

ARMY TM 9-2320-333-10-2 AIR FORCE TO 36A12-1C-1158-1-2

TECHNICAL MANUAL OPERATOR MANUAL FOR

M1083A1P2 SERIES 5 TON, 6X6 MEDIUM TACTICAL VEHICLES (MTV)
TRK, CAR, LWB, M1085A1P2, W/O WN: NSN 2320-01-552-7773 (EIC BU3)
TRK, CAR, LWB, M1085A1P2, W/WN: NSN 2320-01-552-7770 (EIC BU4)
TRK, CAR, M1084A1P2, NSN 2320-01-552-7739 (EIC BU9)
TRK, CAR, M1083A1P2, W/WN: NSN 2320-01-549-8565 (EIC BUS)
TRK, CAR, M1083A1P2, W/O WN: NSN 2320-01-549-8610 (EIC BUT)
TRK, CAR, LWB, M1086A1P2, W/O WN: NSN 2320-01-552-7780 (EIC BUZ)
TRK, EX. VAN, M1087A1P2, NSN 2320-01-552-7781 (EIC BUY)
TRK, 10 TON DUMP, M1157A1P2, W/WN: NSN 2320-01-552-7782 (EIC BUX)
TRK, 10 TON DUMP, M1157A1P2, W/O WN: NSN 2320-01-552-7787 (EIC BUW)
TRK, TRACTOR, M1088A1P2, W/O WN: NSN 2320-01-552-7759 (EIC BU7)
TRK, TRACTOR, M1088A1P2, W/WN: NSN 2320-01-552-7753 (EIC BU8)

TM 9-2320-333-10-1, TM 9-2320-333-10-2, and TM 9-2320-333-10-3 dated 10 January 2014, together supersede TM 9-2320-333-10-1 and TM 9-2320-333-10-2 dated 20 January 2010, including all changes.

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**Headquarters, Departments of the Army and Air Force
10 JANUARY 2014**

WARNING SUMMARY

This section contains general safety and hazardous materials warnings that must be understood and applied during operation and maintenance of this equipment. Failure to observe these precautions could result in serious injury or death to personnel.

FIRST AID DATA

First aid is the emergency care given to the sick, injured, or wounded before being treated by medical personnel. First aid data can be found in FM 4-25.11 (Volume 3, WP 0356). This manual contains procedures for all types of casualties and the measures described are for use by both male and female service members. Service members may be able to save a life, prevent permanent disability, or reduce long periods of hospitalization by knowing WHAT to do, WHAT NOT to do, and WHEN to seek medical assistance.

EXPLANATION OF WARNING ICONS



CHEMICAL - Drops of liquid on hand shows that the material will cause burns or irritation to human skin or tissue.



CRYOGENIC - Hand in block of ice shows that the material is extremely cold and can injure human skin or tissue.



ELECTRICAL - Electrical wire to arm with electricity symbol running through human body shows that shock hazard is present.



EXPLOSION - Rapidly expanding symbol shows that the material may explode if subjected to high temperatures, sources of ignition or high pressure.



EYE PROTECTION - Person with goggles shows that the material will injure the eyes.

WARNING SUMMARY - Continued

EXPLANATION OF WARNING ICONS - Continued



FALLING PARTS - Arrow bouncing off human shoulder and head shows that falling parts present a danger to life or limb.



FLYING PARTICLES - Arrows bouncing off face shows that particles flying through the air will harm face.



FLYING PARTICLES - Arrows bouncing off face with face shield shows that particles flying through the air will harm face.



HEAVY OBJECT - Human figure stooping over heavy object shows physical injury potential from improper lifting technique.



HEAVY PARTS - Foot with heavy object on top shows that heavy parts can crush and harm.



HEAVY PARTS - Heavy object on human figure shows that heavy parts present a danger to life or limb.



HEAVY PARTS - Heavy object pinning human figure against wall shows that heavy, moving parts present a danger to life or limb.

WARNING SUMMARY - Continued

EXPLANATION OF WARNING ICONS - Continued



HOT AREA - Hand over object radiating heat shows that part is hot and can burn.



MOVING OBJECT - Human figure with an arm caught between gears shows that the moving parts of the equipment present a danger to life or limb.



MOVING PARTS - Hand with fingers caught between gears shows that the moving parts of the equipment present a danger to life or limb.



RADIATION - Three circular wedges shows that the material emits radioactive energy and can injure human tissue.



SHARP OBJECT - Pointed object in hand shows that a sharp object presents a danger to limb.



SHARP OBJECT - Pointed object on hand shows that a sharp object presents a danger to limb.



VAPOR - Human figure in a cloud shows that material vapors present a danger to life or health.

WARNING SUMMARY - Continued

WARNING

- CARBON MONOXIDE (EXHAUST GAS) CAN KILL YOU.
- Carbon monoxide is a colorless, odorless, DEADLY POISONOUS gas and when breathed deprives body of oxygen and causes SUFFOCATION. Breathing air with carbon monoxide produces symptoms of headache, dizziness, loss of muscular control, a sleepy feeling, and coma. Permanent BRAIN DAMAGE or DEATH can result from severe exposure.
- The following precautions MUST be followed to ensure personnel are safe whenever any type of personnel heater or engine is operated for any purpose. Failure to comply may result in serious injury or death to personnel.
- DO NOT operate heater or engine in an enclosed area without adequate ventilation.
- DO NOT drive any vehicle with inspection plates, cover plates, or engine compartment covers removed unless necessary for maintenance purposes.
- NEVER sleep in a vehicle when the heater is operating or the engine is idling.
- BE ALERT at all times during vehicle operation for exhaust odors and exposure symptoms. If either is present, IMMEDIATELY VENTILATE personnel compartments. Treatment of affected personnel shall be: remove person from area; expose to fresh air; keep warm; DO NOT PERMIT PHYSICAL EXERCISE. If necessary, give cardiopulmonary resuscitation, as described in FM 4-25.11, and get immediate medical attention. Failure to comply may result in serious injury or death to personnel.
- THE BEST DEFENSE AGAINST CARBON MONOXIDE POISONING IS GOOD VENTILATION.

WARNING SUMMARY - Continued

WARNING

Nuclear, Biological, or Chemical (NBC) contaminated air filters must be handled and disposed of only by authorized and trained personnel. The unit commander or senior officer in charge of maintenance personnel must ensure that prescribed protective clothing (FM 3-4) is used, and prescribed safety measures and decontamination procedures (FM 3-11.5 and TB 700-4) are followed. The unit standard operating procedures are responsible for final disposal of contaminated air filters. Failure to comply may result in serious injury or death to personnel.

WARNING



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

WARNING

Pressure in radiator overflow tank must be released before removing radiator cap. Failure to comply may result in injury to personnel.

WARNING

Ensure both doors are securely closed before cab is lowered. Do not allow personnel near cab when cab is being lowered. Cab doors could open. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

Tire weighs approximately 350 lbs (159 kg). If treads of tire catch on tool box during lowering, tire must be raised and pulled away from tool box before continuing to lower. Use extreme care when handling tire. Failure to comply may result in injury to personnel.

WARNING SUMMARY - Continued

WARNING

Hydraulic jack must be placed on flat surface. Do not allow personnel under vehicle when jacking. Failure to comply may result in serious injury or death to personnel.

WARNING

Use caution when inflating tire. Over inflation may cause tire to blow apart. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

Wheels must be chocked and service brakes applied before parking brake is released. Vehicle may roll if wheels are not chocked. Failure to comply may result in serious injury or death to personnel.

WARNING

A fire extinguisher must be available and ready during all cleaning operations involving solvents. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

Ensure tires have correct tire pressure (within ± 3 psi (21 KPA)) for terrain conditions and driving speed. Failure to comply may result in serious injury or death to personnel.

WARNING



Solvent Cleaning Compound (MIL-PRF-680) is a flammable liquid and vapor and may cause eye, skin, and respiratory irritation. Keep away from heat, sparks, and flame. Use only with adequate ventilation. Avoid breathing dust (vapor, mist, gas). Keep container closed. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Failure to comply may result in injury to personnel.

WARNING SUMMARY - Continued

WARNING



If personnel become dizzy while using Solvent Cleaning Compound, immediately get fresh air and medical help. If Solvent Cleaning Compound contacts skin or clothes, flush with cold water. If Solvent Cleaning Compound contacts eyes, immediately flush eyes with water and get medical attention. Failure to comply may result in serious injury or death to personnel.

WARNING



Hydraulic fluid is TOXIC. Wear protective goggles and gloves; use only in well-ventilated area; avoid contact with skin, eyes, and clothes. Skin and clothing that come in contact with hydraulic fluid should be washed immediately. Saturated clothing should be removed immediately. Failure to comply may result in injury to personnel.

WARNING

Lead-acid battery gases can explode. Do not smoke, have open flames, or make sparks around a battery, especially if caps are off. Battery may give off gas which can explode. Failure to comply may result in serious injury or death to personnel.

WARNING



Ensure master power switches on both vehicles are turned to off before connecting NATO power cable. Vehicles must not touch each other. Failure to comply may result in serious injury or death to personnel.

WARNING SUMMARY - Continued

WARNING



Diesel fuel is flammable. Do not fill fuel tank with engine running, while smoking, or when near an open flame. Never overfill fuel tank or spill fuel. If fuel is spilled, clean up immediately. Failure to comply may result in serious injury or death to personnel.

WARNING

Operating in water or mud causes brake linings to get wet and can impair vehicle braking. Brakes must be dried by driving vehicle about 500 ft (153 m), while applying service brakes often. If adequate braking is not restored by drying brakes, notify Field Maintenance. Failure to comply may result in serious injury to personnel or damage to equipment.

WARNING

Rear axle service brakes will not operate if REAR BRAKE AIR pressure gage reads below 75 psi (517 kPa). Rear axle braking will be provided by rear spring brakes for a limited time. Allow greater stopping distance. Discontinue vehicle operation as soon as possible. Failure to comply may result in serious injury or death to personnel.

WARNING

Front axle service brakes will not operate if FRONT BRAKE AIR pressure gage reads below 75 psi (517 kPa). Allow greater stopping distance. Discontinue vehicle operation as soon as possible. Failure to comply may result in serious injury or death to personnel.

WARNING

Do not exceed maximum vehicle speed and grade limitations during normal operations. Do not exceed maximum approach or departure angles or ford water greater than maximum depth. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING SUMMARY - Continued

WARNING

Vehicle speed should be reduced to 5-10 mph (8-16 km/h) during blackout conditions. Failure to comply may result in serious injury or death to personnel.

WARNING

Do not press brake pedal hard three or four times in a row. Air supply will be used up and service brakes will not work until air pressure builds up again. Do not operate vehicle until FRONT and REAR BRAKE AIR pressure reaches at least 100 psi (690 kPa). Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

Avoid driving diagonally across a hill. Vehicle could roll over. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

Do not straddle or drive on sides of sand mounds. Loose sand will not support vehicle on steep slopes. Avoid driving diagonally across a hill. Vehicle may roll over. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

Towing vehicle and disabled vehicle must have parking brakes applied before connecting/disconnecting towbar. Vehicles may roll into each other. Failure to comply may result in serious injury or death to personnel.

WARNING

Personnel must not occupy towed vehicle during towing operation. Towed vehicle may become disconnected while being towed. Failure to comply may result in serious injury or death to personnel.

WARNING

Ground guide is required to guide vehicle backing up. Failure to comply may result in injury to personnel or damage to equipment.

WARNING SUMMARY - Continued

WARNING



Extreme care should be taken when removing radiator cap if temperature gage reads above 180°F (82°C). Contact with steam or hot coolant under pressure may result. Failure to comply may result in injury to personnel.

WARNING

Ensure that engine is shut down before connecting power cable at vehicle NATO connector. Failure to comply may result in injury or death to personnel.

WARNING



Required Light Material Handling Crane (LMHC) settings must be determined prior to raising boom. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

There must always be at least five wraps of cable on 15K Self-Recovery Winch (SRW). If load is applied with less than five wraps of cable on 15K SRW, cable may come loose on drum. Failure to comply may result in serious injury or death to personnel.

WARNING

Light Material Handling Crane (LMHC) boom and winch weighs approximately 110 lbs (50 kgs). Do not attempt to remove LMHC boom and winch without the aid of an assistant. Failure to comply may result in injury to personnel.

WARNING SUMMARY - Continued

WARNING

When operating vehicle in snowy or icy conditions, brake pedal must be applied momentarily, every few miles. This will ensure that brake linings do not become encrusted with snow or ice. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

Do not engage engine exhaust brake feature in icy or slippery conditions. Failure to comply may result in injury to personnel or damage to equipment.

WARNING



Do not disconnect cable from stowage ring until boom is raised to a 30 degree angle. Hook assembly could fall. Failure to comply may result in injury to personnel.

WARNING

Operator must keep control of load at all times. Guide lines must be attached to load. Do not attempt to attach guide lines without the aid of an assistant. Failure to comply may result in serious injury or death to personnel.

WARNING



Area must be clear of personnel before rotating or telescoping boom. Boom must be rotated and telescoped slow enough so Operator has control of load. If Operator cannot see load during operation, operate Light Material Handling Crane (LMHC) with REMOTE CONTROL UNIT. Failure to comply may result in serious injury or death to personnel.

WARNING SUMMARY - Continued

WARNING



To avoid eye injury, eye protection is required when working around batteries. Do not smoke, use open flames, make sparks or create other ignition sources around batteries. If a battery is giving off gases it can explode and cause injury to personnel. Remove all jewelry such as rings, ID tags, watches and bracelets. If jewelry contacts a battery terminal or a tool touching a battery terminal a direct short may occur, resulting in instant heating of the jewelry and tools with damage to equipment and injury to personnel.

WARNING

If vehicle is equipped with B-Kit and engine is running with doors closed, ensure HVAC unit is operating. If HVAC is not operating, oxygen in cab may become depleted. Failure to comply may result in injury or death to personnel.

WARNING

Vehicles equipped with B-Kit handle differently than vehicles not equipped with B-Kit. Take into account increased stopping distance and decreased grade and side-slope capability. Also be aware that vehicles equipped with B-Kit also take longer to accelerate. Failure to comply may result in damage to equipment and injury or death to personnel.

WARNING

If Protecht displays any blink code other than a slow green blink (about one blink per second), this may indicate leaking R134a. Notify Field Maintenance to perform appropriate troubleshooting. Failure to comply may result in injury or death to personnel.

WARNING SUMMARY - Continued

WARNING

If ABS indicator or trailer ABS indicator illuminates the Anti-lock brake system (ABS) Electronic Control unit ECU has detected a fault. The vehicle may have lost ABS ability on one or more wheels. Without ABS, the wheel(s) may lock up during hard braking and cause the operator to lose steering control. Always reduce speeds accordingly for road conditions. Do not exceed 45 mph (72 km/h). Notify Field Maintenance of ABS fault upon completion of mission. Failure to comply may result in injury to personnel and damage to equipment.

WARNING



Ensure line pull does not exceed capacity of 15K Self-Recovery Winch (SRW). Failure to comply may result in serious injury or death to personnel.

WARNING

Keep all personnel clear of area when tension is on cable. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING



Electrical power is still present inside the battery disconnect enclosure with the MBDS in the disconnect (OFF) position. Do not touch the studs of the MBDS. Failure to comply may result in injury or death to personnel.

WARNING SUMMARY - Continued

WARNING

- This procedure requires the use of proper eye and hand protection, use goggles and gloves. Failure to comply may result in injury to personnel.
- MIL-PRF-46176B is a silicone based fluid and is not compatible with DOT 3 or DOT 4 fluids. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

Remove or disconnect batteries prior to performing maintenance in battery area or when working on electrical system. Batteries can explode from a spark. Do not touch the studs of the Manual Battery Disconnect Switch (MBDS). Battery acid is harmful to skin and eyes. Always wear eye protection and rubber gloves when working with batteries. Failure to comply may result in severe electrical shock to personnel or damage to equipment.

WARNING

Never stand against or between tractor tires, stand between tractor and trailer, allow anyone behind trailer during movement, or allow anyone to stand on opposite side of operator during fifth wheel release. Always chock trailer tires before coupling, connect trailer brakes air supply and set trailer brakes before sliding fifth wheel. Use release tool when releasing and engaging slide latch lever. Failure to comply may result in serious injury or death to personnel.

WARNING

Position of assistant must be known at all times. Do not allow anyone to stand between tractor and trailer, behind trailer, or under trailer neck during coupling of tractor to trailer. Failure to comply may result in serious injury or death to personnel.

WARNING SUMMARY - Continued

WARNING

- Heavy objects/loads, such as tools boxes and heavy parts, must always be carried on the floor with the weight distributed as equally as possible between left and right sides of M1079A1 van. Failure to comply decreases the stability of the M1079A1 van and will increase the likelihood of a rollover.
- Heavy cabinets must always be mounted as low as possible with the weight distributed as equally as possible between left and right sides of M1079A1 van. Remember to consider the weight of the items that will be stored in the cabinets. Failure to comply decreases the stability of the M1079A1 van and will increase the likelihood of a rollover.
- Always keep in mind, when placing items inside the M1079A1 van, that heavier items must always be positioned between left and right sides of M1079A1 van. Failure to comply decreases the stability of the M1079A1 van and will increase the likelihood of a rollover which may result in injury or death to personnel.

WARNING SUMMARY - Continued

WARNING

- Do not "daisy chain" van bodies (wiring two or more van bodies in series). Cables can become overloaded very quickly, get hot and burn through. Failure to comply may result in serious injury or death to personnel or damage to equipment.
- The 100 amp cable provided with van body is to be used for power source (100 amp input) only. The 100 amp male connector will fit into the 50 amp output connector of the van body but will not lock into place, increasing the possibility of arcing. Failure to comply may result in serious injury or death to personnel or damage to equipment.
- When connecting to an outside power source to power van body only ground one, never both at the same time. Preferred grounding method would be at the power source, i.e. generator, shop power. Failure to comply may result in serious injury or death to personnel or damage to equipment.
- Ground rod must be driven into ground 18-24 in. (46-61 cm). Failure to comply may result in serious injury or death to personnel or damage to equipment.
- Ensure that ground cable terminal makes good metal-to-metal contact with bare metal on van body. If required, scrape contact area clean of dirt, paint, or rust. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

- Van body weighs approximately 10,000 lbs (4536 kgs) empty. Do not attempt to lift or move van body without the aid of a suitable lifting device. Failure to comply may result in injury or death to personnel.
- Guide ropes must be attached at opposite corners of van body to aid in controlling van body during installation. Failure to comply may result in serious injury or death to personnel.
- Center of gravity will change depending on equipment installed in van body. Ensure that van body lifts level by attaching and adjusting a lifting device. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING SUMMARY - Continued

WARNING

The payload in a fully loaded M1157A1P2 10 Ton Dump Truck adds significant weight to the vehicle. The additional weight and distribution of the payload affects vehicle handling. Allow for greater stopping distances in a loaded vehicle. Avoid driving loaded vehicle on side slopes of hills as payload can shift and cause rollover. Failure to comply may result in serious injury or death to personnel and damage to equipment.

WARNING

- Ladder is not secure at pivot point and may slip out of mount. Use two hands to lower ladder. Failure to comply may result in injury to personnel.
- Bottom step of ladder may slide down while lowering. Keep personnel clear of ladder path. Failure to comply may result in injury to personnel.

WARNING

Tailgate weighs approximately 360 lbs. (163 kgs). Use care when handling. A suitable lifting device is required to lower or raise tailgate. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

- Ensure no one is behind tailgate before dump body is raised. Failure to comply may result in serious injury or death to personnel.
- Only perform the following two steps if tailgate is pinned at the top. Performing the next two steps without the tailgate pinned at the top will cause tailgate to fall off vehicle. Failure to comply may result in serious injury or death to personnel.

WARNING

Dump body must be supported by maintenance legs at any time that maintenance is performed with dump body up. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING SUMMARY - Continued

WARNING



Assistant must stand clear when dump body is being lowered. Failure to comply may result in injury to personnel.

WARNING

Use caution when lowering or raising dump boarding steps. A pinch hazard exists on the step side of the retaining pin. Failure to comply may result in injury to personnel.

WARNING

Remove any objects that may interfere with the successful lowering of the dump body. Clear personnel from dump body area when operating the manual hydraulic bypass. Failure to comply may result in serious injury to personnel or death.

LIST OF EFFECTIVE PAGES/WORK PACKAGES

NOTE: TM 9-2320-333-10-1, TM 9-2320-333-10-2, and TM 9-2320-333-10-3 dated 10 January 2014, together supersede TM 9-2320-333-10-1 and TM 9-2320-333-10-2 dated 20 January 2010, including all changes.

Date of issue for the original manual is:

Original 10 January 2014

TOTAL NUMBER OF VOLUMES IS 3, TOTAL NUMBER OF PAGES FOR FRONT AND REAR MATTER IS 82, AND TOTAL NUMBER OF WORK PACKAGES IS 283 CONSISTING OF THE FOLLOWING:

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**HEADQUARTERS
DEPARTMENTS OF THE ARMY AND AIR FORCE
WASHINGTON, D.C., 10 JANUARY 2014**

**TECHNICAL MANUAL
OPERATOR MANUAL FOR**

M1083A1P2 SERIES 5 TON, 6X6 MEDIUM TACTICAL VEHICLES (MTV)
TRK, CAR, LWB, M1085A1P2, W/O WN: NSN 2320-01-552-7773 (EIC BU3)
TRK, CAR, LWB, M1085A1P2, W/WN: NSN 2320-01-552-7770 (EIC BU4)
 TRK, CAR, M1084A1P2, NSN 2320-01-552-7739 (EIC BU9)
 TRK, CAR, M1083A1P2, W/WN: NSN 2320-01-549-8565 (EIC BUS)
 TRK, CAR, M1083A1P2, W/O WN: NSN 2320-01-549-8610 (EIC BUT)
TRK, CAR, LWB, M1086A1P2, W/O WN: NSN 2320-01-552-7780 (EIC BUZ)
 TRK, EX, VAN, M1087A1P2, NSN 2320-01-552-7781 (EIC BUY)
TRK, 10 TON DUMP, M1157A1P2, W/WN: NSN 2320-01-552-7782 (EIC BUX)
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TRK, TRACTOR, M1088A1P2, W/O WN: NSN 2320-01-552-7759 (EIC BUT)
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HOW TO USE THIS MANUAL

OVERVIEW

This Technical Manual (TM) is provided to help you operate and maintain the Medium Tactical Vehicle (MTV) M1083A1P2 Series Vehicles. It is divided into the following major sections in order of appearance:

Front Cover. Provides information about the type of manual and vehicle models covered by the TM.

Warning Summary. Provides a summary of all warnings that apply throughout the manual. Read all WARNINGS and CAUTIONS before performing any operation, troubleshooting, or maintenance procedures.

Table of Contents. Lists Chapters, Sections, and Indexes with Work Package numbers in order of appearance.

Chapter 1, General Information, Equipment Description, and Theory of Operation. Describes the MTV and provides equipment data.

Chapters 2 and 3, Operator Instructions. Describes operator's controls and indicators, and operating instructions.

Chapter 4, Troubleshooting Procedures. Provides instructions for troubleshooting problems with the MTV.

Chapter 5, Preventive Maintenance Checks and Services (PMCS). Provides the instructions for Operator PMCS.

Chapter 6, Maintenance Instructions. Provides the instructions for Operator Maintenance.

Chapter 7, Supporting Information. Contains information about References, Components of End Items (COEI) and Basic Issue Items (BII) lists, Additional Authorization List (AAL), and Expendable and Durable Items List.

FINDING INFORMATION

Table of Contents. Lists Chapters, Sections, and Indexes with Work Package numbers in order of appearance.

Index. Lists Work Packages alphabetically by subject/Work Package title. Lists the associated Work Package sequence number and beginning page number.

HOW TO USE THIS MANUAL - Continued

TROUBLESHOOTING

Troubleshooting is contained in Chapter 4. When you have a problem with the operation of your equipment, turn to the Work Package listed for the malfunction. Perform the steps required to correct the malfunction. If you cannot find the malfunction, or the malfunction is not corrected, notify Field Maintenance.

OPERATION AND MAINTENANCE

Operation. Before you operate the MTV, familiarize yourself with the controls and indicators (WP 0004 through WP 0016). Perform your BEFORE preventive maintenance (Volume 3, WP 0337). Read the operating instructions contained in WP 0017 through Volume 2, WP 0070. Always follow WARNINGS and CAUTIONS. During operation, perform your DURING preventive maintenance (Volume 3, WP 0338), and perform your AFTER preventive maintenance (Volume 3, WP 0339) after operation.

Maintenance. When you perform maintenance, look over the entire procedure before starting. Make sure you have the necessary tools and materials at hand. Always observe WARNINGS and CAUTIONS.

CHAPTER 3

OPERATOR INSTRUCTIONS

OPERATOR MAINTENANCE VEHICLE OPERATION - UNUSUAL CONDITIONS WORK PACKAGE

INITIAL SETUP:

Tools and Special Tools

Chocks, Wheel (Volume 3, WP 0357,
Table 2, Item 9)

Padlock (Volume 3, WP 0357, Table
2, Item 24, Table 2, Item 25,
Table 2, Item 26)

Chain, Welded (Volume 3, WP 0357,
Table 2, Item 8)

ENGINE START

WARNING

Prior to operating vehicle, ensure no interference exists between operator and interior components. Failure to comply may result in damage to equipment and injury or death to personnel.

WARNING



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

WARNING

Vehicles equipped with B-Kit and/or Gunner Protection Kit (GPK) have different handling characteristics than vehicles not equipped with B-Kit. Take into account increased stopping distance and decreased grade and side-slope capability. Also be aware that vehicles equipped with B-Kit and GPK take longer to accelerate. Failure to comply may result in damage to equipment and injury or death to personnel.

ENGINE START - Continued**WARNING**

Do not exceed maximum vehicle speed and grade limitations during normal operations. Do not exceed maximum approach or departure angles or ford water greater than maximum depth. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

Do not exceed rated payload of vehicle. Failure to comply may result in injury to personnel or damage to equipment.

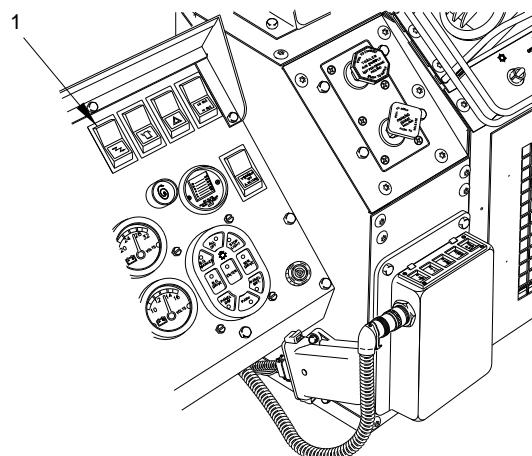
CAUTION

NEVER allow engine to run out of fuel on vehicles. Fuel injectors continue firing even without fuel. Failure to comply will result in damage to engine and fuel injectors.

CAUTION

Cold weather radiator cover should be removed when outside temperature is about 40° F (4° C). Cold weather radiator cover may be removed anytime outside temperature is above 32° F (0° C), and must be removed before outside temperature reaches 70° F (21° C). Failure to comply may result in damage to equipment.

1. If outside ambient temperature is 32°F to -25°F (0°C to -32°C), perform Vehicle Operation in Cold Environment 32°F to -25°F (0°C to -32°C). (WP 0055)
2. If outside ambient temperature is -26°F to -65°F (-32°C to -54°C), perform Vehicle Operation in Extreme Cold Environment -26°F to -65°F (-26°C to -54°C). (WP 0056)
3. Position master power switch (Figure 1, Item 1) to on.

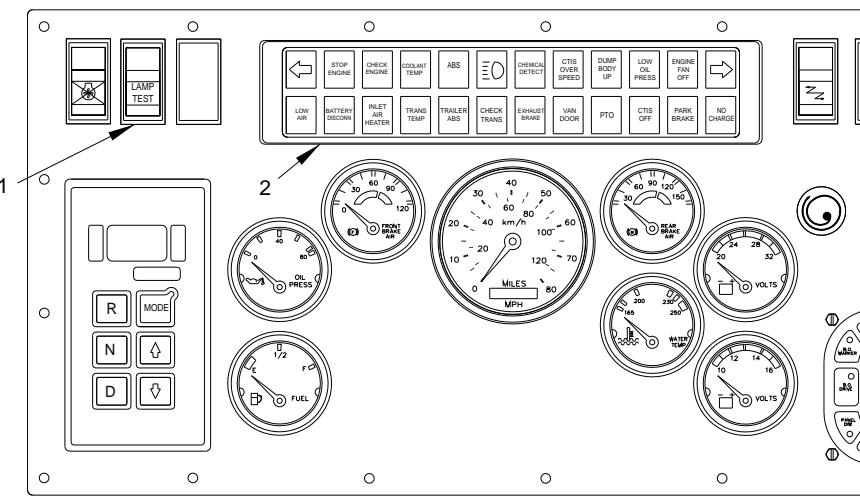
ENGINE START - Continued

LTX10217AB01

Figure 1. Engine Start.

NOTE

- ENGINE OIL PRESSURE, CHECK TRANS, PARK BRAKE, ABS, and LOW AIR indicators will remain on until operating pressures are achieved or are manually released.
 - INLET AIR HEATER indicator on lighted indicator display will illuminate for a minimum of 2 seconds before attempting to start engine again.
4. Press LAMP TEST switch (Figure 2, Item 1) to verify that all warning indicators illuminate on lighted indicator display (Figure 2, Item 2).

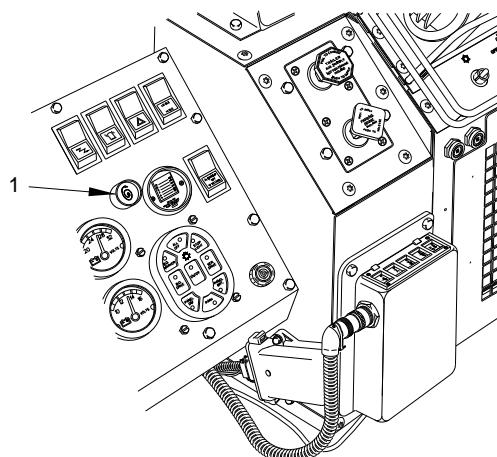
ENGINE START - Continued

LTX10217AB02

Figure 2. Engine Start.

NOTE

- After turning master power switch on and completing lamp test, INLET AIR HEATER indicator may remain on up to 30 seconds, indicating that inlet air heater is in cold start mode.
 - Inlet air preheat is complete when the INLET AIR HEATER indicator goes out
 - It is normal for INLET AIR HEATER indicator to cycle on/off during the cranking operation.
 - If engine does not start in first 30 seconds of cranking, release starter pushbutton and wait 30 seconds before attempting to start engine again.
5. Press and hold starter pushbutton (Figure 3, Item 1) after INLET AIR HEATER indicator goes out.
6. Release starter pushbutton (Figure 3, Item 1) when engine starts or after 30 seconds.

ENGINE START - Continued

LTX10217AB03

Figure 3. Engine Start.

CAUTION

If STOP ENGINE indicator flashes (red) to warn Operator about a potential engine failure, engine should be shut down immediately and Engine System Troubleshooting performed. Failure to comply may result in damage to equipment.

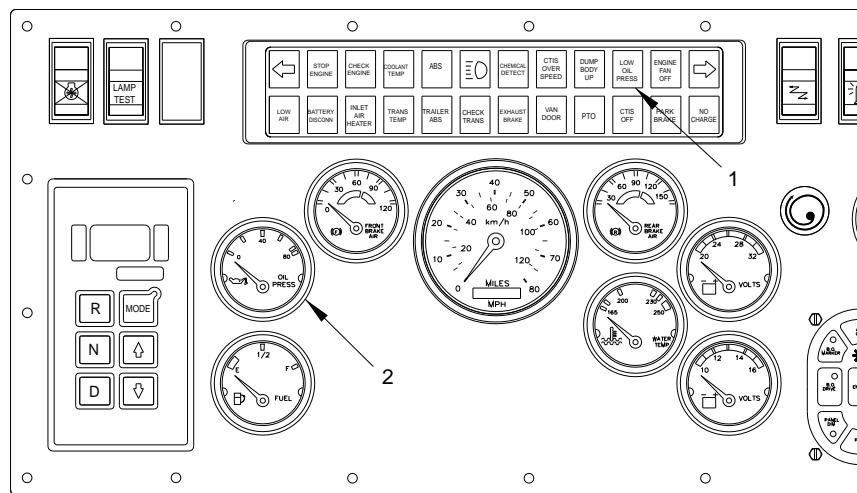
CAUTION

If OIL PRESS gauge does not show engine oil pressure of 15-80 psi within 10-15 seconds after starting engine, engine must be shut down immediately and Engine System Troubleshooting performed. Failure to comply may result in damage to equipment.

ENGINE START - Continued**NOTE**

- After engine starts and maintains low idle speed for two minutes, engine idle speed may increase. If idle speed increases, engine will maintain increased idle speed until engine reaches a predetermined temperature or after operating for 12 minutes at increased speed. Engine speed may be returned to low idle speed to begin vehicle operations by pressing and releasing accelerator pedal.
- Oil pressure will increase when engine speed increases and will decrease when engine speed decreases.

7. Check that OIL PRESS gage (Figure 4, Item 2) reads between 15 psi and 80 psi. If OIL PRESS gage reads in red zone and LOW OIL PRESS indicator (Figure 4, Item 1) is illuminated, shut down engine and perform Engine System Troubleshooting.



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Figure 4. Engine Start.

8. Operate windshield defrost (Volume 1, WP 0006, Table 2) as required.
9. Operate cab HVAC (Volume 1, WP 0022) as required.
10. Operate windshield wipers (Volume 1, WP 0007) as required.
11. Check that WATER TEMP gauge (Figure 5, Item 4) reads less than 230° F (110° C). If WATER TEMP gage reads in the red zone or COOLANT TEMP indicator

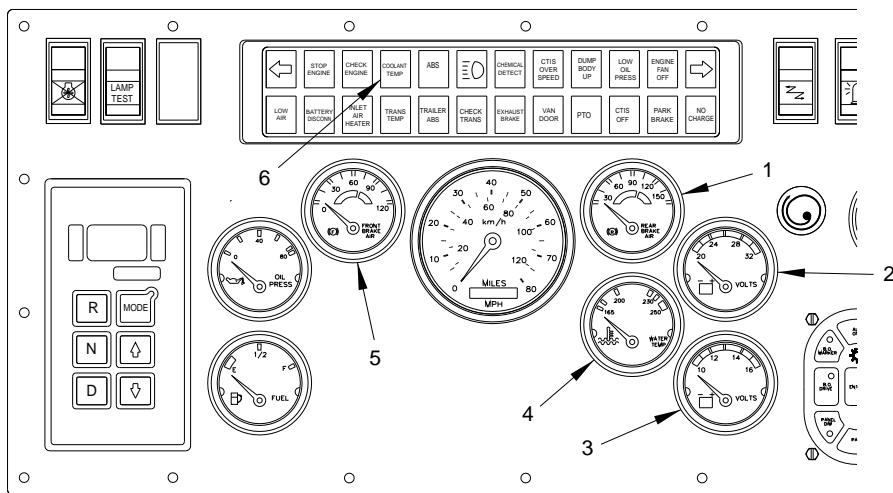
ENGINE START - Continued

(Figure 5, Item 6) is illuminated, shut down engine and perform Engine System Troubleshooting.

NOTE

- If FRONT BRAKE AIR and REAR BRAKE AIR pressure gages do not read between 75-120 psi after engine warm-up, shut down engine and perform Air System Troubleshooting.
- LOW AIR indicator will illuminate (red) and audible alarm will sound until air pressure is between 75-85 psi

12. Check that FRONT BRAKE AIR pressure gage (Figure 5, Item 5) and REAR BRAKE AIR pressure gage (Figure 5, Item 1) read between 75-120 psi (517-827 kPa).
13. Check that 24 VOLTS gage (Figure 5, Item 2) reads between 26 and 30 volts.
14. Check that 12 VOLTS gage (Figure 5, Item 3) reads between 12 and 14 volts.



LTX10217AB05

Figure 5. Engine Start.

15. Check that AIR FILTER RESTRICTION gage (Figure 6, Item 1) reads below 25 in.
 - a. Press reset button (Figure 6, Item 3) if AIR FILTER RESTRICTION gage (Figure 6, Item 1) reads greater than 25 in. (in red area).

ENGINE START - Continued

- b. Shut down engine and service air filter (Volume 3, WP 0346) if AIR FILTER RESTRICTION gage (Figure 6, Item 1) still reads greater than 25 in. (in red area).
- 16. Check that FUEL gage (Figure 6, Item 4) shows sufficient fuel to accomplish mission.

WARNING

Do not engage exhaust brake feature in icy or slippery conditions.
Failure to comply may result in injury to personnel or damage to equipment.

- 17. Position WARMUP/OFF/RETARD switch (Figure 6, Item 2) to RETARD.
- 18. Select desired transmission operating range. (WP 0053)

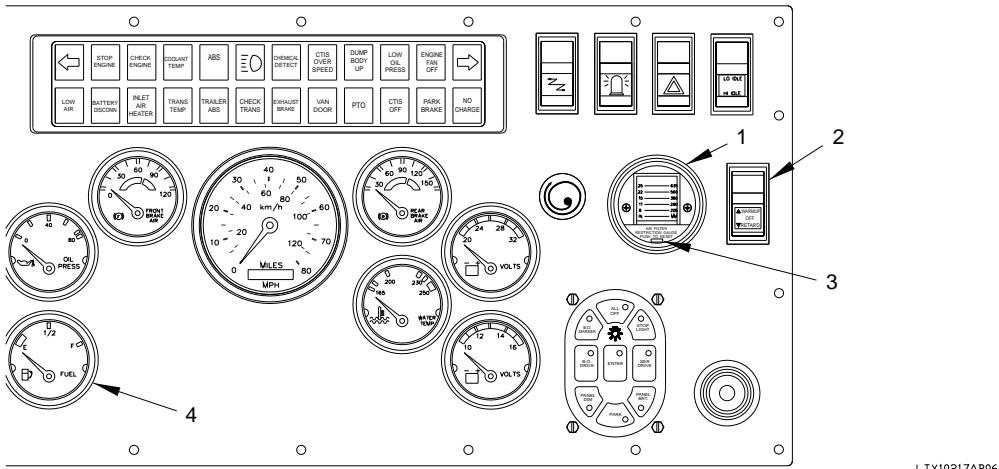


Figure 6. Engine Start.

CAUTION

Water temperature must be maintained at a minimum of 165° F (74° C) for 1 to 3 minutes prior to engine shutdown. Failure to comply may result in damage to equipment.

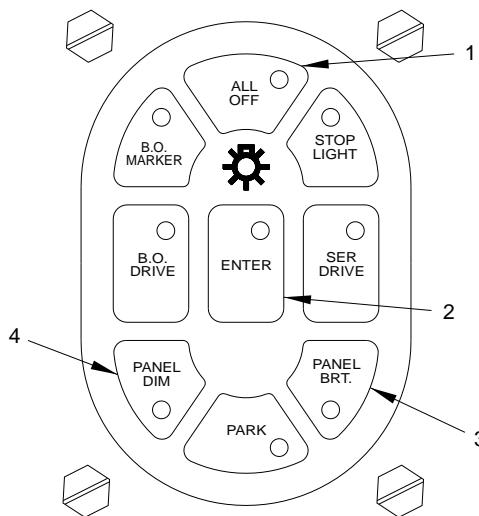
ENGINE START - Continued

19. Shut down engine.

END OF TASK**OPERATE VEHICLE LIGHTS****NOTE**

- Touch any key on keypad to illuminate main light switch before making a selection.
- If there are no blue indicator lights illuminated on the keypad, then no external lights are turned on. Amber back light is for keypad illumination only.
- Pressing the ENTER key after a selection has been made enters the selected function. If ENTER is not pressed within 5 seconds after the selection has been made, the switch will reset to the previous mode to prevent accidental switching. After making a selection, the indicator keys will flash blue until the enter key is pressed.

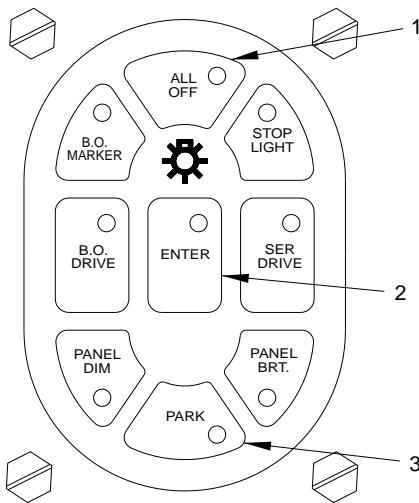
1. Operate Instrument Panel Lights.
 - a. Press PANEL BRT key (Figure 7, Item 3).
 - b. Press ENTER key (Figure 7, Item 2).
 - c. To dim lights, press PANEL DIM key (Figure 7, Item 4).
 - d. Press ALL OFF key (Figure 7, Item 1).
 - e. Press ENTER key (Figure 7, Item 2). All vehicle lights will go off.

OPERATE VEHICLE LIGHTS - Continued

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Figure 7. Operate Vehicle Lights.

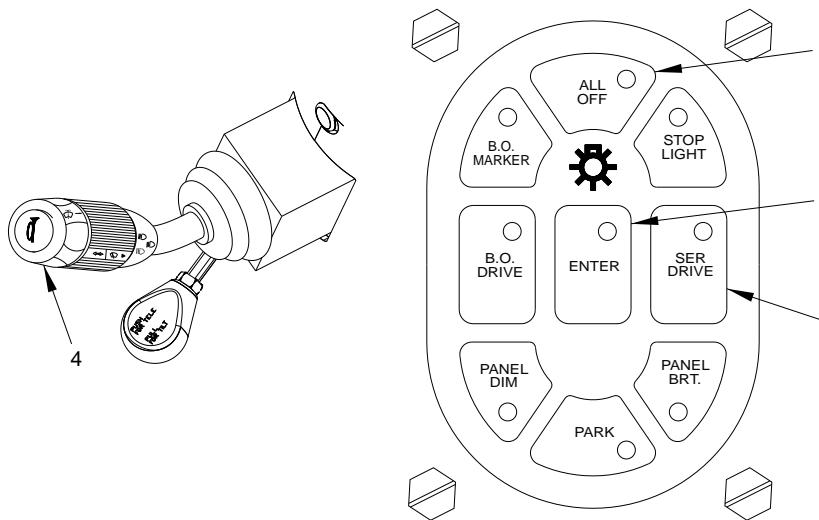
2. Operate Parking Lights.
 - a. Press PARK key (Figure 8, Item 3).
 - b. Press ENTER key (Figure 8, Item 2).
 - c. Press ALL OFF key (Figure 8, Item 1).
 - d. Press ENTER key (Figure 8, Item 2). All vehicle lights will go off.

OPERATE VEHICLE LIGHTS - Continued

LTX10217AB08

Figure 8. Operate Vehicle Lights.

3. Operate Service Drive.
 - a. Press SER DRIVE key (Figure 9, Item 3).
 - b. Press ENTER key (Figure 9, Item 2).
 - c. Pull turn signal switch (Figure 9, Item 4) to operate head lights at high beam or low beam.
 - d. Press ALL OFF key (Figure 9, Item 1).
 - e. Press ENTER key (Figure 9, Item 2). All vehicle lights will go off.

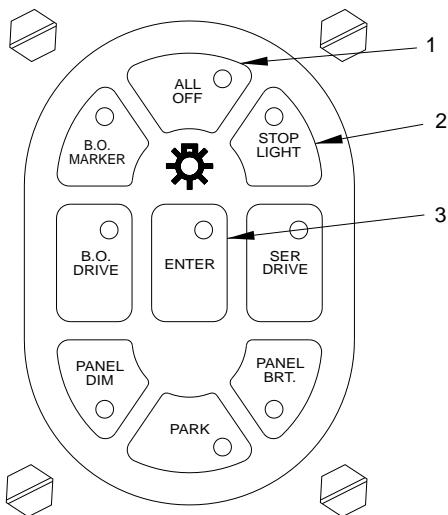
OPERATE VEHICLE LIGHTS - Continued

LTX10217AB09

Figure 9. Operate Vehicle Lights.

4. Operate Stop Lights.

- a. Press STOP LIGHT key (Figure 10, Item 2).
- b. Press ENTER key (Figure 10, Item 3).
- c. Press ALL OFF key (Figure 10, Item 1).
- d. Press ENTER key (Figure 10, Item 3). All vehicle lights will go off.

OPERATE VEHICLE LIGHTS - Continued

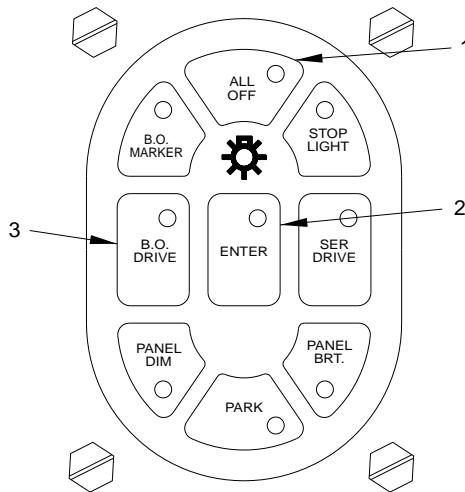
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Figure 10. Operate Vehicle Lights.

WARNING

Vehicle speed should be reduced to 5-10 mph (8-16 km/h) during blackout conditions. Failure to comply may result in serious injury or death to personnel.

5. Operate Blackout Drive Lights.
 - a. Press B.O. DRIVE key (Figure 11, Item 3).
 - b. Press ENTER key (Figure 11, Item 2).
 - c. Press ALL OFF key (Figure 11, Item 1).
 - d. Press ENTER key (Figure 11, Item 2). All vehicle lights will go off.

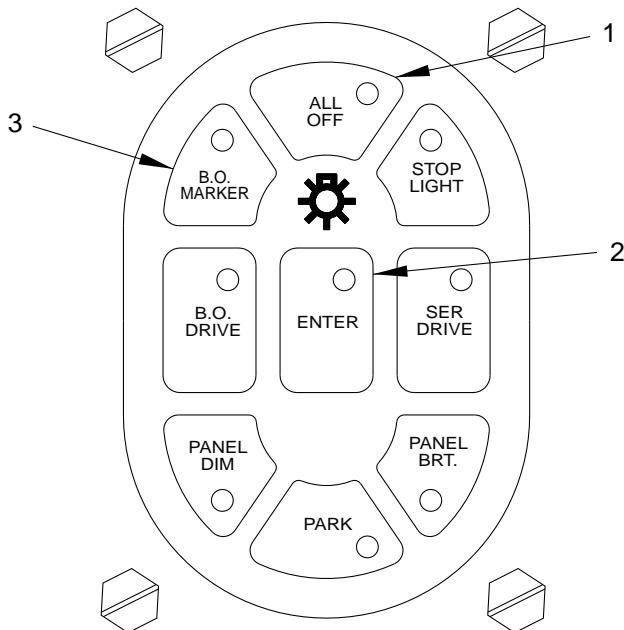
OPERATE VEHICLE LIGHTS - Continued

LTX10217AB11

Figure 11. Operate Vehicle Lights.

6. Operate Blackout Marker Lights.

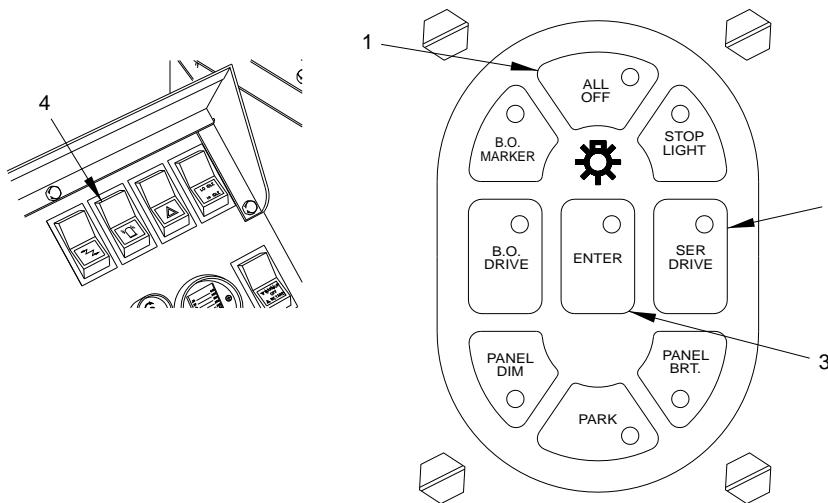
- a. Press B.O. MARKER key (Figure 12, Item 3).
- b. Press ENTER key (Figure 12, Item 2).
- c. Press ALL OFF key (Figure 12, Item 1).
- d. Press ENTER key (Figure 12, Item 2). All vehicle lights will go off.

OPERATE VEHICLE LIGHTS - Continued

LTX10217AB12

Figure 12. Operate Vehicle Lights.

7. Operate Warning Light.
 - a. Notify Field Level maintenance to install amber warning light.
 - b. Press SER DRIVE key (Figure 13, Item 2).
 - c. Press ENTER key (Figure 13, Item 3).
 - d. Press warning light switch (Figure 13, Item 4) to on.
 - e. Press warning light switch (Figure 13, Item 4) to off.
 - f. Press ALL OFF key (Figure 13, Item 1).
 - g. Press ENTER key (Figure 13, Item 3). All vehicle lights will go off.

OPERATE VEHICLE LIGHTS - Continued

LTX10217AB13

Figure 13. Operate Vehicle Lights.

END OF TASK**OPERATE SERVICE BRAKES****WARNING**

Operating in water or mud causes brake linings to get wet and can impair vehicle braking. Brakes must be dried by driving vehicle about 500 ft (150 m) while applying service brakes often. If adequate braking is not restored by drying brakes, notify Field Maintenance. Failure to comply may result in injury to personnel or damage to equipment.

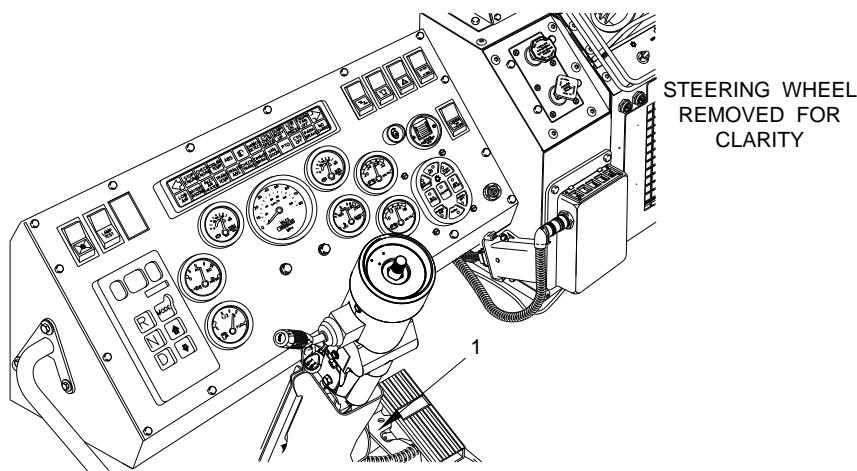
OPERATE SERVICE BRAKES - Continued**WARNING**

Do not press brake pedal hard three or four times in a row. Air supply will be used up and service brakes will not work until air pressure builds up again. Do not operate vehicle until FRONT and REAR BRAKE AIR pressure reaches at least 100 psi (690 kPa). Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

If ABS indicator or trailer ABS indicator illuminates the Anti-lock brake system (ABS) ECU has detected a fault. The vehicle may have lost ABS ability on one or more wheels. Without ABS, the wheel(s) may lock up during hard braking and cause the operator to lose steering control. Always reduce speeds accordingly for road conditions. Do not exceed 45 mph (72 km/h). Notify Field Maintenance of ABS fault upon completion of mission. Failure to comply may result in injury to personnel and damage to equipment.

Push down and hold brake pedal (Figure 14, Item 1) to slow or stop vehicle.

OPERATE SERVICE BRAKES - Continued

LTX10217AB14

Figure 14. Operate Service Brakes.

END OF TASK**SELECTING TRANSMISSION OPERATING RANGE**

1. Start engine. (WP 0053)

WARNING

If vehicle engine stalls, immediately pull vehicle to side of road and out of traffic. Once vehicle has stopped, steering will require excessive force and may not be possible. Failure to comply may result in injury or death to personnel.

CAUTION

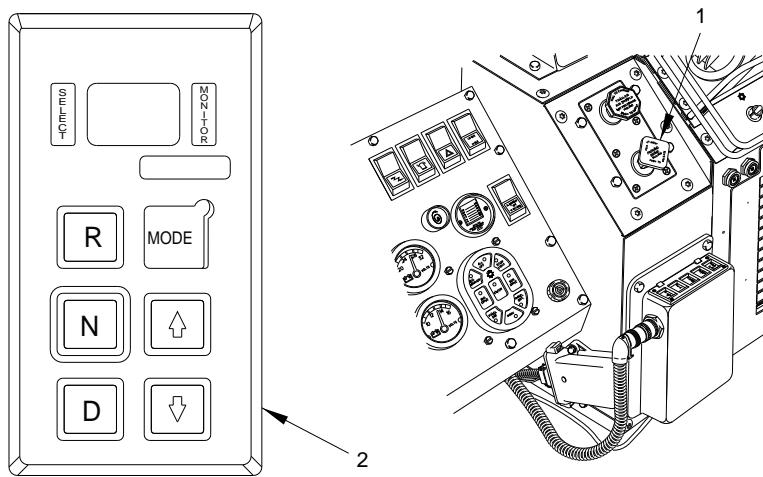
Engine speed must be idle prior to selecting any forward or reverse operating range. Failure to comply may result in damage to equipment.

CAUTION

Do not allow vehicle to coast in N (Neutral). Failure to comply may result in damage to equipment.

SELECTING TRANSMISSION OPERATING RANGE - Continued**NOTE**

- When transmission is operating normally, display window of Gen IV Transmission Pushbutton Shift Selector (TPSS) will indicate selected operating range.
 - When D (Drive) is selected, the default selected operating range is 7.
2. Select desired travel direction (D for Drive or R for Reverse) on Gen IV TPSS (Figure 15, Item 2).
 3. Push in PARKING BRAKE control (Figure 15, Item 1) to release parking brake.



LTX10217AB15

Figure 15. Selecting Transmission Operating Range.

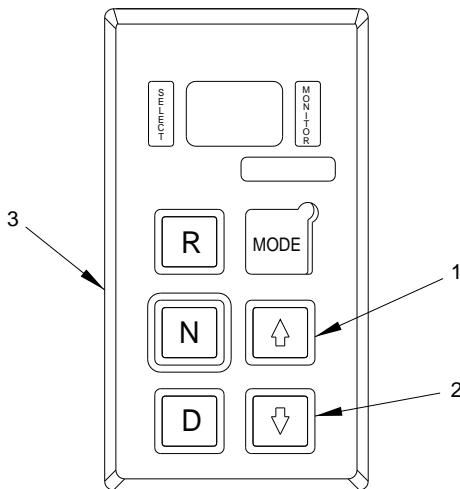
WARNING

Transmission incorporates a hold feature to prohibit upshifting above selected operating range during normal driving. However, during downhill operation, transmission may upshift above selected gear. On downgrades, vehicle speed may need to be restricted by using service brakes. Failure to comply may result in serious injury or death to personnel or damage to equipment.

4. Press down arrow button (Figure 16, Item 2) on Gen IV TPSS (Figure 16, Item 3) to shift transmission to lower operating range.

SELECTING TRANSMISSION OPERATING RANGE - Continued

5. Press up arrow button (Figure 16, Item 1) on Gen IV TPSS (Figure 16, Item 3) to shift transmission to higher operating range.



LTX10217AB16

Figure 16. Selecting Transmission Operating Range.

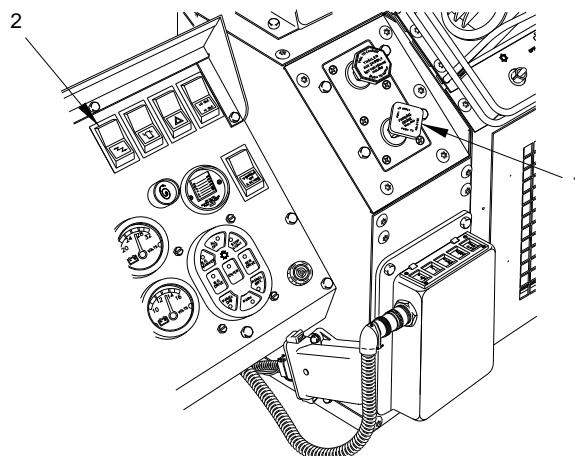
CAUTION

If illumination of last selected operating ranges goes out, Electronic Control Unit (ECU) has detected a problem that needs correcting. Do not attempt to shift transmission to N (Neutral) or any other operating range. Operate vehicle at reduced speed to a safe parking location. Failure to comply may result in damage to equipment.

NOTE

Perform the following three steps if display window is not showing last selected operating range.

6. Stop vehicle.
7. Position master power switch (Figure 17, Item 2) to off.
8. Pull out PARKING BRAKE control (Figure 17, Item 1).
9. Notify Field Maintenance.

SELECTING TRANSMISSION OPERATING RANGE - Continued

LTX10217AB17

Figure 17. Selecting Transmission Operating Range.

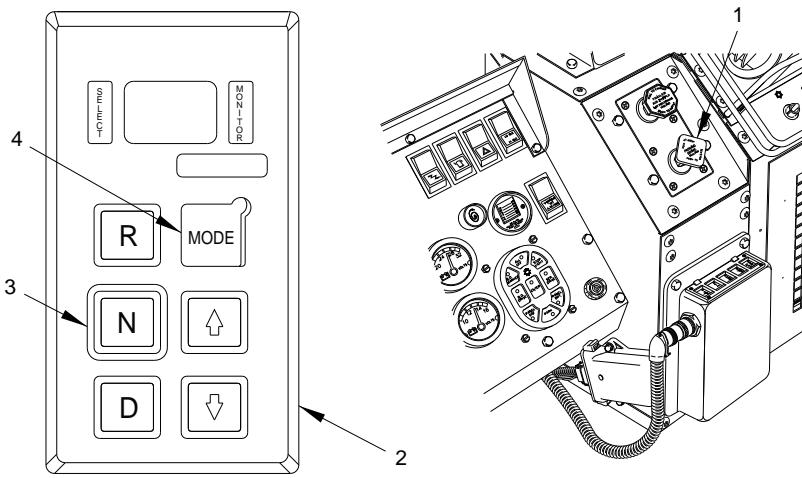
END OF TASK**SHUT DOWN ENGINE**

1. Stop vehicle.

CAUTION

The Mode button on the Transmission Pushbutton Shift Selector (TPSS) must be deselected before placing transmission in Neutral (N). Failure to comply may result in damage to equipment.

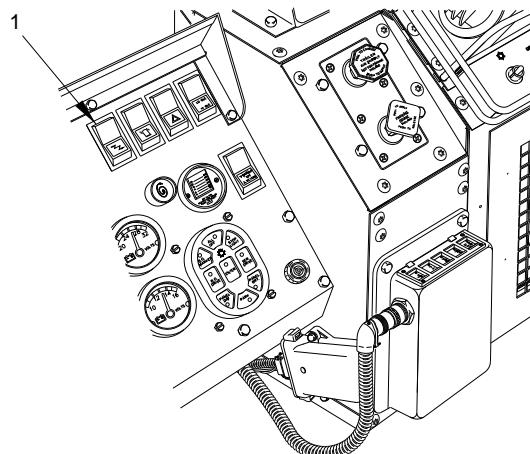
2. If transmission is in Mode, deselect Mode by pushing the Mode button (Figure 18, Item 4).
3. Press N (Neutral) button (Figure 18, Item 3) on Gen IV TPSS (Figure 18, Item 2).
4. Pull out PARKING BRAKE control (Figure 18, Item 1) to engage parking brake.

SHUT DOWN ENGINE - Continued

LTX10217AB18

Figure 18. Shut Down Engine.

5. Turn off lights and electrical accessories.
6. Position master power switch (Figure 19, Item 1) to off.

SHUT DOWN ENGINE - Continued

LTX10217AB19

Figure 19. Shut Down Engine.

NOTE

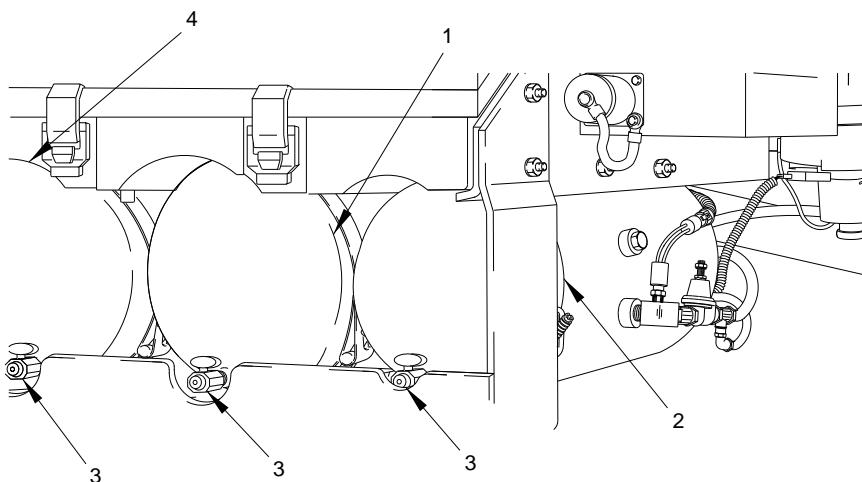
Position Manual Battery Disconnect Switch (MBDS) to the OFF position (Volume 1, WP 0011) to cut off power from batteries to the two way intercom.

7. Chock wheels. (WP 0053)

END OF TASK**DRAIN AIR TANKS****CAUTION**

Air tanks should be drained when vehicle will not be operated for 12 hours or more, or when operating in temperatures below 50° F (10° C). Failure to comply may result in damage to equipment.

1. Open drain valves (Figure 20, Item 3) on primary air tank (Figure 20, Item 1), secondary air tank (Figure 20, Item 4), and wet tank (Figure 20, Item 2) until air cannot be heard escaping.
2. Close drain valves (Figure 20, Item 3) on primary air tank (Figure 20, Item 1), secondary air tank (Figure 20, Item 4), and wet tank (Figure 20, Item 2).

DRAIN AIR TANKS - Continued

LTX10217AB20

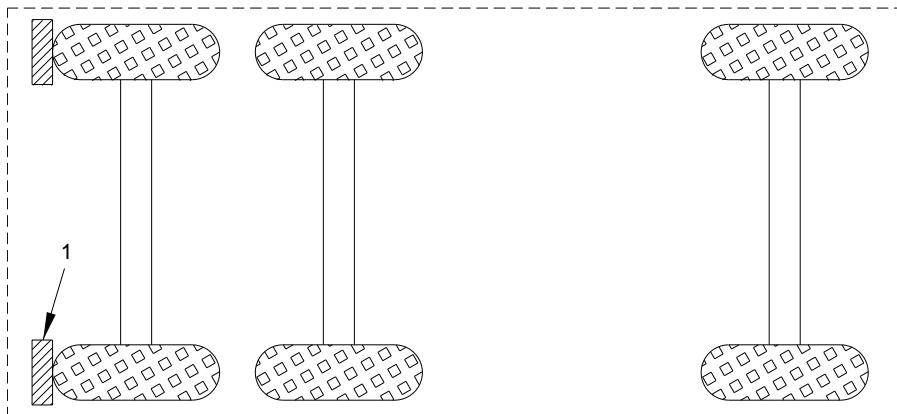
Figure 20. Drain Air Tanks.**END OF TASK******* The following is applicable to the following UOC(s): TSA TSB TSL TSM. *******PARK VEHICLE****WARNING**

If vehicle is equipped with B-Kit, visibility is limited and blind spots are increased around entire cab. Use extreme caution when entering intersections and watch for other vehicles or personnel. Use ground guide whenever parking vehicle. Failure to comply may result in injury or death to personnel and/or damage to equipment.

CAUTION

Accessories mounted in the interior of van bodies must be positioned so that mounting fasteners are located in structural frame members. Failure to comply may result in damage to equipment.

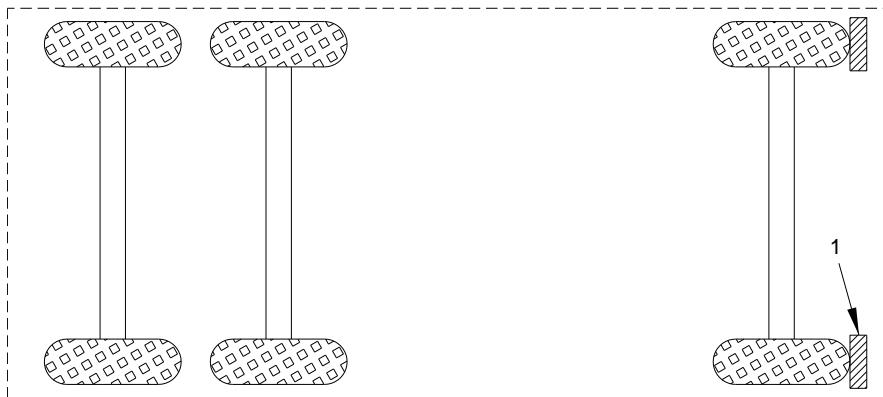
1. Install wheel chocks (Figure 21, Item 1) in back of rear wheels when parked facing uphill.

PARK VEHICLE - Continued

LTX10217AB24

Figure 21. Park Vehicle.

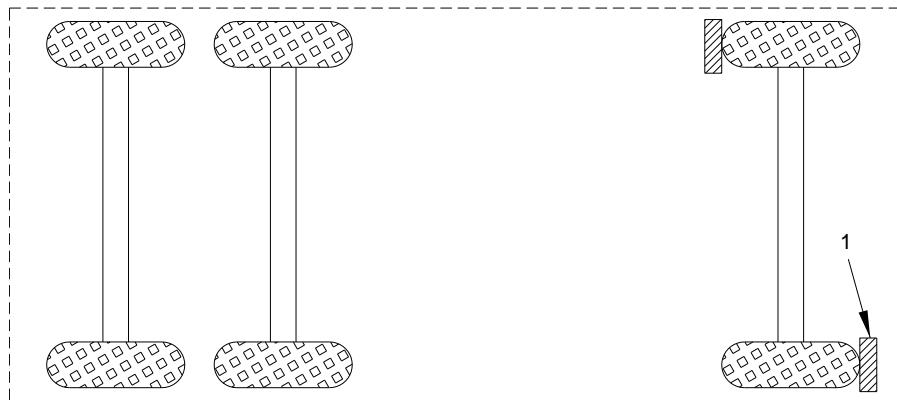
2. Install wheel chocks (Figure 22, Item 1) in front of front wheels when parked facing downhill.



LTX10217AB25

Figure 22. Park Vehicle.

3. Install wheel chocks (Figure 23, Item 1) in front of one front wheel and the second wheel chock in back of the opposite front wheel when parked on level ground.

PARK VEHICLE - Continued

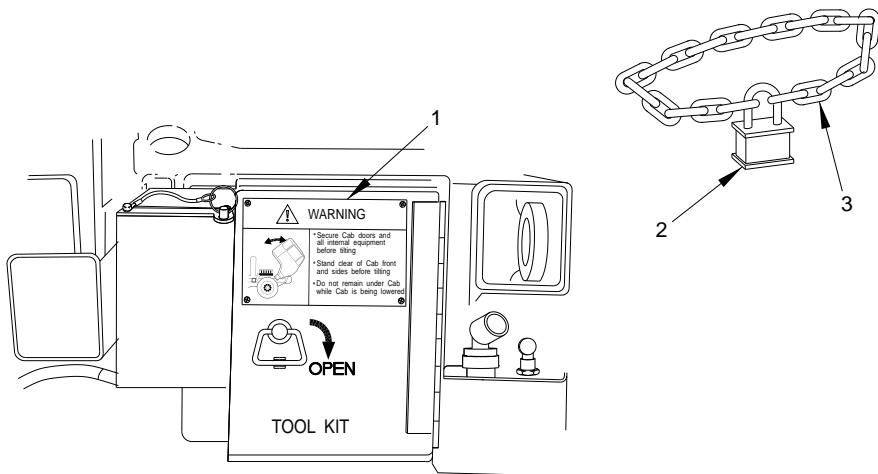
LTXI0217AB26

Figure 23. Park Vehicle.

END OF TASK**SECURE VEHICLE**

Install Chain.

- a. Remove chain (Figure 24, Item 3) and padlock (Figure 24, Item 2) from tool box (Figure 24, Item 1).

SECURE VEHICLE - Continued

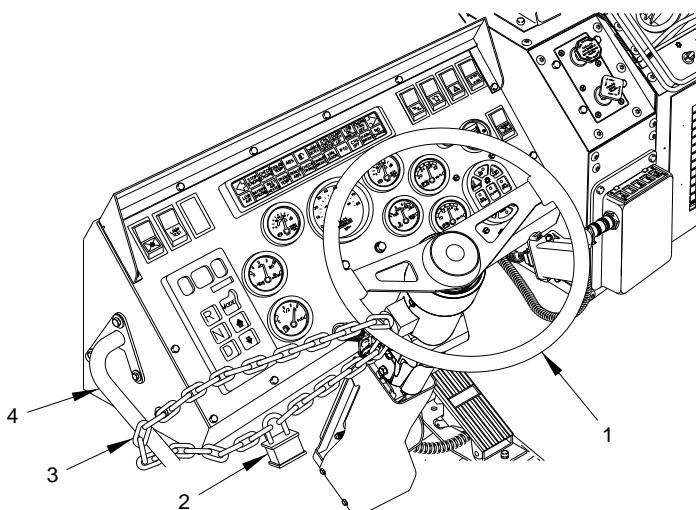
LTX10217AB27

Figure 24. Secure Vehicle.

NOTE

Turn steering wheel either full right or full left before installing chain.

- b. Guide chain (Figure 25, Item 3) through steering wheel (Figure 25, Item 1) and cab handhold (Figure 25, Item 4).
- c. Connect padlock (Figure 25, Item 2) to chain (Figure 25, Item 3).
- d. Lock padlock (Figure 25, Item 2).

SECURE VEHICLE - Continued

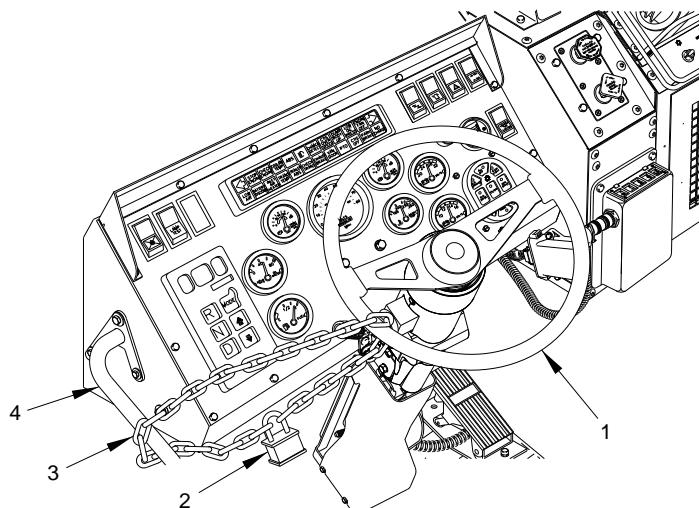
LTX10217AB28

Figure 25. Secure Vehicle.

END OF TASK**UNSECURE VEHICLE**

Remove Chain.

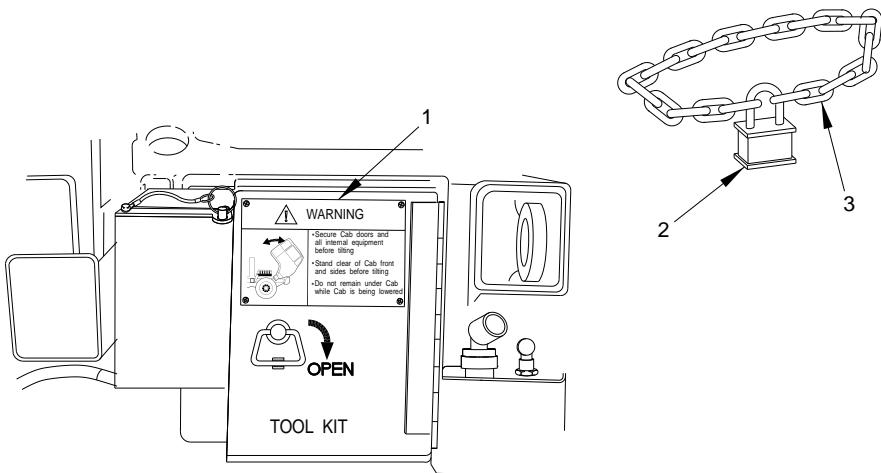
- a. Unlock padlock (Figure 26, Item 2).
- b. Remove padlock (Figure 26, Item 2) from chain (Figure 26, Item 3).
- c. Remove chain (Figure 26, Item 3) from steering wheel (Figure 26, Item 1) and cab handhold (Figure 26, Item 4).

UNSECURE VEHICLE - Continued

LTX10217AB29

Figure 26. Unsecure Vehicle.

- d. Place chain (Figure 27, Item 3) and padlock (Figure 27, Item 2) in tool box (Figure 27, Item 1).

UNSECURE VEHICLE - Continued

LTX10217AB30

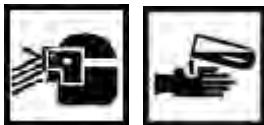
Figure 27. Unsecure Vehicle.

END OF TASK**DOOR OPERATION****WARNING**

If vehicle B-Kit is installed, avoid parking vehicle and operating doors on side slopes. Additional weight may cause doors to overcome dampeners and drift close or become too heavy to open. Failure to comply may result in injury or death to personnel.

WARNING

If vehicle B-kit is installed, combat latches must be engaged when vehicle is driven. Failure to comply may result in damage to equipment, injury, or death to personnel.

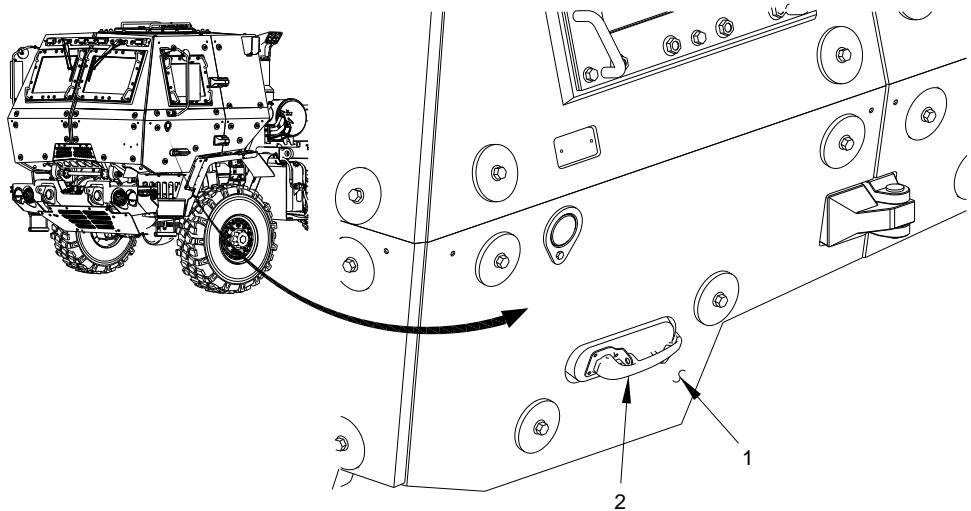
DOOR OPERATION - Continued**WARNING**

Battery acid (electrolyte) is extremely harmful. Always wear safety goggles and rubber gloves, and do not smoke when performing maintenance on batteries. Injury will result if acid contacts skin or eyes. Wear rubber apron to prevent clothing being damaged. Failure to comply may result in serious injury or death to personnel.

NOTE

Perform the following two steps if operating the door from outside the vehicle.

1. Pull down on door handle (Figure 28, Item 2) to open door (Figure 28, Item 1).
2. Push door (Figure 28, Item 1) to close.



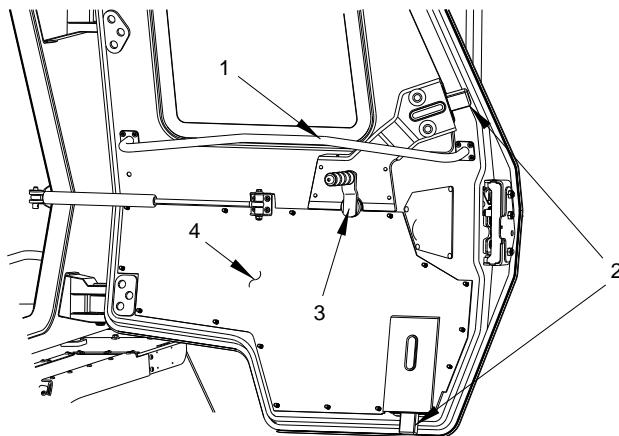
LTX10217AB31

Figure 28. Door Operation.

DOOR OPERATION - Continued**NOTE**

Perform the following five steps if operating the door from inside the vehicle.

3. Pull interior door latch handle (Figure 29, Item 3) back to vertical positionl to disengage combat latch(es) (Figure 29, Item 2).
4. Pull interior door latch handle (Figure 29, Item 3) completely back to unlatch door (Figure 29, Item 4).
5. Pull door (Figure 29, Item 4) closed with cab door pull bar (Figure 29, Item 1).
6. Push interior door latch handle (Figure 29, Item 3) fully forward to engage combat latch(es) (Figure 29, Item 2).



ltx10217ab35

Figure 29. Door Operation.

END OF TASK**HATCH OPERATION****WARNING**

Hatch must be opened completely to ensure safety lock engages.
Failure to comply may result in serious injury or death.

HATCH OPERATION - Continued**WARNING**

In the event of side roll-over, use hatch to exit vehicle. Failure to comply may result in serious injury or death.

NOTE

Perform the following step to open hatch.

1. Turn latch (Figure 30, Item 1) to left and push hatch (Figure 30, Item 2) upward to open.

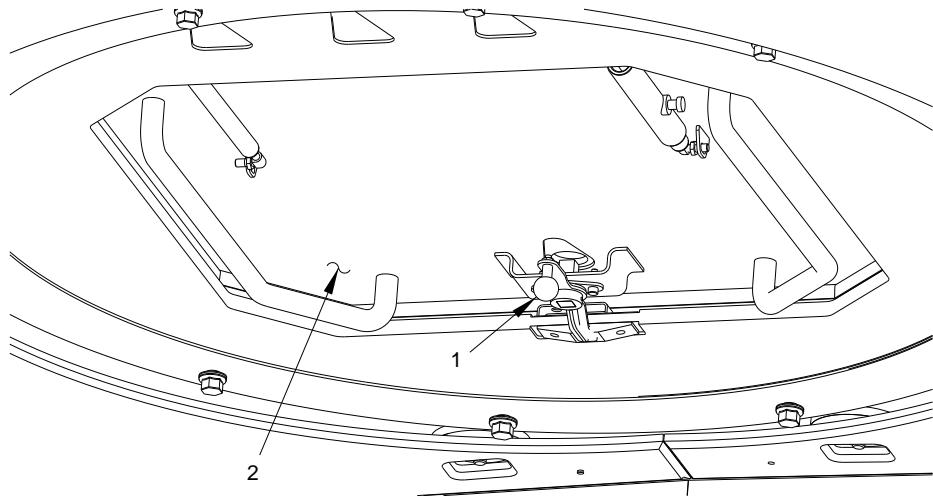
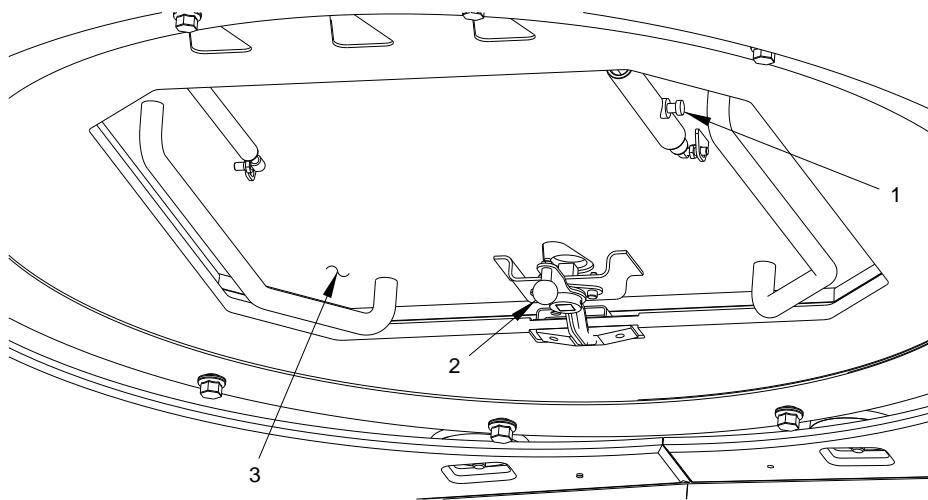


Figure 30. Hatch Operation.

NOTE

Perform the following three steps to close and lock hatch.

2. Pull safety lock (Figure 31, Item 1).
3. Close hatch (Figure 31, Item 3).
4. Turn latch (Figure 31, Item 2) toward right to lock hatch (Figure 31, Item 3).

HATCH OPERATION - Continued

LTX10217AB34

Figure 31. Hatch Operation.

END OF TASK**FIRST RESPONDER ACCESS PLUG (FRAP) OPERATION**

1. Remove two pins (Figure 32, Item 2) from bracket (Figure 32, Item 3).
2. Remove FRAP tool (Figure 32, Item 1) from cab (Figure 32, Item 4).

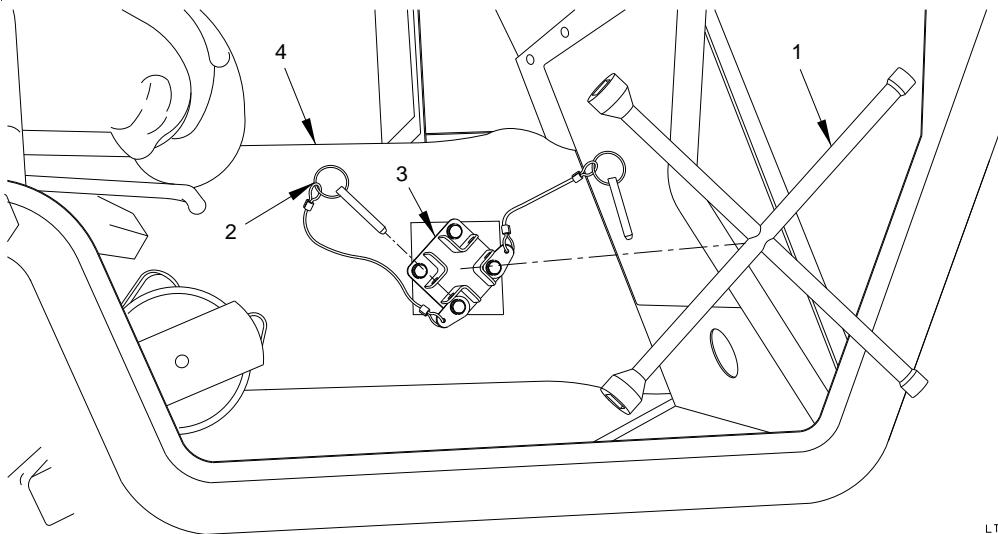
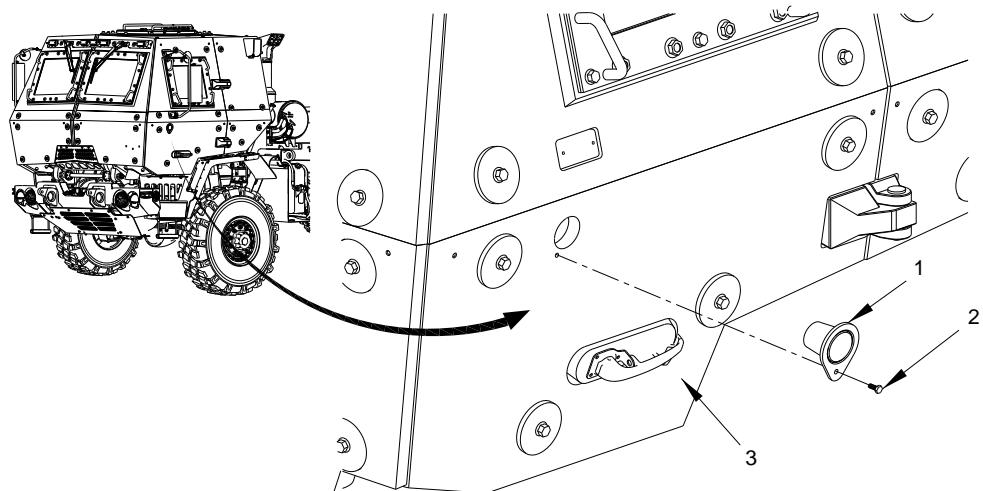
FIRST RESPONDER ACCESS PLUG (FRAP) OPERATION - Continued

Figure 32. First Responder Access Plug (FRAP) Operation.

NOTE

- Left and right side operation is the same. Left side shown.
 - Perform the following step if vehicle is equipped with B-Kit.
3. Remove screw (Figure 33, Item 2) and FRAP (Figure 33, Item 1) from lower door panel (Figure 33, Item 3).

FIRST RESPONDER ACCESS PLUG (FRAP) OPERATION - Continued

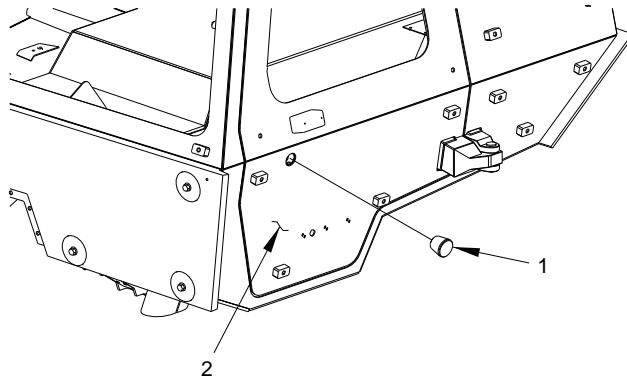
LTX10217A02

Figure 33. First Responder Access Plug (FRAP) Operation.

NOTE

Perform the following step if vehicle is not equipped with B-Kit.

4. Remove FRAP plug (Figure 34, Item 1) from door panel (Figure 34, Item 2).

FIRST RESPONDER ACCESS PLUG (FRAP) OPERATION - Continued

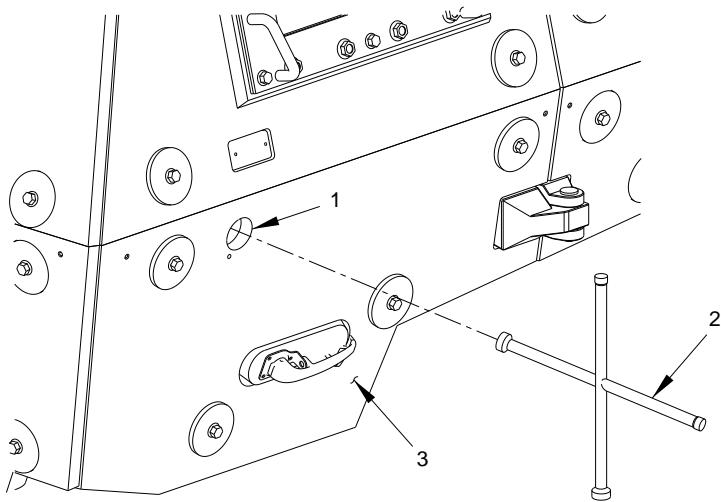
LTX10217A03

Figure 34. First Responder Access Plug (FRAP) Operation.

NOTE

FRAP tool operation same for vehicles with B-Kit and without B-Kit installed. B-Kit shown.

5. Insert FRAP tool (Figure 35, Item 2) in access port (Figure 35, Item 1).
6. Rotate FRAP tool (Figure 35, Item 2) until door latch(es) disengage.
7. Remove FRAP tool (Figure 35, Item 2) from door panel (Figure 35, Item 3).

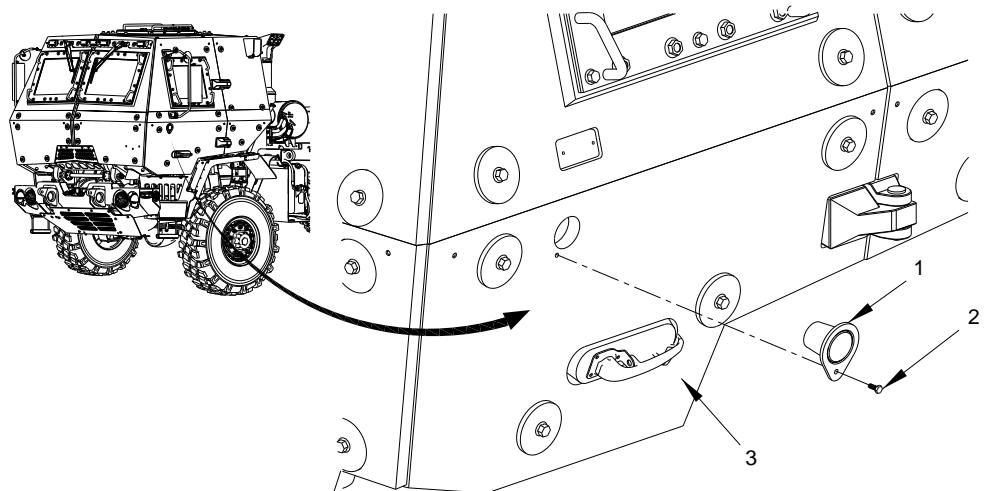
FIRST RESPONDER ACCESS PLUG (FRAP) OPERATION - Continued

LTX10217A04

Figure 35. First Responder Access Plug (FRAP) Operation.

NOTE

- Left and right side operation the same. Left side shown.
 - Perform the following step if vehicle is equipped with B-Kit.
8. Install screw (Figure 36, Item 2) and FRAP (Figure 36, Item 1) in lower door panel (Figure 36, Item 3).

FIRST RESPONDER ACCESS PLUG (FRAP) OPERATION - Continued

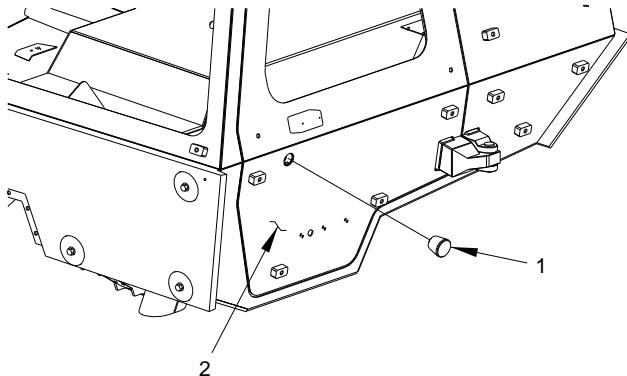
LTX10217A02

Figure 36. First Responder Access Plug (FRAP) Operation.

NOTE

Perform the following step if vehicle is not equipped with B-Kit.

9. Install FRAP plug (Figure 37, Item 1) in door panel (Figure 37, Item 2).

FIRST RESPONDER ACCESS PLUG (FRAP) OPERATION - Continued

LTXI0217A03

Figure 37. First Responder Access Plug (FRAP) Operation.

10. Position FRAP tool (Figure 38, Item 1) in bracket (Figure 38, Item 3) in cab (Figure 38, Item 4).
11. Install two pins (Figure 38, Item 2) in bracket (Figure 38, Item 3).

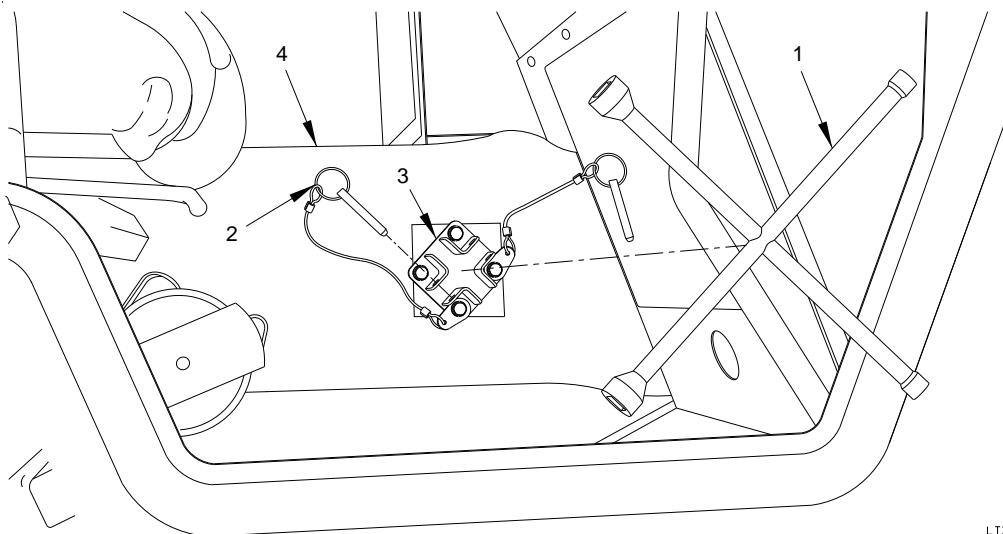
FIRST RESPONDER ACCESS PLUG (FRAP) OPERATION - Continued

Figure 38. First Responder Access Plug (FRAP) Operation.

END OF TASK

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
BURNISHING BRAKE OPERATION WORK PACKAGE**

INITIAL SETUP:

Not Applicable

WARNING

Vehicles equipped with B-Kit have different handling characteristics than vehicles not equipped with B-Kit. Take into account increased stopping distance and decreased grade and side-slope capability. Also be aware that vehicles equipped with B-Kit also take longer to accelerate. Failure to comply may result in damage to equipment and injury or death to personnel.

WARNING

Ensure vehicle path is clear prior to attempting brake burnishing. Failure to comply may result in injury or death to personnel and/or damage to equipment.

WARNING



Do not press brake pedal hard three or four times in a row. Air supply will be used up and service brakes will not work until air pressure builds up again. Do not operate vehicle until FRONT and REAR BRAKE AIR pressure reaches at least 100 psi (690 kPa). Failure to comply may result in serious injury or death to personnel or damage to equipment.

1. Start engine.
2. Select transmission operating range.
3. Accelerate to 15 mph (24 kmh).
4. Press brake pedal firmly to perform quick stop.
5. Repeat previous two steps two times to properly burnish brakes.

***** The following is applicable to the following UOC(s): TSP TSQ TSR TSA TSB
TSG TSL TSM TSV TSV TSH TSU. *****

6. Park vehicle.

END OF TASK

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
VEHICLE OPERATION IN COLD ENVIRONMENT 32° F TO -25° F (0° C TO -32° C)
WORK PACKAGE**

INITIAL SETUP:

Personnel Required

(2)

Equipment Condition

Cab arctic front cover grill snaps
Installed

References

FM 9-207 (Volume 3, WP 0356)
FM 31-70
FM 31-71
FM 21-305

PREPARATION FOR COLD ENVIRONMENT OPERATIONS

WARNING

Wear arctic clothing when cab temperatures fall and remain below 30° F (-1° C). Cold stress preventative measures in FM 31-70 should be applied when vehicle cab temperatures fall and remain below 30° F (-1° C). Failure to comply may result in serious injury or death to personnel.

WARNING

When operating vehicle in snowy or icy conditions, brake pedal must be applied momentarily, every few miles. This will ensure that brake linings do not become encrusted with snow or ice. Failure to comply may result in injury to personnel or damage to equipment.

CAUTION

Before operating vehicle, the vehicle has to be prepared for cold weather environment in accordance with FM 9-207 (Volume 3, WP 0356). Refer to FM 31-70, FM 31-71, and FM 21-305 for additional information on operation in cold environment. Failure to comply may result in damage to equipment.

PREPARATION FOR COLD ENVIRONMENT OPERATIONS - Continued**CAUTION**

Monitor instrument panel assembly gauges closely. If there are any unusual readings, stop vehicle and shut off engine. Check for cause immediately. Failure to comply may result in damage to equipment.

CAUTION

Park in shelter when possible. If shelter is not available, park so vehicle does not face into wind. Follow procedures in FM 9-207 (Volume 3, WP 0356) to prevent vehicle from freezing in place. Failure to comply may result in damage to equipment.

CAUTION

Fuel filter should be drained before topping off fuel tank. Keep fuel tank as full as possible during cold weather operations. Moisture will form in fuel tank as it cools. Moisture will freeze and block fuel supply to engine. Failure to comply may result in damage to equipment.

CAUTION

All snow and ice should be removed from vehicle as soon as possible. Snow and ice may slow or prevent movement of equipment. Failure to comply may result in damage to equipment.

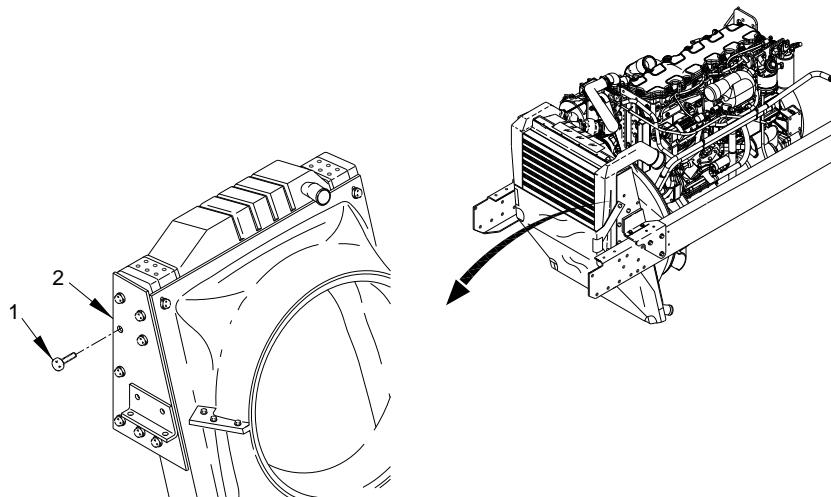
CAUTION

Cold weather radiator cover must be installed when outside temperature is below 40° F (4° C). If equipped, both the cab arctic cover and cold weather radiator cover can remain on vehicle up to 40° F (4° C) at the same time. Failure to comply may result in damage to equipment.

NOTE

Left hand side and right hand side of cold weather radiator cover are installed the same way. Left hand side shown.

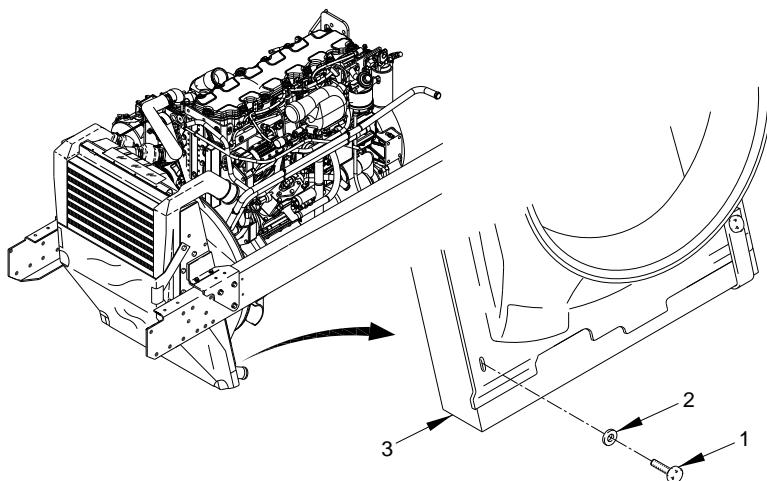
1. Raise cab. (Volume 1, WP 0020)
2. Remove screw (Figure 1, Item 1) from charge air cooler (Figure 1, Item 2).

PREPARATION FOR COLD ENVIRONMENT OPERATIONS - Continued

LTX10259B01

Figure 1. Preparation for Cold Environment Operations.

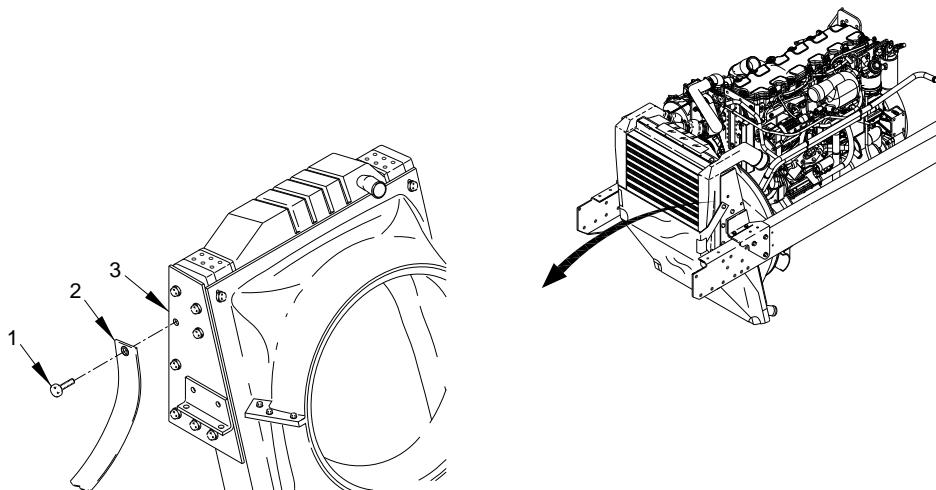
3. Remove screw (Figure 2, Item 1) and washer (Figure 2, Item 2) from bottom corner of radiator (Figure 2, Item 3).

PREPARATION FOR COLD ENVIRONMENT OPERATIONS - Continued

LTX10259B02

Figure 2. Preparation for Cold Environment Operations.

4. Position cold weather radiator cover strap (Figure 3, Item 2) on charge air cooler (Figure 3, Item 3) with screw (Figure 3, Item 1).
5. Notify Field Maintenance to tighten screw (Figure 3, Item 1) to 21-26 lb-ft (28-35 N·m).

PREPARATION FOR COLD ENVIRONMENT OPERATIONS - Continued

LTX10259B03

Figure 3. Preparation for Cold Environment Operations.

6. Position cold weather radiator cover (Figure 4, Item 5) over radiator (Figure 4, Item 4) with strap (Figure 4, Item 3), washer (Figure 4, Item 1), and screw (Figure 4, Item 2).
7. Notify Field Maintenance to tighten screw (Figure 4, Item 2) to 21-26 lb-ft (28-35 N·m).
8. Tighten strap (Figure 4, Item 3) until all slack is removed from cold weather radiator cover (Figure 4, Item 5).
9. Perform the previous six steps on right hand side of cold weather radiator cover (Figure 4, Item 5).

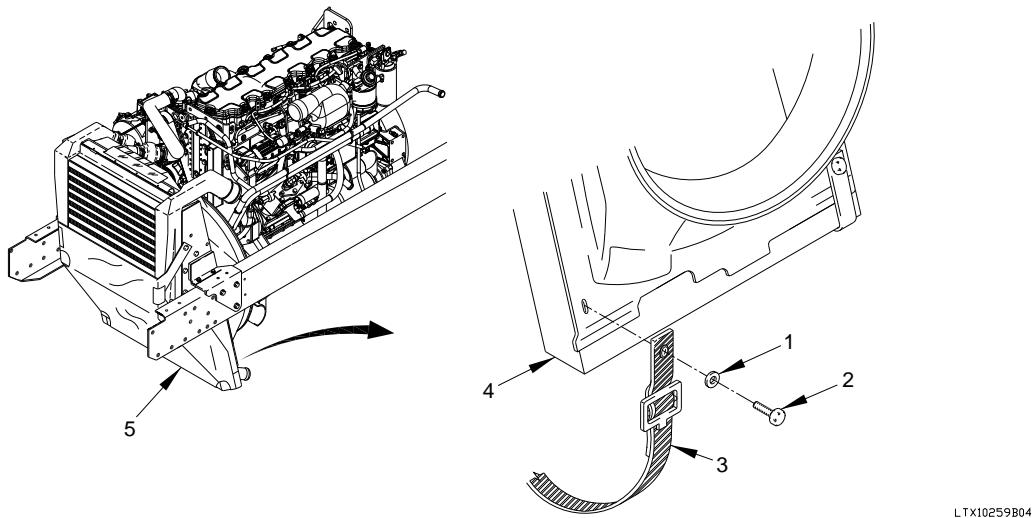
PREPARATION FOR COLD ENVIRONMENT OPERATIONS - Continued

Figure 4. Preparation for Cold Environment Operations.

10. Lower cab. (Volume 1, WP 0020)

NOTE

- Left hand side and right hand side of cab front cover are installed the same way. Left hand side shown.
- Perform the following two steps if vehicle does not have B-Kit installed.

11. Install cab arctic front cover (Figure 5, Item 2) on cab (Figure 5, Item 1) with 15 cab snap half fasteners (Figure 5, Item 4) and 15 cover snap half fasteners (Figure 5, Item 3).

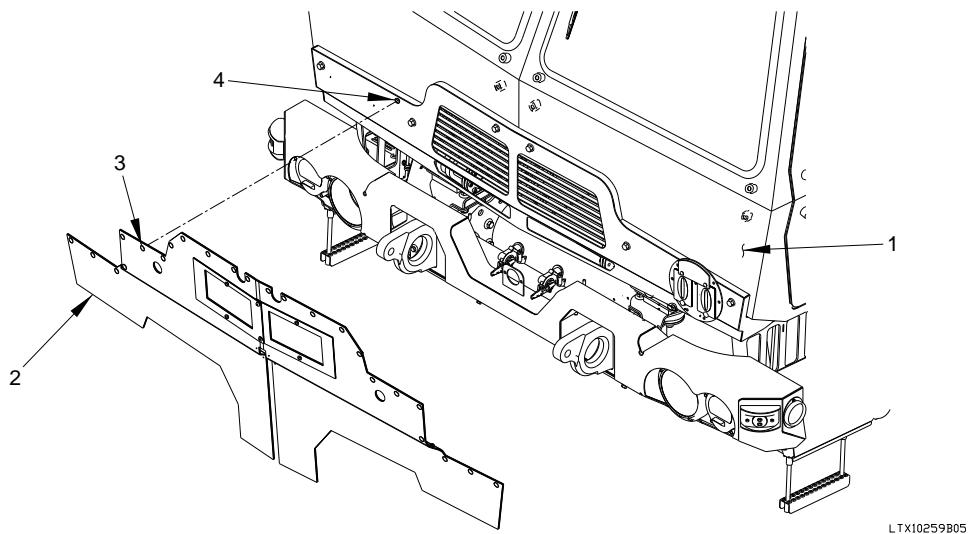
PREPARATION FOR COLD ENVIRONMENT OPERATIONS - Continued

Figure 5. Preparation for Cold Environment Operations.

12. Position lower flaps of cab arctic front cover (Figure 6, Item 3) between cold weather radiator cover (Figure 6, Item 2) and charge air cooler (Figure 6, Item 1).
13. Perform the previous two steps on right hand side of arctic cab front cover (Figure 6, Item 3).

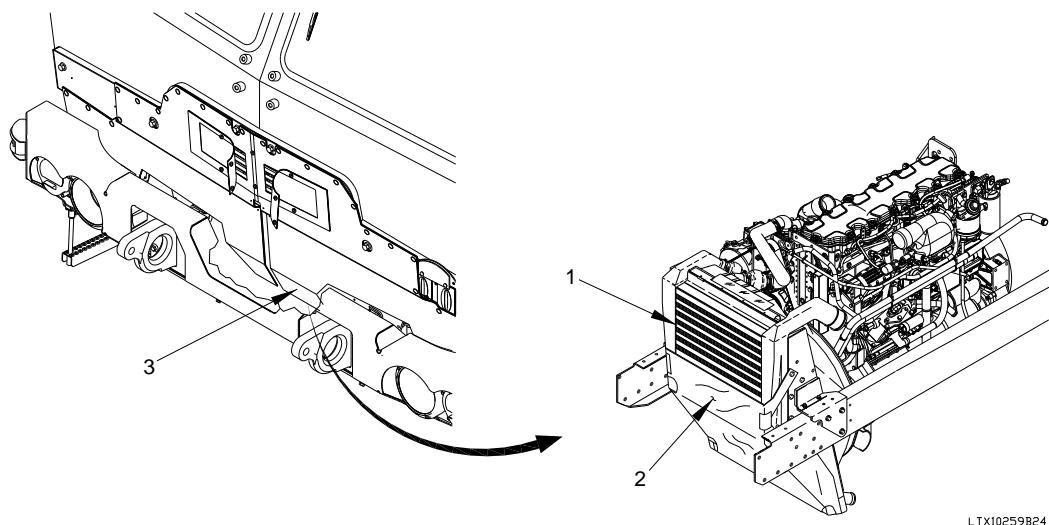
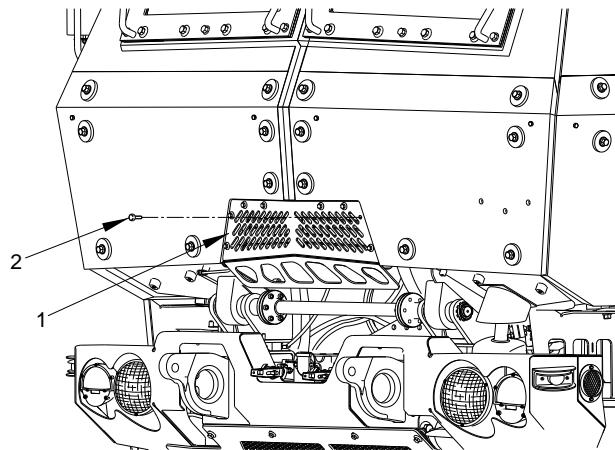
PREPARATION FOR COLD ENVIRONMENT OPERATIONS - Continued

Figure 6. Preparation for Cold Environment Operations.

NOTE

- Perform the following four steps if vehicle has B-Kit installed.
- The following step requires the aid of an assistant.

14. Remove eight screws (Figure 7, Item 2) from grill (Figure 7, Item 1).

PREPARATION FOR COLD ENVIRONMENT OPERATIONS - Continued

LTX10259B06

Figure 7. Preparation for Cold Environment Operations.

15. Position cab arctic front cover (Figure 8, Item 2) on grill (Figure 8, Item 1) with eight screws (Figure 8, Item 3).
16. Notify Field Maintenance to tighten screws (Figure 8, Item 3) to 34-46 lb·ft (46-62 N·m).

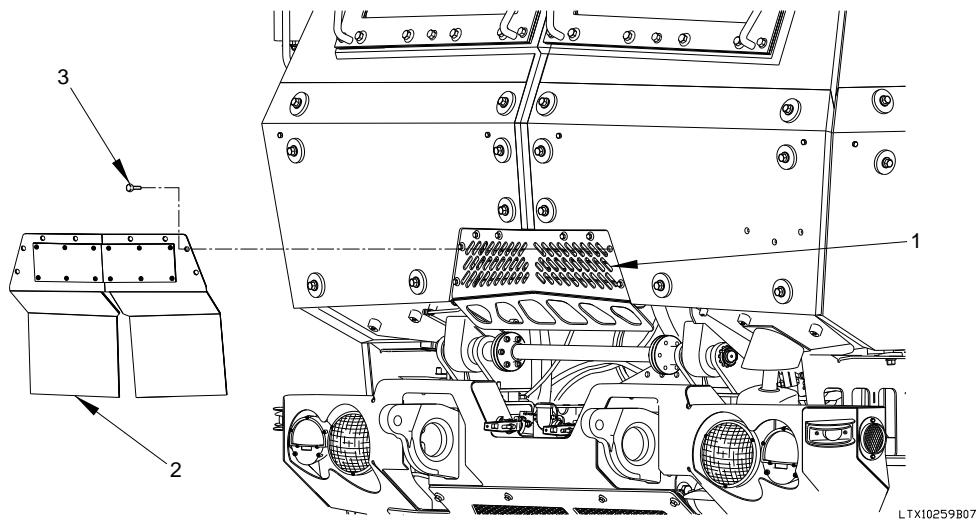
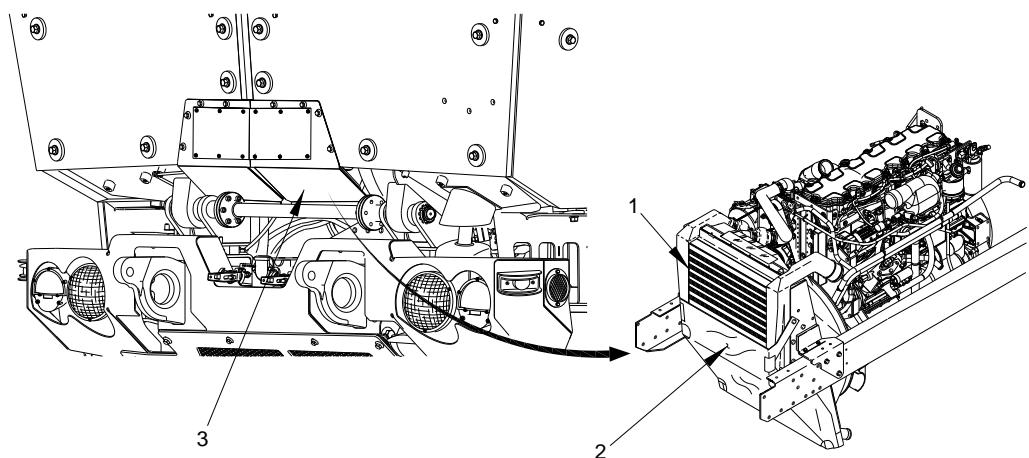
PREPARATION FOR COLD ENVIRONMENT OPERATIONS - Continued

Figure 8. Preparation for Cold Environment Operations.

17. Position lower flaps of cab arctic front cover (Figure 9, Item 3) between cold weather radiator cover (Figure 9, Item 2) and charge air cooler (Figure 9, Item 1).

PREPARATION FOR COLD ENVIRONMENT OPERATIONS - Continued

LTXI0259B25

Figure 9. Preparation for Cold Environment Operations.

