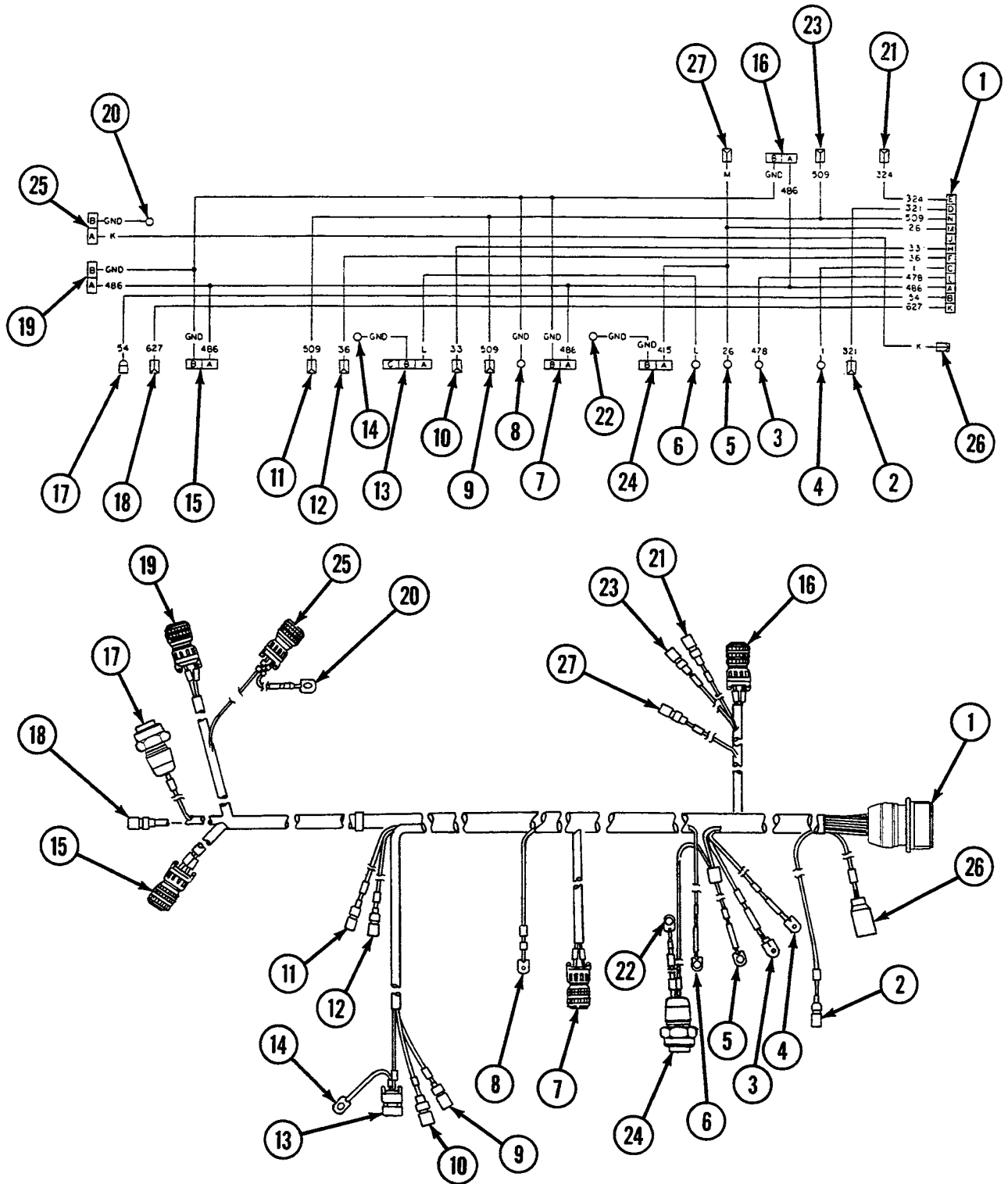
Equipment Condition

Powerplant removed (see WP 0098 00)

WARNING

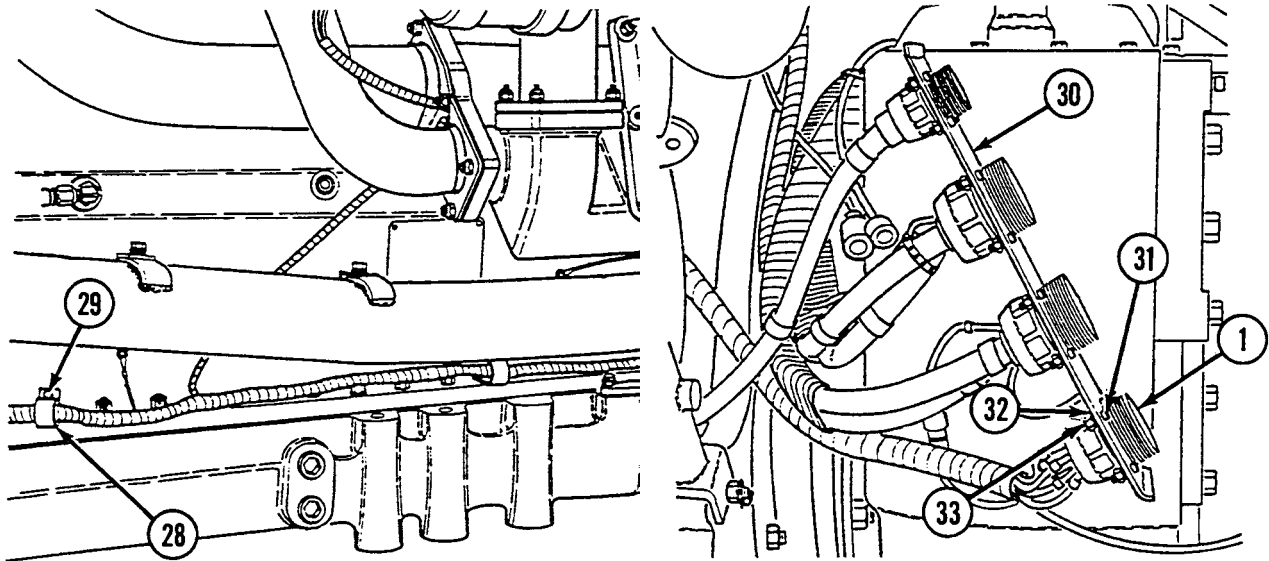
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Engine disconnect	324, 321, 509, 26, 33, 36, 1, 478, 486, 54, 627
2	Transmission oil pressure sending unit	321
3, 4, 5, 6	Generator	478, 1, 26, L
7	Manifold preheat coil—left side	486, GND
8	Ground	GND
9	Engine high oil temperature switch	509
10	Engine oil temperature sending unit	33
11	Engine low oil pressure switch	509
12	Engine oil pressure sending unit	36
13	Time totalizing meter	L, GND
14	Ground	GND
15	Fuel solenoid—left side	486, GND
16	Fuel solenoid—right side	486, GND
17	Fuel shutoff solenoid	54
18	Governor solenoid	627
19	Manifold preheat coil—right side	486, GND
20	Ground	GND
21	Transmission oil temperature sending unit	324
22	Ground	GND
23	Transmission high oil temperature switch	509
24	Generator blower	415, GND
25	Module auto water drain	GND, K
26	Module starter wiring harness	K
27	Module starter wiring harness	M

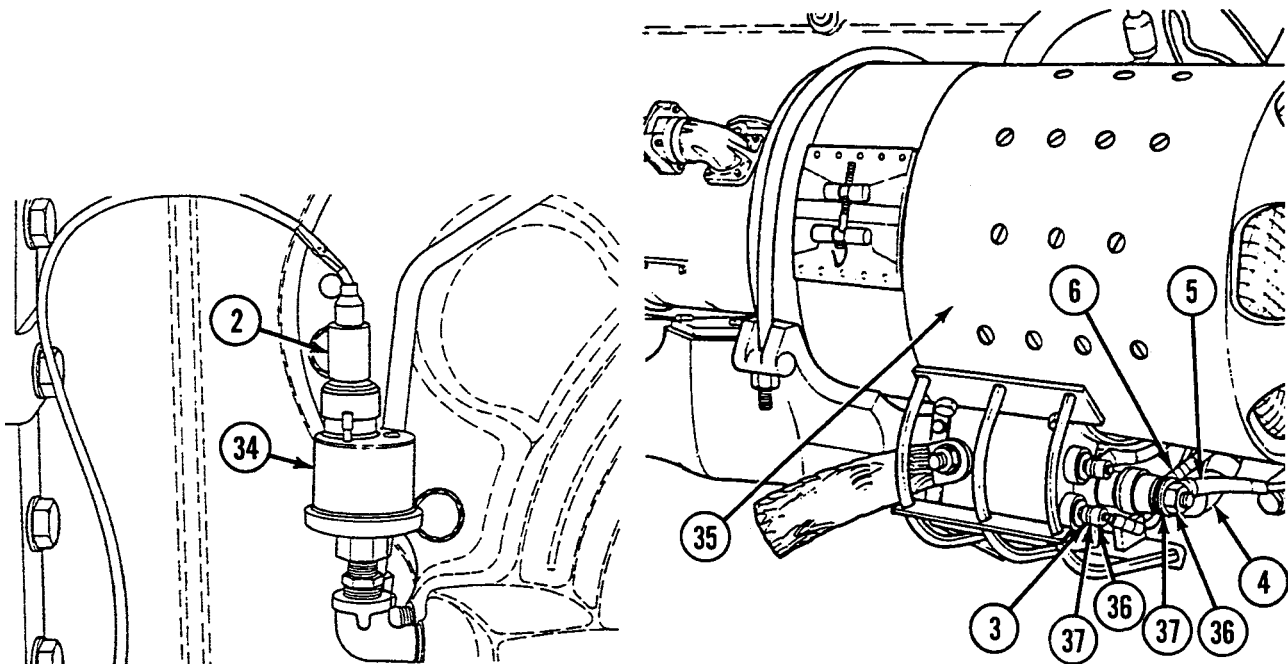


Removal

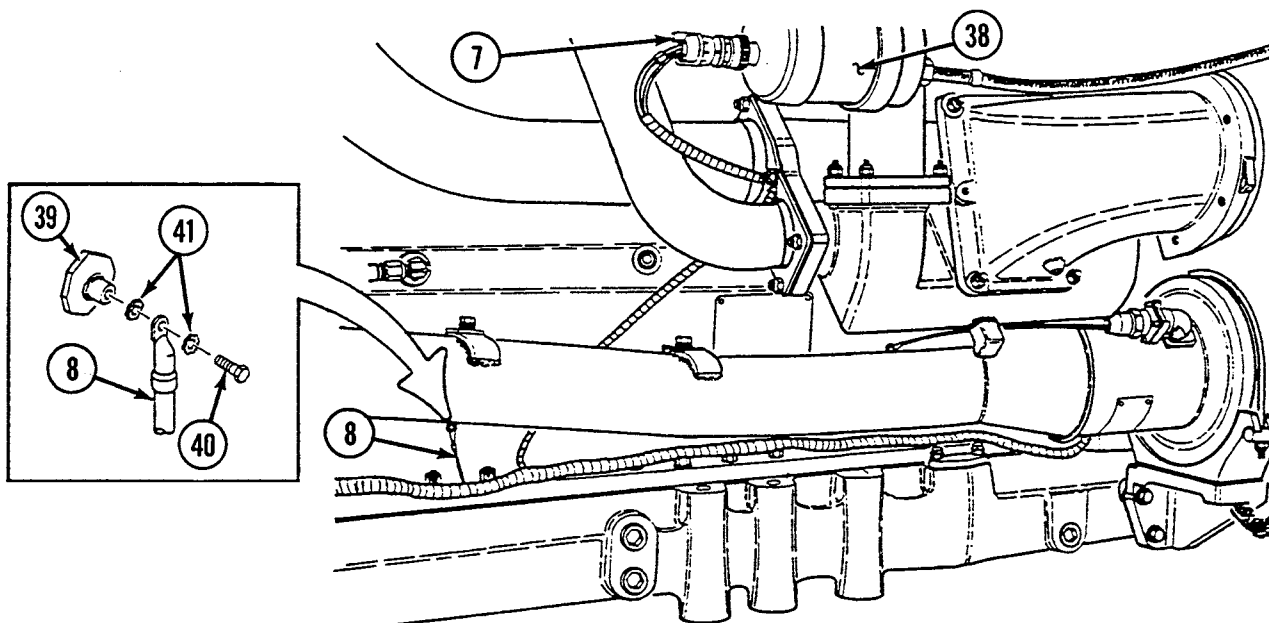
1. Remove seven clamps (28) by removing screw (29) from each.
2. Disconnect connector (1) from engine disconnect (30) by removing four screws (31), four lockwashers (32), and four nuts (33).



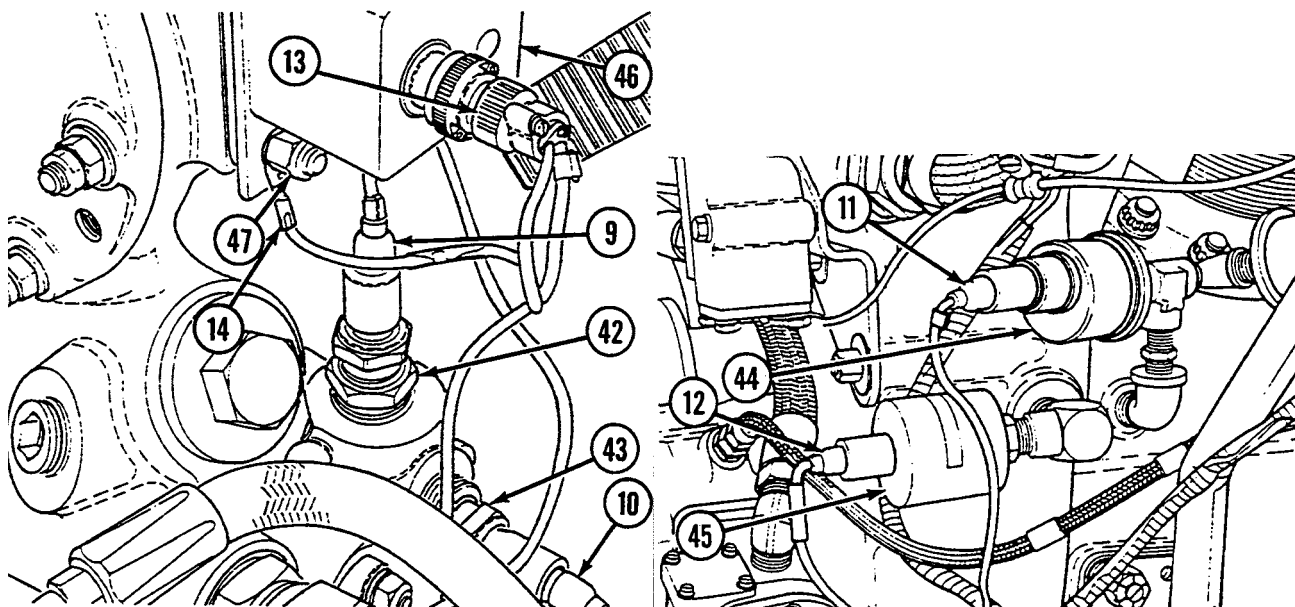
3. Disconnect connector (2) from transmission oil pressure sending unit (34).
4. Remove four connectors (3, 4, 5, and 6) from generator (35) by removing two nuts (36) and two flat washers (37).



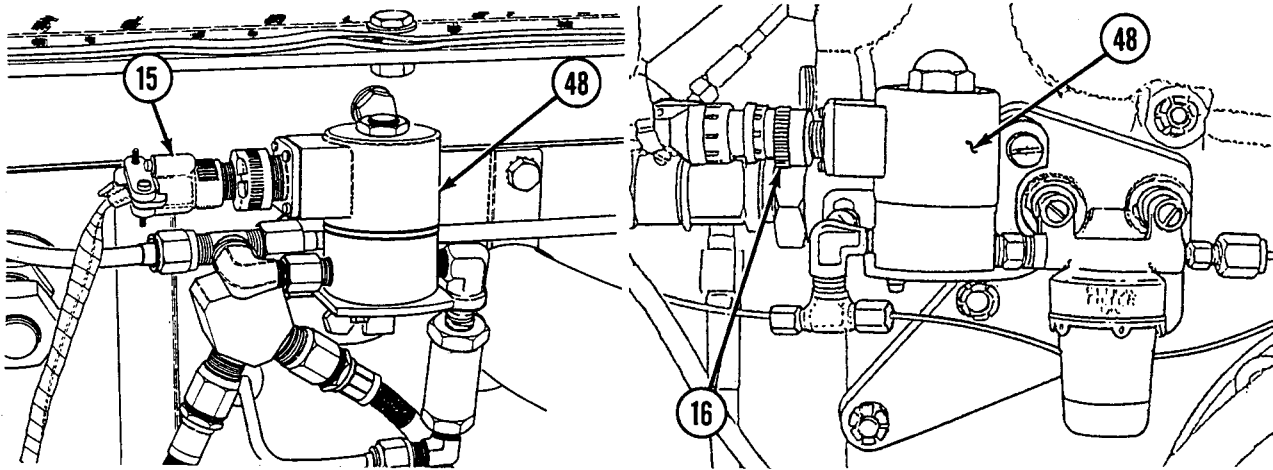
5. Disconnect connector (7) from left manifold heater ignition unit (38).
6. Remove ground lead (8) from engine (39) by removing bolt (40) and two washers (41).



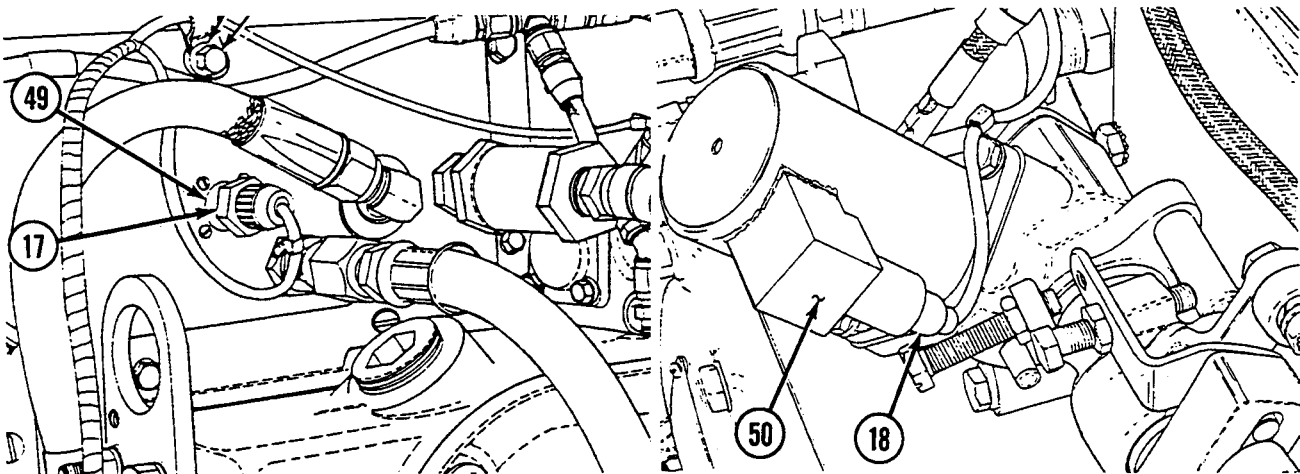
7. Disconnect connector (9) from engine high oil temperature switch (42).
8. Disconnect connector (10) from engine oil temperature sending unit (43).
9. Disconnect connector (11) from engine low oil pressure switch (44).
10. Disconnect connector (12) from engine oil pressure sending unit (45).
11. Disconnect connector (13) from time totalizing meter (46).



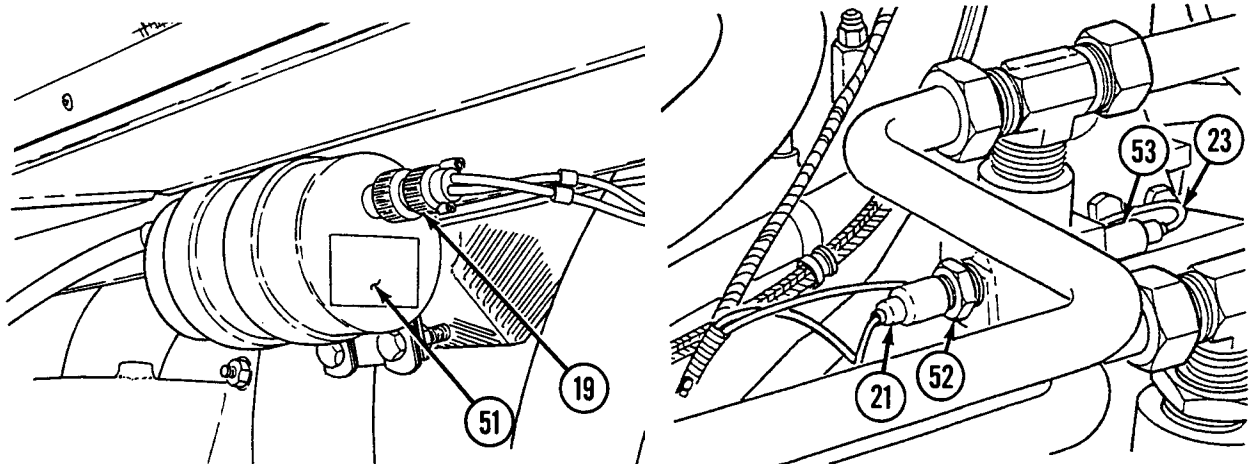
12. Remove ground lead (14) by removing nut (47).
13. Disconnect two connectors (15 and 16) from left and right fuel solenoids (48).



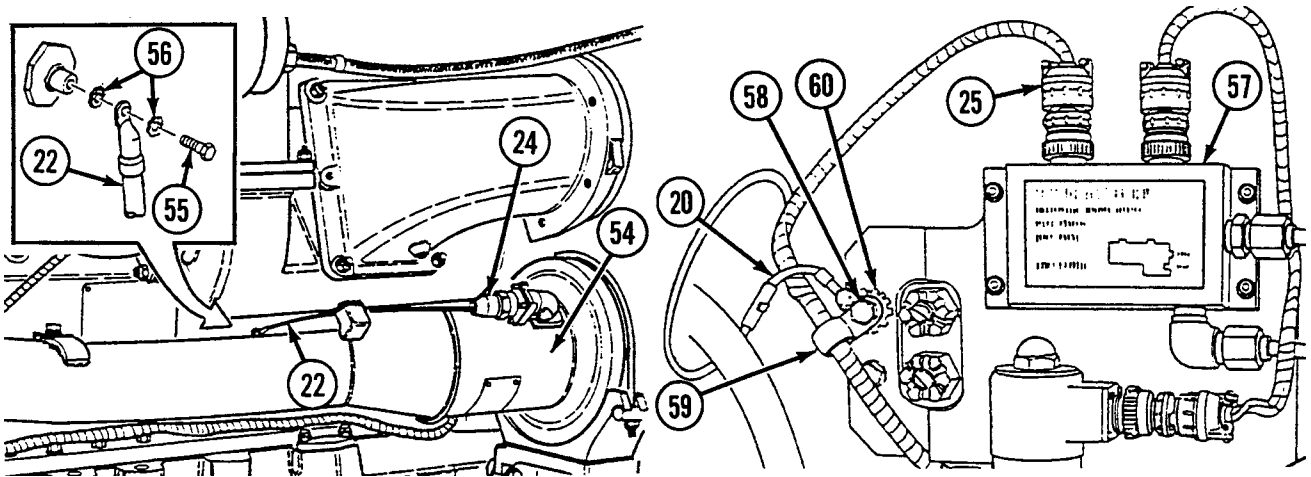
14. Disconnect connector (17) from fuel shutoff solenoid (49).
15. Disconnect connector (18) from governor solenoid (50).



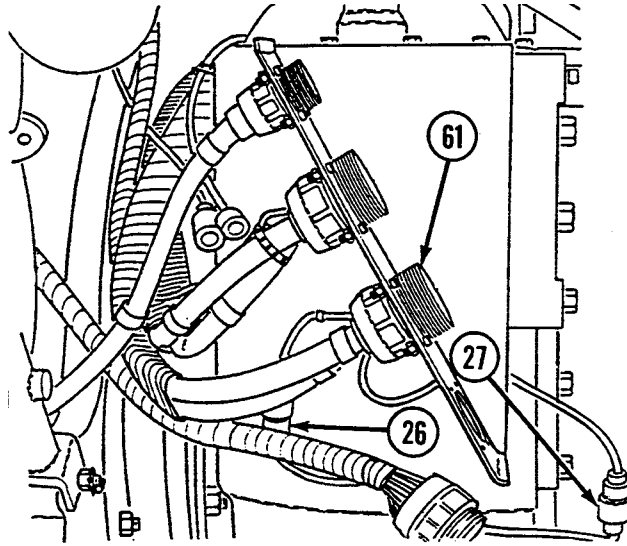
16. Disconnect connector (19) from right manifold heater ignition unit (51).
17. Disconnect connector (21) from transmission high oil temperature sending unit (52).
18. Disconnect connector (23) from transmission high oil temperature switch (53).



19. Disconnect connector (24) from generator blower motor (54).
20. Remove ground lead (22) by removing screw (55) and two lockwashers (56).
21. Disconnect connector (25) from module auto water drain (57).
22. Remove ground lead (20) by removing screw (58), clamp (59), and two lockwashers (60).



23. Disconnect two connectors (26 and 27) from module starter wiring harness (61).



Disassembly

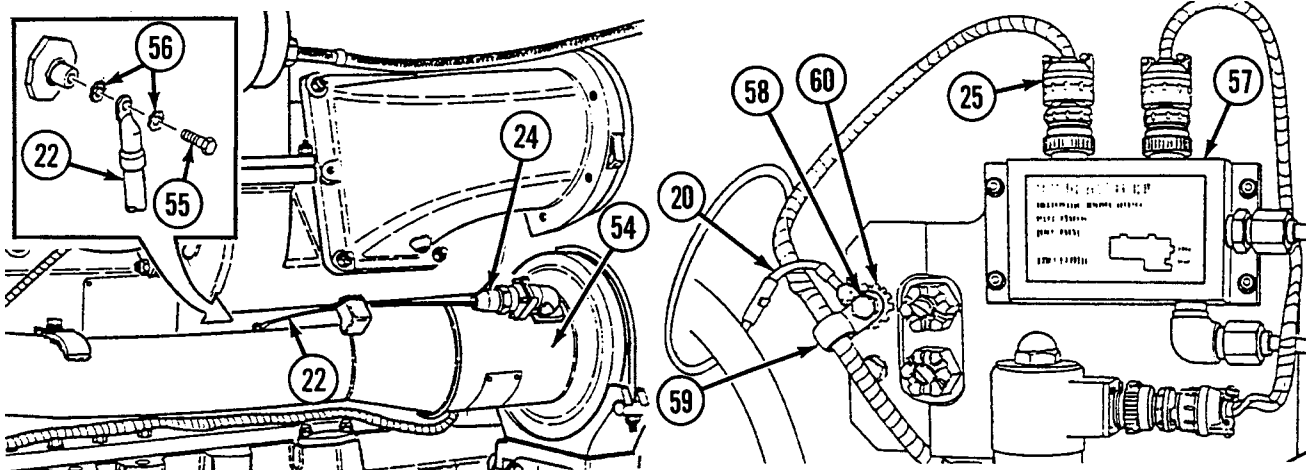
1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

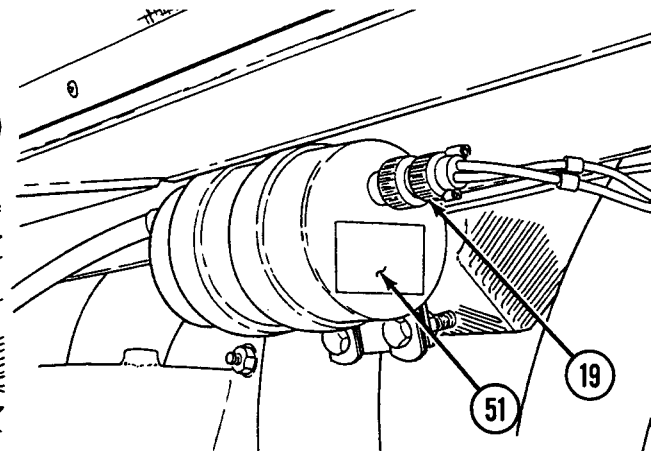
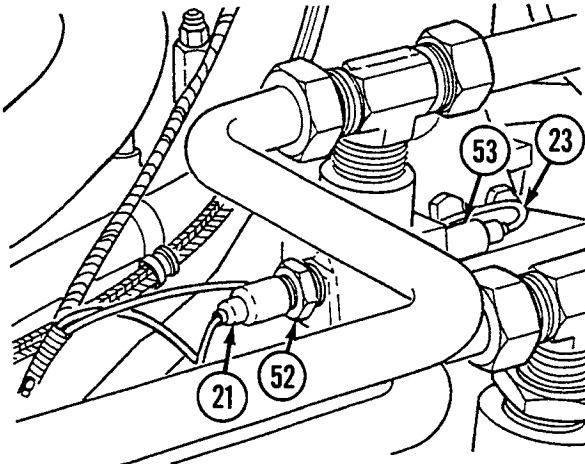
1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

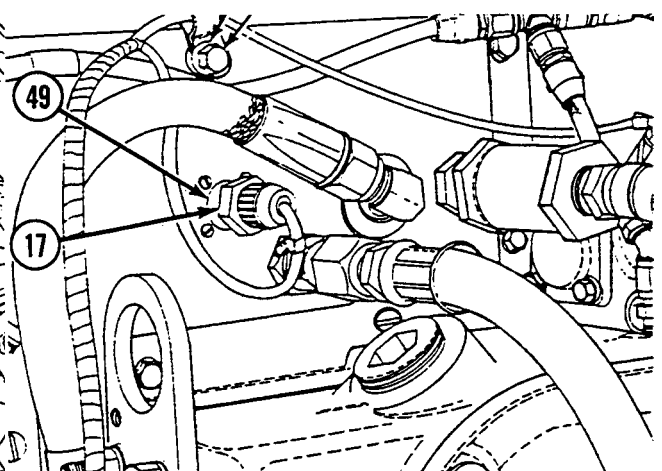
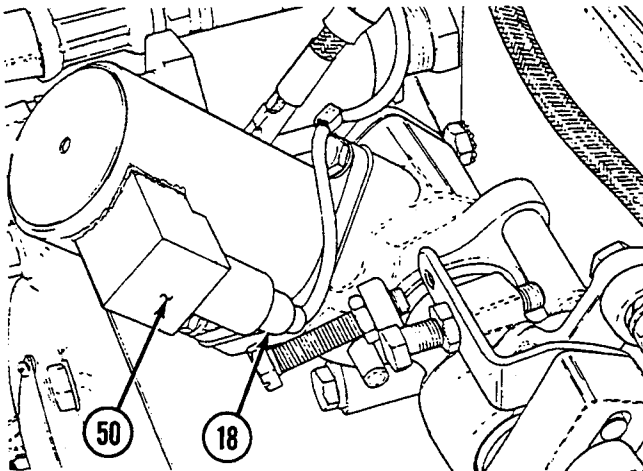
1. Connect two connectors (26 and 27) to module starter wiring harness (61).
2. Connect connector (25) to module auto water drain (57).
3. Install ground lead (20) using two lockwashers (60), clamp (59), and screw (58).
4. Install ground lead (22) using two lockwashers (56) and screw (55).
5. Connect connector (24) to generator blower motor (54)



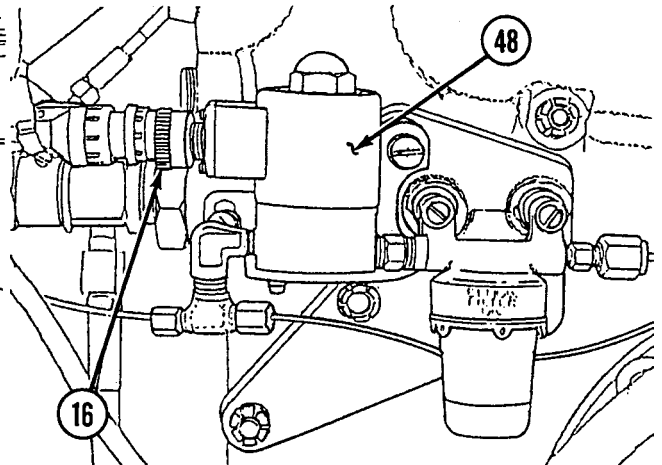
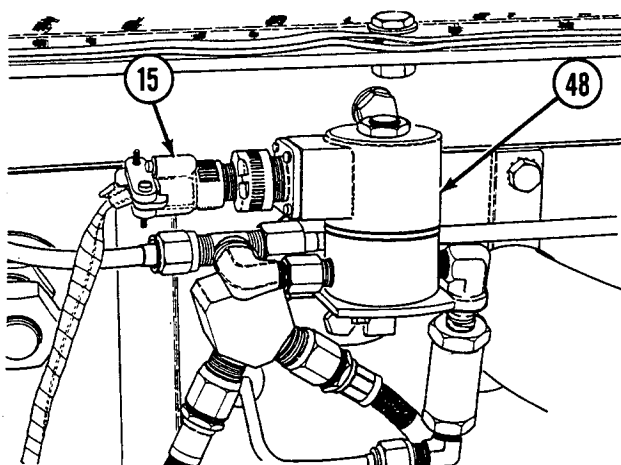
6. Connect connector (23) to transmission high oil temperature switch (53).
7. Connect connector (21) to transmission high oil temperature sending unit (52).
8. Connect connector (19) to right manifold preheat coil (51).



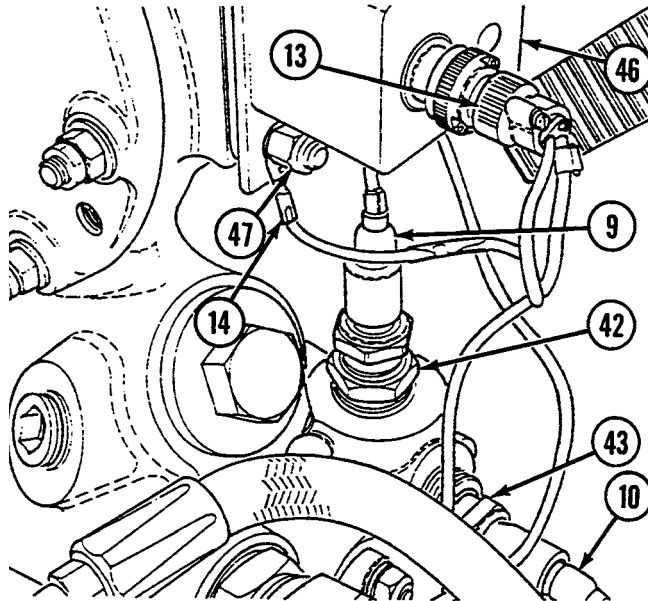
9. Connect connector (18) to governor solenoid (50).
10. Connect connector (17) to fuel shutoff solenoid (49).



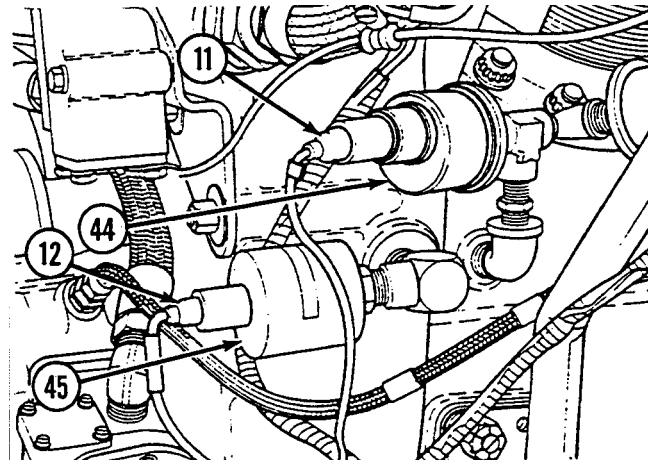
11. Connect two connectors (15 and 16) to left and right fuel solenoid (48).



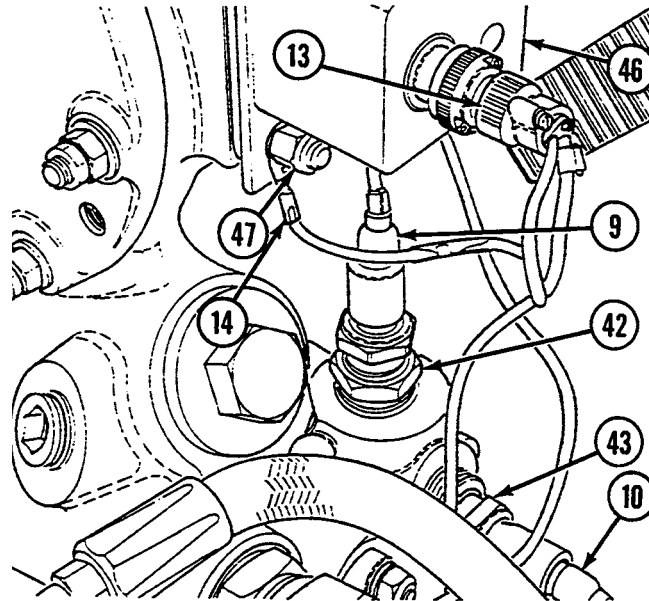
12. Install ground lead (14) using nut (47).
13. Connect connector (13) to time totalizing meter (46).



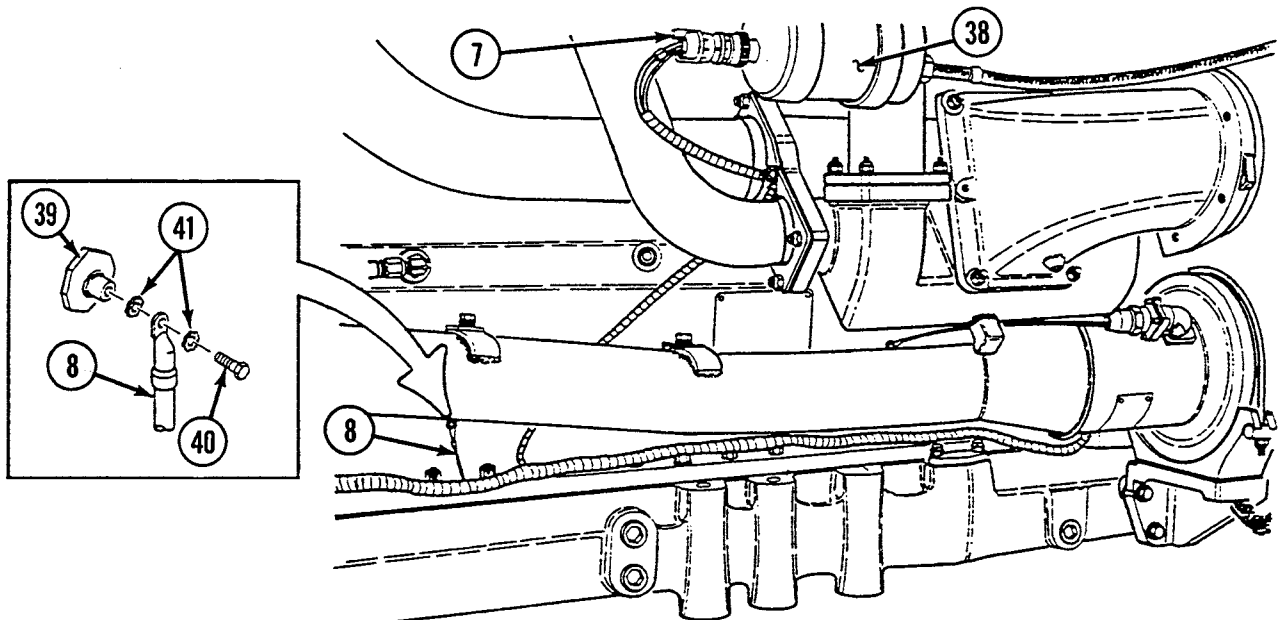
14. Connect connector (12) to engine oil pressure sending unit (45).
15. Connect connector (11) to engine low oil pressure switch (44).



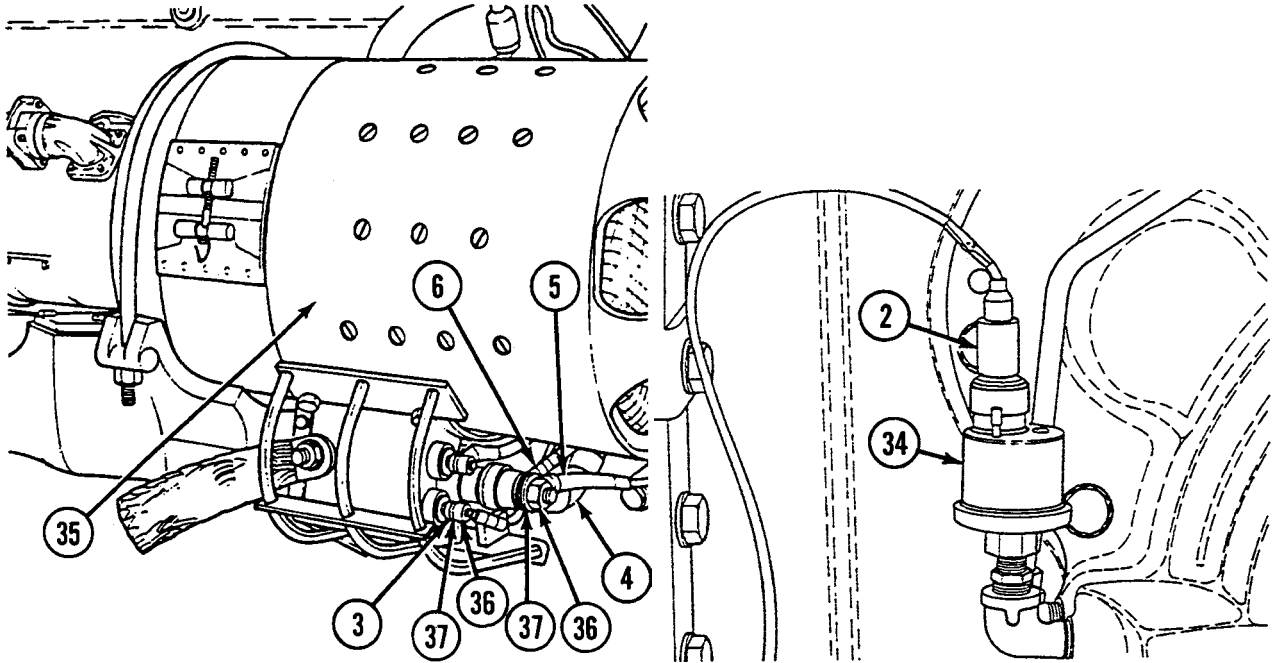
16. Connect connector (10) to engine oil temperature sending unit (43).
17. Connect connector (9) to engine high oil temperature switch (42).



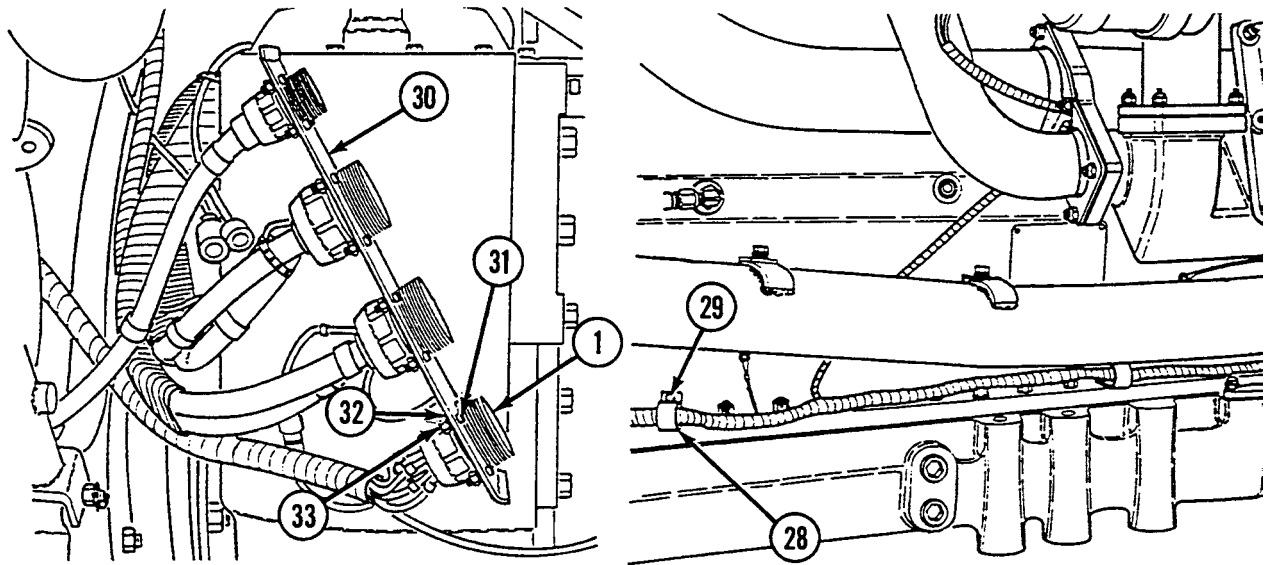
18. Install ground lead (8) to engine (39) using two washers (41) and bolt (40).
19. Connect connector (7) to left manifold preheat coil (38).



20. Install four connectors (3, 4, 5, and 6) to generator (35) using two flat washers (37) and two nuts (36).
21. Connect connector (2) to transmission oil pressure sending unit (34).



22. Connect connector (1) to engine disconnect (30) using four screws (31), four lockwashers (32), and four nuts (33).
23. Install seven clamps (28) using screw (29) for each.



NOTE

Follow-on maintenance: Install powerplant (see WP 0098 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

ENGINE WIRING HARNESS (SINGLE VOLTAGE) (11671816) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Bolt (item 383, WP 0491 00)
 Lockwashers (2) (item 614, WP 0491 00)
 Lockwashers (2) (item 622, WP 0491 00)
 Lockwashers (4) (item 637, WP 0491 00)
 Lockwasher (item 719, WP 0491 00)
 Nut (item 436, WP 0491 00)
 Nut (item 488, WP 0491 00)
 Nuts (4) (item 666, WP 0491 00)
 Nut, self-locking (item 492, WP 0491 00)

Materials/Parts (cont.)

Screws (8) (item 405, WP 0491 00)
 Screws (4) (item 601, WP 0491 00)
 Screw (item 793, WP 0491 00)
 Strap (item 863, WP 0491 00)
 Washers, flat (3) (item 274, WP 0491 00)

References

WP 0255 00 thru 0264 00

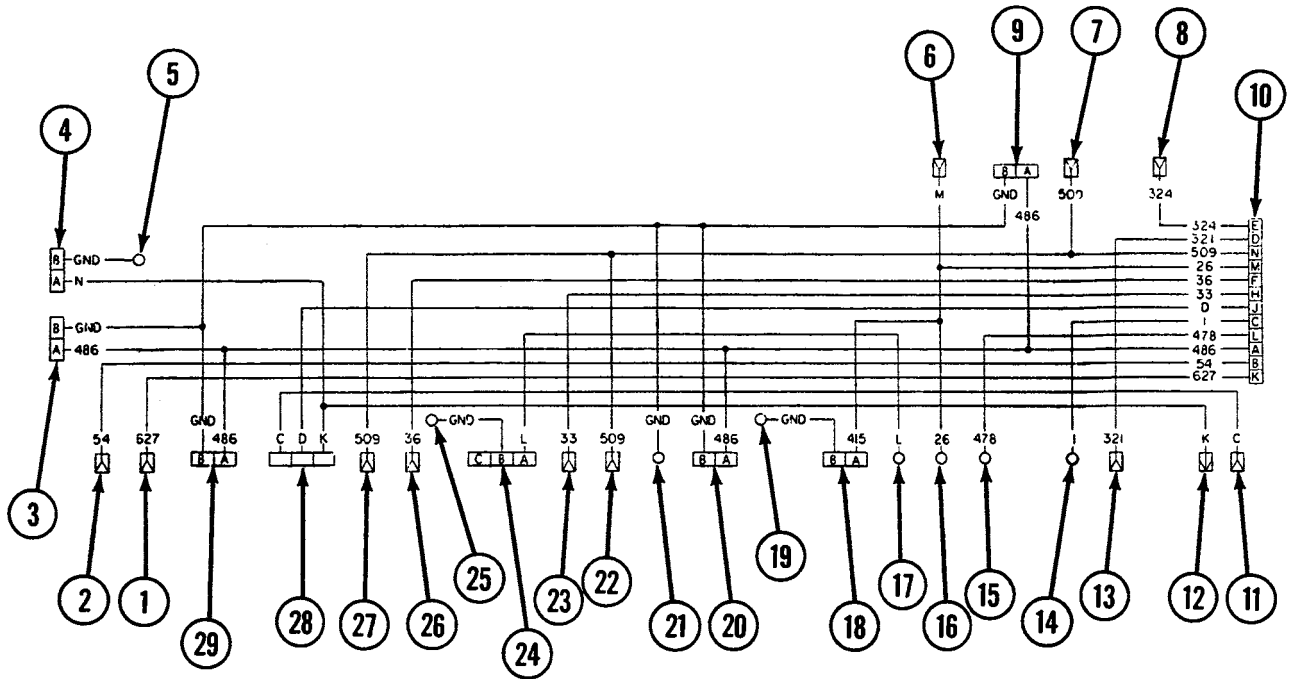
Equipment Condition

Powerplant removed (see WP 0098 00)

WARNING

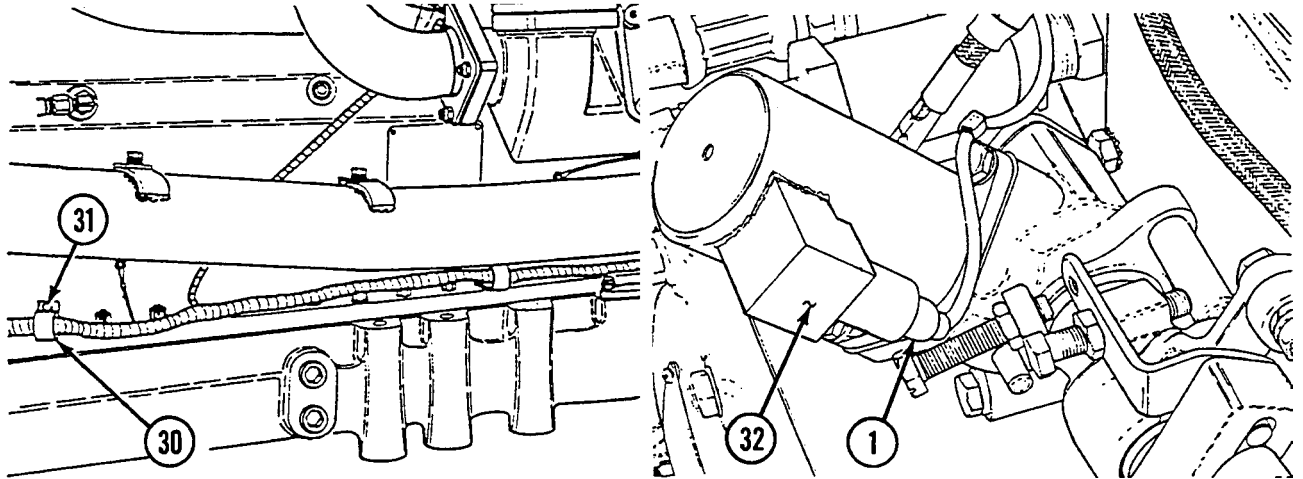
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Governor solenoid	627
2	Fuel shut off	54
3	Manifold preheat coil—right side	486, GND
4	Module auto water drain	GND, N
5	Ground	GND
6	Module starter wiring harness	M
7	Transmission high oil temperature switch	509
8	Transmission oil temperature sending unit	324
9	Fuel solenoid—left side	GND, 486
10	Engine disconnect	324, 321, 509, 26, 36, 33, D, 1, 478, 486, 54, 627
11	Module starter wiring harness	C
12	Module starter wiring harness	K
13	Transmission oil pressure sending unit	321
14	Generator	1
15	Generator	478
16	Generator	26
17	Generator	L
18	Generator blower motor	415, GND
19	Ground	GND
20	Manifold preheat coil—left side	486, GND
21	Ground	GND
22	Engine high oil temperature switch	509
23	Engine oil temperature sending unit	33
24	Time totalizing meter	L, GND
25	Ground	GND
26	Engine oil pressure sending unit	36
27	Engine low oil pressure switch	509
28	Main engine oil pressure switch	C, D, K
29	Fuel solenoid—right side	486, GND

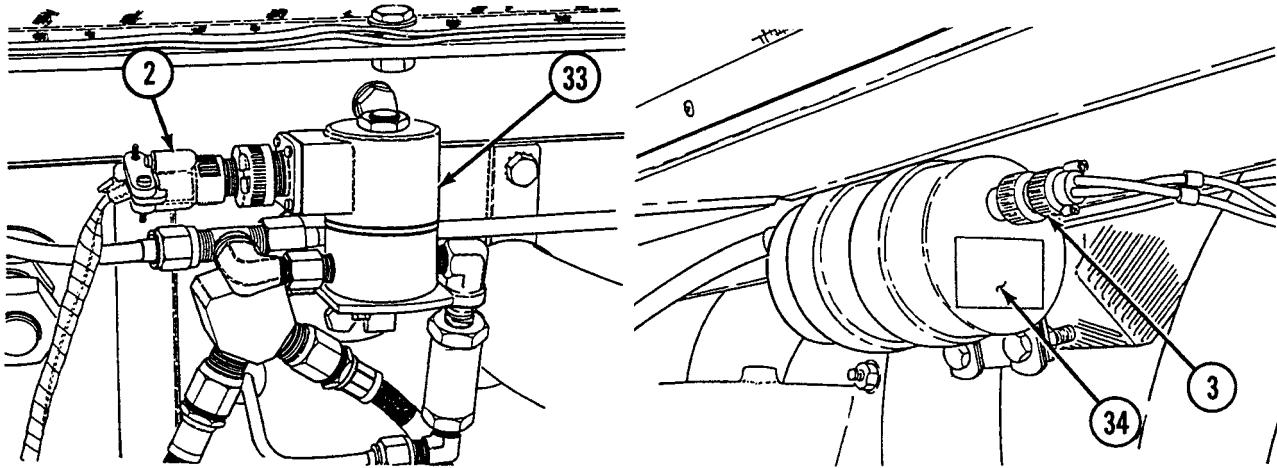


Removal

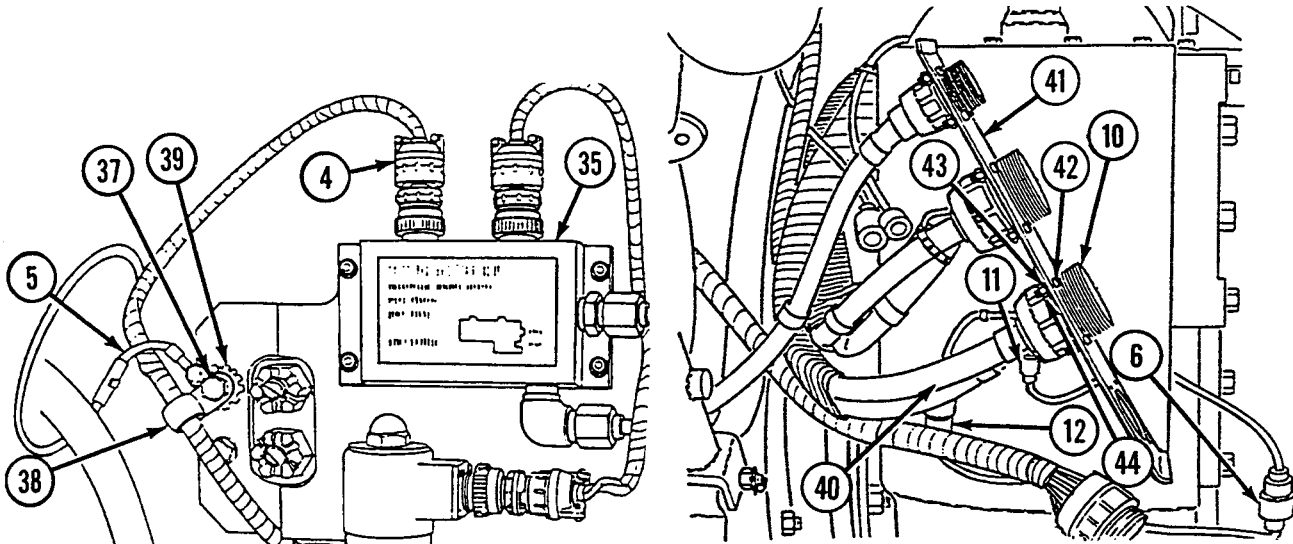
1. Remove seven clamps (30) by removing screw (31) from each.
2. Disconnect connector (1) from governor solenoid (32).



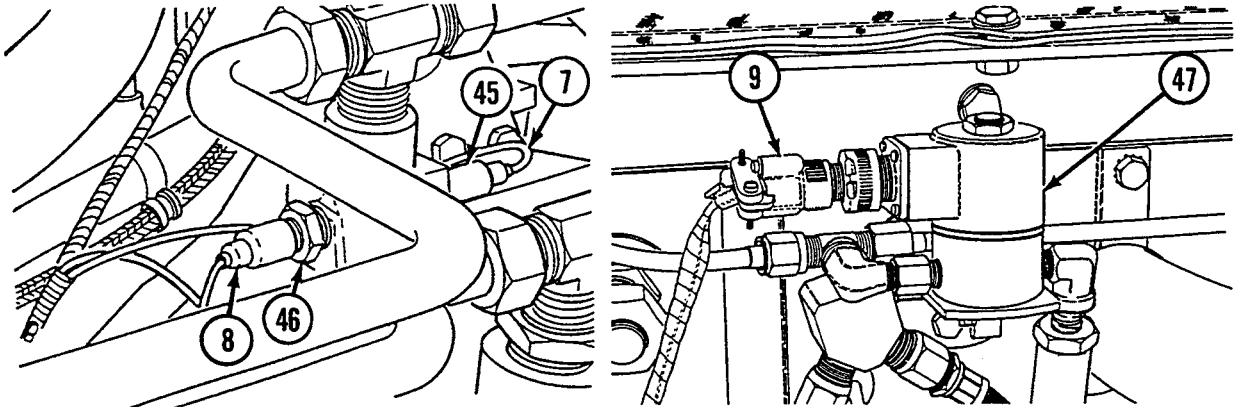
3. Disconnect connector (2) from fuel shutoff (33).
4. Disconnect connector (3) from right side manifold preheat coil (34).



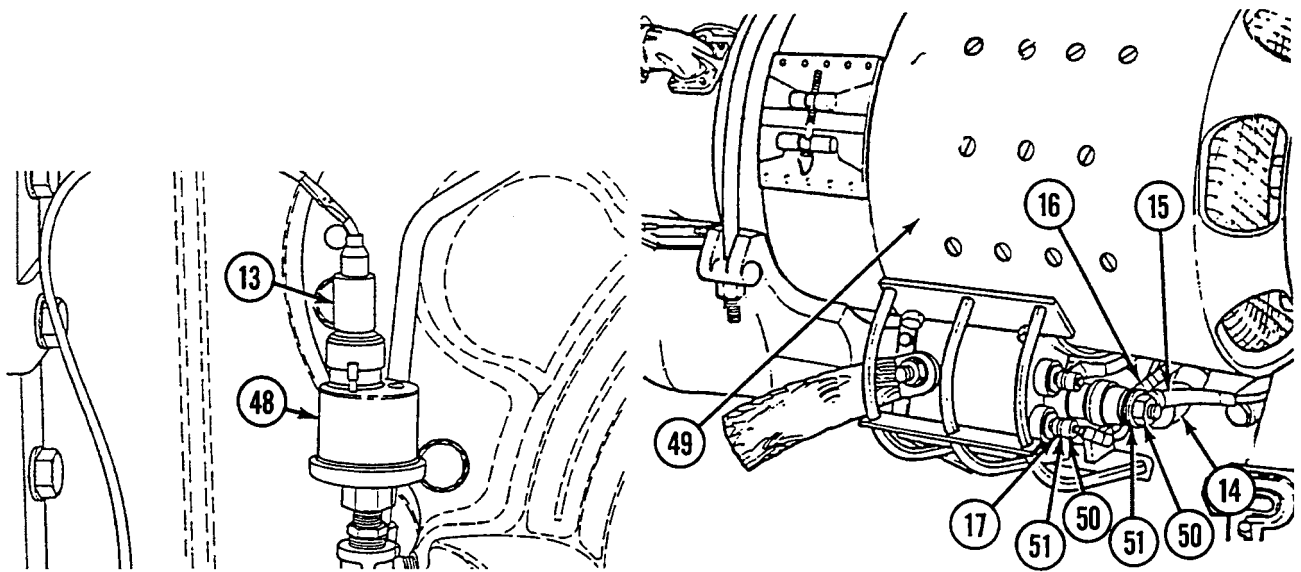
5. Disconnect connector (4) from module auto water drain (35).
6. Remove ground lead (5) from engine (36) by removing screw (37), clamp (38), and two lockwashers (39).
7. Disconnect connectors (6, 11, and 12) from module starter wiring harness (40).
8. Disconnect connector (10) from engine disconnect (41) by removing four screws (42), four lockwashers (43), and four nuts (44).



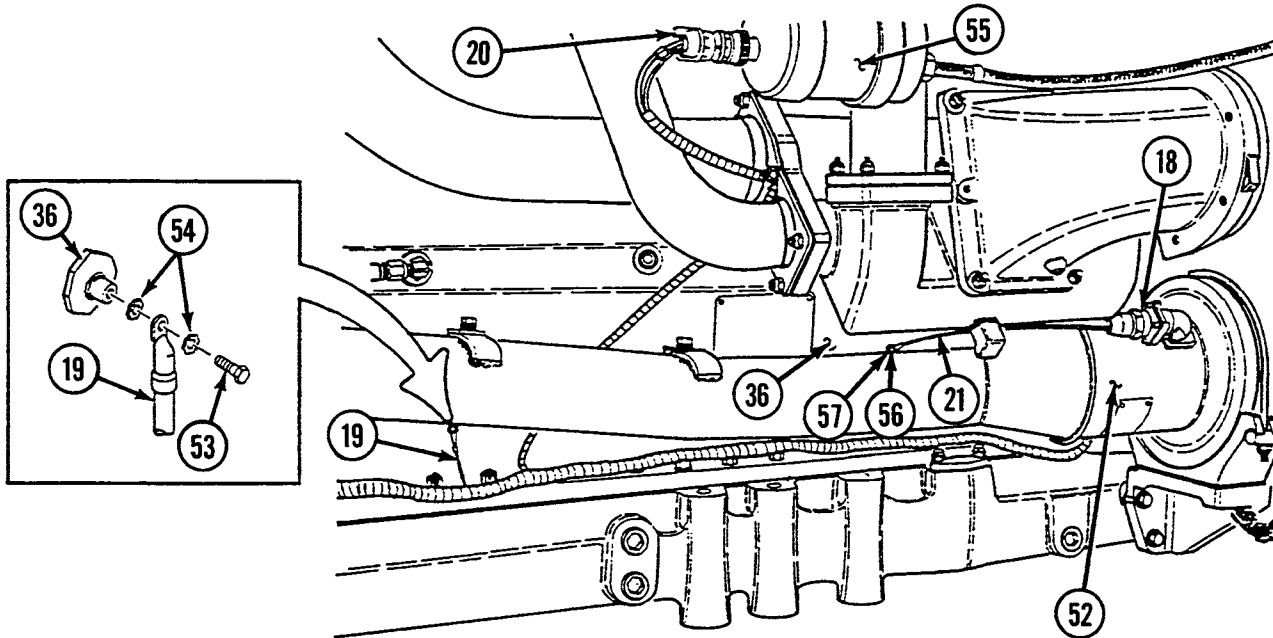
9. Disconnect connector (7) from transmission high oil temperature switch (45).
10. Disconnect connector (8) from transmission oil temperature sending unit (46).
11. Disconnect connector (9) from left side fuel solenoid (47).



12. Disconnect connector (13) from transmission oil pressure sending unit (48).
13. Disconnect four connectors (14 through 17) from generator (49) by removing two nuts (50) and two flat washers (51).

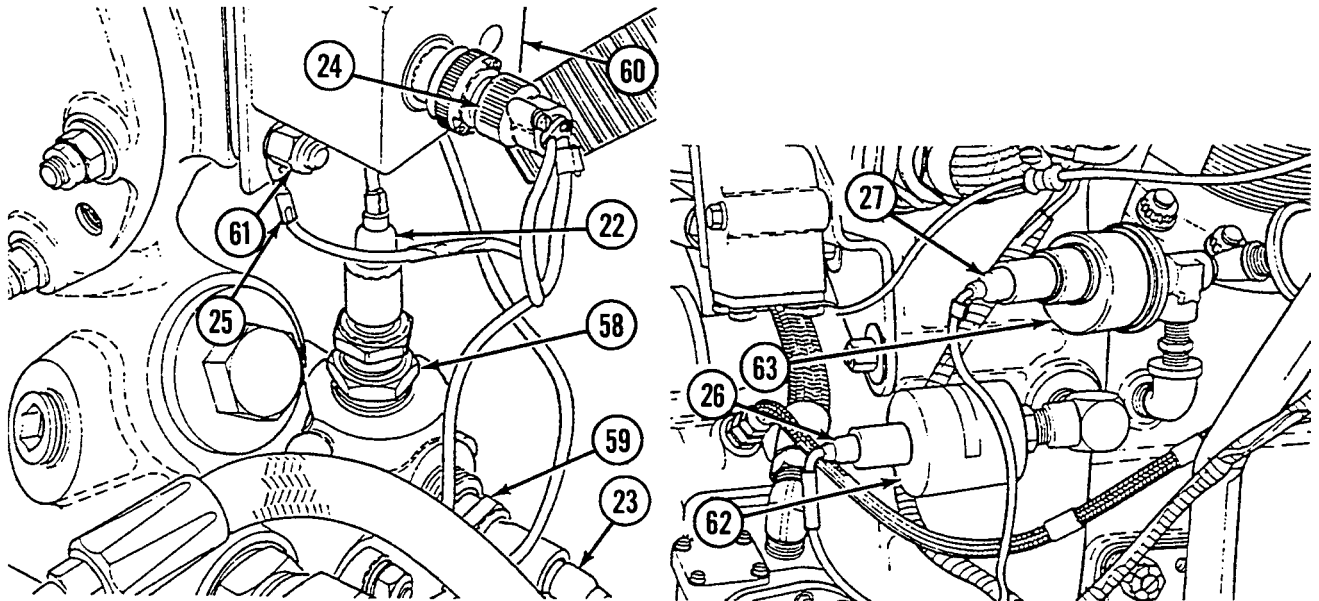


14. Disconnect connector (18) from generator blower (52).
15. Remove ground lead (19) from engine (36) by removing screw (53) and two lockwashers (54).
16. Disconnect connector (20) from left side manifold preheat coil (55).
17. Remove ground lead (21) from engine (36) by removing bolt (56) and two washers (57).

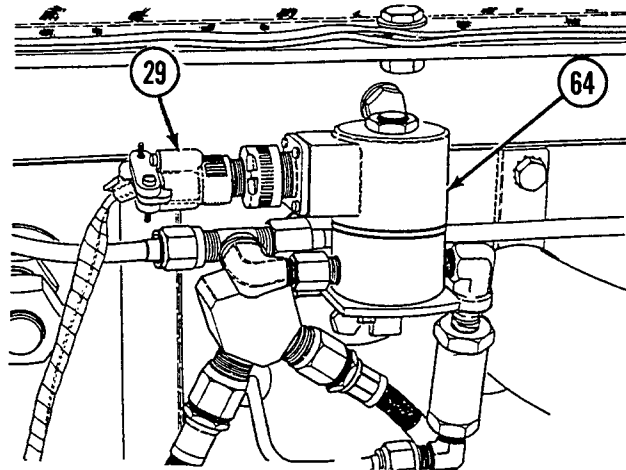


18. Disconnect connector (22) from engine high oil temperature switch (58).
19. Disconnect connector (23) from engine oil temperature sending unit (59).
20. Disconnect connector (24) from time totalizing meter (60).
21. Remove ground lead (25) by removing nut (61).
22. Disconnect connector (26) from engine oil pressure sending unit (62).

23. Disconnect connector (27) from engine low oil pressure switch (63).



24. Disconnect connector (28) from main engine oil pressure switch (64).
 25. Disconnect connector (29) from right side fuel solenoid (65).



Disassembly

1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

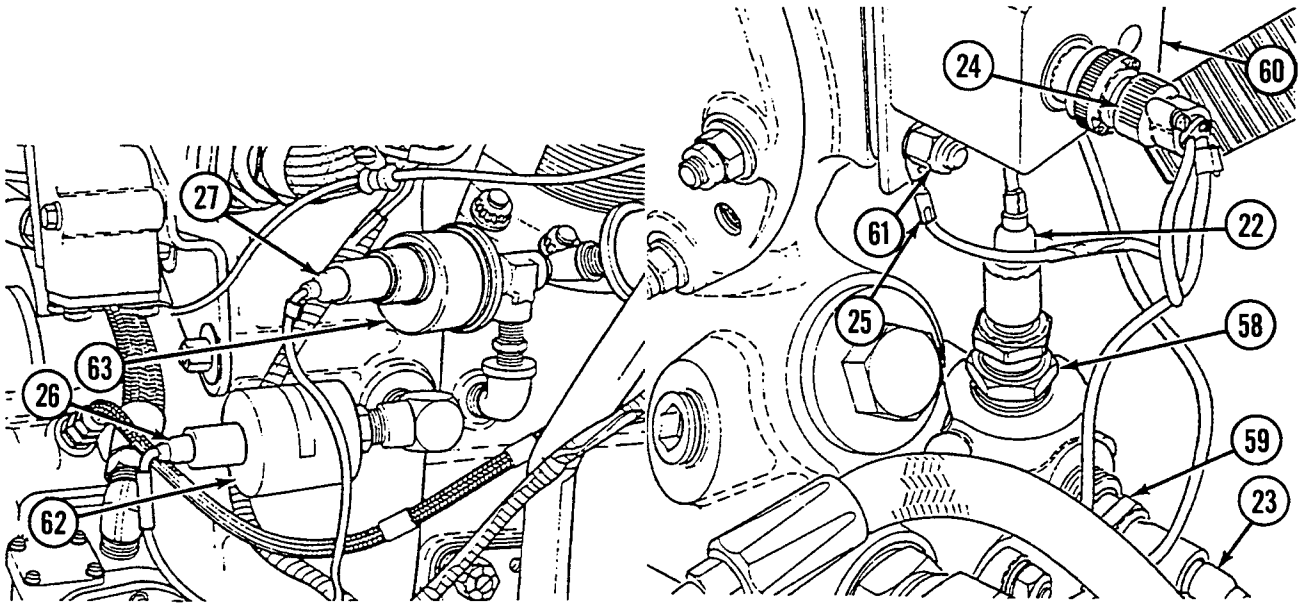
Assembly

1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

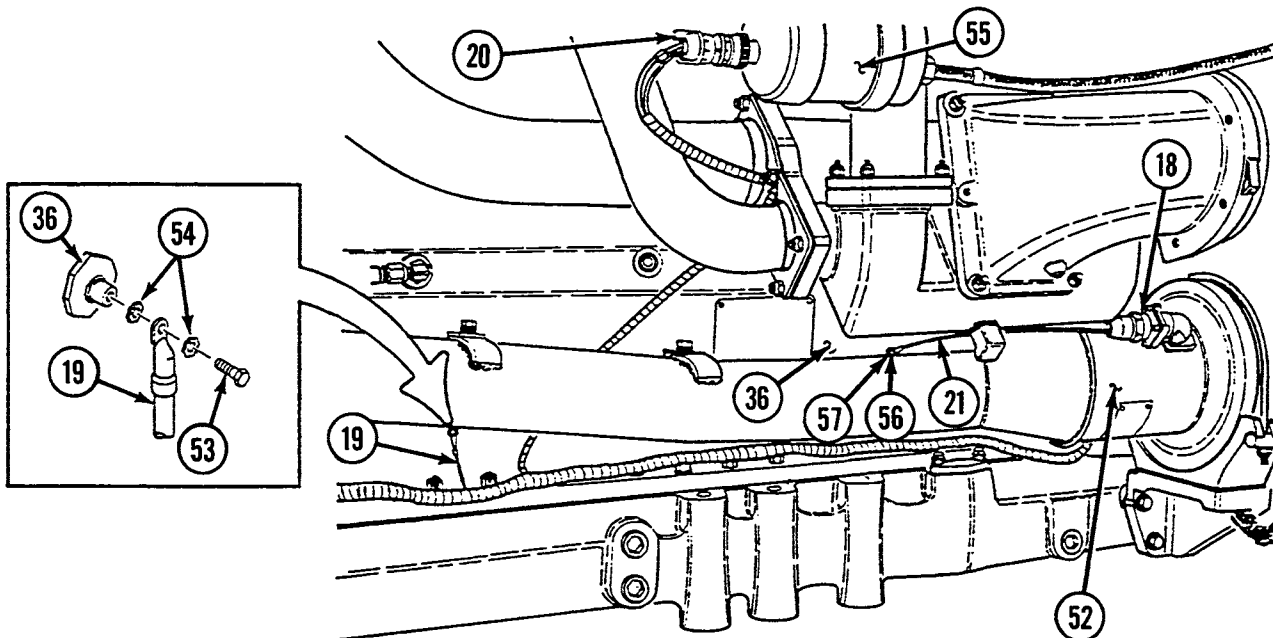
Installation

1. Connect connector (29) to right side fuel solenoid (65).
2. Connect connector (28) to main engine oil pressure switch (64).
3. Connect connector (27) to engine low oil pressure (63).

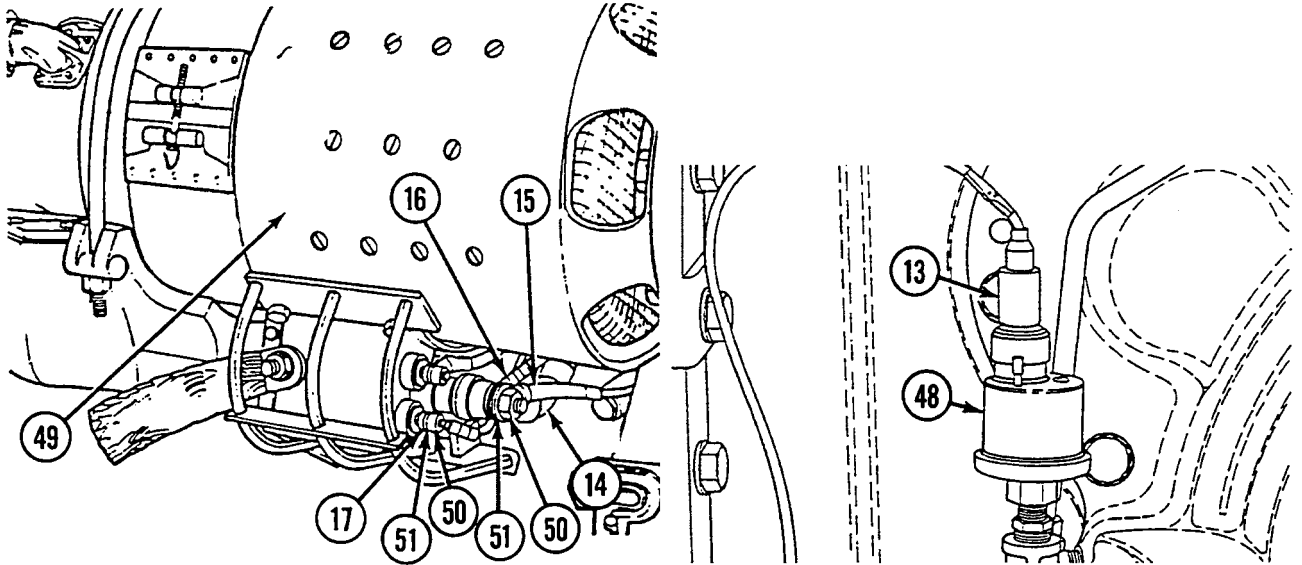
4. Connect connector (26) to engine oil pressure sending unit (62).
5. Install ground lead (25) using nut (61).
6. Connect connector (24) to time totalizing meter (60).
7. Connect connector (23) to engine oil temperature sending unit (59).
8. Connect connector (22) to engine high oil temperature switch (58).



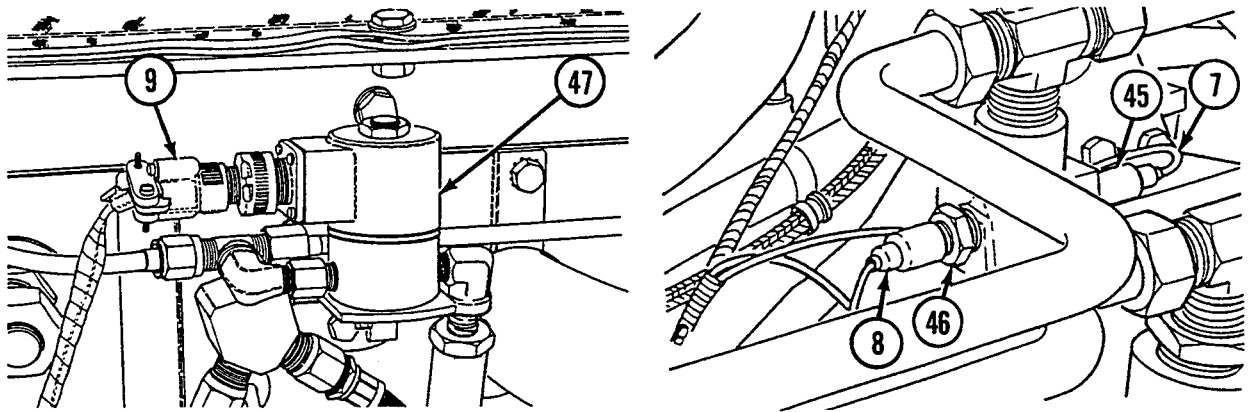
9. Install ground lead (21) to engine (36) using two washers (57) and bolt (56).
10. Connect connector (20) to left side manifold preheat coil (55).
11. Install ground lead (19) to engine (36) using screw (53) and two lockwashers (54).
12. Connect connector (18) to generator blower motor (52).



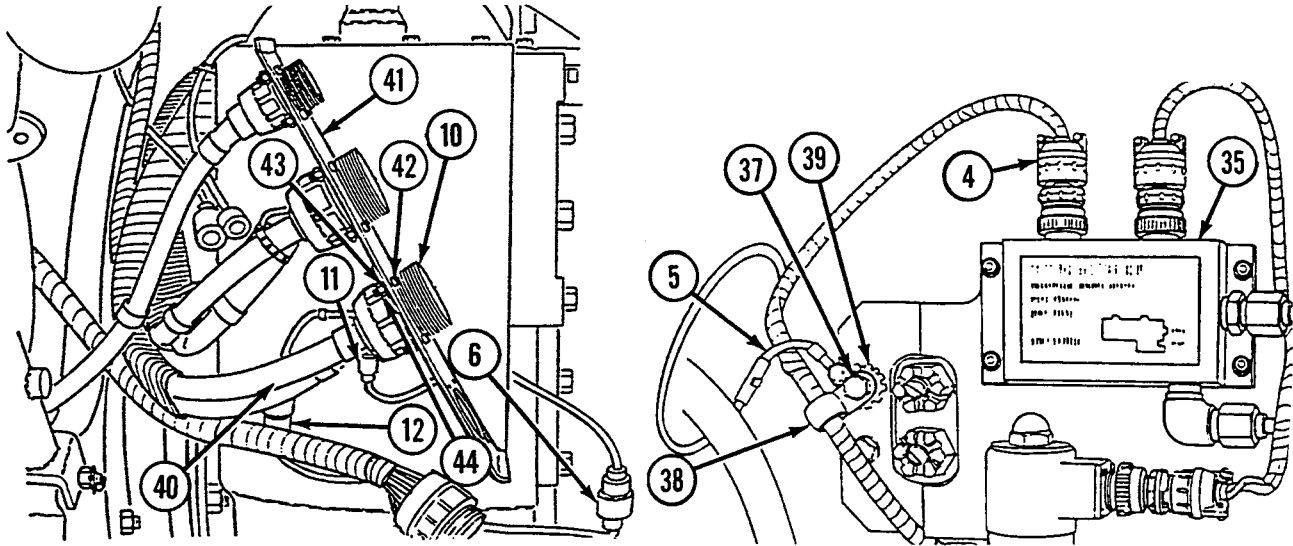
13. Connect four connectors (14 through 17) to generator (49) using two flat washers (51) and two nuts (50).
14. Connect connector (13) to transmission oil pressure sending unit (48).



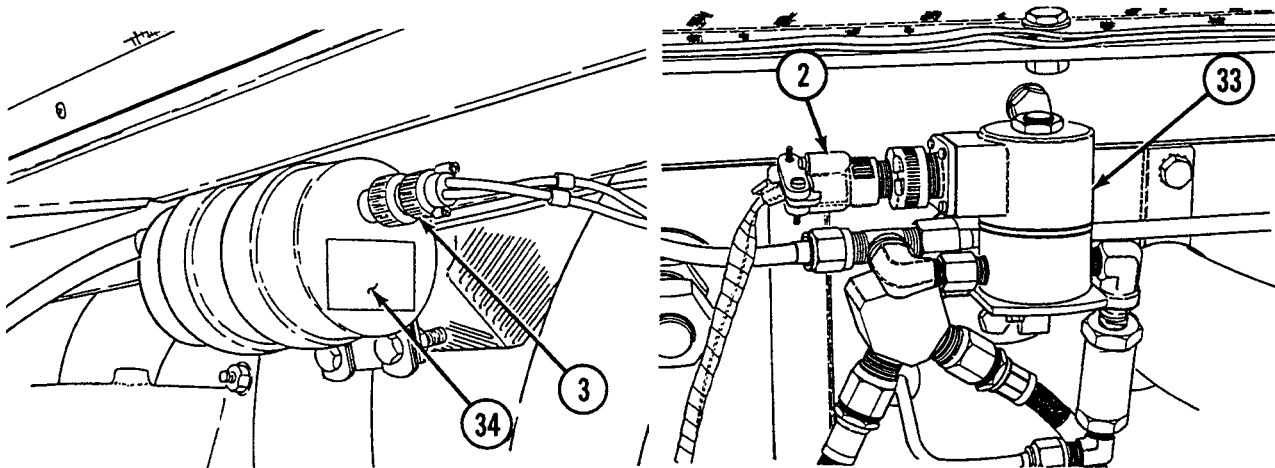
15. Connect connector (9) to left side fuel solenoid (47).
16. Connect connector (8) to transmission oil temperature sending unit (46).
17. Connect connector (7) to transmission high oil temperature switch (45).



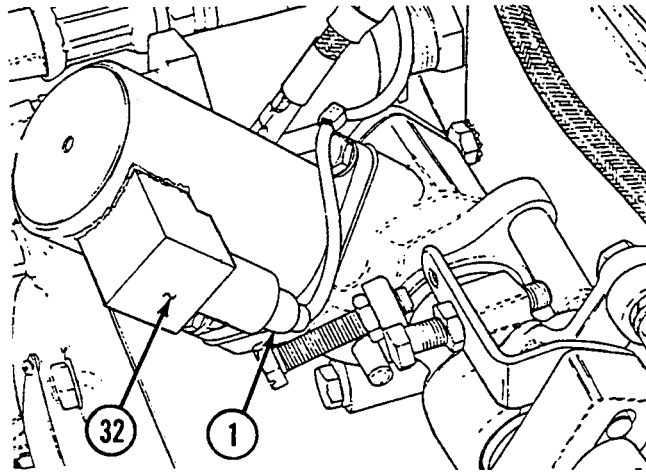
18. Connect connector (10) to engine disconnect (41) using four screws (42), four lockwashers (43), and four nuts (44).
19. Connect connectors (6, 11, and 12) to module starter wiring harness (40).
20. Install ground lead (5) to engine (36) using screw (37), two lockwashers (39), and clamp (38).
21. Connect connector (4) to module auto water drain (35).



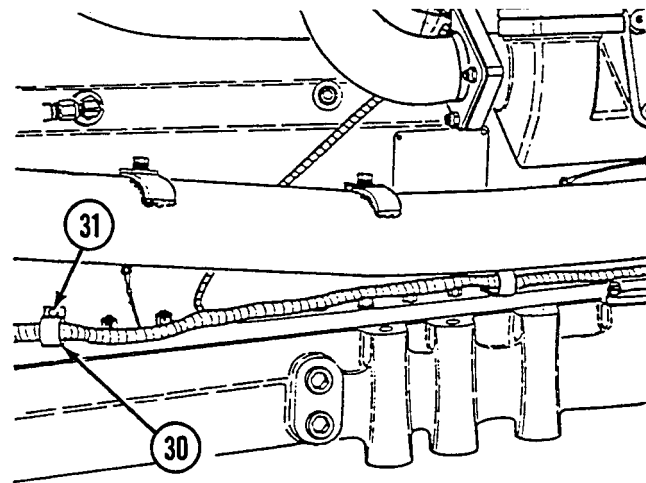
22. Connect connector (3) to right side manifold preheat coil (34).
23. Connect connector (2) to fuel shutoff (33).



24. Connect connector (1) to governor solenoid (32).



25. Install seven clamps (30) using screw (31) for each.



NOTE

Follow-on maintenance: Install powerplant (see WP 0098 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

ENGINE DISCONNECT TO PRESSURE SWITCH WIRING HARNESS (12314651) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00

Materials/Parts

Straps (5) (item 864, WP 0491 00)

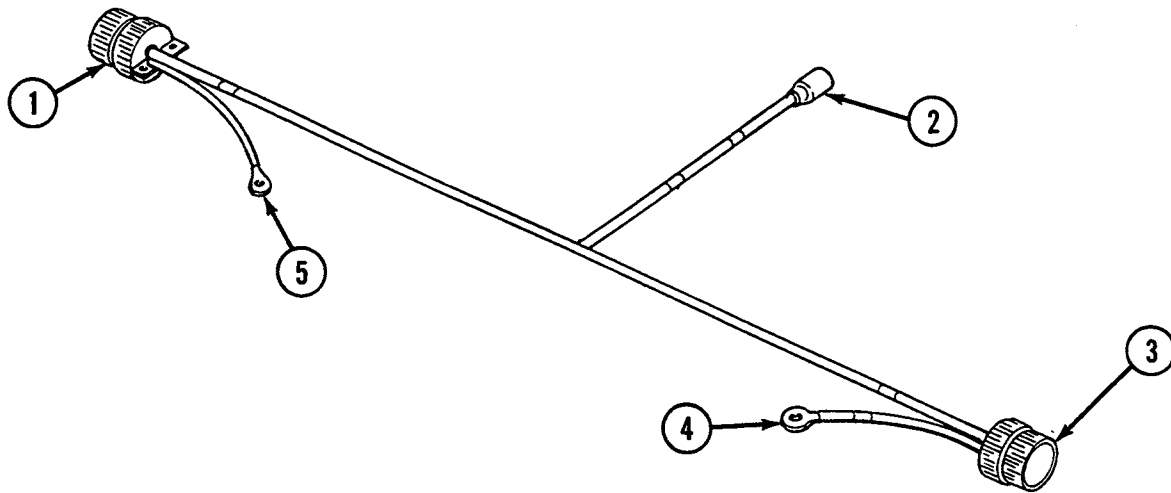
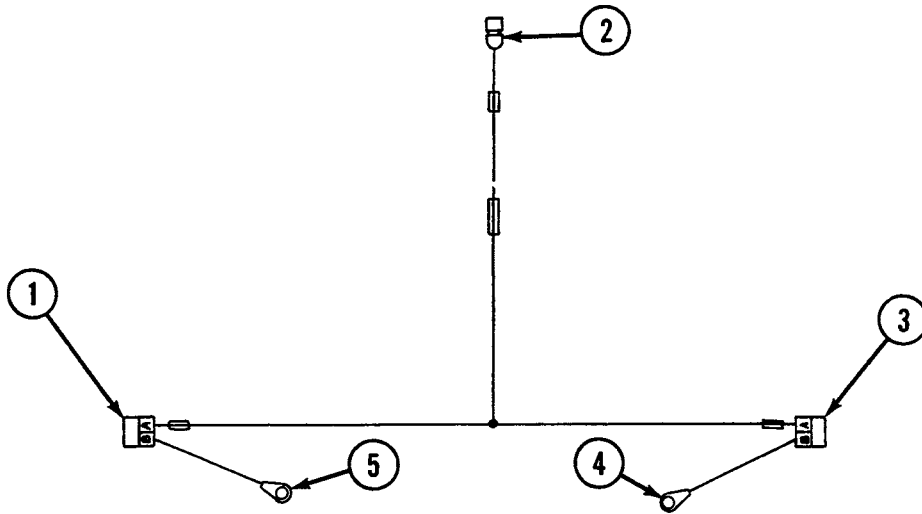
Equipment Condition

Powerplant removed (see WP 0098 00)

WARNING

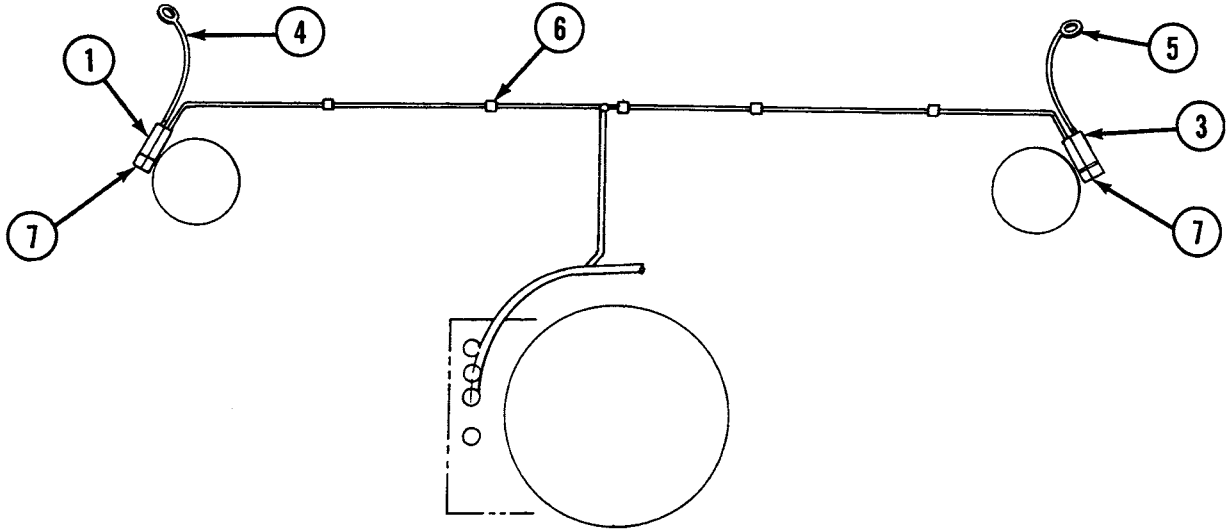
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Pressure switch	510R, GND
2	Engine disconnect to starter wiring harness	510
3	Pressure switch	510L, GND
4	Ground	GND
5	Ground	GND

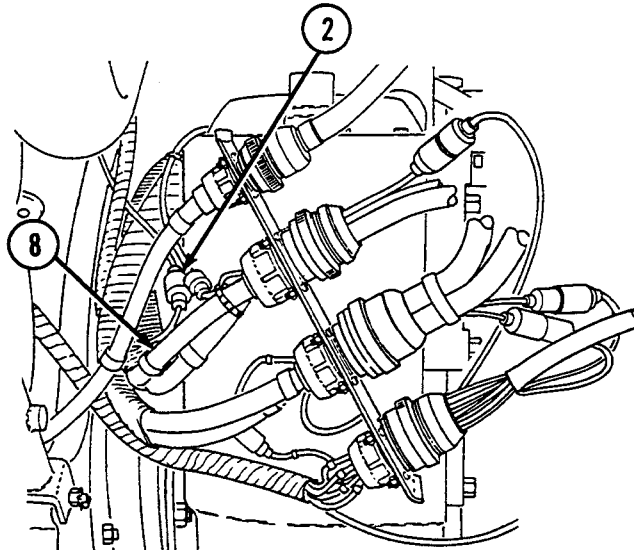


Removal

1. Remove five straps (6).
2. Disconnect two connectors (1 and 3) from two pressure switches (7).



3. Disconnect connector (2) from engine disconnect to starter wiring harness (8).



4. Disconnect two ground leads (4 and 5).

Disassembly

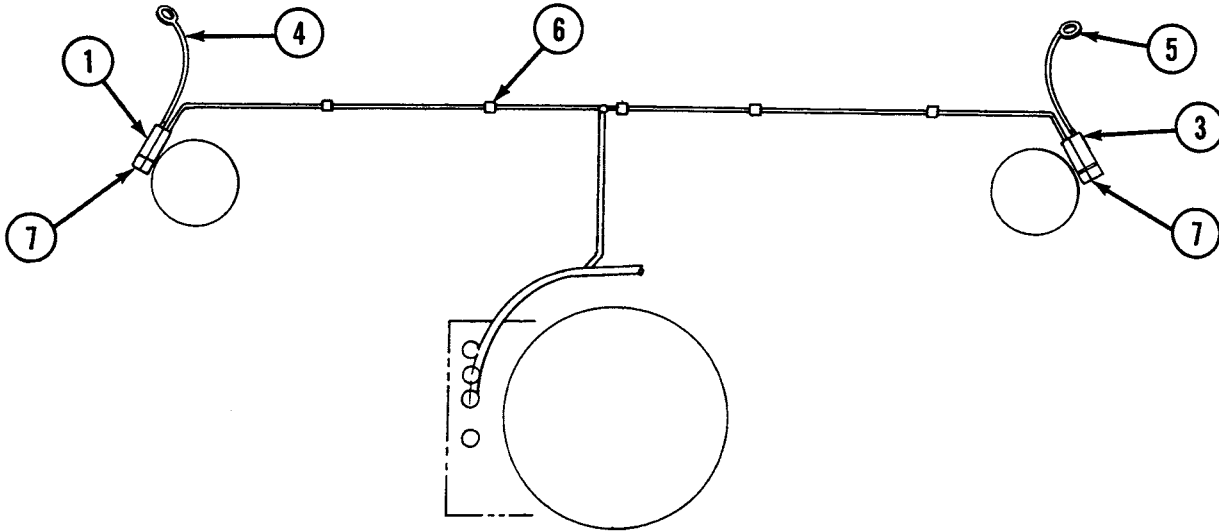
1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

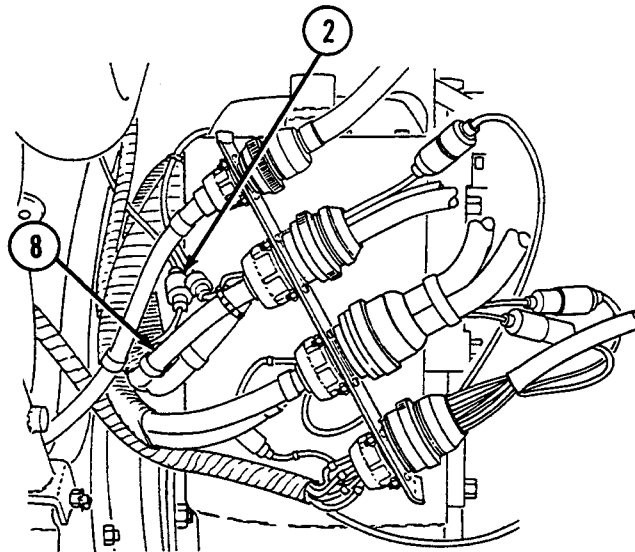
1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect two ground leads (4 and 5).



2. Connect connector (2) to engine disconnect to starter wiring harness (8).



3. Connect two connectors (1 and 2) to two pressure switches (7).
4. Install five straps (6).

NOTE

Follow-on maintenance: Install powerplant (see WP 0098 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

ENGINE DISCONNECT TO STARTER WIRING HARNESS (DUAL VOLTAGE) (12314745) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

- Lockwashers (4) (item 637, WP 0491 00)
- Lockwasher (item 639, WP 0491 00)
- Lockwasher (item 642, WP 0491 00)
- Nuts (4) (item 666, WP 0491 00)
- Nut (item 684, WP 0491 00)

Materials/Parts (cont.)

- Screw (item 383, WP 0491 00)
- Screws (4) (item 601, WP 0491 00)

References

WP 0255 00 thru 0264 00

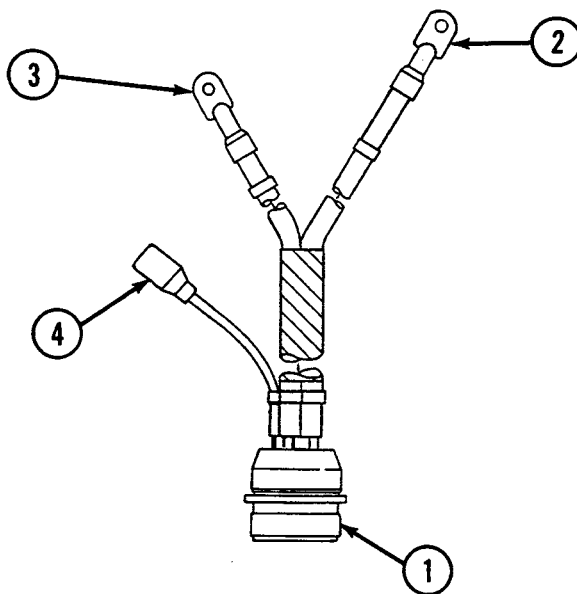
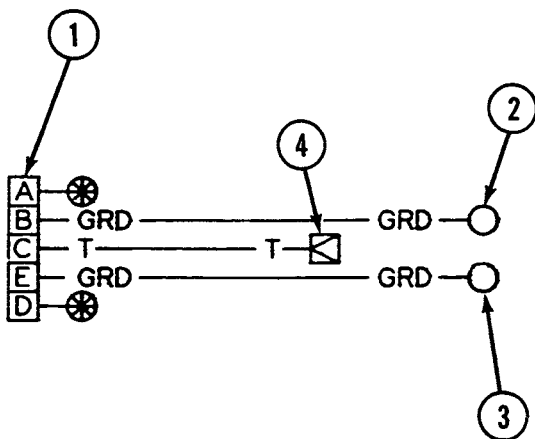
Equipment Condition

Powerplant removed (see WP 0098 00)

WARNING

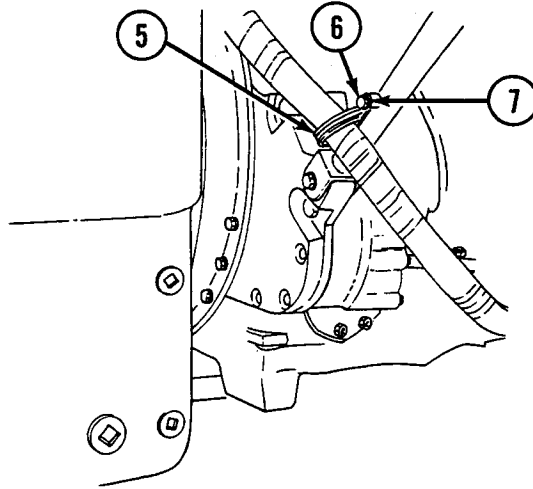
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Engine disconnect	GND, GND, T
2	Fuel solenoid wiring harness	T
3	Starter	GND
4	Starter	GND

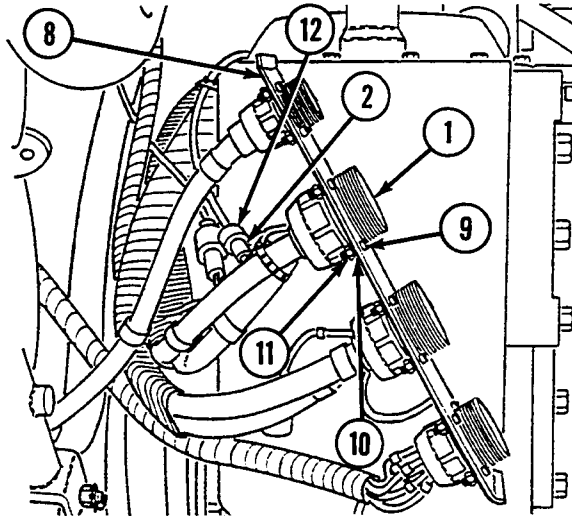


Removal

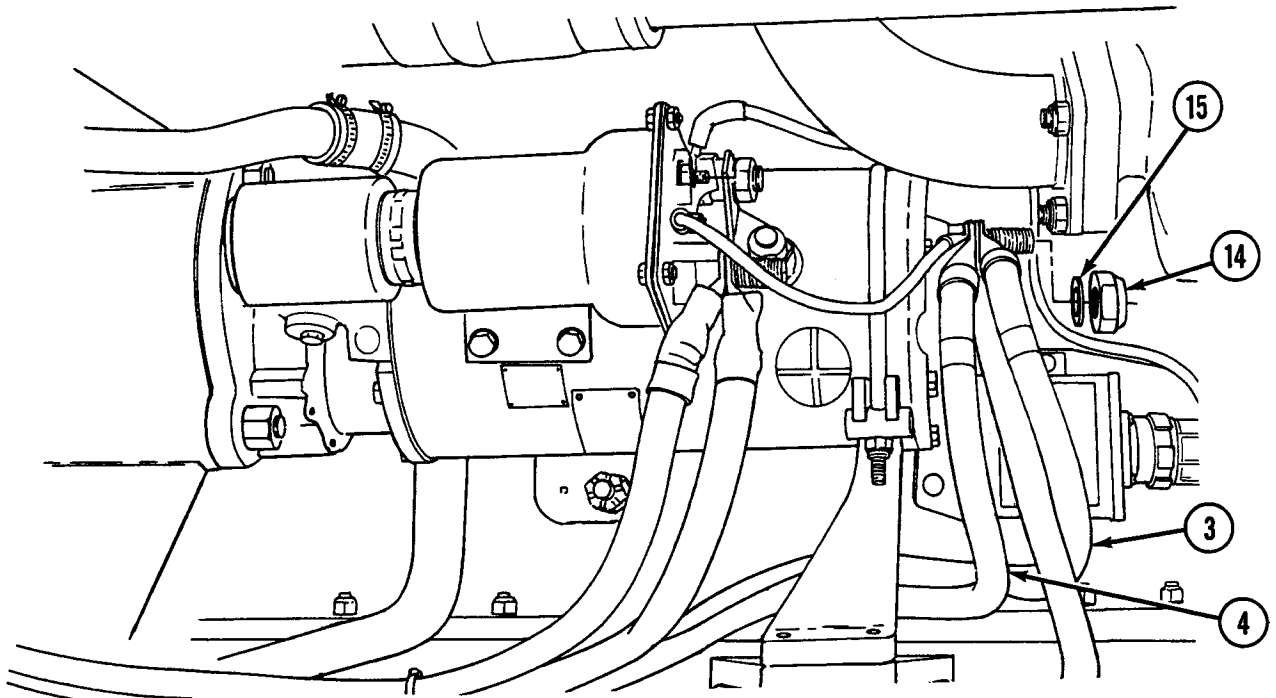
1. Remove clamp (5) by removing screw (6) and lockwasher (7).



2. Disconnect connector (1) from engine disconnect (8) by removing four screws (9), four lockwashers (10), and four nuts (11).
3. Disconnect connector (2) from fuel solenoid wiring harness (12).



4. Remove two connectors (3 and 4) from starter (13) by removing nut (14) and lockwasher (15).



Disassembly

1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Install two connectors (3 and 4) to starter (13) using new lockwasher (15) and nut (14).
2. Connect connector (2) to fuel solenoid wiring harness (8).
3. Connect connector (1) to engine disconnect (8) using four nuts (11), four new lockwashers (10), and four screws (9).
4. Install clamp (5) using new lockwasher (7) and screw (6).

NOTE

Follow-on maintenance: Install powerplant (see WP 0098 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

ENGINE DISCONNECT TO ENGINE GENERATOR RELAY LEAD
(SINGLE VOLTAGE) (11671362) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

Engine deck removed (see WP 0336 00)

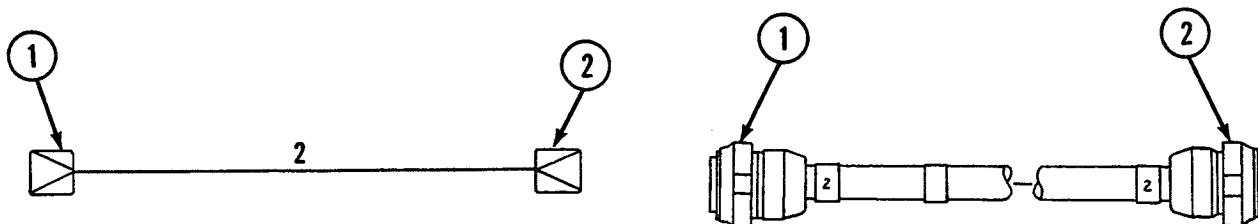
References

WP 0255 00 thru 0264 00

WARNING

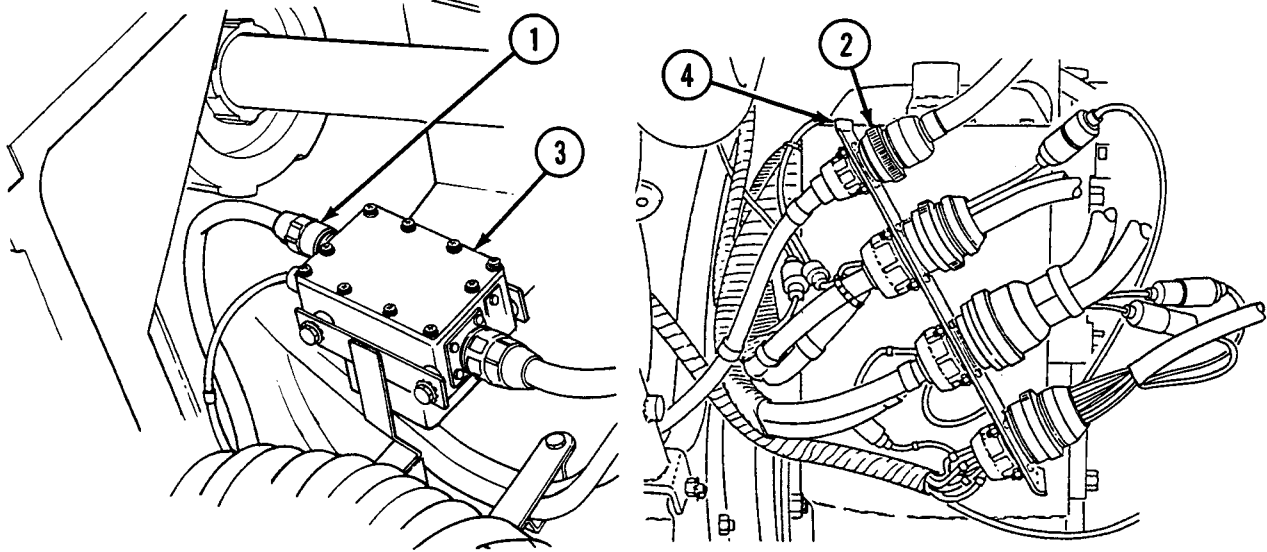
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Main engine generator relay	2
2	Engine disconnect	2



Removal

1. Disconnect connector (1) from main engine generator relay (3).
2. Disconnect connector (2) from engine disconnect (4).

**Disassembly**

1. Disassemble lead assembly (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble lead assembly (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect connector (2) to engine disconnect (4).
2. Connect connector (1) to main engine generator relay (3).

NOTE

Follow-on maintenance: Install engine deck (see WP 0336 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

ENGINE DISCONNECT GROUND LEAD ASSEMBLY (12322589) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00

Materials/Parts

Lockwashers (4) (item 621, WP 0491 00)

Screws (3) (item 731, WP 0491 00)

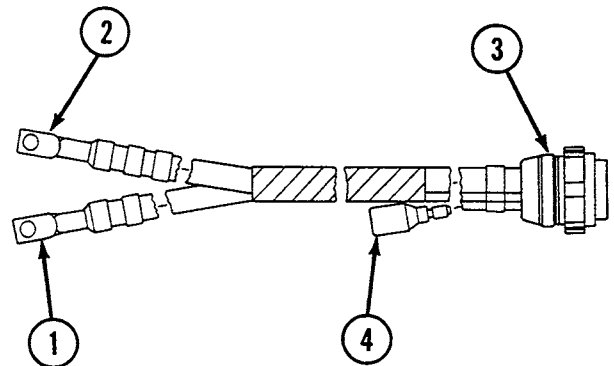
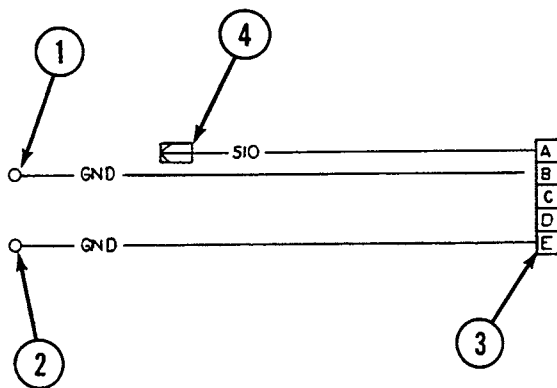
Equipment Condition

Engine deck removed (see WP 0336 00)

WARNING

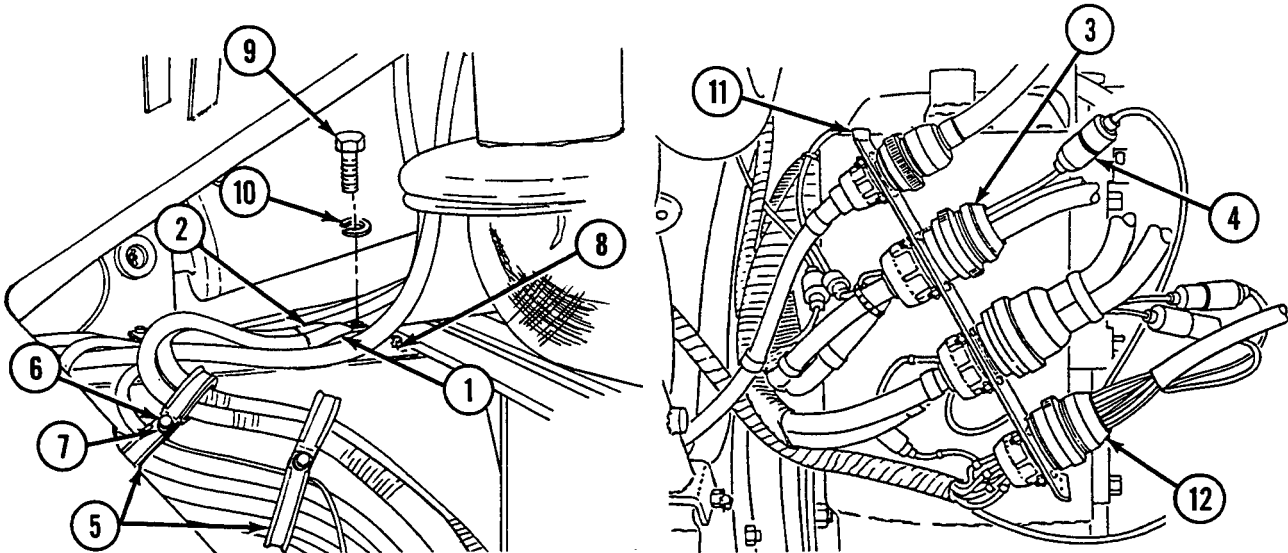
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Ground	GND
2	Ground	GND
3	Engine disconnect	510, GND, GND
4	Bulkhead to main engine bracket and rear fuel tank transmitter wiring harness	510



Removal

1. Remove two clamps (5) by removing screw (6) and lockwasher (7) from each.
2. Remove two ground leads (1 and 2) from hull (8) by removing screw (9) and two lockwashers (10).
3. Disconnect connector (3) from engine disconnect (11).
4. Disconnect connector (4) from bulkhead to main engine bracket and rear fuel tank transmitter wiring harness (12).



Disassembly

1. Disassemble lead assembly (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble lead assembly (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect connector (4) to bulkhead to main engine bracket and rear fuel tank transmitter wiring harness (12).
2. Connect connector (3) to engine disconnect (11).
3. Install two ground leads (1 and 2) to hull (8) with two lockwashers (10) and screw (9).
4. Install two clamps (5) with lockwasher (7) and screw (6) to each.

NOTE

Follow-on maintenance: Install engine deck (see WP 0336 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

HEADLIGHT BASE WIRING HARNESS AND RELATED PARTS (7972352) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Gasket (item 22, WP 0491 00)
Lockwashers (2) (item 612, WP 0491 00)
Lockwashers (2) (item 618, WP 0491 00)
Lockwashers (3) (item 638, WP 0491 00)
Screws (3) (item 372, WP 0491 00)
Screws (2) (item 567, WP 0491 00)

Materials/Parts (cont.)

Screw (item 728, WP 0491 00)
Washers, flat (3) (item 534, WP 0491 00)

References

WP 0255 00 thru 0264 00

Equipment Condition

Headlight removed (see WP 0175 00)

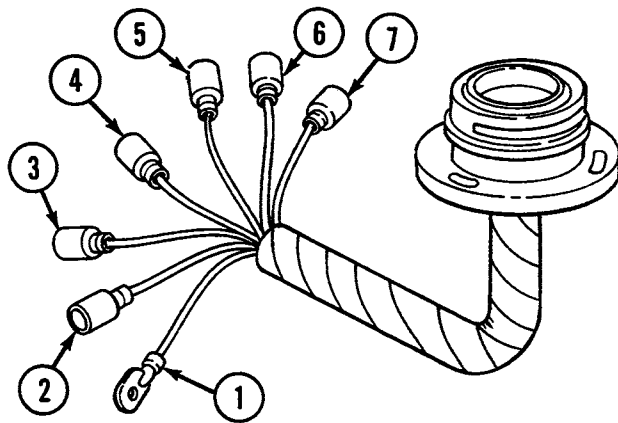
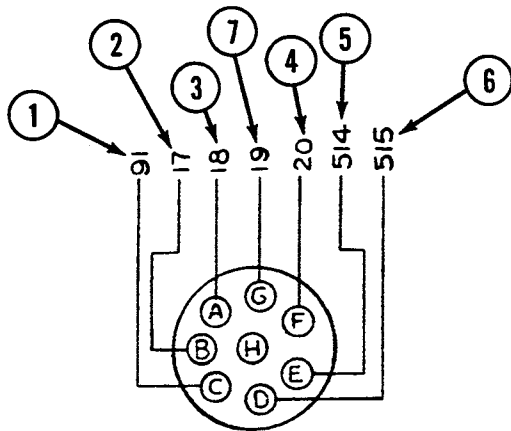
WARNING

Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

NOTE

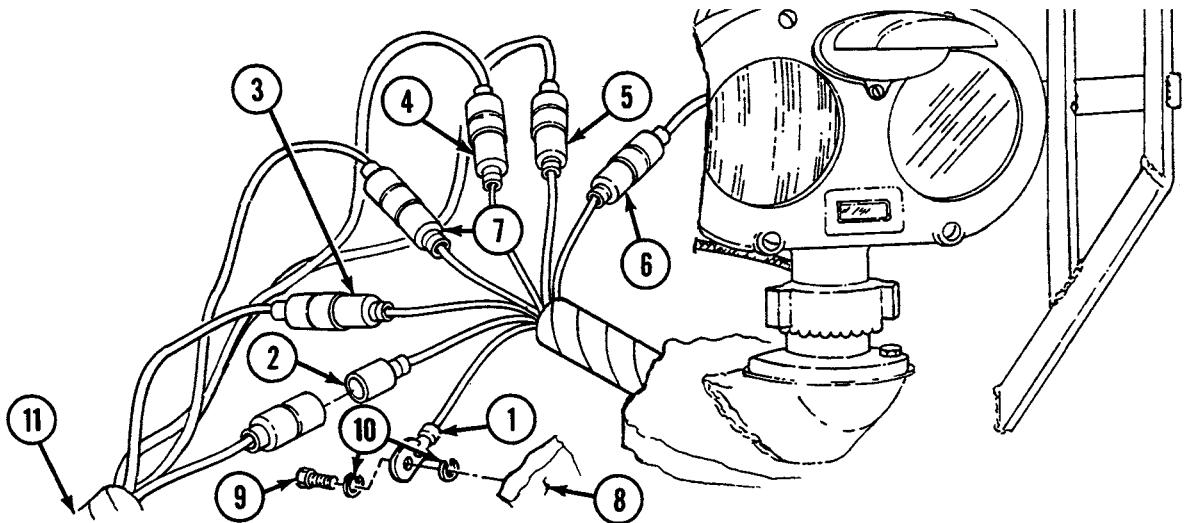
Removal and installation procedures are the same for both left and right headlight assemblies. Left side shown.

Connector No.	Electrical Lead To:	Wire No.
1	Ground	91
2	Headlight and dimmer switch wiring harness	17
3	Headlight and dimmer switch wiring harness	18
4	Headlight and dimmer switch wiring harness	20
5	Headlight and dimmer switch wiring harness	514
6	Headlight and dimmer switch wiring harness	515
7	Dimmer switch wiring harness	19

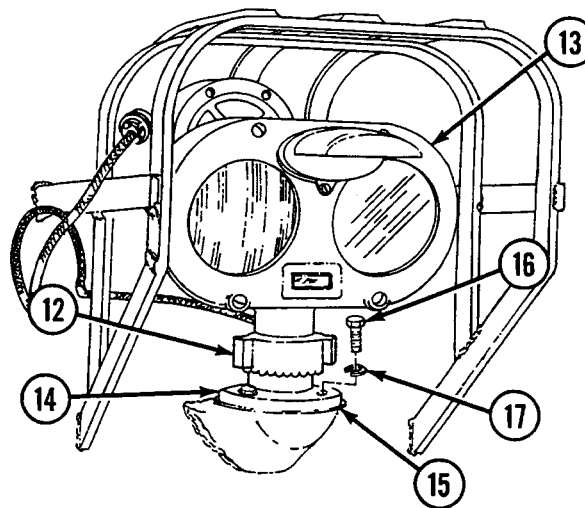


Removal

1. Remove ground lead (1) from hull (8) by removing screw (9) and two lockwashers (10).
2. Disconnect connectors (2 through 7) from headlight and dimmer switch wiring harness (11).

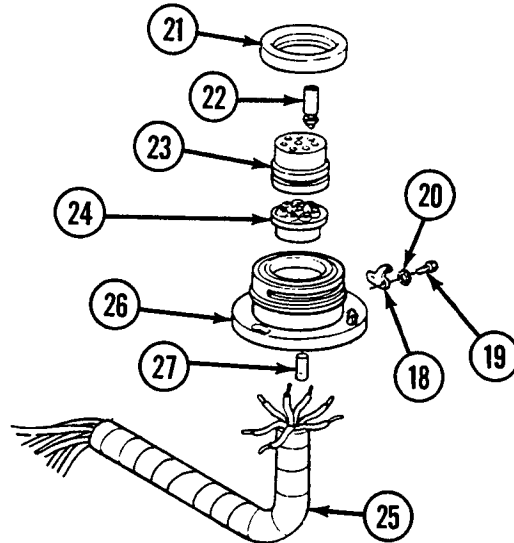


3. Loosen adjustment nut (12) and remove headlight assembly (13).
4. Remove headlight base assembly (14) and gasket (15) by removing three screws (16) and three lockwashers (17), seven electrical contacts (22), electrical insert (23), bushing (24), and lead assembly (25) from base (26).



Disassembly

1. Remove clip (18) by removing two screws (19) and two lockwashers (20).
2. Remove seal (21), seven electrical contacts (22), electrical insert (23), bushing (24), and lead assembly (25) from base (26).
3. Remove rod (27) from bushing (24).



4. Disassemble lead assembly (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble lead assembly (see WP 0255 00 thru 0264 00, as appropriate).
2. Install rod (27) to bushing (24).
3. Install lead assembly (25), bushing (24), electrical insert (23), seven electrical contacts (22), and seal (21) to base (26).
4. Install clip (18) using two lockwashers (20) and two screws (19).

Installation

1. Install headlight base assembly (14) and gasket (15) using three lockwashers (17) and three screws (16).
2. Install headlight assembly (13) by tightening adjustment nut (12).
3. Connect connectors (2 through 7) to headlight and dimmer switch wiring harness (11).
4. Install ground lead (1) to hull (8) using two lockwashers (10) and screw (9).

NOTE

Follow-on maintenance: Install headlight (see WP 0175 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

HEADLIGHT AND DIMMER SWITCH WIRING HARNESS (10866950) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00

Materials/Parts

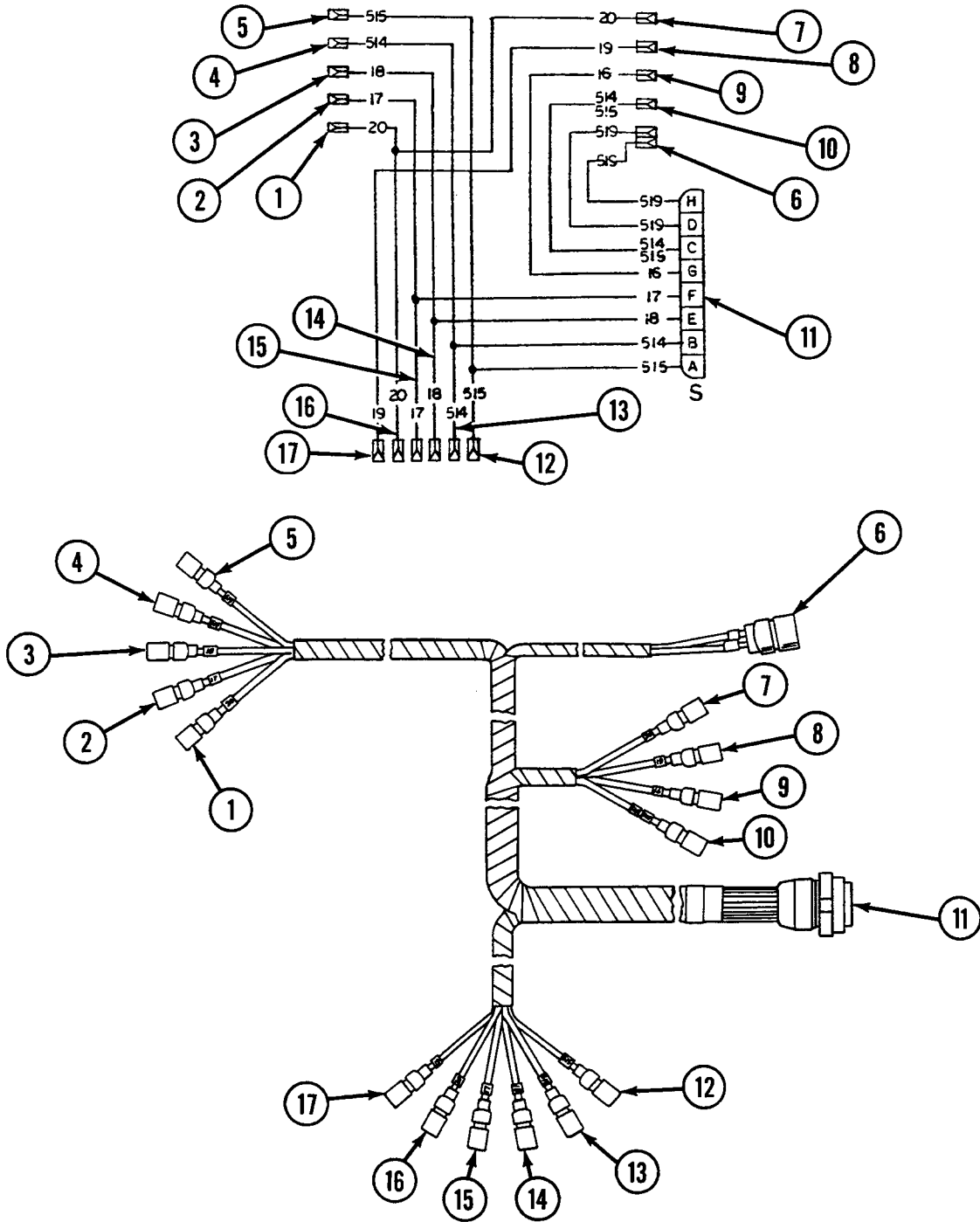
Lockwashers (7) (item 621, WP 0491 00)

Screws (7) (item 731, WP 0491 00)

WARNING

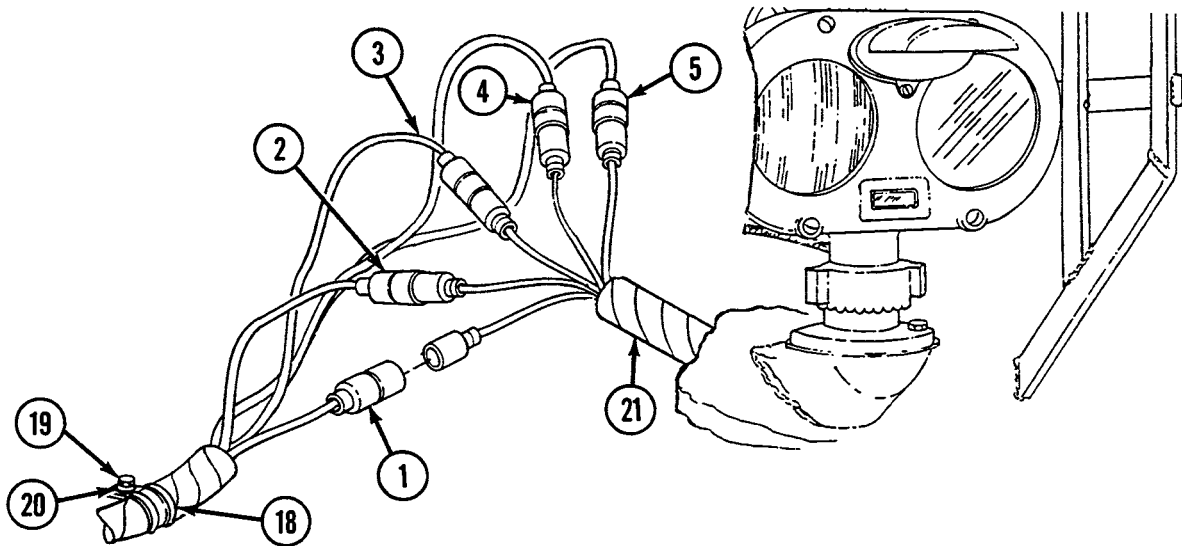
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Right hand headlight base wiring harness	20
2	Right hand headlight base wiring harness	17
3	Right hand headlight base wiring harness	18
4	Right hand headlight base wiring harness	514
5	Right hand headlight base wiring harness	515
6	High beam indicator lamp	519, 519
7	Switch panel to head lamps and bulkhead wiring harness	20
8	Switch panel to gage panel and miscellaneous switches wiring harness (11671795)	19
9	Switch panel to gage panel and miscellaneous switches wiring harness (11671795)	16
10	Switch panel to gage panel and miscellaneous switches wiring harness (11671795)	514/515
11	Dimmer switch	519, 519, 514/515, 16, 17, 18, 514, 515
12	Left hand headlight base wiring harness	515
13	Left hand headlight base wiring harness	514
14	Left hand headlight base wiring harness	18
15	Left hand headlight base wiring harness	17
16	Left hand headlight base wiring harness	20
17	Left hand headlight base wiring harness	19

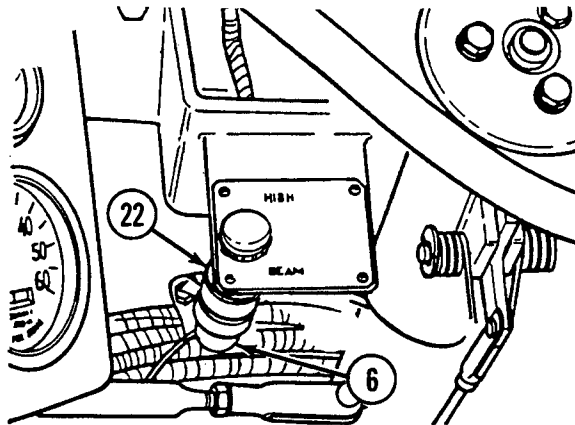


Removal

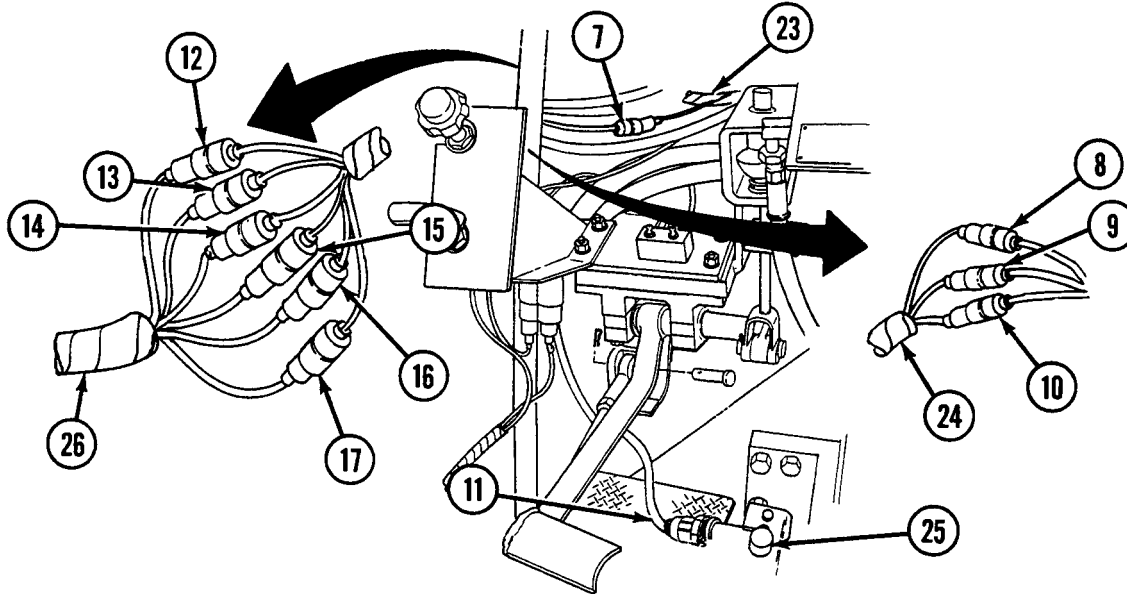
1. Remove seven clamps (18) by removing screw (19) and lockwasher (20) from each.



2. Disconnect connectors (1 through 5) from right headlight base wiring harness (21).
3. Disconnect connector (6) from high beam indicator lamp (22).



4. Disconnect connector (7) from switch panel to head lamps and bulkhead wiring harness (23).
5. Disconnect connectors (8 through 10) from switch panel to gage panel and miscellaneous switches wiring harness (24).
6. Disconnect connector (11) from dimmer switch (25).
7. Disconnect connectors (12 through 17) from left headlight base wiring harness (26).



Disassembly

1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

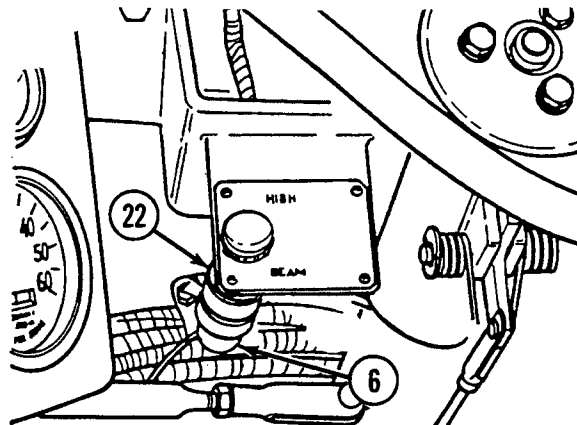
Assembly

1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

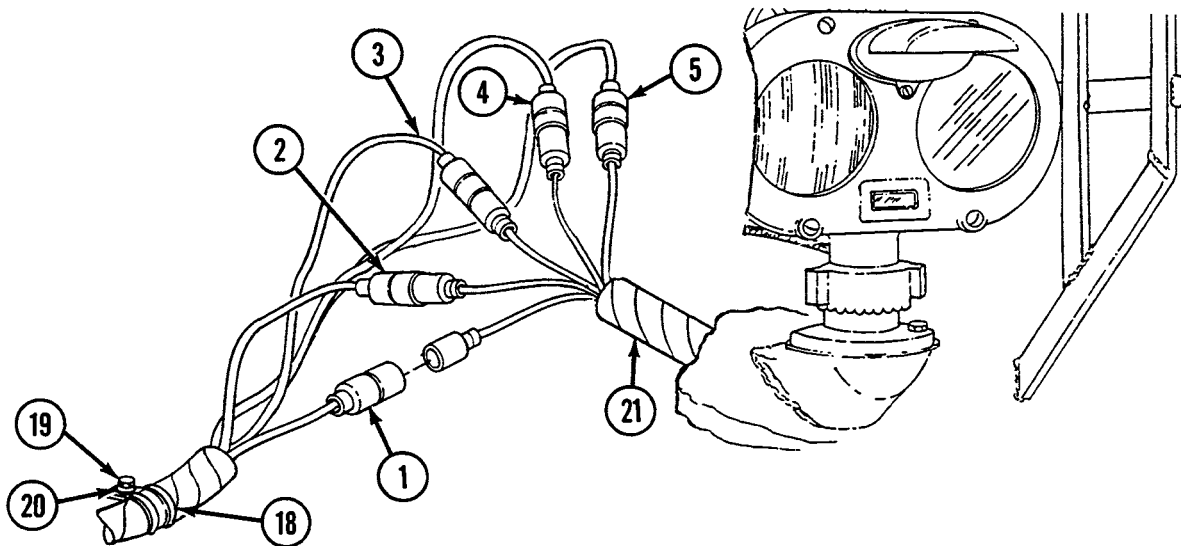
Installation

1. Connect connectors (12 through 17) to left headlight base wiring harness (26).
2. Connect connector (11) to dimmer switch (25).
3. Connect connectors (8 through 10) to switch panel to gage panel and miscellaneous switches wiring harness (24).
4. Connect connector (7) to switch panel to head lamps and bulkhead wiring harness (23).

5. Connect connector (6) to high beam indicator lamp (22).



6. Connect connectors (1 through 5) to right headlight base wiring harness (21).
7. Install seven clamps (18) using screw (19) and lockwasher (20) for each.



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

RED FLASHER BREAKER TO SWITCH WIRING HARNESS (11672371) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

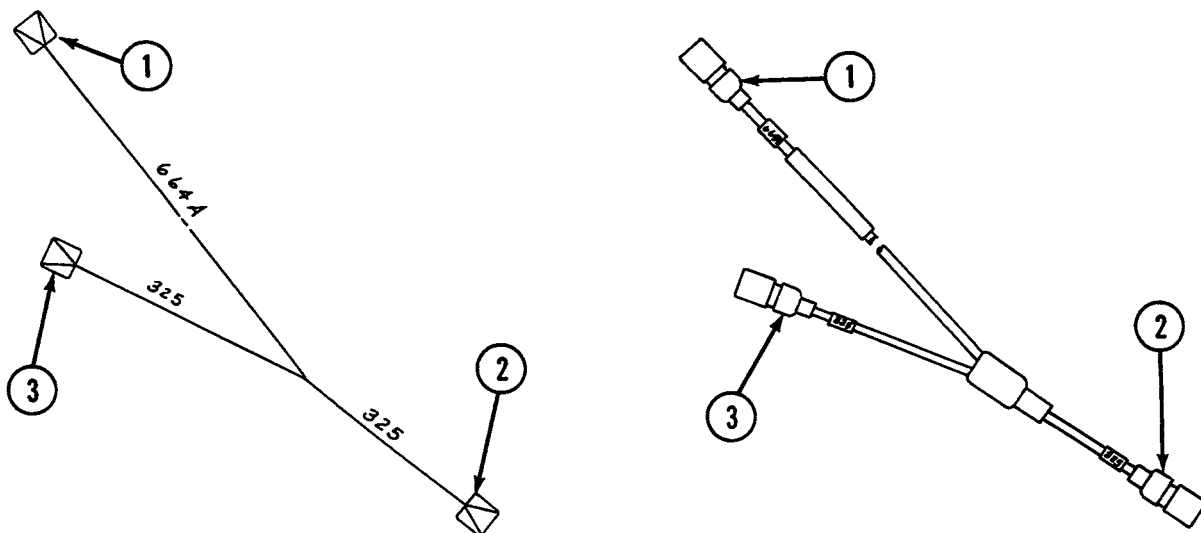
References

WP 0255 00 thru 0264 00

WARNING

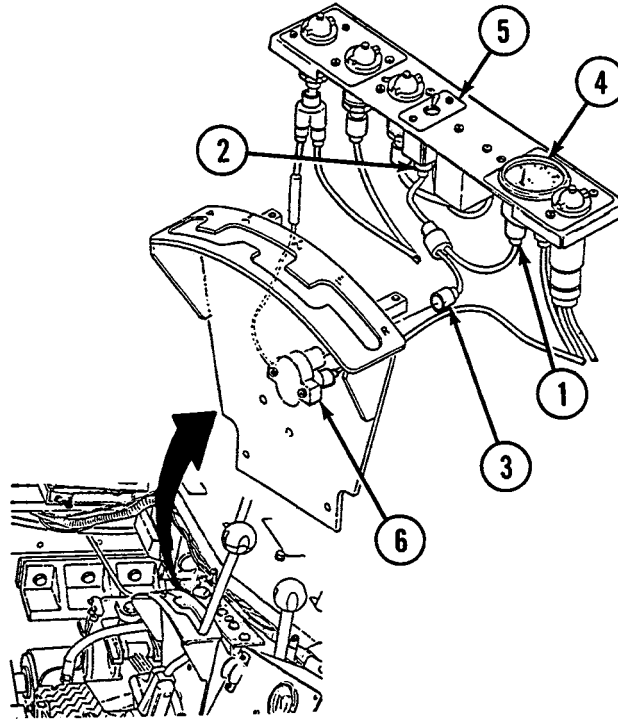
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Hydraulic oil temperature indicator	664A
2	Flasher switch	325
3	Circuit breaker	325



Removal

1. Disconnect connector (1) from hydraulic oil temperature indicator (4).
2. Disconnect connector (2) from flasher switch (5).
3. Disconnect connector (3) from circuit breaker (6).



Disassembly

1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect connector (3) to circuit breaker (6).
2. Connect connector (2) to flasher switch (5).
3. Connect connector (1) to hydraulic oil temperature indicator (4).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

TURN SIGNAL FLASHER WIRING HARNESS (11672273) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00

Materials/Parts

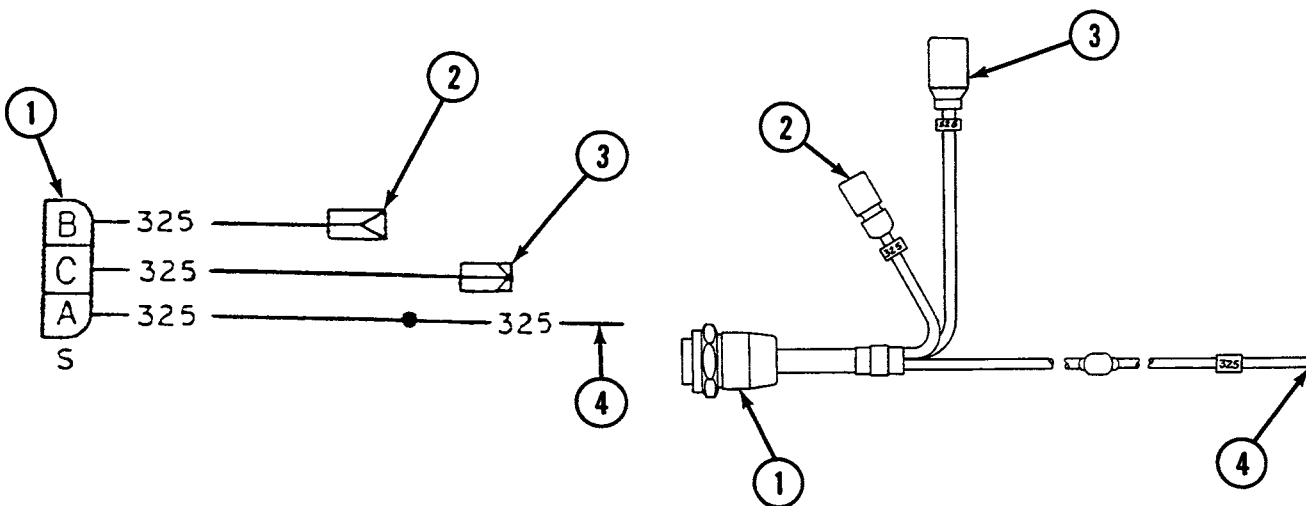
Lockwashers (8) (item 621, WP 0491 00)

Screws (8) (item 371, WP 0491 00)

WARNING

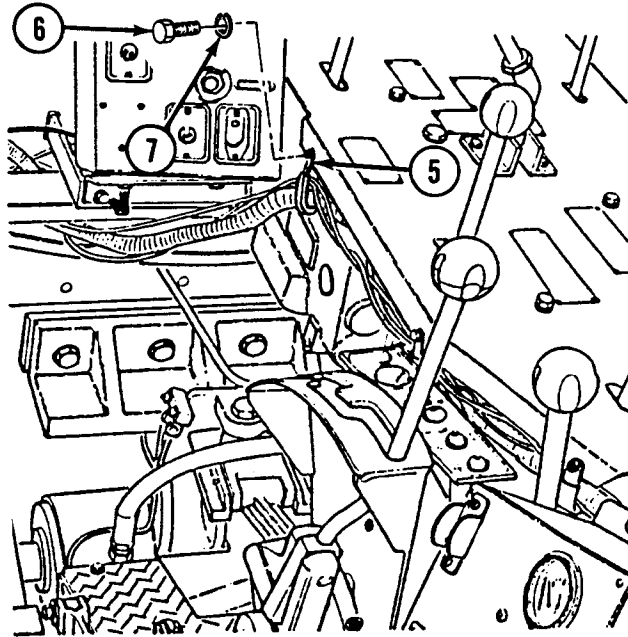
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Thermal flasher	325
2	Flasher switch	325
3	Flasher light	325
4	Front signal light	325

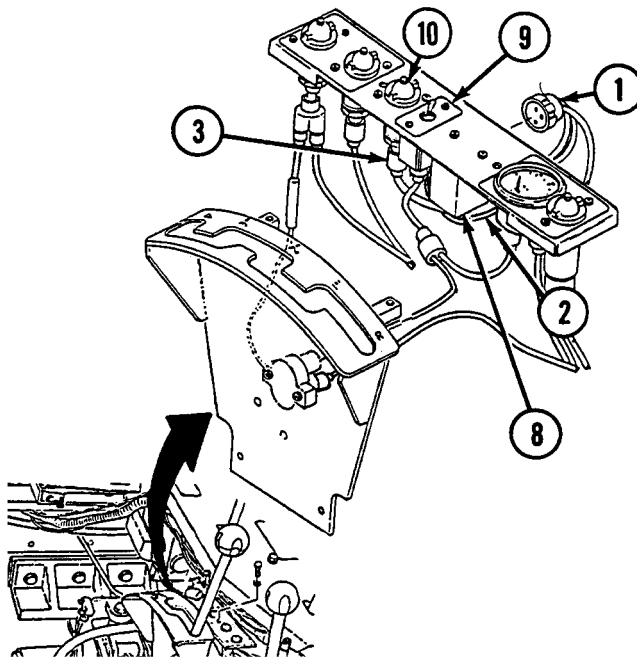


Removal

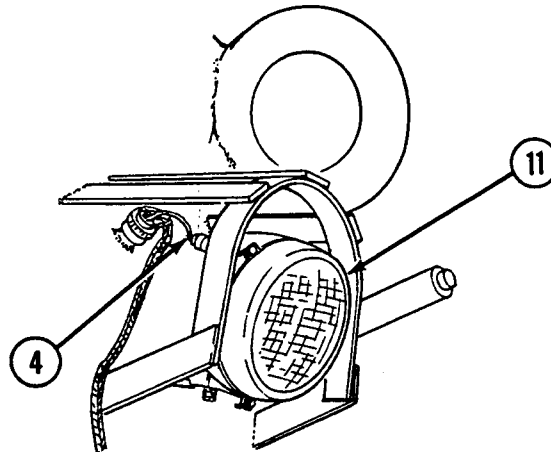
1. Remove eight clamps (5) by removing screw (6) and lockwasher (7) from each.



2. Disconnect connector (1) from thermal flasher (8).
3. Disconnect connector (2) from flasher switch (9).
4. Disconnect connector (3) from flasher light (10).



5. Disconnect connector (4) from front signal light (11).



Disassembly

1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect connector (4) to front signal light (11).
2. Connect connector (2) to flasher light (10).
3. Connect connector (3) to flasher switch (9).
4. Connect connector (1) to thermal flasher (8).
5. Install eight clamps (5) using lockwasher (7) and screw (6) for each.

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

B.O. SELECTOR LEAD ASSEMBLY (10911920) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

Main switch panel removed (see WP 0159 00)

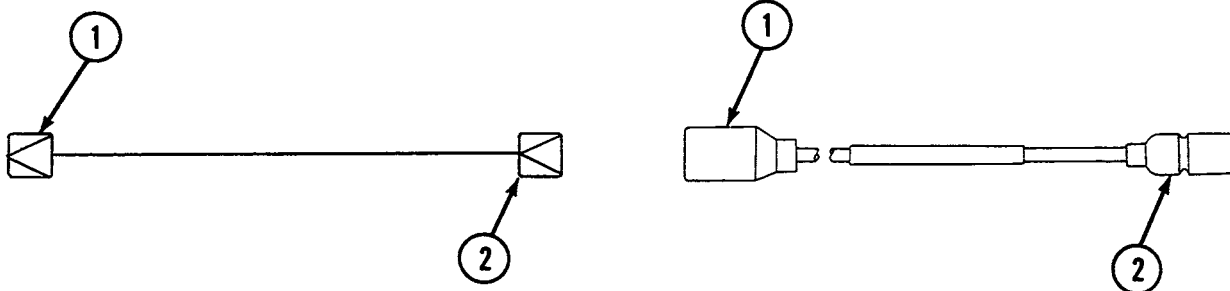
References

WP 0255 00 thru 0264 00

WARNING

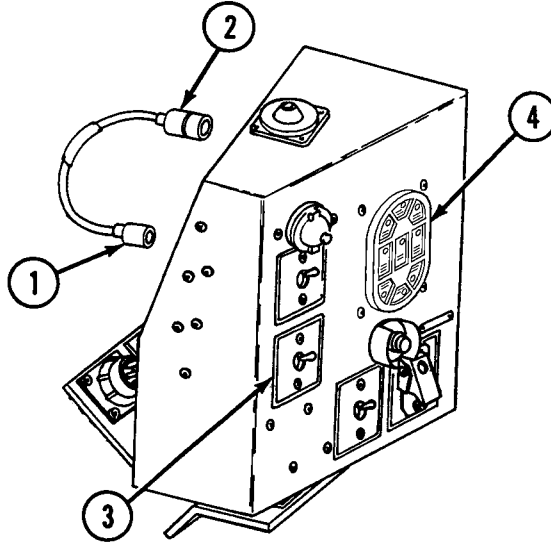
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	B.O. selector	520
2	Main lighting and master relay wiring harness	520



Removal

1. Disconnect connector (1) from B.O. selector switch (3).
2. Disconnect connector (2) from main lighting and master relay wiring harness (4).

**Disassembly**

1. Disassemble lead assembly (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble lead assembly (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect connector (2) to main lighting and master relay wiring harness (4).
2. Connect connector (1) to B.O. selector switch (3).

NOTE

Follow-on maintenance: Install main switch panel (see WP 0159 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

MAIN LIGHTING AND B.O. SELECTOR SWITCH WIRING HARNESS (11671796) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00

Materials/Parts

Nuts (4) (item 351, WP 0491 00)

Screws (4) (item 587, WP 0491 00)

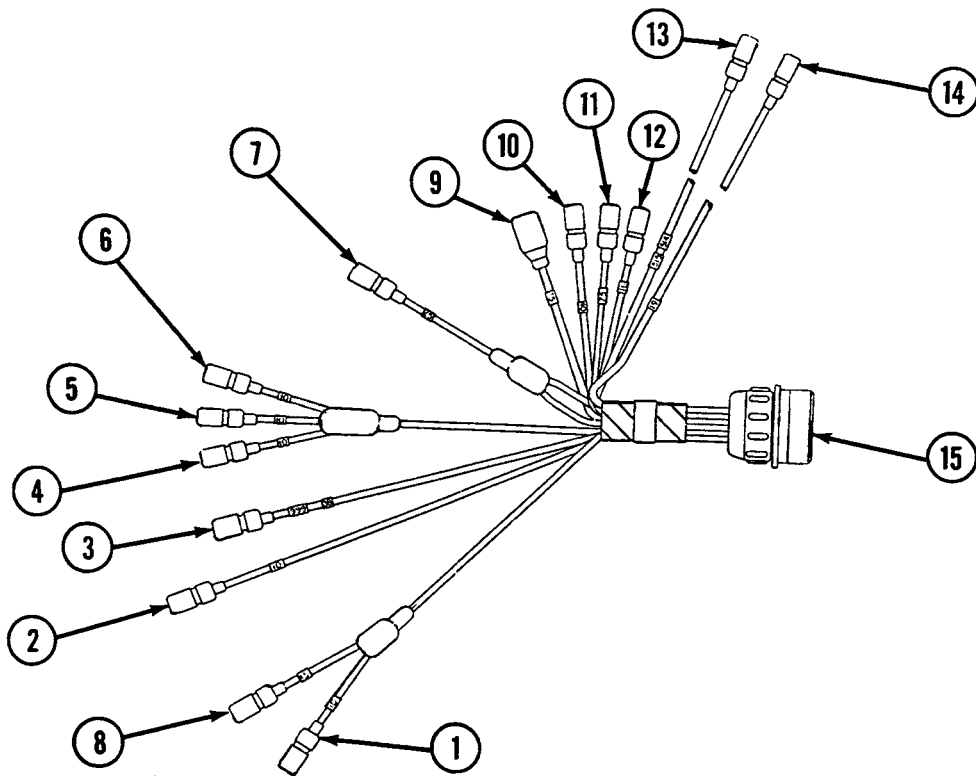
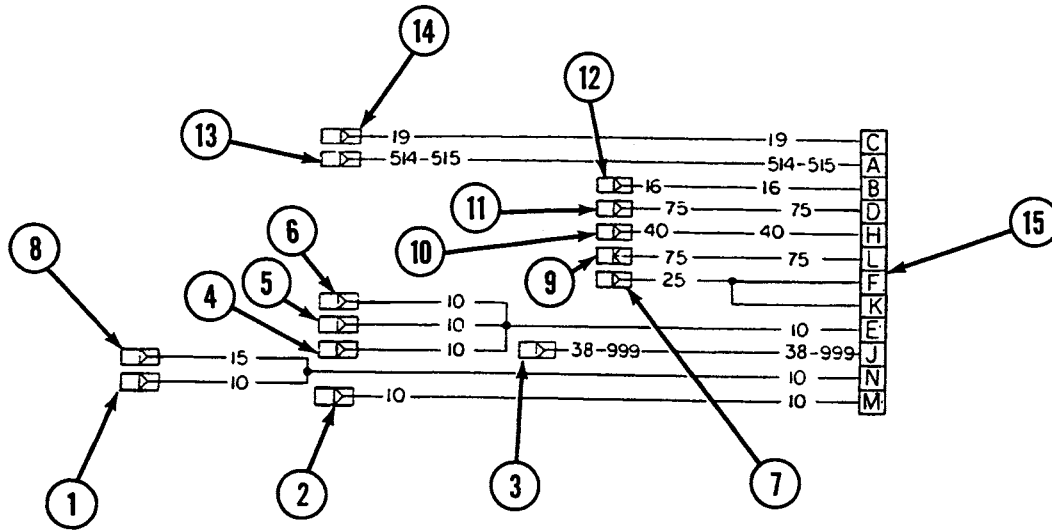
Equipment Condition

Main switch panel removed (see WP 0159 00)

WARNING

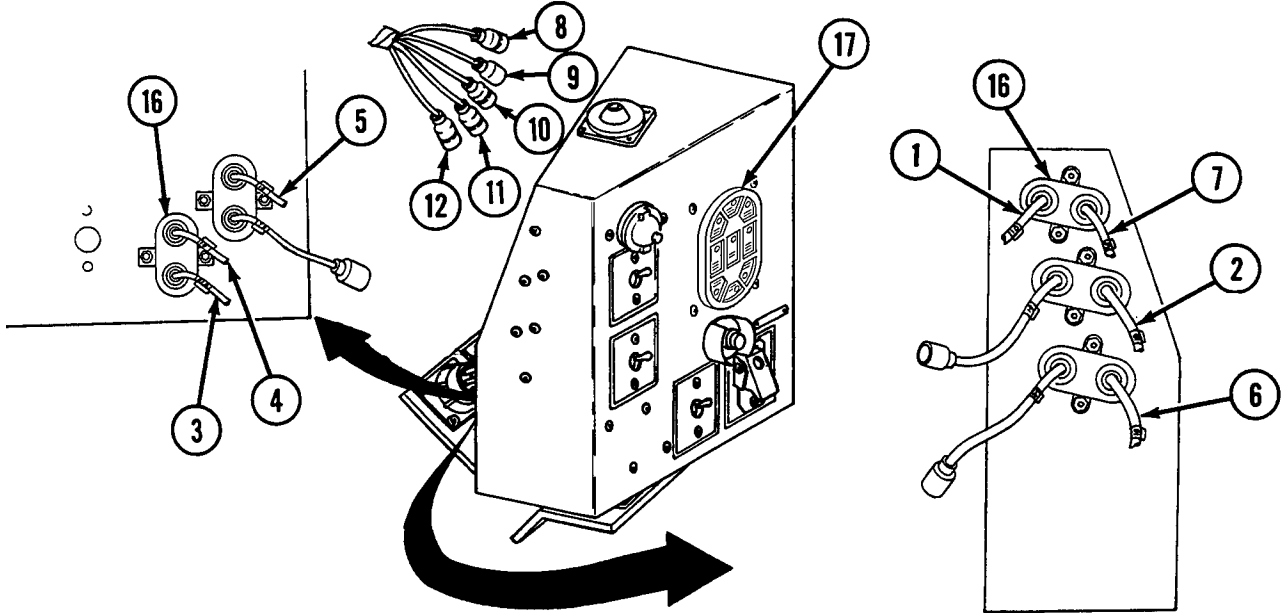
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Circuit breaker	10
2	Circuit breaker	10
3	Circuit breaker	999, 38
4	Circuit breaker	10
5	Circuit breaker	10
6	Circuit breaker	10
7	Circuit breaker	25
8	Main lighting and master relay wiring harness	15
9	Main lighting and master relay wiring harness	75
10	Main lighting and master relay wiring harness	40
11	Main lighting and master relay wiring harness	75/16
12	Main lighting and master relay wiring harness	16
13	B.O. selector switch	515/514
14	B.O. selector switch	19
15	Panel outlet	10, 515/514, 19, 16, 75/16, 40, 75, 10, 10, 25, 27, 38/999

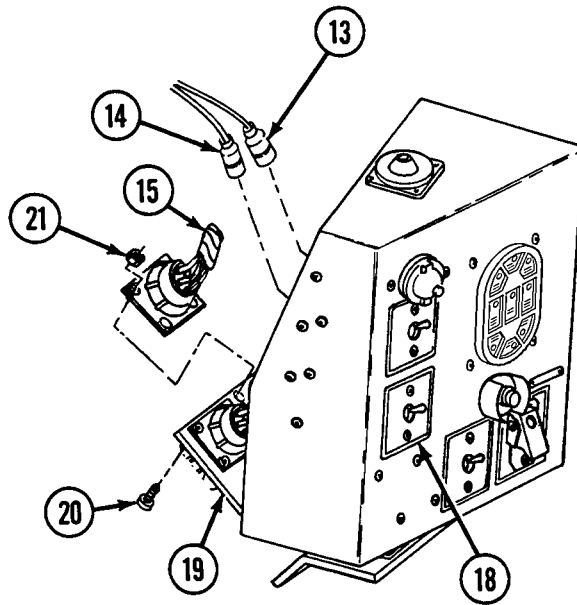


Removal

1. Disconnect seven connectors (1 through 7) from five circuit breakers (16).
2. Disconnect five connectors (8 through 12) from main lighting and master relay wiring harness (17).



3. Disconnect two connectors (13 and 14) from B.O. selector switch (18).
4. Remove connector (15) from panel outlet (19) by removing four screws (20) and four nuts (21).



Disassembly

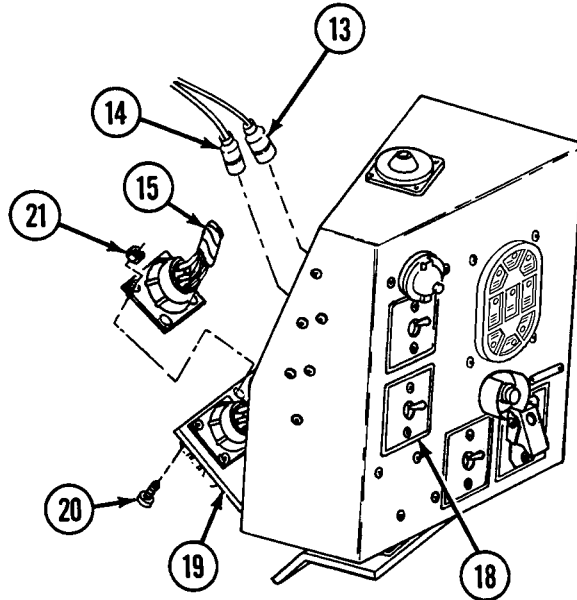
1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

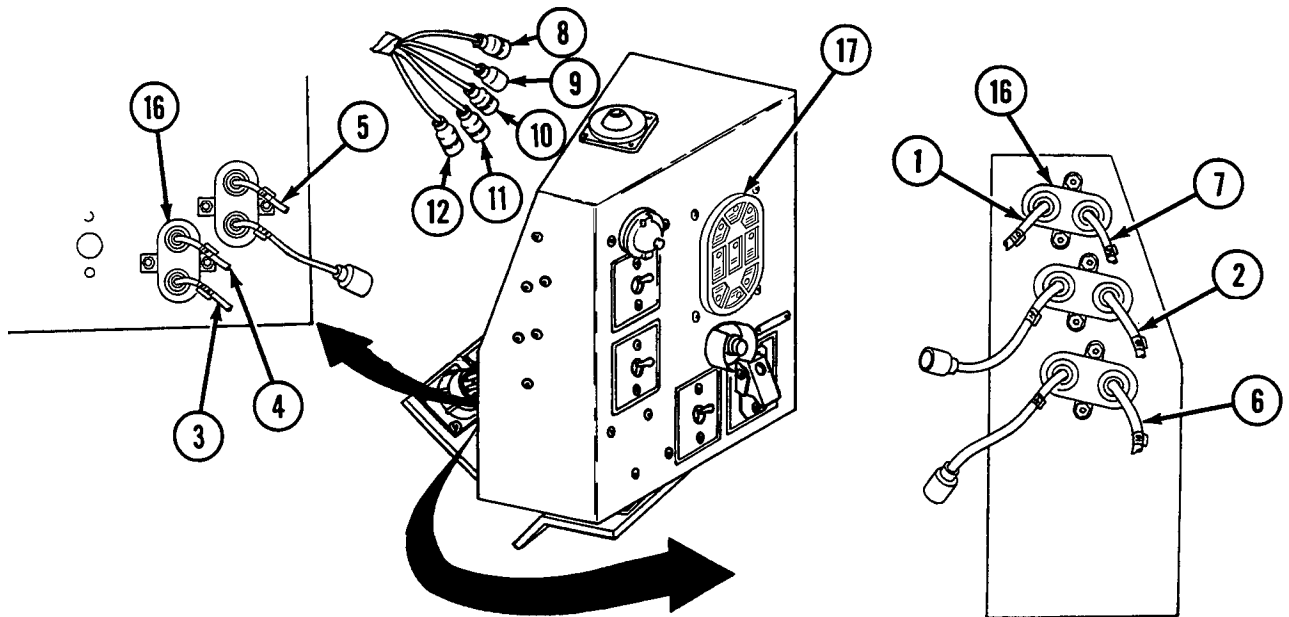
Installation

1. Install connector (15) to panel outlet (19) using four screws (20) and four nuts (21).
2. Connect two connectors (13 and 14) to B.O. selector switch (18).



3. Connect five connectors (8 through 12) to main lighting and master relay wiring harness (17).

4. Connect seven connectors (1 through 7) to five circuit breakers (16).



NOTE

Follow-on maintenance: Install main switch panel (see WP 0159 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

MAIN LIGHTING AND MASTER RELAY WIRING HARNESS (10866909) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00

Materials/Parts

Nuts (4) (item 351, WP 0491 00)
 Screws (4) (item 587, WP 0491 00)

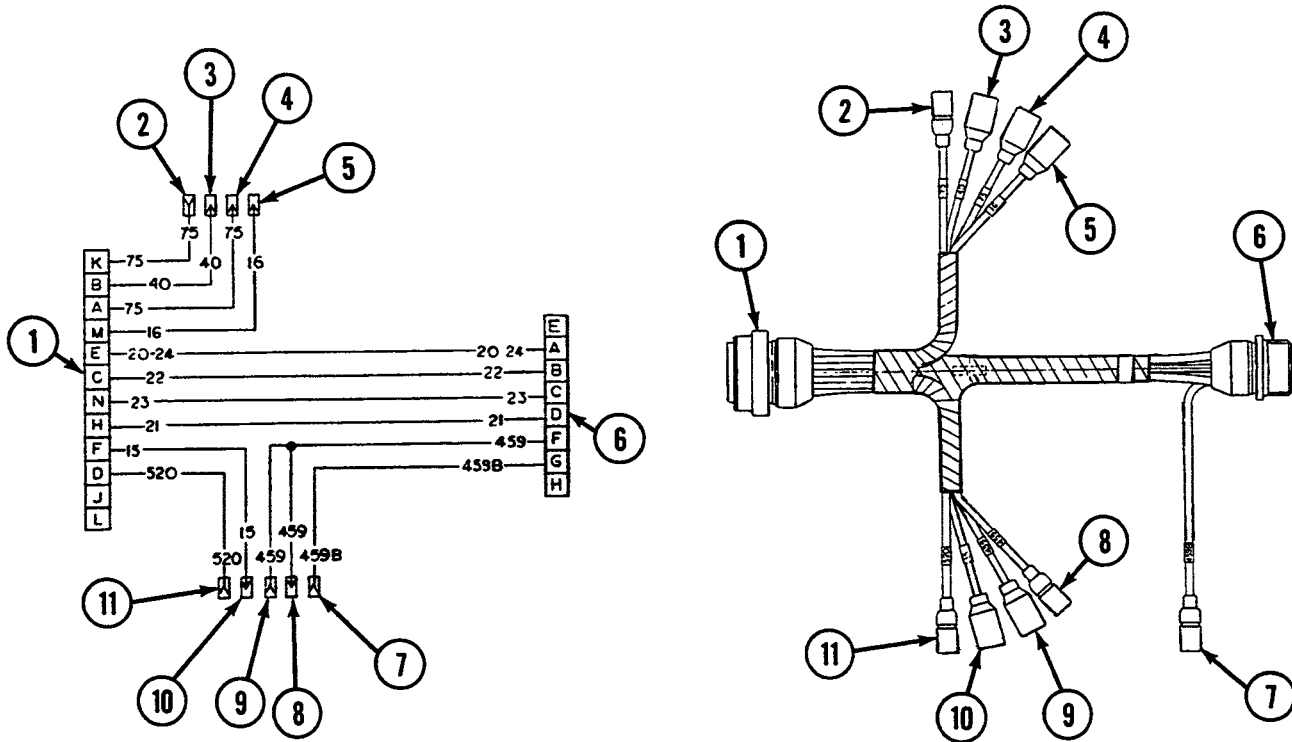
Equipment Condition

Main switch panel removed (see WP 0159 00)

WARNING

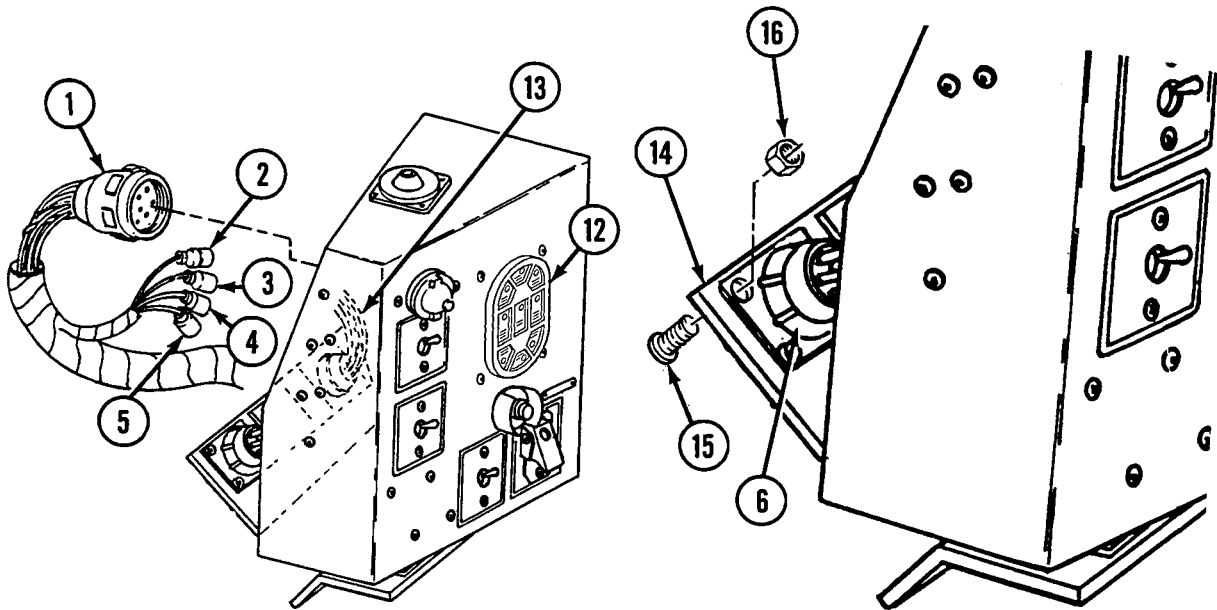
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Main lighting switch	75, 40, 75, 16, 20/24, 22, 23, 21, 15, 520
2	Main lighting and B.O. selector switch wiring harness	75
3	Main lighting and B.O. selector switch wiring harness	40
4	Main lighting and B.O. selector switch wiring harness	75
5	Main lighting and B.O. selector switch wiring harness	16
6	Panel outlet	20/24, 22, 23, 21, 459, 459B
7	Master relay switch	459B
8	Master relay indicator lamp assembly	459
9	Master relay switch	459
10	Main lighting and B.O. selector switch wiring harness	15
11	B.O. selector	520

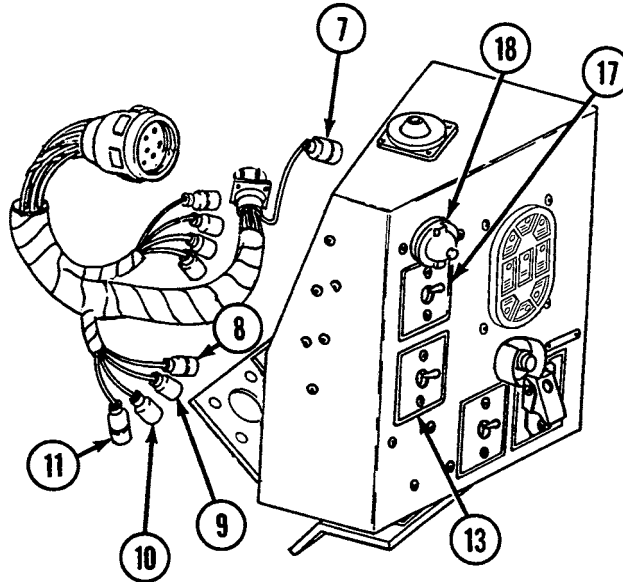


Removal

1. Disconnect connector (1) from main lighting switch (12).
2. Disconnect four connectors (2 through 5) from main lighting and B.O. selector switch wiring harness (13).
3. Remove connector (6) from panel outlet (14) by removing four screws (15) and four nuts (16).



4. Disconnect connector (7) from master relay switch (17).
5. Disconnect connector (8) from master relay indicator lamp assembly (18).
6. Disconnect connector (9) from master relay switch (17).
7. Disconnect connector (10) from main lighting and B.O. selector switch wiring harness (13).
8. Disconnect connector (11) from B.O. selector lead assembly.



Disassembly

1. Disassemble wiring harness and lead assembly (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble wiring harness and lead assembly (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect connector (11) to B.O. selector lead assembly.
2. Connect connector (10) to main lighting and B.O. selector switch wiring harness (13).
3. Connect connector (9) to master relay switch (17).
4. Connect connector (8) to master relay indicator lamp assembly (18).
5. Connect connector (7) to master relay switch (17).
6. Install connector (6) using four screws (15) and four nuts (16).
7. Connect four connectors (2 through 5) to main lighting and B.O. selector switch wiring harness (13).
8. Connect connector (1) to main lighting switch (12).

NOTE

Follow-on maintenance: Install main switch panel (see WP 0159 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

BULKHEAD TO MASTER RELAY AND LEFT AND RIGHT TAILLIGHT WIRING HARNESS (11671813) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00

Materials/Parts

Lockwashers (11) (item 621, WP 0491 00)

Screws (11) (item 731, WP 0491 00)

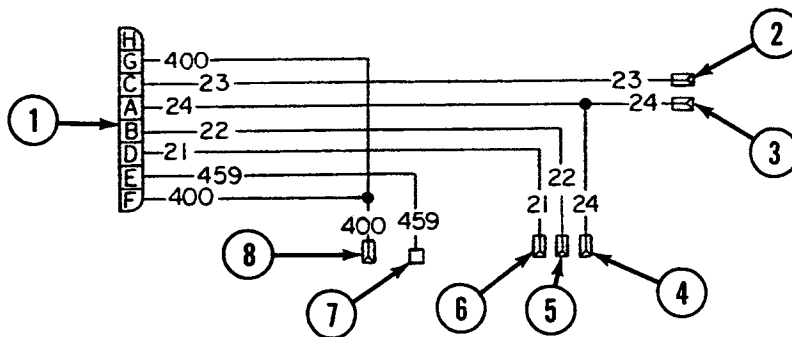
Equipment Condition

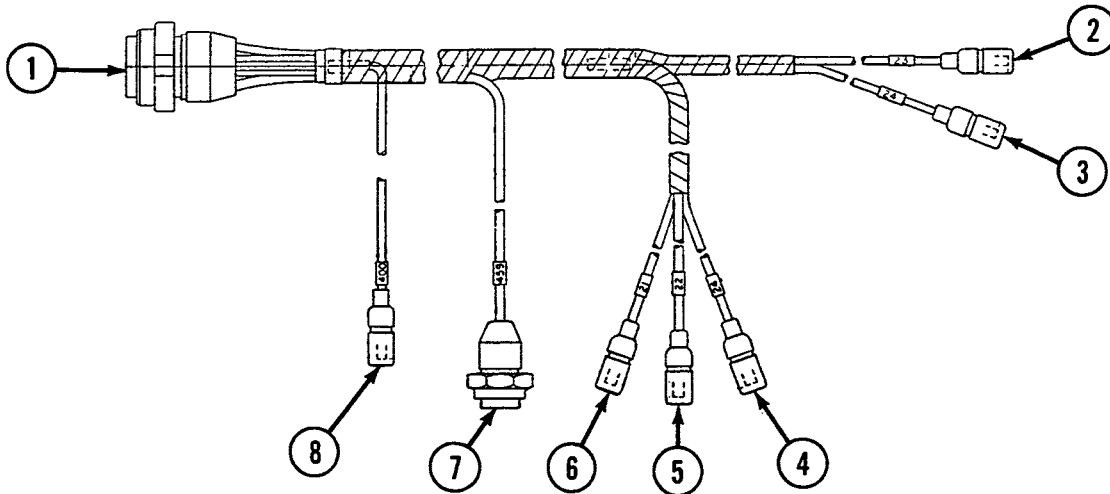
Engine deck removed (see WP 0336 00)

WARNING

Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

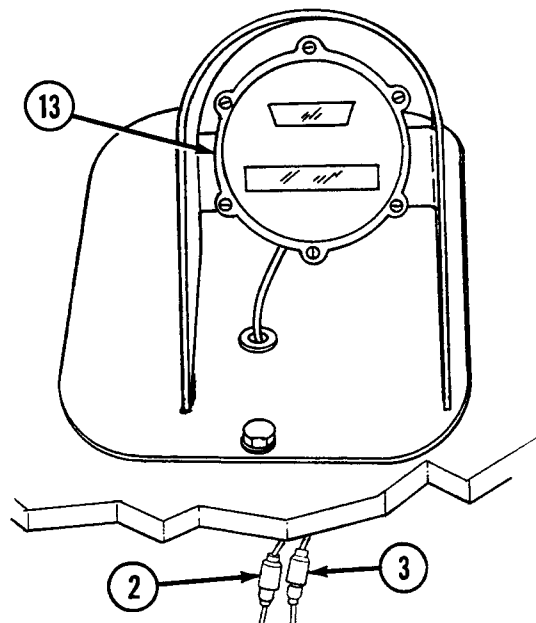
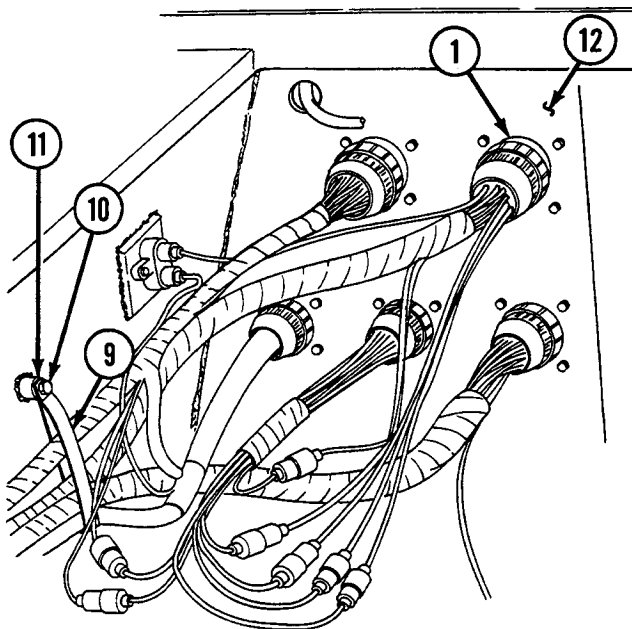
Connector No.	Electrical Lead To:	Wire No.
1	Bulkhead disconnect	400, 23, 24, 22, 21, 459, 400
2	Right hand taillight	23
3	Right hand taillight	24
4	Left hand taillight	24
5	Left hand taillight	22
6	Left hand taillight	21
7	Master relay	459
8	Circuit breaker	400



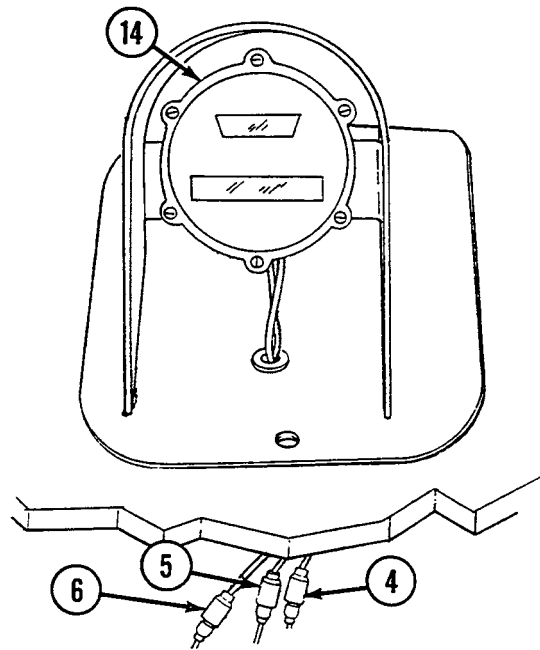


Removal

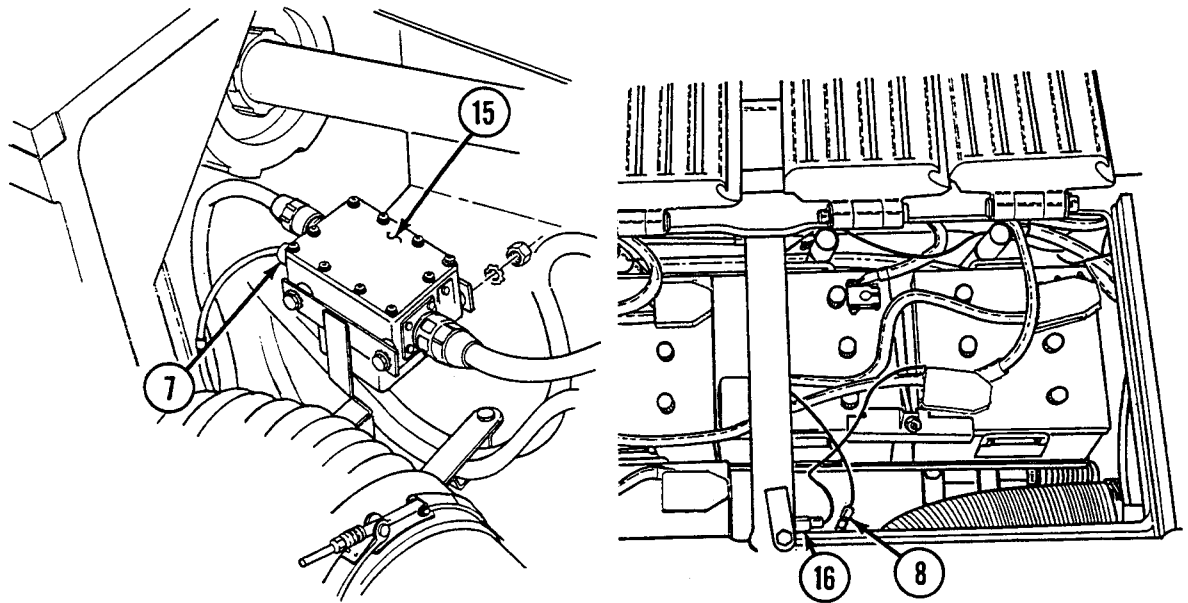
1. Remove 11 clamps (9) by removing screw (10) and lockwasher (11) from each.
2. Disconnect connector (1) from bulkhead disconnect (12).
3. Disconnect two connectors (2 and 3) from right taillight (13).



4. Disconnect three connectors (4, 5, and 6) from left taillight (14).



5. Disconnect connector (7) from master relay (15).
6. Disconnect connector (8) from circuit breaker (16).



Disassembly

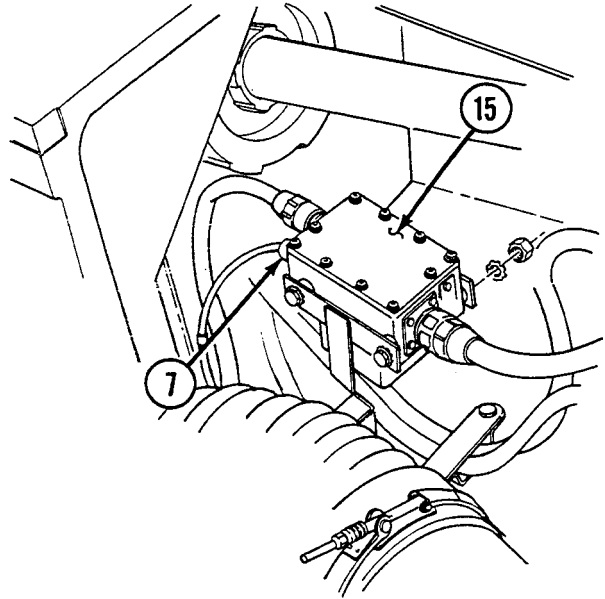
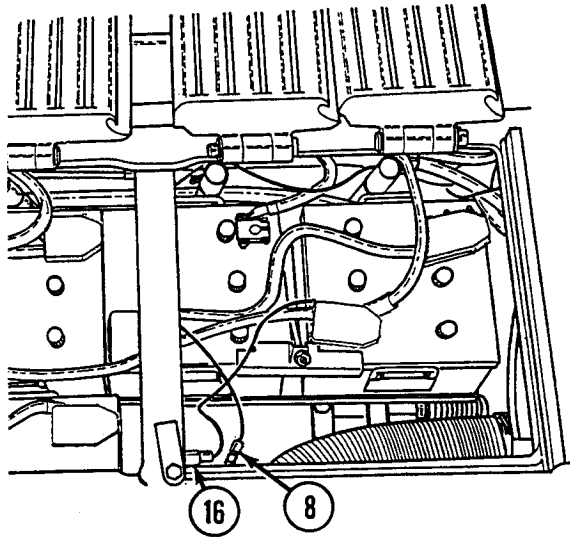
1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

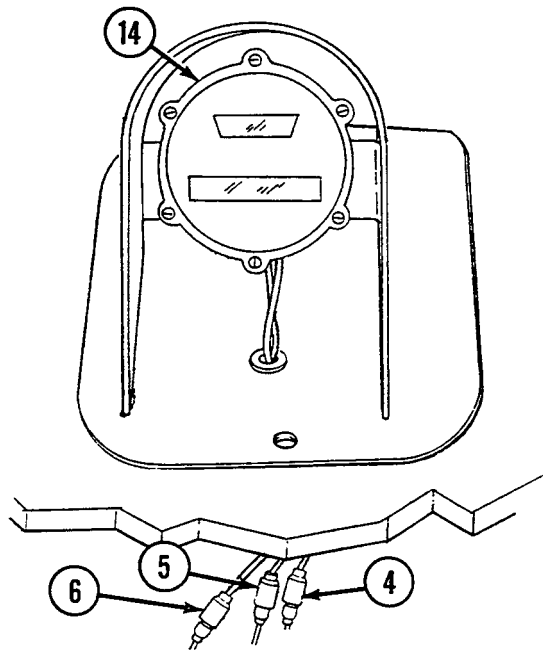
1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

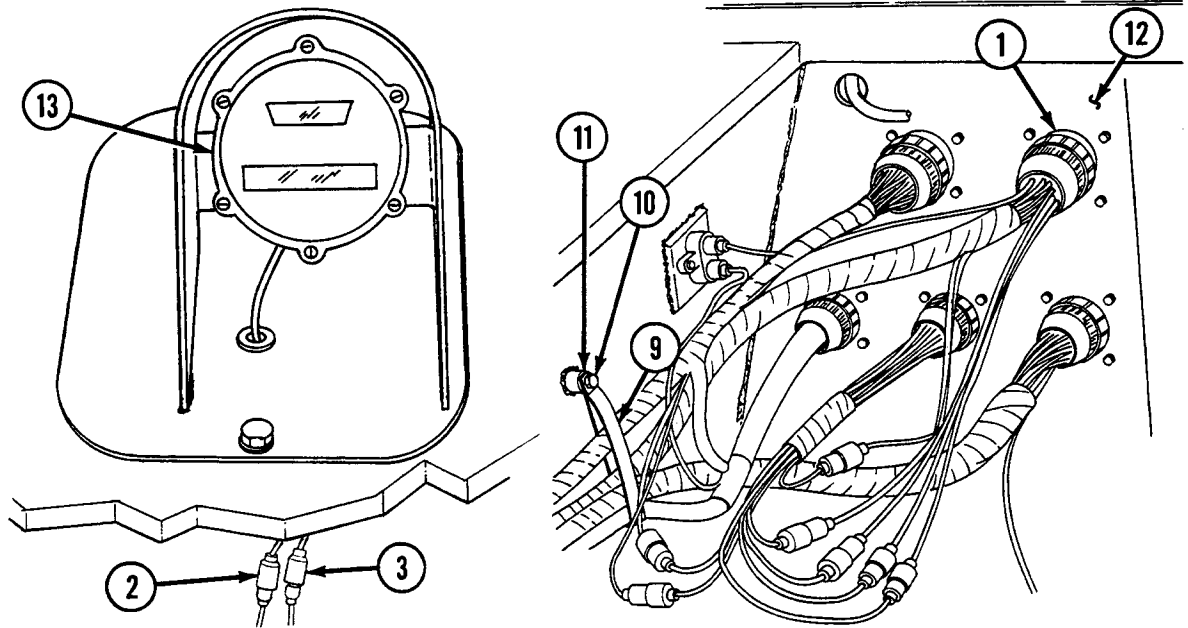
1. Connect connector (8) to circuit breaker (16).
2. Connect connector (7) to master relay (15).



3. Connect three connectors (4, 5, and 6) to left taillight (14).



4. Connect two connectors (2 and 3) to right taillight (13).
5. Connect connector (1) to bulkhead disconnect (12).
6. Install 11 clamps (9) using screw (10) and lockwasher (11) for each.

**NOTE**

Follow-on maintenance: Install engine deck (see WP 0336 00).

END OF WORK PACKAGE

UNIT MAINTENANCE**RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1****NSN 2350-00-122-6826, EIC AQA****BULKHEAD TO ENGINE WIRING HARNESS AND STARTER RELAY
WIRING HARNESS (11671790) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION**

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00

Materials/Parts

Lockwashers (8) (item 621, WP 0491 00)

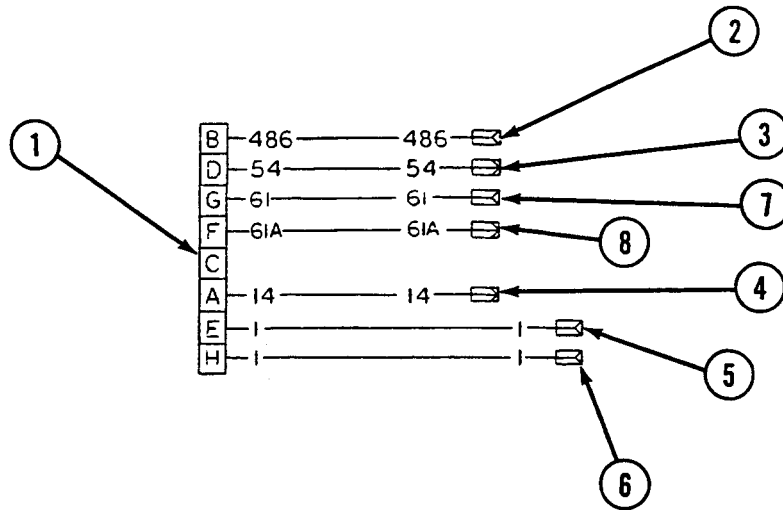
Screws (8) (item 731, WP 0491 00)

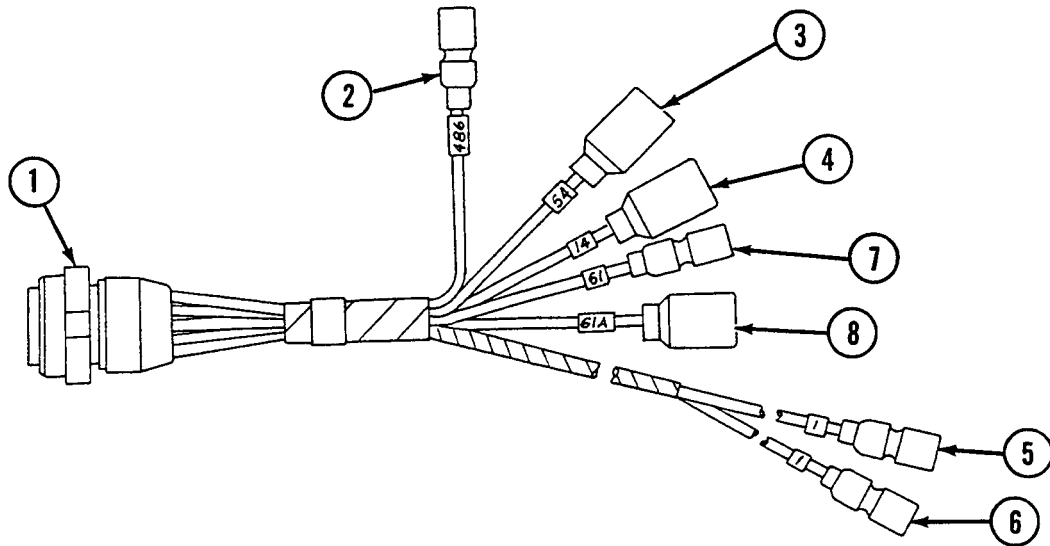
Equipment ConditionAir inlet doors removed as necessary (see WP 0341 00)

WARNING

Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

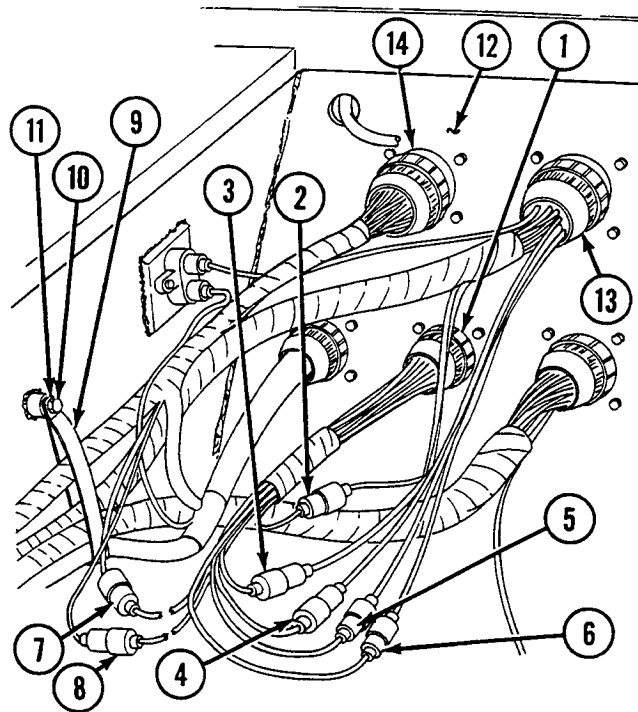
Connector No.	Electrical Lead To:	Wire No.
1	Bulkhead disconnect	1, 486, 54, 14, 61, 61A,
2	Bulkhead to main engine bracket and rear fuel tank transmitter wiring harness	1
3	Bulkhead to main engine bracket and rear fuel tank transmitter wiring harness	486
4	Bulkhead to main engine bracket and rear fuel tank transmitter wiring harness	54
5	Bulkhead to main engine bracket and rear fuel tank transmitter wiring harness	14
6	Bulkhead to main engine bracket and rear fuel tank transmitter wiring harness	1
7	Bulkhead to main engine bracket and rear fuel tank transmitter wiring harness	14
8	Bulkhead to APU, master relay, and rigger's lights wiring harness	61
8	Bulkhead to APU, master relay, and rigger's lights wiring harness	61A





Removal

1. Remove eight clamps (9) by removing screw (10) and lockwasher (11) from each.
2. Disconnect connector (1) from bulkhead disconnect (12).
3. Disconnect five connectors (2 through 6) from bulkhead to main engine bracket and rear fuel tank transmitter wiring harness (13).
4. Disconnect two connectors (7 and 8) from bulkhead to APU, master relay, and rigger's lights wiring harness (14).



Disassembly

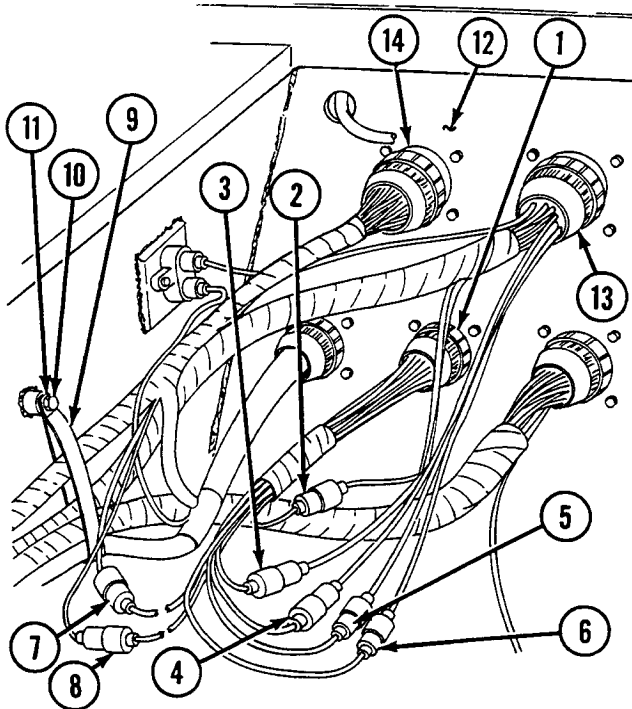
1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect two connectors (7 and 8) to bulkhead to APU, master relay, and rigger's lights wiring harness (14).
2. Connect five connectors (2 through 6) to bulkhead to main engine bracket and rear fuel tank transmitter wiring harness (13).
3. Connect connector (1) to bulkhead disconnect (12).
4. Install eight clamps (9) using lockwasher (11) and screw (10) for each.

**NOTE**

Follow-on maintenance: Install air inlet doors if removed (see WP 0341 00).

END OF WORK PACKAGE

UNIT MAINTENANCE**RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1****NSN 2350-00-122-6826, EIC AQA****BULKHEAD TO ENGINE BRACKET AND REAR FUEL TANK TRANSMITTER
WIRING HARNESS (DUAL VOLTAGE) (12322588) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION**

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00

Materials/Parts

Lockwashers (16) (item 621, WP 0491 00)

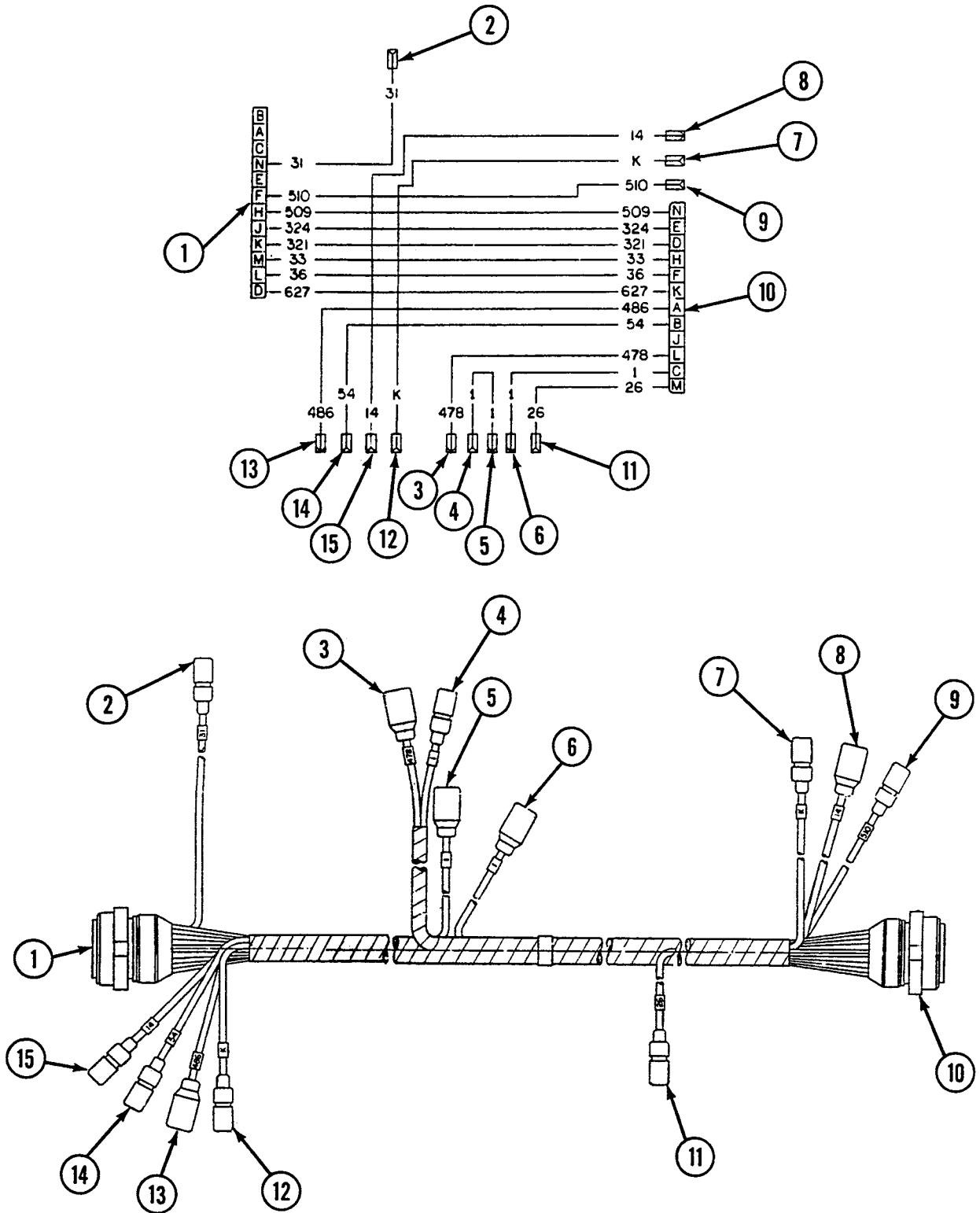
Screws (16) (item 731, WP 0491 00)

Equipment ConditionAir inlet doors removed as necessary (see WP 0341 00)

WARNING

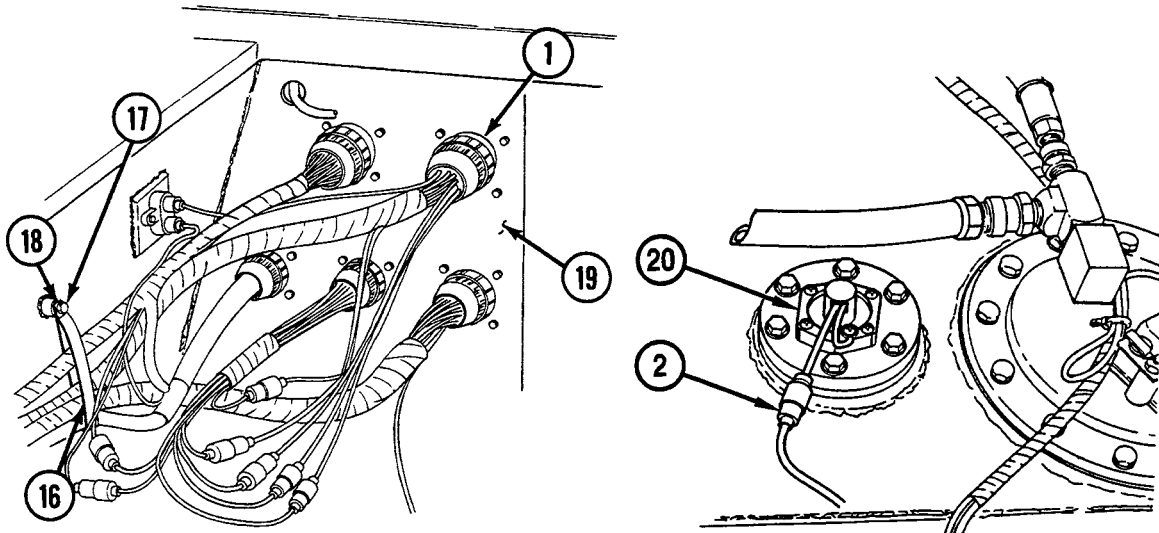
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Bulkhead	627, 510, 509, 324, 36, 31, 321, 33
2	Rear fuel tank transmitter	31
3	Main engine voltage regulator to engine disconnect wiring harness (dual voltage) (11672415)	478
4	Main engine voltage regulator to engine disconnect wiring harness (dual voltage) (11672415)	1
5	Bulkhead to main engine wiring harness and starter relay wiring harness	1
6	Bulkhead to main engine wiring harness and starter relay wiring harness	1
7	Batteries to master relay, voltage regulators, slave receptacle, and engine disconnect wiring harness (dual voltage) (11672413)	K
8	Batteries to master relay, voltage regulators, slave receptacle, and engine disconnect (dual voltage) wiring harness (11672413)	14
9	Engine disconnect ground lead assembly	510
10	Main engine disconnect	627, 486, 54, 478, 1, 26, 509, 324, 321, 33, 36
11	Bulkhead to APU, master relay, and rigger's lights wiring harness (dual voltage) (11672412)	26
12	Circuit breaker	K
13	Bulkhead to main engine wiring harness and starter relay wiring harness	486
14	Bulkhead to main engine wiring harness and starter relay wiring harness	54
15	Bulkhead to main engine wiring harness and starter relay wiring harness	14

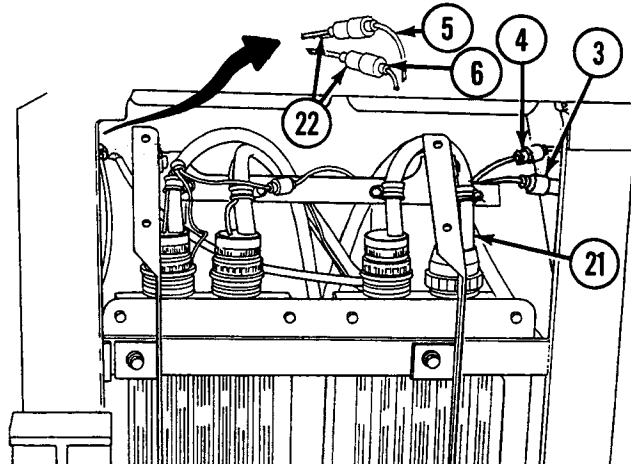


Removal

1. Remove 16 clamps (16) by removing screw (17) and lockwasher (18) from each.
2. Disconnect connector (1) from bulkhead disconnect (19).
3. Disconnect connector (2) from rear fuel tank transmitter (20).

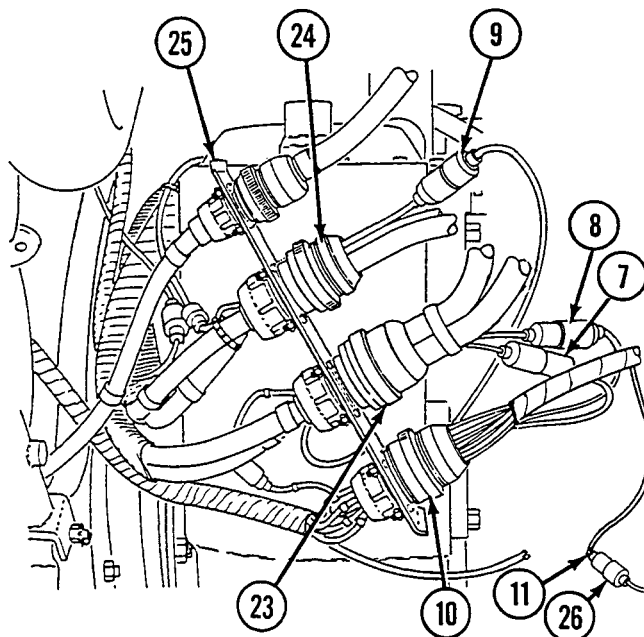


4. Disconnect two connectors (3 and 4) from main engine voltage regulator to engine disconnect wiring harness (21).
5. Disconnect two connectors (5 and 6) from bulkhead to main engine wiring harness and starter relay wiring harness (22).

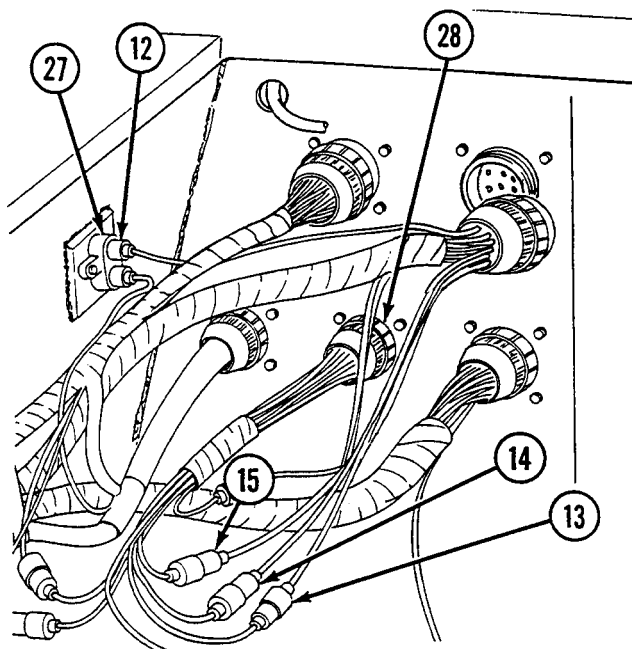


6. Disconnect two connectors (7 and 8) from batteries to master relay, voltage regulators, slave receptacle, and engine disconnect wiring harness (23).
7. Disconnect connector (9) from engine disconnect ground lead assembly (24).

8. Disconnect connector (10) from main engine disconnect (25).
9. Disconnect connector (11) from bulkhead to APU, master relay, and rigger's lights wiring harness (26).



10. Disconnect connector (12) from circuit breaker (27).
11. Disconnect three connectors (13, 14, and 15) from bulkhead to main engine wiring harness and starter relay wiring harness (28).



Disassembly

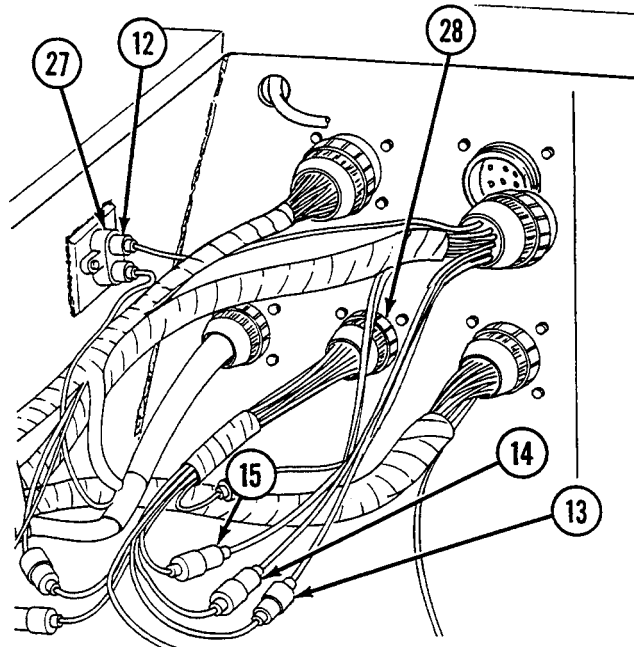
1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

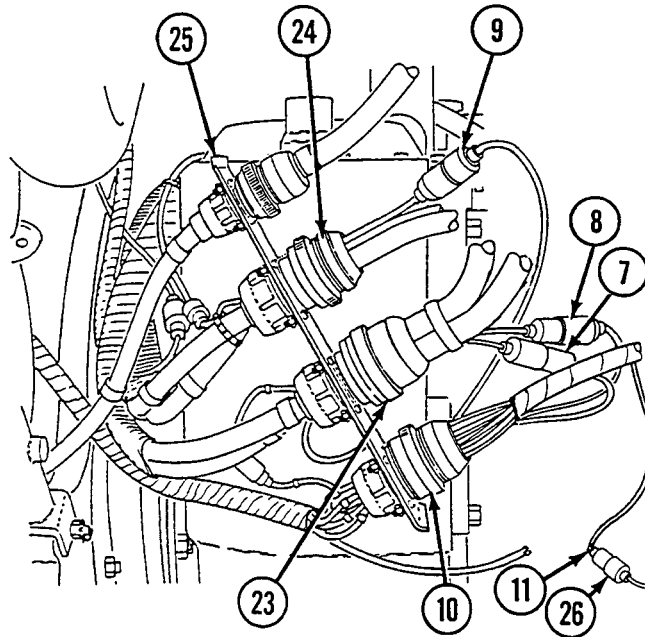
1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

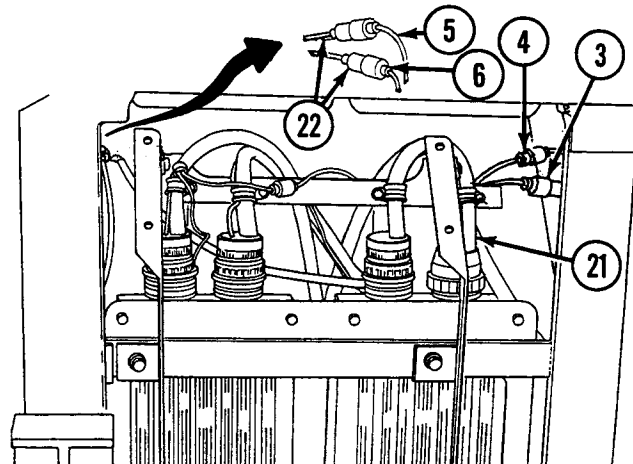
1. Connect three connectors (13, 14, and 15) to bulkhead to main engine wiring harness and starter relay wiring harness (28).
2. Connect connector (12) to circuit breaker (27).



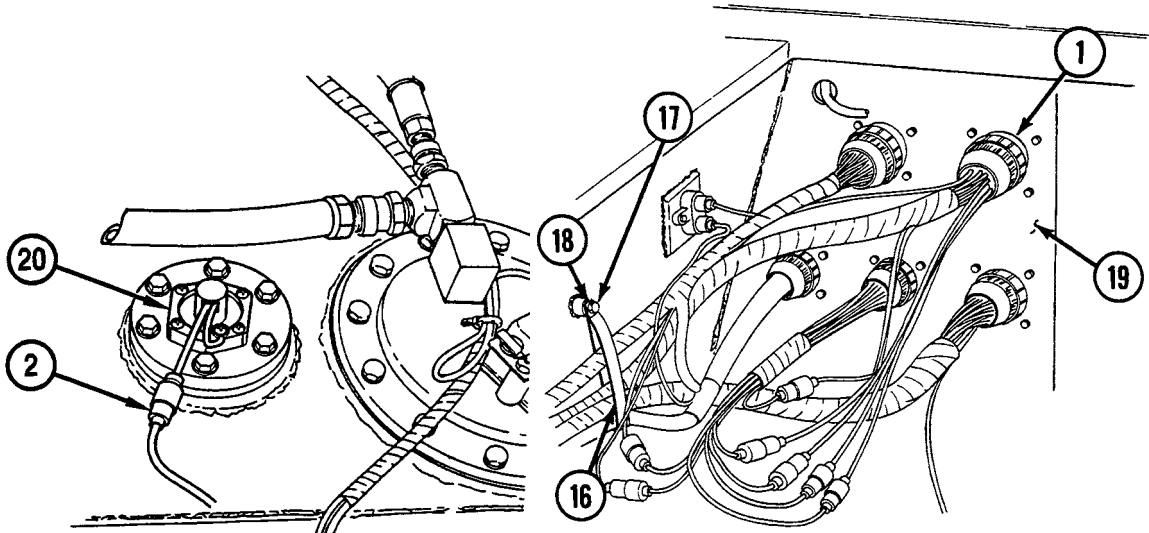
3. Connect connector (11) to bulkhead to APU, master relay, and rigger's lights wiring harness (26).
4. Connect connector (10) to main engine disconnect (25).
5. Connect connector (9) to engine disconnect ground lead assembly (24).
6. Connect two connectors (7 and 8) to batteries to master relay, voltage regulators, slave receptacle, and engine disconnect wiring harness (23).



7. Connect two connectors (5 and 6) to bulkhead to main engine wiring harness and starter relay wiring harness (22).
8. Connect two connectors (3 and 4) to main engine voltage regulator to engine disconnect wiring harness (21).



9. Connect connector (2) to rear fuel tank transmitter (20).
10. Connect connector (1) to bulkhead disconnect (19).
11. Install 16 clamps (16) using lockwasher (18) and screw (17) for each.



NOTE

Follow-on maintenance: Install air inlet doors if removed (see WP 0341 00).

END OF WORK PACKAGE

UNIT MAINTENANCE**RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1****NSN 2350-00-122-6826, EIC AQA****BULKHEAD TO ENGINE BRACKET AND REAR FUEL TANK TRANSMITTER
WIRING HARNESS (SINGLE VOLTAGE) (11671789) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION**

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00

Materials/Parts

Lockwashers (16) (item 621, WP 0491 00)

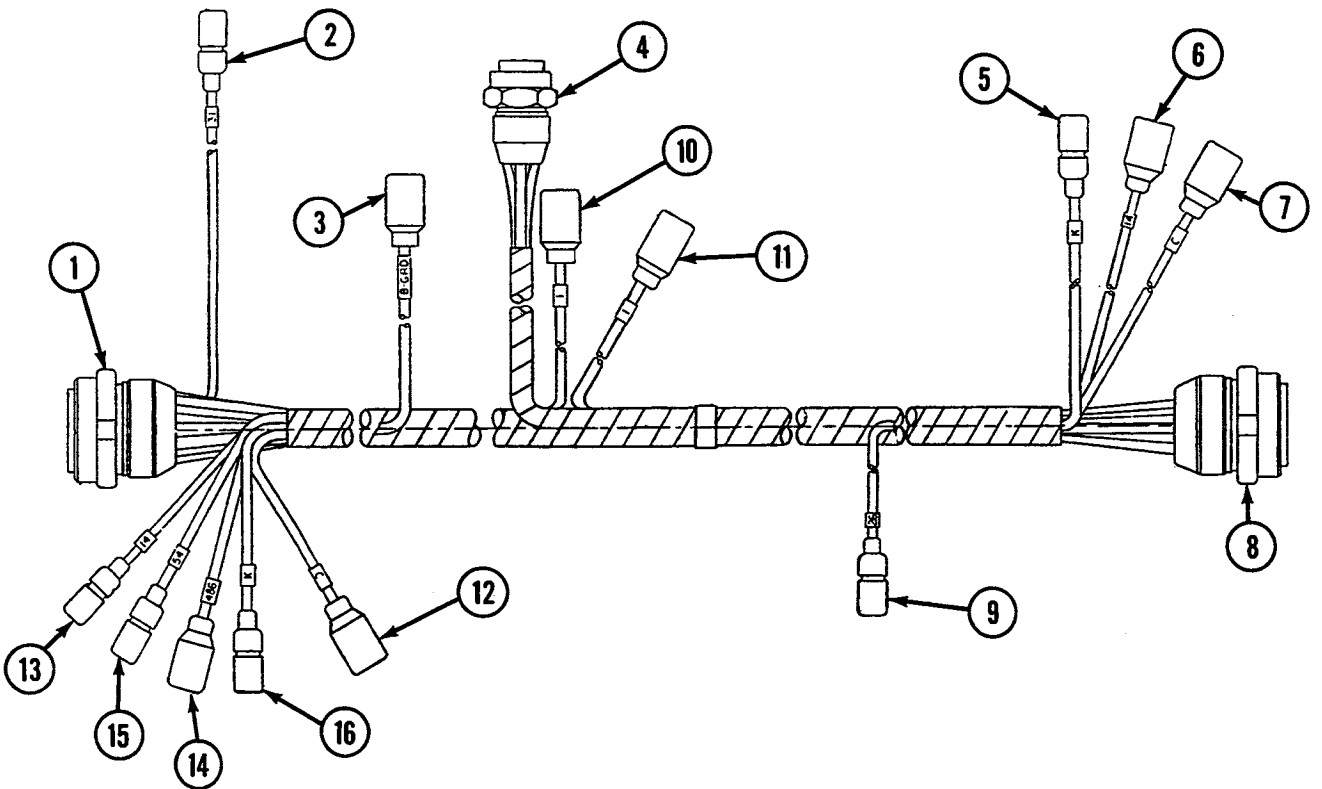
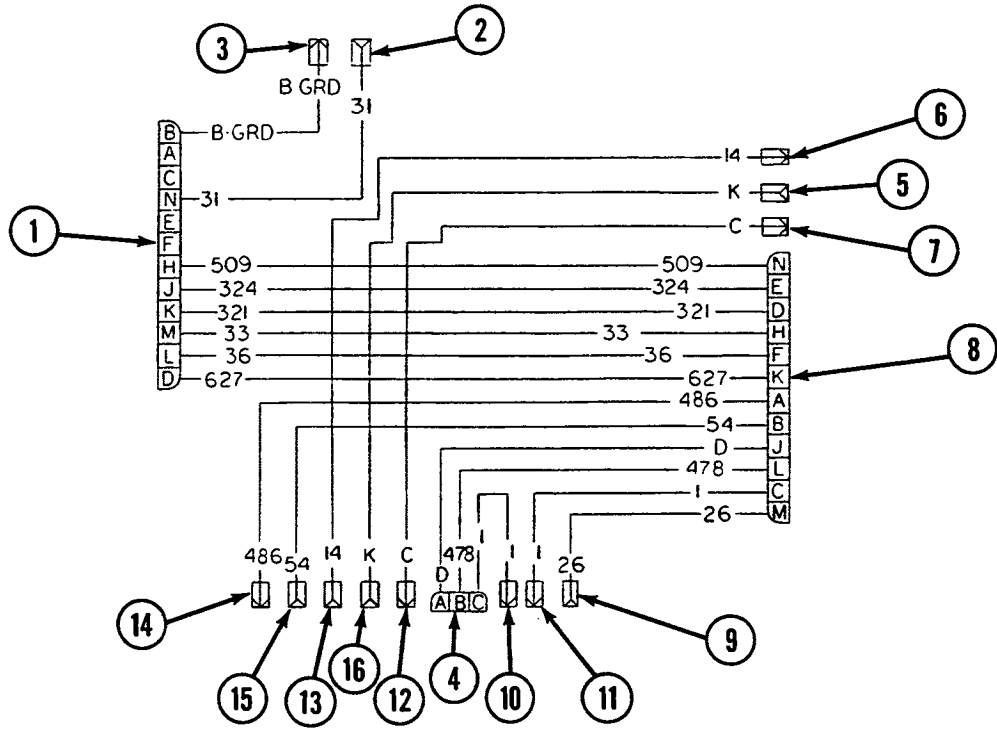
Screws (16) (item 731, WP 0491 00)

Equipment ConditionAir inlet doors removed as necessary (see WP 0341 00)

WARNING

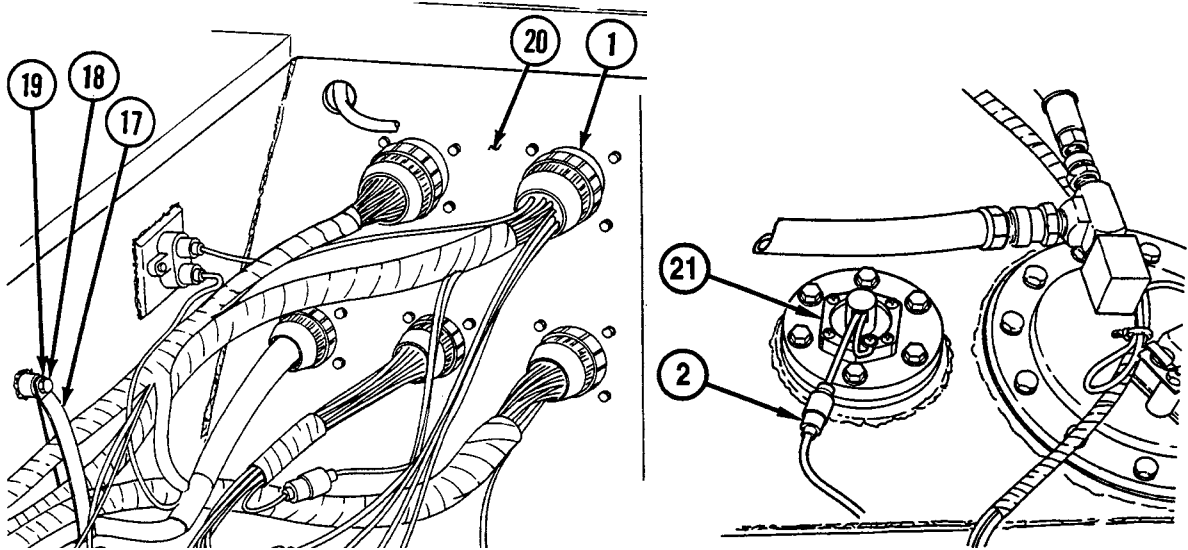
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Bulkhead disconnect	B-GND, 31, 509, 324, 321, 33, 36, 627
2	Rear fuel tank transmitter	31
3	APU and main engine armature relays to voltage regulator wiring harness (single voltage)	B-GND
4	Switching relay box	478, D, 1
5	Batteries to master relay, voltage regulator, slave receptacle, and engine disconnect wiring harness (single voltage) (11671791)	K
6	Batteries to master relay, voltage regulator, slave receptacle, and engine disconnect wiring harness (single voltage) (11671791)	14
7	Batteries to master relay, voltage regulator, slave receptacle, and engine disconnect wiring harness (single voltage) (11671791)	C
8	Main engine disconnect	509, 324, 321, 33, 36, 627, 486, 54, D, 478, 1, 26
9	Bulkhead to APU, master relay, and rigger's lights wiring harness (single voltage)	26
10	Bulkhead to main engine wiring harness and starter relay wiring harness	1
11	Bulkhead to main engine wiring harness and starter relay wiring harness	1
12	Bulkhead to main engine wiring harness and starter relay wiring harness	C
13	Bulkhead to main engine wiring harness and starter relay wiring harness	14
14	Bulkhead to main engine wiring harness and starter relay wiring harness	486
15	Bulkhead to main engine wiring harness and starter relay wiring harness	54
16	Circuit breaker	K

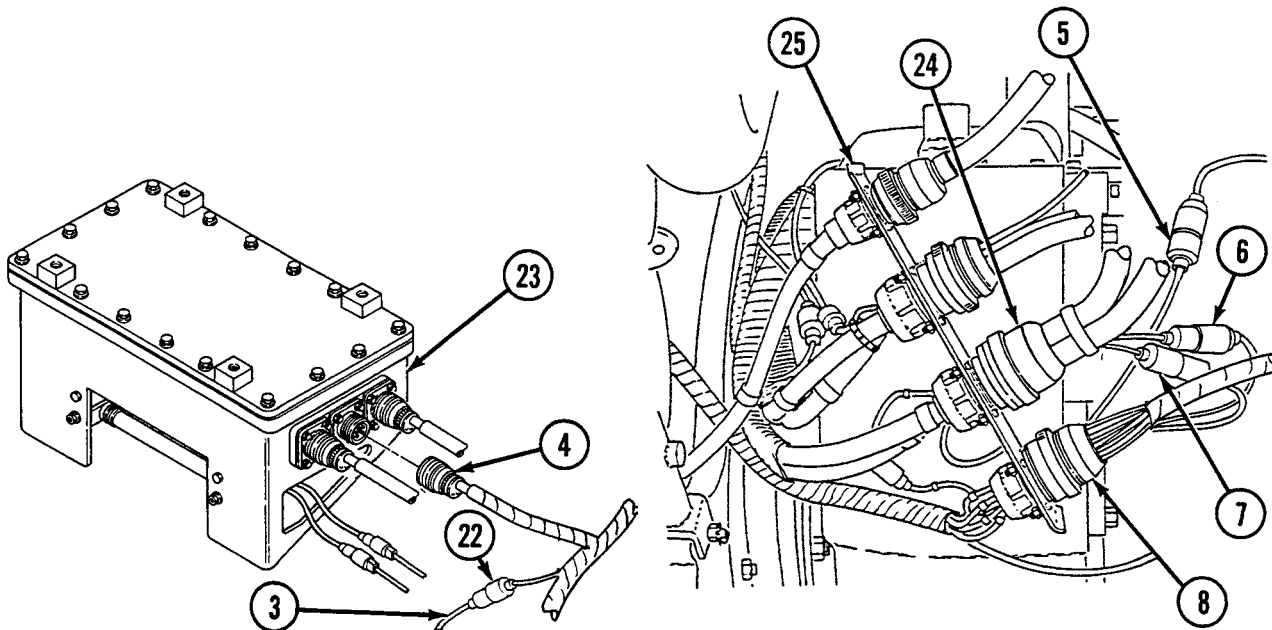


Removal

1. Remove 16 clamps (17) by removing screw (18) and lockwasher (19) from each.
2. Disconnect connector (1) from bulkhead disconnect (20).
3. Disconnect connector (2) from rear fuel tank transmitter (21).

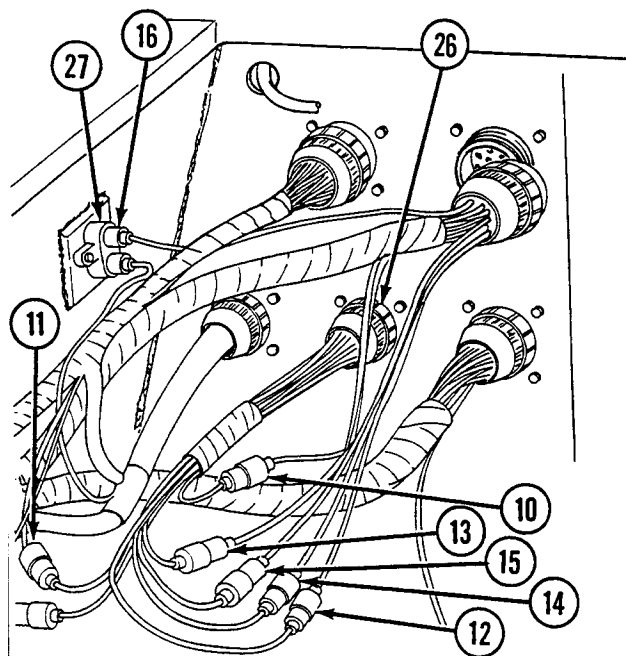


4. Disconnect connector (3) from APU and main engine armature relays to voltage regulator wiring harness (22).
5. Disconnect connector (4) from switching relay box (23).
6. Disconnect three connectors (5, 6, and 7) from batteries to master relay, voltage regulator, slave receptacle, and engine disconnect wiring harness (24).
7. Disconnect connector (8) from main engine disconnect (25).



8. Disconnect six connectors (10 through 15) from bulkhead to main engine wiring harness and starter relay wiring harness (26).

- Disconnect connector (16) from circuit breaker (27).



Disassembly

- Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

- Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

- Connect connector (16) to circuit breaker (27).
- Connect seven connectors (9 through 15) to bulkhead to main engine wiring harness and starter relay wiring harness (26).
- Connect connector (8) to main engine disconnect (25).
- Connect three connectors (5, 6, and 7) to batteries to master relay, voltage regulator, slave receptacle, and engine disconnect wiring harness (24).
- Connect connector (4) to switching relay box (23).
- Connect connector (3) to APU and main engine armature relays to voltage regulator wiring harness (22).
- Connect connector (2) to rear fuel tank transmitter (21).
- Connect connector (1) to bulkhead disconnect (20).
- Install 16 clamps (17) using lockwasher (19) and screw (18) for each.

NOTE

Follow-on maintenance: Install air inlet doors if removed (see WP 0341 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
BULKHEAD TO APU, MASTER RELAY, AND RIGGER'S LIGHTS
WIRING HARNESS (DUAL VOLTAGE) (11672412) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (4) (item 610, WP 0491 00)
 Lockwashers (4) (item 612, WP 0491 00)
 Lockwashers (20) (item 621, WP 0491 00)
 Nuts (4) (item 672, WP 0491 00)
 Nuts (4) (item 675, WP 0491 00)
 Screws (4) (item 585, WP 0491 00)

Materials/Parts (cont.)

Screws (4) (item 592, WP 0491 00)
 Screws (20) (item 731, WP 0491 00)

References

WP 0255 00 thru 0264 00

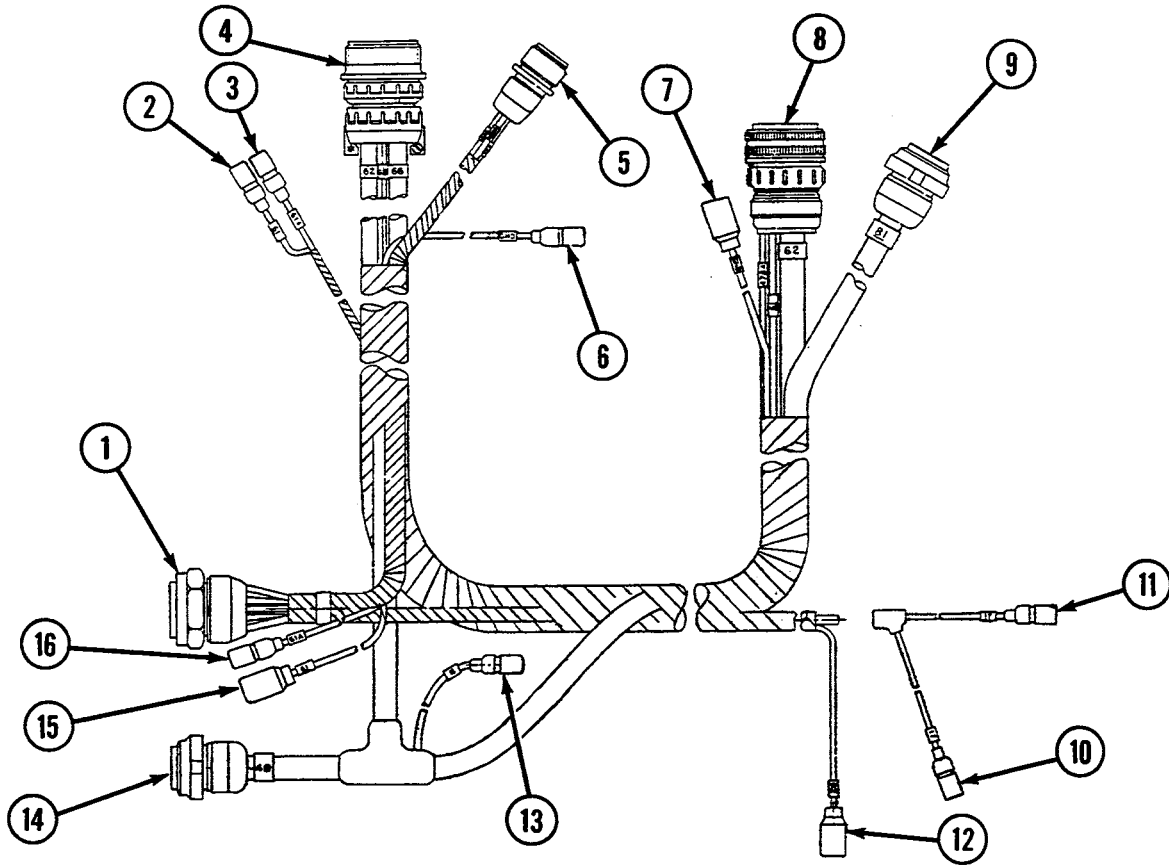
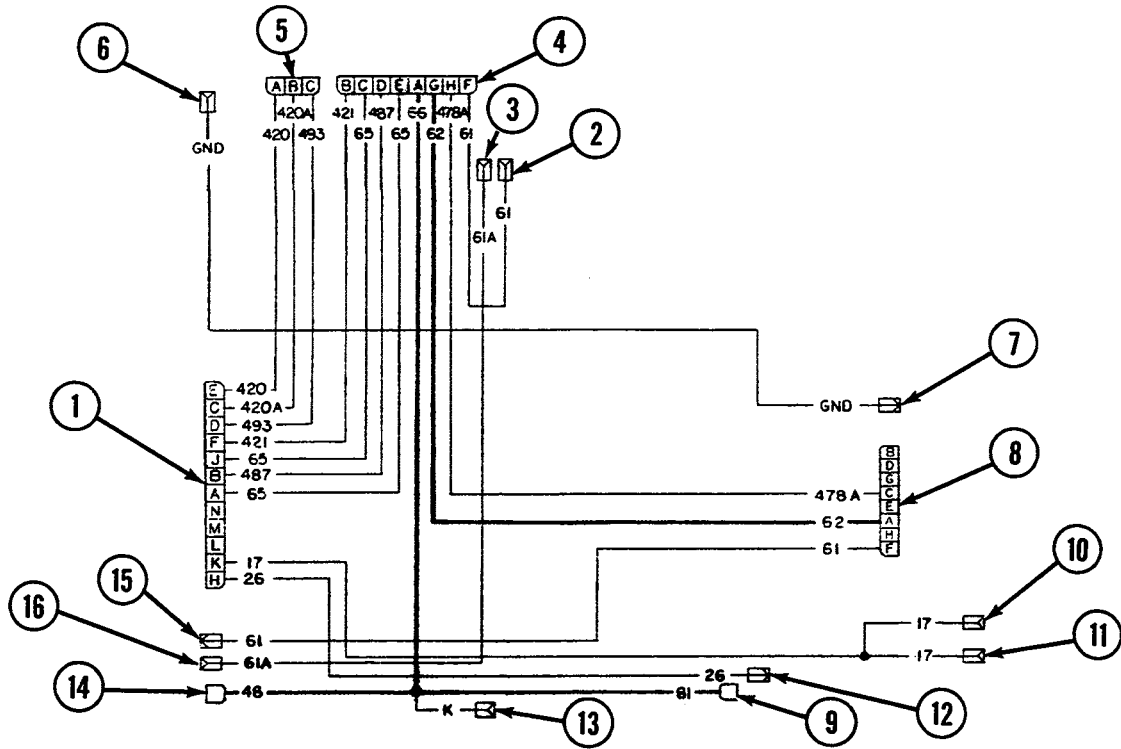
Equipment Condition

Air inlet doors removed (see WP 0341 00)

WARNING

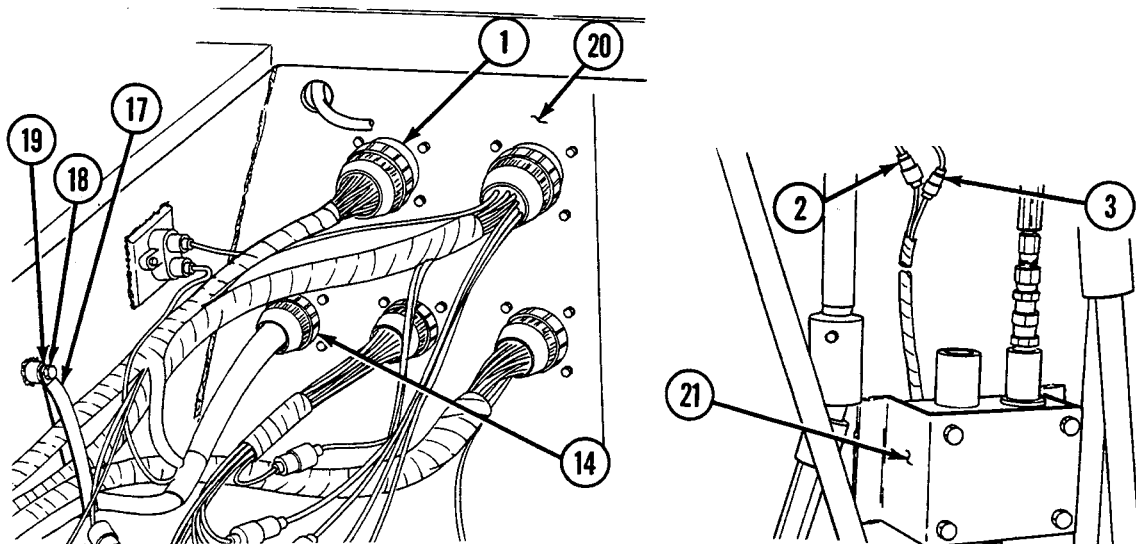
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Bulkhead disconnect	420, 420A, 493, 421, 65, 487, 65, 17, 26
2	Hydraulic pressure switch	61
3	Hydraulic pressure switch	61A
4	APU engine disconnect	421, 65, 487, 65, 66, 62, 478A, 61
5	APU engine disconnect	420, 420A, 493
6	APU wiring harness (11672417)	GND
7	Batteries to master relay, voltage regulators, slave receptacle, and engine disconnect wiring harness (dual voltage) (11672413)	GND
8	APU voltage regulator	478A, 62, 61
9	Master relay	81
10	Rigger right service light	17
11	Rigger left service light	17
12	Bulkhead to main engine bracket and rear fuel tank transmitter wiring harness (dual voltage) (11672411)	26
13	Circuit breaker	K
14	Bulkhead disconnect	48
15	Bulkhead to main engine wiring harness and starter relay wiring harness	61
16	Bulkhead to main engine wiring harness and starter relay wiring harness	61A

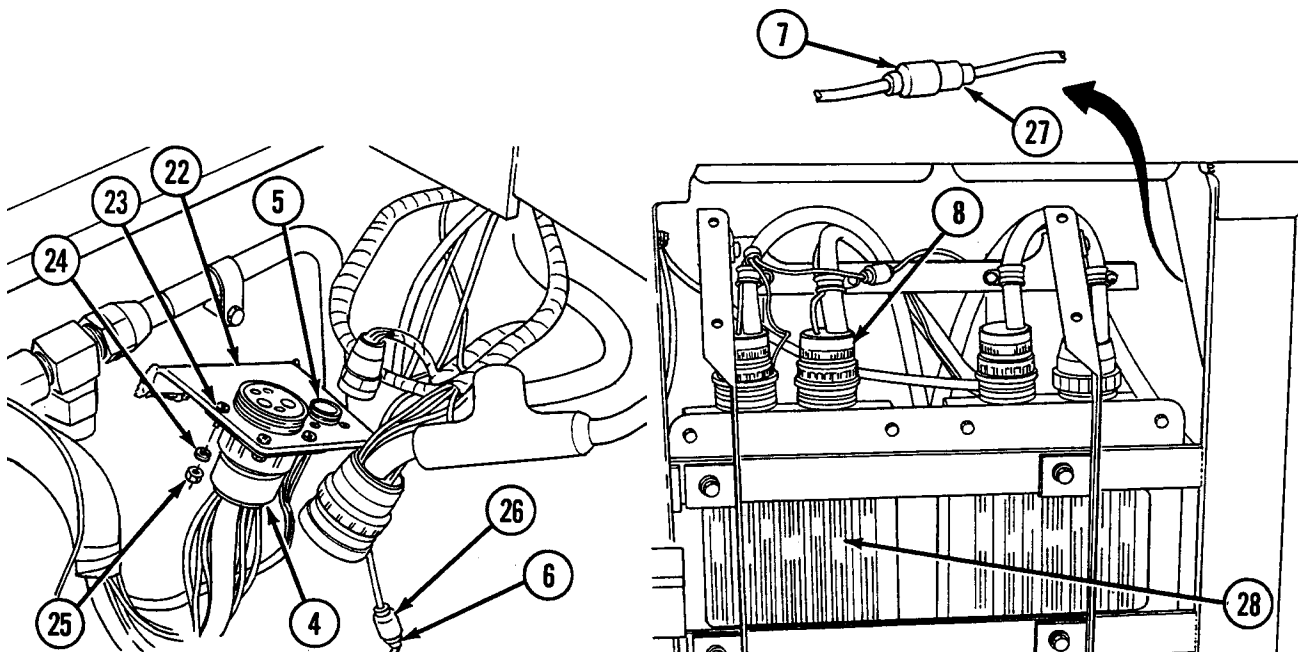


Removal

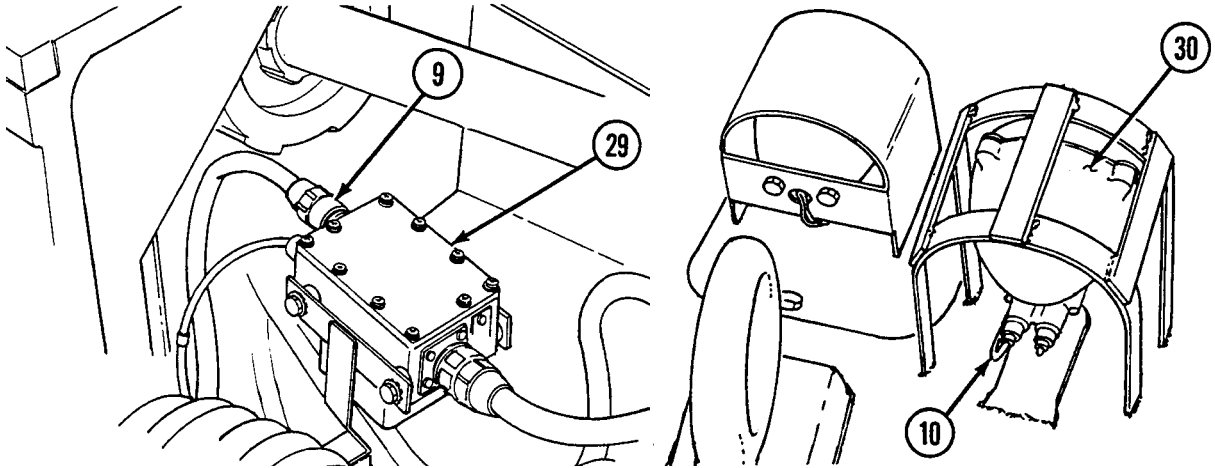
1. Remove 20 clamps (17) by removing screw (18) and lockwasher (19) from each.
2. Disconnect two connectors (1 and 14) from bulkhead disconnect (20).
3. Disconnect two connectors (2 and 3) from hydraulic pressure switch (21).



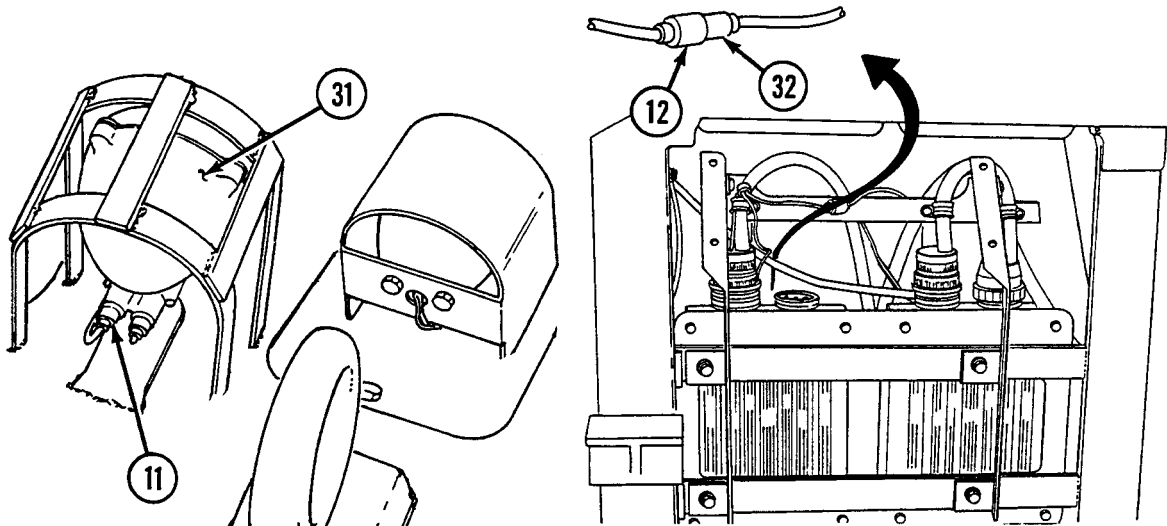
4. Disconnect two connectors (4 and 5) from APU engine disconnect (22) by removing four screws (23), four lockwashers (24), and four nuts (25) from each.
5. Disconnect connector (6) from APU wiring harness (26).
6. Disconnect connector (7) from batteries to master relay, voltage regulators, slave receptacle, and engine disconnect wiring harness (27).
7. Disconnect connector (8) from APU voltage regulator (28).



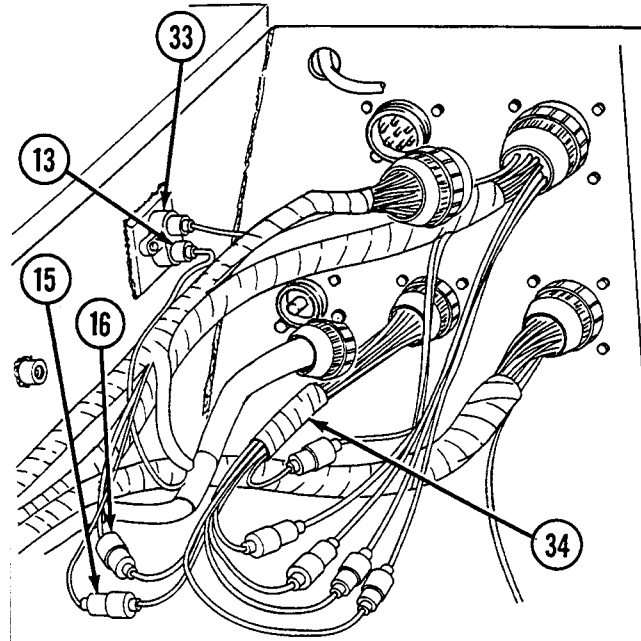
8. Disconnect connector (9) from master relay (29).
9. Disconnect connector (10) from rigger's right service light (30).



10. Disconnect connector (11) from rigger's left service light (31).
11. Disconnect connector (12) from bulkhead to main engine bracket and rear fuel tank transmitter wiring harness (32).



12. Disconnect connector (13) from circuit breaker (33).
13. Disconnect two connectors (15 and 16) from bulkhead to main engine wiring harness and starter relay wiring harness (34).



Disassembly

1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

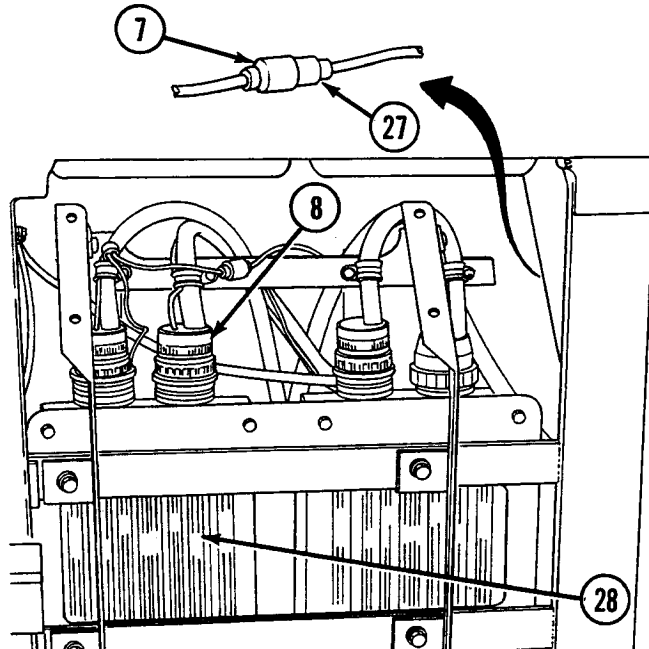
Assembly

1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

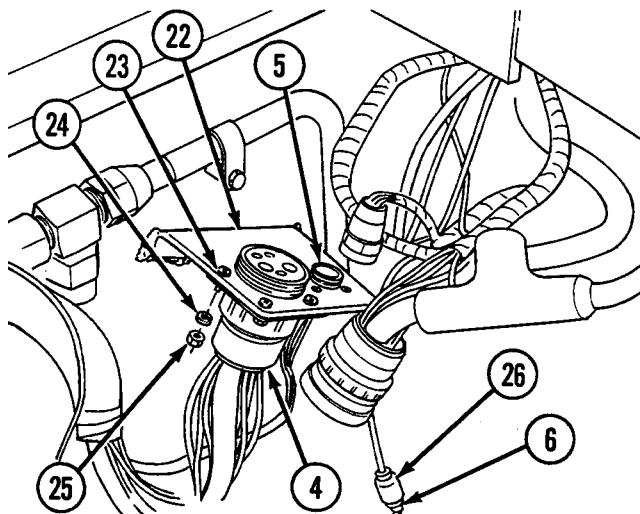
Installation

1. Connect two connectors (15 and 16) to bulkhead to main engine wiring harness and starter relay wiring harness (34).
2. Connect connector (13) to circuit breaker (33).
3. Connect connector (12) to bulkhead to main engine bracket and rear fuel tank transmitter wiring harness (32).
4. Connect connector (11) to rigger's left service light (31).
5. Connect connector (10) to rigger's right service light (30).
6. Connect connector (9) to master relay (29).

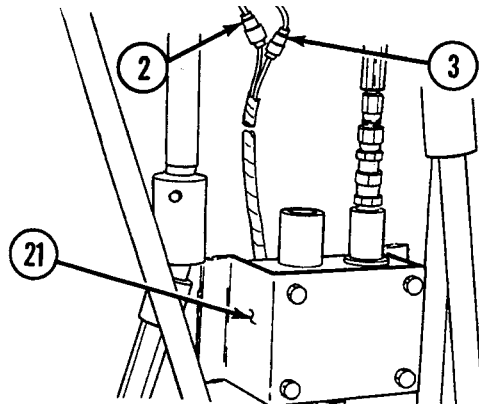
7. Connect connector (8) to APU voltage regulator (28).
8. Connect connector (7) to batteries to master relay, voltage regulators, slave receptacle, and engine disconnect wiring harness (27).
9. Connect connector (6) to APU wiring harness (26).



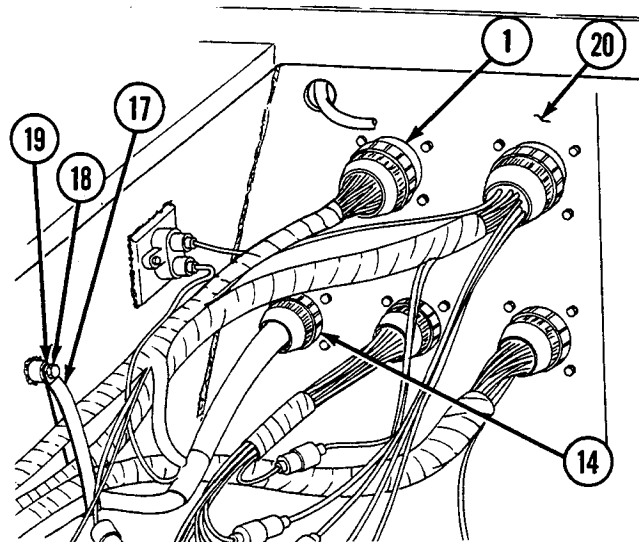
10. Connect two connectors (4 and 5) to APU engine disconnect (22) using four screws (23), four lockwashers (24), and four nuts (25) for each.



11. Connect two connectors (2 and 3) to hydraulic pressure switch (21).



12. Connect two connectors (1 and 14) to bulkhead disconnect (20).
13. Install 20 clamps (17) using lockwasher (19) and screw (18) for each.



NOTE

Follow-on maintenance: Install air inlet doors (see WP 0341 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
BULKHEAD TO APU, MASTER RELAY, AND RIGGER'S LIGHTS
WIRING HARNESS (SINGLE VOLTAGE) (11671324) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (4) (item 610, WP 0491 00)
 Lockwashers (4) (item 612, WP 0491 00)
 Lockwashers (10) (item 621, WP 0491 00)
 Nuts (4) (item 672, WP 0491 00)
 Nuts (4) (item 675, WP 0491 00)
 Screws (4) (item 585, WP 0491 00)

Materials/Parts (cont.)

Screws (4) (item 592, WP 0491 00)
 Screws (10) (item 731, WP 0491 00)

References

WP 0255 00 thru 0264 00

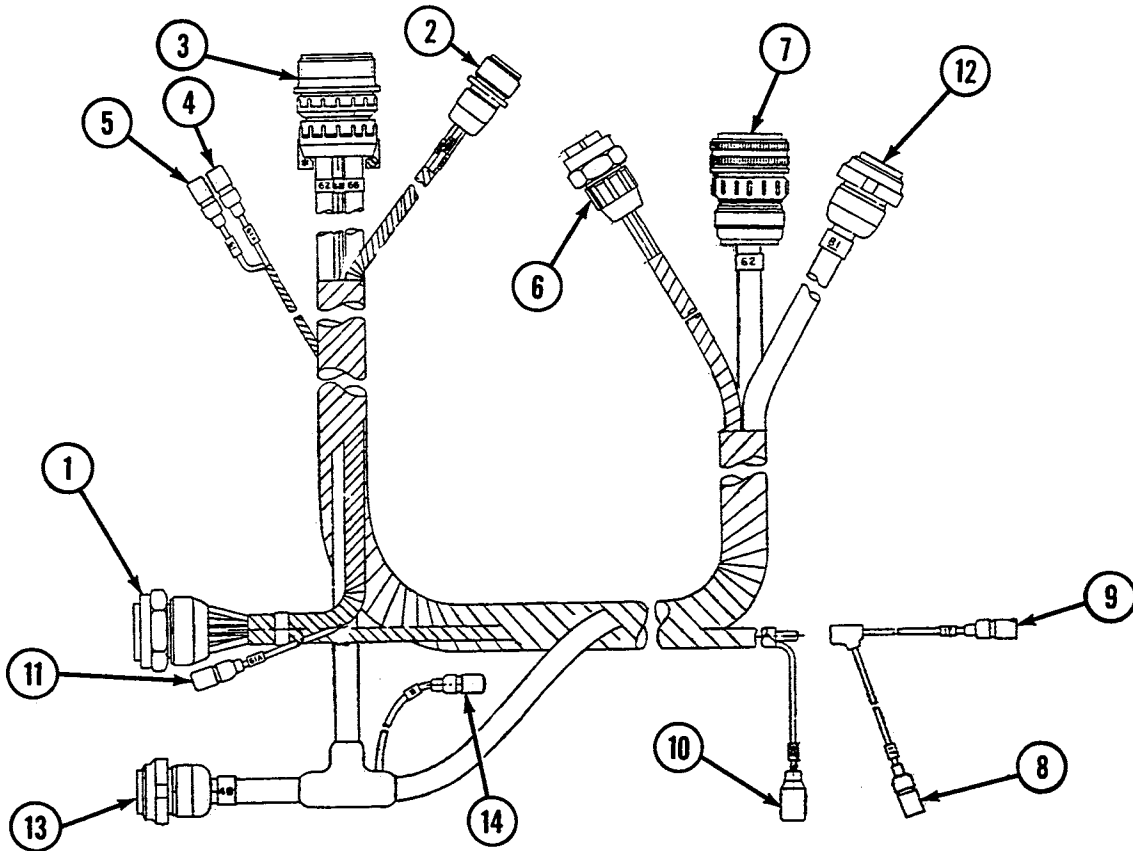
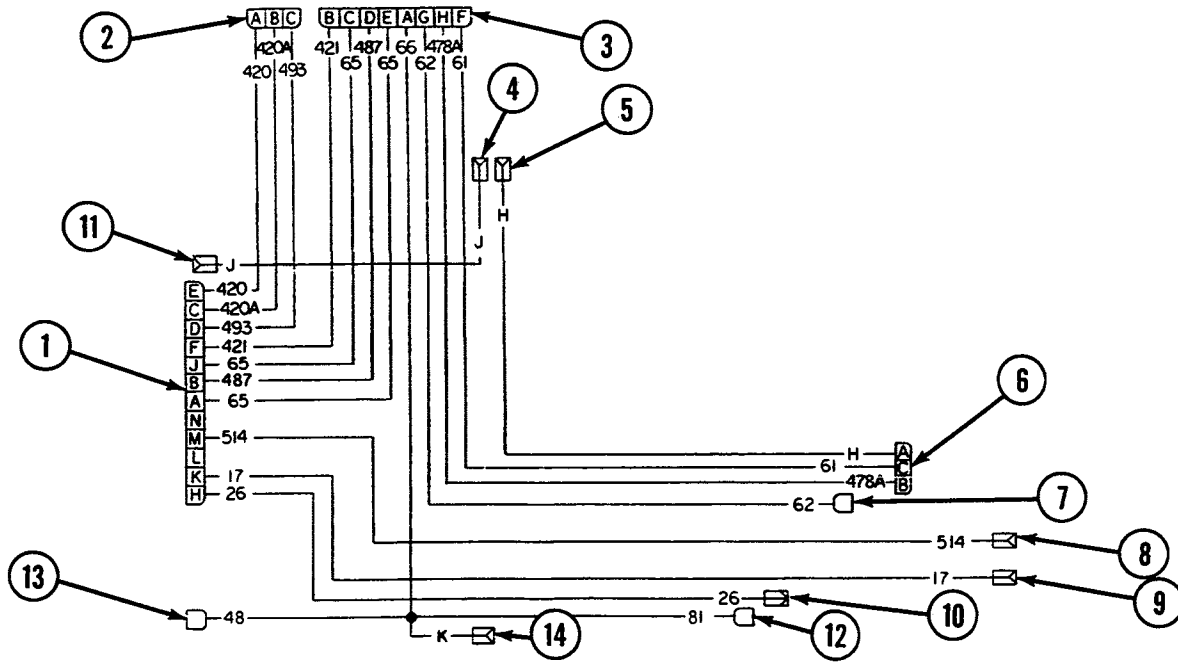
Equipment Condition

Air inlet grilles removed (see WP 0341 00)

WARNING

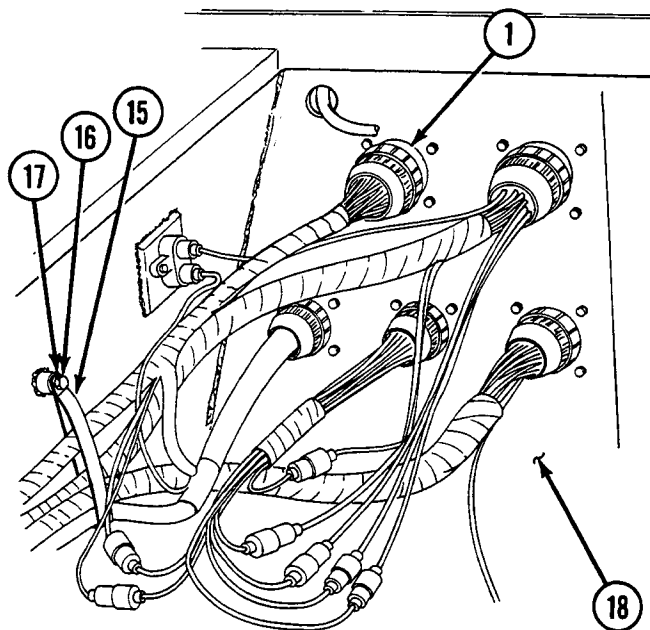
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Bulkhead disconnect	420, 420A, 493, 421, 65, 487, 65, 514, 17, 26
2	APU engine disconnect	420, 420A, 493
3	APU engine disconnect	421, 65, 487, 66, 65, 62, 478A, 61
4	Hydraulic pressure switch	J
5	Hydraulic pressure switch	H
6	Switching relay box	H, 61, 478A
7	Main engine generator relay	62
8	Rigger's right service light	514
9	Rigger's left service light	17
10	Bulkhead to main engine wiring harness and starter relay wiring harness	26
11	Bulkhead to main engine wiring harness and starter relay wiring harness	J
12	Master relay	81
13	Bulkhead disconnect	48
14	Circuit breaker	K

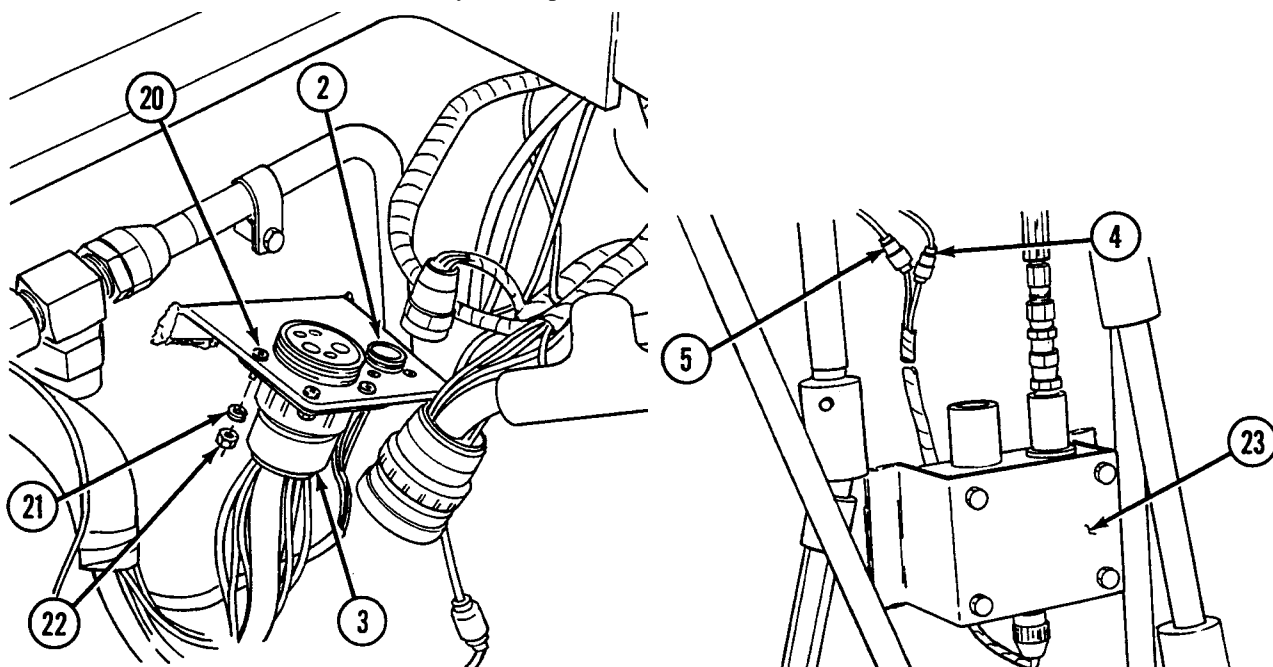


Removal

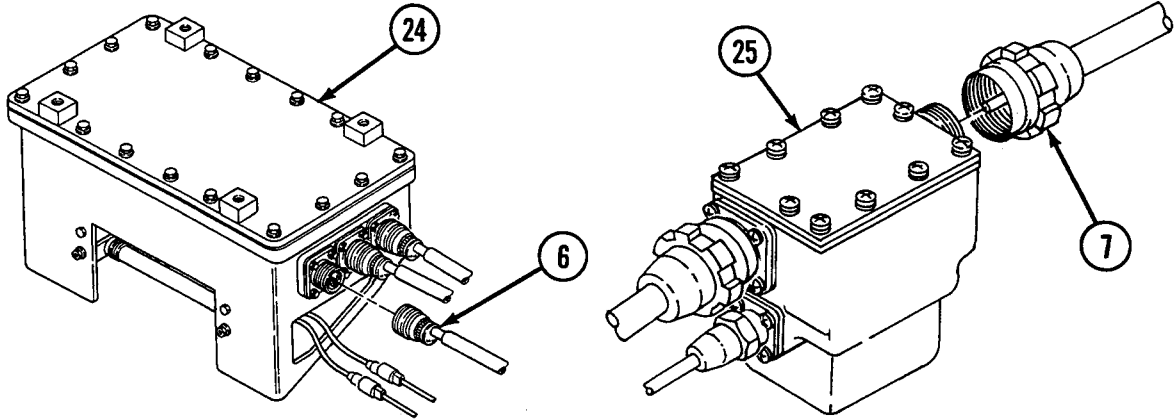
1. Remove 10 clamps (15) by removing screw (16) and lockwasher (17) from each.
2. Disconnect connector (1) from bulkhead disconnect (18).



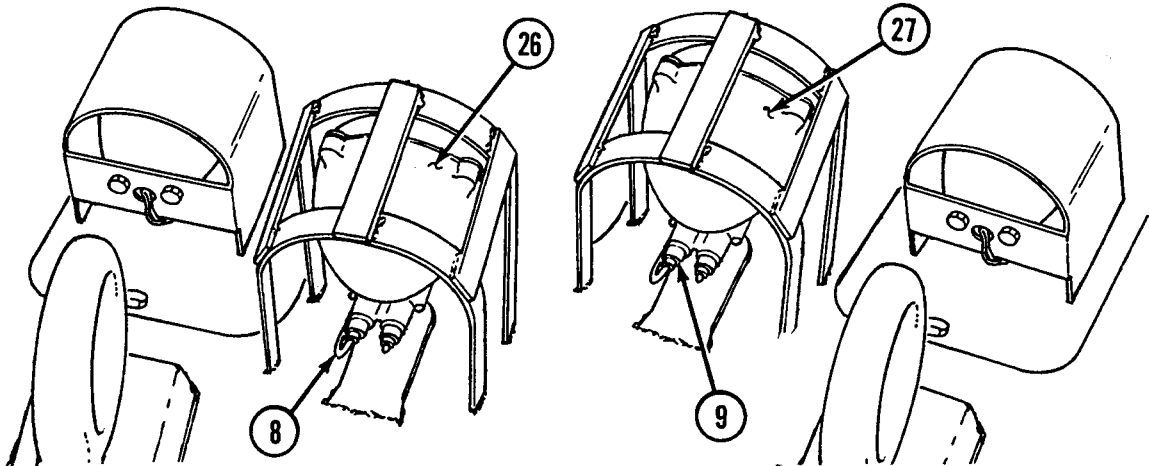
3. Disconnect two connectors (2 and 3) from APU engine disconnect by removing four screws (20), four lockwashers (21), and four nuts (22) from each.
4. Disconnect two connectors (4 and 5) from hydraulic pressure switch (23).



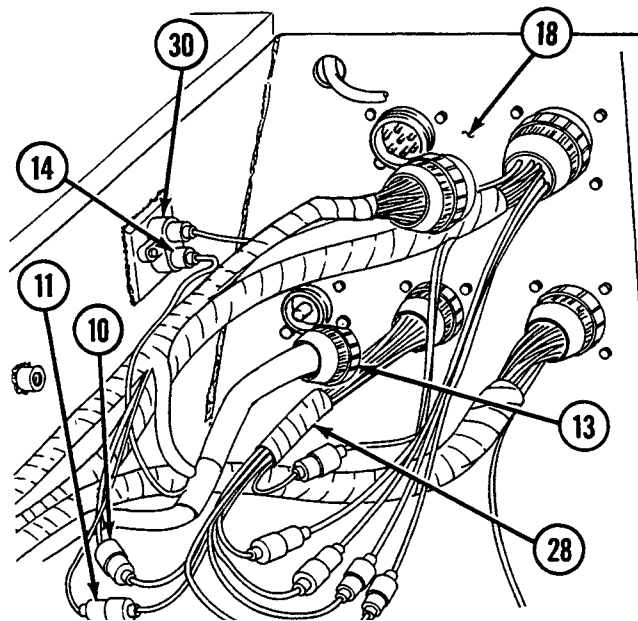
5. Disconnect connector (6) from switching relay box (24).
6. Disconnect connector (7) from main engine generator relay (25).



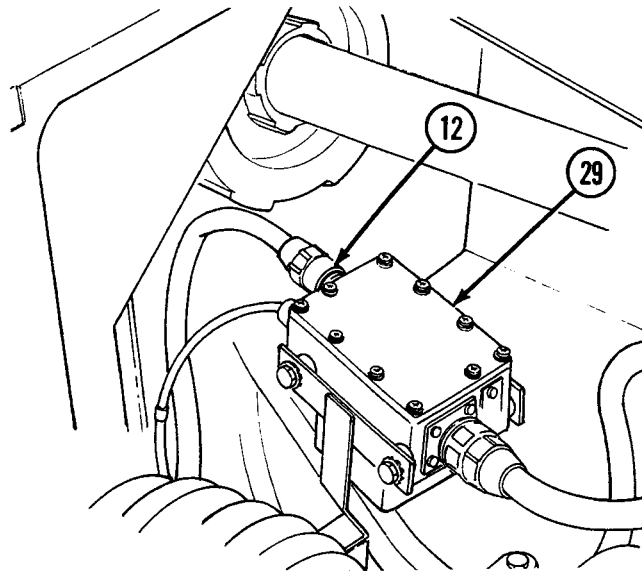
7. Disconnect connector (8) from rigger's right service light (26).
8. Disconnect connector (9) from rigger's left service light (27).



9. Disconnect two connectors (10 and 11) from bulkhead to main engine wiring harness and starter relay wiring harness (28).



10. Disconnect connector (12) from master relay (29).



11. Disconnect connector (13) from bulkhead disconnect (18).
 12. Disconnect connector (14) from circuit breaker (30).

Disassembly

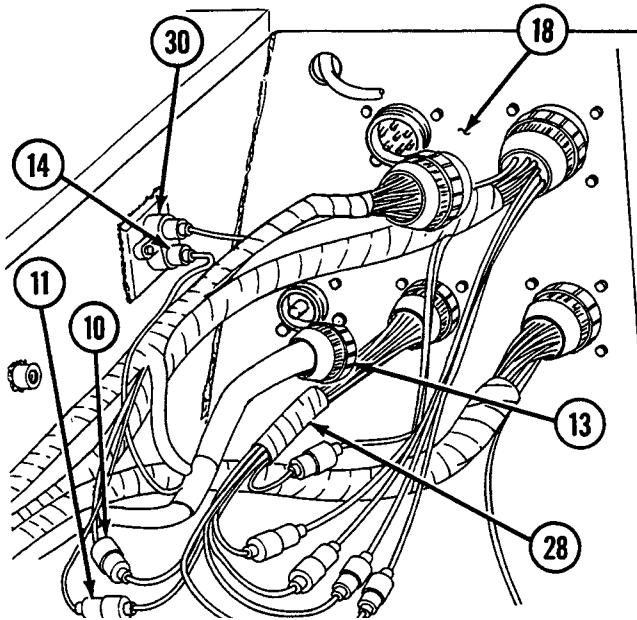
1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

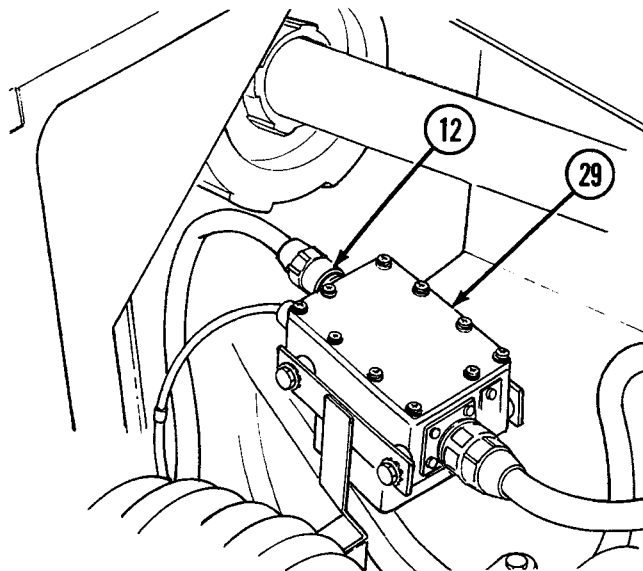
1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

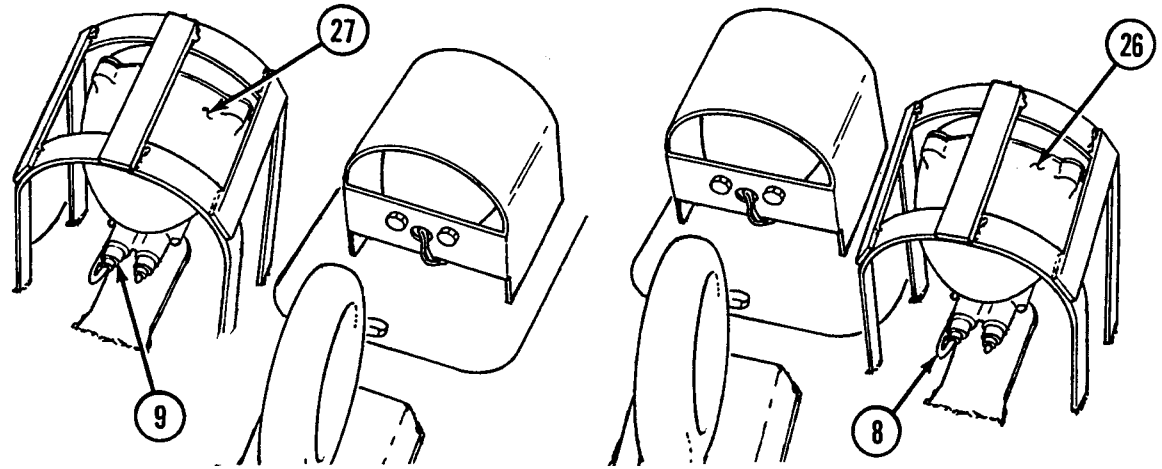
1. Connect connector (14) to circuit breaker (30).
2. Connect connector (13) to bulkhead disconnect (18).



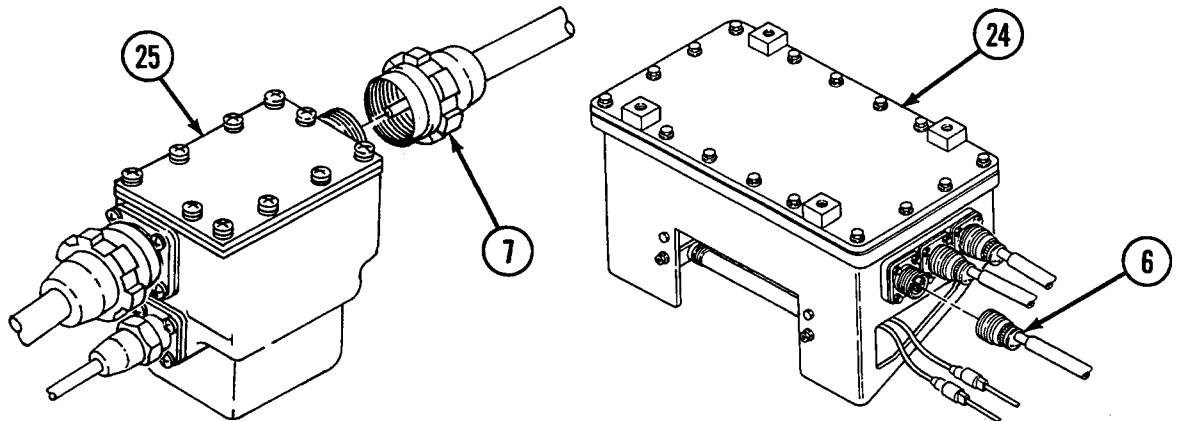
3. Connect connector (12) to master relay (29).



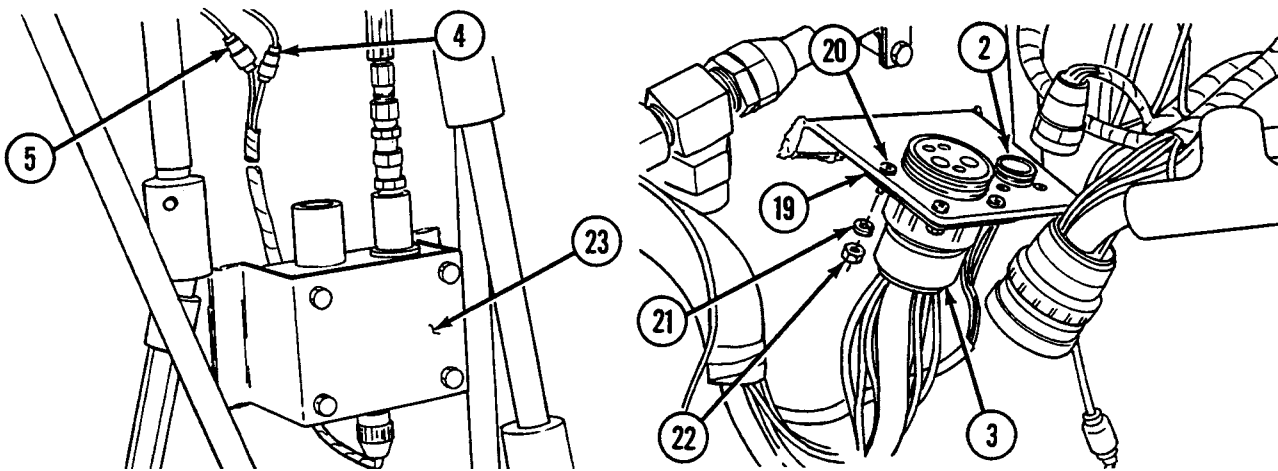
4. Connect two connectors (10 and 11) to bulkhead to main engine wiring harness and starter relay wiring harness (28).
5. Connect connector (9) to rigger's left service light (27).
6. Connect connector (8) to rigger's right service light (26).



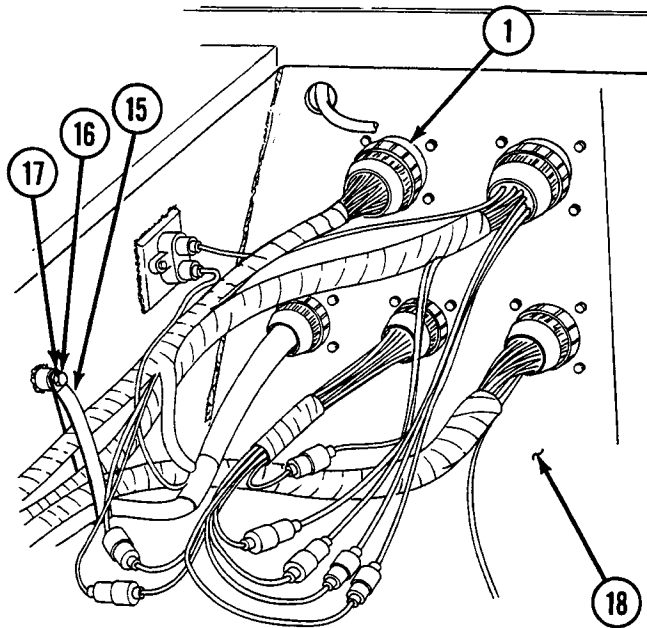
7. Connect connector (7) to main engine generator relay (25).
8. Connect connector (6) to rigger's switching relay box (24).



9. Connect two connectors (4 and 5) to hydraulic pressure switch (23).
10. Connect two connectors (2 and 3) to APU engine disconnect (19) using four screws (20), four lockwashers (21), and four nuts (22).



11. Connect connector (1) to bulkhead disconnect (18).
12. Install 10 clamps (15) using lockwasher (17) and screw (16) for each.



NOTE

Follow-on maintenance: Install air inlet grilles (see WP 0341 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

BULKHEAD REAR SLAVE RECEPTACLE WIRING HARNESS (10894850-4) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts (cont.)

Screws (4) (item 801, WP 0491 00)

Materials/Parts

Lockwashers (4) (item 612, WP 0491 00)

Lockwasher (item 615, WP 0491 00)

Lockwashers (4) (item 719, WP 0491 00)

Screw (item 721, WP 0491 00)

Screws (4) (item 729, WP 0491 00)

References

WP 0255 00 thru 0264 00

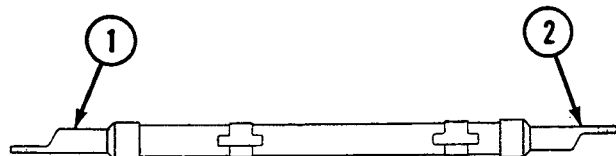
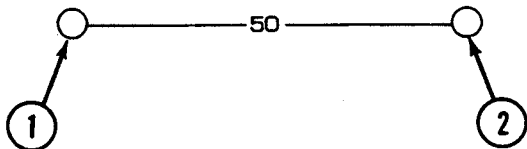
Equipment Condition

Engine deck removed (see WP 0336 00)

WARNING

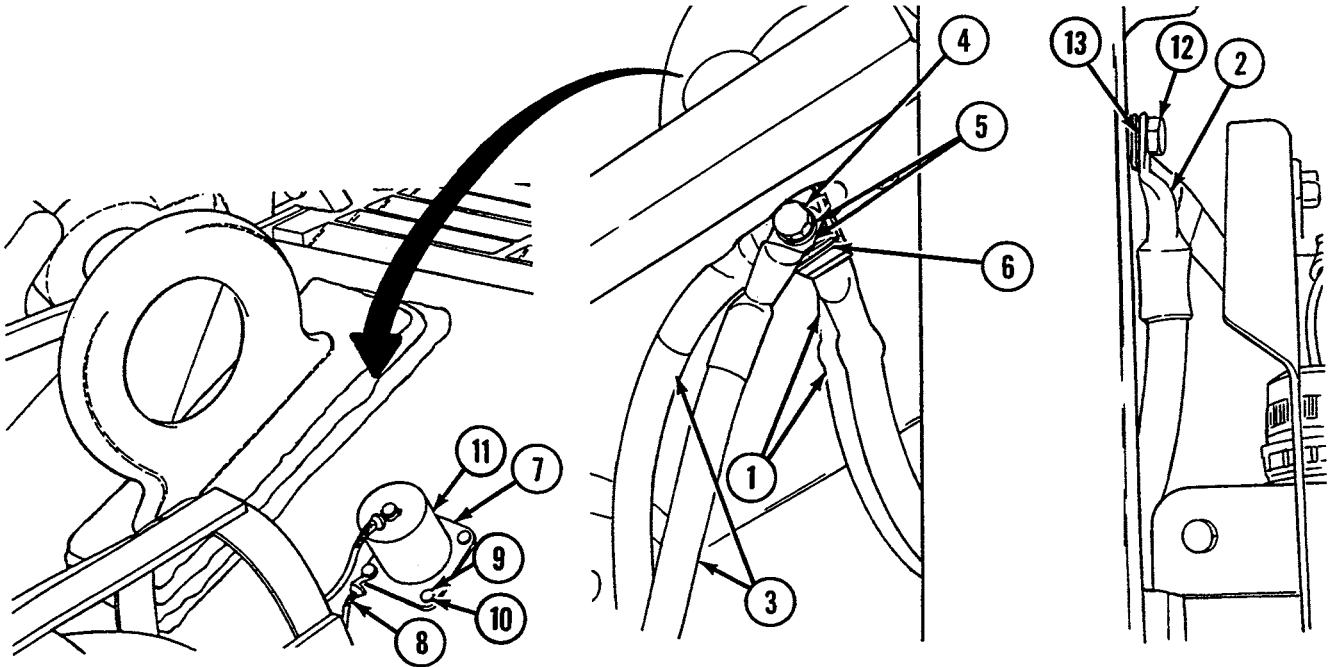
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Slave receptacle	50
2	Ground	50



Removal

1. Disconnect two leads (1) and two leads (3) by removing two screws (4) and four lockwashers (5) from slave receptacle (6).
2. Remove connector receptacle (7) and cap strap (8) by removing four screws (9) and four lockwashers (10).
3. Separate cap (11) from connector receptacle (7).
4. Remove two lead assemblies (2) by removing screw (12) and lockwasher (13).



Disassembly

1. Disassemble lead assemblies (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble lead assemblies (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Install two lead assemblies (2) using screw (12) and lockwasher (13).
2. Install cap (11) to connector receptacle (7).
3. Install connector receptacle (7) and cap strap (8) using four screws (9) and four lockwashers (10).
4. Connect two leads (1) and two leads (3) to slave receptacle (6) using two screws (4) and four lockwashers (5).

NOTE

Follow-on maintenance: Install engine deck (see WP 0336 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

APU WIRING HARNESS (11672417) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts (cont.)

Nut (item 675, WP 0491 00)
 Screw (item 584, WP 0491 00)

Materials/Parts

Lockwasher (item 610, WP 0491 00)
 Lockwasher (item 613, WP 0491 00)
 Lockwashers (4) (item 614, WP 0491 00)
 Lockwashers (3) (item 615, WP 0491 00)
 Nut (item 674, WP 0491 00)

References

WP 0255 00 thru 0264 00

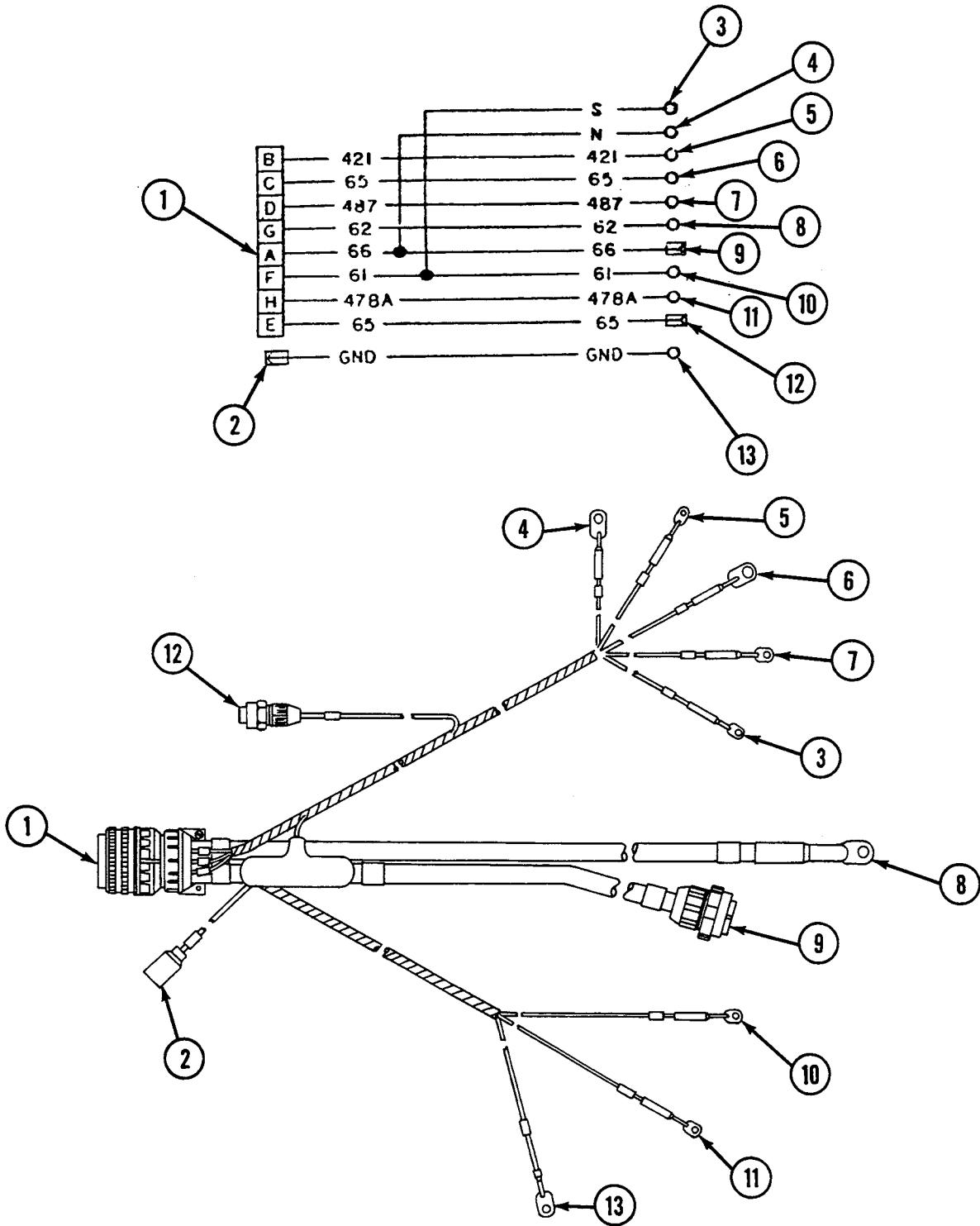
Equipment Condition

APU access cover assembly removed (see WP 0334 00)

WARNING

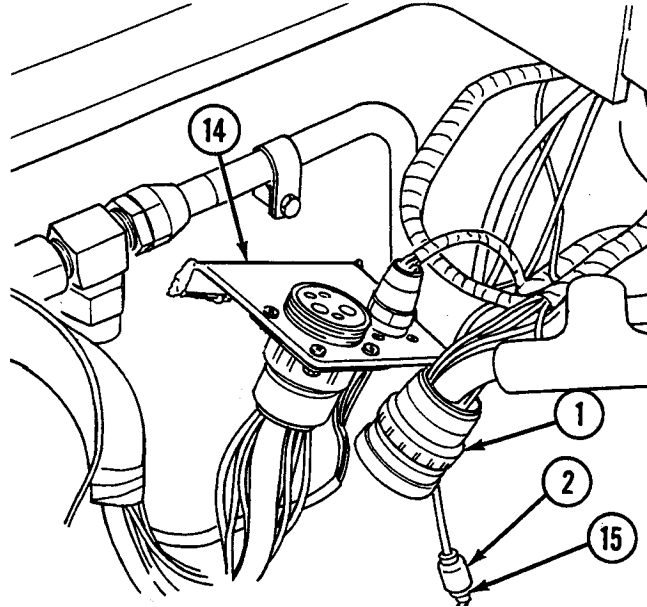
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	APU engine disconnect bracket	421, 65, 487, 62, 66, 61, 478A, 65
2	Bulkhead to APU, master relay, and rigger's lights wiring harness	GND
3	Diode assembly	S
4	Preheat solenoid	N
5	Fuel shutoff solenoid	421
6	Preheat solenoid	65
7	Preheat solenoid	487
8	APU generator	62
9	APU starter relay	66
10	APU generator	61
11	APU generator	478A
12	APU starter relay	65
13	APU generator	GND

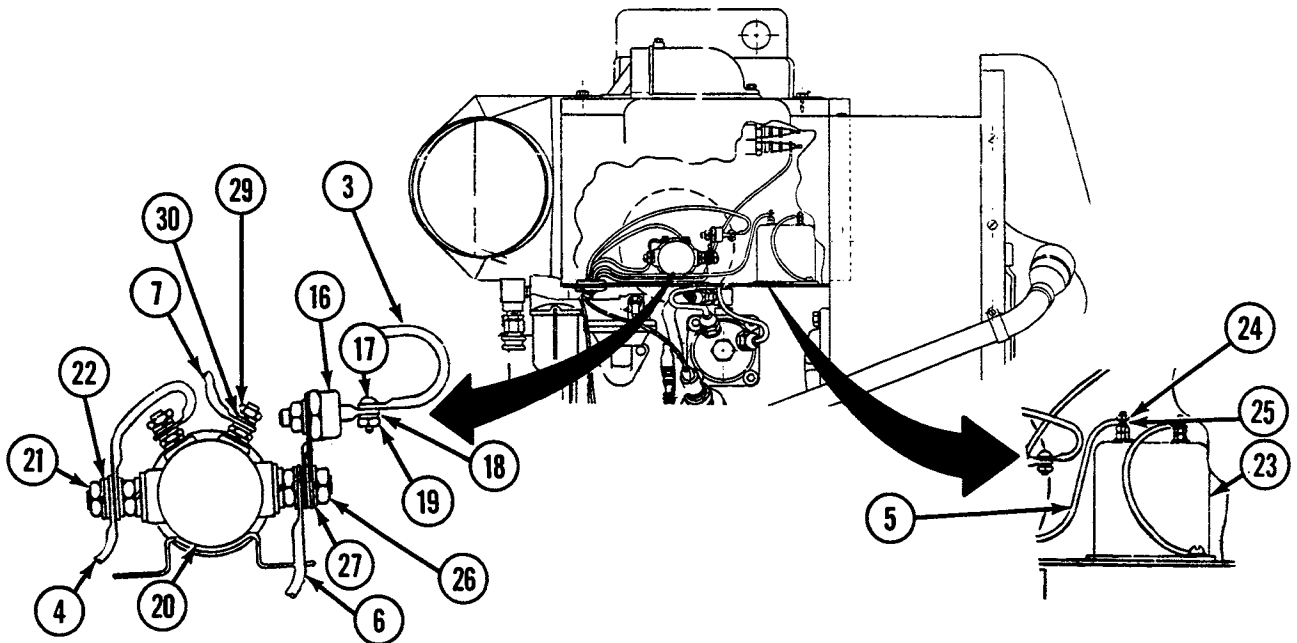


Removal

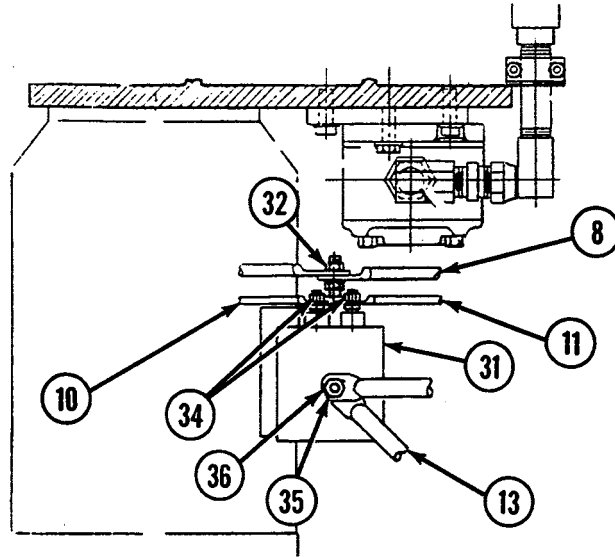
1. Disconnect connector (1) from APU engine disconnect bracket (14).
2. Disconnect connector (2) from bulkhead to APU, master relay, and rigger's lights wiring harness (15).



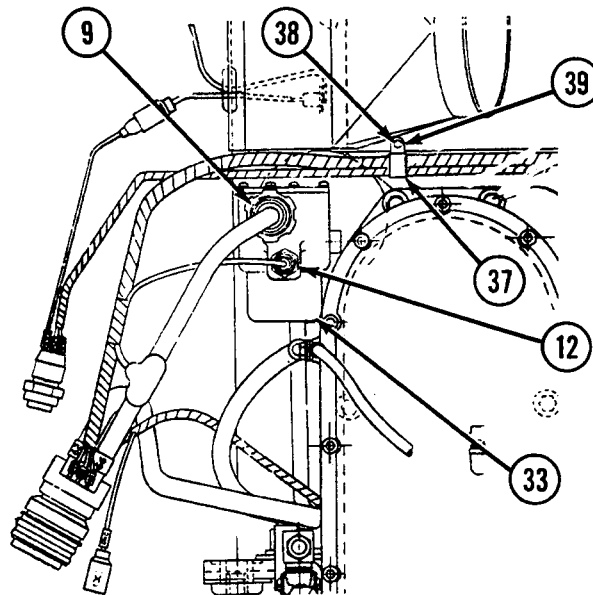
3. Disconnect lead (3) from diode assembly (16) by removing screw (17), lockwasher (18), and nut (19).
4. Disconnect lead (4) from preheat solenoid (20) by removing nut (21) and washer (22).
5. Disconnect lead (5) from fuel shutoff solenoid (23) by removing nut (24) and washer (25).
6. Disconnect lead (6) from preheat solenoid (20) by removing nut (26) and four lockwashers (27).
7. Disconnect lead (7) from preheat solenoid (20) by removing nut (29) and lockwasher (30).



8. Disconnect lead (8) from APU generator (31) by removing nut (32).
9. Disconnect two leads (10 and 11) from APU generator (31) by removing two nuts (34).
10. Disconnect lead (13) from APU generator (31) by removing nut (35) and three lockwashers (36).



11. Disconnect two connectors (9 and 12) from APU starter relay (33).
12. Remove two clamps (37) by removing two screws (38) and two washers (39).



Disassembly

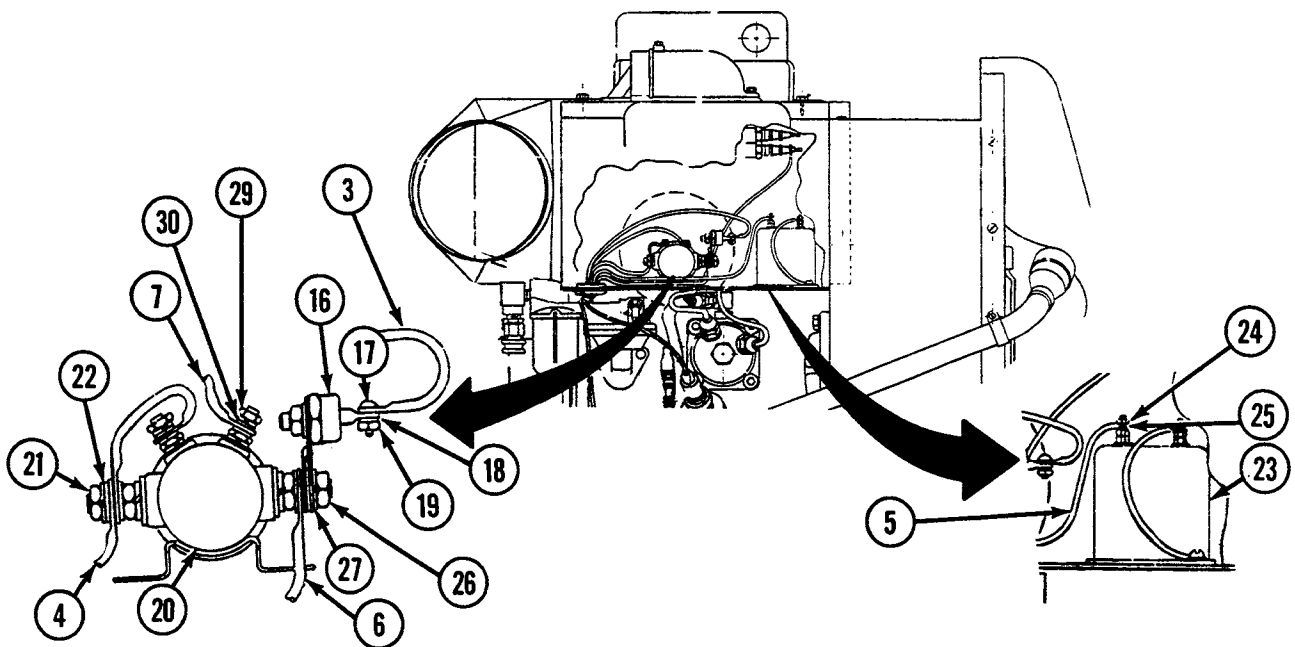
1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

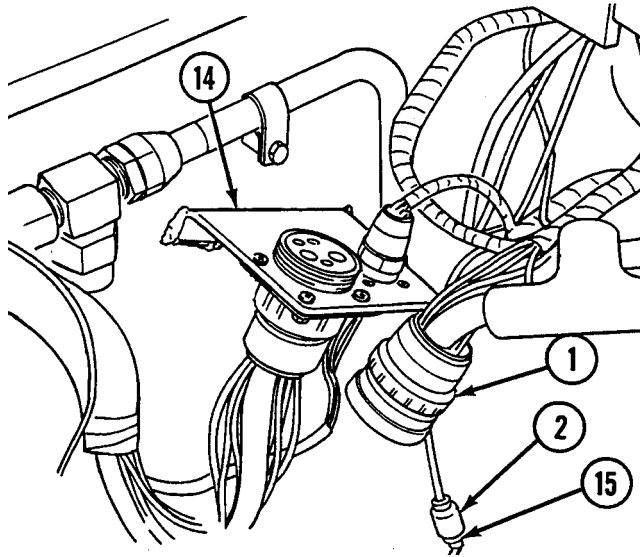
1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Install two clamps (37) using two screws (38) and two washers (39).
2. Connect lead (13) to APU generator (31) using three lockwashers (36) and nut (35).
3. Connect two leads (10 and 11) to APU generator (31) using two nuts (34).
4. Connect two connectors (9 and 12) to APU starter relay (33).
5. Connect lead (8) to APU generator (31) using nut (32).
6. Connect lead (7) to preheat solenoid (20) using four lockwashers (30) and nut (29).
7. Connect lead (6) to preheat solenoid (20) using four lockwashers (27) and nut (26).
8. Connect lead (5) from fuel shutoff solenoid (23) using washer (25) and nut (24).
9. Connect lead (4) to preheat solenoid (20) using washer (22) and nut (21).
10. Connect lead (3) to diode assembly (16) using screw (17), lockwasher (18), and nut (19).



11. Connect connector (2) to bulkhead to APU, master relay, and rigger's lights wiring harness (15).
12. Connect connector (1) to APU engine disconnect bracket (14).

**NOTE**

Follow-on maintenance: Install APU access cover assembly (see WP 0334 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

APU CONTROL BOX TO FOOT DIMMER SWITCH AND BULKHEAD
WIRING HARNESS (DUAL VOLTAGE) (11672466) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Gasket (item 234, WP 0491 00)
Lockwashers (4) (item 611, WP 0491 00)
Lockwashers (20) (item 621, WP 0491 00)
Screw (item 370, WP 0491 00)
Screws (19) (item 371, WP 0491 00)

Materials/Parts (cont.)

Screws (4) (item 575, WP 0491 00)

References

WP 0255 00 thru 0264 00

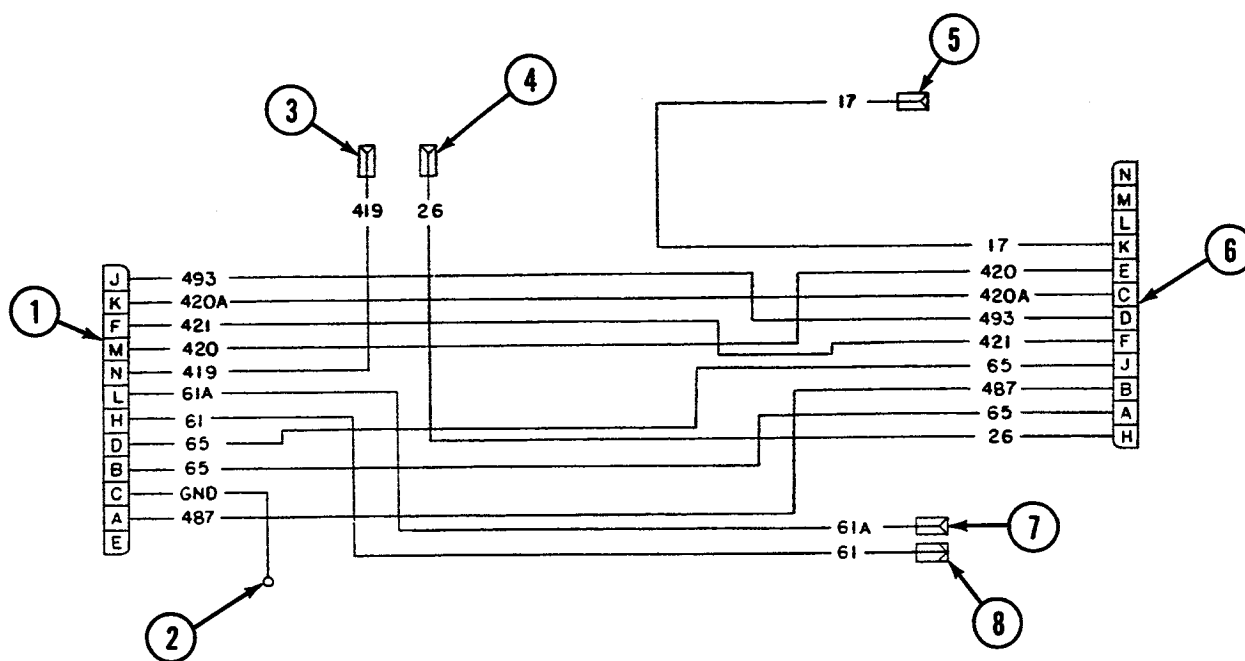
Equipment Condition

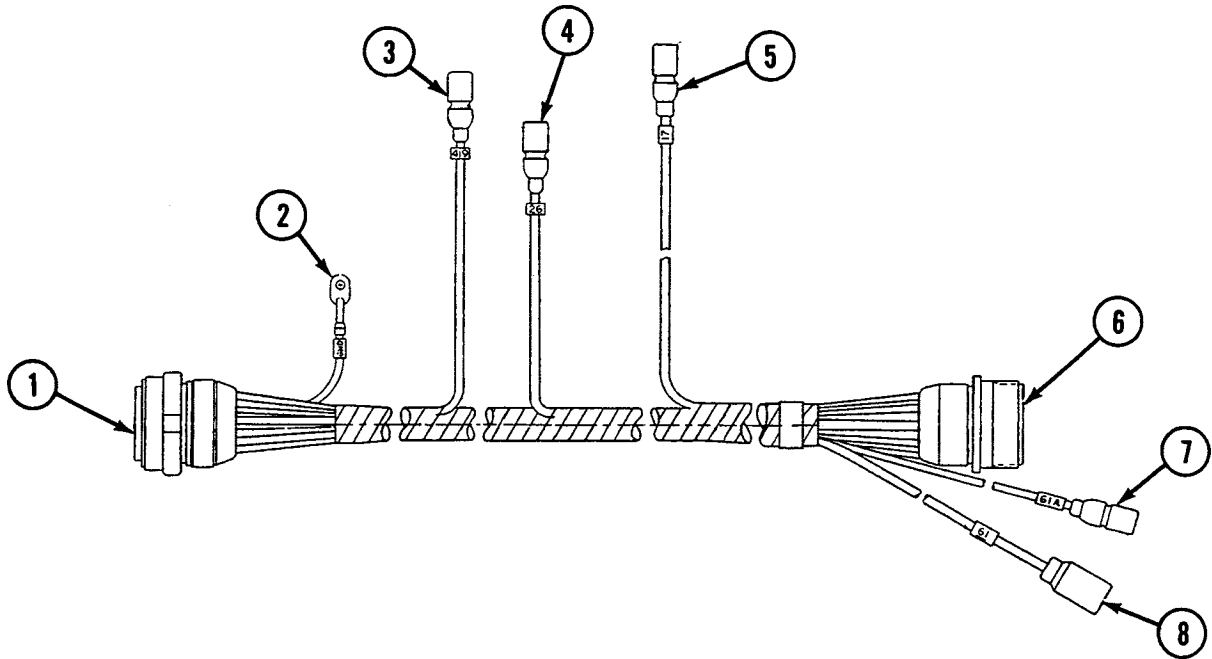
Air cleaner removed (see WP 0137 00)

WARNING

Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

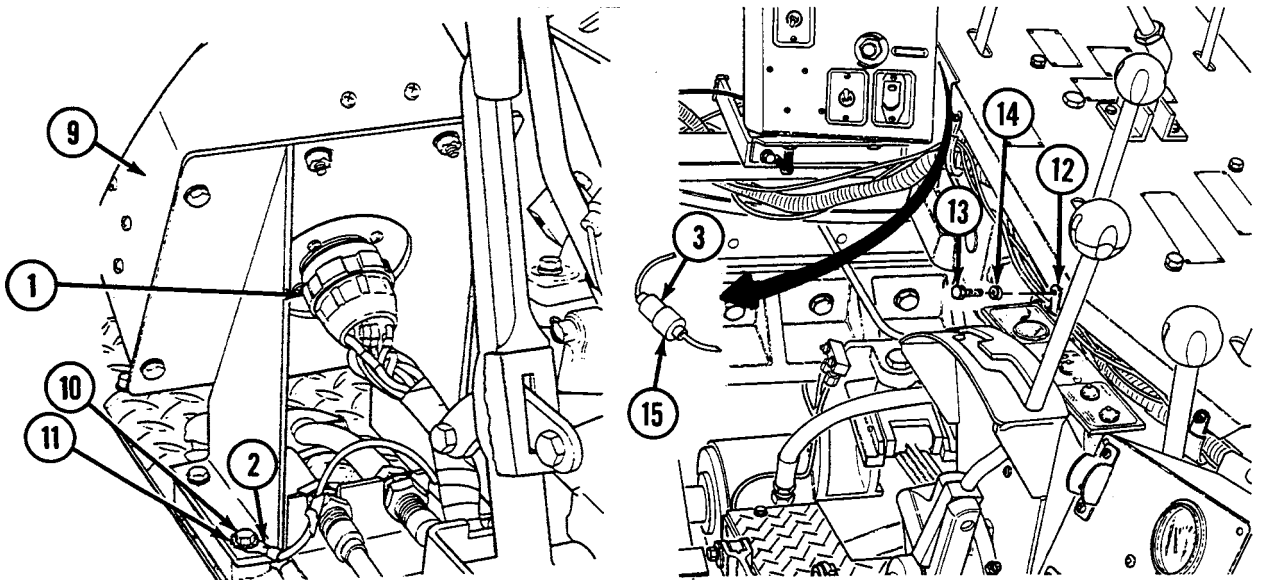
Connector No.	Electrical Lead To:	Wire No.
1	APU control box	493, 420A, 421, 420, 419, 61A, 61, 65, 65, GND, 487
2	APU control box mounting bracket	GND
3	Switch panel to gage panel and miscellaneous switches wiring harness (passive night viewer) (dual voltage) (12322547)	419
4	Gage panel to bulkhead wiring harness (dual voltage) (12322587)	26
5	Rigger's light selector switch	17
6	Bulkhead disconnect	17, 420, 420A, 493, 421, 65, 487, 26, 65
7	Switch panel to neutral safety to bulkhead wiring harness	61A
8	Switch panel to neutral safety to bulkhead wiring harness	61



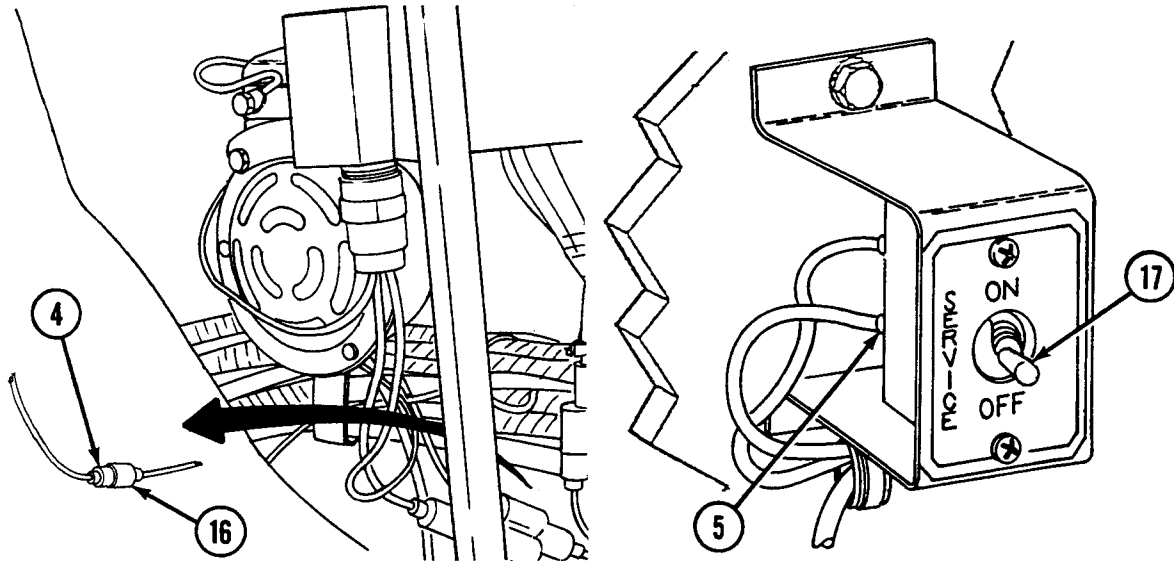


Removal

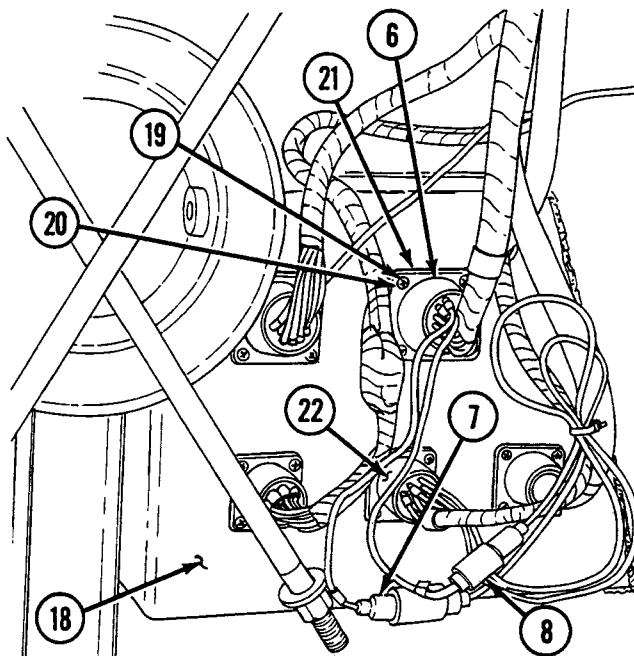
1. Disconnect connector (1) from APU control box (9).
2. Disconnect lead (2) by removing screw (10) and lockwasher (11).
3. Remove 19 clamps (12) by removing screw (13) and lockwasher (14).
4. Disconnect connector (3) from switch panel to gage panel and miscellaneous switches wiring harness (passive night viewer) (dual voltage) (15).



5. Disconnect connector (4) from gage panel to bulkhead wiring harness (16).
6. Disconnect connector (5) from rigger's light selector switch (17).



7. Disconnect connector (6) from bulkhead disconnect (18) by removing four screws (19), four lockwashers (20), and gasket (21).
8. Disconnect two connectors (7 and 8) from switch panel to neutral safety to bulkhead wiring harness (22).



Disassembly

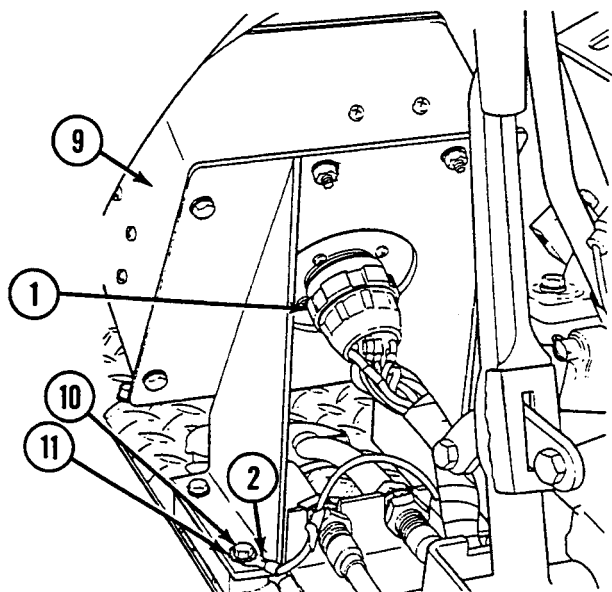
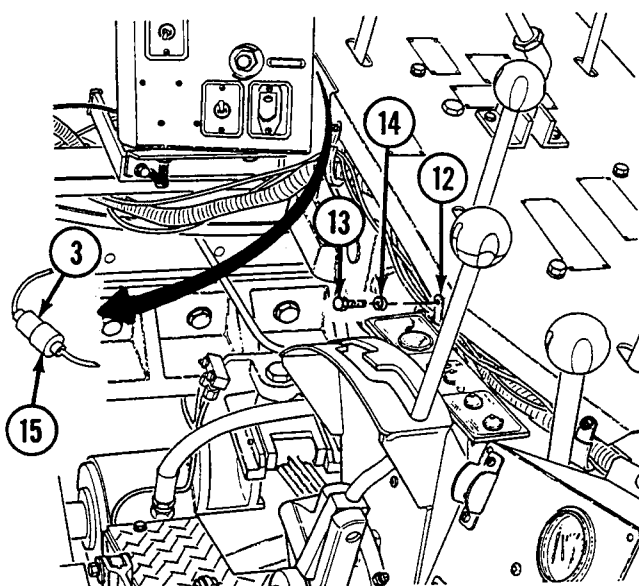
1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect two connectors (7 and 8) to switch panel to neutral safety to bulkhead wiring harness (22).
2. Connect connector (6) to bulkhead disconnect (18) using gasket (21), four lockwashers (20), and four screws (19).
3. Connect connector (5) to rigger's light selector switch (17).
4. Connect connector (4) to gage panel to bulkhead wiring harness (16).
5. Connect connector (3) to switch panel to gage panel and miscellaneous switches wiring harness (passive night viewer) (dual voltage) (15).
6. Install 19 clamps (12) using lockwasher (14) and screw (13) for each.
7. Connect lead (2) using lockwasher (11) and screw (10).
8. Connect connector (1) to APU control box (9).



NOTE

Follow-on maintenance: Install air cleaner (see WP 0137 00).

END OF WORK PACKAGE

UNIT MAINTENANCE**RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1****NSN 2350-00-122-6826, EIC AQA****APU CONTROL BOX TO FOOT DIMMER SWITCH AND BULKHEAD
WIRING HARNESS (SINGLE VOLTAGE) (11671799) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION**

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00

Materials/Parts

Gasket (item 341, WP 0491 00)

Lockwashers (4) (item 611, WP 0491 00)

Lockwashers (19) (item 621, WP 0491 00)

Screws (19) (item 371, WP 0491 00)

Screws (4) (item 575, WP 0491 00)

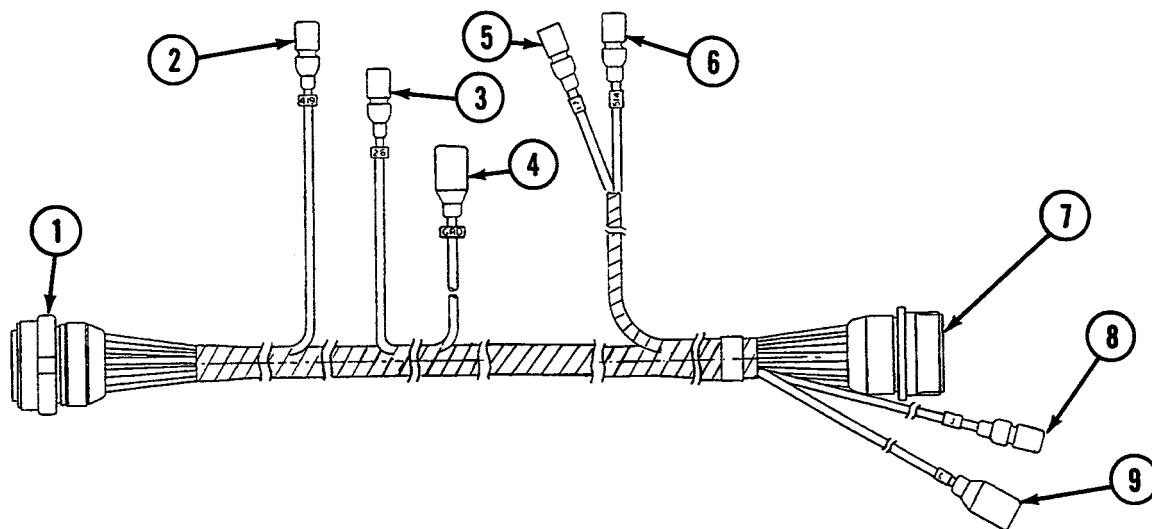
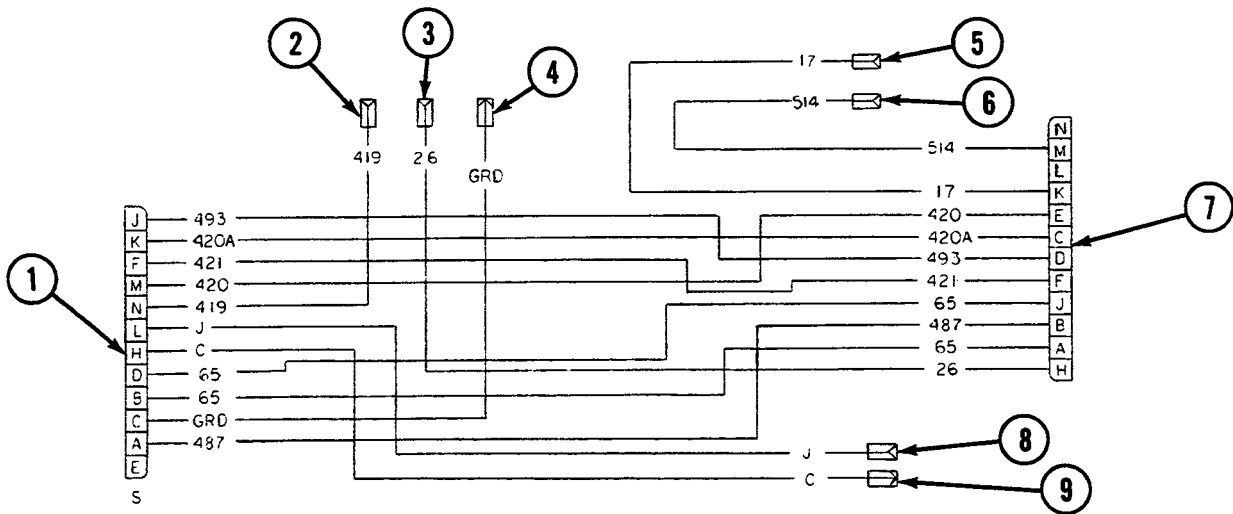
Equipment Condition

Air cleaner removed (see WP 0137 00)

WARNING

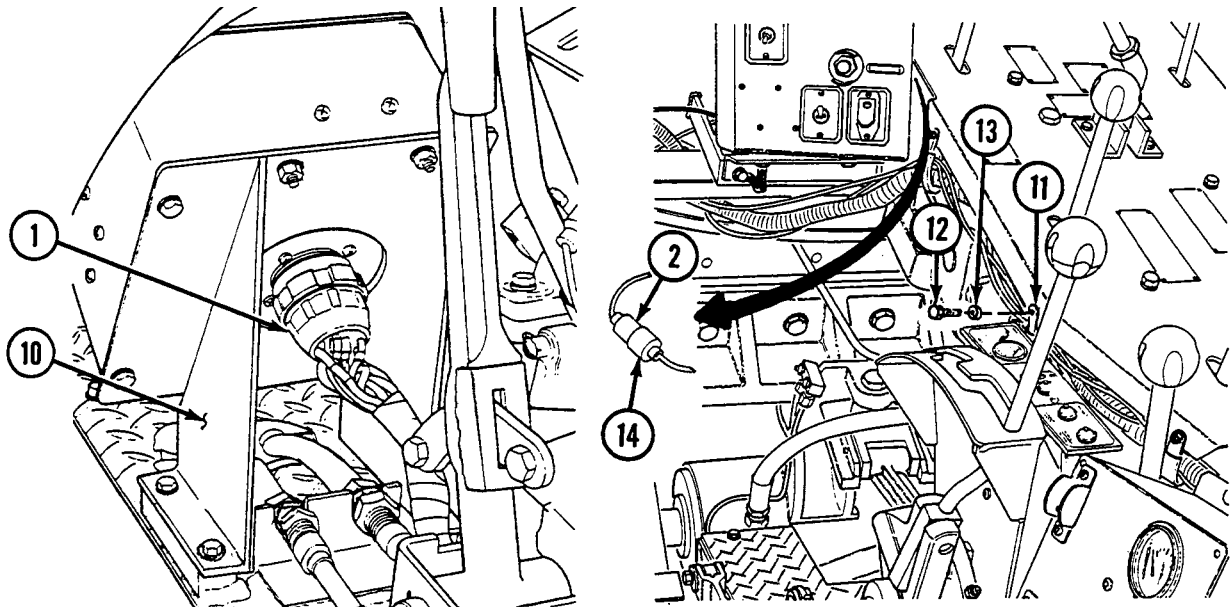
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	APU control box	493, 420A, 421, 420, 419, J, C, 65, GND, 487
2	Switch panel to gage panel and miscellaneous switches wiring harness (infrared night viewer) (single voltage) (11671795)	419
3	Gage panel to bulkhead wiring harness (single voltage) (11671807)	26
4	Gage panel to bulkhead wiring harness (single voltage) (11671807)	GND
5	Rigger's light selector switch	17
6	Rigger's light selector switch	514
7	Bulkhead disconnect	514, 17, 420, 420A, 493, 421, 65, 487, 26
8	Switch panel to neutral safety to bulkhead wiring harness	J
9	Switch panel to neutral safety to bulkhead wiring harness	C

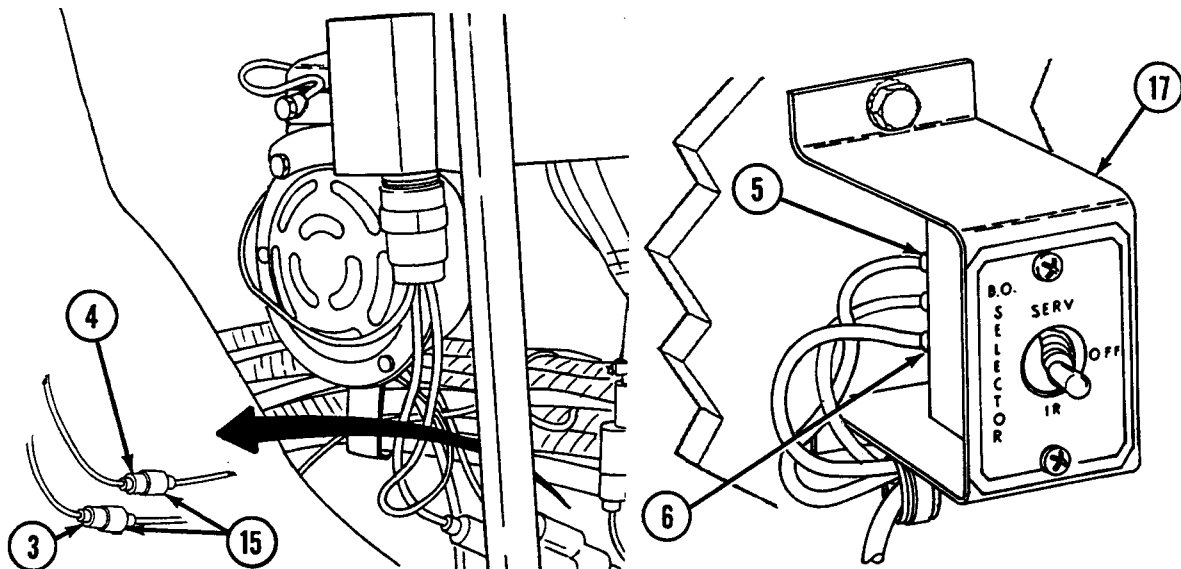


Removal

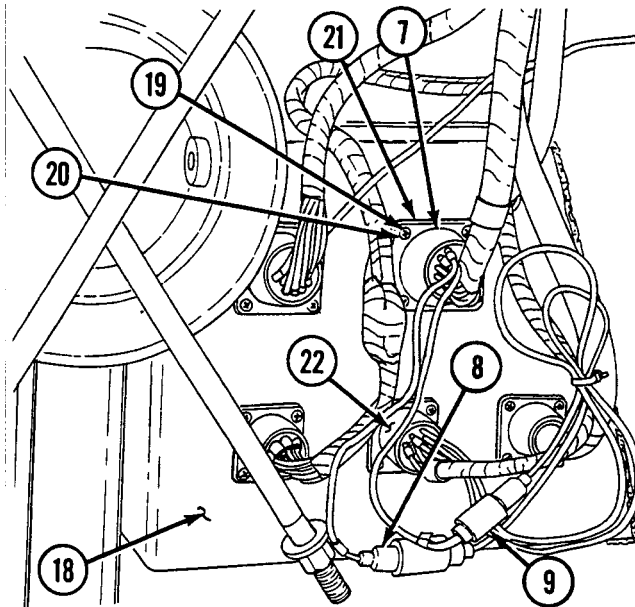
1. Disconnect connector (1) from APU control box (10).
2. Remove 19 clamps (11) by removing screw (12) and lockwasher (13) from each.
3. Disconnect connector (2) from switch panel to gage panel and miscellaneous switches wiring harness (infrared night viewer) (single voltage) (14).



4. Disconnect two connectors (3 and 4) from gage panel to bulkhead wiring harness (15).
5. Disconnect connectors (5 and 6) from rigger's light selector switch (17).



6. Disconnect connector (7) from bulkhead disconnect (18) by removing four screws (19), four lockwashers (20), and gasket (21).
7. Disconnect two connectors (8 and 9) from switch panel to neutral safety to bulkhead wiring harness (22).



Disassembly

1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

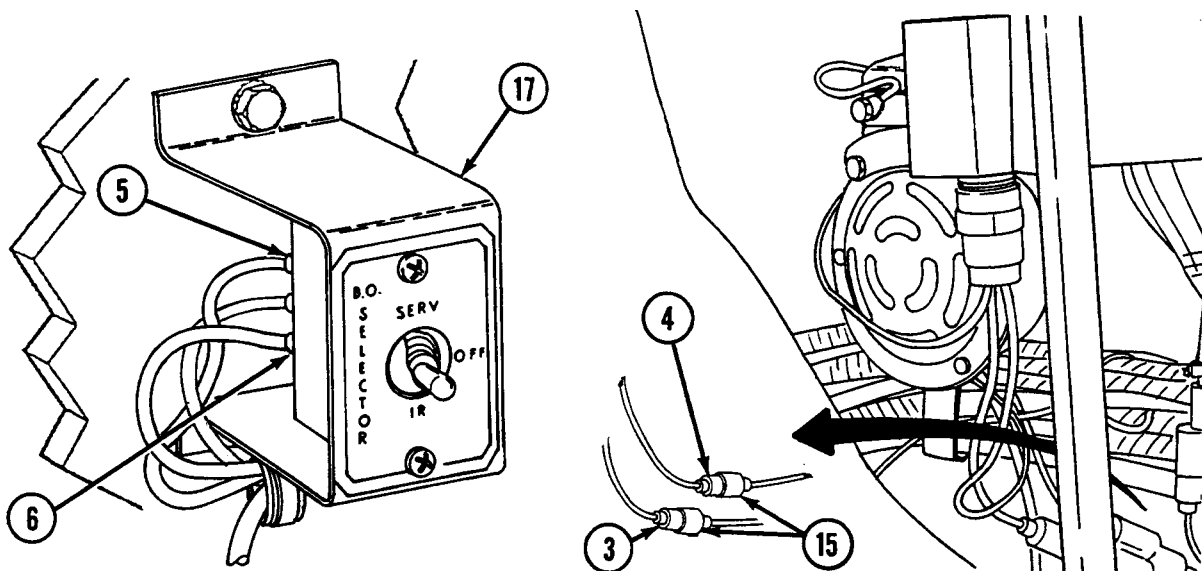
Assembly

1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

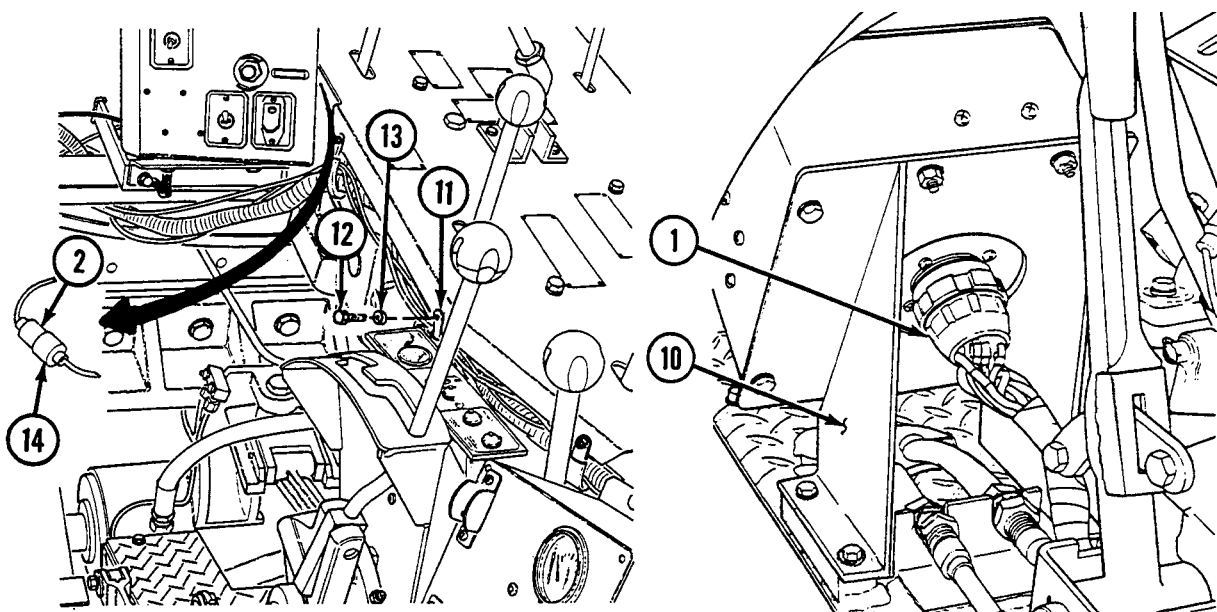
Installation

1. Connect two connectors (8 and 9) to switch panel to neutral safety to bulkhead wiring harness (22).
2. Connect connector (7) and install gasket (21) to bulkhead disconnect (18) using four screws (19) and four lockwashers (20).

3. Connect two connectors (5 and 6) to rigger's light selector switch (17).
4. Connect two connectors (3 and 4) to gage panel to bulkhead wiring harness (15).



5. Connect connector (2) to switch panel to gage panel and miscellaneous switches wiring harness (infrared night viewer) (14).
6. Install 19 clamps (11) using lockwasher (13) and screw (12) for each.
7. Connect connector (1) to APU control box (10).



NOTE

Follow-on maintenance: Install air cleaner (see WP 0137 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

APU AND ENGINE GENERATOR RELAYS TO VOLTAGE REGULATOR
WIRING HARNESS (SINGLE VOLTAGE) (11671793) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00

Materials/Parts

Lockwashers (10) (item 621, WP 0491 00)

Screws (10) (item 731, WP 0491 00)

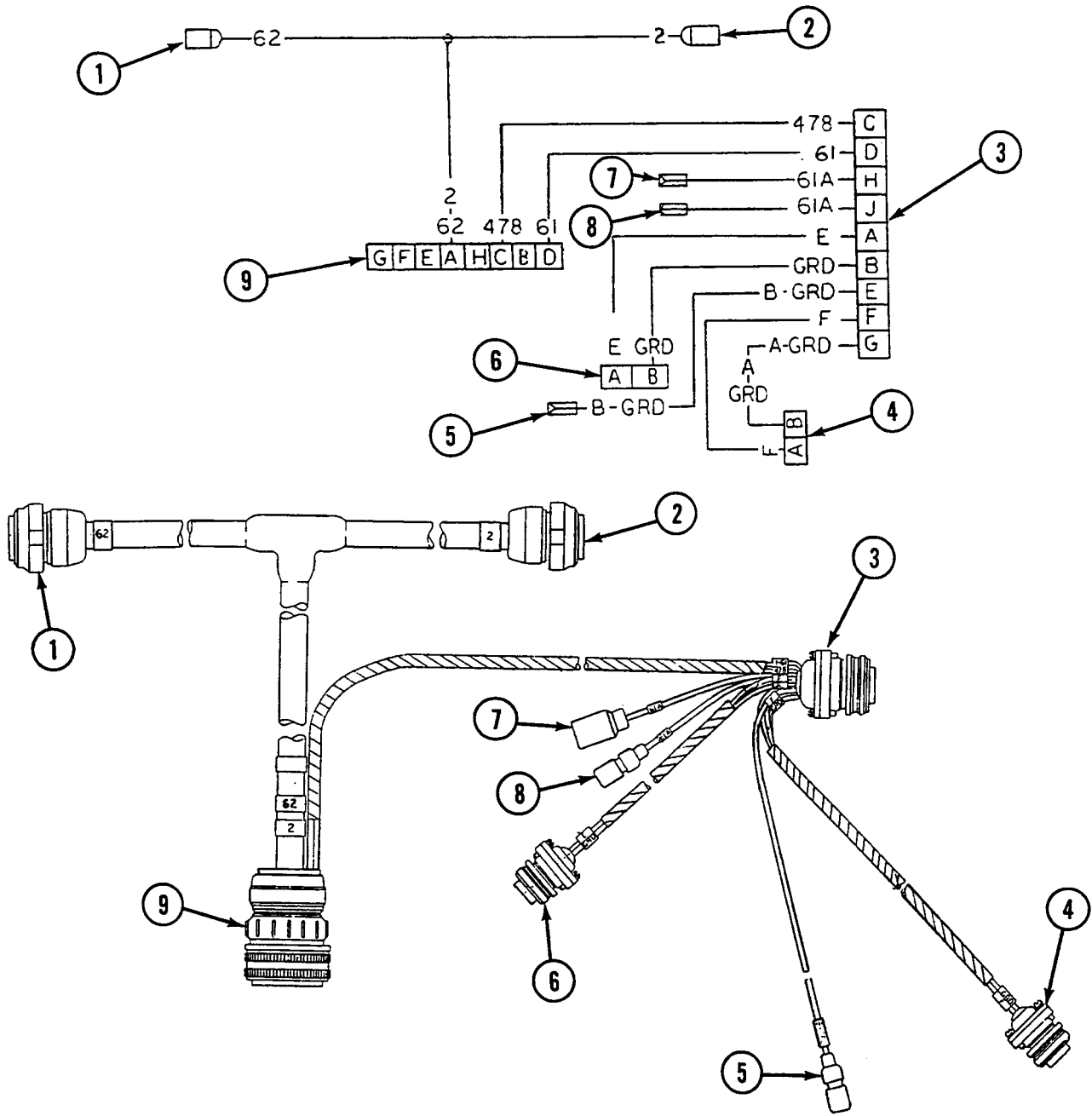
Equipment Condition

Air inlet grilles removed as necessary (see WP 0341 00)

WARNING

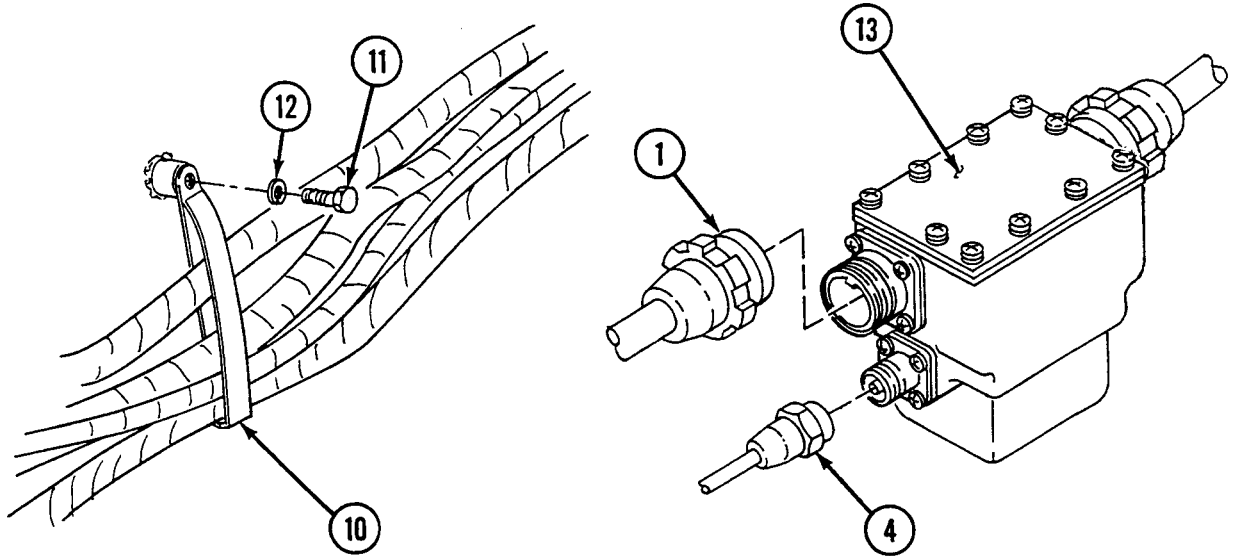
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	APU armature relay	62
2	Main engine armature relay	2
3	Switching relay box assembly	478, 1-61, 61A, 61A, E, GND, B-GND, F, A-GND
4	APU armature relay	F, A-GND
5	Bulkhead to main engine bracket and rear fuel tank transmitter wiring harness (single voltage) (11671789)	B-GND
6	Main engine armature relay	E, GND
7	Switching relay box assembly	61A
8	Switching relay box assembly	61A
9	Voltage regulator	2/62, 478, 61

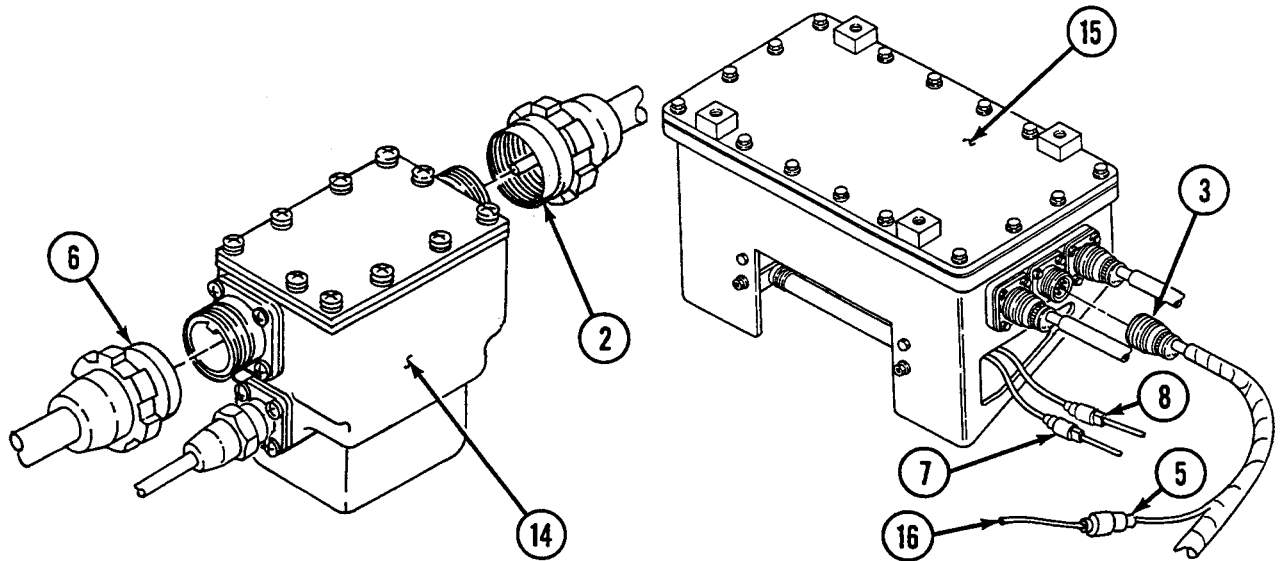


Removal

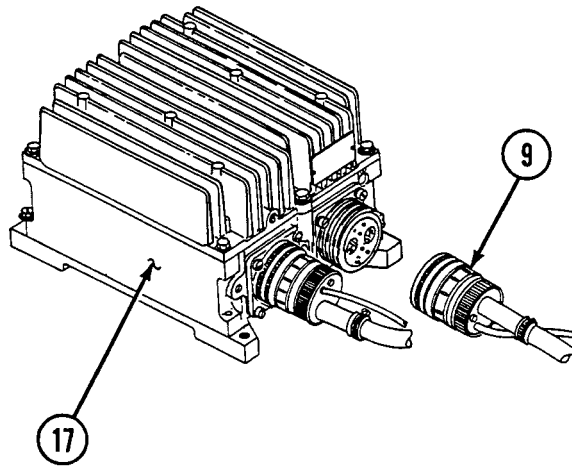
1. Remove 10 clamps (10) by removing screws (11) and lockwasher (12).
2. Disconnect two connectors (1 and 4) from APU armature relay (13).



3. Disconnect two connectors (2 and 6) from main engine armature relay (14).
4. Disconnect three connectors (3, 7, and 8) from switching relay box assembly (15).
5. Disconnect connector (5) from bulkhead to main engine bracket and rear fuel tank transmitter wiring harness (16).



6. Disconnect connector (9) from voltage regulator (17).



Disassembly

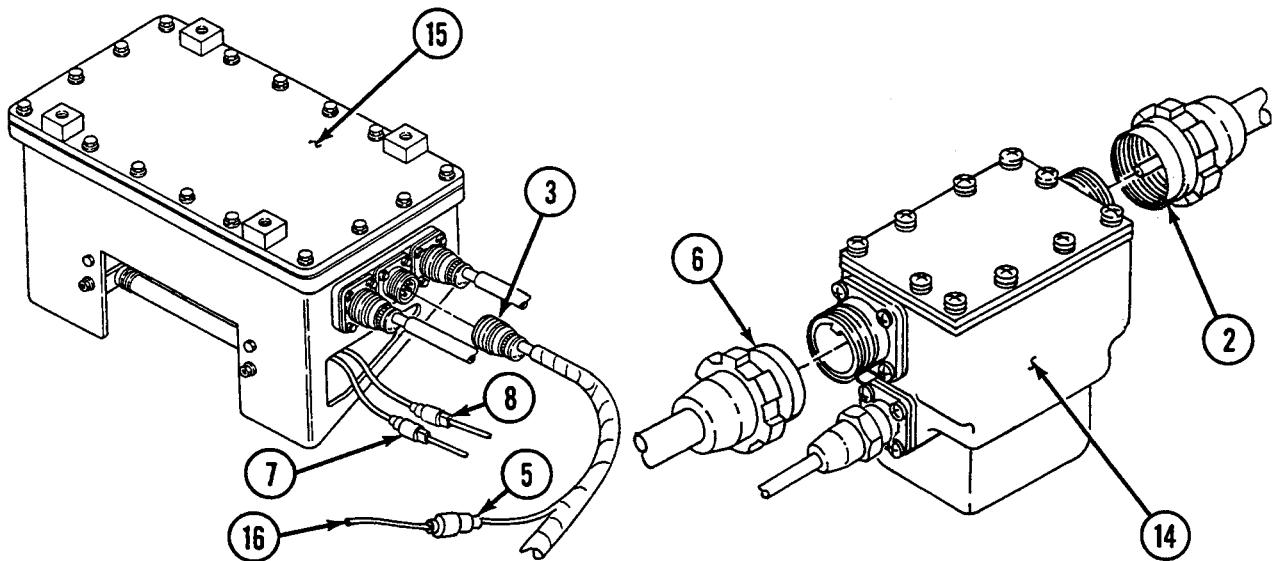
1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

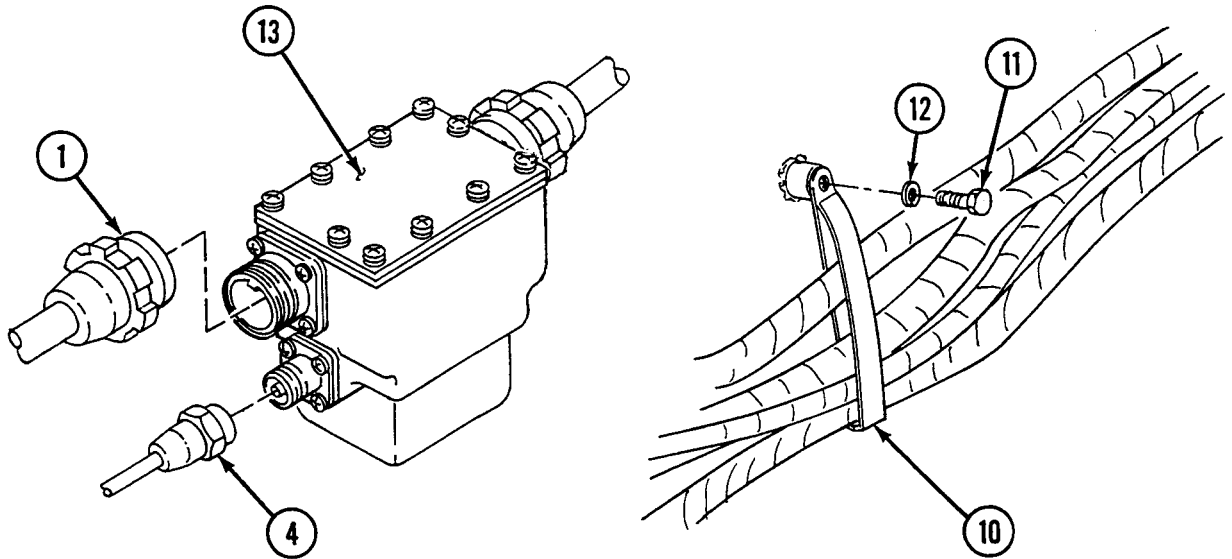
1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect connector (9) to voltage regulator (17).
2. Connect connector (5) to bulkhead to main engine bracket and rear fuel tank transmitter wiring harness (16).
3. Connect three connectors (3, 7, and 8) to switching relay box assembly (15).
4. Connect two connectors (2 and 6) to main engine armature relay (14).



5. Connect connectors (1 and 4) to APU armature relay (13).
6. Install 10 clamps (10) using lockwasher (12) and screw (11) for each.



NOTE

Follow-on maintenance: Install air inlet grilles if removed (see WP 0341 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

AIR CLEANER CIRCUIT BREAKER LEAD ASSEMBLY (11671794) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

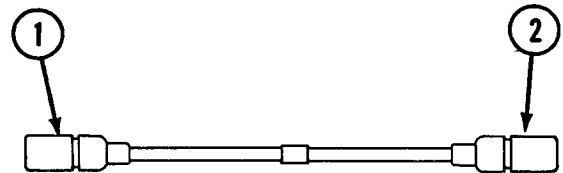
References

WP 0255 00 thru 0264 00

WARNING

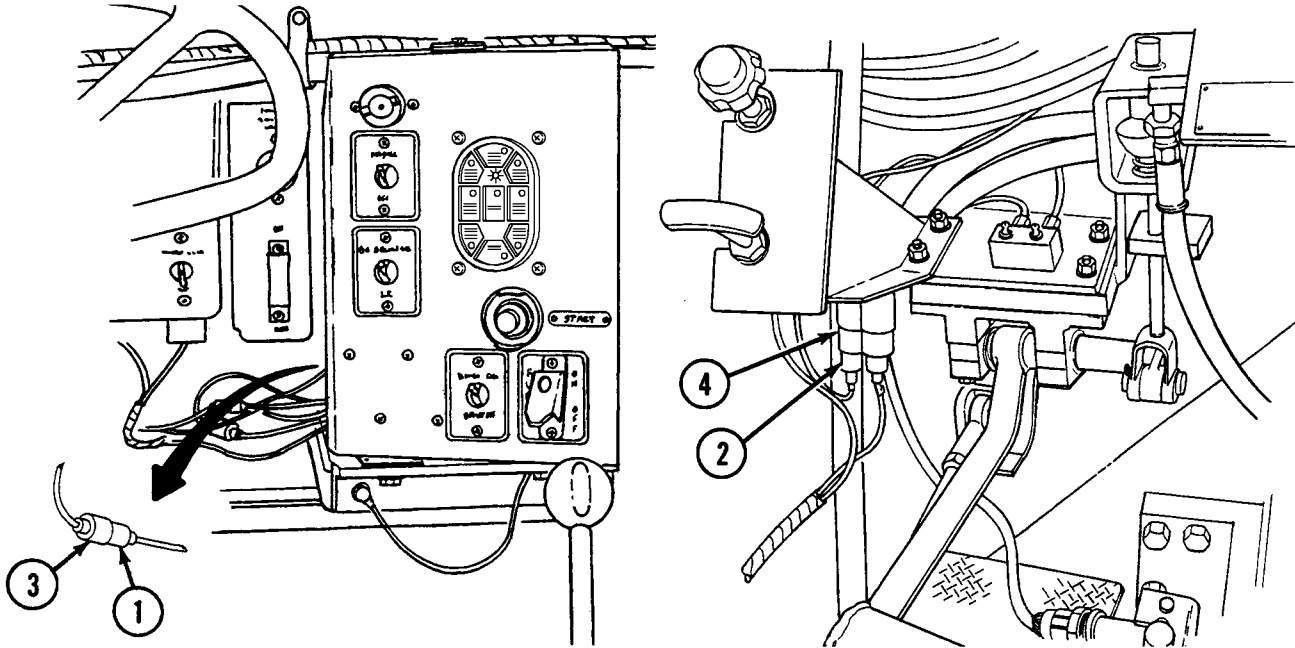
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Switch panel to neutral safety to bulkhead wiring harness	486
2	Circuit breaker no. 15	486



Removal

1. Disconnect connector (1) from switch panel to neutral safety to bulkhead wiring harness (3).
2. Disconnect connector (2) from circuit breaker (4).



Disassembly

1. Disassemble lead assembly (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble lead assembly (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect connector (2) to circuit breaker (4).
2. Connect connector (1) to switch panel to neutral safety to bulkhead wiring harness (3).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

BILGE PUMP AND GENERATOR CUTOUT SWITCH LEAD (10945007) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

Electrical accessories panel removed (see WP 0158 00)

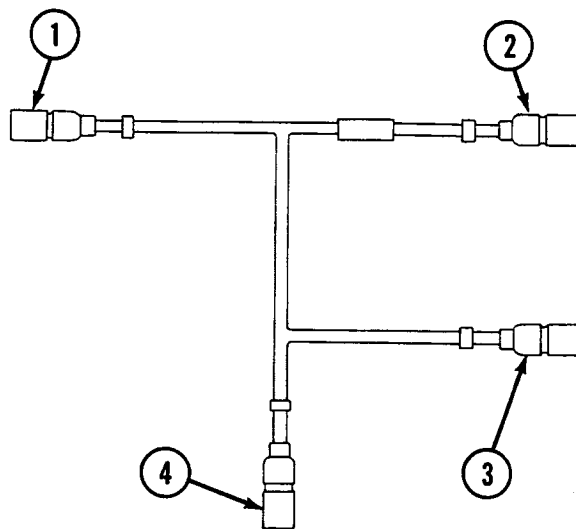
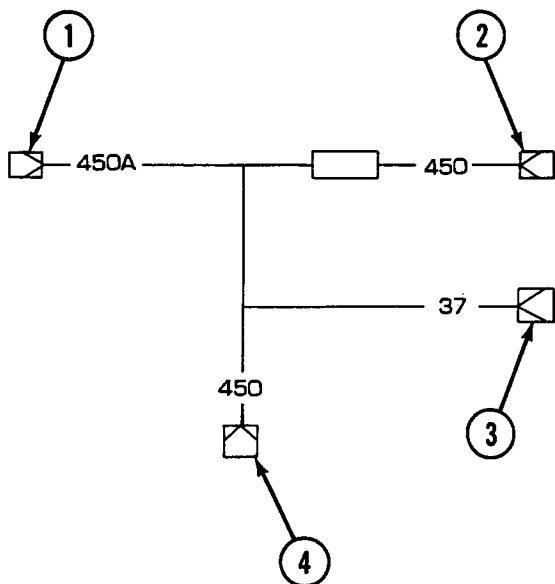
References

WP 0255 00 thru 0264 00

WARNING

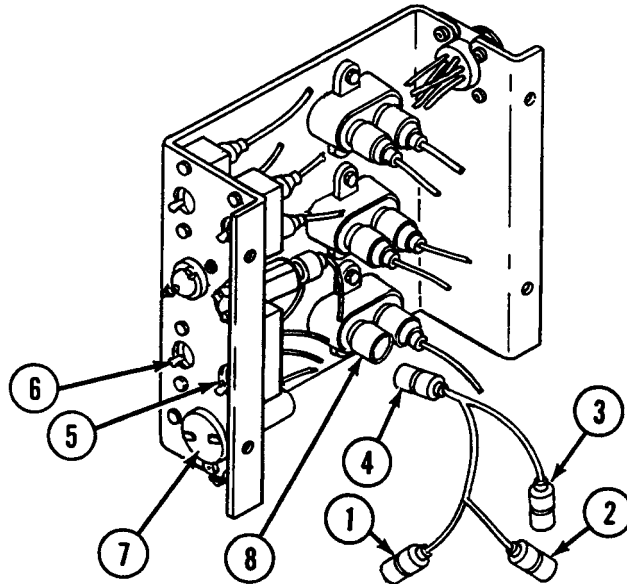
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Generator cutout switch	450A
2	Bilge pump switch	450
3	Auxiliary outlet	37
4	Circuit breaker no. 3	450



Removal

1. Disconnect connector (1) from generator cutout switch (5).
2. Disconnect connector (2) from bilge pump switch (6).
3. Disconnect connector (3) from auxiliary outlet (7).
4. Disconnect connector (4) from circuit breaker no. 3 (8).



Disassembly

1. Disassemble lead assembly (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble lead assembly (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect connector (4) to circuit breaker no. 3 (8).
2. Connect connector (3) to auxiliary outlet (7).
3. Connect connector (2) to bilge pump switch (6).
4. Connect connector (1) to generator cutout switch (5).

NOTE

Follow-on maintenance: Install electrical accessories panel (see WP 0158 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

BILGE PUMP MAIN POWER WIRING HARNESS (10945008) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00

Materials/Parts

Lockwashers (4) (item 619, WP 0491 00)

Nuts (4) (item 671, WP 0491 00)

Screws (4) (item 573, WP 0491 00)

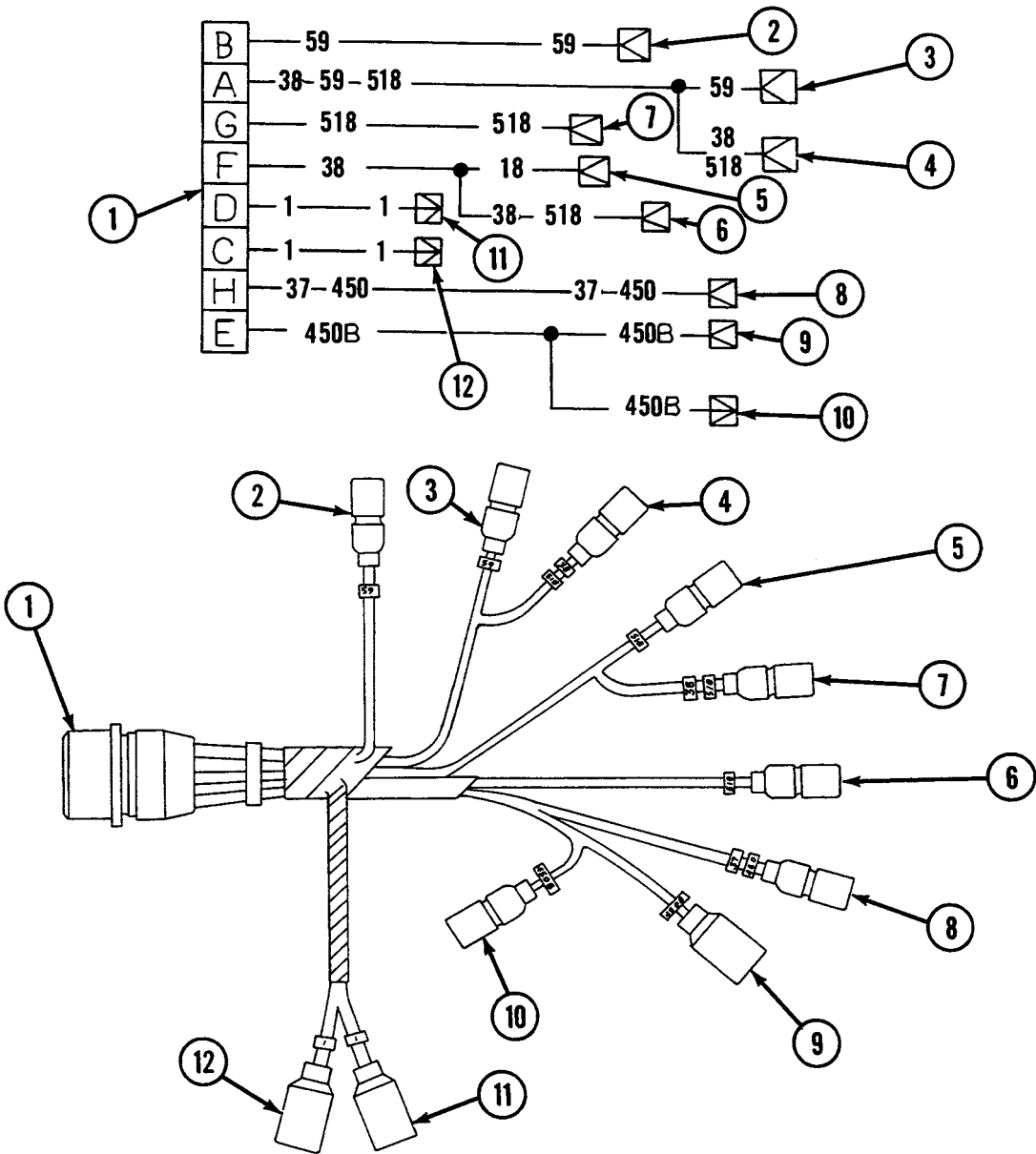
Equipment Condition

Electrical accessories panel removed (see WP 0158 00)

WARNING

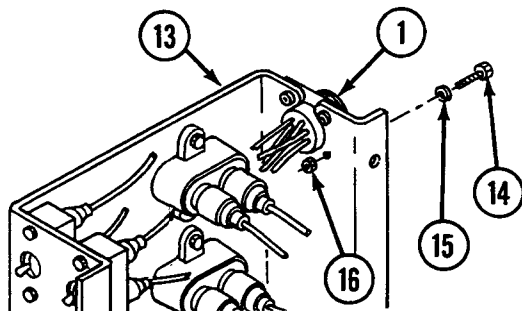
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Electrical accessories panel outlet	518, 38/59/518, 38, 59, 450B, 37/450, 1, 1
2	Vent blower switch	59
3	Circuit breaker no. 1	59
4	Circuit breaker no. 2	38/518
5	Winch light switch	518
6	Winch light switch	518
7	Circuit breaker no. 2	38/518
8	Circuit breaker no. 3	37/450
9	Bilge pump indicator light	450B
10	Bilge pump switch	450B
11	Generator cutout switch	1
12	Generator cutout switch	1

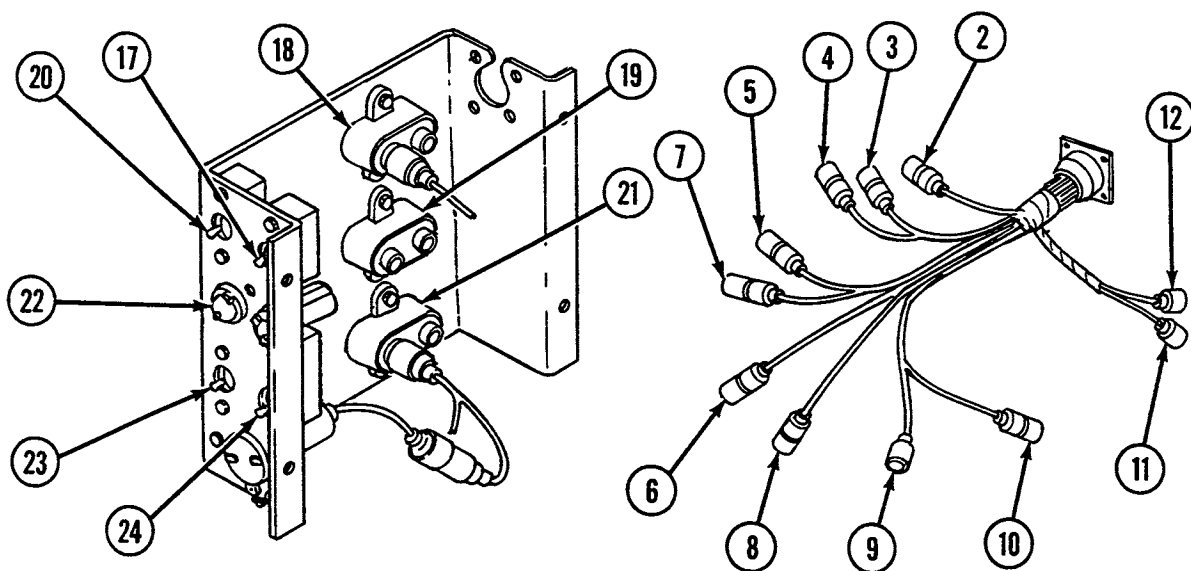


Removal

1. Disconnect connector (1) from electrical accessories panel outlet (13) by removing four screws (14), four lockwashers (15), and four nuts (16).



2. Disconnect connector (2) from vent blower switch (17).
3. Disconnect connector (3) from circuit breaker No. 1 (18).
4. Disconnect connector (4) from circuit breaker No. 2 (19).
5. Disconnect two connectors (5 and 6) from winch light switch (20).
6. Disconnect connector (7) from circuit breaker No. 2 (19).
7. Disconnect connector (8) from circuit breaker No. 3 (21).
8. Disconnect connector (9) from bilge pump indicator light (22).
9. Disconnect connector (10) from bilge pump switch (23).
10. Disconnect two connectors (11 and 12) from generator cutout switch (24).



Disassembly

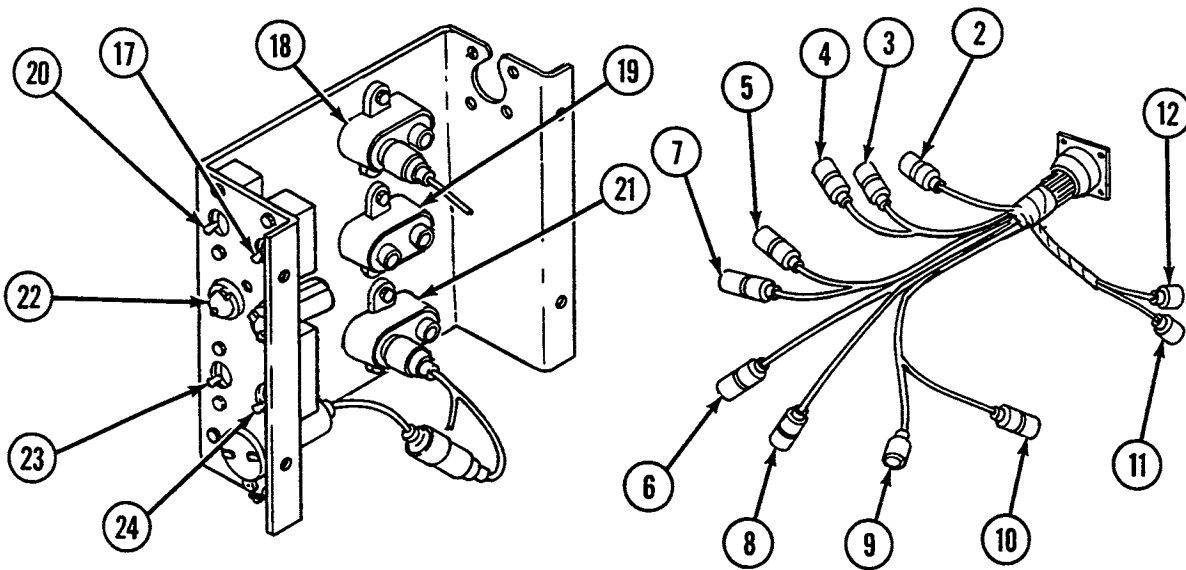
1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

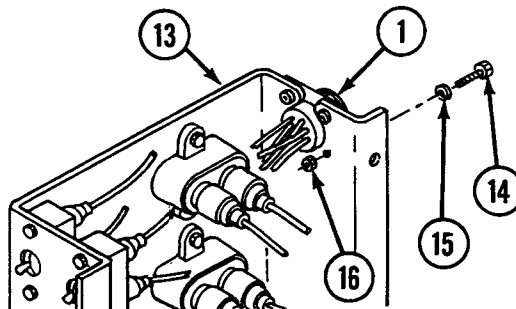
1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect two connectors (11 and 12) to generator cutout switch (24).
2. Connect connector (10) to bilge pump switch (23).
3. Connect connector (9) to bilge pump indicator light (22).
4. Connect connector (8) to circuit breaker No. 3 (21).
5. Connect connector (7) to circuit breaker No. 2 (19).
6. Connect two connectors (5 and 6) to winch light switch (20).
7. Connect connector (4) to circuit breaker No. 2 (19).
8. Connect connector (3) to circuit breaker No. 1 (18).
9. Connect connector (2) to vent blower switch (17).



10. Install connector (1) to electrical accessories panel outlet (13) using four screws (14), four lockwashers (15), and four nuts (16).



NOTE

Follow-on maintenance: Install electrical accessories panel (see WP 0158 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

BILGE PUMP CIRCUIT BREAKER TO SWITCH PANEL LEAD (10894546) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00

Materials/Parts

Lockwasher (item 620, WP 0491 00)
 Screw (item 593, WP 0491 00)

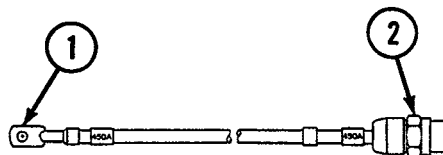
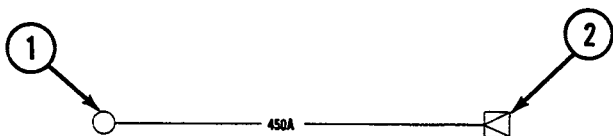
Equipment Condition

Stowage basket forward intermediate left floor plate opened (WP 0306 00)

WARNING

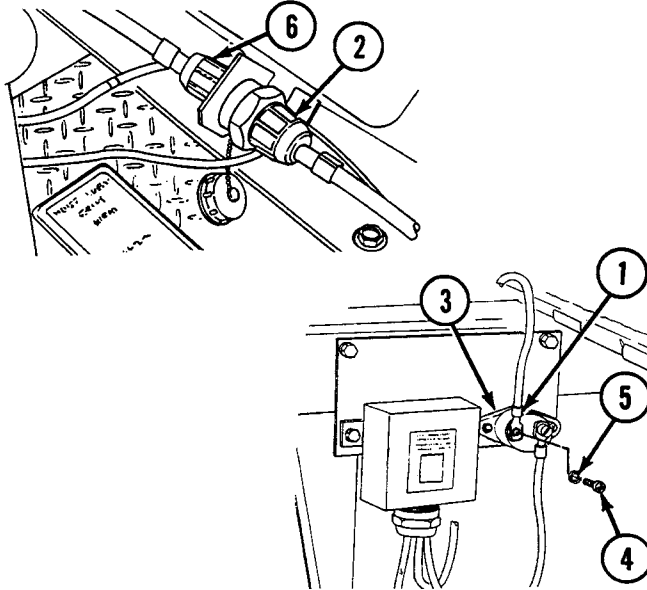
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Bilge pump circuit breaker	450A
2	Switch panel, radio, and bilge pump to bulkhead wiring harness	450A



Removal

1. Disconnect lead (1) from circuit breaker (3) by removing screw (4) and lockwasher (5).
2. Disconnect connector (2) from switch panel, radio, and bilge pump to bulkhead wiring harness (6).



Disassembly

1. Disassemble lead assembly (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble lead assembly (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect connector (2) to switch panel, radio, and bilge pump to bulkhead wiring harness (6).
2. Connect lead (1) to circuit breaker (3) using lockwasher (5) and screw (4).

NOTE

Follow-on maintenance: Close stowage basket forward intermediate left floor plate (see WP 0306 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

BILGE PUMP LEAD RELAY WIRING HARNESS AND CAP (10894548) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00

Materials/Parts

Lockwasher (item 620, WP 0491 00)
 Screw (item 593, WP 0491 00)
 Strap (item 863, WP 0491 00)

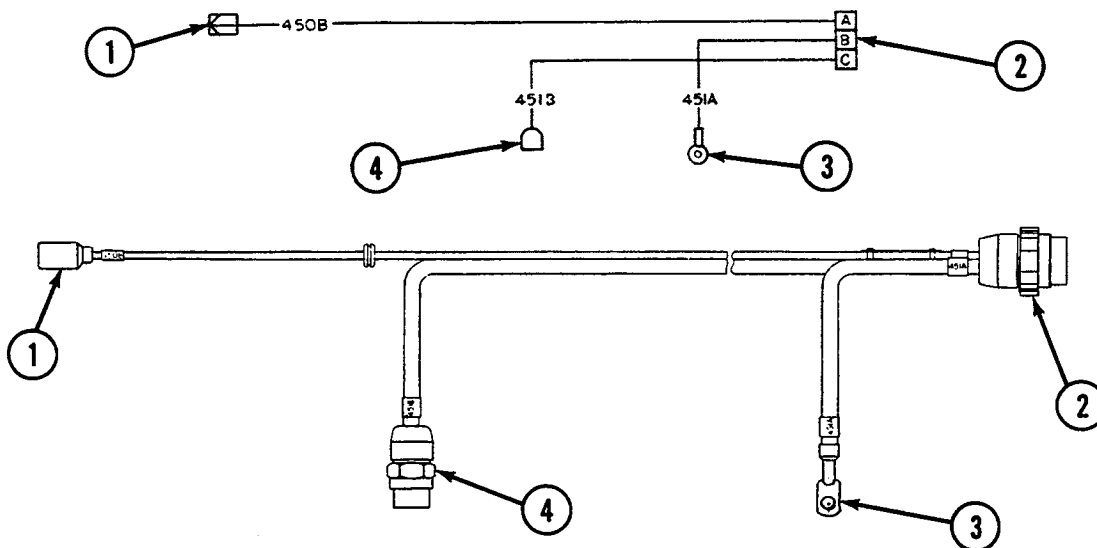
Equipment Condition

Stowage basket forward intermediate left floor plate opened (see WP 0306 00)

WARNING

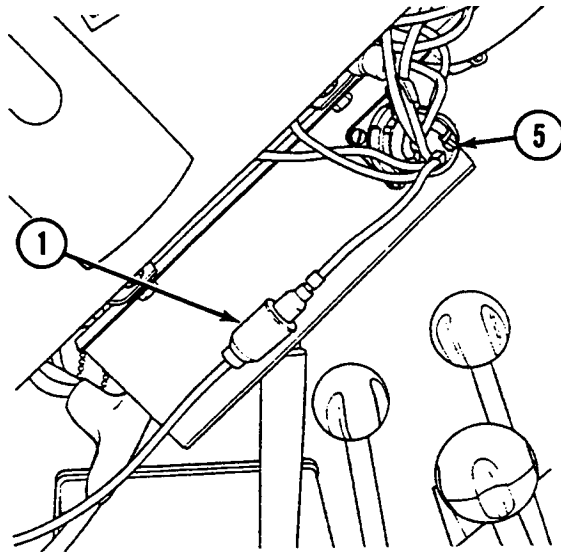
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Electrical accessories panel wiring harness	450B
2	Bilge pump relay	450B, 451B, 451A
3	Circuit breaker	451A
4	Cap assembly/bilge pump	451B

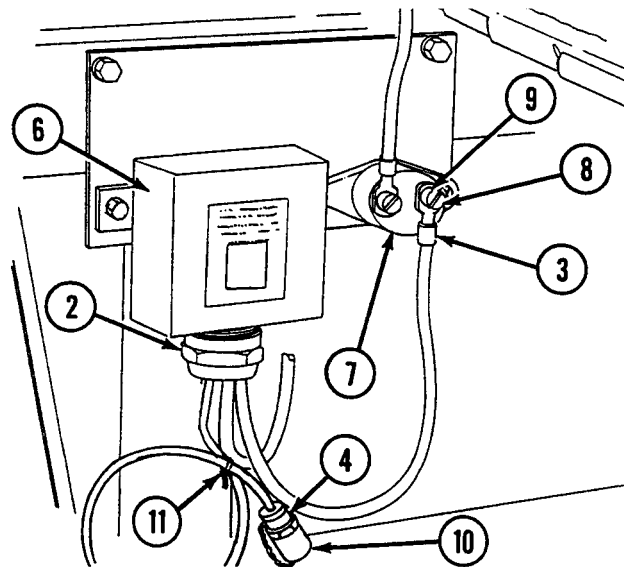


Removal

1. Disconnect connector (1) from electrical accessories panel wiring harness (5).



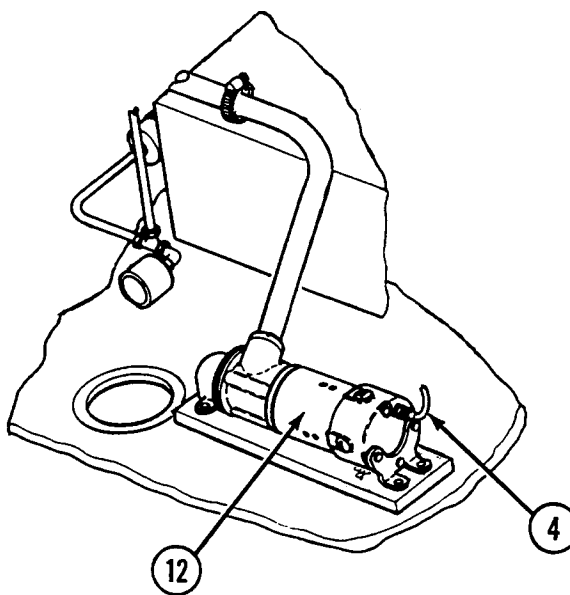
2. Disconnect connector (2) from bilge pump relay (6).
3. Disconnect lead (3) from circuit breaker (7) by removing screw (8) and lockwasher (9).
4. Remove cap assembly (10) from connector (4).
5. Remove strap (11).



NOTE

Bilge pump is part of deep water fording kit. Perform step 6 if deep water fording kit is installed.

6. Disconnect connector (4) from bilge pump (12).



Disassembly

1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

NOTE

Perform step 1 only if deep water fording kit is installed.

1. Connect connector (4) to bilge pump (11).
2. Install strap (5).
3. Install cap assembly (10) on connector (4).
4. Connect lead (3) to circuit breaker (7) using screw (8) and lockwasher (9).
5. Connect connector (2) to bilge pump relay (6).
6. Connect connector (1) to electrical accessories panel wiring harness (5).

NOTE

Follow-on maintenance: Close stowage basket forward intermediate left floor plate (see WP 0306 00).

END OF WORK PACKAGE

UNIT MAINTENANCE**RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1****NSN 2350-00-122-6826, EIC AQA****HEATER CONTROL BOX TO HEATER WIRING HARNESS (11671353) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION**

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00

Materials/Parts

Lockwashers (17) (item 621, WP 0491 00)

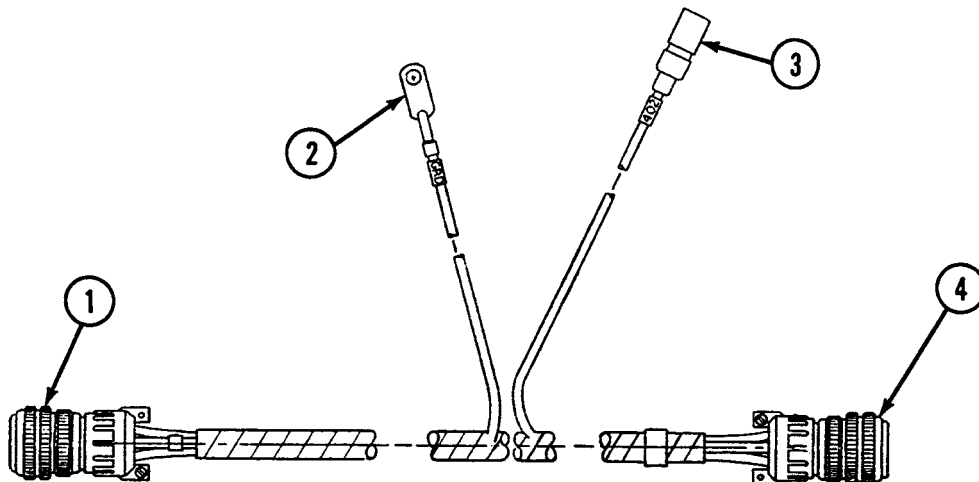
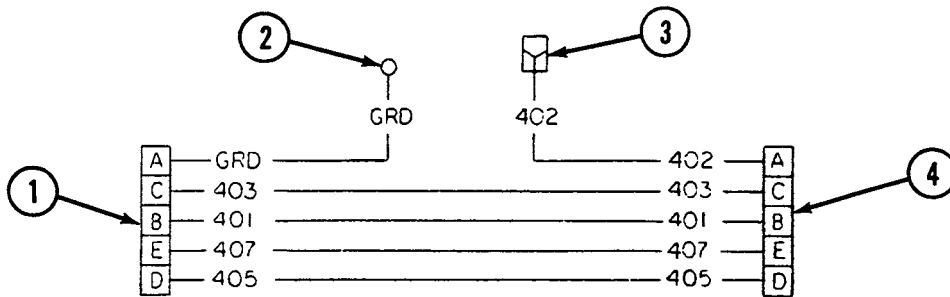
Screws (17) (item 731, WP 0491 00)

Equipment ConditionHeater control box removed (see WP 0161 00)

WARNING

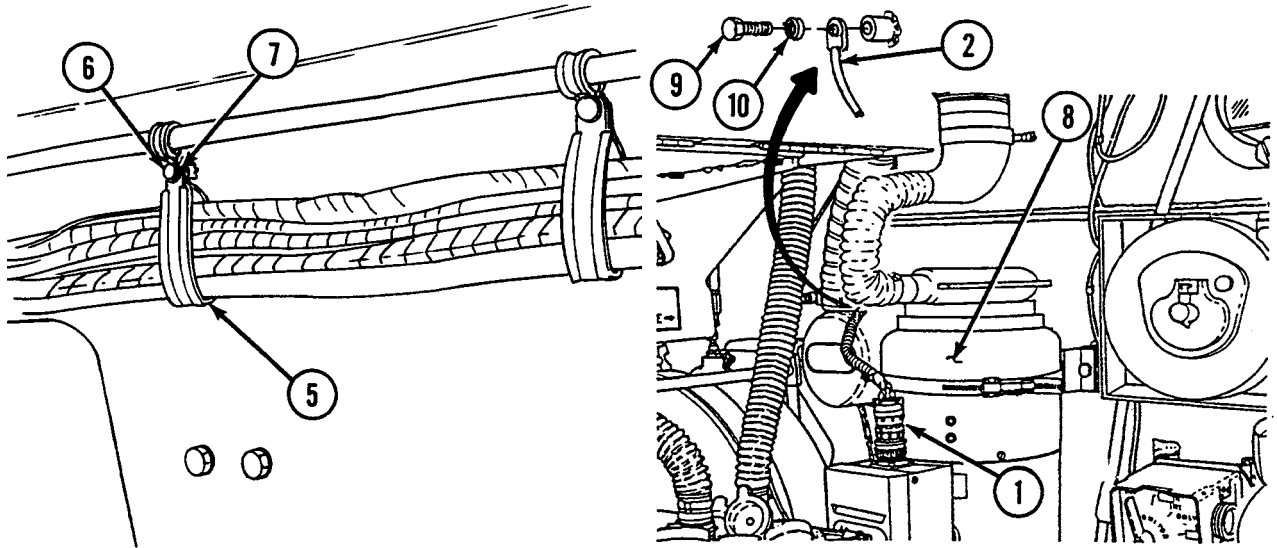
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Personnel heater	GND, 403, 401, 407, 405
2	Ground	GND
3	Heater fuel pump	402
4	Personnel heater control box	403, 401, 407, 405, 402

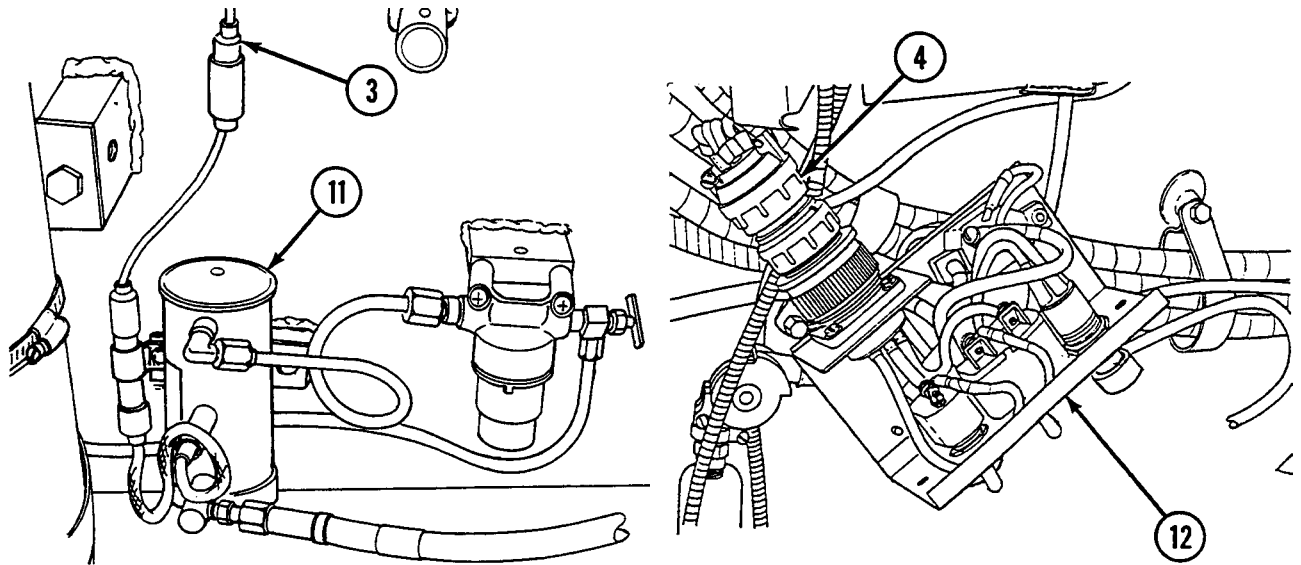


Removal

1. Remove 16 clamps (5) by removing screw (6) and lockwasher (7) from each.
2. Disconnect connector (1) from personnel heater (8).
3. Remove connector (2) from by removing screw (9) and lockwasher (10).



4. Disconnect connector (3) from heater fuel pump (11).
5. Disconnect connector (4) from personnel heater control box (12).



Disassembly

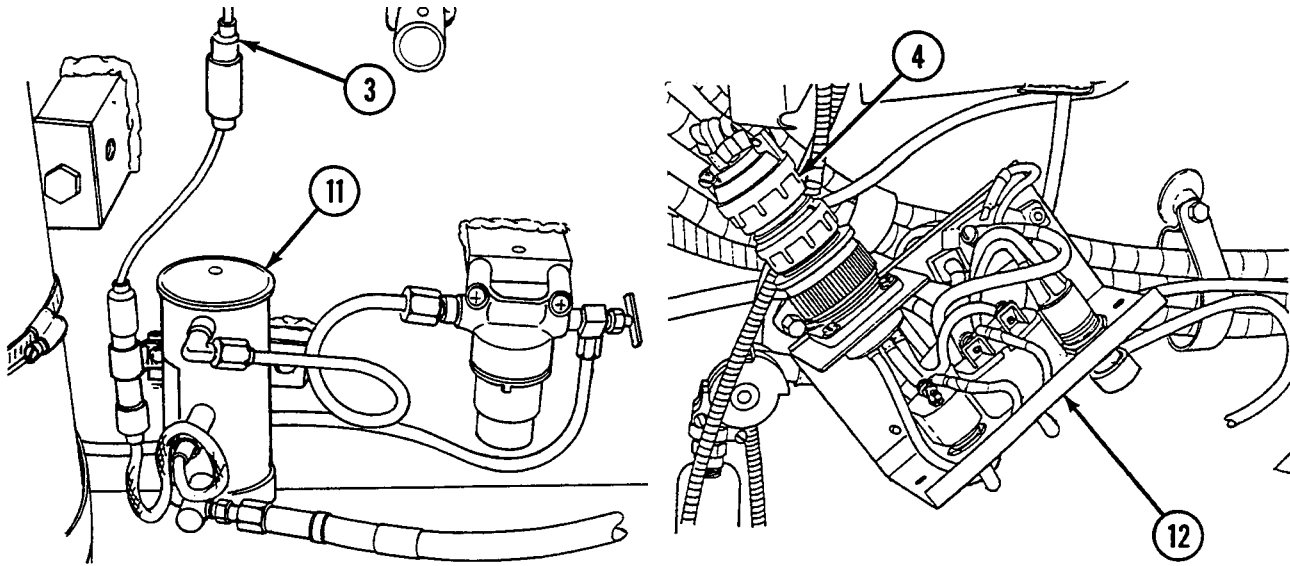
1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

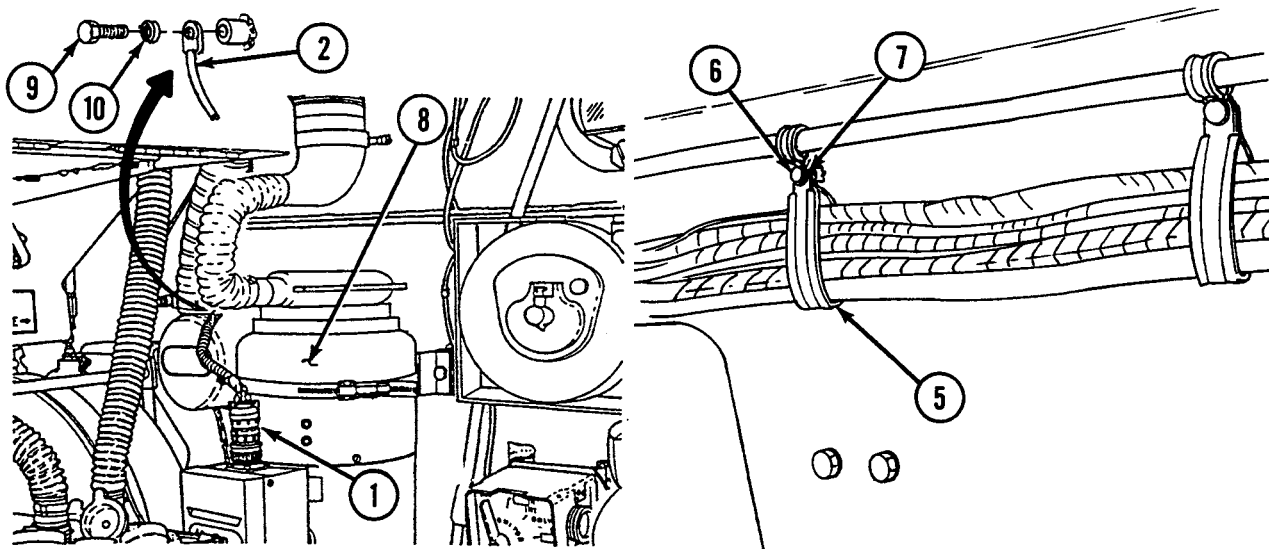
1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect connector (4) to personnel heater control box (13).
2. Connect connector (3) to heater fuel pump (12).



3. Install connector (2) to ground (9) using lockwasher (11) and screw (10).
4. Connect connector (1) to personnel heater (8).
5. Install 16 clamps (5) using lockwasher (7) and screw (6) for each.



NOTE

Follow-on maintenance: Install heater control box (see WP 0161 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

HYDRAULIC OIL TEMPERATURE TRANSMITTER HOUSING ASSEMBLY
WIRING HARNESS (11672366) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00

Materials/Parts

- Gasket (item 342, WP 0491 00)
- Lockwashers (4) (item 634, WP 0491 00)
- Screws (4) (item 583, WP 0491 00)

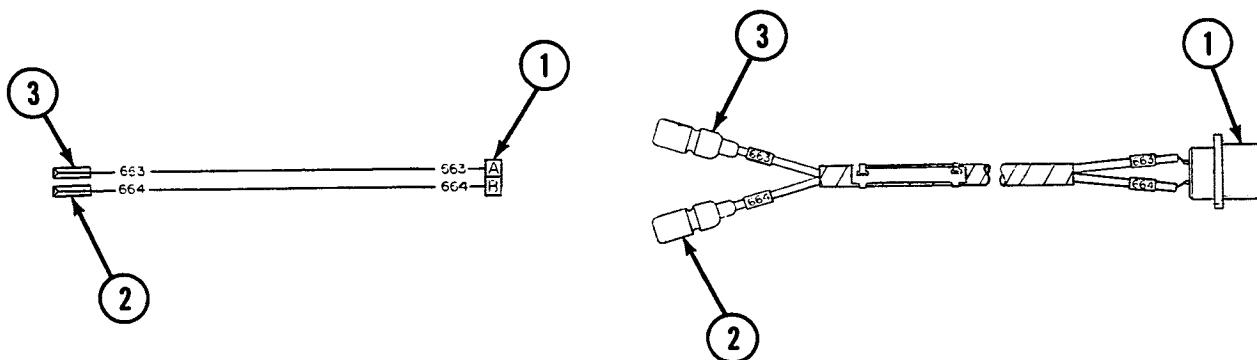
Equipment Condition

Oil temperature transmitter and switch housing assembly removed (see WP 0425 00)

WARNING

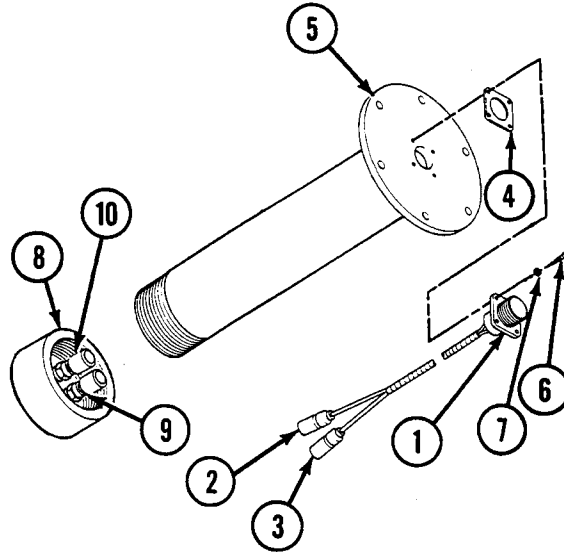
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock or burns.

Connector No.	Electrical Lead To:	Wire No.
1	Oil temperature transmitter and housing assembly	663, 664
2	Hydraulic oil temperature transmitter	664
3	Hydraulic oil high temperature switch	663



Removal

1. Remove connector (1) and gasket (4) from cover (5) by removing four screws (6) and four lockwashers (7).
2. Unscrew cap (8) disconnect connector (2) from hydraulic oil temperature transmitter (9).
3. Disconnect connector (3) from hydraulic oil high temperature switch (10).



Disassembly

1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect connector (3) to hydraulic oil high temperature switch (10).
2. Connect connector (2) to hydraulic oil temperature transmitter (9) and install cap (8).
3. Install connector (1) and gasket (4) to cover (5) using four lockwashers (7) and four screws (6).

NOTE

Follow-on maintenance: Install oil temperature transmitter and switch housing assembly (see WP 0425 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

DIODE LEAD ASSEMBLY (12322604) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)
 Soldering gun (item 56, WP 0490 00)

Materials/Parts (cont.)

Nut (item 676, WP 0491 00)
 Screw (item 589, WP 0491 00)

Materials/Parts

Lockwashers (2) (item 619, WP 0491 00)

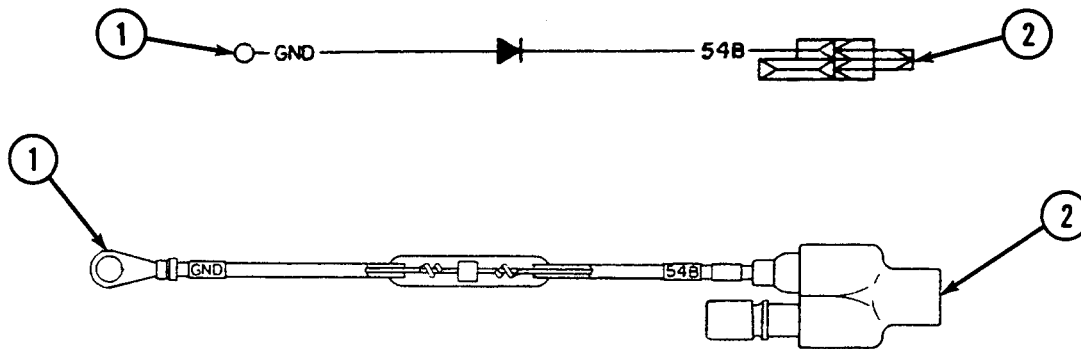
References

WP 0255 00 thru 0264 00

WARNING

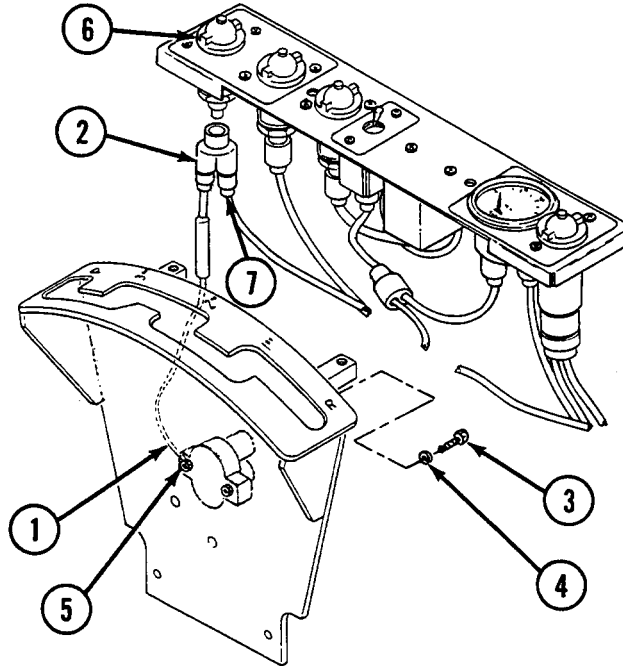
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Ground	GND
2	Fire extinguisher engine shutoff light	54B



Removal

1. Disconnect lead (1) from ground by removing screw (3), two lockwashers (4), and nut (5).
2. Disconnect connector (2) from fire extinguisher engine shutoff light (6) and disconnect connector (7).



Disassembly

1. Disassemble lead assembly (see WP 0255 00 thru 0264 00, as appropriate).

NOTE

Twist conductors to diode observing proper polarity. Solder using solder comp SN60, per QQ-S-571. A heat sink must be used when soldering to the diode.

Assembly

1. Assemble lead assembly (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect connector (2) to fire extinguisher engine shutoff light (6) and connect connector (7).
2. Connect lead (1) to ground with screw (3), two lockwashers (4), and two nuts (5).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

ENGINE DISCONNECT TO STARTER GROUND WIRING HARNESS
(SINGLE VOLTAGE) (11671356) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (4) (item 636, WP 0491 00)
 Lockwasher (item 639, WP 0491 00)
 Lockwasher (item 642, WP 0491 00)
 Nuts (4) (item 671, WP 0491 00)
 Nut (item 684, WP 0491 00)

Materials/Parts (cont.)

Screw (item 383, WP 0491 00)
 Screws (4) (item 600, WP 0491 00)

References

WP 0255 00 thru 0264 00

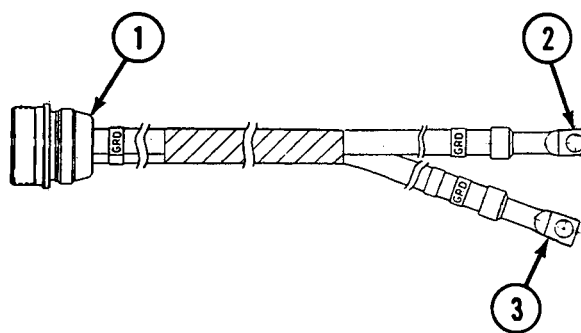
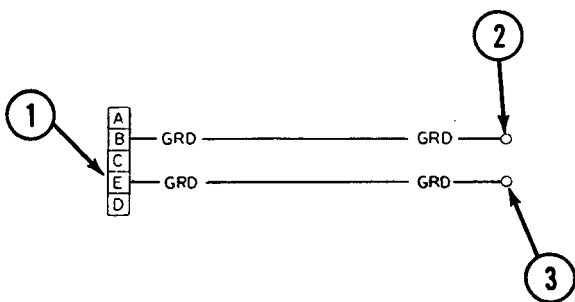
Equipment Condition

Powerplant removed (see WP 0098 00)

WARNING

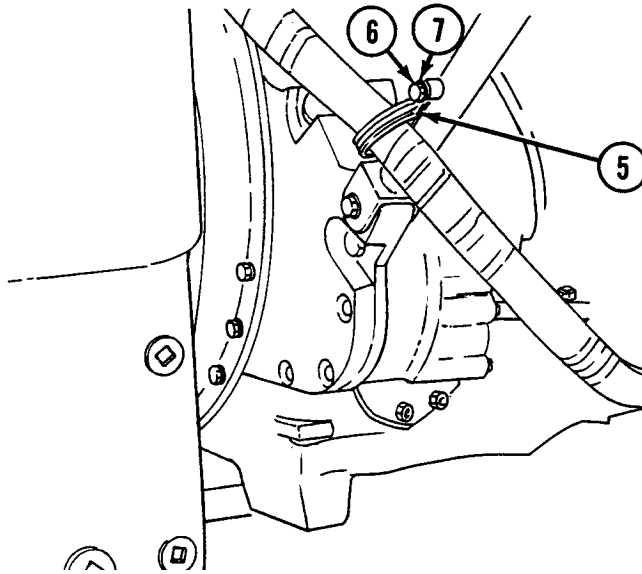
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Engine disconnect bracket	GND
2	Starter	GND
3	Starter	GND

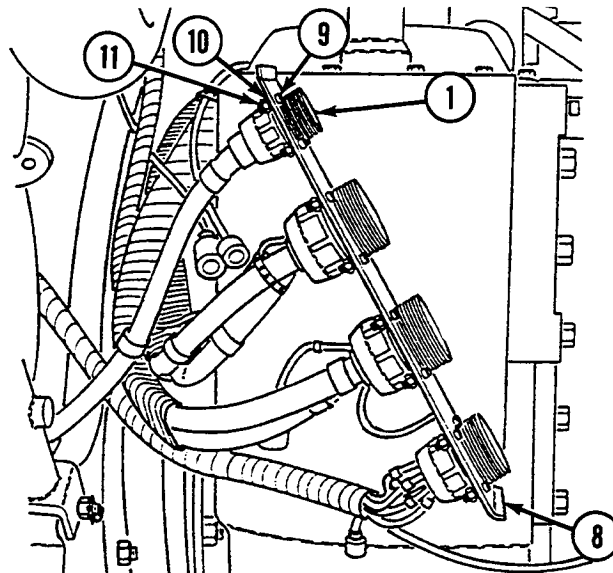


Removal

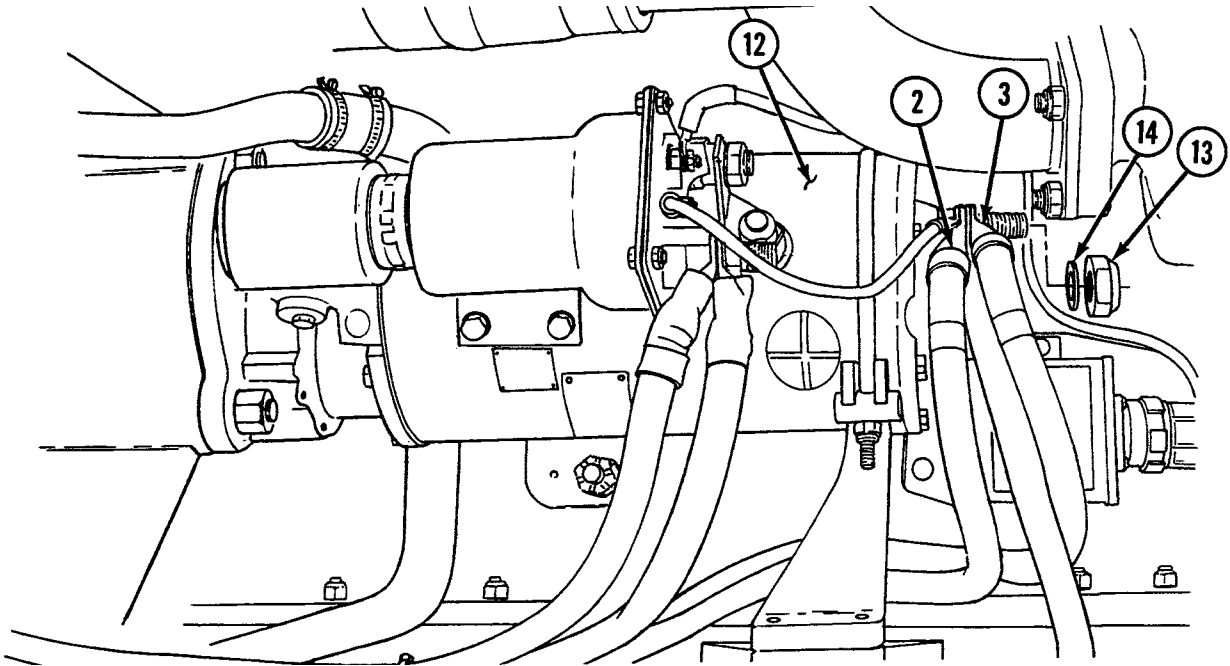
1. Remove clamp (5) by removing screw (6) and lockwasher (7).



2. Disconnect connector (1) from engine disconnect (8) by removing four screws (9), four lockwashers (10), and four nuts (11).



3. Disconnect two leads (2 and 3) from starter (12) by removing nut (13) and lockwasher (14).



Disassembly

1. Disassemble ground cable (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble ground cable (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect two leads (2 and 3) to starter (12) using lockwasher (14) and nut (13).
2. Connect connector (1) to engine disconnect (8) using four nuts (11), four lockwashers (10), and four screws (9).
3. Install clamp (5) using lockwasher (7) and screw (6).

NOTE

Follow-on maintenance: Install powerplant (see WP 0098 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

M239 SMOKE GRENADE LAUNCHER SYSTEM WIRING HARNESS
(SINGLE VOLTAGE) (11672299) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (4) (item 621, WP 0491 00)
 Lockwasher (item 624, WP 0491 00)
 Screws (10) (item 147, WP 0491 00)

Materials/Parts (cont.)

Screws (4) (item 731, WP 0491 00)
 Screw (item 784, WP 0491 00)

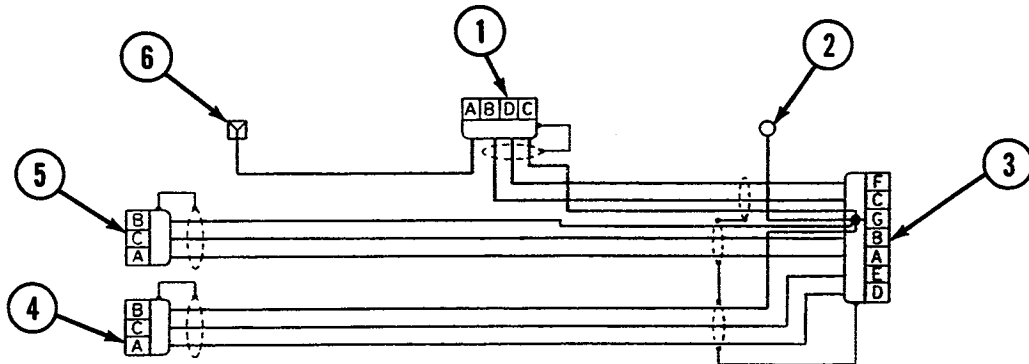
References

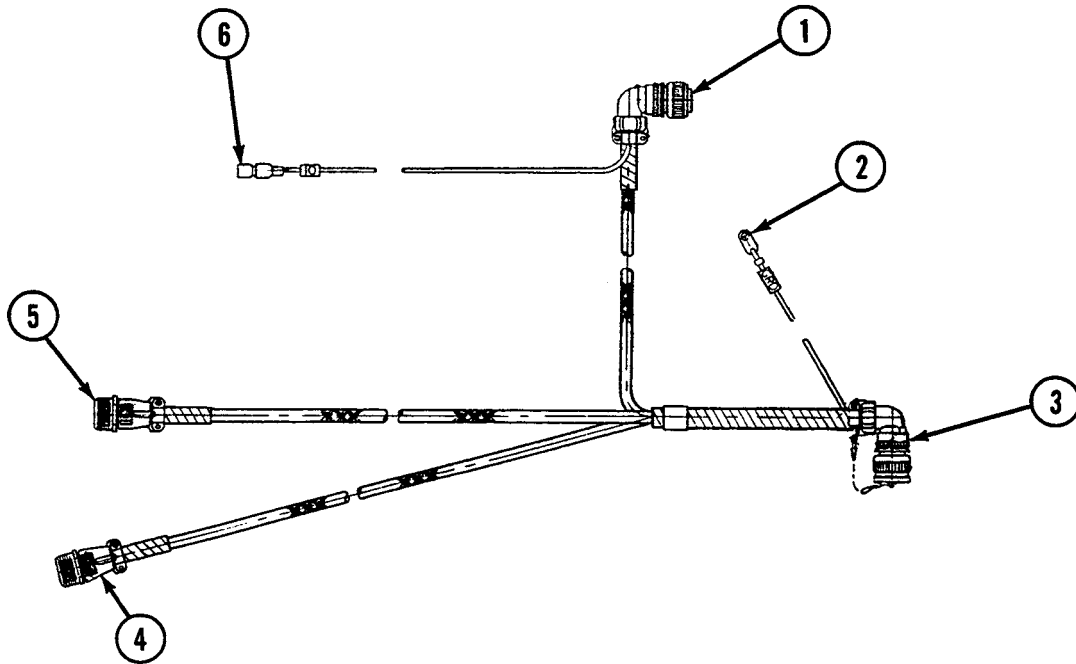
WP 0255 00 thru 0264 00

WARNING

Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

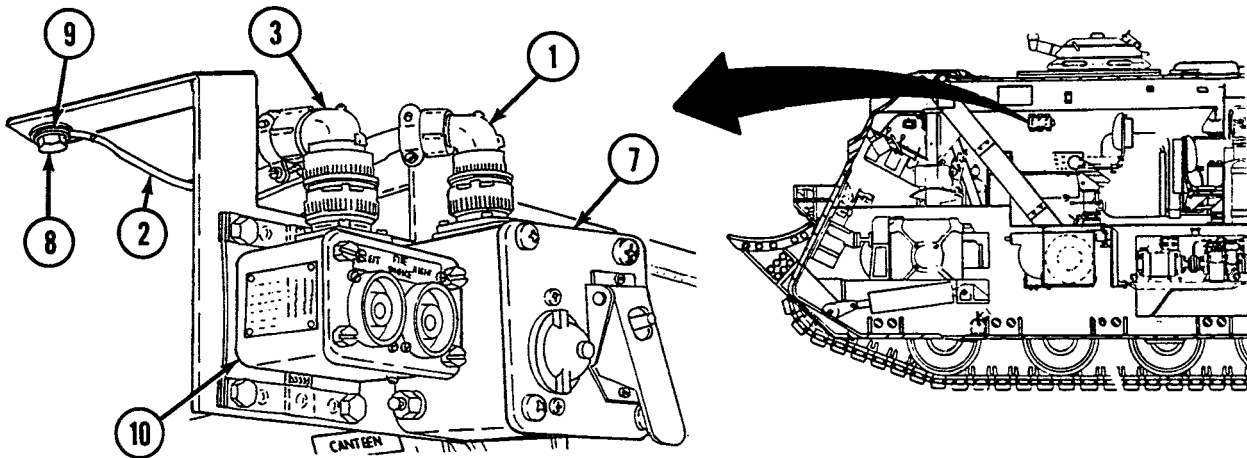
Connector No.	Electrical Lead To:	Wire No.
1	Arming switch box	
2	Ground	
3	Firing switch box	
4	Electrical kit for M239 smoke grenade launcher, left-hand side discharger feed through cable assembly wiring harness (11672298-1)	
5	Electrical kit for M239 smoke grenade launcher cable assembly wiring harness (11672298-2)	
6	Accessory panel auxiliary outlet Y-connector	



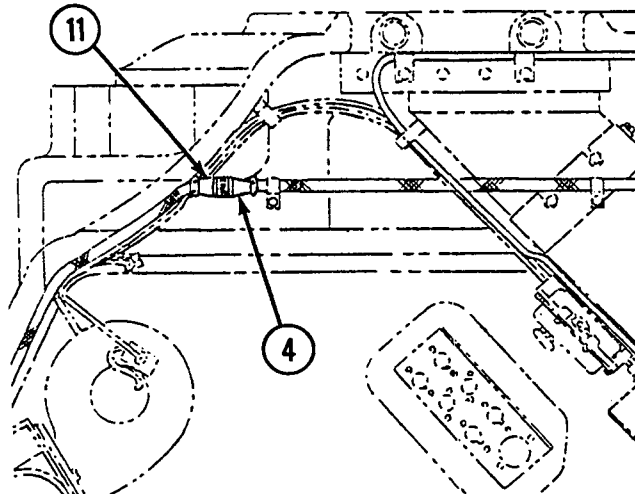


Removal

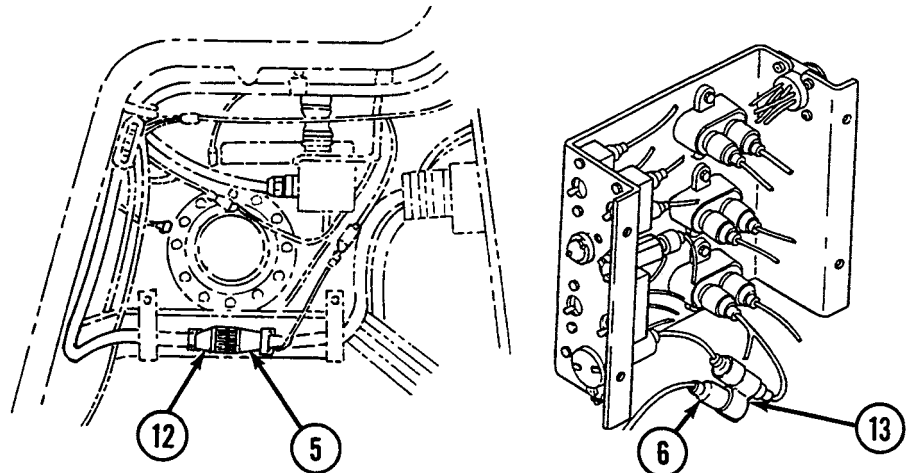
1. Disconnect connector (1) from arming switch box (7).
2. Disconnect lead (2) from ground by removing screw (8) and lockwasher (9).
3. Disconnect connector (3) from firing switch box (10).



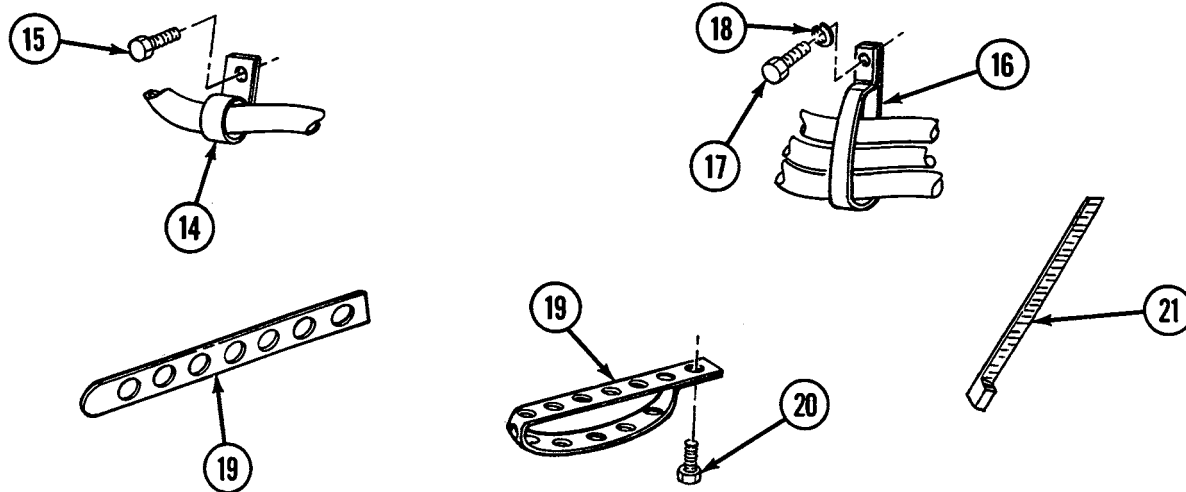
4. Disconnect connector (4) from electrical kit for M239 smoke grenade launcher, left-hand side discharger feed through cable assembly wiring harness (11).



5. Disconnect connector (5) from electrical kit for M239 smoke grenade launcher cable assembly wiring harness (12).
6. Disconnect connector (6) from accessory panel auxiliary outlet Y-connector (13).



7. Remove three clamps (14) by removing screw (15) from each.
8. Remove four clamps (16) by removing screw (17) and lockwasher (18) from each.
9. Remove seven straps (19) by removing screw (20) from each.
10. Remove tie down strap (21).



Disassembly

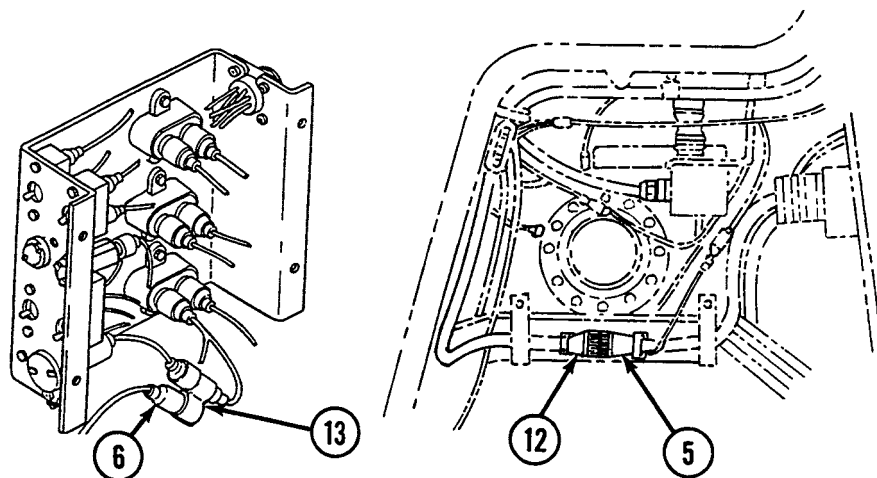
1. Disassemble lead assembly (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

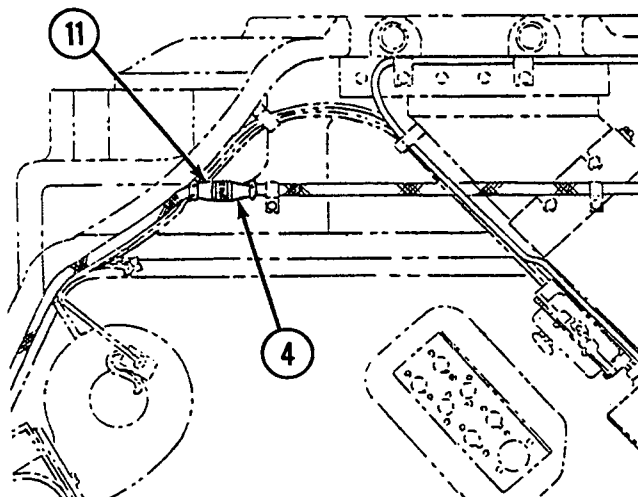
1. Assemble lead assembly (see WP 0255 00 thru 0264 00, as appropriate).

Installation

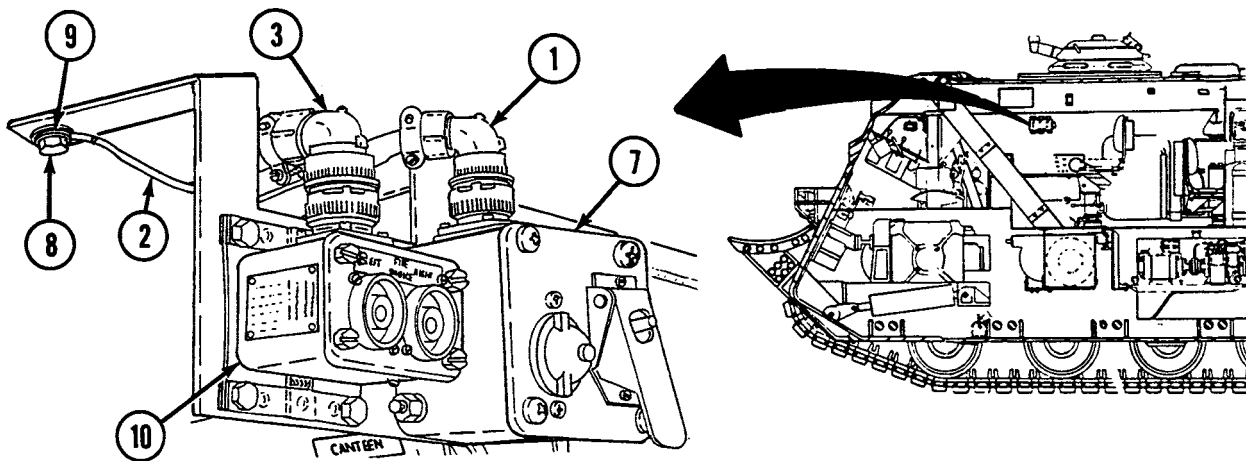
1. Install tie down strap (21).
2. Install seven straps (19) using screw (20) for each.
3. Install four clamps (16) using lockwasher (18) and screw (17) for each.
4. Install three clamps (14) using screw (15) for each.
5. Connect connector (6) to accessory panel auxiliary outlet Y-connector (13).
6. Connect connector (5) to electrical kit for M239 smoke grenade launcher cable assembly wiring harness (12).



7. Connect connector (4) to electrical kit for M239 smoke grenade launcher, left-hand side discharger feed through cable assembly wiring harness (11).



8. Connect connector (3) to firing switch box (10).
9. Connect lead (2) to ground using lockwasher (9) and screw (8).
10. Connect connector (1) to arming switch box (7).



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

POWER SWITCH BOX ASSEMBLY FOR M239 SMOKE GRENADE LAUNCHER
WIRING HARNESS (11672315) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00

Materials/Parts

- Lockwasher (item 624, WP 0491 00)
- Lockwashers (4) (item 634, WP 0491 00)
- Screws (4) (item 583, WP 0491 00)
- Screw (item 784, WP 0491 00)

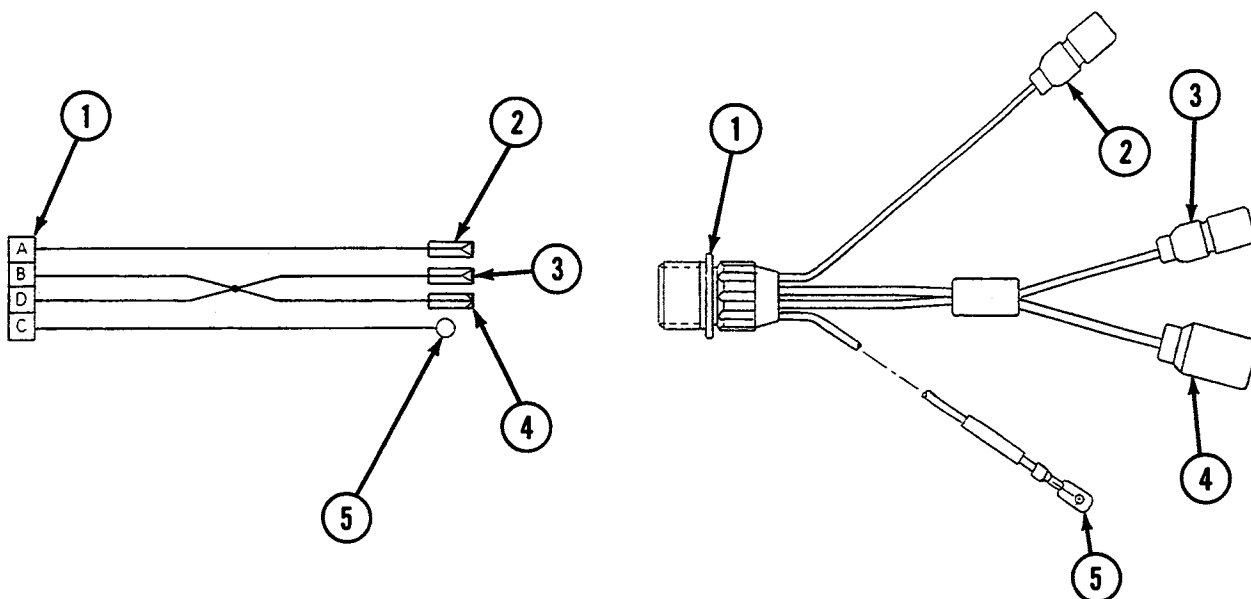
Equipment Condition

M239 launcher power switch box assembly removed (see WP 0442 00)

WARNING

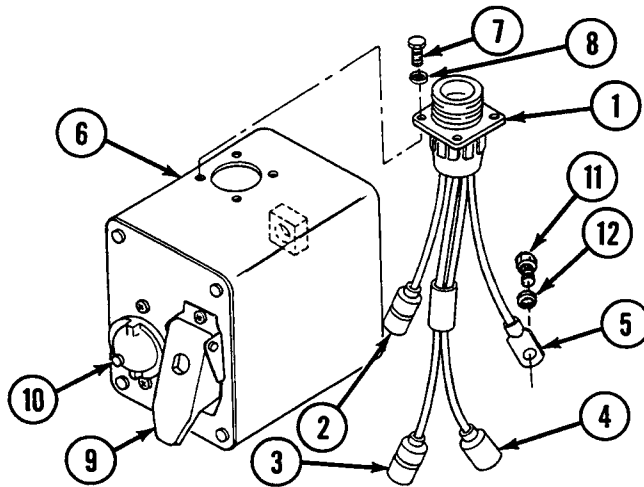
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	M239 launcher power switch box assembly outlet	
2	Power switch assembly	
3	Power switch assembly	
4	Warning lamp	
5	Ground	



Removal

1. Disconnect connector (1) from M239 launcher power switch box assembly outlet (6) by removing four screws (7) and four lockwashers (8).
2. Disconnect two connectors (2 and 3) from power switch assembly (9).
3. Disconnect connector (4) from warning lamp (10).
4. Disconnect lead (5) from ground by removing screw (11) and lockwasher (12).



Disassembly

1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect lead (5) to ground using lockwasher (11) and screw (12).
2. Connect connector (4) to warning lamp (10).
3. Connect two connectors (2) to power switch assembly (9).
4. Connect connector (1) to M239 launcher power switch box assembly outlet (6) using four lockwashers (8) and four screws (7).

NOTE

Follow-on maintenance: Install M239 launcher power switch box assembly (see WP 0442 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

DRIVER'S VEHICLE EXHAUST SMOKE BRACKET TO BULKHEAD CONNECTION
WIRING HARNESS (11672382) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00

Materials/Parts

- Lockwashers (14) (item 621, WP 0491 00)
- Lockwashers (4) (item 649, WP 0491 00)
- Nuts (4) (item 669, WP 0491 00)
- Screws (4) (item 570, WP 0491 00)
- Screws (14) (item 731, WP 0491 00)

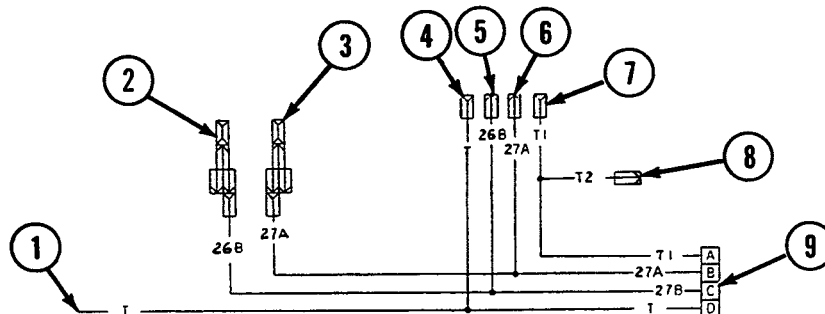
Equipment Condition

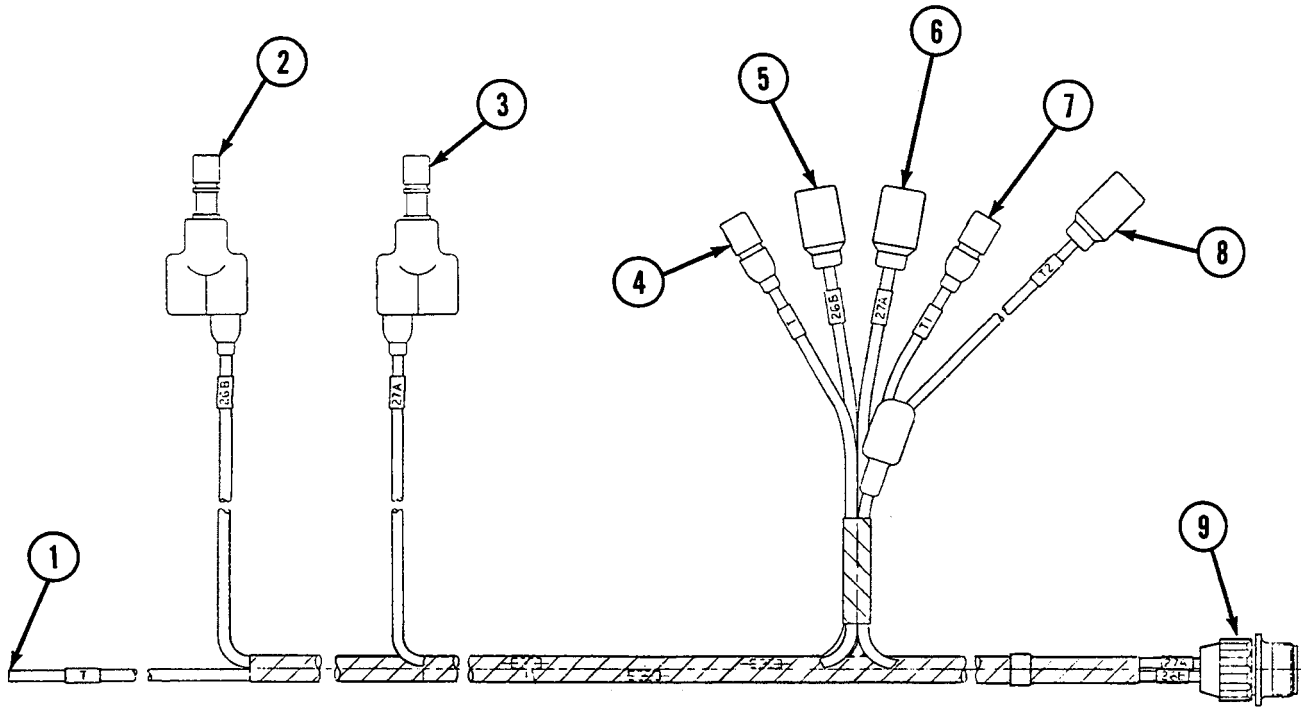
Air cleaner assembly removed (see WP 0138 00)

WARNING

Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

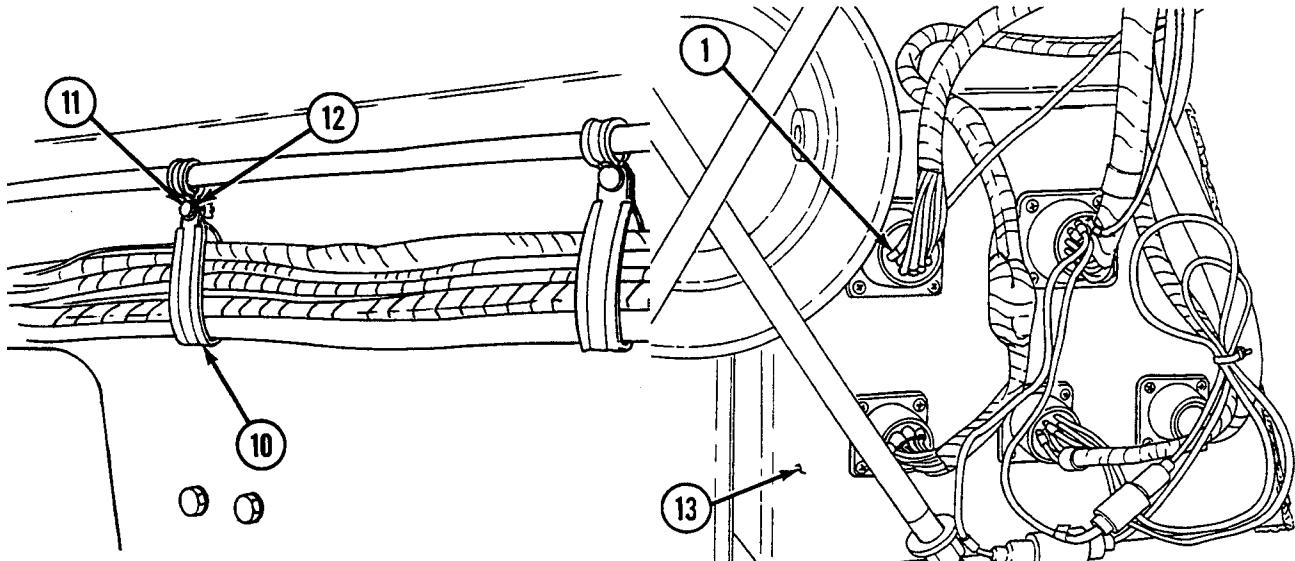
Connector No.	Electrical Lead To:	Wire No.
1	Gage panel to bulkhead wiring harness connector at bulkhead disconnect	T
2	Gage panel to bulkhead wiring harness	26B
3	Switch panel to gage panel and miscellaneous switches wiring harness	27A
4	Driver's vehicle exhaust smoke switch	T
5	Driver's vehicle exhaust smoke switch	26B
6	Driver's vehicle exhaust smoke switch	27A
7	Driver's vehicle exhaust smoke switch	T1
8	Driver's vehicle exhaust smoke indicator light	T2
9	Driver's vehicle exhaust smoke disconnect bracket	27A, 26B, T, T1



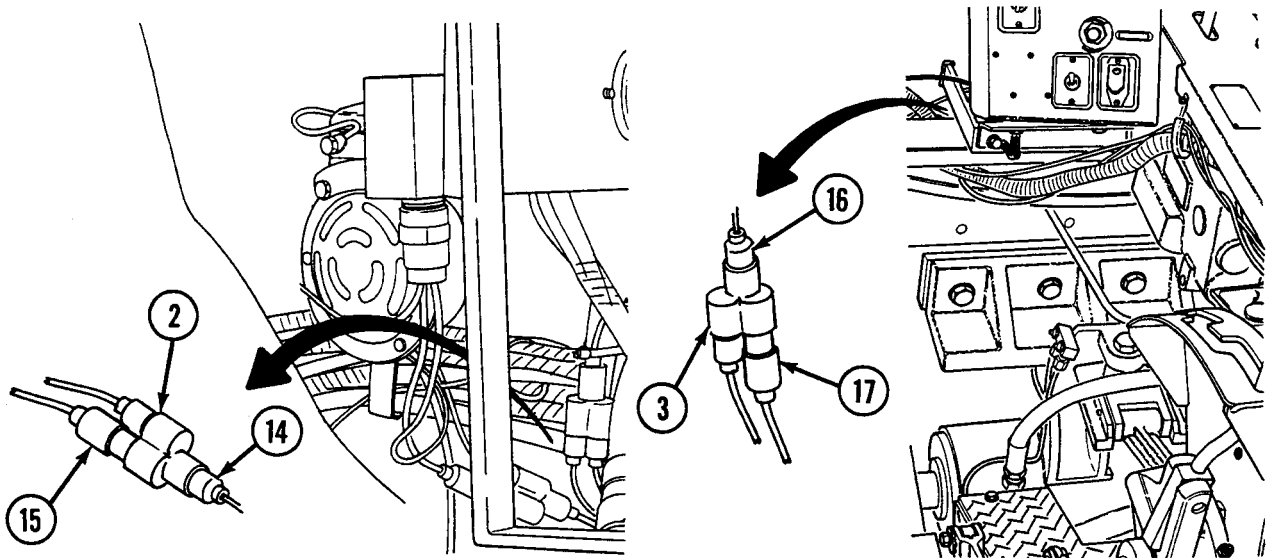


Removal

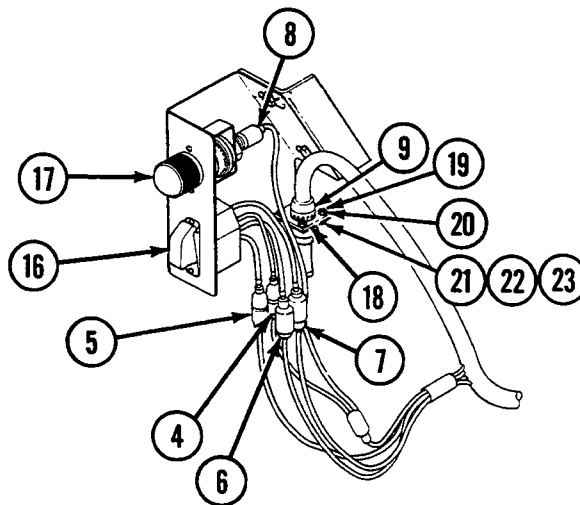
1. Remove 14 clamps (10) by removing screw (11) and lockwasher (12) from each.
2. Disconnect lead (1) from gage panel to bulkhead wiring harness connector at bulkhead disconnect (13).



3. Disconnect Y-connector (2) from gage panel to bulkhead wiring harness (14) and connector (15).
4. Disconnect Y-connector (3) from switch panel to gage panel and miscellaneous switches wiring harness (16) and connector (17).



5. Disconnect four connectors (4 through 7) from driver's vehicle exhaust smoke switch (18).
6. Disconnect connector (8) from driver's vehicle exhaust smoke indicator light (19).
7. Disconnect connector (9) from driver's vehicle exhaust smoke disconnect bracket (20) by removing four screws (21), four lockwashers (22), and four nuts (23).



Disassembly

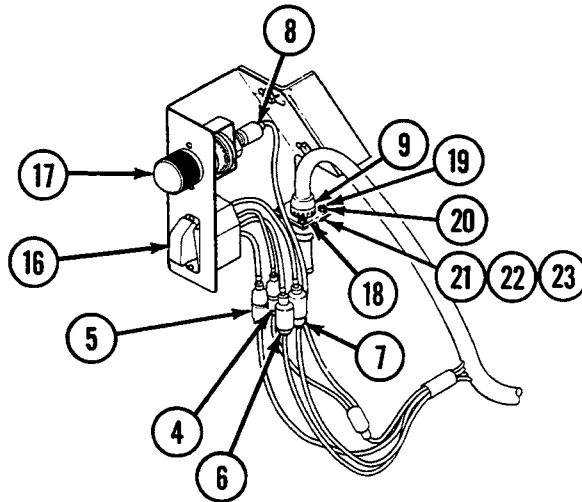
1. Disassemble wiring harness and lead (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

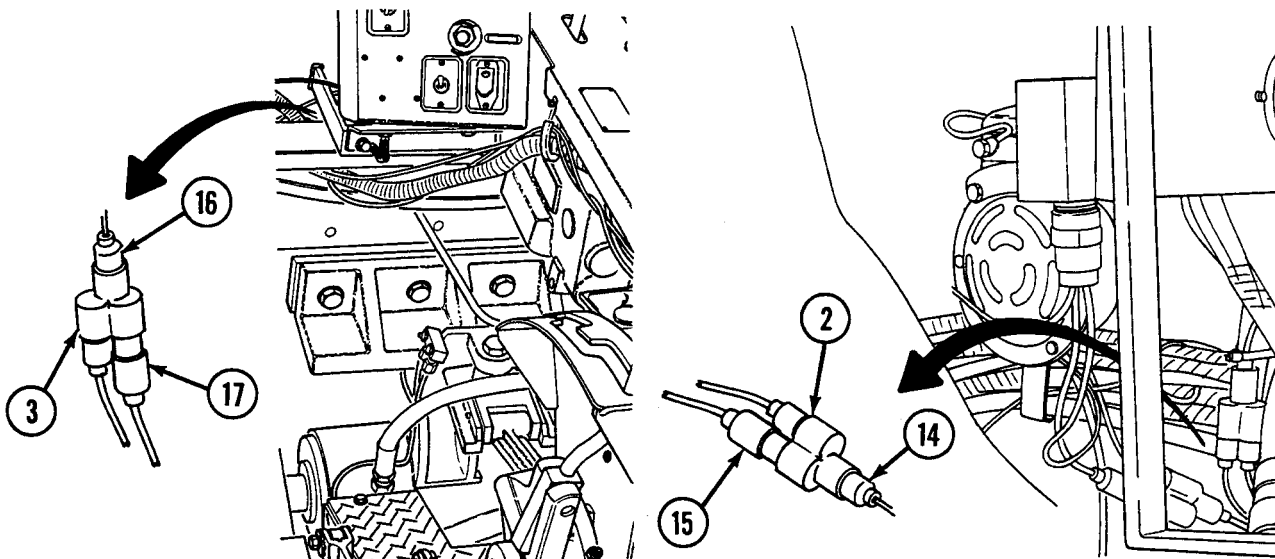
1. Assemble wiring harness and lead (see WP 0255 00 thru 0264 00, as appropriate).

Installation

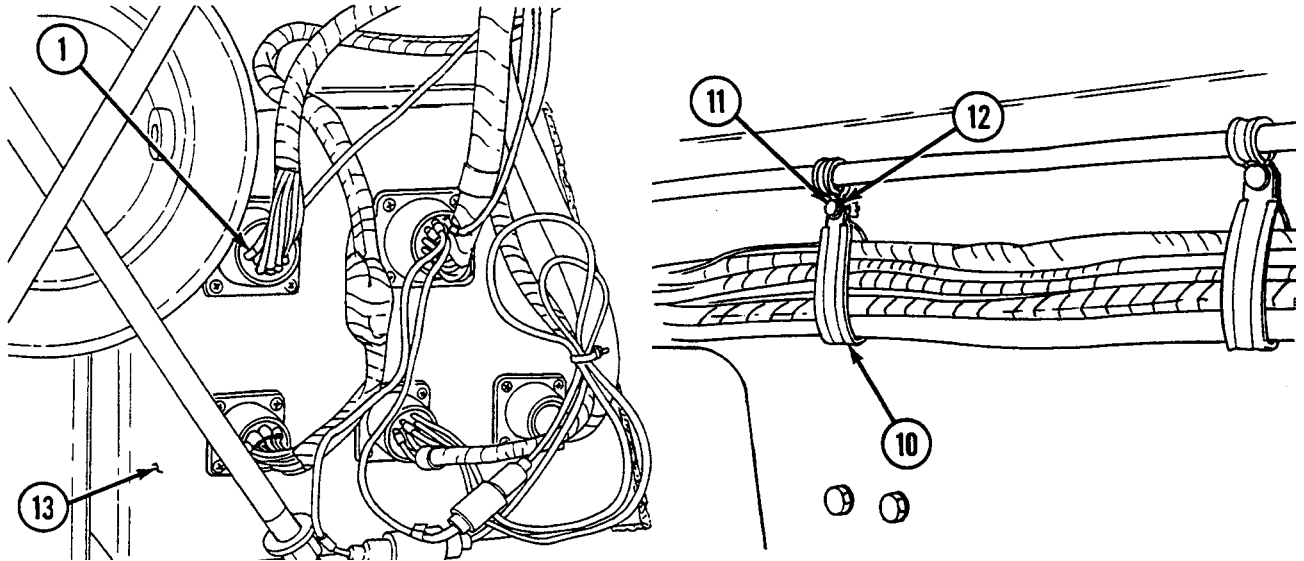
1. Connect connector (9) to driver's vehicle exhaust smoke disconnect bracket (20) using four screws (21), four lockwashers (22), and four nuts (23).
2. Connect connector (8) to driver's vehicle exhaust smoke indicator light (19).
3. Connect four connectors (4 through 7) to driver's vehicle exhaust smoke switch (18).



4. Connect Y-connector (3) to switch panel to gage panel and miscellaneous switches wiring harness (16) and connector (17).
5. Connect Y-connector (2) to gage panel to bulkhead wiring harness (14) and connector (15).



6. Connect lead (1) to gage panel to bulkhead wiring harness connector at bulkhead disconnect (13).
7. Install 14 clamps (10) using lockwasher (12) and screw (11) for each.

**NOTE**

Follow-on maintenance: Install air cleaner assembly (see WP 0138 00).

END OF WORK PACKAGE

UNIT MAINTENANCE**RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1****NSN 2350-00-122-6826, EIC AQA****COMMANDER'S SWITCH PLATE TO DRIVER'S VEHICLE EXHAUST
SMOKE BRACKET (11372387) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION**

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00

Materials/Parts

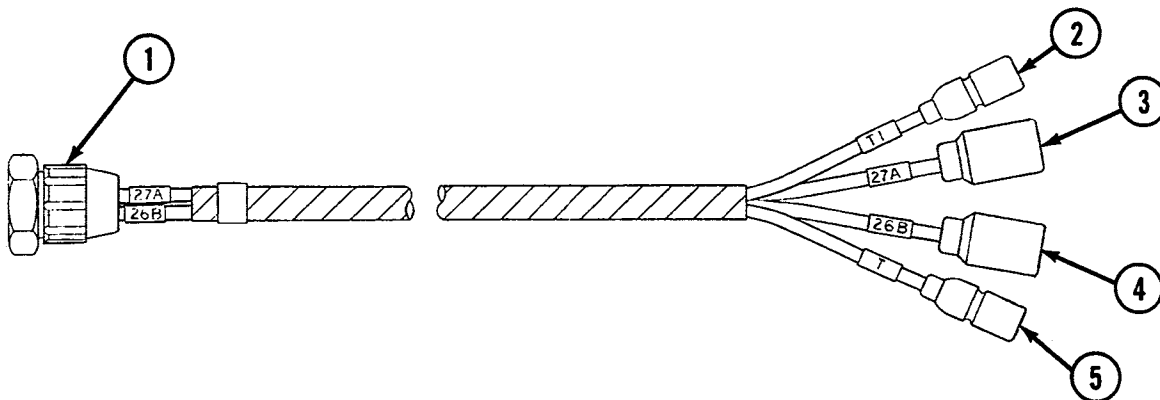
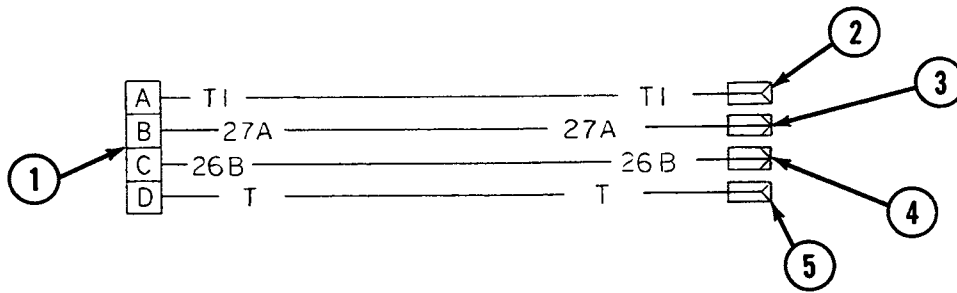
Lockwashers (6) (item 621, WP 0491 00)

Screws (6) (item 731, WP 0491 00)

WARNING

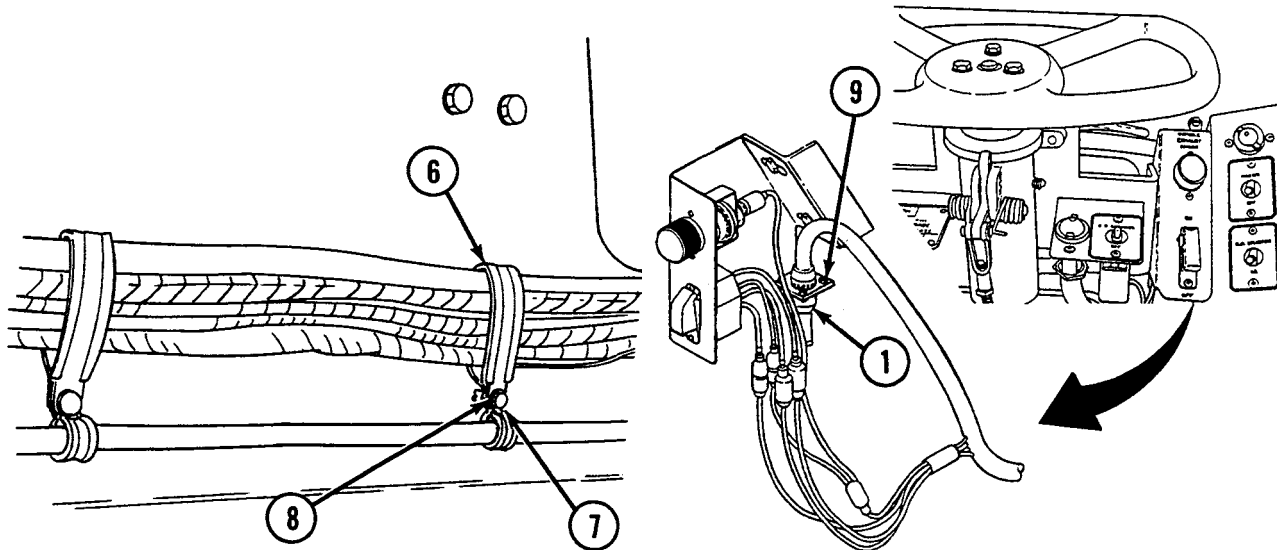
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Driver's vehicle exhaust smoke disconnect bracket	T1, 27A, 26B, T
2	Commander's smoke activating switch	T1
3	Commander's smoke activating switch	27A
4	Commander's smoke activating switch	26B
5	Commander's smoke activating switch	T

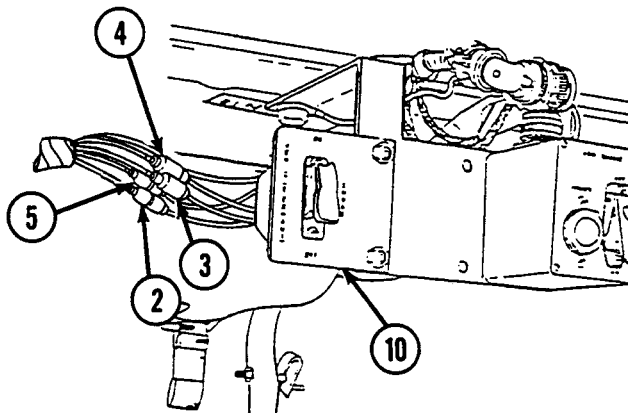


Removal

1. Remove six clamps (6) by removing screw (7) and lockwasher (8) from each.
2. Disconnect connector (1) from driver's vehicle exhaust smoke disconnect bracket (9).



3. Disconnect four connectors (2 through 5) from commander's smoke activating switch (10).



Disassembly

1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect four connectors (2 through 5) to commander's smoke activating switch (10).
2. Connect connector (1) to driver's vehicle exhaust smoke disconnect bracket (9).
3. Install six clamps (6) using screw (7) and lockwasher (8) for each.

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

FUEL SOLENOID WIRING HARNESS (11672386) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00

Materials/Parts

Locknut (item 494, WP 0491 00)

Screw (item 372, WP 0491 00)

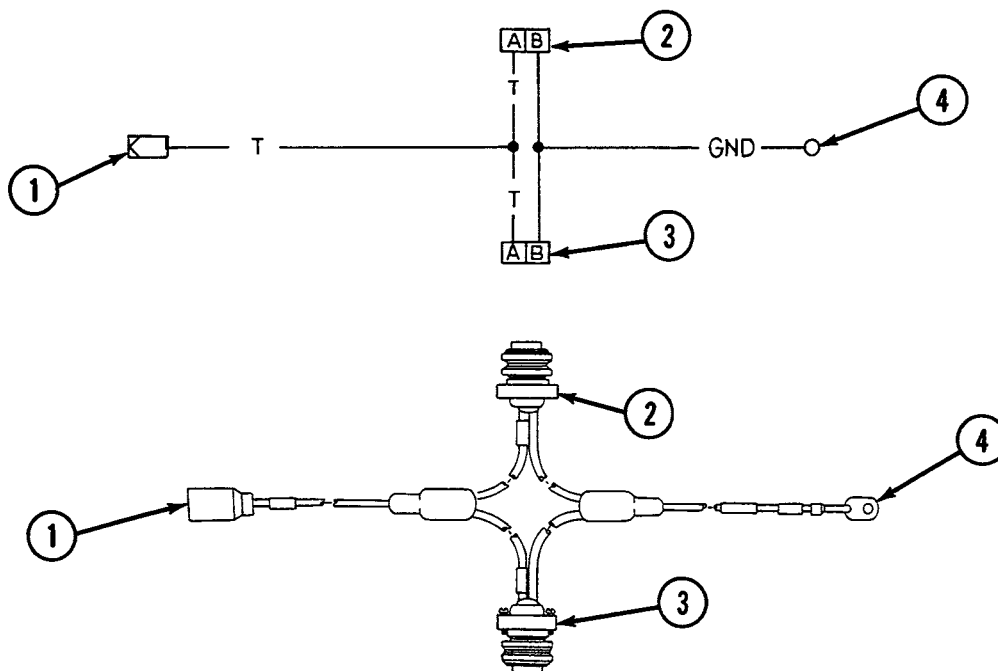
Equipment Condition

Engine deck removed (see WP 0336 00)

WARNING

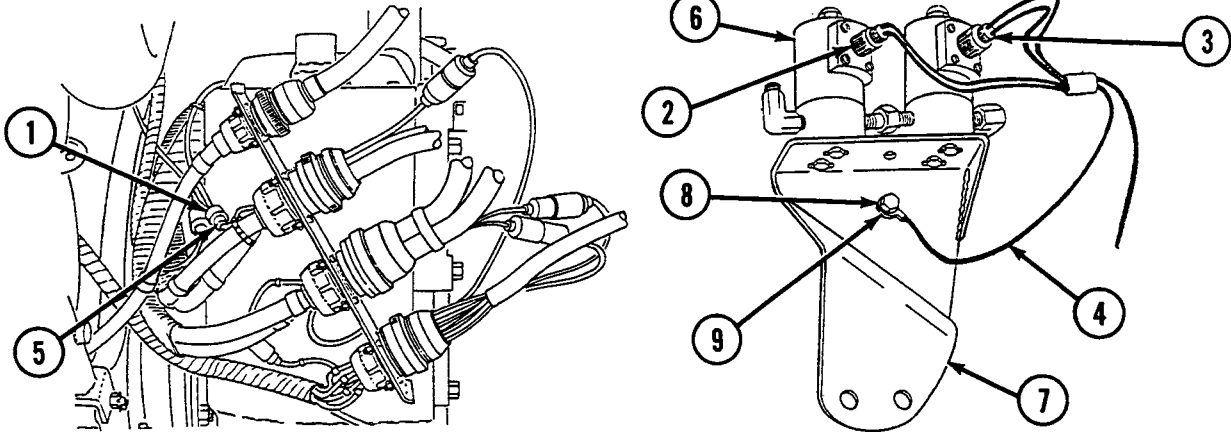
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Exhaust smoke generating system lead assembly (11672473-1)	T
2	Fuel solenoid	T, GND
3	Fuel solenoid	T, GND
4	Ground	GND



Removal

1. Disconnect connector (1) from exhaust smoke generating system lead assembly (5).
2. Disconnect two connectors (2 and 3) and from two fuel solenoids (6).
3. Disconnect ground lead (4) from solenoid bracket (7) by removing cap screw (8) and locknut (9).



Disassembly

1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect ground lead (4) to solenoid bracket (7) using locknut (9) and cap screw (8).
2. Connect two connectors (2 and 3) and to two fuel solenoids (6).
3. Connect connector (1) to exhaust smoke generating system lead assembly (5).

NOTE

Follow-on maintenance: Install engine deck (see WP 0336 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

FUEL/WATER SEPARATOR CONTROL MODULE TO SOLENOID DRAIN VALVE
WIRING HARNESS (11684127) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00

Materials/Parts

Screw (item 149, WP 0491 00)
 Washer, flat (item 139, WP 0491 00)

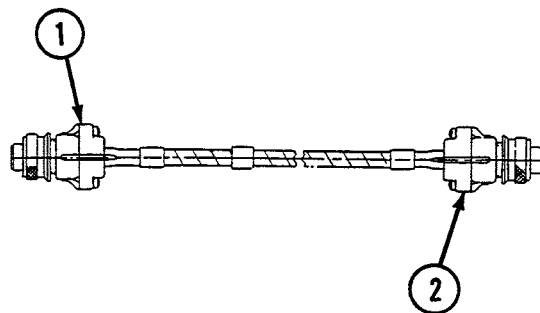
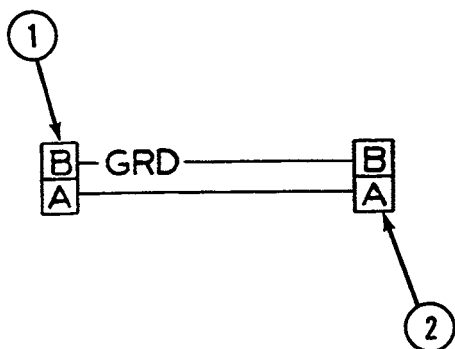
Equipment Condition

Engine deck removed (see WP 0336 00)

WARNING

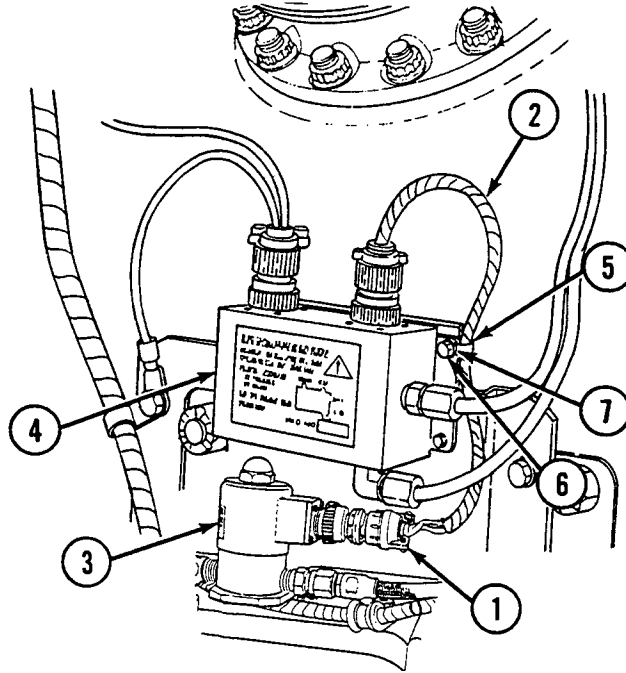
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Solenoid drain valve	GND
2	Fuel/water separator control module	GND



Removal

1. Disconnect connector (1) from solenoid drain valve (3).
2. Disconnect connector (2) from fuel/water separator control module (4).
3. Remove clamp (5) by removing screw (6) and washer (7).



Disassembly

1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Install clamp (5) using washer (7) and screw (6).
2. Connect connector (2) to fuel/water separator control module (4).
3. Connect connector (1) to solenoid drain valve (3).

NOTE

Follow-on maintenance: Install engine deck (see WP 0336 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

EXHAUST SMOKE GENERATING SYSTEM LEAD ASSEMBLY (11672385) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00, as appropriate

Materials/Parts

Wire, electrical (item 38, WP 0489 00)

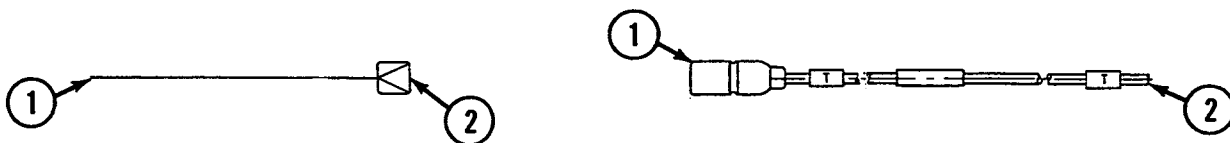
Equipment Condition

Engine deck removed (see WP 0336 00)

WARNING

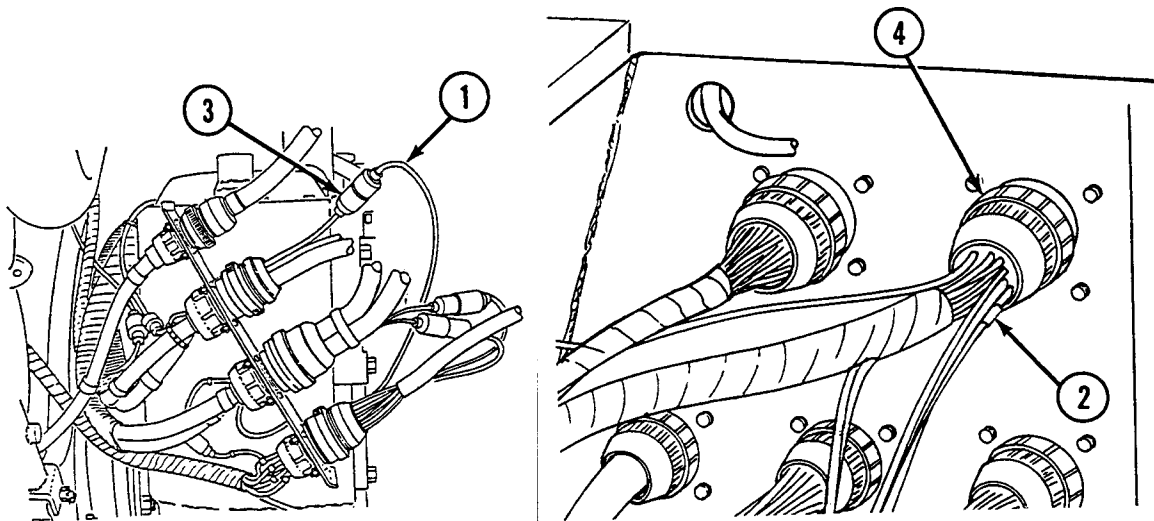
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Smoke generating system lead assembly (11672473-2)	T
2	Bulkhead to main engine bracket and rear fuel tank transmitter wiring harness at bulkhead disconnect	T



Removal

1. Disconnect connector (1) from smoke generating system lead assembly (3).
2. Disconnect lead (2) from bulkhead to main engine bracket and rear fuel tank transmitter wiring harness at bulkhead disconnect (4).



Disassembly

1. Disassemble lead assembly (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble lead assembly (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect lead (2) to bulkhead to main engine bracket and rear fuel tank transmitter wiring harness at bulkhead disconnect (4).
2. Connect connector (1) to smoke generating system lead assembly (3).

NOTE

Follow-on maintenance: Install engine deck (see WP 0336 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

SMOKE GENERATING SYSTEM LEAD ASSEMBLY (11672473-1) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

Engine deck removed (see WP 0336 00)

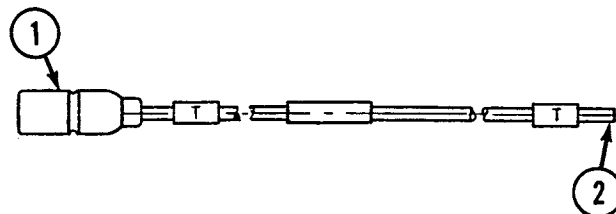
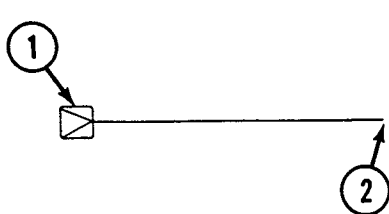
References

WP 0255 00 thru 0264 00

WARNING

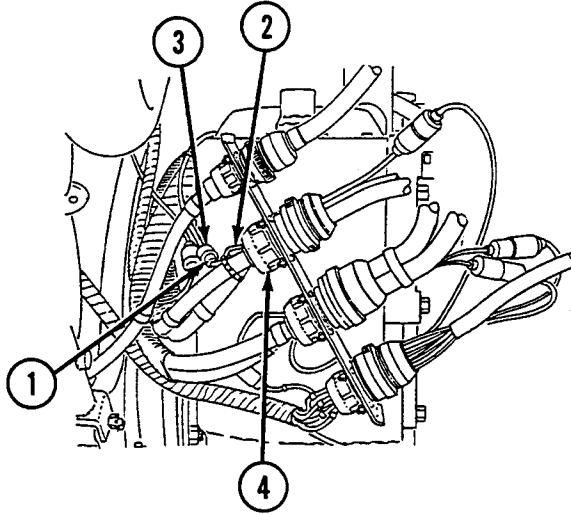
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Fuel solenoid wiring harness	T
2	Engine disconnect to starter wiring harness at engine disconnect	T



Removal

1. Disconnect connector (1) from fuel solenoid wiring harness (3).
2. Disconnect lead (2) from engine disconnect to starter wiring harness at engine disconnect (4).

**Disassembly**

1. Disassemble lead assembly (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble lead assembly (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect lead (2) to engine disconnect to starter wiring harness at engine disconnect (4).
2. Connect connector (1) to fuel solenoid wiring harness (3).

NOTE

Follow-on maintenance: Install engine deck (see WP 0336 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

SMOKE GENERATING SYSTEM LEAD ASSEMBLY (11672473-2) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

Engine deck removed (see WP 0336 00)

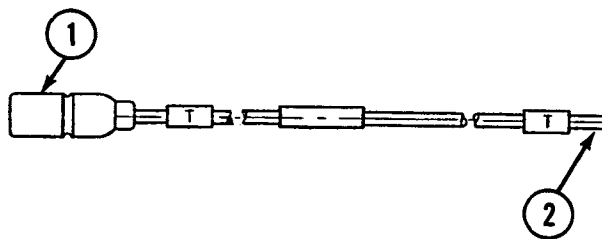
References

WP 0255 00 thru 0264 00

WARNING

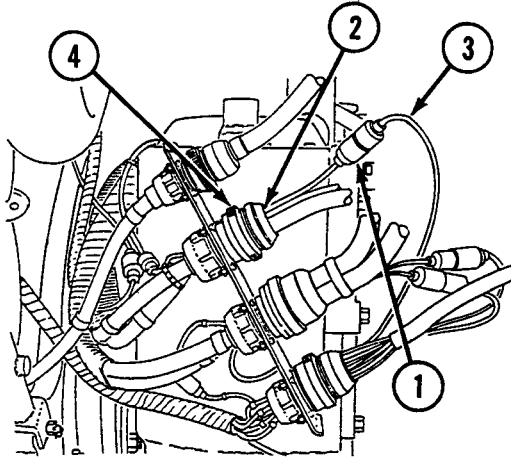
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Exhaust smoke generating system wiring harness (11672385)	T
2	Engine disconnect ground lead assembly	T



Removal

1. Disconnect connector (1) from exhaust smoke generating system wiring harness (3).
2. Disconnect lead (2) from engine disconnect ground lead assembly (4).

**Disassembly**

1. Disassemble lead assembly (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble lead assembly (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect lead (2) to engine disconnect ground lead assembly (4).
2. Connect connector (1) to exhaust smoke generating system wiring harness (3).

NOTE

Follow-on maintenance: Install engine deck (see WP 0336 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

DRIVER'S PERISCOPE TO INFRARED POWER SUPPLY (SINGLE VOLTAGE) (10866967) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

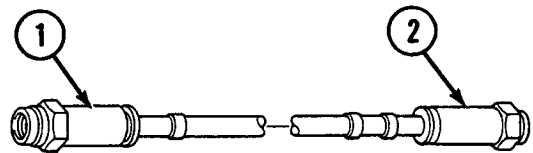
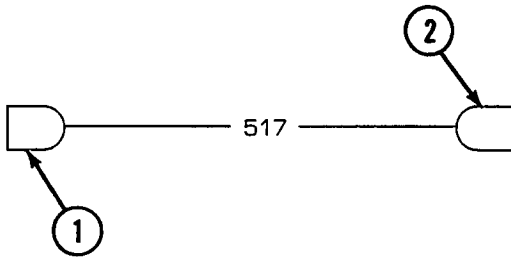
References

WP 0255 00 thru 0264 00

WARNING

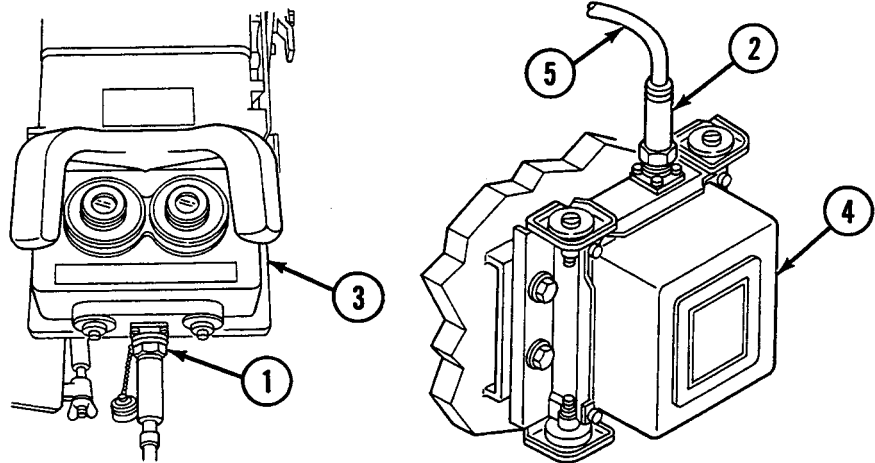
Be certain MASTER switch is OFF and negative battery leads are disconnected to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Driver's periscope	517
2	Infrared power supply	517



Removal

1. Disconnect connector (1) from driver's periscope (3).
2. Disconnect connector (2) from infrared power supply (4) and remove lead assembly (5).

**Disassembly**

1. Disassemble lead assembly (5) (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble lead assembly (5) (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect connector (2) to infrared power supply (4).
2. Connect connector (1) to driver's periscope (3) and install lead assembly (5).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

VENTILATOR BLOWER ASSEMBLY REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (3) (item 640, WP 0491 00)

Materials/Parts (cont.)

Nuts (3) (item 769, WP 0491 00)

Screws (3) (item 401, WP 0491 00)

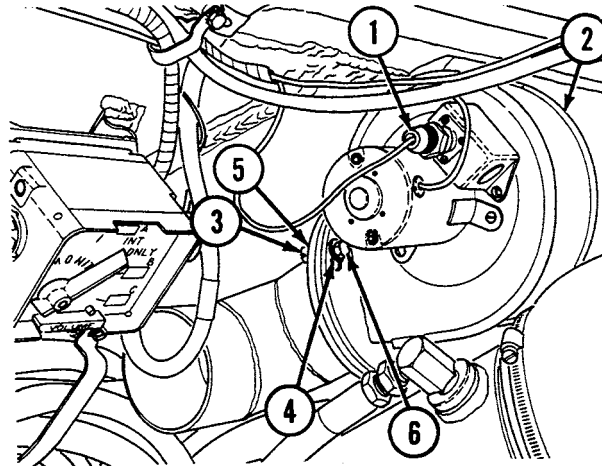
Washers, flat (3) (item 537, WP 0491 00)

WARNING

Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock or burns.

Removal

1. Disconnect connector (1).
2. Remove ventilator blower assembly (2) by removing three nuts (3), three flat washers (4), three lockwashers (5), and three screws (6).



Installation

1. Install ventilator blower assembly (2) using three nuts (3), three flat washers (4), three lockwashers (5), and three screws (6).
2. Connect connector (1).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**BILGE PUMP POWER LEAD RELAY, MOUNTING PLATE, AND CIRCUIT BREAKER REPLACEMENT
 REMOVAL, INSTALLATION**

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (2) (item 620, WP 0491 00)

Lockwashers (4) (item 621, WP 0491 00)

Lockwashers (2) (item 632, WP 0491 00)

Screws (4) (item 372, WP 0491 00)

Materials/Parts (cont.)

Screws (2) (item 593, WP 0491 00)

Screws (2) (item 599, WP 0491 00)

Equipment Condition

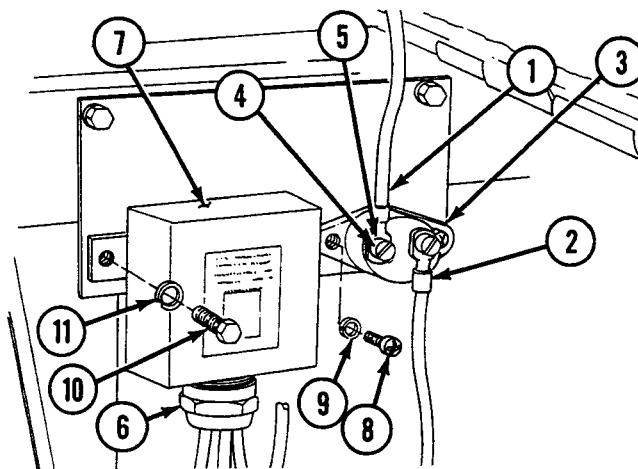
Stowage basket forward intermediate left floor plate opened (see WP 0306 00)

WARNING

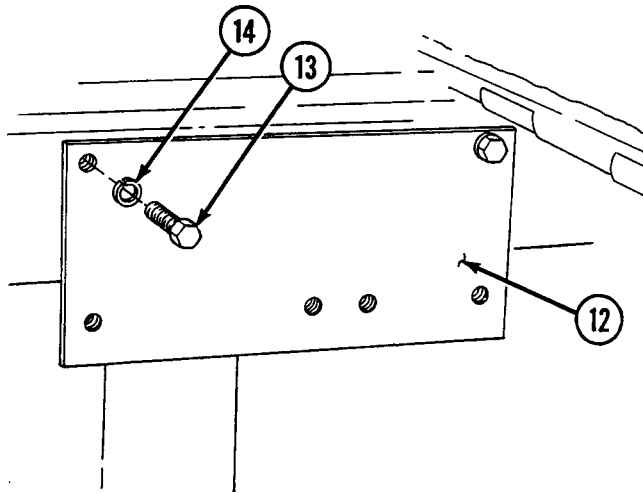
Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock or burns.

Removal

1. Disconnect two leads (1 and 2) from circuit breaker (3) by removing two screws (4) and two lockwashers (5).
2. Disconnect wiring harness (6) from relay (7).
3. Remove circuit breaker (3) by removing two screws (8) and two lockwashers (9).
4. Remove relay (7) by removing two screws (10) and two lockwashers (11).

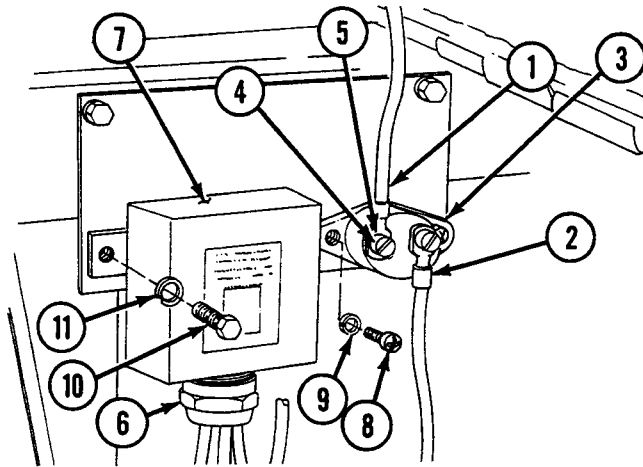


- Remove plate (12) by removing two screws (13) and two lockwashers (14).



Installation

- Install plate (12), using two lockwashers (14) and two screws (13).
- Install relay (7), using two lockwashers (11) and two screws (10).
- Install circuit breaker (3), using two lockwashers (9) and two screws (8).
- Connect wiring harness (6) to relay (7).
- Connect two leads (1 and 2) to circuit breaker (3) using two lockwashers (5) and two screws (4).



NOTE

Follow-on maintenance: Close stowage basket forward intermediate left floor plate (see WP 0306 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**FUEL INJECTION PUMP, FUEL SHUTOFF SOLENOID, LEAD, AND RELATED PARTS REPLACEMENT
REMOVAL, INSTALLATION**

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Clamps (3) (item 363, WP 0491 00)
Clamps (3) (item 510, WP 0491 00)
Lockwashers (4) (item 617, WP 0491 00)
Nuts (4) (item 657, WP 0491 00)

Materials/Parts (cont.)

Nuts, self-locking (3) (item 497, WP 0491 00)
Screws (4) (item 583, WP 0491 00)
Screws (3) (item 594, WP 0491 00)

Equipment Condition

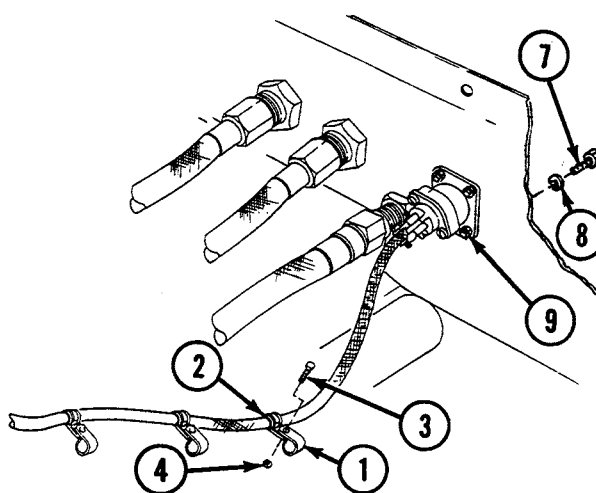
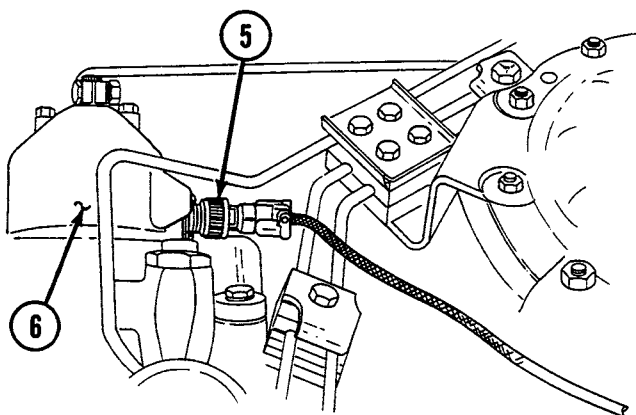
Engine cooling fan housings removed (see WP 0145 00)

WARNING

Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock or burns.

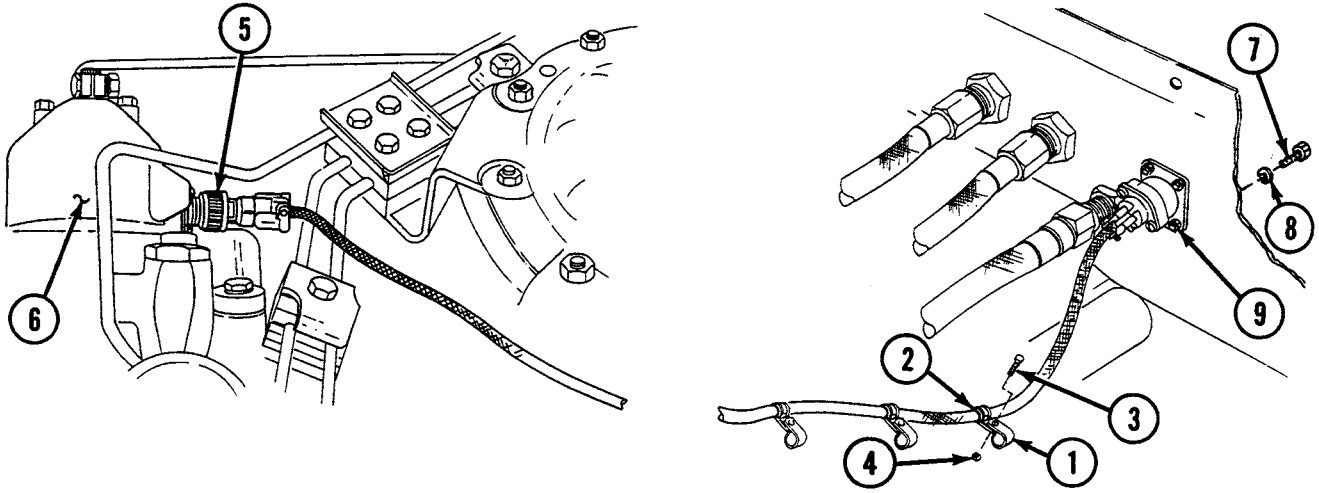
Removal

1. Disconnect six loop clamps (1 and 2) by removing three screws (3) and three self-locking nuts (4).
2. Remove three loop clamps (2).
3. Disconnect lead (5) from fuel injection pump (6).
4. Remove lead (5) by removing four screws (7), four lockwashers (8), and four nuts (9).



Installation

1. Install lead (5) using four screws (7), four lockwashers (8), and four nuts (9).
2. Connect lead (5) to fuel injection pump (6).
3. Install three loop clamps (2).
4. Connect six loop clamps (1 and 2) using three screws (3) and three self-locking nuts (4).

**NOTE**

Follow-on maintenance: Install engine cooling fan housings (see WP 0145 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**DUMMY CONNECTOR ASSEMBLY (INFRARED AND PASSIVE NIGHT VIEWER) REPLACEMENT
REMOVAL, INSTALLATION**

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

Infrared and passive night viewer connector disconnected
(see WP 0164 00)

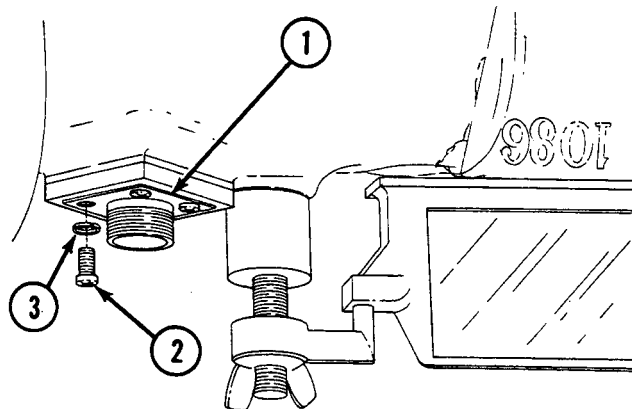
Materials/Parts

Lockwashers (4) (item 609, WP 0491 00)

Screws (4) (item 565, WP 0491 00)

Removal

1. Remove dummy connector (1) by removing four screws (2) and four lockwashers (3).

**Installation**

1. Install dummy connector (1) using four lockwashers (3) and four screws (2).

NOTE

Follow-on maintenance: Connect infrared and passive night viewer connector (see WP 0164 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**ELECTRICAL KIT FOR M239 SMOKE GRENADE LAUNCHER DISCHARGER FEED
 THROUGH CABLE ASSEMBLIES (11672298-1 AND 11672298-2) REPLACEMENT
 REMOVAL, INSTALLATION**

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)
 Soldering gun (item 56, WP 0490 00)

Materials/Parts

Screws (2) (item 147, WP 0491 00)

Equipment Condition

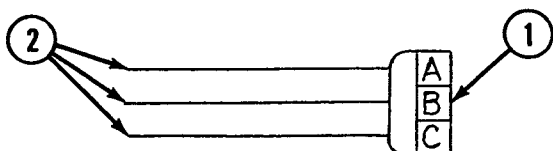
Discharger removed (see WP 0443 00)

WARNING

Be certain MASTER switch is OFF when working on electrical systems to avoid electrical shock or burns.

Connector No.	Electrical Lead To:
1	Smoke grenade launcher system wiring harness
2	Smoke grenade launcher tubes

Wire No.

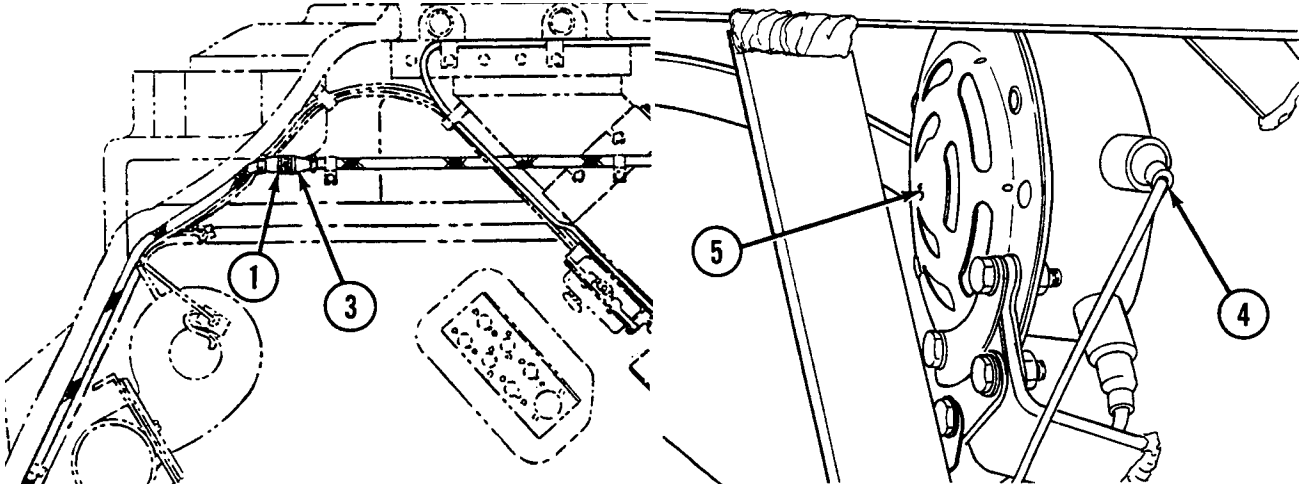


Removal

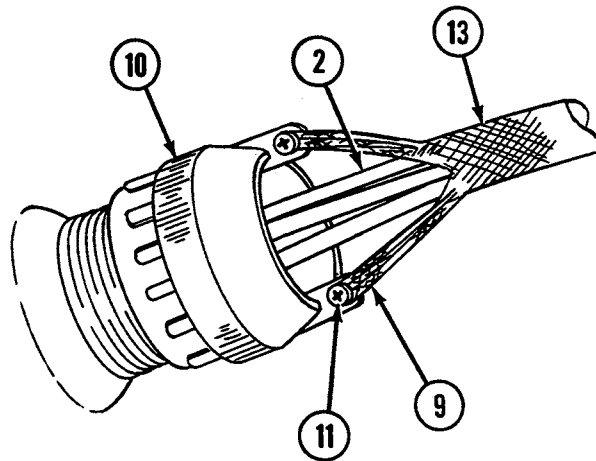
NOTE

Left and right side removed in same manner. Right side connector (4) will be removed from flasher light assembly. Left side shown.

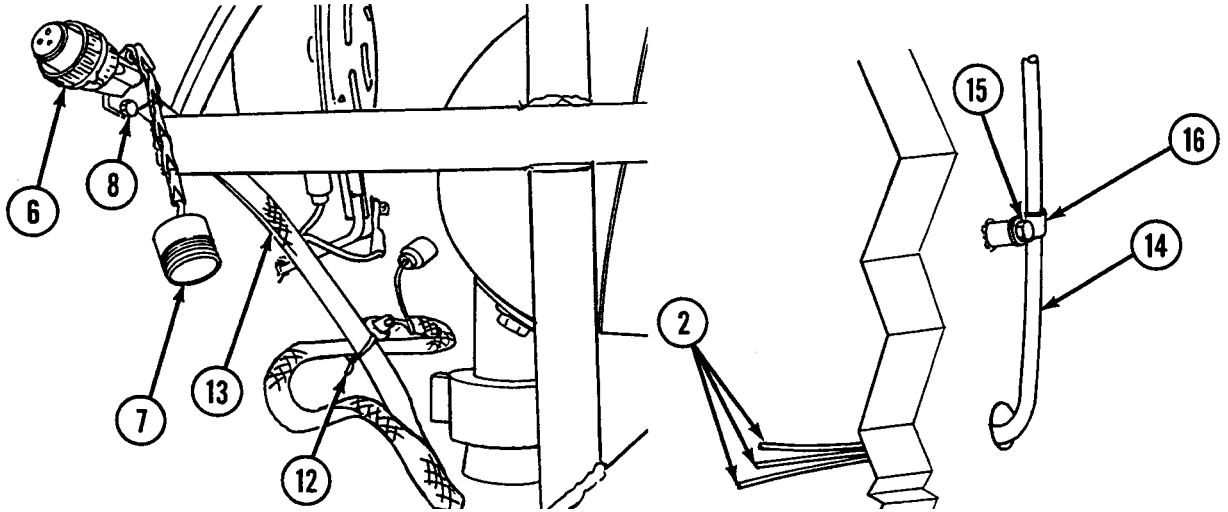
1. Disconnect connector (1) from smoke grenade launcher system wiring harness (3).
2. Disconnect connector (4) from horn assembly (5).



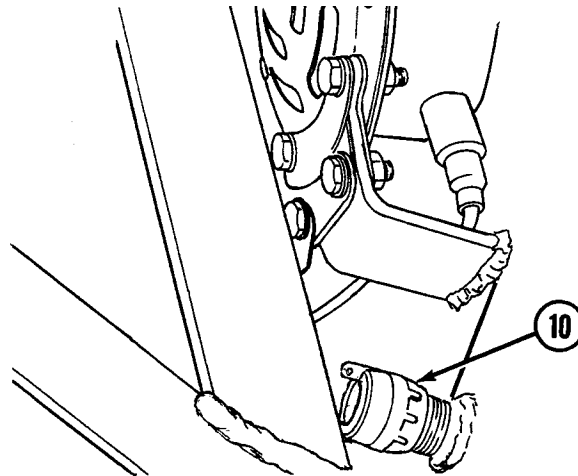
3. Remove terminal (6) and cover (7) from three leads (2) by removing two screws (8).



4. Separate cover (7) from terminal (6).
5. Disconnect two leads (9) from terminal (10) by removing two screws (11).
6. Remove strap (12) and wire braid (13) from three leads (2).
7. Remove cable assembly (14) from inside vehicle by removing screw (15), clamp (16) and pulling three leads (2) through hull.

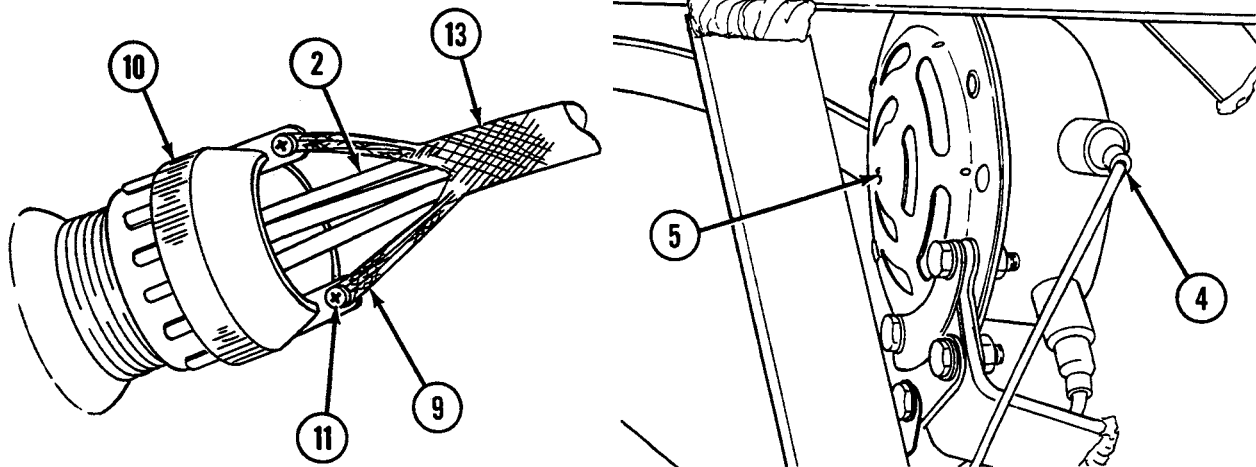


8. Unscrew terminal (10) and remove from hull.

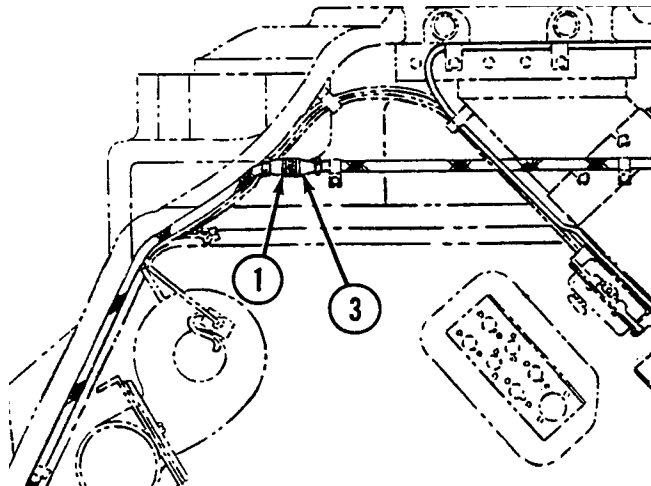


Installation

1. Install terminal (10) to hull.
2. Install cable assembly (14) to inside vehicle using clamp (16) and screw (15).
3. Pull three leads (2) through hull, install wire braid (13) and connect two leads (9) to terminal (10) using two screws (11). Install strap (12).
4. Install terminal (6) and cover (7) to three leads (2) using two screws (8).
5. Install cover (7) to terminal (6).
6. Connect connector (4) to horn assembly (5).



7. Connect connector (1) to smoke grenade launcher system wiring harness (3).



NOTE

Follow-on maintenance: Install discharger (see WP 0443 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
CABLE, WIRE, RECEPTACLE, AND PLUG IDENTIFIER REPAIR

INITIAL SETUP:

Tools and Special Tools

Tool kit, electrical (item 166, WP 0488 00)

WARNING

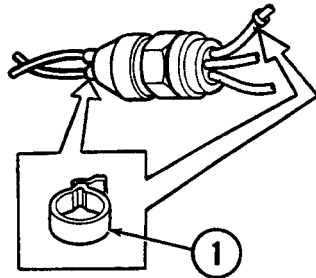
Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

NOTE

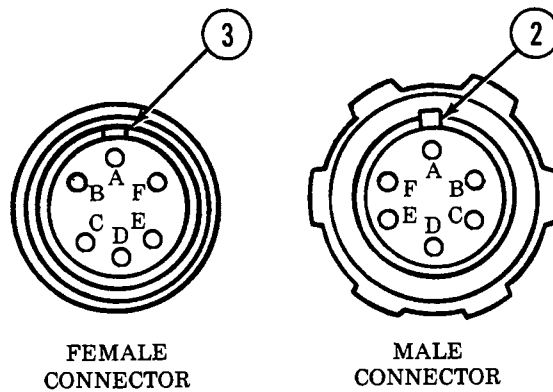
If cables or wires are replaced, remove tags from old wires and place them on new wires.

Repair or Replacement

1. Cable and wire identifiers (1) are aluminum tags attached to cables. The tags are embossed with cable identification numbers. The identification number is the same as shown on the systems wiring diagram.



2. All pins (male connectors) and sockets (female connectors) in receptacles and plugs are identified by an alphabetic code. Coded identification starts at the connector key (2) or groove (3).



3. Male connectors' identifying letters run clockwise.
4. Female connectors' identifying letters run counterclockwise.

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
TERMINAL-TYPE CABLE CONNECTOR REPAIR

INITIAL SETUP:**Tools and Special Tools**

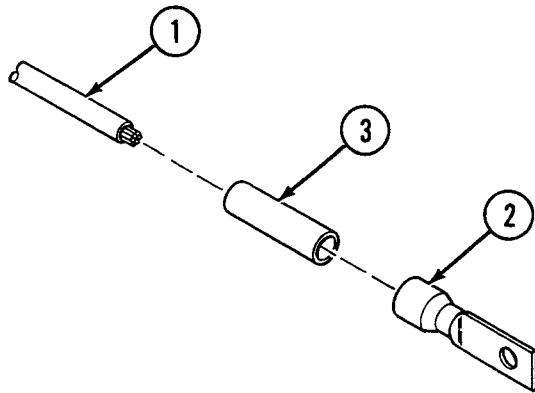
Tool kit, electrical (item 166, WP 0488 00)

WARNING

Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

Repair or Replacement

1. Strip cable (1) insulation equal to depth of terminal (2) well.
2. Slide insulator (3) over cable (1).
3. Insert cable into terminal (2) well and crimp.
4. Slide insulator (3) over crimped end of terminal (2).

**END OF WORK PACKAGE**

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
MALE CABLE CONNECTOR REPAIR

INITIAL SETUP:**Tools and Special Tools**

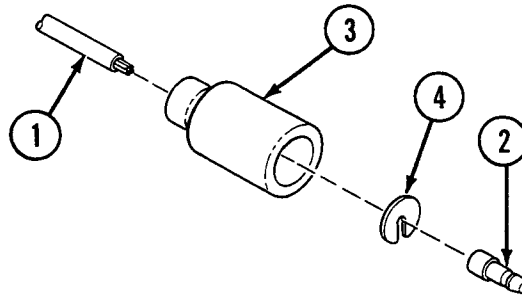
Tool kit, electrical (item 166, WP 0488 00)

WARNING

Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

Repair or Replacement

1. Strip cable (1) insulation equal to depth of terminal (2) well.
2. Slide shell (3) over cable (1).
3. Insert cable into terminal (2) well and crimp.
4. Place C-washer (4) over cable (1) at crimped junction and slide shell (3) over C-washer and terminal (2).

**END OF WORK PACKAGE**

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
FEMALE CABLE CONNECTOR (WITH SLEEVE) REPAIR

INITIAL SETUP:**Tools and Special Tools**

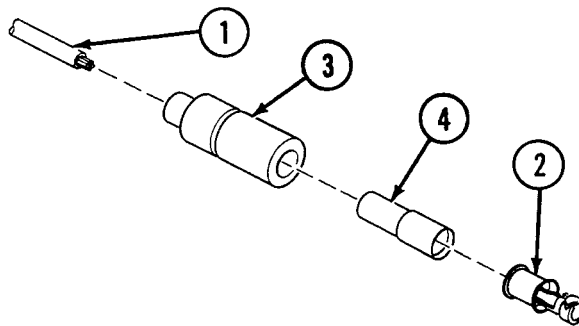
Tool kit, electrical (item 166, WP 0488 00)

WARNING

Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

Repair or Replacement

1. Strip cable (1) insulation equal to depth of terminal (2) well.
2. Slide shell (3) and sleeve (4) over cable (1).
3. Insert cable into terminal (2) well and crimp.
4. Slide shell (3) and sleeve (4) over terminal (2).



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
TYPICAL FEMALE-TYPE PANEL MOUNTING RECEPTACLE REPAIR
DISASSEMBLY, ASSEMBLY

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

References

TB SIG 222

Materials/Parts

Rod (item 28, WP 0489 00)

WARNING

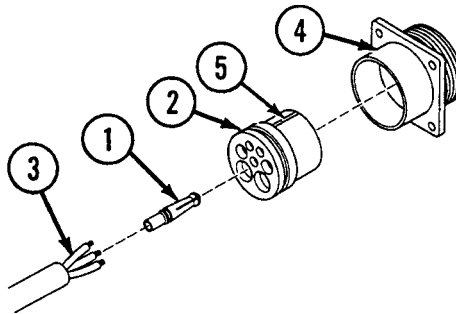
Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

NOTE

In plug and receptacle assemblies, plug all spare grommet holes with rod.

Disassembly

1. Drive socket contact (1) out through rear of insert (2) with pin extractor.
2. Unsolder cable leads (3) from solder wells on socket contacts (1).
3. Slide insert (2) out through rear of shell (4).

**Assembly**

1. Strip cable (3) insulation equal to depth of solder wells of socket contacts (1).
2. Insert cable leads (3) into solder wells of socket contacts (1) and solder (use resin core solder only) (refer to TB SIG 222).
3. Push insert (2) into shell (4) from rear until seated. Groove (5) in insert must be aligned with guide in shell (4) to ensure proper fit.
4. Push socket contacts (1) into insert (2) from rear until seated.

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
TYPICAL MALE-TYPE PANEL MOUNTING RECEPTACLE REPAIR
DISASSEMBLY, ASSEMBLY

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

References

TB SIG 222

Materials/Parts

Rod (item 28, WP 0489 00)

WARNING

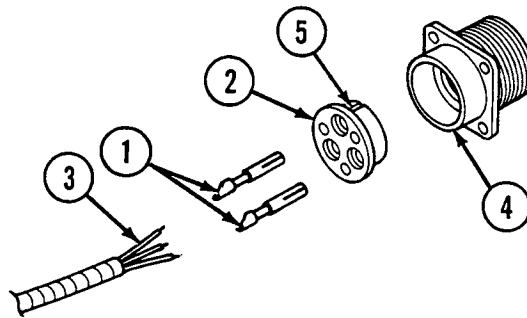
Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

NOTE

In plug and receptacle assemblies, plug all spare grommet holes with rod.

Disassembly

1. Drive pin contacts (1) out through rear of insert (2) with pin extractor.
2. Unsolder cable leads (3) from solder wells on pin contacts (1).
3. Slide insert (2) out through rear of shell (4).

**Assembly**

1. Strip cable (3) insulation equal to depth of solder wells of pin contacts (1).
2. Insert cable leads (3) into solder wells of pin contacts (1) and solder (use resin core solder only) (refer to TB SIG 222).
3. Push insert (2) into shell (4) from rear until seated. Groove (5) in insert must be aligned with guide in shell (4) to ensure proper fit.
4. Push pin contacts (1) into insert (2) from rear until seated.

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**TYPICAL FEMALE-TYPE PANEL MOUNTING RECEPTACLE (WITH RIDGED LOCKING NUT) REPAIR
DISASSEMBLY, ASSEMBLY**

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

References

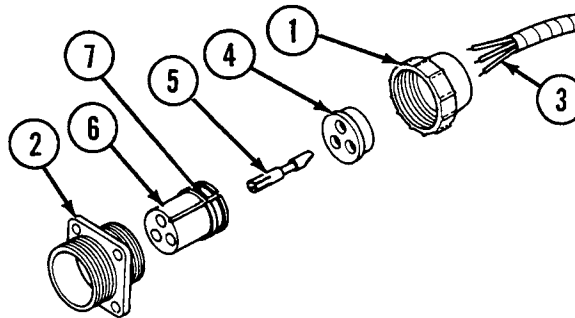
TB SIG 222

WARNING

Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

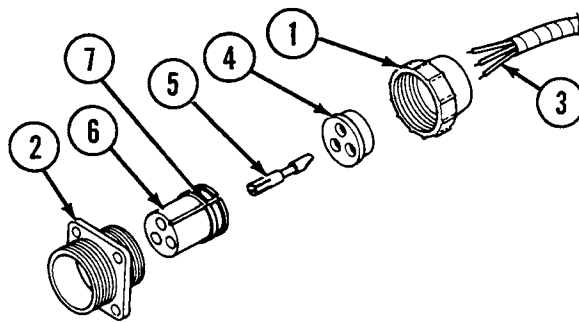
Disassembly

1. Unscrew nut (1) from shell assembly (2) and slide back on cable leads (3).
2. Slide grommet (4) back on cable leads (3).
3. Drive socket contacts (5) out through front of insert (6) with pin extractor.
4. Unsolder cable leads (3) from socket contacts (5). Push insert (6) out through rear of shell (2).



Assembly

1. Strip cable leads (3) insulation equal to depth of solder wells of socket contacts (1).
2. Slide nut (1) over cable leads (3).
3. Slide grommet (4) over cable leads (3).
4. Insert cable leads (3) into solder wells of socket contacts (5) and solder (use resin core solder only) (refer to TB SIG 222).
5. Push insert (6) into shell (2) from rear until seated. Groove (7) in insert must be aligned with guide in shell (4) to ensure proper fit.
6. Push socket contacts (5) into insert (6) from rear until seated.
7. Push grommet (4) down cable leads (3) and over solder wells of socket contacts (5).
8. Screw nut (1) onto shell assembly (2).

**END OF WORK PACKAGE**

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

TYPICAL MALE-TYPE PANEL MOUNTING RECEPTACLE (WITH RIDGED LOCKING NUT) REPAIR
DISASSEMBLY, ASSEMBLY

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

References

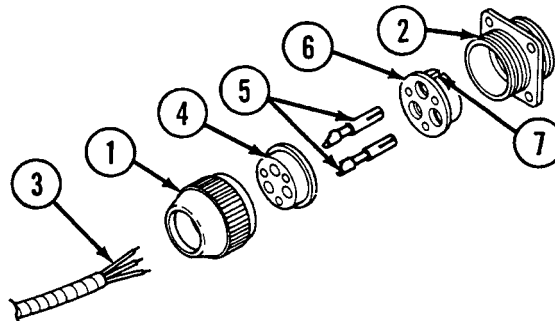
TB SIG 222

WARNING

Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

Disassembly

1. Unscrew nut (1) from shell assembly (2) and slide back on cable leads (3).
2. Push grommet (4) back on cable leads (3).
3. Drive pin contacts (5) out through rear of insert (6) with pin extractor.
4. Unsolder cable leads (3) from pin contacts (5).

**Assembly**

1. Strip cable leads (3) insulation equal to depth of solder wells of pin contacts (5).
2. Slide nut (1) over cable lead (3).
3. Slide grommet (4) over cable leads (3).
4. Insert cable leads (3) into solder wells of pin contacts (5) and solder (use resin core solder only) (refer to TB SIG 222).
5. Push insert (6) into shell (2) from rear until seated. Groove (7) in insert must be aligned with guide in shell (2) to ensure proper fit.
6. Push pin contacts (5) into insert (6) from rear until seated.
7. Push grommet (4) down cable leads (3) and over solder wells of pin contacts (5).
8. Screw nut (1) onto shell assembly (2).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

TYPICAL FEMALE-TYPE PLUG REPAIR
DISASSEMBLY, ASSEMBLY

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

References

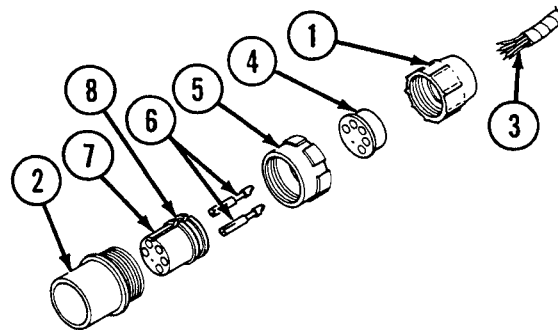
TB SIG 222

WARNING

Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

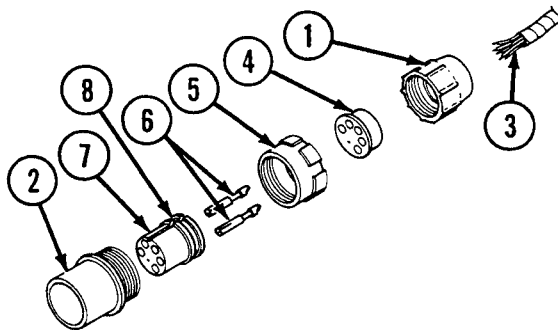
Disassembly

1. Unscrew nut (1) from shell assembly (2) and slide back on cable leads (3).
2. Slide grommet (4) back on cable leads (3).
3. Slide coupling nut (5) off shell (2).
4. Drive socket contacts (6) out through rear of insert (7) with pin extractor.
5. Push insert (7) out through rear of shell (2).
6. Unsolder cable leads (3) from socket contacts (5).



Assembly

1. Strip cable leads (3) insulation equal to depth of solder wells of socket contacts (6).
2. Slide nut (1) over cable leads (3).
3. Slide grommet (4) over cable leads (3).
4. Insert cable leads (3) into solder wells of socket contacts (6) and solder (use resin core solder only) (refer to TB SIG 222).
5. Push insert (7) into shell (2) from rear until seated. Groove (8) in insert must be aligned with guide in shell (2) to ensure proper fit.
6. Push socket contacts (6) into insert (7) from rear until seated.
7. Slide coupling nut (5) onto shell assembly (2).
8. Push grommet (4) down cable leads (3) and over solder wells of socket contacts (6).
9. Screw nut (1) onto shell assembly (2).

**END OF WORK PACKAGE**

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

TYPICAL MALE-TYPE PLUG REPAIR
DISASSEMBLY, ASSEMBLY

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

References

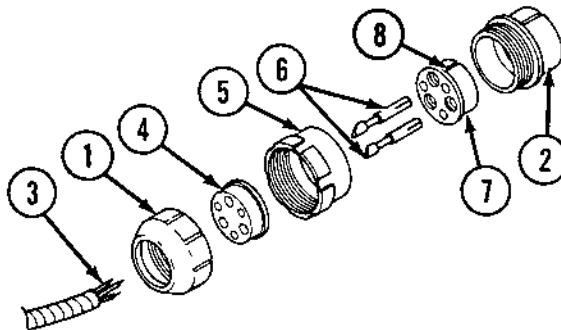
TB SIG 222

WARNING

Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

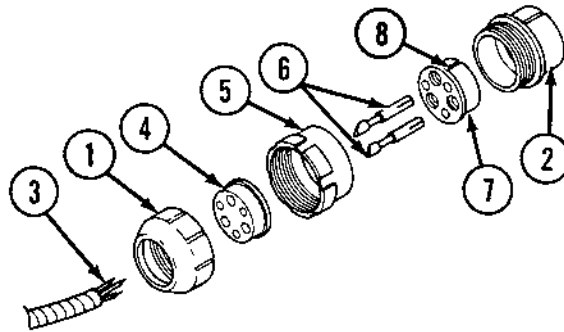
Disassembly

1. Unscrew nut (1) from shell assembly (2) and slide back on cable leads (3).
2. Slide grommet (4) back on cable leads (3).
3. Slide coupling nut (5) off shell assembly (2).
4. Drive pin contacts (6) out through rear of insert (7) with pin extractor.
5. Push insert (7) out through rear of shell assembly (2).
6. Unsolder cable leads (3) from pin contacts (6).



Assembly

1. Strip cable leads (3) insulation equal to depth of solder wells of pin contacts (6).
2. Slide nut (1) over cable lead (3).
3. Slide grommet (4) over cable leads (3).
4. Insert cable leads (3) into solder wells of pin contacts (6) and solder (use resin core solder only) (refer to TB SIG 222).
5. Push insert (7) into shell (2) from rear until seated. Groove (8) in insert must be aligned with guide in shell assembly (2) to ensure proper fit.
6. Push pin contacts (6) into insert (7) from rear until seated.
7. Slide coupling nut (5) onto shell assembly (2).
8. Push grommet (4) down cable leads (3) and over solder wells of pin contacts (5).
9. Screw nut (1) onto shell assembly (2).

**END OF WORK PACKAGE**

CHAPTER 8
UNIT MAINTENANCE
MAINTENANCE INSTRUCTIONS
FOR
TRANSMISSION AND OUTPUT REDUCTION DRIVES
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
(NSN: 2350-00-122-6826)

CHAPTER 8
UNIT MAINTENANCE
MAINTENANCE INSTRUCTIONS

WORK PACKAGE INDEX

<u>Title</u>	<u>WP Sequence No.</u>
Transmission Actuating Brake Air Valve Linkage Maintenance Removal, Installation, Adjustment.....	0265 00
Transmission Oil Filter Maintenance Removal, Service, Installation.....	0266 00
Transmission Roller Bracket Assembly Replacement Removal, Installation.....	0267 00
Transmission Torque Converter Drain Plugs Replacement Removal, Installation	0268 00
Transmission Gage Rod Replacement Removal, Installation.....	0269 00
Transmission Breather Assembly and Line Replacement Removal, Installation.....	0270 00
Transmission Oil Cooler Lines and Sampling Valve Replacement Removal, Installation.....	0271 00
Transmission Saddle Seals Replacement Removal, Installation.....	0272 00
Transmission Output Reduction Drives and Drive Couplings Replacement Removal, Installation.....	0273 00

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
TRANSMISSION ACTUATING BRAKE AIR VALVE LINKAGE MAINTENANCE
REMOVAL, INSTALLATION, ADJUSTMENT

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

Engine transmission access doors opened (see WP 0340 00)

Materials/Parts

Pins, cotter (2) (item 520, WP 0491 00)

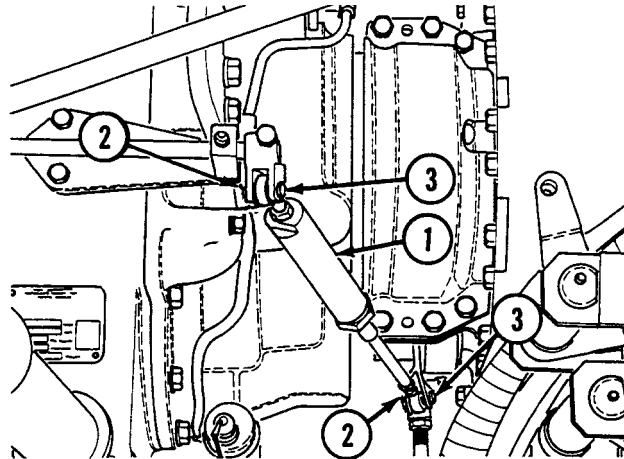
Pins, straight (2) (item 68, WP 0491 00)

Removal

WARNING

Ensure suitable blocking is in place prior to releasing brakes.

1. Release brakes.
2. Remove actuating brake air valve linkage (1) by removing two cotter pins (2) and two clevis pins (3).

**Installation**

1. Install actuating brake air valve linkage (1) with two clevis pins (3) and two cotter pins (2).
2. Adjust actuating brake air valve linkage (1).

Adjustment

WARNING

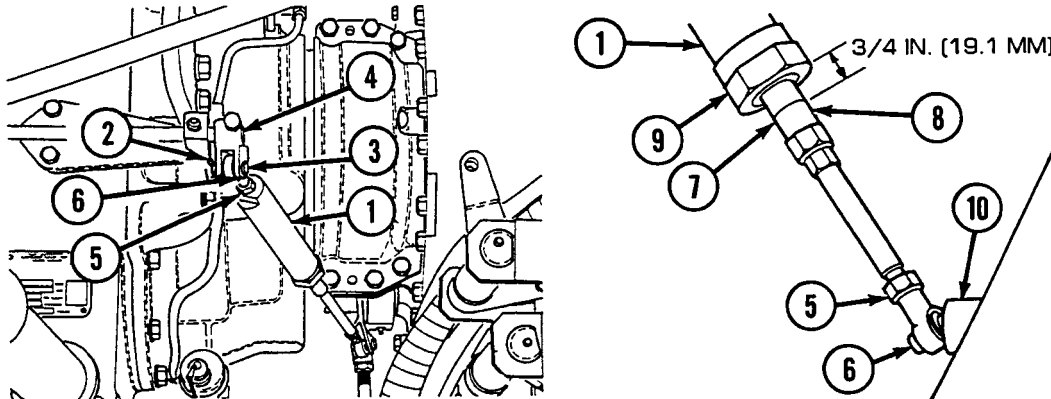
Ensure suitable blocking is in place prior to releasing brakes.

1. Release brakes.
2. Remove cotter pin (2) and clevis pin (3) and disconnect actuating brake air valve linkage (1) from actuating brake air valve linkage lever (4) on transmission.
3. Loosen two rod end locknuts (5) on actuating brake air valve linkage (1) and turn linkage rod ends (6) to adjust free length of actuating brake air valve linkage until clevis pin (3) can be inserted freely through linkage rod end and actuating brake air valve linkage lever (4), with brake air valve linkage lever in released (down) position. Tighten two rod end locknuts. Attach actuating brake air valve linkage to actuating brake air valve linkage lever with cotter pin (2) and clevis pin.

NOTE

Mark (7) appears on linkage rod plunger (8) 3/4 inch (in.) (19.1 millimeters [mm]) from edge of linkage rod plunger stop (9).

4. Apply brakes and check position of mark (7). Mark must align with edge of linkage rod plunger stop (9).
5. Loosen rod end locknut (5) at lower end of actuating brake air valve linkage (1) near output reduction drive (10), and adjust linkage rod end (6) as required. Tighten rod end locknut.



NOTE

Follow-on maintenance: Close engine transmission access doors (see WP 0340 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

TRANSMISSION OIL FILTER MAINTENANCE
REMOVAL, SERVICE, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)
 Wrench, torque (item 67, WP 0490 00)

Materials/Parts (cont.)

Lockwashers (24) (item 640, WP 0491 00)
 Screws (24) (item 390, WP 0491 00)

Materials/Parts

Filter elements (4) (item 129, WP 0491 00)
 Gaskets (2) (item 2, WP 0491 00)

Equipment Condition

Engine transmission access doors opened (see WP 0340 00)

NOTE

Removal and installation procedures are the same for both left- and right-side oil filter heads.

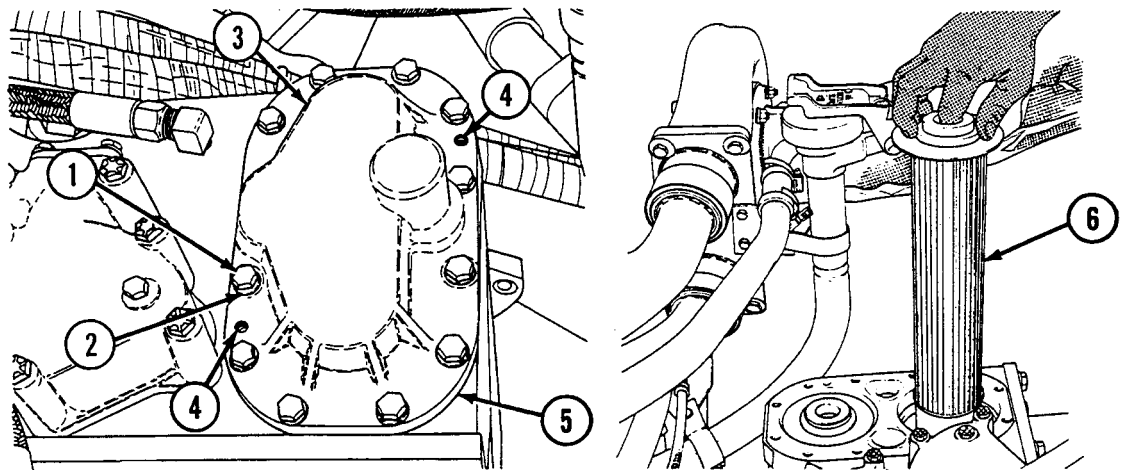
Removal

1. Remove 12 screws (1) and 12 lockwashers (2).

CAUTION

Prying oil filter head off with screwdriver or other object could cause damage to mating surfaces.

2. Use two screws (1) as jackscrews to remove oil filter head (3). Screw two screws into threaded holes (4) and raise oil filter head.
3. Remove and discard gasket (5).
4. Remove and discard two oil filter cartridge assemblies (6).

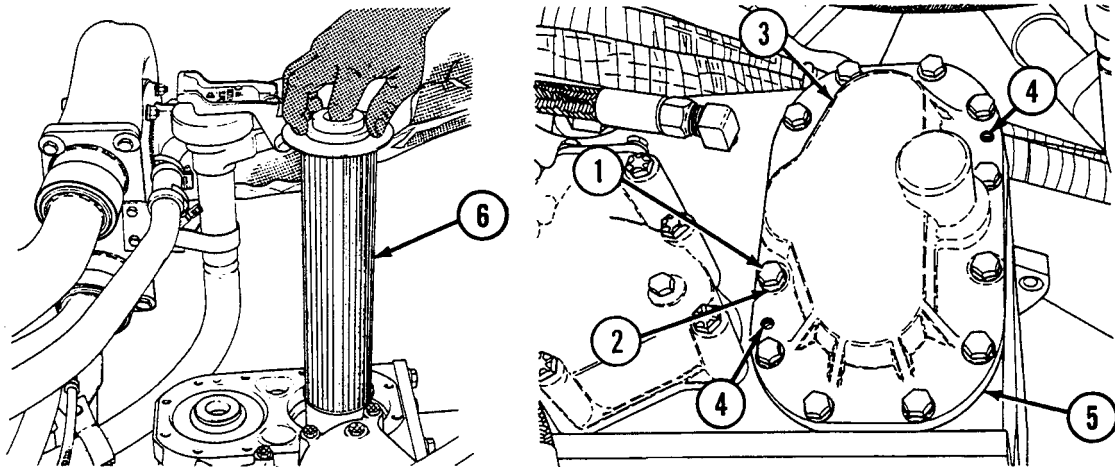


Servicing

1. Clean all surfaces to remove old gasket materials.
2. Clean filter cavity in transmission and 12 boltholes in oil filter head (3) of oil or other contaminants.
3. Clean and dry all parts and inspect for serviceability. Replace all defective or broken parts.

Installation

1. Install two oil filter cartridge assemblies (6).
2. Install gasket (5) and oil filter head (3) using 12 screws (1) and 12 lockwashers (2). Torque screws to 26–32 pound-feet (lb-ft) (35-43 newton-meters [N•m]).



WARNING

Oil sprayed from an improperly installed oil filter head assembly can cause fire in the engine compartment.

NOTE

After torquing screws (1), go back and recheck torque. If any screws move during recheck, repeat torquing process again after a short wait.

3. Operate engine and thoroughly check transmission (and engine) to make certain that no oil leaks are evident before placing vehicle back into service.

NOTE

Follow-on maintenance: Close engine transmission access doors (see WP 0340 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
TRANSMISSION ROLLER BRACKET ASSEMBLY REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

Powerplant removed (see WP 0098 00)

Materials/Parts

Lockwashers (10) (item 642, WP 0491 00)

Screws (4) (item 411, WP 0491 00)

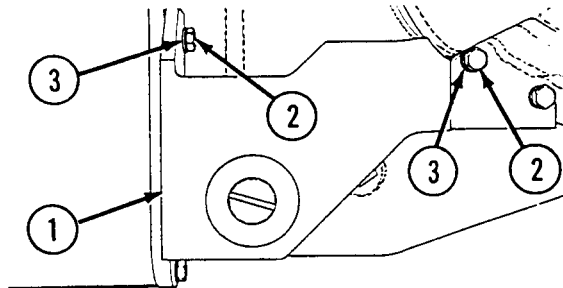
Screws (6) (item 412, WP 0491 00)

NOTE

Removal and installation procedures are the same for both left- and right-side transmission roller bracket assemblies.

Removal

1. Remove transmission roller bracket assembly (1) from transmission by removing five screws (2) and five lockwashers (3).

**Installation**

1. Install transmission roller bracket assembly (1) on transmission with five screws (2) and five lockwashers (3).

NOTE

Follow-on maintenance: Install powerplant (see WP 0098 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**TRANSMISSION TORQUE CONVERTER DRAIN PLUGS REPLACEMENT
REMOVAL, INSTALLATION**

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)
Key, socket head screw (item 30, WP 0490 00)

Materials/Parts (cont.)

Lockwashers (18) (item 646, WP 0491 00)

Materials/Parts

Bolts (18) (item 393, WP 0491 00)
Gasket (item 21, WP 0491 00)
Gasket (item 42, WP 0491 00)
Gasket (item 319, WP 0491 00)

References

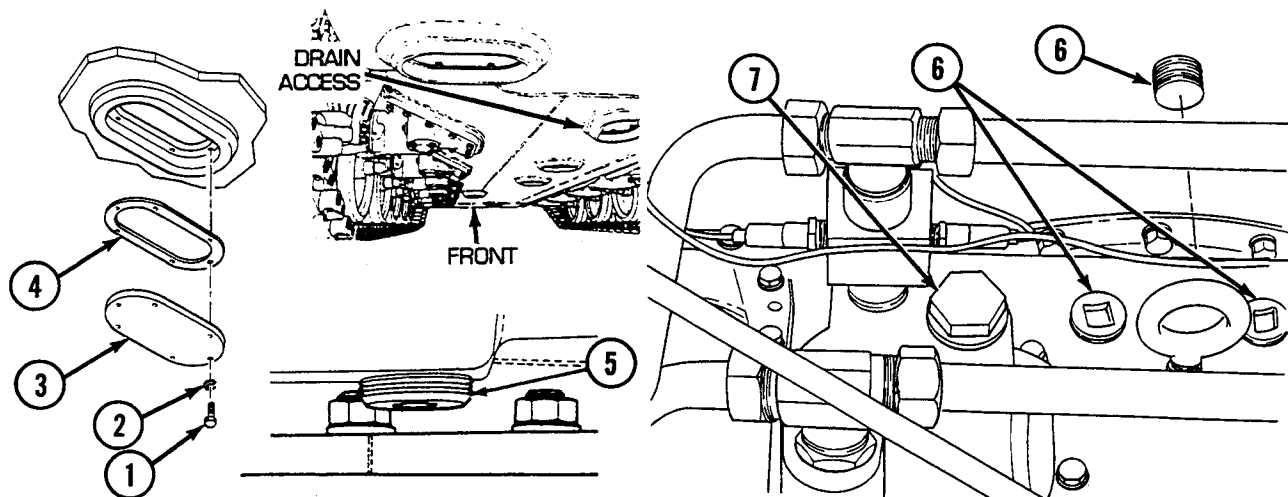
TM 9-2350-256-10

Equipment Condition

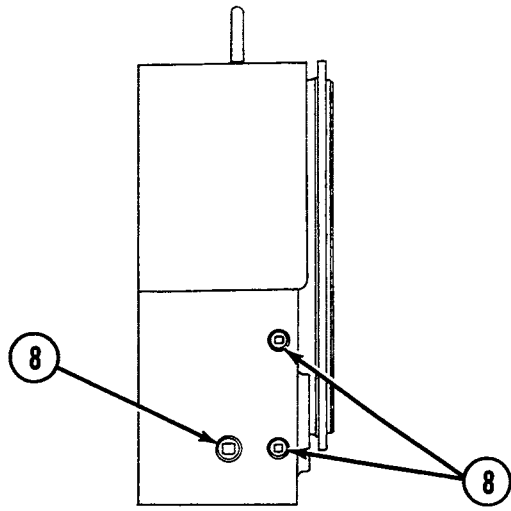
Engine deck removed (see WP 0336 00)

Removal

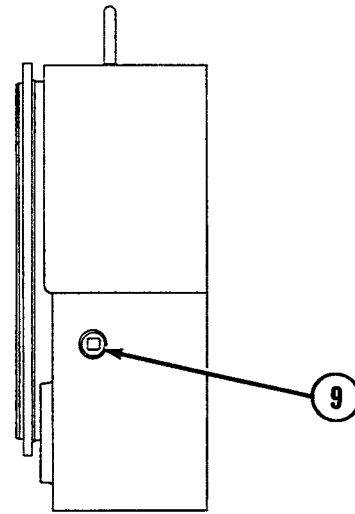
1. Remove six bolts (1), six lockwashers (2), drain cover (3), and gasket (4) from drain access.
2. Place suitable container under torque converter.
3. Remove four drain plugs (5).
4. Remove five plugs (6 and 7), if necessary.



5. Remove three plugs (8) from lower right side.
6. Remove plug (9) from lower left side.



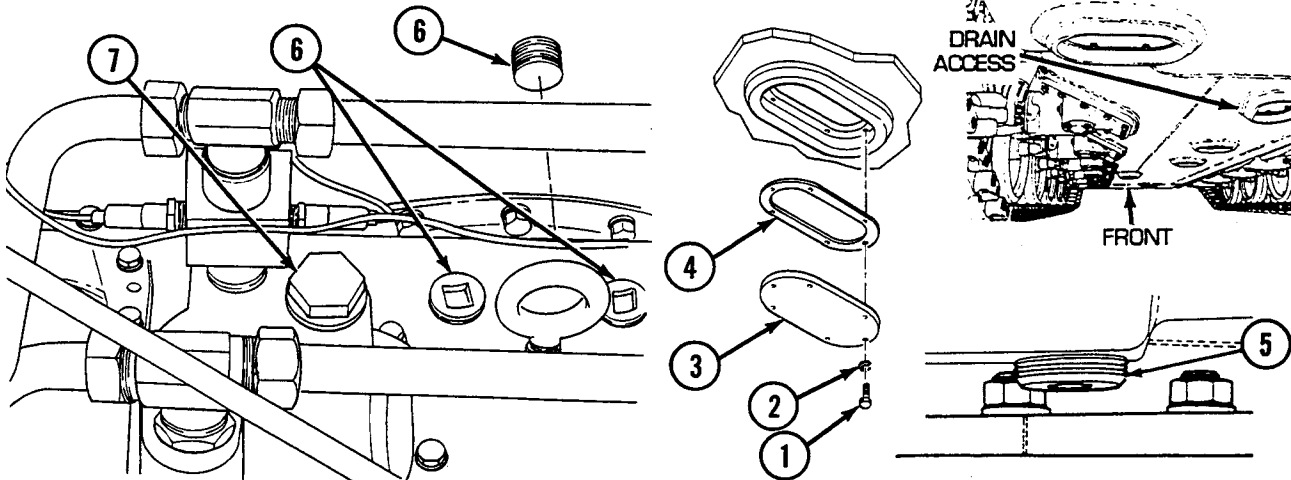
RIGHT SIDE



LEFT SIDE

Installation

1. Install five plugs (6 and 7), if necessary.
2. Install four drain plugs (5).
3. Install gasket (4), drain cover (3), six lockwashers (2), and six bolts (1) to drain access.



4. Install three plugs (8) to lower right side.
5. Install plug (9) to lower left side.
6. Fill torque converter (refer to TM 9-2350-256-10).

NOTE

Follow-on maintenance: Install engine deck (see WP 0336 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

TRANSMISSION GAGE ROD REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

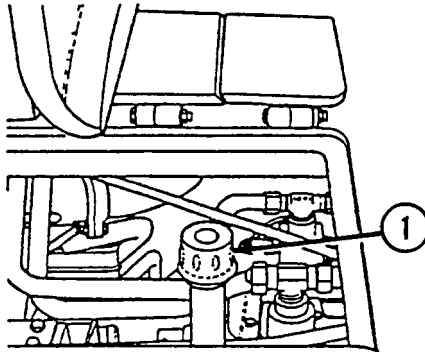
Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

Engine transmission access doors opened (see WP 0340 00)

Removal

1. Remove gage rod (1).



Installation

1. Install gage rod (1).

NOTE

Follow-on maintenance: Close engine transmission access doors (see WP 0340 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
TRANSMISSION BREATHER ASSEMBLY AND LINE REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Bolt (item 130, WP 0491 00)
 Bolts (2) (item 365, WP 0491 00)
 Bolt (item 704, WP 0491 00)

Materials/Parts (cont.)

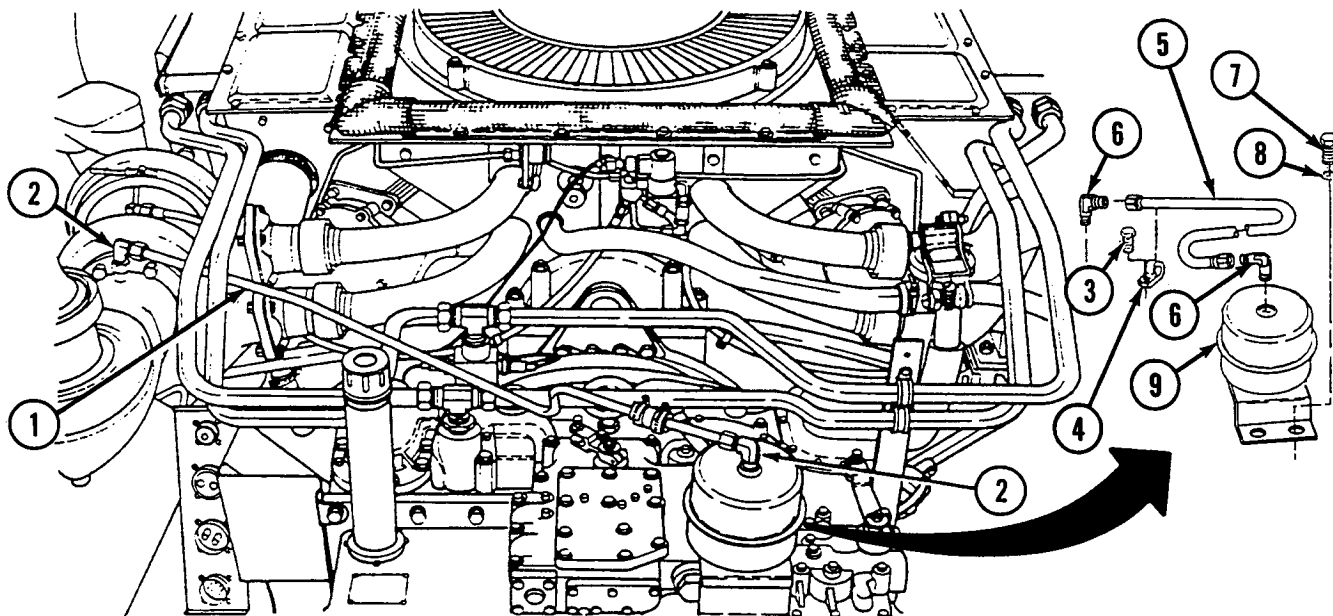
Clamps (2) (item 508, WP 0491 00)
 Washers, flat (2) (item 1, WP 0491 00)

Equipment Condition

Engine transmission access doors opened (see WP 0340 00)

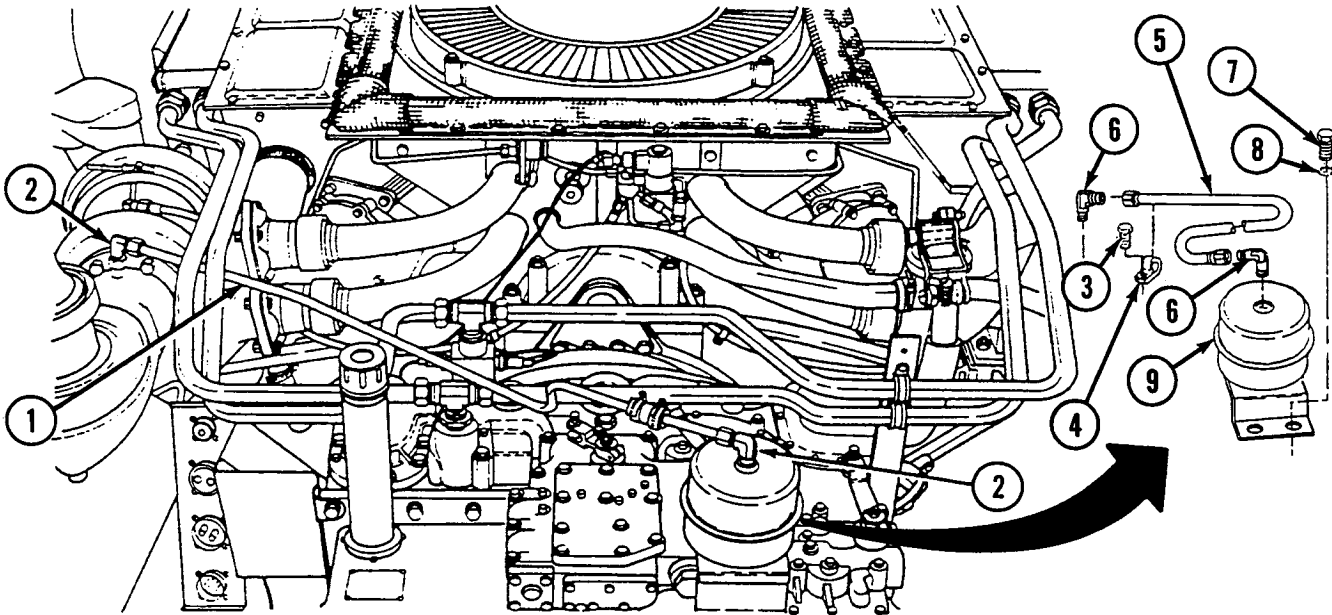
Removal

1. Disconnect breather line (1) from two elbows (2).
2. Remove two elbows (2).
3. Remove two bolts (3) and two clamps (4).
4. Disconnect hose assembly (5) from two elbows (6).
5. Remove two bolts (7), two flat washers (8), and breather assembly (9).
6. Remove two elbows (6).



Installation

1. Install two elbows (6).
2. Install breather assembly (9), two flat washers (8), and two bolts (7).
3. Install hose assembly (5) to two elbows (6).
4. Install two clamps (4) and two bolts (3).
5. Install two elbows (2).
6. Install breather line (1) to two elbows (2).

**NOTE**

Follow-on maintenance: Close engine transmission access doors (see WP 0340 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
TRANSMISSION OIL COOLER LINES AND SAMPLING VALVE REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Clamps (2) (item 509, WP 0491 00)

Gaskets (4) (item 706, WP 0491 00)

Nuts, self-locking (2) (item 495, WP 0491 00)

Materials/Parts (cont.)

Screws (2) (item 816, WP 0491 00)

Washers, flat (2) (item 539, WP 0491 00)

Washers, flat (2) (item 836, WP 0491 00)

Equipment Condition

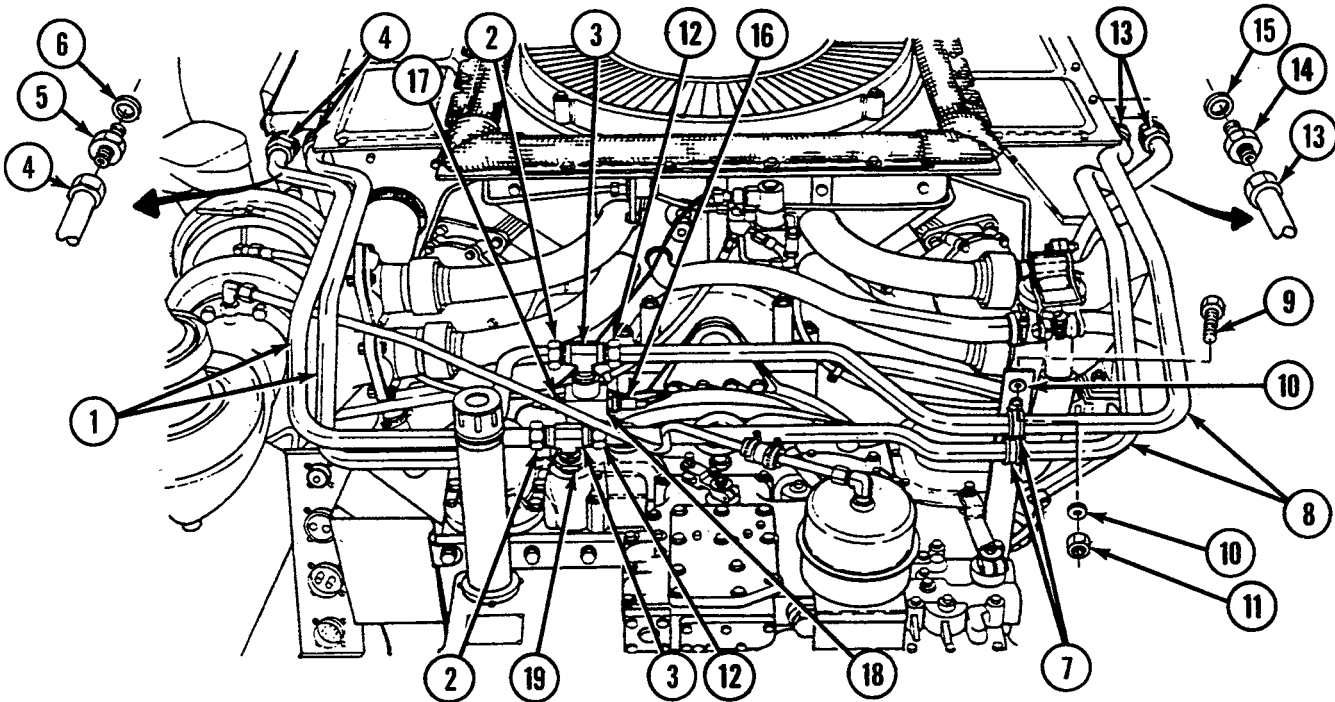
Engine deck removed (see WP 0336 00)

Removal

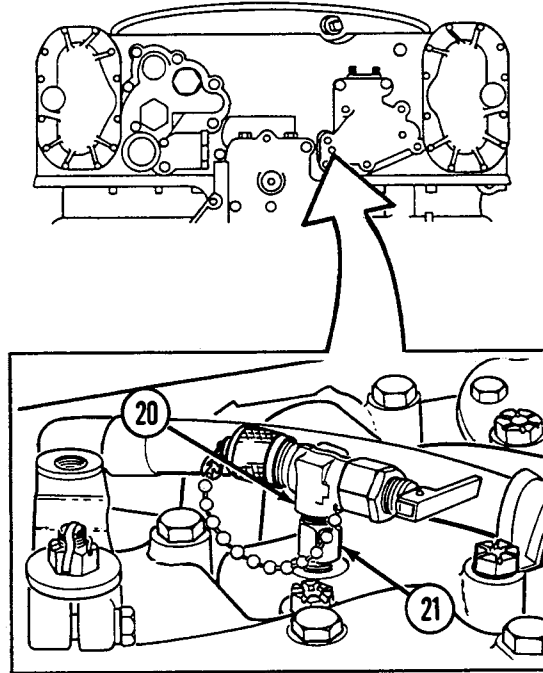
NOTE

Engine exhaust pipes removed for clarity.

1. Remove two left-side oil cooler lines (1) from transmission by disconnecting two coupling nuts (2) at two tees (3), and two coupling nuts (4) and two reducers (5) on opposite ends of two oil cooler lines. Remove and discard two gaskets (6) from transmission oil cooler.
2. Remove two clamps (7) from around two right-side oil cooler lines (8) by removing screw (9), two flat washers (10), and nut (11) from each.
3. Remove two right-side oil cooler lines (8) by disconnecting two coupling nuts (12) at two tees (3), and two coupling nuts (13) and two reducers (14) on opposite ends of two oil cooler lines. Remove and discard two gaskets (15) from transmission oil cooler.
4. Disconnect temperature transmitter (16) and pressure transmitter (17) from crosspipe (18).
5. Remove two tees (3), crosspipe (18), and bushing (19).



6. Remove sampling valve (20) and coupling (21).



Installation

1. Install coupling (21) and sampling valve (20).
2. Install bushing (19), crosspipe (18), and two tees (3).
3. Connect temperature transmitter (16) and pressure transmitter (17) to crosspipe (18).
4. Install two right-side oil cooler lines (8) by connecting two coupling nuts (12) to two tees (3). Install two gaskets (15) on transmission oil cooler; connect two reducers (14) and two coupling nuts (13) on opposite ends of two oil cooler lines.
5. Secure two right-side oil cooler lines (8) each with clamp (7), screw (9), two washers (10), and nut (11).
6. Install two left-side oil cooler lines (1) to transmission by connecting two coupling nuts (2) to two tees (3). Install two gaskets (6) on transmission oil cooler; connect two reducers (5) and two coupling nuts (4) on opposite ends of two oil cooler lines.

NOTE

Follow-on maintenance: Install engine deck (see WP 0336 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

TRANSMISSION SADDLE SEALS REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

Powerplant removed (see WP 0098 00)

Materials/Parts

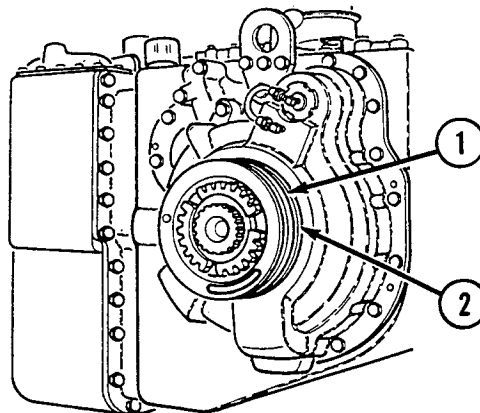
Packings, preformed (4) (item 265, WP 0491 00)

NOTE

Removal and installation procedures are the same for both left- and right-side transmission saddle seals.

Removal

1. Pry out and remove two preformed packings (1) from each side of transmission saddle (2).

**Installation**

1. Install two preformed packings (1) on each side of transmission saddle (2).

NOTE

Follow-on maintenance: Install powerplant (see WP 0098 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**TRANSMISSION OUTPUT REDUCTION DRIVES AND DRIVE COUPLINGS REPLACEMENT
REMOVAL, INSTALLATION**

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)
Bolts, machine (jackscrews) (2) (item 2, WP 0490 00)
Multiplier, torque (item 33, WP 0490 00)
Sling assembly, lifting (item 52, WP 0490 00)
Socket set (item 54, WP 0490 00)
Wrench, torque, 0–600 pound-feet (lb-ft) (0–813
newton-meters [N•m]) (item 69, WP 0490 00)

Materials/Parts

Bolts, self-locking (38) (item 703, WP 0491 00)
Pins, cotter (2) (item 525, WP 0491 00)
Pins, straight (2) (item 95, WP 0491 00)

Equipment Condition

Powerplant removed (see WP 0098 00)
Final drive hub and sprockets removed (see WP 0283 00)

NOTE

Removal procedure is the same for both left- and right-side output reduction drives.

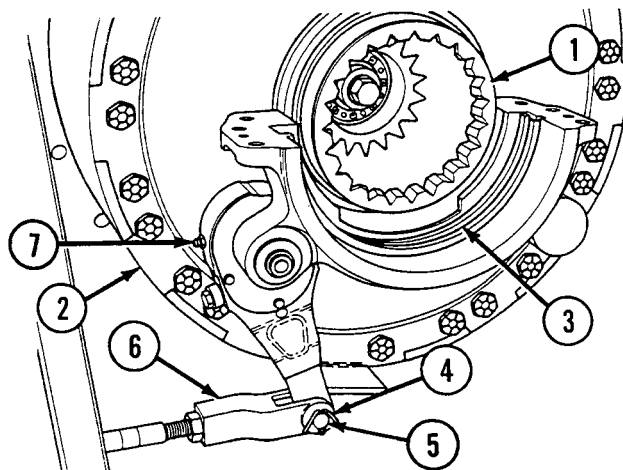
Removal

1. Remove drive coupling (1) from output reduction drive (2).

NOTE

Output reduction drive alignment ring (3) is removed from right-side output reduction drive (2) only.

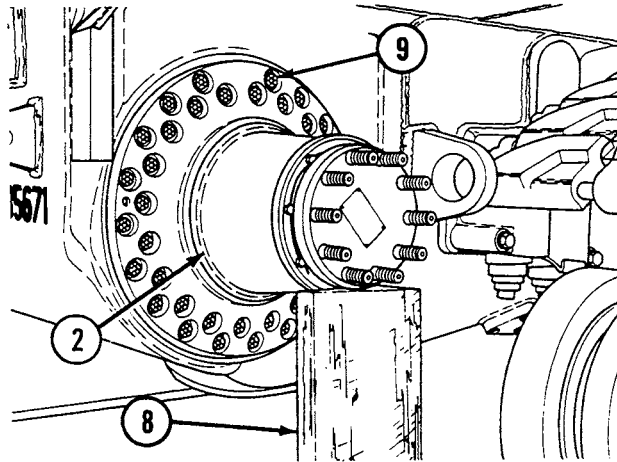
2. Remove output reduction drive alignment ring (3) from output reduction drive (2).
3. Remove cotter pin (4) and straight pin (5). Disconnect brake rod (6).
4. Remove lubrication fitting (7), if necessary.



WARNING

Be sure to place wooden block (8) under output reduction drive (2) before removing.

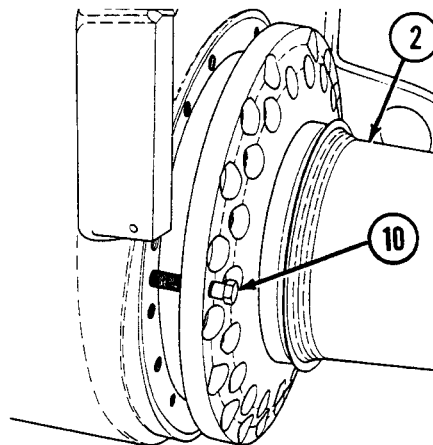
5. Place wooden block (8) under output reduction drive (2).
6. Remove 19 self-locking bolts (9) holding output reduction drive (2) to vehicle hull.



CAUTION

Jackscrews (10) must make output reduction drive (2) clear hull to ensure proper lifting sling operation.

7. Install two jackscrews (10) into two threaded holes in output reduction drive (2). Tighten jackscrews alternately and move output reduction drive out approximately 2 in. (51 mm).



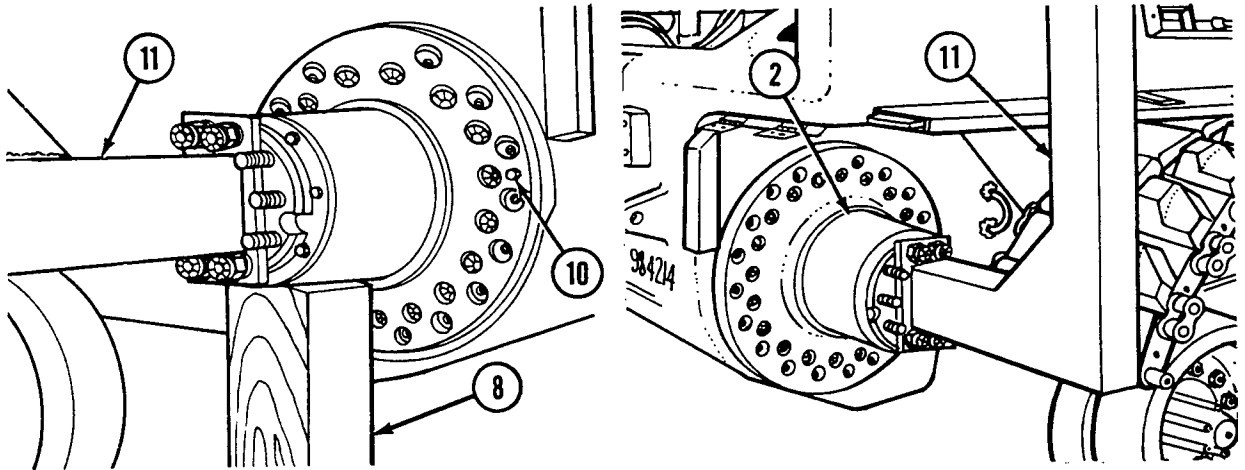
8. Install lifting sling (11).
9. Remove two jackscrews (10).

10. Remove wooden block (8).

WARNING

Output reduction drive (2) must clear hull when assembly is lifted by lifting sling (11). If assembly does not clear hull during lift, weight of vehicle will be transferred to lifting sling causing lifting sling failure. All personnel are to stand clear of vehicle hull when lifting operation starts.

11. Remove output reduction drive (2) using lifting sling (11).



Installation

1. Install lifting sling (11) on output reduction drive (2).

NOTE

Do not thread jackscrews (10) all the way through output reduction drive (2) at this time.

2. Install two jackscrews (10).

WARNING

Output reduction drive (2) must clear hull when assembly is lifted by lifting sling (11). If assembly does not clear hull during lift, weight of vehicle will be transferred to lifting sling causing lifting sling failure. All personnel are to stand clear of vehicle hull when lifting operation starts.

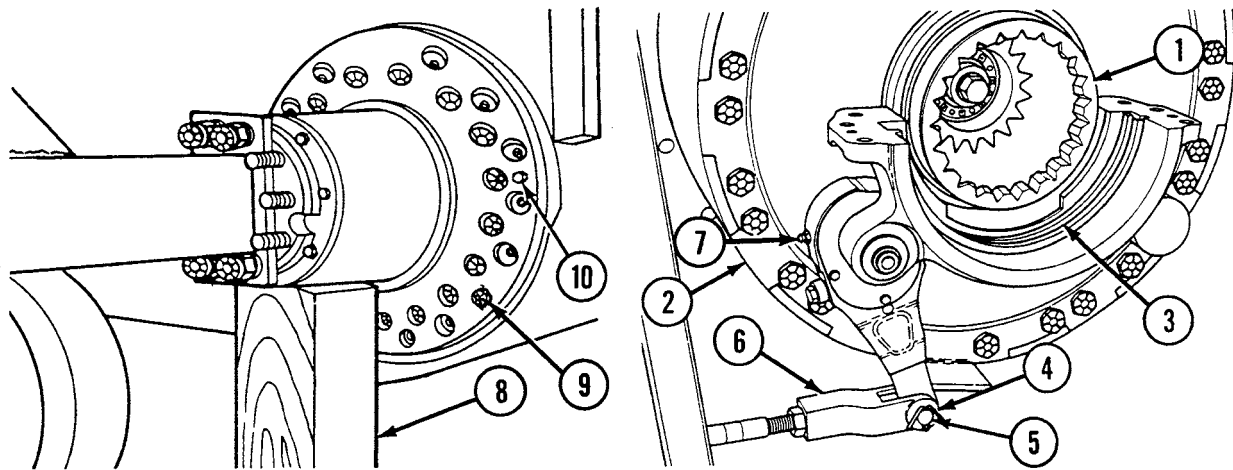
3. Install output reduction drive (2) using lifting sling (11).
4. Place wooden block (8) under output reduction drive (2).
5. Thread two jackscrews (10) into hull and remove lifting sling (11).
6. Tighten two jackscrews (10) alternately to draw output reduction drive (2) against mating surface.

7. Install 19 self-locking bolts (9). Torque self-locking bolts to 337–385 lb-ft (457–522 N•m).
8. Remove two jackscrews (10).
9. Remove wooden block (8).
10. Connect brake rod (6) using straight pin (5) and cotter pin (4).
11. Install lubrication fitting (7), if necessary.

NOTE

Output reduction drive alignment ring (3) is installed in right-side output reduction drive (2) only.

12. Install output reduction drive alignment ring (3) in output reduction drive (2).
13. Install drive coupling (1) on output reduction drive (2).



NOTE

Follow-on maintenance: Install final drive hub and sprockets (see WP 0283 00); Install powerplant (see WP 0098 00).

END OF WORK PACKAGE

CHAPTER 9
UNIT MAINTENANCE
MAINTENANCE INSTRUCTIONS
FOR
SUSPENSION SYSTEM
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
(NSN: 2350-00-122-6826)

CHAPTER 9
UNIT MAINTENANCE
MAINTENANCE INSTRUCTIONS

WORK PACKAGE INDEX

<u>Title</u>	<u>WP Sequence No.</u>
Roadwheel Replacement Removal, Installation	0274 00
Torsion Bar and Torsion Bar Anchors Replacement Removal, Installation	0275 00
Roadwheel Arm Assembly Replacement Removal, Installation	0276 00
Roadwheel Hub Assembly Maintenance Removal, Cleaning, Inspection, Installation	0277 00
Roadwheel Support Housing Replacement Removal, Installation	0278 00
Track Support Roller, Bracket, and Wheel Maintenance Removal, Disassembly, Cleaning, Inspection, Assembly, Installation	0279 00
Left Front Track Support Roller, Bracket, and Wheel Maintenance Removal, Disassembly, Cleaning, Inspection, Assembly, Installation	0280 00
Compensating Idler Arm Assembly Wheels, Hub Assembly, Links, and Link Bearings Replacement Removal, Installation	0281 00
Compensating Idler and Arm Assembly Maintenance Removal, Cleaning, Inspection, Installation	0282 00
Final Drive Sprocket and Hub Replacement Removal, Installation	0283 00
Bumper Springs and Brackets Maintenance Removal, Disassembly, Assembly, Installation	0284 00
Shock Absorbers Replacement Removal, Installation	0285 00

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

ROADWHEEL REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)
 Lifters (item 32, WP 0490 00)
 Multiplier, torque (item 33, WP 0490 00)
 Socket set (item 54, WP 0490 00)
 Wrench, torque, 0–600 pound-feet (lb-ft) (0–813
 newton-meters [N•m]) (item 69, WP 0490 00)

Materials/Parts

Nuts, self-locking (120) (item 111, WP 0491 00)
 Washers, flat (120) (item 60, WP 0491 00)

Equipment Condition

Track tension loosened (refer to TM 9-2350-256-10)

NOTE

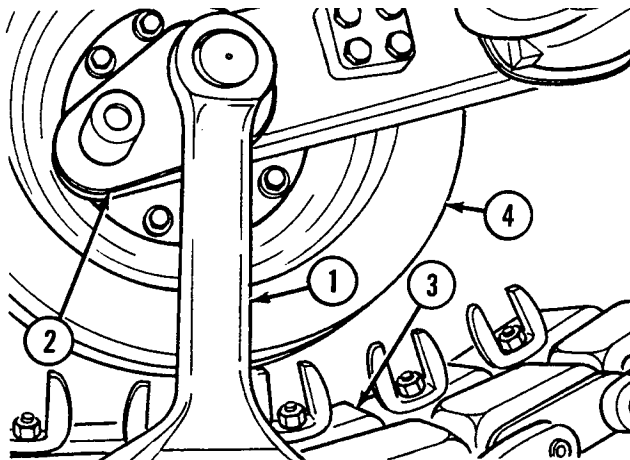
Roadwheels are removed and installed in the same manner.

Removal

WARNING

When driving the vehicle on or off lifters, clear the area. Lifters may fly out from under the vehicle and cause serious injury to personnel.

1. Position lifter (1) on roadwheel arm spindle (2) and track link (3) ahead of roadwheel (4).

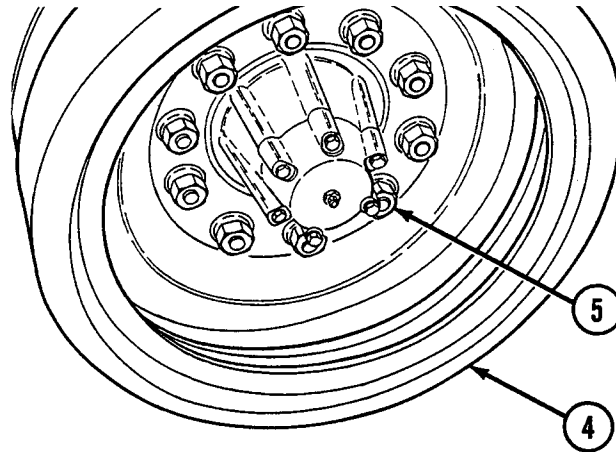


- Loosen 10 wheel nuts (5).

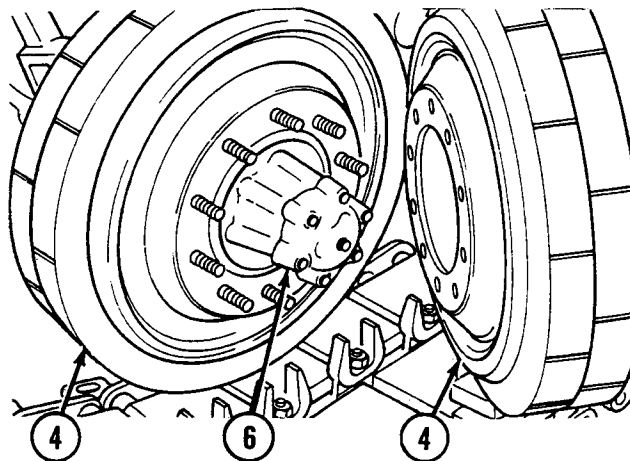
WARNING

When driving the vehicle on or off lifters, clear the area. Lifters may fly out from under vehicle and cause serious injury to personnel.

- Raise roadwheels (4) off track by carefully and slowly moving vehicle forward.
- Remove 10 wheel nuts (5).



- Remove two roadwheels (4) from hub assembly (6).



Installation

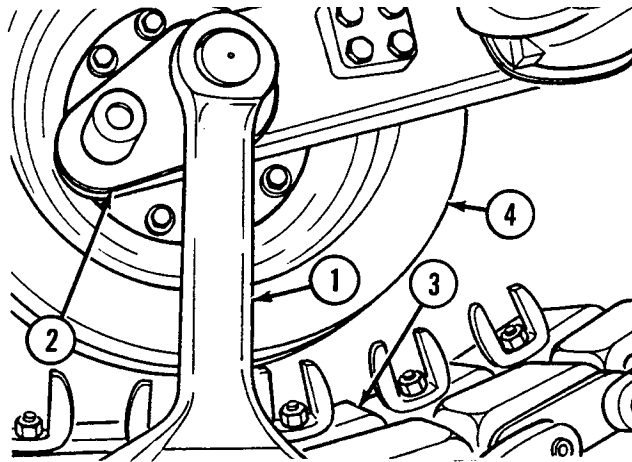
- Install two roadwheels (4) onto hub assembly (6).

2. Install 10 wheel nuts (5).

WARNING

When driving the vehicle on or off lifters, clear the area. Lifters may fly out from under vehicle and cause serious injury to personnel.

3. Lower roadwheels (4) onto track by carefully and slowly moving vehicle backward.
4. Torque 10 wheel nuts (5) to 320–350 lb-ft (434–475 N•m). Remove lifter (1) from between roadwheel arm spindle (2) and track link (3).



5. Adjust track tension (refer to TM 9-2350-256-10).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
TORSION BAR AND TORSION BAR ANCHORS REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)
 Adapter, puller, torsion bar (item 1, WP 0490 00)
 Puller, slide-hammer type (item 42, WP 0490 00)
 Wrench (item 63, WP 0490 00)
 Wrench, plug (item 107, WP 0488 00)
 Wrench, torque, 0-175 lb-ft (0-237 N•m) (item 67, WP 0490 00)

Materials/Parts

Grease, GAA (item 13, WP 0489 00)
 Gaskets (12) (item 177, WP 0491 00)
 Gaskets (12) (item 199, WP 0491 00)
 Lockwashers (12) (item 642, WP 0491 00)

Materials/Parts (cont.)

Lockwashers (48) (item 652, WP 0491 00)
 Screws (48) (item 415, WP 0491 00)
 Screws (12) (item 804, WP 0491 00)

References

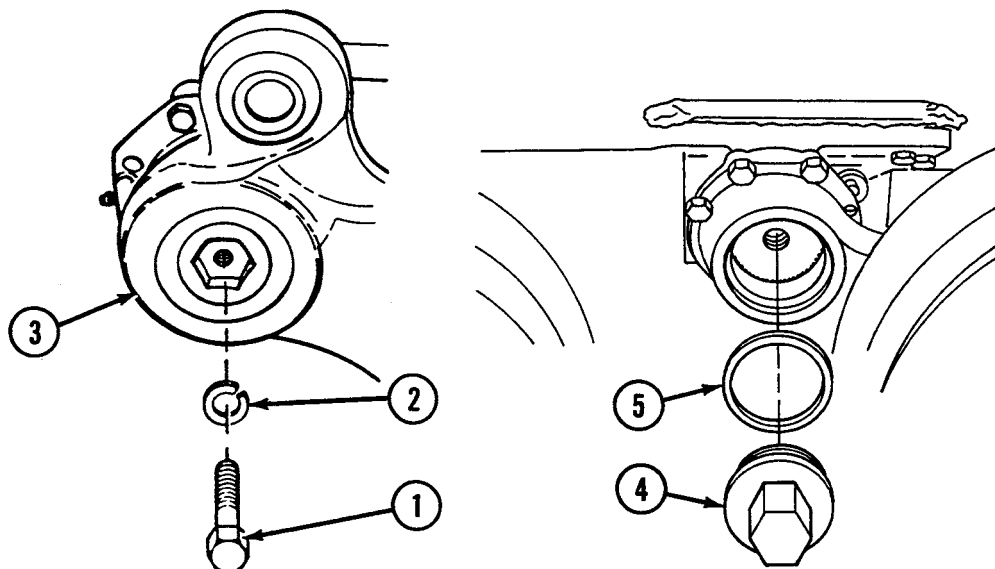
WP 0097 00
 WP 0276 00

Equipment Condition

Roadwheel removed (see WP 0274 00)
 Compensating idler link disconnected (see WP 0281 00)
 Shock absorber disconnected (see WP 0285 00)

Removal

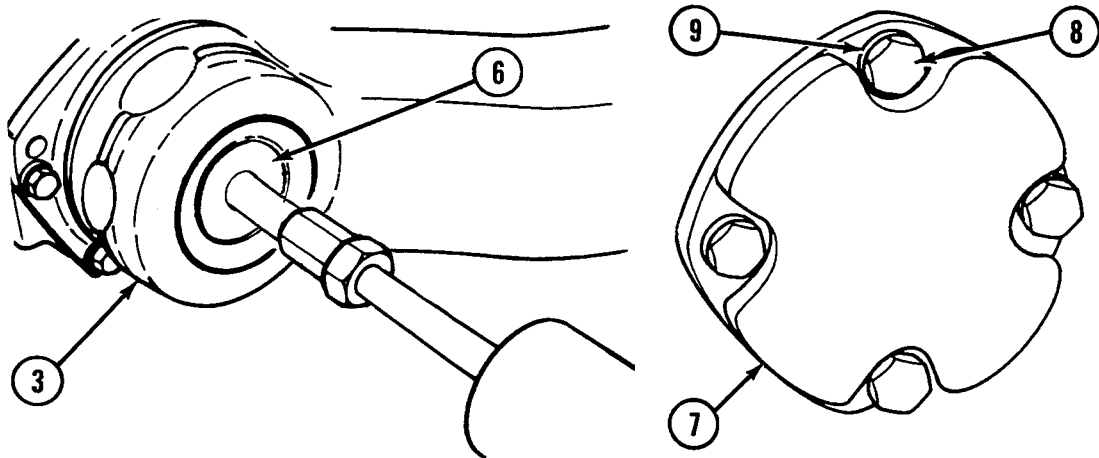
1. Remove screw (1) and lockwasher (2) from roadwheel arm (3).
2. Remove torsion bar end plug (4) and gasket (5).



WARNING

Lift arm sufficiently to take weight off torsion bar. Securely block arm to prevent arm from falling after bar has been removed.

3. Remove torsion bar (6) by using adapter and puller.
4. Remove torsion bar anchor cover plate (7) by removing four screws (8) and four lockwashers (9).



5. Remove and discard gasket (11) from torsion bar anchor cover plate (7).
6. Remove torsion bar anchor (10).

Installation

NOTE

During installation, place the torsion bar anchor (10) in the housing so that the word "FRONT" is toward the front of the vehicle and the cover tangs enter the spanner holes.

1. Coat torsion bar anchor (10) and anchor splines with grease and install torsion bar anchor.
2. Install torsion bar anchor cover plate (7) and gasket (11) with four screws (8) and four lockwashers (9). Torque screws to 40–50 lb-ft (54–68 N•m).

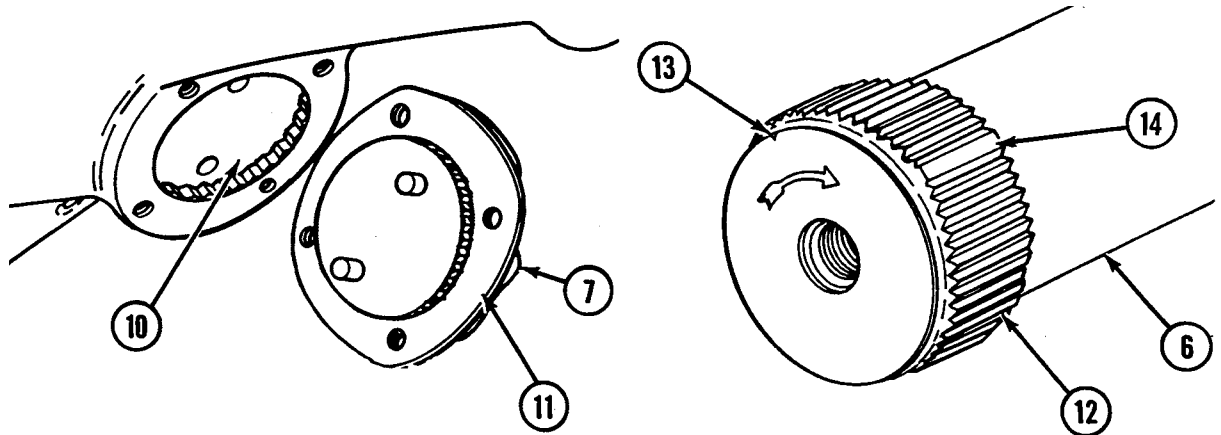
CAUTION

When installing the torsion bar (6), it is not necessary to drive the bar in. When properly aligned, the bar will slide in easily. If bar is forced, splines will be damaged.

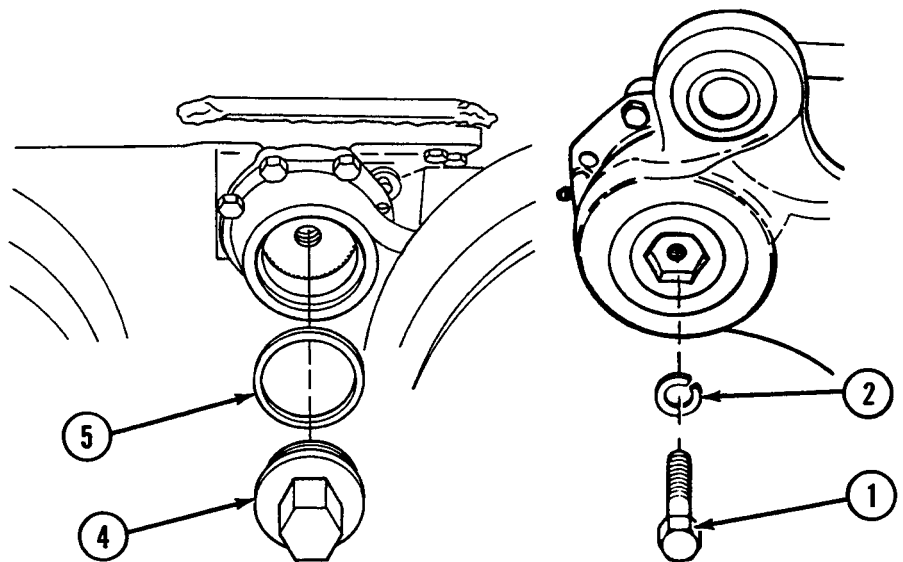
CAUTION

Torsion bars must not be interchanged. Each bar is stamped (on its outside face) with the part number, and an arrow showing the direction of the loading torque. Before installing a new torsion bar, check markings on the bar to be certain that the correct bar is used.

3. Install and block roadwheel arm (see WP 0276 00).
4. Install torsion bar (6) using adapter and puller as follows: Coat serration (12) on both ends of torsion bar with GAA grease (see WP 0097 00). Screw adapter into tapped holes in end of torsion bar. Screw puller into tapped hole in adapter. Hold torsion bar so that V-notch (13) cut into chamfer on outer end is at top. Slide torsion bar in and rotate until blank serration (14) in inner end of torsion bar (opposite V-notch) aligns with blank serration in torsion bar anchor (10). Push torsion bar in far enough to engage torsion bar anchor. Turn roadwheel arm (3) in direction of arrow on torsion bar until blank serration (adjacent to V-groove) in outer end of torsion bar aligns with blank serration in arm (opposite V-groove in arm). Push bar in as far as it will go. Pack cavity in roadwheel arm with GAA grease.



5. Install torsion bar end plug (4) and gasket (5) using wrench plug.
6. Install screw (1) and lockwasher (2). Torque screw to 75–100 lb-ft (102–136 N•m).



NOTE

Follow-on maintenance: Connect shock absorber (see WP 0285 00); Connect idler link (see WP 0281 00); Install roadwheel (see WP 0274 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
ROADWHEEL ARM ASSEMBLY REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Toolkit, general mechanic's (item 59, WP 0490 00)
 Handle (item 19, WP 0490 00)
 Replacer (item 47, WP 0490 00)
 Wrench, spanner (item 66, WP 0490 00)
 Wrench, torque, 0–175 lb-ft (0–237 N•m) (item 67, WP 0490 00)

Materials/Parts

Grease, GAA (item 13, WP 0489 00)
 Oil, OE (item 22, WP 0489 00)
 Gaskets (12) (item 192, WP 0491 00)
 Lockwashers (72) (item 652, WP 0491 00)
 Nuts, bearing (12) (item 193, WP 0491 00)

Materials/Parts (cont.)

Screws (72) (item 415, WP 0491 00)
 Seals (12) (item 345, WP 0491 00)
 Washers, key (12) (item 194, WP 0491 00)

Personnel Required

Mechanics (2)

Equipment Condition

Roadwheel removed (see WP 0274 00)
 Torsion bar removed (see WP 0275 00)
 Compensating idler link or shock absorber disconnected (see WP 0281 00 or WP 0285 00)
 Track tension loosened (refer to TM 9-2350-256-10)

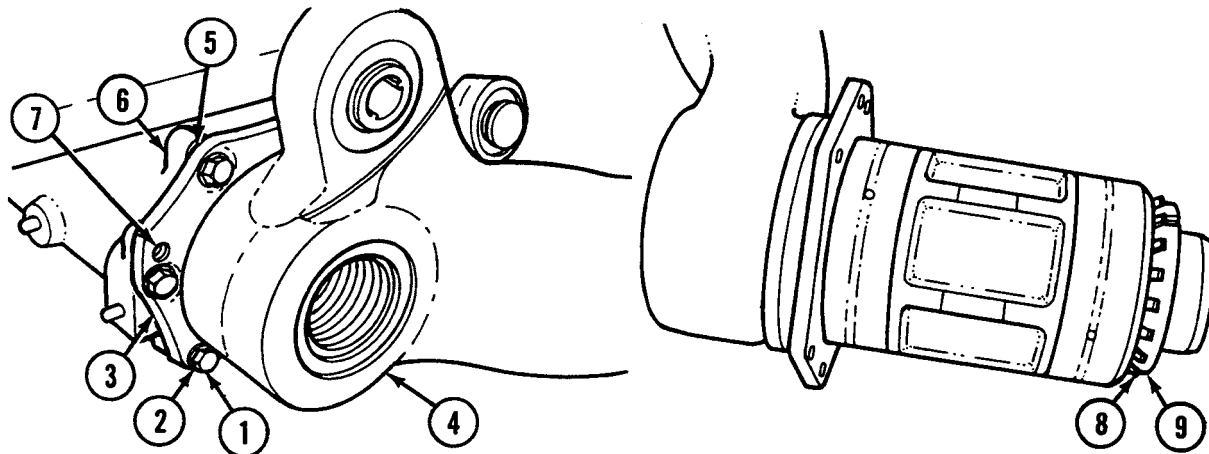
Removal

1. Remove six screws (1) and six lockwashers (2) from roadwheel arm retainer (3).

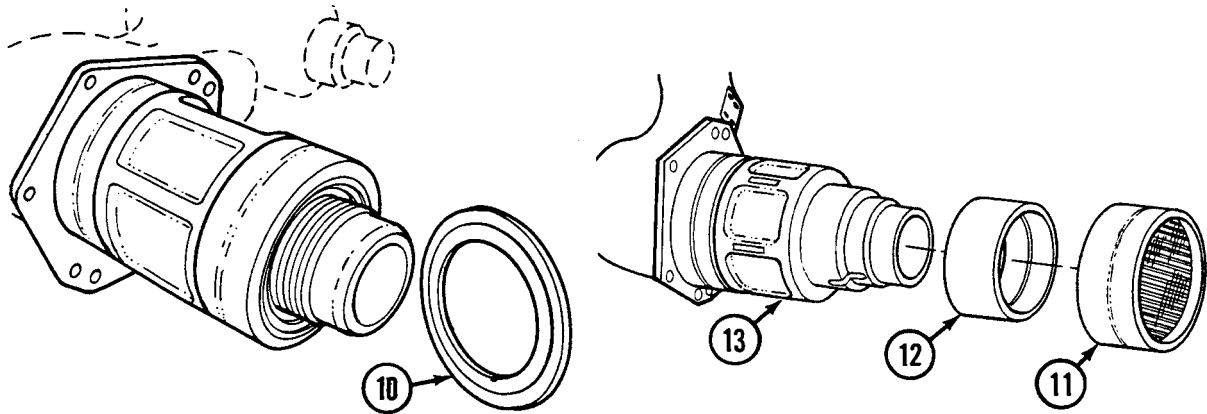
WARNING

Roadwheel arm assembly is heavy, use care when removing roadwheel arm assembly to avoid injury.

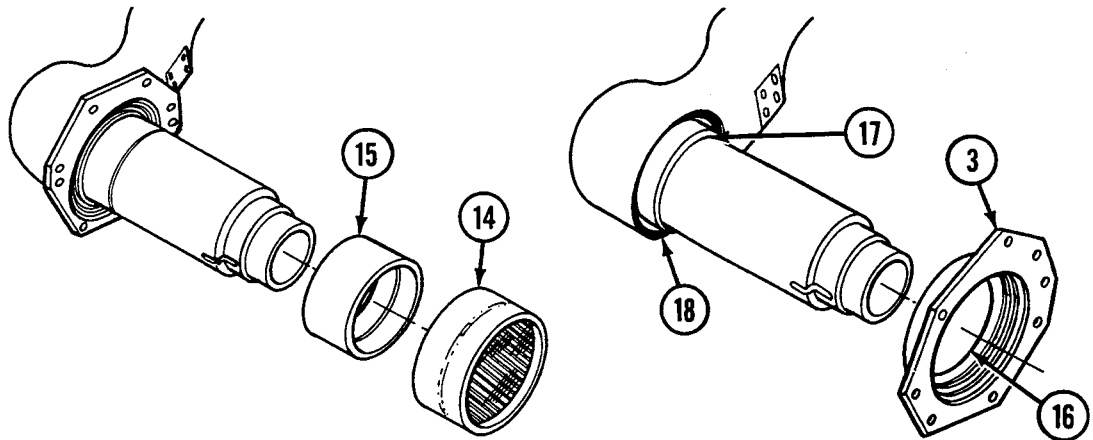
2. Remove roadwheel arm assembly (4) and gasket (5) from roadwheel arm support housing (6) using two removed screws (1) as jackscrews in holes (7) provided.
3. Bend back and straighten tangs of key washer (8) from bearing nut (9).
4. Remove bearing nut (9) and key washer (8).



5. Remove bearing washer (10).
6. Remove inner bearing (11) with bearing race (12) and spacer (13).



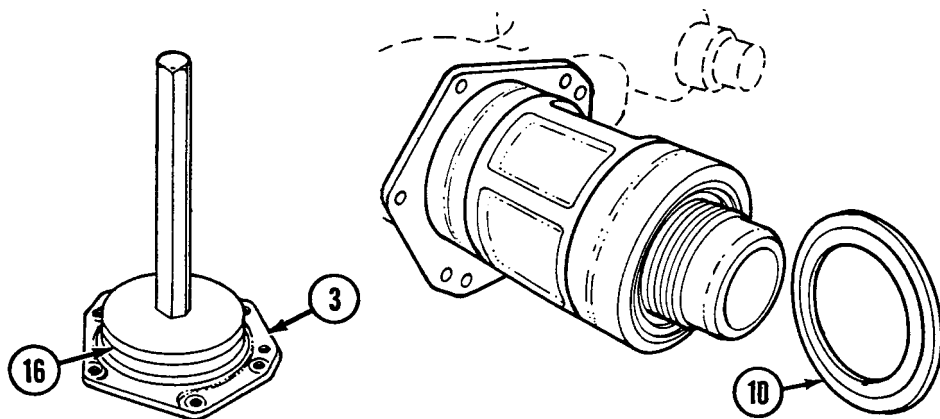
7. Remove outer bearing (14) with bearing race (15).
8. Remove arm retainer (3).
9. Remove oil seal (16).
10. Remove spacer (17) and dirt shield (18).



Installation

1. Install dirt shield (18) and spacer (17).
2. Install oil seal (16) on roadwheel arm retainer (3) using replacer and handle.
3. Install assembled roadwheel arm retainer (3) on roadwheel arm assembly (4).
4. Install outer bearing (14) with bearing race (15). Apply light coat of grease.
5. Install spacer (13) and inner bearing (11) with bearing race (12). Apply light coat of grease.

6. Install bearing washer (10) with shoulder toward bearing.

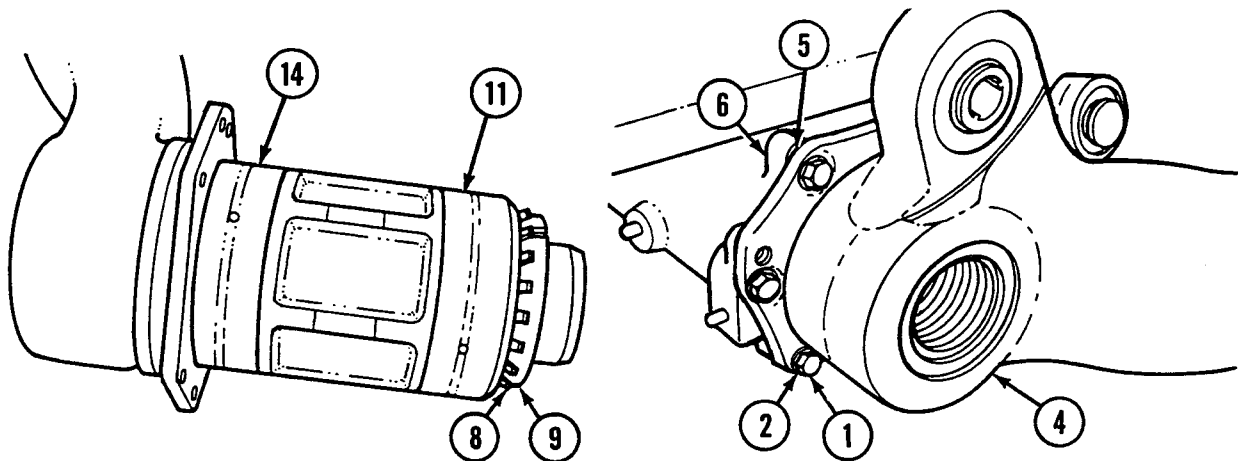


7. Install key washer (8) and bearing nut (9) using wrench. Tighten bearing nut until bearings (11 and 14) cannot be turned. Then back off bearing nut just enough so that inner bearing and outer bearing will turn by hand one complete turn.
8. Turn back tangs of key washer (8) to lock bearing nut (9).

WARNING

Roadwheel arm assembly is heavy, use care when removing assembly to avoid injury.

9. Install roadwheel arm assembly (4) and gasket (5) assembled into roadwheel arm support housing (6) and secure with six screws (1) and six lockwashers (2). Torque screws to 90–100 lb-ft (122–136 N•m).



NOTE

Follow-on maintenance: Tighten track tension (refer to TM 9-2350-256-10); Connect shock absorber (see WP 0285 00) or compensating idler link (see WP 0281 00); Install torsion bar (see WP 0275 00); Install roadwheel (see WP 0274 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

ROADWHEEL HUB ASSEMBLY MAINTENANCE
REMOVAL, CLEANING, INSPECTION, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)
 Handle (item 20, WP 0490 00)
 Multiplier, torque (item 33, WP 0490 00)
 Remover and replacer (item 44, WP 0490 00)
 Socket set (item 54, WP 0490 00)
 Wrench, socket (item 63, WP 0490 00)
 Wrench, torque, 0–175 lb-ft (0–237 N•m) (item 67, WP 0490 00)
 Wrench, torque, 0–600 lb-ft (0–813 N•m) (item 69, WP 0490 00)

Materials/Parts

Compound, cleaning (item 9, WP 0489 00)
 Bolts (60) (item 176, WP 0491 00)
 Gaskets (6) (item 300, WP 0491 00)

Materials/Parts (cont.)

Gaskets (6) (item 301, WP 0491 00)
 Lockwashers (84) (item 640, WP 0491 00)
 Nuts (6) (item 160, WP 0491 00)
 Screws (16) (item 401, WP 0491 00)
 Screws (32) (item 403, WP 0491 00)
 Screws (36) (item 802, WP 0491 00)
 Springs (6) (item 231, WP 0491 00)

Personnel Required

Mechanics (2)

Equipment Condition

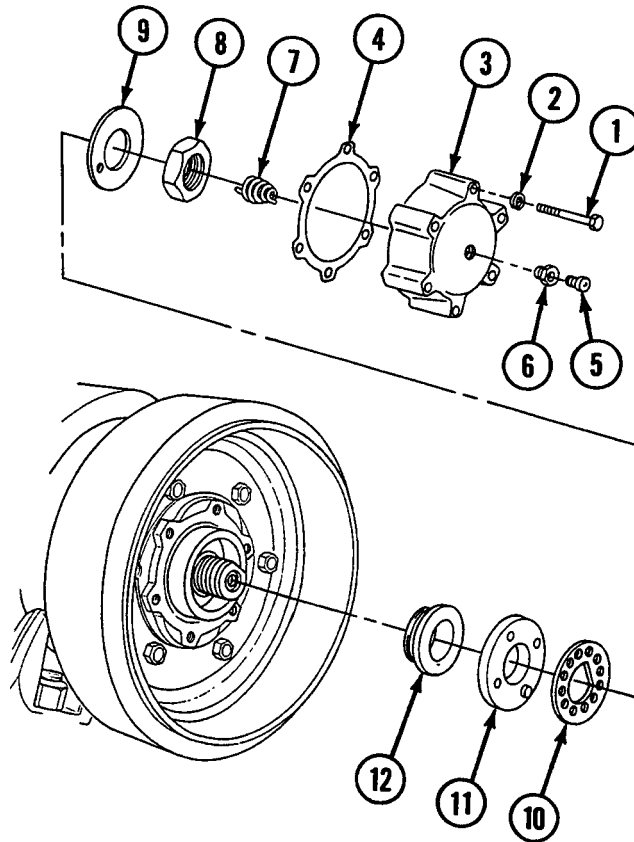
Roadwheel removed (see WP 0274 00)
 Track tension loosened (refer to TM 9-2350-256-10)

NOTE

The following procedures are the same for all six roadwheel hub assemblies.

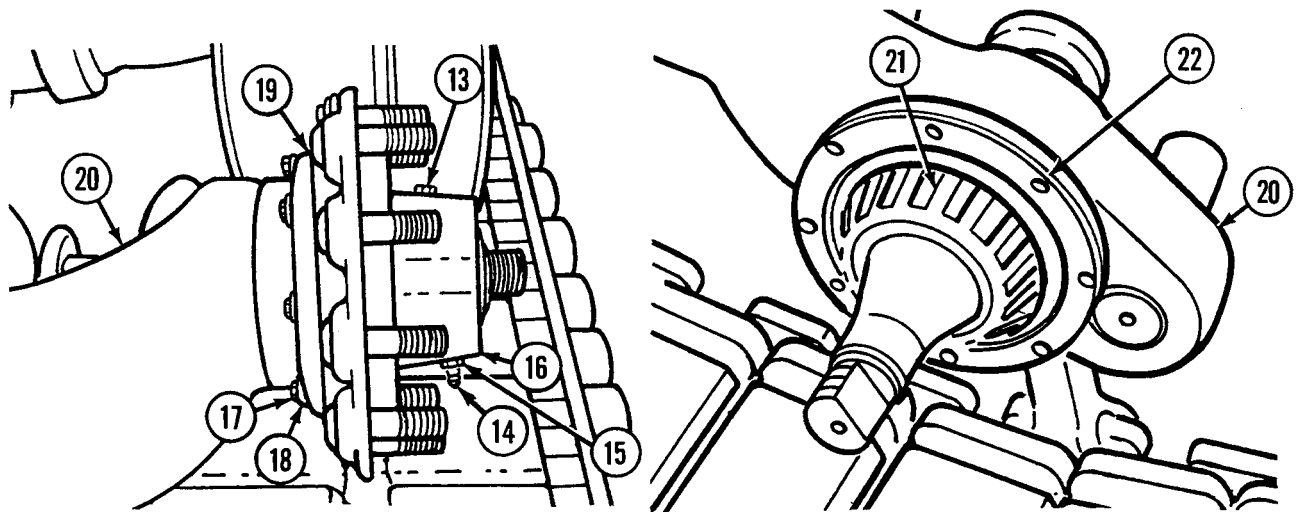
Removal

1. Remove six screws (1), six lockwashers (2), access cover (3), and gasket (4).
2. Remove relief valve (5), bushing (6), and static grounding spring (7).
3. Remove nut (8), lockplate (9), ring (10), and adjusting nut (11).
4. Remove outer cone bearing (12).

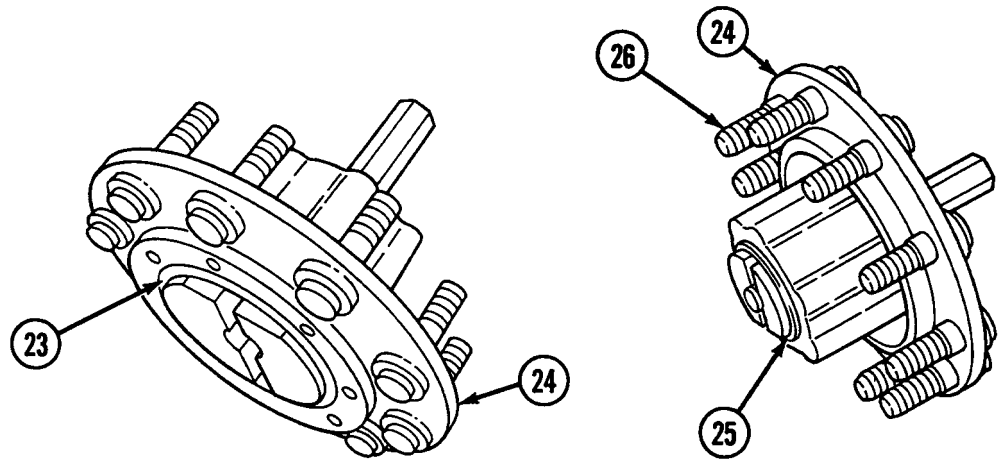


5. Remove pipe plug (13), lubrication fitting (14), and bushing (15) from hub assembly (16).
6. Remove eight screws (17), eight lockwashers (18), hub assembly (16), and gasket (19) from arm (20).
7. Remove inner cone bearing (21).

8. Remove hub seal assembly (22) from arm (20).



9. Remove inner hub bearing cup (23) from hub (24) using remover, replacer, and handle.
 10. Remove outer hub bearing cup (25) from hub (24) using remover, replacer, and handle.
 11. Remove 10 bolts (26) from hub (24).



Cleaning

WARNING

Solvents can burn easily, give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open flame and use in a well-ventilated area. If solvent gets on skin or clothing, wash immediately with soap and water.

NOTE

Use only fresh cleaning compound for bearings.

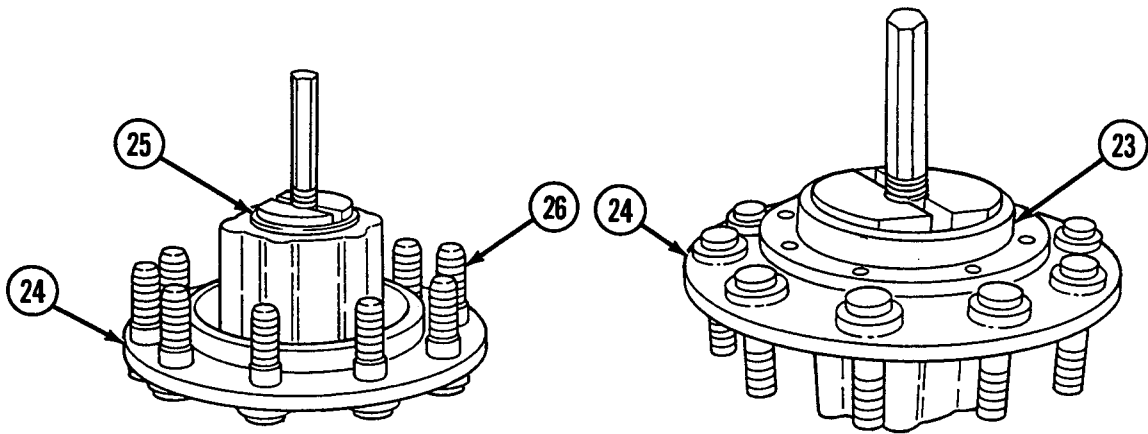
1. Clean all parts thoroughly using cleaning compound.

Test and Inspection

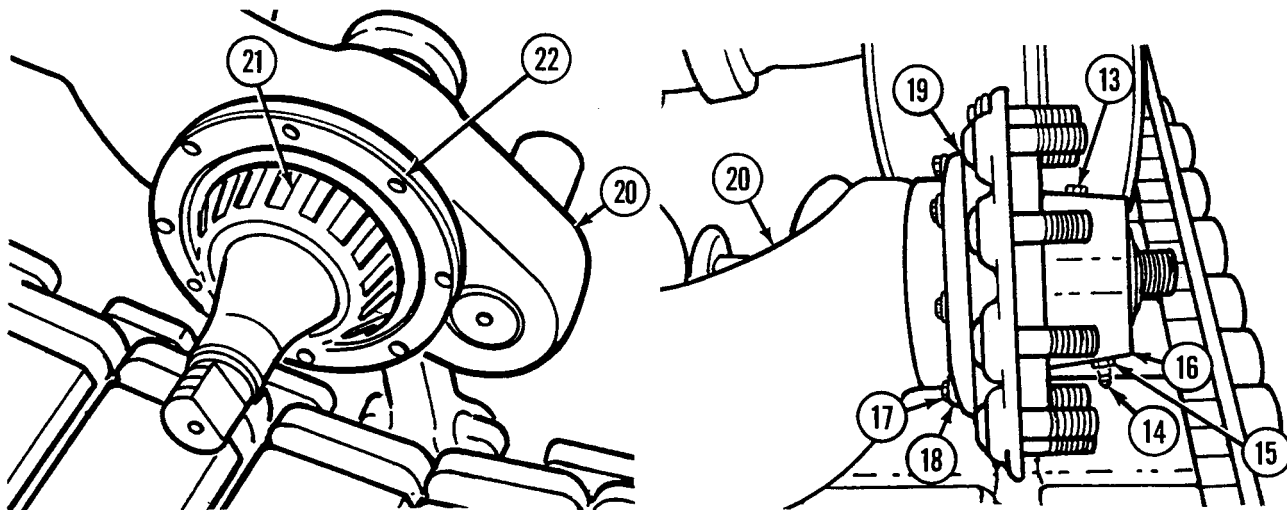
1. Inspect hub and bearings for wear, pitting, or other damage. Replace defective parts.

Installation

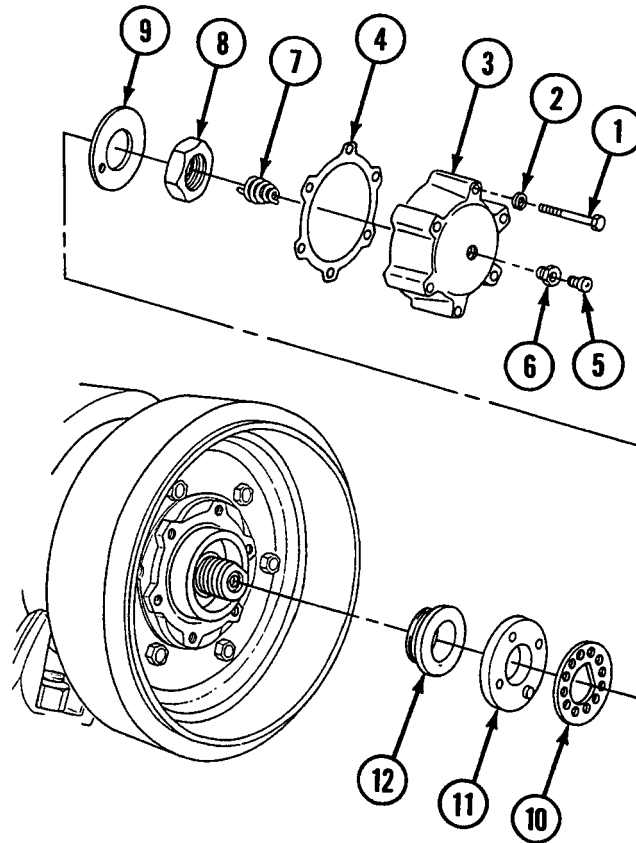
1. Install 10 bolts (26) in hub (24).
2. Install outer hub bearing cup (25) into hub (24) using remover, replacer, and handle.
3. Install inner hub bearing cup (23) into hub (24) using remover, replacer, and handle.



4. Install hub seal assembly (22) on arm (20).
5. Install inner cone bearing (21).
6. Install hub assembly (16) onto arm (20).
7. Install eight screws (17), eight lockwashers (18), hub assembly (16), and gasket (19).
8. Install bushing (15), lubrication fitting (14), and pipe plug (13) into hub assembly (16).



9. Install outer cone bearing (12).
10. Install adjusting nut (11) as follows:
 - a. Tighten adjusting nut while rotating hub (24) in both directions to ensure contact of all bearing surfaces.
 - b. Back off adjusting nut and torque to 50–70 lb-ft (68–95 N•m). Then back off 1/4 turn.
11. Install ring (10) and align adjusting nut (11) pin and ring hole to lock into place.
12. Install lockplate (9) and nut (8). Torque nut to 150–300 lb-ft (203–407 N•m).
13. Install static grounding spring (7), bushing (6), and relief valve (5).
14. Install gasket (4), access cover (3), six lockwashers (2), and six screws (1). Torque screws to 20–25 lb-ft (27–34 N•m).



NOTE

Follow-on maintenance: Tighten track (refer to TM 9-2350-256-10); Install roadwheel (see WP 0274 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

ROADWHEEL SUPPORT HOUSING REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)
Handle (item 20, WP 0490 00)
Multiplier, torque (item 33, WP 0490 00)
Replacer (item 45, WP 0490 00)
Socket set (item 54, WP 0490 00)
Wrench, torque, 0–600 lb-ft (0–813 N•m) (item 69, WP 0490 00)

Materials/Parts

Compound, sealing (item 29, WP 0489 00)
Lockwashers (11) (item 654, WP 0491 00)
Screws (11) (item 424, WP 0491 00)
Seal, oil (item 865, WP 0491 00)

Personnel Required

Mechanics (2)

Equipment Condition

Roadwheel arm assembly removed (see WP 0276 00)

NOTE

All roadwheel support housings are removed and installed in the same manner.

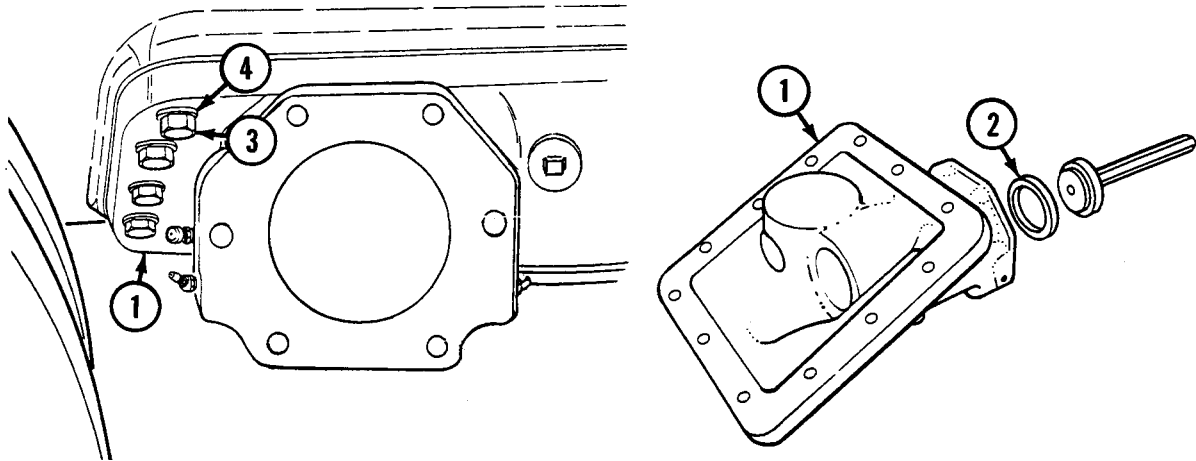
Removal**WARNING**

Roadwheel support housing is heavy, use care when removing housing to avoid injury.

NOTE

It is not necessary to remove roadwheel support housing (1) from hull to remove oil seal (2).

1. Remove roadwheel support housing (1) from hull by removing 11 screws (3) and 11 lockwashers (4).
2. Remove oil seal (2) out of roadwheel support housing (1) and discard.



Installation

1. Install oil seal (2) in roadwheel support housing (1) using replacer and handle.

WARNING

Sealer coating is toxic and gives off harmful vapors. Use in a well-ventilated area. If adhesive gets in eyes try to keep eyes open; flush eyes with water for 15 minutes and get immediate medical attention.

WARNING

Roadwheel support housing is heavy, use care when installing housing to avoid injury.

2. Apply sealer coating to mounting surface of roadwheel support housing (1) and vehicle hull. Install roadwheel support housing on hull with 11 screws (3) and 11 lockwashers (4). Torque screws to 245–270 lb-ft (332–366 N•m).

NOTE

Follow-on maintenance: Install roadwheel arm assembly (see WP 0276 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

TRACK SUPPORT ROLLER, BRACKET, AND WHEEL MAINTENANCE
REMOVAL, DISASSEMBLY, CLEANING, INSPECTION, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)
 Handle (item 20, WP 0490 00)
 Multiplier, torque (item 33, WP 0490 00)
 Remover and replacer (item 44, WP 0490 00)
 Replacer (item 46, WP 0490 00)
 Socket set (item 54, WP 0490 00)
 Wrench, socket (item 63, WP 0490 00)
 Wrench, torque, 0–175 lb-ft (0–237 N•m) (item 67, WP 0490 00)
 Wrench, torque, 0–600 lb-ft (0–813 N•m) (item 69, WP 0490 00)

Materials/Parts

Compound, cleaning (item 9, WP 0489 00)
 Grease, GAA (item 13, WP 0489 00)
 Wood (item 39, WP 0489 00)
 Bolts (30) (item 175, WP 0491 00)
 Bolts (2) (item 208, WP 0491 00)

Materials/Parts (cont.)

Gaskets (5) (item 191, WP 0491 00)
 Lockwashers (30) (item 640, WP 0491 00)
 Lockwashers (20) (item 655, WP 0491 00)
 Nuts (5) (item 160, WP 0491 00)
 Nuts, adjustment (5) (item 173, WP 0491 00)
 Nuts, self-locking (2) (item 746, WP 0491 00)
 Screws (30) (item 407, WP 0491 00)
 Screws (20) (item 812, WP 0491 00)
 Seals, oil (5) (item 141, WP 0491 00)
 Springs (5) (item 266, WP 0491 00)
 Washers, flat (5) (item 140, WP 0491 00)
 Washers, tab (5) (item 161, WP 0491 00)

Personnel Required

Mechanics (2)

References

TM 9-2350-256-10

NOTE

Bracket and wheel assemblies are removed, disassembled, assembled, and installed in the same manner.

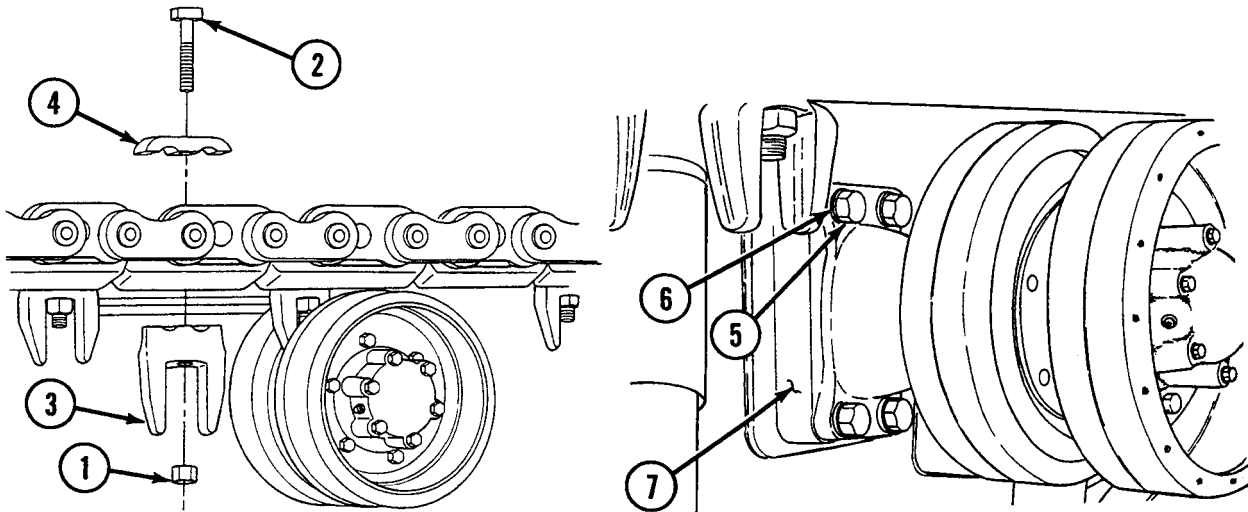
Removal

1. Remove two self locking nuts (1), two bolts (2), two center guides (3), and two caps (4).
2. Position track so that track link from which track shoe guides were removed is directly on support roller to be removed. Place heavy board on top of roadwheels. Position jack on board and raise track clear of support roller.

WARNING

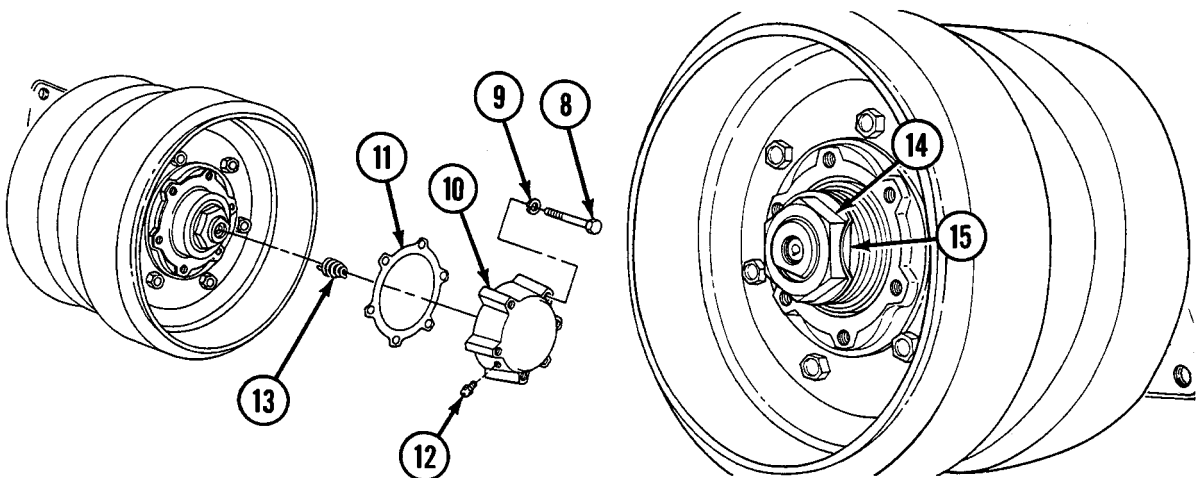
Bracket assembly is heavy, get assistance when removing assembly to avoid injury.

3. Remove four screws (5), four lockwashers (6), and bracket and wheel assembly (7).

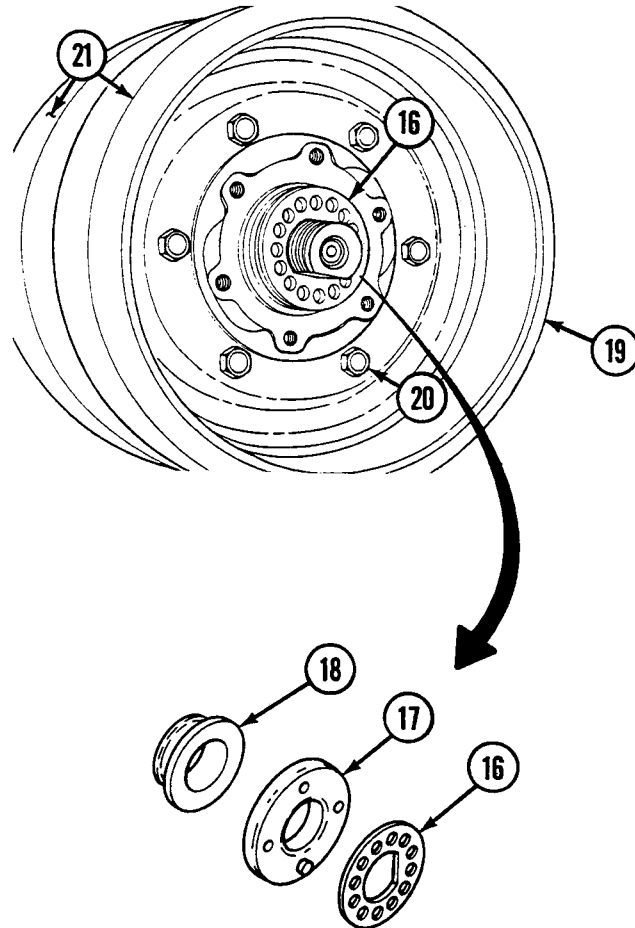


Disassembly

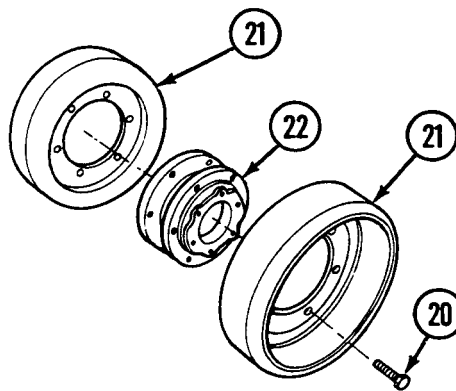
1. Remove six screws (8), six lockwashers (9), access cover (10), and gasket (11).
2. Remove lubrication fitting (12) and static grounding spring (13).
3. Remove nut (14) and tab washer (15).



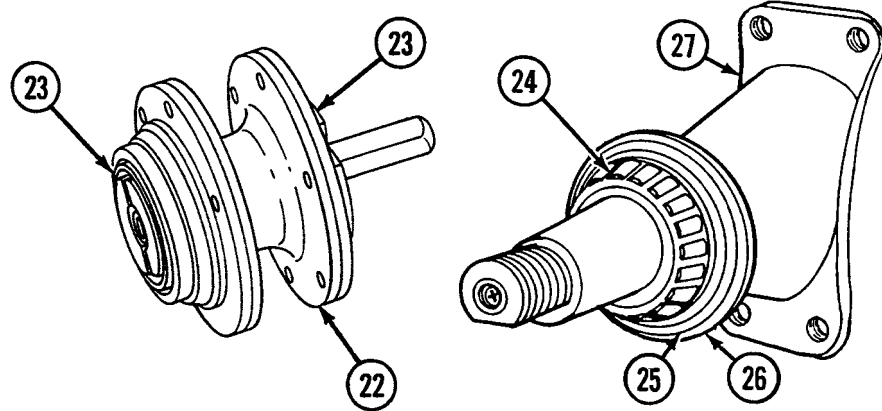
4. Remove flat washer (16) and adjusting nut (17).
5. Remove outer bearing cone (18) and track support roller assembly (19).



6. Remove six bolts (20) and two roadwheels (21) from hub (22).



7. Remove two bearing cups (23) from hub (22) using remover, replacer, handle, and hammer.
8. Remove inner cone bearing (24), inner oil seal (25), and dirt deflector (26) from track support roller bracket (27).



Cleaning

WARNING

Solvents can burn easily, give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open flame and use in a well-ventilated area. If solvent gets on skin or clothing, wash immediately with soap and water.

NOTE

Use only fresh cleaning compound for bearings.

1. Clean all parts thoroughly using cleaning compound.

Inspection-Acceptance and Rejection Criteria

1. Inspect all parts for wear, pitting, or other damage. Replace all defective parts.

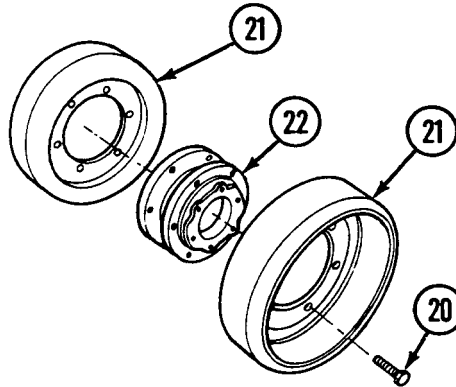
Assembly

NOTE

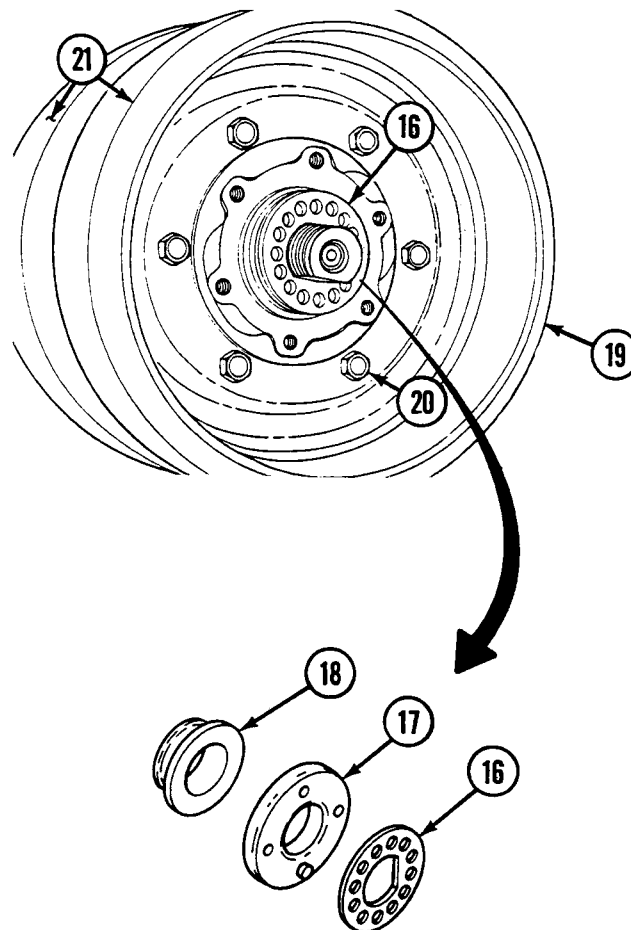
Pack bearings with grease before assembling (refer to TM 9-2350-256-10).

1. Install dirt deflector (26) and inner oil seal (25) onto track support roller bracket (27) using replacer and hammer.
2. Install inner cone bearing (24).
3. Install two bearing cups (23) onto hub (22) using remover, replacer, handle, and hammer.

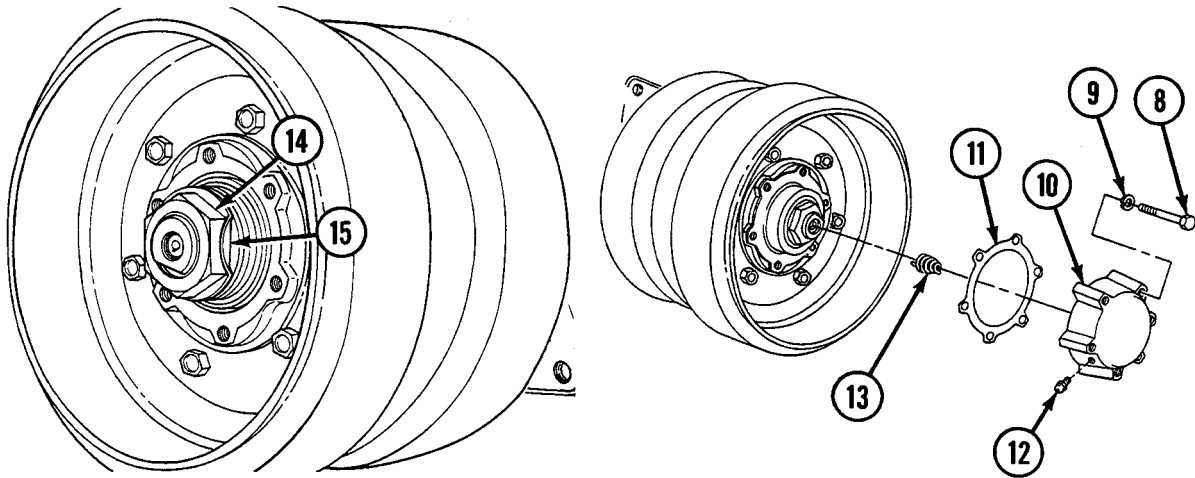
4. Install two roadwheels (21) and six bolts (20) on hub (22). Torque bolts to 110–130 lb-ft (149–176 N•m).