END OF TASK**ENGINE START IN COLD ENVIRONMENT**

1. Position master power switch (Figure 10, Item 1) to on.

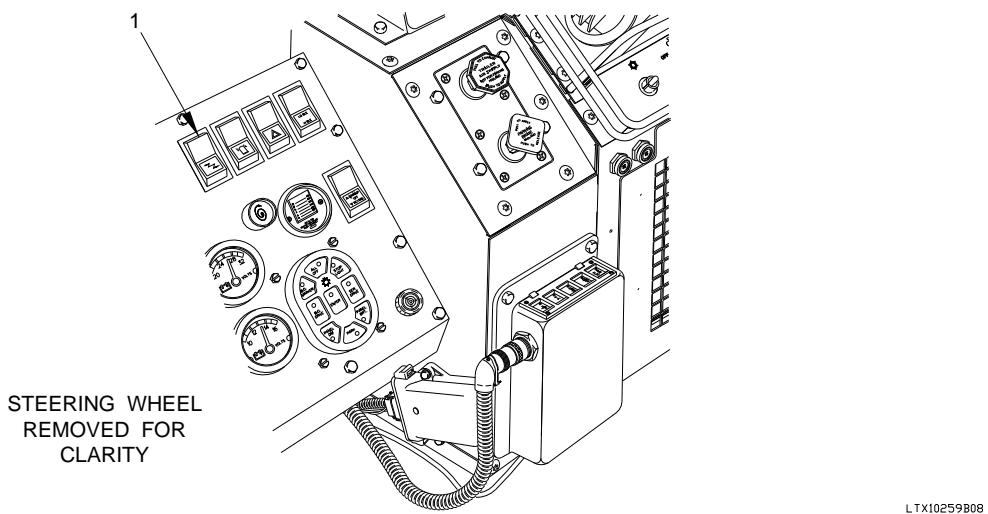
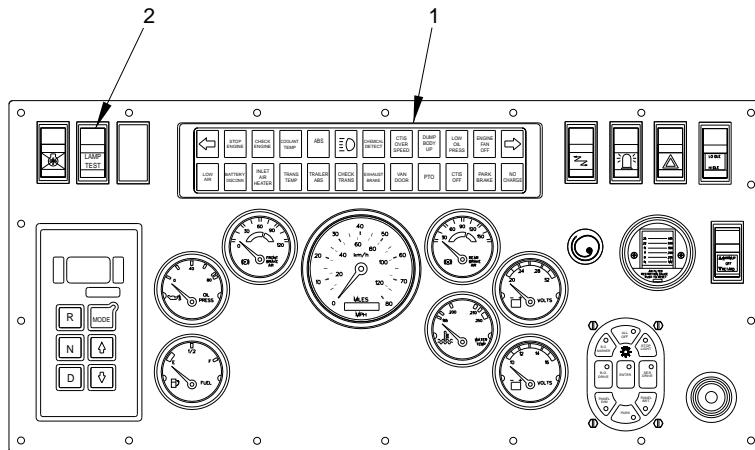
ENGINE START IN COLD ENVIRONMENT - Continued

Figure 10. Engine Start in Cold Environment.

NOTE

- LOW OIL PRESS, CHECK TRANS, PARK BRAKE, ABS, and LOW AIR indicators remain on until operating pressures are achieved or are manually released.
 - INLET AIR HEATER indicator, on lighted indicator display, illuminates for a minimum of 2 seconds before attempting to start engine again.
2. Press LAMP TEST switch (Figure 11, Item 2) to verify that all warning indicators illuminate on lighted indicator display (Figure 11, Item 1).

ENGINE START IN COLD ENVIRONMENT - Continued

LTX10259B09

Figure 11. Engine Start in Cold Environment.

NOTE

- After positioning master power switch on and completing lamp test, INLET AIR HEATER indicator may remain on for up to 30 seconds, indicating that inlet air heater is in cold start mode.
 - Inlet air preheat is complete when the INLET AIR HEATER indicator goes out.
 - It is normal for INLET AIR HEATER indicator to cycle on/off during the cranking operation.
 - If engine does not start in first 30 seconds of cranking, release starter pushbutton and wait 30 seconds before attempting to start engine again.
3. Press and hold starter pushbutton (Figure 12, Item 1) after INLET AIR HEATER indicator (Figure 12, Item 2) goes out.

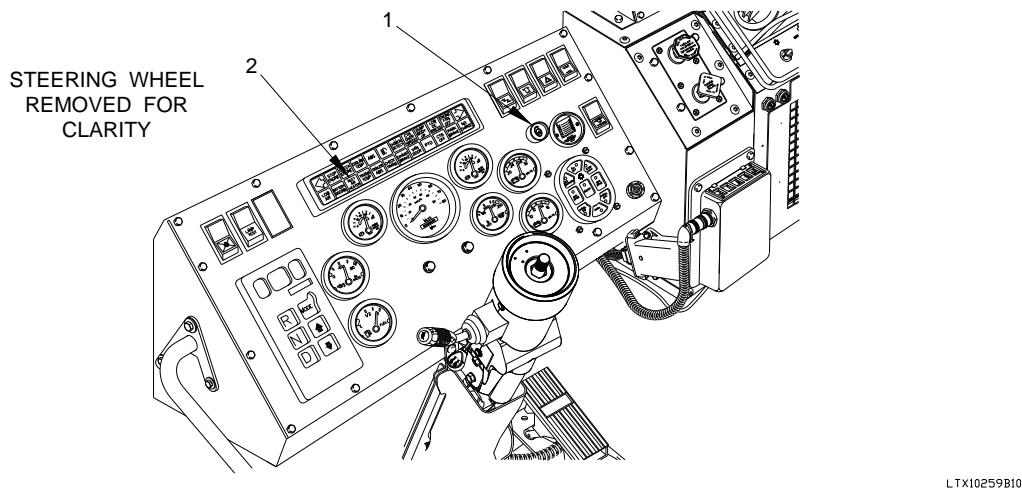
ENGINE START IN COLD ENVIRONMENT - Continued

Figure 12. Engine Start in Cold Environment.

NOTE

After engine starts and maintains low idle speed for two minutes, engine idle speed may increase. If idle speed increases, engine will maintain increased idle speed until engine reaches a predetermined temperature or after operating for 12 minutes at increased speed. Engine speed may be returned to low idle speed to begin vehicle operations by pressing and releasing accelerator pedal.

4. Release starter pushbutton (Figure 13, Item 1) when engine starts or after 30 seconds.

CAUTION

If STOP ENGINE indicator flashes (red) to warn Operator about a potential engine failure, engine should be shut down immediately and Engine System Troubleshooting performed. Failure to comply may result in damage to equipment.

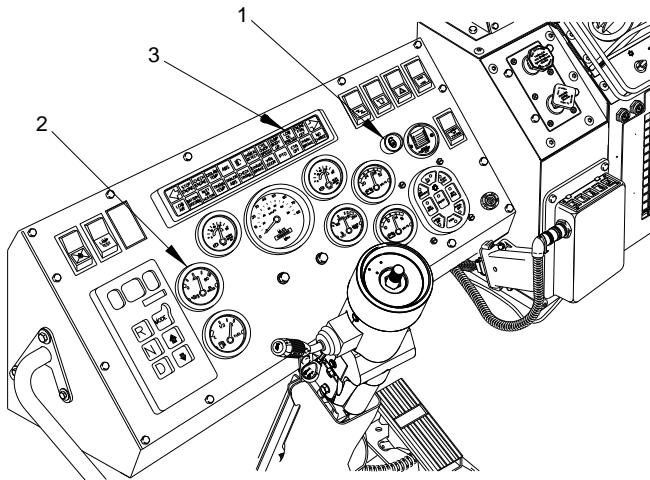
ENGINE START IN COLD ENVIRONMENT - Continued**CAUTION**

If OIL PRESS gauge does not show engine oil pressure of 15-80 psi within 10-15 seconds after starting engine, engine must be shut down immediately and Engine System Troubleshooting performed. Failure to comply may result in damage to equipment.

NOTE

Oil pressure increases when engine speed increases and decreases when engine speed decreases.

5. Check that OIL PRESS gage (Figure 13, Item 2) reads between 15 psi and 80 psi. If OIL PRESS gage (Figure 13, Item 2) reads in red zone and LOW OIL PRESS indicator (Figure 13, Item 3) is illuminated, shut down engine (Volume 1, WP 0019) and perform Engine System Troubleshooting.



LTX10259BII

Figure 13. Engine Start in Cold Environment.

WARNING

Do not drive vehicle until windshield is sufficiently clear of frost/ice. Failure to comply may result in severe injury or death to personnel.

6. Operate windshield defrost (Volume 1, WP 0022) as required.
7. Operate HVAC unit (Volume 1, WP 0022) as required.

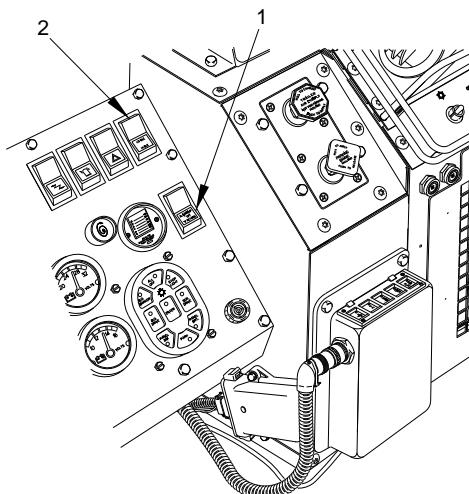
ENGINE START IN COLD ENVIRONMENT - Continued

8. Press LO IDLE/HI IDLE SWITCH (Figure 14, Item 2) to engage HI IDLE.

NOTE

EXHAUST BRAKE WARMUP/OFF/RETARD indicator illuminates WARMUP when switch is positioned to WARMUP.

9. Position WARMUP/OFF/RETARD switch (Figure 14, Item 1) to WARMUP.



LTX10259B12

Figure 14. Engine Start in Cold Environment.

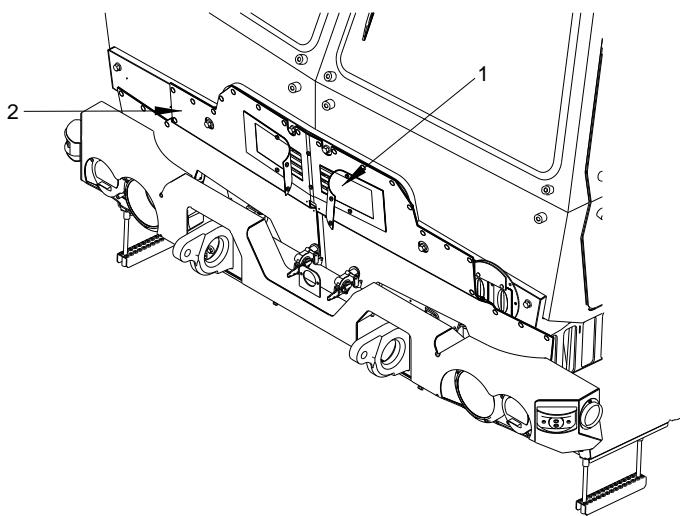
CAUTION

Cab arctic front cover may be left on vehicle in temperatures up to 40° F (4° C), except when engine requires maximum cooling such as in extreme off-road conditions or when vehicle is operating fully loaded. Flaps should be adjusted so that engine temperature is between 165° F (74° C) and 210° F (100° C) during vehicle operation. Failure to comply may result in damage to equipment.

NOTE

Perform the following step on vehicle without B-Kit installed.

10. Adjust flaps (Figure 15, Item 1) on cab arctic front cover (Figure 15, Item 2).

ENGINE START IN COLD ENVIRONMENT - Continued

LTX10259B13

Figure 15. Engine Start in Cold Environment.

NOTE

Perform the following step on vehicle with B-Kit installed.

11. Adjust flaps (Figure 16, Item 2) on cab arctic front cover (Figure 16, Item 1).

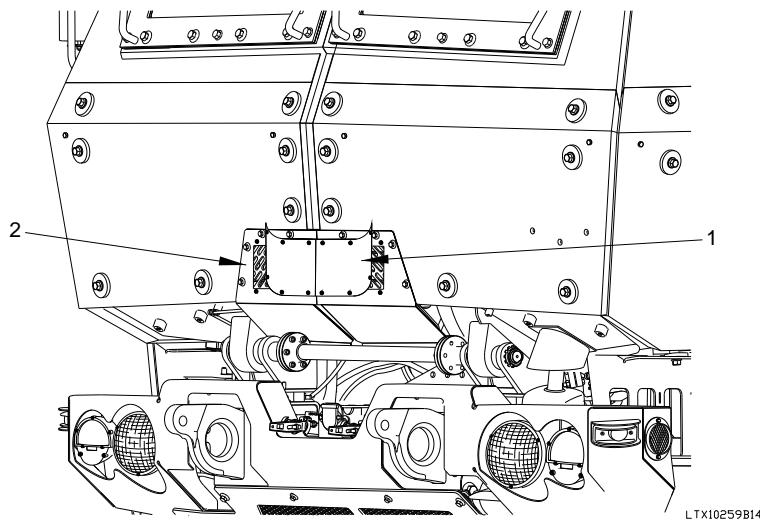
ENGINE START IN COLD ENVIRONMENT - Continued

Figure 16. Engine Start in Cold Environment.

12. Check that WATER TEMP gage (Figure 17, Item 7) reads less than 230° F (110° C). If WATER TEMP gage (Figure 17, Item 7) reads in the red zone or COOLANT TEMP indicator (Figure 17, Item 1) is illuminated, shut down engine (Volume 1, WP 0019) and perform Engine System Troubleshooting.

WARNING

Vehicle must be operated at high idle (1350 rpm) until coolant temperature is 165° F (74° C) and windshield is sufficiently clear of frost/ice. Failure to comply may cause serious injury to personnel or may result in damage to equipment.

NOTE

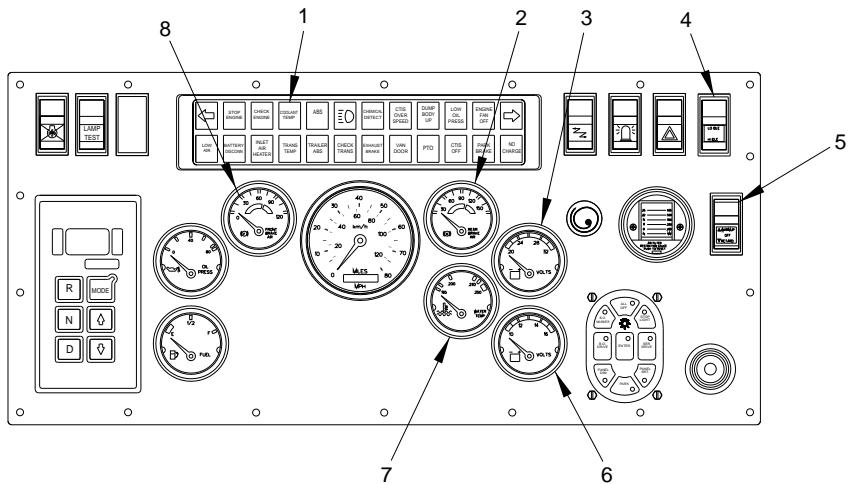
Perform the following two steps when windshield is clear of frost/ice and prior to driving vehicle.

13. Position WARMUP/OFF/RETARD switch (Figure 17, Item 5) to OFF.
14. Press LO IDLE/HI IDLE switch (Figure 17, Item 4) to engage LO IDLE.

ENGINE START IN COLD ENVIRONMENT - Continued

NOTE

- If FRONT BRAKE AIR and REAR BRAKE AIR pressure gages do not read between 75-120 psi after engine warm-up, shut down engine and perform Air System Troubleshooting.
 - LOW AIR indicator illuminates (red) and audible alarm sounds until air pressure is between 75-85 psi.
15. Check that FRONT BRAKE AIR pressure gage (Figure 17, Item 8) and REAR BRAKE AIR pressure gage (Figure 17, Item 2) read between 75-120 psi (517-827 kPa).
 16. Check that 12 VOLTS gage (Figure 17, Item 6) reads between 13 and 15 volts.
 17. Check that 24 VOLTS gage (Figure 17, Item 3) reads between 26 and 30 volts.



LTX10259BIS

Figure 17. Engine Start in Cold Environment.

18. Check that AIR FILTER RESTRICTION GAUGE (Figure 18, Item 1) reads below 25 in.
19. Press reset button (Figure 18, Item 3) if AIR FILTER RESTRICTION GAUGE (Figure 18, Item 1) reads greater than 25 in.
20. Shut down engine (Volume 1, WP 0019) and service air filter (Volume 3, WP 0346) if AIR FILTER RESTRICTION GAUGE (Figure 18, Item 1) still reads greater than 25 in.

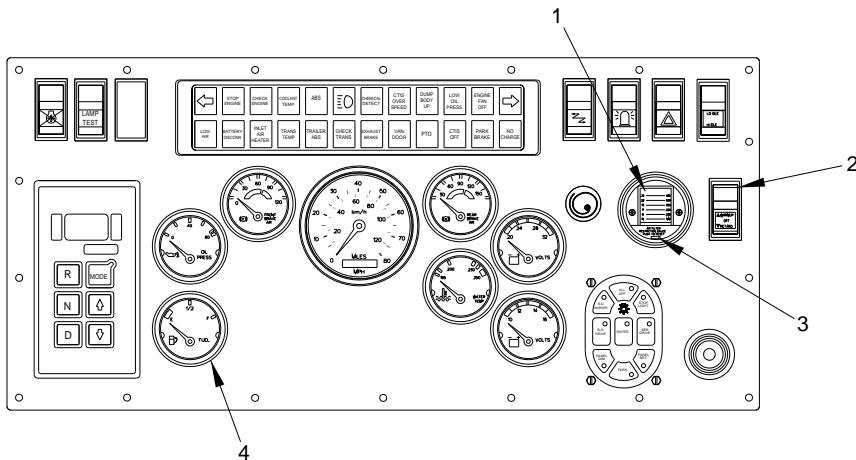
ENGINE START IN COLD ENVIRONMENT - Continued

21. Check that FUEL gage (Figure 18, Item 4) shows sufficient fuel to accomplish mission.

WARNING

Do not engage exhaust brake feature in icy or slippery conditions.
Failure to comply may result in injury to personnel or damage to equipment.

22. Position WARMUP/OFF/RETARD switch (Figure 18, Item 2) to RETARD.



LTXI0259B16

Figure 18. Engine Start in Cold Environment.

END OF TASK

CTIS COLD WEATHER OPERATION

NOTE

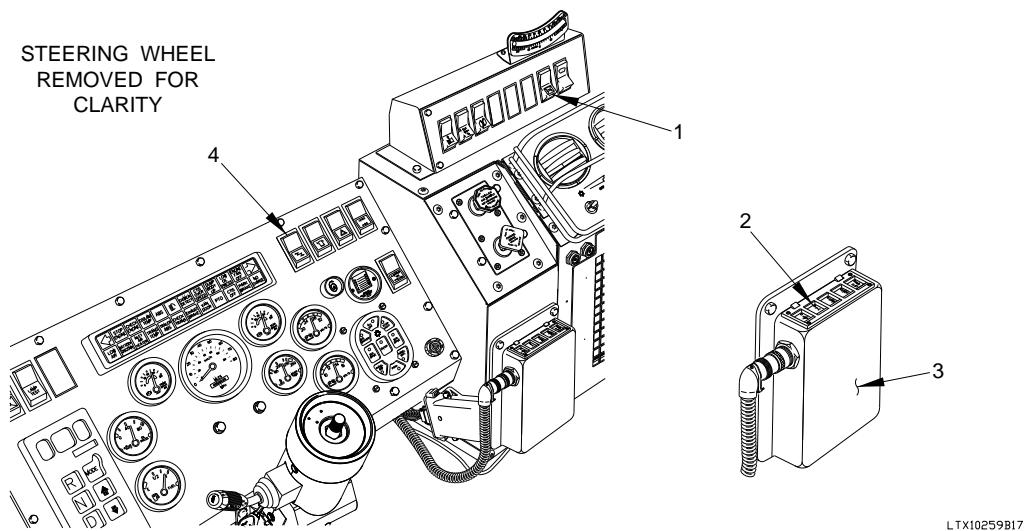
When temperatures are below -15°F (-26°C), Central tire Inflation System (CTIS) air leaks may occur when the vehicle is started. This is indicated by four or five flashing mode lights on the CTIS Electronic Control Unit (ECU). When CTIS seals warm up and air leakage stops, the CTIS ECU should automatically reset and the CTIS ECU selected mode illuminate steady. When four or five mode lights are flashing perform the following two steps.

1. Position CTIS on/off switch (Figure 19, Item 1) to off by pressing the bottom half of the switch.
2. Drive vehicle for approximately 15-30 minutes or until CTIS ECU (Figure 19, Item 3) resets.

NOTE

If Central Tire Inflation System (CTIS) Electronic Control Unit (ECU) does not reset, perform the following three steps. If CTIS ECU does not reset after performing the following three steps, notify Field Maintenance.

3. Position master power switch (Figure 19, Item 4) to off.
4. Position master power switch (Figure 19, Item 4) to on.
5. Depress cross-country mode (XC) (Figure 19, Item 2) on CTIS ECU (Figure 19, Item 3).

CTIS COLD WEATHER OPERATION - Continued

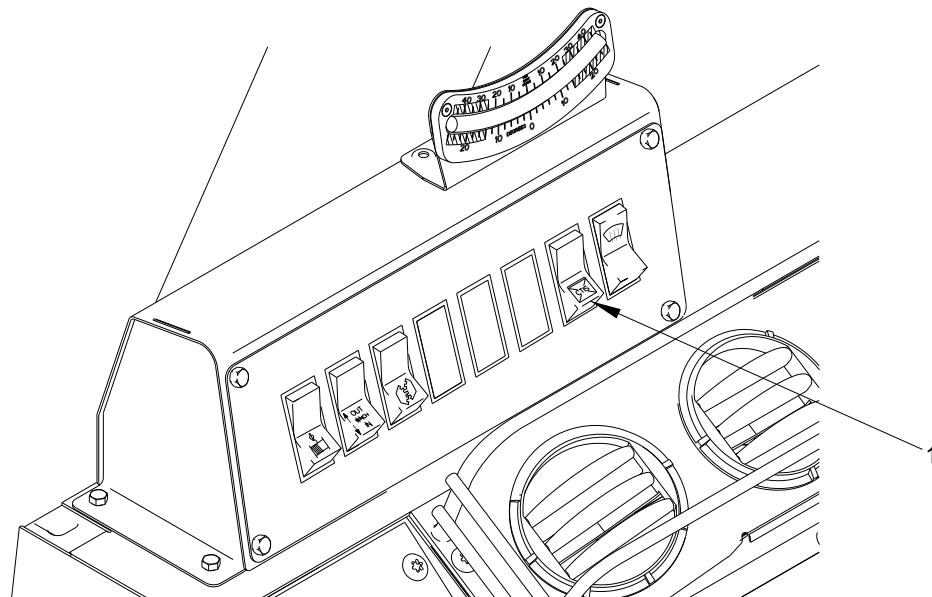
LTXI0259B17

Figure 19. CTIS Cold Weather Operation.

NOTE

Perform the following step when CTIS ECU resets or WATER TEMP gage reaches a minimum of 100° F (38° C).

6. Position CTIS on/off switch (Figure 20, Item 1) to on by pressing top half of switch.

CTIS COLD WEATHER OPERATION - Continued

LTX10259B18

Figure 20. CTIS Cold Weather Operation.

7. Operate vehicle lights. (Volume 1, WP 0019)
8. Select desired transmission operating range. (Volume 1, WP 0019)
9. Operate Service Brakes. (Volume 1, WP 0019)

CAUTION

In cold environments, MATERIAL HANDLING CRANE (MHC) must be exercised for 10 minutes before normal operation. Failure to comply may result in damage to equipment.

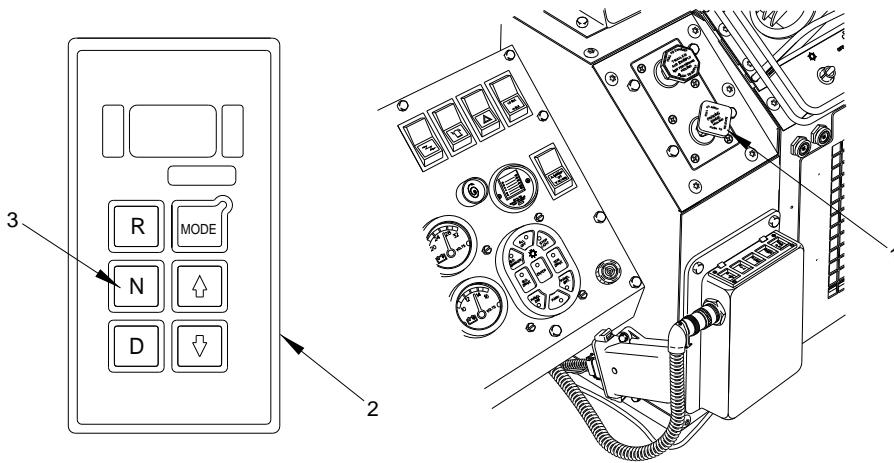
10. Exercise Light Material Handling Crane (LMHC) before normal operation (if equipped).

END OF TASK**ENGINE SHUT DOWN IN COLD ENVIRONMENT**

1. Stop vehicle.
2. Press N (Neutral) button (Figure 21, Item 3) on Gen IV Transmission Pushbutton Shift Selector (TPSS) (Figure 21, Item 2).

ENGINE SHUT DOWN IN COLD ENVIRONMENT - Continued

3. Pull out PARKING BRAKE control (Figure 21, Item 1) to engage parking brake.



LTX10259B19

Figure 21. Engine Shut Down in Cold Environment.

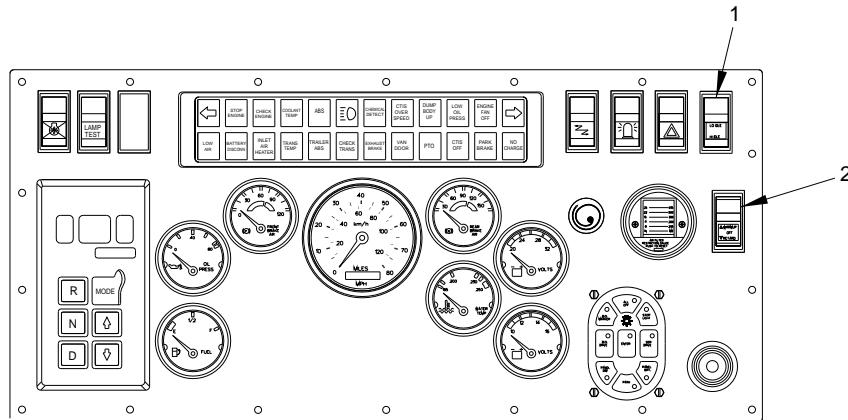
CAUTION

Vehicle must be properly prepared for temperature changes in desert environment. Failure to comply may result in damage to vehicle.

NOTE

- EXHAUST BRAKE WARMUP/OFF/RETARD indicator illuminates WARMUP when switch is positioned to WARMUP.
- LO IDLE/HI IDLE and WARMUP/OFF/RETARD switches are used until WATER TEMP gage reaches and maintains 165° F (74° C) for 1 to 3 minutes.
- The following two steps are only necessary to meet 165° F (74° C) requirements.

4. Press LO IDLE/HI IDLE switch (Figure 22, Item 1) to engage HI IDLE.
5. Position WARMUP/OFF/RETARD switch (Figure 22, Item 2) to WARMUP.

ENGINE SHUT DOWN IN COLD ENVIRONMENT - Continued

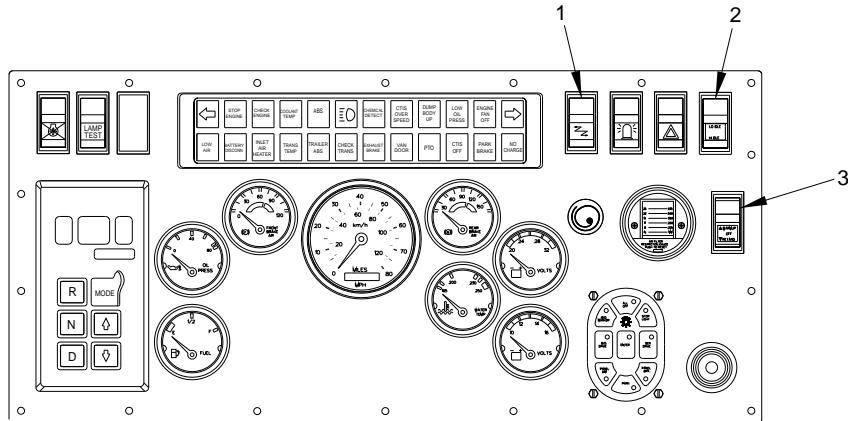
LTX10259B20

Figure 22. Engine Shut Down in Cold Environment.

NOTE

Perform the following two steps after engine has maintained 165° F (74° C) for 1 to 3 minutes.

6. Position WARMUP/OFF/RETARD switch (Figure 23, Item 3) to OFF.
7. Press LO IDLE/HI IDLE switch (Figure 23, Item 2) to engage LO IDLE.
8. Turn off lights and electrical accessories. (Volume 1, WP 0019)
9. Turn off HVAC unit. (Volume 1, WP 0022)
10. Position master power switch (Figure 23, Item 1) to off.
11. Chock wheels. (Volume 1, WP 0019)

ENGINE SHUT DOWN IN COLD ENVIRONMENT - Continued

LTXI0259B21

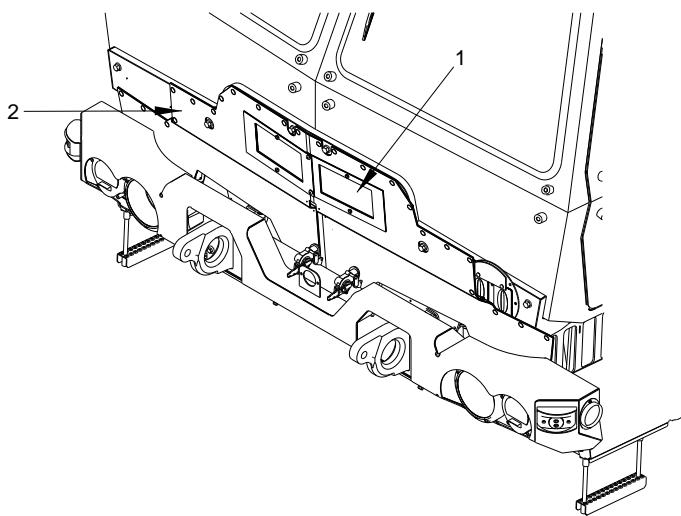
Figure 23. Engine Shut Down in Cold Environment.

12. Drain air tanks. (Volume 1, WP 0019)

NOTE

Perform the following step on vehicle without B-Kit installed.

13. Close flaps (Figure 24, Item 1) on the cab arctic front cover (Figure 24, Item 2).

ENGINE SHUT DOWN IN COLD ENVIRONMENT - Continued

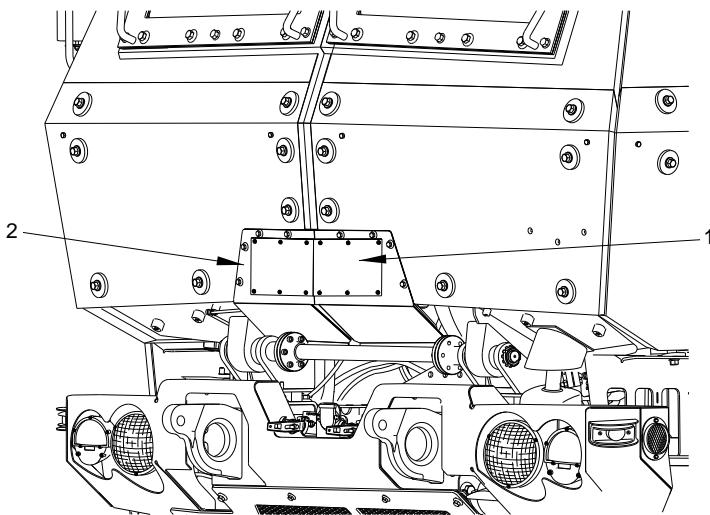
LTXI0259B22

Figure 24. Engine Shut Down in Cold Environment.

NOTE

Perform the following step on vehicle with B-Kit installed.

14. Close flaps (Figure 25, Item 2) on the cab arctic front cover (Figure 25, Item 1).

ENGINE SHUT DOWN IN COLD ENVIRONMENT - Continued

LTXI0259B23

Figure 25. Engine Shut Down in Cold Environment.

END OF TASK**FOLLOW-ON MAINTENANCE**

Install tire chains, (WP 0058) if needed.

END OF TASK**END OF WORK PACKAGE**

OPERATOR MAINTENANCE
**VEHICLE OPERATION IN EXTREME COLD ENVIRONMENT -26° F TO -65° F (-32° C
TO -54° C) WORK PACKAGE**

INITIAL SETUP:

References

FM 31-70

Equipment Condition

Hydraulic system flushed.

ENGINE START IN EXTREME COLD ENVIRONMENT

WARNING

Wear arctic clothing when cab temperatures fall and remain below 30° F (-1° C). Cold stress preventative measures in FM 31-70 should be applied when vehicle cab temperatures fall and remain below 30° F (-1° C). Failure to comply may result in serious injury or death to personnel.

WARNING



Do not touch extremely cold metal (below -26°F [-32°C]). Bare skin may freeze to cold metal. Failure to comply may result in injury to personnel.

CAUTION

If vehicle is equipped with cab arctic front cover, vehicle must not be left running unattended with flaps fully closed in temperatures above -25° F (-32° C). Operating temperature is 165° F (74° C) and 210° F (100° C). Failure to comply may result in damage to equipment.

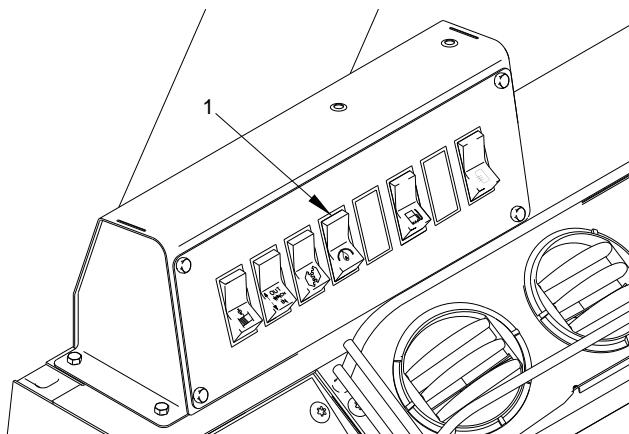
CAUTION

The following four steps must be performed in order shown. Failure to comply may result in excess discharging of batteries, resulting in vehicle being unable to start.

1. Perform vehicle operation in cold environment 32° F to -25° F (0° C -32° C) (WP 0055).

ENGINE START IN EXTREME COLD ENVIRONMENT - Continued

2. Position arctic heater switch (Figure 1, Item 1) to on and run for 40 minutes.
3. Position arctic heater switch (Figure 1, Item 1) to off and wait for pump to turn off (three to four minute cool down cycle).



LTXI0261B07

Figure 1. Engine Start in Extreme Cold Environment.

4. Position master power switch to ON.

NOTE

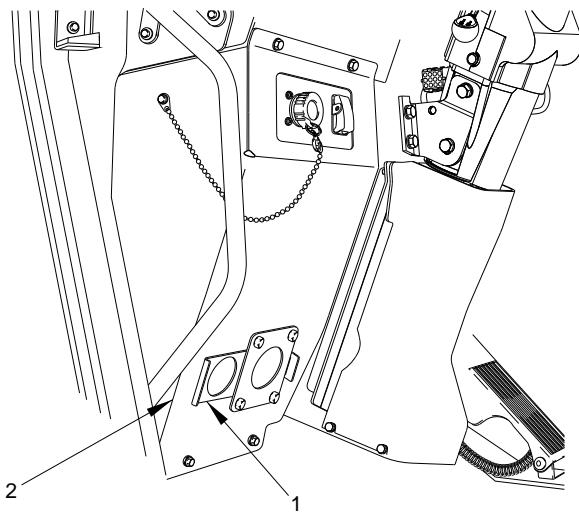
Repeat the following two steps until engine starts.

5. Hold starter pushbutton (Volume 1, WP 0004) until vehicle starts.

END OF TASK**HVAC DEFROST OPERATION IN EXTREME COLD ENVIRONMENT****NOTE**

Operate the HVAC unit in this mode upon initial startup only until windshield is defrosted.

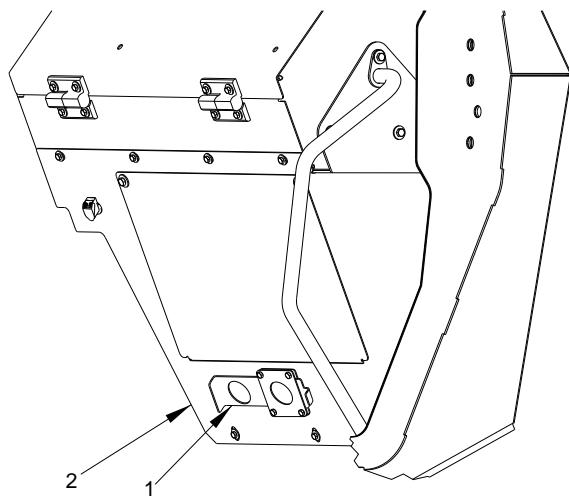
1. Position vent plate slider (Figure 2, Item 1) in driver side kick panel (Figure 2, Item 2) to the fully closed position.

HVAC DEFROST OPERATION IN EXTREME COLD ENVIRONMENT - Continued

LTX10261B05

Figure 2. HVAC Defrost Operation in Extreme Cold Environment.

2. Position vent plate slider (Figure 3, Item 1) in passenger side kick panel (Figure 3, Item 2) to the fully closed position.

HVAC DEFROST OPERATION IN EXTREME COLD ENVIRONMENT - Continued

LTX10261B06

Figure 3. HVAC Defrost Operation in Extreme Cold Environment.

NOTE

Turn Webasto heater on as required once the truck is running to aid in heating the cab. If there is interference with communication equipment than turn Webasto heater off.

3. Adjust vents (Figure 4, Item 1) to fully closed position.
4. Position heat/cool control dial (Figure 4, Item 4) to full heat.
5. Position fresh air/recirculation switch (Figure 4, Item 3) to recirculate.
6. Position defrost control dial (Figure 4, Item 2) to full defrost.
7. Position fan dial (Figure 4, Item 5) to 3.

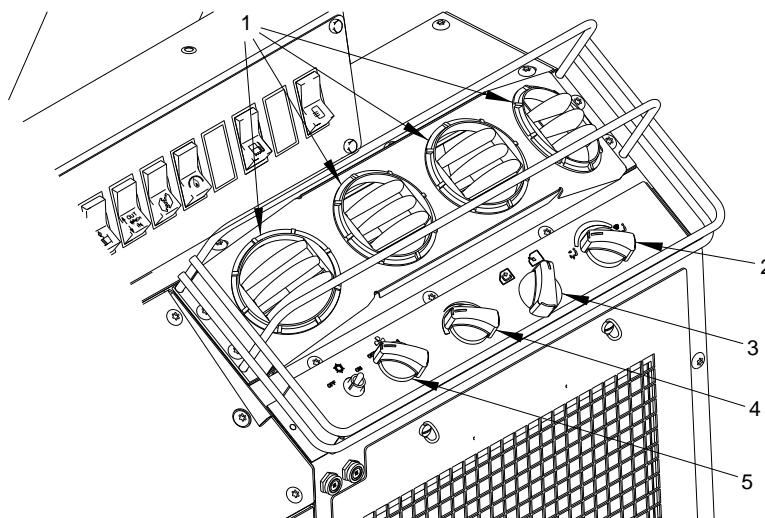
HVAC DEFROST OPERATION IN EXTREME COLD ENVIRONMENT - Continued

Figure 4. HVAC Defrost Operation in Extreme Cold Environment.

NOTE

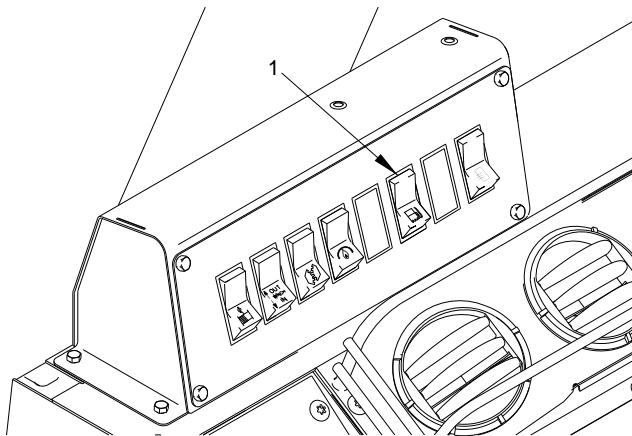
To aid in clearing windshield position windshield wiper control to the first intermittent control setting (the longest cycle time). Once evidence of windshield clearing occurs, position to highest wiper setting.

8. Refer to HVAC Operation (Volume 1, WP 0022) for operation once windshield is defrosted.

END OF TASK**ENGINE SHUT DOWN IN EXTREME COLD ENVIRONMENT****CAUTION**

When outside temperatures are below -26° F (-32° C), continuous operation of engine at high idle without WARMUP/OFF/RETARD switch in WARMUP position should not be attempted. Failure to comply may result in damage to equipment.

1. Perform engine shut down in cold environment. (WP 0055)
2. Position fuel preheat switch (Figure 5, Item 1) to off (if equipped).

ENGINE SHUT DOWN IN EXTREME COLD ENVIRONMENT - Continued

LTX10261B01

Figure 5. Engine Shut Down in Extreme Cold Environment.

END OF TASK**END OF WORK PACKAGE**

**OPERATOR MAINTENANCE
STARTING ON HILL OPERATION WORK PACKAGE**

INITIAL SETUP:

Not Applicable

VEHICLE OPERATION

1. Start engine (Volume 1, WP 0019).
2. Apply service brakes (Volume 1, WP 0019).
3. Select the desired gear (Volume 1, WP 0019).
4. Increase engine speed and slowly release service brakes.

END OF TASK

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
TIRE CHAINS INSTALLATION/REMOVAL WORK PACKAGE**

INITIAL SETUP:

Personnel Required
(2)

REAR OR INTERMEDIATE AXLE TIRE CHAIN INSTALLATION

CAUTION

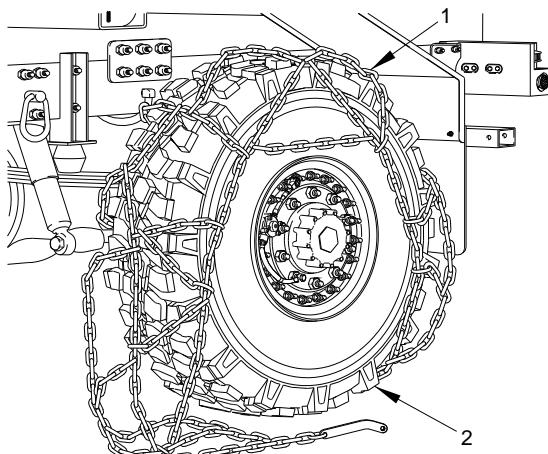
Tire chains must not be used when driving on hard surfaces where there is no wheel slippage. Failure to comply may result in damage to equipment.

CAUTION

When installing tire chains on the vehicle's rear wheels, the CTIS should be in highway mode at all times maximum speed 10 Mph (16 Km/H). Failure to comply may result in damage to equipment.

NOTE

- Maximum speed limit for vehicles with tire chains on highway is 10 mph (16 km/h). Maximum speed limit for vehicles with tire chains off highway is 15 mph (24 km/h).
 - Position chain-end of tire chain towards front of vehicle.
 - The following step requires the aid of an assistant.
 - Tire chain is installed on rear and intermediate tires the same way. Rear tire shown.
1. Lift tire chain (Figure 1, Item 1) over top of tire (Figure 1, Item 2).
 2. Jam chain-end of tire chain (Figure 1, Item 1) between tire (Figure 1, Item 2) and road.

REAR OR INTERMEDIATE AXLE TIRE CHAIN INSTALLATION - Continued

LTX10277X04

Figure 1. Rear or Intermediate Axle Tire Chain Installation.

3. Start engine. (Volume 1, WP 0019)

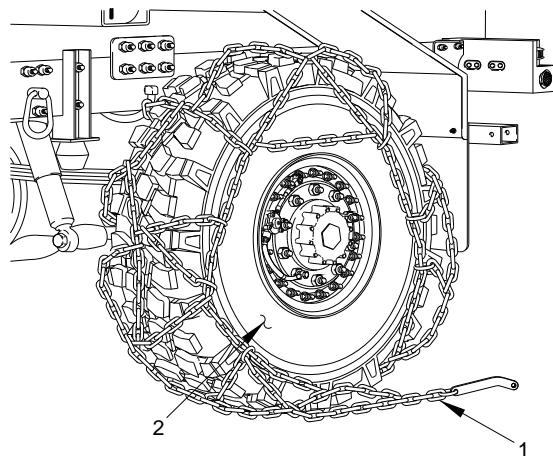
WARNING

Do not back up vehicle without an assistant. Operator has limited vision while backing vehicle. Failure to comply may result in serious injury or death to personnel or damage to equipment.

NOTE

The following step requires the aid of an assistant.

4. Drive vehicle rearward about 1/4 of radius of tire (Figure 2, Item 2) until tire chain (Figure 2, Item 1) comes out underneath other side of tire.
5. Shut down engine. (Volume 1, WP 0019)

REAR OR INTERMEDIATE AXLE TIRE CHAIN INSTALLATION - Continued

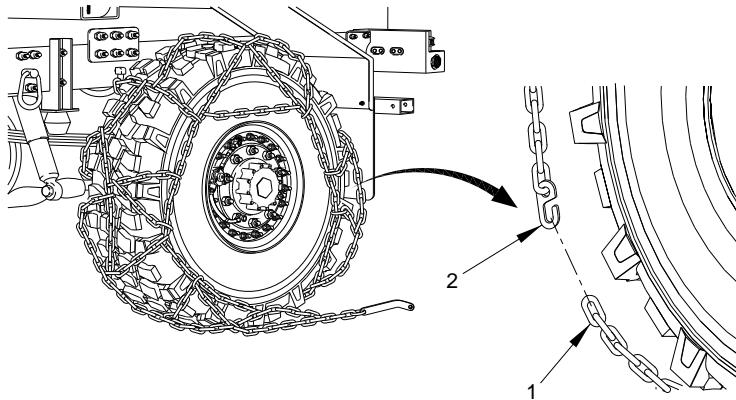
LTX10277X05

Figure 2. Rear or Intermediate Axle Tire Chain Installation.

NOTE

Install end-hook on inside of tire chain first.

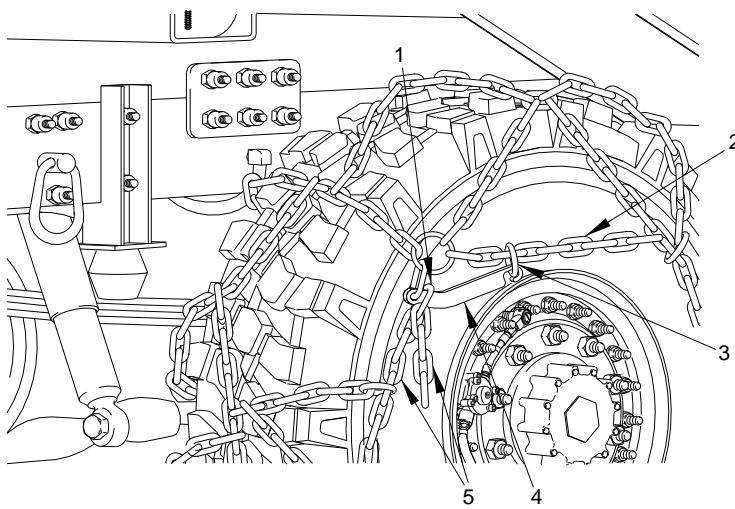
6. Install end-hook (Figure 3, Item 2) on tire chain (Figure 3, Item 1).
7. Perform the previous step on outside end-hook.

REAR OR INTERMEDIATE AXLE TIRE CHAIN INSTALLATION - Continued

LTX10277X02

Figure 3. Rear or Intermediate Axle Tire Chain Installation.

8. Remove slack from tension chain (Figure 4, Item 5) on inside diameter of tire chain (Figure 4, Item 2).
9. Route tension lever (Figure 4, Item 4) in mounting ring (Figure 4, Item 1) of tension chain (Figure 4, Item 5).
10. Install tension lever (Figure 4, Item 4) in securing ring (Figure 4, Item 3).

REAR OR INTERMEDIATE AXLE TIRE CHAIN INSTALLATION - Continued

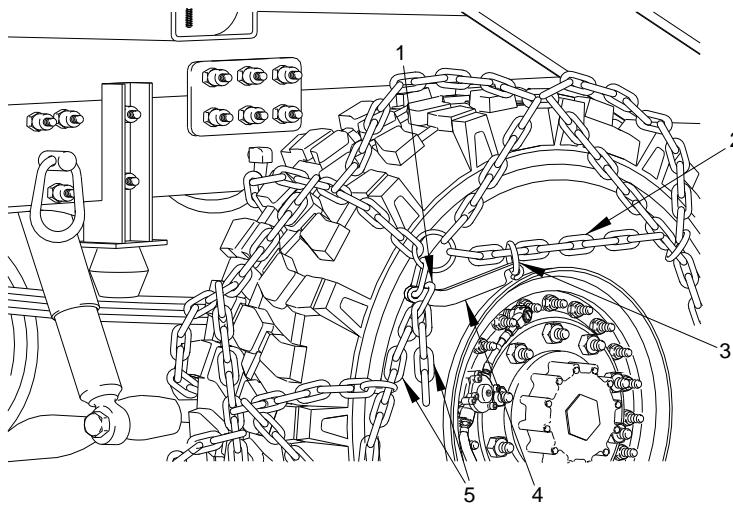
LTX10277X03

Figure 4. Rear or Intermediate Axle Tire Chain Installation.

END OF TASK**REAR OR INTERMEDIATE AXLE TIRE CHAIN REMOVAL****NOTE**

Tire chain is remove from rear and intermediate tires the same way.
Rear tire shown.

1. Remove tension lever (Figure 5, Item 4) from securing ring (Figure 5, Item 3).
2. Remove tension lever (Figure 5, Item 4) through mounting ring (Figure 5, Item 1) of tension chain (Figure 5, Item 5).
3. Remove tension on tension chain (Figure 5, Item 5) from tire chain (Figure 5, Item 2).

REAR OR INTERMEDIATE AXLE TIRE CHAIN REMOVAL - Continued

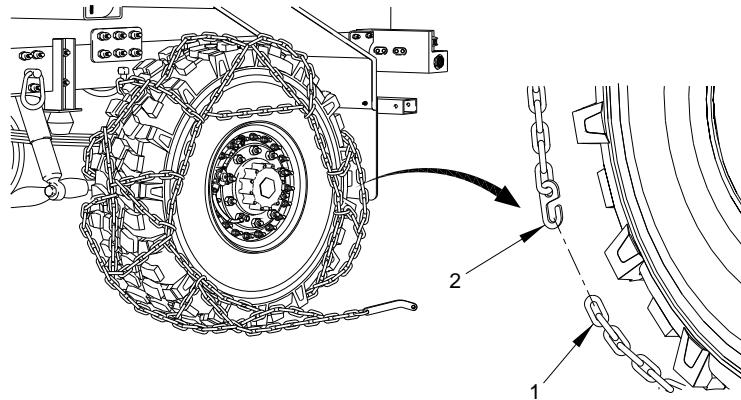
LTX10277X03

Figure 5. Rear or Intermediate Axle Tire Chain Removal.

NOTE

Remove end-hook on outside of tire chain first.

4. Remove end-hook (Figure 6, Item 2) from tire chain (Figure 6, Item 1).
5. Perform the previous step on inside end-hook.

REAR OR INTERMEDIATE AXLE TIRE CHAIN REMOVAL - Continued

LTX10277X02

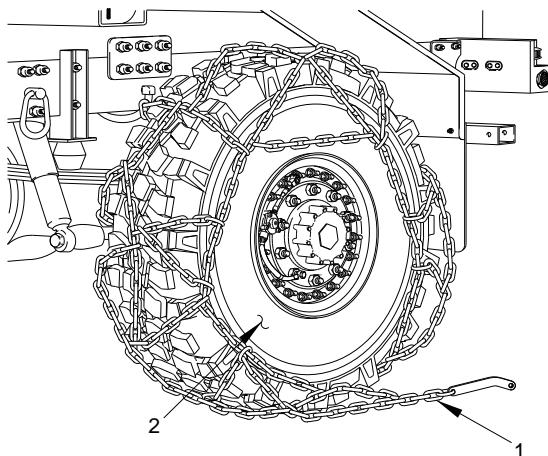
Figure 6. Rear or Intermediate Axle Tire Chain Removal.

6. Start engine. (Volume 1, WP 0019)

NOTE

The following step requires the aid of an assistant.

7. Drive vehicle forward until tire chain (Figure 7, Item 1) isn't underneath tire (Figure 7, Item 2).
8. Shut down engine. (Volume 1, WP 0019)

REAR OR INTERMEDIATE AXLE TIRE CHAIN REMOVAL - Continued

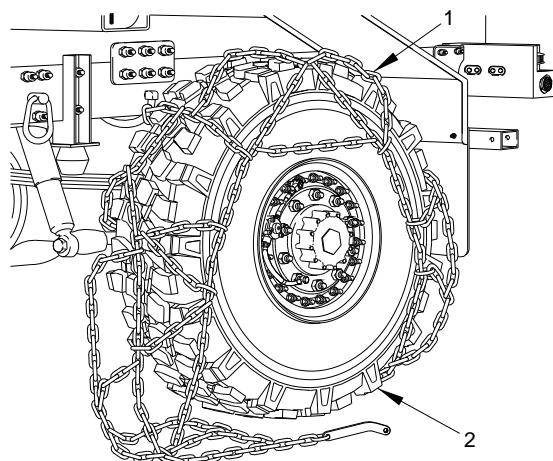
LTX10277X01

Figure 7. Rear or Intermediate Axle Tire Chain Removal.

NOTE

The following step requires the aid of an assistant.

9. Remove tire chain (Figure 8, Item 1) from tire (Figure 8, Item 2).

REAR OR INTERMEDIATE AXLE TIRE CHAIN REMOVAL - Continued

LTX10277X04

Figure 8. Rear or Intermediate Axle Tire Chain Removal.

END OF TASK**END OF WORK PACKAGE**

OPERATOR MAINTENANCE CARGO AREA ARCTIC HEATER OPERATION

*** The following is applicable to the following UOC(s): TSD TSB TSM TSC TSA TSL. ***

INITIAL SETUP:

References

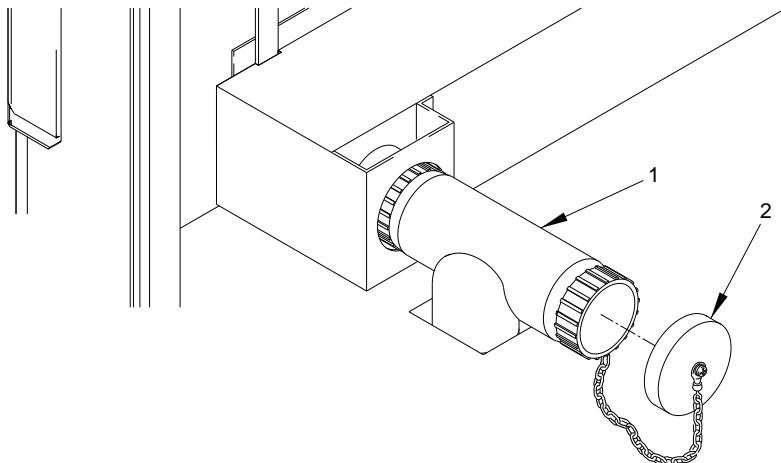
Organizational, Direct Support, and General Support Maintenance Manual (Including Repair Parts

References (cont.)

and Special Tools List) for Heater, Vehicular Compartment (Volume 3, WP 0356)

CARGO AREA ARCTIC HEATER START

1. Remove two caps (Figure 1, Item 2) from ducts (Figure 1, Item 1).



LTX10263B01

Figure 1. Cargo Area Arctic Heater Start.

2. For further information on the cargo area arctic heater, refer to TM 9-2540-207-14&P (Volume 3, WP 0356).

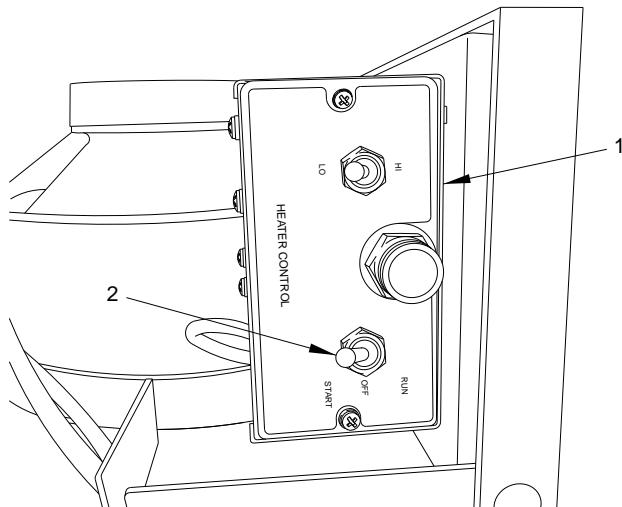
CARGO AREA ARCTIC HEATER START - Continued**WARNING**

- CARBON MONOXIDE (EXHAUST GAS) CAN KILL YOU.
- Carbon monoxide is a colorless, odorless, DEADLY POISONOUS gas and when breathed deprives body of oxygen and causes SUFFOCATION. Breathing air with carbon monoxide produces symptoms of headache, dizziness, loss of muscular control, a sleepy feeling, and coma. Permanent BRAIN DAMAGE or DEATH can result from severe exposure.
- The following precautions MUST be followed to ensure personnel are safe whenever any type of personnel heater or engine is operated for any purpose. Failure to comply may result in serious injury or death to personnel.
- DO NOT operate heater or engine in an enclosed area without adequate ventilation.
- DO NOT drive any vehicle with inspection plates, cover plates, or engine compartment covers removed unless necessary for maintenance purposes.
- NEVER sleep in a vehicle when the heater is operating or the engine is idling.
- BE ALERT at all times during vehicle operation for exhaust odors and exposure symptoms. If either is present, IMMEDIATELY VENTILATE personnel compartments. Treatment of affected personnel shall be: expose to fresh air; keep warm; DO NOT PERMIT PHYSICAL EXERCISE. If necessary, give cardiopulmonary resuscitation, as described in FM 4-25.11, and get immediate medical attention. Failure to comply may result in serious injury or death to personnel.
- THE BEST DEFENSE AGAINST CARBON MONOXIDE POISONING IS GOOD VENTILATION.

CARGO AREA ARCTIC HEATER START - Continued**CAUTION**

Cargo area arctic heater can be started with either the engine running or by turning on the override switch on the front of the cargo area arctic heater. Failure to operate the cargo area arctic heater kit without the engine running over a period of time will result in batteries becoming discharged.

3. Start engine (Volume 1, WP 0019).
4. Position START/OFF/RUN switch (Figure 2, Item 2) on control box (Figure 2, Item 1) to START for a minimum of 4 seconds.



LTX10263B02

Figure 2. Cargo Area Arctic Heater Start.

NOTE

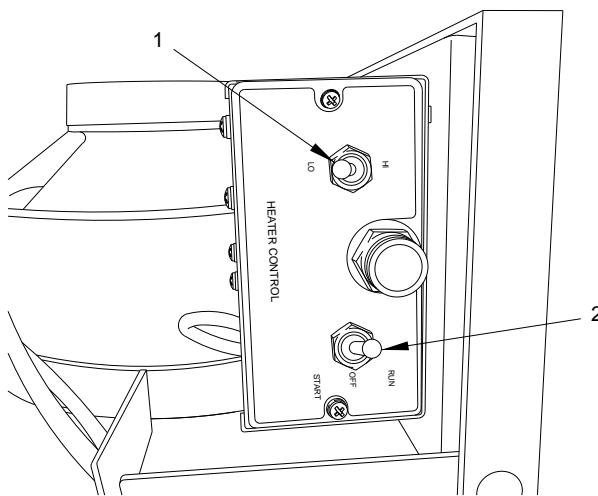
The heater performs several diagnostic functions prior to full operation for the first couple of minutes.

5. Position START/OFF/RUN switch (Figure 3, Item 2) to RUN.

NOTE

The Diagnostic Display will display a code of 07 for LO and 14 for HI during normal operation.

6. Position LO/HI switch (Figure 3, Item 1) as required.

CARGO AREA ARCTIC HEATER START - Continued

LTX10263B03

Figure 3. Cargo Area Arctic Heater Start.

END OF TASK**CARGO AREA ARCTIC HEATER MANUAL SHUTDOWN**

1. For further information on the cargo area arctic heater, refer to TM 9-2540-207-14&P (Volume 3, WP 0356).

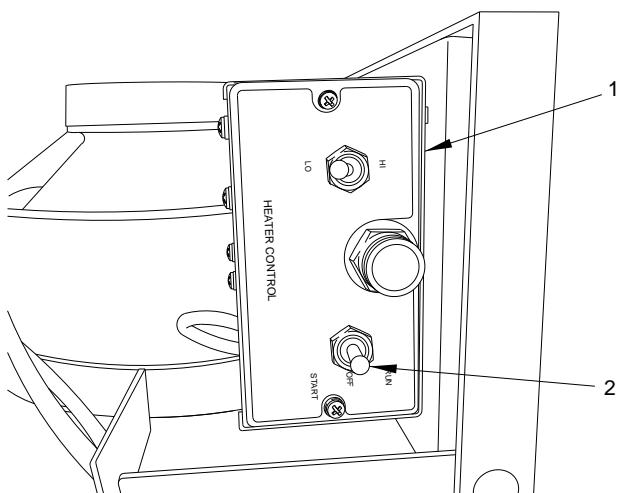
WARNING

Allow heater and exhaust pipe to cool before touching. Failure to comply may result in injury to personnel.

NOTE

Cargo area arctic heater will purge for approximately four minutes after switch is turned to OFF, then it will shutdown completely.

2. Position START/OFF/RUN switch (Figure 4, Item 2) to OFF on control box (Figure 4, Item 1).

CARGO AREA ARCTIC HEATER MANUAL SHUTDOWN - Continued

LTX10263B04

Figure 4. Cargo Area Arctic Heater Manual Shutdown.

END OF TASK**END OF WORK PACKAGE**

**OPERATOR MAINTENANCE
PREPARATION FOR INTERNAL AIR TRANSPORT, HIGHWAY, OR RAIL SHIPMENT
WORK PACKAGE**

***** The following is applicable to the following UOC(s): TSE TSF TSP TSC TSD TSA TSB TSG TSL TSM TSV TSU TSH TSX TSR TSQ TSJ WRK. *****

INITIAL SETUP:

Tools and Special Tools

***** The following is applicable to the following UOC(s): TSP. *****

Tool Kit, Genl Mech

***** The following is applicable to the following UOC(s): TSP. *****

Sling, Multiple Leg

Link, Chain, End

Materials/Parts (cont.)

Rope, Fibrous (Volume 3, WP 0359,
Table 1, Item 153)

Equipment Condition

***** The following is applicable to the following UOC(s): TSP. *****

Prepare van body for movement.
(Volume 1, WP 0018)

Materials/Parts

***** The following is applicable to the following UOC(s): TSP. *****

***** The following is applicable to the following UOC(s): TSP. *****

WARNING



Heavy objects/loads, such as toolboxes and heavy parts, must always be carried on the floor with the weight distributed as equally as possible between left and right sides of van. Failure to comply decreases the stability of the van and will increase the likelihood of a rollover which may result in injury to personnel or damage to equipment.

WARNING

Heavy cabinets must always be mounted as low as possible with the weight distributed as equally as possible between left and right sides of van. Remember to consider the weight of the items that will be stored in the cabinets. Failure to comply decreases the stability of the van and will increase the likelihood of a rollover which may result in injury to personnel or damage to equipment.

WARNING

Always keep in mind, when placing items inside the van, that heavier items must always be positioned as low as possible and the weight distributed as equally as possible between left and right sides of van. Failure to comply decreases the stability of the van and will increase the likelihood of a rollover which may result in injury to personnel or damage to equipment.

*** The following is applicable to the following UOC(s): TSP. ***

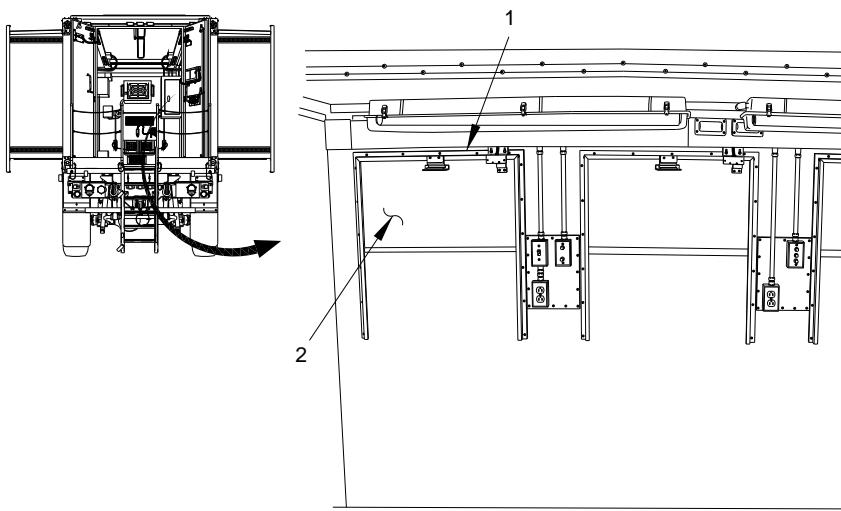
PREPARATION**CAUTION**

Prior to shipment by rail, all loose items and other items inside the van must be properly stowed, tied down, and or braced. Failure to comply may result in damage to equipment.

NOTE

All six blackout shields are closed the same way. RH side front shield shown.

1. Raise and latch blackout shield (Figure 1, Item 2) on van window (Figure 1, Item 1).

PREPARATION - Continued

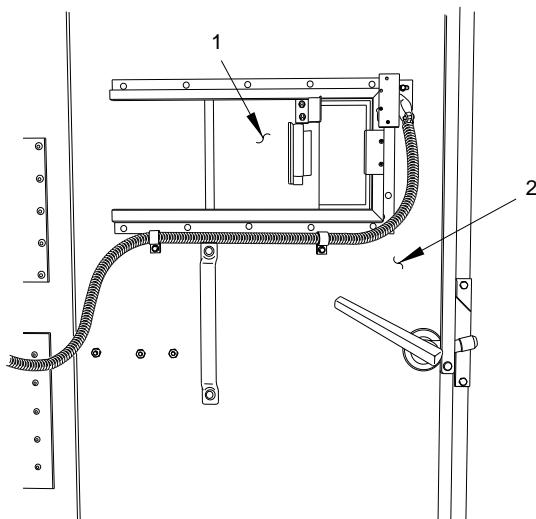
LTX216128A04

Figure 1. Preparation.

NOTE

All blackout shields on doors are closed the same way. RH side door shown.

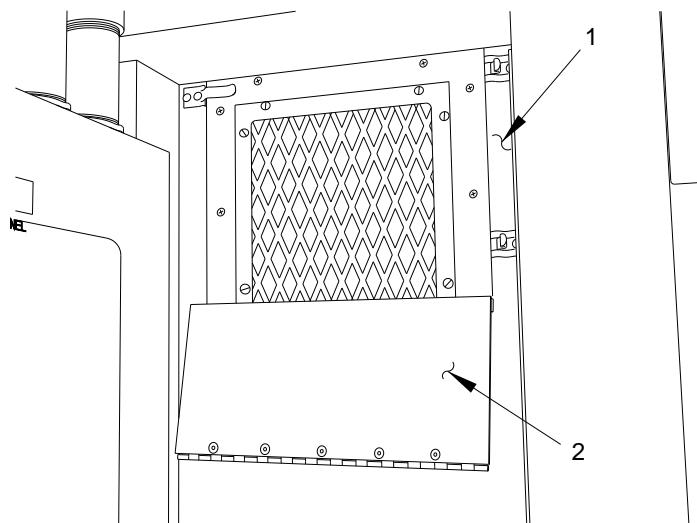
2. Close blackout shield (Figure 2, Item 1) on RH side door (Figure 2, Item 2).

PREPARATION - Continued

LTX216128A05

Figure 2. Preparation.

3. Open vent cover (Figure 3, Item 2) on RH side of van body wall (Figure 3, Item 1).

PREPARATION - Continued

LTX216128A06

Figure 3. Preparation.**END OF TASK**

*** The following is applicable to the following UOC(s): TSP. ***

VAN BODY REMOVAL

WARNING

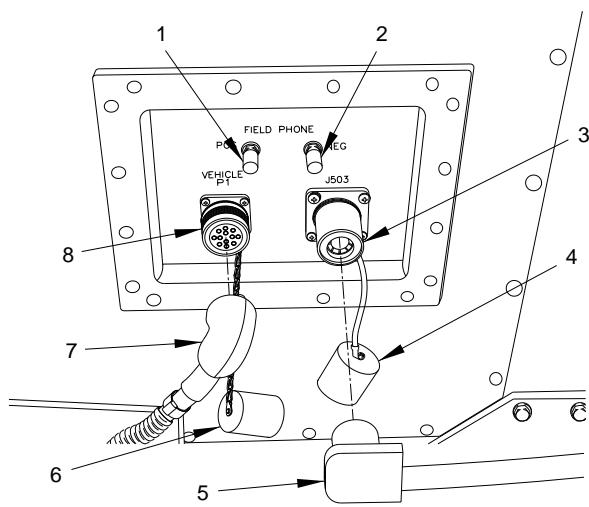


- Heavy objects/loads, such as tools boxes and heavy parts, must always be carried on the floor with the weight distributed as equally as possible between left and right sides of M1087A1 van. Failure to comply decreases the stability of the M1087A1 van and will increase the likelihood of a rollover which may result in serious injury or death to personnel.
- Heavy cabinets must always be mounted as low as possible with the weight distributed as equally as possible between left and right sides of M1087A1 van. Remember to consider the weight of the items that will be stored in the cabinets. Failure to comply decreases the stability of the M1087A1 van and will increase the likelihood of a rollover which may result in serious injury or death to personnel.
- Always keep in mind, when placing items inside the M1087A1 van, that heavier items must always be positioned between left and right sides of M1087A1 van. Failure to comply decreases the stability of the M1087A1 van and will increase the likelihood of a rollover which may result in serious injury or death to personnel.

NOTE

Perform Van Body Removal only if preparing for C130 transport.

1. Disconnect NATO 24 VDC connector (Figure 4, Item 5) from NATO connector (Figure 4, Item 3), if required.
2. Disconnect field phone connectors from POS and NEG terminals (Figure 4, Items 1 and 2) from vehicle, if required.
3. Disconnect connector P1 (Figure 4, Item 7) from vehicle P1 24 VDC connector (Figure 4, Item 8).
4. Install protective caps (Figure 4, Item 6) and (Figure 4, Item 4) on connector J1 (Figure 4, Item 8) and NATO 24 VDC connector (Figure 4, Item 4).

VAN BODY REMOVAL - Continued

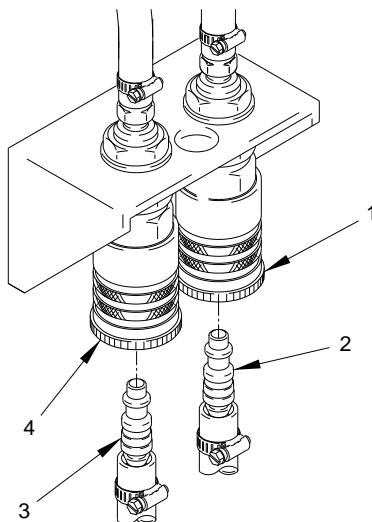
LTX216128X01

Figure 4. Van Body Removal.

NOTE

Tag hoses and connection points prior to disconnecting.

5. Disconnect fuel hoses (Figure 5, Item 3) and (Figure 5, Item 2) from van body fuel connections (Figure 5, Item 4) and (Figure 5, Item 1).

VAN BODY REMOVAL - Continued

LTX216128X02

Figure 5. Van Body Removal.

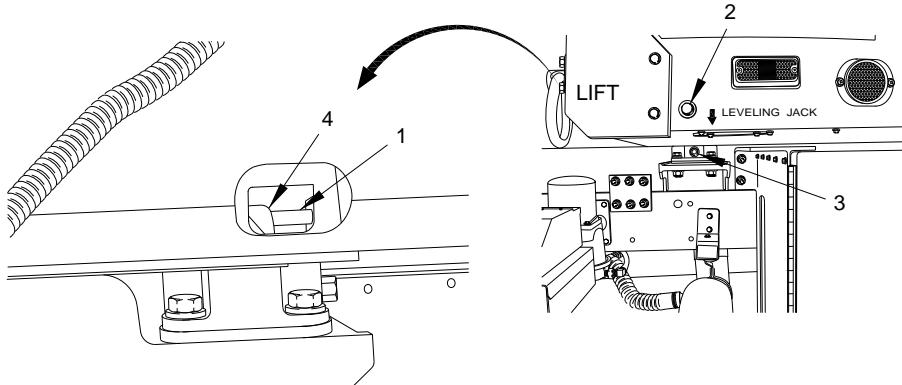
CAUTION

Outer lug must be turned five or six turns to unlock. Fifteen turns will completely loosen outer lug and internal parts. Failure to comply will result in damage to equipment.

NOTE

All four ISO locks are disconnected the same way. Front LH ISO lock shown.

6. Turn outer lug (Figure 6, Item 2) counter-clockwise until safety rod (Figure 6, Item 1) releases ISO lock (Figure 6, Item 4).
7. Turn inner lug (Figure 6, Item 3) until ISO lock (Figure 6, Item 4) releases from vehicle.
8. Perform previous two steps on remaining ISO locks (Figure 6, Item 4).

VAN BODY REMOVAL - Continued

LTX216128X03

Figure 6. Van Body Removal.

WARNING

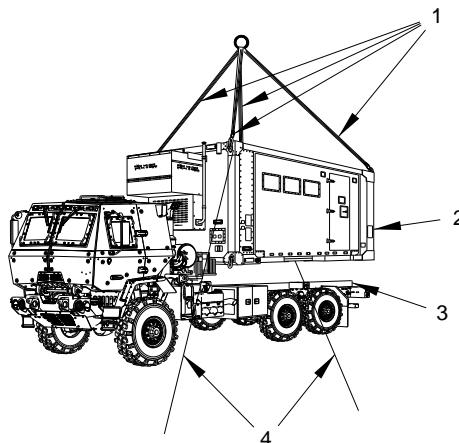
- Van body weighs approximately 10,000 lbs (4536 kgs) empty. Do not attempt to lift or move van body without the aid of a suitable lifting device. Failure to comply may result in injury or death to personnel.
- Guide ropes must be attached at opposite corners of van body to aid in controlling van body during removal. Failure to comply may result in serious injury or death to personnel.
- Center of gravity will change depending on equipment installed in van body. Ensure that van body lifts level by attaching and adjusting a lifting device. Failure to comply may result in serious injury or death to personnel or damage to equipment.

NOTE

The following step requires the aid of two assistants.

VAN BODY REMOVAL - Continued

9. Attach multiple leg sling (Figure 7, Item 1) to four top corners of van body (Figure 7, Item 2).
10. Attach two guide ropes (Figure 7, Item 3) to van body (Figure 7, Item 2).
11. Remove van body (Figure 7, Item 2) from subframe (Figure 7, Item 4).



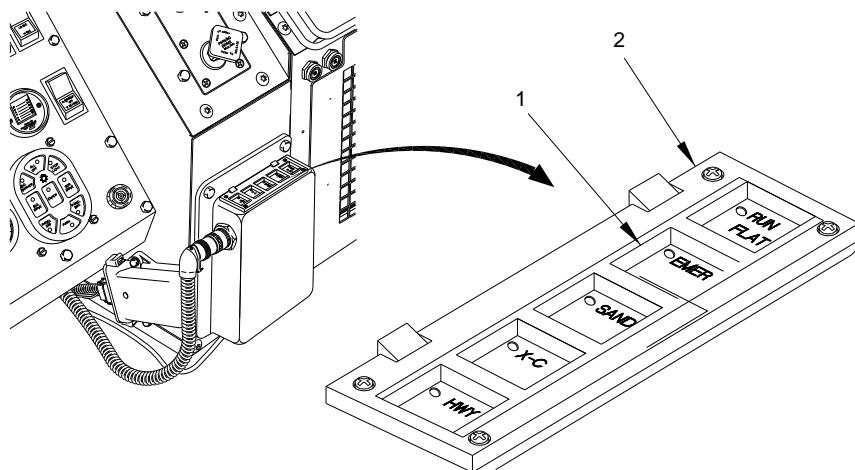
LTX216128R07

Figure 7. Van Body Removal.

END OF TASK**TIRE DEFLATION****NOTE**

- Tires will deflate until approximately 10 psi (69 kPa) remains in tire.
- An audible sound of air releasing will occur when emergency (EMER) light starts flashing.

1. Start engine (Volume 1, WP 0019) and allow air pressure to reach 120 psi (827 kPa).
2. Depress emergency (EMER) (Volume 1, WP 0021) (Figure 8, Item 1) on CTIS ECU (Volume 1, WP 0021) (Figure 8, Item 2) until light starts flashing (approximately five seconds).

TIRE DEFLECTION - Continued

LTX10279X01

Figure 8. Tire Deflation.

NOTE

Allow tires to fully deflate to EMER pressure setting before shutting down engine.

3. Shut down engine. (Volume 1, WP 0019)

END OF TASK**COMPRESSING SUSPENSION****CAUTION**

Ensure area above cab is adequate before raising cab. Failure to comply may result in damage to equipment.

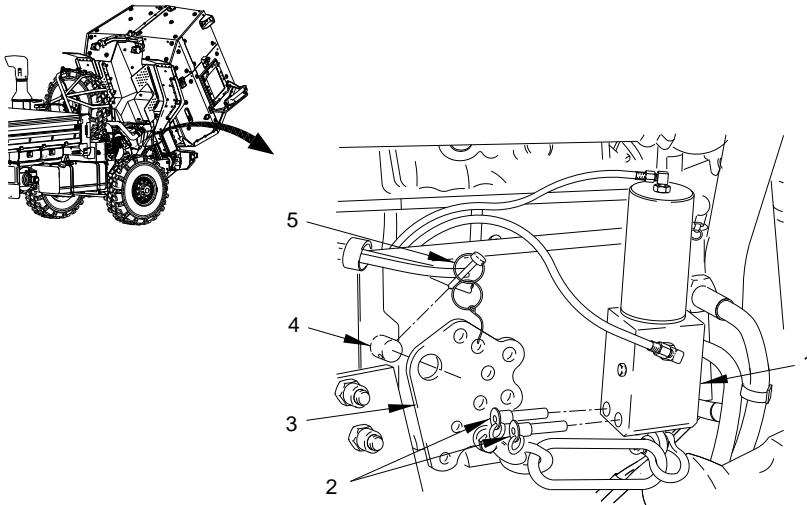
CAUTION

Do not install suspension compression plates on vehicle with B-Kit armor installed. Failure to comply may result in damage to equipment.

COMPRESSING SUSPENSION - Continued**NOTE**

- Suspension compression is not required for highway or rail shipment. Proceed to subsection Folding Mirrors for highway or rail shipment.
- Left and right side suspension compression plates are removed the same way. Right side shown.

1. Raise cab. (Volume 1, WP 0020)
2. Remove retaining pin (Figure 9, Item 5) from frame stud (Figure 9, Item 4).
3. Remove suspension compression plate (Figure 9, Item 3) from frame stud (Figure 9, Item 4).
4. Remove two safety pins (Figure 9, Item 2) from compression cylinder (Figure 9, Item 1).
5. Perform previous three steps on left side of vehicle.



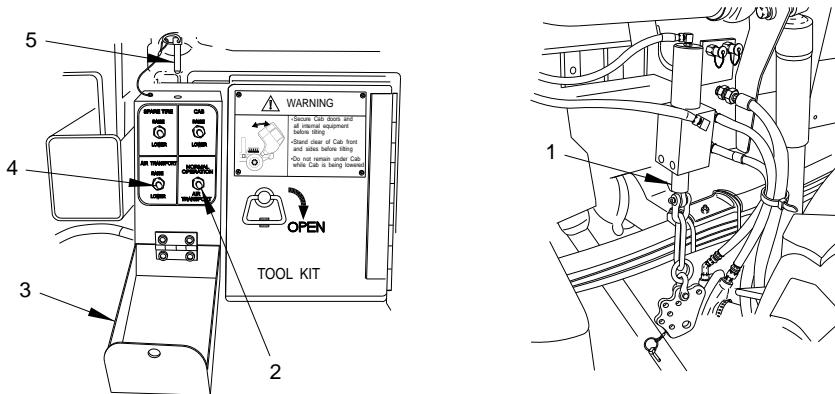
LTX10279X02

Figure 9. Compressing Suspension.

6. Remove quick release pin (Figure 10, Item 5) from switch box cover (Figure 10, Item 3).
7. Open switch box cover (Figure 10, Item 3).

COMPRESSING SUSPENSION - Continued

8. Position NORMAL OPERATION switch (Figure 10, Item 2) to AIR TRANSPORT position.
9. Position AIR TRANSPORT switch (Figure 10, Item 4) to LOWER position until kneeling cylinder rod (Figure 10, Item 1) is fully extended.



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Figure 10. Compressing Suspension.

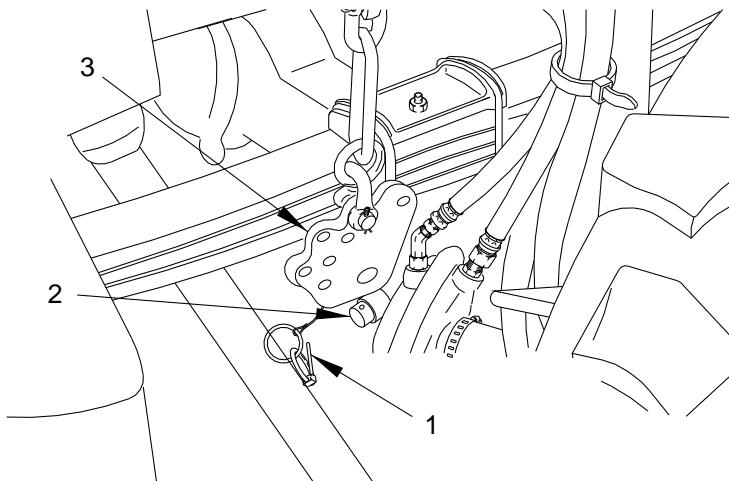
WARNING

Both suspension compression plates must be installed on axle studs. Failure to comply may result in serious injury or death to personnel.

NOTE

Left and right side suspension compression plates are installed on axle studs the same way. Right side shown.

10. Install suspension compression plate (Figure 11, Item 3) on axle stud (Figure 11, Item 2).
11. Install retaining pin (Figure 11, Item 1) in axle stud (Figure 11, Item 2).
12. Perform previous two steps on left side of vehicle.

COMPRESSING SUSPENSION - Continued

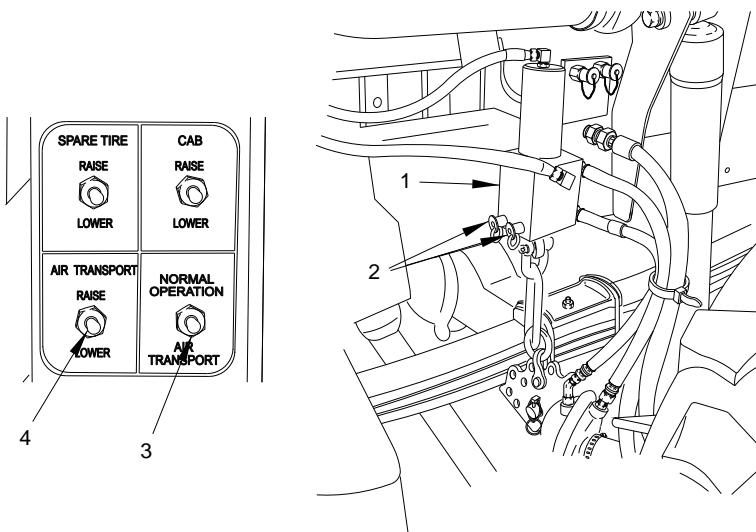
LTX10279X05

Figure 11. Compressing Suspension.

NOTE

- Suspension is fully compressed when kneeling cylinder rod is fully retracted and safety pins can be installed in compression cylinder.
- Left and right side suspension compression plates are installed on axle studs the same way. Left side shown.

13. Position NORMAL OPERATION switch (Figure 12, Item 3) to AIR TRANSPORT position.
14. Position AIR TRANSPORT switch (Figure 12, Item 4) to RAISE position until suspension is fully compressed.
15. Install two safety pins (Figure 12, Item 2) in compression cylinder (Figure 12, Item 1).
16. Perform previous step on left side of vehicle.
17. Lower cab. (Volume 1, WP 0020)

COMPRESSING SUSPENSION - Continued

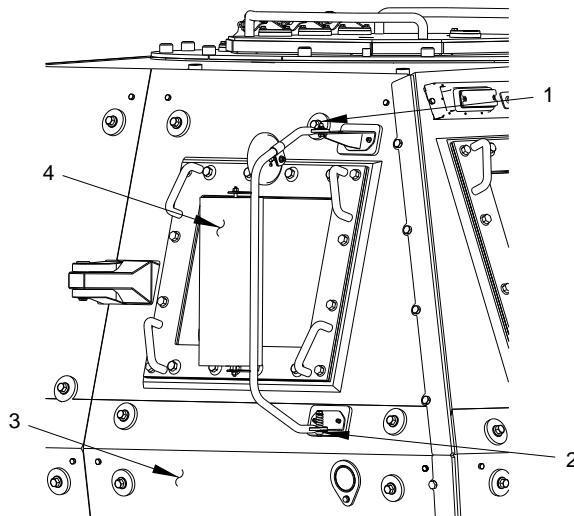
LTX10279XII

Figure 12. Compressing Suspension.

END OF TASK**FOLDING MIRRORS****NOTE**

Left and right side mirrors are folded the same way. Right side shown.

1. Loosen nuts (Figure 13, Item 1) and (Figure 13, Item 2) on mirror assembly (Figure 13, Item 4).
2. Fold mirror assembly (Figure 13, Item 4) in toward door (Figure 13, Item 3).
3. Tighten nuts (Figure 13, Item 1) and (Figure 13, Item 2) on mirror assembly (Figure 13, Item 4).
4. Perform previous three steps on left side of vehicle.

FOLDING MIRRORS - Continued

LTX10279B01

Figure 13. Folding Mirrors.

END OF TASK**UNFOLDING MIRRORS****NOTE**

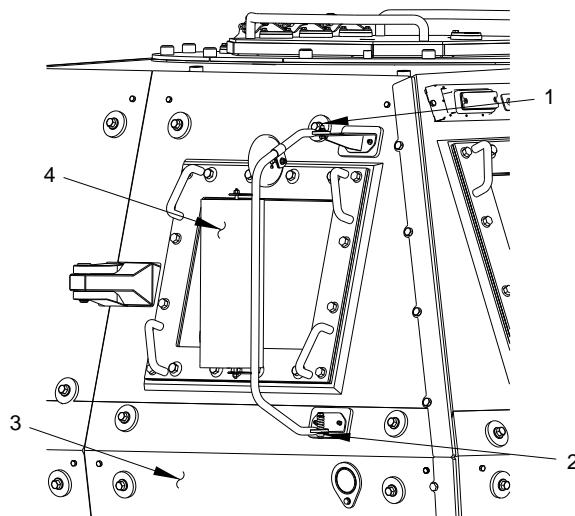
Left and right side mirrors are unfolded the same way. Right side shown.

1. Loosen nuts (Figure 14, Item 1) and (Figure 14, Item 2) on mirror assembly (Figure 14, Item 4).
2. Unfold mirror assembly (Figure 14, Item 4) away from door (Figure 14, Item 3).
3. Tighten nuts (Figure 14, Item 1) and (Figure 14, Item 2).

NOTE

Notify Field Maintenance to tighten nuts to 21-27 lb-ft (29-37 N·m).

4. Perform previous three steps on left side of vehicle.

UNFOLDING MIRRORS - Continued

LTX10279B01

Figure 14. Unfolding Mirrors.

END OF TASK**DECOMPRESSING SUSPENSION****CAUTION**

Ensure area above cab is adequate before raising cab. Failure to comply may result in damage to equipment.

NOTE

- If suspension is not compressed, proceed to subsection Tire Inflation.
- Left and right side safety pins are removed from compression cylinders the same way. Right side shown.

1. Raise cab. (Volume 1, WP 0020)
2. Position Normal Operation switch (Figure 15, Item 4) to AIR TRANSPORT position.
3. Position AIR TRANSPORT switch (Figure 15, Item 5) to RAISE position until kneeling cylinder rod (Figure 15, Item 2) is fully raised.

DECOMPRESSING SUSPENSION - Continued

4. Remove two safety pins (Figure 15, Item 3) from compression cylinder (Figure 15, Item 1).
5. Perform previous step on left side of vehicle.

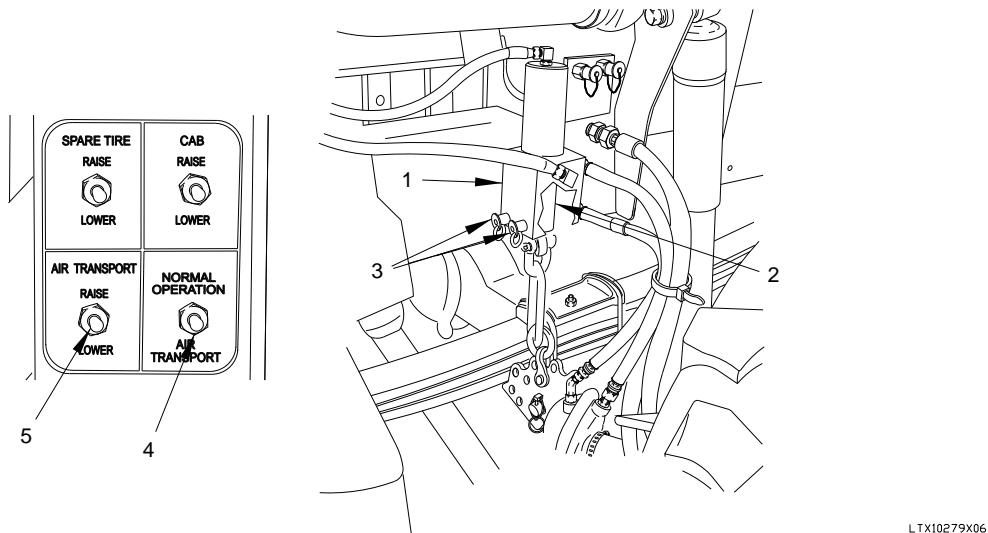


Figure 15. Decompressing Suspension.

WARNING

Both suspension compression plates must be removed from axle studs. Failure to comply may result in serious injury or death to personnel.

NOTE

Left and right compression plates are removed the same way. Right side shown.

6. Position AIR TRANSPORT switch (Figure 16, Item 4) to LOWER position until suspension is fully decompressed and suspension compression plate (Figure 16, Item 2) is loose.
7. Remove retaining pin (Figure 16, Item 1) from axle stud (Figure 16, Item 3).
8. Remove suspension compression plate (Figure 16, Item 2) from axle stud (Figure 16, Item 3).
9. Perform previous two steps on left side of vehicle.

DECOMPRESSING SUSPENSION - Continued

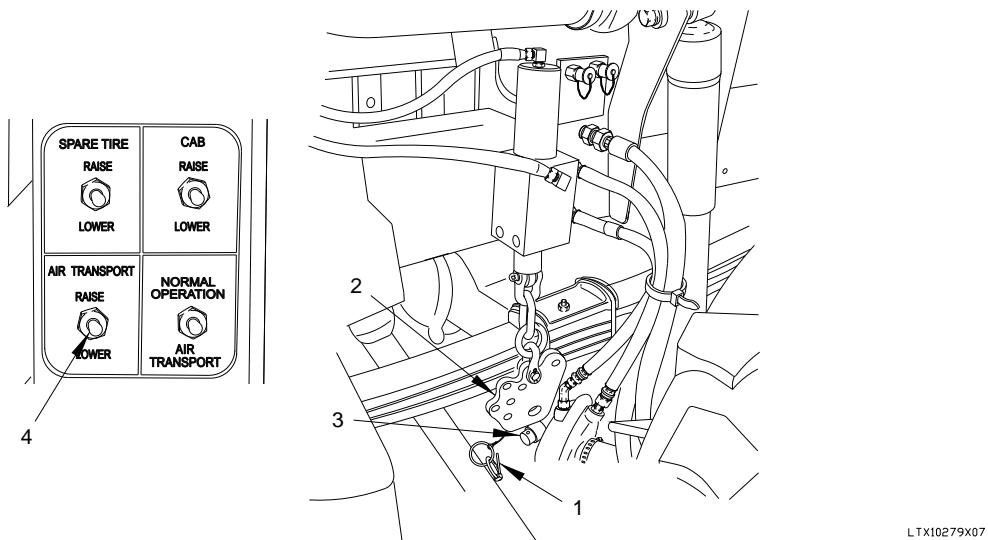


Figure 16. Decompressing Suspension.

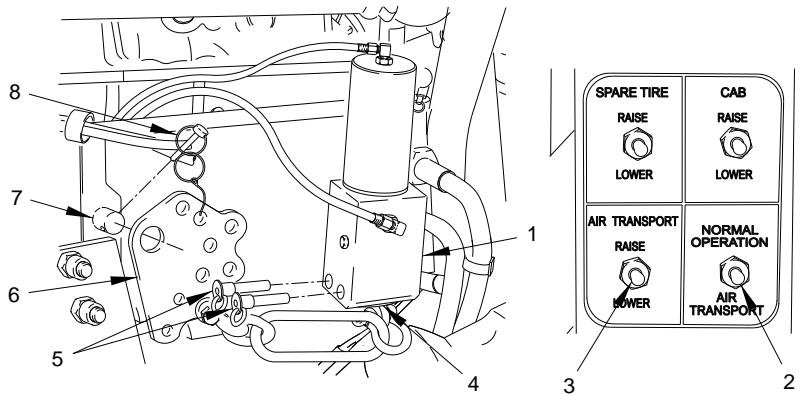
CAUTION

LH suspension compression plate must be stored in BII box and not on frame rail for vehicles equipped with B-kit. Failure to comply may result in damage to equipment.

NOTE

Left and right side suspension compression plates are installed the same way. Right side shown.

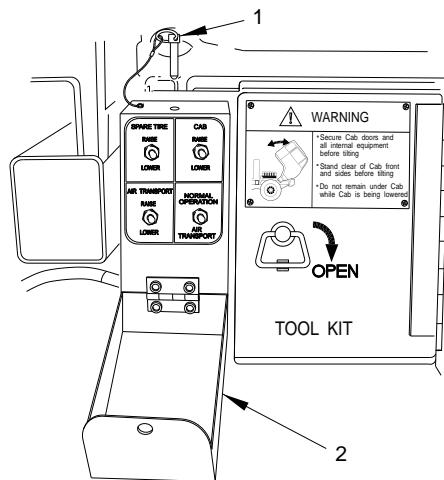
10. Position AIR TRANSPORT switch (Figure 17, Item 3) to RAISE position until kneeling cylinder rod (Figure 17, Item 4) is fully retracted and two safety pins (Figure 17, Item 5) can be inserted into compression cylinder (Figure 17, Item 1).
11. Install two safety pins (Figure 17, Item 5) in compression cylinder (Figure 17, Item 1).
12. Install suspension compression plate (Figure 17, Item 6) on frame stud (Figure 17, Item 7).
13. Install retaining pin (Figure 17, Item 8) in frame stud (Figure 17, Item 7).
14. Perform previous three steps on left side of vehicle.
15. Lower cab. (Volume 1, WP 0020)

DECOMPRESSING SUSPENSION - Continued

LTX10279X08

Figure 17. Decompressing Suspension.

16. Close switch box cover (Figure 18, Item 2).
17. Install quick release pin (Figure 18, Item 1) in switch box cover (Figure 18, Item 2).

DECOMPRESSING SUSPENSION - Continued

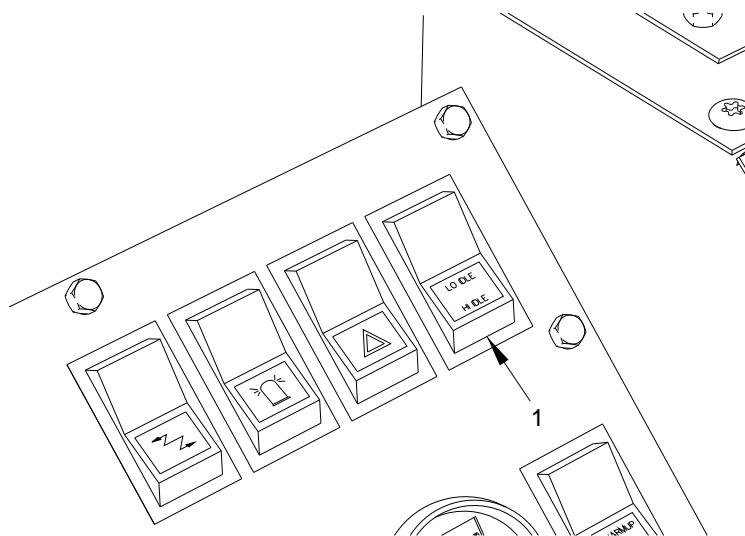
LTX10279101

Figure 18. Decompressing Suspension.

END OF TASK**FRONT TIRE INFLATION****NOTE**

Drive vehicle clear of aircraft before performing this procedure.

1. Start engine. (Volume 1, WP 0019)
2. Position LO IDLE/HI IDLE switch (Figure 19, Item 1) to HI IDLE.

FRONT TIRE INFLATION - Continued

LTX10279X09

Figure 19. Front Tire Inflation.

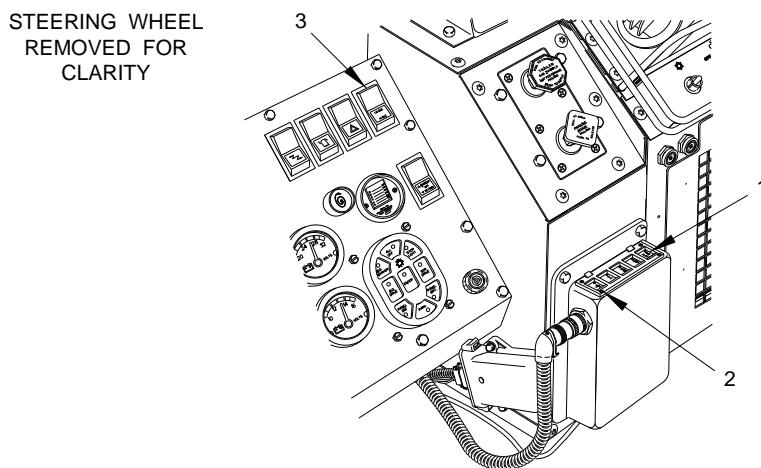
CAUTION

Vehicle may be driven while tires are inflating, but is restricted to first gear and on smooth surfaces. Failure to comply may result in damage to equipment.

NOTE

After one minute of inflation any gear range/speed may be selected and no terrain restriction exists.

3. Press RUN FLAT (Volume 1, WP 0021) (Figure 20, Item 1) HIGHWAY modes (Volume 1, WP 0021) (Figure 20, Item 2) at same time.
4. Position LO IDLE/HI IDLE switch (Figure 20, Item 3) to LO IDLE.

FRONT TIRE INFLATION - Continued

LTX10279X10

Figure 20. Front Tire Inflation.

END OF TASK

*** The following is applicable to the following UOC(s): TSP. ***

*** The following is applicable to the following UOC(s): TSP. ***

VAN BODY INSTALLATION

WARNING

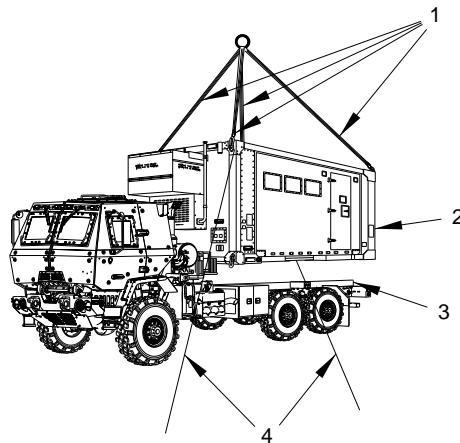


- Van body weighs approximately 10,000 lbs (4536 kgs) empty. Do not attempt to lift or move van body without the aid of a suitable lifting device. Failure to comply may result in injury or death to personnel.
- Guide ropes must be attached at opposite corners of van body to aid in controlling van body during installation. Failure to comply may result in serious injury or death to personnel.
- Center of gravity will change depending on equipment installed in van body. Ensure that van body lifts level by attaching and adjusting a lifting device. Failure to comply may result in serious injury or death to personnel or damage to equipment.

NOTE

The following step requires the aid of two assistants.

1. Use guide ropes (Figure 21, Item 4) and multiple leg sling (Figure 21, Item 1) to position van body (Figure 21, Item 2) on subframe (Figure 21, Item 3).

VAN BODY INSTALLATION - Continued

LTX21612812

Figure 21. Van Body Installation.

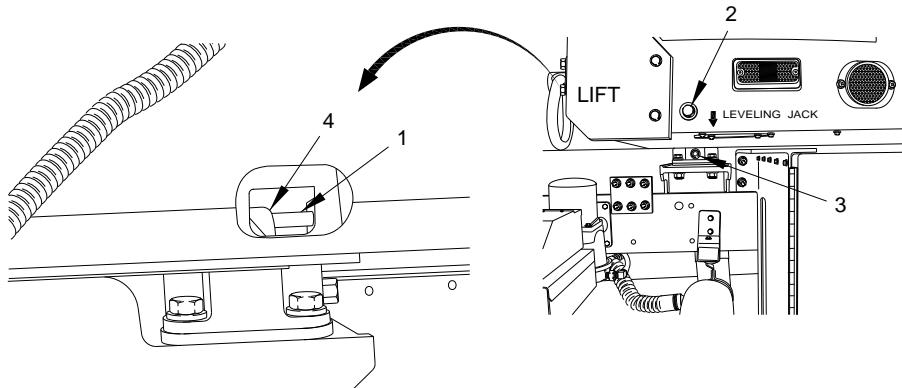
CAUTION

Do not overtighten inner or outer lugs. Failure to comply may result in damage to equipment.

NOTE

All four ISO locks are connected the same way. Front RH ISO lock shown.

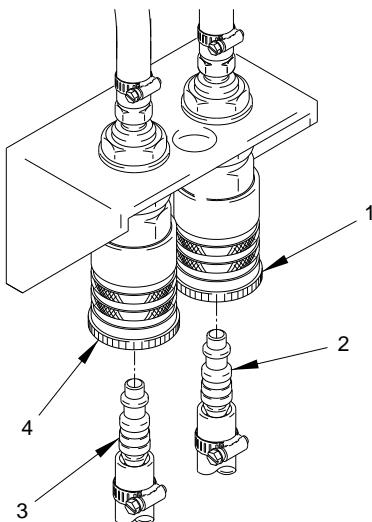
2. Turn inner lug (Figure 22, Item 3) clockwise until ISO lock (Figure 22, Item 4) locks completely.
3. Turn outer lug (Figure 22, Item 2) clockwise until safety rod (Figure 22, Item 1) is pressed fully against ISO lock (Figure 22, Item 4).
4. Perform previous two steps on remaining ISO locks.

VAN BODY INSTALLATION - Continued

LTX216128X03

Figure 22. Van Body Installation.

5. Connect fuel hoses (Figure 23, Item 2) and (Figure 23, Item 3) to van body fuel connections (Figure 23, Item 1) and (Figure 23, Item 4).

VAN BODY INSTALLATION - Continued

LTX216128X02

Figure 23. Van Body Installation.

6. Remove protective caps (Figure 24, Item 4) and (Figure 24, Item 6) from connector J1 (Figure 24, Item 8) and NATO 24 VDC connector (Figure 24, Item 3).
7. Connect connector P1 (Figure 24, Item 7) to vehicle P1 24 VDC connector (Figure 24, Item 8).
8. Connect field phone connectors to POS and NEG terminals (Figure 24, Item 2) and (Figure 24, Item 1) on vehicle, if required.
9. Connect NATO 24 VDC connector (Figure 24, Item 5) to NATO connector (Figure 24, Item 3), if required.
10. Prepare vehicle for movement. (Volume 1, WP 0018)

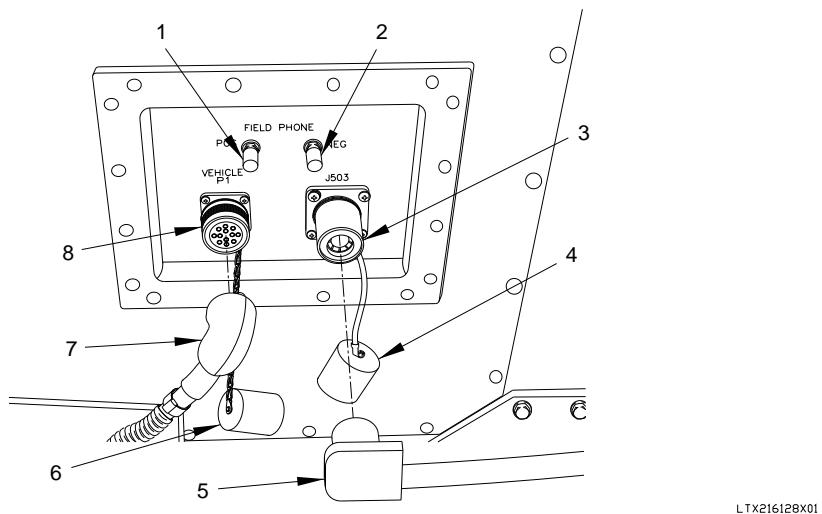
VAN BODY INSTALLATION - Continued

Figure 24. Van Body Installation.

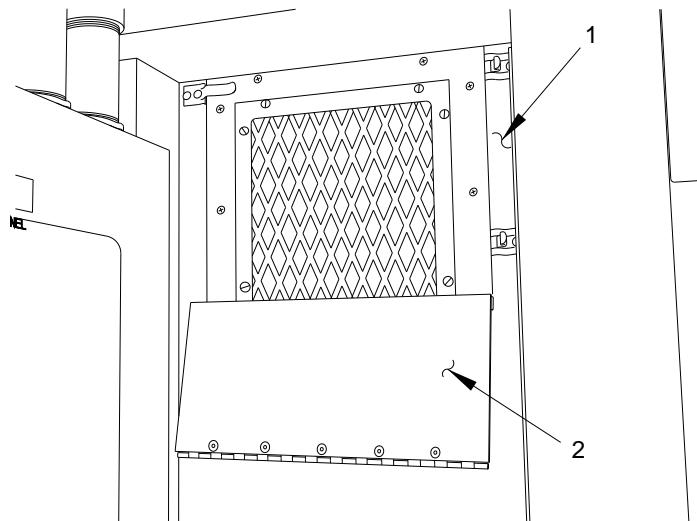
END OF TASK

*** The following is applicable to the following UOC(s): TSP. ***

*** The following is applicable to the following UOC(s): TSP. ***

RECOVERY

1. Close vent cover (Figure 25, Item 2) on RH side of van body wall (Figure 25, Item 1).

RECOVERY - Continued

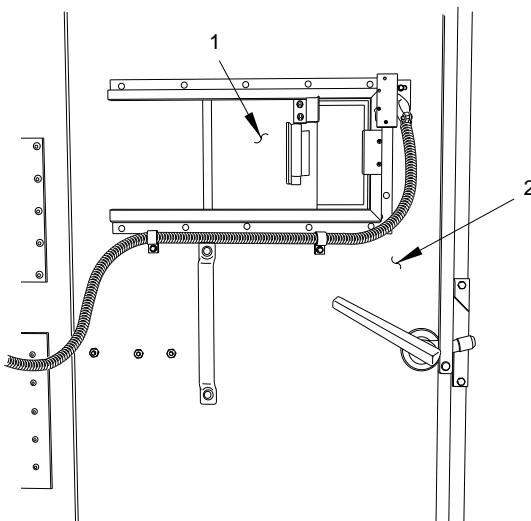
LTX216128A06

Figure 25. Recovery.

NOTE

All blackout shields on doors are opened the same way. RH side door shown.

2. Open blackout shield (Figure 26, Item 1) on RH side door (Figure 26, Item 2).

RECOVERY - Continued

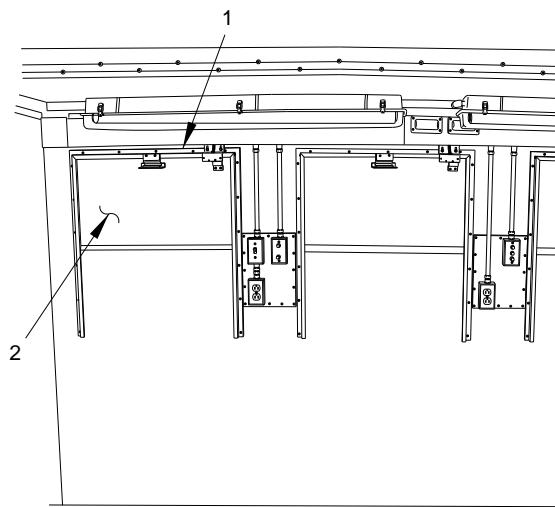
LTX216128A05

Figure 26. Recovery.

NOTE

All six blackout shields are opened the same way. RH side front shield shown.

3. Lower blackout shield (Figure 27, Item 2) on van window (Figure 27, Item 1).

RECOVERY - Continued

LTX216128B08

Figure 27. Recovery.

END OF TASK**END OF WORK PACKAGE**

**OPERATOR MAINTENANCE
TRACTOR PREPARATION FOR AIR OR SHIP TRANSPORT**

***** The following is applicable to the following UOC(s): TSU TSH. *****

INITIAL SETUP:

Tools and Special Tools	Personnel Required
Tool, Release (Volume 3, WP 0357, Table 1, Item 9)	(2)

POSITIONING FIFTH WHEEL TO THE REAR

WARNING

Never stand against or between tractor tires, stand between tractor and trailer, allow anyone behind trailer during movement, or allow anyone to stand on opposite side of operator during fifth wheel release. Always chock trailer tires before coupling, connect trailer brakes air supply and set trailer brakes before sliding fifth wheel. Use release tool when releasing and engaging slide latch lever. Failure to comply may result in serious injury or death to personnel.

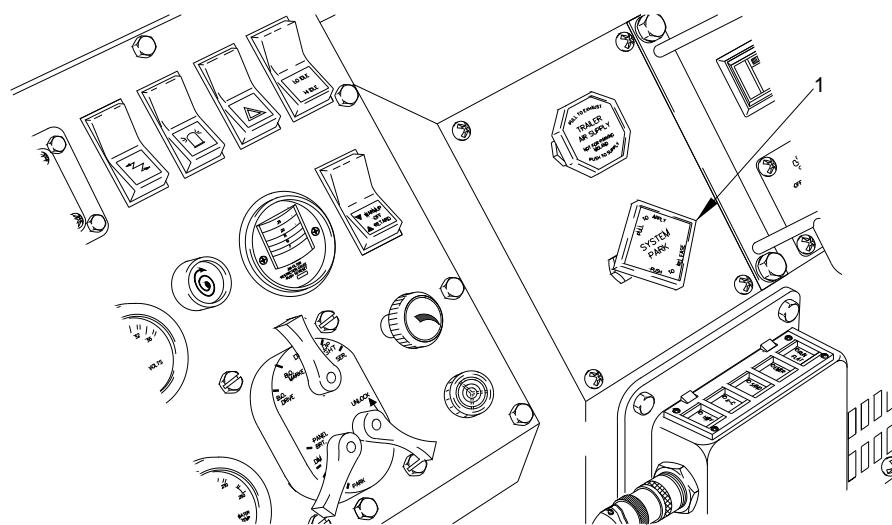
CAUTION

The fifth wheel must be positioned all the way to the rear for all trailers when loading/unloading from air or ship transport. Failure to comply may result in damage to equipment.

NOTE

The fifth wheel is in the forward position for all trailers except the M900 series or XM1098 during normal operation.

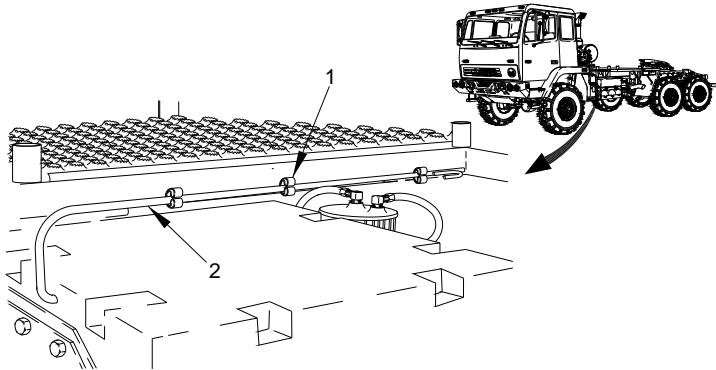
1. Pull out SYSTEM PARK control (Figure 1, Item 1).

POSITIONING FIFTH WHEEL TO THE REAR - Continued

KB64B01

Figure 1. Positioning Fifth Wheel to the Rear.

2. Remove release tool (Figure 2, Item 2) from stowage brackets (Figure 2, Item 1).



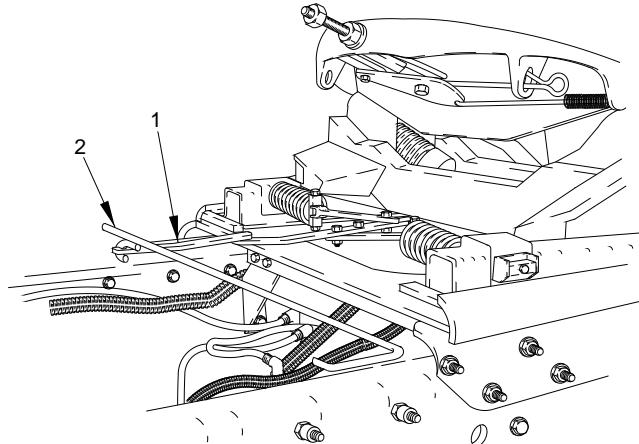
KB64B02

Figure 2. Positioning Fifth Wheel to the Rear.

POSITIONING FIFTH WHEEL TO THE REAR - Continued**NOTE**

Slide latch release lever will lock into place automatically when release tool is pulled.