5. Install track support roller assembly (19) and outer bearing cone (18).
6. Install adjusting nut (17) and flat washer (16).



7. Install tab washer (15) and nut (14).
8. Install lubrication fitting (12).
9. Install static grounding spring (13), gasket (11), access cover (10), six lockwashers (9), and six screws (8).

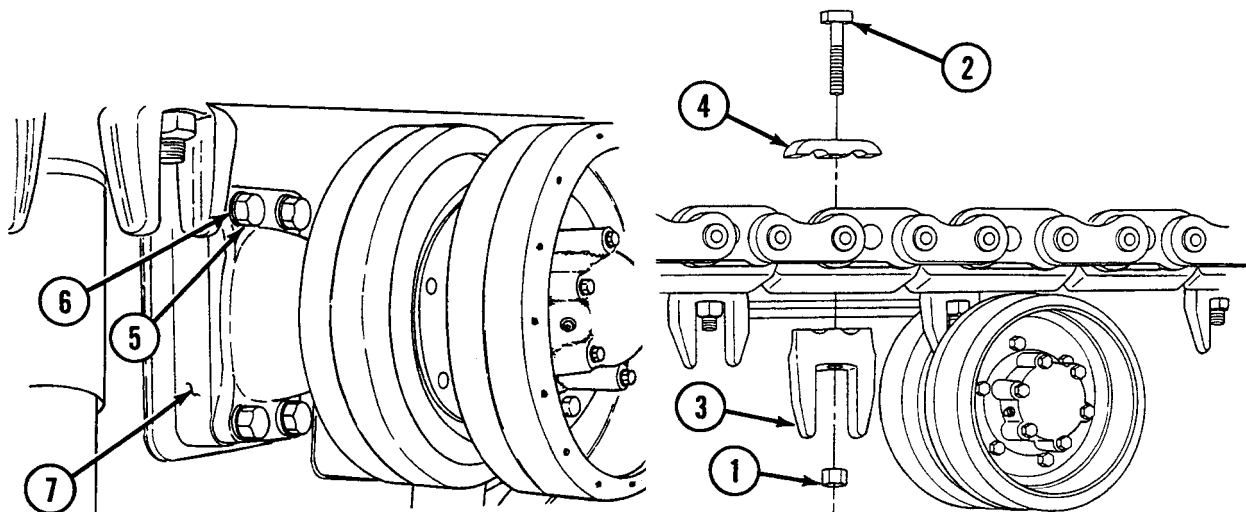


Installation

WARNING

Bracket and wheel assembly are heavy, use care when removing assembly to avoid injury.

1. Install bracket and wheel assembly (7), four lockwashers (6), and four screws (5). Torque screws to 350–400 lb-ft (475–542 N•m).
2. Lower track and remove jack and board.
3. Install two center guides (3), two caps (4), two bolts (2), and two self locking nuts (1).



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

LEFT FRONT TRACK SUPPORT ROLLER, BRACKET, AND WHEEL MAINTENANCE
REMOVAL, DISASSEMBLY, CLEANING, INSPECTION, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)
 Handle (item 20, WP 0490 00)
 Multiplier, torque (item 33, WP 0490 00)
 Remover and replacer (item 44, WP 0490 00)
 Replacer (item 46, WP 0490 00)
 Socket set (item 54, WP 0490 00)
 Wrench, socket (item 63, WP 0490 00)
 Wrench, torque, 0–175 lb-ft (0–237 N•m) (item 67, WP 0490 00)
 Wrench, torque, 0–600 lb-ft (0–813 N•m) (item 69, WP 0490 00)

Materials/Parts

Compound, cleaning (item 9, WP 0489 00)
 Grease, GAA (item 13, WP 0489 00)
 Wood (item 39, WP 0489 00)
 Bolts (6) (item 175, WP 0491 00)
 Bolts (2) (item 208, WP 0491 00)
 Gaskets (2) (item 191, WP 0491 00)

Materials/Parts (cont.)

Lockwashers (6) (item 640, WP 0491 00)
 Lockwashers (4) (item 655, WP 0491 00)
 Nut (item 160, WP 0491 00)
 Nut, adjusting (item 173, WP 0491 00)
 Nuts, self-locking (2) (item 746, WP 0491 00)
 Pin, cotter (item 5, WP 0491 00)
 Screws (6) (item 407, WP 0491 00)
 Screws (4) (item 812, WP 0491 00)
 Seal (item 739, WP 0491 00)
 Seal, oil (item 141, WP 0491 00)
 Washer, flat (item 140, WP 0491 00)
 Washer, tab (item 161, WP 0491 00)

Personnel Required

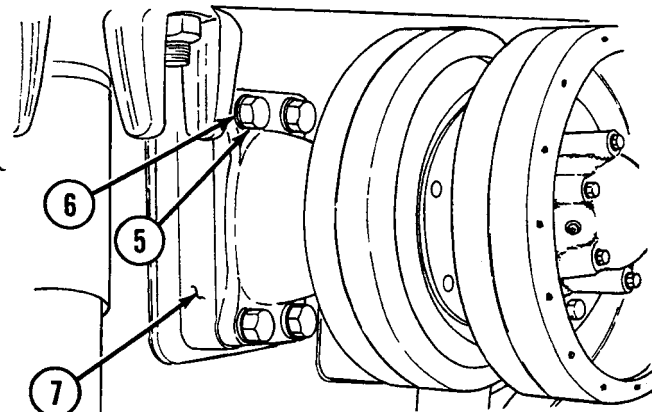
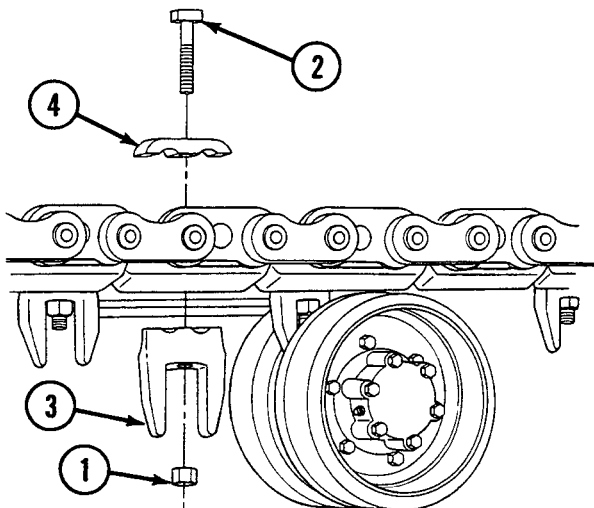
Mechanics (2)

References

TM 9-2350-256-10

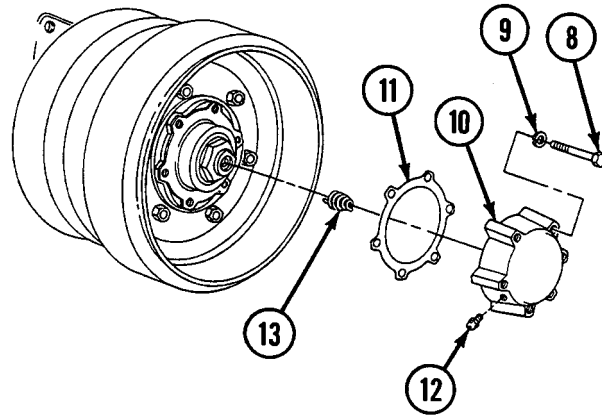
Removal

1. Remove two self-locking nuts (1), two bolts (2), two center guides (3), and two caps (4).
2. Position track so that track link from which track shoe guides were removed is directly on support roller to be removed. Place heavy board on top of roadwheels. Position jack on board and raise track clear of support roller.
3. Remove four screws (5), four lockwashers (6), and bracket and wheel assembly (7).

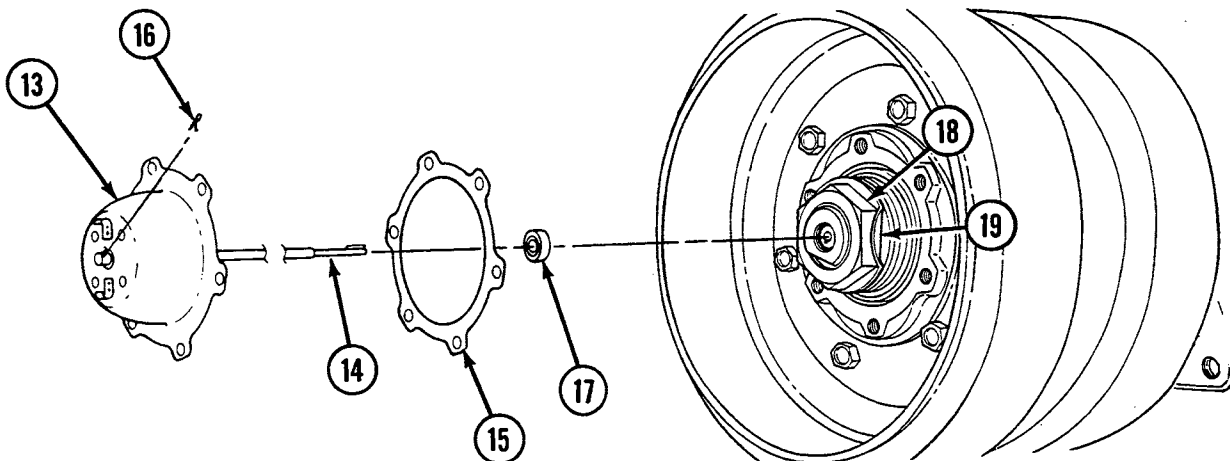


Disassembly

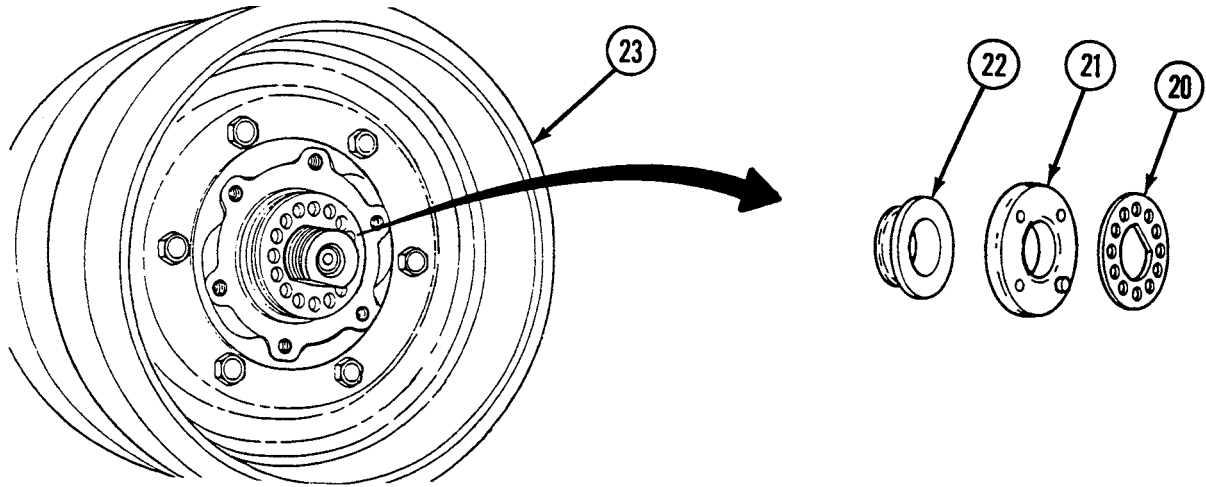
1. Remove six screws (8), six lockwashers (9), access cover (10), and gasket (11).
2. Remove lubrication fitting (12).



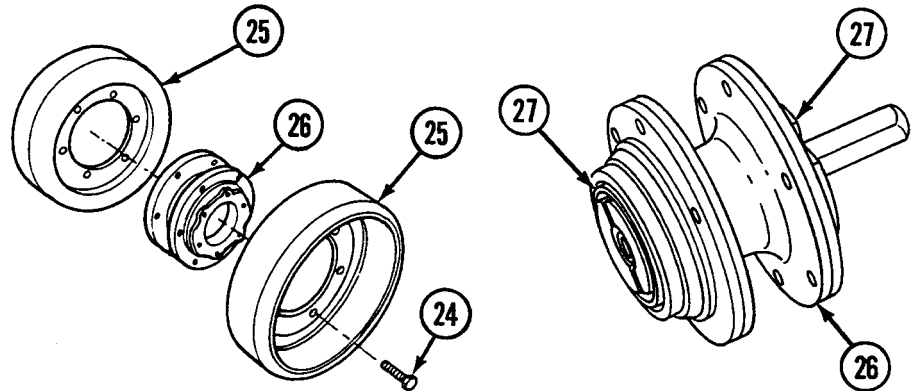
3. Remove cup assembly (13) with drive key (14) and gasket (15). Remove gasket from cup assembly.
4. Remove cotter pin (16) and seal (17) from drive key (14). Remove drive key from cup assembly (13).
5. Remove nut (18) and tab washer (19).



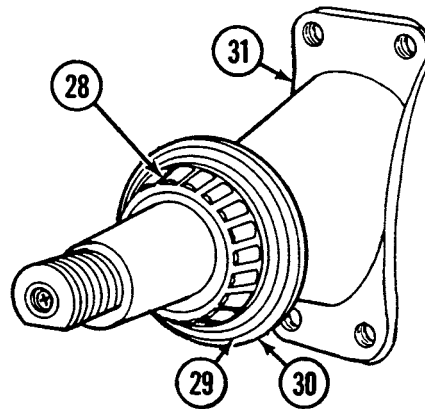
6. Remove flat washer (20) and adjusting nut (21) from outer bearing cone (22).
7. Remove outer bearing cone (22) and track support roller assembly (23).



8. Remove six bolts (24) and two roadwheels (25) from hub (26).
9. Remove two bearing cups (27) from hub (26) using remover, replacer, handle, and hammer.



10. Remove inner cone bearing (28), inner oil seal (29), and dirt deflector (30) from track support roller bracket (31).



Cleaning

WARNING

Solvents can burn easily, give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open flame and use in a well-ventilated area. If solvent gets on skin or clothing, wash immediately with soap and water.

NOTE

Use only fresh cleaning compound for bearings.

1. Clean all parts thoroughly using cleaning compound.

Inspection-Acceptance and Rejection Criteria

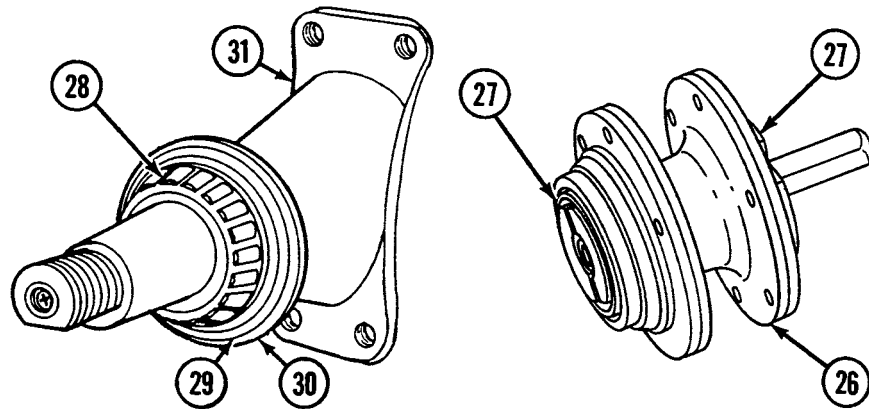
1. Inspect all parts for wear, pitting, or other damage. Replace all defective parts.

Assembly

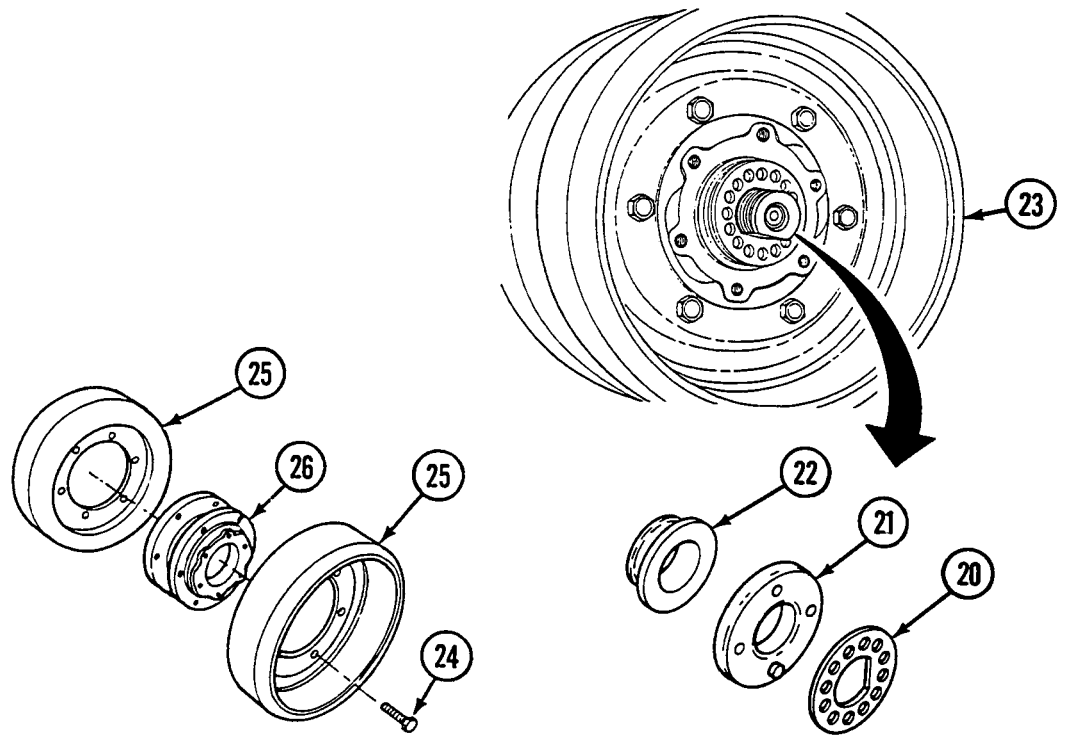
NOTE

Pack bearings with grease before assembling (refer to TM 9-2350-256-10).

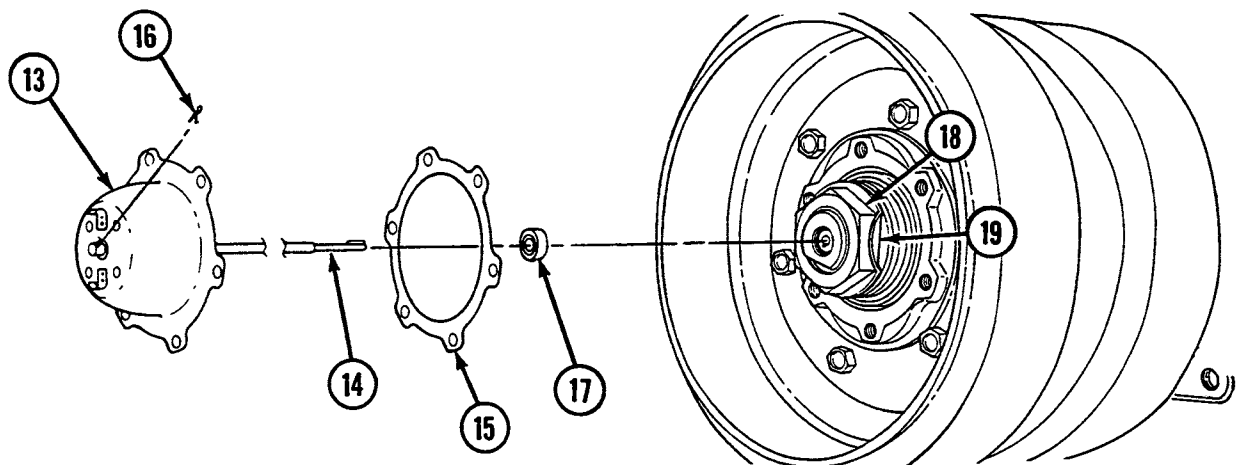
1. Install dirt deflector (30) and inner oil seal (29) onto track support roller bracket (31) using replacer and hammer.
2. Install inner cone bearing (28).
3. Install two bearing cups (27) onto hub (26) using remover, replacer, handle, and hammer.



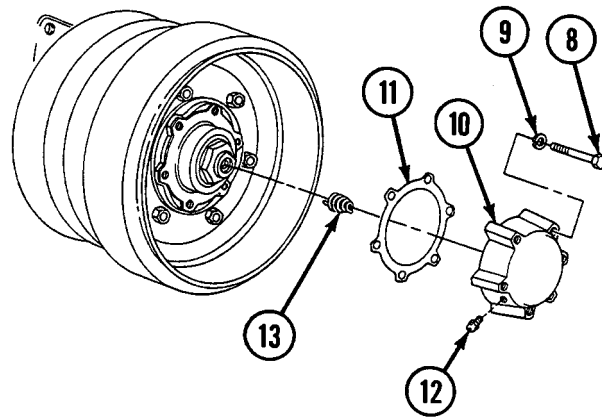
4. Install two roadwheels (25) and six bolts (24) on hub (26). Torque bolts to 110–130 lb-ft (149–176 N•m).
5. Install track support roller assembly (23) and outer bearing cone (22).
6. Install adjusting nut (21) and flat washer (20).



7. Install tab washer (19) and nut (18).
8. Install drive key (14) to cup assembly (13).
9. Install seal (17) and cotter pin (16) to drive key (14).
10. Install gasket (15) and cup assembly (13) with drive key (14).

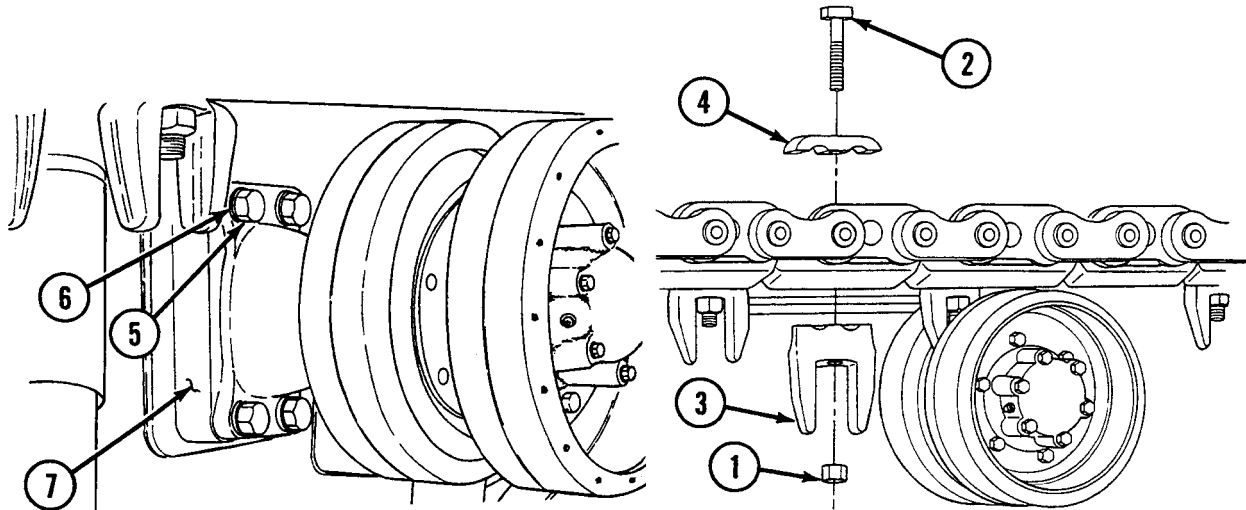


11. Install lubrication fitting (12).
12. Install gasket (11), access cover (10), six lockwashers (9), and six screws (8).



Installation

1. Install bracket and wheel assembly (7), four lockwashers (6), and four screws (5). Torque screws to 350–400 lb-ft (475–542 N•m).
2. Lower track and remove jack and board.
3. Install two centerguides (3), two caps (4), two bolts (2), and two self-locking nuts (1).



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**COMPENSATING IDLER ARM ASSEMBLY WHEELS, HUB
ASSEMBLY, LINKS, AND LINK BEARINGS REPLACEMENT
REMOVAL, INSTALLATION**

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)
Handle (item 20, WP 0490 00)
Puller, mechanical, compensating link bearing (item 41,
WP 0490 00)
Remover and replacer (item 44, WP 0490 00)
Wrench, torque, 0–175 lb-ft (0–237 N•m) (item 67, WP
0490 00)
Wrench, torque, 0–600 lb-ft (0–813 N•m) (item 69, WP
0490 00)

Materials/Parts

Bolts (20) (item 176, WP 0491 00)
Gaskets (2) (item 300, WP 0491 00)
Gaskets (2) (item 301, WP 0491 00)
Lockwashers (28) (item 640, WP 0491 00)

Materials/Parts (cont.)

Nuts (2) (item 160, WP 0491 00)
Nuts (4) (item 695, WP 0491 00)
Nuts, adjusting (2) (item 173, WP 0491 00)
Nuts, self-locking (20) (item 111, WP 0491 00)
Pins, cotter (4) (item 517, WP 0491 00)
Screws (16) (item 401, WP 0491 00)
Screws (12) (item 802, WP 0491 00)
Springs (2) (item 231, WP 0491 00)
Washers (4) (item 325, WP 0491 00)
Washers, flat (20) (item 60, WP 0491 00)
Washers, flat (2) (item 140, WP 0491 00)
Washers, tab (2) (item 161, WP 0491 00)

Equipment Condition

Loosen track tension (refer to TM 9-2350-256-10)

NOTE

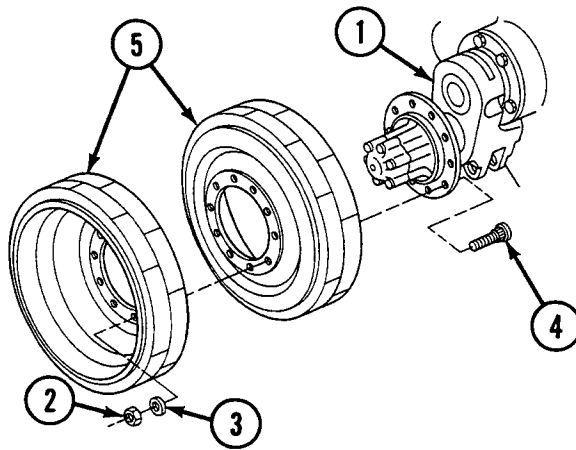
Left and right idler links are removed in the same manner.

Removal

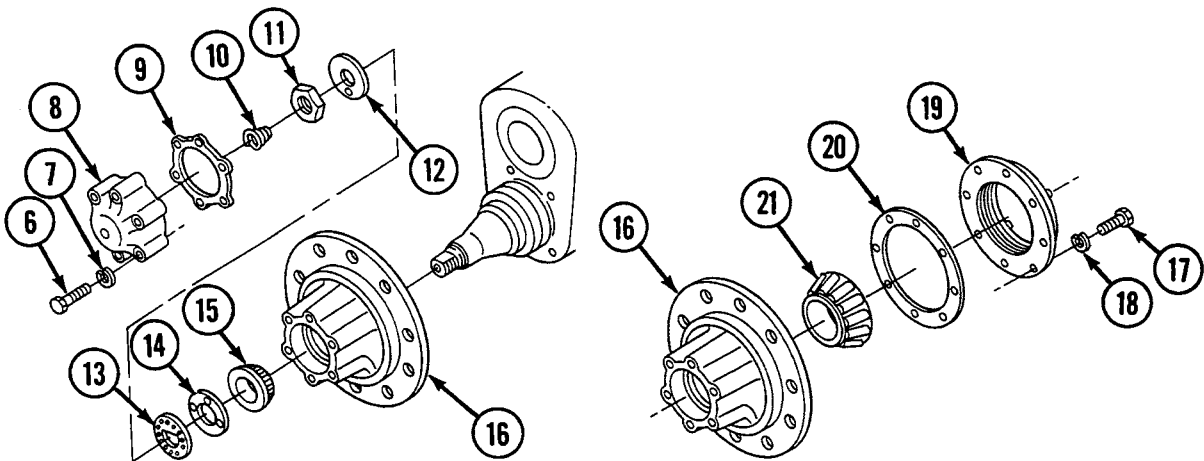
WARNING

Be sure to jack up idler wheel to prevent its dropping after idler link (1) is disconnected.

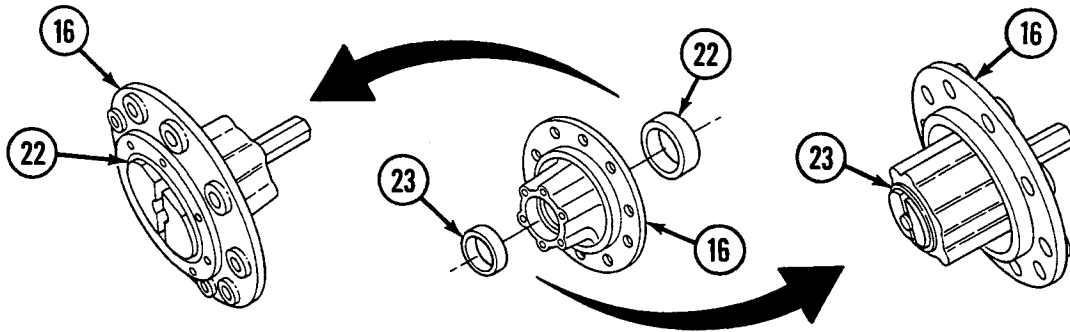
1. Jack up and block idler arm assembly (1).
2. Remove ten self-locking nuts (2), ten washers (3), ten bolts (4), and two compensating idler wheels (5).



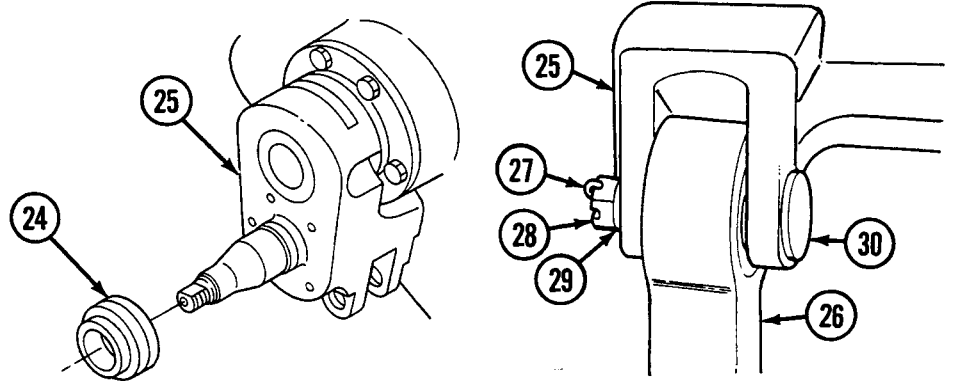
3. Remove six screws (6), six lockwashers (7), access cover (8), gasket (9), spring (10), nut (11), two washers (12 and 13), round nut (14), cone and roller (15), and hub (16).
4. Remove eight screws (17), eight lockwashers (18), seal assembly (19), gasket (20), and cone and roller (21) from hub (16).



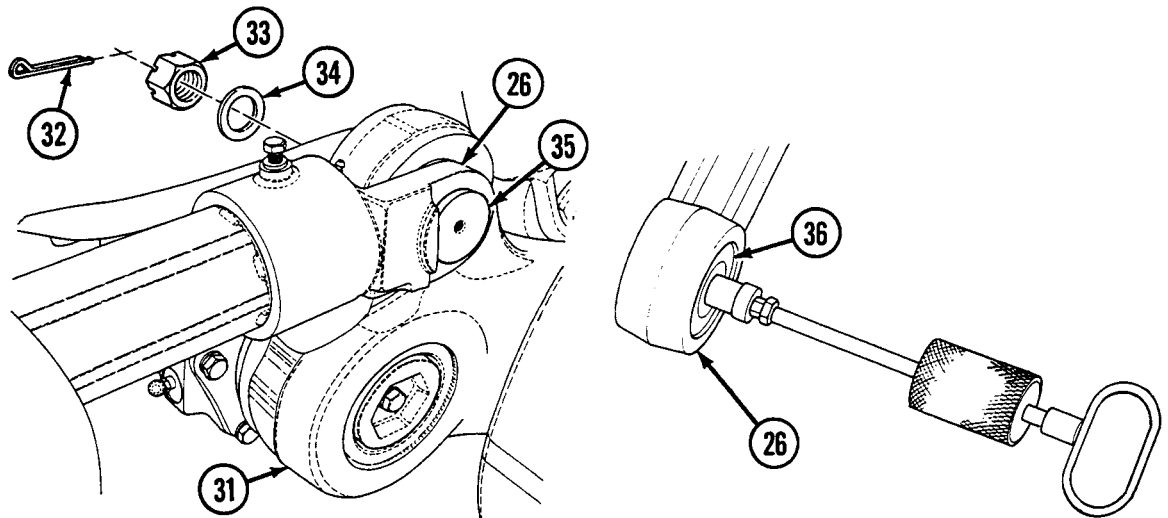
5. Remove inner roller cup (22) from hub (16) using remover, replacer, and handle.
6. Remove outer roller cup (23) from hub (16) using remover, replacer, and handle.



7. Remove spacer (24) from compensating idler arm (25).
8. Disconnect idler link (26) from compensating idler arm (25) by removing cotter pin (27), nut (28), washer (29), and clevis pin (30).

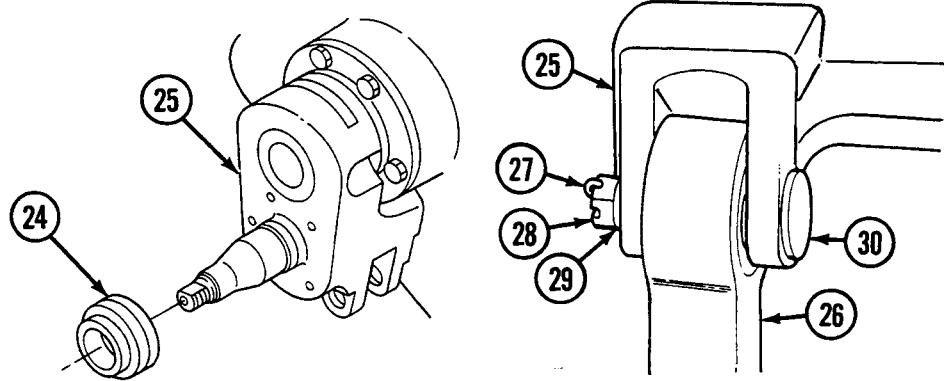


9. Disconnect opposite end of idler link (26) from roadwheel arm (31) by removing cotter pin (32), nut (33), washer (34), and clevis pin (35).
10. Remove idler link bearing (36) from idler link (26) using puller.

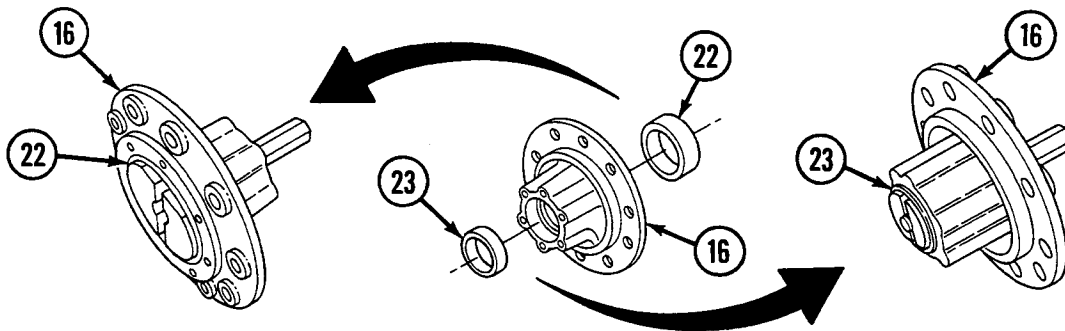


Installation

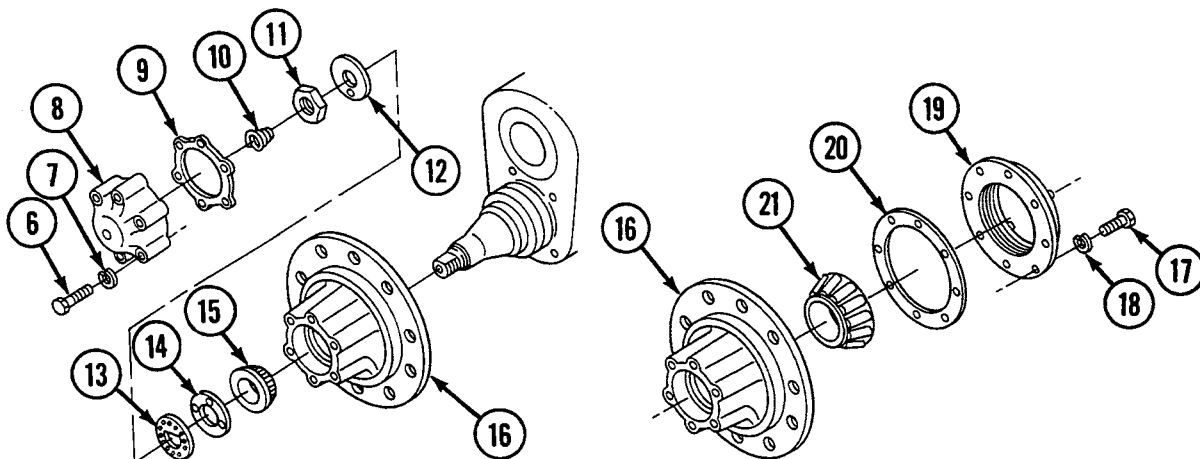
1. Install idler link bearing (36) in idler link (26).
2. Connect one end of idler link (26) to roadwheel arm (31) with clevis pin (35), washer (34), nut (33), and cotter pin (32).
3. Connect opposite end of idler link (26) to compensating idler arm (25) with clevis pin (30), washer (29), nut (28), and cotter pin (27).
4. Install spacer (24) to compensating idler arm (25).



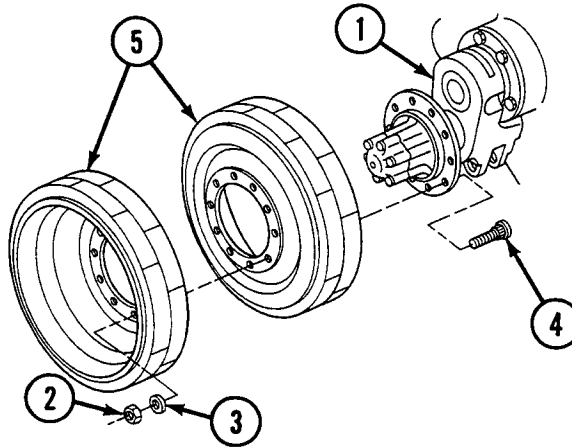
5. Install outer roller cup (23) to hub (16) using remover, replacer, and handle.
6. Install inner roller cup (22) to hub using remover, replacer, and handle.



7. Install, cone and roller (21), gasket (20), seal assembly (19), eight lockwashers (18), and eight screws (17) to hub (16).
8. Install hub (16), cone and roller (15), round nut (14), two washers (12 and 13), nut (11), spring (10), gasket (9), access cover (8), six lockwashers (7), and six screws (6). Torque screws to 20–25 lb-ft (27–34 N•m).



9. Install two compensating idler wheels (5), ten bolts (4), ten washers (3), and ten self-locking nuts (2). Torque self-locking nuts to 320–350 lb-ft (434–475 N•m).
10. Remove blocking and lower idler arm assembly (1).

**NOTE**

Follow-on maintenance: Tighten track tension (refer to TM 9-2350-256-10).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

COMPENSATING IDLER AND ARM ASSEMBLY MAINTENANCE
REMOVAL, CLEANING, INSPECTION, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)
 Handle (item 20, WP 0490 00)
 Replacer (item 46, WP 0490 00)
 Wrench (item 66, WP 0490 00)

Materials/Parts

Compound, cleaning (item 9, WP 0489 00)
 Grease, GAA (item 13, WP 0489 00)
 Oil, OE (item 22, WP 0489 00)
 Nuts, bearing (2) (item 193, WP 0491 00)
 Packings, preformed (2) (item 866, WP 0491 00)
 Screws (12) (item 702, WP 0491 00)

Materials/Parts (cont.)

Seals (2) (item 865, WP 0491 00)
 Seal assemblies (2) (item 346, WP 0491 00)
 Washers, bearing (2) (item 314, WP 0491 00)
 Washers, flat (2) (item 75, WP 0491 00)
 Washers, key (2) (item 76, WP 0491 00)

Equipment Condition

Roadwheel removed (see WP 0274 00)
 Compensating idler wheel and hub assembly removed
 and link disconnected (see WP 0281 00)
 Track disconnected (refer to TM 9-2350-256-10)

WARNING

Ensure track is blocked when performing suspension maintenance. If track is not blocked, vehicle may roll and may cause severe injury or death to personnel.

WARNING

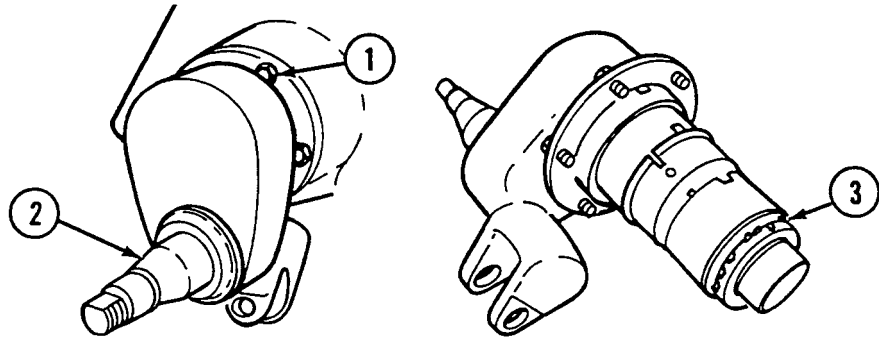
Compensating idler arm is heavy and may cause injury if dropped.

NOTE

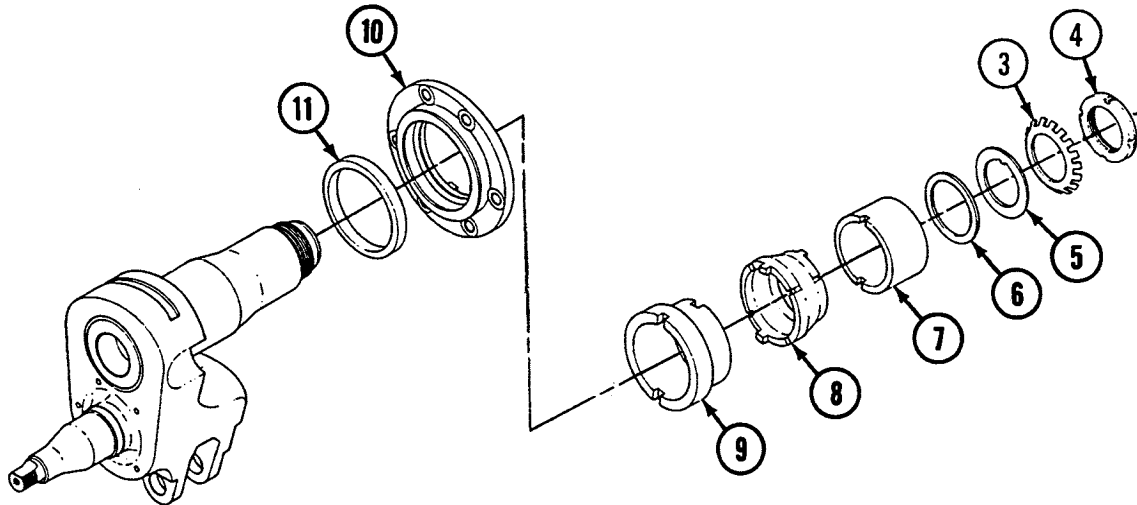
Left and right sides are removed and installed in the same manner.

Removal

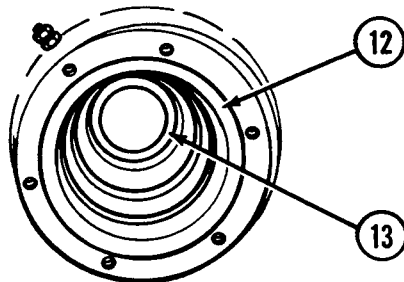
1. Remove six screws (1) and compensating idler arm (2) from vehicle hull.
2. Turn back edges of key washer (3).



3. Remove round bearing nut (4) and key washer (3).
4. Remove thrust bearing washer (5), flat washer (6), and inner sleeve bearing (7).
5. Remove spacer (8) and outer bearing (9).
6. Remove retainer (10) with seal assembly (11) using replacer. Remove old seal assembly from retainer.



7. Remove preformed gasket (12).
8. Remove compensating idler arm support seal (13).



Cleaning

WARNING

Solvents can burn easily, give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open flame and use in a well-ventilated area. If solvent gets on skin or clothing, wash immediately with soap and water.

NOTE

Use only fresh cleaning compound for bearings.

1. Clean all parts thoroughly using cleaning compound.

Inspection-Acceptance and Rejection Criteria

1. Inspect all parts for wear, pitting, or other damage. Replace defective parts.

Installation

1. Lubricate compensating idler arm support seal (13) with OE oil. Install compensating idler arm support seal with spring-loaded lip facing outside of vehicle. Use replacer and handle.
2. Install preformed gasket (12).
3. Install seal assembly (11) in retainer (10) with spring-loaded lip facing inside of vehicle.
4. Apply light coat of grease to mating surfaces and install outer bearing (9).
5. Install spacer (8).
6. Install inner sleeve bearing (7), flat washer (6), and thrust bearing washer (5). Apply light coat of grease to mating surfaces.
7. Install key washer (3) and round bearing nut (4). Tighten round bearing nut until bearings (7 and 9) cannot be turned. Then back off round bearing nut just enough so that inner and outer bearings will turn by hand 1 complete turn.
8. Fold back edges of key washer (3) to lock round bearing nut (4).

WARNING

Compensating idler arm is heavy, and may cause severe injury if dropped.

9. Install compensating idler arm (2) and six screws (1).

NOTE

Follow-on maintenance: Connect track (refer to TM 9-2350-256-10); Install compensating idler hub assembly and wheels and connect compensating idler link (see WP 0281 00); Install roadwheel (see WP 0274 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

FINAL DRIVE SPROCKET AND HUB REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)
 Jackscrews (3) (item 28, WP 0490 00)
 Multiplier, torque (item 33, WP 0490 00)
 Sling assembly (item 51, WP 0490 00)
 Sling assembly, lifting (item 52, WP 0490 00)
 Socket set (item 54, WP 0490 00)
 Wrench, torque, 0–175 lb-ft (0–237 N•m) (item 67, WP 0490 00)
 Wrench, torque, 0–600 lb-ft (0–813 N•m) (item 69, WP 0490 00)

Materials/Parts

Grease, GAA (item 13, WP 0489 00)
 Bolts (44) (item 288, WP 0491 00)
 Nuts (44) (item 434, WP 0491 00)
 Nuts, dowel (20) (item 100, WP 0491 00)
 Screws (14) (item 427, WP 0491 00)

Equipment Condition

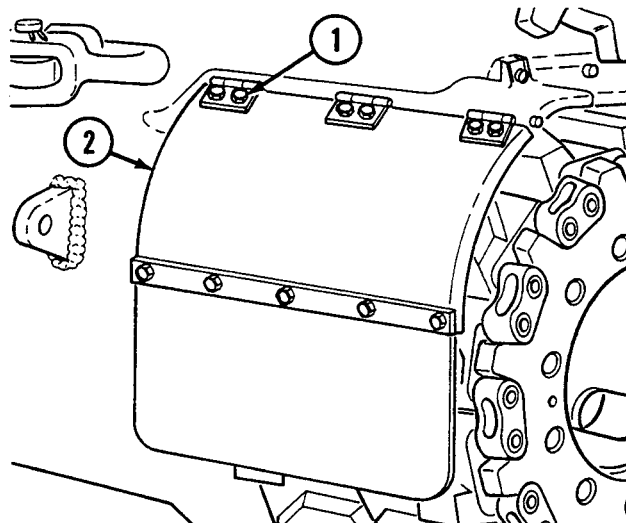
Track disconnected (refer to TM 9-2350-256-10)

Removal

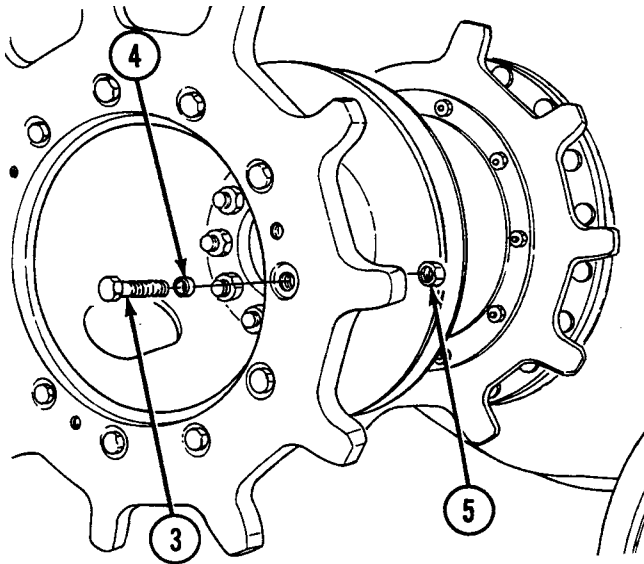
NOTE

Left and right track-drive hubs and sprockets are removed in the same manner.

1. Remove seven screws (1) (one screw is hidden) and remove hinged rear fender (2).



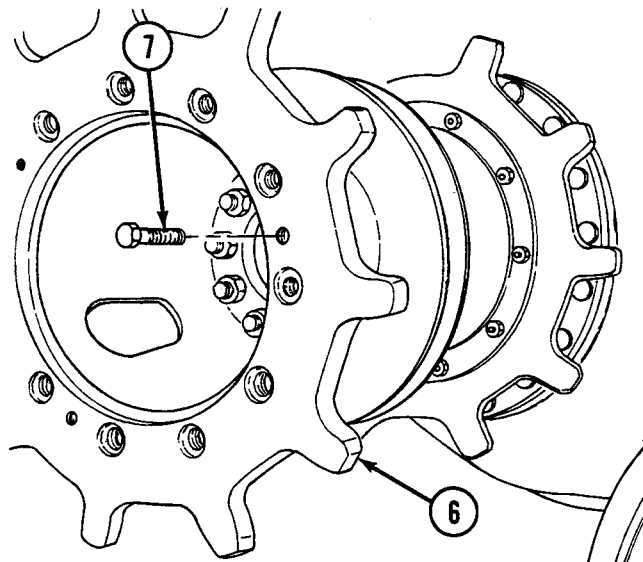
2. Remove 11 bolts (3), 11 bushings (4), and 11 nuts (5).



WARNING

Sprocket is heavy. If sprocket is dropped, it may cause serious injury.

3. Remove outer sprocket (6) by installing three jackscrews (7) in three threaded holes. Tighten jackscrews evenly and remove sprocket.

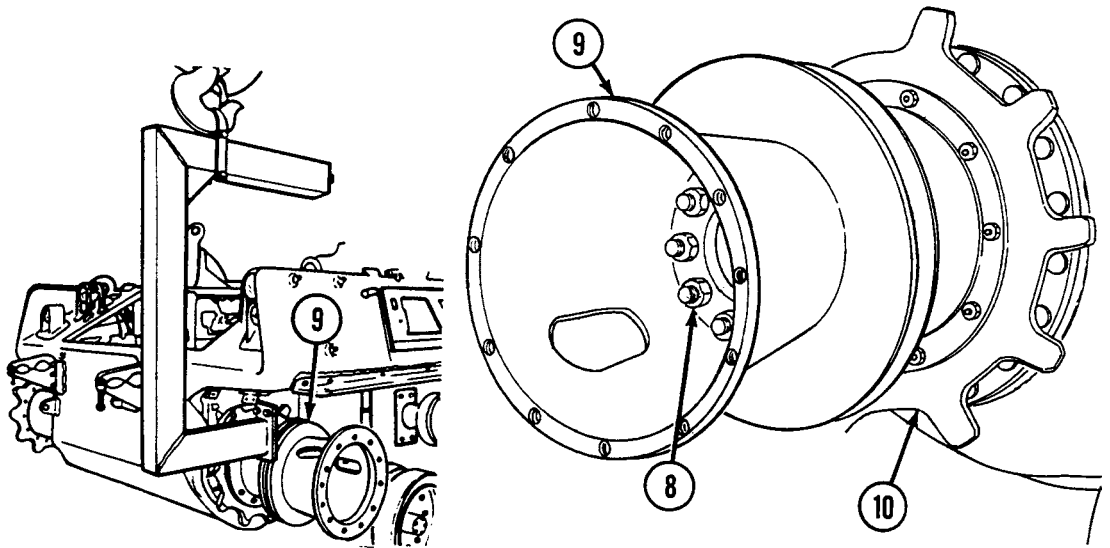


- Remove nine dowel nuts (8) from track-drive hub (9).

WARNING

All personnel are to stand clear of vehicle hull when lifting. Sling failure may cause severe injury or death.

- Install lifting sling assembly and sling assembly on track-drive hub (9).
- Remove dowel nut (8), track-drive hub (9), and inner sprocket (10).

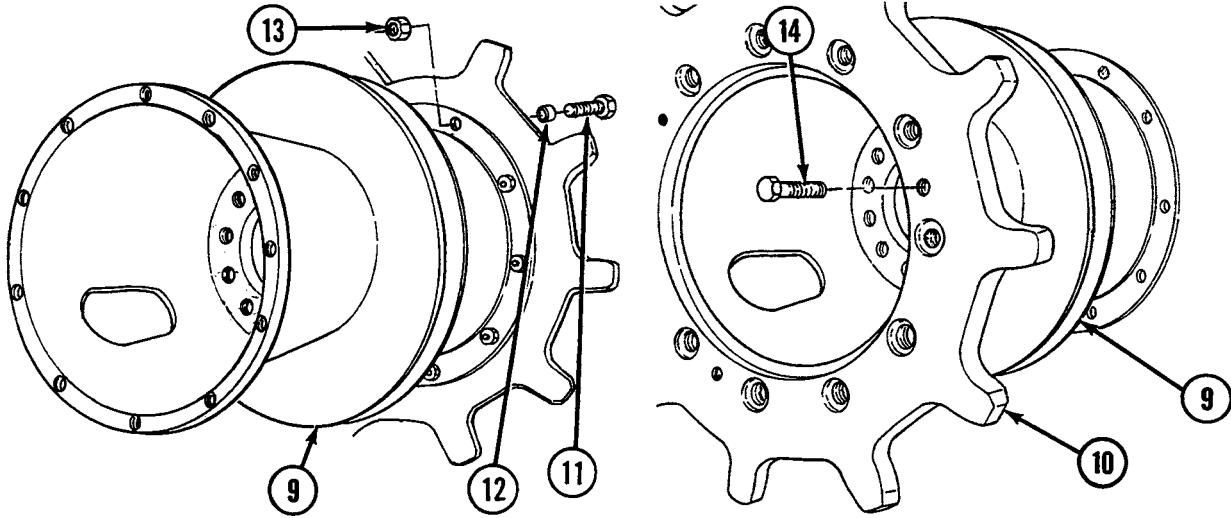


- Remove 11 bolts (11), 11 bushings (12), and 11 nuts (13).

WARNING

Sprocket is heavy. If sprocket is dropped, it may cause serious injury.

- Remove inner sprocket (10) by installing three jackscrews (14) in three holes provided. Tighten jackscrews evenly and remove sprocket.



Installation

WARNING

Sprocket is heavy. If sprocket is dropped, it may cause serious injury.

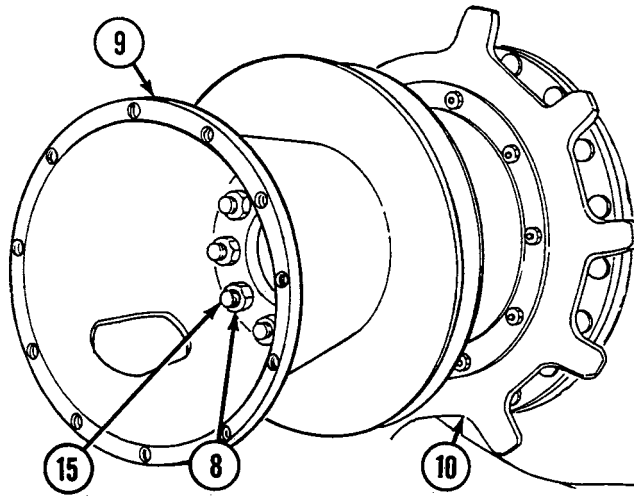
- Install inner sprocket (10), 11 bushings (12), and 11 bolts (11) to track-drive hub (9). Torque bolts to 225–250 lb-ft (305–339 N•m).
- Lubricate threads of 11 bolts (11) and 11 nuts (13) with GAA grease and install nuts. Torque nuts to 70–90 lb-ft (95–122 N•m).

WARNING

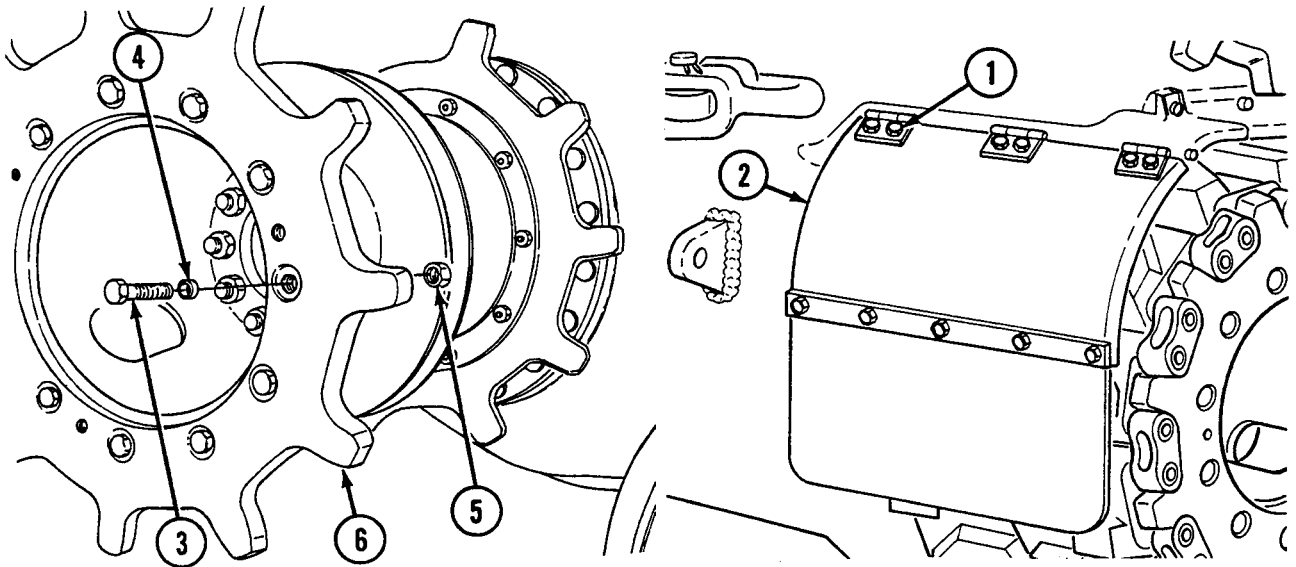
All personnel are to stand clear of vehicle hull when lifting. Sling failure may cause severe injury or death.

- Install lifting sling assembly and sling assembly on track-drive hub (9).
- Loosely install track-drive hub (9) and sprocket (10) with dowel nut (8) to prevent track-drive hub from falling. Remove lifting sling assembly and sling assembly.
- Lubricate mating surfaces of flange on final drive and track-drive hub (9) with GAA grease.

6. Lubricate threads of 10 dowels (15) with GAA grease and install remaining dowel nuts (8). Torque dowel nuts to 450–470 lb-ft (610–637 N•m). Wait 3 minutes and retighten dowel nuts. Wait one minute and check torque again.



7. Install outer sprocket (6), 11 bushings (4), and 11 bolts (3) to track-drive hub (9). Torque bolts to 225–250 lb-ft (305–339 N•m).
8. Lubricate threads of 11 bolts (3) and 11 nuts (5) with GAA grease and install nuts. Torque nuts to 70–90 lb-ft (95–122 N•m).
9. Install hinged rear fender (2) with seven screws (1).



NOTE

Follow-on maintenance: Connect track (refer to TM 9-2350-256-10).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

BUMPER SPRINGS AND BRACKETS MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)
Multiplier, torque (item 33, WP 0490 00)
Socket set (item 54, WP 0490 00)
Wrench, torque, 0–175 lb-ft (0–237 N•m) (item 67, WP 0490 00)
Wrench, torque, 0–600 lb-ft (0–813 N•m) (item 69, WP 0490 00)

Materials/Parts

Bolts (10) (item 308, WP 0491 00)
Bolts, spring (8) (item 420, WP 0491 00)
Lockwashers (8) (item 644, WP 0491 00)
Lockwashers (20) (item 655, WP 0491 00)
Washers, flat (8) (item 174, WP 0491 00)

NOTE

Left and right bumpers are removed and installed in the same manner.

Removal

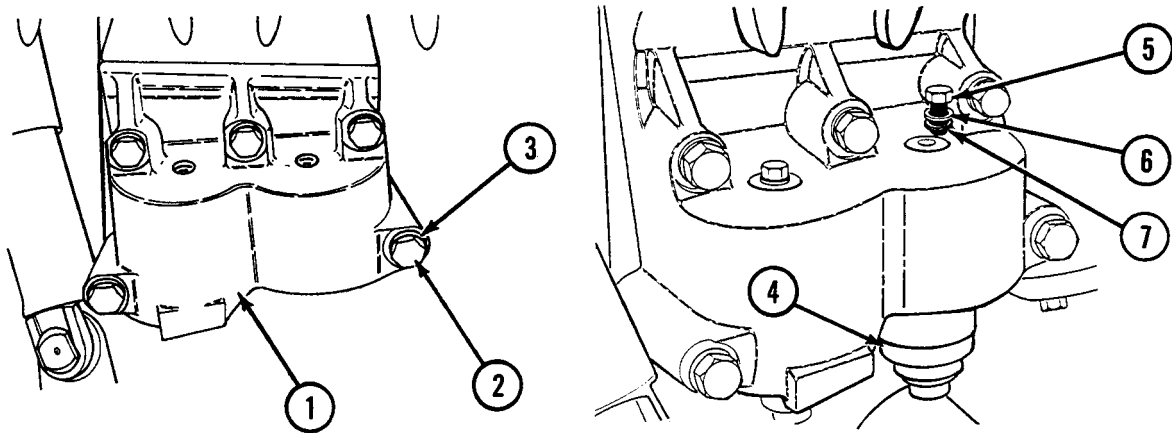
WARNING

Bumper mounting is heavy. If bumper mounting bracket is dropped, it may cause serious injury.

1. Remove bumper mounting bracket (1) by removing five bolts (2) and five lockwashers (3).

Disassembly

1. Remove two bumper springs (4), two bumper spring bolts (5), two lockwashers (6), and two flat washers (7).



Assembly

1. Install two bumper springs (4), and position two flat washers (7), two lockwashers (6), and two spring bolts (5). Align bumper springs to ensure maximum contact between bumper spring tappet and arm assembly. When alignment is complete, torque spring bolts to 150–170 lb-ft (203–230 N•m).

Installation

WARNING

Bumper mounting bracket is heavy. If bumper mounting bracket is dropped, it may cause serious injury.

1. Install bumper mounting bracket (1) with five bolts (2) and five lockwashers (3). Torque bolts to 350–400 lb-ft (475–542 N•m).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

SHOCK ABSORBERS REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)
Multiplier, torque (item 33, WP 0490 00)
Socket set (item 54, WP 0490 00)
Wrench, torque, 0–175 lb-ft (0–237 N•m) (item 67, WP 0490 00)
Wrench, torque, 0–600 lb-ft (0–813 N•m) (item 69, WP 0490 00)

Materials/Parts

Lockwashers (24) (item 653, WP 0491 00)
Lockwashers (24) (item 654, WP 0491 00)
Pins, cotter (12) (item 226, WP 0491 00)
Pins, straight (12) (item 262, WP 0491 00)
Screws (24) (item 422, WP 0491 00)
Screws (20) (item 425, WP 0491 00)
Screws (4) (item 426, WP 0491 00)

Removal**WARNING**

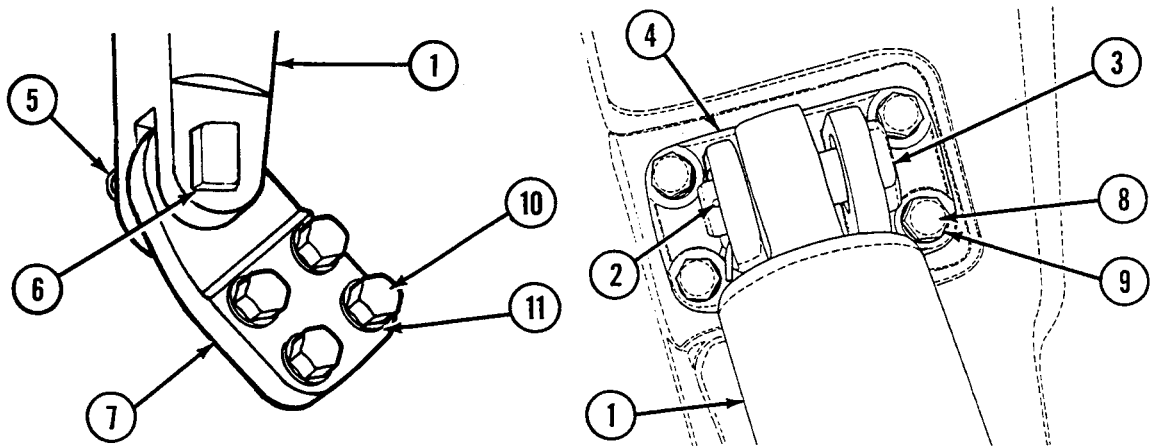
Ensure track is blocked to prevent vehicle from rolling while performing suspension maintenance. If vehicle is not blocked, it may cause serious injury or death.

1. Remove top of shock absorber (1) by removing cotter pin (2) and straight pin (3) from upper bracket (4).

WARNING

Shock absorber is heavy. If shock absorber is dropped, it may cause serious injury.

2. Remove bottom of shock absorber (1) by removing cotter pin (5) and straight pin (6) from lower bracket (7).
3. Remove upper bracket (4) by removing four screws (8) and four lockwashers (9).
4. Remove lower bracket (7) by removing four screws (10) and four lockwashers (11).



Installation**WARNING**

Ensure track is blocked to prevent vehicle from rolling while performing suspension maintenance. If vehicle is not blocked, it may cause serious injury or death.

1. Install lower bracket (7) with four screws (10) and four lockwashers (11). Torque screws to 300–340 lb-ft (407–461 N•m).

WARNING

Shock absorber is heavy. If shock absorber is dropped, it may cause serious injury.

NOTE

Ensure that slotted side of bottom of shock absorber (1) end faces toward centerline of vehicle.

2. Install upper bracket (4) with four screws (8) and four lockwashers (9). Torque screws to 145–175 lb-ft (197–237 N•m).
3. Install bottom of shock absorber (1) on lower bracket (7) with straight pin (6) and cotter pin (5).
4. Install top of shock absorber (1) on upper bracket (4) with straight pin (3) and cotter pin (2).

END OF WORK PACKAGE

CHAPTER 10
UNIT MAINTENANCE
MAINTENANCE INSTRUCTIONS
FOR
HULL- AND CAB-RELATED COMPONENTS
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
(NSN: 2350-00-122-6826)

CHAPTER 10
UNIT MAINTENANCE
MAINTENANCE INSTRUCTIONS

WORK PACKAGE INDEX

<u>Title</u>	<u>WP Sequence No.</u>
Right-Front Access Floor Plate Replacement Removal, Installation.....	0286 00
Right-Front Floor Plate Rear Access Replacement Removal, Installation.....	0287 00
Hydraulic Valve Forward Right Floor Plate Replacement Removal, Installation.....	0288 00
U-35 Winch Center Right Floor Plate Replacement Removal, Installation.....	0289 00
Intermediate Rear Right Floor Plate Replacement Removal, Installation.....	0290 00
Rear Right-Side Floor Plate Replacement Removal, Installation.....	0291 00
Hydraulic Connections Access Cover Replacement Removal, Installation.....	0292 00
Rear Intermediate Right Floor Plate Replacement Removal, Installation.....	0293 00
Rear Intermediate Right Access Cover Replacement Removal, Installation.....	0294 00
Rear Intermediate Right Access Floor Plate Replacement Replacement, Installation.....	0295 00
Hydraulic Line Intermediate Rear Right Center Floor Plate Replacement Removal, Installation.....	0296 00
Rear Center Floor Plate Maintenance Removal, Disassembly, Assembly, Installation.....	0297 00
Rear Left-Side Intermediate Floor Plate Replacement Removal, Installation.....	0298 00
Fuel Transmitter Center Left Floor Access Plate Replacement Removal, Installation.....	0299 00
Rear Left-Side Floor Plate Replacement Removal, Installation.....	0300 00
Intermediate Rear Left-Side Floor Plate Replacement Removal, Installation.....	0301 00
Intermediate Rear Left-Center Floor Plate Replacement Removal, Installation.....	0302 00
Center Rear Floor Plate Replacement Removal, Installation.....	0303 00
Center Forward Floor Plate Replacement Removal, Installation.....	0304 00
Intermediate Rear Left Access Floor Plate Replacement Removal, Installation.....	0305 00
Stowage Basket Forward Intermediate Left Floor Plate Maintenance Removal, Disassembly, Assembly, Installation.....	0306 00
Floor and Light Mount Plate Maintenance Removal, Disassembly, Assembly, Installation.....	0307 00
Hydraulic Valve Forward Intermediate Right Floor Plate Replacement Removal, Installation.....	0308 00
Front Subfloor Support Replacement Removal, Installation.....	0309 00
Center and Rear Subfloor Support Replacement Removal, Installation.....	0310 00
Fenders and Related Parts Replacement Removal, Installation.....	0311 00
Commander's Cupola Assembly Maintenance Removal, Disassembly, Assembly, Installation.....	0312 00
Driver's Cab-Top Door and Related Parts Maintenance Removal, Disassembly, Assembly, Installation.....	0313 00
Mechanic's Cab-Top Door and Related Parts Maintenance Removal, Disassembly, Assembly, Installation.....	0314 00
Rigger's Cab-Top Door and Related Parts Maintenance Removal, Disassembly, Assembly, Installation.....	0315 00
Wire Rope Roller Access Door Replacement Removal, Installation.....	0316 00
Left and Right Stowage Compartment Doors Replacement Removal, Installation.....	0317 00
Left and Right Personnel Doors Replacement Removal, Installation.....	0318 00
Fuel Tank Filler Access Cover Replacement Replacement, Installation.....	0319 00
Bilge Pump Outlet Cover Replacement Removal, Installation.....	0320 00
Left- and Right-Side Air Cleaner Inlet Covers Replacement Removal, Installation.....	0321 00
Left and Right Personnel Step Assemblies Replacement Removal, Installation.....	0322 00
Passive Night Viewer Mount and Related Parts Maintenance Removal, Disassembly, Assembly, Installation.....	0323 00
Infrared Power Supply Replacement Removal, Installation.....	0324 00
Periscope Quick-Release Mount (Infrared Night Viewer) Replacement Removal, Installation.....	0325 00
Driver's and Rigger's Periscope Blocks and Vision Prisms Replacement Removal, Installation.....	0326 00

CHAPTER 10
UNIT MAINTENANCE
MAINTENANCE INSTRUCTIONS

WORK PACKAGE INDEX–Continued

<u>Title</u>	<u>WP Sequence No.</u>
Mechanic’s Periscope Block and Vision Prisms Replacement Removal, Installation	0327 00
Towing Pintle and Mount Maintenance Removal, Disassembly, Cleaning, Inspection, Assembly, Installation	0328 00
Boom Support and Related Parts Maintenance Removal, Installation, Adjustment	0329 00
Transmission Guide Bars Replacement Removal, Installation	0330 00
Antenna Base Covers Replacement Removal, Installation	0331 00
Acetylene Hose Adapter Replacement Removal, Installation	0332 00
Battery Tray Cleaning Tubes Replacement Removal, Installation	0333 00
APU Access Cover Assembly Replacement Removal, Installation	0334 00
APU Access Door Replacement Removal, Installation	0335 00
Engine Deck, Deck Base, and Related Parts Maintenance Removal, Disassembly, Assembly, Instal- lation	0336 00
Right Engine Deck Door Maintenance Removal, Disassembly, Assembly, Installation	0337 00
Clamp Assembly Replacement Removal, Installation	0338 00
Insulation Retainer Replacement Removal, Installation	0339 00
Engine Transmission Access Doors Maintenance Removal, Disassembly, Assembly, Installation	0340 00
Air Inlet Doors Replacement Removal, Installation	0341 00
Left- and Center-Front Air Inlet Grilles Replacement Removal, Installation	0342 00
Deep Water Fording Exhaust Cover Plates Replacement Removal, Installation	0343 00
Exhaust Deflector Replacement Removal, Installation	0344 00
Left and Right Deck Air Inlet Doors Replacement Removal, Installation	0345 00
Left and Right Exhaust Doors Replacement Removal, Installation	0346 00
Center Exhaust Doors Replacement Removal, Installation	0347 00
Nonslip Walkway Coating Service	0348 00
Personnel Seat Assemblies Maintenance Removal, Disassembly, Assembly, Installation	0349 00
Commander’s Seat Assembly Maintenance Removal, Disassembly, Inspection, Repair, Assembly, Installation	0350 00
Rigger’s Seat Assembly Maintenance Removal, Disassembly, Inspection, Repair, Assembly, Instal- lation	0351 00
Mechanic’s and Driver’s Seat Assemblies Maintenance Removal, Disassembly, Inspection, Repair, Assembly, Installation	0352 00
Drain Valves Maintenance Removal, Disassembly, Inspection, Assembly, Installation	0353 00
Drain Valve Controls Maintenance Removal, Inspection, Repair, Installation	0354 00
Drain Covers Replacement Removal, Installation	0355 00
Mechanical Tachometer and Speedometer Flexible Shafts and Fittings Maintenance Removal, Cleaning, Inspection, Installation	0356 00
Steering Controls and Linkages Maintenance Removal, Disassembly, Assembly, Installation	0357 00
Steering Controls and Linkages Alignment	0358 00
Steering Control Assembly Maintenance Removal, Disassembly, Assembly, Installation	0359 00
Steering Control Housing Assembly Maintenance Removal, Disassembly, Assembly, Installation	0360 00
Shifting Controls and Linkages Maintenance Removal, Disassembly, Assembly, Installation	0361 00
Shifting Controls and Linkages Alignment Alignment, Adjustment	0362 00
Accelerator Controls and Linkages Maintenance Removal, Disassembly, Cleaning, Inspection, Repair, Assembly, Installation	0363 00
Accelerator Controls and Linkages Alignment Alignment, Adjustment	0364 00

CHAPTER 10
UNIT MAINTENANCE
MAINTENANCE INSTRUCTIONS

WORK PACKAGE INDEX—Continued

<u>Title</u>	<u>WP Sequence No.</u>
Brake Controls and Linkages Maintenance Removal, Disassembly, Assembly, Installation, Alignment, Adjustment.....	0365 00
Brake Pedal and Bracket Assembly Maintenance Removal, Disassembly, Assembly, Installation.....	0366 00
Brake Cam Assembly Maintenance Removal, Disassembly, Assembly, Installation.....	0367 00
Bearing Unit Housing Assembly Maintenance Removal, Disassembly, Assembly, Installation.....	0368 00
Plate Assembly Maintenance Removal, Disassembly, Assembly, Installation.....	0369 00
Lever Assembly Maintenance Disassembly, Assembly.....	0370 00
Linkage Roller Plates Replacement Removal, Installation.....	0371 00
Vise Mounting Hardware and Adapter Plate Replacement Removal, Installation.....	0372 00
Decontamination Apparatus Bracket Assembly Replacement Removal, Installation.....	0373 00
Tow Bar Assembly, Tow Bar Mounting Brackets, and Tow Chain Mounting Brackets Maintenance Removal, Disassembly, Assembly, Installation.....	0374 00
Bracket Assemblies For Side Tow Bar and Side Tow Cables Maintenance Removal, Disassembly, Assembly, Installation.....	0375 00
Tarpaulin Tray Replacement Removal, Installation.....	0376 00
10-Ton Snatch Block and Track Link Retainers Replacement Removal, Installation.....	0377 00
25-Ton Snatch Block Retainer Replacement Removal, Installation.....	0378 00
Oxygen Tank Strap Assemblies Replacement Removal, Installation.....	0379 00
Pioneer Tool Set Bracket Maintenance Removal, Disassembly, Assembly, Installation.....	0380 00
Roadwheel, Support Wheel, and Sprocket Attaching Hardware Replacement Removal, Installation.....	0381 00
Stowage Basket Replacement Removal, Installation.....	0382 00
Passive Night Viewer Stowage Box, Hand Grenade Boxes and Machine Gun and Rifle Holders Replacement Removal, Installation.....	0383 00
Hand Fire Extinguisher Brackets Replacement Removal, Installation.....	0384 00
Rocket Ammunition Stowage Box Assembly Replacement Removal, Installation.....	0385 00
Caliber .50 Ammunition Rack and Track Wrench Bracket Maintenance Removal, Disassembly, Assembly, Installation.....	0386 00
Acetylene and Compartment Door Hardware and Related Parts Replacement Removal, Installation.....	0387 00
Flasher Light Case Replacement Removal, Installation.....	0388 00
Toolbox Rack Replacement Removal, Installation.....	0389 00
Oddment Tray, Left Side Replacement Removal, Installation.....	0390 00
Caliber .50 Stowage Strap Replacement Removal, Installation.....	0391 00
Liquid Container Brackets Replacement Removal, Installation.....	0392 00
M72 LAW Rocket Launcher Brackets Maintenance Removal, Disassembly, Assembly, Installation.....	0393 00
Interior and Exterior Straps Replacement Removal, Installation.....	0394 00
Vehicle ID Plate Replacement Removal, Installation.....	0395 00

UNIT MAINTENANCE

RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1

NSN 2350-00-122-6826, EIC AQA

**RIGHT-FRONT ACCESS FLOOR PLATE REPLACEMENT
REMOVAL, INSTALLATION**

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

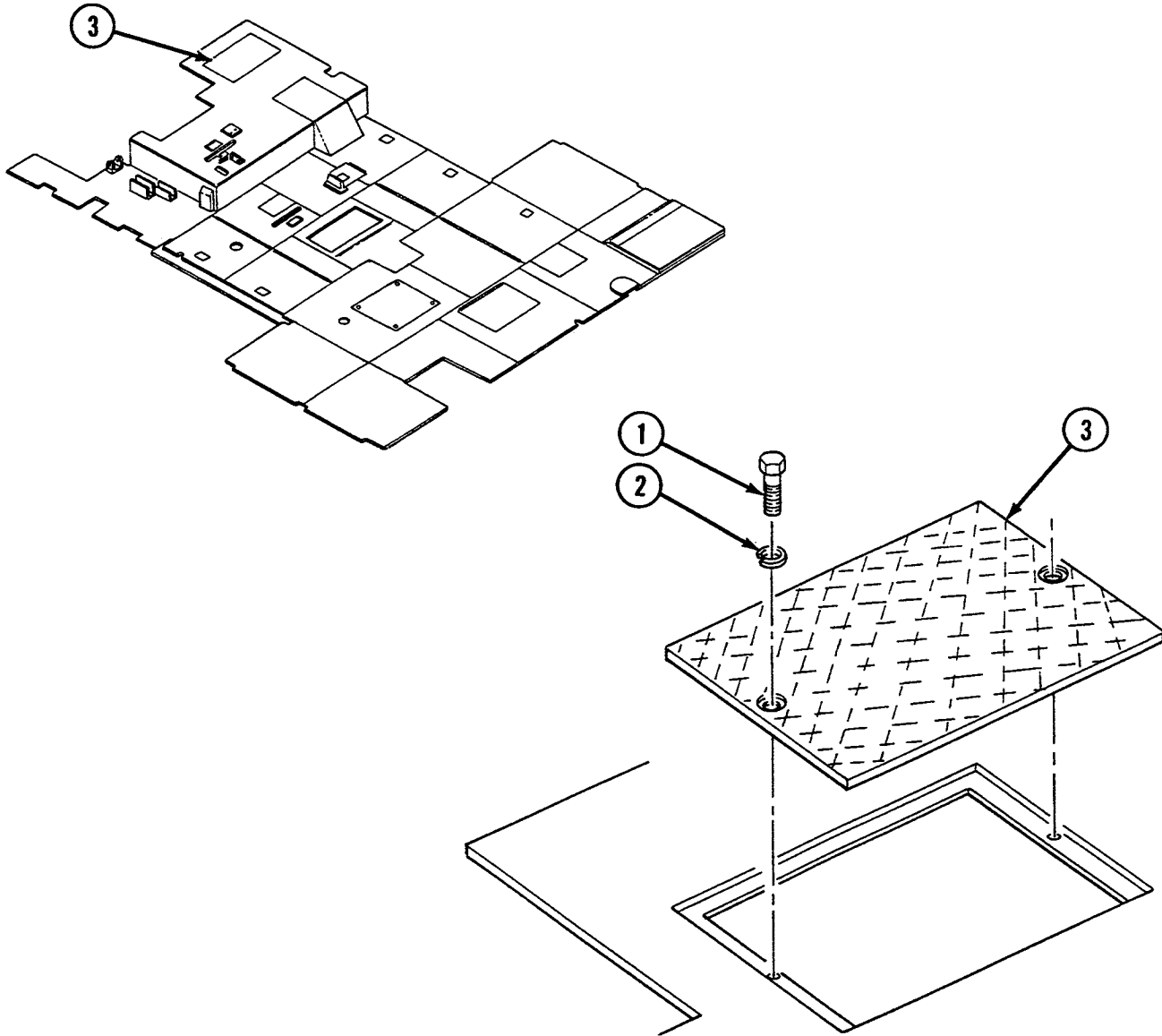
Materials/Parts

Lockwashers (2) (item 623, WP 0491 00)

Screws (2) (item 388, WP 0491 00)

Removal

1. Remove two screws (1), two lockwashers (2), and floor plate (3).

**Installation**

1. Install floor plate (3) with two lockwashers (2) and two screws (1).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
RIGHT-FRONT FLOOR PLATE REAR ACCESS REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

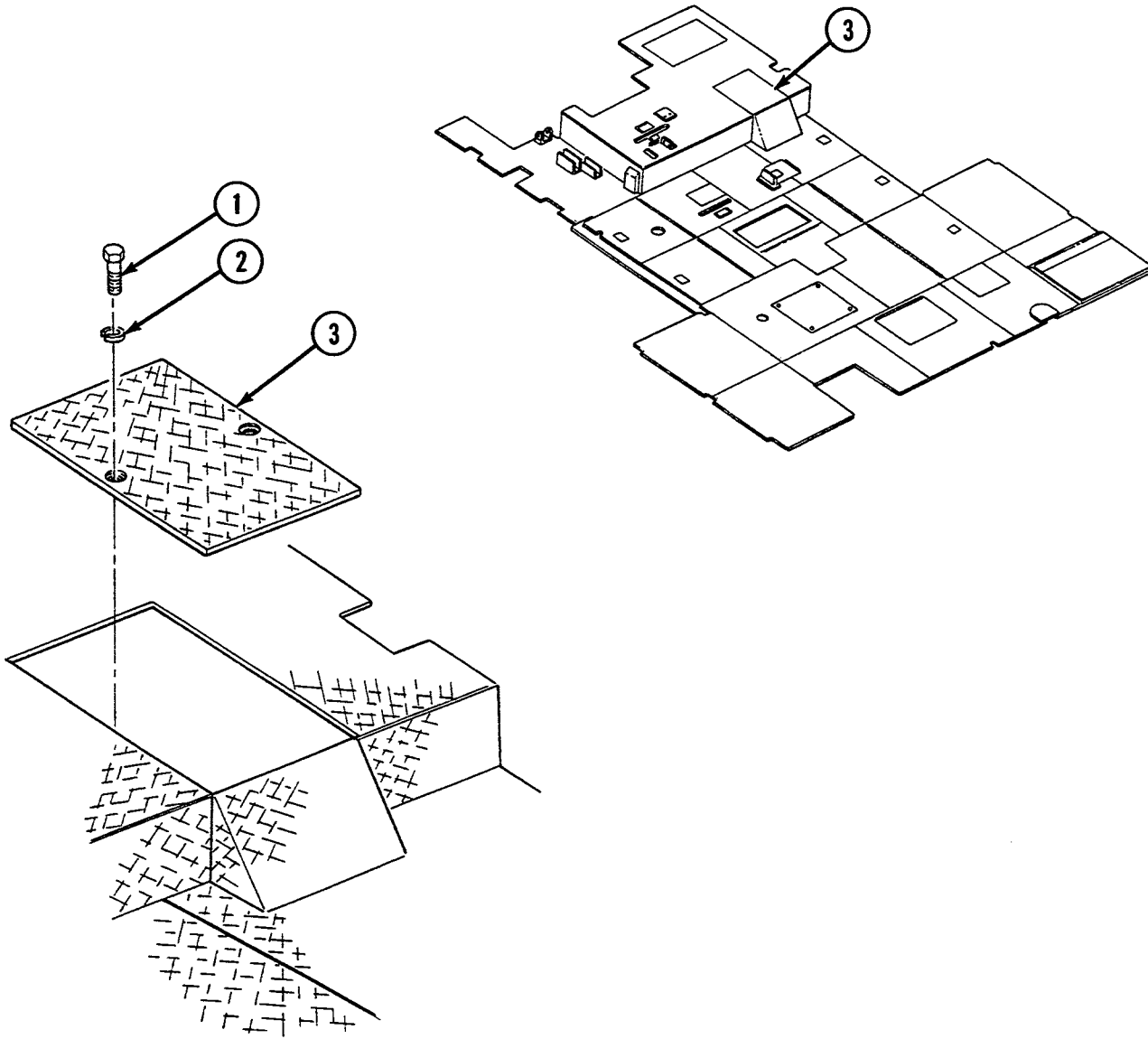
Materials/Parts

Lockwashers (2) (item 623, WP 0491 00)

Screws (2) (item 388, WP 0491 00)

Removal

1. Remove two screws (1), two lockwashers (2), and floor plate (3).

**Installation**

1. Install floor plate (3) with two lockwashers (2) and two screws (1).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
HYDRAULIC VALVE FORWARD RIGHT FLOOR PLATE REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

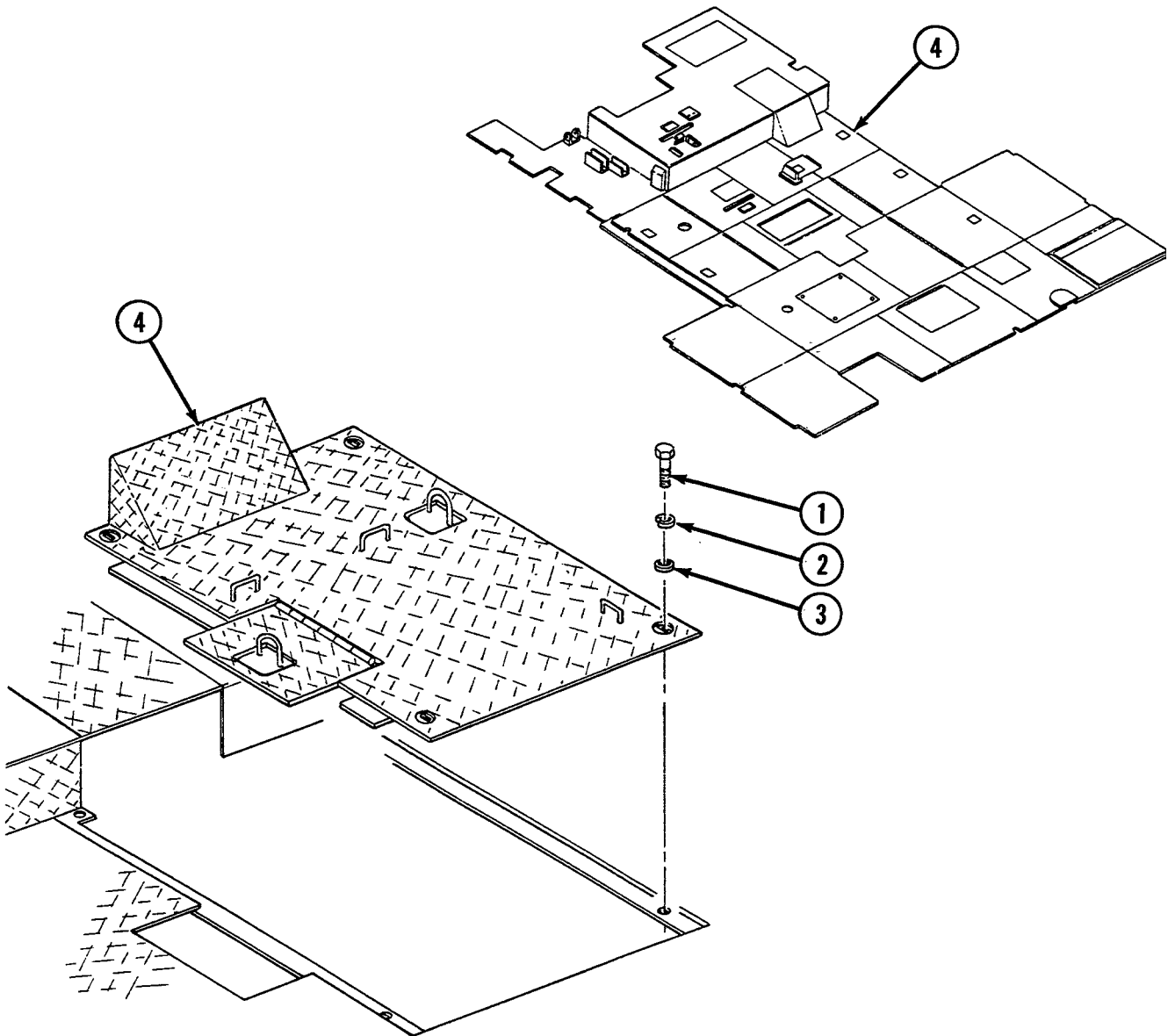
Lockwashers (4) (item 623, WP 0491 00)

Screws (4) (item 388, WP 0491 00)

Washers, flat (4) (item 537, WP 0491 00)

Removal

1. Remove four screws (1), four lockwashers (2), four flat washers (3), and floor plate (4).

**Installation**

1. Install floor plate (4) with four flat washers (3), four lockwashers (2), and four screws (1).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
U-35 WINCH CENTER RIGHT FLOOR PLATE REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

Floor-mounted bracket removed (see WP 0392 00)

Materials/Parts

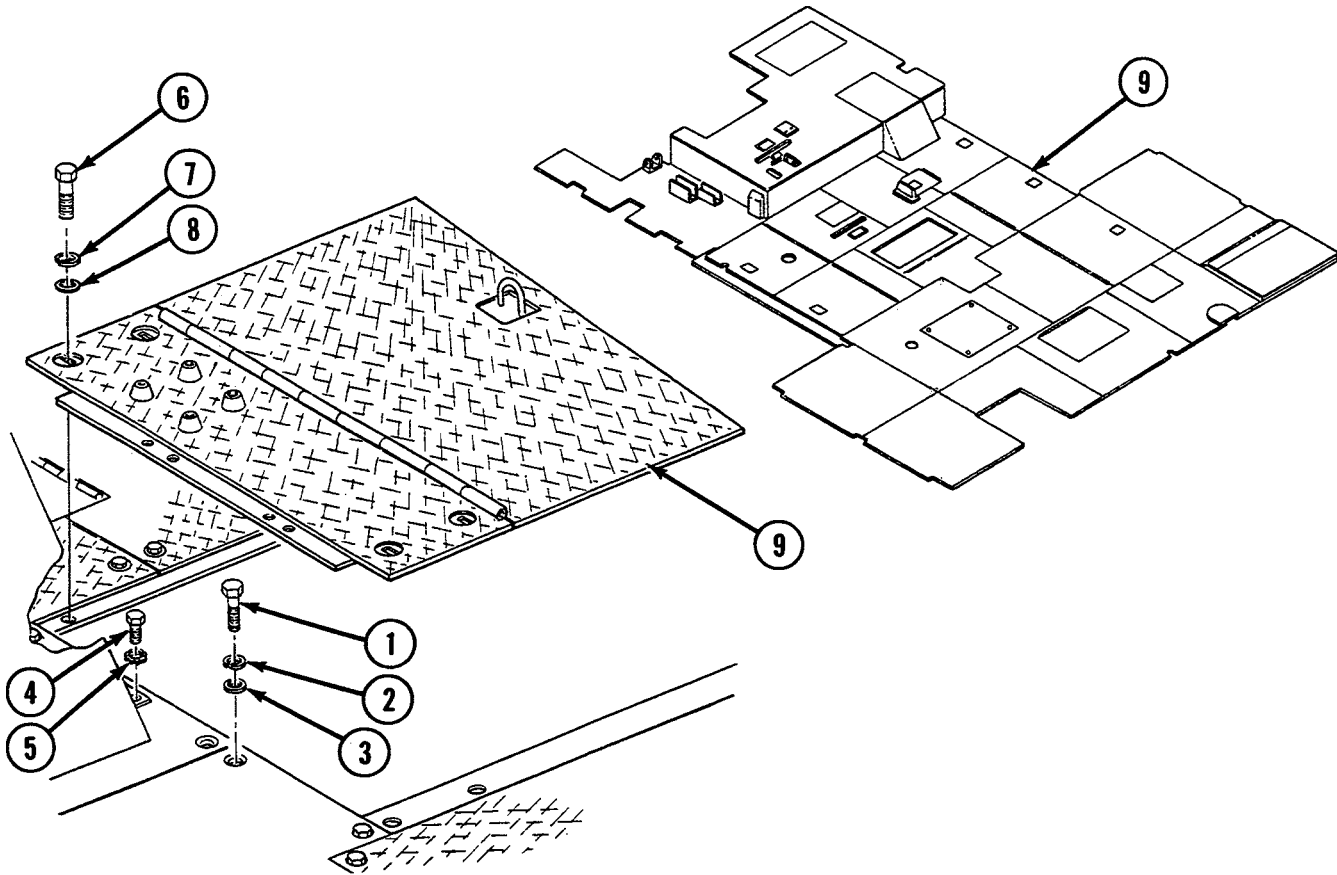
Lockwashers (8) (item 623, WP 0491 00)

Screws (8) (item 388, WP 0491 00)

Washers, flat (6) (item 537, WP 0491 00)

Removal

1. Remove two screws (1), two lockwashers (2), and two flat washers (3).
2. Remove two screws (4) and two lockwashers (5).
3. Remove four screws (6), four lockwashers (7), four flat washers (8), and floor plate (9).



Installation

1. Install floor plate (9) with four flat washers (8), four lockwashers (7), and four screws (6).
2. Install two lockwashers (5) and two screws (4).
3. Install two screws (1), two lockwashers (2), and two flat washers (3).

NOTE

Follow-on maintenance: Install floor-mounted bracket (see WP 0392 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
INTERMEDIATE REAR RIGHT FLOOR PLATE REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

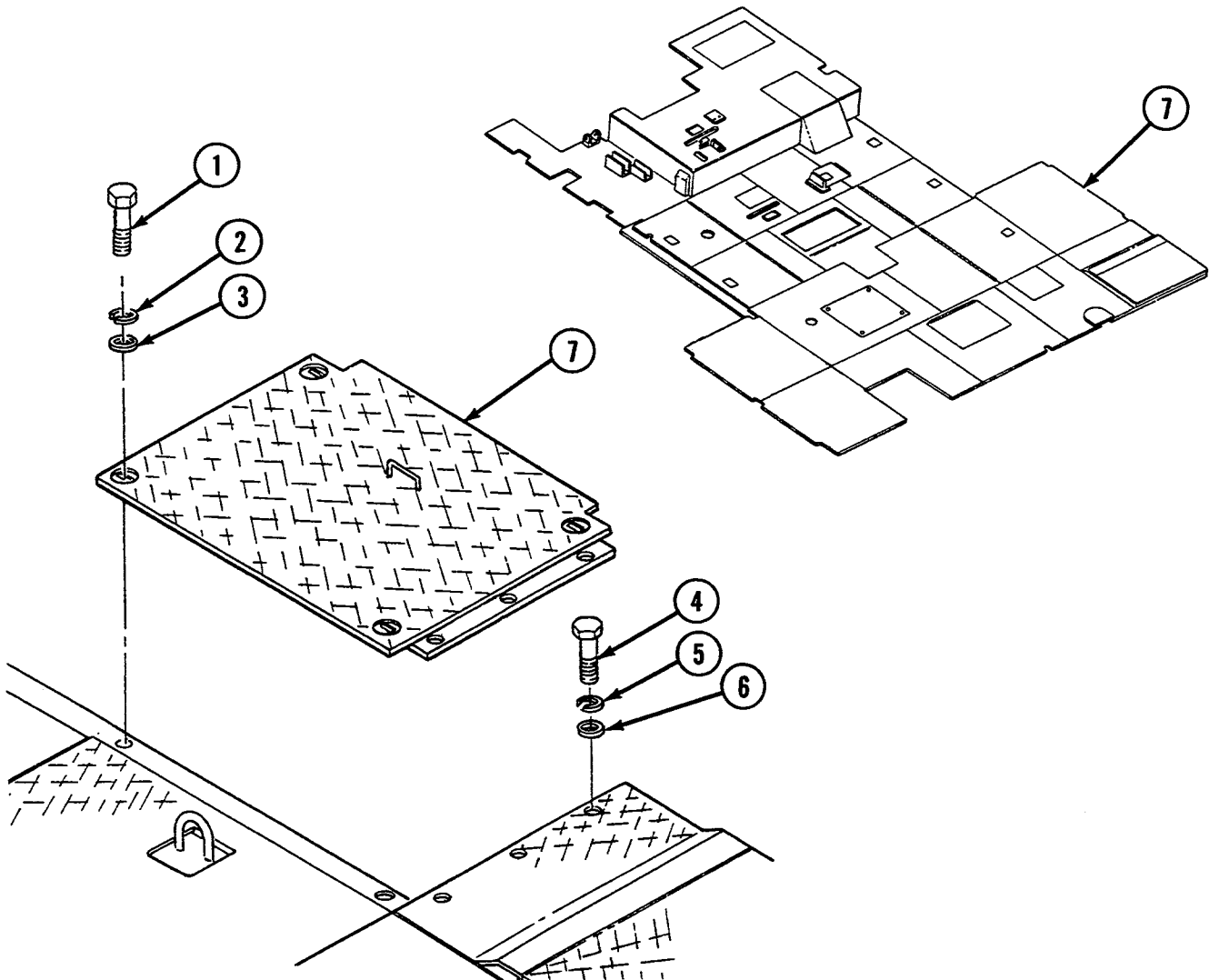
Lockwashers (7) (item 623, WP 0491 00)

Screws (7) (item 388, WP 0491 00)

Washers, flat (7) (item 537, WP 0491 00)

Removal

1. Remove four screws (1), four lockwashers (2), and four flat washers (3).
2. Remove three screws (4), three lockwashers (5), three flat washers (6), and floor plate (7).

**Installation**

1. Install floor plate (7) with four flat washers (3), four lockwashers (2), and four screws (1).
2. Install three flat washers (6), three lockwashers (5), and three screws (4).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
REAR RIGHT-SIDE FLOOR PLATE REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

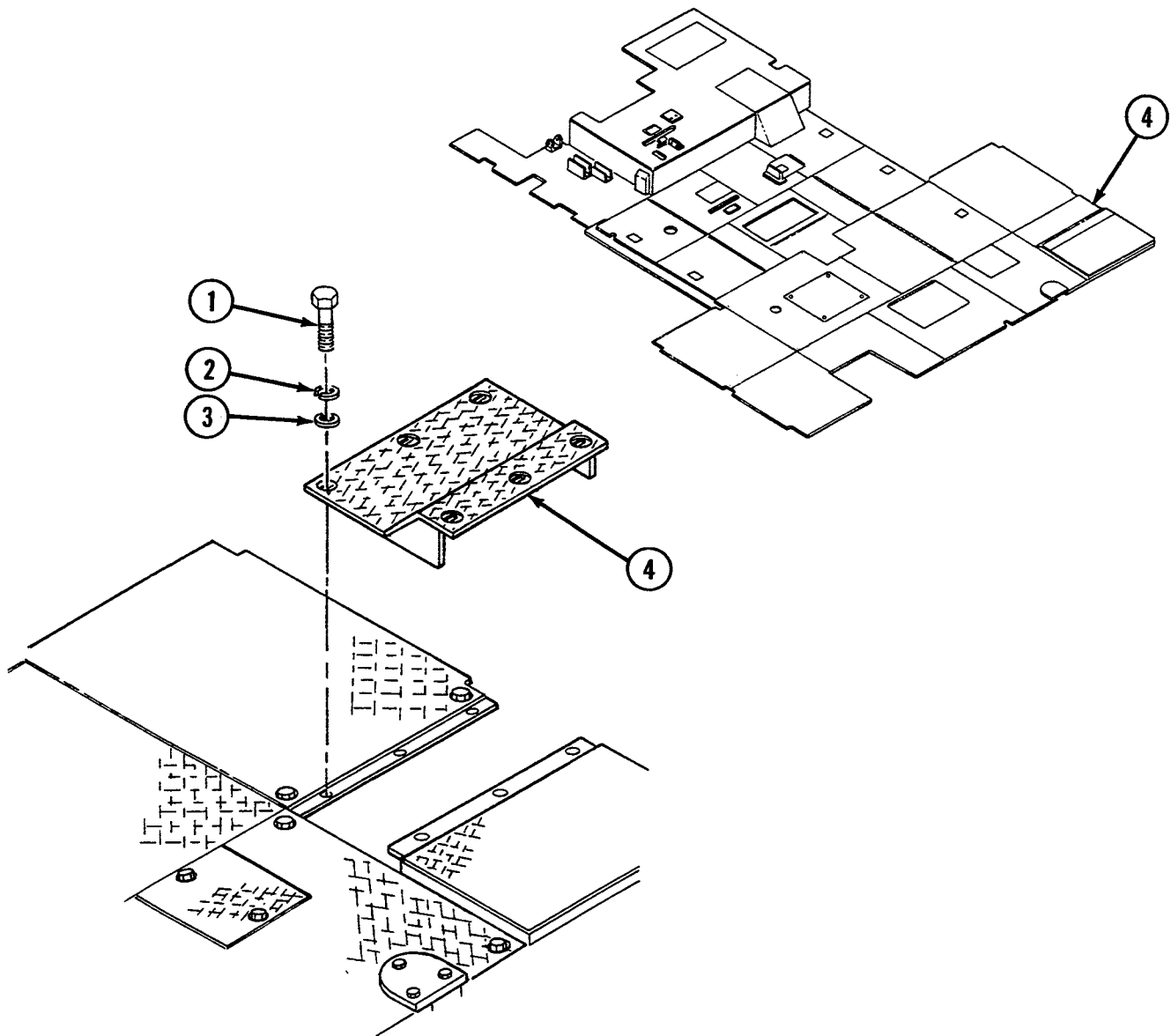
Lockwashers (6) (item 623, WP 0491 00)

Screws (6) (item 388, WP 0491 00)

Washers, flat (6) (item 537, WP 0491 00)

Removal

1. Remove six screws (1), six lockwashers (2), six flat washers (3), and floor plate (4).

**Installation**

1. Install floor plate (4) with six flat washers (3), six lockwashers (2), and six screws (1).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
HYDRAULIC CONNECTIONS ACCESS COVER REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

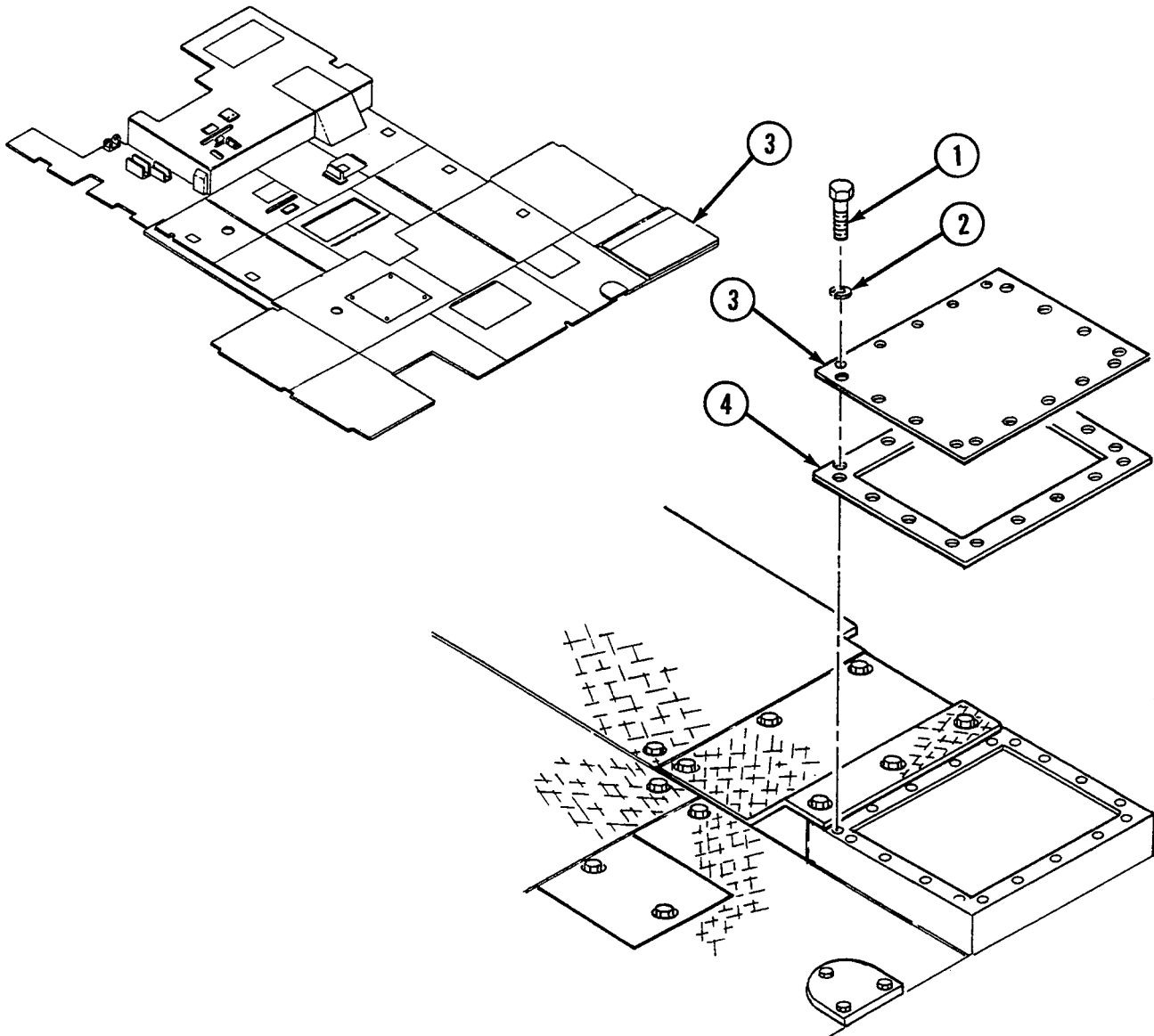
Lockwashers (18) (item 621, WP 0491 00)

Screws (18) (item 373, WP 0491 00)

Seal (item 28, WP 0491 00)

Removal

1. Remove 18 screws (1), 18 lockwashers (2), access cover (3), and seal (4).

**Installation**

1. Install seal (4) and access cover (3) with 18 lockwashers (2) and 18 screws (1).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
REAR INTERMEDIATE RIGHT FLOOR PLATE REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (4) (item 623, WP 0491 00)

Screws (4) (item 388, WP 0491 00)

Washers, flat (4) (item 537, WP 0491 00)

Equipment Condition

Rear intermediate right access cover removed (see WP 0294 00)

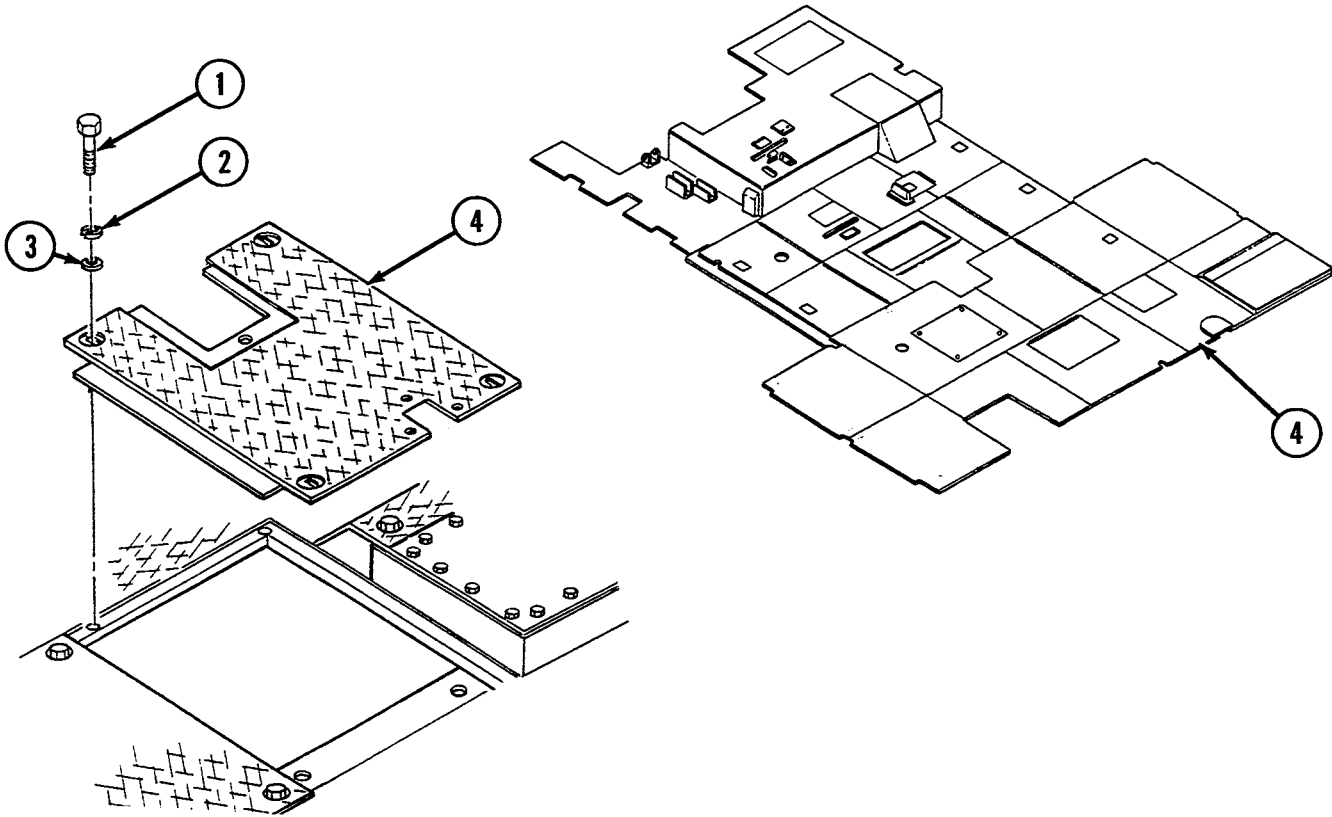
Rear intermediate right access floor plate removed (see WP 0295 00)

Rear center floor plate removed (see WP 0297 00)

Personnel heater removed (see WP 0396 00)

Removal

1. Remove four screws (1), four lockwashers (2), four flat washers (3), and floor plate (4).



Installation

1. Install floor plate (4) with four flat washers (3), four lockwashers (2), and four screws (1).

NOTE

Follow-on maintenance: Install personnel heater (see WP 0396 00); Install rear center floor plate (see WP 0297 00); Install rear intermediate right access floor plate (see WP 0295 00); Install rear intermediate right access cover (see WP 0294 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
REAR INTERMEDIATE RIGHT ACCESS COVER REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

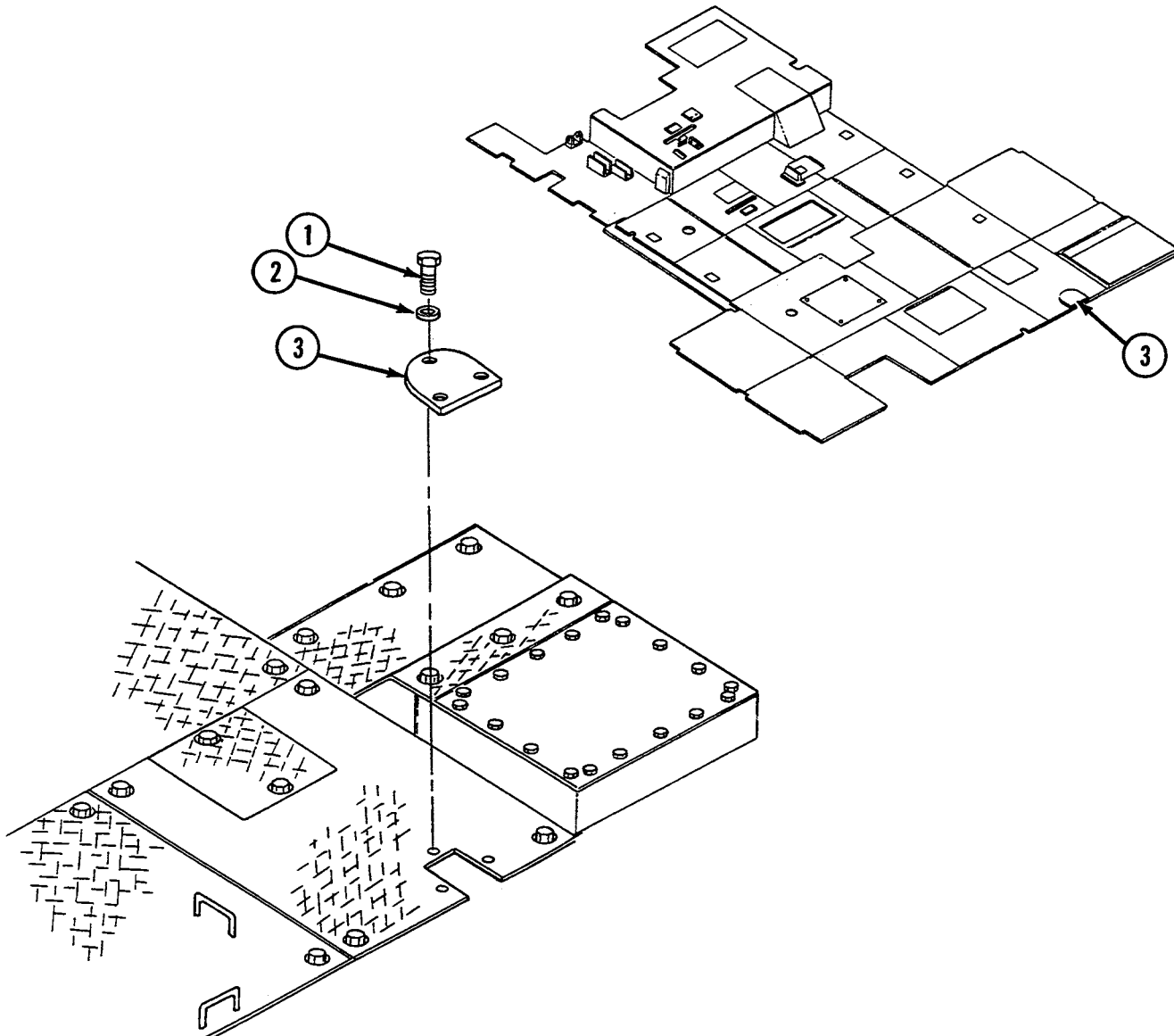
Materials/Parts

Lockwashers (3) (item 621, WP 0491 00)

Screws (3) (item 369, WP 0491 00)

Removal

1. Remove three screws (1), three lockwashers (2), and access cover (3).

**Installation**

1. Install access cover (3) with three lockwashers (2) and three screws (1).

END OF WORK PACKAGE

UNIT MAINTENANCE**RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1****NSN 2350-00-122-6826, EIC AQA****REAR INTERMEDIATE RIGHT ACCESS FLOOR PLATE REPLACEMENT
REPLACEMENT, INSTALLATION**

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

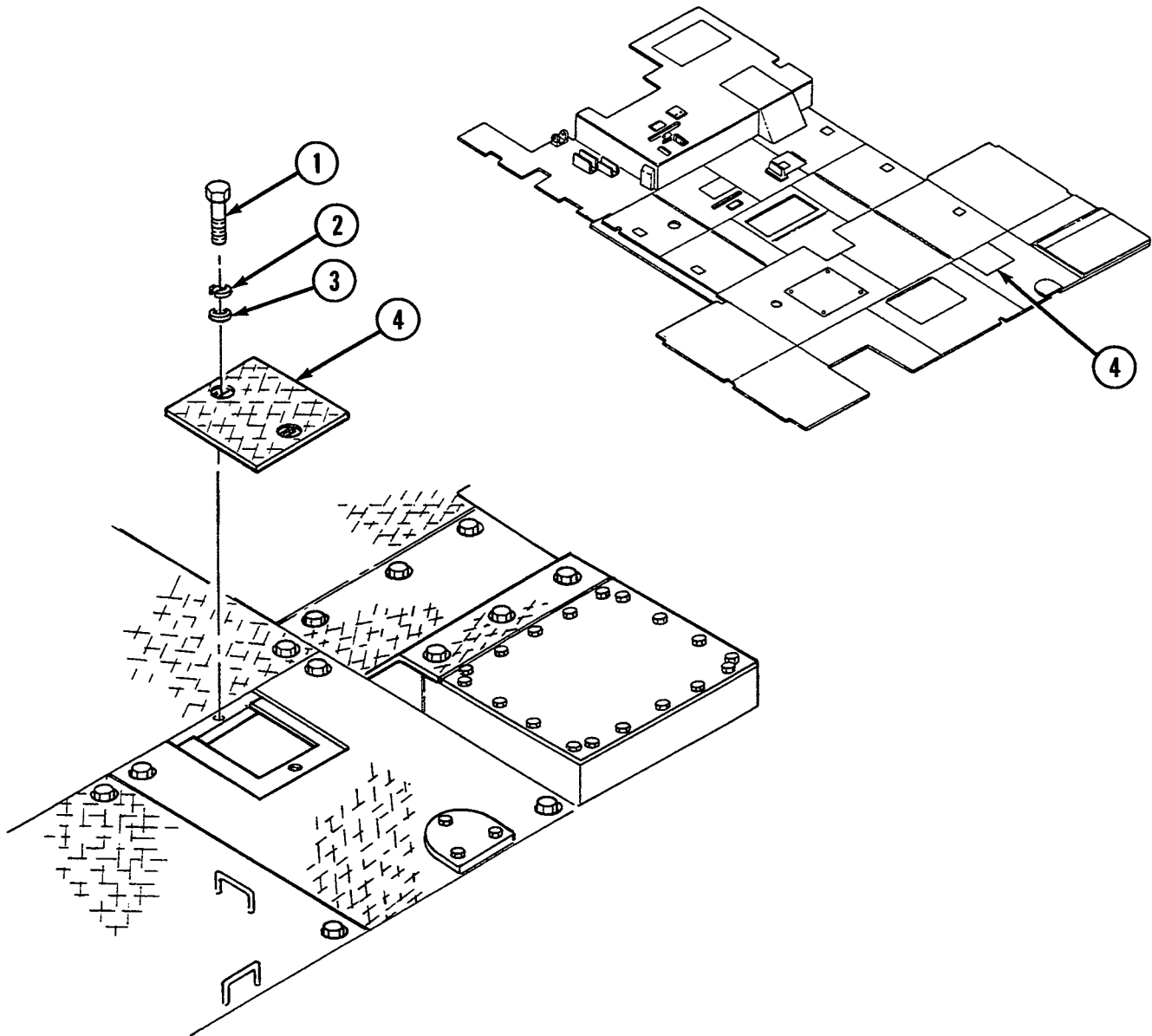
Lockwashers (2) (item 623, WP 0491 00)

Screws (2) (item 388, WP 0491 00)

Washers, flat (2) (item 537, WP 0491 00)

Removal

1. Remove two screws (1), two lockwashers (2), two flat washers (3), and floor plate (4).

**Installation**

1. Install floor plate (4) with two flat washers (3), two lockwashers (2), and two screws (1).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**HYDRAULIC LINE INTERMEDIATE REAR RIGHT CENTER FLOOR PLATE REPLACEMENT
REMOVAL, INSTALLATION**

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

Center rear floor plate removed (see WP 0303 00)

Materials/Parts

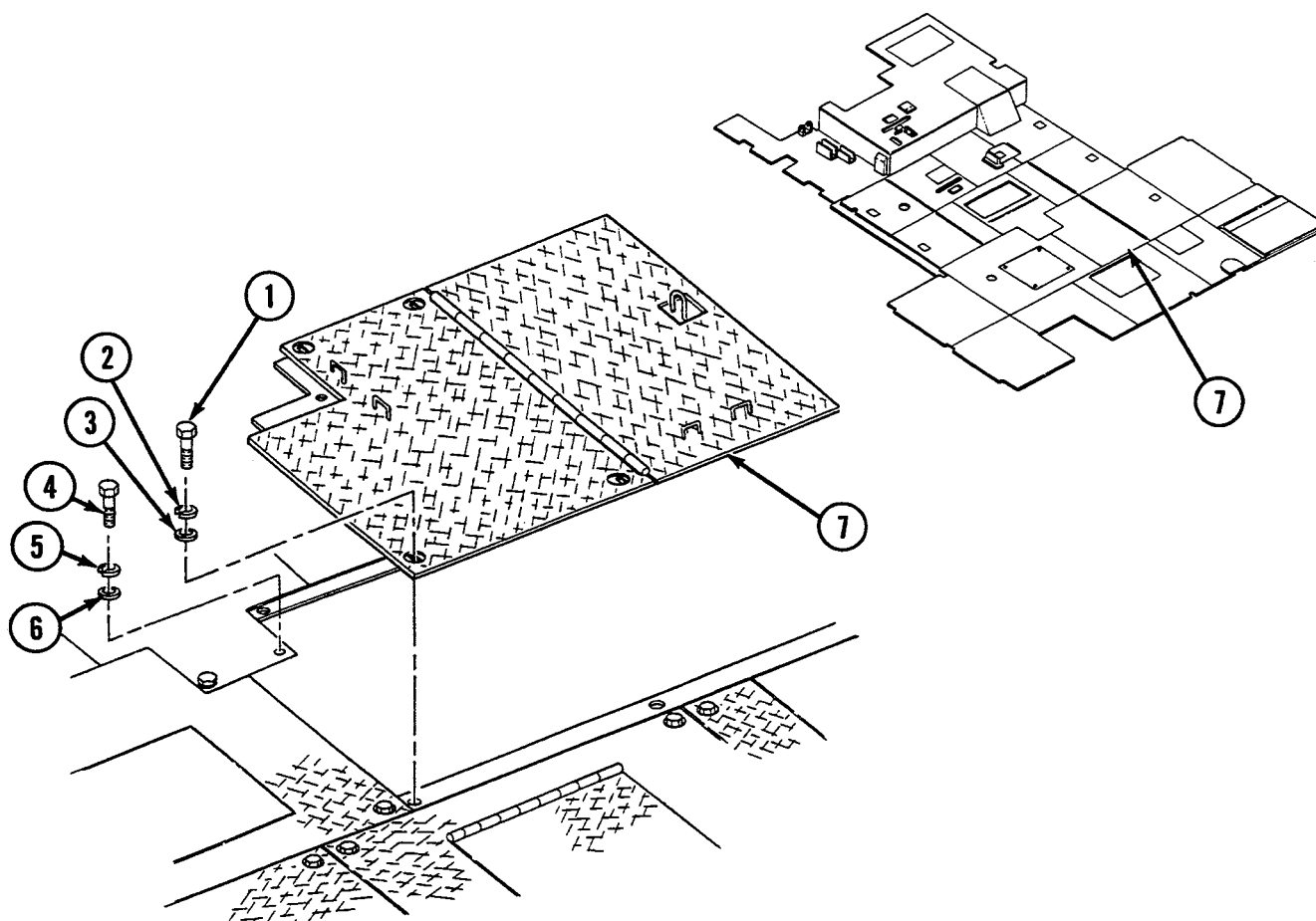
Lockwashers (5) (item 623, WP 0491 00)

Screws (5) (item 388, WP 0491 00)

Washers, flat (5) (item 537, WP 0491 00)

Removal

1. Remove four screws (1), four lockwashers (2), and four flat washers (3).
2. Remove screw (4), lockwasher (5), flat washer (6), and floor plate (7).



Installation

1. Install floor plate (7) with four flat washers (3), four lockwashers (2), and four screws (1).
2. Install flat washer (6), lockwasher (5), and screw (4).

NOTE

Follow-on maintenance: Install center rear floor plate (see WP 0303 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

REAR CENTER FLOOR PLATE MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

Mechanic's seat removed (see WP 0352 00)

Materials/Parts

Lockwashers (6) (item 623, WP 0491 00)

Screws (6) (item 388, WP 0491 00)

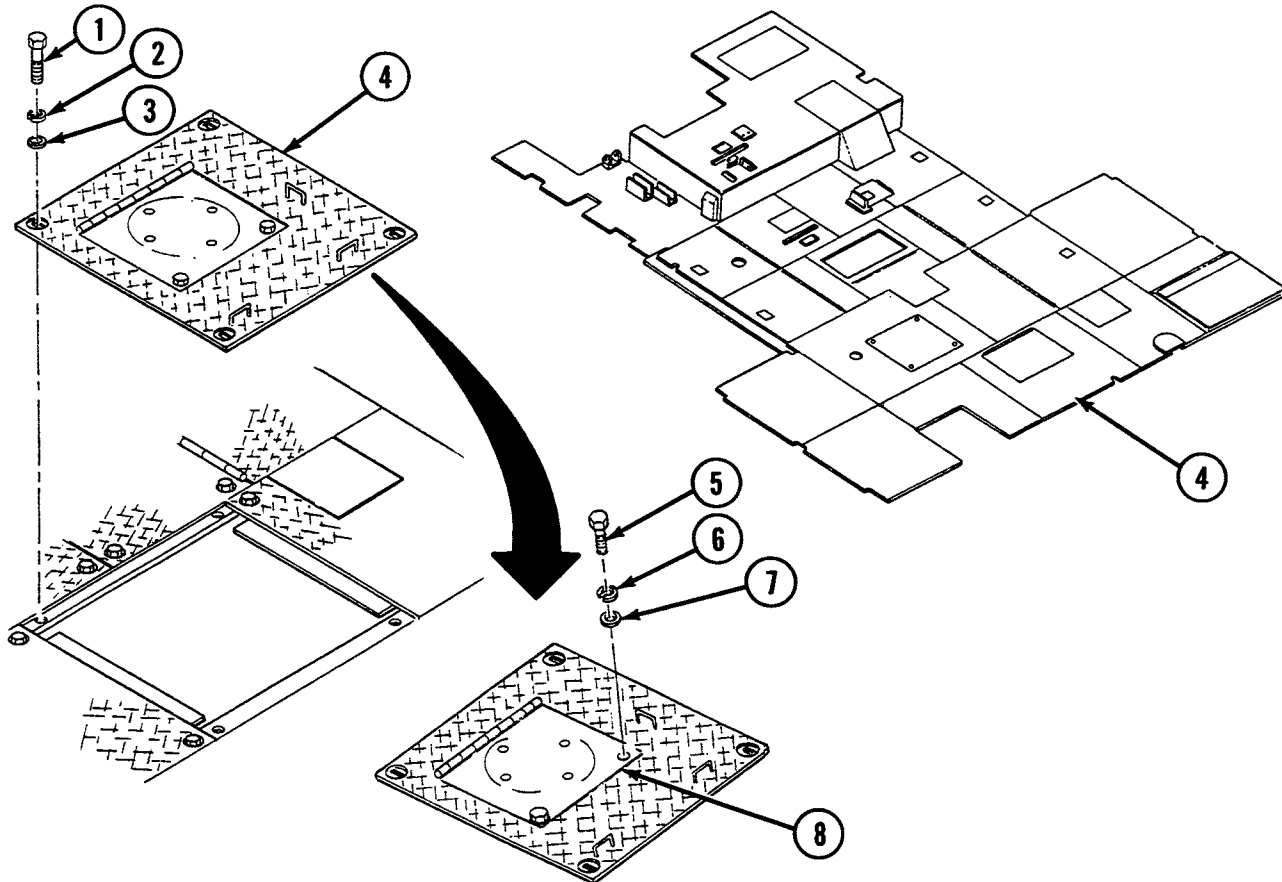
Washers, flat (6) (item 537, WP 0491 00)

Removal

1. Remove four screws (1), four lockwashers (2), four flat washers (3), and floor plate (4).

Disassembly

1. Remove two screws (5), two flat washers (6), and two lockwashers (7) from mechanic's seat door (8).

**Assembly**

1. Secure mechanic's seat door (8) with two lockwashers (7), two flat washers (6), and two screws (5).

Installation

1. Install floor plate (4) with four flat washers (3), four lockwashers (2), and four screws (1).

NOTE

Follow-on maintenance: Install mechanic's seat (see WP 0352 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
REAR LEFT-SIDE INTERMEDIATE FLOOR PLATE REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

Rear center floor plate removed (see WP 0297 00)

Materials/Parts

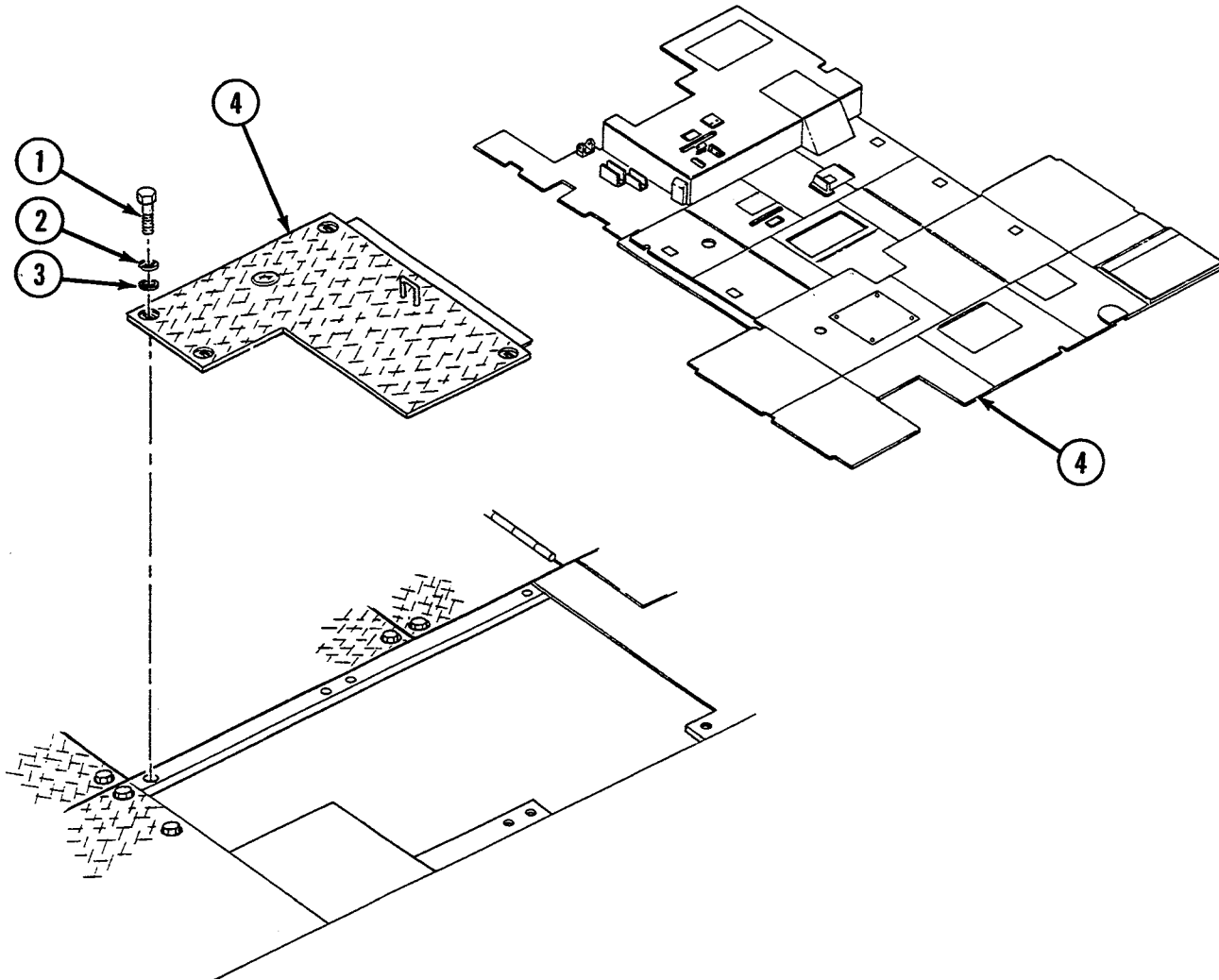
Lockwashers (4) (item 623, WP 0491 00)

Screws (4) (item 388, WP 0491 00)

Washers, flat (4) (item 537, WP 0491 00)

Removal

1. Remove four screws (1), four lockwashers (2), four flat washers (3), and floor plate (4).

**Installation**

1. Install floor plate (4) with four flat washers (3), four lockwashers (2), and four screws (1).

NOTE

Follow-on maintenance: Install rear center floor plate (see WP 0297 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
FUEL TRANSMITTER CENTER LEFT FLOOR ACCESS PLATE REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

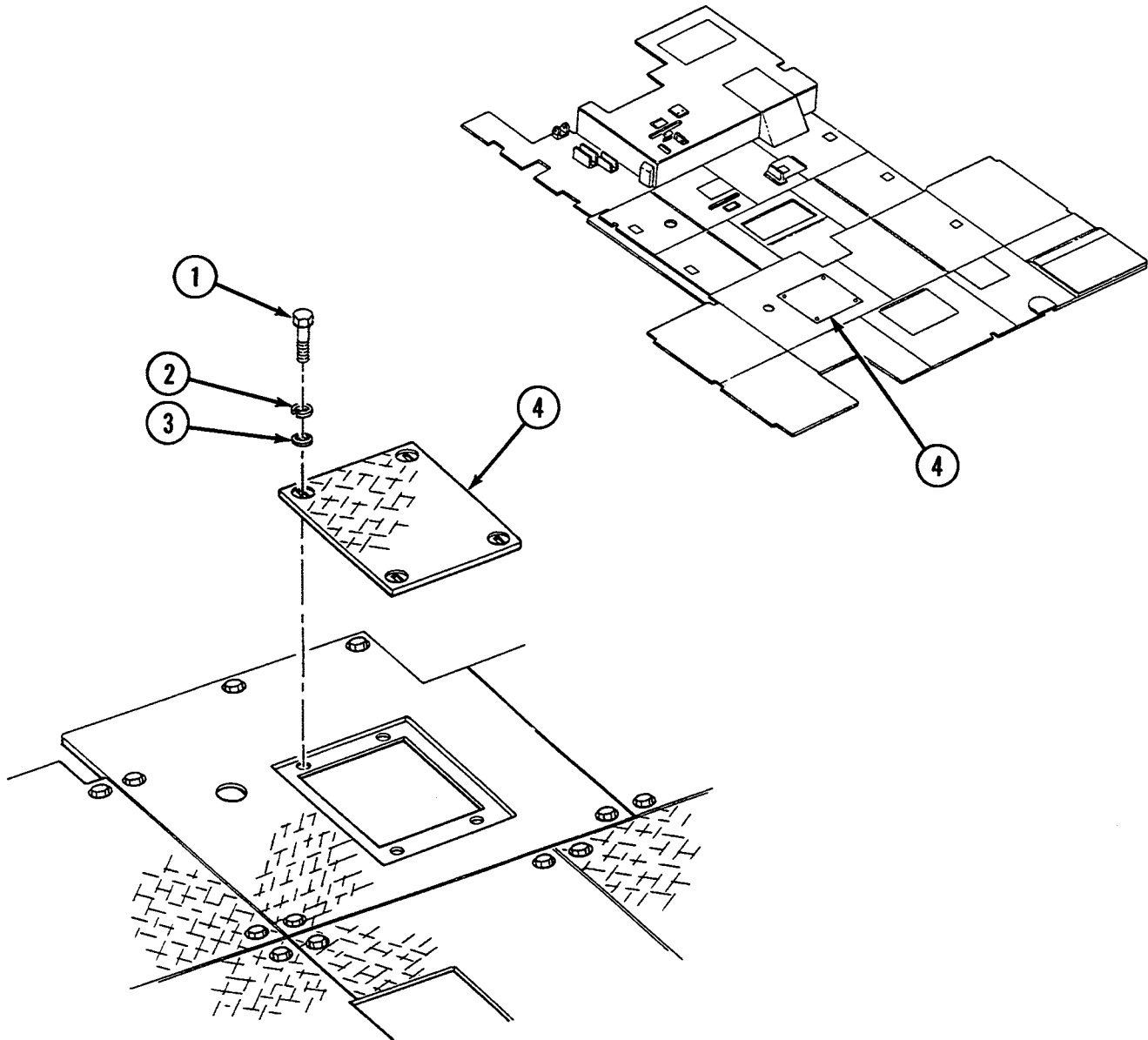
Lockwashers (4) (item 623, WP 0491 00)

Screws (4) (item 388, WP 0491 00)

Washers, flat (4) (item 537, WP 0491 00)

Removal

1. Remove four screws (1), four lockwashers (2), four flat washers (3), and floor plate (4).

**Installation**

1. Install floor plate (4) with four flat washers (3), four lockwashers (2), and four screws (1).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
REAR LEFT-SIDE FLOOR PLATE REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

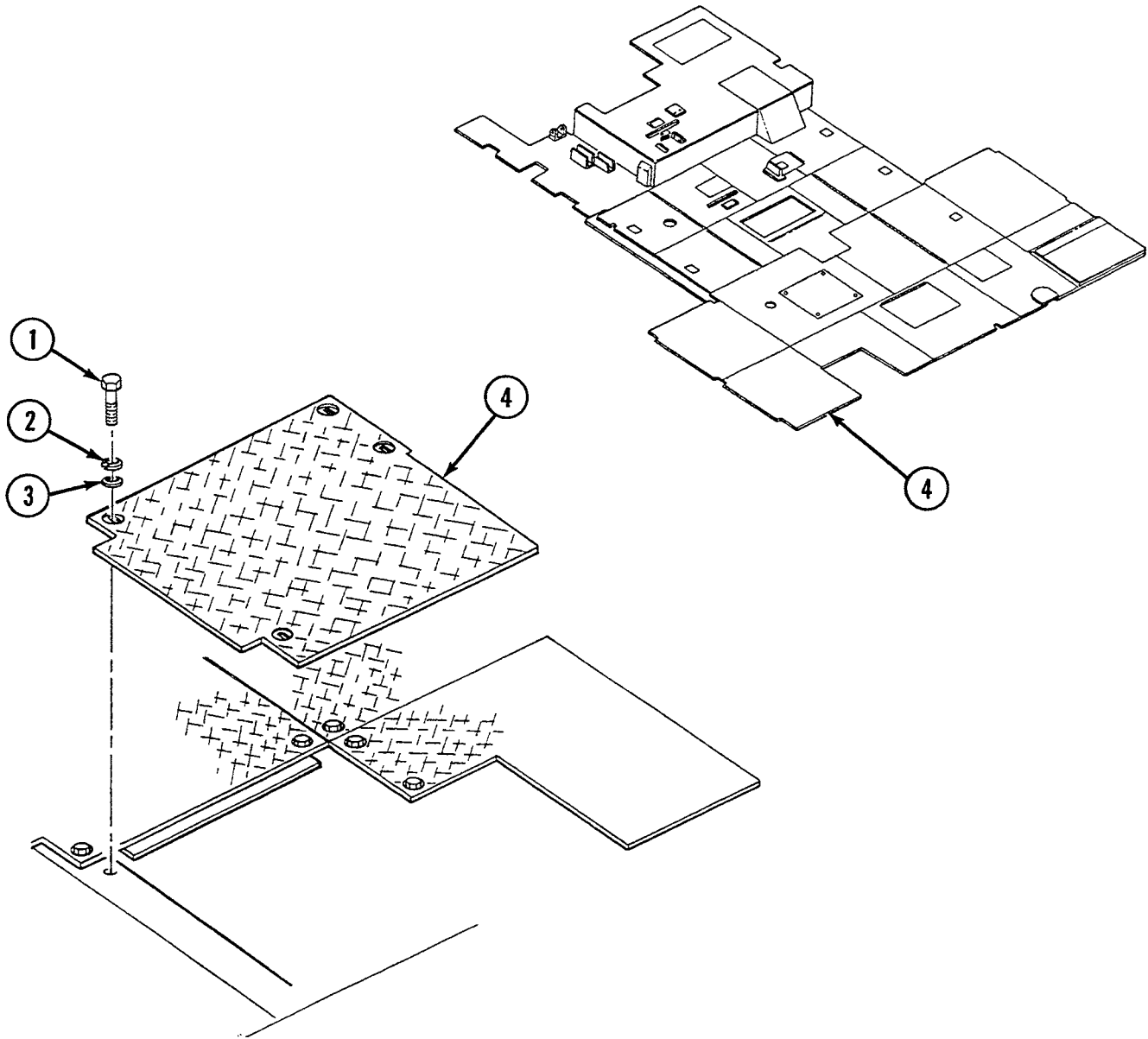
Lockwashers (4) (item 623, WP 0491 00)

Screws (4) (item 388, WP 0491 00)

Washers, flat (4) (item 537, WP 0491 00)

Removal

1. Remove four screws (1), four lockwashers (2), four flat washers (3), and floor plate (4).

**Installation**

1. Install floor plate (4) with four flat washers (3), four lockwashers (2), and four screws (1).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
INTERMEDIATE REAR LEFT-SIDE FLOOR PLATE REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

Rear left-side floor plate removed (see WP 0300 00)

Materials/Parts

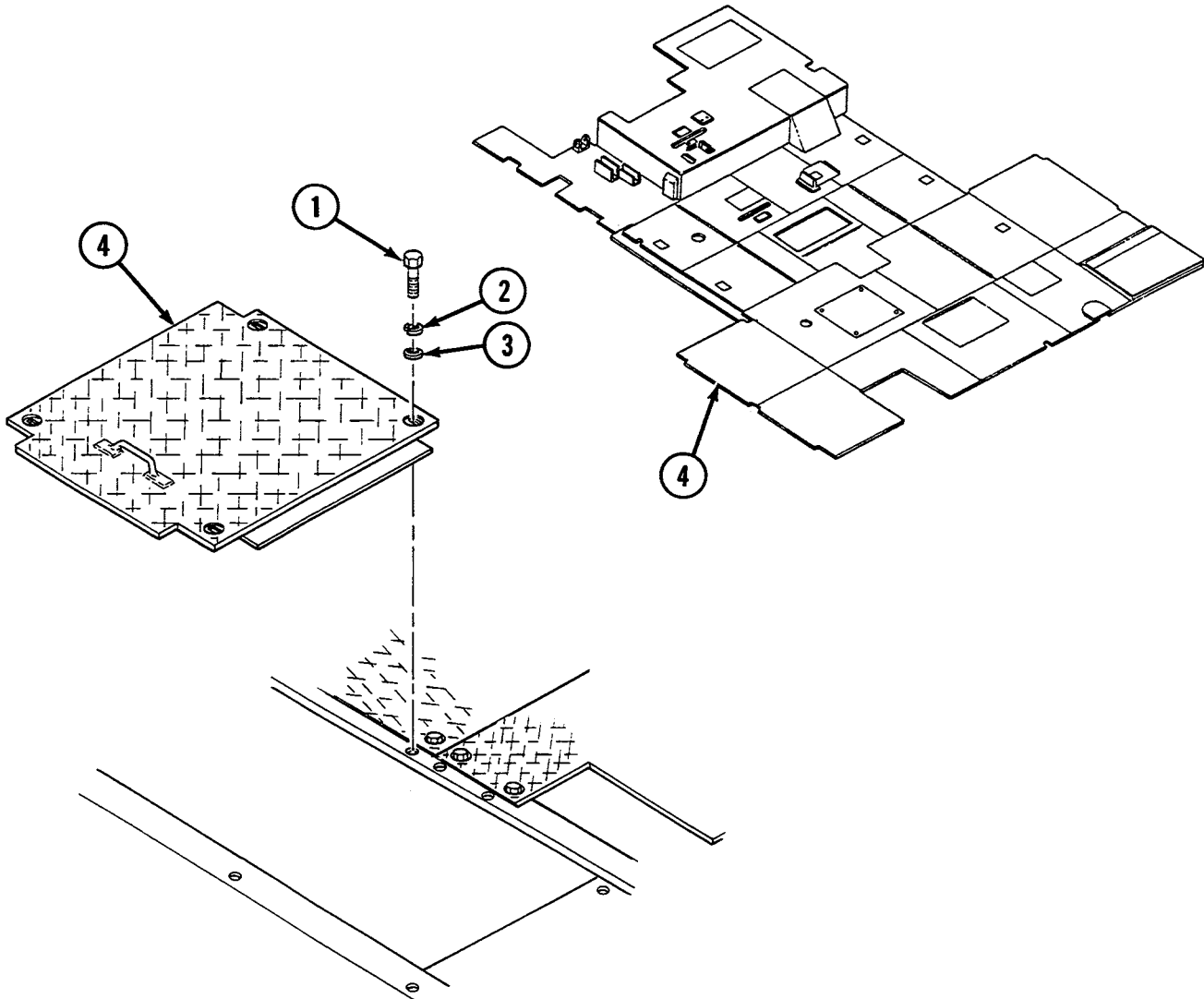
Lockwashers (4) (item 623, WP 0491 00)

Screws (4) (item 388, WP 0491 00)

Washers, flat (4) (item 537, WP 0491 00)

Removal

1. Remove four screws (1), four lockwashers (2), four flat washers (3), and floor plate (4).

**Installation**

1. Install floor plate (4) with four flat washers (3), four lockwashers (2), and four screws (1).

NOTE

Follow-on maintenance: Install rear left-side floor plate (see WP 0300 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
INTERMEDIATE REAR LEFT-CENTER FLOOR PLATE REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (7) (item 623, WP 0491 00)

Screws (7) (item 388, WP 0491 00)

Washers, flat (7) (item 537, WP 0491 00)

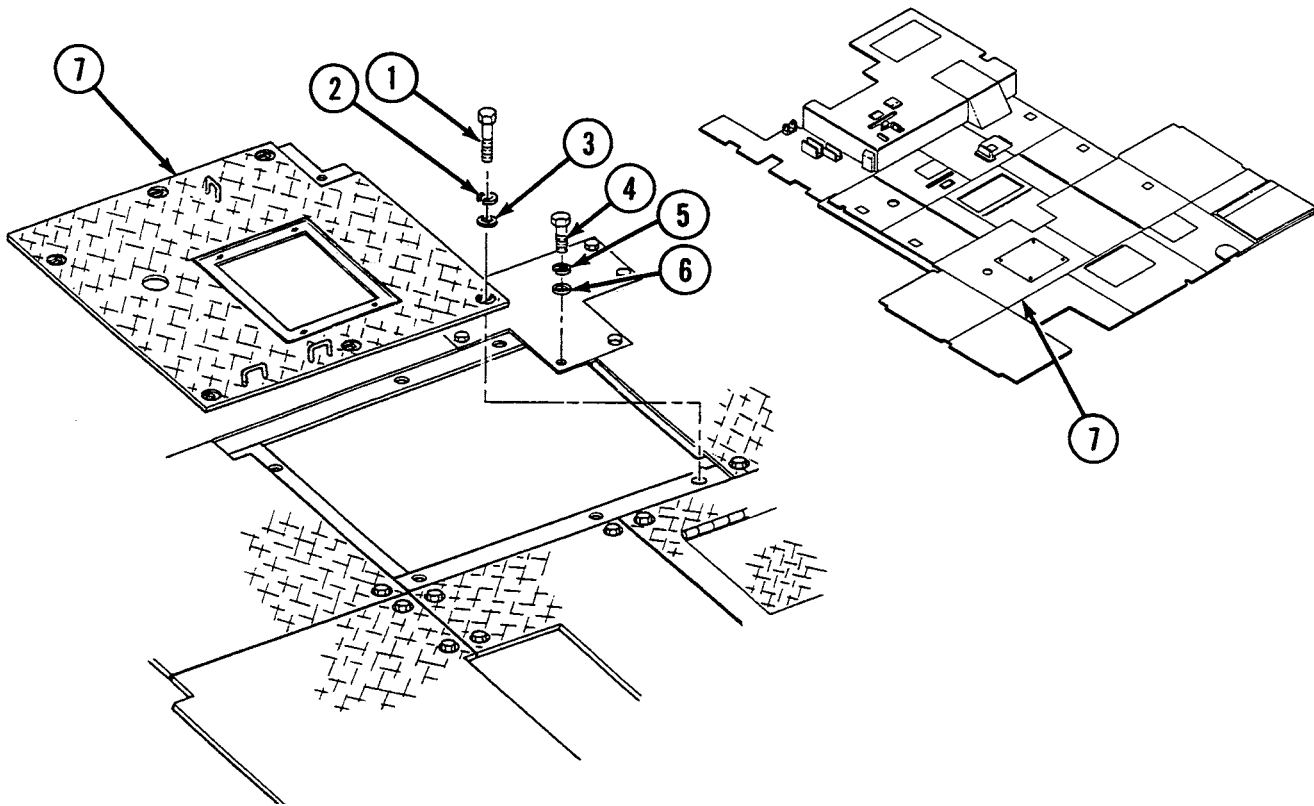
Equipment Condition

Personnel seat removed (see WP 0349 00)

Fuel transmitter center left floor access plate removed
(see WP 0299 00)

Removal

1. Remove six screws (1), six lockwashers (2), and six flat washers (3).
2. Remove screw (4), lockwasher (5), flat washer (6), and floor plate (7).



Installation

1. Install floor plate (7) with six flat washers (3), six lockwashers (2), and six screws (1).
2. Install flat washer (6), lockwasher (5), and screw (4).

NOTE

Follow-on maintenance: Install fuel transmitter center left floor access plate (see WP 0299 00); Install personnel seat (see WP 0349 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
CENTER REAR FLOOR PLATE REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

Commander's seat removed (see WP 0350 00)

Materials/Parts

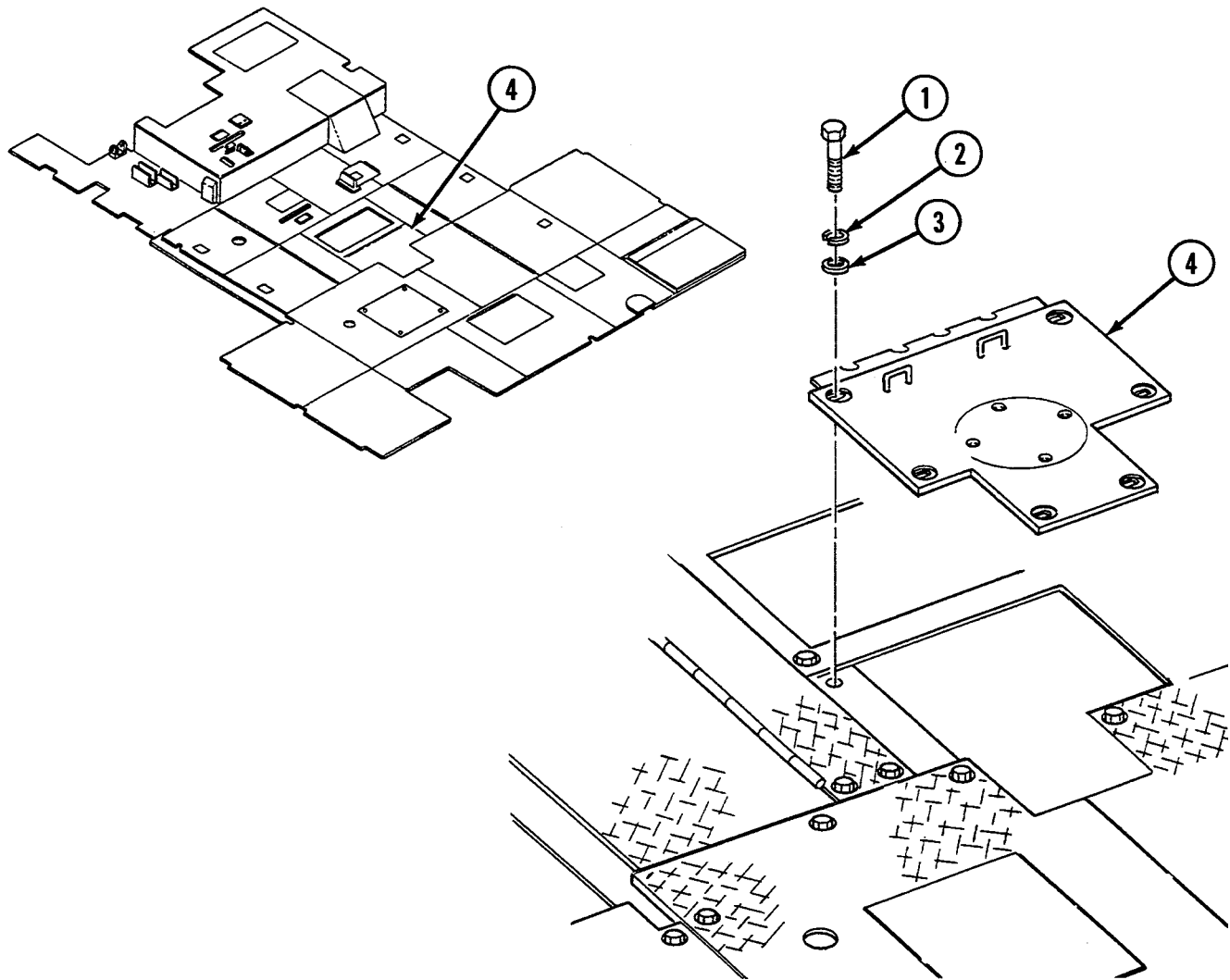
Lockwashers (6) (item 623, WP 0491 00)

Screws (6) (item 388, WP 0491 00)

Washers, flat (6) (item 537, WP 0491 00)

Removal

1. Remove six screws (1), six lockwashers (2), six flat washers (3), and floor plate (4).

**Installation**

1. Install floor plate (4) with six flat washers (3), six lockwashers (2), and six screws (1).

NOTE

Follow-on maintenance: Install commander's seat (see WP 0350 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
CENTER FORWARD FLOOR PLATE REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

Wire rope shield removed (see WP 0412 00)

Materials/Parts

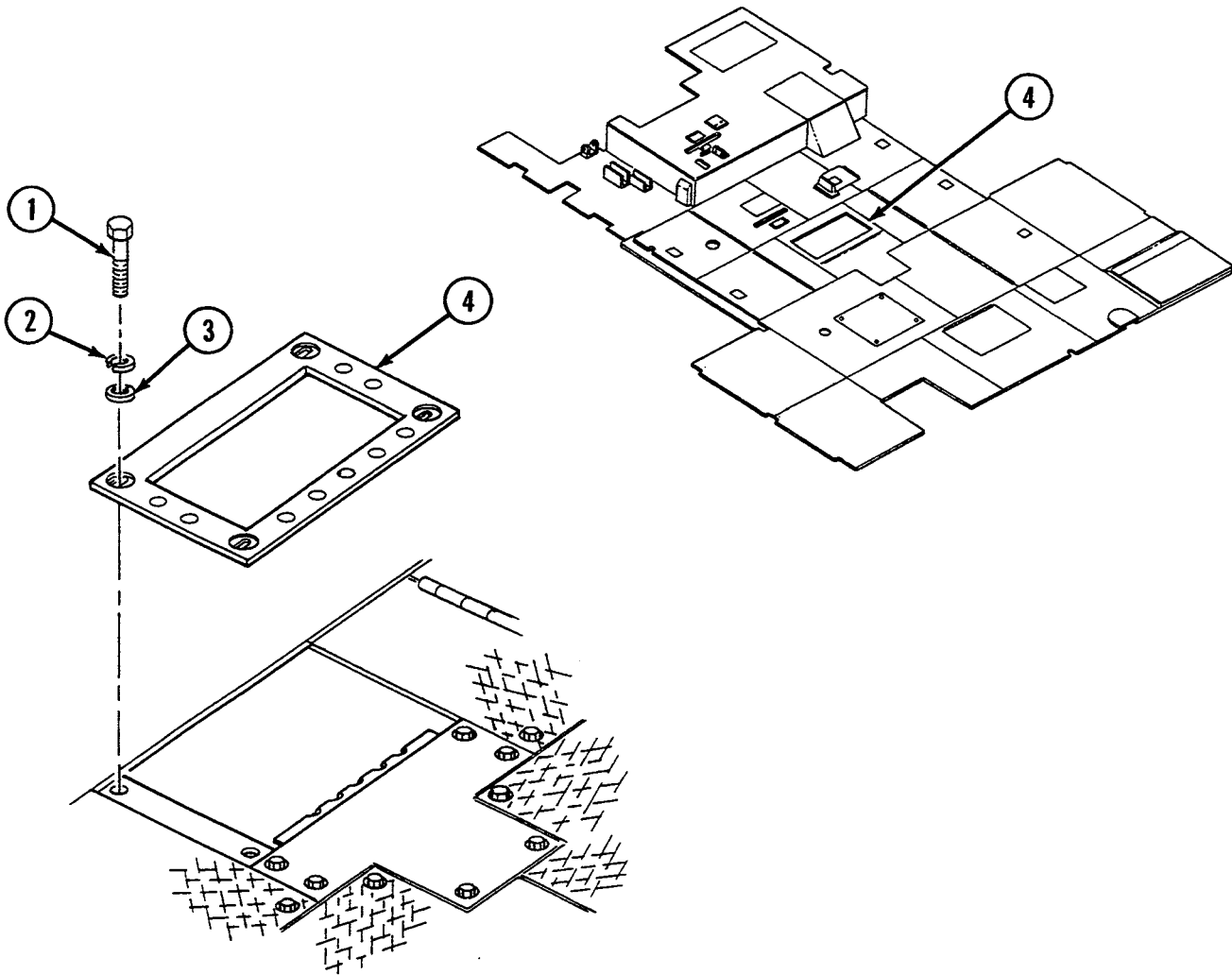
Lockwashers (4) (item 623, WP 0491 00)

Screws (4) (item 388, WP 0491 00)

Washers, flat (4) (item 537, WP 0491 00)

Removal

1. Remove four screws (1), four lockwashers (2), four flat washers (3), and floor plate (4).

**Installation**

1. Install floor plate (4) with four flat washers (3), four lockwashers (2), and four screws (1).

NOTE

Follow-on maintenance: Install wire rope shield (see WP 0412 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
INTERMEDIATE REAR LEFT ACCESS FLOOR PLATE REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

Floor-mounted bracket removed (see WP 0392 00)

Materials/Parts

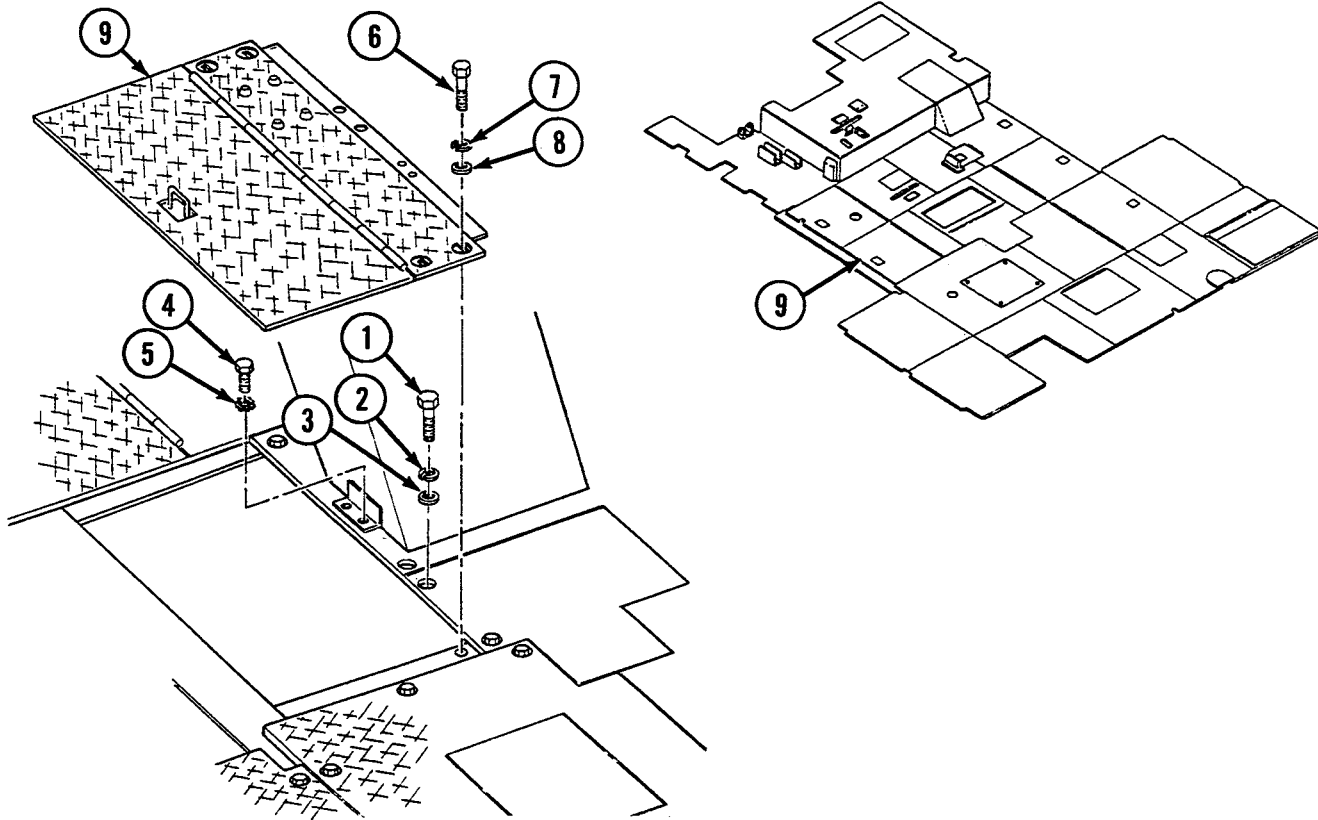
Lockwashers (8) (item 623, WP 0491 00)

Screws (8) (item 388, WP 0491 00)

Washers, flat (6) (item 537, WP 0491 00)

Removal

1. Remove two screws (1), two lockwashers (2), and two flat washers (3).
2. Remove two screws (4) and two lockwashers (5).
3. Remove four screws (6), four lockwashers (7), four flat washers (8), and floor plate (9).



Installation

1. Install floor plate (9) with four flat washers (8), four lockwashers (7), and four screws (6).
2. Install two lockwashers (5) and two screws (4).
3. Install two flat washers (3), two lockwashers (2), and two screws (1).

NOTE

Follow-on maintenance: Install floor-mounted bracket (see WP 0392 00).

END OF WORK PACKAGE

UNIT MAINTENANCE**RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1****NSN 2350-00-122-6826, EIC AQA****STOWAGE BASKET FORWARD INTERMEDIATE LEFT FLOOR PLATE MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION**

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Drivescrews (4) (item 501, WP 0491 00)

Grommet (item 663, WP 0491 00)

Lockwashers (4) (item 623, WP 0491 00)

Screws (4) (item 388, WP 0491 00)

Washers, flat (4) (item 537, WP 0491 00)

Equipment Condition

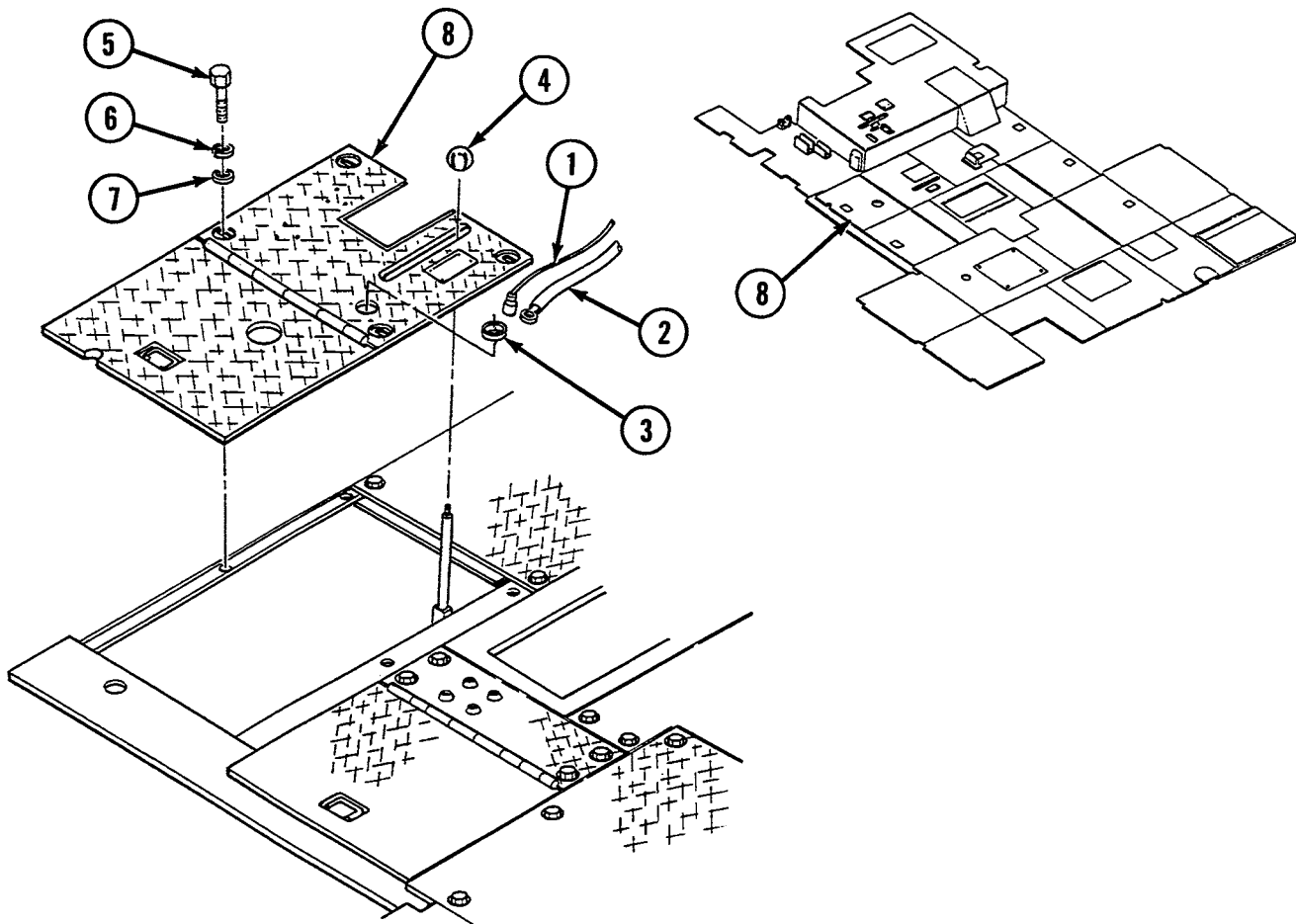
Spare headlight mounts removed (see WP 0178 00)

Floor and light mount plate removed (see WP 0307 00)

Personnel seat removed (see WP 0349 00)

Removal

1. Disconnect wiring harness 10894546/450A (1) and lead 518 (2).
2. Remove grommet (3).
3. Remove hoist winch shift lever knob (4).
4. Remove four screws (5), four lockwashers (6), four flat washers (7), and floor plate (8).

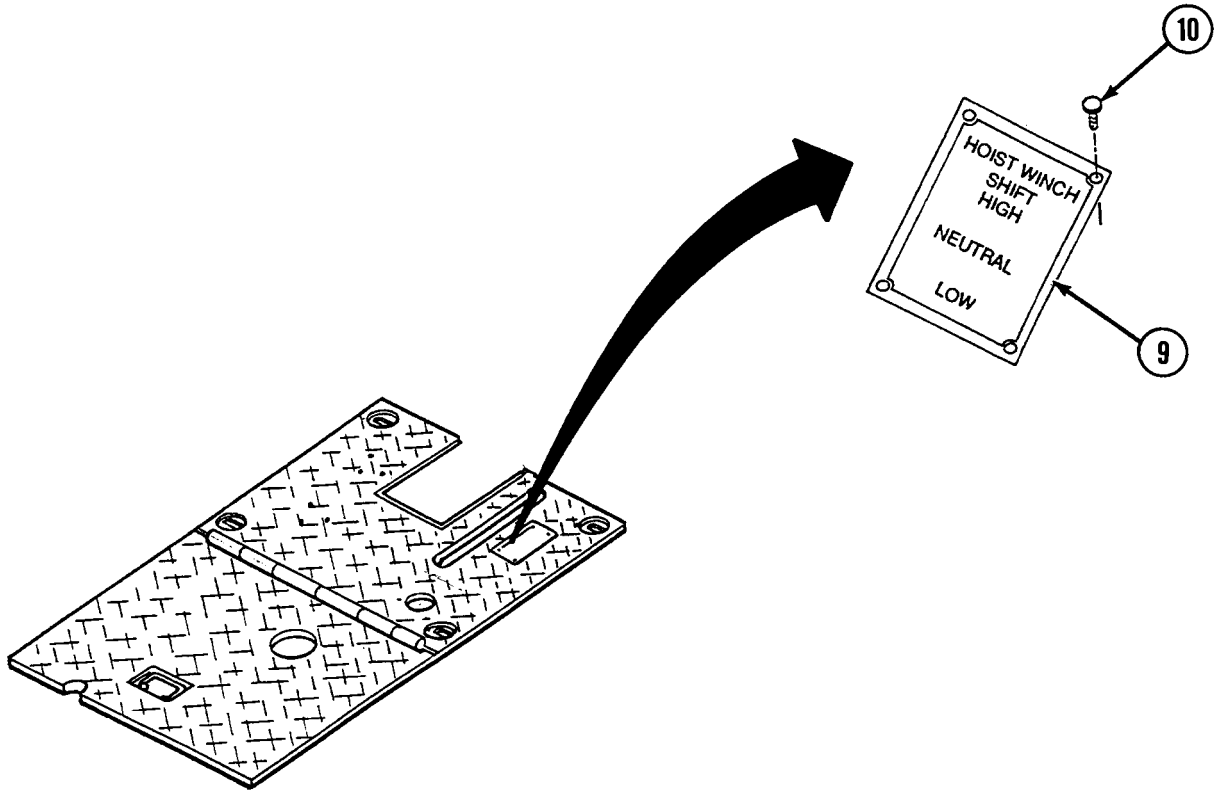


Disassembly

NOTE

Perform step only if hoist winch shift lever switch ID plate (9) is illegible.

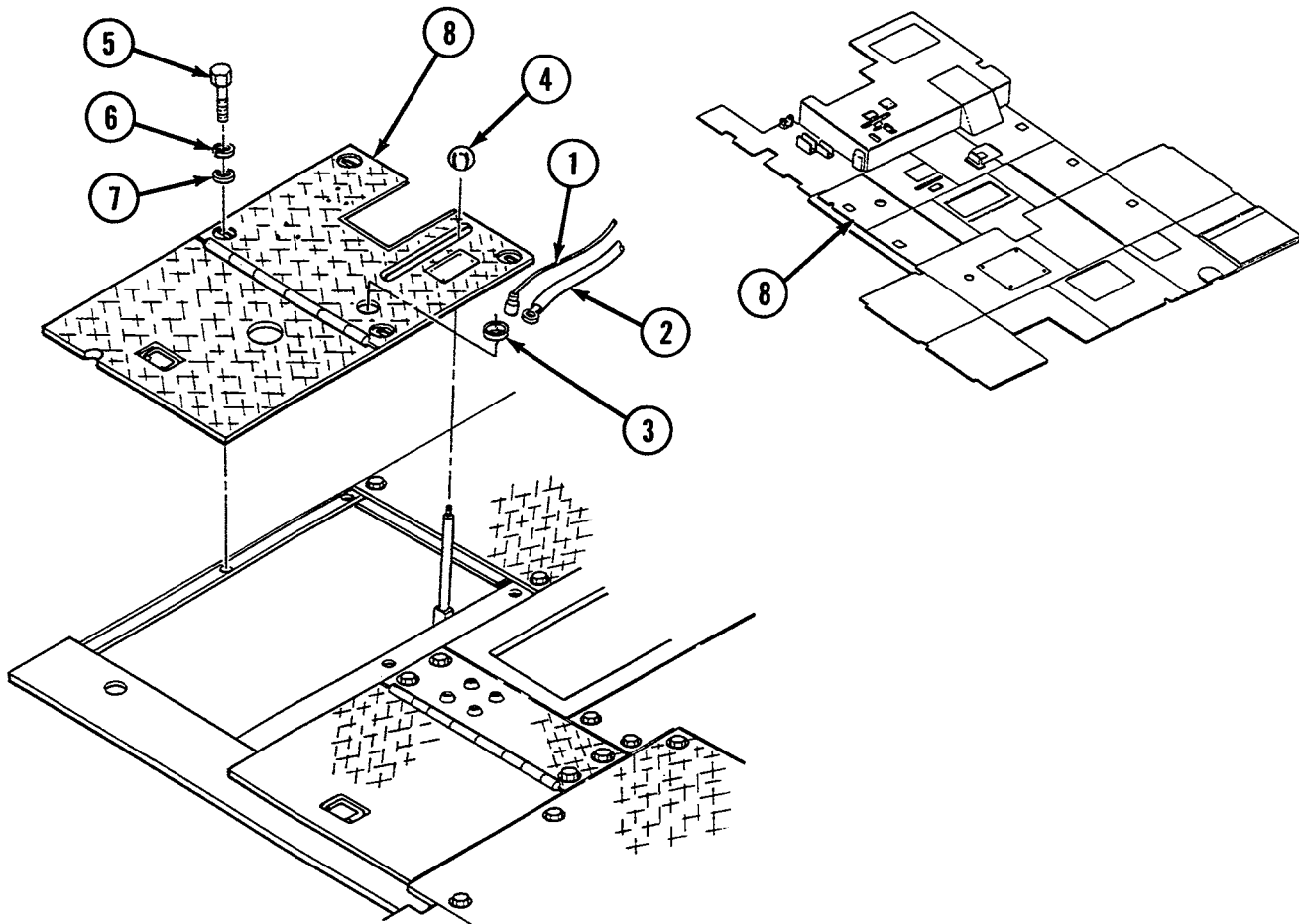
1. Remove four drivescrews (10) and ID plate (9).

**Assembly**

1. Install ID plate (9) with four drivescrews (10).

Installation

1. Install floor plate (8) with four flat washers (7), four lockwashers (6), and four screws (5).
2. Install hoist winch shift lever knob (4).
3. Connect wiring harness 10894546/450A (1) and lead 518 (2).
4. Install grommet (3).



NOTE

Follow-on maintenance: Install personnel seat (see WP 0349 00); Install floor and light mount plate (see WP 0307 00); Install spare headlight mounts (see WP 0178 00).

END OF WORK PACKAGE

UNIT MAINTENANCE**RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1****NSN 2350-00-122-6826, EIC AQA****FLOOR AND LIGHT MOUNT PLATE MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION**

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (2) (item 623, WP 0491 00)

Materials/Parts (cont.)

Lockwasher (item 640, WP 0491 00)

Nut (item 758, WP 0491 00)

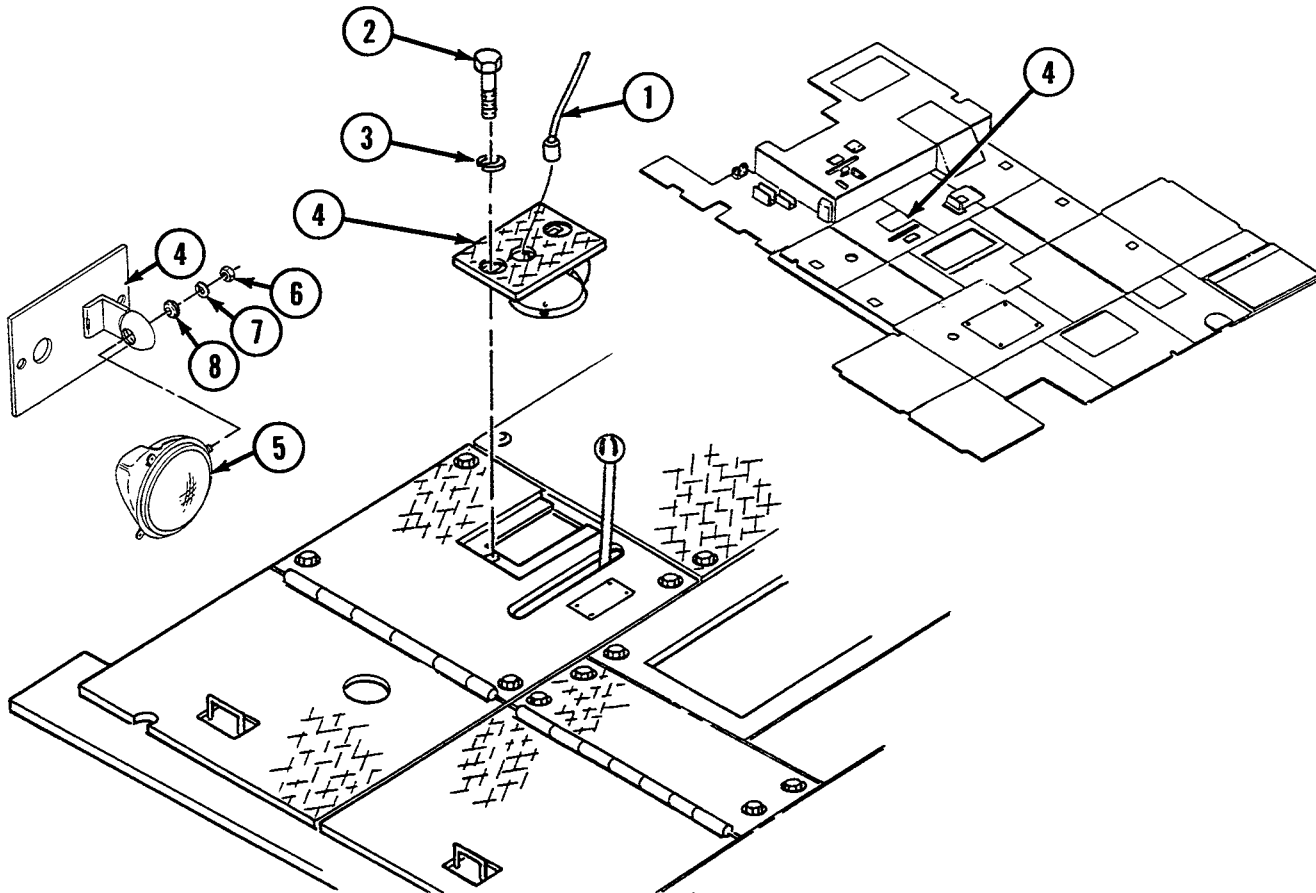
Screws (2) (item 388, WP 0491 00)

Removal

1. Disconnect wire 451 (1).
2. Remove two screws (2), two lockwashers (3), and mount plate (4).

Disassembly

1. Remove winch compartment light (5) from mount plate (4) by removing nut (6), lockwasher (7), and spacer (8).



Assembly

1. Install winch compartment light (5) to mount plate (4) using spacer (8), lockwasher (7) and nut (6).

Installation

1. Install mount plate (4) with two lockwashers (3) and two screws (2).
2. Connect wire 451 (1).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
HYDRAULIC VALVE FORWARD INTERMEDIATE RIGHT FLOOR PLATE REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwasher (item 621, WP 0491 00)
Lockwashers (6) (item 623, WP 0491 00)
Screws (5) (item 388, WP 0491 00)

Materials/Parts (cont.)

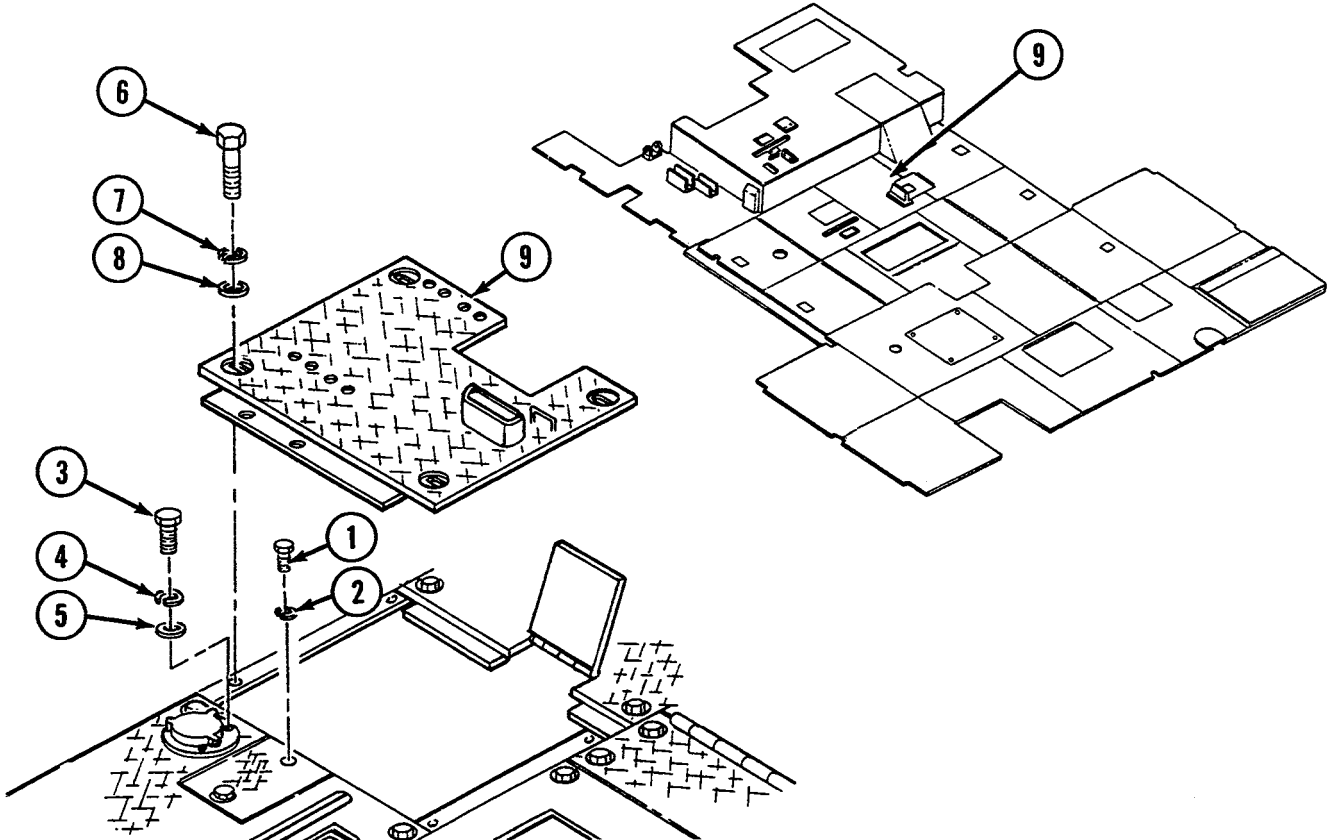
Screw (item 731, WP 0491 00)
Washer, flat (item 534, WP 0491 00)
Washers, flat (4) (item 537, WP 0491 00)

Equipment Condition

Hand grenade boxes removed (see WP 0383 00)

Removal

1. Remove screw (1) and lockwasher (2).
2. Remove screw (3), lockwasher (4), and flat washer (5).
3. Remove four screws (6), four lockwashers (7), four flat washers (8), and floor plate (9).



Installation

1. Install floor plate (9) with four flat washers (8), four lockwashers (7), and four screws (6).
2. Install flat washer (5), lockwasher (4), and screw (3).
3. Install lockwasher (2) and screw (1).

NOTE

Follow-on maintenance: Install hand grenade boxes (see WP 0383 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

FRONT SUBFLOOR SUPPORT REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

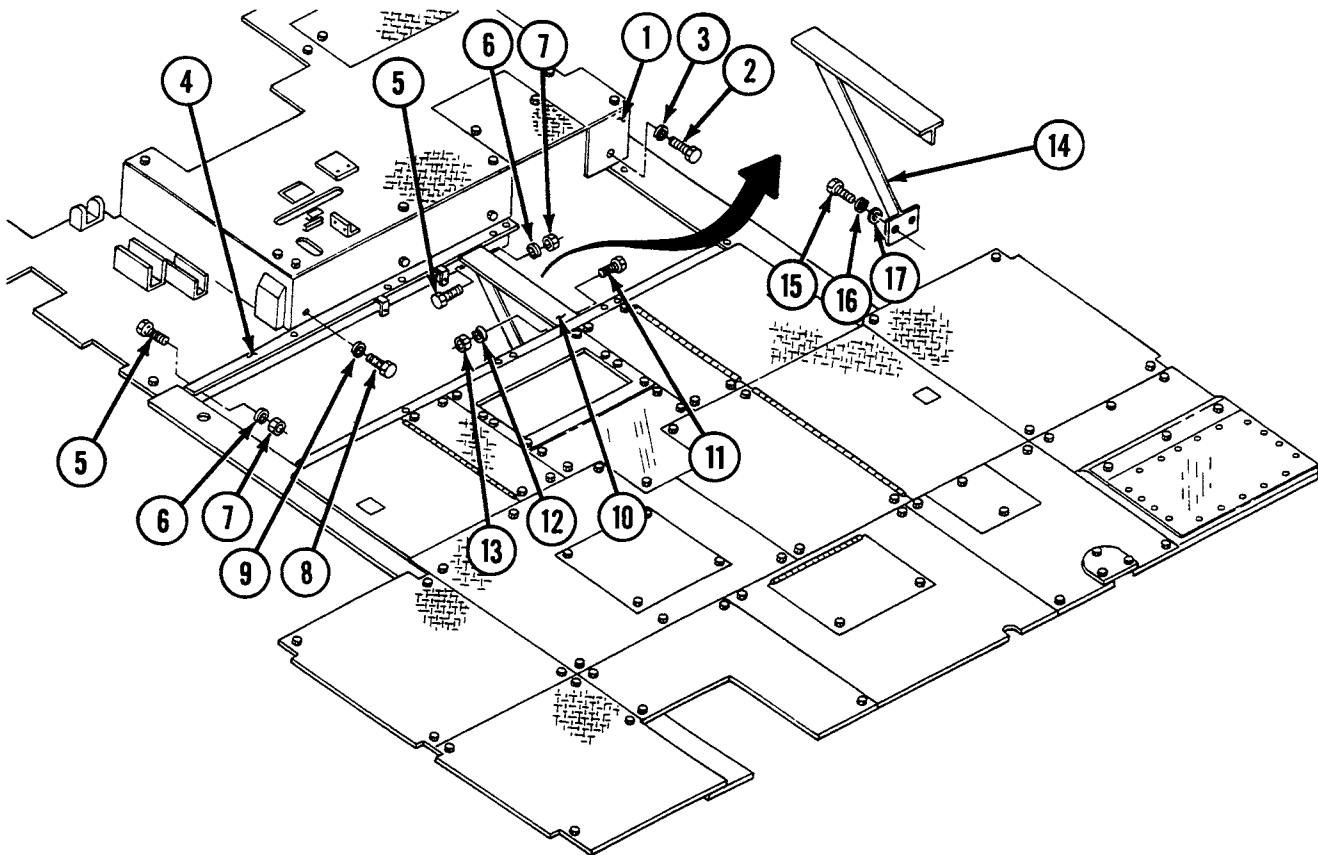
Lockwashers (12) (item 640, WP 0491 00)
Nuts (6) (item 769, WP 0491 00)
Screws (2) (item 401, WP 0491 00)
Screws (4) (item 402, WP 0491 00)
Screws (2) (item 405, WP 0491 00)
Screws (4) (item 801, WP 0491 00)
Washers, flat (2) (item 537, WP 0491 00)

Equipment Condition

Bilge pump plate removed (see WP 0251 00)
Hydraulic valve forward right floor plate removed (see WP 0288 00)
Stowage basket forward intermediate left floor plate removed (see WP 0306 00)
Hydraulic valve forward intermediate right floor plate removed (see WP 0308 00)
Fire extinguisher line loop clamps removed (see WP 0403 00)

Removal

1. Remove support (1) by removing screw (2) and lockwasher (3).
2. Remove support (4) by removing four screws (5), four lockwashers (6), four nuts (7), three screws (8), and three lockwashers (9).
3. Remove support (10) by removing two screws (11), two lockwashers (12), and two nuts (13).
4. Remove support (14) by removing two screws (15), two lockwashers (16), and two flat washers (17).



Installation

1. Install support (14) with two flat washers (17), two lockwashers (16), and two screws (15).
2. Install support (10) with two nuts (13), two lockwashers (12), and two screws (11).
3. Install support (4) with four nuts (7), four lockwashers (6), four screws (5), three lockwashers (9), and three screws (8).
4. Install support (1) with lockwasher (3) and screw (2).

NOTE

Follow-on maintenance: Install fire extinguisher line loop clamps (see WP 0403 00); Install hydraulic valve forward intermediate right floor plate (see WP 0308 00); Install stowage basket forward intermediate left floor plate (see WP 0306 00); Install hydraulic valve forward right floor plate (see WP 0288 00); Install bilge pump (see WP 0251 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
CENTER AND REAR SUBFLOOR SUPPORT REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (2) (item 623, WP 0491 00)
 Lockwashers (10) (item 640, WP 0491 00)
 Nuts (10) (item 769, WP 0491 00)
 Screws (2) (item 388, WP 0491 00)
 Screws (10) (item 402, WP 0491 00)
 Washers, flat (4) (item 537, WP 0491 00)

Equipment Condition

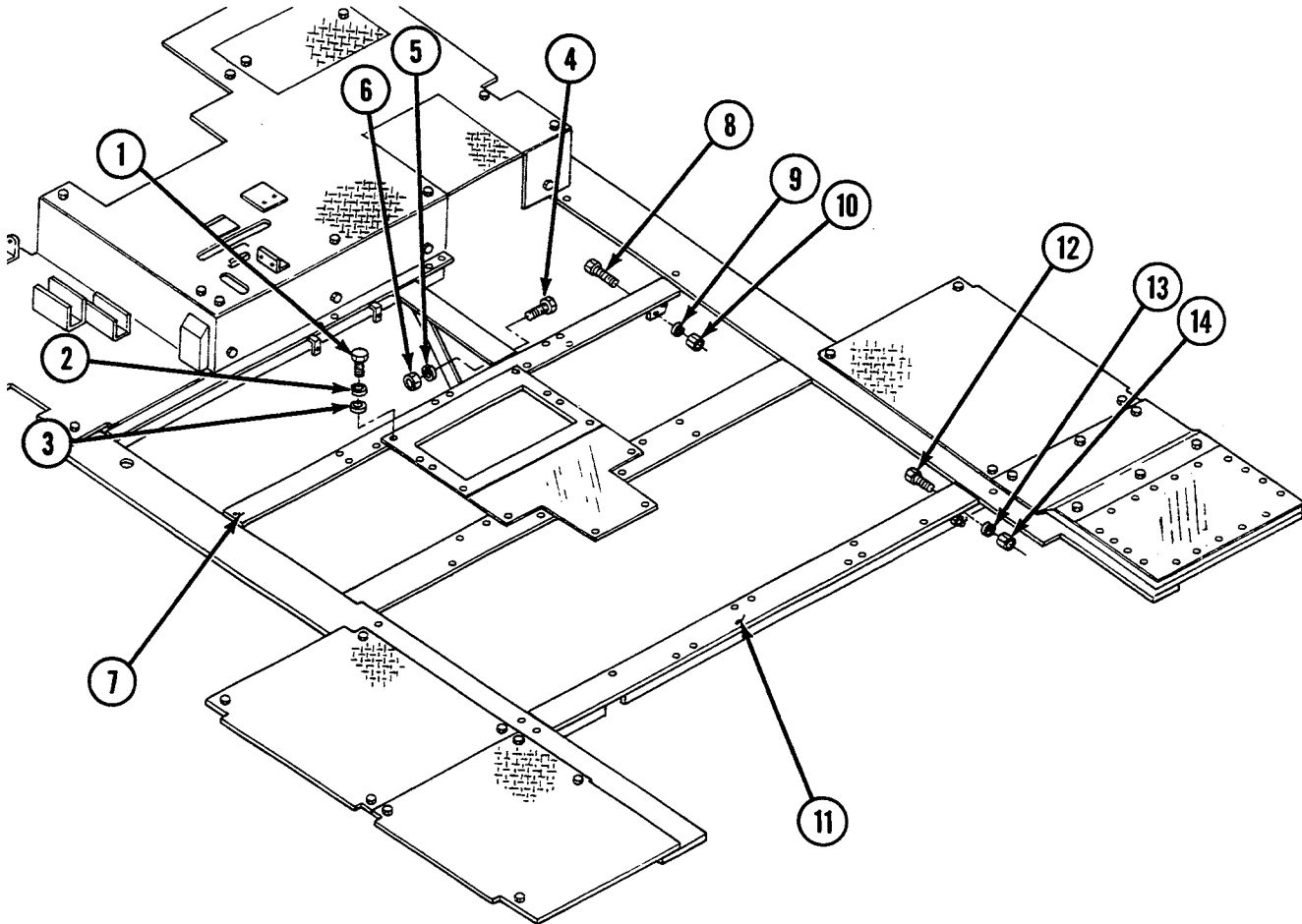
Hydraulic valve forward right floor plate removed (see WP 0288 00)
 U-35 winch center right floor plate removed (see WP 0289 00)

Equipment Condition (cont.)

Rear intermediate right floor plate removed (see WP 0293 00)
 Hydraulic line intermediate rear right center floor plate removed (see WP 0296 00)
 Rear center floor plate removed (see WP 0297 00)
 Rear left-side intermediate floor plate removed (see WP 0298 00)
 Intermediate rear left-center floor plate removed (see WP 0302 00)
 Intermediate rear left access floor plate removed (see WP 0305 00)
 Stowage basket forward intermediate left floor plate removed (see WP 0306 00)
 Hydraulic valve forward intermediate right floor plate removed (see WP 0308 00)

Removal

1. Remove two screws (1), two flat washers (2), two lockwashers (3), two screws (4), two lockwashers (5), and two nuts (6).
2. Remove center support (7) by removing two screws (8), two lockwashers (9), and two nuts (10) from each side of support.
3. Remove rear support (11) by removing two screws (12), two lockwashers (13), and two nuts (14) from each side of support.



Installation

1. Install rear support (11) with two screws (12), two lockwashers (13), and two nuts (14) to each side of support.
2. Install center support (7) with two screws (8), two lockwashers (9), and two nuts (10) to each side of support.
3. Install two screws (1), two flat washers (2), two lockwashers (3), two screws (4), two lockwashers (5), and two nuts (6).

NOTE

Follow-on maintenance: Install hydraulic valve forward intermediate right floor plate (see WP 0308 00); Install stowage basket forward intermediate left floor plate (see WP 0306 00); Install intermediate rear left access floor plate (see WP 0305 00); Install intermediate rear left-center floor plate (see WP 0302 00); Install rear left-side intermediate floor plate (see WP 0298 00); Install rear center floor plate (see WP 0297 00); Install hydraulic line intermediate rear right center floor plate (see WP 0296 00); Install rear intermediate right floor plate (see WP 0293 00); Install U-35 winch center right floor plate (see WP 0289 00); Install hydraulic valve forward right floor plate (see WP 0288 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
FENDERS AND RELATED PARTS REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Personnel Required

Mechanics (2)

Materials/Parts

Lockwashers (106) (item 640, WP 0491 00)

Lockwashers (10) (item 642, WP 0491 00)

Pins (10) (item 725, WP 0491 00)

Screws (10) (item 400, WP 0491 00)

Screws (10) (item 414, WP 0491 00)

Screws (96) (item 427, WP 0491 00)

Equipment Condition

Tow cables removed as required for clearance (see WP 0375 00)

Spade lowered (refer to TM 9-2350-256-10)

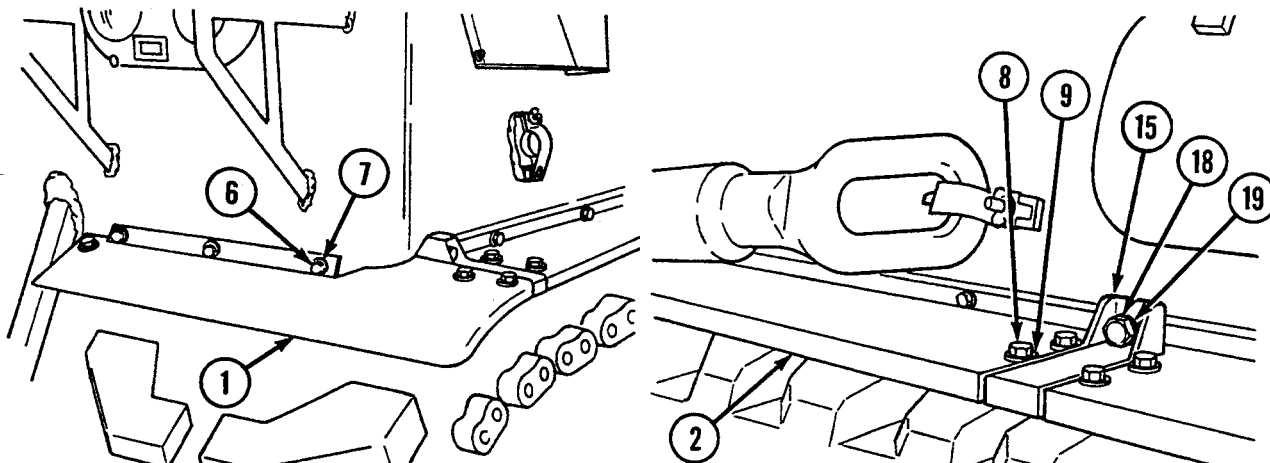
NOTE

The following procedures are the same for both left- and right-sides.

Removal**WARNING**

Fenders can fall when screws are removed. Be sure to secure fenders.

1. Remove front fender (1) by removing six screws (6) and six lockwashers (7).
2. Remove each of four fenders (2) by removing eight screws (8) and eight lockwashers (9).

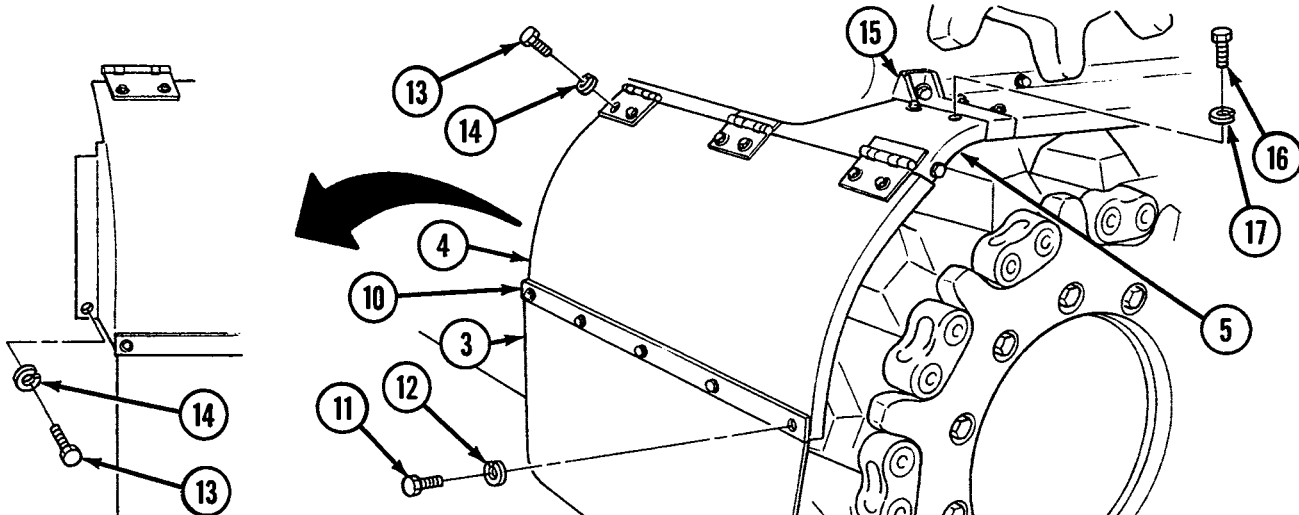


3. Remove splash guard (3) and strip (10) by removing five screws (11) and five lockwashers (12).
4. Remove hinged rear fender (4) by removing eight screws (13) and eight lockwashers (14).
5. Remove rear fender (5) from support (15) by removing two screws (16) and two lockwashers (17).

NOTE

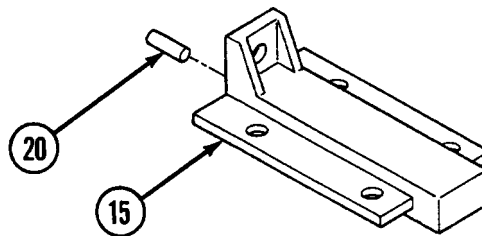
Any support (15) can be removed when fenders on both sides of support have been removed.

6. Remove five supports (15) by removing from each screw (18) and lockwasher (19).



Disassembly

1. Remove five pins (20) from five supports (15).



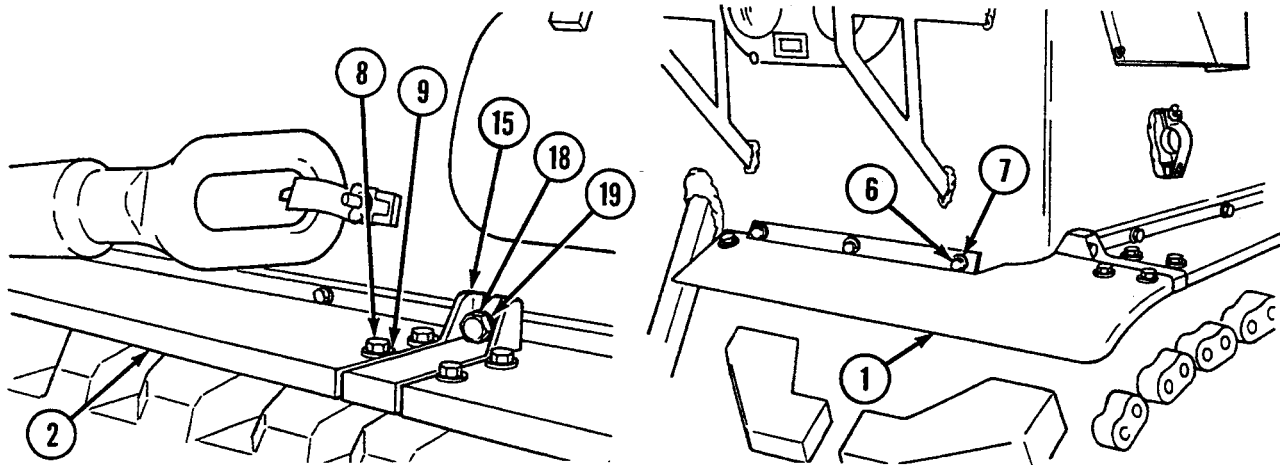
Assembly

1. Install five pins (20) in five supports (15).

Installation

1. Install five supports (15) each with screw (18) and lockwasher (19). Locate pins (20) in hull locating holes.
2. Install rear fender (5) on support (15) with two lockwashers (17) and two screws (16).
3. Install hinged rear fender (4) with eight screws (13) and eight lockwashers (14).
4. Install splash guard (3) and strip (10) with five screws (11) and five lockwashers (12).
5. Install each of four fenders (2) with eight screws (8) and eight lockwashers (9).

6. Install front fender (1) with six screws (6) and six lockwashers (7).



NOTE

Follow-on maintenance: Raise spade (refer to TM-9-2350-256-10); Install tow cables if required for clearance (see WP 0375 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

COMMANDER'S CUPOLA ASSEMBLY MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Took kit, general mechanic's (item 59, WP 0490 00)
 Key, socket head screw (item 29, WP 0490 00)
 Key, socket head screw (item 30, WP 0490 00)
 Pliers, retaining ring, external (item 37, WP 0490 00)
 Socket set (item 55, WP 0490 00)
 Wrench, torque (item 68, WP 0490 00)

Materials/Parts

Adhesive (item 3, WP 0489 00)
 Grease, GAA (item 13, WP 0489 00)
 Sealing compound (item 31, WP 0489 00)
 Buttons (4) (item 137, WP 0491 00)
 Jamnut (item 685, WP 0491 00)
 Lockwashers (16) (item 630, WP 0491 00)
 Lockwashers (8) (item 638, WP 0491 00)
 Lockwashers (17) (item 640, WP 0491 00)
 Lockwashers (30) (item 642, WP 0491 00)
 Lockwires (2) (item 483, WP 0491 00)
 Nut (item 756, WP 0491 00)
 Nuts, socket (12) (item 322, WP 0491 00)
 Pins (2) (item 159, WP 0491 00)
 Pin (item 726, WP 0491 00)
 Pin, spring (item 447, WP 0491 00)

Materials/Parts (cont.)

Rings, retaining (2) (item 451, WP 0491 00)
 Screws (12) (item 41, WP 0491 00)
 Screws (12) (item 205, WP 0491 00)
 Screws (8) (item 370, WP 0491 00)
 Screws (17) (item 401, WP 0491 00)
 Screws (6) (item 417, WP 0491 00)
 Screws (4) (item 473, WP 0491 00)
 Screws (16) (item 562, WP 0491 00)
 Screws (2) (item 604, WP 0491 00)
 Screws (24) (item 807, WP 0491 00)
 Seal (item 222, WP 0491 00)
 Setscrew (item 298, WP 0491 00)
 Setscrew (item 352, WP 0491 00)
 Spring (item 201, WP 0491 00)
 Spring, latch (item 202, WP 0491 00)
 Washer, flat (item 534, WP 0491 00)
 Washers, flat (3) (item 539, WP 0491 00)

Personnel Required

Mechanics (2)

References

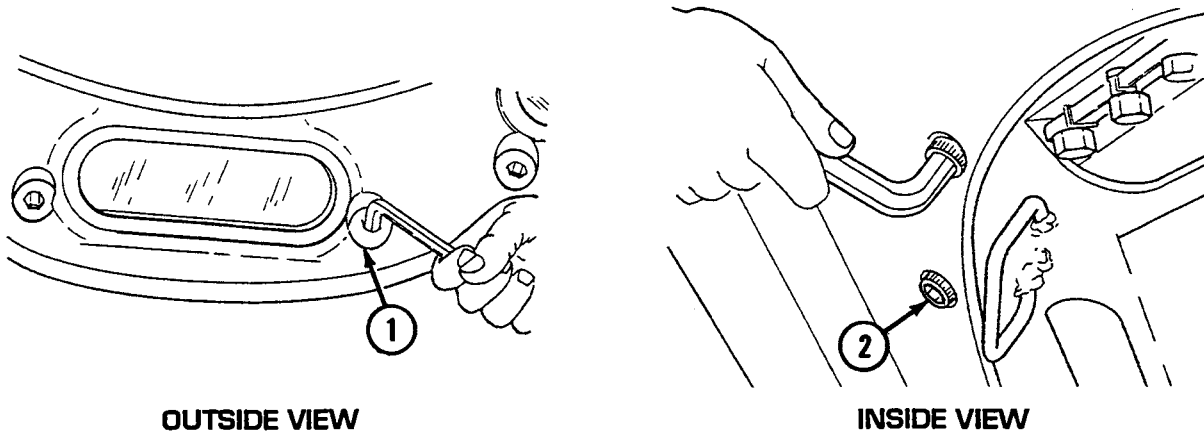
WP 0097 00

NOTE

If mounting plate is to be removed for clearance in removal and installation of hydraulic reservoir, hoist winch, mechanical transmission and main hydraulic pump, or other interior items, it is not necessary to remove cupola from mounting plate. Remove mounting plate with cupola mounted.

Removal

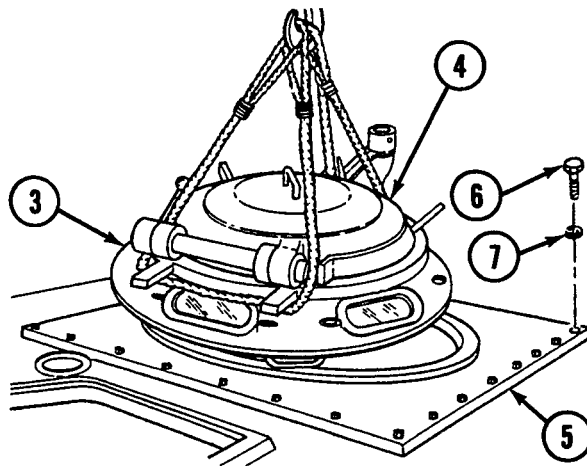
1. Remove 12 screws (1).
2. Remove 12 socket nuts (2).



WARNING

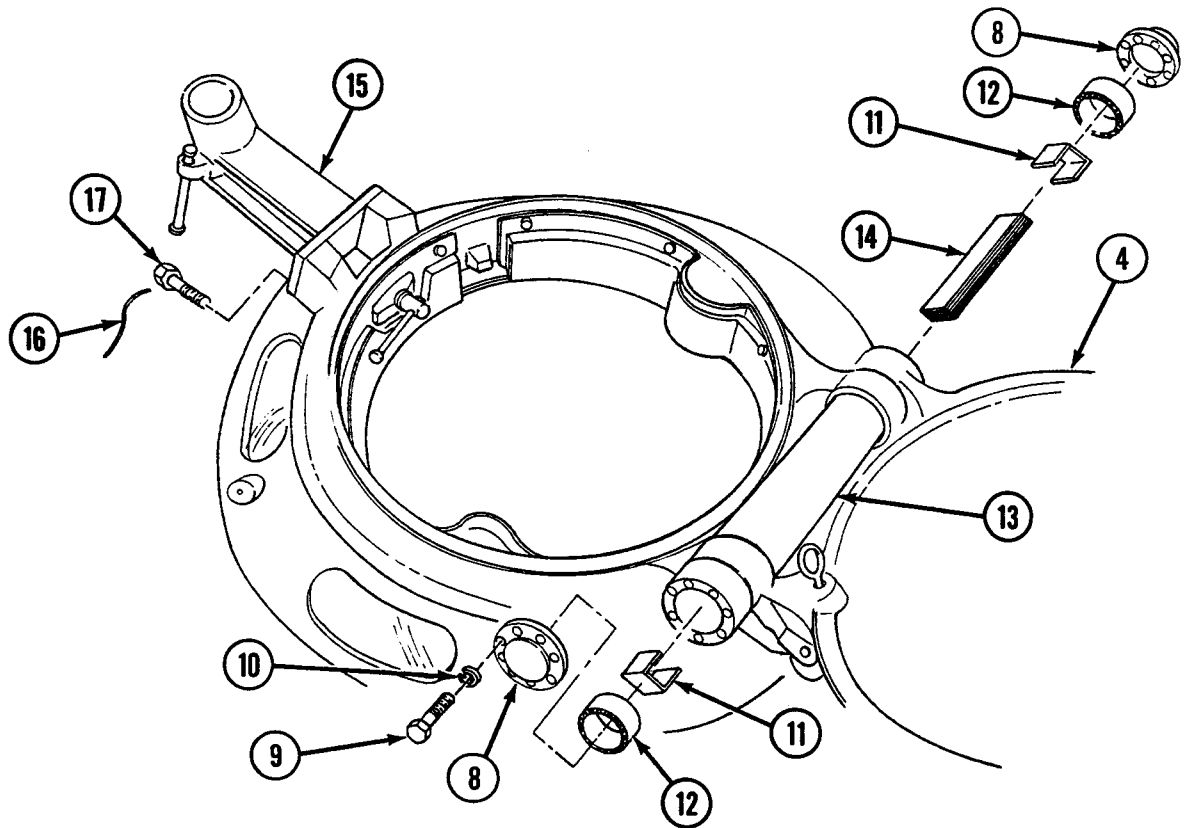
Cupola assembly is extremely heavy; two persons are needed during removal and installation.

3. Secure cupola (3) so that it does not spin. Close and lock cupola door (4).
4. Using a suitable lifting device, remove cupola (3) from mounting plate (5).
5. Remove 30 screws (6), 30 lockwashers (7), and mounting plate (5).



Disassembly

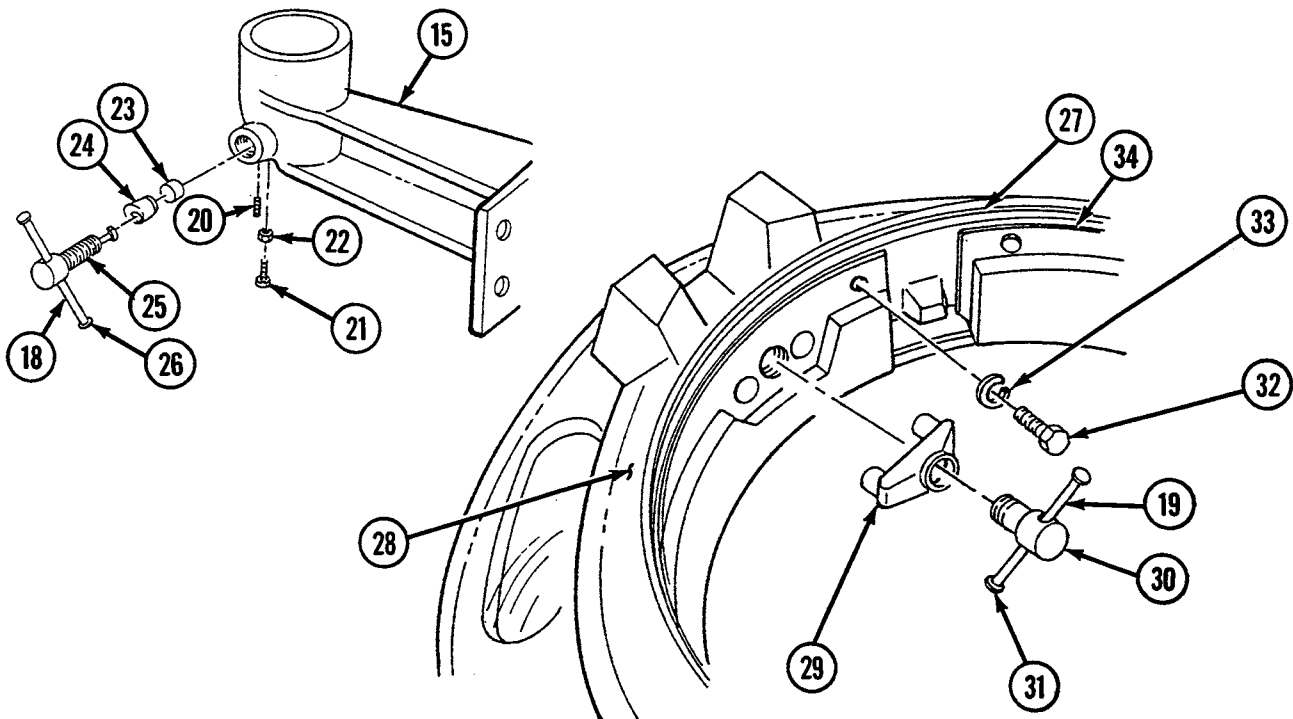
1. Open cupola door (4) to vertical position. Remove two cap assemblies (8) by removing eight screws (9) and eight lock-washers (10) from each.
2. Remove two adapters (11), two bearings (12), tube (13), six springs (14), and cupola door (4).
3. Remove gun support pintle (15) by cutting lockwire (16) and removing four screws (17).



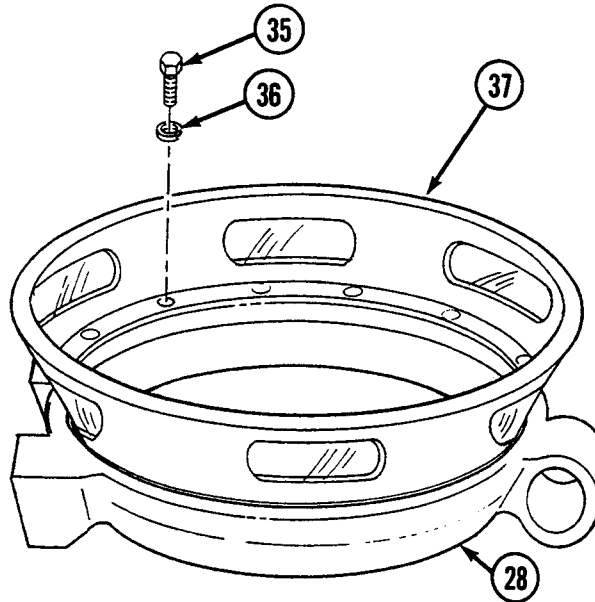
NOTE

Remove pins (18 and 19) only if replacement is necessary.

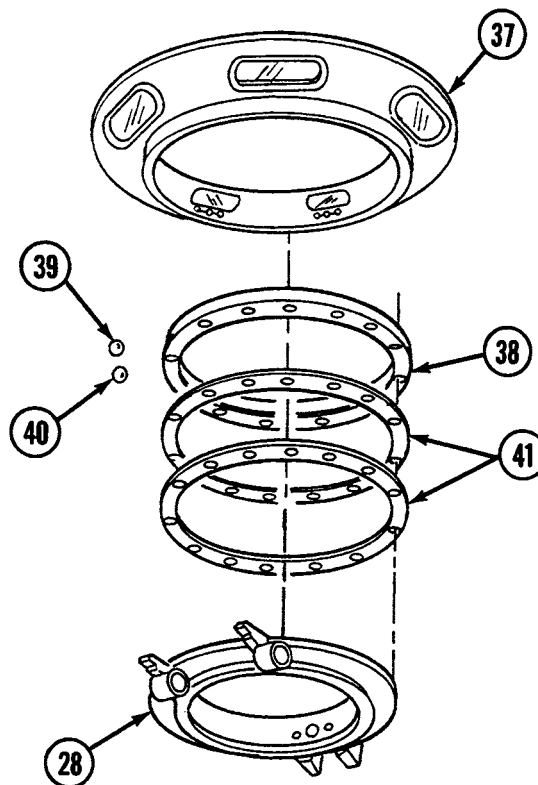
4. Remove from gun support pintle (15), setscrews (20 and 21), nut (22), block (23), adapter (24), screw (25), two buttons (26), and pin (18). File or grind off beveled ends of pin to remove.
5. Remove seal (27). Clean all dirt and adhesive from gun ring assembly (28).
6. Remove lock ring shoe (29) by removing bolt (30), pin (19), and two buttons (31). File or grind off beveled ends of pin to remove.
7. Remove eight screws (32) and eight lockwashers (33). Lift out padding assembly (34).



8. Remove 17 screws (35) and 17 lockwashers (36) from gun ring assembly (28) and cupola body assembly (37).



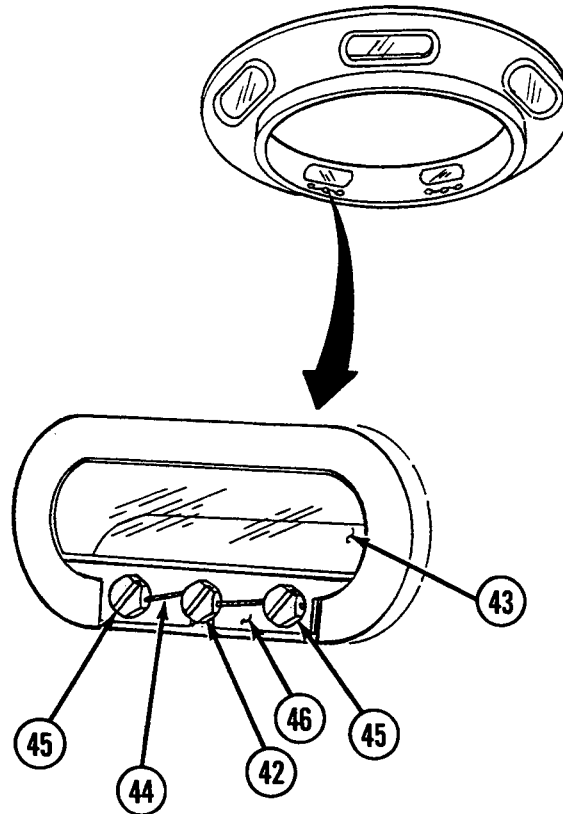
9. Remove bearing retainer (38), 90 ball bearings (39), and 90 ball bearings (40). Separate gun ring assembly (28) from cupola body assembly (37).
10. Remove two bearing retainer shims (41).



NOTE

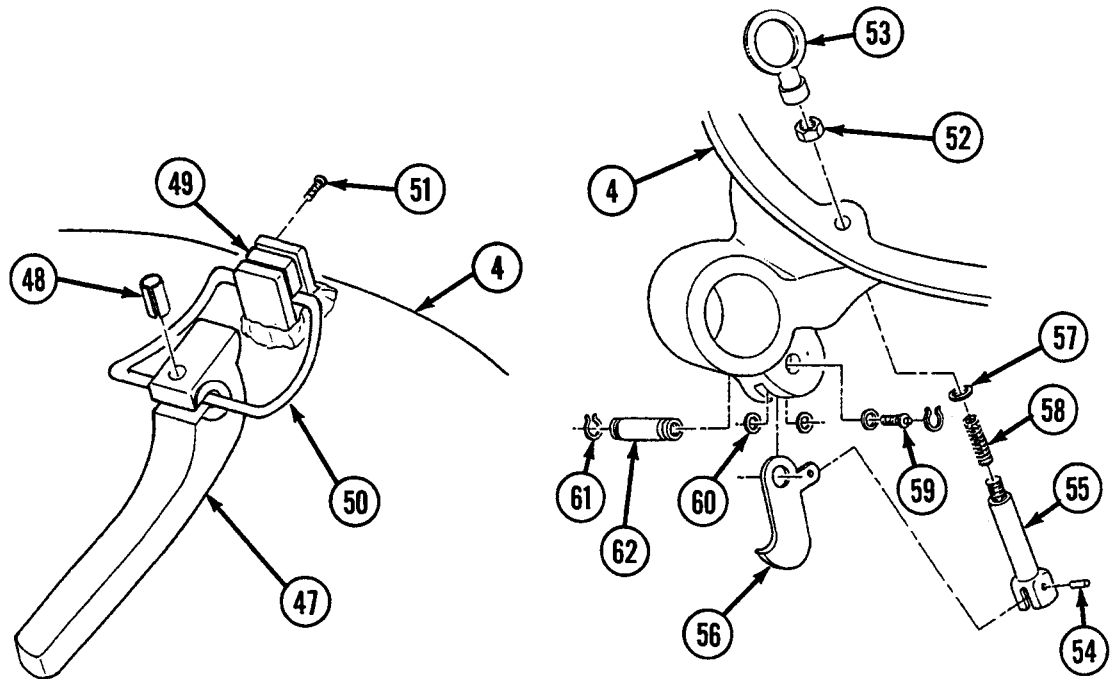
Early design models also use jacking screw (42).

11. Remove six direct vision blocks (43) by cutting lockwire (44) and removing two screws (45) on each prism lock wedge (46).
12. Remove six prism lock wedges (46).



13. Remove inside latch (47) from cupola door (4) by removing spring pin (48).
14. Remove plug (49) and latch spring (50) by removing two screws (51).
15. Loosen jamnut (52) and remove rod end connector (53).
16. Remove jamnut (52).
17. Drive out pin (54). Separate trigger rod (55) from latch (56) and remove trigger rod, washer (57), and spring (58).

18. Remove lubrication fitting (59), three flat washers (60), and two retaining rings (61).
19. Drive out pin (62) and remove latch (56) from cupola door (4).



Assembly

1. Insert trigger rod (55) through spring (58), washer (57), and cupola door (4).
2. Install latch (56) to cupola door (4) with pin (62).
3. Install lubrication fitting (59), three flat washers (60), and two retaining rings (61).
4. Attach trigger rod (55) to latch (56) with pin (54).
5. Install jamnut (52).
6. Install rod end connector (53) and tighten jamnut (52).
7. Install plug (49) and latch spring (50) with two screws (51).
8. Install inside latch (47) to cupola door (4) with spring pin (48).

NOTE

Early design models also use jacking screw (42).

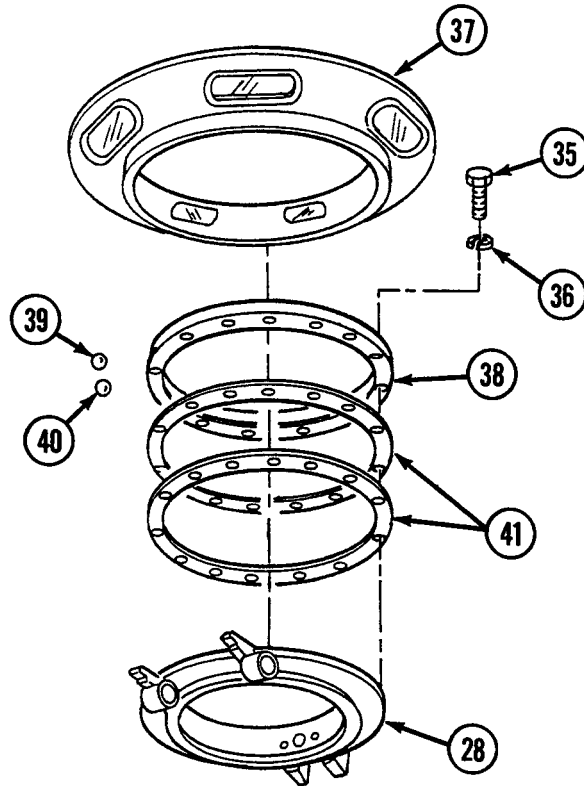
9. Install six direct vision blocks (43) and six prism lock wedges (46). Apply sealing compound. Secure with two screws (45). Secure screws with lockwire (44).

10. Install two bearing retainer shims (41) in gun ring assembly (28). Lubricate bearing with grease (see WP 0097 00).
11. Install cupola body assembly (37) on gun ring assembly (28).

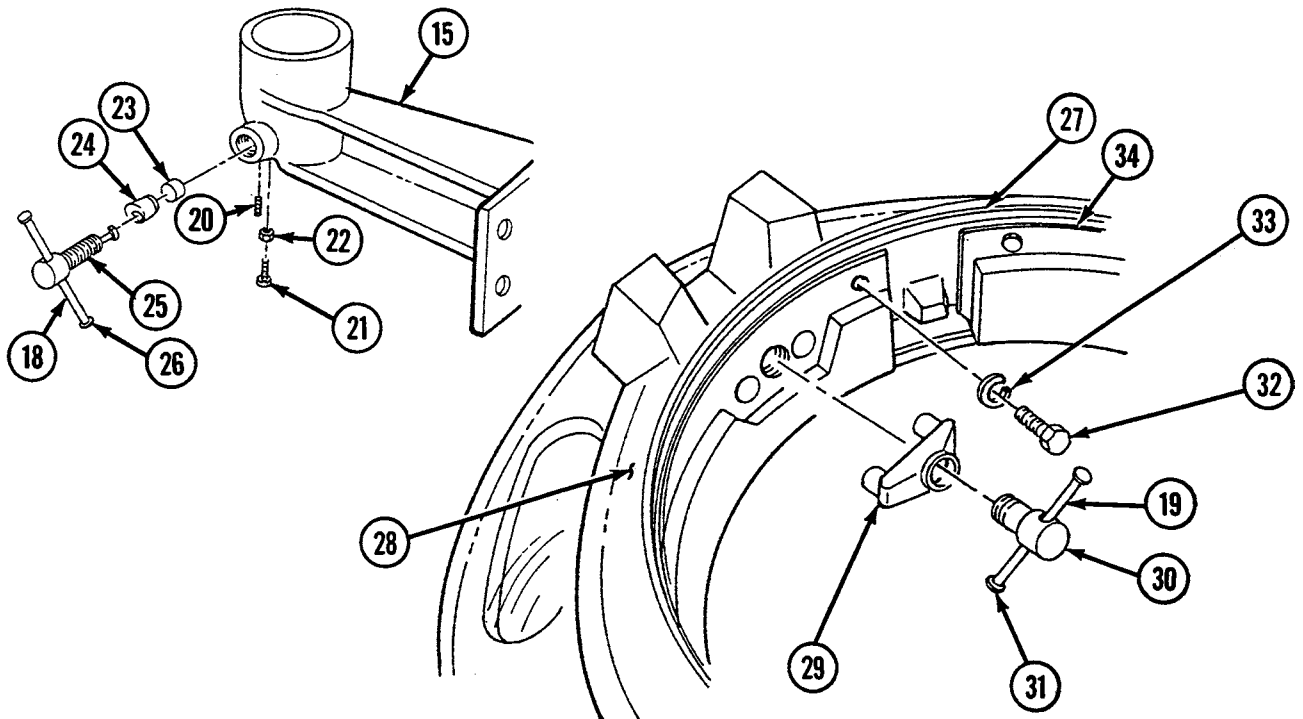
CAUTION

When assembling ball bearings (39 and 40) in gun ring assembly (28), alternate ball bearings around circumference of gun ring assembly.

12. Install 90 ball bearings (40), 90 ball bearings (39), and bearing retainer (38) to gun ring assembly (28). Secure with 17 screws (35) and 17 lockwashers (36).



13. Install padding assembly (34) with eight lockwashers (33) and eight screws (32). Torque not to exceed 96 pound-inches (lb-in.) (10.8 newton-meters [N•m]).
14. Install seal (27) by applying adhesive and pressing seal into place.
15. Install lock ring shoe (29) with bolt (30) and pin (19). Peen ends of pin. Install two buttons (31).
16. Install setscrews (20 and 21), nut (22), block (23), adapter (24), screw (25), and pin (18) to gun support pintle (15). Peen ends of pin. Install two buttons (26).



17. Install gun support pintle (15) with four screws (17). Secure screws with lockwire (16).

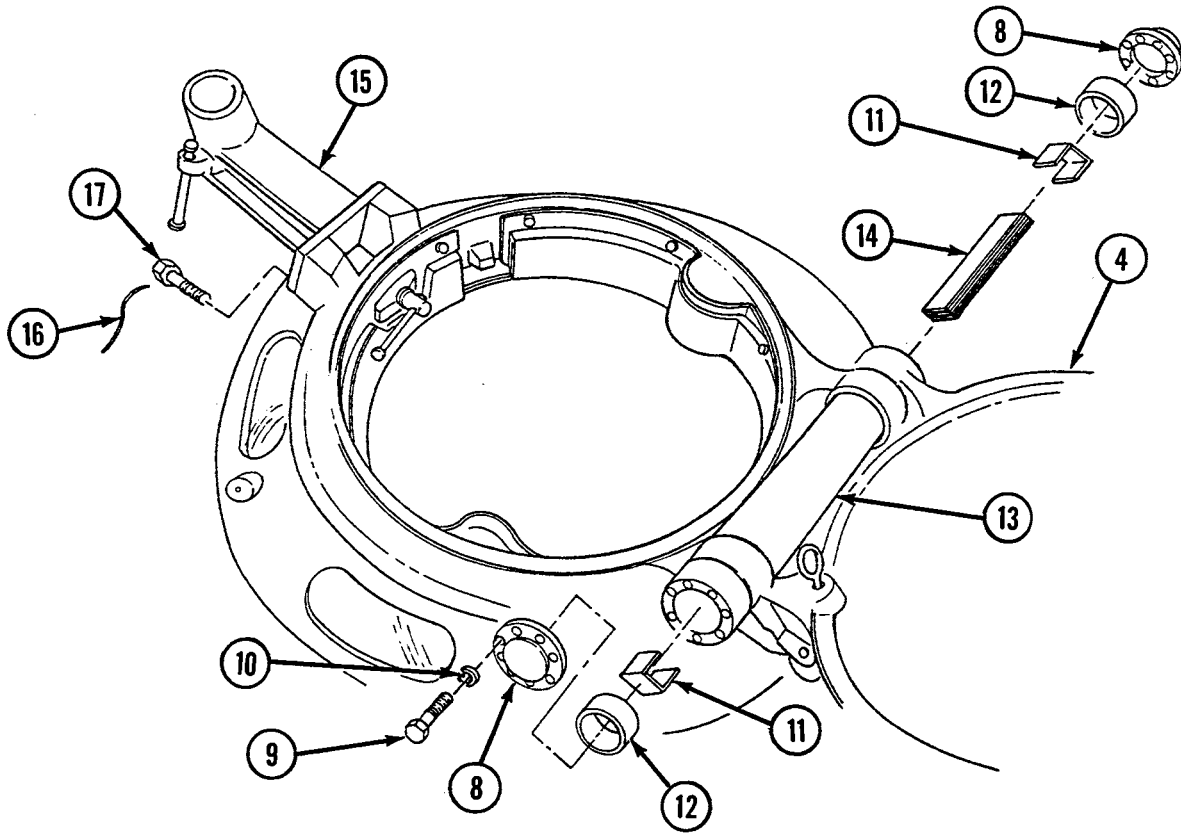
WARNING

Be sure that springs (14) are installed with cupola door (4) open in vertical position. Secure cupola door open to prevent accidental closure.

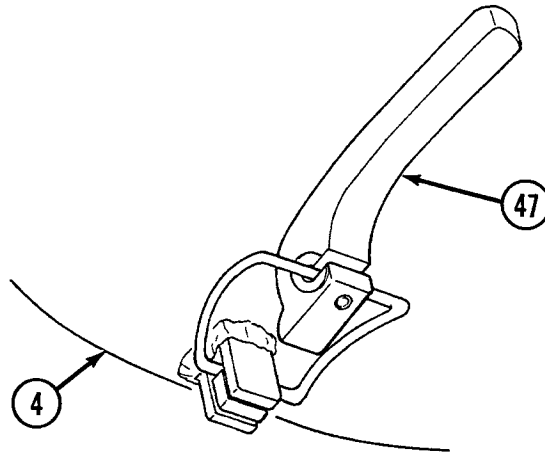
NOTE

Allow adhesive to dry before closing cupola door (4).

18. Place cupola door (4) in vertical position and install with six springs (14), tube (13), two bearings (12), two adapters (11), and two cap assemblies (8). Secure cap assemblies with eight screws (9) and eight lockwashers (10) each.

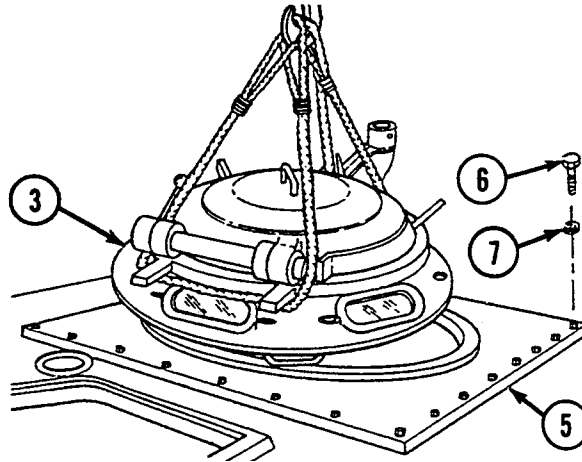


19. Secure cupola door (4) with inside latch (47).

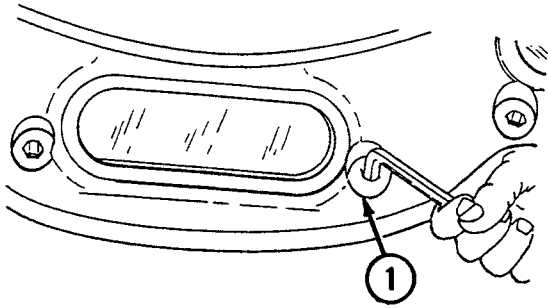


Installation

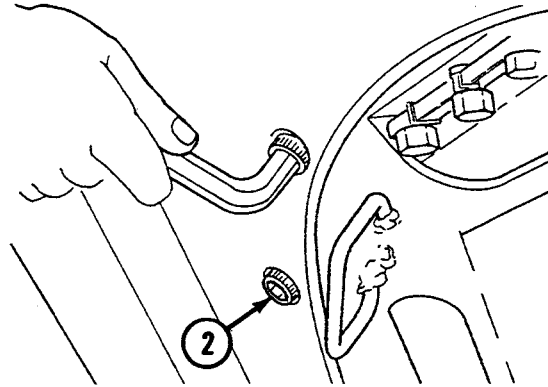
1. Install mounting plate (5) with 30 screws (6) and 30 lockwashers (7).



2. Install cupola (3) on mounting plate (5) with 12 socket nuts (2) and 12 screws (1). Torque to 84–120 lb-in. (9.5–13.6 N•m).



OUTSIDE VIEW



INSIDE VIEW

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
DRIVER'S CAB-TOP DOOR AND RELATED PARTS MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)
Pliers set, retaining (item 35, WP 0490 00)

Materials/Parts

Adhesive (item 1 or 2, WP 0489 00)
Lockwashers (5) (item 640, WP 0491 00)
Nut, self-locking (item 490, WP 0491 00)
Nuts, self-locking (2) (item 498, WP 0491 00)
Packing (item 849, WP 0491 00)
Pin (item 296, WP 0491 00)
Pin, cotter (item 519, WP 0491 00)
Pin, straight (item 154, WP 0491 00)
Ring, retaining (item 457, WP 0491 00)
Screws (5) (item 399, WP 0491 00)

Materials/Parts (cont.)

Screw, adjusting (item 597, WP 0491 00)
Spring (item 55, WP 0491 00)
Spring (item 229, WP 0491 00)
Strip, rubber (item 45, WP 0491 00)
Washer, flat (item 535, WP 0491 00)
Washer, flat (item 538, WP 0491 00)

Personnel Required

Mechanics (3)

References

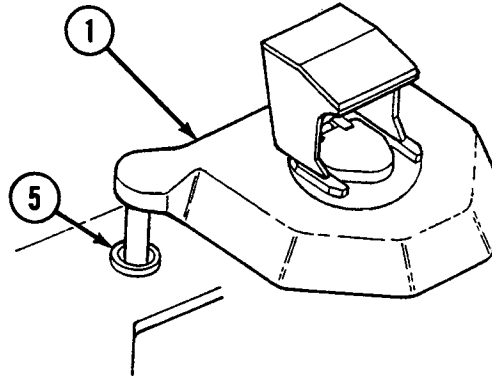
WP 0097 00
WP 0323 00

NOTE

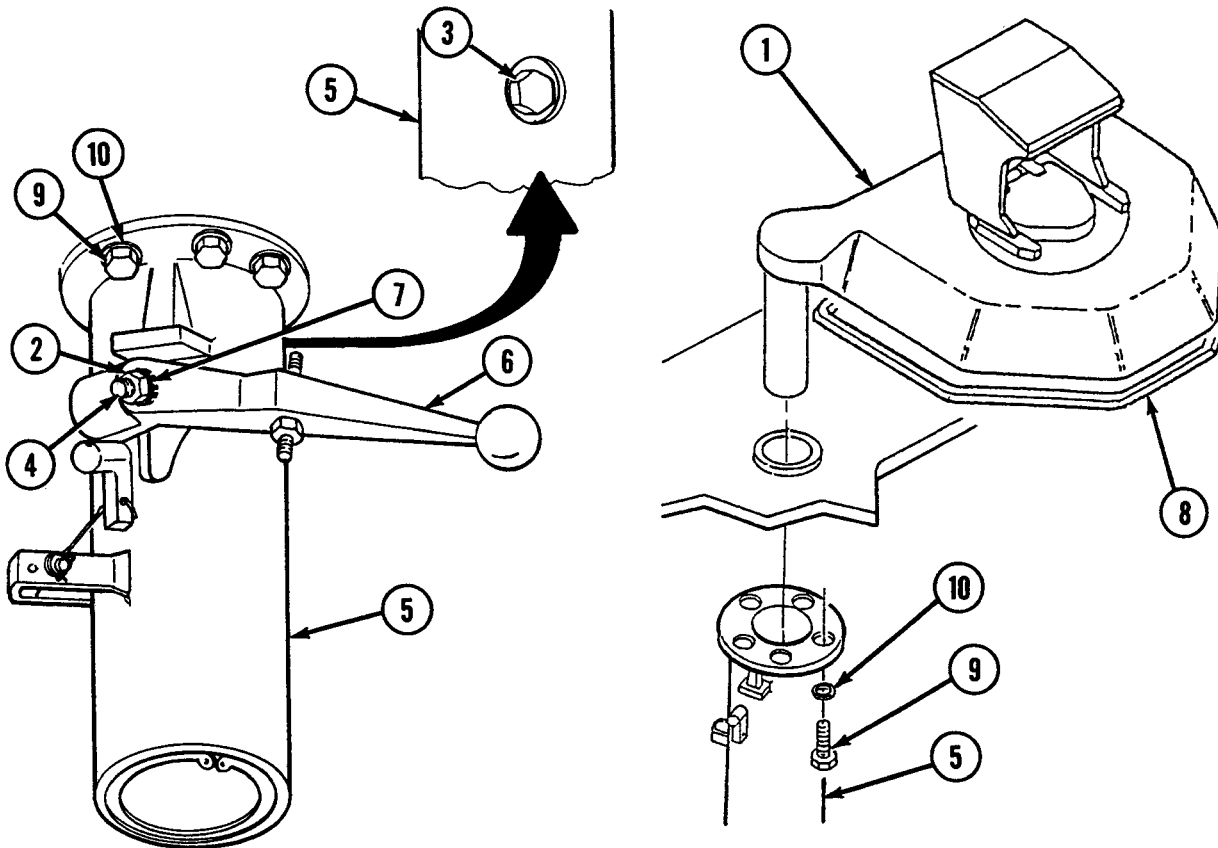
See WP 0323 00 for removal, disassembly, assembly, and installation of passive night viewer mount.

Removal

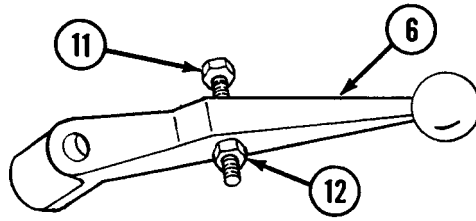
1. Raise driver's cab-top door (1) about 2 inches (in.) (51 millimeters [mm]) to align self-locking nuts (2 and 3) on arm control pin (4) with opening in shaft housing (5).



2. Remove control arm (6) by removing self-locking nut (2), arm control pin (4), washer (7), and self-locking nut (3).
3. Remove driver's cab-top door (1) by pulling up through shaft housing (5).
4. Remove rubber strip (8) from driver's cab-top door (1).
5. Remove shaft housing (5) by removing five screws (9) and five lockwashers (10).



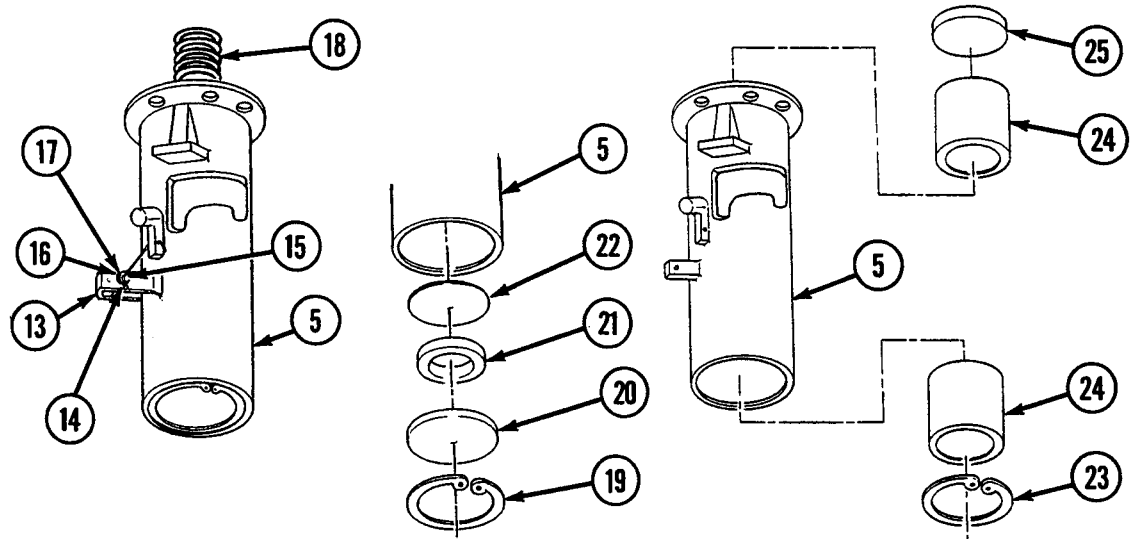
- Remove adjusting screw (11) and self-locking nut (12) from control arm (6).



- Remove retaining latch (13) by removing cotter pin (14), straight pin (15), spring (16), and washer (17).
- Remove spring (18) from shaft housing (5).
- Remove retaining ring (19), bearing retainer (20), bearing (21), and disk (22).

Disassembly

- Remove retaining ring (23), two bearings (24), and packing (25) from shaft housing (5).



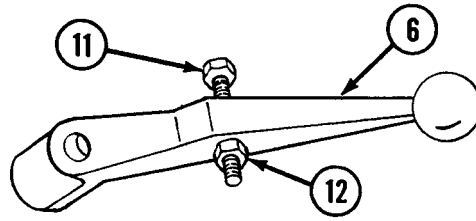
Assembly

- Install two bearings (24), retaining ring (23), and packing (25) in shaft housing (5) and lubricate (see WP 0097 00).

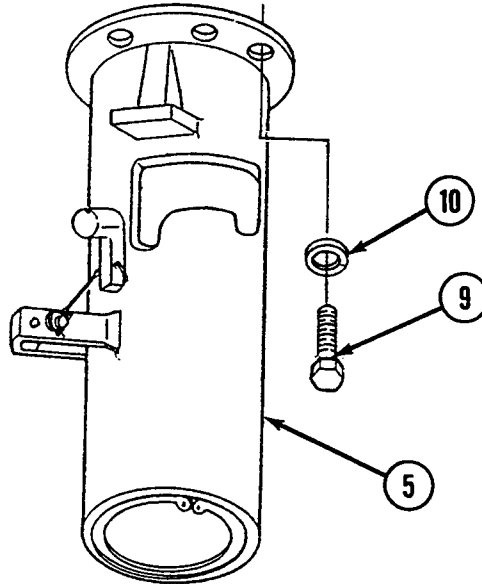
Installation

- Install disk (22), bearing (21), and bearing retainer (20), and secure with retaining ring (19).
- Install spring (18) in shaft housing (5).
- Install retaining latch (13) with straight pin (15), spring (16), washer (17), and cotter pin (14).

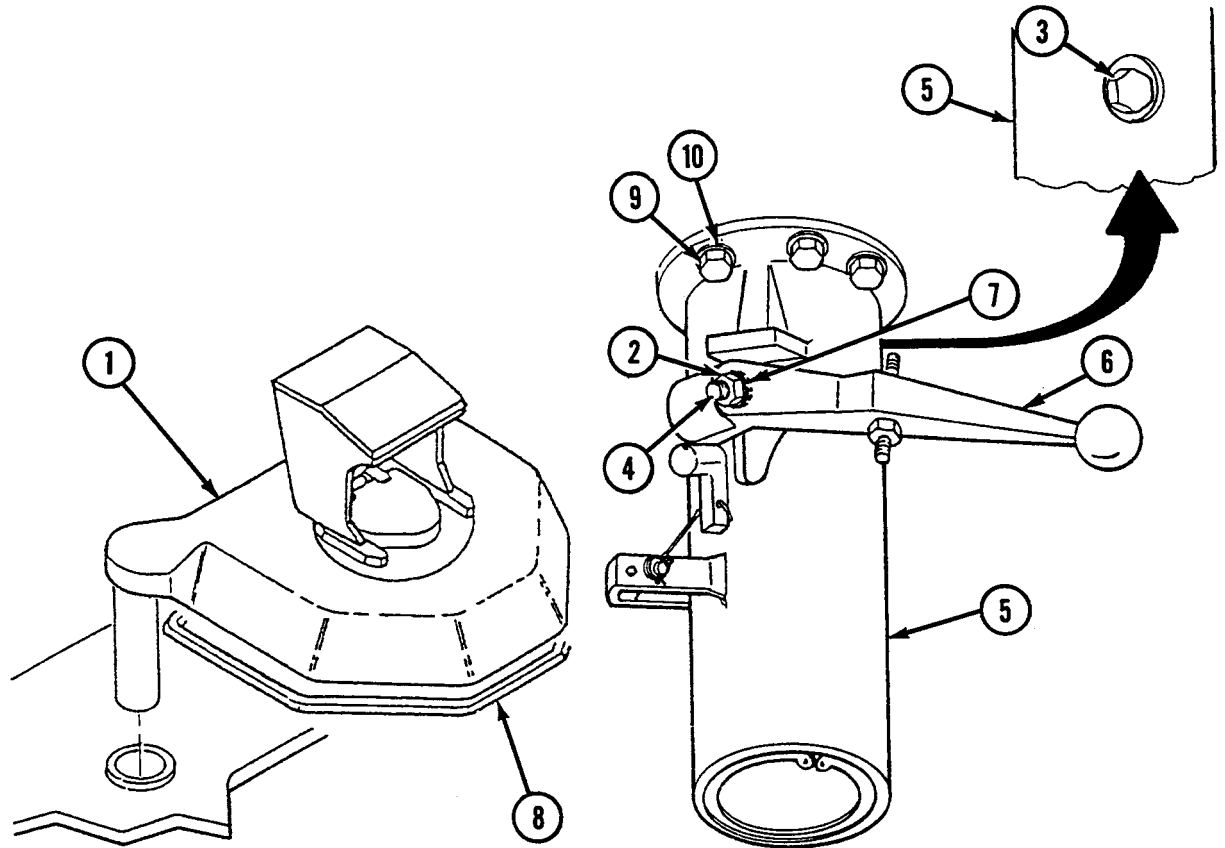
4. Install adjusting screw (11) and self-locking nut (12) on control arm (6).



5. Install assembled shaft housing (5) with five screws (9) and five lockwashers (10).



6. Install rubber strip (8) on driver's cab-top door (1) with adhesive.
7. Install driver's cab-top door (1) into shaft housing (5).
8. Install control arm (6) with self-locking nut (2), arm control pin (4), washer (7), and self-locking nut (3).



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
MECHANIC'S CAB-TOP DOOR AND RELATED PARTS MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)
Pliers set, retaining (item 35, WP 0490 00)

Materials/Parts

Adhesive (item 1 or 2, WP 0489 00)
Lockwashers (5) (item 640, WP 0491 00)
Nut, self-locking (item 490, WP 0491 00)
Nuts, self-locking (2) (item 498, WP 0491 00)
Packing (item 849, WP 0491 00)
Pin (item 296, WP 0491 00)
Pin, cotter (item 519, WP 0491 00)
Pin, straight (item 154, WP 0491 00)
Rings, retaining (2) (item 457, WP 0491 00)

Materials/Parts (cont.)

Screws (5) (item 399, WP 0491 00)
Screw, adjusting (item 597, WP 0491 00)
Seal (item 45, WP 0491 00)
Spring (item 56, WP 0491 00)
Spring (item 229, WP 0491 00)
Washer, flat (item 535, WP 0491 00)
Washer, flat (item 538, WP 0491 00)

Personnel Required

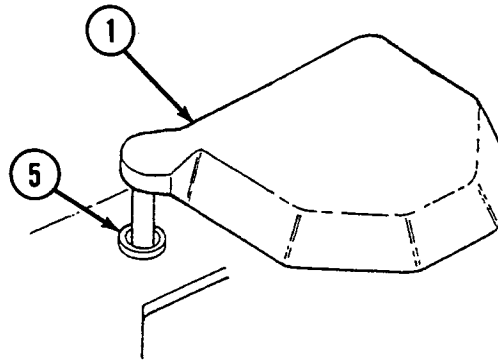
Mechanics (3)

References

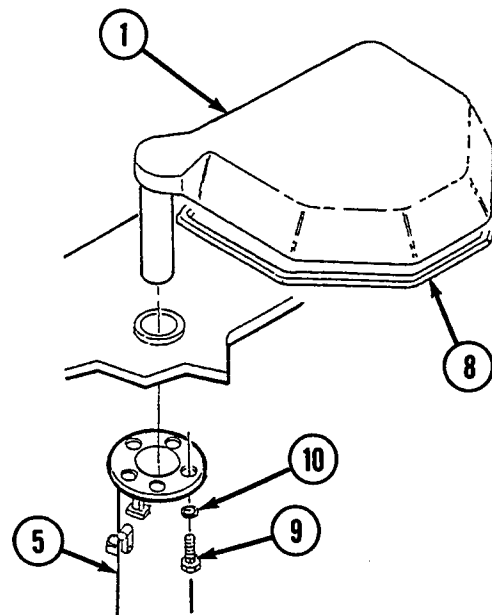
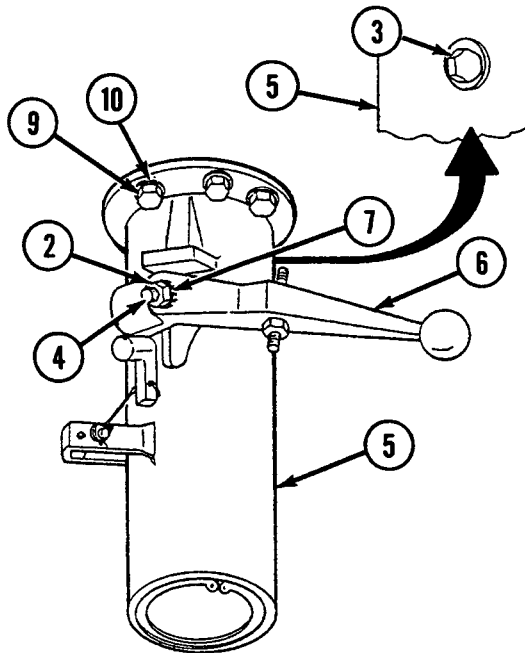
WP 0097 00

Removal

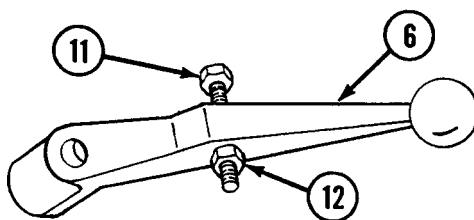
1. Raise mechanic's cab-top door (1) about 2 in. (51 mm) to align self-locking nuts (2 and 3) on arm control pin (4) with opening in shaft housing (5).



2. Remove control arm (6) by removing self-locking nut (2), arm control pin (4), washer (7), and self-locking nut (3).
3. Remove mechanic's cab-top door (1) by pulling up through shaft housing (5).
4. Remove seal (8) from mechanic's cab-top door (1).
5. Remove shaft housing (5) by removing five screws (9) and five lockwashers (10).



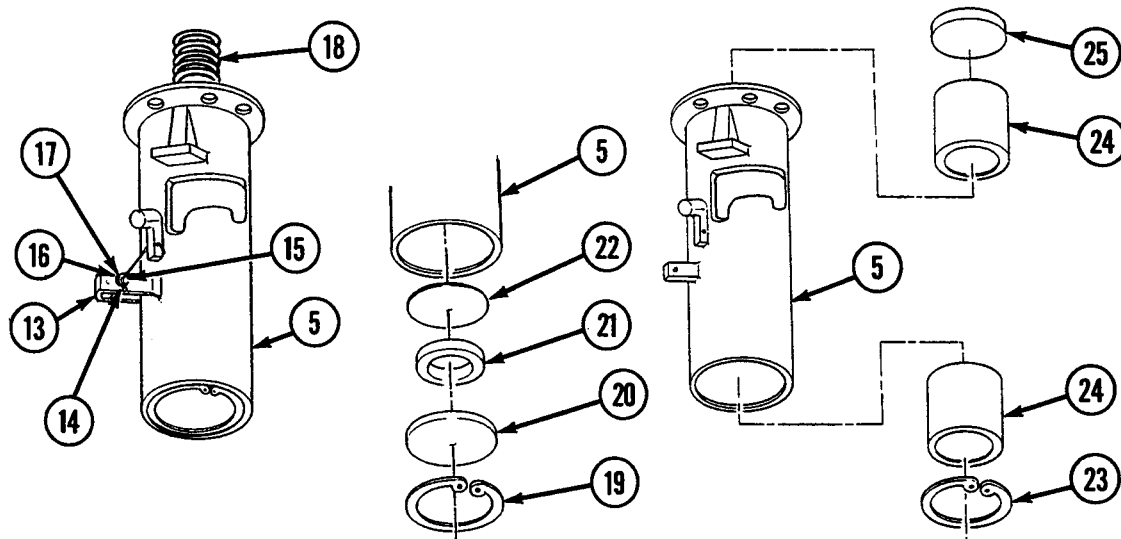
- Remove adjusting screw (11) and self-locking nut (12) from control arm (6).



- Remove retaining latch (13) by removing cotter pin (14), straight pin (15), spring (16), and washer (17).
- Remove spring (18) from shaft housing (5).
- Remove retaining ring (19), bearing retainer (20), bearing (21), and disk (22).

Disassembly

- Remove retaining ring (23), two bearings (24), and packing (25) from shaft housing (5).



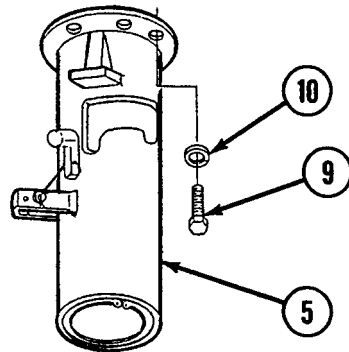
Assembly

- Install two bearings (24), retaining ring (23), and packing (25) in shaft housing (5) and lubricate (see WP 0097 00).

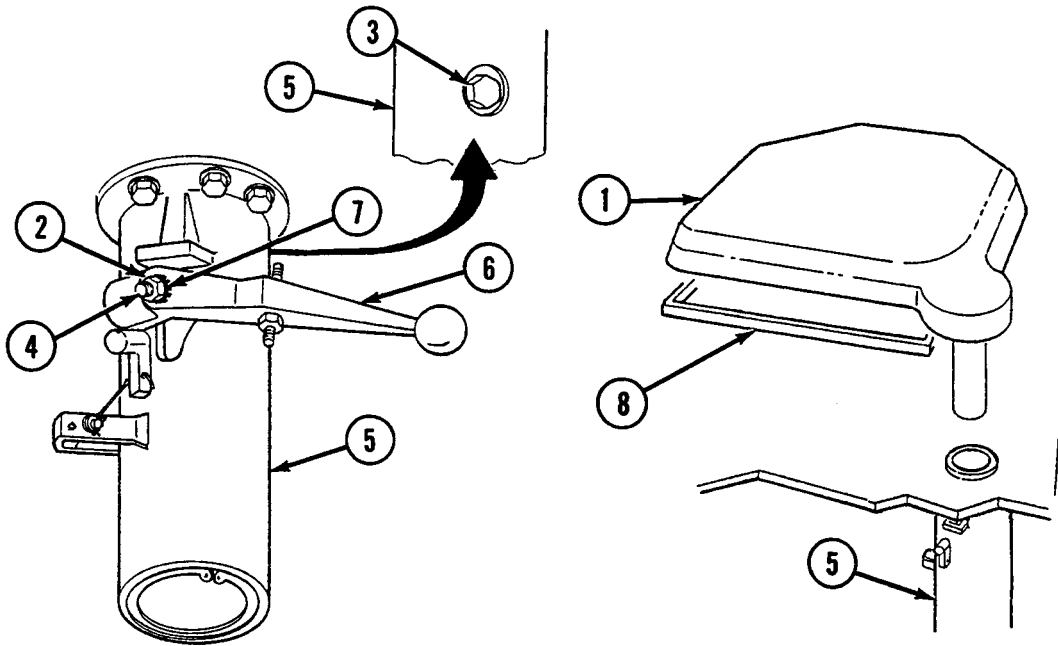
Installation

- Install disk (22), bearing (21), and bearing retainer (20), and secure with retaining ring (19).
- Install spring (18) in shaft housing (5).
- Install retaining latch (13) with straight pin (15), spring (16), washer (17), and cotter pin (14).
- Install adjusting screw (11) and self-locking nut (12) on control arm (6).

5. Install assembled shaft housing (5) with five screws (9) and five lockwashers (10).



6. Install seal (8) on mechanic's cab-top door (1) with adhesive.
7. Install mechanic's cab-top door (1) into shaft housing (5).
8. Install control arm (6) with self-locking nut (2), arm control pin (4), washer (7), and self-locking nut (3).



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

RIGGER'S CAB-TOP DOOR AND RELATED PARTS MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)
Pliers set, retaining (item 35, WP 0490 00)

Materials/Parts

Adhesive (item 1 or 2, WP 0489 00)
Gasket (item 96, WP 0491 00)
Lockwashers (11) (item 640, WP 0491 00)
Nut, self-locking (item 490, WP 0491 00)
Nuts, self-locking (2) (item 498, WP 0491 00)
Packing (item 849, WP 0491 00)
Pin (item 296, WP 0491 00)
Pin, cotter (item 519, WP 0491 00)
Pin, straight (item 154, WP 0491 00)
Rings, retaining (2) (item 457, WP 0491 00)

Materials/Parts (cont.)

Screws (5) (item 398, WP 0491 00)
Screws (6) (item 399, WP 0491 00)
Screw, adjusting (item 597, WP 0491 00)
Spring (item 56, WP 0491 00)
Spring (item 229, WP 0491 00)
Strip, rubber (item 45, WP 0491 00)
Washer, flat (item 535, WP 0491 00)
Washer, flat (item 538, WP 0491 00)

Personnel Required

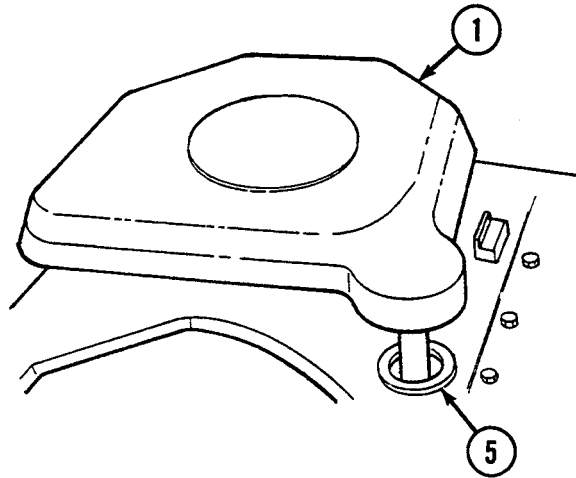
Mechanics (3)

References

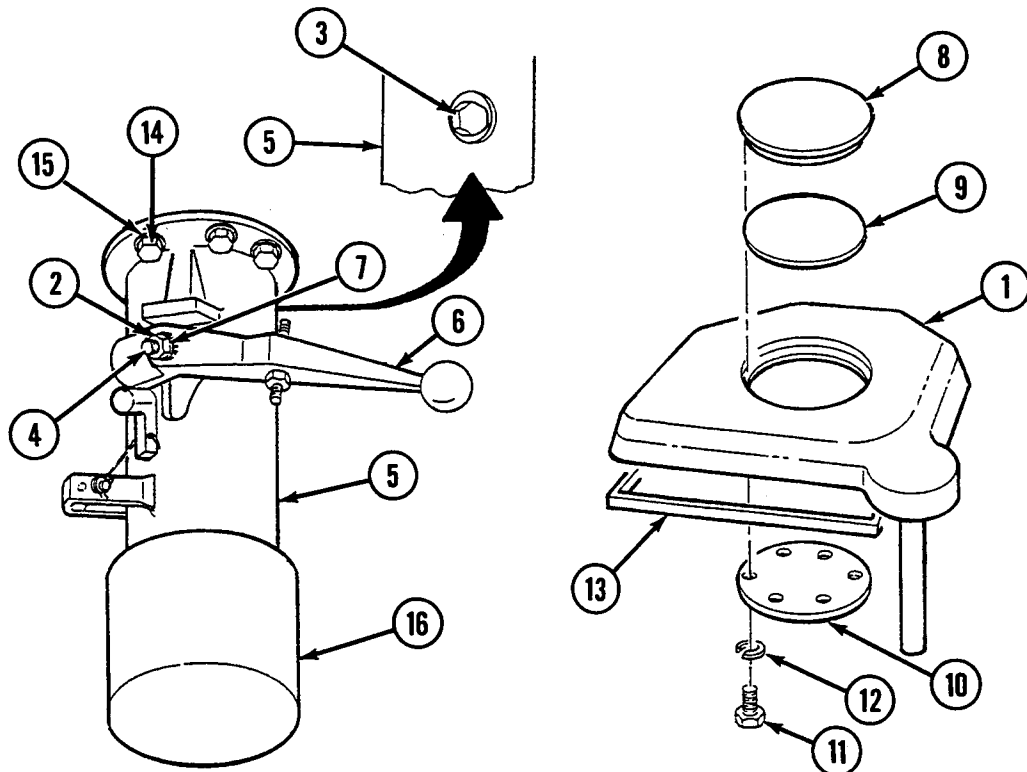
WP 0097 00

Removal

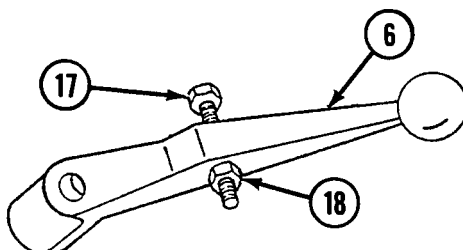
1. Raise rigger's cab-top door (1) about 2 in. (51 mm) to align self-locking nuts (2 and 3) on arm control pin (4) with opening in shaft housing (5).



2. Remove control arm (6) by removing self-locking nut (2), arm control pin (4), washer (7), and self-locking nut (3).
3. Remove rigger's cab-top door (1) by pulling up through shaft housing (5).
4. Remove access cover (8), gasket (9), and access cover (10) from inside rigger's cab-top door (1) by removing six screws (11) and six lockwashers (12).
5. Remove rubber strip (13) from rigger's cab-top door (1).
6. Remove shaft housing (5) by removing five screws (14) and five lockwashers (15).
7. Remove cushioning pad (16) from shaft housing (5).



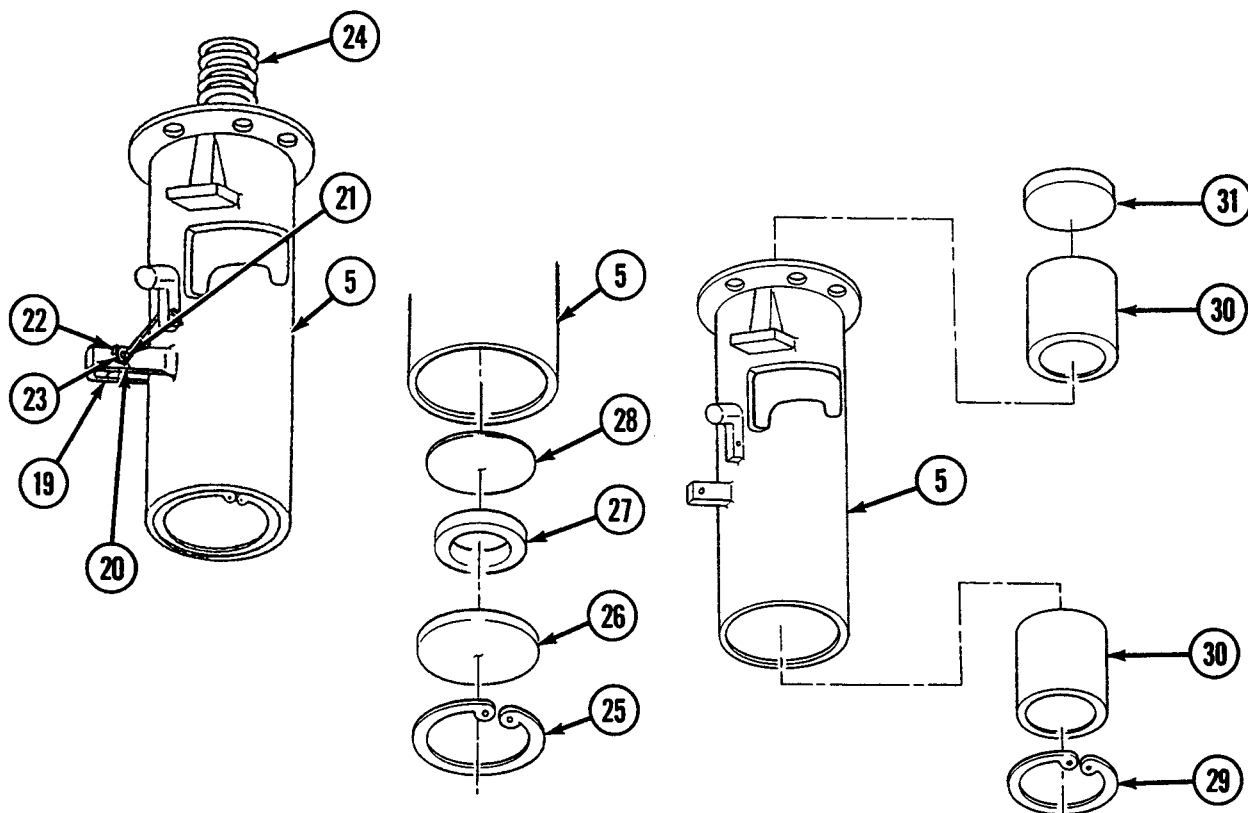
- Remove adjusting screw (17) and self-locking nut (18) from control arm (6).



- Remove retaining latch (19) by removing cotter pin (20), straight pin (21), spring (22), and washer (23).
- Remove spring (24) from shaft housing (5).
- Remove retaining ring (25), bearing retainer (26), bearing (27), and disk (28).

Disassembly

- Remove retaining ring (29), two bushings (30), and packing (31) from shaft housing (5).



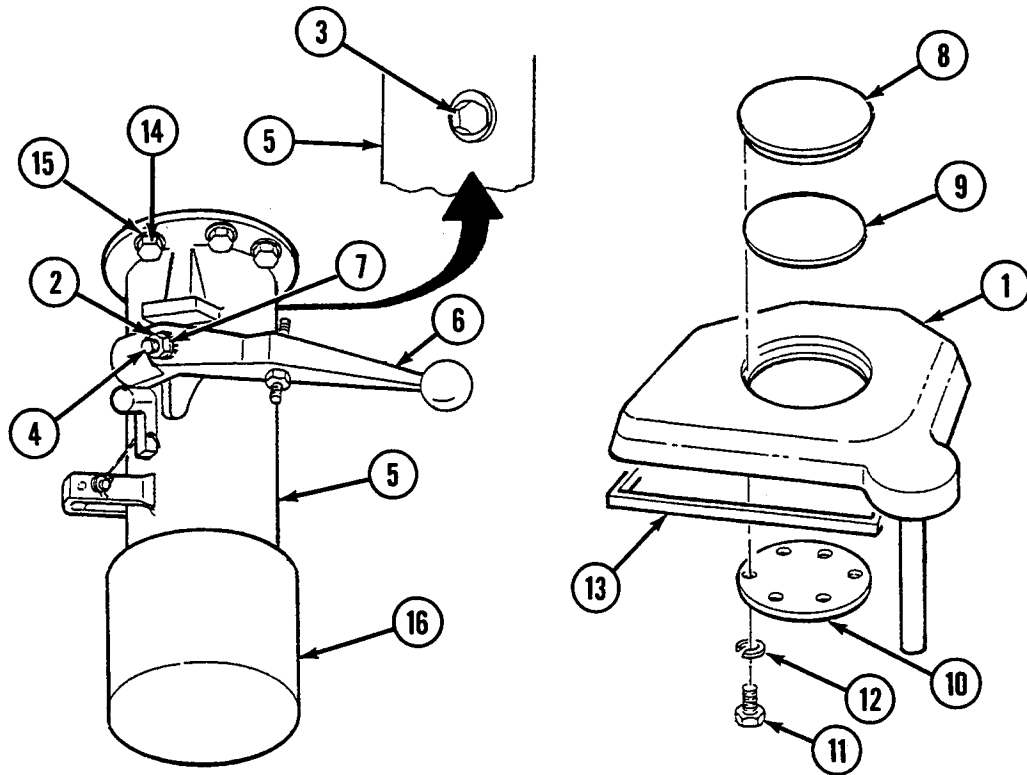
Assembly

- Install two bushings (30), retaining ring (29), and packing (31) in shaft housing (5) and lubricate (see WP 0097 00).

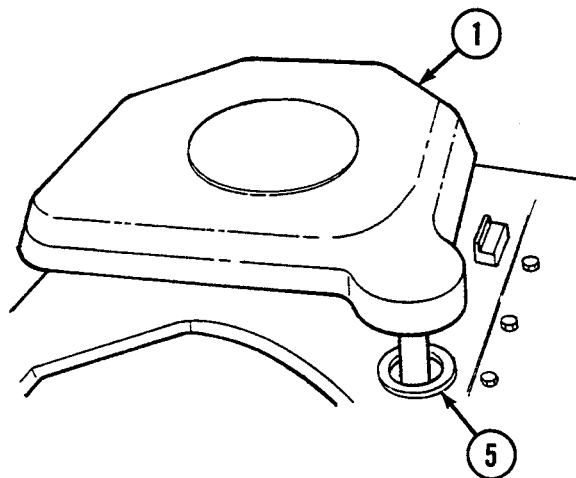
Installation

- Install disk (28), bearing (27), bearing retainer (26), and secure with retaining ring (25).
- Install spring (24) in shaft housing (5).
- Install retaining latch (19) with straight pin (21), spring (22), washer (23), and cotter pin (20).
- Install adjusting screw (17) and self-locking nut (18) on control arm (6).

5. Install cushioning pad (16) on shaft housing (5).
6. Install assembled shaft housing (5) with five screws (14) and five lockwashers (15).
7. Install access cover (8), gasket (9), and access cover (10) inside rigger's cab-top door (1) with six lockwashers (12) and six screws (11).
8. Install rubber strip (13) on rigger's cab-top door (1) with adhesive.



9. Install rigger's cab-top door (1) into shaft housing (5).



10. Install control arm (6) with self-locking nut (2), arm control pin (4), washer (7), and self-locking nut (3).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
WIRE ROPE ROLLER ACCESS DOOR REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

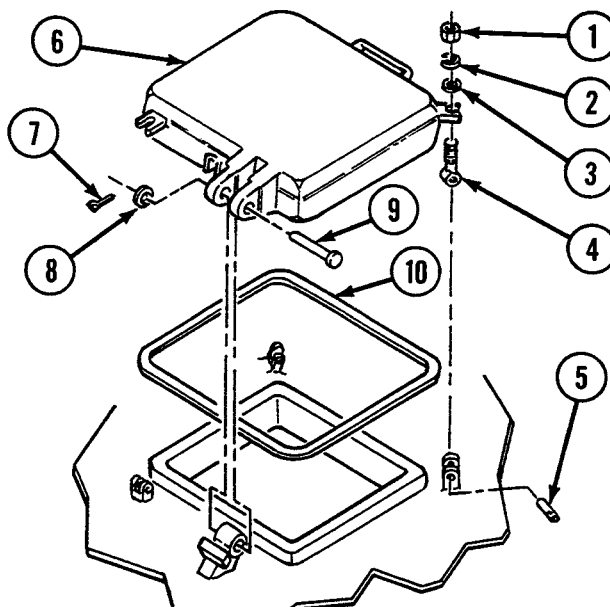
Adhesive (item 2, WP 0489 00)
 Eyebolts (2) (item 211, WP 0491 00)
 Lockwashers (2) (item 646, WP 0491 00)
 Nuts (2) (item 769, WP 0491 00)

Materials/Parts (cont.)

Pin, cotter (item 529, WP 0491 00)
 Pins, spring (2) (item 445, WP 0491 00)
 Pin, straight (item 273, WP 0491 00)
 Seal, rubber (item 47, WP 0491 00)
 Washers, flat (2) (item 537, WP 0491 00)
 Washer, flat (item 543, WP 0491 00)

Removal

1. Remove two nuts (1), two lockwashers (2), and two flat washers (3).
2. Remove two eyebolts (4) by removing spring pin (5) from each hull tab.
3. Remove wire rope roller access door (6) from hull by removing cotter pin (7), flat washer (8), and straight pin (9).
4. Remove rubber seal (10) from wire rope roller access door (6).

**Installation**

1. Install rubber seal (10) on wire rope roller access door (6) with adhesive.
2. Install wire rope roller access door (6) with straight pin (9), flat washer (8), and cotter pin (7).
3. Install two eyebolts (4) and secure each to hull with spring pin (5).
4. Secure wire rope roller access door (6) to hull with two flat washers (3), two lockwashers (2), and two nuts (1).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-22-6826, EIC AQA
LEFT AND RIGHT STOWAGE COMPARTMENT DOORS REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Adhesive (item 3, WP 0489 00)
Drivescrews (4) (item 501, WP 0491 00)
Nuts (2) (item 693, WP 0491 00)
Pins, cotter (2) (item 521, WP 0491 00)
Pins, cotter (4) (item 525, WP 0491 00)

Materials/Parts (cont.)

Pins, straight (4) (item 220, WP 0491 00)
Strip, rubber (item 43, WP 0491 00)
Strip, rubber (item 44, WP 0491 00)
Washers, flat (2) (item 537, WP 0491 00)
Washers, flat (4) (item 539, WP 0491 00)

Personnel Required

Mechanics (2)

NOTE

Removal and installation procedures are the same for both left and right stowage compartment doors.

Removal

1. Remove handle (1) by removing cotter pin (2), nut (3), washer (4), and latch (5).
2. Remove rubber strip (6). Clean all dirt and adhesive from stowage compartment door (7).
3. Remove stowage compartment door (7) by removing two cotter pins (8), two washers (9), and two straight pins (10).

NOTE

Step 4 applies only to right stowage compartment door.

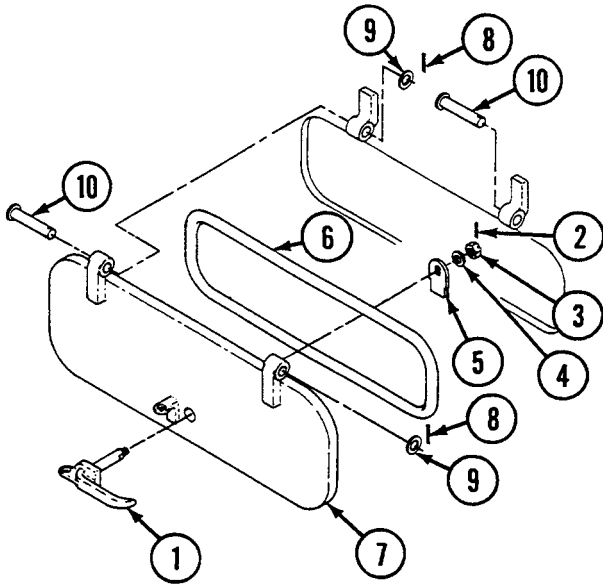
NOTE

Remove flow regulator setting instruction plate (11) from right stowage compartment door only if illegible.

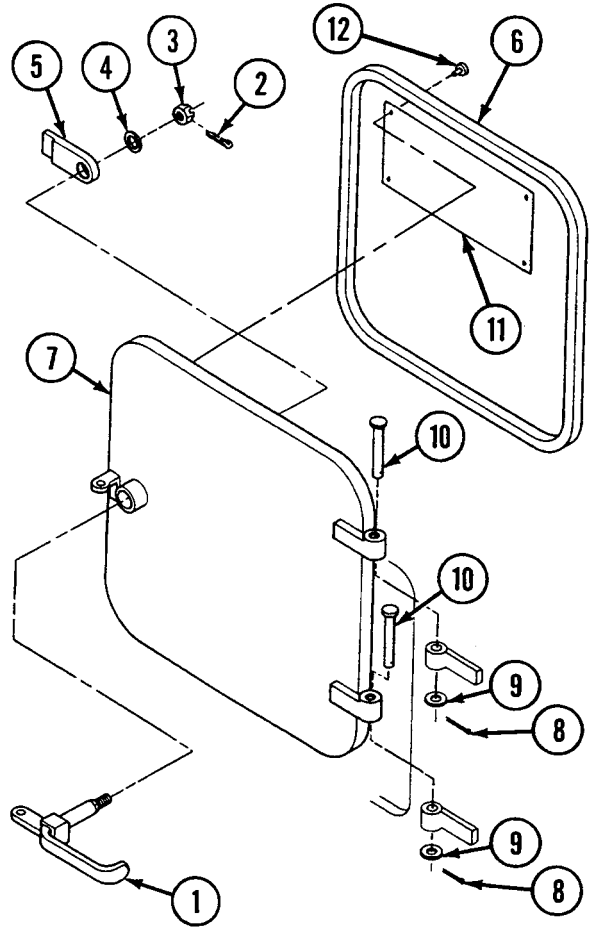
4. Remove flow regulator setting instruction plate (11) by removing four drivescrews (12).

Installation

1. If removed, install flow regulator setting instruction plate (11) with four drivescrews (12).
2. Install stowage compartment door (7) with two straight pins (10), two washers (9), and two cotter pins (8).
3. Install rubber strip (6) by applying adhesive and pressing strip in place. Allow adhesive to dry before closing stowage compartment door (7).
4. Install handle (1) with latch (5), washer (4), nut (3), and cotter pin (2).



LEFT STOWAGE COMPARTMENT DOOR



RIGHT STOWAGE COMPARTMENT DOOR

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
LEFT AND RIGHT PERSONNEL DOORS REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Adhesive (item 3, WP 0489 00)
 Lockwashers (8) (item 638, WP 0491 00)
 Lockwashers (16) (item 642, WP 0491 00)
 Nuts (2) (item 694, WP 0491 00)
 Pins, cotter (2) (item 525, WP 0491 00)
 Screws (16) (item 417, WP 0491 00)
 Screws (8) (item 463, WP 0491 00)
 Strips, rubber (2) (item 46, WP 0491 00)
 Washers, flat (4) (item 272, WP 0491 00)

Materials/Parts (cont.)

Washers, flat (V) (item 292, WP 0491 00)
 Washers, flat (V) (item 307, WP 0491 00)
 Washers, flat (2) (item 540, WP 0491 00)
 Washers, spring (2) (item 324, WP 0491 00)

Personnel Required

Mechanics (2)

Equipment Condition

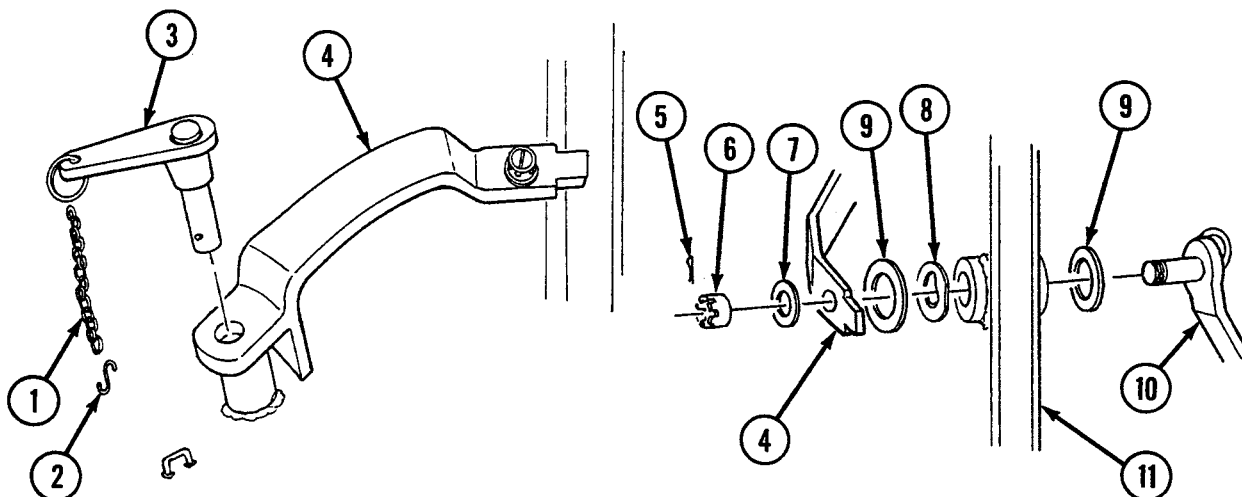
Door-mounted liquid container bracket removed (see WP 0392 00)

NOTE

Removal and installation procedures are the same for both left and right personnel doors.

Removal

1. Remove chain (1) and S-hook (2) from quick-release pin (3).
2. Remove quick-release pin (3) from door handle latch (4).
3. Remove door handle latch (4) by removing cotter pin (5), nut (6), and washer (7). Remove spring washer (8) and two flat washers (9).
4. Remove door handle (10) from personnel door (11).

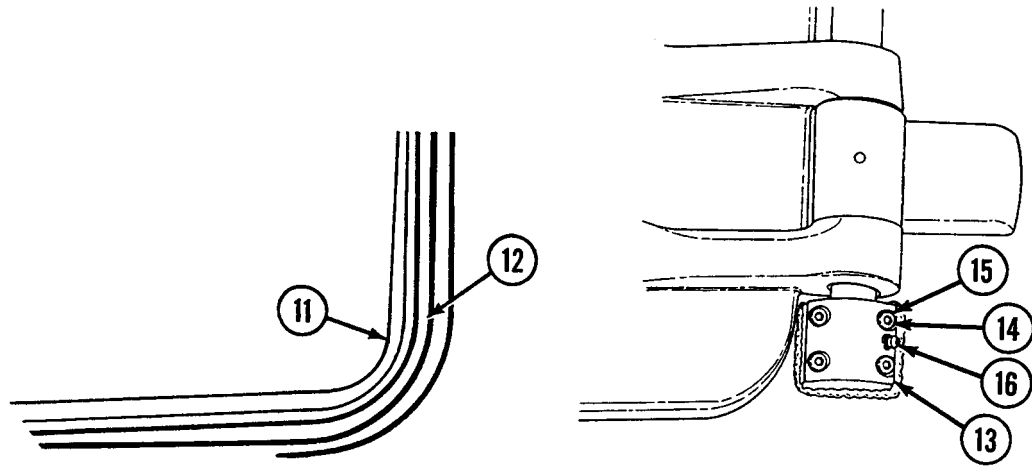


5. Remove rubber strip (12) from personnel door (11). Clean all dirt and adhesive from opening.

NOTE

Open door halfway and secure to relieve stress on torsion bar prior to removing retainer.

6. Remove torsion bar retainer (13) by removing four screws (14), four lockwashers (15), and lubrication fitting (16).

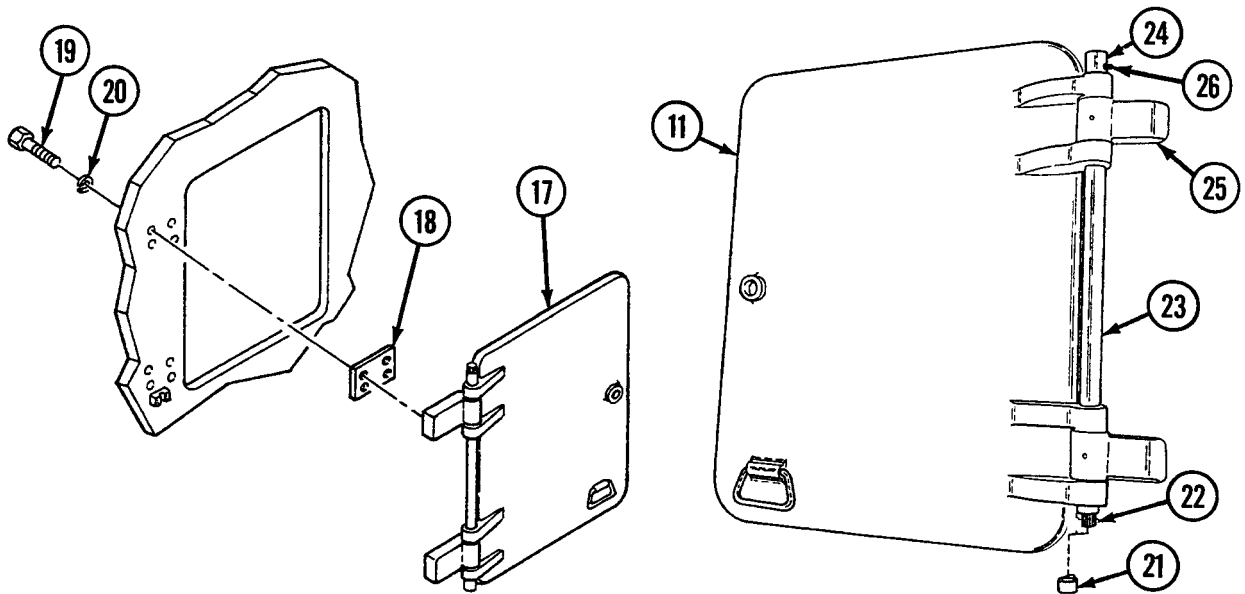


WARNING

Ensure door is properly supported before removing door assembly (17) to prevent personal injury or equipment damage.

7. Remove door assembly (17) and two shims (18) by removing eight screws (19) and eight lockwashers (20).
8. Remove control cam (21), torsion bar (22), tube (23), expansion plug (24), and two hinge leaves (25).

9. Remove lubrication fitting (26).



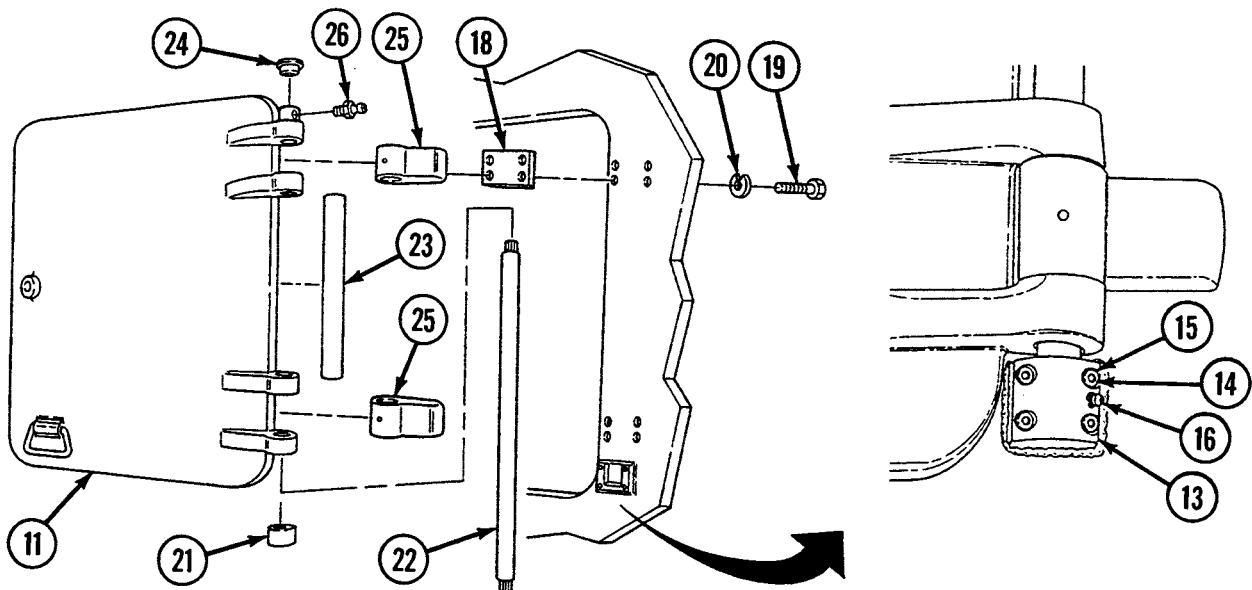
Installation

1. Install two hinge leaves (25) with two shims (18), eight lockwashers (20), and eight screws (19).
2. Install personnel door (11) with torsion bar (22), tube (23), control cam (21), and expansion plug (24).
3. Install lubrication fitting (26).

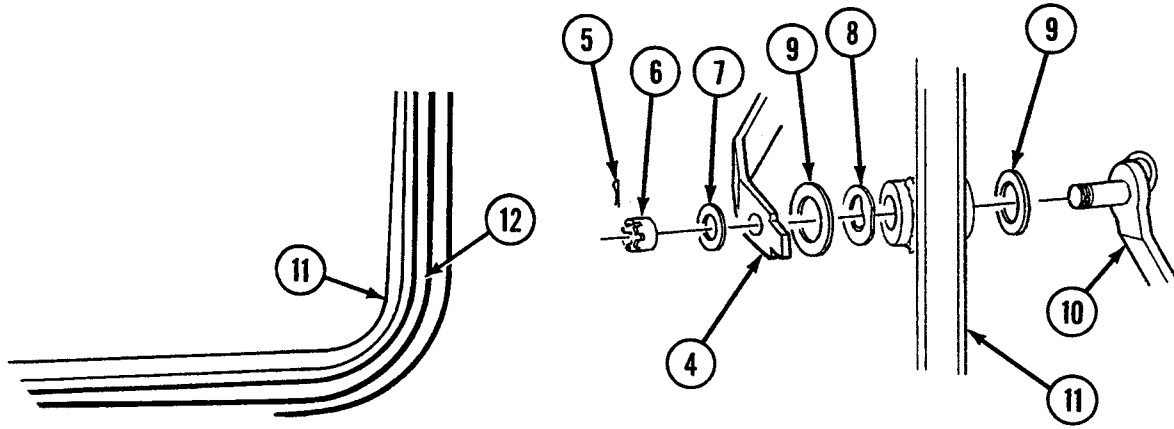
NOTE

Position door halfway open to relieve stress on torsion bar prior to installing retainer. Secure door in position.

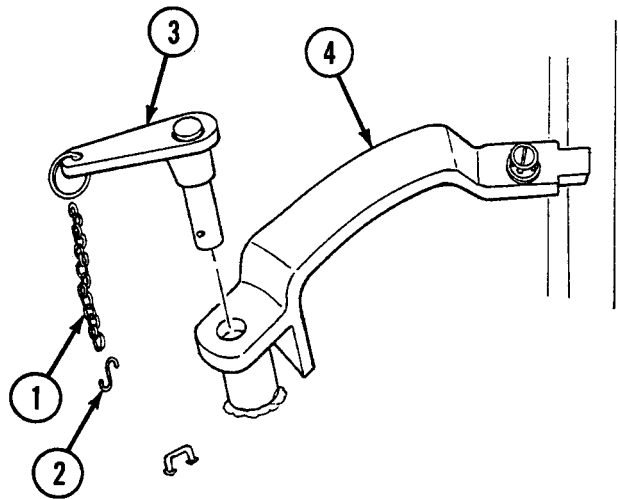
4. Install lubrication fitting (16) and torsion bar retainer (13) with four lockwashers (15) and four screws (14).



5. Install rubber strip (12) on personnel door (11) by applying adhesive and pressing strip in place. Allow adhesive to dry before closing personnel door.
6. Install door handle (10) and door handle latch (4) with two flat washers (9), spring washer (8), washer (7), nut (6), and cotter pin (5).



7. Install quick-release pin (3) on door handle latch (4).
8. Install S-hook (2) and chain (1) on quick-release pin (3).



NOTE

Follow-on maintenance: Install door-mounted liquid container bracket (see WP 0392 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
FUEL TANK FILLER ACCESS COVER REPLACEMENT
REPLACEMENT, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

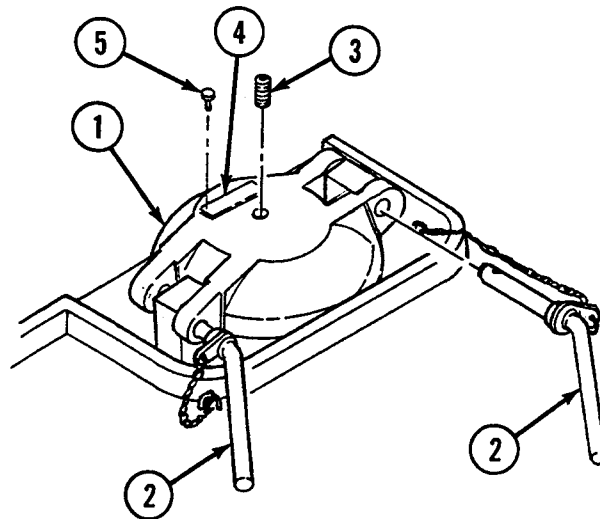
Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Drivescrews (4) (item 501, WP 0491 00)

Removal

1. Remove fuel tank filler access cover (1) by removing two lockpin handles (2).
2. Remove pipe plug (3) from fuel tank filler access cover (1).
3. Remove ID plate (4) by removing four drivescrews (5).

**Installation**

1. Install ID plate (4) with four drivescrews (5).
2. Install pipe plug (3) in fuel tank filler access cover (1).
3. Install fuel tank filler access cover (1) with two lockpin handles (2).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**BILGE PUMP OUTLET COVER REPLACEMENT
REMOVAL, INSTALLATION**

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

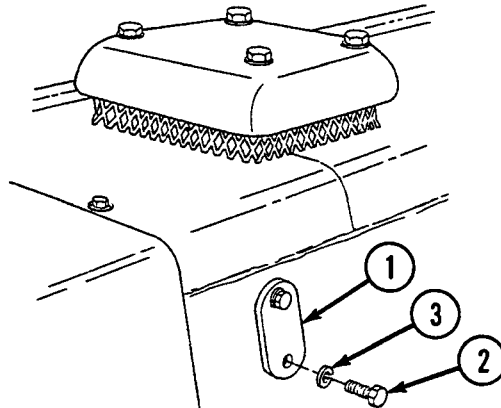
Materials/Parts

Lockwashers (2) (item 640, WP 0491 00)

Screws (2) (item 401, WP 0491 00)

Removal

1. Remove access cover (1) by removing two screws (2) and two lockwashers (3).

**Installation**

1. Install access cover (1) with two lockwashers (3) and two screws (2).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
LEFT- AND RIGHT-SIDE AIR CLEANER INLET COVERS REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (8) (item 642, WP 0491 00)

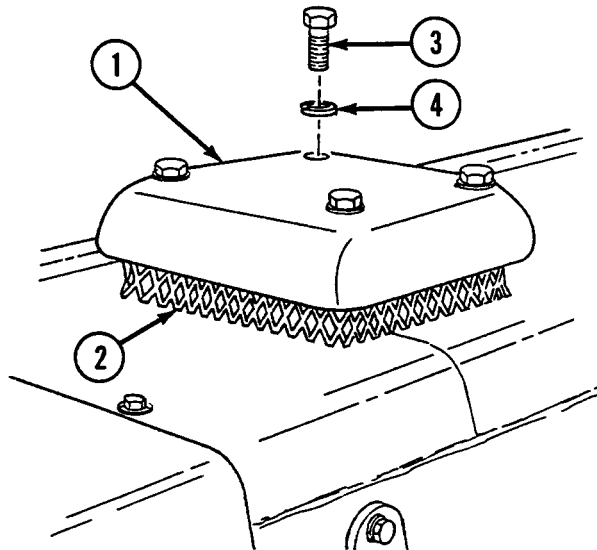
Screws (8) (item 786, WP 0491 00)

NOTE

Removal and installation are the same for both left- and right-side air cleaner inlet covers.

Removal

1. Remove access cover (1) and metal screen assembly (2) by removing four screws (3) and four lockwashers (4).

**Installation**

1. Install access cover (1) and metal screen assembly (2) with four screws (3) and four lockwashers (4).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
LEFT AND RIGHT PERSONNEL STEP ASSEMBLIES REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

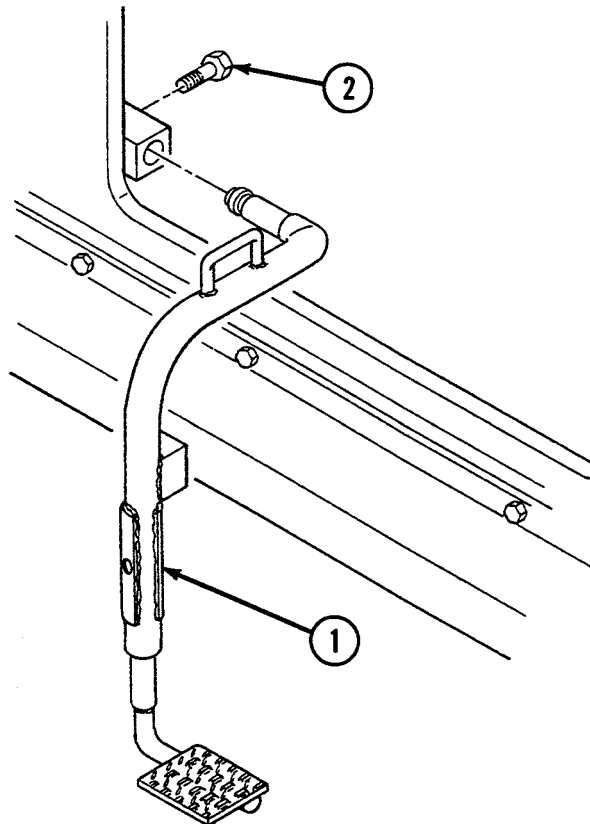
Screws (2) (item 828, WP 0491 00)

NOTE

Removal and installation procedures are the same for both left and right personnel step assemblies.

Removal

1. Remove step assembly (1) by removing screw (2).

**Installation**

1. Install step assembly (1) with screw (2).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

PASSIVE NIGHT VIEWER MOUNT AND RELATED PARTS MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

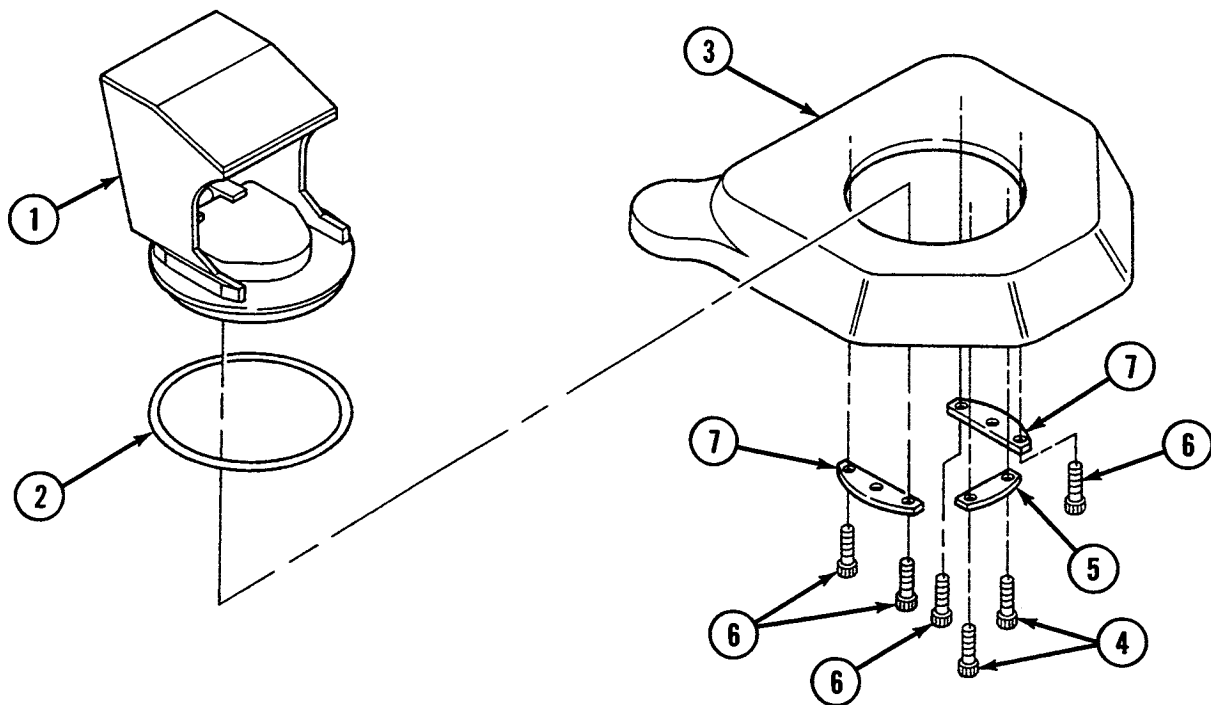
Adhesive (item 5, WP 0489 00)
 Gasket (item 97, WP 0491 00)
 Gasket (item 113, WP 0491 00)
 Packing (item 116, WP 0491 00)

Materials/Parts (cont.)

Screws (3) (item 464, WP 0491 00)
 Screws (2) (item 466, WP 0491 00)
 Screws (4) (item 467, WP 0491 00)
 Screws (2) (item 771, WP 0491 00)
 Screws, self-locking (2) (item 465, WP 0491 00)
 Setscrew (item 753, WP 0491 00)
 Washers, flat (3) (item 534, WP 0491 00)

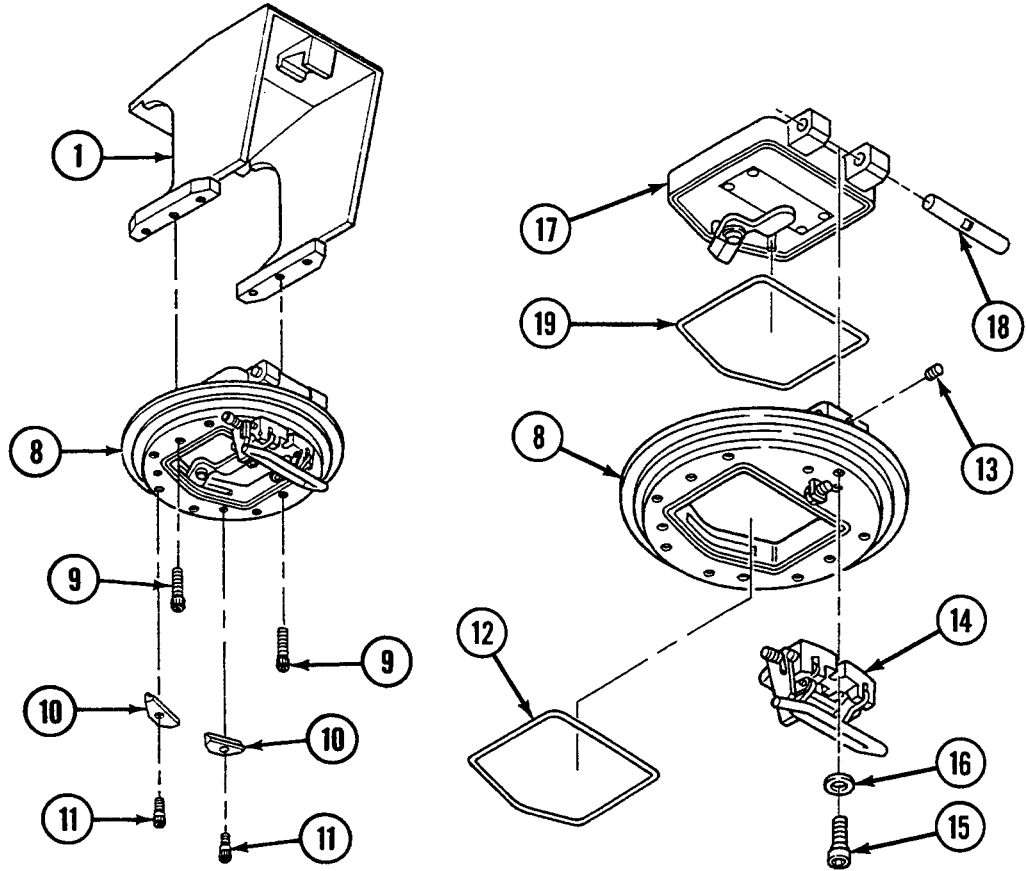
Removal

1. Remove mount assembly (1) and gasket (2) from driver's cab-top door (3) by removing two self-locking screws (4), plate (5), four screws (6), and two plates (7).



Disassembly

1. Remove access cover (8) from mount assembly (1) by removing two screws (9).
2. Remove two brackets (10) by removing two screws (11).
3. Remove packing (12) and setscrew (13) from access cover (8).
4. Remove lever (14) from access cover (8) by removing three screws (15) and three flat washers (16).
5. Remove access door (17) from access cover (8) by removing straight pin (18).
6. Remove gasket (19) from access door (17).



Assembly

1. Install gasket (19) in access door (17).
2. Install access door (17) on access cover (8) with straight pin (18).
3. Install lever (14) with three flat washers (16) and three screws (15).
4. Install packing (12) and setscrew (13) in access cover (8).
5. Install two brackets (10) with two screws (11).

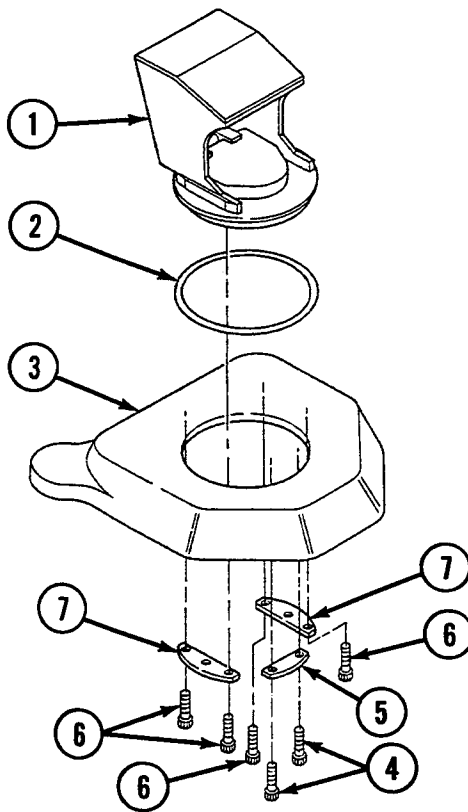
NOTE

Apply adhesive around tapped holes in mount assembly. Remove excess adhesive from inside of holes if necessary.

6. Install access cover (8) on mount assembly (1) with two screws (9).

Installation

1. Install mount assembly (1) on driver's cab-top door (3) with gasket (2), two self-locking screws (4), plate (5), four screws (6), and two plates (7).



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

INFRARED POWER SUPPLY REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

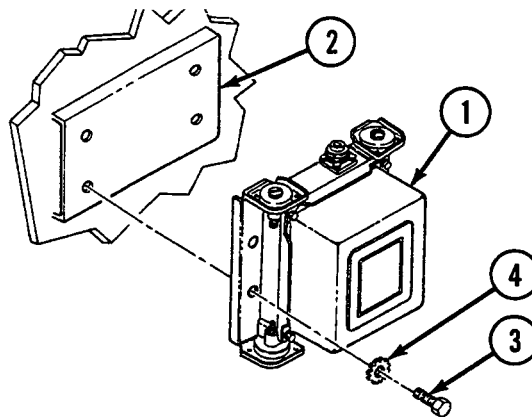
Materials/Parts

Lockwashers (4) (item 622, WP 0491 00)

Screws (4) (item 789, WP 0491 00)

Removal

1. Remove power supply (1) from mount (2) by removing four screws (3) and four lockwashers (4).

**Installation**

1. Install power supply (1) on mount (2) with four lockwashers (4) and four screws (3).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
PERISCOPE QUICK-RELEASE MOUNT (INFRARED NIGHT VIEWER) REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

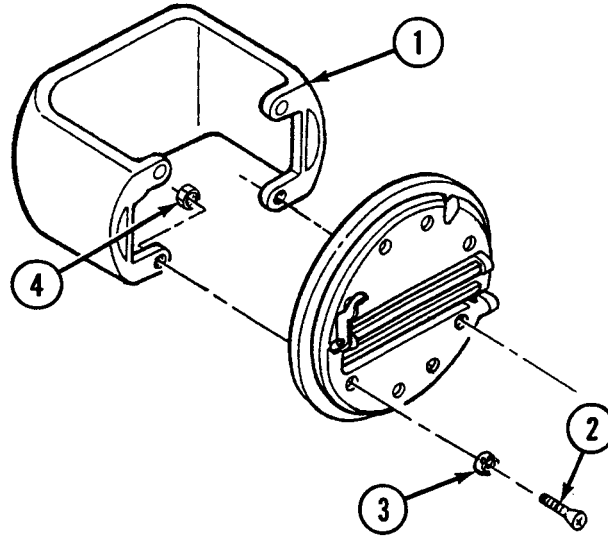
Lockwashers (4) (item 631, WP 0491 00)

Nuts (4) (item 682, WP 0491 00)

Screws (4) (item 564, WP 0491 00)

Removal

1. Remove mount (1) by removing four screws (2), four lockwashers (3), and four nuts (4).

**Installation**

1. Install mount (1) with four nuts (4), four lockwashers (3), and four screws (2).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**DRIVER'S AND RIGGER'S PERISCOPE BLOCKS AND VISION PRISMS REPLACEMENT
 REMOVAL, INSTALLATION**

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)
 Socket set (item 55, WP 0490 00)
 Wrench, torque (item 68, WP 0490 00)

Materials/Parts

Compound, sealing (item 31, WP 0489 00)

Materials/Parts (cont.)

Lockwires (2) (item 364, WP 0491 00)
 Screws (5) (item 203, WP 0491 00)
 Seals (2) (item 297, WP 0491 00)
 Studs (4) (item 737, WP 0491 00)
 Washers, flat (4) (item 537, WP 0491 00)
 Wingnuts (4) (item 661, WP 0491 00)

NOTE

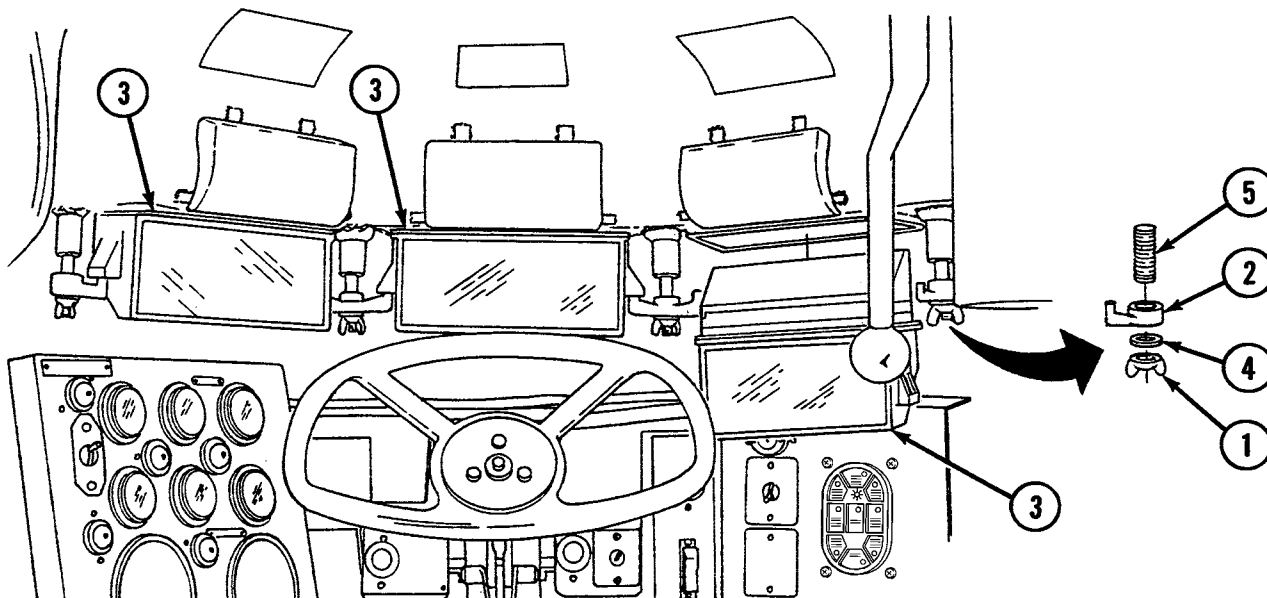
Removal and installation procedures are the same for both driver's and rigger's periscope blocks and vision prisms. Driver's side shown.

NOTE

Steps 1 and 2 apply only to periscope blocks. Proceed to step 3 for vision prism removal.

Removal

1. Loosen four wingnuts (1) and release periscopes by turning retainers (2) 1/2 turn. Pull three periscope blocks (3) out of openings.
2. Remove four wingnuts (1), four flat washers (4), four retainers (2), and four studs (5).



NOTE

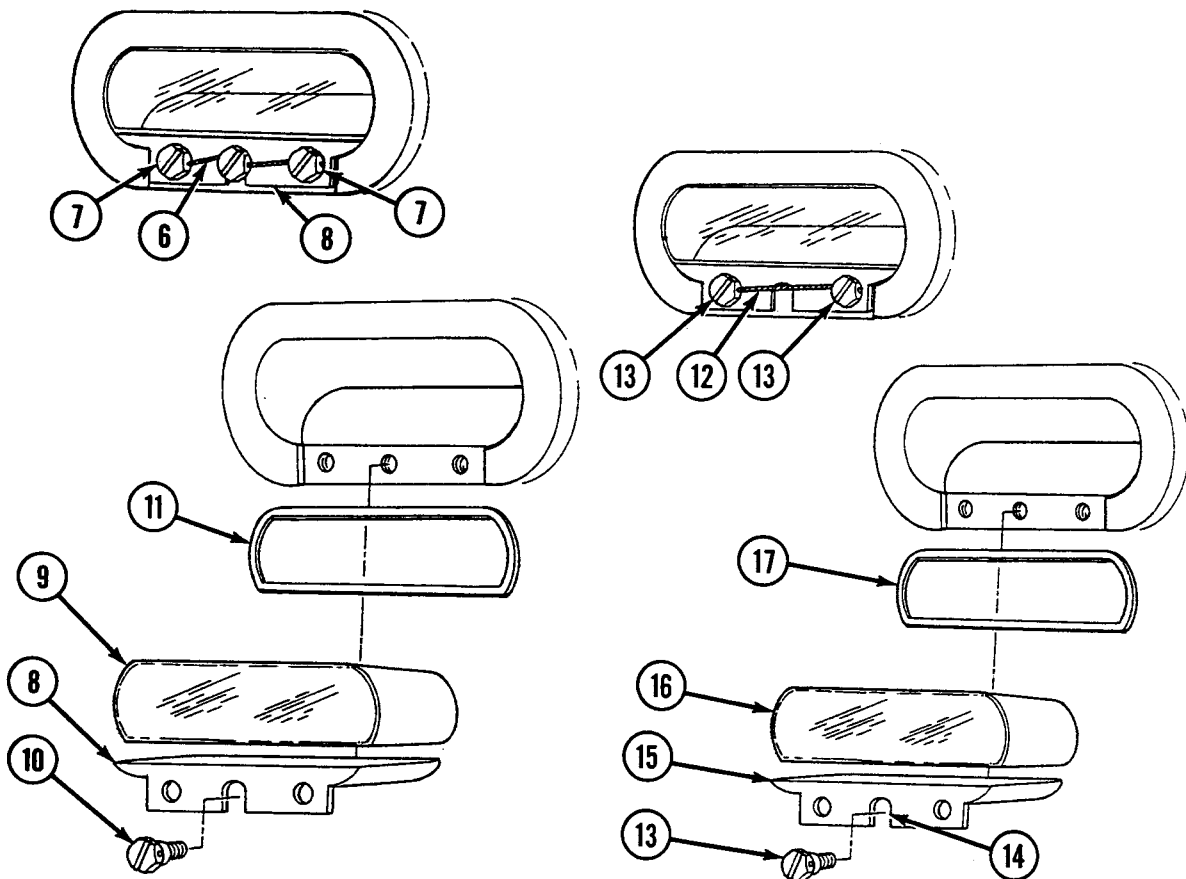
Steps 3 through 6 apply to basic design vision prism; steps 7 through 10 apply to later design.

3. Remove lockwire (6).
4. Remove two outer screws (7) from wedge plate (8).
5. Remove wedge plate (8) and vision prism (9) by turning center screw (10) counterclockwise until removed.
6. Remove seal (11) and all remaining sealing compound from vision prism (9).
7. Remove lockwire (12).
8. Remove two bolts (13).

NOTE

Bolt (13) placed in center hole (14) of wedge plate (15) will act as a jacking screw.

9. Place bolt (13) in center hole (14) of wedge plate (15). Turn clockwise until wedge plate and vision prism (16) are removed from hull.
10. Remove seal (17) and all remaining sealing compound from vision prism (16).



Installation

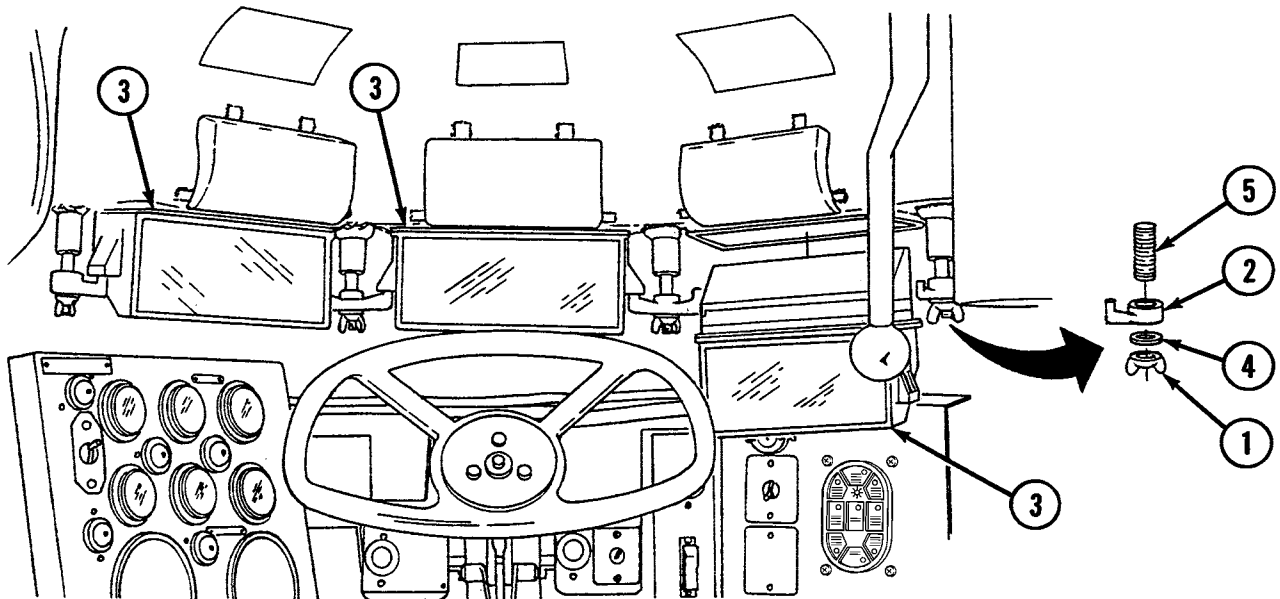
NOTE

Steps 1 through 4 apply to basic design vision prism; steps 5 through 7 apply to later design.

NOTE

Proceed to steps 8 and 9 for periscope block installation.

1. Apply sealing compound to vision prism (9) and install seal (11). Remove excess sealing compound.
2. Install vision prism (9) and wedge plate (8) with screw (10) in center hole.
3. Install two screws (7) in wedge plate (8). Torque to 84–120 lb-in. (9.5–13.6 N•m).
4. Secure three screws (7 and 10) with lockwire (6).
5. Apply sealing compound between vision prism (16), hull opening, and seal (17).
6. Install vision prism (16) and wedge plate (15) with two bolts (13). Torque bolts to 84–120 lb-in. (9.5–13.6 N•m).
7. Secure two bolts (13) with lockwire (12).
8. Install four studs (5), four retainers (2), four flat washers (4), and four wingnuts (1). Do not tighten wingnuts.
9. Install three periscope blocks (3) in hull openings and secure with four retainers (2). Tighten four wingnuts (1).



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
MECHANIC'S PERISCOPE BLOCK AND VISION PRISMS REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)
 Socket set (item 55, WP 0490 00)
 Wrench, torque (item 68, WP 0490 00)

Materials/Parts (cont.)

Studs (2) (item 737, WP 0491 00)
 Washers, flat (2) (item 537, WP 0491 00)
 Wingnuts (2) (item 661, WP 0491 00)

Materials/Parts

Compound, sealing (item 31, WP 0489 00)

References

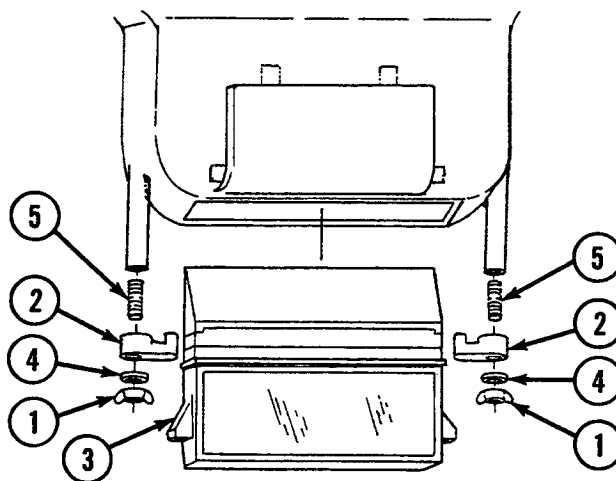
WP 0326 00

NOTE

See WP 0326 00 for removal and installation of typical vision prism.

Removal

1. Loosen two wingnuts (1) and release periscope by turning two retainers (2) 1/2 turn. Pull periscope block (3) from hull opening.
2. Remove two wingnuts (1), two flat washers (4), two retainers (2), and two studs (5).

**Installation**

1. Install two studs (5), two retainers (2), two flat washers (4), and two wingnuts (1). Do not tighten wingnuts.
2. Install periscope block (3) in hull opening and secure with two retainers (2). Tighten two wingnuts (1).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
TOWING PINTLE AND MOUNT MAINTENANCE
REMOVAL, DISASSEMBLY, CLEANING, INSPECTION, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)
 Wrench, open-end adjustable (item 62, WP 0490 00)

Materials/Parts

Cloth, crocus (item 7, WP 0489 00)
 Compound, cleaning (item 9, WP 0489 00)
 Drivescrew (item 504, WP 0491 00)
 Lockwashers (6) (item 656, WP 0491 00)
 Nut (item 207, WP 0491 00)
 Nut, slotted (item 268, WP 0491 00)
 Pin, cotter (item 432, WP 0491 00)
 Pin, cotter (item 527, WP 0491 00)
 Pin, cotter (item 531, WP 0491 00)

Materials/Parts (cont.)

Screws (6) (item 813, WP 0491 00)
 Spring (item 204, WP 0491 00)
 Washer, flat (item 302, WP 0491 00)
 Washer, flat (item 335, WP 0491 00)

Personnel Required

Mechanics (3)

References

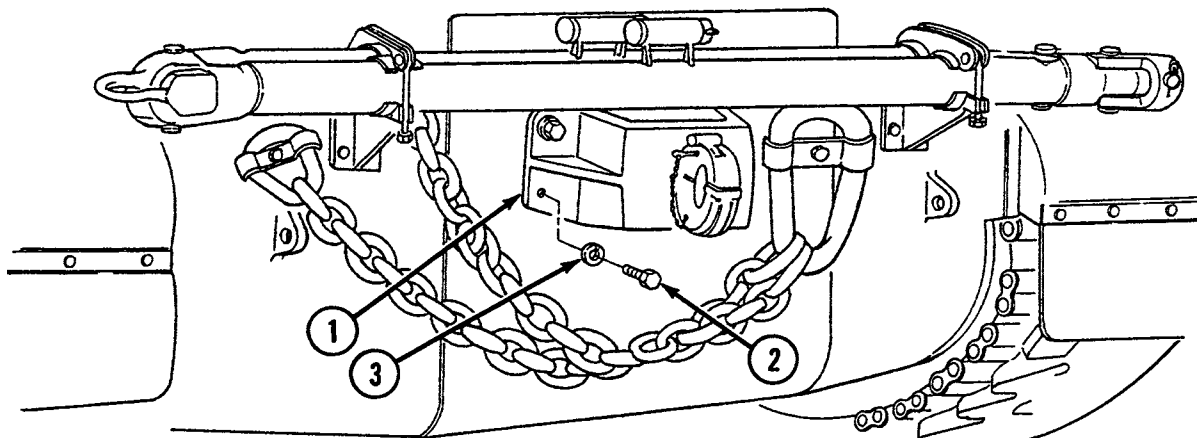
WP 0097 00

Equipment Condition

Tow bar removed (see WP 0374 00)

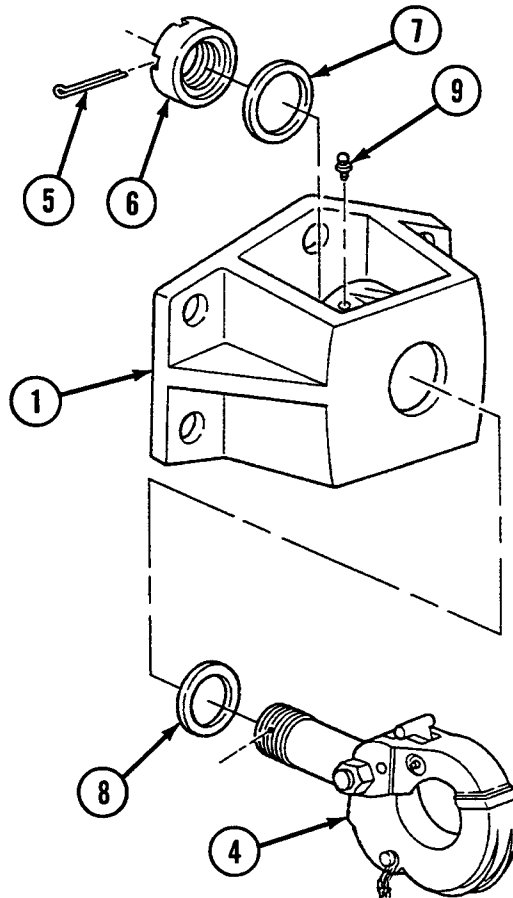
Removal

1. Remove pintle mount (1) by removing six screws (2) and six lockwashers (3).



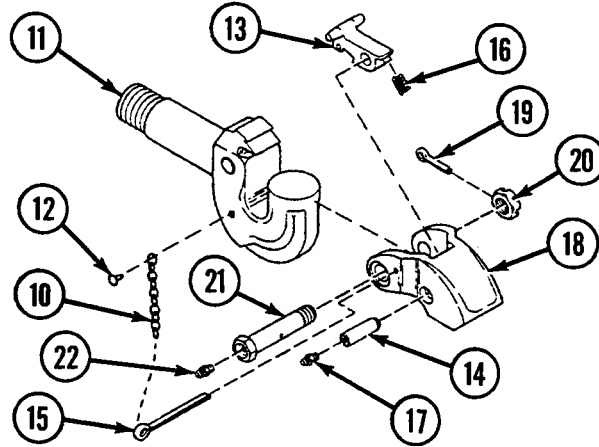
Disassembly

1. Secure towing pintle (4) to prevent it from turning. Remove cotter pin (5), slotted nut (6), and flat washer (7).
2. Remove towing pintle (4) and flat washer (8) from pintle mount (1).
3. Remove lubrication fitting (9) from pintle mount (1).



4. Disconnect chain (10) from pintle hook (11) by removing screw (12).
5. Remove latch (13) by removing straight shaft (14), cotter pin (15), and spring (16). Separate cotter pin and chain (10).
6. Remove lubrication fitting (17) from straight shaft (14).
7. Remove latch (18) from pintle hook (11) by removing cotter pin (19), nut (20), and bolt (21).

8. Remove lubrication fitting (22) from bolt (21).



Cleaning

WARNING

Solvents can burn easily, give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open flame and use in a well-ventilated area. If solvent gets on skin or clothing, wash immediately with soap and water.

WARNING

Particles blown by compressed air can be dangerous. Be certain to direct airstream away from yourself and other personnel in the area. Compressed air used for cleaning will not exceed 30 pounds per square inch (psi) (207 kilopascals [kPa]). Use only with effective chip-guarding and personal protective equipment (goggles/shield and gloves).

1. Clean all parts with cleaning compound and dry with low-pressure air.

Inspection-Acceptance and Rejection Criteria

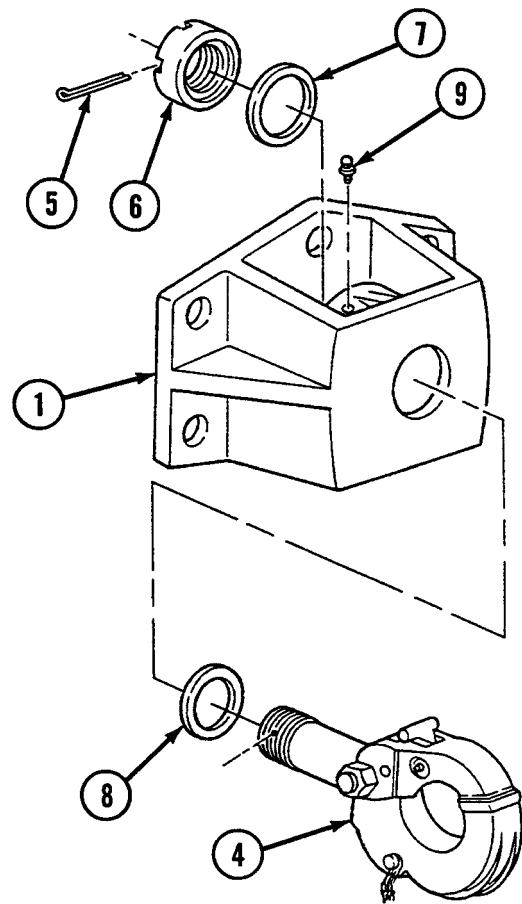
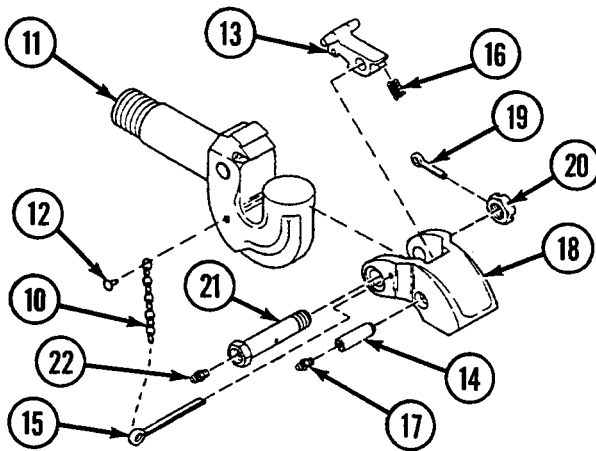
1. Inspect spring (16) for corrosion, breaks, and elasticity.
2. Inspect all threads for wear and damage.
3. Inspect latches (13 and 18), pintle hook (11), straight shaft (14), and bolt (21) for cracks, nicks, and breaks.
4. Remove rust and minor nicks and burrs with crocus cloth.
5. Replace damaged attaching hardware.

Assembly

NOTE

Repaint parts as required

1. Install lubrication fitting (22) on bolt (21).
2. Install latch (18) in pintle hook (11) with bolt (21), nut (20), and cotter pin (19).
3. Install latch (13) with straight shaft (14), cotter pin (15), and spring (16).
4. Install lubrication fitting (17) on straight shaft (14).
5. Connect chain (10) to cotter pin (15) and pintle hook (11) with screw (12).
6. Install lubrication fitting (9) in pintle mount (1).
7. Lubricate towing pintle (4) shaft with GAA lubricant (see WP 0097 00).
8. Place flat washer (8) on pintle mount (1) and insert towing pintle (4).
9. Place flat washer (7) over threaded end of towing pintle (4) and secure with slotted nut (6) and cotter pin (5).
10. Grease towing pintle through lubrication fittings (9, 17, and 22) (see WP 0097 00).

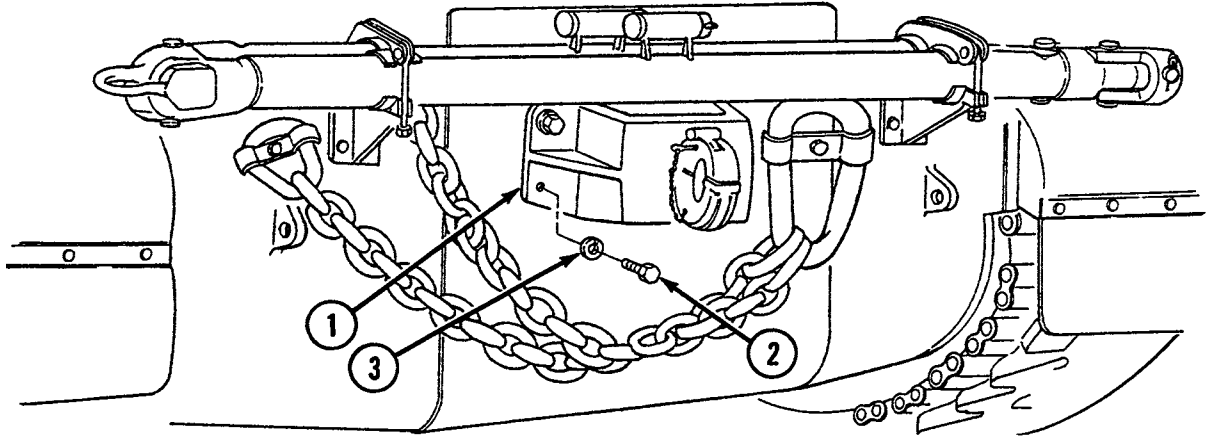


NOTE

Assembled towing pintle must turn freely in pintle mount (1).

Installation

1. Install pintle mount (1) with six lockwashers (3) and six screws (2).

**NOTE**

Follow-on maintenance: Install tow bar (see WP 0374 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
BOOM SUPPORT AND RELATED PARTS MAINTENANCE
REMOVAL, INSTALLATION, ADJUSTMENT

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)
 Wrench, torque (item 67, WP 0490 00)

Materials/Parts

Lockwashers (8) (item 642, WP 0491 00)
 Nut (item 683, WP 0491 00)
 Pins, cotter (6) (item 525, WP 0491 00)
 Pin, cotter (item 529, WP 0491 00)
 Pin, straight (item 57, WP 0491 00)

Materials/Parts (cont.)

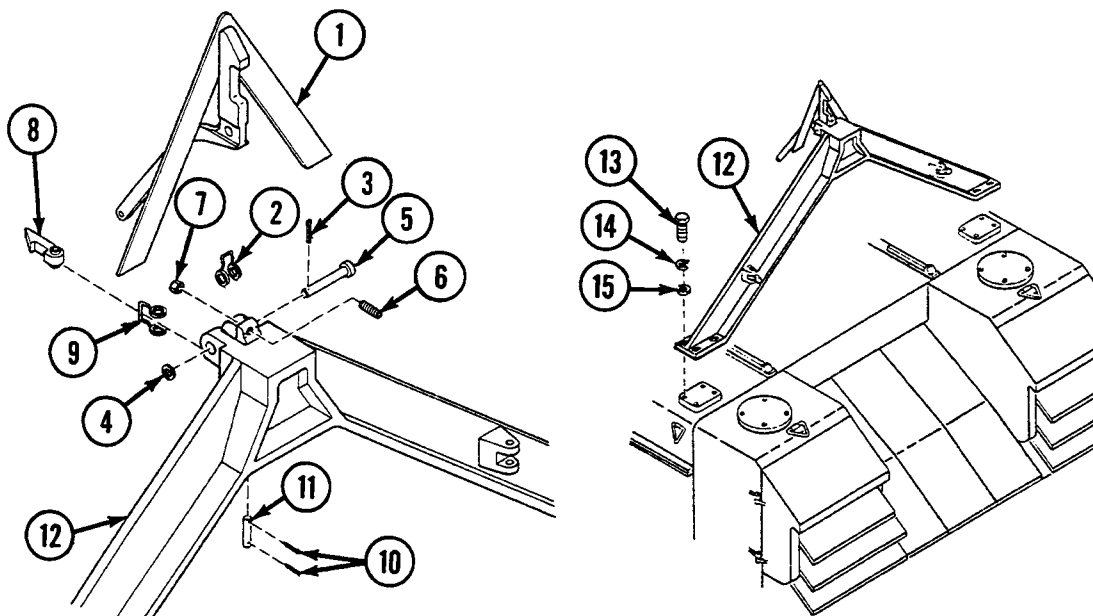
Pins, straight (3) (item 744, WP 0491 00)
 Screws (8) (item 417, WP 0491 00)
 Screw, adjusting (item 750, WP 0491 00)
 Springs (4) (item 169, WP 0491 00)
 Washers, flat (16) (item 162, WP 0491 00)
 Washer, flat (item 543, WP 0491 00)

Equipment Condition

Hoisting boom raised (refer to TM 9-2350-256-10)

Removal

1. Remove support latch (1) and spring (2) by removing cotter pin (3), washer (4), and straight pin (5).
2. Remove latch adjusting screw (6) and nut (7).
3. Remove three latches (8) and three springs (9) by removing six cotter pins (10) and three straight pins (11).
4. Remove boom support (12) by removing 8 screws (13), 8 lockwashers (14), and 16 flat washers (15).

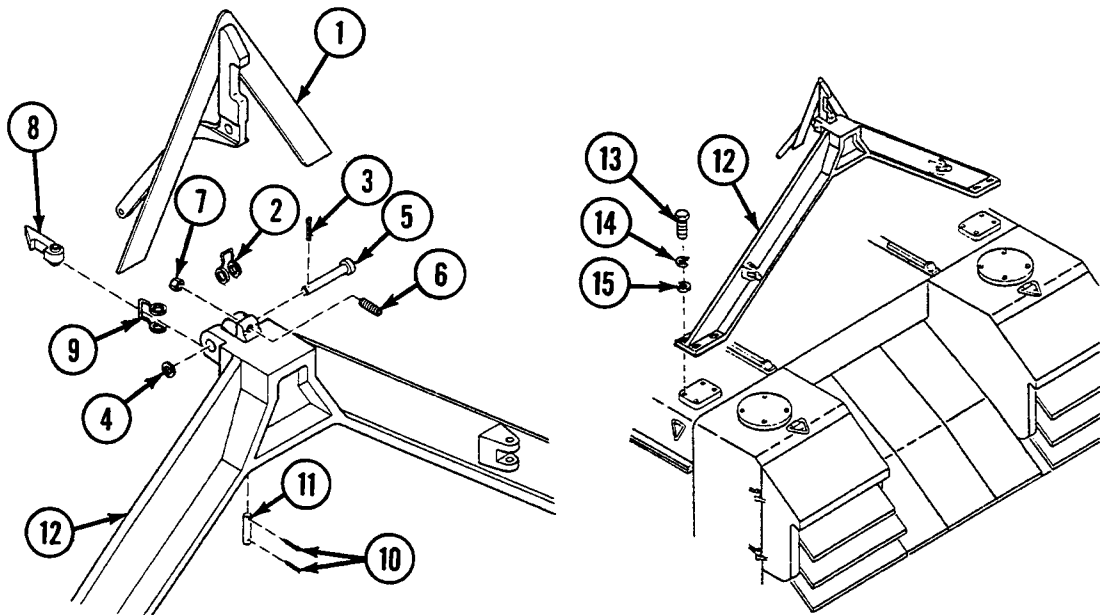


Installation

1. Install boom support (12) with 16 flat washers (15), 8 lockwashers (14), and 8 screws (13). Torque screws to 70–75 pound-feet (lb-ft) (95–102 newton-meters [N•m]).
2. Install three springs (9) and three latches (8) with three straight pins (11) and six cotter pins (10).
3. Install latch adjusting screw (6) and nut (7).
4. Install spring (2) and support latch (1) with washer (4), straight pin (5), and cotter pin (3).

Adjustment

1. Place boom on boom support (12). Loosen nut (7) and adjust latch adjusting screw (6) until support latch (1) is fully engaged. Tighten nut.



NOTE

Follow-on maintenance: Lower hoisting boom (refer to TM 9-2350-256-10).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
TRANSMISSION GUIDE BARS REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (8) (item 642, WP 0491 00)

Nuts (8) (item 754, WP 0491 00)

Materials/Parts (cont.)

Screws (8) (item 410, WP 0491 00)

Washers, flat (4) (item 857, WP 0491 00)

Equipment Condition

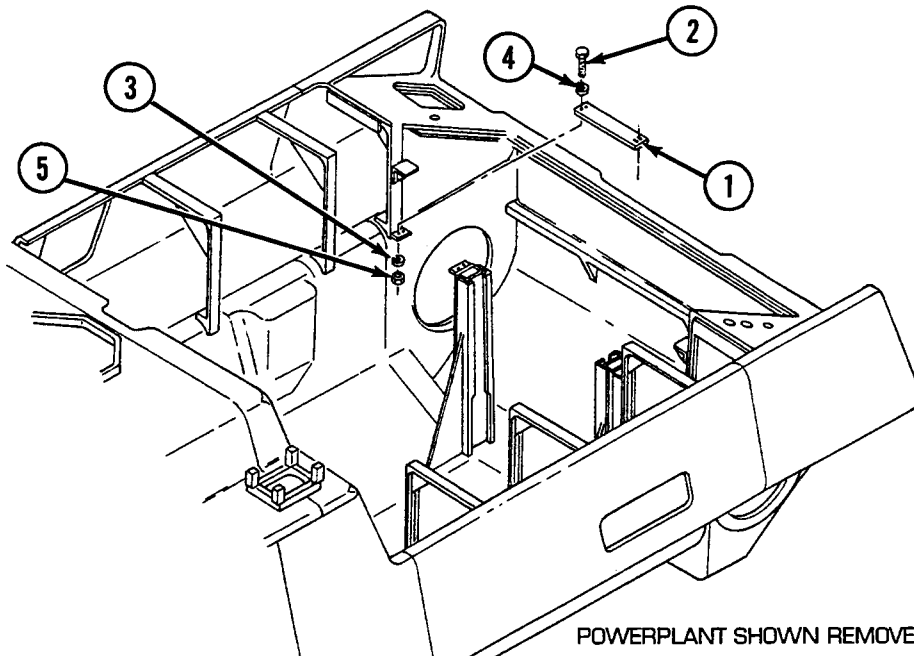
Engine deck removed (see WP 0336 00)

CAUTION

Remove only one guide bar at a time.

Removal

1. Remove two guide bars (1) by removing eight screws (2), eight lockwashers (3), four flat washers (4), and eight nuts (5).

**Installation**

1. Install two guide bars (1) with four flat washers (4), eight lockwashers (3), eight screws (2), and eight nuts (5).

NOTE

Follow-on maintenance: Install engine deck (see WP 0336 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

ANTENNA BASE COVERS REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Gaskets (2) (item 270, WP 0491 00)

Lockwashers (8) (item 640, WP 0491 00)

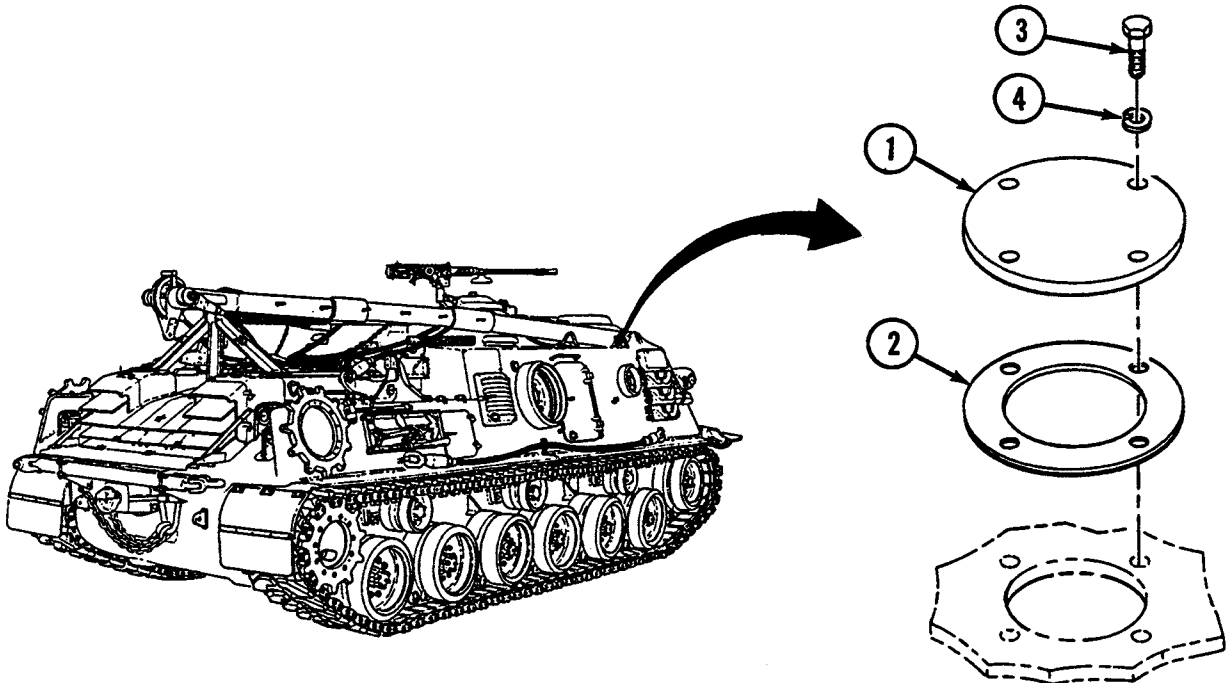
Screws (8) (item 402, WP 0491 00)

NOTE

Removal and installation procedures are the same for both antenna base covers.

Removal

1. Remove access cover (1) and gasket (2) by removing four screws (3) and four lockwashers (4).



Installation

1. Install access cover (1) and gasket (2) with four lockwashers (4) and four screws (3).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
ACETYLENE HOSE ADAPTER REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

Acetylene tank removed (refer to TM 9-2350-256-10)

WARNING

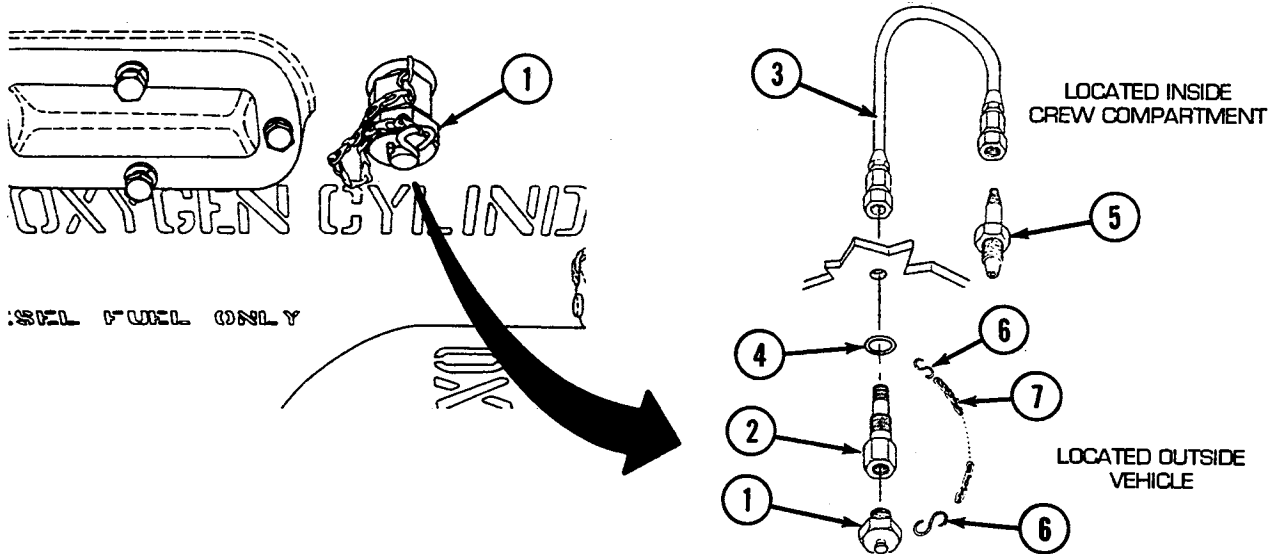
Acetylene is very flammable and a potential hazard to personnel and property. Avoid open flames and excessive heat when working around acetylene.

NOTE

Plug and hose adapter are reverse threaded.

Removal

1. Remove plug (1) from hose adapter (2).
2. Remove flexible hose assembly (3) from hose adapter (2).
3. Remove hose adapter (2) and ring (4) from rear hull wall.
4. Remove acetylene tank adapter (5) from flexible hose assembly (3).
5. Remove two S-hooks (6) and chain (7).



Installation

1. Connect two S-hooks (6) to chain (7).
2. Install chain (7) to plug (1) and vehicle hull.
3. Connect acetylene tank adapter (5) to flexible hose assembly (3).
4. Install hose adapter (2) and ring (4) in vehicle hull and connect flexible hose assembly (3).
5. Install plug (1) on hose adapter (2).

NOTE

Follow-on maintenance: Install acetylene tank (refer to TM 9-2350-256-10).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

BATTERY TRAY CLEANING TUBES REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

Batteries removed (see WP 0153 00)

Materials/Parts

Lockwashers (8) (item 638, WP 0491 00)

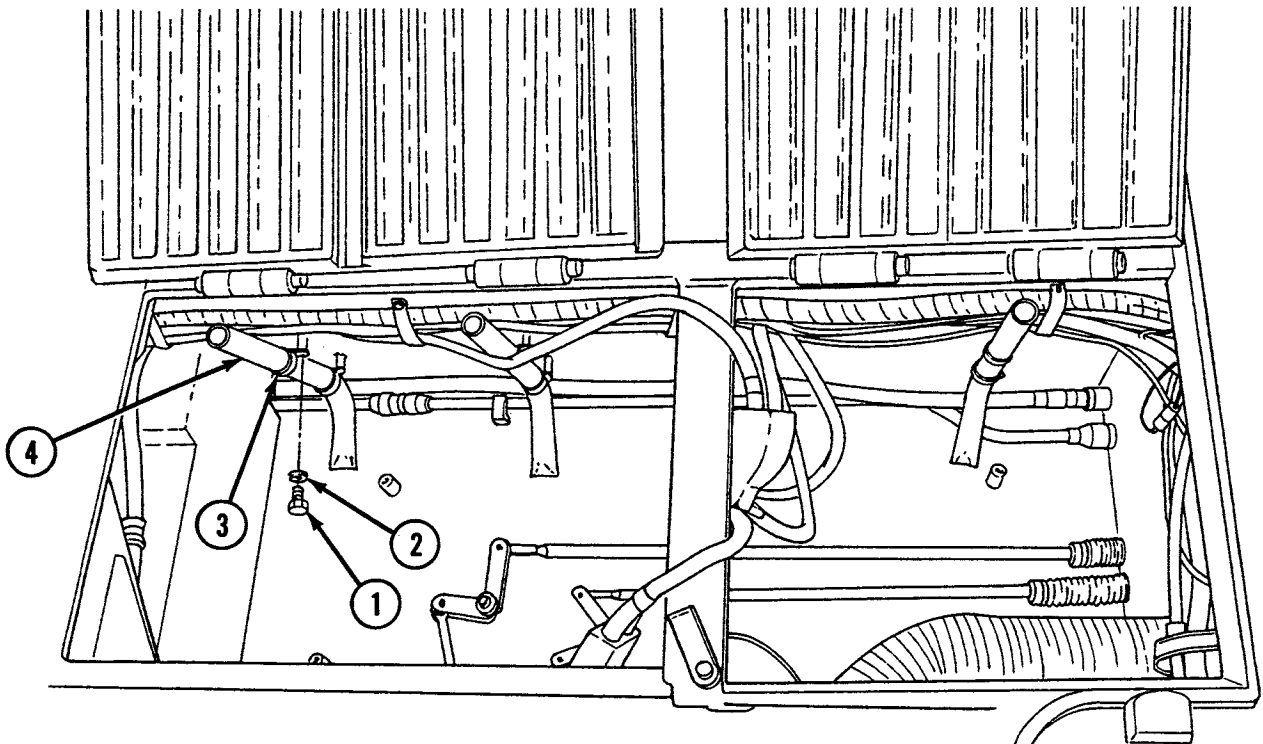
Screws (8) (item 370, WP 0491 00)

NOTE

Removal and installation procedures are the same for all four cleaning tubes.

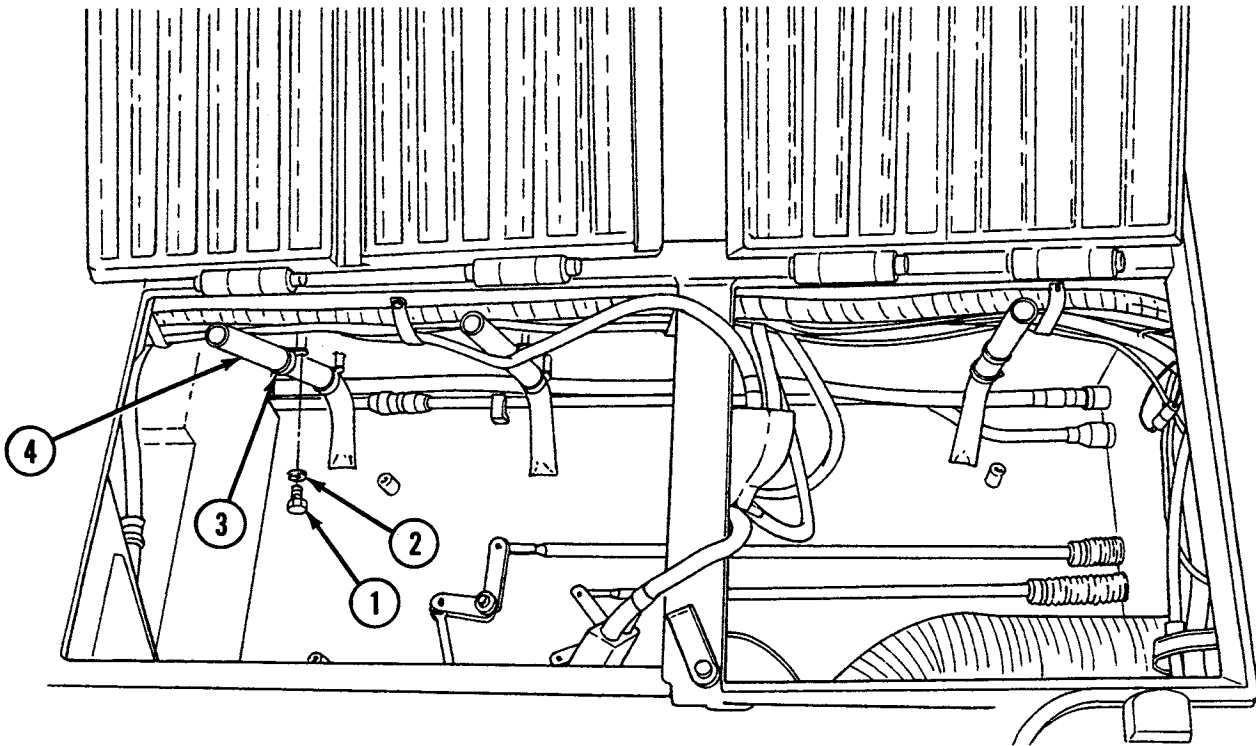
Removal

1. Remove two screws (1) and two lockwashers (2) from two clamps (3).
2. Remove cleaning tube (4) and two clamps (3).



Installation

1. Install cleaning tube (4) and two clamps (3).
2. Install two screws (1), two lockwashers (2), and two clamps (3).

**NOTE**

Follow-on maintenance: Install batteries (see WP 0153 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

APU ACCESS COVER ASSEMBLY REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)
 Chain assembly, single leg (item 9, WP 0490 00)

Materials/Parts

Gasket (item 87, WP 0491 00)
 Lockwashers (2) (item 621, WP 0491 00)
 Lockwashers (4) (item 638, WP 0491 00)
 Lockwashers (11) (item 640, WP 0491 00)
 Lockwashers (12) (item 642, WP 0491 00)
 Nuts (2) (item 480, WP 0491 00)
 Nuts (2) (item 763, WP 0491 00)
 Screws (2) (item 134, WP 0491 00)
 Screws (4) (item 372, WP 0491 00)
 Screws (3) (item 397, WP 0491 00)

Materials/Parts (cont.)

Screws (12) (item 417, WP 0491 00)
 Screws (8) (item 800, WP 0491 00)
 Springs (4) (item 513, WP 0491 00)
 Studs (2) (item 844, WP 0491 00)
 Washers, flat (3) (item 537, WP 0491 00)
 Washers, flat (8) (item 837, WP 0491 00)

Personnel Required

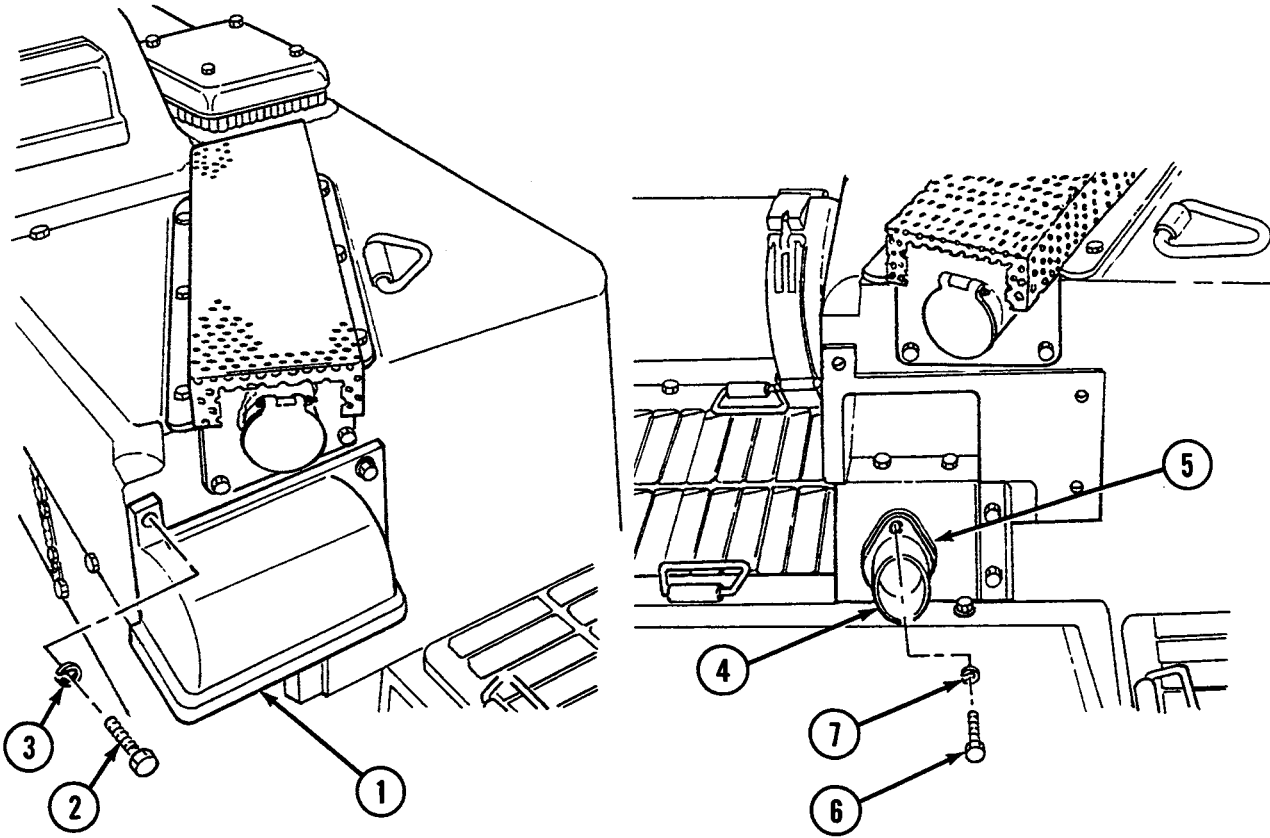
Mechanics (3)

Equipment Condition

Right-front air inlet door opened (see WP 0341 00)
 Boom raised (refer to TM 9-2350-256-10)

Removal

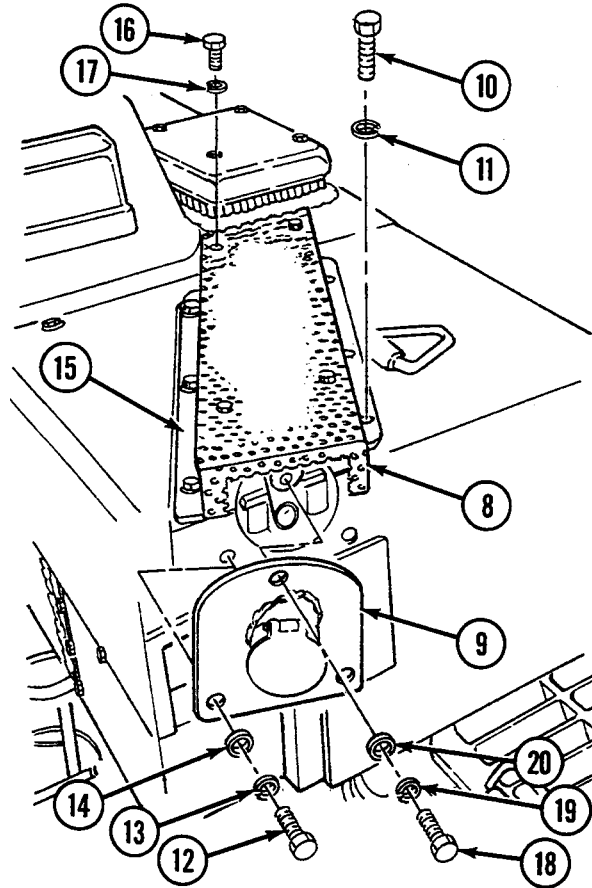
1. Remove APU cooling air shield (1) by removing three screws (2) and three lockwashers (3).
2. Remove personnel heater exhaust (4) and gasket (5) by removing two screws (6) and two lockwashers (7).



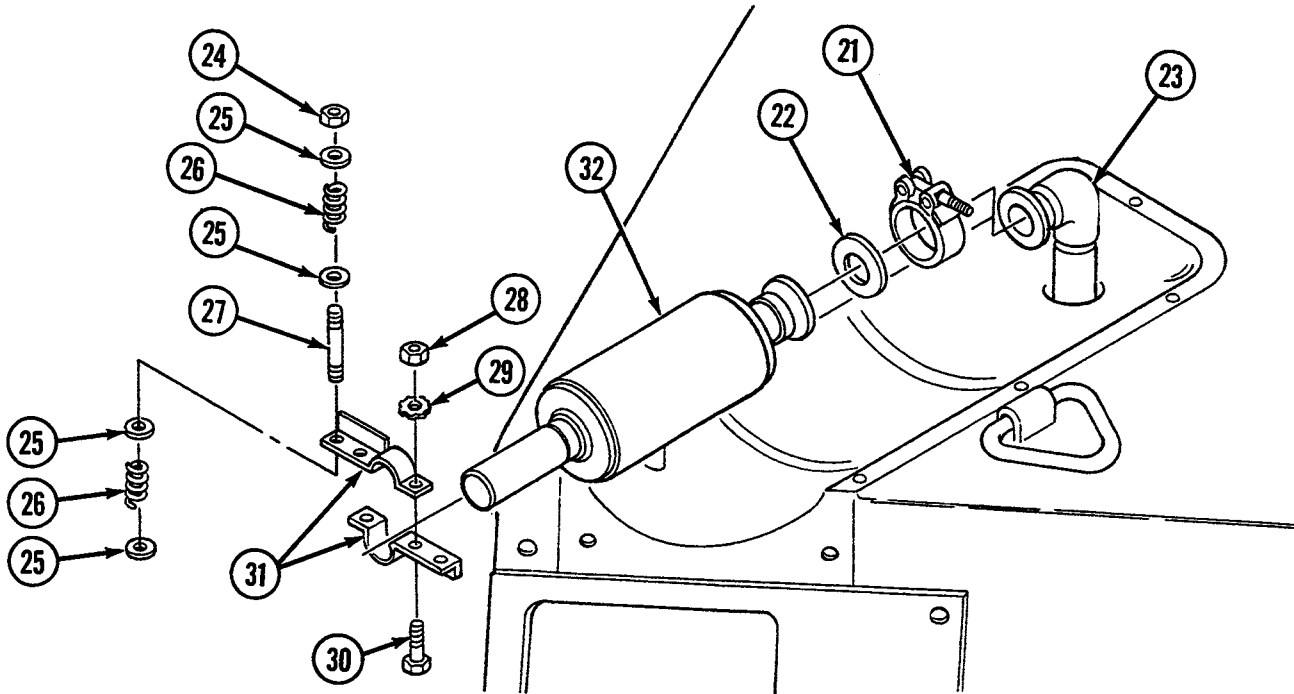
NOTE

Slide APU exhaust cover (8) forward to clear exhaust gate (9).

3. Remove APU exhaust cover (8) by removing six screws (10), six lockwashers (11), two screws (12), two lockwashers (13), and two washers (14).
4. Separate APU exhaust cover (8) from muffler guard (15) by removing four bolts (16) and four lockwashers (17).



5. Remove exhaust gate (9) from exhaust cover by removing screw (18), lockwasher (19), and washer (20).
6. Remove clamp (21) and shim (22) at elbow (23).
7. Remove two nuts (24), eight flat washers (25), four springs (26), two studs (27), two nuts (28), two lockwashers (29), two screws (30), two straps (31), and APU muffler (32).

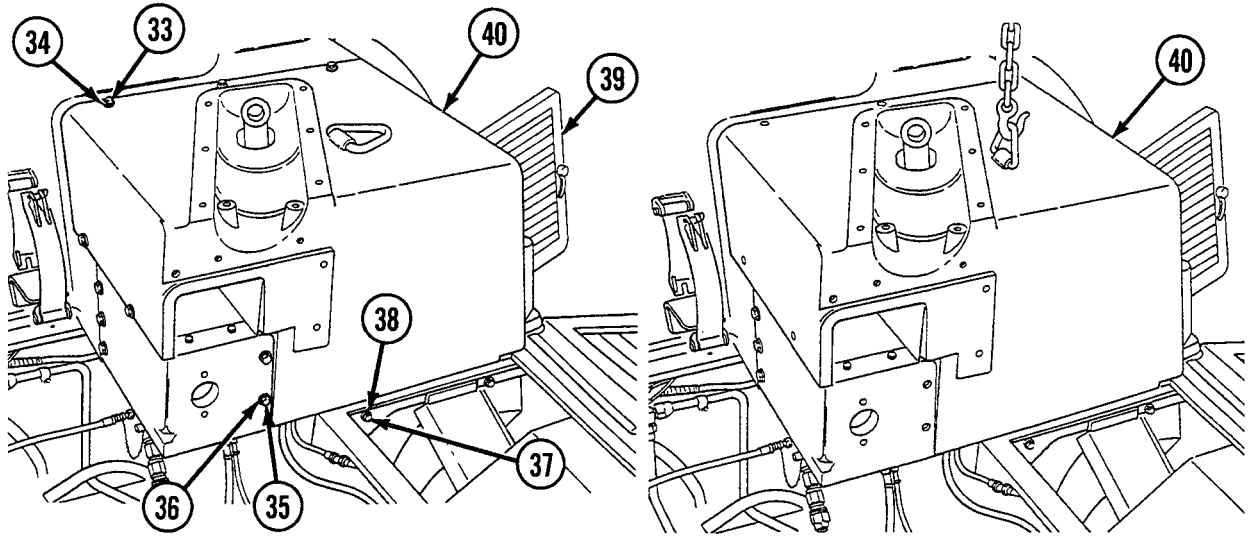


8. Remove five screws (33), five lockwashers (34), two screws (35), two lockwashers (36), two screws (37), and two lockwashers (38).

WARNING

Keep clear of equipment when equipment is being raised or lowered. Equipment may fall causing severe injury or death to personnel.

9. Open APU access door (39) and remove APU access cover (40) using lifting device.

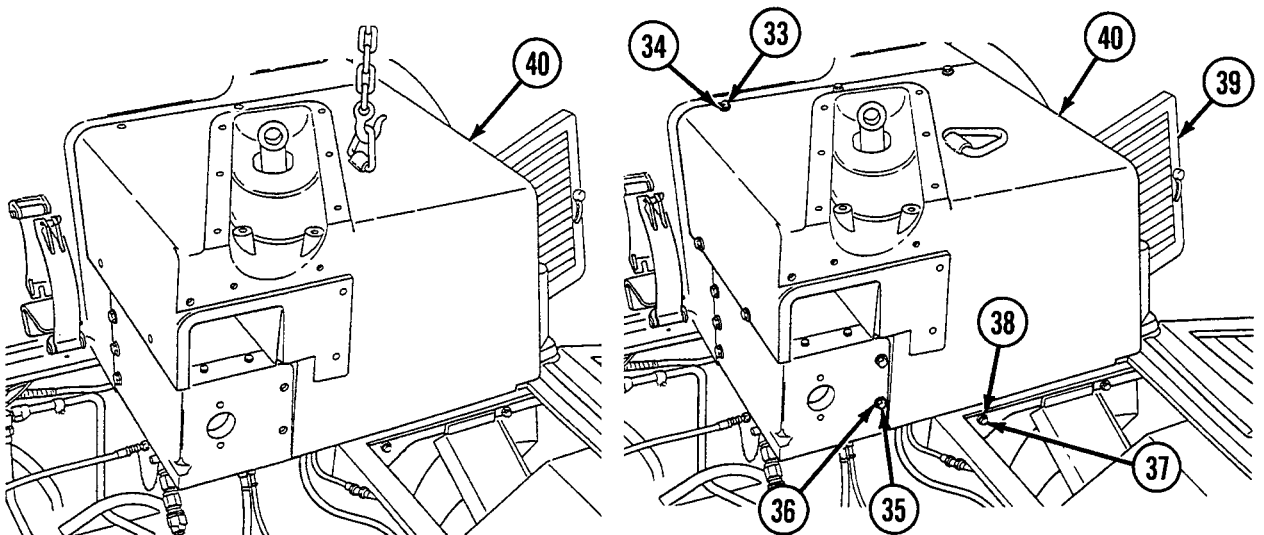


Installation

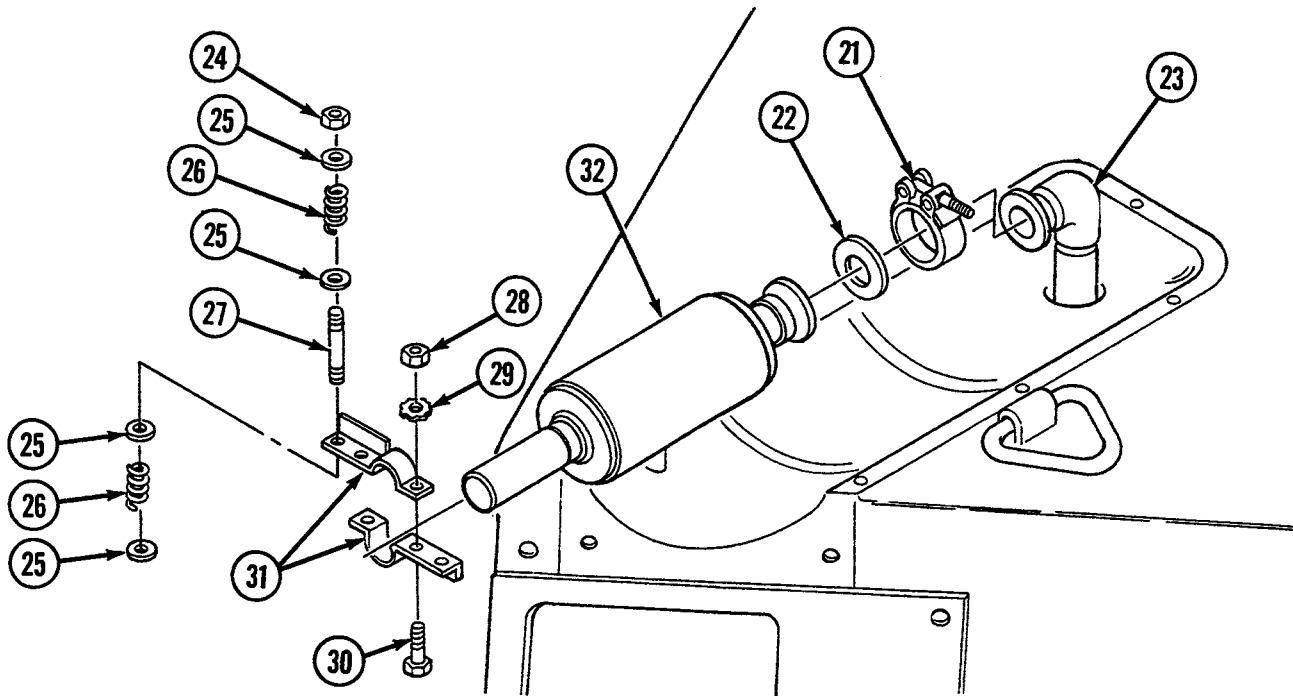
WARNING

Keep clear of equipment when equipment is being raised or lowered. Equipment may fall causing severe injury or death to personnel.

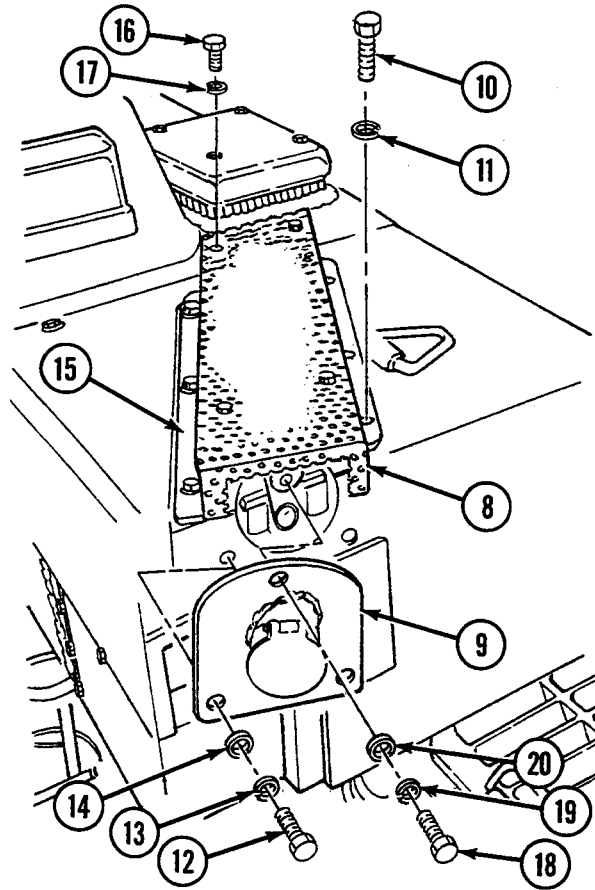
1. Place APU access cover (40) using lifting device. Install APU access cover (40) with five screws (33), five lockwashers (34), two screws (35), two lockwashers (36), two screws (37), and two lockwashers (38). Close APU access door (39).



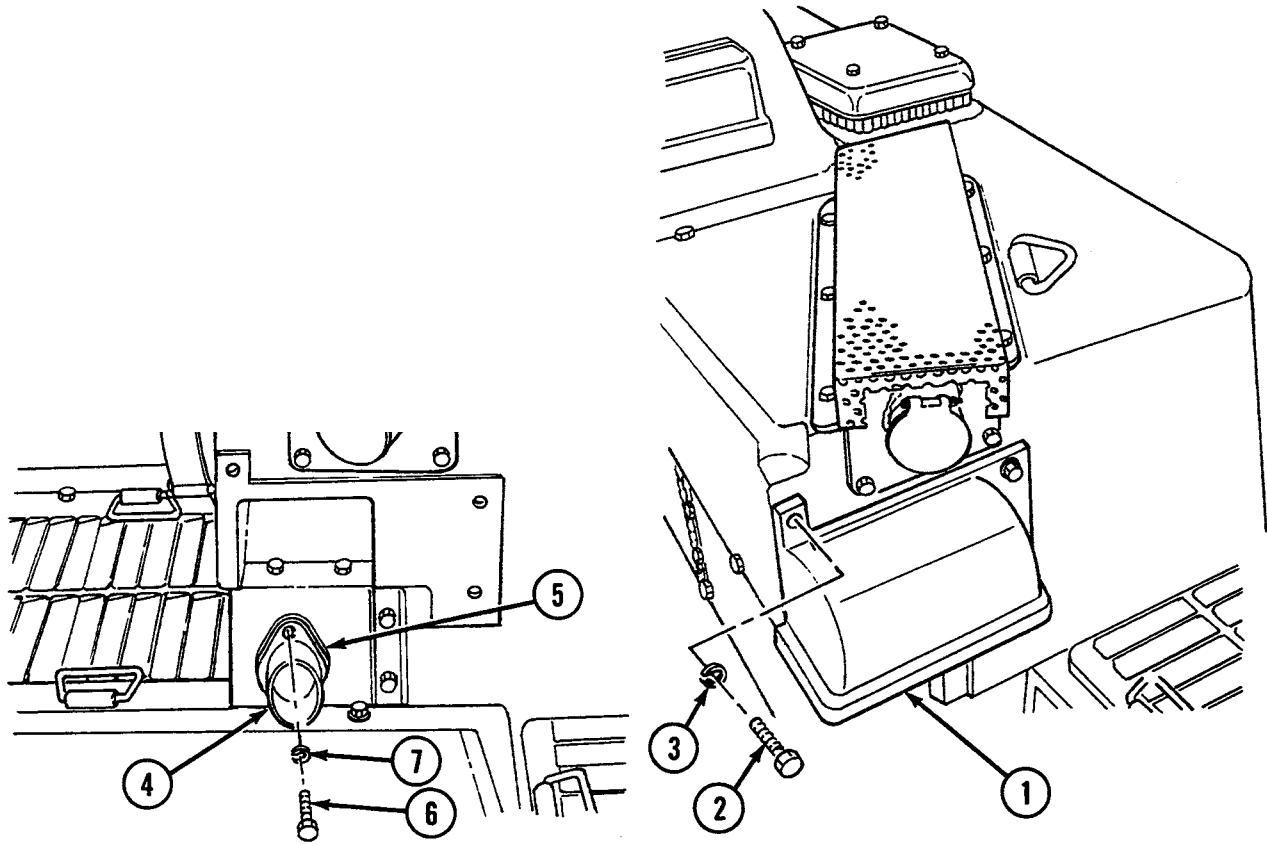
2. Install APU muffler (32) with shim (22) and clamp (21) at elbow (23), and two straps (31), two screws (30), two lockwashers (29), two nuts (28), two studs (27), four springs (26), eight flat washers (25), and two nuts (24).



3. Install exhaust gate (9) with screw (18), lockwasher (19), and washer (20).
4. Install APU exhaust cover (8) to muffler guard (15) with four bolts (16) and four lockwashers (17).
5. Install APU exhaust cover (8) with six screws (10), six lockwashers (11), two screws (12), two lockwashers (13), and two washers (14).



6. Install personnel heater exhaust (4) and gasket (5) with two screws (6) and two lockwashers (7).
7. Install APU cooling air shield (1) with three screws (2) and three lockwashers (3).

**NOTE**

Follow-on maintenance: Lower boom (refer to TM 9-2350-256-10); Close right-front air inlet door (see WP 0341 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**APU ACCESS DOOR REPLACEMENT
REMOVAL, INSTALLATION**

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Nut (item 693, WP 0491 00)
Pin, cotter (item 520, WP 0491 00)
Pins, cotter (2) (item 524, WP 0491 00)
Pins, straight (2) (item 220, WP 0491 00)

Materials/Parts (cont.)

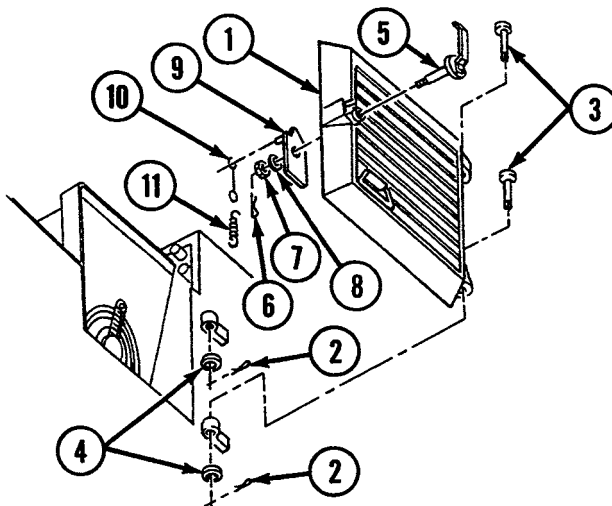
Spring (item 514, WP 0491 00)
Washer, flat (item 537, WP 0491 00)
Washers, flat (2) (item 539, WP 0491 00)

Personnel Required

Mechanics (2)

Removal

1. Remove APU access door (1) by removing two cotter pins (2), two straight pins (3), and two flat washers (4).
2. Remove door handle (5) by removing cotter pin (6), nut (7), flat washer (8), latch (9), link (10), and spring (11).

**Installation**

1. Install door handle (5) with spring (11), link (10), latch (9), flat washer (8), nut (7), and cotter pin (6).
2. Install APU access door (1) with two straight pins (3), two flat washers (4), and two cotter pins (2).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
ENGINE DECK, DECK BASE, AND RELATED PARTS MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)
 Sling, beam-type (item 53, WP 0490 00)

Materials/Parts

Clamps (2) (item 840, WP 0491 00)
 Gasket (item 87, WP 0491 00)
 Lockwashers (10) (optional deck base) (item 613, WP 0491 00)
 Lockwashers (33) (optional deck base) (item 614, WP 0491 00)
 Lockwashers (47) (standard deck base) (item 614, WP 0491 00)
 Lockwashers (2) (item 640, WP 0491 00)
 Lockwashers (30) (item 642, WP 0491 00)
 Screws (10) (optional deck base) (item 371, WP 0491 00)
 Screws (33) (optional deck base) (item 380, WP 0491 00)
 Screws (41) (standard deck base) (item 380, WP 0491 00)

Materials/Parts (cont.)

Screws (11) (item 416, WP 0491 00)
 Screws (19) (item 417, WP 0491 00)
 Screws (6) (standard deck base) (item 788, WP 0491 00)
 Screws (2) (item 800, WP 0491 00)
 Seal kit (item 38, WP 0491 00)
 Studs (41) (standard deck base) (item 31, WP 0491 00)
 Washers, flat (6) (standard deck base) (item 171, WP 0491 00)

Personnel Required

Mechanics (3)

References

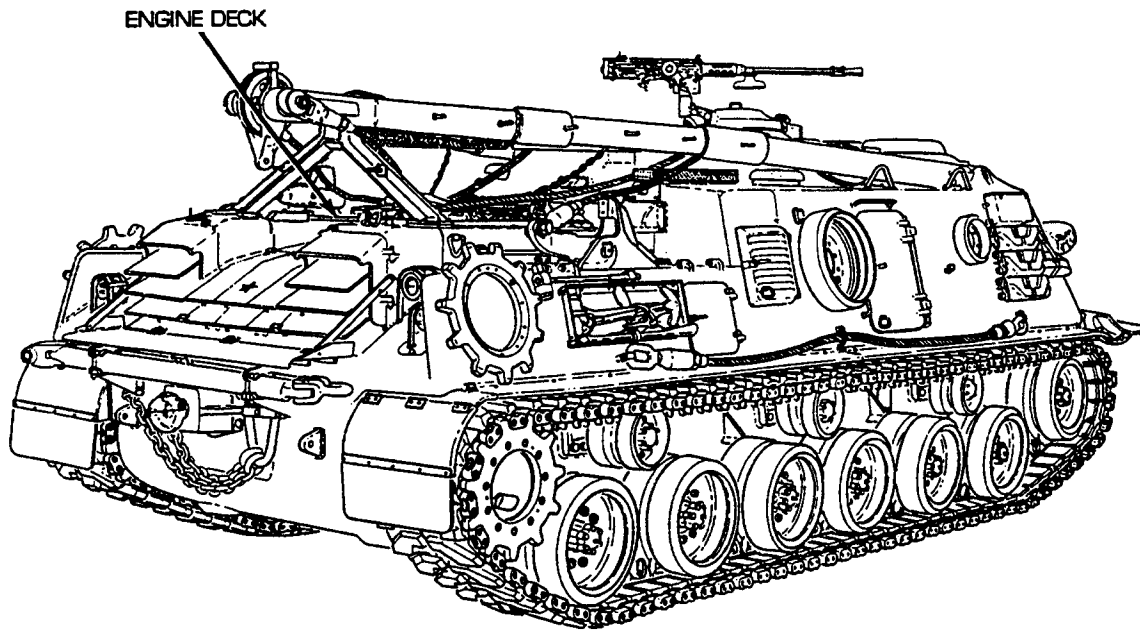
WP 0337 00

Equipment Condition

Boom raised (refer to TM 9-2350-256-10)
 Oxygen cylinder removed (refer to TM 9-2350-256-10)

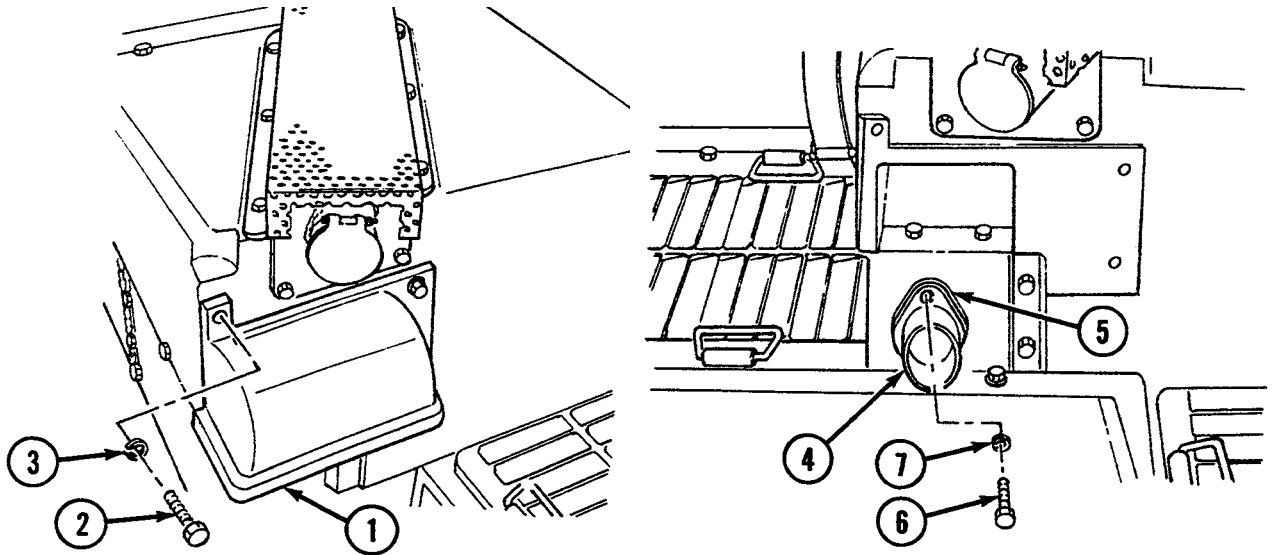
WARNING

All personnel must stand clear during lifting operations. A swinging or shifting load may cause injury or death to personnel.

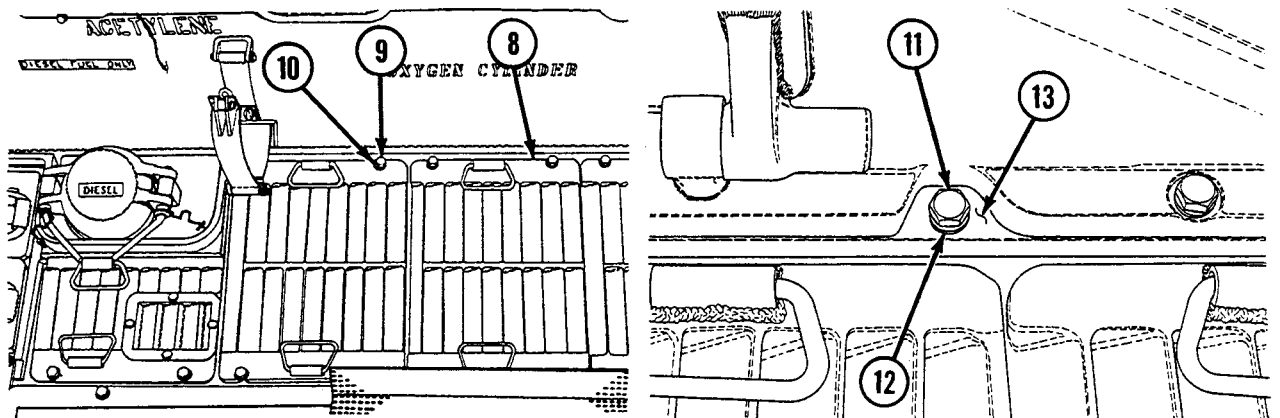


Removal

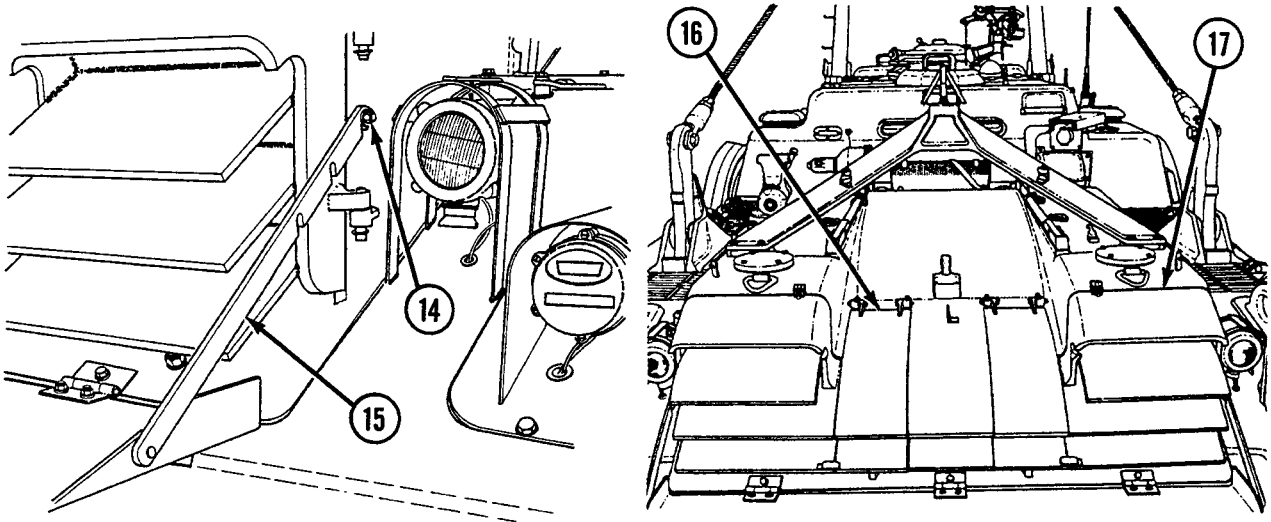
1. Remove APU cooling air shield (1) by removing three screws (2) and three lockwashers (3).
2. Remove personnel heater exhaust (4) and gasket (5) by removing two screws (6) and two lockwashers (7).



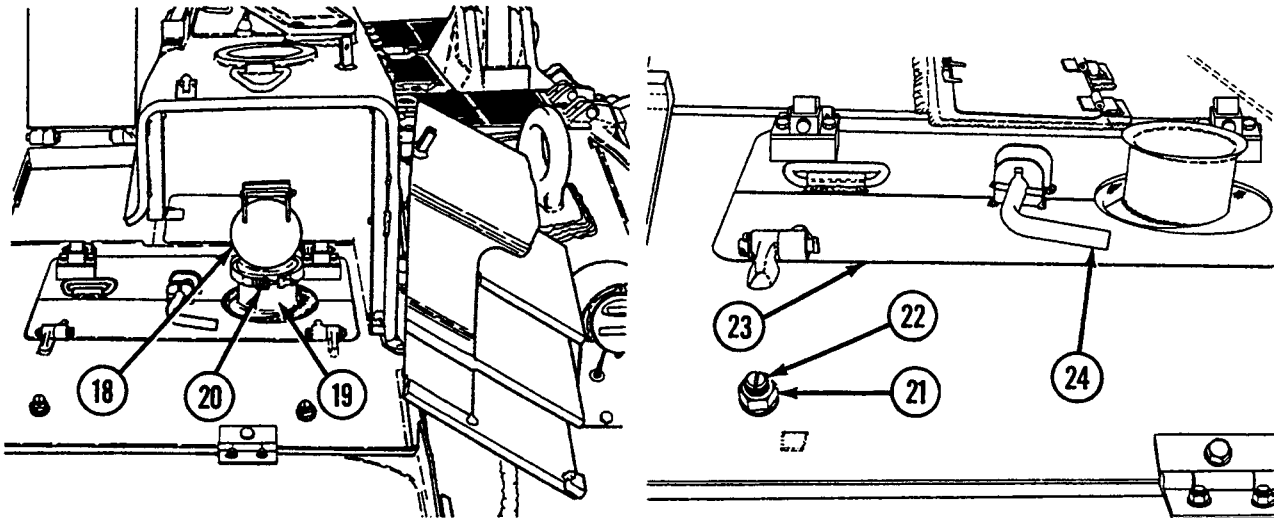
3. Remove 4 front air inlet grilles (8) by removing 14 screws (9) and 14 lockwashers (10).
4. Remove screw (11) and lockwasher (12) from each side of engine deck (13).



5. Loosen nut (14) on each of two exhaust deflector braces (15). Move exhaust deflector braces to rear.
6. Open both center exhaust doors (16). Open both exhaust deflector grille doors (17).



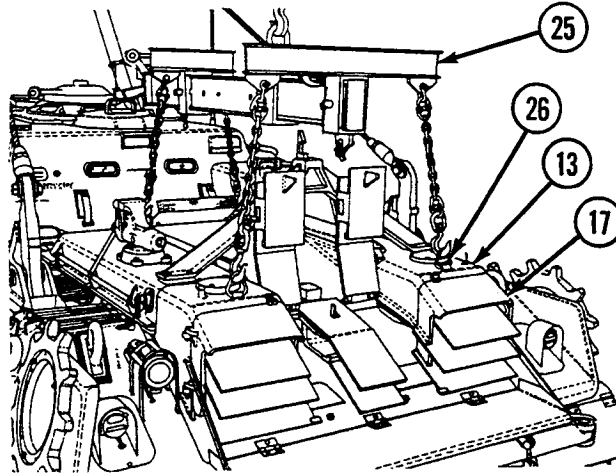
7. Remove two engine exhaust caps (18) from engine exhaust tubes (19) by removing two clamps (20).
8. Loosen four nuts (21) and turn four slotted screws (22).
9. Open two engine transmission access doors (23) by releasing two handle assemblies (24).



NOTE

Sling is premarked to ensure proper rigging for deck removal.

10. Close exhaust deflector grille doors (17). Attach sling (25) to four engine deck handles (26). Using suitable lifting device, remove engine deck (13).

**Disassembly****CAUTION**

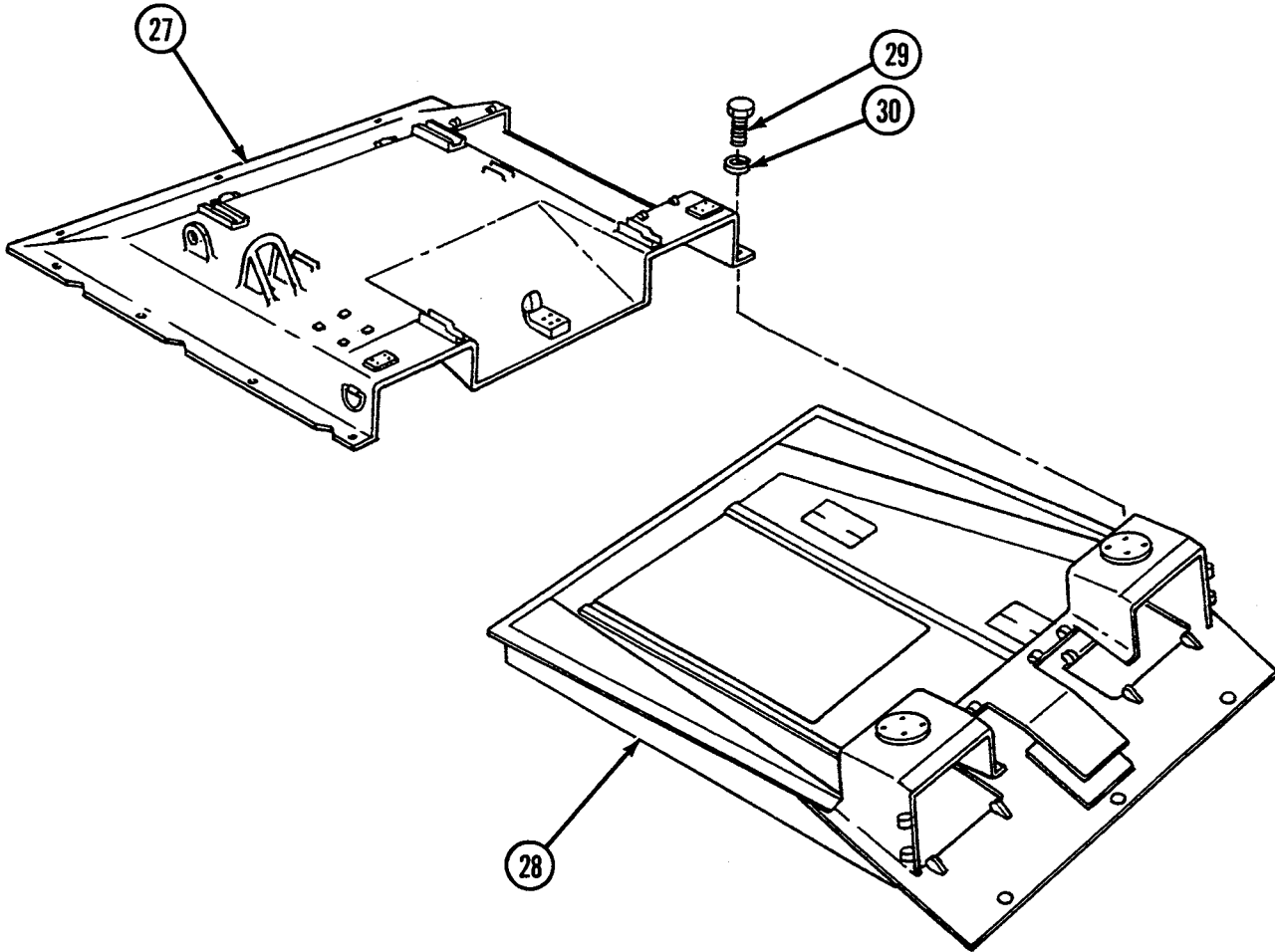
Engine cooler fans must be covered to prevent anything from falling into them.

1. Remove right engine deck door (see WP 0337 00).

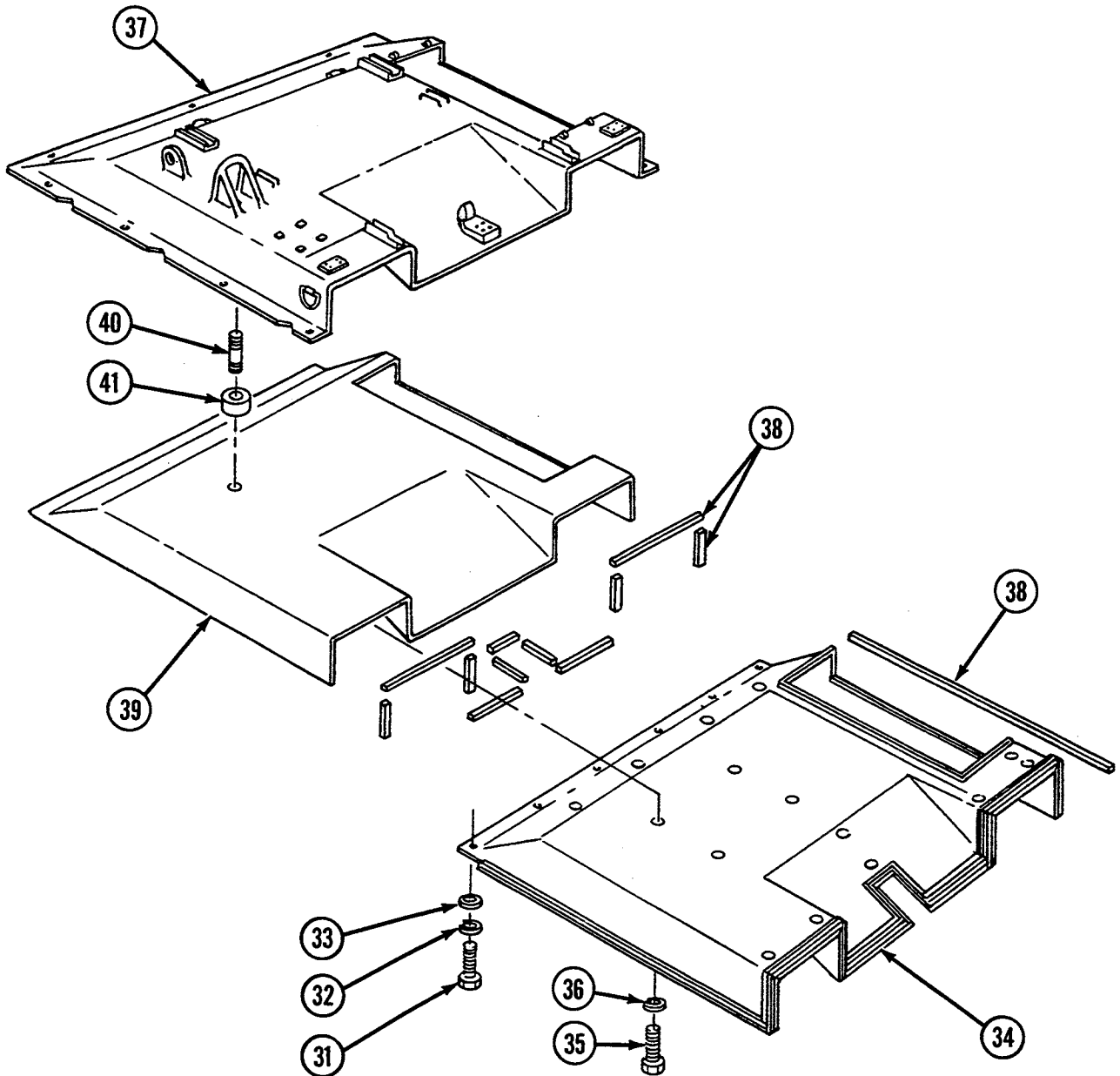
NOTE

Steps 2 through 6 apply to standard deck base. Steps 7 through 10 apply to optional deck base.

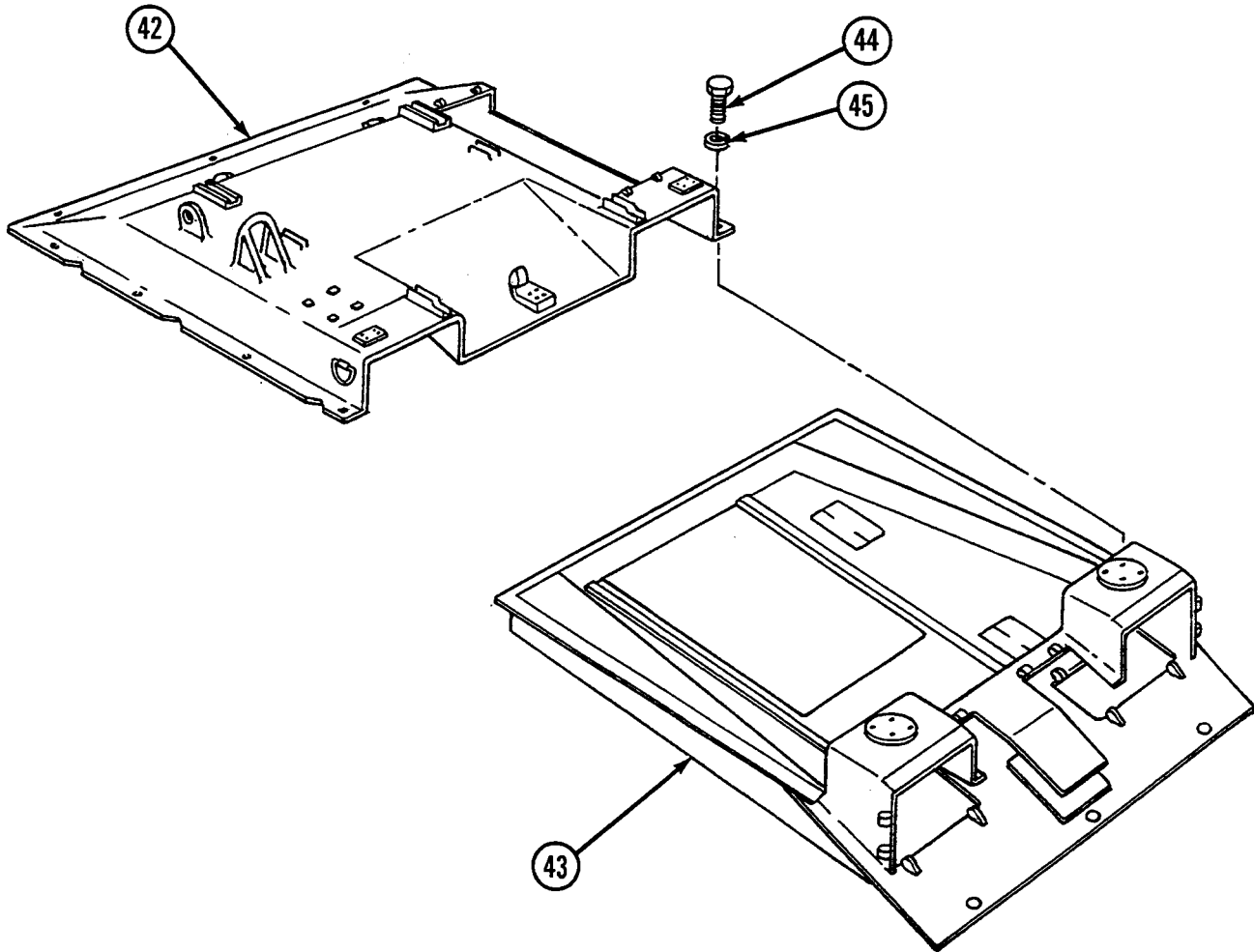
2. Separate cover assembly (27) from base assembly (28) by removing 11 screws (29) and 11 lockwashers (30).



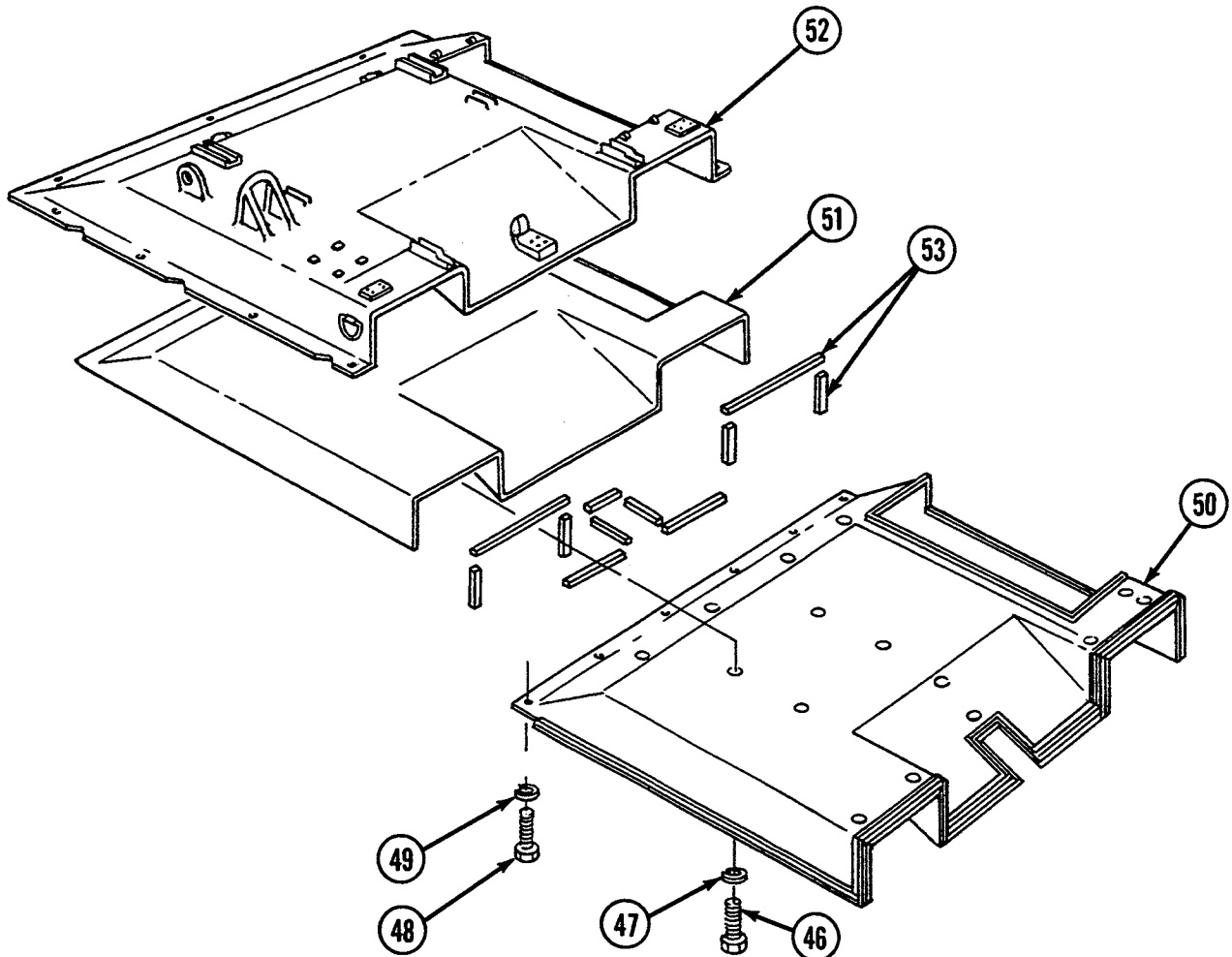
3. Remove six screws (31), six lockwashers (32), and six flat washers (33) from bracket mounting (34).
4. Remove 41 screws (35) and 41 lockwashers (36) to separate bracket mounting (34) from cover (37).
5. Remove 12 seals (38) and insulation blanket (39).
6. Remove 41 studs (40) and 41 spacers (41).



7. Separate cover assembly (42) from base assembly (43) by removing 11 screws (44) and 11 lockwashers (45).



8. Remove 33 screws (46), 33 lockwashers (47), 10 screws (48), and 10 lockwashers (49) from retainer assembly (50).
9. Separate retainer assembly (50), insulation (51), and engine deck cover (52).
10. Remove 11 seals (53).



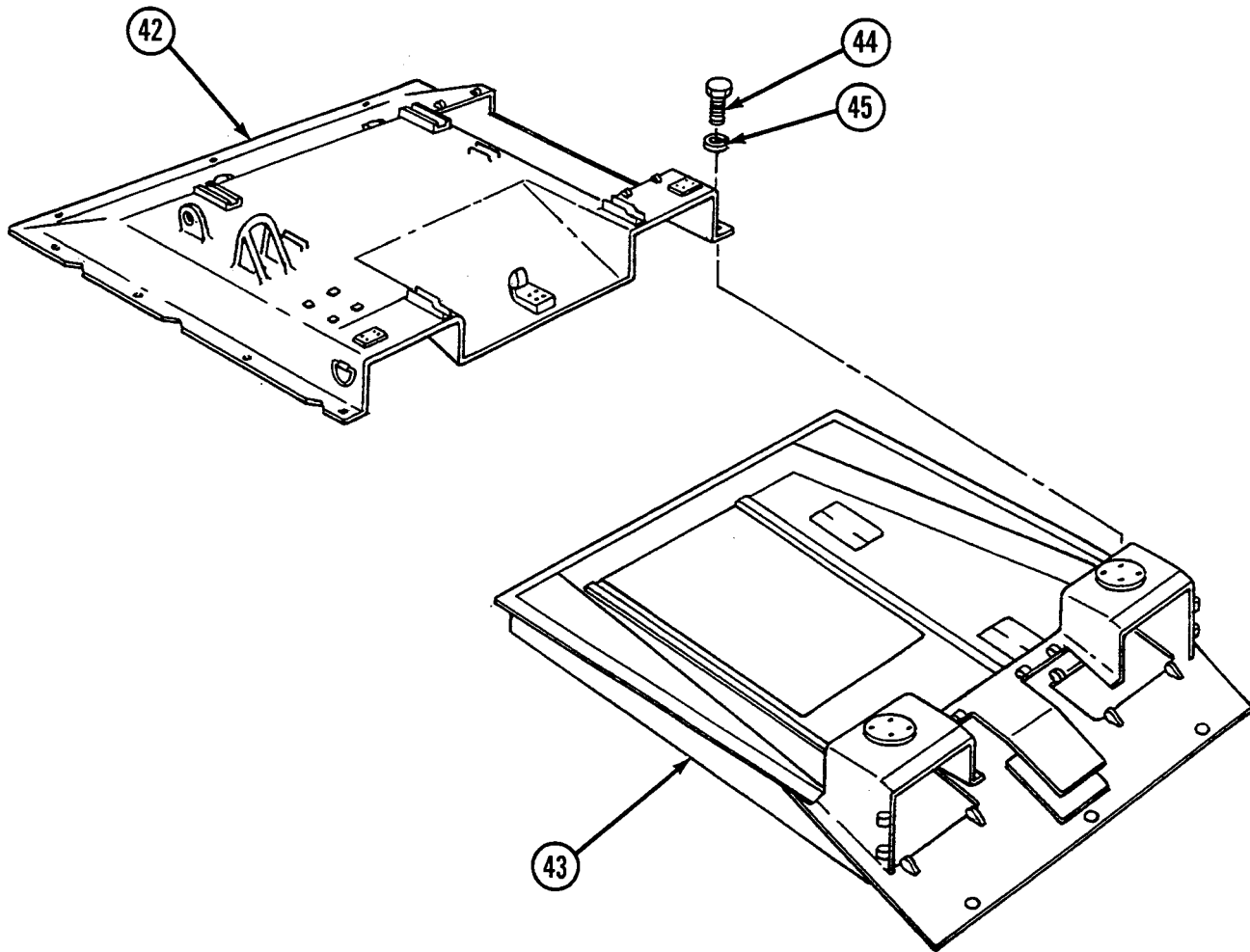
Assembly

NOTE

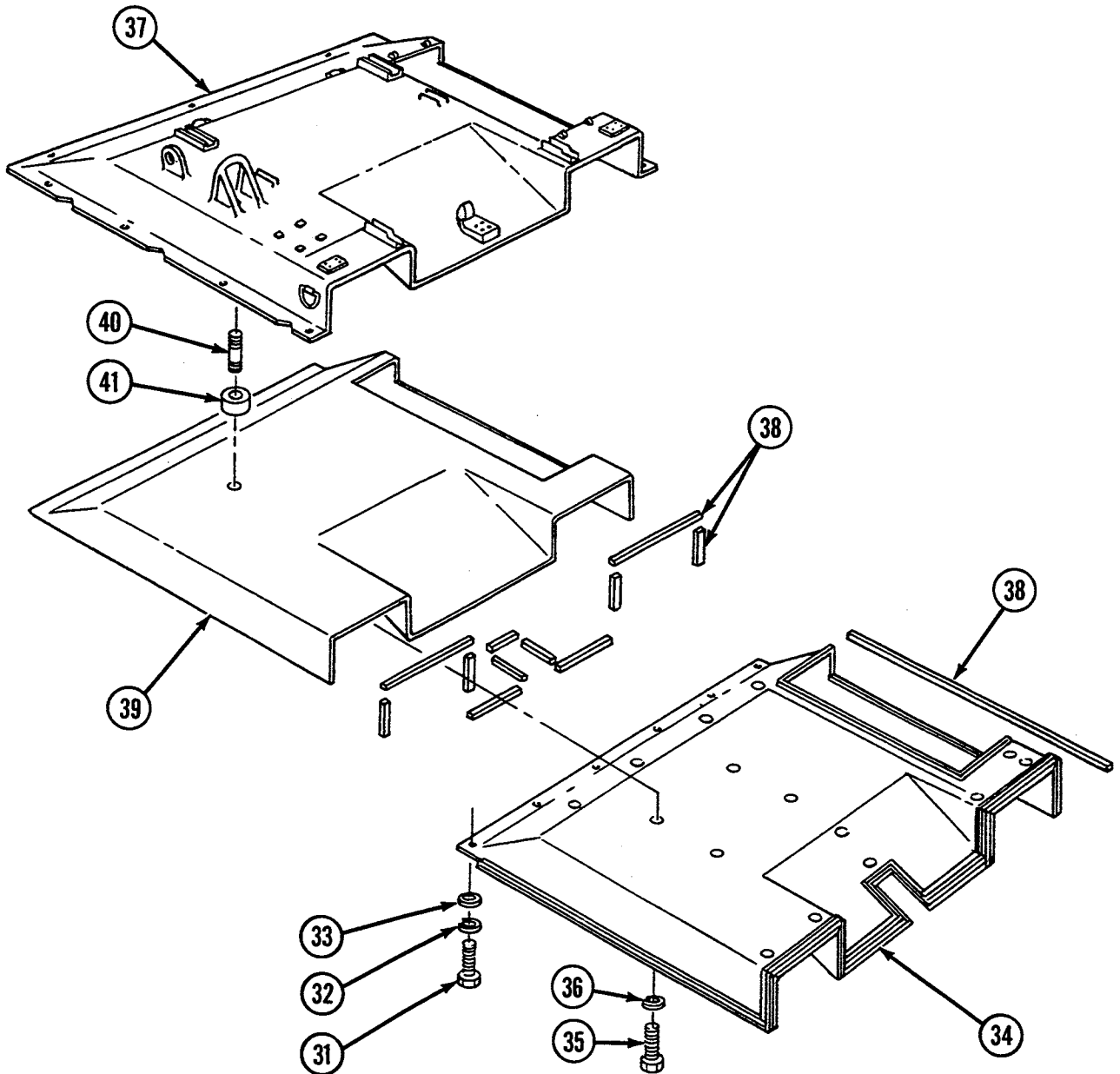
Steps 1 and 2 apply to optional engine deck base. Steps 3 through 8 apply to standard engine deck base.

1. Install 11 seals (53).
2. Assemble engine deck cover (52), insulation (51), and retainer assembly (50) with 33 screws (46), 33 lockwashers (47), 10 screws (48), and 10 lockwashers (49).

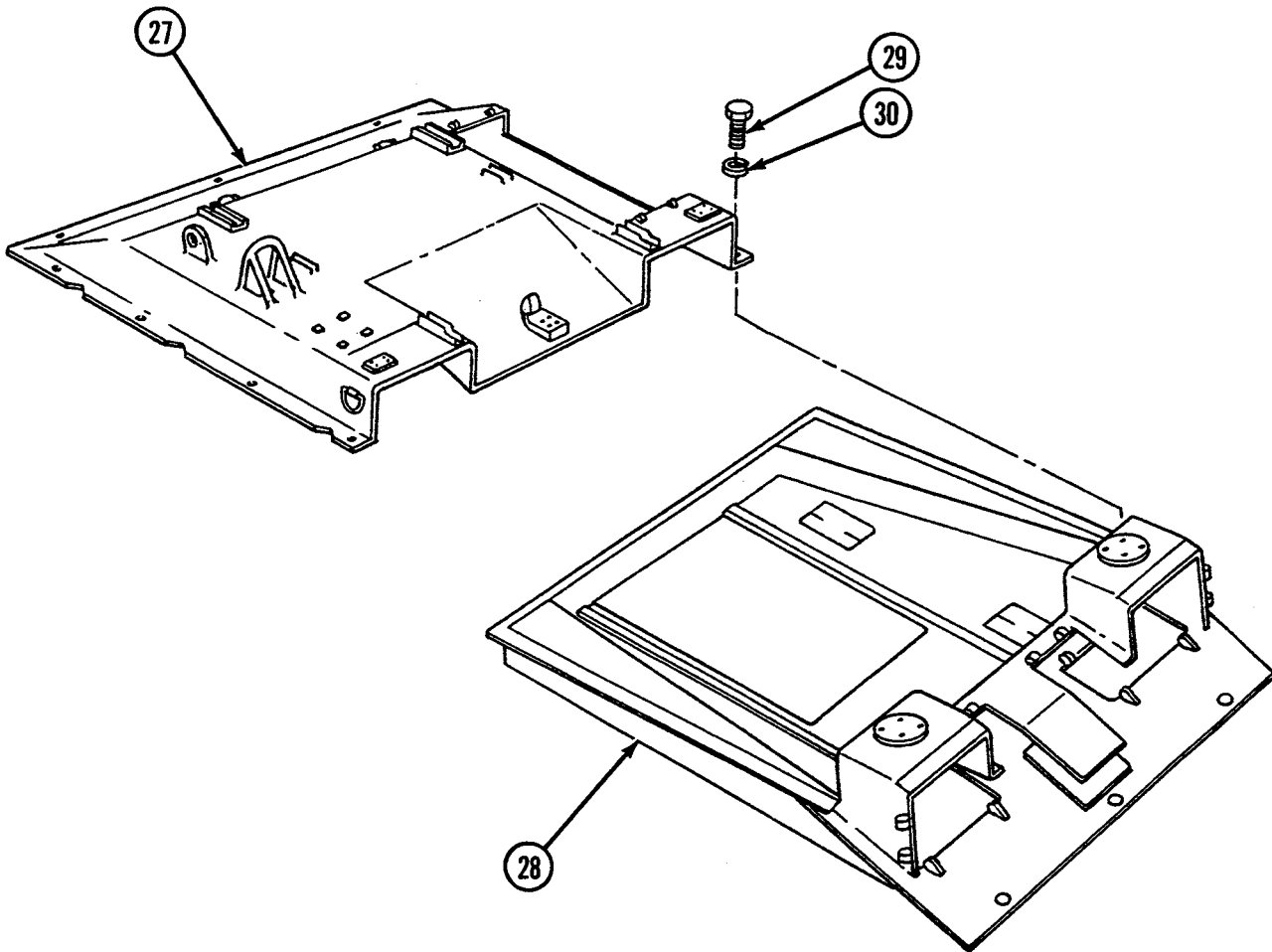
3. Assemble cover assembly (42) to base assembly (43) with 11 screws (44) and 11 lockwashers (45).



4. Install 41 studs (40) and 41 spacers (41) to cover (37).
5. Install 12 seals (38) and insulation blanket (39).
6. Install cover (37) to bracket mounting (34) with 41 screws (35) and 41 lockwashers (36).
7. Install six screws (31), six lockwashers (32), and six flat washers (33) to bracket mounting (34).

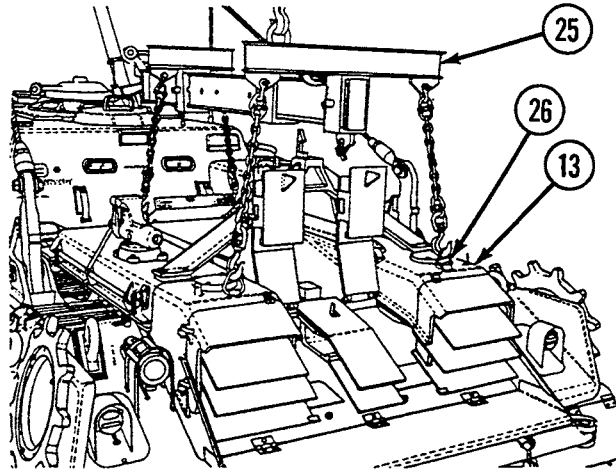


8. Install cover assembly (27) to base assembly (28) with 11 screws (29) and 11 lockwashers (30).
9. Install right engine deck door (see WP 0337 00).

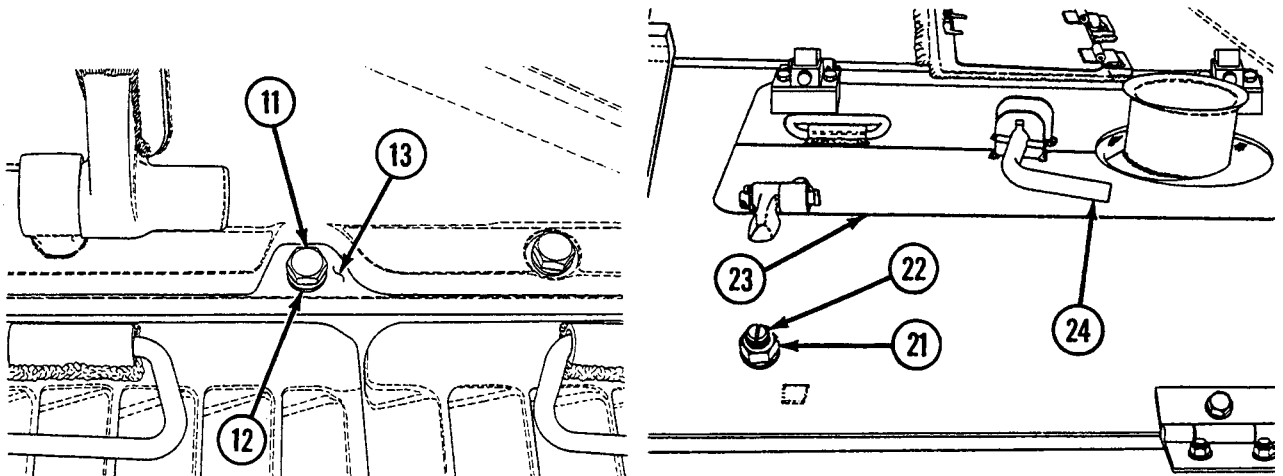


Installation

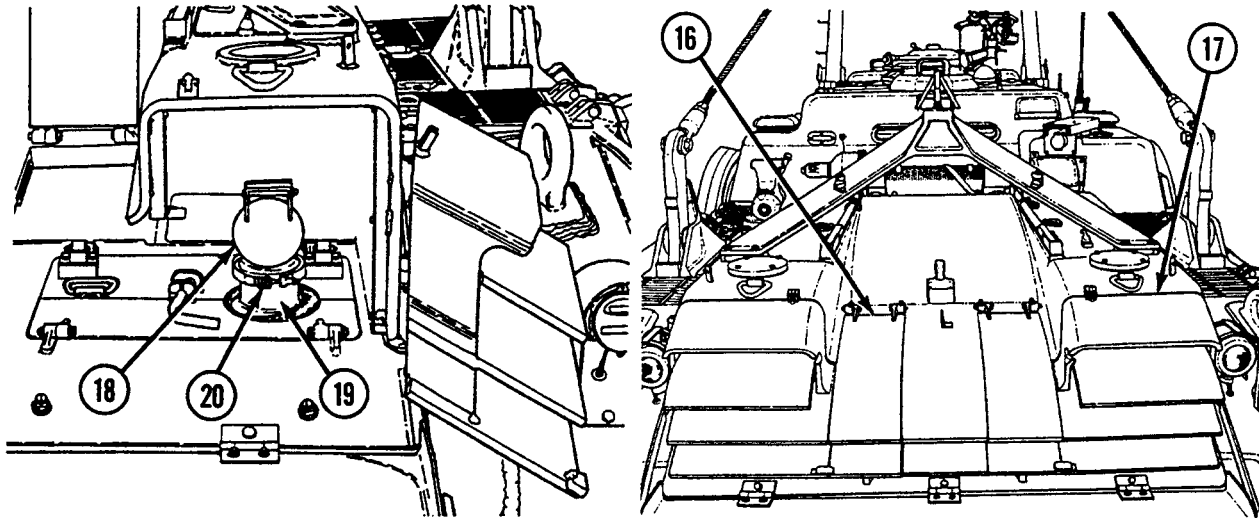
1. Attach sling (25) to four engine deck handles (26). Using suitable lifting device. Install engine deck (13).



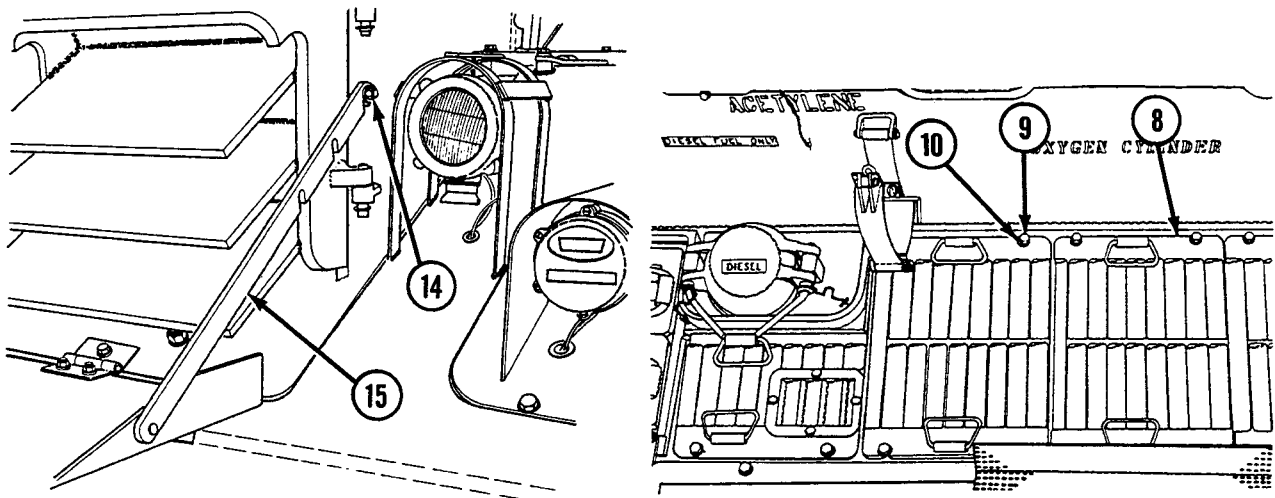
2. Install two screws (11) and two lockwashers (12) to engine deck (13) and hull.
3. Turn four slotted screws (22) clockwise 90° to secure to hull. Then tighten four nuts (21) to secure screws.
4. Close two engine transmission access doors (23) and secure with two handle assemblies (24).



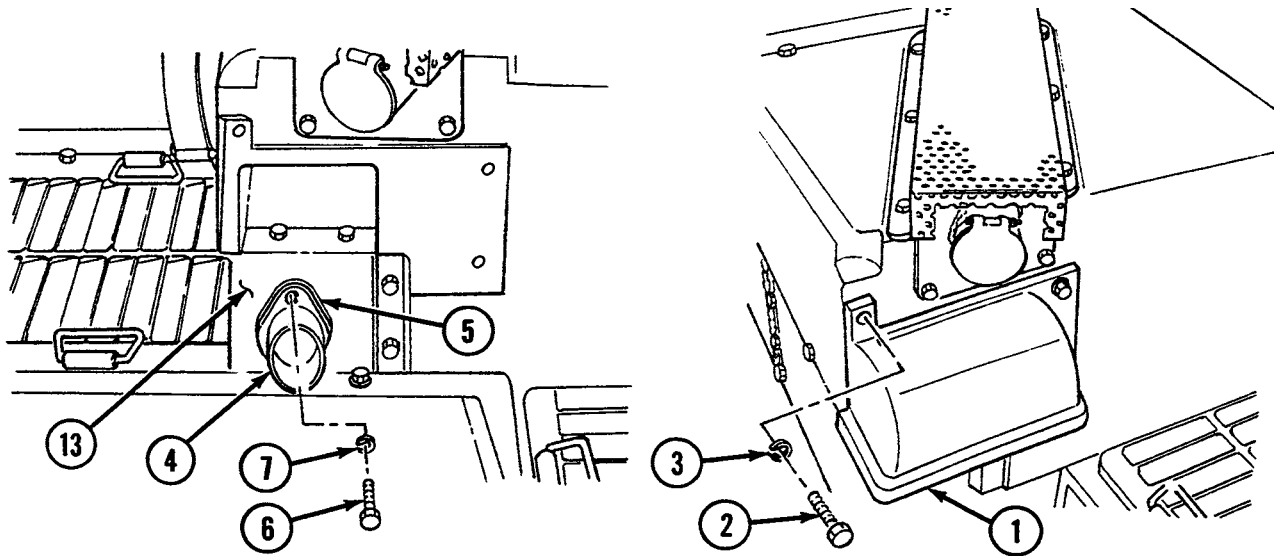
5. Install two engine exhaust caps (18) to engine exhaust tubes (19) with two clamps (20).
6. Close center exhaust doors (16) and exhaust deflector grille doors (17) on both sides.



7. Move both exhaust deflector braces (15) forward and tighten two nuts (14).
8. Install 4 front air inlet grilles (8) with 14 screws (9) and 14 lockwashers (10).



9. Install personnel heater exhaust (4) and gasket (5) on engine deck (13) with two screws (6) and two lockwashers (7).
10. Install APU cooling air shield (1) with three screws (2) and three lockwashers (3).

**NOTE**

Follow-on maintenance: Lower boom (refer to TM 9-2350-256-10); Install oxygen cylinder (refer to TM 9-2350-256-10).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

RIGHT ENGINE DECK DOOR MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

- Lockwashers (10) (item 614, WP 0491 00)
- Lockwashers (5) (item 640, WP 0491 00)
- Nut (item 769, WP 0491 00)
- Screws (10) (item 380, WP 0491 00)
- Screws (2) (item 398, WP 0491 00)
- Screws (2) (item 402, WP 0491 00)
- Seal kit (item 36, WP 0491 00)

Materials/Parts (cont.)

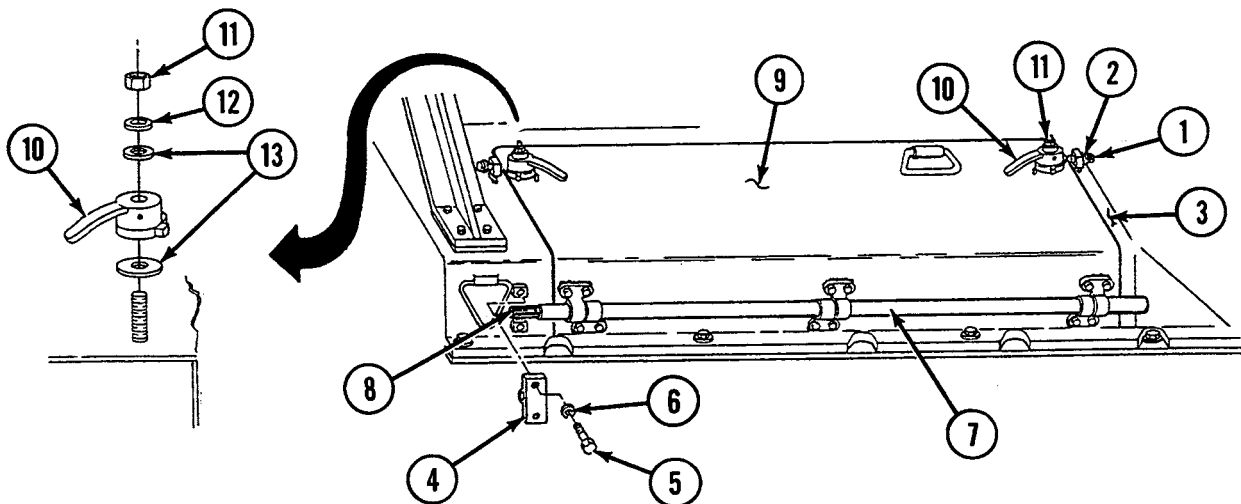
- Seal kit (item 37, WP 0491 00)
- Seal kit (2) (item 38, WP 0491 00)
- Studs (10) (item 31, WP 0491 00)
- Washer, flat (item 292, WP 0491 00)
- Washer, flat (item 537, WP 0491 00)
- Washers, spring (2) (item 281, WP 0491 00)

Personnel Required

Mechanics (2)

Removal

1. Remove two screws (1) and two lockwashers (2) from engine deck cover (3).
2. Remove torsion bar support (4) by removing two screws (5) and two lockwashers (6).
3. Remove tube (7) and torsion bar (8).
4. Remove door (9) from vehicle.
5. Remove two handles (10) from door (9) by removing nut (11), spring washer (12), and two flat washers (13) from each.

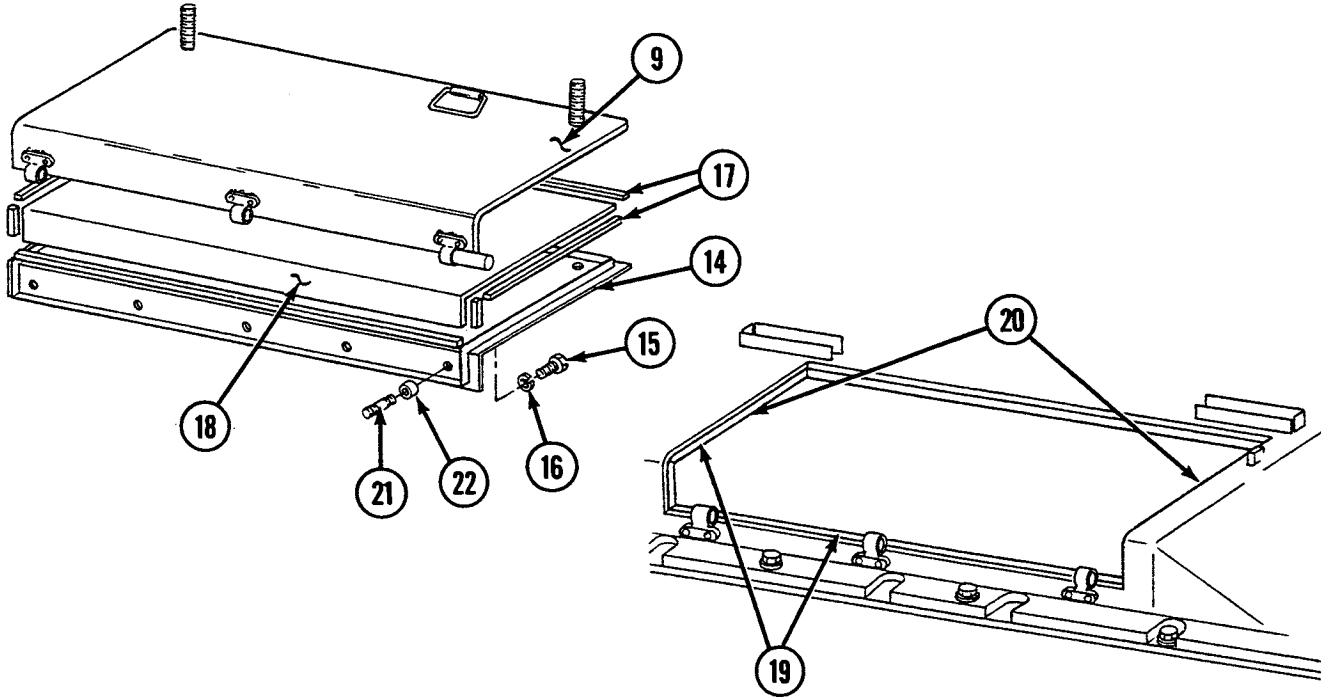


6. Remove bracket mounting (14) from door (9) by removing 10 screws (15) and 10 lockwashers (16).
7. Remove six seals (17) and insulation blanket (18) from door (9) and remove six seals (19) from door opening (20) on vehicle.

NOTE

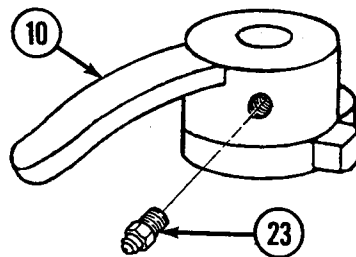
Optional door does not have studs (21) or spacers (22).

8. Remove 10 studs (21) and 10 spacers (22).



Disassembly

1. Remove lubrication fitting (23) from each handle (10).



Assembly

1. Install lubrication fitting (23) to each handle (10).

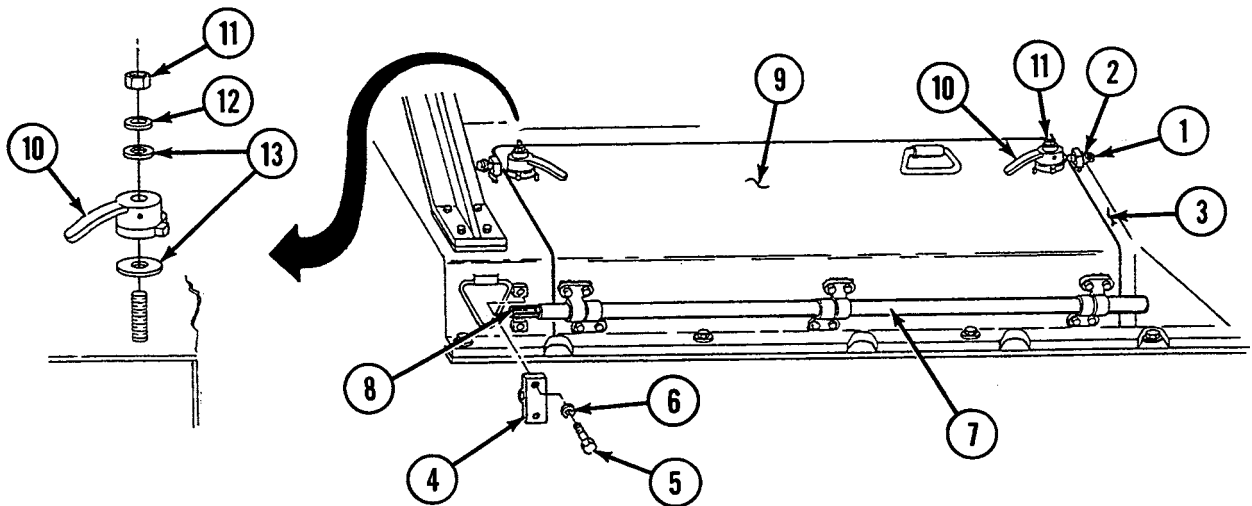
Installation

1. Install 10 studs (21) and 10 spacers (22) to door (9).
2. Install six seals (17) and insulation blanket (18) to door (9) and install six seals (19) to door opening (20) on vehicle.
3. Install bracket mounting (14) to door (9) with 10 screws (15) and 10 lockwashers (16).
4. Install two handles (10) to door (9) with two flat washers (13), spring washer (12), and nut (11) each.
5. Install door (9) to vehicle.

NOTE

Door (9) must be open to set torsion bar (8) and torsion bar support (4).

6. Install tube (7) and torsion bar (8).
7. Install torsion bar support (4) with two screws (5) and two lockwashers (6).
8. Install two lockwashers (2) and two screws (1) to engine deck cover (3). Peen screws.



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

CLAMP ASSEMBLY REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

Engine transmission access doors opened (see WP 0340 00)

Materials/Parts

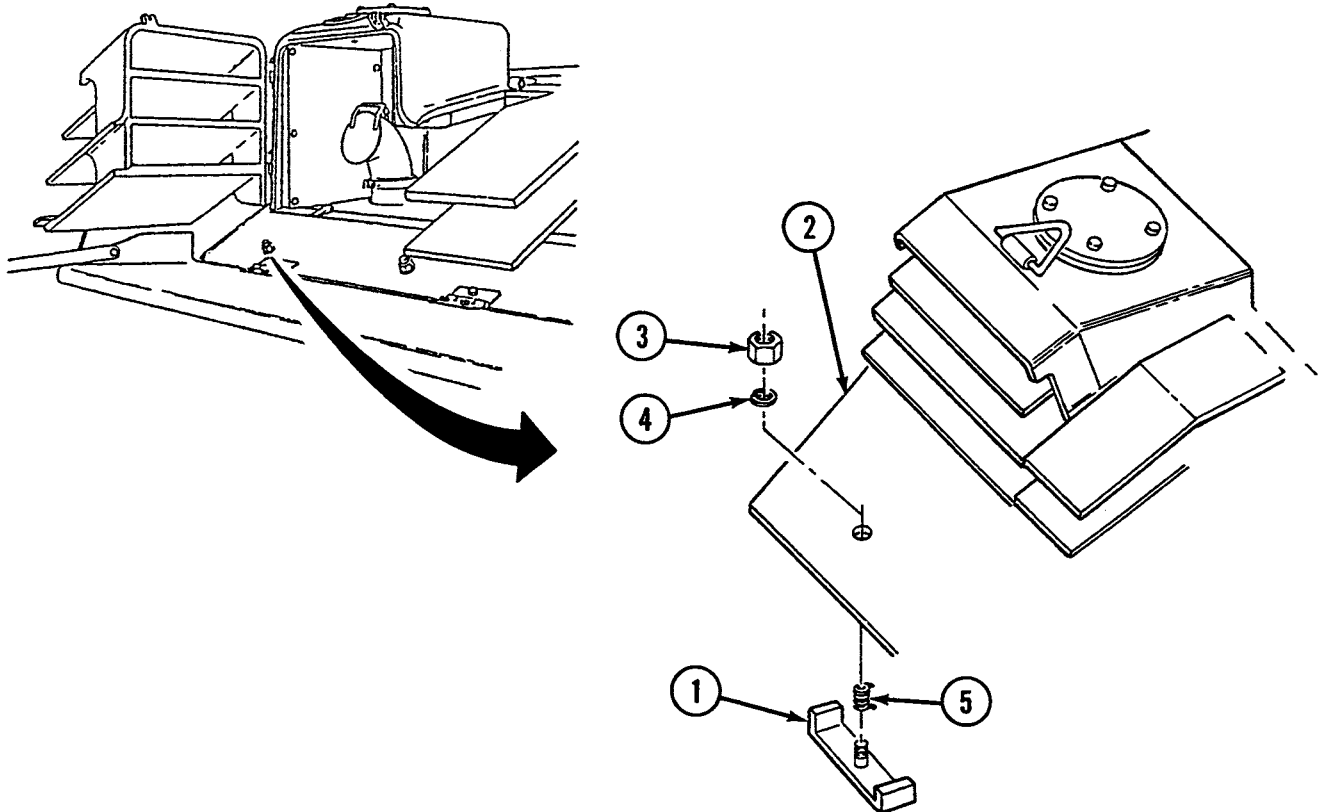
Lockwashers (4) (item 645, WP 0491 00)

Nuts (4) (item 838, WP 0491 00)

Springs (4) (item 83, WP 0491 00)

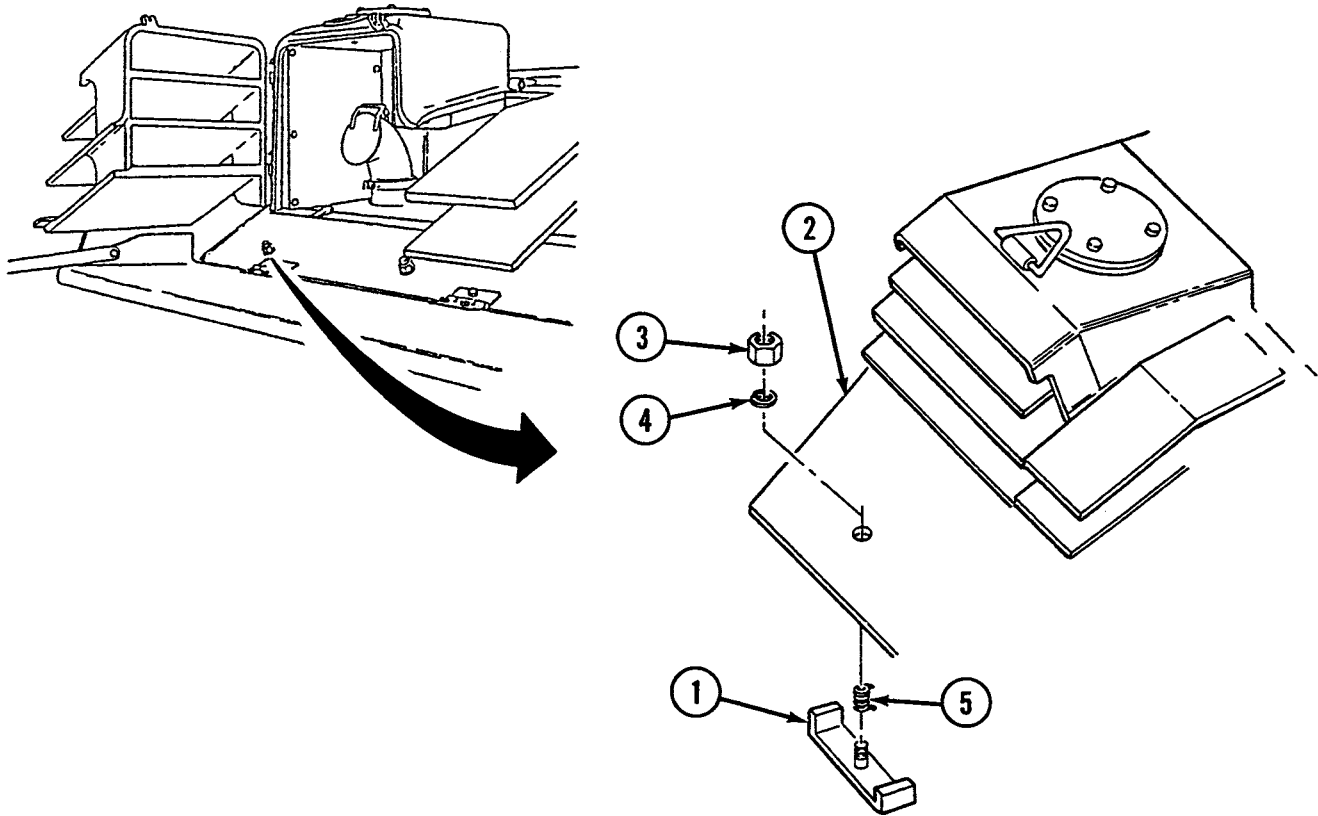
Removal

1. Remove four clamps (1) from base assembly (2) by removing four nuts (3), four lockwashers (4), and four springs (5).



Installation

1. Install four clamps (1) to base assembly (2) with four springs (5), four lockwashers (4), and four nuts (3).

**NOTE**

Follow-on maintenance: Close engine transmission access doors (see WP 0340 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

INSULATION RETAINER REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Bolts (8) (item 380, WP 0491 00)
 Lockwashers (32) (item 614, WP 0491 00)
 Screws (24) (item 788, WP 0491 00)

Materials/Parts (cont.)

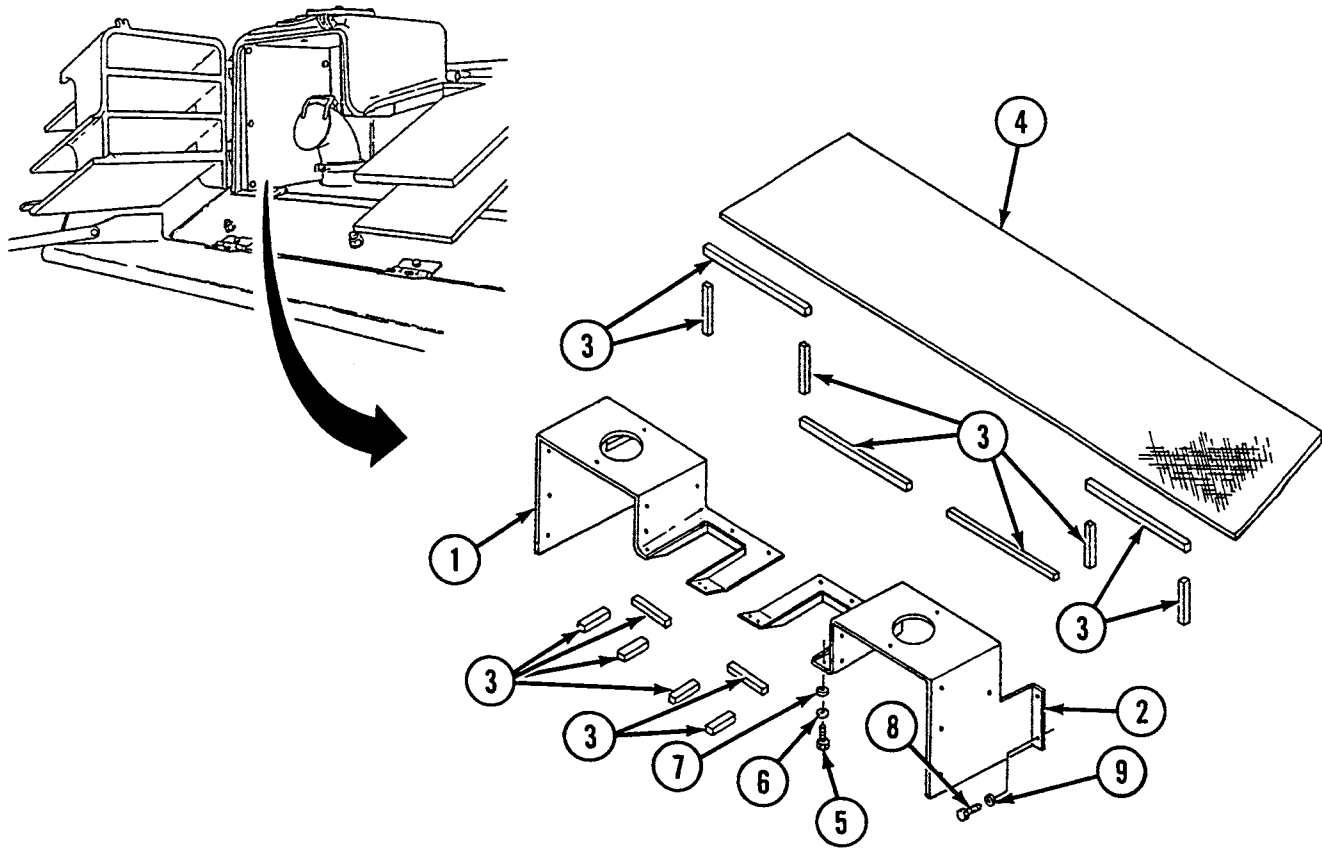
Seal kit (item 38, WP 0491 00)
 Washers, flat (24) (item 171, WP 0491 00)

Equipment Condition

Left and right exhaust doors opened (see WP 0346 00)
 Center exhaust doors opened (see WP 0347 00)

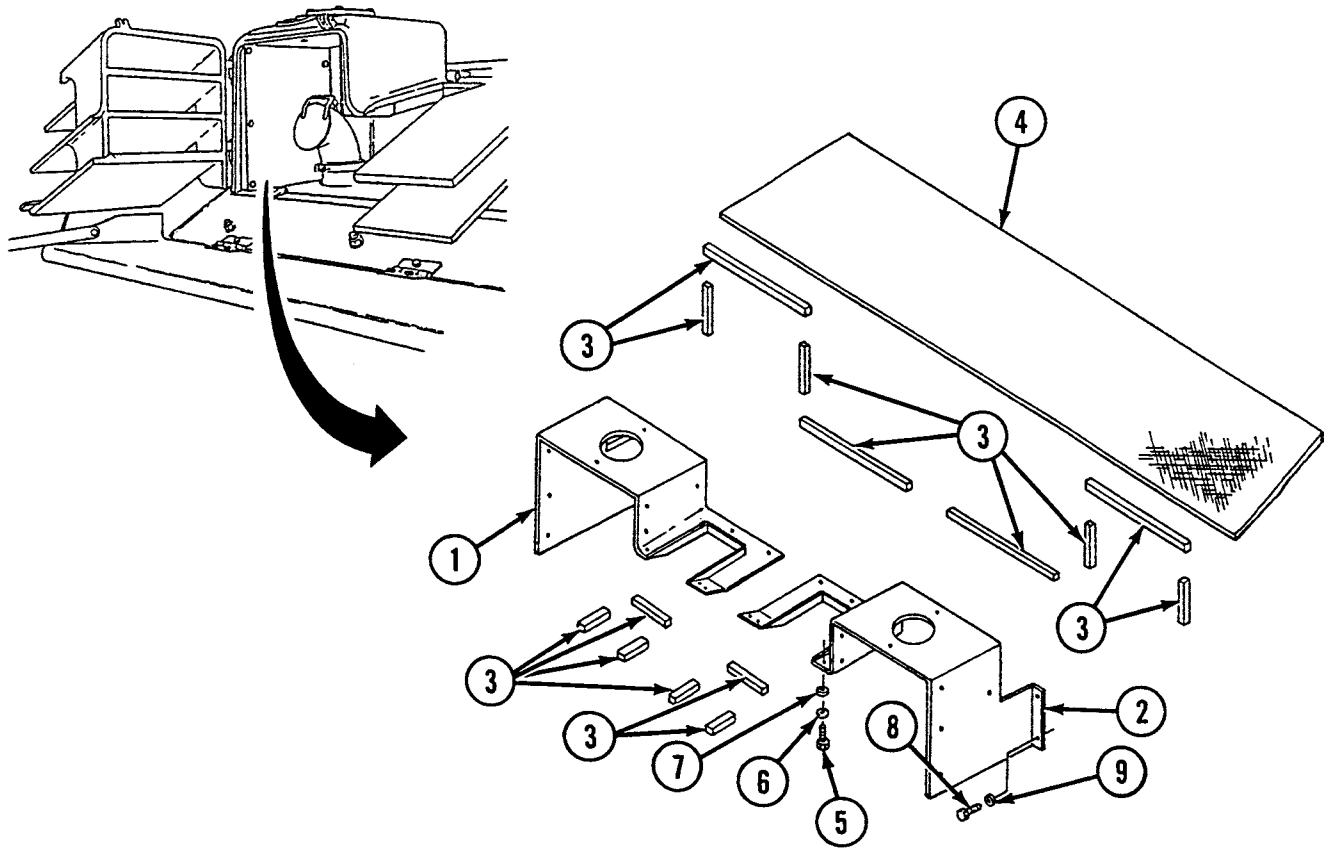
Removal

1. Remove 2 retainers (1 and 2), 14 seals (3), and insulation blanket (4) by removing 24 screws (5), 24 flat washers (6), 24 lockwashers (7), 8 bolts (8), and 8 lockwashers (9).



Installation

1. Install 2 retainers (1 and 2), 14 seals (3), and insulation blanket (4) with 8 lockwashers (9), 8 bolts (8), 24 lockwashers (7), 24 flat washers (6), and 24 screws (5).



NOTE

Follow-on maintenance: Close center exhaust doors (see WP 0347 00); Close left and right exhaust doors (see WP 0346 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
ENGINE TRANSMISSION ACCESS DOORS MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Locknuts (4) (item 320, WP 0491 00)
Lockwashers (4) (item 349, WP 0491 00)
Pins (2) (item 679, WP 0491 00)
Pins, cotter (9) (item 525, WP 0491 00)

Materials/Parts (cont.)

Pins, straight (9) (item 221, WP 0491 00)
Screws (4) (item 395, WP 0491 00)
Washers, flat (9) (item 539, WP 0491 00)

Equipment Condition

Exhaust doors opened (see WP 0346 00)

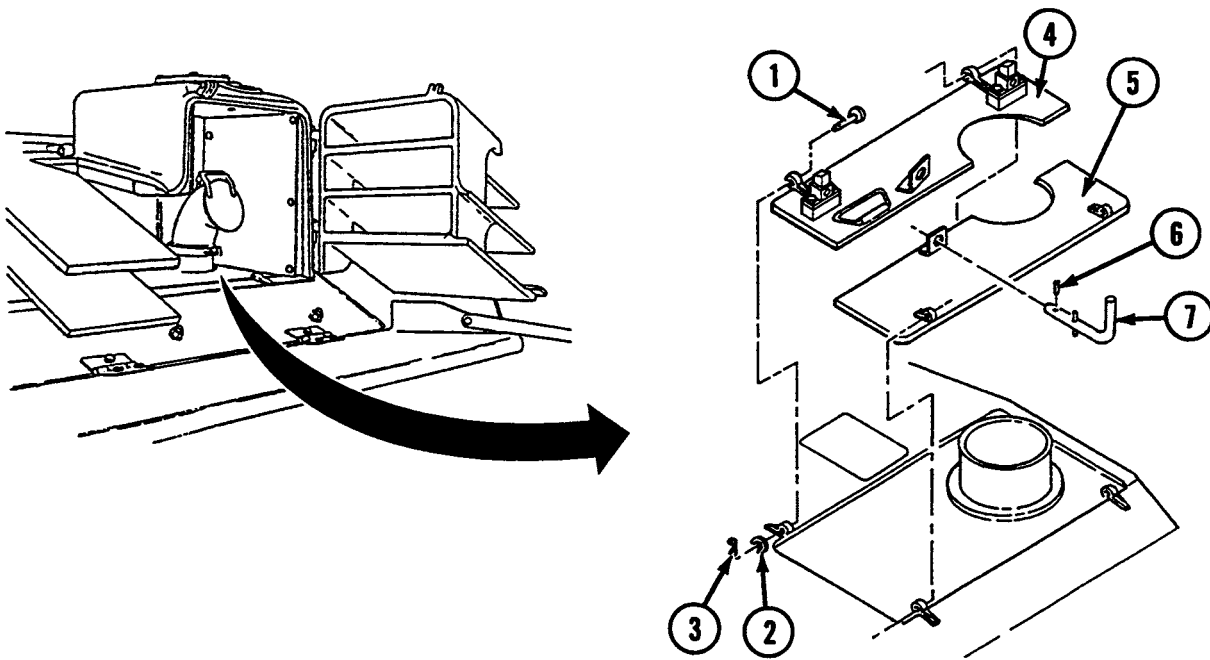
Removal**NOTE**

Left-forward door is split and contains an additional straight pin (1), flat washer (2), and cotter pin (3).

NOTE

Right door shown.

1. Remove four cotter pins (3), four flat washers (2), four straight pins (1), and two access doors (4 and 5).
2. Remove groove pin (6) and handle (7).

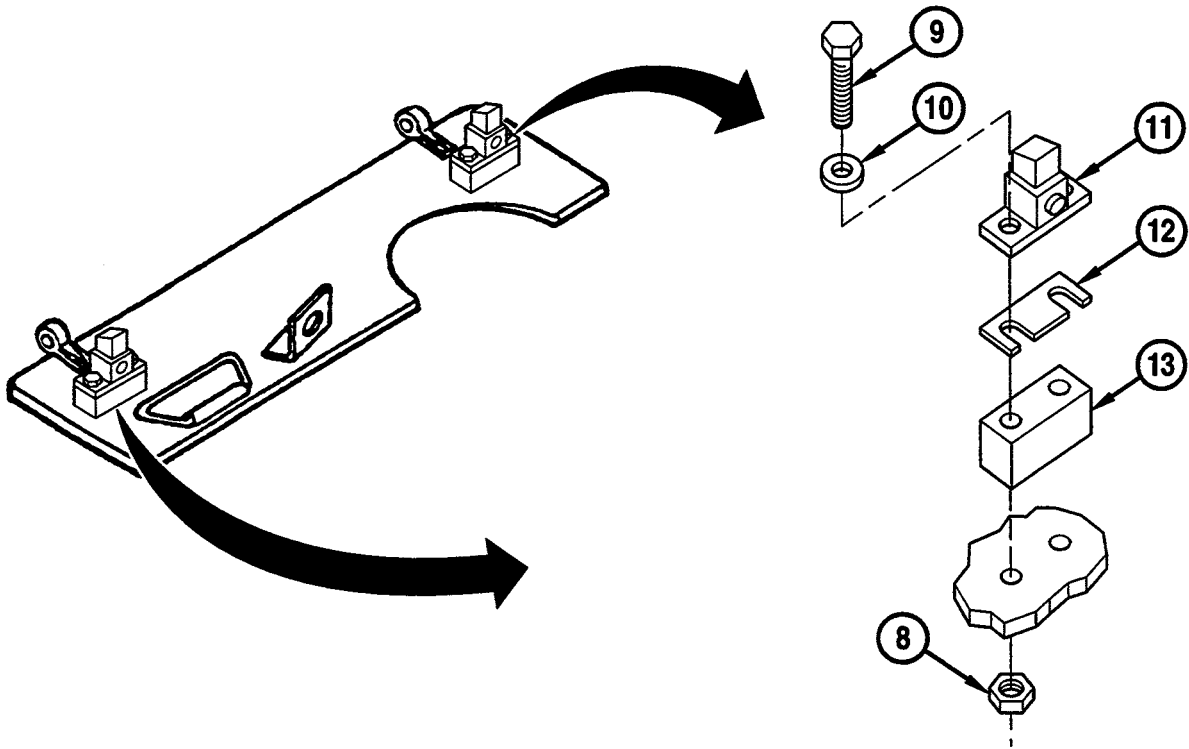


NOTE

Disassembly and assembly are for the right side door only.

Disassembly

1. Remove four locknuts (8), four screws (9), four washers (10), two bumper assemblies (11), shims (12), and two blocks (13).

**Assembly**

1. Install two blocks (13), shims (12), two bumper assemblies (11), shims (12), four washers (10), four screws (9), and four locknuts (8).

Installation

1. Install handle (7) and groove pin (6) on access door (5).
2. Install two access doors (4 and 5) each with two straight pins (1), two flat washers (2), and two cotter pins (3).

NOTE

Follow-on maintenance: Close exhaust doors (see WP 0346 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
AIR INLET DOORS REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Pins, cotter (10) (item 526, WP 0491 00)

Materials/Parts (cont.)

Pins, straight (10) (item 306, WP 0491 00)

Screws (5) (item 413, WP 0491 00)

Washers, flat (5) (item 539, WP 0491 00)

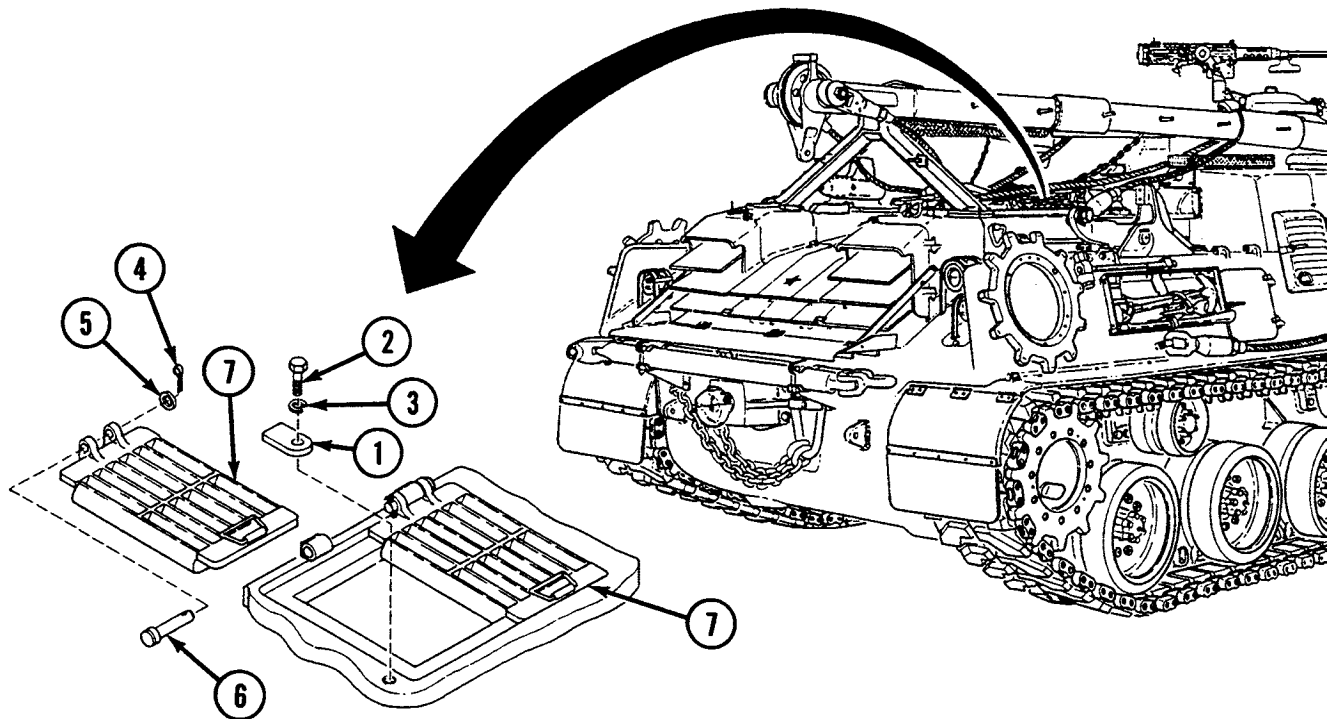
Washers, flat (10) (item 543, WP 0491 00)

NOTE

Removal and installation procedures are the same for all five sets of air inlet doors.

Removal

1. Remove lock (1), screw (2), and flat washer (3).
2. Remove two cotter pins (4), two flat washers (5), two straight pins (6), and two air inlet doors (7).

**Installation**

1. Install two air inlet doors (7) each with straight pin (6), flat washer (5), and cotter pin (4).
2. Install lock (1) with screw (2) and flat washer (3).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
LEFT- AND CENTER-FRONT AIR INLET GRILLES REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

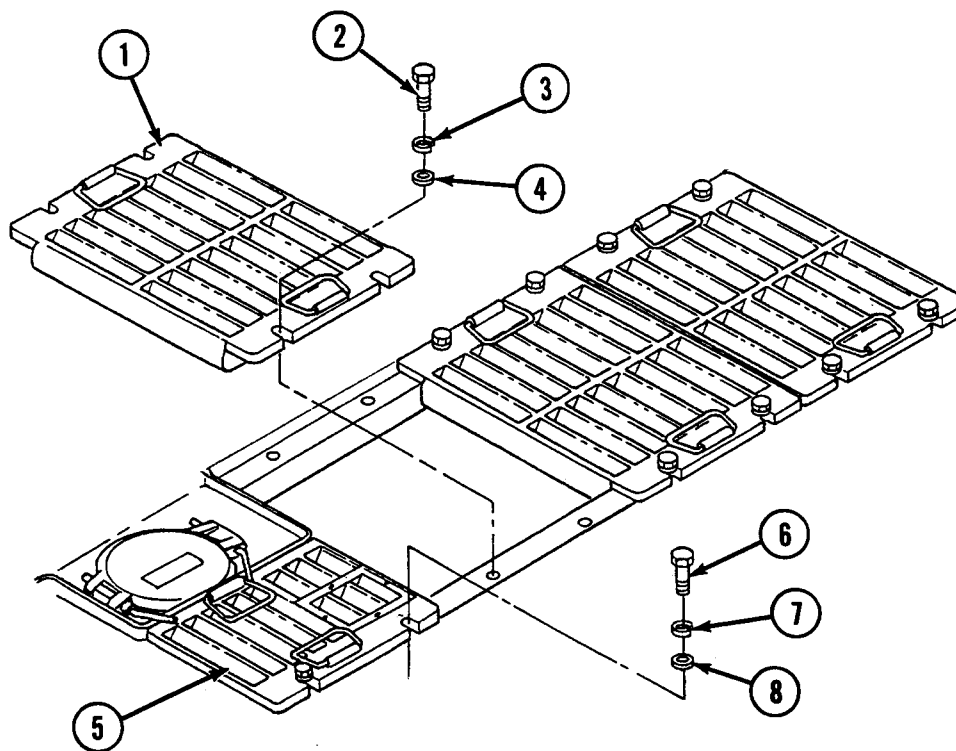
Lockwashers (14) (item 642, WP 0491 00)

Screws (14) (item 417, WP 0491 00)

Washers, flat (14) (item 539, WP 0491 00)

Removal

1. Remove three center-front air inlet grilles (1) by removing four screws (2), four lockwashers (3), and four flat washers (4) from each.
2. Remove left-front air inlet grille (5) by removing two screws (6), two lockwashers (7), and two flat washers (8).

**Installation**

1. Install three center-front air inlet grilles (1) each with four screws (2), four lockwashers (3), and four flat washers (4).
2. Install left-front air inlet grille (5) with two screws (6), two lockwashers (7), and two flat washers (8).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
DEEP WATER FORDING EXHAUST COVER PLATES REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (8) (item 642, WP 0491 00)

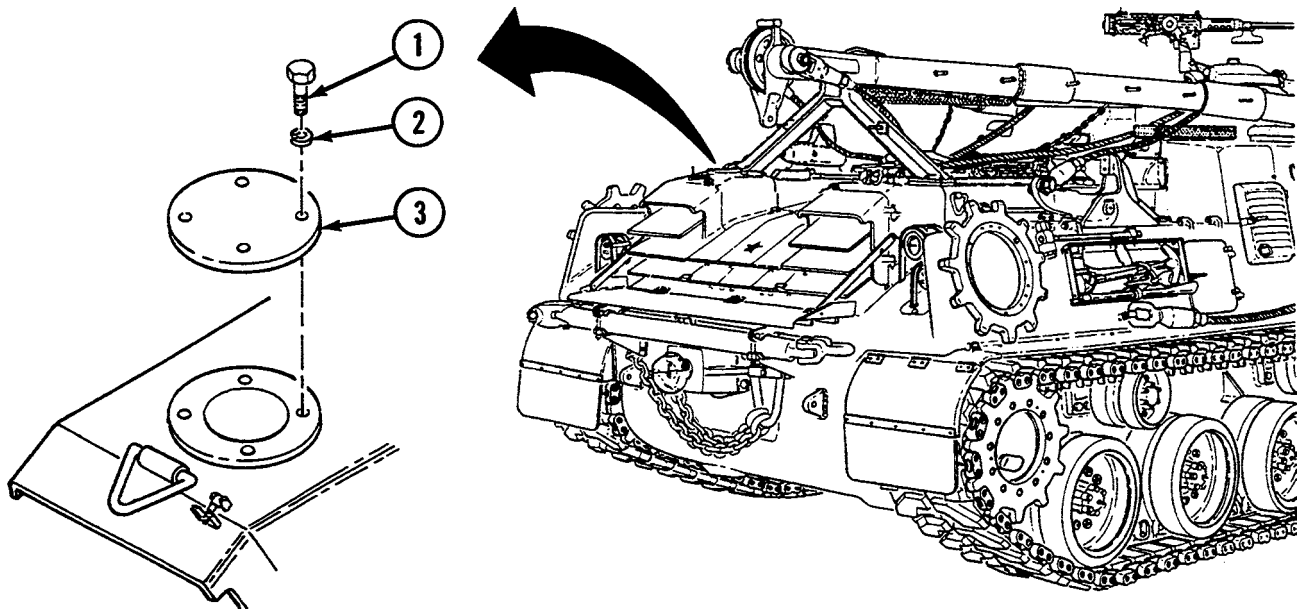
Screws (8) (item 804, WP 0491 00)

NOTE

Removal and installation procedures are the same for both left and right exhaust cover plates.

Removal

1. Remove four screws (1), four lockwashers (2), and exhaust cover plate (3).

**Installation**

1. Install exhaust cover plate (3) with four screws (1) and four lockwashers (2).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

EXHAUST DEFLECTOR REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (2) (item 640, WP 0491 00)

Lockwashers (3) (item 642, WP 0491 00)

Lockwashers (6) (item 646, WP 0491 00)

Nuts (6) (item 769, WP 0491 00)

Nuts (2) (item 770, WP 0491 00)

Materials/Parts (cont.)

Pins, cotter (2) (item 520, WP 0491 00)

Pins, straight (2) (item 710, WP 0491 00)

Screws (3) (item 413, WP 0491 00)

Screws (6) (item 606, WP 0491 00)

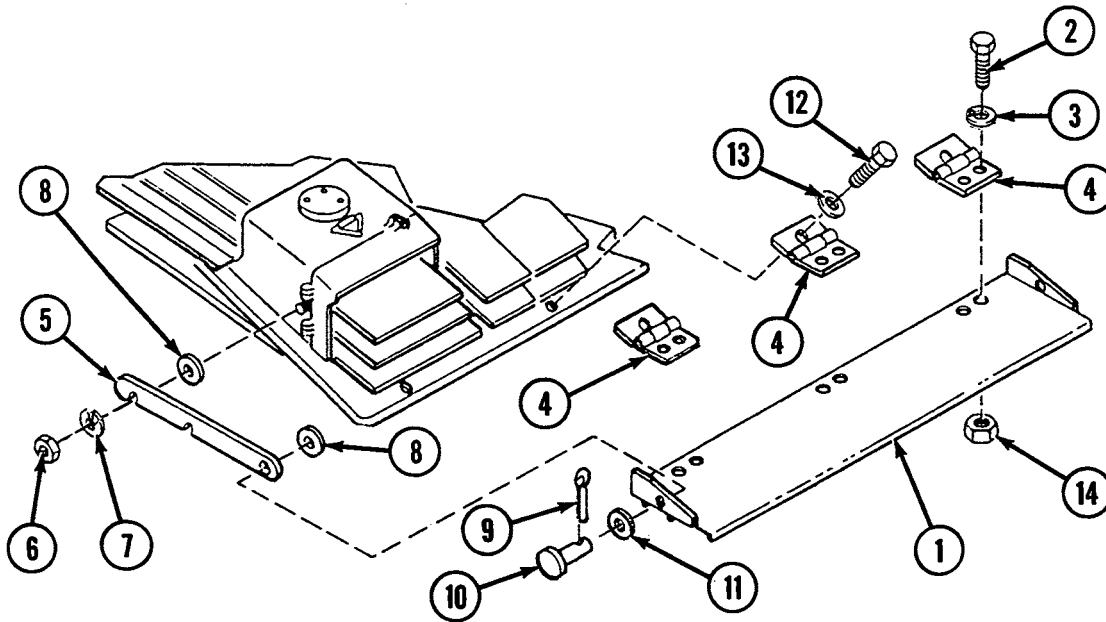
Washers, flat (6) (item 537, WP 0491 00)

Personnel Required

Mechanics (2)

Removal

1. Remove exhaust deflector (1) by removing screw (2) and lockwasher (3) from each of three hinges (4). Unlatch two levers (5) at top end by removing nut (6), lockwasher (7), and flat washer (8) from each.
2. Remove two levers (5) by removing cotter pin (9), pin (10), and two flat washers (11) from each side.
3. Remove three hinges (4) from exhaust deflector (1) by removing two screws (12), two lockwashers (13), and two nuts (14) from each.



Installation

1. Install three hinges (4) to exhaust deflector (1) with two screws (12), two lockwashers (13), and two nuts (14) on each.
2. Install two levers (5) to exhaust deflector (1) with cotter pin (9), pin (10), and two flat washers (11) on each.
3. Install exhaust deflector (1) with three screws (2) and three lockwashers (3). Latch two levers (5) at top end with flat washer (8), lockwasher (7), and nut (6) on each.

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
LEFT AND RIGHT DECK AIR INLET DOORS REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (4) (item 642, WP 0491 00)

Screws (4) (item 417, WP 0491 00)

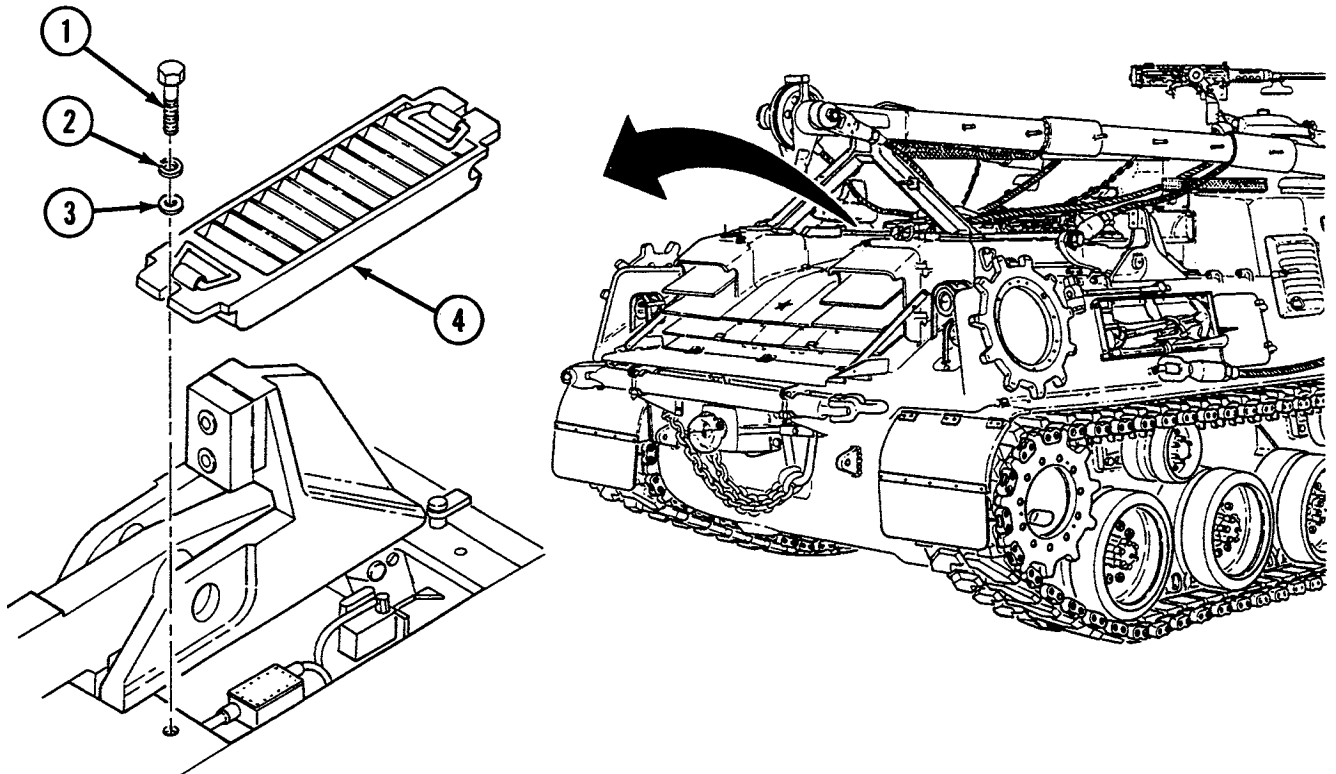
Washers, flat (4) (item 539, WP 0491 00)

NOTE

Removal and installation procedures are the same for both left and right air inlet doors.

Removal

1. Remove two screws (1), two lockwashers (2), and two flat washers (3) from air inlet door (4).

**Installation**

1. Install air inlet door (4) with two screws (1), two lockwashers (2), and two flat washers (3).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
LEFT AND RIGHT EXHAUST DOORS REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (2) (item 646, WP 0491 00)

Nuts (2) (item 769, WP 0491 00)

Pins, cotter (4) (item 525, WP 0491 00)

Pins, spring (2) (item 450, WP 0491 00)

Materials/Parts (cont.)

Pins, straight (4) (item 221, WP 0491 00)

Washers, flat (2) (item 538, WP 0491 00)

Washers, flat (4) (item 539, WP 0491 00)

Personnel Required

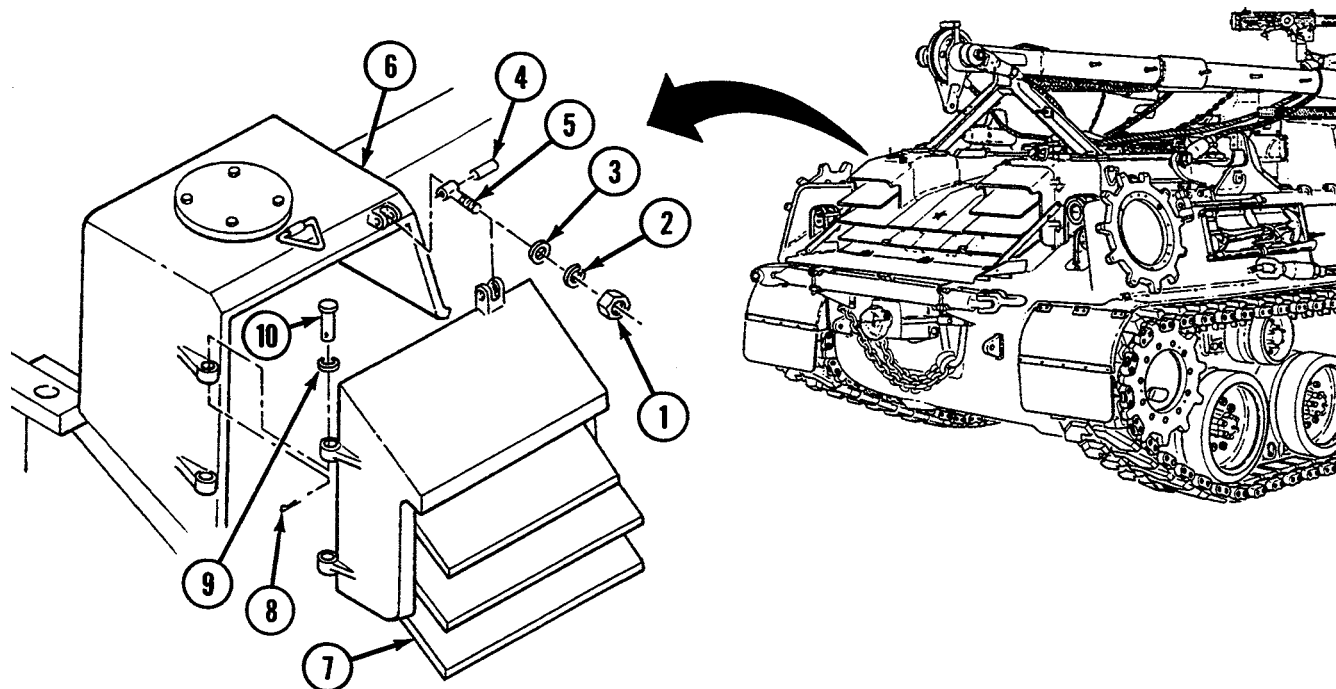
Mechanics (2)

NOTE

Removal and installation procedures are the same for both left and right exhaust doors.

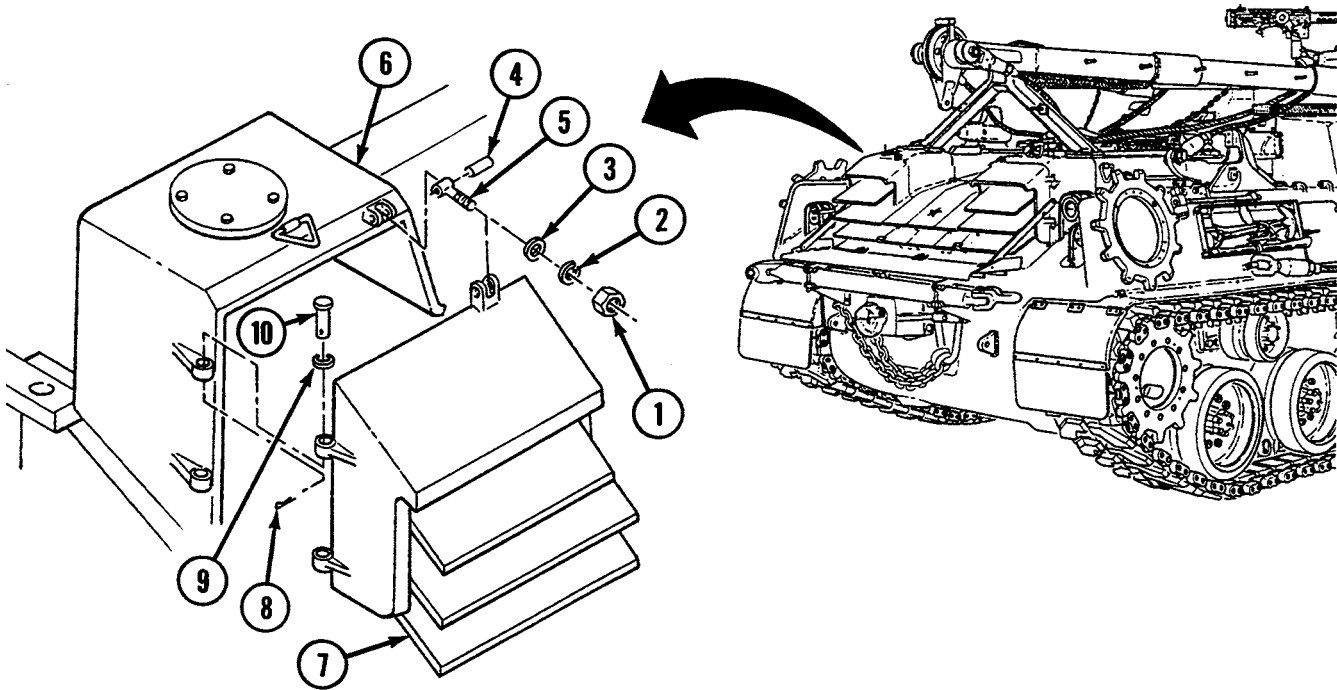
Removal

1. Remove nut (1), lockwasher (2), and flat washer (3).
2. Remove spring pin (4) to remove eyebolt (5) from base assembly (6).
3. Remove exhaust door (7) by removing two cotter pins (8), two flat washers (9), and two straight pins (10).



Installation

1. Install exhaust door (7) with two straight pins (10), two flat washers (9), and two cotter pins (8).
2. Install eyebolt (5) to exhaust door (7) and base assembly (6) with spring pin (4), flat washer (3), lockwasher (2), and nut (1).

**END OF WORK PACKAGE**

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
CENTER EXHAUST DOORS REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Personnel Required

Mechanics (2)

Materials/Parts

Pins, cotter (4) (item 525, WP 0491 00)

Pins, straight (4) (item 221, WP 0491 00)

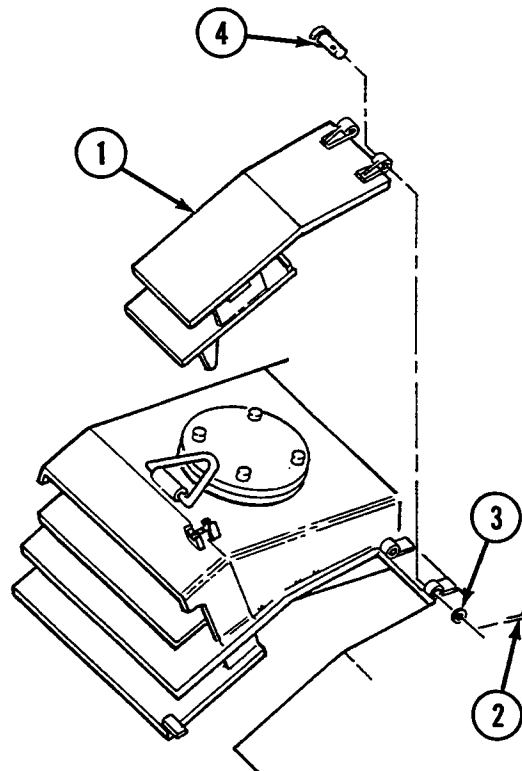
Washers, flat (4) (item 539, WP 0491 00)

NOTE

Removal and installation procedures are the same for both left and right center exhaust doors.

Removal

1. Remove exhaust doors (1), two cotter pins (2), two flat washers (3), and two straight pins (4).

**Installation**

1. Install exhaust doors (1) with two straight pins (4), two flat washers (3), and two cotter pins (2).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
NONSLIP WALKWAY COATING SERVICE

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0002 00

WP 0095 00

Materials/Parts

Compound, walkway (item 36, WP 0489 00)

NOTE

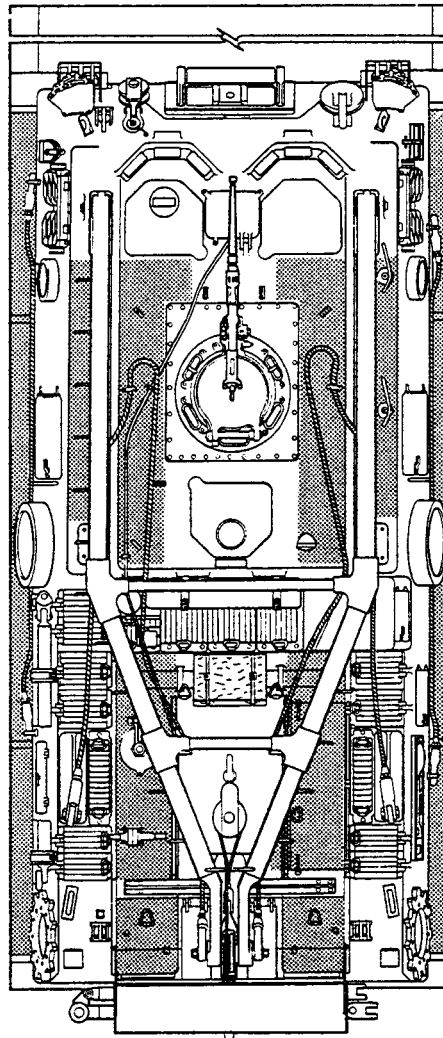
In illustration, nonslip walkway coating areas are highlighted in gray.

Inspection-Acceptance and Rejection Criteria

1. Prior to application of compound, inspect finish on areas to be painted for peeling, chipping, or otherwise defective coating.
2. Replace parts where metal is badly torn, missing, broken, cracked, or otherwise damaged.

Painting

1. Paint all areas indicated in illustration with nonslip walkway compound. Coating shall have a film thickness of 0.03 to 0.06 in. (0.8 to 1.5 mm) (see WP 0002 00 and 0095 00).



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

PERSONNEL SEAT ASSEMBLIES MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (4) (item 638, WP 0491 00)

Screws (4) (item 782, WP 0491 00)

NOTE

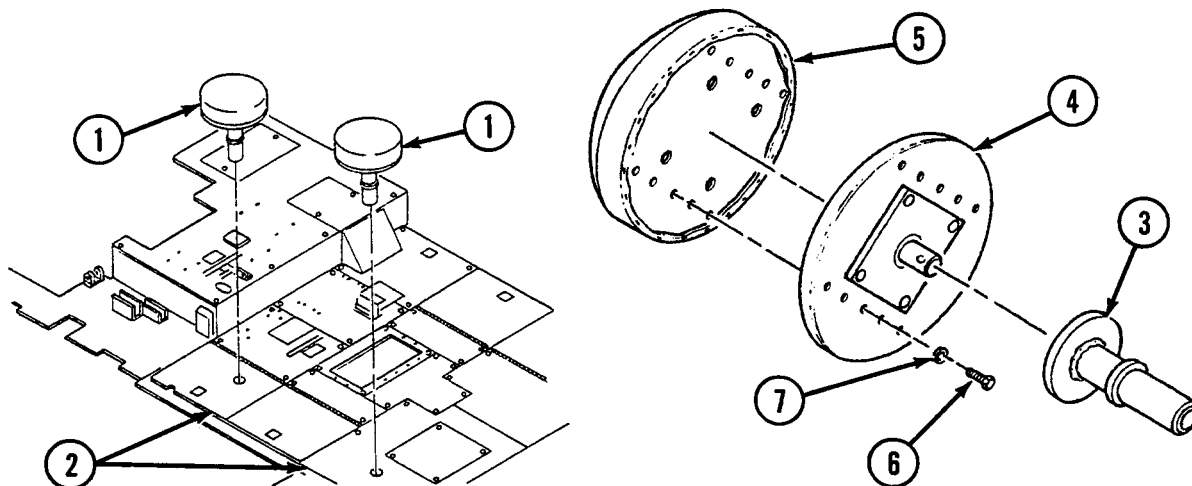
The following procedures are the same for both personnel seat assemblies.

Removal

1. Remove personnel seat assembly (1) from cab subfloor plate (2) by lifting.

Disassembly

1. Pull pedestal assembly (3) from seat (4).
2. Remove seat (4) from seat cushion (5) by removing two screws (6) and two lockwashers (7).



Assembly

1. Install seat (4) on seat cushion (5) with two lockwashers (7) and two screws (6).
2. Place pedestal assembly (3) onto seat (4).

Installation

1. Insert personnel seat assembly (1) into cab subfloor plate (2).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

COMMANDER'S SEAT ASSEMBLY MAINTENANCE
REMOVAL, DISASSEMBLY, INSPECTION, REPAIR, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)
 Awl, saddler's sewing (item 2, WP 0490 00)
 File, thread restorer (thread chaser) (item 14, WP 0490 00)
 Hammer, hand (mallet) (item 18, WP 0490 00)

Materials/Parts

Axles (4) (item 184, WP 0491 00)
 Lockwashers (10) (item 638, WP 0491 00)
 Lockwashers (8) (item 640, WP 0491 00)
 Lockwashers (4) (item 651, WP 0491 00)
 Nuts (6) (item 756, WP 0491 00)
 Nuts (4) (item 769, WP 0491 00)
 Pin (item 178, WP 0491 00)
 Pin (item 180, WP 0491 00)
 Pin (item 181, WP 0491 00)
 Pin (item 182, WP 0491 00)

Materials/Parts (cont.)

Pins, cotter (15) (item 520, WP 0491 00)
 Screws (6) (item 367, WP 0491 00)
 Screws (4) (item 397, WP 0491 00)
 Screws (8) (item 721, WP 0491 00)
 Screws (4) (item 782, WP 0491 00)
 Spring (item 166, WP 0491 00)
 Spring (item 179, WP 0491 00)
 Springs (3) (item 183, WP 0491 00)
 Springs (2) (item 189, WP 0491 00)
 Washers, flat (4) (item 156, WP 0491 00)

Personnel Required

Mechanics (2)

Equipment Condition

Flasher light case removed (see WP 0388 00)

WARNING

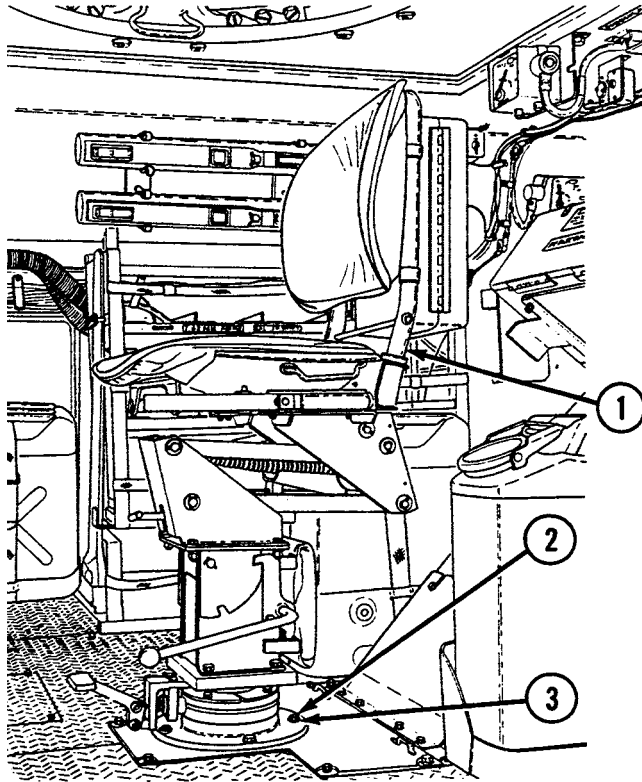
Commander's seat assembly is extremely heavy—two persons are required to lift it.

WARNING

Be sure not to lift commander's seat assembly by seat adjusting lever or seat may spring up and cause injury.

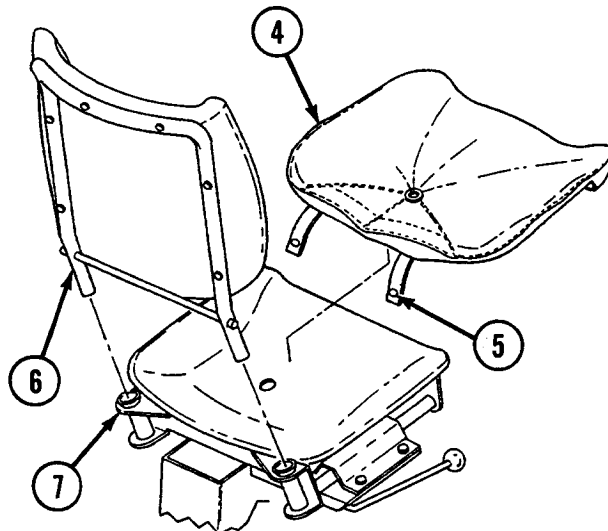
Removal

1. Rotate commander's seat assembly (1) as necessary to gain access to four screws (2). Remove four screws, four lockwashers (3), and commander's seat assembly.



Disassembly

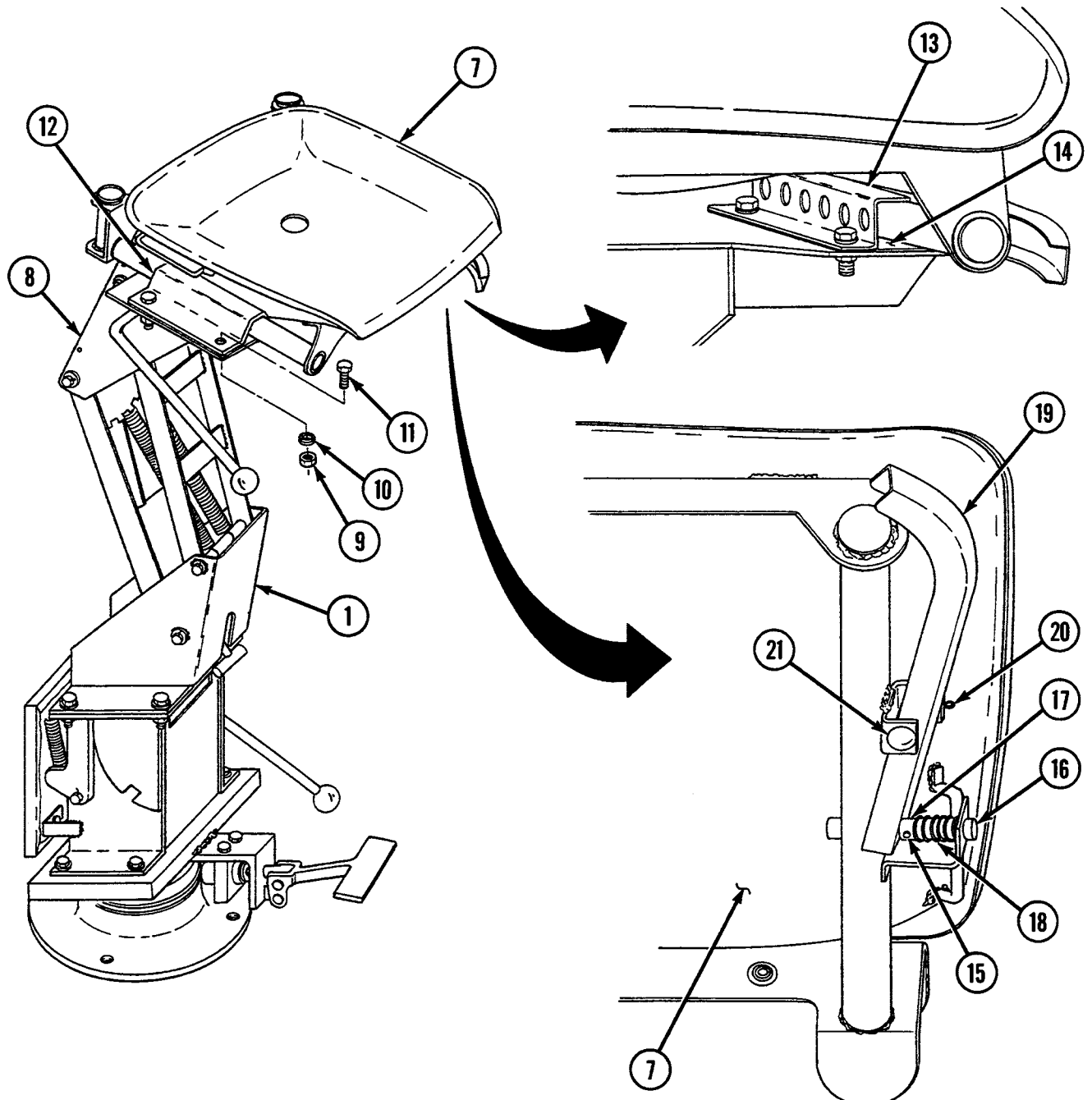
1. Remove seat cushion (4) by unsnapping two snaps (5).
2. Lift seat back (6) off seat body (7).



WARNING

Raise commander's seat assembly (1) before removing seat body (7) in order to avoid injury.

3. Remove seat body (7) from carriage assembly (8) by removing six nuts (9), six lockwashers (10), and six screws (11). Remove brackets (12 and 13) and two plates (14).
4. Remove pin (15), pin (16), collar (17), and spring (18).
5. Remove handle (19) by removing cotter pin (20) and pin (21).

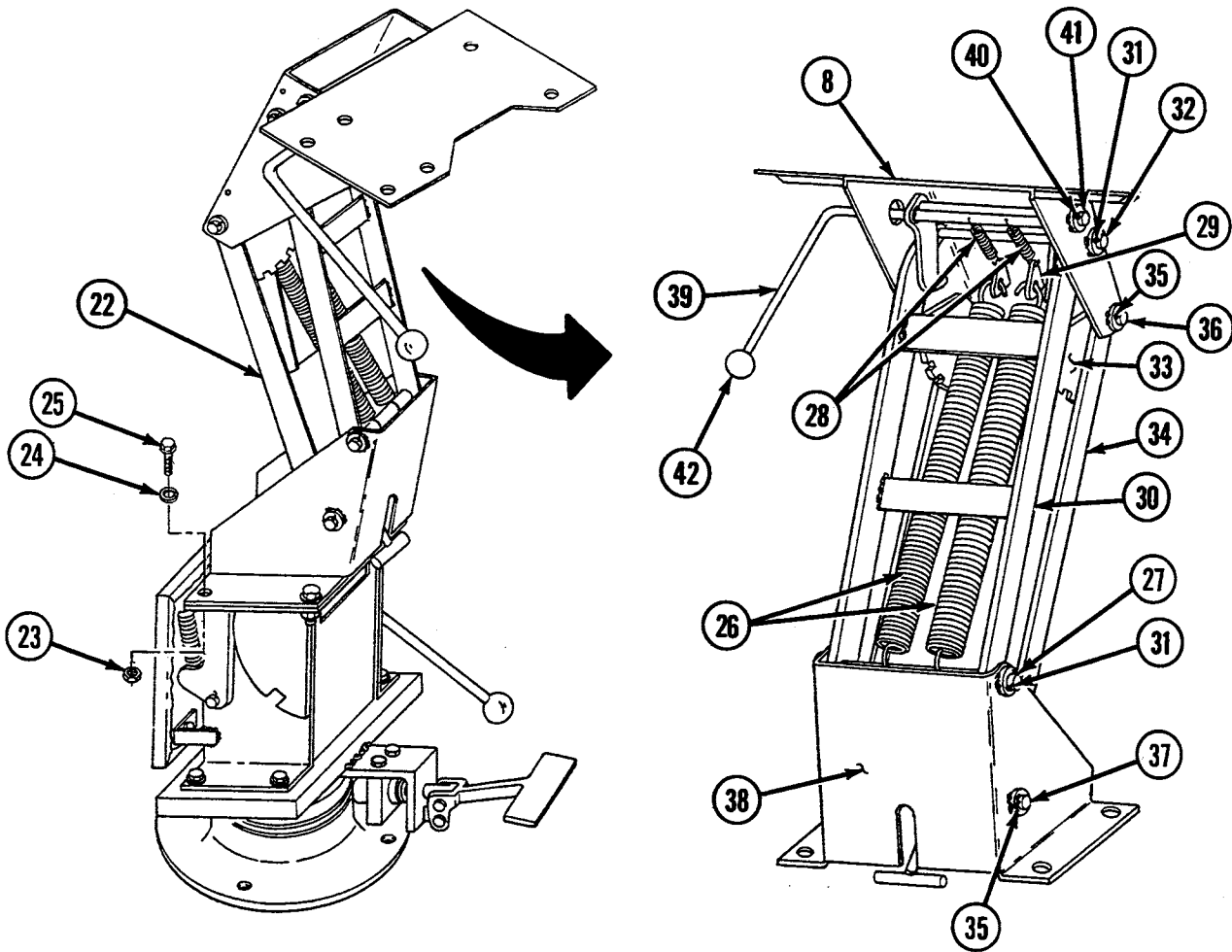


6. Remove base assembly (22) by removing four nuts (23), four lockwashers (24), and four screws (25).

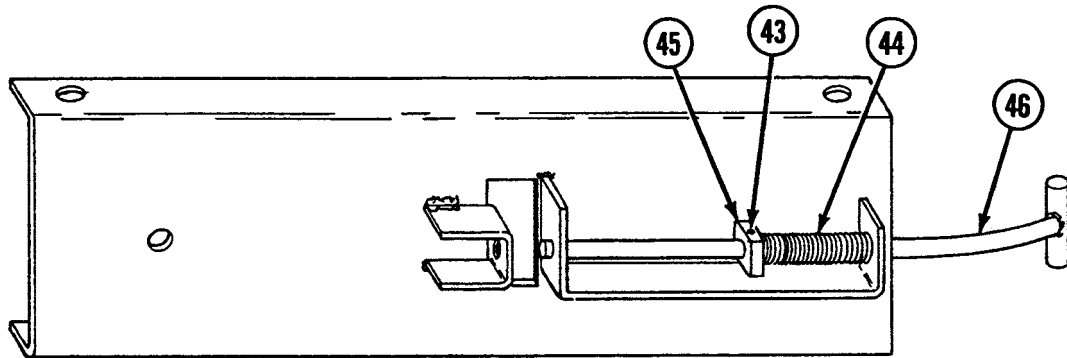
WARNING

Ensure that base assembly (22) is raised to full extension and adequately braced prior to spring removal.
Failure to do so will result in base assembly collapsing.

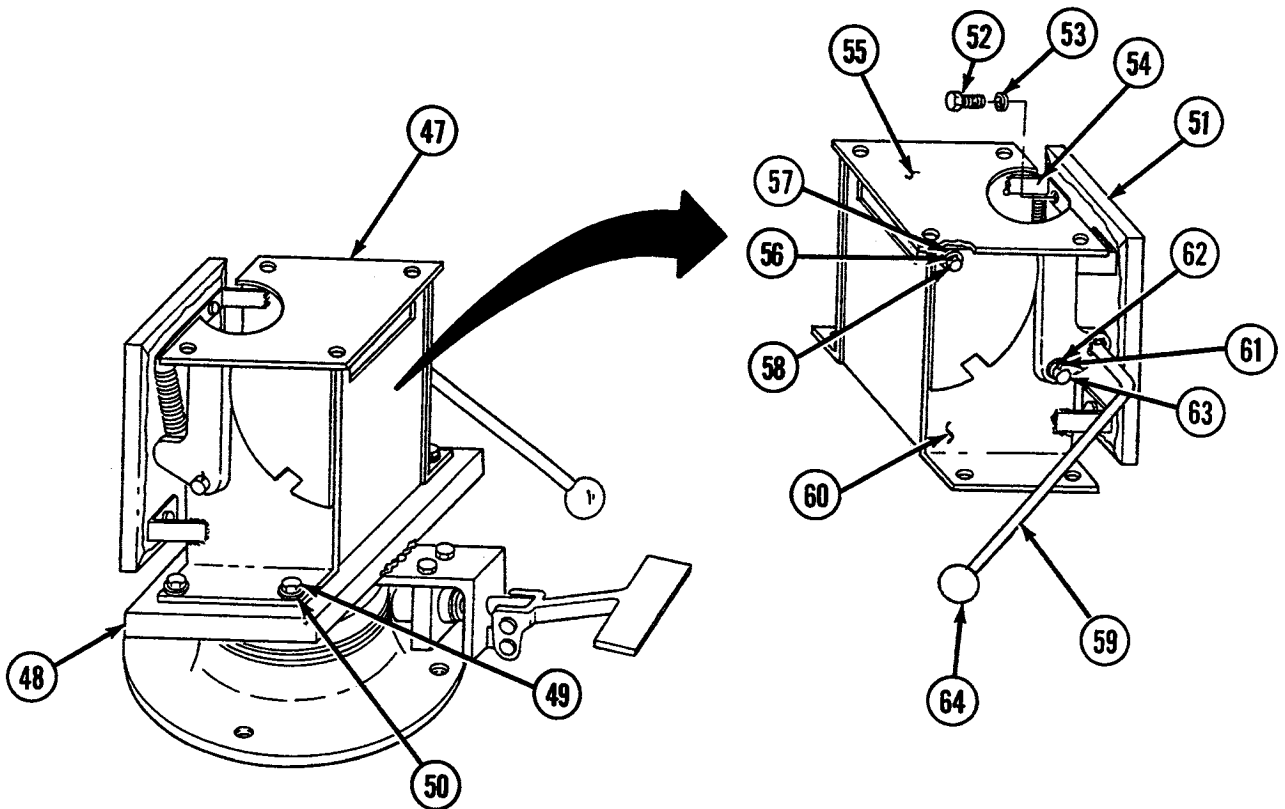
7. Pry two adjuster springs (26) from axle (27) to relieve tension. Remove two adjuster springs.
8. Remove two springs (28) and spring retainer (29).
9. Remove bracket (30) by removing four cotter pins (31) and two axles (27 and 32).
10. Remove arm (33) and guard (34) by removing four cotter pins (35) and two axles (36 and 37) from carriage assembly (8) and base (38).
11. Remove release assembly (39) by removing two cotter pins (40) and axle (41) from carriage assembly (8).
12. Remove knob (42) from release assembly (39).



13. Remove pin (43), spring (44), collar (45), and pull handle (46).

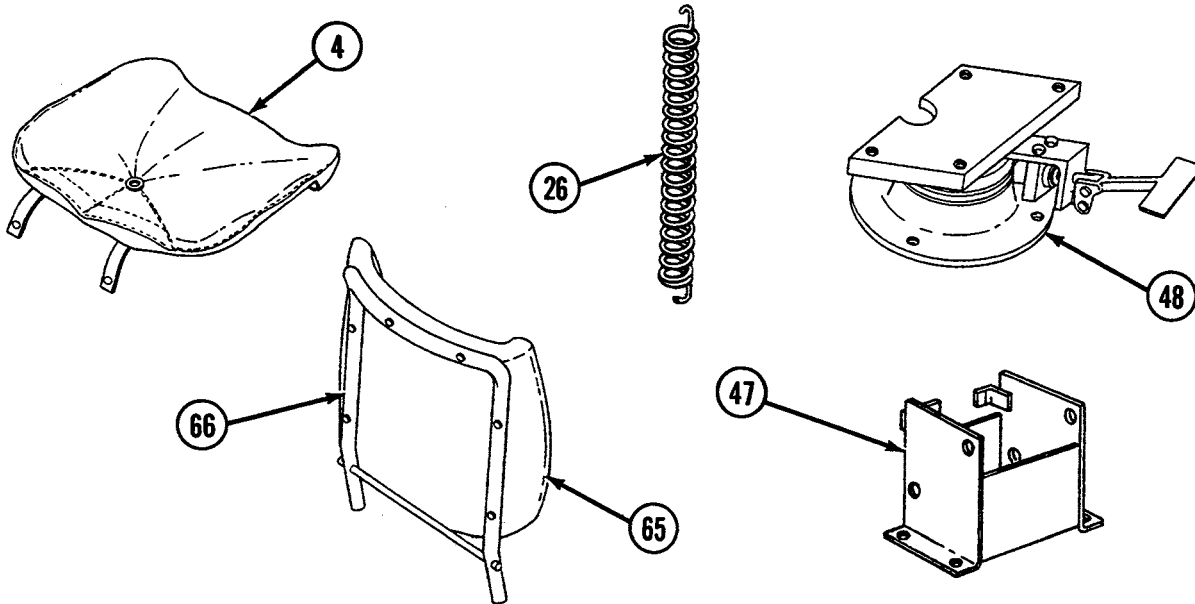


14. Remove subbase assembly (47) from pedestal assembly (48) by removing four screws (49) and four lockwashers (50).
15. Remove pad (51) by removing four screws (52) and four lockwashers (53).
16. Remove spring (54).
17. Remove support (55) by removing two cotter pins (56), two flat washers (57), and axle (58).
18. Remove handle (59) from frame (60) by removing two cotter pins (61), two flat washers (62), and axle (63).
19. Remove knob (64) from handle (59).



Inspection-Acceptance and Rejection Criteria

1. Inspect seat cushion (4) and seat back cushion (65) for cuts and tears.
2. Inspect seat back frame (66) for dents.
3. Inspect two adjuster springs (26) for breakage, fatigue, and distortion.
4. Inspect adjustment mechanisms for breakage or wear.
5. Inspect pedestal assembly (48) for undue wear of components.
6. Inspect subbase assembly (47) for breakage or undue wear.

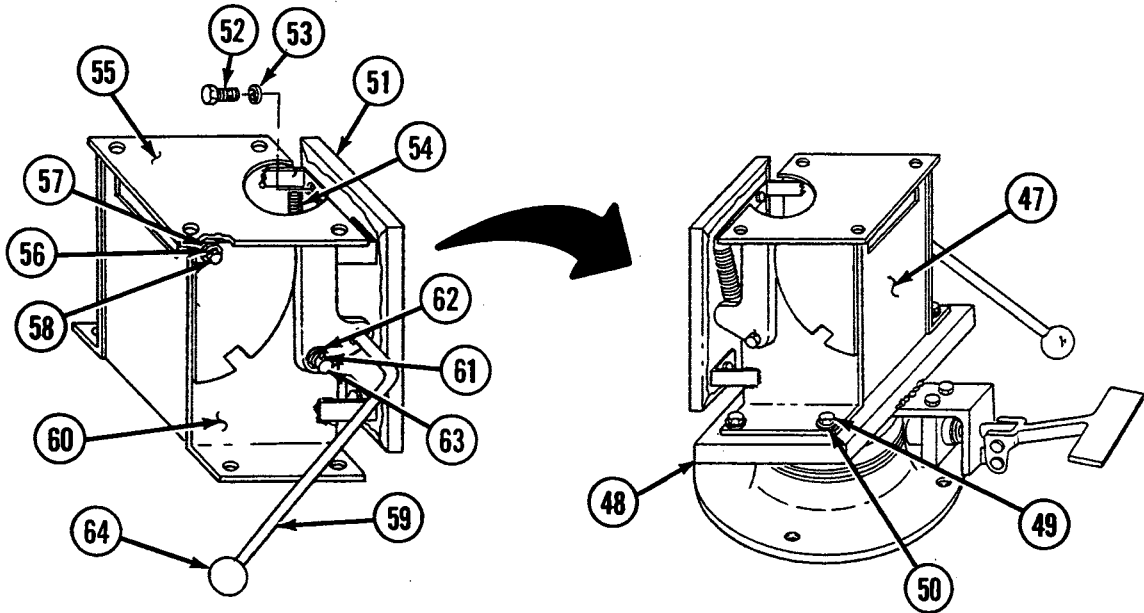


Repair or Replacement

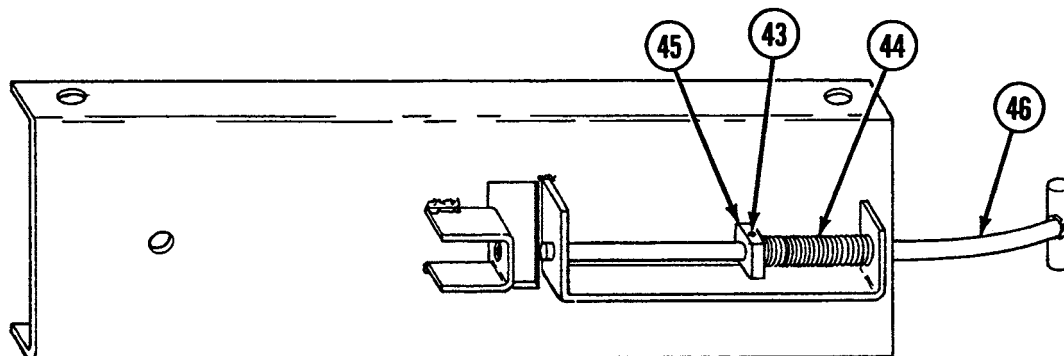
1. Minor cuts or tears in pads or cushions may be repaired by hand stitching. If damage is extensive, replace defective parts.
2. Repair any dents and straighten any bent parts with a mallet. Replace if part does not lend itself to this type of repair.
3. Replace springs if proven defective.
4. Repair tapped holes with a thread chaser.
5. If wear or breakage affects ease of seat adjustment, replace defective part or parts.
6. Replace pedestal assembly (48) if defective.
7. Replace subbase assembly (47) if not repairable.

Assembly

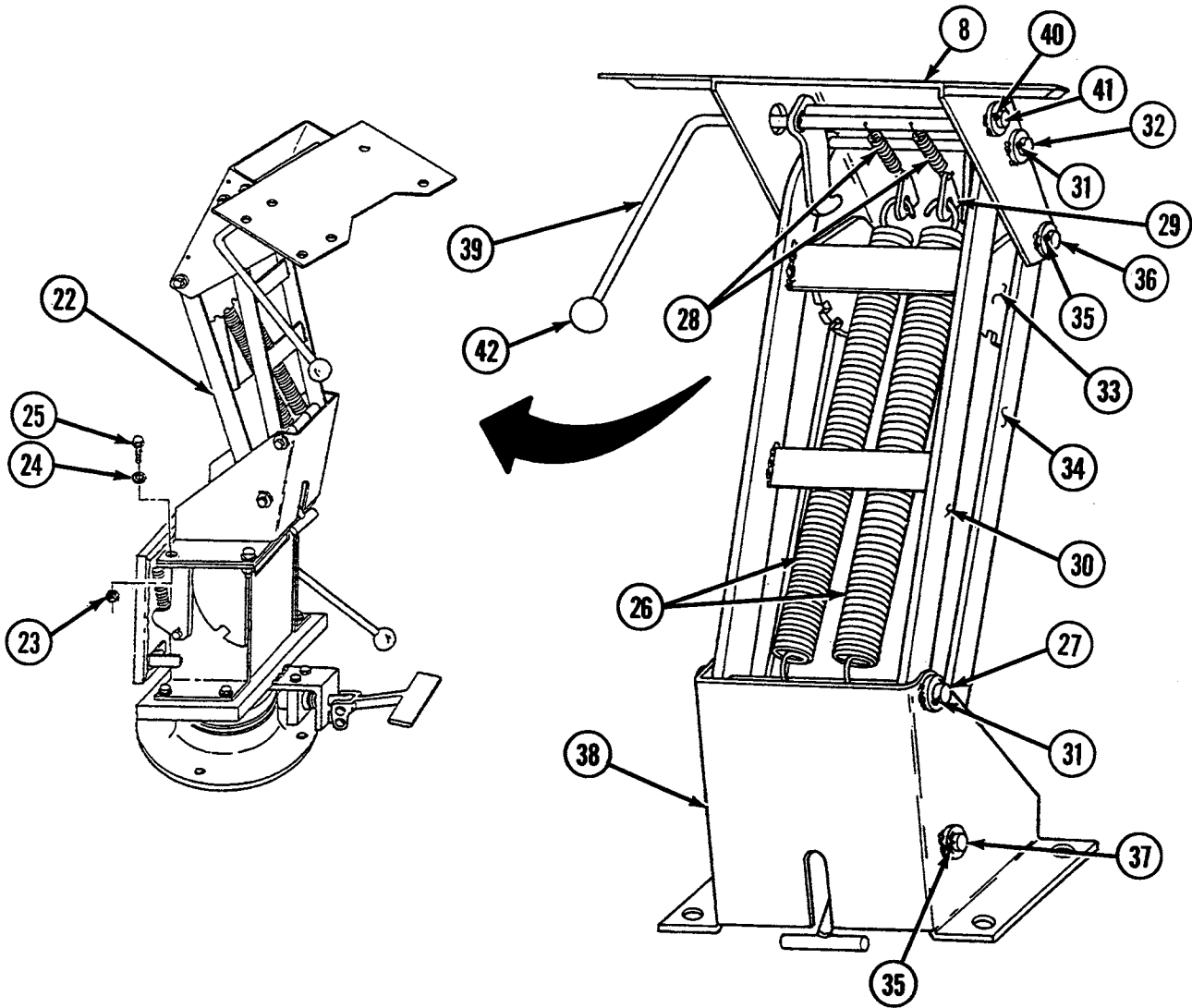
1. Install knob (64) to handle (59).
2. Install handle (59) to frame (60) with axle (63), two flat washers (62), and two cotter pins (61).
3. Install support (55) with axle (58), two flat washers (57), and two cotter pins (56).
4. Install spring (54).
5. Install pad (51) with four screws (52) and four lockwashers (53).
6. Install subbase assembly (47) to pedestal assembly (48) with four screws (49) and four lockwashers (50).



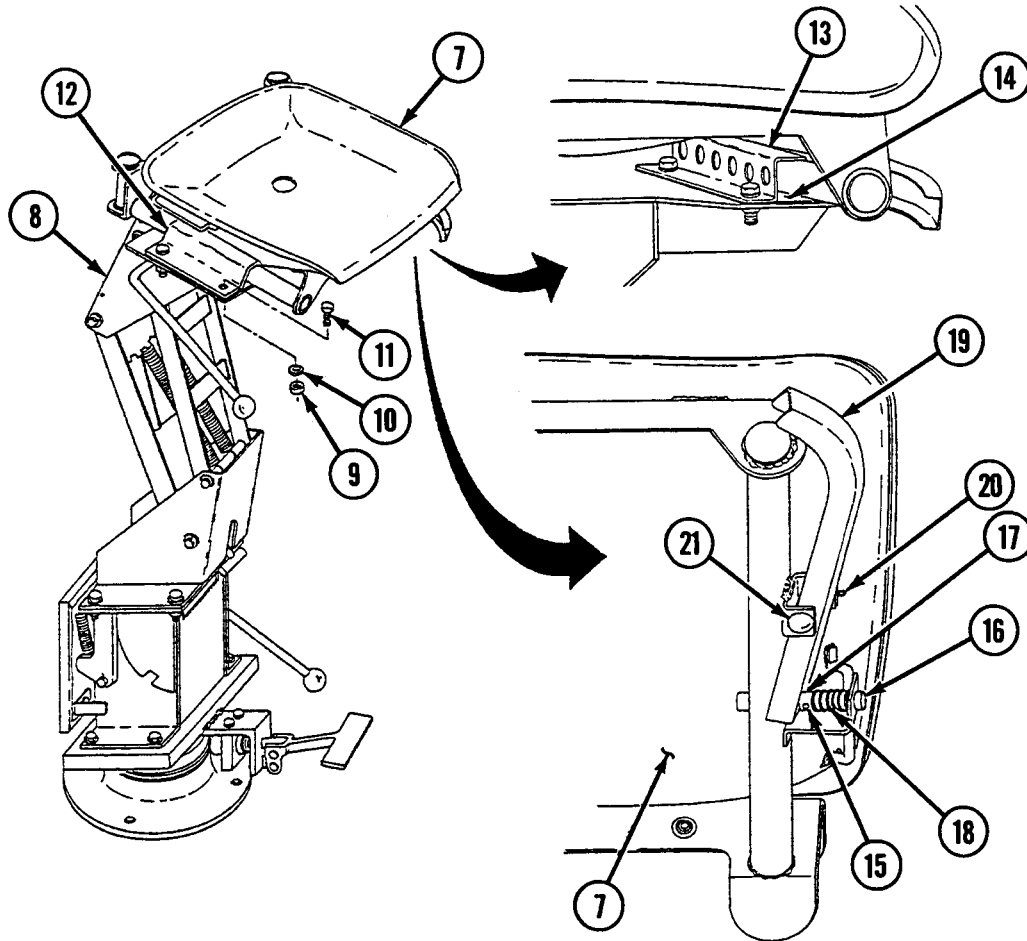
7. Install pull handle (46) with spring (44), collar (45), and pin (43).



8. Install release assembly (39) to carriage assembly (8) with axle (41) and two cotter pins (40).
9. Install knob (42) to release assembly (39).
10. Install arm (33) and guard (34) to carriage assembly (8) and base (38) with two axles (36 and 37) and four cotter pins (35).
11. Install bracket (30) to carriage assembly (8) and base (38) with two axles (27 and 32) and four cotter pins (31).
12. Install spring retainer (29) and two springs (28).
13. Install two adjuster springs (26) to spring retainer (29) and axle (27).
14. Install base assembly (22) with four screws (25), four lockwashers (24), and four nuts (23).



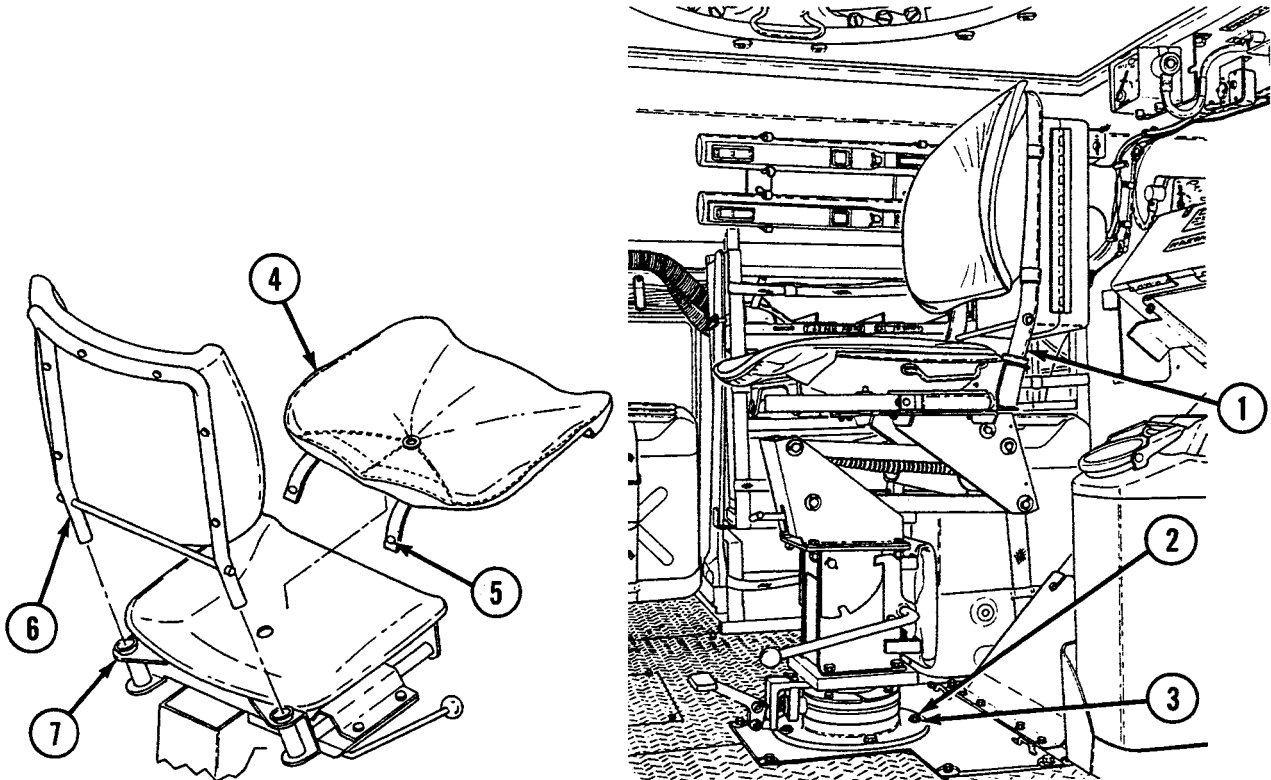
15. Install handle (19) to seat body (7) with cotter pin (20) and pin (21).
16. Install spring (18), collar (17), pin (16), and pin (15).
17. Install seat body (7), brackets (12 and 13), and two plates (14) with six screws (11), six lockwashers (10), and six nuts (9).



18. Install seat back (6) to seat body (7).
19. Install seat cushion (4) with two snaps (5).

Installation

1. Install commander's seat assembly (1) with four screws (2) and four lockwashers (3).



NOTE

Follow-on maintenance: Install flasher light case (see WP 0388 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
RIGGER'S SEAT ASSEMBLY MAINTENANCE
REMOVAL, DISASSEMBLY, INSPECTION, REPAIR, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)
 Awl, saddler's sewing (item 2, WP 0490 00)
 File, thread restorer (thread chaser) (item 14, WP 0490 00)
 Hammer, hand (mallet) (item 18, WP 0490 00)

Materials/Parts

Lockwashers (6) (item 638, WP 0491 00)
 Lockwashers (8) (item 640, WP 0491 00)
 Nuts (6) (item 756, WP 0491 00)
 Nuts (4) (item 769, WP 0491 00)
 Pin (item 178, WP 0491 00)
 Pin (item 180, WP 0491 00)

Materials/Parts (cont.)

Pin (item 181, WP 0491 00)
 Pin (item 182, WP 0491 00)
 Pins, cotter (11) (item 520, WP 0491 00)
 Screws (6) (item 367, WP 0491 00)
 Screws (8) (item 721, WP 0491 00)
 Spring (item 166, WP 0491 00)
 Spring (item 179, WP 0491 00)
 Springs (2) (item 183, WP 0491 00)
 Springs (2) (item 189, WP 0491 00)
 Washer, flat (item 858, WP 0491 00)

Personnel Required

Mechanics (2)

WARNING

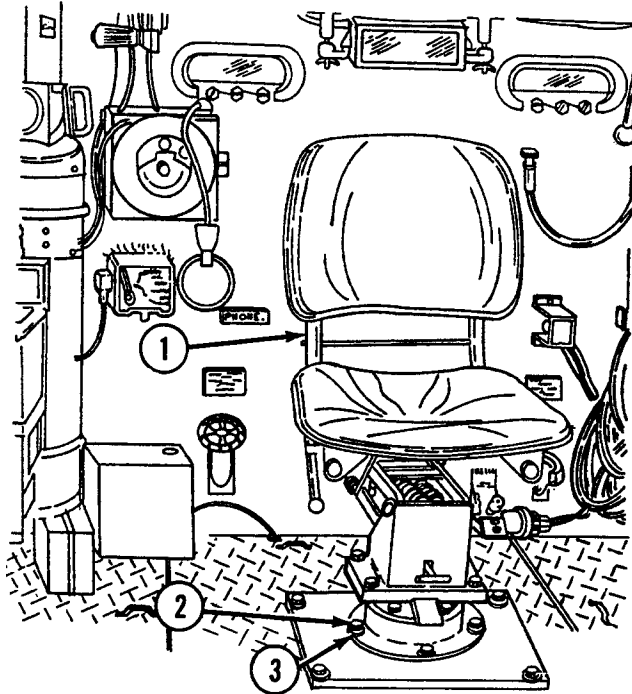
Rigger's seat assembly is extremely heavy-two persons are required to lift it.

WARNING

Be sure not to lift rigger's seat assembly by seat adjusting lever or seat may spring up and cause injury.

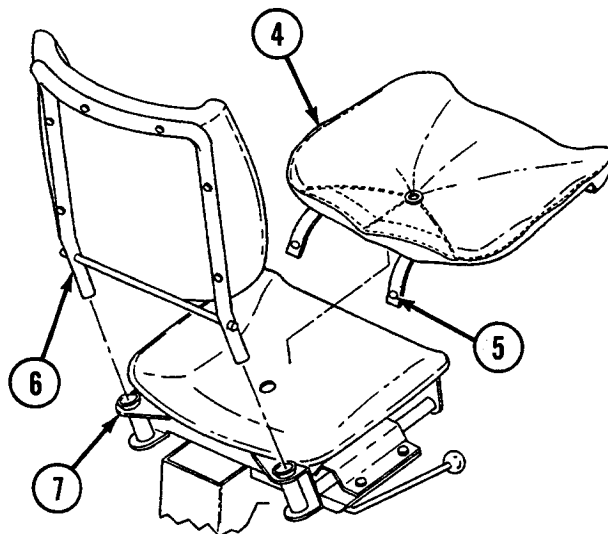
Removal

1. Rotate rigger's seat assembly (1) as necessary to gain access to four screws (2). Remove four screws, four lockwashers (3), and rigger's seat assembly.



Disassembly

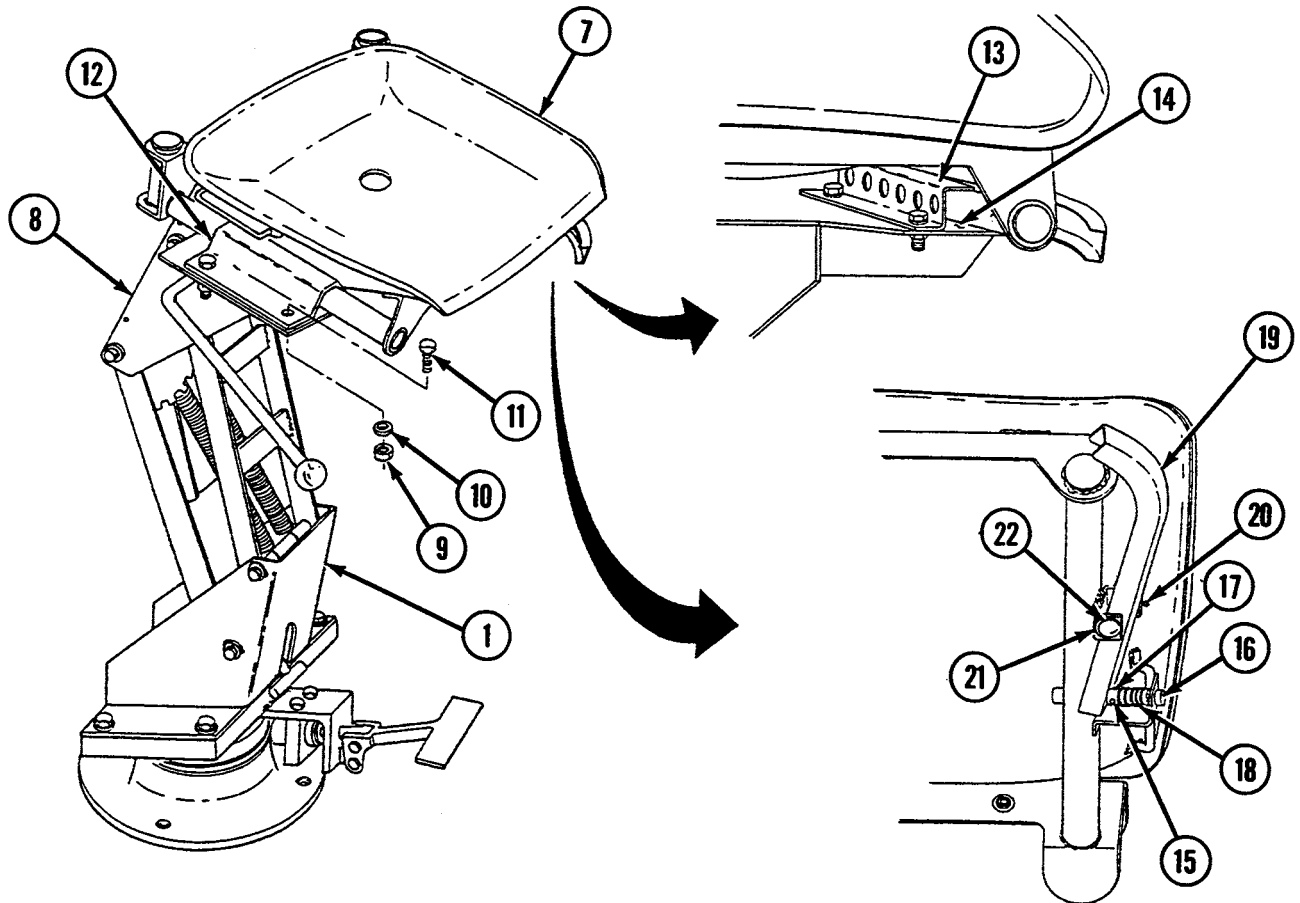
1. Remove seat cushion (4) by unsnapping two snaps (5).
2. Lift seat back (6) off seat body (7).



WARNING

Raise rigger's seat assembly (1) before removing seat body (7) in order to avoid injury.

3. Remove seat body (7) from carriage assembly (8) by removing six nuts (9), six lockwashers (10), and six screws (11). Remove brackets (12) and plates (13 and 14).
4. Remove pin (15), pin (16), collar (17), and spring (18).
5. Remove handle (19) by removing cotter pin (20), flat washer (21), and pin (22).

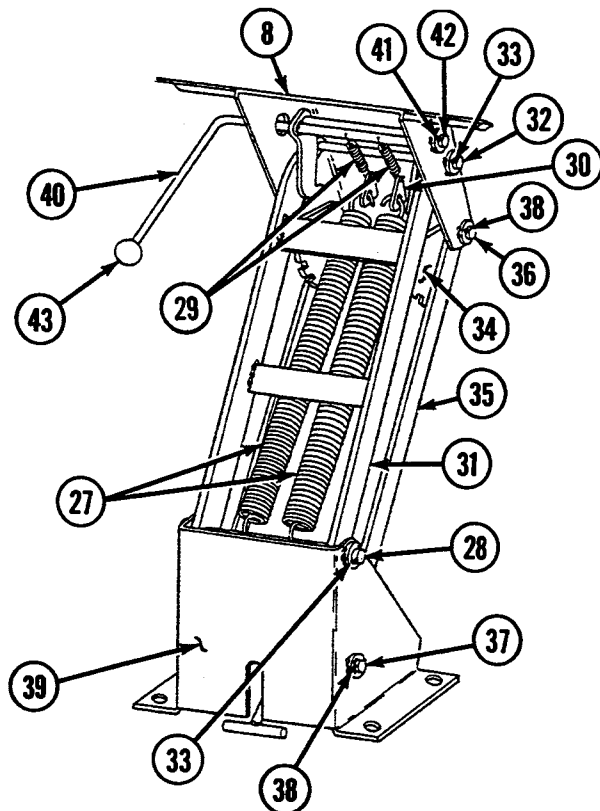
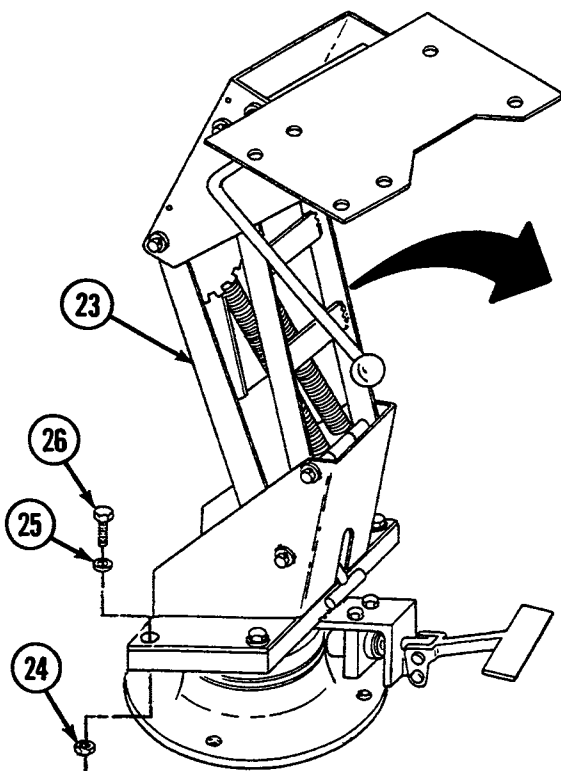


6. Remove base assembly (23) by removing four nuts (24), four lockwashers (25), and four screws (26).

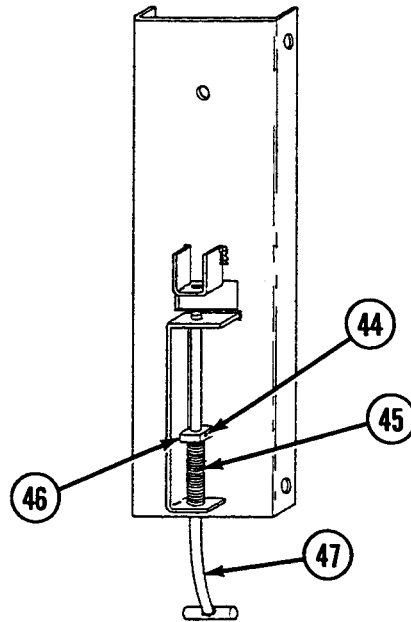
WARNING

Ensure that base assembly (23) is raised to full extension and adequately braced prior to spring removal.
Failure to do so will result in base assembly collapsing.

7. Pry two adjuster springs (27) from axle (28) to relieve tension. Remove two adjuster springs.
8. Remove two springs (29) and spring retainer (30).
9. Remove bracket (31) by removing two axles (28 and 32) and four cotter pins (33).
10. Remove arm (34) and guard (35) by removing two axles (36 and 37) and four cotter pins (38) from carriage assembly (8) and base (39).
11. Remove release assembly (40) by removing two cotter pins (41) and axle (42) from carriage assembly (8).
12. Remove knob (43) from release assembly (40).

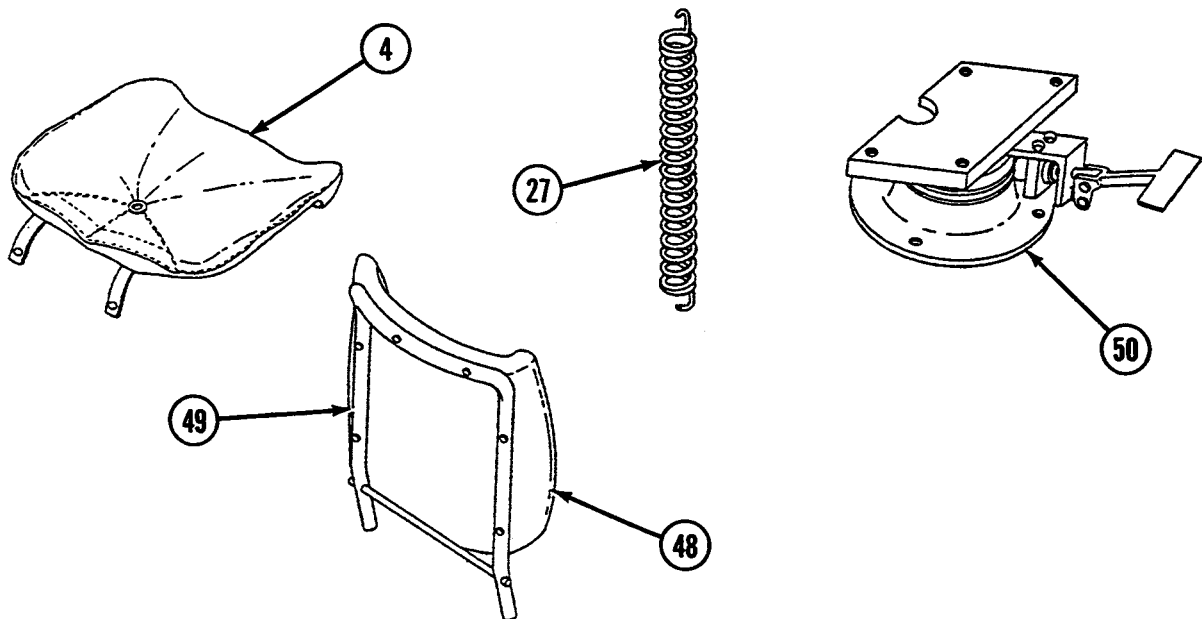


13. Remove pin (44), spring (45), collar (46), and pull handle (47).



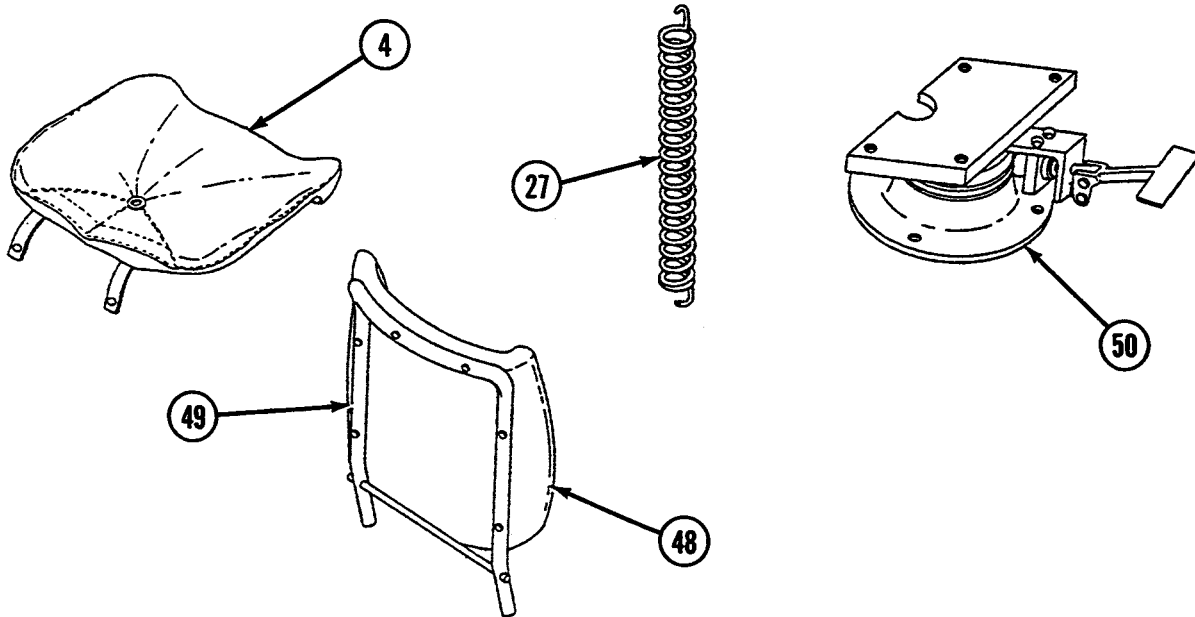
Inspection-Acceptance and Rejection Criteria

1. Inspect seat cushion (4) and seat back cushion (48) for cuts and tears.
2. Inspect seat back frame (49) for dents.
3. Inspect two adjuster springs (27) for breakage, fatigue, and distortion.
4. Inspect adjustment mechanisms for breakage and wear.
5. Inspect pedestal assembly (50) for undue wear of components.



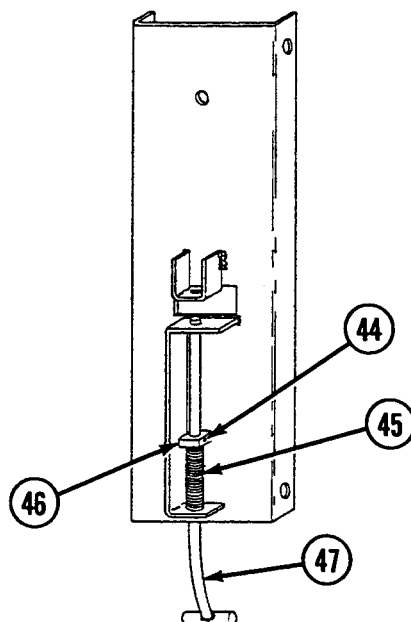
Repair or Replacement

1. Minor cuts or tears in pads or cushions may be repaired by hand stitching. If damage is extensive, replace defective parts.
2. Repair any dents and straighten any bent parts with a mallet. Replace if part does not lend itself to this type of repair.
3. Replace springs if proven defective.
4. Repair tapped holes with a thread chaser.
5. If wear or breakage affects ease of seat adjustment, replace defective part or parts.
6. Replace pedestal assembly (50) if defective.

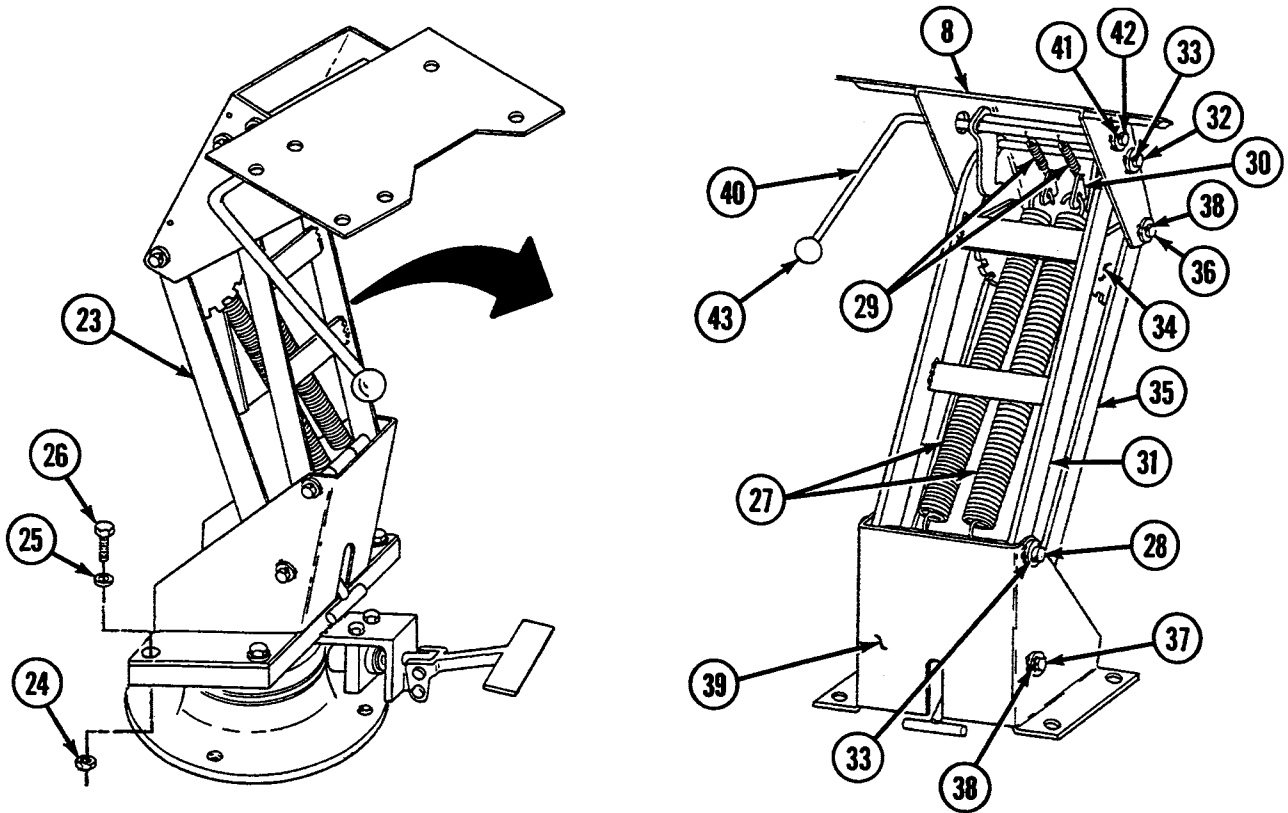


Assembly

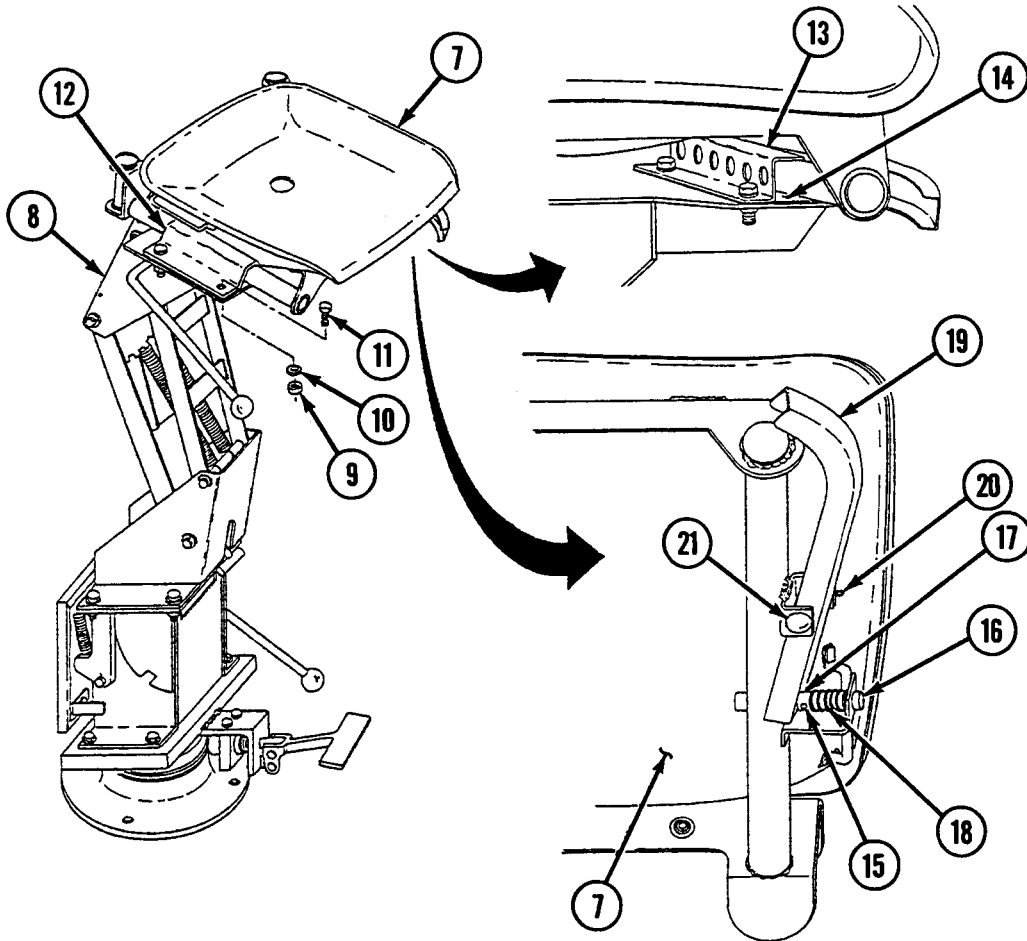
1. Install pull handle (47) with spring (45), collar (46), and pin (44).



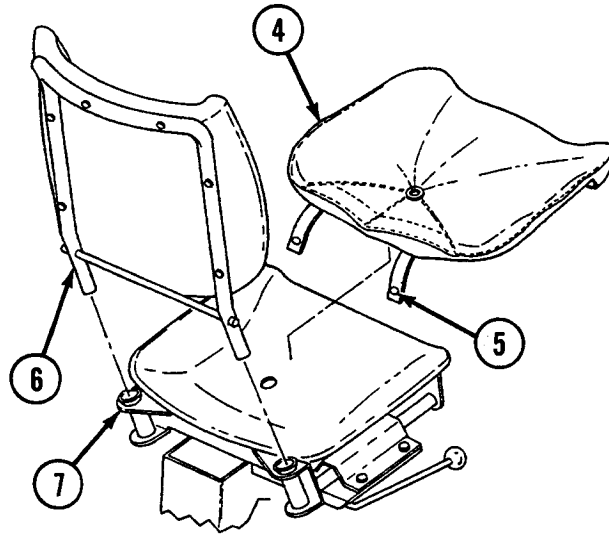
2. Install knob (43) to release assembly (40).
3. Install release assembly (40) to carriage assembly (8) with axle (42) and two cotter pins (41).
4. Install arm (34) and guard (35) to carriage assembly (8) and base (39) with two axles (36 and 37) and four cotter pins (38).
5. Install bracket (31) to carriage assembly (8) and base (39) with two axles (28 and 32) and four cotter pins (33).
6. Install spring retainer (30) and two springs (29).
7. Install two adjuster springs (27) to spring retainer (30) and axle (28).
8. Install base assembly (23) with four screws (26), four lockwashers (25), and four nuts (24).



9. Install handle (19) to seat body (7) with cotter pin (20), flat washer (21), and pin (22).
10. Install pin (16), pin (15), collar (17), and spring (18).
11. Install seat body (7), brackets (12), and plates (13 and 14) with six screws (11), six lockwashers (10), and six nuts (9).

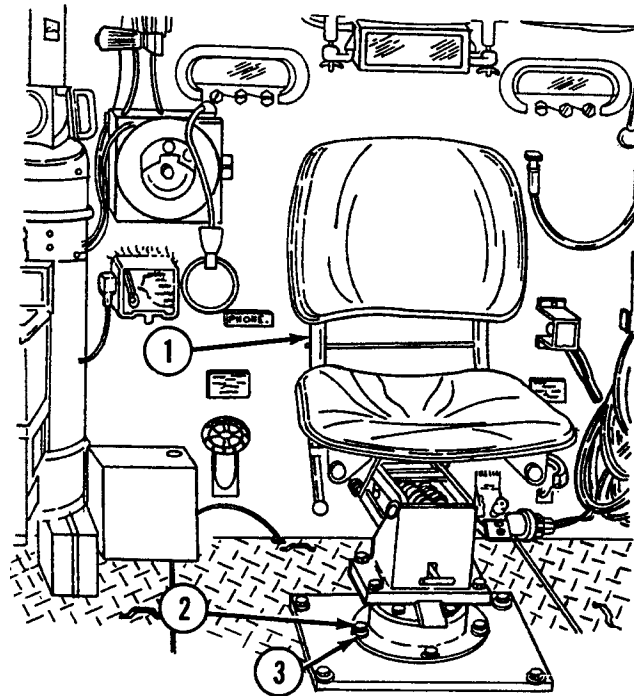


12. Install seat back (6) to seat body (7).
13. Install seat cushion (4) by snapping two snaps (5).



Installation

1. Install rigger's seat assembly (1) with four screws (2) and four lockwashers (3).



END OF WORK PACKAGE

UNIT MAINTENANCE**RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1****NSN 2350-00-122-6826, EIC AQA****MECHANIC'S AND DRIVER'S SEAT ASSEMBLIES MAINTENANCE
REMOVAL, DISASSEMBLY, INSPECTION, REPAIR, ASSEMBLY, INSTALLATION****INITIAL SETUP:****Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)
 Awl, saddler's sewing (item 2, WP 0490 00)
 File, thread restorer (thread chaser) (item 14, WP 0490 00)
 Hammer, hand (mallet) (item 18, WP 0490 00)
 Pliers, retaining ring, external (item 37, WP 0490 00)

Materials/Parts

Lockwashers (4) (item 249, WP 0491 00)
 Lockwashers (2) (item 250, WP 0491 00)
 Lockwashers (4) (item 637, WP 0491 00)
 Lockwashers (8) (item 639, WP 0491 00)
 Lockwashers (7) (item 640, WP 0491 00)
 Lockwashers (2) (item 642, WP 0491 00)
 Lockwashers (2) (item 651, WP 0491 00)
 Lockwasher (item 652, WP 0491 00)
 Nut (item 754, WP 0491 00)
 Nuts (2) (item 758, WP 0491 00)
 Nuts (4) (item 768, WP 0491 00)

Materials/Parts (cont.)

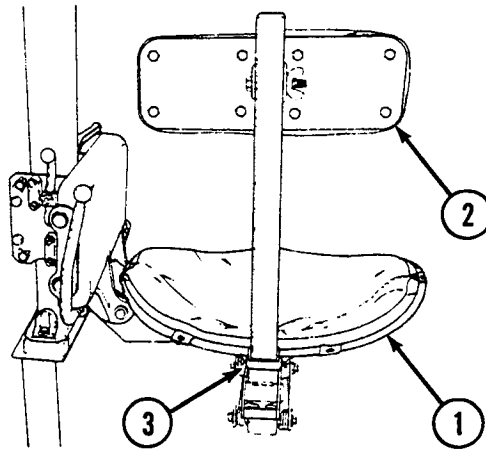
Nuts (2) (item 769, WP 0491 00)
 Pins (2) (item 245, WP 0491 00)
 Pin (item 246, WP 0491 00)
 Pin (item 678, WP 0491 00)
 Pin (item 679, WP 0491 00)
 Rings, retaining (4) (item 248, WP 0491 00)
 Screws (8) (item 383, WP 0491 00)
 Screw (item 394, WP 0491 00)
 Screws (6) (item 397, WP 0491 00)
 Screws (4) (item 590, WP 0491 00)
 Screws (2) (item 785, WP 0491 00)
 Shafts (2) (item 247, WP 0491 00)
 Spring (item 243, WP 0491 00)
 Spring (item 244, WP 0491 00)
 Springs (2) (item 251, WP 0491 00)
 Spring (item 252, WP 0491 00)
 Springs (2) (item 253, WP 0491 00)
 Wingnut (item 659, WP 0491 00)

NOTE

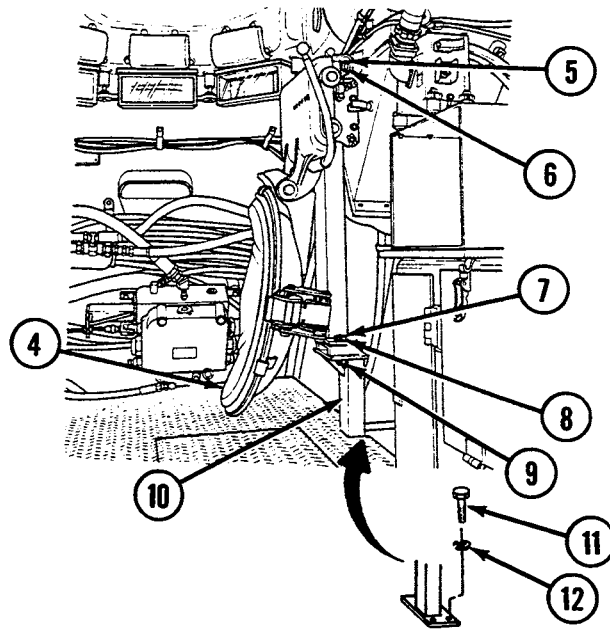
The following procedures are the same for both the driver's and mechanic's seat assemblies. Driver's seat assembly is shown.

Removal

1. Remove seat cushion (1).
2. Remove backrest and support assembly (2) by pulling straight out of retainer assembly (3) socket.

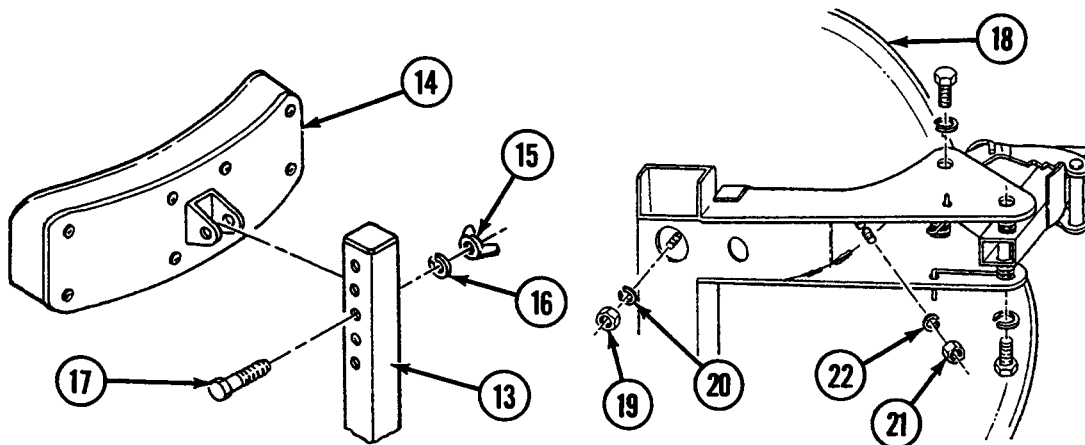


3. Remove seat assembly (4) by removing two screws (5) and two lockwashers (6) at top, and two screws (7), two lockwashers (8), and two nuts (9) at seat support (10).
4. Remove seat support (10) by removing four screws (11) and four lockwashers (12).



Disassembly

1. Remove support (13) from backrest (14) by removing wing nut (15), lockwasher (16), and screw (17).
2. Remove seat pan (18) by removing nut (19), lockwasher (20), two nuts (21), and two lockwashers (22).



3. Snap ends of two springs (23) out of holes in support assembly (24).

NOTE

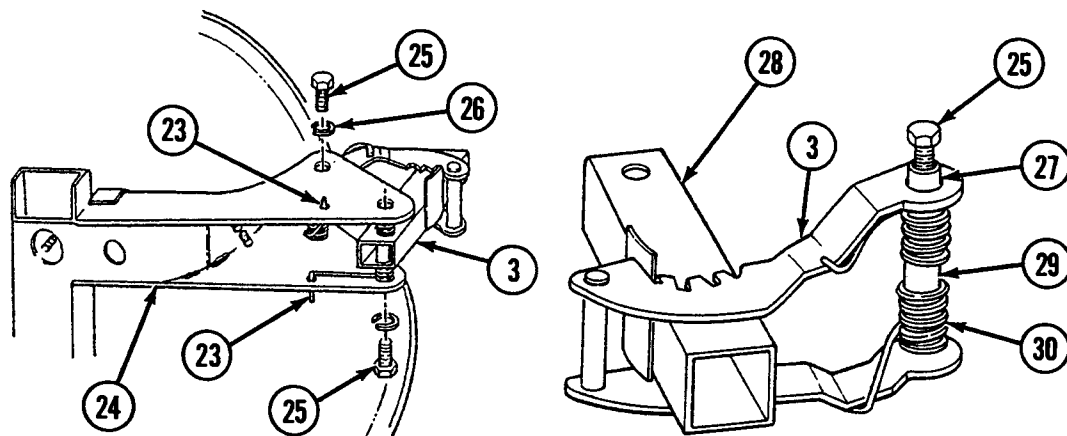
Remove upper screw (25) first. Insert a drive pin punch in upper screw hole while removing lower screw (25) to prevent binding.

4. Remove retainer assembly (3) from support assembly (24) by removing four screws (25), four lockwashers (26), and two springs (23).

NOTE

Hollow threaded rod (27) can be pulled out of retainer assembly (3) in same manner as pulled out of adjuster assembly (28) in step 5.

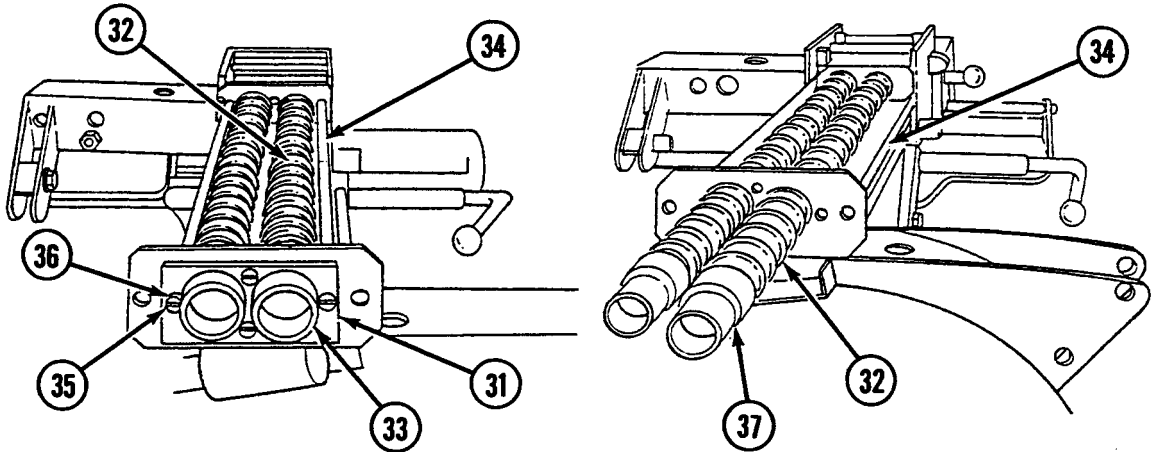
5. Use one screw (25) (removed in step 4) and pull hollow threaded rod (27) out of spacer (29). Remove spacer and two springs (30) from adjuster assembly (28).



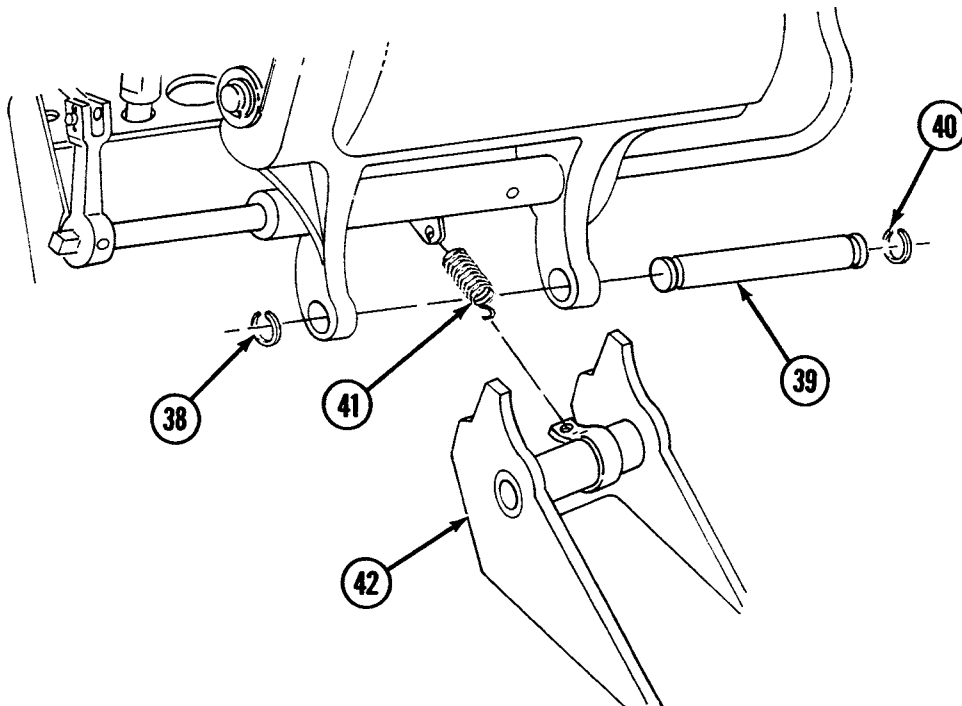
WARNING

Remove retaining strap (31) carefully to prevent springs (32) from suddenly decompressing.

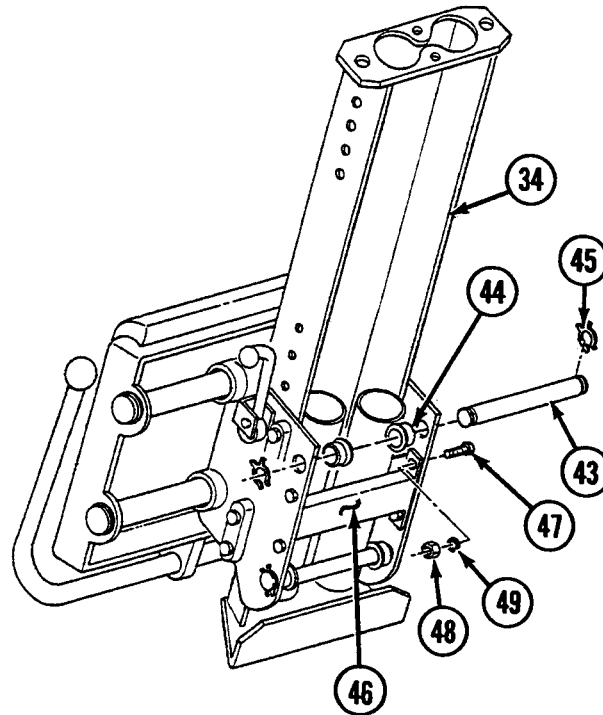
6. Remove retaining strap (31) and two retainers (33) from support assembly (34) by removing four screws (35) and four lockwashers (36).
7. Remove two guides (37) and two springs (32) from support assembly (34).



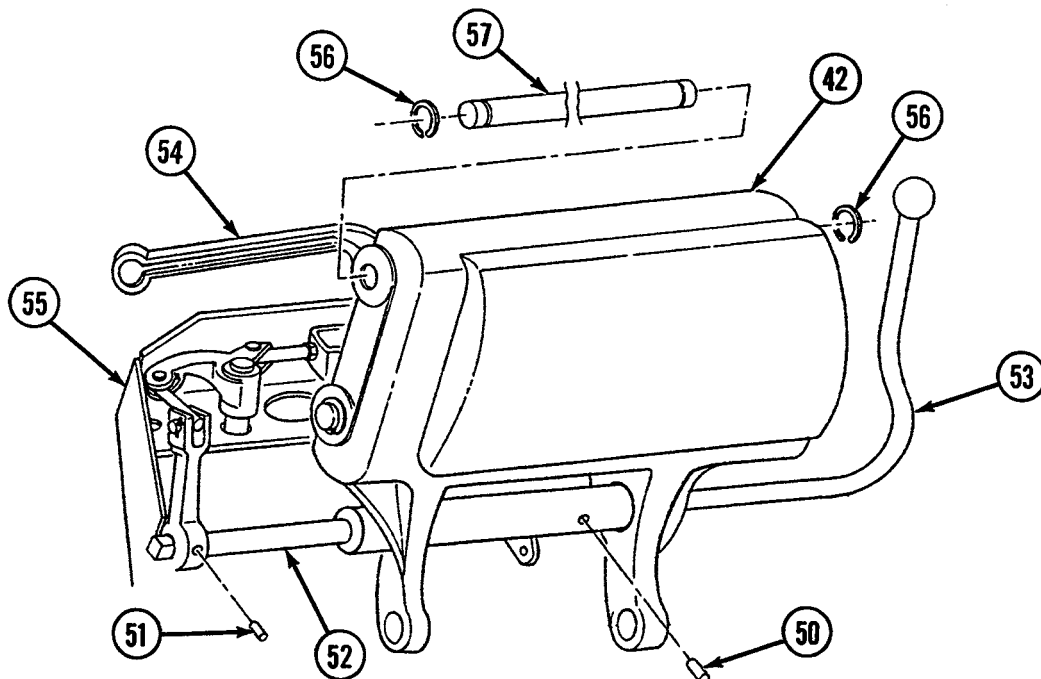
8. Remove lockwasher (38). Push out pin (39) and remove lockwasher (40).
9. Remove spring (41) and frame (42).



10. Remove two pins (43) and four rollers (44) by removing four lockwashers (45).
11. Remove retainer assembly (46) by removing four screws (47), four nuts (48), and four lockwashers (49).
12. Remove support assembly (34).

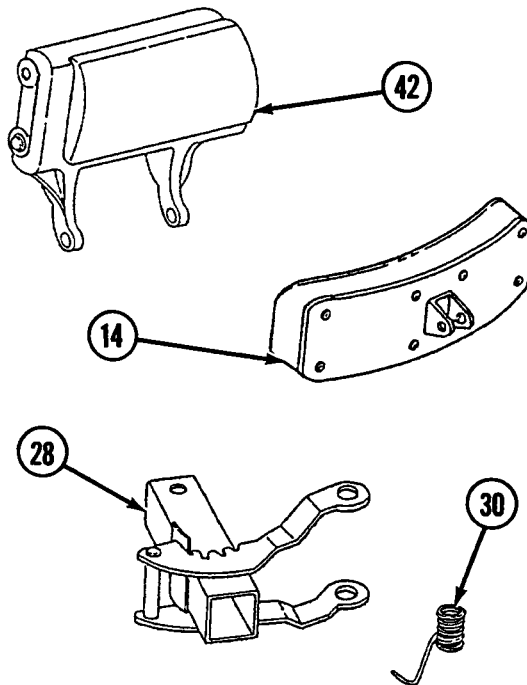


13. Remove pins (50 and 51).
14. Remove shaft (52) and two levers (53 and 54).
15. Remove control assembly (55) from frame (42) by removing four retaining rings (56) and two shafts (57).



Inspection-Acceptance and Rejection Criteria

1. Inspect backrest (14) cushion for cuts and tears.
2. Inspect seat frame (42) for dents.
3. Inspect adjuster springs (30) for breakage, fatigue, and distortion.
4. Inspect adjustment mechanisms for breakage and wear.
5. Inspect adjuster assembly (28) for breakage or wear of pins, linkages, and guides.



6. Inspect vertical support assembly for undue wear.

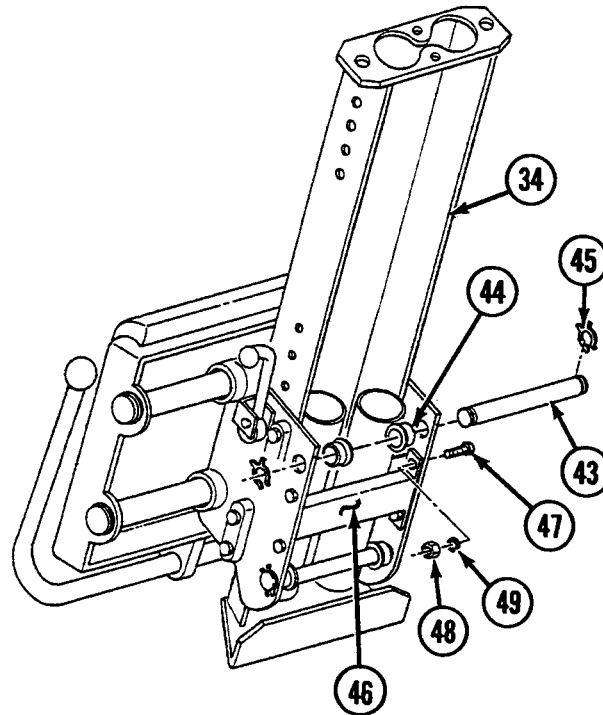
Repair or Replacement

1. Minor cuts or tears in cushion may be repaired by hand stitching. If damage is extensive, replace part.
2. Repair any dents and straighten any bent parts with a mallet. Replace if part does not lend itself to this type of repair.
3. Replace springs if proven defective.
4. Repair tapped holes with a thread chaser.
5. If wear or breakage affects seat adjustment, replace defective parts.

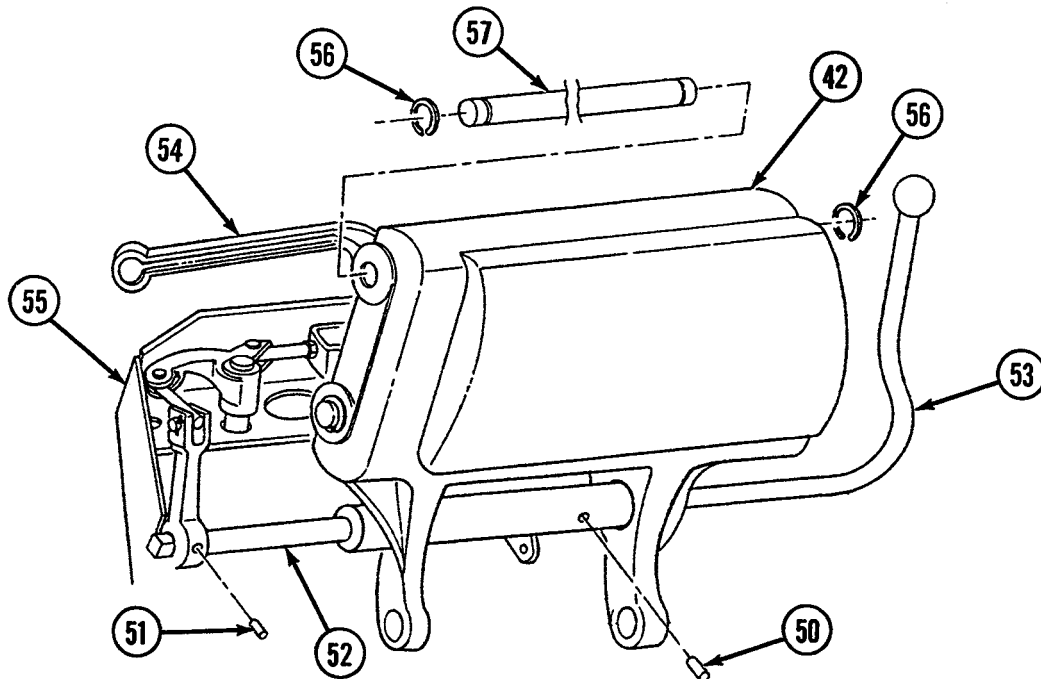
Assembly

1. Install control assembly (55) to frame (42) by installing two shafts (57) and four retaining rings (56).
2. Install two levers (53 and 54) and shaft (52) on frame (42).
3. Insert pins (50 and 51).

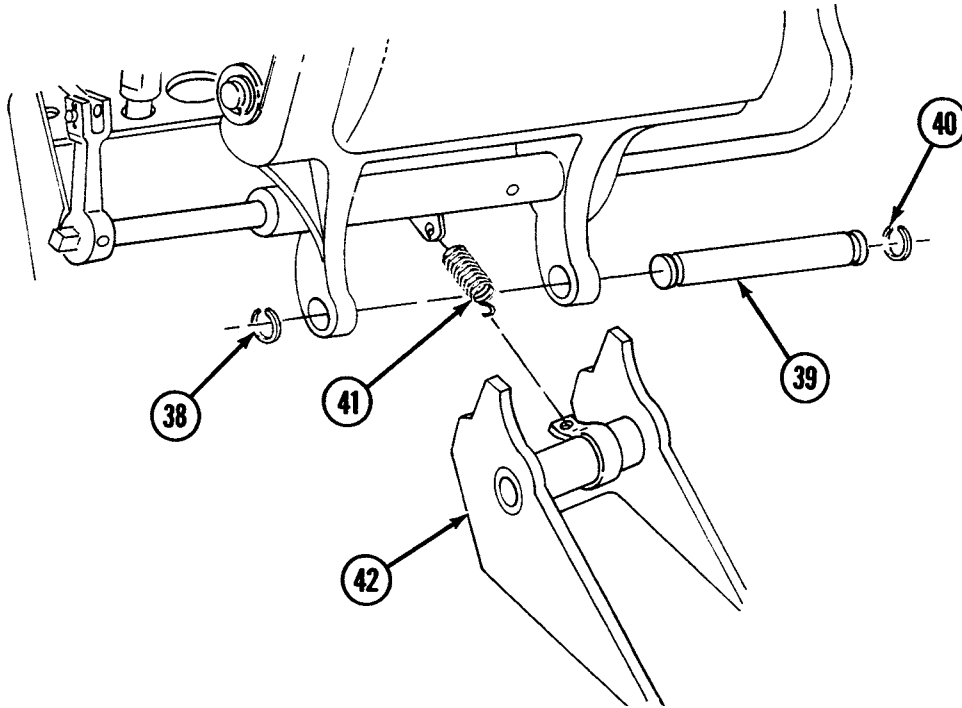
4. Insert support assembly (34).
5. Install retainer assembly (46) with four screws (47), four nuts (48), and four lockwashers (49).
6. Install four rollers (44) with two pins (43) and four lockwashers (45).



7. Install spring (41) between frame (42) and levers (53 and 54).



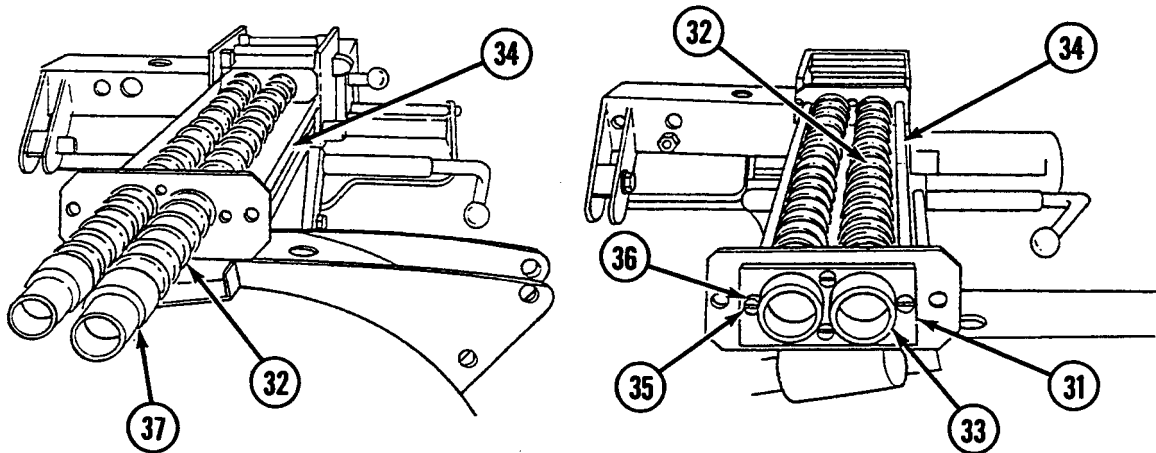
8. Install pin (39) with two lockwashers (38 and 40).



WARNING

Springs (32) are installed under compression and should be handled carefully.

9. Insert two guides (37) into two springs (32) and into support assembly (34).
10. Secure two springs (32) in support assembly (34) by installing retaining strap (31) and two retainers (33) with four screws (35) and four lockwashers (36).

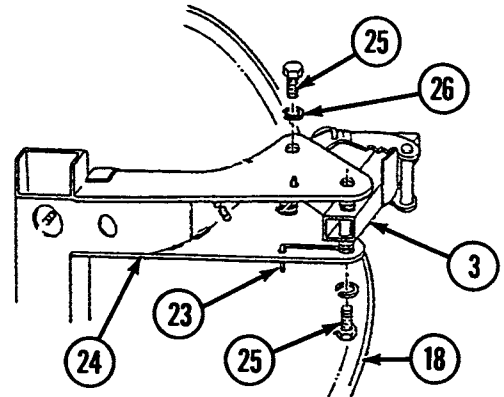
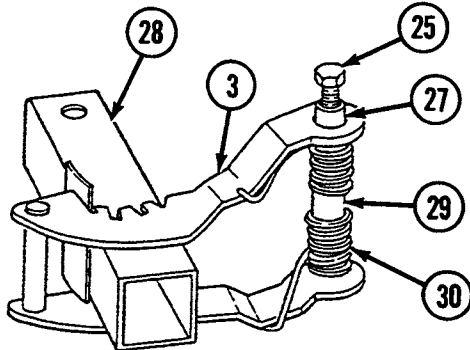


11. Insert hollow threaded rod (27) into each of two spacers (29), one in adjuster assembly (28) and one in retainer assembly (3).
12. Place springs (30 and 23) over rods (27) and spacers (29) and install as shown.

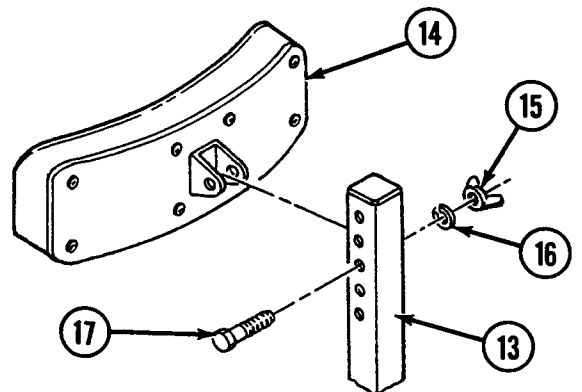
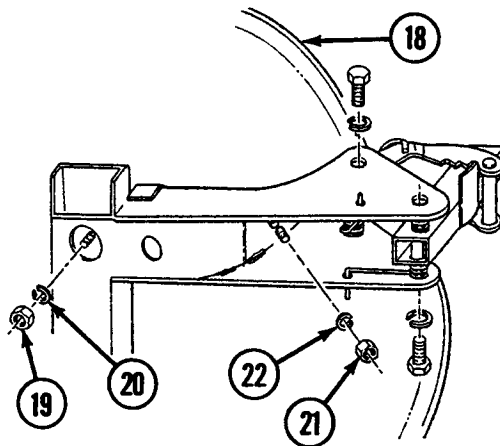
NOTE

When installing retainer assembly (3), be sure spring (23) ends of upper set are behind edge of support assembly (24) and in contact with seat pan (18).

13. Install retainer assembly (3) on support assembly (24) with four screws (25) and four lockwashers (26).

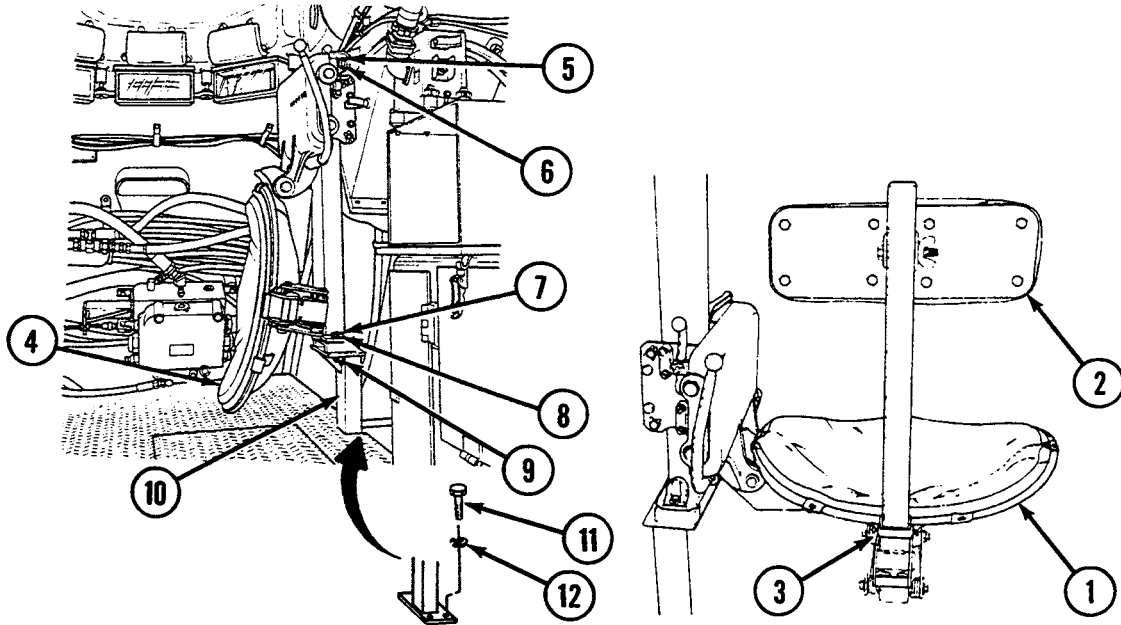


14. Install seat pan (18) with nut (19), lockwasher (20), two nuts (21), and two lockwashers (22).
15. Install support (13) to backrest (14) with screw (17), lockwasher (16), and wing nut (15).



Installation

1. Install seat support (10) with four screws (11) and four lockwashers (12).
2. Install seat assembly (4) to seat support (10) with two screws (7), two lockwashers (8), and two nuts (9). Secure seat assembly at top with two screws (5) and two lockwashers (6).
3. Install backrest and support assembly (2) by inserting into retainer assembly (3) socket.
4. Install seat cushion (1).

**END OF WORK PACKAGE**

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
DRAIN VALVES MAINTENANCE
REMOVAL, DISASSEMBLY, INSPECTION, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (6) (item 646, WP 0491 00)

Materials/Parts (cont.)

Pin, spring (item 446, WP 0491 00)

Screws (6) (item 393, WP 0491 00)

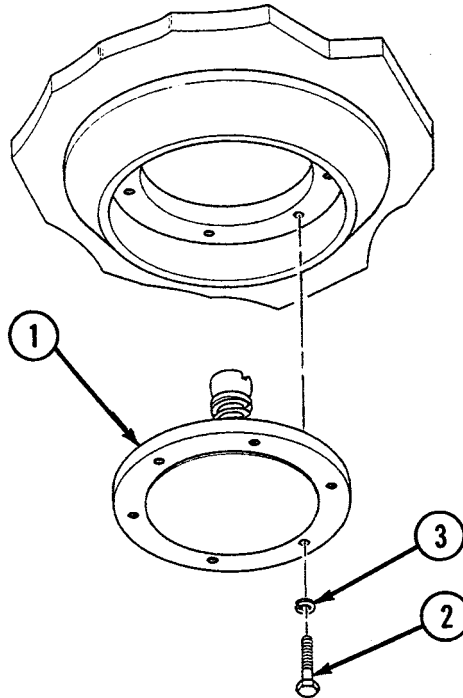
Spring (item 158, WP 0491 00)

NOTE

The following procedures are the same for all drain valves. Remove drain valves from the underside of the vehicle.

Removal

1. Remove drain valve assembly (1) by removing six screws (2) and six lockwashers (3).

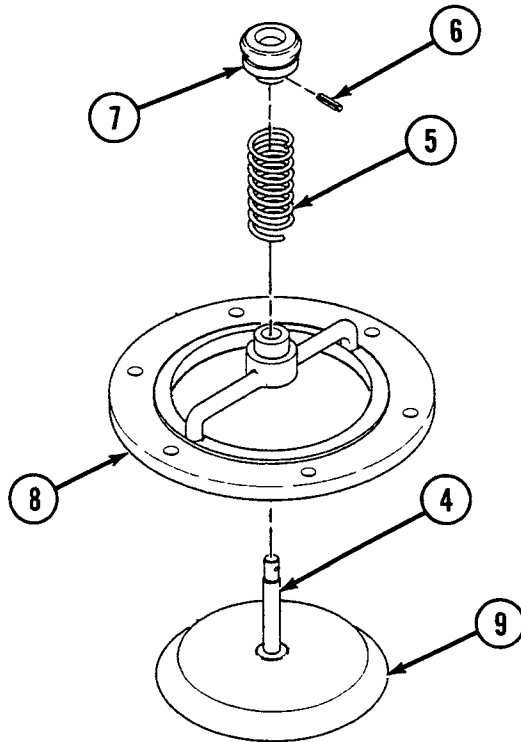


Disassembly

1. Place drain valve assembly (1) on flat surface with valve stem (4) up.
2. Press down on actuating spring (5) and remove spring pin (6).
3. Remove valve cap (7), actuating spring (5), and valve cage (8) from valve (9).

Inspection-Acceptance and Rejection Criteria

1. Inspect valve cage (8) for cracks, warping, and scored bearing and mating surfaces. Replace if worn or damaged.
2. Inspect valve stem (4) for scored bearing surface, bends, cracks, nicks, dents, and corrosion. Replace if worn or damaged.
3. Inspect actuating spring (5) for signs of fatigue, damage, or deformation. Replace if damaged or deformed.
4. Inspect valve (9) bearing for nicks, dents, scored bearing surface, and out-of-roundness. Replace if defective.

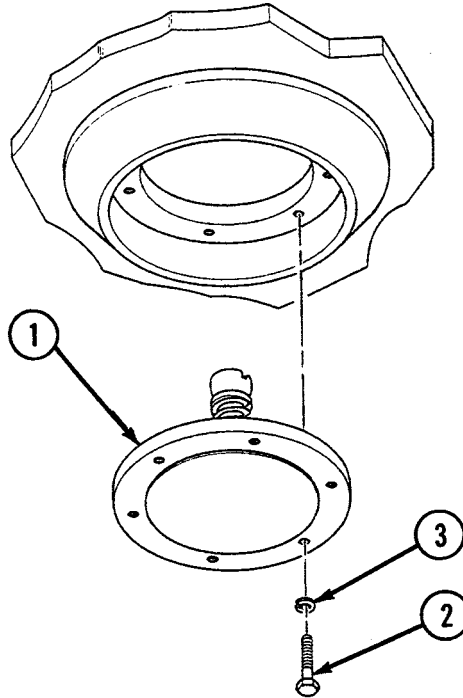


Assembly

1. Install valve cap (7), actuating spring (5), and valve cage (8) on valve (9).
2. Place drain valve assembly (1) on flat surface. Press down on actuating spring (5) and install spring pin (6).

Installation

1. Install drain valve assembly (1) on underside of vehicle with six screws (2) and six lockwashers (3).



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

DRAIN VALVE CONTROLS MAINTENANCE
REMOVAL, INSPECTION, REPAIR, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Cloth, crocus (item 7, WP 0489 00)
 Grommet (item 20, WP 0491 00)
 Grommet (item 218, WP 0491 00)
 Lockwasher (item 638, WP 0491 00)
 Lockwashers (19) (item 640, WP 0491 00)
 Nuts (4) (item 680, WP 0491 00)
 Pins (2) (item 217, WP 0491 00)
 Pins, cotter (4) (item 519, WP 0491 00)
 Pins, cotter (3) (item 520, WP 0491 00)
 Pins, cotter (2) (item 526, WP 0491 00)
 Pins, straight (2) (item 155, WP 0491 00)
 Pins, straight (3) (item 709, WP 0491 00)
 Screw (item 371, WP 0491 00)

Materials/Parts (cont.)

Screws (3) (item 388, WP 0491 00)
 Screws (9) (item 396, WP 0491 00)
 Screws (2) (item 800, WP 0491 00)
 Screws (2) (item 801, WP 0491 00)
 Spring (item 219, WP 0491 00)
 Washers, flat (2) (item 537, WP 0491 00)

Equipment Condition

Powerplant removed for rear cable only (see WP 0098 00)
 Rear left-side cab subfloor plate removed (see WP 0300 00)
 Intermediate rear left-side cab subfloor plate removed (see WP 0301 00)
 Ammunition rack removed (see WP 0386 00)
 APU control box removed (see WP 0438 00)

NOTE

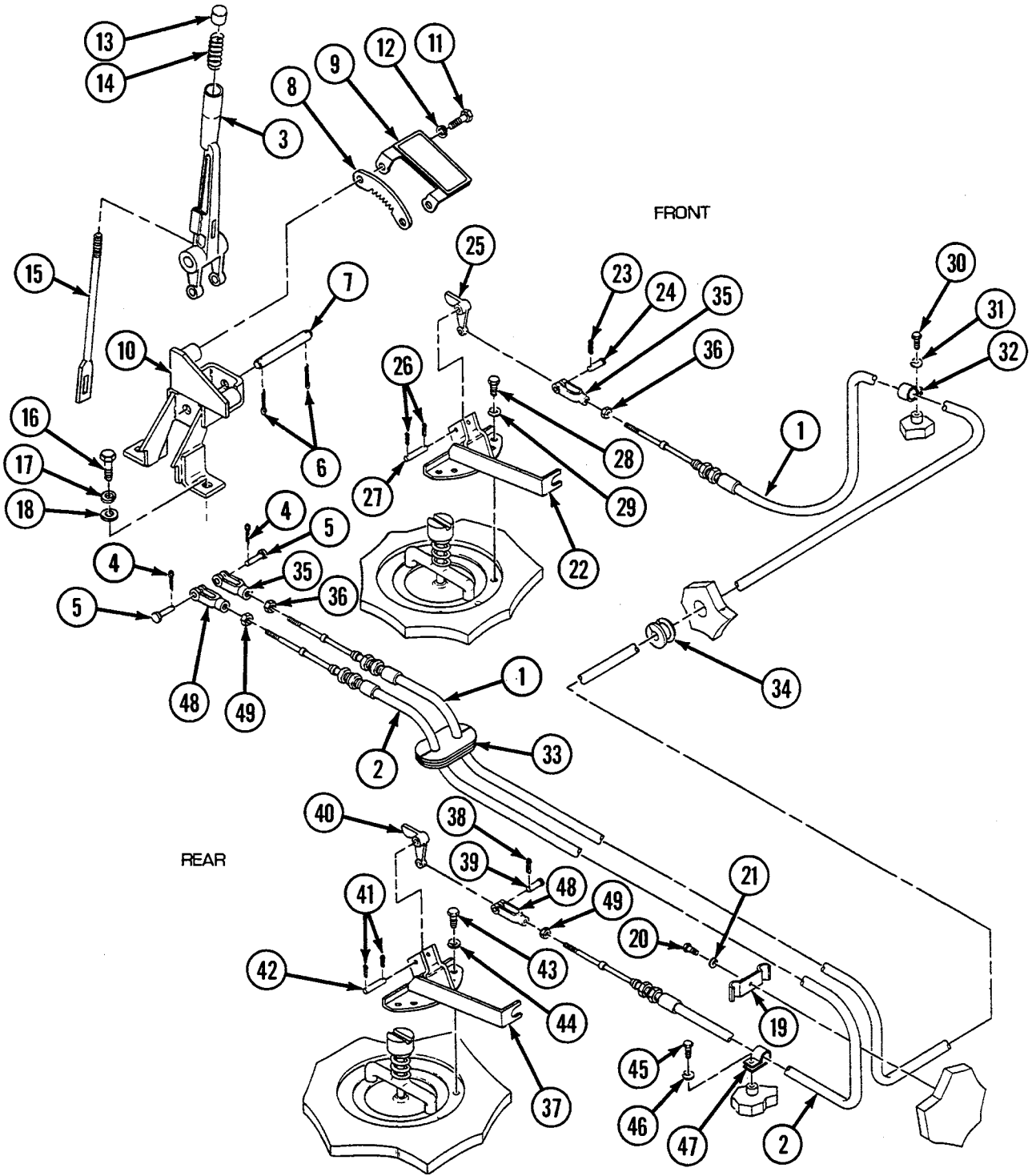
Prior to performing maintenance on drain valves, place a suitable container under valves and open each valve to prevent leakage on maintenance personnel.

Removal

1. Disconnect front drain valve cable assembly (1) and rear drain valve cable assembly (2) from control lever assembly (3) by removing cotter pin (4) and straight pin (5) from each.
2. Remove two cotter pins (6) and pin (7).
3. Remove ratchet (8), bracket (9), and control lever assembly (3) from control lever support assembly (10) by removing two screws (11) and two lockwashers (12).
4. Remove control lever push button (13), spring (14), and lever rod-and-pawl assembly (15) from control lever assembly (3).
5. Remove control lever support assembly (10) from vehicle by removing two screws (16), two flat washers (17), and two lockwashers (18).
6. Remove retaining strap (19) by removing screw (20) and lockwasher (21).
7. Disconnect front drain valve cable assembly (1) from front drain valve bracket assembly (22) by removing cotter pin (23) and straight pin (24).
8. Remove drain control lever (25) from front drain valve bracket assembly (22) by removing two cotter pins (26) and straight pin (27).
9. Remove front drain valve bracket assembly (22) from vehicle hull by removing three screws (28) and three lockwashers (29).
10. Remove front drain valve cable assembly (1) by removing five screws (30), five lockwashers (31), and five cable clamps (32). Pull front drain valve cable assembly through grommets (33 and 34).
11. Remove two yokes (35) and two jamnuts (36) from front drain valve cable assembly (1).
12. Remove rear drain valve cable assembly (2) from rear drain valve bracket assembly (37) by removing cotter pin (38) and straight pin (39).
13. Remove drain control lever (40) from rear drain valve bracket assembly (37) by removing two cotter pins (41) and straight pin (42).
14. Remove rear drain valve bracket assembly (37) from vehicle hull by removing three screws (43) and three lockwashers (44).
15. Remove rear drain valve cable assembly (2) by removing four screws (45), four lockwashers (46), and four cable clamps (47). Pull rear drain valve cable assembly through grommet (33).
16. Remove two yokes (48) and two jamnuts (49) from rear drain valve cable assembly (2).

Inspection-Acceptance and Rejection Criteria

1. Inspect threaded parts for stripped or crossed threads, nicks, and dents.
2. Inspect spring for breakage and distortion.
3. Inspect pins for bends, scoring, and cracks.
4. Inspect supports, ratchets, control levers, and brackets for cracks, bends, and other damage.
5. Inspect cables for corrosion, cracks, bends, and wear. Be especially critical of cable cores.



Repair or Replacement

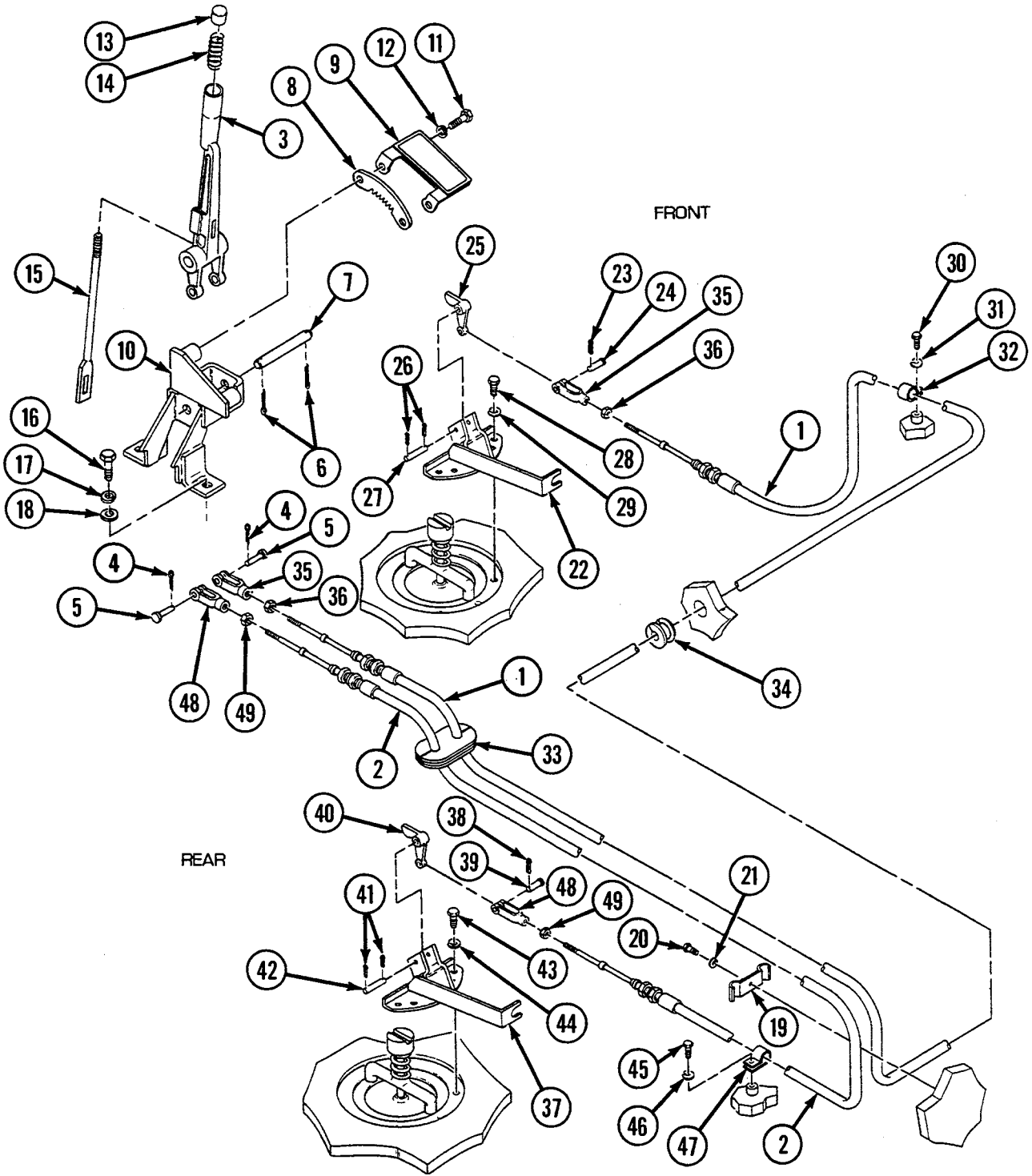
1. Dress down light corrosion with crocus cloth.
2. Straighten slightly bent parts.
3. Replace worn or damaged parts.
4. Replace severely corroded parts.