3. Pull slide latch release lever (Figure 3, Item 1) to the locked open position with release tool (Figure 3, Item 2).



KB64B03

Figure 3. Positioning Fifth Wheel to the Rear.

4. Push down on trailer service brake valve (Figure 4, Item 2).
5. Push in SYSTEM PARK control (Figure 4, Item 1).

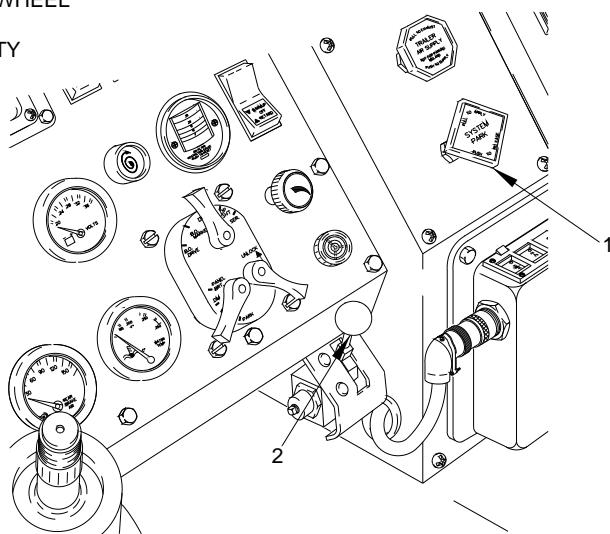
NOTE

The following step requires the aid of an assistant.

6. Very slowly drive tractor forward until fifth wheel reaches the rear most notch position.
7. Pull out SYSTEM PARK control (Figure 4, Item 1).

POSITIONING FIFTH WHEEL TO THE REAR - Continued

STEERING WHEEL
REMOVED
FOR CLARITY



KB64B04

Figure 4. Positioning Fifth Wheel to the Rear.

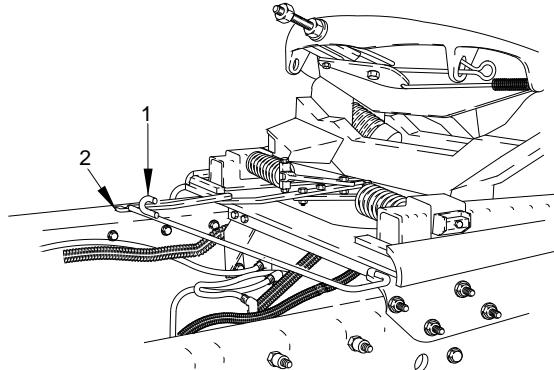
WARNING

Release tool must be used with hook side up when closing slide latch release lever. Failure to comply may result in injury to personnel.

NOTE

Slide carriage will lock into place automatically when slide latch release lever is tripped.

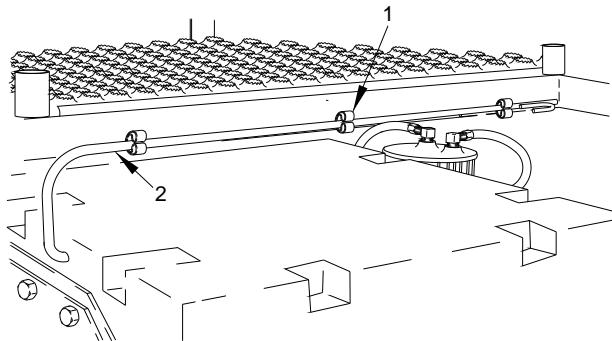
8. Close slide latch release lever (Figure 5, Item 2) by pushing slide latch release lever with the point of the release tool (Figure 5, Item 1).

POSITIONING FIFTH WHEEL TO THE REAR - Continued

KB64B05

Figure 5. Positioning Fifth Wheel to the Rear.

9. Install release tool (Figure 6, Item 2) in stowage brackets (Figure 6, Item 1).



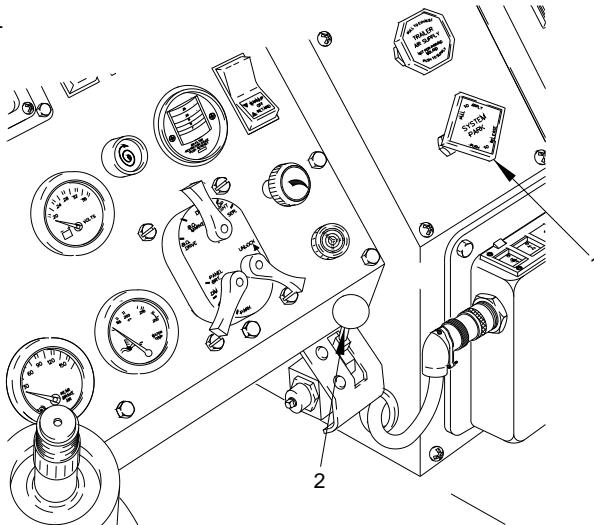
KB64B06

Figure 6. Positioning Fifth Wheel to the Rear.

POSITIONING FIFTH WHEEL TO THE REAR - Continued

10. Push in SYSTEM PARK control (Figure 7, Item 1).
11. Pull up on trailer service brake valve (Figure 7, Item 2).

STEERING WHEEL
REMOVED
FOR CLARITY



KB64B07

Figure 7. Positioning Fifth Wheel to the Rear.

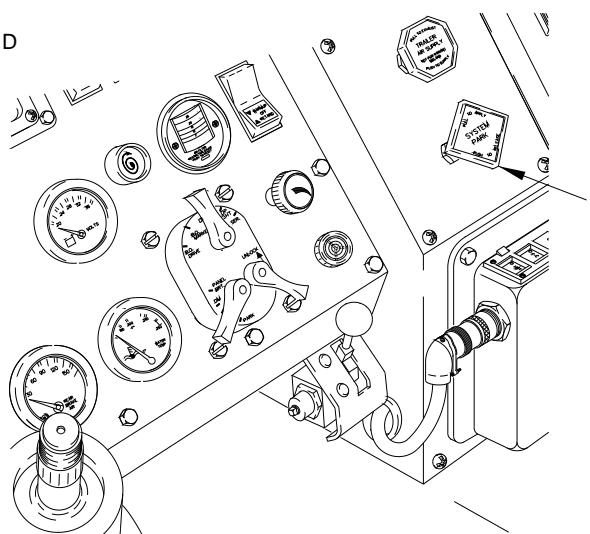
END OF TASK**POSITIONING FIFTH WHEEL TO THE FRONT****WARNING**

Never stand against or between tractor tires, stand between tractor and trailer, allow anyone behind trailer during movement, or allow anyone to stand on opposite side of operator during fifth wheel release. Always chock trailer tires before coupling, connect trailer brakes air supply and set trailer brakes before sliding fifth wheel. Use release tool when releasing and engaging slide latch lever. Failure to comply may result in serious injury or death to personnel.

1. Pull out SYSTEM PARK control (Figure 8, Item 1).

POSITIONING FIFTH WHEEL TO THE FRONT - Continued

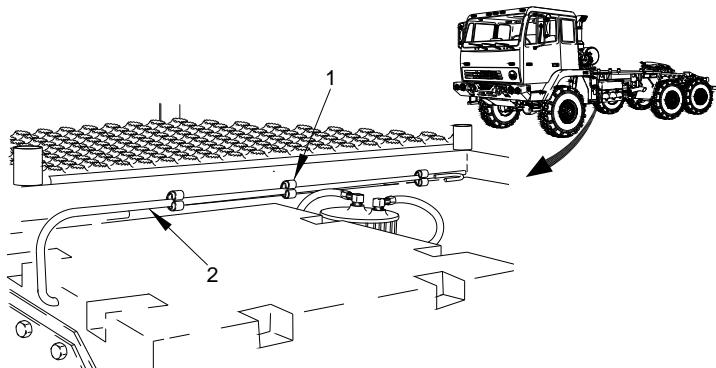
STEERING
WHEEL REMOVED
FOR CLARITY



KB64B08

Figure 8. Positioning Fifth Wheel to the Front.

2. Remove release tool (Figure 9, Item 2) from stowage brackets (Figure 9, Item 1).



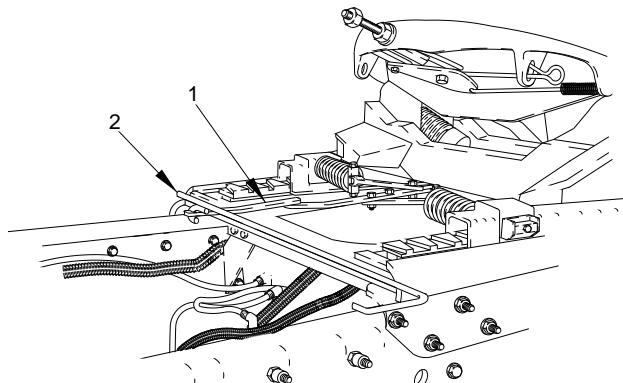
KB64B09

Figure 9. Positioning Fifth Wheel to the Front.

POSITIONING FIFTH WHEEL TO THE FRONT - Continued**NOTE**

Slide latch release lever will lock into place automatically when release tool is pulled.

3. Pull slide latch release lever (Figure 10, Item 1) to the locked open position with release tool (Figure 10, Item 2).



KB64B10

Figure 10. Positioning Fifth Wheel to the Front.

CAUTION

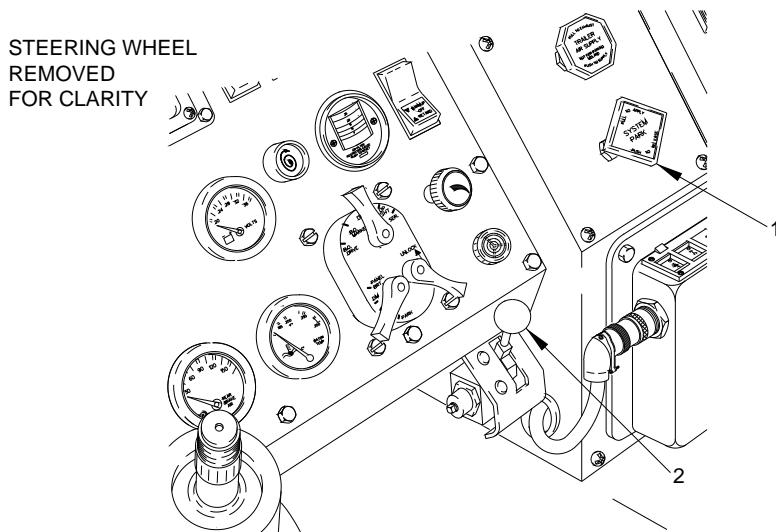
The fifth wheel must be positioned all the way to the rear for all trailers except M900 or XM1098 when loading/unloading from air or ship transport. Failure to comply may result in damage to equipment.

4. Push down on trailer service brake valve (Figure 11, Item 2).
5. Push in SYSTEM PARK control (Figure 11, Item 1).

NOTE

The following step requires the aid of an assistant.

6. Very slowly drive tractor rearward until fifth wheel reaches the front stop blocks (trailer resistance will be felt).
7. Pull out SYSTEM PARK control (Figure 11, Item 1).

POSITIONING FIFTH WHEEL TO THE FRONT - Continued

KB64BII

Figure 11. Positioning Fifth Wheel to the Front.

CAUTION

Perform the following three steps on M900 series or XM1098 trailer.
Failure to comply may result in damage to equipment.

8. Push down on trailer service brake valve (Figure 12, Item 2).
9. Push in SYSTEM PARK control (Figure 12, Item 1).

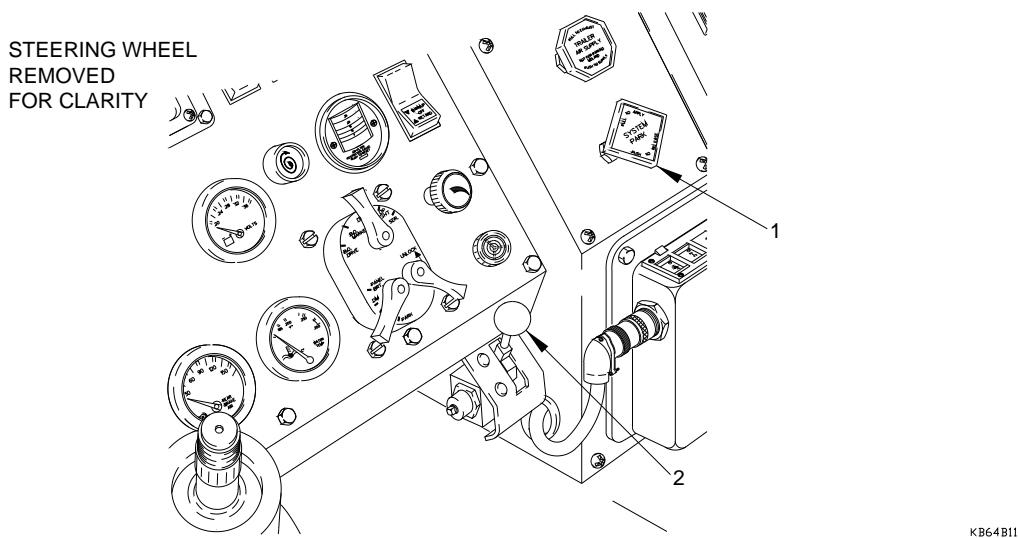
POSITIONING FIFTH WHEEL TO THE FRONT - Continued

Figure 12. Positioning Fifth Wheel to the Front.

NOTE

The following step requires the aid of an assistant.

10. Very slowly drive tractor rearward until fifth wheel reaches the third notch as shown.

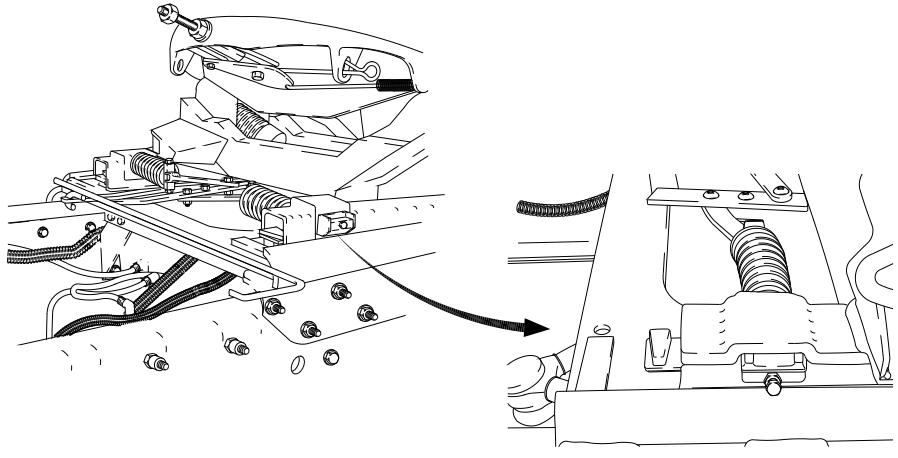
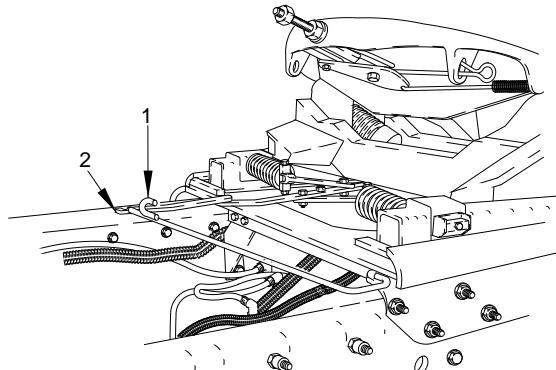
POSITIONING FIFTH WHEEL TO THE FRONT - Continued

Figure 13. Positioning Fifth Wheel to the Front.

NOTE

Slide carriage will lock into place automatically when slide latch release lever is tripped.

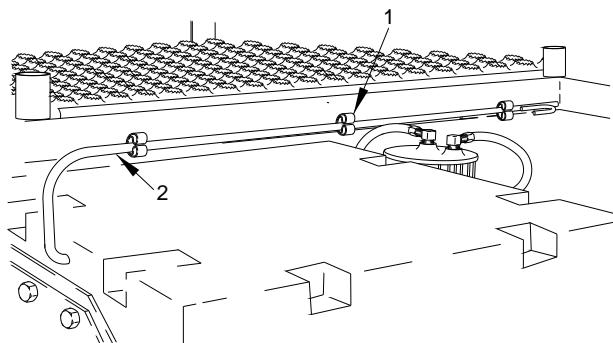
11. Close slide latch release lever (Figure 14, Item 2) by pushing slide latch release lever down with the point of the release tool (Figure 14, Item 1).

POSITIONING FIFTH WHEEL TO THE FRONT - Continued

KB64B05

Figure 14. Positioning Fifth Wheel to the Front.

12. Install release tool (Figure 15, Item 2) in stowage brackets (Figure 15, Item 1).

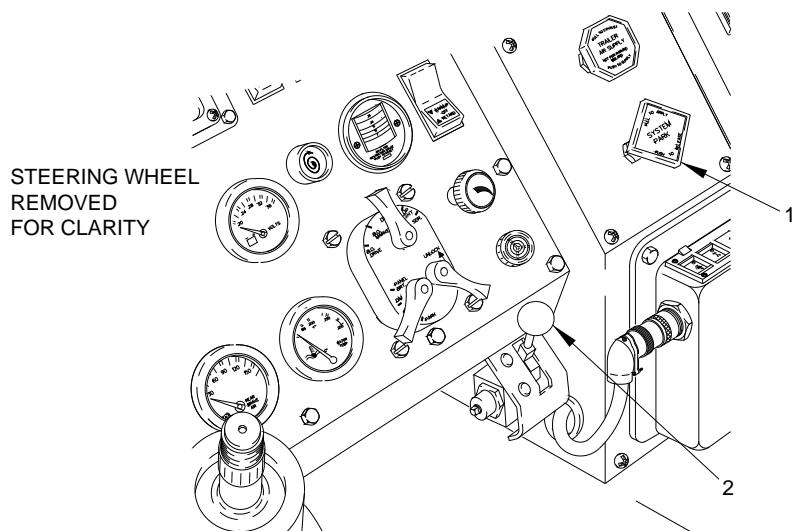


KB64B13

Figure 15. Positioning Fifth Wheel to the Front.

POSITIONING FIFTH WHEEL TO THE FRONT - Continued

13. Push in SYSTEM PARK control (Figure 16, Item 1).
14. Pull up on trailer service brake valve (Figure 16, Item 2).



KB64B14

Figure 16. Positioning Fifth Wheel to the Front.

END OF TASK**END OF WORK PACKAGE**

**OPERATOR MAINTENANCE
FIRE EXTINGUISHER OPERATION WORK PACKAGE**

INITIAL SETUP:

Not Applicable

FIRE EXTINGUISHER REMOVAL

1. Pull down on latch (Figure 1, Item 1) to open clamp (Figure 1, Item 3).
2. Remove fire extinguisher (Figure 1, Item 2) from clamp (Figure 1, Item 3).

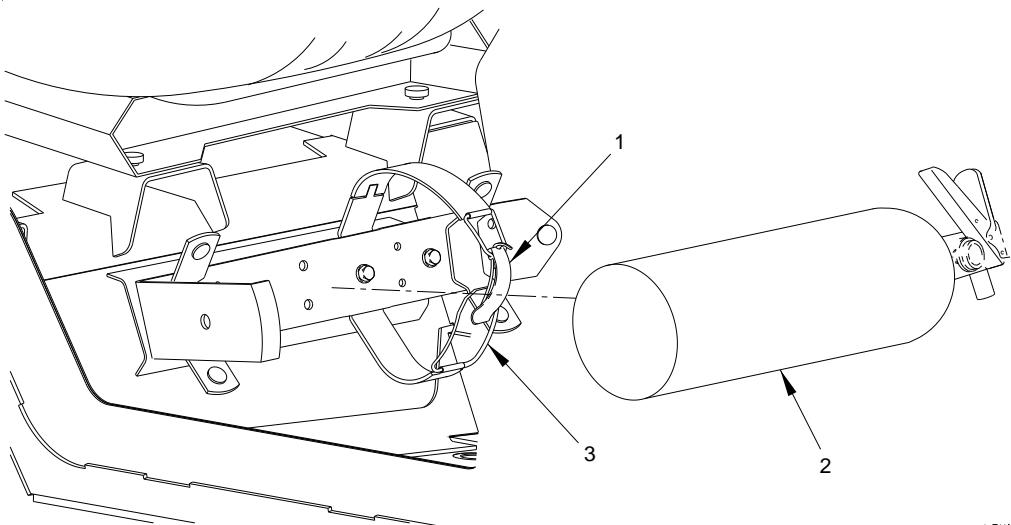


Figure 1. Fire Extinguisher Removal.

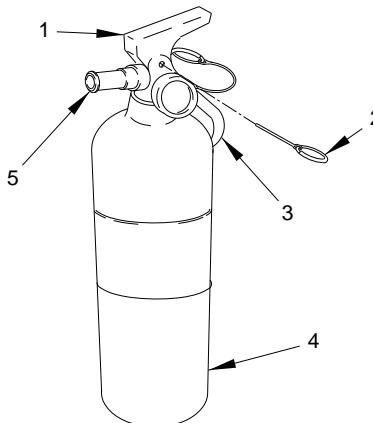
END OF TASK

FIRE EXTINGUISHER OPERATION

1. Remove safety pin (Figure 2, Item 2) from fire extinguisher (Figure 2, Item 4).

FIRE EXTINGUISHER OPERATION - Continued

2. Holding fire extinguisher (Figure 2, Item 4) upright, point nozzle (Figure 2, Item 5) at base of fire from approximately 8 ft (2.4 m).
3. Squeeze together handle (Figure 2, Item 1) and lever (Figure 2, Item 3).
4. Spray discharge in a side-to-side motion at base of fire.
5. Release handle (Figure 2, Item 1) and lever (Figure 2, Item 3) when fire is out.
6. Install safety pin (Figure 2, Item 2) in fire extinguisher (Figure 2, Item 4).
7. Notify Field Maintenance to replace fire extinguisher (Figure 2, Item 4).

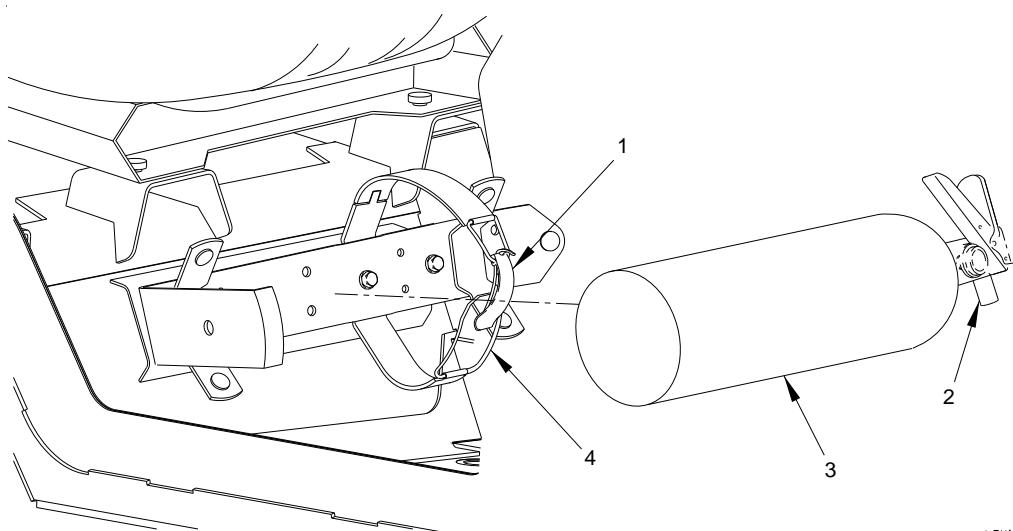


LTXI0265R02

Figure 2. Fire Extinguisher Operation.

END OF TASK**FIRE EXTINGUISHER INSTALLATION**

1. Install fire extinguisher (Figure 3, Item 3) in clamp (Figure 3, Item 4) with nozzle (Figure 3, Item 2) pointing down.
2. Push up on latch (Figure 3, Item 1) to secure fire extinguisher (Figure 3, Item 3) in clamp (Figure 3, Item 4).

FIRE EXTINGUISHER INSTALLATION - Continued

LTX10265R03

Figure 3. Fire Extinguisher Installation.

END OF TASK

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
HIGHWAY EMERGENCY MARKER KIT SETUP WORK PACKAGE**

INITIAL SETUP:

Tools and Special Tools

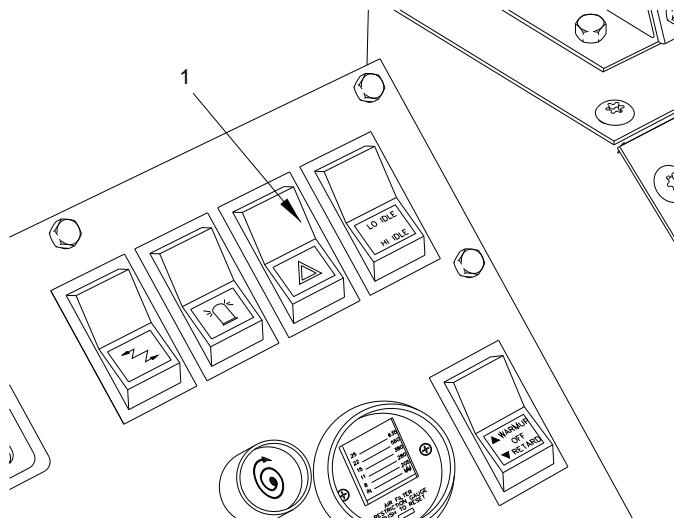
Reflector Set, Highway Warning,
Triangular (Volume 3, WP 0357,
Table 2, Item 1)
Chocks, Wheel (Volume 3, WP 0357,
Table 2, Item 9)

Equipment Condition

Main light switch positioned to PARK.
(Volume 1, WP 0019)

PREPARING MARKERS FOR USE

1. Position hazard lights switch (Figure 1, Item 1) to on.



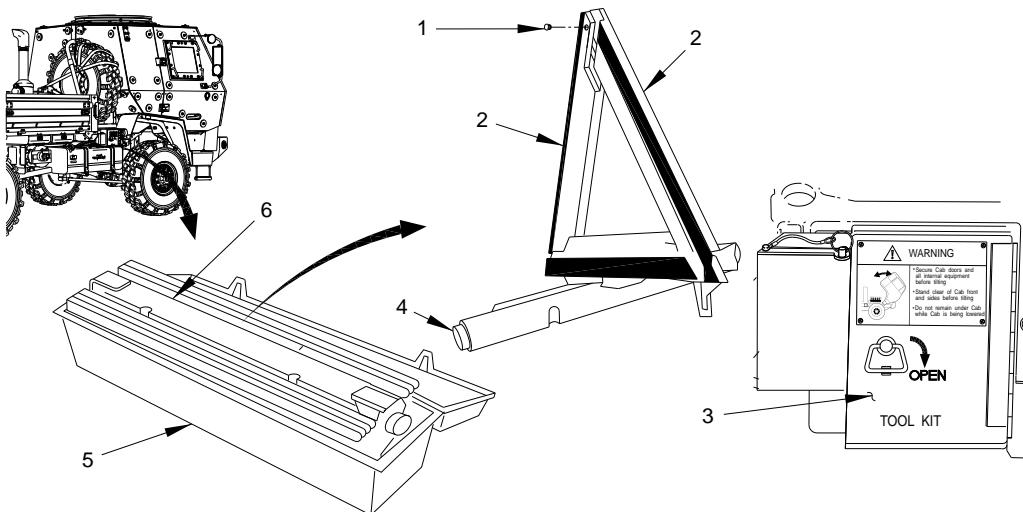
LTXI0266B01

Figure 1. Preparing Markers for Use.

2. Remove emergency marker kit (Figure 2, Item 5) from tool box (Figure 2, Item 3).
3. Remove three markers (Figure 2, Item 6) from emergency marker kit (Figure 2, Item 5).
4. Attach two ends of marker arms (Figure 2, Item 2) with pin (Figure 2, Item 1).

PREPARING MARKERS FOR USE - Continued

5. Rotate marker arms (Figure 2, Item 2) approximately 1/2 turn on base (Figure 2, Item 4).



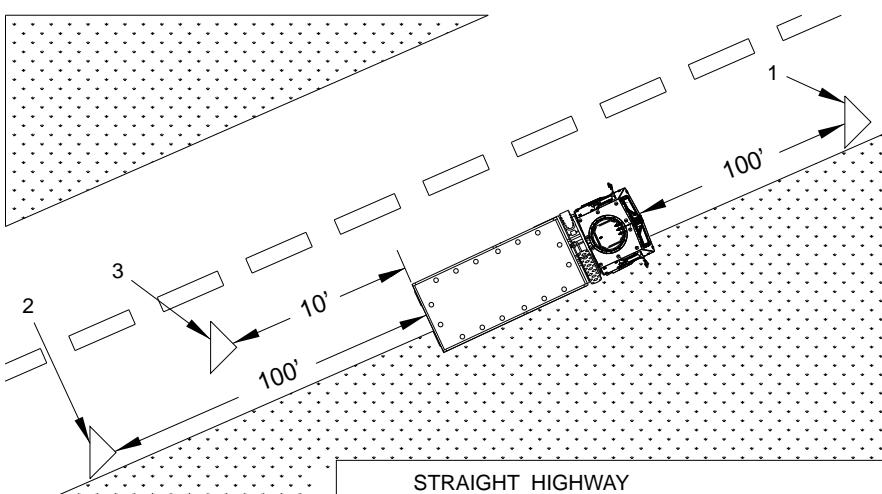
LTX10266B02

Figure 2. Preparing Markers for Use.

6. Perform previous two steps on second and third markers.

END OF TASK**PLACING MARKERS ON UNDIVIDED, STRAIGHT HIGHWAY**

1. Place one marker (Figure 3, Item 1) approximately 100 ft (30 m) in front of vehicle with marker facing approaching traffic.
2. Place second marker (Figure 3, Item 3) approximately 10 ft (3 m) behind vehicle and about 5 ft (1.5 m) out from side of vehicle with marker facing approaching traffic.
3. Place third marker (Figure 3, Item 2) approximately 100 ft (30 m) behind vehicle with marker facing approaching traffic.

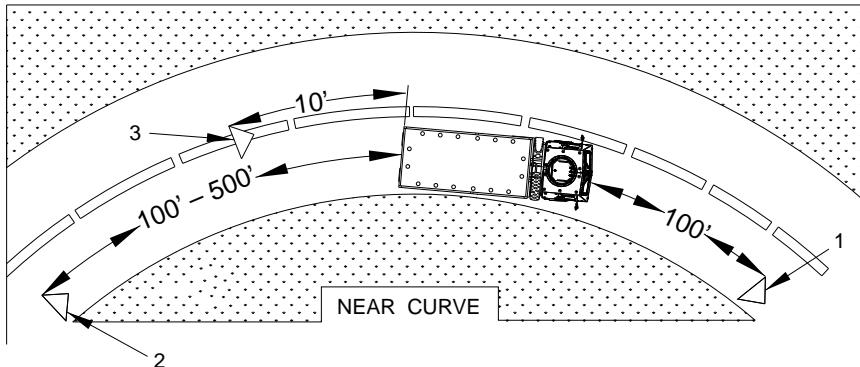
PLACING MARKERS ON UNDIVIDED, STRAIGHT HIGHWAY - Continued

LTX10266B03

Figure 3. Placing Markers on Undivided, Straight Highway.

END OF TASK**PLACING MARKERS ON UNDIVIDED, CURVED HIGHWAY**

1. Place one marker (Figure 4, Item 1) approximately 100 ft (30 m) in front of vehicle with marker facing approaching traffic.
2. Place second marker (Figure 4, Item 3) approximately 10 ft (3 m) behind vehicle and about 5 ft (1.5 m) out from side of vehicle with marker facing approaching traffic.
3. Place third marker (Figure 4, Item 2) approximately 100 to 500 ft (30 to 150 m) behind vehicle with marker facing approaching traffic and visible before traffic reaches curve.

PLACING MARKERS ON UNDIVIDED, CURVED HIGHWAY - Continued

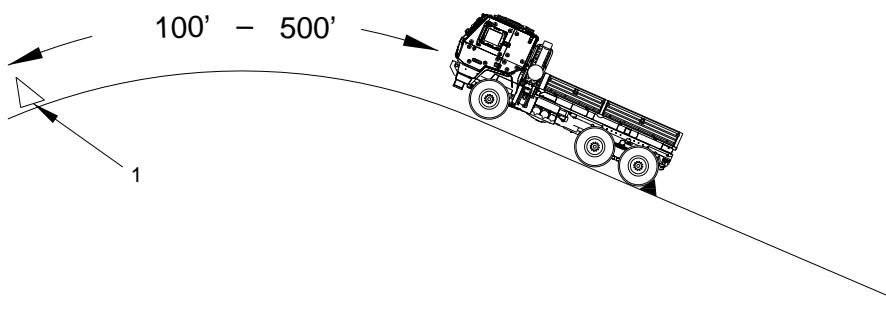
LTX10266B04

Figure 4. Placing Markers on Undivided, Curved Highway.

END OF TASK**PLACING MARKERS ON UNDIVIDED HIGHWAY WITH HILLS****WARNING**

Vehicle must be secure. Wheels must be chocked when stopped on incline to prevent vehicle from rolling. Failure to comply may result in serious injury or death to personnel or damage to equipment.

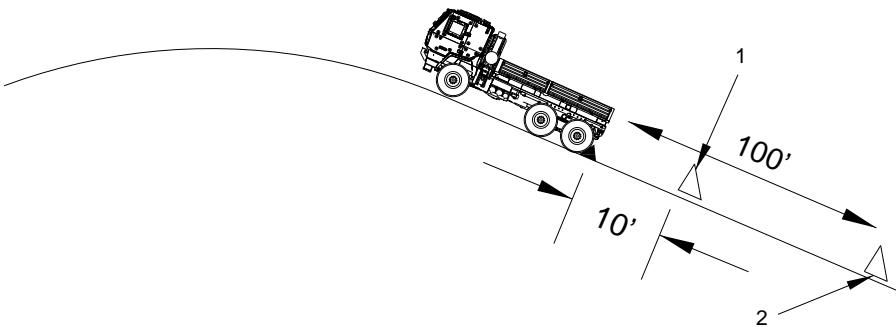
1. Chock wheels. (Volume 1, WP 0019)
2. Place one marker (Figure 5, Item 1) approximately 100 to 500 ft (30 to 150 m) in front of vehicle with marker facing approaching traffic and visible before traffic reaches top of hill.

PLACING MARKERS ON UNDIVIDED HIGHWAY WITH HILLS - Continued

LTM10266B07

Figure 5. Placing Markers on Undivided Highway With Hills.

3. Place second marker (Figure 6, Item 1) approximately 10 ft (3 m) behind vehicle and about 5 ft (1.5 m) out from side of vehicle with marker facing approaching traffic.
4. Place third marker (Figure 6, Item 2) approximately 100 ft (30 m) behind vehicle with marker facing approaching traffic.

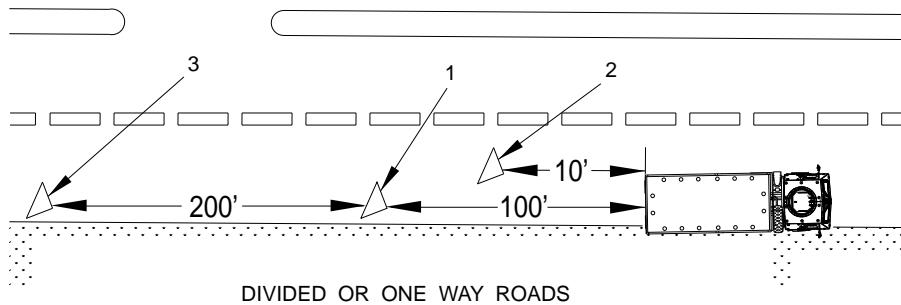
PLACING MARKERS ON UNDIVIDED HIGHWAY WITH HILLS - Continued

L TM10266B06

Figure 6. Placing Markers on Undivided Highway With Hills.

END OF TASK**PLACING MARKERS ON DIVIDED HIGHWAY OR ONE WAY ROAD**

1. Place one marker (Figure 7, Item 2) approximately 10 ft (3 m) behind vehicle and about 5 ft (1.5 m) out from side of vehicle with marker facing approaching traffic.
2. Place second marker (Figure 7, Item 1) approximately 100 ft (30 m) behind vehicle with marker facing approaching traffic.
3. Place third marker (Figure 7, Item 3) approximately 200 ft (60 m) behind second marker with marker facing approaching traffic.

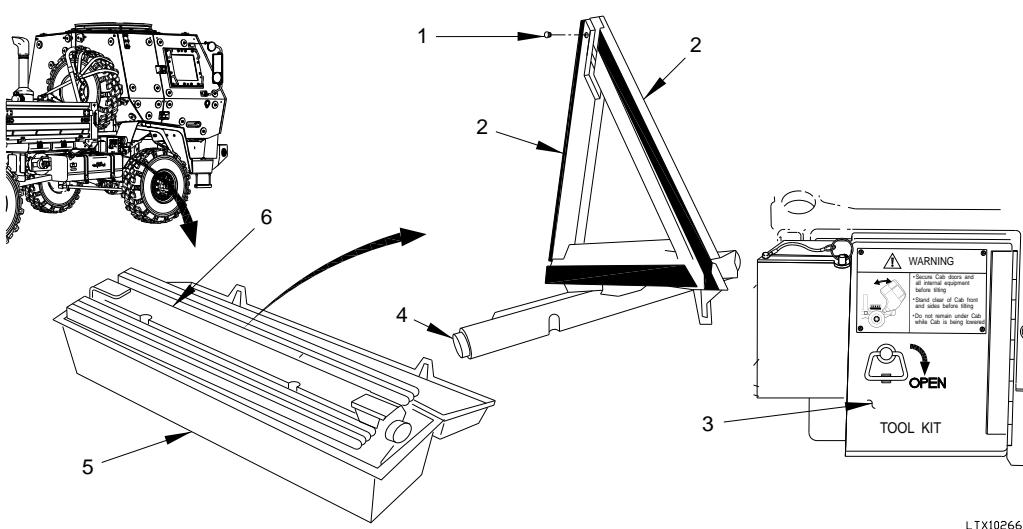
PLACING MARKERS ON DIVIDED HIGHWAY OR ONE WAY ROAD - Continued

LTX10266B07

Figure 7. Placing Markers on Divided Highway or One Way Road.

END OF TASK**STOWING MARKERS**

1. Rotate marker arms (Figure 8, Item 2) approximately 1/2 turn on base (Figure 8, Item 4).
2. Remove pin (Figure 8, Item 1) from marker arms (Figure 8, Item 2).
3. Fold marker arms (Figure 8, Item 2) down to base (Figure 8, Item 4).
4. Perform previous three steps on second and third markers.
5. Stow three markers (Figure 8, Item 6) in emergency marker kit (Figure 8, Item 5).
6. Stow emergency marker kit (Figure 8, Item 5) in tool box (Figure 8, Item 3).

STOWING MARKERS - Continued

LTX10266B02

Figure 8. Stowing Markers.

7. Position hazard lights switch (Figure 9, Item 1) to off.

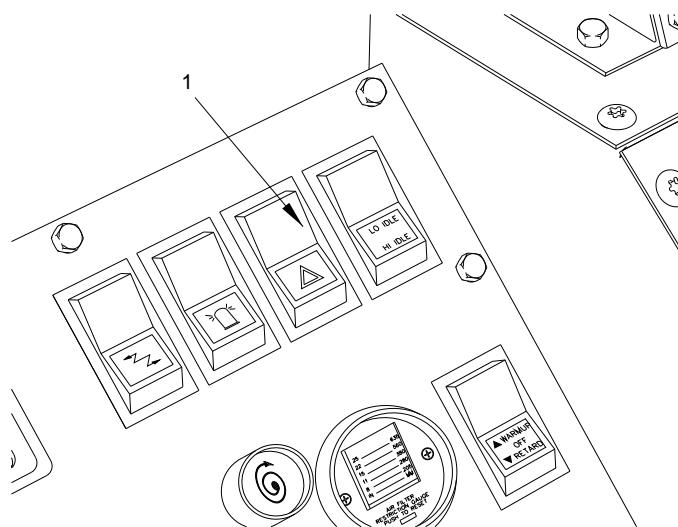
STOWING MARKERS - Continued

Figure 9. Stowing Markers.

END OF TASK

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
TOWBAR CONNECTION/DISCONNECTION WORK PACKAGE**

INITIAL SETUP:

Personnel Required
(2)

TOWBAR CONNECTION

WARNING

Towing vehicle and disabled vehicle must have parking brakes applied before connecting/disconnecting towbar. Vehicles may roll into each other. Failure to comply may result in serious injury or death to personnel.

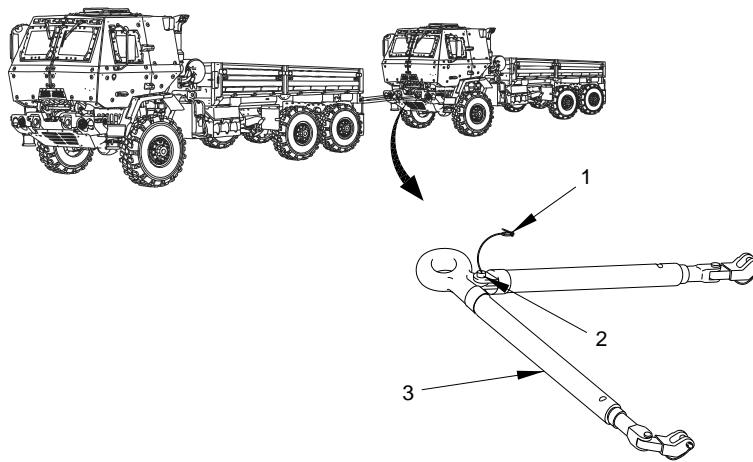
WARNING

Towbar weighs approximately 134 lbs (61 kgs) and requires two or more personnel to carry. Failure to comply may result in injury to personnel.

NOTE

The following two steps require the aid of an assistant.

1. Position rear of towing vehicle near front of disabled vehicle.
2. Position towbar (Figure 1, Item 3) between vehicles.
3. Remove linchpin (Figure 1, Item 2) from pin (Figure 1, Item 1).

TOWBAR CONNECTION - Continued

LTM10267B01

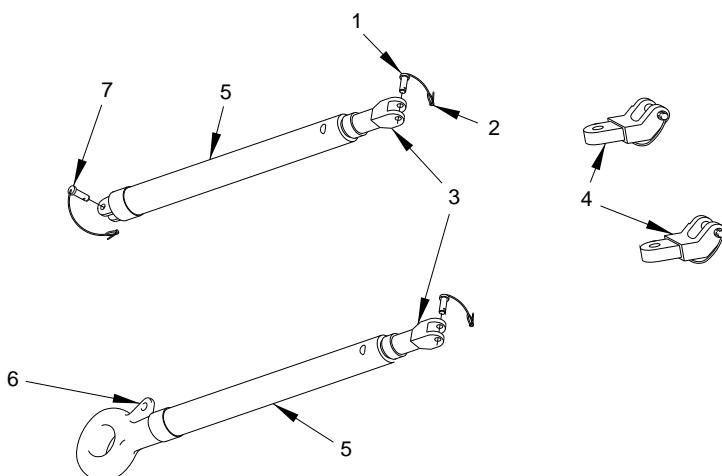
Figure 1. Towbar Connection.

4. Remove pin (Figure 2, Item 7) from towbar (Figure 2, Item 5).
5. Separate towbar (Figure 2, Item 5) at pivot point (Figure 2, Item 6).

NOTE

Left and right side chains are installed the same way. Right side shown.

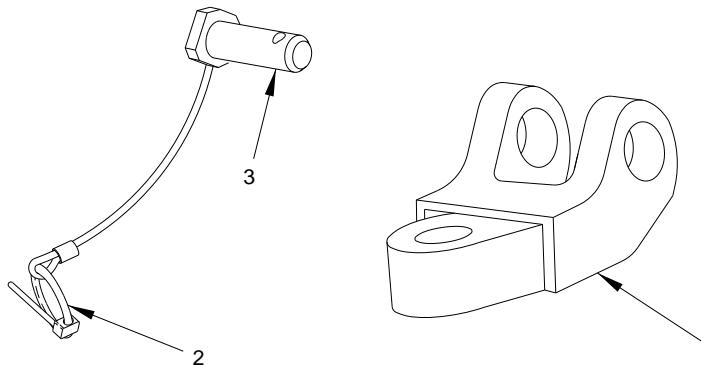
6. Remove two linchpins (Figure 2, Item 2), pins (Figure 2, Item 1), and towbar adapters (Figure 2, Item 4) from towbar clevises (Figure 2, Item 3).

TOWBAR CONNECTION - Continued

LTM10267B02

Figure 2. Towbar Connection.

7. Remove two lynchpins (Figure 3, Item 2) and pins (Figure 3, Item 3) from towbar adapters (Figure 3, Item 1).

TOWBAR CONNECTION - Continued

LTL10267B26

Figure 3. Towbar Connection.

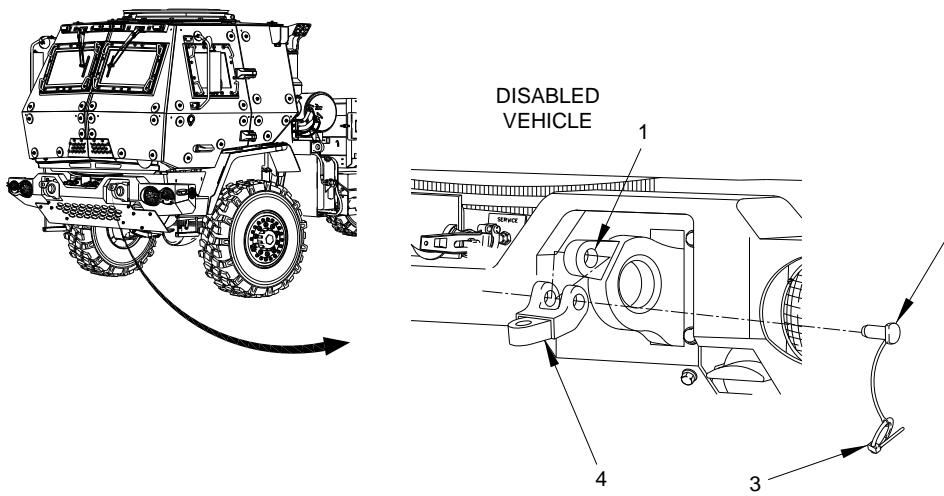
CAUTION

Pins should be installed with lynchpin hole down. Failure to comply may result in damage to equipment.

NOTE

- Left and right side towbar adapters are installed on tow eyes the same way. Left side shown.
- Left and right side lynchpins and pins are installed in towbar adapters the same way. Left side shown.

8. Position two towbar adapters (Figure 4, Item 4) on eyes (Figure 4, Item 1) of disabled vehicle.
9. Install two pins (Figure 4, Item 2) in towbar adapters (Figure 4, Item 4).
10. Install two lynchpin (Figure 4, Item 3) in pins (Figure 4, Item 2).

TOWBAR CONNECTION - Continued

LTM10267B03

Figure 4. Towbar Connection.

WARNING

Towbar weighs approximately 134 lbs (61 kgs) and requires two or more personnel to carry. Failure to comply may result in injury to personnel.

NOTE

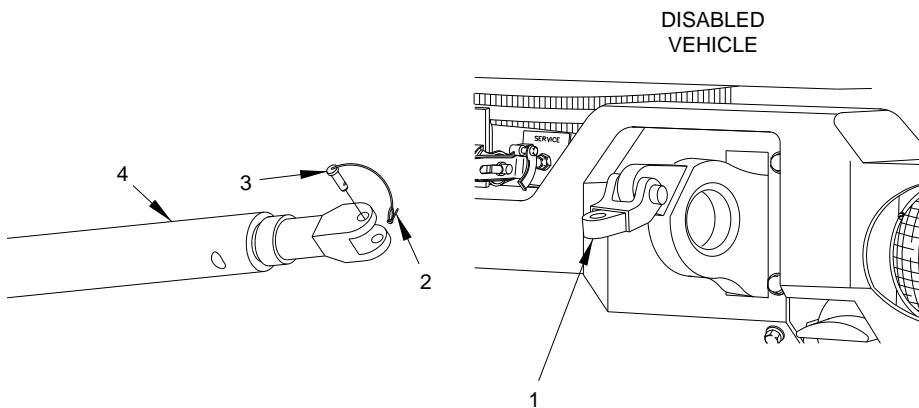
- Left and right sides of towbar are installed on towbar adapters the same way. Left side shown.
- The next eight steps require the aid of an assistant.

11. Position towbar (Figure 5, Item 4) on two towbar adapters (Figure 5, Item 1).

CAUTION

Pins should be installed with lynchpin hole down. Failure to comply may result in damage to equipment.

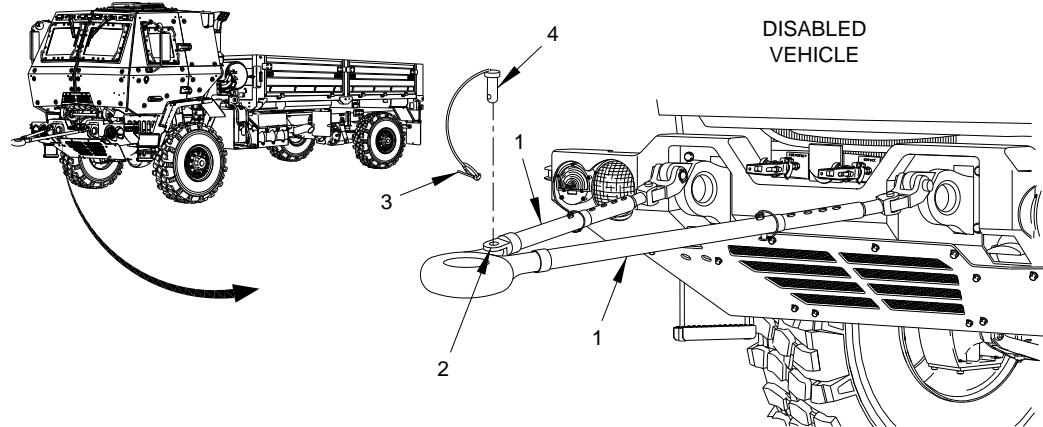
12. Install two pins (Figure 5, Item 3) in towbar (Figure 5, Item 4) and towbar adapters (Figure 5, Item 1).
13. Install two lynchpins (Figure 5, Item 2) in pins (Figure 5, Item 3).

TOWBAR CONNECTION - Continued

LTM10267B05

Figure 5. Towbar Connection.

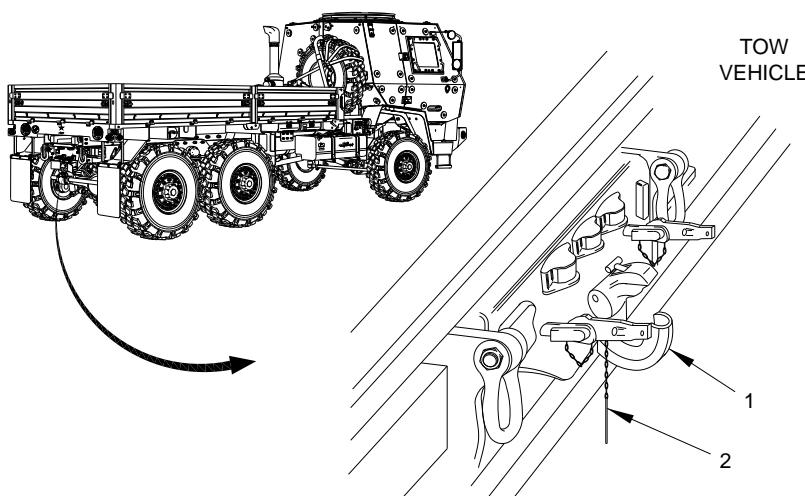
14. Align left and right sides of towbar (Figure 6, Item 1) at pivot point (Figure 6, Item 2).
15. Install pin (Figure 6, Item 4) in towbar (Figure 6, Item 1).
16. Install linchpin (Figure 6, Item 3) in pin (Figure 6, Item 4).

TOWBAR CONNECTION - Continued

LTM10267B06

Figure 6. Towbar Connection.

17. Remove cotter pin (Figure 7, Item 2) from pintle hook (Figure 7, Item 1).
18. Open pintle hook (Figure 7, Item 1).

TOWBAR CONNECTION - Continued

LTM10267B07

Figure 7. Towbar Connection.

19. Chock wheels of disabled vehicle (Volume 1, WP 0019).

WARNING

Ground guide is required to guide vehicle backing up. If sight of the ground guide is lost, vehicle must be stopped. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

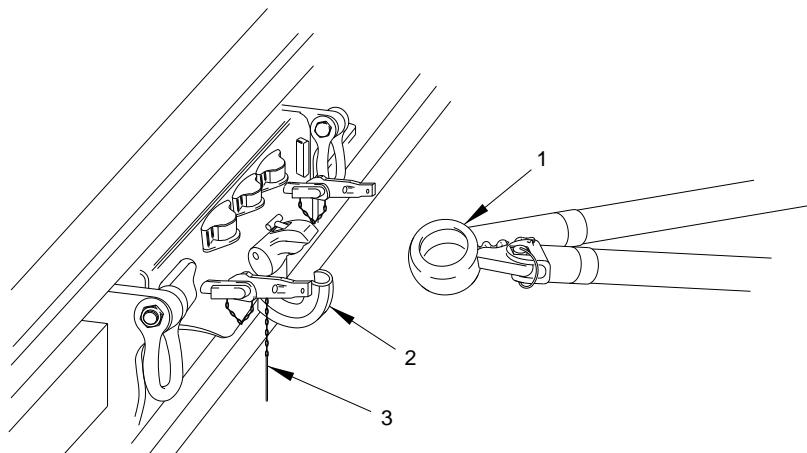
Do not place hands near pintle hook when connecting/disconnecting towbar from pintle hook. No personnel are to be between the vehicle and the towed vehicle during towbar disconnection without the ground guide present and in sight of the driver. Failure to comply may result in injury to personnel.

NOTE

The next two steps require the aid of two assistants.

TOWBAR CONNECTION - Continued

20. Slowly back up towing vehicle until towbar eye (Figure 8, Item 1) is aligned with pintle hook (Figure 8, Item 2).
21. Connect towbar eye (Figure 8, Item 1) to pintle hook (Figure 8, Item 2).
22. Close pintle hook (Figure 8, Item 2).
23. Install cotter pin (Figure 8, Item 3) in pintle hook (Figure 8, Item 2).



LTM10267B08

Figure 8. Towbar Connection.

24. Release parking brakes of disabled vehicle (refer to disabled vehicle operator's manual).
25. Remove two dummy couplings (Figure 9, Item 2) from SERVICE gladhand (Figure 9, Item 1) and EMERGENCY gladhand (Figure 9, Item 5) on front of disabled vehicle.

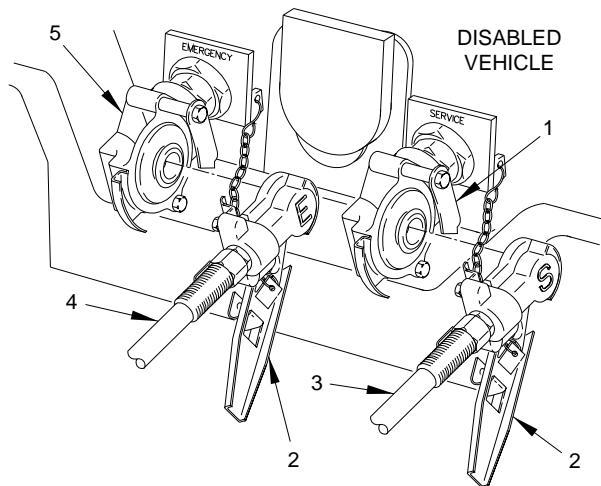
WARNING

Listen for air leaks coming from the connections at the SERVICE and EMERGENCY gladhands. Large enough air leaks may result in brakes applying prematurely. Failure to comply may result in serious injury or death to personnel or damage to equipment.

26. Connect intervehicular air hose (Figure 9, Item 4) to EMERGENCY gladhand (Figure 9, Item 5) of disabled vehicle.

TOWBAR CONNECTION - Continued

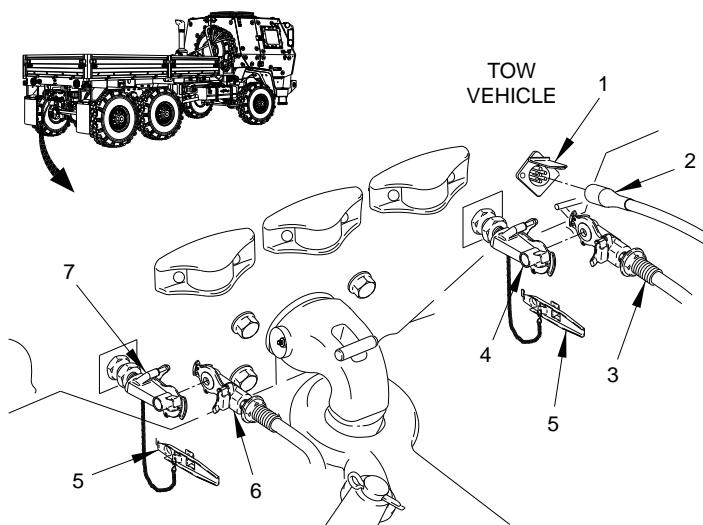
27. Connect intervehicular air hose (Figure 9, Item 3) to SERVICE gladhand (Figure 9, Item 1) of disabled vehicle.



LTM10267B09

Figure 9. Towbar Connection.

28. Remove two dummy couplings (Figure 10, Item 5) from SERVICE gladhand (Figure 10, Item 7) and EMERGENCY gladhand (Figure 10, Item 4) of towing vehicle.
29. Connect intervehicular air hose (Figure 10, Item 3) to EMERGENCY gladhand (Figure 10, Item 4).
30. Connect intervehicular air hose (Figure 10, Item 6) to SERVICE gladhand (Figure 10, Item 7).
31. Connect intervehicular cable (Figure 10, Item 2) to rear receptacle (Figure 10, Item 1) of towing vehicle.

TOWBAR CONNECTION - Continued

LTM10267B10

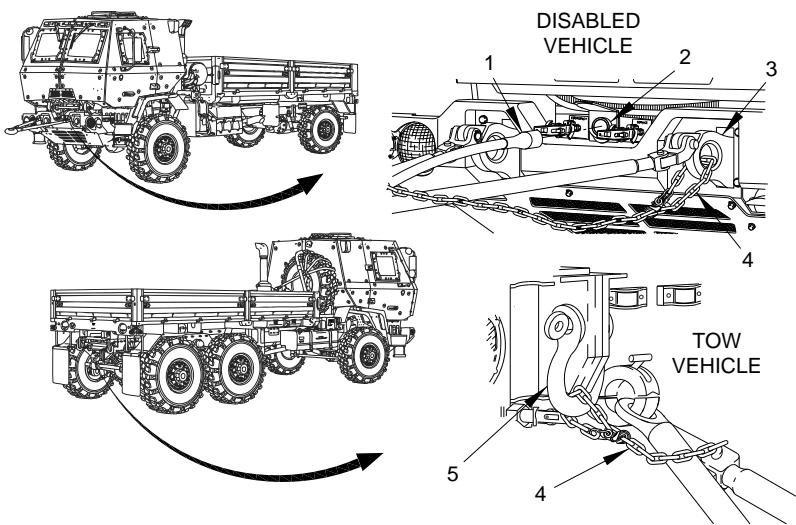
Figure 10. Towbar Connection.

32. Connect intervehicular cable (Figure 11, Item 1) to front receptacle (Figure 11, Item 2) of disabled vehicle.

NOTE

Left and right side chains are installed the same way. Right side shown.

33. Attach two chains (Figure 11, Item 4) to holes in front crossmember (Figure 11, Item 3) on disabled vehicle and to shackles (Figure 11, Item 5) on towing vehicle.

TOWBAR CONNECTION - Continued

LTM10267B11

Figure 11. Towbar Connection.

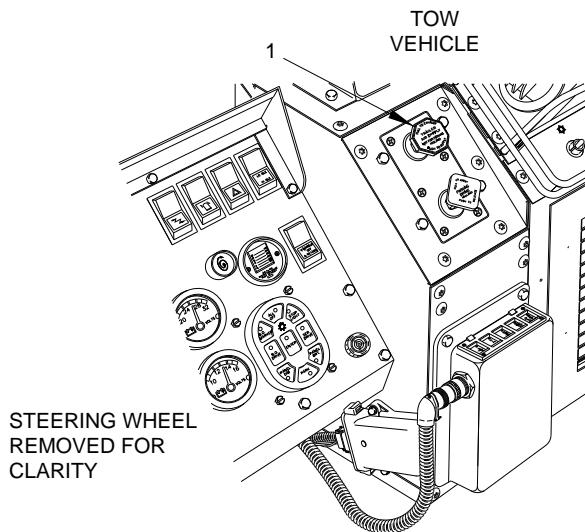
END OF TASK**TOWBAR DISCONNECTION****WARNING**

Towing vehicle and disabled vehicle must have parking brakes applied before connecting/disconnecting towbar. Vehicles may roll into each other. Failure to comply may result in serious injury or death to personnel.

WARNING

Towbar weighs approximately 134 lbs (61 kgs) and requires two or more personnel to carry. Failure to comply may result in injury to personnel.

1. Pull out TRAILER AIR SUPPLY control (Figure 12, Item 1) on towing vehicle.

TOWBAR DISCONNECTION - Continued

LTM10267B15

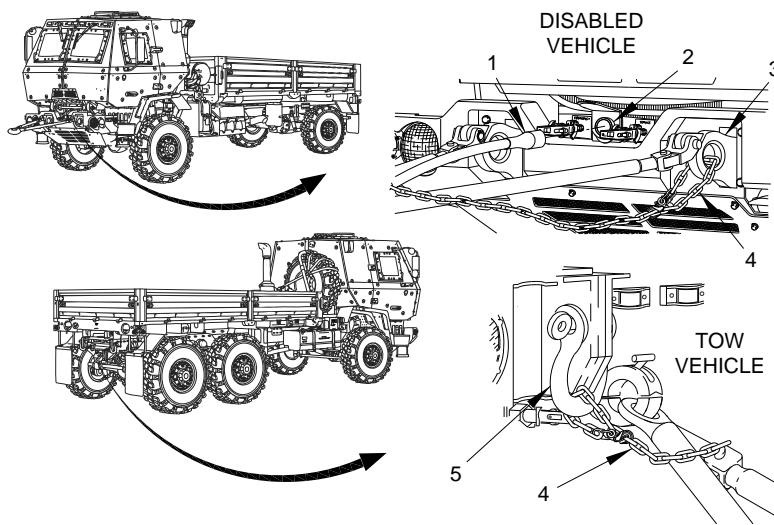
Figure 12. Towbar Disconnection.

2. Chock wheels of disabled vehicle (Volume 1, WP 0019).

NOTE

Left and right side safety chains are removed the same way. Right side shown.

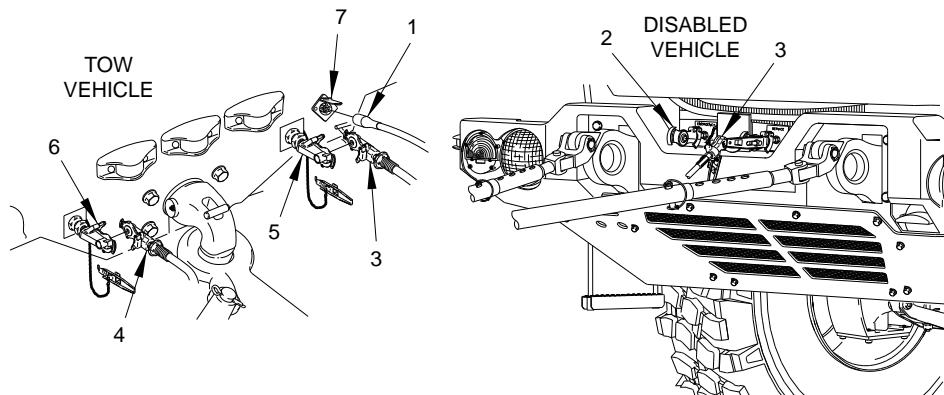
3. Disconnect intervehicular cable (Figure 13, Item 1) from front receptacle (Figure 13, Item 2) on disabled vehicle.
4. Disconnect two chains (Figure 13, Item 4) from shackles (Figure 13, Item 5) of towing vehicle and from holes in front crossmember (Figure 13, Item 3) on disabled vehicle.

TOWBAR DISCONNECTION - Continued

LTM10267B11

Figure 13. Towbar Disconnection.

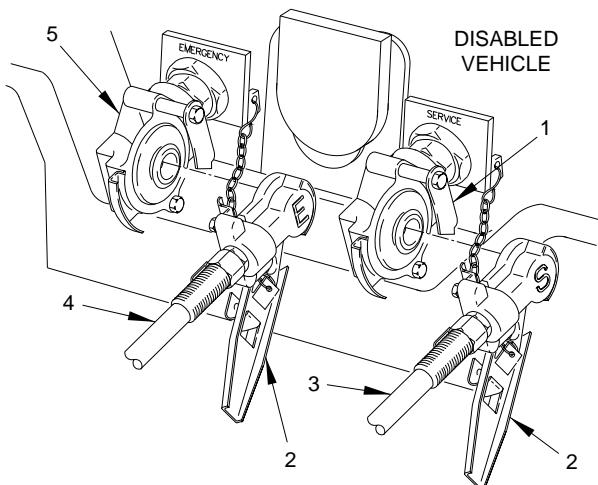
5. Disconnect intervehicular air hose (Figure 14, Item 4) from SERVICE gladhand (Figure 14, Item 6) of towing vehicle.
6. Disconnect intervehicular air hose (Figure 14, Item 3) from EMERGENCY gladhand (Figure 14, Item 5) of towing vehicle and EMERGENCY gladhand (Figure 14, Item 2) on disabled vehicle.
7. Disconnect intervehicular cable (Figure 14, Item 1) from rear receptacle (Figure 14, Item 7) on towing vehicle.

TOWBAR DISCONNECTION - Continued

LTL10267B29

Figure 14. Towbar Disconnection.

8. Disconnect intervehicular air hose (Figure 15, Item 3) from SERVICE gladhand (Figure 15, Item 1) of disabled vehicle.
9. Disconnect intervehicular air hose (Figure 15, Item 4) from EMERGENCY gladhand (Figure 15, Item 5) of disabled vehicle.
10. Install dummy couplings (Figure 15, Item 2) on SERVICE and EMERGENCY gladhands (Figure 15, Items 1 and 5) of disabled vehicle.

TOWBAR DISCONNECTION - Continued

LTM10267B09

Figure 15. Towbar Disconnection.

11. Install dummy couplings (Figure 16, Item 1) on gladhands (Figure 16, Items 5 and 6) of towing vehicle.
12. Remove cotter pin (Figure 16, Item 4) from pintle hook (Figure 16, Item 3).
13. Open pintle hook (Figure 16, Item 3).

WARNING

Do not place hands near pintle hook when connecting/disconnecting towbar from pintle hook. No personnel are to be between the vehicle and the towed vehicle during towbar disconnection without the ground guide present and in sight of the driver. Failure to comply may result in injury to personnel.

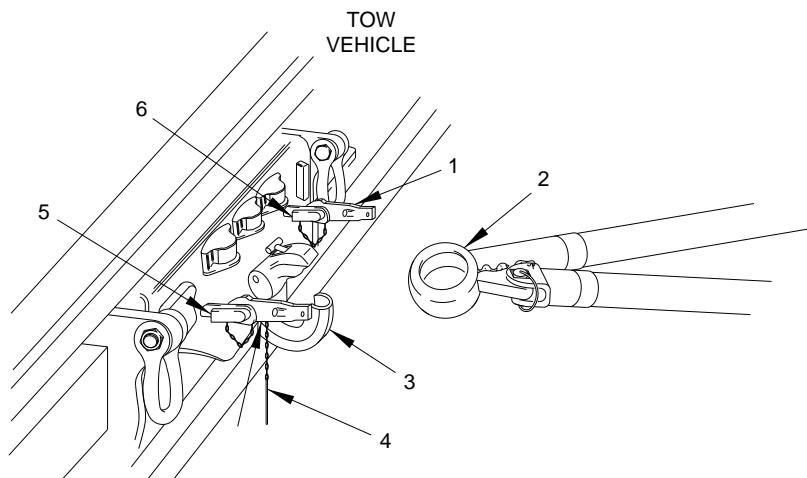
WARNING

Ground guide is required to guide vehicle backing up. If sight of the ground guide is lost, vehicle must be stopped. Failure to comply may result in injury to personnel or damage to equipment.

TOWBAR DISCONNECTION - Continued**NOTE**

The next two steps require the aid of an assistant.

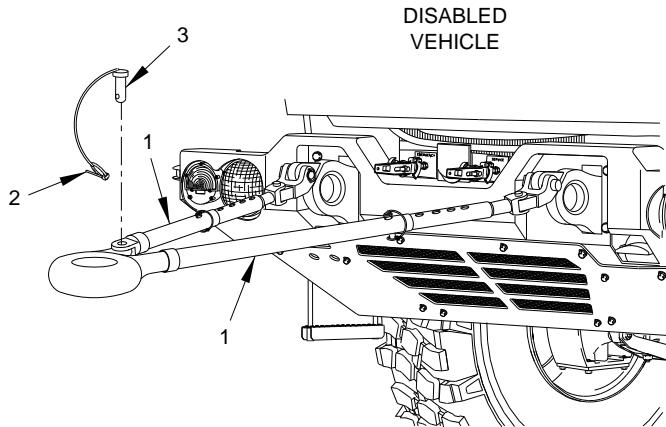
14. Remove towbar (Figure 16, Item 2) from pintle hook (Figure 16, Item 3).
15. Drive towing vehicle forward. When towing vehicle is clear, lower towbar (Figure 16, Item 2) to ground.
16. Close pintle hook (Figure 16, Item 3).
17. Install cotter pin (Figure 16, Item 4) in pintle hook (Figure 16, Item 3).



LTM10267B26

Figure 16. Towbar Disconnection.

18. Remove linchpin (Figure 17, Item 2) and pin (Figure 17, Item 3) from towbar (Figure 17, Item 1).
19. Separate left and right sides of towbar (Figure 17, Item 1).

TOWBAR DISCONNECTION - Continued

LTM10267B27

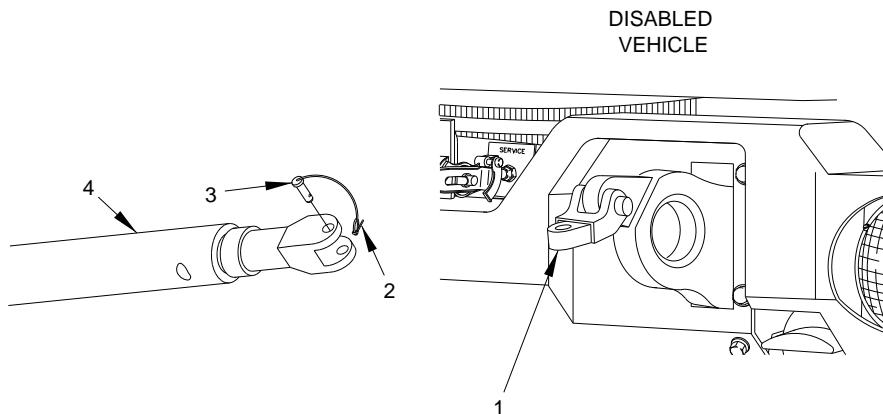
Figure 17. Towbar Disconnection.

WARNING

Towbar weighs approximately 134 lbs (61 kgs) and requires two or more personnel to carry. Failure to comply may result in injury to personnel.

NOTE

- Left and right sides of towbar are removed the same way. Left side shown.
 - The next step requires the aid of an assistant.
20. Remove two lynchpins (Figure 18, Item 2), pins (Figure 18, Item 3), and towbar (Figure 18, Item 4) from two towbar adapters (Figure 18, Item 1).

TOWBAR DISCONNECTION - Continued

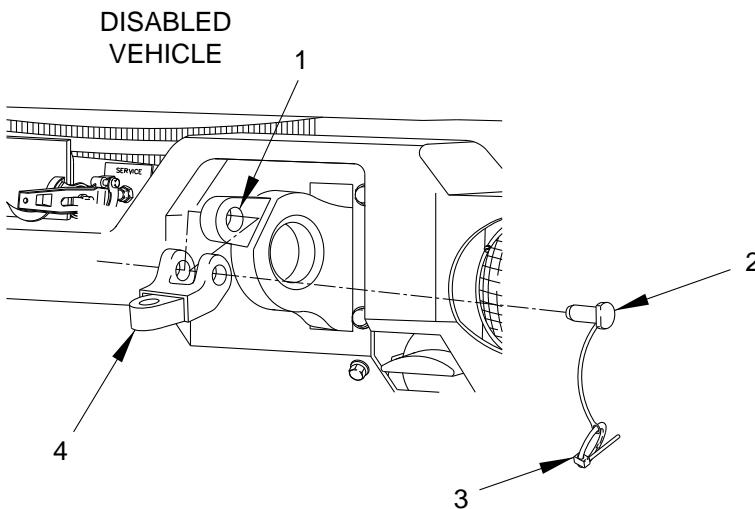
LTM10267B28

Figure 18. Towbar Disconnection.

NOTE

Left and right side towbar adapters are removed the same way. Left side shown.

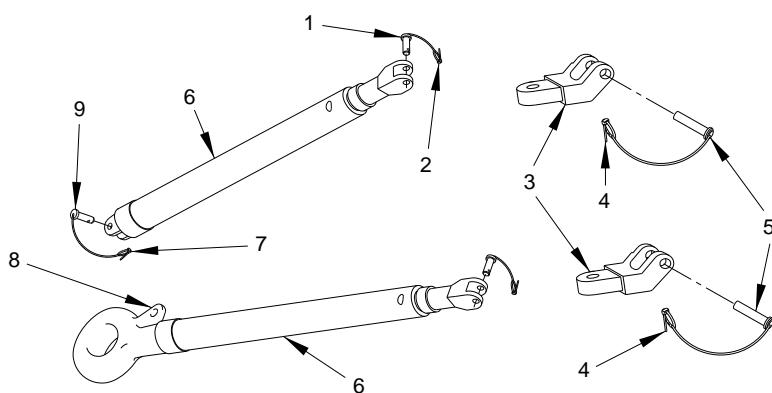
21. Remove two lynchpins (Figure 19, Item 3), pins (Figure 19, Item 2), and towbar adapters (Figure 19, Item 4) from tow eyes (Figure 19, Item 1).

TOWBAR DISCONNECTION - Continued

L TM10267B29

Figure 19. Towbar Disconnection.

22. Install two pins (Figure 20, Item 5) in towbar adapters (Figure 20, Item 3) with lynchpins (Figure 20, Item 4).
23. Install towbar adapters (Figure 20, Item 3) on towbar (Figure 20, Item 6) with two pins (Figure 20, Item 2) and lynchpins (Figure 20, Item 1).
24. Align left and right sides of towbar (Figure 20, Item 6) at pivot point (Figure 20, Item 8).
25. Install pin (Figure 20, Item 9) in towbar (Figure 20, Item 6) with lynchpin (Figure 20, Item 7).

TOWBAR DISCONNECTION - Continued

LTM10267B30

Figure 20. Towbar Disconnection.

END OF TASK**END OF WORK PACKAGE**

**OPERATOR MAINTENANCE
TOWING DISABLED VEHICLE WORK PACKAGE**

INITIAL SETUP:

References

FM 21-305

*** The following is applicable to the following UOC(s): TSP TSR TSQ TSA TSB
TSG TSL TSM TSV. ***

TOWBAR CONNECTION

WARNING

Use only towbar 12424566, which is rated to 65,000 lbs (29,484 kg). The correct towbar pins are all 1 in. (2.54 cm) in diameter. Certain older towbars use 0.75 in. (1.91 cm) pins that are not adequate for flat tow operations. Failure to comply may result in damage to equipment and injury or death to personnel.

WARNING

Do not flat tow a fully loaded MTV and trailer or LMTV and trailer combination. The wrecker towbar can be damaged if weight capacity is exceeded. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

When towing a vehicle with non-functional brakes, use extreme caution and reduce/adjust speed accordingly. Failure to comply may result in serious injury or death to personnel or damage to equipment.

TOWBAR CONNECTION - Continued**WARNING**

Vehicles should not be operated at speeds over 15 mph (24 km/h) when towing off-road. On paved roads when Operator determines that vehicle being towed and terrain conditions allow safe operation, the following are maximum speeds for safe operation. Exceeding these speeds may result in loss of vehicle control.

TERRAIN CONDITION - MAXIMUM SPEED

on road (level) - 35 mph (56 km/h)

on road (hilly) - 30 mph (48 km/h)

off road - 15 mph (24 km/h)

Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

Never flat tow a vehicle with a heavier weight than the vehicle being used to tow. Operator driving actions will be increased in towed vehicle and loss of control will result. Failure to comply may result in serious injury or death to personnel and/or damage to equipment.

CAUTION

Flat towing is the recommended means of towing. Lift and tow should only be performed in situations that provide no other means to move the disabled vehicle. Lift and tow may damage frame. Failure to comply may result in damage to equipment.

CAUTION

Listen for air leaks on towed vehicle. If air leaks are present, cage the air brakes (Volume 3, WP 0353). Failure to comply may result in damage to equipment.

NOTE

If disabled vehicle is a M1083A1 series vehicle, proceed to Preparation of Disabled Vehicle (M1078A1/M1083A1 Series). If disabled vehicle is another series vehicle, refer to Operator's manual for that vehicle.

Connect towbar between towing vehicle and disabled vehicle. (WP 0064)

END OF TASK

*** The following is applicable to the following UOC(s): TSH TSU. ***

TOWBAR CONNECTION

WARNING

Use only towbar 12424566, which is rated to 65,000 lbs (29,484 kg). The correct towbar pins are all 1 in. (2.54 cm) in diameter. Certain older towbars use 0.75 in. (1.91 cm) pins that are not adequate for flat tow operations. Failure to comply may result in damage to equipment and injury or death to personnel.

WARNING

Do not flat tow a fully loaded LMTV and trailer combination. The M1089A1P2 towbar can be damaged if weight capacity is exceeded. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

When towing a vehicle with non-functional brakes, use extreme caution and reduce/adjust speed accordingly. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

Vehicles should not be operated at speeds over 15 mph (24 km/h) when towing off-road. On paved roads when Operator determines that vehicle being towed and terrain conditions allow safe operation, the following are maximum speeds for safe operation. Exceeding these speeds may result in loss of vehicle control.

TERRAIN CONDITION - MAXIMUM SPEED

on road (level) - 35 mph (56 km/h)

on road (hilly) - 30 mph (48 km/h)

off road - 15 mph (24 km/h)

Failure to comply may result in serious injury or death to personnel or damage to equipment.

CAUTION

Flat towing is the recommended means of towing. Lift and tow should only be performed in situations that provide no other means to move the disabled vehicle. Lift and tow may damage frame. Failure to comply may result in damage to equipment.

TOWBAR CONNECTION - Continued**CAUTION**

Listen for air leaks on towed vehicle. If air leaks are present, cage the air brakes (Volume 3, WP 0353). Failure to comply may result in damage to equipment.

NOTE

- M1088A1P2 should be used as a tow vehicle only as a last resort.
- If disabled vehicle is a M1078A1 series vehicle, proceed to Preparation of Disabled Vehicle (M1078A1/M1083A1 Series). If disabled vehicle is another series vehicle, refer to Operator's manual for that vehicle.

Connect towbar between towing vehicle and disabled vehicle. (WP 0064)

END OF TASK**PREPARATION OF DISABLED VEHICLE****CAUTION**

Drive shafts must be disconnected if disabled M1078A1P2 or M1083A1P2 series vehicle is flat towed (all wheels in contact with ground) over 100 miles (161 km) or if towing speed is over 30 MPH. Failure to comply may result in damage to towed vehicle.

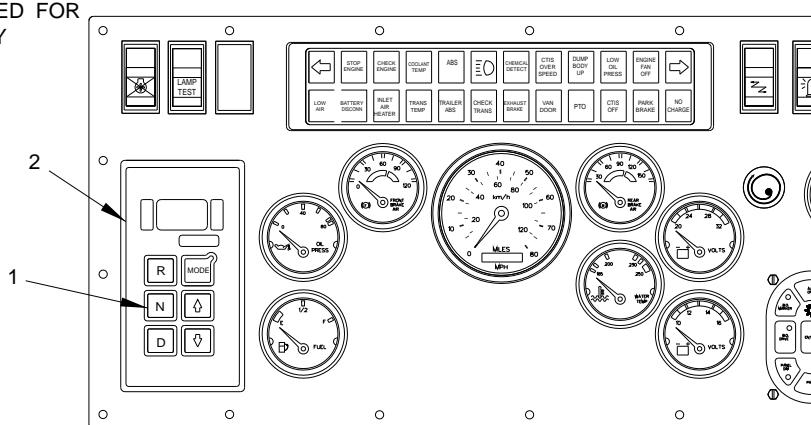
NOTE

Disabled vehicles must be prepared and moved in accordance with FM 21-305.

1. Press N (Neutral) button (Figure 1, Item 1) on Gen IV Transmission Pushbutton Shift Selector (TPSS) (Figure 1, Item 2).

PREPARATION OF DISABLED VEHICLE - Continued

STEERING WHEEL
REMOVED FOR
CLARITY



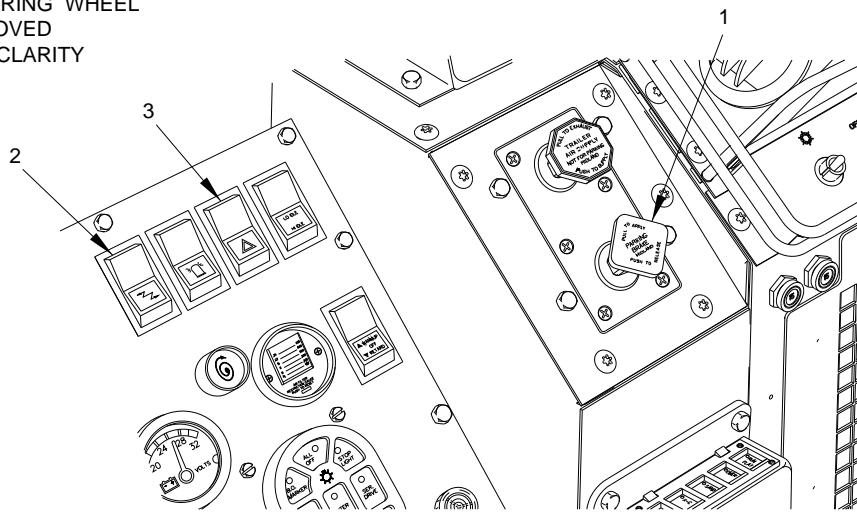
LTX10268B04

Figure 1. Preparation of Disabled Vehicle.

2. Push in PARKING BRAKE control (Figure 2, Item 1).
3. Position master power switch (Figure 2, Item 2) to on.
4. Position hazard lights switch (Figure 2, Item 3) to on.

PREPARATION OF DISABLED VEHICLE - Continued

STEERING WHEEL
REMOVED
FOR CLARITY



LTX10268B02

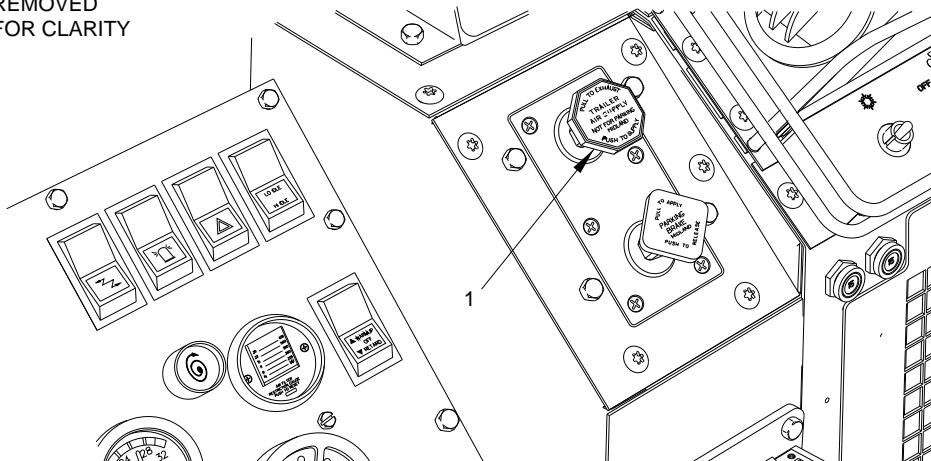
Figure 2. Preparation of Disabled Vehicle.

END OF TASK**PREPARATION OF TOWING VEHICLE**

1. Start engine. (Volume 1, WP 0019)
2. Push in TRAILER AIR SUPPLY control (Figure 3, Item 1).

PREPARATION OF TOWING VEHICLE - Continued

STEERING WHEEL
REMOVED
FOR CLARITY



LTX10268B03

Figure 3. Preparation of Towing Vehicle.

WARNING

Listen for air leaks coming from the connections at the SERVICE and EMERGENCY gladhands. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

Personnel must not occupy towed vehicle during towing operation. Towed vehicle may become disconnected while being towed. Failure to comply may result in serious injury or death to personnel.

CAUTION

Maximum speed for flat tow of M1078A1P2 or M1083A1P2 series vehicles is 35 mph (51 km/h). Failure to comply may result in damage to vehicle.

3. Transport disabled vehicle.

END OF TASK

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
PREPARATION FOR INTERNAL AIR TRANSPORT SHIPMENT WORK PACKAGE**

***** The following is applicable to the following UOC(s): TSE TSF TSP TSC TSD TSA TSB TSG TSL TSM TSV TSU TSH TSX TSR TSQ TSJ WRK. *****

INITIAL SETUP:

Tools and Special Tools

***** The following is applicable to the following UOC(s): TSP. *****

Tool Kit, Genl Mech

***** The following is applicable to the following UOC(s): TSP. *****

Sling, Multiple Leg
Link, Chain, End

Materials/Parts (cont.)

Rope, Fibrous (Volume 3, WP 0359,
Table 1, Item 153)

Equipment Condition

***** The following is applicable to the following UOC(s): TSP. *****

Prepare van body for movement.
(Volume 1, WP 0018)

Materials/Parts

***** The following is applicable to the following UOC(s): TSP. *****

***** The following is applicable to the following UOC(s): TSP. *****

WARNING



Heavy objects/loads, such as toolboxes and heavy parts, must always be carried on the floor with the weight distributed as equally as possible between left and right sides of van. Failure to comply decreases the stability of the van and will increase the likelihood of a rollover which may result in injury to personnel or damage to equipment.

WARNING

Heavy cabinets must always be mounted as low as possible with the weight distributed as equally as possible between left and right sides of van. Remember to consider the weight of the items that will be stored in the cabinets. Failure to comply decreases the stability of the van and will increase the likelihood of a rollover which may result in injury to personnel or damage to equipment.

WARNING

Always keep in mind, when placing items inside the van, that heavier items must always be positioned as low as possible and the weight distributed as equally as possible between left and right sides of van. Failure to comply decreases the stability of the van and will increase the likelihood of a rollover which may result in injury to personnel or damage to equipment.

*** The following is applicable to the following UOC(s): TSP. ***

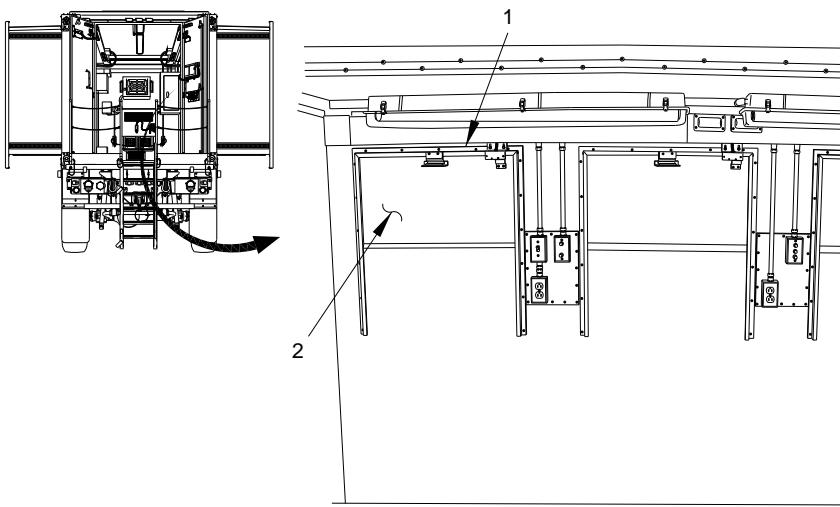
PREPARATION**CAUTION**

Prior to shipment by rail, all loose items and other items inside the van must be properly stowed, tied down, and or braced. Failure to comply may result in damage to equipment.

NOTE

All six blackout shields are closed the same way. RH side front shield shown.

1. Raise and latch blackout shield (Figure 1, Item 2) on van window (Figure 1, Item 1).

PREPARATION - Continued

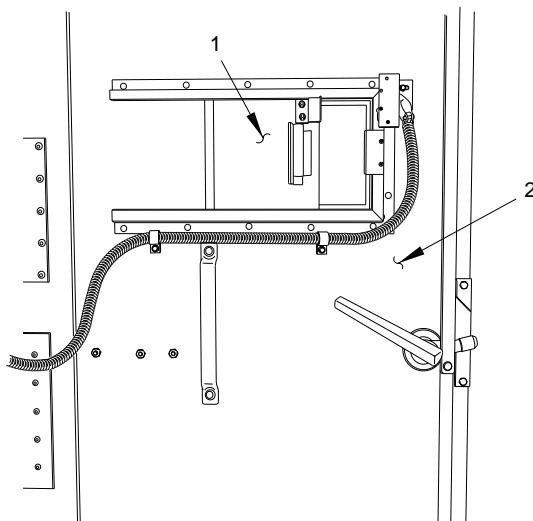
LTX216128A04

Figure 1. Preparation.

NOTE

All blackout shields on doors are closed the same way. RH side door shown.

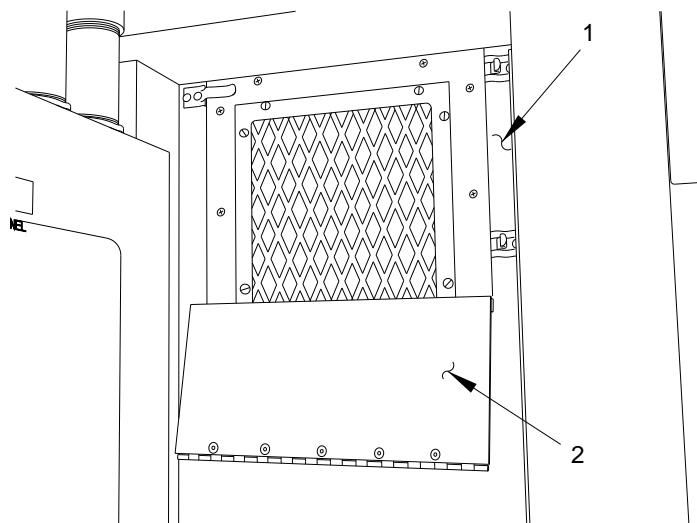
2. Close blackout shield (Figure 2, Item 1) on RH side door (Figure 2, Item 2).

PREPARATION - Continued

LTX216128A05

Figure 2. Preparation.

3. Open vent cover (Figure 3, Item 2) on RH side of van body wall (Figure 3, Item 1).

PREPARATION - Continued

LTX216128A06

Figure 3. Preparation.

END OF TASK

*** The following is applicable to the following UOC(s): TSP. ***

VAN BODY REMOVAL

WARNING

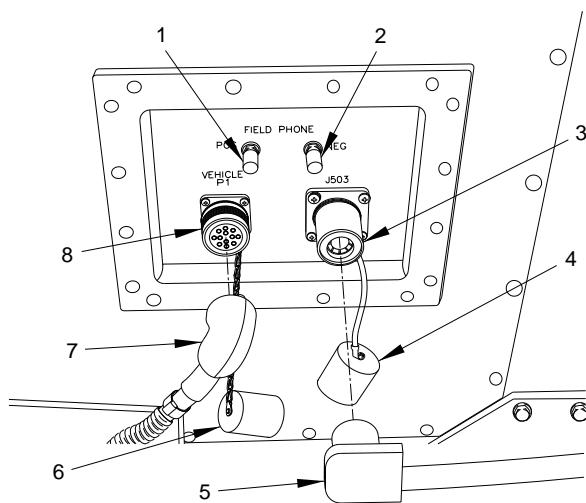


- Heavy objects/loads, such as tools boxes and heavy parts, must always be carried on the floor with the weight distributed as equally as possible between left and right sides of M1087A1 van. Failure to comply decreases the stability of the M1087A1 van and will increase the likelihood of a rollover which may result in serious injury or death to personnel.
- Heavy cabinets must always be mounted as low as possible with the weight distributed as equally as possible between left and right sides of M1087A1 van. Remember to consider the weight of the items that will be stored in the cabinets. Failure to comply decreases the stability of the M1087A1 van and will increase the likelihood of a rollover which may result in serious injury or death to personnel.
- Always keep in mind, when placing items inside the M1087A1 van, that heavier items must always be positioned between left and right sides of M1087A1 van. Failure to comply decreases the stability of the M1087A1 van and will increase the likelihood of a rollover which may result in serious injury or death to personnel.

NOTE

Perform Van Body Removal only if preparing for C130 transport.

1. Disconnect NATO 24 VDC connector (Figure 4, Item 5) from NATO connector (Figure 4, Items 3), if required.
2. Disconnect field phone connectors from POS and NEG terminals (Figure 4, Items 1 and 2) from vehicle, if required.
3. Disconnect connector P1 (Figure 4, Item 7) from vehicle P1 24 VDC connector (Figure 4, Item 8).
4. Install protective caps (Figure 4, Item 6) and (Figure 4, Item 4) on connector J1 (Figure 4, Item 8) and NATO 24 VDC connector (Figure 4, Item 5).

VAN BODY REMOVAL - Continued

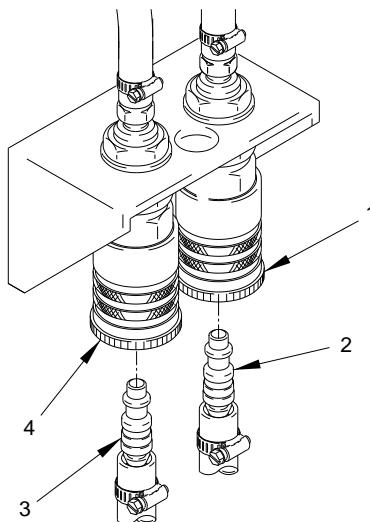
LTX216128X01

Figure 4. Van Body Removal.

NOTE

Tag hoses and connection points prior to disconnecting.

5. Disconnect fuel hoses (Figure 5, Item 3) and (Figure 5, Item 2) from van body fuel connections (Figure 5, Item 4) and (Figure 5, Item 1).

VAN BODY REMOVAL - Continued

LTX216128X02

Figure 5. Van Body Removal.

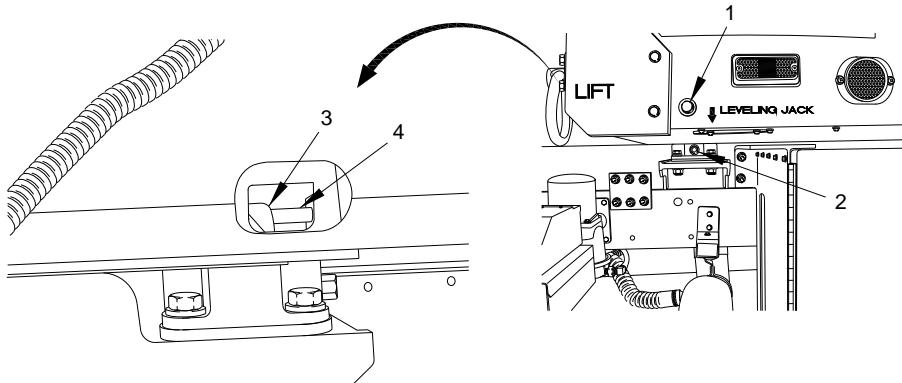
CAUTION

Outer lug must be turned five or six turns to unlock. Fifteen turns will completely loosen outer lug and internal parts. Failure to comply will result in damage to equipment.

NOTE

All four ISO locks are disconnected the same way. Front LH ISO lock shown.

6. Turn outer lug (Figure 6, Item 1) counter-clockwise until safety rod (Figure 6, Item 4) releases ISO lock (Figure 6, Item 3).
7. Turn inner lug (Figure 6, Item 2) until ISO lock (Figure 6, Item 3) releases from vehicle.
8. Perform previous two steps on remaining ISO locks (Figure 6, Item 3).

VAN BODY REMOVAL - Continued

LTX216128X03

Figure 6. Van Body Removal.

WARNING

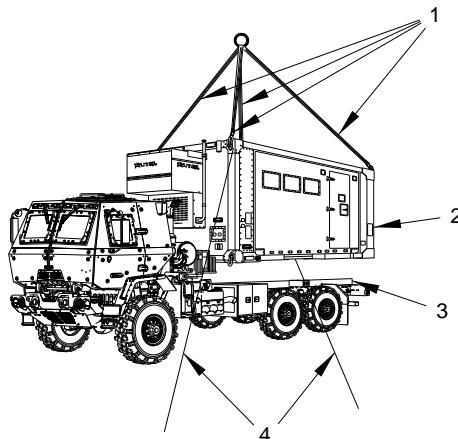
- Van body weighs approximately 10,000 lbs (4536 kgs) empty. Do not attempt to lift or move van body without the aid of a suitable lifting device. Failure to comply may result in injury or death to personnel.
- Guide ropes must be attached at opposite corners of van body to aid in controlling van body during removal. Failure to comply may result in serious injury or death to personnel.
- Center of gravity will change depending on equipment installed in van body. Ensure that van body lifts level by attaching and adjusting a lifting device. Failure to comply may result in serious injury or death to personnel or damage to equipment.

NOTE

The following step requires the aid of two assistants.

VAN BODY REMOVAL - Continued

9. Attach multiple leg sling (Figure 7, Item 4) to four top corners of van body (Figure 7, Item 2).
10. Attach two guide ropes (Figure 7, Item 3) to van body (Figure 7, Item 2).
11. Remove van body (Figure 7, Item 2) from subframe (Figure 7, Item 3).



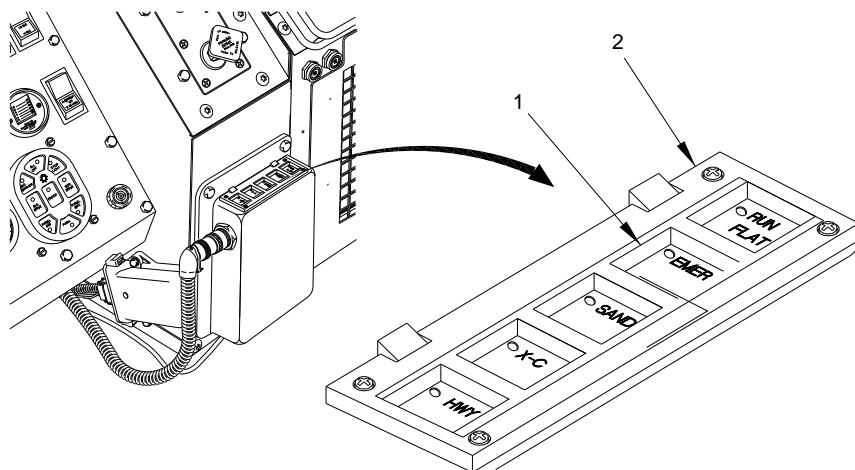
LTX216128R07

Figure 7. Van Body Removal.

END OF TASK**TIRE DEFLATION****NOTE**

- Tires will deflate until approximately 10 psi (69 kPa) remains in tire.
- An audible sound of air releasing will occur when emergency (EMER) light starts flashing.

1. Start engine (Volume 1, WP 0019), and allow air pressure to reach 120 psi (827 kPa).
2. Depress emergency (EMER) (Volume 1, WP 0021) (Figure 8, Item 1) on CTIS ECU (Volume 1, WP 0021) (Figure 8, Item 2) until light starts flashing (approximately 5 seconds).

TIRE DEFLECTION - Continued

LTX10279X01

Figure 8. Tire Deflation.

NOTE

Allow tires to fully deflate to EMER pressure setting before shutting down engine.

3. Shut down engine. (Volume 1, WP 0019)

END OF TASK**COMPRESSING SUSPENSION****CAUTION**

Ensure area above cab is adequate before raising cab. Failure to comply may result in damage to equipment.

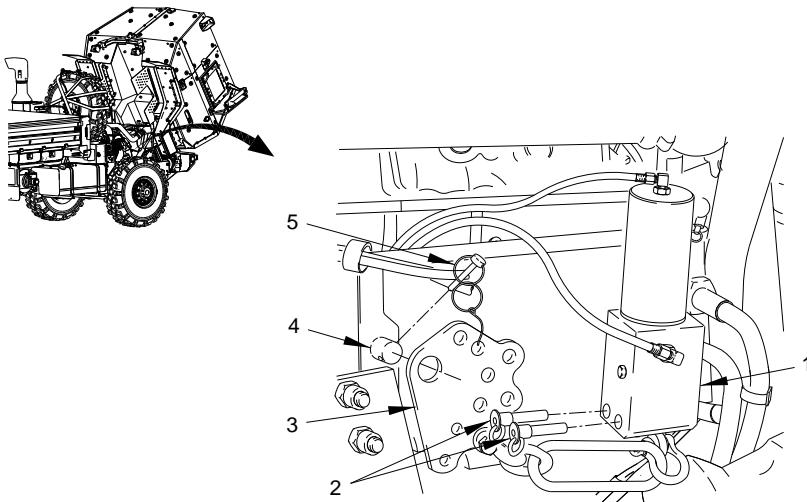
CAUTION

Do not install suspension compression plates on vehicle with B-Kit armor installed. Failure to comply may result in damage to equipment.

COMPRESSING SUSPENSION - Continued**NOTE**

Left and right side suspension compression plates are removed the same way. Right side shown.

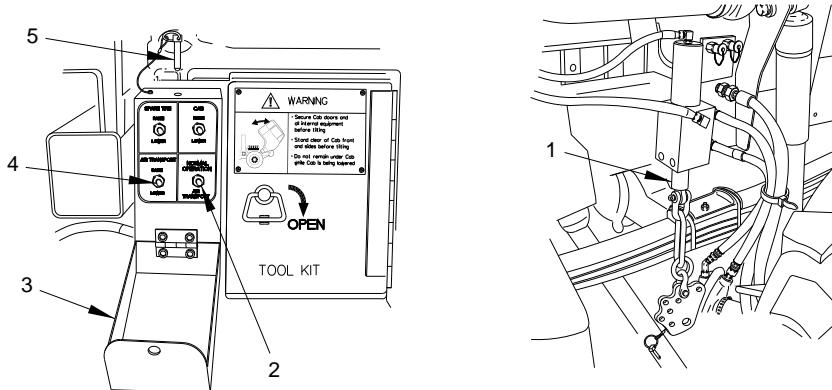
1. Raise cab. (Volume 1, WP 0020)
2. Remove retaining pin (Figure 9, Item 5) from frame stud (Figure 9, Item 4).
3. Remove suspension compression plate (Figure 9, Item 3) from frame stud (Figure 9, Item 4).
4. Remove two safety pins (Figure 9, Item 2) from compression cylinder (Figure 9, Item 1).
5. Perform previous three steps on left side of vehicle.



LTX10279X02

Figure 9. Compressing Suspension.

6. Remove quick release pin (Figure 10, Item 5) from switch box cover (Figure 10, Item 3).
7. Open switch box cover (Figure 10, Item 3).
8. Position NORMAL OPERATION switch (Figure 10, Item 2) to AIR TRANSPORT position.
9. Position AIR TRANSPORT switch (Figure 10, Item 4) to LOWER position until kneeling cylinder rod (Figure 10, Item 1) is fully extended.

COMPRESSING SUSPENSION - Continued

LTX10279X03

Figure 10. Compressing Suspension.

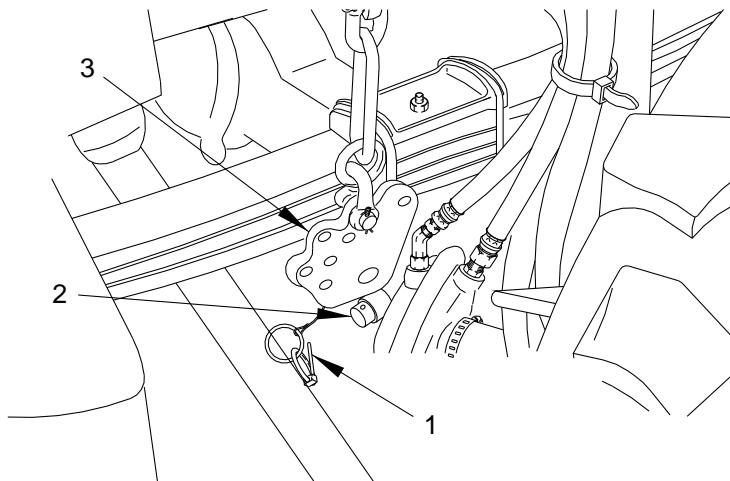
WARNING

Both suspension compression plates must be installed on axle studs. Failure to comply may result in serious injury or death to personnel.

NOTE

Left and right side suspension compression plates are installed on axle studs the same way. Right side shown.

10. Install suspension compression plate (Figure 11, Item 3) on axle stud (Figure 11, Item 2).
11. Install retaining pin (Figure 11, Item 1) in axle stud (Figure 11, Item 2).
12. Perform previous two steps on left side of vehicle.

COMPRESSING SUSPENSION - Continued

LTX10279X05

Figure 11. Compressing Suspension.

NOTE

Left and right side compression cylinders are pinned the same way.
Right side shown.

13. Position NORMAL OPERATION switch (Figure 12, Item 4) to AIR TRANSPORT position.
14. Position AIR TRANSPORT switch (Figure 12, Item 5) to RAISE position until kneeling cylinder rod (Figure 12, Item 2) is fully retracted. This indicates that suspension is fully compressed.
15. Install two safety pins (Figure 12, Item 3) in compression cylinder (Figure 12, Item 1).
16. Perform previous step on left side of vehicle.
17. Lower cab. (Volume 1, WP 0020)

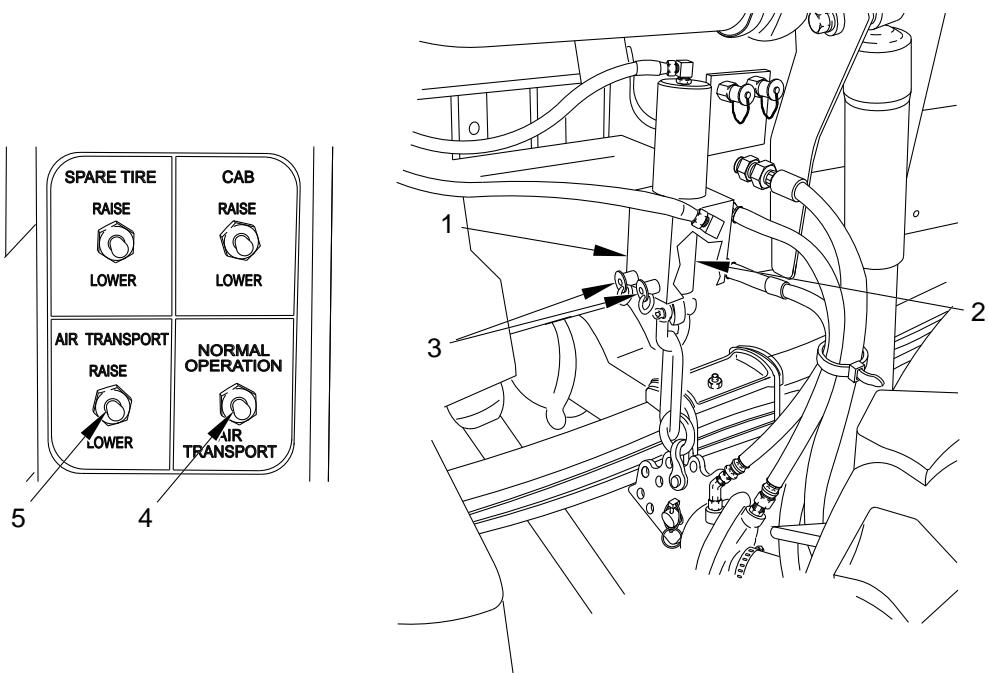
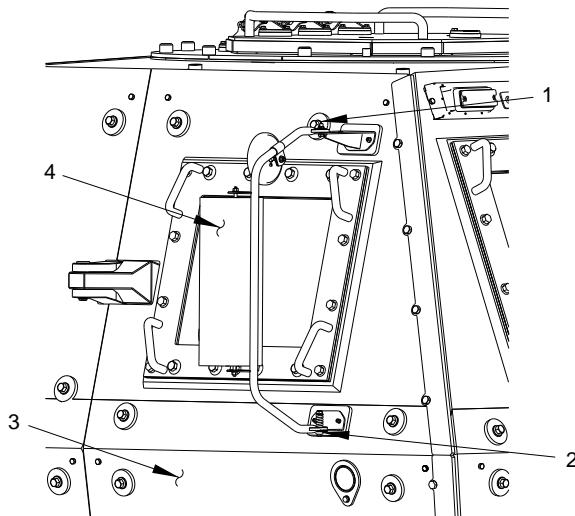
COMPRESSING SUSPENSION - Continued

Figure 12. Compressing Suspension.

END OF TASK**FOLDING MIRRORS****NOTE**

Left and right side mirrors are folded the same way. Right side shown.

1. Loosen nuts (Figure 13, Item 1) and (Figure 13, Item 2) on mirror assembly (Figure 13, Item 4).
2. Fold mirror assembly (Figure 13, Item 4) in toward door (Figure 13, Item 3).
3. Tighten nuts (Figure 13, Item 1) and (Figure 13, Item 2) on mirror assembly (Figure 13, Item 4).
4. Perform previous three steps on left side of vehicle.

FOLDING MIRRORS - Continued

LTX10279B01

Figure 13. Folding Mirrors.

END OF TASK

*** The following is applicable to the following UOC(s): TSP. ***

VAN BODY INSTALLATION

WARNING

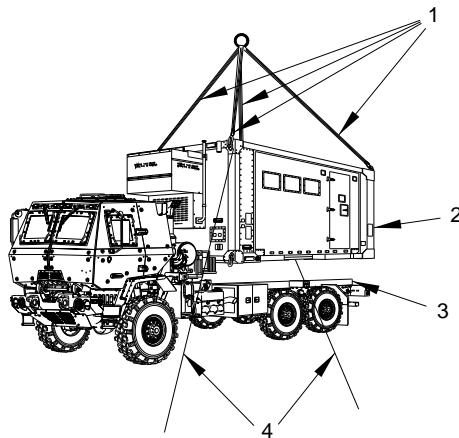


- Van body weighs approximately 10,000 lbs (4536 kgs) empty. Do not attempt to lift or move van body without the aid of a suitable lifting device. Failure to comply may result in injury or death to personnel.
- Guide ropes must be attached at opposite corners of van body to aid in controlling van body during installation. Failure to comply may result in serious injury or death to personnel.
- Center of gravity will change depending on equipment installed in van body. Ensure that van body lifts level by attaching and adjusting a lifting device. Failure to comply may result in serious injury or death to personnel or damage to equipment.

NOTE

The following step requires the aid of two assistants.

1. Use guide ropes (Figure 14, Item 4) and multiple leg sling (Figure 14, Item 1) to position van body (Figure 14, Item 2) on subframe (Figure 14, Item 3).

VAN BODY INSTALLATION - Continued

LTX21612812

Figure 14. Van Body Installation.

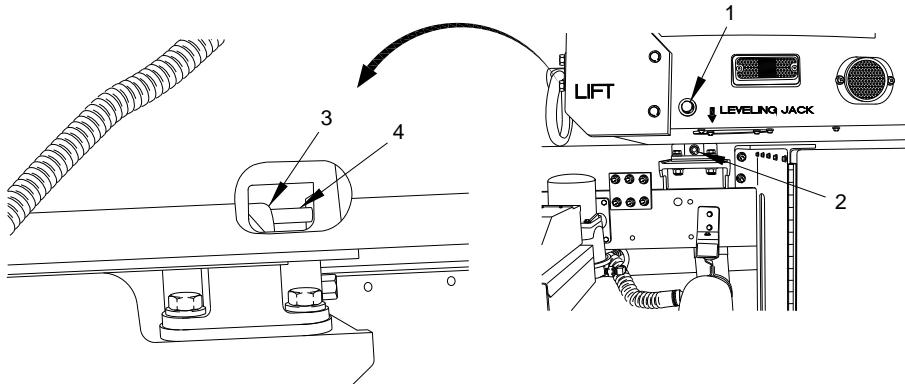
CAUTION

Do not overtighten inner or outer lugs. Failure to comply may result in damage to equipment.

NOTE

All four ISO locks are connected the same way. Front RH ISO lock shown.

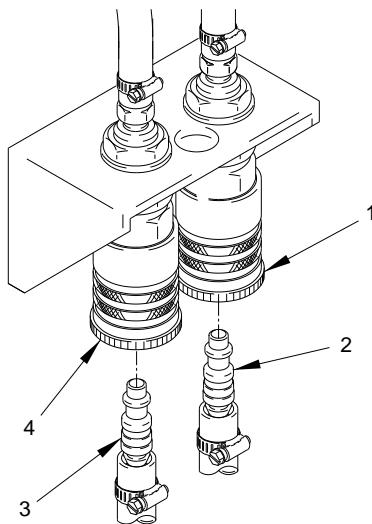
2. Turn inner lug (Figure 15, Item 2) clockwise until ISO lock (Figure 15, Item 3) locks completely.
3. Turn outer lug (Figure 15, Item 1) clockwise until safety rod (Figure 15, Item 4) is pressed fully against ISO lock (Figure 15, Item 3).
4. Perform previous two steps on remaining ISO locks.

VAN BODY INSTALLATION - Continued

LTX216128X03

Figure 15. Van Body Installation.