Installation

1. Install yoke (48) and jamnut (49) at each end of rear drain valve cable assembly (2).
2. Install rear drain valve cable assembly (2) by pulling through grommet (33) and secure with four cable clamps (47), four screws (45), and four lockwashers (46).
3. Install rear drain valve bracket assembly (37) on vehicle hull with three screws (43) and three lockwashers (44).
4. Install drain control lever (40) on rear drain valve bracket assembly (37) with straight pin (42) and two cotter pins (41).
5. Connect rear drain valve cable assembly (2) to rear drain valve bracket assembly (37) and drain control lever (40) with straight pin (39) and cotter pin (38).
6. Install two yokes (35) and two jamnuts (36) to front drain valve cable assembly (1).
7. Install front drain valve cable assembly (1) by pulling through grommets (33 and 34). Secure with five cable clamps (32), five screws (30), and five lockwashers (31).
8. Install front drain valve bracket assembly (22) on vehicle hull with three screws (28) and three lockwashers (29).
9. Install drain control lever (25) on front drain valve bracket assembly (22) with straight pin (27) and two cotter pins (26).
10. Connect front drain valve cable assembly (1) to front drain valve bracket assembly (22) and drain control lever (25) with straight pin (24) and cotter pin (23).
11. Install control lever support assembly (10) on vehicle with two screws (16), two flat washers (17), and two lockwashers (18).
12. Install control lever push button (13), spring (14), and lever rod-and-pawl assembly (15) on control lever assembly (3).
13. Install retaining strap (19) with screw (20) and lockwasher (21).
14. Install ratchet (8) and bracket (9) on control lever support assembly (10) with two screws (11) and two lockwashers (12).
15. Install control lever assembly (3) on control lever support assembly (10) with pin (7) and two cotter pins (6).
16. Connect front drain valve cable assembly (1) and rear drain valve cable assembly (2) to control lever assembly (3) each with straight pin (5) and cotter pin (4).

NOTE

Follow-on maintenance: Install APU control box (see WP 0438 00); Install ammunition rack (see WP 0386 00); Install intermediate rear left-side cab subfloor plate (see WP 0301 00); Install rear left-side cab subfloor plate (see WP 0300 00); Install powerplant if removed (see WP 0098 00).



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

DRAIN COVERS REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Gasket (item 21, WP 0491 00)

Materials/Parts (cont.)

Gasket (item 42, WP 0491 00)

Gasket (item 319, WP 0491 00)

Lockwashers (18) (item 646, WP 0491 00)

Screws (18) (item 393, WP 0491 00)

NOTE

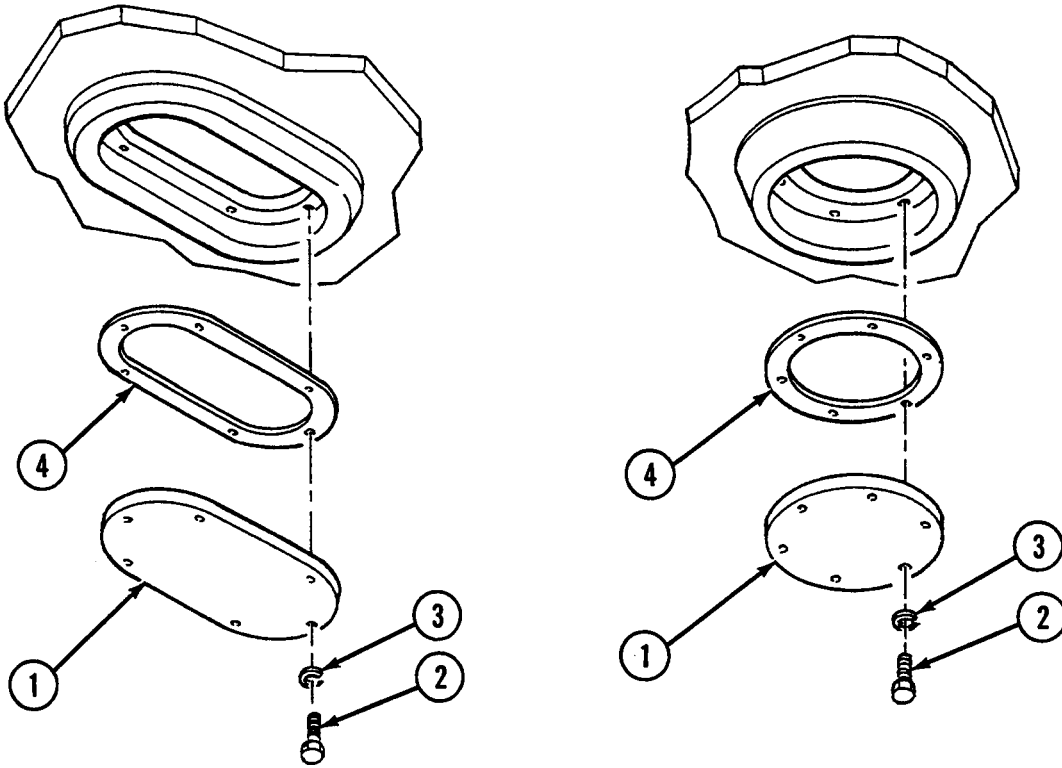
Ensure adequate collecting device is placed under the drain cover to catch any liquid that drains.

NOTE

Removal and installation procedures are the same for all three drain covers.

Removal

1. Remove drain cover (1) by removing six screws (2), six lockwashers (3), and gasket (4).

**Installation**

1. Install drain cover (1) with gasket (4), six lockwashers (3), and six screws (2).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

MECHANICAL TACHOMETER AND SPEEDOMETER FLEXIBLE SHAFTS AND FITTINGS MAINTENANCE
REMOVAL, CLEANING, INSPECTION, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Compound, cleaning (item 9, WP 0489 00)

Lockwashers (6) (item 613, WP 0491 00)

Lockwashers (2) (item 638, WP 0491 00)

Materials/Parts (cont.)

Lockwashers (4) (item 650, WP 0491 00)

Lockwires (2) (item 482, WP 0491 00)

Screws (5) (item 134, WP 0491 00)

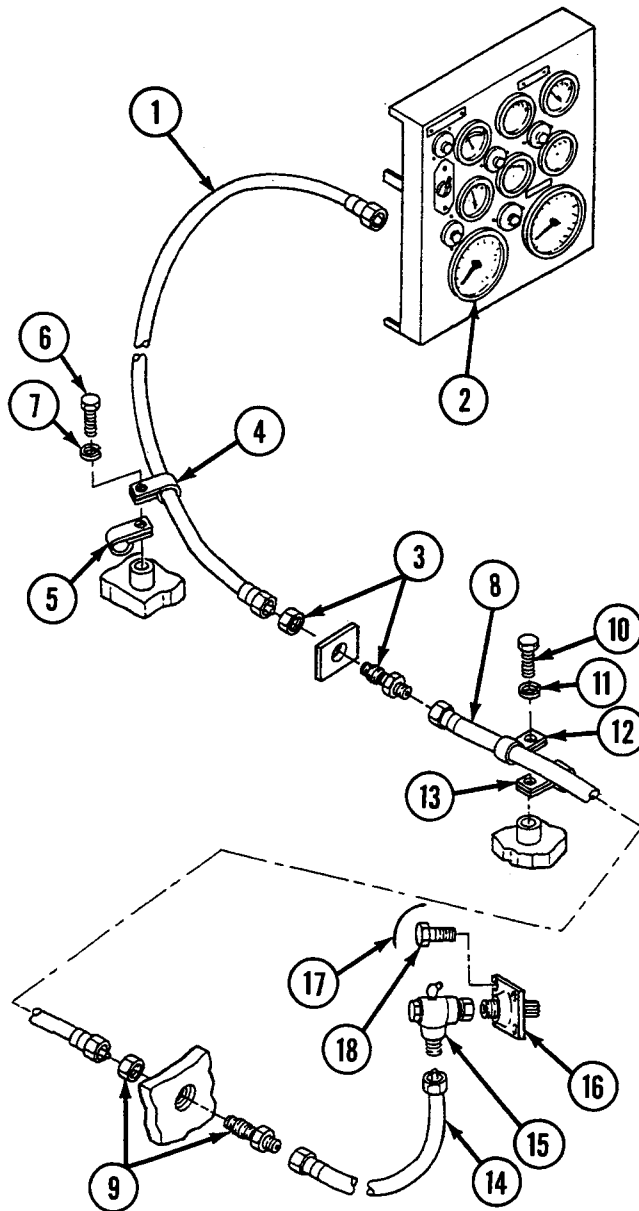
Screws (4) (item 379, WP 0491 00)

Screws (4) (item 720, WP 0491 00)

Screws (2) (item 783, WP 0491 00)

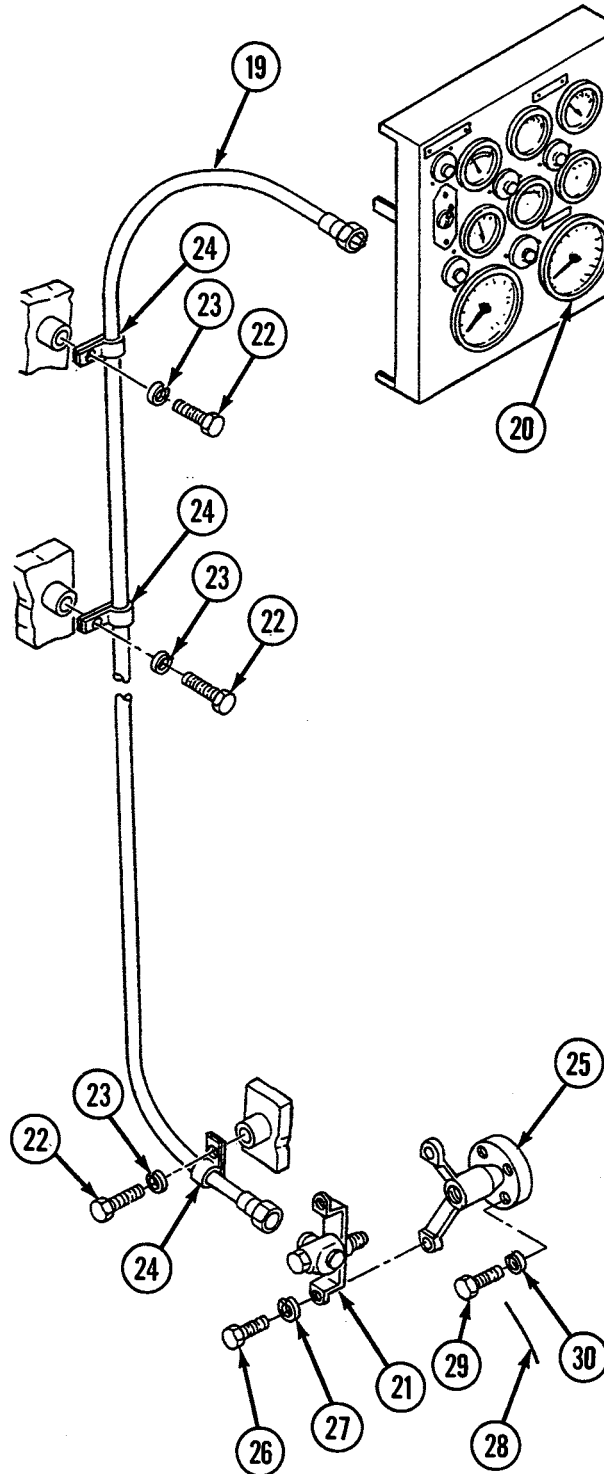
Removal

1. Disconnect flexible shaft (1) from tachometer (2).
2. Disconnect flexible shaft (1) from adapter (3).
3. Remove flexible shaft (1) by removing two clamps (4 and 5), screw (6), and lockwasher (7).
4. Disconnect flexible shaft (8) from adapters (3 and 9).
5. Remove adapter (3).
6. Remove flexible shaft (8) by removing screw (10), lockwasher (11), and clamps (12 and 13).
7. Disconnect flexible shaft (14) from adapter (9) and elbow (15).
8. Remove adapter (9) and elbow (15).
9. Remove adapter (16) by removing lockwire (17) and four screws (18).



10. Disconnect flexible shaft (19) from speedometer (20).

11. Disconnect flexible shaft (19) from adapter assembly (21).
12. Remove flexible shaft (19) by removing three screws (22), three lockwashers (23), and three clamps (24).
13. Remove adapter assembly (21) from bracket (25) by removing two screws (26) and two lockwashers (27).
14. Remove bracket (25) by removing lockwire (28), four screws (29), and four lockwashers (30).



Cleaning

WARNING

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

WARNING

Particles blown by compressed air can be dangerous. Be certain to direct airstream away from yourself and other personnel in the area. Compressed air used for cleaning will not exceed 30 psi (207 kPa). Use only with effective chip-guarding and personal protective equipment (goggles/shield and gloves).

1. Clean dirt and other foreign materials from flexible shafts. Thoroughly wipe core tips with lint-free rags saturated with dry-cleaning solvent. Wash rubber tubing with clean water; rinse and dry.
2. Clean other parts with cleaning compound and dry with compressed air.

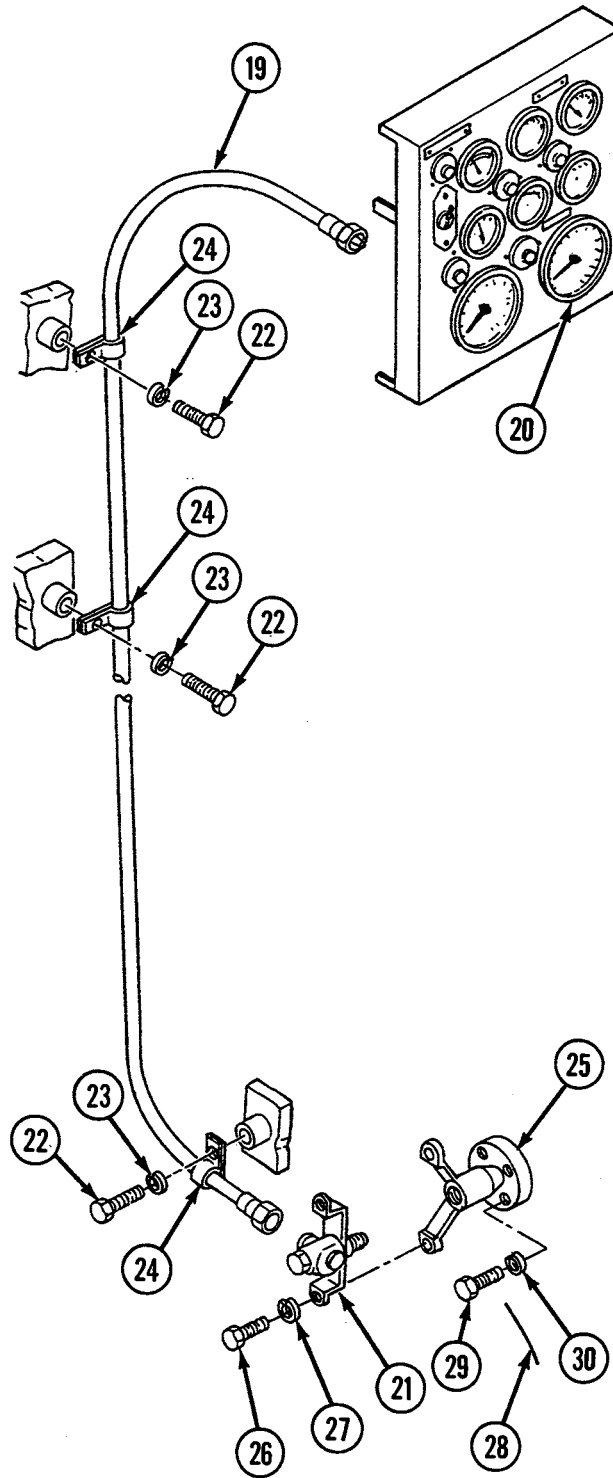
Inspection-Acceptance and Rejection Criteria

1. Inspect flexible shafts for cracking or fraying of rubber cover and for inner damage. Check for excessive flexibility at any point along length of tubing.
2. Inspect core tips for nicks and distortion.
3. Inspect all threaded parts for cross threading and nicks.
4. Inspect clamps, bracket, and welded pad and plate for cracks, distortion, and breakage. Replace all damaged parts. If welded pad and plate are damaged, notify Direct Support.

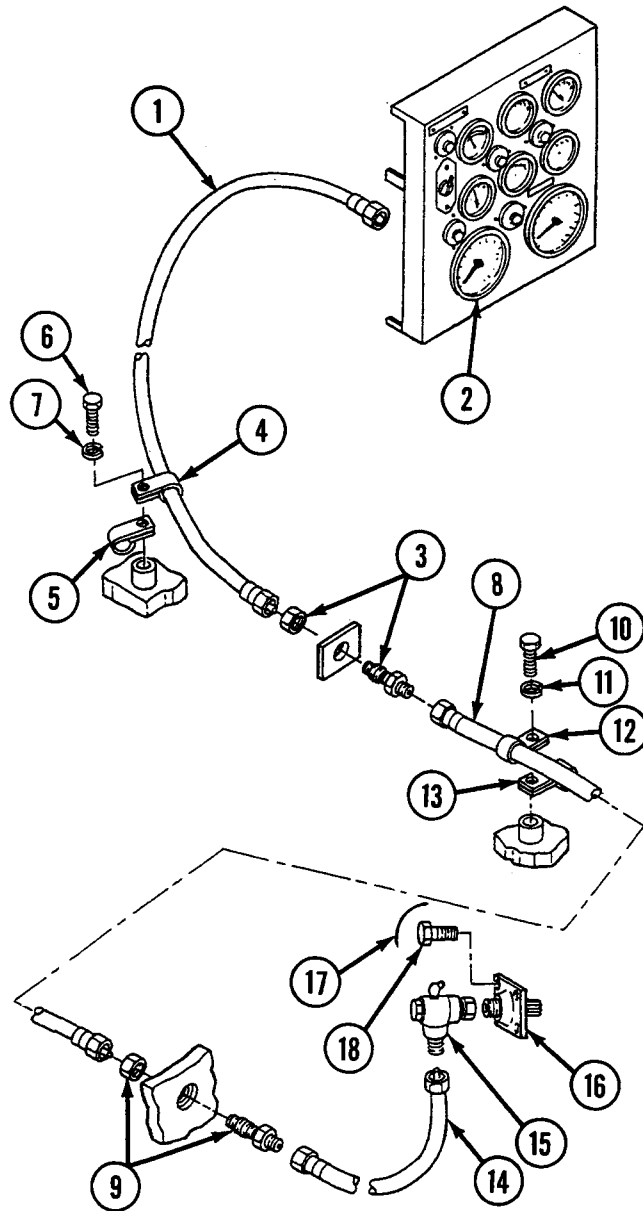
Installation

1. Install bracket (25) with four screws (29) and four lockwashers (30). Secure four screws with lockwire (28).
2. Install adapter assembly (21) on bracket (25) with two screws (26) and two lockwashers (27).

3. Install flexible shaft (19) on adapter assembly (21) and secure with three clamps (24), three lockwashers (23), and three screws (22).



4. Install adapter (16) with four screws (18). Secure four screws with lockwire (17).
5. Install adapter (9) and elbow (15).
6. Connect flexible shaft (14) to adapter (9) and elbow (15).
7. Install adapter (3).
8. Install flexible shaft (8) on adapters (3 and 9) and secure with clamps (12 and 13) held by screw (10) and lockwasher (11).
9. Connect flexible shaft (1) on adapter (3).
10. Install flexible shaft (1) with two clamps (4 and 5), screw (6), and lockwasher (7).
11. Connect flexible shaft (1) to tachometer (2).
12. Connect flexible shaft (19) to speedometer (20).



END OF WORK PACKAGE

UNIT MAINTENANCE**RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1**

NSN 2350-00-122-6826, EIC AQA

**STEERING CONTROLS AND LINKAGES MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION****INITIAL SETUP:****Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)
Pliers, retaining ring (item 36, WP 0490 00)

Materials/Parts

Bearings (2) (item 433, WP 0491 00)
Bearings (4) (item 470, WP 0491 00)
Bolts (2) (item 11, WP 0491 00)
Bolts (6) (item 339, WP 0491 00)
Boot, rubber (item 34, WP 0491 00)
Clamp (item 344, WP 0491 00)
Keys (2) (item 138, WP 0491 00)
Lockwashers (3) (item 350, WP 0491 00)
Lockwashers (21) (item 640, WP 0491 00)
Nuts (18) (item 682, WP 0491 00)
Pin, cotter (item 108, WP 0491 00)
Pin, cotter (item 520, WP 0491 00)
Pin, straight (item 708, WP 0491 00)
Pin, straight (item 710, WP 0491 00)
Retainers (2) (item 845, WP 0491 00)
Rings, retaining (2) (item 461, WP 0491 00)

Materials/Parts (cont.)

Screws (4) (item 397, WP 0491 00)
Screws (2) (item 401, WP 0491 00)
Screws (18) (item 402, WP 0491 00)
Screws (4) (item 403, WP 0491 00)
Screws (3) (item 415, WP 0491 00)
Seals (6) (item 235, WP 0491 00)
Washer, flat (item 537, WP 0491 00)
Washers, flat (5) (item 540, WP 0491 00)

Equipment Condition

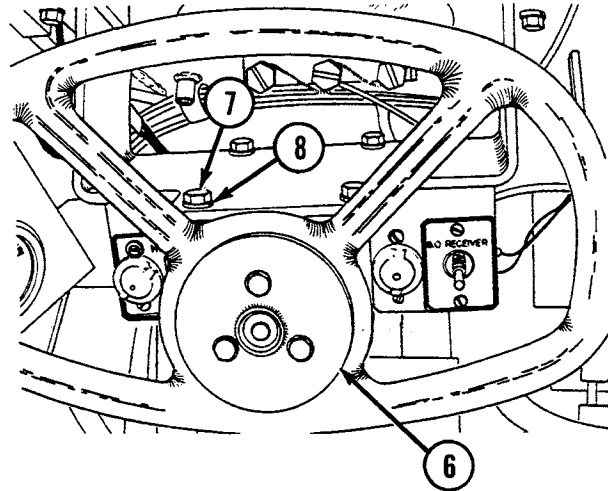
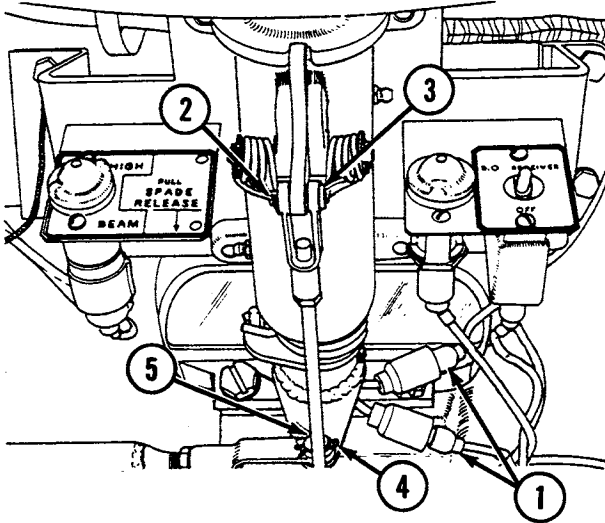
Powerplant removed (see WP 0098 00)
Left-side air cleaner removed (see WP 0137 00)
Cab subfloor plates removed (see WP 0286 00 thru 0308 00)
Air inlet doors removed as necessary (see WP 0341 00)
Air inlet grilles removed as necessary (see WP 0342 00)
Ammunition rack removed (see WP 0386 00)
Toolbox rack removed (see WP 0389 00)
Oddment tray removed (see WP 0390 00)

NOTE

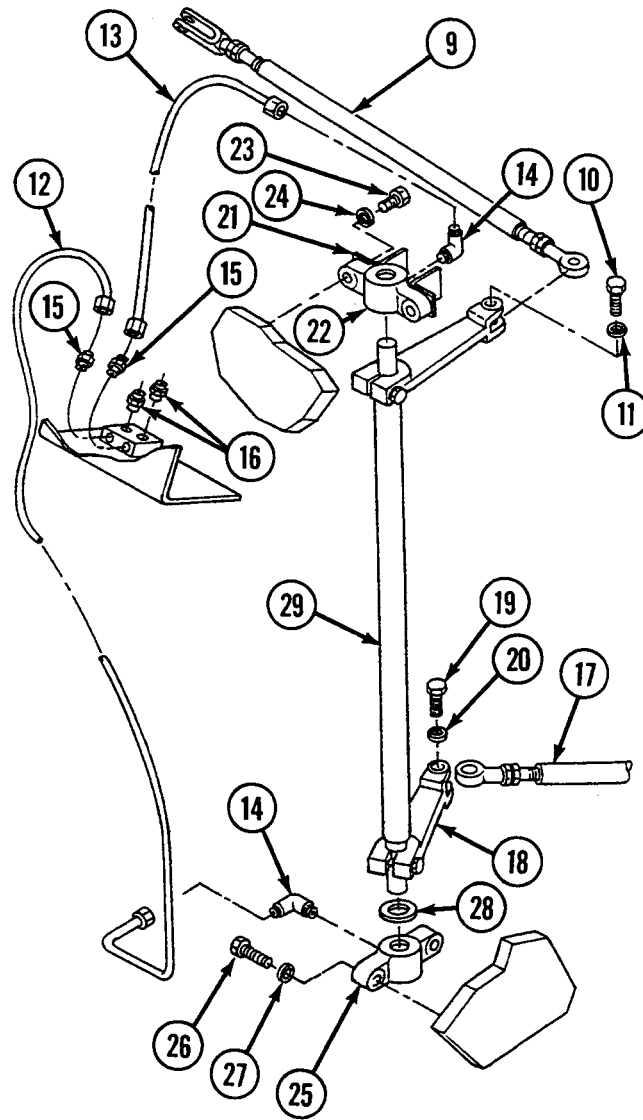
Only remove or open items necessary to gain access to area of linkage requiring removal.

Removal

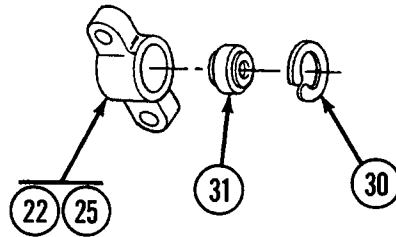
1. Disconnect two electrical leads (1).
2. Remove cotter pin (2) and straight pin (3).
3. Remove cotter pin (4) and straight pin (5).
4. Remove steering control assembly (6) by removing four screws (7) and four lockwashers (8).



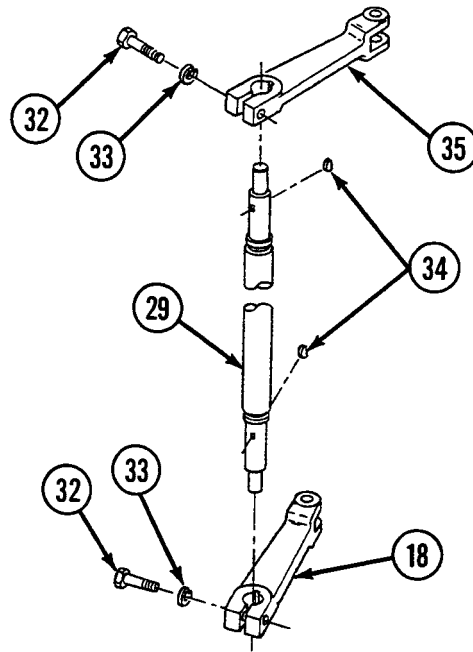
5. Remove connecting link (9) by removing screw (10) and lockwasher (11).
6. Disconnect and remove two lubrication tubes (12 and 13), two elbows (14), two adapters (15), and two fittings (16).
7. Disconnect connecting link (17) from lever (18) by removing screw (19) and lockwasher (20).
8. Remove bracket (21) and bearing housing (22) by removing two screws (23) and two lockwashers (24).
9. Remove bearing housing (25) by removing two screws (26) and two lockwashers (27).
10. Slide two bearing housings (22 and 25) and washer (28) from shaft assembly (29).



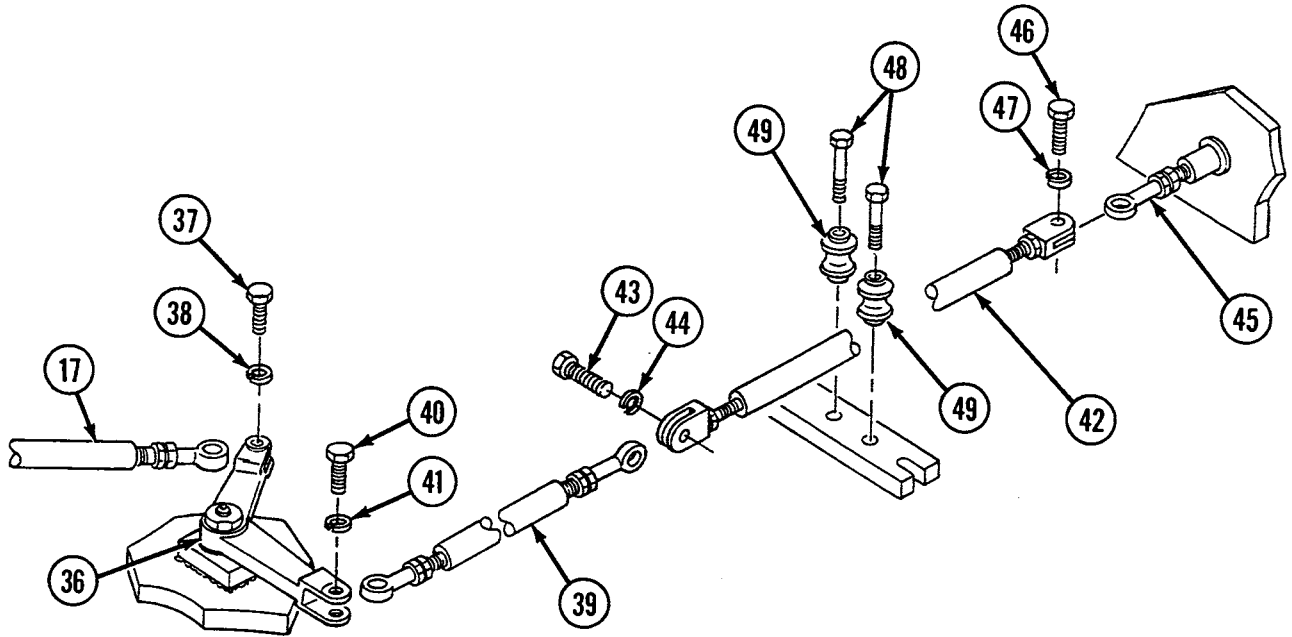
11. Remove two retainers (30) and two bearings (31) from bearing housings (22 and 25).



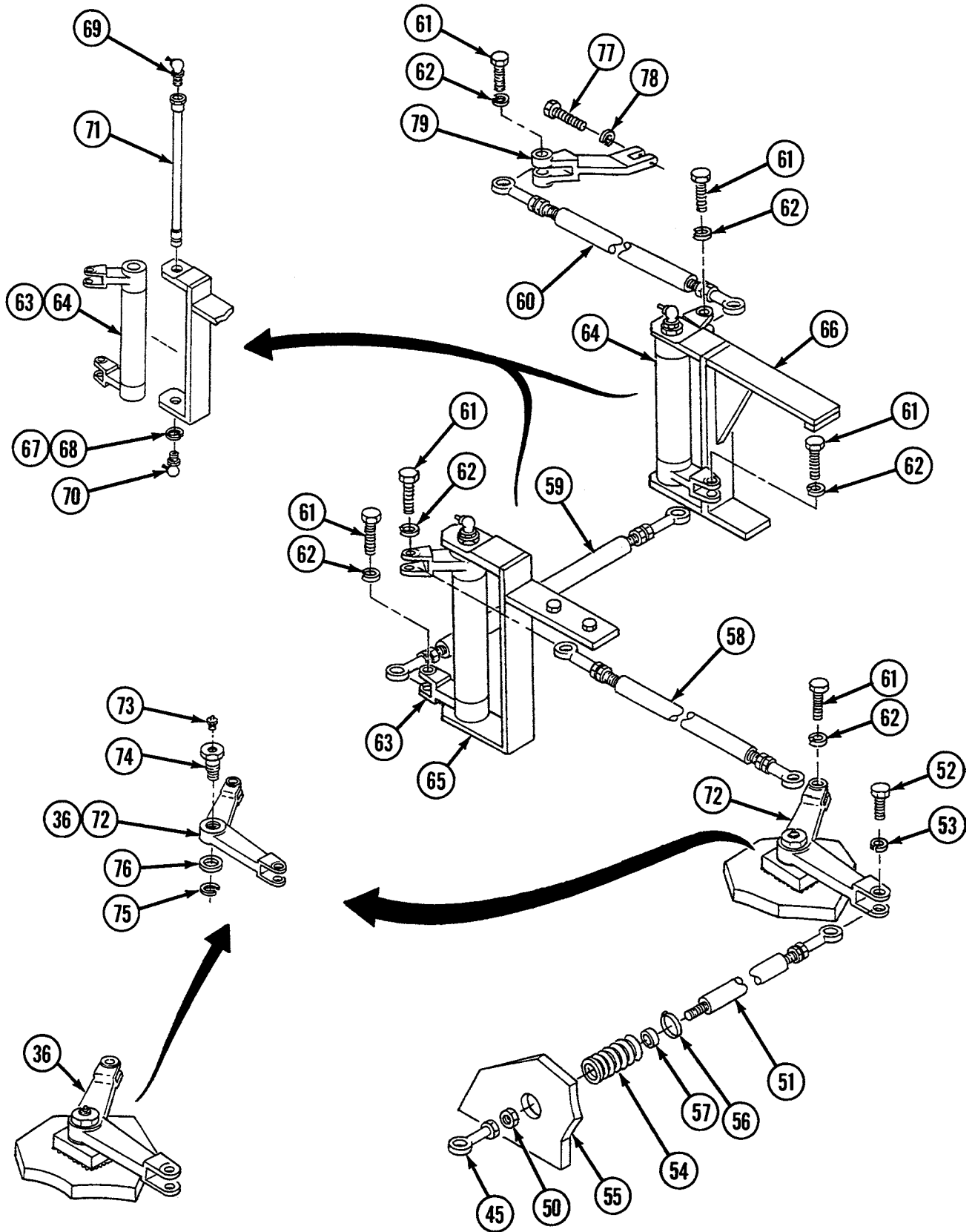
12. Remove two screws (32), two lockwashers (33), two keys (34), and two levers (35 and 18) from shaft assembly (29).



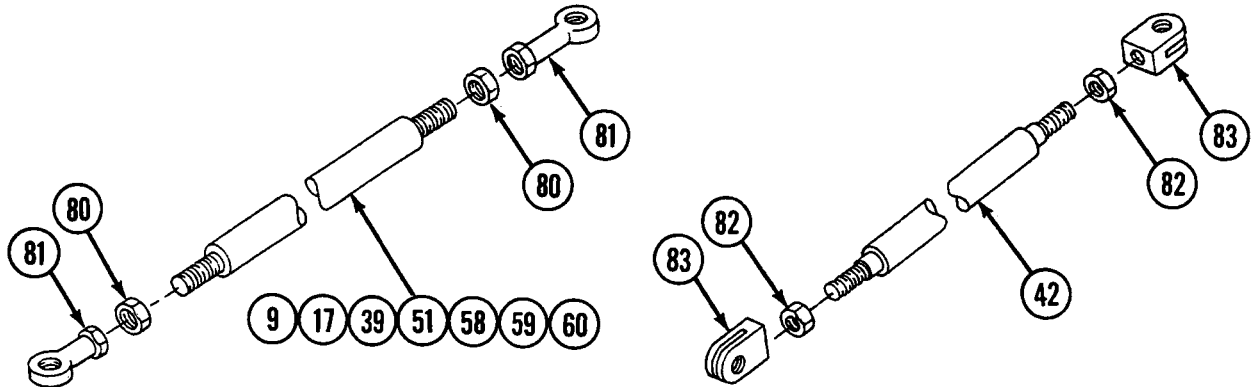
13. Remove connecting link (17) from bell crank assembly (36) by removing screw (37) and lockwasher (38).
14. Disconnect connecting link (39) from bell crank assembly (36) by removing screw (40) and lockwasher (41).
15. Remove connecting link (39) from tube assembly (42) by removing screw (43) and lockwasher (44).
16. Remove tube assembly (42) from rod end bearing (45) by removing screw (46) and lockwasher (47).
17. Remove six bolts (48) and six rollers (49).



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18. Loosen nut (50) and unscrew rod end bearing (45) from connecting link (51). Remove nut.
 19. Remove screw (52) and lockwasher (53).
 20. Pry rubber bellows (54) loose from bulkhead (55) and pull connecting link (51) from bulkhead.
 21. Remove rubber bellows (54) from connecting link (51) by removing clamp (56) and bushing (57).
 22. Remove connecting links (58, 59, and 60) by removing screw (61) and lockwasher (62) from ends of each connecting link.
 23. Remove two bell crank assemblies (63 and 64) from mounting brackets (65 and 66) by removing two retaining rings (67 and 68), four lubrication fittings (69 and 70), and two grooved pins (71).
 24. Remove two bell cranks (72 and 36) by removing lubrication fitting (73), bolt (74), lockwasher (75), and flat washer (76) from each.
 25. Remove screw (77), lockwasher (78), and lever (79).



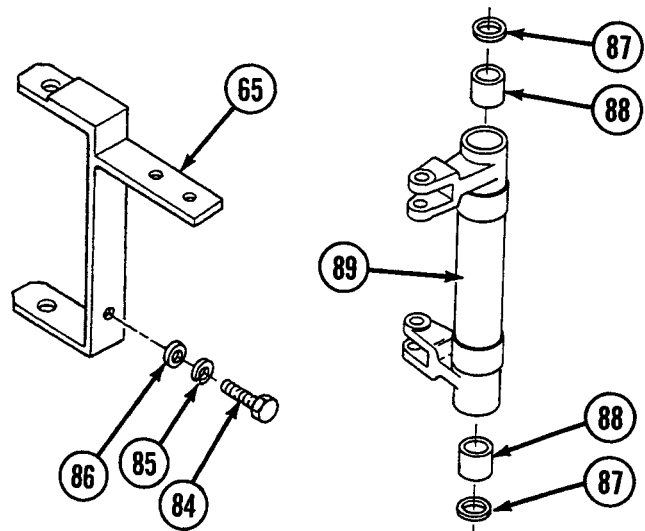
26. If necessary, remove nut (80) and bearing (81) from each end of connecting links (9, 17, 39, 51, 58, 59, and 60).
27. If necessary, remove two nuts (82) and two clevis assemblies (83) from tube assembly (42).



28. Remove mounting bracket (65) by removing three screws (84), three lockwashers (85), and flat washer (86).

Disassembly

1. Remove two seals (87) and two bearings (88) from each of two bell cranks (89).



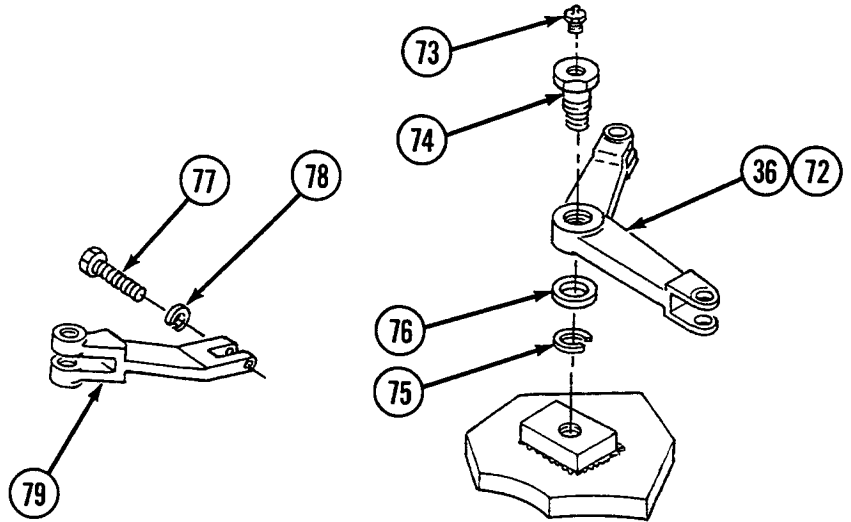
Assembly

1. Install two seals (87) and two bearings (88) to each of two bell cranks (89).

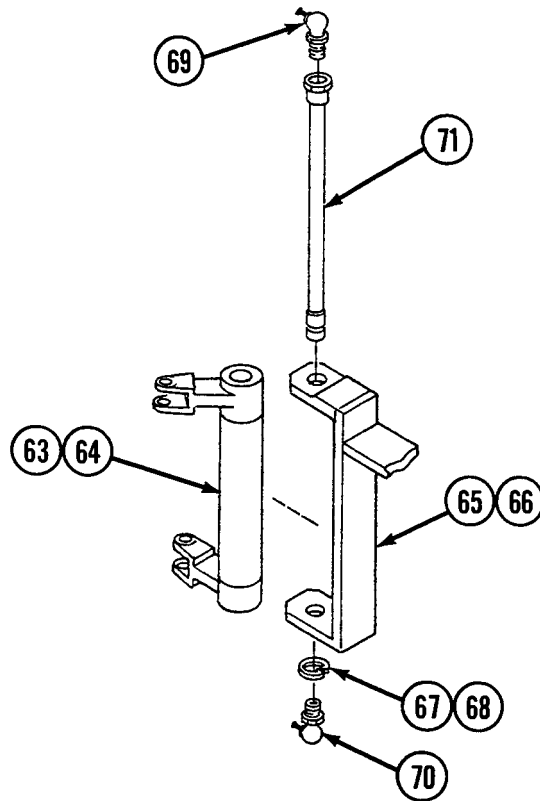
Installation

1. Install mounting bracket (65) with three lockwashers (85), flat washer (86), and three screws (84).
2. If removed, install two clevis assemblies (83) and two nuts (82) to tube assembly (42).
3. If removed, install bearing (81) and nut (80) to each end of connecting links (9, 17, 39, 51, 58, 59, and 60).

4. Install lever (79) with lockwasher (78) and screw (77).
5. Install two bell cranks (72 and 36) each with lubrication fitting (73), flat washer (76), lockwasher (75), and bolt (74).



6. Install two bell crank assemblies (63 and 64) to mounting brackets (65 and 66) with two grooved pins (71), four lubrication fittings (69 and 70), and two retaining rings (67 and 68).

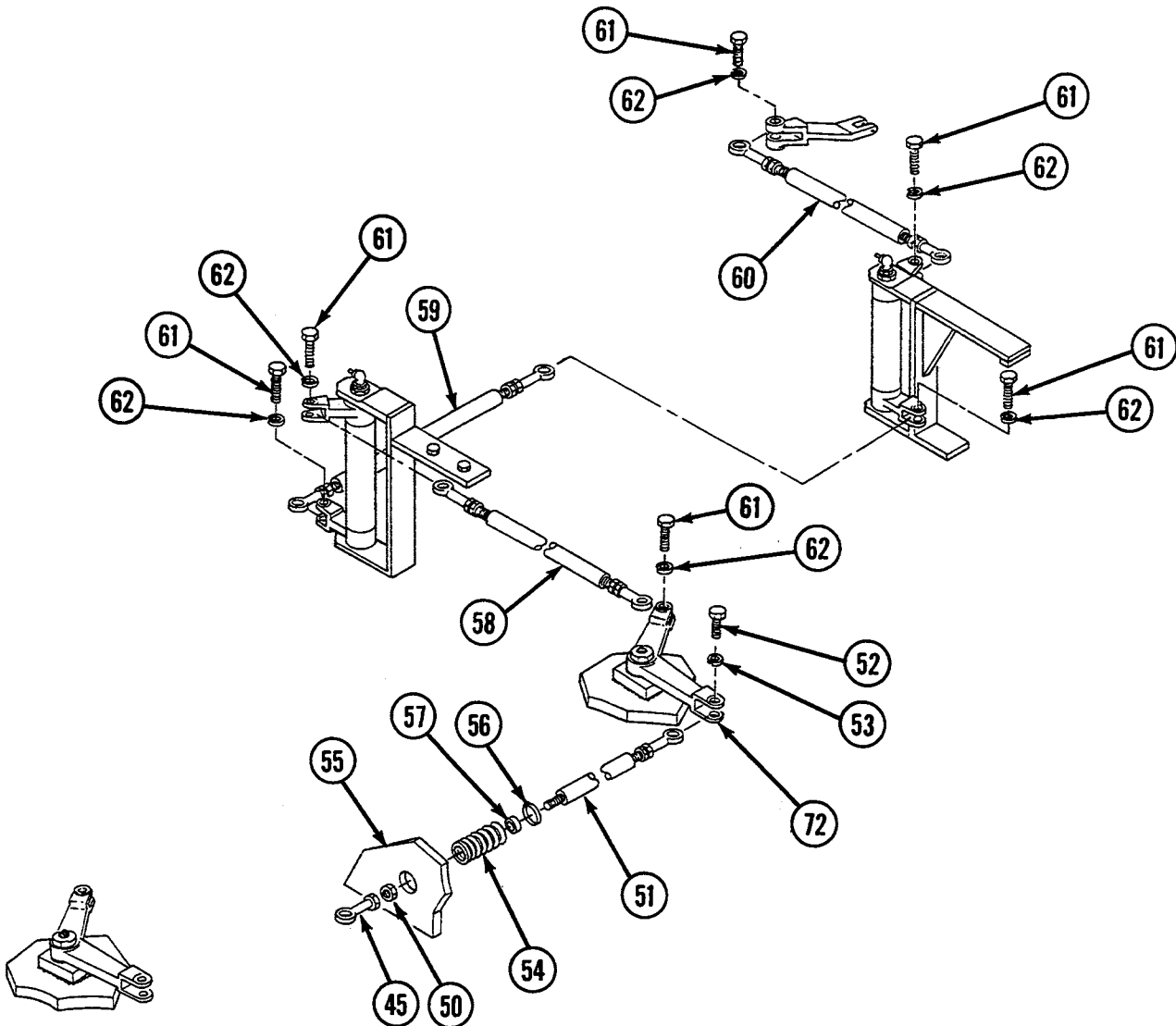


7. Install each end of connecting links (58, 59, and 60) with lockwasher (62) and screw (61).

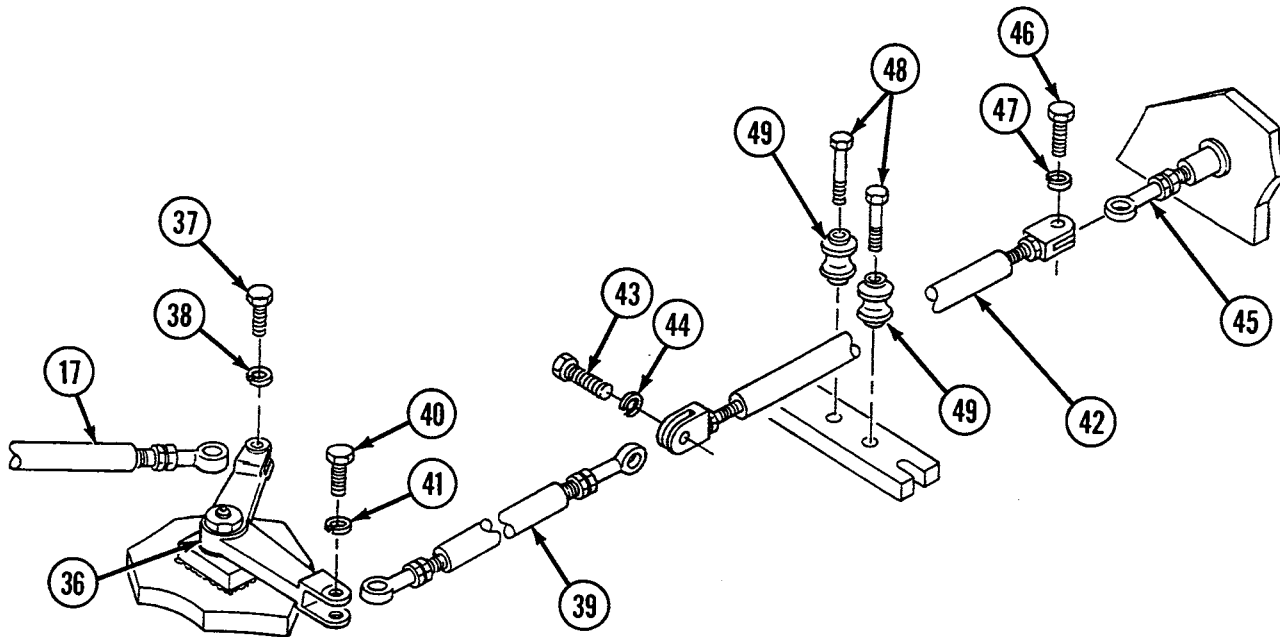
NOTE

Linkages must be completely installed and aligned and rubber bellows must be adjusted (see WP 0358 00) before cementing rubber bellows in place.

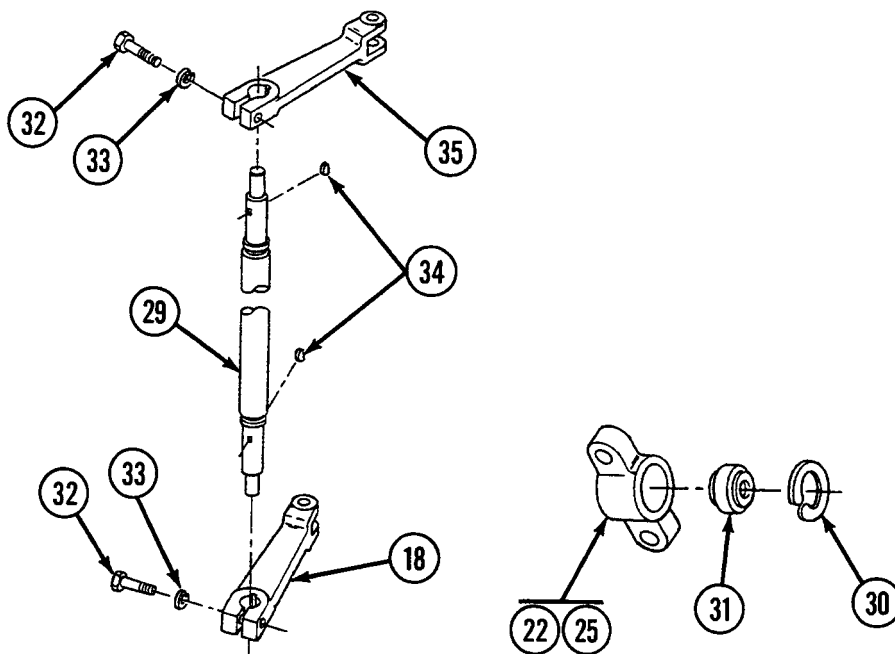
8. Install rubber bellows (54) on connecting link (51) with bushing (57) and clamp (56).
9. Insert connecting link (51) through bulkhead (55).
10. Connect end of connecting link (51) to bell crank assembly (72) with lockwasher (53) and screw (52).
11. Install rod end bearing (45) to connecting link (51) with nut (50).



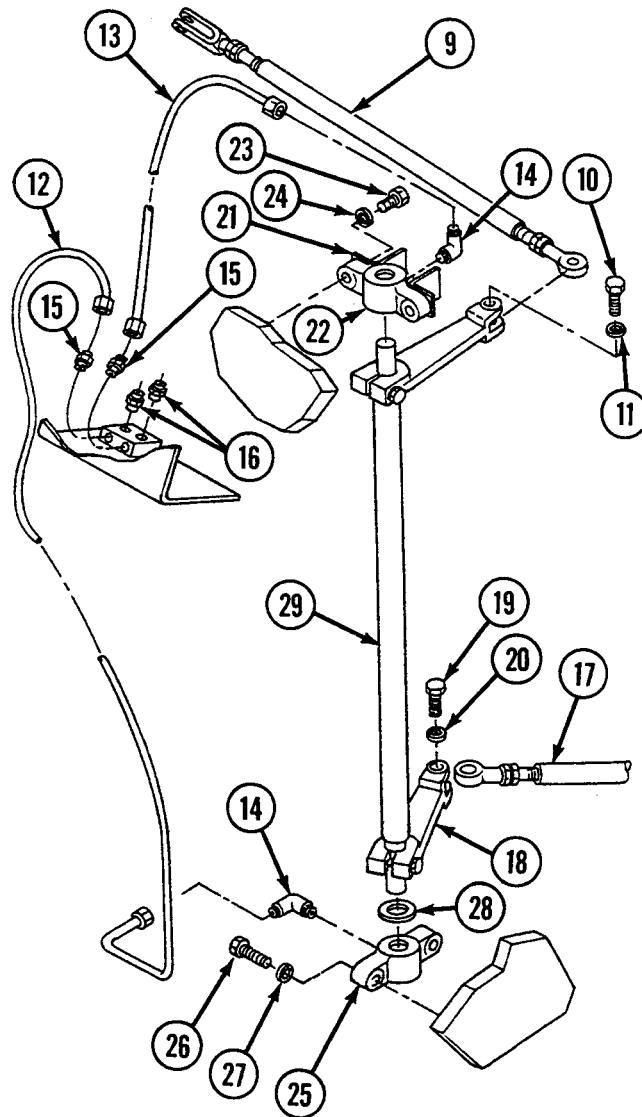
12. Install six rollers (49) with six bolts (48).
13. Install tube assembly (42) to rod end bearing (45) with lockwasher (47) and screw (46).
14. Install connecting link (39) to tube assembly (42) with lockwasher (44) and screw (43).
15. Connect connecting link (39) to bell crank assembly (36) with lockwasher (41) and screw (40).
16. Install connecting link (17) to bell crank assembly (36) with lockwasher (38) and screw (37).



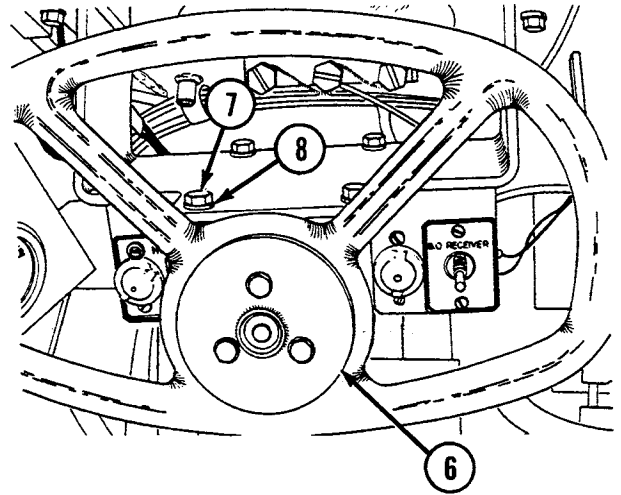
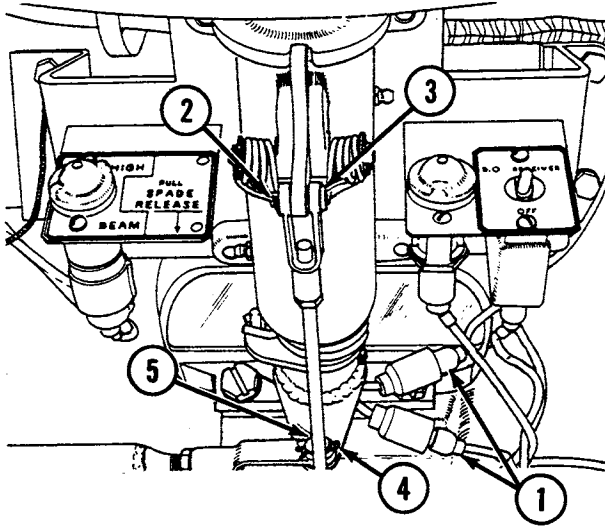
17. Install two levers (35 and 18) to shaft assembly (29) with two keys (34), two lockwashers (33), and two screws (32).
18. Install two bearings (31) and two retainers (30) to bearing housings (22 and 25).



19. Install two bearing housings (22 and 25) and washer (28) to shaft assembly (29).
20. Install bearing housing (25) with two lockwashers (27) and two screws (26).
21. Install bracket (21) and bearing housing (22) with two lockwashers (24) and two screws (23).
22. Connect connecting link (17) to lever (18) with lockwasher (20) and screw (19).
23. Install two elbows (14), two adapters (15), and two fittings (16) and connect two lubrication tubes (12 and 13).
24. Install connecting link (9) with lockwasher (11) and screw (10).



25. Install steering control assembly (6) with four lockwashers (8) and four screws (7).
26. Install straight pin (5) and cotter pin (4).
27. Install straight pin (3) and cotter pin (2).
28. Connect two electrical leads (1).



NOTE

Follow-on maintenance: Only install or close items necessary to gain access to area of linkage requiring removal. Install oddment tray (see WP 0390 00); Install toolbox rack (see WP 0389 00); Install ammunition rack (see WP 0386 00); Install air inlet grilles if removed (see WP 0342 00); Install air inlet doors if removed (see WP 0341 00); Install cab subfloor plates (see WP 0286 00 thru 0308 00); Install left-side air cleaner (see WP 0137 00); Install powerplant (see WP 0098 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
STEERING CONTROLS AND LINKAGES ALIGNMENT

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)
Punches, drive (5) (locating pins) (item 43, WP 0490 00)

Equipment Condition

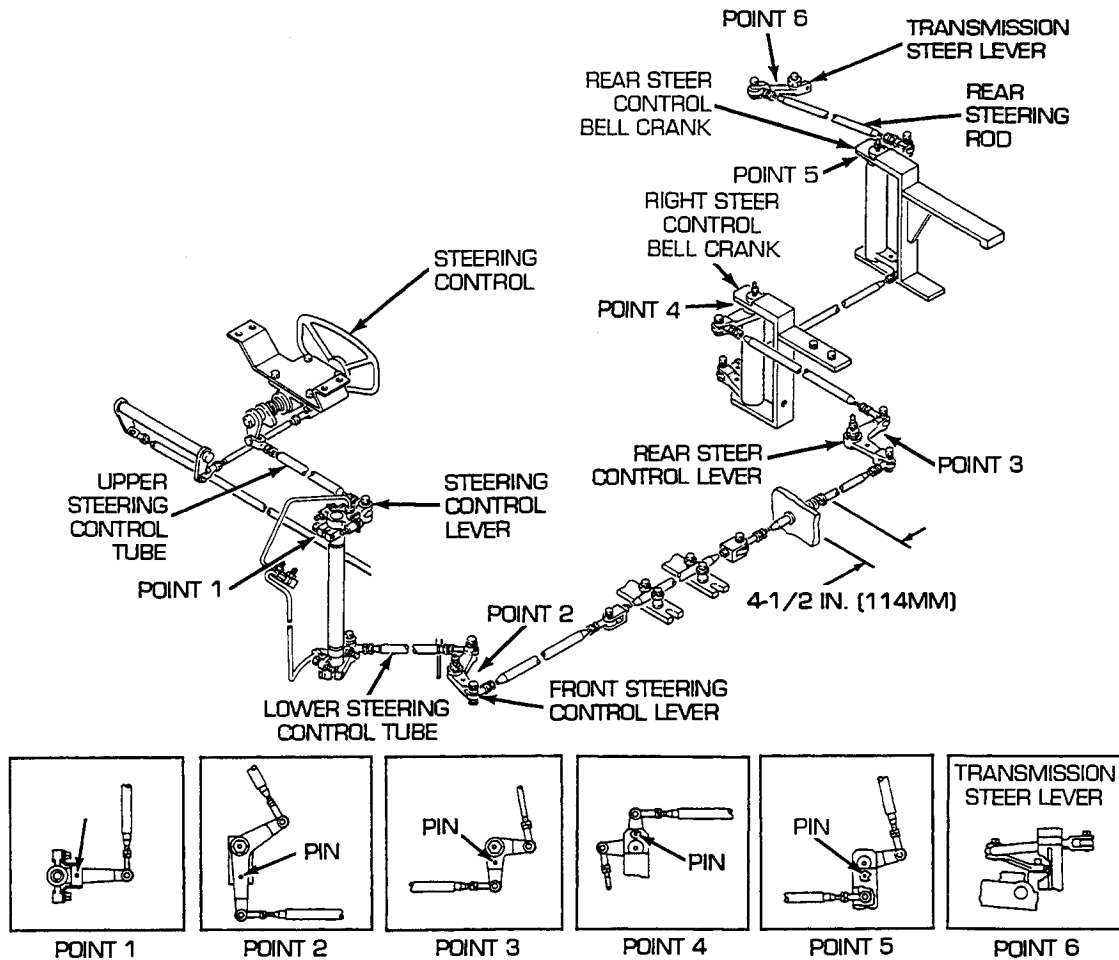
Powerplant removed (see WP 0098 00)
Batteries removed (see WP 0153 00)

Materials/Parts

Adhesive, rubber-base (item 3, WP 0489 00)

Alignment

1. Disconnect rear steering rod from transmission steer levers. Insert 1/8-in.- (3.2 mm-) diameter locating pins in steering control lever (point 1) and adjust upper steering control tube until steering control is in center (no-steer) position.
2. Insert locating pins in levers at points 2 through 5, adjusting lower steering control tube and linkage between points 2 and 5 as necessary to permit pinning.
3. Adjust rear steering rod until rod clevis hole aligns with hole in transmission steer lever with steering position indicator on transmission valve body pointing to center (no-steer) dot (point 6). Connect rod to lever.
4. Extend rubber bellows to 4-1/2 in. (114 mm). Cement rubber bellows to bulkhead with adhesive and clamp rubber bellows to rod. Tighten all nuts and remove locating pins. Connect rear steering rod to transmission steer levers.



NOTE

Follow-on maintenance: Install batteries (see WP 0153 00); Install powerplant (see WP 0098 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

STEERING CONTROL ASSEMBLY MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)
Pliers, retaining ring (item 36, WP 0490 00)

Materials/Parts

Lockwashers (3) (item 638, WP 0491 00)
Pin (item 317, WP 0491 00)
Pins, cotter (2) (item 108, WP 0491 00)
Pin, cotter (item 516, WP 0491 00)
Pin, straight (item 286, WP 0491 00)

Materials/Parts (cont.)

Ring, retaining (item 455, WP 0491 00)
Screws (3) (item 376, WP 0491 00)
Spring (item 315, WP 0491 00)
Spring (item 321, WP 0491 00)
Washer (item 316, WP 0491 00)
Washers, flat (2) (item 536, WP 0491 00)

References

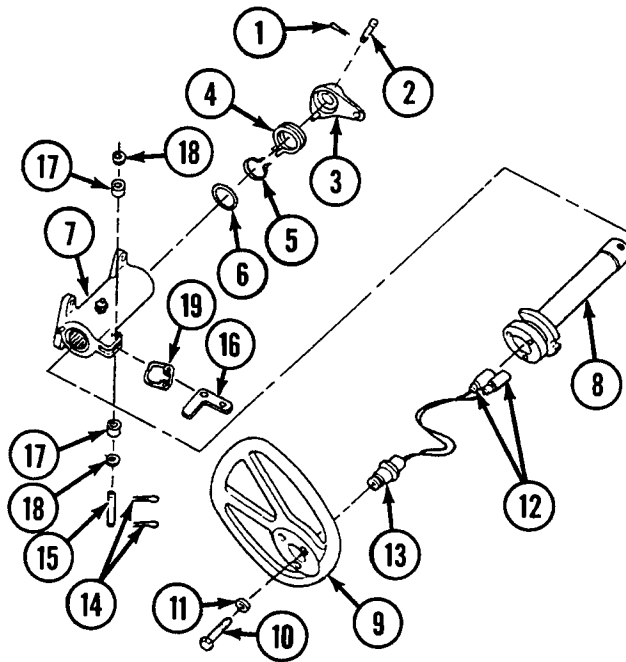
WP 0357 00

Removal

1. Remove steering control assembly (see WP 0357 00).

Disassembly

1. Remove cotter pin (1) and straight pin (2) from control lever (3).
2. Remove control lever (3) with spring (4).
3. Remove retaining ring (5) and washer (6).
4. Pull housing assembly (7) from steering column (8).
5. Remove steering wheel (9) from steering column (8) by removing three screws (10) and three lockwashers (11).
6. Remove connectors (12) from horn switch assembly (13) and pull horn switch assembly out of steering column (8).
7. Remove two cotter pins (14), pin (15), bell crank (16), two spacers (17), two washers (18), and spring (19) from housing assembly (7).



Assembly

1. Install spring (19), two washers (18), two spacers (17), bell crank (16), pin (15), and two cotter pins (14) to housing assembly (7).
2. Pull horn switch assembly (13) wires through steering column (8). Install connectors (12) to horn switch assembly.
3. Install steering wheel (9) to steering column (8) with three screws (10) and three lockwashers (11).
4. Install steering column (8) to housing assembly (7).
5. Install washer (6), retaining ring (5), spring (4), and control lever (3).
6. Install straight pin (2) and cotter pin (1).

Installation

1. Install steering control assembly (see WP 0357 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
STEERING CONTROL HOUSING ASSEMBLY MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)
Puller kit, mechanical (item 40, WP 0490 00)

References

WP 0097 00
WP 0357 00

Materials/Parts

Bearings (2) (item 471, WP 0491 00)
Pin (item 53, WP 0491 00)
Pin (item 724, WP 0491 00)

Removal

1. Remove steering control housing assembly (see WP 0357 00).

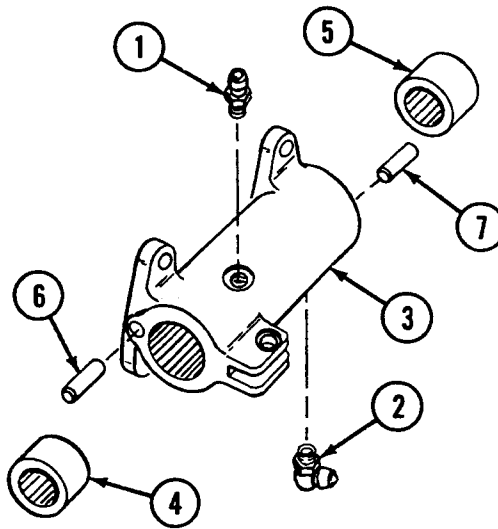
Disassembly

1. Remove two lubrication fittings (1 and 2) from housing (3).

NOTE

Bearings (4 and 5) are mounted in housing (3) with a light press fit.

2. Drive bearings (4 and 5) out of housing (3).
3. Pull and remove two pins (6 and 7) from housing (3).

**Assembly**

1. Install two pins (6 and 7) in housing (3).
2. Install two bearings (4 and 5) in housing (3).
3. Install two lubrication fittings (1 and 2) to housing (3).
4. Lubricate steering control housing assembly (see WP 0097 00).

Installation

1. Install steering control housing assembly (see WP 0357 00).

END OF WORK PACKAGE

UNIT MAINTENANCE**RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1**

NSN 2350-00-122-6826, EIC AQA

**SHIFTING CONTROLS AND LINKAGES MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION****INITIAL SETUP:****Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)
Pliers, retaining ring, external (item 37, WP 0490 00)

Materials/Parts

Bearing (item 91, WP 0491 00)
Bearings (2) (item 470, WP 0491 00)
Bearing units (3) (item 90, WP 0491 00)
Bolt (item 11, WP 0491 00)
Bolts (6) (item 339, WP 0491 00)
Bolts (3) (item 386, WP 0491 00)
Boot, rubber (item 34, WP 0491 00)
Clamp (item 344, WP 0491 00)
Keys (3) (item 698, WP 0491 00)
Lockwashers (3) (item 350, WP 0491 00)
Lockwashers (3) (item 619, WP 0491 00)
Lockwashers (2) (item 621, WP 0491 00)
Lockwashers (3) (item 639, WP 0491 00)
Lockwashers (21) (item 640, WP 0491 00)
Nuts (2) (item 676, WP 0491 00)
Nuts (12) (item 682, WP 0491 00)
Nuts (4) (item 685, WP 0491 00)
Pins, cotter (4) (item 108, WP 0491 00)
Pin, cotter (item 520, WP 0491 00)
Pin, straight (item 119, WP 0491 00)
Pin, straight (item 125, WP 0491 00)
Pin, straight (item 126, WP 0491 00)
Pins, straight (2) (item 163, WP 0491 00)
Pins, straight (2) (item 708, WP 0491 00)

Materials/Parts (cont.)

Screws (10) (item 402, WP 0491 00)
Screws (4) (item 403, WP 0491 00)
Screw (item 404, WP 0491 00)
Screws (6) (item 405, WP 0491 00)
Screws (3) (item 415, WP 0491 00)
Screws (2) (item 589, WP 0491 00)
Screws (2) (item 731, WP 0491 00)
Seals (5) (item 235, WP 0491 00)
Seal (item 851, WP 0491 00)
Spring (item 318, WP 0491 00)
Washers (2) (item 431, WP 0491 00)
Washers, flat (4) (item 537, WP 0491 00)
Washers, flat (4) (item 540, WP 0491 00)

References

WP 0175 00
WP 0362 00

Equipment Condition

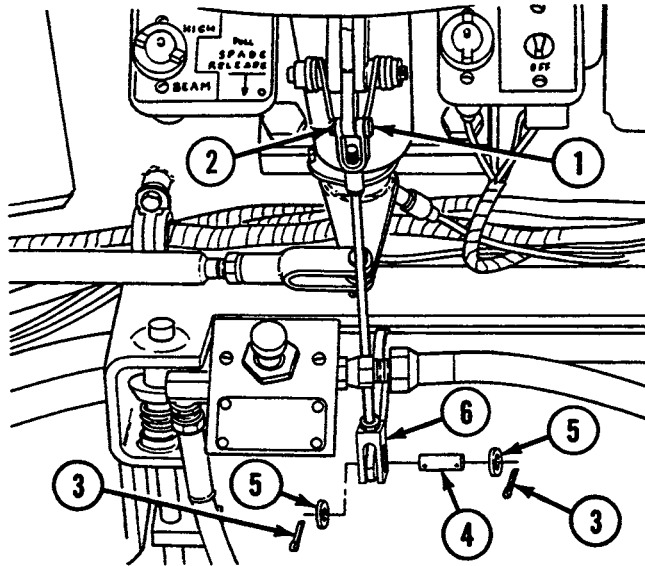
Powerplant removed (see WP 0098 00)
Left-side air cleaner removed (see WP 0137 00)
Cab subfloor plates removed (see WP 0286 00 thru 0308 00)
Air inlet doors removed as necessary (see WP 0341 00)
Air inlet grilles removed as necessary (see WP 0342 00)
Ammunition rack removed (see WP 0386 00)
Toolbox rack removed (see WP 0389 00)
Oddment tray removed (see WP 0390 00)

NOTE

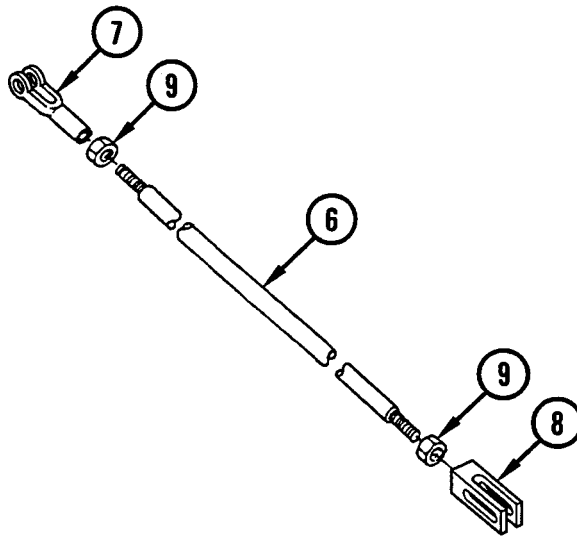
Only remove or open items necessary to gain access to area of linkage requiring removal.

Removal

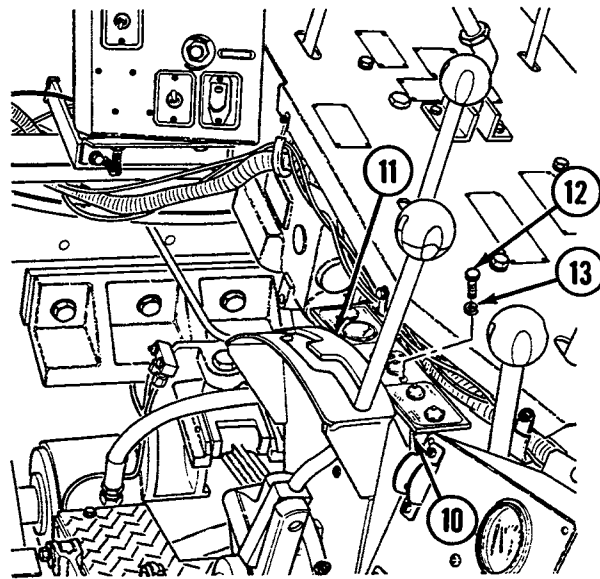
1. Remove cotter pin (1) and straight pin (2).
2. Remove two cotter pins (3), straight pin (4), two washers (5), and rod (6).



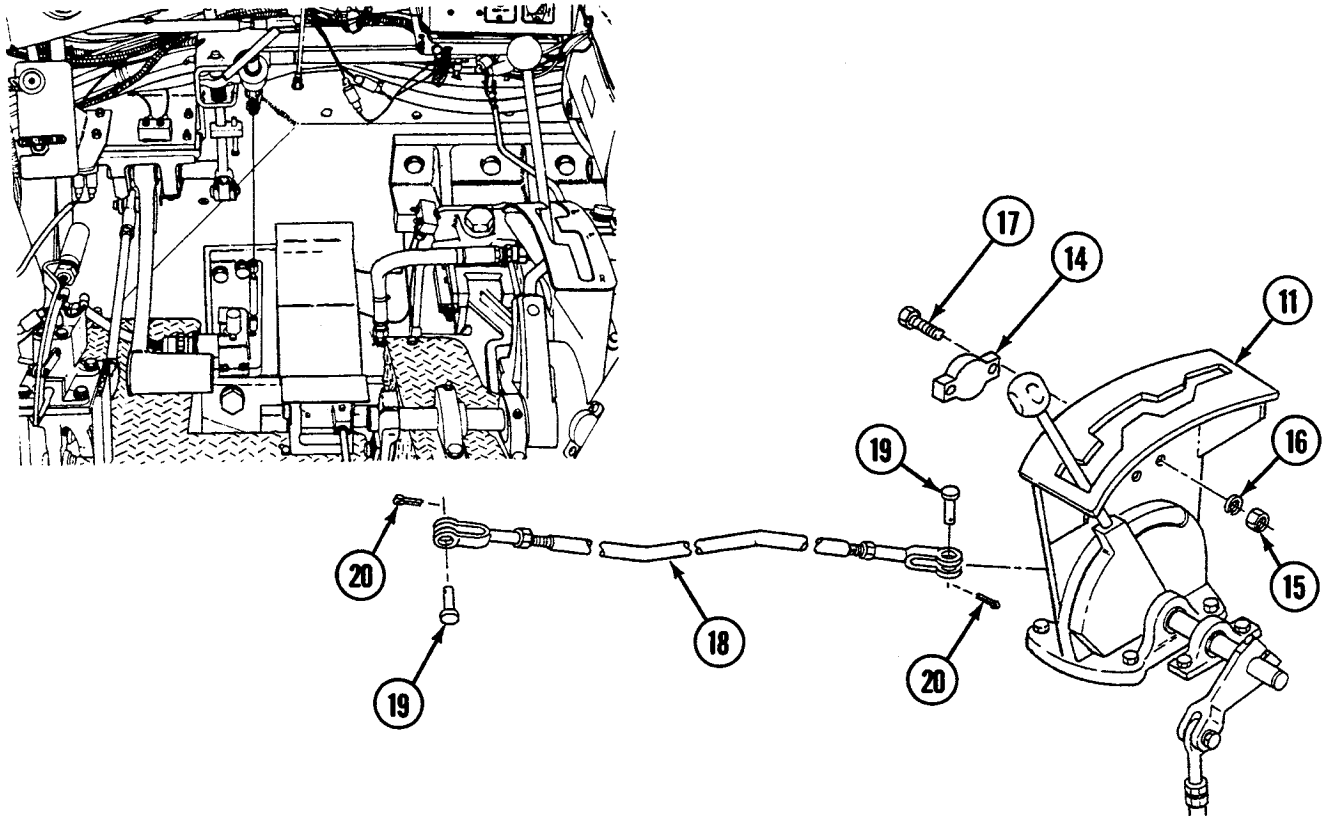
3. Remove two clevis (7 and 8) and two nuts (9) from rod (6).



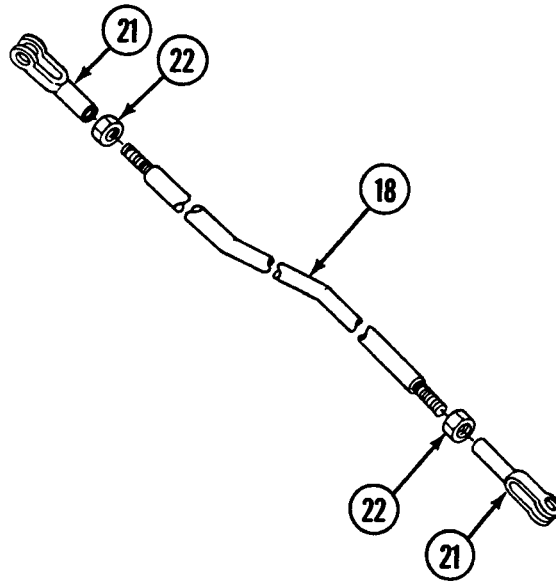
4. Remove electrical leads from warning indicator light, gage, and flasher system panel (10) (see WP 0175 00) attached to transmission shift control assembly (11).
5. Remove warning indicator light, gage, and flasher system panel (10) from transmission shift control assembly (11) by removing two screws (12) and two lockwashers (13).



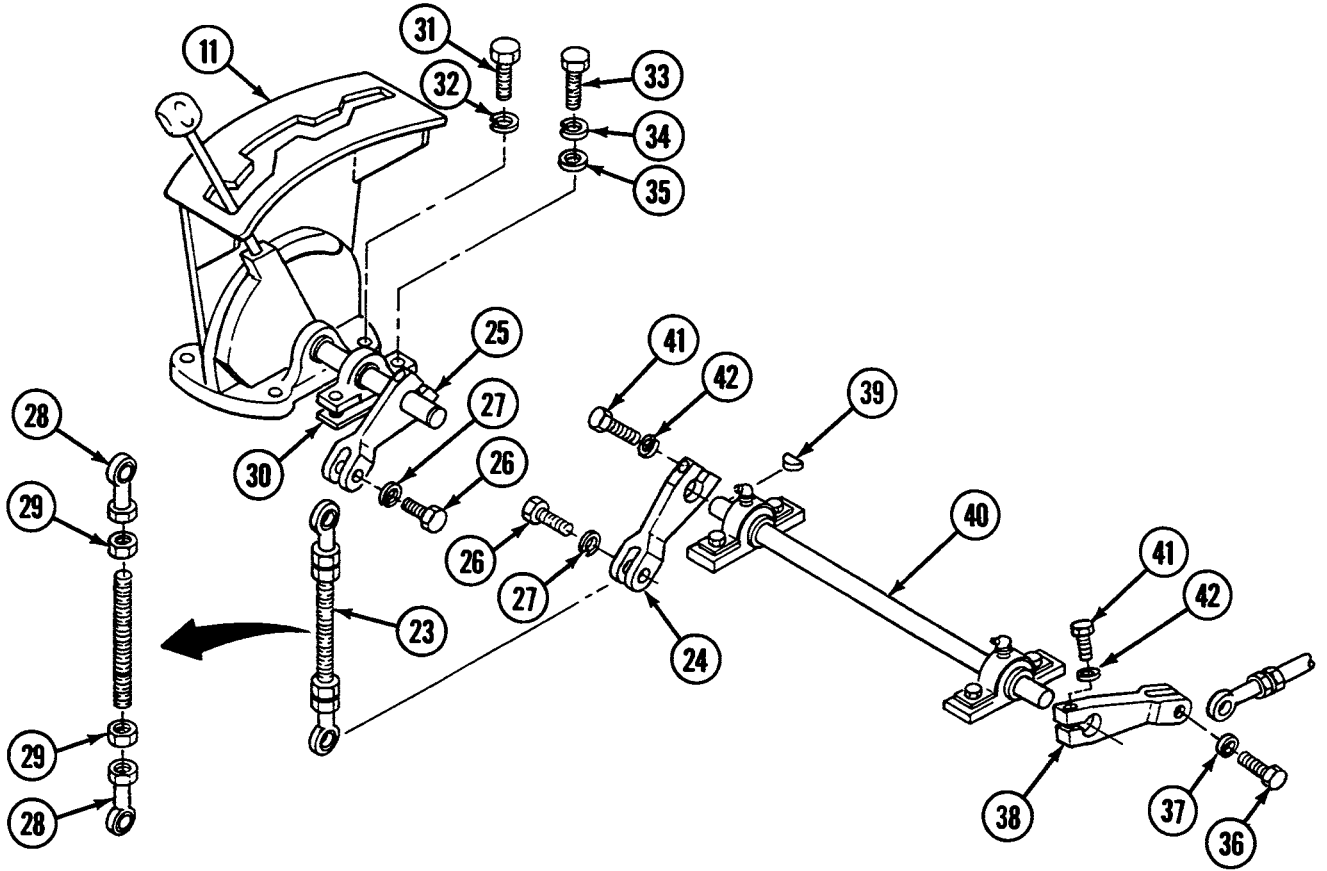
6. Remove circuit breaker (14) from transmission shift control assembly (11) by removing two nuts (15), three lockwashers (16), and two screws (17).
7. Remove rod assembly (18) by removing straight pin (19) and cotter pin (20) from each end.



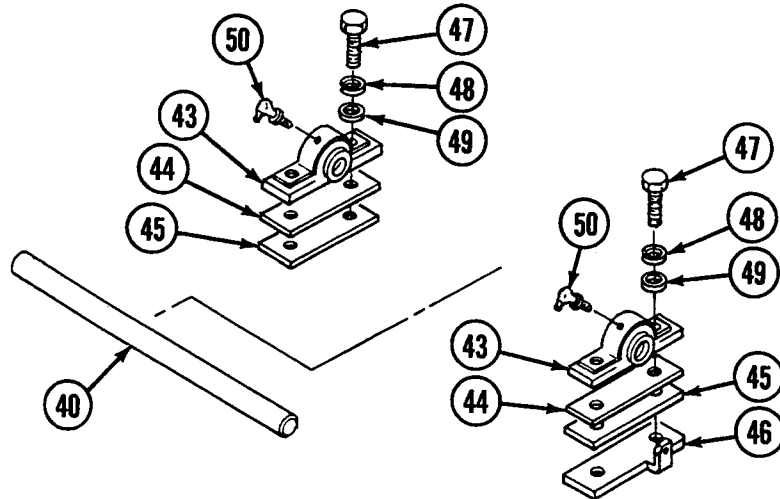
8. Remove clevis (21) and nut (22) from each end of rod assembly (18).



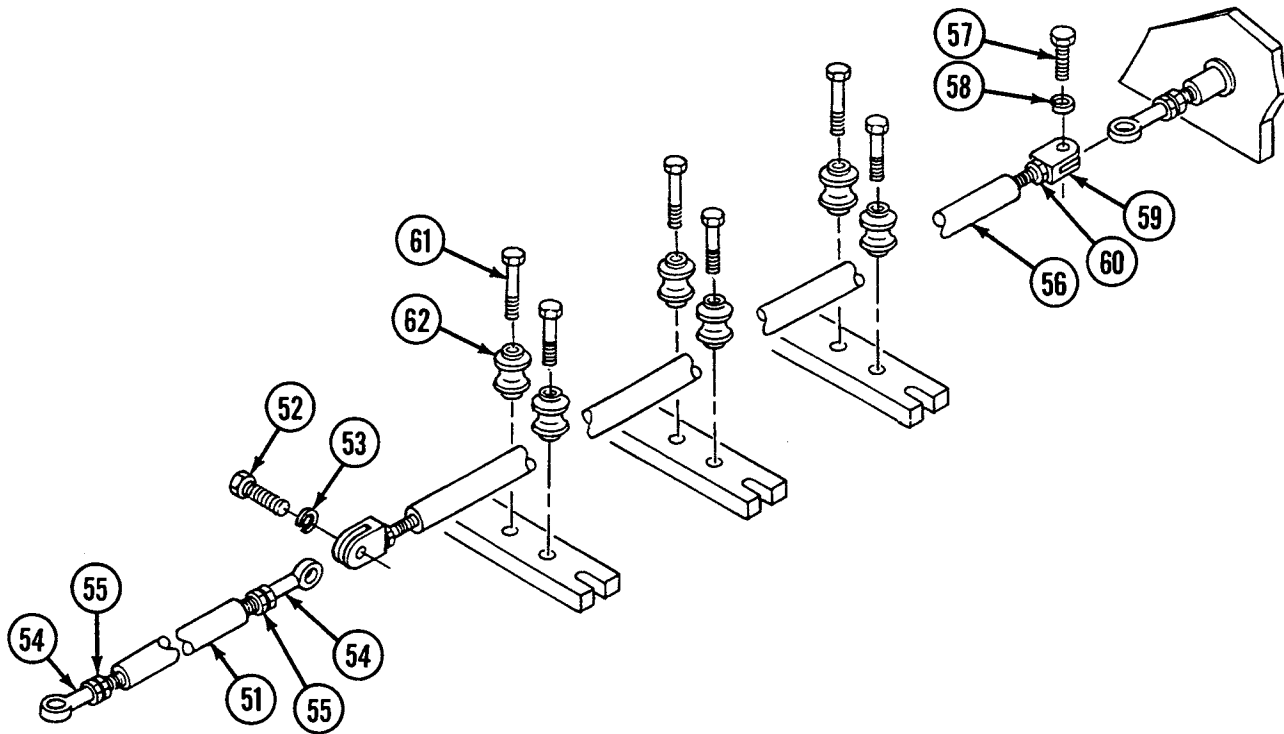
9. Remove stud assembly (23) from levers (24 and 25) by removing two screws (26) and two lockwashers (27). Remove bearing (28) and nut (29) from each end of stud assembly.
10. Remove transmission shift control assembly (11) and shims (30) by removing four screws (31), four lockwashers (32), two screws (33), two lockwashers (34), and two flat washers (35).
11. Remove screw (36) and lockwasher (37).
12. Remove two levers (24 and 38) and two keys (39) from shaft (40) by removing screw (41) and lockwasher (42) from each lever.



13. Remove two bearing units (43), shims (44), two spacers (45), and bracket (46) by removing two screws (47), two lockwashers (48), and two washers (49) from each bearing unit.
14. Remove two fittings (50).
15. Remove shaft (40) from two bearing units (43).

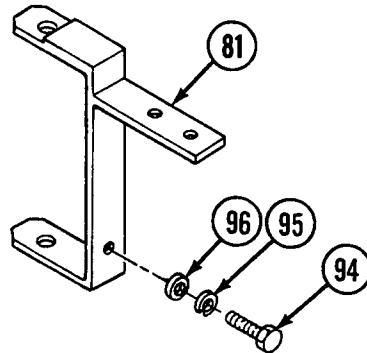


16. Remove tube assembly (51) by removing screw (52) and lockwasher (53). Remove bearing (54) and nut (55) from each end of tube assembly.
17. Remove tube assembly (56) by removing screw (57) and lockwasher (58). Remove bearing (59) and nut (60) from each end of tube assembly.
18. Remove six bolts (61) and six rollers (62).



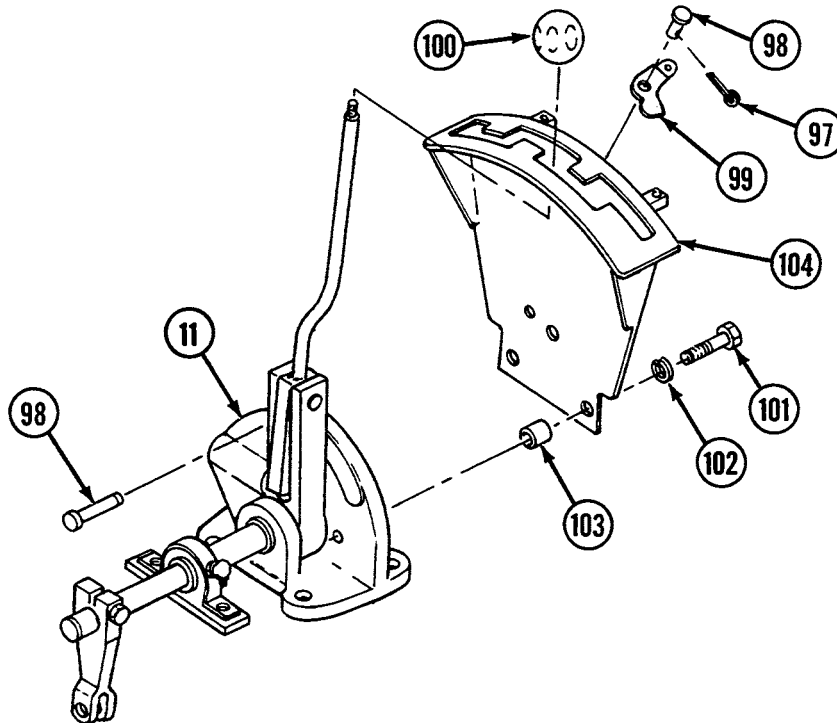
19. Remove screw (63) and lockwasher (64).
20. Loosen nuts (65) and unscrew rod end bearings (66) from tube assembly (67). Remove nuts from each end of tube assembly.
21. Pry rubber boot (68) from bulkhead (69) and pull tube assembly (67) from bulkhead.
22. Remove rubber boot (68) from tube assembly (67) by removing clamp (70) and bushing (71).
23. Remove tube assemblies (72, 73, and 74) by removing screw (75) and lockwasher (76) from ends of each tube assembly.
24. Remove bearing (77) and nut (78) from each end of tube assemblies (72, 73, and 74).
25. Remove two bell crank assemblies (79) from mounting brackets (80 and 81) by removing two retaining rings (82), four lubrication fittings (83 and 84), and two grooved pins (85).
26. Remove bell crank assembly (86) by removing lubrication fitting (87), bolt (88), lockwasher (89), and flat washer (90).
27. Remove screw (91), lockwasher (92), and lever (93).

28. Remove mounting bracket (81) by removing three screws (94), three lockwashers (95), and flat washer (96).

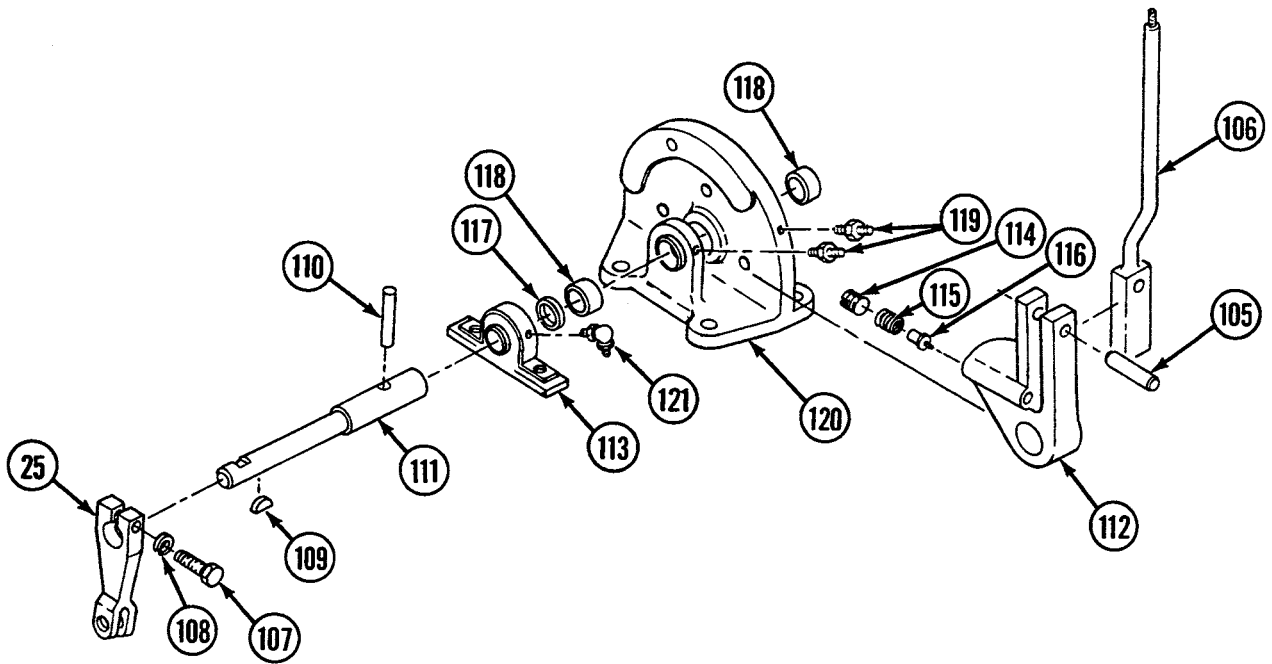


Disassembly

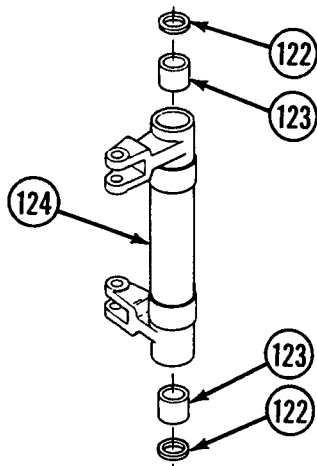
1. Remove cotter pin (97), two straight pins (98), and lever (99) from transmission shift control assembly (11).
2. Remove knob (100), three bolts (101), three lockwashers (102), three spacers (103), and mounting bracket (104).



3. Remove straight pin (105) and lever (106).
4. Remove screw (107), lockwasher (108), lever (25), and key (109).
5. Remove straight pin (110), shaft (111), segment assembly (112), and bearing unit (113).
6. Remove setscrew (114), spring (115), and plunger (116).
7. Remove seal (117) and two bearings (118).
8. If necessary, remove two lubrication fittings (119) from base (120) and fitting (121) from bearing unit (113).

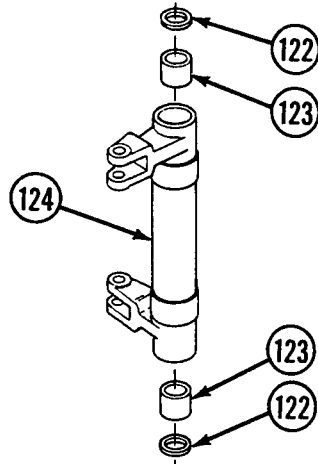


9. Remove two seals (122) and two bearings (123) from each of two bell cranks (124).

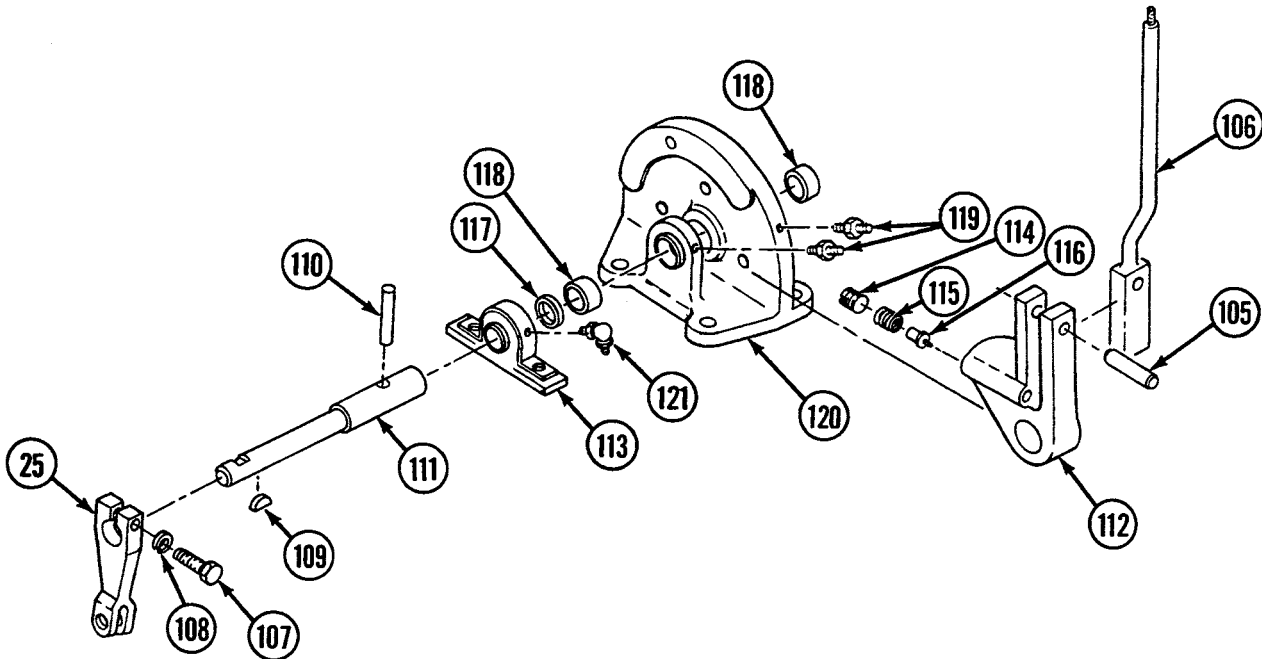


Assembly

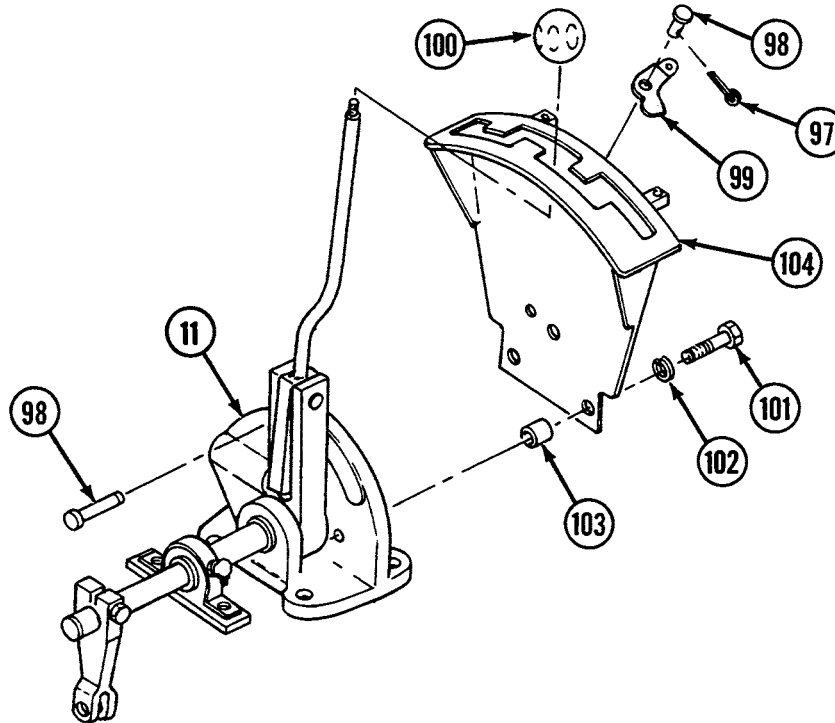
1. Install two seals (122) and two bearings (123) to each of two bell cranks (124).



2. If removed, install two lubrication fittings (119) to base (120) and fitting (121) to bearing unit (113).
3. Install two bearings (118) and seal (117).
4. Install plunger (116), spring (114), and setscrew (114).
5. Install bearing unit (113), segment assembly (112), shaft (111), and straight pin (110).
6. Install key (109), lever (25), lockwasher (108), and screw (107).
7. Install lever (106) and straight pin (105).

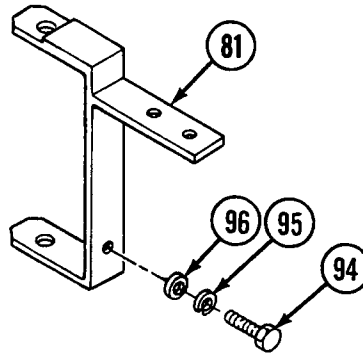


8. Install mounting bracket (104), three spacers (103), three lockwashers (102), three bolts (101), and knob (100).
9. Install lever (99), two straight pins (98), and cotter pin (97).



Installation

1. Install mounting bracket (81) with flat washer (96), three lockwashers (95), and three screws (94).

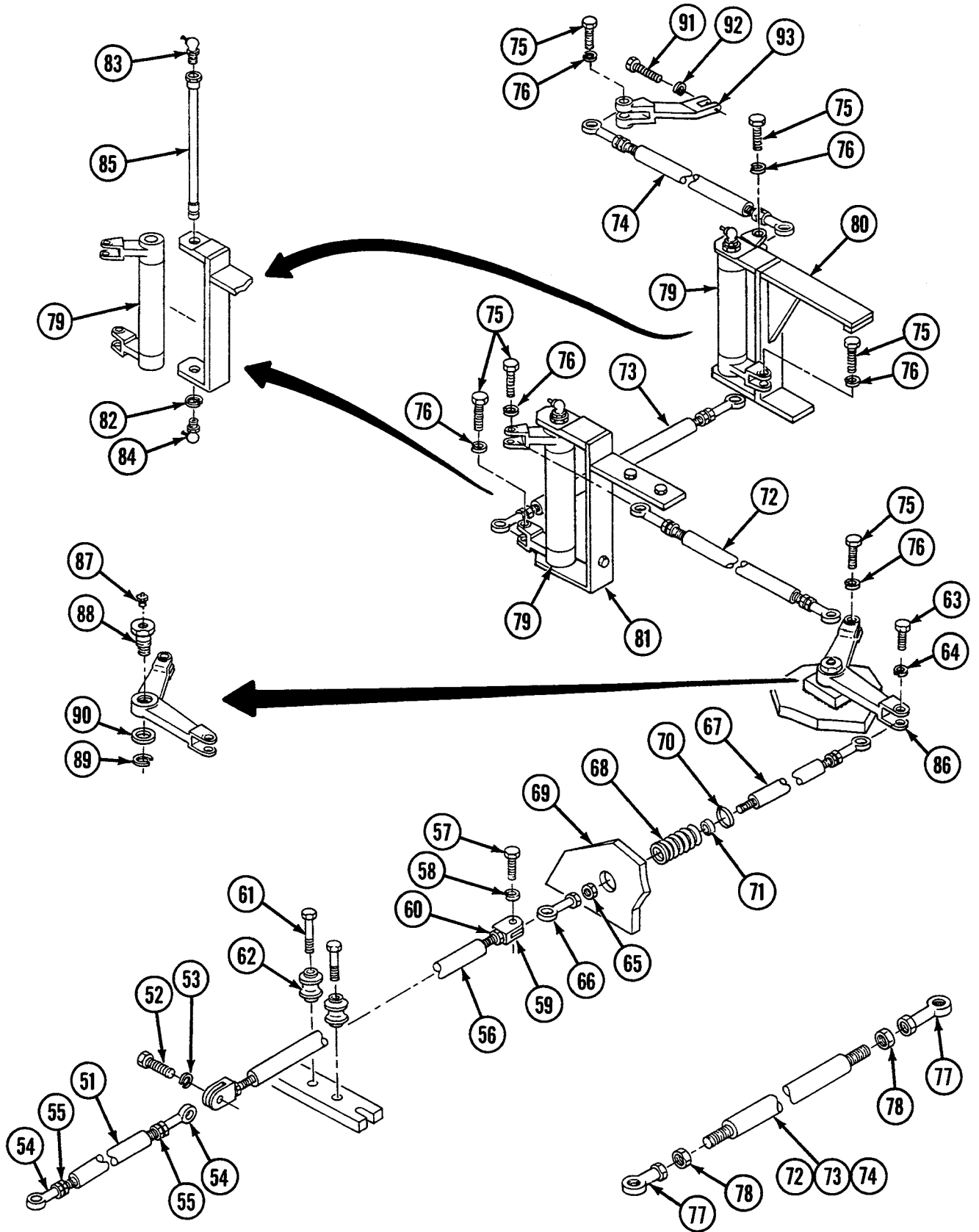


2. Install lever (93), lockwasher (92), and screw (91).
3. Install bell crank assembly (86) with flat washer (90), lockwasher (89), bolt (88), and lubrication fitting (87).
4. Install two bell crank assemblies (79) to mounting brackets (80 and 81) with two grooved pins (85), four lubrication fittings (83 and 84), and two retaining rings (82).
5. Install nut (78) and bearing (77) to each end of tube assemblies (72, 73, and 74).
6. Install tube assemblies (72, 73, and 74) with lockwasher (76) and screw (75) at each end.

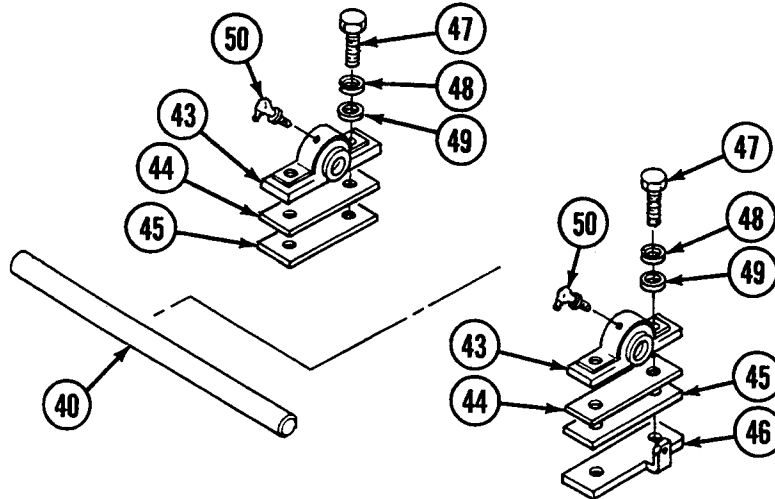
NOTE

Linkages must be completely installed and aligned and rubber boot must be adjusted (see WP 0362 00) before cementing rubber boot in place.

7. Install bushing (71), clamp (70), and rubber boot (68) to tube assembly (67). Install tube assembly to bulkhead (69).
8. Install nut (65) and rod end bearing (66) to each end of tube assembly (67).
9. Install lockwasher (64) and screw (63).
10. Install nut (60) and bearing (59) to each end of tube assembly (56). Install tube assembly with lockwasher (58) and screw (57).
11. Install six rollers (62) with six bolts (61).
12. Install nut (55) and bearing (54) to each end of tube assembly (51). Install tube assembly with lockwasher (53) and screw (52).

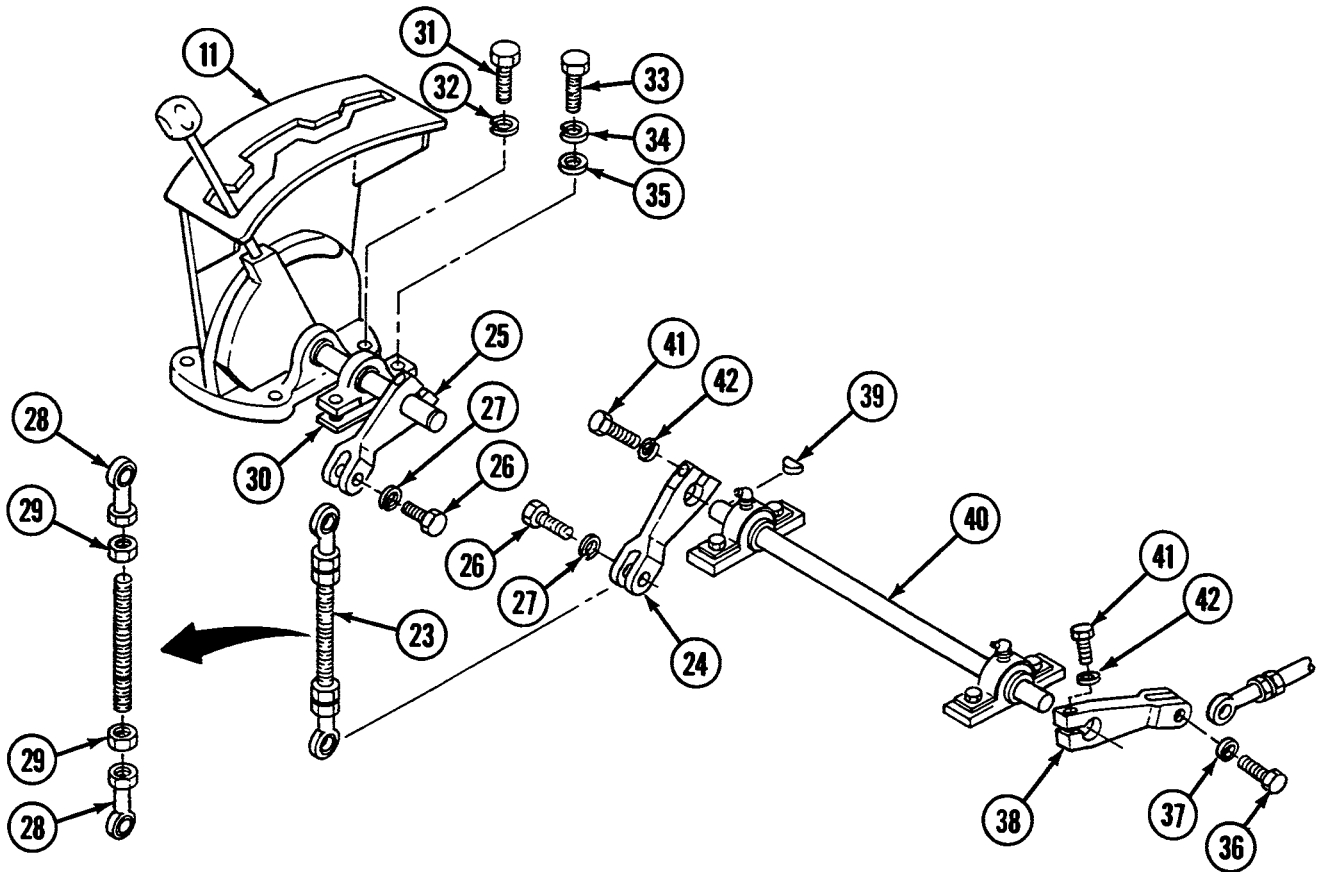


13. Install shaft (40) to two bearing units (43).
14. Install two fittings (50).
15. Install two bearing units (43), shims (44), two spacers (45), and bracket (46) by installing two washers (49), two lockwashers (48), and two screws (47) to each bearing unit.

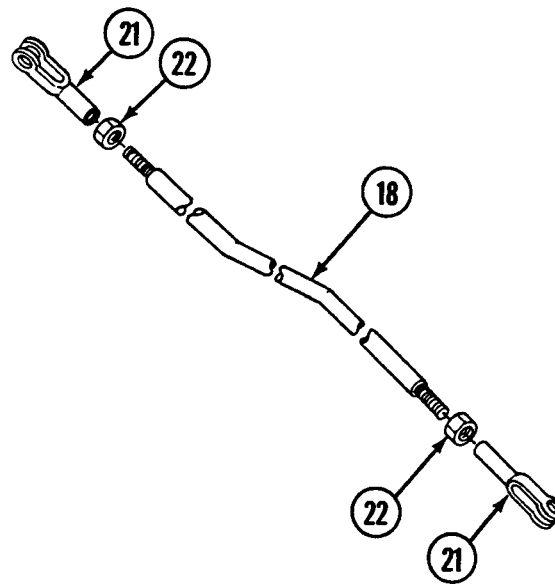


16. Install two levers (24 and 38) and two keys (39) to shaft (40) by installing lockwasher (42) and screw (41) to each lever.
17. Install lockwasher (37) and screw (36).
18. Install transmission shift control assembly (11) and shims (30) with two flat washers (35), two lockwashers (34), two screws (33), four lockwashers (32), and four screws (31).

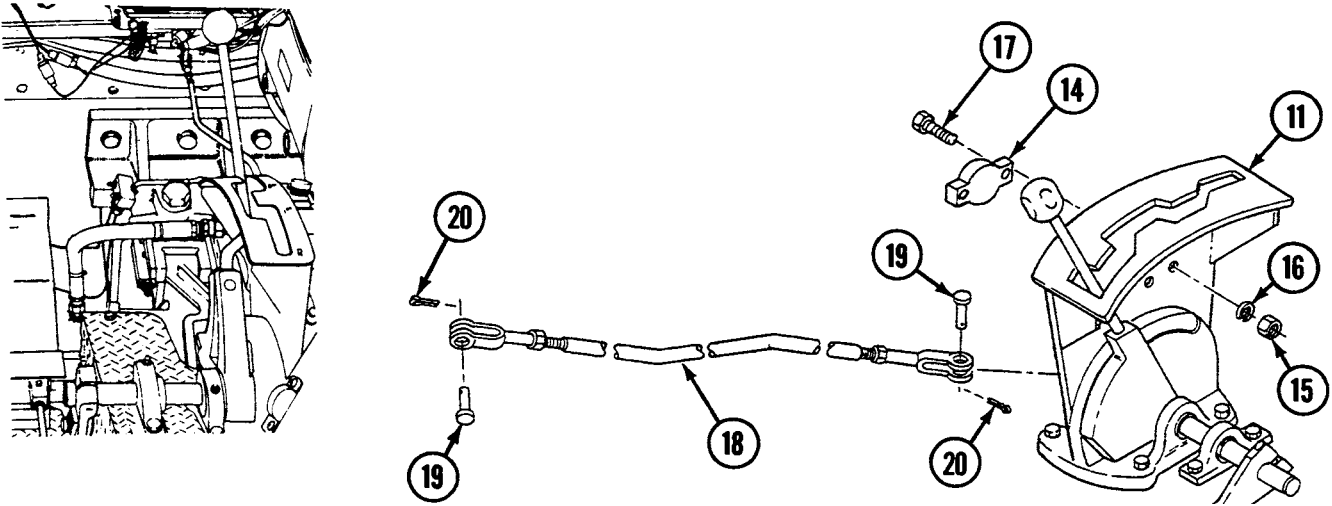
19. Install nut (29) and bearing (28) to each end of stud assembly (23). Install stud assembly to levers (24 and 25) with two lockwashers (27) and two screws (26).



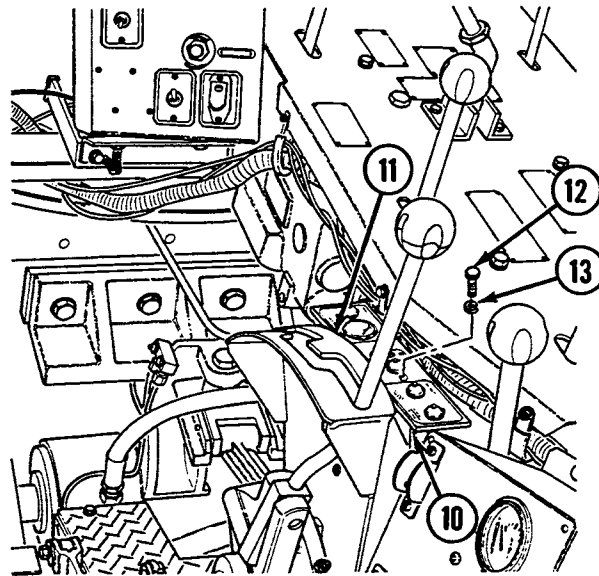
20. Install nut (22) and clevis (21) to each end of rod assembly (18).



21. Install rod assembly (18) with straight pin (19) and cotter pin (20) to each end.
22. Install circuit breaker (14) to transmission shift control assembly (11) with two screws (17), three lockwashers (16), and two nuts (15).



23. Install warning indicator light, gage, and flasher system panel (10) to transmission shift control assembly (11) with two lockwashers (13) and two screws (12).
24. Install electrical leads to warning indicator light, gage, and flasher system panel (10) (see WP 0175 00) attached to transmission shift control assembly (11).

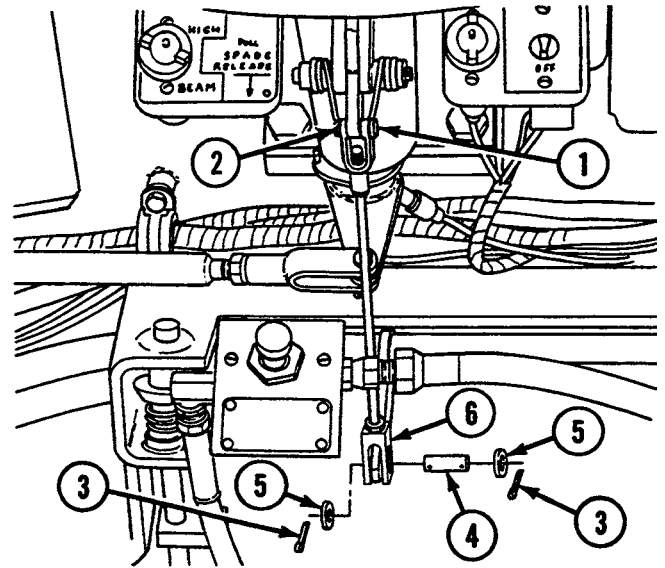
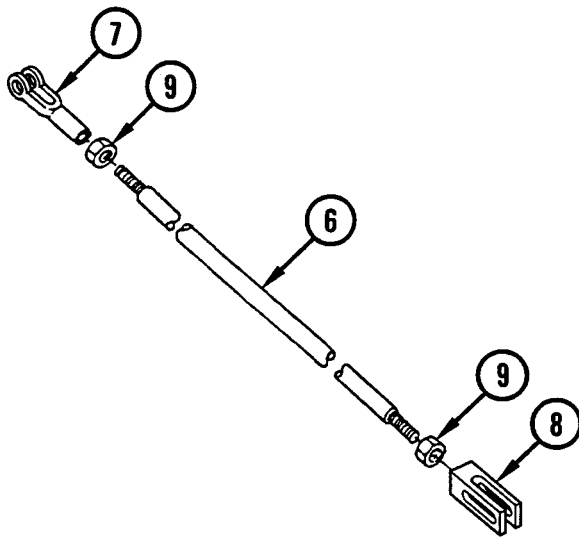


25. Install two nuts (9) and two clevis (7 and 8) to rod (6).

NOTE

Be sure that rod (6) is installed with clevis (8) at bottom of rod.

26. Install rod (6), two washers (5), straight pin (4), and two cotter pins (3).
27. Install straight pin (2) and cotter pin (1).



NOTE

Follow-on maintenance: Only install or close items necessary to gain access to area of linkage requiring removal. Install oddment tray (see WP 0390 00); Install toolbox rack (see WP 0389 00); Install ammunition rack (see WP 0386 00); Install air inlet grilles if removed (see WP 0342 00); Install air inlet doors if removed (see WP 0341 00); Install cab subfloor plates (see WP 0286 00 thru 0308 00); Install left-side air cleaner (see WP 0137 00); Install powerplant (see WP 0098 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
SHIFTING CONTROLS AND LINKAGES ALIGNMENT
ALIGNMENT, ADJUSTMENT

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)
 Punches, drive (locating pins) (4) (item 43, WP 0490 00)

References

WP 0483 00

Equipment Condition

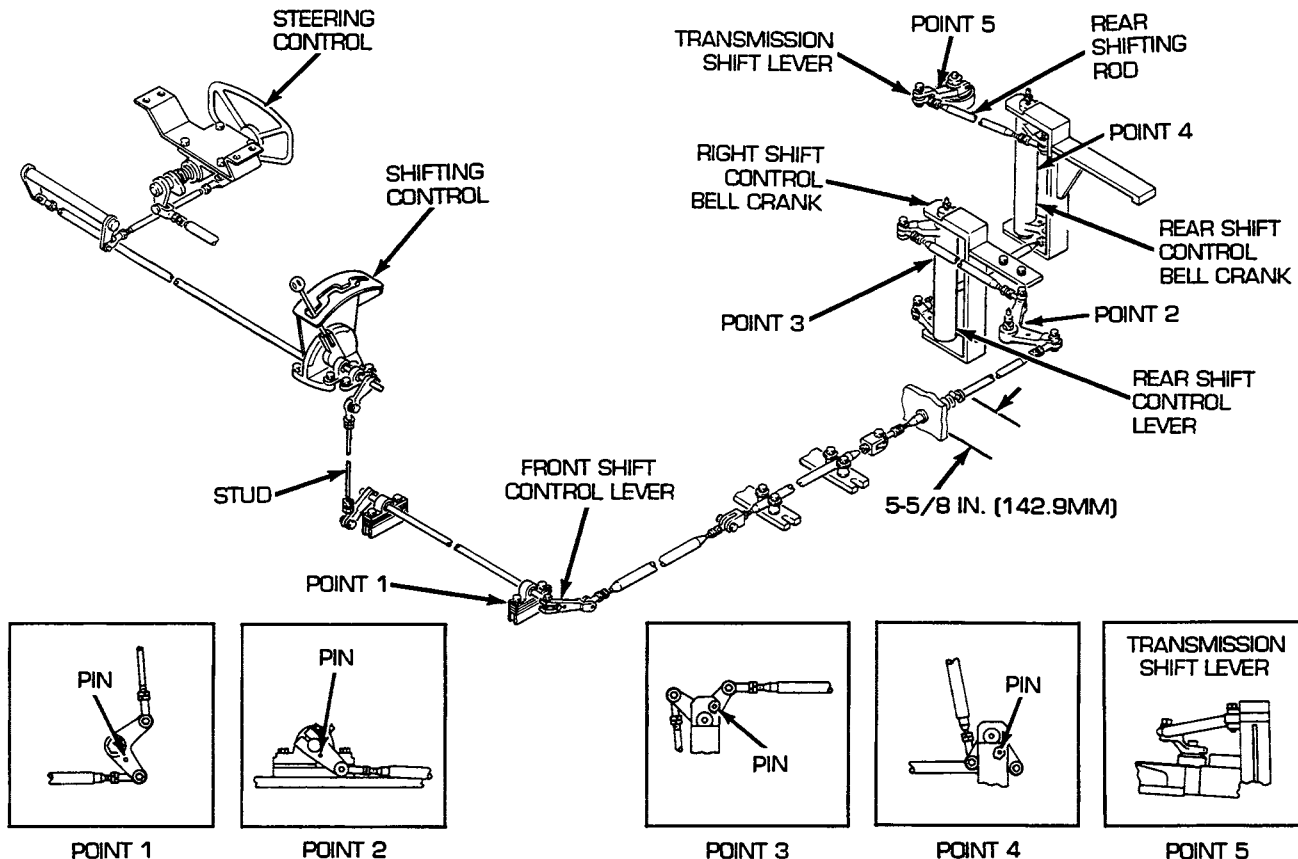
Powerplant removed (see WP 0098 00)
 Batteries removed (see WP 0153 00)
 Transmission oil pressure checked

Materials/Parts

Adhesive, rubber-base (item 3, WP 0489 00)

Alignment

1. Disconnect rear shifting rod from transmission shift lever. Insert 1/8-in.- (3.2 mm-) diameter locating pin in front shift control lever (point 1) and adjust stud until shifting control is in N (neutral) position.
2. Insert locating pins in lever at points 2, 3, and 4. Adjust linkage between these points as necessary to permit pinning.
3. Adjust rear shifting rod until rod clevis holes align with hole in transmission shift lever, when shifting position indicator on transmission valve body is in N (neutral) position (point 5). Connect rod to lever.
4. Extend rubber boot to 5-5/8 in. (142.9 mm). Cement rubber boot into bulkhead with adhesive and clamp rubber boot to rod. Tighten all nuts and remove locating pins. Connect rear shifting rod to transmission shift lever.



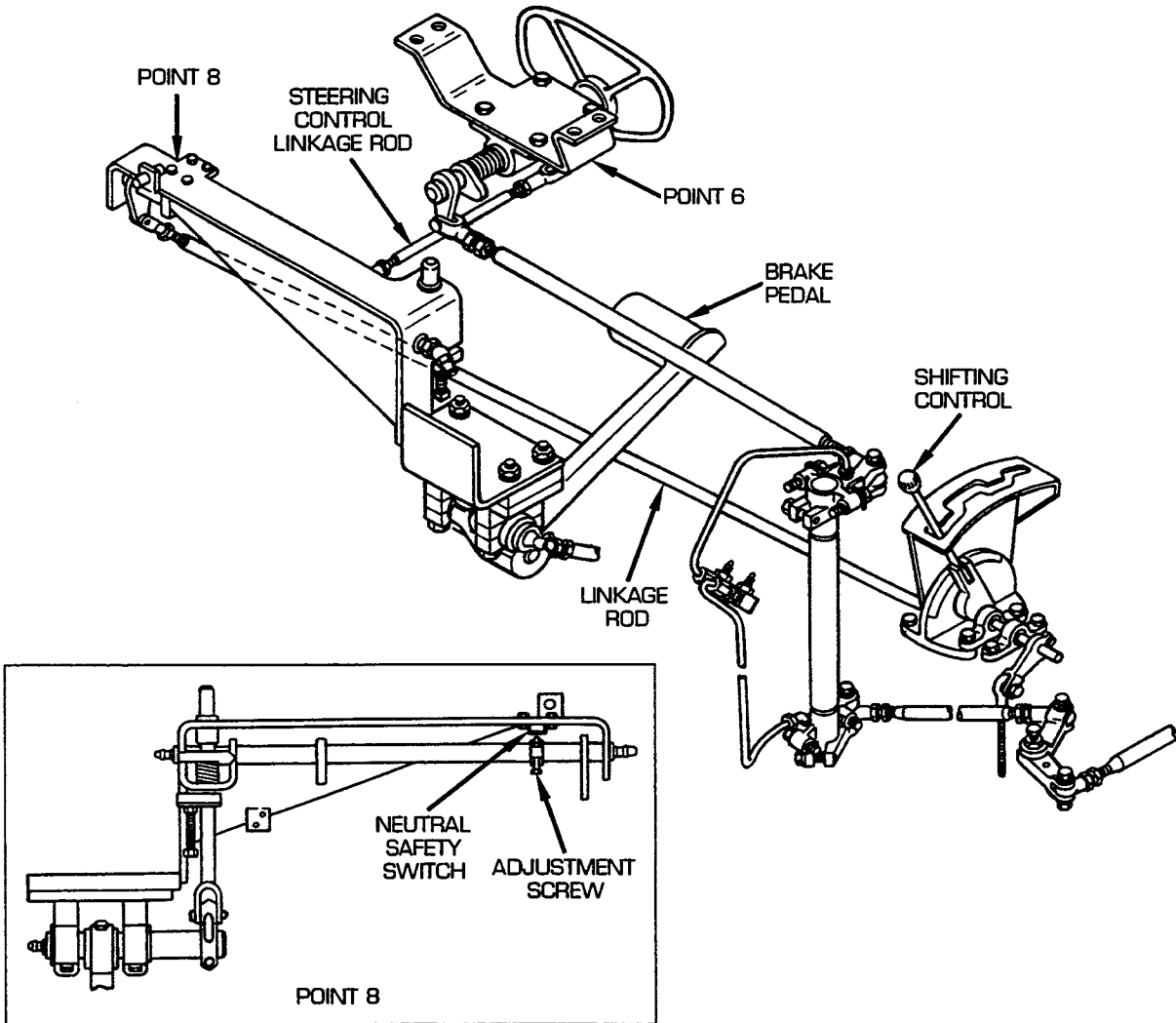
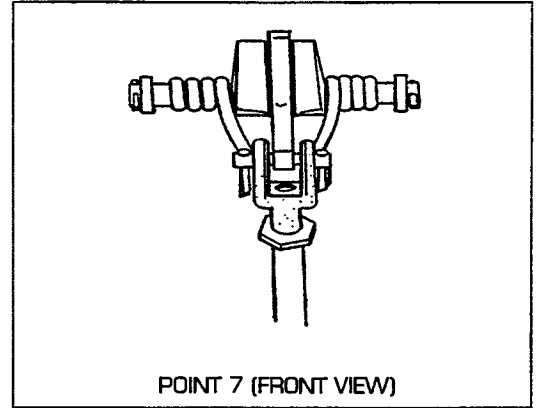
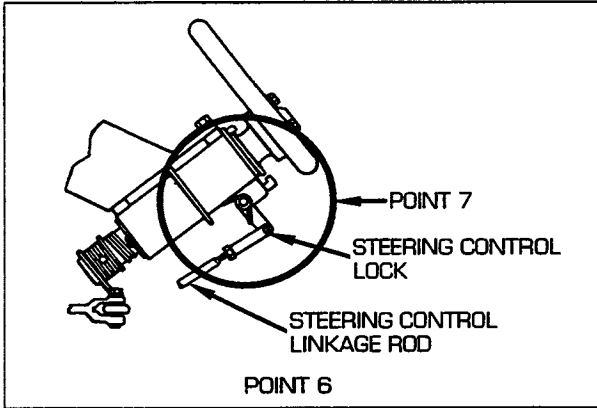
Adjustment**WARNING**

To prevent injury to personnel or damage to equipment, chock track (see WP 0483 00).

1. Place shifting control in PARK (P) position.
2. Push brake pedal down as far as possible. Brake pedal should lock in down position.
3. If brake pedal does not lock in down position, loosen two locknuts on linkage rod. Loosen neutral safety switch adjustment screw. Adjust rod until brake pedal will lock in down position. Tighten locknuts.
4. Check to see if steering control lock engages recess in steering control (point 6). If lock is not engaged, loosen two locknuts on steering control linkage rod. Adjust rod until lock engages recess in steering control. Tighten locknuts.
5. After adjustment is made, hold brake pedal down and move shifting control to neutral. Move steering wheel left and right to verify free movement of steering wheel. If lock remains engaged, readjust steering lock control rod linkage and reverify free movement of steering wheel by repeating step 4 above.
6. If lock will not seat completely, inspect to see if spring (point 7) is pushed against clevis. If spring is pushing against clevis, replace spring.
7. Check adjustment screw on neutral safety switch lever cross shaft (point 8) for contact with neutral safety switch. If adjustment screw is not in contact with neutral safety switch, loosen locknut on adjustment screw. Adjust length of screw until neutral safety switch is engaged.

NOTE

Follow-on maintenance: Check transmission oil pressure; Install batteries (see WP 0153 00); Install powerplant (see WP 0098 00).



END OF WORK PACKAGE

UNIT MAINTENANCE**RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1****NSN 2350-00-122-6826, EIC AQA****ACCELERATOR CONTROLS AND LINKAGES MAINTENANCE
REMOVAL, DISASSEMBLY, CLEANING, INSPECTION, REPAIR, ASSEMBLY, INSTALLATION****INITIAL SETUP:****Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)
File, thread restorer (item 14, WP 0490 00)

Materials/Parts

Bearing housings (2) (item 89, WP 0491 00)
Bearing units (2) (item 90, WP 0491 00)
Bolts (6) (item 339, WP 0491 00)
Boot, rubber (item 233, WP 0491 00)
Bushing, rubber (item 338, WP 0491 00)
Clamp (item 712, WP 0491 00)
Keys (4) (item 700, WP 0491 00)
Lockwashers (6) (item 638, WP 0491 00)
Lockwashers (12) (item 640, WP 0491 00)
Nuts (4) (item 680, WP 0491 00)
Nuts (7) (item 682, WP 0491 00)
Nuts (2) (item 685, WP 0491 00)
Nuts (7) (item 769, WP 0491 00)
Nuts, self-locking (3) (item 490, WP 0491 00)
Pins, cotter (3) (item 525, WP 0491 00)
Pin, headed (item 39, WP 0491 00)
Pin, straight (item 743, WP 0491 00)
Ring, retaining (item 460, WP 0491 00)
Screws (5) (item 374, WP 0491 00)
Screws (4) (item 376, WP 0491 00)

Materials/Parts (cont.)

Screws (9) (item 402, WP 0491 00)
Screws (2) (item 403, WP 0491 00)
Screw (item 596, WP 0491 00)
Screws (2) (item 800, WP 0491 00)
Screw (item 802, WP 0491 00)
Spring (item 254, WP 0491 00)
Washers, flat (6) (item 537, WP 0491 00)
Washers, flat (3) (item 539, WP 0491 00)
Washer, flat (item 541, WP 0491 00)

References

WP 0364 00

Equipment Condition

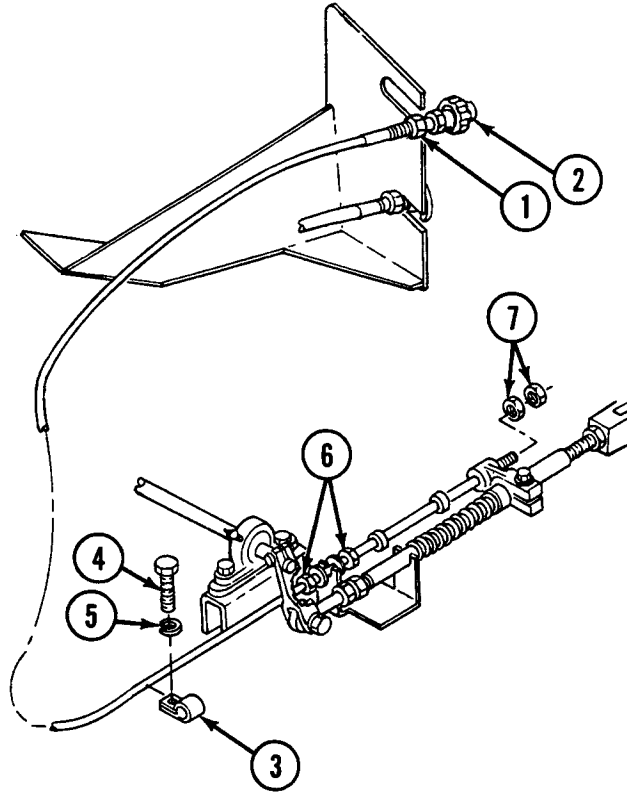
Powerplant removed (see WP 0098 00)
Left-side air cleaner removed (see WP 0137 00)
Cab subfloor plates removed (see WP 0286 00 thru 0308 00)
Air inlet doors removed as necessary (see WP 0341 00)
Air inlet grilles removed as necessary (see WP 0342 00)
Ammunition rack removed (see WP 0386 00)
Toolbox rack removed (see WP 0389 00)
Oddment tray removed (see WP 0390 00)

NOTE

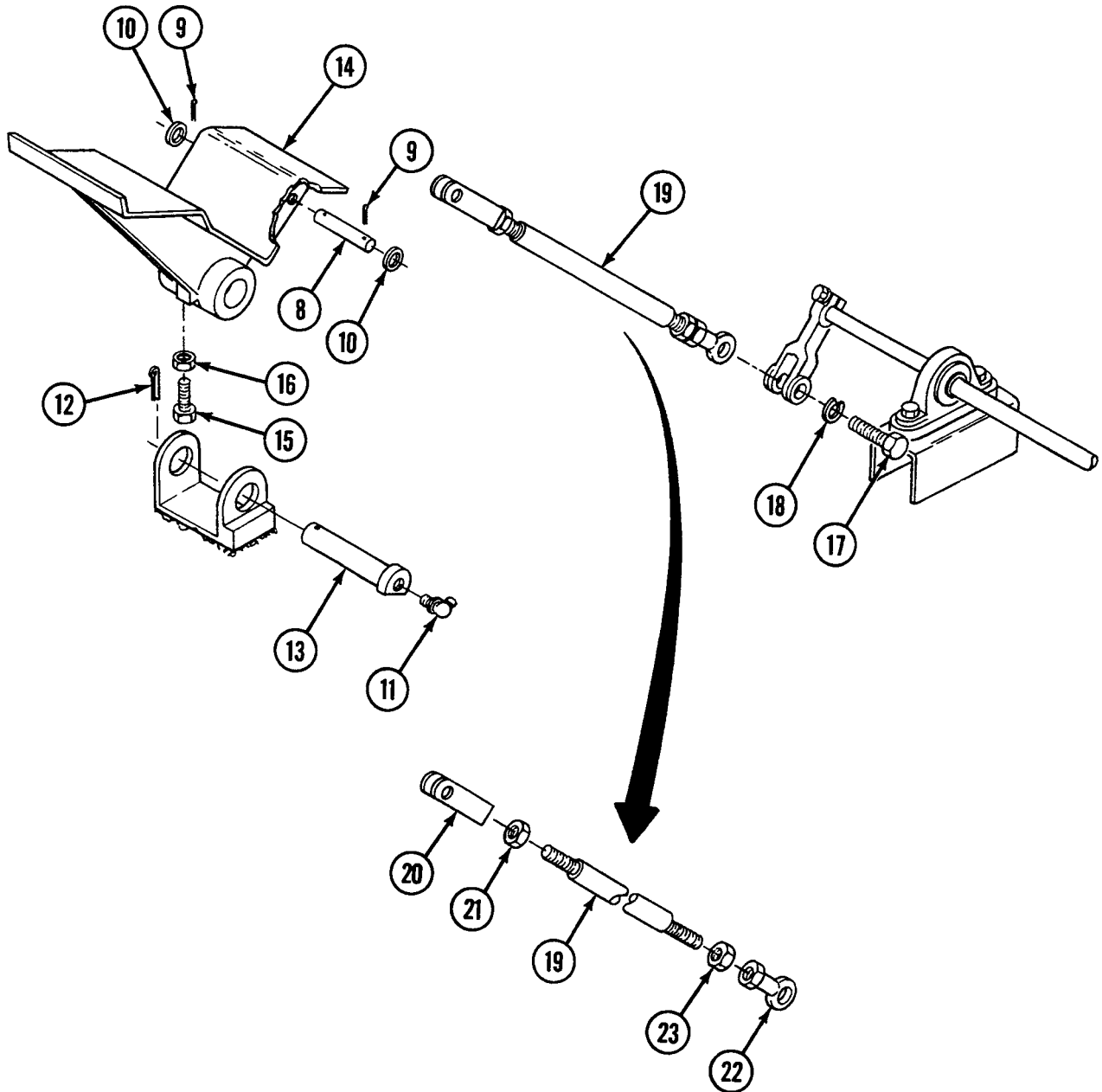
Only remove or open items necessary to gain access to area of linkage requiring removal.

Removal

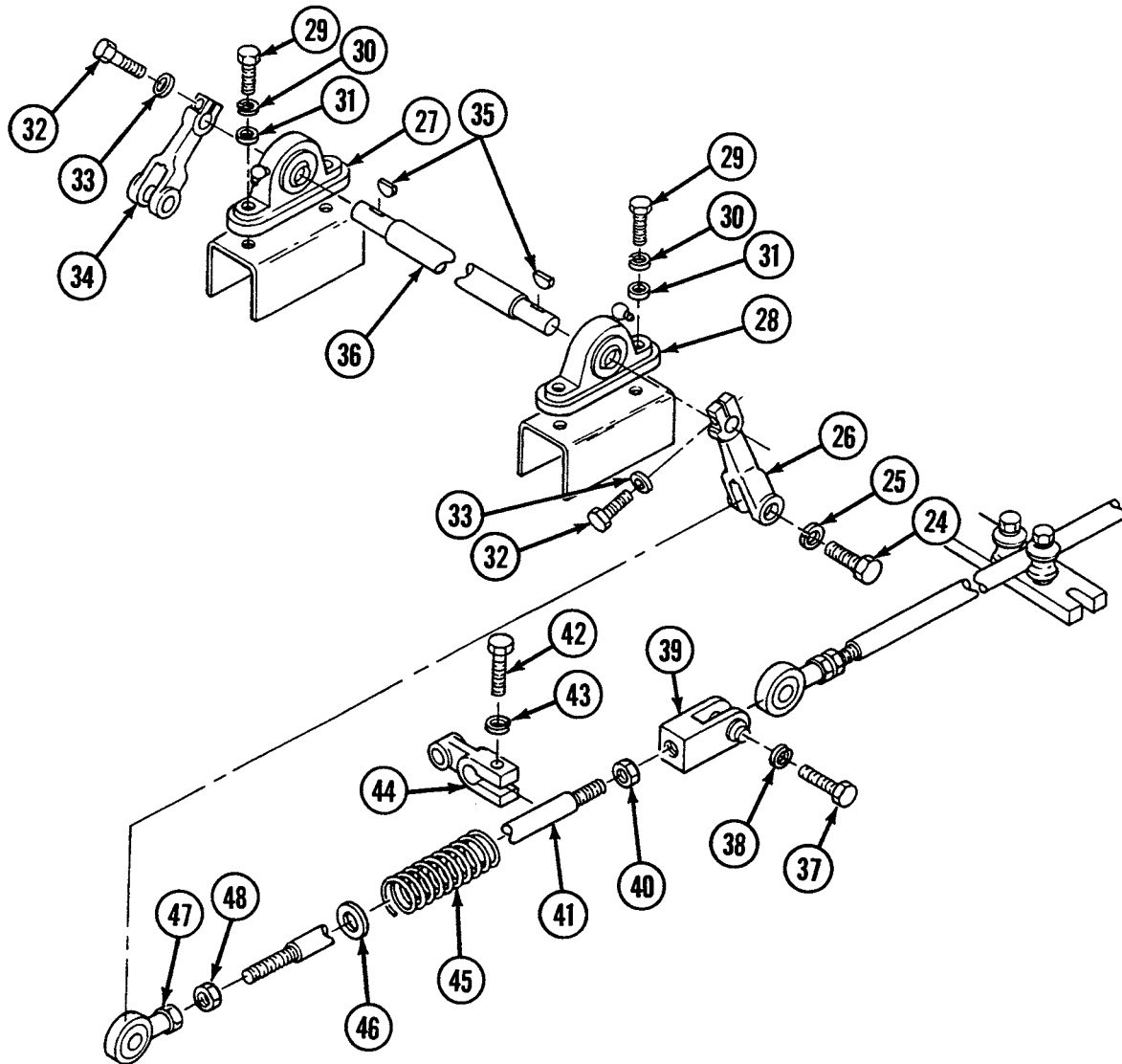
1. Loosen self-locking nut (1) on throttle control assembly (2).
2. Remove clamp (3) by removing screw (4) and lockwasher (5).
3. Loosen two self-locking nuts (6).
4. Remove two nuts (7) and throttle control assembly (2).



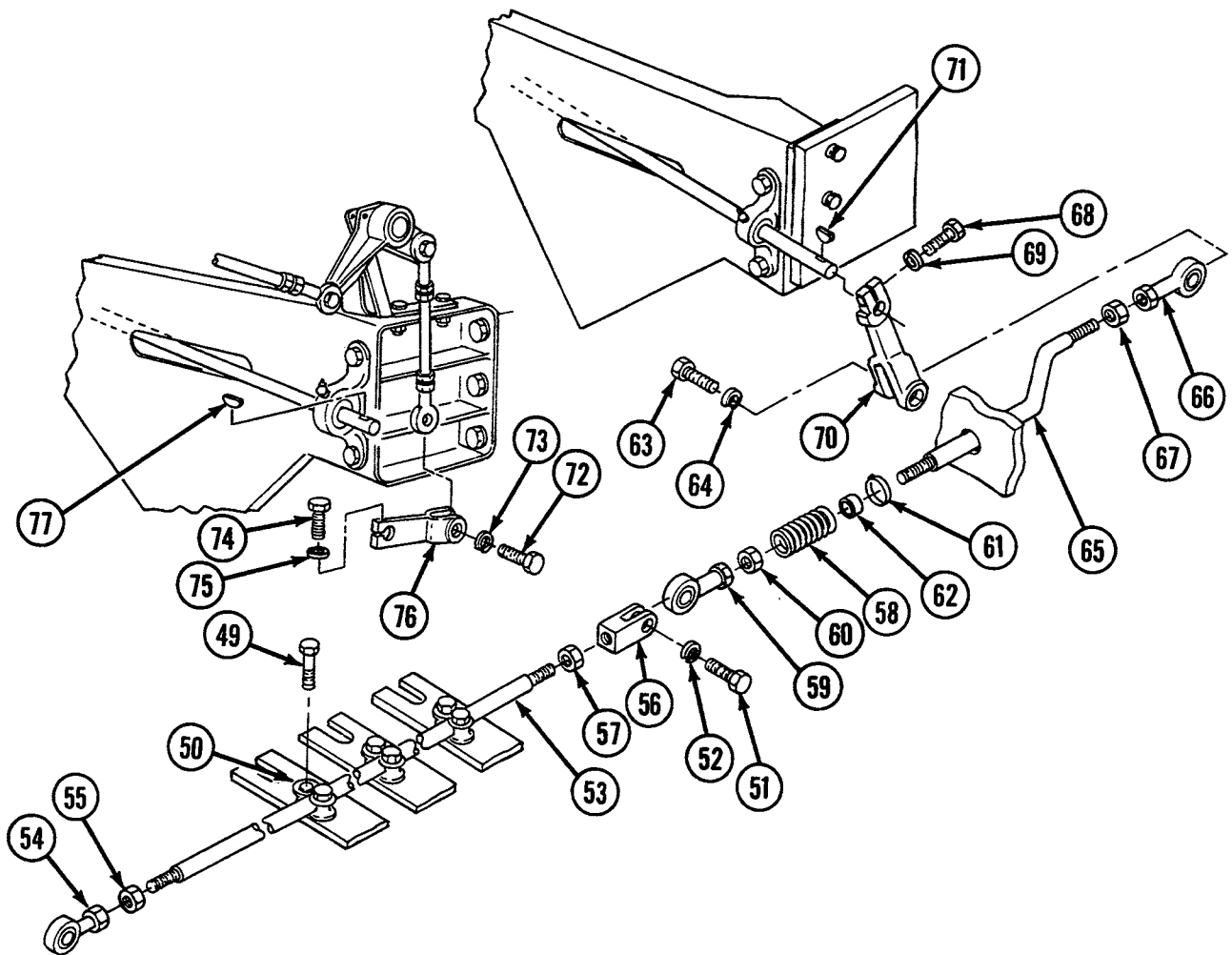
5. Remove straight pin (8) by removing two cotter pins (9) and two washers (10).
6. Remove lubrication fitting (11), cotter pin (12), headed pin (13), and accelerator control pedal assembly (14).
7. Remove screw (15) and nut (16) from accelerator control pedal assembly (14).
8. Remove screw (17), lockwasher (18), and rod (19).
9. Remove clevis (20) and nut (21) from one end of rod (19) and remove bearing (22) and nut (23) from other end of rod.



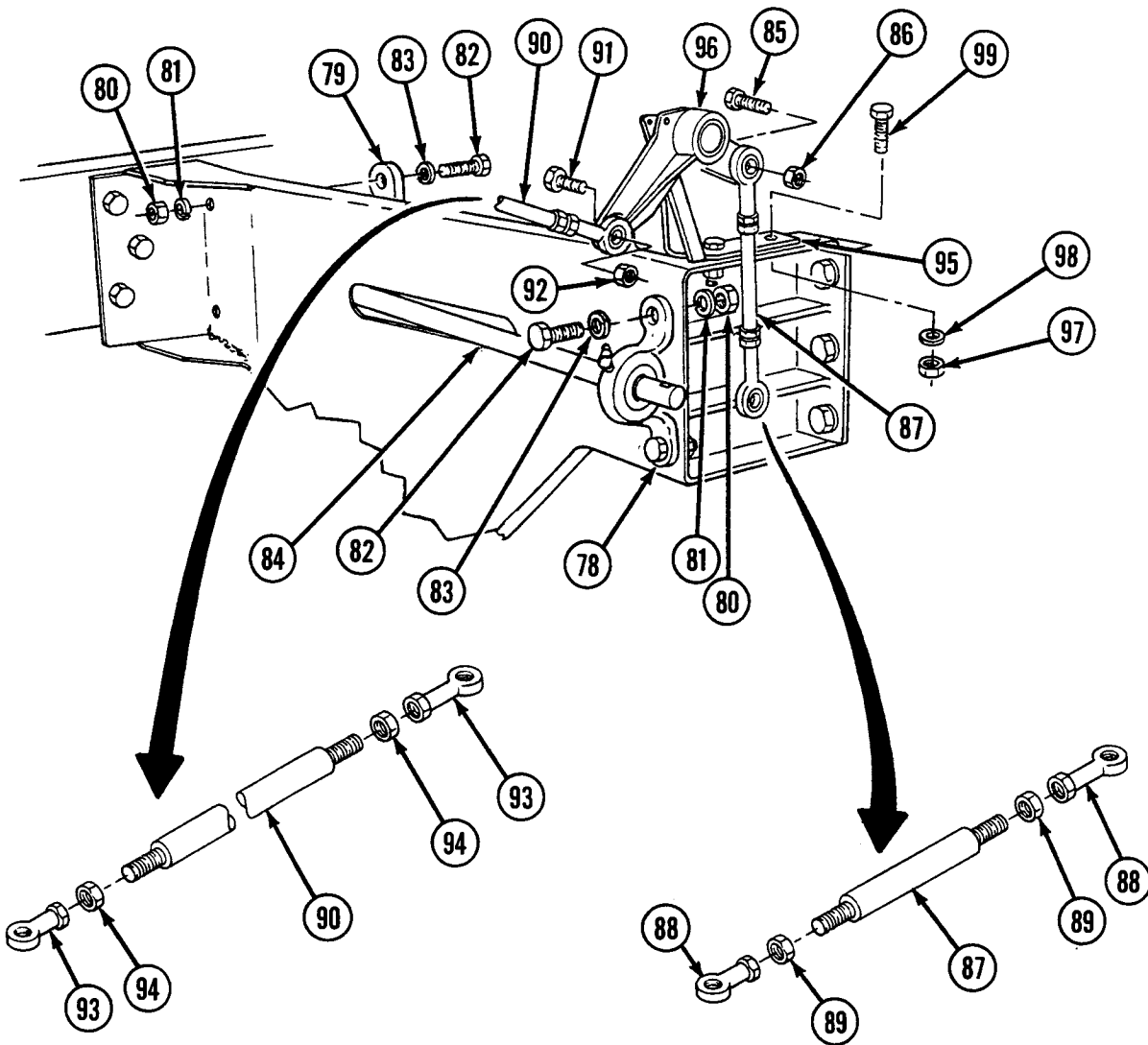
10. Remove screw (24) and lockwasher (25) from lever (26).
11. Remove from each bearing unit (27 and 28) two screws (29), two lockwashers (30), and two flat washers (31).
12. Remove two screws (32) and two lockwashers (33) from levers (34 and 26) and two keys (35) from shaft (36).
13. Remove bearing units (27 and 28) from shaft (36).
14. Remove screw (37) and lockwasher (38) from clevis (39).
15. Remove clevis (39) and nut (40) from rod (41).
16. Remove screw (42), lockwasher (43), lever (44), spring (45), flat washer (46), and rod (41). Remove bearing (47) and nut (48) from one end of rod.



17. Remove six bolts (49) and six rollers (50).
18. Remove screw (51), lockwasher (52), and tube (53).
19. Remove bearing (54) and nut (55) from one end of tube (53) and remove clevis (56) and nut (57) from other end of tube.
20. Pry rubber boot (58) free from bulkhead
21. Remove bearing (59), nut (60), clamp (61), rubber boot (58), and rubber bushing (62).
22. Remove screw (63), lockwasher (64), and rod (65).
23. Remove bearing (66) and nut (67) from rod (65).
24. Remove screw (68), lockwasher (69), lever (70), and key (71).
25. Remove screw (72) and lockwasher (73).
26. Remove screw (74), lockwasher (75), lever (76), and key (77).



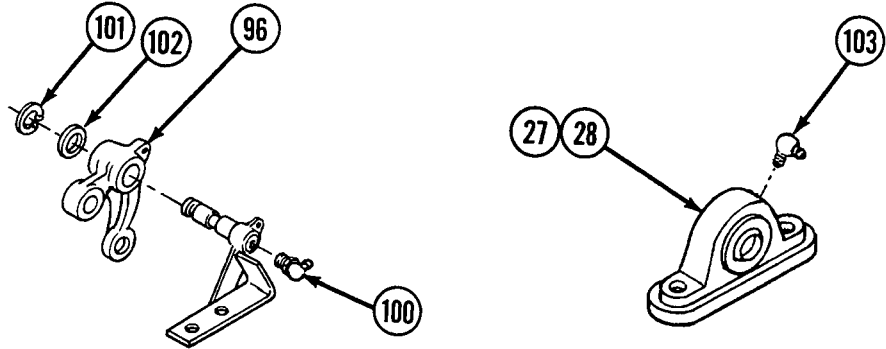
27. Remove bearing housings (78 and 79) by removing from each two nuts (80), two lockwashers (81), two screws (82), and two flat washers (83).
28. Remove bearing housings (78 and 79) from shaft (84).
29. Remove screw (85), self-locking nut (86), and rod (87).
30. Remove bearing (88) and nut (89) from each end of rod (87).
31. Remove rod (90) by removing screw (91) and self-locking nut (92) from each end.
32. Remove bearing (93) and nut (94) from each end of rod (90).
33. Remove bracket assembly (95) and bell crank assembly (96) by removing two nuts (97), two washers (98), and two screws (99).



34. Remove lubrication fitting (100), retaining ring (101), flat washer (102), and bell crank assembly (96).

Disassembly

1. Remove lubrication fitting (103) from bearing units (27 and 28).



Cleaning

WARNING

Particles blown by compressed air can be dangerous. Be certain to direct airstream away from yourself and other personnel in the area. Compressed air used for cleaning will not exceed 30 psi (207 kPa). Use only with effective chip-guarding and personal protective equipment (goggles/shield and gloves).

1. Clean rubber parts in mild soap solution. Rinse in clean water and dry with compressed air.

Inspection-Acceptance and Rejection Criteria

1. Inspect all parts for cracks and distortions.
2. Inspect connecting and pivot parts for excessive wear.
3. Inspect bearings for damage.
4. Inspect threaded parts for cross threading and nicks.
5. Inspect rubber parts for cracks and hardening.

Repair or Replacement

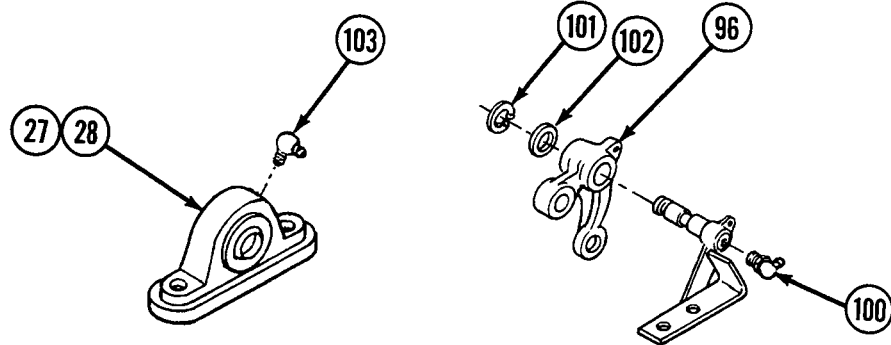
1. Straighten any rods which are bowed.
2. Replace any badly worn clevis rod ends or pins.
3. Repair damaged threads with thread restoring file where possible, or replace defective threaded parts
4. Replace defective rubber parts.

Assembly

1. Install lubrication fitting (103) to bearing units (27 and 28).

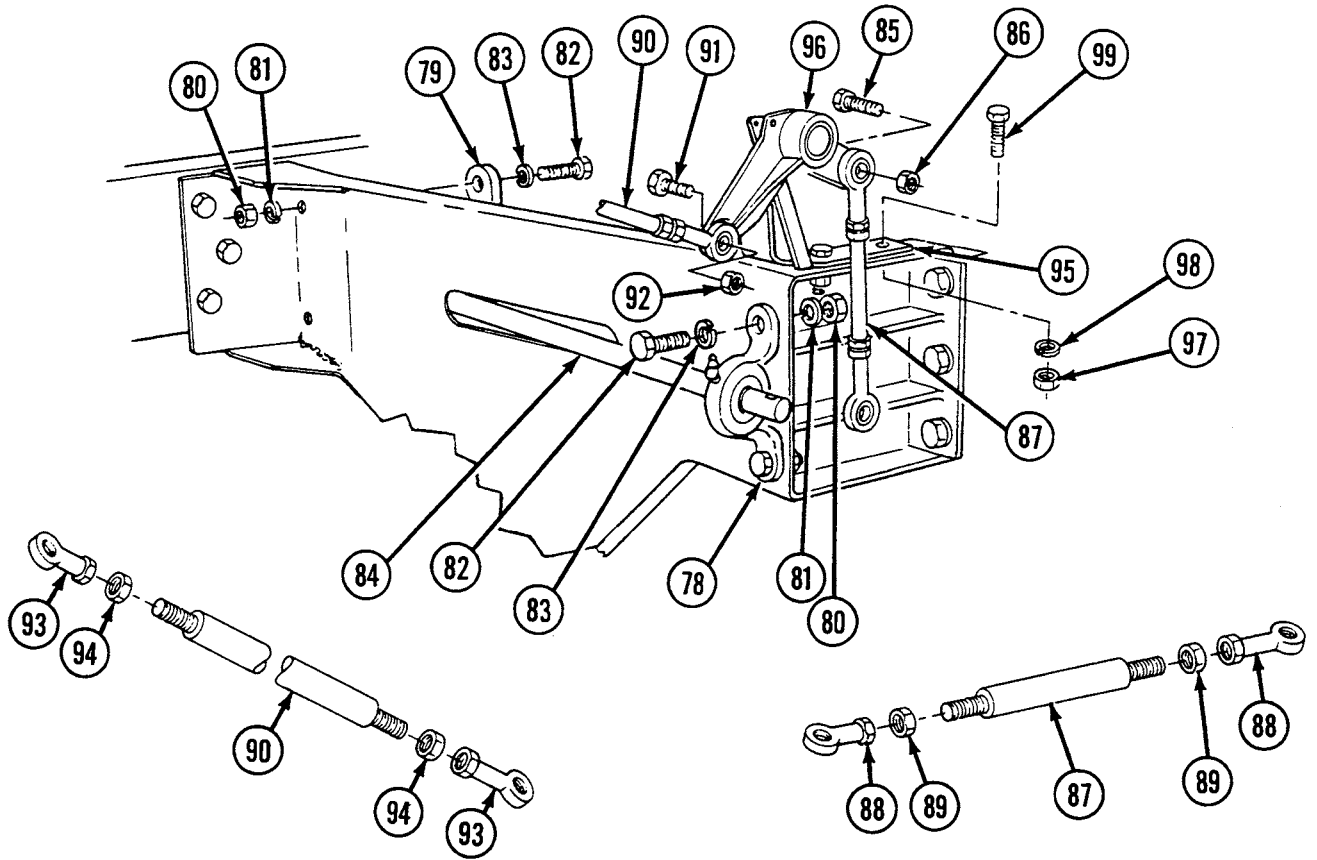
Installation

1. Install bell crank assembly (96) with flat washer (102), retaining ring (101), and lubrication fitting (100).



2. Install bracket assembly (95) and bell crank assembly (96) with two screws (99), two washers (98), and two nuts (97).
3. Install nut (94) and bearing (93) to each end of rod (90).
4. Install self-locking nut (92) and screw (91) to each end of rod (90).
5. Install nut (89) and bearing (88) to each end of rod (87).
6. Install rod (87) with screw (85) and self-locking nut (86).

7. Install bearing housings (78 and 79) to shaft (84) each with two screws (82), two flat washers (83), two lockwashers (81), and two nuts (80).

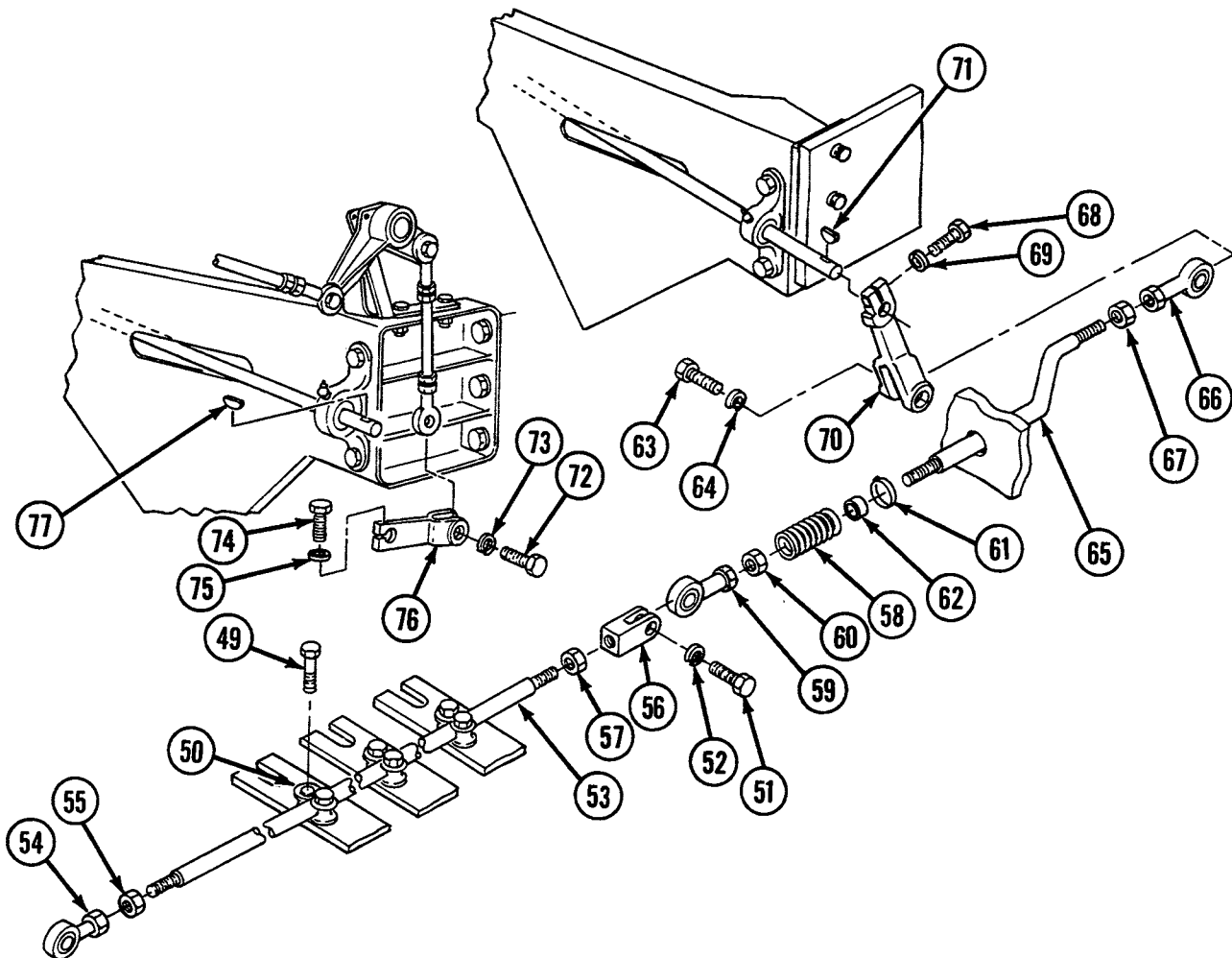


8. Install key (77), lever (76), lockwasher (75), and screw (74).
9. Install lockwasher (73) and screw (72).
10. Install key (71), lever (70), lockwasher (69), and screw (68).
11. Install nut (67) and bearing (66) to rod (65).
12. Install rod (65) with lockwasher (64) and screw (63).

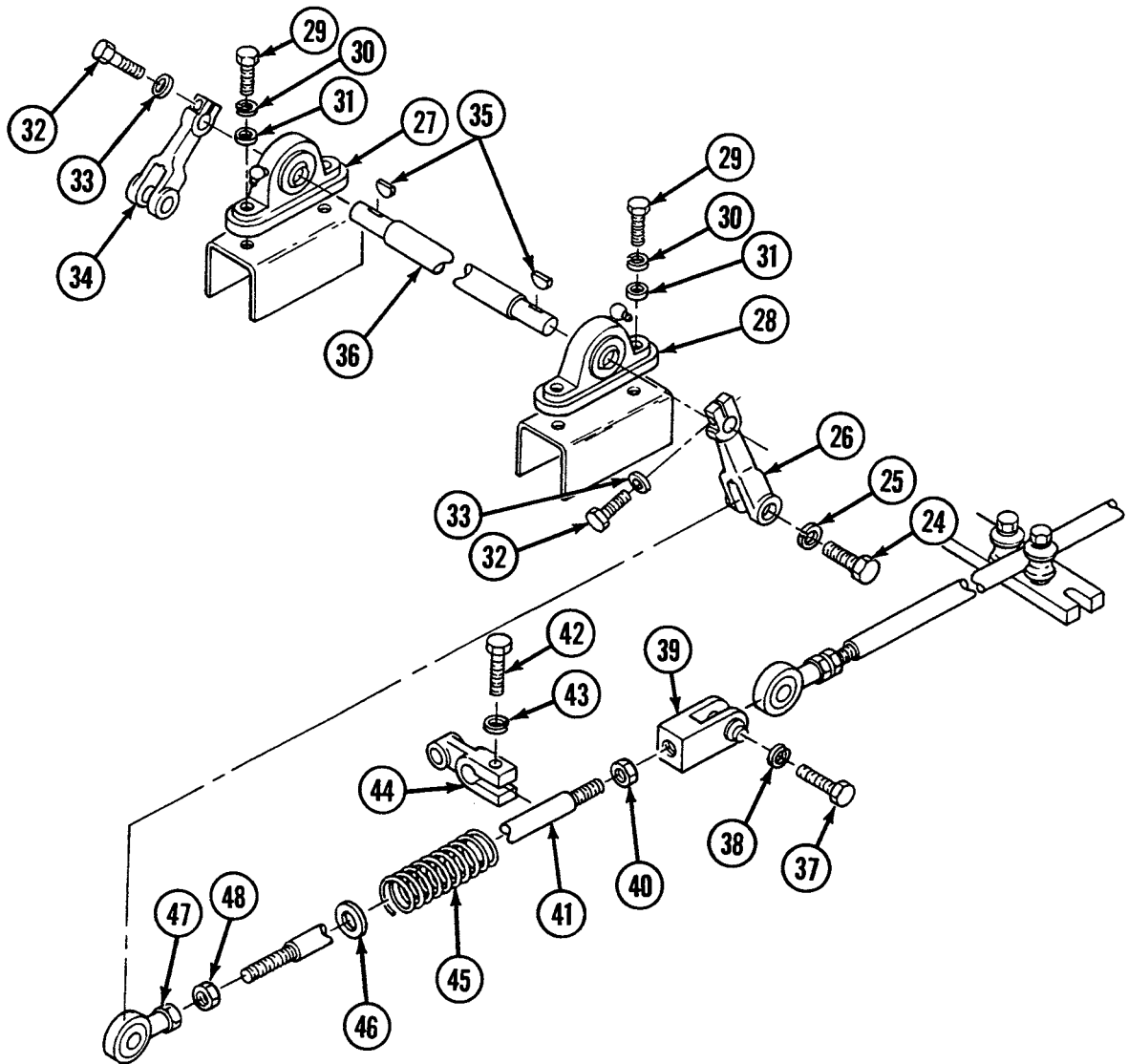
NOTE

Linkages must be completely installed and aligned and rubber boot must be adjusted (see WP 0364 00) before cementing rubber boot in place.

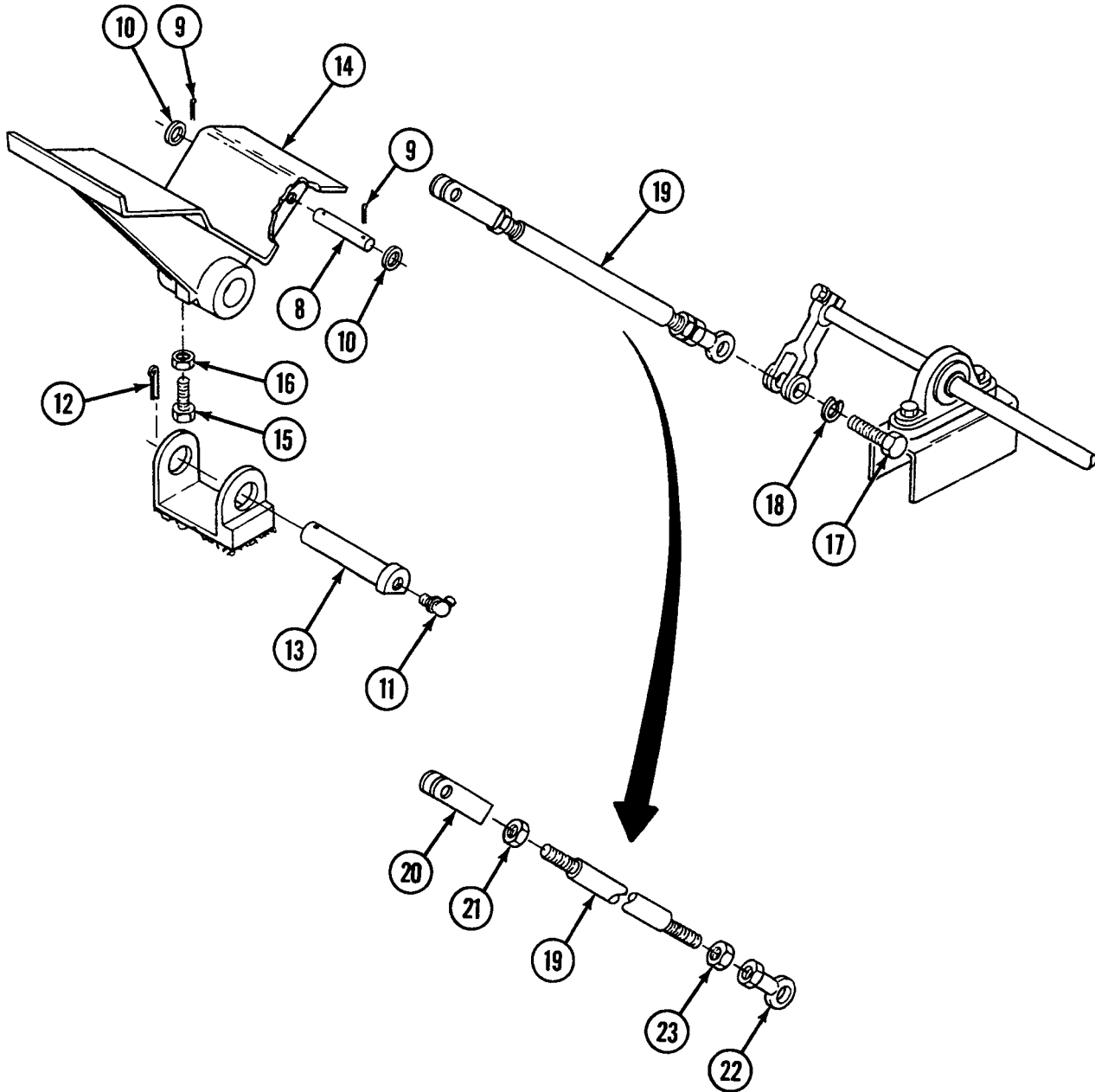
13. Install rubber bushing (62), rubber boot (58), clamp (61), nut (60), and bearing (59).
14. Install nut (55) and bearing (54) to one end of tube (53) and nut (57) and clevis (56) to other end of tube.
15. Install tube (53), lockwasher (52), and screw (51).
16. Install six rollers (50) with six bolts (49).



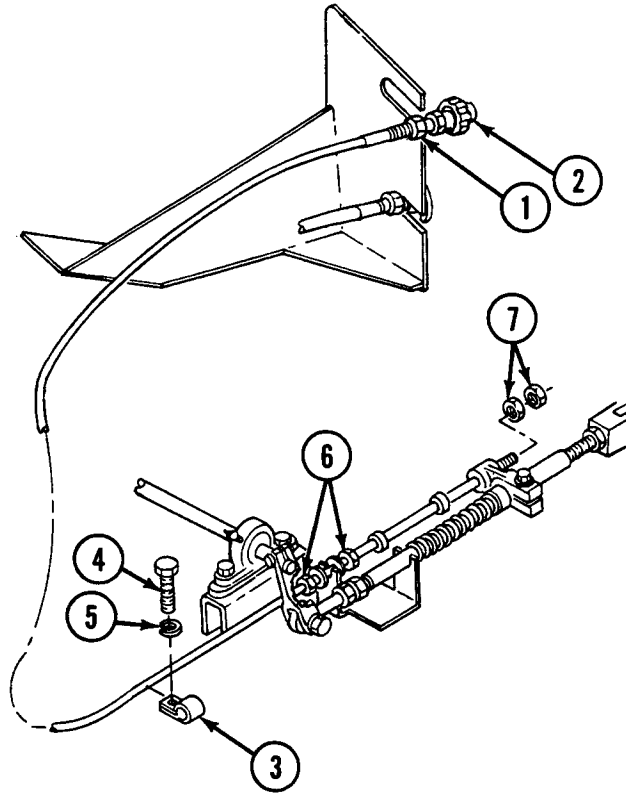
17. Install nut (48) and bearing (47) to one end of rod (41).
18. Install rod (41), flat washer (46), spring (45), lever (44), lockwasher (43), and screw (42).
19. Install nut (40) and clevis (39) to rod (41).
20. Install lockwasher (38) and screw (37) to clevis (39).
21. Install bearing units (27 and 28) to shaft (36).
22. Install two keys (35) to shaft (36) and install two lockwashers (33) and two screws (32) to levers (26 and 34).
23. Install two flat washers (31), two lockwashers (30), and two screws (29) to each bearing unit (27 and 28).
24. Install lockwasher (25) and screw (24) to lever (26).



25. Install nut (21) and clevis (20) to one end of rod (19) and nut (23) and bearing (22) to other end of rod. Install rod with lockwasher (18) and screw (17).
26. Install nut (16) and screw (15) to accelerator control pedal assembly (14).
27. Install accelerator control pedal assembly (14) with headed pin (13), cotter pin (12), and lubrication fitting (11).
28. Install straight pin (8), two washers (10), and two cotter pins (9).



29. Install throttle control assembly (2) with two nuts (7).
30. Tighten two self-locking nuts (6).
31. Install clamp (3) with lockwasher (5) and screw (4).
32. Tighten self-locking nut (1) on throttle control assembly (2).



NOTE

Follow-on maintenance: Only install or close items necessary to gain access to area of linkage requiring removal. Install oddment tray (see WP 0390 00); Install toolbox rack (see WP 0389 00); Install ammunition rack (see WP 0386 00); Install air inlet grilles if removed (see WP 0342 00); Install air inlet doors if removed (see WP 0341 00); Install cab subfloor plates (see WP 0286 00 thru 0308 00); Install left-side air cleaner (see WP 0137 00); Install powerplant (see WP 0098 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
ACCELERATOR CONTROLS AND LINKAGES ALIGNMENT
ALIGNMENT, ADJUSTMENT

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)
 Punches, drive (2) (locating pins) (item 43, WP 0490 00)

Materials/Parts

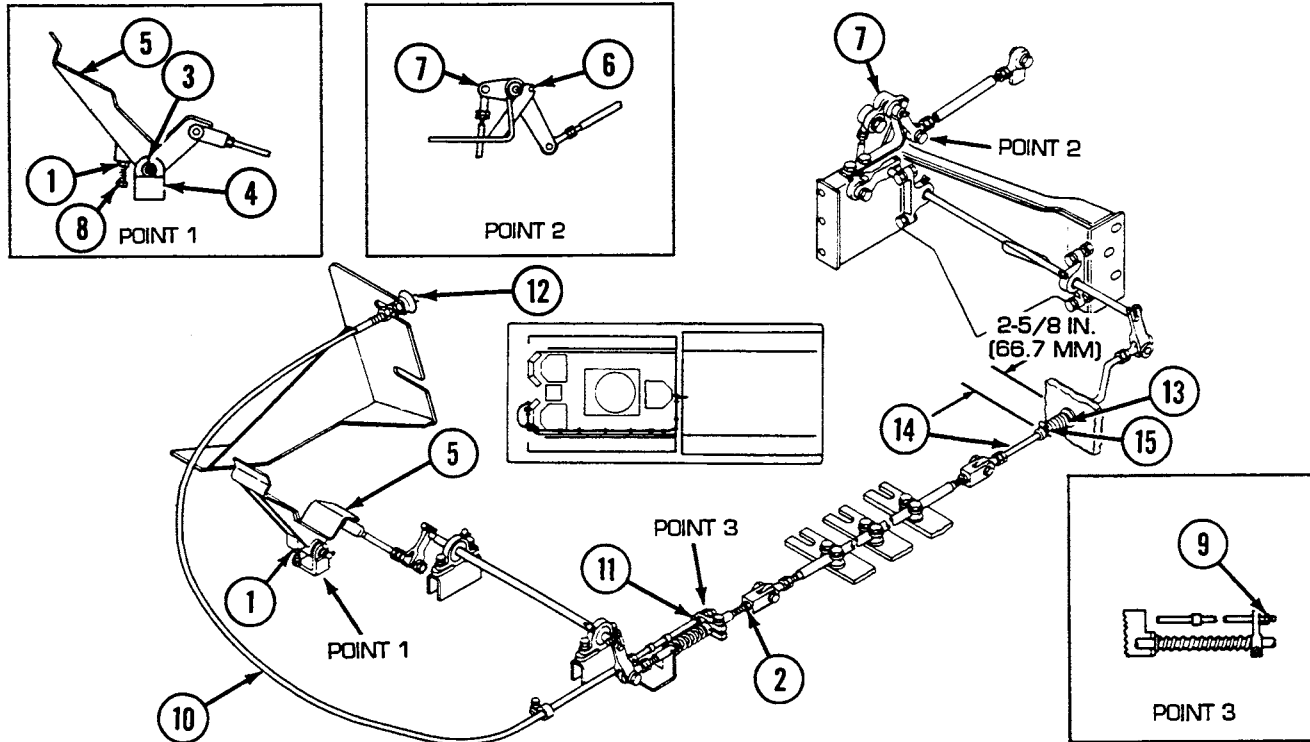
Adhesive, rubber-base (item 3, WP 0489 00)

Equipment Condition

Powerplant removed for alignment only (see WP 0098 00)
 Engine throttle lever linkage disconnected (see WP 0363 00)

Alignment

1. Loosen nuts (1 and 2).
2. Insert 1/8-in.- (3.2 mm-) diameter locating pin (3) in bracket (4) and accelerator pedal (5) (point 1).
3. Adjust linkage leaving nuts (1 and 2) loose until 1/8-in.- (3.2 mm-) diameter locating pin (6) can be inserted in bell crank (7) (point 2).
4. Tighten nuts (1 and 2). Remove locating pins (3 and 6) and connect linkage to engine throttle lever (see WP 0363 00).



Adjustment**NOTE**

Step 1 refers of full throttle adjustment.

1. Loosen nut (1) (point 1) and adjust throttle stop (8) as required to obtain full throttle acceleration. Tighten nut.

NOTE

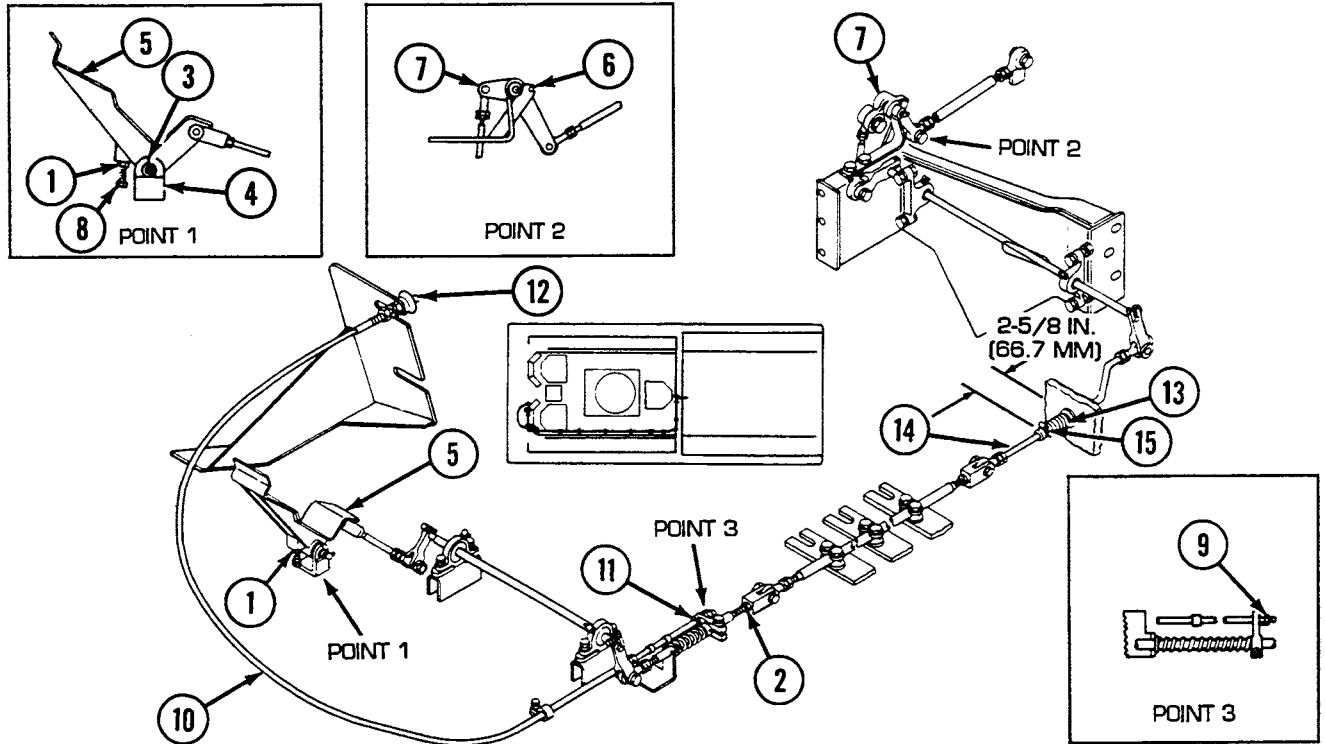
Steps 2 and 3 refer to hand throttle adjustment.

2. Loosen two nuts (9) (point 3) on throttle control cable (10) at accelerator connecting lever (11). Push in throttle control handle (12) all the way.
3. Adjust two nuts (9) until 3/16-in. (4.8-mm) movement of throttle control handle (12) causes increase in engine speed with engine operating at idle.

NOTE

Step 4 refers to rubber boot final adjustment.

4. With throttle control handle (12) adjusted and accelerator pedal (5) released, extend rubber boot (13) to 2-5/8 in. (66.7 mm) (as shown in illustration). Cement rubber boot to bulkhead with adhesive and clamp to rod (14) with clamp (15) (see WP 0363 00).



NOTE

Follow-on maintenance: Connect engine throttle lever linkage (see WP 0363 00); Install powerplant if removed (see WP 0098 00).

END OF WORK PACKAGE

UNIT MAINTENANCE**RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1****NSN 2350-00-122-6826, EIC AQA****BRAKE CONTROLS AND LINKAGES MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION, ALIGNMENT, ADJUSTMENT****INITIAL SETUP:****Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)
 Pliers, retaining ring (item 36, WP 0490 00)
 Punches, drive (7) (locating pins) (item 43, WP 0490 00)

Materials/Parts

Adhesive, rubber-base (item 3, WP 0489 00)
 Bearing (item 295, WP 0491 00)
 Bearing unit (item 10, WP 0491 00)
 Bearing units (2) (item 88, WP 0491 00)
 Bearing units (2) (item 232, WP 0491 00)
 Bearing unit (item 236, WP 0491 00)
 Bolts (6) (item 339, WP 0491 00)
 Boot, rubber (item 34, WP 0491 00)
 Bushing, rubber (item 8, WP 0491 00)
 Clamp, hose (item 3, WP 0491 00)
 Lockwashers (5) (item 638, WP 0491 00)
 Lockwashers (6) (item 640, WP 0491 00)
 Lockwashers (16) (item 642, WP 0491 00)
 Lockwashers (8) (item 644, WP 0491 00)
 Nut (item 269, WP 0491 00)
 Nuts (13) (item 686, WP 0491 00)
 Nuts (3) (item 687, WP 0491 00)
 Nut (item 764, WP 0491 00)
 Pin, cotter (item 522, WP 0491 00)
 Pins, cotter (12) (item 525, WP 0491 00)
 Pin, grooved (item 9, WP 0491 00)
 Pin, grooved (item 35, WP 0491 00)
 Pins, grooved (4) (item 95, WP 0491 00)
 Pin, spring (item 449, WP 0491 00)
 Pin, straight (item 7, WP 0491 00)

Materials/Parts (cont.)

Pins, straight (7) (item 711, WP 0491 00)
 Rings, retaining (4) (item 456, WP 0491 00)
 Ring, retaining (item 458, WP 0491 00)
 Ring, retaining (item 462, WP 0491 00)
 Screws (3) (item 370, WP 0491 00)
 Screws (2) (item 375, WP 0491 00)
 Screws (8) (item 418, WP 0491 00)
 Screws (7) (item 422, WP 0491 00)
 Screw (item 423, WP 0491 00)
 Screws (4) (item 785, WP 0491 00)
 Screws (4) (item 786, WP 0491 00)
 Screws (6) (item 801, WP 0491 00)
 Setscrews (2) (item 751, WP 0491 00)
 Washers, flat (3) (item 537, WP 0491 00)

References

WP 0363 00
 TM 9-2350-256-10

Equipment Condition

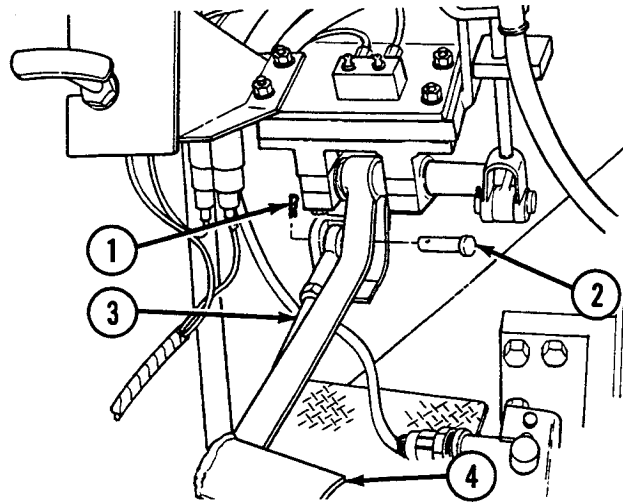
Powerplant removed (see WP 0098 00)
 Left-side air cleaner removed (see WP 0137 00)
 Cab subfloor plates removed (see WP 0286 00 thru 0308 00)
 Air inlet doors removed as necessary (see WP 0341 00)
 Air inlet grilles removed as necessary (see WP 0342 00)
 Ammunition rack removed (see WP 0386 00)
 Toolbox rack removed (see WP 0389 00)
 Oddment tray removed (see WP 0390 00)

NOTE

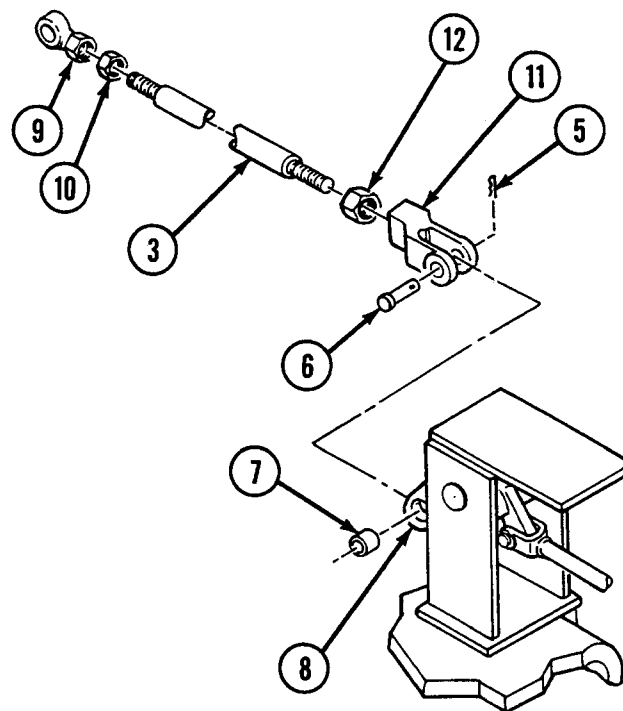
Only remove or open items necessary to gain access to area of linkage requiring removal.

Removal

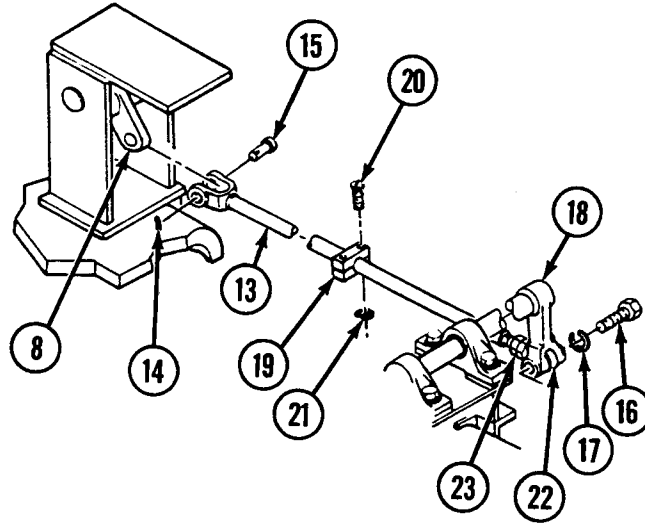
1. Remove cotter pin (1) and straight pin (2), and disconnect rod assembly (3) from brake pedal (4).



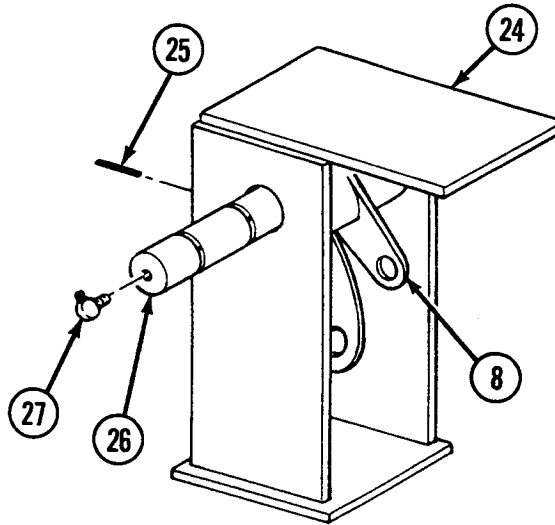
2. Remove cotter pin (5), straight pin (6), bearing (7), and rod assembly (3) from brake cam assembly (8).
3. Remove rod end (9) and nut (10) from one end of rod assembly (3) and remove clevis (11) and nut (12) from other end of rod assembly.



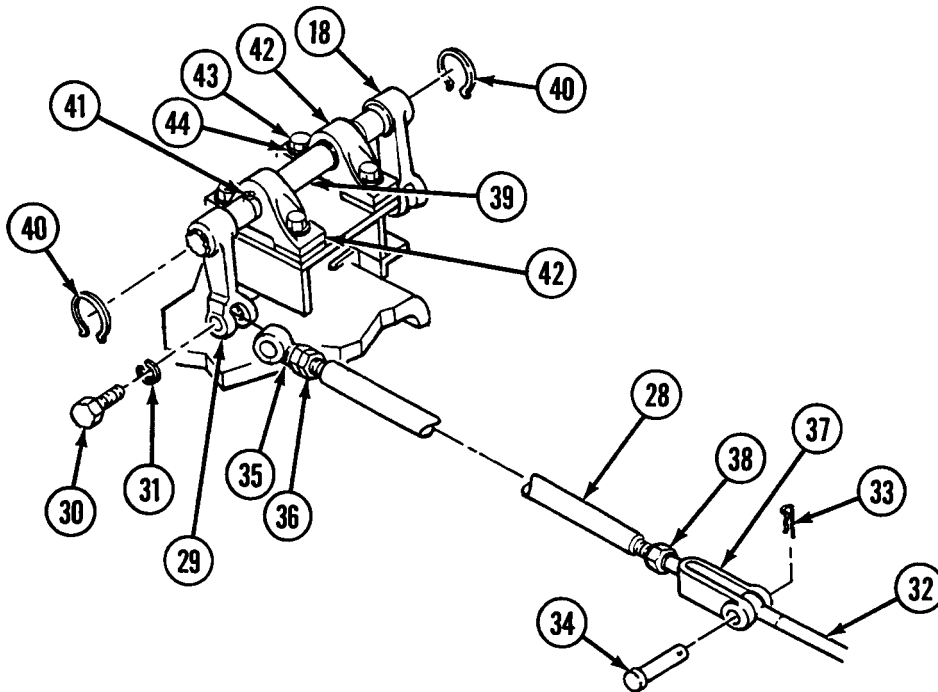
4. Disconnect rod assembly (13) from brake cam assembly (8) by removing cotter pin (14) and straight pin (15).
5. Remove rod assembly (13) by removing screw (16) and lockwasher (17) from lever (18).
6. Remove two blocks (19) from rod assembly (13) by removing two screws (20) and two lockwashers (21). Remove rod end (22) and nut (23) from rod assembly.



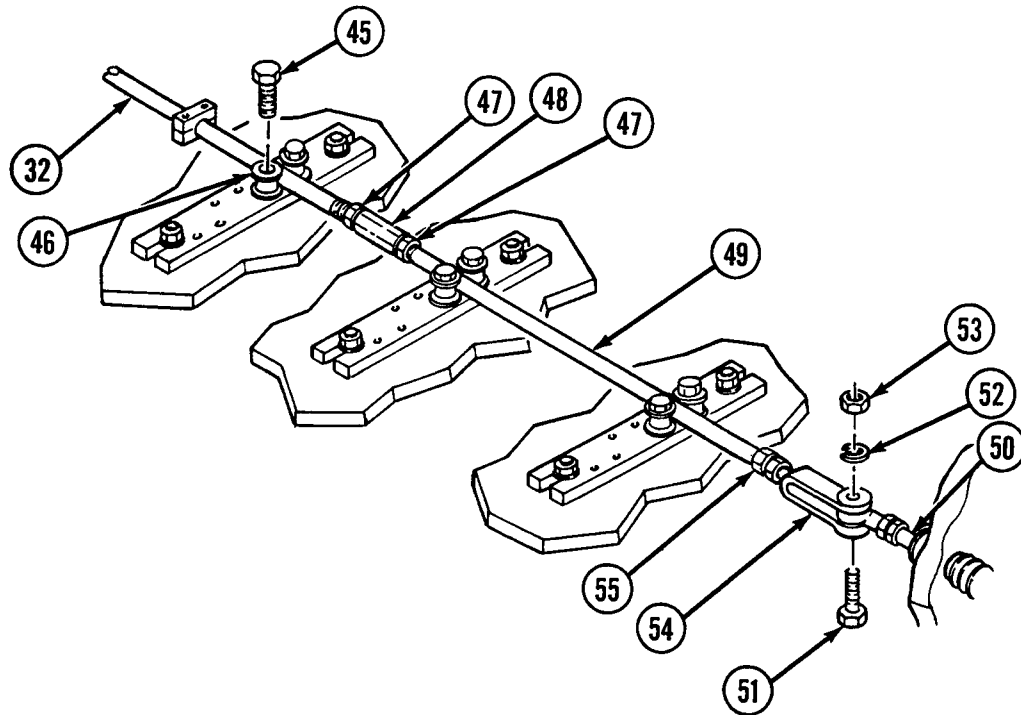
7. Remove brake cam assembly (8) from bracket assembly (24) by removing spring pin (25), shaft (26), and lubrication fitting (27).



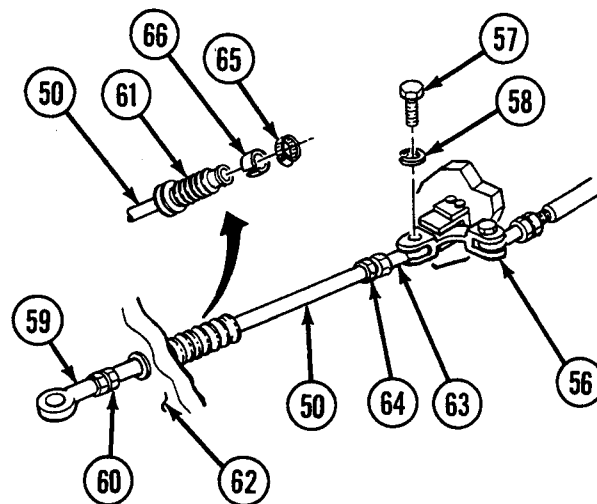
8. Disconnect rod assembly (28) from lever (29) by removing screw (30) and lockwasher (31). Remove rod assembly (28) from rod assembly (32) by removing cotter pin (33) and straight pin (34). Remove rod end (35), nut (36), clevis (37), and nut (38) from rod assembly (28).
9. Remove levers (18 and 29) from shaft (39) by removing two retaining rings (40).
10. Loosen two setscrews (41) and remove shaft (39) from two bearing units (42).
11. Remove two bearing units (42) by removing four screws (43) and four lockwashers (44).



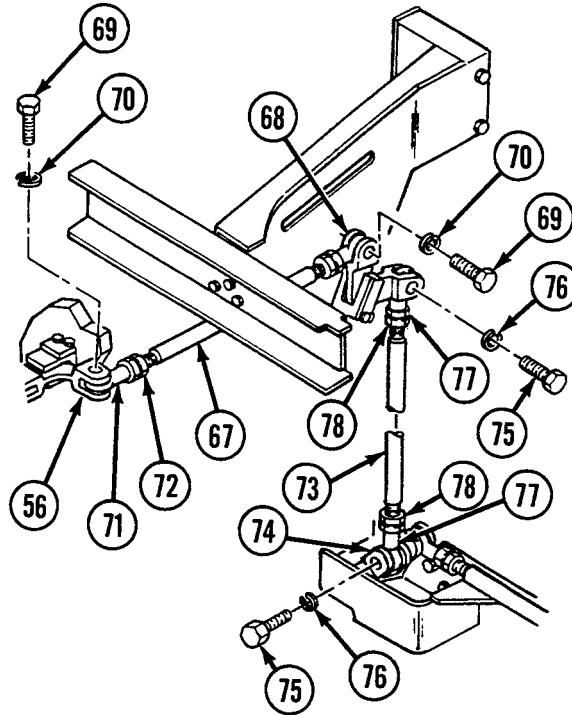
12. Remove six bolts (45) and six rollers (46).
13. Loosen two nuts (47) and turnbuckle (48) and remove rod assembly (32).
14. Remove two nuts (47) and turnbuckle (48).
15. Remove rod assembly (49) from rod assembly (50) by removing screw (51), lockwasher (52), and nut (53).
16. Remove clevis (54) and nut (55).



17. Disconnect rod assembly (50) from lever (56) by removing screw (57) and lockwasher (58).
18. Remove rod end (59) and nut (60) from rod assembly (50).
19. Pry rubber boot (61) from bulkhead (62) and remove rod assembly (50) from bulkhead.
20. Remove rod end (63) and nut (64) from rod assembly (50).
21. Remove clamp (65), rubber bushing (66), and rubber boot (61) from rod assembly (50).



22. Remove rod assembly (67) from levers (56 and 68) by removing two screws (69) and two lockwashers (70).
23. Remove rod end (71) and nut (72) from each end of rod assembly (67).
24. Remove rod assembly (73) from levers (68 and 74) by removing two screws (75) and two lockwashers (76).
25. Remove rod end (77) and nut (78) from each end of rod assembly (73).

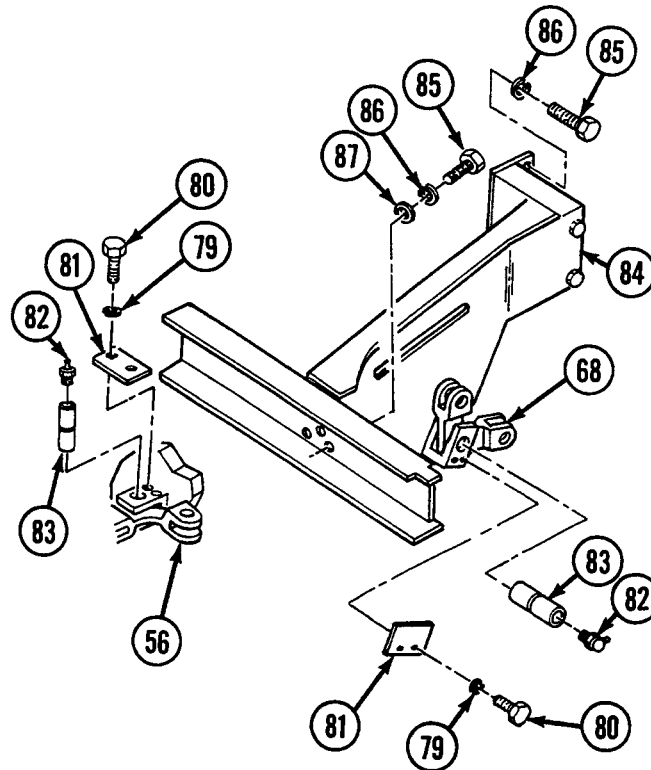


26. Remove levers (56 and 68) by removing from each two lockwashers (79), two screws (80), pin retainer (81), lubrication fitting (82), and grooved pin (83).

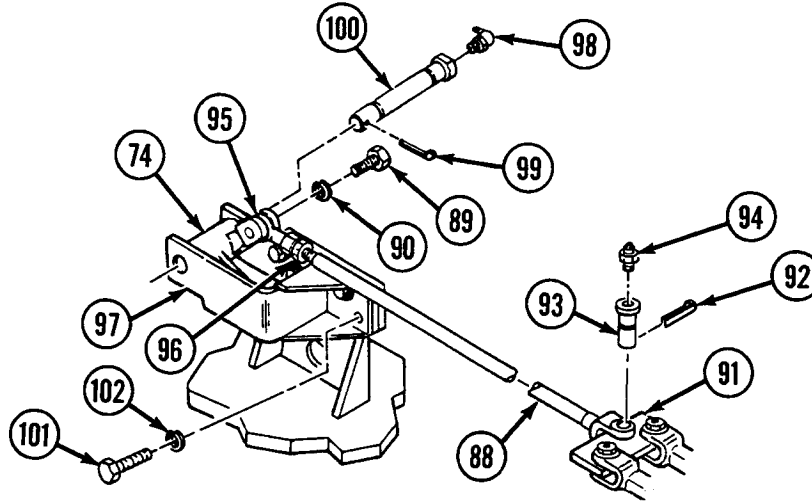
NOTE

If removal of bracket assembly (84) is required, remove accelerator controls and linkages as necessary (see WP 0363 00).

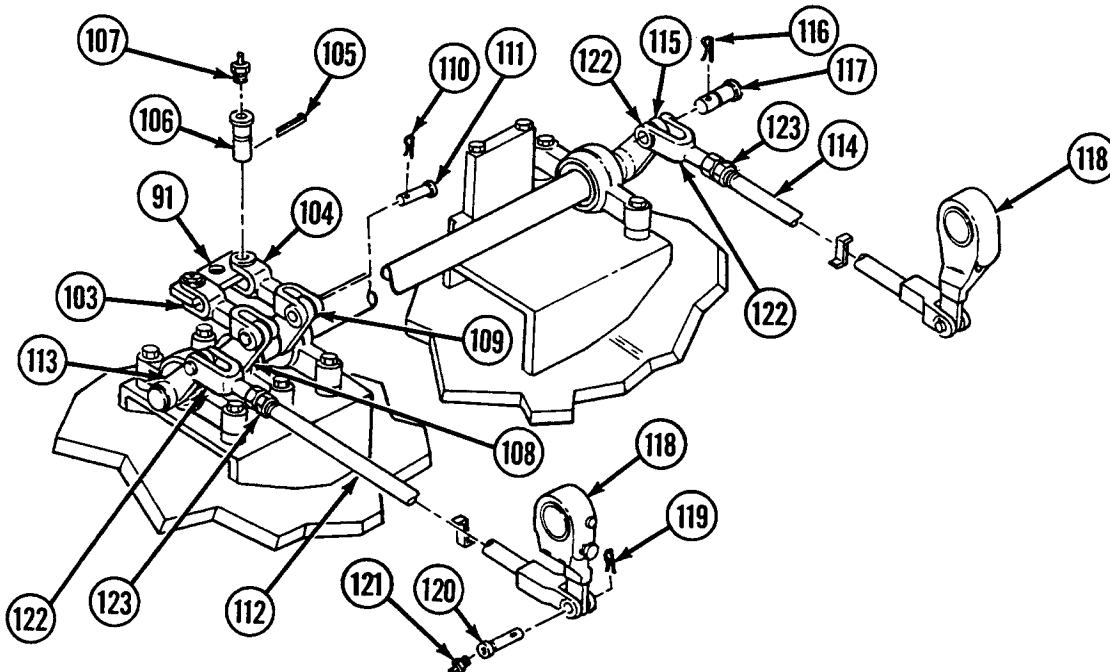
27. Remove bracket assembly (84) by removing six screws (85), six lockwashers (86), and three flat washers (87).



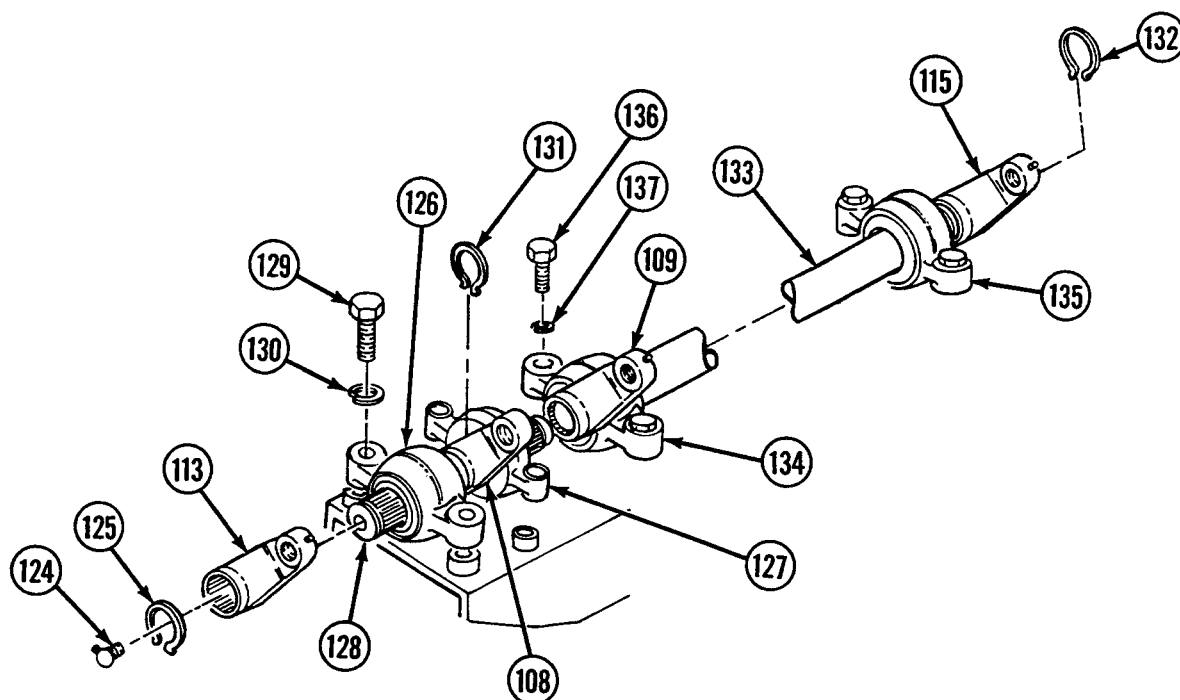
28. Disconnect rod assembly (88) from lever (74) by removing screw (89) and lockwasher (90). Remove rod assembly from plate assembly (91) by removing cotter pin (92), grooved pin (93), and lubrication fitting (94). Remove rod end (95) and nut (96) from rod assembly.
29. Remove bracket assembly (97) and lever (74) by removing lubrication fitting (98), cotter pin (99), grooved pin (100), four screws (101), and four lockwashers (102).



30. Remove plate assembly (91) from yokes (103 and 104) by removing two cotter pins (105), two grooved pins (106), and two lubrication fittings (107).
31. Remove yokes (103 and 104) from levers (108 and 109) by removing cotter pin (110) and straight pin (111) from each.
32. Disconnect rod assembly (112) from lever (113) and rod assembly (114) from lever (115) by removing cotter pin (116) and straight pin (117) from each.
33. Remove rod assemblies (112 and 114) from brake-apply-and-slack adjuster levers (118) by removing cotter pin (119), grooved pin (120), and lubrication fitting (121) from each. Remove clevis (122) and nut (123) from each end of rod assemblies.

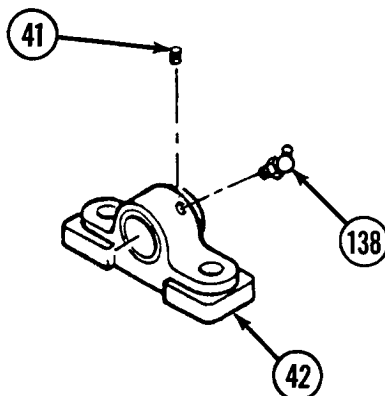


34. Remove lever (113) by removing lubrication fitting (124) and retaining ring (125).
35. Remove two bearing units (126 and 127) with short left shaft (128) assembled by removing four screws (129) and four lockwashers (130).
36. Remove short left shaft (128) from two bearing units (126 and 127) by removing retaining ring (131) and lever (108).
37. Remove levers (109 and 115) by removing retaining ring (132) from each end of long right shaft (133).
38. Remove two bearing units (134 and 135) and long right shaft (133) by removing four screws (136) and four lockwashers (137). Remove long right shaft from two bearing units.



Disassembly

1. Remove setscrew (41) and lubrication fitting (138) from each bearing unit (42).

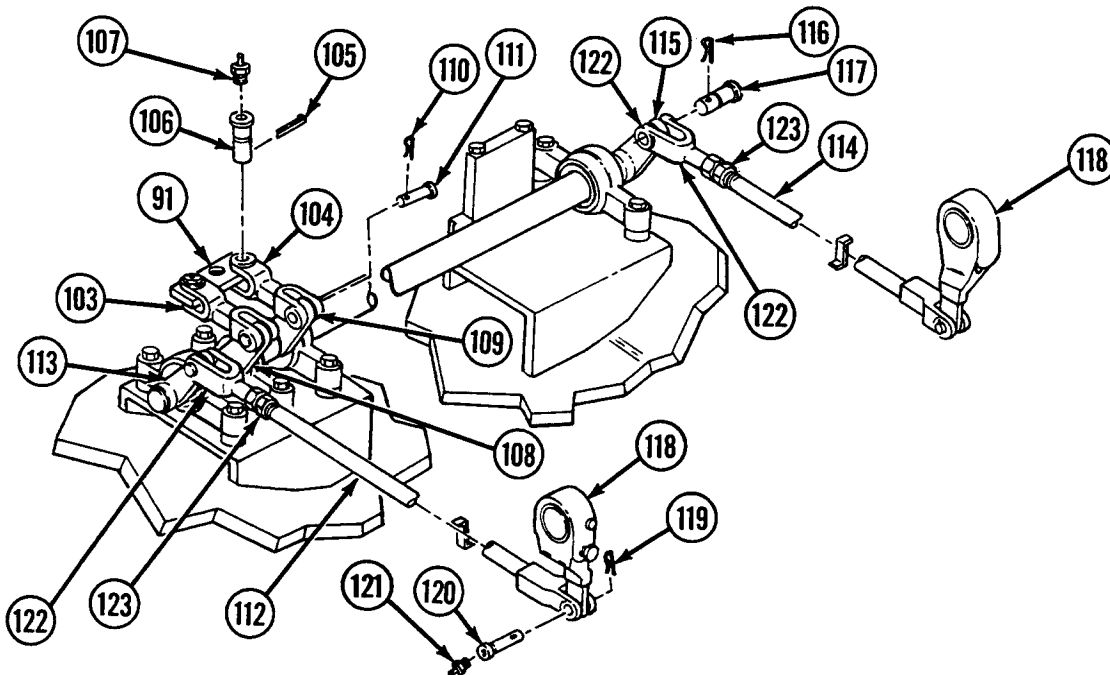


Assembly

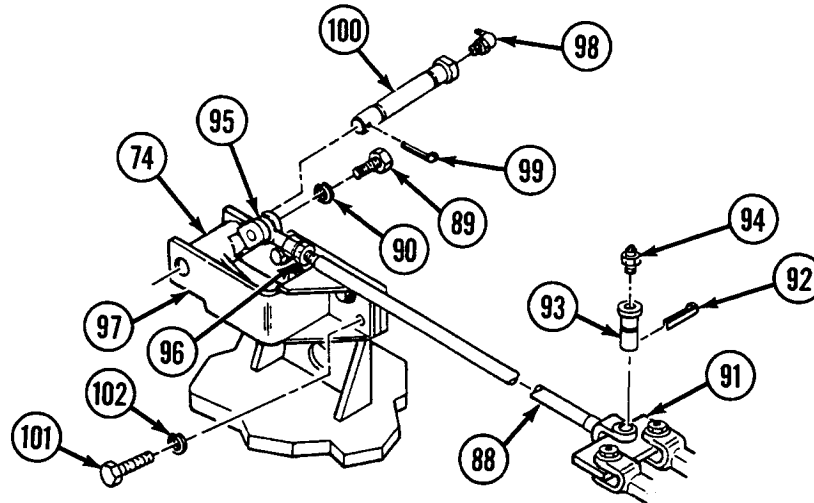
1. Install setscrew (41) and lubrication fitting (138) to each bearing unit (42).

Installation

1. Install long right shaft (133) to two bearing units (134 and 135).
2. Install levers (109 and 115) with retaining ring (132) at each end of long right shaft (133).
3. Install lever (108) with retaining ring (131).
4. Install short left shaft (128) to two bearing units (126 and 127).
5. Install lever (113) with retaining ring (125) and lubrication fitting (124).
6. Install two bearing units (126 and 127) each with two lockwashers (130) and two screws (129).
7. Install two bearing units (134 and 135) each with two lockwashers (137) and two screws (136).
8. Install nut (123) and clevis (122) to each end of rod assemblies (112 and 114).
9. Connect rod assembly (112) to lever (113) with straight pin (117) and cotter pin (116). Install rod assembly to brake-apply-and-slack adjuster lever (118) with grooved pin (120), lubrication fitting (121), and cotter pin (119).
10. Connect rod assembly (114) to lever (115) with straight pin (117) and cotter pin (116). Install rod assembly to brake-apply-and-slack adjuster lever (118) with grooved pin (120), lubrication fitting (121), and cotter pin (119).
11. Install yokes (103 and 104) to levers (108 and 109) each with straight pin (111) and cotter pin (110).
12. Install plate assembly (91) to yokes (103 and 104) with two grooved pins (106), two cotter pins (105), and two lubrication fittings (107).



13. Install bracket assembly (97) and lever (74) with grooved pin (100), cotter pin (99), lubrication fitting (98), four lockwashers (102), and four screws (101).
14. Install rod end (95) and nut (96) to rod assembly (88).
15. Connect rod assembly (88) to plate assembly (91) with grooved pin (93), cotter pin (92), and lubrication fitting (94).
16. Install rod assembly (88) to lever (74) with screw (89) and lockwasher (90).

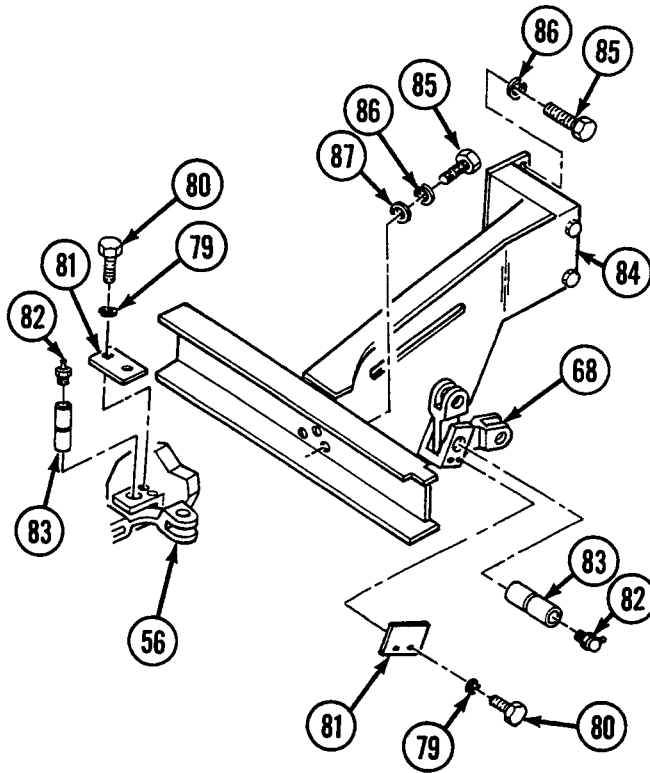


17. If removed, install bracket assembly (84) with six screws (85), six lockwashers (86), and three flat washers (87).

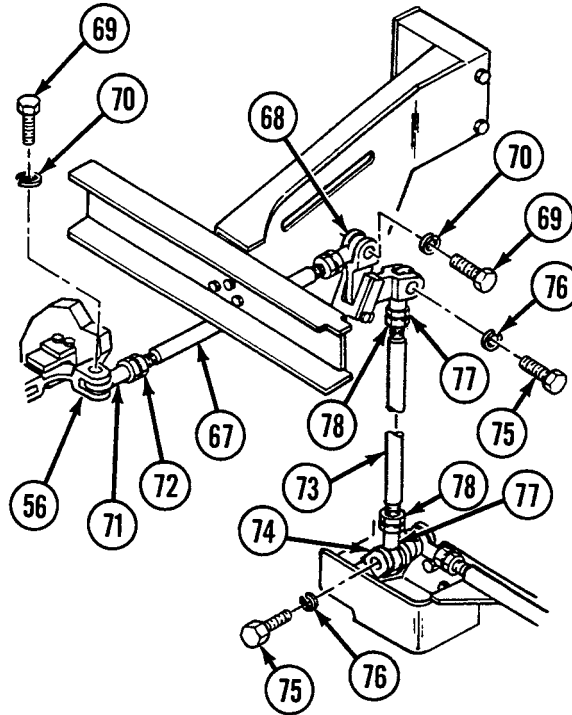
NOTE

Install accelerator controls and linkages if removed (see WP 0363 00).

18. Install levers (56 and 68) each with pin retainer (81), grooved pin (83), lubrication fitting (82), two screws (80), and two lockwashers (79).



19. Install rod end (77) and nut (78) to each end of rod assembly (73).
20. Install rod assembly (73) to levers (68 and 74) with two screws (75) and two lockwashers (76).
21. Install rod end (71) and nut (72) to each end of rod assembly (67).
22. Install rod assembly (67) to levers (56 and 68) with two screws (69) and two lockwashers (70).

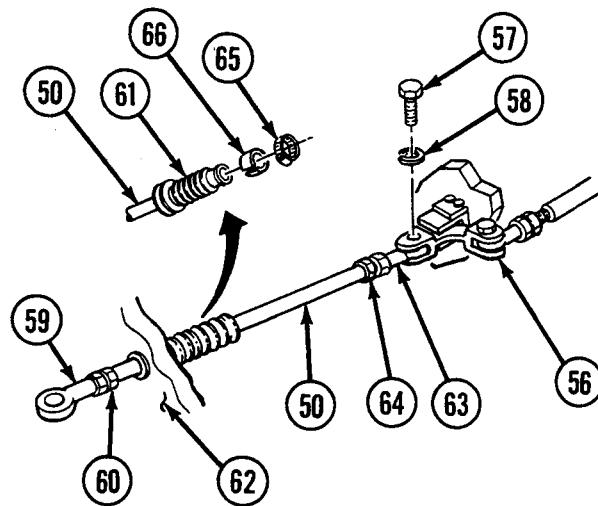


23. Install rubber boot (61), rubber bushing (66), and clamp (65) to rod assembly (50). Do not tighten clamp.
24. Install rod end (63) and nut (64) to one end of rod assembly (50) and slide other end of rod assembly through bulkhead (62).
25. Connect rod assembly (50) to lever (56) with screw (57) and lockwasher (58).
26. Install rod end (59) and nut (60) to rod assembly (50).

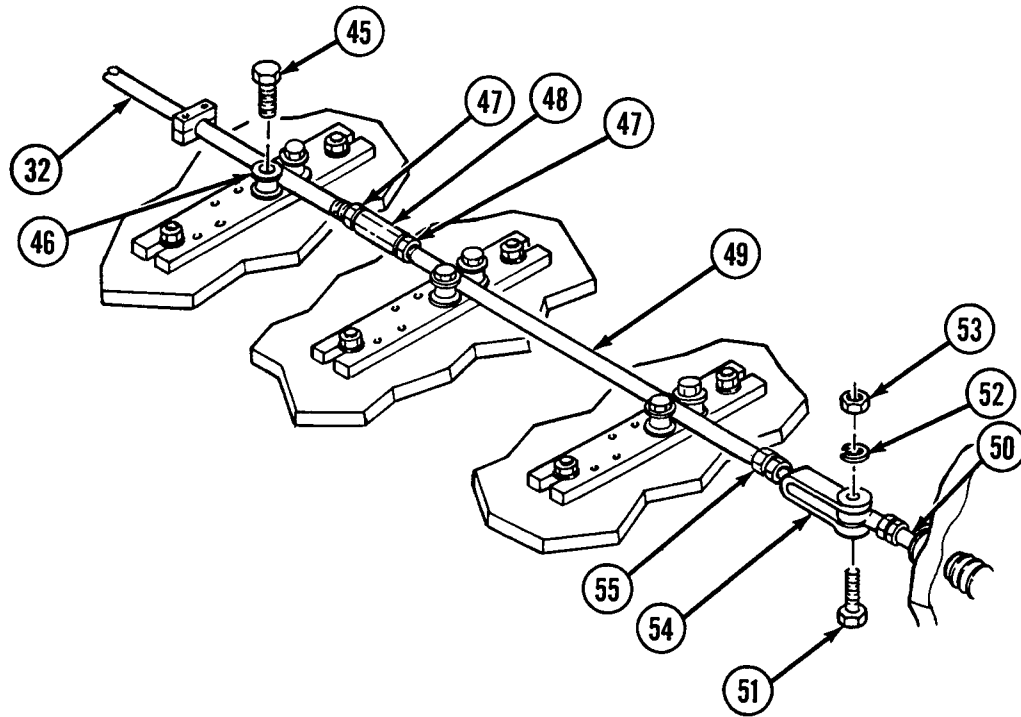
NOTE

Linkage must be completely installed, aligned, and adjusted before cementing rubber boot in place.

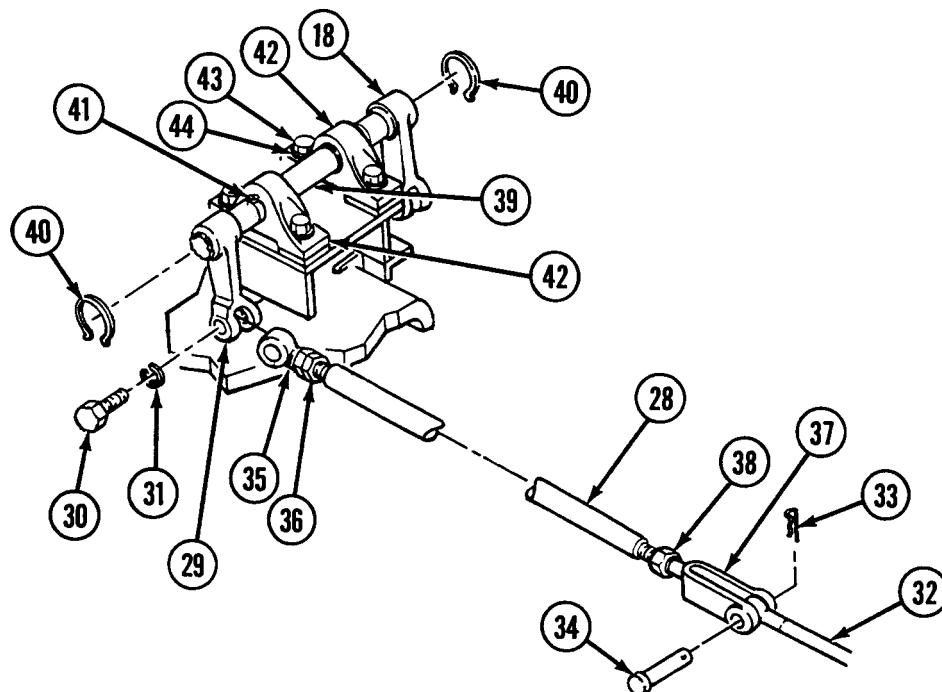
27. With control adjusted and brake pedal released, ensure rubber boot (61) is extended to 5-5/8 in. (142.9 mm), tighten clamp (65), and cement rubber boot to bulkhead (62) with adhesive.



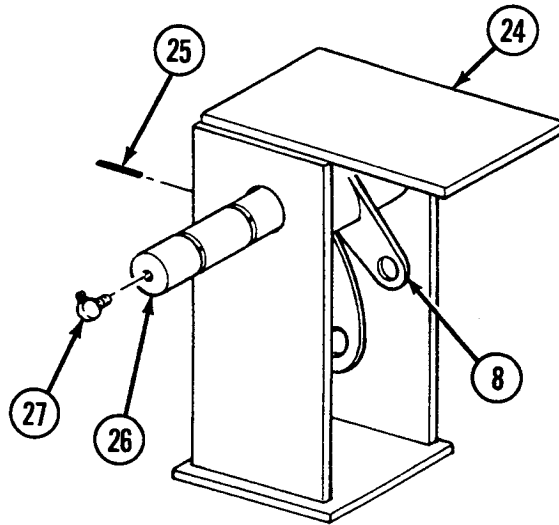
28. Install clevis (54) and nut (55) to rod assembly (49).
29. Connect rod assembly (49) to rod assembly (50) with screw (51), lockwasher (52), and nut (53).
30. Install rod assembly (32) to rod assembly (49) with two nuts (47) and turnbuckle (48).
31. Install six rollers (46) and six bolts (45).



32. Install two bearing units (42) with four screws (43) and four lockwashers (44).
33. Install shaft (39) to two bearing units (42) and tighten two setscrews (41).
34. Install levers (18 and 29) to shaft (39) with two retaining rings (40).
35. Install clevis (37), nut (38), rod end (35), and nut (36) to rod assembly (28).
36. Connect rod assembly (28) to rod assembly (32) with straight pin (34) and cotter pin (33). Install rod assembly (28) to lever (29) with screw (30) and lockwasher (31).



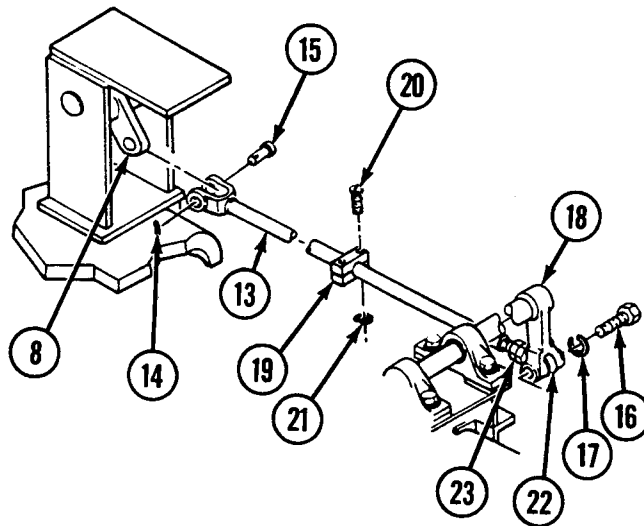
37. Install brake cam assembly (8) to bracket assembly (24) with shaft (26), spring pin (25), and lubrication fitting (27).



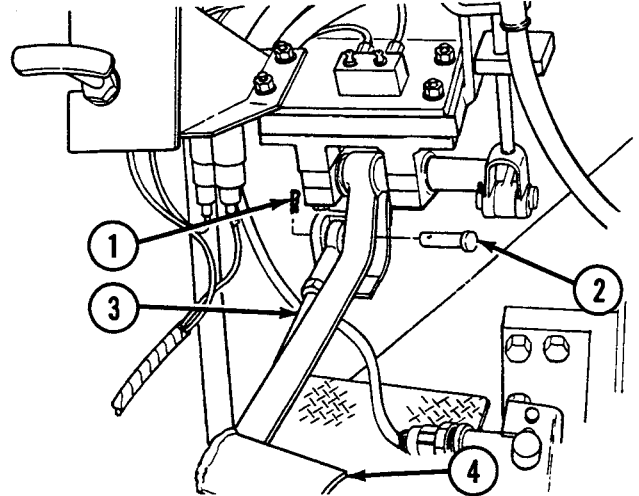
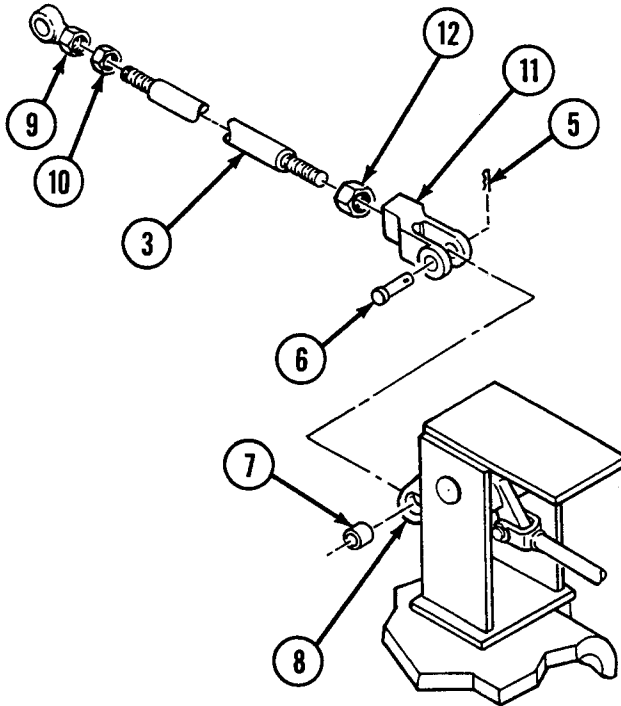
38. Install rod end (22) and nut (23) to rod assembly (13). Connect rod assembly to lever (18) with screw (16) and lockwasher (17).

39. Install rod assembly (13) to brake cam assembly (8) with straight pin (15) and cotter pin (14).

40. Install two blocks (19) to rod assembly (13) with two screws (20) and two lockwashers (21).



41. Install rod end (9), nut (10), clevis (11), and nut (12) to rod assembly (3).
42. Connect rod assembly (3) to brake cam assembly (8) with straight pin (6), bearing (7), and cotter pin (5).
43. Install rod assembly (3) to brake pedal (4) with straight pin (2) and cotter pin (1).



Alignment

NOTE

Prior to performing any brake control alignment or adjustment, do the following: Block vehicle in place and fully release vehicle brakes (refer to TM 9-2350-256-10); Disconnect left and right brake lever rods from brake-apply levers; Check each brake-apply lever (point 1). Each lever must be in its fully released position against its external stop with no free travel. If not, use a 9/16-in. socket wrench and, while pushing in with socket wrench to release adjustment bolt, turn bolt clockwise to position each lever against its stop.

1. Loosen nuts on linkage rods and insert 1/8-in.- (3.2 mm-) diameter locating pins at points indicated. Adjust rods as necessary to permit pinning.
2. While brake control pedal is pinned, adjust brake control pedal height stop.
3. With brake-apply levers in fully released position against their stops, adjust rear brake rods equally at both ends until clevis holes in rod ends align with bottom holes in brake-apply levers. Connect rods to levers.
4. Tighten all nuts and remove locating pins.

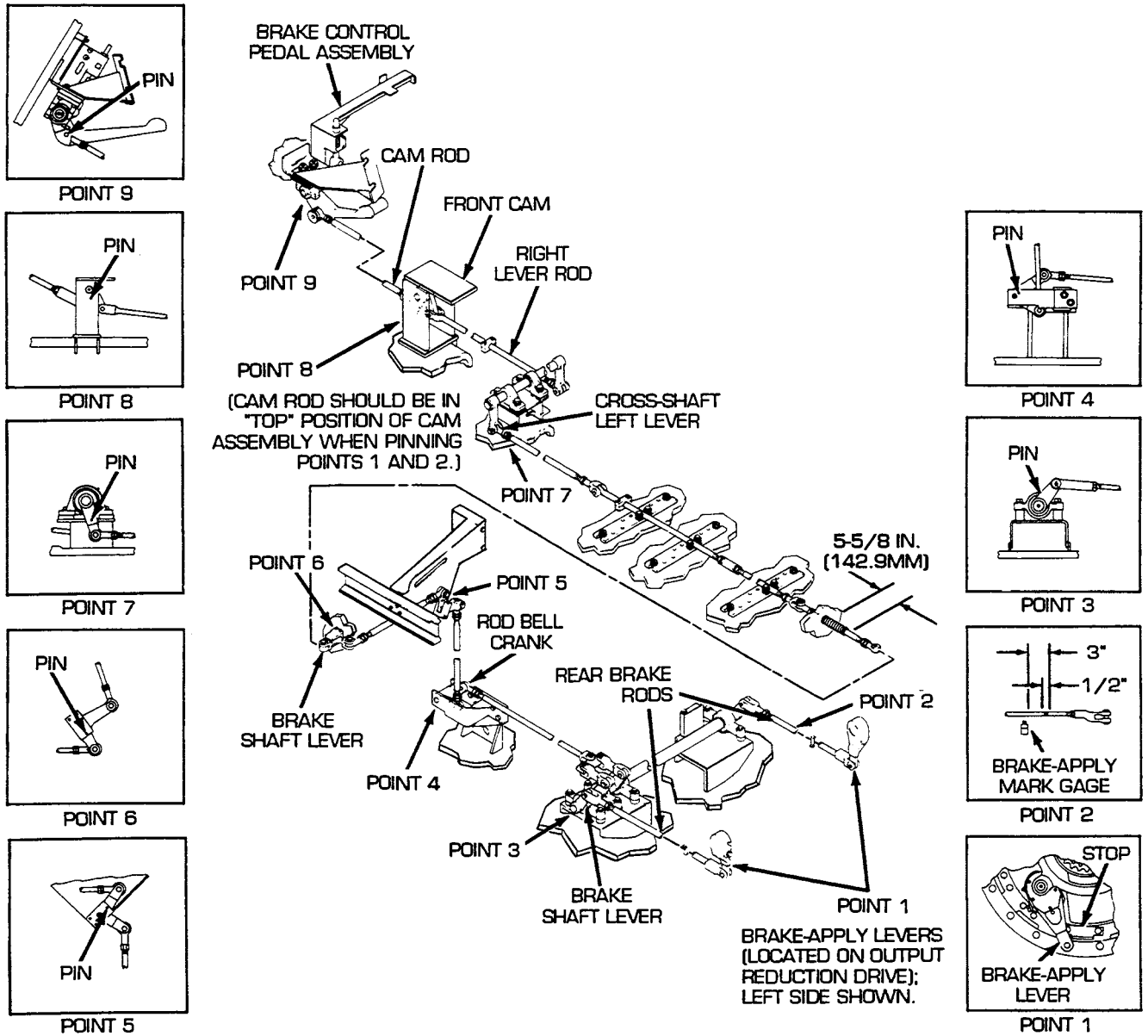
Adjustment

NOTE

Prior to performing any brake control alignment or adjustment, do the following: Block vehicle in place and fully release vehicle brakes (refer to TM 9-2350-256-10); Disconnect left and right brake lever rods from brake-apply levers; Check each brake-apply lever (point 1). Each lever must be in its fully released position against its external stop with no free travel. If not, use a 9/16-in. socket wrench and, while pushing in with socket wrench to release adjustment bolt, turn bolt clockwise to position each lever against its stop.

1. With brake not applied and each brake-apply lever against its stop, measure 3 in. (76.2 mm) back on each rod from brake adjustment indicator and place mark 1/2-in. (12.7 mm) wide on rod so centerline of mark is 3 in. (76.2 mm) from centerline of indicator (point 2).
2. Apply brake fully and note position of mark with respect to indicator; mark and indicator should align. If not, proceed to step 3 and adjust.

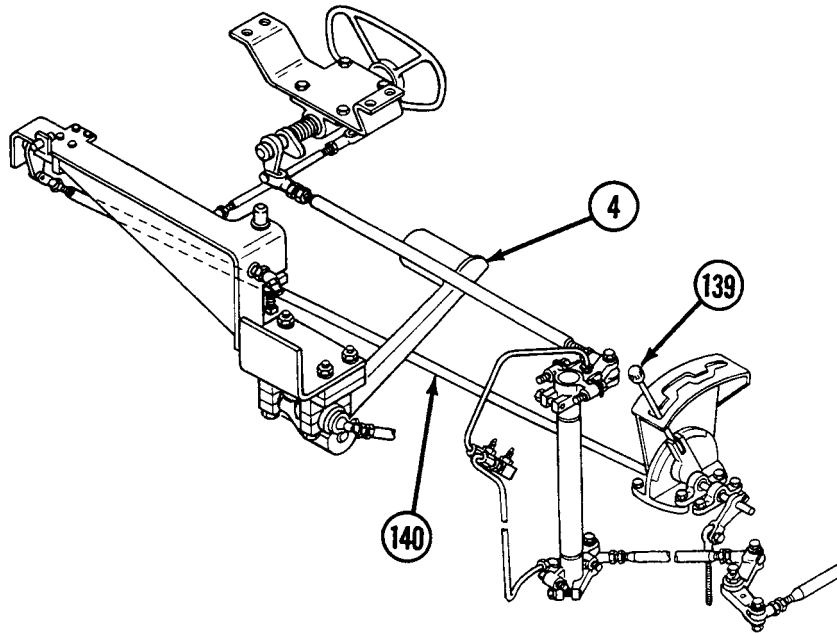
- With brake fully applied, place 9/16-in. socket wrench on brake-apply lever adjustment bolt. While pushing in with wrench to release bolt, turn bolt (clockwise if mark is in front of indicator, counterclockwise if mark is behind) until mark on rod aligns with indicator.



NOTE

Steps 4 thru 6 refer to brake control adjustment.

4. Place shift control lever (139) in PARK (P) position.
5. Push brake pedal (4) down as far as possible. Brake pedal should lock in down position.
6. If brake pedal (4) does not lock in down position, loosen two nuts on linkage rod (140). Adjust linkage rod until brake pedal will lock in down position. Tighten nuts.

**CAUTION**

Adjust brakes only after making certain brake linkage alignment is correct.

CAUTION

Do not adjust travel of brake-apply-and-slack adjuster lever to less than 3 in. (76.2 mm) because of possible damage to brakes.

NOTE

Alignment of black mark (141) on brake rod and black mark (142) on brake adjustment gage indicates that brakes are applied and in proper adjustment.

NOTE

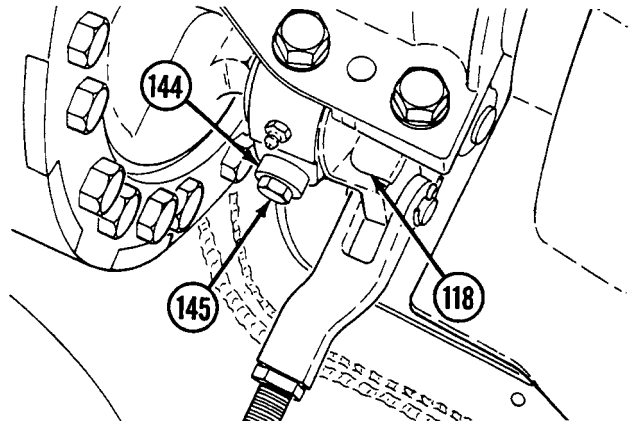
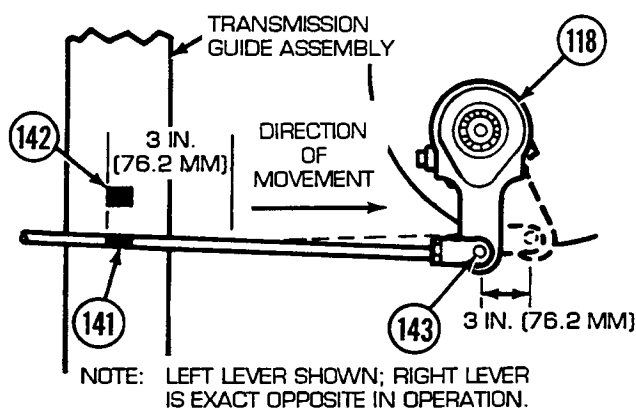
Steps 7 and 8 refer to brake adjustment.

- Apply brakes and check amount of brake-apply-and-slack adjuster lever (118) travel. Each lever (right or left) must travel not less than 3 in. (76.2 mm), measured at outer hole (143) in end of lever. With brakes applied, black mark (141) on brake rod should align with black mark (142) on brake adjustment gage.

NOTE

Adjustment may be made through access holes in bottom rear of hull.

- Release brakes and press in locking ring (144). Turn adjustment bolt (145) clockwise to shorten travel or counterclockwise to lengthen travel, as required. (Shortening brake-apply- and-slack adjuster lever [118] tightens brakes.)

**NOTE**

Follow-on maintenance: Only install or close items necessary to gain access to area of linkage requiring removal. Install oddment tray (see WP 0390 00); Install toolbox rack (see WP 0389 00); Install ammunition rack (see WP 0386 00); Install air inlet grilles as necessary (see WP 0342 00); Install air inlet doors as necessary (see WP 0341 00); Install cab subfloor plates (see WP 0286 00 thru 0308 00); Install left-side air cleaner (see WP 0137 00); Install powerplant (see WP 0098 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

BRAKE PEDAL AND BRACKET ASSEMBLY MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)
 Pliers, retaining ring (item 36, WP 0490 00)

Materials/Parts

Bearing assemblies (2) (item 198, WP 0491 00)
 Key (item 698, WP 0491 00)
 Key (item 699, WP 0491 00)
 Lockwashers (4) (item 639 WP 0491 00)
 Lockwashers (9) (item 640, WP 0491 00)
 Nut (item 681, WP 0491 00)
 Nut (item 685, WP 0491 00)
 Nuts (4) (item 769, WP 0491 00)
 Pin (item 677, WP 0491 00)
 Pins, cotter (3) (item 108, WP 0491 00)
 Pins, cotter (2) (item 525, WP 0491 00)
 Pin, straight (item 7, WP 0491 00)
 Pin, straight (item 119, WP 0491 00)
 Pin, straight (item 708, WP 0491 00)
 Pin, straight (item 711, WP 0491 00)

Materials/Parts (cont.)

Rings, retaining (2) (item 453, WP 0491 00)
 Screw (item 33, WP 0491 00)
 Screw (item 405, WP 0491 00)
 Screws (6) (item 406, WP 0491 00)
 Screw (item 701, WP 0491 00)
 Screw (item 733, WP 0491 00)
 Screws (2) (item 780, WP 0491 00)
 Screws (2) (item 792, WP 0491 00)
 Screw (item 800, WP 0491 00)
 Screws (2) (item 802, WP 0491 00)
 Spring (item 200, WP 0491 00)
 Washers (2) (item 230, WP 0491 00)
 Washers (2) (item 431, WP 0491 00)

References

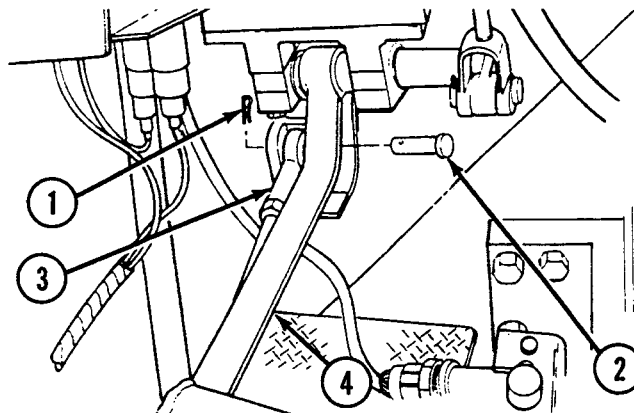
WP 0097 00

Equipment Condition

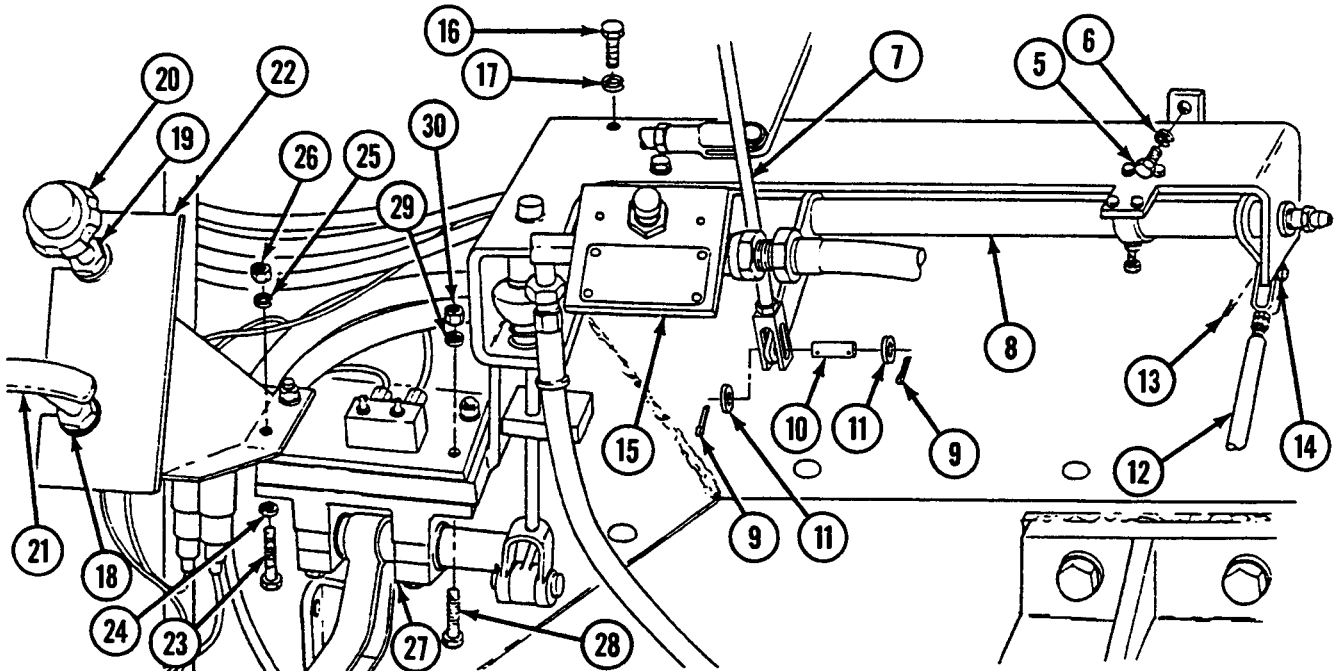
Neutral safety switch removed (see WP 0163 00)

Removal

1. Remove cotter pin (1) and straight pin (2) and disconnect rod assembly (3) from brake pedal (4).



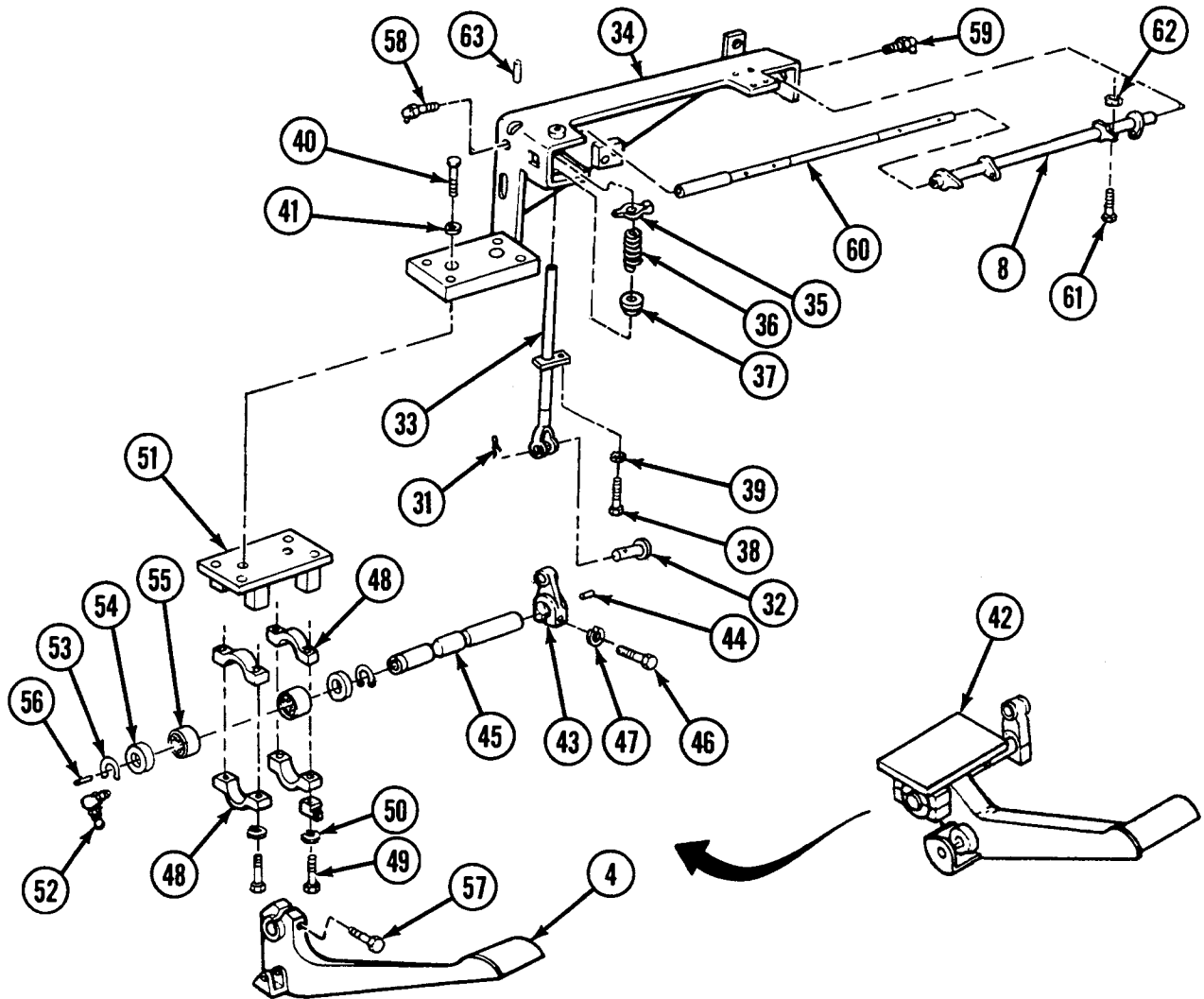
2. Remove screw (5) and lockwasher (6).
3. Disconnect steering rod (7) from lever (8) by removing two cotter pins (9), straight pin (10), and two washers (11).
4. Disconnect shifting rod (12) from lever (8) by removing cotter pin (13) and straight pin (14).
5. Remove spade release bracket (15) by removing two screws (16) and two lockwashers (17).
6. Loosen nuts (18 and 19) and remove throttle control assembly (20) and fuel shutoff (21) from bracket (22).
7. Remove bracket (22) by removing two screws (23), two flat washers (24), two lockwashers (25), and two nuts (26).
8. Remove brake pedal and bracket assembly (27) by removing two screws (28), two lockwashers (29), and two nuts (30).



Disassembly

1. Remove cotter pin (31) and straight pin (32).
2. Pull cam rod (33) out of bracket (34) and remove cam (35), spring (36), and collar (37).
3. Remove screw (38) and nut (39) from cam rod (33).
4. Remove two screws (40), two lockwashers (41), and brake pedal and support assembly (42).
5. Remove lever (43) and key (44) from shaft (45) by removing screw (46) and lockwasher (47).
6. Remove four caps (48) by removing four screws (49) and four lockwashers (50). Remove brake pedal (4), with shaft (45), from support (51).
7. Remove lubrication fitting (52) from shaft (45).
8. Remove two retaining rings (53) and two washers (54) from shaft (45).
9. Remove two bearing assemblies (55) and key (56) from shaft (45).

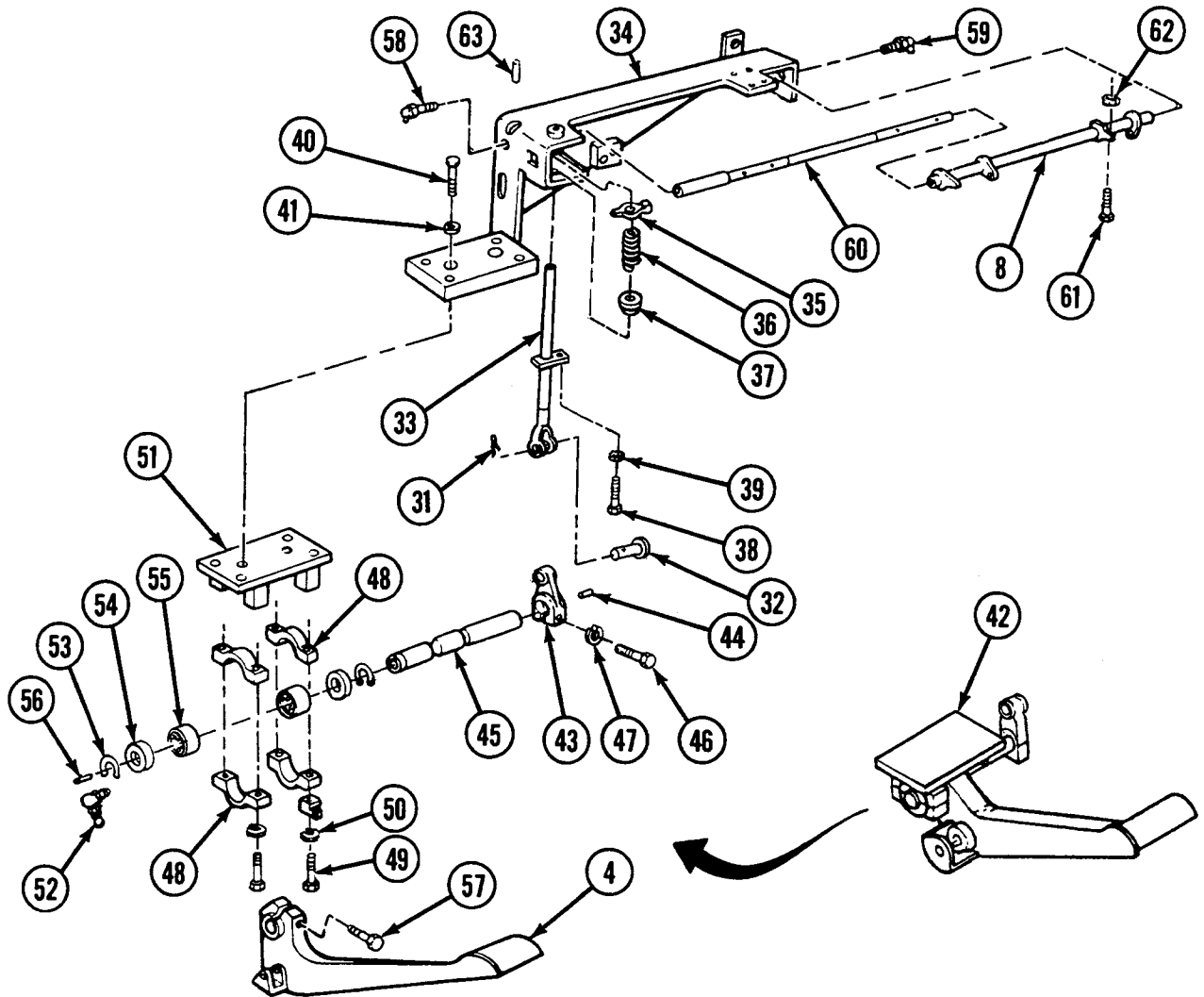
10. Remove brake pedal (4) from shaft (45) by removing screw (57).
11. Remove lubrication fittings (58 and 59).
12. Remove shaft (60) and lever (8) from bracket (34).
13. Remove screw (61) and nut (62) from lever (8).
14. Remove pin (63) from bracket (34).



Assembly

1. Install pin (63) to bracket (34).
2. Install screw (61) and nut (62) on lever (8).
3. Install shaft (60) and lever (8) on bracket (34).
4. Install lubrication fittings (58 and 59) on shaft (60).
5. Install brake pedal (4) on shaft (45) with screw (57).
6. Install two bearing assemblies (55) and key (56) on shaft (45).
7. Install two washers (54) and two retaining rings (53) on shaft (45).
8. Install lubrication fitting (52) on shaft (45).
9. Install assembled brake pedal (4) on support (51) with four caps (48), four screws (49), and four lockwashers (50).
10. Install lever (43) and key (44) on shaft (45) with screw (46) and lockwasher (47).
11. Lubricate in accordance with WP 0097 00.
12. Install brake pedal and support assembly (42) with two screws (40) and two lockwashers (41).
13. Install screw (38) and nut (39) on cam rod (33).
14. Install cam rod (33), cam (35), spring (36), and collar (37) on bracket (34).

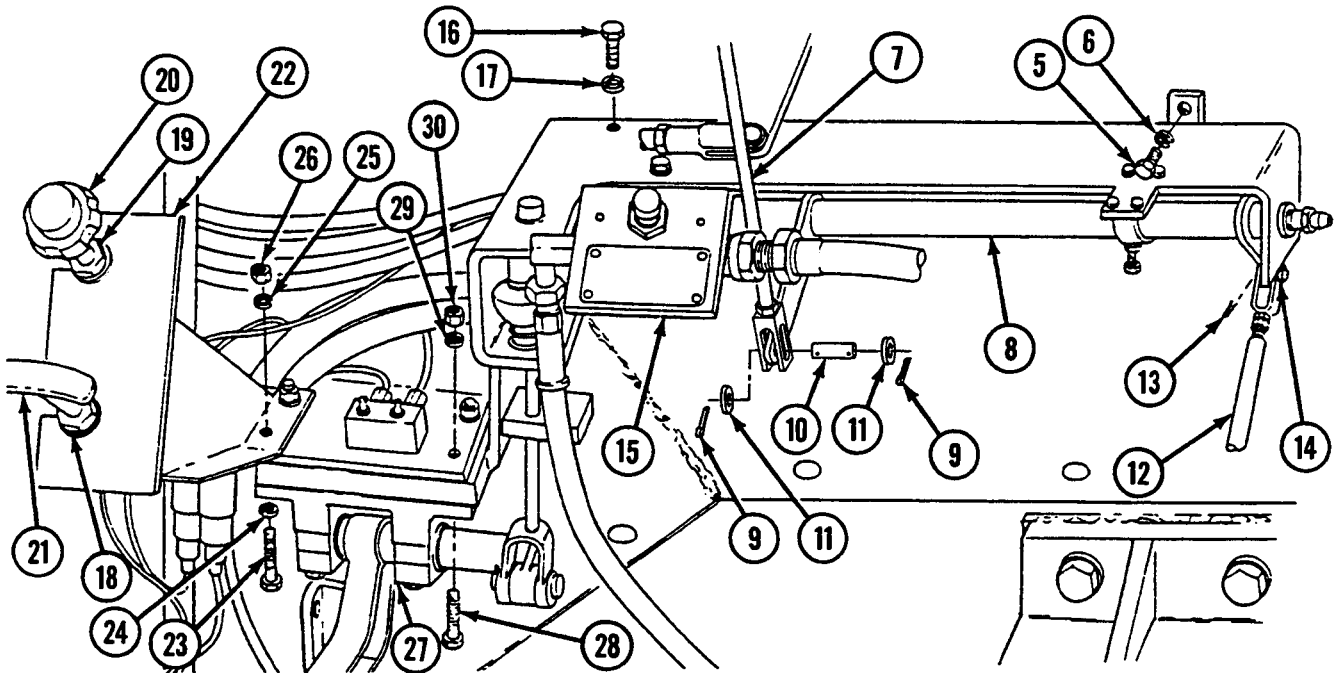
15. Install straight pin (32) and cotter pin (31).



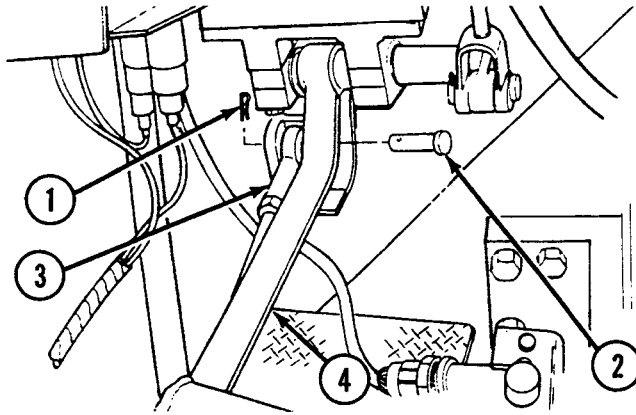
16. Lubricate in accordance with WP 0097 00.

Installation

1. Install brake pedal and bracket assembly (27) with two lockwashers (29), two screws (28), and two nuts (30).
2. Install bracket (22) with two screws (23), two flat washers (24), two lockwashers (25), and two nuts (26).
3. Install lockwasher (6) and screw (5).
4. Install throttle control assembly (20) and fuel shutoff (21) to bracket (22) and tighten nuts (18 and 19).
5. Install spade release bracket (15) with two lockwashers (17) and two screws (16).
6. Connect shifting rod (12) to lever (8) with straight pin (14) and cotter pin (13).
7. Connect steering rod (7) to lever (8) with straight pin (10), two washers (11), and two cotter pins (9).



8. Connect rod assembly (3) to brake pedal (4) with straight pin (2) and cotter pin (1).



NOTE

Follow-on maintenance: Install neutral safety switch (see WP 0163 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

BRAKE CAM ASSEMBLY MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0097 00

WP 0365 00

Materials/Parts

Seals (2) (item 241, WP 0491 00)

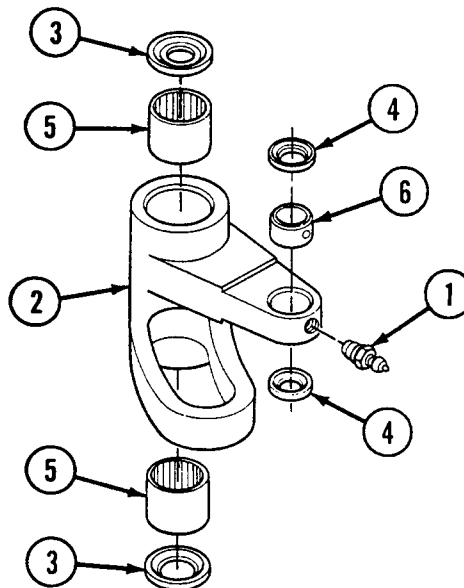
Seals (2) (item 851, WP 0491 00)

Removal

1. Remove brake cam assembly (see WP 0365 00).

Disassembly

1. Remove lubrication fitting (1) from brake cam assembly (2).
2. Pry four seals (3 and 4) out of brake cam assembly (2).
3. Tap two bearings (5) and bearing (6) out of brake cam assembly (2).



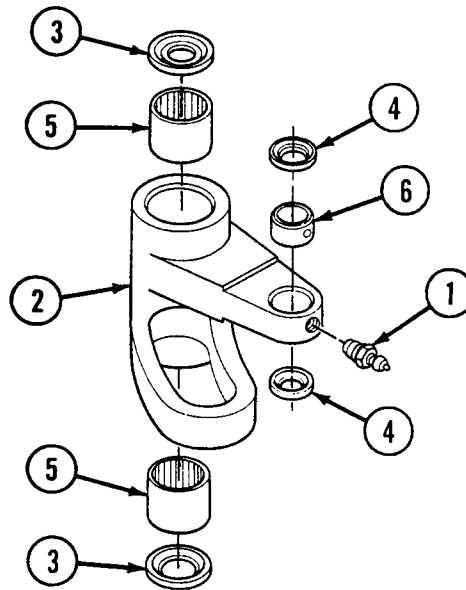
Assembly

1. Install two bearings (5) into brake cam assembly (2).
2. Install bearing (6) into brake cam assembly (2) making sure that bearing hole aligns with hole in brake cam assembly for lubrication fitting.

NOTE

Seals must be installed with rubber lips facing outward.

3. Install four seals (3 and 4) in brake cam assembly (2).
4. Install lubrication fitting (1) in brake cam assembly (2).



5. Lubricate in accordance with WP 0097 00.

Installation

1. Install brake cam assembly (see WP 0365 00).

END OF WORK PACKAGE

UNIT MAINTENANCE**RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1****NSN 2350-00-122-6826, EIC AQA****BEARING UNIT HOUSING ASSEMBLY MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION**

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)
Pliers, retaining ring (item 36, WP 0490 00)

References

WP 0097 00

Equipment Condition

Service brake linkages removed as necessary (see WP
0365 00)

Materials/Parts

Ring, retaining (item 458, WP 0491 00)
Seal (item 6, WP 0491 00)
Seal (item 136, WP 0491 00)

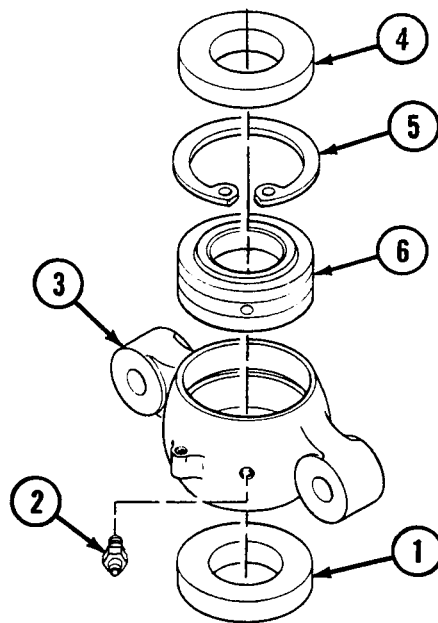
Removal

1. Remove bearing unit housing assembly (see WP 0365 00).

Disassembly**NOTE**

Seal (1) and lubrication fitting (2) are not part of left-center brake shaft bearing unit housing assembly.

1. Remove lubrication fitting (2) from housing (3).
2. Pry seals (1 and 4) out of housing (3).
3. Remove retaining ring (5) from housing (3).
4. Remove ball bearing (6) from housing (3).



Assembly

1. Install ball bearing (6) into housing (3) making sure that bearing hole aligns with hole for lubrication fitting in housing. Secure ball bearing with retaining ring (5).

NOTE

Seals (1 and 4) must be installed with rubber lips facing outward.

2. Install seals (1 and 4) into housing (3).
3. Install lubrication fitting (2) into housing (3).
4. Lubricate in accordance with WP 0097 00.

Installation

1. Install bearing unit housing assembly (see WP 0365 00).

NOTE

Follow-on maintenance: Install service brake linkages if removed (see WP 0365 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

PLATE ASSEMBLY MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0365 00

Materials/Parts

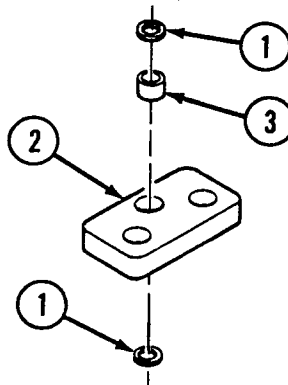
Seals (6) (item 241, WP 0491 00)

Removal

1. Remove plate assembly (see WP 0365 00).

Disassembly

1. Pry six seals (1) out of plate (2).
2. Tap three bearings (3) out of plate (2).

**Assembly**

1. Install three bearings (3) into plate (2).
2. Install three seals (1) on each side of plate (2).

Installation

1. Install plate assembly (see WP 0365 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
LEVER ASSEMBLY MAINTENANCE
DISASSEMBLY, ASSEMBLY

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0097 00

Materials/Parts

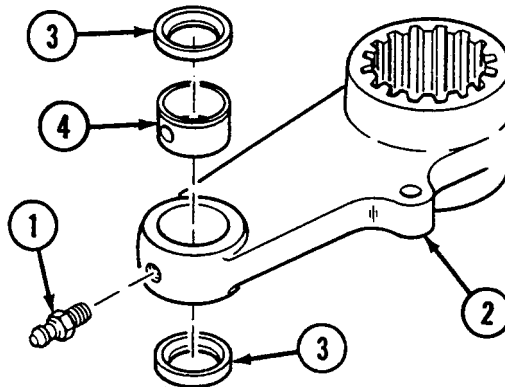
Seals (2) (item 241, WP 0491 00)

Equipment Condition

Lever assembly removed (see WP 0365 00)

Disassembly

1. Remove lubrication fitting (1) from lever (2).
2. Pry two seals (3) out of lever (2).
3. Tap bearing (4) out of lever (2).

**Assembly**

1. Install bearing (4) into lever (2) making sure that bearing hole aligns with hole for lubrication fitting in lever.

NOTE

Seals (3) must be installed with rubber lips facing outward.

2. Install two seals (3) into lever (2).
3. Install lubrication fitting (1) into lever (2).
4. Lubricate in accordance with WP 0097 00.

NOTE

Follow-on maintenance: Install lever assembly (see WP 0365 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**LINKAGE ROLLER PLATES REPLACEMENT
REMOVAL, INSTALLATION**

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Bolts (8) (item 339, WP 0491 00)

Materials/Parts (cont.)

Lockwashers (6) (item 642, WP 0491 00)

Nuts (6) (item 761, WP 0491 00)

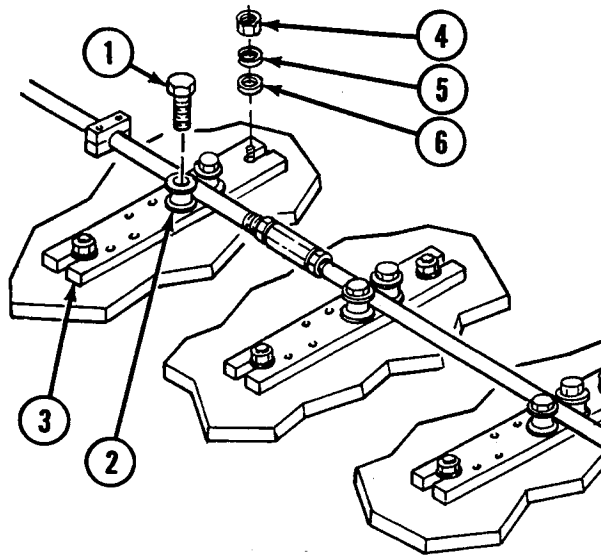
Washers, flat (6) (item 540, WP 0491 00)

NOTE

Removal and installation procedures are the same for all three linkage roller plates.

Removal

1. Remove eight bolts (1) and eight rollers (2) from linkage roller plate (3).
2. Remove linkage roller plate (3) by removing two nuts (4), two lockwashers (5), and two flat washers (6).



Installation

1. Install linkage roller plate (3) with two flat washers (6), two lockwashers (5), and two nuts (4).
2. Install eight rollers (2) and eight bolts (1) to linkage roller plate (3).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

WISE MOUNTING HARDWARE AND ADAPTER PLATE REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (8) (item 642, WP 0491 00)

Materials/Parts (cont.)

Screws (4) (item 417, WP 0491 00)

Screws (4) (item 803, WP 0491 00)

Washers, flat (8) (item 539, WP 0491 00)

NOTE

The M88A1 uses either a three- or four-mounting-hole vise. The four-mounting-hole vise procedure is shown.

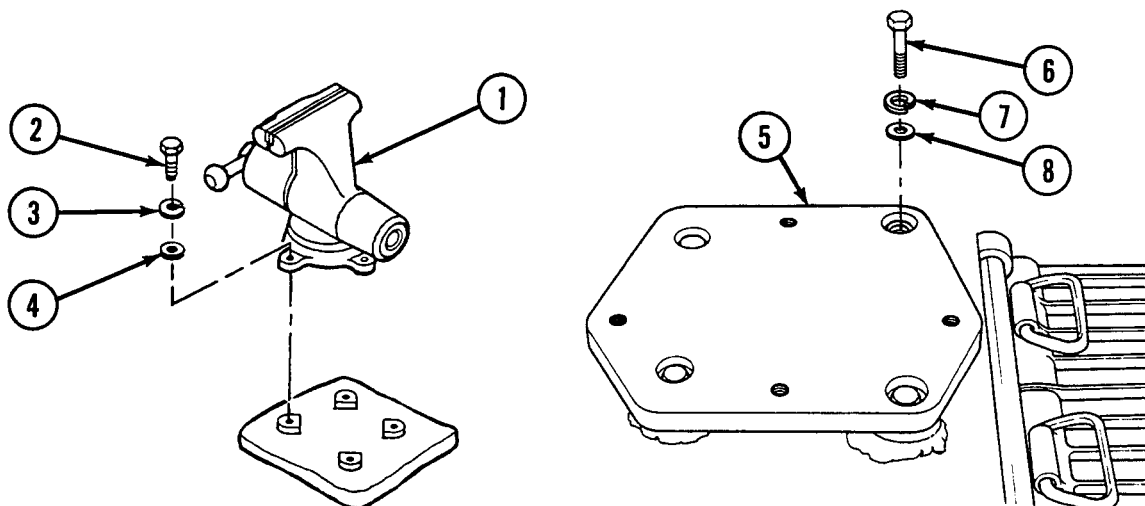
Removal

1. Remove vise (1) by removing four screws (2), four lockwashers (3), and four flat washers (4).

NOTE

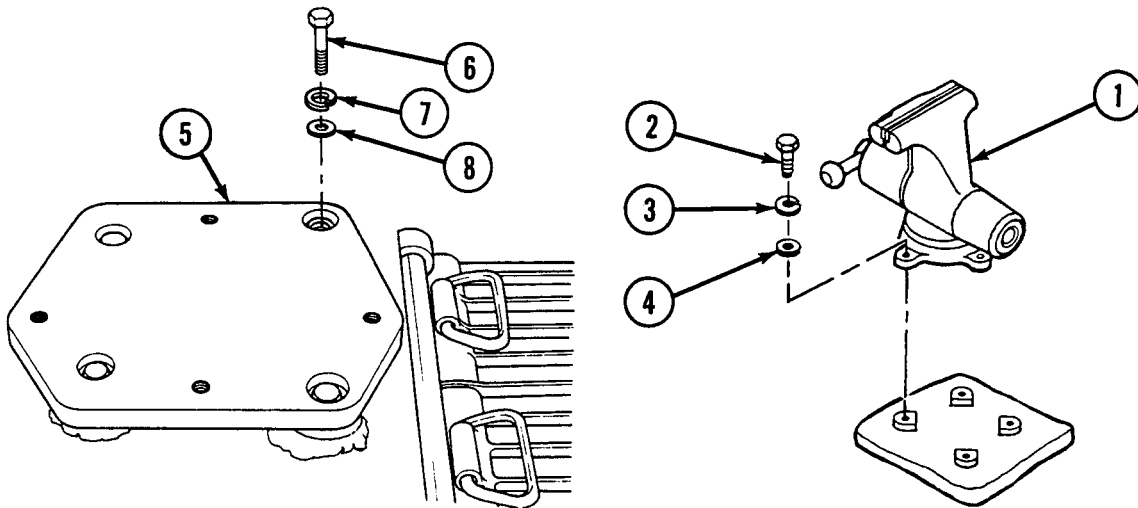
Vise adapter plate is required only when three-mounting-hole vise is used. Proceed with step 2 only if necessary.

2. Remove vise adapter plate (5) by removing four screws (6), four lockwashers (7), and four flat washers (8).



Installation

1. Install vise adapter plate (5) by installing four flat washers (8), four lockwashers (7), and four screws (6).
2. Install vise (1) by installing four flat washers (4), four lockwashers (3), and four screws (2).

**END OF WORK PACKAGE**

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
DECONTAMINATION APPARATUS BRACKET ASSEMBLY REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

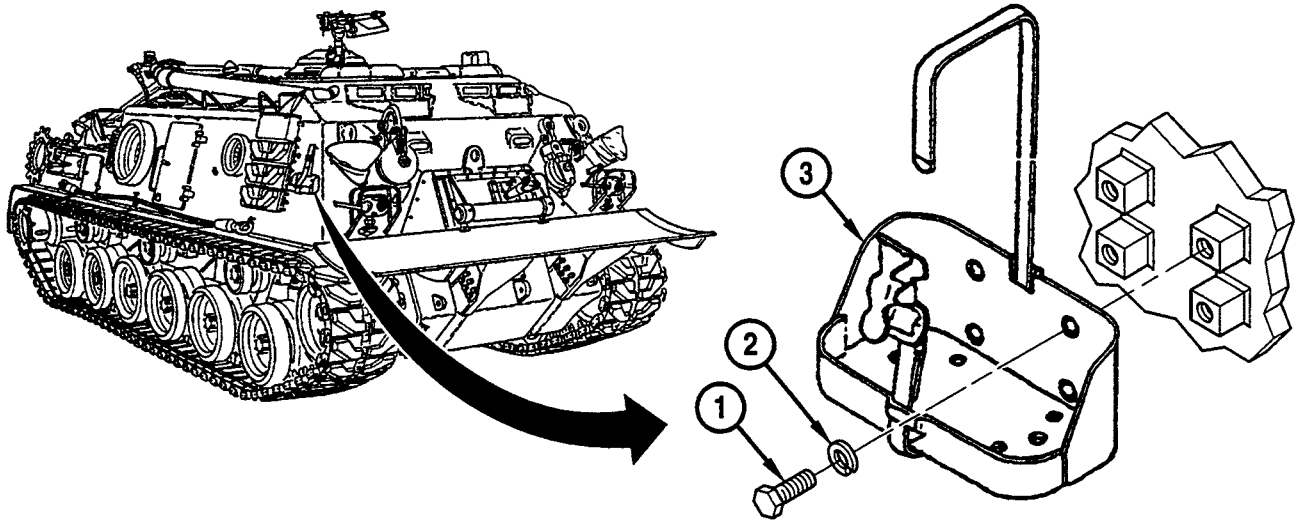
Materials/Parts

Lockwashers (4) (item 640, WP 0491 00)

Screws (4) (item 397, WP 0491 00)

Removal

1. Remove four screws (1), four lockwashers (2), and bracket assembly (3). Discard lockwashers.

**Installation**

1. Install bracket assembly (3) with four screws (1) and four lockwashers (2).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**TOW BAR ASSEMBLY, TOW BAR MOUNTING BRACKETS,
AND TOW CHAIN MOUNTING BRACKETS MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION**

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (7) (item 642, WP 0491 00)
Lockwasher (item 647, WP 0491 00)
Nut (item 761, WP 0491 00)
Pins, cotter (3) (item 528, WP 0491 00)
Pins, headed (5) (item 61, WP 0491 00)
Pins, locking (5) (item 164, WP 0491 00)
Pins, straight (2) (item 711, WP 0491 00)

Materials/Parts (cont.)

Screws (7) (item 804, WP 0491 00)
Washers, flat (4) (item 539, WP 0491 00)
Washers, flat (6) (item 541, WP 0491 00)

Personnel Required

Mechanics (2)

References

WP 0344 00

WARNING

Tow bar assembly is extremely heavy—two persons are required for removal and installation.

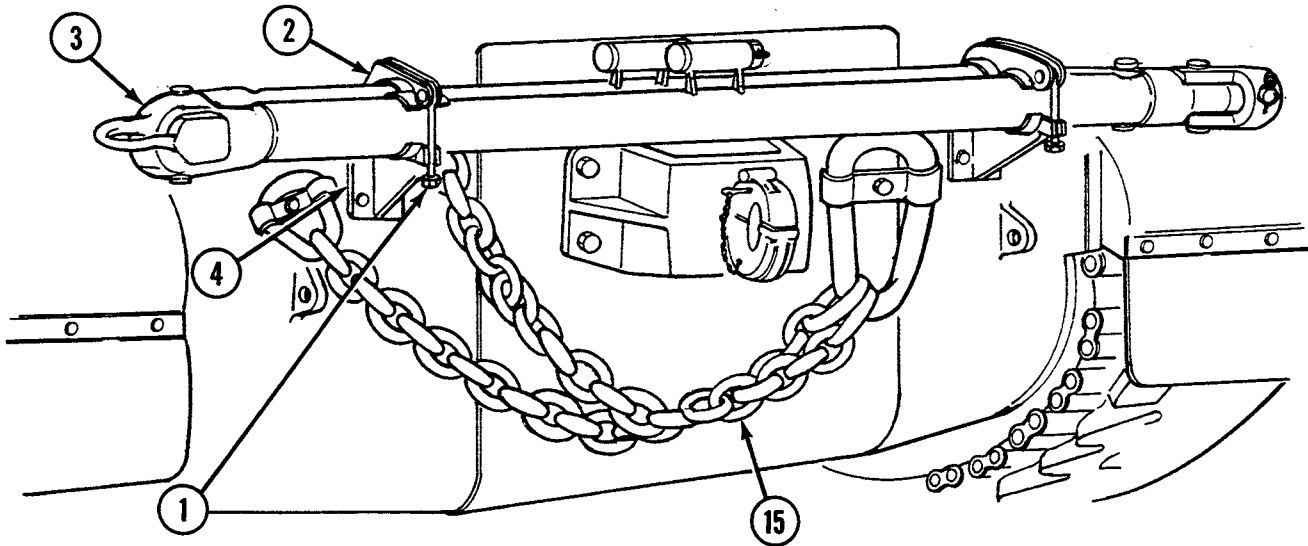
Removal**NOTE**

Lift or remove exhaust deflector (see WP 0344 00) as required for clearance.

NOTE

Steps 1 through 5 apply to both left- and right-side tow bar mounting brackets.

1. Loosen nut (1) to open clamp assembly (2) and remove tow bar (3) from bracket (4).



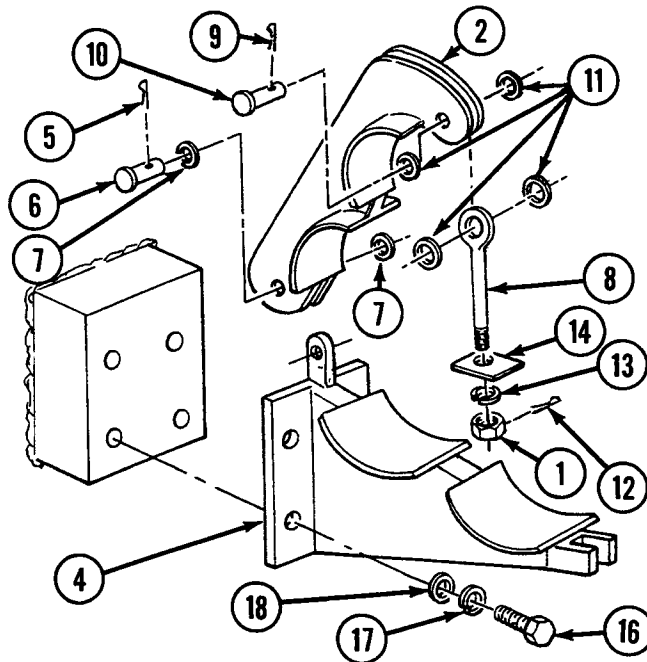
2. Remove cotter pin (5), pin (6), two flat washers (7), and clamp assembly (2) from bracket (4).
3. Remove eyebolt (8) from clamp assembly (2) by removing cotter pin (9), pin (10), and four flat washers (11).

- Remove cotter pin (12), nut (1), lockwasher (13), and spacer (14) from eyebolt (8).

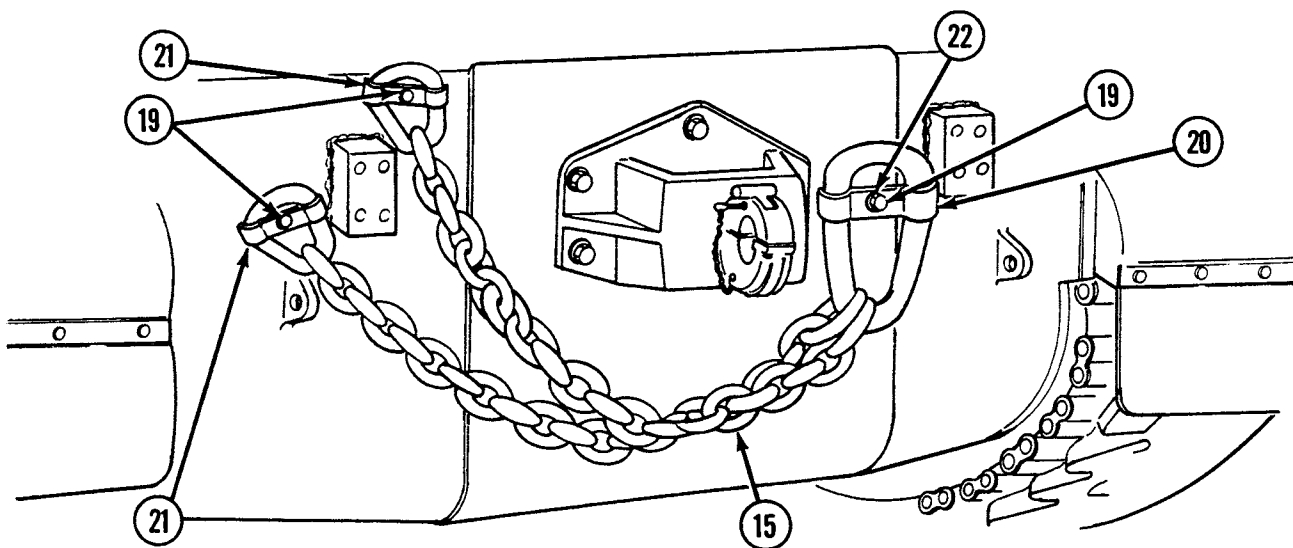
WARNING

If bracket (4) or tow chain (15) is dropped, it may cause serious injury.

- Remove bracket (4) by removing four screws (16), four lockwashers (17), and four flat washers (18).

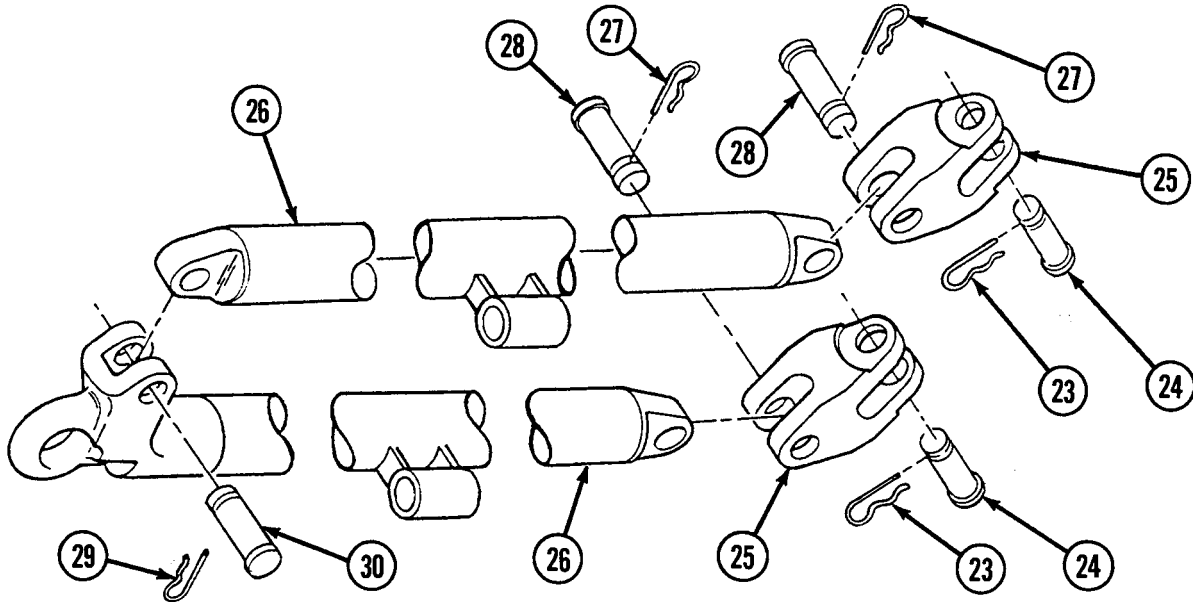


- Loosen three screws (19) and turn clamps (20 and 21) to release tow chain (15). Remove tow chain.
- Remove three screws (19), three lockwashers (22), two clamps (21), and clamp (20).



Disassembly

1. Remove locking pin (23) and headed pin (24) from each of two clevises (25).
2. Remove clevis (25) from each tube assembly (26) by removing from each locking pin (27) and headed pin (28).
3. Separate tube assemblies (26) by removing locking pin (29) and headed pin (30).

**Assembly**

1. Connect tube assemblies (26) with headed pin (30) and locking pin (29).
2. Install clevis (25) on each tube assembly (26) with headed pin (28) and locking pin (27).
3. Install headed pin (24) and locking pin (23) on each of two clevises (25).

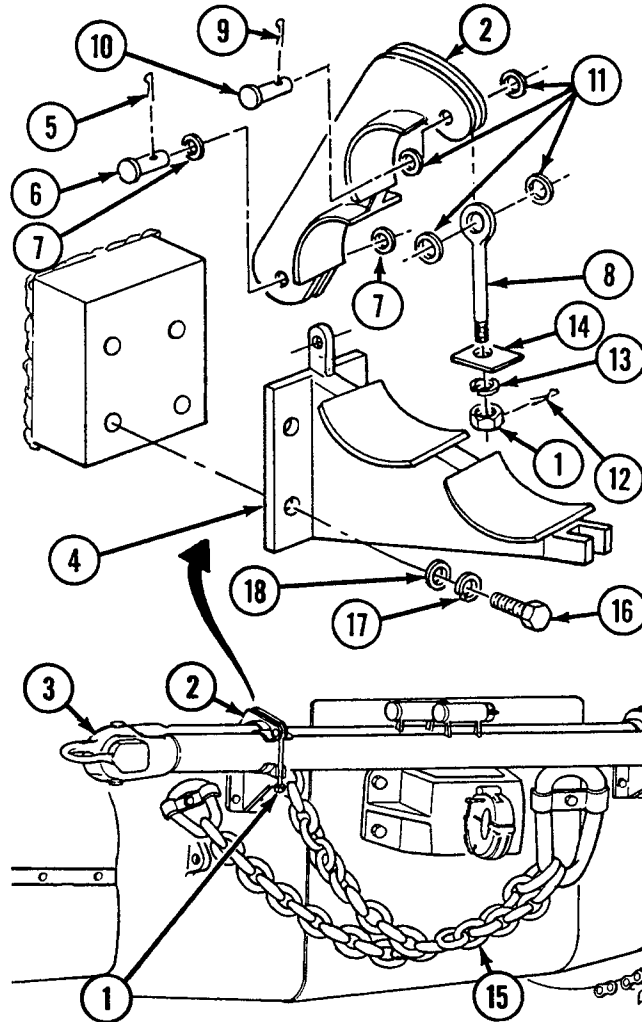
Installation

1. Install clamp (20), two clamps (21), three lockwashers (22), and three screws (19). Do not tighten screws.
2. Install tow chain (15) and secure using two clamps (21) and clamp (20). Tighten three screws (19).

NOTE

Steps 3 through 7 apply to both left- and right-side tow bar mounting brackets.

3. Install bracket (4) with four screws (16), four lockwashers (17), and four flat washers (18).
4. Install spacer (14), lockwasher (13), nut (1), and cotter pin (12) to eyebolt (8).
5. Install eyebolt (8) to clamp assembly (2) with four flat washers (11), pin (10), and cotter pin (9).
6. Install clamp assembly (2) to bracket (4) with two flat washers (7), pin (6), and cotter pin (5).
7. Install clamp assembly (2) to bracket (4) with two flat washers (7), pin (6), and cotter pin (5).



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

BRACKET ASSEMBLIES FOR SIDE TOW BAR AND SIDE TOW CABLES MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

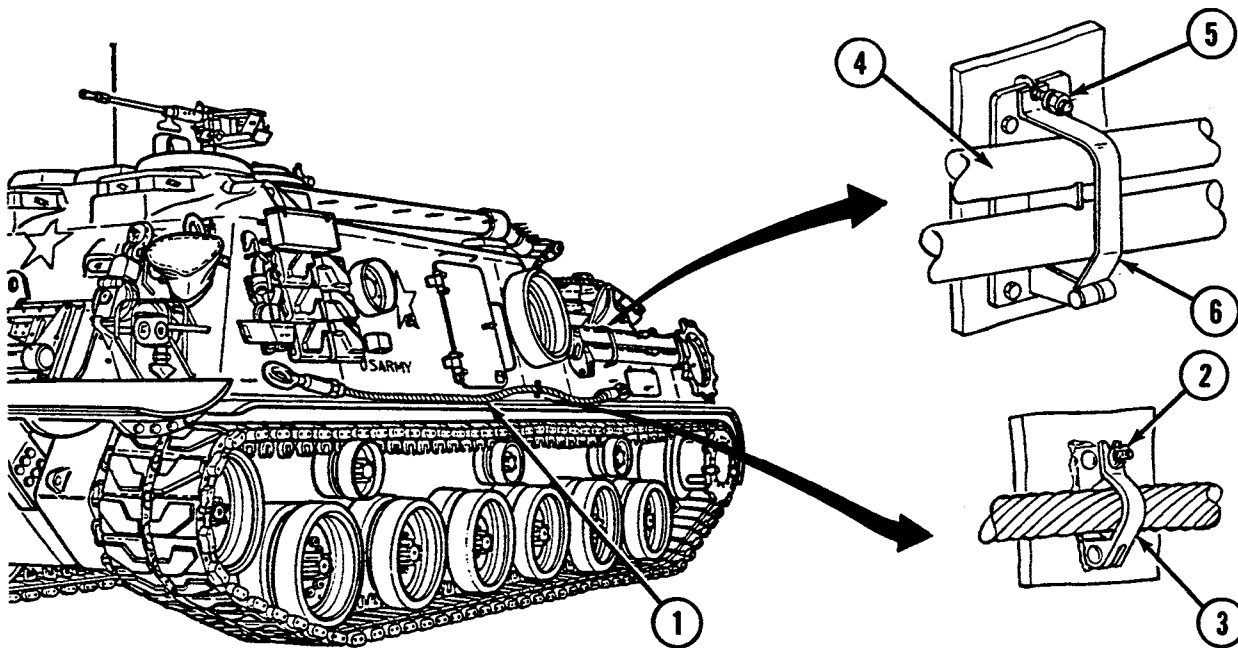
Eyebolts (2) (item 197, WP 0491 00)
 Lockwashers (10) (item 642, WP 0491 00)
 Nuts (2) (item 761, WP 0491 00)

Materials/Parts (cont.)

Pins, cotter (2) (item 5, WP 0491 00)
 Pins, cotter (2) (item 530, WP 0491 00)
 Pins, straight (2) (item 206, WP 0491 00)
 Pins, straight (2) (item 478, WP 0491 00)
 Screws (8) (item 414, WP 0491 00)
 Washers, flat (2) (item 540, WP 0491 00)

Removal

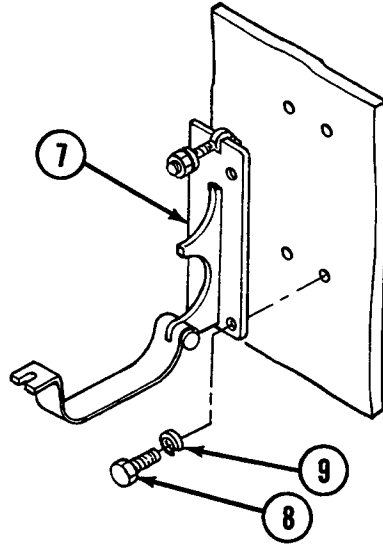
1. Remove two tow cables (1) by loosening six wingnuts (2) and opening six clamps (3).
2. Remove tow bar (4) by loosening two nuts (5) and opening two clamps (6).



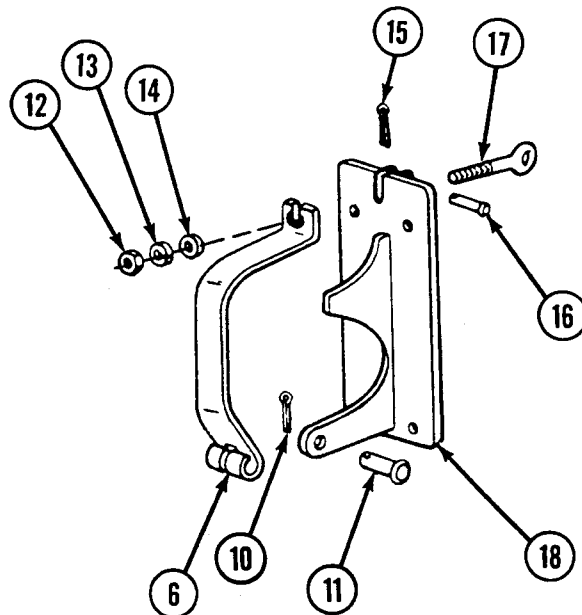
NOTE

The following procedures are the same for both forward and rear bracket assemblies.

3. Remove bracket assembly (7) by removing four screws (8) and four lockwashers (9).

**Disassembly**

1. Remove cotter pin (10), straight pin (11), and clamp (6).
2. Remove nut (12), lockwasher (13), and flat washer (14).
3. Remove cotter pin (15), straight pin (16), and eyebolt (17) from bracket (18).

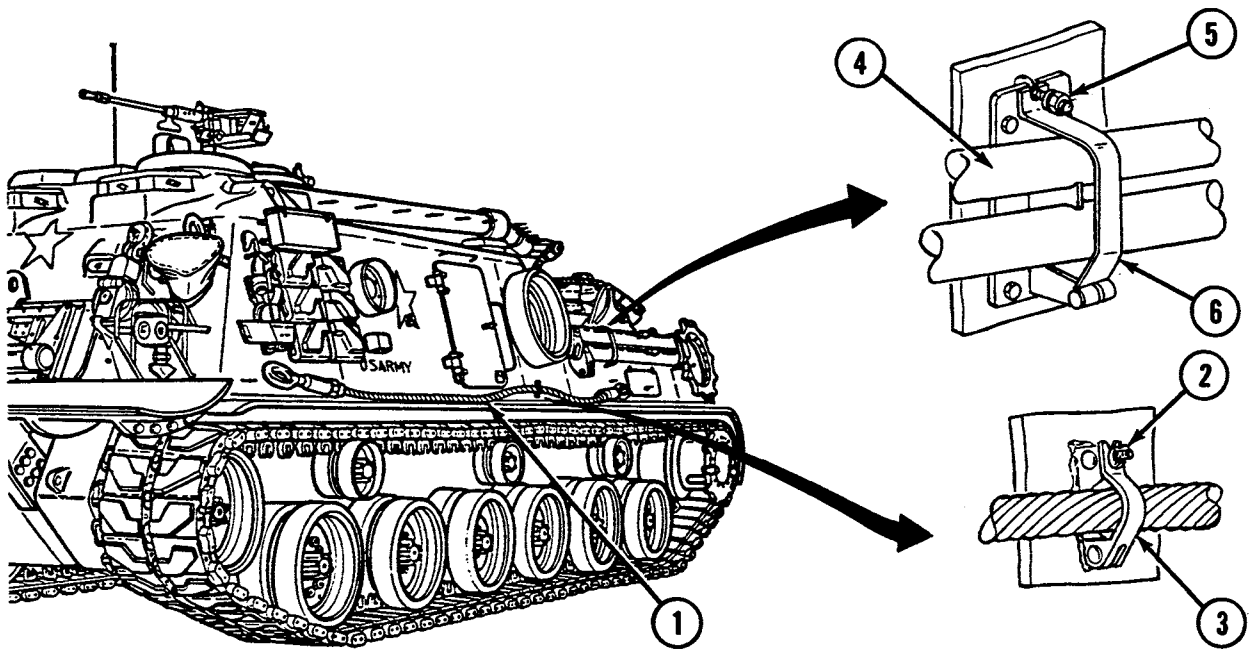


Assembly

1. Install clamp (6) on bracket (18) with straight pin (11) and cotter pin (10).
2. Install straight pin (16), cotter pin (15), and eyebolt (17).
3. Install flat washer (14), lockwasher (13), and nut (12).

Installation

1. Install bracket assembly (7) using four lockwashers (9) and four screws (8).
2. Install tow bar (4) and secure with two clamps (6). Tighten two nuts (5).
3. Install two tow cables (1) by closing six clamps (3) and tightening six wingnuts (2).



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

TARPAULIN TRAY REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

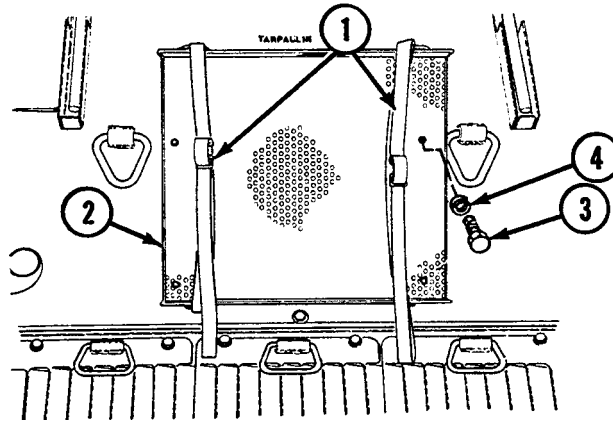
Materials/Parts

Lockwashers (4) (item 638, WP 0491 00)

Screws (4) (item 374, WP 0491 00)

Removal

1. Remove two straps (1).
2. Remove tarpaulin tray (2) by removing four screws (3) and four lockwashers (4).



Installation

1. Install tarpaulin tray (2) using four lockwashers (4) and four screws (3).
2. Install two straps (1).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
10-TON SNATCH BLOCK AND TRACK LINK RETAINERS REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (4) (item 640, WP 0491 00)

Lockwashers (7) (item 642, WP 0491 00)

Nuts (6) (item 755, WP 0491 00)

Materials/Parts (cont.)

Nut (item 762, WP 0491 00)

Screws (4) (item 399, WP 0491 00)

Equipment Condition

Snatch block and track links removed (refer to TM 9-2350-256-10)

NOTE

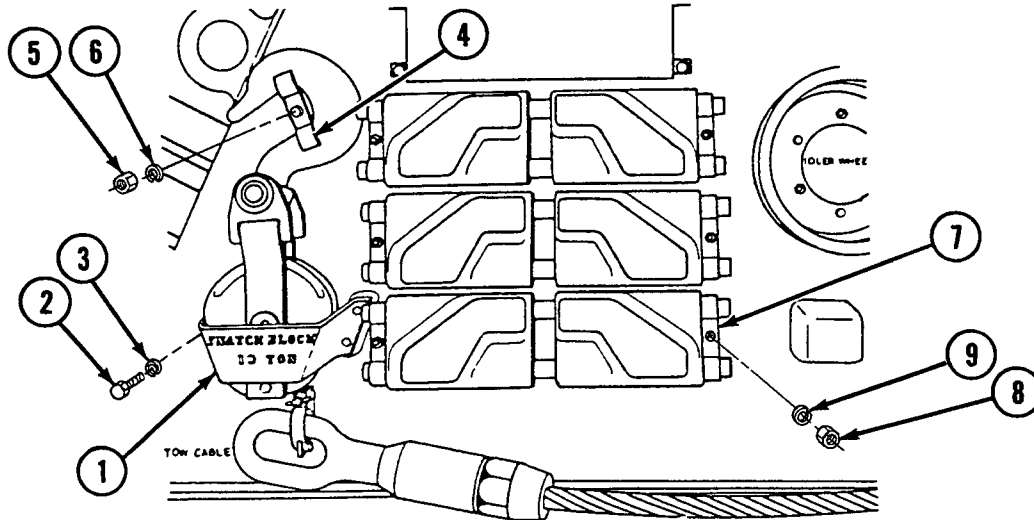
Removal and installation procedures are the same for both left- and right-side track link retainers. Left side shown.

NOTE

Snatch block and track links shown for clarity.

Removal

1. Remove snatch block bracket (1) by removing four screws (2) and four lockwashers (3).
2. Remove retainer (4) by removing nut (5) and lockwasher (6).
3. Remove six track link retainers (7) by removing six nuts (8) and six lockwashers (9).



Installation

1. Install six track link retainers (7) using six lockwashers (9) and six nuts (8).
2. Install retainer (4) using lockwasher (6) and nut (5).
3. Install snatch block bracket (1) using four lockwashers (3) and four screws (2).

NOTE

Follow-on maintenance: Install snatch block and track link (refer to TM 9-2350-256-10).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
25-TON SNATCH BLOCK RETAINER REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

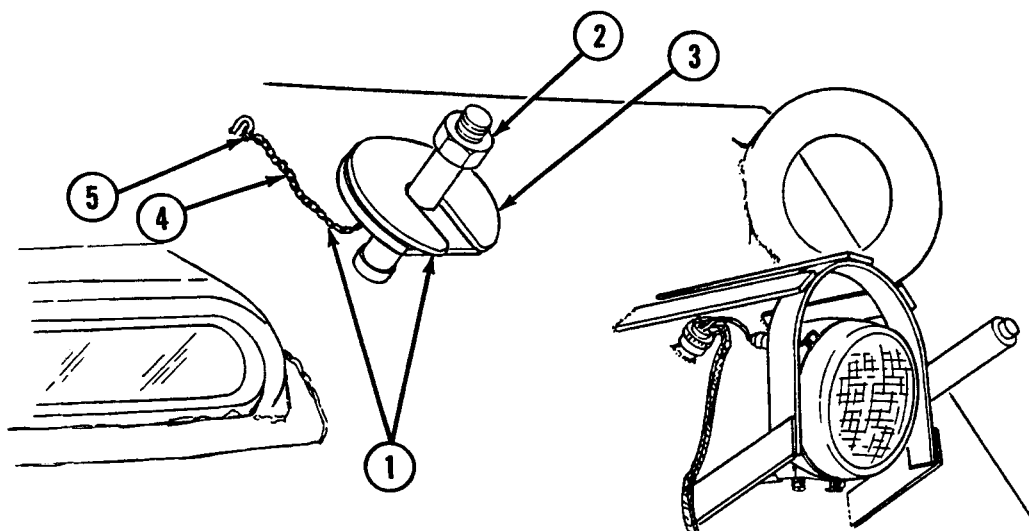
Materials/Parts

Weldless chain (item 5, WP 0484 00)

Nut (item 766, WP 0491 00)

Removal

1. Remove snatch block retainer assembly (1) by removing nut (2) and pulling slotted retainer washer (3) away from hull-mounted stud. Let slotted assembly chain (4) retainer washer hang by its snatch block retainer
2. Disconnect snatch block retainer assembly chain (4) by opening two S-hooks (5).

**Installation**

1. Connect snatch block retainer assembly chain (4) to hull and slotted retainer washer (3) with two S-hooks (5).
2. Install snatch block retainer assembly (1) by placing slotted retainer washer (3) over hull-mounted stud and tightening nut (2).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**OXYGEN TANK STRAP ASSEMBLIES REPLACEMENT
REMOVAL, INSTALLATION**

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Bolts (2) (item 172, WP 0491 00)
Lockwashers (2) (item 640, WP 0491 00)
Nuts (2) (item 759, WP 0491 00)
Pins, cotter (2) (item 520, WP 0491 00)

Materials/Parts (cont.)

Pins, cotter (4) (item 524, WP 0491 00)
Pins, straight (4) (item 19, WP 0491 00)
Pins, straight (2) (item 210, WP 0491 00)
Washers, flat (6) (item 538, WP 0491 00)

Equipment Condition

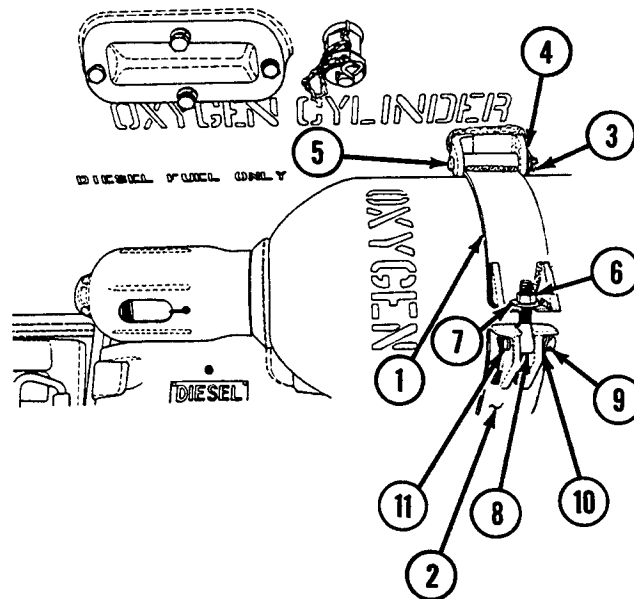
Oxygen tank removed (refer to TM 9-2350-256-10)

Removal

1. Remove four straps (1 and 2) by removing four cotter pins (3), four flat washers (4), and four straight pins (5).
2. Remove nut (6) and lockwasher (7) from each bolt (8).
3. Remove bolt (8) from each of two straps (2) by removing cotter pin (9), flat washer (10), and straight pin (11).

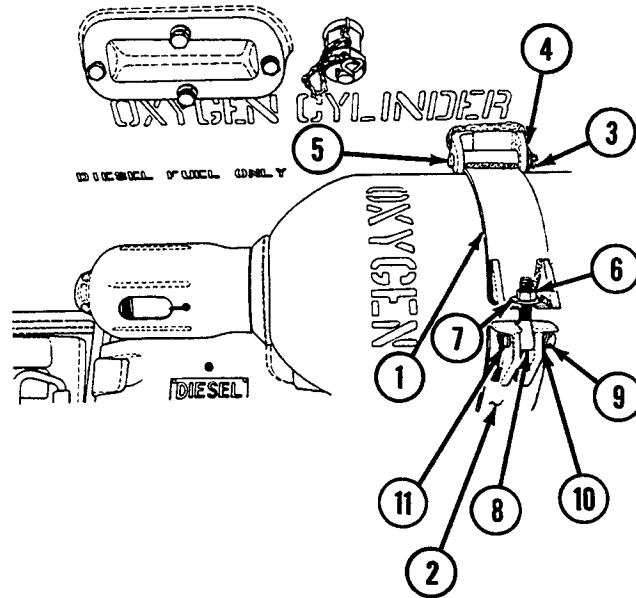
NOTE

Oxygen tank shown for clarity.



Installation

1. Install bolt (8) to each of two straps (2) with straight pin (11), flat washer (10), and cotter pin (9).
2. Install lockwasher (7) and nut (6) to each bolt (8).
3. Install four straps (1 and 2) with four straight pins (5), four flat washers (4), and four cotter pins (3).

**NOTE**

Follow-on maintenance: Install oxygen tank (refer to TM 9-2350-256-10).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

PIONEER TOOL SET BRACKET MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

Pioneer tool set removed (refer to TM 9-2350-256-10)

Materials/Parts

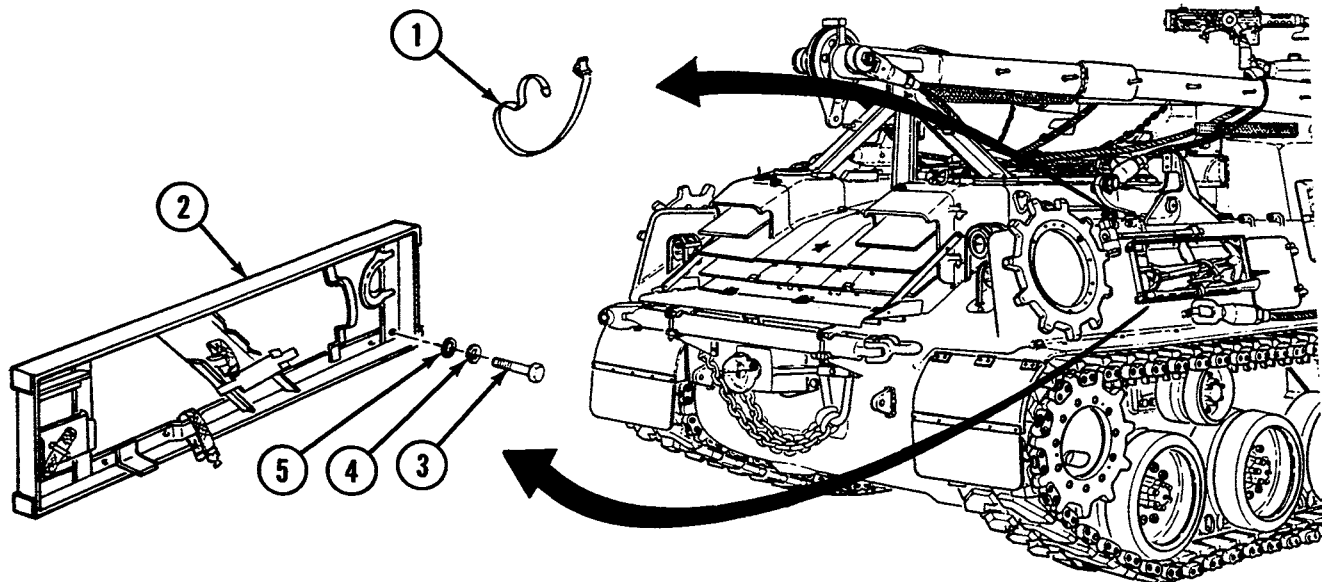
Lockwashers (4) (item 640, WP 0491 00)

Screws (4) (item 396, WP 0491 00)

Washers, flat (2) (item 537, WP 0491 00)

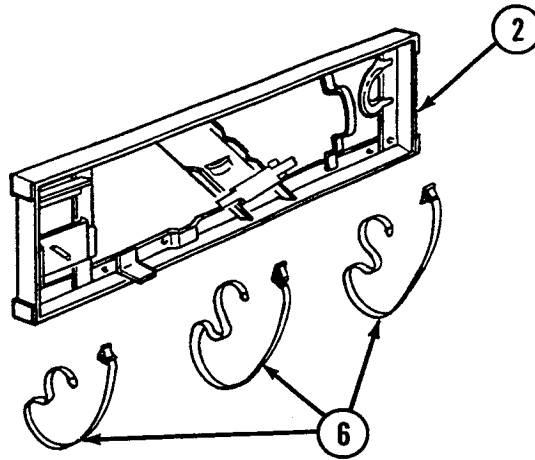
Removal

1. Remove strap (1).
2. Remove pioneer tool set bracket (2) by removing four screws (3), four lockwashers (4), and two flat washers (5).



Disassembly

1. Remove three straps (6) from pioneer tool set bracket (2).

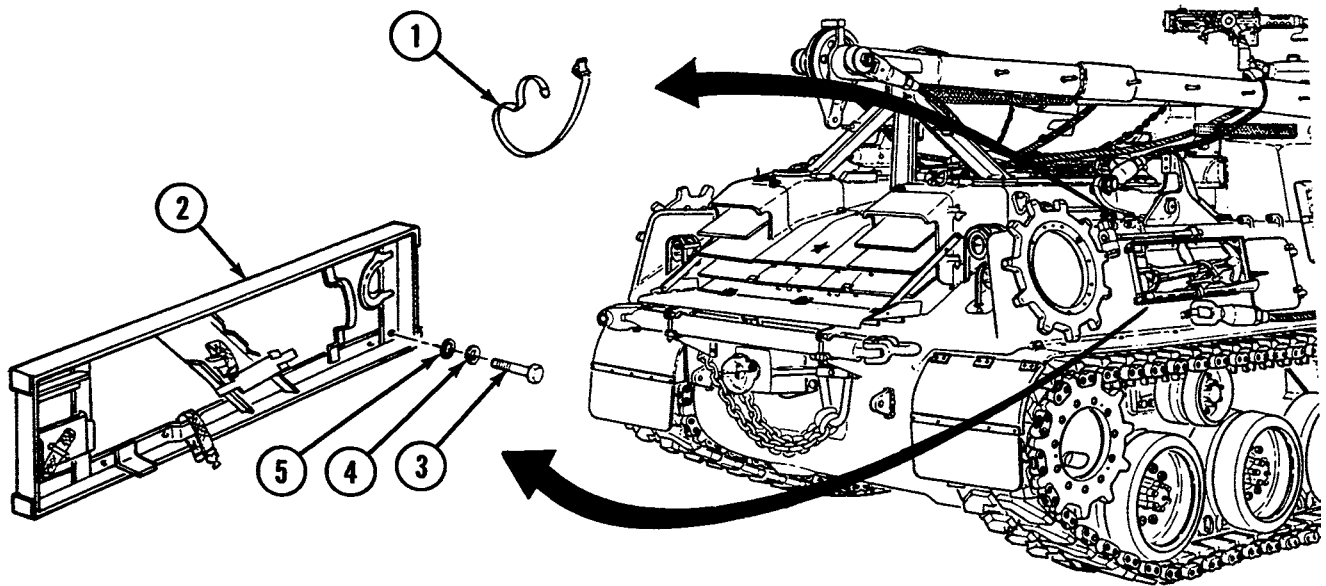


Assembly

1. Install three straps (6) on pioneer tool set bracket (2).

Installation

1. Install pioneer tool set bracket (2) using two flat washers (5), four lockwashers (4), and four screws (3).
2. Install strap (1).



NOTE

Follow-on maintenance: Install pioneer tool set (refer to TM 9-2350-256-10).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**ROADWHEEL, SUPPORT WHEEL, AND SPROCKET ATTACHING HARDWARE REPLACEMENT
REMOVAL, INSTALLATION**

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Bolts (6) (item 175, WP 0491 00)

Lockwashers (6) (item 642, WP 0491 00)

Materials/Parts (cont.)

Nuts, self-locking (6) (item 111, WP 0491 00)

Screws (6) (item 417, WP 0491 00)

Washers, flat (6) (item 60, WP 0491 00)

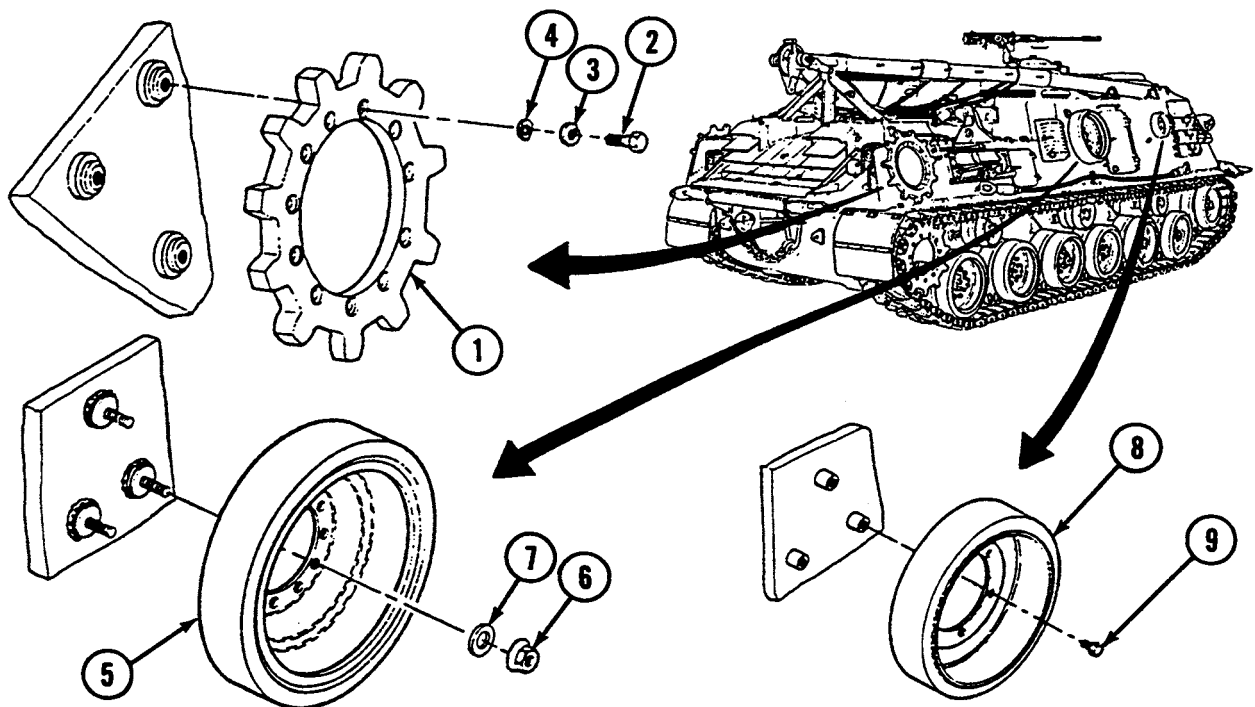
Washers, flat (6) (item 540, WP 0491 00)

NOTE

Removal and installation procedures are the same for both left- and right-side wheels and sprockets.
Left side shown.

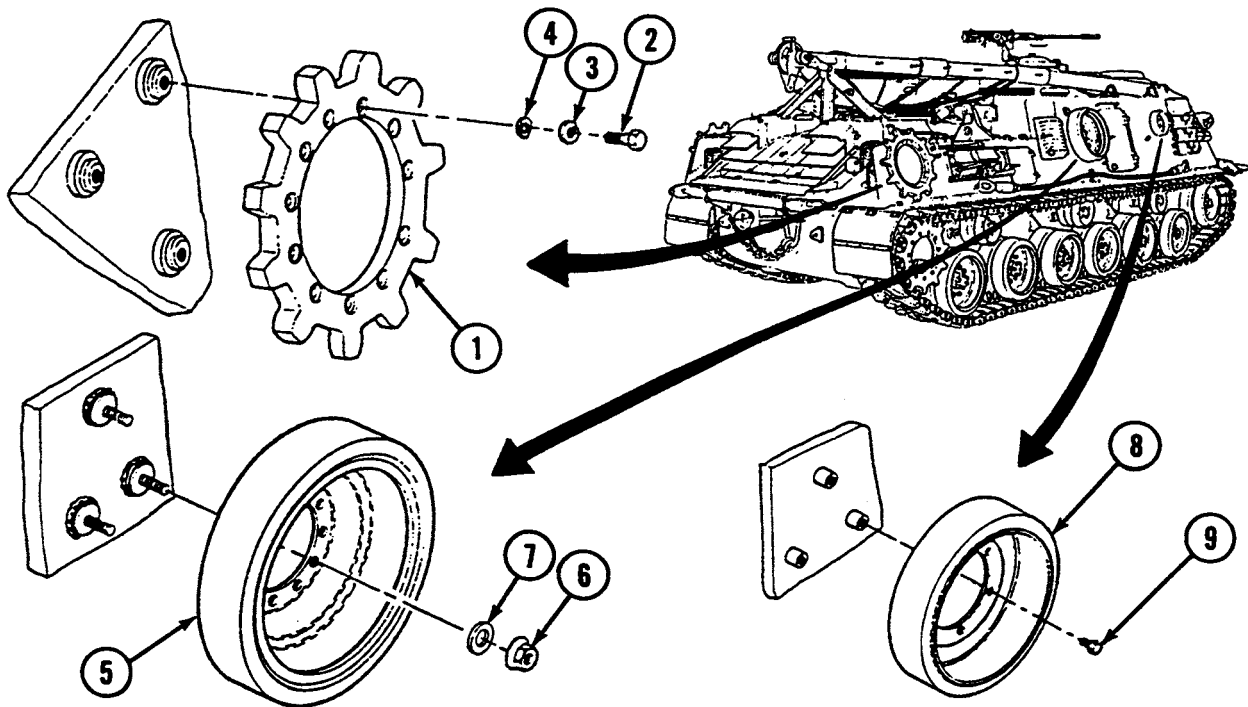
Removal

1. Remove sprocket (1) by removing three screws (2), three lockwashers (3), and three flat washers (4).
2. Remove roadwheel (5) by removing three nuts (6) and three flat washers (7).
3. Remove support wheel (8) by removing three bolts (9).



Installation

1. Install support wheel (8) using three bolts (9).
2. Install roadwheel (5) using three flat washers (7) and three nuts (6).
3. Install sprocket (1) using three flat washers (4), three lockwashers (3), and three screws (2).

**END OF WORK PACKAGE**

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
STORAGE BASKET REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

- Lockwashers (16) (item 640, WP 0491 00)
- Nuts (4) (item 768, WP 0491 00)
- Nuts (8) (item 769, WP 0491 00)
- Screws (4) (item 398, WP 0491 00)
- Screws (4) (item 399, WP 0491 00)
- Screws (4) (item 402, WP 0491 00)
- Washers, flat (2) (item 54, WP 0491 00)

Materials/Parts (cont.)

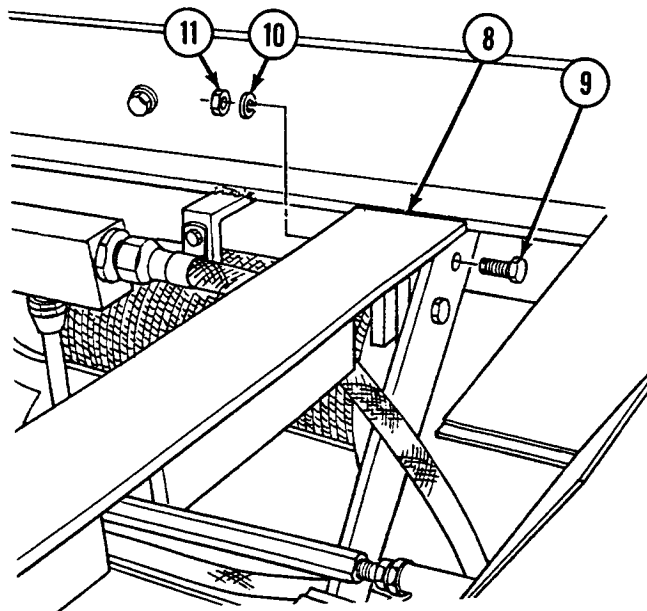
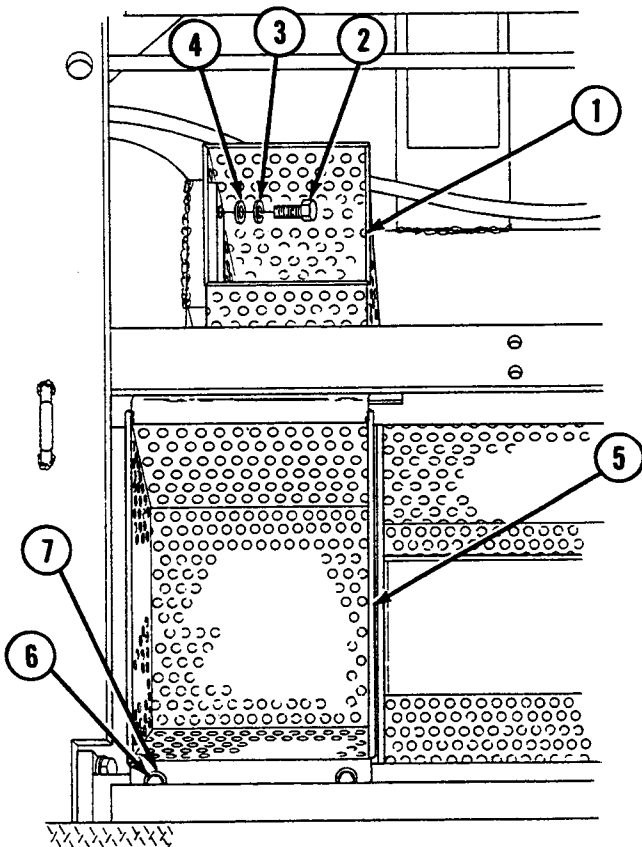
- Washers, flat (2) (item 538, WP 0491 00)
- Wingnut (item 662, WP 0491 00)

Equipment Condition

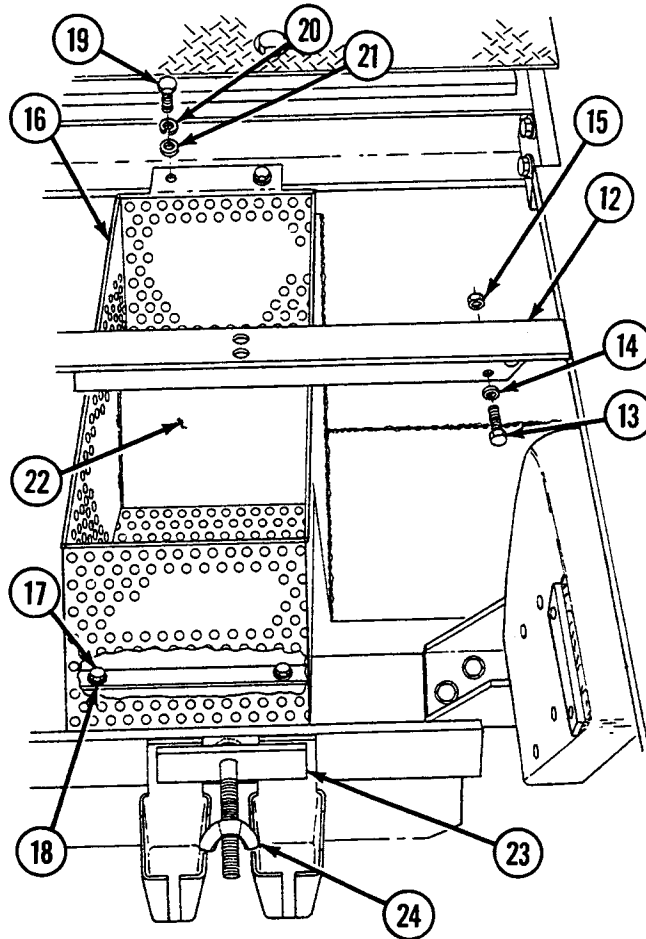
- Hydraulic valve forward right floor plate removed (see WP 0288 00)
- Stowage basket forward intermediate left floor plate removed (see WP 0306 00)
- Hydraulic valve forward intermediate right floor plate removed (see WP 0308 00)

Removal

1. Remove jack-and-chain stowage basket (1) by removing two screws (2), two lockwashers (3), and two flat washers (4).
2. Remove track connector stowage basket (5) by removing two screws (6) and two lockwashers (7).
3. Remove support (8) by removing four screws (9), four lockwashers (10), and four nuts (11).



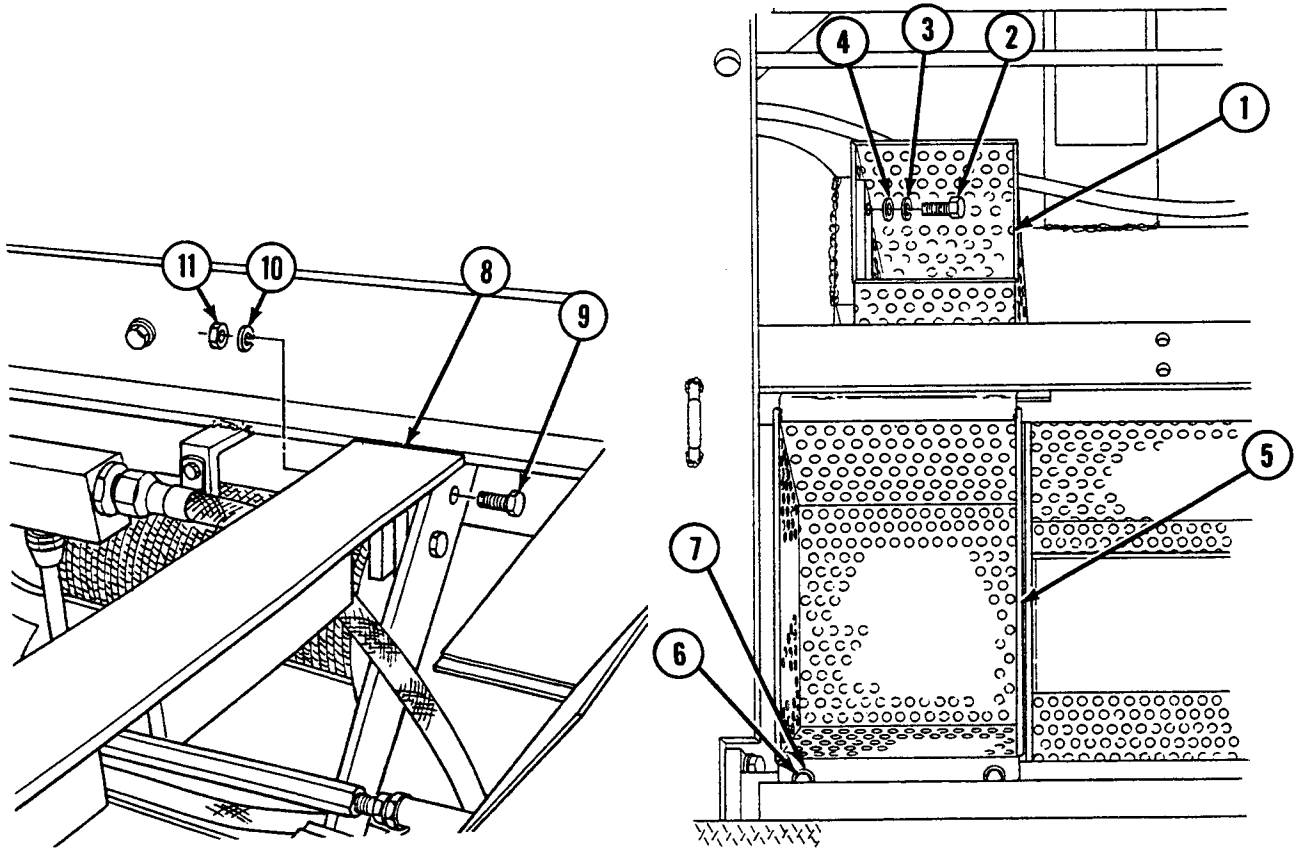
4. Remove support (12) by removing four screws (13), four lockwashers (14), and four nuts (15).
5. Remove utility chain stowage basket (16) by removing two screws (17), two lockwashers (18), two screws (19), two lockwashers (20), and two flat washers (21).
6. Remove divider assembly (22).
7. Remove strap (23) by removing wingnut (24).



Installation

1. Install strap (23) with wingnut (24).
2. Install divider assembly (22) into utility chain stowage basket (16).
3. Install utility chain stowage basket (16) with two screws (17), two lockwashers (18), two screws (19), two lockwashers (20), and two flat washers (21).
4. Install support (12) with four screws (13), four lockwashers (14), and four nuts (15).

5. Install support (8) with four screws (9), four lockwashers (10), and four nuts (11).
6. Install track connector stowage basket (5) with two screws (6) and two lockwashers (7).
7. Install jack-and-chain stowage basket (1) with two screws (2), two lockwashers (3), and two flat washers (4).



NOTE

Follow-on maintenance: Install hydraulic valve forward intermediate right floor plate (see WP 0288 00); Install stowage basket forward intermediate left floor plate (see WP 0306 00); Install hydraulic valve forward right floor plate (see WP 0308 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
PASSIVE NIGHT VIEWER STOWAGE BOX, HAND GRENADE
BOXES AND MACHINE GUN AND RIFLE HOLDERS REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (8) (item 285, WP 0491 00)
 Lockwasher (item 639, WP 0491 00)
 Lockwashers (12) (item 640, WP 0491 00)
 Nut (item 768, WP 0491 00)
 Nuts (4) (item 769, WP 0491 00)

Materials/Parts (cont.)

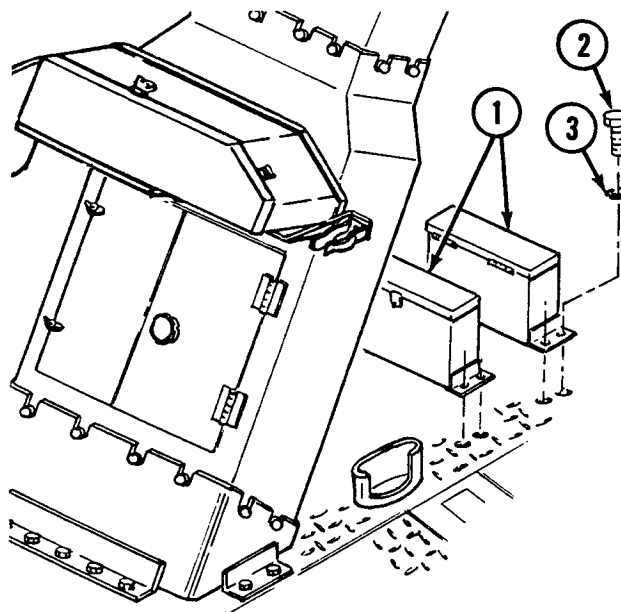
Screws (8) (item 388, WP 0491 00)
 Screws (4) (item 397, WP 0491 00)
 Screw (item 793, WP 0491 00)
 Screws (4) (item 801, WP 0491 00)

Equipment Condition

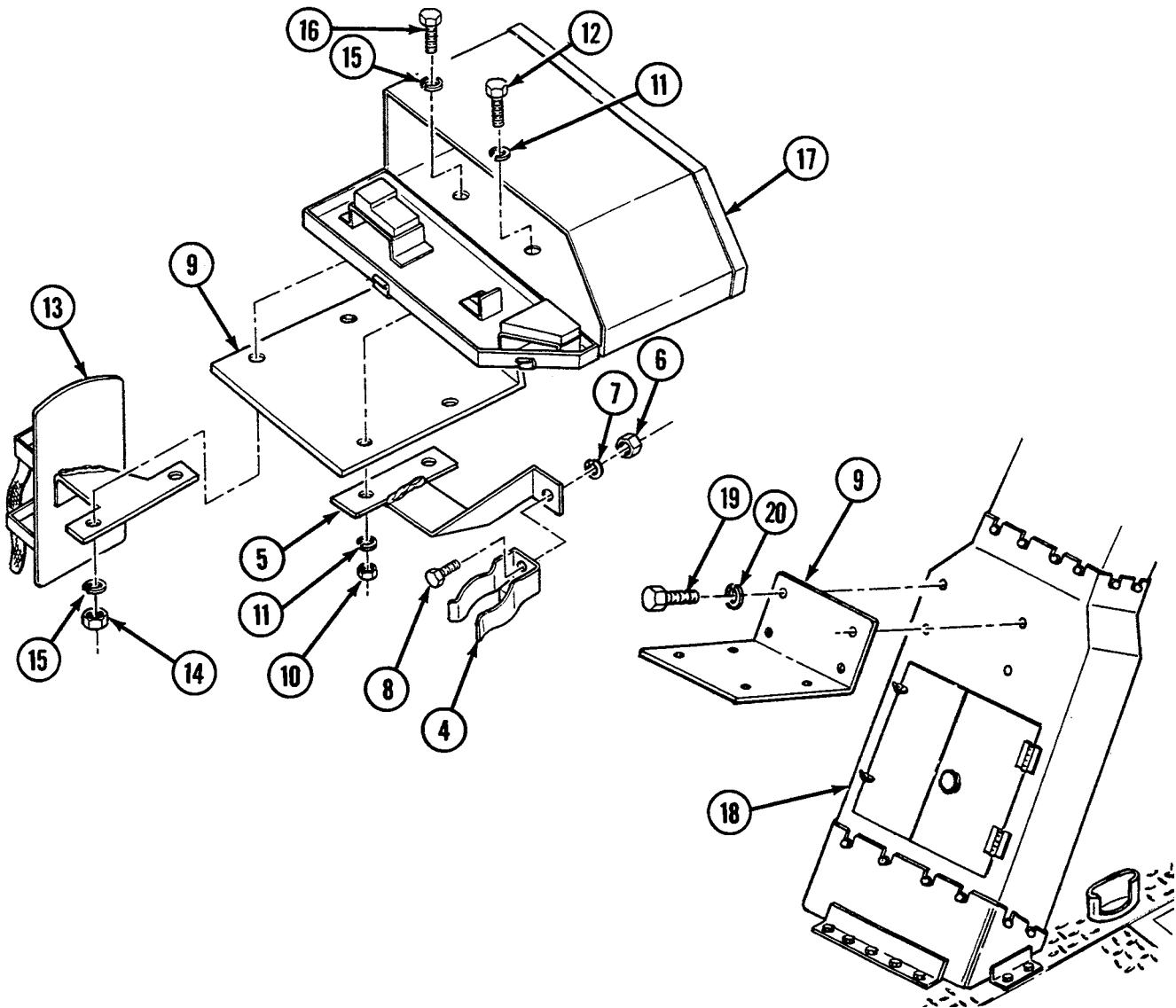
Contents of boxes removed
 Machine guns and rifles removed from clips

Removal

1. Remove two hand grenade boxes (1) by removing four screws (2) and four lockwashers (3) from each.

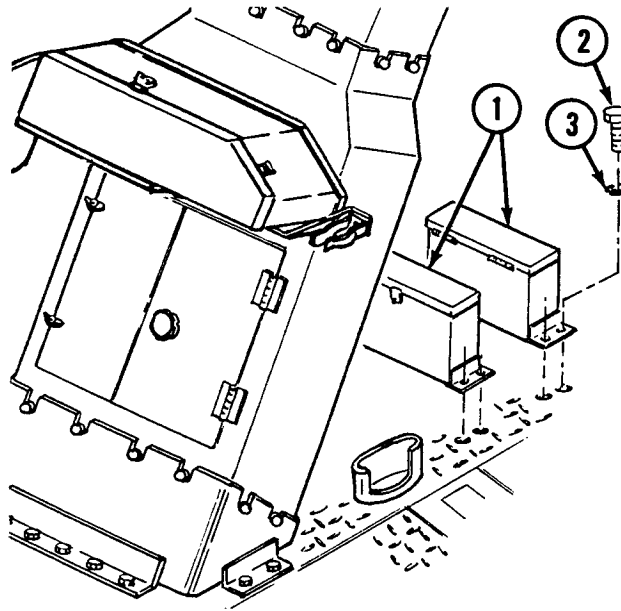


2. Remove rifle stowage clip (4) from rifle holder (5) by removing nut (6), lockwasher (7), and screw (8).
3. Remove rifle holder (5) from mounting bracket (9) by removing two nuts (10), four lockwashers (11), and two screws (12).
4. Remove machine gun holder (13) from mounting bracket (9) by removing two nuts (14), four lockwashers (15), and two screws (16). Then remove passive night viewer stowage box (17) from mounting bracket.
5. Remove mounting bracket (9) from wire rope shield (18) by removing four screws (19) and four lockwashers (20).



Installation

1. Install mounting bracket (9) on wire rope shield (18) with four screws (19) and four lockwashers (20).
2. Place passive night viewer stowage box (17) on mounting bracket (9) and install machine gun holder (13) by placing two screws (16) through two lockwashers (15), passive night viewer stowage box, and mounting bracket. Secure with two more lockwashers (15) and two nuts (14).
3. Install rifle holder (5) by placing two screws (12) through two lockwashers (11), passive night viewer stowage box (17), and mounting bracket (9), and securing with two more lockwashers (11) and two nuts (10).
4. Install rifle stowage clip (4) on rifle holder (5) with screw (8), lockwasher (7), and nut (6).
5. Install two hand grenade boxes (1) each with four screws (2) and four lockwashers (3).

**NOTE**

Follow-on maintenance: Install machine guns and rifles in clips; Install contents to boxes.

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
HAND FIRE EXTINGUISHER BRACKETS REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (13) (item 640, WP 0491 00)
 Nuts (3) (item 766, WP 0491 00)
 Pins, cotter (2) (item 524, WP 0491 00)
 Screws (2) (item 390, WP 0491 00)
 Screw (item 393, WP 0491 00)
 Screws (3) (item 396, WP 0491 00)
 Screws (3) (item 401, WP 0491 00)

Materials/Parts (cont.)

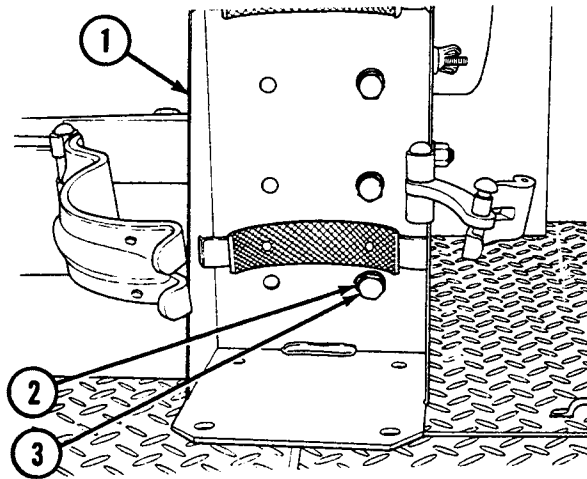
Screws (4) (item 721, WP 0491 00)
 Washers, flat (2) (item 536, WP 0491 00)
 Washers, flat (2) (item 539, WP 0491 00)

Equipment Condition

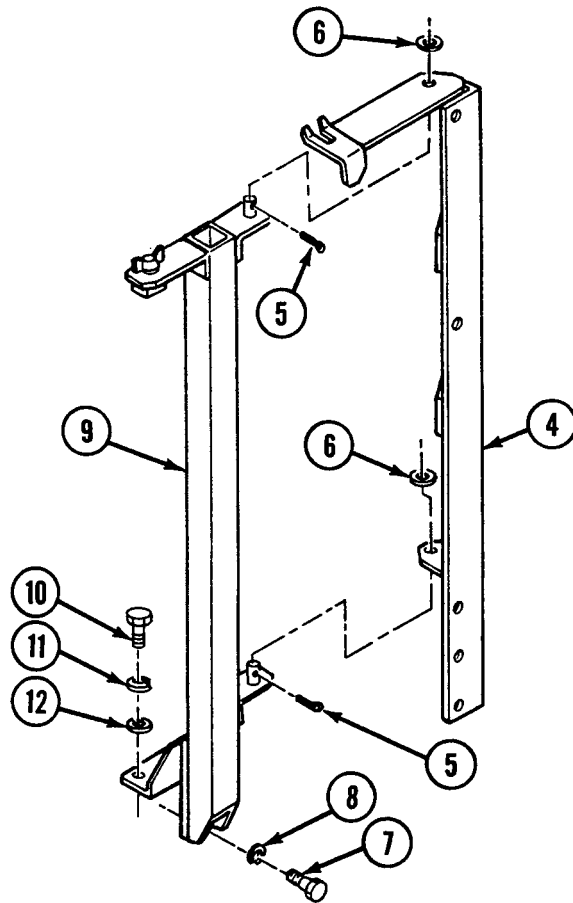
Fire extinguishers removed from brackets (refer to TM 9-2350-256-10)
 Two M2A2 air purifiers and two brackets removed as required (see WP 0440 00)

Removal

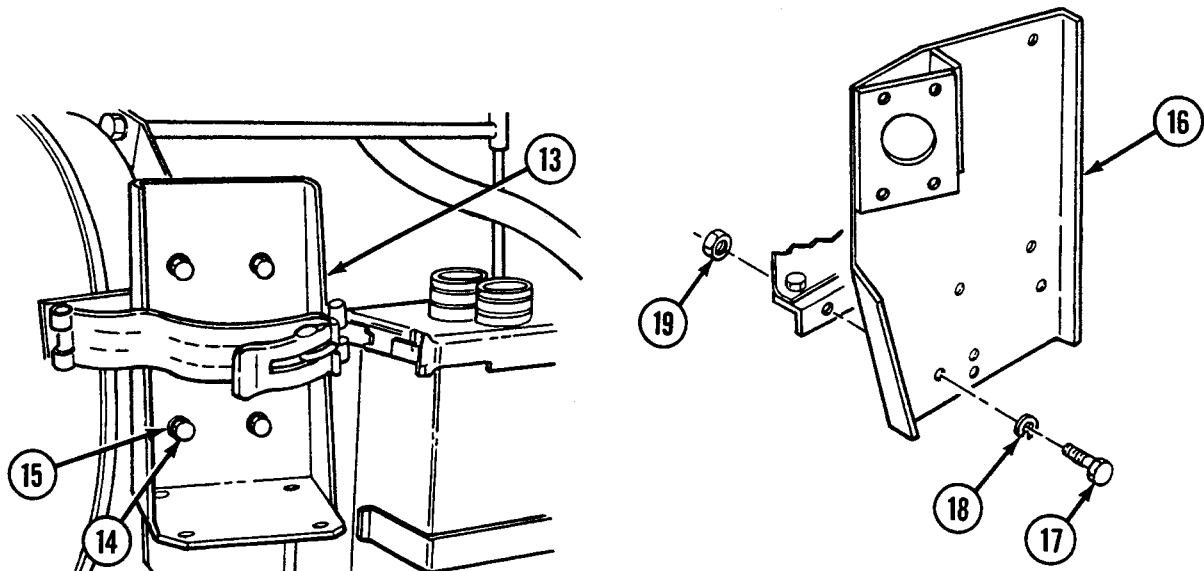
1. Remove left-side bracket (1) by removing three screws (2) and three lockwashers (3).



2. Remove mounting bracket (4) by removing two cotter pins (5) and two flat washers (6).
3. Remove screw (7) and lockwasher (8) from front of mounting bracket (9).
4. Remove mounting bracket (9) by removing two screws (10), two lockwashers (11), and two flat washers (12).

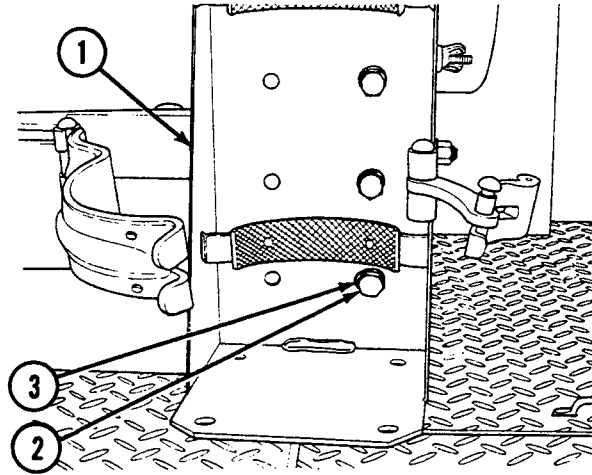


5. Remove right-side bracket (13) by removing four screws (14) and four lockwashers (15).
6. Remove right-side mounting bracket (16) by removing three screws (17), three lockwashers (18), and three nuts (19).



Installation

1. Install right-side mounting bracket (16) with three nuts (19), three lockwashers (18), and three screws (17).
2. Install right-side bracket (13) with four lockwashers (15) and four screws (14).
3. Install mounting bracket (9) with two flat washers (12), two lockwashers (11), and two screws (10).
4. Install lockwasher (8) and screw (7).
5. Install mounting bracket (4) with two flat washers (6) and two cotter pins (5).
6. Install left-side bracket (1) to mounting bracket (4) using three lockwashers (3) and three screws (2).

**NOTE**

Follow-on maintenance: Install two M2A2 air purifiers and two brackets if removed (see WP 0440 00);
Install fire extinguishers to brackets (refer to TM 9-2350-256-10).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
ROCKET AMMUNITION STOWAGE BOX ASSEMBLY REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Adhesive (item 3, WP 0489 00)
Lockwashers (10) (item 640, WP 0491 00)
Lockwashers (6) (item 719, WP 0491 00)
Pads (4) (item 92, WP 0491 00)
Pads (2) (item 93, WP 0491 00)
Screws (6) (item 396, WP 0491 00)

Materials/Parts (cont.)

Screws (2) (item 397, WP 0491 00)
Screws (3) (item 399, WP 0491 00)
Screws (2) (item 402, WP 0491 00)
Screws (3) (item 800, WP 0491 00)
Washers, flat (5) (item 537, WP 0491 00)

Personnel Required

Mechanics (3)

Removal

1. Remove shelf assembly (1) by removing six screws (2) and six lockwashers (3).
2. Remove two straps (4) by unbuckling and sliding out of slots.
3. Remove tray (5) from box assembly (6) by removing two screws (7), two lockwashers (8), two screws (9), and two lockwashers (10).
4. Remove support (11) by removing screw (12) and lockwasher (13).
5. Remove three screws (14), three lockwashers (15), and three washers (16) securing top of box assembly (6).

WARNING

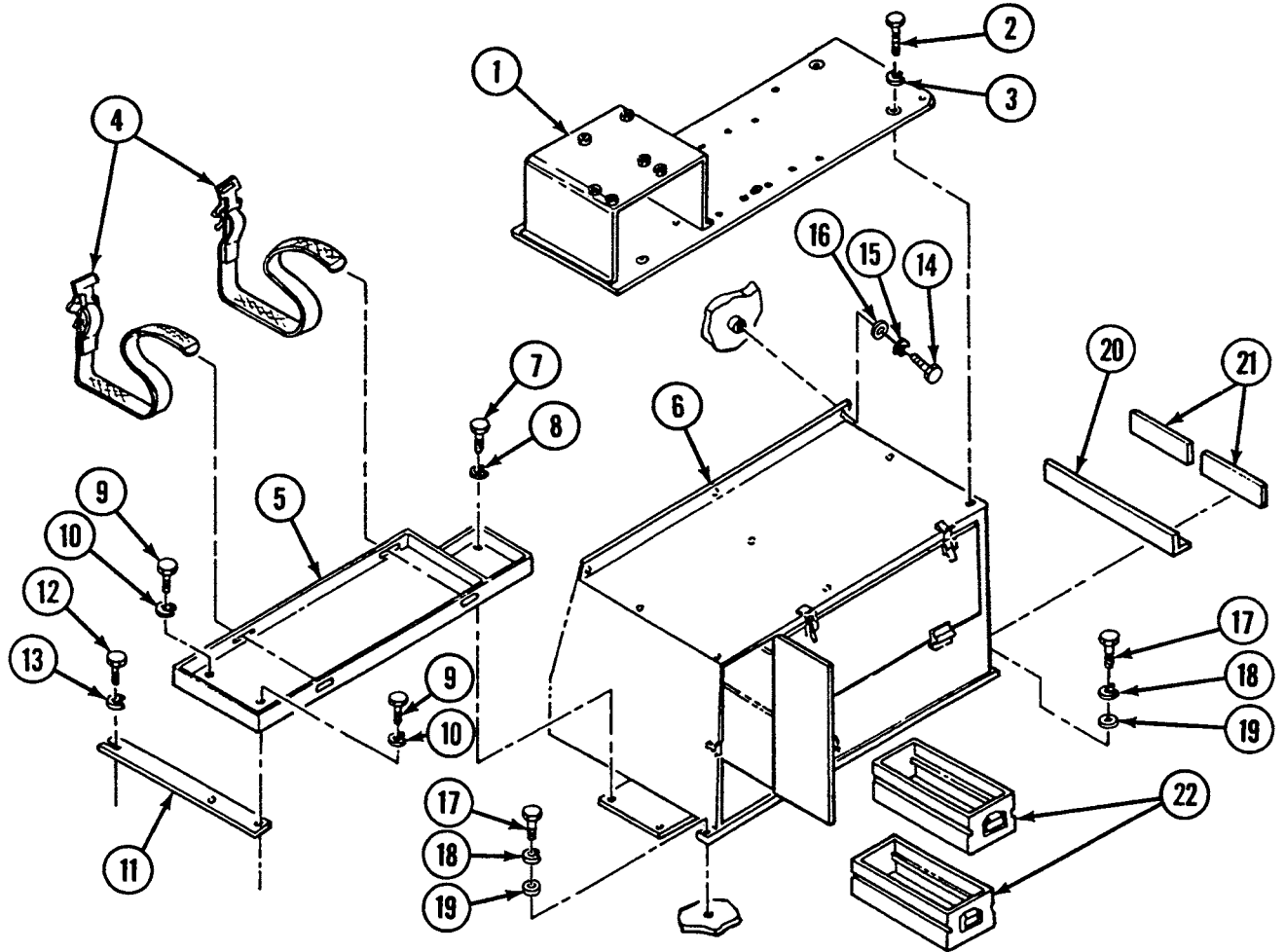
Box assembly is extremely heavy—three persons are required to remove it from vehicle.

6. Remove box assembly (6) by removing two screws (17), two lockwashers (18), and two washers (19).

NOTE

Box assembly (6) must be inverted to remove pads (20).

7. Remove four pads (21) and two pads (20) from box assembly (6).
8. Remove two drawers (22), if necessary.



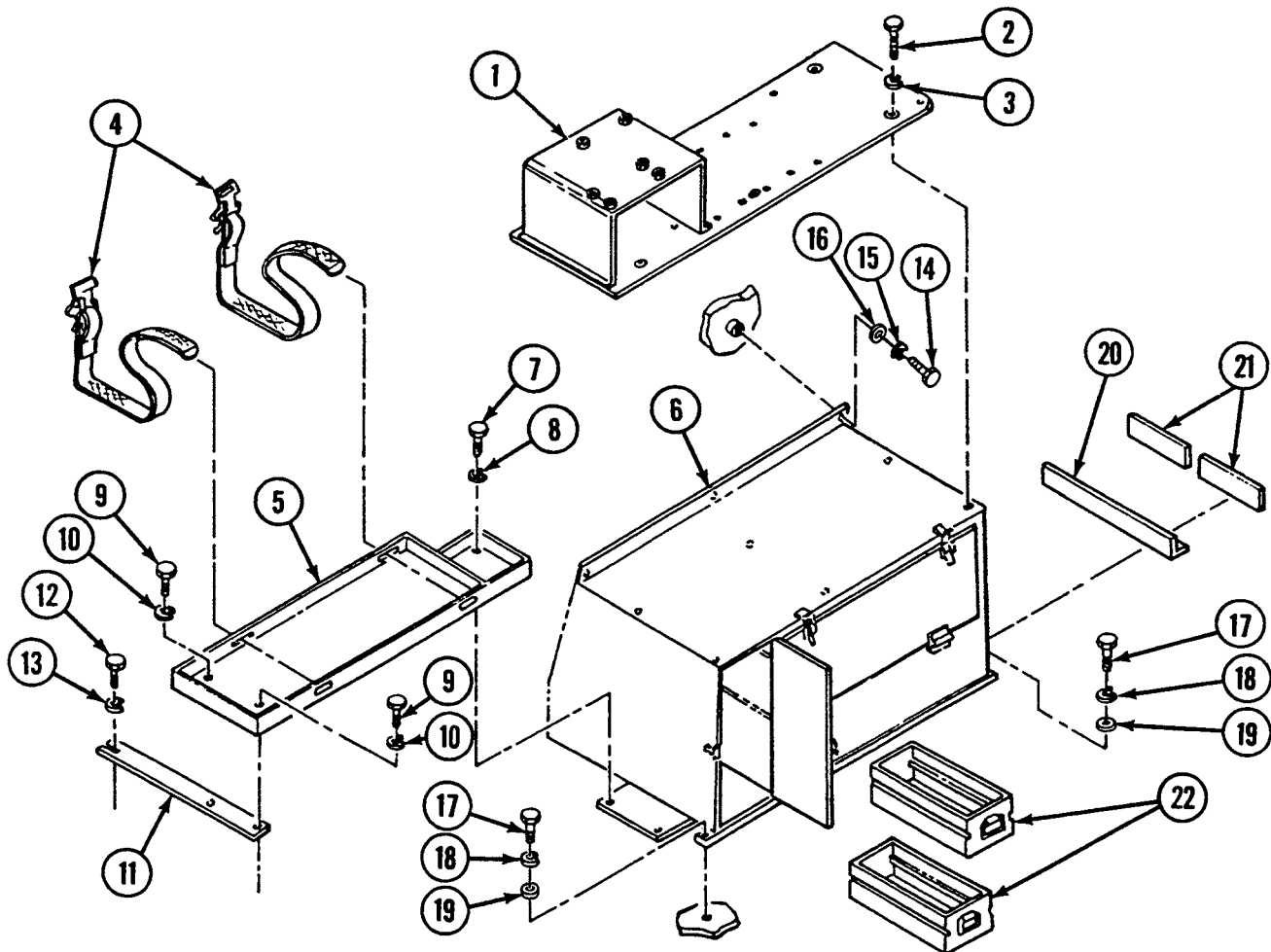
Installation

1. Install two drawers (22), if removed.
2. Install two pads (20) and four pads (21) with adhesive.

WARNING

Box assembly is extremely heavy—three persons are required to lift it.

3. Install box assembly (6) with two washers (19), two lockwashers (18), and two screws (17).
4. Secure top of box assembly (6) with three washers (16), three lockwashers (15), and three screws (14).
5. Install support (11) with lockwasher (13) and screw (12).
6. Install tray (5) with two lockwashers (10), two screws (9), two lockwashers (8), and two screws (7).
7. Install two straps (4) by sliding through slots. Buckle straps.
8. Install shelf assembly (1) with six lockwashers (3) and six screws (2).



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
CALIBER .50 AMMUNITION RACK AND TRACK WRENCH BRACKET MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwasher (item 621, WP 0491 00)
Lockwashers (8) (item 640, WP 0491 00)
Pins, cotter (2) (item 520, WP 0491 00)
Screw (item 124, WP 0491 00)
Screws (6) (item 398, WP 0491 00)

Materials/Parts (cont.)

Screws (2) (item 722, WP 0491 00)
Washer, flat (item 536, WP 0491 00)

Personnel Required

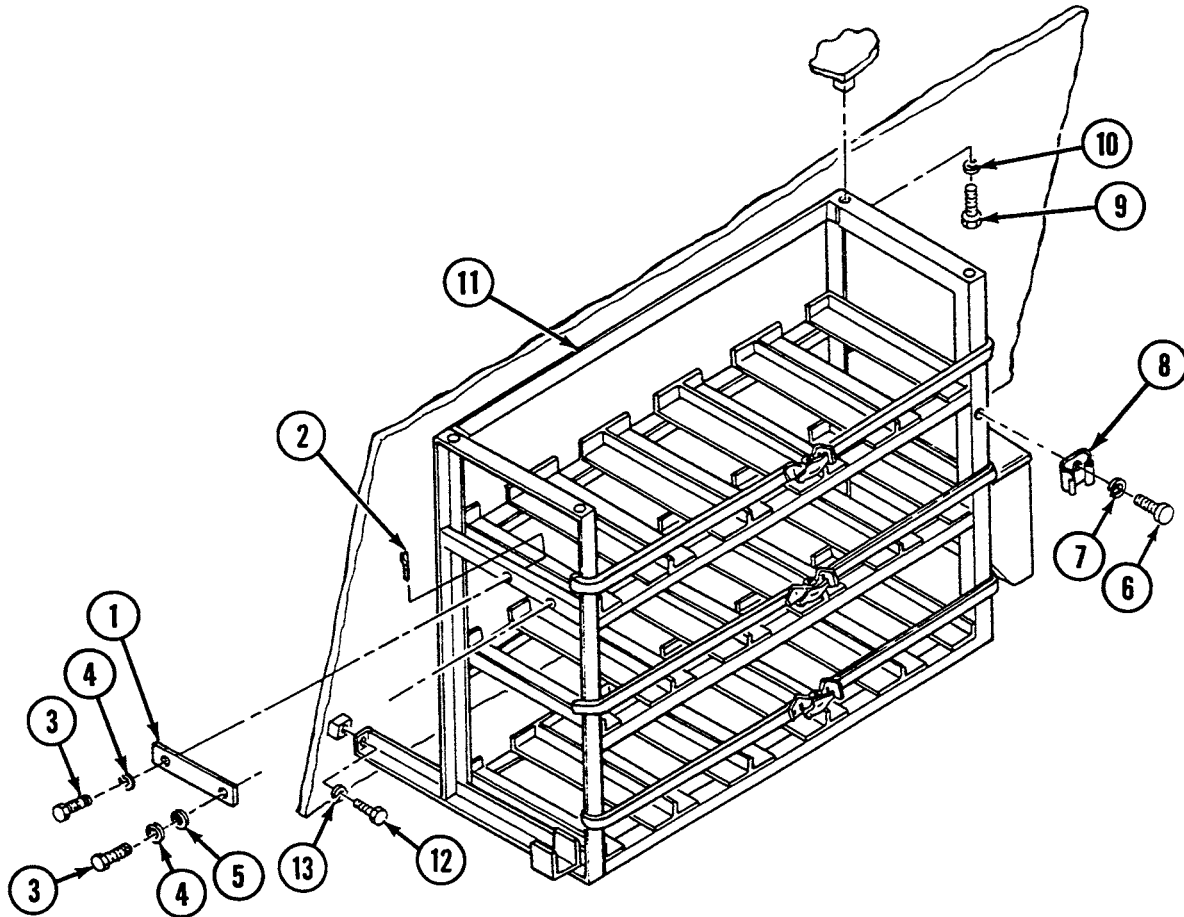
Mechanics (2)

Equipment Condition

All ammunition rack contents removed

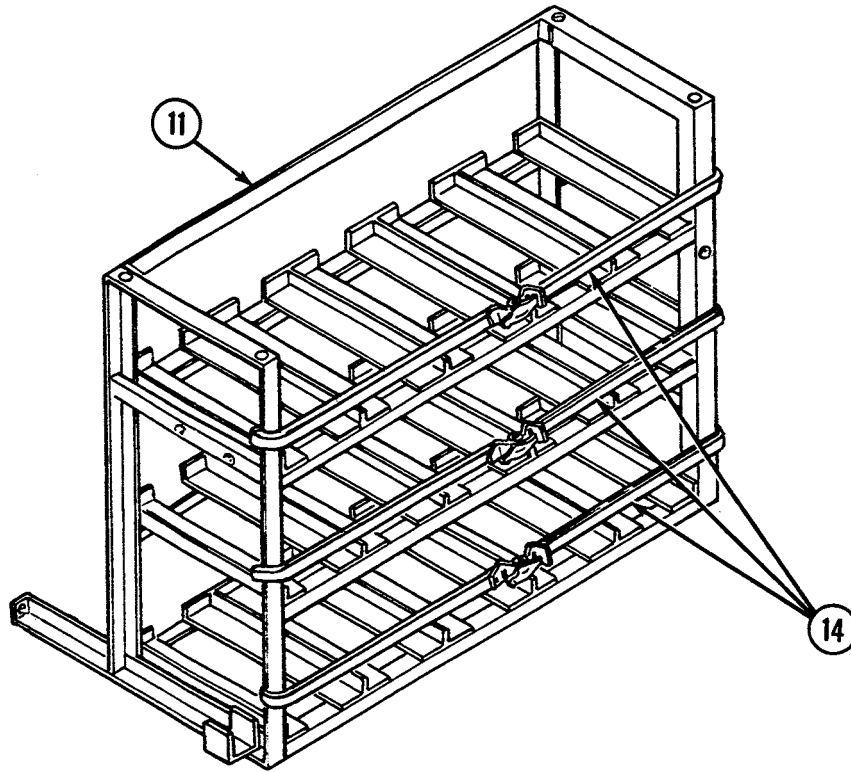
Removal

1. Remove track wrench bracket (1), if necessary, by removing two cotter pins (2), two screws (3), two lockwashers (4), and flat washer (5).
2. Remove screw (6), lockwasher (7), and clip (8).
3. Remove four screws (9) and four lockwashers (10) securing top of ammunition rack assembly (11).
4. Remove ammunition rack assembly (11) by removing two screws (12) and two lockwashers (13).



Disassembly

1. Remove three straps (14) from ammunition rack assembly (11) by unbuckling and threading end of straps through slots.



Assembly

1. Install three straps (14) on ammunition rack assembly (11) by threading straps through slots. Buckle straps.

Installation

1. Install ammunition rack assembly (11) using two lockwashers (13) and two screws (12).
2. Secure top of ammunition rack assembly (11) using four lockwashers (10) and four screws (9).
3. Install clip (8), lockwasher (7), and screw (6).
4. Install track wrench bracket (1), if removed, using two cotter pins (2), flat washer (5), two lockwashers (4), and two screws (3).

NOTE

Follow-on maintenance: Install all ammunition rack contents.

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**ACETYLENE AND COMPARTMENT DOOR HARDWARE AND RELATED PARTS REPLACEMENT
REMOVAL, INSTALLATION**

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Cement, adhesive (item 3, WP 0489 00)
Lockwashers (16) (item 640, WP 0491 00)
Nuts (2) (item 692, WP 0491 00)
Pins, cotter (2) (item 5, WP 0491 00)
Screws (3) (item 388, WP 0491 00)
Screws (12) (item 397, WP 0491 00)

Materials/Parts (cont.)

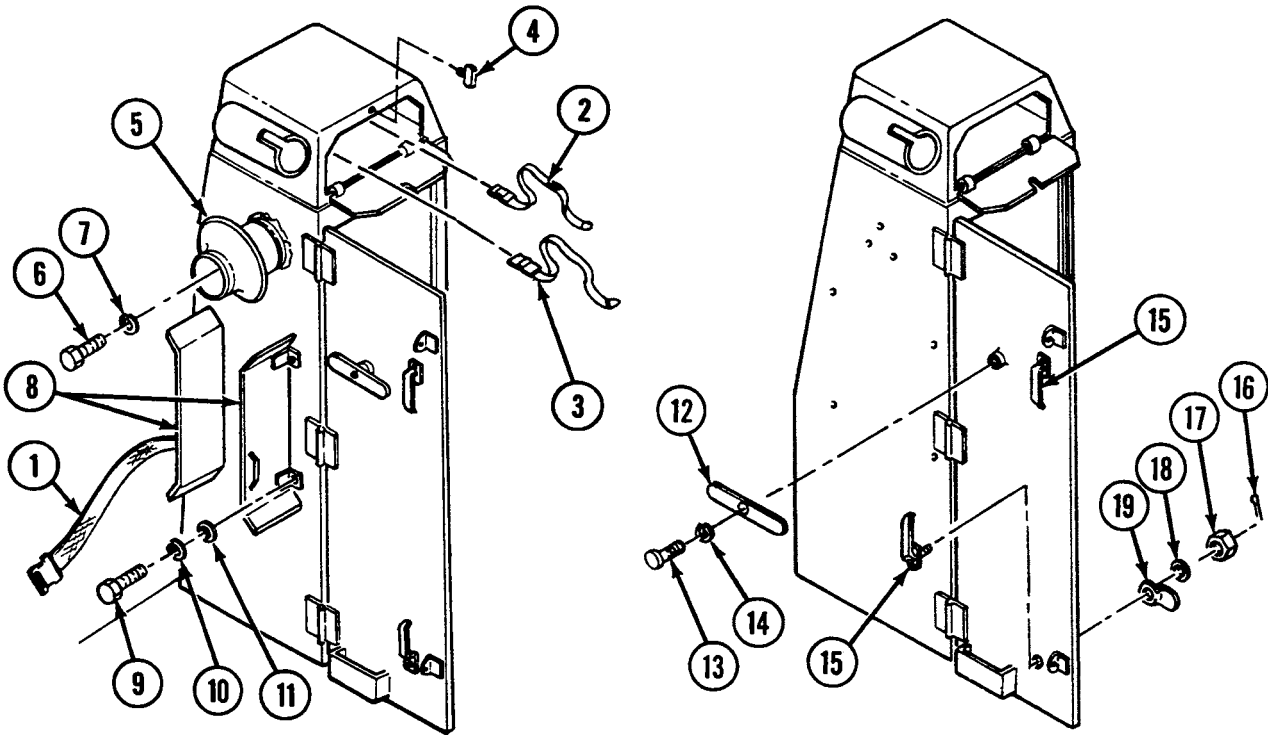
Screw (item 403, WP 0491 00)
Seal strips (2) (item 333, WP 0491 00)
Seal strips (2) (item 334, WP 0491 00)
Thumbscrew (item 17, WP 0491 00)
Washers, flat (2) (item 537, WP 0491 00)
Washers, flat (4) (item 538, WP 0491 00)

References

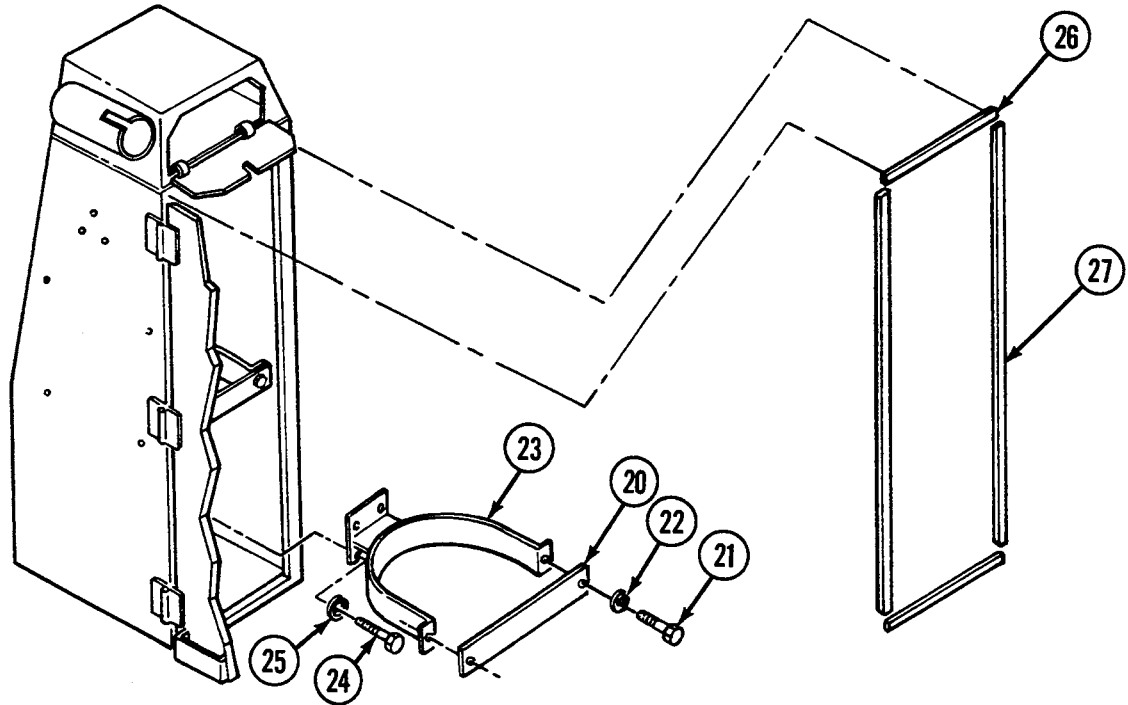
TM 9-2350-256-10

Removal

1. Remove hose retaining strap (1) and gage straps (2 and 3) by threading end of straps through slots in compartment.
2. Remove thumbscrew (4).
3. Remove hose rack (5) by removing three screws (6) and three lockwashers (7).
4. Remove two hose retainers (8) by removing four screws (9), four lockwashers (10), and four flat washers (11).
5. Remove bolt cutter retaining clamp (12) by removing screw (13) and lockwasher (14).
6. Remove two door handles (15) by removing two cotter pins (16), two nuts (17), two flat washers (18), and two latches (19).



7. Remove two retaining bars (20) by removing four screws (21) and four lockwashers (22). Remove acetylene tank (refer to TM 9-2350-256-10).
8. Remove two cylinder bracket assemblies (23) by removing four screws (24) and four lockwashers (25) from each.
9. Remove four door seal strips (26 and 27).



Installation

1. Install four door seal strips (26 and 27) (items 3 and 4, WP 0484 00) with adhesive cement.
2. Install two cylinder bracket assemblies (23) with four lockwashers (25) and four screws (24) in each. Install acetylene tank (refer to TM 9-2350-256-10).
3. Install two retaining bars (20) with four lockwashers (22) and four screws (21).
4. Install two door handles (15) with two latches (19), two flat washers (18), two nuts (17), and two cotter pins (16).
5. Install bolt cutter retaining clamp (12) with lockwasher (14) and screw (13).
6. Install two hose retainers (8) with four flat washers (11), four lockwashers (10), and four screws (9).
7. Install hose rack (5) with three lockwashers (7) and three screws (6).
8. Install thumbscrew (4).
9. Install gage straps (2 and 3) and hose retaining strap (1).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

FLASHER LIGHT CASE REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

Flasher light case contents removed

Materials/Parts

Lockwashers (8) (item 638, WP 0491 00)

Nuts (8) (item 763, WP 0491 00)

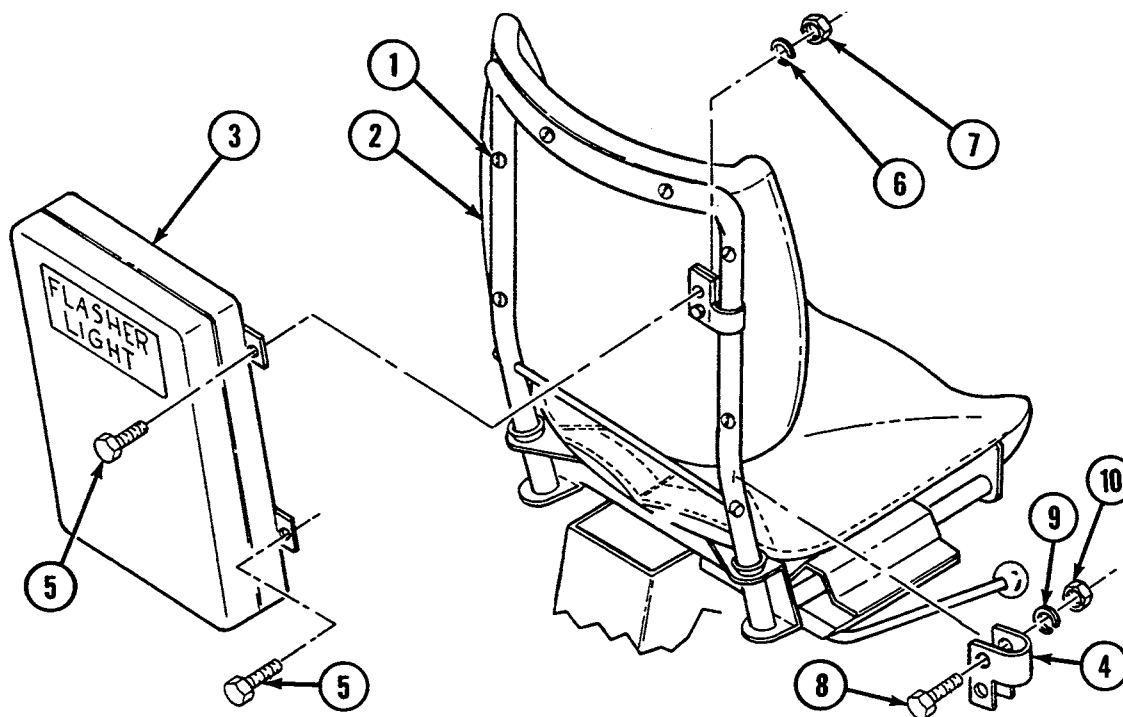
Screws (4) (item 370, WP 0491 00)

Removal

NOTE

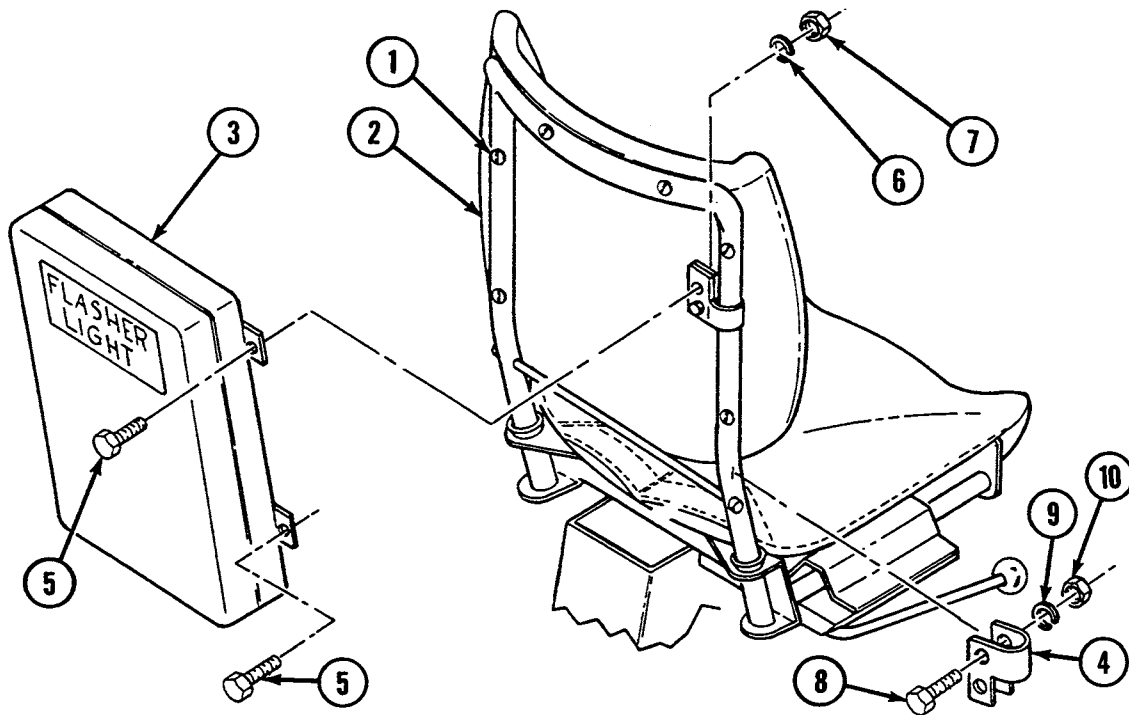
Six screws (1) on seat back (2) may be loosened or removed as necessary for removal and installation of flasher light case (3) and brackets (4).

1. Remove flasher light case (3) from four brackets (4) by removing four screws (5), four lockwashers (6), and four nuts (7).
2. Remove four brackets (4) from commander's seat by removing four screws (8), four lockwashers (9), and four nuts (10).



Installation

1. Install four brackets (4) on commander's seat with four screws (8), four lockwashers (9), and four nuts (10).
2. Install flasher light case (3) on four brackets (4) with four screws (5), four lockwashers (6), and four nuts (7).

**NOTE**

Follow-on maintenance: Install flasher light case contents.

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
TOOLBOX RACK REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

Oddment tray removed (see WP 0390 00)

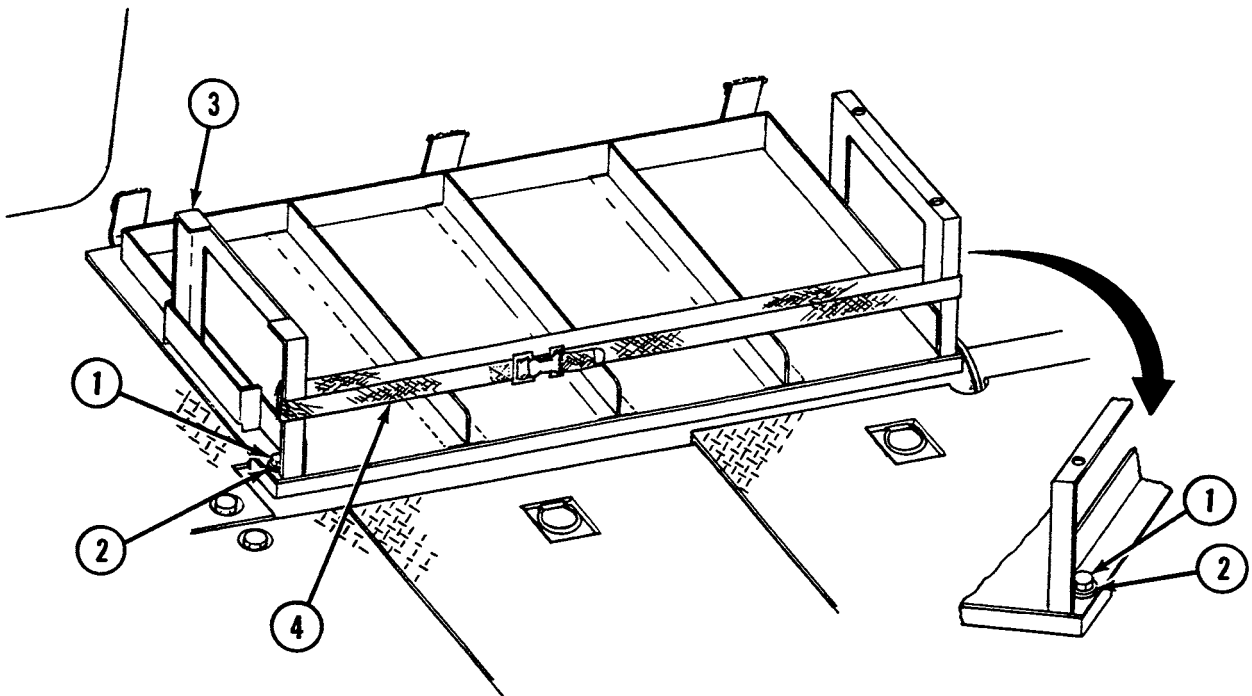
Materials/Parts

Lockwashers (2) (item 640, WP 0491 00)

Screws (2) (item 404, WP 0491 00)

Removal

1. Remove two screws (1), two lockwashers (2), and rack (3).
2. Remove strap (4) from rack (3).

**Installation**

1. Install rack (3) using two lockwashers (2) and two screws (1).
2. Install strap (4) to rack (3).

NOTE

Follow-on maintenance: Install oddment tray (see WP 0390 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

ODDMENT TRAY, LEFT SIDE REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (3) (item 638, WP 0491 00)

Lockwashers (4) (item 640, WP 0491 00)

Materials/Parts (cont.)

Nuts (2) (item 763, WP 0491 00)

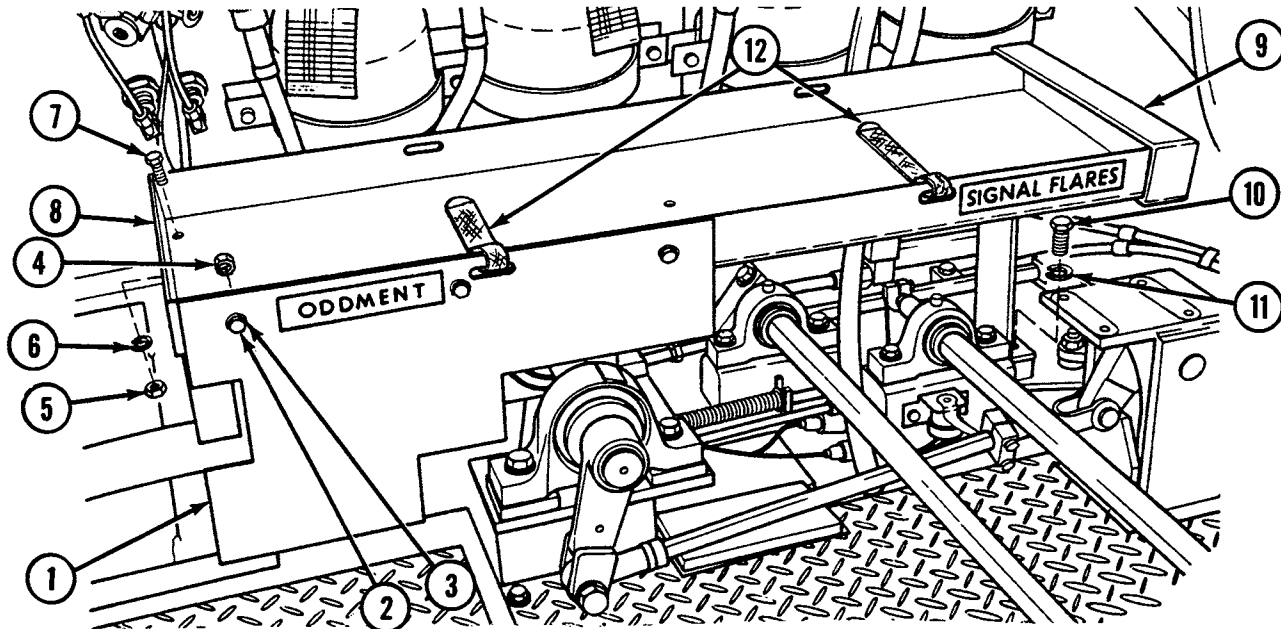
Nuts (2) (item 770, WP 0491 00)

Screws (3) (item 372, WP 0491 00)

Screws (4) (item 398, WP 0491 00)

Removal

1. Remove plate (1) by removing three screws (2), three lockwashers (3), and three nuts (4).
2. Remove two nuts (5), two lockwashers (6), and two screws (7).
3. Slide oddment tray (8) out of bracket assembly (9).
4. Remove bracket assembly (9) by removing two screws (10) and two lockwashers (11).
5. Remove two straps (12) from oddment tray (8).



Installation

1. Install bracket assembly (9) using two screws (10) and two lockwashers (11).
2. Slide oddment tray (8) into bracket assembly (9).
3. Install two lockwashers (6), two nuts (5), and two screws (7).
4. Install plate (1) with three lockwashers (3), three nuts (4), and three screws (2).
5. Install two straps (12) to oddment tray (8).

END OF WORK PACKAGE

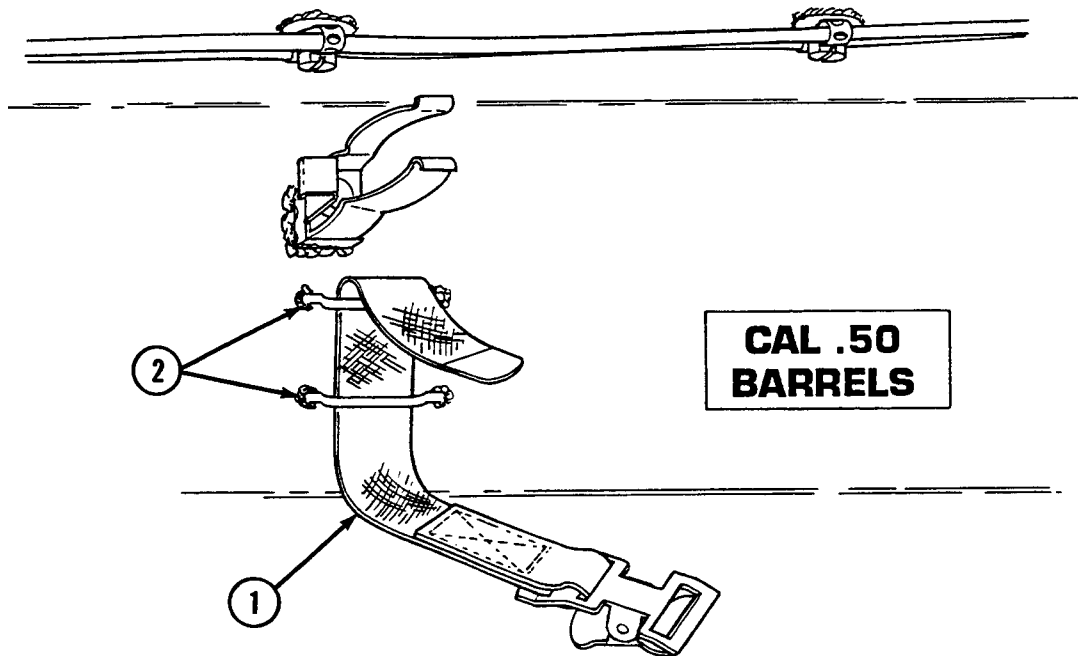
UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
CALIBER .50 STOWAGE STRAP REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Removal

1. Remove strap (1) by sliding out of loops (2).

**Installation**

1. Install strap (1) by sliding through loops (2).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
LIQUID CONTAINER BRACKETS REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

Water and oil cans removed from brackets

Materials/Parts

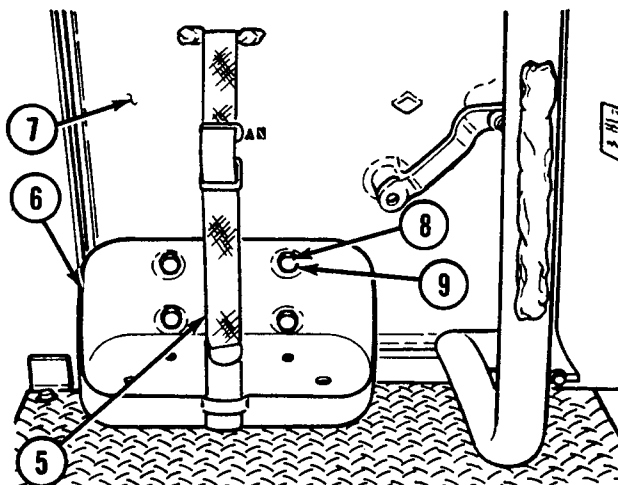
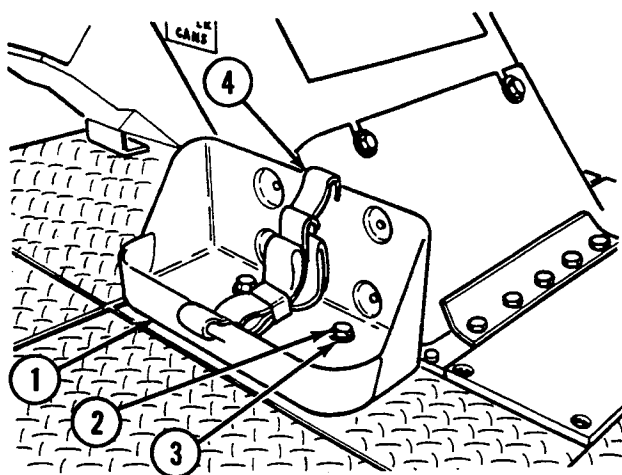
Lockwashers (16) (item 640, WP 0491 00)

Screws (8) (item 396, WP 0491 00)

Screws (8) (item 397, WP 0491 00)

Removal

1. Remove two floor-mounted brackets (1) by removing four screws (2) and four lockwashers (3) from each.
2. Remove strap (4) from each floor-mounted bracket (1).
3. Remove strap (5) from each door-mounted bracket (6) and door (7).
4. Remove two door-mounted brackets (6) by removing four screws (8) and four lockwashers (9) from each.

**Installation**

1. Install two door-mounted brackets (6) each with four screws (8) and four lockwashers (9).
2. Install strap (5) on each door-mounted bracket (6) and door (7).
3. Install two floor-mounted brackets (1) each with four screws (2) and four lockwashers (3).
4. Install strap (4) on each floor-mounted bracket (1).

NOTE

Follow-on maintenance: Install water and oil cans to brackets.

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

M72 LAW ROCKET LAUNCHER BRACKETS MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

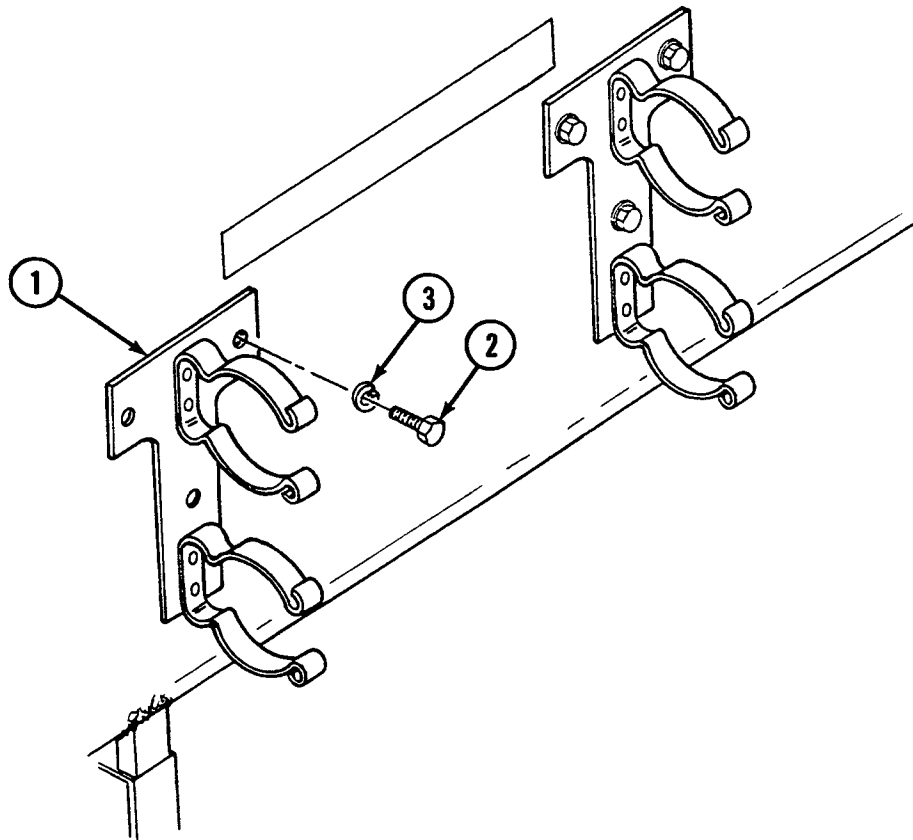
Tool kit, general mechanic's (item 59, WP 0490 00)
Riveter, blind (item 48, WP 0490 00)

Materials/Parts

Lockwashers (6) (item 640, WP 0491 00)
Rivets (8) (item 481, WP 0491 00)
Screws (6) (item 396, WP 0491 00)

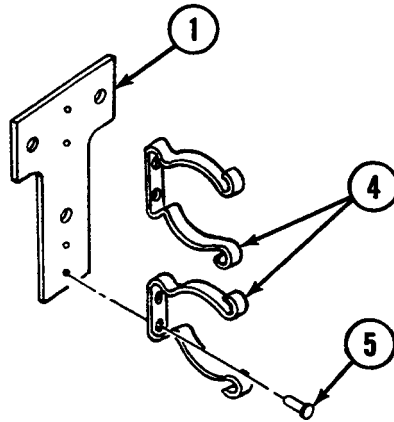
Removal

1. Remove two rocket launcher brackets (1) by removing three screws (2) and three lockwashers (3) from each.



Disassembly

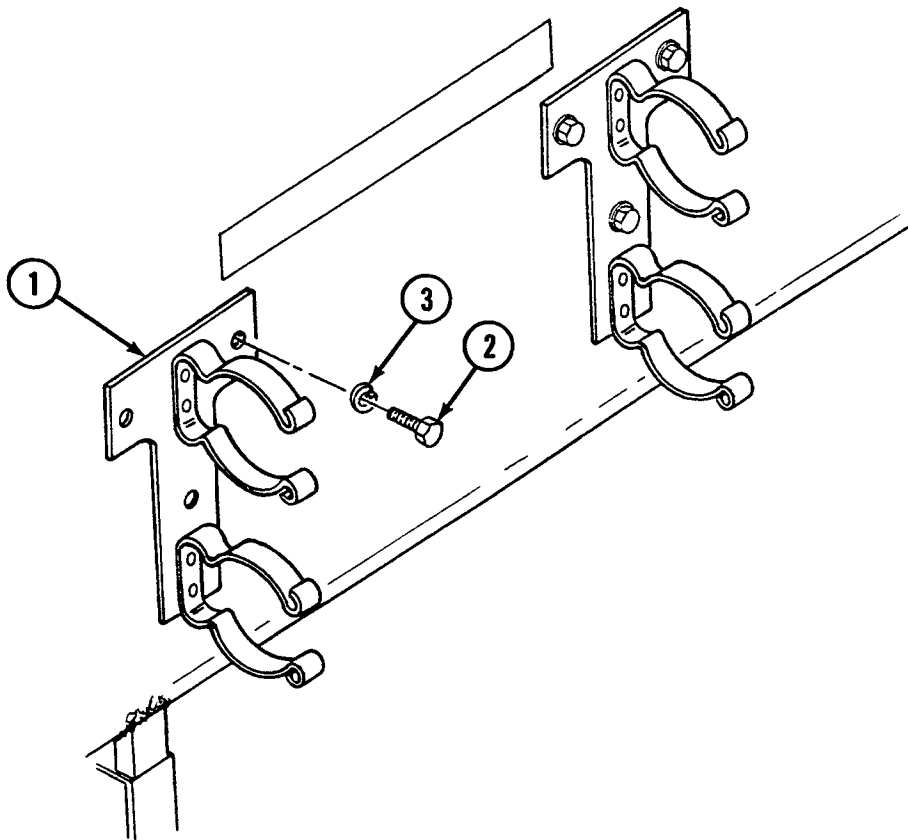
1. Remove two clips (4) from each rocket launcher bracket (1) by removing four rivets (5).

**Assembly**

1. Install two clips (4) to each rocket launcher bracket (1) using four rivets (5).

Installation

1. Install two rocket launcher brackets (1) using three lockwashers (3) and three screws (2) for each.

**END OF WORK PACKAGE**

UNIT MAINTENANCE

RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1

NSN 2350-00-122-6826, EIC AQA

**INTERIOR AND EXTERIOR STRAPS REPLACEMENT
REMOVAL, INSTALLATION**

INITIAL SETUP:

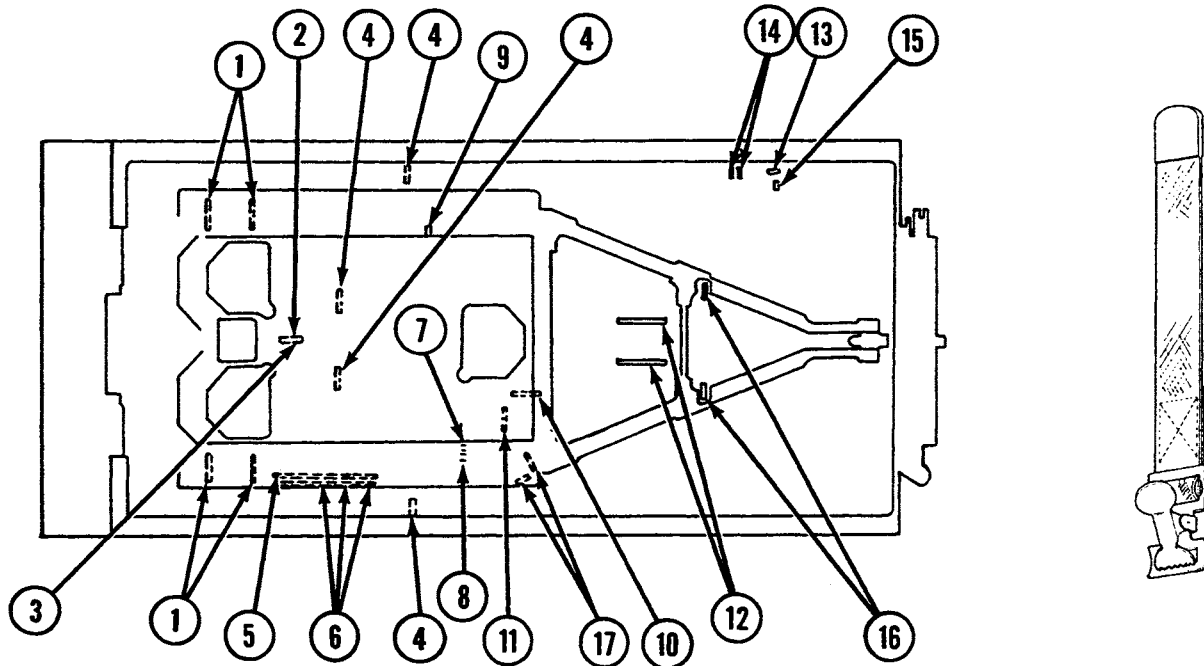
Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Removal

1. Remove straps by unbuckling and sliding through slots. Use illustration as location guide.

Callout	Strap for:	Part Number	Length in. (mm)	Width in. (mm)
INTERIOR				
1	Oddment tray	8690495	120 (3048)	1 (25)
2	Binocular bracket	7326942	14 (356)	1 (25)
3	Binocular bracket	7326943	10.62 (270)	1 (25)
4	Water or oil can	8690527	54 (1372)	1.50 (38)
5	Toolbox rack	8690536	88 (2235)	1.50 (38)
6	Caliber .50 ammunition rack	8690486	80 (2032)	1 (25)
7	Caliber .45 machine gun	8684028	3.25 (83)	1 (25)
8	Caliber .45 machine gun	8684030	9.25 (235)	1 (25)
9	Caliber .50 spare barrel	8690462	12 (305)	1 (25)
10	Acetylene hose	8690470	28 (711)	1 (25)
11	Ration boxes	8690479	54 (1372)	1 (25)
EXTERIOR				
12	Stowage tray	8690486	80 (2032)	1 (25)
13	Pioneer kit bracket	8690466	20 (508)	1 (25)
14	Pioneer kit bracket	8690462	12 (305)	1 (25)
15	5-pound (2.3-kilogram) sledgehammer	8690462	12 (305)	1 (25)
16	Crowbar	8690462	12 (305)	1 (25)
17	Gage	8690471	30 (762)	1 (25)



Installation

1. Install straps by sliding through slots and buckling. Use illustration as location guide.

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
VEHICLE ID PLATE REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

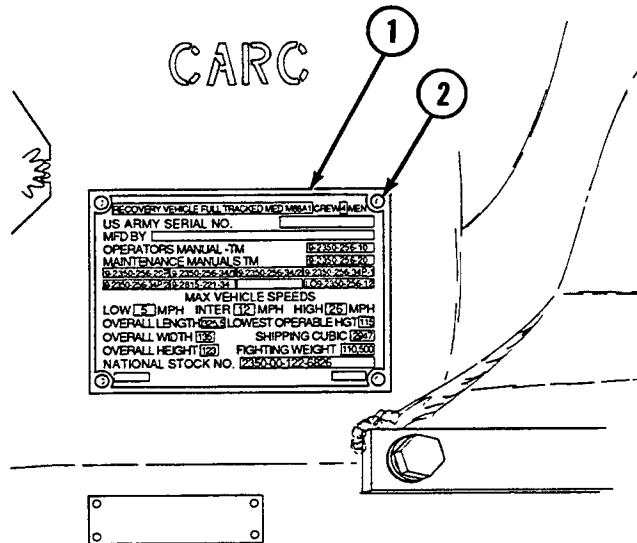
Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Drivescrews (4) (item 506, WP 0491 00)

Removal

1. Remove vehicle ID plate (1) by removing four drivescrews (2).



Installation

1. Install vehicle ID plate (1) with four drivescrews (2).

END OF WORK PACKAGE

CHAPTER 11
UNIT MAINTENANCE
MAINTENANCE INSTRUCTIONS
FOR
PERSONNEL HEATER AND CONNECTING COMPONENTS
AND FIXED FIRE EXTINGUISHER SYSTEM
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
(NSN: 2350-00-122-6826)

CHAPTER 11
UNIT MAINTENANCE
MAINTENANCE INSTRUCTIONS

WORK PACKAGE INDEX

<u>Title</u>	<u>WP Sequence No.</u>
Personnel Heater Replacement Removal, Installation.....	0396 00
Personnel Heater and APU Air Intake Water Deflector Replacement Removal, Installation	0397 00
Personnel Heater Fuel Pump Replacement Removal, Installation.....	0398 00
Personnel Heater Fuel Filter Replacement Removal, Installation.....	0399 00
Fixed Fire Extinguisher Cylinders Maintenance Removal, Inspection, Installation.....	0400 00
Fixed Fire Extinguisher Cylinder Controls Maintenance Removal, Inspection, Installation.....	0401 00
Fixed Fire Extinguisher System Controls and Linkages Maintenance Removal, Installation, Adjust- ment	0402 00
Fixed Fire Extinguisher System Lines and Nozzles Replacement Removal, Installation.....	0403 00

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

PERSONNEL HEATER REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Clamps (4) (item 190, WP 0491 00)
Clamp (item 343, WP 0491 00)
Clamp (item 715, WP 0491 00)
Clamp, hose (item 3, WP 0491 00)
Clamp, hose (item 196, WP 0491 00)
Gasket (item 52, WP 0491 00)
Gasket (item 87, WP 0491 00)

Materials/Parts (cont.)

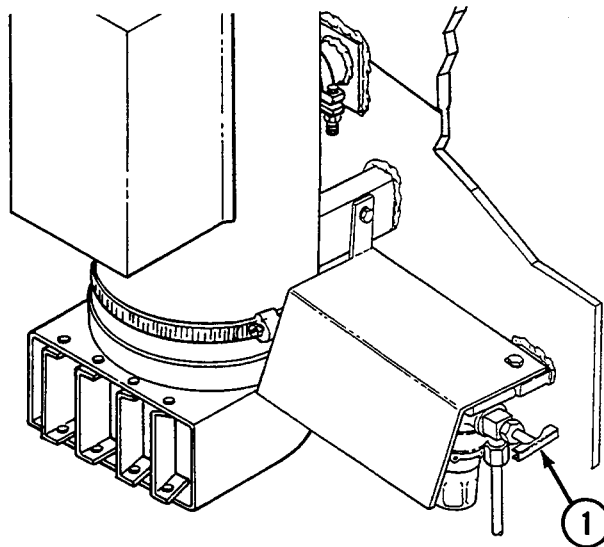
Lockwashers (3) (item 623, WP 0491 00)
Lockwashers (4) (item 637, WP 0491 00)
Lockwashers (10) (item 640, WP 0491 00)
Screws (3) (item 396, WP 0491 00)
Screws (4) (item 401, WP 0491 00)
Screws (4) (item 590, WP 0491 00)
Screws (6) (item 800, WP 0491 00)

References

WP 0334 00

Removal

1. Shut off fuel at shutoff valve (1).

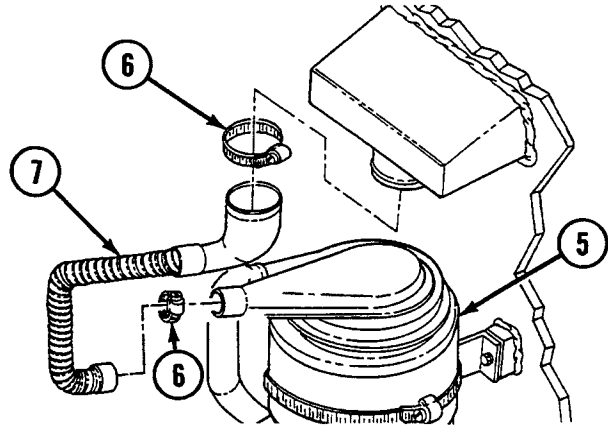
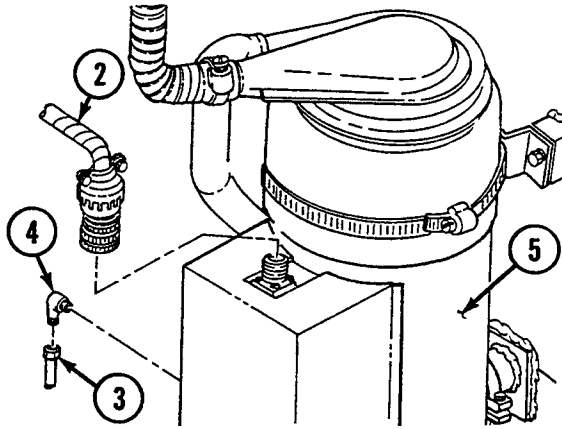


2. Disconnect electrical harness (2).

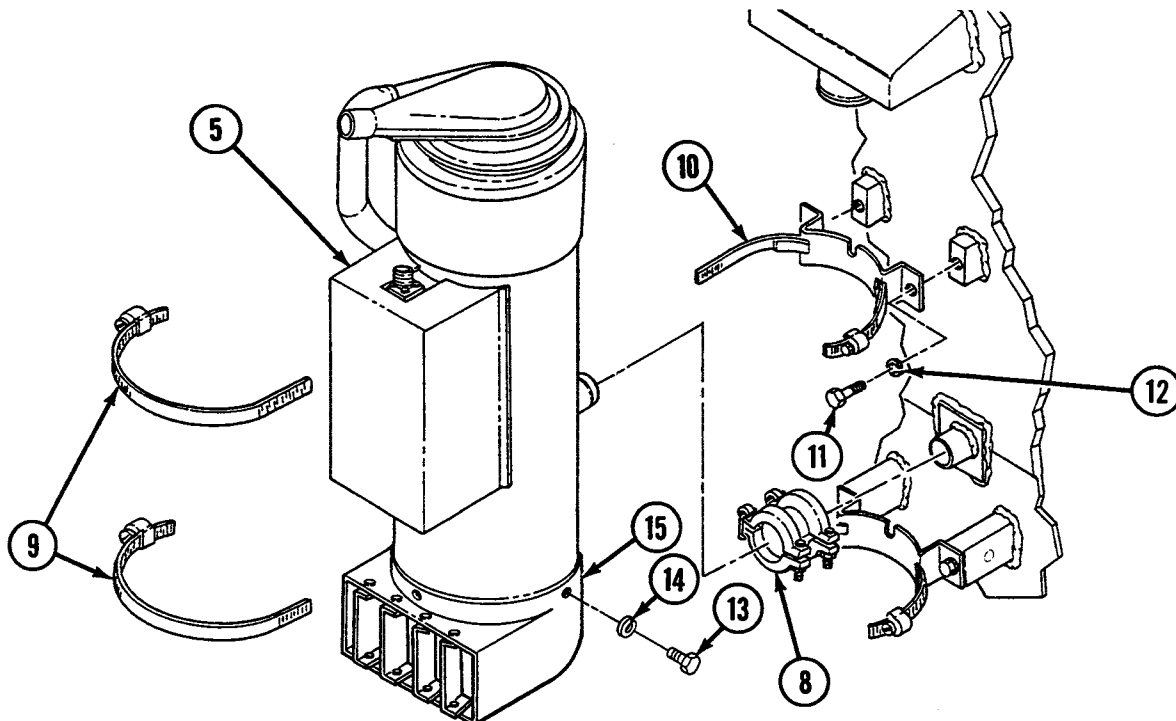
WARNING

Fuel line contains fuel. Fuel and oil are slippery and can cause falls. To avoid injury, wipe up spilled fuel or oil with rags.

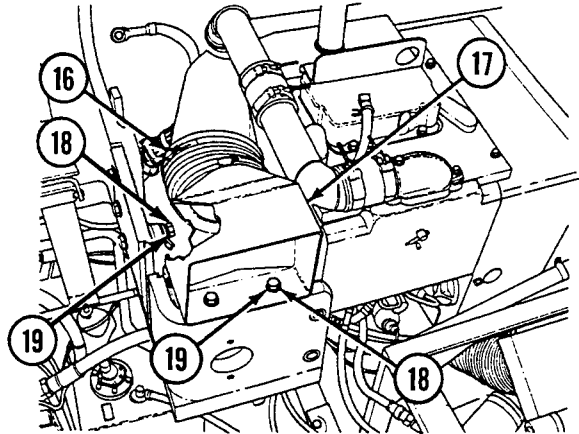
3. Disconnect fuel line (3) and adapter (4) from personnel heater (5).
4. Remove two clamps (6) and personnel heater hose (7) from personnel heater (5).



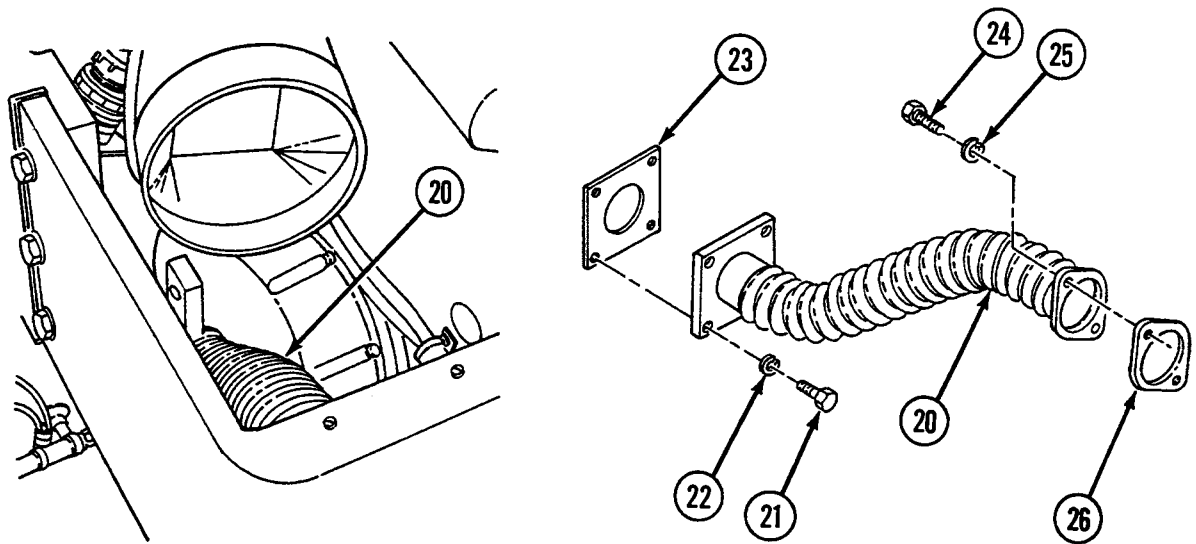
5. Remove exhaust hose clamp (8).
6. Remove two clamps (9) and personnel heater (5).
7. Remove two saddle assemblies (10) by removing four screws (11) and four lockwashers (12).
8. Remove four screws (13), four lockwashers (14), and air circulation ventilator (15).



9. Remove APU access cover assembly (see WP 0334 00).
10. Loosen clamp (16).
11. Remove APU cooling air duct (17) by removing three screws (18) and three lockwashers (19).



12. Remove personnel heater exhaust hose assembly (20) by removing four screws (21), four lockwashers (22), gasket (23), two screws (24), two lockwashers (25), and gasket (26).



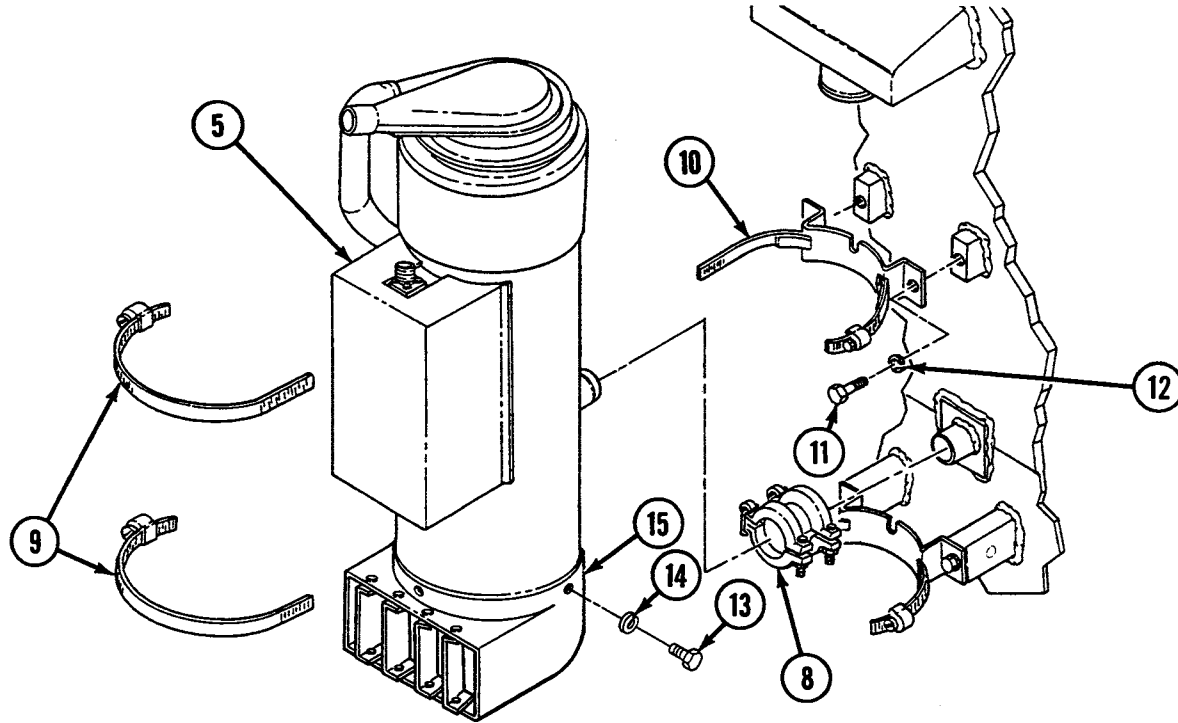
Installation

1. Install personnel heater exhaust hose assembly (20) with four screws (21), four lockwashers (22), gasket (23), two screws (24), two lockwashers (25), and gasket (26).
2. Install APU cooling air duct (17) with three screws (18) and three lockwashers (19).
3. Tighten clamp (16).
4. Install APU access cover assembly (see WP 0334 00).
5. Install air circulation ventilator (15), four lockwashers (14), and four screws (13).
6. Install two saddle assemblies (10) with four screws (11) and four lockwashers (12).
7. Install personnel heater (5) using two clamps (9). Do not tighten clamps.

NOTE

Be sure that exhaust flange is properly aligned before tightening clamps.

8. Install exhaust hose clamp (8) and tighten two clamps (9).

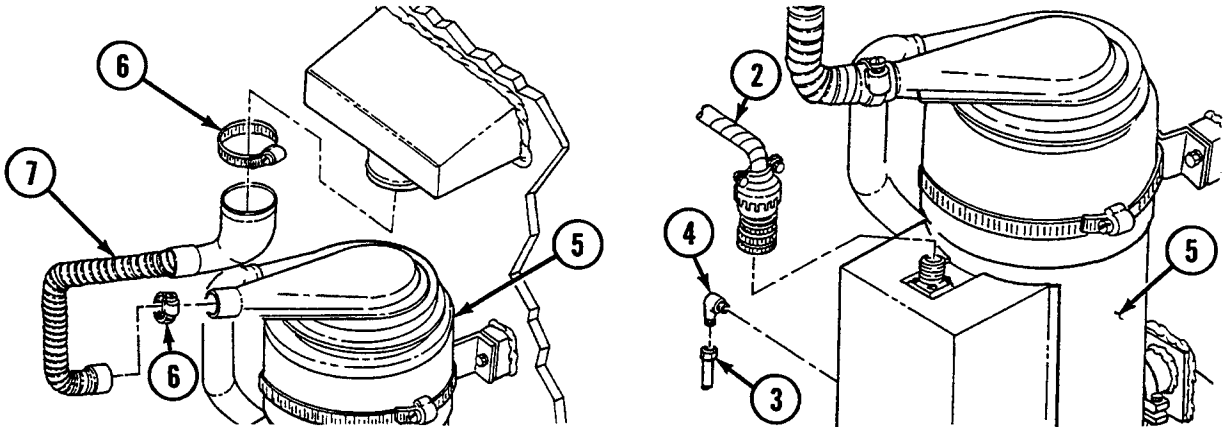


9. Install personnel heater hose (7) with two clamps (6) on personnel heater (5).

WARNING

Ensure fuel lines do not leak after installation. Fuel is flammable and can cause severe injury or death to personnel.

10. Install adapter (4) and connect fuel line (3) at personnel heater (5).
11. Connect electrical harness (2).



12. Check for leaks.

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**PERSONNEL HEATER AND APU AIR INTAKE WATER DEFLECTOR REPLACEMENT
 REMOVAL, INSTALLATION**

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

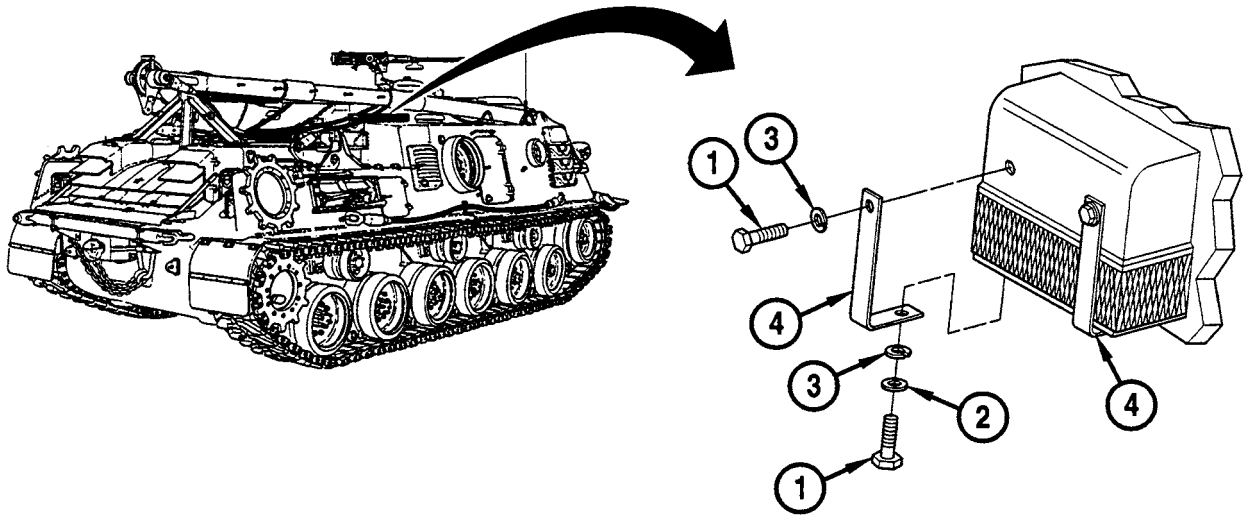
Lockwashers (4) (item 638, WP 0491 00)

Screws (4) (item 799, WP 0491 00)

Washers, flat (2) (item 534, WP 0491 00)

Removal

1. Remove four screws (1), two washers (2), four lockwashers (3), and two brackets (4). Discard lockwashers.



Installation

1. Install two brackets (4), four lockwashers (3), two washers (2), and four screws (1).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

PERSONNEL HEATER FUEL PUMP REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

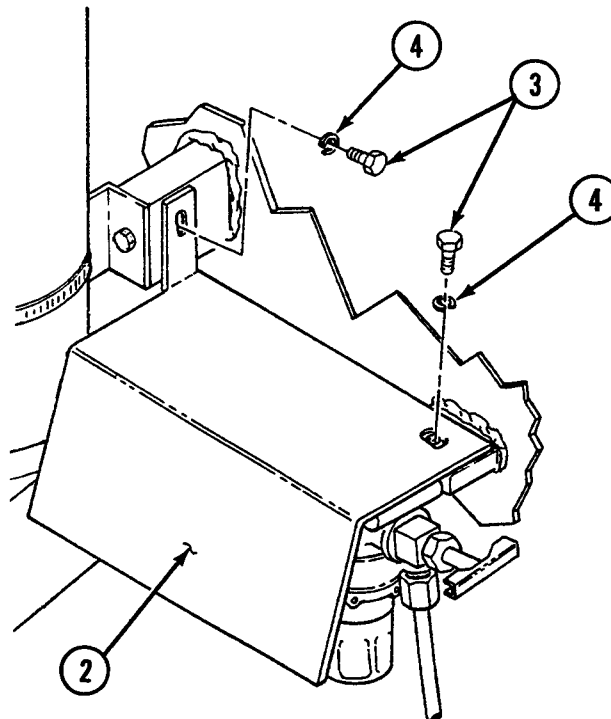
Lockwashers (4) (item 638, WP 0491 00)

Screws (2) (item 371, WP 0491 00)

Screws (2) (item 372, WP 0491 00)

Removal

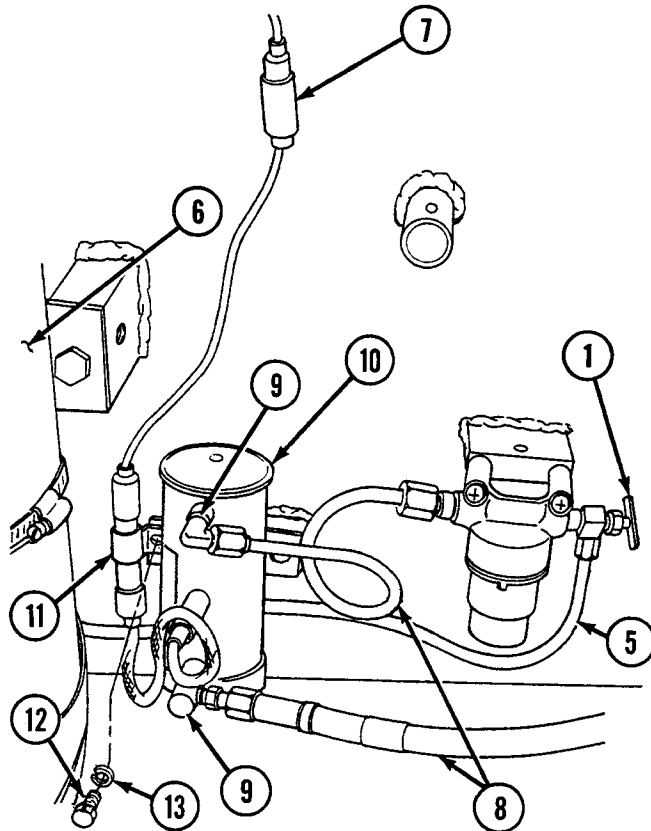
1. Shut off fuel at shutoff valve (1).
2. Remove shield (2) by removing two screws (3) and two lockwashers (4).



WARNING

Fuel line contains fuel. Fuel and oil are slippery and can cause falls. To avoid injury, wipe up spilled fuel or oil with rags.

3. Remove fuel line (5) by disconnecting from shutoff valve (1) and personnel heater (6).
4. Disconnect electrical fuel pump connector (7).
5. Remove two fuel lines (8) and two elbows (9).
6. Remove fuel pump (10) and electrical connector mount (11) by removing two screws (12) and two lockwashers (13).



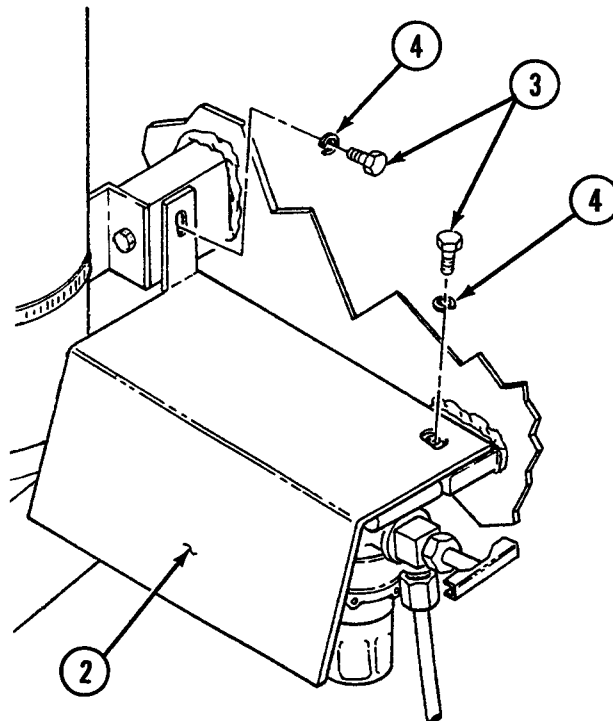
Installation

1. Install fuel pump (10) and electrical connector mount (11) with two screws (12) and two lockwashers (13).
2. Connect two fuel lines (8) and two elbows (9).

WARNING

Ensure fuel lines do not leak after installation. Fuel is flammable and can cause severe injury or death to personnel.

3. Install fuel line (5) at shutoff valve (1) and personnel heater (6).
4. Connect electrical fuel pump connector (7) to harness.
5. Open fuel shutoff valve (1).
6. Check for leaks.
7. Install shield (2) with two screws (3) and two lockwashers (4).



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

PERSONNEL HEATER FUEL FILTER REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (2) (item 637, WP 0491 00)

Materials/Parts (cont.)

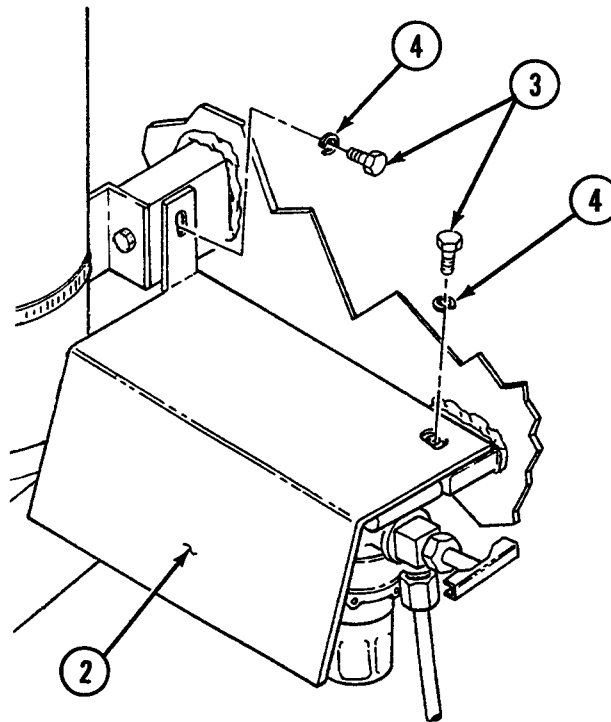
Lockwashers (2) (item 638, WP 0491 00)

Screws (2) (item 371, WP 0491 00)

Screws (2) (item 595, WP 0491 00)

Removal

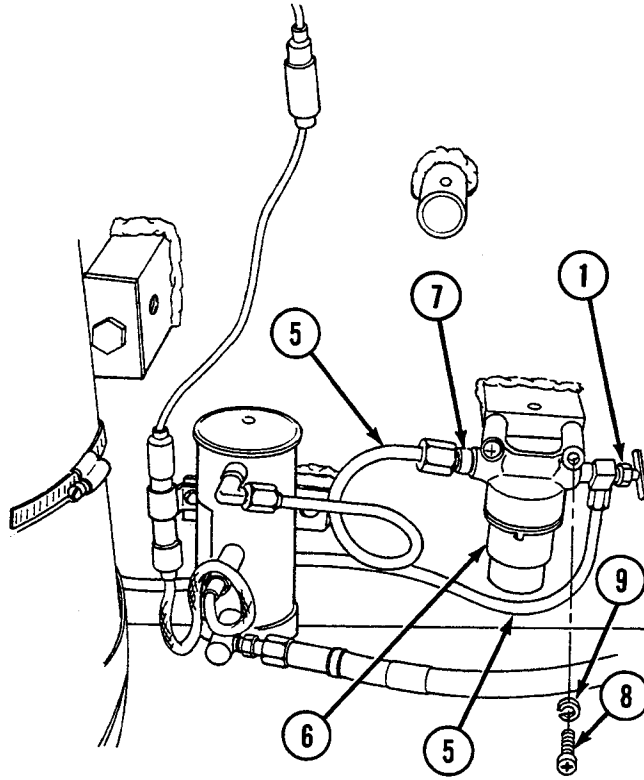
1. Shut off fuel at shutoff valve (1).
2. Remove shield (2) by removing two screws (3) and two lockwashers (4).



WARNING

Fuel line and filter contain fuel. Exercise caution when removing to prevent spilling fuel on deck.

3. Disconnect two fuel lines (5) at fuel filter (6) and remove adapter (7).
4. Remove fuel filter (6) by removing two screws (8) and two lockwashers (9).
5. Remove shutoff valve (1) from fuel filter (6).



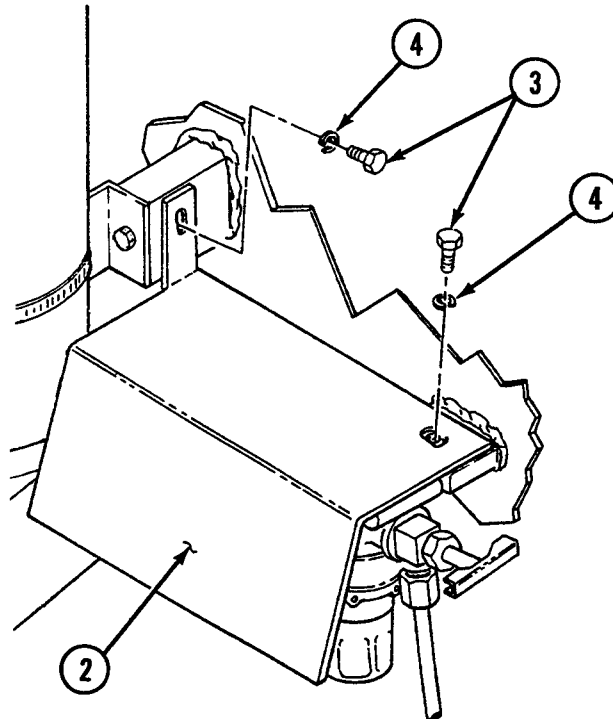
Installation

1. Install shutoff valve (1) on fuel filter (6).
2. Install fuel filter (6) with two screws (8) and two lockwashers (9).

WARNING

Ensure fuel lines do not leak after installation. Fuel is flammable and can cause severe injury or death to personnel.

3. Install adapter (7) and connect two fuel lines (5).
4. Check for leaks.
5. Install shield (2) with two screws (3) and two lockwashers (4).



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
FIXED FIRE EXTINGUISHER CYLINDERS MAINTENANCE
REMOVAL, INSPECTION, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)
Scale, indicating (item 49, WP 0490 00)

Materials/Parts

Lockwashers (16) (item 640, WP 0491 00)

Materials/Parts (cont.)

Lockwashers (2) (item 644, WP 0491 00)
Nuts (2) (item 764, WP 0491 00)
Screws (12) (item 800, WP 0491 00)
Screws (4) (item 801, WP 0491 00)
Washers, flat (2) (item 542, WP 0491 00)

WARNING

Handle all fire extinguisher cylinders with care. Do not bump, jar, or drop.

Removal

1. Remove interconnecting tube assemblies (1 and 2) from cylinder control valve (3) and head assemblies (4).

CAUTION

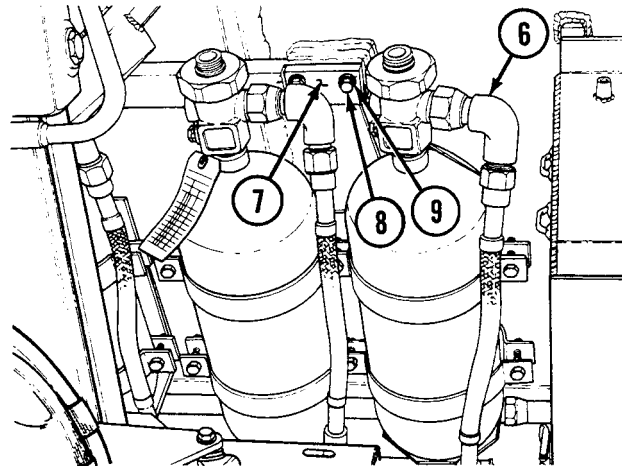
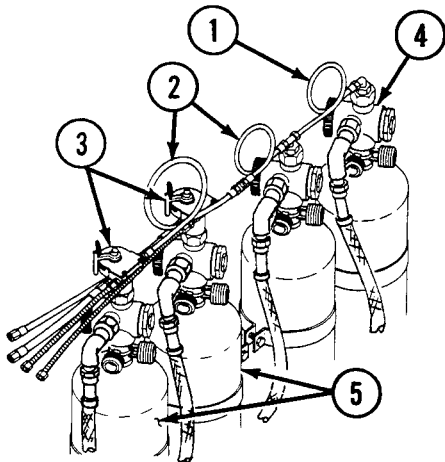
Be sure to remove cylinder control valve (3) from cylinder before any other disconnections are made.

2. Unscrew and remove two cylinder control valves (3) from fire extinguisher cylinders (5).
3. Remove six connector head assemblies (4).
4. Disconnect eight fire extinguisher lines (6).

NOTE

Steps 5 through 11 apply to both the left- and right-side fire extinguisher banks.

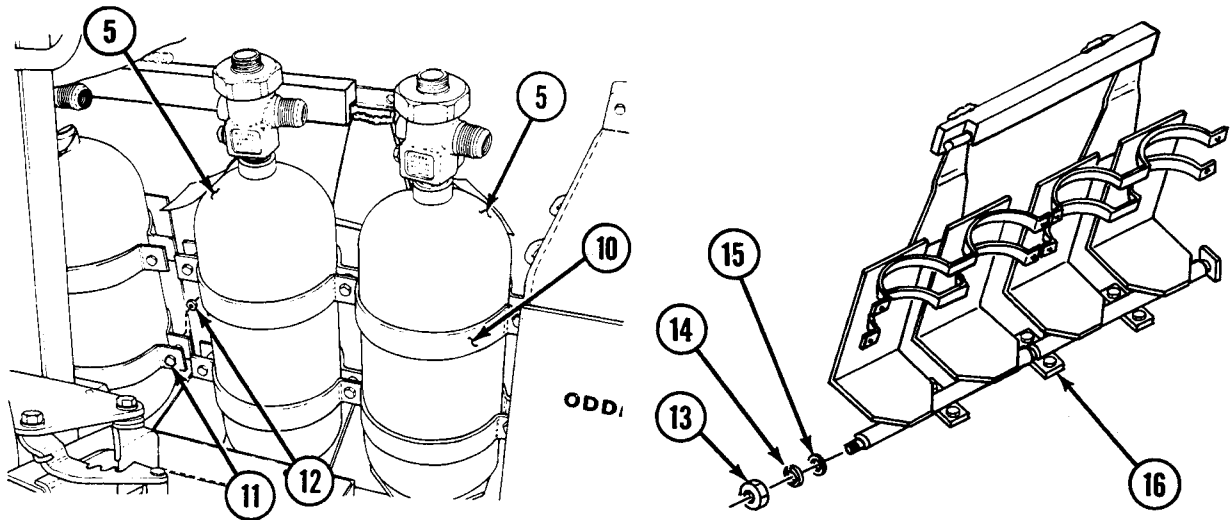
5. Remove retaining bar (7) by removing two screws (8) and two lockwashers (9).



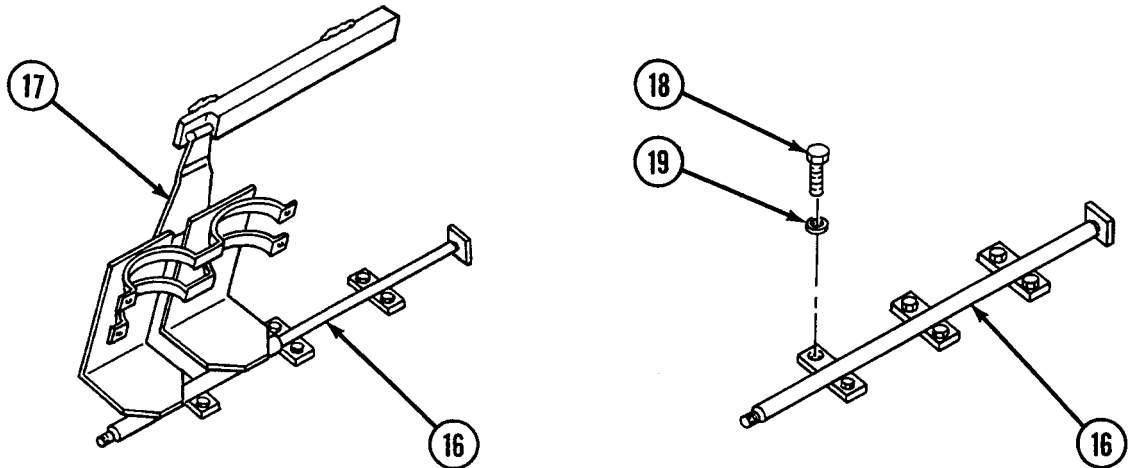
NOTE

Before removing cylinders, place flexible fire extinguisher lines under oddment tray to prevent any interference during removal.

6. Remove bracket (10) from two fire extinguisher cylinders (5) by removing six screws (11) and six nuts (12).
7. Lift out two fire extinguisher cylinders (5).
8. Remove nut (13), lockwasher (14), and washer (15) from directional slide (16).



9. Remove cradle (17) by sliding off directional slide (16).
10. Slide the two forward fire extinguisher cylinders (5) and cradle (17) to rear and repeat steps 6, 7, and 9.
11. Remove directional slide (16) by removing six screws (18) and six lockwashers (19).



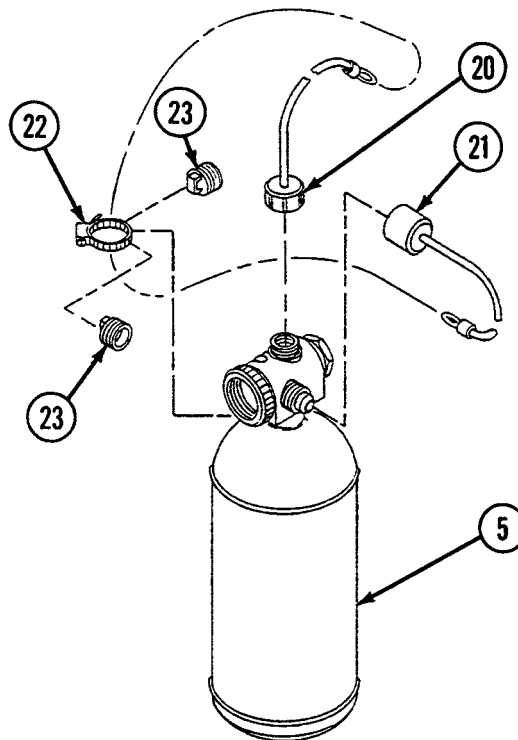
Inspection-Acceptance and Rejection Criteria

1. Before installation, weigh each cylinder. The cylinder should weigh about 35 pounds (15.9 kilograms) when fully charged. If weight is less than 90 percent of marked weight of cylinder, replace cylinder.
2. Inspect the fire extinguisher data plate to ensure that a hydrostatic test has been performed within the past 5 years. Faulty extinguishers or those beyond the test time limit (5 years) shall be declared unserviceable and replaced.

Installation**NOTE**

Steps 1 and 2 apply to installation of fire extinguisher cylinders only.

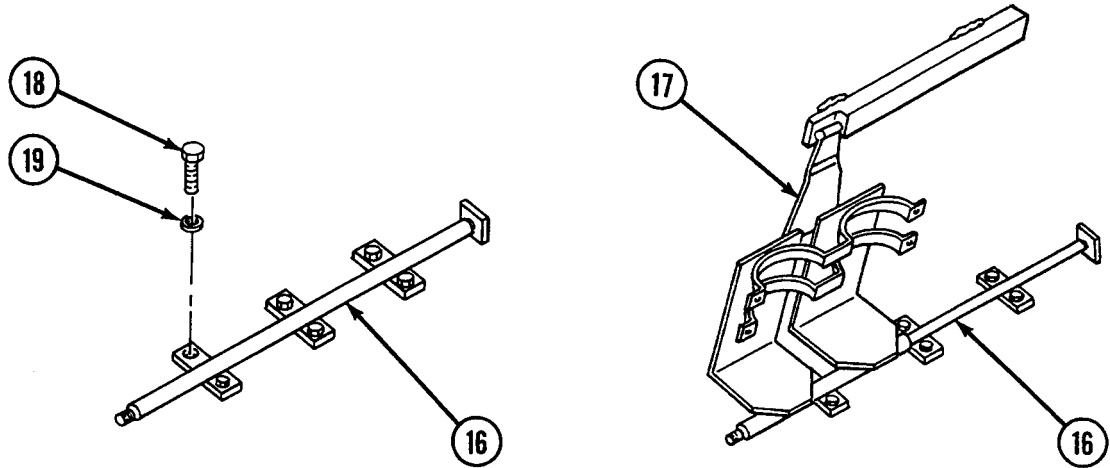
1. Remove two cap assemblies (20 and 21) from each fire extinguisher cylinder (5).
2. Remove clamp (22) and two plugs (23) from each fire extinguisher cylinder (5).



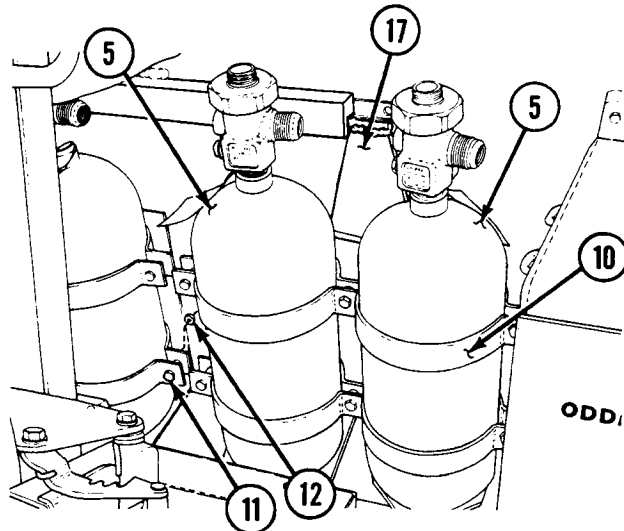
NOTE

Steps 3 through 11 apply to both left and right banks.

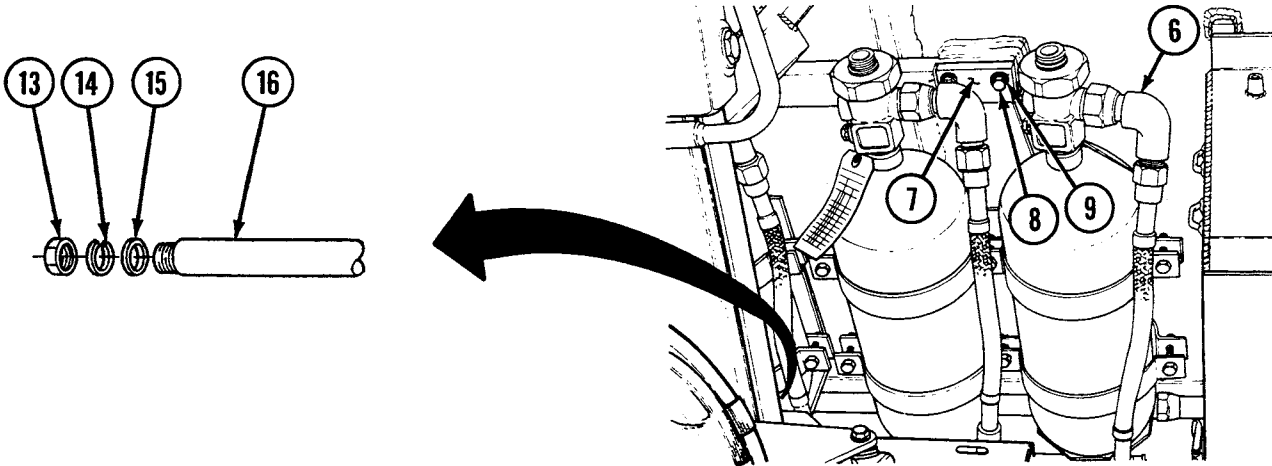
3. Install directional slide (16) with six lockwashers (19) and six screws (18).
4. Install cradle (17) on directional slide (16).



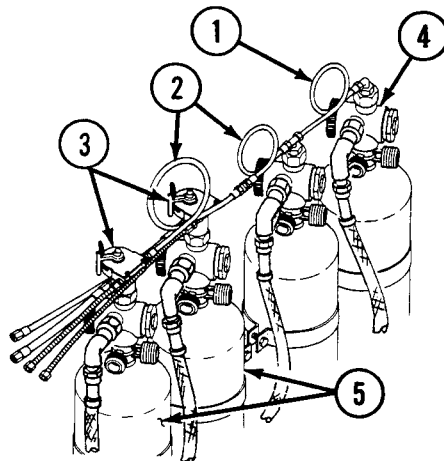
5. Install two fire extinguisher cylinders (5) in cradle (17).
6. Install bracket (10) around two fire extinguisher cylinders (5) with six screws (11) and six nuts (12).



7. Slide two forward fire extinguisher cylinders (5) and cradle (17) to front.
8. Install two rear fire extinguisher cylinders (5) by repeating steps 4 through 6.
9. Install retaining bar (7) with two lockwashers (9) and two screws (8).
10. Install washer (15), lockwasher (14), and nut (13) on directional slide (16).
11. Connect eight fire extinguisher lines (6).



12. Install six connector head assemblies (4).
13. Install two cylinder control valves (3) onto fire extinguisher cylinders (5).
14. Connect interconnecting tube assemblies (1 and 2) to cylinder control valve (3) and head assemblies (4).



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
FIXED FIRE EXTINGUISHER CYLINDER CONTROLS MAINTENANCE
REMOVAL, INSPECTION, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (6) (item 648, WP 0491 00)

Screws (6) (item 605, WP 0491 00)

Seals (2) (item 323, WP 0491 00)

WARNING

Handle all fire extinguisher cylinders with care. Do not bump, jar, or drop.

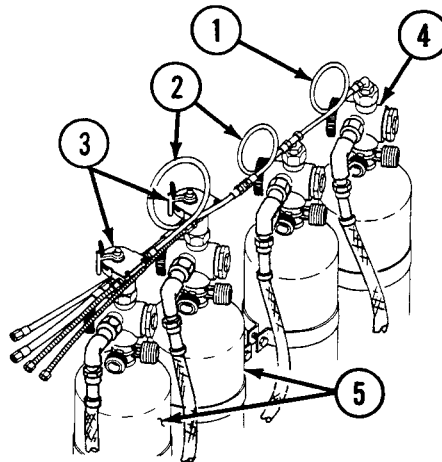
Removal

1. Remove interconnecting tube assemblies (1 and 2) from cylinder control valves (3) and head assemblies (4).

CAUTION

Be sure to remove cylinder control valve (3) from cylinder before any other disconnections are made.

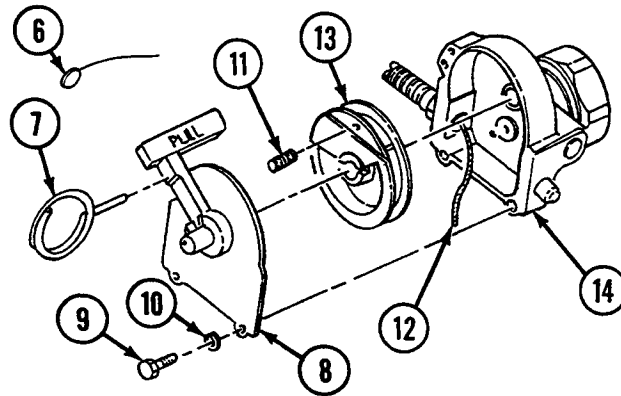
2. Unscrew and remove two cylinder control valves (3) from cylinders (5).



NOTE

Repeat steps 3 through 6 for each cylinder control valve.

3. Break safety seal (6) and pull safety pin (7).
4. Remove cover assembly (8) by removing three screws (9) and three lockwashers (10).
5. Loosen two screws (11) and disconnect cable (12).
6. Remove cable pulley assembly (13) from cylinder control valve housing (14) to remove cable (12) from housing.

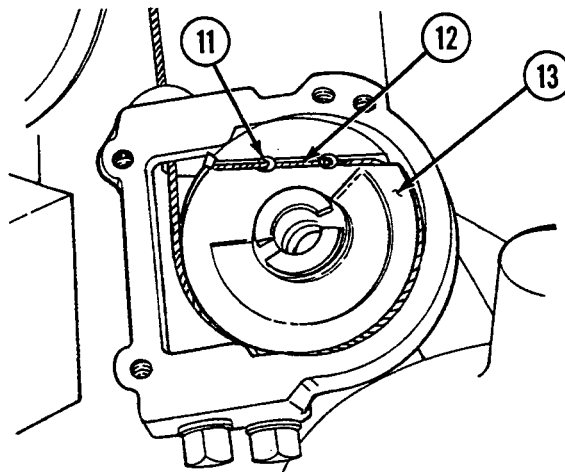
**Inspection-Acceptance and Rejection Criteria**

1. Inspect system components for wear, corrosion, and damage. If necessary, remove defective parts and replace.
2. Clean and dry all items before installation.

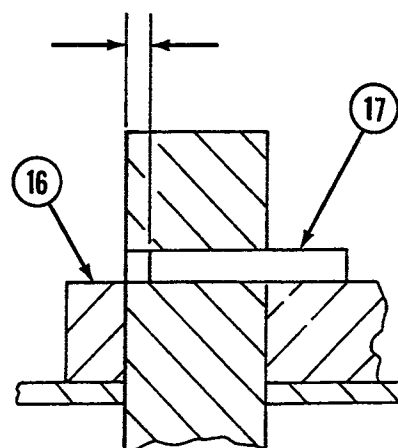
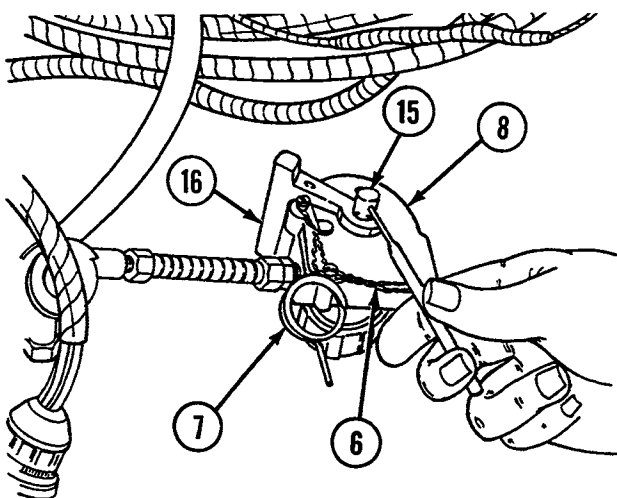
Installation**NOTE**

Repeat steps 1 through 5 for each cylinder control valve.

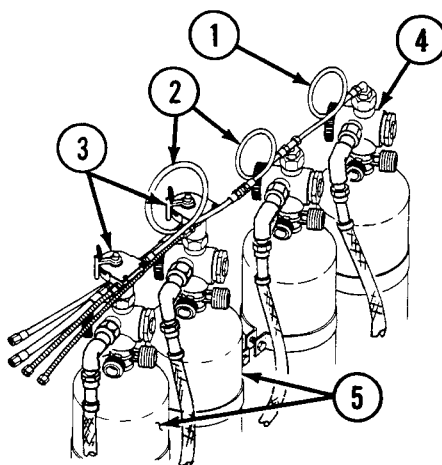
1. Wind cable (12) around sheave of cable pulley assembly (13) and secure by tightening two screws (11).



2. Install cover assembly (8) with three screws (9) and three lockwashers (10).
3. Rotate cylinder control valve shaft (15) and handle (16) counterclockwise to the reset position, and install safety pin (7) through handle and cover assembly (8).
4. Install safety seal (6).
5. Inspect two fire extinguisher control valves to be sure pin (17) does not extend beyond shaft on side away from handle (16). If it does, protruding pin must be driven back into shaft 0.062 inch (in.) (1.57 millimeters [mm]). Then stake hole at three places to prevent pin from coming through. File staking flush to ensure free rotation.



6. Install two cylinder control valves (3) into cylinders (5).
7. Connect interconnecting tube assemblies (1 and 2) to cylinder control valves (3) and head assemblies (4).



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

FIXED FIRE EXTINGUISHER SYSTEM CONTROLS AND LINKAGES MAINTENANCE
REMOVAL, INSTALLATION, ADJUSTMENT

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)
Riveter, blind (item 48, WP 0490 00)

Materials/Parts

Gasket (item 32, WP 0491 00)
Lockwashers (2) (item 612, WP 0491 00)
Lockwashers (2) (item 638, WP 0491 00)
Lockwashers (2) (item 640, WP 0491 00)
Lockwashers (2) (item 645, WP 0491 00)
Nuts (2) (item 533, WP 0491 00)
Nuts (2) (item 672, WP 0491 00)
Nuts (2) (item 763, WP 0491 00)
Nuts (2) (item 765, WP 0491 00)
Rivet (item 479, WP 0491 00)

Materials/Parts (cont.)

Screws (2) (item 372, WP 0491 00)
Screws (3) (item 559, WP 0491 00)
Screws (2) (item 560, WP 0491 00)
Screws (2) (item 592, WP 0491 00)
Screw (item 748, WP 0491 00)
Screws (2) (item 800, WP 0491 00)
Seals (4) (item 323, WP 0491 00)

References

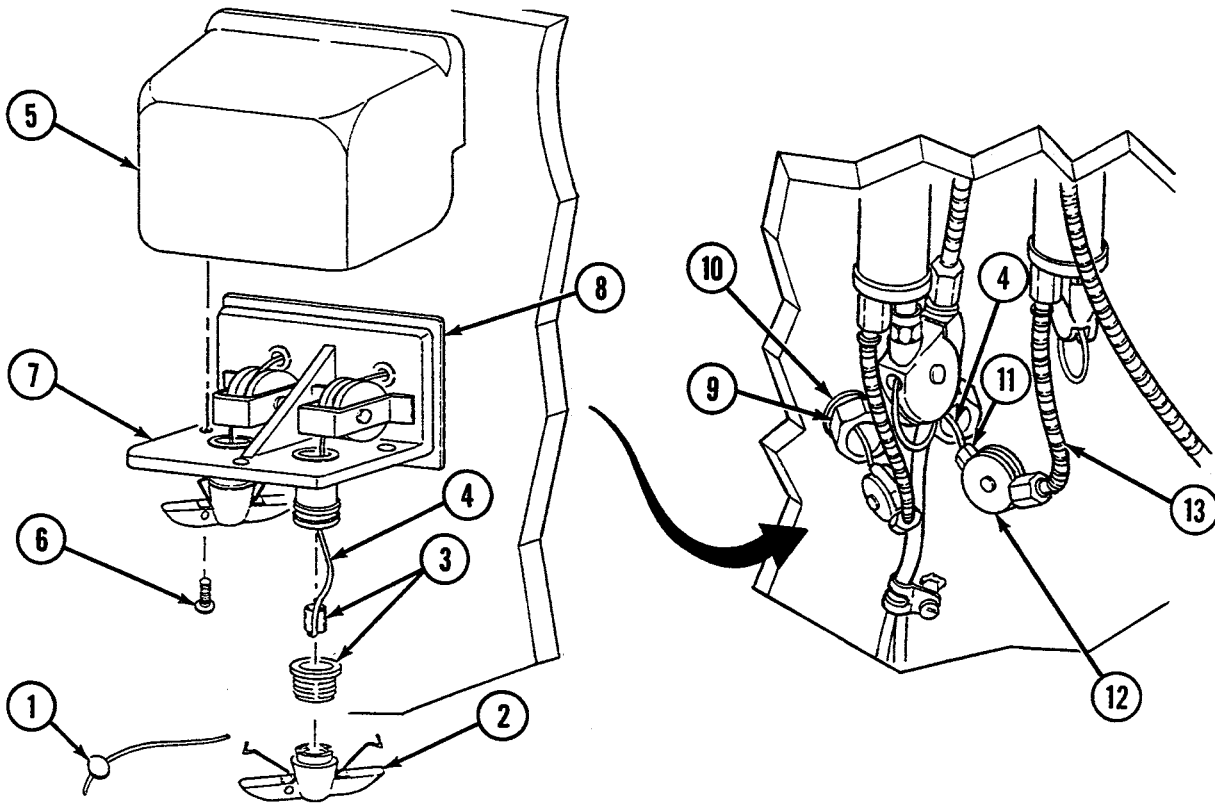
WP 0401 00

Equipment Condition

Heater control box removed (see WP 0161 00)

Removal

1. Remove two seals (1), two manual control levers (2), and two fastener assemblies (3) from two cables (4).
2. Remove cover (5) by removing three screws (6).
3. Remove pull-release mechanism (7) and gasket (8) by loosening two nuts (9) and two lockwashers (10) and pulling cable through pull-release mechanism.
4. Pull two cables (4) through hull and remove two lockwashers (10) and two nuts (9).
5. Remove two adapters (11), two swivel connectors (12), and two conduits (13) from two cables (4).

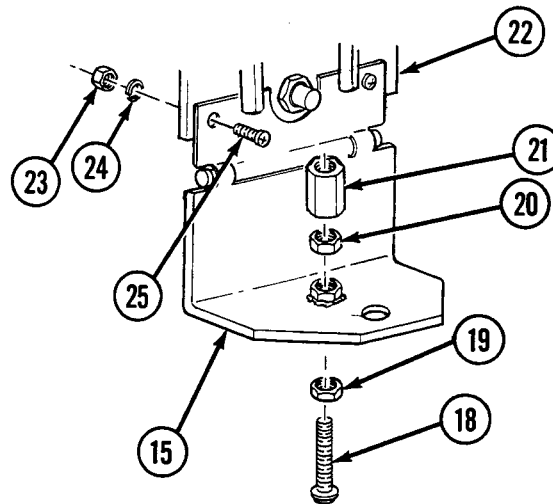
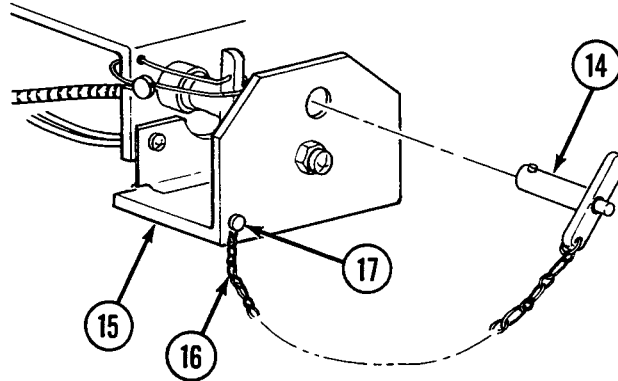


6. Remove quick-release pin (14) from shield (15).

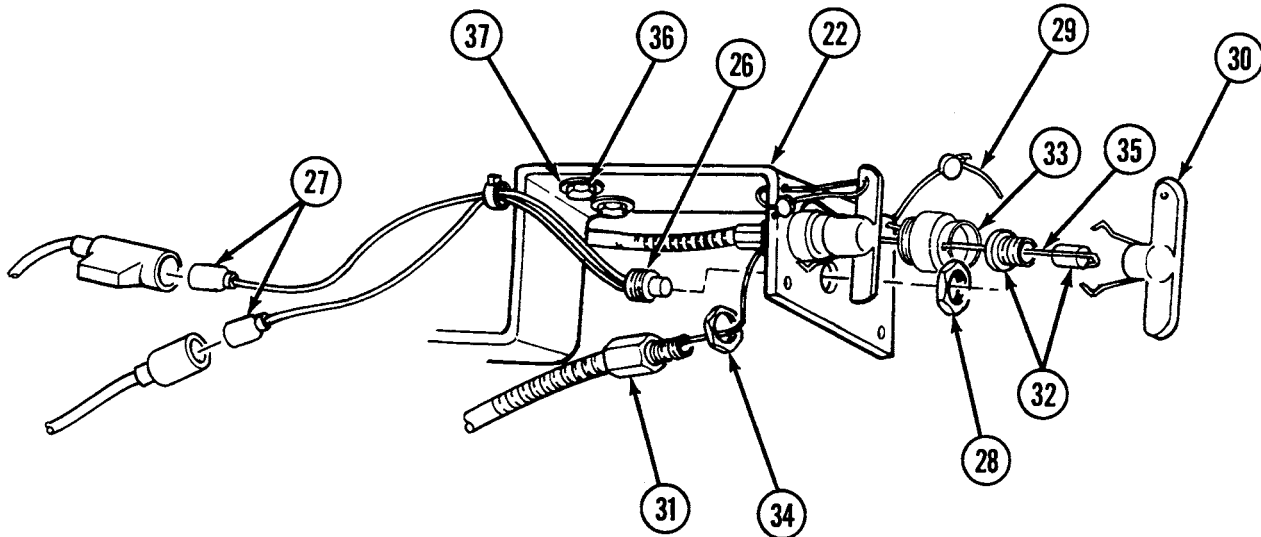
NOTE

Perform step 7 only if quick-release pin chain (16) is damaged and must be replaced.

7. Remove quick-release pin chain (16) from shield (15) by removing rivet (17).
8. Remove screw (18), two nuts (19 and 20), and stop (21) from shield (15).
9. Remove shield (15) from bracket (22) by removing two nuts (23), two lockwashers (24), and two screws (25).

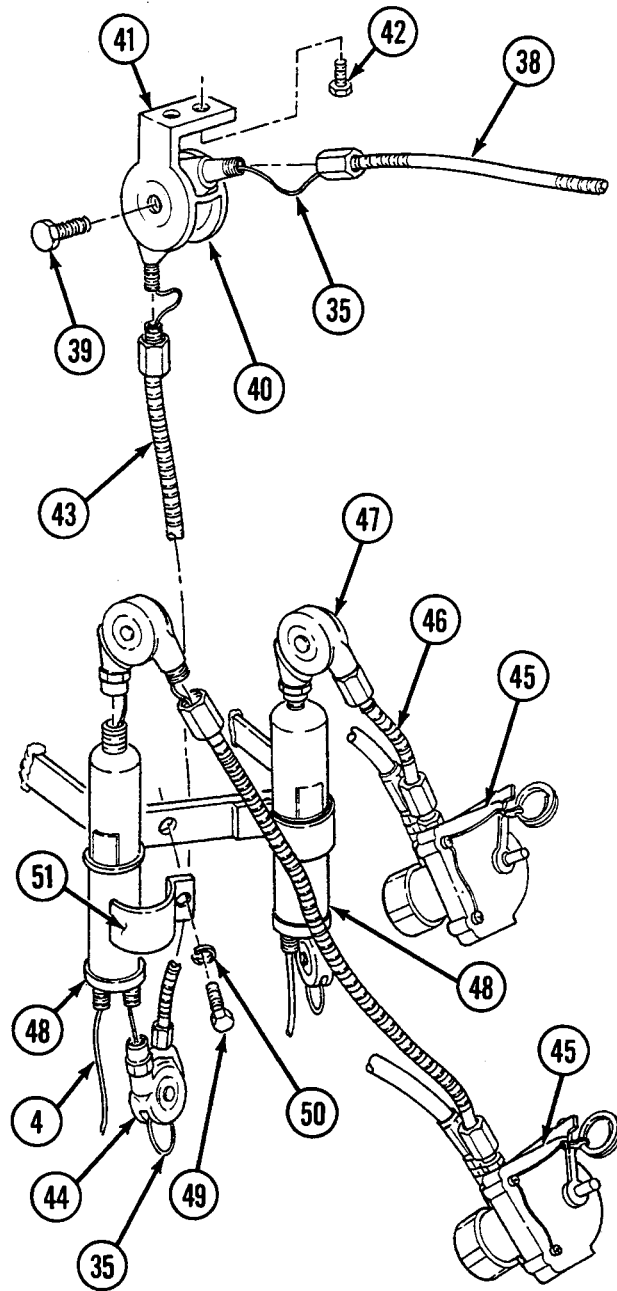


10. Remove interlock switch assembly (26) from bracket (22) by disconnecting two leads (27) and removing locknut (28).
11. Remove two seals (29) from two manual control levers (30).
12. Remove two manual control levers (30) by unscrewing two conduit nuts (31) and removing two fastener assemblies (32), two reducers (33), and two nuts (34) from two cables (35).
13. Pull two cables (35) through bracket (22).
14. Remove bracket (22) by removing two screws (36) and two lockwashers (37).

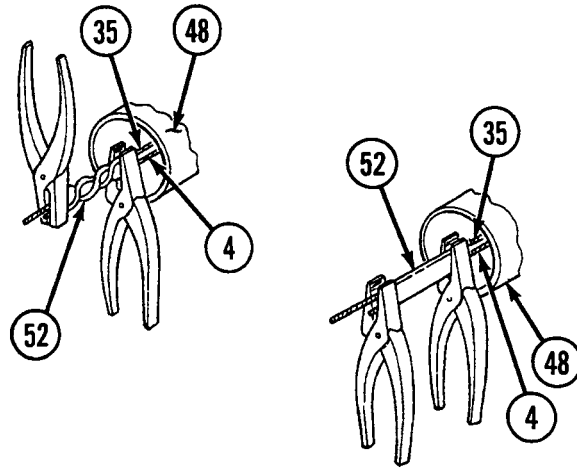


15. Remove two conduits (38) from two cables (35).
16. Remove two screws (39) and slide two adjustable elbows (40) from two cables (35).
17. Remove two adjustable elbow brackets (41) by removing two screws (42).
18. Remove two conduits (43) and two swivel connectors (44) from two cables (35).
19. Remove two cylinder control valves (45) (see WP 0401 00) from two cables (35).
20. Remove two conduits (46) and two swivel connectors (47) from two cables (35).

21. Remove two dual-pull mechanisms (48) with cables (4 and 35) by removing two screws (49), two lockwashers (50), and two clips (51).

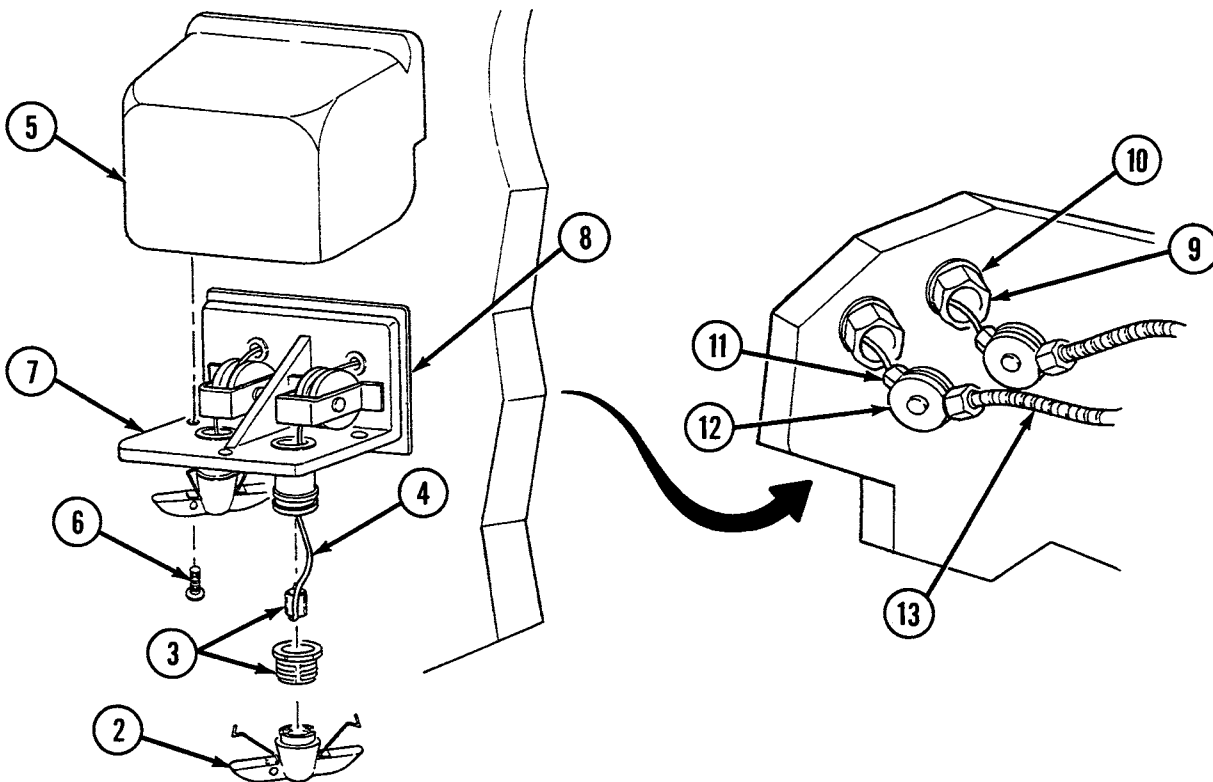


22. Open two dual-pull mechanisms (48) and remove four cables (4 and 35) as follows: grasp 3/16 in. (5 mm) of each end of cable clamp (52) with pliers. Rotate ends of clamp simultaneously until cable clamp has been untwisted and cables are released.

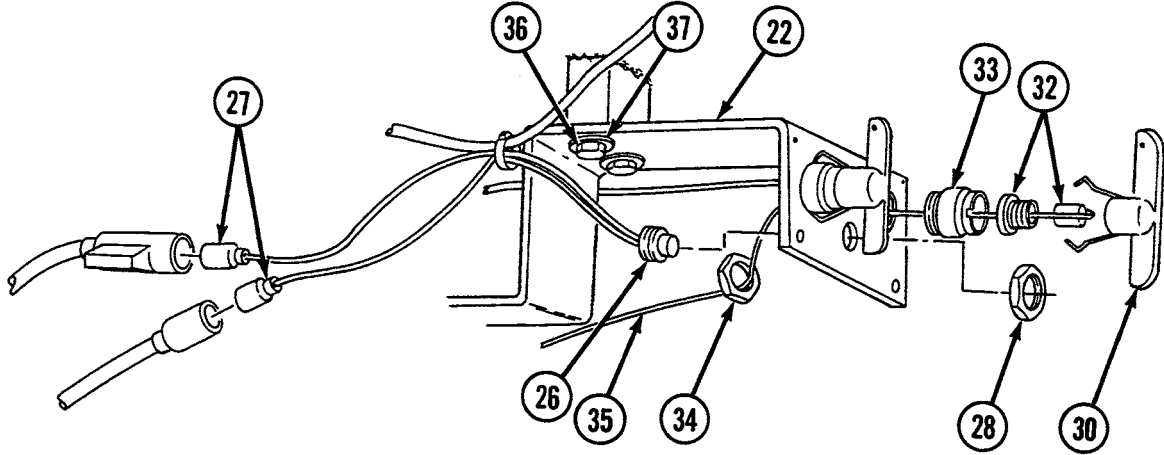


Installation

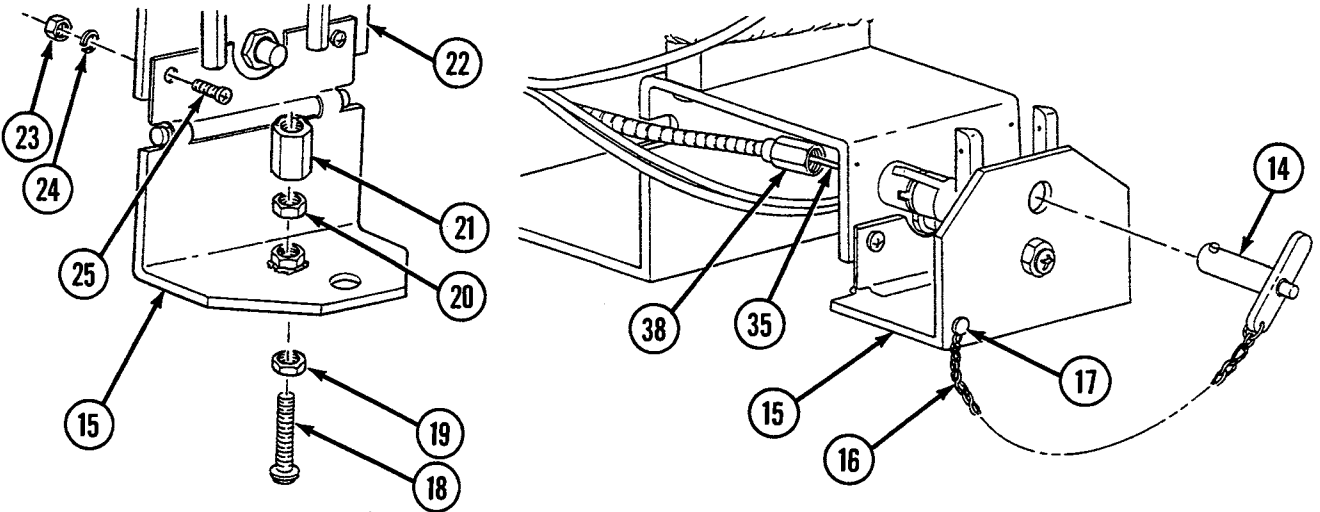
1. Install two fastener assemblies (3) and two manual control levers (2) on two cables (4).
2. Install gasket (8) and pull-release mechanism (7) with two lockwashers (10) and two nuts (9).
3. Install two cables (4) through pull-release mechanism (7).
4. Install two adapters (11), two swivel connectors (12), and two conduits (13).
5. Install cover (5) with three screws (6) onto pull-release mechanism (7).



6. Install bracket (22) with two lockwashers (37) and two screws (36).
7. Install two manual control levers (30) on two cables (35) with two nuts (34), two reducers (33), and two fastener assemblies (32) on bracket (22).
8. Install interlock switch assembly (26) on bracket (22) by connecting two leads (27) and tightening locknut (28).



9. Install shield (15) on bracket (22) with two screws (25), two lockwashers (24), and two nuts (23).
10. Install stop (21), two nuts (19 and 20), and screw (18) on shield (15).
11. Install quick-release pin chain (16) on shield (15) with rivet (17).
12. Install quick-release pin (14) on shield (15).
13. Install two conduits (38) on two cables (35).



14. Install two adjustable elbow brackets (41) with two screws (42).
15. Install two adjustable elbows (40) on two cables (35) and two conduits (38) and secure with two screws (39).
16. Install two conduits (43) and two swivel connectors (44) on two cables (35).

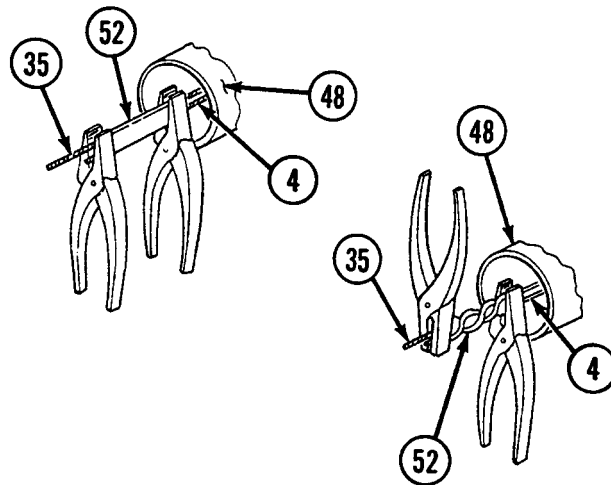
NOTE

Remove slack from cables.

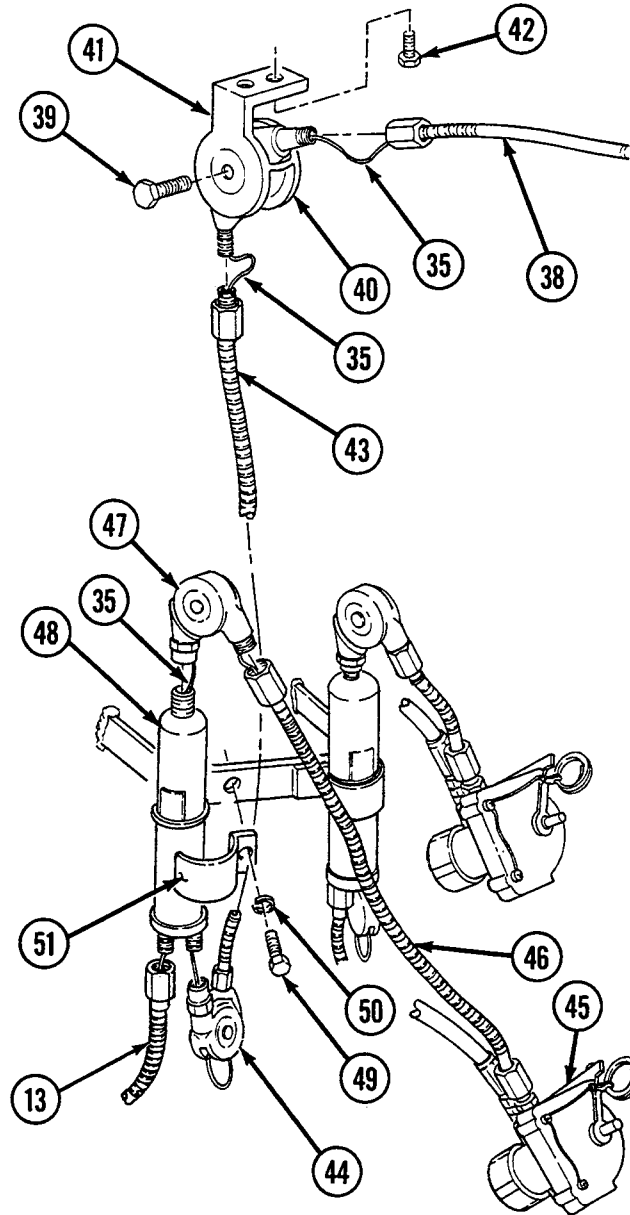
NOTE

Pull splice to inlet end of barrel before attaching to cylinder valve. Apply thin coat of graphite to cable before installing.

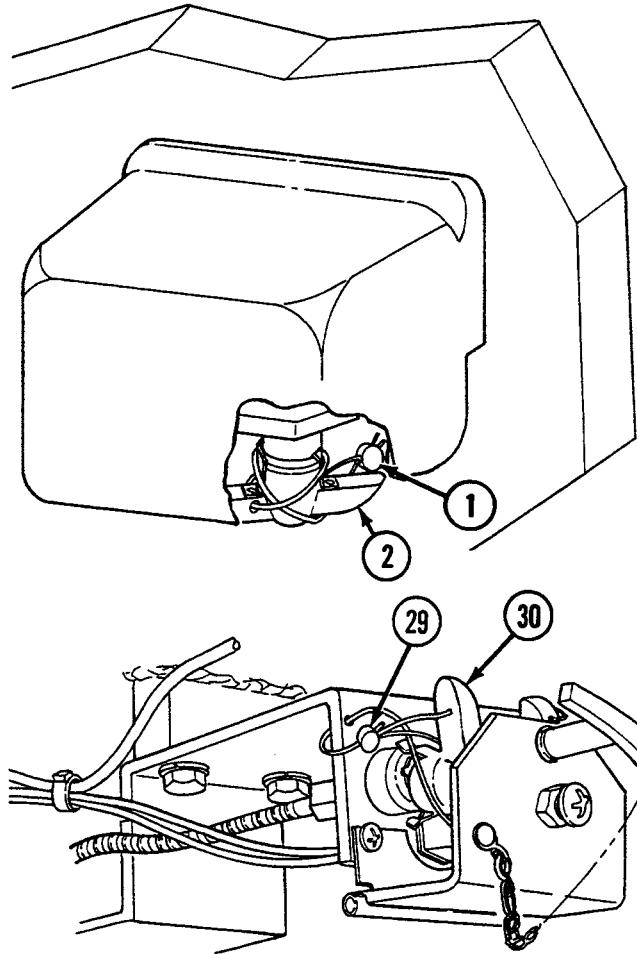
17. Install four cables (4 and 35) in two dual-pull mechanisms (48) with two cable clamps (52). Insert cable into cable clamp. Squeeze cable clamp tightly along its entire length using pliers, or flatten securely by tapping lightly with a hammer. Grasp 3/16 in. (5 mm) of each end of cable clamp with pliers. Rotate ends of cable clamp in opposite directions simultaneously until cable clamp has been twisted 1-1/2 turns. Cut short end of cable to within 1/16 in. (2 mm) of cable clamp.



18. Secure two dual-pull mechanisms (48) to two swivel connectors (44) and two conduits (13).
19. Install two dual-pull mechanisms (48) with two clips (51), two lockwashers (50), and two screws (49).
20. Install two swivel connectors (47) and two conduits (46) on two cables (35).
21. Install two cylinder control valves (45) on two cables (35) (see WP 0401 00).

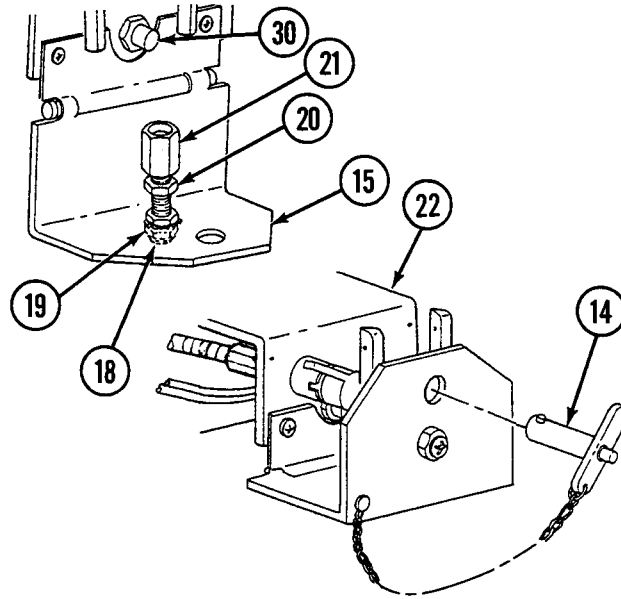


22. Install four seals (1 and 29) on four manual control levers (2 and 30).
23. Install two cylinder control valves (45) on two fire extinguisher cylinders.



Adjustment

1. Loosen two nuts (19 and 20) and back off screw (18) and stop (21).
2. Close shield (15) and insert quick-release pin (14) through shield and bracket (22) to locked position.
3. Push in button on manual control lever (30) and adjust screw (18) until it touches switch button. Back off screw 1/2 turn. Tighten nut (19) to lock screw.
4. Turn stop (21) in until it seats firmly against rim of manual control lever (30). Turn nut (20) in until it seats firmly against stop. Remove quick-release pin (14) and open shield (15). Tighten nut without allowing stop to rotate.



5. Repeat step 2 and check for switch operation and locked position of pin.

NOTE

Follow-on maintenance: Install heater control box (see WP 0161 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
FIXED FIRE EXTINGUISHER SYSTEM LINES AND NOZZLES REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Gaskets (2) (item 705, WP 0491 00)
 Lockwasher (item 621, WP 0491 00)
 Lockwasher (item 627, WP 0491 00)
 Lockwashers (27) (item 638, WP 0491 00)
 Lockwashers (16) (item 640, WP 0491 00)
 Nuts (2) (item 356, WP 0491 00)
 Nut, self-locking (item 497, WP 0491 00)
 Screws (5) (item 134, WP 0491 00)
 Screws (16) (item 366, WP 0491 00)
 Screws (4) (item 370, WP 0491 00)
 Screws (2) (item 373, WP 0491 00)

Materials/Parts (cont.)

Screws (12) (item 388, WP 0491 00)
 Screws (2) (item 477, WP 0491 00)
 Screw (item 512, WP 0491 00)
 Screws (4) (item 721, WP 0491 00)
 Screw (item 731, WP 0491 00)

Equipment Condition

Stowage baskets removed as necessary (see WP 0382 00)
 Oddment tray assembly removed (see WP 0390 00)
 Rocket ammunition storage box assembly removed (see WP 0385 00)
 Subfloor plates removed as necessary (see WP 0286 00 thru 0308 00)

Removal

1. Remove lines and nozzles as required using illustrations as a guide.

Installation

1. Install lines and nozzles in reverse order using illustrations as a guide.

NOTE

Follow-on maintenance: Install subfloor plates if removed (see WP 0286 00 thru 0308 00); Install rocket ammunition storage box assembly (see WP 0385 00); Install oddment tray assembly (see WP 0390 00); Install stowage basket if removed (see WP 0382 00).

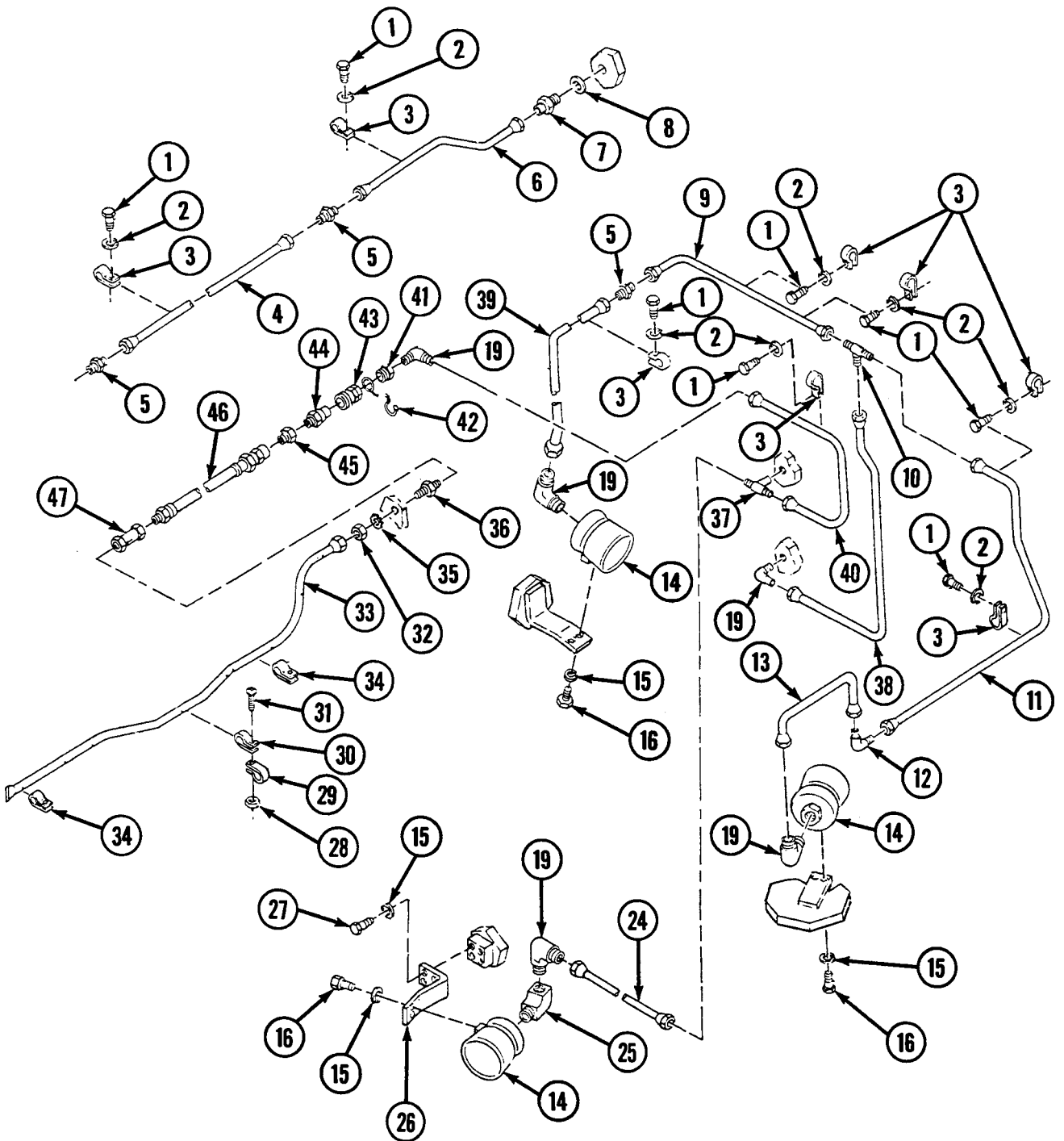
1	Screw	9	Tube assembly	17	Tube assembly	25	Elbow
2	Lockwasher	10	Tee	18	Tube assembly	26	Bracket
3	Clamp	11	Tube assembly	19	Elbow	27	Screw
4	Tube assembly	12	Elbow	20	Tube assembly	28	Self-locking nut
5	Nipple	13	Tube assembly	21	Tube assembly	29	Clamp
6	Tube assembly	14	Nozzle	22	Tube assembly	30	Clamp
7	Coupling	15	Lockwasher	23	Valve assembly	31	Screw
8	Gasket	16	Screw	24	Tube assembly	32	Nut

- 33 Tube assembly
- 34 Clamp
- 35 Lockwasher
- 36 Adapter

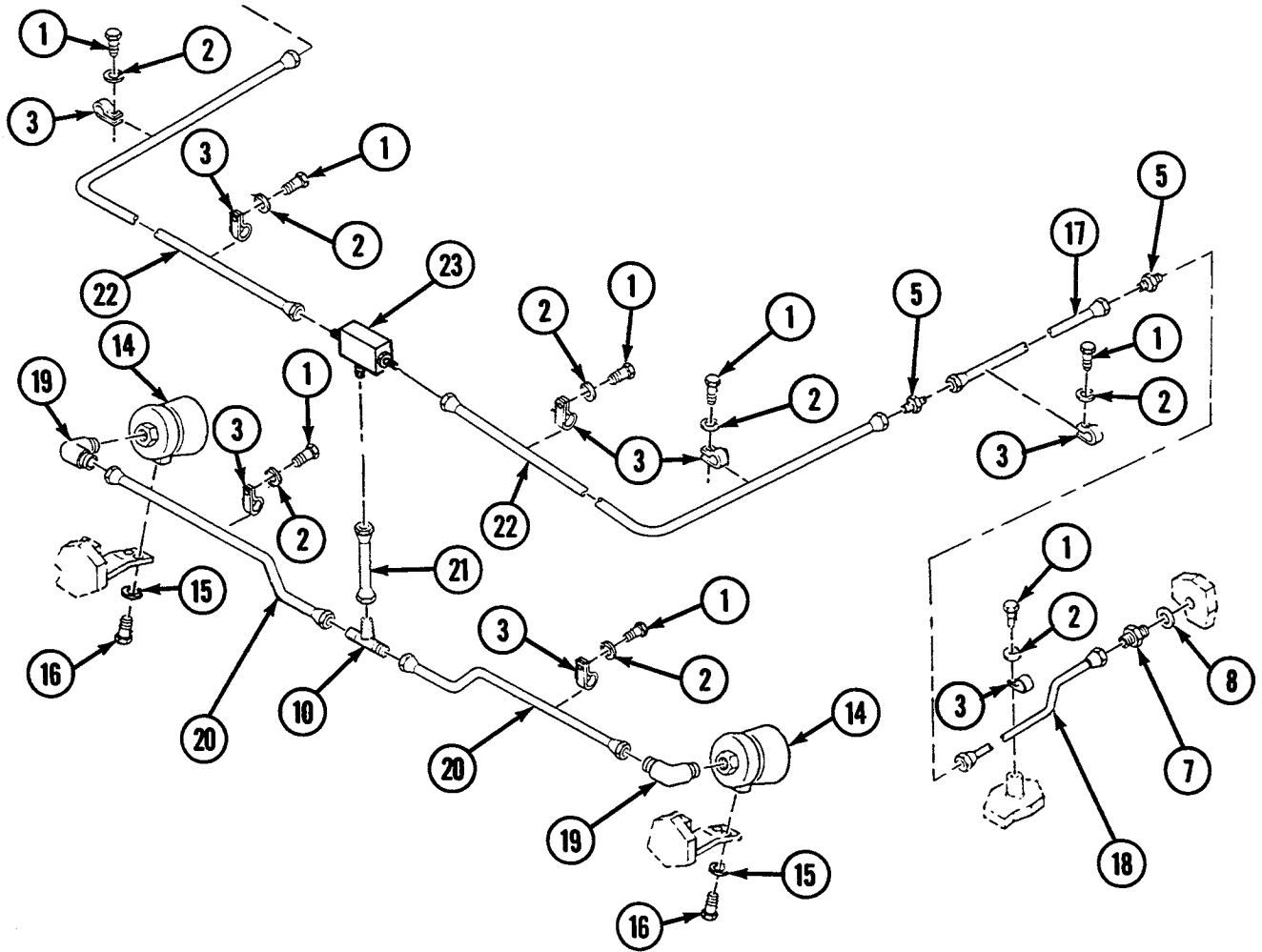
- 37 Tee
- 38 Tube assembly
- 39 Tube assembly
- 40 Tube assembly

- 41 Bushing
- 42 Ring
- 43 Coupling
- 44 Coupling

- 45 Reducer
- 46 Hose assembly
- 47 Valve



- | | | | | | |
|---|---------------|----|---------------|----|----------------|
| 1 | Screw | 9 | Tube assembly | 17 | Tube assembly |
| 2 | Lockwasher | 10 | Tee | 18 | Tube assembly |
| 3 | Clamp | 11 | Tube assembly | 19 | Elbow |
| 4 | Tube assembly | 12 | Elbow | 20 | Tube assembly |
| 5 | Nipple | 13 | Tube assembly | 21 | Tube assembly |
| 6 | Tube assembly | 14 | Nozzle | 22 | Tube assembly |
| 7 | Coupling | 15 | Lockwasher | 23 | Valve assembly |
| 8 | Gasket | 16 | Screw | | |



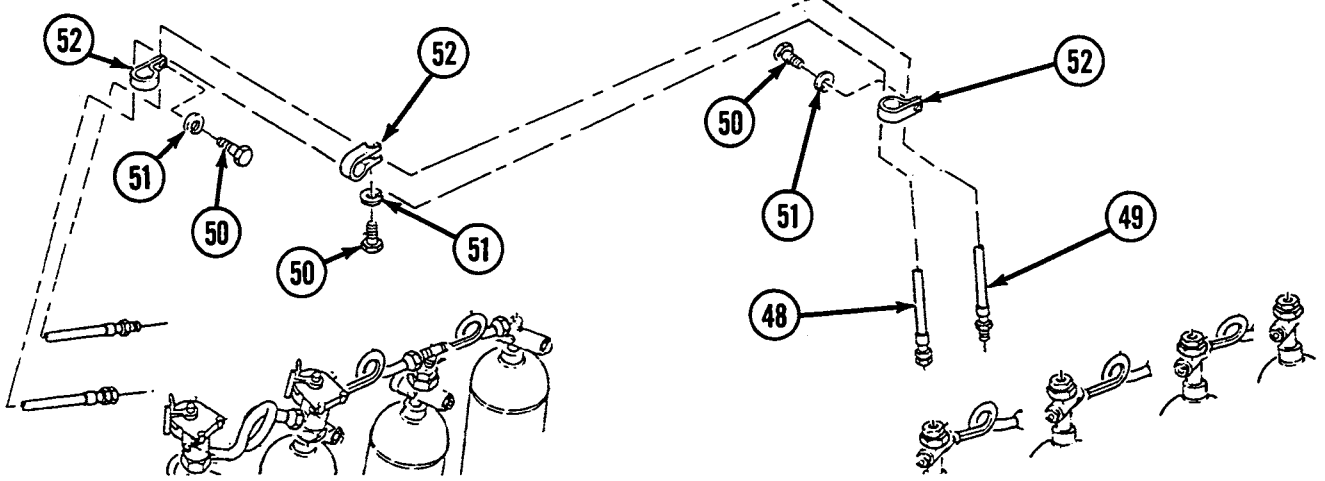
48 Hose assembly

49 Hose assembly

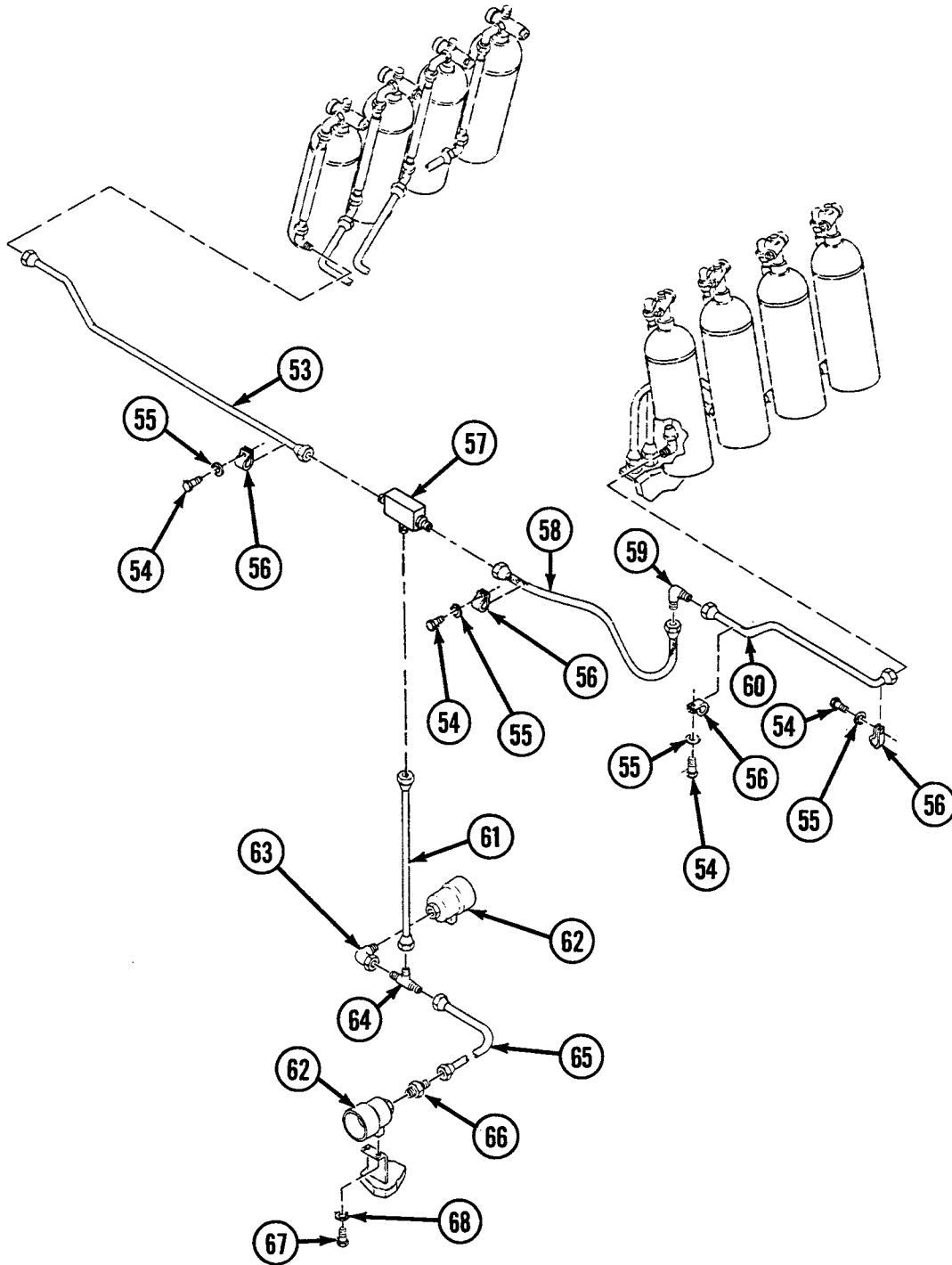
50 Screw

51 Lockwasher

52 Clamp



- | | | | |
|------------------|------------------|------------------|------------------|
| 53 Tube assembly | 57 Check valve | 61 Tube assembly | 65 Tube assembly |
| 54 Screw | 58 Tube assembly | 62 Fire nozzle | 66 Adapter |
| 55 Lockwasher | 59 Elbow | 63 Elbow | 67 Screw |
| 56 Clamp | 60 Tube assembly | 64 Tee | 68 Lockwasher |

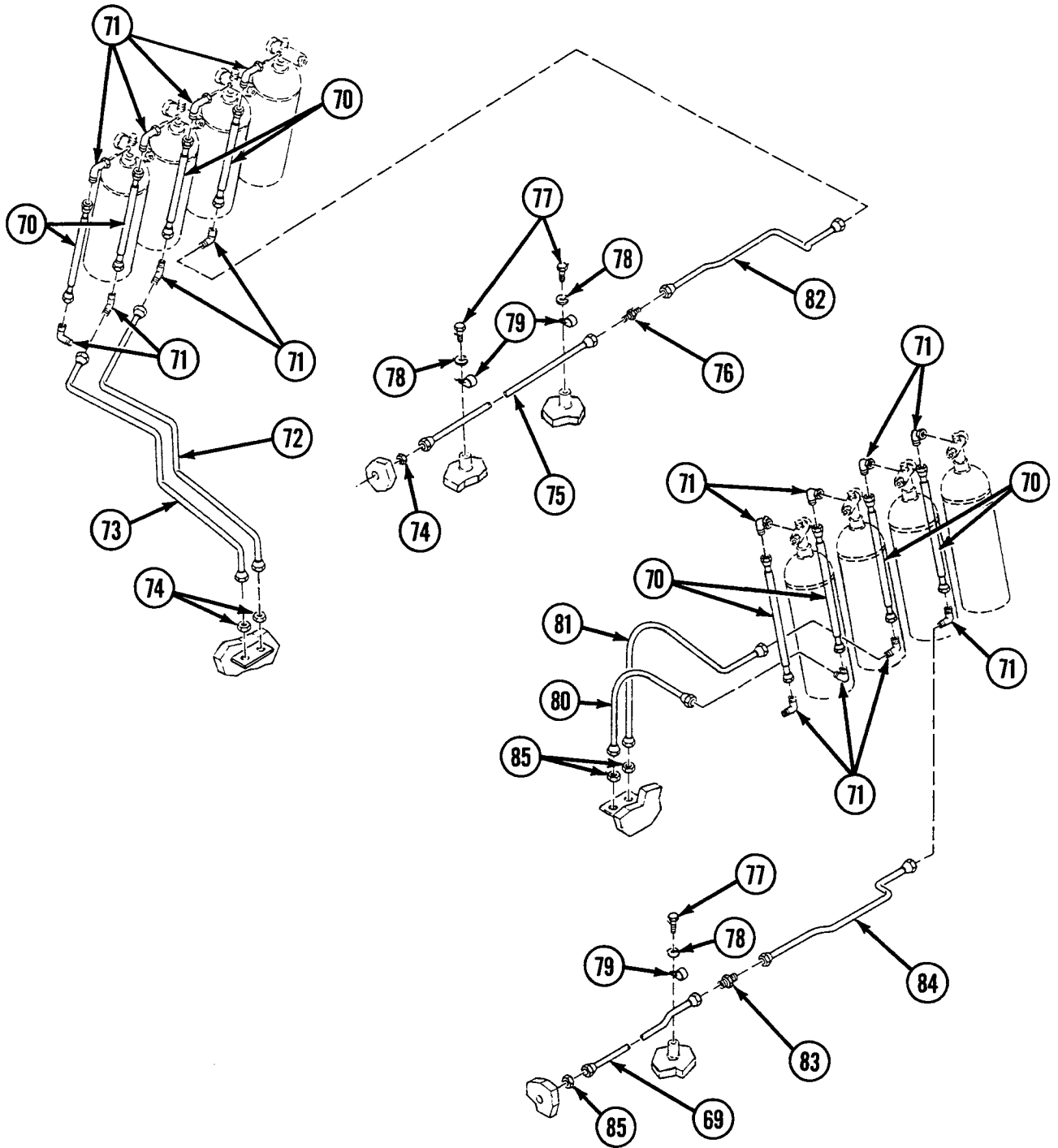


- 69 Tube assembly
- 70 Hose assembly
- 71 Elbow
- 72 Tube assembly
- 73 Tube assembly

- 74 Nut
- 75 Tube assembly
- 76 Nipple
- 77 Screw
- 78 Lockwasher

- 79 Clamp
- 80 Tube assembly
- 81 Tube assembly
- 82 Tube assembly
- 83 Nipple

- 84 Tube assembly
- 85 Nut
- 86 Coupling
- 87 Tube assembly
- 88 Adapter

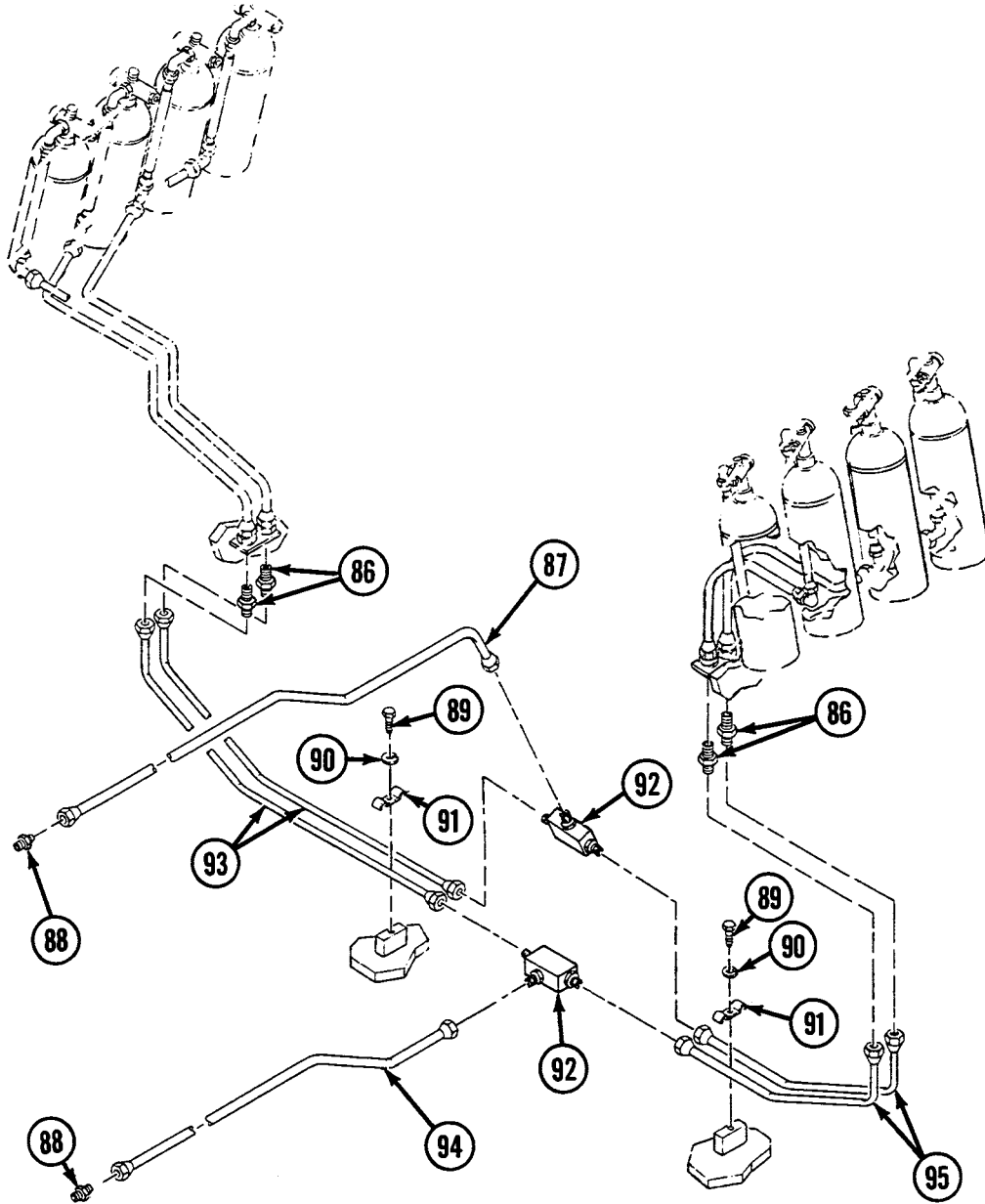


89 Screw
90 Lockwasher

91 Retaining strap
92 Check valve

93 Tube assembly
94 Tube assembly

95 Tube assembly



END OF WORK PACKAGE

CHAPTER 12
UNIT MAINTENANCE
MAINTENANCE INSTRUCTIONS
FOR
MAIN WINCH, HOIST WINCH, AND RELATED COMPONENTS
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
(NSN: 2350-00-122-6826)

CHAPTER 12
UNIT MAINTENANCE
MAINTENANCE INSTRUCTIONS

WORK PACKAGE INDEX

<u>Title</u>	<u>WP Sequence No.</u>
Main Winch Level Winder Cylinder Adjustment.....	0404 00
Main Winch Brake Band Adjustment.....	0405 00
Main Winch Manual Control and Linkage Replacement Removal, Installation.....	0406 00
Main Winch Controls and Hoses Replacement Removal, Installation.....	0407 00
Main Winch Cable Replacement Removal, Installation.....	0408 00
Hoist Winch Hose and Cable Assembly Replacement Removal, Installation.....	0409 00
Hoist Winch Brake Band Adjustment.....	0410 00
Hoist Winch Manual Control and Linkage Replacement Removal, Installation.....	0411 00
Wire Rope Shield Replacement Removal, Installation.....	0412 00
Wire Rope Roller Housing and Bearing Maintenance Removal, Disassembly, Assembly, Installation.....	0413 00
Hoisting Boom, Cylinders, and Related Parts Maintenance Removal, Installation, Inspection.....	0414 00
Stayline Cylinder Limit Valve Adjustment.....	0415 00

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
MAIN WINCH LEVEL WINDER CYLINDER ADJUSTMENT

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)
Wrench, spanner, hydraulic cylinder (item 64, WP 0490 00)
Wrench, spanner, level winder adjusting nut (item 65, WP 0490 00)

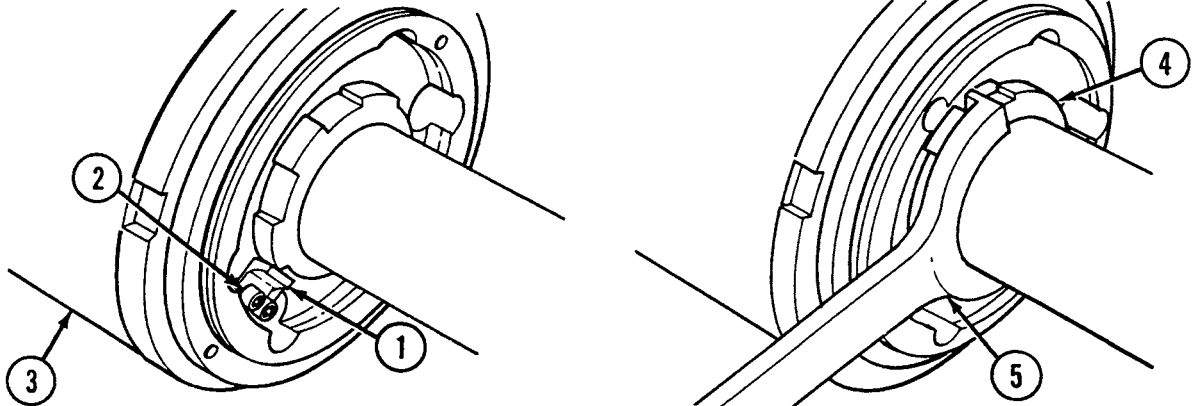
Equipment Condition

Cab subfloor plates removed as necessary (see WP 0287 00 thru 0308 00)

Adjustment**CAUTION**

Reel in cable under a load heavy enough to keep cable tightly drawn and off ground. Do not reel in cable under load in high gear.

1. Remove lockplate (1) by removing two screws (2) on level winder cylinder (3).
2. Loosen and slide back packing gland nut (4) using wrench (5).

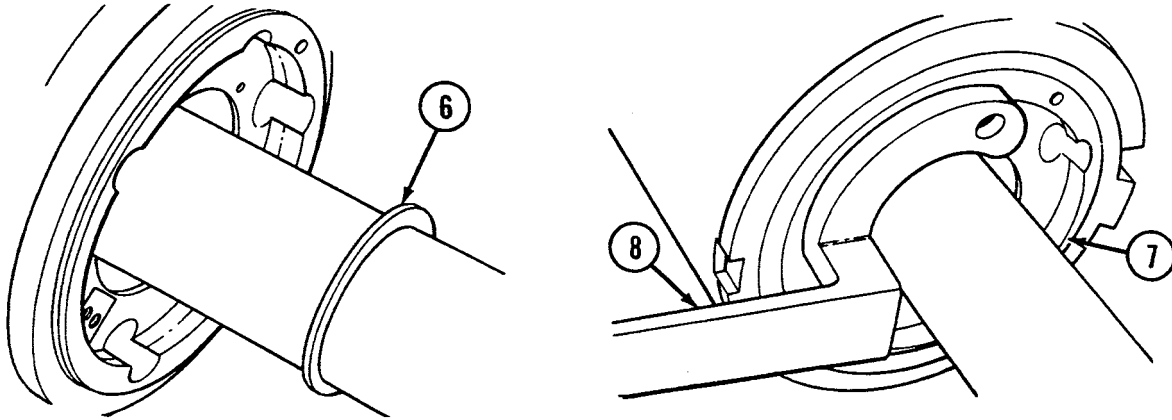


- Slide back seal (6).

NOTE

Tightening inner cap shortens level winder piston stroke; loosening cap lengthens stroke. Adjust cap at end of cylinder until cable wire winds evenly across winch drum without piling up or falling short at drum ends.

- Adjust inner cap (7) using wrench (8).



NOTE

Follow-on maintenance: Install cab subfloor plates if removed (see WP 0287 00 thru 0308 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

MAIN WINCH BRAKE BAND ADJUSTMENT

INITIAL SETUP:

Tools and Special Tools

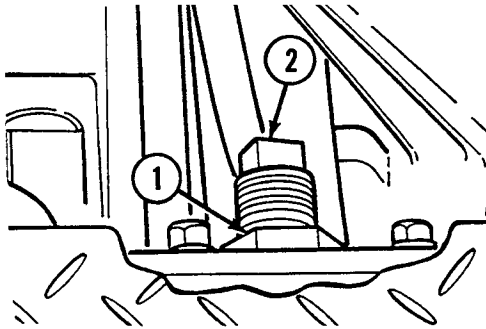
Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

Right-front access floor plate removed (see WP 0287 00)

Adjustment

1. Loosen locknut (1).
2. Tighten adjusting screw (2) clockwise to maximum. Back off adjusting screw one full turn. Hold adjusting screw in position and tighten locknut (1).



NOTE

Follow-on maintenance: Install right front access floor plate (see WP 0287 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
MAIN WINCH MANUAL CONTROL AND LINKAGE REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

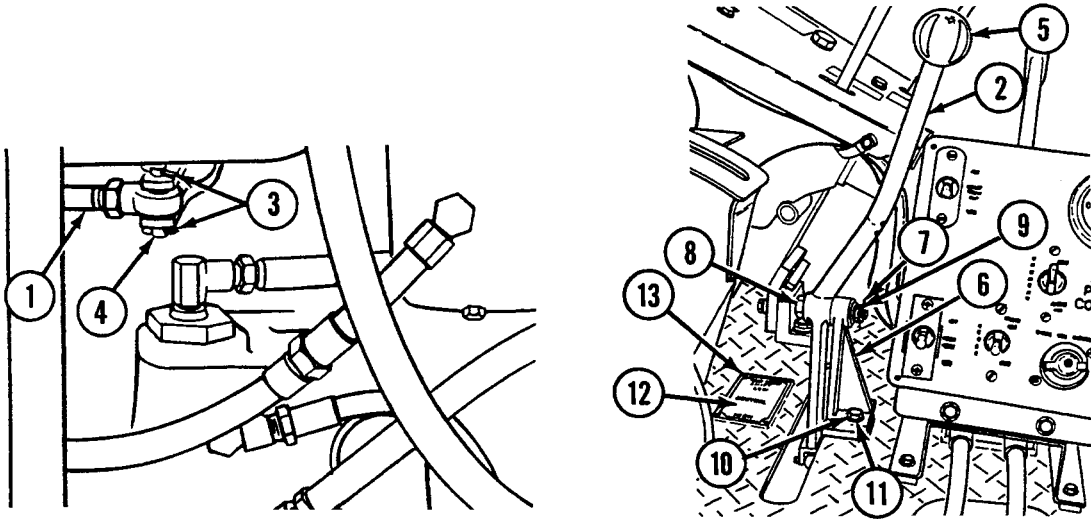
Drivescrews (4) (item 501, WP 0491 00)
Lockwashers (2) (item 640, WP 0491 00)
Nut (item 693, WP 0491 00)

Materials/Parts (cont.)

Pins, cotter (2) (item 520, WP 0491 00)
Pin, cotter (item 522, WP 0491 00)
Pin, straight (item 745, WP 0491 00)
Screw (item 27, WP 0491 00)
Screws (2) (item 721, WP 0491 00)

Removal

1. Disconnect winch shift rod (1) from winch shift lever (2) by removing two cotter pins (3) and straight pin (4).
2. Remove knob (5) from winch shift lever (2).
3. Remove winch shift lever (2) from bracket (6) by removing cotter pin (7), screw (8), and nut (9).
4. Remove bracket (6) by removing two screws (10) and two lockwashers (11).
5. Remove main winch ID plate (12) by removing four drivescrews (13).



Installation

1. Install main winch ID plate (12) with four drivescrews (13).
2. Install bracket (6) with two lockwashers (11) and two screws (10).
3. Install winch shift lever (2) to bracket (6) with screw (8), nut (9), and cotter pin (7).
4. Install knob (5) onto winch shift lever (2).
5. Connect winch shift rod (1) to winch shift lever (2) with straight pin (4) and two cotter pins (3).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
MAIN WINCH CONTROLS AND HOSES REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Drivescrews (8) (item 503, WP 0491 00)
 Lockwasher (item 638, WP 0491 00)
 Lockwashers (8) (item 641, WP 0491 00)
 Lockwashers (4) (item 642, WP 0491 00)
 Lockwasher (item 861, WP 0491 00)
 Nuts, seal (5) (item 131, WP 0491 00)
 Packings, preformed (2) (item 552, WP 0491 00)
 Packing, preformed (item 553, WP 0491 00)

Materials/Parts (cont.)

Screw (item 372, WP 0491 00)
 Screws (8) (item 409, WP 0491 00)
 Screws (4) (item 416, WP 0491 00)
 Screw (item 859, WP 0491 00)
 Screw (item 860, WP 0491 00)

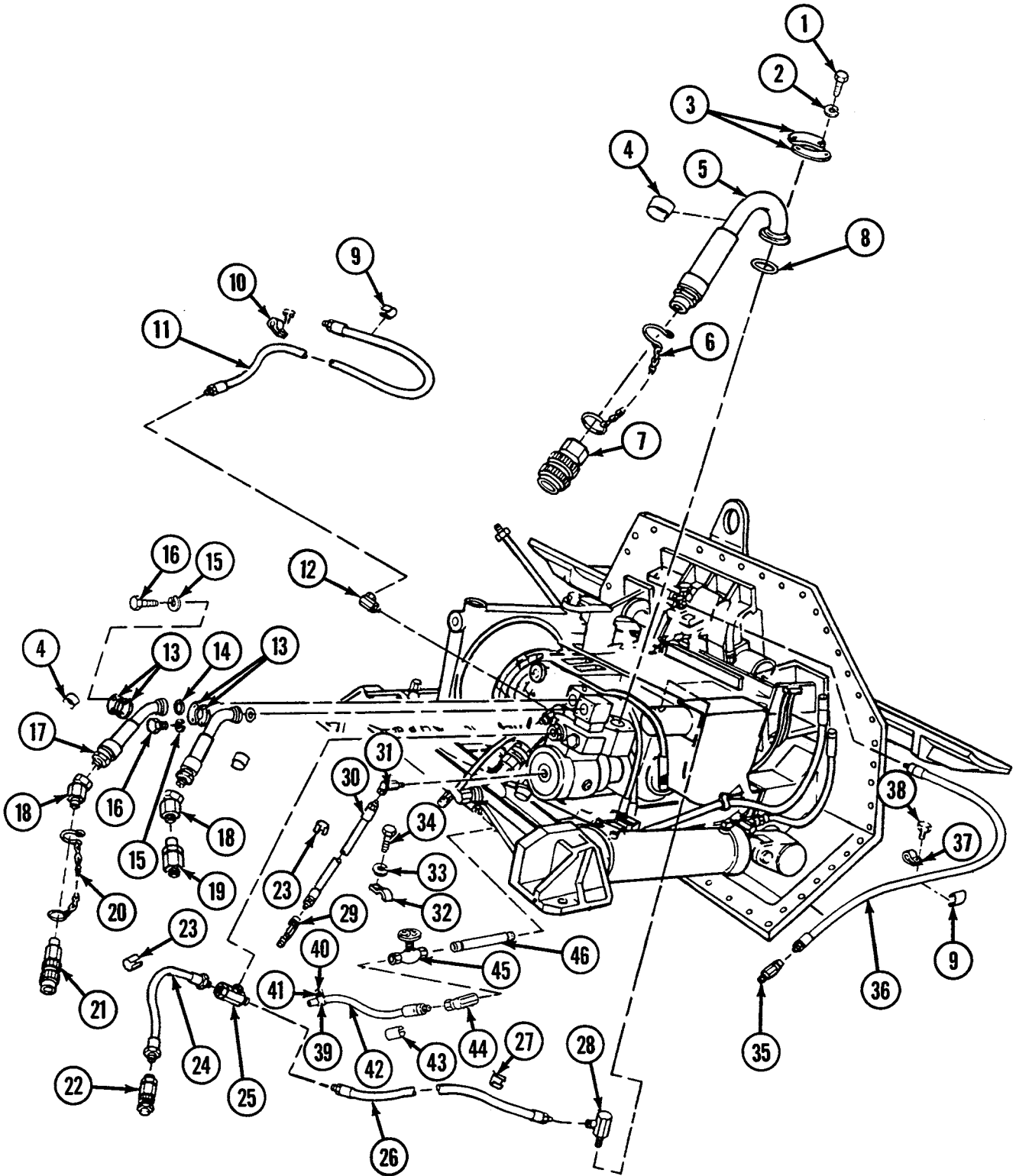
Equipment Condition

Cab subfloor plates removed as necessary (see WP 0287 00 thru 0308 00)
 Cable paid out (refer to TM 9-2350-256-10)

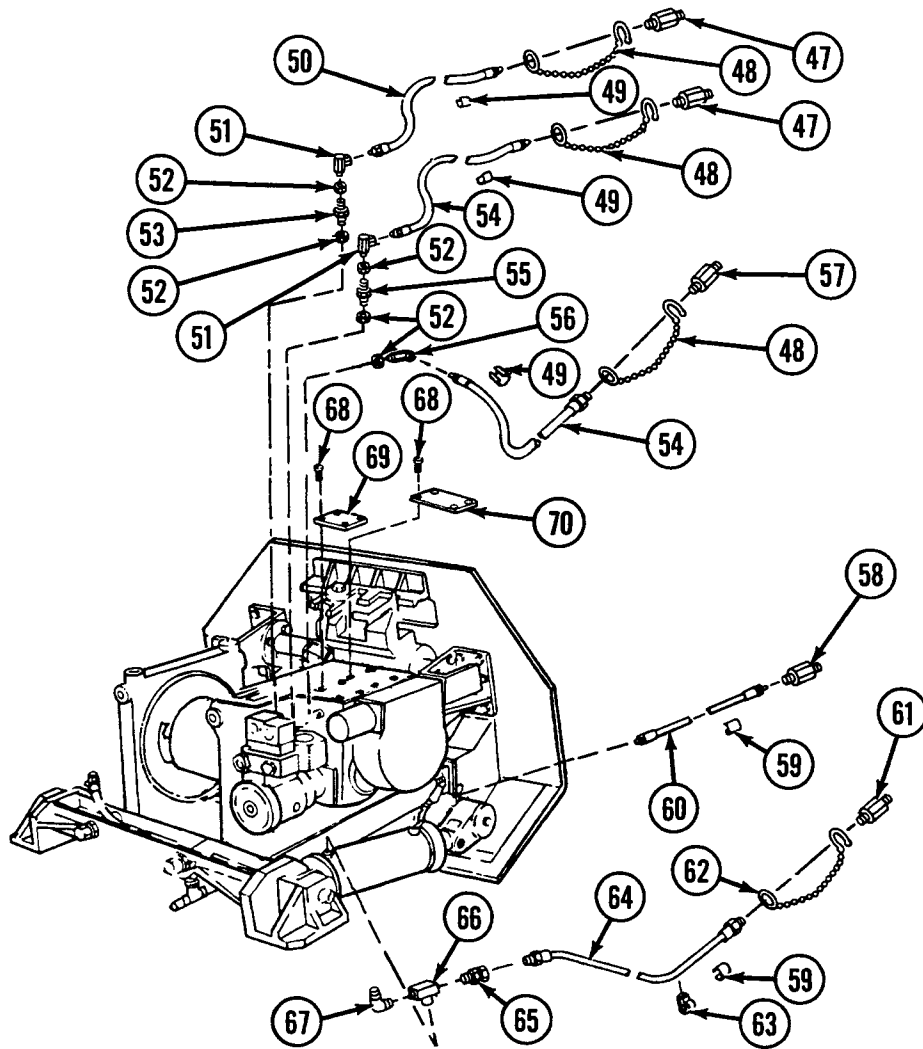
Removal

1. Remove lines and fittings as required using illustration as guide.

1 Screw (4)	24 Hose assembly
2 Lockwasher (4)	25 Tee
3 Pipe flange (2)	26 Hose assembly
4 Band marker (6)	27 Band marker (2)
5 Hose assembly	28 Elbow
6 Connecting ring	29 Coupling
7 Coupling	30 Hose assembly
8 Preformed packing	31 Elbow
9 Band marker (6)	32 Retaining strap
10 Loop clamp	33 Lockwasher
11 Hose assembly	34 Screw
12 Elbow	35 Coupling
13 Pipe flange (4)	36 Hose assembly
14 Preformed packing (2)	37 Loop clamp
15 Lockwasher (8)	38 Screw
16 Screw (8)	39 Clamp
17 Hose assembly (2)	40 Screw
18 Elbow (2)	41 Lockwasher
19 Coupling	42 Hose assembly
20 Connecting ring	43 Band marker (2)
21 Coupling	44 Elbow
22 Coupling	45 Gate valve
23 Band marker (4)	46 Nipple



- | | |
|------------------------|--------------------|
| 47 Coupling (2) | 59 Band marker (5) |
| 48 Connecting ring (3) | 60 Hose assembly |
| 49 Band marker (6) | 61 Coupling |
| 50 Hose assembly | 62 Connecting ring |
| 51 Elbow (2) | 63 Loop clamp |
| 52 Seal nut (5) | 64 Hose assembly |
| 53 Nipple | 65 Reducer |
| 54 Hose assembly (2) | 66 Tee |
| 55 Nipple | 67 Elbow |
| 56 Elbow | 68 Drivescrew (8) |
| 57 Coupling | 69 ID plate |
| 58 Coupling | 70 ID plate |



Installation

1. Install lines and fittings in reverse order using illustration as guide.

NOTE

Follow-on maintenance: Install cab subfloor plates if removed (see WP 0287 00 thru 0308 00); Retract cable (refer to TM 9-2350-256-10).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**MAIN WINCH CABLE REPLACEMENT
REMOVAL, INSTALLATION**

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Grease, GAA (item 13, WP 0489 00)

Lockwashers (16) (item 652, WP 0491 00)

Screws (4) (item 26, WP 0491 00)

Materials/Parts (cont.)

Screws (8) (item 415, WP 0491 00)

Screws (8) (item 807, WP 0491 00)

Equipment Condition

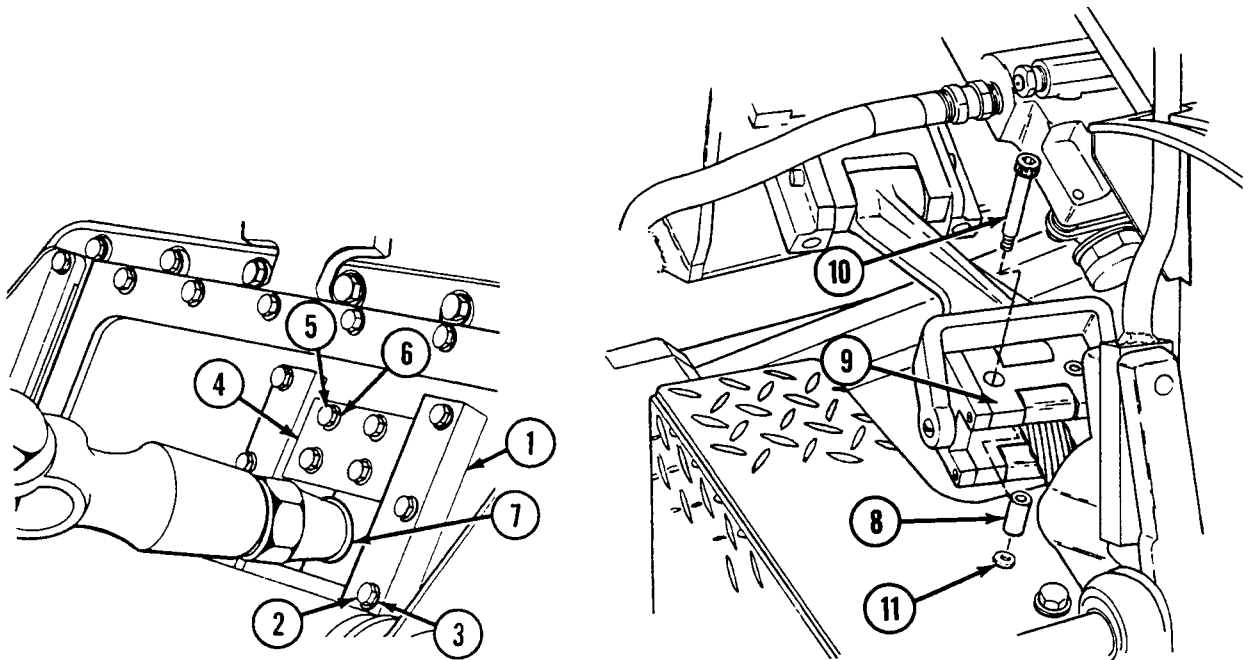
Cable paid out (refer to TM 9-2350-256-10)

WARNING

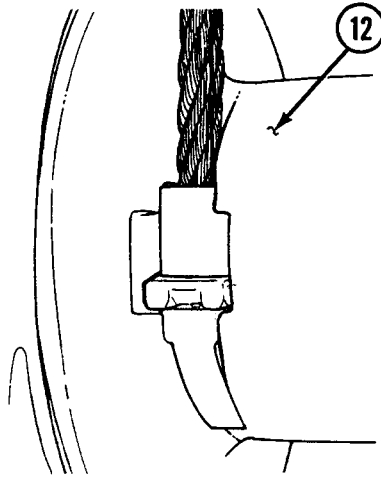
Gloves should be worn when working with cable to prevent cuts and abrasions.

Removal

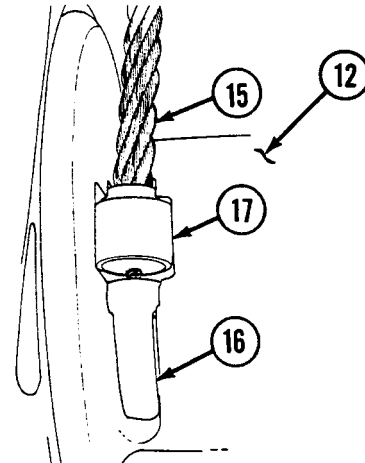
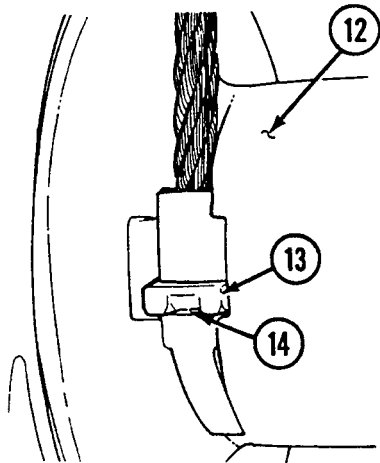
1. Remove two guides (1) by removing four screws (2) and four lockwashers (3) from each.
2. Remove two retainers (4) by removing four screws (5) and four lockwashers (6) from each. Remove two halfbushings (7).
3. Remove two vertical rollers (8), and separate guide assemblies (9) by removing two screws (10) and two bearing washers (11).



- Run cable slowly out and guide cable off drum (12).



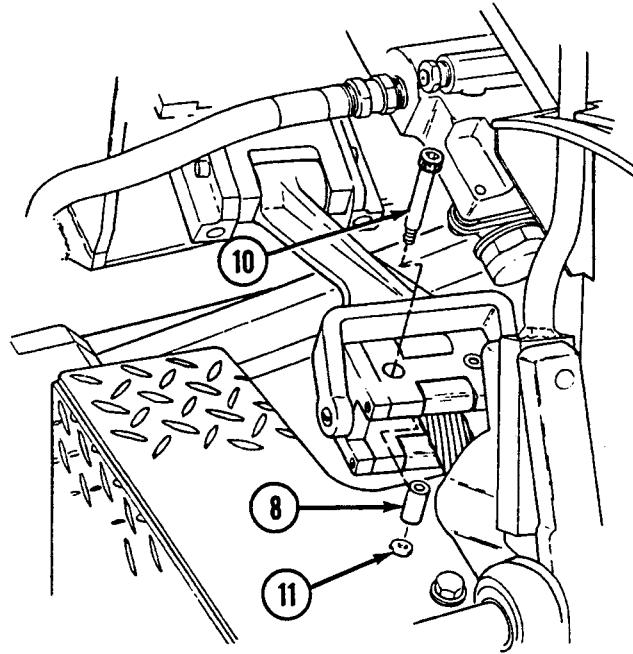
- Remove ferrule filler (13) by depressing filler spring (14).
- Remove cable assembly (15) from dummy filler (16) by disengaging rope ferrule (17).
- Remove dummy filler (16) from drum (12).



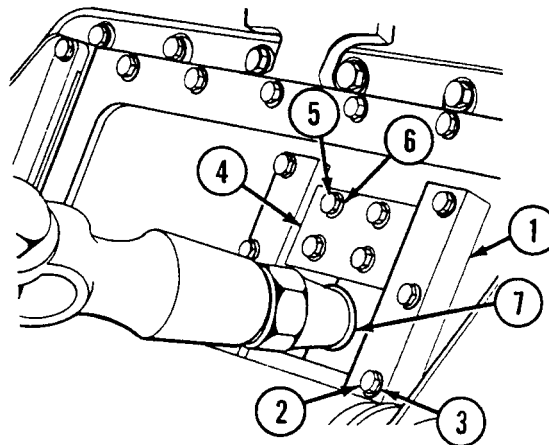
Installation

- Install dummy filler (16) in drum (12).
- Install cable assembly (15) to dummy filler (16) by engaging rope ferrule (17).
- Coat ferrule filler (13) with GAA grease and install with filler spring (14) in between rope ferrule (17) and dummy filler (16).

4. Install two vertical rollers (8) with two screws (10) and two bearing washers (11).



5. Install two retainers (4) and two halfbushings (7) each with four screws (5) and four lockwashers (6).
6. Install two guides (1) each with four screws (2) and four lockwashers (3).



7. Run winch slowly and guide cable on drum (12). Apply load to cable from outside of vehicle to prevent loose cable wrap.

NOTE

Follow-on maintenance: Retract cable (refer to TM 9-2350-256-10).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
HOIST WINCH HOSE AND CABLE ASSEMBLY REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Grease, GAA (item 13, WP 0489 00)

Equipment Condition

U-35 winch center right floor plate opened (see WP 0289 00)

Cable paid out (refer to TM 9-2350-256-10)

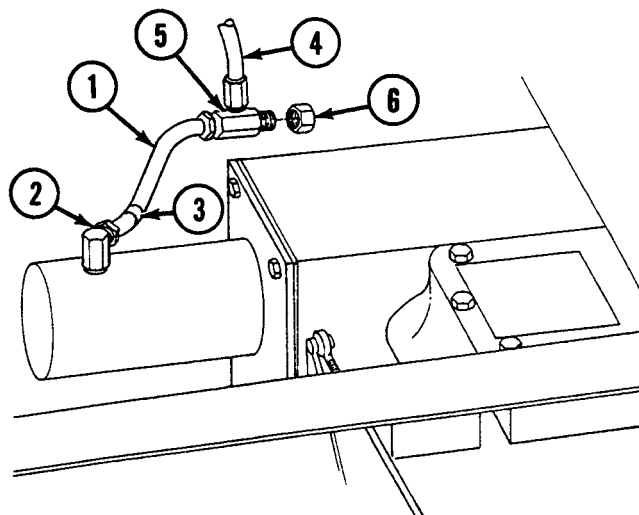
Floor plates door opened (see WP 0287 00 thru 0308 00)

WARNING

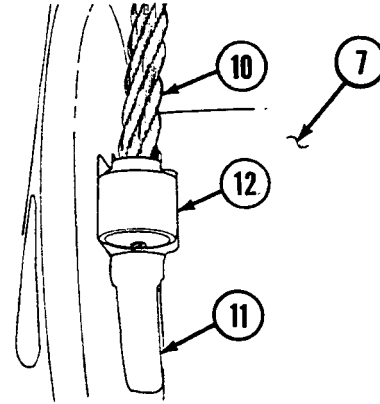
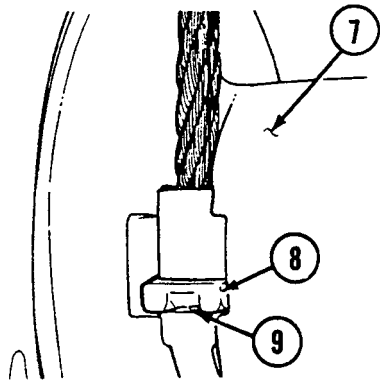
Gloves should be worn when working with cable to prevent cuts and abrasions.

Removal

1. Disconnect hose (1) from elbow (2), and remove two band markers (3) from hose.
2. Remove hoses (1 and 4) from tee (5).
3. Remove tee (5) and seal (6).

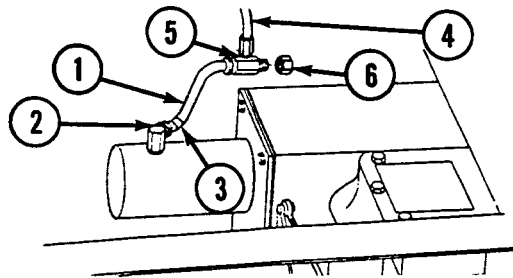


4. Run cable slowly out and guide cable off drum (7).
5. Remove ferrule filler (8) by depressing filler spring (9).
6. Remove cable assembly (10) from dummy filler (11) by disengaging rope ferrule (12).
7. Remove dummy filler (11) from drum (7).



Installation

1. Install dummy filler (11) in drum (7).
2. Install cable assembly (10) to dummy filler (11) by engaging rope ferrule (12).
3. Coat ferrule filler (8) with GAA grease and install with filler spring (9) in between rope ferrule (12) and dummy filler (11).
4. Install tee (5) and seal (6).
5. Install hoses (1 and 4) on tee (5).
6. Install hose (1) onto elbow (2), and install two band markers (3) to hose.



7. Run winch slowly and guide cable on drum (7).

NOTE

Follow-on maintenance: Retract cable (refer to TM 9-2350-256-10); Close U-35 winch center right floor plate (see WP 0289 00); Close floor plates (see WP 0287 00 thru 0308 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

HOIST WINCH BRAKE BAND ADJUSTMENT

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

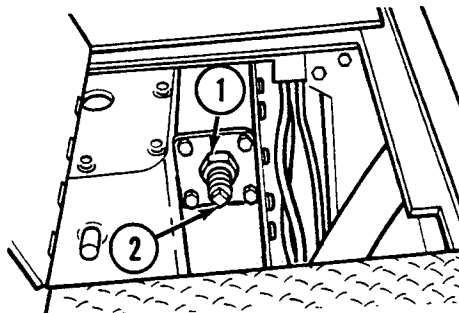
U-35 winch center right floor plate opened (see WP 0289 00)

Materials/Parts

Locknut (item 690, WP 0491 00)

Adjustment

1. Loosen locknut (1).
2. Tighten adjusting screw (2) clockwise to maximum, then back adjusting screw off one full turn. Hold adjusting screw in position and tighten locknut (1).



NOTE

Follow-on maintenance: Close U-35 winch center right floor plate (see WP 0289 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
HOIST WINCH MANUAL CONTROL AND LINKAGE REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Nut, self-locking (item 493, WP 0491 00)

Pins, cotter (4) (item 520, WP 0491 00)

Pins, straight (3) (item 745, WP 0491 00)

Materials/Parts (cont.)

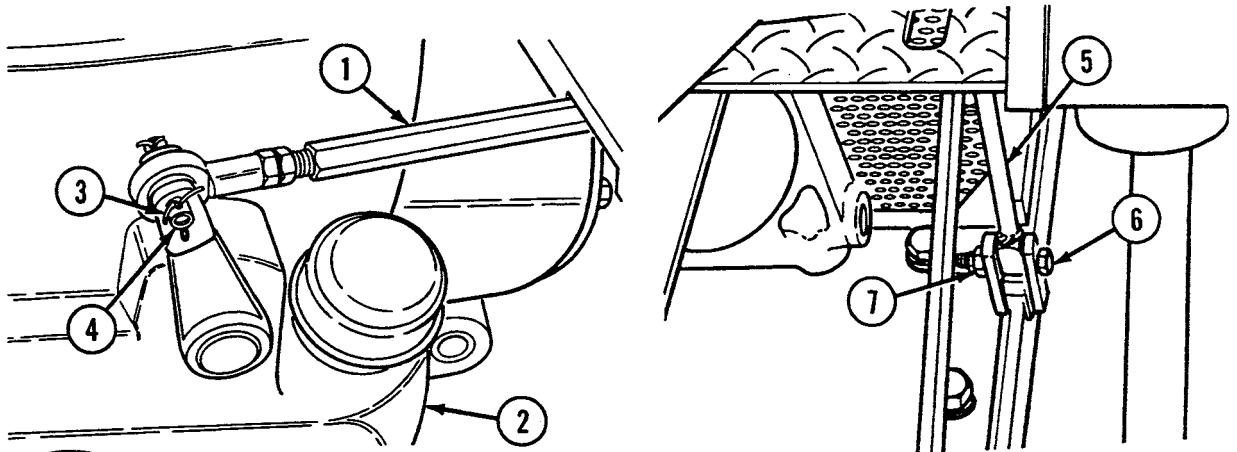
Screw (item 419, WP 0491 00)

Equipment Condition

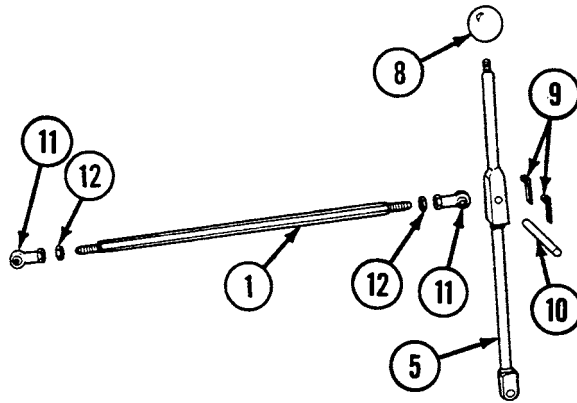
Stowage basket forward intermediate left floor plate removed (see WP 0306 00)

Removal

1. Disconnect control rod (1) from hoist winch (2) by removing two cotter pins (3) and straight pin (4).
2. Remove control lever (5) by removing screw (6) and self-locking nut (7).

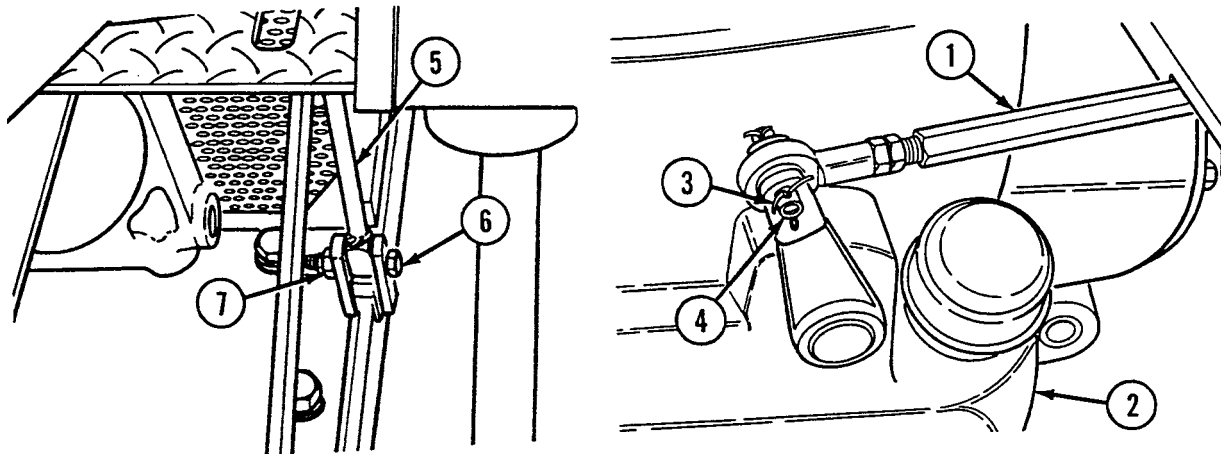


3. Unscrew and remove control knob (8) from control lever (5).
4. Remove control rod (1) from control lever (5) by removing two cotter pins (9) and straight pin (10).
5. Remove two end bearings (11) and two jamnuts (12) from control rod (1).



Installation

1. Install two jamnuts (12) and two rod end bearings (11) on control rod (1).
2. Install control rod (1) on control lever (5) with straight pin (10) and two cotter pins (9).
3. Install control knob (8) on control lever (5).
4. Install control lever (5) with screw (6) and self-locking nut (7).
5. Connect control rod (1) to hoist winch (2) with straight pin (4) and two cotter pins (3).



NOTE

Follow-on maintenance: Install stowage basket forward intermediate left floor plate (see WP 0306 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**WIRE ROPE SHIELD REPLACEMENT
REMOVAL, INSTALLATION**

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (43) (item 623, WP 0491 00)

Screws (43) (item 388, WP 0491 00)

Thumbscrews (2) (item 17, WP 0491 00)

Washers, flat (24) (item 537, WP 0491 00)

Wingnuts (4) (item 660, WP 0491 00)

Equipment Condition

Accessories panel removed (see WP 0158 00)

Dome light removed (see WP 0183 00)

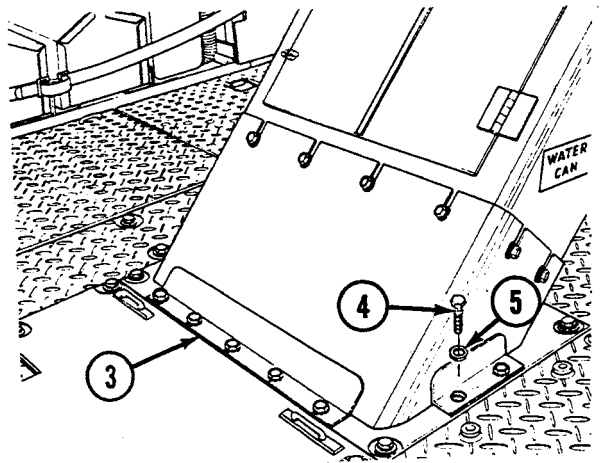
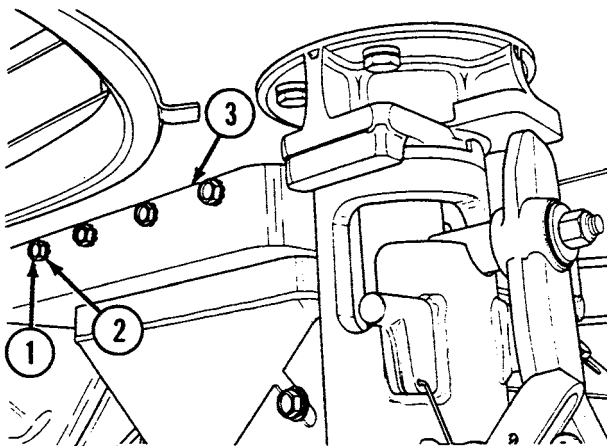
Center forward floor plate removed (see WP 0304 00)

Commander's seat removed (see WP 0350 00)

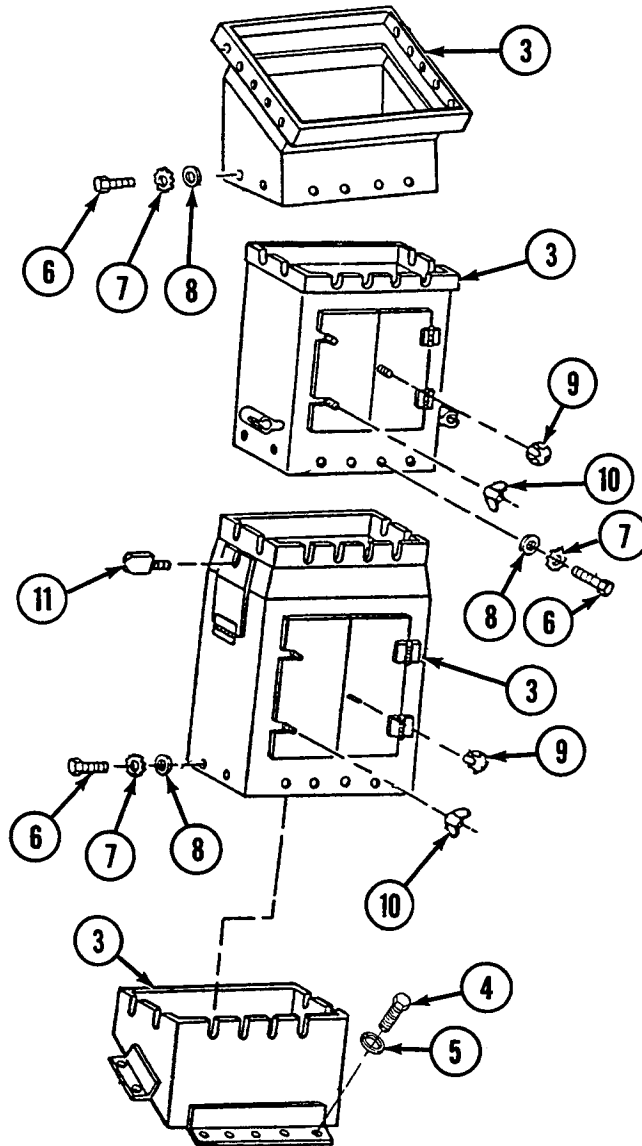
Water can brackets removed (see WP 0392 00)

Removal

1. Remove five screws (1) and five lockwashers (2) from each side at top of shield assembly (3).
2. Remove nine screws (4) and nine lockwashers (5) from bottom of shield assembly (3).
3. Remove shield assembly (3) by hand by turning on its side and removing through personnel door.

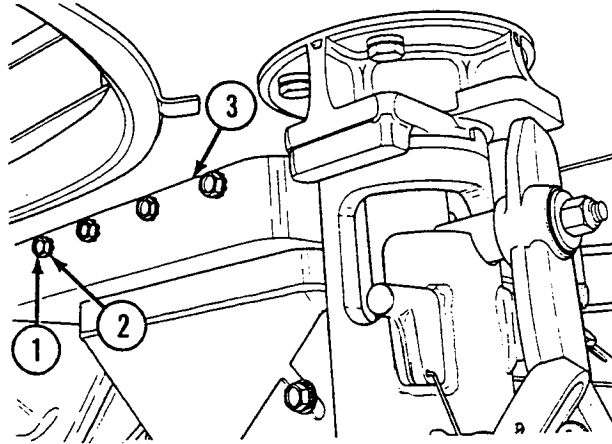


4. Separate shield assemblies (3) by removing 24 screws (6), 24 lockwashers (7), and 24 flat washers (8).
5. Remove two knobs (9) and four wingnuts (10) from doors.
6. Remove thumbscrew (11) from each side of shield assembly (3).



Installation

1. Install thumbscrew (11) to each side of shield assembly (3).
2. Install doors with two knobs (9) and four wingnuts (10).
3. Connect shield assemblies (3) with 24 screws (6), 24 lockwashers (7), and 24 flat washers (8).
4. Support shield assembly (3) by hand, turn on its side, and insert through personnel door; then place in position.
5. Install nine screws (4) and nine lockwashers (5) to bottom of shield assembly (3).
6. Install five screws (1) and five lockwashers (2) to each side at top of shield assembly (3).

**NOTE**

Follow-on maintenance: Install water can brackets (see WP 0392 00); Install commander's seat (see WP 0350 00); Install forward floor plate (see WP 0304 00); Install dome light (see WP 0183 00); Install accessories panel (see WP 0158 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
WIRE ROPE ROLLER HOUSING AND BEARING MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0097 00

Materials/Parts

Lockwashers (8) (item 640, WP 0491 00)

Screws (8) (item 800, WP 0491 00)

Equipment Condition

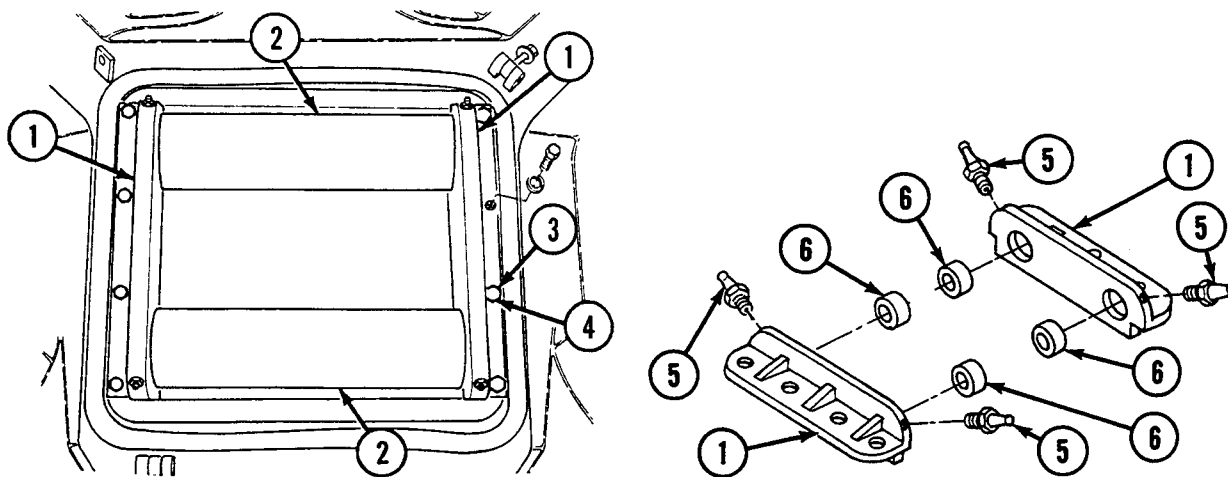
U-35 winch center right floor plate opened (see WP 0289 00)

Removal

1. Remove two housing and bearing assemblies (1) and two rollers (2) by removing eight screws (3) and eight lockwashers (4).

Disassembly

1. Remove four fittings (5) and four sleeve bearings (6).

**Assembly**

1. Install four sleeve bearings (6) and four fittings (5).

Installation

1. Install eight lockwashers (4), eight screws (3), and two rollers (2) into two housing and bearing assemblies (1).
2. Lubricate housing and bearing assemblies (1) using four fittings (5) (see WP 0097 00).

NOTE

Follow-on maintenance: Close U-35 winch center right floor plate (see WP 0289 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
HOISTING BOOM, CYLINDERS, AND RELATED PARTS MAINTENANCE
REMOVAL, INSTALLATION, INSPECTION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Clamps, loop (5) (item 713, WP 0491 00)
 Lockwashers (2) (item 12, WP 0491 00)
 Lockwashers (3) (item 638, WP 0491 00)
 Lockwashers (13) (item 640, WP 0491 00)
 Nuts (2) (item 691, WP 0491 00)
 Pin (item 13, WP 0491 00)
 Pins, cotter (2) (item 532, WP 0491 00)

Materials/Parts (cont.)

Screws (2) (item 30, WP 0491 00)
 Screws (3) (item 145, WP 0491 00)
 Screws (2) (item 721, WP 0491 00)
 Screws (11) (item 800, WP 0491 00)
 Spring (item 303, WP 0491 00)
 Washer (item 14, WP 0491 00)
 Washers, flat (11) (item 538, WP 0491 00)

References

TM 9-2350-256-24P-2

WARNING

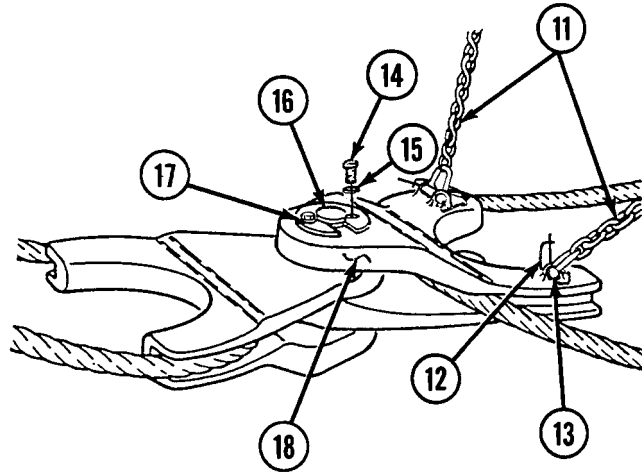
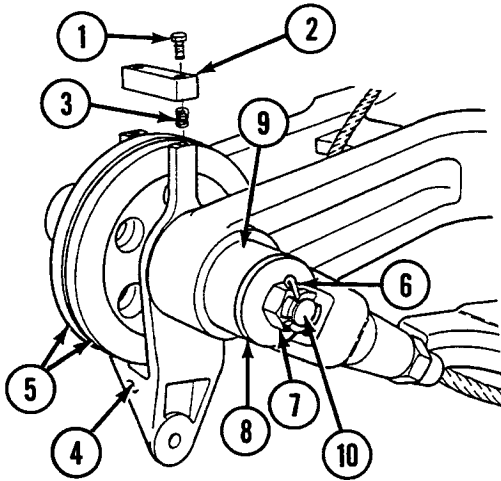
Elevating the hoisting boom when both the main engine and the APU are inoperable is a safety hazard and may cause injury to personnel.

NOTE

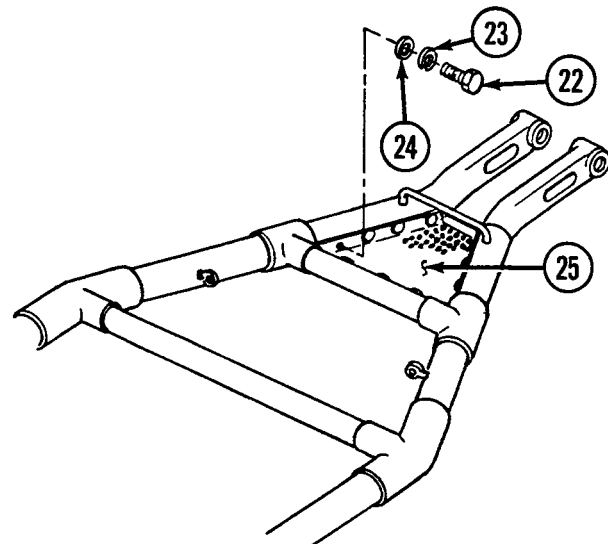
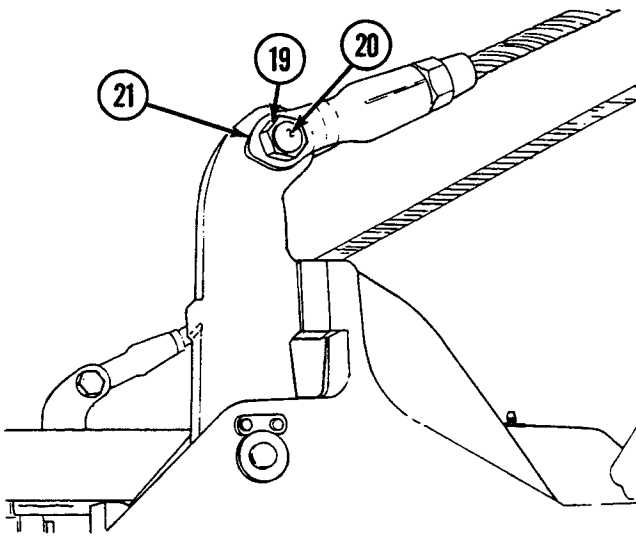
The hoisting boom will only be repaired (parts removed and installed) to the extent of the replacement of parts authorized in TM 9-2350-256-24P-2.

Removal

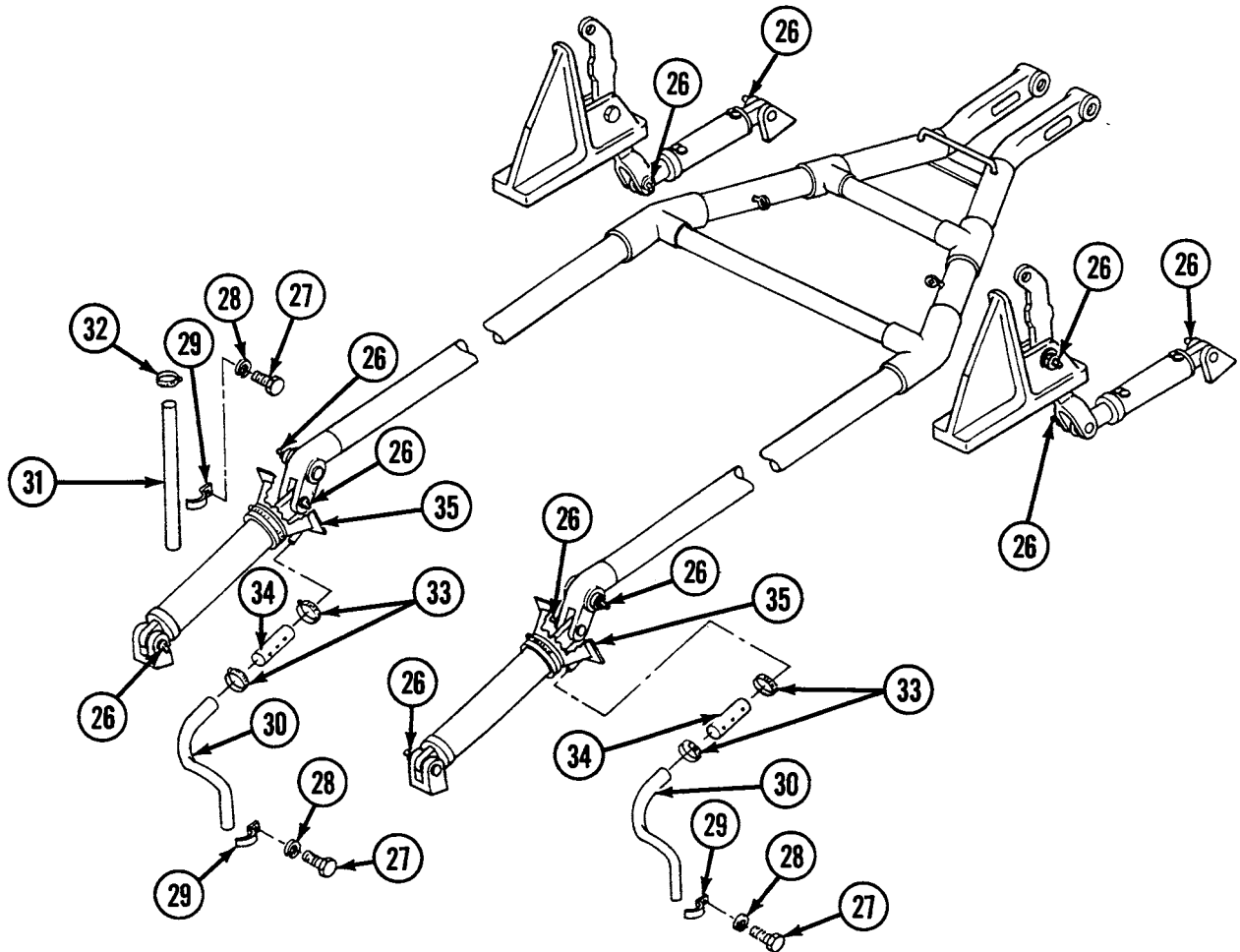
1. Remove two screws (1), guide bar (2), and spring (3) from guard (4).
2. Remove two pulleys (5) and guard (4) by removing two cotter pins (6), two nuts (7), two lockwashers (8), wire rope (9), and shaft (10).
3. Remove two chains (11) by removing two retaining pins (12) and two pin shackles (13) from each.
4. Remove two screws (14), two lockwashers (15) with pin (16), and washer (17) from shoe tree (18).



5. Remove two nuts (19), two pins (20), and wire rope assembly (21).
6. Remove 11 screws (22), 11 lockwashers (23), 11 flat washers (24), and tray (25).



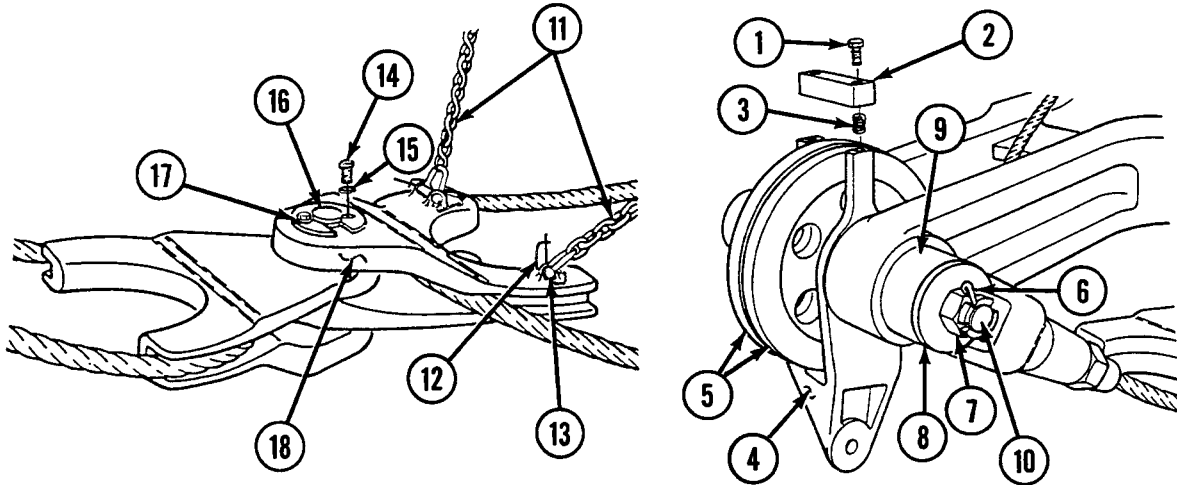
7. Remove 12 fittings (26) as necessary.
8. Remove three screws (27), three lockwashers (28), and three clips (29) from two hoses (30) and hose (31).
9. Remove hose (31) by removing loop clamp (32).
10. Remove two hoses (30) by removing four loop clamps (33) and two pipes (34) from two boot assemblies (35).



Installation

1. Install two boot assemblies (35), two pipes (34), four loop clamps (33), and two hoses (30).
2. Install hose (31) with loop clamp (32).
3. Install hose (31) and two hoses (30) with clip (29), lockwasher (28), and screw (27) each.
4. Install 12 fittings (26) as necessary.
5. Install tray (25) with 11 flat washers (24), 11 lockwashers (23), and 11 screws (22).
6. Install wire rope assembly (21) with two pins (20) and two nuts (19).

7. Install shoe tree (18) with washer (17), pin (16), two lockwashers (15), and two screws (14).
8. Install two chains (11) with two pin shackles (13) and two retaining pins (12) each.
9. Install two pulleys (5) into guard (4), and insert shaft (10) through guard and pulleys.
10. Install wire rope (9) onto shaft (10) with two lockwashers (8), two nuts (7), and two cotter pins (6).
11. Install guide bar (2), spring (3), and two screws (1) to guard (4).



Inspection-Acceptance and Rejection Criteria

1. Inspect pin and last link of chain for defects and wear.

END OF WORK PACKAGE

UNIT MAINTENANCE

RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1

NSN 2350-00-122-6826, EIC AQA

STAYLINE CYLINDER LIMIT VALVE ADJUSTMENT

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

Air inlet grilles removed (see WP 0342 00)

Adjustment

CAUTION

Do not operate hydraulic system when any hydraulic lines are disconnected.

CAUTION

Stayline cylinder limit valve adjustment should be accomplished with hoisting boom in stowed position to prevent damage to equipment.

1. Loosen two screws (1) to adjust valve lever roller (2) on cam follower bracket (3).

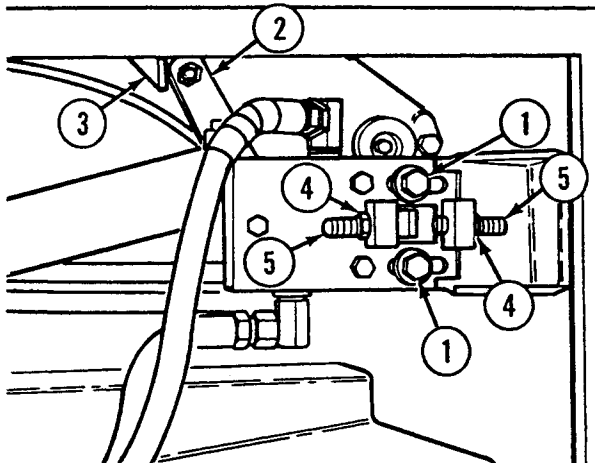
NOTE

During adjustment, valve lever roller (2) must ride squarely and freely on upper side of cam follower bracket (3).

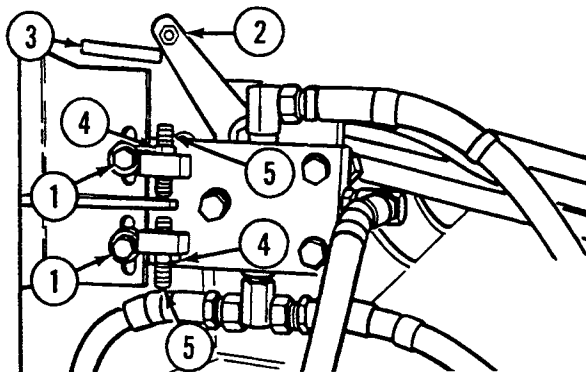
NOTE

Left and right limit valve assemblies are adjusted in same manner.

2. If necessary, loosen jamnuts (4) and adjust screws (5) to position valve lever roller (2) so that valve lever is in fully open position with stayline crank arms in fully stowed position.



LEFT LIMIT VALVE ASSEMBLY



RIGHT LIMIT VALVE ASSEMBLY

NOTE

Follow-on maintenance: Install air inlet grilles (see WP 0342 00).

END OF WORK PACKAGE

CHAPTER 13
UNIT MAINTENANCE
MAINTENANCE INSTRUCTIONS
FOR
MAIN HYDRAULIC SYSTEM
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
(NSN: 2350-00-122-6826)

CHAPTER 13
UNIT MAINTENANCE
MAINTENANCE INSTRUCTIONS

WORK PACKAGE INDEX

<u>Title</u>	<u>WP Sequence No.</u>
Mechanical Transmission and Hydraulic Pump Hydraulic Lines and Fittings Replacement Removal, Installation	0416 00
Hydraulic Lines and Fittings Replacement Removal, Installation	0417 00
Hydraulic Connecting Panel Replacement Removal, Installation	0418 00
Fuel Transfer Pump and Flow Regulator Replacement Removal, Installation	0419 00
Hydraulic System Oil Filter Maintenance Removal, Disassembly, Assembly, Installation	0420 00
External Hydraulic Reservoir Components Replacement Removal, Installation	0421 00
Hydraulic Drain Valve and Related Parts Replacement Removal, Installation	0422 00
Hydraulic Subplate ID Plate Replacement Removal, Installation	0423 00
Hydraulic Oil Reservoir Strainer Replacement Removal, Installation	0424 00
Oil Temperature Transmitter and Switch Housing Assembly Maintenance Removal, Disassembly, Assembly, Installation	0425 00
Mechanical Transmission ID Plate Replacement Removal, Installation	0426 00
Mechanical Transmission Breather and Oil Level Gage Maintenance Removal, Disassembly, Assembly, Installation	0427 00
Spade Release and Lubrication Line (Hydraulic Spade Release) Replacement Removal, Installation	0428 00
Spade Cable Lubrication Line (Manual Spade Release) Replacement Removal, Installation	0429 00
Spade Release Lubrication Fitting Replacement Removal, Installation	0430 00
Spade Cylinder Hoses Replacement Removal, Installation	0431 00

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

MECHANICAL TRANSMISSION AND HYDRAULIC PUMP
HYDRAULIC LINES AND FITTINGS REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Sealant tape (item 34, WP 0489 00)

WARNING

Do not attempt to loosen or tighten hydraulic fittings or lines when the system is pressurized. Ensure that the boom is in the stowed position before doing any maintenance on the hydraulic system.

NOTE

Individual hydraulic lines and fittings may be removed and replaced separately as required. Each line is marked with a part number and code number alternately at 36-inch (in.) (914-millimeter [mm]) intervals along its length. Foldout FO-1 (at the end of this manual) provides a schematic of hydraulic lines and fittings.

Removal

WARNING

Hydraulic fluid under pressure can penetrate skin or damage eyes. Fluid leaks under pressure may not be visible, use a piece of cardboard or wood to find leaks, but do not use bare hand. Wear safety goggles for protection. If fluid enters skin or eye, get immediate medical attention.

WARNING

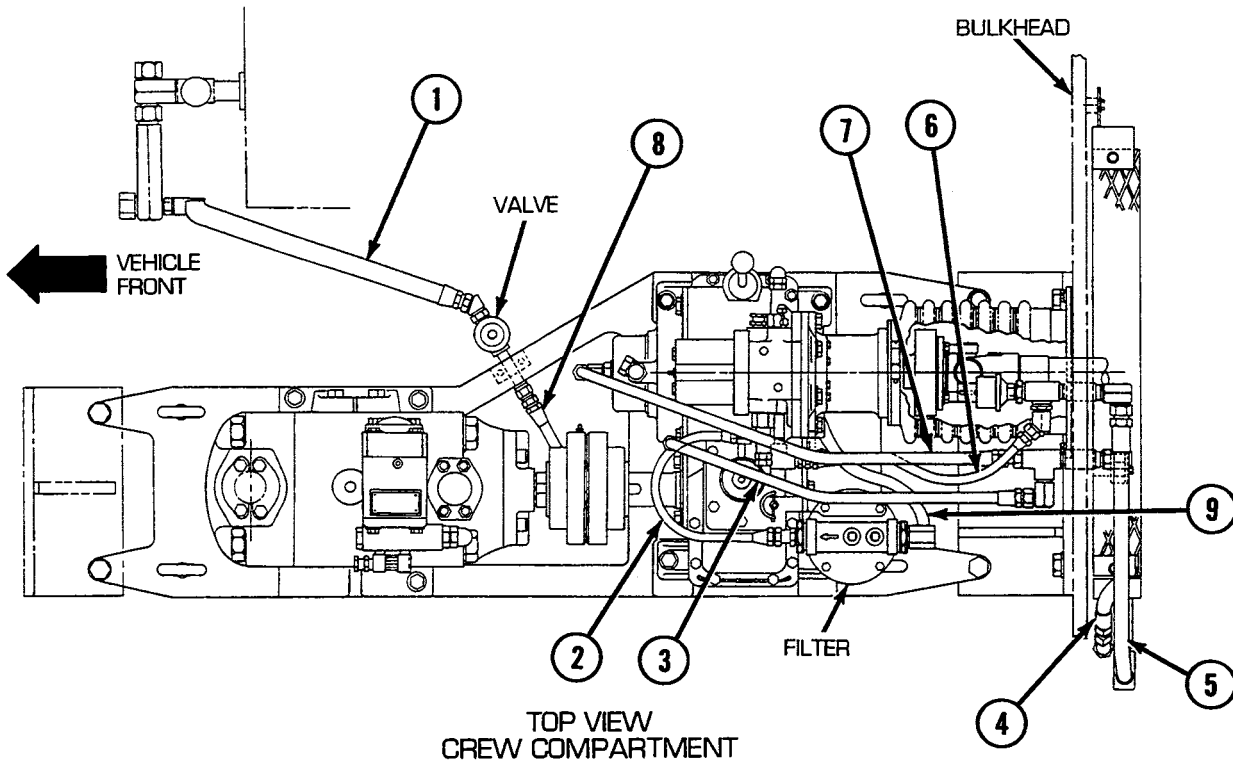
Do not attempt to loosen or tighten hydraulic fittings or lines when the system is pressurized. Ensure that the boom is in the stowed position before doing any maintenance on the hydraulic system.

WARNING

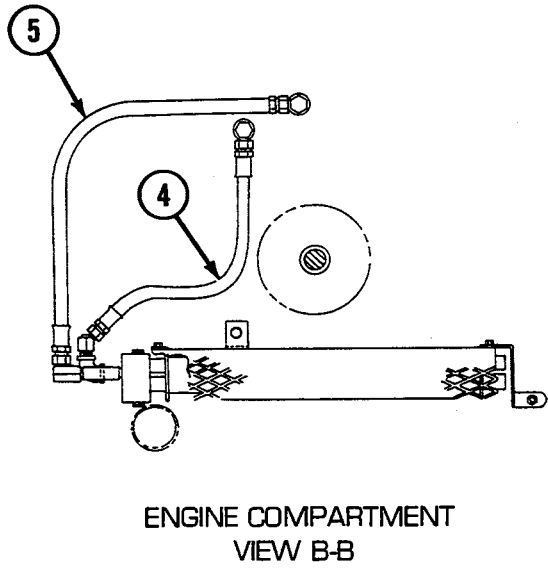
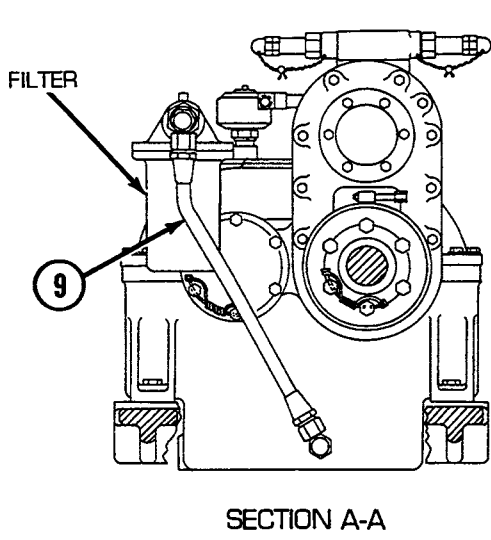
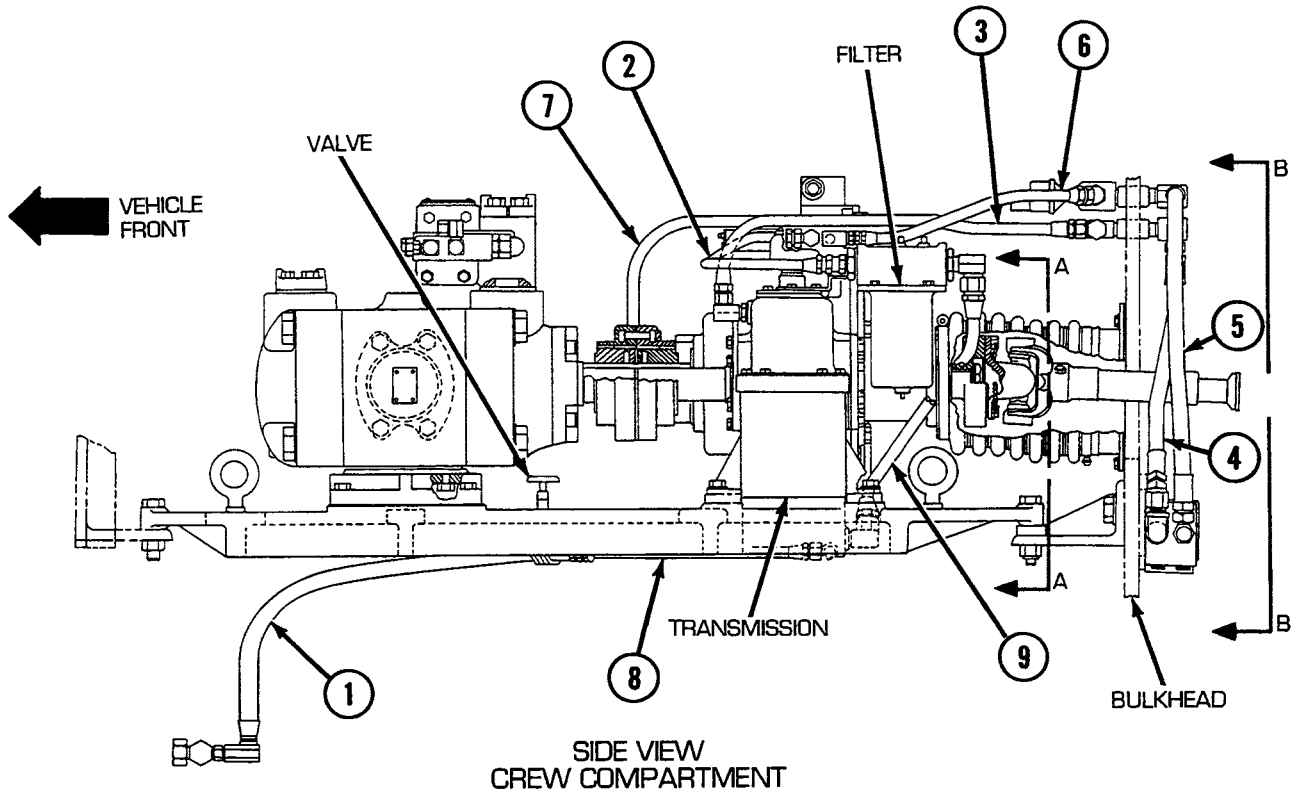
Do not move under any hydraulically controlled implement when making adjustments or repairs to hydraulic system. Lower implement and work from above. If implement must be raised for access, always block to support. If implement drops, injury to personnel can result.

1. Remove lines and fittings as required using legends, locator views, Table 1 for equipment conditions, Table 2 for port routing and the line/fitting illustration as a guide.

- | | | | | | |
|---|----------------------------|---|---------------------------|---|---------------------------|
| 1 | Hose assembly Code No. 75A | 4 | Hose assembly Code No. 73 | 7 | Hose assembly Code No. 71 |
| 2 | Hose assembly Code No. 62 | 5 | Hose assembly Code No. 74 | 8 | Hose assembly Code No. 75 |
| 3 | Hose assembly Code No. 70 | 6 | Hose assembly Code No. 72 | 9 | Hose assembly Code No. 76 |



MECHANICAL TRANSMISSION AND HYDRAULIC PUMP LINES LOCATOR VIEW



MECHANICAL TRANSMISSION AND HYDRAULIC PUMP LINES LOCATOR VIEW

NOTE

The following table lists the equipment condition for removal of the hose in question.

Table 1. Equipment Conditions for Hose Removal

Callout Number	Hose Code Number	Equipment Conditions
1	75A	Hydraulic Line Intermediate Rear Right Center Floor Plate removed (see WP 0296 00)
2	62	Rear Center Floor Plate Door opened (see WP 0297 00)
3	70	Rear Center Floor Plate removed (see WP 0297 00)
4	73	Powerplant removed (see WP 0098 00)
5	74	Powerplant removed (see WP 0098 00)
6	72	Rear Center Floor Plate removed (see WP 0297 00)
7	71	Rear Center Floor Plate removed (see WP 0297 00)
8	75	Hydraulic Line Intermediate Rear Right Center Floor Plate removed (see WP 0296 00) Rear Center Floor Plate removed (see WP 0297 00)
9	76	Rear Center Floor Plate removed (see WP 0297 00)

NOTE

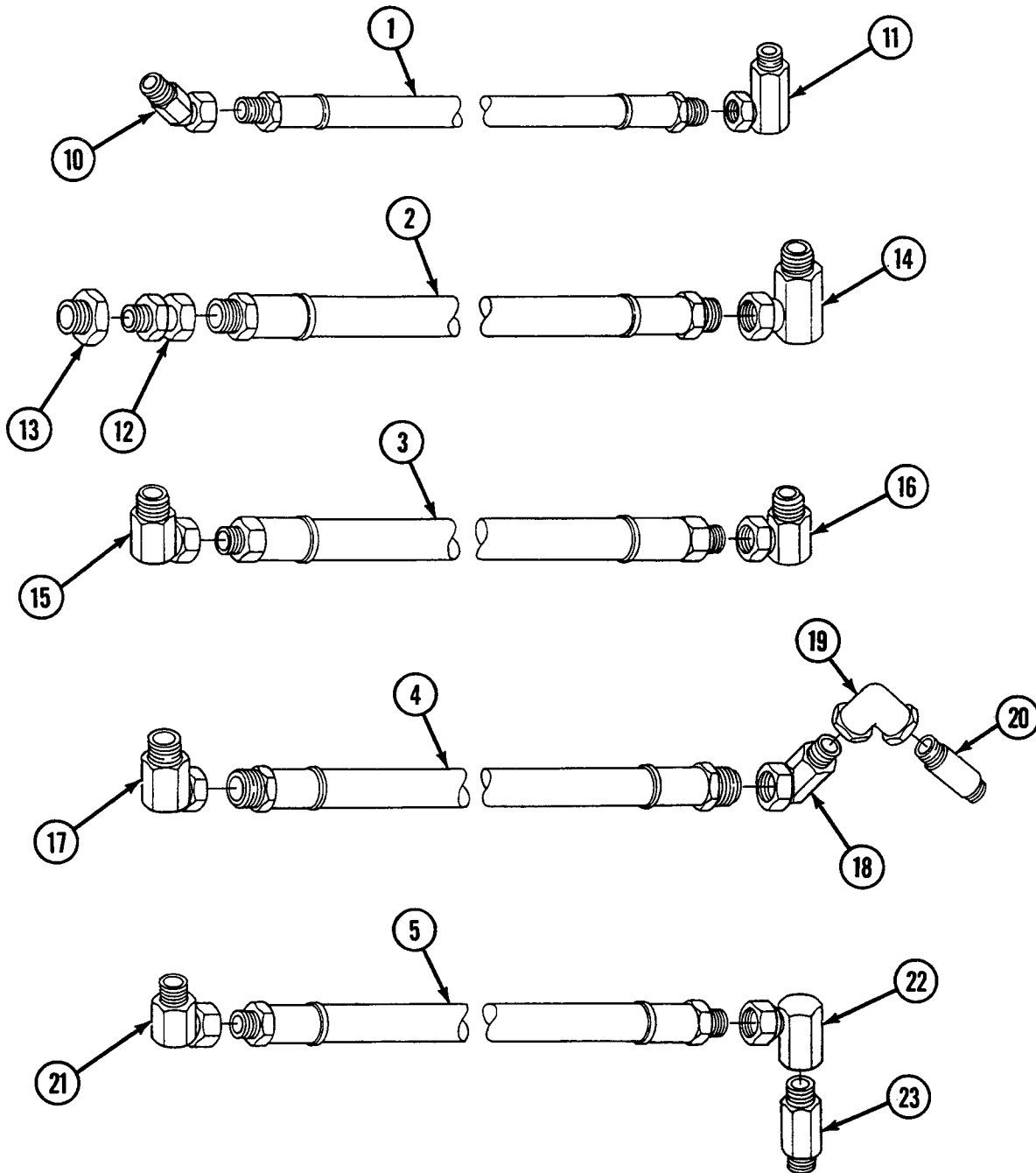
Remove and tag each hose with the port number from which it was removed, using port routing chart and illustrations as a guide.

Table 2. Hose Connections

Hose Callout	Hose Code Number	Port	
		From	To
1	75A	Valve 506767	Elbow 7762309
2	62	Filter	163
3	70	93	167
4	73	93	79
5	74	92	78
6	72	92	162
7	71	93	170
8	75	166	Valve 506767
9	76	165	Filter

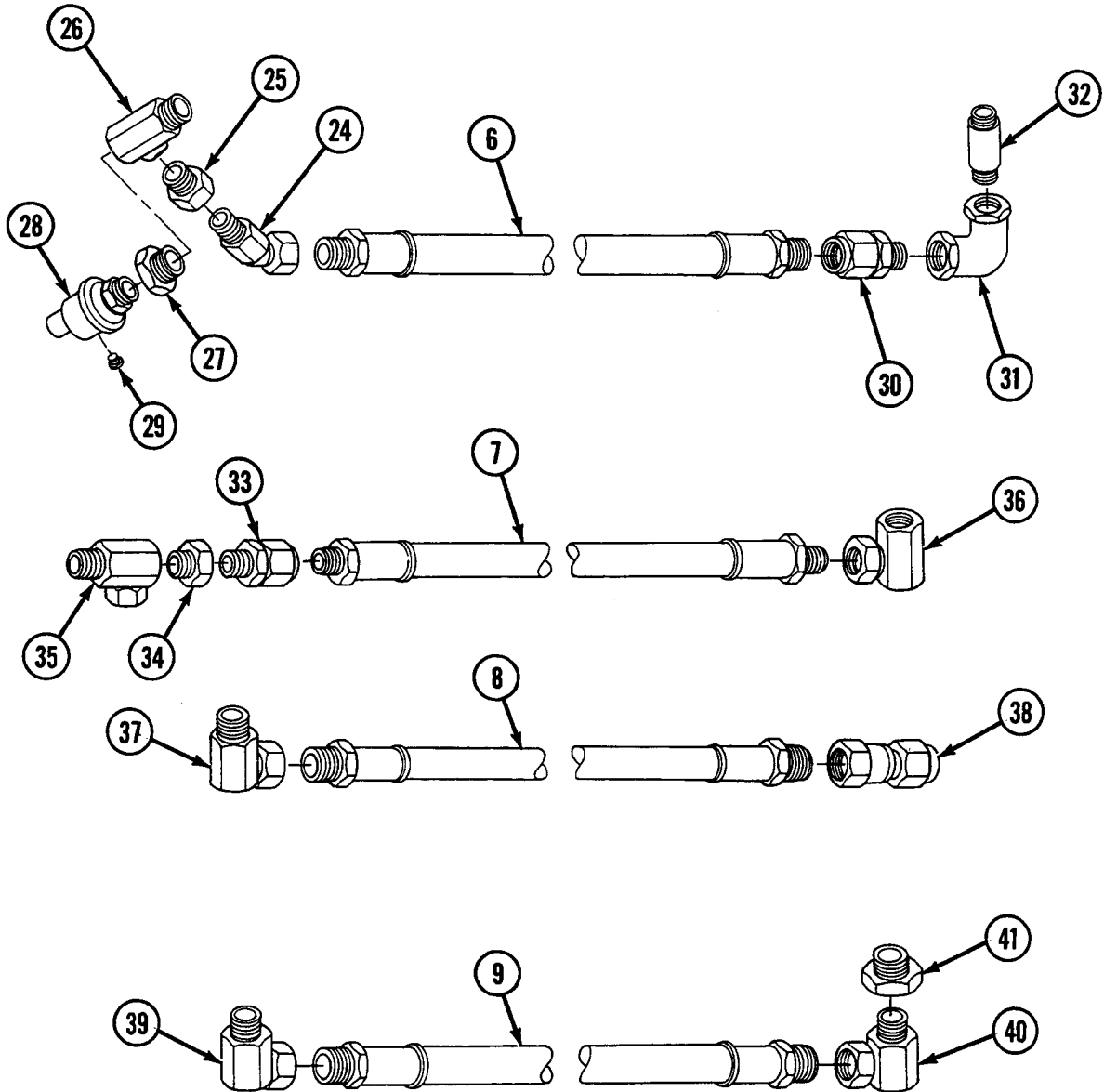
- | | | |
|-------------------|-------------------|-------------|
| 10 Adapter union* | 15 Adapter union* | 20 Nipple* |
| 11 Elbow* | 16 Adapter union* | 21 Elbow |
| 12 Union | 17 Elbow* | 22 Adapter* |
| 13 Bushing* | 18 Adapter union* | 23 Nipple* |
| 14 Adapter union* | 19 Elbow* | |

* Apply sealant tape to threads when installing these items.



- | | | |
|-------------|-------------|-------------------|
| 24 Union | 30 Union* | 36 Adapter union* |
| 25 Bushing* | 31 Elbow* | 37 Elbow* |
| 26 Fitting* | 32 Nipple* | 38 Adapter union* |
| 27 Bushing* | 33 Union* | 39 Elbow |
| 28 Switch* | 34 Bushing* | 40 Elbow |
| 29 Plug* | 35 Fitting* | 41 Bushing |

* Apply sealant tape to threads when installing these items.



Installation

WARNING

Hydraulic fluid under pressure can penetrate skin or damage eyes. Fluid leaks under pressure may not be visible, use a piece of cardboard or wood to find leaks, but do not use bare hand. Wear safety goggles for protection. If fluid enters skin or eye, get immediate medical attention.

WARNING

Do not attempt to loosen or tighten hydraulic fittings or lines when the system is pressurized. Ensure that the boom is in the stowed position before doing any maintenance on the hydraulic system.

WARNING

Do not move under any hydraulically controlled implement when making adjustments or repairs to hydraulic system. Lower implement and work from above. If implement must be raised for access, always block to support. If implement drops, injury to personnel can result.

1. Install lines and fittings as required using legends, locator views, Table 1 for equipment conditions, Table 2 for port routing and the line/fitting illustration as a guide.

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**HYDRAULIC LINES AND FITTINGS REPLACEMENT
REMOVAL, INSTALLATION**

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Sealant tape (item 34, WP 0489 00)
Lockwashers (2) (item 637, WP 0491 00)
Lockwashers (22) (item 638, WP 0491 00)

Materials/Parts (cont.)

Packings, preformed (10) (item 552, WP 0491 00)
Packing, preformed (item 553, WP 0491 00)
Packings, preformed (2) (item 554, WP 0491 00)
Screws (22) (item 371, WP 0491 00)
Screws (2) (item 602, WP 0491 00)
Washers, flat (2) (item 534, WP 0491 00)

Removal

WARNING

Hydraulic fluid under pressure can penetrate skin or damage eyes. Fluid leaks under pressure may not be visible, use a piece of cardboard or wood to find leaks, but do not use bare hand. Wear safety goggles for protection. If fluid enters skin or eye, get immediate medical attention.

WARNING

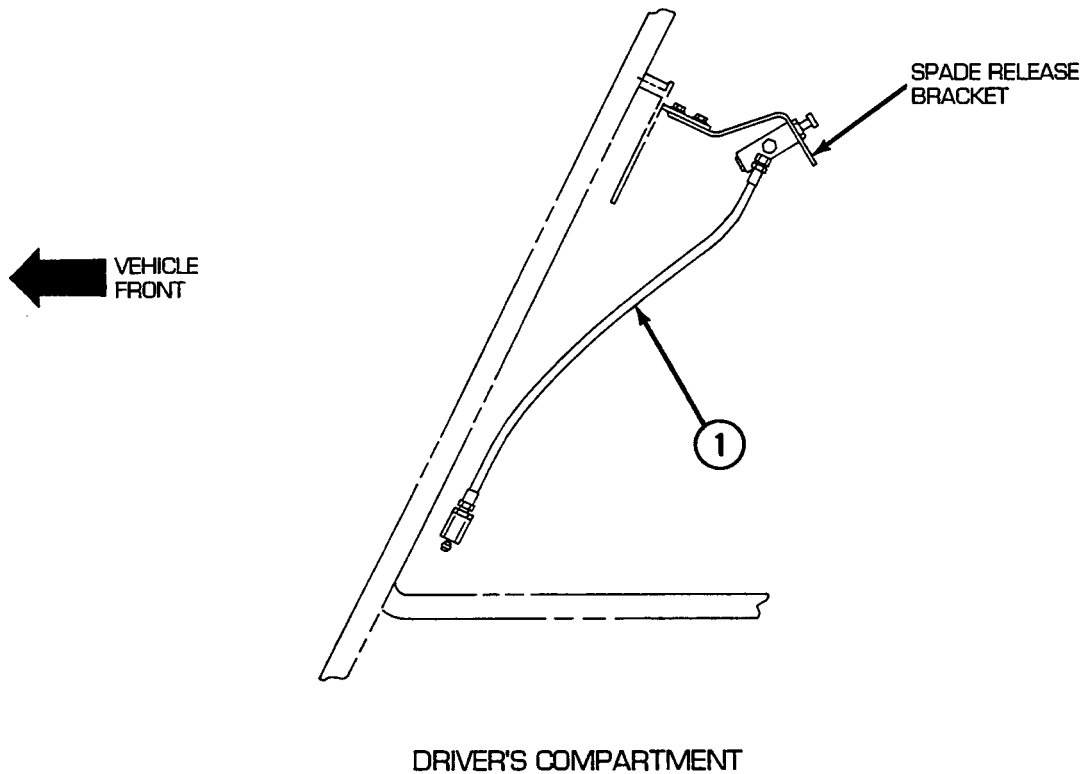
Do not attempt to loosen or tighten hydraulic fittings or lines when the system is pressurized. Ensure that the boom is in the stowed position before doing any maintenance on the hydraulic system.

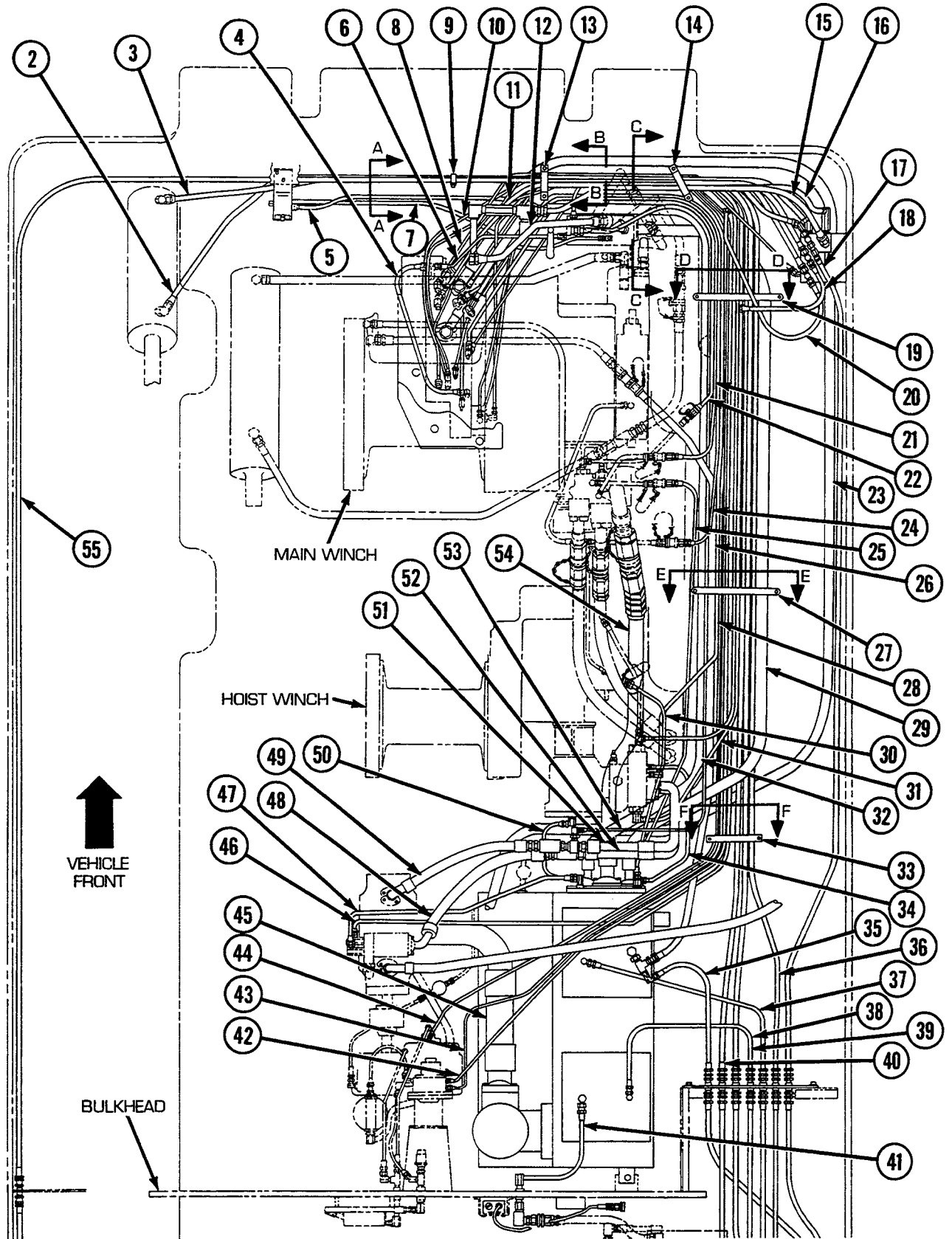
WARNING

Do not move under any hydraulically controlled implement when making adjustments or repairs to hydraulic system. Lower implement and work from above. If implement must be raised for access, always block to support. If implement drops, injury to personnel can result.

1. Remove and install lines and fittings as required using legends, locator views, Tables 1 and 3 for equipment conditions, Tables 2 and 4 for port routing and the line/fitting illustration as a guide.

- | | | |
|--------------------------------|-------------------------------|--------------------------------|
| 1 Hose assembly Code No. 67A | 20 Hose assembly Code No. 15R | 39 Hose assembly Code No. 13 |
| 2 Hose assembly Code No. 14AL | 21 Hose assembly Code No. 21 | 40 Hose assembly Code No. 12A |
| 3 Hose assembly Code No. 15L | 22 Hose assembly Code No. 21B | 41 Hose assembly Code No. 2 |
| 4 Hose assembly Code No. 18A | 23 Hose assembly Code No. 7 | 42 Hose assembly Code No. 63 |
| 5 Hose assembly Code No. 69 | 24 Hose assembly Code No. 22A | 43 Hose assembly Code No. 65 |
| 6 Hose assembly Code No. 18 | 25 Hose assembly Code No. 46A | 44 Hose assembly Code No. 66 |
| 7 Hose assembly Code No. 68 | 26 Hose assembly Code No. 45 | 45 Hose assembly Code No. 1 |
| 8 Hose assembly Code No. 14BR | 27 Cover | 46 Hose assembly Code No. 17 |
| 9 Cover | 28 Hose assembly Code No. 23A | 47 Hose assembly Code No. 49 |
| 10 Hose assembly Code No. 24 | 29 Hose assembly Code No. 43 | 48 Hose assembly Code No. 6B |
| 11 Hose assembly Code No. 14 | 30 Hose assembly Code No. 47A | 49 Hose assembly Code No. 4B |
| 12 Hose assembly Code No. 8 | 31 Hose assembly Code No. 23 | 50 Hose assembly Code No. 48 |
| 13 Covers (2) | 32 Hose assembly Code No. 42 | 51 Hose assembly Code No. 4A |
| 14 Cover | 33 Cover | 52 Hose assembly Code No. 6A |
| 15 Hose assembly Code No. 9B | 34 Hose assembly Code No. 50 | 53 Hose assembly Code No. 4C |
| 16 Hose assembly Code No. 9A | 35 Hose assembly Code No. 44A | 54 Hose assembly Code No. 41A |
| 17 Hose assembly Code No. 14CR | 36 Hose assembly Code No. 19 | 55 Hose assembly Code No. 14CL |
| 18 Hose assembly Code No. 14AR | 37 Hose assembly Code No. 51C | |
| 19 Cover | 38 Hose assembly Code No. 52B | |





NOTE

The following table lists the equipment condition for removal of the hose in question.

Table 1. Equipment Conditions for Hose Removal

Callout Number	Hose Code Number	Equipment Conditions
1	67A	None
2	14AL	Covers (9, 13, and 14) removed Section A-A, Section B-B, and Section C-C
3	15L	Covers (9, 13, and 14) removed Section A-A, Section B-B, and Section C-C
4	18A	None
5	69	None
6	18	None
7	68	None
8	14BR	Covers (13 and 14) removed Section B-B and Section C-C
10	24	U-35 Winch Center Right Floor Plate opened (see WP 0289 00) Rocket Ammunition Stowage Box Assembly removed (see WP 0385 00) Covers (13, 14, 19, and 27) removed Section B-B, Section C-C, Section D-D, and Section E-E
11	14	Covers (13 and 14) removed Section B-B and Section C-C
12	8	None
15	9B	Covers (13 and 14) removed Section B-B and Section C-C
16	9A	Covers (13 and 14) removed Section B-B and Section C-C
17	14CR	Rocket Ammunition Stowage Box Assembly removed (see WP 0385 00) Intermediate Rear Right Floor Plate removed (see WP 0290 00) Rear Right-Side Floor Plate removed (see WP 0291 00)
18	14AR	None
20	15R	None
21	21	Right-Front Floor Plate Rear Access removed (see WP 0287 00) Rocket Ammunition Stowage Box Assembly removed (see WP 0385 00) Cover (19) removed Section D-D
22	21B	Right-Front Floor Plate Rear Access removed (see WP 0287 00) Rocket Ammunition Stowage Box Assembly removed (see WP 0385 00) Cover (19) removed Section D-D
23	7	Hydraulic Line Intermediate Rear Right Center Floor Plate opened (see WP 0296 00) Rocket Ammunition Stowage Box Assembly removed (see WP 0385 00)
24	22A	Hydraulic Valve Forward Right Floor Plate removed (see WP 0288 00) Rocket Ammunition Stowage Box Assembly removed (see WP 0385 00) Cover (19) removed Section D-D
25	46A	Right-Front Floor Plate Rear Access removed (see WP 0287 00) Hydraulic Line Intermediate Rear Right Center Floor Plate opened (see WP 0296 00) U-35 Winch Center Right Floor Plate opened (see WP 0289 00)

Table 1. Equipment Conditions for Hose Removal–Continued

Callout Number	Hose Code Number	Equipment Conditions
26	45	Hydraulic Line Intermediate Rear Right Center Floor Plate opened (see WP 0296 00) Rocket Ammunition Stowage Box Assembly removed (see WP 0385 00) Cover (27) removed Section E-E Right-Front Floor Plate Rear Access removed (see WP 0287 00)
28	23A	U-35 Winch Center Right Floor Plate opened (see WP 0289 00) Rocket Ammunition Stowage Box Assembly removed (see WP 0385 00) Covers (13, 14, 19, and 27) removed Section B-B, Section C-C, Section D-D, and Section E-E
29	43	Hydraulic Line Intermediate Rear Right Center Floor Plate opened (see WP 0296 00) Rocket Ammunition Stowage Box Assembly removed (see WP 0385 00) Covers (19 and 27) removed Section D-D and Section E-E
30	47A	Hydraulic Line Intermediate Rear Right Center Floor Plate opened (see WP 0296 00) U-35 Winch Center Right Floor Plate opened (see WP 0289 00)
31	23	Hydraulic Line Intermediate Rear Right Center Floor Plate opened (see WP 0296 00) Rocket Ammunition Stowage Box Assembly removed (see WP 0385 00) Covers (13, 14, 19, and 27) removed Section B-B, Section C-C, Section D-D, and Section E-E
32	42	Hydraulic Line Intermediate Rear Right Center Floor Plate opened (see WP 0296 00) Rocket Ammunition Stowage Box Assembly removed (see WP 0385 00) Covers (19 and 27) removed Section D-D and Section E-E
34	50	Hydraulic Line Intermediate Rear Right Center Floor Plate opened (see WP 0296 00) U-35 Winch Center Right Floor Plate opened (see WP 0289 00)
35	44A	Rear Right-Side Floor Plate removed (see WP 0291 00) Hydraulic Line Intermediate Rear Right Center Floor Plate opened (see WP 0296 00)
36	19	Rear Right-Side Floor Plate removed (see WP 0291 00) Intermediate Rear Right Floor Plate removed (see WP 0290 00) Rocket Ammunition Stowage Box Assembly removed (see WP 0385 00) Covers (13, 14, 19, 27, and 33) removed Section B-B, Section C-C, Section D-D, Section D-D, and Section F-F
37	51C	Rear Right-Side Floor Plate removed (see WP 0291 00) Hydraulic Line Intermediate Rear Right Center Floor Plate opened (see WP 0296 00)
38	52B	Rear Right-Side Floor Plate removed (see WP 0291 00) Rear Intermediate Right Access Floor Plate removed (see WP 0295 00) Rear Intermediate Right Floor Plate removed (see WP 0293 00)
39	13	Rear Right-Side Floor Plate removed (see WP 0291 00) Intermediate Rear Right Floor Plate removed (see WP 0290 00) Rocket Ammunition Stowage Box Assembly removed (see WP 0385 00) Covers (13, 14, 19, 27, and 33) removed Section B-B, Section C-C, Section D-D, Section D-D, and Section F-F

Table 1. Equipment Conditions for Hose Removal-Continued

Callout Number	Hose Code Number	Equipment Conditions
40	12A	Rear Right-Side Floor Plate removed (see WP 0291 00) Intermediate Rear Right Floor Plate removed (see WP 0290 00) Rocket Ammunition Stowage Box Assembly removed (see WP 0385 00) Covers (13, 14, 19, 27, and 33) removed Section B-B, Section C-C, Section D-D, Section D-D, and Section F-F
41	2	Rear Intermediate Right Floor Plate removed (see WP 0293 00)
42	63	Rear Center Floor Plate Door opened (see WP 0297 00) Hydraulic Line Intermediate Rear Right Center Floor Plate opened (see WP 0296 00) Intermediate Rear Right Floor Plate removed (see WP 0290 00) Rocket Ammunition Stowage Box Assembly removed (see WP 0385 00) Covers (13, 14, 19, 27, and 33) removed Section B-B, Section C-C, Section D-D, Section D-D, and Section F-F
43	65	Rear Center Floor Plate Door opened (see WP 0297 00) Hydraulic Line Intermediate Rear Right Center Floor Plate opened (see WP 0296 00) Intermediate Rear Right Floor Plate removed (see WP 0290 00) Rocket Ammunition Stowage Box Assembly removed (see WP 0385 00) Covers (13, 14, 19, 27, and 33) removed Section B-B, Section C-C, Section D-D, Section D-D, and Section F-F
44	66	Rear Center Floor Plate Door opened (see WP 0297 00) Hydraulic Line Intermediate Rear Right Center Floor Plate opened (see WP 0296 00) Intermediate Rear Right Floor Plate removed (see WP 0290 00) Rocket Ammunition Stowage Box Assembly removed (see WP 0385 00) Covers (13, 14, 19, 27, and 33) removed Section B-B, Section C-C, Section D-D, Section D-D, and Section F-F
45	1	Rear Center Floor Plate removed (see WP 0297 00) Hydraulic Line Intermediate Rear Right Center Floor Plate opened (see WP 0296 00)
46	17	Intermediate Rear Left-Center Floor Plate removed (see WP 0302 00) Hydraulic Line Intermediate Rear Right Center Floor Plate opened (see WP 0296 00) Intermediate Rear Right Floor Plate removed (see WP 0290 00) Rocket Ammunition Stowage Box Assembly removed (see WP 0385 00) Covers (14, 19, 27, and 33) removed Section C-C, Section D-D, Section D-D, and Section F-F
47	49	Fuel Transmitter Center Left Floor Access Plate removed (see WP 0299 00) Hydraulic Line Intermediate Rear Right Center Floor Plate opened (see WP 0296 00)
48	6B	Hydraulic Line Intermediate Rear Right Center Floor Plate opened (see WP 0296 00)
49	4B	Fuel Transmitter Center Left Floor Access Plate removed (see WP 0299 00) Hydraulic Line Intermediate Rear Right Center Floor Plate opened (see WP 0296 00)
50	48	Hydraulic Line Intermediate Rear Right Center Floor Plate opened (see WP 0296 00)
51	4A	Hydraulic Line Intermediate Rear Right Center Floor Plate opened (see WP 0296 00) U-35 Winch Center Right Floor Plate opened (see WP 0289 00)
52	6A	Hydraulic Line Intermediate Rear Right Center Floor Plate opened (see WP 0296 00) U-35 Winch Center Right Floor Plate opened (see WP 0289 00)

Table 1. Equipment Conditions for Hose Removal–Continued

Callout Number	Hose Code Number	Equipment Conditions
53	4C	Hydraulic Line Intermediate Rear Right Center Floor Plate opened (see WP 0296 00) Rocket Ammunition Stowage Box Assembly removed (see WP 0385 00) Hydraulic Valve Forward Right Floor Plate removed (See WP 0288 00)
54	41A	Hydraulic Line Intermediate Rear Right Center Floor Plate opened (see WP 0296 00) U-35 Winch Center Right Floor Plate opened (see WP 0289 00) Hydraulic Valve Forward Right Floor Plate removed (See WP 0288 00)
55	14CL	Covers (9, 13, and 14) removed Section A-A, Section B-B, and Section C-C Caliber .50 Ammunition Rack and Track Wrench Bracket removed (see WP 0386 00) Intermediate Rear Left-Side Floor Plate removed (see WP 0301 00) Rear Left-Side Floor Plate removed (see WP 0300 00)

NOTE

Remove and tag each hose with the port number from which it was removed, using port routing chart and illustrations as a guide.