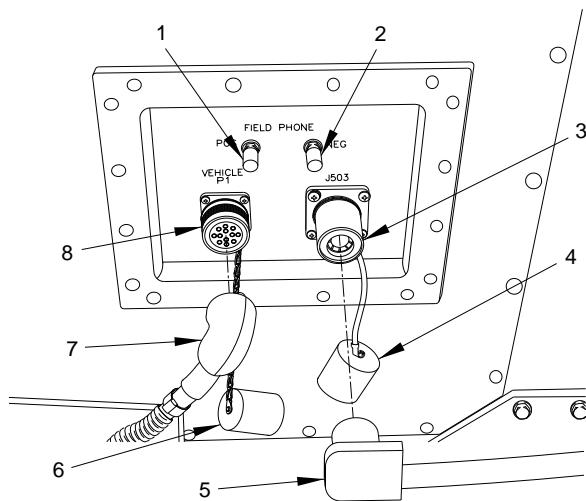
5. Connect fuel hoses (Figure 16, Item 2) and (Figure 16, Item 3) to van body fuel connections (Figure 16, Item 1) and (Figure 16, Item 4).

VAN BODY INSTALLATION - Continued

LTX216128X02

Figure 16. Van Body Installation.

6. Remove protective caps (Figure 17, Item 4) and (Figure 17, Item 6) from connector J1 (Figure 17, Item 8) and NATO 24 VDC connector (Figure 17, Item 3).
7. Connect connector P1 (Figure 17, Item 7) to vehicle P1 24 VDC connector (Figure 17, Item 8).
8. Connect field phone connectors to POS and NEG terminals (Figure 17, Item 2) and (Figure 17, Item 1) on vehicle, if required.
9. Connect NATO 24 VDC connector (Figure 17, Item 5) to NATO connector (Figure 17, Item 3), if required.
10. Prepare vehicle for movement. (Volume 1, WP 0018)

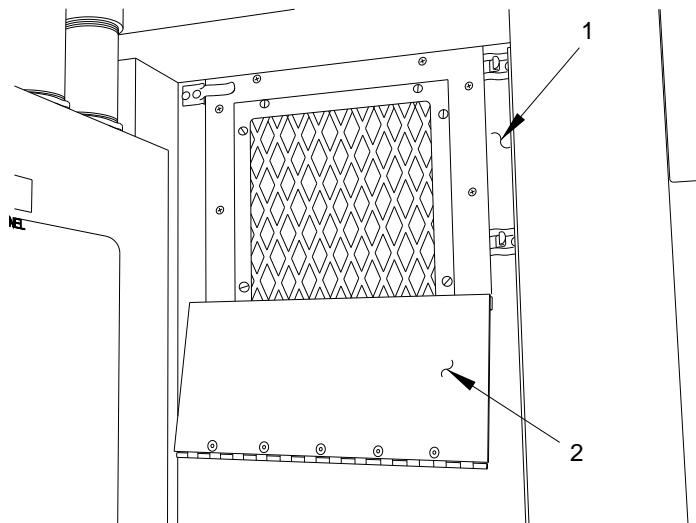
VAN BODY INSTALLATION - Continued

LTX216128X01

Figure 17. Van Body Installation.

END OF TASK***** The following is applicable to the following UOC(s): TSP. *******RECOVERY**

1. Close vent cover (Figure 18, Item 2) on RH side of van body wall (Figure 18, Item 1).

RECOVERY - Continued

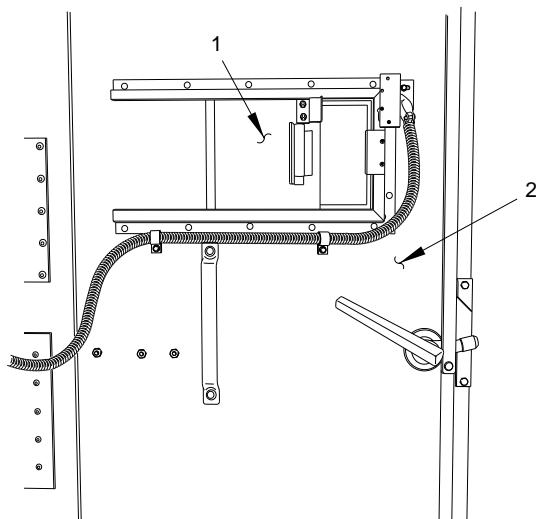
LTX216128A06

Figure 18. Recovery.

NOTE

All blackout shields on doors are opened the same way. RH side door shown.

2. Open blackout shield (Figure 19, Item 1) on RH side door (Figure 19, Item 2).

RECOVERY - Continued

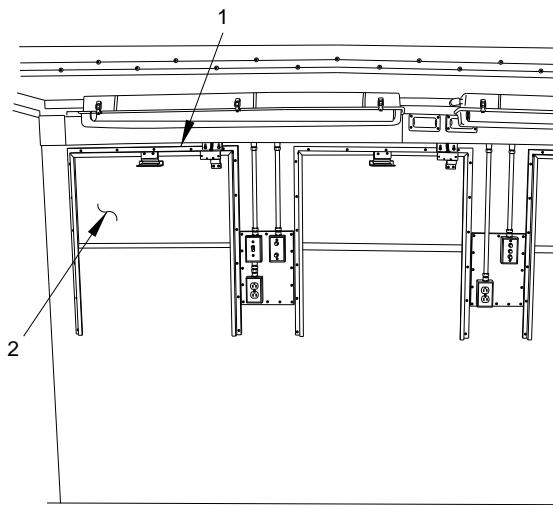
LTX216128A05

Figure 19. Recovery.

NOTE

All six blackout shields are opened the same way. RH side front shield shown.

3. Lower blackout shield (Figure 20, Item 2) on van window (Figure 20, Item 1).

RECOVERY - Continued

LTX216128B08

Figure 20. Recovery.**END OF TASK****END OF WORK PACKAGE**

OPERATOR MAINTENANCE PREPARATION FOR HIGHWAY OR RAIL SHIPMENT WORK PACKAGE

***** The following is applicable to the following UOC(s): TSE TSF TSP TSC TSD TSA TSB TSG TSL TSM TSV TSU TSH TSX TSR TSQ TSJ WRK. *****

INITIAL SETUP:

Tools and Special Tools

***** The following is applicable to the following UOC(s): TSP. *****

Tool Kit, Genl Mech

***** The following is applicable to the following UOC(s): TSP. *****

Sling, Multiple Leg
Link, Chain, End

Materials/Parts (cont.)

Rope, Fibrous (Volume 3, WP 0359,
Table 1, Item 153)

Equipment Condition

***** The following is applicable to the following UOC(s): TSP. *****

Prepare van body for movement.
(Volume 1, WP 0018)

Materials/Parts

***** The following is applicable to the following UOC(s): TSP. *****

***** The following is applicable to the following UOC(s): TSP. *****

WARNING



Heavy objects/loads, such as toolboxes and heavy parts, must always be carried on the floor with the weight distributed as equally as possible between left and right sides of van. Failure to comply decreases the stability of the van and will increase the likelihood of a rollover which may result in injury to personnel or damage to equipment.

WARNING

Heavy cabinets must always be mounted as low as possible with the weight distributed as equally as possible between left and right sides of van. Remember to consider the weight of the items that will be stored in the cabinets. Failure to comply decreases the stability of the van and will increase the likelihood of a rollover which may result in injury to personnel or damage to equipment.

WARNING

Always keep in mind, when placing items inside the van, that heavier items must always be positioned as low as possible and the weight distributed as equally as possible between left and right sides of van. Failure to comply decreases the stability of the van and will increase the likelihood of a rollover which may result in injury to personnel or damage to equipment.

*** The following is applicable to the following UOC(s): TSP. ***

PREPARATION**CAUTION**

Prior to shipment by rail, all loose items and other items inside the van must be properly stowed, tied down, and or braced. Failure to comply may result in damage to equipment.

NOTE

All six blackout shields are closed the same way. RH side front shield shown.

1. Raise and latch blackout shield (Figure 1, Item 2) on van window (Figure 1, Item 1).

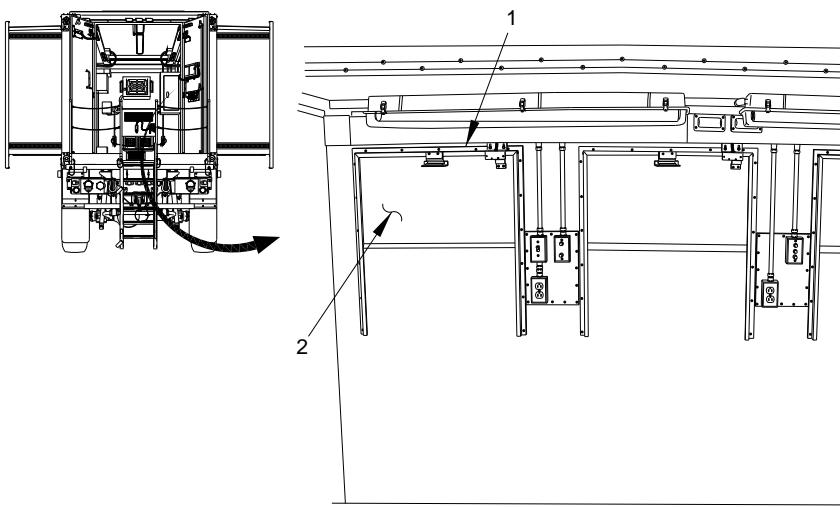
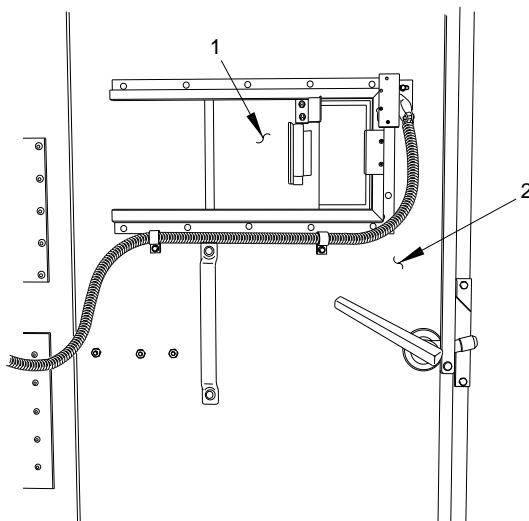
PREPARATION - Continued

Figure 1. Preparation.

NOTE

All blackout shields on doors are closed the same way. RH side door shown.

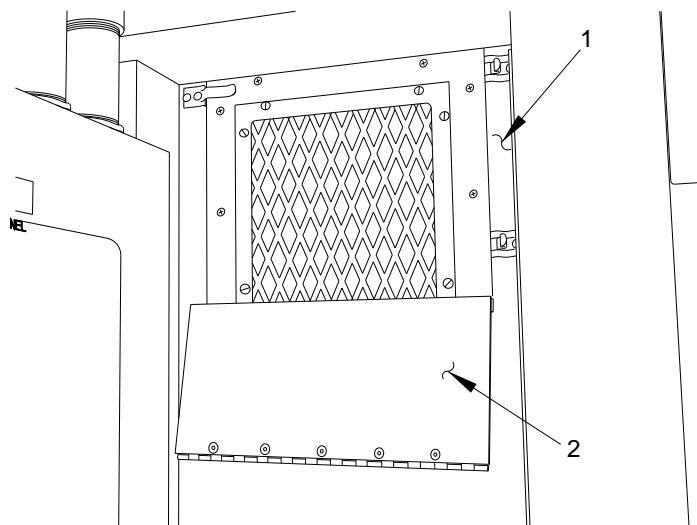
2. Close blackout shield (Figure 2, Item 1) on RH side door (Figure 2, Item 2).

PREPARATION - Continued

LTX216128A05

Figure 2. Preparation.

3. Open vent cover (Figure 3, Item 2) on RH side of van body wall (Figure 3, Item 1).

PREPARATION - Continued

LTX216128A06

Figure 3. Preparation.

END OF TASK

*** The following is applicable to the following UOC(s): TSP. ***

VAN BODY REMOVAL

WARNING

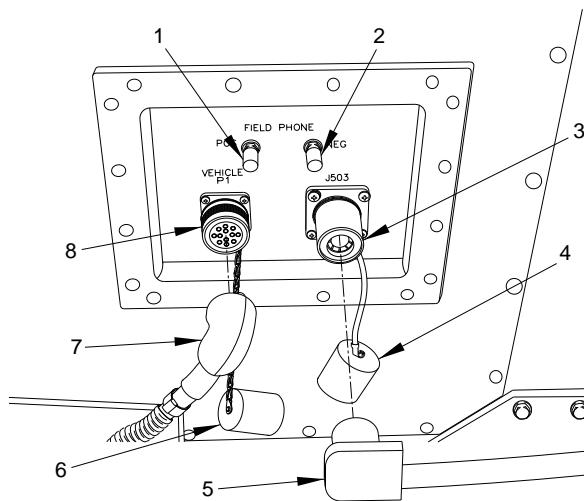


- Heavy objects/loads, such as tools boxes and heavy parts, must always be carried on the floor with the weight distributed as equally as possible between left and right sides of M1087A1 van. Failure to comply decreases the stability of the M1087A1 van and will increase the likelihood of a rollover which may result in serious injury or death to personnel.
- Heavy cabinets must always be mounted as low as possible with the weight distributed as equally as possible between left and right sides of M1087A1 van. Remember to consider the weight of the items that will be stored in the cabinets. Failure to comply decreases the stability of the M1087A1 van and will increase the likelihood of a rollover which may result in serious injury or death to personnel.
- Always keep in mind, when placing items inside the M1087A1 van, that heavier items must always be positioned between left and right sides of M1087A1 van. Failure to comply decreases the stability of the M1087A1 van and will increase the likelihood of a rollover which may result in serious injury or death to personnel.

NOTE

Perform Van Body Removal only if preparing for C130 transport.

1. Disconnect NATO 24 VDC connector (Figure 4, Item 5) from NATO connector (Figure 4, Item 3), if required.
2. Disconnect field phone connectors from POS and NEG terminals (Figure 4, Items 1 and 2) from vehicle, if required.
3. Disconnect connector P1 (Figure 4, Item 7) from vehicle P1 24 VDC connector (Figure 4, Item 8).
4. Install protective caps (Figure 4, Item 6) and (Figure 4, Item 4) on connector J1 (Figure 4, Item 8) and NATO 24 VDC connector (Figure 4, Item 5).

VAN BODY REMOVAL - Continued

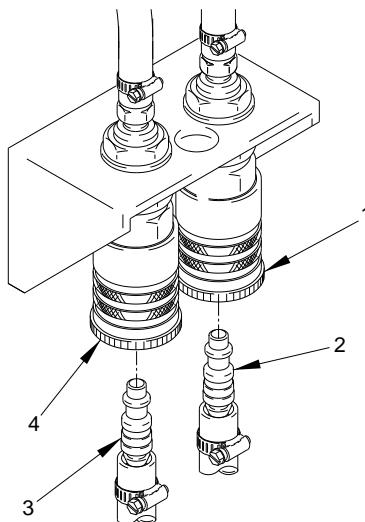
LTX216128X01

Figure 4. Van Body Removal.

NOTE

Tag hoses and connection points prior to disconnecting.

5. Disconnect fuel hoses (Figure 5, Item 3) and (Figure 5, Item 2) from van body fuel connections (Figure 5, Item 4) and (Figure 5, Item 1).

VAN BODY REMOVAL - Continued

LTX216128X02

Figure 5. Van Body Removal.

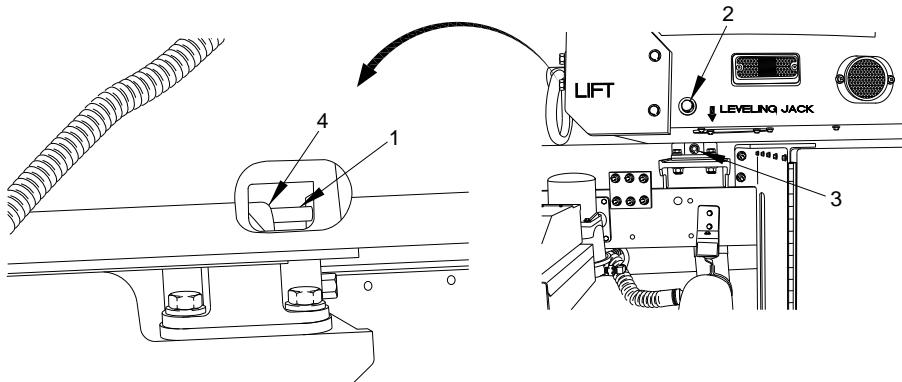
CAUTION

Outer lug must be turned five or six turns to unlock. Fifteen turns will completely loosen outer lug and internal parts. Failure to comply will result in damage to equipment.

NOTE

All four ISO locks are disconnected the same way. Front LH ISO lock shown.

6. Turn outer lug (Figure 6, Item 2) counter-clockwise until safety rod (Figure 6, Item 1) releases ISO lock (Figure 6, Item 4).
7. Turn inner lug (Figure 6, Item 3) until ISO lock (Figure 6, Item 4) releases from vehicle.
8. Perform previous two steps on remaining ISO locks (Figure 6, Item 4).

VAN BODY REMOVAL - Continued

LTX216128X03

Figure 6. Van Body Removal.

WARNING

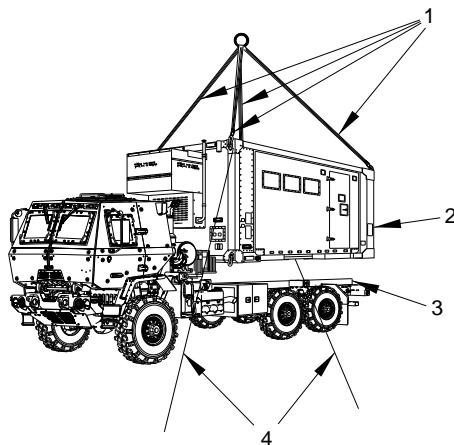
- Van body weighs approximately 10,000 lbs (4536 kgs) empty. Do not attempt to lift or move van body without the aid of a suitable lifting device. Failure to comply may result in injury or death to personnel.
- Guide ropes must be attached at opposite corners of van body to aid in controlling van body during removal. Failure to comply may result in serious injury or death to personnel.
- Center of gravity will change depending on equipment installed in van body. Ensure that van body lifts level by attaching and adjusting a lifting device. Failure to comply may result in serious injury or death to personnel or damage to equipment.

NOTE

The following step requires the aid of two assistants.

VAN BODY REMOVAL - Continued

9. Attach multiple leg sling (Figure 7, Item 4) to four top corners of van body (Figure 7, Item 2).
10. Attach two guide ropes (Figure 7, Item 3) to van body (Figure 7, Item 2).
11. Remove van body (Figure 7, Item 2) from subframe (Figure 7, Item 3).



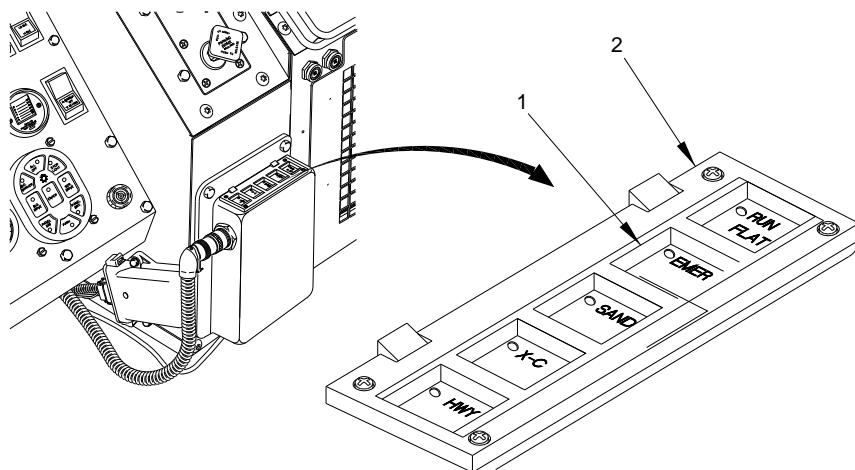
LTX216128R07

Figure 7. Van Body Removal.

END OF TASK**TIRE DEFLATION****NOTE**

- Tires will deflate until approximately 10 psi (69 kPa) remains in tire.
- An audible sound of air releasing will occur when emergency (EMER) light starts flashing.

1. Start engine (Volume 1, WP 0019), and allow air pressure to reach 120 psi (827 kPa).
2. Depress emergency (EMER) (Volume 1, WP 0021) (Figure 8, Item 1) on CTIS ECU (Volume 1, WP 0021) (Figure 8, Item 2) until light starts flashing (approximately 5 seconds).

TIRE DEFLATION - Continued

LTX10279X01

Figure 8. Tire Deflation.

NOTE

Allow tires to fully deflate to EMER pressure setting before shutting down engine.

3. Shut down engine. (Volume 1, WP 0019)

END OF TASK**FOLDING MIRRORS****NOTE**

Left and right side mirrors are folded the same way. Right side shown.

1. Loosen nuts (Figure 9, Item 1) and (Figure 9, Item 2) on mirror assembly (Figure 9, Item 4).
2. Fold mirror assembly (Figure 9, Item 4) in toward door (Figure 9, Item 3).
3. Tighten nuts (Figure 9, Item 1) and (Figure 9, Item 2) on mirror assembly (Figure 9, Item 4).
4. Perform previous three steps on left side of vehicle.

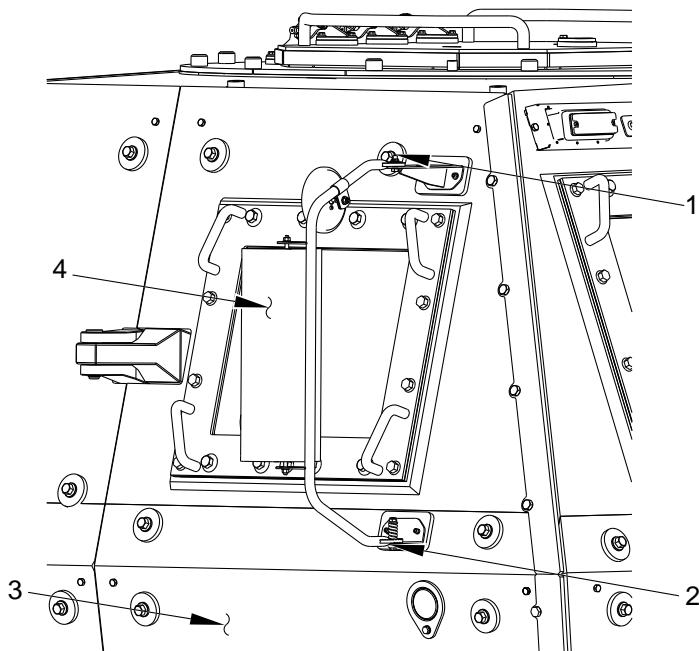
FOLDING MIRRORS - Continued

Figure 9. Folding Mirrors.

END OF TASK

*** The following is applicable to the following UOC(s): TSP. ***

VAN BODY INSTALLATION

WARNING

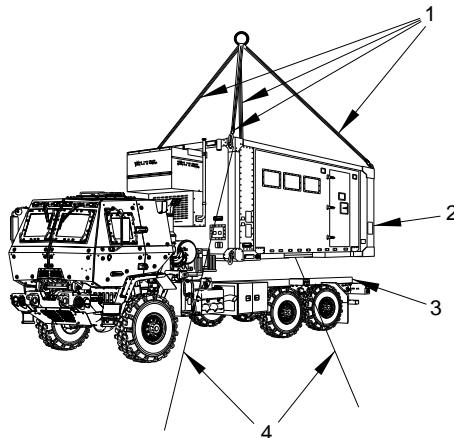


- Van body weighs approximately 10,000 lbs (4536 kgs) empty. Do not attempt to lift or move van body without the aid of a suitable lifting device. Failure to comply may result in injury or death to personnel.
- Guide ropes must be attached at opposite corners of van body to aid in controlling van body during installation. Failure to comply may result in serious injury or death to personnel.
- Center of gravity will change depending on equipment installed in van body. Ensure that van body lifts level by attaching and adjusting a lifting device. Failure to comply may result in serious injury or death to personnel or damage to equipment.

NOTE

The following step requires the aid of two assistants.

1. Use guide ropes (Figure 10, Item 4) and multiple leg sling (Figure 10, Item 1) to position van body (Figure 10, Item 2) on subframe (Figure 10, Item 3).

VAN BODY INSTALLATION - Continued

LTX21612812

Figure 10. Van Body Installation.

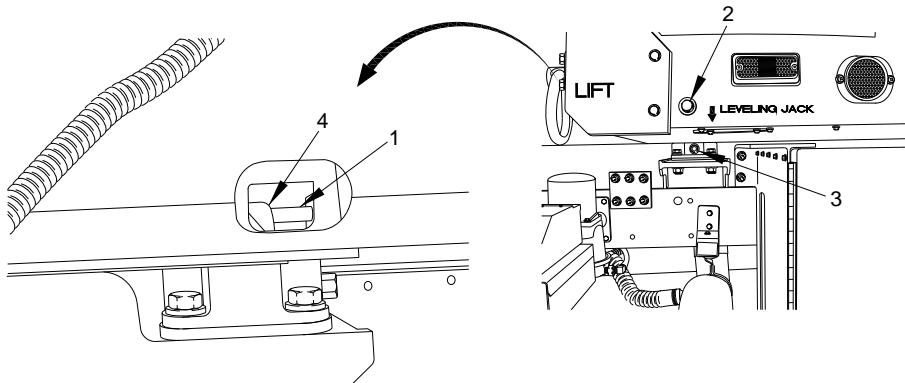
CAUTION

Do not overtighten inner or outer lugs. Failure to comply may result in damage to equipment.

NOTE

All four ISO locks are connected the same way. Front RH ISO lock shown.

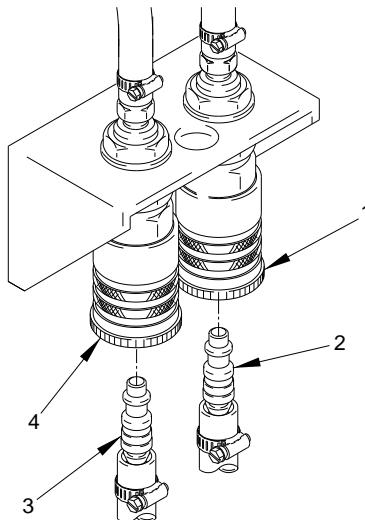
2. Turn inner lug (Figure 11, Item 3) clockwise until ISO lock (Figure 11, Item 4) locks completely.
3. Turn outer lug (Figure 11, Item 2) clockwise until safety rod (Figure 11, Item 1) is pressed fully against ISO lock (Figure 11, Item 4).
4. Perform previous two steps on remaining ISO locks.

VAN BODY INSTALLATION - Continued

LTX216128X03

Figure 11. Van Body Installation.

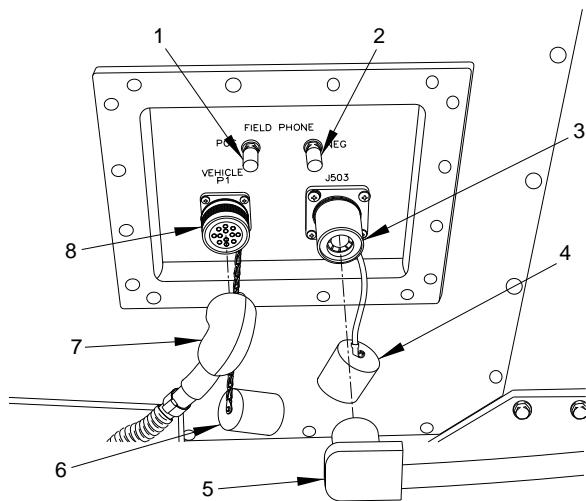
5. Connect fuel hoses (Figure 12, Item 2) and (Figure 12, Item 3) to van body fuel connections (Figure 12, Item 1) and (Figure 12, Item 4).

VAN BODY INSTALLATION - Continued

LTX216128X02

Figure 12. Van Body Installation.

6. Remove protective caps (Figure 13, Item 4) and (Figure 13, Item 6) from connector J1 (Figure 13, Item 8) and NATO 24 VDC connector (Figure 13, Item 3).
7. Connect connector P1 (Figure 13, Item 7) to vehicle P1 24 VDC connector (Figure 13, Item 8).
8. Connect field phone connectors to POS and NEG terminals (Figure 13, Item 2) and (Figure 13, Item 1) on vehicle, if required.
9. Connect NATO 24 VDC connector (Figure 13, Item 5) to NATO connector (Figure 13, Item 3), if required.
10. Prepare vehicle for movement. (Volume 1, WP 0018)

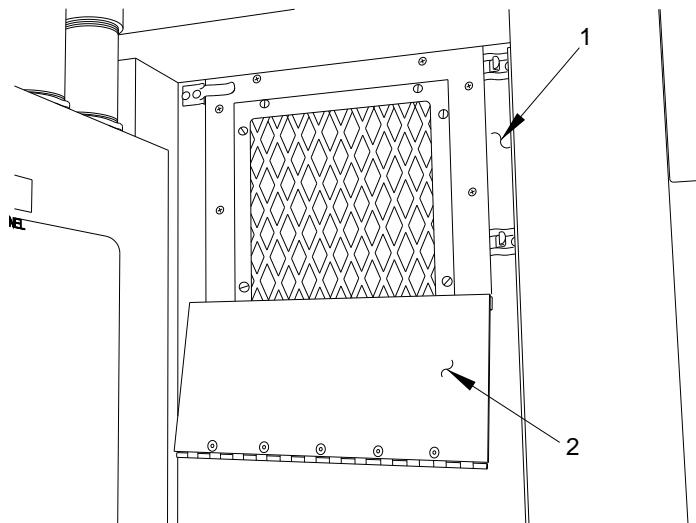
VAN BODY INSTALLATION - Continued

LTX216128X01

Figure 13. Van Body Installation.

END OF TASK***** The following is applicable to the following UOC(s): TSP. *******RECOVERY**

1. Close vent cover (Figure 14, Item 2) on RH side of van body wall (Figure 14, Item 1).

RECOVERY - Continued

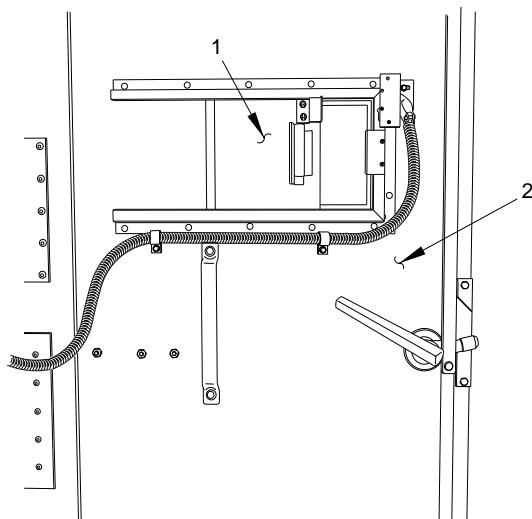
LTX216128A06

Figure 14. Recovery.

NOTE

All blackout shields on doors are opened the same way. RH side door shown.

2. Open blackout shield (Figure 15, Item 1) on RH side door (Figure 15, Item 2).

RECOVERY - Continued

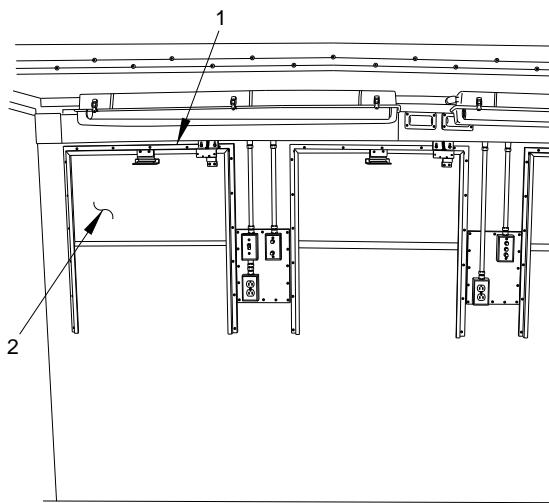
LTX216128A05

Figure 15. Recovery.

NOTE

All six blackout shields are opened the same way. RH side front shield shown.

3. Lower blackout shield (Figure 16, Item 2) on van window (Figure 16, Item 1).

RECOVERY - Continued

LTX216128B08

Figure 16. Recovery.**END OF TASK****END OF WORK PACKAGE**

**OPERATOR MAINTENANCE
15K SELF-RECOVERY WINCH (SRW) OPERATION WORK PACKAGE**

*** The following is applicable to the following UOC(s): TSA TSH TSJ WRK TSL TSQ. ***

INITIAL SETUP:

Tools and Special Tools

Gloves, Leather (Volume 3, WP 0358,
Table 1)

SPOOLING CABLE TO FRONT OF VEHICLE

*** The following is applicable to the following UOC(s): TSA TSL TSH TSQ. ***

WARNING

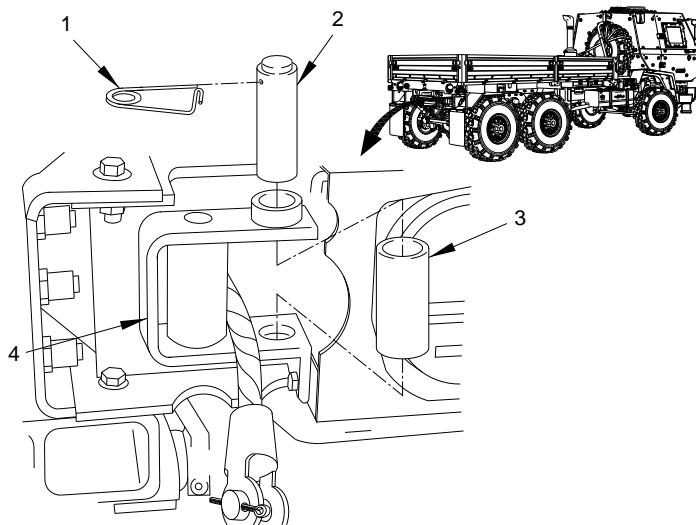


Wear heavy leather-palmed work gloves when handling cable. Cables can become frayed or contain broken wires. Never let moving cable slide through hands, even when wearing gloves. Failure to comply may result in injury to personnel.

WARNING

Keep all personnel clear of area when tension is on cable. Failure to comply may result in serious injury or death to personnel or damage to equipment.

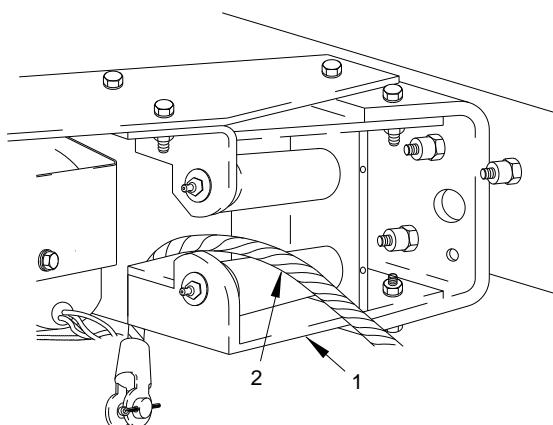
1. Shut down engine (Volume 1, WP 0019)
2. Remove retaining pin (Figure 1, Item 1), pin (Figure 1, Item 2), and roller (Figure 1, Item 3) from rear roller support (Figure 1, Item 4).

SPOOLING CABLE TO FRONT OF VEHICLE - Continued

LTM10270B01

Figure 1. Spooling Cable to Front of Vehicle.

3. Remove cable (Figure 2, Item 2) from rear roller support (Figure 2, Item 1).



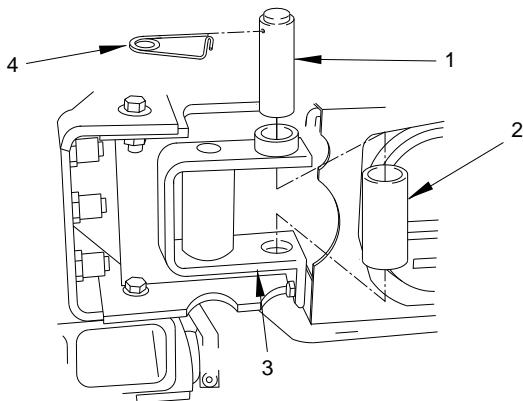
LTM10270B02

Figure 2. Spooling Cable to Front of Vehicle.

SPOOLING CABLE TO FRONT OF VEHICLE - Continued**NOTE**

Install retaining pin so that clasping end is toward curbside of vehicle.

4. Install roller (Figure 3, Item 2) in rear roller support (Figure 3, Item 3) with pin (Figure 3, Item 1) and retaining pin (Figure 3, Item 4).



LTM10270B03

Figure 3. Spooling Cable to Front of Vehicle.

5. Remove cable (Figure 4, Item 1) from rear cable pulley (Figure 4, Item 2).

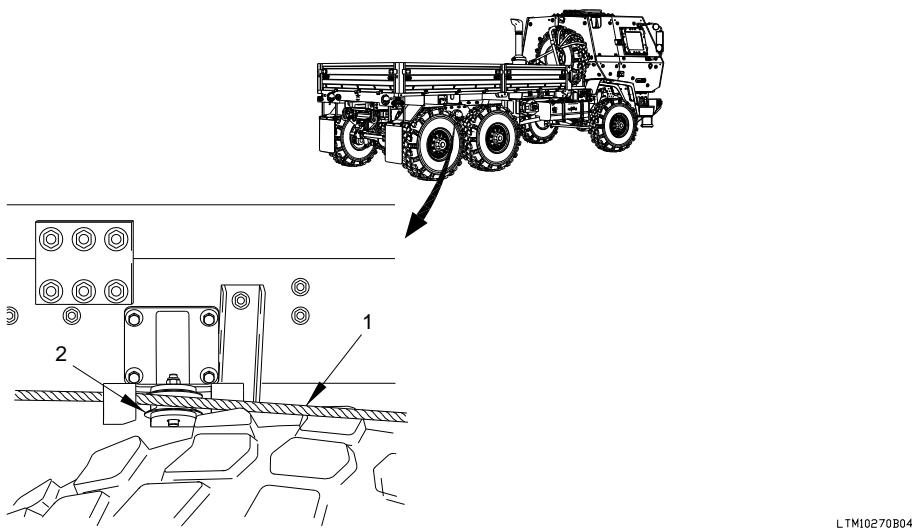
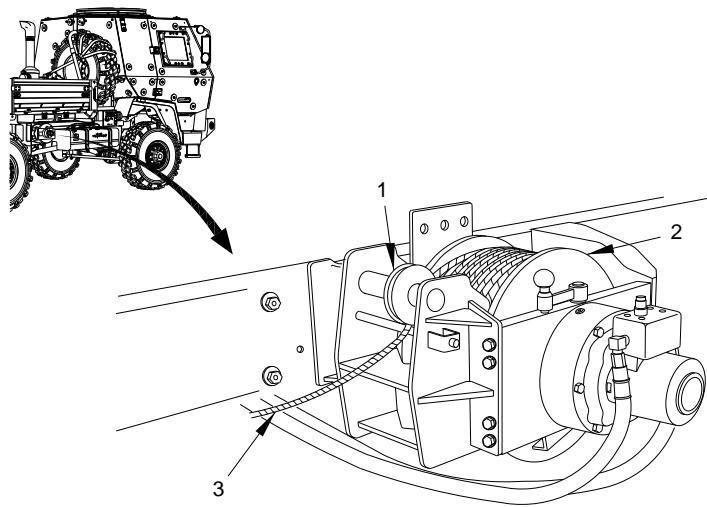
SPOOLING CABLE TO FRONT OF VEHICLE - Continued

Figure 4. Spooling Cable to Front of Vehicle.

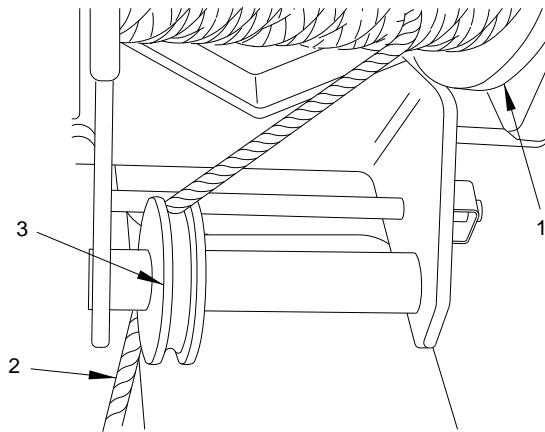
6. Remove cable (Figure 5, Item 3) from rear cable guide (Figure 5, Item 1) on 15K SRW (Figure 5, Item 2).

SPOOLING CABLE TO FRONT OF VEHICLE - Continued

LTM10270B05

Figure 5. Spooling Cable to Front of Vehicle.

7. Position cable (Figure 6, Item 2) toward front of vehicle.
8. Install cable (Figure 6, Item 2) through front cable guide (Figure 6, Item 3) on 15K SRW (Figure 6, Item 1).

SPOOLING CABLE TO FRONT OF VEHICLE - Continued

LTL10269B06

Figure 6. Spooling Cable to Front of Vehicle.

9. Install cable (Figure 7, Item 2) through cable guide (Figure 7, Item 3) behind fuel tank (Figure 7, Item 1).

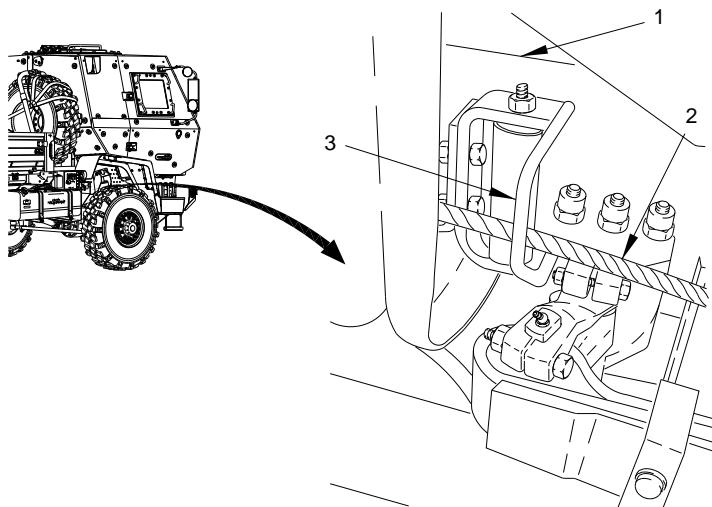
SPOOLING CABLE TO FRONT OF VEHICLE - Continued

Figure 7. Spooling Cable to Front of Vehicle.

10. Install cable (Figure 8, Item 2) through three front cable pulleys (Figure 8, Item 1).

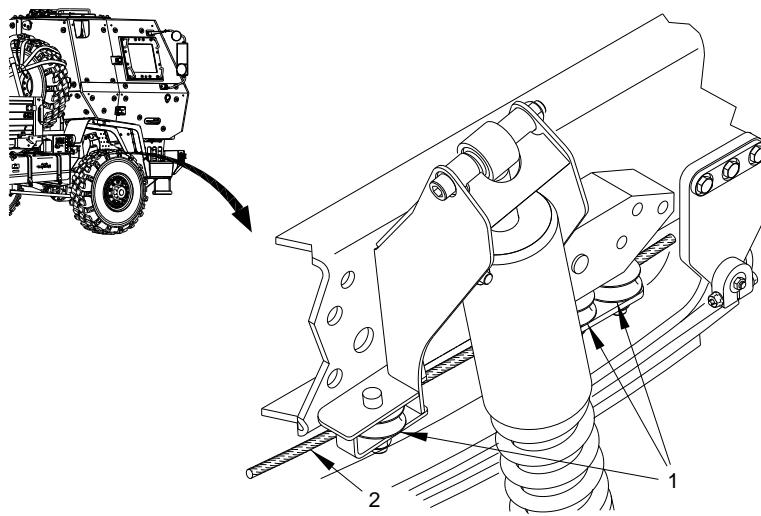
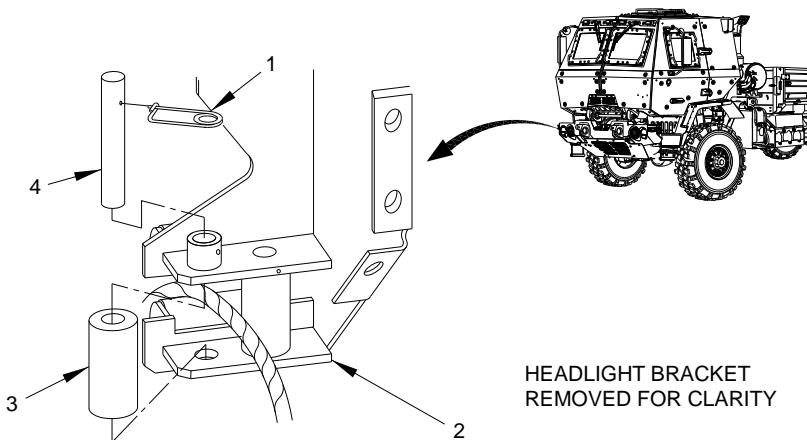


Figure 8. Spooling Cable to Front of Vehicle.

SPOOLING CABLE TO FRONT OF VEHICLE - Continued

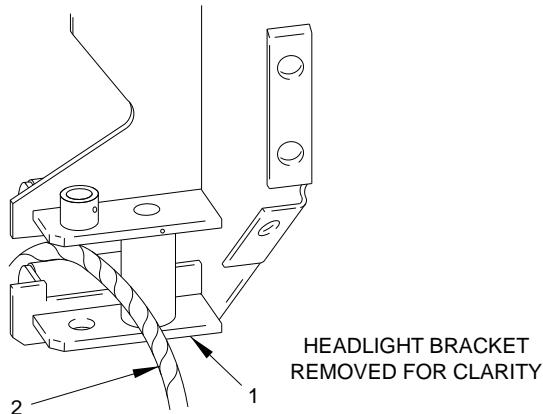
11. Remove retaining pin (Figure 9, Item 1), pin (Figure 9, Item 4), and roller (Figure 9, Item 3) from front roller support (Figure 9, Item 2).



LTM10270B09

Figure 9. Spooling Cable to Front of Vehicle.

12. Install cable (Figure 10, Item 2) through front roller support (Figure 10, Item 1).

SPOOLING CABLE TO FRONT OF VEHICLE - Continued

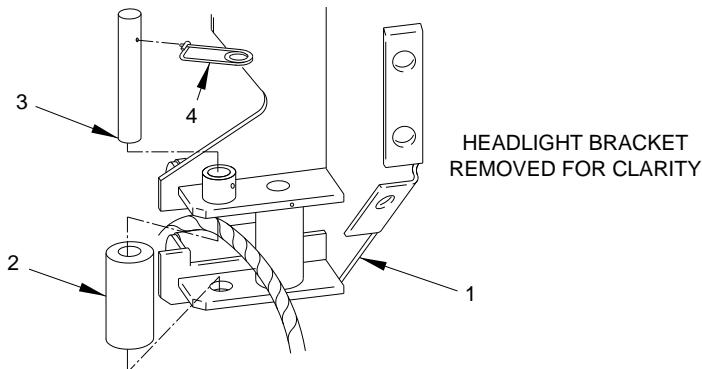
LTM10270B10

Figure 10. Spooling Cable to Front of Vehicle.

NOTE

Install retaining pin so that clasping end is toward curbside of vehicle.

13. Install roller (Figure 11, Item 2) on front roller support (Figure 11, Item 1) with pin (Figure 11, Item 3) and retaining pin (Figure 11, Item 4).

SPOOLING CABLE TO FRONT OF VEHICLE - Continued

LTM10270B11

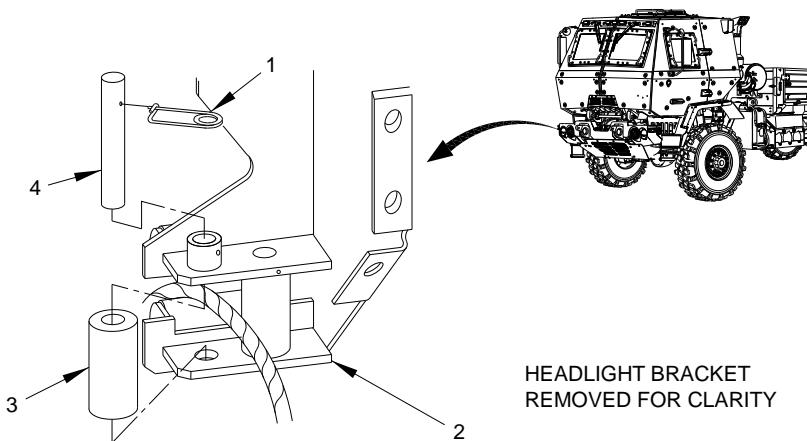
Figure 11. Spooling Cable to Front of Vehicle.

END OF TASK

*** The following is applicable to the following UOC(s): **TSA TSL TSH TSQ.** ***

SPOOLING CABLE TO REAR OF VEHICLE

1. Shut down engine (Volume 1, WP 0019)
2. Remove retaining pin (Figure 12, Item 1), pin (Figure 12, Item 4), and roller (Figure 12, Item 3) from front roller support (Figure 12, Item 2).

SPOOLING CABLE TO REAR OF VEHICLE - Continued

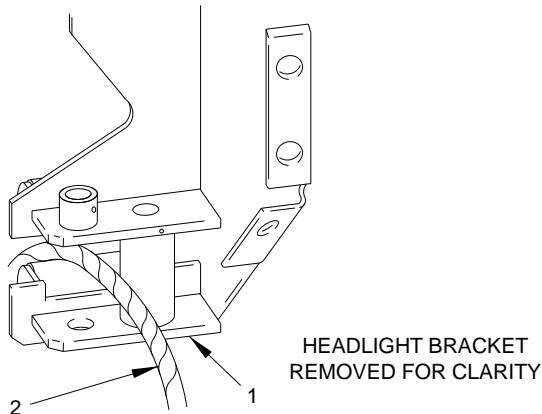
LTM10270B09

Figure 12. Spooling Cable to Rear of Vehicle.

WARNING

Wear heavy leather-palmed work gloves when handling cable. Cables can become frayed or contain broken wires. Never let moving cable slide through hands, even when wearing gloves. Failure to comply may result in injury to personnel.

3. Remove cable (Figure 13, Item 2) from front roller support (Figure 13, Item 1).

SPOOLING CABLE TO REAR OF VEHICLE - Continued

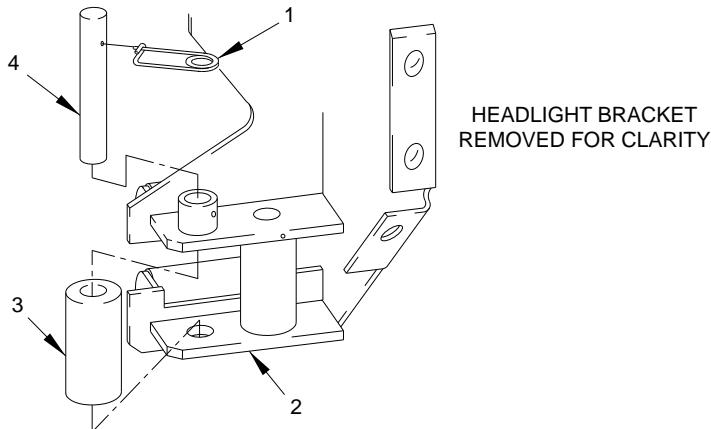
LTM10270B10

Figure 13. Spooling Cable to Rear of Vehicle.

NOTE

Install retaining pin so that clasping end is toward curbside of vehicle.

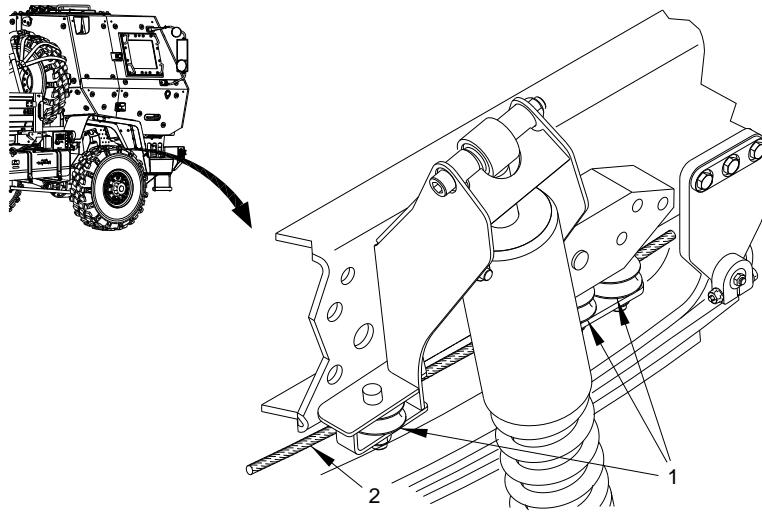
4. Install roller (Figure 14, Item 3) on front roller support (Figure 14, Item 2) with pin (Figure 14, Item 4) and retaining pin (Figure 14, Item 1).

SPOOLING CABLE TO REAR OF VEHICLE - Continued

LTM10270B12

Figure 14. Spooling Cable to Rear of Vehicle.

5. Remove cable (Figure 15, Item 2) from three front cable pulleys (Figure 15, Item 1).



LTM10270B08

Figure 15. Spooling Cable to Rear of Vehicle.

SPOOLING CABLE TO REAR OF VEHICLE - Continued

6. Remove cable (Figure 16, Item 2) from cable guide (Figure 16, Item 3) behind fuel tank (Figure 16, Item 1).

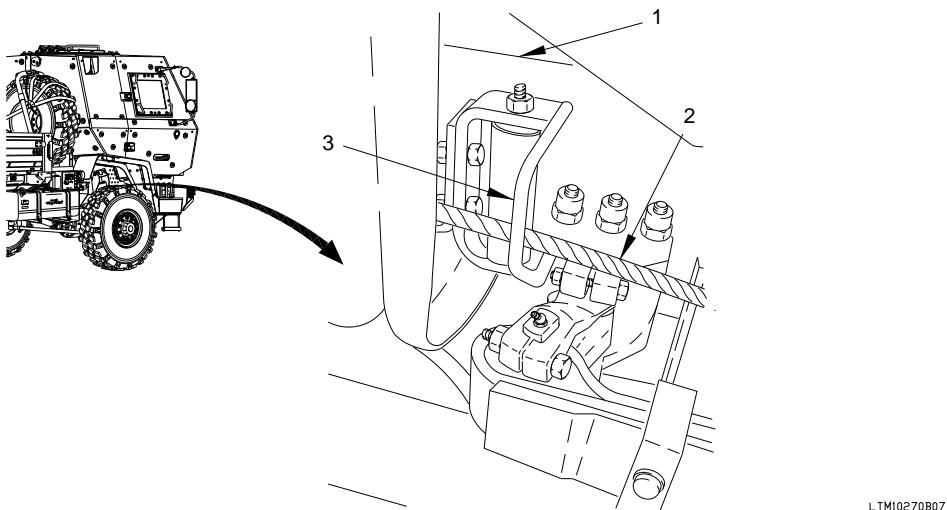
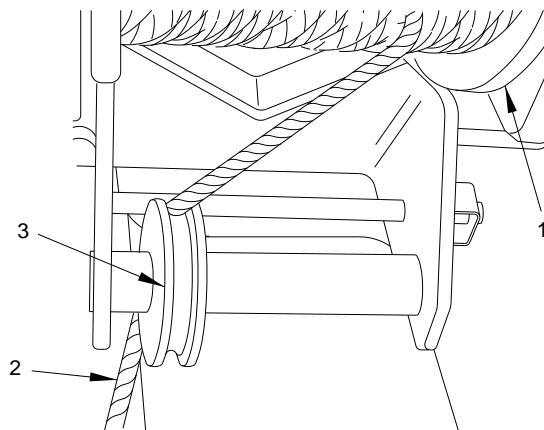


Figure 16. Spooling Cable to Rear of Vehicle.

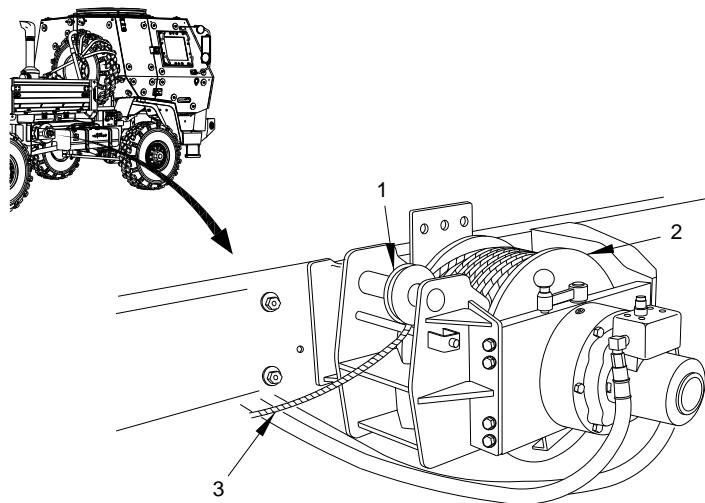
7. Remove cable (Figure 17, Item 2) from front cable guide (Figure 17, Item 3) on 15K SRW (Figure 17, Item 1).

SPOOLING CABLE TO REAR OF VEHICLE - Continued

LTL10269B06

Figure 17. Spooling Cable to Rear of Vehicle.

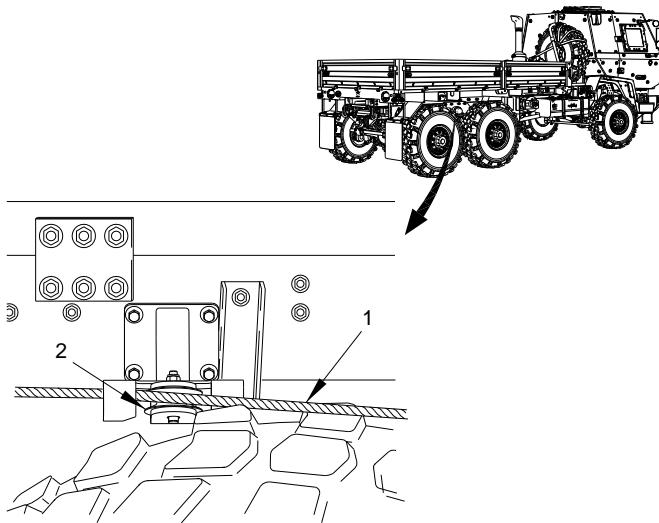
8. Position cable (Figure 18, Item 3) toward rear of vehicle.
9. Install cable (Figure 18, Item 3) through rear cable guide (Figure 18, Item 1) on 15K SRW (Figure 18, Item 2).

SPOOLING CABLE TO REAR OF VEHICLE - Continued

LTM10270B05

Figure 18. Spooling Cable to Rear of Vehicle.

10. Install cable (Figure 19, Item 1) through rear cable pulley (Figure 19, Item 2).

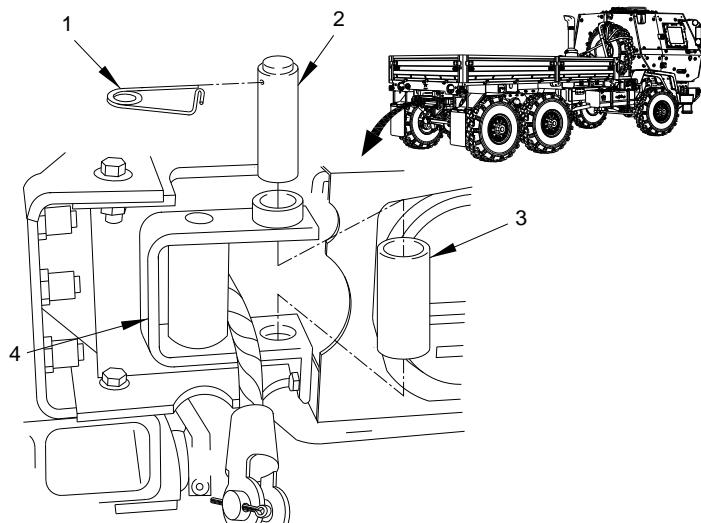


LTM10270B04

Figure 19. Spooling Cable to Rear of Vehicle.

SPOOLING CABLE TO REAR OF VEHICLE - Continued

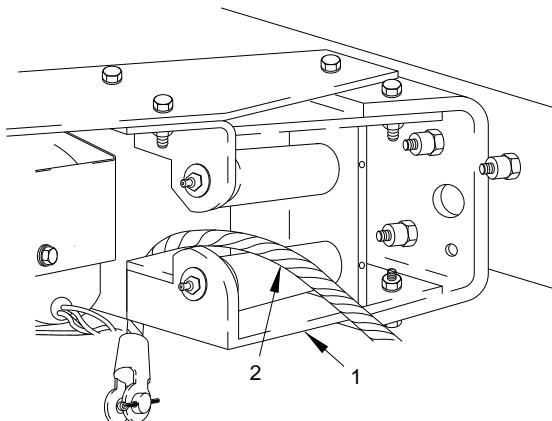
11. Remove retaining pin (Figure 20, Item 1), pin (Figure 20, Item 2), and roller (Figure 20, Item 3) from rear roller support (Figure 20, Item 4).



LTM10270B01

Figure 20. Spooling Cable to Rear of Vehicle.

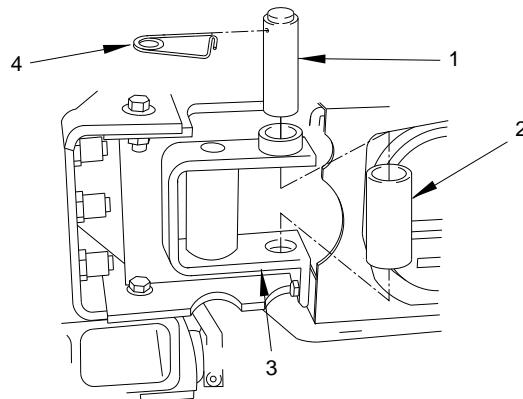
12. Install cable (Figure 21, Item 2) through rear roller support (Figure 21, Item 1).

SPOOLING CABLE TO REAR OF VEHICLE - Continued

LTM10270B02

Figure 21. Spooling Cable to Rear of Vehicle.

13. Install roller (Figure 22, Item 2) in rear roller support (Figure 22, Item 3) with pin (Figure 22, Item 1) and retaining pin (Figure 22, Item 4).

SPOOLING CABLE TO REAR OF VEHICLE - Continued

LTM10270B03

Figure 22. Spooling Cable to Rear of Vehicle.

END OF TASK***** The following is applicable to the following UOC(s): TSA TSL TSH TSQ. *******15K SRW OPERATION***Table 1. 15K SRW Pull Capacity.*

Cable Layer	Maximum Line Pull
Bottom Layer (five wraps)	15,500 lbs (68,944 N)
2nd Layer	13,870 lbs (61,693 N)
3rd Layer	12,550 lbs (55,822 N)
4th Layer	11,460 lbs (50,974 N)
5th Layer	10,540 lbs (46,881 N)
6th Layer	9,760 lbs (43,412 N)

15K SRW OPERATION - Continued***Table 1. 15K SRW Pull Capacity - Continued.***

Cable Layer	Maximum Line Pull
Top Layer	9,090 lbs (40,432 N)

1. Shut down engine (Volume 1, WP 0019)

WARNING

Ensure line pull does not exceed capacity of 15K Self-Recovery Winch (SRW). Failure to comply may result in serious injury or death to personnel.

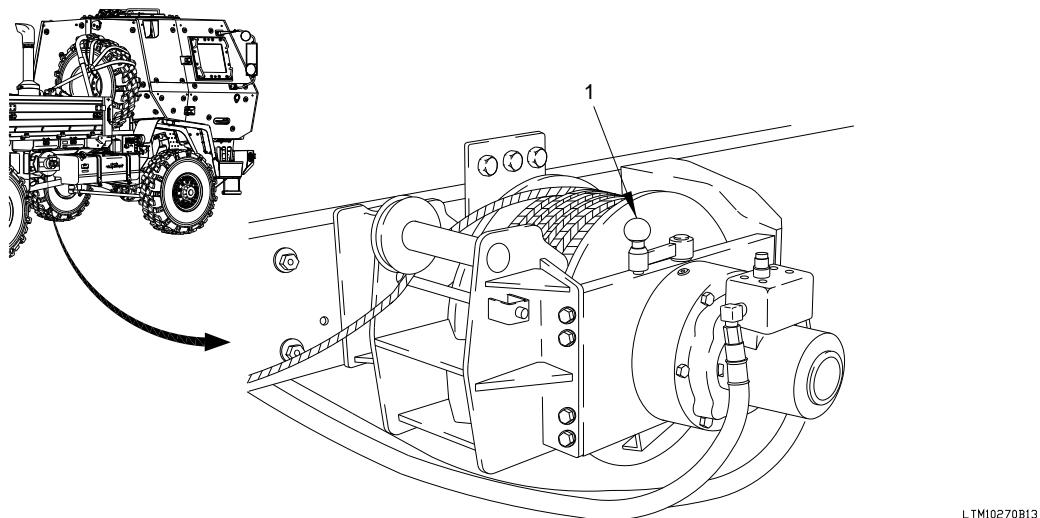
WARNING

There must always be at least five wraps of cable on 15K Self-Recovery Winch (SRW). If load is applied with less than five wraps of cable on 15K SRW, cable may come loose on drum. Failure to comply may result in serious injury or death to personnel.

CAUTION

Do not attempt to pull load over 15K Self-Recovery Winch (SRW) capacity. Failure to comply may result in damage to equipment.

2. Position 15K SRW clutch control lever (Figure 23, Item 1) to DISENGAGED.

15K SRW OPERATION - Continued

LTM10270B13

Figure 23. 15K SRW Operation.

*** The following is applicable to the following UOC(s): TSA TSH TSL. ***

WARNING

Wear heavy leather-palmed work gloves when handling cable. Cables can become frayed or contain broken wires. Never let moving cable slide through hands, even when wearing gloves. Failure to comply may result in injury to personnel.

WARNING

Keep all personnel clear of area when tension is on cable. Failure to comply may result in serious injury or death to personnel or damage to equipment.

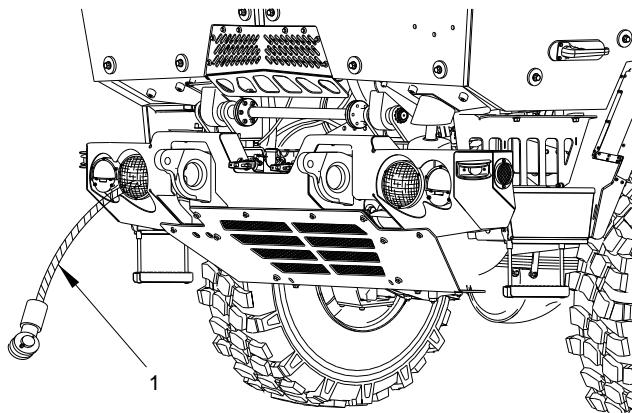
CAUTION

Do not attach cable to any object more than approximately 15 degrees away from a straight 15K Self-Recovery Winch (SRW) pull. Failure to comply may result in damage to equipment.

15K SRW OPERATION - Continued**NOTE**

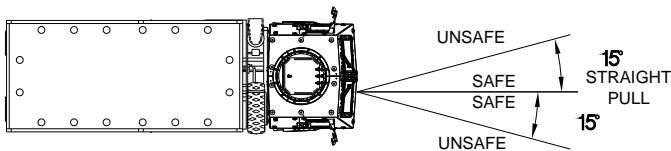
Link connector 12532129 from BII may be required to attach cable to tow eye or shackle of another vehicle.

3. Pull out cable (Figure 24, Item 1) and attach to secure object.



LTM10270B14

Figure 24. 15K SRW Operation.

15K SRW OPERATION - Continued

LTM10270B15

Figure 25. 15K SRW Operation.

WARNING

Both collapsible drums weigh approximately 235 lbs (107 kgs) empty and 3800 lbs (1725 kgs) full. Do not attempt to lift or move drums without the aid of a suitable lifting device. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

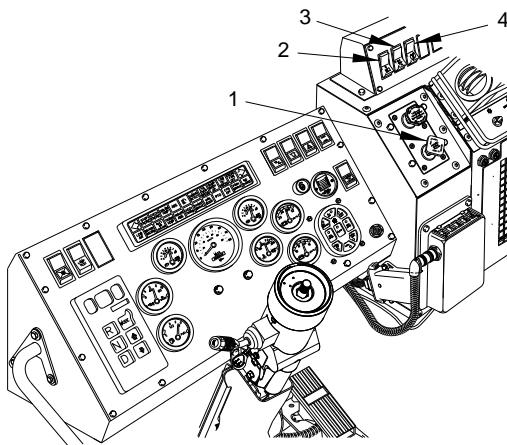
Keep all personnel clear of area when tension is on cable. Failure to comply may result in serious injury or death to personnel or damage to equipment.

4. Position 15K SRW clutch control lever (Figure 23, Item 1) to ENGAGED.
5. Start engine (Volume 1, WP 0019)
6. Position PTO switch (Figure 26, Item 4) to on.
7. Position winch switch (Figure 26, Item 2) to on.

15K SRW OPERATION - Continued

8. Hold WINCH IN/OUT switch (Figure 26, Item 3) in the WINCH IN position until vehicle is recovered.
9. Release WINCH IN/OUT switch (Figure 26, Item 3).
10. Pull out PARKING BRAKE control (Figure 26, Item 1).

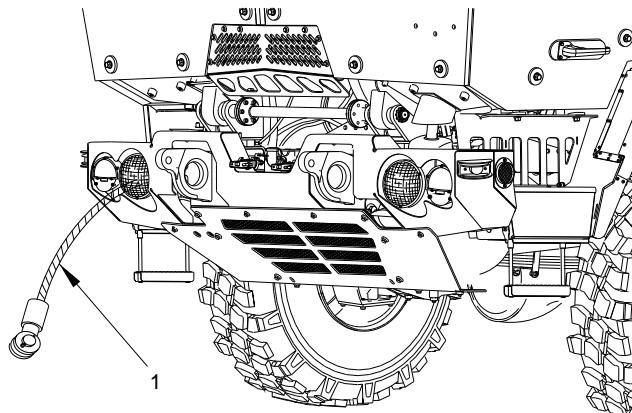
STEERING WHEEL
REMOVED FOR
CLARITY



LTM10270B17

Figure 26. 15K SRW Operation.

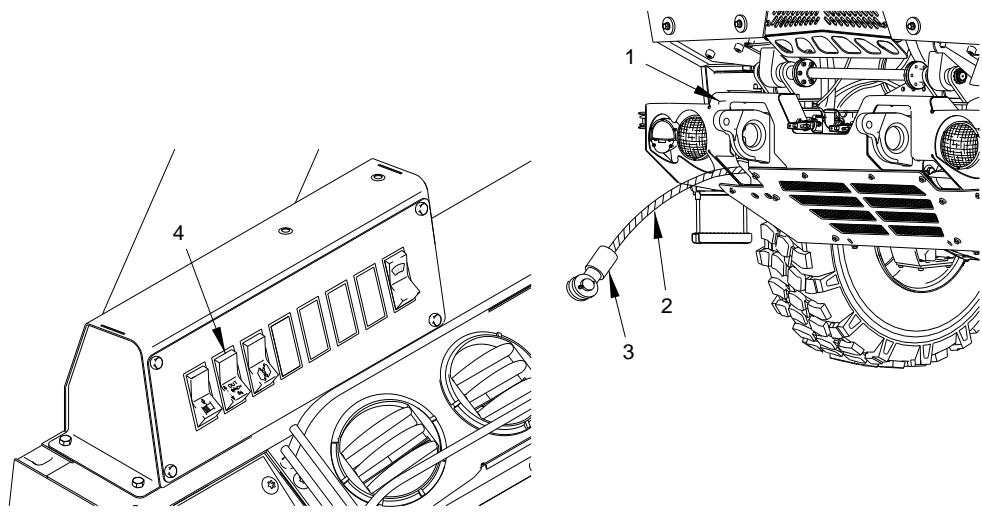
11. Remove cable (Figure 27, Item 1) from secure object.

15K SRW OPERATION - Continued

LTM10270B14

Figure 27. 15K SRW Operation.

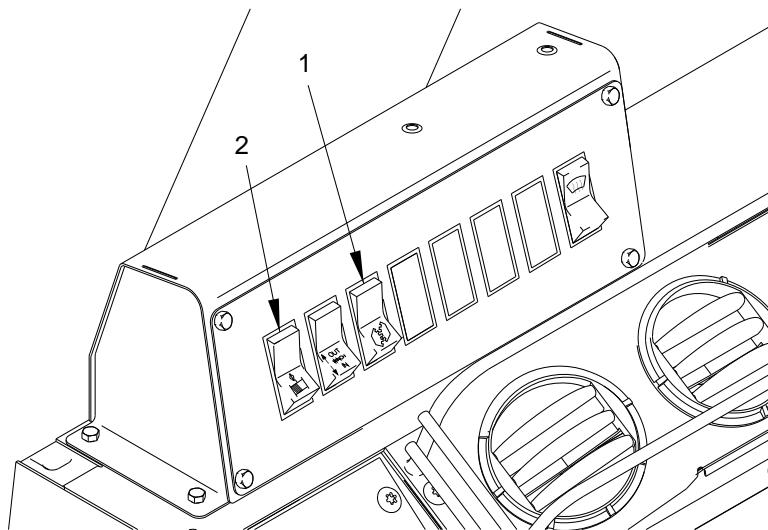
12. Hold WINCH IN/OUT switch (Figure 28, Item 4) in the WINCH IN position to reel in cable (Figure 28, Item 2) until cable socket (Figure 28, Item 3) contacts rollers (Figure 28, Item 1).

15K SRW OPERATION - Continued

LTM10270B18

Figure 28. 15K SRW Operation.

13. Position winch switch (Figure 29, Item 2) to off.
14. Position PTO switch (Figure 29, Item 1) to off.

15K SRW OPERATION - Continued

LTM10270B19

Figure 29. 15K SRW Operation.

END OF TASK**END OF WORK PACKAGE**

OPERATOR MAINTENANCE EMERGENCY PROCEDURES WORK PACKAGE

INITIAL SETUP:

Tools and Special Tools

*** The following is applicable to the following UOC(s): TSG TSV. ***

Goggles, Industrial (Volume 3,
WP 0357, Table 2, Item 16)

*** The following is applicable to the following UOC(s): TSA TSB TSH TSL
TSM TSP TSQ TSR TSU. ***

Goggles, Industrial (Volume 3,
WP 0359, Table 1, Item 69)

Gloves, Leather (Volume 3, WP 0358,
Table 1)

Wrench, Socket Wheel Stud (Volume
3, WP 0357, Table 2, Item 37)

Cable, 24V

Materials/Parts

Lockwire (Volume 3, WP 0359, Table
1, Item 103)

Pin, Cotter Qty: 2

Personnel Required

(2)

References

FM 3-11.5 (Volume 3, WP 0356)

STARTING DISABLED VEHICLE

WARNING



Remove rings, bracelets, wristwatches, neck chains, and any other jewelry before working around vehicle. Jewelry may catch on equipment or may short across an electrical circuit or battery terminal. Failure to comply may result in serious injury or death to personnel.

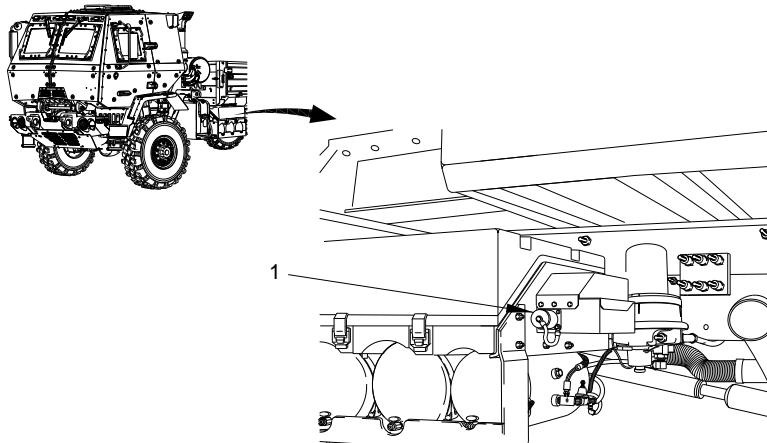
STARTING DISABLED VEHICLE - Continued**WARNING**

Do not smoke, have open flames, or make sparks near batteries when starting vehicle. Batteries can explode. Failure to comply may result in serious injury or death to personnel.

NOTE

Notify Field Maintenance if vehicle was started by another vehicle.

1. Start engine (Volume 1, WP 0019) on service vehicle.
2. Position service vehicle next to disabled vehicle with NATO receptacles (Figure 1, Item 1) facing each other.



L TM10271B01

Figure 1. Starting Disabled Vehicle.

STARTING DISABLED VEHICLE - Continued**WARNING**

Ensure master power switches on both vehicles are turned to off before connecting NATO power cable. Vehicles must not touch each other. Failure to comply may result in serious injury or death to personnel.

3. Shut down engine (Volume 1, WP 0019) on service vehicle.

CAUTION

NATO power cable must be connected to disabled vehicle before connecting it to service vehicle. Failure to comply may result in damage to batteries or cable.

NOTE

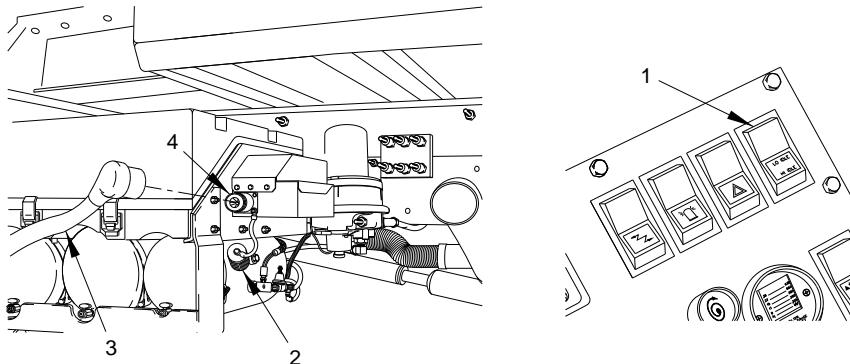
NATO power cable is included in vehicle Basic Issue Items (BII).

4. Remove cap (Figure 2, Item 2) from NATO receptacle (Figure 2, Item 4) on disabled vehicle.
5. Install NATO power cable (Figure 2, Item 3) on NATO receptacle (Figure 2, Item 4) on disabled vehicle.
6. Remove cap (Figure 2, Item 2) from NATO receptacle (Figure 2, Item 4) on servicing vehicle.
7. Install NATO power cable (Figure 2, Item 3) on NATO receptacle (Figure 2, Item 4) on service vehicle.

NOTE

The following three steps require the aid of an assistant.

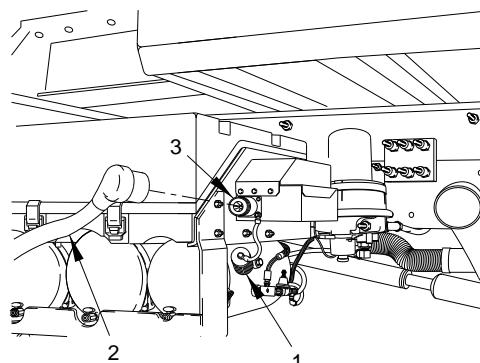
8. Start engine (Volume 1, WP 0019) of servicing vehicle.
9. Press LO IDLE/HI IDLE switch (Figure 2, Item 1) to engage HI IDLE.

STARTING DISABLED VEHICLE - Continued

LTM10271B02

Figure 2. Starting Disabled Vehicle.

10. Start engine (Volume 1, WP 0019) of disabled vehicle.
11. Remove NATO power cable (Figure 3, Item 2) from NATO receptacle (Figure 3, Item 3) on disabled vehicle.
12. Install cap (Figure 3, Item 1) on NATO receptacle (Figure 3, Item 3) on disabled vehicle.
13. Remove NATO power cable (Figure 3, Item 2) from NATO receptacle (Figure 3, Item 3) on service vehicle.
14. Install cap (Figure 3, Item 1) on NATO receptacle (Figure 3, Item 3) on service vehicle.

STARTING DISABLED VEHICLE - Continued

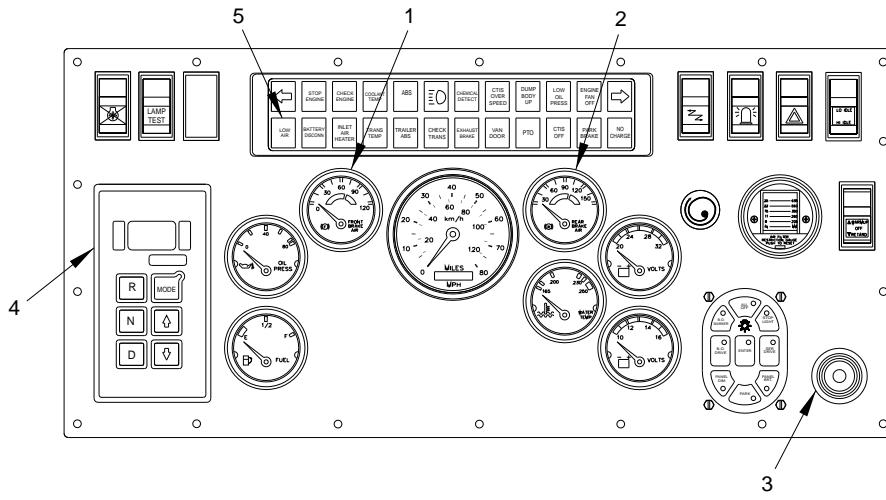
LTM10271B03

Figure 3. Starting Disabled Vehicle.

END OF TASK**LOSS OF AIR PRESSURE**

1. Check FRONT BRAKE AIR pressure gage (Figure 4, Item 1) and REAR BRAKE AIR pressure gage (Figure 4, Item 2) if LOW AIR indicator (Figure 4, Item 5) illuminates and audible alarm (Figure 4, Item 3) sounds while Gen IV Transmission Push-button Shift Selector (TPSS) (Figure 4, Item 4) is in gear.

LOSS OF AIR PRESSURE - Continued



LTM10271B04

Figure 4. Loss of Air Pressure.

WARNING

Rear axle service brakes will not operate if REAR BRAKE AIR pressure gage reads below 75 psi (517 kPa). Rear axle braking will be provided by rear spring brakes for a limited time. Allow greater stopping distance. Discontinue vehicle operation as soon as possible. Failure to comply may result in serious injury or death to personnel.

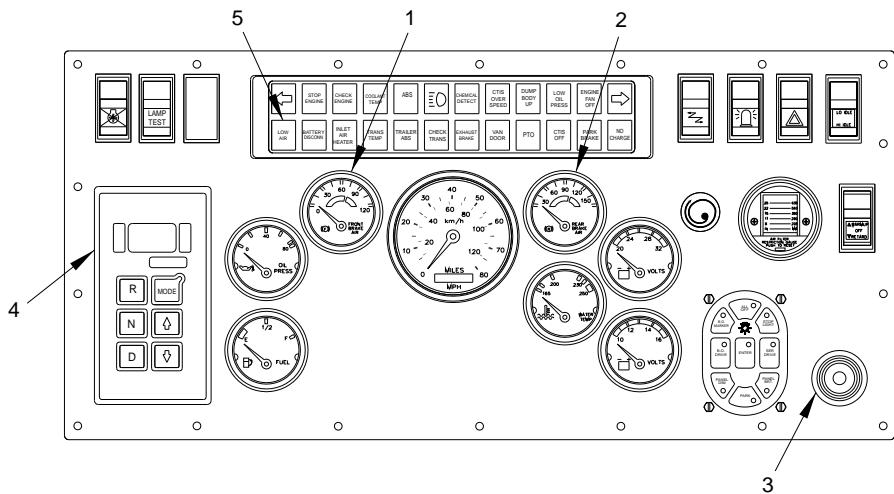
2. If REAR BRAKE AIR pressure gage (Figure 5, Item 2) reads below 75 psi (517 kPa), LOW AIR indicator (Figure 5, Item 5) illuminates and audible alarm (Figure 5, Item 3) sounds:
 - a. Reduce speed.
 - b. Leave additional distance between vehicles.
 - c. Apply brake pedal (Volume 1, WP 0019) earlier than usual when slowing vehicle.
 - d. Downshift to lower gear range using Gen IV TPSS (Figure 5, Item 4).
 - e. Notify Field Maintenance as soon as possible.

LOSS OF AIR PRESSURE - Continued

WARNING

Front axle service brakes will not operate if FRONT BRAKE AIR pressure gage reads below 75 psi (517 kPa). Allow greater stopping distance. Discontinue vehicle operation as soon as possible. Failure to comply may result in serious injury or death to personnel.

3. If FRONT BRAKE AIR pressure gage (Figure 5, Item 1) reads below 75 psi (517 kPa), LOW AIR indicator (Figure 5, Item 5) illuminates, and audible alarm (Figure 5, Item 3) sounds:
 - a. Reduce speed.
 - b. Leave additional distance between vehicles.
 - c. Apply brake pedal (Volume 1, WP 0019) earlier than usual when slowing vehicle.
 - d. Downshift to lower gear range using Gen IV TPSS (Figure 5, Item 4).
 - e. Notify Field Maintenance as soon as possible.



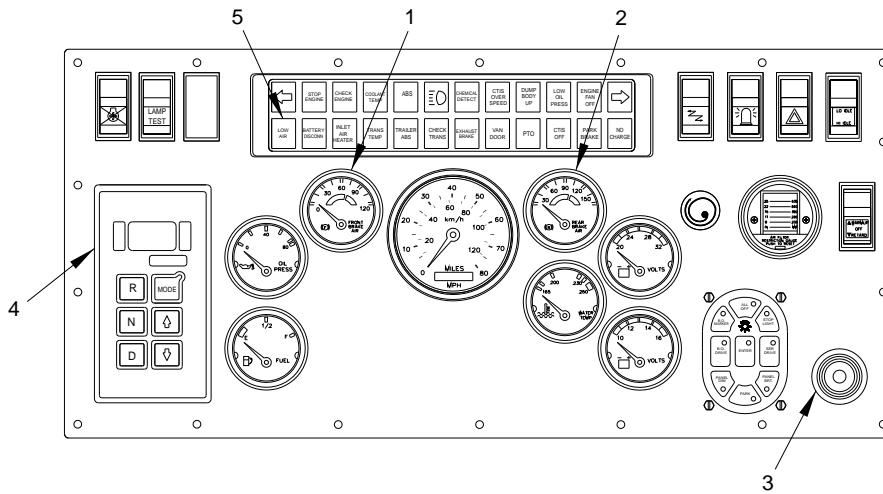
LTM10271B05

Figure 5. Loss of Air Pressure.

4. If FRONT BRAKE AIR pressure gage (Figure 6, Item 1) and REAR BRAKE AIR pressure gage (Figure 6, Item 2) read below 75 psi (517 kPa), LOW AIR indicator (Figure 6, Item 5) illuminates and audible alarm (Figure 6, Item 3) sounds:
 - a. Look for a place to stop vehicle without blocking other traffic.

LOSS OF AIR PRESSURE - Continued

- b. Downshift to lower gear range using Gen IV TPSS (Figure 6, Item 4) to control vehicle speed until place to stop is found.
- c. Stop vehicle.
- d. Notify Field Maintenance.



LTM10271B05

Figure 6. Loss of Air Pressure.

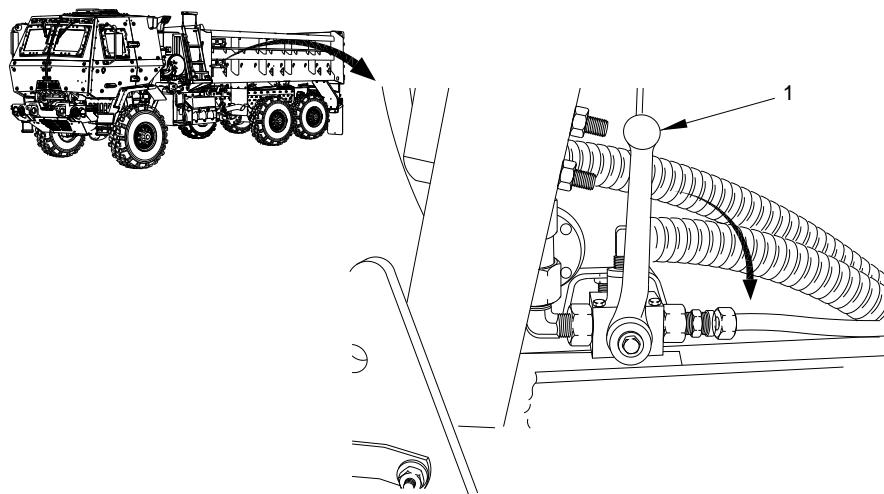
END OF TASK

***** The following is applicable to the following UOC(s): TSQ TSR. *****

M1157 DUMP TRUCK MANUAL TAILGATE RELEASE**NOTE**

Use this procedure in the event of electrical or pneumatic failure.

1. Move handle (Figure 7, Item 1) 90 degrees to the right.

M1157 DUMP TRUCK MANUAL TAILGATE RELEASE - Continued

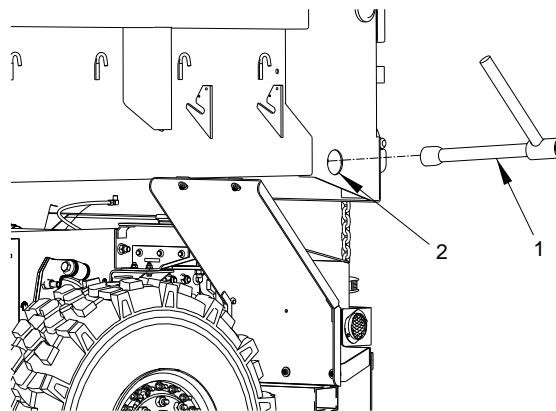
LTX10271B06

Figure 7. M1157 Dump Truck Manual Tailgate Release.

NOTE

Manual release tool is included in vehicle Basic Issue Items (BII).

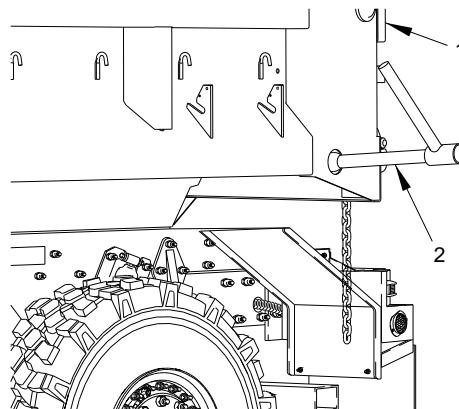
2. Position manual release tool (Figure 8, Item 1) in manual tailgate release port (Figure 8, Item 2).

M1157 DUMP TRUCK MANUAL TAILGATE RELEASE - Continued

LTX10271B07

Figure 8. M1157 Dump Truck Manual Tailgate Release.

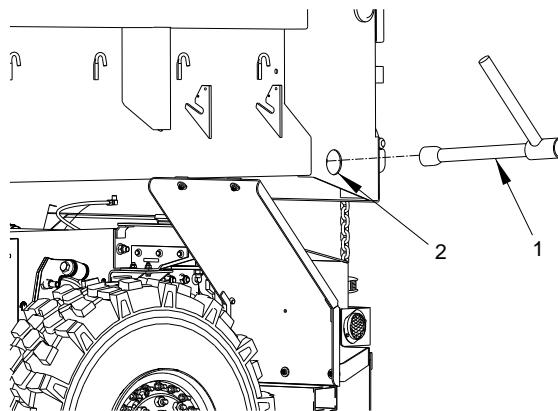
3. Rotate manual release tool (Figure 9, Item 2) to the left to release tailgate (Figure 9, Item 1).

M1157 DUMP TRUCK MANUAL TAILGATE RELEASE - Continued

LTX10271B08

Figure 9. M1157 Dump Truck Manual Tailgate Release.

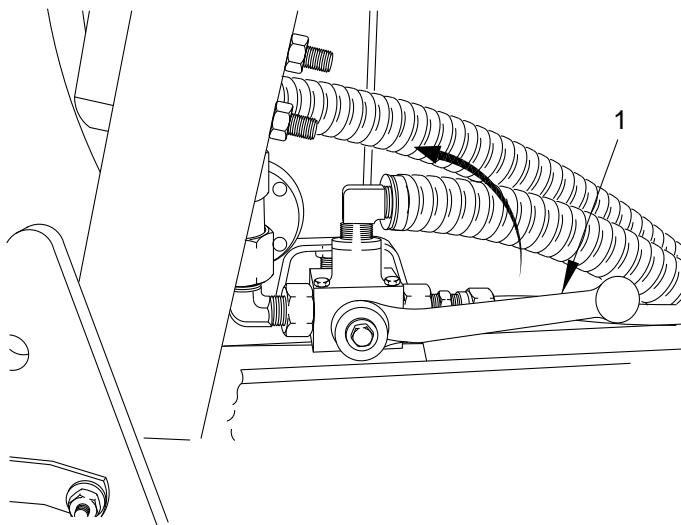
4. Remove manual release tool (Figure 10, Item 2) from manual tailgate release port (Figure 10, Item 1).

M1157 DUMP TRUCK MANUAL TAILGATE RELEASE - Continued

LTX10271B07

Figure 10. M1157 Dump Truck Manual Tailgate Release.

5. Move handle (Figure 11, Item 1) 90 degrees to the left.

M1157 DUMP TRUCK MANUAL TAILGATE RELEASE - Continued

LTX10271B09

Figure 11. M1157 Dump Truck Manual Tailgate Release.

END OF TASK

*** The following is applicable to the following UOC(s): TSQ TSR. ***

M1157 MANUAL HYDRAULIC BYPASS OPERATION**WARNING**

Remove any objects that may interfere with the successful lowering of the dump body. Clear personnel from dump body area when operating the manual hydraulic bypass. Failure to comply may result in serious injury or death to personnel or damage to equipment.

NOTE

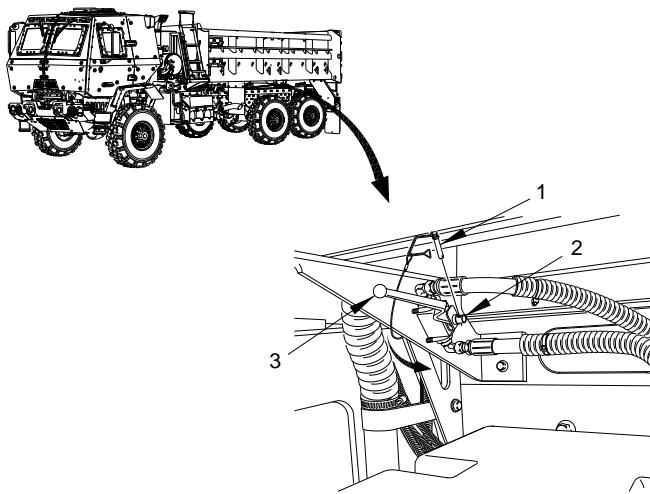
Use this procedure to lower the dump body in case of hydraulic or electrical failure.

1. Remove locking pin (Figure 12, Item 1) from manual bypass valve (Figure 12, Item 2).

M1157 MANUAL HYDRAULIC BYPASS OPERATION - Continued**NOTE**

During manual bypass operation, bed may be stopped at any point during lowering by rotating the valve handle back to the closed position.

2. Rotate manual bypass valve handle (Figure 12, Item 3) 90 degrees to the left to open the manual bypass system.
3. Allow dump body to come to a complete stop, resting on the subframe.



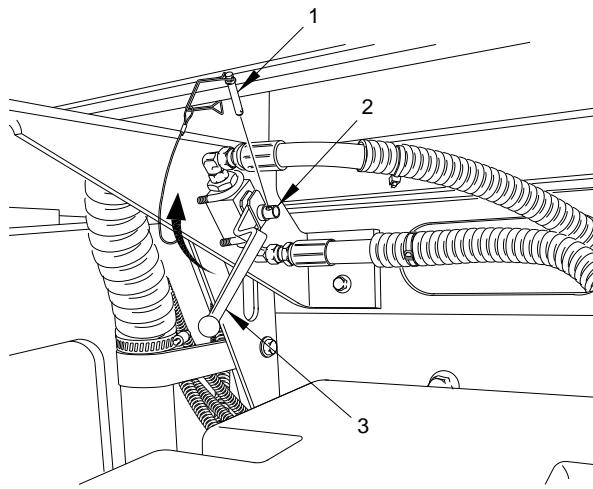
LTX1027IB10

Figure 12. M1157 Manual Hydraulic Bypass Operation.

CAUTION

After the dump body is lowered manually, the manual bypass system valve must be closed. Manually raising the dump body for maintenance or normal operation of the dump body with an open manual bypass system can result in damage to equipment.

4. Rotate manual bypass valve handle (Figure 13, Item 3) 90 degrees to the right to close the manual bypass system.
5. Install locking pin (Figure 13, Item 1) in manual bypass valve (Figure 13, Item 2).

M1157 MANUAL HYDRAULIC BYPASS OPERATION - Continued

LTX10271B11

Figure 13. M1157 Manual Hydraulic Bypass Operation.

END OF TASK**NUCLEAR, BIOLOGICAL, AND CHEMICAL (NBC) DECONTAMINATION**

Refer to nuclear, biological, and chemical (NBC) defense procedures. Refer to FM 3-11.5 for chemical, biological, and radiological (CBR) decontamination procedures.

END OF TASK

***** The following is applicable to the following UOC(s): TSG TSV. *****

OPERATING MHC AFTER ELECTRICAL FAILURE (M1084A1P2/M1086A1P2)

1. Position gate valve handle (Figure 14, Item 1) down.

NOTE

- All MHC functions operate same way. Boom extension function shown.
- Dump valves are latched by removing safety wire, then pushing up and turning plunger 1/4 turn with a flat screwdriver.

**OPERATING MHC AFTER ELECTRICAL FAILURE (M1084A1P2/M1086A1P2) -
Continued**

2. Remove safety wire from dump 1 valve (Figure 14, Item 3).
3. Latch plunger (Figure 14, Item 2) on dump 1 valve (Figure 14, Item 3).

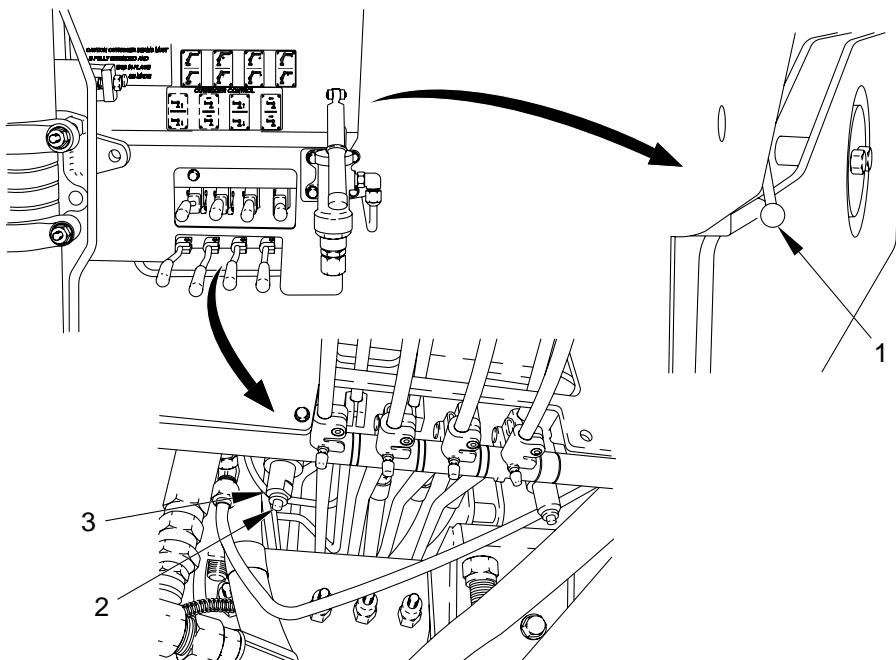


Figure 14. Operating MHC After Electrical Failure (M1084A1P2/M1086A1P2).

4. Position boom extension lever (Figure 15, Item 2) in desired direction and operate crane hand pump (Figure 15, Item 1).

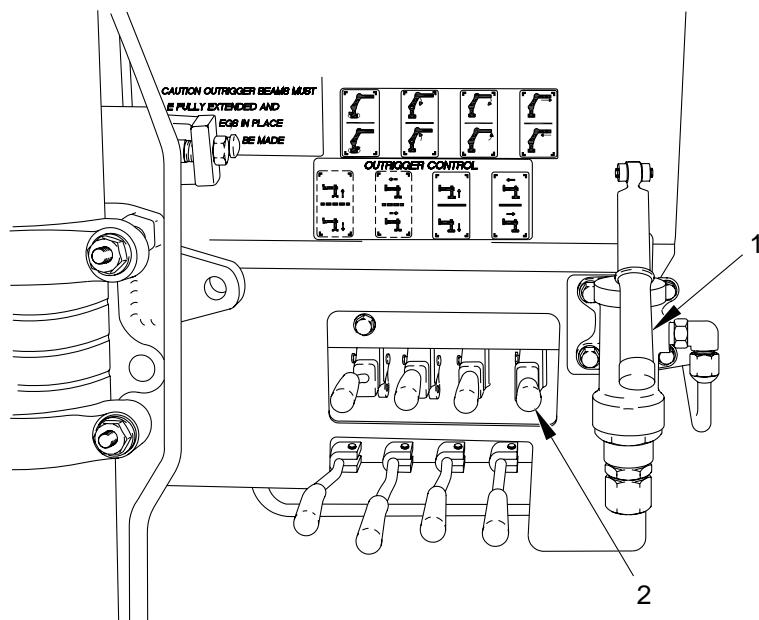
**OPERATING MHC AFTER ELECTRICAL FAILURE (M1084A1P2/M1086A1P2) -
Continued**

Figure 15. Operating MHC After Electrical Failure (M1084A1P2/M1086A1P2).

5. Operate inner boom lever (Figure 16, Item 3), outer boom lever (Figure 16, Item 2), and slew lever (Figure 16, Item 4) to lower load with crane hand pump (Figure 16, Item 1).

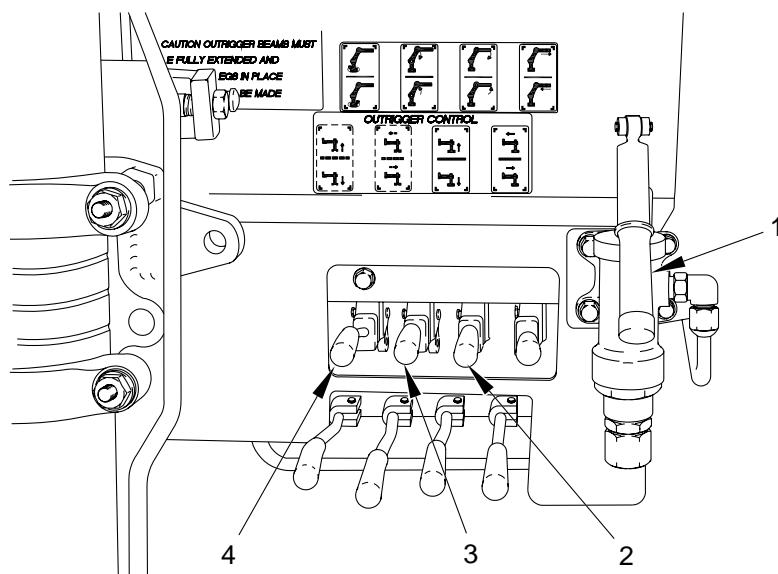
**OPERATING MHC AFTER ELECTRICAL FAILURE (M1084A1P2/M1086A1P2) -
Continued**

Figure 16. Operating MHC After Electrical Failure (M1084A1P2/M1086A1P2).

6. Remove hook assembly (Figure 17, Item 1) from load.

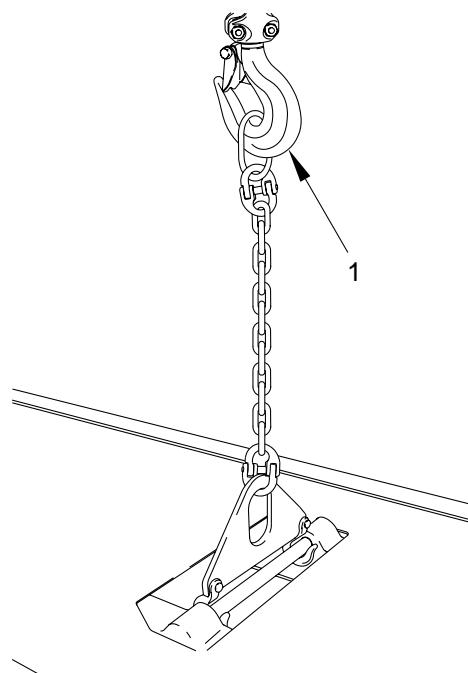
**OPERATING MHC AFTER ELECTRICAL FAILURE (M1084A1P2/M1086A1P2) -
Continued**

Figure 17. Operating MHC After Electrical Failure (M1084A1P2/M1086A1P2).

7. Operate inner boom lever (Figure 18, Item 4), outer boom lever (Figure 18, Item 3), slew lever (Figure 18, Item 5), and boom extension lever (Figure 18, Item 2) to stow MHC with crane hand pump (Figure 18, Item 1).

**OPERATING MHC AFTER ELECTRICAL FAILURE (M1084A1P2/M1086A1P2) -
Continued**

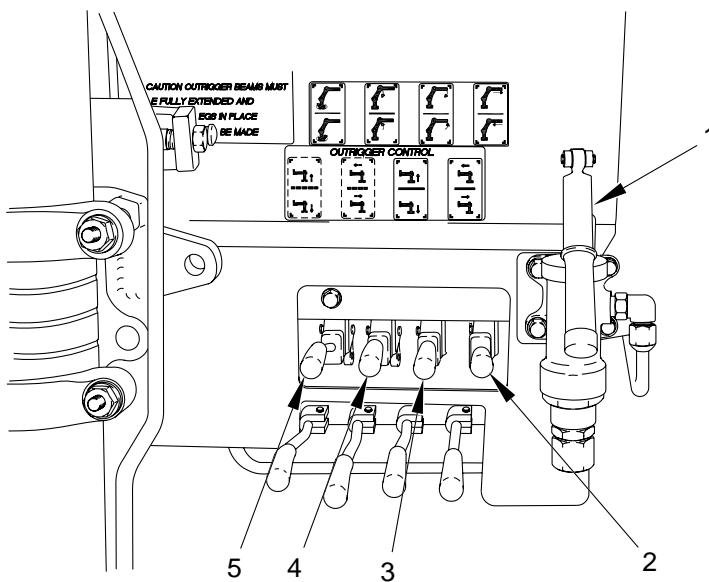


Figure 18. Operating MHC After Electrical Failure (M1084A1P2/M1086A1P2).

NOTE

- Dump valves are latched by removing safety wire, then pushing up and turning plunger 1/4 turn with a flat screwdriver.
- Outrigger extension and jack cylinders and outriggers are stowed the same way. Left side shown.

8. Remove safety wire from dump 2 valve (Figure 19, Item 3).

9. Latch plunger (Figure 19, Item 4) on dump 2 valve (Figure 19, Item 3).

NOTE

Left and right side jack cylinders and outriggers are stowed same way.
Left side shown.

10. Position jack cylinder (Figure 19, Item 7) up and operate crane hand pump (Figure 19, Item 2) to retract.

11. Position outrigger lever (Figure 19, Item 6) up and operate crane hand pump (Figure 19, Item 2) to retract.

12. Perform preceding two steps on right side.

OPERATING MHC AFTER ELECTRICAL FAILURE (M1084A1P2/M1086A1P2) - Continued

13. Unlatch plungers (Figure 19, Items 4 and 5) on dump 2 valve (Figure 19, Item 3) and dump 1 valve (Figure 19, Item 1).
14. Notify Field Maintenance of electrical failure.

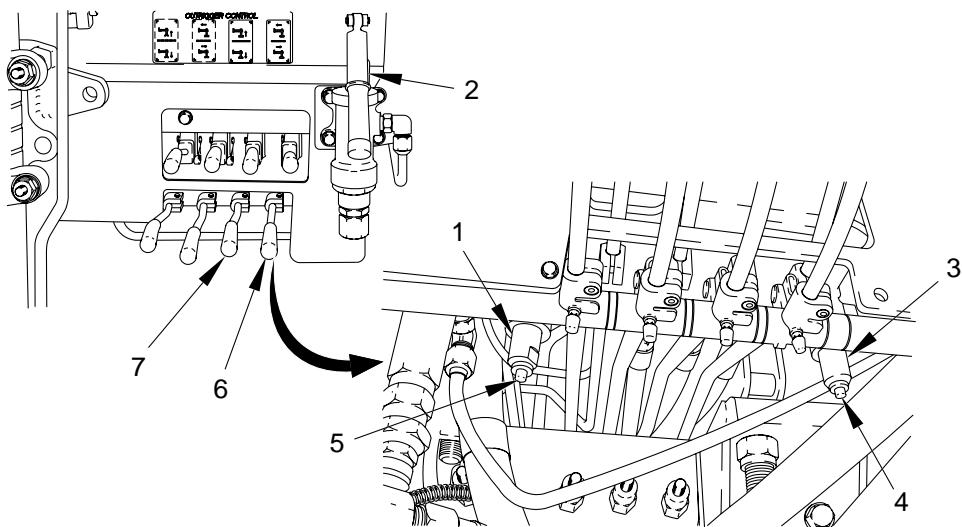


Figure 19. Operating MHC After Electrical Failure (M1084A1P2/M1086A1P2).

NOTE

Both jack cylinder pads are removed same way. Left side shown.

15. Remove safety pin (Figure 20, Item 3) from pin (Figure 20, Item 2).
16. Remove pin (Figure 20, Item 2) and pad (Figure 20, Item 4) from jack cylinder piston (Figure 20, Item 1).
17. Install pin (Figure 20, Item 2) on pad (Figure 20, Item 4) with safety pin (Figure 20, Item 3).
18. Perform the preceding three steps on right side.

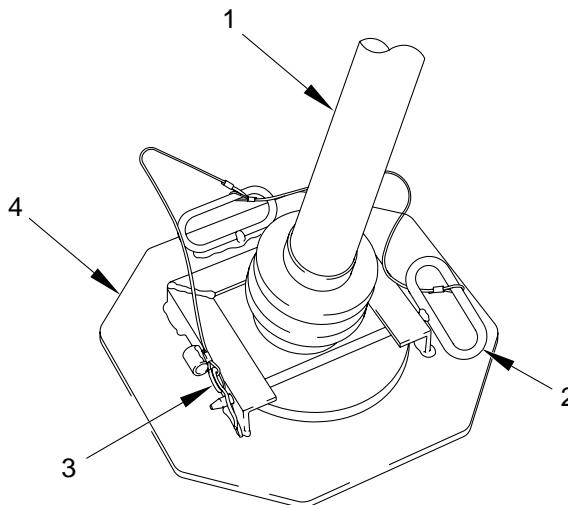
**OPERATING MHC AFTER ELECTRICAL FAILURE (M1084A1P2/M1086A1P2) -
Continued**

Figure 20. Operating MHC After Electrical Failure (M1084A1P2/M1086A1P2).

19. Remove safety pin (Figure 21, Item 4) from pin (Figure 21, Item 2).
20. Remove pin (Figure 21, Item 2) from stowage bracket (Figure 21, Item 1).
21. Install two pads (Figure 21, Item 3) on stowage bracket (Figure 21, Item 1) with pin (Figure 21, Item 2) and safety pin (Figure 21, Item 4).

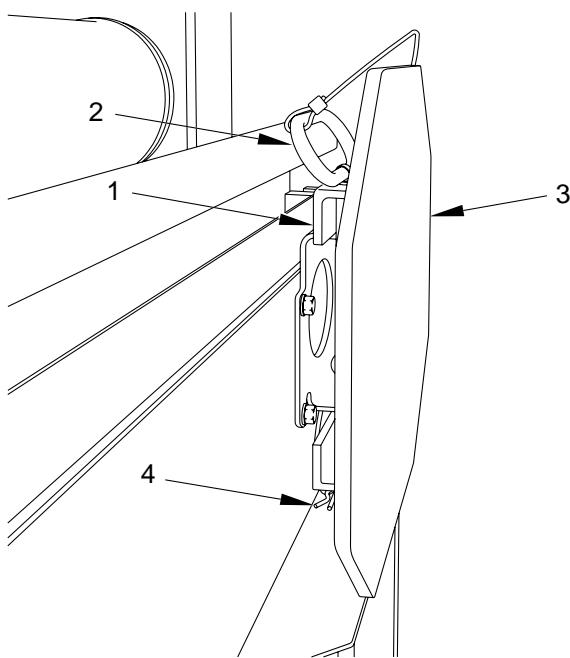
**OPERATING MHC AFTER ELECTRICAL FAILURE (M1084A1P2/M1086A1P2) -
Continued**

Figure 21. Operating MHC After Electrical Failure (M1084A1P2/M1086A1P2).

END OF TASK

*** The following is applicable to the following UOC(s): TSV TSG. ***

OPERATING MHC USING OLP SWITCH (M1084A1P2/M1086A1P2)**CAUTION**

Overload Protection (OLP) switch is to be used only after attempting to relieve pressure by using remote control levers and only to move MHC out of a locked condition. Do not use OLP switch to overload MHC. Failure to comply may result in damage to equipment.

1. Verify four red pressure LEDs (Figure 22, Item 7) and red OLP LED (Figure 22, Item 6) are illuminated on POWER DISPLAY BOX (Figure 22, Item 4).
2. Verify main dump valve LED (Figure 22, Item 5) on POWER DISPLAY BOX (Figure 22, Item 4) is not illuminated.

OPERATING MHC USING OLP SWITCH (M1084A1P2/M1086A1P2) - Continued**NOTE**

Overriding the OLP circuit will allow only 10 seconds of operation at a time followed by 20 seconds of system lockout.

3. Press and hold OLP switch (Figure 22, Item 3) on remote control (Figure 22, Item 2).
4. Verify four red pressure LEDs (Figure 22, Item 7) illuminate in sequence.
5. Move lever (Figure 22, Item 1) on remote control (Figure 22, Item 2) in opposite direction that boom was moving when OLP activated.
6. Verify OLP LED (Figure 22, Item 6) blinks and goes out.
7. Release OLP switch (Figure 22, Item 3) on remote control.

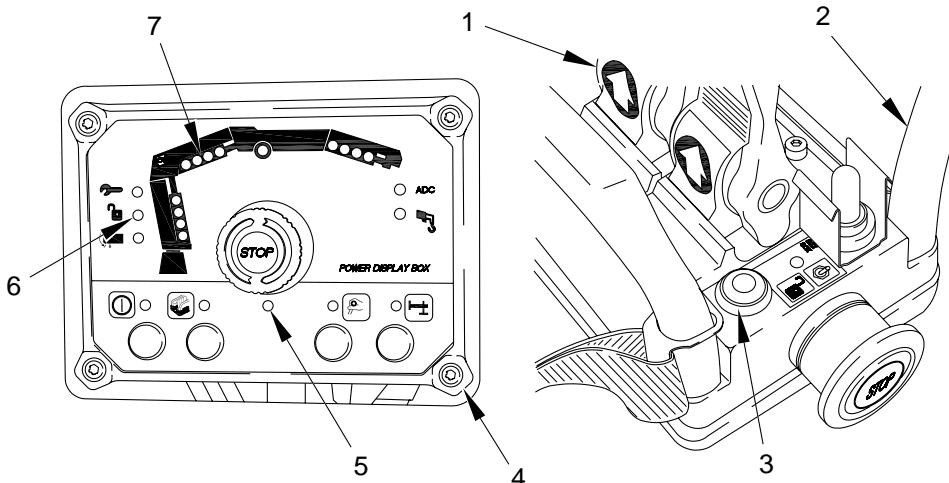


Figure 22. Operating MHC Using OLP Switch (M1084A1P2/M1086A1P2).

END OF TASK**END OF WORK PACKAGE**

**OPERATOR MAINTENANCE
BACKUP HYDRAULIC PUMP OPERATION WORK PACKAGE**

INITIAL SETUP:

Not Applicable

CAB UP PROCEDURES

WARNING

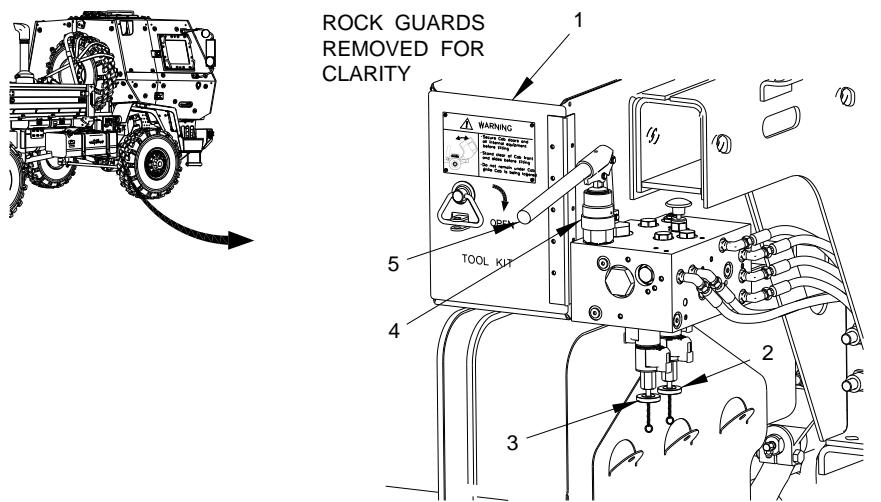


Caution must be exercised while cab is raised. Ensure both doors are securely locked in the closed position before cab is raised or lowered. Keeping doors in the open position while cab is raised or lowered can cause stress on the damper which can then fail and crush personnel. Do not allow personnel near front of cab while cab is being raised or lowered. Never raise cab while occupied or when parked uphill on a steep grade. Use extreme care when opening cab door with cab raised. Do not allow personnel near cab and engine compartment when cab is being lowered. Failure to comply may result in serious injury or death to personnel or damage to equipment.

NOTE

Perform the following five steps if outside temperature is above -25° F (-32° C).

1. Remove handle (Figure 1, Item 5) from tool box (Figure 1, Item 1).
2. Insert handle (Figure 1, Item 5) in backup hydraulic pump (Figure 1, Item 4).
3. Push up on outer adjustment knob (Figure 1, Item 3) and turn fully clockwise to the cab up position.
4. Perform previous step on inner adjustment knob (Figure 1, Item 2).
5. Pump handle (Figure 1, Item 5) until cab is fully raised.

CAB UP PROCEDURES - Continued

LTX10251B01

Figure 1. Cab Up Procedures.

NOTE

- Perform the following twelve steps if cab does not move.
- Perform the following twelve steps if outside temperature is -25° F (-32° C) or below.

6. Remove handle (Figure 2, Item 7) from tool box (Figure 2, Item 1).
7. Insert handle (Figure 2, Item 7) in backup hydraulic pump (Figure 2, Item 6).

NOTE

Once tension is felt on adjustment knobs, continue turning three more times to ensure they are in the cab down position. Adjustment knobs will continue to turn even after they are in the cab down position.

8. Turn outer adjustment knob (Figure 2, Item 5) counter clockwise until it spins freely in the normal operating procedure position.
9. Pull down ring (Figure 2, Item 4) on outer adjustment knob (Figure 2, Item 5) and continue turning counter clockwise until tension is felt.
10. Turn outer adjustment knob (Figure 2, Item 5) three more times to ensure it is in the cab down position.
11. Release ring (Figure 2, Item 4).

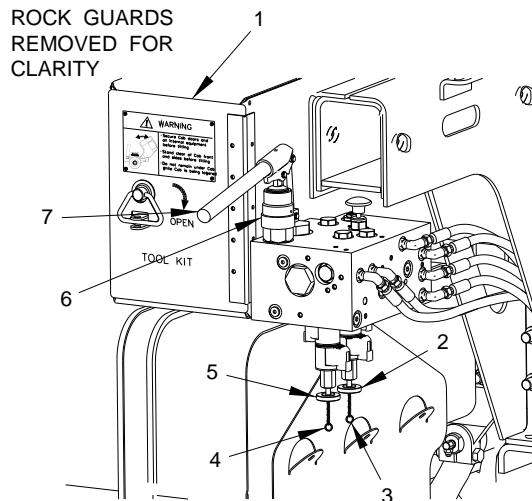
CAB UP PROCEDURES - Continued

12. Perform previous four steps on inner adjustment knob (Figure 2, Item 2) and ring (Figure 2, Item 3).
13. Pump handle (Figure 2, Item 7) slowly a few times.
14. Turn outer adjustment knob (Figure 2, Item 5) clockwise until it spins freely in normal operating position.
15. Push up on outer adjustment knob (Figure 2, Item 5) and turn fully clockwise to the cab up position.
16. Perform previous two steps on inner adjustment knob (Figure 2, Item 2) and ring (Figure 2, Item 3).
17. Pump handle (Figure 2, Item 7) slowly a few times.

NOTE

It may be necessary to perform previous eleven steps several times before cab begins to move.

18. Pump handle (Figure 2, Item 7) until cab is fully raised.



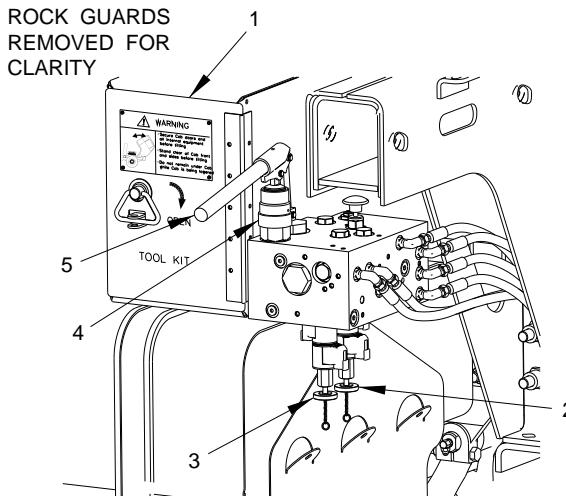
LTXI025IB02

Figure 2. Cab Up Procedures.

CAB UP PROCEDURES - Continued**NOTE**

If performing previous step does not accomplish the required action, notify Field Maintenance.

19. Turn outer adjustment knob (Figure 3, Item 3) counter clockwise until it spins freely in the normal operating position.
20. Perform previous step on inner adjustment knob (Figure 3, Item 2).
21. Place pump handle (Figure 3, Item 5) in up position.
22. Remove handle (Figure 3, Item 5) from backup hydraulic pump (Figure 3, Item 4).
23. Stow handle (Figure 3, Item 5) in tool box (Figure 3, Item 1).



LTXI0251B03

Figure 3. Cab Up Procedures.

END OF TASK

CAB DOWN PROCEDURES

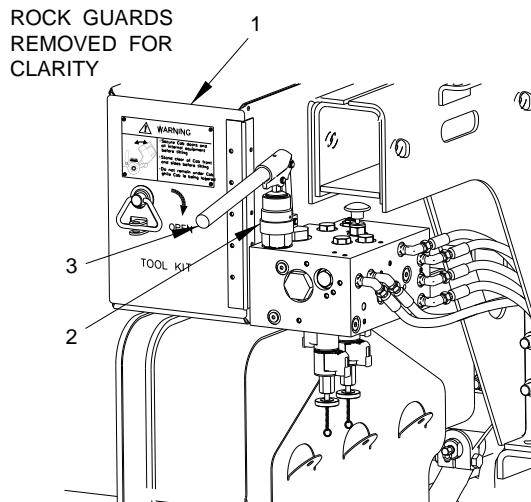
WARNING

Ensure both doors are securely closed before cab is lowered. Do not allow personnel near cab when cab is being lowered. Failure to comply may result in serious injury or death to personnel or damage to equipment.

NOTE

Perform the following seven steps if outside temperature is above -25° F (-32° C).

1. Remove handle (Figure 4, Item 3) from tool box (Figure 4, Item 1).
2. Insert handle (Figure 4, Item 3) in backup hydraulic pump (Figure 4, Item 2).



LTX10251B06

Figure 4. Cab Down Procedures.

NOTE

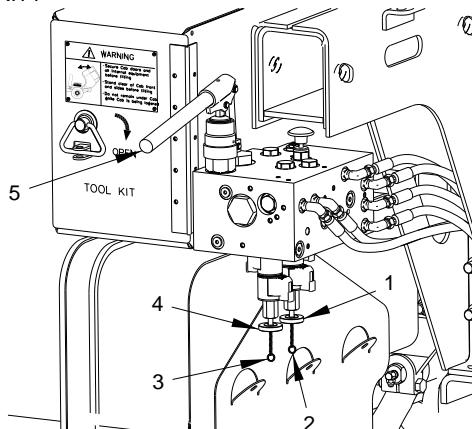
Once tension is felt on adjustment knobs, continue turning three more times to ensure they are in the cab down position. Adjustment knobs will continue to turn even after they are in the cab down position.

3. Pull down ring (Figure 5, Item 3) on outer adjustment knob (Figure 5, Item 4) and turn counter clockwise until tension is felt.

CAB DOWN PROCUDURES - Continued

4. Turn outer adjustment knob (Figure 5, Item 4) three more times to ensure it is in the cab down position.
5. Release ring (Figure 5, Item 3).
6. Perform previous three steps on inner adjustment knob (Figure 5, Item 1) and ring (Figure 5, Item 2).
7. Pump handle (Figure 5, Item 5) until cab is fully lowered.

ROCK GUARDS
REMOVED FOR
CLARITY



LTXI025IB04

Figure 5. Cab Down Procedures.

NOTE

- Perform the following twelve steps if cab does not move.
- Perform the following twelve steps if outside temperature is -25° F (-32° C) or below.

8. Remove handle (Figure 6, Item 7) from tool box (Figure 6, Item 1).
9. Insert handle (Figure 6, Item 7) in backup hydraulic pump (Figure 6, Item 6).
10. Push up on outer adjustment knob (Figure 6, Item 5) and turn fully clockwise to the cab up position.
11. Release outer adjustment knob (Figure 6, Item 5).
12. Perform previous two steps on inner adjustment knob (Figure 6, Item 2).

CAB DOWN PROCEDURES - Continued

13. Pump handle (Figure 6, Item 7) slowly a few times.

NOTE

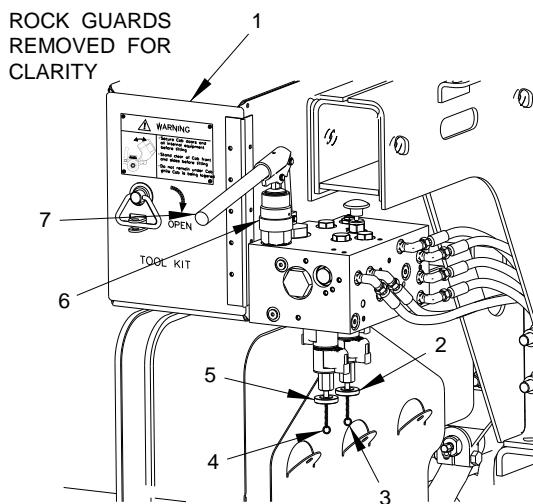
Once tension is felt on adjustment knobs, continue turning three more times to ensure they are in the cab down position. Adjustment knobs will continue to turn even after they are in the cab down position.

14. Turn outer adjustment knob (Figure 6, Item 5) counter clockwise until it spins freely in the normal operating position.
15. Pull down ring (Figure 6, Item 4) on outer adjustment knob (Figure 6, Item 5) and continue turning counter clockwise until tension is felt.
16. Turn outer adjustment knob (Figure 6, Item 5) three more times to ensure it is in the cab down position.
17. Release ring (Figure 6, Item 4).
18. Perform previous four steps on inner adjustment knob (Figure 6, Item 2) and ring (Figure 6, Item 3).
19. Pump handle (Figure 6, Item 7) slowly a few times.

NOTE

- It may be necessary to perform previous ten steps several times before cab begins to move.
- If performing the following step does not accomplish the required action, notify Field Maintenance.

20. Pump handle (Figure 6, Item 7) until cab is fully lowered.

CAB DOWN PROCUDURES - Continued

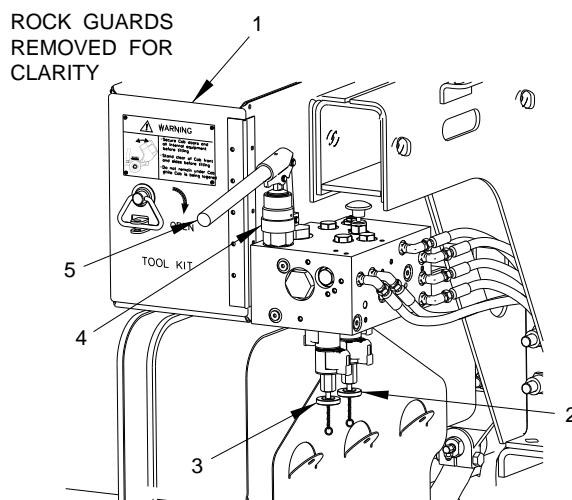
LTX10251B02

Figure 6. Cab Down Procedures.

WARNING

Cab hydraulic latch must be locked before driving vehicle. Failure to comply may result in serious injury or death to personnel or damage to equipment.

21. Turn outer adjustment knob (Figure 7, Item 3) clockwise until it spins freely in the normal operating position.
22. Perform previous step on inner adjustment knob (Figure 7, Item 2).
23. Position adjustment out adjustment valve (Figure 7, Item 3) in neutral.
24. Position adjustment inner adjustment valve (Figure 7, Item 2) in neutral.
25. Place pump handle (Figure 7, Item 5) in up position.
26. Remove handle (Figure 7, Item 5) from backup hydraulic pump (Figure 7, Item 4).
27. Stow handle (Figure 7, Item 5) in tool box (Figure 7, Item 1).

CAB DOWN PROCUDURES - Continued

LTX10251B03

Figure 7. Cab Down Procedures.

END OF TASK**END OF WORK PACKAGE**

OPERATOR MAINTENANCE STOWAGE LOCATION/DECAL/STENCIL GUIDE

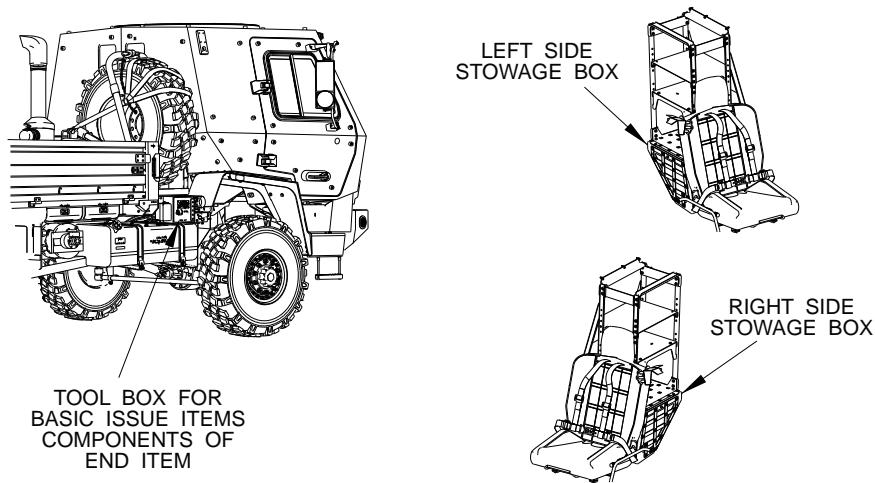
SCOPE

This work package shows location of; decals and stencils, equipment stowage, and required materials for M1078A1P2 and M1083A1P2 series vehicles.

GENERAL

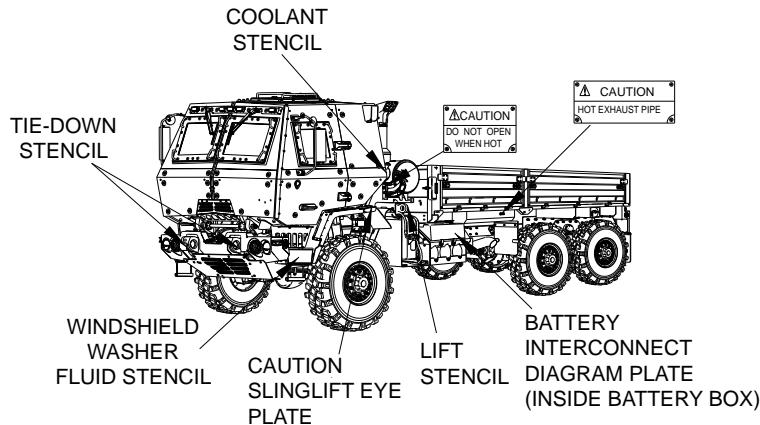
The equipment stowage locator is designed to help inventory items required for safe and efficient operation. The equipment locator is representative of BII and AAL stowage on all M1078A1P2 and M1083A1P2 series vehicles.

STOWAGE LOCATIONS, ALL VEHICLES



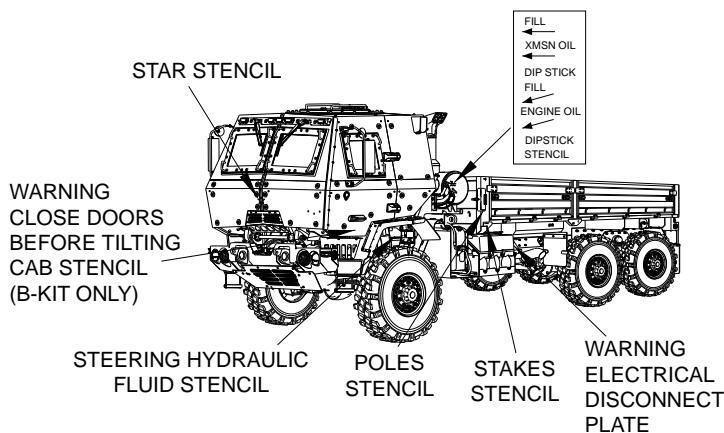
LTAPPF2001

Figure 1. Stowage Locations, All Vehicles.

DECALS/STENCILS, ALL VEHICLES

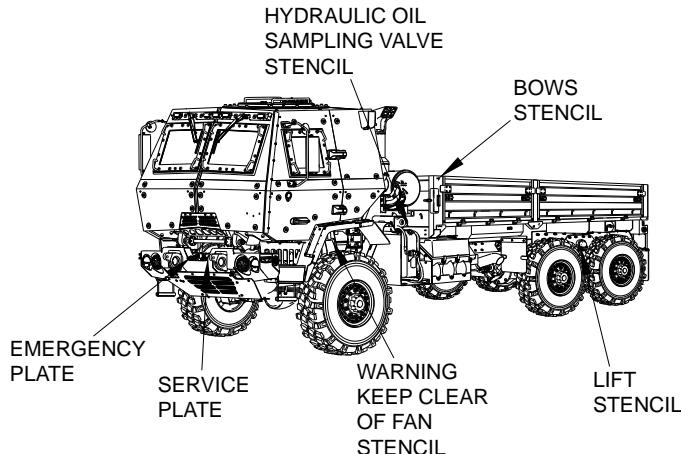
LTAPPF2015

Figure 2. Decals/Stencils, All Vehicles.



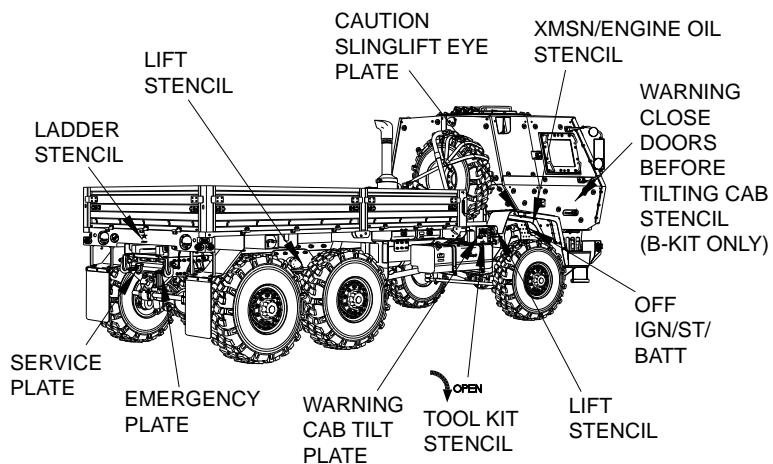
LTAPPF2016

Figure 3. Decals/Stencils, All Vehicles.

DECALS/STENCILS, ALL VEHICLES - Continued

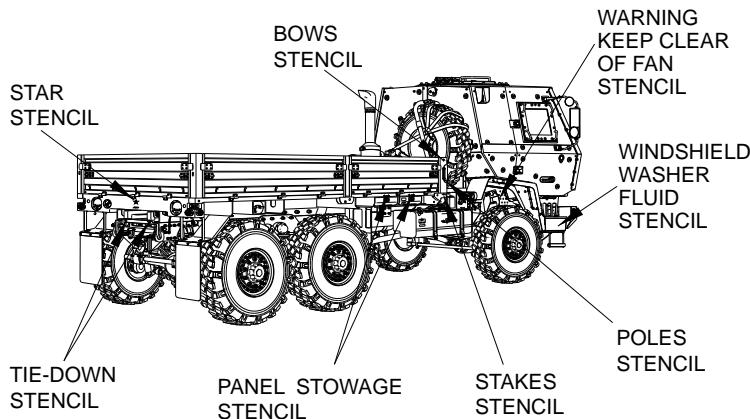
LTAPPF2017

Figure 4. Decals/Stencils, All Vehicles.



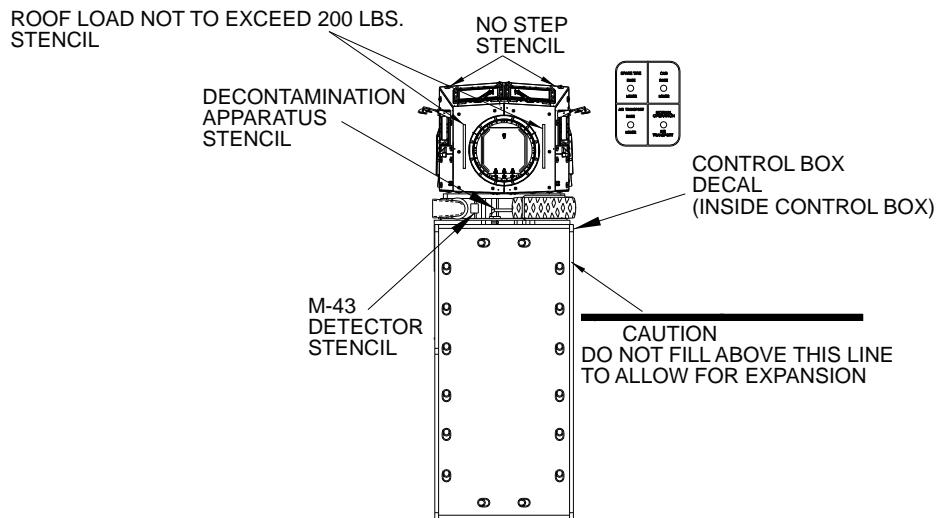
LTAPPF2018

Figure 5. Decals/Stencils, All Vehicles.

DECALS/STENCILS, ALL VEHICLES - Continued

LTAPPF2019

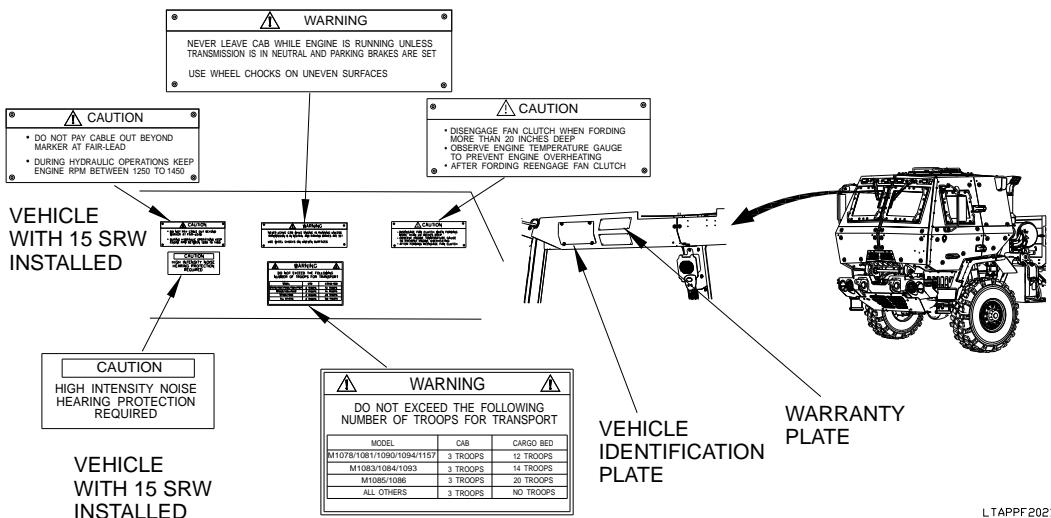
Figure 6. Decals/Stencils, All Vehicles.



LTAPPF2020

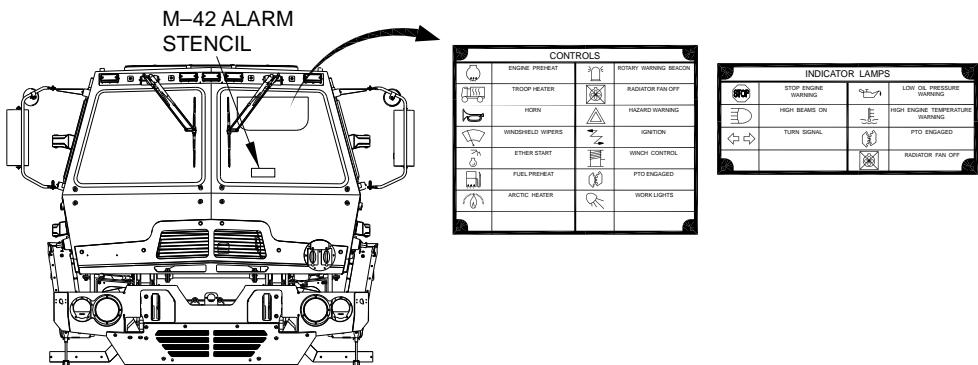
Figure 7. Decals/Stencils, All Vehicles.

DECALS/STENCILS, ALL VEHICLES - Continued



LT APPF 2021

Figure 8. Decals/Stencils, All Vehicles.



LT APPF 2022

Figure 9. Decals/Stencils, All Vehicles.

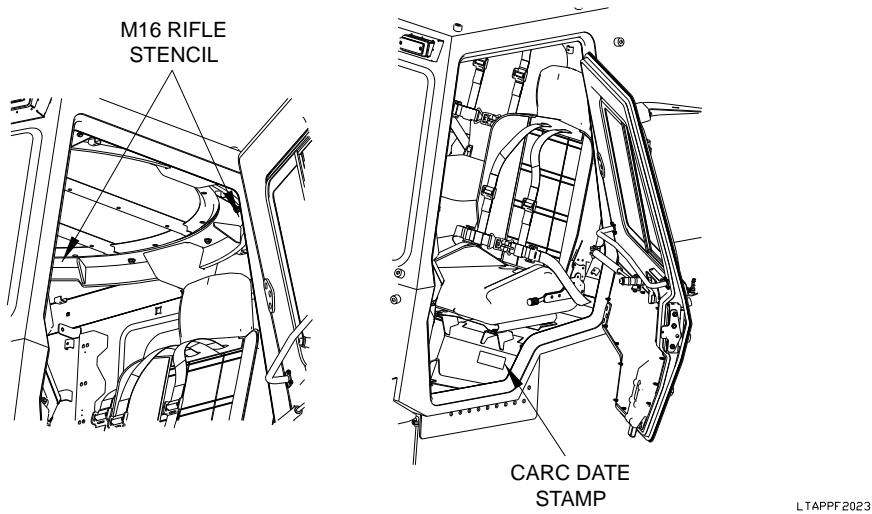
DECALS/STENCILS, ALL VEHICLES - Continued

Figure 10. Decals/Stencils, All Vehicles.

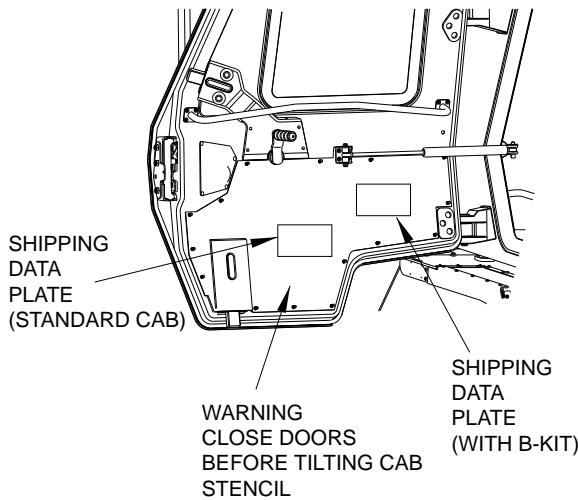
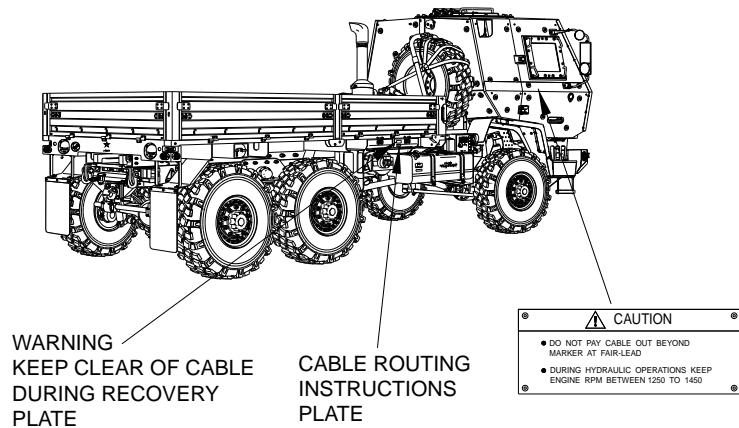


Figure 11. Decals/Stencils, All Vehicles.

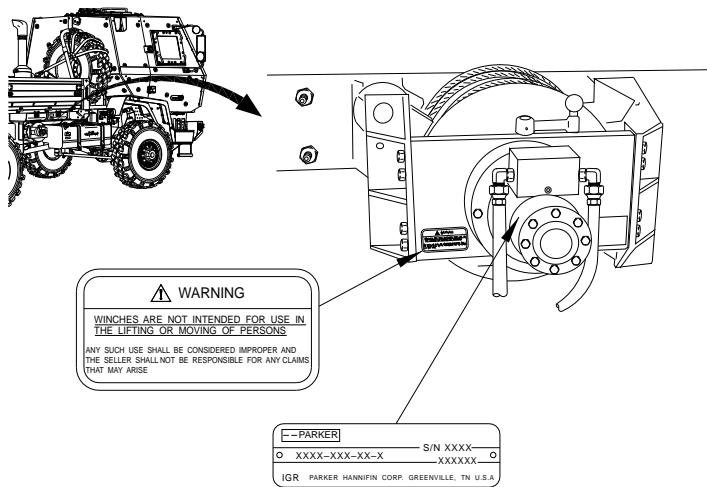
*** The following is applicable to the following UOC(s): TSA TSL TSH TSQ. ***

DECALS/STENCILS, 15K SELF RECOVERY WINCH (SRW)



LTAPPF 2025

Figure 12. Decals/Stencils, 15K Self Recovery Winch (SRW).

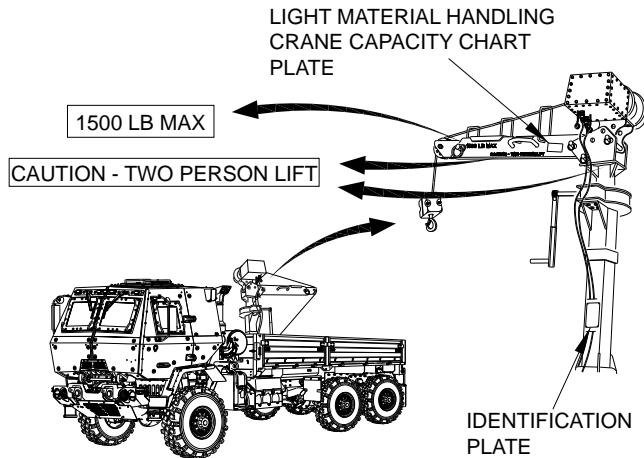
DECALS/STENCILS, 15K SELF RECOVERY WINCH (SRW) - Continued

LTAPPF2026

Figure 13. Decals/Stencils, 15K Self Recovery Winch (SRW).

*** The following is applicable to the following UOC(s): TSA TSB TSM TSL. ***

DECALS/STENCILS, LIGHT MATERIAL HANDLING CRANE (LMHC)

DECALS/STENCILS, LIGHT MATERIAL HANDLING CRANE (LMHC) - Continued

LTAPPF 2027

Figure 14. Decals/Stencils, Light Material Handling Crane (LMHC).

*** The following is applicable to the following UOC(s): TSQ TSR. ***

STENCILS, M1157A1P2

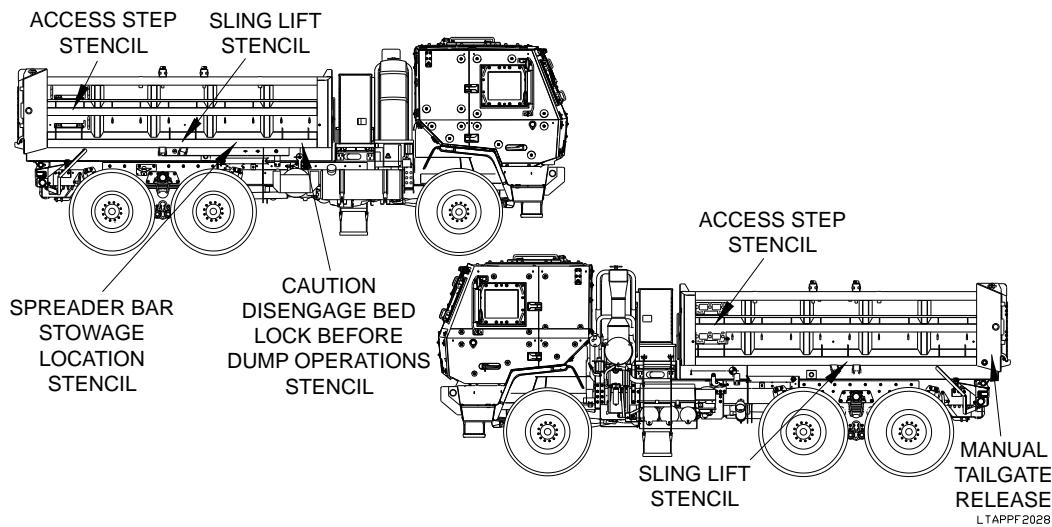
STENCILS, M1157A1P2 - Continued

Figure 15. Stencils, M1157A1P2.

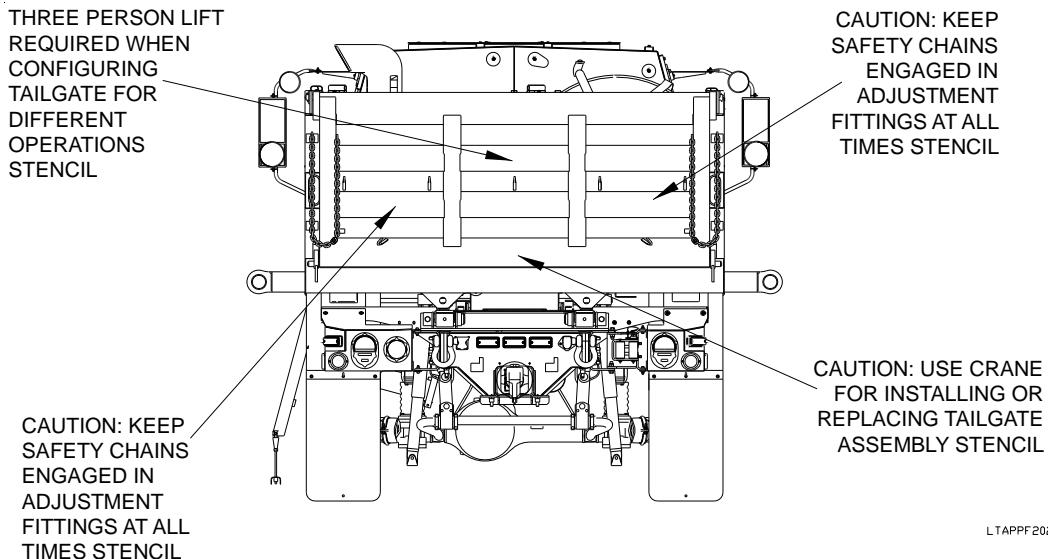
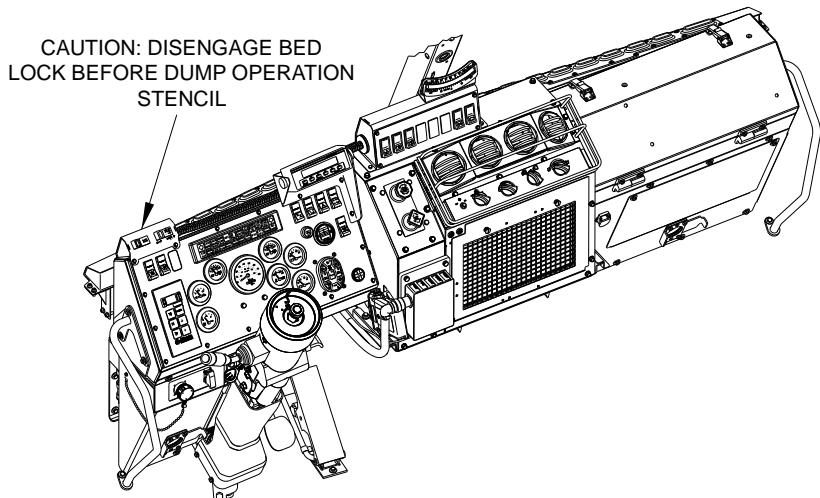


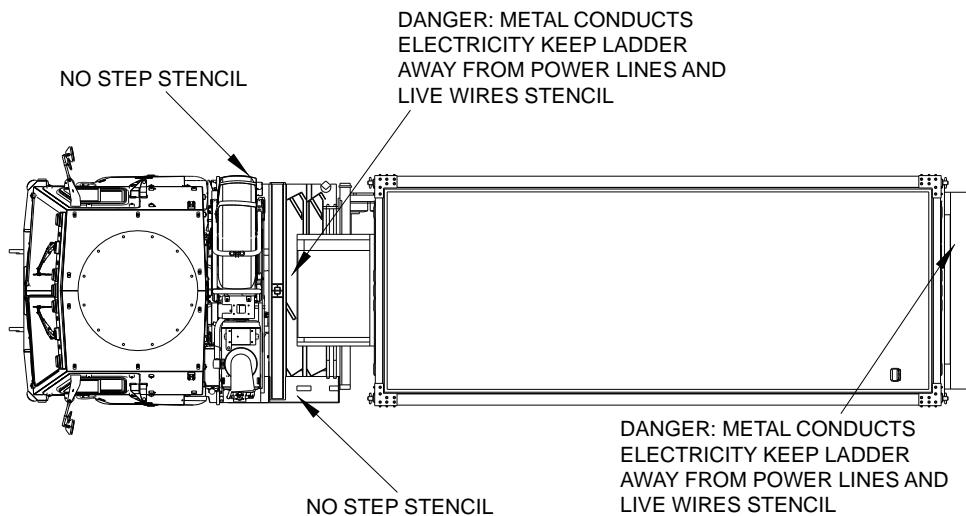
Figure 16. Stencils, M1157A1P2.

STENCILS, M1157A1P2 - Continued

LTAPPF2030

Figure 17. Stencils, M1157A1P2.

***** The following is applicable to the following UOC(s): TSP. *******STENCILS, M1087A1P2**

STENCILS, M1087A1P2 - Continued

LTAPPF2040

Figure 18. Stencils, M1087A1P2.

END OF WORK PACKAGE

CHAPTER 4

TROUBLESHOOTING PROCEDURES

OPERATOR MAINTENANCE TROUBLESHOOTING INTRODUCTION

TROUBLESHOOTING PROCEDURES

The troubleshooting work packages contain tables listing the malfunctions, tests or inspections, and corrective action required to return the vehicle to normal operation. Perform the steps in the order they appear in the tables.

Each work package is headed by an initial setup. This setup outlines what is needed as well as certain conditions which must be met before starting the task. DON'T START A TASK UNTIL:

- You understand the task.
- You understand what you are to do.
- You understand what is needed to do the work.
- You have the things you need.

This manual cannot list all malfunctions that may occur, or all tests or inspections and corrective actions. If a malfunction is not listed or is not corrected by listed corrective actions, notify Field Maintenance.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
BLUE EXHAUST SMOKE FROM ENGINE**

INITIAL SETUP:

Materials/Parts

Rag, Wiping (Volume 3, WP 0359,
Table 1, Item 148)

Equipment Condition

Engine shut down (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
BLUE EXHAUST SMOKE FROM ENGINE**

STEP 1

Is engine oil at proper level?

WARNING

Ensure engine oil is cool before performing any maintenance. Failure to comply may result in serious injury to personnel.

NOTE

Oil consumption is considered normal up to 12,000 mi (19,308 km) at a rate of one qt (one L) of oil per 45 gal (170 L) of fuel. After 12,000 mi (19,308 km), oil consumption is considered normal at a rate of one qt (one L) of oil per 60 gal (227 L) of fuel.

1. Pull engine oil dipstick from dipstick tube.
2. Check engine oil level (Volume 3, WP 0339).

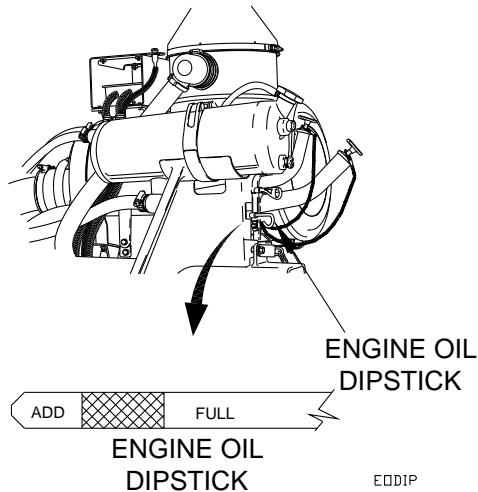


Figure 1. Engine Oil.

3. Reading should be between ADD and OPERATING RANGE markings on dipstick.
4. Add oil as required (Volume 3, WP 0355, Table 5).

CONDITION/INDICATION

Is engine oil at proper level?

DECISION

OIL HIGH - Notify Field Maintenance of overfilled engine oil.

OIL OK - Step 2 - Does engine exhaust emit blue smoke?

STEP 2

Does engine exhaust emit blue smoke?

1. Install engine oil dipstick in dipstick tube.

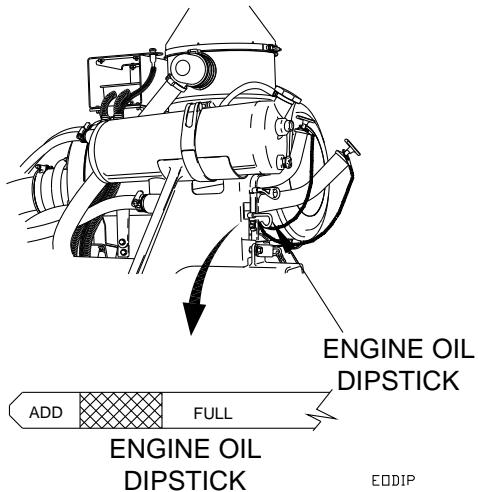


Figure 2. Engine Exhaust.

2. Start engine (Volume 1, WP 0019).
3. Perform road test.
4. Check to see if engine exhaust emits blue smoke.
5. Shut down engine (Volume 1, WP 0019).

CONDITION/INDICATION

Does engine exhaust emit blue smoke?

DECISION

SMOKE PRESENT - Notify Field Maintenance
NO SMOKE - Fault corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
CHECK ENGINE INDICATOR REMAINS ILLUMINATED**

INITIAL SETUP:

Equipment Condition

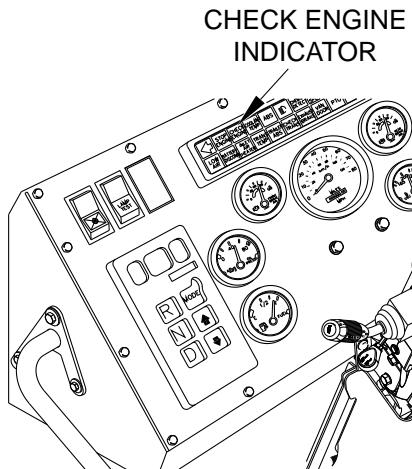
Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
CHECK ENGINE INDICATOR REMAINS ILLUMINATED**

STEP 1

Does CHECK ENGINE indicator remain illuminated after test drive?

1. Start engine. (Volume 1, WP 0019)
2. Test drive vehicle.
3. Check to see if CHECK ENGINE indicator remains illuminated.
4. Shut down engine. (Volume 1, WP 0019)



**STEERING WHEEL
REMOVED FOR CLARITY**

Figure 1. CHECK ENGINE Indicator.

CONDITION/INDICATION

Does CHECK ENGINE indicator remain illuminated after test drive?

DECISION

INDICATOR FAULTY - Notify Field Maintenance.

INDICATOR OK - Fault Corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE COOLANT IN ENGINE LUBRICATION OIL

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE COOLANT IN ENGINE LUBRICATION OIL

STEP 1

Is coolant present in engine lubrication oil?

1. Remove engine oil dipstick from dipstick tube.

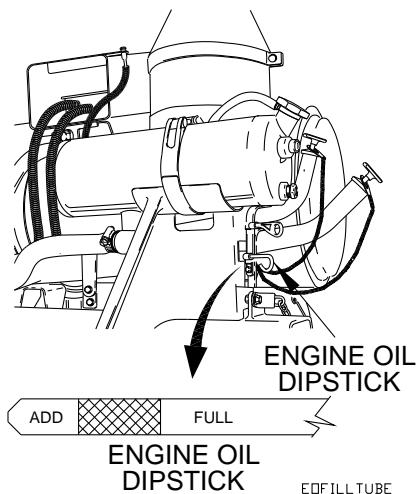


Figure 1. Engine Lubrication Oil.

2. Check engine oil dipstick for cloudy milky substance or signs of contamination.
3. If no contamination is noticed, wipe dipstick and reinstall in dipstick tube.
4. If contamination is noticed, reinstall dipstick in dipstick tube.

CONDITION/INDICATION

Is coolant present in engine lubrication oil?

DECISION

OIL CONTAMINATED - Notify Field Maintenance.

OIL OK - Fault corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
ENGINE CRANKS BUT DOES NOT START (ELECTRICAL)**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
ENGINE CRANKS BUT DOES NOT START (ELECTRICAL)**

STEP 1

Is engine oil at proper level?

1. Check engine oil level (Volume 3, WP 0339).
2. Add oil as required (Volume 3, WP 0355, Table 5).

CONDITION/INDICATION

Is engine oil at proper level?

DECISION

ADDED OIL - Step 3 - Does engine start?

LEVEL OK - Step 2 - Is air cleaner restricted?

STEP 2

Is air cleaner restricted?

WARNING



Nuclear, Biological, or Chemical (NBC) contaminated air filters must be handled and disposed of only by authorized and trained personnel. The unit commander or senior officer in charge of maintenance personnel must ensure that prescribed protective clothing (FM 3-4) is used, and prescribed safety measures and decontamination procedures (FM 3-11.5 and TB 700-4) are followed. The unit standard operating procedures are responsible for final disposal of contaminated air filters. Failure to comply may result in serious injury or death to personnel.

1. Start engine (Volume 1, WP 0019).
2. Check that AIR FILTER RESTRICTION GAUGE reads below 15 in.

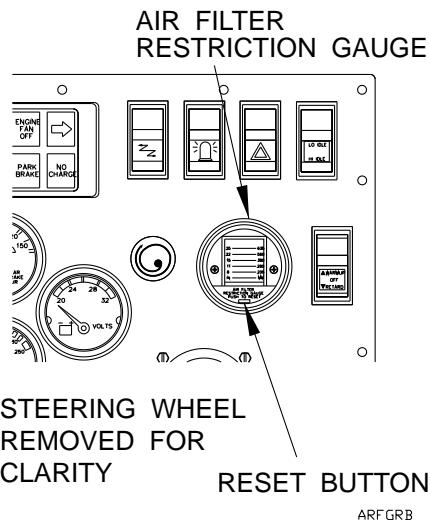


Figure 1. Air Cleaner.

3. Press reset button if AIR FILTER RESTRICTION GAUGE reads greater than 15 in.
4. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Is air cleaner restricted?

DECISION

FILTER CLOGGED - Service air cleaner. (Volume 3, WP 0346) Step 3 - Does engine start?

FILTER OK - Step 3 - Does engine start?

STEP 3

Does engine start?

1. Position master power switch to on. (Volume 1, WP 0004)
2. Attempt to start vehicle. (Volume 1, WP 0019)
3. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does engine start?

DECISION

Engine Starts - Fault corrected.

No Start - Perform Fuel System Troubleshooting (Engine Cranks But Does Not Start, or Engine Stalls After Starting). (WP 0088, Test 2 - Does fuel tank have fuel?)

END OF WORK PACKAGE

OPERATOR MAINTENANCE ENGINE DOES NOT CRANK

INITIAL SETUP:

Not Applicable

TROUBLESHOOTING PROCEDURE ENGINE DOES NOT CRANK

STEP 1

Are batteries, battery cables, and terminal posts free from damage or corrosion?

WARNING



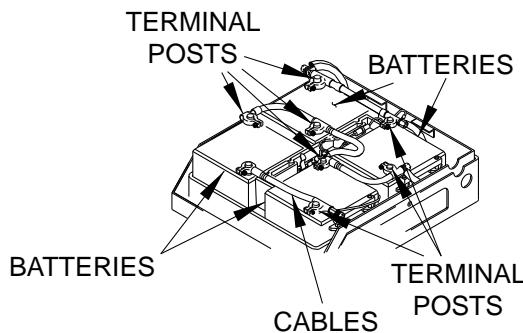
Lead-acid battery gases can explode. Do not smoke, have open flames, or make sparks around a battery, especially if caps are off. Battery may give off gas which can explode. Failure to comply may result in serious injury or death to personnel.

WARNING



Remove rings, bracelets, wristwatches, neck chains, and any other jewelry before working around vehicle. Jewelry may catch on equipment or may short across an electrical circuit or battery terminal. Failure to comply may result in serious injury or death to personnel.

1. Open battery box. (Volume 3, WP 0345)
2. Check batteries, battery cables, and terminal posts for apparent damage and corrosion.



BATTPOST

Figure 1. Batteries, Battery Cables, and Terminal Posts.

CONDITION/INDICATION

Are batteries, battery cables, and terminal posts free from damage or corrosion?

DECISION

DAMAGE PRESENT - Notify Field Maintenance batteries/battery cables need to be replaced.

NO DAMAGE - Step 2 -

STEP 2

Close battery box (Volume 3, WP 0345).

CONDITION/INDICATION**DECISION**

Continue - Notify Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE ENGINE OVERHEATS

INITIAL SETUP:

Materials/Parts

Rag, Wiping (Volume 3, WP 0359,
Table 1, Item 148)

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE ENGINE OVERHEATS

STEP 1

Is coolant at proper level?

1. Check coolant level. (Volume 3, WP 0337)

CONDITION/INDICATION

Is coolant at proper level?

DECISION

COOLANT LOW - Volume 3, WP 0337

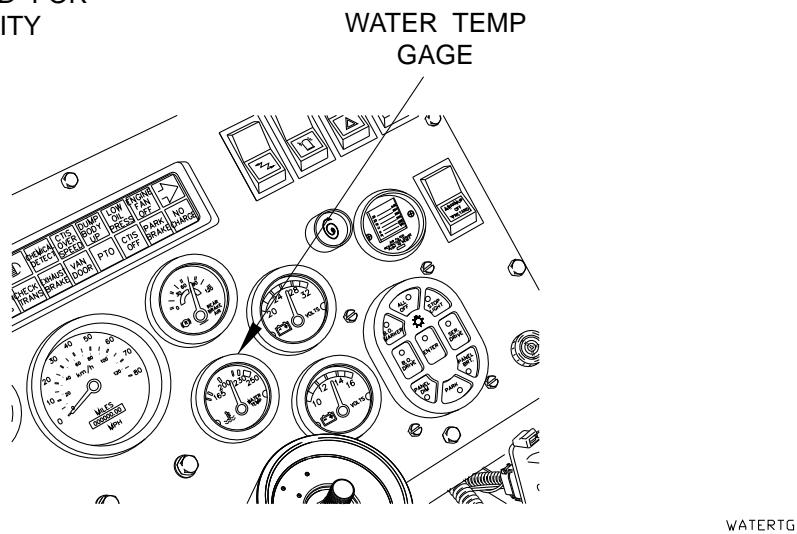
COOLANT OK - Step 2 - Does engine overheat?

STEP 2

Does engine overheat?

1. Start engine (Volume 1, WP 0019).
2. Allow engine to reach normal operating temperature (160° F to 230° F (71° C to 110° C)).

STEERING WHEEL
REMOVED FOR
CLARITY



WATERTG

Figure 1. Engine.

3. While engine is running, observe WATER TEMP gage for ten minutes.
4. Shut down engine (Volume 1, WP 0019).

CONDITION/INDICATION

Does engine overheat?

DECISION

ENGINE OVERHEATS - Notify Field Maintenance.

ENGINE OK. - Fault corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE ENGINE SPEED IS NOT STABLE

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE ENGINE SPEED IS NOT STABLE

STEP 1

Does AIR FILTER RESTRICTION GAUGE read below 15 in.?

1. Check reading on AIR FILTER RESTRICTION GAUGE.

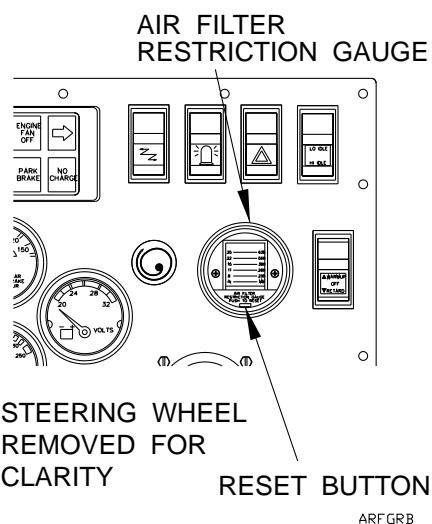


Figure 1. Air Filter Restriction Gauge.

2. Press reset button on AIR FILTER RESTRICTION GAUGE if reading is above 15 in.
3. Start engine (Volume 1, WP 0019).
4. Check reading on AIR FILTER RESTRICTION GAUGE again.
5. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Does AIR FILTER RESTRICTION GAUGE read below 15 in.?

DECISION

FILTER RESTRICTED - Service air filter. (Volume 3, WP 0346) Step 5 - Is engine speed now stable?

FILTER OK - Step 2 - Does turbocharger intake tube have damage?

STEP 2

Does turbocharger intake tube have damage?

1. Raise cab (Volume 1, WP 0020).

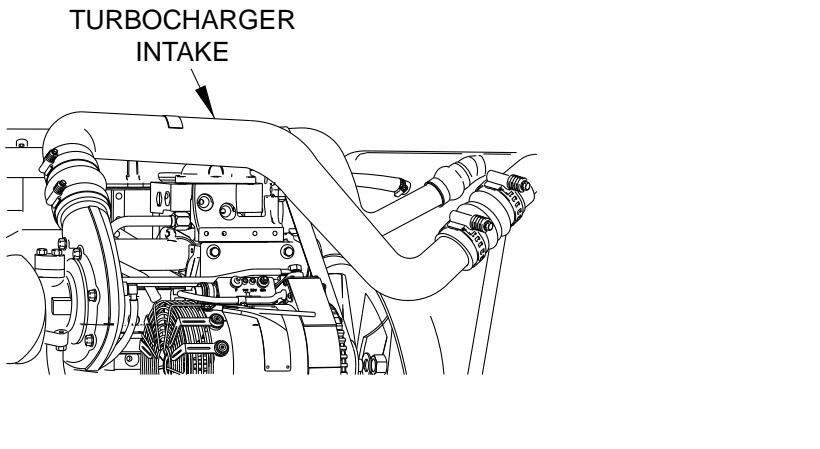


Figure 2. Turbocharger Intake Tube.

2. Check turbocharger intake tube for damage.

CONDITION/INDICATION

Does turbocharger intake tube have damage?

DECISION

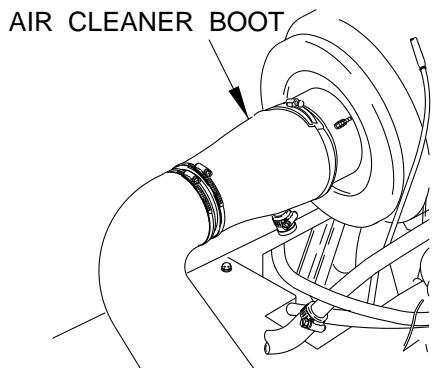
TUBE FAULTY - Notify Field Maintenance

TUBE OK - Step 3 - Does air cleaner boot have damage?

STEP 3

Does air cleaner boot have damage?

1. Check air cleaner boot for damage.



AIRCLEANERBLT10

Figure 3. Air Cleaner Boot.

CONDITION/INDICATION

Does air cleaner boot have damage?

DECISION

BOOT FAULTY - Notify Field Maintenance

BOOT OK - Step 4 - Is fuel system leaking or damaged?

STEP 4**Is fuel system leaking or damaged?**

1. Check fuel lines, fuel fittings, and fuel pump for leaks or damage.
2. Check fuel/water separator for trash and/or leaks.

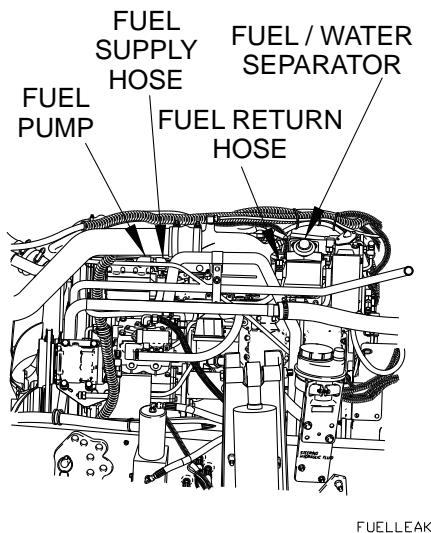


Figure 4. Fuel System.

CONDITION/INDICATION

Is fuel system leaking or damaged?

DECISION

SYSTEM FAULTY - Notify Field Maintenance

SYSTEM OK - Step 5 - Is engine speed now stable?

STEP 5

Is engine speed now stable?

1. Lower cab (Volume 1, WP 0020).
2. Start engine (Volume 1, WP 0019).
3. Check to see if engine speed is now stable.
4. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Is engine speed now stable?

DECISION

NOT STABLE - Notify Field Maintenance

STABLE - Fault corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE ENGINE STALLS AT LOW RPM

INITIAL SETUP:

Equipment Condition

Engine shut down (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE ENGINE STALLS AT LOW RPM

STEP 1

Is air cleaner restricted?

1. Start engine (Volume 1, WP 0019).
2. Check that AIR FILTER RESTRICTION GAUGE reads below 15 inches.

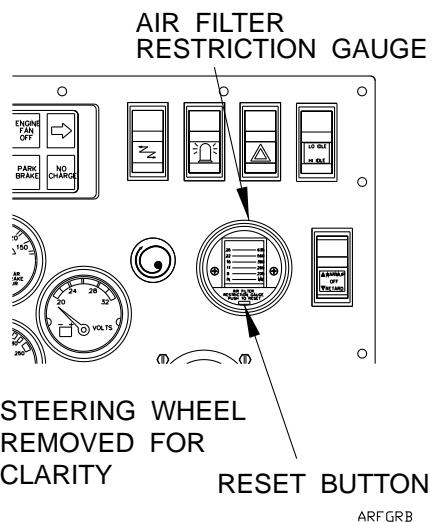


Figure 1. Air Cleaner.

3. Press reset button if AIR FILTER RESTRICTION GAUGE reads greater than 15 inches.
4. Shut down engine (Volume 1, WP 0019).

CONDITION/INDICATION

Is air cleaner restricted?

DECISION

FILTER CLOGGED - Service air cleaner. (Volume 3, WP 0346)

FILTER OK - Step 2 - Does air particle extraction hose have kinks or damage?

STEP 2

Does air particle extraction hose have kinks or damage?

1. Raise cab (Volume 1, WP 0020).
2. Check air particle extraction hose for kinks and damage.

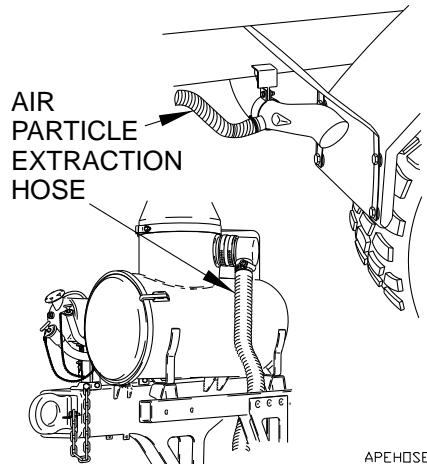


Figure 2. Air Particle Extraction Hose.

CONDITION/INDICATION

Does air particle extraction hose have kinks or damage?

DECISION

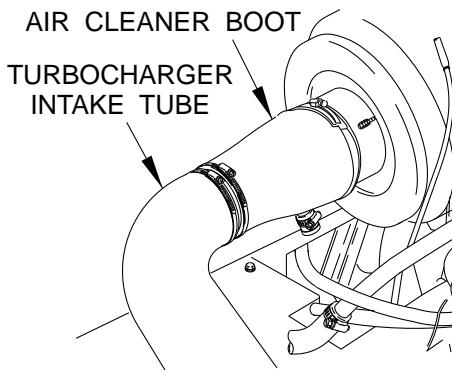
HOSE BAD - Notify Field Maintenance.

HOSE OK - Step 3 - Do air cleaner boot and/or turbocharger intake tube have damage?

STEP 3

Do air cleaner boot and/or turbocharger intake tube have damage?

1. Check air cleaner boot and turbocharger intake tube for damage.



AIRCLEANERLT10

Figure 3. Air Cleaner Boot and/or Turbocharger Intake Tube.

CONDITION/INDICATION

Do air cleaner boot and/or turbocharger intake tube have damage?

DECISION

Boot Faulty - Notify Field Maintenance to replace air cleaner boot.

Tube Faulty - Notify Field Maintenance.

Assembly OK - Step 4 - Does engine idle normally without stalling at low rpm?

STEP 4

Does engine idle normally without stalling at low rpm?

1. Lower cab (Volume 1, WP 0020).
2. Start engine (Volume 1, WP 0019).
3. Perform road test (Volume 1, WP 0019).
4. Shut down engine (Volume 1, WP 0019).

CONDITION/INDICATION

Does engine idle normally without stalling at low rpm?

DECISION

NO OPERATION - Notify Field Maintenance.

OPERATION OK - Fault corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
ENGINE STARTS BUT MISFIRES, RUNS ROUGH, OR LACKS POWER**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
ENGINE STARTS BUT MISFIRES, RUNS ROUGH, OR LACKS POWER**

STEP 1

Does AIR FILTER RESTRICTION GAUGE read below 15 in.?

1. Check reading on AIR FILTER RESTRICTION GAUGE.

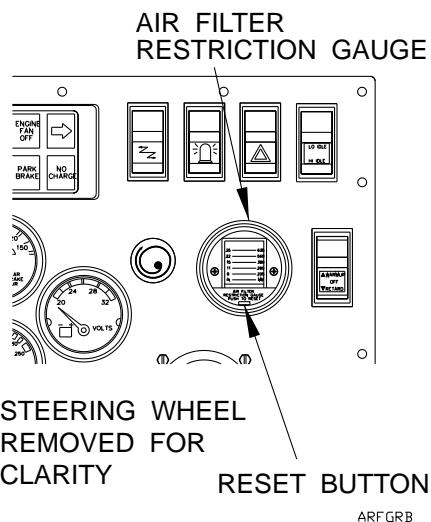


Figure 1. Air Filter Restriction Gauge.

2. Press reset button on AIR FILTER RESTRICTION GAUGE if reading is above 15 in.
3. Start engine (Volume 1, WP 0019).
4. Check reading on AIR FILTER RESTRICTION GAUGE.
5. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Does AIR FILTER RESTRICTION GAUGE read below 15 in.?

DECISION

FILTER RESTRICTED - Service air filter. (Volume 3, WP 0346) Step 8 - Does engine misfire, run rough, or lack power?

FILTER OK - Step 2 - Does turbocharger intake tube have damage?

STEP 2

Does turbocharger intake tube have damage?

1. Raise cab. (Volume 1, WP 0020)

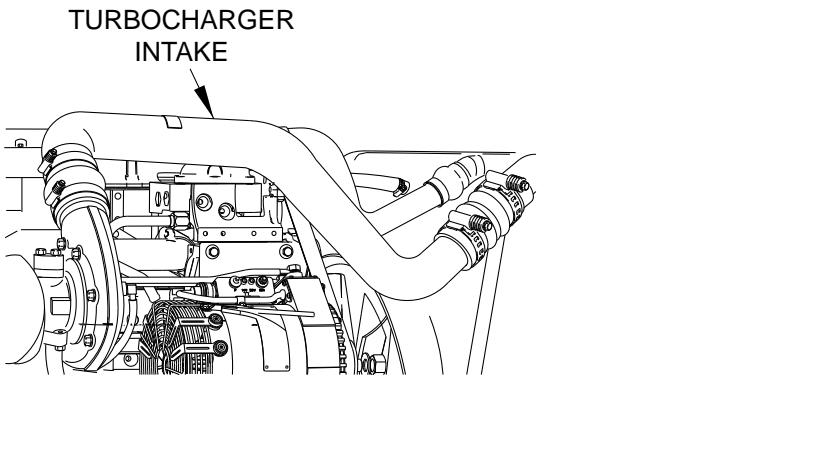


Figure 2. Turbocharger Intake Tube.

2. Check turbocharger intake tube for damage.

CONDITION/INDICATION

Does turbocharger intake tube have damage?

DECISION

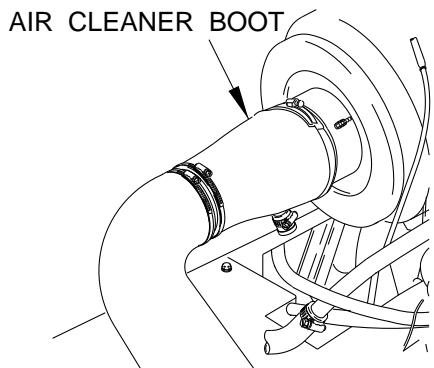
TUBE FAULTY - Notify Field Maintenance

TUBE OK - Step 3 - Does air cleaner boot have damage?

STEP 3

Does air cleaner boot have damage?

1. Check air cleaner boot for damage.



AIRCLEANERBLT10

Figure 3. Air Cleaner Boot.

CONDITION/INDICATION

Does air cleaner boot have damage?

DECISION

BOOT FAULTY - Notify Field Maintenance

BOOT OK - Step 4 - Is fuel system leaking or damaged?

STEP 4**Is fuel system leaking or damaged?**

1. Check fuel lines, fuel fittings, and fuel pump for leaks or damage.
2. Check fuel/water separator for trash and/or leaks.

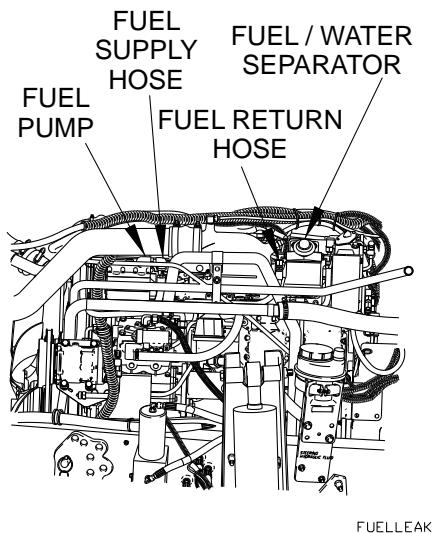


Figure 4. Fuel System.

CONDITION/INDICATION

Is fuel system leaking or damaged?

DECISION

SYSTEM FAULTY - Notify Field Maintenance

SYSTEM OK - Step 5 - Is exhaust brake pipe assembly, exhaust pipe assembly, or muffler damaged?

STEP 5

Is exhaust brake pipe assembly, exhaust pipe assembly, or muffler damaged?

1. Check exhaust brake pipe assembly and exhaust pipe assembly for damage.

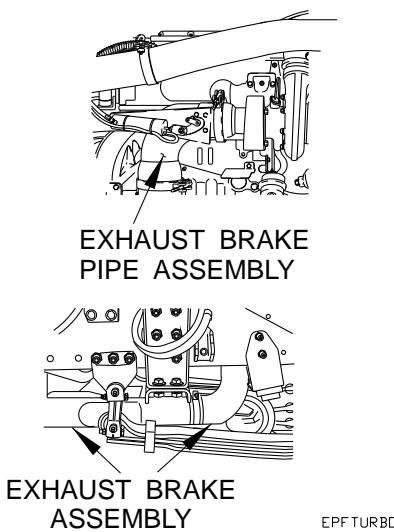


Figure 5. Exhaust Brake Pipe Assembly, Exhaust Pipe Assembly, or Muffler.

2. Check muffler for damage.

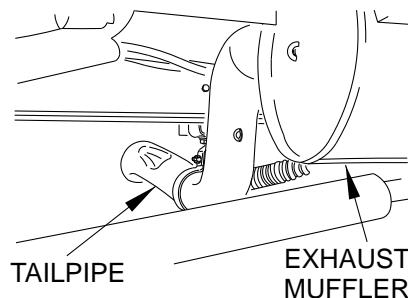


Figure 6. Exhaust Brake Pipe Assembly, Exhaust Pipe Assembly, or Muffler.

CONDITION/INDICATION

Is exhaust brake pipe assembly, exhaust pipe assembly, or muffler damaged?

DECISION

DAMAGED - Notify Field Maintenance

ASSEMBLIES/MUFFLER OK - Step 6 - Is engine oil at proper level?

STEP 6**Is engine oil at proper level?**

1. Raise cab. (Volume 1, WP 0020)

WARNING

Ensure engine oil is cool before performing any maintenance. Failure to comply may result in serious injury to personnel.

2. Pull engine oil dipstick from dipstick tube.
3. Wipe engine oil dipstick clean.
4. Reinsert engine oil dipstick in dipstick tube until fully seated.
5. Pull engine oil dipstick from dipstick tube.
6. Verify engine oil level.

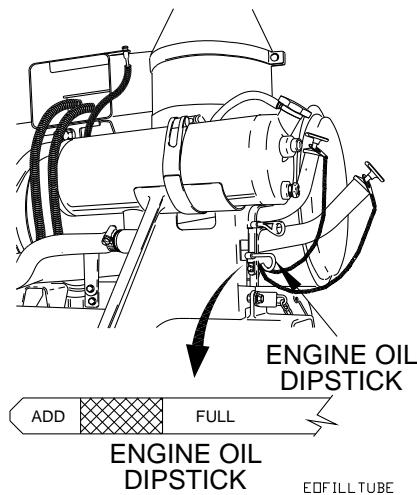


Figure 7. Engine Oil.

7. Reading should be between ADD and FULL markings on engine oil dipstick.
8. If oil is low, add oil to appropriate level. (Volume 3, WP 0355, Table 5)
9. Wipe engine oil dipstick clean.
10. Return engine oil dipstick to dipstick tube

CONDITION/INDICATION

Is engine oil at proper level?

DECISION

OIL ADDED - Step 8 - Does engine misfire, run rough, or lack power?

OIL OK - Step 7 - Is water present in fuel/water separator?

STEP 7**Is water present in fuel/water separator?**

1. Check fuel/water separator for water. (Volume 3, WP 0339)

CONDITION/INDICATION

Is water present in fuel/water separator?

DECISION

Continue - Step 8 - Does engine misfire, run rough, or lack power?

STEP 8**Does engine misfire, run rough, or lack power?**

1. Lower cab. (Volume 1, WP 0020)
2. Start engine. (Volume 1, WP 0019)
3. Check to see if engine misfires, runs rough, or lacks power.
4. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Does engine misfire, run rough, or lack power?

DECISION

ENGINE FAULTY - Notify Field Maintenance

ENGINE OK - Fault corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE EXCESSIVE BLACK OR GRAY EXHAUST SMOKE FROM ENGINE

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE EXCESSIVE BLACK OR GRAY EXHAUST SMOKE FROM ENGINE

STEP 1

Does AIR FILTER RESTRICTION GAUGE read below 15 in.?

1. Check reading on AIR FILTER RESTRICTION GAUGE.

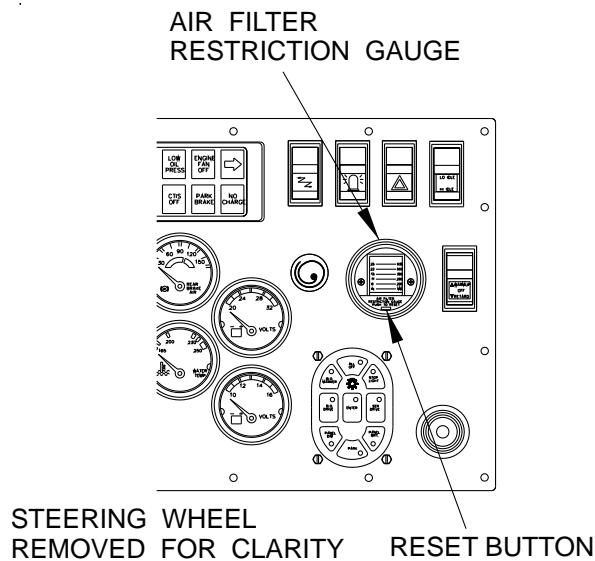


Figure 1. Air Filter Restriction Gauge.

2. Press RESET button on AIR FILTER RESTRICTION GAUGE if reading is between 15 and 22 in. or above 22 in.

3. Start engine (Volume 1, WP 0019).
4. Check reading on AIR FILTER RESTRICTION GAUGE again.
5. Shut down engine (Volume 1, WP 0019).

CONDITION/INDICATION

Does AIR FILTER RESTRICTION GAUGE read below 15 in.?

DECISION

FILTER CLOGGED - Service air filter. (Volume 3, WP 0346) Step 4 - Does engine still have excessive black or gray exhaust smoke?

FILTER OK - Step 2 - Does the air particle extraction hose have kinks or damage?

STEP 2**Does the air particle extraction hose have kinks or damage?**

1. Check air particle extraction hose for kinks and damage.

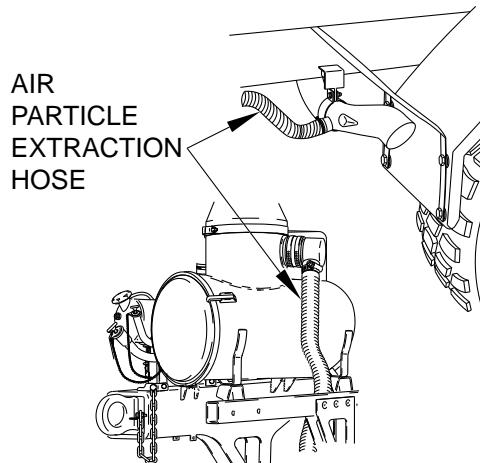


Figure 2. Air Particle Extraction Hose.

CONDITION/INDICATION

Does the air particle extraction hose have kinks or damage?

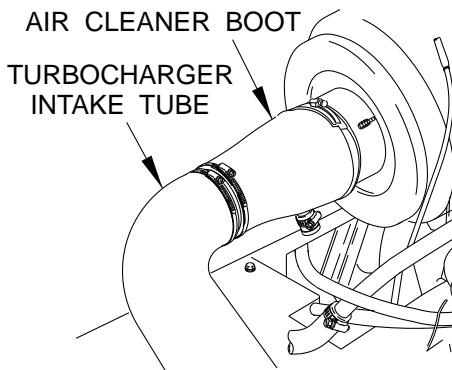
DECISION

HOSE FAULTY - Notify Field Maintenance

HOSE OK - Step 3 - Does air cleaner boot and/or turbocharger intake tube have damage?

STEP 3**Does air cleaner boot and/or turbocharger intake tube have damage?**

1. Check air cleaner boot and turbocharger intake tube for damage.



AIRCLEANERLT10

Figure 3. Air Cleaner Boot and/or Turbocharger Intake Tube.

CONDITION/INDICATION

Does air cleaner boot and/or turbocharger intake tube have damage?

DECISION

Boot Faulty - Notify Field Maintenance to replace air cleaner boot.

Tube Faulty - Notify Field Maintenance to replace turbocharger intake tube.

Assembly OK - Step 4 - Does engine still have excessive black or gray exhaust smoke?

STEP 4

Does engine still have excessive black or gray exhaust smoke?

1. Start engine (Volume 1, WP 0019).
2. Perform road test (Volume 1, WP 0019).
3. Shut down engine (Volume 1, WP 0019).

CONDITION/INDICATION

Does engine still have excessive black or gray exhaust smoke?

DECISION

ENGINE SMOKES - Notify Field Maintenance

ENGINE OK - Fault corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE EXCESSIVE ENGINE OIL CONSUMPTION

INITIAL SETUP:

Materials/Parts

Rag, Wiping (Volume 3, WP 0359,
Table 1, Item 148)

Equipment Condition

Engine shut down (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE EXCESSIVE ENGINE OIL CONSUMPTION

STEP 1**Is engine oil at proper level?**

1. Raise cab (Volume 1, WP 0020).

WARNING

Ensure engine oil is cool before performing any maintenance. Failure to comply may result in serious injury to personnel.

NOTE

Oil consumption is considered normal up to 12,000 mi (19,308 km) at a rate of one qt (one L) of oil per 45 gal (170 L) of fuel. After 12,000 mi (19,308 km), oil consumption is considered normal at a rate of one qt (one L) of oil per 60 gal (227 L) of fuel.

2. Pull engine oil dipstick from dipstick tube.
3. Check engine oil level (Volume 3, WP 0339).

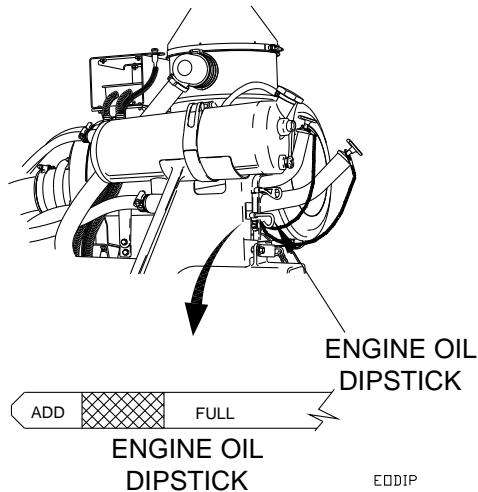


Figure 1. Engine Oil.

4. Reading should be between ADD and FULL markings on dipstick.
5. Add oil as required (Volume 3, WP 0355, Table 5).

CONDITION/INDICATION

Is engine oil at proper level?

DECISION

OIL HIGH - Notify Field Maintenance of overfilled engine oil.

OIL OK - Step 2 - Do high pressure tubes have Class II or Class III leaks?

STEP 2

Do high pressure tubes have Class II or Class III leaks?

1. Install engine oil dipstick.
2. Inspect high pressure tubes for signs of oil leakage.

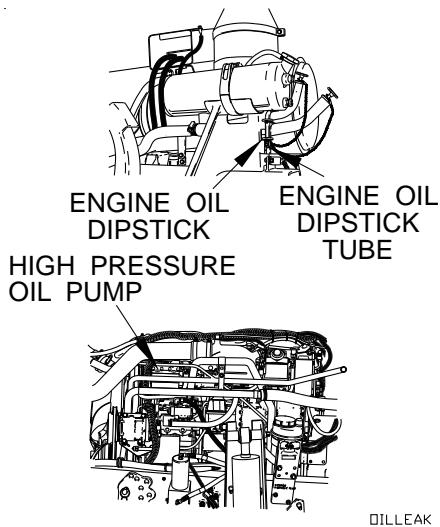


Figure 2. High Pressure Tubes.

CONDITION/INDICATION

Do high pressure tubes have Class II or Class III leaks?

DECISION

OIL TUBE FAULTY - Notify Field Maintenance of faulty oil tube.

OIL TUBES OK - Step 3 - Does engine block have Class II or Class III leak?

STEP 3

Does engine block have Class II or Class III leak?

1. Visually inspect engine block for signs of oil leakage.

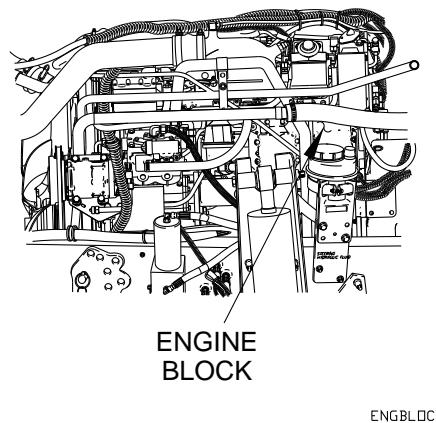


Figure 3. Engine Block.

CONDITION/INDICATION

Does engine block have Class II or Class III leak?

DECISION

BLOCK FAULTY - Notify Field Maintenance of faulty engine block.

BLOCK OK - Step 4 - Does engine oil filter have Class II or Class III leak?

STEP 4

Does engine oil filter have Class II or Class III leak?

1. Visually inspect engine oil filter for signs of oil leakage.

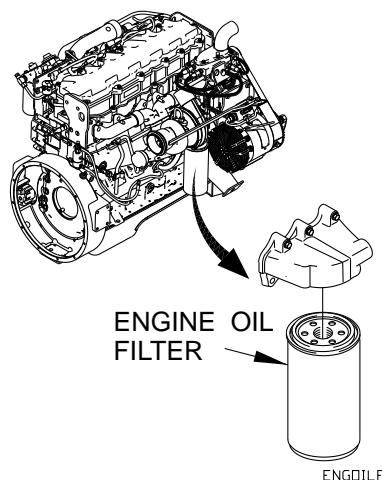


Figure 4. Engine Oil Filter.

CONDITION/INDICATION

Does engine oil filter have Class II or Class III leak?

DECISION

FILTER FAULTY - Notify Field Maintenance.

FILTER OK - Step 5 - Is engine oil consumption high?

STEP 5

Is engine oil consumption high?

1. Lower cab (Volume 1, WP 0020).
2. Check to see if engine oil consumption is high.

CONDITION/INDICATION

Is engine oil consumption high?

DECISION

CONSUMPTION HIGH - Notify Field Maintenance.

CONSUMPTION OK - Fault corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE LOW ENGINE OIL PRESSURE

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE LOW ENGINE OIL PRESSURE

STEP 1

Is engine oil at proper level?

WARNING

Ensure engine oil is cool before performing any maintenance. Failure to comply may result in serious injury to personnel.

1. Pull engine oil dipstick from dipstick tube.
2. Wipe oil dipstick clean.
3. Reinsert oil dipstick in dipstick tube until fully seated.
4. Pull engine oil dipstick from dipstick tube.

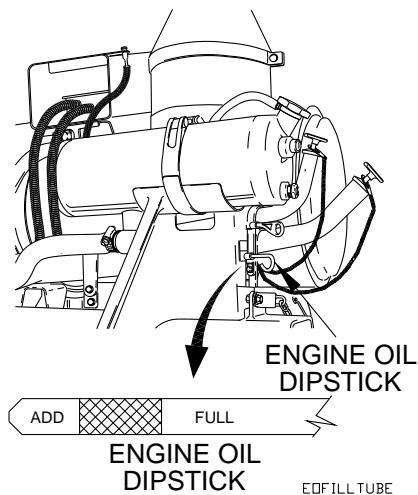


Figure 1. Engine Oil.

5. Reading should be between ADD and FULL markings on dipstick.
6. If oil is low, add oil to appropriate level. (Volume 3, WP 0355, Table 5)
7. Wipe oil dipstick clean.
8. Return dipstick to dipstick tube.

CONDITION/INDICATION

Is engine oil at proper level?

DECISION

Continue - Step 2 - Is engine oil contaminated?

STEP 2

Is engine oil contaminated?

1. Pull engine oil dipstick from dipstick tube.

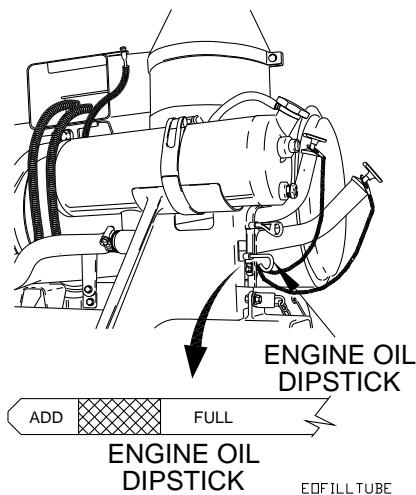


Figure 2. Engine Oil.

2. Check engine oil dipstick for cloudy milky substance or signs of contamination.

CONDITION/INDICATION

Is engine oil contaminated?

DECISION

Contaminated - Notify Field Maintenance

Oil OK - Step 3 - Is ENGINE OIL PRESSURE/LOW OIL PRESSURE indicator illuminated with engine running?

STEP 3

Is ENGINE OIL PRESSURE/LOW OIL PRESSURE indicator illuminated with engine running?

1. Start engine. (Volume 1, WP 0019)
2. Check to see if ENGINE OIL PRESS/LOW OIL PRESS indicator is illuminated. (Volume 1, WP 0004)
3. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Is ENGINE OIL PRESSURE/LOW OIL PRESSURE indicator illuminated with engine running?

DECISION

Not Illuminated - Step 5 - Does OIL PRESSURE gage read lower than 15 PSI with engine at 750 RPM?

Illuminated - Step 4 - Does OIL PRESSURE gage read lower than 15 PSI with engine at 750 RPM?

STEP 4

Does OIL PRESSURE gage read lower than 15 PSI with engine at 750 RPM?

1. Start engine. (Volume 1, WP 0019)
2. Note reading on OIL PRESS gage. (Volume 1, WP 0004)
3. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Does OIL PRESSURE gage read lower than 15 PSI with engine at 750 RPM?

DECISION

Pressure OK - Perform Electrical System troubleshooting (LOW OIL PRESSURE Indicator Illuminates While Engine is Running). (WP 0129)

Pressure Low - Notify Field Maintenance

STEP 5

Does OIL PRESSURE gage read lower than 15 PSI with engine at 750 RPM?

1. Start engine. (Volume 1, WP 0019)
2. Note reading on OIL PRESSURE gage. (Volume 1, WP 0004)
3. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Does OIL PRESSURE gage read lower than 15 PSI with engine at 750 RPM?

DECISION

Pressure OK - Fault corrected.

Pressure Low - Perform Electrical System troubleshooting (OIL PRESS Does Not Operate Or Is Inaccurate). (WP 0107)

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
STOP ENGINE INDICATOR REMAINS ILLUMINATED**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
STOP ENGINE INDICATOR REMAINS ILLUMINATED**

STEP 1

Does STOP ENGINE indicator remain illuminated after test drive?

1. Start engine. (Volume 1, WP 0019)
2. Test drive vehicle.
3. Check to see if STOP ENGINE indicator remains illuminated.
4. Shut down engine. (Volume 1, WP 0019)

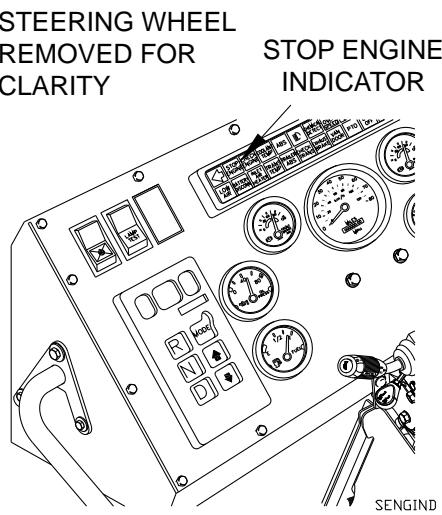


Figure 1. STOP ENGINE Indicator.

CONDITION/INDICATION

Does STOP ENGINE indicator remain illuminated after test drive?

DECISION

INDICATOR FAULTY - Notify Field Maintenance.
INDICATOR OK - Fault Corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE TOO MUCH ENGINE VIBRATION

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE TOO MUCH ENGINE VIBRATION

STEP 1

Is air filter restricted?

1. Start engine (Volume 1, WP 0019).
2. Check that AIR FILTER RESTRICTION GAUGE reads below 25 in.

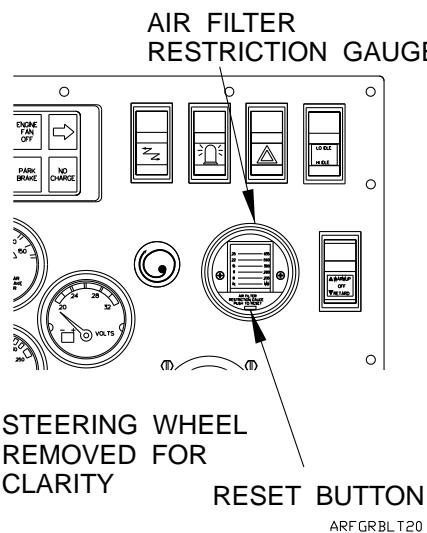


Figure 1. Air Filter.

3. Press reset button if AIR FILTER RESTRICTION GAUGE reads greater than 25 in.
4. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Is air filter restricted?

DECISION

FILTER CLOGGED - Service air filter. (Volume 3, WP 0346) Step 2 - Does engine have excessive vibration?

FILTER OK - Step 2 - Does engine have excessive vibration?

STEP 2**Does engine have excessive vibration?**

1. Start engine (Volume 1, WP 0019).
2. Listen and feel for excessive engine vibration.
3. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Does engine have excessive vibration?

DECISION

ENGINE VIBRATES - Notify Field Maintenance.

ENGINE OK - Fault corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE WHITE EXHAUST SMOKE FROM ENGINE

INITIAL SETUP:

Equipment Condition

Engine running (Volume 1, WP 0019)

TROUBLESHOOTING PROCEDURE WHITE EXHAUST SMOKE FROM ENGINE

STEP 1

Is air cleaner restricted?

1. Check that AIR FILTER RESTRICTION GAUGE reads below 15 in.

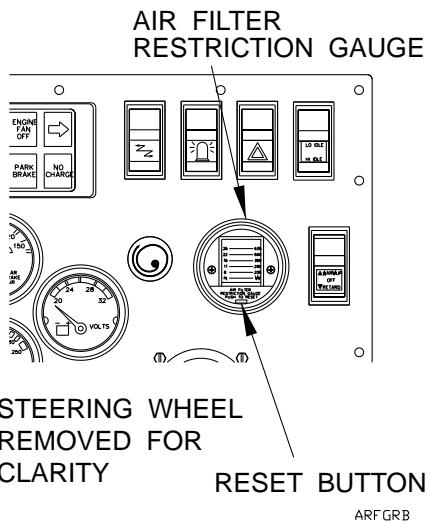


Figure 1. Air Cleaner.

2. Press reset button if AIR FILTER RESTRICTION GAUGE reads greater than 15 in.
3. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Is air cleaner restricted?

DECISION

FILTER CLOGGED - Service air cleaner. (Volume 3, WP 0346) Step 3 - Is white smoke present from engine exhaust?

FILTER OK - Step 2 - Is white smoke present with engine warm?

STEP 2

Is white smoke present with engine warm?

NOTE

Do not allow engine to idle for a long period of time. When an engine runs at idle for a long period of time, cylinders cool and all of fuel does not burn.

1. Start engine (Volume 1, WP 0019).

STEERING WHEEL
REMOVED FOR
CLARITY

WATER TEMP
GAGE

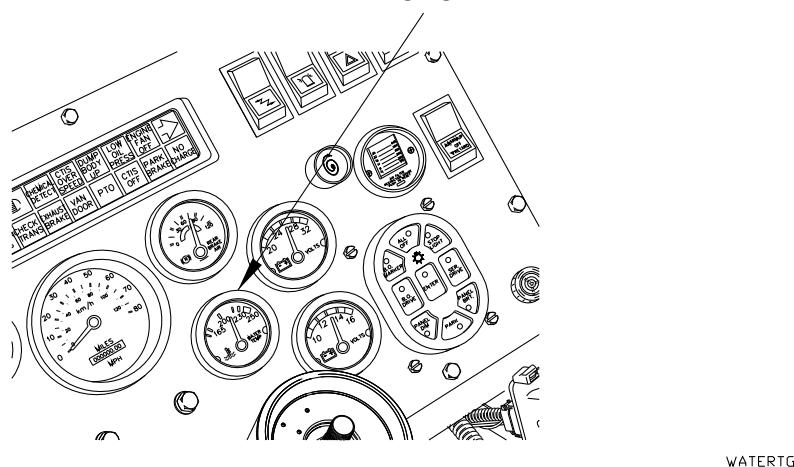


Figure 2. White Smoke.

2. Check that WATER TEMP gage reads between 100° F to 230° F (38° C to 110° C).
3. Check for white exhaust smoke.
4. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Is white smoke present with engine warm?

DECISION

SMOKE PRESENT - Notify Field Maintenance
NO SMOKE - Fault corrected.

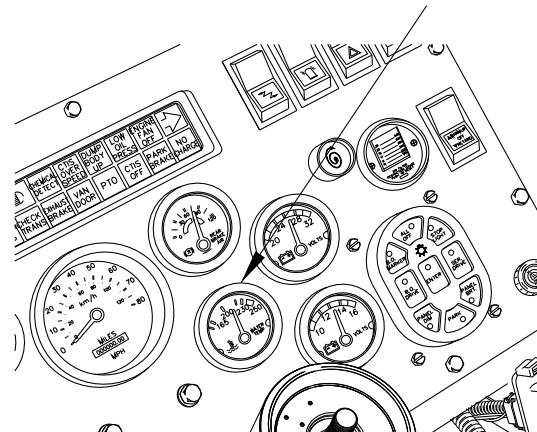
STEP 3

Is white smoke present from engine exhaust?

1. Start engine (Volume 1, WP 0019).

STEERING WHEEL
REMOVED FOR
CLARITY

WATER TEMP
GAGE



WATERTG

Figure 3. White Smoke.

2. Check that WATER TEMP gage reads between 100° F to 230° F (38° C to 110° C).
3. Check for white exhaust smoke.
4. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Is white smoke present from engine exhaust?

DECISION

SMOKE PRESENT - Notify Field Maintenance
NO SMOKE - Fault corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
ENGINE CRANKS BUT DOES NOT START, OR ENGINE STALLS AFTER STARTING
(FUEL)**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

Cab raised. (Volume 1, WP 0020)

*** The following is applicable to the following UOC(s): TSA TSB TSG TSH TSJ
WRK TSL TSM TSP TSQ TSR TSU TSV TSX. ***

TROUBLESHOOTING PROCEDURE

**ENGINE CRANKS BUT DOES NOT START, OR ENGINE STALLS AFTER STARTING
(FUEL)**

STEP 1

Has engine system troubleshooting been performed?

CONDITION/INDICATION

Has engine system troubleshooting been performed?

DECISION

PERFORM ENGINE - Perform Engine System Troubleshooting (Engine Cranks But Does Not Start). (WP 0076)

ENGINE PERFORMED - Step 2 - Does fuel tank have fuel?

STEP 2

Does fuel tank have fuel?

WARNING



Diesel fuel is flammable. Do not fill fuel tank with engine running, while smoking, or when near an open flame. Never overfill fuel tank or spill fuel. If fuel is spilled, clean up immediately. Failure to comply may result in serious injury or death to personnel.

1. Remove fuel cap from tank.

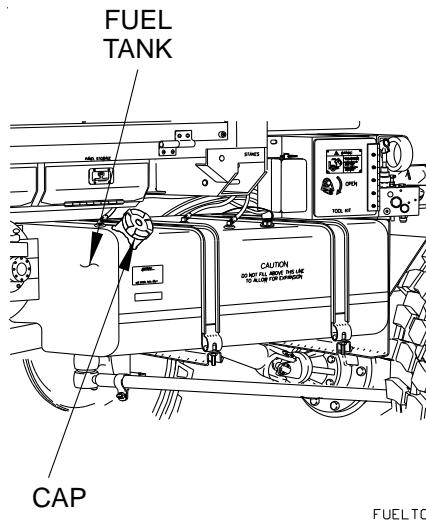


Figure 1. Fuel Tank.

2. Visually check fuel tank to see if fuel is present.

CONDITION/INDICATION

Does fuel tank have fuel?

DECISION

NO FUEL - Add fuel to fuel tank. (Volume 1, WP 0017) Step 5 - Does engine start?

FUEL PRESENT - Step 3 - Did fuel in tank match what FUEL gage read?

STEP 3

Did fuel in tank match what FUEL gage read?

1. Check fuel tank and FUEL gage to see if FUEL gage is operating properly.



Figure 2. Fuel Gage.

2. Replace fuel cap on tank.

CONDITION/INDICATION

Did fuel in tank match what FUEL gage read?

DECISION

DIFFERENT READINGS - Perform Electrical System Troubleshooting (FUEL Gage Does Not Operate or Is Inaccurate). (WP 0102)

GAGE OK - Step 4 - Does fuel show signs of contamination?

STEP 4

Does fuel show signs of contamination?

WARNING



Do not perform fuel/water separator checks, inspections, or draining while smoking, or when near fire or sparks. Fuel could ignite. Failure to comply may result in serious injury or death to personnel.

1. Check fuel/water separator for water and/or oil in fuel.

CONDITION/INDICATION

Does fuel show signs of contamination?

DECISION

FUEL CONTAMINATED - Notify Field Maintenance.
FUEL CLEAN - Step 5 - Does engine start?

STEP 5**Does engine start?**

1. Lower cab. (Volume 1, WP 0020)
2. Start engine. (Volume 1, WP 0019)
3. Perform road test.
4. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Does engine start?

DECISION

NO OPERATION - Perform Electrical System Troubleshooting (Engine Cranks But Does Not Start). (WP 0101, Test 1 - Has fuel system troubleshooting been performed?)
OPERATION OK - Fault corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE FUEL CONSUMPTION TOO HIGH

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE FUEL CONSUMPTION TOO HIGH

STEP 1

Does AIR FILTER RESTRICTION GAUGE read below 15 in.?

1. Check reading on AIR FILTER RESTRICTION GAUGE.

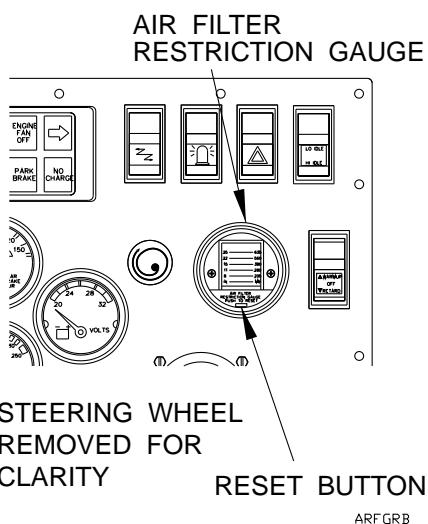


Figure 1. Air Filter Restriction Gauge.

2. Press RESET button on AIR FILTER RESTRICTION GAUGE if reading is between 15 and 22 in.
3. Start engine. (Volume 1, WP 0019)
4. Check reading on AIR FILTER RESTRICTION GAUGE again.
5. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Does AIR FILTER RESTRICTION GAUGE read below 15 in.?

DECISION

FILTER CLOGGED - Service air filter. (Volume 3, WP 0346) Step 6 - Does fuel consumption rate return to normal operation level?

FILTER OK - Step 2 - Is air cleaner boot damaged?

STEP 2

Is air cleaner boot damaged?

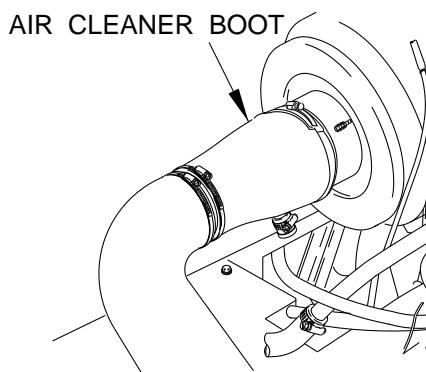
WARNING

Ensure both doors are securely closed before cab is raised. Do not allow personnel near cab when cab is being raised. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

Never raise cab while occupied or when parked uphill on a steep grade. Failure to comply may result in serious injury or death to personnel.

1. Raise cab (Volume 1, WP 0020).
2. Check air cleaner boot for damage.



AIRCLEANERBL T10

Figure 2. Air Cleaner Boot.

CONDITION/INDICATION

Is air cleaner boot damaged?

DECISION

TUBE BAD - Notify Field Maintenance

TUBE OK - Step 3 - Are exhaust tubes or muffler damaged?

STEP 3

Are exhaust tubes or muffler damaged?

WARNING

Ensure exhaust system is cool before performing troubleshooting.
Failure to comply may result in injury to personnel.

1. Check exhaust tube from turbocharger for damage.

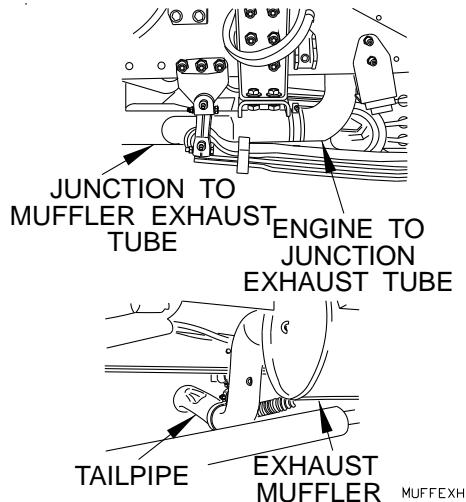


Figure 3. Exhaust Tubes or Muffler.

2. Check muffler for extensive damage.

CONDITION/INDICATION

Are exhaust tubes or muffler damaged?

DECISION

EXHAUST DAMAGED - Notify Field Maintenance
EXHAUST OK - Step 4 - Are leaks found in fuel lines?

STEP 4**Are leaks found in fuel lines?**

1. Check fuel lines, fuel fittings and fuel pump for fuel leaks.

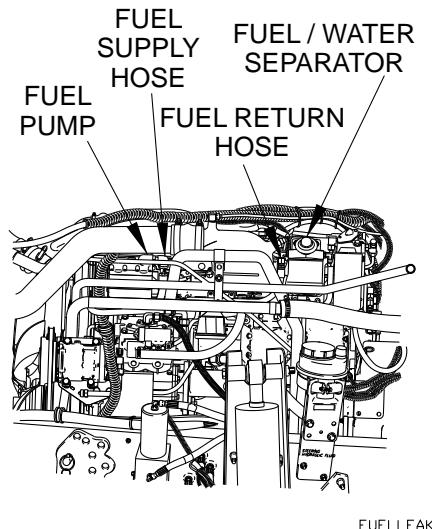


Figure 4. Fuel Lines.

CONDITION/INDICATION

Are leaks found in fuel lines?

DECISION

LEAKS FOUND - Notify Field Maintenance
NO LEAKS - Step 5 - Does fuel consumption rate return to normal operation level?

STEP 5**Does fuel consumption rate return to normal operation level?**

1. Lower cab (Volume 1, WP 0020).
2. Start engine (Volume 1, WP 0019).
3. Perform road test.
4. Shut down engine (Volume 1, WP 0019).

CONDITION/INDICATION

Does fuel consumption rate return to normal operation level?

DECISION

CONSUMPTION HIGH - Notify Field Maintenance
CONSUMPTION OK - Fault corrected.

STEP 6

Does fuel consumption rate return to normal operation level?

1. Start engine (Volume 1, WP 0019).
2. Perform road test.
3. Shut down engine (Volume 1, WP 0019).

CONDITION/INDICATION

Does fuel consumption rate return to normal operation level?

DECISION

CONSUMPTION HIGH - Notify Field Maintenance
CONSUMPTION OK - Fault corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
EXHAUST FUMES IN CAB**

INITIAL SETUP:

Equipment Condition

Engine running. (Volume 1, WP 0019)

**TROUBLESHOOTING PROCEDURE
EXHAUST FUMES IN CAB**

STEP 1

Are exhaust fumes present in cab?

WARNING



- CARBON MONOXIDE (EXHAUST GAS) CAN KILL YOU.
 - Carbon monoxide is a colorless, odorless, DEADLY POISONOUS gas and when breathed deprives body of oxygen and causes SUFFOCATION. Breathing air with carbon monoxide produces symptoms of headache, dizziness, loss of muscular control, a sleepy feeling, and coma. Permanent BRAIN DAMAGE or DEATH can result from severe exposure.
 - The following precautions MUST be followed to ensure personnel are safe whenever any type of personnel heater or engine is operated for any purpose. Failure to comply may result in serious injury or death to personnel.
 - DO NOT operate heater or engine in an enclosed area without adequate ventilation.
 - DO NOT drive any vehicle with inspection plates, cover plates, or engine compartment covers removed unless necessary for maintenance purposes.
 - NEVER sleep in a vehicle when the heater is operating or the engine is idling.
 - BE ALERT at all times during vehicle operation for exhaust odors and exposure symptoms. If either is present, IMMEDIATELY VENTILATE personnel compartments. Treatment of affected personnel shall be: expose to fresh air; keep warm; DO NOT PERMIT PHYSICAL EXERCISE. If necessary, give cardiopulmonary resuscitation, as described in FM 4-25.11, and get immediate medical attention. Failure to comply may result in serious injury or death to personnel.
 - THE BEST DEFENSE AGAINST CARBON MONOXIDE POISONING IS GOOD VENTILATION.
1. Check for exhaust fumes in cab.
 2. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Are exhaust fumes present in cab?

DECISION

PRESENT - Notify Field Maintenance
NOT PRESENT - Fault corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
EXHAUST SYSTEM UNUSUALLY NOISY OR VIBRATES EXCESSIVELY DURING
ENGINE OPERATION

INITIAL SETUP:

Equipment Condition

Engine running. (Volume 1, WP 0019)

TROUBLESHOOTING PROCEDURE

EXHAUST SYSTEM UNUSUALLY NOISY OR VIBRATES EXCESSIVELY DURING
ENGINE OPERATION

STEP 1

Is exhaust system unusually noisy or vibrating excessively during engine operation?

1. Listen to hear if exhaust system is unusually noisy.
2. Check for excessive vibration of exhaust system.
3. Shut down engine (Volume 1, WP 0019).

CONDITION/INDICATION

Is exhaust system unusually noisy or vibrating excessively during engine operation?

DECISION

PRESENT - Notify Field Maintenance

NOT PRESENT - Fault corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE ENGINE OVERHEATS

INITIAL SETUP:

Materials/Parts

Antifreeze, Permanent (Volume 3,
WP 0359, Table 1, Item 23)

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE ENGINE OVERHEATS

STEP 1

Is coolant at proper level?

WARNING



Extreme care should be taken when removing radiator cap if temperature gage reads above 180°F (82°C). Contact with steam or hot coolant under pressure may result. Failure to comply may result in injury to personnel.

1. Check top radiator sight glass for proper level of engine coolant.

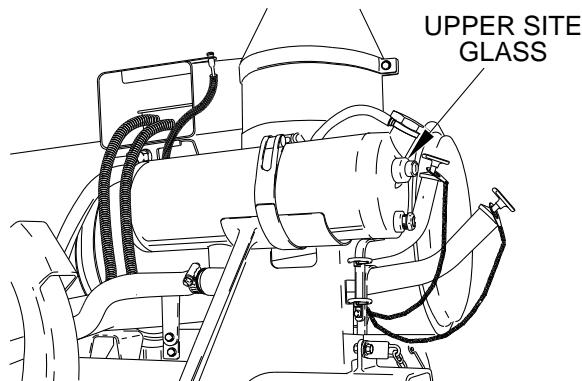


Figure 1. Coolant Level.

CONDITION/INDICATION

Is coolant at proper level?

DECISION

COOLANT LOW - Volume 3, WP 0337, Table 1 Step 7 - Does engine continue to overheat?

COOLANT OK - Step 2 - Does radiator cap leak or show signs of damage?

STEP 2

Does radiator cap leak or show signs of damage?

1. Check around radiator cap for leakage.

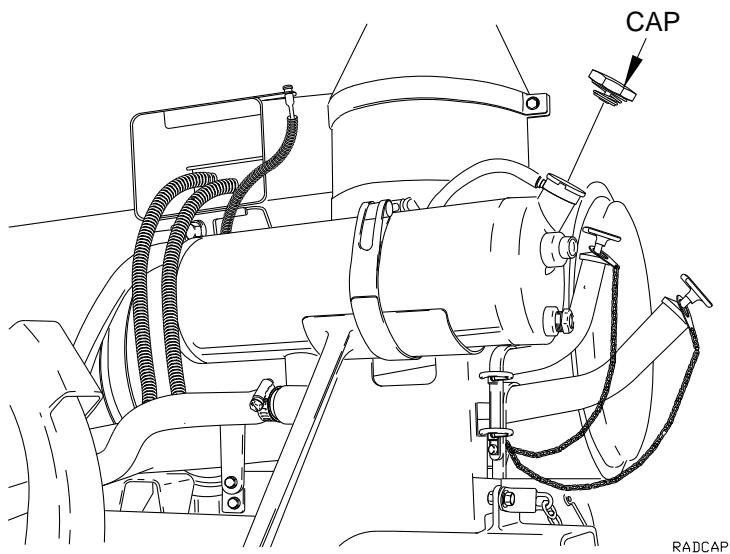


Figure 2. Radiator Cap.

2. Remove radiator cap.
3. Check for damage to cap.

CONDITION/INDICATION

Does radiator cap leak or show signs of damage?

DECISION

Damage - Notify Field Maintenance

Leaks - Notify Field Maintenance

Cap OK - Step 3 - Is radiator overflow tank and connecting hoses free from leaks and damage?

STEP 3

Is radiator overflow tank and connecting hoses free from leaks and damage?

1. Check radiator overflow tank for leaks.

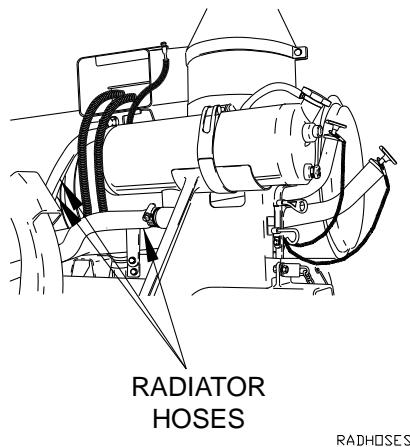


Figure 3. Radiator Overflow Tank and Connecting Hoses.

2. Check all connecting hoses for cracks and/or leaks.

CONDITION/INDICATION

Is radiator overflow tank and connecting hoses free from leaks and damage?

DECISION

LEAKS - Notify Field Maintenance

NO LEAKS - Step 4 - Is outside of radiator core free of obstructions?

STEP 4

Is outside of radiator core free of obstructions?

WARNING

Use care when removing debris from engine fan. Engine components will be hot. Failure to comply may result in injury to personnel.

1. Check radiator fins for dirt.

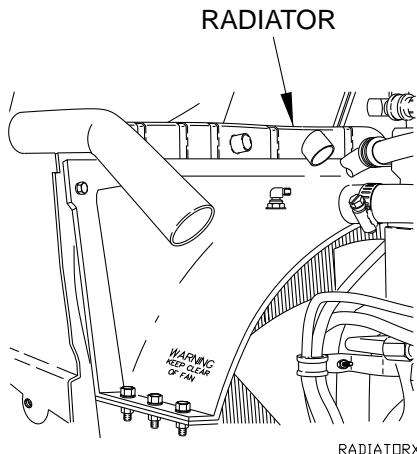


Figure 4. Outside of Radiator Core.

2. Check radiator fins for debris and other external blockage.

CONDITION/INDICATION

Is outside of radiator core free of obstructions?

DECISION

CLOGGED - Clean radiator of dirt and debris. (Volume 3, WP 0344) Step 7 - Does engine continue to overheat?

NO CLOGS - Step 5 - Are radiator hose connections tight?

STEP 5

Are radiator hose connections tight?

1. Check hoses for tight connections.

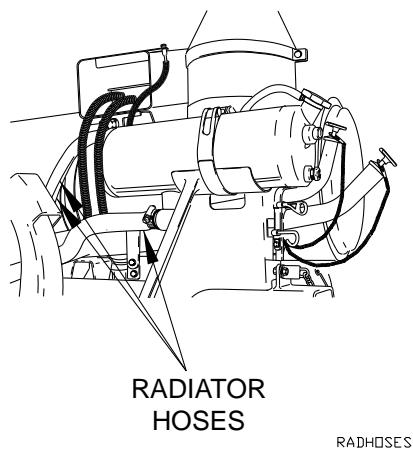


Figure 5. Radiator Hose Connections.