Table 2. Hose Connections

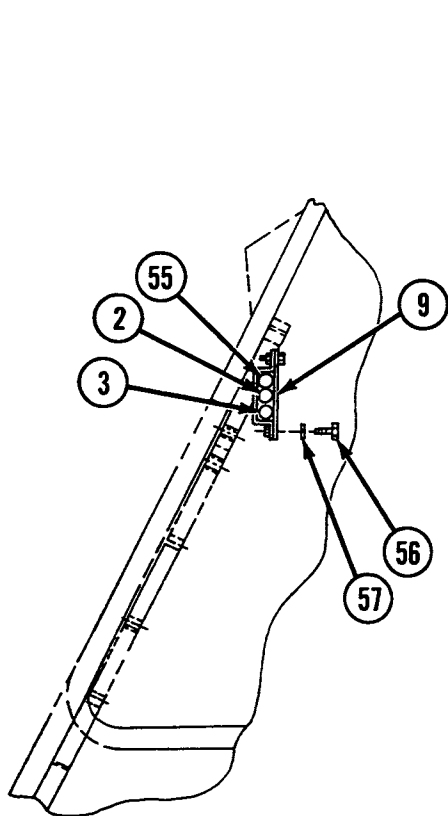
Hose Callout	Hose Code Number	Port	
		From	To
1	67A	Out 12322566 Isolator valve	Line 67
2	14AL	195	61FL
3	15L	194	62FL
4	18A	118	148
5	69	Out 12322566 Gage isolator valve	189
6	18	179	118
7	68	Out 12322565 Check valve	190
8	14BR	135	193
10	24	145	19
11	14	139	197
12	8	178	119
15	9B	155	198
16	9A	120	199
17	14CR	196	80
18	14AR	195	61FR
20	15R	194	62FR
21	21	150	Line 21A
22	21B	150	Line 21C

Table 2. Hose Connections—Continued

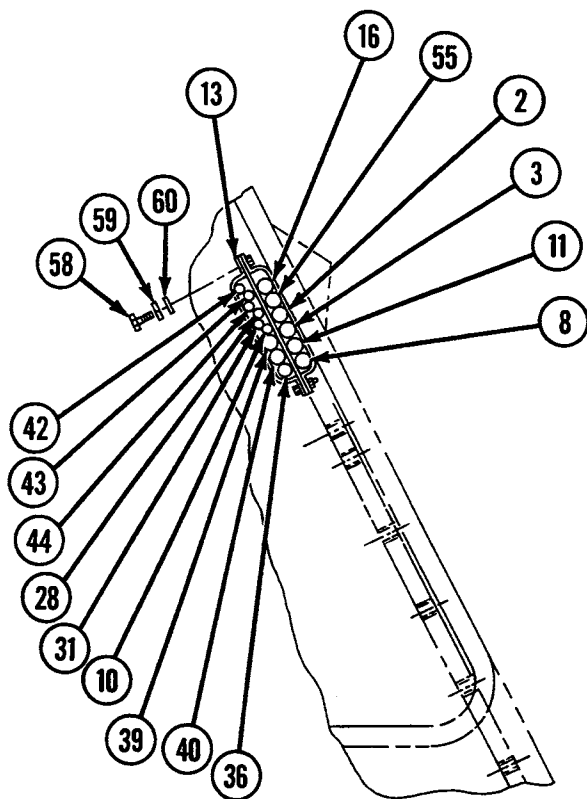
Hose Callout	Hose Code Number	Port	
		From	To
23	7	3	136
24	22A	144	Line 22
25	46A	240	Line 46
26	45	245	Line 45A
28	23A	146	23
29	43	177	235
30	47A	241	Line 47
31	23	146	24
32	42	140	236
34	50	240	21
35	44A	86	245
36	19	149	81
37	51C	82	246
38	52B	83	244
39	13	138	84
40	12A	85	137
41	2	243	87
42	63	226	161
43	65	227	169
44	66	228	171
45	1	242	69
46	17	180	5
47	49	239	6
48	6B	Valve	4
49	4B	Valve	1
50	48	25	238
51	4A	27	Valve
52	6A	22	Valve
53	4C	Valve	Lines 4A–4B
54	41A	237	Line 41
55	14CL	196	91

- 2 Hose assembly Code No. 14AL
- 3 Hose assembly Code No. 15L
- 8 Hose assembly Code No. 14BR
- 9 Cover
- 10 Hose assembly Code No. 24
- 11 Hose assembly Code No. 14
- 13 Covers (2)
- 16 Hose assembly Code No. 9A
- 28 Hose assembly Code No. 23A
- 31 Hose assembly Code No. 23
- 36 Hose assembly Code No. 19

- 39 Hose assembly Code No. 13
- 40 Hose assembly Code No. 12A
- 42 Hose assembly Code No. 63
- 43 Hose assembly Code No. 65
- 44 Hose assembly Code No. 66
- 55 Hose assembly Code No. 14CL
- 56 Screw (2)
- 57 Lockwasher (2)
- 58 Screw (2)
- 59 Lockwasher (2)
- 60 Washer



SECTION A-A

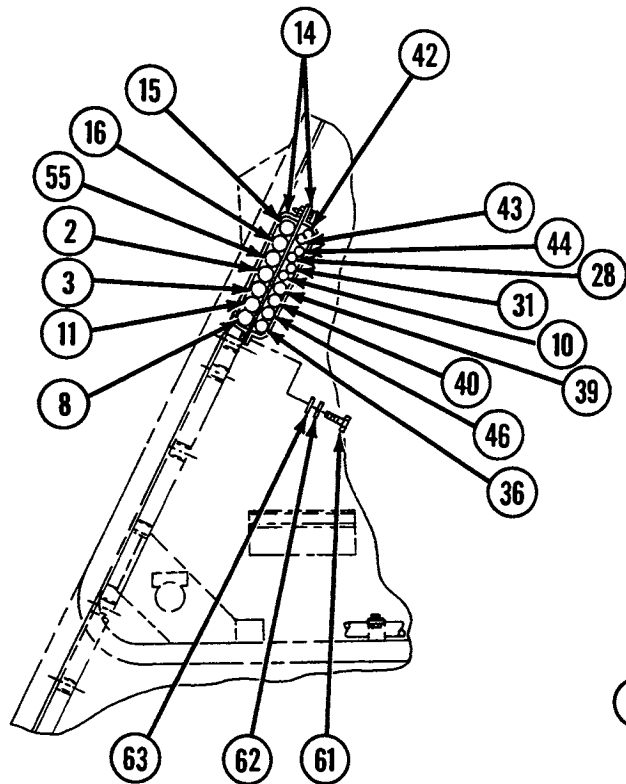


SECTION B-B

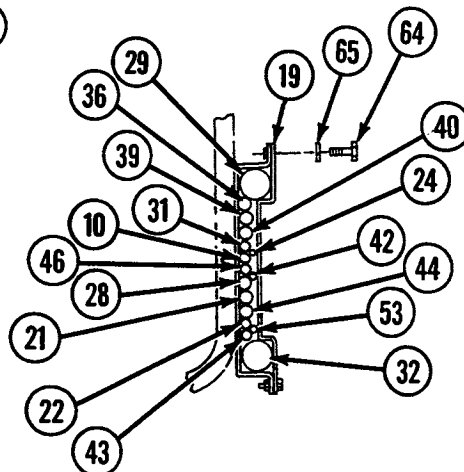
- 2 Hose assembly Code No. 14AL
- 3 Hose assembly Code No. 15L
- 8 Hose assembly Code No. 14BR
- 10 Hose assembly Code No. 24
- 11 Hose assembly Code No. 14
- 14 Cover
- 15 Hose assembly Code No. 9B

- 16 Hose assembly Code No. 9A
- 21 Hose assembly Code No. 21
- 22 Hose assembly Code No. 21B
- 24 Hose assembly Code No. 22A
- 27 Cover
- 28 Hose assembly Code No. 23A
- 29 Hose assembly Code No. 43

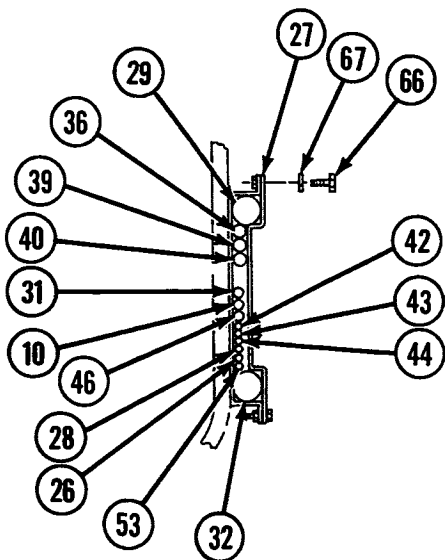
- 31 Hose assembly Code No. 23
- 32 Hose assembly Code No. 42
- 33 Cover
- 36 Hose assembly Code No. 19
- 39 Hose assembly Code No. 13
- 40 Hose assembly Code No. 12A
- 42 Hose assembly Code No. 63
- 44 Hose assembly Code No. 66
- 46 Hose assembly Code No. 17
- 52 Hose assembly Code No. 6A
- 53 Hose assembly Code No. 4C
- 55 Hose assembly Code No. 14CL
- 64 Screw (2)
- 65 Lockwasher (2)
- 66 Screw (2)
- 67 Lockwasher (2)
- 68 Screw (2)
- 69 Lockwasher (2)



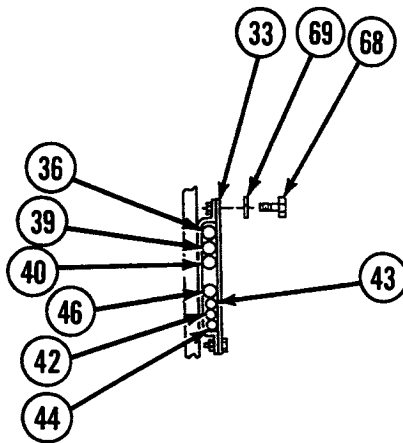
SECTION C-C



SECTION D-D



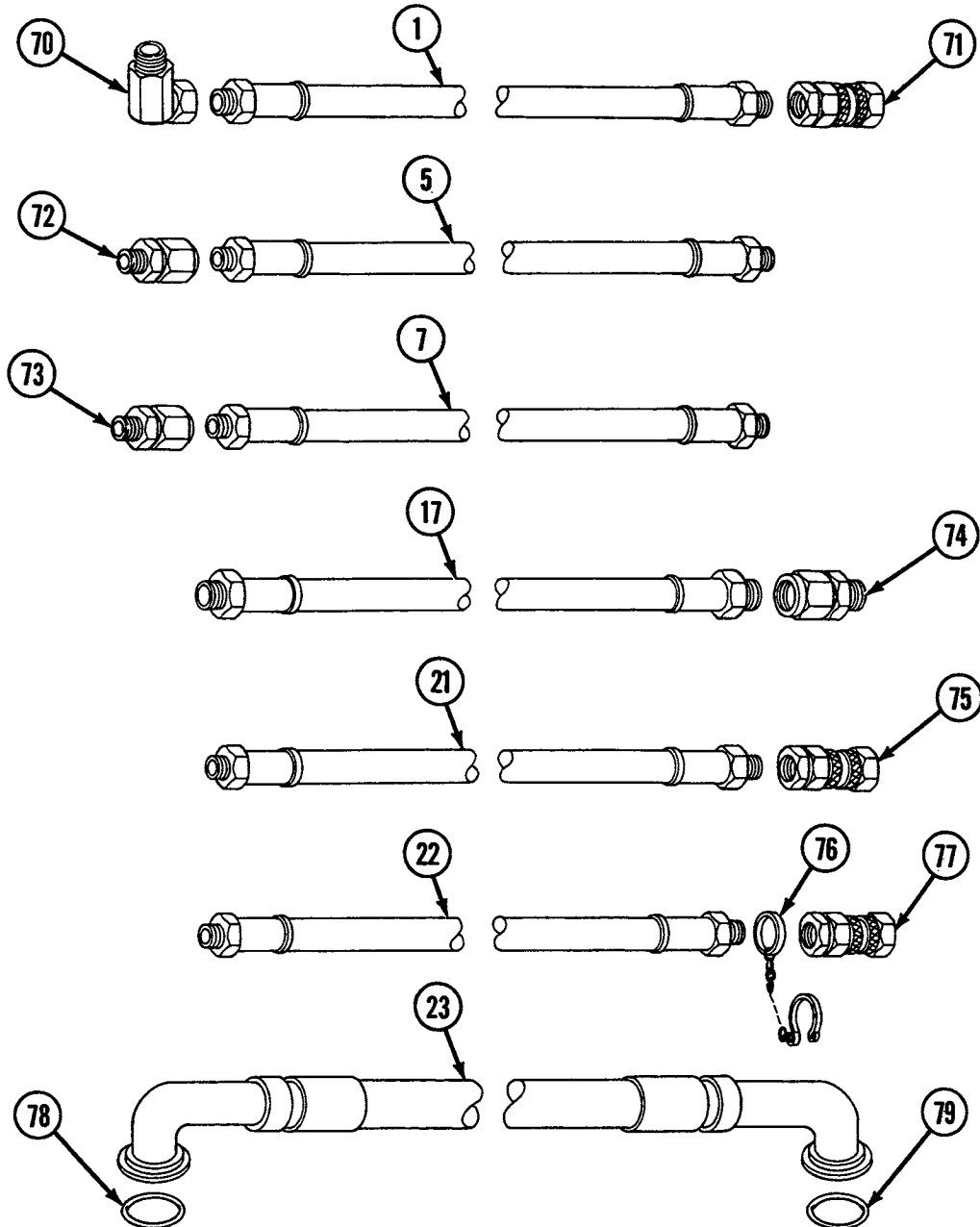
SECTION E-E



SECTION F-F

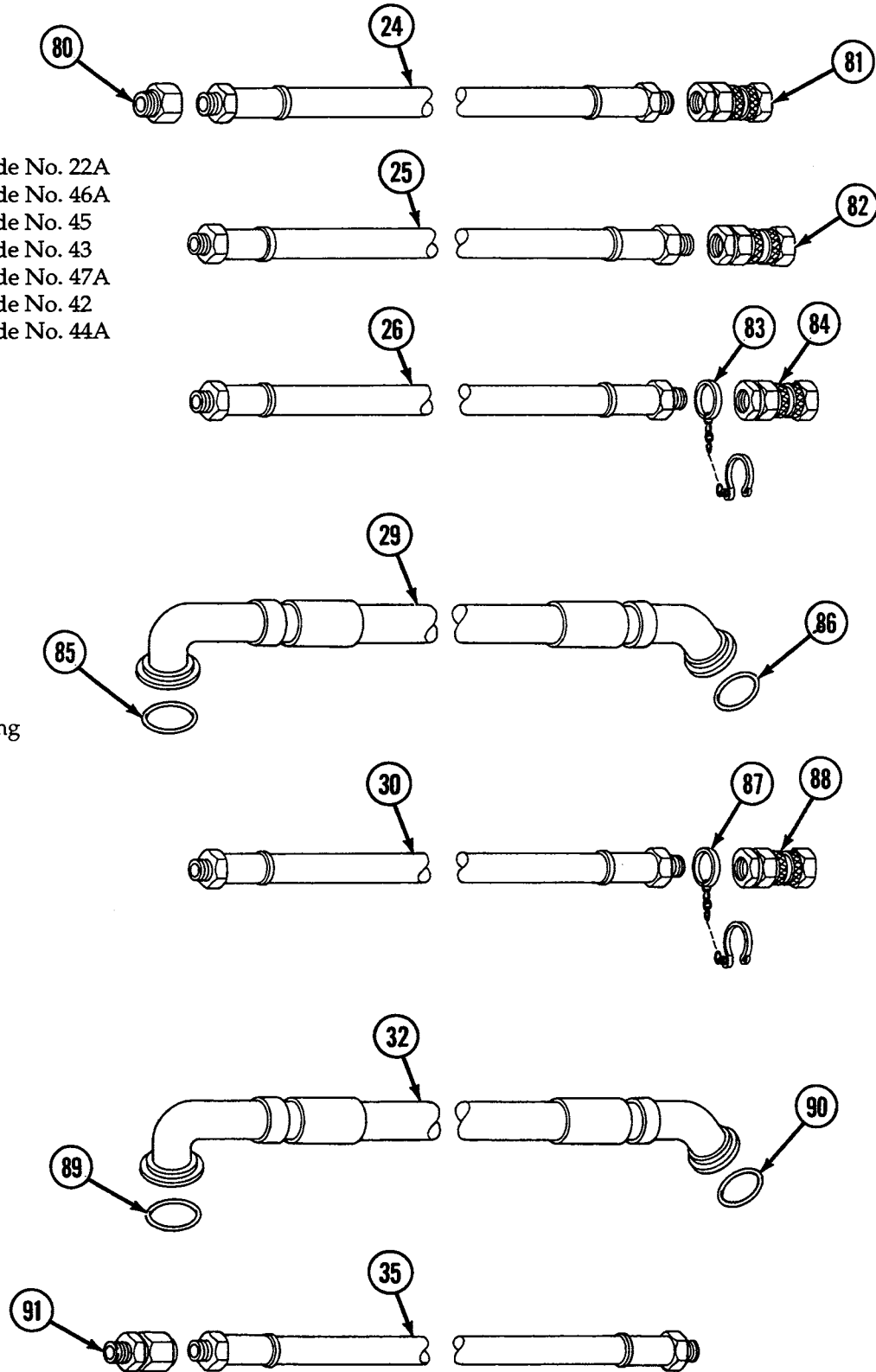
- | | | |
|--------------------------------|----------------------|-------------------|
| 1 Hose assembly Code No. 67A | 70 Adapter union* | 77 Coupling half* |
| 5 Hose assembly Code No. 69 | 71 Coupling half* | 78 Packing |
| 7 Hose assembly Code No. 68 | 72 Union* | 79 Packing |
| 17 Hose assembly Code No. 14CR | 73 Union* | |
| 21 Hose assembly Code No. 21 | 74 Union* | |
| 22 Hose assembly Code No. 21B | 75 Coupling half* | |
| 23 Hose assembly Code No. 7 | 76 Retainer assembly | |

* Apply sealant tape to threads when installing these items.



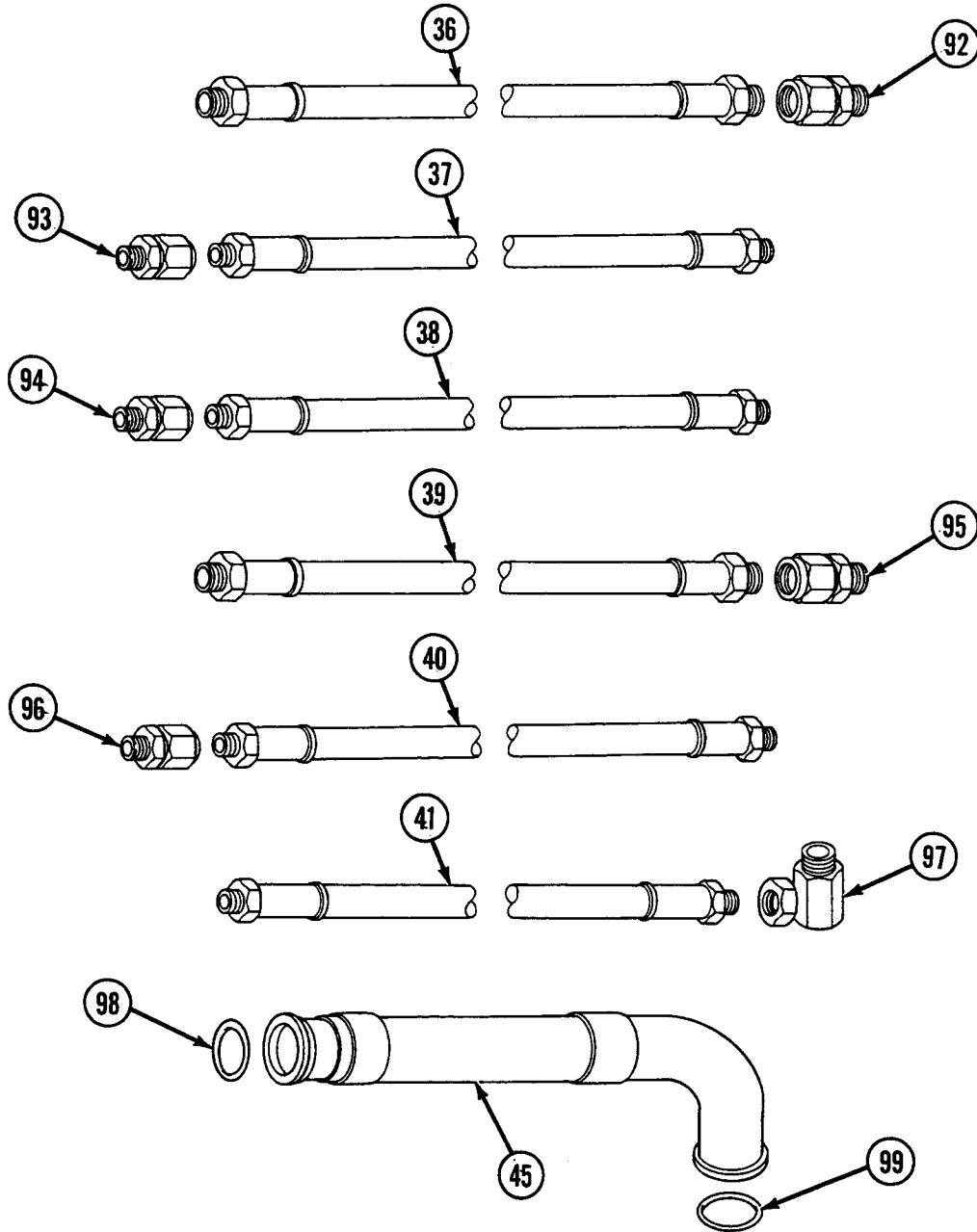
- 24 Hose assembly Code No. 22A
- 25 Hose assembly Code No. 46A
- 26 Hose assembly Code No. 45
- 29 Hose assembly Code No. 43
- 30 Hose assembly Code No. 47A
- 32 Hose assembly Code No. 42
- 35 Hose assembly Code No. 44A
- 80 Adapter
- 81 Coupling half*
- 82 Coupling half*
- 83 Retainer assembly
- 84 Coupling half*
- 85 Packing
- 86 Packing
- 87 Retainer assembly
- 88 Coupling half*
- 89 Packing
- 90 Packing
- 91 Union*

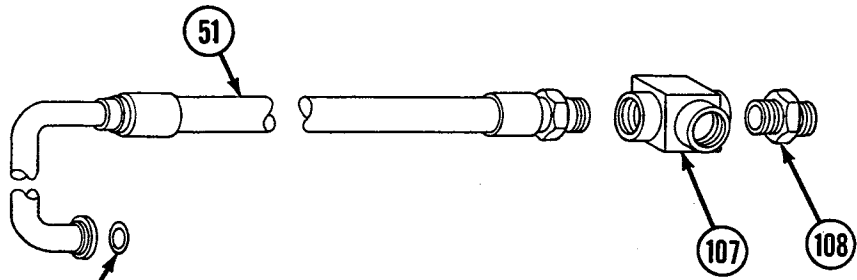
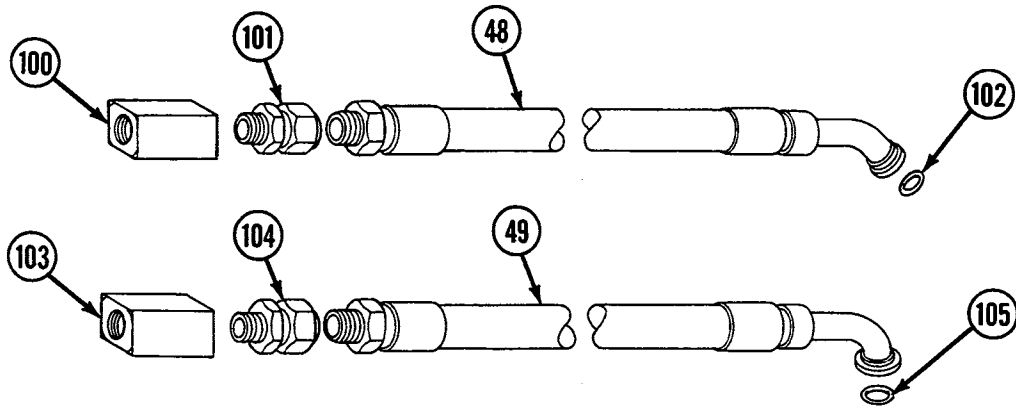
* Apply sealant tape to threads when installing these items.



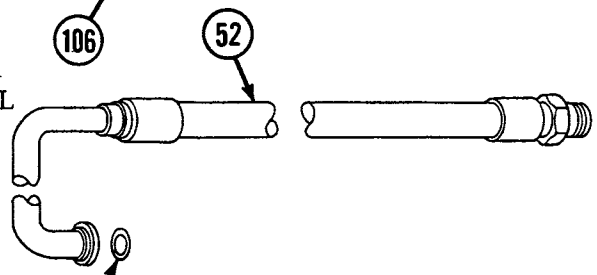
- | | | | | | |
|----|----------------------------|----|----------------|----|---------|
| 36 | Hose assembly Code No. 19 | 92 | Union* | 98 | Packing |
| 37 | Hose assembly Code No. 51C | 93 | Union* | 99 | Packing |
| 38 | Hose assembly Code No. 52B | 94 | Union* | | |
| 39 | Hose assembly Code No. 13 | 95 | Union* | | |
| 40 | Hose assembly Code No. 12A | 96 | Union* | | |
| 41 | Hose assembly Code No. 2 | 97 | Adapter union* | | |

* Apply sealant tape to threads when installing these items.

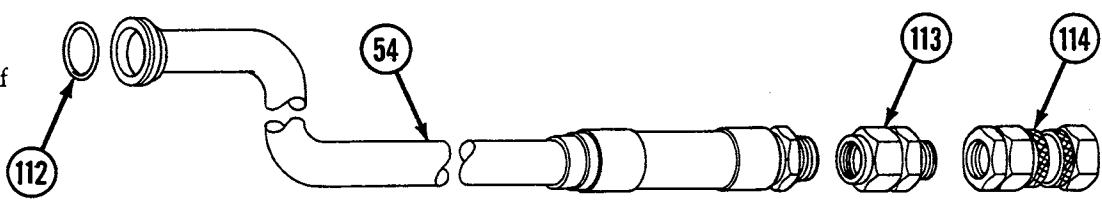
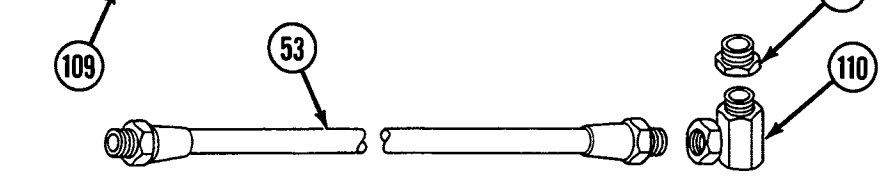




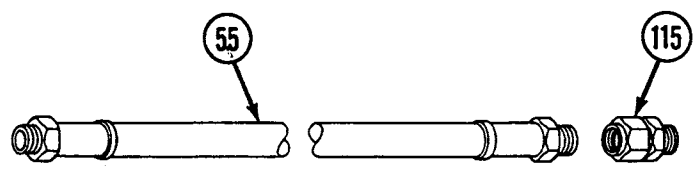
- 48 Hose assembly Code No. 6B
- 49 Hose assembly Code No. 4B
- 51 Hose assembly Code No. 4A
- 52 Hose assembly Code No. 6A
- 53 Hose assembly Code No. 4C
- 54 Hose assembly Code No. 41A
- 55 Hose assembly Code No. 14CL



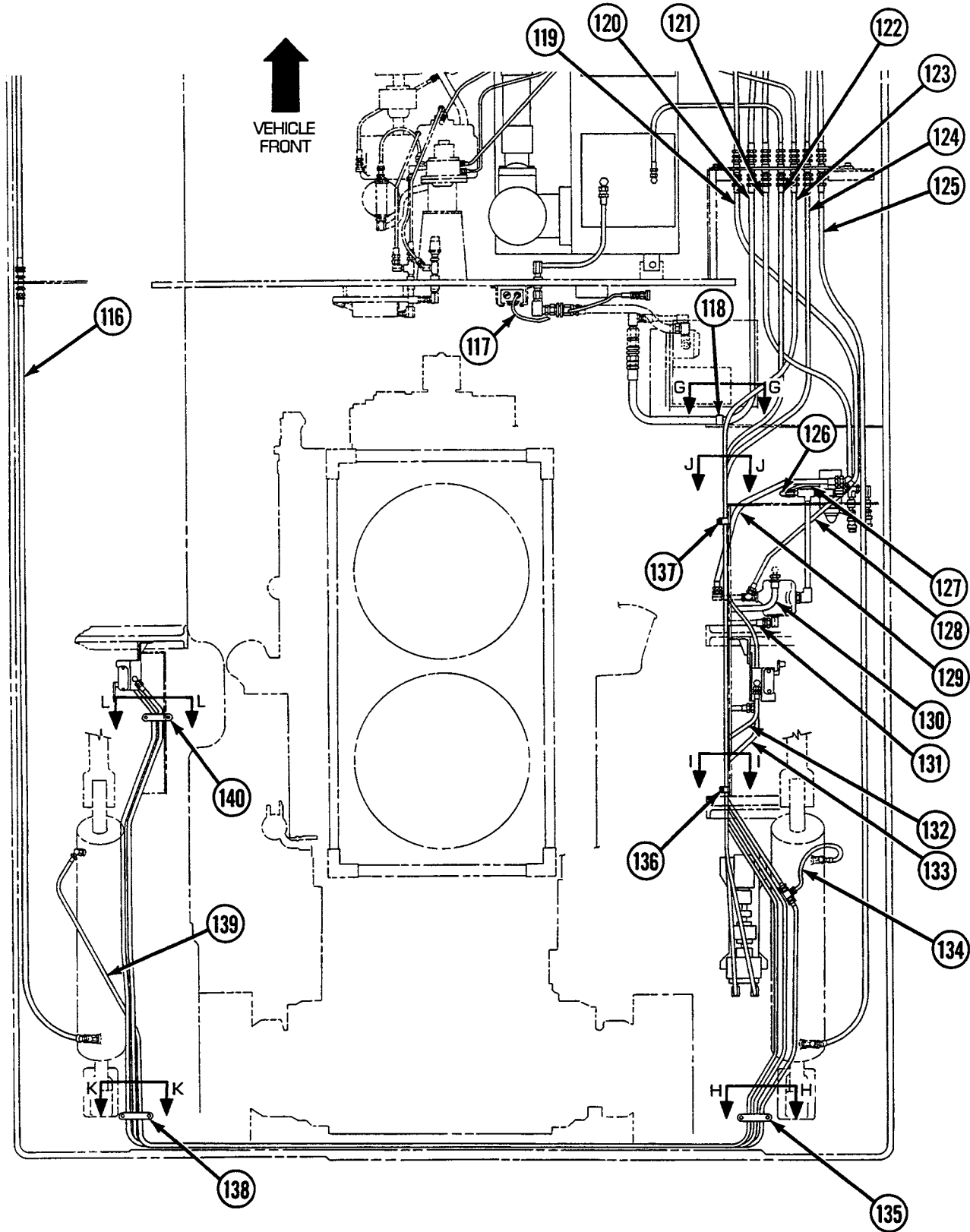
- 100 Check valve
- 101 Union
- 102 Packing
- 103 Check valve
- 104 Union
- 105 Packing
- 106 Packing
- 107 Tee
- 108 Nipple
- 109 Packing
- 110 Elbow
- 111 Bushing
- 112 Packing
- 113 Union*
- 114 Coupling half
- 115 Union*



* Apply sealant tape to threads when installing these items.



116 Hose assembly Code No. 14DL	125 Hose assembly Code No. 14DR	134 Hose assembly Code No. 51A
117 Hose assembly Code No. 25	126 Hose assembly Code No. 56	135 Cover
118 Clamp	127 Hose assembly Code No. 53	136 Cover
119 Hose assembly Code No. 44	128 Hose assembly Code No. 26	137 Cover
120 Hose assembly Code No. 12	129 Hose assembly Code No. 13B	138 Cover
121 Hose assembly Code No. 13A	130 Hose assembly Code No. 13D	139 Hose assembly Code No. 51
122 Hose assembly Code No. 52A	131 Hose assembly Code No. 13C	140 Cover
123 Hose assembly Code No. 51B	132 Hose assembly Code No. 20	
124 Hose assembly Code No. 19A	133 Hose assembly Code No. 52	



NOTE

The following table lists the equipment condition for removal of the hose in question.

Table 3. Equipment Conditions for Hose Removal

Callout Number	Hose Code Number	Equipment Conditions
116	14DL	Air Inlet Doors (left side) opened (see WP 0341 00) Batteries removed (see WP 0153 00) Engine Deck removed (see WP 0336)
117	25	Left- and Center-Front Air Inlet Grilles removed (see WP 0342 00)
119	44	Air Cleaner (right) removed (see WP 0137 00) Hydraulic Connection Access Cover removed (see WP 0292 00) APU removed Air Inlet Doors (two front right side) opened (see WP 0341 00)
120	12	Air Cleaner (right) removed (see WP 0137 00) Hydraulic Connection Access Cover removed (see WP 0292 00) APU removed Left- and Center-Front Air Inlet Grilles removed (see WP 0342 00)
121	13A	Air Cleaner (right) removed (see WP 0137 00) Hydraulic Connection Access Cover removed (see WP 0292 00) APU removed Engine Deck removed (see WP 0336) Air Inlet Doors (two front right side) opened (see WP 0341 00) Clamp (118) removed Section G-G
122	52A	Air Cleaner (right) removed (see WP 0137 00) Hydraulic Connection Access Cover removed (see WP 0292 00) APU removed Engine Deck removed (see WP 0336) Cover (137) removed Section J-J Right Deck Air Inlet Door removed (see WP 0345 00)
123	51B	Air Cleaner (right) removed (see WP 0137 00) Hydraulic Connection Access Cover removed (see WP 0292 00) APU removed Engine Deck removed (see WP 0336) Air Inlet Doors (right side) opened (see WP 0341 00) Covers (136 and 137) removed Section I-I and Section J-J
124	19A	Air Cleaner (right) removed (see WP 0137 00) Hydraulic Connection Access Cover removed (see WP 0292 00) APU removed Engine Deck removed (see WP 0336) Air Inlet Doors (two front right side) opened (see WP 0341 00) Cover (137) removed Section J-J Right Deck Air Inlet Door removed (see WP 0345 00)

Table 3. Equipment Conditions for Hose Removal-Continued

Callout Number	Hose Code Number	Equipment Conditions
125	14DR	Air Cleaner (right) removed (see WP 0137 00) Hydraulic Connection Access Cover removed (see WP 0292 00) APU removed Engine Deck removed (see WP 0336) Air Inlet Doors (two front right side) opened (see WP 0341 00)
126	56	Air Inlet Doors (two front right side) opened (see WP 0341 00)
127	53	Air Inlet Doors (two front right side) opened (see WP 0341 00)
128	26	Air Inlet Doors (two front right side) opened (see WP 0341 00)
129	13B	Air Inlet Doors (two front right side) opened (see WP 0341 00)
130	13D	Air Inlet Doors (right side) opened (see WP 0341 00) Right Deck Air Inlet Door removed (see WP 0345 00) Cover (136) removed Section I-I
131	13C	Air Inlet Doors (right side) opened (see WP 0341 00) Right Deck Air Inlet Door removed (see WP 0345 00) Cover (136) removed Section I-I
132	20	Left and Right Deck Air Inlet Doors removed (see WP 0345 00) Engine Deck removed (see WP 0336) Covers (135, 136,138, and 140) removed Section H-H, Section I-I, Section K-K, and Section L-L
133	52	Engine Deck removed (see WP 0336) Covers (135, 136,138, and 140) removed Section H-H, Section I-I, Section K-K, and Section L-L
134	51A	Air Inlet Doors (two rear right side) opened (see WP 0341 00)
139	51	Engine Deck removed (see WP 0336) Covers (135 and 138) removed Section H-H and Section K-K

NOTE

Remove and tag each hose with the port number from which it was removed, using port routing chart and illustrations as a guide.

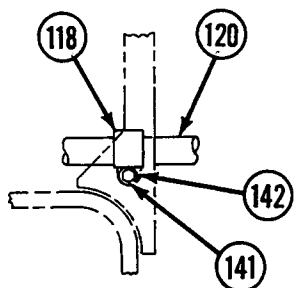
Table 4. Hose Connections

Hose Callout	Hose Code Number	Port	
		From	To
116	14DL	91	62RL
117	25	64	Switch 10894889-1
119	44	86	Return 8352698
120	12	64	85
121	13A	84	In 10884618

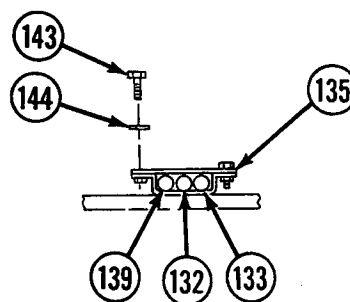
Table 4. Hose Connections—Continued

Hose Callout	Hose Code Number	Port	
		From	To
122	52A	204	83
123	51B	Lines 51–51A	82
124	19A	81	205
125	14DR	80	62RR
126	56	Out 10884618	Return 8352698
127	53	Return 8352698	93
128	26	92	Pres. 8352698
129	13B	In 10884618	Pres. 8352698
130	13D	CYL-2 8352698	65
131	13C	CYL-1 8352698	66
132	20	203	214
133	52	215	204
134	51A	61RR	Lines 51–51B
139	51	61RL	Lines 51A–51B

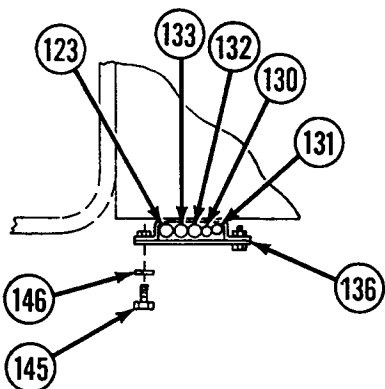
- | | | |
|--------------------------------|-------------------------------|--------------------|
| 118 Clamp | 135 Cover | 145 Screw (2) |
| 120 Hose assembly Code No. 12 | 136 Cover | 146 Lockwasher (2) |
| 122 Hose assembly Code No. 52A | 137 Cover | 147 Screw (2) |
| 123 Hose assembly Code No. 51B | 139 Hose assembly Code No. 51 | 148 Lockwasher (2) |
| 124 Hose assembly Code No. 19A | 141 Screw | 149 Screw (2) |
| 130 Hose assembly Code No. 13D | 140 Cover | 150 Lockwasher (2) |
| 131 Hose assembly Code No. 13C | 142 Lockwasher | 151 Screw (2) |
| 132 Hose assembly Code No. 20 | 143 Screw (2) | 152 Lockwasher (2) |
| 133 Hose assembly Code No. 52 | 144 Lockwasher (2) | |



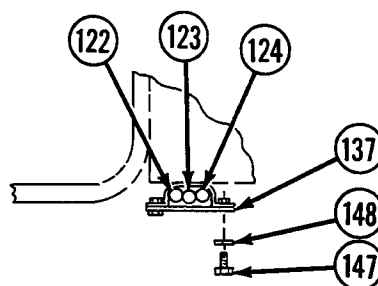
SECTION G-G



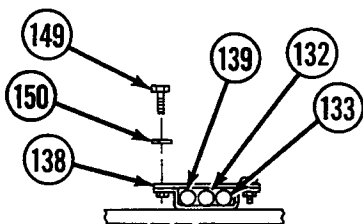
SECTION H-H



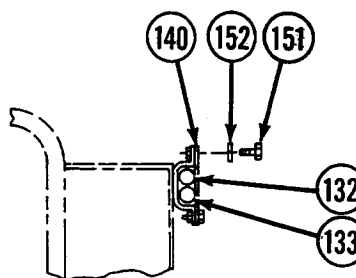
SECTION I-I



SECTION J-J



SECTION K-K



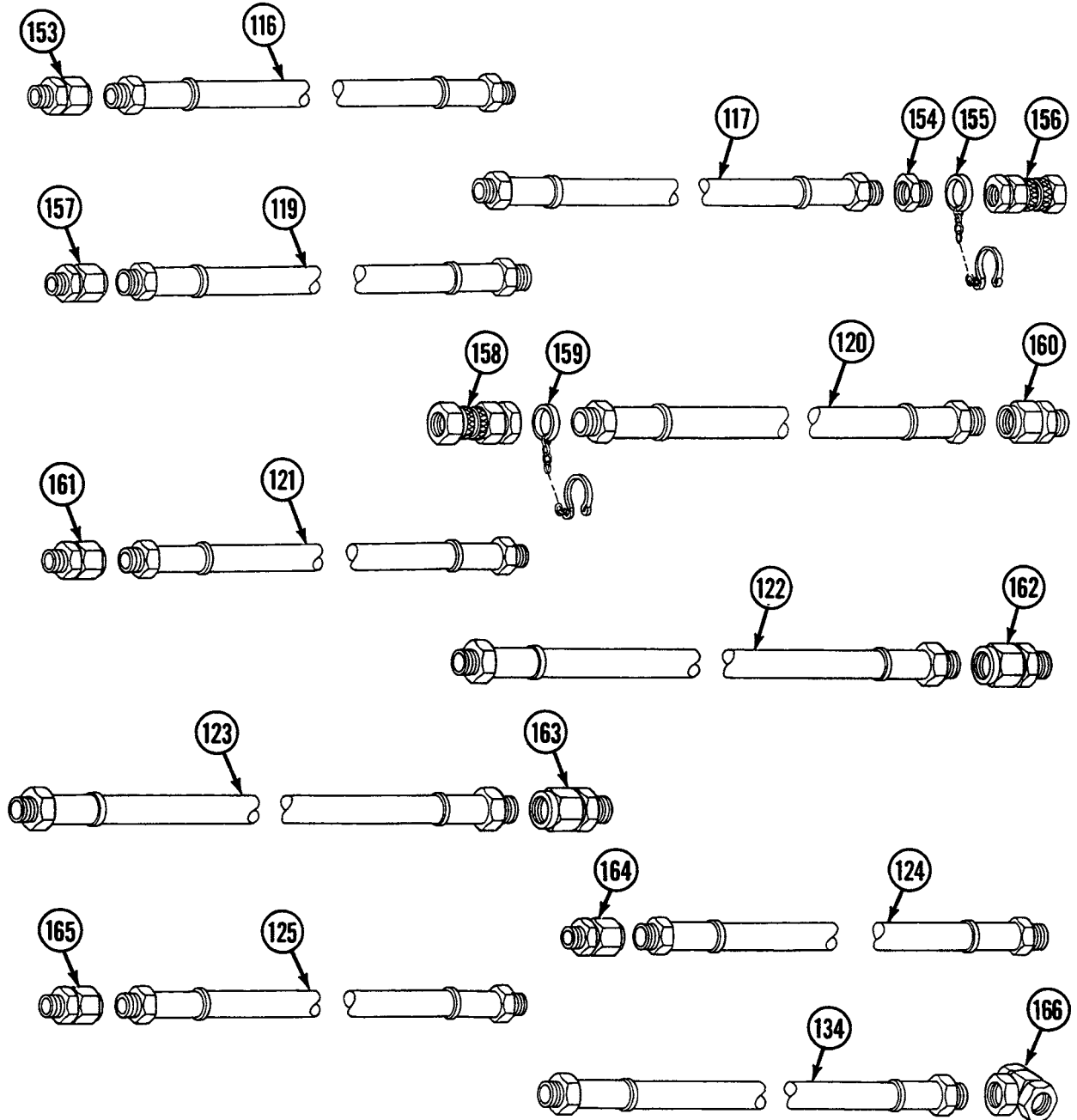
SECTION L-L

- 116 Hose assembly Code No. 14DL
- 117 Hose assembly Code No. 25
- 119 Hose assembly Code No. 44
- 120 Hose assembly Code No. 12
- 121 Hose assembly Code No. 13A
- 122 Hose assembly Code No. 52A
- 123 Hose assembly Code No. 51B
- 124 Hose assembly Code No. 19A

- 125 Hose assembly Code No. 14DR
- 153 Union*
- 154 Bushing
- 155 Retainer assembly
- 156 Coupling half
- 157 Union*
- 158 Coupling half
- 159 Retainer assembly

- 160 Union
- 161 Union*
- 162 Union*
- 163 Union*
- 164 Union*
- 165 Union*
- 166 Tee

* Apply sealant tape to threads when installing these items.



Installation

WARNING

Hydraulic fluid under pressure can penetrate skin or damage eyes. Fluid leaks under pressure may not be visible, use a piece of cardboard or wood to find leaks, but do not use bare hand. Wear safety goggles for protection. If fluid enters skin or eye, get immediate medical attention.

WARNING

Do not attempt to loosen or tighten hydraulic fittings or lines when the system is pressurized. Ensure that the boom is in the stowed position before doing any maintenance on the hydraulic system.

WARNING

Do not move under any hydraulically controlled implement when making adjustments or repairs to hydraulic system. Lower implement and work from above. If implement must be raised for access, always block to support. If implement drops, injury to personnel can result.

1. Install lines and fittings as required using legends, locator views, Tables 1 and 3 for equipment conditions, Tables 2 and 4 for port routing and the line/fitting illustration as a guide.

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

HYDRAULIC CONNECTING PANEL REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Sealant tape (item 34, WP 0489 00)

Gasket (item 29, WP 0491 00)

Lockwashers (10) (item 638, WP 0491 00)

Screws (10) (item 371, WP 0491 00)

Equipment Condition

Air cleaner (right-side) removed (see WP 0137 00)

Rear right-side floor plate removed (see WP 0291 00)

Hydraulic connections access cover removed (see WP 0292 00)

WARNING

Hydraulic fluid under pressure can penetrate skin or damage eyes. Fluid leaks under pressure may not be visible, use a piece of cardboard or wood to find leaks, but do not use bare hand. Wear safety goggles for protection. If fluid enters skin or eye, get immediate medical attention.

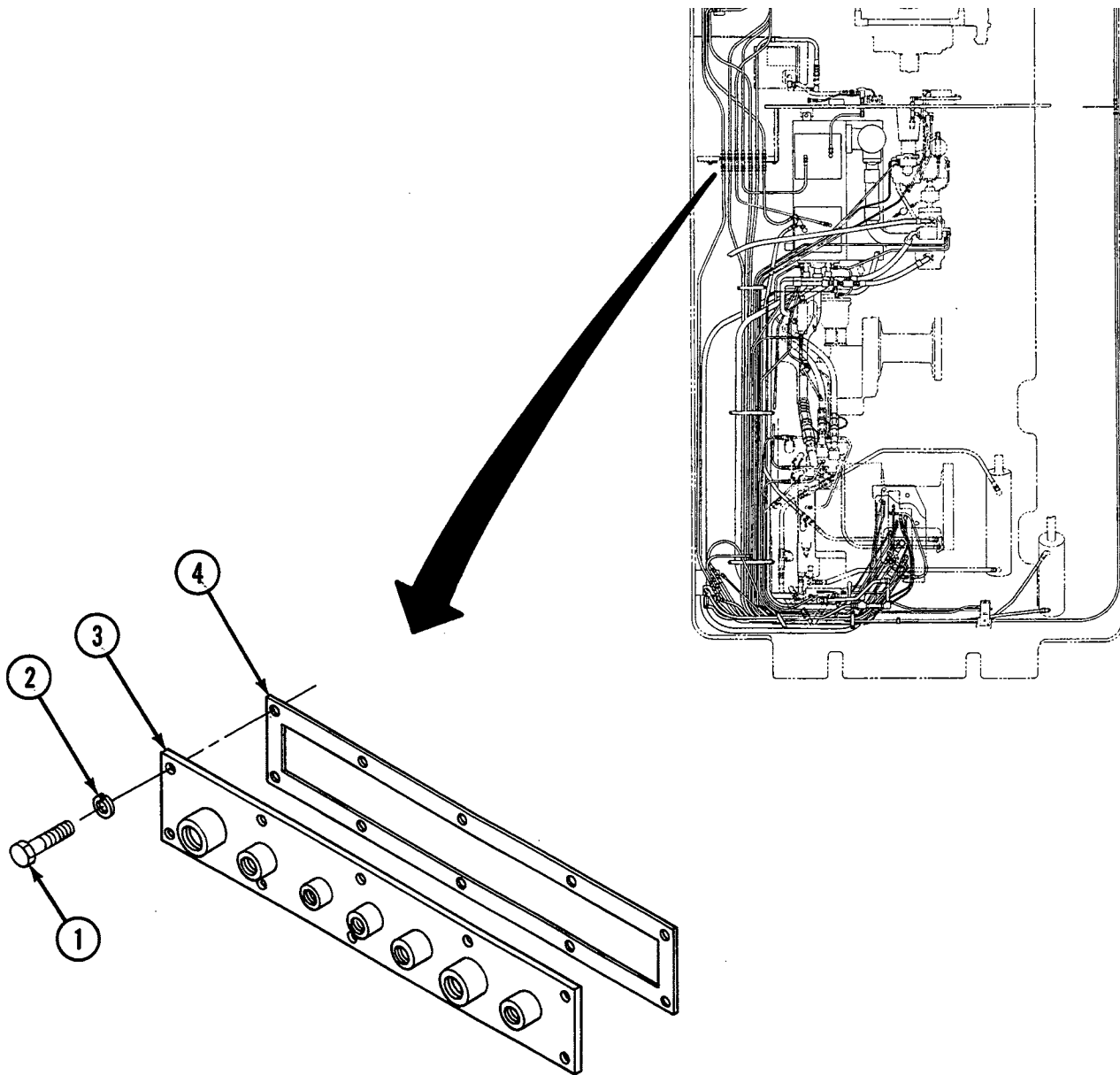
WARNING

Do not attempt to loosen or tighten hydraulic fittings or lines when the system is pressurized. Ensure that the boom is in the stowed position before doing any maintenance on the hydraulic system.

Removal

1. Disconnect hydraulic lines on both sides of the bulkhead and tag each line with the port number from which it was removed.

- Remove 10 screws (1), 10 lockwashers (2), hose connecting panel (3) and gasket (4). Discard gasket.



Installation

- Install gasket (4) and hose connecting panel (3) with 10 lockwashers (2) and 10 screws (1).
- Apply sealant tape to threads and connect hydraulic lines to each side of the bulkhead using port reference tag.

NOTE

Follow-on maintenance: Install hydraulic connections access cover (see WP 0292 00); Install rear right-side floor plate (see WP 0291 00); Install air cleaner (right side) (see WP 0137 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
FUEL TRANSFER PUMP AND FLOW REGULATOR REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Drivescrews (16) (item 501, WP 0491 00)

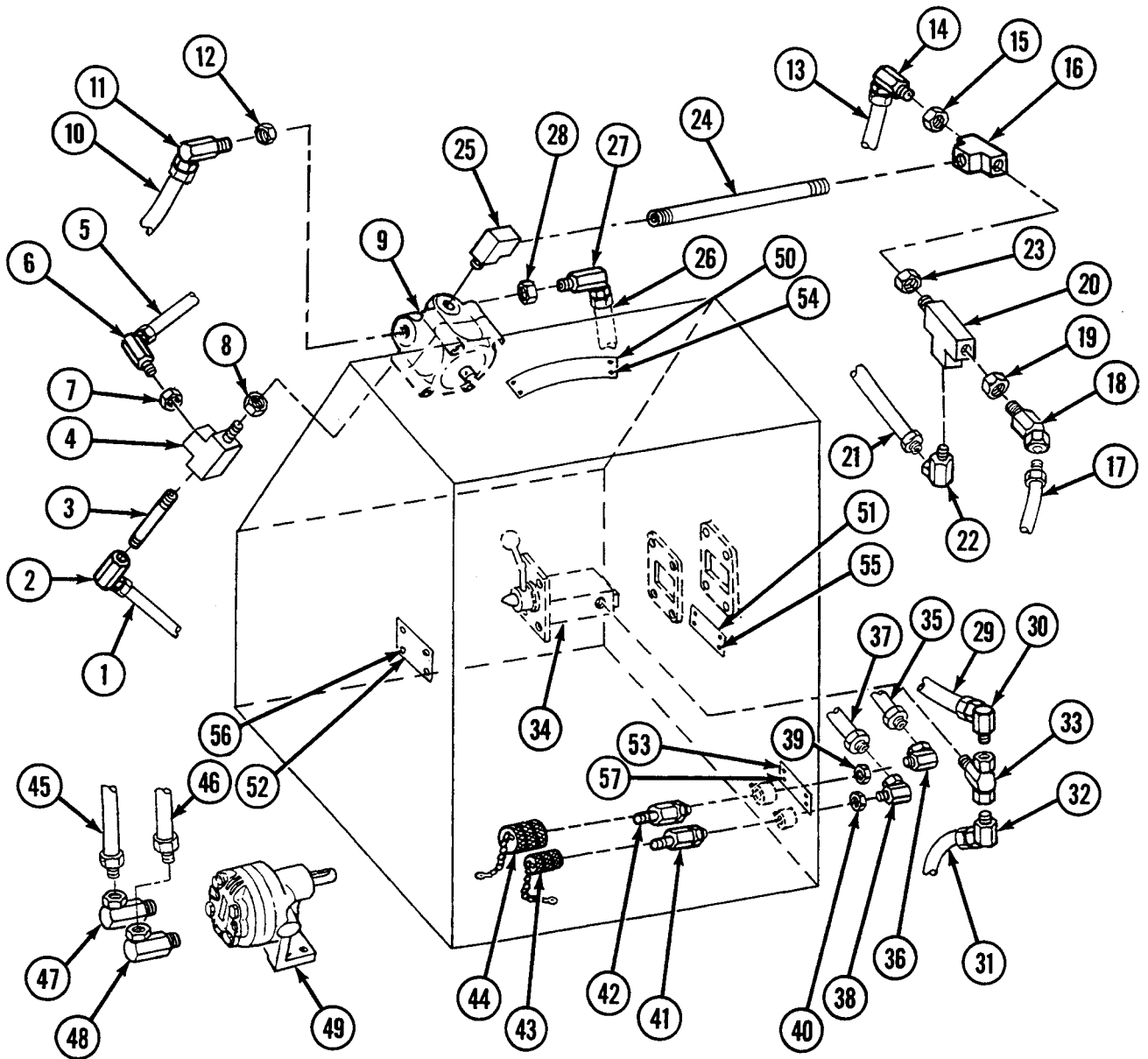
Locknut (item 142, WP 0491 00)

Locknuts (8) (item 143, WP 0491 00)

Removal

1. Disconnect hose (1) from elbow (2) and nipple (3).
2. Remove nipple (3) from tee (4), and disconnect hose (5) from elbow (6).
3. Remove locknut (7) and elbow (6) from tee (4).
4. Remove locknut (8) and tee (4) from control valve (9), and disconnect hose (10) from elbow (11).
5. Remove locknut (12) and elbow (11) from control valve (9).
6. Disconnect hose (13) from elbow (14), and remove locknut (15) and elbow from tee (16).
7. Disconnect hose (17) from elbow (18), and remove locknut (19) and elbow from tee (20).
8. Remove hose (21) and tee (20) from elbow (22).
9. Remove locknut (23) and tee (20) from tee (16).
10. Remove tee (16) from pipe (24) and elbow (25).
11. Remove elbow (25) from control valve (9), and disconnect hose (26) from elbow (27).
12. Remove locknut (28) and elbow (27) from control valve (9).
13. Disconnect hose (29) from elbow (30), and hose (31) from elbow (32).
14. Remove elbows (30 and 32) from tee (33), and remove tee from regulating valve (34).
15. Remove hose (35) from elbow (36), and hose (37) from elbow (38).
16. Remove two locknuts (39 and 40) and two elbows (36 and 38) from two couplings (41 and 42).
17. Remove two caps (43 and 44) and two couplings (41 and 42).
18. Remove hoses (45 and 46) from elbows (47 and 48).
19. Remove elbows (47 and 48) from fuel transfer pump (49).

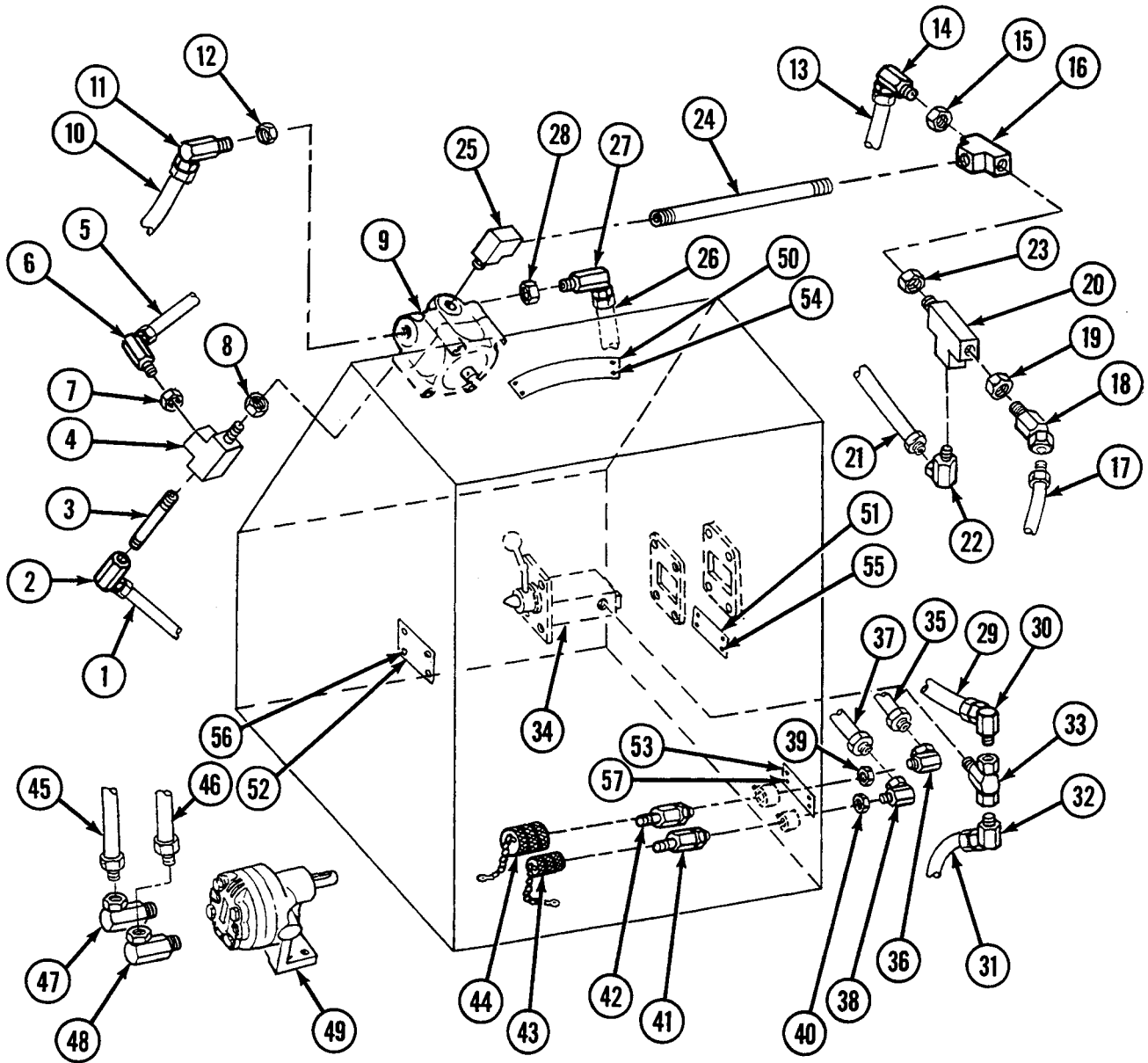
20. Remove ID plates (50, 51, 52, and 53) by removing four drivescrews (54, 55, 56, and 57) from each.



Installation

1. Install ID plates (50, 51, 52, and 53) with four drivescrews (54, 55, 56, and 57) each.
2. Install elbows (47 and 48) to fuel transfer pump (49).
3. Connect hoses (45 and 46) to elbows (47 and 48).
4. Install two caps (43 and 44) and two couplings (41 and 42).
5. Install two locknuts (39 and 40) and two elbows (36 and 38) to two couplings (41 and 42).
6. Connect hose (37) to elbow (38), and hose (35) to elbow (36).
7. Install tee (33) to regulating valve (34), and elbows (30 and 32) to tee.
8. Connect hose (31) to elbow (32), and hose (29) to elbow (30).
9. Install elbow (27) and locknut (28) to control valve (9).
10. Connect hose (26) to elbow (27), and install elbow to control valve (9).
11. Install pipe (24) to elbow (25) and tee (16).
12. Install locknut (23) and tee (20) to tee (16).
13. Install elbow (22) to tee (20) and hose (21).
14. Install locknut (19) and elbow (18) to tee (20), and hose (17) to elbow.
15. Install locknut (15) and elbow (14) to tee (16), and connect hose (13) to elbow.
16. Install locknut (12) and elbow (11) to control valve (9).
17. Connect hose (10) to elbow (11), and install locknut (8) and tee (4) to control valve (9).
18. Install locknut (7) and elbow (6) to tee (4).
19. Connect hose (5) to elbow (6), and install nipple (3) to tee (4).

20. Install elbow (2) to nipple (3), and connect hose (1) to elbow.



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

HYDRAULIC SYSTEM OIL FILTER MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Compound, cleaning (item 9, WP 0489 00)
 Filter element (item 114, WP 0491 00)
 Gaskets (2) (item 115, WP 0491 00)
 Lockwashers (4) (item 643, WP 0491 00)

Materials/Parts (cont.)

Packings, preformed (2) (item 549, WP 0491 00)
 Packings, preformed (4) (item 555, WP 0491 00)
 Screws (4) (item 469, WP 0491 00)
 Screws (4) (item 809, WP 0491 00)

Equipment Condition

Rear center floor plate removed (see WP 0297 00)

NOTE

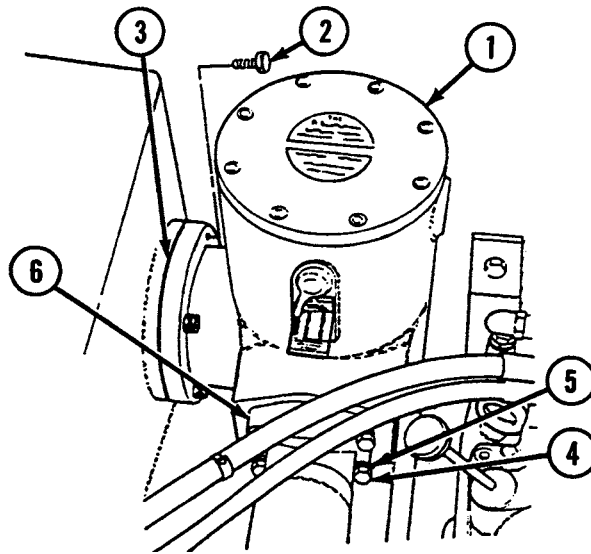
It is not necessary to remove oil filter housing to service filter element assembly (1).

NOTE

Place suitable container under filter housing prior to removal to catch any hydraulic oil that drains.

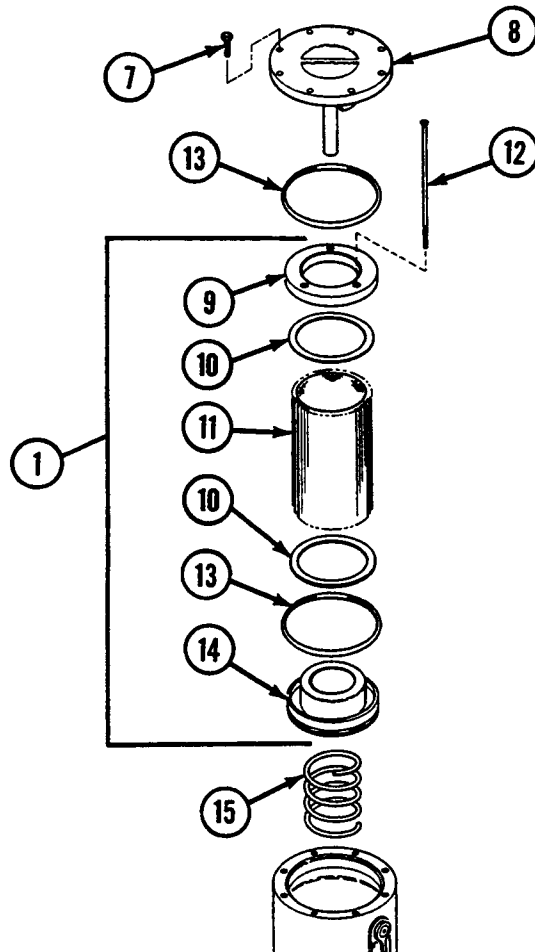
Removal

1. Remove four screws (2) and preformed packings (3).
2. Remove four screws (4), four lockwashers (5), and two flanges (6) from filter element assembly (1).



Disassembly

1. Remove eight screws (7) and cover (8) with filter element assembly (1).
2. Remove filter retainer (9), two preformed packings (10), and filter element (11) by removing three screws (12) from cover (8).
3. Remove two gaskets (13) from cover (14).
4. Remove spring (15) from filter element assembly (1).



Assembly**WARNING**

Solvents can burn easily, give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open flame and use in a well-ventilated area. If solvent gets on skin or clothing, wash immediately with soap and water.

WARNING

Particles blown by compressed air can be dangerous. Be certain to direct air stream away from user and other personnel in area. Compressed air used for cleaning will not exceed 30 pounds per square inch (207 kilopascals). Use only with effective chip-guarding and personal protective equipment (goggles, shield, and gloves).

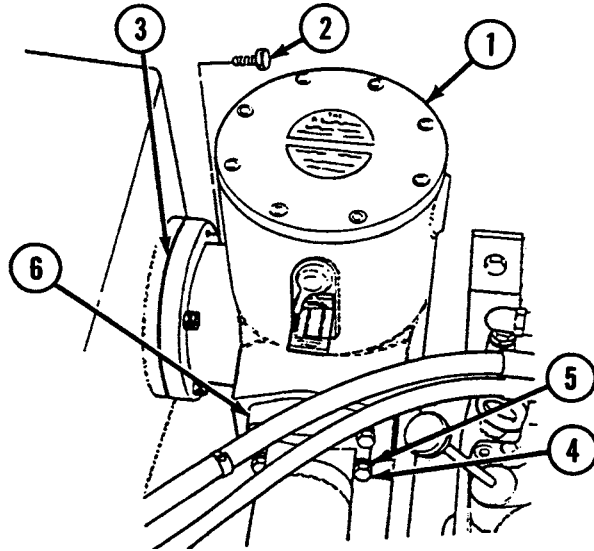
NOTE

Clean filter element (11) with cleaning compound. Dry with compressed air.

1. Install two preformed packings (10), filter element (11), and filter retainer (9) to cover (14) with three screws (12).
2. Install spring (15) into filter element assembly (1).
3. Install cover (8) with preformed packing (13) and filter element (11) to filter element assembly (1) with eight screws (7).

Installation

1. Install two flanges (6) to filter element assembly (1) with four lockwashers (5) and four screws (4).
2. Install four preformed packings (3) with four screws (2).

**NOTE**

Follow-on maintenance: Install rear center floor plate (see WP 0297 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
EXTERNAL HYDRAULIC RESERVOIR COMPONENTS REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (4) (item 641, WP 0491 00)

Lockwashers (8) (item 642, WP 0491 00)

Lockwashers (4) (item 727, WP 0491 00)

Nuts (2) (item 340, WP 0491 00)

Packing, preformed (item 552, WP 0491 00)

Materials/Parts (cont.)

Screws (4) (item 408, WP 0491 00)

Screws (4) (item 468, WP 0491 00)

Screws (4) (item 804, WP 0491 00)

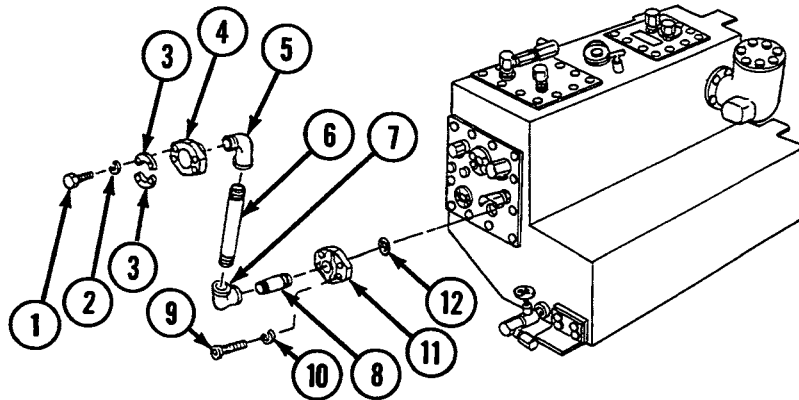
Screws (4) (item 829, WP 0491 00)

Equipment Condition

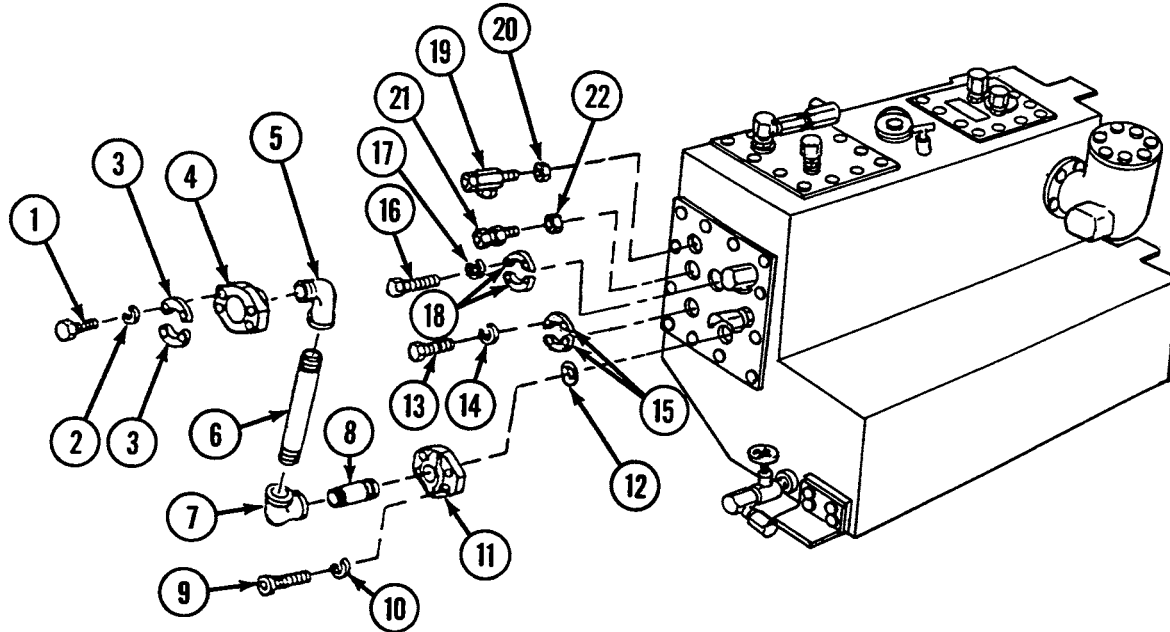
Cab subfloor plates removed as necessary (see WP 0287 00 thru 0308 00)

Removal

1. Remove four screws (1), four lockwashers (2), and two flanges (3).
2. Remove from flange (4), elbow (5), nipple (6), elbow (7), and nipple (8).
3. Remove four screws (9), four lockwashers (10), flange (11), and preformed packing (12).



4. Remove four screws (13), four lockwashers (14), and two flanges (15).
5. Remove four screws (16), four lockwashers (17), and two flanges (18).
6. Remove tee (19) and nut (20).
7. Remove coupling (21) and nut (22).



Installation

1. Install nut (22) with coupling (21).
2. Install nut (20) with tee (19).
3. Install two flanges (18) with four lockwashers (17) and four screws (16).
4. Install two flanges (15) with four lockwashers (14) and four screws (13).
5. Install preformed packing (12), flange (11), four lockwashers (10), and four screws (9).
6. Install nipple (8), elbow (7) with nipple (6), and elbow (5) to flange (4).
7. Install two flanges (3) with four lockwashers (2) and four screws (1).

NOTE

Follow-on maintenance: Install cab subfloor plates if removed (see WP 0287 00 thru 0308 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
HYDRAULIC DRAIN VALVE AND RELATED PARTS REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

Rear intermediate right floor plate removed (see WP 0293 00)

Rear center floor plate removed (see WP 0297 00)

Materials/Parts

Drivescrews (4) (item 500, WP 0491 00)

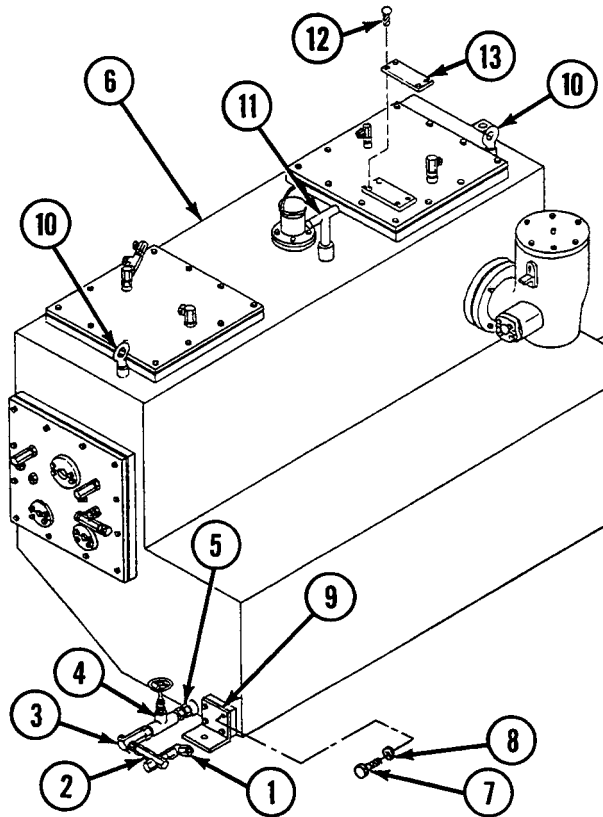
Eyebolts (2) (item 337, WP 0491 00)

Lockwashers (4) (item 640, WP 0491 00)

Screws (4) (item 800, WP 0491 00)

Removal

1. Remove elbow (1) and tee (2).
2. Remove tee (3), valve (4), and nipple (5) from tank (6).
3. Remove four screws (7) with four lockwashers (8) and bracket (9).
4. Remove two eyebolts (10).
5. Remove gage rod (11).
6. Remove four drivescrews (12) and plate (13).



Installation

1. Install plate (13) with four drivescrews (12).
2. Install gage rod (11) and two eyebolts (10).
3. Install bracket (9) with four lockwashers (8) and four screws (7).
4. Install nipple (5), valve (4), and tee (3) to tank (6).
5. Install tee (2) with elbow (1).

NOTE

Follow-on maintenance: Install rear center floor plate (see WP 0293 00); Install rear intermediate right floor plate (see WP 0297 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
HYDRAULIC SUBPLATE ID PLATE REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Drivescrews (4) (item 501, WP 0491 00)

Materials/Parts (cont.)

Lockwashers (4) (item 637, WP 0491 00)

Nuts (4) (item 673, WP 0491 00)

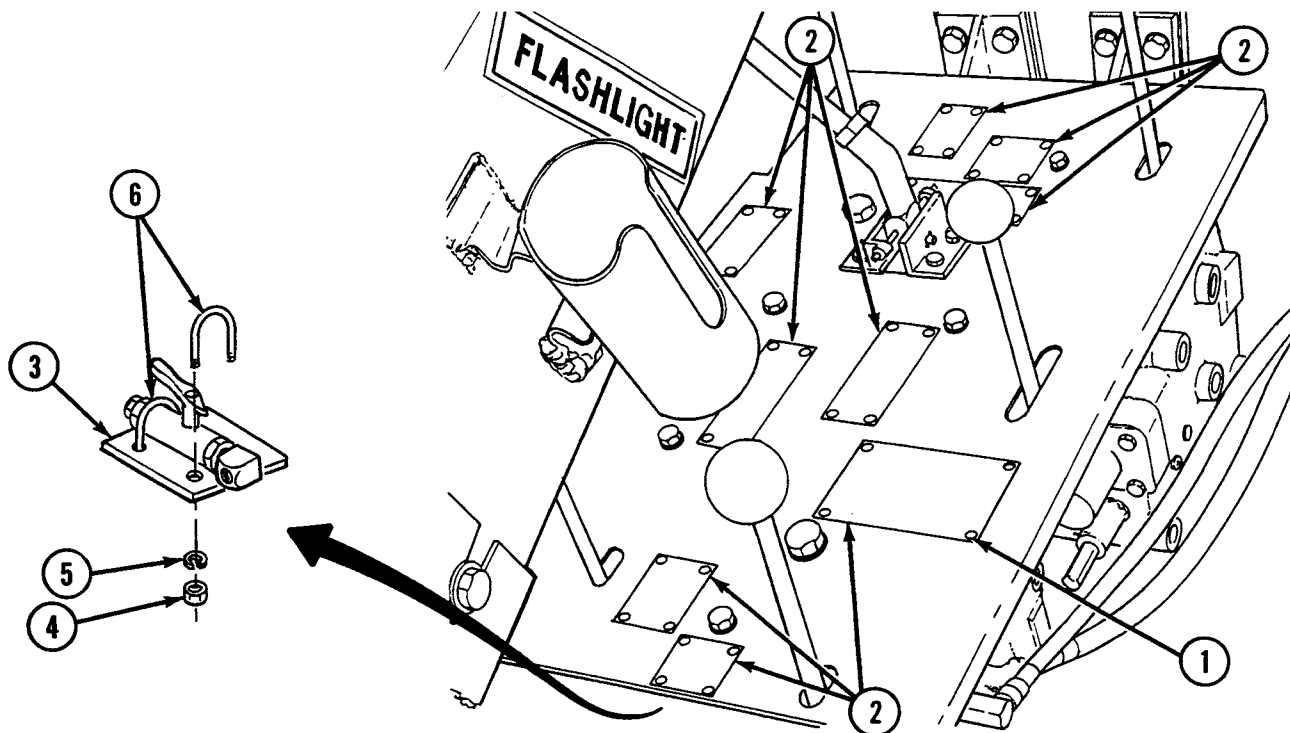
U-bolts (2) (item 85, WP 0491 00)

NOTE

Removal and installation procedures are the same for all plates.

Removal

1. Remove four drivescrews (1) each from nine plates (2).
2. Remove plate (3) by removing four nuts (4), four lockwashers (5), and two U-bolts (6).

**Installation**

1. Install plate (3) with two U-bolts (6), four lockwashers (5), and four nuts (4).
2. Install nine plates (2) with four drivescrews (1) each.

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
HYDRAULIC OIL RESERVOIR STRAINER REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Filter (item 259, WP 0491 00)
 Gasket (item 336, WP 0491 00)
 Lockwashers (6) (item 638, WP 0491 00)

Materials/Parts (cont.)

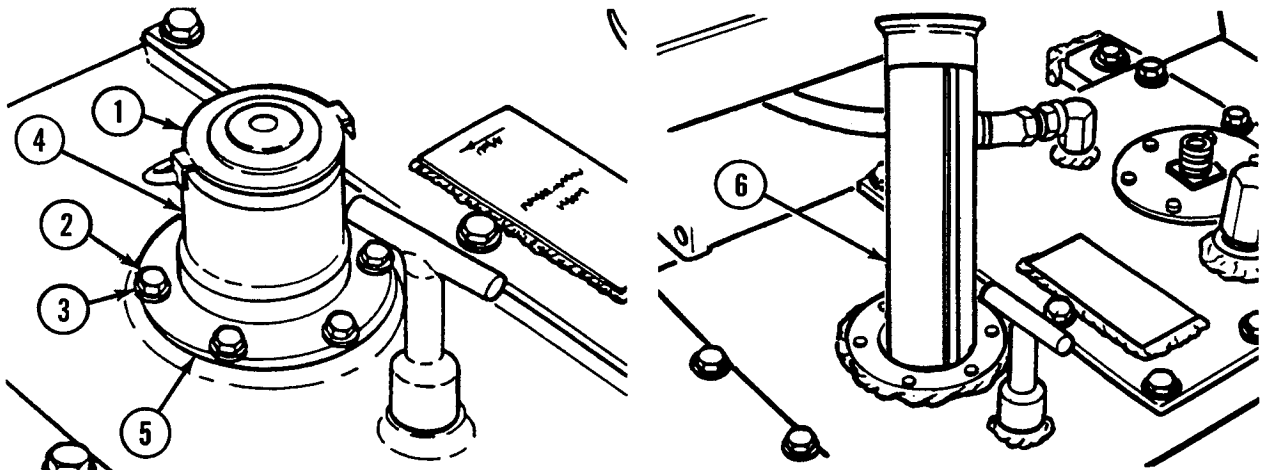
Screws (6) (item 373, WP 0491 00)

Equipment Condition

Rear intermediate right access floor plate removed (see WP 0295 00)

Removal

1. Remove filler cap (1).
2. Remove six screws (2) and six lockwashers (3).
3. Remove filler neck (4), gasket (5), and filter (6).
4. Discard gasket (5) and filter (6).

**Installation**

1. Install filter (6), gasket (5), and filler neck (4).
2. Install six lockwashers (3) and six screws (2).
3. Install filler cap (1).

NOTE

Follow-on maintenance: Install rear intermediate right access floor plate (see WP 0295 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

OIL TEMPERATURE TRANSMITTER AND SWITCH HOUSING ASSEMBLY MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Gasket (item 237, WP 0491 00)

Gasket (item 342, WP 0491 00)

Lockwashers (6) (item 638, WP 0491 00)

Materials/Parts (cont.)

Screws (6) (item 372, WP 0491 00)

Screws (4) (item 583, WP 0491 00)

Equipment Condition

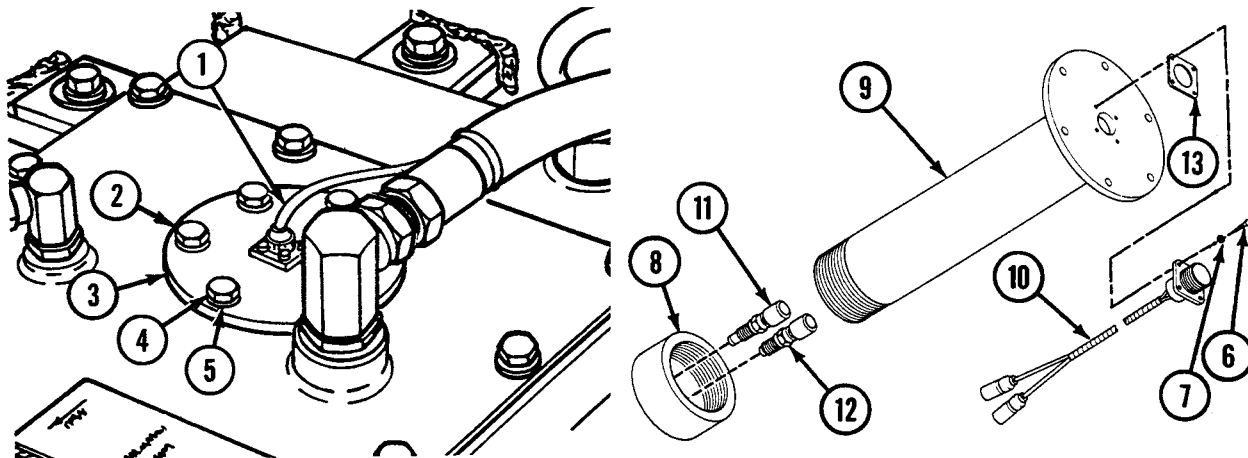
Rear intermediate right access floor plate removed (see WP 0295 00)

Removal

1. Disconnect harness assembly (1), and remove housing assembly (2) and gasket (3) by removing six screws (4) and six lockwashers (5). Discard gasket.

Disassembly

1. Remove four screws (6) and four lockwashers (7).
2. Unscrew cap (8) and remove from cover (9).
3. Disconnect harness assembly (10), connector (wire number 664) from transmitter (11), and connector (wire number 663) from switch (12).
4. Unscrew and remove transmitter (11) and switch (12) from cap (8).
5. Remove harness assembly (10) and gasket (13) from cover (9). Discard gasket.

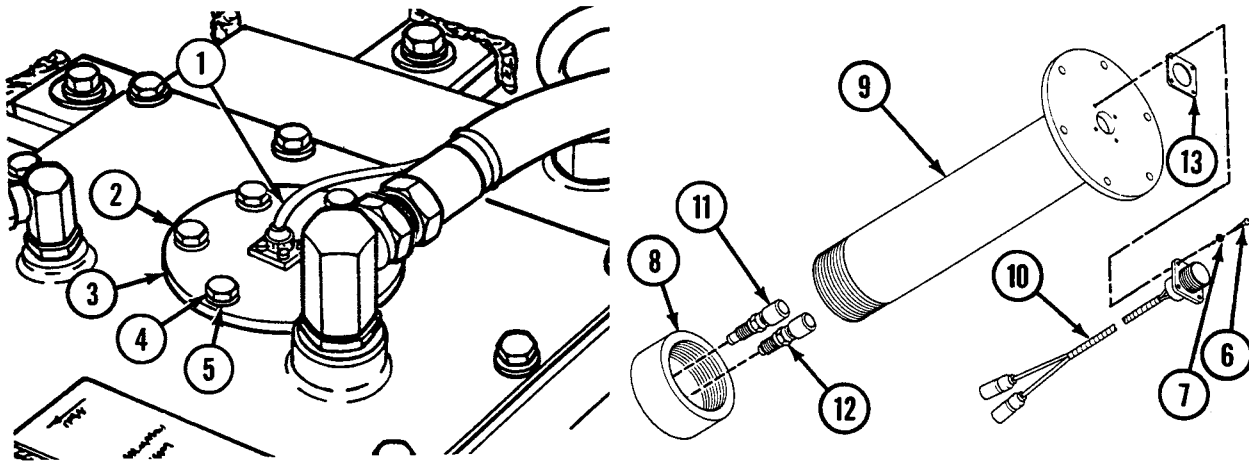


Assembly

1. Place harness assembly (10) and gasket (13) in cover (9).
2. Install transmitter (11) and switch (12) on cap (8).
3. Connect harness assembly (10), connector (wire number 664) to transmitter (11), and connector (wire number 663) to switch (12).
4. Screw cap (8) on cover (9).
5. Secure harness assembly (10) and gasket (13) to cover (9) with four screws (6) and four lockwashers (7).

Installation

1. Install harness assembly (1), housing assembly (2), and gasket (3) to tank with six screws (4) and six lockwashers (5).

**NOTE**

Follow-on maintenance: Install rear intermediate right access floor plate (see WP 0295 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
MECHANICAL TRANSMISSION ID PLATE REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

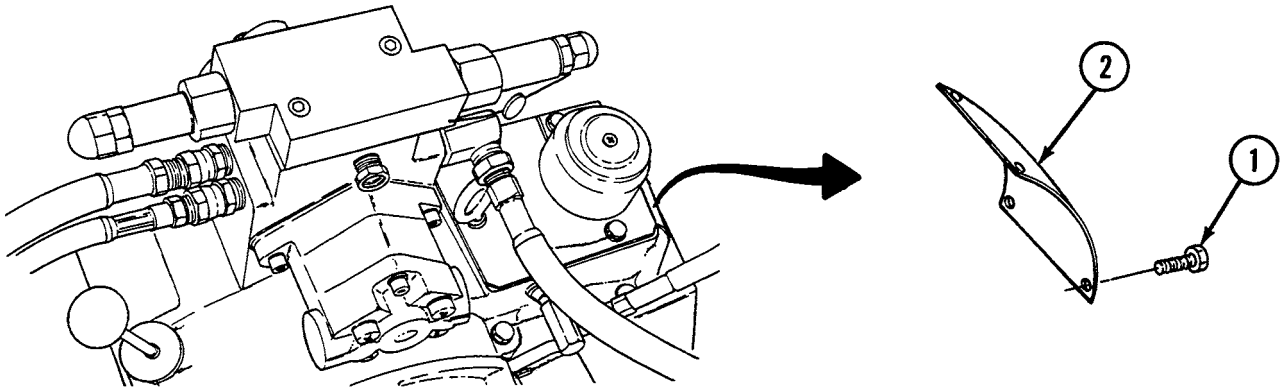
Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Drivescrews (4) (item 505, WP 0491 00)

Removal

1. Remove four drivescrews (1) and plate (2) from mechanical transmission.

**Installation**

1. Install plate (2) and four drivescrews (1) to mechanical transmission.

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

MECHANICAL TRANSMISSION BREATHER AND OIL LEVEL GAGE MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

Rear center floor plate removed (see WP 0297 00)

Materials/Parts

Eyebolt (item 112, WP 0491 00)

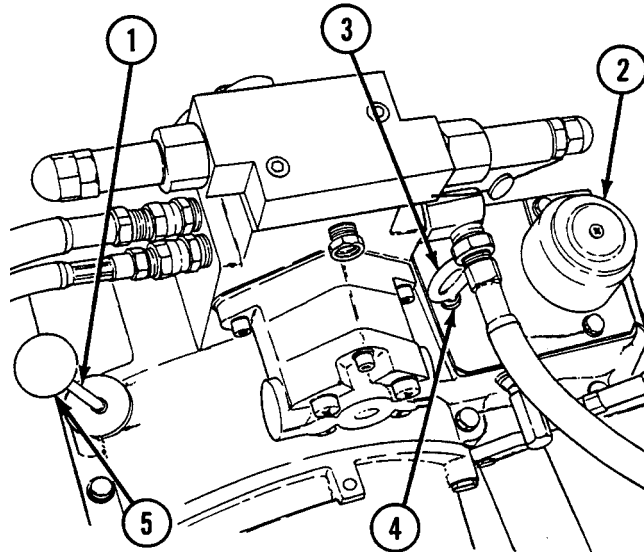
Lockwasher (item 640, WP 0491 00)

Removal

1. Remove oil level gage (1).
2. Turn and remove breather (2).
3. Turn and remove eyebolt (3) and lockwasher (4).

Disassembly

1. Remove knob (5) from oil level gage (1).

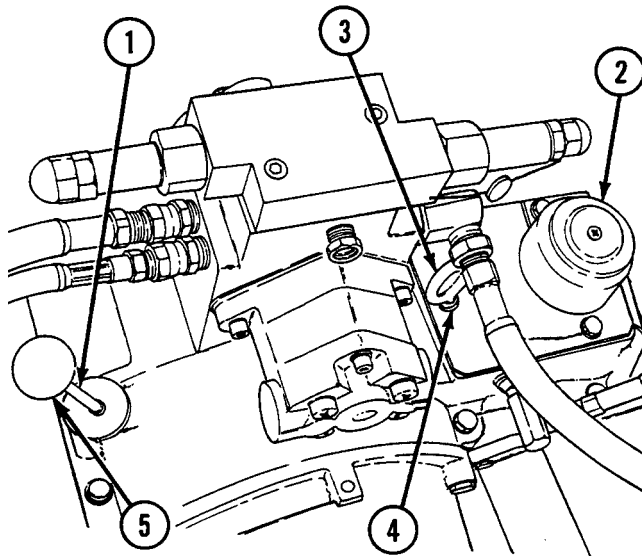


Assembly

1. Install knob (5) to oil level gage (1).

Installation

1. Install eyebolt (3) and lockwasher (4).
2. Clean and dry breather (2) and install.
3. Install oil level gage (1).

**NOTE**

Follow-on maintenance: Install rear center floor plate (see WP 0297 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**SPADE RELEASE AND LUBRICATION LINE (HYDRAULIC SPADE RELEASE) REPLACEMENT
 REMOVAL, INSTALLATION**

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

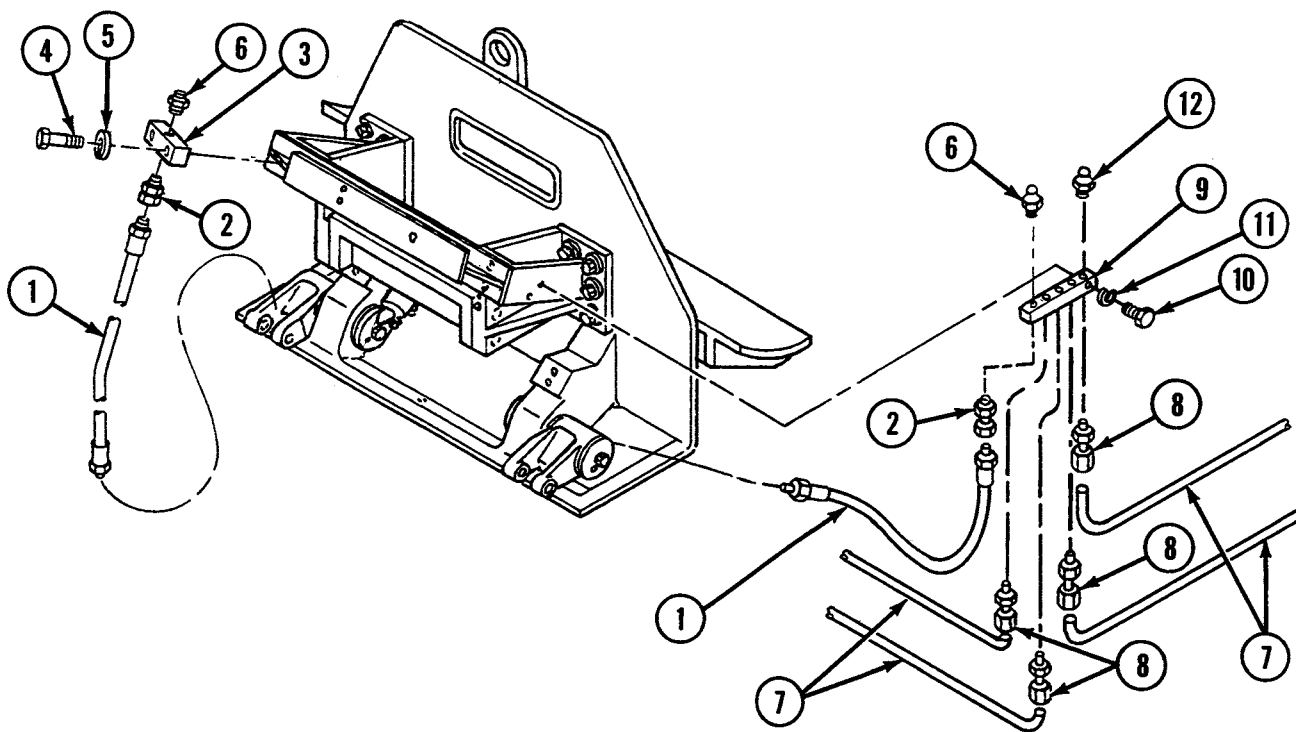
Materials/Parts

Lockwashers (4) (item 638, WP 0491 00)

Screws (4) (item 808, WP 0491 00)

Removal

1. Disconnect and remove two hoses (1) and remove coupling (2) from connector (3) end of each hose.
2. Remove connector (3) by removing two screws (4), two lockwashers (5), and two lubrication fittings (6).
3. Disconnect four hoses (7) and remove four couplings (8) from connector (9) end of hoses.
4. Remove connector (9) by removing two screws (10), two lockwashers (11), and four lubrication fittings (12) in connector.

**Installation**

1. Install connector (9) with two screws (10), two lockwashers (11), and four lubrication fittings (12) in connector.
2. Install four couplings (8) to four hoses (7) and connect to connector (9) end of hoses.
3. Install connector (3) with two screws (4), two lockwashers (5), and two lubrication fittings (6).
4. Install two hoses (1) and coupling (2) to connector (3) end of each hose.

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**SPADE CABLE LUBRICATION LINE (MANUAL SPADE RELEASE) REPLACEMENT
 REMOVAL, INSTALLATION**

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

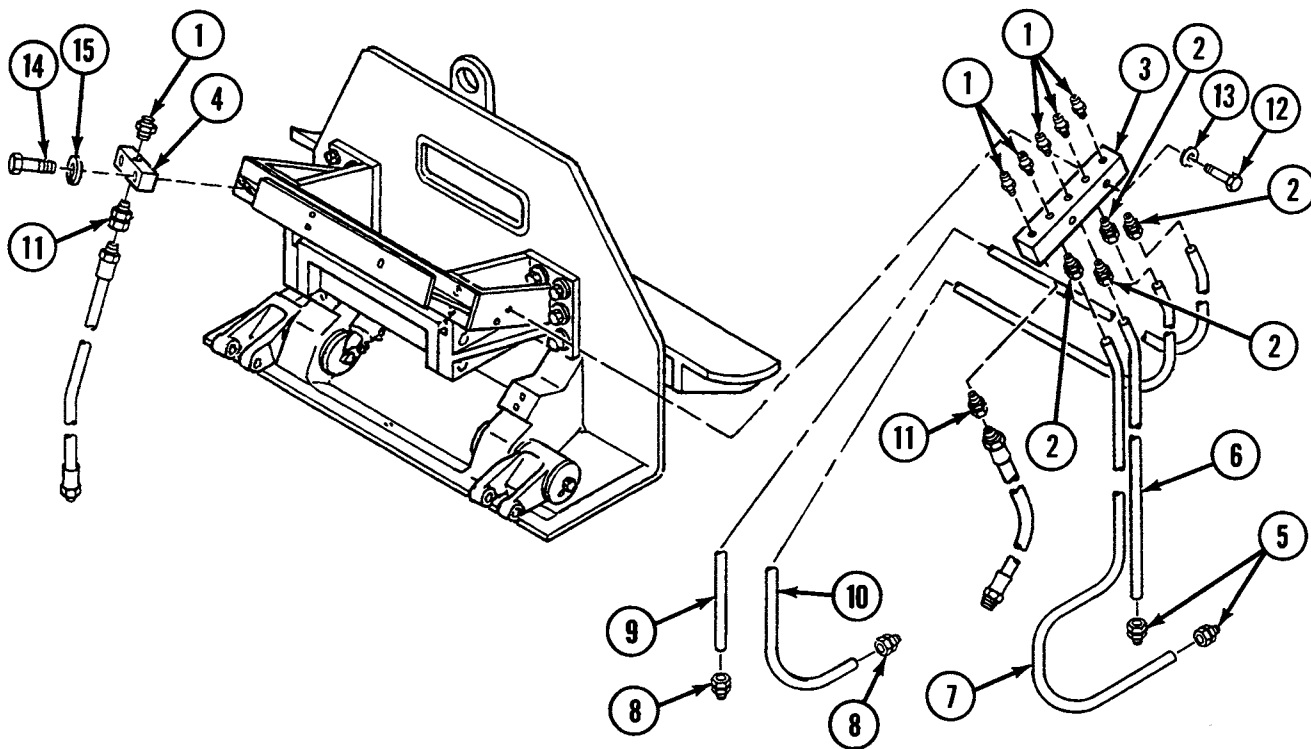
Materials/Parts

Lockwashers (4) (item 638, WP 0491 00)

Screws (4) (item 808, WP 0491 00)

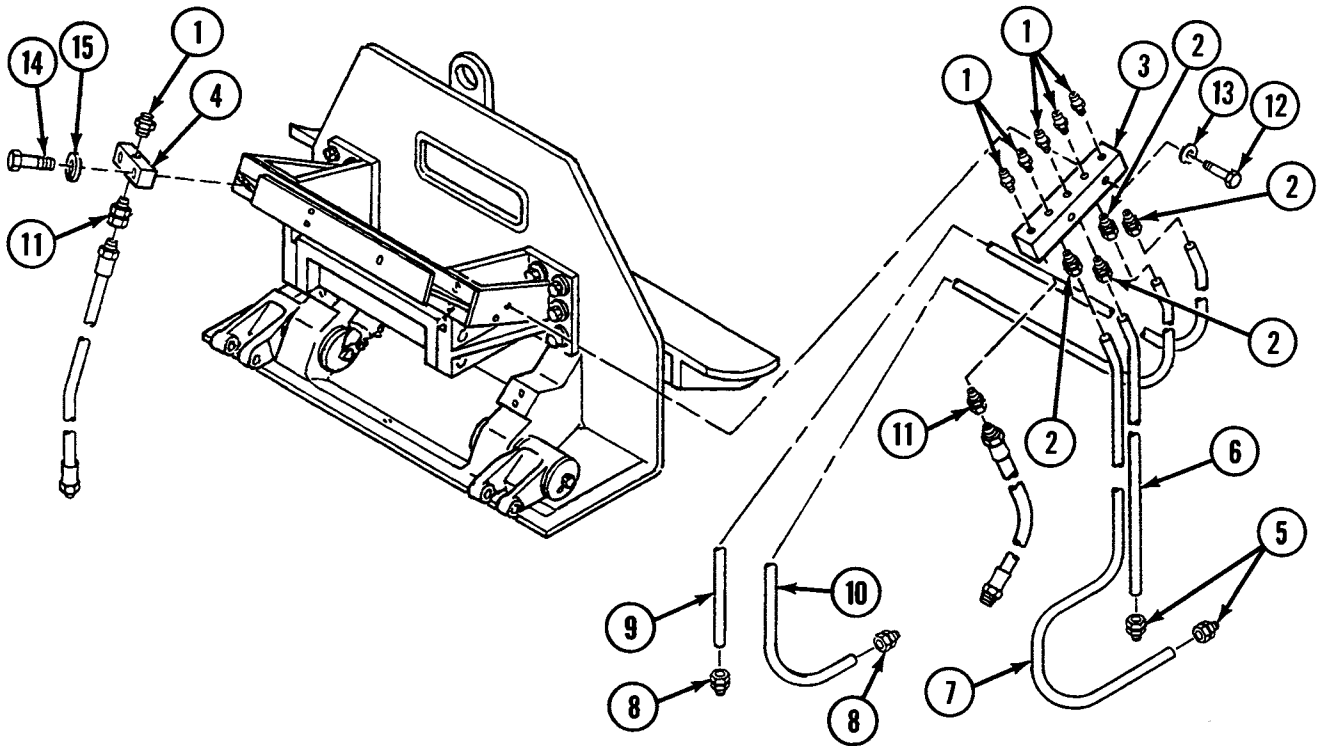
Removal

1. Remove six fittings (1) and four adapters (2) from connectors (3 and 4).
2. Remove two adapters (5) from tubes (6 and 7).
3. Remove two adapters (8) from tubes (9 and 10).
4. Remove two couplings (11) from connectors (3 and 4).
5. Remove connector (3) by removing two screws (12) and two lockwashers (13).
6. Remove connector (4) by removing two screws (14) and two lockwashers (15).



Installation

1. Install connector (4) by installing two lockwashers (15) and two screws (14).
2. Install connector (3) by installing two lockwashers (13) and two screws (12).
3. Install couplings (11) into connectors (3 and 4).
4. Install two adapters (8) onto tubes (9 and 10).
5. Install two adapters (5) onto tubes (6 and 7).
6. Install four adapters (2) and six fittings (1) to connectors (3 and 4).



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
SPADE RELEASE LUBRICATION FITTING REPLACEMENT
REMOVAL, INSTALLATION

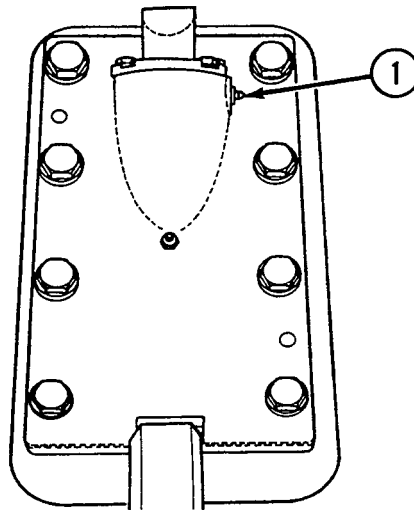
INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Removal

1. Remove lubrication fitting (1).



Installation

1. Install lubrication fitting (1).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**SPADE CYLINDER HOSES REPLACEMENT
REMOVAL, INSTALLATION**

INITIAL SETUP:

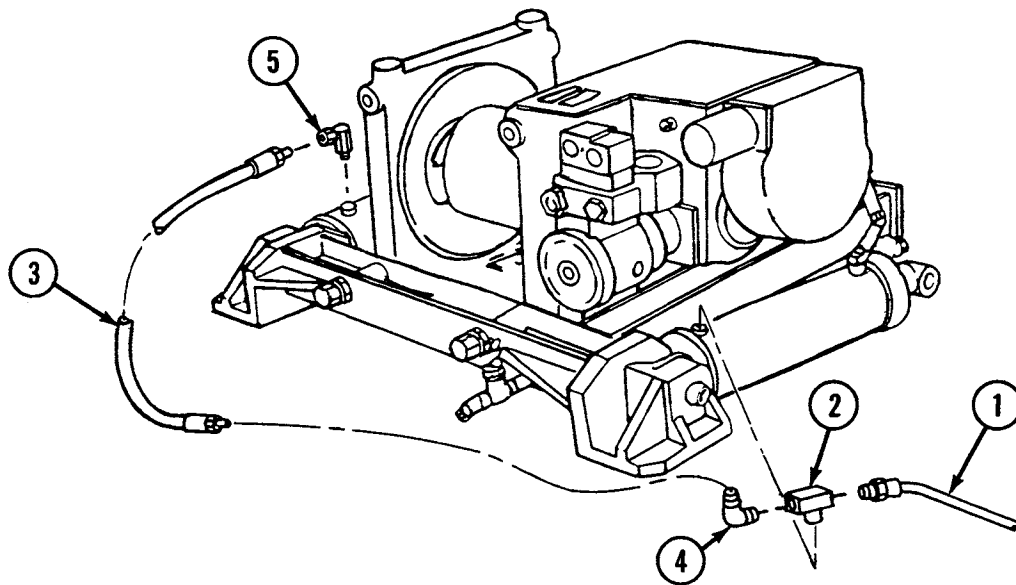
Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

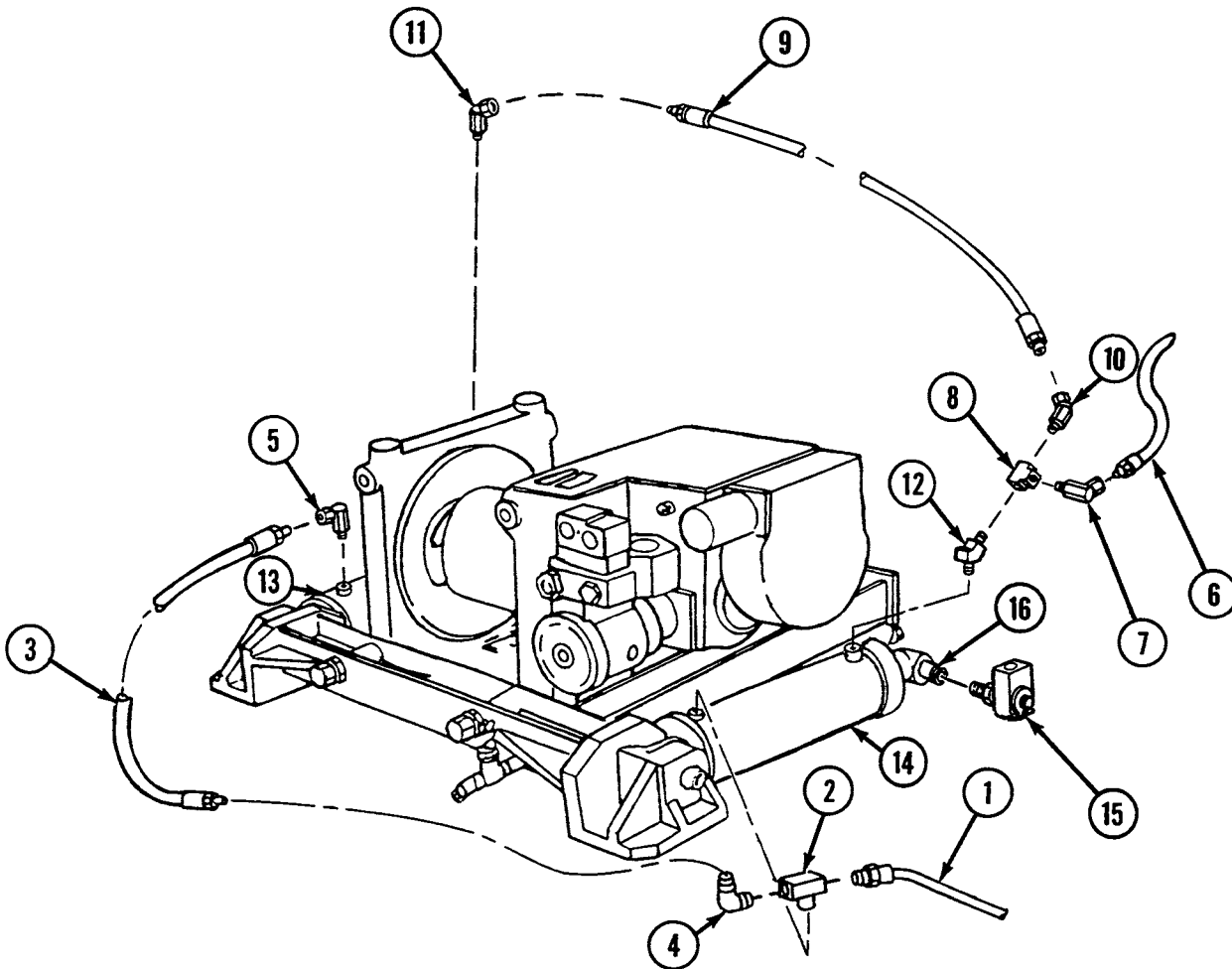
Pliers, snap ring (item 35, WP 0490 00)

Removal

1. Disconnect hose (1) from tee (2).
2. Remove hose (3) from elbows (4 and 5).
3. Remove elbow (4) from tee (2).

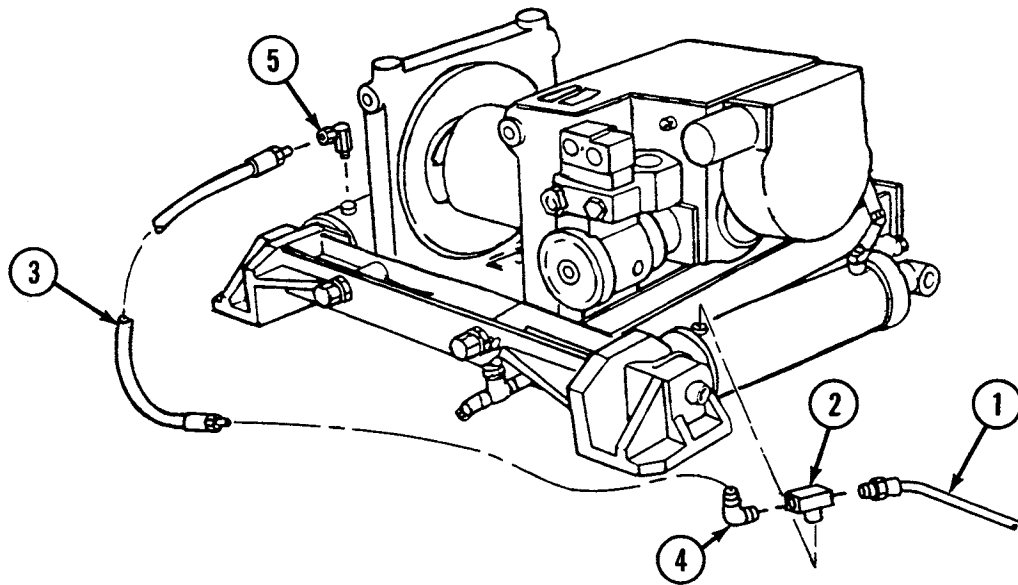


4. Disconnect hose (6) from elbow (7).
5. Remove elbow (7) from tee (8).
6. Disconnect hose (9) from elbows (10 and 11).
7. Remove elbow (10) from tee (8).
8. Remove tee (8) from elbow (12).
9. Remove elbows (11 and 12) from cylinders (13 and 14).
10. Remove elbow (5) and tee (2) from cylinders (13 and 14).
11. Remove two fittings (15) from shaft (16).



Installation

1. Install two fittings (15) to shaft (16).
2. Install elbow (5) and tee (2) to cylinders (13 and 14).
3. Install elbows (11 and 12) to cylinders (13 and 14).
4. Install tee (8) to elbow (12).
5. Install elbow (10) to tee (8).
6. Install hose (9) to elbows (10 and 11).
7. Install elbow (7) to tee (8).
8. Install hose (6) to elbow (7).
9. Install elbow (4) to tee (2).
10. Install hose (3) to elbows (4 and 5).
11. Install hose (1) to tee (2).

**END OF WORK PACKAGE**

CHAPTER 14
UNIT MAINTENANCE
MAINTENANCE INSTRUCTIONS
FOR
AUXILIARY POWER UNIT (APU)
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
(NSN: 2350-00-122-6826)

CHAPTER 14
UNIT MAINTENANCE
MAINTENANCE INSTRUCTIONS

WORK PACKAGE INDEX

<u>Title</u>	<u>WP Sequence No.</u>
APU Pressure Switch Assembly Replacement Removal, Installation.....	0432 00
Engine Air Cleaner, Filter, and Air Intake Tubes Maintenance Removal, Service, Installation.....	0433 00
APU Cooling Air Exhaust Replacement Removal, Installation.....	0434 00
APU Engine Crankcase Fill-and-Level ID Plate Replacement Removal, Installation.....	0435 00
APU Engine Fuel Filters Replacement Removal, Installation.....	0436 00
APU Engine Oil Filter Replacement Removal, Installation.....	0437 00
APU Control Box Maintenance Removal, Disassembly, Assembly, Installation.....	0438 00

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

APU PRESSURE SWITCH ASSEMBLY REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

References

TM 9-2350-256-10

Materials/Parts

Lockwashers (4) (item 638, WP 0491 00)

Screws (4) (item 778, WP 0491 00)

Equipment Condition

Center front air inlet grilles removed (see WP 0342 00)

WARNING

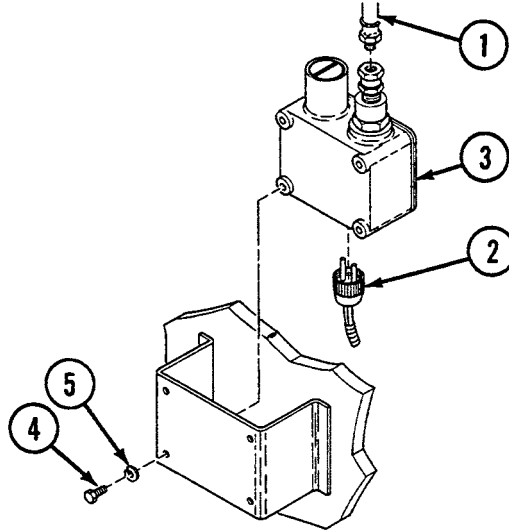
Unless the APU access door is properly secured by a strap, the access door can swing shut and injure personnel working on the unit, especially if the spare roadwheel is mounted in place on the hull. To secure the door, refer to TM 9-2350-256-10. The strap is routed through the lower access door ring handle and stowed roadwheel hub, and tied to secure the door in the open position.

WARNING

Do not attempt to loosen, tighten, or remove hydraulic fittings or lines when system is pressurized.

Removal

1. Disconnect hose (1).
2. Disconnect electrical connection (2).
3. Remove pressure switch assembly (3) by removing four screws (4) and four lockwashers (5).

**Installation**

1. Install pressure switch assembly (3) with four screws (4) and four lockwashers (5).
2. Connect electrical connection (2).
3. Connect hose (1).

NOTE

Follow-on maintenance: Install center front air inlet grilles (see WP 0342 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
ENGINE AIR CLEANER, FILTER, AND AIR INTAKE TUBES MAINTENANCE
REMOVAL, SERVICE, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

References

TM 9-2350-256-10
 WP 0334 00

Materials/Parts

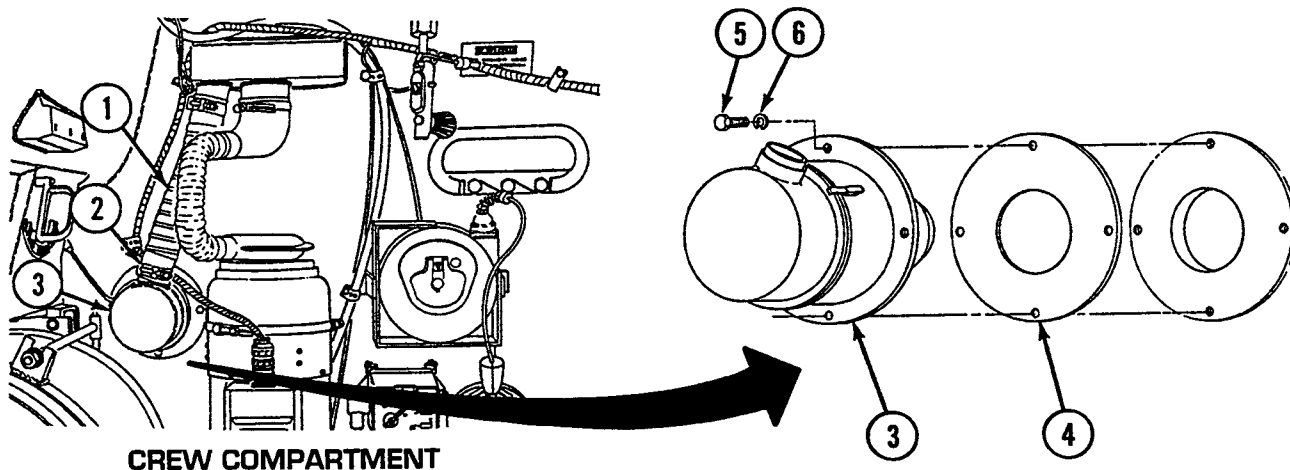
Gasket (item 40, WP 0491 00)
 Lockwashers (4) (item 640, WP 0491 00)
 Screws (4) (item 721, WP 0491 00)

WARNING

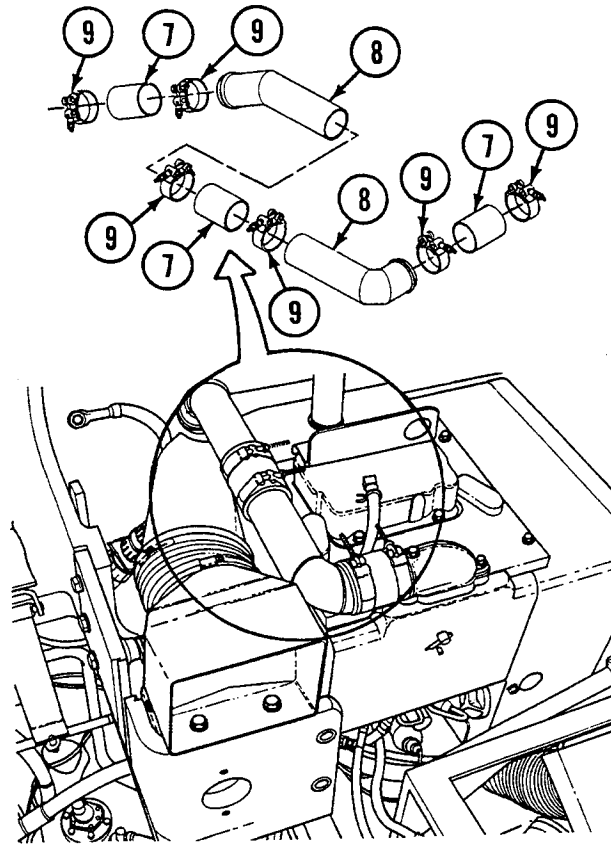
Unless the APU access door is properly secured by a strap, the access door can swing shut and injure personnel working on the unit, especially if the spare roadwheel is mounted in place on the hull. To secure the door, refer to TM 9-2350-256-10. The strap is routed through the lower access door ring handle and stowed roadwheel hub, and tied to secure the door in the open position.

Removal

1. Remove air intake tube (1) by loosening two clamps (2).
2. Remove APU air cleaner (3) and gasket (4) by removing four screws (5) and four lockwashers (6).



3. Remove APU access cover (see WP 0334 00).
4. Remove three hoses (7) and two tubes (8) by loosening six clamps (9).

**APU COMPARTMENT**

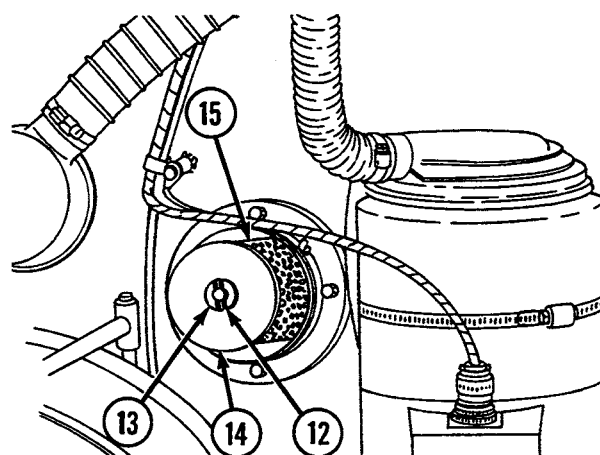
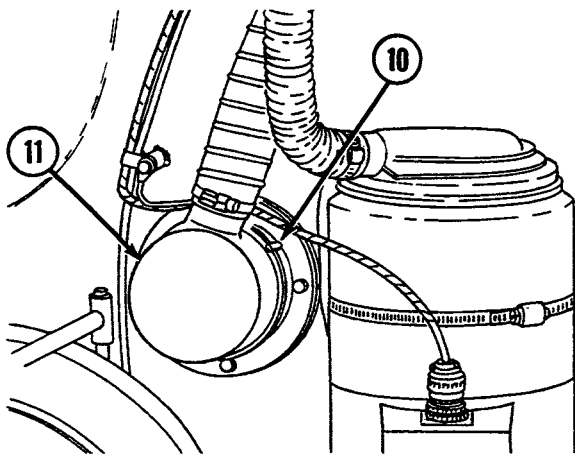
Servicing

1. Release two latches (10) and remove cover (11).

NOTE

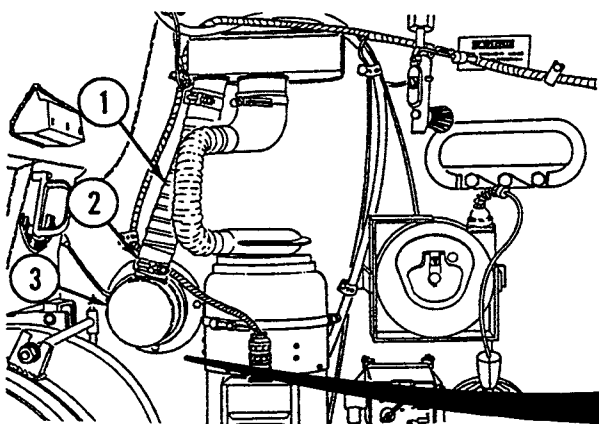
Refer to TM 9-2350-256-10 for service instructions of filter element.

2. Remove wing nut (12), washer (13), plate (14), and filter element (15).

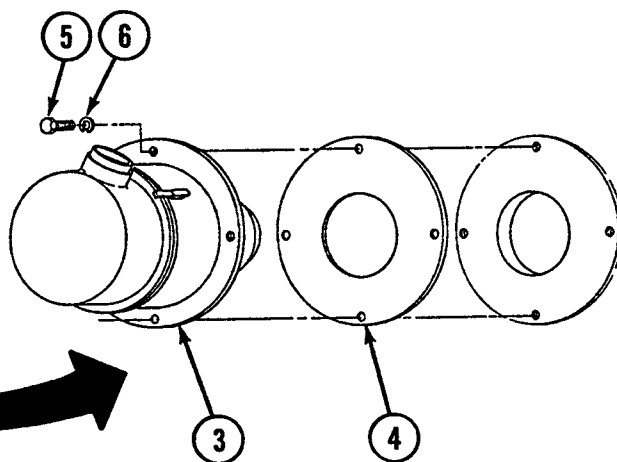


Installation

1. Install three hoses (7) and two tubes (8) with six clamps (9).
2. Install APU access cover (see WP 0334 00).
3. Install APU air cleaner (3) and gasket (4) with four screws (5) and four lockwashers (6).
4. Install air intake tube (1) with two clamps (2).



CREW COMPARTMENT



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

APU COOLING AIR EXHAUST REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Equipment Condition

APU access cover removed (see WP 0334 00)

Materials/Parts

Lockwashers (3) (item 623, WP 0491 00)

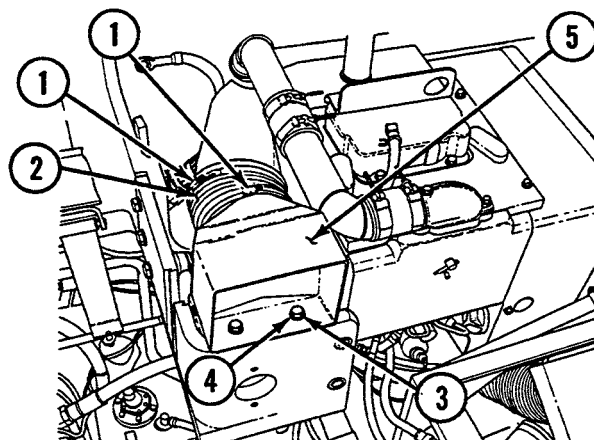
Screws (3) (item 396, WP 0491 00)

WARNING

Unless the APU access door is properly secured by a strap, the access door can swing shut and injure personnel working on the unit, especially if the spare roadwheel is mounted in place on the hull. To secure the door, refer to TM 9-2350-256-10. The strap is routed through the lower access door ring handle and stowed roadwheel hub, and tied to secure the door in the open position.

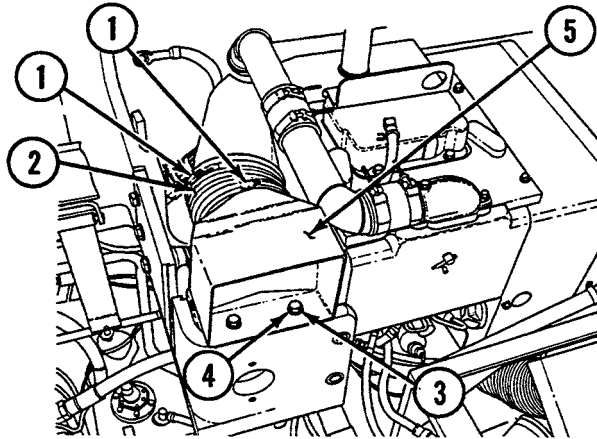
Removal

1. Loosen two clamps (1).
2. Remove APU cooling air exhaust (2) by removing three screws (3) and three lockwashers (4).
3. Remove duct (5) and two clamps (1).



Installation

1. Install duct (5) and two clamps (1).
2. Install APU cooling air exhaust (2) with three screws (3) and three lockwashers (4).
3. Tighten two clamps (1).

**NOTE**

Follow-on maintenance: Install APU access cover (see WP 0334 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
APU ENGINE CRANKCASE FILL-AND-LEVEL ID PLATE REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Toolkit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

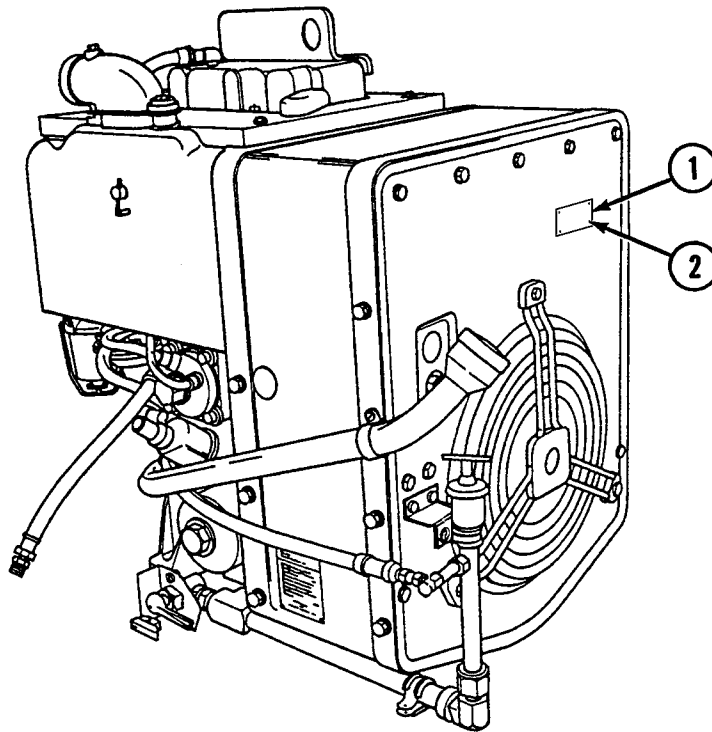
Drivescrews (4) (item 501, WP 0491 00)

WARNING

Unless the APU access door is properly secured by a strap, the access door can swing shut and injure personnel working on the unit, especially if the spare roadwheel is mounted in place on the hull. To secure the door, refer to TM 9-2350-256-10. The strap is routed through the lower access door ring handle and stowed roadwheel hub, and tied to secure the door in the open position.

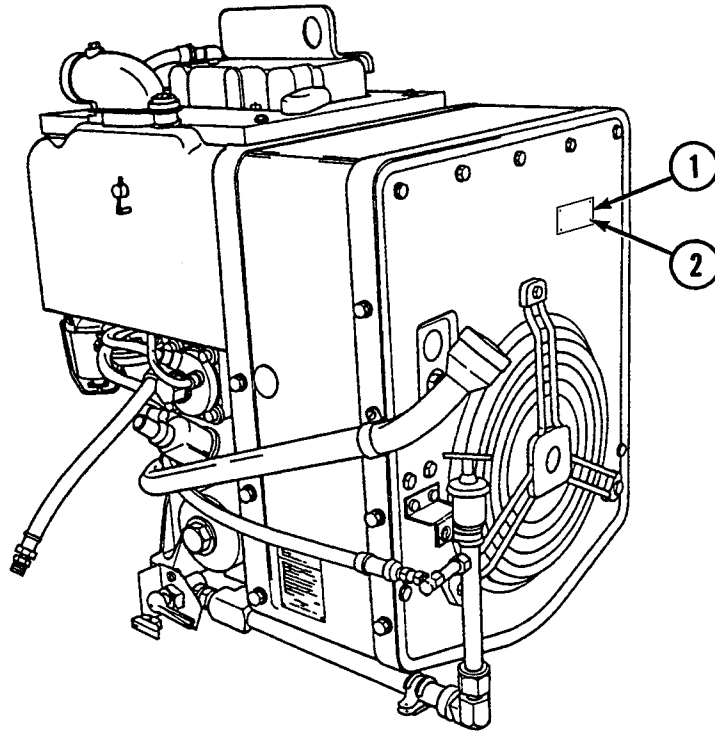
Removal

1. Remove APU engine crankcase-fill-and-level ID plate (1) by removing four drivescrews (2).



Installation

1. Install APU engine crankcase-fill-and-level ID plate (1) with four drivescrews (2).

**END OF WORK PACKAGE**

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

APU ENGINE FUEL FILTERS REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Drivescrews (4) (item 501, WP 0491 00)
 Filter, fuel (item 106, WP 0491 00)
 Filter, fuel (item 847, WP 0491 00)
 Lockwashers (3) (item 620, WP 0491 00)
 Lockwashers (3) (item 622, WP 0491 00)
 Nuts (3) (item 672, WP 0491 00)
 Screw (item 290, WP 0491 00)
 Screw (item 291, WP 0491 00)

Materials/Parts (cont.)

Screws (3) (item 779, WP 0491 00)
 Screw (item 832, WP 0491 00)
 Washer, flat (item 86, WP 0491 00)
 Washer, flat (item 167, WP 0491 00)
 Washer, flat (item 168, WP 0491 00)

References

TM 9-2350-256-20P

Equipment Condition

Left front air inlet grille doors opened (see WP 0342 00)

WARNING

Unless the APU access door is properly secured by a strap, the access door can swing shut and injure personnel working on the unit, especially if the spare roadwheel is mounted in place on the hull. To secure the door, refer to TM 9-2350-256-10. The strap is routed through the lower access door ring handle and stowed roadwheel hub, and tied to secure the door in the open position.

Removal

1. Remove clamp (1) from fuel line (2) by removing nut (3), lockwasher (4), flat washer (5), and screw (6).
2. Remove U-bolt (7) from fuel line (8) by removing two nuts (9) and two lockwashers (10).
3. Disconnect fuel lines (2 and 8) from the APU engine fuel filter fittings (11).

NOTE

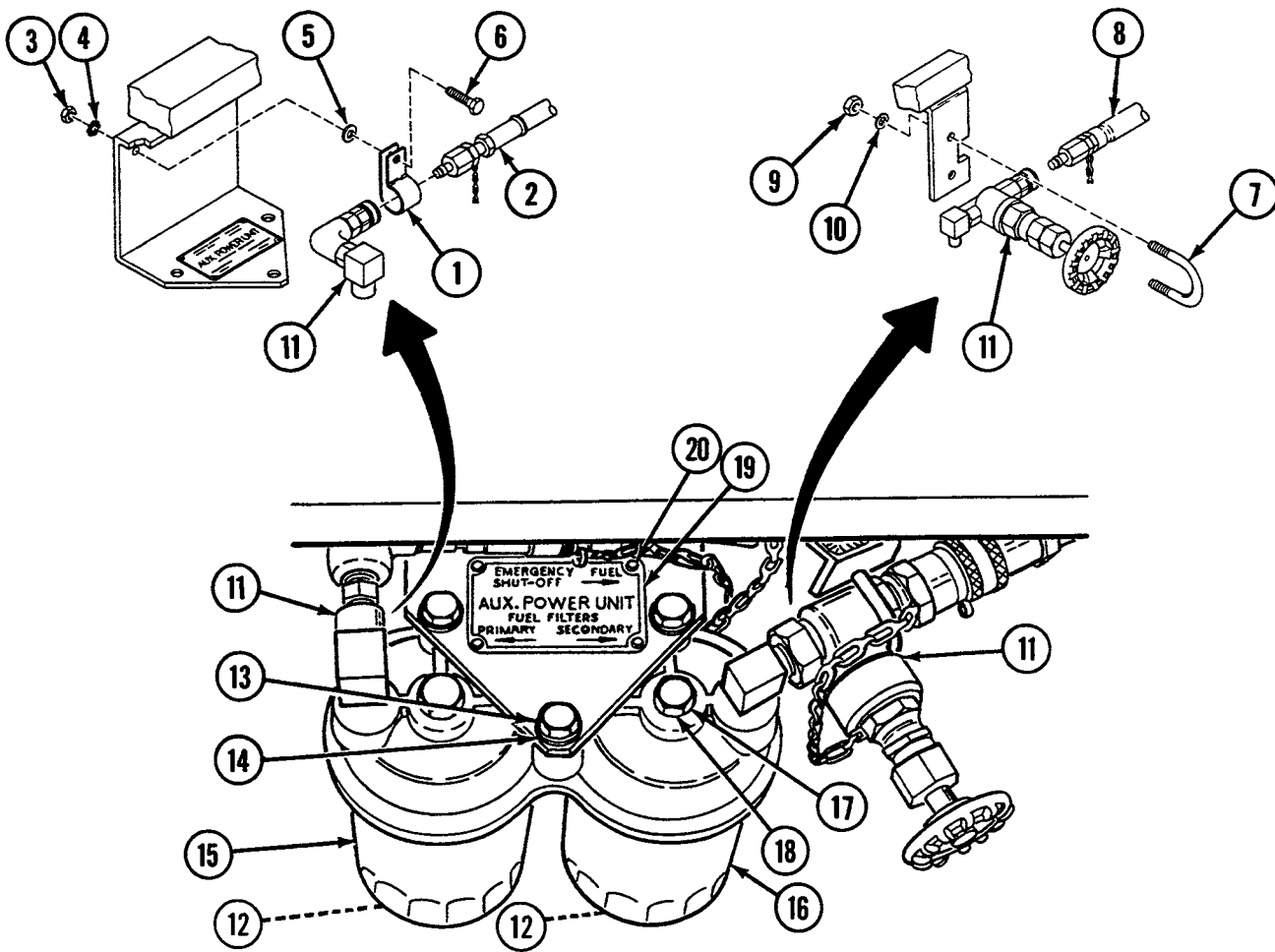
Open drain cocks (12) on bottom of each filter and drain before removal of filters.

4. Remove APU engine fuel filters and fittings (11) by removing three screws (13) and three lockwashers (14).
5. Remove primary fuel filter (15) and secondary fuel filter (16) by removing from each one screw (17) and one flat washer (18).

NOTE

Remove ID plate (19) only if required.

6. Remove ID plate (19) by removing four drivescrews (20).



Installation**CAUTION**

Use of replacement filters other than those specified in TM 9-2350-256-20P will cause damage to the APU engine.

1. Install ID plate (19) with four drivescrews (20).

NOTE

When replacing fuel filters (15 and 16), remove plug from bottom of filter and install drain cock (12) from old filter.

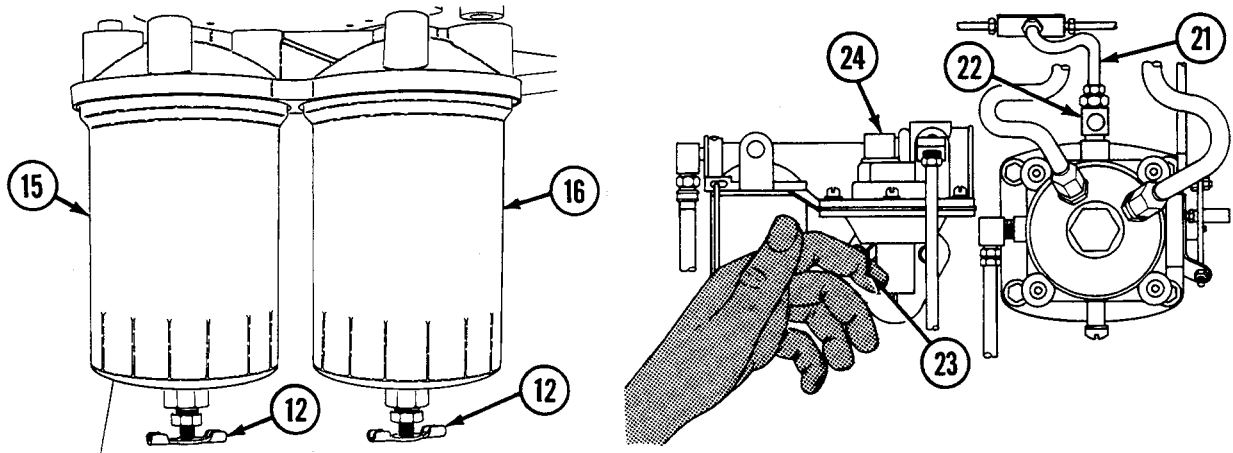
2. Install primary fuel filter (15) and secondary fuel filter (16) each with one screw (17) and one flat washer (18).
3. Install APU engine fuel filters and fittings (11) with three screws (13) and three lockwashers (14).
4. Connect fuel line (2) on primary fuel filter (15) and fuel line (8) on secondary fuel filter (16).
5. Install U-bolt (7) over fuel line (8) with two lockwashers (10) and two nuts (9).
6. Install clamp (1) over fuel line (2) with screw (6), flat washer (5), lockwasher (4), and nut (3).
7. Bleed fuel system after installation of fuel filters.

8. Disconnect fuel return line (21) at return line fitting (22).

NOTE

If pump lobe of camshaft is up, crank engine one revolution to permit hand priming.

9. Operate priming lever (23) on fuel transfer pump (24) until no oil bubbles appear in fluid flowing from return line fitting (22).
10. Connect fuel return line (21) to return line fitting (22).
11. Return priming lever (23) to disengaged position for normal operation.



NOTE

Follow-on maintenance: Close left front air inlet grille doors (see WP 0342 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

APU ENGINE OIL FILTER REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0097 00

Materials/Parts

Filter, oil (item 157, WP 0491 00)

Equipment Condition

Left front air inlet grille doors opened (see WP 0342 00)

WARNING

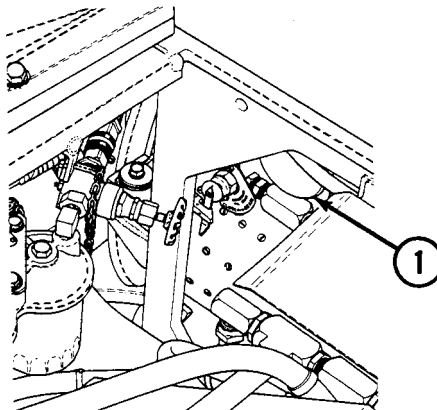
Unless the APU access door is properly secured by a strap, the access door can swing shut and injure personnel working on the unit, especially if the spare roadwheel is mounted in place on the hull. To secure the door, refer to TM 9-2350-256-10. The strap is routed through the lower access door ring handle and stowed roadwheel hub, and tied to secure the door in the open position.

NOTE

Coordinate engine oil filter change with draining of engine crankcase (see WP 0097 00).

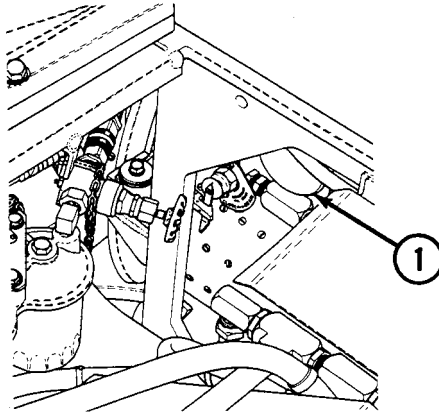
Removal

1. Remove engine oil filter (1) from APU engine.



Installation

1. Install engine oil filter (1) on APU engine.

**NOTE**

Follow-on maintenance: Close left front air inlet grille doors (see WP 0342 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

APU CONTROL BOX MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Drivescrews (4) (item 501, WP 0491 00)
 Lockwashers (6) (item 611, WP 0491 00)
 Lockwashers (4) (item 613, WP 0491 00)
 Lockwashers (4) (item 621, WP 0491 00)
 Lockwashers (16) (item 636, WP 0491 00)
 Lockwashers (2) (item 637, WP 0491 00)
 Lockwashers (4) (item 638, WP 0491 00)
 Nuts (4) (item 671, WP 0491 00)
 Nuts (2) (item 672, WP 0491 00)

Materials/Parts (cont.)

Nuts (6) (item 676, WP 0491 00)
 Nuts (4) (item 763, WP 0491 00)
 Screws (4) (item 370, WP 0491 00)
 Screws (4) (item 374, WP 0491 00)
 Screws (4) (item 575, WP 0491 00)
 Screws (12) (item 576, WP 0491 00)
 Screws (6) (item 588, WP 0491 00)
 Screws (4) (item 778, WP 0491 00)
 Washers, flat (4) (item 547, WP 0491 00)

References

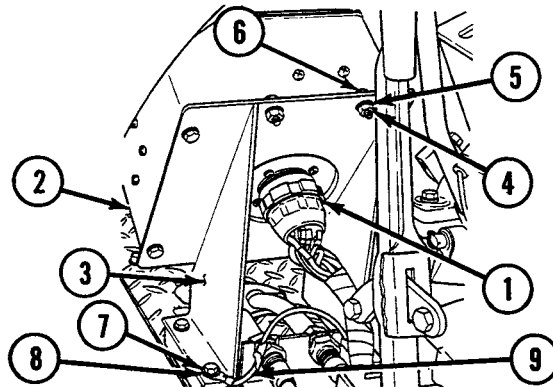
WP 0255 00 thru 0264 00

WARNING

Unless the APU access door is properly secured by a strap, the access door can swing shut and injure personnel working on the unit, especially if the spare roadwheel is mounted in place on the hull. To secure the door, refer to TM 9-2350-256-10. The strap is routed through the lower access door ring handle and stowed roadwheel hub, and tied to secure the door in the open position.

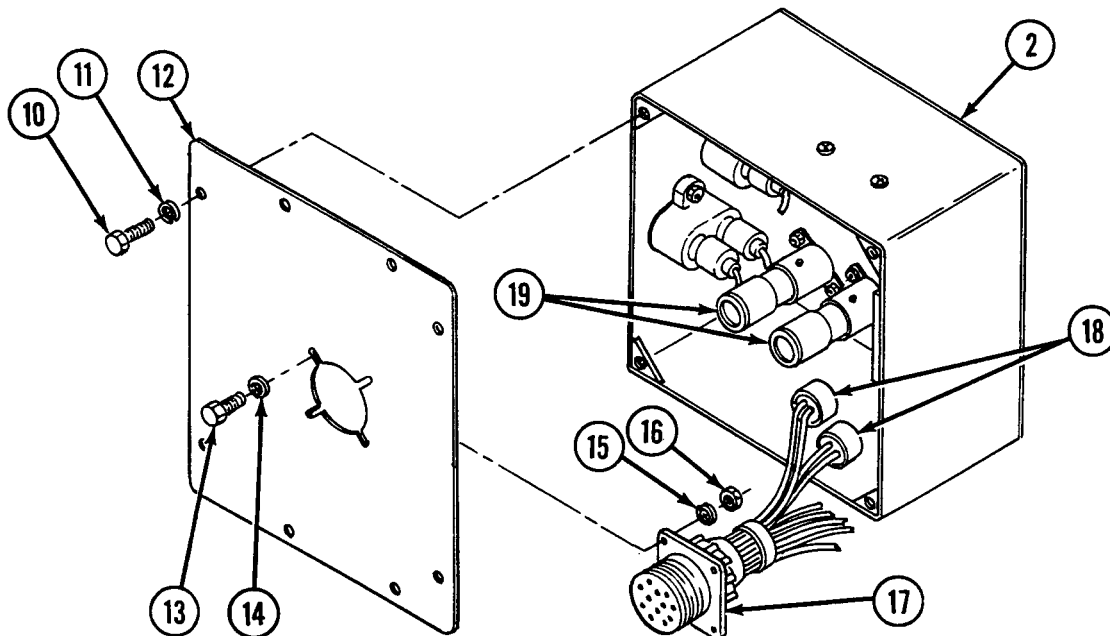
Removal

1. Disconnect cable connector (1) from back of APU control box (2).
2. Remove APU control box (2) from mounting bracket (3) by removing four nuts (4), four lockwashers (5), and four screws (6).
3. Remove mounting bracket (3) by removing four screws (7), four lockwashers (8), and ground strap (9).

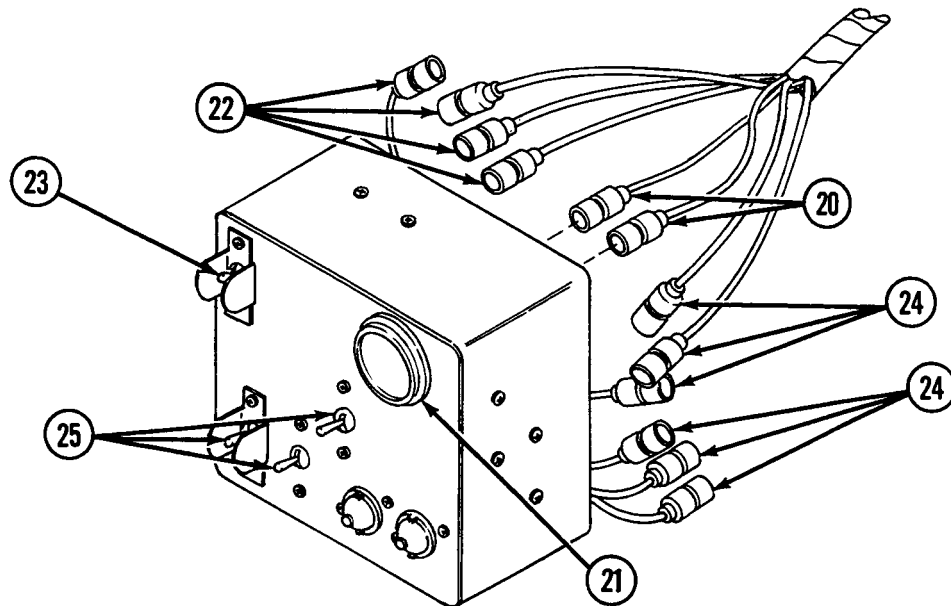


Disassembly

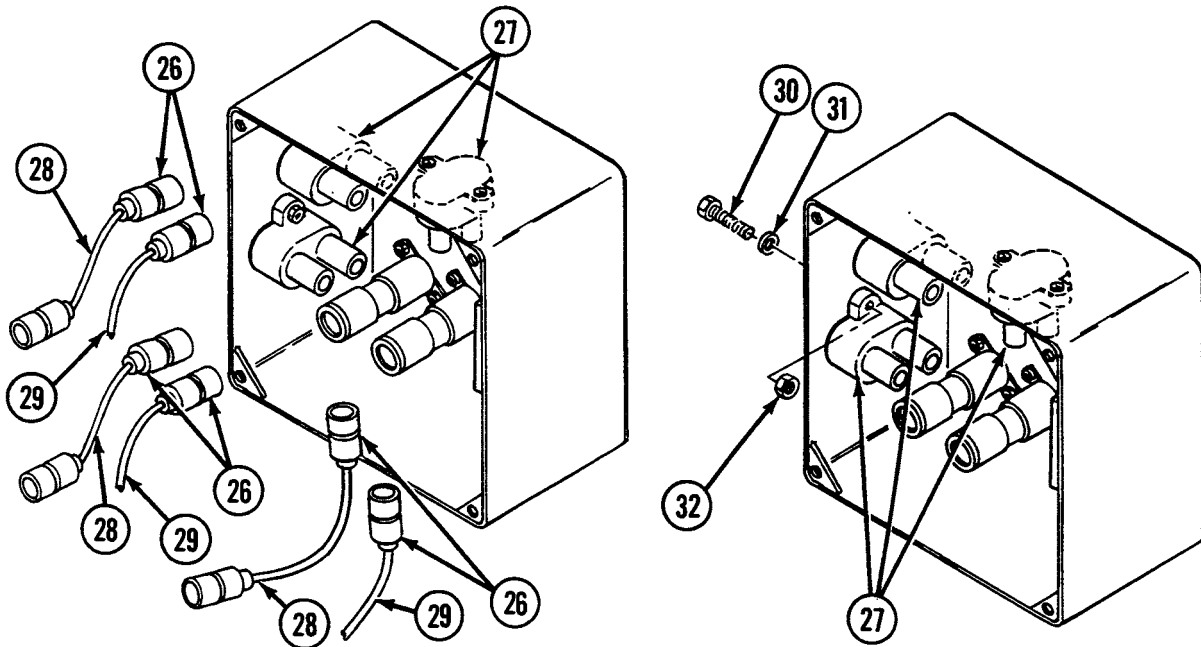
1. Remove four screws (10), four lockwashers (11) and pull rear panel (12) from APU control box (2).
2. Remove four screws (13), four washers (14), four lockwashers (15), four nuts (16), and connector (17) from rear panel (12).
3. Disconnect four connectors (18) from two indicator lights (19).



4. Disconnect two connectors (20) from oil pressure indicator (21).
5. Disconnect four connectors (22) from APU generator switch (23).
6. Disconnect six connectors (24) from three switches (25).



7. Disconnect six connectors (26) from three circuit breakers (27) and remove three lead assemblies (28) and APU control box wiring harness (29).
8. Remove three circuit breakers (27) by removing two screws (30), two lockwashers (31), and two nuts (32) from each.

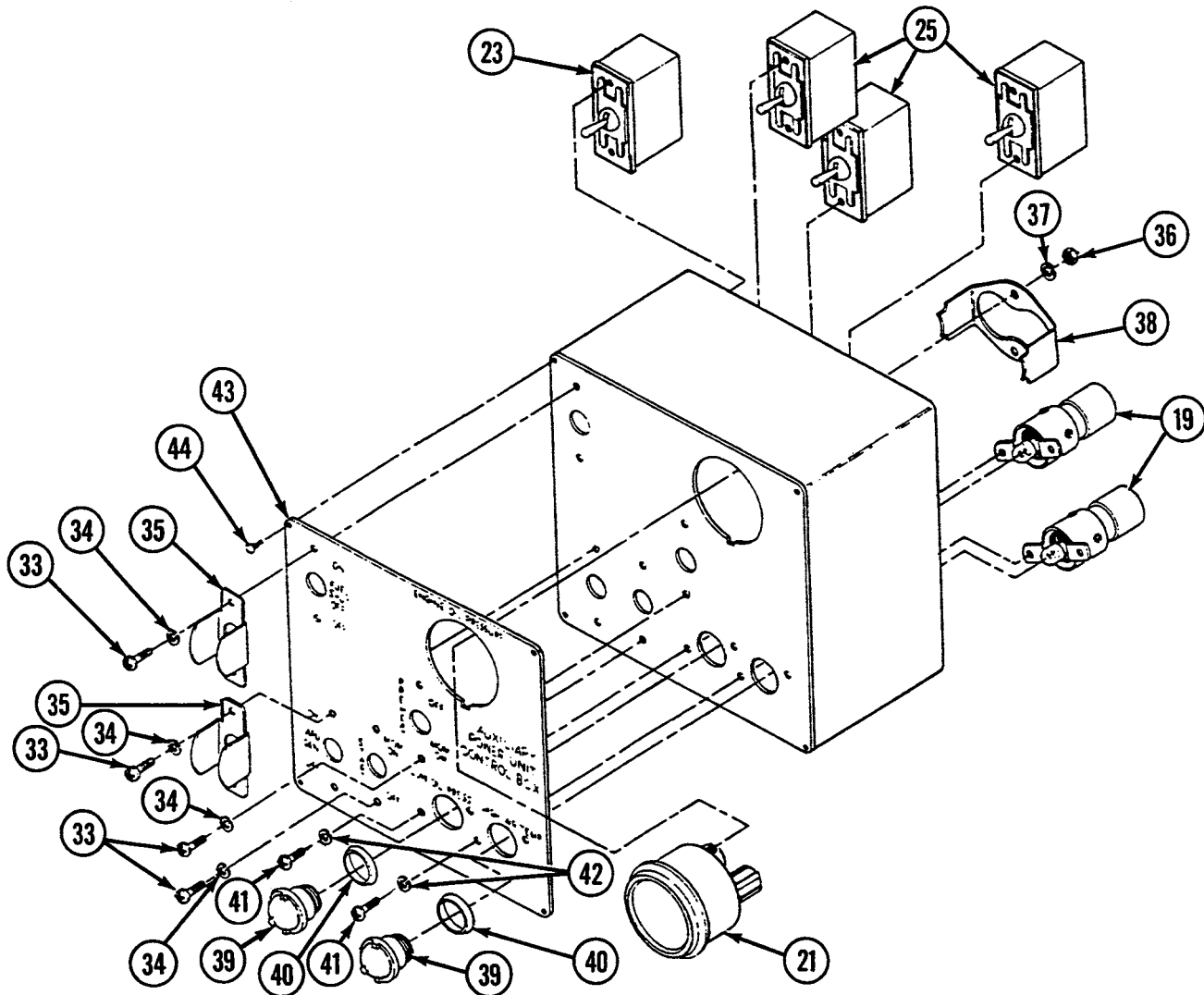


9. Remove APU generator switch (23) and three switches (25) by removing eight screws (33), eight lockwashers (34), and two switch guards (35).
10. Remove oil pressure indicator (21) by removing two nuts (36), two lockwashers (37), and bracket (38).
11. Remove two indicator lights (19) by removing lens (39), gasket (40), two screws (41), and two lockwashers (42) from each.

NOTE

Remove ID plate (43) only if required.

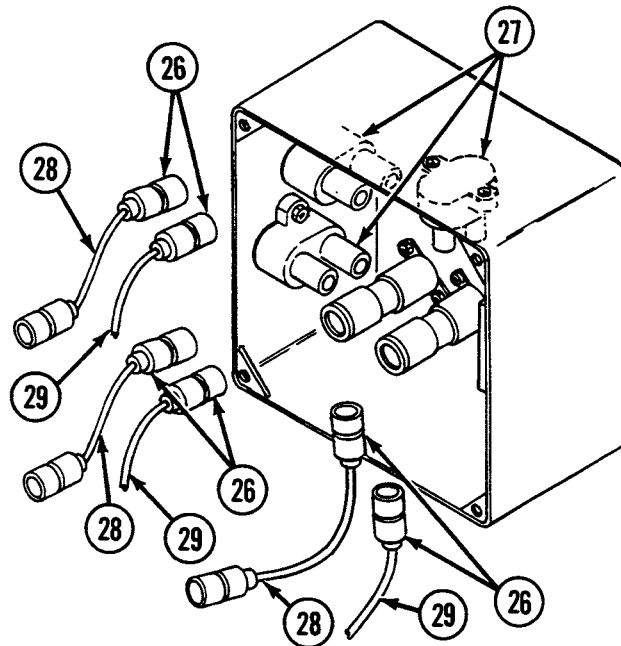
12. Remove control box ID plate (43) by removing four drivescrews (44).



13. Disassemble three lead assemblies (28) and APU control box wiring harness (29) (see WP 0255 thru 0264 00, as necessary).

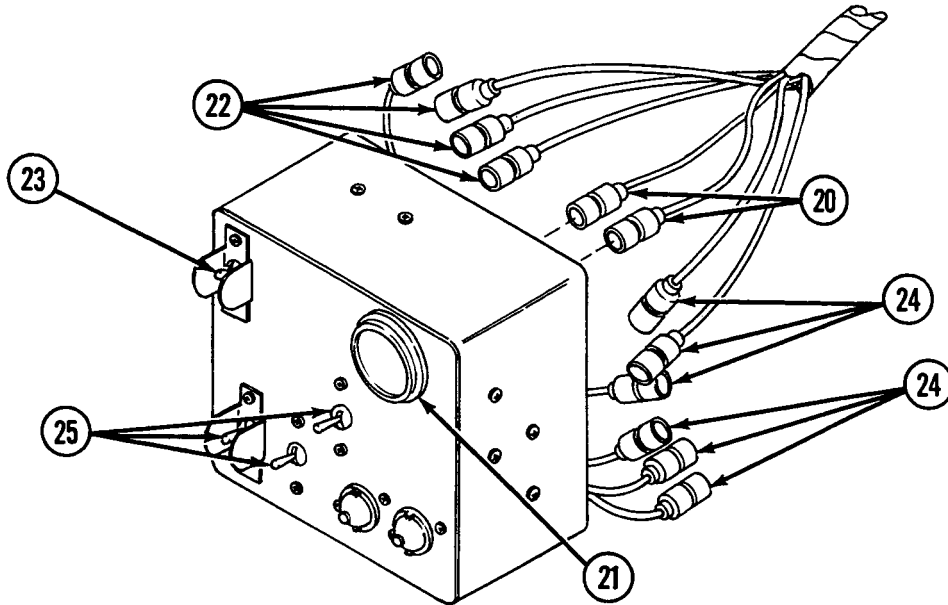
Assembly

1. Assemble three lead assemblies (28) and APU control box wiring harness (29) (see WP 0255 thru 0264 00, as necessary).

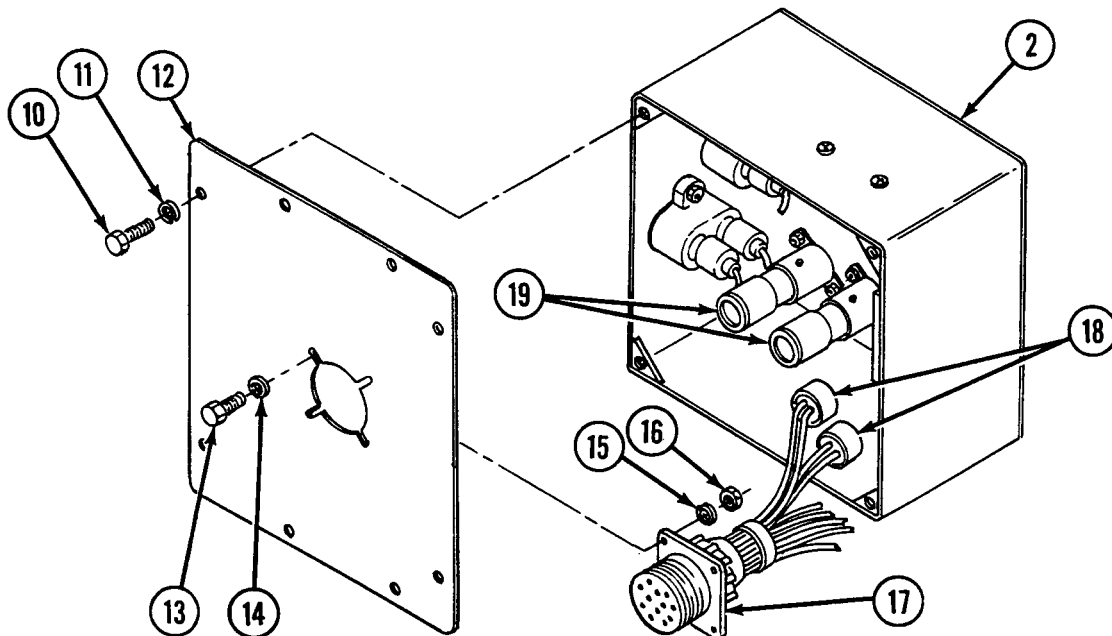


2. Install control box ID plate (43) with four drivescrews (44), if removed.
3. Install two indicator lights (19) using two lockwashers (42), two screws (41), gasket (40), and lens (39) for each.
4. Install oil pressure indicator (21) using bracket (38), two lockwashers (37), and two nuts (36).
5. Install APU generator switch (23) and three switches (25) using two switch guards (35), eight lockwashers (34), and eight screws (33).
6. Install three circuit breakers (27) using two nuts (32), two lockwashers (31), and two screws (30) for each.
7. Connect six connectors (26) to three circuit breakers (27).

8. Connect six connectors (24) to three switches (25).
9. Connect four connectors (22) to APU generator switch (23).
10. Connect two connectors (20) to oil pressure indicator (21).

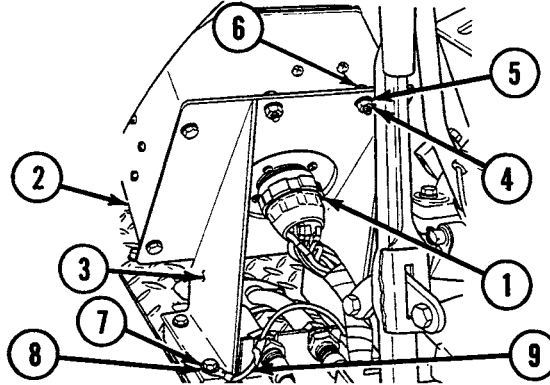


11. Connect four connectors (18) to two indicator lights (19).
12. Install connector (17) to rear panel (12) using four screws (13), four washers (14), four lockwashers (15) and four nuts (16).
13. Install rear panel (12) to APU control box (2) using four screws (10) and four lockwashers (11).



Installation

1. Install mounting bracket (3) with four screws (7), four lockwashers (8), and ground strap (9).
2. Install APU control box (2) on mounting bracket (3) with four screws (6), four lockwashers (5), and four nuts (4).
3. Connect cable connector (1) to back of APU control box (2).

**END OF WORK PACKAGE**

CHAPTER 15
UNIT MAINTENANCE
MAINTENANCE INSTRUCTIONS
FOR
M8A3 GAS/PARTICULATE FILTER UNIT
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
(NSN: 2350-00-122-6826)

CHAPTER 15
UNIT MAINTENANCE
MAINTENANCE INSTRUCTIONS

WORK PACKAGE INDEX

<u>Title</u>	<u>WP Sequence No.</u>
M8A3 Filter Unit System Maintenance Removal, Disassembly, Assembly, Installation, Test.....	0439 00
M8A3 Filter Unit M2A2 Air Purifier Maintenance Removal, Disassembly, Assembly, Installation.....	0440 00
M8A3 Filter Unit Switch Assembly Maintenance Removal, Disassembly, Assembly, Installation.....	0441 00

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
M8A3 FILTER UNIT SYSTEM MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION, TEST

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)
Tester, airflow (item 58, WP 0490 00)

Materials/Parts

Lockwashers (35) (item 621, WP 0491 00)
Lockwashers (2) (item 636, WP 0491 00)
Screws (2) (item 577, WP 0491 00)

Materials/Parts (cont.)

Screws (17) (item 778, WP 0491 00)
Screws (18) (item 783, WP 0491 00)

References

WP 0255 00 thru 0264 00
TM 9-2350-256-10

WARNING

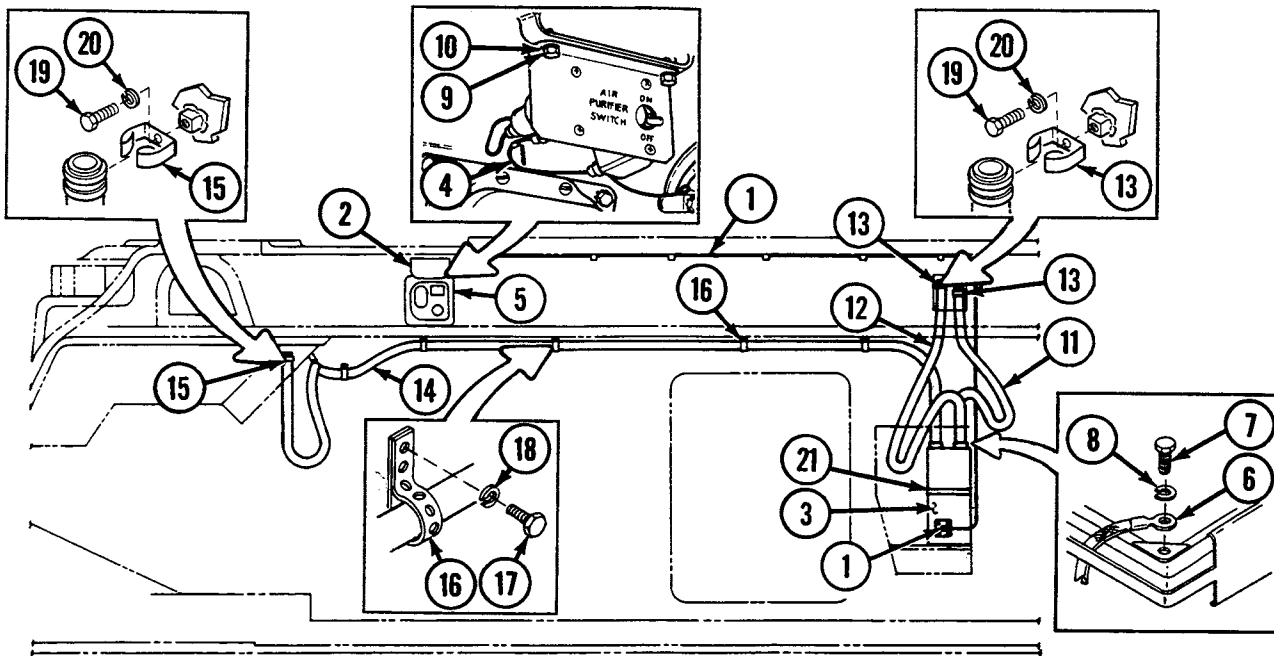
Remove all jewelry such as rings, dog tags, bracelets, etc. If jewelry contacts a metal surface a direct short may result in heating of tools, damage to equipment, and injury or death to personnel.

Removal

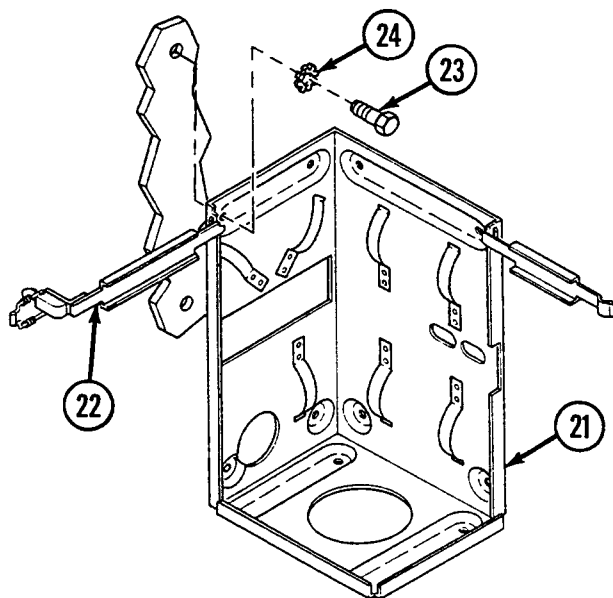
NOTE

Steps 1 thru 9 apply only to right side.

1. Disconnect and remove cable assembly (4) from circuit breaker and switch assembly (2) and dome light (5).
2. Remove ground wire (6) from M2A2 air purifier (3) by removing screw (7) and lockwasher (8).
3. Remove circuit breaker and switch assembly (2) by removing two screws (9) and two lockwashers (10).
4. Disconnect and remove rigger's hose (11) and commander's hose (12) from manifold of M2A2 air purifier (3) and clamps (13).
5. Remove circuit breaker and switch assembly (2) by removing two screws (9) and two lockwashers (10).
6. Disconnect mechanic's hose (14) from clamp (15) and manifold of M2A2 air purifier (3). Remove six clamps (16) by removing from each screw (17) and lockwasher (18).
7. Remove two clamps (13) and clamp (15) by removing from each screw (19) and lockwasher (20).



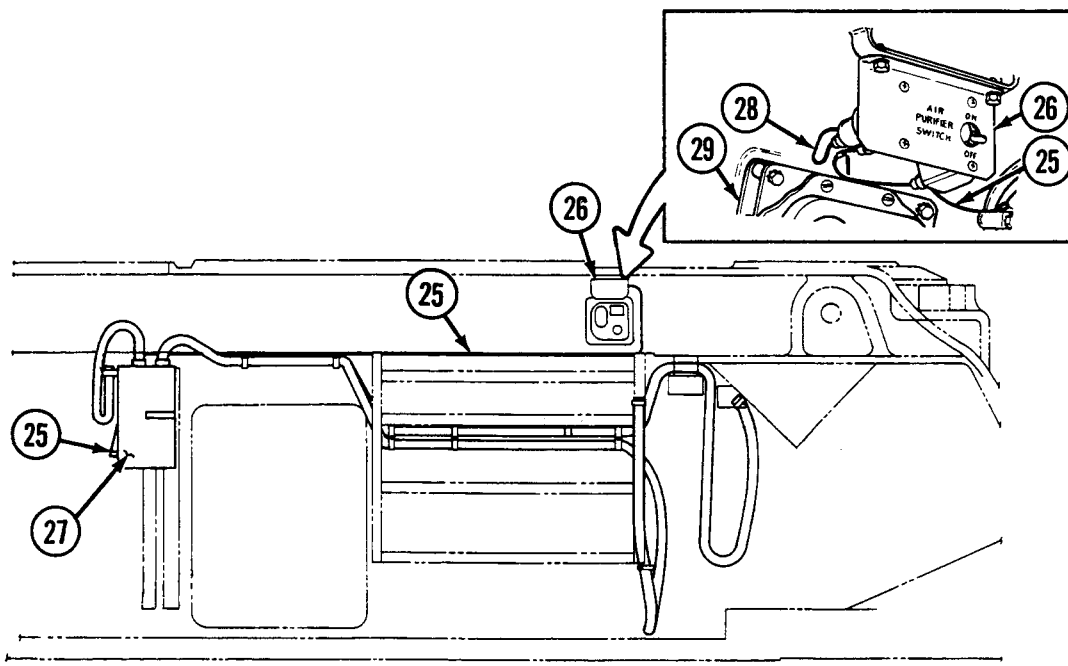
8. Remove M2A2 air purifier (3) from frame assembly (21) by opening catch assembly (22) on frame assembly.
9. Remove frame assembly (21) by removing four screws (23) and four lockwashers (24).



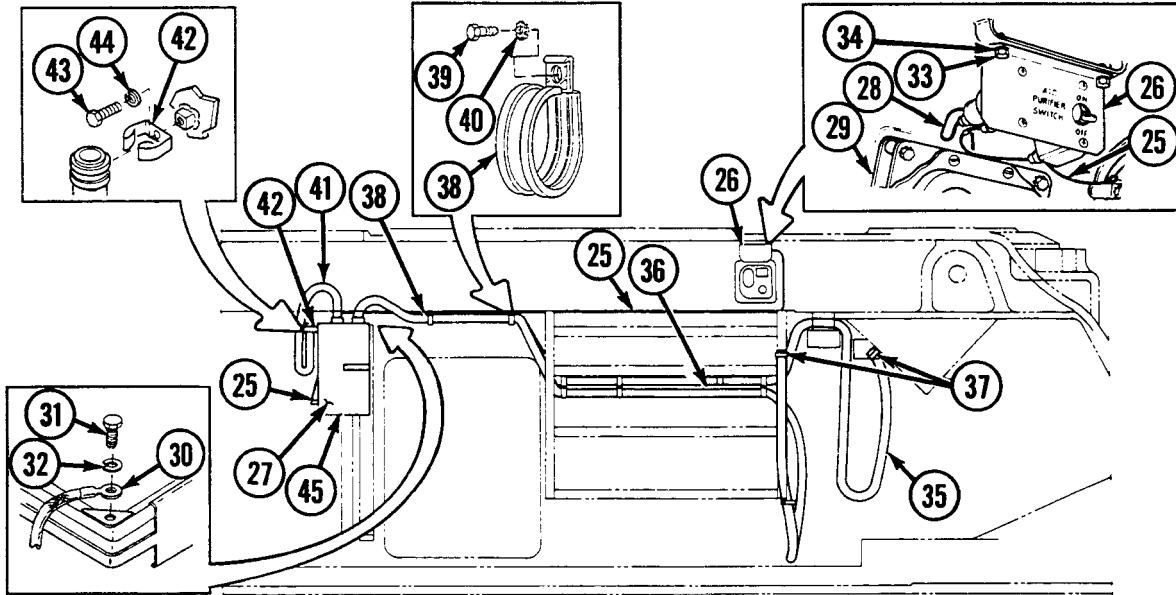
NOTE

Steps 10 thru 18 apply only to left side.

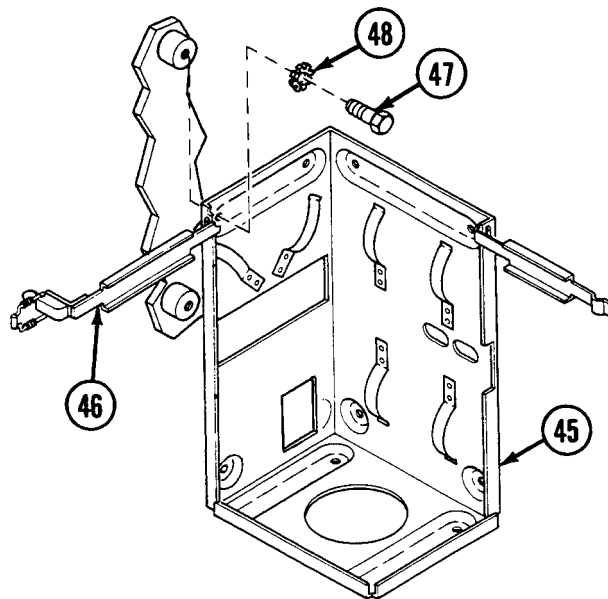
10. Disconnect and remove cable assembly (25) from circuit breaker and switch assembly (26) and M2A2 air purifier (27).
11. Disconnect and remove cable assembly (28) from circuit breaker and switch assembly (26) and dome light (29).



12. Remove ground wire (30) from M2A2 air purifier (27) by removing screw (31) and lockwasher (32).
13. Remove circuit breaker and switch assembly (26) by removing two screws (33) and two lockwashers (34).
14. Disconnect and remove driver's hose (35) and FWD passenger's hose (36) from manifold of M2A2 air purifier (27) and clamps (37). Remove 12 clamps (38) by removing from each pair screw (39) and lockwasher (40).
15. Disconnect and remove AFT passenger's hose (41) from manifold of M2A2 air purifier (27) and clamp (42).
16. Remove two clamps (37) and clamp (42) by removing from each screw (43) and lockwasher (44).



17. Remove M2A2 air purifier (27) from frame assembly (45) by opening catch assembly (46) on frame assembly.
18. Remove frame assembly (45) by removing three screws (47) and three lockwashers (48).

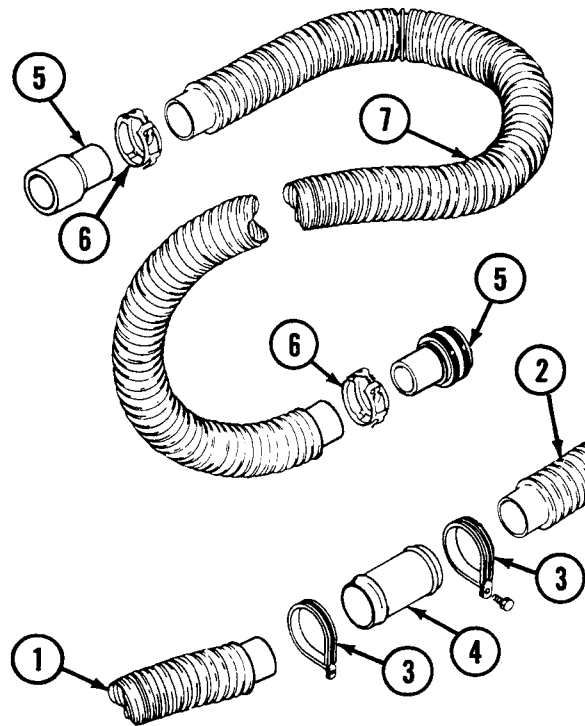


Disassembly

NOTE

Step 1 applies only to driver's hose.

1. Separate hoses (1 and 2) by removing two clamps (3) and tube (4).
2. Disassemble hose assembly by removing coupling half (5) and clamp (6) from each end of hose (7).



3. Disassemble electrical cable assemblies and wire lead (see WP 0255 00 thru 0264 00).

Assembly

1. Assemble hose assembly by installing coupling half (5) and clamp (6) to each end of hose (7).

NOTE

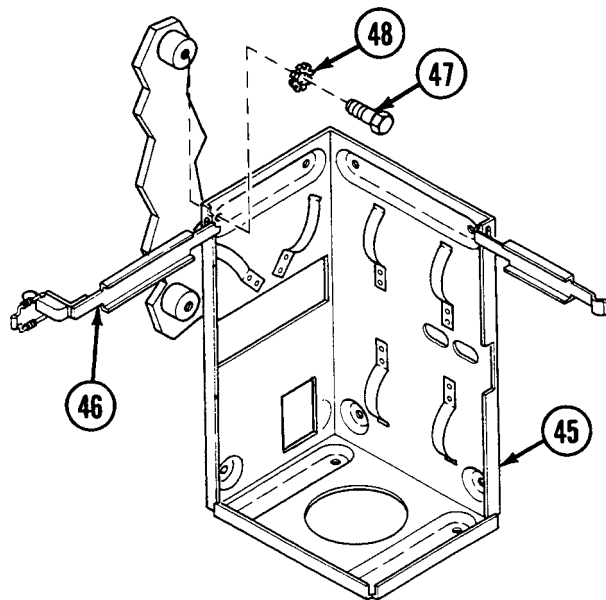
Step 2 applies only to driver's hose.

2. Connect hoses (1 and 2) to each other with two clamps (3) and tube (4).
3. Assemble electrical cable assemblies and wire lead (see WP 0255 00 thru 0264 00).

Installation**NOTE**

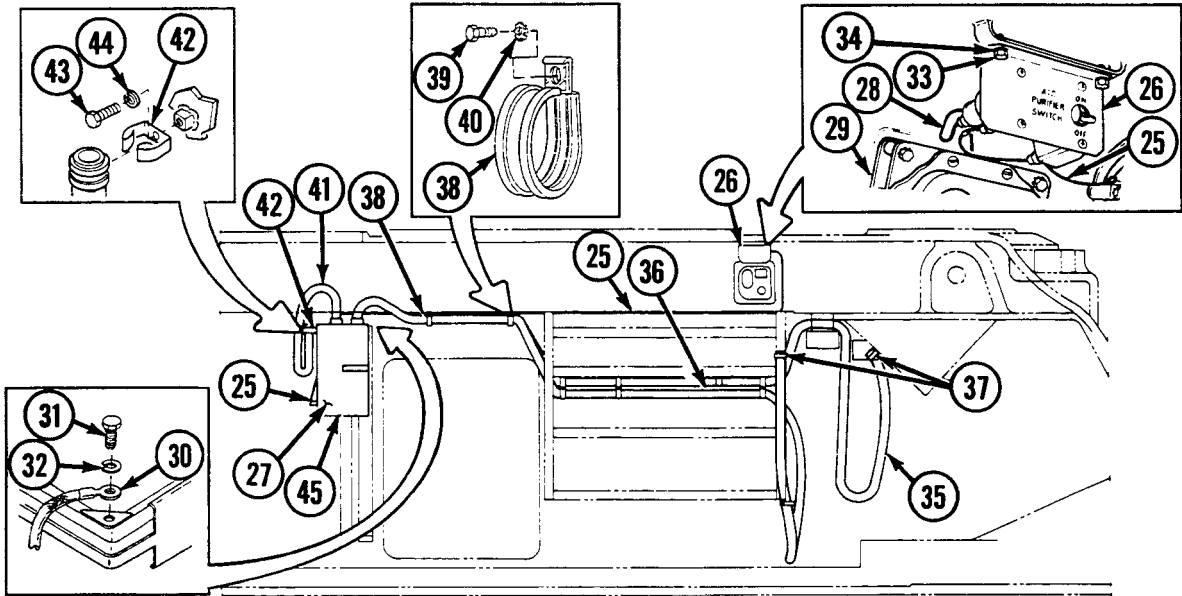
Steps 1 thru 9 apply only to left side.

1. Install frame assembly (45) with three screws (47) and three lockwashers (48).
2. Install M2A2 air purifier (27) in frame assembly (45) and close catch assembly (46).



3. Install two clamps (37) and clamp (42) each with screw (43) and lockwasher (44).
4. Connect and install AFT passenger's hose (41) on manifold of M2A2 air purifier (27) and clamp (42).
5. Connect and install driver's hose (35) and FWD passenger's hose (36) on manifold of M2A2 air purifier (27) and clamps (37). Secure hoses to vehicle with 12 clamps (38). Each pair of clamps is held by screw (39) and lockwasher (40).
6. Install circuit breaker and switch assembly (26) with two screws (33) and two lockwashers (34).
7. Connect ground wire (30) on M2A2 air purifier (27) with screw (31) and lockwasher (32).
8. Connect cable assembly (28) from circuit breaker and switch assembly (26) to dome light (29).

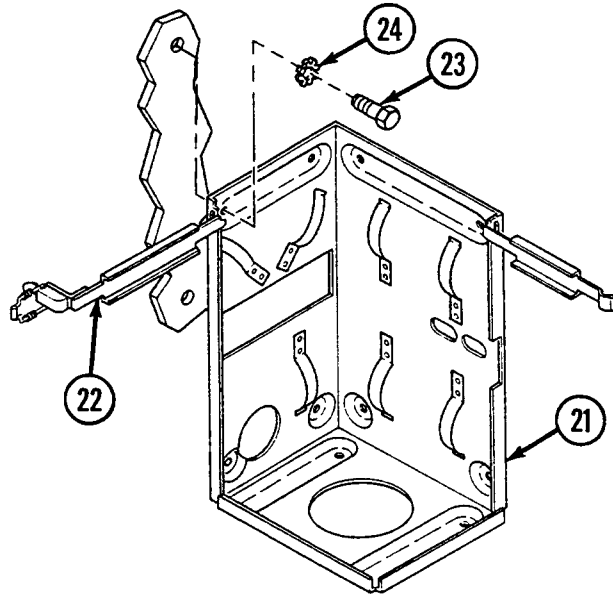
9. Connect cable assembly (25) from circuit breaker and switch assembly (26) to M2A2 air purifier (27).



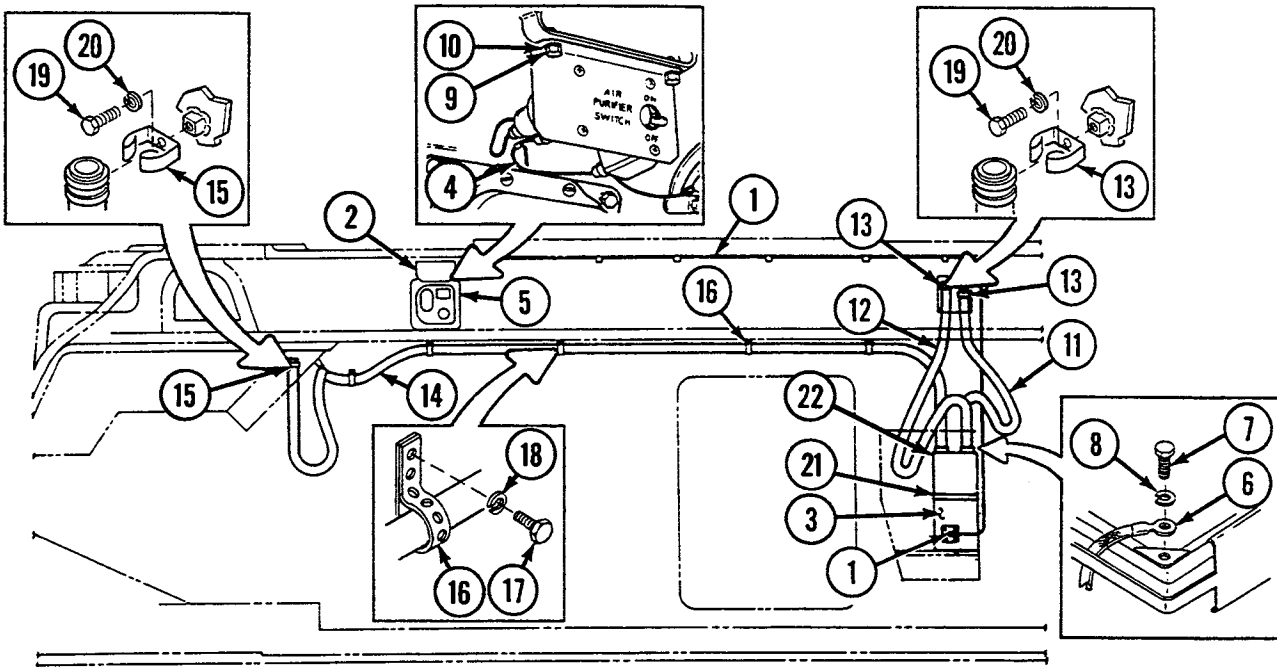
NOTE

Steps 10 thru 18 apply only to right side.

10. Install frame assembly (21) with four screws (23) and four lockwashers (24).

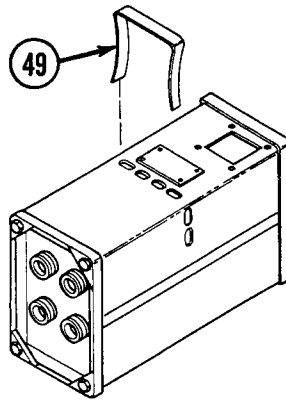


11. Place ground wire (6) between frame assembly (21) and M2A2 air purifier (3). Install M2A2 air purifier in frame assembly by closing catch assembly (22).
12. Install two clamps (13) and clamp (15) each with screw (19) and lockwasher (20).
13. Connect mechanic's hose (14) between manifold of M2A2 air purifier (3) and clamp (15). Secure hose with six clamps (16), each held by screw (17) and lockwasher (18).
14. Connect rigger's hose (11) and commander's hose (12) between manifold of M2A2 air purifier (3) and clamps (13).
15. Install circuit breaker and switch assembly (2) with two screws (9) and two lockwashers (10).
16. Connect ground wire (6) on M2A2 air purifier (3) with screw (7) and lockwasher (8).
17. Connect cable assembly (4) between circuit breaker and switch assembly (2) and dome light (5).
18. Connect cable assembly (1) between circuit breaker and switch assembly (2) and M2A2 air purifier (3).



Testing

1. Move spring clip (49) from M2A2 air purifier air intake holes. Perform test as instructed in operator's manual TM 9-2350-256-10 located in airflow tester container.



2. Replace spring clip (49) at completion of test.

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
M8A3 FILTER UNIT M2A2 AIR PURIFIER MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0114 00

Materials/Parts

Lockwashers (4) (item 636, WP 0491 00)

Screws (4) (item 577, WP 0491 00)

WARNING

After suspected NBC exposure of this vehicle, all air filter media shall be handled only by personnel wearing full NBC-protective equipment.

NOTE

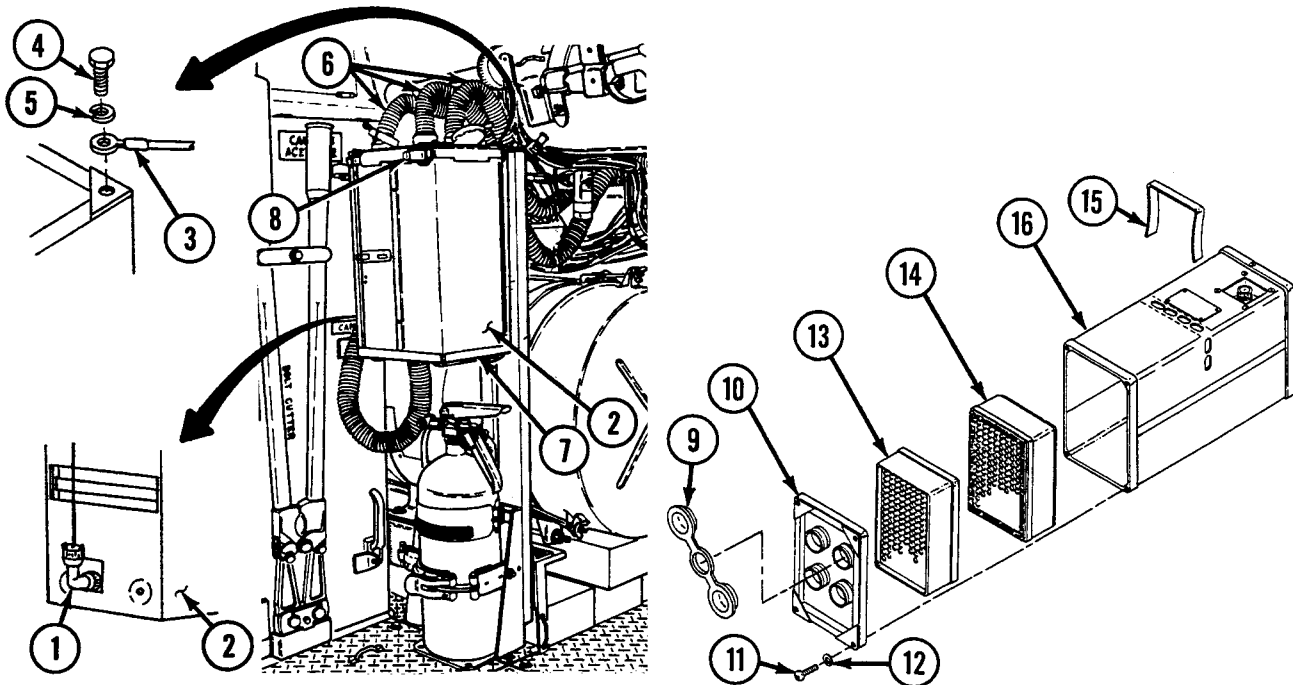
The following procedures apply to either right or left M2A2 air purifier.

Removal

1. Disconnect cable assembly (1) from M2A2 air purifier (2).
2. Remove ground wire (3) from M2A2 air purifier (2) by removing screw (4) and lockwasher (5).
3. Tag and disconnect hoses (6).
4. Remove M2A2 air purifier (2) from frame assembly (7) by opening catch assembly (8).

Disassembly

1. Remove four airflow caps (9).
2. Remove manifold assembly (10) by removing three screws (11) and three lockwashers (12).
3. Remove filters (13 and 14) and spring clip (15) from housing (16).



Assembly

1. Install spring clip (15) and filters (13 and 14) to housing (16).
2. Install manifold assembly (10) with three screws (11) and three lockwashers (12).
3. Install four airflow caps (9).

Installation

1. Place ground wire (3) between frame assembly (7) and M2A2 air purifier (2). Install M2A2 air purifier in frame assembly and close catch assembly (8).
2. Install ground wire (3) to M2A2 air purifier (2) with lockwasher (5) and screw (4).
3. Reconnect hoses (6) and remove tags.
4. Connect cable assembly (1).
5. Test M2A2 air purifier (see WP 0114 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

M8A3 FILTER UNIT SWITCH ASSEMBLY MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (2) (item 619, WP 0491 00)

Lockwashers (2) (item 621, WP 0491 00)

Materials/Parts (cont.)

Lockwashers (2) (item 636, WP 0491 00)

Nuts (2) (item 671, WP 0491 00)

Screws (2) (item 574, WP 0491 00)

Screws (2) (item 577, WP 0491 00)

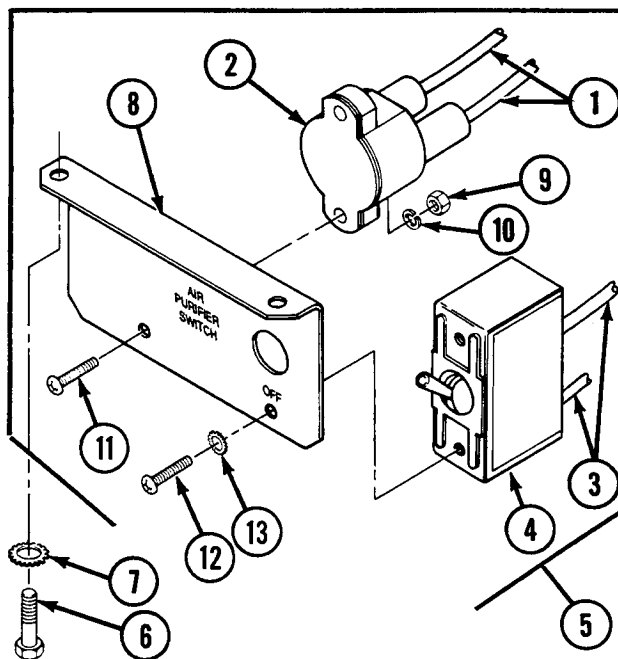
Screws (4) (item 778, WP 0491 00)

Removal

1. Tag and disconnect two electrical leads (1) from circuit breaker (2) and two electrical leads (3) from switch (4).
2. Remove circuit breaker and switch assembly (5) by removing two screws (6) and two lockwashers (7).

Disassembly

1. Remove circuit breaker (2) from bracket (8) by removing two nuts (9), two lockwashers (10), and two screws (11).
2. Remove switch (4) from bracket (8) by removing two screws (12) and two lockwashers (13).

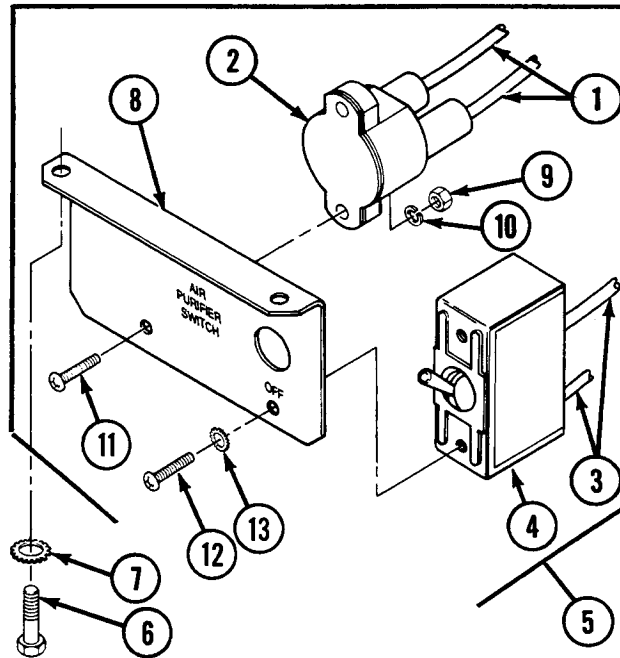


Assembly

1. Install switch (4) to bracket (8) with two screws (12) and two lockwashers (13).
2. Install circuit breaker (2) to bracket (8) with two screws (11), two lockwashers (10), and two nuts (9).

Installation

1. Install circuit breaker and switch assembly (5) with two screws (6) and two lockwashers (7).
2. Connect two electrical leads (3) to switch (4) and two electrical leads (1) to circuit breaker (2). Remove tags.

**END OF WORK PACKAGE**

CHAPTER 16
UNIT MAINTENANCE
MAINTENANCE INSTRUCTIONS
FOR
M239 SMOKE GRENADE LAUNCHER SYSTEM
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
(NSN: 2350-00-122-6826)

CHAPTER 16
UNIT MAINTENANCE
MAINTENANCE INSTRUCTIONS

WORK PACKAGE INDEX

<u>Title</u>	<u>WP Sequence No.</u>
M239 Launcher Power Switch Box Assembly Maintenance Removal, Disassembly, Assembly, Installation.....	0442 00
M239 Launcher Dischargers Replacement Removal, Installation.....	0443 00
M239 Launcher Stowage Boxes Replacement Removal, Installation.....	0444 00

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
M239 LAUNCHER POWER SWITCH BOX ASSEMBLY MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Drivescrews (4) (item 501, WP 0491 00)
 Lockwashers (2) (item 611, WP 0491 00)
 Lockwashers (2) (item 613, WP 0491 00)
 Lockwashers (4) (item 624, WP 0491 00)
 Lockwashers (4) (item 634, WP 0491 00)

Materials/Parts (cont.)

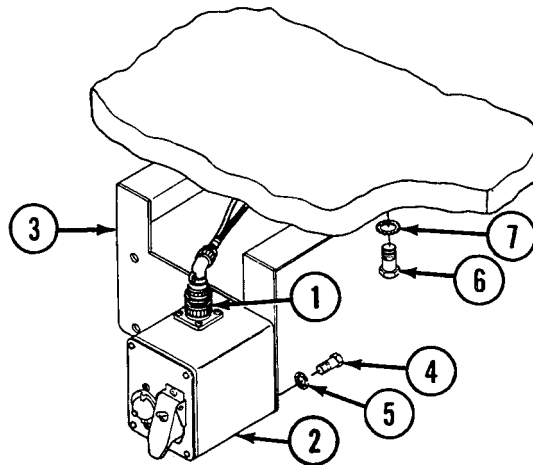
Screws (4) (item 573, WP 0491 00)
 Screws (4) (item 583, WP 0491 00)
 Screws (4) (item 778, WP 0491 00)
 Screws (2) (item 784, WP 0491 00)

Equipment Condition

Commander's plate and switch assembly removed (see WP 0449 00)

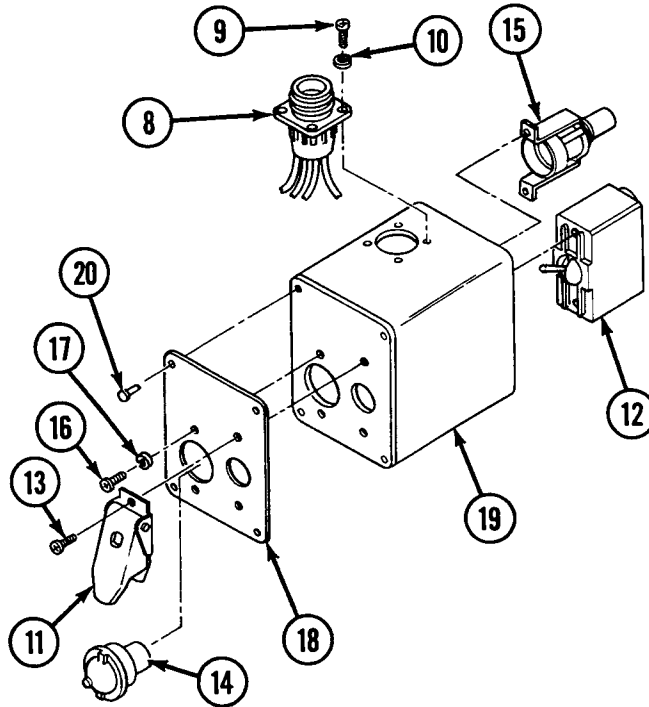
Removal

1. Disconnect harness connector (1) from switch box (2).
2. Remove switch box (2) from mounting bracket (3) by removing four screws (4) and four lockwashers (5).
3. Remove mounting bracket (3) by removing two screws (6) and two lockwashers (7).



Disassembly

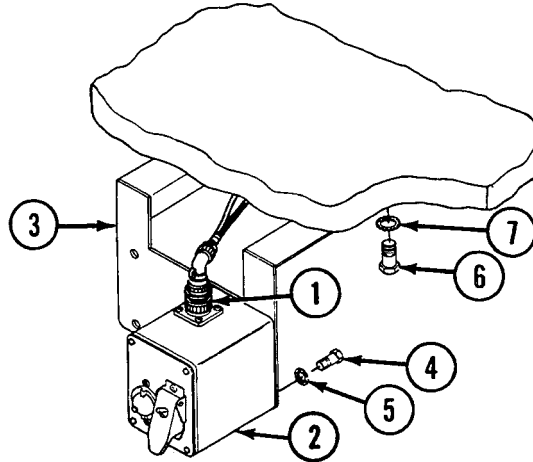
1. Remove panel harness (8), four screws (9), and four lockwashers (10).
2. Remove switch guard (11) and switch (12) by removing two screws (13).
3. Remove light lens (14).
4. Remove indicator light (15) by removing two screws (16) and two lockwashers (17).
5. Remove ID plate (18) from enclosure (19) by removing four drivescrews (20).

**Assembly**

1. Install ID plate (18) to enclosure (19) using four drivescrews (20).
2. Install indicator light (15) with two screws (16) and two lockwashers (17).
3. Install light lens (14).
4. Install switch (12) and switch guard (11) with two screws (13).
5. Install panel harness (8) with four screws (9) and four lockwashers (10).

Installation

1. Install mounting bracket (3) with two screws (6) and two lockwashers (7).
2. Install switch box (2) to mounting bracket (3) with four screws (4) and four lockwashers (5).
3. Connect harness connector (1) to switch box (2).

**NOTE**

Follow-on maintenance: Install commander's plate and switch assembly (see WP 0449 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
M239 LAUNCHER DISCHARGERS REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (3) (item 640, WP 0491 00)

Screws (3) (item 777, WP 0491 00)

NOTE

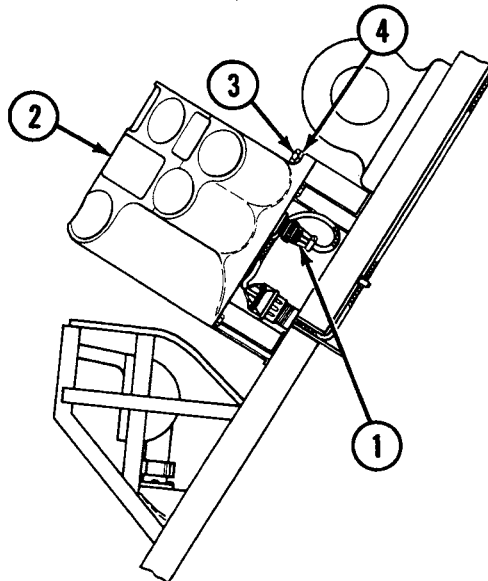
The discharger marked "RIGHT-HAND" is mounted on the left outside of the hull and the discharger marked "LEFT-HAND" is mounted on the right outside of the hull.

NOTE

Removal and installation of the left- and right-hand dischargers are the same.

Removal

1. Disconnect electrical cable connector (1) from back of discharger (2).
2. Remove discharger (2) from vehicle by removing three screws (3) and three lockwashers (4).

**Installation**

1. Install discharger (2) to vehicle with three screws (3) and three lockwashers (4).
2. Connect electrical cable connector (1) to back of discharger (2).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**M239 LAUNCHER STOWAGE BOXES REPLACEMENT
REMOVAL, INSTALLATION**

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (4) (item 640, WP 0491 00)

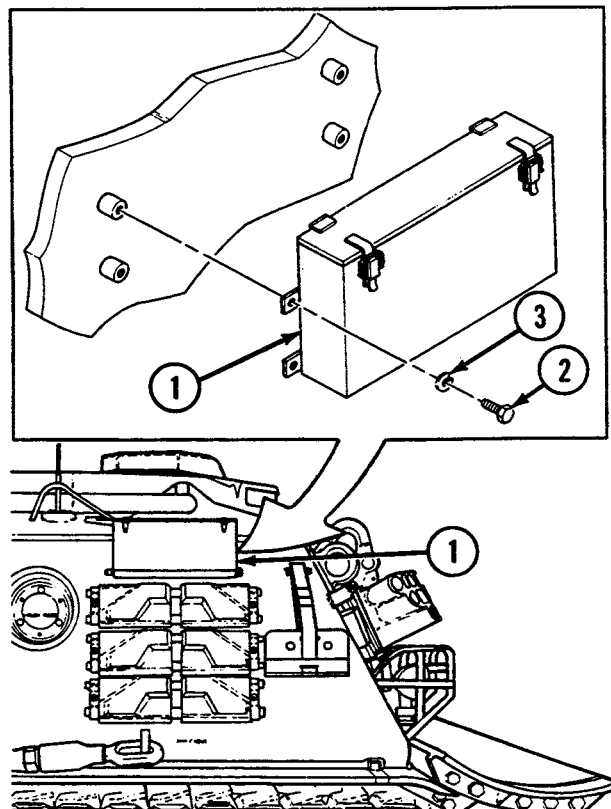
Screws (4) (item 388, WP 0491 00)

NOTE

Left and right stowage boxes are removed and installed in the same manner.

Removal

1. Remove smoke grenade stowage boxes (1) by removing four screws (2) and four lockwashers (3).



Installation

1. Install smoke grenade stowage boxes (1) with four screws (2) and four lockwashers (3).

END OF WORK PACKAGE

CHAPTER 17
UNIT MAINTENANCE
MAINTENANCE INSTRUCTIONS
FOR
EXHAUST SMOKE GENERATING SYSTEM
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
(NSN: 2350-00-122-6826)

CHAPTER 17
UNIT MAINTENANCE
MAINTENANCE INSTRUCTIONS

WORK PACKAGE INDEX

<u>Title</u>	<u>WP Sequence No.</u>
Exhaust Smoke Generating System Solenoid Valve Assemblies and Bracket Replacement Removal, Installation.....	0445 00
Exhaust Smoke Generating System Fuel Tube Assemblies Replacement Removal, Installation.....	0446 00
Exhaust Smoke Generating System Fuel Shutoff Valve Assembly Replacement Removal, Installation.....	0447 00
Exhaust Smoke Generating System Driver's Bracket and Switch Assembly Maintenance Removal, Disassembly, Assembly, Installation.....	0448 00
Exhaust Smoke Generating System Commander's Plate and Switch Assembly Maintenance Removal, Disassembly, Assembly, Installation.....	0449 00

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**EXHAUST SMOKE GENERATING SYSTEM SOLENOID
 VALVE ASSEMBLIES AND BRACKET REPLACEMENT
 REMOVAL, INSTALLATION**

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)
 Socket set (item 55, WP 0490 00)
 Vise, soft-jaw (item 60, WP 0490 00)
 Wrench, torque (item 68, WP 0490 00)

Materials/Parts

Bolts (2) (item 258, WP 0491 00)
 Bolts, assembled washer (4) (item 148, WP 0491 00)
 Nut, self-locking (item 494, WP 0491 00)

Materials/Parts (cont.)

Screw (item 372, WP 0491 00)
 Screws (2) (item 386, WP 0491 00)
 Washers, flat (4) (item 139, WP 0491 00)

References

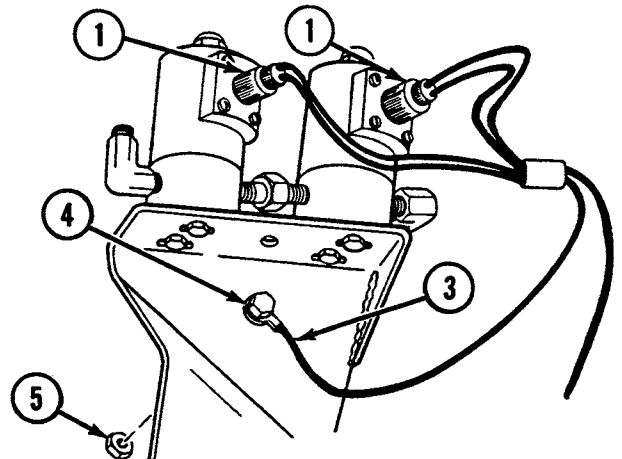
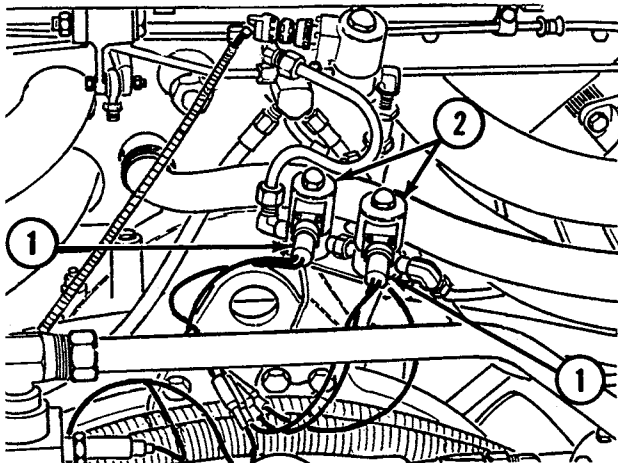
TM 9-2350-256-10

Equipment Condition

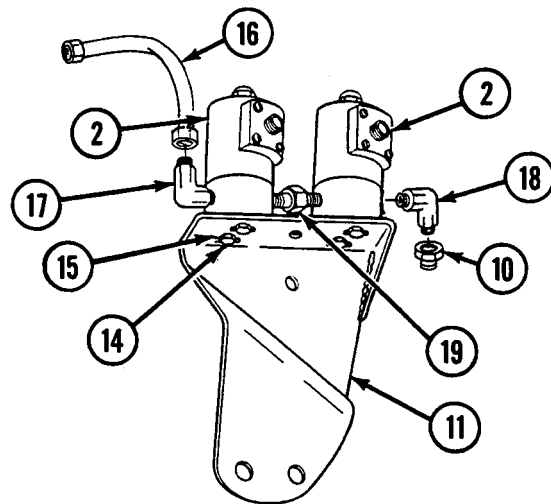
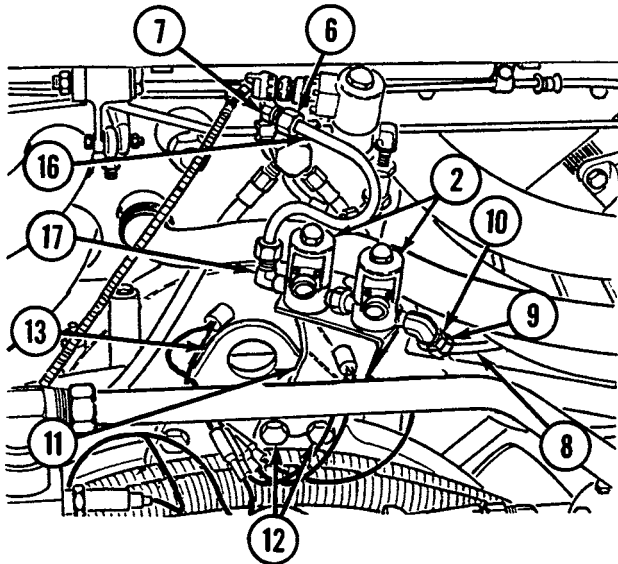
Engine deck removed (see WP 0336 00)

Removal

1. Disconnect two cable assemblies (1) from two solenoid valves (2).
2. Disconnect ground lead (3) by removing screw (4) and self-locking nut (5).



3. Loosen nut (6) at elbow (7).
4. Remove fuel line (8) by removing nut (9) from adapter (10).
5. Remove mounting bracket (11) by removing two bolts (12) from engine lifting eye (13).
6. Remove solenoid valves (2) from mounting bracket (11) by removing four bolts (14) and four flat washers (15).
7. Place solenoid valves (2) in soft-jaw vise and disconnect fuel tube assembly (16) from elbow (17).
8. Remove elbows (17 and 18) from two solenoid valves (2).
9. Remove adapter (10) from elbow (18).
10. Remove pipe nipple (19).



Installation

NOTE

If new solenoid valve is to be used, check position of electrical connector by holding valve with inlet port to right side and outlet port to left side. Electrical connector must be 45° from inlet port and pointing to right. Reposition, if necessary, by placing solenoid valve in soft-jawed vise and loosening acorn nut at top of valve. Position electrical connector and torque acorn nut to 50 pound-inches (5.6 Newton-meters).

NOTE

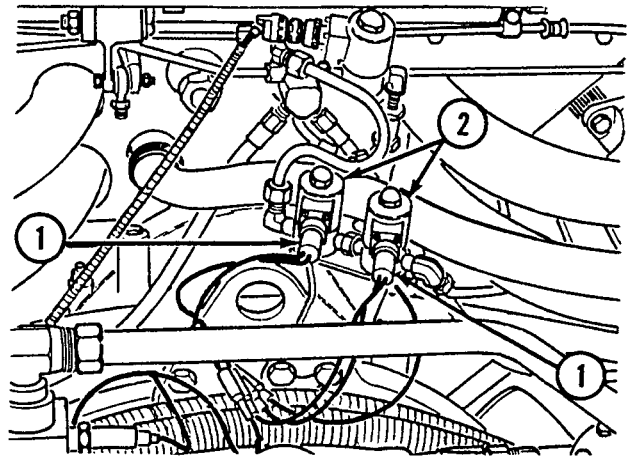
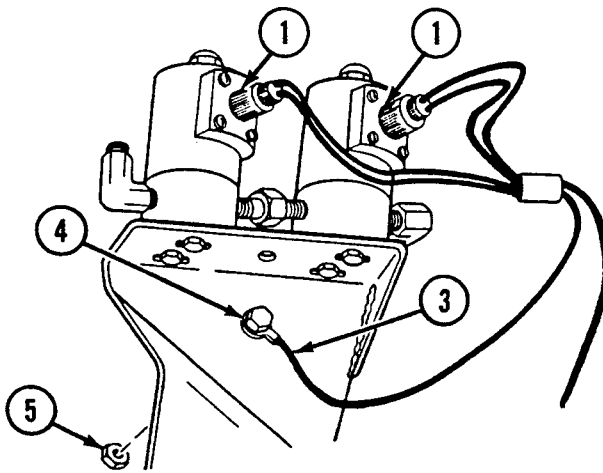
If new solenoid valves are used, remove protective covers and felt filtering disks (if present) from inlet and outlet ports.

NOTE

Bottom surfaces of solenoid valves must be parallel (check on flat surface).

1. Install pipe nipple (19) between outlet port of one solenoid valve (2) and inlet port of second solenoid valve.
2. Place solenoid valves (2) in soft-jawed vise.

3. Install elbow (17) into remaining solenoid valve (2) outlet port with connection end of elbow at 12 o'clock position.
4. Install elbow (18) into remaining solenoid valve (2) inlet port with connection end of elbow at 4 o'clock position.
5. Install adapter (10) to elbow (18).
6. Mount solenoid valves (2) on mounting bracket (11) with four flat washers (15) and four bolts (14).
7. Install mounting bracket (11) with two bolts (12) to engine lifting eye (13).
8. Position fuel line (8) and tighten nut (9) at adapter (10).
9. Connect fuel tube assembly (16) to elbow (17).
10. Position fuel tube assembly (16) and tighten nut (6) at elbow (7).
11. Connect ground lead (3) with screw (4) and self-locking nut (5).
12. Connect two cable assemblies (1) to two solenoid valves (2).



WARNING

Move vehicle out of building before attempting to check system for operation/leaks and extinguish all open flames in the immediate area. Refer to TM 9-2350-256-10 for operating procedures.

13. Check all connections to ensure tightness.

NOTE

Follow-on maintenance: Install engine deck (see WP 0336 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**EXHAUST SMOKE GENERATING SYSTEM FUEL TUBE ASSEMBLIES REPLACEMENT
REMOVAL, INSTALLATION**

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwasher (item 625, WP 0491 00)
Nuts (2) (item 495, WP 0491 00)
Nut (item 735, WP 0491 00)
Screws (4) (item 256, WP 0491 00)
Screws (2) (item 386, WP 0491 00)
Screw (item 816, WP 0491 00)

Materials/Parts (cont.)

Washer, flat (item 151, WP 0491 00)
Washer, flat (item 540, WP 0491 00)

References

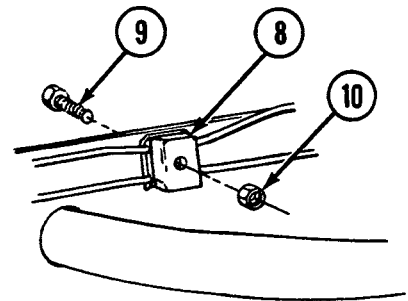
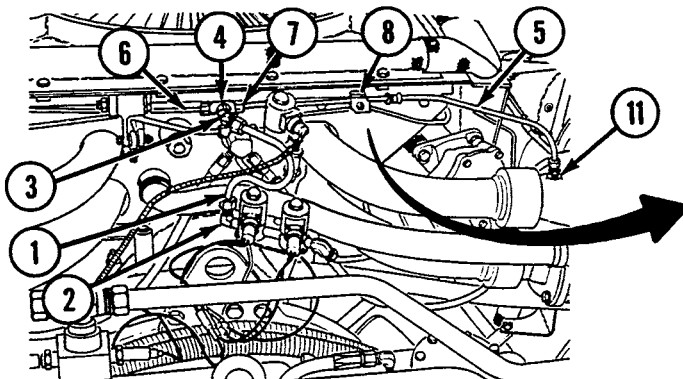
TM 9-2350-256-10

Equipment Condition

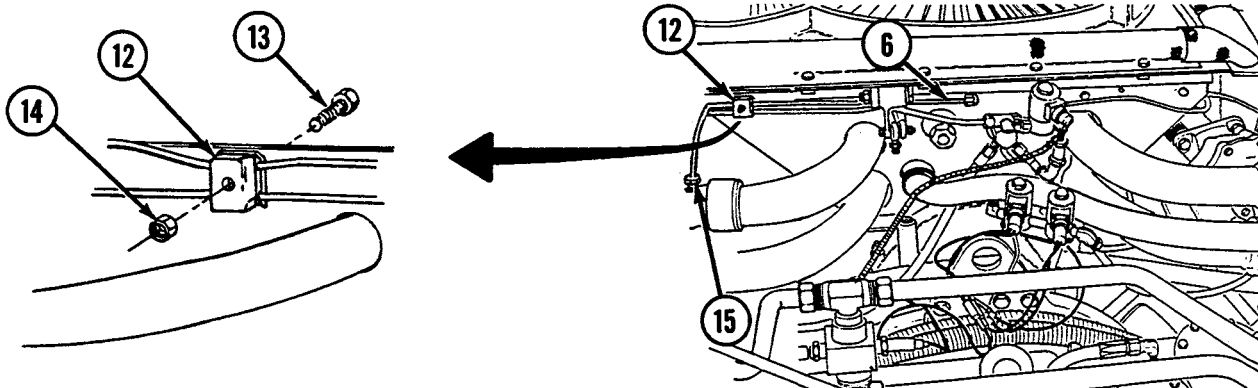
Engine deck removed (see WP 0336 00)

Removal

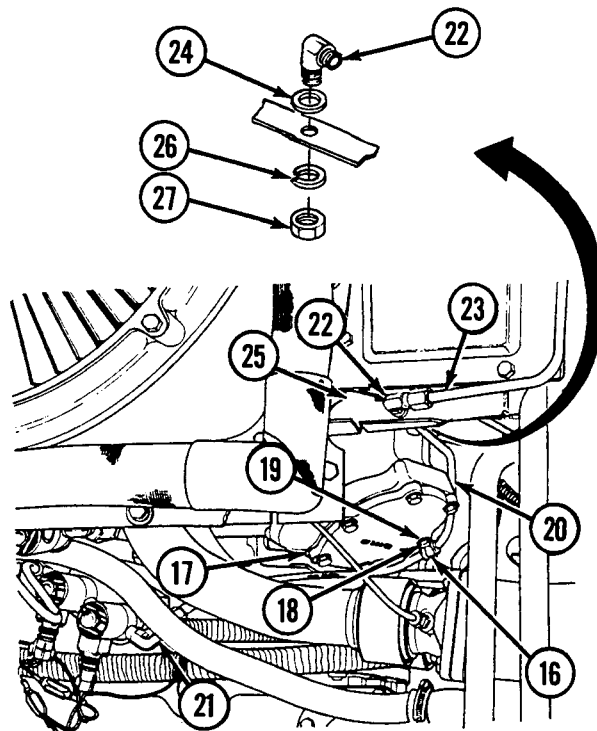
1. Remove tube assembly (1) by disconnecting from 90° elbow (2) and 45° elbow (3).
2. Remove tee (4) from between two tube assemblies (5 and 6) by loosening two nuts (7).
3. Remove 45° elbow (3) from tee (4).
4. Remove clamp (8) by removing bolt (9) and nut (10).
5. Remove tube assembly (5) by disconnecting from right exhaust manifold tube (11).



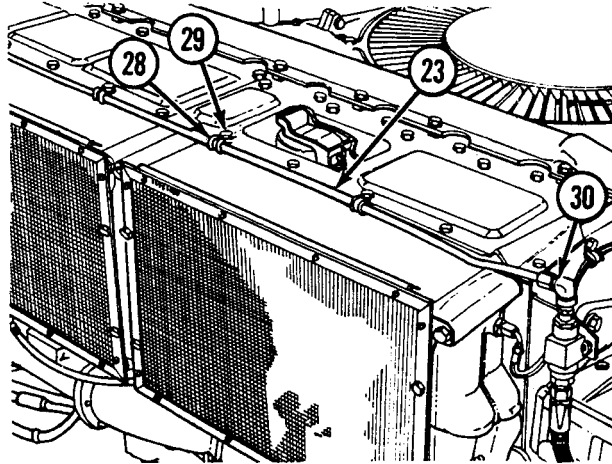
6. Remove clamp (12) by removing bolt (13) and nut (14).
7. Remove tube assembly (6) by disconnecting from left exhaust manifold tube (15).



8. Remove clamp (16) from gear housing cover (17) by removing screw (18) and flat washer (19).
9. Remove tube assembly (20) by disconnecting from elbow (21) and bulkhead elbow (22).
10. Disconnect tube assembly (23) from bulkhead elbow (22).
11. Remove bulkhead elbow (22) and flat washer (24) from shroud bracket (25) by removing lockwasher (26) and locknut (27).

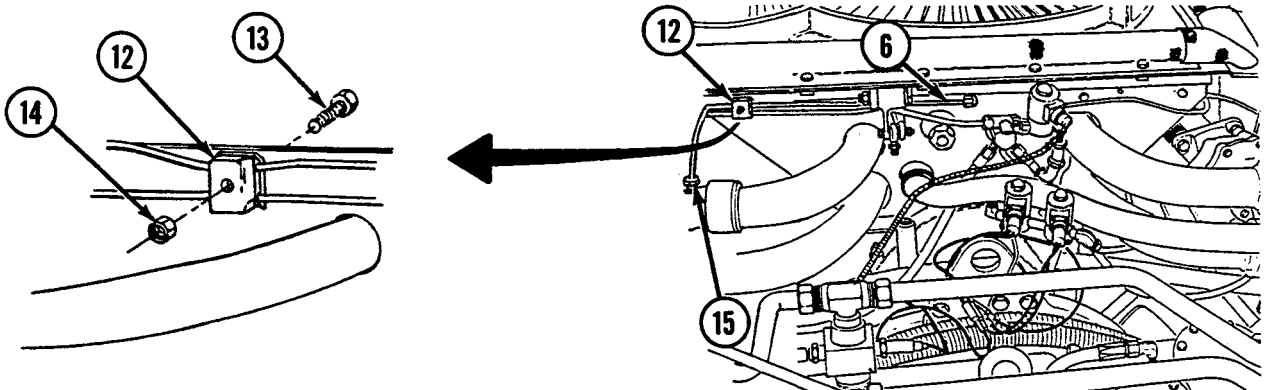


12. Remove four clamps (28) by removing four screws (29).
13. Remove tube assembly (23) by disconnecting from elbow (30).

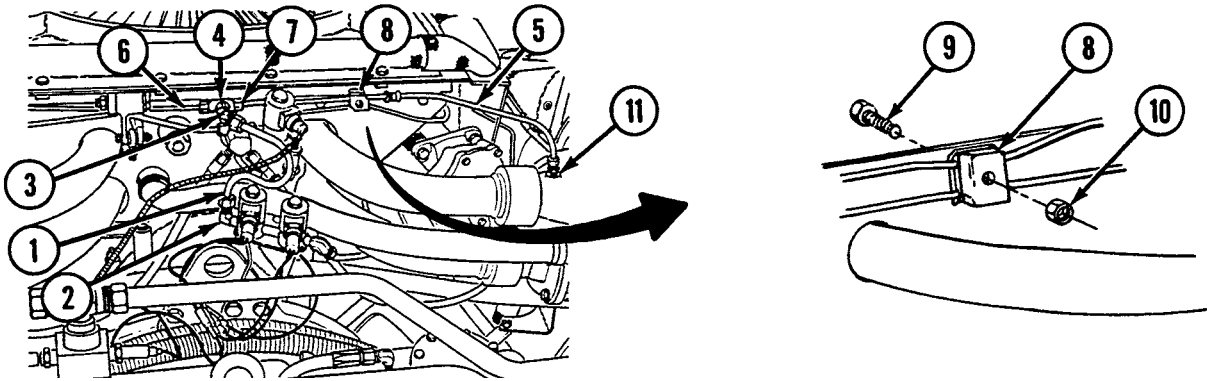


Installation

1. Install bulkhead elbow (22) and flat washer (24) to shroud bracket (25) with lockwasher (26) and locknut (27).
2. Install tube assembly (23) by connecting at bulkhead elbow (22) and elbow (30).
3. Secure tube assembly (23) with four clamps (28) and four screws (29).
4. Install tube assembly (20) by connecting to elbow (21) and bulkhead elbow (22).
5. Secure tube assembly (23) to gear housing cover (17) with clamp (16), screw (18), and flat washer (19).
6. Install tube assembly (6) onto left exhaust manifold tube (15) and secure tube assembly with clamp (12), bolt (13), and nut (14).



7. Install tube assembly (5) onto right exhaust manifold tube (11) and secure tube assembly with clamp (8), bolt (9), and nut (10).
8. Install 45° elbow (3) to tee (4).
9. Install tee (4) between two tube assemblies (5 and 6) by tightening two nuts (7).
10. Install tube assembly (1) by connecting to 90° elbow (2) and 45° elbow (3).



WARNING

Move vehicle out of building before attempting to check system for operation/leaks and extinguish all open flames in the immediate area. Refer to TM 9-2350-256-10 for operating procedures.

11. Check all connections to ensure tightness.

NOTE

Follow-on maintenance: Install engine deck (see WP 0336 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**EXHAUST SMOKE GENERATING SYSTEM FUEL SHUTOFF VALVE ASSEMBLY REPLACEMENT
REMOVAL, INSTALLATION**

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

References

TM 9-2350-256-10

Materials/Parts

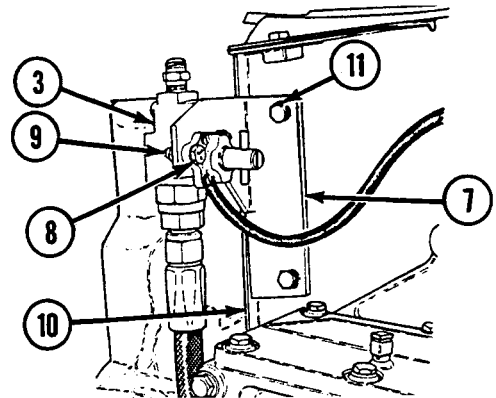
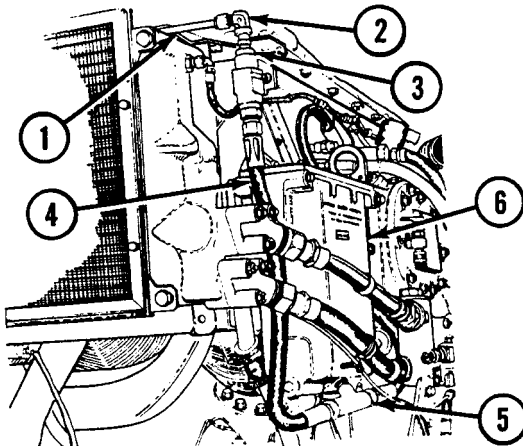
Nuts, self-locking (2) (item 494, WP 0491 00)
Screws (2) (item 132, WP 0491 00)
Screws (2) (item 373, WP 0491 00)

Equipment Condition

Engine deck removed (see WP 0336 00)

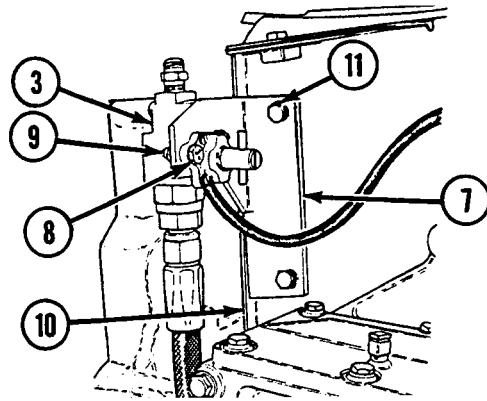
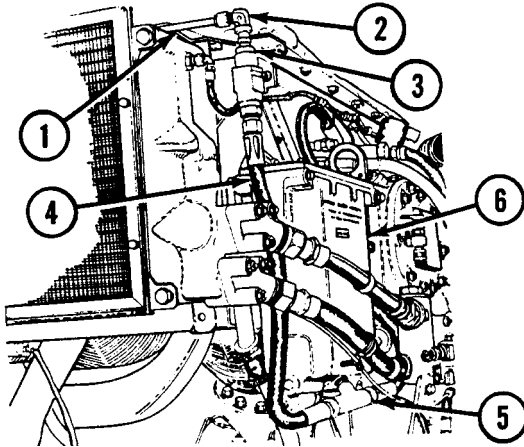
Removal

1. Disconnect tube assembly (1) from elbow (2).
2. Remove elbow (2) from fuel shutoff valve (3).
3. Remove fuel hose assembly (4) by disconnecting from fuel shutoff valve (3) and from tee (5) at bottom of fuel/water separator (6).
4. Remove fuel shutoff valve (3) from mounting bracket (7) by removing two screws (8) and two self-locking nuts (9).
5. Remove mounting bracket (7) from front shroud plate (10) by removing two assembled washer screws (11).



Installation

1. Install mounting bracket (7) on front shroud plate (10) with two assembled washer screws (11).
2. Install fuel shutoff valve (3) into mounting bracket (7) with two screws (8) and two self-locking nuts (9).
3. Connect fuel hose assembly (4) to tee (5) at bottom of fuel/water separator (6) and to fuel shutoff valve (3).
4. Install elbow (2) on fuel shutoff valve (3).
5. Connect tube assembly (1) to elbow (2).



WARNING

Move vehicle out of building before attempting to check system for operation/leaks and extinguish all open flames in the immediate area. Refer to TM 9-2350-256-10 for operating procedures.

6. Check all connections to ensure tightness.

NOTE

Follow-on maintenance: Install engine deck (see WP 0336 00).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

EXHAUST SMOKE GENERATING SYSTEM DRIVER'S BRACKET AND SWITCH ASSEMBLY MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (2) (item 348, WP 0491 00)
 Lockwashers (2) (item 611, WP 0491 00)
 Lockwashers (4) (item 649, WP 0491 00)
 Nuts (4) (item 669, WP 0491 00)
 Packing, preformed (item 550, WP 0491 00)

Materials/Parts (cont.)

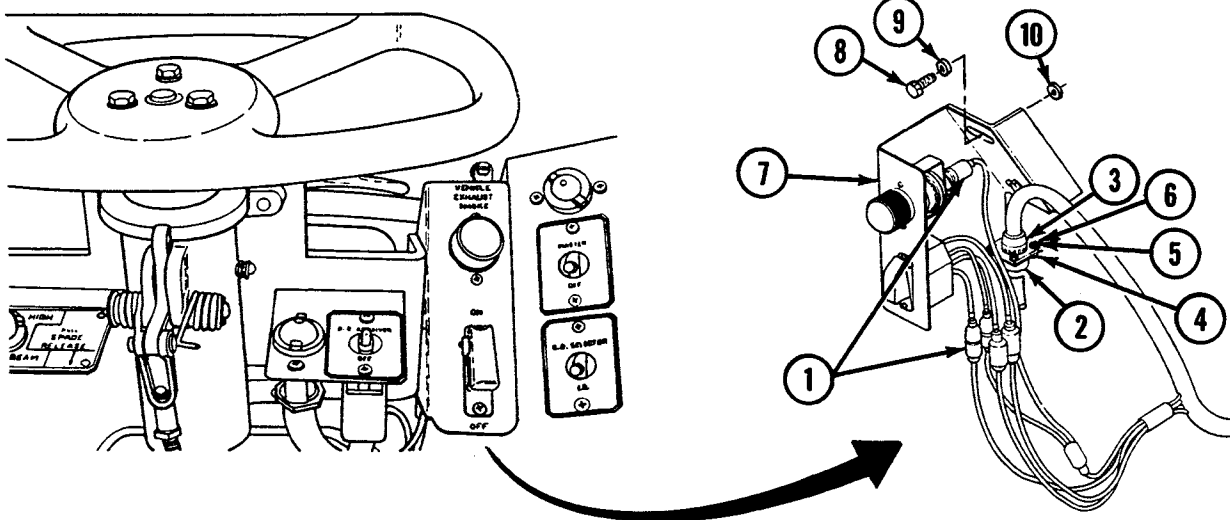
Screws (4) (item 570, WP 0491 00)
 Screws (4) (item 575, WP 0491 00)
 Screws (2) (item 800, WP 0491 00)
 Washers, flat (2) (item 862, WP 0491 00)

References

WP 0255 00 thru 0264 00

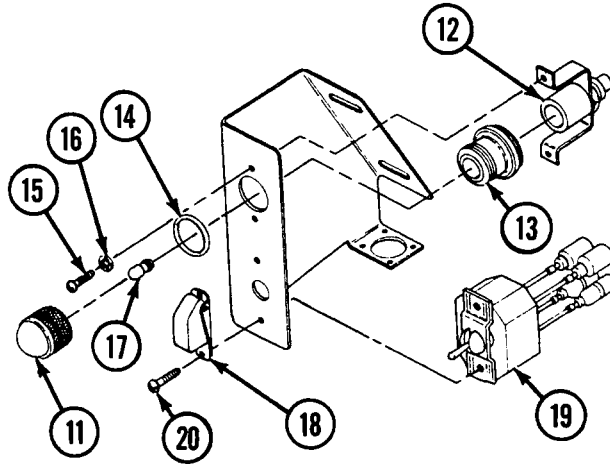
Removal

1. Tag and disconnect five electrical cables (1).
2. Disconnect wiring harness (2).
3. Disconnect wiring harness (3) by removing four screws (4), four lockwashers (5), and four nuts (6).
4. Remove bracket (7) by removing two screws (8), two lockwashers (9), and two flat washers (10).



Disassembly

1. Unscrew and remove light lens (11).
2. Remove indicator light (12), adapter (13), and preformed packing (14) by removing two screws (15) and two lockwashers (16).
3. Remove lamp (17) from indicator light (12) by pressing in lamp and turning counterclockwise.
4. Remove switch guard (18) and switch assembly (19) by removing two screws (20).



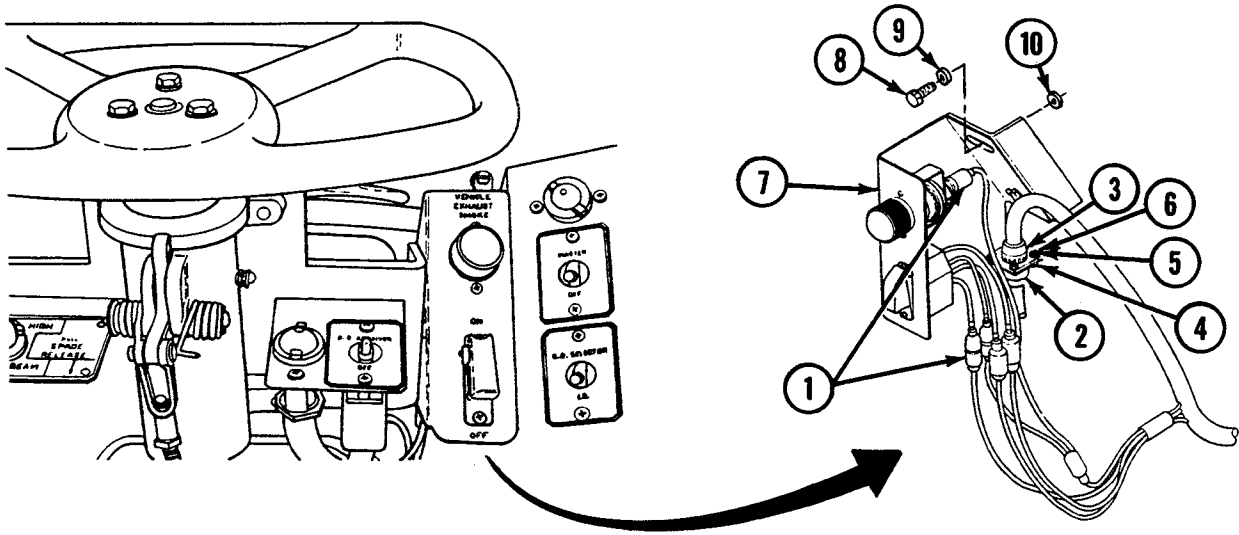
5. Disassemble switch assembly (19) cables (see WP 0255 00 thru 0264 00 00).

Assembly

1. Assemble switch assembly (19) cables (see WP 0255 00 thru 0264 00 00).
2. Install switch guard (18) and switch assembly (19) with two screws (20).
3. Install lamp (17) in indicator light (12) by pressing in lamp and turning clockwise.
4. Install indicator light (12), adapter (13), and preformed packing (14) with two screws (15) and two lockwashers (16).
5. Install light lens (11).

Installation

1. Install bracket (7) with two screws (8), two lockwashers (9), and two flat washers (10).
2. Connect wiring harness (3) with four screws (4), four lockwashers (5), and four nuts (6).
3. Connect wiring harness (2).
4. Connect five electrical cables (1). Remove tags.

**END OF WORK PACKAGE**

UNIT MAINTENANCE

RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1

NSN 2350-00-122-6826, EIC AQA

EXHAUST SMOKE GENERATING SYSTEM COMMANDER'S
PLATE AND SWITCH ASSEMBLY MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (2) (item 613, WP 0491 00)

Nuts (2) (item 763, WP 0491 00)

Materials/Parts (cont.)

Screws (2) (item 373, WP 0491 00)

Screws (2) (item 573, WP 0491 00)

References

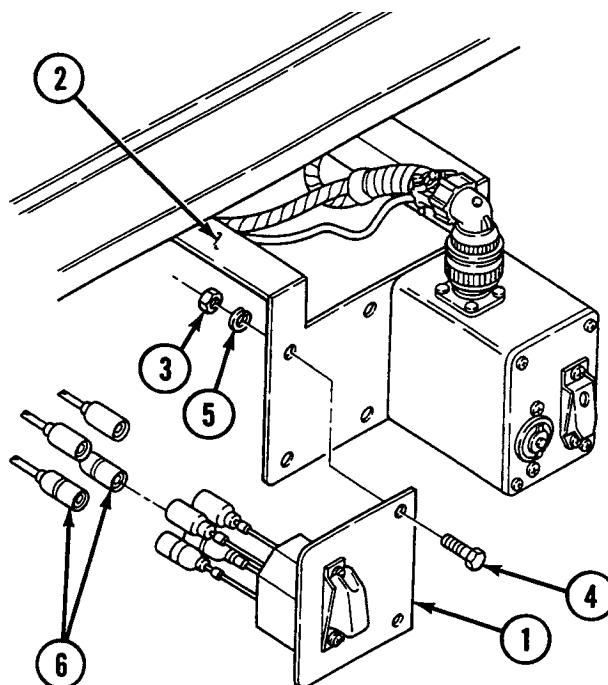
WP 0255 00 thru 0264 00

NOTE

Commander's plate and switch assembly is only found in vehicles equipped with an M239 smoke grenade launcher.

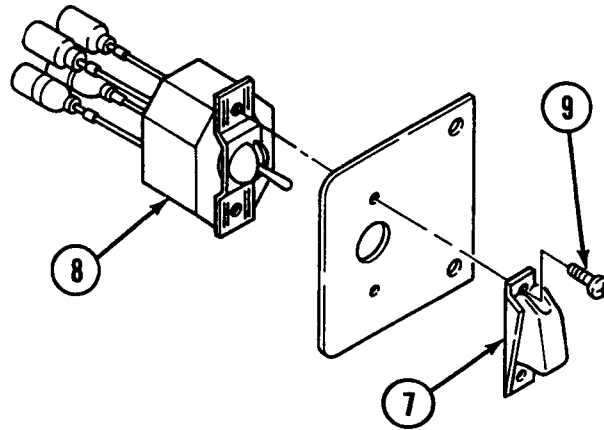
Removal

1. Remove plate (1) from M239 launcher switch bracket (2) by removing two nuts (3), two screws (4), and two lockwashers (5).
2. Tag and disconnect four electrical cables (6).



Disassembly

1. Remove switch guard (7) and switch assembly (8) by removing two screws (9).
2. Disassemble switch assembly (8) leads (see WP 0255 00 thru 0264 00 00).

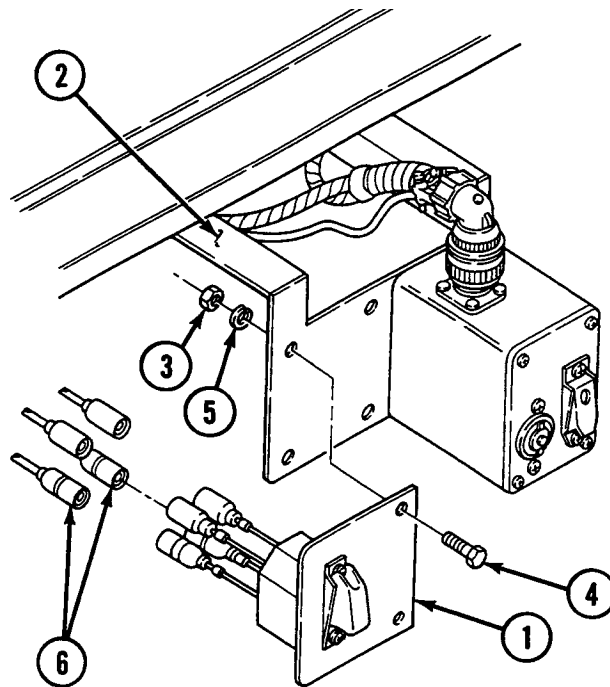


Assembly

1. Assemble switch assembly (8) leads (see WP 0255 00 thru 0264 00 00).
2. Install switch assembly (8) and switch guard (7) with two screws (9).

Installation

1. Connect four electrical cables (6). Remove tags.
2. Install plate (1) to M239 launcher switch bracket (2) with two screws (4), two lockwashers (5), and two nuts (3).



END OF WORK PACKAGE

CHAPTER 18
UNIT MAINTENANCE
MAINTENANCE INSTRUCTIONS
FOR
UNITED STATES ARMY, EUROPE (USAEUR)
SAFETY LIGHTING AND MODIFICATION KIT
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
(NSN: 2350-00-122-6826)

CHAPTER 18
UNIT MAINTENANCE
MAINTENANCE INSTRUCTIONS

WORK PACKAGE INDEX

Title	WP Sequence No.
Stoplight and Covers Maintenance Removal, Disassembly, Assembly, Installation	0450 00
Reflectors and Mounting Plates Replacement Removal, Installation	0451 00
Flasher Assembly and Related Parts Replacement Removal, Installation	0452 00
Directional Signal Control and Mount Assembly Replacement Removal, Installation	0453 00
Mirror and Mount Assemblies Replacement Removal, Installation	0454 00
Front Directional Signal Lamps and Related Parts Replacement Removal, Installation	0455 00
Directional Signal Control Wiring Harness (12322611) Maintenance Removal, Disassembly, Assembly, Installation	0456 00
Right Tail Lamp to Left Tail Lamp To Bulkhead Wiring Harness (12322613) Maintenance Removal, Disassembly, Assembly, Installation	0457 00
Flasher Wiring Harness (12322612) Maintenance Removal, Disassembly, Assembly, Installation	0458 00
Directional Signal Control to Bulkhead Wiring Harness (12322614) Maintenance Removal, Disas- sembly, Assembly, Installation	0459 00
Main Lighting Switch Panel Wire Assemblies (12322615-1 and 12322615-2) Maintenance Removal, Disassembly, Assembly, Installation	0460 00
Headlight Base Assembly to Headlight and Dimmer Switch Wiring Harness (12322668) Mainte- nance Removal, Disassembly, Assembly, Installation	0461 00
Directional Signal Wiring Harness (12322660) Maintenance Removal, Disassembly, Assembly, Installation	0462 00
Directional Signal/Directional Signal Lamp Wire Assemblies (12322648) Maintenance Removal, Disassembly, Assembly, Installation	0463 00
Directional Signal Lamp Wire Assembly (12322658) Maintenance Removal, Disassembly, Assem- bly, Installation	0464 00

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

STOPLIGHT AND COVERS MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Gasket (item 73, WP 0491 00)
 Grommets (2) (item 25, WP 0491 00)
 Grommets (4) (item 122, WP 0491 00)
 Lockwasher (item 620, WP 0491 00)
 Lockwashers (4) (item 621, WP 0491 00)
 Lockwashers (4) (item 623, WP 0491 00)
 Lockwashers (2) (item 638, WP 0491 00)

Materials/Parts (cont.)

Lockwasher (item 642, WP 0491 00)
 Nuts (2) (item 666, WP 0491 00)
 Nuts (2) (item 667, WP 0491 00)
 Nuts (4) (item 763, WP 0491 00)
 Screws (2) (item 389, WP 0491 00)
 Screw (item 416, WP 0491 00)
 Screw (item 579, WP 0491 00)
 Screw (item 581, WP 0491 00)
 Washers, flat (4) (item 59, WP 0491 00)

WARNING

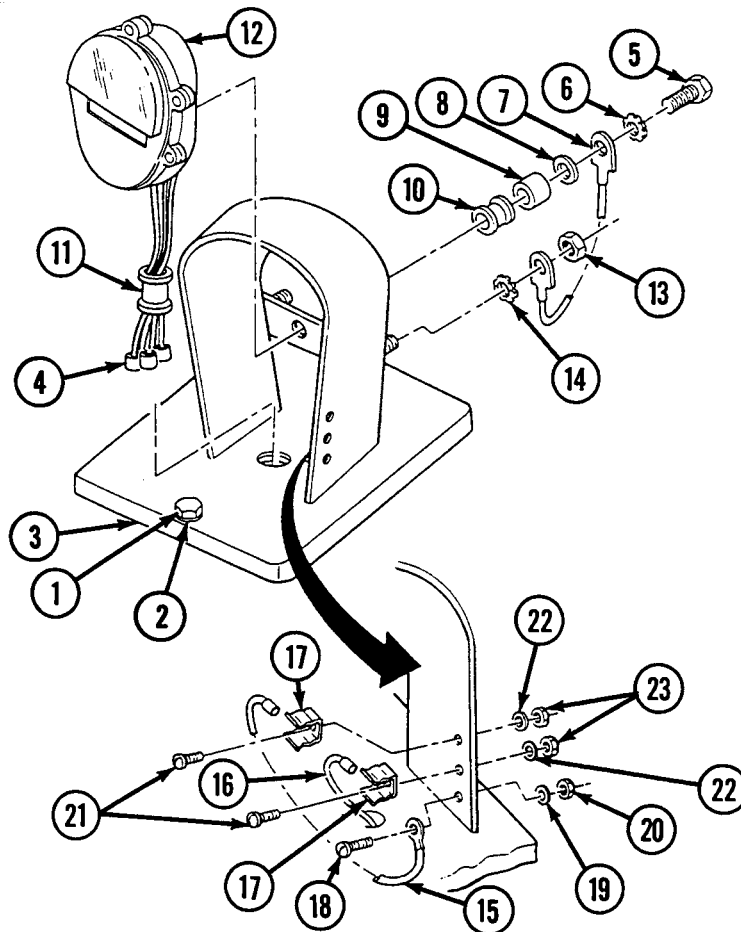
Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

NOTE

The following procedures apply to both left and right stoplights.

Removal

1. Remove two screws (1), two lockwashers (2), and cover (3).
2. Disconnect four electrical cables (4).
3. Remove two screws (5), two lockwashers (6), two ground leads (7), two flat washers (8), two bushings (9), and two grommets (10).
4. Remove grommet (11) and taillight (12), pulling electrical connectors through grommet hole.
5. Remove two nuts (13), two ground leads (7), and two lockwashers (14).
6. Remove two electrical cables (15 and 16) from clips (17). Remove screw (18), electrical cable (15), lockwasher (19), and nut (20).
7. Remove two screws (21), two clips (17), two lockwashers (22), and two nuts (23).

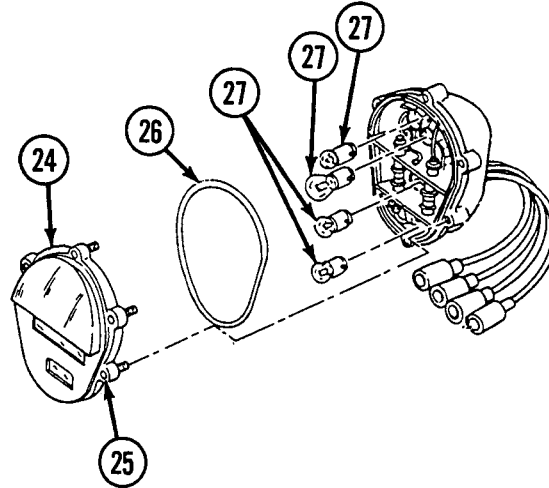


Disassembly

NOTE

Clean and dry all parts, paying particular attention to electrical contacts.

1. Remove door light assembly (24) by loosening six (captive) screws (25).
2. Remove gasket (26).
3. Remove four lamps (27) by pressing in and turning counterclockwise.



Assembly

1. Install four lamps (27) by pressing in and turning clockwise.
2. Install gasket (26).
3. Install door light assembly (24) by tightening six (captive) screws (25).

Installation

1. Install two clips (17), two screws (21), two lockwashers (22), and two nuts (23).
2. Install electrical cable (15), screw (18), lockwasher (19), and nut (20).
3. Install two electrical cables (15 and 16) through clips (17).
4. Install grommet (11) over four electrical cables (4) and insert cables and grommet into hole in cover (3). Connect electrical cables.
5. Install taillight (12), two grommets (10), two bushings (9), two flat washers (8), two ground leads (7), two lockwashers (6), and two screws (5).
6. Install two lockwashers (14), two ground leads (7), and two nuts (13).
7. Install cover (3), two lockwashers (2), and two screws (1).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
REFLECTORS AND MOUNTING PLATES REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (4) (item 638, WP 0491 00)

Materials/Parts (cont.)

Lockwashers (4) (item 640, WP 0491 00)

Nuts (4) (item 763, WP 0491 00)

Screws (4) (item 370, WP 0491 00)

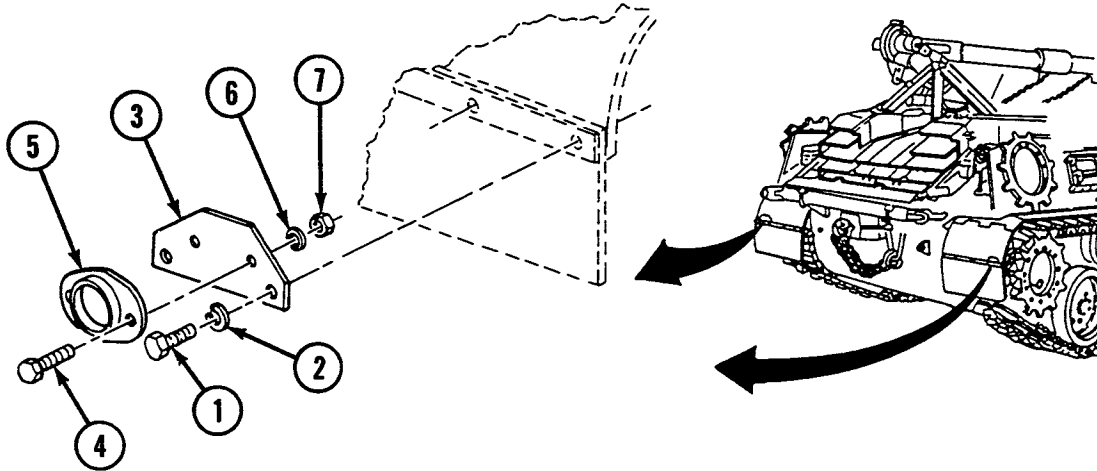
Screws (4) (item 400, WP 0491 00)

NOTE

The following procedures apply to both left and right reflectors.

Removal

1. Remove two screws (1), two lockwashers (2), and reflector mounting plate (3).
2. Remove two screws (4), reflector (5), two lockwashers (6), and two nuts (7).

**Installation**

1. Install reflector (5), two screws (4), two lockwashers (6), and two nuts (7).
2. Install reflector mounting plate (3), two lockwashers (2), and two screws (1).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
FLASHER ASSEMBLY AND RELATED PARTS REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (3) (item 620, WP 0491 00)

Lockwashers (6) (item 621, WP 0491 00)

Materials/Parts (cont.)

Screws (2) (item 372, WP 0491 00)

Screws (2) (item 730, WP 0491 00)

Screws (2) (item 782, WP 0491 00)

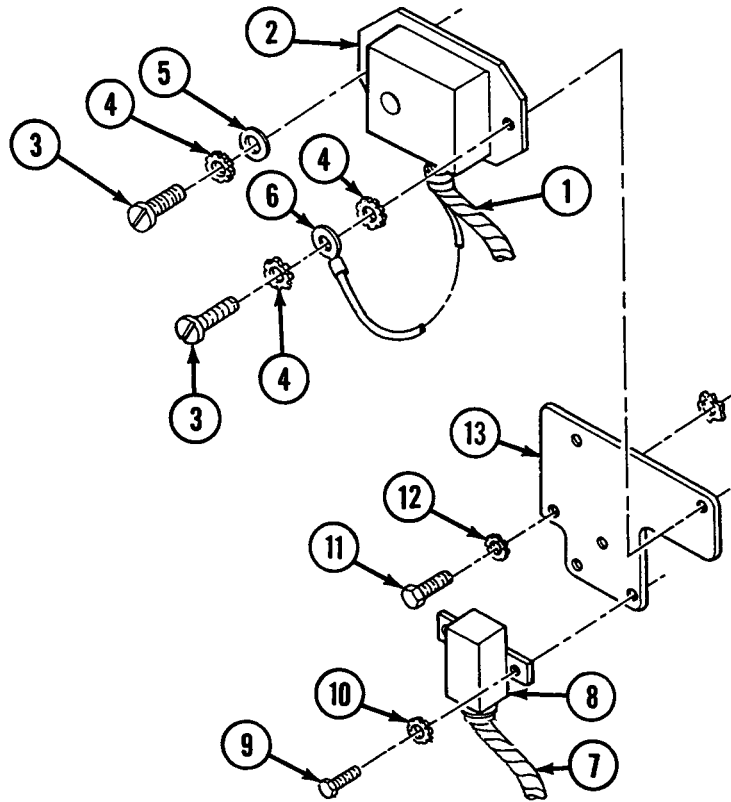
Washer, flat (item 545, WP 0491 00)

WARNING

Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

Removal

1. Disconnect wiring harness (1) from flasher (2).
2. Remove two screws (3), three lockwashers (4), flat washer (5), ground lead (6), and flasher (2).
3. Disconnect wiring harness (7) from warning horn relay (8).
4. Remove two screws (9), two lockwashers (10), and warning horn relay (8).
5. Remove two screws (11), two lockwashers (12), and mounting plate (13).



Installation

1. Install mounting plate (13), two screws (11), and two lockwashers (12).
2. Install warning horn relay (8), two screws (9), and two lockwashers (10).
3. Connect wiring harness (7) to warning horn relay (8).
4. Install flasher (2), ground lead (6), two screws (3), three lockwashers (4), and flat washer (5).
5. Connect wiring harness (1) to flasher (2).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
DIRECTIONAL SIGNAL CONTROL AND MOUNT ASSEMBLY REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (3) (item 638, WP 0491 00)

Nuts (2) (item 763, WP 0491 00)

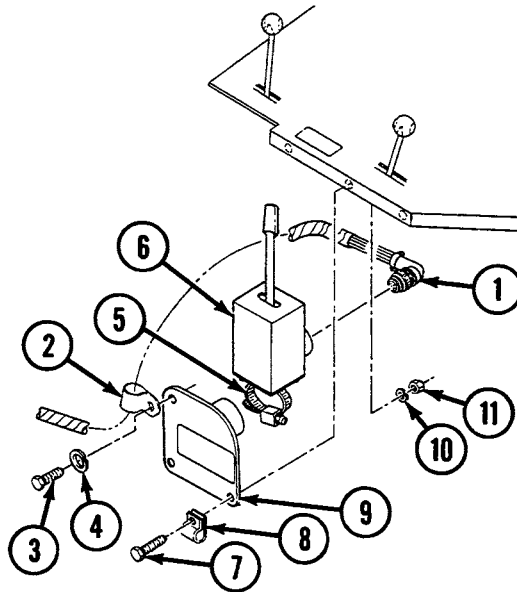
Screws (3) (item 563, WP 0491 00)

WARNING

Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

Removal

1. Disconnect and remove wiring harness (1), clamp (2), screw (3), and lockwasher (4).
2. Loosen clamp (5) and remove directional signal control (6).
3. Remove two screws (7), clamp (8), mount assembly (9), two lockwashers (10), and two nuts (11).

**Installation**

1. Install mount assembly (9), clamp (8), two screws (7), two lockwashers (10), and two nuts (11).
2. Connect directional signal control (6) to mount assembly (9) and tighten clamp (5).
3. Install clamp (2), lockwasher (4), and screw (3). Install wiring harness (1) and connect to directional signal control (6).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
MIRROR AND MOUNT ASSEMBLIES REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Lockwashers (2) (item 639, WP 0491 00)

Lockwashers (8) (item 640, WP 0491 00)

Materials/Parts (cont.)

Nuts (2) (item 757, WP 0491 00)

Nuts (8) (item 758, WP 0491 00)

Screws (2) (item 381, WP 0491 00)

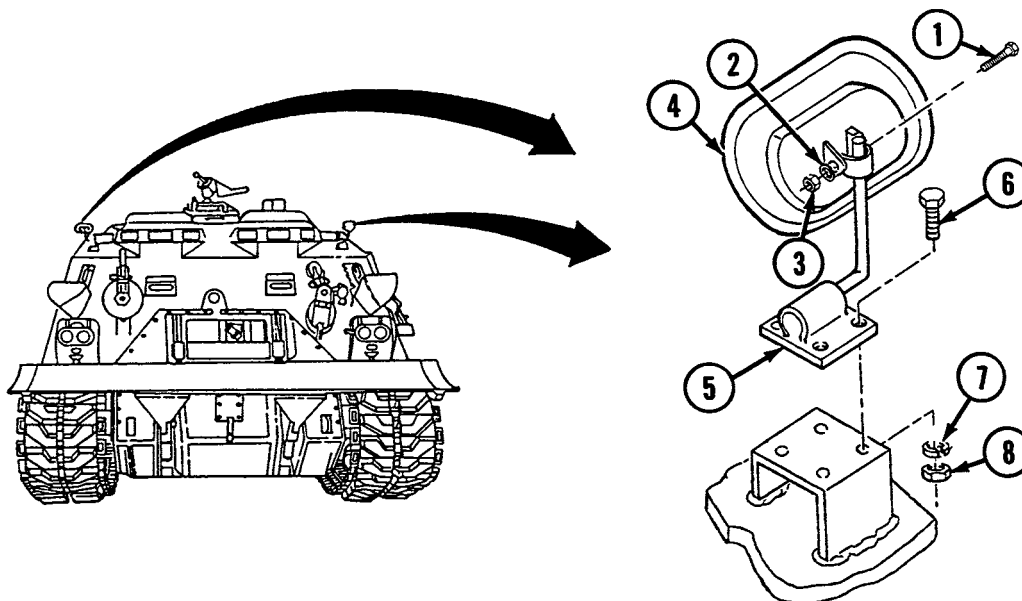
Screws (8) (item 391, WP 0491 00)

NOTE

The following procedures apply to both left and right mirror assemblies.

Removal

1. Remove screw (1), lockwasher (2), nut (3), and mirror (4) from mount assembly (5).
2. Remove four screws (6), four lockwashers (7), four nuts (8), and mount assembly (5).

**Installation**

1. Install mount assembly (5), four screws (6), four lockwashers (7), and four nuts (8).
2. Slide mirror (4) onto mount assembly (5) and secure using screw (1), lockwasher (2), and nut (3).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
FRONT DIRECTIONAL SIGNAL LAMPS AND RELATED PARTS REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Gaskets (2) (item 22, WP 0491 00)

Lockwashers (10) (item 622, WP 0491 00)

Materials/Parts (cont.)

Nuts (4) (item 757, WP 0491 00)

Screws (6) (item 377, WP 0491 00)

Screws (2) (item 380, WP 0491 00)

Screws (4) (item 780, WP 0491 00)

Washers, flat (6) (item 534, WP 0491 00)

WARNING

Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

NOTE

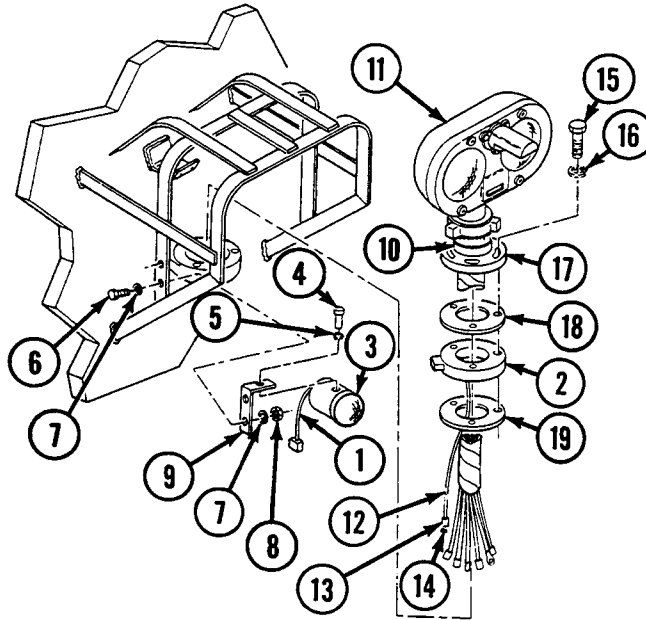
The left headlight is modified during safety lighting kit installation. However, while the part number is different, the maintenance procedure is unchanged (see WP 0175 00).

NOTE

The following procedures apply to both left- and right-front directional signal lamps.

Removal

1. Disconnect signal lamp wire assembly (1) from adapter assembly (2) and signal lamp (3).
2. Remove screw (4), lockwasher (5), and signal lamp (3).
3. Remove two screws (6), four lockwashers (7), two nuts (8), and bracket (9).
4. Loosen quick-disconnect coupling nut (10). Pull front headlight assembly (11) up and remove (pulling up disconnects electrical connector).
5. Disconnect adapter assembly harness (12) in crew compartment. Remove shell (13) and flat washer (14) if required.
6. Remove three screws (15), three lockwashers (16), cover (17), gasket (18), adapter assembly (2), and gasket (19).



RIGHT-FRONT DIRECTIONAL SIGNAL LAMP

Installation

1. Install gasket (19), adapter assembly (2), gasket (18), cover (17), three lockwashers (16), and three screws (15).
2. Install shell (13) and flat washer (14).
3. Connect adapter assembly harness (12) in crew compartment.
4. Place front headlight assembly (11) over mounting and push down to engage connector. Then, securely tighten quick-disconnect coupling nut (10).
5. Install bracket (9), two screws (6), four lockwashers (7), and two nuts (8).
6. Install signal lamp (3), screw (4), and lockwasher (5).
7. Connect signal lamp wire assembly (1) to adapter assembly (2) and signal lamp (3).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

DIRECTIONAL SIGNAL CONTROL WIRING HARNESS (12322611) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

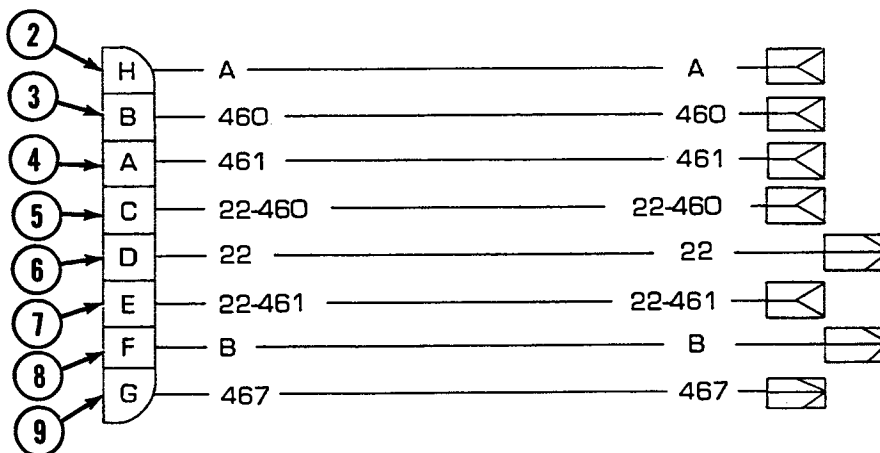
References

WP 0255 00 thru 0264 00

WARNING

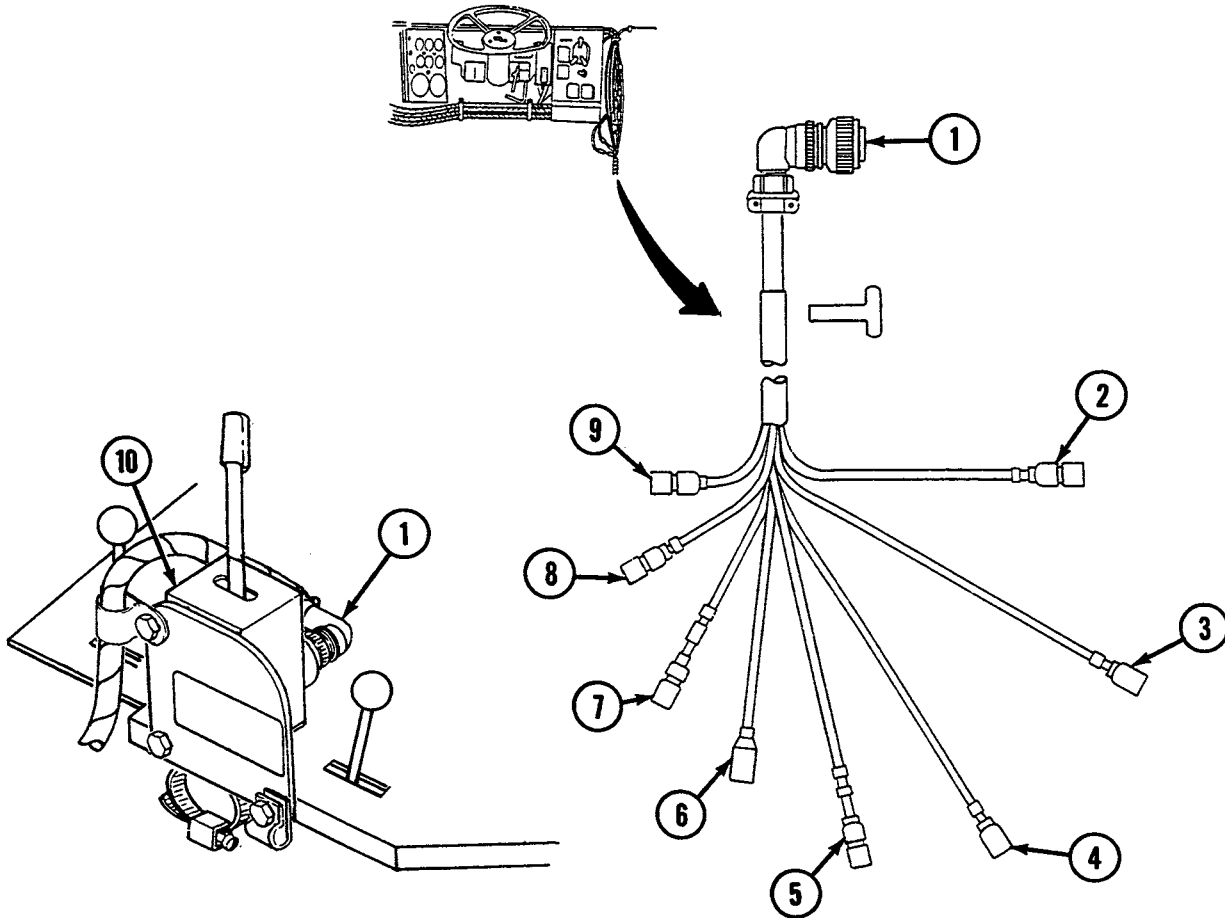
Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Directional signal control	
2	Flasher wiring harness (12322612)	A
3	Directional signal wiring harness (12322660)	460
4	Directional signal wiring harness (12322660)	461
5	Directional signal control to bulkhead wiring harness (12322614)	22-460
6	Main lighting switch panel wire assembly (12322615-1)	22
7	Directional signal control to bulkhead wiring harness (12322614)	22-461
8	Flasher wiring harness (12322612)	B
9	Main lighting switch panel wire assembly (12322615-2)	467



Removal

1. Disconnect connector (1) at directional signal control (10).
2. Disconnect connectors (2 through 9).



Disassembly

1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect connectors (2 through 9).
2. Connect connector (1) at directional signal control (10).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

**RIGHT TAIL LAMP TO LEFT TAIL LAMP TO BULKHEAD WIRING HARNESS (12322613) MAINTENANCE
 REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION**

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

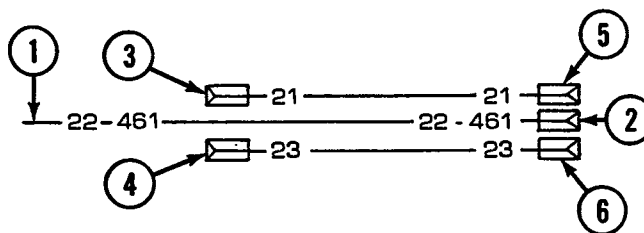
References

WP 0255 00 thru 0264 00

WARNING

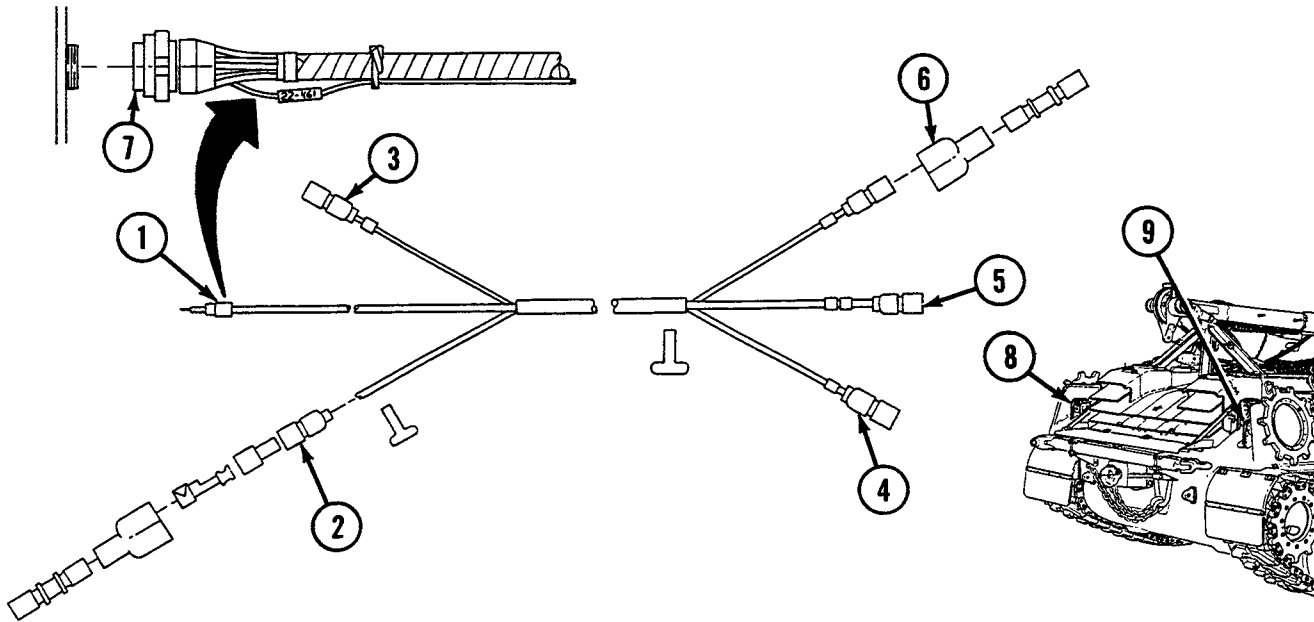
Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Bulkhead connector	22-461
2	Right tail lamp assembly	22-461
3	Left tail lamp assembly	21
4	Left tail lamp assembly	23
5	Right tail lamp assembly	21
6	Right tail lamp assembly	23



Removal

1. Disconnect lead (1) at bulkhead connector (7).
2. Disconnect two connectors (2 and 3) at left tail lamp (8).
3. Disconnect three connectors (4, 5, and 6) at right tail lamp (9).

**Disassembly**

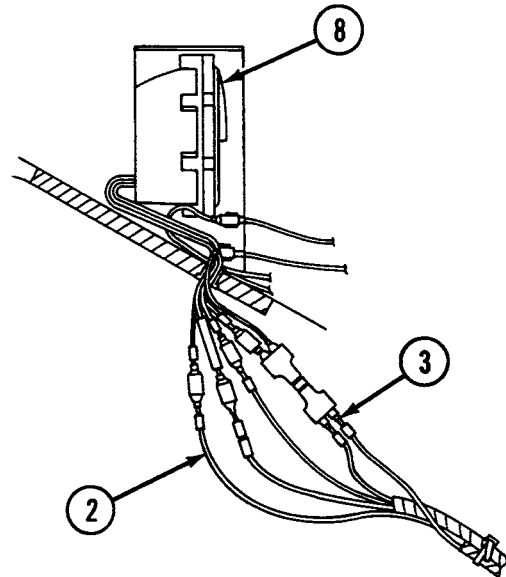
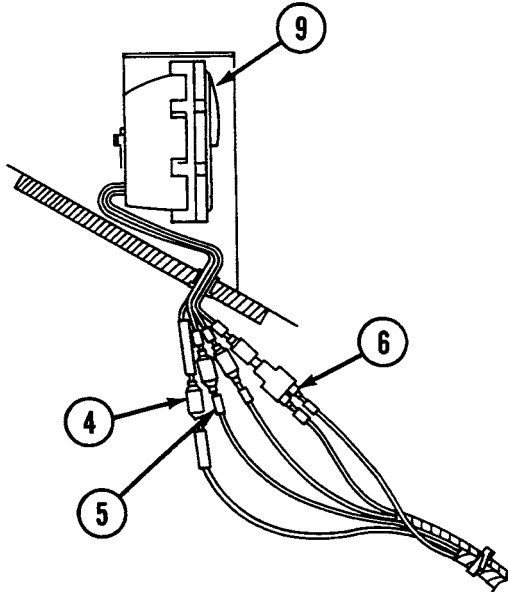
1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect three connectors (4, 5, and 6) at right tail lamp (9).
2. Connect two connectors (2 and 3) at left tail lamp (8).



3. Connect lead (1) at bulkhead connector (7).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
FLASHER WIRING HARNESS (12322612) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00

Materials/Parts

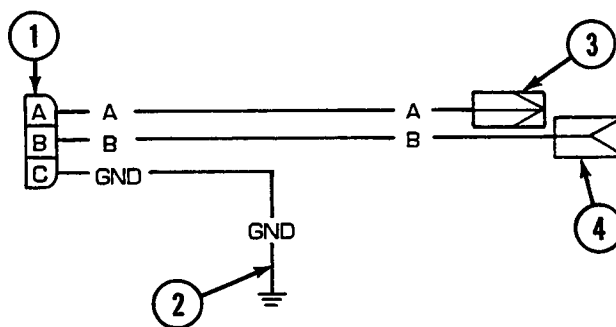
Lockwashers (2) (item 628, WP 0491 00)

Screw (item 730, WP 0491 00)

WARNING

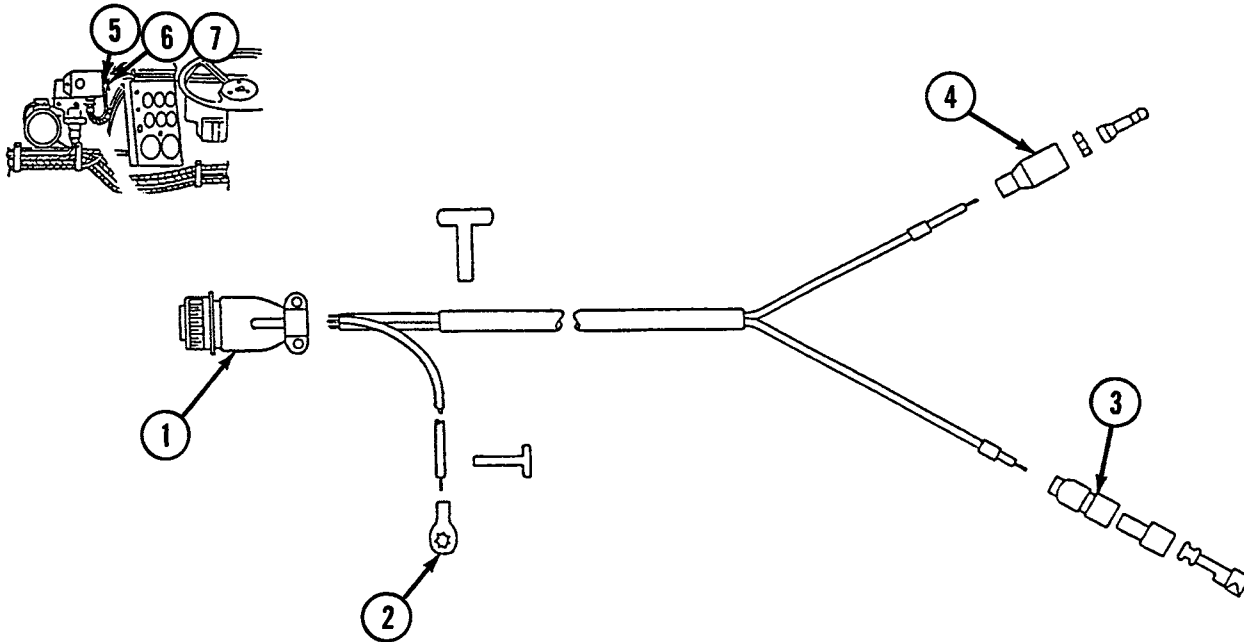
Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Flasher assembly	
2	Ground	GND
3	Directional signal control wiring harness (12322611)	A
4	Directional signal control wiring harness (12322611)	B



Removal

1. Disconnect connector (1) from flasher (5).
2. Disconnect ground lead (2) by removing screw (6) and two lockwashers (7).
3. Disconnect two connectors (3 and 4).



Disassembly

1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect two connectors (3 and 4).
2. Connect ground lead (2) using screw (6) and two lockwashers (7).
3. Connect connector (1) to flasher (5).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

DIRECTIONAL SIGNAL CONTROL TO BULKHEAD WIRING HARNESS (12322614) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

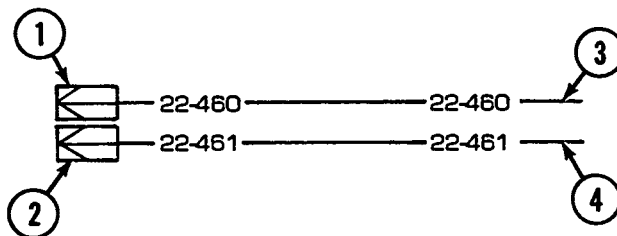
References

WP 0255 00 thru 0264 00

WARNING

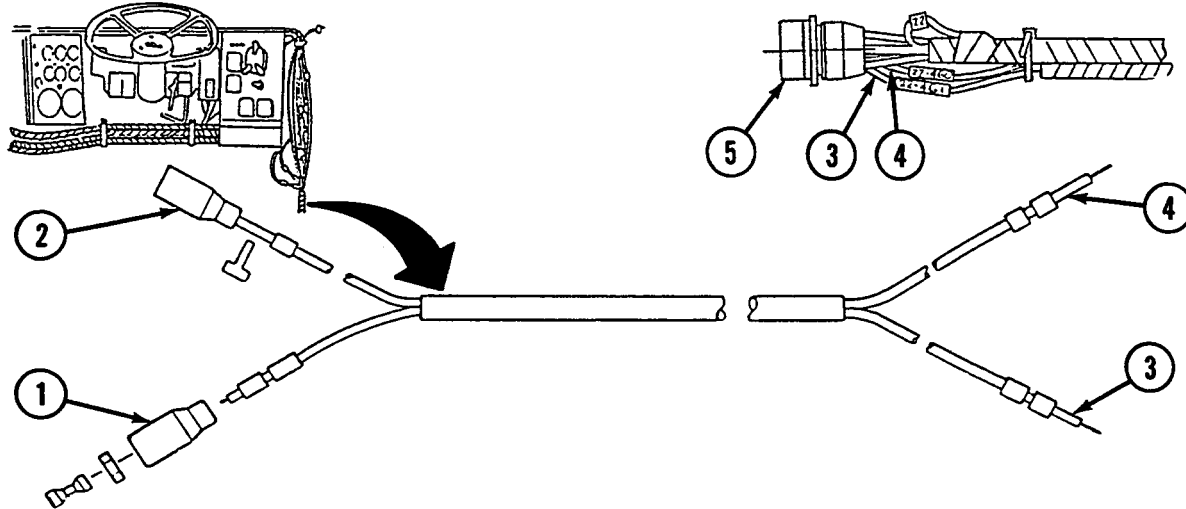
Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Directional signal control wiring harness (12322611)	22-460
2	Directional signal control wiring harness (12322611)	22-461
3	Bulkhead connector	22-460
4	Bulkhead connector	22-461



Removal

1. Disconnect connectors (1 and 2).
2. Disconnect leads (3 and 4) at bulkhead connector (5).

**Disassembly**

1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect leads (3 and 4) at bulkhead (5).
2. Connect connectors (1 and 2).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

MAIN LIGHTING SWITCH PANEL WIRE ASSEMBLIES (12322615-1 AND 12322615-2) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

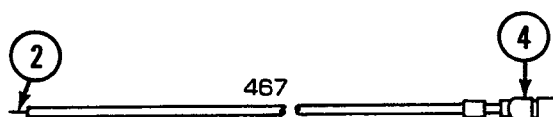
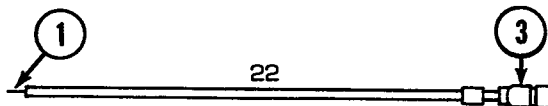
References

WP 0255 00 thru 0264 00

WARNING

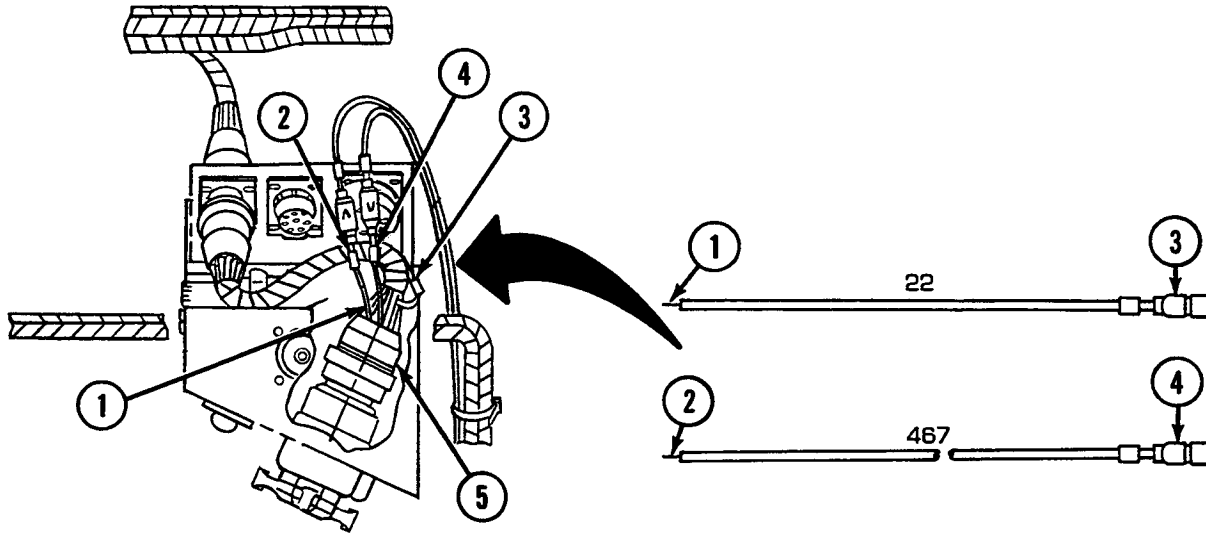
Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Directional signal control wiring harness (12322611)	22
2	Directional signal control wiring harness (12322611)	467
3	Main lighting switch panel connector	22
4	Main lighting switch panel connector	467



Removal

1. Disconnect connectors (1 and 2).
2. Disconnect leads (3 and 4) from connector (5).

**Disassembly**

1. Disassemble wire assembly (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble wire assembly (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect leads (3 and 4) to connector (5).
2. Connect connectors (1 and 2).

END OF WORK PACKAGE

UNIT MAINTENANCE**RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1****NSN 2350-00-122-6826, EIC AQA****HEADLIGHT BASE ASSEMBLY TO HEADLIGHT AND DIMMER
SWITCH WIRING HARNESS (12322668) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION**

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

ReferencesWP 0255 00 thru 0264 00

WARNING

Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

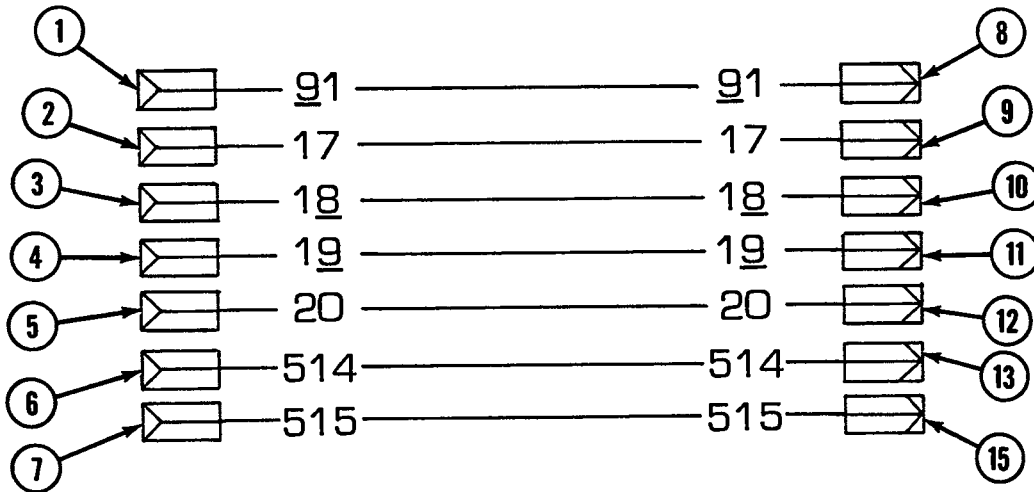
NOTE

The left headlight is modified during safety lighting kit installation. However, while the part number is different, the maintenance procedure is unchanged (see WP 0175 00).

NOTE

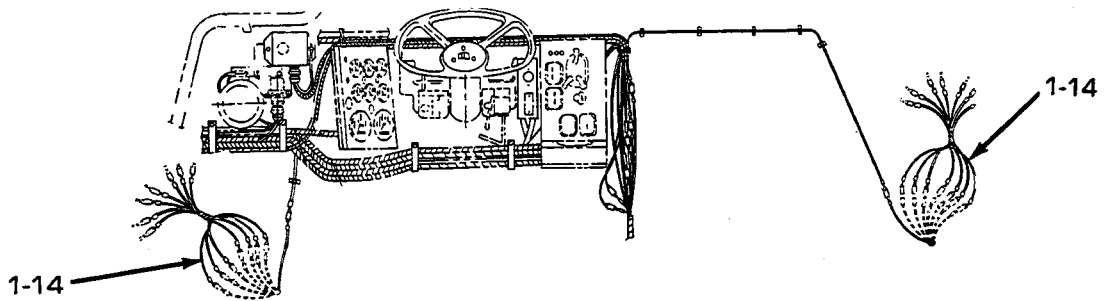
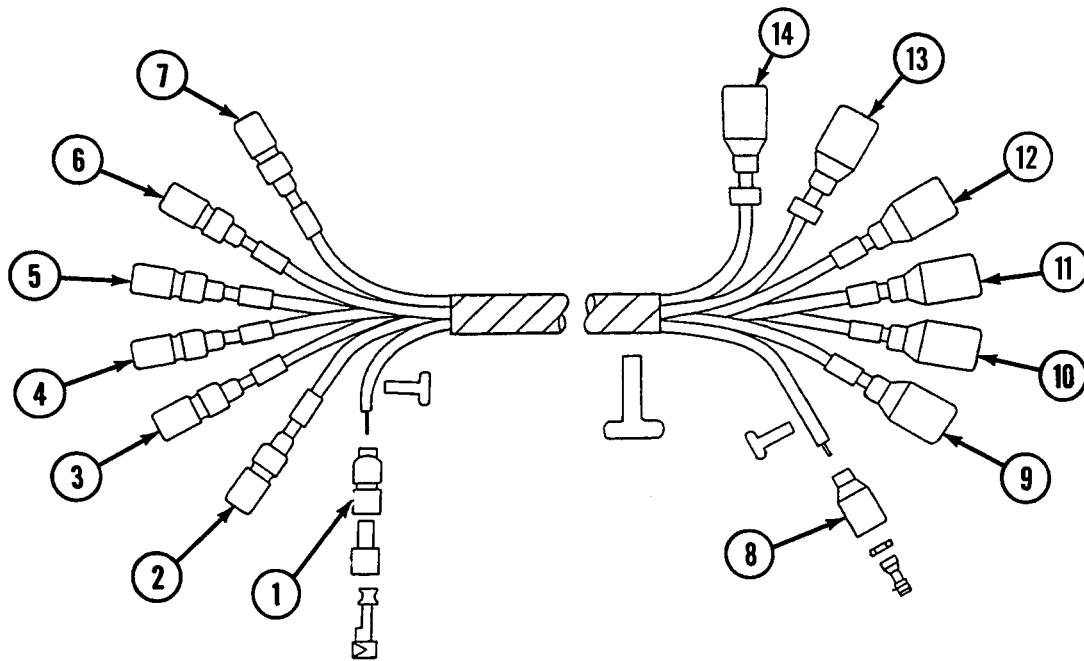
The following procedures apply to both left and right harnesses.

Connector No.	Electrical Lead To:	Wire No.
1	Headlight base assembly	91
2	Headlight base assembly	17
3	Headlight base assembly	18
4	Headlight base assembly	19
5	Headlight base assembly	20
6	Headlight base assembly	514
7	Headlight base assembly	515
8	Headlight and dimmer switch wiring harness (10866950)	91
9	Headlight and dimmer switch wiring harness (10866950)	17
10	Headlight and dimmer switch wiring harness (10866950)	18
11	Headlight and dimmer switch wiring harness (10866950)	19
12	Headlight and dimmer switch wiring harness (10866950)	20
13	Headlight and dimmer switch wiring harness (10866950)	514
14	Headlight and dimmer switch wiring harness (10866950)	515



Removal

1. Disconnect connectors (1 through 7) at headlight base assembly.
2. Disconnect connectors (8 through 14).



Disassembly

1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect connectors (8 through 14).
2. Connect connectors (1 through 7) at headlight base assembly.

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

DIRECTIONAL SIGNAL WIRING HARNESS (12322660) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00

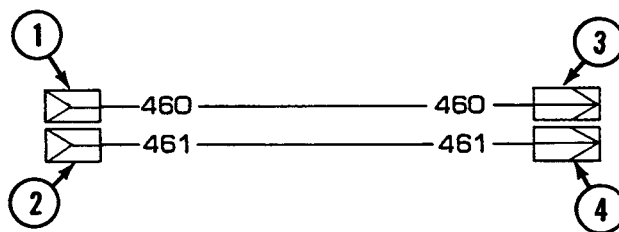
WARNING

Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

NOTE

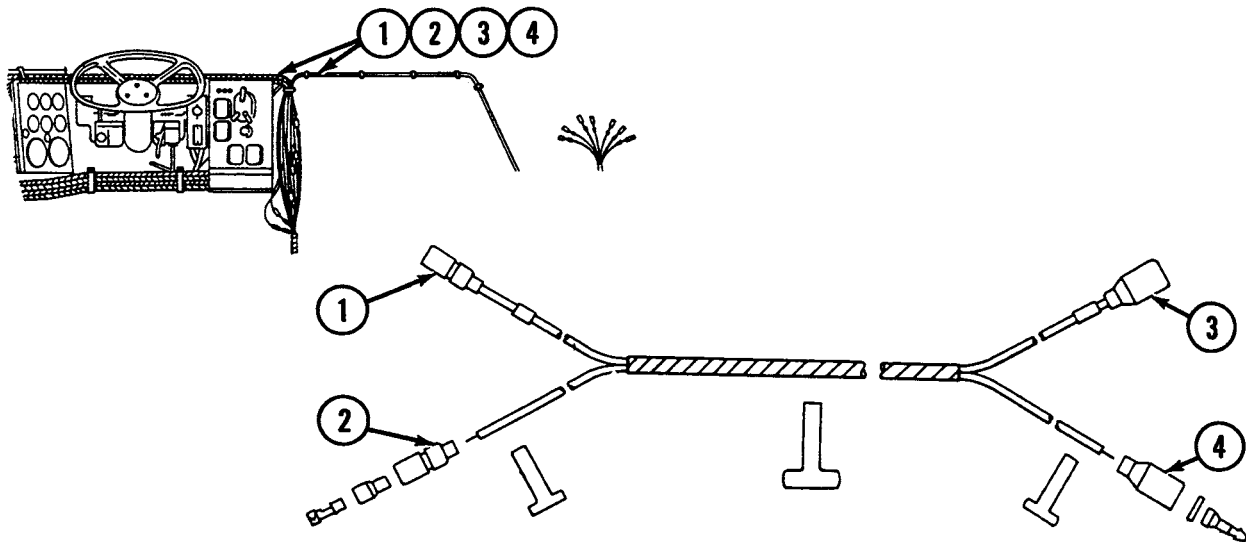
The following procedures apply to both left and right harnesses.

Connector No.	Electrical Lead To:	Wire No.
1	Directional signal/directional signal lamp wire assembly (12322648)	460
2	Directional signal/directional signal lamp wire assembly (12322648)	461
3	Directional signal control wiring harness (12322611)	460
4	Directional signal control wiring harness (12322611)	461



Removal

1. Disconnect connectors (1 and 2).
2. Disconnect connectors (3 and 4).

**Disassembly**

1. Disassemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble wiring harness (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect connectors (3 and 4).
2. Connect connectors (1 and 2).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

DIRECTIONAL SIGNAL/DIRECTIONAL SIGNAL LAMP WIRE ASSEMBLIES (12322648) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0175 00
 WP 0255 00 thru 0264 00

WARNING

Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

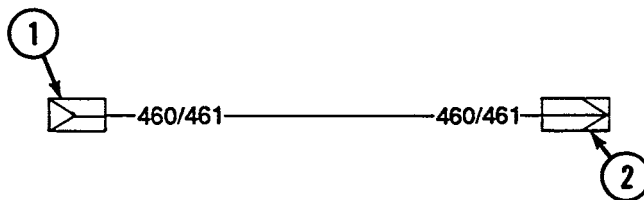
NOTE

The left headlight is modified during safety lighting kit installation. However, while the part number is different, the maintenance procedure is unchanged (see WP 0175 00).

NOTE

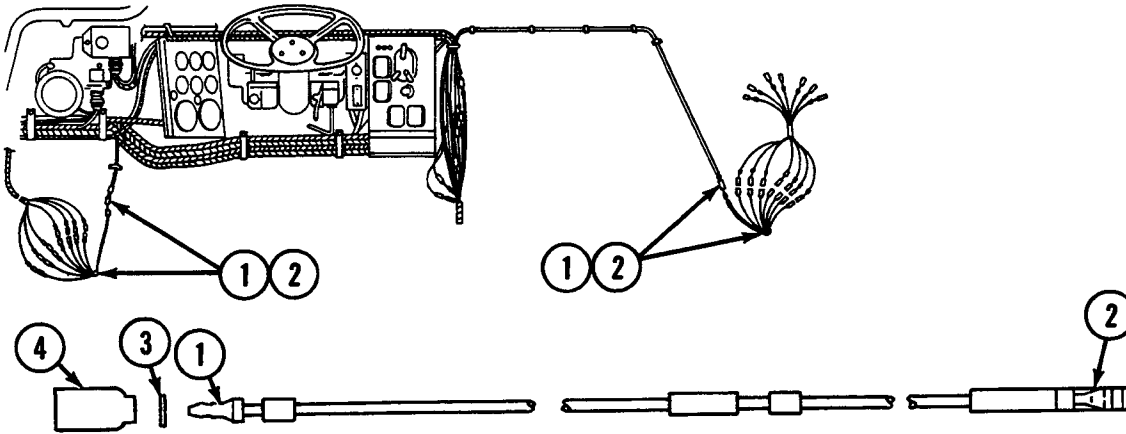
The following procedures apply to both left and right wire assemblies.

Connector No.	Electrical Lead To:	Wire No.
1	Adapter assembly (12322647)	460/461
2	Directional signal wiring harness (12322660)	460/461



Removal

1. Disconnect connectors (1 and 2).
2. Remove flat washer (3) and shell (4).

**Disassembly**

1. Disassemble wire assembly (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble wire assembly (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Install shell (4) and flat washer (3).
2. Connect connectors (1 and 2).

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

DIRECTIONAL SIGNAL LAMP WIRE ASSEMBLY (12322658) MAINTENANCE
REMOVAL, DISASSEMBLY, ASSEMBLY, INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0255 00 thru 0264 00

WARNING

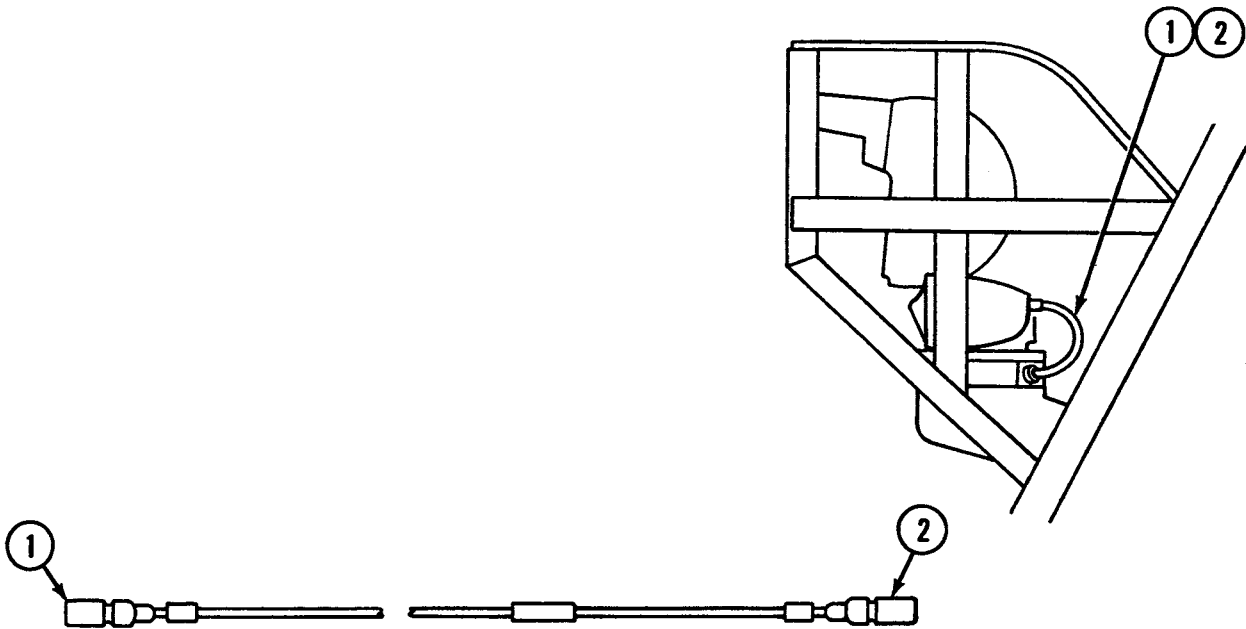
Be certain MASTER switch is OFF when working on electrical system to avoid electrical shock and burns.

Connector No.	Electrical Lead To:	Wire No.
1	Right/left directional signal lamp	460/461
2	Adapter assembly (12322647)	460/461



Removal

1. Disconnect connectors (1 and 2).

**Disassembly**

1. Disassemble wire assembly (see WP 0255 00 thru 0264 00, as appropriate).

Assembly

1. Assemble wire assembly (see WP 0255 00 thru 0264 00, as appropriate).

Installation

1. Connect connectors (1 and 2).

END OF WORK PACKAGE

CHAPTER 19
UNIT MAINTENANCE
MAINTENANCE INSTRUCTIONS
FOR
DEEP WATER FORDING KIT
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
(NSN: 2350-00-122-6826)

CHAPTER 19
UNIT MAINTENANCE
MAINTENANCE INSTRUCTIONS

WORK PACKAGE INDEX

<u>Title</u>	<u>WP Sequence No.</u>
Pre-Installation Procedures.....	0465 00
APU Installation.....	0466 00
Engine Generator Cooling Exhaust Installation.....	0467 00
Engine Exhaust Pipe Supports Installation.....	0468 00
Engine Air Inlet Pipes Installation.....	0469 00
Fuel Tank Vent Installation.....	0470 00
Acetylene Vent Installation.....	0471 00
Crew Fan and Boom Boot Drain Shutoff Clamp Installation.....	0472 00
Bilge Pump Installation.....	0473 00
Fire Extinguisher Nozzles and Electrical Connections in Engine Compartment Installation.....	0474 00
Exterior Fire Extinguisher Remote Control.....	0475 00
Other Applications of Caulking Compound.....	0476 00
Armament Protection.....	0477 00
Sealing Inspection.....	0478 00
Operations During Deep Water Fording.....	0479 00
Operations After Deep Water Fording.....	0480 00
Service After Deep Water Fording.....	0481 00

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
PRE-INSTALLATION PROCEDURES

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Compound, cleaning (item 9, WP 0489 00)

Gasket (item 868, WP 0491 00)

Lockwashers (12) (item 638, WP 0491 00)

Lockwashers (15) (item 640, WP 0491 00)

Lockwashers (20) (item 642, WP 0491 00)

Pin, cotter (item 870, WP 0491 00)

Seal (item 869, WP 0491 00)

Seal (item 871, WP 0491 00)

Strips, rubber (2) (item 867, WP 0491 00)

References

WP 0021 00

WP 0096 00

WP 0097 00

WP 0144 00

TM 9-2350-256-10

Equipment Condition

Boom raised to hoisting position (refer to TM 9-2350-256-10)

Engine deck assembly removed (see WP 0336 00)

NOTE

Although parts listed in the initial set-up are kit furnished, part numbers are provided in the appendices for replenishment purposes.