CONDITION/INDICATION

Are radiator hose connections tight?

DECISION

HOSES LOOSE - Notify Field Maintenance

HOSES TIGHT - Step 6 - Are radiator hoses or radiator leaking?

STEP 6

Are radiator hoses or radiator leaking?

1. Check radiator hoses for leaks.

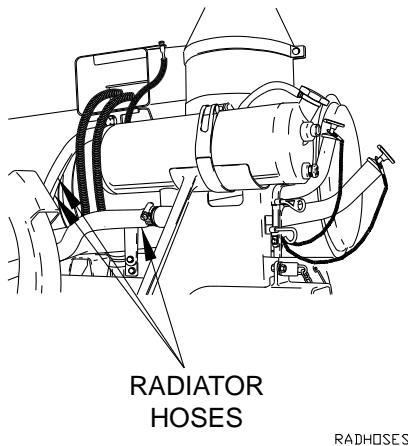


Figure 6. Radiator Hoses or Radiator.

2. Check radiator for leaks.

CONDITION/INDICATION

Are radiator hoses or radiator leaking?

DECISION

LEAKS FOUND - Notify Field Maintenance

NO LEAKS - Step 7 - Does engine continue to overheat?

STEP 7

Does engine continue to overheat?

1. Start engine (Volume 1, WP 0019).
2. While engine is running, watch for leaks around radiator overflow tank, tank hoses, sight glasses, radiator and radiator hoses.

NOTE

Make sure that engine runs at operating temperature for at least 30 minutes or until further overheating is noted.

3. After 30 minutes of being at operating temperature, check coolant level in site glass.
4. Shut down engine (Volume 1, WP 0019).

CONDITION/INDICATION

Does engine continue to overheat?

DECISION

OVERHEATS - Notify Field Maintenance
ENGINE OK - Fault corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE LOSS OF COOLANT

INITIAL SETUP:

Materials/Parts

Antifreeze, Permanent (Volume 3,
WP 0359, Table 1, Item 23)

Equipment Condition

Engine shut down (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE LOSS OF COOLANT

STEP 1

Does radiator cap leak or show signs of damage?

1. Check around radiator cap for leakage.

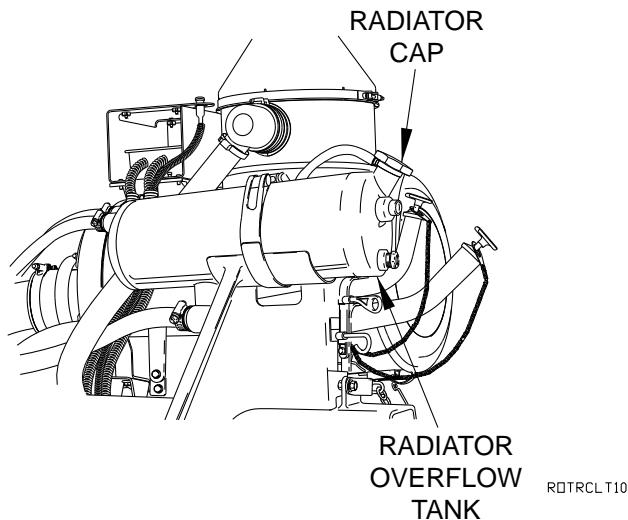


Figure 1. Radiator Cap.

WARNING



Extreme care should be taken when removing radiator cap if temperature gage reads above 180°F (82°C). Contact with steam or hot coolant under pressure may result. Failure to comply may result in injury to personnel.

2. Remove radiator cap from radiator overflow tank.
3. Check for damage to radiator cap.
4. Install radiator cap on radiator overflow tank.

CONDITION/INDICATION

Does radiator cap leak or show signs of damage?

DECISION

CAP DAMAGED - Notify Field Maintenance

CAP OK - Step 2 - Is radiator overflow tank and connecting hoses free from leaks and damage?

STEP 2

Is radiator overflow tank and connecting hoses free from leaks and damage?

1. Check radiator overflow tank for leaks.

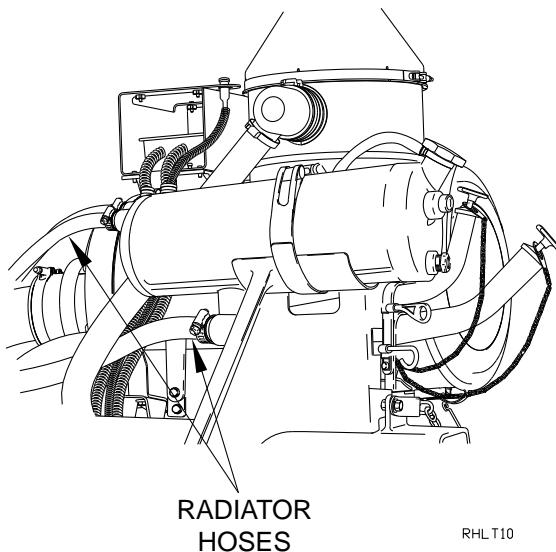


Figure 2. Radiator Overflow Tank and Connecting Hoses.

2. Check all connecting hoses for cracks and/or leaks.

CONDITION/INDICATION

Is radiator overflow tank and connecting hoses free from leaks and damage?

DECISION

HOSES LEAK - Notify Field Maintenance

NO LEAKS - Step 3 - Is outside of radiator core free of obstructions?

STEP 3

Is outside of radiator core free of obstructions?

WARNING

Use care when removing debris from engine fan. Engine components will be hot. Failure to comply may result in injury to personnel.

1. Check radiator fins for dirt.

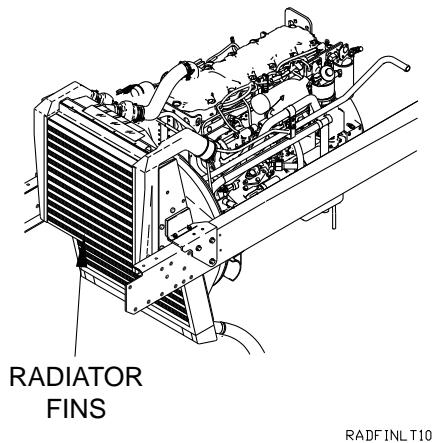


Figure 3. Outside of Radiator Core.

2. Check radiator fins for debris and other external blockage.

CONDITION/INDICATION

Is outside of radiator core free of obstructions?

DECISION

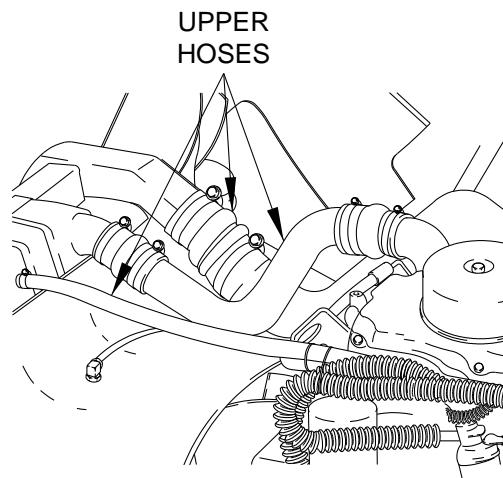
RADIATOR CLOGGED - Clean radiator of dirt and debris. (Volume 3, WP 0344) Step 5 -
Does cooling system no longer have loss of coolant?

NOT CLOGGED - Step 4 - Are radiator hoses or radiator leaking?

STEP 4

Are radiator hoses or radiator leaking?

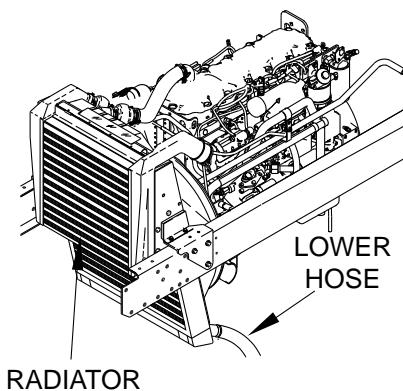
1. Raise cab (Volume 1, WP 0020)
2. Check upper radiator hoses for leaks.



UPHOSELT10

Figure 4. Radiator Hoses or Radiator.

3. Check lower radiator hoses for leaks.



LOWHOSELT10

Figure 5. Radiator Hoses or Radiator.

4. Check radiator for leaks.

CONDITION/INDICATION

Are radiator hoses or radiator leaking?

DECISION

RADIATOR LEAKS - Notify Field Maintenance

NO LEAKS - Step 5 - Does cooling system no longer have loss of coolant?

STEP 5**Does cooling system no longer have loss of coolant?**

1. Lower cab (Volume 1, WP 0020).
2. Start engine (Volume 1, WP 0019).
3. While engine is running, watch for leaks around radiator overflow tank, tank hoses, sight glasses, radiator and radiator hoses.
4. After 30 minutes of being at operating temperature, check coolant level in site glass.
5. Shut down engine (Volume 1, WP 0019).

CONDITION/INDICATION

Does cooling system no longer have loss of coolant?

DECISION

COOLANT LOSS - Notify Field Maintenance

COOLANT OK - Fault corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
12 VDC AND 24 VDC CIRCUITS DO NOT OPERATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
12 VDC AND 24 VDC CIRCUITS DO NOT OPERATE**

STEP 1

Have Preventative Maintenance Checks and Services (PMCS) Before checks been performed?

CONDITION/INDICATION

Have Preventative Maintenance Checks and Services (PMCS) Before checks been performed?

DECISION

PERFORM PMCS - Perform PMCS-Before checks. (Volume 3, WP 0337)

PMCS PERFORMED - Step 2 - Are batteries, battery cables, and terminal posts free from damage or corrosion?

STEP 2

Are batteries, battery cables, and terminal posts free from damage or corrosion?

WARNING



Lead-acid battery gases can explode. Do not smoke, have open flames, or make sparks around a battery, especially if caps are off. Battery may give off gas which can explode. Failure to comply may result in serious injury or death to personnel.

WARNING

Remove rings, bracelets, wristwatches, neck chains, and any other jewelry before working around vehicle. Jewelry may catch on equipment or may short across an electrical circuit or battery terminal. Failure to comply may result in serious injury or death to personnel.

1. Open battery box (Volume 3, WP 0345).
2. Check batteries, battery cables, and terminal posts for apparent damage and corrosion.

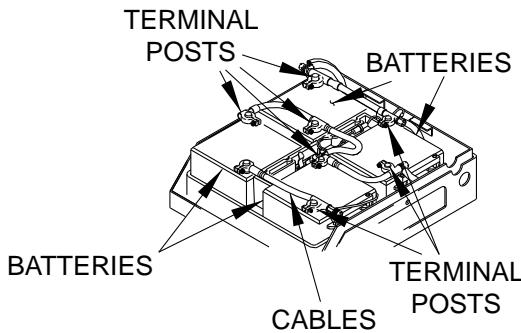


Figure 1. Batteries, Battery Cables, and Terminal Posts.

CONDITION/INDICATION

Are batteries, battery cables, and terminal posts free from damage or corrosion?

DECISION

DAMAGE PRESENT - Notify Field Maintenance batteries/battery cables need to be replaced.

NO DAMAGE - Step 3 -

STEP 3

Close battery box (Volume 3, WP 0345).

CONDITION/INDICATION

DECISION

Continue - Notify Field Maintenance.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
12 VDC CIRCUITS DO NOT OPERATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
12 VDC CIRCUITS DO NOT OPERATE**

STEP 1

Have Preventative Maintenance Checks and Services (PMCS) Before checks been performed?

CONDITION/INDICATION

Have Preventative Maintenance Checks and Services (PMCS) Before checks been performed?

DECISION

PERFORM PMCS - Perform PMCS-Before checks. (Volume 3, WP 0337)

PMCS PERFORMED - Step 2 - Are batteries, battery cables, and terminal posts free from damage or corrosion?

STEP 2

Are batteries, battery cables, and terminal posts free from damage or corrosion?

WARNING

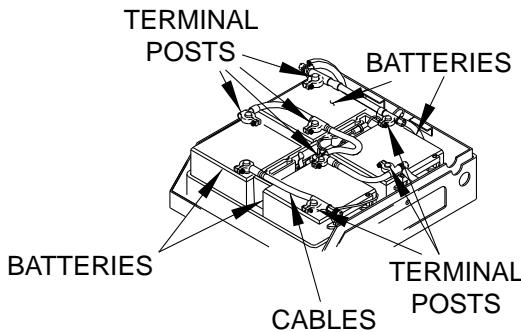


Lead-acid battery gases can explode. Do not smoke, have open flames, or make sparks around a battery, especially if caps are off. Battery may give off gas which can explode. Failure to comply may result in serious injury or death to personnel.

WARNING

Remove rings, bracelets, wristwatches, neck chains, and any other jewelry before working around vehicle. Jewelry may catch on equipment or may short across an electrical circuit or battery terminal. Failure to comply may result in serious injury or death to personnel.

1. Open battery box (Volume 3, WP 0345).
2. Check batteries, battery cables, and terminal posts for apparent damage and corrosion.



BATTPOST

Figure 1. Batteries, Battery Cables, and Terminal Posts.

CONDITION/INDICATION

Are batteries, battery cables, and terminal posts free from damage or corrosion?

DECISION

DAMAGE PRESENT - Notify Field Maintenance batteries/battery cables need to be replaced.

NO DAMAGE - Step 3 -

STEP 3

Close battery box (Volume 3, WP 0345).

CONDITION/INDICATION

DECISION

Continue - Notify Field Maintenance.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
12 VDC POWER OUTLET DOES NOT OPERATE**

INITIAL SETUP:

Equipment Condition

Engine shut down (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
12 VDC POWER OUTLET DOES NOT OPERATE**

STEP 1

Is circuit breaker CB84 tripped?

1. Remove PDP cover. (Volume 3, WP 0351)
2. Open PDM 1.

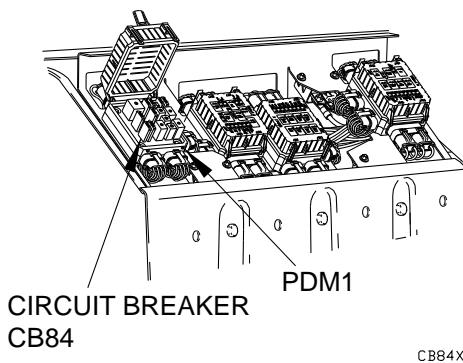


Figure 1. Circuit Breaker CB84.

3. If circuit breaker CB84 is tripped, push button to reset.
4. Check to see if 12 VDC power outlet operates.
5. Close PDM 1.
6. Install PDP cover (Volume 3, WP 0351).

CONDITION/INDICATION

Is circuit breaker CB84 tripped?

DECISION

CB84 OK - Notify Field Maintenance.
CB84 Tripped - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
12 VOLTS GAGE DOES NOT OPERATE OR IS INACCURATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
12 VOLTS GAGE DOES NOT OPERATE OR IS INACCURATE**

STEP 1

Does any other electrical gage operate?

1. Position master power switch to on. (Volume 1, WP 0004)
2. Check to see if any of the other electrical gages operate. (Volume 1, WP 0004)
3. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does any other electrical gage operate?

DECISION

No Gages - Perform Electrical System troubleshooting (All Electrical Gages Do not Operate). (WP 0202)

Gages - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
24 VDC CIRCUITS DO NOT OPERATE**

INITIAL SETUP:

Equipment Condition

Engine shut down (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
24 VDC CIRCUITS DO NOT OPERATE**

STEP 1

Have Preventative Maintenance Checks and Services (PMCS) Before checks been performed?

CONDITION/INDICATION

Have Preventative Maintenance Checks and Services (PMCS) Before checks been performed?

DECISION

Perform PMCS - Perform PMCS-Before checks. (Volume 3, WP 0337)

PMCS Performed - Step 2 - Are batteries, battery cables, and terminal posts free from damage or corrosion?

STEP 2

Are batteries, battery cables, and terminal posts free from damage or corrosion?

WARNING

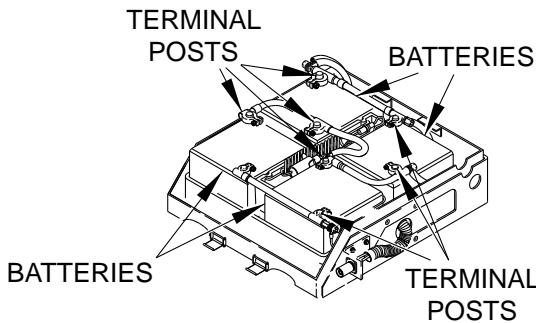


Lead-acid battery gases can explode. Do not smoke, have open flames, or make sparks around a battery, especially if caps are off. Battery may give off gas which can explode. Failure to comply may result in serious injury or death to personnel.

WARNING

Remove rings, bracelets, wristwatches, neck chains, and any other jewelry before working around vehicle. Jewelry may catch on equipment or may short across an electrical circuit or battery terminal. Failure to comply may result in serious injury or death to personnel.

1. Open battery box (Volume 3, WP 0345).
2. Check batteries, battery cables, and terminal posts for apparent damage and corrosion.



hawkbatLT10

Figure 1. Batteries, Battery Cables, and Terminal Posts.

CONDITION/INDICATION

Are batteries, battery cables, and terminal posts free from damage or corrosion?

DECISION

DAMAGE PRESENT - Notify Field Maintenance

NO DAMAGE - Step 3 - Do headlights illuminate?

STEP 3**Do headlights illuminate?**

1. Close battery box (Volume 3, WP 0345).

2. Position main light switch to SER DRIVE. (Volume 1, WP 0004)
3. Check to see if headlights illuminate.
4. Position main light switch to OFF. (Volume 1, WP 0004)

CONDITION/INDICATION

Do headlights illuminate?

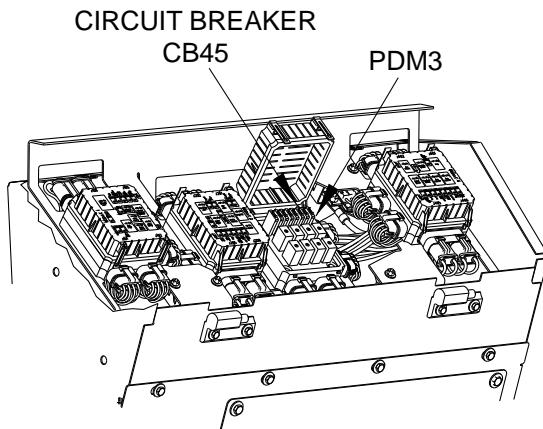
DECISION

HEADLIGHTS FAULTY - Notify Field Maintenance

HEADLIGHTS OK - Step 4 - Is circuit breaker CB45 tripped?

STEP 4**Is circuit breaker CB45 tripped?**

1. Remove PDP cover (Volume 3, WP 0351).
2. Open Power Distribution Module (PDM) 3.
3. If circuit breaker CB45 is tripped, push button to reset.



CB45LT10

Figure 2. Circuit Breaker CB45.

4. Position master power switch to on. (Volume 1, WP 0004)
5. Check circuit breaker CB45 to see if it is tripped again.
6. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Is circuit breaker CB45 tripped?

DECISION

BREAKER TRIPPED - Notify Field Maintenance.

BREAKER OK. - Step 5 - Do the windshield wipers operate?

STEP 5

Do the windshield wipers operate?

1. Close PDM 3.

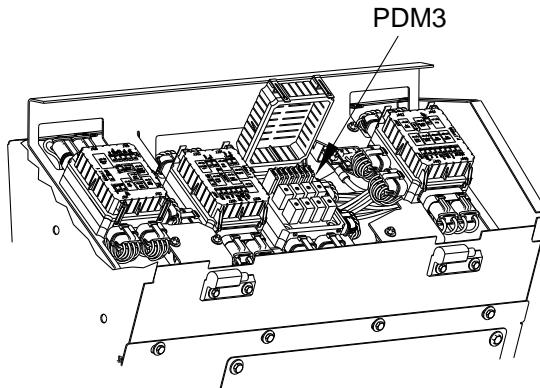


Figure 3. Windshield Wipers.

2. Install PDP cover (Volume 3, WP 0351).
3. Position master power switch to on. (Volume 1, WP 0004)
4. Position windshield wiper switch to "I" position. (Volume 1, WP 0007)
5. Check to see if windshield wiper operates on low speed.
6. Position windshield wiper switch to "O" position. (Volume 1, WP 0007)
7. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Do the windshield wipers operate?

DECISION

Wipers Faulty - Notify Field Maintenance.
Wipers OK - Fault corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
24 VOLTS GAGE DOES NOT OPERATE OR IS INACCURATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
24 VOLTS GAGE DOES NOT OPERATE OR IS INACCURATE**

STEP 1

Does any other electrical gage operate?

1. Position master power switch to on. (Volume 1, WP 0004)
2. Check to see if any of the other electrical gages operate. (Volume 1, WP 0004)
3. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does any other electrical gage operate?

DECISION

No Gages - Perform Electrical System troubleshooting (All Electrical Gages Do not Operate). (WP 0202)

Gages - Step 2 - Does OIL PRESS gage operate?

STEP 2

Does OIL PRESS gage operate?

1. Start engine. (Volume 1, WP 0019)
2. Check to see if OIL PRESS gage operates. (Volume 1, WP 0004)
3. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Does OIL PRESS gage operate?

DECISION

No OIL PRESS - Perform Electrical System troubleshooting (All Electrical Gages Do Not Operate). (WP 0202)

OIL PRESS - Notify Field Maintenance

END OF WORK PACKAGE

OPERATOR MAINTENANCE ENGINE DOES NOT CRANK

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE ENGINE DOES NOT CRANK

STEP 1

Has engine system troubleshooting been performed?

CONDITION/INDICATION

Has engine system troubleshooting been performed?

DECISION

PERFORM ENGINE - Perform Engine System Troubleshooting (Engine Does Not Crank). (WP 0077)

ENGINE PERFORMED - Step 2 - Have Preventative Maintenance Checks and Services (PMCS) Before checks been performed?

STEP 2

Have Preventative Maintenance Checks and Services (PMCS) Before checks been performed?

CONDITION/INDICATION

Have Preventative Maintenance Checks and Services (PMCS) Before checks been performed?

DECISION

PERFORM PMCS - Perform PMCS-Before checks. (Volume 3, WP 0337)

PMCS PERFORMED - Step 3 - Does audible alarm operate?

STEP 3

Does audible alarm operate?

1. Position master power switch to on. (Volume 1, WP 0004)
2. Depress LAMP TEST switch. (Volume 1, WP 0004)

CONDITION/INDICATION

Does audible alarm operate?

DECISION

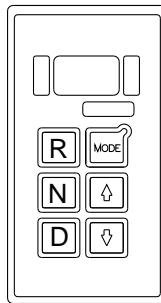
No Alarm - Perform Electrical System troubleshooting (Audible Alarm Does Not Operate) (WP 0109)

Alarm - Step 4 - Does Gen IV Transmission Pushbutton Shift Selector (TPSS) illuminate/operate?

STEP 4

Does Gen IV Transmission Pushbutton Shift Selector (TPSS) illuminate/operate?

1. Position master power switch to on. (Volume 1, WP 0004)
2. Check to see if Gen IV TPSS display windows displays "N".
3. Position master power switch to off. (Volume 1, WP 0004)



GENIVTPSS

Figure 1. Gen IV Transmission Pushbutton Shift Selector (TPSS).

CONDITION/INDICATION

Does Gen IV Transmission Pushbutton Shift Selector (TPSS) illuminate/operate?

DECISION

TPSS Faulty - Perform Transmission System troubleshooting (Gen IV Transmission Pushbutton Shift Selector Does Not Illuminate/Operate). (WP 0254, Test 1 - Is circuit breaker CB43 tripped?)

TPSS OK - Notify Field Maintenance.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
ENGINE CRANKS BUT DOES NOT START (ELECTRICAL)**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
ENGINE CRANKS BUT DOES NOT START (ELECTRICAL)**

STEP 1

Has fuel system troubleshooting been performed?

CONDITION/INDICATION

Has fuel system troubleshooting been performed?

DECISION

Perform Fuel - Perform Fuel System Troubleshooting (Engine Cranks But Does Not Start or Engine Stalls After Starting)

Fuel Performed - Step 2 - Is circuit breaker CB60 tripped?

STEP 2

Is circuit breaker CB60 tripped?

1. *** The following is applicable to the following UOC(s): TSA TSB TSG TSH TSL TSM TSP TSQ TSR TSU TSV. ***

Position MBDS to disconnect (OFF). (Volume 1, WP 0011, Table 1).

WARNING



Vehicle is equipped with a Load and Battery Control Device (LBCD). LBCD has internal capacitors, which must be discharged prior to maintenance or troubleshooting procedures being performed. Failure to comply may result in damage to equipment and/or injury to personnel.

2. Position master power switch to on for 30 seconds.

3. Position master power switch to off.

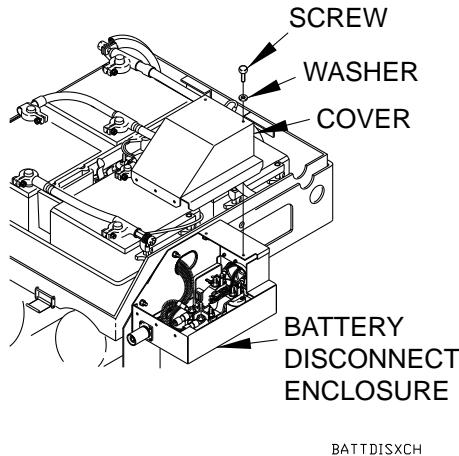


Figure 1. Circuit Breaker CB60.

WARNING



With the Manual Battery Disconnect Switch (MBDS) in the disconnect (OFF) position, electrical power is still present inside the battery disconnect enclosure. Do not touch the studs of the MBDS. Failure to comply may result in injury or death to personnel.

WARNING



Remove rings, bracelets, wristwatches, neck chains, and any other jewelry before working around vehicle. Jewelry may catch on equipment or may short across an electrical circuit or battery terminal. Failure to comply may result in serious injury or death to personnel.

4. Remove five screws, washers, and cover from battery disconnect enclosure.

5. If circuit breaker CB60 is tripped, push lever up to reset.

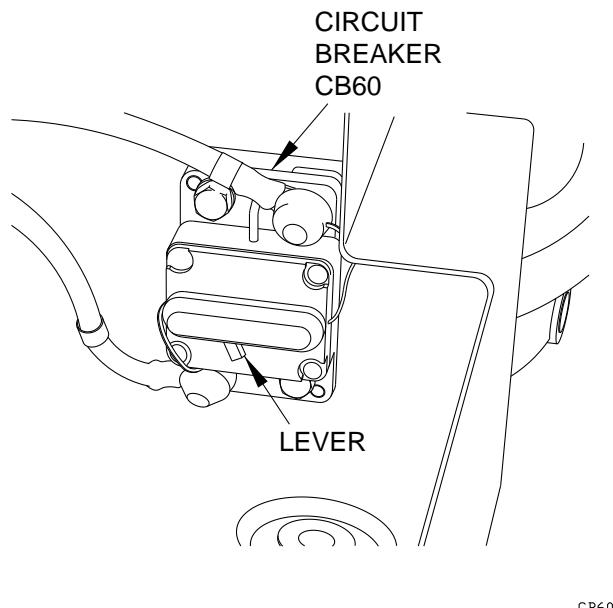
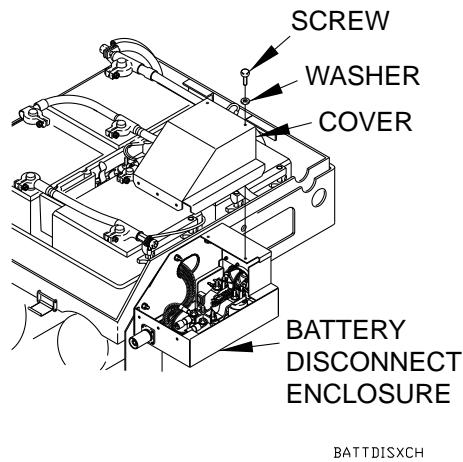


Figure 2. Circuit Breaker CB60.

6. *** The following is applicable to the following UOC(s): TSA TSB TSG TSH TSL TSM TSP TSQ TSR TSU TSV. ***

6. *** The following is applicable to the following UOC(s): TSA TSB TSG TSH TSL TSM TSP TSQ TSR TSU TSV. ***
7. Position MBDS to connect (ON) (Volume 1, WP 0011, Table 1).
8. Attempt to start engine (Volume 1, WP 0019).
9. Check circuit breaker CB60 to see if it is tripped again.
10. Shut down engine. (Volume 1, WP 0019)
11. Position MBDS to disconnect (OFF) (Volume 1, WP 0011, Table 1).
12. Position master power switch to on for 30 seconds. (Volume 1, WP 0004, Table 1)
13. Position master power switch to off. (Volume 1, WP 0004, Table 1)
14. Install cover on battery disconnect enclosure with six washers and screws.



BATTDISXCH

Figure 3. Circuit Breaker CB60.

CONDITION/INDICATION

Is circuit breaker CB60 tripped?

DECISION

Engine starts. - Fault corrected.

Circuit breaker CB60 tripped again. - Notify Field Maintenance.

Circuit breaker CB60 not tripped, engine does not start. - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
FUEL GAGE DOES NOT OPERATE OR IS INACCURATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
FUEL GAGE DOES NOT OPERATE OR IS INACCURATE**

STEP 1

Have Preventative Maintenance Checks and Services (PMCS) Before checks been performed?

CONDITION/INDICATION

Have Preventative Maintenance Checks and Services (PMCS) Before checks been performed?

DECISION

PERFORM PMCS - Perform PMCS-Before checks. (Volume 3, WP 0337)
PMCS PERFORMED - Step 2 - Does any other electrical gage operate?

STEP 2

Does any other electrical gage operate?

1. Position master power switch to on. (Volume 1, WP 0004)
2. Check to see if any of the other electrical gages operate. (Volume 1, WP 0004)
3. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does any other electrical gage operate?

DECISION

No Gages - Perform Electrical System troubleshooting (All Electrical Gages Do not Operate). (WP 0202)
Gages - Notify Field Maintenance

END OF WORK PACKAGE

OPERATOR MAINTENANCE

INLET AIR HEATER INDICATOR DOES NOT ILLUMINATE

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

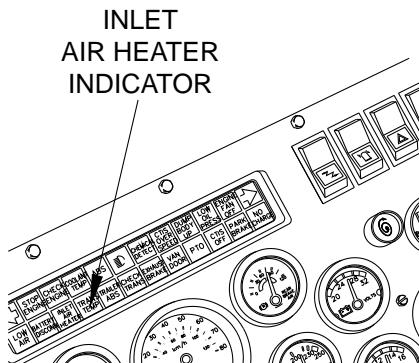
TROUBLESHOOTING PROCEDURE

INLET AIR HEATER INDICATOR DOES NOT ILLUMINATE

STEP 1

Does LAMP TEST switch illuminate INLET AIR HEATER indicator?

1. Position master power switch to on. (Volume 1, WP 0004)



IAIRHINDLT10

Figure 1. INLET AIR HEATER Indicator.

2. Hold LAMP TEST switch in on position. (Volume 1, WP 0004, Table 1)
3. Check to see if INLET AIR HEATER indicator illuminates.
4. Release LAMP TEST switch.
5. Position master power switch to off. (Volume 1, WP 0004, Table 1)

CONDITION/INDICATION

Does LAMP TEST switch illuminate INLET AIR HEATER indicator?

DECISION

Display Faulty - Notify Field Maintenance

Display OK - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
WATER TEMP GAGE DOES NOT OPERATE OR IS INACCURATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
WATER TEMP GAGE DOES NOT OPERATE OR IS INACCURATE**

STEP 1

Does any other electrical gage operate?

1. Position master power switch to on. (Volume 1, WP 0004)
2. Check to see if any of the other electrical gages operate. (Volume 1, WP 0004)
3. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does any other electrical gage operate?

DECISION

No Gages - Perform Electrical System troubleshooting (All Electrical Gages Do not Operate). (WP 0202)

Gages - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
REAR BRAKE AIR GAGE DOES NOT OPERATE OR IS INACCURATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
REAR BRAKE AIR GAGE DOES NOT OPERATE OR IS INACCURATE**

STEP 1

Does any other electrical gage operate?

1. Position master power switch to on. (Volume 1, WP 0004)
2. Check to see if any of the other electrical gages operate. (Volume 1, WP 0004)
3. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does any other electrical gage operate?

DECISION

No Gages - Perform Electrical System troubleshooting (All Electrical Gages Do not Operate). (WP 0202)

Gages - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
FRONT BRAKE AIR GAGE DOES NOT OPERATE OR IS INACCURATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
FRONT BRAKE AIR GAGE DOES NOT OPERATE OR IS INACCURATE**

STEP 1

Does any other electrical gage operate?

1. Position master power switch to on. (Volume 1, WP 0004)
2. Check to see if any of the other electrical gages operate. (Volume 1, WP 0004)
3. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does any other electrical gage operate?

DECISION

No Gages - Perform Electrical System troubleshooting (All Electrical Gages Do not Operate). (WP 0202)

Gages - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
OIL PRESS GAGE DOES NOT OPERATE OR IS INACCURATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
OIL PRESS GAGE DOES NOT OPERATE OR IS INACCURATE**

STEP 1

Is engine oil at proper level?

1. Pull engine oil dipstick from dipstick tube.
2. Wipe oil dipstick clean.
3. Reinsert oil dipstick in dipstick tube until fully seated.
4. Pull engine oil dipstick from dipstick tube.

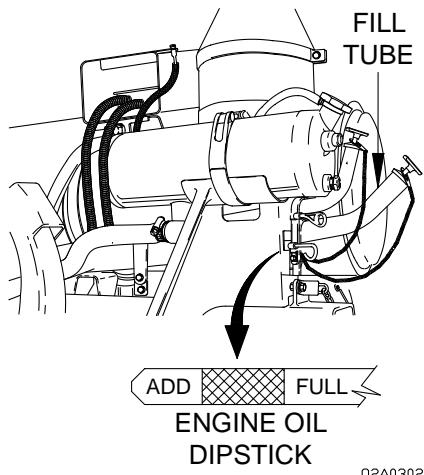


Figure 1. Engine Oil.

5. Reading should be between ADD and FULL markings on dipstick.
6. If oil is low, add oil to appropriate level. (Volume 3, WP 0355, Table 5)

7. Wipe oil dipstick clean.
8. Return dipstick to dipstick tube.

CONDITION/INDICATION

Is engine oil at proper level?

DECISION

OIL ADDED -

OIL OK - Step 2 - Does any other electrical gage operate?

STEP 2**Does any other electrical gage operate?**

1. Position master power switch to on. (Volume 1, WP 0004)
2. Check to see if any of the other electrical gages operate. (Volume 1, WP 0004)
3. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does any other electrical gage operate?

DECISION

No Gages - Perform Electrical System troubleshooting (All Electrical Gages Do not Operate). (WP 0202)

Gages - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
SPEEDOMETER DOES NOT OPERATE OR IS INACCURATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
SPEEDOMETER DOES NOT OPERATE OR IS INACCURATE**

STEP 1

Does any other electrical gage operate?

1. Position master power switch to on. (Volume 1, WP 0004)
2. Check to see if any of the other electrical gages operate. (Volume 1, WP 0004)
3. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does any other electrical gage operate?

DECISION

No Gages - Perform Electrical System troubleshooting (All Electrical Gages Do not Operate). (WP 0202)

Gages - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
AUDIBLE ALARM DOES NOT OPERATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
AUDIBLE ALARM DOES NOT OPERATE**

STEP 1

Does lamp test switch illuminate lighted indicator display?

1. Check to see if lamp test switch illuminates lighted indicator display. (Volume 1,
WP 0004)

CONDITION/INDICATION

Does lamp test switch illuminate lighted indicator display?

DECISION

Display Faulty - Notify Field Maintenance.

Display OK. - Step 2 - Is circuit breaker CB77 tripped?

STEP 2

Is circuit breaker CB77 tripped?

1. Position master power switch to off. (Volume 1, WP 0004)
2. Remove PDP cover. (Volume 3, WP 0351)

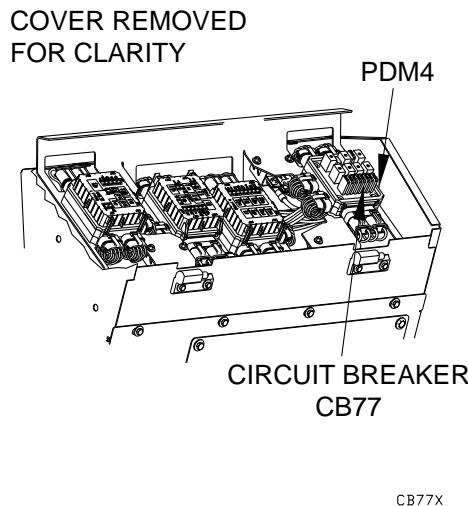


Figure 1. Circuit Breaker CB77.

3. If circuit breaker CB77 is tripped, push button to reset.
4. Position master power switch to on. (Volume 1, WP 0004)
5. Check circuit breaker CB77 to see if it is tripped again.
6. Position master power switch to off. (Volume 1, WP 0004)
7. Install PDP cover. (Volume 3, WP 0351)

CONDITION/INDICATION

Is circuit breaker CB77 tripped?

DECISION

BREAKER TRIPPED - Notify Field Maintenance

BREAKER OK - Step 3 - Does audible alarm operate?

STEP 3

Does audible alarm operate?

1. Check to see if audible alarm operates.

CONDITION/INDICATION

Does audible alarm operate?

DECISION

ALARM FAULTY - Notify Field Maintenance

ALARM OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
DIFFERENTIAL LOCK SOLENOID DOES NOT OPERATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

*** The following is applicable to the following UOC(s): **TSA TSB TSG TSH TSJ
WRK TSL TSM TSP TSQ TSR TSU TSV TSX.** ***

**TROUBLESHOOTING PROCEDURE
DIFFERENTIAL LOCK SOLENOID DOES NOT OPERATE**

**STEP 1
Is circuit breaker CB21 tripped?**

WARNING



Remove rings, bracelets, wristwatches, neck chains, and any other jewelry before working around vehicle. Jewelry may catch on equipment or may short across an electrical circuit or battery terminal. Failure to comply may result in serious injury or death to personnel.

1. Remove PDP cover (Volume 3, WP 0351).
2. If circuit breaker CB21 is tripped, push button to reset.

COVER REMOVED
FOR CLARITY

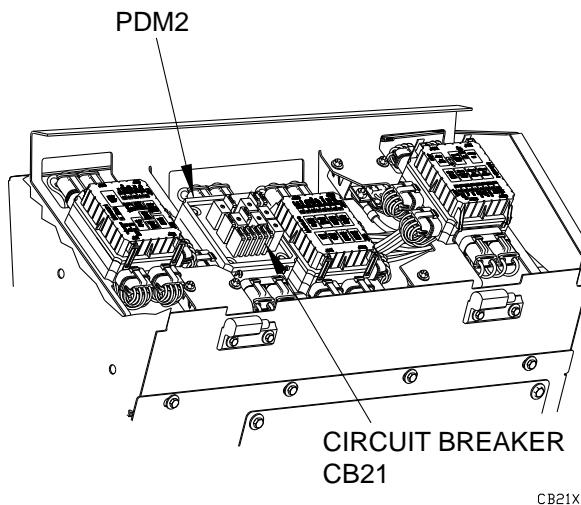


Figure 1. Circuit Breaker CB21.

3. Start engine (Volume 1, WP 0019).
4. Select MODE on Gen IV Transmission Pushbutton Shift Selector (TPSS) (Volume 1, WP 0004).
5. Check circuit breaker CB21 to see if it is tripped again.
6. Shut down engine (Volume 1, WP 0019).

CONDITION/INDICATION

Is circuit breaker CB21 tripped?

DECISION

Breaker Tripped - Notify Field Maintenance

Breaker OK - Step 2 - Is circuit breaker CB79 tripped?

STEP 2

Is circuit breaker CB79 tripped?

WARNING



Remove rings, bracelets, wristwatches, neck chains, and any other jewelry before working around vehicle. Jewelry may catch on equipment or may short across an electrical circuit or battery terminal. Failure to comply may result in serious injury or death to personnel.

1. If circuit breaker CB79 is tripped, push button to reset.

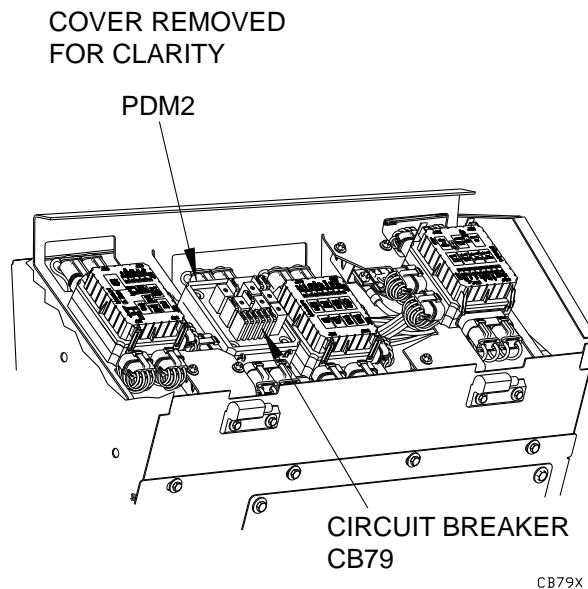


Figure 2. Circuit Breaker CB79.

2. Start engine (Volume 1, WP 0019).
3. Select MODE on Gen IV Transmission Pushbutton Shift Selector (TPSS) (Volume 1, WP 0004).
4. Check circuit breaker CB79 to see if it is tripped again.
5. Shut down engine (Volume 1, WP 0019).

CONDITION/INDICATION

Is circuit breaker CB79 tripped?

DECISION

Breaker Tripped - Notify Field Maintenance
Breaker OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
INSTRUMENT PANEL SWITCH DOES NOT ILLUMINATE**

INITIAL SETUP:

Not Applicable

**TROUBLESHOOTING PROCEDURE
INSTRUMENT PANEL SWITCH DOES NOT ILLUMINATE**

STEP 1

CONDITION/INDICATION

DECISION

Continue - Notify Field Maintenance.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
INSTRUMENT PANEL GAGE DOES NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

Position Master Power switch to ON
position. (Volume 1, WP 0004)

**TROUBLESHOOTING PROCEDURE
INSTRUMENT PANEL GAGE DOES NOT ILLUMINATE**

STEP 1

Do any instrument panel gages illuminate?

1. Press SER DRIVE key on main light switch. (Volume 1, WP 0004)
2. Press ENTER key on main light switch. (Volume 1, WP 0004)
3. Press PANEL BRT key on main light switch. (Volume 1, WP 0004)
4. Press ENTER key on main light switch. (Volume 1, WP 0004)
5. Check to see if any instrument panel gages illuminate.
6. Press ALL OFF key on main light switch. (Volume 1, WP 0004)
7. Press ENTER key on main light switch. (Volume 1, WP 0004)

CONDITION/INDICATION

Do any instrument panel gages illuminate?

DECISION

Panel Faulty - Notify Field Maintenance.

Gage Faulty - Step 2 - Do instrument panel gages operate?

STEP 2

Do instrument panel gages operate?

1. Start engine. (Volume 1, WP 0019)
2. Check operation of gages. (Volume 1, WP 0004)
3. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Do instrument panel gages operate?

DECISION

All gages operate. - Notify Field Maintenance.

All electrical gages do not operate. - Perform electrical system troubleshooting (All Electrical Gages Do Not Operate). (WP 0202)

24 Volts Gage Does not operate. - Perform electrical system troubleshooting (24 Volts Gage Does Not Operate Or Is Inaccurate). (WP 0099)

Front brake air pressure gage does not operate. - Perform electrical system troubleshooting (FRONT BRAKE Air Pressure Gage Does Not Operate or is Inaccurate). (WP 0106)

Rear brake air pressure gage does not operate. - Perform electrical system troubleshooting (REAR BRAKE Air Pressure Gage Does Not Operate Or Is Inaccurate). (WP 0105)

Fuel gage does not operate. - Perform electrical system troubleshooting (FUEL Gage Does Not Operate Or Is Inaccurate). (WP 0102)

Oil pressure gage does not operate. - Perform electrical system troubleshooting (OIL PRESS gage does not operate or is inaccurate). (WP 0107)

Water temp gage does not operate. - Perform electrical system troubleshooting (WATER TEMP Gage Does Not Operate Or Is Inaccurate). (WP 0104)

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
AUXILIARY PANEL SWITCH DOES NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
AUXILIARY PANEL SWITCH DOES NOT ILLUMINATE**

STEP 1

Does any other auxiliary panel switch illuminate?

1. Position master power switch to on position. (Volume 1, WP 0004)
2. Hold LAMP TEST switch in on position. (Volume 1, WP 0004)
3. Check to see if any other auxiliary panel switch illuminates.
4. Release LAMP TEST switch.
5. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does any other auxiliary panel switch illuminate?

DECISION

SWITCHES FAULTY - Perform Electrical System Troubleshooting (Auxiliary Panel Does Not Illuminate). (WP 0114, Test 1 - Do headlights illuminate?)
SWITCHES OK - Notify Field Maintenance.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
AUXILIARY PANEL DOES NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
AUXILIARY PANEL DOES NOT ILLUMINATE**

STEP 1

Do headlights illuminate?

1. Press SER DRIVE key on main light switch. (Volume 1, WP 0004)
2. Press ENTER key on main light switch. (Volume 1, WP 0004)
3. Check to see if headlights illuminate.
4. Press ALL OFF key on main light switch. (Volume 1, WP 0004)
5. Press ENTER key on main light switch. (Volume 1, WP 0004)

CONDITION/INDICATION

Do headlights illuminate?

DECISION

HEADLIGHTS FAULTY - Perform Electrical System Troubleshooting (All Main Light Switch Functions Do Not Operate). (WP 0201, Test 1 - Is circuit breaker CB70 tripped?)

HEADLIGHTS OK - Notify Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE COOLANT TEMP INDICATOR DOES NOT ILLUMINATE

INITIAL SETUP:

Equipment Condition

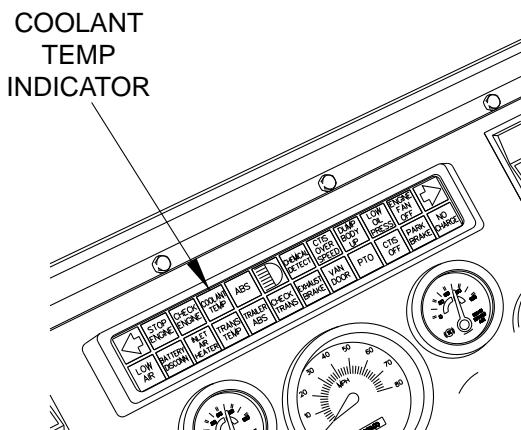
Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE COOLANT TEMP INDICATOR DOES NOT ILLUMINATE

STEP 1

Does LAMP TEST switch illuminate COOLANT TEMP indicator?

1. Position master power switch to on. (Volume 1, WP 0004, Table 1)



CTEMPINDLT10

Figure 1. COOLANT TEMP Indicator.

2. Hold LAMP TEST switch in on position. (Volume 1, WP 0004, Table 1)
3. Check to see if COOLANT TEMP indicator illuminates.

4. Release LAMP TEST switch.
5. Position master power switch to off. (Volume 1, WP 0004, Table 1)

CONDITION/INDICATION

Does LAMP TEST switch illuminate COOLANT TEMP indicator?

DECISION

Display Faulty - Notify Field Maintenance.

Display OK - Step 2 - Does WATER TEMP gage operate?

STEP 2**Does WATER TEMP gage operate?**

1. Position master power switch to on. (Volume 1, WP 0004, Table 1)
2. Check to see if WATER TEMP gage operates. (Volume 1, WP 0004, Table 1)
3. Position master power switch to off. (Volume 1, WP 0004, Table 1)

CONDITION/INDICATION

Does WATER TEMP gage operate?

DECISION

Does Not Operate - Perform Operator level troubleshooting (All Electrical Gages Do Not Operate). (WP 0202)

Operates - Notify Field Maintenance.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
COOLANT TEMPERATURE INDICATOR ILLUMINATES**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
COOLANT TEMPERATURE INDICATOR ILLUMINATES**

STEP 1

Does WATER TEMP gage read below 216°F (102°C) when COOLANT TEMP indicator illuminates?

1. Start engine (Volume 1, WP 0019).
2. Check to see if WATER TEMP gage reads below 216°F (102°C) when COOLANT TEMP indicator illuminates. (Volume 1, WP 0004)
3. Shut engine down. (Volume 1, WP 0019).

CONDITION/INDICATION

Does WATER TEMP gage read below 216°F (102°C) when COOLANT TEMP indicator illuminates?

DECISION

ENGINE OVERHEATS - Perform Cooling System troubleshooting (Engine Overheats).
(WP 0092)

INDICATOR FAULTY - Notify Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE

CTIS OVERSPEED INDICATOR DOES NOT ILLUMINATE

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

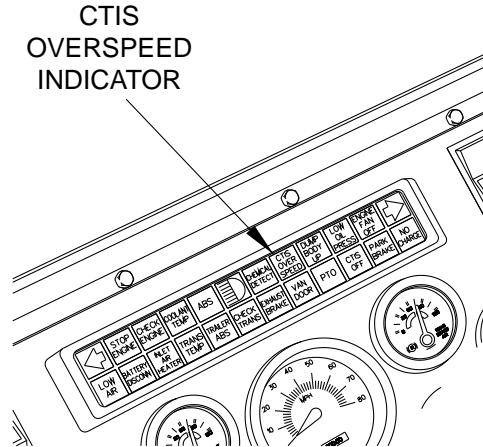
TROUBLESHOOTING PROCEDURE

CTIS OVERSPEED INDICATOR DOES NOT ILLUMINATE

STEP 1

Does LAMP TEST switch illuminate CTIS OVERSPEED indicator?

1. Position master power switch to on. (Volume 1, WP 0004, Table 1)



A1RC0

Figure 1. CTIS OVERSPEED Indicator.

2. Hold LAMP TEST switch in on position. (Volume 1, WP 0004, Table 1)
3. Check to see if CTIS OVERSPEED indicator illuminates.

4. Release LAMP TEST switch.
5. Position master power switch to off. (Volume 1, WP 0004, Table 1)

CONDITION/INDICATION

Does LAMP TEST switch illuminate CTIS OVERSPEED indicator?

DECISION

Display Faulty - Notify Field Maintenance.

Display OK. - Notify Field Maintenance

END OF WORK PACKAGE

OPERATOR MAINTENANCE CHEMICAL DETECT INDICATOR DOES NOT ILLUMINATE

INITIAL SETUP:

Equipment Condition

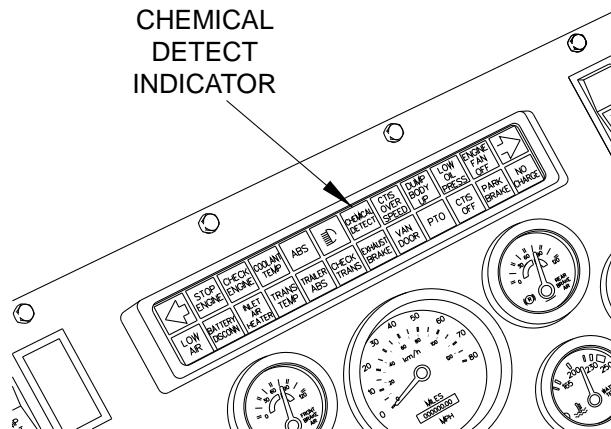
Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE CHEMICAL DETECT INDICATOR DOES NOT ILLUMINATE

STEP 1

Does LAMP TEST switch illuminate CHEMICAL DETECT indicator?

1. Position master power switch to on. (Volume 1, WP 0004)
2. Hold LAMP TEST switch in on position. (Volume 1, WP 0004)
3. Check to see if CHEMICAL DETECT indicator illuminates.



CHEMIND

Figure 1. CHEMICAL DETECT Indicator.

4. Release LAMP TEST switch.
5. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does LAMP TEST switch illuminate CHEMICAL DETECT indicator?

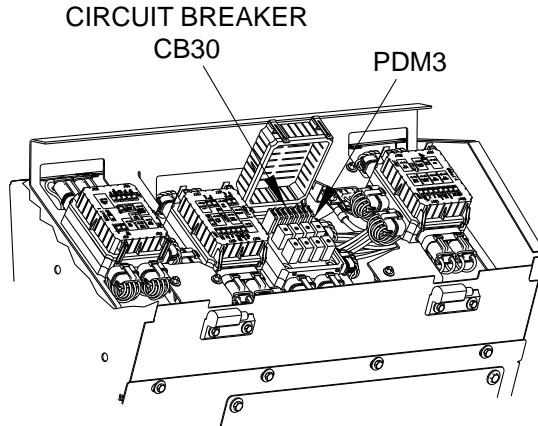
DECISION

Display Faulty - Notify Field Maintenance.

Display OK - Step 2 - Is circuit breaker CB30 tripped?

STEP 2**Is circuit breaker CB30 tripped?**

1. Remove PDP cover. (Volume 3, WP 0351)



CB30XLT10

Figure 2. Circuit Breaker CB30.

2. If circuit breaker CB30 is tripped, push button to reset.
3. Position master power switch to on. (Volume 1, WP 0004)
4. Check circuit breaker CB30 to see if it is tripped again.
5. Position master power switch to off. (Volume 1, WP 0004)
6. Install PDP cover. (Volume 3, WP 0351)

CONDITION/INDICATION

Is circuit breaker CB30 tripped?

DECISION

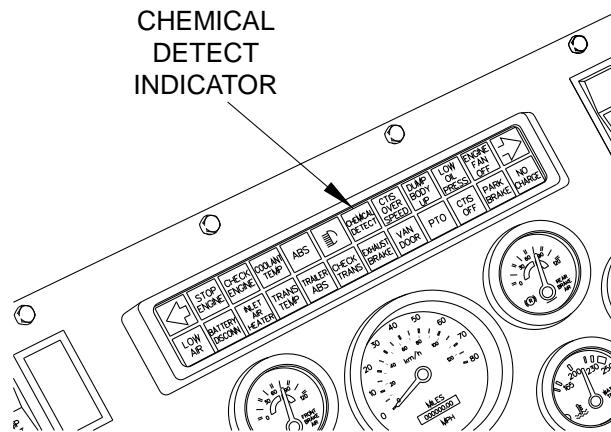
BREAKER TRIPPED - Notify Field Maintenance

BREAKER OK - Step 3 - Does CHEMICAL DETECT indicator illuminate?

STEP 3

Does CHEMICAL DETECT indicator illuminate?

1. Check to see if CHEMICAL DETECT indicator illuminates.



CHEMIND

Figure 3. CHEMICAL DETECT Indicator.

CONDITION/INDICATION

Does CHEMICAL DETECT indicator illuminate?

DECISION

Indicator Faulty - Notify Field Maintenance.

Indicator OK - Fault Corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE LEFT TURN SIGNAL INDICATOR DOES NOT ILLUMINATE

INITIAL SETUP:

Equipment Condition

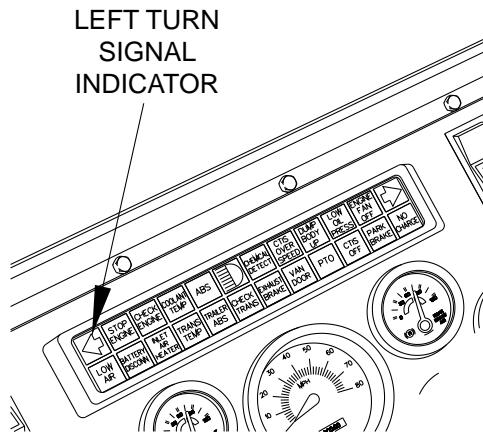
Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE LEFT TURN SIGNAL INDICATOR DOES NOT ILLUMINATE

STEP 1

Does LAMP TEST switch illuminate left turn signal indicator?

1. Position master power switch to on. (Volume 1, WP 0004)
2. Hold LAMP TEST switch in on position. (Volume 1, WP 0004, Table 1)
3. Check to see if left turn signal indicator illuminates.



A1RLTSI

Figure 1. Left Turn Signal Indicator.

4. Release LAMP TEST switch.
5. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does LAMP TEST switch illuminate left turn signal indicator?

DECISION

Display Faulty - Notify Field Maintenance.

Display OK - Step 2 - Does left turn signal illuminate?

STEP 2**Does left turn signal illuminate?**

1. Position master power switch to on. (Volume 1, WP 0004)

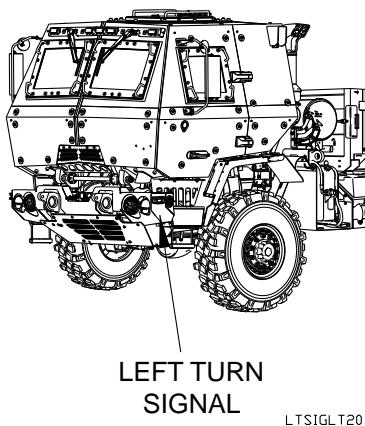


Figure 2. Left Turn Signal.

2. Position turn signal switch to left turn. (Volume 1, WP 0004, Table 2)
3. Check to see if left turn signal illuminates.
4. Position turn signal switch to off. (Volume 1, WP 0004, Table 2)
5. Position master power switch to off.

CONDITION/INDICATION

Does left turn signal illuminate?

DECISION

SIGNAL FAULTY - Perform electrical system troubleshooting (Front and Rear Turn Signals Do Not Illuminate). (WP 0159, Test 1 - Do headlights illuminate?)

SIGNAL OK - Notify Field Maintenance.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
RIGHT TURN SIGNAL INDICATOR DOES NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

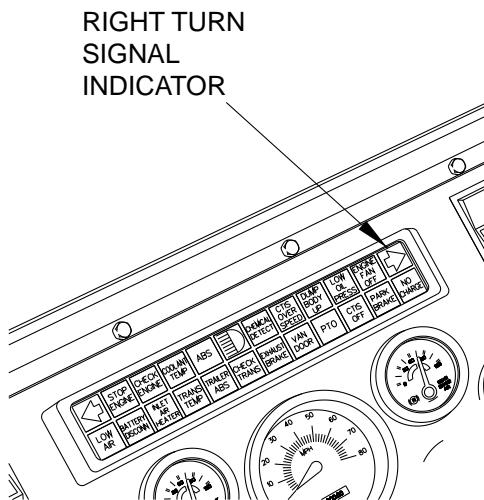
Engine shut down (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
RIGHT TURN SIGNAL INDICATOR DOES NOT ILLUMINATE**

STEP 1

Does LAMP TEST switch illuminate right turn signal indicator?

1. Position master power switch to on. (Volume 1, WP 0004, Table 1)
2. Hold LAMP TEST switch in on position. (Volume 1, WP 0004, Table 1)
3. Check to see if right turn signal indicator illuminates.



A1RRTSI

Figure 1. Right Turn Signal Indicator.

4. Release LAMP TEST switch.
5. Position master power switch to off. (Volume 1, WP 0004, Table 1)

CONDITION/INDICATION

Does LAMP TEST switch illuminate right turn signal indicator?

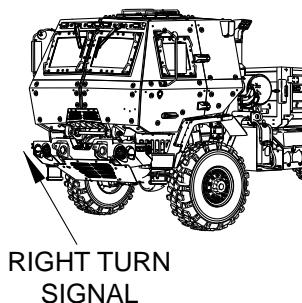
DECISION

Display Faulty - Notify Field Maintenance.

Display OK - Step 2 - Does right turn signal illuminate?

STEP 2**Does right turn signal illuminate?**

1. Position master power switch to on. (Volume 1, WP 0004, Table 1)



RTSIGLT20

Figure 2. Right Turn Signal.

2. Position right turn signal switch to on. (Volume 1, WP 0004, Table 2)
3. Check to see if right turn signal illuminates.
4. Position right turn signal switch to off. (Volume 1, WP 0004, Table 2)
5. Position master power switch to off. (Volume 1, WP 0004, Table 1)

CONDITION/INDICATION

Does right turn signal illuminate?

DECISION

SIGNAL FAULTY - Perform electrical system troubleshooting (Front and Rear Turn Signals Do Not Illuminate). (WP 0159, Test 1 - Do headlights illuminate?)

SIGNAL OK - Notify Field Maintenance.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
LIGHTED INDICATOR DISPLAY ICONS ILLUMINATE IN CHASE PATTERN**

INITIAL SETUP:

Equipment Condition

Engine shut down (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
LIGHTED INDICATOR DISPLAY ICONS ILLUMINATE IN CHASE PATTERN**

STEP 1

Does any electrical gage operate?

1. Position master power switch to on. (Volume 1, WP 0004)
2. Check to see if any electrical gages operate. (Volume 1, WP 0004)
3. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does any electrical gage operate?

DECISION

No Gages - Perform Electrical System troubleshooting (All Electrical Gages Do not Operate). (WP 0202)

Gages - Notify Field Maintenance

END OF WORK PACKAGE

OPERATOR MAINTENANCE HIGH BEAM INDICATOR DOES NOT ILLUMINATE

INITIAL SETUP:

Equipment Condition

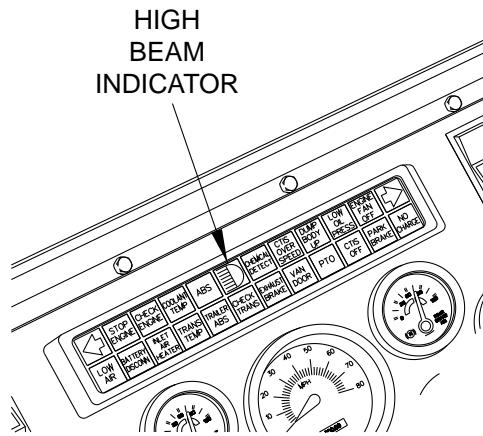
Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE HIGH BEAM INDICATOR DOES NOT ILLUMINATE

STEP 1

Does LAMP TEST switch illuminate HIGH BEAM indicator?

1. Position master power switch to on. (Volume 1, WP 0004)



AIRHBI

Figure 1. HIGH BEAM Indicator.

2. Hold LAMP TEST switch in on position. (Volume 1, WP 0004)
3. Check to see if HIGH BEAM indicator illuminates.

4. Release LAMP TEST switch.
5. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does LAMP TEST switch illuminate HIGH BEAM indicator?

DECISION

Display Faulty - Notify Field Maintenance.

Display OK - Step 2 - Do headlight high beams illuminate?

STEP 2**Do headlight high beams illuminate?**

1. Position master power switch to on. (Volume 1, WP 0004)
2. Position main light switch to SER DRIVE. (Volume 1, WP 0004)
3. Press ENTER key on main light switch. (Volume 1, WP 0004)
4. Position turn signal switch to high beam. (Volume 1, WP 0007)
5. Check to see if headlight high beams illuminate.
6. Position turn signal switch to low beam. (Volume 1, WP 0007)
7. Position main light switch to OFF. (Volume 1, WP 0004)
8. Press ENTER key on main light switch. (Volume 1, WP 0004)
9. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Do headlight high beams illuminate?

DECISION

LIGHTS FAULTY - Perform Electrical System Troubleshooting (One or Both Headlight High Beams Do Not Illuminate). (WP 0140, Test 1 - Do one or both headlight high beams illuminate?)

LIGHTS OK - Fault Corrected

END OF WORK PACKAGE

OPERATOR MAINTENANCE PARK BRAKE INDICATOR DOES NOT ILLUMINATE

INITIAL SETUP:

Equipment Condition

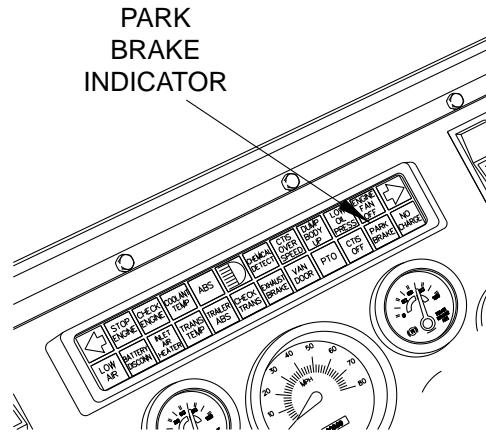
Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE PARK BRAKE INDICATOR DOES NOT ILLUMINATE

STEP 1

Does LAMP TEST switch illuminate PARK BRAKE indicator?

1. Position master power switch to on. (Volume 1, WP 0004)



A1RPB

Figure 1. PARK BRAKE Indicator.

2. Hold LAMP TEST switch in on position. (Volume 1, WP 0004)
3. Check to see if PARK BRAKE indicator illuminates.

4. Release LAMP TEST switch.
5. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does LAMP TEST switch illuminate PARK BRAKE indicator?

DECISION

Display Faulty - Notify Field Maintenance.

Display OK - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
POWER TAKEOFF (PTO) INDICATOR DOES NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

***** The following is applicable to the following UOC(s): TSA TSC TSE TSG TSH TSJ WRK TSL TSQ TSV TSX. *****

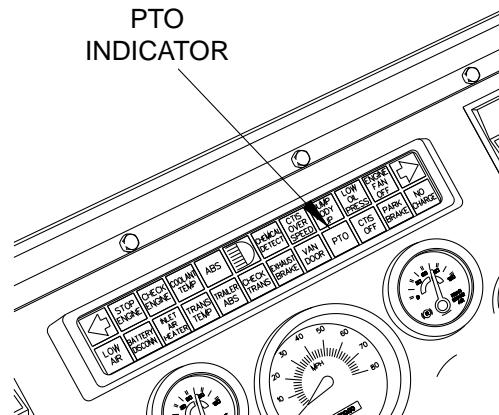
TROUBLESHOOTING PROCEDURE

POWER TAKEOFF (PTO) INDICATOR DOES NOT ILLUMINATE

STEP 1

Does LAMP TEST switch illuminate PTO indicator?

1. Position master power switch to on. (Volume 1, WP 0004)
2. Hold LAMP TEST switch in on position. (Volume 1, WP 0004)
3. Check to see if PTO indicator illuminates.



AIRPTO

Figure 1. PTO Indicator.

4. Release LAMP TEST switch.
5. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does LAMP TEST switch illuminate PTO indicator?

DECISION

Display Faulty - Notify Field Maintenance.

Display OK - Notify Field Maintenance

END OF WORK PACKAGE

OPERATOR MAINTENANCE ENGINE FAN OFF INDICATOR DOES NOT ILLUMINATE

INITIAL SETUP:

Equipment Condition

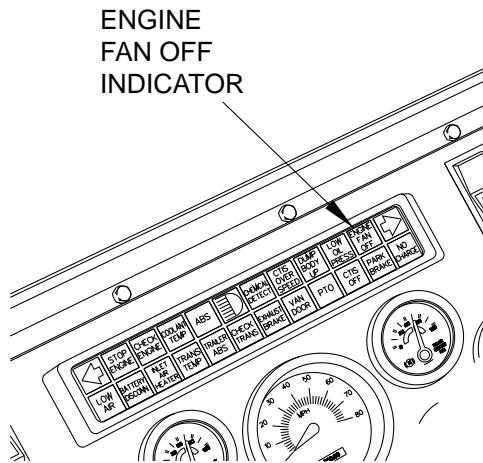
Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE ENGINE FAN OFF INDICATOR DOES NOT ILLUMINATE

STEP 1

Does LAMP TEST switch illuminate ENGINE FAN OFF indicator?

1. Position master power switch to on. (Volume 1, WP 0004)
2. Hold LAMP TEST switch in on position. (Volume 1, WP 0004)
3. Check to see if ENGINE FAN OFF indicator illuminates.



A1REF01

Figure 1. ENGINE FAN OFF Indicator.

4. Release LAMP TEST switch.
5. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does LAMP TEST switch illuminate ENGINE FAN OFF indicator?

DECISION

Display Faulty - Notify Field Maintenance.

Display OK - Notify Field Maintenance

END OF WORK PACKAGE

OPERATOR MAINTENANCE TRANS TEMP INDICATOR DOES NOT ILLUMINATE

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE TRANS TEMP INDICATOR DOES NOT ILLUMINATE

STEP 1

Does LAMP TEST switch illuminate TRANS TEMP indicator?

1. Position master power switch to on. (Volume 1, WP 0004)

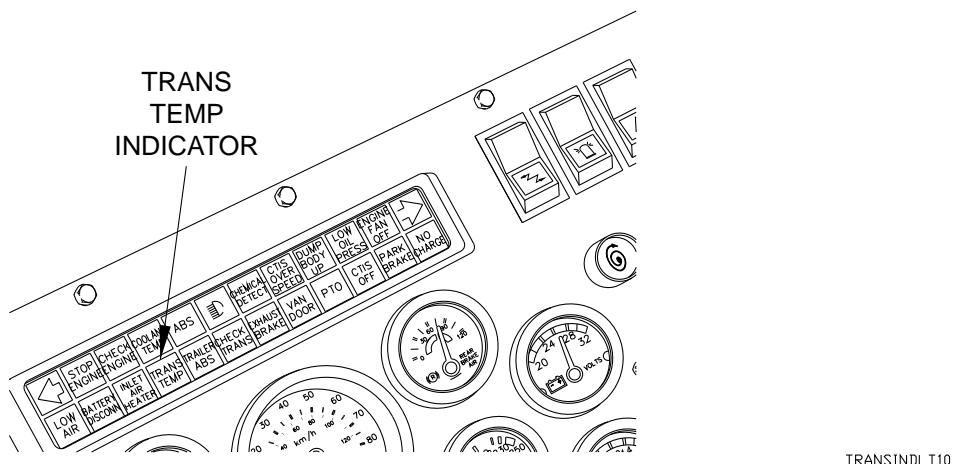


Figure 1. TRANS TEMP Indicator.

2. Hold LAMP TEST switch in on position. (Volume 1, WP 0004)
3. Check to see if TRANS TEMP indicator illuminates.
4. Position LAMP TEST switch to off. (Volume 1, WP 0004)
5. Release LAMP TEST switch.

CONDITION/INDICATION

Does LAMP TEST switch illuminate TRANS TEMP indicator?

DECISION

Display Faulty - Notify Field Maintenance

Display OK - Notify Field Maintenance

END OF WORK PACKAGE

OPERATOR MAINTENANCE LOW AIR INDICATOR DOES NOT ILLUMINATE

INITIAL SETUP:

Equipment Condition

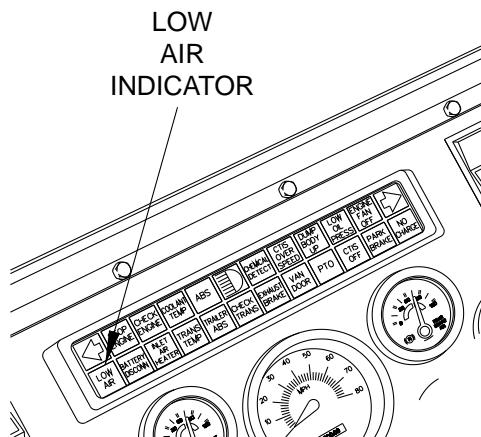
Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE LOW AIR INDICATOR DOES NOT ILLUMINATE

STEP 1

Does LAMP TEST switch illuminate LOW AIR indicator?

1. Position master power switch to on. (Volume 1, WP 0004, Table 1)



airlo

Figure 1. LOW AIR Indicator.

2. Hold LAMP TEST switch in on position. (Volume 1, WP 0004, Table 1)
3. Check to see if LOW AIR indicator illuminates.

4. Release LAMP TEST switch.
5. Position master power switch to off. (Volume 1, WP 0004, Table 1)

CONDITION/INDICATION

Does LAMP TEST switch illuminate LOW AIR indicator?

DECISION

Display Faulty - Notify Field Maintenance.

Display OK. - Notify Field Maintenance.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
LOW OIL PRESS INDICATOR DOES NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

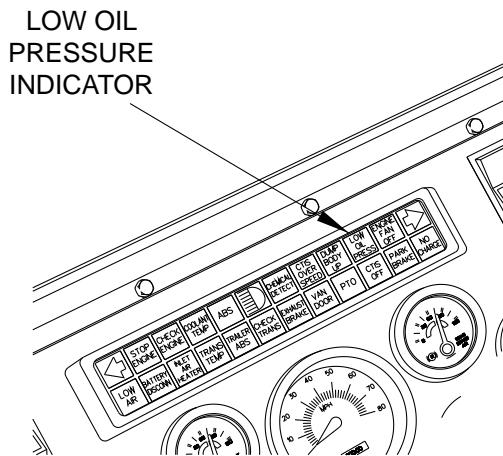
Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
LOW OIL PRESS INDICATOR DOES NOT ILLUMINATE**

STEP 1

Does LAMP TEST switch illuminate LOW OIL PRESS indicator?

1. Position master power switch to on. (Volume 1, WP 0004)



AIRLOP

Figure 1. LOW OIL PRESS Indicator.

2. Hold LAMP TEST switch in on position. (Volume 1, WP 0004)
3. Check to see if LOW OIL PRESS indicator illuminates.

4. Release LAMP TEST switch.
5. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does LAMP TEST switch illuminate LOW OIL PRESS indicator?

DECISION

DISPLAY FAULTY - Notify Field Maintenance

DISPLAY OK - Step 2 - Does OIL PRESS gage operate?

STEP 2**Does OIL PRESS gage operate?**

1. Start engine. (Volume 1, WP 0019)

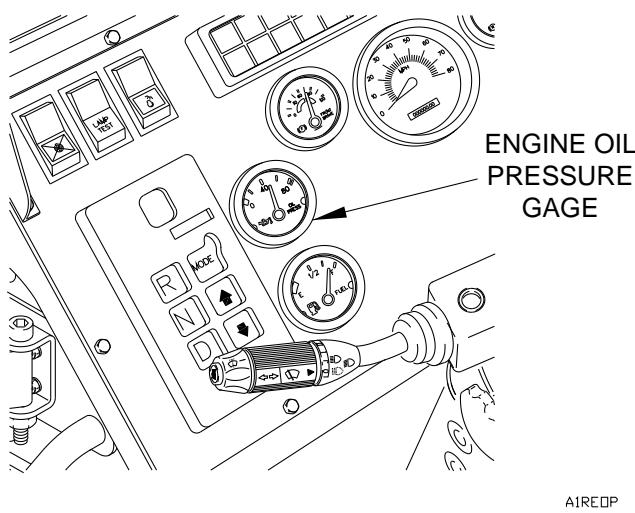


Figure 2. OIL PRESS Gage.

2. Check to see if OIL PRESS gage operates?
3. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Does OIL PRESS gage operate?

DECISION

GAGE FAULTY - Perform Electrical System Troubleshooting (OIL PRESS Gage Does Not Operate or Is Inaccurate). (WP 0107)

GAGE OK - Notify Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE**LOW OIL PRESS INDICATOR ILLUMINATES WHILE ENGINE IS RUNNING/REMAINS
ILLUMINATED 10 SECONDS AFTER ENGINE STARTS****INITIAL SETUP:****Equipment Condition**

Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE**LOW OIL PRESS INDICATOR ILLUMINATES WHILE ENGINE IS RUNNING/REMAINS
ILLUMINATED 10 SECONDS AFTER ENGINE STARTS****STEP 1****Is engine oil at proper level?****WARNING**

Ensure engine oil is cool before performing any maintenance. Failure to comply may result in serious injury to personnel.

1. Pull engine oil dipstick from dipstick tube.
2. Wipe oil dipstick clean.
3. Reinsert oil dipstick in dipstick tube until fully seated.
4. Pull engine oil dipstick from dipstick tube.

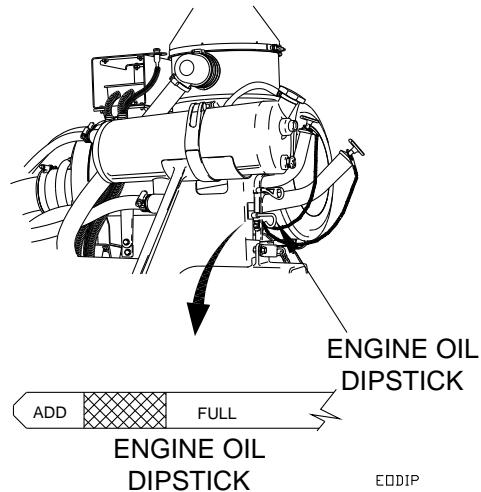


Figure 1. Engine Oil.

5. Reading should be between ADD and FULL markings on dipstick.
6. Return dipstick to dipstick tube.

CONDITION/INDICATION

Is engine oil at proper level?

DECISION

Oil Low - Add Oil (Volume 3, WP 0355, Table 5)

Oil OK - Notify Field Maintenance.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
NO CHARGE INDICATOR DOES NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

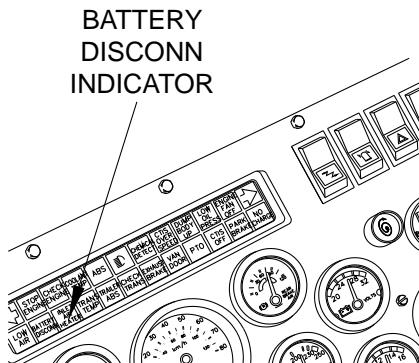
Engine shut down (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
NO CHARGE INDICATOR DOES NOT ILLUMINATE**

STEP 1

Does LAMP TEST switch illuminate NO CHARGE indicator?

1. Position master power switch to on. (Volume 1, WP 0004)



BATT DIS INDL T10

Figure 1. NO CHARGE Indicator.

2. Hold LAMP TEST switch in on position. (Volume 1, WP 0004)
3. Check to see if NO CHARGE indicator illuminates.
4. Release LAMP TEST switch.
5. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does LAMP TEST switch illuminate NO CHARGE indicator?

DECISION

Display Faulty - Notify Field Maintenance.

Display OK. - Notify Field Maintenance

END OF WORK PACKAGE

OPERATOR MAINTENANCE STOP ENGINE INDICATOR DOES NOT ILLUMINATE

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE STOP ENGINE INDICATOR DOES NOT ILLUMINATE

STEP 1

Does LAMP TEST switch illuminate STOP ENGINE indicator?

1. Position master power switch to on. (Volume 1, WP 0004)

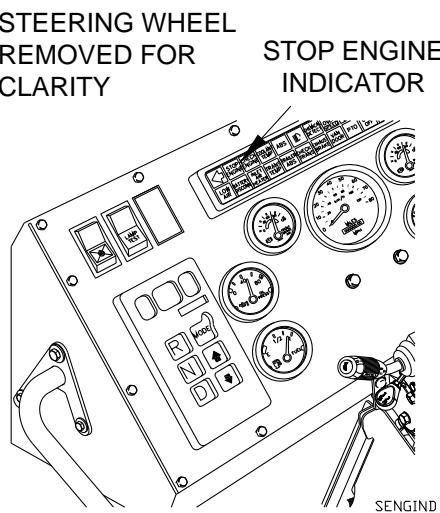


Figure 1. STOP ENGINE Indicator.

2. Hold LAMP TEST switch in on position. (Volume 1, WP 0004, Table 1)
3. Check to see if STOP ENGINE indicator illuminates.
4. Release LAMP TEST switch.
5. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does LAMP TEST switch illuminate STOP ENGINE indicator?

DECISION

Display Faulty - Notify Field Maintenance

Display OK - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
EXHAUST BRAKE INDICATOR DOES NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
EXHAUST BRAKE INDICATOR DOES NOT ILLUMINATE**

STEP 1

Does exhaust brake operate?

1. Position master power switch to on. (Volume 1, WP 0004)
2. Position WARMUP/OFF/RETARD switch to WARMUP. (Volume 1, WP 0004)
3. Start engine. (Volume 1, WP 0019)

NOTE

Exhaust brake can be heard when WARMUP/OFF/RETARD switch is placed in WARMUP position.

4. Check to hear if exhaust brake operates.
5. Shut down engine. (Volume 1, WP 0019)
6. Position WARMUP/OFF/RETARD switch to OFF. (Volume 1, WP 0004)
7. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does exhaust brake operate?

DECISION

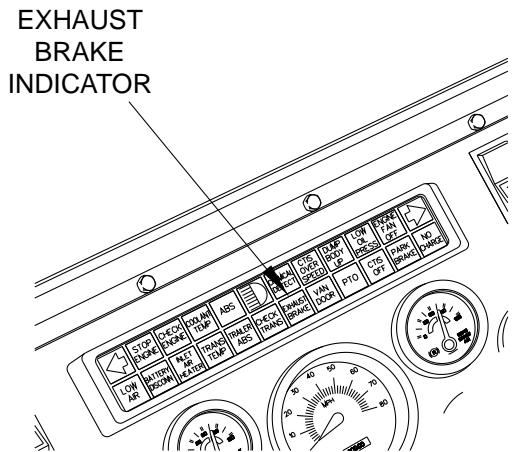
BRAKE FAULTY - Perform Electrical System Troubleshooting (Exhaust Brake Does Not Operate). (WP 0199)

BRAKE OK - Step 2 - Does LAMP TEST switch illuminate EXHAUST BRAKE indicator?

STEP 2

Does LAMP TEST switch illuminate EXHAUST BRAKE indicator?

1. Position master power switch to on. (Volume 1, WP 0004)



AIREB

Figure 1. EXHAUST BRAKE Indicator.

2. Hold LAMP TEST switch in on position. (Volume 1, WP 0004)
3. Check to see if EXHAUST BRAKE indicator illuminates.
4. Release LAMP TEST switch.
5. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does LAMP TEST switch illuminate EXHAUST BRAKE indicator?

DECISION

Display Faulty - Notify Field Maintenance

Display OK - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
CHECK ENGINE INDICATOR DOES NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
CHECK ENGINE INDICATOR DOES NOT ILLUMINATE**

STEP 1

Does LAMP TEST switch illuminate CHECK ENGINE indicator?

1. Position master power switch to on. (Volume 1, WP 0004)



Figure 1. CHECK ENGINE Indicator.

2. Hold LAMP TEST switch in on position. (Volume 1, WP 0004)
3. Check to see if CHECK ENGINE indicator illuminates.
4. Release LAMP TEST switch.
5. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does LAMP TEST switch illuminate CHECK ENGINE indicator?

DECISION

Display Faulty - Notify Field Maintenance

Display OK - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
CHECK TRANS INDICATOR DOES NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

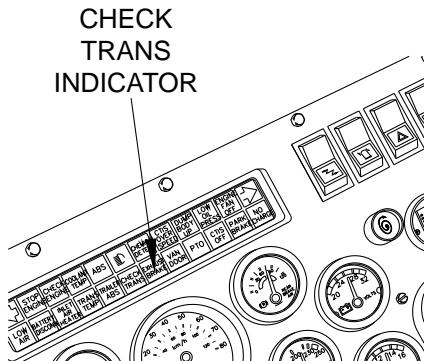
Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
CHECK TRANS INDICATOR DOES NOT ILLUMINATE**

STEP 1

Does LAMP TEST switch illuminate CHECK TRANS indicator?

1. Position master power switch to on. (Volume 1, WP 0004, Table 1)



CTRANSINDLT10

Figure 1. CHECK TRANS Indicator.

2. Hold LAMP TEST switch in on position. (Volume 1, WP 0004, Table 1)
3. Check to see if CHECK TRANS indicator illuminates.
4. Release LAMP TEST switch.
5. Position master power switch to off. (Volume 1, WP 0004, Table 1)

CONDITION/INDICATION

Does LAMP TEST switch illuminate CHECK TRANS indicator?

DECISION

Display Faulty - Notify Field Maintenance

Display OK - Notify Field Maintenance

END OF WORK PACKAGE

OPERATOR MAINTENANCE ABS INDICATOR DOES NOT ILLUMINATE

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

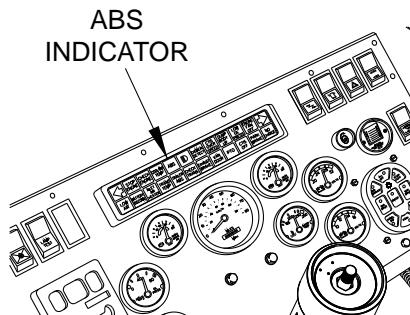
TROUBLESHOOTING PROCEDURE ABS INDICATOR DOES NOT ILLUMINATE

STEP 1

Does LAMP TEST switch illuminate ABS indicator?

1. Position master power switch to on. (Volume 1, WP 0004, Table 1)
2. Hold LAMP TEST switch in ON position. (Volume 1, WP 0004, Table 1)
3. Check to see if ABS indicator illuminates.

STEERING WHEEL
REMOVED FOR
CLARITY



ABSINDLT10

Figure 1. ABS Indicator.

4. Release LAMP TEST switch.
5. Position master power switch to off. (Volume 1, WP 0004, Table 1)

CONDITION/INDICATION

Does LAMP TEST switch illuminate ABS indicator?

DECISION

Display Faulty - Notify Field Maintenance

Display OK. - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
CTIS OFF INDICATOR DOES NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
CTIS OFF INDICATOR DOES NOT ILLUMINATE**

STEP 1

Does LAMP TEST switch illuminate CTIS OFF indicator?

1. Position master power switch to on. (Volume 1, WP 0004, Table 1)

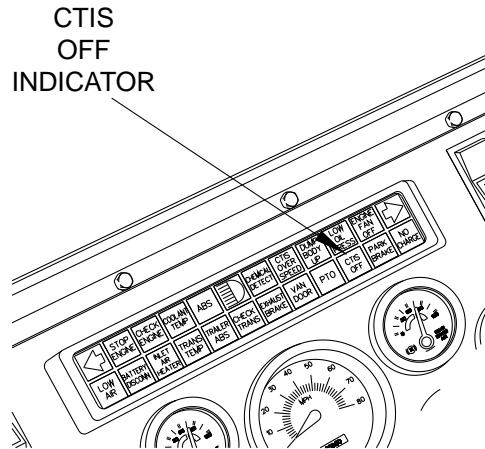


Figure 1. CTIS OFF Indicator.

2. Position LAMP TEST switch to on. (Volume 1, WP 0004, Table 1)
3. Check to see if CTIS OFF indicator illuminates.

4. Position LAMP TEST switch to off. (Volume 1, WP 0004, Table 1)
5. Position master power switch to off. (Volume 1, WP 0004, Table 1)

CONDITION/INDICATION

Does LAMP TEST switch illuminate CTIS OFF indicator?

DECISION

Display Faulty - Notify Field Maintenance

Display OK - Notify Field Maintenance

END OF WORK PACKAGE

OPERATOR MAINTENANCE BATTERY DISCONN INDICATOR DOES NOT ILLUMINATE

INITIAL SETUP:

Equipment Condition

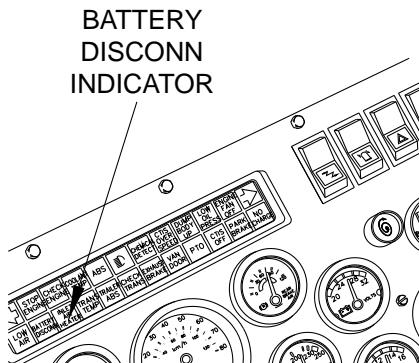
Engine shut down (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE BATTERY DISCONN INDICATOR DOES NOT ILLUMINATE

STEP 1

Does LAMP TEST switch illuminate BATTERY DISCONN indicator?

1. Position master power switch to on. (Volume 1, WP 0004)



BATTDISINLT10

Figure 1. BATTERY DISCONN Indicator.

2. Hold LAMP TEST switch in on position. (Volume 1, WP 0004)
3. Check to see if BATTERY DISCONN indicator illuminates.
4. Release LAMP TEST switch.
5. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does LAMP TEST switch illuminate BATTERY DISCONN indicator?

DECISION

Display Faulty - Notify Field Maintenance.

Display OK - Notify Field Maintenance

END OF WORK PACKAGE

OPERATOR MAINTENANCE
ONE OR BOTH HEADLIGHTS (HIGH AND LOW BEAMS) DO NOT ILLUMINATE

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE

ONE OR BOTH HEADLIGHTS (HIGH AND LOW BEAMS) DO NOT ILLUMINATE

STEP 1

Does one headlight illuminate?

1. Press SER DRIVE key on main light switch.
2. Press ENTER key on main light switch.
3. Check to see one headlight illuminates.
4. Press ALL OFF key on main light switch.
5. Press ENTER key on main light switch.

CONDITION/INDICATION

Does one headlight illuminate?

DECISION

Lamp Faulty - Notify Field Maintenance.

Headlights Faulty - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
ONE OR BOTH HEADLIGHT LOW BEAMS DO NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
ONE OR BOTH HEADLIGHT LOW BEAMS DO NOT ILLUMINATE**

STEP 1

Do one or both headlight low beams illuminate?

1. Press SER DRIVE key on main light switch.
2. Press ENTER key on main light switch.
3. Position turn signal switch to low beam setting. (Volume 1, WP 0007)
4. Check to see if one or both headlight low beams illuminate.
5. Press ALL OFF key on main light switch.
6. Press ENTER key on main light switch.

CONDITION/INDICATION

Do one or both headlight low beams illuminate?

DECISION

LOW BEAMS FAULTY - Step 2 - Do one or both headlight high beams illuminate?
LOW BEAMS OK - Fault corrected.

STEP 2

Do one or both headlight high beams illuminate?

1. Press SER DRIVE key on main light switch.
2. Press ENTER key on main light switch.
3. Position turn signal switch to high beam setting. (Volume 1, WP 0007)
4. Check to see if one or both headlight high beams illuminate.
5. Press ALL OFF key on main light switch.
6. Press ENTER key on main light switch.

CONDITION/INDICATION

Do one or both headlight high beams illuminate?

DECISION

High Beams Faulty - Perform Electrical System Troubleshooting (One or Both Headlights (High and Low Beam) Do Not Illuminate). (WP 0138)

High Beams OK - Notify Field Maintenance.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
ONE OR BOTH HEADLIGHT HIGH BEAMS DO NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
ONE OR BOTH HEADLIGHT HIGH BEAMS DO NOT ILLUMINATE**

STEP 1

Do one or both headlight high beams illuminate?

1. Press SER DRIVE key on main light switch.
2. Press ENTER key on main light switch.
3. Position turn signal switch to high beam setting. (Volume 1, WP 0007)
4. Check to see if one or both headlight high beams illuminate.
5. Press ALL OFF key on main light switch.
6. Press ENTER key on main light switch.

CONDITION/INDICATION

Do one or both headlight high beams illuminate?

DECISION

HIGH BEAMS FAULTY - Step 2 - Do one or both headlight low beams illuminate?
HIGH BEAMS OK - Fault corrected.

STEP 2

Do one or both headlight low beams illuminate?

1. Press SER DRIVE key on main light switch.
2. Press ENTER key on main light switch.
3. Position turn signal switch to low beam setting. (Volume 1, WP 0007)
4. Check to see if one or both headlight low beams illuminate.
5. Press ALL OFF key on main light switch.
6. Press ENTER key on main light switch.

CONDITION/INDICATION

Do one or both headlight low beams illuminate?

DECISION

Low Beams Faulty - Perform Electrical System Troubleshooting (One or Both Headlights (High and Low Beam) Do Not Illuminate). (WP 0138)

Low Beams OK - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
PARKING LIGHTS DO NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
PARKING LIGHTS DO NOT ILLUMINATE**

STEP 1

Do headlights illuminate?

1. Press SER DRIVE key on main light switch.
2. Press ENTER key on main light switch.
3. Press PARK key on main light switch.
4. Press ENTER key on main light switch.
5. Check to see if headlights illuminate.
6. Press ALL OFF key on main light switch.
7. Press ENTER key on main light switch.

CONDITION/INDICATION

Do headlights illuminate?

DECISION

HEADLIGHTS FAULTY - Perform Electrical System Troubleshooting (All Main Light Switch Functions Do Not Operate). (WP 0201, Test 1 - Is circuit breaker CB70 tripped?)

HEADLIGHTS OK - Step 2 - Does one parking light illuminate?

STEP 2

Does one parking light illuminate?

1. Press SER DRIVE key on main light switch.
2. Press ENTER key on main light switch.
3. Press PARK key on main light switch.
4. Press ENTER key on main light switch.
5. Check to see if any parking lights illuminate.
6. Press ALL OFF key on main light switch.
7. Press ENTER key on main light switch.

CONDITION/INDICATION

Does one parking light illuminate?

DECISION

NO LIGHTS - Step 4 - Is circuit breaker CB65 tripped?

NOT ALL - Step 3 - Do turn signals operate?

STEP 3**Do turn signals operate?**

1. Press SER DRIVE key on main light switch.
2. Press ENTER key on main light switch.
3. Position turn signal switch to right or left turn. (Volume 1, WP 0007)
4. Check to see if turn signals operate.
5. Position turn signal switch to off. (Volume 1, WP 0007)
6. Press ALL OFF key on main light switch.
7. Press ENTER key on main light switch.

CONDITION/INDICATION

Do turn signals operate?

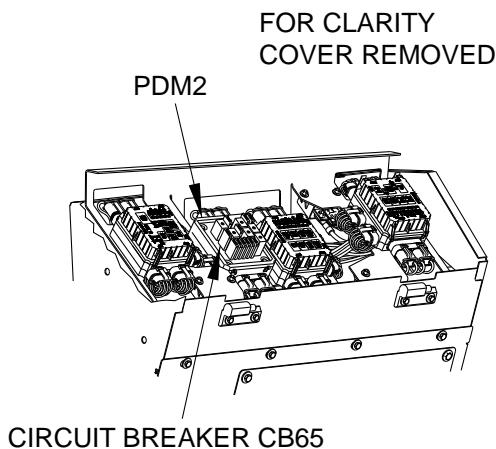
DECISION

SIGNALS FAULTY - Perform Electrical System Troubleshooting (One or Both Composite Taillights Do Not Illuminate). (WP 0145, Test 1 - Does front marker lights illuminate?)

SIGNALS OK - Notify Field Maintenance

STEP 4**Is circuit breaker CB65 tripped?**

1. Remove Power Distribution Panel (PDP) cover. (Volume 3, WP 0351)
2. Open PDM 2.



cb65x

Figure 1. Circuit Breaker CB65.

3. If circuit breaker CB65 is tripped, push button to reset.
4. Position master power switch to on. (Volume 1, WP 0004)
5. Check circuit breaker CB65 to see if it is tripped again.
6. Position master power switch to off. (Volume 1, WP 0004)
7. Close PDM 2.
8. Install PDP cover. (Volume 3, WP 0351)

CONDITION/INDICATION

Is circuit breaker CB65 tripped?

DECISION

BREAKER TRIPPED - Notify Field Maintenance

BREAKER OK - Step 5 - Do parking lights illuminate?

STEP 5

Do parking lights illuminate?

1. Press SER DRIVE key on main light switch.
2. Press ENTER key on main light switch.
3. Press PARK key on main light switch.
4. Press ENTER key on main light switch.
5. Check to see if parking lights illuminate.
6. Press ALL OFF key on main light switch.
7. Press ENTER key on main light switch.

CONDITION/INDICATION

Do parking lights illuminate?

DECISION

LIGHTS FAULTY - Notify Field Maintenance
LIGHTS OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
ONE OR MORE CAB TOP MARKER LIGHTS DO NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
ONE OR MORE CAB TOP MARKER LIGHTS DO NOT ILLUMINATE**

STEP 1

Do other marker lights illuminate?

1. Press SER DRIVE key on main light switch.
2. Press ENTER key on main light switch.
3. Check to see if other marker lights illuminate.
4. Press ALL OFF key on main light switch.
5. Press ENTER key on main light switch.

CONDITION/INDICATION

Do other marker lights illuminate?

DECISION

Lights Faulty - Perform Electrical System Troubleshooting (All Front and/or Rear Marker Lights Do Not Illuminate in Normal Mode). (WP 0144, Test 1 - Do headlights operate?)

Lights OK - Notify Field Maintenance.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
LIGHT BAR CLEARANCE LIGHTS DO NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

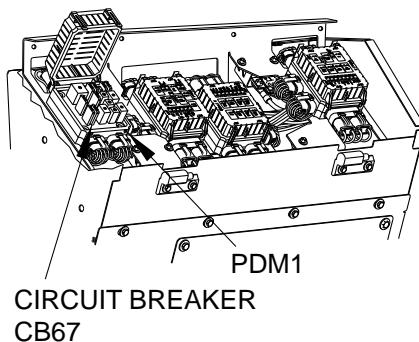
Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
LIGHT BAR CLEARANCE LIGHTS DO NOT ILLUMINATE**

STEP 1

Is circuit breaker CB67 tripped?

1. Remove PDP cover. (Volume 3, WP 0351)
2. Remove cover from PDM 1.



CB67XLT10

Figure 1. Circuit Breaker CB67.

3. If circuit breaker CB67 is tripped, push button to reset.
4. Position master power switch to on. (Volume 1, WP 0004)
5. Check circuit breaker CB67 to see if it is tripped again.
6. Position master power switch to off. (Volume 1, WP 0004)

7. Install PDP cover. (Volume 3, WP 0351)

CONDITION/INDICATION

Is circuit breaker CB67 tripped?

DECISION

BREAKER TRIPPED - Notify Field Maintenance

BREAKER OK - Step 2 - Do light bar clearance lights illuminate?

STEP 2**Do light bar clearance lights illuminate?**

1. Press SER DRIVE key on main light switch.
2. Press ENTER key on main light switch.
3. Check if light bar clearance lights illuminate.
4. Press ALL OFF key on main light switch.
5. Press ENTER key on main light switch.

CONDITION/INDICATION

Do light bar clearance lights illuminate?

DECISION

LIGHTS FAULTY - Notify Field Maintenance

LIGHTS OK - Fault Corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
ALL FRONT AND/OR REAR MARKER LIGHTS DO NOT ILLUMINATE IN NORMAL MODE

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE

ALL FRONT AND/OR REAR MARKER LIGHTS DO NOT ILLUMINATE IN NORMAL MODE

STEP 1

Do headlights operate?

1. Press SER DRIVE key on main light switch.
2. Press ENTER key on main light switch.
3. Check to see if headlights operate.
4. Press ALL OFF key on main light switch.
5. Press ENTER key on main light switch.

CONDITION/INDICATION

Do headlights operate?

DECISION

HEADLIGHTS FAULTY - Perform Electrical System Troubleshooting (All Main Light Switch Functions Do Not Operate). (WP 0201, Test 1 - Is circuit breaker CB70 tripped?)

HEADLIGHTS OK - Step 2 - Do rear marker lights illuminate?

STEP 2

Do rear marker lights illuminate?

1. Press SER DRIVE key on main light switch.
2. Press ENTER key on main light switch.
3. Check to see if rear marker lights illuminate.
4. Press ALL OFF key on main light switch.
5. Press ENTER key on main light switch.

CONDITION/INDICATION

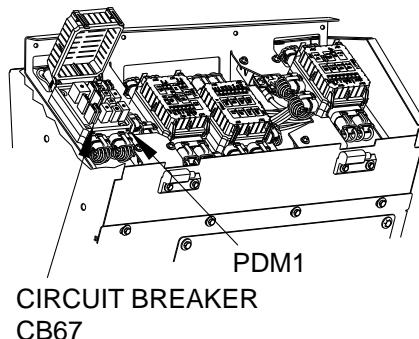
Do rear marker lights illuminate?

DECISION

Rear Faulty - Step 4 - Is circuit breaker CB80 tripped?
Rear OK - Step 3 - Is circuit breaker CB67 tripped?

STEP 3**Is circuit breaker CB67 tripped?**

1. Remove PDP cover. (Volume 3, WP 0351)
2. Open cover on PDM 1.



CB67XL T10

Figure 1. Circuit Breaker CB67.

3. If circuit breaker CB67 is tripped, push button to reset.
4. Position master power switch to on. (Volume 1, WP 0004)
5. Check circuit breaker CB67 to see if it is tripped again.
6. Position master power switch to off. (Volume 1, WP 0004)
7. Close cover on PDM 1.
8. Install PDP cover. (Volume 3, WP 0351)

CONDITION/INDICATION

Is circuit breaker CB67 tripped?

DECISION

Breaker Tripped - Notify Field Maintenance.
Breaker OK -

STEP 4**Is circuit breaker CB80 tripped?**

1. Remove PDP cover. (Volume 3, WP 0351)

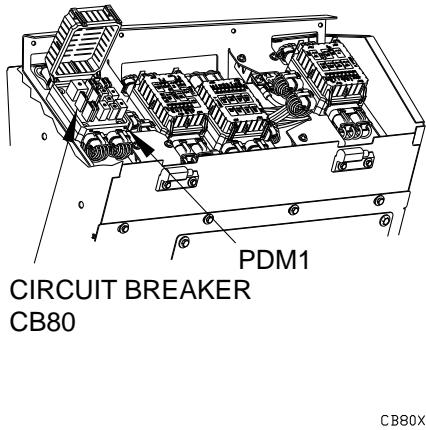


Figure 2. Circuit Breaker CB80.

2. Open cover on PDM 1.
3. If circuit breaker CB80 is tripped, push button to reset.
4. Position master power switch to on. (Volume 1, WP 0004)
5. Check circuit breaker CB80 to see if it is tripped again.
6. Position master power switch to off. (Volume 1, WP 0004)
7. Close cover on PDM 1.
8. Install PDP cover. (Volume 3, WP 0351)

CONDITION/INDICATION

Is circuit breaker CB80 tripped?

DECISION

Breaker Tripped - Notify Field Maintenance.

Breaker OK -

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
ONE OR BOTH COMPOSITE TAILLIGHTS DO NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
ONE OR BOTH COMPOSITE TAILLIGHTS DO NOT ILLUMINATE**

STEP 1

Does front marker lights illuminate?

1. Check to see if front marker lights illuminate. (Volume 1, WP 0019)

CONDITION/INDICATION

Does front marker lights illuminate?

DECISION

LIGHTS FAULTY - Perform Electrical System Troubleshooting (All Front and/or Rear Marker Lights Do Not Illuminate in Normal Mode). (WP 0144, Test 1 - Do headlights operate?)

LIGHTS OK - Step 2 - Do LH and RH rear marker lights illuminate?

STEP 2

Do LH and RH rear marker lights illuminate?

1. Check to see if rear marker lights illuminate. (Volume 1, WP 0019)

CONDITION/INDICATION

Do LH and RH rear marker lights illuminate?

DECISION

LIGHTS FAULTY - Perform Electrical System Troubleshooting (Rear Marker Lights Do Not Illuminate). (WP 0157, Test 1 - Do front corner marker lights illuminate?)

LIGHTS OK - Step 3 - Does any composite taillight illuminate?

STEP 3

Does any composite taillight illuminate?

1. Check to see if any composite taillight illuminates. (Volume 1, WP 0019)

CONDITION/INDICATION

Does any composite taillight illuminate?

DECISION

Lights Faulty - Step 4 - Is circuit breaker CB80 tripped?

One Light OK - Notify Field Maintenance

STEP 4**Is circuit breaker CB80 tripped?**

1. Remove PDP cover. (Volume 3, WP 0351)

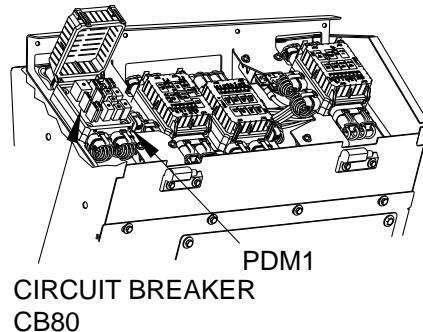


Figure 1. Circuit Breaker CB80.

2. If circuit breaker CB80 is tripped, push button to reset.
3. Press SER DRIVE key on main light switch.
4. Press ENTER key on main light switch.
5. Check circuit breaker CB80 to see if it is tripped again.
6. Press ALL OFF key on main light switch.
7. Press ENTER key on main light switch.
8. Install PDP cover. (Volume 3, WP 0351)

CONDITION/INDICATION

Is circuit breaker CB80 tripped?

DECISION

Breaker OK - Step 5 - Do composite taillights illuminate?

Breaker Tripped - Notify Field Maintenance

STEP 5**Do composite taillights illuminate?**

1. Check to see if composite taillights illuminate. (Volume 1, WP 0019)

CONDITION/INDICATION

Do composite taillights illuminate?

DECISION

Lights OK - Fault Corrected.

Lights Faulty - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
ONE OR BOTH FRONT BLACKOUT MARKER LIGHTS DO NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
ONE OR BOTH FRONT BLACKOUT MARKER LIGHTS DO NOT ILLUMINATE**

STEP 1

Do rear blackout marker lights illuminate?

1. Position Press B.O. MARKER key on main light switch.
2. Press ENTER key on main light switch.
3. Check to see if rear blackout marker lights illuminate.
4. Position Press ALL OFF key on main light switch.
5. Press ENTER key on main light switch.

CONDITION/INDICATION

Do rear blackout marker lights illuminate?

DECISION

MARKERS FAULTY - Perform Electrical System Troubleshooting (All Blackout Marker Lights Do Not Illuminate). (WP 0152)
MARKERS OK - Notify Field Maintenance

END OF WORK PACKAGE

OPERATOR MAINTENANCE
ONE OR BOTH FRONT CORNER MARKER LIGHTS DO NOT ILLUMINATE

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE
ONE OR BOTH FRONT CORNER MARKER LIGHTS DO NOT ILLUMINATE

STEP 1

Do other marker lights illuminate?

1. Press SER DRIVE key on main light switch.
2. Press ENTER key on main light switch.
3. Check to see if other marker lights illuminate.
4. Press ALL OFF key on main light switch.
5. Press ENTER key on main light switch.

CONDITION/INDICATION

Do other marker lights illuminate?

DECISION

LIGHTS FAULTY - Perform Electrical System Troubleshooting (All Front and/or Rear Marker Lights Do Not Illuminate in Normal Mode). (WP 0144)
LIGHTS OK - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
ONE OR BOTH STOPLIGHTS DO NOT ILLUMINATE**

INITIAL SETUP:

Personnel Required
(2)

Equipment Condition
Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
ONE OR BOTH STOPLIGHTS DO NOT ILLUMINATE**

STEP 1

Do blackout stoplights illuminate?

1. Position master power switch to on. (Volume 1, WP 0004)
2. Start engine and allow air tank to fill. (Volume 1, WP 0019)
3. Shut down engine. (Volume 1, WP 0019)
4. Press B.O. DRIVE key on main light switch.
5. Press ENTER key on main light switch.
6. Depress brake pedal.
7. Check to see if blackout stoplights illuminate.
8. Release brake pedal.
9. Press ALL OFF key on main light switch.
10. Press ENTER key on main light switch.
11. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Do blackout stoplights illuminate?

DECISION

LIGHTS FAULTY - WP 0161, Test 1 - Do stoplights and lighted indicator display illuminate?

LIGHTS OK - Step 2 - Does one stoplight illuminate?

STEP 2

Does one stoplight illuminate?

1. Position master power switch to on. (Volume 1, WP 0004)
2. Start engine and allow air tank to fill. (Volume 1, WP 0019)
3. Shut down engine. (Volume 1, WP 0019)
4. Press STOP LIGHT key on main light switch.
5. Press ENTER key on main light switch.
6. Depress brake pedal.

7. Check to see if one stoplight illuminates.
8. Release brake pedal.
9. Press ALL OFF key on main light switch.
10. Press ENTER key on main light switch.
11. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does one stoplight illuminate?

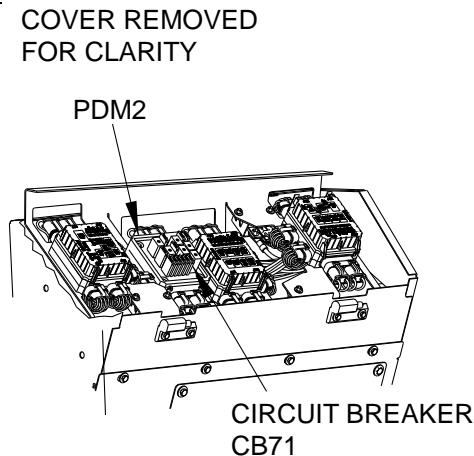
DECISION

One Light - Notify Field Maintenance

Neither Light - Step 3 - Is circuit breaker CB71 tripped?

STEP 3**Is circuit breaker CB71 tripped?**

1. Remove PDP cover. (Volume 3, WP 0351)



CB71XLT10

Figure 1. Circuit Breaker CB71.

2. Open PDM 2.
3. If circuit breaker CB71 is tripped, push button to reset.
4. Position master power switch to on. (Volume 1, WP 0004)
5. Check circuit breaker CB71 to see if it is tripped again.
6. Position master power switch to off. (Volume 1, WP 0004)
7. Close PDM 2
8. Install PDP cover. (Volume 3, WP 0351)

CONDITION/INDICATION

Is circuit breaker CB71 tripped?

DECISION

Breaker Tripped - Notify Field Maintenance

Breaker OK - Step 4 - Do stoplights illuminate?

STEP 4**Do stoplights illuminate?**

1. Position master power switch to on. (Volume 1, WP 0004)
2. Start engine and allow air tank to fill. (Volume 1, WP 0019)
3. Shut down engine. (Volume 1, WP 0019)
4. Press STOP LIGHT key on main light switch.
5. Press ENTER key on main light switch.
6. Depress brake pedal.
7. Check to see if stoplights illuminate.
8. Release brake pedal.
9. Press ALL OFF key on main light switch.
10. Press ENTER key on main light switch.
11. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Do stoplights illuminate?

DECISION

Lights Faulty - Notify Field Maintenance

Lights OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
BLACKOUT DRIVE LIGHT DOES NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
BLACKOUT DRIVE LIGHT DOES NOT ILLUMINATE**

STEP 1

Do blackout marker lights illuminate?

1. Press B.O. MARKER key on main light switch.
2. Press ENTER key on main light switch.
3. Check to see if blackout marker lights illuminate.
4. Press ALL OFF key on main light switch.
5. Press ENTER key on main light switch.

CONDITION/INDICATION

Do blackout marker lights illuminate?

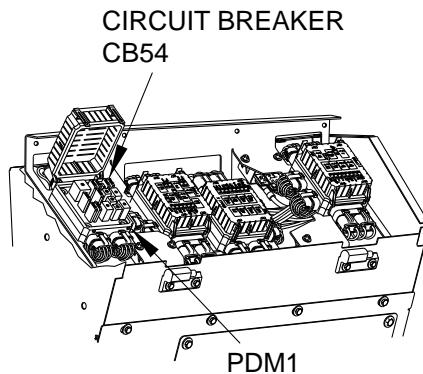
DECISION

MARKERS FAULTY - Perform Electrical System Troubleshooting (All Main Light Switch Functions Do Not Operate). (WP 0201, Test 1 - Is circuit breaker CB70 tripped?)
MARKERS OK - Step 2 - Is circuit breaker CB54 tripped?

STEP 2

Is circuit breaker CB54 tripped?

1. Remove PDP cover. (Volume 3, WP 0351)
2. If circuit breaker CB54 is tripped, push button to reset.



CB54XLT10

Figure 1. Circuit Breaker CB54.

3. Position master power switch to on.
4. Check circuit breaker CB54 to see if it is tripped again.
5. Position master power switch to off.
6. Install PDP cover. (Volume 3, WP 0351)

CONDITION/INDICATION

Is circuit breaker CB54 tripped?

DECISION

Breaker Tripped - Notify Field Maintenance

Breaker OK -

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
ONE OR BOTH BLACKOUT STOPLIGHTS DO NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
ONE OR BOTH BLACKOUT STOPLIGHTS DO NOT ILLUMINATE**

STEP 1

Do stoplights illuminate in normal mode?

1. Press STOP LIGHT key on main light switch.
2. Press ENTER key on main light switch.
3. Depress brake pedal.
4. Check to see if stoplights illuminate.
5. Release brake pedal.
6. Press ALL OFF key on main light switch.
7. Press ENTER key on main light switch.

CONDITION/INDICATION

Do stoplights illuminate in normal mode?

DECISION

LIGHTS FAULTY - WP 0161, Test 1 - Do stoplights and lighted indicator display illuminate?

LIGHTS OK - Step 2 - Do blackout stoplights illuminate?

STEP 2

Do blackout stoplights illuminate?

1. Press ALL OFF key on main light switch.
2. Press ENTER key on main light switch.
3. Press B.O. DRIVE key on main light switch.
4. Press ENTER key on main light switch.
5. Depress brake pedal.
6. Check to see if blackout stoplights illuminate.
7. Release brake pedal.
8. Press ALL OFF key on main light switch.
9. Press ENTER key on main light switch.

CONDITION/INDICATION

Do blackout stoplights illuminate?

DECISION

Lights OK - Fault Corrected.

Lights Faulty - Notify Field Maintenance

END OF WORK PACKAGE

OPERATOR MAINTENANCE
ONE OR BOTH REAR BLACKOUT MARKER LIGHTS DO NOT ILLUMINATE

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE
ONE OR BOTH REAR BLACKOUT MARKER LIGHTS DO NOT ILLUMINATE

STEP 1

Do front blackout marker lights illuminate?

1. Press B.O. MARKER key on main light switch.
2. Press ENTER key on main light switch.
3. Check to see if front blackout marker lights illuminate.
4. Press ALL OFF key on main light switch.
5. Press ENTER key on main light switch.

CONDITION/INDICATION

Do front blackout marker lights illuminate?

DECISION

Markers Faulty - Perform Electrical System Troubleshooting (All Blackout Marker Lights Do Not Illuminate). (WP 0152, Test 1 - Does Gen IV Transmission Pushbutton Shift Selector (TPSS) display dim?)

Markers OK - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
ALL BLACKOUT MARKER LIGHTS DO NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
ALL BLACKOUT MARKER LIGHTS DO NOT ILLUMINATE**

STEP 1

Does Gen IV Transmission Pushbutton Shift Selector (TPSS) display dim?

1. Start engine. (Volume 1, WP 0019)
2. Press B.O. MARKER key on main light switch.
3. Press ENTER key on main light switch.
4. Check to see if Gen IV TPSS display dims.
5. Press ALL OFF key on main light switch.
6. Press ENTER key on main light switch.
7. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Does Gen IV Transmission Pushbutton Shift Selector (TPSS) display dim?

DECISION

TPSS FAULTY - Perform Electrical System Troubleshooting (Blackout Marker Lights Do Not Illuminate and/or Gen IV Transmission Pushbutton Shift Selector Does Not Dim).
(WP 0153, Test 1 - Is circuit breaker CB66 tripped?)