Assembly and Preparation for Use**NOTE**

The following miscellaneous items are included in the deep water fording kit. This table is provided for replenishment purposes.

Table 1. Miscellaneous Items

Item Number	Document/Part Number	National Stock Number	Description
1	MMM-A-1617	--	Adhesive, rubber, type III— 1-pint (0.47-liter) can
2	H-B-643	7920-00-223-8005	Brush, acid-swabbing, type II, class I, size 2
3	11672186	8030-01-031-9155	Caulking compound—1-1/2-inch- (in.-) (38-millimeter- [mm]) wide x 25-foot- (ft-) (7.62-meter- [m-]) long roll
4	MIL-A-46106	8040-01-010-8758	Sealant, adhesive, RTV, general purpose, white—1-ounce (28.4-gram) primer and 10.3-ounce (292-gram) adhesive
5	MIL-A-46146	8040-01-063-7509	Sealing compound, RTV general noncorro- sive—1-gallon (3.79-liter) pail

Table 1. Miscellaneous Items—Continued

Item Number	Document/Part Number	National Stock Number	Description
6	ASTM D 3400	6810-00-247-0607	Sodium silicate, type 2— 5-gallon (18.9-liter) pail
7	PPP-T-60	- -	Tape, adhesive, type I, class I, olive drab number 34087—2 in.- (51 mm-) wide x 60 yard- (54.9 m-) long roll
8	MIL-I-24391	5970-00-419-4290	Tape, insulation, electrical, black—0.50-in.- (12.7 mm-) wide x 0.010-in.- (0.25 mm-) thick roll
9	DDD-R-30	7920-00-205-1711	Wiping rags, cotton, grade B—50 pounds (22.7 kilograms)
10	GGG-W-665	5120-00-293-1602	Wrench, spanner, universal hose coupling, type V

Cleaning

1. Clean and dry vehicle thoroughly. Surfaces to be covered with nonhygroscopic tape or sealer must be clean and dry.

Inspection-Acceptance and Rejection Criteria

1. Perform semiannual Preventive Maintenance Checks and Services (PMCS) (see WP 0096 00).
2. Inspect drain valves for proper operation and fit. Repair or replace if necessary.
3. Inspect rubber boots used to seal service brake, steer-and-shift, and accelerator rods at side of bulkhead on sponson. Notify Direct Support Maintenance to replace boots that are defective or do not provide a watertight fit.
4. Inspect rubber drain boots on boom for proper seal. Replace if necessary.
5. Inspect main engine and APU oil filler caps, main engine and APU oil level gages, and transmission filler cap/oil level gage to ensure watertight fits. Replace if necessary.
6. Inspect main engine air induction hoses, APU air induction hose, main engine generator air induction hose, and main engine exhaust cooling hoses. Replace any item found defective.
7. Inspect cover and gasket on armature and master relays for possibility of leakage. Replace if necessary.
8. Inspect waterproof electrical connections for possibility of leakage. Replace if necessary.
9. Inspect personnel door seals for watertight fit. Replace if necessary.
10. Inspect caliber .50 machine gun cover for tears or damage. Replace if necessary.
11. Operate engine and troubleshoot any malfunction or deficiency as required (see WP 0021 00).

Testing

1. Check release torque of main engine cooling fans (see WP 0144 00).
2. Check batteries to see that they are fully charged and properly filled with electrolyte. Also, check battery caps for tightness; battery vents, however, must be open.

Lubrication

1. Lubricate vehicle in accordance with TM 9-2350-256-10 and WP 0097 00.

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

APU INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Sealant, adhesive (item 4, WP 0465 00)

Lockwashers (2) (item 640, WP 0491 00)

Materials/Parts (cont.)

Screws (2) (item 736, WP 0491 00)

Screws (2) (item 800, WP 0491 00)

References

WP 0334 00

NOTE

Items removed for installation of kit and not reused should be stowed for reinstallation when kit parts are removed.

NOTE

APU is not operational during fording operation. Air inlets and exhausts for this components are plugged and must be unplugged after fording operation to become operational.

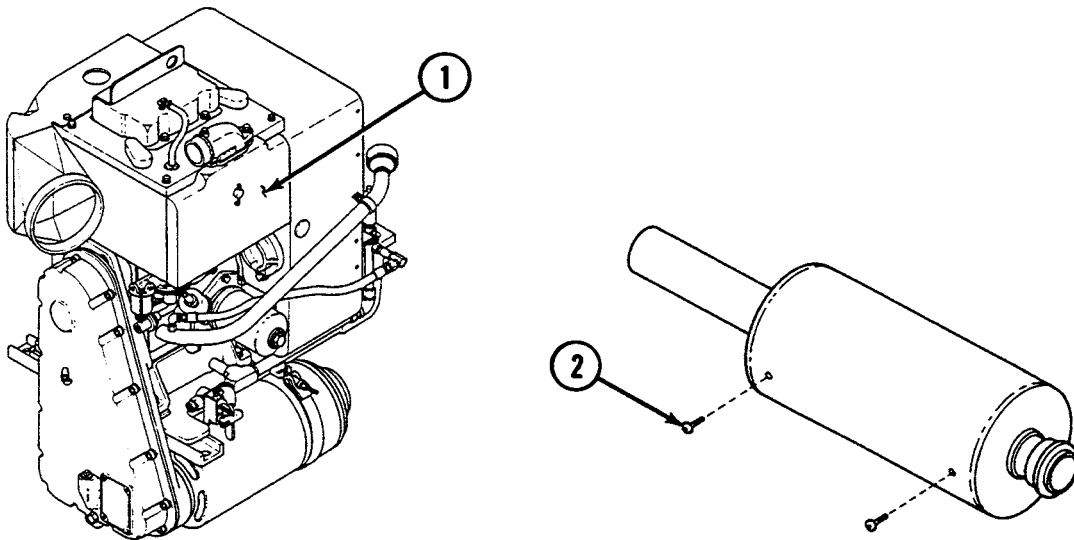
Installation

1. Remove APU access cover (see WP 0334 00).

WARNING

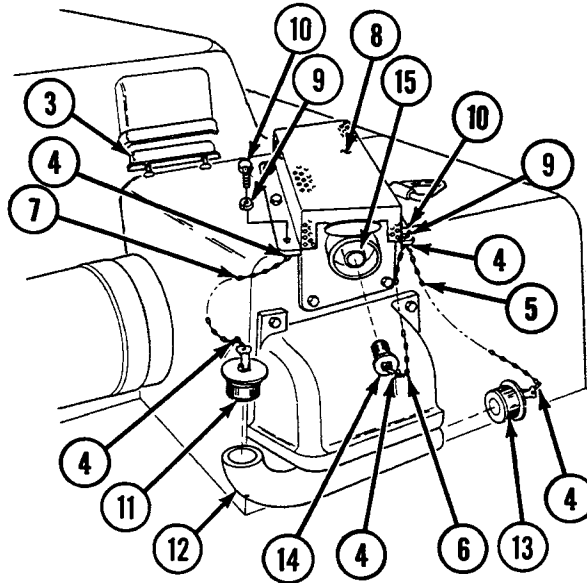
APU access door must be secured prior to performing any work on unit. Unless properly secured by a strap, access door can swing shut and injure personnel working on unit, especially if spare roadwheel is mounted in place on hull.

2. Remove access door (1) to expose electrical terminals.
3. Apply adhesive sealant (item 4, WP 0465 00) on all exposed exterior and interior electrical terminals.
4. Install access door (1).
5. Install two kit-furnished screws (2) in holes on bottom of muffler and apply adhesive sealant (item 4, WP 0465 00) around head of each screw.



6. Install APU access cover (see WP 0334 00).

7. Install kit-furnished seal assembly (3) into air inlet, located above APU engine compartment.
8. Attach two kit-furnished S-hooks (4) to ends of each kit-furnished chain (5, 6, and 7).
9. Attach S-hooks (4) of chains (5 and 6) to muffler guard (8) by using lockwasher (9) and existing screws (10).
10. Attach S-hook (4) of chain (7) to muffler guard (8) using lockwasher (9) and existing screw (10).
11. Attach kit-furnished plug (11) to chain (7) S-hook (4) and install into personnel heater exhaust pipe (12).
12. Attach kit-furnished plug (13) to chain (5) S-hook (4) and install into opposite end of personnel heater exhaust pipe (12).
13. Attach kit-furnished plug (14) to chain (6) S-hook (4) and install into end of APU muffler (15).



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
ENGINE GENERATOR COOLING EXHAUST INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Adhesive, rubber (item 1, WP 0465 00)
Grommet (item 98, WP 0491 00)
Lockwasher (item 638, WP 0491 00)
Lockwashers (4) (item 640, WP 0491 00)
Nuts (2) (item 674, WP 0491 00)

Materials/Parts (cont.)

Pin, cotter (item 870, WP 0491 00)
Screw (item 374, WP 0491 00)
Screws (2) (item 388, WP 0491 00)
Screws (2) (item 721, WP 0491 00)

References

WP 0115 00
WP 0150 00

NOTE

Items removed for installation of kit and not reused should be stowed for reinstallation when kit parts are removed.

Installation

1. Remove exhaust air elbow from front shroud and exhaust air tube (see WP 0150 00).
2. Remove right-rear upper engine cover (see WP 0115 00).

NOTE

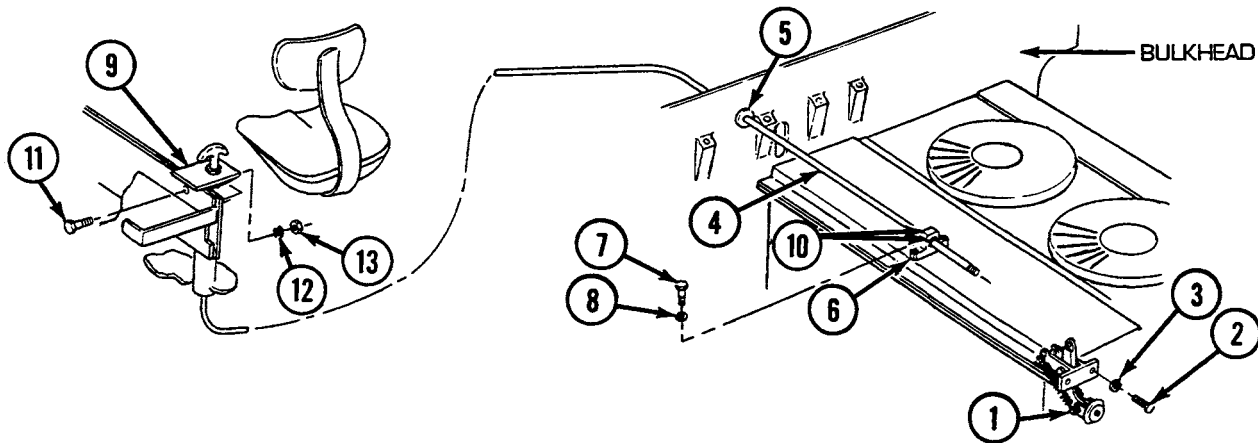
Valve assembly (1) should be operated manually to ensure that valve is centered properly in shroud opening prior to tightening screws (2).

3. Install kit-furnished valve assembly (1) on right-rear flywheel end, upper shroud assembly with two kit-furnished screws (2) and two lockwashers (3).
4. Install right-rear upper engine cover (see WP 0115 00), previously removed.
5. Remove pipe plug in bulkhead (engine compartment side) to provide opening for control cable (4).
6. Install kit-furnished grommet (5) in bulkhead using rubber adhesive (item 1, WP 0465 00).
7. Install kit-furnished support (6) with two kit-furnished screws (7) and two lockwashers (8).
8. Install kit-furnished bracket and control assembly (9) as follows:

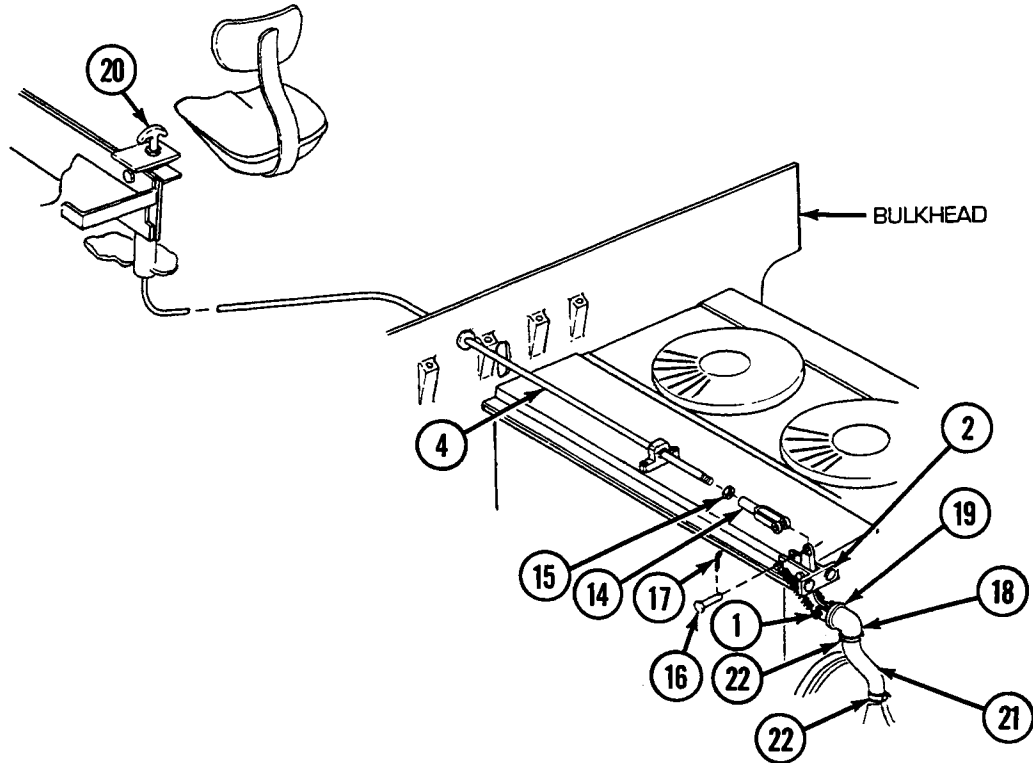
NOTE

Care should be taken not to damage rubber seals (10) when removing them from their retaining ferrules.

- a. Remove two rubber seals (10) with nuts from control cable (4). Discard nuts.
- b. Route control cable (4) through floor plate support at oddment tray on driver's side, under floor plates, through bulkhead grommet (5), and through support (6). Place rubber seal (10) on each side of support.
- c. Secure bracket and control assembly (9) with screw (11), lockwasher (12), and nut (13).



- d. Install clevis (14) and nut (15) onto end of control cable (4). Tighten nut.
- e. Attach clevis (14) to valve assembly (1) with pin (16) and cotter pin (17).
9. Position air exhaust elbow (18) on shroud connection in an inverted position (pointing up) and secure with hose clamp (19).
10. Operate hand lever by exerting sufficient pull on T-handle (20) and valve assembly (1), and lock in place by rotating T-handle clockwise.
11. Fill air exhaust elbow (18) with water and allow to sit for 5 minutes. If valve assembly (1) is seated properly and no leakage is detected, reposition valve assembly by loosening two screws (2). Then, tighten screws and recheck for watertight seal.
12. Reposition air exhaust elbow (18) on exhaust air tubes (21) and shroud connection and secure with two hose clamps (22).



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
ENGINE EXHAUST PIPE SUPPORTS INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

References

WP 0343 00
TM 9-2350-256-10

Materials/Parts

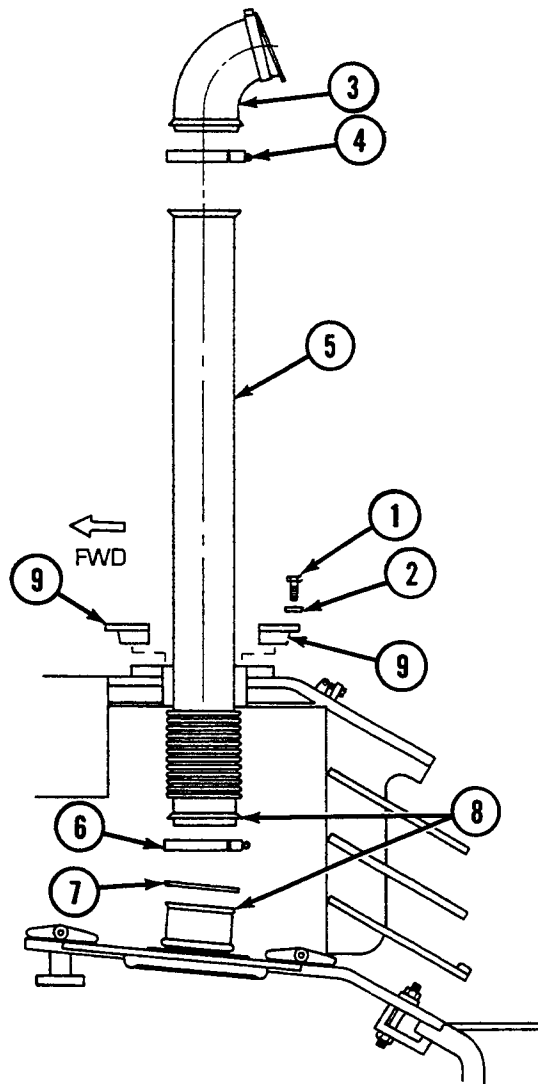
Sealant, adhesive (item 4, WP 0465 00)
Lockwashers (8) (item 642, WP 0491 00)
Screws (8) (item 376, WP 0491 00)

NOTE

Items removed for installation of kit and not reused should be stowed for reinstallation when kit parts are removed.

Installation

1. Remove two cover plates (see WP 0343 00) on top of engine deck from exhaust stack by removing eight screws (1) and eight lockwashers (2). Retain screws.
2. Remove two existing elbows (3) by removing two clamps (4) and retain.
3. Install two kit-furnished flexible exhaust pipes (5) on engine exhaust outlets using kit-furnished clamp (6) and seal (7). Apply adhesive sealant (item 4, WP 0465 00) to pipe flange (8).
4. Install four kit-furnished clamps (9) with eight previously removed screws (1) and eight lockwashers (2).
5. Install two previously removed elbows (3) on flexible exhaust pipes (5) each with previously removed clamp (4). Apply adhesive sealant (item 4, WP 0465 00) around joint to prevent entry of water.



6. Start and operate engine (refer to TM 9-2350-256-10). While exhaust system is hot, tighten all exhaust system clamped joints.

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
ENGINE AIR INLET PIPES INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Sealant, adhesive (item 4, WP 0465 00)

Materials/Parts (cont.)

Lockwashers (4) (item 638, WP 0491 00)

Lockwashers (4) (item 642, WP 0491 00)

Screws (4) (item 145, WP 0491 00)

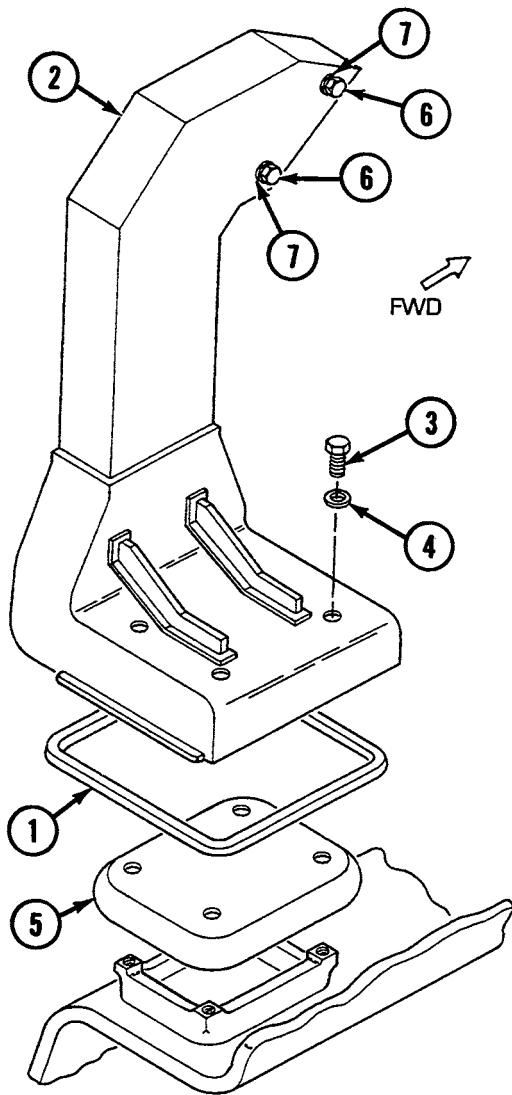
Screws (4) (item 786, WP 0491 00)

NOTE

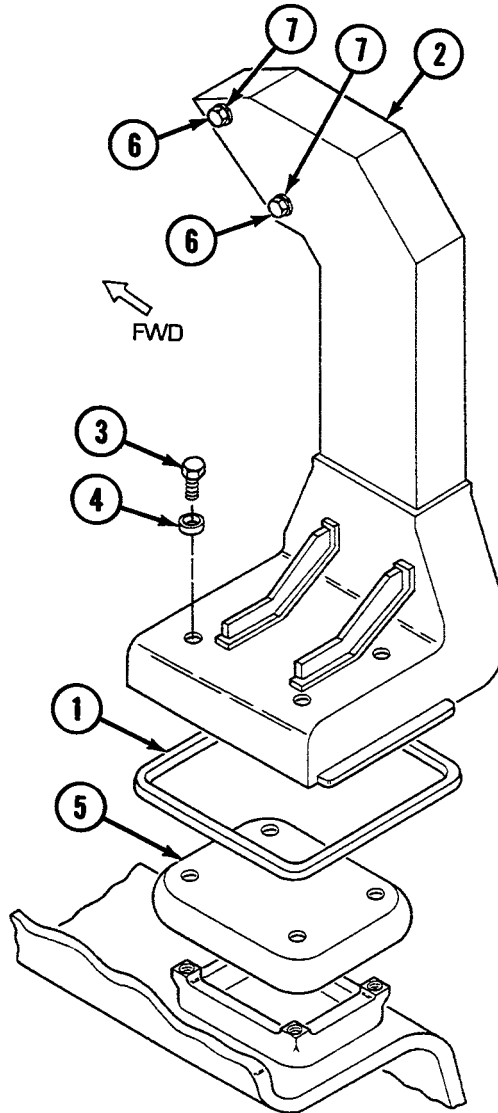
Items removed for installation of kit and not reused should be stowed for reinstallation when kit parts are removed.

Installation

1. Bond kit-furnished rubber strip (1) to left and right kit-furnished air inlet pipes (2) with adhesive sealant (item 4, WP 0465 00).
2. Remove four existing screws (3) and four lockwashers (4) securing armor covers (5). Do not remove either armor cover.
3. Install left and right kit-furnished air inlet pipes (2) and secure each with four previously removed screws (3) and four lockwashers (4). Apply adhesive sealant (item 4, WP 0465 00) around heads of screws and base of air inlet pipes at installation.
4. Install four kit-furnished screws (6) and four lockwashers (7) in both left and right air inlet pipes (2).



LEFT SIDE



RIGHT SIDE

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
FUEL TANK VENT INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Compound, caulking (item 3, WP 0465 00)

Sealant, adhesive (item 4, WP 0465 00)

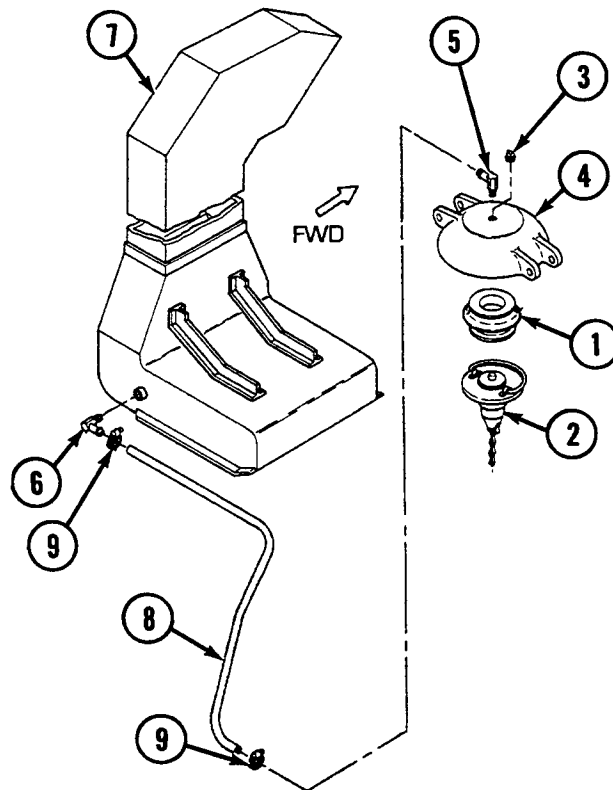
Clamps (2) (item 712, WP 0491 00)

NOTE

Items removed for installation of kit and not reused should be stowed for reinstallation when kit parts are removed.

Installation

1. Bond kit-furnished seal (1) to existing cap assembly (2) with adhesive sealant (item 4, WP 0465 00).
2. Remove plug (3) from fuel tank filler cover (4).
3. Install kit-furnished elbow (5) in fuel tank filler cover (4).
4. Install kit-furnished elbow (6) in left engine air inlet pipe (7).
5. Connect kit-furnished hose (8) between elbows (5 and 6). Secure each end with clamp (9).
6. Seal fuel tank filler cover (4) to mating surface with caulking compound (item 3, WP 0465 00).

**END OF WORK PACKAGE**

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
ACETYLENE VENT INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Sealant, adhesive (item 4, WP 0465 00)

Materials/Parts (cont.)

Lockwashers (4) (item 638, WP 0491 00)

Lockwashers (2) (item 640, WP 0491 00)

Screws (4) (item 370, WP 0491 00)

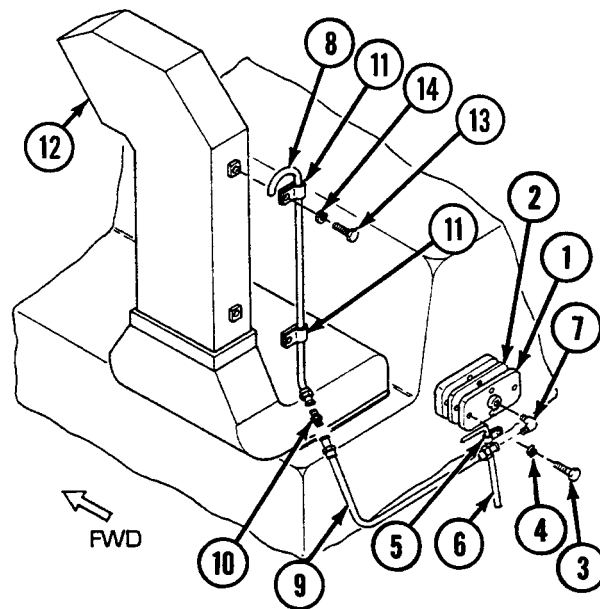
Screws (2) (item 388, WP 0491 00)

Installation

NOTE

Items removed for installation of kit and not reused should be stowed for reinstallation when kit parts are removed.

1. Install kit-furnished cover (1) and gasket (2) over acetylene vent holes with three kit-furnished screws (3) and three lockwashers (4). Apply adhesive sealant (item 4, WP 0465 00) to gasket upon installation.
2. Install kit-furnished loop clamp (5) over fuel tank vent hose (6) and secure with fourth kit-furnished screw (3) and lockwasher (4).
3. Install kit-furnished elbow (7) in cover (1).
4. Connect kit-furnished tube assembly (8) to tube assembly (9) with kit-furnished union (10).
5. Place two kit-furnished loop clamps (11) over kit-furnished tube assembly (8).
6. Connect end of tube assembly (9) to kit-furnished elbow (7).
7. Secure kit-furnished tube assembly (8) to left air inlet pipe (12) with two kit-furnished screws (13) and two lockwashers (14).



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
CREW FAN AND BOOM BOOT DRAIN SHUTOFF CLAMP INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Compound, caulking (item 3, WP 0465 00)

Materials/Parts (cont.)

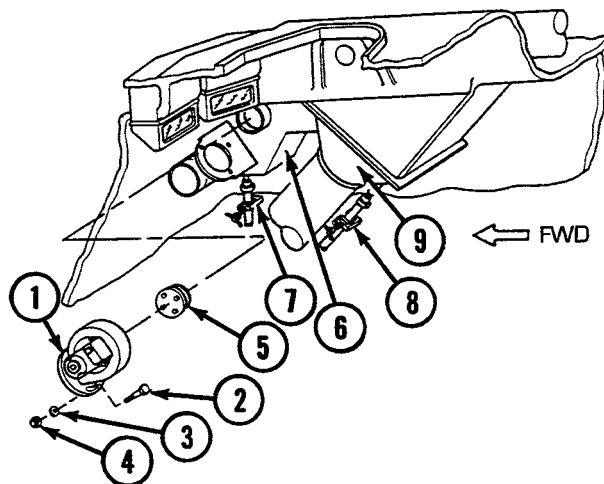
Tape, adhesive (item 7, WP 0465 00)
 Lockwashers (4) (item 642, WP 0491 00)
 Nuts (4) (item 769, WP 0491 00)
 Screws (4) (item 401, WP 0491 00)

NOTE

Items removed for installation of kit and not reused should be stowed for reinstallation when kit parts are removed.

Installation

1. Tape crew fan switch, located on accessories panel, to OFF position with adhesive tape (item 7, WP 0465 00).
2. Remove ventilating blower assembly (1) by removing three screws (2), three lockwashers (3), and three nuts (4).
3. Apply caulking compound (item 3, WP 0465 00) to seal assembly (5) and place seal assembly into opening of crew fan housing (6). Tighten seal assembly screws until watertight fit is obtained.
4. Install ventilating blower assembly (1) with three screws (2), three lockwashers (3), and three nuts (4).
5. Install kit-furnished clamp (7) on crew fan housing (6) drain hose.
6. Install one kit-furnished clamp (8) on right and left drain hoses of boom cylinder boot (9).



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
BILGE PUMP INSTALLATION

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)
 Wrench, spanner (item 10, WP 0465 00)

Materials/Parts

Sodium silicate (item 6, WP 0465 00)
 Clamps, hose (7) (item 3, WP 0491 00)
 Clamp, hose (item 4, WP 0491 00)

Materials/Parts (cont.)

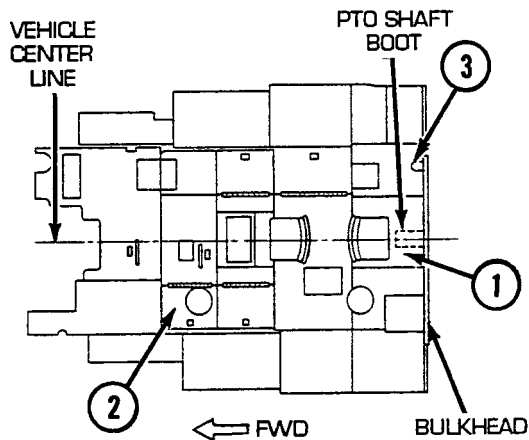
Grommet (item 665, WP 0491 00)
 Lockwashers (5) (item 123, WP 0491 00)
 Lockwashers (4) (item 642, WP 0491 00)
 Screws (5) (item 370, WP 0491 00)
 Screws (4) (item 785, WP 0491 00)
 Washers, flat (8) (item 539, WP 0491 00)

NOTE

Items removed for installation of kit and not reused should be stowed for reinstallation when kit parts are removed.

Installation

1. Remove rear center floor plate (1) and stowage basket forward intermediate left floor plate (2), and retain.
2. Remove rear intermediate right access cover (3).



CAUTION

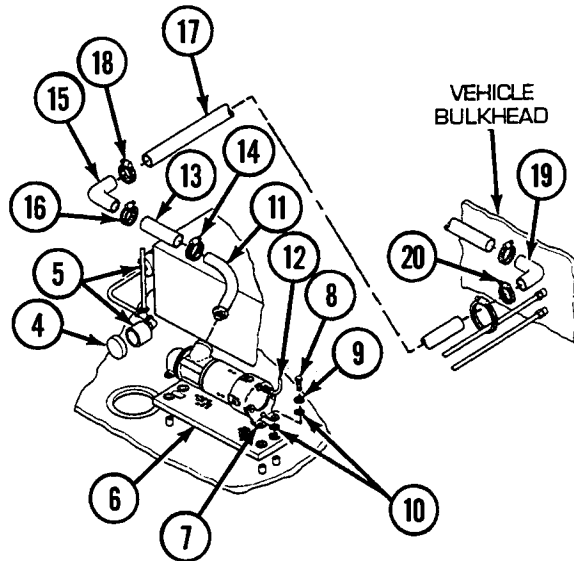
Do not apply adhesive sealant to fire extinguisher nozzle caps.

3. Install kit-furnished rubber cap (4) in two fire extinguisher nozzles (5) in main winch compartment.

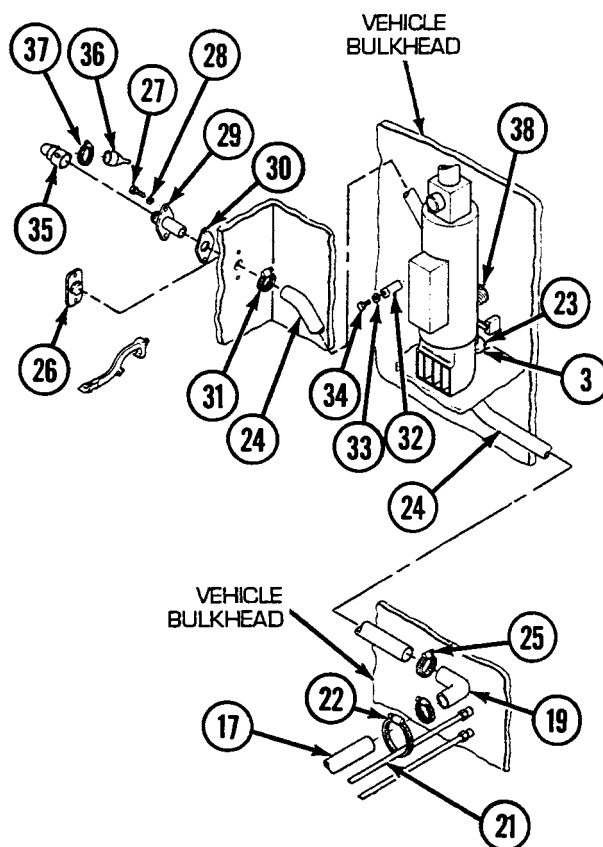
NOTE

All of the following items are kit furnished unless otherwise noted.

4. Install strainer assembly (6) and bilge pump assembly (7) with four screws (8), four lockwashers (9), and eight flat washers (10).
5. Install bent tube (11) with spanner wrench (item 10, WP 0465 00) and existing wiring harness (12) to bilge pump assembly (7).
6. Connect hose (13) to bent tube (11) with clamp (14).
7. Connect bent tube (15) to hose (13) with clamp (16).
8. Connect one end of hose (17) to bent tube (15) with clamp (18) and other end to bent tube (19) with clamp (20).



9. Secure hose (17) to existing fire extinguisher tubing (21) with clamp (22).
10. Install grommet (23) in opening from which rear intermediate right access cover (3) was removed.
11. Route hose (24) through grommet (23) and attach one end to bent tube (19) with clamp (25).
12. Remove cover (26) from hull by removing two existing screws (27) and two lockwashers (28). Retain screws.
13. Install adapter (29) and gasket (30) to outside of hull with two screws (27) and two lockwashers (28).
14. Connect second end of hose (24) to adapter (29) and secure with clamp (31).
15. Secure hose (24) to bulkhead with clip (32), lockwasher (33), and screw (34).
16. Connect adapter (35) to adapter (29) using spanner wrench (item 10, WP 0465 00).
17. Attach seal (36) to adapter (35) with clamp (37).
18. Wrap asbestos tape several times around personnel heater exhaust (38), applying sodium silicate (item 6, WP 0465 00) while wrapping.



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
FIRE EXTINGUISHER NOZZLES AND ELECTRICAL CONNECTIONS
IN ENGINE COMPARTMENT INSTALLATION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Materials/Parts

Sealant, adhesive (item 4, WP 0465 00)
Sealing compound (item 5, WP 0465 00)

Installation

1. Open battery access doors.
2. Clean and dry all electrical connections to which sealer is to be applied.

WARNING

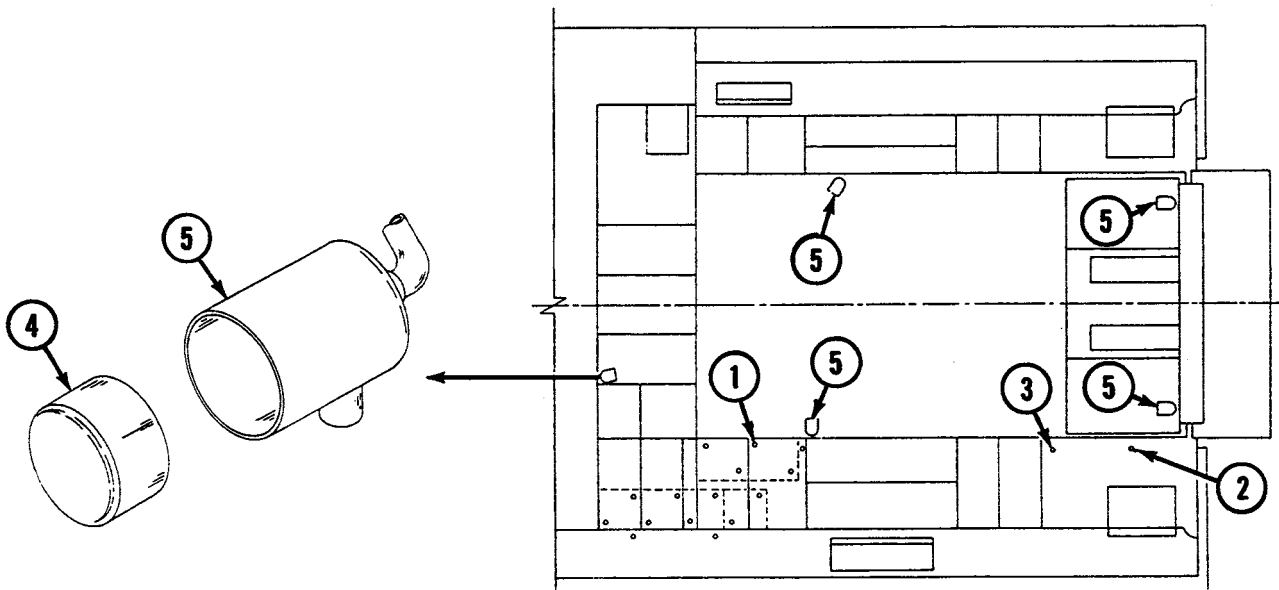
Do not seal battery cap vents.

3. Apply asbestos sealing compound (item 5, WP 0465 00) to all 15 battery terminals and ground (1).
4. Close battery access doors.
5. Apply adhesive sealant (item 4, WP 0465 00) to main engine ground (2) and slave ground (3).

CAUTION

Do not apply adhesive sealant to fire extinguisher nozzle caps.

6. Install kit-furnished rubber caps (4) in five fire extinguisher nozzles (5).



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
EXTERIOR FIRE EXTINGUISHER REMOTE CONTROL

INITIAL SETUP:**Materials/Parts**

- Compound, caulking (item 3, WP 0465 00)
 - Compound, cleaning (item 9, WP 0489 00)
-

Cleaning

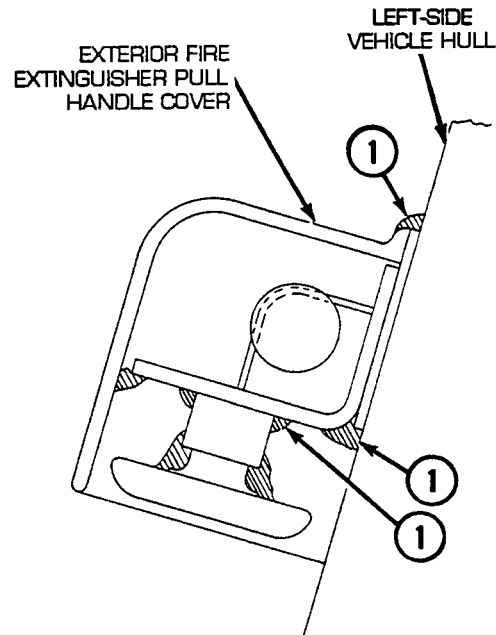
WARNING

Solvents can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open flame and use in a well-ventilated area. If solvent gets on skin or clothing, wash immediately with soap and water.

1. Clean area around exterior and interior with cleaning compound.

Installation

1. Apply caulking compound (item 3, WP 0465 00) all around areas indicated (1).

**END OF WORK PACKAGE**

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
OTHER APPLICATIONS OF CAULKING COMPOUND

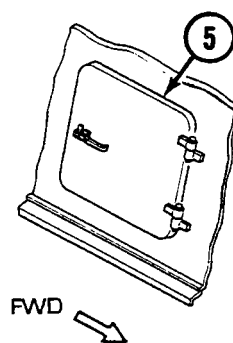
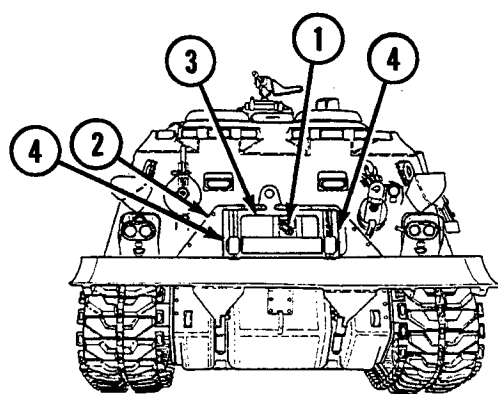
INITIAL SETUP:**Materials/Parts**

Compound, caulking (item 3, WP 0465 00)

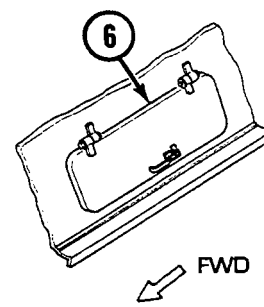
Installation**NOTE**

Personnel heater is not operational during fording operation. Air inlets and exhausts for this component are plugged and must be unplugged after fording operation to become operational.

1. Pull main winch cable (1) in until a light pressure is applied between clevis and opening. Seal exposed area around cable with caulking compound (item 3, WP 0465 00).
2. Seal hull front cover (2) with caulking compound (item 3, WP 0465 00).
3. Seal all around cover plate (3) at opening in hull front cover (2) with caulking compound (item 3, WP 0465 00).
4. Seal at both ends of cover plate (4) with caulking compound (item 3, WP 0465 00).
5. Seal personnel doors with caulking compound (item 3, WP 0465 00) only if watertight seal cannot be obtained with regular door seals.
6. Check drain plugs in exterior stowage compartments to ensure watertight fit. Seal stowage compartment doors (5 and 6) with caulking compound (item 3, WP 0465 00).



STORAGE DOORS
(RIGHT SIDE)



STORAGE DOORS
(LEFT SIDE)

7. Use caulking compound (item 3, WP 0465 00) to seal around all mounting surfaces of deep water fording components, such as right and left engine air intake pipes, personnel heater air intake cover and exhaust, acetylene vent, fuel tank vent, and engine generator vent.

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

ARMAMENT PROTECTION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Preparation for Storage or Shipment

1. Cover caliber .50 machine gun with its protective bag.

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

SEALING INSPECTION

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

References

TM 9-2350-256-10

Inspection-Acceptance and Rejection Criteria

When time and facilities permit, engine compartment should be flooded with water. At this time, a thorough inspection should be made at bulkhead and power takeoff drive shaft cover to determine any leaks. Engine should be operated (refer to TM 9-2350-256-10) to detect any malfunctions as a result of water leakage.

NOTE

Remove and stow two access plates from underside of engine compartment. This is done to prevent buildup of sand during fording operations.

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
OPERATIONS DURING DEEP WATER FORDING

INITIAL SETUP:**References**TM 9-2350-256-10

WARNING

Maximum depth of water should be known. Do not exceed a depth of 8 ft, 6 in. (2.59 m). Highest wave should not reach opening of engine air intake pipes.

CAUTION

Do not operate APU or personnel heater until after deep water fording kit has been removed.

Placing in Service

1. Engine. Refer to TM 9-2350-256-10 for operational instructions pertaining to deep water fording kit.
 - a. Warm up vehicle engine as directed in TM 9-2350-256-10.
 - b. Do not move vehicle until engine is properly warmed up.
 - c. Drive vehicle in low range while fording.
2. Fording procedure and precautions.
 - a. Have at least one hatch door open on cab top throughout fording operations.
 - b. Close valve of main engine generator cooling air exhaust system.
 - c. Enter water slowly to avoid surge of "bow wave."
 - d. Speed up engine to overcome possibility of stalling when engine is chilled by water.
 - e. Do not operate engine below 950 revolutions per minute while fording.
 - f. Drive at moderate speed of 3 to 4 miles per hour (4.8 to 6.4 kilometers per hour) to avoid forming a "bow wave." Hold this speed by braking if necessary.
 - g. If it becomes necessary to stop vehicle while engine is submerged, place transmission in neutral, lock brakes, and use throttle to maintain engine speed at 950 to 1000 rpm.

NOTE

Should engine accidentally stop while vehicle is submerged, restart engine immediately. If engine does not start, continue cranking. Vehicle engine has a restart capability after being stopped for a period of 15 minutes.

3. Bilge pump. Turn on bilge pump only when excessive water seepage is apparent.

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
OPERATIONS AFTER DEEP WATER FORDING

INITIAL SETUP:**References**

TM 9-2350-256-10

NOTE

The following operations should be performed as soon as possible after landing, or when tactical situation permits.

Reclamation

1. Open drain valves in hull floor as directed in TM 9-2350-256-10 to drain vehicle of any water which may have accumulated in hull.
2. Check oil level in APU engine for excessive amount of water in crankcase. (Drain and refill if necessary.)
3. Remove nonhygroscopic adhesive tape from all components.
4. Clean caulking compound from all places where it had been applied.

NOTE

Removal of kit components depends upon tactical situation.

5. Remove all deep water fording kit components and install any item that was removed and stowed at time of kit installation.
6. Drain any accumulated water from stowage compartments and impact wrench hydraulic hoses.
7. Start APU engine and run under load until engine and generator assembly are free from residual moisture in or about unit.

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
SERVICE AFTER DEEP WATER FORDING

INITIAL SETUP:**References**

WP 0097 00
 TM 9-2350-256-10
 TM 9-6140-200-14

Equipment Condition

Boom raised (refer to TM 2350-256-10)
 Engine deck assembly removed (see WP 0200 00)

NOTE

The following procedures should be performed as soon as possible after landing, or when tactical situation permits.

Servicing

1. Inspect for water entry.
 - a. Engine and transmission.
 - (1) Check lubricant in engine and transmission for evidence of water.
 - (2) If there is evidence that water has entered these units, flush and refill with correct lubricants as instructed in WP 0097 00.
 - (3) Remove and clean engine oil filter as directed in WP 0097 00.
 - (4) Remove and clean transmission oil filter as directed in WP 0097 00.
 - b. Air cleaner intake assemblies.
 - (1) Check air cleaner intake assemblies for evidence of water.
 - (2) If water is found, clean air cleaner intake assemblies.
 - c. Batteries.
 - (1) Check quantity of battery electrolyte.
 - (2) Check specific gravity of battery electrolyte (refer to TM 9-6140-200-14).
 - (3) Service batteries, as necessary, if water has entered them.
2. Service armament.
 - a. Empty gun of any accumulated water. Clean, dry, and apply prescribed lubricant to all exposed, unpainted surfaces.
 - b. If fording was conducted in salt water, remove all traces of salt water deposits from parts of gun.
3. Wash and clean.

NOTE

While washing vehicle, do not permit water to enter opening of engine exhaust and air intake pipes.

- a. If vehicle was forded in salt water, wash vehicle thoroughly in clean water.
- b. Clean out hull. Touch up all parts with paint where necessary.

4. Lubrication. Lubricate vehicle completely in accordance with instructions given in WP 0097 00.

NOTE

Emphasis should be placed upon need for regular inspection (particularly of switches, relays, and similar equipment) to guard against possible aftereffects of submersion, such as corrosion and fusion of contact points.

5. PMCS. Perform PMCS as directed in TM 9-2350-256-10 or this manual.

NOTE

Follow-on maintenance: Install engine deck assembly (see WP 0200 00); Lower boom (refer to TM 2350-256-10).

END OF WORK PACKAGE

CHAPTER 20
UNIT MAINTENANCE
MAINTENANCE INSTRUCTIONS
FOR
SUPPLEMENTARY MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
(NSN: 2350-00-122-6826)

CHAPTER 20
UNIT MAINTENANCE
MAINTENANCE INSTRUCTIONS

WORK PACKAGE INDEX

<u>Title</u>	<u>WP Sequence No.</u>
Decal Markings Replacement Removal, Installation.....	0482 00
Preparation for Storage and Shipment.....	0483 00
Illustrated List of Manufactured Items.....	0484 00
Torque Limits.....	0485 00

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

DECAL MARKINGS REPLACEMENT
REMOVAL, INSTALLATION

INITIAL SETUP:**Materials/Parts**

Compound, cleaning (item 9, WP 0489 00)

References

TM 9-2350-256-10

Removal

WARNING

Solvents can burn easily, give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open flame and use in a well-ventilated area. If solvent gets on skin or clothing, wash immediately with soap and water.

NOTE

Many of the markings within the vehicle are decals. If these decals become damaged and are no longer legible, they should be replaced. TM 9-2350-256-10 illustrates the various decals and their locations.

1. Before removing a damaged decal, note its position. Then remove it by scraping, and cleaning scraped area with cleaning compound. Apply new decal over scraped area.

Installation

1. Spot paint area if required.
2. Remove carrier sheet (backing sheet) from back of new decal by dipping decal in water for approximately 20 seconds.
3. Place new decal in same position as old decal and roll down firmly.

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

PREPARATION FOR STORAGE AND SHIPMENT

INITIAL SETUP:

References

DA Form 2404
 DD Form 6
 DD Form 1397
 MIL-R-62220

References (cont.)

TM 43-0139
 TM 740-90-1
 TM 743-200

Preparation for Storage or Shipment

1. PREPARATION FOR SHIPMENT

- a. When shipping the M88A1, the officer in charge of preparing the shipment will be responsible for furnishing the materiel in serviceable condition, properly cleaned, processed, packaged, and packed.

2. PRESERVATIVES

- a. Personnel withdrawing the vehicle from storage for shipment must not remove preservatives other than to ensure that the materiel is complete and serviceable. If preservatives have been removed, they must be restored to prescribed level of preservation prior to shipment.

3. LIMITED STORAGE INSTRUCTIONS

- a. When received for storage and already processed for domestic shipment by the manufacturer as indicated on DD Form 1397, the vehicle will not be reprocessed unless inspection performed on receipt of materiel reveals corrosion, deterioration, etc.
- b. Upon receipt from manufacturing facilities, if the procession data on the tag indicated that preservation has been rendered ineffective by operation or by freight shipping damage, completely process the vehicle in accordance with MIL-R-62220.
- c. Vehicle to be prepared for administrative storage must be given a limited technical inspection and processed as prescribed on DD Form 1397. The results of the inspection and classification will be entered on DA Form 2404.

4. RECEIVING INSPECTION

- a. Immediately upon receipt of the vehicle for storage, inspect and service the vehicle as prescribed. Perform a systematic inspection. Replace or repair all missing or broken parts. If repairs are beyond the scope of the unit and materiel will be inactivated for an appreciable length of time, place materiel in limited storage and attach tags specifying the repairs needed. The report of these conditions will be submitted by the unit commander for action by an ordnance maintenance unit.
- b. When materiel is inactivated for a limited time (not to exceed 90 days), it will be processed in accordance with TM 740-90-1.
- c. Prepare a DD Form 6 for all shipments received in a damaged or otherwise unsatisfactory condition due to deficiencies in preservation, packaging, marking, handling, loading, or storage, and for apparently excessive preservation.
- d. The preferred storage site for vehicles is in dry, covered sheds. When it is necessary to store materiel outdoors, protect it against the elements as prescribed in TM 743-200.

5. INSPECTION DURING STORAGE

- a. Perform a visual inspection periodically to determine general condition. If corrosion is found, remove it and clean, paint, and treat vehicle with the prescribed preservatives.

NOTE

Touchup painting will be in accordance with TM 43-0139.

6. REMOVAL FROM LIMITED STORAGE

- a. If a vehicle is not shipped or issued upon expiration of the limited storage period, process as applicable in accordance with MIL-R-62220.
- b. If a vehicle to be shipped will reach its destination within the limited storage period, it need not be reprocessed when removed from storage, unless necessary because of anticipated in-transit weather conditions.
- c. When the vehicle is to be placed into service, immediately deprocess in accordance with instructions on DD Form 1397.

7. LOADING

CAUTION

The height and width of a vehicle, when prepared for rail transportation, must not exceed the limitations prescribed for particular railroad lines. Whenever possible, local transportation officers must be consulted about the limitations of the particular railroad lines to be used for the movement in order to avoid delays, dangerous conditions, and damage to equipment.

- a. When a vehicle is shipped by rail, every precaution must be taken to see that it is properly loaded, blocked, and securely fastened to flatcar floor.
- b. Inspect flatcar prior to loading and see that it is in a suitable condition to carry loads safely.
- c. Prepare flatcar for loading by removing debris, previous blocking, nails, and other obstructions. Inspect flatcar for loose or broken floor planks. If found unsatisfactory, reject car for use.
- d. If suitable hoisting equipment, permanent loading ramps, and handling equipment are not available for loading or unloading materiel, improvised runways, ramps, and spanning platforms can be constructed.
- e. Loading must be governed by the capacity and length of flatcars available at time of shipment, as well as requirements of bills of lading and shipping instructions.

8. BLOCKING

- a. All blocking instructions specified herein are in accordance with the Association of American Railroads Pamphlet, Section No. 6 (Rules Governing the Loading of Department of Defense Materiel on Open-Top Cars). Additional blocking may be added at the discretion of the officer in charge.

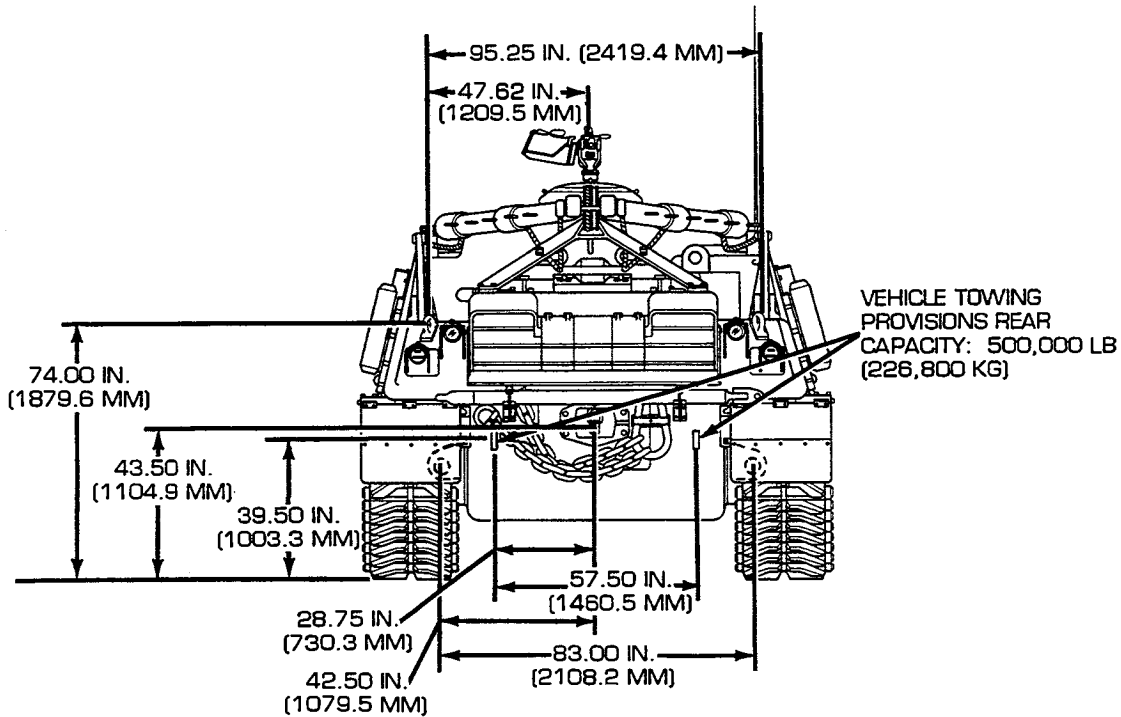
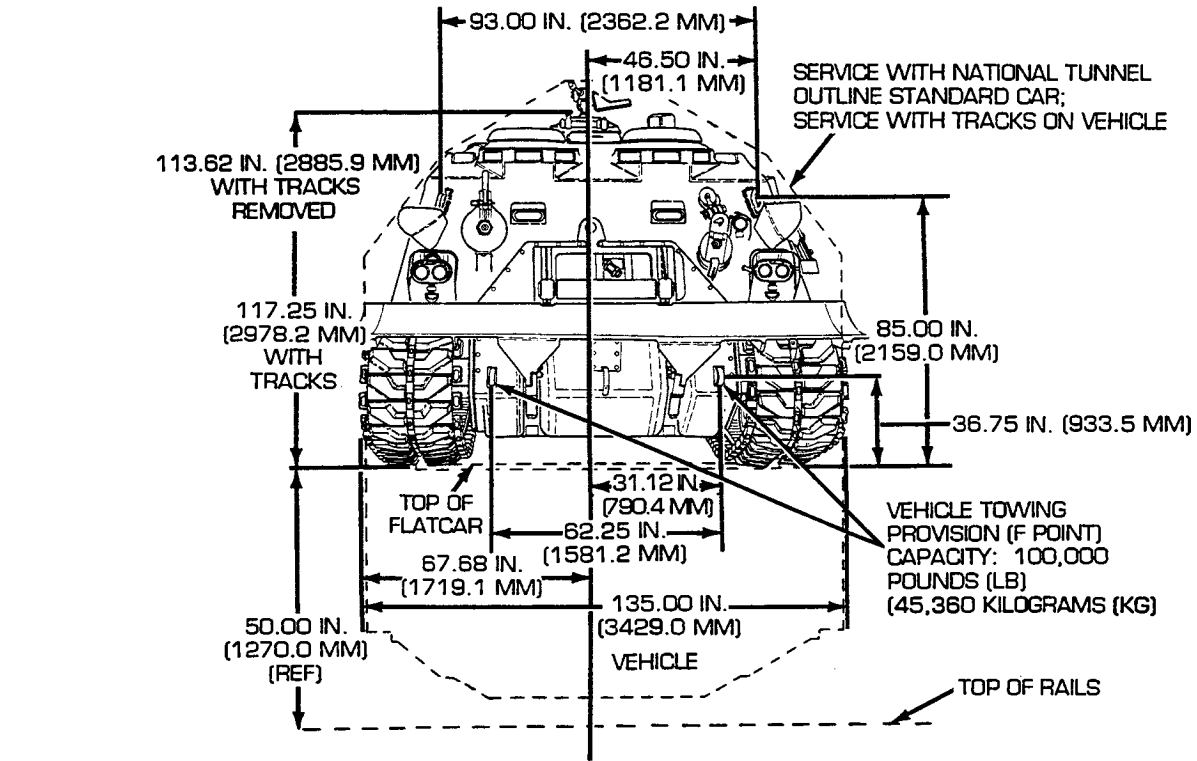
9. VEHICLE SIZE REDUCTION TO ACCOMMODATE RAIL CLEARANCE

- a. The height and width of the M88A1 vehicle can be reduced to conform to the limitations prescribed by a particular railroad line for transportation on its standard flatcar by removing the items noted in the rail carrier limitation accommodations table.
- b. The overall width of 135 inches (in.) (3429 millimeters [mm]) can be reduced to 124 in. (3150 mm) by the removal of fender assemblies, tracks, hub and sprocket assemblies, spade extensions, table block brackets, tow bar brackets, pioneer tool kit bracket, and clamps.
- c. The overall height can also be reduced from 117-1/4 in. (2978 mm) to 112-5/8 in. (2861 mm) by the removal of tracks.

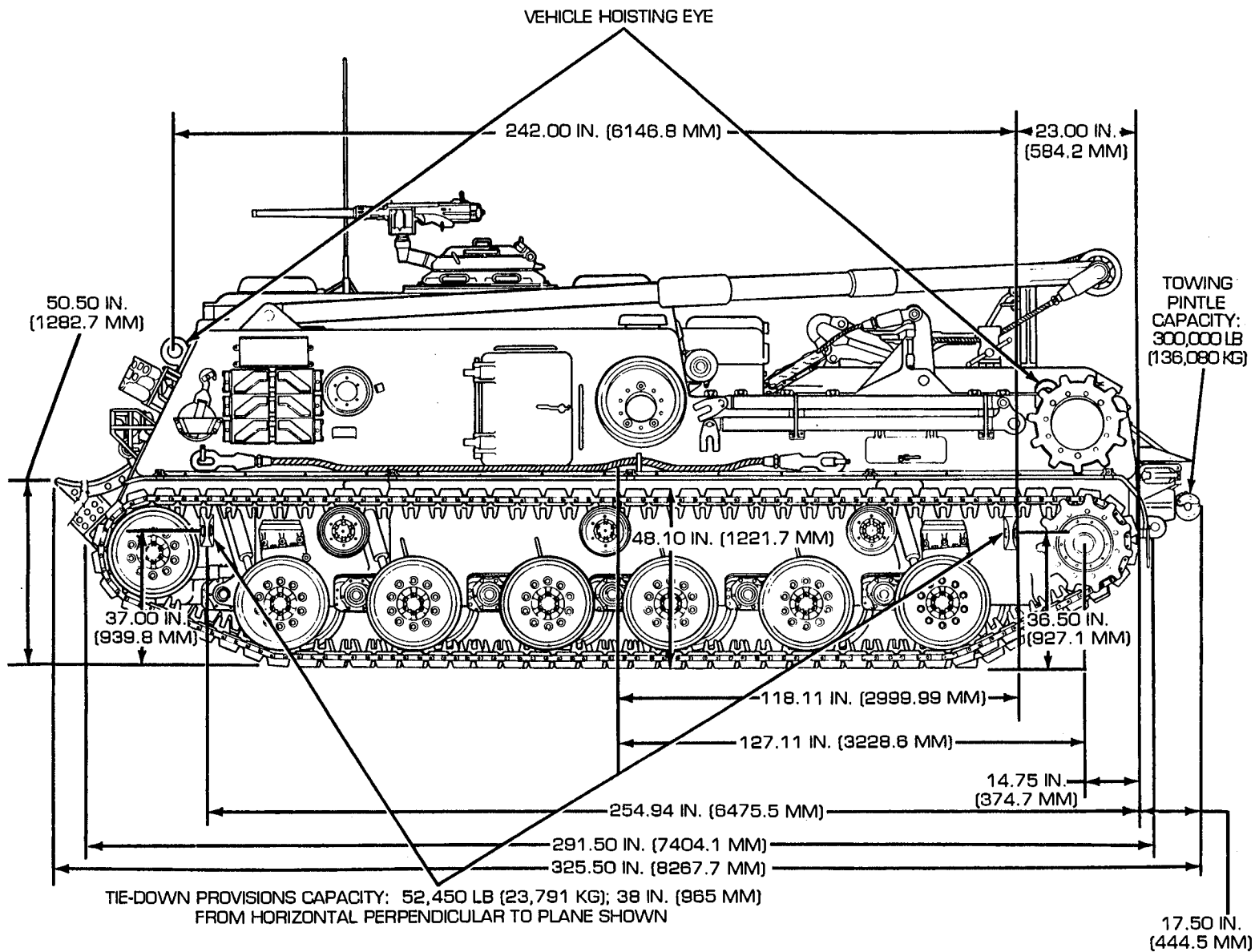
10. RAIL CARRIER LIMITATION ACCOMMODATIONS

Table 1. Rail Carrier Limitation Accommodations

Items Recommended For Removal To Accommodate Rail Carrier Limitations	Rail Carrier and Clearance (X Denotes Removal Required)			
	Bernie International (Car Deck Height 50 in. [1270 mm])	Near East (Car Deck Height 49 in. [1245 mm])	Association of American Railroads (Car Deck Height 41 in. [1041 mm])	Far East (Car Deck Height 50 in. [1270 mm])
Caliber .50 machine gun	X	X	X	X
Tracks (2)	X	X	X	X
Track drive hubs (2) and sprockets (4)	X	X	X	X
Tow cables (2)	X	X	X	X
Fenders, supports, etc.	X	X	X	X
Spare roadwheels (2)	X	X	X	X
Snatch block and bracket	X	X	X	
Tow bar and mounting brackets (2)	X	X	X	
Spade extensions (2)	X	X	X	X
Spare track support rollers (2)	X	X		
Spare drive sprockets (2)	X	X		
Tow cable mounting brackets (6)	X	X		
Spare track link (6)	X			
Pioneer kit mounting bracket	X			
Boom support	X			
M13 decontamination apparatus bracket assembly	X	X	X	X



0483 00-5



TM 9-2350-256-20-2

0483 00

11. TRANSPORTABILITY DATA

Table 2. Transportability Data

Nomenclature	Assembled	Items Removed
Length	325.5 in. (8268 mm)	325.5 in. (8268 mm) (max)
Width	135 in. (3429 mm)	124 in (3150 mm) (Berne Tunnel)
Height	117.25 in. (2978 mm)	112.625 in. (2861 mm) (max)
Weight	110,000 lb (49,896 kg) (max)	93,612.95 lb (42,463 kg)
Unit ground pressure	109 psi (752 kpa)	
Shipping dimensions:		
Area	305.16 square feet (sq. ft.) (28.349 square meters [sq. m])	280.29 sq. ft (26.039 sq. m)
Volume	2981.63 cubic feet (cu. ft) (84.440 cubic meters [cu. m])	2630.53 cu. ft (74.497 cu. m)
Center of gravity:		
Above ground	45.1 in. (1146 mm)	
From centerline of cross-drive	127.11 in. (3229 mm)	

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
ILLUSTRATED LIST OF MANUFACTURED ITEMS

INITIAL SETUP:**Tools and Special Tools**

Tool kit, general mechanic's (item 59, WP 0490 00)

Overview

This Work Package includes complete instructions for making items authorized to be manufactured or fabricated at unit maintenance level. An item number index is provided for cross-referencing the item to be manufactured to the figure which covers fabrication criteria. All bulk materials needed for manufacture of an item are listed by National Stock Number (NSN) in a tabular list on the illustration.

Explanation of Columns for Manufactured Items Index

Column 1, Item Number indicates the item number assigned to a part.

Column 2, Manufactured Items identifies the item to be manufactured or fabricated.

Column 3, Table Number indicates the cross-reference to the manufactured item.

Explanation of Columns for Illustrations of Manufactured Items

Column 1, Description identifies the bulk material used in the manufacture of the item.

Column 2, NSN indicates the NSN assigned to the bulk material; use it to request or requisition the material.

Assembly

1. Manufactured Items

Table 1. Manufactured Items

Item Number	Manufactured Item	Table Number
1	Fabricated stop	2
2	Lumber, wood block	3
3	Seal strip	4
4	Seal strip	5
5	Weldless chain	6

2. Illustrations of Manufactured Items

Table 2. Item 1—Fabricated Stop

Materials	
Description	NSN
Fabricate from 0.125 in. (3.18 mm) sheet metal: ASTM A569	9515-00-184-8467

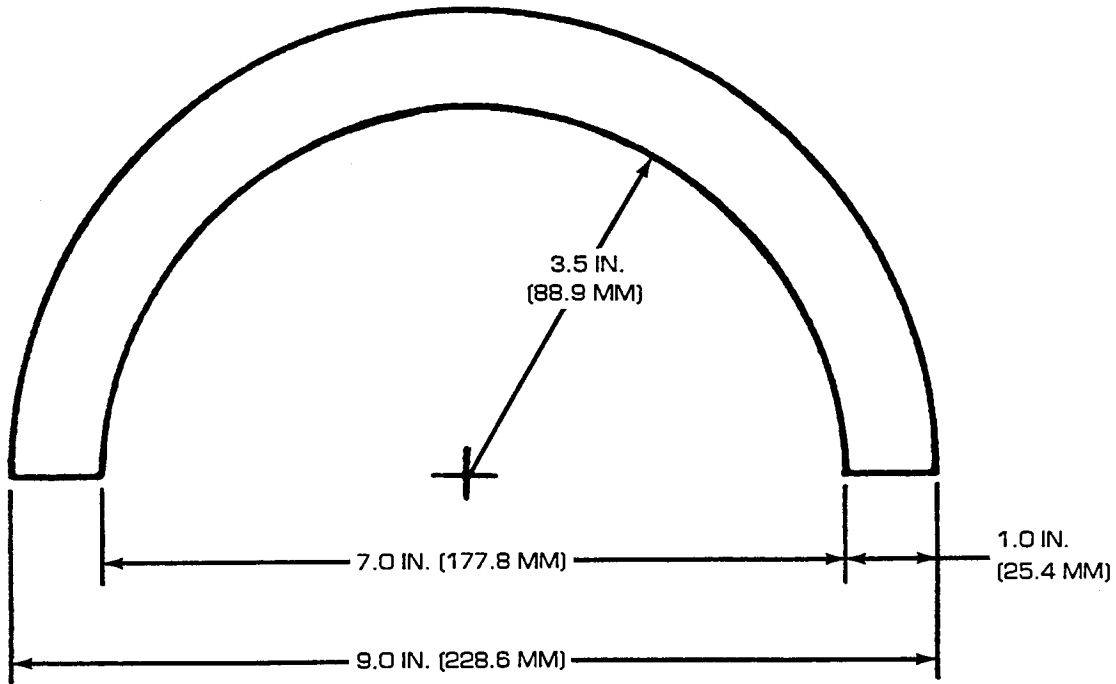


Table 3. Item 2—Lumber, Wood Block

Materials	
Description	NSN
Fabricate from hardwood lumber: MM-L-736	5510-00-274-5381

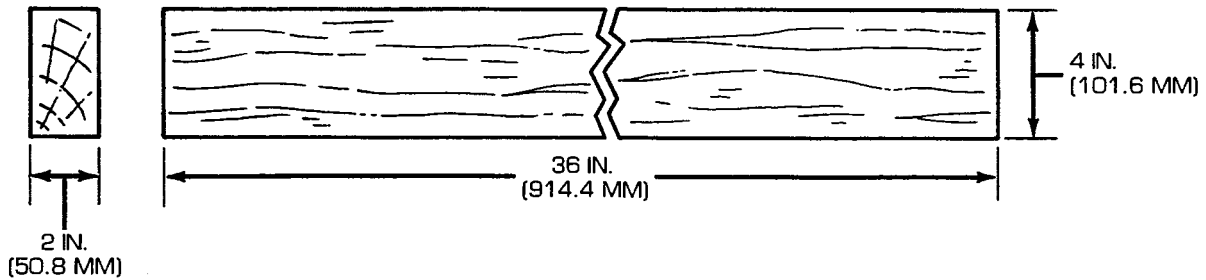


Table 4. Item 3—Seal Strip

Materials	
Description	NSN
Fabricate from rubber, cellular grade RN 11AB or 12AB SPEC MIL-C-3133: PN 8764337	9320-01-379-6428

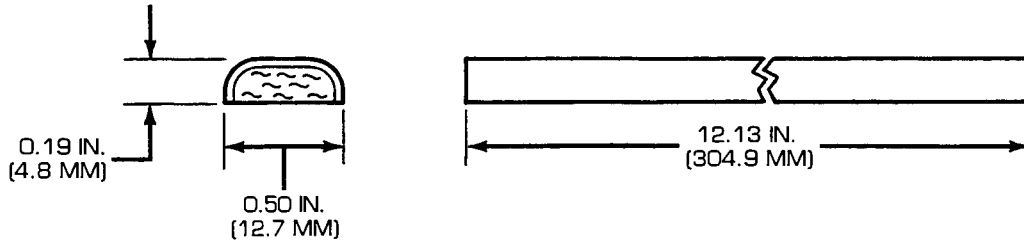


Table 5. Item 4—Seal Strip

Materials	
Description	NSN
Fabricate from silicone rubber MIL-C-3133: PN 204-030-853	9320-00-880-4520

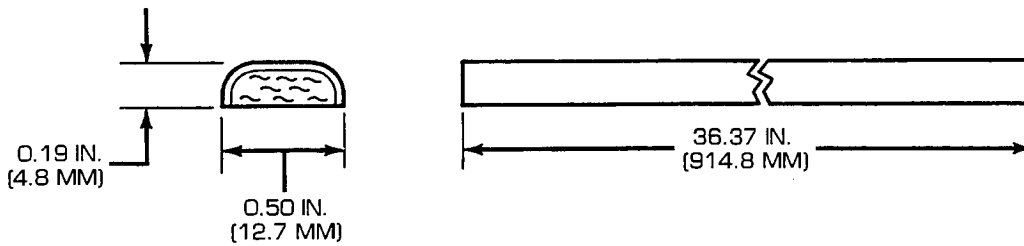


Table 6. Item 5—Weldless Chain

Materials	
Description	NSN
Fabricate from 0.072 in. (1.83 mm) steel: PN 42C15120-205	4010-00-129-3221



END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQU

TORQUE LIMITS

INITIAL SETUP:

Tools and Special Tools

Tool kit, general mechanic's (item 59, WP 0490 00)

Overview

This Work Package provides general torque limits for screws used on the M88A1 Recovery Vehicle. Special torque limits are indicated in the maintenance procedures for applicable components. The general torque limits given herein shall be used when specific torque limits are not indicated in the maintenance procedure. These general torque limits cannot be applied to screws that retain rubber components. The rubber components will be damaged before the correct torque limit is reached. If a special torque limit is not given in the maintenance instructions, tighten the screw or nut until it touches metal, then tighten it one more turn.

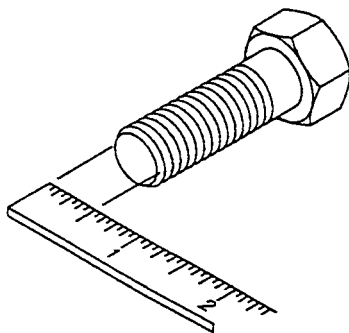
Adjustment

1. Torque Limits

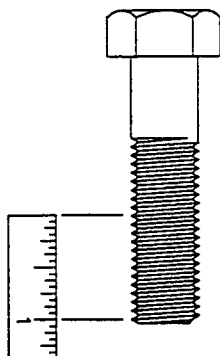
Table 1 lists dry torque limits. Dry torque limits are used on screws that do not have lubricants applied to the threads. Table 2 lists wet torque limits. Wet torque limits are used on screws that have high-pressure lubricants applied to the threads.

2. How to Use Torque Table

- a. Measure the diameter (dia.) of the screw you are installing.

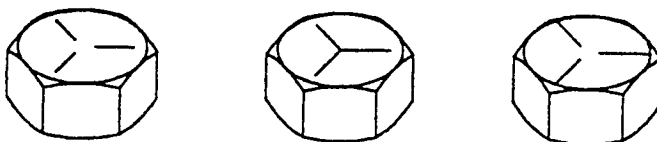


- b. Count the number of threads per 1 inch (in.) (25.4 millimeters [mm]) or use a pitch gage.



- c. Under the heading Size, look down the left-hand column until you find the dia. of the screw you are installing (there will usually be two lines beginning with the same size).
- d. In the second column under Size, find the number of threads per 1 in. (25.4 mm) that matches the number of threads you counted in step 2b.
- e. To find the grade screw you are installing, match the markings on the head to the correct picture of SAE Cap Screw Head Markings on the torque table.
- f. Look down the column under the picture you found in step 2a until you find the torque limit in pound-feet (lb-ft) or Newton-meters (N•m) for the diameter and threads per 1 in. (25.4 mm) of the screw you are installing.

Manufacturer’s marks may vary. These are all SAE Grade 5 (3-line).



STANDARD CAP SCREW HEAD MARKINGS

Table 1. Torque Limits for Dry Fasteners

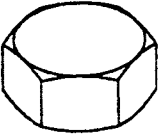
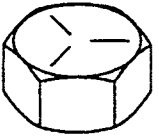
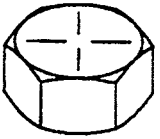
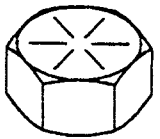
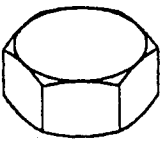
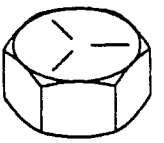
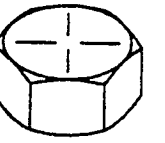
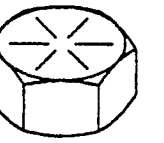
SAE Cap Screw Head Markings										
Size			Torque							
			SAE Grade No. 1 or 2		SAE Grade No. 5		SAE Grade No. 6 or 7		SAE Grade No. 8	
Dia. (In.)	Threads Per 1 In. (25.4 Mm)	Dia. (Mm)	Lb-ft	N•m	Lb-ft	N•m	Lb-ft	N•m	Lb-ft	N•m
1/4	20	6.35	5	6.78	8	10.85	10	13.56	12	16.27
1/4	28	6.35	6	8.14	10	13.56	—	—	14	18.98
5/16	18	7.94	11	14.92	17	23.05	19	25.76	24	32.52
5/16	24	7.94	13	17.63	19	25.76	—	—	27	36.61
3/8	16	9.53	18	24.41	31	42.04	34	46.1	44	59.66
3/8	24	9.53	20	27.12	35	47.46	—	—	49	66.44
7/16	14	11.11	28	37.97	49	66.44	55	74.58	70	94.92
7/16	20	—	30	40.68	55	74.58	—	—	78	105.77
1/2	13	12.7	39	52.88	75	101.7	85	115.26	105	142.38
1/2	20	—	41	55.6	85	115.26	—	—	120	162.78
9/16	12	14.29	51	69.16	110	149.16	120	162.72	155	210.18
9/16	18	—	55	74.58	120	162.72	—	—	170	230.52
5/8	11	15.88	63	85.43	150	203.4	167	226.45	210	284.76
5/8	18	—	95	128.82	170	230.52	—	—	240	325.44
3/4	10	19.05	105	142.38	270	366.12	280	379.68	375	508.5
3/4	16	—	115	155.94	295	400.02	—	—	420	596.52
7/8	9	22.23	160	216.96	395	535.62	440	596.64	605	820.38
7/8	14	—	175	237.3	435	589.86	—	—	675	915.3
1	8	25.4	235	318.66	590	800.04	660	894.96	910	1233.96
1	14	—	250	339	660	894.96	—	—	990	1342.44
1-1/8	—	28.58	—	—	800	1084.8	—	—	1280	1735.7
					880	1193.3			1440	1952.8
1-1/4	—	31.75	—	—	—	—	—	—	1820	2467.9
					—	—	—	—	2000	2712
1-3/8	—	34.93	—	—	1460	1979.8	—	—	2380	3227.3
					1680	2278.1	—	—	2720	3688.3
1-1/2	—	38.1	—	—	1940	2630.6	—	—	3160	4285
					2200	2983.2	—	—	3560	4827.4

Table 2. Torque Limits for Wet Fasteners

SAE Cap Screw Head Markings										
Size			Torque							
			SAE Grade No. 1 or 2		SAE Grade No. 5		SAE Grade No. 6 or 7		SAE Grade No. 8	
Dia. (In.)	Threads Per 1 In. (25.4 Mm)	Dia. (Mm)	Lb-ft	N•m	Lb-ft	N•m	Lb-ft	N•m	Lb-ft	N•m
1/4	20	6.35	4.5	6.10	7.2	9.76	9.0	12.20	10.8	14.64
1/4	28	6.35	5.4	7.33	9	12.2	—	—	12.6	17.08
5/16	18	7.94	9.9	13.34	15.3	20.74	17.1	23.18	21.6	29.27
5/16	24	7.94	11.7	15.87	17.1	23.18	—	—	24.3	32.95
3/8	16	9.53	16.2	21.97	27.9	37.84	30.6	41.49	39.6	53.69
3/8	24	9.53	18	24.41	31.5	42.71	—	—	44.1	59.8
7/16	14	11.11	25.2	34.17	44.1	59.8	49.5	67.12	63	85.42
7/16	20	—	27	36.61	49.5	67.12	—	—	70.2	95.19
1/2	13	12.7	35.1	47.59	67.5	91.53	76.5	103.73	94.5	128.14
1/2	20	—	36.9	50.04	76.5	103.73	—	—	108	146.45
9/16	12	14.29	45.9	62.24	99	134.24	108	146.45	139.5	189.16
9/16	18	—	49.5	67.12	108	146.45	—	—	153	207.47
5/8	11	15.88	56.7	76.89	135	183.06	150.3	203.8	189	256.28
5/8	18	—	85.5	115.94	153	207.47	—	—	216	292.89
3/4	10	19.05	94.5	128.14	243	329.51	252	341.71	337.5	457.65
3/4	16	—	103.5	140.35	265.5	360.2	—	—	378	512.56
7/8	9	22.23	144	195.26	355.5	482.06	396	536.98	544.5	738.34
7/8	14	—	157.5	213.57	391.5	530.87	—	—	607.5	823.77
1	8	25.4	211.5	286.79	531	720.04	594	805.46	819	1110.56
1	14	—	225	305.1	594	805.46	—	—	891	1208.2
1-1/8	—	28.58	—	—	720	976.32	—	—	1152	1562.13
					792	1073.97	—	—	1296	1757.52
1-1/4	—	31.75	—	—	—	—	—	—	1638	2221.11
					—	—	—	—	1800	2440.8
1-3/8	—	34.93	—	—	1314	1781.82	—	—	2142	2904.57
					1512	2050.29	—	—	2448	3319.47
1-1/2	—	38.1	—	—	1746	2367.54	—	—	2844	3856.5
					1980	2684.88	—	—	3204	4344.66

3. Tightening Metal Fasteners

When torquing a metal fastener, select a torque wrench whose range fits the required torque value. A torque wrench is most accurate from 25% to 75% of its stated range. A torque wrench with a stated range of 0–100 lb-ft (0–136 N•m) will be most accurate from 25–75 lb-ft (34–102 N•m). The accuracy of readings will decrease as you approach 0 lb-ft or 100 lb-ft (0 N•m or 136 N•m). The ranges in Table 3 are based on this principle.

Table 3. Torque Ranges

Stated Range	Most Effective Range
0–200 pound-inches (lb-in.) (0–23 N•m)	50–150 lb-in. (6–17 N•m)
15–75 lb-ft (20–102 N•m)	30–60 lb-ft (41–81 N•m)
0–175 lb-ft (0–237 N•m)	44–131 lb-ft (60–178 N•m)
0–600 lb-ft (0–813 N•m)	150–450 lb-ft (203–610 N•m)

4. Fastener Size and Thread Pattern

Threaded fasteners are categorized according to the dia. of the fastener shank. Thread styles are divided into broad groups, the two most common being coarse (Unified Coarse [UNC]) and fine (Unified Fine [UNF]). These groups are defined by the number of threads per 1 in. (25.4 mm) on the bolt shank. In addition, threads are categorized by thread class (see Table 4), which is a measure of the degree of fit between the threads of the bolt or screw (external threads) and the threads of the attaching nut or tapped hole (internal threads). The most common thread class for bolts and screws is Class 2.

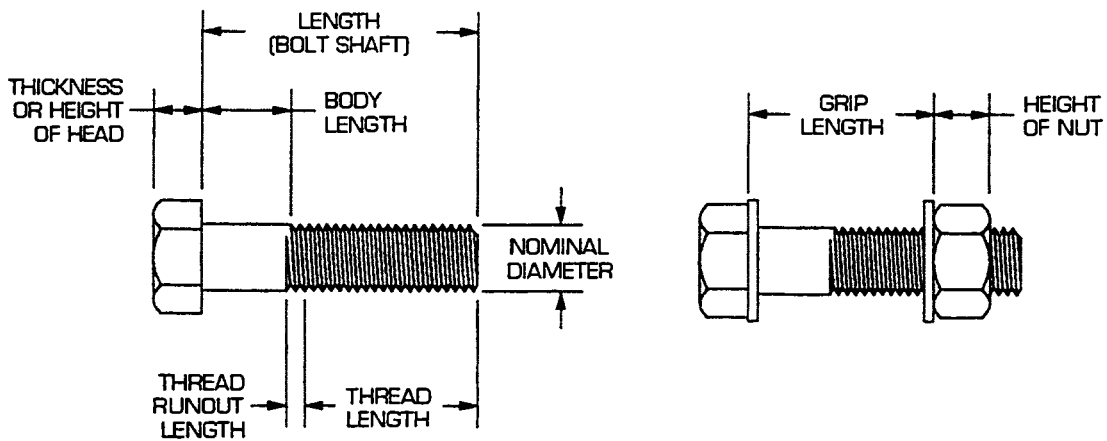
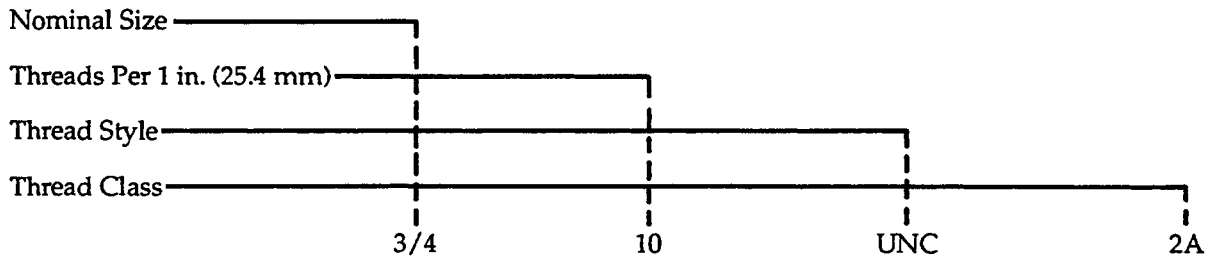
Table 4. Thread Classes and Description

External	Internal	Fit
1A	1B	Loose
2A	2B	Medium
3A	3B	Close

Thread patterns are as follows:

NOTE

Unless followed with -LH (e.g., 3/4-10-UNC-2A-LH), threads are right-hand.



5. Fastener Grade

In addition to being classified by thread type, threaded fasteners are also classified by material. The most familiar fastener classification system is the SAE grading system (see Table 5).

Table 5. SAE Screw and Bolt Markings

Screws	Bolts
SAE Grade 2 No Marking	SAE Grade 6 4 Radial Dashes 90° Apart
SAE Grade 3 2 Radial Dashes 180° Apart	SAE Grade 7 5 Radial Dashes 72° Apart
SAE Grade 5 3 Radial Dashes 120° Apart	SAE Grade 8 6 Radial Dashes 60° Apart

NOTE

The following is a listing of various manufacturer markings on hex locknuts:

1. Grade A—No Marks/No Notches/No Letter
1. Grade B—3 Marks/One Notch/Letter B
1. Grade C—6 Marks/Two Notches/Letter C

END OF WORK PACKAGE

CHAPTER 21
UNIT MAINTENANCE
SUPPORTING INFORMATION
FOR
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
(NSN: 2350-00-122-6826)

CHAPTER 21
UNIT MAINTENANCE
SUPPORTING INFORMATION

WORK PACKAGE INDEX

<u>Title</u>	<u>WP Sequence No.</u>
References.....	0486 00
Introduction to Maintenance Allocation Chart (MAC).....	0487 00
Maintenance Allocation Chart (MAC).....	0488 00
Expendable and Durable Items List.....	0489 00
Tool Identification List.....	0490 00
Mandatory Replacement Parts List.....	0491 00

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA

REFERENCES

Scope

This Work Package lists all technical bulletins, forms, field manuals, technical manuals, pamphlets, lubrication orders, and regulations referenced in this manual.

Army Regulation

AR 725-50 Requisitioning, Receipt, and Issue System

Department of Defense Forms

DD Form 6 Duty Roster
 DD Form 1397 Processing and Deprocessing Record for Shipment, Storage and Issue of Vehicles and Spare Engines

Department of The Army Forms

DA Form 2404 Equipment Inspection and Maintenance Worksheet
 DA Form 2407 Maintenance Request
 DA Form 2028-2 Recommended Change to Equipment Technical Publications
 DA Form 2028 Recommended Changes to Publications and Blank Forms

Department of the Army Pamphlets

DA PAM 310-1 Index of Administrative Publications (Regulations, Circulars, Pamphlets, Posters, Joint Chiefs of Staff Publications, DOD and Miscellaneous)
 DA PAM 738-750 The Army Maintenance Management System (TAMMS)

Field Manuals

FM 23-65 Browning Machinegun, .50-Caliber HB, M2
 FM 21-11 First Aid for Soldiers
 FM 9-207 Operation and Maintenance of Ordnance Material in Extreme Cold Weather 0° to -65°F

Standard Form

SF Form 368 Product Quality Deficiency Report

Technical Bulletin

TB 9-2300-278-20 Domelight Lens Replacement

Technical Manuals

TM 9-6140-200-14 Lead Acid Storage Batteries
 TM 9-1330-200-12 Operator's and Organizational Maintenance Manual: Grenades, Hand and Rifle
 TM 9-4910-571-12&P Operator's and Organizational Maintenance Manual (Including Repair Parts and Special Tools List): Simplified Test Equipment for Internal Combustion Engines—Reprogrammable
 TM 9-2350-256-10 Operator's Manual for Recovery Vehicle, Full-Tracked: Medium, M88A1 (NSN 2350-00-122-6826)
 TM 9-1005-213-10 Operator's Manual for Machinegun, .50-Caliber; Browning M2, Heavy Barrel, Flexible, w/e (NSN 1005-00-322-9716); Mount, Machinegun, Anti-aircraft, .50-Caliber, M63 w/e (NSN 1005-00-673-3246)

TM 9-6140-200-14	Operator's Organizational, Direct Support, and General Support Maintenance Manual for Lead-Acid Storage Batteries; 4 HN, 24 V (NSN 6140-00-059-3528) MS75047-1; 2 HN, 12 V (6140-00-057-2553) MS35000-1; 6 TN 12 V (6140-00-057-2554) MS35000-3
TM 9-2350-200-24	Organizational, Direct Support, and General Support Maintenance Manual: Standards for Inspection and Classification of Tracks, Track Components and Solid-Rubber Tires (FSC 2530)
TM 9-5130-338-15P	Organizational, Field, and Depot Maintenance Repair Parts List for Wrench, Impact, Hydraulic
TM 9-1055-642-20&P	Organizational Maintenance Manual (Including Repair Parts and Special Tools Lists): Launcher, Grenade, Smoke: Screening, RP, M239 (NSN 1040-01-015-0874)
TM 9-2350-256-24P-1	Organizational Maintenance Repair Parts and Special Tools List for Recovery Vehicle, Full-Tracked: Medium, M88A1 (NSN 2350-00-122-6826), Volume 1
TM 9-2350-256-24P-2	Organizational Maintenance Repair Parts and Special Tools List for Recovery Vehicle, Full-Tracked: Medium, M88A1 (NSN 2350-00-122-6826), Volume 2
TM 43-0139	Painting Instructions for Field Use
TM 9-2540-205-24&P	Personnel Heater
TM 750-244-6	Procedures for Destruction of Tank-Automotive Equipment to Prevent Enemy Use
TM 11-483	Radio Interference Suppression

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
INTRODUCTION TO MAINTENANCE ALLOCATION CHART (MAC)

The Army Maintenance System MAC

This introduction provides a general explanation of all maintenance and repair functions authorized at various maintenance levels under the standard Army Maintenance System concept.

The MAC (WP 0488 00) designates overall authority and responsibility for the performance of maintenance functions on the identified end item or component. The application of the maintenance functions to the end item or component will be consistent with the capacities and capabilities of the designated maintenance levels, which are shown on the MAC in column 4 as:

1. Unit—includes two subcolumns, C (Operator/Crew) and O (Unit) Maintenance.
2. Direct Support—includes an F subcolumn.
3. General Support—includes an H subcolumn.
4. Depot—includes a D subcolumn.

A lists of tools and test equipment required for each maintenance function immediately follows the MAC.

Maintenance Functions

Maintenance functions are limited to and defined as follows:

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).

Test

To verify serviceability by measuring the mechanical, pneumatic, hydraulic, or electrical characteristics of an item and comparing those characteristics with prescribed standards.

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.

Adjust

To maintain or regulate, within prescribed limits, by bringing into proper position, or by setting the operating characteristics to specified parameters.

Align

To adjust specified variable elements of an item to bring about optimum or desired performance.

Calibrate

To determine and cause corrections to be made or to be adjusted on instruments or 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.

Remove/Install

To remove and install the same item when required to perform services 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.

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.

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

Maintenance services include inspection, testing, service, adjustment, alignment, calibration, and/or replacement. Troubleshooting is 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 is the step-by-step breakdown (taking apart) of a spare functional group coded item to the level of its least component that is assigned an SMR code for the level of maintenance under consideration (i.e., identified as maintenance significant). Maintenance actions include welding, grinding, riveting, straightening, facing, machining, and/or resurfacing.

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 (i.e., Depot Maintenance Work Requirement). Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like-new condition.

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.

Explanation of Columns in the MAC**Column 1, Group Number**

This lists functional group code numbers, the purpose of which is to identify maintenance significant components, assemblies, subassemblies, and modules with the next higher assembly.

Column 2, Component/Assembly

This contains the item names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

Column 3, Maintenance Function

This lists the functions to be performed on the item listed in column 2. (A explanation of these functions appears above.)

Column 4, Maintenance Level

This specifies each level of maintenance authorized to perform each function listed in column 3 by indicating work-time required (expressed as man-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 vary 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), fault location/troubleshooting 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:

1. C—Operator/Crew Maintenance
2. O—Unit Maintenance
3. F—Direct Support Maintenance
4. L—Specialized Repair Activity (SRA)
5. H—General Support Maintenance
6. D—Depot Maintenance

NOTE

SRA is not included in column 4 of the MAC. Functions to this level of maintenance are identified by a work-time figure in column 4 as General Support ("H") and an associated referenced code is used in the "Remarks" column, column 6.

Column 5, Tools and Test Equipment Reference Code

This specifies, by code, those common tools 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 tools and test equipment in the list that immediately follows the MAC.

Column 6, Remarks

When applicable, this contains a letter code, in alphabetical order.

Explanation of Columns in Tools and Test Equipment

Column 1, Reference Code

This is correlated with the code used in the MAC, column 5.

Column 2, Maintenance Level

This is the lowest level of maintenance authorized to use the tool or test equipment.

Column 3, Nomenclature

This is the name or identification of the tools or test equipment.

Column 4, National Stock Number (NSN)

This is assigned to the tool or test equipment; use it to request or requisition the item.

Column 5, Tool Number

This is the manufacturer's part number, model number, or type number.

END OF WORK PACKAGE

**UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA**

MAINTENANCE ALLOCATION CHART (MAC)

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL						(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			UNIT		DIRECT SUPPORT	GENERAL SUPPORT	DEPOT			
			C	O	F	H	D			
01	ENGINE	NONE								
0100	Adapter assembly	REPLACE					1.0			
		REPAIR					2.0			
	Powerplant	INSPECT	0.1	0.5						
		TEST		0.4						
		SERVICE	0.2	0.8						
		ADJUST		0.4						
		REPLACE		9.0						
		REPAIR		3.5						
	Engine, diesel	INSPECT				1.0				
		TEST		2.0						
		TEST				0.3				
		ADJUST		0.5						
		ADJUST				2.0				
		REPLACE		25.0						
		REPAIR				8.0				
		REPAIR					50.0			
		OVERHAUL						297.0		
	Engine front mounting	INSPECT		0.2						
		REPLACE		25.5						
		REPAIR		0.5						
	Cylinders assembly and valves	INSPECT					1.5			
		REPLACE					4.0			
		REPAIR					8.0			
0101	Cylinder head	INSPECT					1.5			
		REPLACE					3.0			
		REPAIR						4.0		
0102	Crankshaft	INSPECT					1.5			
		REPLACE					2.0			
		REPAIR						3.0		
0104	Connecting rod, piston	INSPECT					1.0			
		REPLACE						1.5		
		REPAIR						2.0		
0105	Rocker arm assembly (intake/exhaust)	INSPECT			0.5					
		REPLACE			1.0					
		REPAIR			2.0					
	Housing assembly, camshaft	REPLACE					0.5			
		REPAIR						1.0		

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	UNIT		(4) MAINTENANCE LEVEL		(5) DEPOT D	(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
					DIRECT SUPPORT F	GENERAL SUPPORT H			
0106	Plate assembly, camshaft	REPLACE				0.5			
		REPAIR				1.0			
	Housing assembly, crankshaft	REPLACE				0.5			
		REPAIR				1.5			
	Filler, neck	INSPECT		0.2					
		REPLACE		0.5					
	Oil pan	INSPECT				0.3			
		REPLACE				0.5			
		REPAIR				1.0			
	Oil pump	INSPECT			0.2				
REPLACE					0.5				
REPAIR					1.5				
Oil cooler, engine/trans- mission	INSPECT	0.1	0.3						
	SERVICE			0.5					
	TEST			0.5					
	REPLACE			13.0					
	REPAIR					3.0			
Oil cooler frames and shrouds	INSPECT		2.0						
	REPLACE			12.0					
	REPAIR			2.0					
	INSPECT			0.5					
0108 Exhaust manifold and pipe	REPLACE			1.0					
	REPAIR				1.5				
	INSPECT			0.5					
0109 Exhaust manifolds	REPLACE			1.0					
	REPLACE					0.3			
0109 Housing assembly accessory drive	REPAIR					0.5			
	Control, automatic	REPLACE				0.5			
03 Power, take off	REPAIR					1.0			
	REPLACE			0.5					
0301 FUEL SYSTEM Injector, fuel	REPAIR				1.0				
	TEST				1.0				
	REPLACE				3.0				
	REPAIR				4.0				
0302 Pump, fuel injection	INSPECT				0.3				
	REPLACE				0.5				
	REPAIR					1.0			
Pump, fuel, electric	TEST		0.3						

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	UNIT			(4) MAINTENANCE LEVEL			(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
						DIRECT SUPPORT F	GENERAL SUPPORT H	DEPOT D		
		REPLACE			3.0					
		REPAIR				3.5				
	Pump, fuel motoring	REPLACE			0.3					
		REPAIR				0.5				
	Nozzle and holder assembly, fuel injector	INSPECT			0.3					
		TEST				1.0				
		ADJUST				1.0				
		REPLACE				3.0				
		REPAIR				1.0				
	Pump, fuel (engine)	INSPECT				0.3				
		SERVICE				0.3				
		TEST			0.3					
		ADJUST				0.1				
		REPLACE			0.1					
		REPAIR				2.0				
	Pump, fuel electrical (fuel tank)	TEST			0.3					
		REPLACE			3.0					
		REPAIR			0.5					
	Coupling, flexible shaft	REPLACE				1.0				
		REPAIR				1.5				
		OVERHAUL				2.0				
0304	Air cleaner	INSPECT			0.1					
		REPLACE			4.0					
		REPAIR			2.0					
0305	Turbosupercharger	INSPECT			0.3					
		REPLACE				3.0				
		REPAIR					4.0			
0306	Tank, fuel	INSPECT			0.3					
		SERVICE			0.5					
		REPLACE				11.0				
		REPAIR				4.0				
	Fuel filler tube	INSPECT			0.3					
		REPLACE			0.3					
		REPAIR			0.3					
	Pump, purge	INSPECT			0.2					
		REPLACE			1.0					
		REPAIR				2.0				
	Gate valves, fuel control	INSPECT			0.5					
		REPLACE			1.0					
		REPAIR			0.5					
0309	Fuel filter bracket assembly	INSPECT			0.5					
		REPLACE			1.0					
		REPAIR			1.0					

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	UNIT		(4) MAINTENANCE LEVEL			(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
					DIRECT SUPPORT F	GENERAL SUPPORT H	DEPOT D		
	Filter assembly, primary	INSPECT		0.1					
		SERVICE		0.3					
		REPLACE		10.0					
		REPAIR		0.3					
	Filter assembly, fuel/wa- ter separator	INSPECT		1.0					
		SERVICE		0.4					
		REPLACE		10.0					
		REPAIR		0.3					
0311	Heater assembly, manifold	INSPECT		0.3					
		SERVICE		0.3					
		REPLACE		10.0					
		REPAIR		1.0					
	Heater, coolant engine	INSPECT		0.3					
		SERVICE		0.3					
		REPLACE		10.3					
	Tube assembly, manifold heater	REPLACE		1.5					
		REPAIR		1.5					
0312	Controls and linkage, accelerator and throttle	SERVICE		0.5					
		ALIGN		0.5					
		INSPECT	0.5	0.5					
		ADJUST		2.0					
		REPLACE		1.0					
		REPAIR		5.0					
04	EXHAUST SYSTEM	NONE							
0401	Pipes	REPLACE		1.5					
05	COOLING SYSTEM	NONE							
0502	Engine seal, air inlet	INSPECT		0.3					
		REPLACE		1.0					
0505	Fan assembly	INSPECT		0.3					
		TEST		0.3					
		REPLACE		4.0					
		REPAIR				4.5			
	Engine cooling fan, housing mounting bracket	INSPECT		1.0					
		REPLACE		4.0					
		REPAIR		2.0					
	Retainer and oil seal assembly	REPLACE		1.0					
		REPAIR		0.5					
06	ELECTRICAL SYS- TEM	NONE							

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	UNIT		(4) MAINTENANCE LEVEL			(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
					DIRECT SUPPORT F	GENERAL SUPPORT H	DEPOT D		
0601	Generator, engine accessory	INSPECT		0.3					
		TEST			0.3				
		REPLACE		13.0					
	Bracket mounting	REPAIR			3.4				
		REPLACE		0.3					
		REPAIR		0.2					
0602	Regulator, generator (dual and single voltage)	INSPECT	0.2	0.2					
		TEST		0.2					
		REPLACE		0.4					
		REPAIR		1.0					
0603	Motor, starting	INSPECT		0.3					
		TEST				0.3			
		REPLACE		12.0					
		REPAIR			2.4				
		OVERHAUL					7.0		
	Switching relay box assembly (single voltage regulator)	INSPECT		0.2					
		TEST		0.7					
		ADJUST			0.7				
		REPLACE			0.8				
		REPAIR			5.6				
0606	Fuel injection pump, fuel shutoff solenoid, Electrical Lead and Related Parts	INSPECT		0.5					
		REPLACE		1.0					
0607	Main Switch panel assembly	INSPECT	0.5						
		REPLACE		1.0					
		REPAIR		1.5					
	Main lighting and blackout (B.O.) selector switch wiring harness	INSPECT		0.5					
		REPLACE		1.0					
		REPAIR		1.0					
	Main lighting and master relay wiring harness	INSPECT		0.5					
		REPLACE		1.0					
		REPAIR		1.0					
		INSPECT		0.5					
Starter switch wiring harness	REPLACE		1.0						
	REPAIR		1.0						

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	UNIT		(4) MAINTENANCE LEVEL			(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
					DIRECT SUPPORT F	GENERAL SUPPORT H	DEPOT D		
	Switch panel electrical lead (10911920)	INSPECT		0.5					
		REPLACE		0.5					
		REPAIR		0.5					
	Switch panel electrical lead (11671227-2)	INSPECT		0.5					
		REPLACE		0.5					
		REPAIR		0.5					
	Switch panel electrical lead (11671227-3)	INSPECT		0.5					
		REPLACE		0.5					
		REPAIR		0.5					
	Gage panel assembly (11671903)	INSPECT		1.0					
		REPLACE		1.0					
		REPAIR		1.0					
	Gage panel wiring harness assembly	INSPECT		0.5					
		REPLACE		1.0					
		REPAIR		1.0					
	Electrical accessories panel	INSPECT	0.5	1.0					
		REPLACE		1.0					
		REPAIR		1.5					
	Bilge pump, generator cutout switch, PTO Engagement and M239 smoke grenade launcher power box warning light	REPLACE		0.5					
	Accessories panel generator cutout switch assembly	INSPECT		0.5					
		REPLACE		1.0					
		REPAIR		1.0					
	Bilge pump and generator cutout switch lead assembly	INSPECT		0.5					
		REPLACE		1.0					
		REPAIR		0.5					
	Bilge pump main power harness	INSPECT		0.5					
		REPLACE		1.0					
		REPAIR		1.0					

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			UNIT C O	DIRECT SUPPORT F	GENERAL SUPPORT H	DEPOT D		
0608	Auxiliary Power Unit (APU) control box (dual and single voltage)	INSPECT		0.5				
		REPLACE		0.5				
		REPAIR		2.0				
	APU generator switch assembly (dual voltage regulator)	INSPECT		0.5				
		REPLACE		1.0				
		REPAIR		1.0				
	APU preheat switch lead assembly	INSPECT		0.5				
		REPLACE		0.5				
		REPAIR		0.5				
	APU starting switch lead	INSPECT		0.5				
		REPLACE		0.5				
		REPAIR		0.5				
	APU fuel shutoff lead assembly	INSPECT		0.5				
		REPLACE		0.5				
		REPAIR		0.5				
	APU control box wire harness assembly (single and dual voltage)	REPLACE		0.5				
		REPAIR		0.5				
		REPAIR		1.0				
	Heater control box assembly	INSPECT		0.5				
		REPLACE		0.5				
		REPAIR		1.0				
	Spare headlight mounting assembly	REPLACE		0.5				
		REPAIR		0.5				
		REPAIR		0.5				
APU pressure switch	REPLACE		0.5					
	INSPECT		0.5					
	REPLACE		1.0					
Fire extinguisher inter- lock switch assembly	REPAIR		0.5					
	REPAIR		0.5					
	REPAIR		0.5					
0609	Driver's infrared or passive night viewer indicator lamps	REPLACE		0.5				
		REPAIR		0.5				
		REPAIR		0.5				
Rigger's service light	REPLACE		0.3					
	REPAIR		0.2					
	INSPECT		0.5	0.5				
Front signal light assembly	INSPECT		0.5	0.5				

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	UNIT		(4) MAINTENANCE LEVEL			(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
					DIRECT SUPPORT F	GENERAL SUPPORT H	DEPOT D		
		REPLACE		0.5					
		REPAIR		0.5					
	Front headlight assembly	INSPECT	0.5	0.5					
		REPLACE		0.5					
		REPAIR		0.5					
	Stoplight/taillight assembly, left and right	INSPECT	0.5	0.5					
		REPLACE		0.5					
		REPAIR		0.5					
	Light extension	REPLACE		0.5					
		REPAIR		0.5					
	Spotlight, hand and reel assembly	INSPECT	0.5	0.5					
		REPLACE		0.5					
		REPAIR		0.5					
	High beam indicator light	REPLACE		0.5					
		REPAIR		0.5					
	Hydraulic reservoir temperature caution light	REPLACE		0.5					
		REPAIR		0.5					
	Dome light	INSPECT	0.2	0.2					
		REPLACE		0.5					
		REPAIR		0.2					
	Winch illumination lamp assembly	INSPECT	0.5	0.5					
		REPLACE		0.5					
		REPAIR		0.2					
	Front signal light assembly	INSPECT	0.5	0.5					
		REPLACE		1.0					
		REPAIR		1.0					
0610	Switches, warning	TEST		0.5					
		REPLACE		0.5					
	Oil temperature transmitter unit and wiring harness	REPLACE		0.3					
		REPAIR		0.5					
0611	Horn assembly	INSPECT	0.5						
		REPLACE		1.0					
0612	Battery	INSPECT	0.4						
		TEST		0.3					
		SERVICE	0.4						
		REPLACE		1.5					

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) DEPOT D	(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			DIRECT SUPPORT F	GENERAL SUPPORT H	UNIT C	UNIT O			
		REPAIR						1.0	
0613	Master relay to rectifier lead assembly	INSPECT						0.5	
		REPLACE						0.5	
		REPAIR						0.5	
	Red flasher breaker to switch cable assembly	INSPECT						0.5	
		REPLACE						0.5	
		REPAIR						0.5	
	Panel wiring harness (11672373)	INSPECT						0.5	
		REPLACE						0.5	
		REPAIR						1.0	
	Red flasher wiring harness assembly	REPLACE						0.5	
		REPAIR						0.5	
	Engine wiring harness assembly (single voltage regulator)	REPLACE						1.0	
		REPAIR						1.0	
	Engine wiring harness (dual voltage regulator)	INSPECT						0.5	
		REPLACE						1.0	
		REPAIR						1.0	
	Generator power lead assembly	INSPECT						0.5	
		REPLACE						0.5	
		REPAIR						0.5	
	Starter ground cable	INSPECT						0.5	
		REPLACE						0.5	
		REPAIR						0.5	
	Starter wiring harness branched (12314745)	INSPECT						0.5	
		REPLACE						1.0	
		REPAIR						1.0	
	Starter wiring harness (12314651)	INSPECT	0.5	0.5					
		REPLACE						1.0	
		REPAIR						1.0	
	Starter wiring harness (11671792)	INSPECT						0.5	
		REPLACE						1.0	
		REPAIR						1.0	
	Headlight wiring harness assembly	INSPECT						0.5	
		REPLACE						1.0	

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	UNIT		(4) MAINTENANCE LEVEL		(5) DEPOT D	(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
					DIRECT SUPPORT F	GENERAL SUPPORT H			
		REPAIR							
	Bulkhead rear slave	INSPECT							
	receptacle wiring harness								
	assembly								
		REPLACE							
		REPAIR							
	Air cleaner circuit breaker	INSPECT							
	lead assembly								
		REPLACE							
		REPAIR							
	Bulkhead to master relay	INSPECT							
	and left and right taillight								
	wiring harness assembly								
		REPLACE							
		REPAIR							
	Bulkhead to engine	INSPECT							
	harness and starter relay								
	wiring harness assembly								
		REPLACE							
		REPAIR							
	Bulkhead to engine	INSPECT							
	bracket and rear fuel tank								
	transmitter wiring harness								
	(dual voltage regulator)								
		REPLACE							
		REPAIR							
	Bulkhead to engine	INSPECT							
	bracket and rear fuel								
	tank transmitter wiring								
	harness (single voltage								
	regulator)								
		REPLACE							
		REPAIR							
	Batteries to master relay,	INSPECT							
	voltage regulator and								
	slave receptacle wiring								
	harness assembly engine								
	disconnect (dual voltage								
	regulator)								
		REPLACE							
		REPAIR							

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	UNIT		(4) MAINTENANCE LEVEL			(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
					DIRECT SUPPORT F	GENERAL SUPPORT H	DEPOT D		
	Batteries to master relay, voltage regulator and slave receptacle wiring harness assembly engine disconnect (single voltage regulator)	INSPECT		0.5					
		REPLACE		1.0					
		REPAIR		1.0					
	Bulkhead to APU master relay and rigger's lights wiring harness (dual voltage regulator)	INSPECT		0.5					
		REPLACE		1.0					
		REPAIR		1.0					
	Bulkhead to APU, master relay and rigger's lights wiring harness assembly (single voltage regulator)	INSPECT		0.5					
		REPLACE		1.0					
		REPAIR		1.0					
	APU and engine armature relays to voltage regulator harness (single voltage regulator)	INSPECT		0.5					
		REPLACE		1.0					
		REPAIR		1.0					
	Gage panel to bulkhead wiring harness assembly (dual voltage regulator)	INSPECT		0.5					
		REPLACE		1.0					
		REPAIR		1.0					
	Gage panel to bulkhead wiring harness assembly (single voltage regula- tor)	INSPECT		0.5					
		REPLACE		1.0					
		REPAIR		1.0					
	Switch panel to head lamps and bulkhead wiring harness assembly	INSPECT		0.5					
		REPLACE		1.0					
		REPAIR		1.0					

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	UNIT		(4) MAINTENANCE LEVEL		(5) DEPOT D	(6) REMARKS CODE
					DIRECT SUPPORT F	GENERAL SUPPORT H			TOOLS AND EQUIPMENT REF CODE
	Switch panel to park position switch to bulkhead wiring harness assembly	INSPECT		0.5				
		REPLACE		1.0				
		REPAIR		1.0				
	APU control box to foot dimmer switch and bulkhead wiring harness (single voltage regulator)	INSPECT		0.5				
		REPLACE		1.0				
		REPAIR		1.0				
	Switch panel, radio and bilge pump to bulkhead wiring harness	INSPECT		0.5				
		REPLACE		1.0				
		REPAIR		1.0				
	Heater control box to heater wiring harness assembly	INSPECT		0.5				
		REPLACE		1.0				
		REPAIR		1.0				
	Engine disconnect ground lead assembly	INSPECT		0.5				
		REPLACE		0.5				
		REPAIR		0.5				
	Battery to circuit breaker lead assembly	INSPECT		0.5				
		REPLACE		0.5				
		REPAIR		0.5				
	Engine voltage regulator to engine disconnect wiring harness assembly (dual voltage regulator)	INSPECT		0.5				
		REPLACE		1.0				
		REPAIR		1.0				
	Switch panel to gage panel and miscellaneous switches wiring harness (passive night viewer) (single voltage regula- tor)	INSPECT		0.5				
		REPLACE		1.0				
		REPAIR		1.0				

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	UNIT		(4) MAINTENANCE LEVEL			(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
					DIRECT SUPPORT F	GENERAL SUPPORT H	DEPOT D		
	Engine disconnect to engine armature relay electrical lead (single voltage regulator)	INSPECT		0.5					
		REPLACE		1.0					
		REPAIR		1.0					
	Switch panel to gage panel and miscellaneous switches wiring harness (passive night viewer) (dual voltage regulator)	INSPECT		0.5					
		REPLACE		1.0					
		REPAIR		1.0					
	Engine wiring connectors and terminals harness (single voltage regulator)	INSPECT		0.5					
		REPLACE		1.0					
		REPAIR		1.0					
	Driver's powerpack to infrared scope lead assembly (infrared night viewer)	INSPECT	0.5	0.5					
		REPLACE		1.0					
		REPAIR		1.0					
	Headlight and dimmer switch wiring harness assembly	INSPECT		0.5					
		REPLACE		1.0					
		REPAIR		1.0					
	Accessories panel cable assembly	INSPECT	0.3						
		REPLACE			1.5				
		REPAIR			1.0				
	Horn switch to horn lead assembly	INSPECT		0.2					
		REPLACE		1.0					
		REPAIR		1.0					
	Horn ground cable assembly	INSPECT		0.5					
		REPLACE		1.0					
		REPAIR		1.0					
	Bilge pump lead relay wiring harness	INSPECT		0.5					
		REPLACE		1.0					
		REPAIR		1.0					

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	UNIT			(4) MAINTENANCE LEVEL			(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
						DIRECT SUPPORT F	GENERAL SUPPORT H	DEPOT D		
	Lead assembly, smoke generating system (1672473-1)	INSPECT			0.5					
		REPLACE			0.5					
		REPAIR			0.5					
	Bilge pump circuit breaker to switch panel lead assembly	INSPECT			0.5					
		REPLACE				0.5				
		REPAIR				0.5				
	Wiring harness, electrical kit for M239 smoke grenade launcher	INSPECT			0.5					
		REPLACE			1.0					
		REPAIR			1.0					
	Cable assembly, electrical kit for M239 smoke grenade launcher	INSPECT			0.5					
		REPLACE			0.5					
		REPAIR			0.5					
	Wiring harness, box assembly, power switch for M239 smoke grenade launcher	INSPECT			0.5					
		REPLACE			0.5					
		REPAIR			0.5					
	Switch plate to driver's vehicle exhaust smoke bracket wiring harness	INSPECT			0.5					
		REPLACE			1.0					
		REPAIR			1.0					
	Exhaust smoke gen- erating system to fuel solenoid lead assembly	REPLACE			0.5					
		REPAIR			0.5					
	Driver's vehicle exhaust smoke bracket	INSPECT			0.5					
		REPLACE			1.0					
		REPAIR			1.0					
	Exhaust smoke generat- ing system lead assembly (11672385)	INSPECT			0.5					
		REPLACE			0.5					
		REPAIR			0.5					

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	UNIT		(4) MAINTENANCE LEVEL			(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
					DIRECT SUPPORT F	GENERAL SUPPORT H	DEPOT D		
	Lead assembly, smoke generating system	REPLACE		0.5					
		REPAIR		1.0					
	Diode assembly	INSPECT		0.5					
		REPLACE		0.5					
		REPAIR		0.5					
	Fuel gage panel lead assembly	INSPECT		0.5					
		REPLACE		0.5					
		REPAIR		0.5					
	Starter electrical lead assembly (10887570)	INSPECT		0.5					
		REPLACE		1.0					
		REPAIR		1.0					
	Turn signal red flasher wiring harness assembly (11672273)	INSPECT		0.5					
		REPLACE		1.0					
		REPAIR		1.0					
	Wiring harness, bilge pump lead relay	INSPECT		0.5					
		REPLACE		2.0					
		REPAIR		2.0					
0616	Ventilating blower	INSPECT		0.5					
		REPLACE		1.0					
07	TRANSMISSION	NONE							
0700	Linkage, transmission	ADJUST		0.5					
		REPLACE		1.0					
0705	Control assembly, transmission shifting	INSPECT	1.0	1.0					
		SERVICE		0.5					
		REPLACE		3.0					
		REPAIR		1.5					
	Segment assembly	INSPECT	1.0	1.0					
		REPLACE		1.0					
		REPAIR		1.0					
0708	Converter, torque	INSPECT				1.0			
		REPLACE				1.0			
		REPAIR				4.0			
		OVERHAUL					4.0		
0710	Transmission assembly	INSPECT		0.3					
		SERVICE	0.3						
		TEST		0.3					
		REPLACE			18.0				
		REPAIR					50.0		
		OVERHAUL					80.0		

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	UNIT		(4) MAINTENANCE LEVEL		(5) DEPOT D	(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
					DIRECT SUPPORT F	GENERAL SUPPORT H			
		ADJUST		3.5					
	Housing assembly, high range clutch	REPLACE				1.5			
0714	Servo unit	REPAIR				3.5			
	Pump assembly, output oil	NONE							
		REPLACE		1.0					
	Pump assembly, scavenge oil	REPAIR				2.5			
		REPLACE				0.5			
	Pump assembly input oil	REPAIR				1.0			
		REPLACE				0.5			
		REPAIR				1.0			
0724	Clutch, steer	INSPECT		0.5					
		REPLACE				3.5			
0726	Saddles, mounting brakes	REPLACE			2.0				
11	REAR AXLE	NONE							
1103	Output reduction assembly (left side)	INSPECT		1.0					
		REPLACE		4.0					
		REPAIR			4.0				
		OVERHAUL					8.0		
	Final drive assembly (right side)	INSPECT		1.0					
		REPLACE		4.0					
		REPAIR			4.0				
		OVERHAUL					8.0		
12	BRAKES	NONE							
1206	Service brake control linkage, front and rear	ADJUST		2.0					
		INSPECT		1.0					
		SERVICE		1.0					
		REPLACE		12.0					
		REPAIR	0.5	1.0					
	Plate assembly, brake	REPLACE		0.5					
		REPAIR		0.5					
	Lever remote control	REPLACE		0.5					
		REPAIR		0.5					
13	WHEELS AND TRACK	NONE							
1301	Hub assembly, track	INSPECT	0.5	0.5					
		SERVICE		0.5					
		REPLACE		5.0					
		REPAIR		2.0					
	Arm assembly, pivot	INSPECT	0.5	0.5					

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	UNIT		(4) MAINTENANCE LEVEL			(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
					DIRECT SUPPORT F	GENERAL SUPPORT H	DEPOT D		
		SERVICE		0.5					
		REPLACE		7.0					
		REPAIR		3.0					
	Arm and hub assembly (front, intermediate, and rear)	INSPECT	0.2	0.5					
		SERVICE		0.5					
		REPLACE		7.5					
		REPAIR		3.0					
	Track support roller, bracket and wheel	INSPECT	0.5	0.5					
		SERVICE		0.5					
		REPLACE		6.0					
		REPAIR		3.0					
	Track support roller, bracket and wheel (left front)	INSPECT	0.5	0.5					
		SERVICE		0.5					
		REPLACE		6.0					
		REPAIR		3.0					
1303	Compensating idler arm assembly	INSPECT	0.5	0.5					
		SERVICE		1.0					
		REPLACE		5.0					
		REPAIR		2.0					
	Brake shoe link	INSPECT	0.5	0.5					
		REPLACE		2.0					
		REPAIR		1.5					
1304	Sprocket, drive hub	INSPECT	0.1	0.3					
		REPLACE		7.5					
		REPAIR					5.0		
1305	Track assembly	ADJUST	0.4	0.5					
		INSPECT		1.0					
		SERVICE		4.0					
		REPLACE	0.5	1.5					
		REPAIR		0.5					
	Shoe assembly	INSPECT	0.5						
		REPLACE		3.0					
		REPAIR		1.0					
1311	Wheel, road	REPLACE		1.0					
		REPAIR					2.0		
14	STEERING	NONE							
1401	Steering and shifting controls, front and rear	ADJUST		0.5					
		INSPECT	0.5	1.0					
		SERVICE		1.0					

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL						(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			UNIT		DIRECT SUPPORT	GENERAL SUPPORT	DEPOT			
			C	O	F	H	D			
		REPLACE		1.5						
		REPAIR		3.5						
	Bell cranks	INSPECT		1.0						
		SERVICE		1.0						
		REPLACE		1.0						
		REPAIR		0.3						
15	FRAME, TOWING ATTACHMENTS AND DRAWBARS	NONE								
1503	Pintle and mount assembly	INSPECT		0.3						
		SERVICE		0.5						
		REPLACE		1.0						
		REPAIR		2.0						
	Heavy duty tow bar assembly	INSPECT		0.5						
		REPLACE		1.0						
		REPAIR		0.5						
16	SPRINGS AND SHOCK ABSORBERS	NONE								
1601	Bumper assembly, left and right	INSPECT		0.1						
		REPLACE		0.7						
		REPAIR		1.0						
1604	Shock absorber	INSPECT		0.1						
		REPLACE		0.6						
18	BODY, CAB, HOOD, AND HULL	NONE								
1801	Door assembly, APU	INSPECT		0.3						
		REPLACE		1.5						
		REPAIR		1.0						
	Engine deck	REPLACE		1.5						
		REPAIR		1.0						
	Optional engine deck cover assembly	REPLACE		1.5						
		REPAIR		1.0						
1802	Brace, fender	INSPECT		0.5						
		REPLACE		2.0						
		REPAIR		3.0						
1803	Housing assembly, cab door	INSPECT		0.1						
		REPLACE		2.0						
		REPAIR		2.0						
	Mount, passive night viewer	REPLACE		0.5						
		REPAIR		0.5						

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	UNIT		(4) MAINTENANCE LEVEL			(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
					DIRECT SUPPORT F	GENERAL SUPPORT H	DEPOT D		
1804	Valve assembly	INSPECT	0.5	0.5					
		SERVICE		0.8					
		REPLACE		1.0					
		REPAIR		0.5					
1805	Subfloors and related parts	REPLACE		4.0					
1806	Personnel seat assembly	INSPECT	0.2						
		REPLACE		0.5					
		REPAIR		0.5					
	Commander's and rigger's seat assembly	INSPECT	0.2						
		SERVICE		0.5					
		REPLACE		0.5					
		REPAIR		1.5					
	Driver's and mechanic's seat assembly	INSPECT	0.2						
		SERVICE		0.5					
		REPLACE		0.5					
		REPAIR		1.5					
	Cushion assembly, backrest, commander's and riggers	INSPECT	0.1						
		REPLACE		0.2					
		REPAIR		1.2					
		INSPECT	0.2	0.5					
		REPLACE		1.0					
1808	Rack, ammunition stowage	REPAIR		1.0					
		REPAIR		1.0					
		INSPECT	0.2	0.5					
	Stowage boxes, brackets and straps	INSPECT	0.5						
		SERVICE		0.2					
		REPLACE		1.0					
		REPAIR		1.0					
	Toolbox, rack, caliber .50 barrel stowage straps, liquid container and rocket launcher	INSPECT	0.2	0.2					
		REPLACE		0.2					
		REPAIR		0.2					
		INSPECT	0.2	0.2					
	Pioneer tool set bracket	INSPECT		0.2					
		REPLACE		0.2					
		REPAIR		0.5					
	Vise, tow bar assembly mounting bracket and tow chain mounting brackets	REPLACE		1.5					
		REPAIR		0.5					

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	UNIT		(4) MAINTENANCE LEVEL			(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
					DIRECT SUPPORT F	GENERAL SUPPORT H	DEPOT D		
19	TURRET	NONE							
1903	Commander's cupola assembly	INSPECT	0.1						
		SERVICE		0.1					
		TEST		1.0					
		REPLACE		2.0					
		REPAIR		4.0					
	Commander's cupola door assembly	INSPECT	0.2						
		SERVICE		0.2					
		REPLACE		2.0					
		REPAIR		1.0					
20	WINCH, PTO AND HOIST	NONE							
2001	Winch and motor assembly, main	INSPECT	1.0	2.0					
		ADJUST		1.0					
		SERVICE		1.0					
		REPLACE			20.0				
		REPAIR				18.0			
		OVERHAUL				75.0			
	Winch and motor assembly, hoist	INSPECT	1.0	2.0					
		ADJUST		1.0					
		SERVICE		1.0					
		REPLACE			15.0				
		REPAIR				18.0			
		OVERHAUL				70.0			
	Wire rope assembly, hoist winch	SERVICE	0.5						
		INSPECT	0.5						
		REPLACE		1.0					
		REPAIR		2.0					
	Wire rope shield and roller, hoist winch	SERVICE	0.5						
		INSPECT	0.5	0.5					
		REPLACE		2.0					
		REPAIR		1.0					
	Mounting brackets, level winder arm assembly	INSPECT	0.5	0.5					
		REPLACE			1.0				
		REPAIR			1.0				
	Brake band assembly, hoist and main winch	ADJUST		0.5					
		SERVICE			0.5				
		REPLACE			2.0				

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	UNIT		(4) MAINTENANCE LEVEL		DEPOT D	(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
					DIRECT SUPPORT F	GENERAL SUPPORT H			
		REPAIR			0.5				
	Main winch cover	INSPECT	0.5						
		REPLACE					0.4		
		REPAIR					0.2		
	Governor, hydraulic (on engine)	ADJUST			1.2				
		REPLACE			1.0				
		REPAIR			2.0				
	Main winch level winder assembly	INSPECT	0.5	0.5					
		ADJUST			1.0				
		SERVICE			1.0				
		REPLACE			24.0				
		REPAIR			5.2				
	Main winch and hoist cable roller	INSPECT	0.5	0.5					
		SERVICE			1.0				
		REPLACE			3.0				
		REPAIR			2.0				
2002	Spade support assembly and mounting	INSPECT		1.0					
		REPLACE			2.0				
	Hydraulic subplate assembly	INSPECT	1.0	1.0					
		ADJUST		0.3					
		REPLACE			1.2				
		REPAIR			1.0				
	Spade subplate and hydraulic valve assembly	INSPECT	0.5						
		ADJUST			1.5				
		REPLACE			1.5				
		REPAIR			2.0				
2004	Propeller shaft with universal joint assembly	INSPECT		0.2					
		SERVICE		0.2					
		REPLACE			8.0				
		REPAIR			4.0				
	Transmission assembly, mechanical	INSPECT	1.0	1.0					
		REPLACE		1.0					
		REPAIR					12.0		
		OVERHAUL					30.0		
		TEST		1.0					
2005	Spade latch assembly	INSPECT	0.5						
		SERVICE		1.0					
		REPLACE			1.5				

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	UNIT		(4) MAINTENANCE LEVEL		(5) DEPOT D	(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
					DIRECT SUPPORT F	GENERAL SUPPORT H			
		REPAIR			1.0				
	Spade assembly	INSPECT	0.5	1.0					
		SERVICE		1.0					
		REPLACE				4.0			
		REPAIR				4.0			
2007	Boom, hoisting	INSPECT	0.5	0.5					
		SERVICE		1.0					
		REPLACE		1.5					
		REPAIR			2.0				
	Cylinder	INSPECT	0.5	0.5					
		REPLACE		1.5					
		REPAIR					8.0		
22	ACCESSORY ITEMS	NONE							
2207	Personnel heater	INSPECT	0.3	1.0					
		TEST		0.5					
		REPLACE		2.5					
		REPAIR			4.5				
2210	Stencils, identification plates, and instruction plates	INSPECT		0.5					
		REPLACE		0.5					
24	HYDRAULIC LIFT COMPONENTS	NONE							
2400	Tank assembly, hy- draulic	SERVICE		1.0					
		REPLACE			3.0				
		REPAIR			4.0				
2401	Coupling, shaft	INSPECT	0.5	0.5					
		SERVICE		1.0					
		REPLACE			4.0				
		REPAIR					3.0		
2402	Flow regulator subplate assembly	INSPECT	0.5	0.5					
		REPLACE			2.0				
		REPAIR			2.0				
2406	Mechanical transmission, hydraulic and lubricating lines	INSPECT	0.5	1.0					
		REPLACE			3.0				
29	APU AND CONTROLS	NONE							
2901	APU assembly	INSPECT	0.5						
		TEST		1.5					
		SERVICE		1.5					
		REPLACE			11.5				
		REPAIR			20.0				
2902	Filter, oil	INSPECT	0.1						

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	UNIT		(4) MAINTENANCE LEVEL			(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
					DIRECT SUPPORT F	GENERAL SUPPORT H	DEPOT D		
		SERVICE		0.5					
		REPLACE		0.2					
2910	Engine assembly, diesel	REPLACE			2.0				
		REPAIR			24.0				
		OVERHAUL				30.0			
2916	Lever, lock release	REPLACE		0.3					
		REPAIR		0.5					
	Cooler assembly, oil pump, lubricating oil	INSPECT			0.5				
		SERVICE			1.0				
		REPLACE			0.5				
		REPAIR			2.0				
	Adapter assembly, oil filter	INSPECT		0.2					
		REPLACE			0.5				
		REPAIR			1.0				
2919	Driving mechanisms, APU	SERVICE		1.0					
		REPLACE			2.0				
2932	Nozzle and holder assembly, fuel	INSPECT			1.5				
		REPLACE			0.5				
		REPAIR				2.0			
	Pump assembly, fuel injection	INSPECT			0.2				
		ADJUST			0.2				
		REPLACE			2.0				
		REPAIR				2.5			
2933	Air cleaner assembly	INSPECT		0.1					
		SERVICE		0.5					
		REPLACE		0.2					
	Adapter and heater assembly	INSPECT			0.5				
		REPLACE			2.0				
		REPAIR			1.0				
2936	Linkage, governor	ADJUST			0.5				
		REPLACE			1.8				
		REPAIR			1.5				
2937	Fuel filter assembly	INSPECT		0.3					
		SERVICE		0.5					
		REPLACE		0.4					
		REPAIR		0.5					
2938	Engine fuel lines and fittings, APU	INSPECT		0.5					
		REPLACE		0.5					

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	UNIT		(4) MAINTENANCE LEVEL			(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
					DIRECT SUPPORT F	GENERAL SUPPORT H	DEPOT D		
2941	Muffler and exhaust system, APU	INSPECT	0.2						
		REPLACE		1.0					
2952	Engine shrouds and exhaust cooling ducts, APU	INSPECT	0.5						
		REPLACE		1.0					
2960	Pressure transmitter, APU	REPLACE			1.0				
		REPLACE			1.0				
2961	Generator/starter (combination)	TEST	0.5						
		REPLACE			2.0				
		REPAIR			2.0				
2963	APU wiring harness	INSPECT	0.5						
		REPLACE		1.0					
		REPAIR		2.0					
	APU sending unit wiring harness	INSPECT	0.5						
		REPLACE			1.0				
		REPAIR			0.5				
	Ground lead, APU	INSPECT	0.5						
		REPLACE			1.0				
		REPAIR			1.0				
	APU starter relay to generator harness	INSPECT	0.5						
		REPLACE			1.0				
		REPAIR			1.0				
APU fuel shutoff, preheat solenoid and leads	INSPECT	0.2							
	REPLACE			1.5					
	REPAIR			1.5					
High air temperature switch lead, APU	INSPECT	0.5							
	REPLACE			1.0					
	REPAIR			0.5					
33	SPECIAL PURPOSE KITS	NONE							
3301	Shipping and storage container, engine	REPLACE			0.5				
		REPAIR				2.0			
		OVERHAUL				4.0			
3305	Deep water fording kit	INSPECT	1.0	1.0					
		REPLACE		2.0					
		REPAIR		4.0					

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					DIRECT SUPPORT F	GENERAL SUPPORT H	DEPOT D		
3307	Pump, deep water fording kit	REPLACE		1.0					
		REPAIR			2.0				
	Electrical kit for M239 smoke grenade launcher	INSPECT		1.5					
		REPLACE		1.0					
	Power switch box assembly (M239 smoke grenade launcher)	REPAIR		1.5					
		INSPECT		1.0					
	Bracket and switch assembly	REPLACE		1.0					
		REPAIR		1.0					
	Commander's plate and switch assembly	INSPECT		1.0					
		REPLACE		1.0					
	Rear stoplight, left and right (USAEUR signal kit)	REPAIR		1.0					
		INSPECT	0.2	0.2					
	Wiring harness (US-AEUR signal kit) (12322614)	REPLACE		1.0					
		REPAIR		0.5					
	Wiring harness (US-AEUR signal kit) (12322615-1 & 12322615-2)	INSPECT		0.5					
		REPLACE		1.0					
	Wiring harness (US-AEUR signal kit) (12322611)	REPAIR		0.5					
		INSPECT		0.5					
	Wiring harness (US-AEUR signal kit) (12322612)	REPLACE		1.0					
		REPAIR		0.5					

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	UNIT			(4) MAINTENANCE LEVEL			(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
						DIRECT SUPPORT F	GENERAL SUPPORT H	DEPOT D		
	Wiring harness (US-AEUR signal kit) (12322613)	INSPECT								0.5
		REPLACE								1.0
		REPAIR								0.5
	Discharger, smoke grenade	TEST								0.5
		REPAIR								1.5
		REPLACE								1.3
44	WELDING, MET- ALLIZING, METAL HEATING, AND PLAT- ING EQUIPMENT	NONE								
4415	Acetylene hose adapter and related parts	INSPECT								1.0
		REPLACE								1.0
47	GAGES (NONELEC- TRICAL)	NONE								
4701	Tachometer and speedometer, mechani- cal	INSPECT			1.0					
		REPLACE								1.5
68	WARNING, SCAN- NING, AND SIG- NALLING DEVICES AND NAVIGATIONAL INSTRUMENTS	NONE								
6810	Infrared power supply and mount	INSPECT								0.5
		REPLACE								1.5
		REPAIR					1.5			
		OVERHAUL						1.5		
76	FIRE FIGHTING EQUIPMENT COMPO- NENTS	NONE								
7639	Fire extinguisher	INSPECT								1.0
		REPLACE								2.0
		REPAIR								1.0
	Valve, fire extinguisher	INSPECT								0.2
		REPLACE								0.5
		REPAIR								0.5
91	CHEMICAL, BIO- LOGICAL, AND RADIOLOGICAL (CBR)	NONE								
9111	Hose assemblies	INSPECT								0.3

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	UNIT		(4) MAINTENANCE LEVEL			(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
					DIRECT SUPPORT F	GENERAL SUPPORT H	DEPOT D		
		REPLACE		1.3					
		REPAIR		0.3					
	Purifier, M2A2	INSPECT	0.3						
		TEST		0.5					
		REPLACE		1.3					
		REPAIR		1.5					
	Cable, assembly	INSPECT	0.3	0.3					
		REPLACE		1.0					
		REPAIR		0.5					
	Circuit breaker and switch assembly	REPLACE		0.3					
		REPAIR		0.3					
95	GENERAL USE STANDARDIZED PARTS	NONE							
9501	Bulk material, cables, wire, and hoses	REPLACE	1.0	1.0					
		REPAIR		2.0					

Tools and Test Equipment

TOOLS OR				
TEST EQUIP	MAINTENANCE		NATIONAL	TOOL
REF CODE	LEVEL	NOMENCLATURE	STOCK NUMBER	NUMBER
1	F D	Adapter, compression (used with gage 4910-00-870-6283)	4910-00-795-7961	8742025
2	H D	Adapter, mechanical input, scavenger pump (used with remover 5120-00-473-7352)	5120-00-708-2774	7082774
3	H D	Adapter, mechanical puller, starter generator idler gearshaft and main bearing caps (used with puller 5120-00-310-4668)	5120-00-837-5091	8375091
4	H D	Alignment tool, output reduction planetary spindles		8389997
5	F H D	Blade, thickness gage, exhaust valve	5210-00-793-7899	10882616
6	F H D	Blade, thickness gage, intake valve	5210-00-793-7898	10882615
7	F H D	Blade, thickness gage, intake valve timing	5210-00-793-7897	10882617
8	F H D	Bracket, transmission (used with 4910-00-610-5961)	4910-00-610-5962	8742052
9	F H D	Bracket, transmission (used with 4910-00-610-5962)	4910-00-610-5961	8742051
10	H D	Bushing, reamer pilot, exhaust valve guides (used with reamers 5110-00-708-3696 and 5110-00-708-3697)	5110-00-003-1010	11642089
11	H D	Bushing, reamer pilot, intake valve guides (used with reamers 5110-00-7080-3698 and 5110-00-708-3699)	5110-00-460-5831	11642088
12	H D	Compressor assembly, brake-apply assembly, torque converter lockup clutch backing plate or steering tie shaft drive gear	5120-00-330-4274	8708939
13	D	Compressor, piston ring (used to install 0.010 or 0.020 oversize pistons and rings)	5120-01-005-3001	1088288-1
14	D	Compressor, piston ring (used to install 0.030 and 0.040 oversize piston and rings)	5120-01-005-3000	10882888-2
15	F H D	Crowfoot attachment, injector nozzle and holder (used to install adapter 4910-00-795-7961)	5120-01-039-2809	12254244
16	F H D	Cutter, carbon nozzle, injector nozzle seat	4910-00-795-7958	10882949
17	H D	Extractor, screw thread, inserts (#10 thru 3/8 inch [in.] [10 millimeters {mm}])	5120-00-723-6833	MIL-T-21309
18	H D	Extractor, screw thread, inserts (7/16 [11 mm] to 1 in. [25 mm])	5120-00-251-1527	77521056
19	F H D	Eyebolt, flywheel	5306-00-017-6143	MS51973-7
20	H D	Fixture, stator springs and cam rollers	4910-00-098-6732	8390000
21	H D	Gage and compressor, piston ring	4910-00-795-7956	10882888
22	F H D	Gage assembly, compression (used with adapter 4910-00-795-7961)	4910-00-870-6283	10899180
23	H D	Inserter, screw thread (7/16-20)	5120-00-797-2407	MIL-T-21309
24	F H D	Gage, fan rotor, checking erosion	5120-01-099-1477	12275775
25	H D	Gage, piston ring, checking piston top ring groove	5220-01-084-1230	12254296
26	D	Gage, ring, plain (0.010 or 0.030 oversize)	5209-01-005-3003	10912589-1
27	H D	Gage, ring, plain (standard and 0.020 oversize)	5220-00-988-8774	10912589
28	H D	Gage, ring, plain (standard or 0.040 oversize)	5220-01-005-3002	10912589-2
29	H D	Inserter, screw thread (1/2-20)	5120-00-672-8897	8761582
30	H D	Inserter, screw thread (3/8-24)	5120-00-710-7437	8375324
31	H D	Inserter, screw thread (5/16-24)	5120-00-797-2405	3552-5
32	H D	Lifter assembly, valve spring (used with stand 4910-00-554-1317)	5120-00-678-5285	8761535
33	O F H D	Parts kit, steering clutch housing output shaft	2590-00-330-8642	8708831

TOOLS OR TEST EQUIP REF CODE	MAINTENANCE LEVEL	NOMENCLATURE	NATIONAL STOCK NUMBER	TOOL NUMBER
34	H D	Pin, hollow (for loading low-range planetary carrier pinion gear spindle rollers or aligning low-range planetary carrier pinion gear thrust washers and spindle rollers)	5315-00-098-6735	8390006
35	H D	Pin, hollow (for loading reverse-range planetary carrier pinion gear spindle rollers or aligning reverse-range planetary carrier pinion gear thrust washers and spindle rollers)	5315-00-098-6737	8390007
36	H D	Pin, straight, threaded (for aligning input scavenger oil pump assembly to torque converter housing)	5315-00-098-6733	8390002
37	H D	Pin, straight, threaded (for aligning lockup clutch housing assembly to converter pump)	5315-00-333-6081	8708909
38	H D	Pliers, retaining ring, fan drive shaft	5120-00-752-9755	WT28163
39	H D	Proctor, crankcase	4910-00-785-7951	10882790
40	H D	Puller, attachment, mechanical, reverse range planetary carrier pinion gear spindle or input scavenger pump (used with adapter 5120-00-708-2774)	5120-00-473-7352	7082201
41	F H D	Puller, adapter, output reduction planetary carrier (used with puller 5120-00-423-1596)	5120-00-534-7830	5347830
42	H D	Puller, mechanical, camshaft drive quill	5120-00-678-5282	8761297
43	H D	Puller, mechanical, exhaust valve guide	5120-00-448-0401	10882954
44	F H D	Puller, mechanical, generator and starter gear-shaft or crankshaft main bearing cap (used with adapter 5120-00-837-5091 and spreader 5120-00-575-7767); hydraulic cylinder pins used with adapter (5120-00-767-9102)	5120-00-310-4668	8708712
45	F H D	Puller, mechanical, injector nozzle and holder	5120-01-119-4172	12275805
46	H D	Puller, mechanical, intake valve guide	5120-00-448-0400	10882953
47	F H D	Puller, mechanical, vibration damper and fan drive oil seal retainer	5120-00-473-7222	5379997
48	H D	Reamer, hand, exhaust valve guide (used with bushing 5110-00-003-1010)	5110-00-708-3696	7083696
49	H D	Reamer, hand, exhaust valve guide (used with bushing 5110-00-003-1010)	5110-00-708-3697	7083697
50	H D	Reamer, hand, intake valve guide (used with bushing 5110-00-003-1010)	5110-00-708-3698	7083698
51	H D	Reamer, hand, intake valve guide (used with bushing 5110-00-003-1010)	5110-00-708-3699	7083699
52	H D	Remover and replacer, piston rings	5120-00-494-1849	7950177
53	H D	Adapter, torque wrench, cylinder hold-down nut		
54	H D	Remover assembly, bearing, output reduction planetary carrier assembly roller bearing	5120-00-776-1861	8351087
55	H D	Replacer guide, intake valve	5120-00-448-0402	10883052
56	H D	Replacer, exhaust valve guide	5120-00-448-7993	10883053
57	H D	Replacer, final drive output shaft seal or O-ring	5120-00-977-5581	8355822
58	H D	Replacer, output reduction planetary carrier pinion gear spindle	5120-00-776-1862	8351083
59	H D	Reset device, power electrical, hour meter	5999-00-294-2332	11668287

TOOLS OR TEST EQUIP REF CODE	MAINTENANCE LEVEL	NOMENCLATURE	NATIONAL STOCK NUMBER	TOOL NUMBER
60	H D	Sling	4910-00-795-7954	10882945
61	H D	Sling, crankshaft and connecting rod	4910-00-795-7955	10882958
62	H D	Sling, lifting, torque converter housing, lockup clutch housing, low-range clutch anchor, brake apply reaction plate, output reduction gear planetary assembly or steering flywheel	4910-00-708-3778	7083778
63	F H D	Sling, lifting, transmission	4910-00-473-7556	7081593
64	H D	Socket wrench, face, output reduction gear assembly output shaft locknut	5120-00-596-4472	8708178
65	F H D	Socket wrench, face, output reduction gear assembly output shaft locknut	5120-00-348-7505	8389992
66	F H D	Socket wrench, injector nozzle and holder	5120-00-875-9556	11610171
67	F H D	Socket, socket wrench injection pump inlet housing filter cap nut	5120-01-034-1698	12254213
68	O F H D	Spacer, fan rotor hub sleeve	4910-00-795-7952	10882651
69	H D	Spreading tool, crankcase (used with puller 5120-00-310-4668 and adapter 5120-00-837-5091)	5120-00-575-7767	8708361
70	H D	Stand, maintenance, engine overhaul	4910-00-856-4137	10912260
71	H D	Remover assembly, dead steer shaft	5120-00-572-8729	8356047
72	H D	Stand, valve removing and installing (used with lifter 5120-00-678-5285)	4910-00-554-1317	8708419
73	D	Stone and holder assembly, cylinder	3640-00-689-3368	5704380
74	H D	Test stand, timing unit, injector pump	4910-00-986-9873	10898928
75	F H D	Tube, attaching injector nozzle	4910-00-795-7953	10882963
76	H D	Tube metallic (for removing output reduction planetary pinion gear spindles or loading pinion gear rollers)	4710-00-098-6734	8389996
77	H D	Wrench assembly, spanner, converter retaining nut	5120-00-977-5582	8355710
78	O F H D	Wrench, box and open-end combination generator mounting nuts	5120-00-789-4881	10935476
79	H D	Wrench, box, cylinder hold-down nut	5120-00-466-5948	11684130-1
79	H D	Wrench, box, cylinder hold-down nut	5120-00-466-5948	11684130-2
80	H D	Wrench, box, cylinder hold-down nut	5120-00-475-5414	8761562
81	O F H D	Wrench, open-end fixed, starter mounting nuts	5120-00-678-5288	8761568
82	H D	Wrench, splined (for measuring bearing pre-load of output shaft)	5120-00-348-7506	8389995
83	O F H D	Wrench, spanner, PTO gearshift retaining nut	5220-01-005-3002	12254282
84	O F H D	Adapter, puller, torsion bar (used with puller 5120-00-557-3615)	5120-01-017-5328	12251805
85	O F H D	Adapter, roadwheel arm assembly (used with puller 5120-00-557-3615)	5120-00-483-6927	7080285
86	F H D	Adapter, socket wrench (for attaching power wrench to fixture 5120-00-605-3926_)	5120-00-632-5797	7026898
87	F H D	Fixture, track connecting (used with adapter 5120-00-632-5797)	5120-00-605-3926	8741739
88	O F H D	Gage, sprocket tooth	5120-00-563-7324	8708391
89	O F H D	Gage, wear, end connector	4910-00-799-8732	10887333
90	O F H D	Handle (used with removers and/or replacers)	5120-00-473-7121	7082881

TOOLS OR TEST EQUIP REF CODE	MAINTENANCE LEVEL	NOMENCLATURE	NATIONAL STOCK NUMBER	TOOL NUMBER
91	OFHD	Handle, remover and replacer (used with adapters and/or replacers)	5120-00-708-3883	7083883
92	OFHD	Lifter, roadwheel arm	5120-00-611-7137	7010355
93	OFHD	Puller and pump track end encounter	5120-01-052-5642	11669394-1
94	OFHD	Puller, mechanical, compensating link bearing	5120-00-614-1454	7027414
95	OFHD	Puller, slide hammer-type (used with adapters and/or replacers)	5120-00557-3615	5573615
96	OFHD	Remover and replacer, roadwheel hub inner bearing cup or compensating idler wheel hub inner bearing cup (used with handle 5120-00-708-3883)	5120-00-473-7373	7082876
97	OFHD	Remover and replacer, roadwheel hub outer bearing cup or track support compensating idler wheel hub outer bearing cup (used with handle 5120-00-708-3883)	5120-00-473-7374	7082834
98	OFHD	Remover and replacer, shock absorber bearings	5120-00-279-8325	11654533
99	OFHD	Remover and replacer, track support roller wheel hub inner bearing cup (used with handle 5120-00-708-3883)	5120-00-473-7372	7082863
100	OFHD	Remover, final drive sprocket hub, split tapered dowel	5120-00-034-8445	8390335
101	OFHD	Replacer, oil seal and retainer, compensating arm	5120-00-492-3672	8708188
102	OFHD	Replacer, roadwheel arm support spindle inner bearing oil seal (used with handle 5120-00-473-7121)	5120-00-473-7494	7078977
103	OFHD	Replacer, roadwheel arm support spindle outer bearing oil seal (used with handle 5120-00-473-7121)	5120-00-473-7471	7078973
104	OFHD	Replacer, track support roller wheel inner bearing oil seal	5120-00-473-7471	7082882
105	OFHD	Sling assembly, final drive hub and sprocket assembly (used with adapter, hoisting 4910-00-766-1961)	4010-00-800-8900	10884613
106	OFHD	Sling assembly, lifting	4910-01-046-8944	11672258
107	OFHD	Wrench, plug, roadwheel arm torsion bar end plug	5120-00-473-7716	7078976
108	OFHD	Wrench, socket, roadwheel bearing adjusting nut or track support roller bearing adjusting nut or compensating idler wheel adjusting nut	5120-00-588-4808	8708459
109	OFHD	Wrench, spanner, roadwheel arm supporting spindle inner and outer bearing and spacer retaining nut	5120-00-473-7761	7078980
110	FHD	Wrench, track tension adjusting	5120-00-293-2106	GGG-W-636D
111	FHD	Cable assembly, special purpose, electrical (for test run outside of vehicle)	2950-00-521-6223	8708290
112	FHD	Cable assembly, special purpose, electrical (for test run outside of vehicle)	2590-00-614-7544	11671581-3
113	FHD	Cable assembly, special purpose, electrical (for test run outside of vehicle)	2590-00-614-7545	11671581-4
114	FHD	Compression tool, valve spring		420-0210
115	FHD	Cutter, engine valve seat		420-0311
116	FHD	Driver, engine cam bearing		420-0264
117	FHD	Driver, engine main bearing	5120-00-125-4402	420-0326
118	FHD	Driver, engine oil seal (used with loader 420-0338)		420-0281
119	FHD	Driver, engine oil seal (used with loader 420-0339)	5120-00-125-4411	420-0250
120	FHD	Driver, engine valve guide		420-0327
121	FHD	Driver, engine valve seat	5120-00-169-3032	420-0270

TOOLS OR TEST EQUIP REF CODE	MAINTENANCE LEVEL	NOMENCLATURE	NATIONAL STOCK NUMBER	TOOL NUMBER
122	F H D	Gage, alignment, chain sprocket	5210-00-613-6779	11671961
123	F H D	Hose assembly, nonmetallic (for test run outside of vehicle)	4720-00-617-6929	11671580-1
124	F H D	Hose assembly, nonmetallic (for test run outside of vehicle)	4720-00-619-9706	11671580-2
125	F H D	Hose assembly, nonmetallic (for test run outside of vehicle)	4720-00-619-9691	11671580-3
126	F H D	Hose assembly, nonmetallic (for test run outside of vehicle)		11671580-4
127	F H D	Hose assembly, nonmetallic (for test run outside of vehicle)	4720-00-619-9681	11671580-5
128	F H D	Loader, oil seal (used with driver 420-0250)		420-0339
129	F H D	Loader, oil seal (used with handle 420-0281)		420-0338
130	F H D	Puller, gear engine ring		420-0275
131	F H D	Puller, mechanical, flywheel and sprocket	5120-00-613-6775	11671732
132	F H D	Remover, engine main bearing		420-0325
133	O F H D	Cable assembly, special purpose, electrical, accessories (for test run outside of vehicle)	6150-00-615-8737	11671581-2
134	O F H D	Cable assembly, special purpose, electrical, generator armature (for test run outside of vehicle)	2920-00-614-7203	10864167
135	O F H D	Cable assembly, special purpose, electrical, starter (for test run outside of vehicle)	6150-00-614-7543	11671581-1
136	O F H D	Cable assembly, special purpose, electrical, ground (for test run outside of vehicle)	3995-00-674-8738	10864170
137	O F H D	Clamp, hose, T-bolt (for test run outside of vehicle)		11669087-6
138	O F H D	Cleaner, oil cleaner	4910-00-494-8257	11641959
139	O F H D	Filter assembly (for test run outside of vehicle)		12390176
140	O F H D	Hose (for test run outside of vehicle)		12390186
141	O F H D	Hose assembly, nonmetallic, engine primer (for test run outside of vehicle)	4720-01-044-8393	11671580-7
142	O F H D	Hose assembly, nonmetallic, main fuel line and fuel injector return (for test run outside of vehicle)	4720-01-041-3375	11671580-6
143	O F H D	Sling, beam-type, powerplant or engine	3940-00-622-7288	11671664
144	F H D	Adapter, bearing, tow or hoist winch pinion bearings (used with remover 5120-00-767-9107)	5120-00-767-9101	10867493
145	F H D	Adapter, mechanical puller, tow or hoist winch drum shaft bearings (used with puller 5120-00-557-3615)	5120-00-767-9103	10867491
146	F H D	Adapter, mechanical, hydraulic cylinder pins (used with puller 5120-00-310-4668)	5120-00-767-9102	10867497
147	O F H D	Automotive maintenance common no. 1 tool kit	4910-00-754-0654	SC 4910-95-A74
148	O F H D	Automatic maintenance common no. 2 tool kit	4910-00-754-0650	SC 4910-95-A72
149	F H D	Bushing, pipe (used with kit assembly 4910-00-572-8612)	4730-00-193-0869	WW-P-471
150	F H D	Gage assembly, testing, hydraulic (for checking main winch pressure, hoist winch pressure, spade system pressure, boom system pressure, or auxiliary hydraulic system pressure)	4910-00-766-3355	10884612
151	O F H D	General mechanic's tool kit	5180-00-177-7033	SC 5180-90-N26

TOOLS OR TEST EQUIP REF CODE	MAINTENANCE LEVEL	NOMENCLATURE	NATIONAL STOCK NUMBER	TOOL NUMBER
152	F H D	Guide, shaft (for installing spade shaft through oil seal, used with handle 4910-00-766-1964)	4910-00-767-0419	10884600
153	D	Guide, spanner wrench (used with wrench 5120-00-767-0419)	5120-00-062-9479	10894347
154	F H D	Handle (for installing spade shaft through oil seal, used with handle 4910-00-767-0419)	4910-00-766-1964	10867499
155	D	Handle (used with remover 5120-00-767-9105 and replacer 5120-00-767-0419)	5120-00-316-9182	7950864
156	F H D	Kit assembly, gage, pressure (for checking PTO lubricating oil pressure, used with bushing 4730-00-193-0869, or for checking PTO clutch operating pressure, used with tee 4730-01-083-4422)	4910-00-572-8612	8356176
157	F H D	Lifting eye, hoist winch	4910-00-766-1963	10884605
158	F H D	Lifting eye, tow winch	4910-00-766-1962	10884606
159	D	Plate, mechanical, hoist winch drum support bearings (used with puller 5120-00-557-3615)	5120-00-767-9104	10867492
160	D	Remover and replacer, hoist winch drum shaft bearing (used with handle 5120-00-316-9182)	5120-00-767-9106	10867490
161	D	Remover and replacer, hoist winch drum support bearing (used with handle 5120-00-316-9182)	5120-00-767-9105	10867494
162	D	Remover and replacer, tow and hoist winch pinion bearing (used with adapter 5120-00-767-9101 and puller set 5120-00-767-9101)	5120-00-767-9107	10867495
163		STE/ICE-R kit	4910-01-222-6589	12259266
164	O F H D	Tee, pipe (used with gage assembly 4910-00-572-8612)	4730-01-083-4422	4MT-4F-4F
165		Tester, airflow	6680-00-436-4212	ES-77-2120
166	O F H D	Tool kit, electrical	5180-00-876-9336	7550526
167	F H D	Wrench assembly, hydraulic cylinder piston retaining nut	5120-00-532-3836	8747917
168	O F H D	Wrench spanner, level winder cylinder adjusting nut	5120-00-767-9099	10884603
169	O F H D	Wrench, open-end, hydraulic line fittings	5120-00-555-0060	8395504
170	D	Wrench, socket, tow winch drum shaft bearing retaining nut (used with guide 5120-00-062-9479)	5120-00-062-9478	10894346
171	O F H D	Wrench, spanner, hydraulic cylinder packing nut	5120-00-777-1388	10884649
172	F H D	Gage, finger sleeve and shaft ring groove width	4910-00-793-503	10882675
173	H D	Pliers, retaining ring	5120-00-792-8624	10935598
174	H D	Sleeve, installing, finger sleeve and shaft seal ring expander	4910-00-870-2122	10899149
175	H D	Wrench, box, bearing housing	5120-00-323-4875	8708189
176	H D	Compressor, spring seat	5120-00-793-5049	10882862
177	H D	Fixture, positioning, plunger	4910-00-793-5039	10882859
178	H D	Gage, weight and spider springs	4910-00-793-5040	10882854
179	H D	Puller, mechanical, weight and spider weight and spider assembly	5120-00-793-5048	10882818
180	H D	Remover and replacer, weight and spider assembly	5120-00-793-5055	10882856
181	H D	Wrench, socket, clutch torque adjusting	5120-00-793-5046	10882889
182	H D	Wrench, spanner, access plug	5120-00-793-5045	10882851
183	H D	Wrench, torque, clutch	5120-00-230-6380	GGG-W-686

TOOLS OR TEST EQUIP REF CODE	MAINTENANCE LEVEL	NOMENCLATURE	NATIONAL STOCK NUMBER	TOOL NUMBER
184	H D	Wrench, turning, shaft	5120-00-793-5057	10882894

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
EXPENDABLE AND DURABLE ITEMS LIST

Overview

This Work Package lists expendable and durable items that you will need to operate and maintain the M88 Medium Recovery Vehicle. This listing is for information 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 for Expendable and Durable Items List**Column 1, Item Number**

This is assigned to the entry in the listing for referencing when required.

Column 2, Level

This identifies the lowest level of maintenance that requires the listed item:

1. C—Operator/Crew
2. O—Unit Maintenance
3. F—Direct Support Maintenance
4. H—General Support Maintenance

Column 3, National Stock Number (NSN)

This is assigned to the item; use it to request or requisition the item.

Column 4, Description

This indicates the Federal item name and, if required, a description to identify the item. The last line for each item indicates the Commercial and Government Entity Code (CAGEC) in parenthesis followed by the part number.

Column 5, Unit of Measure (U/M) or Unit of Issue (U/I)

This is expressed by a two-character alphabetical abbreviation (e.g., EA, IN, PR). If the U/M differs from the U/I as shown in the Army Master Data File (AMDF), requisition the lowest U/I that will satisfy your requirements.

Table 1. Unit of Measure (U/M) or Unit of Issue (U/I)

Abbreviation	Unit	Abbreviation	Unit
BDL	bundle	LG	length
CN	can	PT	pint
GL	gallon	QT	quart
KT	kit	RO	roll

Table 2. Expendable and Durable Items List

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) ITEM NAME, DESCRIPTION, CAGE, PART NUMBER	(5) U/M
1		8040-00-281-1972	Adhesive - rubber ()-	QT
2		8040-00-843-3461	Adhesive - rubber ()-	QT
3		8040-00-285-1104	Adhesive - rubber-base, general purpose, type II ()- MMM-A-1617	QT
4		8040-00-833-9563	Adhesive, sealant - silicone, RTV, one component, white, type I ()- MIL-A-46106	QT
5		8040-01-009-1562	Adhesive, sealant - silicone, RTV, one component, white, type II ()- MIL-A-46106	QT
6		8040-01-221-3841	Cement - gasket ()-	PT
7		5350-00-221-0872	Cloth - abrasive, crocus ()- P-C-458	
8		8010-00-148-7042	Coating - epoxy, VOC-compliant, acid-resistant, black, class 2, type III ()- MIL-C-22750	QT
9		7930-01-328-2030	Compound, cleaning - solvent-detergent, PF degreaser (0JVH6)-	CN
		7920-01-328-4058	Compound, cleaning - solvent-detergent, PF degreaser (0JVH6)-	DM
10		8010-00-111-7930	Enamel, alkyd - camouflage, forest green, type II ()- MIL-E-52798	QT
11		8010-00-286-7725	Enamel, alkyd - gloss, low VOC content, white, synthetic ()- TT-E-489	QT
12		8010-00-664-7653	Enamel, alkyd - semi-gloss, low VOC, white ()- TT-E-529D	QT
13		9150-01-197-7689	Grease - automotive and artillery (GAA) ()- MIL-G-10924	LB
14		9150-00-269-8255	Grease - pneumatic ()- MIL-G-4343	CN
15			Insulation tape, electrical - pressure-sensitive, adhesive, plastic ()- MIL-I-7798	RO
16		8010-00-292-3029	Lacquer, spraying - clear and pigmented for interior use ()- TT-L-58	PT
17		9150-00-234-5197	Lubricating oil - chain, wire rope, exposed gear ()- VV-L-751	CN
18		9150-01-048-4593	Lubricating oil - gear ()- MIL-L-2105	GL
19		9150-00-257-5440	Lubricating oil - gear ()- MIL-L-10324	CN
20		9150-00-261-8146	Lubricating oil - general purpose, 1 oz. bottle (81348)- VV-L-800	OZ
21		9150-00-491-7197	Lubricating oil - internal combustion engine, arctic ()- MIL-L-46167	QT
22		9150-01-152-4117	Lubricating oil - internal combustion engine, combat/tactical service ()- MIL-L-2104	QT

Table 2. Expendable and Durable Items List--Continued

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) ITEM NAME, DESCRIPTION, CAGE, PART NUMBER	(5) U/M
23			Paint, flat - type I, TT-P-948, black (37038)- FED-STD-595	QT
24			Paint, flat, - type I, TT-P-948, white (37875)- FED-STD-595	QT
25		2910-00-801-1152	Parts kit - outer filter elements ()-	KT
26		8010-00-292-3048	Primer coating and surfacer - synthetic, tints, and white ()- TT-P-659	QT
27			Rags, wiping cotton - grade B, 5-lb ()- DD-R-30	BDL
28		9390-00-180-7289	Rod - ()-	LG
29		8030-00-543-4384	Sealing compound - non-curing, polybutane ()- MIL-S-12158	QT
30		8030-00-275-8111	Sealing compound - non-curing, polybutene, type I ()- MIL-S-12158	PT
31		8030-00-965-2437	Sealing compound, single-component - non-curing, polysulfide base, type I ()- MIL-S-11030	QT
32		6850-00-295-7685	Silicone compound - NATO code number S-736 ()- MIL-S-8660	CN
33		8030-00-964-5968	Tape, antiseize - polytetrafluoroethylene, 18 yard each (81349)- MIL-T-27730	YD
34			Tape, teflon - thread sealant, 1/2-inch- (12.7-millimeter-) wide (drawing 10379740)-	RO
35		8010-00-165-4432	Varnish, spar - water-resisting ()- TT-V-121	PT
36		5610-00-141-7838	Walkway compound and walkway matting - nonslip, forest green, type II ()- MIL-W-5044	QT
37		6145-00-705-6674	Wire - electrical ()- M13486/1-14	RO
38			Wire - electrical ()- M13486/1-5	RO
39		5510-00-274-5381	Wood - hardwood, board foot (81348)- MM-L-736	BF

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
TOOL IDENTIFICATION LIST

Overview

This Work Package lists tools needed to maintain the M88A1 Recovery Vehicle.

Explanation of Columns for Tool ID List**Column 1, Item Number**

This number is assigned to the entry in the listing and is referenced in the initial setup of procedures to identify the tool.

Column 2, Item Name

This lists the name and the dimensions of each item.

Column 3, National Stock Number (NSN)

This indicates the NSN assigned to the tool; use it to request or requisition the tool.

Column 4, Part Number

This indicates the manufacturer's part number.

Column 5, Reference

This references the supply catalog or Repair Parts and Special Tools List (RPSTL) that provides a description of the tool.

(1)	(2)	(3)	(4)	(5)
ITEM NO	ITEM NAME	NATIONAL STOCK NUMBER	PART NUMBER	REFERENCE
1	Adapter, puller, torsion bar (used with puller 5120-00-557-3615)	5120-01-017-5328	12251805	TM 9-2350-256-24P-1
2	Awl, saddler's sewing	5120-00-221-1541		SC 4910-95-CL-A72
3	Bolt, machine (jackscrew)	5305-00-269-2807		
4	Bolt, machine (jackscrew)	5306-00-270-8239	FF-S-85	
5	Cable assembly, special purpose, electrical, accessories (for test run outside of vehicle)	6150-00-615-8737	11671581-2	TM 9-2350-256-24P-1
6	Cable assembly, special purpose, electrical, generator armature (for test run outside of vehicle)	2920-00-614-7203	10864167	TM 9-2350-256-24P-1
7	Cable assembly, special purpose, electrical, ground (for test run outside of vehicle)	5995-00-674-8738	10864170	TM 9-2350-256-24P-1
8	Cable assembly, special purpose, electrical, starter (for test run outside of vehicle)	6150-00-614-7543	11671581-1	TM 9-2350-256-24P-1
9	Chain assembly, single leg	4010-00-171-4426		CTA 50-970
10	Clamp, T-bolt, hose (for test run outside of vehicle)		11669087-6	TM 9-2350-256-24P-1
11	Cleaning tool, oil cooler	4910-00-494-8257	11641959	TM 9-2350-256-24P-1
12	Compressor assembly, brake-apply assembly, torque converter lockup clutch backing plate or steering tie shaft drive gear	5120-00-330-4274	8708939	TM 9-2520-215-34P
13	Cutter, carbon nozzle, injector nozzle seat	4910-00-795-7958	10882949	TM 9-2815-220-34P
14	File, thread restorer (thread chaser)	5110-00-373-1691		SC 4910-95-CL-A72
15	Filter assembly (for test run outside of vehicle)		12390176	TM 9-2350-256-24P-1
16	Gage and compressor, piston ring	4910-00-795-7956	10882888	

(1)	(2)	(3)	(4)	(5)
ITEM NO	ITEM NAME	NATIONAL STOCK NUMBER	PART NUMBER	REFERENCE
17	Gage, wear, end connector	4910-00-799-8732	10887333	TM 9-2350-256-24P-1
18	Hammer, hand (mallet)	5120-00-902-0089		SC 4910-95-CL-A74
19	Handle (used with removers and/or replacers)	5120-00-473-7121	7082881	TM 9-2350-256-24P-1
20	Handle, remover and replacer (used with adapters and/or replacers)	5120-00-708-3883	7083883	TM 9-2350-256-24P-1
21	Hose (for test run outside of vehicle)		12390186	TM 9-2350-256-24P-1
22	Hose assembly, nonmetallic (for emergency boom operation)	4720-00-619-9681	11671580-5	TM 9-2350-256-24P-1
23	Hose assembly, nonmetallic (for emergency boom operation)	4720-00-619-9689	11671580-4	TM 9-2350-256-24P-1
24	Hose assembly, nonmetallic (for emergency boom operation)	4720-00-619-9691	11671580-3	TM 9-2350-256-24P-1
25	Hose assembly, nonmetallic, engine primer (for test run outside of vehicle)	4720-01-044-8393	11671580-7	TM 9-2350-256-24P-1
26	Hose assembly, nonmetallic, main fuel line and fuel injector return (for test run outside of vehicle)	4720-01-041-3375	11671580-6	TM 9-2350-256-24P-1
27	Insertor, screw thread (7/16-20)	5120-00-797-2407	MIL-T-21309	TM 9-2350-256-24P-1
28	Jackscrews	5306-01-331-6273		
29	Key, socket head screw, 3/8 inches (in.) (set) hex, 4-1/4 in. (108.0 millimeters [mm]) long	5120-00-198-5390	41-W-2456	SC 4910-95-CL-A74
30	Key, socket head screw, 5/8 in., hex, 6-1/4 in. (158.8 mm) long	5120-00-224-2510	GGG-N-652	SC 4910-95-CL-A74
31	Kit assembly, gage, pressure	4910-00-572-8612	8356176	
32	Lifter, roadwheel arm	5120-00-611-7137	7010355	TM 9-2350-256-24P-1
33	Multiplier, torque wrench	5120-00-574-9318	TD-1000	SC 4910-95-CL-A72
34	Parts kit, steering clutch housing output shaft	2590-00-330-8642	8708831	TM 9-2350-256-24P-1
35	Pliers set, retaining	5120-00-789-0492		SC 4910-95-CL-A74
36	Pliers, retaining ring	5120-00-595-9551		SC 4910-95-CL-A74
37	Pliers, retaining ring	5120-00-288-9717		SC 4910-95-CL-A74
38	Pliers, retaining ring, external	5120-00-088-9393		SC 4910-95-CL-A74
39	Puller and pump track end connector	5120-01-052-5642		
40	Puller kit, mechanical	5120-00-313-9496		SC 4910-95-CL-A72
41	Puller, mechanical, compensating link bearing	5120-00-614-1454	7027414	
42	Puller, slide hammer-type (used with adapters and/or replacers)	5120-00-557-3615	5573615	TM 9-2350-256-24P-1
43	Punches, drive	5120-00-242-3435	GG-P-831	CTA 50-970
44	Remover and replacer, roadwheel hub inner bearing cup or compensating idler wheel hub inner bearing cup (used with handle 5120-00-708-3883)	5120-00-473-7373	7092876	TM 9-2350-256-24P-1
45	Remover and replacer, roadwheel hub outer bearing cup or track support compensating idler wheel hub outer bearing cup (used with handle 5120-00-708-3883)	5120-00-473-7374	7082834	TM 9-2350-256-24P-1
46	Replacer, roadwheel arm support spindle outer bearing oil seal (used with handle 5120-00-473-7121)	5120-00-473-7475	7078973	TM 9-2350-256-24P-1
47	Replacer, track support roller wheel inner bearing oil seal	5120-00-473-7471	7082882	TM 9-2350-256-24P-1
48	Riveter, blind	5120-00-017-2849		SC 4933-95-CL-A11
49	Scale, indicating	6670-00-254-4634		SC 4910-95-CL-A72
50	Screws, cap (jackscrews)	5305-00-720-7994		

(1)	(2)	(3)	(4)	(5)
ITEM NO	ITEM NAME	NATIONAL STOCK NUMBER	PART NUMBER	REFERENCE
51	Sling assembly, final drive hub and sprocket assembly (used with adapter, hoisting 4910-00-766-1961)	4010-00-800-8900	10884613	TM 9-2350-256-24P-1
52	Sling assembly, lifting	4910-01-046-8944	11672258	TM 9-2350-256-24P-1
53	Sling, beam-type, powerplant or engine	3940-00-622-7288	11671664	TM 9-2350-256-24P-1
54	Socket set	5120-00-204-1999	GGG-W-641	SC 4910-95-CL-A72
55	Socket set	5120-00-322-6231		SC 4910-95-CL-A72
56	Soldering gun	3439-00-732-7798		SC 4910-95-CL-A12
57	STE/ICE-R kit	4910-01-222-6589	12259266	TM 9-4910-571-12&P
58	Tester, airflow	6680-00-436-4217	ES-77-2120	TM 3-6680-316-10
59	Tool kit, general mechanic's	5180-00-177-7033		SC 5180-90-N26
60	Vise, soft-jaw	5120-00-221-1506		SC 4910-95-CL-A74
61	Wrench, box and open-end combination generator mounting nuts	5120-00-789-4881	10935476	TM 9-2815-220-34P
62	Wrench, open-end, adjustable	5120-00-277-6470		
63	Wrench, socket, roadwheel bearing adjusting nut or track support roller bearing adjusting nut or compensating idler wheel adjusting nut	5120-00-588-4808	8708459	TM 9-2350-256-24P-1
64	Wrench, spanner, hydraulic cylinder packing nut	5120-00-777-1388	10884649	TM 9-2350-256-24P-1
65	Wrench, spanner, level winder cylinder adjusting nut	5120-00-767-9099	10884603	TM 9-2350-256-24P-1
66	Wrench, spanner, roadwheel arm supporting spindle inner and outer bearing and spacer retaining nut	5120-00-473-7761	7078980	TM 9-2350-256-24P-1
67	Wrench, torque, 0-175 pound-feet (lb-ft) (0-237 Newton-meters [N•m])	5120-00-640-6364		SC 4910-95-CL-A72
68	Wrench, torque, 0-200 pound-inches (0-22.6 N•m)	5120-00-853-4538		SC 4910-95-CL-A72
69	Wrench, torque, 0-600 lb-ft (0-813 N•m)	5120-00-221-7983		SC 4910-95-CL-A74

END OF WORK PACKAGE

UNIT MAINTENANCE
RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88A1
NSN 2350-00-122-6826, EIC AQA
MANDATORY REPLACEMENT PARTS LIST

Explanation of Columns**Column (1)—Item Number**

This number is assigned to the entry in the listing for cross-referencing to the part number.

Column (2)—Part Number

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, specification, standards, and inspection requirements to identify an item of range of items.

Column (3)—Nomenclature

This column contains the description that appears on the first page of the task under the subheading Materials.

ITEM NO.	PART NUMBER/ CAGEC	NSN	NOMENCLATURE	QTY
1	019-00001-7 (59556)	5310-00-261-7340	Washer, flat	2
2	03106 (14153)	5330-01-435-4551	Gasket	2
3	0612596-00 (83299)	4730-00-908-3193	Clamp, hose	29
4	10060S (7Z588)	4730-00-908-6293	Clamp, hose	1
5	103374 (24617)	5315-00-816-1794	Pin, cotter	5
6	106274 (15434)	5330-00-285-8278	Seal	1
7	10862060 (19207)	5315-00-824-0512	Pin, straight	2
8	10862061 (19207)	5365-00-678-6185	Bushing, rubber	1
9	10862062 (19207)	5315-00-176-6802	Pin, grooved	1
10	10862098 (19207)	3130-01-079-3172	Bearing unit	1
11	10862143 (19207)	5306-01-062-2176	Bolt	3
12	10862177 (19207)	5310-00-619-9735	Lockwasher	2
13	10862178 (19207)	5315-01-009-1869	Pin	1
14	10862187 (19207)	5310-00-619-9734	Washer	1
15	10862216 (19207)	5331-00-678-4739	Packing, preformed	1
16	10862830 (19207)	5330-00-678-4256	Gasket	2
17	10862902 (19207)	5305-00-682-5629	Thumbscrew	3
18	10863824 (19207)	5306-00-678-4262	Screw	6
19	10866527 (19207)	5315-00-617-7098	Pin, straight	4
20	10866621 (18876)	5325-00-682-2042	Grommet	1
21	10866626 (19207)	5330-00-613-6828	Gasket	2
22	10866873 (19207)	5330-00-179-9186	Gasket	3
23	10866938 (19207)	6250-01-319-6899	Collet	1
24	10866939 (19207)	4730-00-722-3271	Nut	1
25	10866945 (18876)	5325-00-682-1742	Grommet	3
26	10867133 (19207)	5306-00-690-2706	Screw	4
27	10867165 (19207)	5306-00-679-1730	Screw	1
28	10867195 (19207)	5330-00-690-2826	Seal	1
29	10867389 (19207)	5330-00-706-2229	Gasket	1
30	10867405 (19207)	5305-00-144-1475	Screw	2
31	10867440 (19207)	5307-00-196-2732	Stud	51

ITEM NO.	PART NUMBER/ CAGEC	NSN	NOMENCLATURE	QTY
32	10870150 (19207)	5330-00-678-4168	Gasket	1
33	10883119 (19207)	5305-00-740-9507	Screw	1
34	10884694 (19207)	9390-00-788-0015	Boot, rubber	3
35	10884721 (19207)	5315-01-297-8336	Pin, grooved	1
36	10884725 (19207)	9390-00-893-1906	Seal kit	KIT
37	10884726 (19207)	9390-00-893-1907	Seal kit	KIT
38	10884727 (19207)	9390-00-893-1908	Seal kit	KIT
39	10884893 (19207)	5315-01-011-0186	Pin, headed	1
40	10894116 (19207)	5330-00-883-7817	Gasket	1
41	10894364 (19207)	5305-01-046-5326	Screw	12
42	10894371 (19207)	5330-00-887-8936	Gasket	2
43	10894378 (19207)	5330-00-865-6021	Strip, rubber	1
44	10894379 (19207)	5330-00-865-6144	Strip, rubber	1
45	10894380 (19207)	5330-00-865-6143	Strip, rubber	3
46	10894381 (19207)	5330-00-883-7820	Strip, rubber	2
47	10894382 (19207)	5330-00-887-5773	Seal, rubber	1
48	10894394 (19207)	5315-00-619-9714	Pin, shoulder	4
49	10894397 (19207)	3120-00-629-2258	Bushing	4
50	10894407 (19207)	5330-00-887-8923	Seal	2
51	10894489 (19207)	5330-00-827-8493	Gasket	1
52	10894496 (19207)	5330-01-033-1545	Gasket	2
53	10894804 (19207)	5315-01-009-6803	Pin	1
54	10894820 (19207)	5340-01-301-0248	Washer, flat	2
55	10894834-1 (19207)	5360-00-999-5125	Spring	1
56	10894834-2 (19207)	5360-00-999-5126	Spring	2
57	10894860 (19207)	5315-00-089-8238	Pin, straight	1
58	10897166 (19207)	5330-01-060-2536	Gasket	1
59	10910174-22 (19200)	5310-00-728-9957	Washer, flat	4
60	10910174-9 (19200)	5310-00-809-9514	Washer, flat	146
61	10929861 (19207)	5315-00-539-9174	Pin, headed	5
62	10934437 (19207)	3120-00-168-2451	Bushing	1
63	10935537 (19207)	5330-00-902-3189	Seal, oil	2
64	10935621 (19207)	5330-00-410-9803	Gasket	2
65	10940451 (19207)	5310-00-914-7310	Washer, flat	1
66	110-5-16 (25184)	5330-00-530-2772	Packing	3
67	112726 (24617)	5315-00-839-2325	Pin, cotter	1
68	11-4785 (24617)	5315-00-010-3496	Pin, straight	4
69	11602061 (19207)	2940-00-808-2421	Filter element, center (final)	1
70	11602062 (19207)		Filter element, outer	2
71	11605388 (19207)	5330-00-143-7002	Gasket	10
72	11610232 (19207)	5331-01-102-4685	Gasket	1
73	11639519-2 (19207)	5331-00-462-0907	Gasket	1
74	11641867 (19207)		Spring, helical compression	1
75	11655770 (19207)	5310-01-037-0676	Washer, flat	2
76	11655771 (19207)	5310-01-026-0392	Washer, key	2
77	11668688 (19207)	5306-01-013-7020	Screw	2
78	11669087-6 (19207)	4730-01-130-8070	Clamp	16
79	11671216-5 (19207)	5310-01-376-9656	Washer	1
80	11671216-6 (19207)	5305-01-377-0950	Wingbolt	1

ITEM NO.	PART NUMBER/ CAGEC	NSN	NOMENCLATURE	QTY
81	11671216-7 (19207)	5310-01-378-8714	Washer	1
82	11671277 (19207)	5330-00-625-3425	Gasket	1
83	11671309 (19207)	5360-01-159-4854	Spring	4
84	11671426 (19207)	5306-01-030-2901	Bolt	1
85	11671432 (19207)	5306-00-615-8971	U-bolt	2
86	11671725 (19207)	5310-00-614-9129	Washer, flat	1
87	11672014 (19207)	5330-01-032-7008	Gasket	4
88	11672027 (19207)	3130-01-038-8845	Bearing unit	2
89	11672031-1 (19207)	3130-01-024-9862	Bearing housing	2
90	11672031-2 (19207)	3130-01-024-9861	Bearing unit	5
91	11672033 (19207)	3120-01-026-9335	Bearing	1
92	116720-74 (9Y580)	5962-01-339-5898	Pad	4
93	116720-75 (9Y580)	5962-01-339-5897	Pad	2
94	11672102 (19207)	5330-01-037-0658	Packing	2
95	11672203 (19207)	5315-01-061-5679	Pin, grooved	6
96	11672220 (19207)	5330-01-060-0983	Gasket	1
97	11672220-1 (19207)	5330-01-178-5469	Gasket	1
98	11672228 (19207)	5325-01-047-9387	Grommet	1
99	11672263 (19207)	5306-01-080-5656	Bolt	2
100	11672360 (19207)	5310-01-123-6782	Nut, dowel	20
101	11676243 (19207)	5305-01-016-3721	Screw	12
102	11684034 (19207)	5310-00-477-0789	Washer	2
103	11684058 (19207)	5330-00-486-0320	Packing	2
104	11684066 (19207)	5360-00-510-4109	Spring	2
105	11684095 (19207)	5330-00-486-0346	Gasket	1
106	122-0326 (44940)	2910-00-125-5601	Filter, fuel	1
107	1-220889 (60198)	5330-01-166-0597	Gasket	1
108	12Z48PC611 (10001)	5315-00-839-2325	Pin, cotter	21
109	12254235 (19207)	5330-01-037-0800	Gasket	2
110	12254261 (19207)	5360-01-052-0941	Spring	1
111	12274570 (19207)	5310-01-064-3910	Nut, self-locking	146
112	12322550 (19207)	5306-01-178-5443	Eyebolt	1
113	12322582 (19207)	5330-01-255-0903	Gasket	1
114	12322674 (19207)		Filter element	1
115	12322675 (19207)		Gasket	2
116	12322676 (19207)	5330-01-372-0363	Packing	1
117	12354303 (19207)	5330-01-207-6449	Gasket	2
118	12360844 (19207)	5330-01-281-6515	Gasket	2
119	12390175 (19207)	5315-01-443-8063	Pin, straight	2
120	12-50641 (07666)	5310-01-166-0601	Lockwasher	3
121	125774 (21450)	5310-01-215-1383	Lockwasher	4
122	12Z12002-87 (10001)	5325-00-276-6051	Grommet	4
123	132634 (77445)	5310-00-582-5965	Lockwasher	5
124	132848 (89646)	5305-00-068-0500	Screw	1
125	141253 (24617)	5315-00-014-1253	Pin, straight	1
126	141291 (24617)	5315-00-014-1291	Pin, straight	1
127	14-50211 (07666)	5310-01-166-6392	Nut	3
128	171801 (0AHP5)	5310-00-540-4976	Washer, flat	3
129	1736195-01 (90005)	2940-00-933-4433	Filter element	4

ITEM NO.	PART NUMBER/ CAGEC	NSN	NOMENCLATURE	QTY
130	179397 (24617)	5305-00-559-1022	Bolt	1
131	1851539 (80064)	4730-00-670-6031	Nut, seal	5
132	192417 (24617)	5305-00-019-2417	Screw	21
133	193477 (62983)	5331-00-248-3847	Packing	1
134	201137-A (28265)	5305-00-068-0504	Screw	14
135	23E06 (12603)	5310-00-637-9541	Lockwasher	18
136	256W116 (80201)	5330-00-286-6860	Seal	1
137	27W2531A (62265)	1005-00-514-0856	Button	4
138	29620-3 (64294)	5315-00-616-5524	Key	2
139	310-9001-020 (95105)	5310-00-167-0818	Washer, flat	5
140	325960 (65282)	5310-00-353-2436	Washer, flat	8
141	343XW420 (80201)	5330-00-350-9945	Seal	6
142	350-TSE01-38 (95208)	4730-00-678-6165	Locknut	1
143	350-TSE01-50 (95208)	4730-00-670-6032	Locknut	8
144	400140-400 (08179)	5310-01-060-7264	Lockwasher	2
145	418179-3 (96214)	5305-00-068-0504	Screw	7
146	425567 (24617)	5305-00-042-5567	Screw	3
147	425580 (24617)	5305-00-042-5580	Screw	12
148	425828 (21450)	5306-00-042-5828	Bolt, assembled washer	8
149	425859 (24617)	5306-00-042-5859	Screw	7
150	454056 (21450)	5305-00-410-4135	Screw	1
151	48488 (62983)	5310-00-167-0820	Washer, flat	1
152	50-2245 (47258)	6515-00-075-6637	Washer, flat	4
153	503345 (40152)	5330-00-425-2474	Nut	4
154	505016 (21450)	5315-00-050-5016	Pin, straight	3
155	505048 (21450)	5315-00-050-5048	Pin, straight	2
156	50Z15-17-2 (80070)	5310-00-626-1937	Washer, flat	4
157	51068 (79396)	2940-00-586-4792	Filter, oil	1
158	5130804 (19207)	5360-00-693-3032	Spring	1
159	5140855 (19207)	5315-00-514-0855	Pin	2
160	5146158 (19207)	5310-00-514-6158	Nut	14
161	5146162 (19207)	5310-00-514-6162	Washer, tab	8
162	5165013 (19207)	5310-01-007-1566	Washer, flat	16
163	5167571 (19207)	5315-00-158-4463	Pin, straight	2
164	5213744 (19207)	5315-00-350-4326	Pin, locking	5
165	523557 (02978)	5310-00-679-5685	Washer	12
166	5246247 (19204)	5360-00-524-6247	Spring	2
167	526-0066 (44940)	5310-00-358-3797	Washer, flat	1
168	526-0068 (44940)	5310-01-009-6613	Washer, flat	1
169	5277767 (19207)	5360-00-527-7767	Spring	4
170	5294507 (19207)	5310-00-350-2655	Spacer	1
171	5301638 (19207)	5310-01-048-3272	Washer, flat	30
172	5325632 (19207)	5306-00-682-5628	Bolt	2
173	5380812-1 (19207)	5310-01-115-1854	Nut, adjusting	8
174	5380829 (19207)	5310-00-538-0829	Washer, flat	8
175	5380854 (19207)	5306-00-538-0854	Bolt	42
176	5380856 (19207)	5306-00-617-7117	Bolt	80
177	5380884 (19207)	5365-00-538-0884	Gasket	12
178	5381399 (19207)	5315-00-538-1399	Pin	2

ITEM NO.	PART NUMBER/ CAGEC	NSN	NOMENCLATURE	QTY
179	5381401 (19204)	5360-00-538-1401	Spring	2
180	5381404 (19207)	5315-00-538-1404	Pin	2
181	5381405 (19204)	5315-00-272-6613	Pin	2
182	5381406 (19207)	5315-00-538-1406	Pin	2
183	5381407 (19207)	5360-00-538-1407	Spring	5
184	5383509 (19207)	3040-01-309-1621	Axle	4
185	5704486 (19207)	4330-00-397-3404	Filters, oil, w/packing and gasket	KIT
186	5704487 (19207)	4330-00-410-1964	Filter, fuel, kit	KIT
187	58313-40189-3 (97384)	5315-00-881-8553	Key	2
188	585094 (63728)	5330-00-679-4961	Gasket	2
189	6209959 (19204)	5360-00-620-9959	Spring	4
190	6215 (81646)	4730-00-908-6293	Clamp	4
191	6295364 (19207)	5330-00-629-5364	Gasket	7
192	6295371 (19207)	5330-00-629-5371	Gasket	12
193	6295380 (19207)	5310-00-275-9203	Nut, bearing	14
194	6295381 (19207)	5310-00-629-5381	Washer, key	12
195	63X87 (73680)	5330-00-154-7528	Packing, preformed	4
196	6505-2-275 (07861)	4730-00-820-3079	Clamp, hose	1
197	7004440 (19207)	5306-00-617-7109	Eyebolt	2
198	7013502 (19207)	3110-00-701-3502	Bearing assembly	2
199	7014010 (19207)	5330-00-701-4010	Gasket	12
200	7014501 (19207)	5360-00-701-4501	Spring	1
201	7028548 (19207)	5360-00-702-8548	Spring	1
202	7041750 (19207)	5342-00-704-1750	Spring, latch	1
203	7041825 (19207)	5305-00-704-1825	Screw	5
204	7044253 (19207)	5306-00-704-4253	Spring	1
205	7051867 (19207)	5305-00-705-1867	Screw	12
206	7053607 (19207)	5315-00-617-7112	Pin, straight	2
207	7061871 (19207)	5310-00-050-3520	Nut	1
208	7069543 (19207)	5306-00-706-9543	Bolt	4
209	7084278 (19207)	5330-00-678-7101	Gasket	1
210	7094997 (19207)	5315-00-176-6500	Pin, straight	2
211	7115804 (19204)	5306-00-711-5804	Eyebolt	2
212	7320641 (19207)	5305-00-737-5694	Screw	36
213	7320642 (19207)	5340-00-732-0642	Ring, retaining	32
214	7320658 (19207)	5331-00-297-7106	Packing, preformed	2
215	7320687 (19207)	5305-01-048-6596	Screw	4
216	7320711 (19207)	5340-00-693-4175	Spring, retaining	6
217	7329017 (19207)	5315-01-296-8813	Pin	2
218	7329019 (19207)	5325-00-721-7107	Grommet	1
219	7329033 (19207)	5360-00-690-2831	Spring	1
220	7354488 (19207)	5315-00-044-1892	Pin, straight	6
221	7354489 (19207)	5315-00-176-6742	Pin, straight	17
222	7355018 (19207)	5330-00-298-3952	Seal	1
223	7358624 (19207)	5975-00-588-0387	Bond nut	1
224	7358625 (19207)	5310-00-197-4508	Lockwasher	1
225	7358626 (19207)	5330-00-297-6329	Packing, preformed	14
226	7359944 (19207)	5340-00-920-0718	Pin, cotter	12

ITEM NO.	PART NUMBER/ CAGEC	NSN	NOMENCLATURE	QTY
227	7360492 (19207)	5365-00-625-3340	Spacer, sleeve	1
228	7360494 (19207)	2510-00-692-9216	Mount	1
229	7364327 (19207)	5360-00-736-4327	Spring	3
230	7364441 (19207)	5310-01-023-4005	Washer	2
231	7379067 (19207)	5360-00-737-9067	Spring	8
232	7379892 (19207)	2530-00-737-9892	Bearing unit	2
233	7385092 (19207)	5342-00-738-5092	Boot, rubber	1
234	7388352 (19207)	5330-00-641-4336	Gasket	4
235	7388835 (19207)	5330-00-740-5469	Seal	11
236	7398146 (19207)	3130-00-167-5832	Bearing unit	1
237	7398878 (19207)	5330-00-739-8878	Gasket	2
238	7398879 (19207)	5330-00-739-8879	Gasket	2
239	7398887 (19207)	5330-00-739-8887	Gasket	1
240	7398888 (19207)	5330-00-739-8888	Gasket	1
241	7400356 (19207)	5330-00-740-0356	Seal	10
242	7403580 (19207)	5365-00-740-3580	Gasket	4
243	7404658 (19207)	5360-00-740-4658	Spring	1
244	7404659 (19207)	5360-00-740-4659	Spring	1
245	7404662 (19207)	5315-00-476-9331	Pin	2
246	7404663 (19207)	5315-00-740-4663	Pin	1
247	7404666 (19207)	3040-00-476-9332	Shaft	2
248	7404670 (19207)	5325-00-740-4670	Ring, retaining	4
249	7404671 (19207)	5310-00-612-9969	Lockwasher	4
250	7404672 (19207)	5310-00-740-4672	Lockwasher	2
251	7404673 (19207)	5360-00-740-4673	Spring	2
252	7404677 (19207)	5360-00-740-4677	Spring	1
253	7404680 (19207)	5360-00-740-4680	Spring	2
254	7407083 (19207)	5360-00-740-7083	Spring	1
255	7410218 (19207)	5310-00-407-9566	Lockwasher	2
256	7414584 (19207)	5306-00-741-4584	Screw	70
257	7415354 (19207)	5330-00-741-5354	Gasket	1
258	7416636 (19207)	5306-00-400-7637	Bolt	2
259	7520804 (19207)	2910-00-752-0804	Filter	1
260	7525474 (19207)	5315-00-752-5474	Pin, straight	4
261	7525938 (19207)	5305-00-752-5938	Screw	1
262	7699609 (19207)	5315-00-769-9609	Pin, straight	12
263	7700859 (19207)	5310-00-050-3345	Nut	6
264	7708793 (19207)	5331-00-291-1989	Packing, preformed	1
265	7709148 (1V513)	5330-00-699-7996	Packing, preformed	4
266	7713298 (19207)	5360-00-771-3298	Spring	5
267	7713891 (19207)	5315-00-771-3891	Pin, straight	4
268	7714911 (19207)	5310-00-771-4911	Nut, slotted	1
269	7720511 (19207)	5310-00-695-6235	Nut	1
270	7726600 (19207)	5330-00-772-6600	Gasket	2
271	7744570 (19207)	5310-00-774-4570	Washer	2
272	7748742 (19207)	5310-00-079-1979	Washer, flat	4
273	7760510 (19207)	5315-00-776-0510	Pin, straight	1
274	7767318 (19207)	5310-00-776-7318	Washer, flat	20
275	7767728 (19207)	5310-00-776-7728	Nut	2

ITEM NO.	PART NUMBER/ CAGEC	NSN	NOMENCLATURE	QTY
276	7962254 (19207)	5330-00-796-2254	Rubber seal	4
277	7962267 (73331)	5330-00-543-7160	Gasket	1
278	7962268 (19207)	5331-00-159-3469	Gasket	1
279	7972328 (19207)	5305-00-854-2185	Screw	4
280	7972340 (19207)	5330-00-047-4101	Gasket	1
281	7972345 (19207)	5330-00-047-4098	Gasket	2
282	7972346 (19207)	5330-00-047-4099	Gasket	2
283	7972349 (19204)	5330-00-047-4102	Gasket	1
284	7972350 (19207)	5330-00-047-4104	Gasket	1
285	7972888 (19207)	6650-00-248-0647	Lockwasher	8
286	7985633 (19207)	5315-00-798-5633	Pin, straight	1
287	7991273 (19207)	5330-00-799-1273	Gasket	1
288	7997722 (19207)	5306-00-799-7722	Bolt	44
289	7L2FF (96881)	3120-00-756-9093	Bearing	2
290	801-0053 (44940)	5305-01-110-7859	Screw	1
291	801-0074 (44940)	5305-01-009-6951	Screw	1
292	8143667 (18876)	5310-00-331-3266	Washer, flat	V
293	8338567 (19207)	5310-00-833-8567	Washer, slotted	2
294	8346363 (19207)	5360-00-201-1651	Spring	1
295	8346490 (19207)	3120-00-039-9107	Bearing	1
296	8365037 (19207)	5315-00-615-8755	Pin	3
297	8371846 (19207)	5330-00-608-1287	Seal	2
298	8373762 (19207)	5305-00-563-4493	Setscrew	1
299	8381708 (19207)	3120-00-661-4123	Gasket	2
300	8387092 (19207)	5330-00-291-8991	Gasket	8
301	8387093 (19207)	5330-00-291-7465	Gasket	8
302	8391685 (19207)	5310-00-661-4411	Washer, flat	1
303	8392529 (19207)	5360-00-133-9733	Spring	1
304	8395411-1 (19207)	4730-01-029-4573	Bushing	1
305	84001-1 (29201)	5310-00-081-4219	Washer, flat	30
306	8671869 (19207)	5315-00-699-7760	Pin, straight	10
307	8674484 (19207)	5365-00-937-1518	Washer, flat	V
308	8676184 (19207)	5305-01-137-7046	Bolt	10
309	8679576 (19207)	5310-00-333-7348	Washer, flat	12
310	8682503 (79788)	5330-00-678-4695	Gasket	2
311	8682679 (19207)	5330-00-678-4669	Gasket	8
312	8682680 (19207)	5330-00-678-5388	Gasket	1
313	8682770 (19207)	5330-01-347-8161	Gasket	2
314	8686310 (19207)	3120-00-314-0573	Washer, bearing	2
315	8693880 (19207)	5360-00-337-6970	Spring	1
316	8693938 (19207)	5310-00-143-6539	Washer	1
317	8693939 (19207)	5315-00-145-1610	Pin	1
318	8694036 (19207)	5360-00-692-5361	Spring	1
319	8697673 (19207)	5330-00-693-3735	Gasket	2
320	8712289-9 (19207)	5310-00-930-9759	Locknut	4
321	8715583 (19207)	5360-00-598-4431	Spring	1
322	8716420 (19207)	5310-00-313-9440	Nut, socket	12
323	8720150 (19207)	5340-00-835-9815	Seal	6
324	8725595 (19207)	5310-01-255-3353	Washer, spring	2

ITEM NO.	PART NUMBER/ CAGEC	NSN	NOMENCLATURE	QTY
325	8733966 (19207)	5310-00-791-5367	Washer	4
326	8741442 (19207)	5325-00-088-6147	Grommet	2
327	8744897 (19207)	5310-00-132-1438	Lockwire	4
328	8745480 (19207)	5310-00-535-6688	Washer, flat	2
329	8761091 (19207)	4730-00-679-5682	Screw	6
330	8761230 (19207)	5310-00-678-3257	Washer, flat	2
331	8761272 (19207)	5306-00-678-6889	Bolt	3
332	8762780 (19207)	5330-00-678-3488	Gasket	2
333	8764337 (19207)	9320-01-379-6428	Seal strip	2
334	8764338 (19207)	9320-01-390-4605	Seal strip	2
335	8764379 (19207)	5310-00-937-1415	Washer, flat	1
336	8764500 (19207)	5330-00-670-5606	Gasket	1
337	8764542 (19207)	5306-01-297-2749	Eyebolt	2
338	8764546 (19207)	5365-00-673-3220	Bushing, rubber	1
339	8764548 (19207)	5306-01-060-8169	Bolt	32
340	8764824 (19207)	4730-00-670-6031	Nut	2
341	A52481-10 (58536)	5330-00-948-0704	Gasket	3
342	A52481-5 (58536)	5330-00-946-8344	Gasket	2
343	A-A-52506-F-104 (58536)	4730-00-908-6294	Clamp	3
344	A-A-52506-F-24	4730-00-908-3193	Clamp	2
345	A-A-52524/1-178-2 (58536)	5330-01-006-2099	Seal	12
346	A-A-52524/8-2-9 (58536)	5330-00-978-7353	Seal assembly	2
347	AA55487-2 (58536)	5315-00-194-2455	Pin, cotter	3
348	AA55610-42 (81352)		Lockwasher	2
349	AA55610-46 (81349)		Lockwasher	6
350	AA55610-48 (81349)		Lockwasher	6
351	AN365-836A (88044)	5310-00-207-9078	Nut	24
352	AN565A10-4 (88044)	5305-00-206-4843	Setscrew	1
353	AN5H7 (88044)	5306-00-180-2748	Screw	12
354	AN6-5A (88044)	5306-00-180-0238	Screw	4
355	AN8C56A (88044)	5306-00-069-3019	Screw	16
356	AN924-8 (81352)	5310-00-208-5775	Nut	2
357	AN960-10 (88044)	5310-00-722-5943	Washer, flat	6
358	AN960-416 (88044)	5310-00-141-1795	Washer, flat	2
359	AN960-516 (88044)	5310-00-167-0820	Washer, flat	1
360	AN960-716 (88044)	5310-00-167-0822	Washer, flat	3
361	AN960B616 (88044)	5310-00-331-3225	Washer, flat	3
362	AN970-4 (80205)	5310-00-167-0766	Washer, flat	3
363	AS21919WDG16 (81343)	5340-00-286-9418	Clamp	3
364	ASTMA853 (81346)	9505-00-191-3680	Lockwire	2
365	B10-45363 (88907)	5305-00-269-3218	Bolt	2
366	B1821BH0250F50N (80204)	5305-00-267-8952	Screw	1
367	B1821BH025C063N (80204)	5305-00-068-7837	Screw	12

ITEM NO.	PART NUMBER/ CAGEC	NSN	NOMENCLATURE	QTY
368	B1821BH025C100N (80204)	5305-00-225-3843	Screw	8
369	B1821BH025F044N (80204)	5305-00-267-8951	Screw	3
370	B1821BH025F050N (80204)	5305-00-267-8952	Screw	92
371	B1821BH025F063N (80204)	5305-00-267-8953	Screw	101
372	B1821BH025F075N (80204)	5306-00-068-0513	Screw	95
373	B1821BH025F088N (80204)	5306-00-068-0514	Screw	30
374	B1821BH025F100N (80204)	5305-00-068-0515	Screw	14
375	B1821BH025F125N (80204)	5305-00-267-8954	Screw	5
376	B1821BH025F138N (80204)	5305-00-267-8955	Screw	19
377	B1821BH025F200N (80204)	5305-00-267-8958	Screw	6
378	B1821BH025F225D (80204)	5305-00-905-2712	Screw	2
379	B1821BH025F400D (80204)	5305-00-964-0627	Screw	4
380	B1821BH031C050N (80204)	5306-00-226-4822	Screw	94
381	B1821BH031C175N (80204)	5306-00-226-4832	Screw	2
382	B1821BH031C400N (80204)	5306-00-226-4841	Bolt	2
383	B1821BH031F075N (80204)	5306-00-050-1238	Screw	34
384	B1821BH031F113N (80204)	5306-00-051-4077	Screw	2
385	B1821BH031F175D (80204)	5305-01-914-6131	Screw	1
386	B1821BH031F175N (80204)	5306-00-051-4081	Screw	63
387	B1821BH038C063N (80204)	5305-00-721-5492	Screw	4
388	B1821BH038C075N (80204)	5305-00-543-4372	Screw	177
389	B1821BH038C100D (80204)	5305-00-942-2196	Screw	7
390	B1821BH038C113N (80204)	5305-00-543-2419	Screw	26
391	B1821BH038C125N (80204)	5305-00-068-0511	Screw	12

ITEM NO.	PART NUMBER/ CAGEC	NSN	NOMENCLATURE	QTY
392	B1821BH038C138N (80204)	5303-00-688-2111	Screw	4
393	B1821BH038C175N (80204)	5305-00-821-3869	Screw	50
394	B1821BH038C200N (80204)	5305-00-782-9489	Screw	1
395	B1821BH038C250N (80204)	5305-00-543-2866	Screw	4
396	B1821BH038F050N (80204)	5305-00-269-3231	Screw	50
397	B1821BH038F075N (80204)	5305-00-269-3234	Screw	58
398	B1821BH038F088N (80204)	5305-00-269-3235	Screw	25
399	B1821BH038F100N (80204)	5305-00-269-3236	Screw	30
400	B1821BH038F113N (80204)	5305-00-269-3237	Screw	26
401	B1821BH038F125N (80204)	5305-00-269-3238	Screw	83
402	B1821BH038F138N (80204)	5305-00-269-3239	Screw	90
403	B1821BH038F150N (80204)	5305-00-269-3240	Screw	49
404	B1821BH038F175D (80204)	5305-00-914-6131	Screw	11
405	B1821BH038F175N (80204)	5305-00-269-3241	Screw	19
406	B1821BH038F250N (80204)	5305-00-269-3244	Screw	6
407	B1821BH038F275N (80204)	5305-00-269-3245	Screw	38
408	B1821BH044C150N (80204)	5305-00-071-2055	Screw	4
409	B1821BH044F125N (80204)	5305-00-709-8523	Screw	8
410	B1821BH050C150N (80204)	5305-00-071-2069	Screw	20
411	B1821BH050C175N (80204)	5305-00-071-2070	Screw	4
412	B1821BH050C225N (80204)	5305-00-071-2072	Screw	6
413	B1821BH050F088N (80205)	5305-00-990-0695	Screw	8
414	B1821BH050F100N (80204)	5305-00-719-5184	Screw	18
415	B1821BH050F138N (80204)	5305-00-725-0154	Screw	135

ITEM NO.	PART NUMBER/ CAGEC	NSN	NOMENCLATURE	QTY
416	B1821BH050F150N (80204)	5305-00-719-5221	Screw	20
417	B1821BH050F175N (80204)	5305-00-719-5235	Screw	95
418	B1821BH050F200N (80204)	5305-00-719-5238	Screw	8
419	B1821BH050F250N (80204)	5305-00-719-5240	Screw	1
420	B1821BH063F125N (80204)	5305-00-726-2543	Bolt, spring	8
421	B1821BH063F138N (80204)	5305-00-726-2544	Screw	2
422	B1821BH063F200N (80204)	5305-00-726-2551	Screw	31
423	B1821BH063F225N (80204)	5305-00-726-2552	Screw	1
424	B1821BH075F250N (80204)	5305-00-762-6041	Screw	11
425	B1821BH075F275N (80204)	5305-00-926-1826	Screw	20
426	B1821BH075F350N (80204)	5305-00-728-5475	Screw	4
427	B1821BH375C735N (80204)	5305-01-410-8604	Screw	110
428	E9418823 (08179)	5306-01-061-1410	Screw	2
429	ED89D (0B231)	2920-00-711-5929	Spark plug (with gasket)	2
430	F2738-A01-2-4-24 (81348)	5340-00-902-0426	Seal	1
431	G337862 (64959)	5310-00-950-1403	Washer	4
432	L6451-101 (46717)	5315-00-187-9591	Pin, cotter	1
433	LSB8-1 (02695)	3120-00-692-5037	Bearing	2
434	M45913/1-10FG5C (81349)	5310-00-225-6408	Nut	52
435	M45913/1-6CG5C (81349)	5310-00-087-4652	Nut	1
436	M45913/2-6FBB (81349)	5310-00-902-0183	Nut	9
437	M83248/1-012 (81349)	5331-00-166-0980	Packing, preformed	1
438	M83248/1-327 (81349)	5330-01-005-3213	Packing, preformed	4
439	MS11625-1275 (96906)	5325-00-804-2777	Ring, retaining	1
440	MS124657 (96906)	5325-00-045-2676	Insert	8
441	MS124658 (96906)	5340-00-291-3493	Insert	8
442	MS14315-1XA (96906)	4730-00-196-0930	Bushing	1
443	MS15795-703 (80205)	5310-00-656-0111	Washer, flat	4
444	MS15795-806 (80205)	5310-00-880-5976	Washer, flat	68
445	MS16562-159 (80205)	5315-00-298-9845	Pin, spring	2
446	MS16562-36 (80205)	5315-00-810-3701	Pin, spring	1

ITEM NO.	PART NUMBER/ CAGEC	NSN	NOMENCLATURE	QTY
447	MS16562-51 (80205)	5315-00-809-8786	Pin, spring	1
448	MS16562-52 (80205)	5315-00-836-9628	Pin, spring	4
449	MS16562-53 (80205)	5315-00-616-4260	Pin, spring	1
450	MS16562-65 (80205)	5315-00-844-5836	Pin, spring	2
451	MS16624-1050 (96906)	5325-00-803-7301	Ring, retaining	2
452	MS16624-1062 (96906)	5325-00-803-7305	Ring, retaining	1
453	MS16624-1125 (96906)	5325-00-721-6876	Ring, retaining	2
454	MS16624-1131 (96906)	5325-00-803-7317	Ring, retaining	2
455	MS16624-1137 (96906)	5325-00-803-7316	Ring, retaining	1
456	MS16624-1143 (96906)	5325-00-530-7957	Ring, retaining	4
457	MS16625-1237 (96906)	5325-00-804-2770	Ring, retaining	5
458	MS16625-1275 (96906)	5325-00-804-2777	Ring, retaining	2
459	MS16626-1143 (96906)	5325-00-989-7682	Ring	1
460	MS16633-1062 (96906)	5325-00-842-2613	Ring, retaining	1
461	MS16633-1075 (96906)	5325-00-817-2417	Ring, retaining	2
462	MS16633-1118 (96906)	5325-01-006-9567	Ring, retaining	1
463	MS16998-44 (96906)	5305-00-983-6661	Screw	8
464	MS16998-46L (96906)	5305-01-258-8493	Screw	3
465	MS16998-74L (96906)	5305-01-110-7887	Screw, self-locking	2
466	MS16998-75L (96906)	5305-01-171-0538	Screw	2
467	MS16998-77 (96906)	5305-00-983-7451	Screw	4
468	MS16998-89 (96906)	5305-00-983-7437	Screw	4
469	MS16998-98 (96906)	5305-00-983-7457	Screw	4
470	MS17131-23 (96906)	3110-00-183-6730	Bearing	6
471	MS17131-40 (96906)	3110-00-902-3775	Bearing	2
472	MS171567 (96906)	5315-00-576-0599	Pin, spring	16
473	MS18153-114 (96906)	5305-00-914-6135	Screw	4
474	MS18153-63 (96906)	5305-00-914-6131	Screw	1
475	MS18153-85 (96906)	5305-00-926-5519	Screw	4
476	MS18153-88 (96906)	5305-00-914-6133	Screw	5
477	MS18154-59 (96906)	5305-01-010-2362	Screw	2
478	MS20392-7C47 (96906)	5315-00-957-0760	Pin, straight	2
479	MS20470B4-5 (80205)	5320-00-721-5275	Rivet	1
480	MS20500-624 (96906)	5310-00-297-8380	Nut	2
481	MS20613-8C8 (96906)	5320-00-264-3183	Rivets	8
482	MS20995F41 (80205)	9505-00-684-4843	Lockwire	5

ITEM NO.	PART NUMBER/ CAGEC	NSN	NOMENCLATURE	QTY
483	MS20995F47 (96906)	9505-00-248-9850	Lockwire	2
484	MS20995NC32 (80205)	9525-00-355-6072	Lockwire	2
485	MS20995NC40 (80205)	9525-00-990-7799	Lockwire	2
486	MS21042-06 (80205)	5310-00-807-1465	Nut, self-locking	1
487	MS210444N8 (80205)	5310-00-877-5795	Nut, self-locking	1
488	MS21044B3 (80205)	5310-00-982-5064	Nut, self-locking	4
489	MS21044N10 (80205)	5310-00-982-6809	Nut, self-locking	3
490	MS21044N4 (80205)	5310-00-877-5796	Nut, self-locking	26
491	MS21044N5 (80205)	5310-00-088-0553	Nut, self-locking	44
492	MS21044N6 (80205)	5310-00-950-0039	Nut, self-locking	21
493	MS21044-N8 (80205)	5310-00-877-5795	Nut, self-locking	3
494	MS21045-4 (96906)	5310-00-061-7325	Nut, self-locking	4
495	MS21045-5 (96906)	5310-00-982-4912	Nut, self-locking	77
496	MS21045-6 (96906)	5310-00-982-4908	Nut, self-locking	14
497	MS21083N3 (96906)	5310-00-902-6676	Nut, self-locking	19
498	MS21083-N6 (96906)	5310-00-926-1852	Nut, self-locking	6
499	MS21318-13 (80205)	5305-00-253-5609	Drivescrew	2
500	MS21318-20 (96906)	5305-00-253-5614	Drivescrew	14
501	MS21318-21 (80205)	5305-00-253-5615	Drivescrew	78
502	MS21318-27 (80205)	5305-00-253-5618	Drivescrew	4
503	MS21318-46 (80205)	5305-00-253-5625	Drivescrew	8
504	MS21318-47 (80205)	5305-00-253-5626	Drivescrew	1
505	MS21318-8 (80205)	5305-00-253-5607	Drivescrew	4
506	MS21318-9 (80205)	5305-00-253-5608	Drivescrew	6
507	MS21333-104 (80205)	5340-00-088-1254	Clamp	4
508	MS21333-126 (80205)	5340-00-053-8994	Clamp	2
509	MS21333-128 (96906)	5340-00-702-2848	Clamp	2
510	MS21333-66 (96906)	5340-00-990-7610	Clamp	3
511	MS2183-19 (96906)	5310-00-809-3079	Lockwasher	1
512	MS21919WCF8 (96906)	5340-01-163-6016	Screw	1
513	MS24585C370 (96906)	5360-00-890-4622	Spring	4
514	MS24586C200 (96906)	5360-00-969-4430	Spring	1
515	MS24665-151 (80205)	5315-00-815-1405	Pin, cotter	3
516	MS24665-170 (80205)	5315-00-234-1619	Pin, cotter	1
517	MS24665-425 (80205)	5315-00-013-7238	Pin, cotter	4
518	MS24665-263 (80205)	5315-00-842-3044	Pin, cotter	1
519	MS24665-281 (80205)	5315-00-839-2326	Pin, cotter	7
520	MS24665-283 (80205)	5315-00-842-3044	Pin, cotter	50
521	MS24665-285 (96906)	5315-01-061-2060	Pin, cotter	2
522	MS24665-287 (80205)	5315-00-011-9120	Pin, cotter	2
523	MS24665-335 (80205)	5315-00-012-0123	Pin, cotter	1
524	MS24665-351 (80205)	5315-00-839-5821	Pin, cotter	8
525	MS24665-353 (80205)	5315-00-839-5822	Pin, cotter	48
526	MS24665-355 (80205)	5315-00-012-0123	Pin, cotter	22
527	MS24665-359 (80205)	5315-00-013-7214	Pin, cotter	3
528	MS24665-370 (80205)	5315-00-236-8359	Pin, cotter	3

ITEM NO.	PART NUMBER/ CAGEC	NSN	NOMENCLATURE	QTY
529	MS24665-421 (80205)	5315-00-849-9857	Pin, cotter	2
530	MS24665-423 (80205)	5315-00-013-7228	Pin, cotter	2
531	MS24665-631 (80205)	5315-00-597-7399	Pin, cotter	1
532	MS24665-752 (80205)	5315-00-846-4297	Pin, cotter	2
533	MS27151-28 (96906)	5310-00-985-0782	Nut	2
534	MS27183-10 (96906)	5310-00-809-4058	Washer, flat	40
535	MS27183-12 (96906)	5310-00-081-4219	Washer, flat	35
536	MS27183-13 (96906)	5310-00-087-7493	Washer, flat	5
537	MS27183-14 (96906)	5310-00-080-6004	Washer, flat	203
538	MS27183-15 (96906)	5310-00-809-4061	Washer, flat	31
539	MS27183-18 (96906)	5310-00-809-5998	Washer, flat	84
540	MS27183-19 (96906)	5310-00-809-3079	Washer, flat	30
541	MS27183-21 (96906)	5310-00-823-8803	Washer, flat	11
542	MS27183-22 (96906)	5310-00-951-7209	Washer, flat	2
543	MS27183-23 (96906)	5310-00-809-8533	Washer, flat	18
544	MS27183-25 (96906)	5310-00-809-8540	Washer, flat	1
545	MS27183-42 (96906)	5310-00-014-5850	Washer, flat	1
546	MS27183-55 (96906)	5310-01-312-4960	Washer, flat	4
547	MS27183-7 (96906)	5310-00-809-8544	Washer, flat	4
548	MS27183-9 (96906)	5310-00-823-8804	Washer, flat	12
549	MS28775-006 (81343)	5331-00-292-0580	Packing, preformed	2
550	MS28775-021 (81343)	5331-00-631-1341	Packing, preformed	1
551	MS28775-110 (96906)	5330-00-585-6663	Packing, preformed	1
552	MS28775-222 (81343)	5331-00-297-9990	Packing, preformed	13
553	MS28775-228 (81343)	5331-00-807-8993	Packing, preformed	2
554	MS28775-237 (81343)	5331-00-608-6432	Packing, preformed	2
555	MS28775-238 (81343)	5331-00-579-7545	Packing, preformed	4
556	MS29513-465 (96906)	5331-01-131-2279	Packing, preformed	1
557	MS35180-2 (96906)	5315-00-610-5729	Pin, straight	1
558	MS35190-251 (80205)	5305-00-958-5473	Screw	1
559	MS35190-272 (80205)	5305-00-088-8332	Screw	3
560	MS35191-254 (96906)	5305-00-984-7358	Screw	2
561	MS35191-277 (80205)	5305-00-957-2635	Screw	8
562	MS35191-290 (96906)	5305-00-957-2639	Screw	16
563	MS35191-292 (96906)	5305-00-988-9106	Screw	3
564	MS35191-324 (96906)	5305-00-959-2704	Screw	4
565	MS35206-213 (80205)	5305-00-889-3116	Screw	4
566	MS35206-214 (80205)	5305-00-993-0190	Screw	12
567	MS35206-226 (80205)	5305-00-984-4983	Screw	5
568	MS35206-228 (80205)	5305-00-984-4988	Screw	4
569	MS35206-229 (80205)	5305-00-984-4989	Screw	3
570	MS35206-230 (80205)	5305-00-889-3000	Screw	8
571	MS35206-234 (96906)	5305-00-984-6221	Screw	1
572	MS35206-242 (96906)	5305-00-889-3002	Screw	6
573	MS35206-243 (80205)	5305-00-984-6191	Screw	52
574	MS35206-244 (80205)	5305-00-984-6192	Screw	24
575	MS35206-245 (80205)	5305-00-984-6193	Screw	54
576	MS35206-246 (80205)	5305-00-984-6194	Screw	12
577	MS35206-247 (80205)	5305-00-984-6195	Screw	14

ITEM NO.	PART NUMBER/ CAGEC	NSN	NOMENCLATURE	QTY
578	MS35206-260 (80205)	5305-00-984-6207	Screw	1
579	MS35206-263 (80205)	5305-00-984-6210	Screw	1
580	MS35206-264 (96906)	5305-00-984-6211	Screw	8
581	MS35206-279 (96906)	5305-00-988-1723	Screw	1
582	MS35207-208 (96906)	5305-00-958-0654	Screw	17
583	MS35207-215 (96906)	5305-00-958-4346	Screw	20
584	MS35207-228 (96906)	5305-00-958-4352	Screw	3
585	MS35207-231 (96906)	5305-00-958-0662	Screw	8
586	MS35207-243 (96906)	5305-00-958-4358	Screw	4
587	MS35207-245 (96906)	5305-00-989-4864	Screw	24
588	MS35207-247 (96906)	5305-00-958-0340	Screw	16
589	MS35207-248 (96906)	5305-00-052-6859	Screw	5
590	MS35207-261 (96906)	5305-00-990-6444	Screw	8
591	MS35207-263 (96906)	5305-00-989-7434	Screw	4
592	MS35207-264 (80205)	5305-00-989-7435	Screw	14
593	MS35207-265 (80205)	5305-00-993-1848	Screw	4
594	MS35207-267 (80205)	5305-00-993-1851	Screw	20
595	MS35207-270 (80205)	5305-00-995-3440	Screw	2
596	MS35207-277 (96906)	5305-00-952-0760	Screw	1
597	MS35207-287 (96906)	5305-00-958-0588	Screw, adjusting	3
598	MS35226-67 (96906)	5305-00-043-6754	Screw	2
599	MS35229-41 (96906)	5305-00-551-7027	Screw	2
600	MS35265-46 (96906)	5305-00-622-9476	Screw	8
601	MS35265-64 (96906)	5305-00-614-0245	Screw	16
602	MS35266-63 (96906)	5305-00-614-0246	Screw	2
603	MS35266-70 (96906)	5305-00-655-6556	Screw	2
604	MS35266-81 (96906)	5305-00-882-2242	Screw	2
605	MS35273-44 (96906)	5305-00-226-7222	Screw	6
606	MS35294-59 (96906)	5305-01-327-9685	Screw	6
607	MS35308-365 (80205)	5305-00-531-1097	Screw	2
608	MS35333-33 (96906)	5310-00-013-8578	Lockwasher	1
609	MS35333-36 (96906)	5310-00-193-7577	Lockwasher	4
610	MS35333-37 (96906)	5310-00-579-0079	Lockwasher	13
611	MS35333-38 (96906)	5310-00-559-0070	Lockwasher	104
612	MS35333-39 (80205)	5310-00-576-5752	Lockwasher	24
613	MS35333-40 (96906)	5310-00-550-1130	Lockwasher	56
614	MS35333-41 (96906)	5310-00-167-0721	Lockwasher	136
615	MS35333-42 (96906)	5310-00-595-7237	Lockwasher	22
616	MS35334-22 (96906)	5310-00-883-8741	Lockwasher	1
617	MS35335-29 (96906)	5310-00-616-3554	Lockwasher	5
618	MS35335-30 (96906)	5310-00-209-0788	Lockwasher	8
619	MS35335-31 (96906)	5310-00-596-7693	Lockwasher	36
620	MS35335-32 (96906)	5310-00-596-7691	Lockwasher	12
621	MS35335-33 (96906)	5310-00-209-0786	Lockwasher	434
622	MS35335-34 (96906)	5310-00-514-6674	Lockwasher	27
623	MS35335-35 (96906)	5310-00-627-6128	Lockwasher	155
624	MS35335-37 (96906)	5310-00-209-5116	Lockwasher	6
625	MS35335-38 (96906)	5310-00-616-6354	Lockwasher	1
626	MS35335-39 (96906)	5310-00-800-0695	Lockwasher	4

ITEM NO.	PART NUMBER/ CAGEC	NSN	NOMENCLATURE	QTY
627	MS35335-40 (96906)	5310-00-275-3683	Lockwasher	2
628	MS35335-42 (96906)	5310-00-807-4795	Lockwasher	2
629	MS35335-58 (96906)	5310-00-209-1366	Lockwasher	34
630	MS35336-27 (96906)	5310-00-194-9211	Lockwasher	16
631	MS35336-39 (96906)	5310-00-194-9213	Lockwasher	4
632	MS35338-27 (96906)	5310-00-543-2705	Lockwasher	2
633	MS35338-38 (96906)	5310-00-013-1052	Lockwasher	4
634	MS35338-40 (80205)	5310-00-543-2410	Lockwasher	40
635	MS35338-41 (80205)	5310-00-045-4007	Lockwasher	1
636	MS35338-42 (80205)	5310-00-045-3299	Lockwasher	40
637	MS35338-43 (80205)	5310-00-045-3296	Lockwasher	41
638	MS35338-44 (80205)	5310-00-582-5965	Lockwasher	325
639	MS35338-45 (96906)	5310-00-407-9566	Lockwasher	77
640	MS35338-46 (80205)	5310-00-637-9541	Lockwasher	793
641	MS35338-47 (96906)	5310-00-209-0965	Lockwasher	17
642	MS35338-48 (80205)	5310-00-584-5272	Lockwasher	331
643	MS35338-49 (96906)	5310-00-167-0680	Lockwasher	4
644	MS35338-50 (96906)	5310-00-820-6653	Lockwasher	18
645	MS35338-51 (96906)	5310-00-584-7888	Lockwasher	7
646	MS35338-65 (96906)	5310-00-011-5093	Lockwasher	58
647	MS35338-67 (96906)	5310-00-011-6121	Lockwasher	1
648	MS35338-99 (96906)	5310-00-576-0546	Lockwasher	6
649	MS35339-41 (96906)	5310-00-515-7997	Lockwasher	8
650	MS35340-44 (96906)	5310-00-682-5930	Lockwasher	4
651	MS35340-46 (96906)	5310-00-959-4675	Lockwasher	6
652	MS35340-48 (96906)	5310-00-834-7606	Lockwasher	137
653	MS35340-50 (96906)	5310-00-045-5001	Lockwasher	28
654	MS35340-51 (96906)	5310-00-052-6454	Lockwasher	35
655	MS35340-52 (96906)	5310-00-926-5884	Lockwasher	44
656	MS35340-53 (96906)	5310-00-926-5885	Lockwasher	6
657	MS35650-342 (96906)	5310-00-934-9734	Nut	4
658	MS35425-72 (96906)	5310-01-077-6817	Wingnut	4
659	MS35425-74 (96906)	5310-01-088-2490	Wingnut	1
660	MS35426-27 (96906)	5310-01-100-5199	Wingnut	4
661	MS35426-31 (96906)	5310-01-080-2211	Wingnut	6
662	MS35346-35 (96906)	5310-01-126-2630	Wingnut	1
663	MS35489-104 (96906)	5325-00-641-2800	Grommet	1
664	MS35489-106 (94135)	5325-00-276-6056	Grommet	2
665	MS35489-117 (96906)	5325-00-954-6724	Grommet	1
666	MS35649-202 (96906)	5310-00-934-9758	Nut	18
667	MS35649-2252 (96906)	5310-00-997-1888	Nut	2
668	MS35649-232 (96906)		Nut	4
669	MS35649-262 (96906)	5310-00-934-9747	Nut	8
670	MS35649-264 (96906)	5310-00-934-9761	Nut	34
671	MS35649-282 (96906)	5310-00-934-9757	Nut	24
672	MS35650-302 (80205)	5310-00-934-9751	Nut	15
673	MS35650-304 (80205)	5310-00-934-9765	Nut	4

ITEM NO.	PART NUMBER/ CAGEC	NSN	NOMENCLATURE	QTY
674	MS35650-3252 (96906)	5310-00-043-0520	Nut	3
675	MS35650-362 (96906)	5310-00-934-9755	Nut	11
676	MS35650-382 (96906)	5310-00-934-9754	Nut	25
677	MS35671-27 (96906)	5315-00-062-3993	Pin	1
678	MS35674-40 (96906)	5315-00-080-7090	Pin	1
679	MS35674-41 (96906)	5315-00-062-5417	Pin	3
680	MS35691-13 (96906)	5310-00-853-9335	Nut	8
681	MS35691-17 (96906)	5310-00-851-2682	Nut	1
682	MS35691-21 (96906)	5310-00-975-2075	Nut	43
683	MS35691-22 (96906)	5310-00-891-1751	Nut	1
684	MS35691-33 (96906)	5310-00-834-8732	Nut	3
685	MS35691-5 (96906)	5310-00-971-7989	Nut	8
686	MS35691-53 (96906)	5310-00-835-2037	Nut	18
687	MS35691-54 (96906)	5310-00-891-3405	Nut	8
688	MS35691-57 (96906)	5310-00-838-1702	Nut	1
689	MS35691-77 (96906)	5310-00-891-3428	Nut	1
690	MS35691-93 (96906)	5310-00-997-6903	Nut	1
691	MS35692-109 (96906)	5310-00-842-7634	Nut	2
692	MS35692-18 (96906)	5310-00-244-2895	Nut	2
693	MS35692-21 (96906)	5310-00-842-1488	Nut	4
694	MS35692-37 (96906)	5310-00-842-1490	Nut	2
695	MS35692-57 (96906)	5310-00-850-6881	Nut	4
696	MS35692-9 (96906)	5310-00-850-6868	Nut	2
697	MS3569-54 (96906)	5310-00-891-3405	Nut	1
698	MS35756-12 (80205)	5315-00-616-5522	Key	4
699	MS35756-19 (80205)	5315-00-616-5502	Key	1
700	MS35756-5 (80205)	5315-00-616-5515	Key	4
701	MS35764-1437 (96906)	5306-01-008-4193	Screw	1
702	MS35764-1547 (96906)	5306-01-126-2319	Screw	12
703	MS35764-1603 (96906)	5306-01-006-2062	Bolt, self-locking	38
704	MS35764-241 (96906)	5306-01-011-3069	Bolt	1
705	MS35769-26 (81343)	5330-01-352-3132	Gasket	2
706	MS35769-31 (81343)	5330-01-352-3360	Gasket	4
707	MS35769-47 (81343)	5330-00-269-2844	Gasket	1
708	MS35810-2 (96906)	5315-00-610-5729	Pin, straight	7
709	MS35810-3 (96906)	5315-00-754-0848	Pin, straight	3
710	MS35810-4 (96906)	5315-00-815-8840	Pin, straight	3
711	MS35810-7 (96906)	5315-00-245-3144	Pin, straight	10
712	MS35842-10 (96906)	4730-00-908-3195	Clamp	3
713	MS35842-11 (81646)	4730-00-908-3194	Clamp, loop	5
714	MS35842-13 (96906)	4730-00-909-8627	Clamp	2
715	MS35842-14 (81646)	4730-00-908-6292	Clamp	10
716	MS35842-16 (96906)	4730-00-908-6294	Clamp	1
717	MS45901-4 (96906)	5310-00-264-1390	Washer, flat	3
718	MS45904-68 (96906)	5310-00-889-2528	Lockwasher	2

ITEM NO.	PART NUMBER/ CAGEC	NSN	NOMENCLATURE	QTY
719	MS45904-76 (96906)	5310-00-061-1258	Lockwasher	14
720	MS51096-306 (96906)	5305-00-910-7369	Screw	4
721	MS51096-359 (96906)	5305-00-912-5113	Screw	73
722	MS51106-363 (96906)	5305-00-910-7332	Screw	2
723	MS51823-5 (96906)	4730-00-025-7508	Nut	1
724	MS51838-175 (96906)	5315-01-006-2184	Pin	1
725	MS51838-234 (96906)	5315-01-017-5963	Pin	10
726	MS51838-88 (96906)	5315-01-006-2185	Pin	1
727	MS51848-13 (96906)	5310-01-016-9348	Lockwasher	4
728	MS51849-64 (96906)	5305-00-180-4966	Screw	6
729	MS51849-65 (96906)	5305-01-006-2052	Screw	4
730	MS51849-76 (96906)	5305-00-240-0194	Screw	3
731	MS51849-85 (96906)	5305-01-006-2050	Screw	281
732	MS51849-86 (96906)	5305-01-006-2051	Screw	1
733	MS51849-90 (96906)	5305-01-126-3641	Screw	1
734	MS51860-53 (96906)	4730-00-466-7467	Locknut	1
735	MS51860-55 (96906)	4730-00-375-6403	Nut	1
736	MS51861-22 (96906)	5305-00-432-8027	Screw	2
737	MS51864-104-24 (80205)	5307-00-373-0796	Stud	6
738	MS51906-359 (96906)	5305-00-912-5113	Screw	1
739	MS51920-1 (96906)	5330-00-852-6255	Seal	1
740	MS51922-23 (96906)	5310-00-902-0183	Nut	1
741	MS51922-53 (96906)	5310-00-225-6408	Nut, self-locking	1
742	MS51922-61 (96906)	5310-00-832-9719	Nut, self-locking	8
743	MS51932-101 (96906)	5315-01-011-8029	Pin, straight	1
744	MS51932-109 (96906)	5315-00-994-1604	Pin, straight	3
745	MS51932-52 (96906)	5315-01-006-2186	Pin, straight	4
746	MS51943-18 (96906)	5310-01-006-2085	Nut, self-locking	4
747	MS51957-28 (96906)	5305-00-054-6552	Screw	34
748	MS51958-87 (96906)	5305-00-071-2096	Screw	1
749	MS51963-64 (96906)	5305-00-723-9386	Setscrew	4
750	MS51964-101 (80205)	5305-00-725-3498	Screw, adjusting	1
751	MS51964-147 (80205)	5305-01-008-6711	Setscrew	2
752	MS51964-64 (80205)	5305-00-724-5811	Setscrew	2
753	MS51966-122 (80205)	5305-01-038-4760	Setscrew	1
754	MS51967-14 (96906)	5310-00-768-0318	Nut	9
755	MS51967-15 (96906)	5310-00-761-3706	Nut	6
756	MS51967-2 (96906)	5310-00-761-6882	Nut	15
757	MS51967-5 (96906)	5310-00-880-7744	Nut	6
758	MS51967-8 (96906)	5310-00-732-0558	Nut	17
759	MS51967-9 (96906)	5310-00-761-0654	Nut	2
760	MS51968-11 (96906)	5310-00-880-7745	Nut	1
761	MS51968-14 (96906)	5310-00-732-0560	Nut	12
762	MS51968-15 (96906)	5310-00-943-2141	Nut	1
763	MS51968-2 (96906)	5310-00-768-0319	Nut	43
764	MS51968-20 (96906)	5310-00-763-8905	Nut	3
765	MS51968-23 (96906)	5310-00-763-8901	Nut	2
766	MS51968-29 (96906)	5310-00-762-6239	Nut	4

ITEM NO.	PART NUMBER/ CAGEC	NSN	NOMENCLATURE	QTY
767	MS51968-3 (96906)	5310-00-913-7020	Nut	4
768	MS51968-5 (96906)	5310-00-880-7746	Nut	31
769	MS51968-8 (96906)	5310-00-732-0559	Nut	73
770	MS51968-9 (96906)	5310-00-785-1762	Nut	2
771	MS51975-16 (80205)	5305-00-914-3821	Screw	2
772	MS52000-5 (96906)	5330-00-946-8344	Gasket	1
773	MS27183-15 (96906)	5310-00-809-4061	Washer	1
774	MS90484-16-1 (96906)	5330-01-042-2397	Gasket	2
775	MS90484-22-1 (96906)	5330-01-041-9720	Gasket	1
776	MS90725-1 (80205)	5305-00-068-0498	Screw	1
777	MS90725-111 (80205)	5305-00-782-9495	Screw	3
778	MS90725-3 (96906)	5305-00-068-0500	Screw	52
779	MS90725-31 (80205)	5306-00-225-8496	Screw	3
780	MS90725-33 (80205)	5306-00-225-8498	Screw	6
781	MS90725-4 (80205)	5305-00-225-3838	Screw	8
782	MS90725-5 (80205)	5305-00-068-0501	Screw	14
783	MS90725-6 (96906)	5305-00-068-0502	Screw	22
784	MS90726-104 (96906)	5305-00-716-8194	Screw	4
785	MS90726-109 (96906)	5305-00-226-7767	Screw	10
786	MS90726-113 (80205)	5305-00-725-4183	Screw	16
787	MS90726-162 (96906)	5305-00-727-2283	Screw	2
788	MS90726-27 (80205)	5305-00-225-9082	Screw	30
789	MS90726-29 (80205)	5306-00-225-9084	Screw	4
790	MS90726-3 (96906)	5305-00-068-0504	Screw	1
791	MS90726-31 (80205)	5306-00-225-9086	Screw	4
792	MS90726-32 (80205)	5306-00-225-9087	Screw	2
793	MS90726-33 (80205)	5306-00-225-9088	Screw	8
794	MS90726-34 (80205)	5306-00-225-9089	Screw	6
795	MS90726-36 (80205)	5305-00-225-9091	Screw	2
796	MS90726-38 (80205)	5305-00-225-9093	Screw	1
797	MS90726-47 (80205)	5305-00-225-9102	Screw	2
798	MS90726-52 (80205)	5306-00-225-9107	Screw	2
799	MS90726-6 (80205)	5305-00-068-0506	Screw	4
800	MS90726-60 (80205)	5305-00-269-2803	Screw	84
801	MS90726-61 (80205)	5305-00-269-2804	Screw	25
802	MS90726-67 (80205)	5305-00-269-2811	Screw	51
803	MS90727-110 (96906)	5305-00-719-5209	Screw	4
804	MS90727-111 (96906)	5305-00-719-5219	Screw	35
805	MS90727-112 (96906)	5305-00-725-0154	Screw	1
806	MS90727-114 (96906)	5305-00-719-5235	Screw	1
807	MS90727-116 (96906)	5305-00-719-5239	Screw	32
808	MS90727-12 (96906)	5305-00-267-8956	Screw	8
809	MS90727-139 (96906)	5305-00-725-0140	Screw	4
810	MS90727-164 (96906)	5305-00-726-2551	Screw	1
811	MS90727-18 (96906)	5305-00-267-8962	Screw	3
812	MS90727-210 (96906)	5305-00-903-7768	Screw	24
813	MS90727-236 (96906)	5305-00-935-2931	Screw	6

ITEM NO.	PART NUMBER/ CAGEC	NSN	NOMENCLATURE	QTY
814	MS90727-3 (96906)	5305-00-267-8952	Screw	1
815	MS90727-33 (96906)	5305-00-051-4075	Screw	8
816	MS90727-34 (96906)	5305-00-051-4076	Screw	6
817	MS90727-42 (96906)	5306-00-051-4084	Screw	2
818	MS90727-48 (96906)	5306-00-051-4090	Screw	2
819	MS90727-5 (96906)	5305-00-267-8953	Screw	1
820	MS90727-55 (96906)	5305-00-269-3231	Screw	1
821	MS90727-58 (96906)	5305-00-269-3234	Screw	1
822	MS90727-59 (96906)	5305-00-269-3235	Screw	1
823	MS90727-6 (96906)	5306-00-068-0513	Screw	1
824	MS90727-62 (96906)	5305-00-269-3238	Screw	1
825	MS90727-63 (96906)	5305-00-269-3239	Screw	1
826	MS90727-64 (96906)	5305-00-269-3240	Screw	1
827	MS90727-7 (96906)	5306-00-068-0514	Screw	1
828	MS90727-71 (96906)	5305-00-269-3247	Screw	2
829	MS90727-86 (96906)	5305-00-709-8516	Screw	4
830	MS90727-9 (96906)	5305-00-068-0516	Screw	3
831	MS90728-113 (96906)	5305-00-071-2069	Screw	1
832	MS9316-11 (96906)	5305-00-852-4233	Screw	1
833	MS9320-07 (96906)	5310-00-941-3598	Washer, flat	1
834	MS9320-12 (96906)	5310-00-184-8974	Washer, flat	11
835	MS9320-14 (96906)	5310-00-184-8992	Washer, flat	4
836	MS9321-11 (96906)	5310-00-945-0528	Washer, flat	2
837	MS9321-12 (96906)	5310-00-903-2612	Washer, flat	8
838	MS9356-17 (96906)	5310-00-871-7855	Nut	4
839	N405P39C15 (03538)	5310-00-045-3296	Lockwasher	4
840	N4210S550M (94581)	5342-00-678-6179	Clamp	2
841	NAS1149B0663H (80205)	5310-00-167-0704	Washer, flat	1
842	NAS1149F0363P (80205)	5310-00-167-0818	Washer, flat	4
843	NAS1149F0563P (80205)	5310-00-167-0820	Washer, flat	22
844	NAS184-6-16A (80205)	5307-01-007-1708	Stud	2
845	NAS50-131 (80205)	5325-00-804-3892	Retainer	2
846	P01-6984 (18265)	5305-01-169-6386	Wingbolt	1
847	P1115 (73370)	2910-00-125-5600	Filter, fuel	1
848	RV290-5-3 (53551)	5320-00-616-4339	Rivet	4
849	S1500 (96881)	5330-00-684-7852	Packing	3
850	SC587195 (63728)	5330-01-393-9091	Gasket	2
851	SL5961 (35311)	5330-00-355-0281	Seal	3
852	SPL51712-6 (15653)	5310-01-151-2732	Nut, self-locking	14
853	TR50-80 (03677)	5315-00-839-2325	Pin, cotter	1
854	WW-P-471BDQBC (81348)	4730-00-430-3165	Bushing	1
855	WW-P-471-BDQBUD (81348)	4730-00-204-3481	Bushing	1
856	TBD (207-29) (TBD)	TBD (207-29)	Screw	7

ITEM NO.	PART NUMBER/ CAGEC	NSN	NOMENCLATURE	QTY
857	TBD (330-4) (TBD)	TBD (330-4)	Washer, flat	4
858	TBD (351-21) (TBD)	TBD (351-21)	Washer, flat	1
859	TBD (407-38) (TBD)	TBD (407-38)	Screw	1
860	TBD (407-40) (TBD)	TBD (407-40)	Screw	1
861	TBD (407-41) (TBD)	TBD (407-41)	Lockwasher	1
862	TBD (448-10) (TBD)	TBD (448-10)	Washer, flat	2
863	MS3367-1-0 (81343)	5975-00-984-6582	Strap	3
864	MS3367-1-9 (81343)	5975-00-074-2072	Strap	5
865	8376364 (19207)	5330-00-695-1178	Seal	3
866	AS3551-266 (81343)	5331-00-845-4962	Packing, preformed	2
867	10894471 (19207)	5330-01-017-2744	Strip, rubber	2
868	10894505 (19207)	5330-01-043-7760	Gasket	1
869	8693757 (19207)	5330-00-636-3527	Seal	1
870	MS24665-132 (80205)	5315-00-839-2325	Pin, cotter	2
871	CAP157B (92798)	5330-00-980-2583	Seal	1
872	MS9007-199	3305-00-928-9636	Screw	2

END OF WORK PACKAGE

INDEX

<u>Subject</u>	<u>WP Sequence No.-Page No.</u>
10-ton snatch block retainer	0377 00-1
25-ton snatch block retainer	0378 00-1
A	
Abbreviations and acronyms	0001 00-3
Accelerator controls	0363 00-1
Accelerator controls, adjustment	0364 00-1
Accelerator controls, alignment	0364 00-1
Accelerator linkages	0363 00-1
Accelerator linkages, adjustment	0364 00-1
Accelerator linkages, alignment	0364 00-1
Access cover, fuel tank filler	0319 00-1
Access cover, hydraulic connections	0292 00-1
Access cover, rear intermediate right	0294 00-1
Access door, APU	0335 00-1
Access door, wire rope roller	0316 00-1
Access doors, engine transmission	0340 00-1
Accessories panel, electrical	0158 00-1
Acetylene and compartment door hardware	0387 00-1
Acetylene hose adapter	0332 00-1
Actuating brake air valve linkage, transmission	0265 00-1
Adjustment of accelerator controls	0364 00-1
Adjustment of accelerator linkages	0364 00-1
Air cleaner	0137 00-1
Air cleaner, APU engine	0433 00-1
Air cleaner inlet covers, left-side	0321 00-1
Air cleaner inlet covers, right-side	0321 00-1
Air cleaner restriction gage assembly	0138 00-1
Air inlet, engine seal	0140 00-1
Air inlet door, left deck	0345 00-1
Air inlet door, right deck	0345 00-1
Air inlet doors	0341 00-1
Air inlet grilles, center-front	0342 00-1
Air inlet grilles, left-front	0342 00-1
Air intake hoses	0139 00-1
Air intake system	0005 00-1
Air intake tube, generator	0111 00-1
Air intake tubes, APU engine	0433 00-1
Air intake water deflector, personnel heater and APU	0397 00-1
Air purifier, M2A2	0440 00-1
Alignment of accelerator controls	0364 00-1
Alignment of accelerator linkages	0364 00-1
Alignment of shifting controls	0362 00-1
Alignment of shifting linkages	0362 00-1

INDEX-Continued

<u>Subject</u>	<u>WP Sequence No.-Page No.</u>
Alignment of steering controls.....	0358 00-1
Alignment of steering linkages.....	0358 00-1
Ammunition rack, caliber .50.....	0386 00-1
Antenna base covers.....	0331 00-1
APU.....	0015 00-1
APU access cover assembly.....	0334 00-1
APU access door.....	0335 00-1
APU air intake water deflector.....	0397 00-1
APU armature relay (single voltage), engine.....	0156 00-1
APU control box.....	0438 00-1
APU cooling air exhaust.....	0434 00-1
APU engine air cleaner.....	0433 00-1
APU engine air cleaner, filter, and air intake tubes.....	0433 00-1
APU engine air intake tubes.....	0433 00-1
APU engine crankcase fill-and-level ID plate.....	0435 00-1
APU engine filter.....	0433 00-1
APU engine fuel filters.....	0436 00-1
APU engine oil filter.....	0437 00-1
APU pressure switch assembly.....	0432 00-1
Arm assembly, compensating.....	0282 00-1
Arm assembly, roadwheel.....	0276 00-1
Army regulations.....	0486 00-1
Army shipping documents.....	0483 00-1
B	
B.O. receiver light.....	0164 00-1
B.O. receiver switch.....	0164 00-1
Batteries.....	0153 00-1
Battery terminal.....	0153 00-1
Battery tray cleaning tubes.....	0333 00-1
Battery trays.....	0153 00-1
Bearing unit housing assembly.....	0368 00-1
Bilge pump outlet cover.....	0320 00-1
Bilge pump power lead circuit breaker.....	0251 00-1
Bilge pump power lead mounting plate.....	0251 00-1
Bilge pump power lead relay.....	0251 00-1
Blocking.....	0483 00-2
Boom, emergency operation of.....	0100 00-1
Boom support.....	0329 00-1
Boxes, hand grenade.....	0383 00-1
Bracket assemblies for side tow bar.....	0375 00-1
Bracket assemblies for side tow cables.....	0375 00-1
Brackets, hand fire extinguisher.....	0384 00-1
Brackets, liquid container.....	0392 00-1

INDEX-Continued

<u>Subject</u>	<u>WP Sequence No.-Page No.</u>
Brackets, M72 LAW rocket launcher	0393 00-1
Brake band adjustment, hoist winch	0410 00-1
Brake band adjustment, main winch	0405 00-1
Brake cam assembly	0367 00-1
Brake pedal	0366 00-1
Brake pedal and bracket assembly	0366 00-1
Breather assembly and line, transmission	0270 00-1
Breather tube, crankcase	0108 00-1
Breather, mechanical transmission	0427 00-1
Bumper spring brackets	0284 00-1
Bumper springs	0284 00-1
Bypass valve, oil cooler pressure-actuated	0110 00-1
C	
Cab-top door, driver's	0313 00-1
Cab-top door, mechanic's	0314 00-1
Cab-top door, rigger's	0315 00-1
Cable, main winch	0408 00-1
Cable identifiers	0255 00-1
Caliber .50 ammunition rack	0386 00-1
Caliber .50 stowage strap	0391 00-1
Center exhaust doors	0347 00-1
Center forward floor plate	0304 00-1
Center front air inlet grilles	0342 00-1
Center rear floor plate	0303 00-1
Center subfloor support	0310 00-1
Check valve, fuel	0126 00-1
Checking unpacked equipment	0094 00-2
Clamp assembly	0338 00-1
Clamps, exhaust manifold	0142 00-1
Cleaner, air	0137 00-1
Cleaning tubes, battery tray	0333 00-1
Commander's cupola assembly	0312 00-1
Commander's plate and switch assembly	0449 00-1
Commander's seat assembly	0350 00-1
Common tools and equipment	0001 00-4
Compensating arm assembly	0282 00-1
Compensating idler	0282 00-1
Compensating idler arm assembly hub assembly	0281 00-1
Compensating idler arm assembly link bearings	0281 00-1
Compensating idler arm assembly links	0281 00-1
Compensating idler arm assembly wheels	0281 00-1
Connecting panel, hydraulic	0418 00-1
Control and linkage, manual, hoist winch	0411 00-1

INDEX-Continued

<u>Subject</u>	<u>WP Sequence No.-Page No.</u>
Control box, APU	0438 00-1
Control box, heater	0161 00-1
Control, engine fuel manual shutoff	0124 00-1
Controls, accelerator	0363 00-1
Controls, accelerator, adjustment of	0364 00-1
Controls, accelerator, alignment of	0364 00-1
Controls, fire extinguisher system	0402 00-1
Controls, main winch	0407 00-1
Controls, service brake	0365 00-1
Controls, shifting	0361 00-1
Controls, shifting, alignment of	0362 00-1
Controls, steering	0357 00-1
Controls, steering, alignment of	0358 00-1
Cooler lines, engine oil	0149 00-1
Cooling air exhaust, APU	0434 00-1
Cooling fan housings, engine	0145 00-1
Cooling fan shroud, engine	0146 00-1
Cooling fan shroud seals, engine	0143 00-1
Cooling fan vertical shaft oil seals, engine	0147 00-1
Cooling fans, engine	0144 00-1
Cooling system	0007 00-1
Corrosion prevention and control	0001 00-2
Cover assembly, APU access	0334 00-1
Cover plates, deep water fording exhaust	0343 00-1
Covers, antenna base	0331 00-1
Covers, drain	0355 00-1
Cradle, engine generator	0150 00-1
Crankcase breather tube	0108 00-1
Cupola assembly, commander's	0312 00-1
Cylinder adjustment, main winch level winder	0404 00-1
Cylinder controls, fire extinguisher	0401 00-1
Cylinder head oil pan drain tubes	0109 00-1
Cylinders, fire extinguisher	0400 00-1
Cylinders and hoisting boom	0414 00-1

D

Damper housing, engine	0104 00-1
Decal markings	0482 00-1
Deck door, engine, right	0337 00-1
Decontamination apparatus bracket assembly, M13	0373 00-1
Deep water fording exhaust cover plates	0343 00-1
Deep water fording kit	0019 00-1
Department of Defense forms	0486 00-1
Department of the Army forms	0486 00-1

INDEX-Continued

<u>Subject</u>	<u>WP Sequence No.-Page No.</u>
Department of the Army pamphlets.....	0486 00-1
Destruction of Army materiel to prevent enemy use	0001 00-2
Differences between models.....	0002 00-27
Dimmer switch, headlight.....	0174 00-1
Directional signal control and mount assembly.....	0453 00-1
Dischargers, M239 launcher.....	0443 00-1
Dome light.....	0183 00-1
Door, APU access.....	0335 00-1
Door, left deck air inlet.....	0345 00-1
Door, left personnel.....	0318 00-1
Door, left stowage compartment.....	0317 00-1
Door, right deck air inlet.....	0345 00-1
Door, right engine deck.....	0337 00-1
Door, right personnel.....	0318 00-1
Door, right stowage compartment.....	0317 00-1
Door, wire rope roller access.....	0316 00-1
Doors, air inlet.....	0341 00-1
Doors, center exhaust.....	0347 00-1
Doors, engine transmission access.....	0340 00-1
Doors, left exhaust.....	0346 00-1
Doors, right exhaust.....	0346 00-1
Drain covers.....	0355 00-1
Drain plugs, transmission torque converter.....	0268 00-1
Drain tubes, cylinder head oil pan.....	0109 00-1
Drain valve, hydraulic.....	0422 00-1
Drain valve controls.....	0354 00-1
Drain valves.....	0353 00-1
Drive couplings, transmission.....	0273 00-1
Driver's bracket and switch assembly.....	0448 00-1
Driver's cab-top door.....	0313 00-1
Driver's headlight dimmer switch.....	0174 00-1
Driver's passive night viewer light.....	0164 00-1
Driver's passive night viewer switch.....	0164 00-1
Driver's periscope blocks.....	0326 00-1
Driver's periscope to infrared power supply (single voltage) (10866967).....	0249 00-1
Driver's periscope vision prisms.....	0326 00-1
Driver's seat assembly.....	0352 00-1
Driver's vision prisms.....	0326 00-1
Dummy connector assembly (infrared and passive night viewer).....	0253 00-1
E	
Electric fuel pump.....	0116 00-1
Electrical accessories panel.....	0158 00-1
Electrical systems and circuits.....	0008 00-1

INDEX-Continued

<u>Subject</u>	<u>WP Sequence No.-Page No.</u>
Electrical troubleshooting.....	0021 00-4
Emergency boom operation.....	0100 00-1
Engine and APU armature relay (single voltage).....	0156 00-1
Engine and APU generator housing (single voltage).....	0156 00-1
Engine cooling fan housings.....	0145 00-1
Engine cooling fan shroud.....	0146 00-1
Engine cooling fan shroud seals.....	0143 00-1
Engine cooling fan vertical shaft oil seals.....	0147 00-1
Engine cooling fans.....	0144 00-1
Engine damper housing.....	0104 00-1
Engine deck.....	0336 00-1
Engine deck, optional.....	0336 00-1
Engine deck base.....	0336 00-1
Engine deck base, optional.....	0336 00-1
Engine fuel manual shutoff control.....	0124 00-1
Engine generator.....	0150 00-1
Engine generator cradle.....	0150 00-1
Engine generator support.....	0150 00-1
Engine idle speed.....	0112 00-1
Engine left upper cover.....	0115 00-1
Engine mounting bracket.....	0101 00-1
Engine oil cooler lines.....	0149 00-1
Engine oil cooler screens.....	0148 00-1
Engine oil coolers.....	0148 00-1
Engine oil filter.....	0104 00-1
Engine oil filter servicing instruction plate.....	0103 00-1
Engine oil pressure sending unit.....	0171 00-1
Engine oil pressure sending unit switch.....	0171 00-1
Engine oil temperature sending unit.....	0171 00-1
Engine oil temperature sending unit switch.....	0171 00-1
Engine rear mount and base assembly.....	0102 00-1
Engine right upper cover.....	0115 00-1
Engine seal, air inlet.....	0140 00-1
Engine solenoid speed.....	0113 00-1
Engine starter.....	0152 00-1
Engine starter bracket.....	0152 00-1
Engine starter solenoid relay.....	0152 00-1
Engine transmission access doors.....	0340 00-1
Equipment characteristics, capabilities, and features.....	0002 00-1
Equipment data.....	0002 00-27
Exhaust deflector.....	0344 00-1
Exhaust manifold clamps.....	0142 00-1
Exhaust pipes.....	0141 00-1

INDEX-Continued

<u>Subject</u>	<u>WP Sequence No.-Page No.</u>
Exhaust smoke generating system	0018 00-1
Exhaust system	0005 00-1
Expendable and durable items list.....	0489 00-1
Exterior straps.....	0394 00-1
External hydraulic reservoir components.....	0421 00-1
External vehicle warning horn	0169 00-1
F	
Fan housings, engine cooling.....	0145 00-1
Fan shroud, engine cooling.....	0146 00-1
Fan shroud seals, engine cooling.....	0143 00-1
Fan vertical shaft oil seals, engine cooling.....	0147 00-1
Fastener grade	0485 00-7
Fastener size and thread pattern.....	0485 00-6
Female cable connector replacement (with sleeve).....	0258 00-1
Fenders	0311 00-1
Field manuals	0486 00-1
Filler strainer.....	0120 00-1
Filler tube, oil.....	0106 00-1
Filter, APU engine.....	0433 00-1
Filter, engine oil.....	0104 00-1
Filter, primary fuel.....	0127 00-1
Filter, transmission oil.....	0266 00-1
Filter elements, fuel/water separator.....	0128 00-1
Filter unit, fuel/water separator.....	0129 00-1
Filter unit, M8A3 gas/particulate.....	0016 00-1
Filter unit system, M8A3.....	0439 00-1
Final drive hub	0283 00-1
Final drive sprocket.....	0283 00-1
Fire extinguisher cylinder controls.....	0401 00-1
Fire extinguisher cylinders	0400 00-1
Fire extinguisher interlock switch assembly	0165 00-1
Fire extinguisher system	0011 00-1
Fire extinguisher system controls.....	0402 00-1
Fire extinguisher system lines.....	0403 00-1
Fire extinguisher system linkages	0402 00-1
Fire extinguisher system nozzles	0403 00-1
Fittings, manifold heater.....	0136 00-1
Flasher assembly and related parts	0452 00-1
Flasher light case.....	0388 00-1
Flasher system panel.....	0160 00-1
Flexible shafts and fittings, mechanical speedometer	0356 00-1
Flexible shafts and fittings, mechanical tachometer	0356 00-1
Floor and light mount plate	0307 00-1

INDEX-Continued

<u>Subject</u>	<u>WP Sequence No.-Page No.</u>
Floor plate, center forward	0304 00-1
Floor plate, center rear	0303 00-1
Floor plate, fuel transmitter center left access	0299 00-1
Floor plate, hydraulic line intermediate rear right center	0296 00-1
Floor plate, hydraulic valve forward intermediate right	0308 00-1
Floor plate, hydraulic valve forward right	0288 00-1
Floor plate, intermediate rear left access	0305 00-1
Floor plate, intermediate rear left-center	0302 00-1
Floor plate, intermediate rear left-side	0301 00-1
Floor plate, intermediate rear right	0290 00-1
Floor plate, rear center	0297 00-1
Floor plate, rear intermediate right	0293 00-1
Floor plate, rear intermediate right access	0295 00-1
Floor plate, rear left-side	0300 00-1
Floor plate, rear left-side intermediate	0298 00-1
Floor plate, rear right-side	0291 00-1
Floor plate, right-front access	0286 00-1
Floor plate, right-front rear access	0287 00-1
Floor plate, stowage basket center left	0299 00-1
Floor plate, stowage basket forward intermediate left	0306 00-1
Floor plate, U-35 winch center right	0289 00-1
Fording kit, deep water	0019 00-1
Fording kit, pre-installation procedures for	0465 00-1
Front directional signal lamps	0455 00-1
Front headlight assembly	0175 00-1
Front signal light assembly	0177 00-1
Front subfloor support	0309 00-1
Fuel check valve	0126 00-1
Fuel control valves and ID plates	0125 00-1
Fuel filler tube	0120 00-1
Fuel filter, manifold heater fuel supply	0131 00-1
Fuel filter, personnel heater	0399 00-1
Fuel filter, primary	0127 00-1
Fuel filters, APU engine	0436 00-1
Fuel flow regulator	0419 00-1
Fuel injection pump	0252 00-1
Fuel injector fuel return hose	0119 00-1
Fuel injector tubes and brackets	0114 00-1
Fuel level transmitter	0121 00-1
Fuel lines, manifold heater	0136 00-1
Fuel pump, electric	0116 00-1
Fuel pump, personnel heater	0398 00-1
Fuel pump (gear type) and lines	0118 00-1

INDEX-Continued

<u>Subject</u>	<u>WP Sequence No.-Page No.</u>
Fuel return hose, fuel injector	0119 00-1
Fuel shutoff solenoid	0252 00-1
Fuel shutoff valve assembly	0447 00-1
Fuel supply system	0005 00-1
Fuel tank filler access cover	0319 00-1
Fuel transfer pump	0419 00-1
Fuel transfer pump hoses	0117 00-1
Fuel transmitter center left floor access plate	0299 00-1
Fuel tube assemblies	0446 00-1
Fuel valve lines and fittings	0123 00-1
Fuel/water separator automatic drain system	0130 00-1
Fuel/water separator filter elements	0128 00-1
Fuel/water separator filter unit	0129 00-1
G	
Gage assembly, air cleaner restriction	0138 00-1
Gage panel assembly	0157 00-1
Gage rod, transmission	0269 00-1
Gear type fuel pump	0118 00-1
Generator, engine	0150 00-1
Generator air intake tube	0111 00-1
Generator relay and housing (single voltage), engine and APU	0156 00-1
Grilles, air inlet, center-front	0342 00-1
Grilles, air inlet, left-front	0342 00-1
Groundhop instructions	0099 00-1
Guide bars, transmission	0330 00-1
H	
Hand fire extinguisher brackets	0384 00-1
Hand grenade boxes	0383 00-1
Harnesses, wiring:	
7972352	0213 00-1
10866909	0219 00-1
10866950	0214 00-1
10894548	0235 00-1
10894850-4	0226 00-1
10944744	0196 00-1
10945008	0233 00-1
11671226	0206 00-1
11671324	0225 00-1
11671353	0236 00-1
11671356	0239 00-1
11671420	0203 00-1
11671568	0201 00-1

INDEX-Continued

<u>Subject</u>	<u>WP Sequence No.-Page No.</u>
11671789.....	0223 00-1
11671790.....	0221 00-1
11671791.....	0191 00-1
11671792.....	0189 00-1
11671793.....	0230 00-1
11671795.....	0205 00-1
11671796.....	0218 00-1
11671798.....	0202 00-1
11671799.....	0229 00-1
11671807.....	0195 00-1
11671813.....	0220 00-1
11671816.....	0208 00-1
11672273.....	0216 00-1
11672298-1.....	0254 00-1
11672298-2.....	0254 00-1
11672299.....	0240 00-1
11672315.....	0241 00-1
11672366.....	0237 00-1
11672371.....	0215 00-1
11672373.....	0197 00-1
11672382.....	0242 00-1
11672386.....	0244 00-1
11672387.....	0243 00-1
11672412.....	0224 00-1
11672413.....	0190 00-1
11672415.....	0192 00-1
11672416.....	0207 00-1
11672417.....	0227 00-1
11672466.....	0228 00-1
11684127.....	0245 00-1
12314651.....	0209 00-1
12314745.....	0210 00-1
12322547.....	0204 00-1
12322586.....	0193 00-1
12322587.....	0194 00-1
12322588.....	0222 00-1
12322611.....	0456 00-1
12322612.....	0458 00-1
12322613.....	0457 00-1
12322614.....	0459 00-1
12322615-1.....	0460 00-1
12322615-2.....	0460 00-1
12322648.....	0463 00-1

INDEX-Continued

<u>Subject</u>	<u>WP Sequence No.-Page No.</u>
12322658.....	0464 00-1
12322660.....	0462 00-1
12322668.....	0461 00-1
Headlight assembly, front.....	0175 00-1
Headlight dimmer switch.....	0174 00-1
Heater, personnel.....	0396 00-1
Heater control box.....	0161 00-1
High beam indicator light assembly.....	0182 00-1
Hoist winch brake band adjustment.....	0410 00-1
Hoist winch hose and cable assembly.....	0409 00-1
Hoist winch manual control and linkage.....	0411 00-1
Hoisting boom.....	0012 00-2
Hoisting boom and cylinders.....	0414 00-1
Holdings, machine gun and rifle.....	0383 00-1
Horn, external vehicle warning.....	0169 00-1
Horn, powerplant warning.....	0170 00-1
Hose, fuel injector fuel return.....	0119 00-1
Hose and cable assembly, hoist winch.....	0409 00-1
Hoses, air intake.....	0139 00-1
Hoses, fuel transfer pump.....	0117 00-1
Hoses, main winch.....	0407 00-1
Hoses, spade cylinder.....	0431 00-1
Housing, master relay (dual and single voltage).....	0151 00-1
Hub, final drive.....	0283 00-1
Hub assembly, compensating idler arm assembly.....	0281 00-1
Hub assembly, roadwheel.....	0277 00-1
Hydraulic connecting panel.....	0418 00-1
Hydraulic connections access cover.....	0292 00-1
Hydraulic drain valve and related parts.....	0422 00-1
Hydraulic fittings.....	0417 00-1
Hydraulic fittings, mechanical transmission and hydraulic pump.....	0416 00-1
Hydraulic line intermediate rear right center floor plate.....	0296 00-1
Hydraulic lines.....	0417 00-1
Hydraulic lines, mechanical transmission and hydraulic pump.....	0416 00-1
Hydraulic oil reservoir strainer.....	0424 00-1
Hydraulic reservoir components, external.....	0421 00-1
Hydraulic subplate ID plate.....	0423 00-1
Hydraulic system, main.....	0014 00-1
Hydraulic system oil filter.....	0420 00-1
Hydraulic troubleshooting.....	0021 00-3
Hydraulic valve forward intermediate right floor plate.....	0308 00-1
Hydraulic valve forward right floor plate.....	0288 00-1

INDEX-Continued

<u>Subject</u>	<u>WP Sequence No.-Page No.</u>
I	
ID plate, APU engine crankcase fill-and-level.....	0435 00-1
ID plate, hydraulic subplate.....	0423 00-1
ID plate, mechanical transmission.....	0426 00-1
ID plate, vehicle.....	0395 00-1
ID plates, fuel control valves.....	0125 00-1
Identifiers, cable.....	0255 00-1
Identifiers, plug.....	0255 00-1
Identifiers, receptacle.....	0255 00-1
Identifiers, wire.....	0255 00-1
Idle speed, engine.....	0112 00-1
Idler, compensating.....	0282 00-1
Ignition unit, manifold heater.....	0132 00-1
Indicator, oil level.....	0105 00-1
Infrared power supply.....	0324 00-1
Infrared power supply (single voltage) (10866967), driver's periscope to.....	0249 00-1
Inlet covers, left-side air cleaner.....	0321 00-1
Inlet covers, right-side air cleaner.....	0321 00-1
Inspection, receiving.....	0483 00-1
Inspection during storage.....	0483 00-2
Instruction plate, engine oil filter servicing.....	0103 00-1
Insulation retainer.....	0339 00-1
Interior straps.....	0394 00-1
Interlock switch assembly, fire extinguisher.....	0165 00-1
Intermediate rear left access floor plate.....	0305 00-1
Intermediate rear left-center floor plate.....	0302 00-1
Intermediate rear left-side floor plate.....	0301 00-1
Intermediate rear right floor plate.....	0290 00-1
L	
Launcher system, M239 smoke grenade.....	0017 00-1
Lead assemblies:	
10866881.....	0200 00-1
10866904.....	0186 00-1
10887570.....	0188 00-1
10894546.....	0234 00-1
10911920.....	0217 00-1
10945007.....	0232 00-1
11671227-2.....	0198 00-1
11671227-3.....	0199 00-1
11671357.....	0185 00-1
11671362.....	0211 00-1
11671794.....	0231 00-1
11671811.....	0187 00-1

INDEX-Continued

<u>Subject</u>	<u>WP Sequence No.-Page No.</u>
11672385.....	0246 00-1
11672473-1.....	0247 00-1
11672473-2.....	0248 00-1
12322589.....	0212 00-1
12322604.....	0238 00-1
Left deck air inlet door.....	0345 00-1
Left exhaust doors.....	0346 00-1
Left front track support bracket.....	0280 00-1
Left front track support roller.....	0280 00-1
Left front track support wheel.....	0280 00-1
Left personnel door.....	0318 00-1
Left personnel step assembly.....	0322 00-1
Left side oddment tray.....	0390 00-1
Left stowage compartment door.....	0317 00-1
Left-front air inlet grilles.....	0342 00-1
Left-side air cleaner inlet covers.....	0321 00-1
Lever assembly.....	0370 00-1
Limit valve adjustment, stayline cylinder.....	0415 00-1
Limited storage instructions.....	0483 00-1
Lines, fixed fire extinguisher system.....	0403 00-1
Lines and fittings, fuel valve.....	0123 00-1
Link bearings, compensating idler arm assembly.....	0281 00-1
Linkage roller plates.....	0371 00-1
Linkages, accelerator.....	0363 00-1
Linkages, accelerator, adjustment of.....	0364 00-1
Linkages, accelerator, alignment of.....	0364 00-1
Linkages, fire extinguisher system.....	0402 00-1
Linkages, service brake.....	0365 00-1
Linkages, shifting.....	0361 00-1
Linkages, shifting, alignment of.....	0362 00-1
Linkages, steering.....	0357 00-1
Linkages, steering, alignment of.....	0358 00-1
Links, compensating idler arm assembly.....	0281 00-1
Liquid container brackets.....	0392 00-1
Loading.....	0483 00-2
Location and description of major components.....	0002 00-2
Low pressure switch, mechanical transmission lubrication oil.....	0167 00-1
Lubrication fitting, spade release.....	0430 00-1
Lubrication instructions.....	0097 00-1
Lubrication line, spade cable (manual spade release).....	0429 00-1
Lubrication line, spade release (hydraulic spade release).....	0428 00-1
Lubrication system.....	0004 00-1

INDEX-Continued

<u>Subject</u>	<u>WP Sequence No.-Page No.</u>
M	
M13 decontamination apparatus bracket assembly	0373 00-1
M239 launcher dischargers.....	0443 00-1
M239 launcher power switch box assembly	0442 00-1
M239 launcher stowage boxes.....	0444 00-1
M239 smoke grenade launcher system.....	0017 00-1
M2A2 air purifier.....	0440 00-1
M72 LAW rocket launcher brackets.....	0393 00-1
M8A3 filter unit switch assembly	0441 00-1
M8A3 filter unit system.....	0439 00-1
M8A3 gas/particulate filter unit.....	0016 00-1
Machine gun and rifle holders	0383 00-1
Main hydraulic system	0014 00-1
Main hydraulic system pump.....	0013 00-1
Main switch panel assembly.....	0159 00-1
Main winch brake band adjustment.....	0405 00-1
Main winch cable	0408 00-1
Main winch controls and hoses	0407 00-1
Main winch level winder cylinder adjustment.....	0404 00-1
Main winch manual control and linkage	0406 00-1
Maintenance allocation chart (MAC).....	0488 00-1
Maintenance forms, records, and reports.....	0001 00-2
Maintenance functions.....	0487 00-1
Male cable connector replacement	0257 00-1
Mandatory replacement parts	0491 00-1
Manifold air induction heater system	0006 00-1
Manifold clamps, exhaust	0142 00-1
Manifold heater fuel lines and fittings	0136 00-1
Manifold heater fuel return solenoid valve.....	0133 00-1
Manifold heater fuel supply fuel filter	0131 00-1
Manifold heater fuel supply solenoid valve.....	0131 00-1
Manifold heater ignition unit.....	0132 00-1
Manifold heater nozzle assembly.....	0134 00-1
Manifold heater operation check.....	0135 00-1
Manual control and linkage, hoist winch.....	0411 00-1
Manual control and linkage, main winch.....	0406 00-1
Manufactured items.....	0484 00-1
Markings, painting and restenciling.....	0002 00-22
Master relay housing (dual and single voltage).....	0151 00-1
Mechanic's cab-top door.....	0314 00-1
Mechanic's periscope block.....	0327 00-1
Mechanic's periscope vision prisms.....	0327 00-1
Mechanic's seat assembly.....	0352 00-1

INDEX–Continued

<u>Subject</u>	<u>WP Sequence No.-Page No.</u>
Mechanical speedometer flexible shafts and fittings.....	0356 00-1
Mechanical tachometer flexible shafts and fittings.....	0356 00-1
Mechanical transmission	0013 00-1
Mechanical transmission breather and oil level gage	0427 00-1
Mechanical transmission ID plate.....	0426 00-1
Mechanical transmission lubrication oil low pressure switch	0167 00-1
Mechanical troubleshooting.....	0021 00-2
Mirror and mount assemblies.....	0454 00-1
Mount plate, floor and light.....	0307 00-1
Mounting bracket, engine.....	0101 00-1
N	
Neutral safety switch.....	0163 00-1
Night viewer light.....	0164 00-1
Night viewer mount.....	0323 00-1
Night viewer switch	0164 00-1
Nomenclature cross-reference	0001 00-3
Nonslip walkway coating.....	0348 00-1
Nozzle assembly, manifold heater.....	0134 00-1
Nozzles, fixed fire extinguisher system	0403 00-1
O	
Oddment tray, left side	0390 00-1
Oil cooler lines, engine.....	0149 00-1
Oil cooler lines, transmission.....	0271 00-1
Oil cooler pressure-actuated bypass valve.....	0110 00-1
Oil coolers and screens, engine	0148 00-1
Oil filler tube and related parts.....	0106 00-1
Oil filter, APU engine.....	0437 00-1
Oil filter, engine	0104 00-1
Oil filter, hydraulic system.....	0420 00-1
Oil filter, transmission.....	0266 00-1
Oil level gage	0427 00-1
Oil level indicator and related parts.....	0105 00-1
Oil pan	0107 00-1
Oil pan drain tubes, cylinder head	0109 00-1
Oil temperature transmitter and switch housing assembly.....	0425 00-1
Operation check, manifold heater	0135 00-1
Optional engine deck.....	0336 00-1
Optional engine deck base.....	0336 00-1
Output reduction drives, transmission.....	0273 00-1
Oxygen tank strap assemblies.....	0379 00-1

INDEX-Continued

<u>Subject</u>	<u>WP Sequence No.-Page No.</u>
P	
Painting and restenciling markings.....	0002 00-22
Panel, electrical accessories.....	0158 00-1
Panel, flasher system.....	0160 00-1
Panel assembly, gage.....	0157 00-1
Panel assembly, main switch.....	0159 00-1
Passive night viewer light, driver's	0164 00-1
Passive night viewer mount.....	0323 00-1
Passive night viewer stowage box.....	0383 00-1
Passive night viewer switch, driver's	0164 00-1
Periscope block, mechanic's.....	0327 00-1
Periscope blocks, driver's.....	0326 00-1
Periscope blocks, rigger's.....	0326 00-1
Periscope quick-release mount (infrared night viewer).....	0325 00-1
Periscope vision prisms, driver's.....	0326 00-1
Periscope vision prisms, mechanic's.....	0327 00-1
Periscope vision prisms, rigger's.....	0326 00-1
Personnel heater.....	0396 00-1
Personnel heater air intake water deflector	0397 00-1
Personnel heater fuel filter	0399 00-1
Personnel heater fuel pump.....	0398 00-1
Personnel seat assemblies.....	0349 00-1
Pioneer tool set bracket.....	0380 00-1
Plate assembly	0369 00-1
Plug identifiers.....	0255 00-1
PMCS.....	0096 00-1
PMCS general procedures.....	0095 00-1
PMCS special intervals.....	0095 00-2
Power control lever switch.....	0166 00-1
Power supply, infrared.....	0324 00-1
Powerplant.....	0003 00-1
Powerplant replacement.....	0098 00-1
Powerplant warning horn	0170 00-1
Pre-installation procedures for fording kit.....	0465 00-1
Preparation for shipment.....	0483 00-1
Preparation for storage or shipment.....	0001 00-3
Preservatives.....	0483 00-1
Primary fuel filter.....	0127 00-1
Processing unpacked equipment.....	0094 00-2
Pump, fuel injection.....	0252 00-1
Pump, fuel transfer.....	0419 00-1
Pump, main hydraulic system	0013 00-1
Purge pump/handle/lever.....	0122 00-1

INDEX-Continued

<u>Subject</u>	<u>WP Sequence No.-Page No.</u>
R	
Radio interference suppression	0020 00-1
Rail carrier limitation accommodations.....	0483 00-3
Rail clearance, vehicle size reduction to accommodate	0483 00-2
Rear center floor plate.....	0297 00-1
Rear intermediate right access cover.....	0294 00-1
Rear intermediate right access floor plate	0295 00-1
Rear intermediate right floor plate	0293 00-1
Rear left-side floor plate.....	0300 00-1
Rear left-side intermediate floor plate.....	0298 00-1
Rear mount and base assembly, engine.....	0102 00-1
Rear right-side floor plate.....	0291 00-1
Rear subfloor support	0310 00-1
Receiving inspection.....	0483 00-1
Receptacle identifiers	0255 00-1
Reflectors and mounting plates.....	0451 00-1
Regulator, fuel flow	0419 00-1
Regulator, voltage (dual voltage) (11672403).....	0154 00-1
Regulator, voltage (single voltage) (11659111-1).....	0155 00-1
Relay box assembly, switching (single voltage regulator).....	0162 00-1
Removal from limited storage.....	0483 00-2
Repair parts.....	0001 00-4
Reservoir strainer, hydraulic oil.....	0424 00-1
Retainer, 10-ton snatch block.....	0377 00-1
Retainer, 25-ton snatch block.....	0378 00-1
Retainer, insulation.....	0339 00-1
Retainers, track link	0377 00-1
Rigger's cab-top door.....	0315 00-1
Rigger's fixed spotlight.....	0181 00-1
Rigger's periscope blocks.....	0326 00-1
Rigger's periscope vision prisms.....	0326 00-1
Rigger's seat assembly.....	0351 00-1
Rigger's service light.....	0176 00-1
Rigger's service light switch	0173 00-1
Rigger's vision prisms.....	0326 00-1
Right and left upper covers, engine	0115 00-1
Right deck air inlet door.....	0345 00-1
Right engine deck door	0337 00-1
Right exhaust doors.....	0346 00-1
Right personnel door.....	0318 00-1
Right personnel step assembly	0322 00-1
Right stowage compartment door	0317 00-1
Right-front access floor plate.....	0286 00-1

INDEX-Continued

<u>Subject</u>	<u>WP Sequence No.-Page No.</u>
Right-front floor plate rear access	0287 00-1
Right-side air cleaner inlet covers	0321 00-1
Roadwheel arm assembly.....	0276 00-1
Roadwheel attaching hardware	0381 00-1
Roadwheel hub assembly	0277 00-1
Roadwheel support housing	0278 00-1
Roadwheels.....	0274 00-1
Rocket ammunition stowage box	0385 00-1
Roller bracket assembly, transmission.....	0267 00-1
Roller plates, linkage.....	0371 00-1
S	
Saddle seals, transmission	0272 00-1
Safety switch, neutral.....	0163 00-1
Sampling valve, transmission	0271 00-1
Seat assembly, commander's.....	0350 00-1
Seat assembly, driver's.....	0352 00-1
Seat assembly, mechanic's.....	0352 00-1
Seat assembly, personnel.....	0349 00-1
Seat assembly, rigger's.....	0351 00-1
Sending unit, engine oil pressure	0171 00-1
Sending unit, engine oil temperature.....	0171 00-1
Sending unit, transmission oil pressure.....	0168 00-1
Sending unit, transmission oil temperature	0168 00-1
Service brake controls	0365 00-1
Service brake linkages.....	0365 00-1
Service light, rigger's.....	0176 00-1
Service light switch, rigger's.....	0173 00-1
Shield, wire rope.....	0412 00-1
Shifting controls	0361 00-1
Shifting controls, alignment of.....	0362 00-1
Shifting linkages.....	0361 00-1
Shifting linkages, alignment of.....	0362 00-1
Shock absorbers.....	0285 00-1
Shroud seals, engine cooling fan	0143 00-1
Side tow bar, bracket assemblies	0375 00-1
Side tow cables, bracket assemblies.....	0375 00-1
Signal light assembly, front.....	0177 00-1
Solenoid, fuel shutoff.....	0252 00-1
Solenoid relay, engine starter.....	0152 00-1
Solenoid speed, engine.....	0113 00-1
Solenoid valve assemblies and bracket.....	0445 00-1
Solenoid valve, fuel/water separator automatic drain system.....	0130 00-1
Solenoid valve, manifold heater fuel return.....	0133 00-1

INDEX-Continued

<u>Subject</u>	<u>WP Sequence No.-Page No.</u>
Solenoid valve, manifold heater fuel supply.....	0131 00-1
Spade assembly.....	0012 00-1
Spade cable lubrication line (manual spade release).....	0429 00-1
Spade cylinder hoses.....	0431 00-1
Spade release and lubrication line (hydraulic spade release).....	0428 00-1
Spade release lubrication fitting.....	0430 00-1
Spare headlight mount base assembly.....	0178 00-1
Special intervals, PMCS.....	0095 00-2
Special tools, TMDE, and support equipment.....	0001 00-4
Speed adjustment, engine idle.....	0112 00-1
Speed adjustment, engine solenoid.....	0113 00-1
Speedometer flexible shafts and fittings, mechanical.....	0356 00-1
Spotlight, fixed.....	0181 00-1
Sprocket, final drive.....	0283 00-1
Sprocket attaching hardware.....	0381 00-1
Standard form.....	0486 00-1
Starter, engine.....	0152 00-1
Starter bracket, engine.....	0152 00-1
Stayline cylinder limit valve adjustment.....	0415 00-1
STE/ICE-R vehicle troubleshooting.....	0040 00-1
Steering control assembly.....	0359 00-1
Steering control housing assembly.....	0360 00-1
Steering controls, alignment of.....	0358 00-1
Steering controls and linkages.....	0357 00-1
Steering linkages, alignment of.....	0358 00-1
Step assembly, left personnel.....	0322 00-1
Step assembly, right personnel.....	0322 00-1
Stoplight switch.....	0172 00-1
Stoplight-taillight assemblies.....	0179 00-1
Stoptlights and covers.....	0450 00-1
Storage, inspection during.....	0483 00-2
Stowage basket center left floor plate.....	0299 00-1
Stowage basket forward intermediate left floor plate.....	0306 00-1
Stowage baskets.....	0382 00-1
Stowage box, passive night viewer.....	0383 00-1
Stowage box, rocket ammunition.....	0385 00-1
Stowage boxes, M239 launcher.....	0444 00-1
Stowage compartment door, left.....	0317 00-1
Stowage compartment door, right.....	0317 00-1
Stowage strap, caliber .50.....	0391 00-1
Straps, exterior.....	0394 00-1
Straps, interior.....	0394 00-1
Subfloor support, center.....	0310 00-1

INDEX-Continued

<u>Subject</u>	<u>WP Sequence No.-Page No.</u>
Subfloor support, front	0309 00-1
Subfloor support, rear	0310 00-1
Support, engine generator.....	0150 00-1
Support bracket, track.....	0279 00-1
Support bracket, track, left front.....	0280 00-1
Support housing, roadwheel.....	0278 00-1
Support roller, track.....	0279 00-1
Support roller, track, left front.....	0280 00-1
Support wheel, track.....	0279 00-1
Support wheel, track, left front.....	0280 00-1
Support wheel attaching hardware.....	0381 00-1
Suspension systems.....	0010 00-1
Switch assembly, APU pressure	0432 00-1
Switch assembly, M8A3 filter unit.....	0441 00-1
Switch box assembly, power, M239 launcher	0442 00-1
Switch panel assembly, main.....	0159 00-1
Switching relay box assembly (single voltage reguator).....	0162 00-1

T

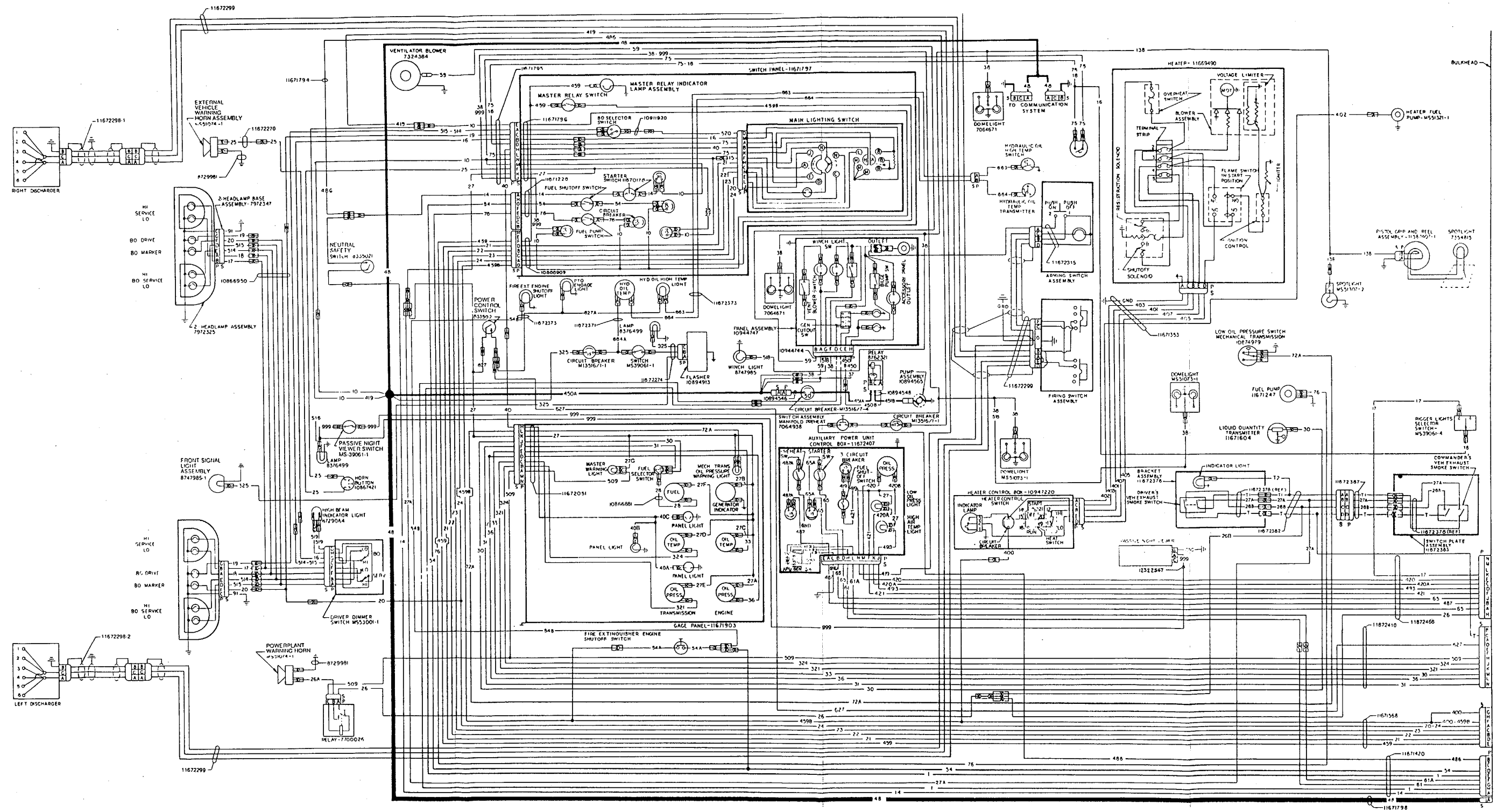
Tachometer flexible shafts and fittings, mechanical.....	0356 00-1
Taillight assemblies.....	0179 00-1
Tarpaulin tray.....	0376 00-1
Technical bulletins.....	0486 00-2
Technical manuals.....	0486 00-2
Temperature transmitter, oil.....	0425 00-1
Terminal, battery.....	0153 00-1
Terminal-type cable connector replacement.....	0256 00-1
Tightening metal fasteners.....	0485 00-5
Tool ID list.....	0490 00-1
Toolbox rack.....	0389 00-1
Tools and test equipment.....	0488 00-1
Torque converter drain plugs, transmission.....	0268 00-1
Torque limits.....	0485 00-2
Torsion bar.....	0275 00-1
Torsion bar anchors.....	0275 00-1
Tow bar, side, bracket assemblies for.....	0375 00-1
Tow bar assembly.....	0374 00-1
Tow bar mounting brackets.....	0374 00-1
Tow cables, side, bracket assemblies for.....	0375 00-1
Tow chain mounting brackets.....	0374 00-1
Towing pintle and mount.....	0328 00-1
Towing pintle mount.....	0328 00-1
Track link retainers.....	0377 00-1
Track support bracket.....	0279 00-1

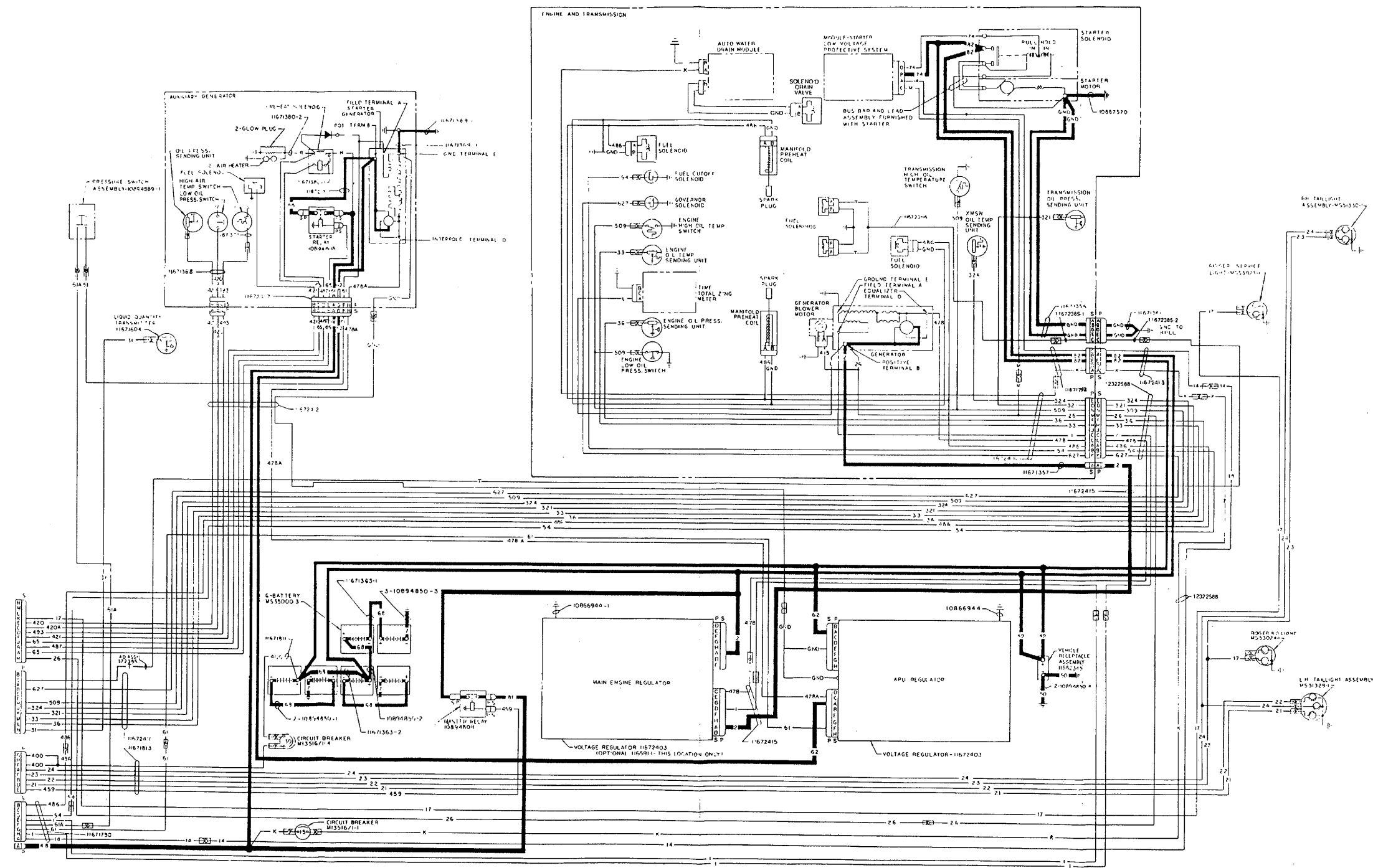
INDEX-Continued

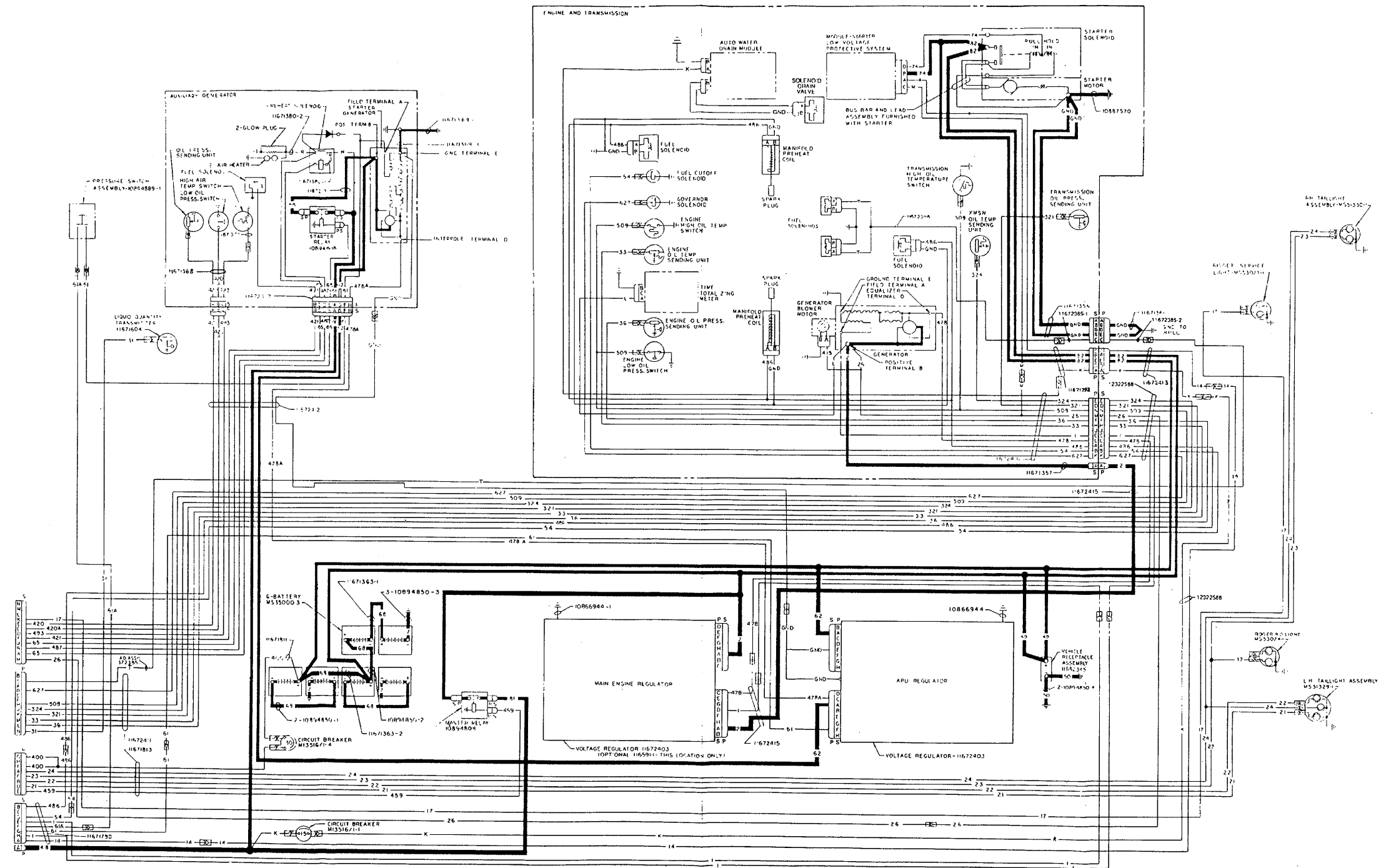
<u>Subject</u>	<u>WP Sequence No.-Page No.</u>
Track support bracket, left front.....	0280 00-1
Track support roller.....	0279 00-1
Track support roller, left front.....	0280 00-1
Track support wheel.....	0279 00-1
Track support wheel, left front.....	0280 00-1
Track wrench bracket.....	0386 00-1
Tracks and suspension systems.....	0010 00-1
Transmission, mechanical.....	0013 00-1
Transmission access doors, engine.....	0340 00-1
Transmission actuating brake air valve linkage.....	0265 00-1
Transmission and output reduction drives.....	0009 00-1
Transmission breather assembly and line.....	0270 00-1
Transmission drive couplings.....	0273 00-1
Transmission gage rod.....	0269 00-1
Transmission guide bars.....	0330 00-1
Transmission oil cooler lines.....	0271 00-1
Transmission oil filter.....	0266 00-1
Transmission oil pressure sending unit.....	0168 00-1
Transmission oil temperature sending unit.....	0168 00-1
Transmission output reduction drives.....	0273 00-1
Transmission roller bracket assembly.....	0267 00-1
Transmission saddle seals.....	0272 00-1
Transmission sampling valve.....	0271 00-1
Transmission torque converter drain plugs.....	0268 00-1
Transmitter, fuel level.....	0121 00-1
Transmitter, oil temperature.....	0425 00-1
Transportability data.....	0483 00-6
Trays, battery.....	0153 00-1
Troublelight assembly.....	0180 00-1
Troubleshooting, electrical.....	0021 00-4
Troubleshooting, hydraulic.....	0021 00-3
Troubleshooting, mechanical.....	0021 00-2
Typical female-type panel mounting receptacle.....	0259 00-1
Typical female-type panel mounting receptacle (with ridged locking nut).....	0261 00-1
Typical female-type plug.....	0263 00-1
Typical male-type panel mounting receptacle.....	0260 00-1
Typical male-type panel mounting receptacle (with ridged locking nut).....	0262 00-1
Typical male-type plug.....	0264 00-1
U	
U-35 winch center right floor plate.....	0289 00-1
Unpacked equipment, checking.....	0094 00-2
Unpacked equipment, processing.....	0094 00-2
Upper covers, engine right and left.....	0115 00-1

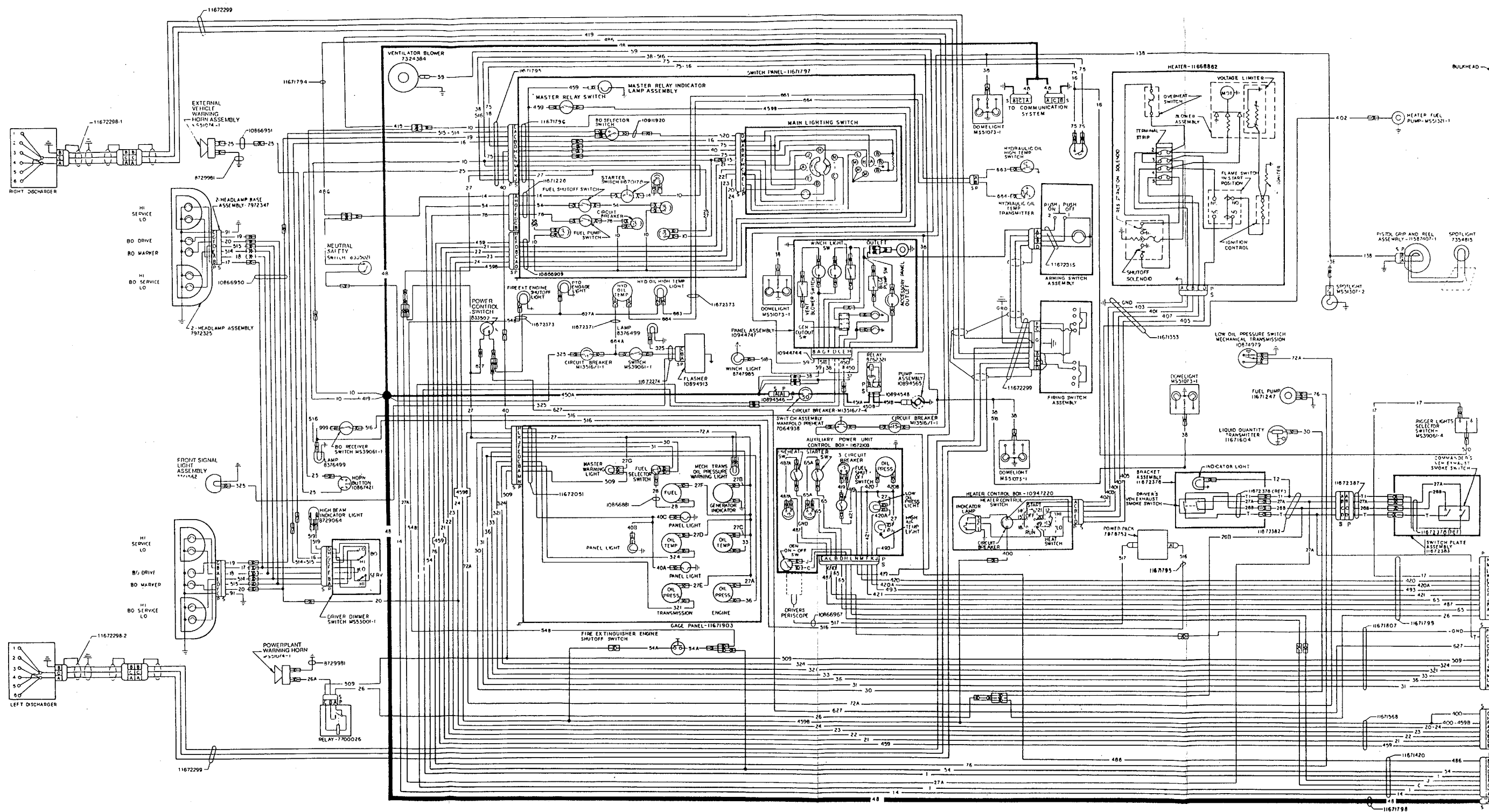
INDEX-Continued

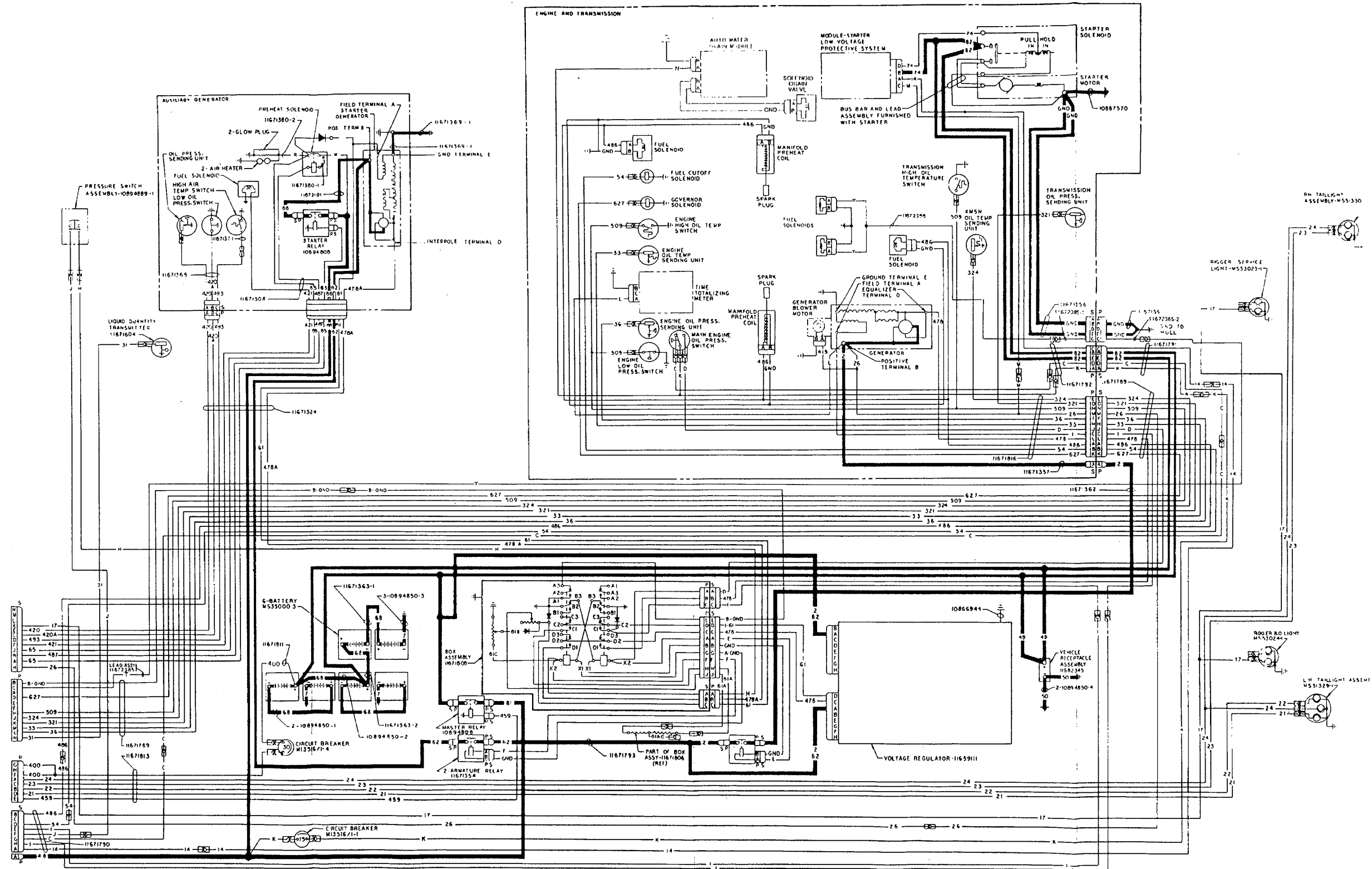
<u>Subject</u>	<u>WP Sequence No.-Page No.</u>
V	
Valve controls, drain.....	0354 00-1
Valves, drain.....	0353 00-1
Vehicle ID plate.....	0395 00-1
Vehicle size reduction to accomodate rail clearance.....	0483 00-2
Vehicle warning horn, external.....	0169 00-1
Ventilator blower assembly.....	0250 00-1
Vertical shaft oil seals, engine cooling fan.....	0147 00-1
Vise.....	0372 00-1
Vise mounting adapter plate.....	0372 00-1
Vise mounting hardware.....	0372 00-1
Vision prisms, driver's.....	0326 00-1
Vision prisms, rigger's.....	0326 00-1
Voltage regulator (dual voltage) (11672403).....	0154 00-1
Voltage regulator (single voltage) (11659111-1).....	0155 00-1
W	
Walkway coating, nonslip.....	0348 00-1
Warning horn, external vehicle.....	0169 00-1
Warning horn, powerplant.....	0170 00-1
Wheels, compensating idler arm assembly.....	0281 00-1
Winch illumination lamp assembly.....	0184 00-1
Winches, spade assembly, and hoisting boom.....	0012 00-1
Wire identifiers.....	0255 00-1
Wire rope roller access door.....	0316 00-1
Wire rope roller bearing assembly.....	0413 00-1
Wire rope roller housing.....	0413 00-1
Wire rope shield.....	0412 00-1











RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS						Use Part II (reverse) for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).	DATE Date you filled out this form.
For use of this form, see AR 25-30; the proponent agency is ODISC4.							
TO: (Forward to proponent of publication or form) (Include ZIP Code) AMSTALC-LMIT / TECH PUBS, TACOM-RI 1 Rock Island Arsenal Rock Island, IL 61299-7630						FROM: (Activity and location) (Include ZIP Code) Your mailing address	
PART I – ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS							
PUBLICATION/FORM NUMBER TM 9-2350-256-20-2				DATE 27 June 2005	TITLE Recovery Vehicle, Full Tracked: Medium, M88A1		
ITEM NO.	PAGE NO.	PARA-GRAPH	LINE NO. *	FIGURE NO.	TABLE NO.	RECOMMENDED CHANGES AND REASON (Provide exact wording of recommended changes, if possible).	
	0004 00-2	4-7				Wrong POC is listed. <div style="border: 1px solid black; padding: 20px; text-align: center; font-size: 48px; font-weight: bold; transform: rotate(-10deg);">SAMPLE</div>	
<i>*Reference to line numbers within the paragraph or subparagraph.</i>							
TYPED NAME, GRADE OR TITLE Your Name				TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION		SIGNATURE Your Signature	

TO: <i>(Forward direct to addressee listed in publication)</i> AMSTALC-LMIT / TECH PUBS, TACOM-RI 1 Rock Island Arsenal Rock Island, IL 61299-7630	FROM: <i>(Activity and location) (Include ZIP Code)</i> Your address	DATE Date you filled out this form
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PART II – REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

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PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION

PART III – REMARKS *(Any general remarks or recommendations, or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed.)*

TYPED NAME, GRADE OR TITLE Your Name	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE Your Signature
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By Order of the Secretary of the Army:

PETER J. SCHOOMAKER
General, United States Army
Chief of Staff

Official:



SANDRA R. RILEY
Administrative Assistant to the
Secretary of the Army
0516402

DISTRIBUTION: To be distributed in accordance with the initial distribution requirements for IDN: 370945, requirements for TM 9-2350-256-20-2.

The Metric System and Equivalents

Linear Measure

1 centimeter = 10 millimeters = .39 inch
 1 decimeter = 10 centimeters = 3.94 inches
 1 meter = 10 decimeters = 39.37 inches
 1 decameter = 10 meters = 32.8 feet
 1 hectometer = 10 decameters = 328.08 feet
 1 kilometer = 10 hectometers = 3,280.8 feet

Weights

1 centigram = 10 milligrams = .15 grain
 1 decigram = 10 centigrams = 1.54 grains
 1 gram = 10 decigrams = .035 ounce
 1 decagram = 10 grams = .35 ounce
 1 hectogram = 10 decagrams = 3.52 ounces
 1 kilogram = 10 hectograms = 2.2 pounds
 1 quintal = 100 kilograms = 220.46 pounds
 1 metric ton = 10 quintals = 1.1 short tons

Liquid Measure

1 centiliter = 10 milliliters = .34 fl. ounce
 1 deciliter = 10 centiliters = 3.38 fl. ounces
 1 liter = 10 deciliters = 33.81 fl. ounces
 1 dekaliters = 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 = .155 sq. inch
 1 sq. decimeter = 100 sq. centimeters = 15.5 sq. inches
 1 sq. meter (centare) = 100 sq. decimeters = 10.76 sq. feet
 1 sq. decameter (are) = 100 sq. meters = 1,076.4 sq. feet
 1 sq. hectometer (hectare) = 100 sq. decameters = 2.47 acres
 1 sq. kilometer = 100 sq. hectometers = .386 sq. mile

Cubic Measure

1 cu. centimeter = 1000 cu. millimeters = .06 cu. inch
 1 cu. decimeter = 1000 cu. centimeters = 61.02 cu. inches
 1 cu. meter = 1000 cu. decimeters = 35.31 cu. feet

Approximate Conversion Factors

<i>To change</i>	<i>To</i>	<i>Multiply by</i>	<i>To change</i>	<i>To</i>	<i>Multiply by</i>
inches	centimeters	2.540	ounce-inches	Newton-meters	.007062
feet	meters	.305	centimeters	inches	.394
yards	meters	.914	meters	feet	3.280
miles	kilometers	1.609	meters	yards	1.094
square inches	square centimeters	6.451	kilometers	miles	.621
square feet	square meters	.093	square centimeters	square inches	.155
square yards	square meters	.836	square meters	square feet	10.764
square miles	square kilometers	2.590	square meters	square yards	1.196
acres	square hectometers	.405	square kilometers	square miles	.386
cubic feet	cubic meters	.028	square hectometers	acres	2.471
cubic yards	cubic meters	.765	cubic meters	cubic feet	35.315
fluid ounces	milliliters	29.573	cubic meters	cubic yards	1.308
pints	liters	.473	milliliters	fluid ounces	.034
quarts	liters	.946	liters	pints	2.113
gallons	liters	3.785	liters	quarts	1.057
ounces	grams	28.349	liters	gallons	.264
pounds	kilograms	.454	grams	ounces	.035
short tons	metric tons	.907	kilograms	pounds	2.205
pound-feet	Newton-meters	1.356	metric tons	short tons	1.102
pound-inches	Newton-meters	.11296			

Temperature (Exact)

°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C
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PIN: 080212-000