TPSS OK - Notify Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE

**BLACKOUT MARKER LIGHTS DO NOT ILLUMINATE AND/OR GEN IV
TRANSMISSION PUSHBUTTON SHIFT SELECTOR (TPSS) DISPLAY DOES NOT DIM**

INITIAL SETUP:**Equipment Condition**

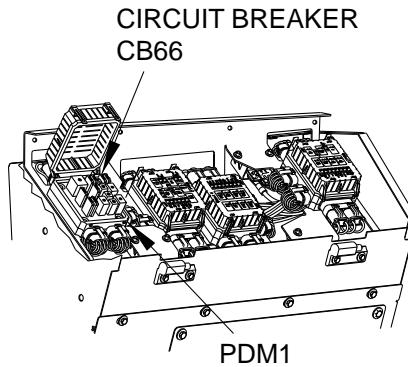
Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE

**BLACKOUT MARKER LIGHTS DO NOT ILLUMINATE AND/OR GEN IV
TRANSMISSION PUSHBUTTON SHIFT SELECTOR (TPSS) DISPLAY DOES NOT DIM**

STEP 1**Is circuit breaker CB66 tripped?**

1. Position master power switch to off. (Volume 1, WP 0004)
2. Remove PDP cover (Volume 3, WP 0351).
3. Open PDM 1.



CB66XLT10

Figure 1. Circuit Breaker CB66.

4. If circuit breaker CB66 is tripped, push button to reset.

5. Position master power switch to on. (Volume 1, WP 0004)
6. Check circuit breaker CB66 to see if it is tripped again.
7. Position master power switch to off. (Volume 1, WP 0004)
8. Install PDP cover (Volume 3, WP 0351).

CONDITION/INDICATION

Is circuit breaker CB66 tripped?

DECISION

BREAKER TRIPPED - Notify Filed Maintenance

BREAKER OK - Step 2 - Do headlights illuminate?

STEP 2**Do headlights illuminate?**

1. Press SER DRIVE key on main light switch.
2. Press ENTER key on main light switch.
3. Check to see if headlights illuminate.
4. Press ALL OFF key on main light switch.
5. Press ENTER key on main light switch.

CONDITION/INDICATION

Do headlights illuminate?

DECISION

HEADLIGHTS FAULTY - Perform Electrical System Troubleshooting (All Main Light Switch Functions Do Not Operate). (WP 0201, Test 1 - Is circuit breaker CB70 tripped?)

HEADLIGHTS OK - Notify Field Maintenance.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
AMBER WARNING LIGHT DOES NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
AMBER WARNING LIGHT DOES NOT ILLUMINATE**

STEP 1

Do headlights illuminate?

1. Press SER DRIVE key on main light switch.
2. Press ENTER key on main light switch.
3. Check to see if headlights illuminate.
4. Press ALL OFF key on main light switch.
5. Press ENTER key on main light switch.

CONDITION/INDICATION

Do headlights illuminate?

DECISION

HEADLIGHTS FAULTY - Perform Electrical System Troubleshooting (All Main Light Switch Functions Do Not Operate). (WP 0201, Test 1 - Is circuit breaker CB70 tripped?)

HEADLIGHTS OK - Step 2 - Is circuit breaker CB38 tripped?

STEP 2

Is circuit breaker CB38 tripped?

1. Position master power switch to off. (Volume 1, WP 0004)

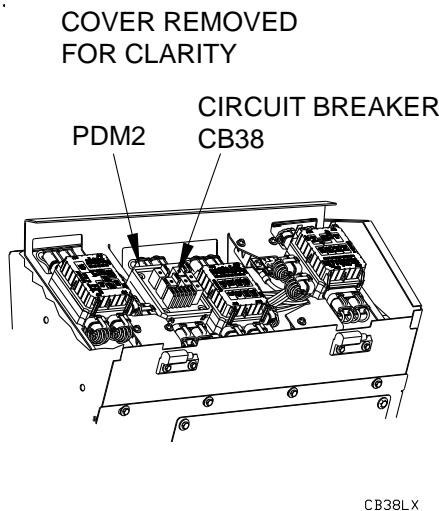


Figure 1. Circuit Breaker CB38.

2. Remove PDP cover. (Volume 3, WP 0351)
3. If circuit breaker CB38 is tripped, push button to reset.
4. Position master power switch to on. (Volume 1, WP 0004)
5. Check circuit breaker CB38 to see if it is tripped again.
6. Position master power switch to off. (Volume 1, WP 0004)
7. Install PDP cover. (Volume 3, WP 0351)

CONDITION/INDICATION

Is circuit breaker CB38 tripped?

DECISION

BREAKER TRIPPED - Notify Field Maintenance

BREAKER OK - Fault corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
BACKUP LIGHT DOES NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
BACKUP LIGHT DOES NOT ILLUMINATE**

STEP 1

Do headlights illuminate?

1. Press SER DRIVE key on main light switch.
2. Press ENTER key on main light switch.
3. Check to see if headlights illuminate.
4. Press ALL OFF key on main light switch.
5. Press ENTER key on main light switch.

CONDITION/INDICATION

Do headlights illuminate?

DECISION

HEADLIGHTS FAULTY - Perform Electrical System Troubleshooting (All Main Light Switch Functions Do Not Operate). (WP 0201, Test 1 - Is circuit breaker CB70 tripped?)

HEADLIGHTS OK - Step 2 - Does vehicle operate in reverse?

STEP 2

Does vehicle operate in reverse?

1. Start engine (Volume 1, WP 0019).
2. Operate vehicle in reverse (Volume 1, WP 0019).
3. Shut down engine. (Volume 1, WP 0019)
4. Position MBDS to disconnect (OFF). (Volume 1, WP 0011)

CONDITION/INDICATION

Does vehicle operate in reverse?

DECISION

No Reverse - Notify Field Maintenance

Reverse OK - Step 3 - Is circuit breaker CB73 tripped?

STEP 3**Is circuit breaker CB73 tripped?**

1. Remove PDP cover. (Volume 3, WP 0351)
2. If circuit breaker CB73 is tripped, push button to reset.

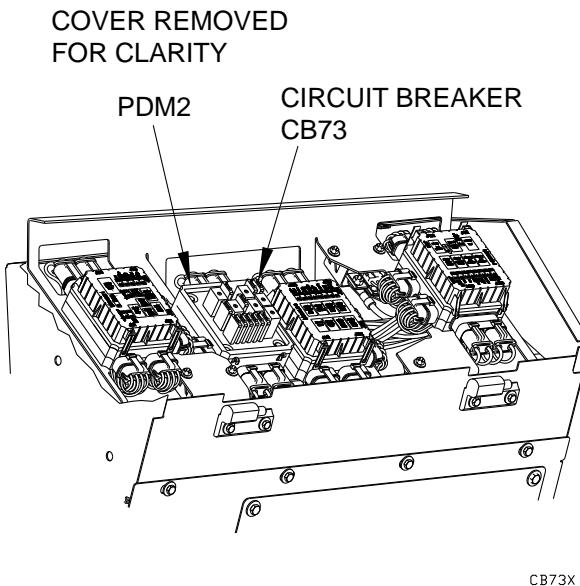


Figure 1. Circuit Breaker CB73.

3. Position MBDS to connect (ON). (Volume 1, WP 0011)
4. Start engine. (Volume 1, WP 0019)
5. Press SER DRIVE key on main light switch.
6. Press ENTER key on main light switch.
7. Select R (reverse) on Gen IV TPSS. (Volume 1, WP 0004)
8. Check circuit breaker CB73 to see if it is tripped again.
9. Select N (neutral) on Gen IV TPSS. (Volume 1, WP 0004).
10. Press ALL OFF key on main light switch.
11. Press ENTER key on main light switch.
12. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Is circuit breaker CB73 tripped?

DECISION

Breaker Tripped - Notify Field Maintenance

Breaker OK - Step 4 - Is circuit breaker CB79 tripped?

STEP 4

Is circuit breaker CB79 tripped?

1. If circuit breaker CB79 is tripped, push button to reset.

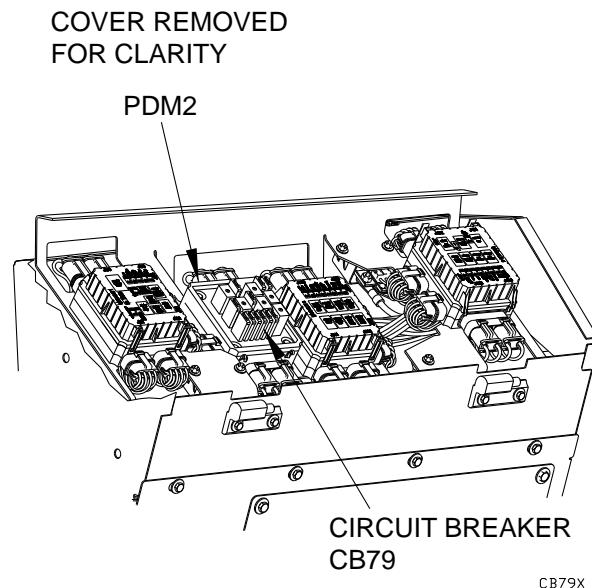


Figure 2. Circuit Breaker CB79.

2. Start engine. (Volume 1, WP 0019)
3. Press SER DRIVE key on main light switch.
4. Press ENTER key on main light switch.
5. Select R (reverse) on Gen IV TPSS. (Volume 1, WP 0004)
6. Check circuit breaker CB79 to see if it is tripped again.
7. Select N (neutral) on Gen IV TPSS. (Volume 1, WP 0004).
8. Press ALL OFF key on main light switch.
9. Press ENTER key on main light switch.
10. Shut down engine. (Volume 1, WP 0019)
11. Position MBDS to disconnect (OFF). (Volume 1, WP 0011)
12. Install PDP cover. (Volume 3, WP 0351)

CONDITION/INDICATION

Is circuit breaker CB79 tripped?

DECISION

Breaker Tripped - Notify Filed Maintenance

Breaker OK - Step 5 - Does backup light illuminate?

STEP 5

Does backup light illuminate?

1. Start engine. (Volume 1, WP 0019)
2. Press SER DRIVE key on main light switch.
3. Press ENTER key on main light switch.
4. Select R (reverse) on Gen IV TPSS. (Volume 1, WP 0004)
5. Check to see if backup light operates.
6. Select N (neutral) on Gen IV TPSS. (Volume 1, WP 0004).
7. Press ALL OFF key on main light switch.
8. Press ENTER key on main light switch.
9. Shut down engine. (Volume 1, WP 0019)
10. Position MBDS to disconnect (OFF). (Volume 1, WP 0011)

CONDITION/INDICATION

Does backup light illuminate?

DECISION

LIGHT FAULTY - Notify Field Maintenance

LIGHT OK - Fault corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
REAR HAZARD LIGHTS DO NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
REAR HAZARD LIGHTS DO NOT ILLUMINATE**

STEP 1

Do front hazard lights illuminate?

1. Press STOPLIGHT on main light switch. (Volume 1, WP 0004)
2. Press ENTER key on main light switch. (Volume 1, WP 0004)
3. Position hazard lights switch to on. (Volume 1, WP 0004)
4. Check to see if front hazard lights illuminate.
5. Position hazard lights switch to off. (Volume 1, WP 0004)
6. Press OFF on main light switch. (Volume 1, WP 0004)
7. Press ENTER key on main light switch. (Volume 1, WP 0004)

CONDITION/INDICATION

Do front hazard lights illuminate?

DECISION

HAZARDS FAULTY - Perform Electrical System Troubleshooting (Front and Rear Hazard Lights Do Not Illuminate). (WP 0158, Test 1 - Do headlights illuminate?)

HAZARDS OK - Step 2 - Do stoplights illuminate?

STEP 2

Do stoplights illuminate?

1. Position master power switch to on. (Volume 1, WP 0004)
2. Start engine and allow air tank to fill. (Volume 1, WP 0019)
3. Shut down engine. (Volume 1, WP 0019)
4. Press STOP LIGHT key on main light switch.
5. Press ENTER key on main light switch.
6. Depress brake pedal.
7. Check to see if stoplights illuminate.
8. Release brake pedal.
9. Press ALL OFF key on main light switch.
10. Press ENTER key on main light switch.

11. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Do stoplights illuminate?

DECISION

STOPLIGHTS FAULTY - Perform Electrical System Troubleshooting (One or Both Stoplights Do Not Illuminate). (WP 0148, Test 1 - Do blackout stoplights illuminate?)
STOPLIGHTS OK - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
REAR MARKER LIGHTS DO NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
REAR MARKER LIGHTS DO NOT ILLUMINATE**

STEP 1

Do front corner marker lights illuminate?

1. Press SER DRIVE key on main light switch.
2. Press ENTER key on main light switch.
3. Check to see if front corner marker lights illuminate.
4. Press ALL OFF key on main light switch.
5. Press ENTER key on main light switch.

CONDITION/INDICATION

Do front corner marker lights illuminate?

DECISION

Lights Faulty - Perform Operator Electrical System Troubleshooting (All Front and/or Rear Marker Lights Do Not Illuminate in Normal Mode). (WP 0144, Test 1 - Do headlights operate?)

Lights OK - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
FRONT AND REAR HAZARD LIGHTS DO NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
FRONT AND REAR HAZARD LIGHTS DO NOT ILLUMINATE**

STEP 1

Do headlights illuminate?

1. Press SER DRIVE key on main light switch.
2. Press ENTER key on main light switch.
3. Check to see if headlights illuminate.
4. Press ALL OFF key on main light switch.
5. Press ENTER key on main light switch.

CONDITION/INDICATION

Do headlights illuminate?

DECISION

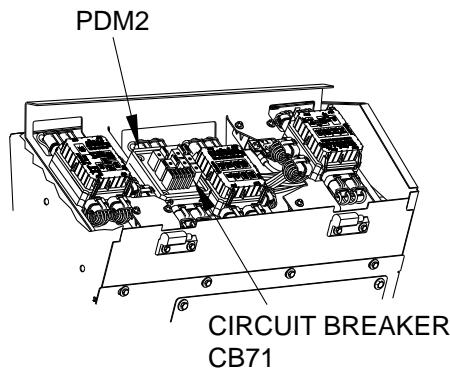
HEADLIGHTS FAULTY - Perform Electrical System Troubleshooting (All Main Light Switch Functions Do Not Operate). (WP 0201)
HEADLIGHTS OK - Step 2 - Is circuit breaker CB71 tripped?

STEP 2

Is circuit breaker CB71 tripped?

1. Remove PDP cover. (Volume 3, WP 0351)
2. If circuit breaker CB71 is tripped, push button to reset.

COVER REMOVED
FOR CLARITY



QCB71X

Figure 1. Circuit Breaker CB71.

3. Position master power switch to on. (Volume 1, WP 0004)
4. Check circuit breaker CB71 to see if it is tripped again.
5. Position master power switch to off. (Volume 1, WP 0004)
6. Install PDP cover. (Volume 3, WP 0351)

CONDITION/INDICATION

Is circuit breaker CB71 tripped?

DECISION

BREAKER TRIPPED - Notify Field Maintenance

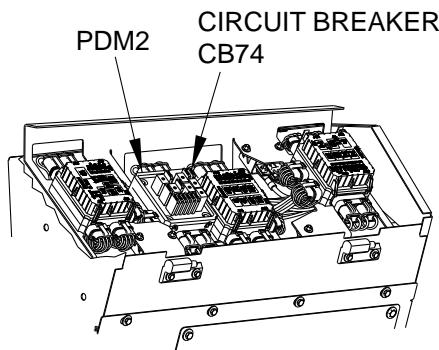
BREAKER OK - Step 3 - Is circuit breaker CB74 tripped?

STEP 3

Is circuit breaker CB74 tripped?

1. Remove PDP cover. (Volume 3, WP 0351)
2. If circuit breaker CB74 is tripped, push button to reset.

COVER REMOVED
FOR CLARITY



QB74X

Figure 2. Circuit Breaker CB74.

3. Position master power switch to on. (Volume 1, WP 0004)
4. Check circuit breaker CB74 to see if it is tripped again.
5. Position master power switch to off. (Volume 1, WP 0004)
6. Install PDP cover. (Volume 3, WP 0351)

CONDITION/INDICATION

Is circuit breaker CB74 tripped?

DECISION

BREAKER TRIPPED - Notify Field Maintenance

BREAKER OK - Step 4 - Do front and rear hazard lights illuminate?

STEP 4

Do front and rear hazard lights illuminate?

1. Press SER DRIVE key on main light switch.
2. Press ENTER key on main light switch.
3. Position hazard lights switch to on. (Volume 1, WP 0004)
4. Check to see if front and rear hazard lights illuminate.
5. Position hazard lights switch to off. (Volume 1, WP 0004)
6. Press ALL OFF key on main light switch.
7. Press ENTER key on main light switch.

CONDITION/INDICATION

Do front and rear hazard lights illuminate?

DECISION

HAZARDS FAULTY - Notify Field Maintenance

HAZARDS OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
FRONT AND REAR TURN SIGNALS DO NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
FRONT AND REAR TURN SIGNALS DO NOT ILLUMINATE**

STEP 1

Do headlights illuminate?

1. Press SER DRIVE key on main light switch.
2. Press ENTER key on main light switch.
3. Check to see if headlights illuminate.
4. Press ALL OFF key on main light switch.
5. Press ENTER key on main light switch.

CONDITION/INDICATION

Do headlights illuminate?

DECISION

HEADLIGHTS FAULTY - Perform Electrical System Troubleshooting (All Main Light Switch Functions Do Not Operate). (WP 0201, Test 1 - Is circuit breaker CB70 tripped?)

HEADLIGHTS OK - Step 2 - Do hazard lights illuminate?

STEP 2

Do hazard lights illuminate?

1. Press SER DRIVE key on main light switch.
2. Press ENTER key on main light switch.
3. Position hazard light switch to on. (Volume 1, WP 0004)
4. Check to see if hazard lights illuminate.
5. Position hazard light switch to off. (Volume 1, WP 0004)
6. Press ALL OFF key on main light switch.
7. Press ENTER key on main light switch.

CONDITION/INDICATION

Do hazard lights illuminate?

DECISION

HAZARDS FAULTY - Perform Operator level maintenance (Front and Rear Hazard Lights Do Not Illuminate). (WP 0158, Test 2 - Is circuit breaker CB71 tripped?)

HAZARDS OK - Step 3 - Do front and rear turn signals illuminate?

STEP 3**Do front and rear turn signals illuminate?**

1. Press STOP LIGHT key on main light switch.
2. Press ENTER key on main light switch.
3. Position turn signal switch to left turn position. (Volume 1, WP 0007)
4. Check to see if front and rear turn signals illuminate.
5. Position turn signal switch to right turn position. (Volume 1, WP 0007)
6. Check to see if front and rear turn signals illuminate.
7. Position turn signal switch to off. (Volume 1, WP 0007)
8. Press ALL OFF key on main light switch.
9. Press ENTER key on main light switch.

CONDITION/INDICATION

Do front and rear turn signals illuminate?

DECISION

SIGNALS FAULTY - Notify Field Maintenance

SIGNALS OK - Fault Corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
LEFT OR RIGHT FRONT TURN SIGNAL DOES NOT ILLUMINATE

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE
LEFT OR RIGHT FRONT TURN SIGNAL DOES NOT ILLUMINATE

STEP 1

Do rear turn signals illuminate?

1. Press STOP LIGHT key on main light switch.
2. Press ENTER key on main light switch.
3. Position turn signal switch to left turn position. (Volume 1, WP 0007)
4. Check to see if rear turn signals illuminate.
5. Position turn signal switch to right turn position. (Volume 1, WP 0007)
6. Check to see if rear turn signals illuminate.
7. Position turn signal switch to off. (Volume 1, WP 0007)
8. Press ALL OFF key on main light switch.
9. Press ENTER key on main light switch.

CONDITION/INDICATION

Do rear turn signals illuminate?

DECISION

SIGNALS FAULTY - Perform Electrical System Troubleshooting (Front and Rear Turn Signals Do Not Illuminate). (WP 0159, Test 1 - Do headlights illuminate?)

SIGNALS OK - Step 2 - Do left and right front turn signals illuminate?

STEP 2

Do left and right front turn signals illuminate?

1. Press STOP LIGHT key on main light switch.
2. Press ENTER key on main light switch.
3. Position turn signal switch to left turn position. (Volume 1, WP 0007)
4. Check to see if front turn signals illuminate.
5. Position turn signal switch to right turn position. (Volume 1, WP 0007)
6. Check to see if front turn signals illuminate.
7. Position turn signal switch to off. (Volume 1, WP 0007)
8. Press ALL OFF key on main light switch.

9. Press ENTER key on main light switch.

CONDITION/INDICATION

Do left and right front turn signals illuminate?

DECISION

SIGNAL FAULTY - Notify Field Maintenance

SIGNALS OK - Fault Corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
STOPLIGHTS AND BLACKOUT STOPLIGHTS DO NOT ILLUMINATE

INITIAL SETUP:

Personnel Required
(2)

Equipment Condition
Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE
STOPLIGHTS AND BLACKOUT STOPLIGHTS DO NOT ILLUMINATE

STEP 1

Do stoplights and lighted indicator display illuminate?

1. Position master power switch to on. (Volume 1, WP 0004)
2. Start engine and allow air tank to fill. (Volume 1, WP 0019)
3. Shut down engine. (Volume 1, WP 0019)
4. Press STOP LIGHT key on main light switch.
5. Press ENTER key on main light switch.
6. Depress brake pedal.
7. Check to see if stoplights illuminate.
8. Release brake pedal.
9. Hold LAMP TEST switch in on position. (Volume 1, WP 0004)
10. Check to see if lighted indicator display illuminates.
11. Release LAMP TEST switch.
12. Press ALL OFF key on main light switch.
13. Press ENTER key on main light switch.
14. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Do stoplights and lighted indicator display illuminate?

DECISION

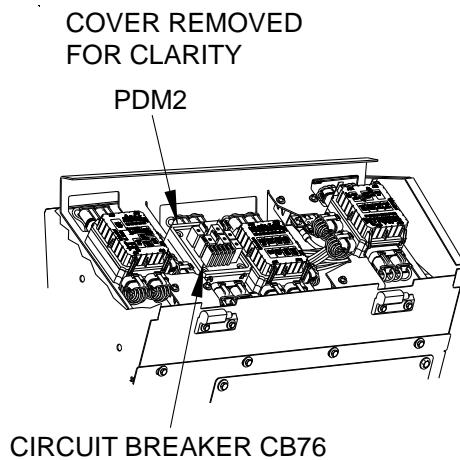
BOTH FAULTY - Step 2 - Is circuit breaker CB76 tripped?

DISPLAY OK - Step 3 - Do stoplights and blackout stoplights illuminate?

STEP 2

Is circuit breaker CB76 tripped?

1. Remove Power Distribution Panel (PDP) cover. (Volume 3, WP 0351)
2. Open Power Distribution Module (PDM) 2.



CB76LX

Figure 1. Circuit Breaker CB76.

3. If circuit breaker CB76 is tripped, push button to reset.
4. Position master power switch to on. (Volume 1, WP 0004)
5. Check circuit breaker CB76 to see if it is tripped again.
6. Position master power switch to off. (Volume 1, WP 0004)
7. Close PDM 2.
8. Install PDP cover. (Volume 3, WP 0351)

CONDITION/INDICATION

Is circuit breaker CB76 tripped?

DECISION

BREAKER TRIPPED - Notify Field Maintenance

BREAKER OK - Step 3 - Do stoplights and blackout stoplights illuminate?

STEP 3**Do stoplights and blackout stoplights illuminate?**

1. Position master power switch to on. (Volume 1, WP 0004)
2. Start engine and allow air tank to fill. (Volume 1, WP 0019)
3. Shut down engine. (Volume 1, WP 0019)
4. Press STOP LIGHT key on main light switch.
5. Press ENTER key on main light switch.
6. Depress brake pedal.
7. Check to see if stoplights illuminate.
8. Release brake pedal.
9. Press B.O. DRIVE key on main light switch.
10. Press ENTER key on main light switch.

11. Depress brake pedal.
12. Check to see if blackout stoplights illuminate.
13. Release brake pedal.
14. Press ALL OFF key on main light switch.
15. Press ENTER key on main light switch.
16. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Do stoplights and blackout stoplights illuminate?

DECISION

LIGHTS FAULTY - Notify Field Maintenance

LIGHTS OK - Fault Corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
STOPLIGHTS AND 12 VDC INDICATOR PANEL CIRCUITS DO NOT ILLUMINATE

INITIAL SETUP:

Personnel Required
(2)

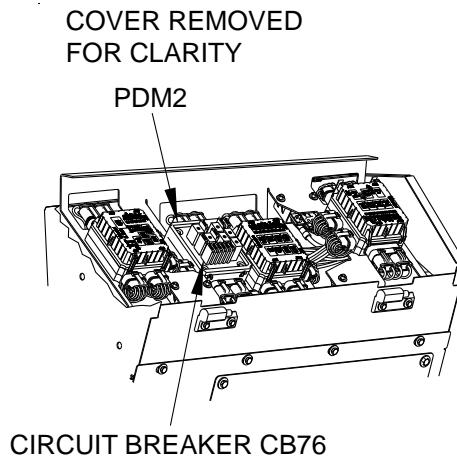
Equipment Condition
Engine shut down (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE
STOPLIGHTS AND 12 VDC INDICATOR PANEL CIRCUITS DO NOT ILLUMINATE

STEP 1

Is circuit breaker CB76 tripped?

1. Remove Power Distribution Panel (PDP) cover. (Volume 3, WP 0351)
2. Open Power Distribution Module (PDM) 2.



CB76L X

Figure 1. Circuit Breaker CB76.

3. If circuit breaker CB76 is tripped, push button to reset.
4. Position master power switch to on. (Volume 1, WP 0004)
5. Check circuit breaker CB76 to see if it is tripped again.
6. Position master power switch to off. (Volume 1, WP 0004)

7. Close PDM 2.
8. Install PDP cover. (Volume 3, WP 0351)

CONDITION/INDICATION

Is circuit breaker CB76 tripped?

DECISION

BREAKER TRIPPED - Notify Field Maintenance

BREAKER OK - Step 2 - Do stoplights and 12 VDC indicator panel illuminate?

STEP 2**Do stoplights and 12 VDC indicator panel illuminate?**

1. Position master power switch to on. (Volume 1, WP 0004)
2. Press STOP LIGHT key on main light switch.
3. Press ENTER key on main light switch.
4. Depress brake pedal.
5. Check to see if stoplights illuminate.
6. Release brake pedal.
7. Hold LAMP TEST switch in on position. (Volume 1, WP 0004)
8. Check to see if lighted indicator display illuminates.
9. Release LAMP TEST switch.
10. Press ALL OFF key on main light switch.
11. Press ENTER key on main light switch.
12. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Do stoplights and 12 VDC indicator panel illuminate?

DECISION

LIGHTS FAULTY - Notify Field Maintenance

LIGHTS OK - Fault Corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE TRAILER ABS INDICATOR DOES NOT ILLUMINATE

INITIAL SETUP:

Equipment Condition

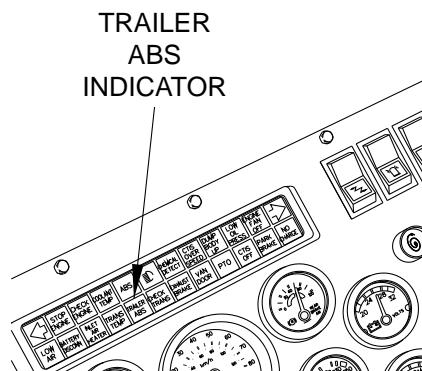
Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE TRAILER ABS INDICATOR DOES NOT ILLUMINATE

STEP 1

Does LAMP TEST switch illuminate TRAILER ABS indicator?

1. Position master power switch to on. (Volume 1, WP 0004)



TABSINDLT10

Figure 1. TRAILER ABS Indicator.

2. Hold LAMP TEST switch in ON position. (Volume 1, WP 0004)
3. Check to see if TRAILER ABS indicator illuminates.
4. Release LAMP TEST switch.
5. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does LAMP TEST switch illuminate TRAILER ABS indicator?

DECISION

Display Faulty - Notify Field Maintenance.

Display OK. - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
TRAILER MARKER/TAILLIGHTS DO NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
TRAILER MARKER/TAILLIGHTS DO NOT ILLUMINATE**

STEP 1

Does towing vehicle marker lights illuminate?

1. Press SER DRIVE key on main light switch.
2. Press ENTER key on main light switch.
3. Check to see if towing vehicle marker lights illuminate.
4. Press ALL OFF key on main light switch.
5. Press ENTER key on main light switch.

CONDITION/INDICATION

Does towing vehicle marker lights illuminate?

DECISION

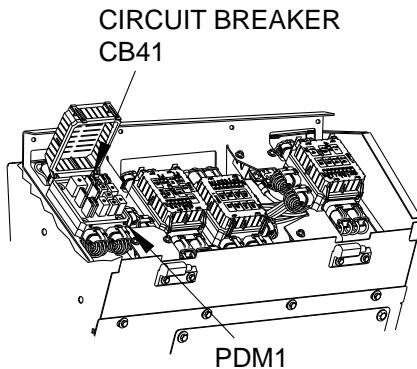
LIGHTS FAULTY - Perform Electrical System Troubleshooting (All Front and/or Rear Marker Lights Do Not Illuminate in Normal Mode). (WP 0144, Test 1 - Do headlights operate?)

LIGHTS OK - Step 2 - Is circuit breaker CB41 tripped?

STEP 2

Is circuit breaker CB41 tripped?

1. Remove PDP cover. (Volume 3, WP 0351)
2. Open cover on PDM 1.



CB41XL T10

Figure 1. Circuit Breaker CB41.

3. If circuit breaker CB41 is tripped, push button to reset.
4. Position master power switch to on. (Volume 1, WP 0004)
5. Check circuit breaker CB41 to see if it is tripped again.
6. Position master power switch to off. (Volume 1, WP 0004)
7. Close cover on PDM 1.
8. Install PDP cover. (Volume 3, WP 0351)

CONDITION/INDICATION

Is circuit breaker CB41 tripped?

DECISION

Breaker Tripped - Notify Field Maintenance

Breaker OK - Step 3 - Does trailer marker/taillights illuminate?

STEP 3**Does trailer marker/taillights illuminate?**

1. Press SER DRIVE key on main light switch.
2. Press ENTER key on main light switch.
3. Check to see if trailer marker/taillights illuminate.
4. Press ALL OFF key on main light switch.
5. Press ENTER key on main light switch.

CONDITION/INDICATION

Does trailer marker/taillights illuminate?

DECISION

Lights Faulty - Notify Field Maintenance.
Lights OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
TRAILER RIGHT STOP/TURN LIGHT DOES NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
TRAILER RIGHT STOP/TURN LIGHT DOES NOT ILLUMINATE**

STEP 1

Does towing vehicle right stop/turn light illuminate?

1. Start engine and allow air tanks to fill. (Volume 1, WP 0019)
2. Press STOP LIGHT key on main light switch.
3. Press ENTER key on main light switch.
4. Depress brake pedal.
5. Check to see if towing vehicle right stop/turn light illuminates.
6. Release brake pedal.
7. Press ALL OFF key on main light switch.
8. Press ENTER key on main light switch.
9. Shut down engine.

CONDITION/INDICATION

Does towing vehicle right stop/turn light illuminate?

DECISION

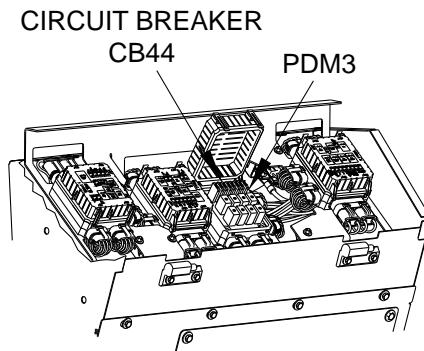
LIGHT FAULTY - Perform Electrical System Troubleshooting (One or Both Stoplights Do Not Illuminate). (WP 0148, Test 1 - Do blackout stoplights illuminate?)

LIGHT OK - Step 2 - Is circuit breaker CB44 tripped?

STEP 2

Is circuit breaker CB44 tripped?

1. Remove PDP cover. (Volume 3, WP 0351)
2. Open cover on PDM 3.



CB44XLT10

Figure 1. Circuit Breaker CB44.

3. If circuit breaker CB44 is tripped, push button to reset.
4. Position master power switch to on. (Volume 1, WP 0004)
5. Check circuit breaker CB44 to see if it is tripped again.
6. Position master power switch to off. (Volume 1, WP 0004)
7. Close cover on PDM 3.
8. Install PDP cover. (Volume 3, WP 0351)

CONDITION/INDICATION

Is circuit breaker CB44 tripped?

DECISION

Breaker Tripped - Notify Field Maintenance

Breaker OK - Step 3 - Does trailer right stop/turn light illuminate?

STEP 3**Does trailer right stop/turn light illuminate?**

1. Press SER DRIVE key on main light switch.
2. Press ENTER key on main light switch.
3. Position turn signal switch to right turn. (Volume 1, WP 0007)
4. Check to see if trailer right stop/turn light illuminate.
5. Position turn signal switch to off. (Volume 1, WP 0007)
6. Press ALL OFF key on main light switch.
7. Press ENTER key on main light switch.

CONDITION/INDICATION

Does trailer right stop/turn light illuminate?

DECISION

Light Faulty - Notify Field Maintenance
Light OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
WORK LIGHTS DO NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

*** The following is applicable to the following UOC(s): TSU TSH TSJ WRK TSX. ***

**TROUBLESHOOTING PROCEDURE
WORK LIGHTS DO NOT ILLUMINATE**

STEP 1

Do any work lights illuminate?

1. Check to see if any work lights illuminate.

CONDITION/INDICATION

Do any work lights illuminate?

DECISION

ONE LIGHT - Step 2 - Is faulty work light LH or RH?

ALL LIGHTS - Step 3 - Is circuit breaker CB72 tripped?

STEP 2

Is faulty work light LH or RH?

1. Check to see if faulty work light is LH or RH.

CONDITION/INDICATION

Is faulty work light LH or RH?

DECISION

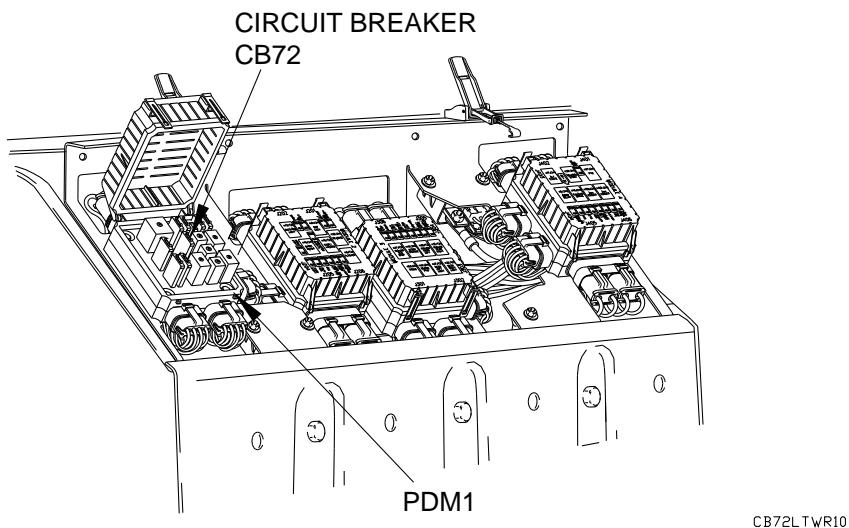
LEFT LIGHT - WP 0217, Test 1 - Do RH worklights illuminate?

RIGHT LIGHT - WP 0218, Test 1 - Do LH worklights illuminate?

STEP 3

Is circuit breaker CB72 tripped?

1. Remove PDP cover. (Volume 3, WP 0351)
2. Open cover on PDM 1.



CB72LTWR10

Figure 1. Circuit Breaker CB72.

3. If circuit breaker CB72 is tripped, push button to reset.
4. Press SER DRIVE key on main light switch.
5. Press ENTER key on main light switch.
6. Check circuit breaker CB72 to see if it is tripped again.
7. Press ALL OFF key on main light switch.
8. Press ENTER key on main light switch.
9. Close cover on PDM 1.
10. Install PDP cover.

CONDITION/INDICATION

Is circuit breaker CB72 tripped?

DECISION

BREAKER TRIPPED - Notify Field Maintenance

FAULT CORRECTED - Fault corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
BOTH TRAILER STOP/TURN LIGHTS DO NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

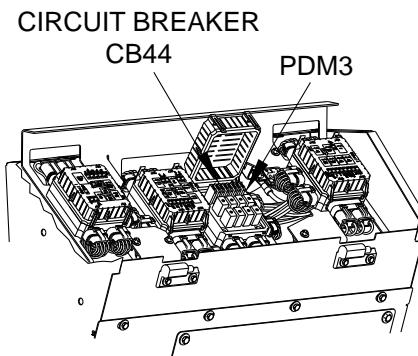
Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
BOTH TRAILER STOP/TURN LIGHTS DO NOT ILLUMINATE**

STEP 1

Is circuit breaker CB44 tripped?

1. Remove PDP cover. (Volume 3, WP 0351)
2. Open cover on PDM 3.
3. If circuit breaker CB44 is tripped, push button to reset.



CB44XLT10

Figure 1. Circuit Breaker CB44.

4. Position master power switch to on. (Volume 1, WP 0004)
5. Check circuit breaker CB44 to see if it is tripped again.
6. Position master power switch to off. (Volume 1, WP 0004)
7. Close cover on PDM 3.
8. Install PDP cover. (Volume 3, WP 0351)

CONDITION/INDICATION

Is circuit breaker CB44 tripped?

DECISION

BREAKER TRIPPED - Notify Field Maintenance

BREAKER OK - Step 2 - Do trailer stop/turn lights illuminate?

STEP 2**Do trailer stop/turn lights illuminate?**

1. Press SER DRIVE key on main light switch.
2. Press ENTER key on main light switch.
3. Position turn signal switch to right turn or left turn. (Volume 1, WP 0007)
4. Check to see if trailer stop/turn lights illuminate.
5. Position turn signal switch to off. (Volume 1, WP 0007)
6. Press ALL OFF key on main light switch.
7. Press ENTER key on main light switch.

CONDITION/INDICATION

Do trailer stop/turn lights illuminate?

DECISION

LIGHTS FAULTY - Notify Field Maintenance

LIGHTS OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
TRAILER BLACKOUT MARKER LIGHTS DO NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
TRAILER BLACKOUT MARKER LIGHTS DO NOT ILLUMINATE**

STEP 1

Does towing vehicle blackout marker lights illuminate?

1. Press B.O. DRIVE key on main light switch.
2. Press ENTER key on main light switch.
3. Check to see if towing vehicle blackout marker lights illuminate.
4. Press ALL OFF key on main light switch.
5. Press ENTER key on main light switch.

CONDITION/INDICATION

Does towing vehicle blackout marker lights illuminate?

DECISION

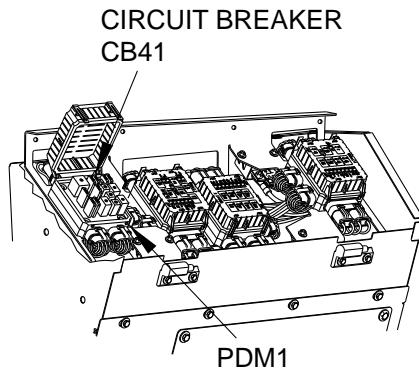
LIGHTS FAULTY - Perform Electrical System Troubleshooting (All Blackout Marker Lights Do Not Illuminate). (WP 0152, Test 1 - Does Gen IV Transmission Pushbutton Shift Selector (TPSS) display dim?)

LIGHTS OK - Step 2 - Is circuit breaker CB41 tripped?

STEP 2

Is circuit breaker CB41 tripped?

1. Remove PDP cover. (Volume 3, WP 0351)
2. Open PDM 1.
3. If circuit breaker CB41 is tripped, push button to reset.



CB41XLT10

Figure 1. Circuit Breaker CB41.

4. Position master power switch to on. (Volume 1, WP 0004)
5. Check circuit breaker CB41 to see if it is tripped again.
6. Position master power switch to off. (Volume 1, WP 0004)
7. If circuit breaker CB41 trips, close PDM 1.
8. If circuit breaker CB41 trips, install PDP cover. (Volume 3, WP 0351)

CONDITION/INDICATION

Is circuit breaker CB41 tripped?

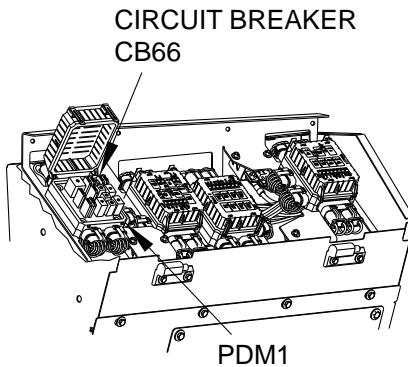
DECISION

Breaker Tripped - Notify Field Maintenance.

Breaker OK - Step 3 - Is circuit breaker CB66 tripped?

STEP 3**Is circuit breaker CB66 tripped?**

1. If circuit breaker CB66 is tripped, push button to reset.



CB66XLT10

Figure 2. Circuit Breaker CB66.

2. Position master power switch to on. (Volume 1, WP 0004)
3. Press B.O. DRIVE key on main light switch.
4. Press ENTER key on main light switch.
5. Check circuit breaker CB66 to see if it is tripped again.
6. Press ALL OFF key on main light switch.
7. Press ENTER key on main light switch.
8. Position master power switch to off. (Volume 1, WP 0004)
9. Close PDM 1.
10. Install PDP cover. (Volume 3, WP 0351)

CONDITION/INDICATION

Is circuit breaker CB66 tripped?

DECISION

Breaker Tripped - Notify Field Maintenance.

Breaker OK - Step 4 - Does trailer blackout marker lights illuminate?

STEP 4

Does trailer blackout marker lights illuminate?

1. Press B.O. DRIVE key on main light switch.
2. Press ENTER key on main light switch.
3. Check to see if trailer blackout marker lights illuminate.
4. Press ALL OFF key on main light switch.
5. Press ENTER key on main light switch.

CONDITION/INDICATION

Does trailer blackout marker lights illuminate?

DECISION

Lights Faulty - Notify Field Maintenance.

Lights OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
TRAILER BLACKOUT STOPLIGHTS DO NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
TRAILER BLACKOUT STOPLIGHTS DO NOT ILLUMINATE**

STEP 1

Does towing vehicle blackout stoplights illuminate?

1. Start engine and allow air tanks to fill. (Volume 1, WP 0019)
2. Press B.O. DRIVE key on main light switch.
3. Press ENTER key on main light switch.

NOTE

Air tanks must be full before test.

4. Depress brake pedal.
5. Check to see if towing vehicle blackout stoplights illuminate.
6. Release brake pedal.
7. Press ALL OFF key on main light switch.
8. Press ENTER key on main light switch.

CONDITION/INDICATION

Does towing vehicle blackout stoplights illuminate?

DECISION

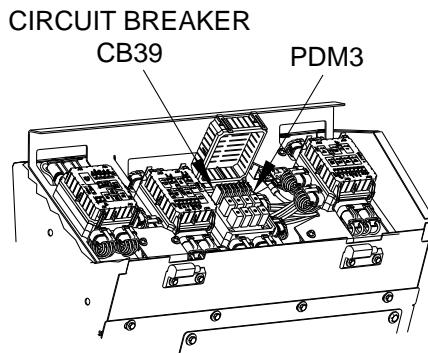
LIGHT FAULTY - Perform Electrical System Troubleshooting (One or Both Blackout Stoplights Do Not Illuminate). (WP 0150, Test 1 - Do stoplights illuminate in normal mode?)

LIGHT OK - Step 2 - Is circuit breaker CB39 tripped?

STEP 2

Is circuit breaker CB39 tripped?

1. Remove PDP cover. (Volume 3, WP 0351)
2. Open PDM 3.



CB39XLT10

Figure 1. Circuit Breaker CB39.

3. If circuit breaker CB39 is tripped, push button to reset.
4. Position master power switch to on. (Volume 1, WP 0004)
5. Check circuit breaker CB39 to see if it is tripped again.
6. Position master power switch to off. (Volume 1, WP 0004)
7. Close PDM 3.
8. Install PDP cover. (Volume 3, WP 0351)

CONDITION/INDICATION

Is circuit breaker CB39 tripped?

DECISION

Breaker Tripped - Notify Field Maintenance

Breaker OK - Step 3 - Does trailer blackout stoplights illuminate?

STEP 3**Does trailer blackout stoplights illuminate?**

1. Press B.O. DRIVE key on main light switch.
2. Press ENTER key on main light switch.
3. Depress brake pedal.
4. Check to see if trailer blackout stoplights illuminate.
5. Release brake pedal.
6. Press ALL OFF key on main light switch.
7. Press ENTER key on main light switch.

CONDITION/INDICATION

Does trailer blackout stoplights illuminate?

DECISION

Lights Faulty - Notify Field Maintenance
Light OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
TRAILER LEFT STOP/TURN LIGHT DOES NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
TRAILER LEFT STOP/TURN LIGHT DOES NOT ILLUMINATE**

STEP 1

Does towing vehicle left stop/turn light illuminate?

1. Start engine and allow air tanks to fill. (Volume 1, WP 0019)
2. Press STOP LIGHT key on main light switch.
3. Press ENTER key on main light switch.
4. Depress brake pedal.
5. Check to see if towing vehicle left stop/turn light illuminates.
6. Release brake pedal.
7. Press ALL OFF key on main light switch.
8. Press ENTER key on main light switch.
9. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Does towing vehicle left stop/turn light illuminate?

DECISION

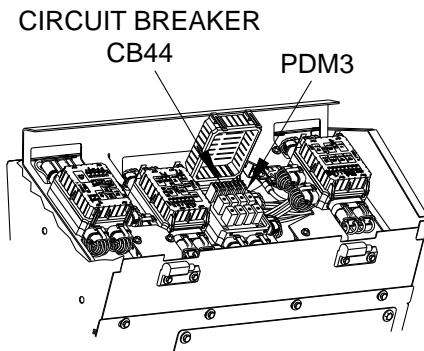
LIGHT FAULTY - Perform Electrical System Troubleshooting (One or Both Stoplights Do Not Illuminate). (WP 0148, Test 1 - Do blackout stoplights illuminate?)

LIGHT OK - Step 2 - Is circuit breaker CB44 tripped?

STEP 2

Is circuit breaker CB44 tripped?

1. Remove PDP cover. (Volume 3, WP 0351)
2. Open cover on PDM 3.



CB44XLT10

Figure 1. Circuit Breaker CB44.

3. If circuit breaker CB44 is tripped, push button to reset.
4. Position master power switch to on. (Volume 1, WP 0004)
5. Check circuit breaker CB44 to see if it is tripped again.
6. Position master power switch to off. (Volume 1, WP 0004)
7. Close cover on PDM 3.
8. Install PDP cover. (Volume 3, WP 0351)

CONDITION/INDICATION

Is circuit breaker CB44 tripped?

DECISION

Breaker Tripped - Notify Field Maintenance

Breaker OK - Step 3 - Does trailer left stop/turn light illuminate?

STEP 3**Does trailer left stop/turn light illuminate?**

1. Press SER DRIVE key on main light switch.
2. Press ENTER key on main light switch.
3. Position turn signal switch to left turn. (Volume 1, WP 0007)
4. Check to see if trailer left stop/turn light illuminate.
5. Position turn signal switch to off. (Volume 1, WP 0007)
6. Press ALL OFF key on main light switch.
7. Press ENTER key on main light switch.

CONDITION/INDICATION

Does trailer left stop/turn light illuminate?

DECISION

Light Faulty - Notify Field Maintenance

Light OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
INTERVEHICULAR CLEARANCE LIGHTS DO NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
INTERVEHICULAR CLEARANCE LIGHTS DO NOT ILLUMINATE**

STEP 1

Do towing vehicle clearance lights illuminate?

1. Press SER DRIVE key on main light switch.
2. Press ENTER key on main light switch.
3. Check to see if towing vehicle clearance lights illuminate.
4. Press ALL OFF key on main light switch.
5. Press ENTER key on main light switch.

CONDITION/INDICATION

Do towing vehicle clearance lights illuminate?

DECISION

LIGHTS FAULTY - Perform Electrical System Troubleshooting (Side and/or Rear Marker Lights Do Not Illuminate). (WP 0157, Test 1 - Do front corner marker lights illuminate?)

LIGHTS OK - Notify Field Maintenance.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
INTERVEHICULAR LEFT TURN SIGNAL DOES NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
INTERVEHICULAR LEFT TURN SIGNAL DOES NOT ILLUMINATE**

STEP 1

Does towing vehicle left rear turn signal illuminate?

1. Press STOP LIGHT key on main light switch.
2. Press ENTER key on main light switch.
3. Position turn signal switch to left turn. (Volume 1, WP 0007)
4. Check to see if towing vehicle left rear turn signal illuminates.
5. Position turn signal switch to off. (Volume 1, WP 0007)
6. Press ALL OFF key on main light switch.
7. Press ENTER key on main light switch.

CONDITION/INDICATION

Does towing vehicle left rear turn signal illuminate?

DECISION

LIGHTS FAULTY - Perform Electrical System Troubleshooting (Front and Rear Turn Signals Do Not Illuminate). (WP 0159, Test 1 - Do headlights illuminate?)

LIGHTS OK - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
INTERVEHICULAR RIGHT TURN SIGNAL DOES NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
INTERVEHICULAR RIGHT TURN SIGNAL DOES NOT ILLUMINATE**

STEP 1

Does towing vehicle right rear turn signal illuminate?

1. Press STOP LIGHT key on main light switch.
2. Press ENTER key on main light switch.
3. Position turn signal switch to right turn. (Volume 1, WP 0007)
4. Check to see if towing vehicle right rear turn signal illuminates.
5. Position turn signal switch to off. (Volume 1, WP 0007)
6. Press ALL OFF key on main light switch.
7. Press ENTER key on main light switch.

CONDITION/INDICATION

Does towing vehicle right rear turn signal illuminate?

DECISION

LIGHTS FAULTY - Perform Electrical System Troubleshooting (Front and Rear Turn Signals Do Not Illuminate). (WP 0159, Test 1 - Do headlights illuminate?)

LIGHTS OK - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
INTERVEHICULAR STOPLIGHTS DO NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
INTERVEHICULAR STOPLIGHTS DO NOT ILLUMINATE**

STEP 1

Do towing vehicle stoplights illuminate?

1. Press STOP LIGHT key on main light switch.
2. Press ENTER key on main light switch.
3. Depress brake pedal.
4. Check to see if towing vehicle stoplights illuminate.
5. Release brake pedal.
6. Press ALL OFF key on main light switch.
7. Press ENTER key on main light switch.

CONDITION/INDICATION

Do towing vehicle stoplights illuminate?

DECISION

LIGHTS FAULTY - Perform Electrical System Troubleshooting (One or Both Stoplights Do Not Illuminate). (WP 0148, Test 1 - Do blackout stoplights illuminate?)

LIGHTS OK - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
INTERVEHICULAR TAILLIGHTS DO NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
INTERVEHICULAR TAILLIGHTS DO NOT ILLUMINATE**

STEP 1

Do towing vehicle taillights illuminate?

1. Press SER DRIVE key on main light switch.
2. Press ENTER key on main light switch.
3. Check to see if towing vehicle taillights illuminate.
4. Press ALL OFF key on main light switch.
5. Press ENTER key on main light switch.

CONDITION/INDICATION

Do towing vehicle taillights illuminate?

DECISION

LIGHTS FAULTY - Perform Electrical System Troubleshooting (One or Both Composite Tailights Do Not Illuminate). (WP 0145, Test 1 - Does front marker lights illuminate?)
LIGHTS OK - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
WINDSHIELD WASHER DOES NOT OPERATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
WINDSHIELD WASHER DOES NOT OPERATE**

STEP 1

Does horn operate?

1. Position master power switch to on. (Volume 1, WP 0004)
2. Press horn button. (Volume 1, WP 0007)
3. Check to hear if horn operates.
4. Release horn button. (Volume 1, WP 0007)
5. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does horn operate?

DECISION

HORN FAULTY - Perform Electrical System Troubleshooting (Horn, Windshield Wipers, and Windshield Washer Do Not Operate). (WP 0182, Test 1 - Does the audible alarm operate?)

HORN OK - Step 2 - Are windshield washer hoses free of leaks?

STEP 2

Are windshield washer hoses free of leaks?

1. Position master power switch to on. (Volume 1, WP 0004)
2. Push in windshield washer switch. (Volume 1, WP 0007)
3. Check underneath vehicle for windshield washer leaks.
4. Release windshield washer switch. (Volume 1, WP 0007)
5. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Are windshield washer hoses free of leaks?

DECISION

WASHER LEAKS - Notify Field Maintenance.

WASHER OK - Step 3 - Does windshield washer operate?

STEP 3**Does windshield washer operate?**

1. Position master power switch to on. (Volume 1, WP 0004)
2. Push in windshield washer switch. (Volume 1, WP 0007)
3. Check to see if windshield washer operates.
4. Release windshield washer switch. (Volume 1, WP 0007)
5. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does windshield washer operate?

DECISION

Washer Faulty - Notify Field Maintenance

Washer OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
WINDSHIELD WIPER DOES NOT OPERATE ON LOW SPEED**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
WINDSHIELD WIPER DOES NOT OPERATE ON LOW SPEED**

STEP 1

Does windshield wiper operate on low speed?

1. Position master power switch to on. (Volume 1, WP 0004)
2. Position windshield wiper switch to "I" position. (Volume 1, WP 0007)
3. Check to see if windshield wiper operates on low speed.
4. Position windshield wiper switch to "O" position. (Volume 1, WP 0007)
5. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does windshield wiper operate on low speed?

DECISION

WIPER FAULTY - Step 2 - Does windshield wiper operate on high speed?

WIPER OK - Fault Corrected.

STEP 2

Does windshield wiper operate on high speed?

1. Position master power switch to on. (Volume 1, WP 0004)
2. Position windshield wiper switch to "II" position. (Volume 1, WP 0007)
3. Check to see if windshield wiper operates on high speed.
4. Position windshield wiper switch to "O" position. (Volume 1, WP 0007)
5. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does windshield wiper operate on high speed?

DECISION

WIPER FAULTY - Perform Electrical System Troubleshooting (All Windshield Wiper
Speeds Do Not Operate). (WP 0178, Test 2 - Does horn operate?)

WIPER OK - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
ALL WINDSHIELD WIPER SPEEDS DO NOT OPERATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
ALL WINDSHIELD WIPER SPEEDS DO NOT OPERATE**

STEP 1

Does windshield wiper operate on any speed?

1. Position master power switch to on. (Volume 1, WP 0004)
2. Position windshield wiper switch to "J" position. (Volume 1, WP 0007)
3. Position windshield wiper switch to "I" position. (Volume 1, WP 0007)
4. Position windshield wiper switch to "II" position. (Volume 1, WP 0007)
5. Check to see if windshield wiper operates on any speed.
6. Position windshield wiper switch to "O" position. (Volume 1, WP 0007)
7. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does windshield wiper operate on any speed?

DECISION

Intermittent Faulty - Perform electrical system troubleshooting (Windshield Wiper Does Not Operate on Intermittent Speed). (WP 0179)

Low Faulty - Perform electrical system troubleshooting (Windshield Wiper Does Not Operate on Low Speed). (WP 0177)

High Faulty - Perform electrical system troubleshooting (Windshield Wiper Does Not Operate on High Speed). (WP 0180)

All Faulty - Step 2 - Does horn operate?

STEP 2

Does horn operate?

1. Position master power switch to on. (Volume 1, WP 0004)
2. Press horn button. (Volume 1, WP 0007)
3. Check to hear if horn operates.
4. Release horn button. (Volume 1, WP 0007)
5. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does horn operate?

DECISION

HORN FAULTY - Perform Electrical System Troubleshooting (Horn, Windshield Wipers, and Windshield Washer Do Not Operate). (WP 0182, Test 1 - Does the audible alarm operate?)

HORN OK - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
WINDSHIELD WIPER DOES NOT OPERATE ON INTERMITTENT SPEED**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
WINDSHIELD WIPER DOES NOT OPERATE ON INTERMITTENT SPEED**

STEP 1

Does windshield wiper operate on intermittent speed?

1. Position master power switch to on. (Volume 1, WP 0004)
2. Position windshield wiper switch to "J" position. (Volume 1, WP 0007)
3. Check to see if windshield wiper operates on intermittent speed.
4. Position windshield wiper switch to "O" position. (Volume 1, WP 0007)
5. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does windshield wiper operate on intermittent speed?

DECISION

WIPER FAULTY - Step 2 - Does windshield wiper operate on low speed?

WIPER OK - Fault Corrected.

STEP 2

Does windshield wiper operate on low speed?

1. Position master power switch to on. (Volume 1, WP 0004)
2. Position windshield wiper switch to "I" position. (Volume 1, WP 0007)
3. Check to see if windshield wiper operates on low speed.
4. Position windshield wiper switch to "O" position. (Volume 1, WP 0007)
5. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does windshield wiper operate on low speed?

DECISION

WIPER FAULTY - Perform Electrical System Troubleshooting (All Windshield Wiper Speeds Do Not Operate). (WP 0178, Test 1 - Does windshield wiper operate on any speed?)

WIPER OK - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
WINDSHIELD WIPER DOES NOT OPERATE ON HIGH SPEED**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
WINDSHIELD WIPER DOES NOT OPERATE ON HIGH SPEED**

STEP 1

Does windshield wiper operate on low speed?

1. Position master power switch to on. (Volume 1, WP 0004)
2. Position windshield wiper switch to "I" position. (Volume 1, WP 0007)
3. Check to see if windshield wiper operates on low speed.
4. Position windshield wiper switch to "O" position. (Volume 1, WP 0007)
5. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does windshield wiper operate on low speed?

DECISION

WIPER FAULTY - Perform Electrical System Troubleshooting (All Windshield Wiper
Speeds Do Not Operate). (WP 0178, Test 1 - Does windshield wiper operate on any
speed?)

WIPER OK - Step 2 - Does windshield wiper operate on high speed?

STEP 2

Does windshield wiper operate on high speed?

1. Position master power switch to on. (Volume 1, WP 0004)
2. Position windshield wiper switch to "II" position. (Volume 1, WP 0007)
3. Check to see if windshield wiper operates on high speed.
4. Position windshield wiper switch to "O" position. (Volume 1, WP 0007)
5. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does windshield wiper operate on high speed?

DECISION

WIPER FAULTY - Notify Field Maintenance
WIPER OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
HORN DOES NOT OPERATE (ELECTRICAL SYSTEM)**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
HORN DOES NOT OPERATE (ELECTRICAL SYSTEM)**

STEP 1

Has Operator level pneumatic system troubleshooting been performed?

CONDITION/INDICATION

Has Operator level pneumatic system troubleshooting been performed?

DECISION

OPERATOR LEVEL - Perform operator level pneumatic troubleshooting (Horn Does Not Operate) (WP 0275)

OPERATOR PERFORMED - Step 2 - Does windshield washer operate?

STEP 2

Does windshield washer operate?

1. Position master power switch to on. (Volume 1, WP 0004)
2. Push in windshield washer switch. (Volume 1, WP 0007)
3. Check to see if windshield washer operates.
4. Release windshield washer switch. (Volume 1, WP 0007)
5. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does windshield washer operate?

DECISION

WASHER FAULTY - Perform Operator level troubleshooting (Horn, Windshield Wipers, and Windshield Washer Do Not Operate). (WP 0182, Test 1 - Does the audible alarm operate?)

WASHER OK - Step 3 - Does horn operate?

STEP 3

Does horn operate?

1. Position master power switch to on. (Volume 1, WP 0004)
2. Press horn button. (Volume 1, WP 0007)
3. Check to hear if horn operates.
4. Release horn button. (Volume 1, WP 0007)
5. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does horn operate?

DECISION

HORN FAULTY - Notify Field Maintenance.

HORN OK - Fault Corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
HORN, WINDSHIELD WIPERS, AND WINDSHIELD WASHER DO NOT OPERATE

INITIAL SETUP:

Personnel Required
(2)

Equipment Condition
Engine shut down (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE

HORN, WINDSHIELD WIPERS, AND WINDSHIELD WASHER DO NOT OPERATE

STEP 1

Does the audible alarm operate?

1. Drain air tanks. (Volume 1, WP 0019)
2. Position master power switch to on. (Volume 1, WP 0004)
3. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does the audible alarm operate?

DECISION

Alarm Faulty - Perform Electrical System troubleshooting (24 VDC Circuits Do Not Operate). (WP 0098)

Alarm OK - Step 2 - Is circuit breaker CB37 tripped?

STEP 2

Is circuit breaker CB37 tripped?

1. Remove PDP cover. (Volume 3, WP 0351)
2. Open PDM 4.
3. If circuit breaker CB37 is tripped, push button to reset.

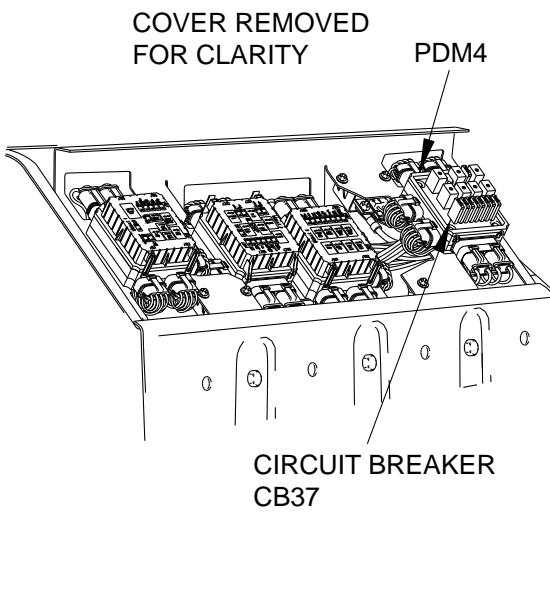


Figure 1. Circuit Breaker CB37.

4. Position master power switch to on. (Volume 1, WP 0004)
5. Check circuit breaker CB37 to see if it is tripped again.
6. Position master power switch to off. (Volume 1, WP 0004)
7. Close PDM 4.
8. Install PDP cover. (Volume 3, WP 0351)

CONDITION/INDICATION

Is circuit breaker CB37 tripped?

DECISION

BREAKER TRIPPED - Notify Field Maintenance

BREAKER OK - Step 3 - Do horn, windshield wipers, and windshield washer operate?

STEP 3

Do horn, windshield wipers, and windshield washer operate?

1. Position master power switch to on. (Volume 1, WP 0004)
2. Press horn button. (Volume 1, WP 0007)
3. Check to hear if horn operates.
4. Release horn button. (Volume 1, WP 0007)
5. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Do horn, windshield wipers, and windshield washer operate?

DECISION

COLUMN FAULTY - Notify Field Maintenance
COLUMN OK - Fault Corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE CHEMICAL ALARM DOES NOT OPERATE

INITIAL SETUP:

Equipment Condition

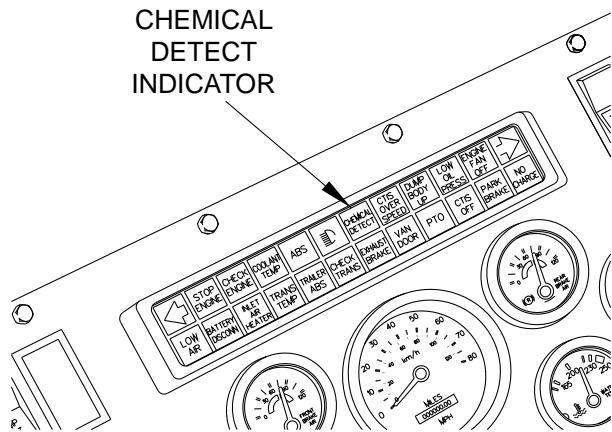
Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE CHEMICAL ALARM DOES NOT OPERATE

STEP 1

Does CHEMICAL DETECT indicator illuminate?

1. Check to see if CHEMICAL DETECT indicator illuminates.



CHEMIND

Figure 1. CHEMICAL DETECT Indicator.

CONDITION/INDICATION

Does CHEMICAL DETECT indicator illuminate?

DECISION

INDICATOR FAULTY - Perform Electrical System Troubleshooting (Chemical Detector Does Not Operate). (WP 0184, Test 1 - Is circuit breaker CB30 tripped?)

INDICATOR OK - Step 2 - Does chemical alarm operate?

STEP 2**Does chemical alarm operate?**

1. Check to see if chemical alarm operates.

CONDITION/INDICATION

Does chemical alarm operate?

DECISION

ALARM FAULTY - Notify Field Maintenance

ALARM OK - Fault Corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE CHEMICAL DETECTOR DOES NOT OPERATE

INITIAL SETUP:

Equipment Condition

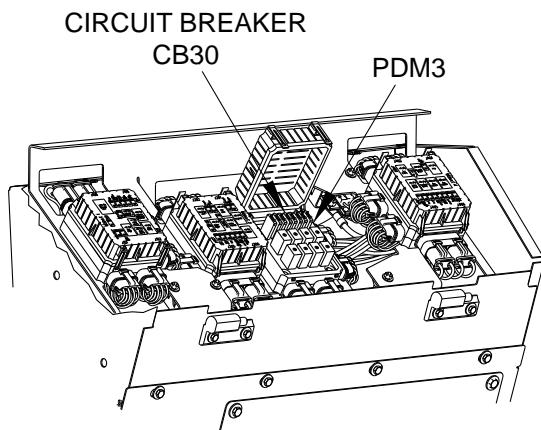
Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE CHEMICAL DETECTOR DOES NOT OPERATE

STEP 1

Is circuit breaker CB30 tripped?

1. Remove PDP cover. (Volume 3, WP 0351)



CB30XLT10

Figure 1. Circuit Breaker CB30.

2. If circuit breaker CB30 is tripped, push button to reset.
3. Position master power switch to on. (Volume 1, WP 0004)

4. Check circuit breaker CB30 to see if it is tripped again.
5. Position master power switch to off. (Volume 1, WP 0004)
6. Install PDP cover. (Volume 3, WP 0351)

CONDITION/INDICATION

Is circuit breaker CB30 tripped?

DECISION

BREAKER TRIPPED - Notify Field Maintenance

BREAKER OK -

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
CENTRAL TIRE INFLATION SYSTEM (CTIS) DOES NOT OPERATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

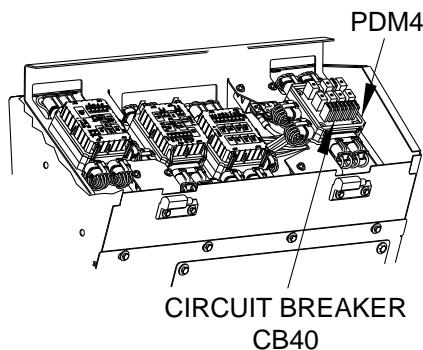
**TROUBLESHOOTING PROCEDURE
CENTRAL TIRE INFLATION SYSTEM (CTIS) DOES NOT OPERATE**

STEP 1

Is circuit breaker CB40 tripped?

1. Remove PDP cover (Volume 3, WP 0351).
2. Open PDM 4.

COVER REMOVED
FOR CLARITY



CB40XLT10

Figure 1. Circuit Breaker CB40.

3. If circuit breaker CB40 is tripped, push button to reset.
4. Position master power switch to on. (Volume 1, WP 0004)
5. Check circuit breaker to see if it is tripped again.
6. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Is circuit breaker CB40 tripped?

DECISION

Breaker Tripped - Notify Field Maintenance

Breaker OK - Step 2 - Does CTIS operate?

STEP 2**Does CTIS operate?**

1. Close PDM 4.
2. Install PDP cover (Volume 3, WP 0351).
3. Attempt to operate CTIS (Volume 1, WP 0021).

CONDITION/INDICATION

Does CTIS operate?

DECISION

No Operation - Notify Field Maintenance

Operates OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
CENTRAL TIRE INFLATION SYSTEM (CTIS) DOES NOT INFLATE TIRES**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

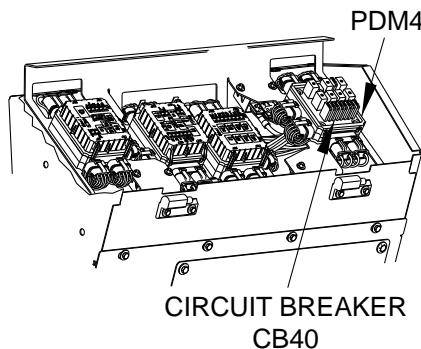
**TROUBLESHOOTING PROCEDURE
CENTRAL TIRE INFLATION SYSTEM (CTIS) DOES NOT INFLATE TIRES**

STEP 1

Is circuit breaker CB40 tripped?

1. Remove Power Distribution Panel (PDP) cover. (Volume 3, WP 0351).

COVER REMOVED
FOR CLARITY



CB40XLT10

Figure 1. Circuit Breaker CB40.

2. Open PDM 4.
3. If circuit breaker CB40 is tripped, push button to reset.
4. Position master power switch to on. (Volume 1, WP 0004)
5. Check circuit breaker to see if it is tripped again.
6. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Is circuit breaker CB40 tripped?

DECISION

Breaker Tripped - Notify Field Maintenance

Breaker OK - Step 2 - Does CTIS inflate tires?

STEP 2**Does CTIS inflate tires?**

1. Close PDM 4.
2. Install PDP cover (Volume 3, WP 0351).
3. Start engine (Volume 1, WP 0019).
4. Check to see that CTIS inflates tires (Volume 1, WP 0021).
5. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Does CTIS inflate tires?

DECISION

No Inflation - Notify Field Maintenance

Inflates OK - Fault corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
CENTRAL TIRE INFLATION SYSTEM (CTIS) DOES NOT DEFLATE TIRES**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
CENTRAL TIRE INFLATION SYSTEM (CTIS) DOES NOT DEFLATE TIRES**

STEP 1

Does CTIS deflate tires after resetting CTIS ECU?

1. Position master power switch to on. (Volume 1, WP 0004)
2. Select RUN FLAT and one other mode button simultaneously (Volume 1, WP 0021).
3. Start engine (Volume 1, WP 0019).
4. Check CTIS for deflation of tires.
5. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Does CTIS deflate tires after resetting CTIS ECU?

DECISION

No Deflate - Notify Field Maintenance
Deflate OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
CENTRAL TIRE INFLATION SYSTEM (CTIS) ELECTRONIC CONTROL UNIT (ECU)
MODE LIGHT DOES NOT DIM IN BLACKOUT MODE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

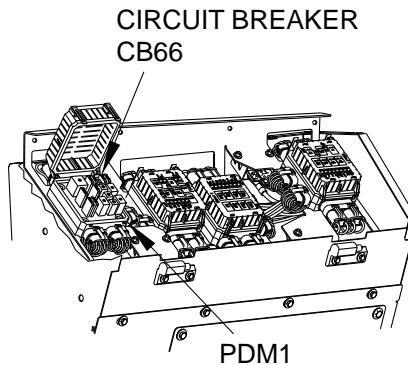
TROUBLESHOOTING PROCEDURE

**CENTRAL TIRE INFLATION SYSTEM (CTIS) ELECTRONIC CONTROL UNIT (ECU)
MODE LIGHT DOES NOT DIM IN BLACKOUT MODE**

STEP 1

Is circuit breaker CB66 tripped?

1. Remove PDP cover (Volume 3, WP 0351).
2. Lift cover on PDM1.



CB66XLT10

Figure 1. Circuit Breaker CB66.

3. If circuit breaker CB66 is tripped, push button to reset.
4. Position master power switch to on. (Volume 1, WP 0004)

5. Position main light switch to BO DRIVE (Volume 1, WP 0004).
6. Press ENTER key on main light switch. (Volume 1, WP 0004)
7. Check circuit breaker CB66 to see if it is tripped again.
8. Position main light switch to off (Volume 1, WP 0004).
9. Press ENTER key on main light switch. (Volume 1, WP 0004)
10. Position master power switch to off. (Volume 1, WP 0004)
11. Install PDP cover (Volume 3, WP 0351).

CONDITION/INDICATION

Is circuit breaker CB66 tripped?

DECISION

BREAKER TRIPPED - Perform Electrical System Troubleshooting (Blackout Marker Lights Do Not Illuminate and/or Gen IV Transmission Pushbutton Shift Selector (TPSS) Does Not Dim). (WP 0153, Test 1 - Is circuit breaker CB66 tripped?)
BREAKER OK - Step 2 - Does CTIS ECU mode light dim in blackout mode?

STEP 2**Does CTIS ECU mode light dim in blackout mode?**

1. Position master power switch to on. (Volume 1, WP 0004)
2. Position main light switch to BO DRIVE (Volume 1, WP 0004).
3. Press ENTER key on main light switch. (Volume 1, WP 0004)

CONDITION/INDICATION

Does CTIS ECU mode light dim in blackout mode?

DECISION

REMAINS ILLUMINATED - Notify Field Maintenance
GOES OUT - Fault corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
CENTRAL TIRE INFLATION SYSTEM (CTIS) ECU MODE LIGHTS DO NOT
ILLUMINATE**

INITIAL SETUP:

Equipment Condition

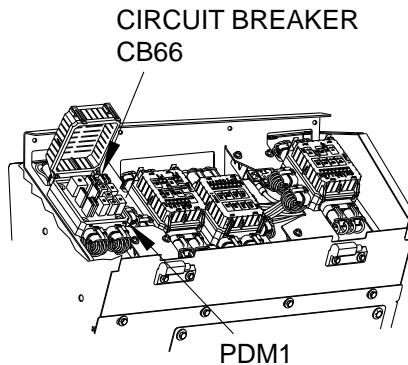
Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
CENTRAL TIRE INFLATION SYSTEM (CTIS) ECU MODE LIGHTS DO NOT
ILLUMINATE**

STEP 1

Is circuit breaker CB66 tripped?

1. Remove PDP cover (Volume 3, WP 0351).
2. Lift cover on PDM 1.



CB66XLT10

Figure 1. Circuit Breaker CB66.

3. If circuit breaker CB66 is tripped, push button to reset.
4. Position master power switch to on. (Volume 1, WP 0004)

5. Check to see if CTIS ECU mode lights illuminate.
6. Position master power switch to off. (Volume 1, WP 0004)
7. Install PDP cover (Volume 3, WP 0351).

CONDITION/INDICATION

Is circuit breaker CB66 tripped?

DECISION

ECU OK - Fault Corrected.
NO ILLUMINATION - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
SELF-RECOVERY WINCH (SRW) DOES NOT REEL IN OR PAY OUT**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

***** The following is applicable to the following UOC(s): TSA TSC TSE TSH TSJ
WRK TSL TSQ. *****

TROUBLESHOOTING PROCEDURE

SELF-RECOVERY WINCH (SRW) DOES NOT REEL IN OR PAY OUT

STEP 1

Does PTO engage?

1. Position master power switch to on. (Volume 1, WP 0004)
2. Position PTO switch to on. (Volume 1, WP 0005)
3. Check that PTO engages.
4. Position PTO switch to off. (Volume 1, WP 0005)
5. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does PTO engage?

DECISION

PTO FAULTY - Perform Electrical System Troubleshooting (PTO Does Not Engage).
(WP 0193, Test 1 - Is circuit breaker CB49 tripped?)

PTO OK - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
SELF-RECOVERY WINCH (SRW) DOES NOT REEL IN**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

***** The following is applicable to the following UOC(s): TSA TSC TSE TSH TSJ
WRK TSL TSQ. *****

TROUBLESHOOTING PROCEDURE

SELF-RECOVERY WINCH (SRW) DOES NOT REEL IN

STEP 1

Does SRW pay out?

***** The following is applicable to the following UOC(s): TSA TSQ TSL TSH. *****

1. Check to see if SRW pays out. (WP 0068)

CONDITION/INDICATION

Does SRW pay out?

DECISION

SRW OK - Notify Field Maintenance

SRW Faulty - Perform Operator level troubleshooting (SRW Does Not Pay In Or Reel Out). (WP 0190)

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
SELF-RECOVERY WINCH (SRW) DOES NOT PAY OUT**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

***** The following is applicable to the following UOC(s): TSA TSC TSE TSH TSJ
WRK TSL TSQ. *****

**TROUBLESHOOTING PROCEDURE
SELF-RECOVERY WINCH (SRW) DOES NOT PAY OUT**

STEP 1

Does SRW reel in?

***** The following is applicable to the following UOC(s): TSA TSQ TSL TSH. *****

1. Check to see if SRW reels in. (WP 0068)

CONDITION/INDICATION

Does SRW reel in?

DECISION

SRW OK - Notify Field Maintenance

SRW Faulty - Perform Operator level troubleshooting (SRW Does Not Pay In Or Reel Out). (WP 0190)

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
POWER TAKEOFF (PTO) DOES NOT ENGAGE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

***** The following is applicable to the following UOC(s): TSA TSC TSE TSH TSJ TSL
TSQ TSX WRK. *****

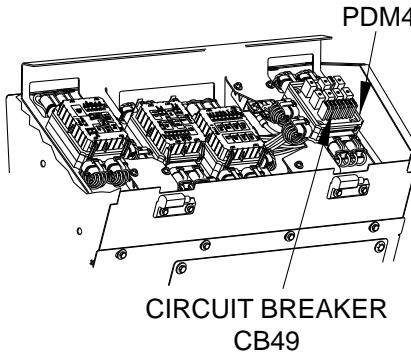
**TROUBLESHOOTING PROCEDURE
POWER TAKEOFF (PTO) DOES NOT ENGAGE**

STEP 1

Is circuit breaker CB49 tripped?

1. Remove PDP cover. (Volume 3, WP 0351)
2. Open PDM 4.
3. If circuit breaker CB49 is tripped, push button to reset.

COVER REMOVED
FOR CLARITY



CB49XLT10

Figure 1. Circuit Breaker CB49.

4. Start engine. (Volume 1, WP 0019)

5. Select N (neutral) on Gen IV Transmission Pushbutton Shift Selector (TPSS) (Volume 1, WP 0004).
6. Position PTO ON/OFF switch to ON (Volume 1, WP 0005).
7. Check circuit breaker CB49 to see if it is tripped again.
8. Position PTO ON/OFF switch to OFF (Volume 1, WP 0005).
9. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Is circuit breaker CB49 tripped?

DECISION

Breaker Tripped - Notify Field Maintenance.

Breaker OK - Step 2 - Does PTO engage?

STEP 2**Does PTO engage?**

1. Install PDP cover. (Volume 3, WP 0351)
2. Start engine. (Volume 1, WP 0019)
3. Select N (neutral) on Gen IV TPSS (Volume 1, WP 0004).
4. Position PTO ON/OFF switch to ON (Volume 1, WP 0005).
5. Check to see if PTO engages.
6. Position PTO ON/OFF switch to OFF (Volume 1, WP 0005).
7. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Does PTO engage?

DECISION

PTO Faulty - Notify Field Maintenance

PTO OK - Fault corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
ELECTRICAL SYSTEM DOES NOT MAINTAIN A CHARGE IN BATTERIES/
CHARGING SYSTEM INDICATOR ILLUMINATES**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE

**ELECTRICAL SYSTEM DOES NOT MAINTAIN A CHARGE IN BATTERIES/
CHARGING SYSTEM INDICATOR ILLUMINATES**

STEP 1

Have Preventative Maintenance Checks and Services (PMCS) Before checks been performed?

CONDITION/INDICATION

Have Preventative Maintenance Checks and Services (PMCS) Before checks been performed?

DECISION

PERFORM PMCS - Perform PMCS-Before checks. (Volume 3, WP 0337)

PMCS PERFORMED - Step 2 - Are batteries, battery cables, and terminal posts free from damage or corrosion?

STEP 2

Are batteries, battery cables, and terminal posts free from damage or corrosion?

WARNING



Lead-acid battery gases can explode. Do not smoke, have open flames, or make sparks around a battery, especially if caps are off. Battery may give off gas which can explode. Failure to comply may result in serious injury or death to personnel.

WARNING

Remove rings, bracelets, wristwatches, neck chains, and any other jewelry before working around vehicle. Jewelry may catch on equipment or may short across an electrical circuit or battery terminal. Failure to comply may result in serious injury or death to personnel.

1. Open battery box (Volume 3, WP 0345).
2. Check batteries, battery cables, and terminal posts for apparent damage and corrosion.

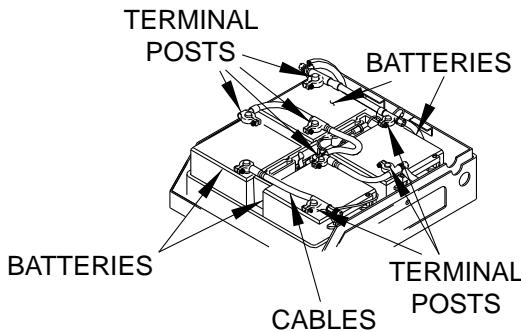


Figure 1. Batteries, Battery Cables, and Terminal Posts.

CONDITION/INDICATION

Are batteries, battery cables, and terminal posts free from damage or corrosion?

DECISION

DAMAGE PRESENT - Notify Field Maintenance batteries/battery cables need to be replaced.

NO DAMAGE - Step 3 - Does BATTERY DISCONN indicator illuminate while vehicle engine is running?

STEP 3

Does BATTERY DISCONN indicator illuminate while vehicle engine is running?

1. Start engine. (Volume 1, WP 0019)
2. Allow engine to run for approximately two minutes.
3. Check to see if BATTERY DISCONN indicator illuminates while engine is running.
4. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Does BATTERY DISCONN indicator illuminate while vehicle engine is running?

DECISION

No Indicator - Notify Field Maintenance

Indicator Illuminates - Notify Field Maintenance batteries need to be replaced.

END OF WORK PACKAGE

OPERATOR MAINTENANCE ENGINE FAN RUNS CONSTANTLY

INITIAL SETUP:

Equipment Condition

Engine shut down (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE ENGINE FAN RUNS CONSTANTLY

STEP 1

Does engine fan turn off using engine fan off switch?

1. Start engine. (Volume 1, WP 0019)
2. Position master power switch to on. (Volume 1, WP 0004)
3. Check to see if engine fan continues to run.
4. Position master power switch to off. (Volume 1, WP 0004)
5. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Does engine fan turn off using engine fan off switch?

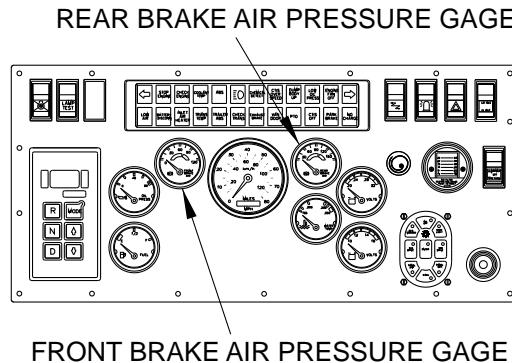
DECISION

Fan Runs - Perform Electrical System Troubleshooting (Engine Fan Does Not Turn Off Using Engine Fan Off Switch). (WP 0197, Test 1 - Are air tanks pressurized?)
Fan Stops - Step 2 - Are air tanks pressurized?

STEP 2

Are air tanks pressurized?

1. Start engine. (Volume 1, WP 0019)
2. Allow engine to idle until 120 psi is registered on FRONT BRAKE AIR and REAR BRAKE AIR pressure gages.



LTASRBAPG

Figure 1. Air Tanks.

3. Shut down engine. (Volume 1, WP 0019)
4. Check FRONT BRAKE AIR and REAR BRAKE AIR pressure gages.

CONDITION/INDICATION

Are air tanks pressurized?

DECISION

Compressor Faulty - Perform Air System Troubleshooting (Air System Loses Pressure During Operation/Slow Air Pressure Buildup). (WP 0270, Test 1 - Does air system lose pressure during operation or have slow air pressure buildup?)

Compressor OK - Step 3 - Does engine fan turn off normally?

STEP 3**Does engine fan turn off normally?**

1. Check to see if engine fan shuts down normally.

CONDITION/INDICATION

Does engine fan turn off normally?

DECISION

Fan Faulty - Notify Field Maintenance.

Fan OK - Fault Corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE ETHER STARTING AID DOES NOT OPERATE

INITIAL SETUP:

Equipment Condition

Engine shut down (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE ETHER STARTING AID DOES NOT OPERATE

STEP 1

Is ether cylinder free from damage?

1. Check ether cylinder for loose or damaged mounts and hardware.
2. Check ether cylinder and injection valve for damage.

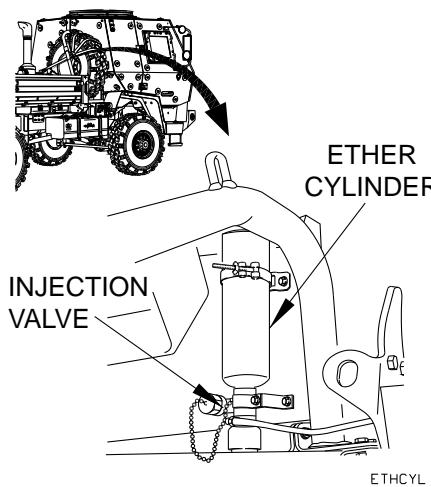


Figure 1. Ether Cylinder.

CONDITION/INDICATION

Is ether cylinder free from damage?

DECISION

CYLINDER FAULTY - Notify Field Maintenance to replace ether cylinder.
CYLINDER OK - Notify Field Maintenance.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
ENGINE FAN DOES NOT TURN OFF USING ENGINE FAN OFF SWITCH**

INITIAL SETUP:

Equipment Condition

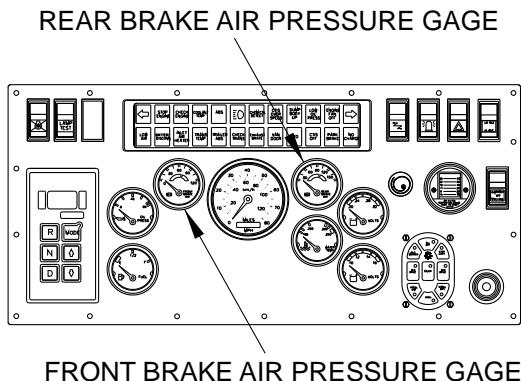
Engine running. (Volume 1, WP 0019)

**TROUBLESHOOTING PROCEDURE
ENGINE FAN DOES NOT TURN OFF USING ENGINE FAN OFF SWITCH**

STEP 1

Are air tanks pressurized?

1. Allow engine to idle until 120 psi is registered on FRONT BRAKE AIR and REAR BRAKE AIR pressure gages.



RF BRAKEAPG

Figure 1. Air Tanks.

2. Shut down engine. (Volume 1, WP 0019)
3. Check FRONT BRAKE AIR and REAR BRAKE AIR pressure gages.

CONDITION/INDICATION

Are air tanks pressurized?

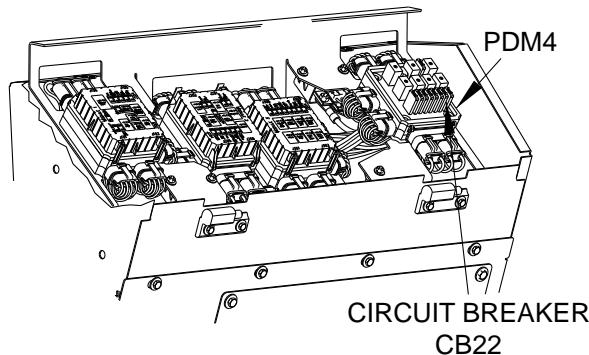
DECISION

COMPRESSOR FAULTY - Perform Air System Troubleshooting (Air System Loses Pressure During Operation/Slow Air Pressure Buildup). (WP 0270, Test 1 - Does air system lose pressure during operation or have slow air pressure buildup?)
COMPRESSOR OK - Step 2 - Is circuit breaker CB22 tripped?

STEP 2**Is circuit breaker CB22 tripped?**

1. Open PDP cover. (Volume 3, WP 0351)

COVER REMOVED
FOR CLARITY



LTXCB22X

Figure 2. Circuit Breaker CB22.

2. If circuit breaker CB22 is tripped, push button to reset.
3. Position master power switch to on. (Volume 1, WP 0004)
4. Check circuit breaker CB22 to see if it is tripped again.
5. Position master power switch to off. (Volume 1, WP 0004)
6. Close PDP cover. (Volume 3, WP 0351)

CONDITION/INDICATION

Is circuit breaker CB22 tripped?

DECISION

Breaker Tripped - Notify Field Maintenance.

Breaker OK - Step 3 - Does engine fan turn off using engine fan off switch?

STEP 3**Does engine fan turn off using engine fan off switch?**

1. Start engine. (Volume 1, WP 0019)
2. Position master power switch to on. (Volume 1, WP 0004)
3. Check to see if engine fan continues to run.
4. Position master power switch to off. (Volume 1, WP 0004)
5. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Does engine fan turn off using engine fan off switch?

DECISION

Fan Runs - Notify Field Maintenance.

Fan Stops - Fault Corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE RADIO DOES NOT OPERATE

INITIAL SETUP:

Equipment Condition

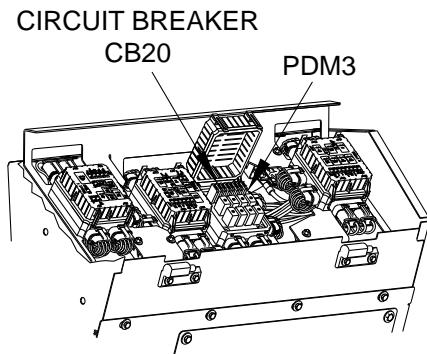
Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE RADIO DOES NOT OPERATE

STEP 1

Is circuit breaker CB20 tripped?

1. Remove PDP cover. (Volume 3, WP 0351)



CB20P3X

Figure 1. Circuit Breaker CB20.

2. Position master power switch to off. (Volume 1, WP 0004)
3. If circuit breaker CB20 is tripped, push button to reset.
4. Position master power switch to on. (Volume 1, WP 0004)
5. Check circuit breaker CB20 to see if it is tripped again.
6. Position master power switch to off. (Volume 1, WP 0004)

7. Install PDP cover (Volume 3, WP 0351).

CONDITION/INDICATION

Is circuit breaker CB20 tripped?

DECISION

Breaker Tripped - Notify Field Maintenance.

Breaker OK - Step 2 - Does radio operate?

STEP 2**Does radio operate?**

1. Position master power switch to on. (Volume 1, WP 0004)
2. Position radio to on.
3. Position radio to off.
4. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does radio operate?

DECISION

Radio Faulty - Notify Field Maintenance.

Radio OK - Fault corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
EXHAUST BRAKE DOES NOT OPERATE**

INITIAL SETUP:

Equipment Condition

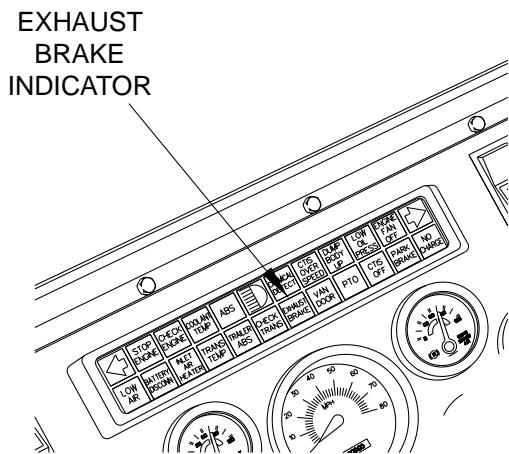
Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
EXHAUST BRAKE DOES NOT OPERATE**

STEP 1

Does EXHAUST BRAKE indicator illuminate?

1. Start engine (Volume 1, WP 0019).
2. Idle engine with parking brakes set.
3. Set WARMUP/OFF/RETARD switch to WARM UP position. (Volume 1, WP 0004)
4. Position Gen IV Transmission Pushbutton Shift Selector (TPSS) (Volume 1, WP 0004, Table 4) into and out of NEUTRAL gear.
5. Each time observing EXHAUST BRAKE indicator.



AIREB

Figure 1. EXHAUST BRAKE Indicator.

6. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Does EXHAUST BRAKE indicator illuminate?

DECISION

NOT ILLUMINATED - Notify Field Maintenance

ILLUMINATED - Step 2 - Does EXHAUST BRAKE still not operate?

STEP 2

Does EXHAUST BRAKE still not operate?

1. Start engine. (Volume 1, WP 0019)
2. Road test vehicle and check that EXHAUST BRAKE operates.
3. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Does EXHAUST BRAKE still not operate?

DECISION

NO OPERATION - Notify Field Maintenance
BRAKE OPERATES - Fault corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE INLET AIR HEATER DOES NOT OPERATE

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

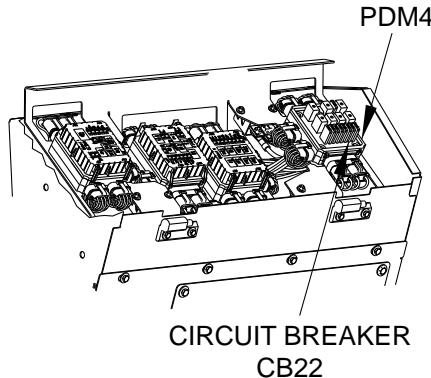
TROUBLESHOOTING PROCEDURE INLET AIR HEATER DOES NOT OPERATE

STEP 1

Is circuit breaker CB22 tripped?

1. Remove PDP cover for access. (Volume 3, WP 0351)
2. If circuit breaker CB22 is tripped, push button to reset.

COVER REMOVED
FOR CLARITY



CB22X

Figure 1. Circuit Breaker CB22.

3. Position master power switch to on. (Volume 1, WP 0004)
4. Check circuit breaker CB22 to see if it is tripped again.
5. Position master power switch to off. (Volume 1, WP 0004)
6. Install PDP cover. (Volume 3, WP 0351)

CONDITION/INDICATION

Is circuit breaker CB22 tripped?

DECISION

BREAKER TRIPPED - Notify Field Maintenance

BREAKER OK - Step 2 - Does inlet air heater operate?

STEP 2**Does inlet air heater operate?**

1. Start engine (Volume 1, WP 0019).
2. Check to see if inlet air heater operates.
3. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Does inlet air heater operate?

DECISION

NO OPERATION - Notify Field Maintenance

HEATER OK - Fault Corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
ALL MAIN LIGHT SWITCH FUNCTIONS DO NOT OPERATE

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

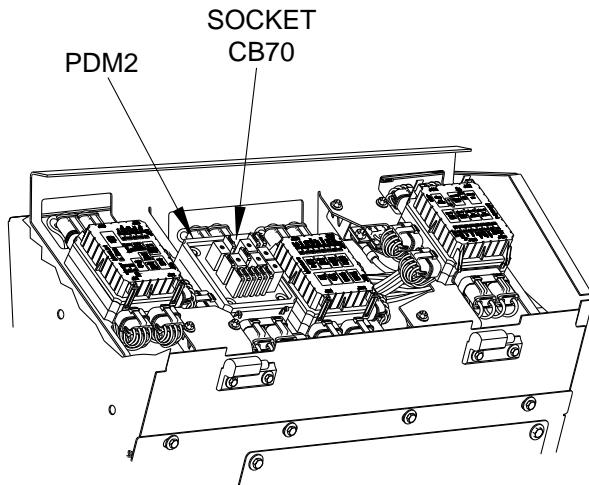
TROUBLESHOOTING PROCEDURE
ALL MAIN LIGHT SWITCH FUNCTIONS DO NOT OPERATE

STEP 1

Is circuit breaker CB70 tripped?

1. Remove PDP cover. (Volume 3, WP 0351)

COVER REMOVED
FOR CLARITY



CB70SXLT10

Figure 1. Circuit Breaker CB70.

2. Remove PDM 2 cover.
3. If circuit breaker CB70 is tripped, push button to reset.

4. Position master power switch to on. (Volume 1, WP 0004)
5. Check circuit breaker CB70 to see if it is tripped again.
6. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Is circuit breaker CB70 tripped?

DECISION

BREAKER TRIPPED - Notify Field Maintenance

BREAKER OK - Step 2 - Do main light switch functions operate?

STEP 2**Do main light switch functions operate?**

1. Press SER DRIVE key on main light switch.
2. Press ENTER key on main light switch.
3. Check to see if headlights illuminate.
4. Press ALL OFF key on main light switch.
5. Press ENTER key on main light switch.

CONDITION/INDICATION

Do main light switch functions operate?

DECISION

LIGHTS FAULTY - Notify Field Maintenance

LIGHTS OK - Fault Corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
LIGHTED INDICATOR DISPLAY AND ALL ELECTRICAL GAGES DO NOT OPERATE

INITIAL SETUP:

Equipment Condition

Engine shut down (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE

LIGHTED INDICATOR DISPLAY AND ALL ELECTRICAL GAGES DO NOT OPERATE

STEP 1

Have Preventative Maintenance Checks and Services (PMCS) Before checks been performed?

CONDITION/INDICATION

Have Preventative Maintenance Checks and Services (PMCS) Before checks been performed?

DECISION

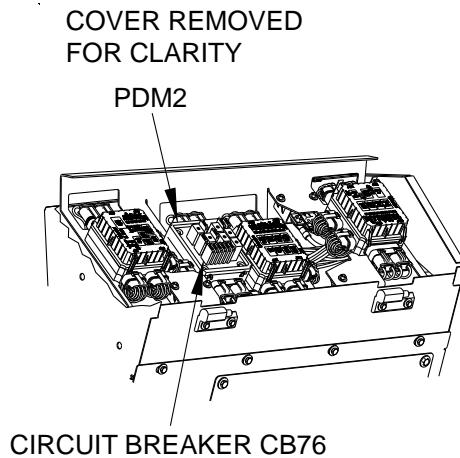
Perform PMCS - Perform PMCS-Before checks. (Volume 3, WP 0337)

PMCS Performed - Step 2 - Is circuit breaker CB76 in PDM 2 tripped?

STEP 2

Is circuit breaker CB76 in PDM 2 tripped?

1. Remove Power Distribution Panel (PDP) cover. (Volume 3, WP 0351)



CB76LX

Figure 1. Circuit Breaker CB76 in PDM 2.

2. Open PDM 2.
3. If circuit breaker CB76 is tripped, push button to reset.
4. Position master power switch to on. (Volume 1, WP 0004, Table 1)
5. Check circuit breaker CB76 to see if it is tripped again.
6. Position master power switch to off. (Volume 1, WP 0004, Table 1)

CONDITION/INDICATION

Is circuit breaker CB76 in PDM 2 tripped?

DECISION

BREAKER TRIPPED - Notify Field Maintenance

BREAKER OK - Step 3 - Is circuit breaker CB38 in PDM 2 tripped?

STEP 3

Is circuit breaker CB38 in PDM 2 tripped?

1. If circuit breaker CB38 is tripped, push button to reset.

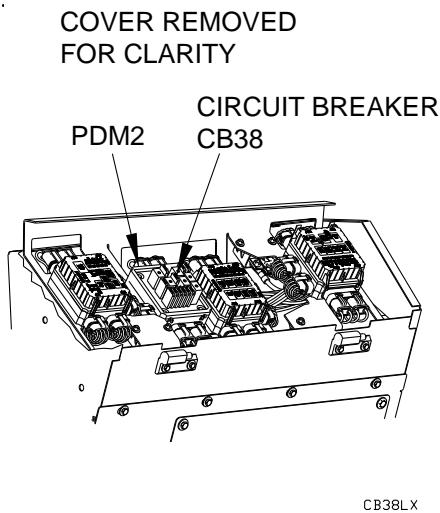


Figure 2. Circuit Breaker CB38 in PDM 2.

2. Check circuit breaker CB38 to see if it is tripped again.
3. Close PDM 2.
4. Install PDP cover. (Volume 3, WP 0351)

CONDITION/INDICATION

Is circuit breaker CB38 in PDM 2 tripped?

DECISION

BREAKER TRIPPED - Notify Field Maintenance.

BREAKER OK - Step 4 - Does the Lighted Indicator Display Illuminate and All Electrical Gages Operate?

STEP 4

Does the Lighted Indicator Display Illuminate and All Electrical Gages Operate?

1. Position master power switch to on (Volume 1, WP 0004, Table 1)
2. Start engine. (Volume 1, WP 0019)
3. Check for operation of electrical gages.
4. Press the Lamp Test switch.

CONDITION/INDICATION

Does the Lighted Indicator Display Illuminate and All Electrical Gages Operate?

DECISION

GAGES AND LIGHTS FAULTY - Notify Field Maintenance
FAULT CORRECTED - Fault Corrected

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
LO IDLE/HI IDLE SWITCH DOES NOT OPERATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
LO IDLE/HI IDLE SWITCH DOES NOT OPERATE**

STEP 1

Does LO IDLE/HI IDLE switch operate?

1. Position PTO switch to off. (Volume 1, WP 0005)
2. Start engine. (Volume 1, WP 0019)
3. Position LO IDLE/HI IDLE switch to HI IDLE. (Volume 1, WP 0004)
4. Note if LO IDLE/HI IDLE switch operates.
5. Position LO IDLE/HI IDLE switch to LO IDLE. (Volume 1, WP 0004)
6. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Does LO IDLE/HI IDLE switch operate?

DECISION

IDLE FAULTY - Notify Field Maintenance
IDLE OK - Fault corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
MASTER POWER SWITCH DOES NOT SHUT DOWN ENGINE**

INITIAL SETUP:

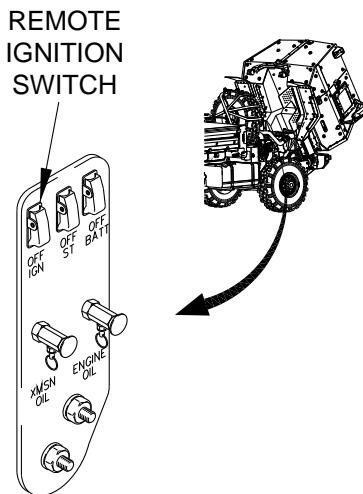
Not Applicable

**TROUBLESHOOTING PROCEDURE
MASTER POWER SWITCH DOES NOT SHUT DOWN ENGINE**

STEP 1

Verify remote IGN switch is in the OFF position.

1. Position master power switch to off. (Volume 1, WP 0004)
2. Lift RH rear cab mud flap.
3. Position remote IGN switch to OFF. (Volume 1, WP 0011)



RIS

Figure 1. Remote IGN Switch.

CONDITION/INDICATION

Verify remote IGN switch is in the OFF position.

DECISION

ENGINE NOT SHUTDOWN - Step 2 - Shut down engine by positioning Manual Battery Disconnect Switch (MBDS) to disconnect (OFF).

ENGINE SHUTDOWN - Fault corrected.

STEP 2

Shut down engine by positioning Manual Battery Disconnect Switch (MBDS) to disconnect (OFF).

1. Position Manual Battery Disconnect Switch (MBDS) to disconnect (OFF). (Volume 1, WP 0011)
2. After engine shuts down, position Manual Battery Disconnect Switch (MBDS) to connect (ON). (Volume 1, WP 0011)

CONDITION/INDICATION

Shut down engine by positioning Manual Battery Disconnect Switch (MBDS) to disconnect (OFF).

DECISION

Continue - Notify Field Maintenance

END OF WORK PACKAGE

OPERATOR MAINTENANCE AIR DRYER HEATER DOES NOT OPERATE

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE AIR DRYER HEATER DOES NOT OPERATE

STEP 1

Is circuit breaker CB21 tripped?

1. Remove PDP cover. (Volume 3, WP 0351)
2. If circuit breaker CB21 is tripped, push button to reset.

COVER REMOVED
FOR CLARITY

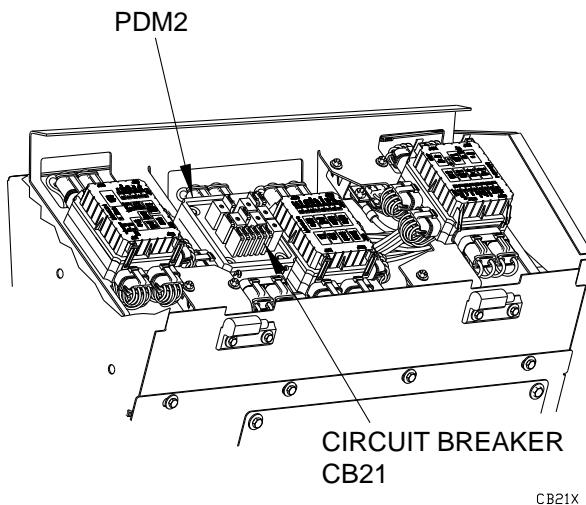


Figure 1. Circuit Breaker CB21.

3. Position master power switch to on. (Volume 1, WP 0004)
4. Check circuit breaker CB21 to see if it is tripped again.

5. Position master power switch to off. (Volume 1, WP 0004)
6. Install PDP cover. (Volume 3, WP 0351)

CONDITION/INDICATION

Is circuit breaker CB21 tripped?

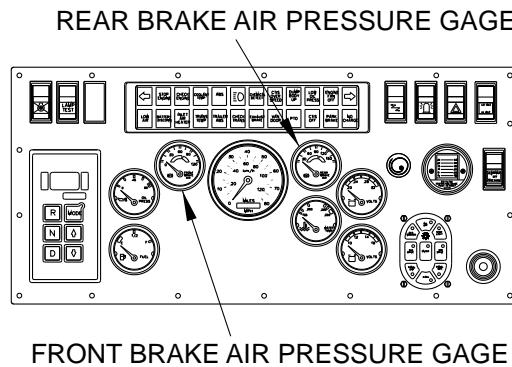
DECISION

Breaker Tripped - Notify Field Maintenance.

Breaker OK - Step 2 - Are air tanks pressurized?

STEP 2**Are air tanks pressurized?**

1. Start engine. (Volume 1, WP 0019)
2. Allow engine to idle until 120 psi is registered on FRONT BRAKE AIR and REAR BRAKE AIR pressure gages.



L TASRBAPG

Figure 2. Air Tanks.

3. Shut down engine. (Volume 1, WP 0019)
4. Check FRONT BRAKE AIR and REAR BRAKE AIR pressure gages.

CONDITION/INDICATION

Are air tanks pressurized?

DECISION

COMPRESSOR FAULTY - Perform Air System Troubleshooting (Air System Loses Pressure During Operation/Slow Air Pressure Buildup). (WP 0270, Test 1 - Does air system lose pressure during operation or have slow air pressure buildup?)
COMPRESSOR OK - Step 3 - Are air hoses and fittings free from leaks?

STEP 3**Are air hoses and fittings free from leaks?**

1. Check to see if air hoses and fittings are free from leaks.

CONDITION/INDICATION

Are air hoses and fittings free from leaks?

DECISION

LEAKS FOUND - Notify Field Maintenance.
NO LEAKS - Step 4 - Does air dryer heater operate?

STEP 4**Does air dryer heater operate?****CONDITION/INDICATION**

Does air dryer heater operate?

DECISION

Heater Faulty - Notify Field Maintenance.
Heater OK - Fault Corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE CAB DOES NOT RETURN TO RIDE HEIGHT

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE CAB DOES NOT RETURN TO RIDE HEIGHT

STEP 1

Is AIR TRANSPORT switch in NORMAL OPERATION position?

1. Remove quick release pin from switch box cover.
2. Open switch box cover on electric hydraulic switch box.
3. Check if NORMAL OPERATION/AIR TRANSPORT switch is in NORMAL OPERATION position.

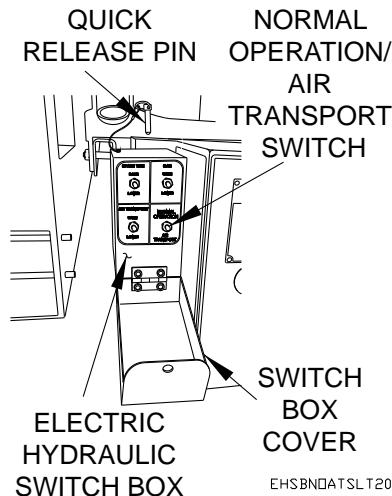


Figure 1. AIR TRANSPORT Switch.

CONDITION/INDICATION

Is AIR TRANSPORT switch in NORMAL OPERATION position?

DECISION

NORMAL OPERATION - Step 2 - Do hydraulic functions operate?
AIR TRANSPORT - Step 4 - Does cab rise to ride height?

STEP 2**Do hydraulic functions operate?**

1. Attempt to operate any hydraulic function.

CONDITION/INDICATION

Do hydraulic functions operate?

DECISION

NO FUNCTION - Perform Operator maintenance troubleshooting (No Hydraulic Functions Operate). (WP 0208)

FUNCTIONS OK - Step 3 - Is circuit breaker CBF10 tripped?

STEP 3**Is circuit breaker CBF10 tripped?**

1. Loosen four screws in access cover on overhead panel.

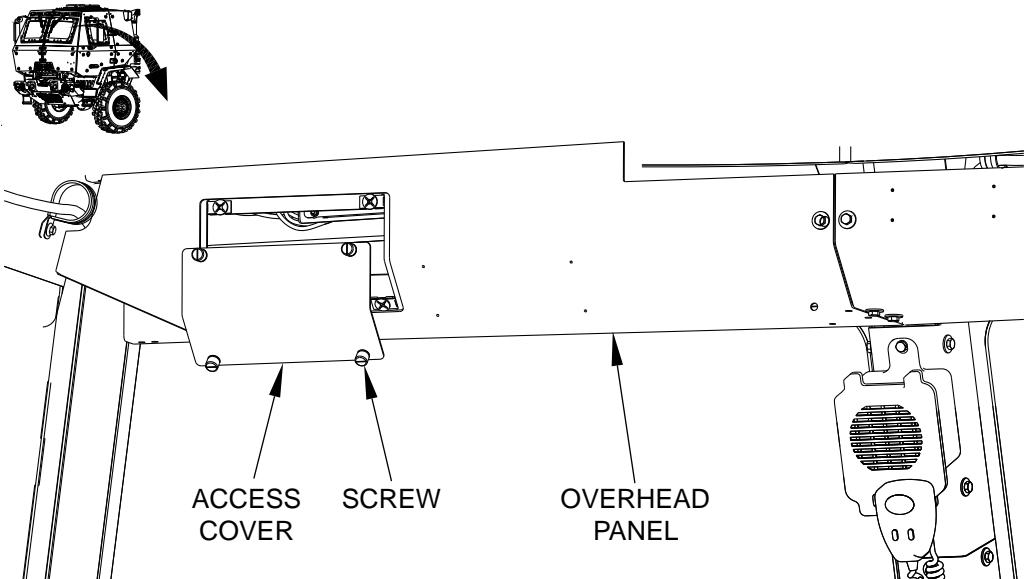


Figure 2. Overhead Access Cover

2. Remove access cover from overhead panel.
3. If circuit breaker CBF10 is tripped, push button to reset.

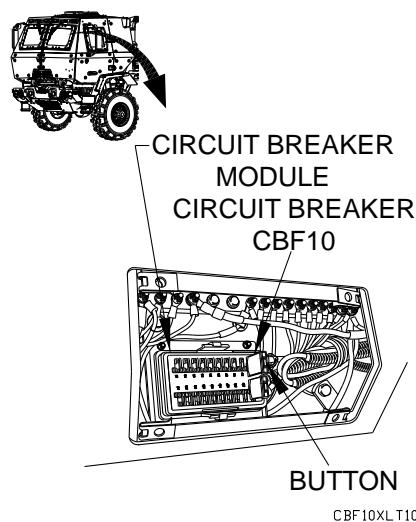


Figure 3. Circuit Breaker CBF10.

4. Position master power switch to on. (Volume 1, WP 0004, Table 1)
5. Check to see if circuit breaker CBF10 is tripped again.
6. Install access cover to overhead panel.
7. Tighten four screws in access cover on overhead panel.

CONDITION/INDICATION

Is circuit breaker CBF10 tripped?

DECISION

Breaker OK - Step 4 - Does cab rise to ride height?

Breaker Tripped - Notify Field Maintenance

STEP 4

Does cab rise to ride height?

1. Position NORMAL OPERATION/AIR TRANSPORT switch to NORMAL OPERATION. (Volume 1, WP 0020)
2. Start engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Does cab rise to ride height?

DECISION

Function OK - Fault Corrected.

No Function - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
REMOTE START DOES NOT OPERATE**

INITIAL SETUP:

Not Applicable

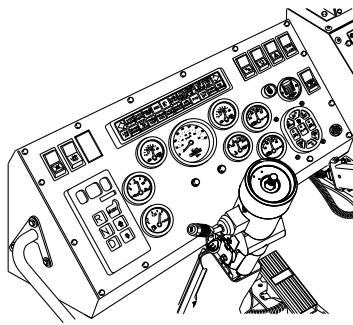
**TROUBLESHOOTING PROCEDURE
REMOTE START DOES NOT OPERATE**

STEP 1

Does vehicle start using dashboard controls?

1. Start engine. (Volume 1, WP 0019)

STEERING WHEEL
REMOVED FOR
CLARITY



REMOTESDNO

Figure 1. Vehicle.

2. Check to see if any instrument panel gages operate.
3. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Does vehicle start using dashboard controls?

DECISION

NO START - Perform Engine System Troubleshooting (Engine Does Not Crank).
(WP 0077)

ENGINE STARTS - Notify Field Maintenance.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
NO HYDRAULIC FUNCTIONS OPERATE (ELECTRICAL SYSTEM)**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
NO HYDRAULIC FUNCTIONS OPERATE (ELECTRICAL SYSTEM)**

STEP 1

Do other 24 VDC battery circuits operate?

***** The following is applicable to the following UOC(s): TSA TSB TSL TSM TSR TSQ. *****

1. Operate troop two-way intercom (Volume 1, WP 0012, Table 1) to test 24 VDC battery circuit.

***** The following is applicable to the following UOC(s): TSP TSG TSV TSH TSU. *****

2. Operate main light switch to test 24 VDC battery circuit.

CONDITION/INDICATION

Do other 24 VDC battery circuits operate?

DECISION

CIRCUITS FAULTY - Perform Operator level electrical troubleshooting (24 VDC Circuits Do Not Operate). (WP 0098)

CIRCUITS OPERATE - Step 2 - Is pump solenoid 40A circuit breaker tripped?

STEP 2

Is pump solenoid 40A circuit breaker tripped?

1. If 40A circuit breaker is tripped, push button to reset.

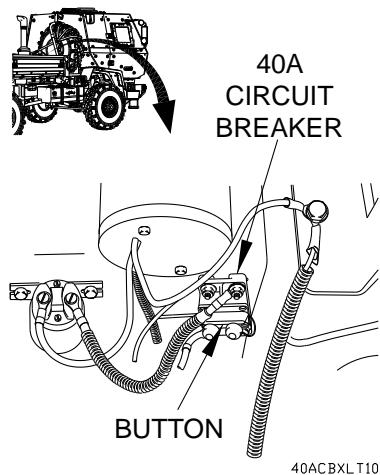


Figure 1. Pump Solenoid 40A Circuit Breaker.

2. Position master power switch to on. (Volume 1, WP 0004, Table 1)
3. Attempt to operate any hydraulic function.
4. Check to see if 40A circuit breaker is tripped again.

CONDITION/INDICATION

Is pump solenoid 40A circuit breaker tripped?

DECISION

BREAKER TRIPPED - Perform Operator level hydraulic troubleshooting (No Hydraulic Functions Operate). (WP 0280, Test 3 - Is hydraulic fluid at proper level?)

BREAKER OK - Step 3 - Is circuit breaker CBF20 tripped?

STEP 3

Is circuit breaker CBF20 tripped?

1. Loosen four screws in access cover on overhead panel.

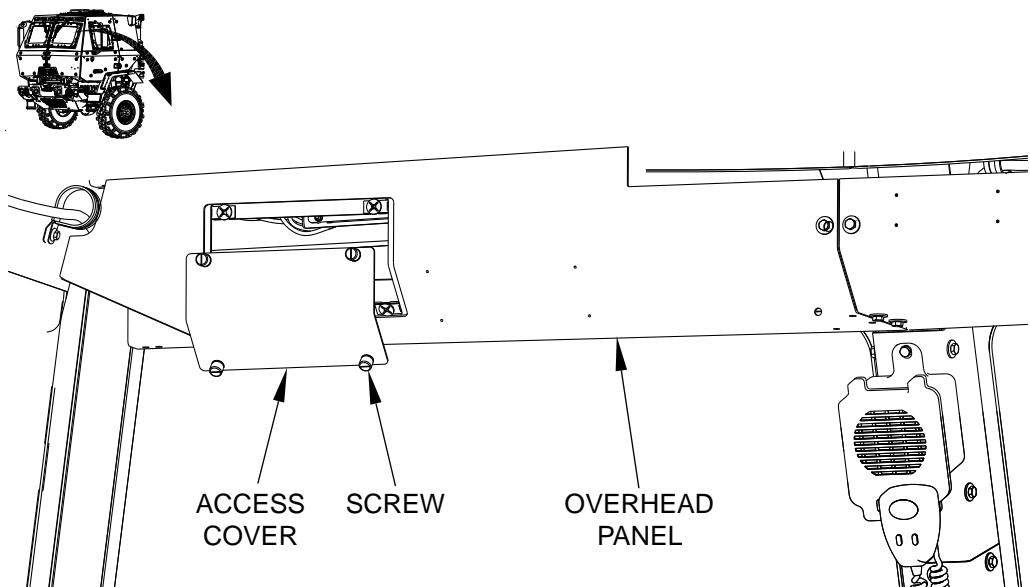


Figure 2. Overhead Access Cover

2. Remove access cover from overhead panel.
3. If circuit breaker CBF20 is tripped, push button to reset.

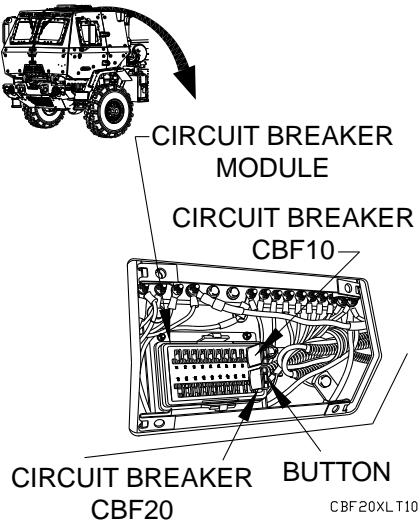


Figure 3. Circuit Breaker CBF20.

4. Position master power switch to on. (Volume 1, WP 0004, Table 1)
5. Attempt to operate any hydraulic function.
6. Check to see if circuit breaker CBF20 is tripped again.
7. Install access cover to overhead panel.
8. Tighten four screws in access cover on overhead panel.

CONDITION/INDICATION

Is circuit breaker CBF20 tripped?

DECISION

BREAKER TRIPPED - Perform Operator level hydraulic troubleshooting (No Hydraulic Functions Operate). (WP 0280, Test 3 - Is hydraulic fluid at proper level?)

BREAKER OK - Step 4 - Do hydraulic functions operate?

STEP 4**Do hydraulic functions operate?**

1. Attempt to operate any hydraulic function.

CONDITION/INDICATION

Do hydraulic functions operate?

DECISION

NO FUNCTION - Perform Operator level hydraulic troubleshooting (No Hydraulic Functions Operate). (WP 0280, Test 3 - Is hydraulic fluid at proper level?)

FUNCTION OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
SPARE TIRE DOES NOT RAISE OR LOWER PROPERLY (ELECTRICAL SYSTEM)**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE

SPARE TIRE DOES NOT RAISE OR LOWER PROPERLY (ELECTRICAL SYSTEM)

STEP 1

Do other hydraulic functions operate?

1. Attempt to raise and lower cab.

CONDITION/INDICATION

Do other hydraulic functions operate?

DECISION

HYDRAULICS FAULTY - Perform Operator level electrical system troubleshooting (No Hydraulic Functions Operate) (WP 0208)

HYDRAULICS OK - Perform Operator level hydraulic troubleshooting (Spare Tire Does Not Raise or Lower Properly). (WP 0334, Test 2 - Are hydraulic hoses and fittings free from Class III leaks?)

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
SUSPENSION DOES NOT COMPRESS OR RETURN TO NORMAL PROPERLY
(ELECTRICAL SYSTEM)**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE

**SUSPENSION DOES NOT COMPRESS OR RETURN TO NORMAL PROPERLY
(ELECTRICAL SYSTEM)**

STEP 1

Do other hydraulic functions operate?

1. Attempt to raise and lower cab. (Volume 1, WP 0020)
2. Attempt to lower and raise spare tire. (Volume 3, WP 0342)

CONDITION/INDICATION

Do other hydraulic functions operate?

DECISION

OTHERS FAULTY - Perform Electrical System Troubleshooting (No hydraulic functions operate). (WP 0208)

OTHERS OK - Perform operator level hydraulic troubleshooting (Suspension does not compress or return to normal properly (hydraulic) (WP 0303, Test 2 - Is hydraulic fluid at proper level?)

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
A/C COMPRESSOR CLUTCH DOES NOT ENGAGE**

INITIAL SETUP:

Equipment Condition

HVAC system OFF. (Volume 1,
WP 0022)

**TROUBLESHOOTING PROCEDURE
A/C COMPRESSOR CLUTCH DOES NOT ENGAGE**

STEP 1

Is circuit breaker CB1-1 tripped?

1. Press button on circuit breaker CB1-1.

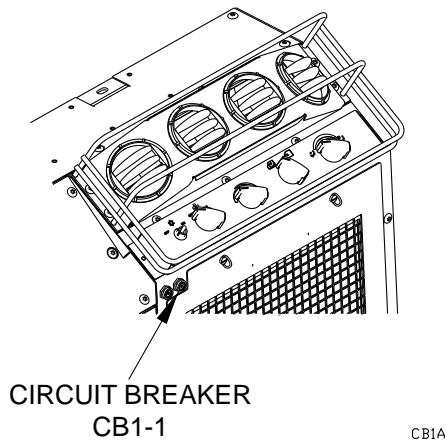


Figure 1. Circuit Breaker CB1-1.

2. Check for proper operation of A/C system. (Volume 1, WP 0022)

CONDITION/INDICATION

Is circuit breaker CB1-1 tripped?

DECISION

A/C FAULTY - Notify Field Maintenance.
A/C OPERATES -

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
HVAC BLOWER MOTOR DOES NOT OPERATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
HVAC BLOWER MOTOR DOES NOT OPERATE**

STEP 1

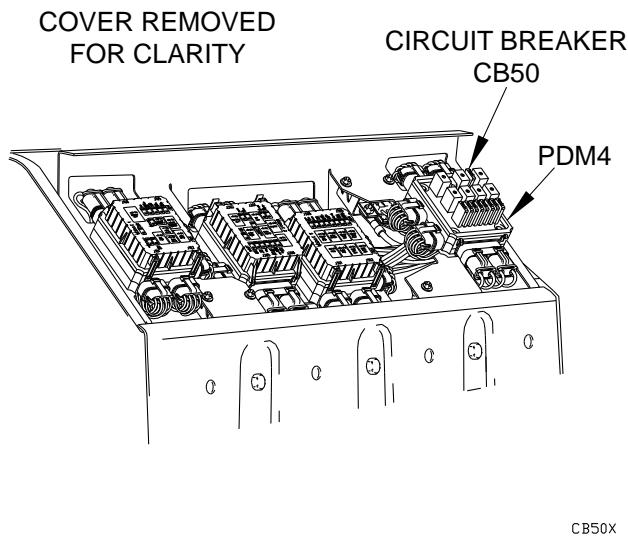
Is circuit breaker CB50 tripped?

WARNING



Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

1. Remove Power Distribution Panel (PDP) cover. (Volume 3, WP 0351)
2. If circuit breaker CB50 is tripped, push button to reset.



CB50X

Figure 1. Circuit Breaker CB50.

3. Position master power switch to on.
4. Check to see if circuit breaker CB50 is tripped again.

CONDITION/INDICATION

Is circuit breaker CB50 tripped?

DECISION

BREAKER TRIPPED - Notify Field Maintenance

BREAKER OK - Step 2 - Is circuit breaker CB23 tripped?

STEP 2**Is circuit breaker CB23 tripped?**

1. If circuit breaker CB23 is tripped, push button to reset.

COVER REMOVED
FOR CLARITY

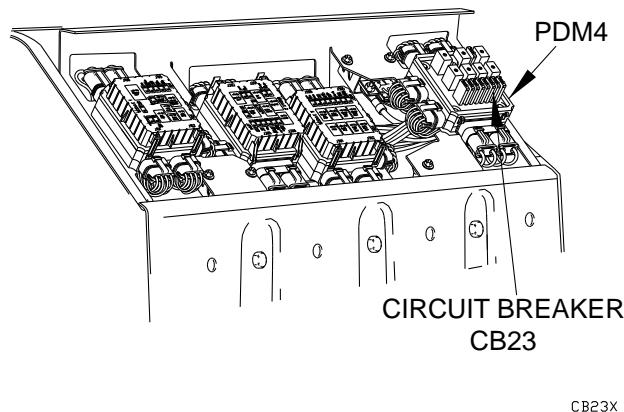


Figure 2. Circuit Breaker CB23.

2. Position master power switch to on. (Volume 1, WP 0004, Table 1)
3. Check to see if circuit breaker CB23 is tripped again.

CONDITION/INDICATION

Is circuit breaker CB23 tripped?

DECISION

BREAKER TRIPPED - Notify Field Maintenance.
BREAKER OK - Step 3 - Does HVAC operate?

STEP 3

Does HVAC operate?

1. Attempt to operate HVAC. (Volume 1, WP 0006)

CONDITION/INDICATION

Does HVAC operate?

DECISION

HVAC FAULTY - Notify Field Maintenance
HVAC OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
TRANSMISSION AUXILIARY OIL COOLER FAN DOES NOT OPERATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

*** The following is applicable to the following UOC(s): TSA TSH TSJ WRK TSL
TSQ TSX TSB TSG TSM TSP TSR TSU TSV. ***

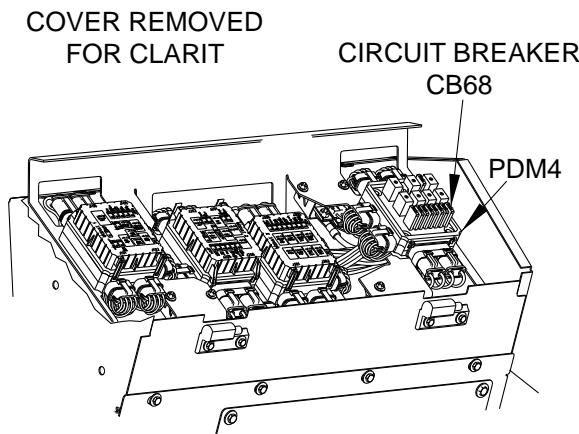
TROUBLESHOOTING PROCEDURE

TRANSMISSION AUXILIARY OIL COOLER FAN DOES NOT OPERATE

STEP 1

Is circuit breaker CB68 tripped?

1. Remove PDP cover. (Volume 3, WP 0351)



CB68X

Figure 1. Circuit Breaker CB68.

2. If circuit breaker CB68 is tripped, push button to reset.

3. Position master power switch to on. (Volume 1, WP 0004)
4. Check circuit breaker CB68 to see if it is tripped again.
5. Position master power switch to off. (Volume 1, WP 0004)
6. Install PDP cover. (Volume 3, WP 0351)

CONDITION/INDICATION

Is circuit breaker CB68 tripped?

DECISION

Breaker OK - Step 2 - Does transmission auxiliary oil cooler fan operate?

Breaker Tripped - Notify Field Maintenance

STEP 2**Does transmission auxiliary oil cooler fan operate?**

1. Check to see if transmission auxiliary oil cooler fan operates.

CONDITION/INDICATION

Does transmission auxiliary oil cooler fan operate?

DECISION

Fan OK - Fault Corrected.

Fan Faulty - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
TRANSMISSION AUXILIARY OIL COOLER FAN(S) DOES NOT OPERATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

*** The following is applicable to the following UOC(s): TSU TSH TSJ WRK. ***

TROUBLESHOOTING PROCEDURE

TRANSMISSION AUXILIARY OIL COOLER FAN(S) DOES NOT OPERATE

STEP 1

Is circuit breaker CB68 tripped?

1. Remove PDP cover. (Volume 3, WP 0351)

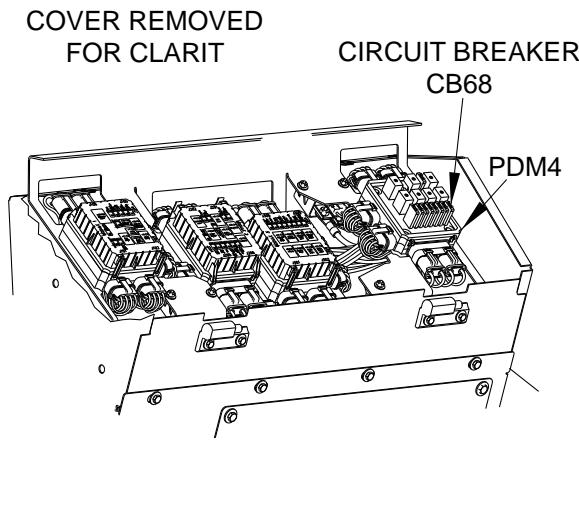


Figure 1. Circuit Breaker CB68.

2. If circuit breaker CB68 is tripped, push button to reset.
3. Position master power switch to on. (Volume 1, WP 0004)

4. Check circuit breaker CB68 to see if it is tripped again.
5. Position master power switch to off. (Volume 1, WP 0004)
6. Install PDP cover.

CONDITION/INDICATION

Is circuit breaker CB68 tripped?

DECISION

Breaker Tripped - Notify Field Maintenance.

Breaker OK - Step 2 - Does transmission auxiliary oil cooler fan operate?

STEP 2**Does transmission auxiliary oil cooler fan operate?**

1. Check if transmission auxiliary oil cooler fan operates.

CONDITION/INDICATION

Does transmission auxiliary oil cooler fan operate?

DECISION

Fan Faulty - Notify Field Maintenance.

Fan OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
TRANSMISSION AUXILIARY OIL COOLER FAN(S) RUNS CONSTANTLY**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

***** The following is applicable to the following UOC(s): TSA TSB TSG TSH TSJ
WRK TSL TSM TSP TSQ TSR TSU TSV TSX. *****

TROUBLESHOOTING PROCEDURE

TRANSMISSION AUXILIARY OIL COOLER FAN(S) RUNS CONSTANTLY

STEP 1

Does transmission auxiliary oil cooler fan(s) turn off?

1. Start engine. (Volume 1, WP 0019)
2. Position engine fan off switch to on. (Volume 1, WP 0004)
3. Check to see if transmission auxiliary oil cooler fan(s) continues to run.
4. Position engine fan off switch to off. (Volume 1, WP 0004)
5. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Does transmission auxiliary oil cooler fan(s) turn off?

DECISION

FAN(S) FAULTY - Notify Field Maintenance

FANS OK - Fault Corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
STOPLIGHTS DO NOT ILLUMINATE WHEN TRAILER BRAKES ARE APPLIED

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

*** The following is applicable to the following UOC(s): TSU TSH. ***

TROUBLESHOOTING PROCEDURE

STOPLIGHTS DO NOT ILLUMINATE WHEN TRAILER BRAKES ARE APPLIED

STEP 1

Do stoplights illuminate when vehicle brake is depressed?

1. Start engine. (Volume 1, WP 0019)
2. Press STOP LIGHT key on main light switch. (Volume 1, WP 0004)
3. Press ENTER key on main light switch.
4. Apply trailer handbrake. (Volume 1, WP 0034)
5. Check to see if stoplights illuminate.
6. Release trailer handbrake. (Volume 1, WP 0034)
7. Press ALL OFF key on main light switch. (Volume 1, WP 0004)
8. Press ENTER key on main light switch.
9. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Do stoplights illuminate when vehicle brake is depressed?

DECISION

LIGHTS FAULTY - Perform Electrical System Troubleshooting (Stoplights and Blackout Stoplights Do Not Illuminate). (WP 0161, Test 1 - Do stoplights and lighted indicator display illuminate?)

LIGHTS OK - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
LH WORKLIGHTS DO NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down (Volume 1,
WP 0019)

*** The following is applicable to the following UOC(s): TSU TSH TSJ WRK TSX. ***

**TROUBLESHOOTING PROCEDURE
LH WORKLIGHTS DO NOT ILLUMINATE**

STEP 1

Do RH worklights illuminate?

1. Check to see if RH worklights illuminate.

CONDITION/INDICATION

Do RH worklights illuminate?

DECISION

RH FAULTY - Perform Electrical System Troubleshooting (Worklights Do Not Illuminate).
(WP 0166, Test 3 - Is circuit breaker CB72 tripped?)

RH OK - Step 2 - Do LH worklights illuminate?

STEP 2

Do LH worklights illuminate?

1. Check to see if LH worklights illuminate.

CONDITION/INDICATION

Do LH worklights illuminate?

DECISION

LIGHTS FAULTY - Notify Field Maintenance

LIGHTS OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
RH WORKLIGHTS DO NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down (Volume 1,
WP 0019)

*** The following is applicable to the following UOC(s): TSU TSH TSJ WRK TSX. ***

TROUBLESHOOTING PROCEDURE

RH WORKLIGHTS DO NOT ILLUMINATE

STEP 1

Do LH worklights illuminate?

1. Check to see if LH worklights illuminate.

CONDITION/INDICATION

Do LH worklights illuminate?

DECISION

LH FAULTY - Perform Electrical System Troubleshooting (Worklights Do Not Illuminate).
(WP 0166, Test 3 - Is circuit breaker CB72 tripped?)

LH OK - Step 2 - Do RH worklights illuminate?

STEP 2

Do RH worklights illuminate?

1. Check to see if RH worklights illuminate.

CONDITION/INDICATION

Do RH worklights illuminate?

DECISION

LIGHTS FAULTY - Notify Field Maintenance

LIGHTS OK - Fault Corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
WORKLIGHTS DO NOT ILLUMINATE IN BLACKOUT MODE WITH BLACKOUT
OVERRIDE SWITCH ON

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

***** The following is applicable to the following UOC(s): TSU TSH TSJ WRK. *****

TROUBLESHOOTING PROCEDURE

WORKLIGHTS DO NOT ILLUMINATE IN BLACKOUT MODE WITH BLACKOUT
OVERRIDE SWITCH ON

STEP 1

Do worklights illuminate in normal mode?

1. Check to see if worklights illuminate in normal mode.

CONDITION/INDICATION

Do worklights illuminate in normal mode?

DECISION

FAULTY - Perform Electrical System Troubleshooting (Worklights Do Not Illuminate).
(WP 0166, Test 3 - Is circuit breaker CB72 tripped?)

OK - Step 2 - Do worklights illuminate in blackout mode with blackout override switch on?

STEP 2

Do worklights illuminate in blackout mode with blackout override switch on?

1. Check to see if worklights illuminate in blackout mode with blackout override switch on.

CONDITION/INDICATION

Do worklights illuminate in blackout mode with blackout override switch on?

DECISION

LIGHTS FAULTY - Notify Field Maintenance
LIGHTS OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
120 VAC OUTLET(S) J505 AND/OR J506 DO NOT OPERATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

AC power connected. (Volume 1,
WP 0040)

*** The following is applicable to the following UOC(s): TSP. ***

TROUBLESHOOTING PROCEDURE

120 VAC OUTLET(S) J505 AND/OR J506 DO NOT OPERATE

STEP 1

Is circuit breaker CB103 tripped?

NOTE

When either door or any blackout shield is open, van will not have AC power unless BLACKOUT OVERRIDE switches are activated.

1. Open door on 120/208 VAC POWER DISTRIBUTION PANEL.

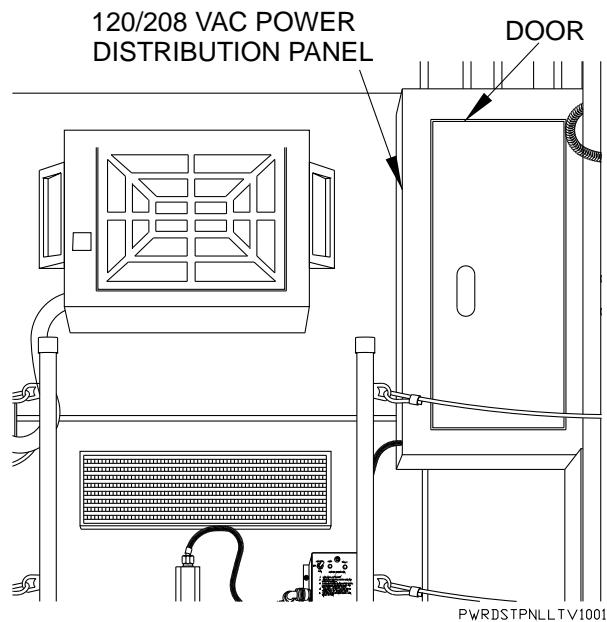


Figure 1. Circuit Breaker CB103.

2. Position master power switch to off. (Volume 1, WP 0004)
3. If circuit breaker CB103 is tripped, position circuit breaker CB103 to ON.

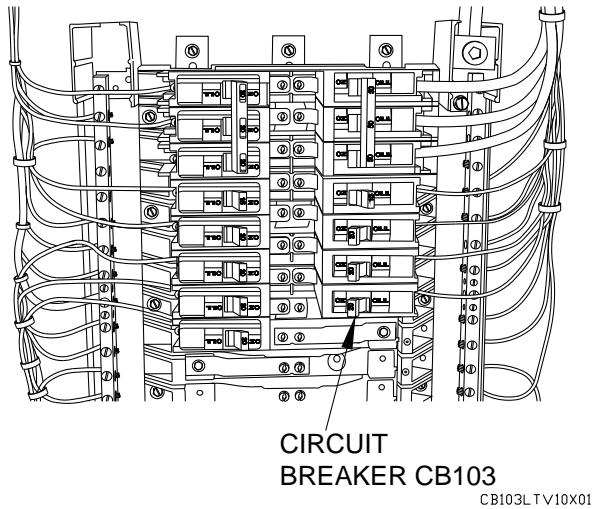


Figure 2. Circuit Breaker CB103.

4. Position master power switch to on. (Volume 1, WP 0004)
5. Check circuit breaker CB103 to see if it is tripped again.
6. Position master power switch to off. (Volume 1, WP 0004)
7. Close door on 120 VAC POWER DISTRIBUTION PANEL.

CONDITION/INDICATION

Is circuit breaker CB103 tripped?

DECISION

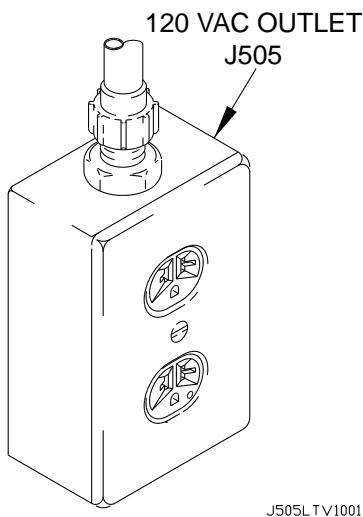
BREAKER TRIPPED - Notify Field Maintenance.

BREAKER OK - Step 2 - Do either 120 vac outlets J505 and/or J506 operate?

STEP 2

Do either 120 vac outlets J505 and/or J506 operate?

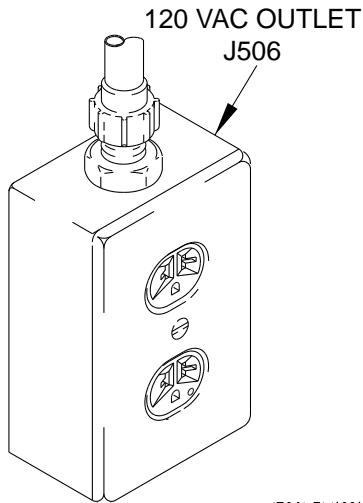
1. Connect any 120 vac appliance to 120 vac outlet J505.
2. Check for 120 vac appliance operation.
3. Disconnect 120 vac appliance from 120 vac outlet J505.



J505LT V1001

Figure 3. 120 VAC Outlets J505 and/or J506.

4. Connect any 120 vac appliance to 120 vac outlet J506.
5. Connect any 120 vac appliance to 120 vac outlet J506.



J506LT V1001

Figure 4. 120 VAC Outlets J505 and/or J506.

6. Check for 120 vac appliance operation.
7. Disconnect 120 vac application from 120 vac outlet J506.

CONDITION/INDICATION

Do either 120 vac outlets J505 and/or J506 operate?

DECISION

J505 Faulty - Notify Field Maintenance.

J506 Faulty - Notify Field Maintenance

J505 and J506 Faulty - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
120 VAC OUTLET(S) J507 AND/OR J508 DO NOT OPERATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

AC power connected. (Volume 1,
WP 0040)

*** The following is applicable to the following UOC(s): TSP. ***

TROUBLESHOOTING PROCEDURE

120 VAC OUTLET(S) J507 AND/OR J508 DO NOT OPERATE

STEP 1

Is circuit breaker CB101 tripped?

NOTE

When either door or any blackout shield is open, van will not have AC power unless BLACKOUT OVERRIDE switches are activated.

1. Open door on 120/208 VAC POWER DISTRIBUTION PANEL.

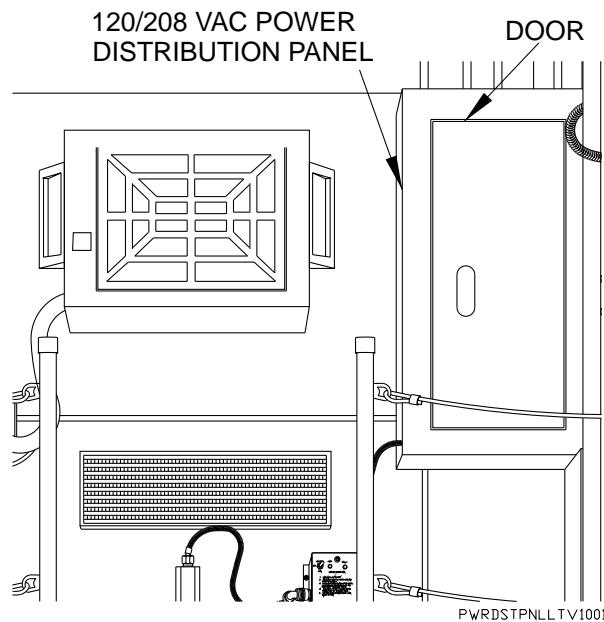


Figure 1. Circuit Breaker CB101.

2. Position master power switch to off. (Volume 1, WP 0004)
3. If circuit breaker CB101 is tripped, position circuit breaker CB101 to ON.

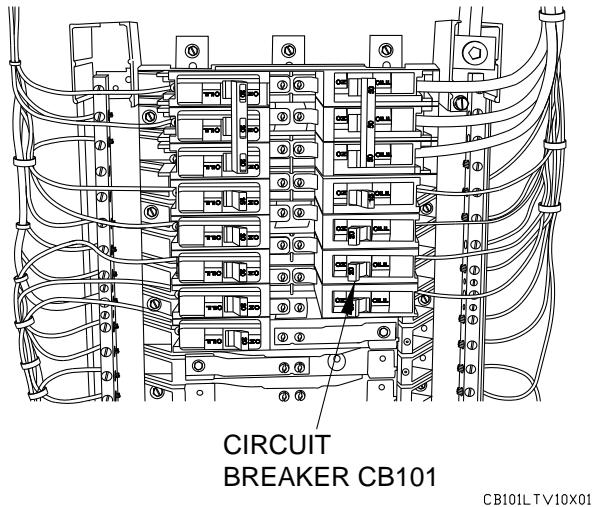


Figure 2. Circuit Breaker CB101.

4. Position master power switch to on. (Volume 1, WP 0004)
5. Check circuit breaker CB101 to see if it is tripped again.
6. Position master power switch to off. (Volume 1, WP 0004)
7. Close door on 120 VAC POWER DISTRIBUTION PANEL.

CONDITION/INDICATION

Is circuit breaker CB101 tripped?

DECISION

BREAKER TRIPPED - Notify Field Maintenance.

BREAKER OK - Step 2 - Do either 120 vac outlets J507 and/or J508 operate?

STEP 2

Do either 120 vac outlets J507 and/or J508 operate?

1. Connect any 120 vac appliance to 120 vac outlet J507.

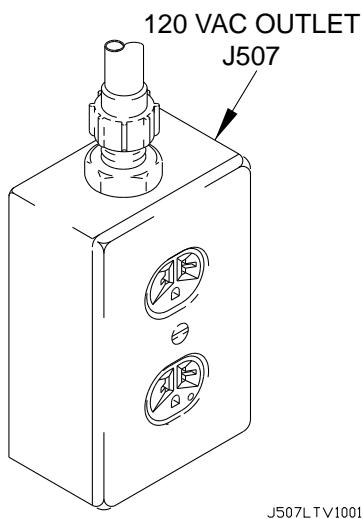


Figure 3. 120 VAC Outlets J507 and/or J508.

2. Check for 120 vac appliance operation.
3. Disconnect 120 vac appliance from 120 vac outlet J507.
4. Connect any 120 vac appliance to 120 vac outlet J508.
5. Connect any 120 vac appliance to 120 vac outlet J508.

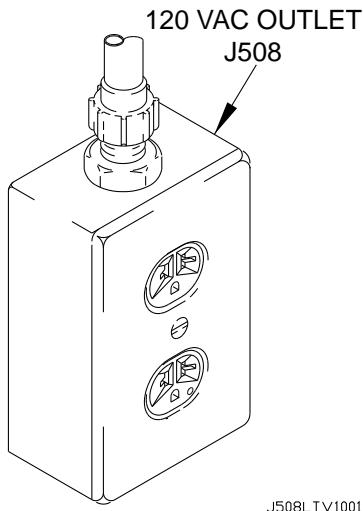


Figure 4. 120 VAC Outlets J507 and/or J508.

6. Check for 120 vac appliance operation.

7. Disconnect 120 vac application from 120 vac outlet J508.

CONDITION/INDICATION

Do either 120 vac outlets J507 and/or J508 operate?

DECISION

J507 Faulty - Notify Field Maintenance.

J508 Faulty - Notify Field Maintenance.

J507 and J508 Faulty - Notify Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE**120 VAC OUTLET(S) J509 AND/OR J510 DO NOT OPERATE IN BLACKOUT MODE****INITIAL SETUP:****Equipment Condition**

Engine shut down. (Volume 1,
WP 0019)

AC power connected. (Volume 1,
WP 0040)

*** The following is applicable to the following UOC(s): TSP. ***

TROUBLESHOOTING PROCEDURE**120 VAC OUTLET(S) J509 AND/OR J510 DO NOT OPERATE IN BLACKOUT MODE****STEP 1****Do interior van body blackout lights illuminate?**

1. Turn on blackout lights. (Volume 1, WP 0042)
2. Note if any blackout lights fail to illuminate.
3. Turn off blackout lights. (Volume 1, WP 0042)

CONDITION/INDICATION

Do interior van body blackout lights illuminate?

DECISION

LIGHTS FAIL - Perform Electrical System troubleshooting (Blackout Lights Do Not Illuminate). (WP 0227)

LIGHTS ILLUMINATE - Step 2 - Do interior van body emergency lights illuminate?

STEP 2**Do interior van body emergency lights illuminate?**

1. Check to see if emergency lights illuminate. (Volume 1, WP 0042)

CONDITION/INDICATION

Do interior van body emergency lights illuminate?

DECISION

LIGHTS FAIL - Notify Field Maintenance.

LIGHTS ILLUMINATE - Step 3 - Is circuit breaker CB99 tripped?

STEP 3

Is circuit breaker CB99 tripped?**NOTE**

When either door or any blackout shield is open, van will not have AC power unless BLACKOUT OVERRIDE switches are activated.

1. Open door on 120/208 VAC POWER DISTRIBUTION PANEL.

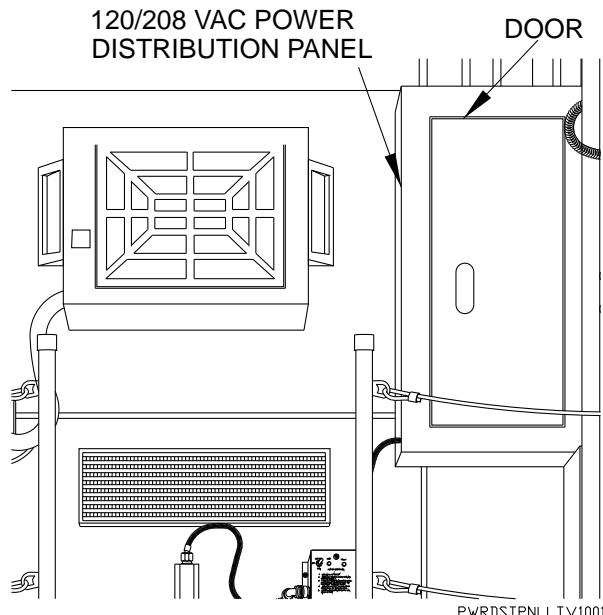


Figure 1. Circuit Breaker CB99.

2. Position master power switch to off. (Volume 1, WP 0004)
3. If circuit breaker CB99 is tripped, position circuit breaker CB99 to ON.

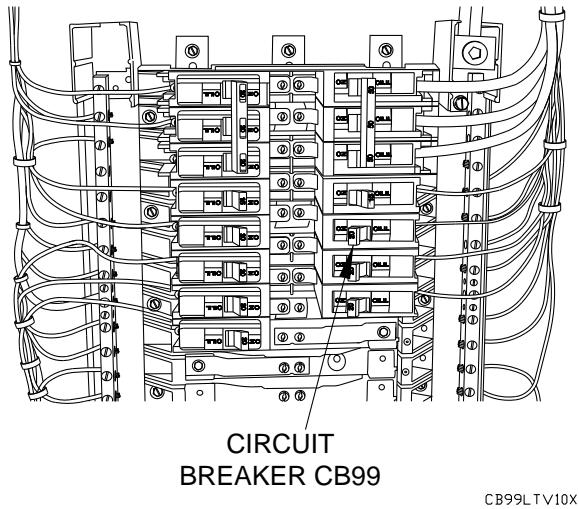


Figure 2. Circuit Breaker CB99.

4. Position master power switch to on. (Volume 1, WP 0004)
5. Check circuit breaker CB99 to see if it is tripped again.
6. Position master power switch to off. (Volume 1, WP 0004)
7. Close door on 120 VAC POWER DISTRIBUTION PANEL.

CONDITION/INDICATION

Is circuit breaker CB99 tripped?

DECISION

BREAKER TRIPPED - Notify Field Maintenance.

BREAKER OK - Step 4 - Do either 120 vac outlets J509 and/or J510 operate?

STEP 4

Do either 120 vac outlets J509 and/or J510 operate?

1. Connect any 120 vac appliance to 120 vac outlet J509.

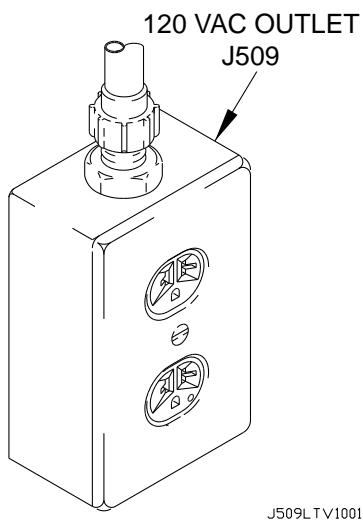


Figure 3. 120 VAC Outlets J509 and/or J510.

2. Check for 120 vac appliance operation.
3. Disconnect 120 vac appliance from 120 vac outlet J509.
4. Connect any 120 vac appliance to 120 vac outlet J510.
5. Connect any 120 vac appliance to 120 vac outlet J510.
6. Check for 120 vac appliance operation.
7. Disconnect 120 vac application from 120 vac outlet J510.

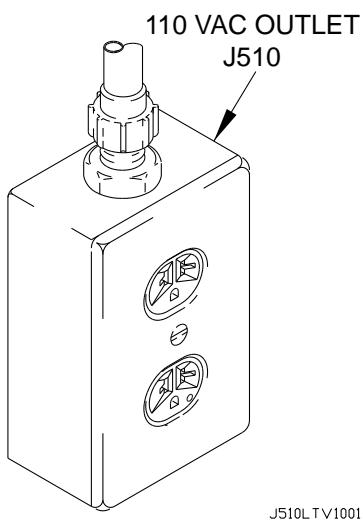


Figure 4. 120 VAC Outlets J509 and/or J510.

CONDITION/INDICATION

Do either 120 vac outlets J509 and/or J510 operate?

DECISION

J509 Faulty - Notify Field Maintenance.

J510 Faulty - Notify Field Maintenance

J509 and J510 Faulty - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
120 VAC POWER DOES NOT OPERATE**

INITIAL SETUP:

Equipment Condition

Engine shut down (Volume 1,
WP 0019)
Van walls expanded. (Volume 1,
WP 0043)

Equipment Condition (cont.)

Ladder and platform mounted.
(Volume 1, WP 0038)
AC power Disconnected.

*** The following is applicable to the following UOC(s): TSP. ***

TROUBLESHOOTING PROCEDURE

120 VAC POWER DOES NOT OPERATE

STEP 1

Is circuit breaker CB93 tripped?

1. Open door on 120/208 VAC POWER DISTRIBUTION PANEL.

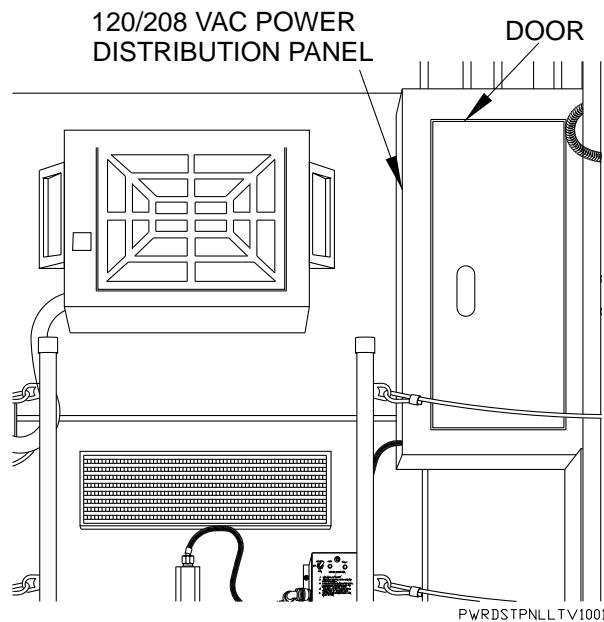
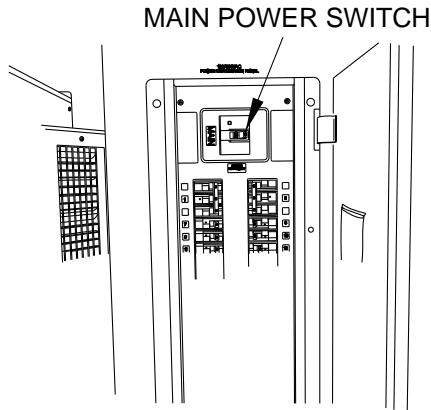


Figure 1. Circuit Breaker CB93.

2. Position MAIN power switch to OFF.
3. Position MAIN power switch to ON.



MAINPWRLLTV10X02

Figure 2. Circuit Breaker CB93.

4. Connect AC power.

5. Check circuit breaker CB93 to see if it is tripped again.
6. Disconnect AC power.
7. Close door on 120/208 VAC POWER DISTRIBUTION PANEL.

CONDITION/INDICATION

Is circuit breaker CB93 tripped?

DECISION

BREAKER TRIPPED - Notify Field Maintenance

BREAKER OK - Step 2 - Does 120 vac power operate?

STEP 2**Does 120 vac power operate?**

1. Connect AC power.
2. Contact a known good 120 vac appliance to any 120 vac outlet.
3. Attempt to operate 120 vac appliance.
4. Disconnect 120 vac appliance from 120 vac outlet.
5. Disconnect AC power.

CONDITION/INDICATION

Does 120 vac power operate?

DECISION

POWER ABSENT - Notify Field Maintenance

POWER PRESENT - Fault Corrected

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
120 VAC OUTLET J515 DOES NOT OPERATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

AC power connected. (Volume 1,
WP 0040)

*** The following is applicable to the following UOC(s): TSP. ***

TROUBLESHOOTING PROCEDURE

120 VAC OUTLET J515 DOES NOT OPERATE

STEP 1

Is circuit breaker CB102 tripped?

NOTE

When either door or any blackout shield is open, van will not have AC power unless BLACKOUT OVERRIDE switches are activated.

1. Open door on 120/208 VAC POWER DISTRIBUTION PANEL.

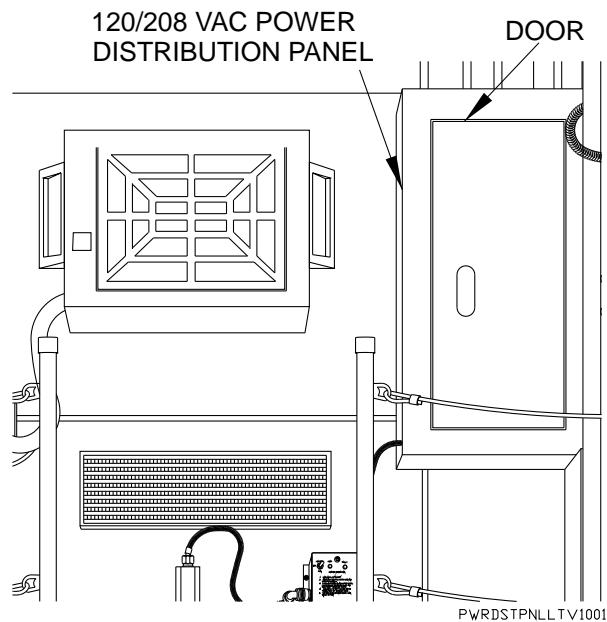


Figure 1. Circuit Breaker CB102.

2. If circuit breaker CB102 is tripped, position circuit breaker CB102 to ON.

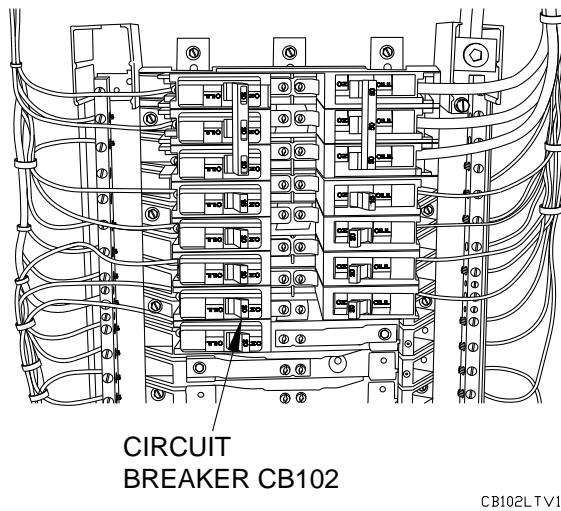
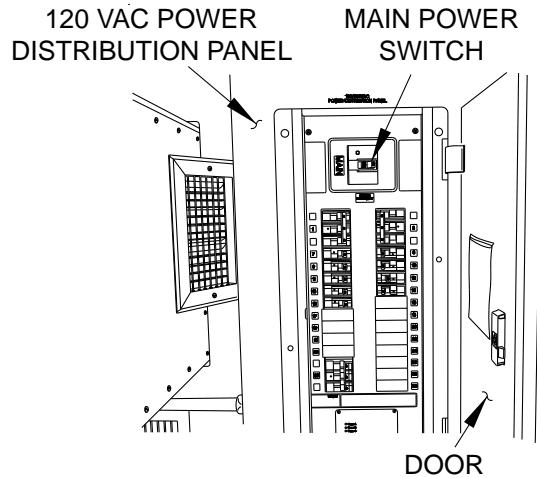


Figure 2. Circuit Breaker CB102.

3. Position MAIN power switch to OFF.
4. Position MAIN power switch to ON.



MAINPWR LT V10X01

Figure 3. Circuit Breaker CB102.

5. Check circuit breaker CB102 to see if it is tripped again.
6. Close door on 120/208 VAC POWER DISTRIBUTION PANEL.

CONDITION/INDICATION

Is circuit breaker CB102 tripped?

DECISION

BREAKER TRIPPED - Notify Field Maintenance

BREAKER OK - Step 2 - Does 120 vac outlet J515 operate?

STEP 2

Does 120 vac outlet J515 operate?

1. Connect any 120 vac appliance to 120 vac outlet J515.

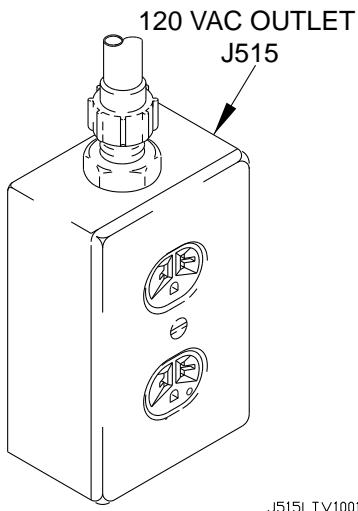


Figure 4. 120 VAC Outlet J515.

2. Check for 120 vac appliance operation.
3. Disconnect 120 vac appliance from 120 vac outlet J515.

CONDITION/INDICATION

Does 120 vac outlet J515 operate?

DECISION

J515 FAULTY - Notify Field Maintenance

J515 OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
120 VAC OUTLET J516 DOES NOT OPERATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

AC power connected. (Volume 1,
WP 0040)

*** The following is applicable to the following UOC(s): TSP. ***

TROUBLESHOOTING PROCEDURE

120 VAC OUTLET J516 DOES NOT OPERATE

STEP 1

Is circuit breaker CB100 tripped?

NOTE

When either door or any blackout shield is open, van will not have AC power unless BLACKOUT OVERRIDE switches are activated.

1. Open door on 120/208 VAC POWER DISTRIBUTION PANEL.

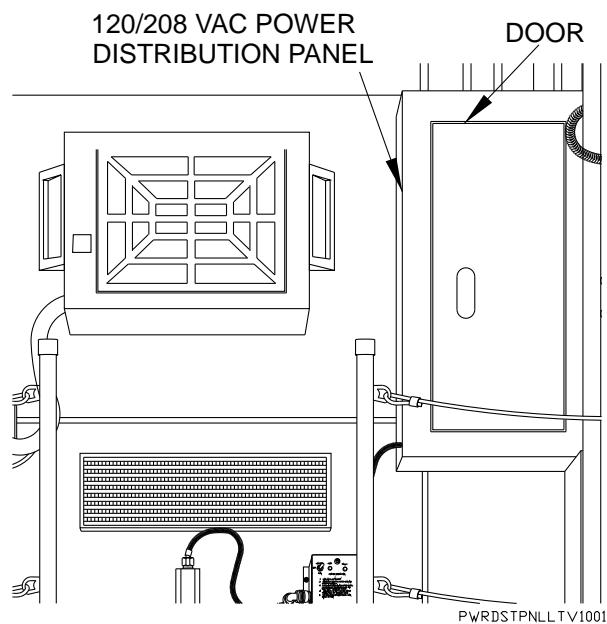


Figure 1. Circuit Breaker CB100.

2. If circuit breaker CB100 is tripped, position circuit breaker CB100 to ON.

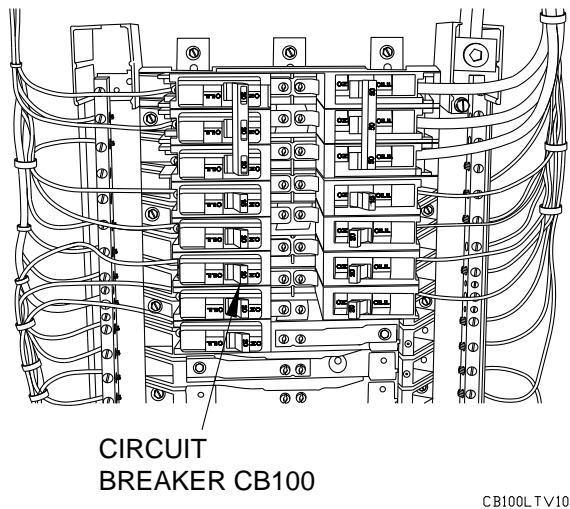
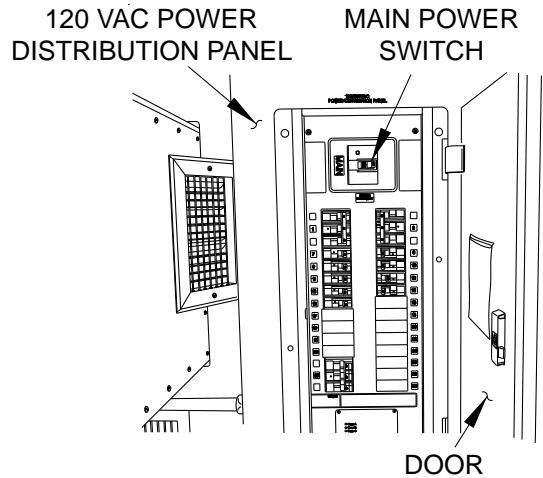


Figure 2. Circuit Breaker CB100.

3. Position MAIN power switch to OFF.
4. Position MAIN power switch to ON.



MAINPWR LT V10X01

Figure 3. Circuit Breaker CB100.

5. Check circuit breaker CB100 to see if it is tripped again.
6. Close door on 120 VAC POWER DISTRIBUTION PANEL.

CONDITION/INDICATION

Is circuit breaker CB100 tripped?

DECISION

BREAKER TRIPPED - Notify Field Maintenance

BREAKER OK - Step 2 - Does 120 vac outlet J516 operate?

STEP 2**Does 120 vac outlet J516 operate?**

1. Connect any 120 vac appliance to 120 vac outlet J516.

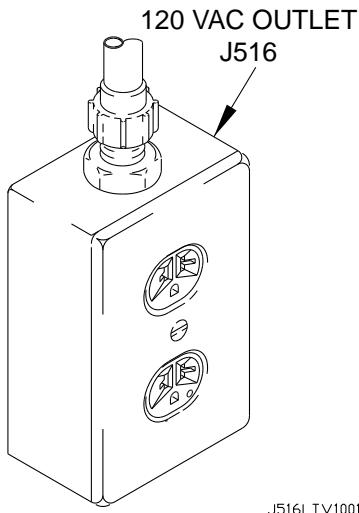


Figure 4. 120 VAC Outlet J516.

2. Check for 120 vac appliance operation.
3. Disconnect 120 vac appliance from 120 vac outlet J516.

CONDITION/INDICATION

Does 120 vac outlet J516 operate?

DECISION

J516 FAULTY - Notify Field Maintenance

J516 OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
CONNECTOR J511 DOES NOT OPERATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)
Van walls expanded. (Volume 1,
WP 0043)

Equipment Condition (cont.)

Ladder and platform mounted.
(Volume 1, WP 0038)
AC power connected. (Volume 1,
WP 0040)

*** The following is applicable to the following UOC(s): TSP. ***

**TROUBLESHOOTING PROCEDURE
CONNECTOR J511 DOES NOT OPERATE**

STEP 1

Is circuit breaker CB105 tripped?

1. Open door on 120/208 VAC Power Distribution Panel.

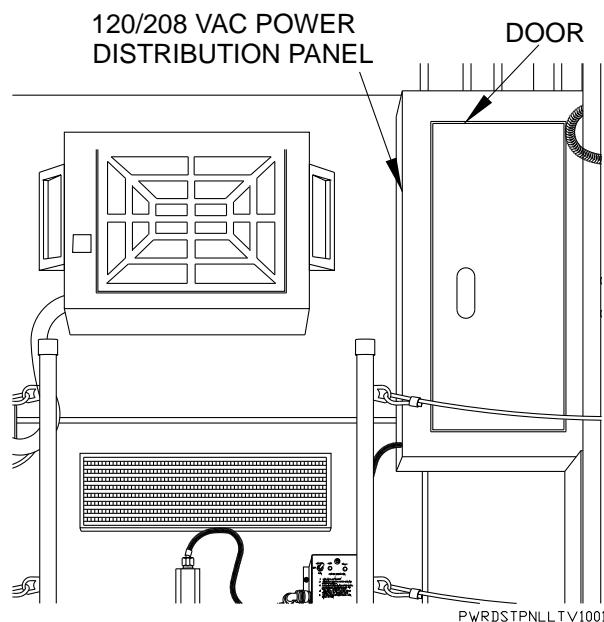
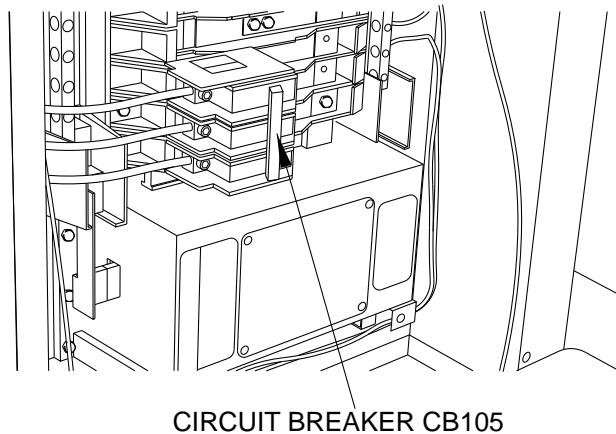


Figure 1. Circuit Breaker CB105.

2. Check to see if circuit breaker CB105 is tripped.
3. If circuit breaker CB105 is tripped, position switch on circuit breaker CB105 to ON to reset.
4. Check to see if circuit breaker CB105 trips again.



CB105LT\TV10X01

Figure 2. Circuit Breaker CB105.

CONDITION/INDICATION

Is circuit breaker CB105 tripped?

DECISION

Air Conditioner OK - Fault corrected.

Circuit Breaker Tripped Again - Notify Field Maintenance.

Air Conditioner Faulty - Notify Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE BLACKOUT LIGHT(S) DOES NOT ILLUMINATE

INITIAL SETUP:

Equipment Condition

Engine shut down (Volume 1,
WP 0019)

Van walls expanded. (Volume 1,
WP 0043)

Ladder and platform mounted.
(Volume 1, WP 0038)

*** The following is applicable to the following UOC(s): TSP. ***

TROUBLESHOOTING PROCEDURE BLACKOUT LIGHT(S) DOES NOT ILLUMINATE

STEP 1

Is circuit breaker CB90 tripped?

1. Check circuit breaker CB90 on relay box to see it is tripped.

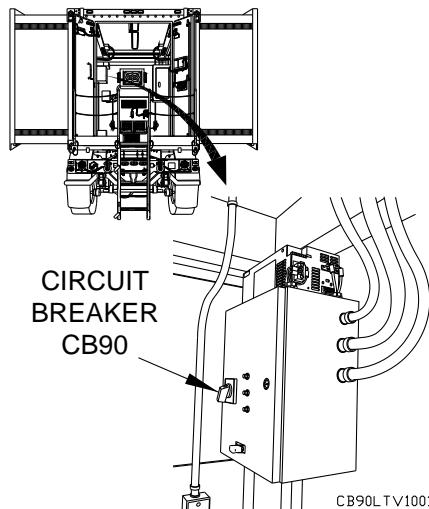


Figure 1. Circuit Breaker CB90.

2. If circuit breaker CB90 is tripped, push in to reset.
3. Check to see if blackout lights illuminate.

CONDITION/INDICATION

Is circuit breaker CB90 tripped?

DECISION

Light(s) Faulty - Step 2 - Does Curbside 24 VDC binding post operate?

Light(s) OK - Fault Corrected.

Circuit Breaker - Notify Field Maintenance

STEP 2**Does Curbside 24 VDC binding post operate?**

1. Connect any 24 VDC appliance to curbside 24 VDC binding post. (Volume 1, WP 0036).

CONDITION/INDICATION

Does Curbside 24 VDC binding post operate?

DECISION

POST FAULTY - Perform Electrical System troubleshooting (24 VDC Binding Post(s) Do Not Operate). (WP 0239)

POST OK - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
EMERGENCY LIGHT(S) DOES NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down (Volume 1,
WP 0019)

Van walls expanded. (Volume 1,
WP 0043)

Ladder and platform mounted.
(Volume 1, WP 0038)

*** The following is applicable to the following UOC(s): TSP. ***

**TROUBLESHOOTING PROCEDURE
EMERGENCY LIGHT(S) DOES NOT ILLUMINATE**

STEP 1

Is circuit breaker CB10 or CB11 tripped?

1. Check circuit breaker CB90 on relay box to see if it is tripped.

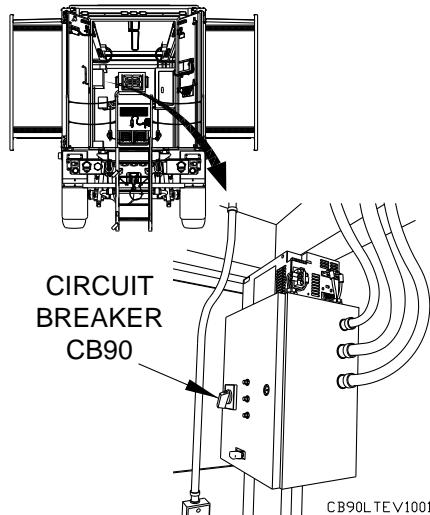


Figure 1. Circuit Breaker CB10 or CB11.

2. If circuit breaker CB90 is tripped, push in to reset.
3. Check to see if emergency lights illuminate (Volume 1, WP 0042).

CONDITION/INDICATION

Is circuit breaker CB10 or CB11 tripped?

DECISION

Light(s) Faulty - Step 2 - Do blackout lights illuminate?

Light(s) OK - Fault corrected.

Circuit Breaker - Notify Field Maintenance

STEP 2**Do blackout lights illuminate?**

1. Check to see if blackout lights illuminate. (Volume 1, WP 0042)

CONDITION/INDICATION

Do blackout lights illuminate?

DECISION

LIGHTS FAULTY - Perform Electrical System troubleshooting (Blackout Light(s) Does Not Illuminate). (WP 0227)

LIGHTS OK - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
FAN DOES NOT OPERATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)
Van walls expanded. (Volume 1,
WP 0043)

Equipment Condition (cont.)

Ladder and platform mounted.
(Volume 1, WP 0038)
AC power connected. (Volume 1,
WP 0040)

*** The following is applicable to the following UOC(s): TSP. ***

**TROUBLESHOOTING PROCEDURE
FAN DOES NOT OPERATE**

STEP 1

Is circuit breaker CB96 tripped?

1. Open door on 120/208 VAC Power Distribution Panel.

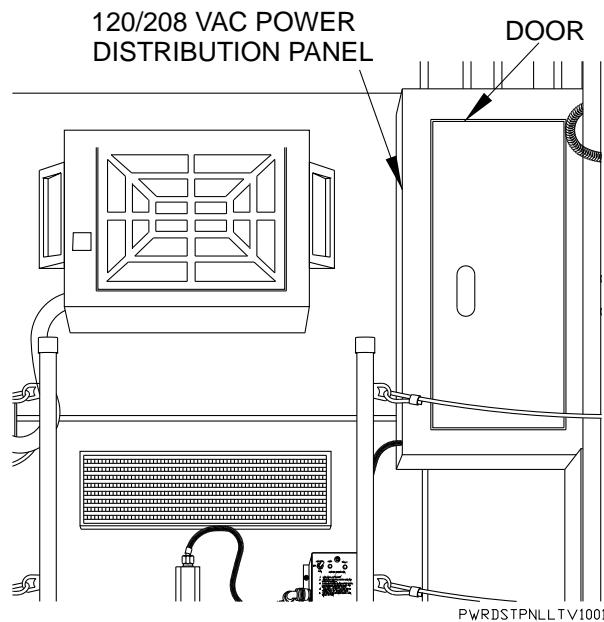
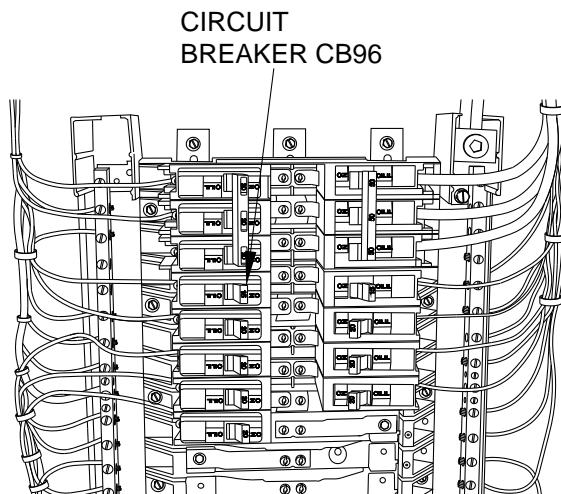


Figure 1. Circuit Breaker CB96.

2. Check to see if circuit breaker CB96 is tripped.
3. If circuit breaker CB96 is tripped, position switch on circuit breaker CB96 to ON to reset.
4. Check to see if circuit breaker CB96 trips again.



CB96LT\TV10X01

Figure 2. Circuit Breaker CB96.

CONDITION/INDICATION

Is circuit breaker CB96 tripped?

DECISION

Fan OK - Fault corrected.

Circuit Breaker Tripped Again - Notify Field Maintenance.

Fan Faulty - Notify Field Maintenance.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
FLUORESCENT LIGHT(S) DS120 AND/OR DS121 DO NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

AC power connected. (Volume 1,
WP 0040)

*** The following is applicable to the following UOC(s): TSP. ***

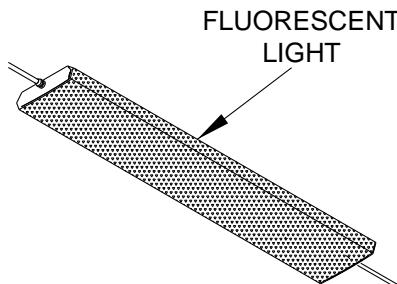
TROUBLESHOOTING PROCEDURE

FLUORESCENT LIGHT(S) DS120 AND/OR DS121 DO NOT ILLUMINATE

STEP 1

Do fluorescent lights DS122, DS123, DS124, DS125, DS126, DS127 and DS156 illuminate?

1. Position master power switch to on. (Volume 1, WP 0004)



FLRLITELTIV001

Figure 1. Fluorescent Lights DS122, DS123, DS124, DS125, DS126, DS127 and DS156.

2. Check to see if fluorescent light(s) DS122, DS123, DS124, DS 125, DS126, DS127 and/or DS156 illuminate (Volume 1, WP 0042).
3. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Do fluorescent lights DS122, DS123, DS124, DS125, DS126, DS127 and DS156 illuminate?

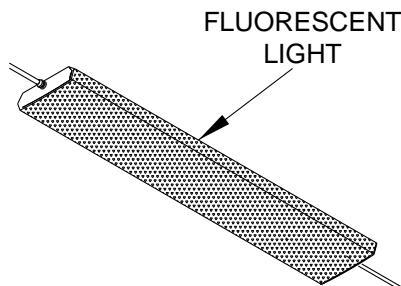
DECISION

LIGHT(S) FAULTY - Perform Electrical System Troubleshooting (All Fluorescent Lights Do Not Illuminate). (WP 0241, Test 1 - Is circuit breaker CB98 tripped?)

LIGHTS OK - Step 2 - Do fluorescent light(s) DS120 and/or DS121 illuminate?

STEP 2**Do fluorescent light(s) DS120 and/or DS121 illuminate?**

1. Position master power switch to on. (Volume 1, WP 0004)



FLRLITELT1001

Figure 2. Fluorescent Light(s) DS120 and/or DS121.

2. Check to see if fluorescent light(s) DS120 and/or DS121 illuminate (Volume 1, WP 0042).
3. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Do fluorescent light(s) DS120 and/or DS121 illuminate?

DECISION

LIGHT(S) FAULTY - Notify Field Maintenance
LIGHTS OK - Fault corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
**FLUORESCENT LIGHT(S) DS122, DS123, DS124, DS125 AND/OR DS156 DO NOT
ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

AC power connected. (Volume 1,
WP 0040)

*** The following is applicable to the following UOC(s): TSP. ***

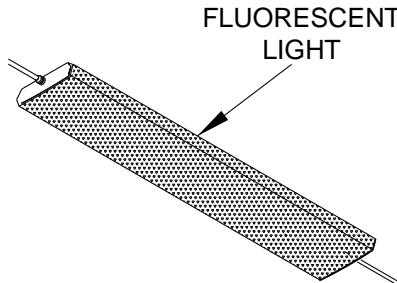
TROUBLESHOOTING PROCEDURE

**FLUORESCENT LIGHT(S) DS122, DS123, DS124, DS125 AND/OR DS156 DO NOT
ILLUMINATE**

STEP 1

Do fluorescent lights DS120, DS121, DS126 and DS127 illuminate?

1. Position master power switch to on. (Volume 1, WP 0004)



FLRLITELT1001

Figure 1. Fluorescent Lights DS120, DS121, DS126 and DS127.

2. Check to see if fluorescent light(s) DS120, DS121, DS 126 and/or DS127 illuminate (Volume 1, WP 0042).
3. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Do fluorescent lights DS120, DS121, DS126 and DS127 illuminate?

DECISION

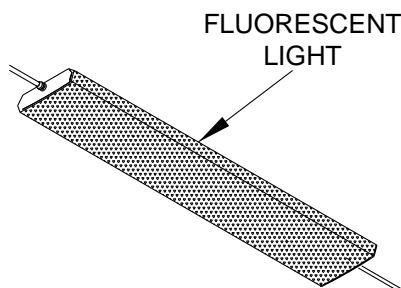
LIGHT(S) FAULTY - Perform Electrical System Troubleshooting (All Fluorescent Lights Do Not Illuminate). (WP 0241, Test 1 - Is circuit breaker CB98 tripped?)

LIGHTS OK - Step 2 - Do fluorescent light(s) DS122, DS123, DS124, DS125, and/or DS156 illuminate?

STEP 2

Do fluorescent light(s) DS122, DS123, DS124, DS125, and/or DS156 illuminate?

1. Position master power switch to on. (Volume 1, WP 0004)



FLRLITELT1001

Figure 2. Fluorescent Light(s) DS122, DS123, DS124, DS125, and/or DS156.

2. Check to see if fluorescent light(s) DS122, DS123, DS124, DS125, and/or DS156 illuminate (Volume 1, WP 0042).
3. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Do fluorescent light(s) DS122, DS123, DS124, DS125, and/or DS156 illuminate?

DECISION

LIGHT(S) FAULTY - Notify Field Maintenance
LIGHTS OK - Fault corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
FLUORESCENT LIGHT(S) DS126, AND/OR DS127 DO NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

AC power connected. (Volume 1,
WP 0040)

*** The following is applicable to the following UOC(s): TSP. ***

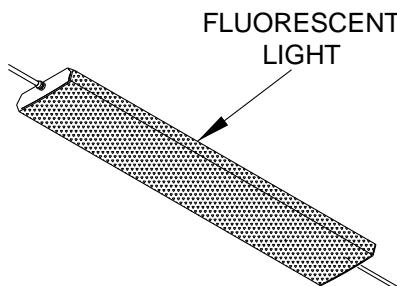
TROUBLESHOOTING PROCEDURE

FLUORESCENT LIGHT(S) DS126, AND/OR DS127 DO NOT ILLUMINATE

STEP 1

Do fluorescent lights DS120, DS121, DS122, DS123, DS124, DS125 and DS156 illuminate?

1. Position master power switch to on. (Volume 1, WP 0004)



FLRLITELT1001

Figure 1. Fluorescent Lights DS120, DS121, DS122, DS123, DS124, DS125 and DS156.

2. Check to see if fluorescent light(s) DS120, DS121, DS122, DS123, DS124, DS 125 and/or DS156 illuminate (Volume 1, WP 0042).
3. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Do fluorescent lights DS120, DS121, DS122, DS123, DS124, DS125 and DS156 illuminate?

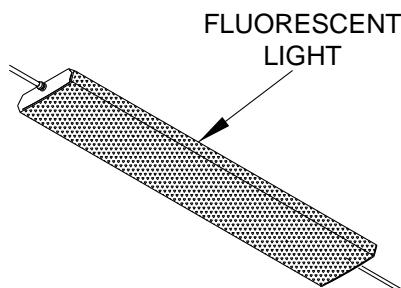
DECISION

LIGHT(S) FAULTY - Perform Electrical System Troubleshooting (All Fluorescent Lights Do Not Illuminate). (WP 0241, Test 1 - Is circuit breaker CB98 tripped?)

LIGHTS OK - Step 2 - Do fluorescent light(s) DS126 and/or DS127 illuminate?

STEP 2**Do fluorescent light(s) DS126 and/or DS127 illuminate?**

1. Position master power switch to on. (Volume 1, WP 0004)



FLRLITELT1001

Figure 2. Fluorescent Light(s) DS126 and/or DS127.

2. Check to see if fluorescent light(s) DS126 and/or DS127 illuminate (Volume 1, WP 0042).
3. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Do fluorescent light(s) DS126 and/or DS127 illuminate?

DECISION

LIGHT(S) FAULTY - Notify Field Maintenance
LIGHTS OK - Fault corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
HEATER DOES NOT OPERATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)
Van walls expanded. (Volume 1,
WP 0043)

Equipment Condition (cont.)

Ladder and platform mounted.
(Volume 1, WP 0038)
AC power connected. (Volume 1,
WP 0040)

*** The following is applicable to the following UOC(s): TSP. ***

TROUBLESHOOTING PROCEDURE
HEATER DOES NOT OPERATE

STEP 1

Is circuit breaker CB104 tripped?

1. Open door on 120/208 VAC Power Distribution Panel.

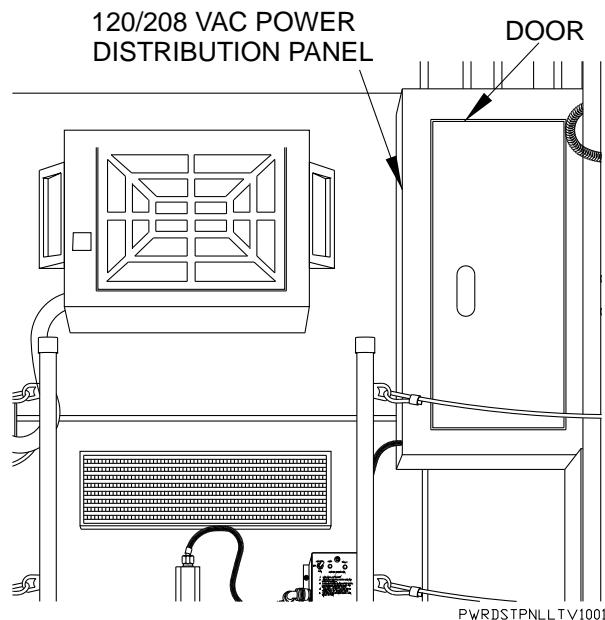


Figure 1. Circuit Breaker CB104.

2. Check to see if circuit breaker CB104 is tripped.
3. If circuit breaker CB104 is tripped, position switch on circuit breaker CB104 to ON to reset.
4. Check to see if circuit breaker CB104 trips again.

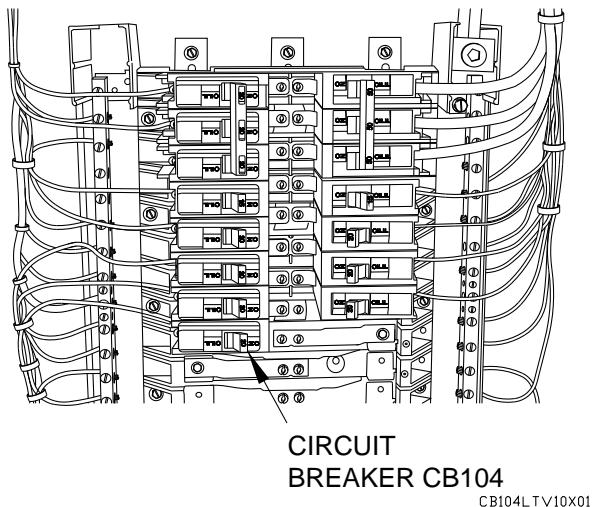


Figure 2. Circuit Breaker CB104.

CONDITION/INDICATION

Is circuit breaker CB104 tripped?

DECISION

Heater OK - Fault corrected.

Circuit Breaker Tripped Again - Notify Field Maintenance.

Heater Faulty - Notify Field Maintenance.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
VAN DOOR INDICATOR BLINKS WITH VAN DOORS CLOSED AND WALLS
STOWED**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

Van walls stowed, (Volume 1,
WP 0043)

Van doors closed. (Volume 1,
WP 0039)

***** The following is applicable to the following UOC(s): TSP. *****

TROUBLESHOOTING PROCEDURE

**VAN DOOR INDICATOR BLINKS WITH VAN DOORS CLOSED AND WALLS
STOWED**

STEP 1

Are van walls stowed and doors closed?

1. Verify van walls are stowed. (Volume 1, WP 0043)
2. Verify all van doors are closed. (Volume 1, WP 0039)
3. Position master power switch to on. (Volume 1, WP 0004)
4. Check to see if VAN DOOR indicator is blinking.
5. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Are van walls stowed and doors closed?

DECISION

No Indicator -

Indicator Blinking - Notify Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE**ALL INTERIOR VAN LIGHTS DO NOT ILLUMINATE IN AC/DC CONVERTER MODE****INITIAL SETUP:****Equipment Condition**

- Engine shut down. (Volume 1,
WP 0019)
- Van walls expanded. (Volume 1,
WP 0043)

***** The following is applicable to the following UOC(s): TSP. *******TROUBLESHOOTING PROCEDURE****ALL INTERIOR VAN LIGHTS DO NOT ILLUMINATE IN AC/DC CONVERTER MODE****STEP 1****Do any interior van lights operate in vehicle mode?**

1. Position 24 VDC SOURCE switch to VEHICLE. (Volume 1, WP 0015)
2. Attempt to operate van lighting (Volume 1, WP 0042).
3. Check to see if any interior van lights operate.
4. Turn off van lights (Volume 1, WP 0042).
5. Position 24 VDC SOURCE switch to AC/DC CONVERTER. (Volume 1, WP 0015)

CONDITION/INDICATION**Do any interior van lights operate in vehicle mode?****DECISION****NO LIGHTS - Perform troubleshooting (All Interior Van Lights Do Not Illuminate).****(WP 0238, Test 1 - Which position is the 24 VDC SOURCE switch in?)****LIGHTS - Step 2 - Is circuit breaker CB94 tripped?****STEP 2****Is circuit breaker CB94 tripped?**

1. Open door on 120/208 VAC Power Distribution Panel.

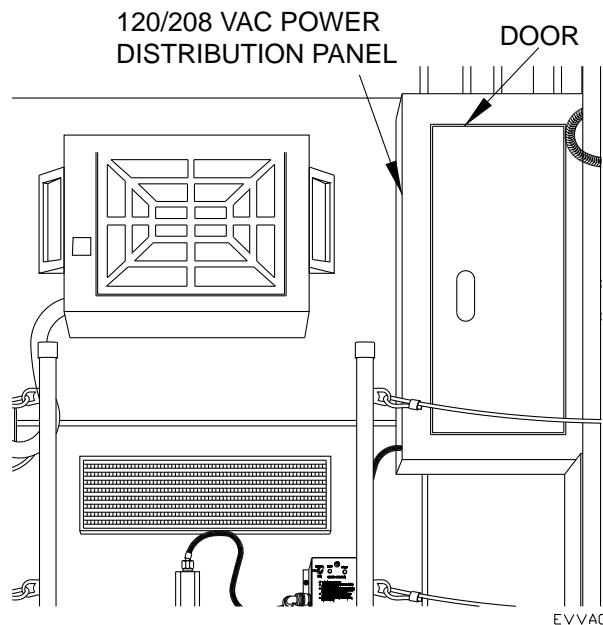


Figure 1. Circuit Breaker CB94.

2. Check to see if circuit breaker CB94 is tripped.
3. If circuit breaker CB94 is tripped, position switch on circuit breaker CB94 to ON to reset.
4. Attempt to operate van lighting (Volume 1, WP 0042).
5. Check to see if circuit breaker CB94 is tripped.

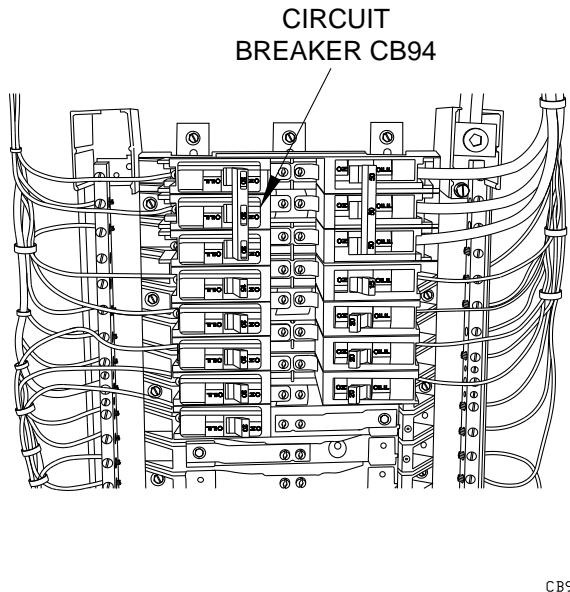


Figure 2. Circuit Breaker CB94.

6. Turn off van lights (Volume 1, WP 0042).

CONDITION/INDICATION

Is circuit breaker CB94 tripped?

DECISION

Van Lights Illuminate - Fault corrected.

Circuit Breaker CB94 Tripped Again - Notify Field Maintenance.

Circuit Breaker CB94 Not Tripped/Van Lights Do Not Illuminate - Step 3 - Does ventilation fan operate?

STEP 3

Does ventilation fan operate?

1. Check to see if ventilation fan is operating.

CONDITION/INDICATION

Does ventilation fan operate?

DECISION

NO FAN - Perform troubleshooting (120 VAC Power Does Not Operate). (WP 0223, Test 1 - Is circuit breaker CB93 tripped?)

FAN - Step 4 - Does primary heater operate?

STEP 4**Does primary heater operate?**

1. Check to see if primary heater operates. (Volume 1, WP 0045)
2. Turn primary heater switch to off. (Volume 1, WP 0045)

CONDITION/INDICATION

Does primary heater operate?

DECISION

NO HEATER - Perform troubleshooting (120 VAC Power Does Not Operate). (WP 0223,

Test 1 - Is circuit breaker CB93 tripped?)

HEATER - Notify Field Maintenance.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
VAN DOOR INDICATOR ILLUMINATES BUT DOES NOT BLINK**

INITIAL SETUP:

Not Applicable

***** The following is applicable to the following UOC(s): TSP. *****

**TROUBLESHOOTING PROCEDURE
VAN DOOR INDICATOR ILLUMINATES BUT DOES NOT BLINK**

STEP 1

CONDITION/INDICATION

DECISION

Continue - Notify Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
ALL INTERIOR VAN LIGHTS DO NOT ILLUMINATE IN VEHICLE MODE

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

AC Power connected to van body (if
available). (Volume 1, WP 0040)

*** The following is applicable to the following UOC(s): TSP. ***

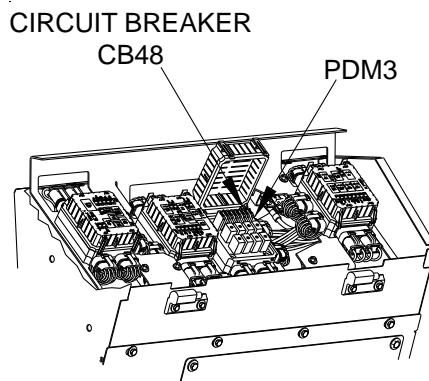
TROUBLESHOOTING PROCEDURE

ALL INTERIOR VAN LIGHTS DO NOT ILLUMINATE IN VEHICLE MODE

STEP 1

Is circuit breaker CB48 tripped?

1. Position battery disconnect switch to disconnect (up). (Volume 1, WP 0004)
2. Remove Power Distribution Panel (PDP) cover. (Volume 3, WP 0351)
3. Open Power Distribution Module (PDM) 3.
4. Check to see if circuit breaker CB48 is tripped.
5. If circuit breaker CB48 is tripped, push button to reset.
6. Position battery disconnect switch to connect (down). (Volume 1, WP 0004)
7. Position 24 VDC SOURCE switch to VEHICLE.
8. Attempt to operate van lighting (Volume 1, WP 0042).
9. Check to see if circuit breaker CB48 is tripped.



CB48LT\10X01

Figure 1. Circuit Breaker CB48.

10. Turn off van lights (Volume 1, WP 0042).

CONDITION/INDICATION

Is circuit breaker CB48 tripped?

DECISION

Van Lights Illuminate - Fault corrected.

Circuit Breaker CB48 Tripped Again - Notify Field Maintenance.

Circuit Breaker CB48 Not Tripped/Van Lights Do Not Illuminate - Step 2 - Is an AC power source available for the vehicle?

STEP 2

Is an AC power source available for the vehicle?

1. Position battery disconnect switch to disconnect (up). (Volume 1, WP 0004)
2. Install PDP cover. (Volume 3, WP 0351)
3. Position battery disconnect switch to connect (down). (Volume 1, WP 0004)

CONDITION/INDICATION

Is an AC power source available for the vehicle?

DECISION

NO POWER - Notify Field Maintenance

AC POWER - Step 3 - Do any interior van lights operate in AC/DC CONVERTER mode?

STEP 3

Do any interior van lights operate in AC/DC CONVERTER mode?

1. Connect AC Power to van body. (Volume 1, WP 0040)
2. Position 24 VDC SOURCE switch to AC/DC CONVERTER mode.
3. Check to see if any interior van lights operate. (Volume 1, WP 0042)
4. Disconnect AC Power to van body. (Volume 1, WP 0040)
5. Position 24 VDC SOURCE switch to VEHICLE.

CONDITION/INDICATION

Do any interior van lights operate in AC/DC CONVERTER mode?

DECISION

NO LIGHTS - Perform Operator Level troubleshooting (All Interior Van Lights Do Not Illuminate.) (WP 0238, Test 2 - Is 24 VDC LIGHTING circuit breaker CB90 tripped?)
LIGHTS - Notify Field Maintenance.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
ALL INTERIOR VAN LIGHTS DO NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

Van walls expanded (Volume 1,
WP 0043)

*** The following is applicable to the following UOC(s): TSP. ***

TROUBLESHOOTING PROCEDURE

ALL INTERIOR VAN LIGHTS DO NOT ILLUMINATE

STEP 1

Which position is the 24 VDC SOURCE switch in?

CONDITION/INDICATION

Which position is the 24 VDC SOURCE switch in?

DECISION

AC/DC - Perform Operator Level troubleshooting (All Interior Van Lights Do Not Illuminate In AC/DC CONVERTER Mode). (WP 0235, Test 1 - Do any interior van lights operate in vehicle mode?)

VEHICLE - Perform Operator Level troubleshooting (All Interior Van Lights Do Not Illuminate In VEHICLE Mode). (WP 0237, Test 1 - Is circuit breaker CB48 tripped?)

STEP 2

Is 24 VDC LIGHTING circuit breaker CB90 tripped?

1. Position battery disconnect switch to disconnect (up). (Volume 1, WP 0004)
2. Check to see if 24 VDC LIGHTING circuit breaker CB90 is tripped.
3. If 24 VDC LIGHTING circuit breaker CB90 is tripped, push in to reset.
4. Position battery disconnect switch to connect (down). (Volume 1, WP 0004)
5. Attempt to operate van lighting (Volume 1, WP 0042).
6. Check to see if 24 VDC LIGHTING circuit breaker CB90 is tripped.

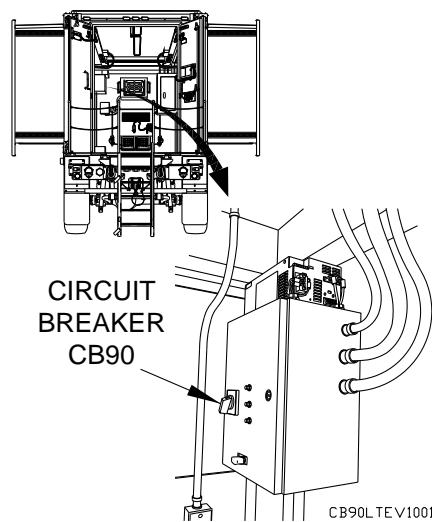


Figure 1. 24 VDC LIGHTING Circuit Breaker CB90.

7. Turn off van lights (Volume 1, WP 0042).

CONDITION/INDICATION

Is 24 VDC LIGHTING circuit breaker CB90 tripped?

DECISION

Van Lights Illuminate - Fault corrected.

Circuit Breaker CB90 Tripped Again - Notify Field Maintenance.

Circuit Breaker CB90 Not Tripped/Van Lights Do Not Illuminate - Notify Field Maintenance.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
24 VDC BINDING POST(S) DOES NOT OPERATE**

INITIAL SETUP:

Equipment Condition

- Engine shut down (Volume 1,
WP 0019)
 - Van walls expanded. (Volume 1,
WP 0043)
 - Ladder and platform mounted.
(Volume 1, WP 0038)
-

***** The following is applicable to the following UOC(s): TSP. *****

TROUBLESHOOTING PROCEDURE

24 VDC BINDING POST(S) DOES NOT OPERATE

STEP 1

Do interior van lights operate in VEHICLE mode?

1. Check to see if interior van lights illuminate in VEHICLE mode. (Volume 1,
WP 0042)

CONDITION/INDICATION

Do interior van lights operate in VEHICLE mode?

DECISION

LIGHTS FAULTY - Perform Electrical System troubleshooting (All Interior Van Lights Do Not Operate in Vehicle Mode) (WP 0237)

LIGHTS OK - Step 2 - Do interior van lights operate in AC/DC CONVERTER mode?

STEP 2

Do interior van lights operate in AC/DC CONVERTER mode?

1. Check to see if interior van lights illuminate in VEHICLE mode. (Volume 1,
WP 0042)

CONDITION/INDICATION

Do interior van lights operate in AC/DC CONVERTER mode?

DECISION

LIGHTS FAULTY - Step 3 - Is circuit breaker CB94 tripped?

LIGHTS OK - Notify Field Maintenance

STEP 3**Is circuit breaker CB94 tripped?**

1. Open door to 120/208 VAC POWER DISTRIBUTION PANEL.

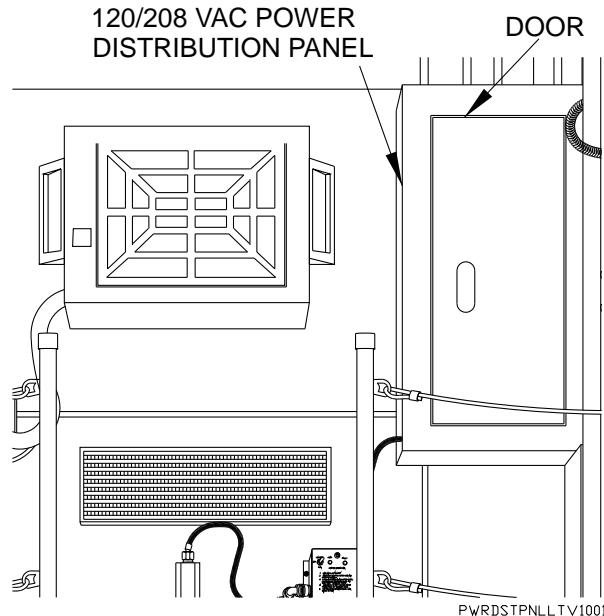
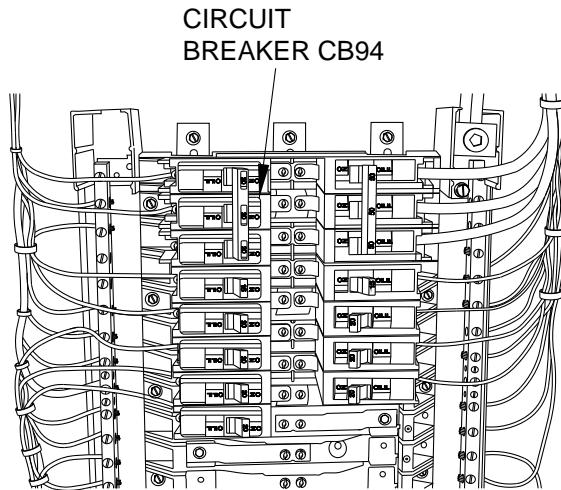


Figure 1. Circuit Breaker CB94.

2. Check circuit breaker CB94 in circuit breaker box to see it is tripped.



CB94LT V10X01

Figure 2. Circuit Breaker CB94.

3. If circuit breaker CB94 is tripped, reset.
4. Check to see if binding post(s) operate. (Volume 1, WP 0036)

CONDITION/INDICATION

Is circuit breaker CB94 tripped?

DECISION

Binding Post(s) Faulty - Notify Field Maintenance

Binding Post(s) OK - Fault Corrected

Circuit Breaker - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
AIR DRYER HEATER DOES NOT OPERATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

*** The following is applicable to the following UOC(s): TSR TSQ. ***

**TROUBLESHOOTING PROCEDURE
AIR DRYER HEATER DOES NOT OPERATE**

STEP 1

Is circuit breaker CB21 tripped?

1. Remove PDP cover. (Volume 3, WP 0351)

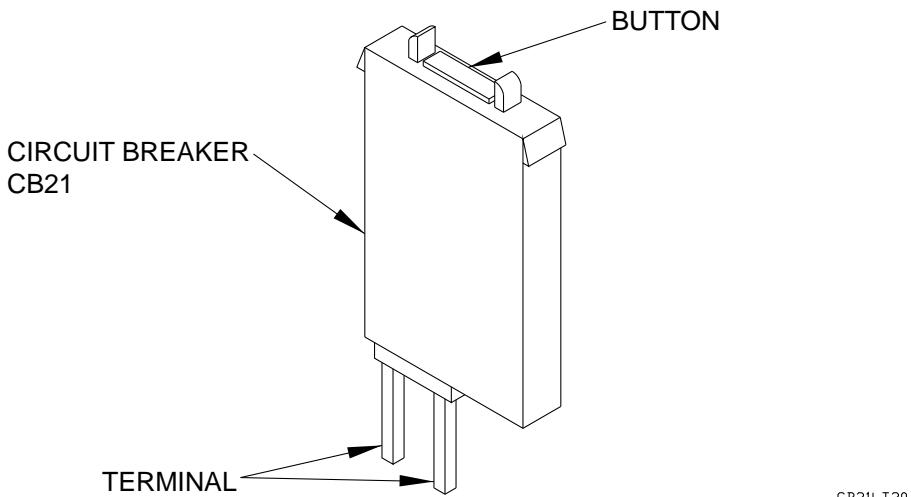


Figure 1. Circuit Breaker CB21.

2. Position master power switch to off. (Volume 1, WP 0004)
3. If circuit breaker CB21 is tripped, push button to reset.
4. Position master power switch to on. (Volume 1, WP 0004)
5. Check circuit breaker CB21 to see if it is tripped again.
6. Position master power switch to off. (Volume 1, WP 0004)

7. Install PDP cover.

CONDITION/INDICATION

Is circuit breaker CB21 tripped?

DECISION

Breaker Tripped - Notify Filed Maintenance.

Breaker OK - Step 2 - Are air tanks pressurized?

STEP 2**Are air tanks pressurized?**

1. Start engine. (Volume 1, WP 0019)
2. Allow engine to idle until 120 psi is registered on FRONT BRAKE AIR and REAR BRAKE AIR pressure gages.

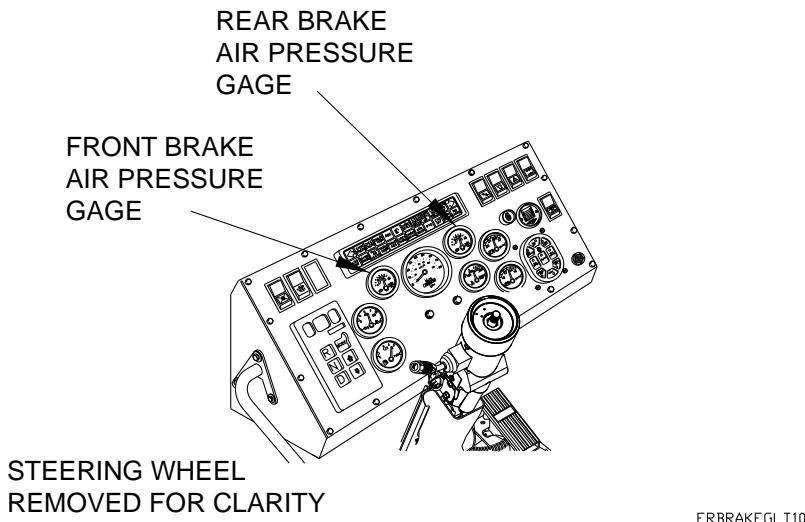


Figure 2. Air Tanks.

3. Shut down engine. (Volume 1, WP 0019)
4. Check FRONT BRAKE AIR and REAR BRAKE AIR pressure gages.

CONDITION/INDICATION

Are air tanks pressurized?

DECISION

COMPRESSOR FAULTY - Perform Air System Troubleshooting (Air System Loses Pressure During Operation/Slow Air Pressure Buildup). (WP 0270, Test 1 - Does air system lose pressure during operation or have slow air pressure buildup?)

COMPRESSOR OK - Step 3 - Are air hoses and fittings free from leaks?

STEP 3**Are air hoses and fittings free from leaks?**

1. Check to see if air hoses and fittings are free from leaks.

CONDITION/INDICATION

Are air hoses and fittings free from leaks?

DECISION

LEAKS FOUND - Notify Field Maintenance

NO LEAKS - Step 4 - Does air dryer heater operate?

STEP 4**Does air dryer heater operate?**

1. Check to see if air dryer heater operates.
2. Start engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Does air dryer heater operate?

DECISION

HEATER FAULTY - Notify Field Maintenance

HEATER OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
ALL FLUORESCENT LIGHTS DO NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)
Van walls expanded. (Volume 1,
WP 0043)

Equipment Condition (cont.)

Ladder and platform mounted.
(Volume 1, WP 0038)
AC power connected. (Volume 1,
WP 0040)

*** The following is applicable to the following UOC(s): TSP. ***

TROUBLESHOOTING PROCEDURE

ALL FLUORESCENT LIGHTS DO NOT ILLUMINATE

STEP 1

Is circuit breaker CB98 tripped?

1. Open door on 120/208 VAC POWER DISTRIBUTION PANEL.

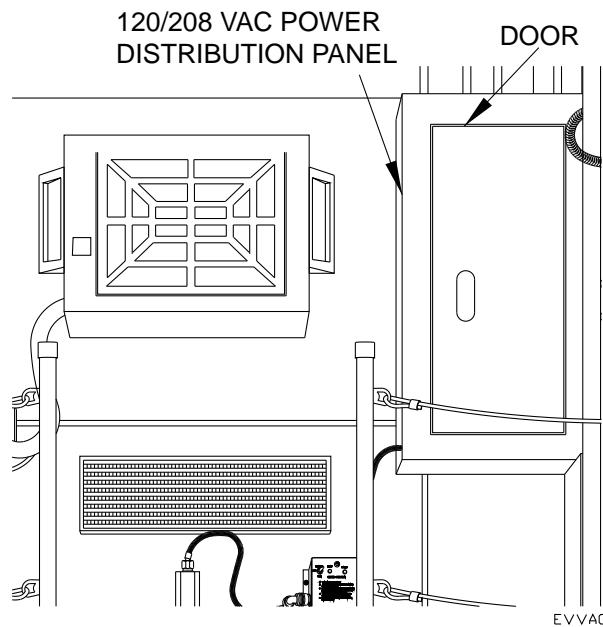


Figure 1. Circuit Breaker CB98.

2. If circuit breaker CB98 is tripped, position circuit breaker CB98 to ON.

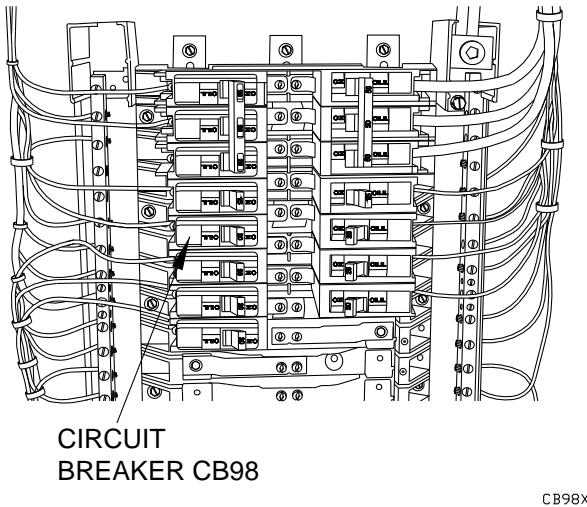


Figure 2. Circuit Breaker CB98.

3. Position MAIN power switch to OFF.

4. Position MAIN power switch to ON.

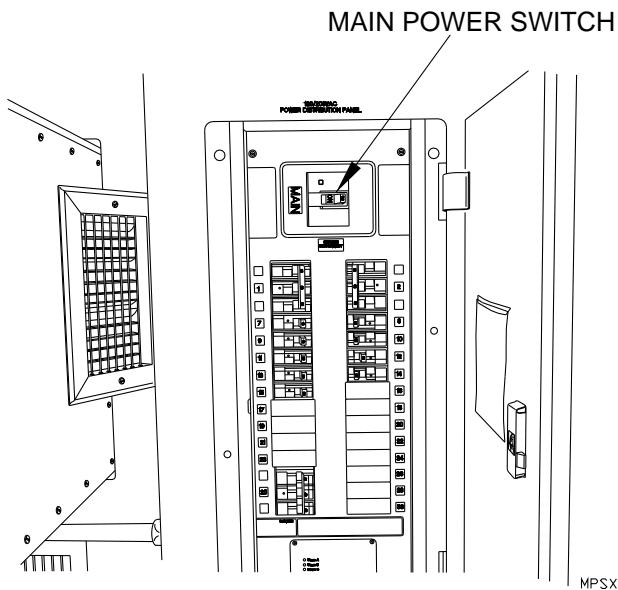


Figure 3. Circuit Breaker CB98.

5. Check circuit breaker CB98 to see if it is tripped again.
6. Close door on 120/208 VAC POWER DISTRIBUTION PANEL.
7. Check to see if fluorescent lights will illuminate. (Volume 1, WP 0042)

CONDITION/INDICATION

Is circuit breaker CB98 tripped?

DECISION

Breaker Tripped - Notify Field Maintenance

Breaker OK - Step 2 - Do blackout lights illuminate?

Lights OK - Fault Corrected.

STEP 2

Do blackout lights illuminate?

1. Check to see if blackout lights illuminate. (Volume 1, WP 0042)

CONDITION/INDICATION

Do blackout lights illuminate?

DECISION

LIGHTS FAULTY - Perform Electrical System troubleshooting (Blackout Light(s) Do Not Illuminate). (WP 0227)

LIGHTS OK - Step 3 - Do emergency lights illuminate?

STEP 3**Do emergency lights illuminate?**

1. Check to see if emergency lights illuminate. (Volume 1, WP 0042)

CONDITION/INDICATION

Do emergency lights illuminate?

DECISION

LIGHTS FAULTY - Perform Electrical System troubleshooting (Emergency Light(s) Do Not Illuminate). (WP 0228)

LIGHTS OK - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
ALL VAN BODY CLEARANCE AND MARKER LIGHTS DO NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

***** The following is applicable to the following UOC(s): TSP. *****

TROUBLESHOOTING PROCEDURE

ALL VAN BODY CLEARANCE AND MARKER LIGHTS DO NOT ILLUMINATE

STEP 1

Do cab and/or chassis marker lights illuminate?

1. Main light switch to SER DRIVE. (Volume 1, WP 0004)
2. Note if cab and/or chassis marker lights illuminate.
3. Main light switch to OFF. (Volume 1, WP 0004)

CONDITION/INDICATION

Do cab and/or chassis marker lights illuminate?

DECISION

MARKER LIGHTS FAULTY - Perform Electrical System Troubleshooting (All Front And/Or Rear Marker Lights Do Not Illuminate in Normal Mode). (WP 0144, Test 1 - Do headlights operate?)

MARKER LIGHTS OK - Step 2 - Do van body blackout lights illuminate?

STEP 2

Do van body blackout lights illuminate?

1. Open rear van door. (Volume 1, WP 0039)
2. Turn on blackout lights. (Volume 1, WP 0042)
3. Note if blackout lights illuminate.
4. Turn off blackout lights. (Volume 1, WP 0042)
5. Close rear van door. (Volume 1, WP 0039)

CONDITION/INDICATION

Do van body blackout lights illuminate?

DECISION

Blackout Lights Faulty - Perform Electrical System troubleshooting (Blackout Lights Do Not illuminate). (WP 0227)

Blackout Lights OK - Notify Field Maintenance.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
AUDIBLE ALARM DOES NOT OPERATE WITH VAN DOOR OPEN**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

Air tanks filled to 75-120 psi. (Volume
1, WP 0019)

*** The following is applicable to the following UOC(s): TSF TSE TSP. ***

TROUBLESHOOTING PROCEDURE

AUDIBLE ALARM DOES NOT OPERATE WITH VAN DOOR OPEN

STEP 1

Does audible alarm, radio, starter pushbutton, and electrical gages all fail to operate?

1. Check to see if audible alarm, radio, starter pushbutton, and electrical gages all fail to operate. (Volume 1, WP 0019)

CONDITION/INDICATION

Does audible alarm, radio, starter pushbutton, and electrical gages all fail to operate?

DECISION

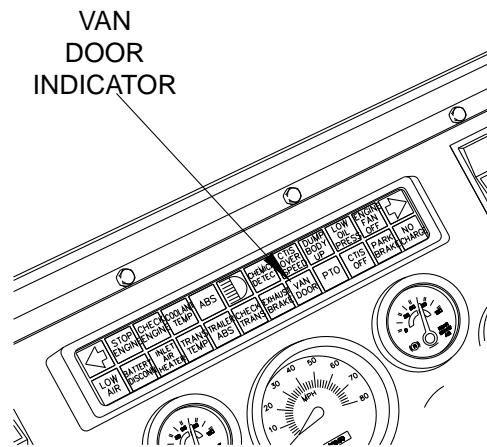
CB77 FAULTY - Notify Field Maintenance

CB77 OK - Step 2 - Does VAN DOOR indicator illuminate?

STEP 2

Does VAN DOOR indicator illuminate?

1. Position master power switch to on. (Volume 1, WP 0004)



VANDRINDL TV10X01

Figure 1. VAN DOOR Indicator.

2. Open van door. (Volume 1, WP 0039)
3. Check to see if VAN DOOR indicator illuminates. (Volume 1, WP 0004)
4. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does VAN DOOR indicator illuminate?

DECISION

Indicator OK - Notify Field Maintenance.

Indicator Faulty - Perform Operator maintenance level troubleshooting (Van Door Indicator Does Not Illuminate).

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
FIELD TELEPHONE(S) DOES NOT OPERATE**

INITIAL SETUP:

Equipment Condition

Engine shut down (Volume 1,
WP 0019)
Van walls expanded. (Volume 1,
WP 0043)

Equipment Condition (cont.)

Ladder and platform mounted.
(Volume 1, WP 0038)
AC power connected. (Volume 1,
WP 0040)

*** The following is applicable to the following UOC(s): TSP. ***

TROUBLESHOOTING PROCEDURE

FIELD TELEPHONE(S) DOES NOT OPERATE

STEP 1

Which field telephone binding posts do not operate?

1. Install field telephone on roadside field telephone binding posts. (Volume 1, WP 0037)

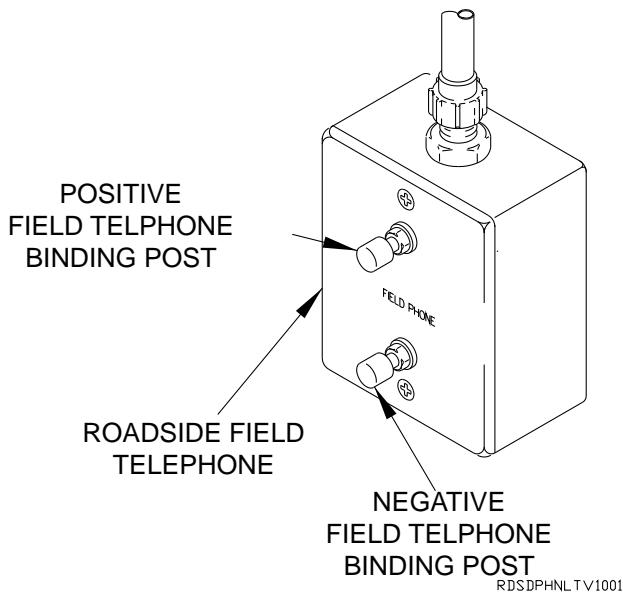


Figure 1. Field Telephone Binding Posts.

2. Attempt to operate field telephone.
3. Remove field telephone from roadside field telephone binding posts.
4. Install field telephone on curbside field telephone binding posts. (Volume 1, WP 0037)

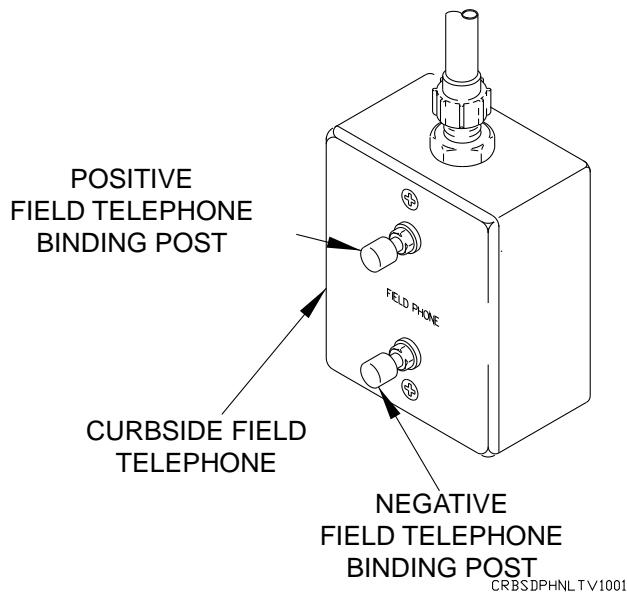


Figure 2. Field Telephone Binding Posts.

5. Remove field telephone from curbside field telephone binding posts.
6. Attempt to operate field telephone.

CONDITION/INDICATION

Which field telephone binding posts do not operate?

DECISION

Roadside Faulty - Notify Field Maintenance.

Curbside Faulty - Notify Field Maintenance.

Both Faulty - Notify Field Maintenance.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
VAN BODY CLEARANCE OR MARKER LIGHT DOES NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

*** The following is applicable to the following UOC(s): TSP. ***

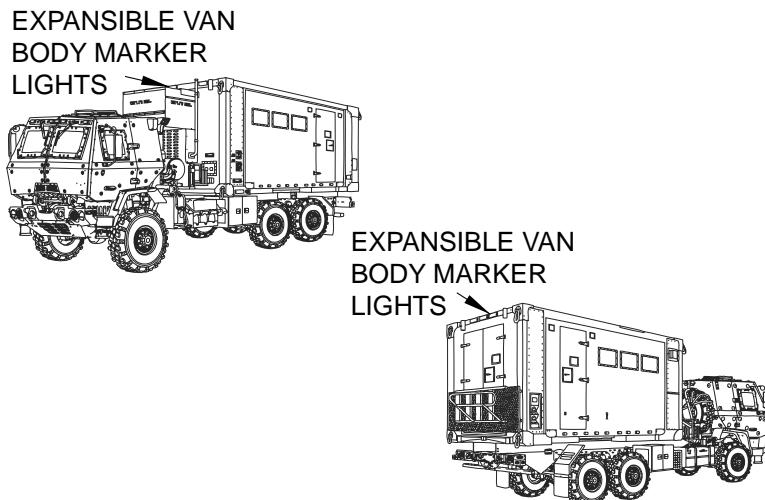
TROUBLESHOOTING PROCEDURE

VAN BODY CLEARANCE OR MARKER LIGHT DOES NOT ILLUMINATE

STEP 1

Do other van body clearance and marker lights illuminate?

1. Press SER DRIVE key on main light switch. (Volume 1, WP 0004)



XVBMLL TEX2001

Figure 1. Van Body Clearance and Marker Lights.

2. Press ENTER key on main light switch.
3. Check to see if other van body clearance and marker lights illuminate.
4. Press ALL OFF key on main light switch. (Volume 1, WP 0004)
5. Press ENTER key on main light switch.

CONDITION/INDICATION

Do other van body clearance and marker lights illuminate?

DECISION

MARKERS FAULTY - Perform Electrical System Troubleshooting (All Van Clearance and Body Marker Lights Do Not Illuminate). (WP 0242, Test 1 - Do cab and/or chassis marker lights illuminate?)

MARKERS OK - Notify Field Maintenance.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
DUMP BODY UP INDICATOR DOES NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

*** The following is applicable to the following UOC(s): TSR TSQ. ***

**TROUBLESHOOTING PROCEDURE
DUMP BODY UP INDICATOR DOES NOT ILLUMINATE**

STEP 1

Does LAMP TEST switch illuminate DUMP BODY UP indicator?

1. Position master power switch to on. (Volume 1, WP 0004)

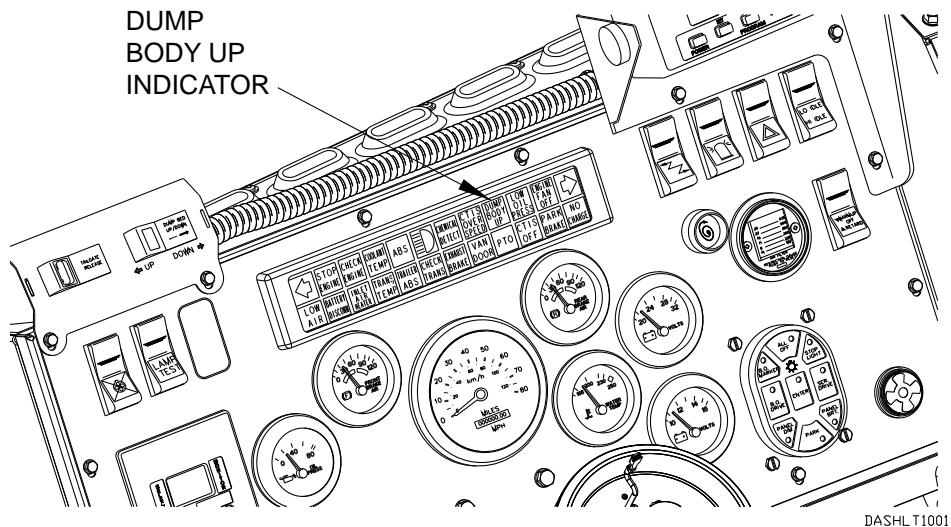


Figure 1. DUMP BODY UP Indicator.

2. Hold LAMP TEST switch in on position. (Volume 1, WP 0004)
3. Check to see if DUMP BODY UP indicator illuminates.
4. Release LAMP TEST switch.
5. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does LAMP TEST switch illuminate DUMP BODY UP indicator?

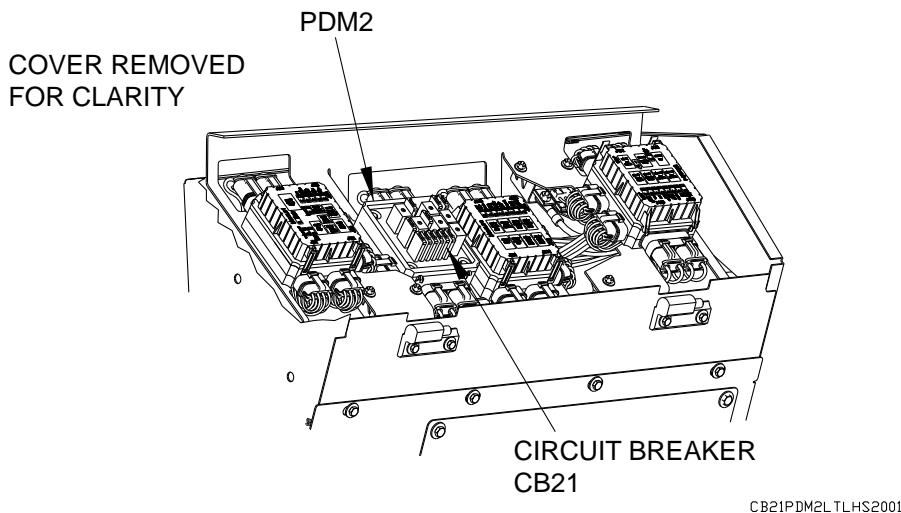
DECISION

Display Faulty - Notify Field Maintenance.

Display OK - Step 2 - Is circuit breaker CB21 tripped?

STEP 2**Is circuit breaker CB21 tripped?**

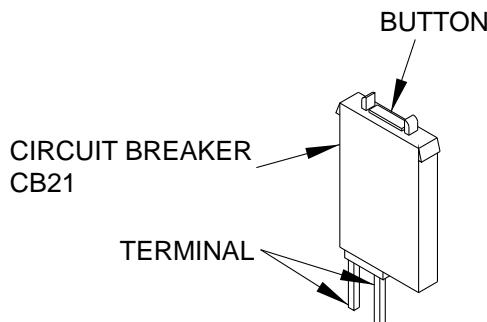
1. Remove PDP cover. (Volume 3, WP 0351)
2. If circuit breaker CB21 is tripped, push button to reset.



CB21PDM2L TLHS2001

Figure 2. Circuit Breaker CB21.

3. Position master power switch to on. (Volume 1, WP 0004)
4. Check circuit breaker CB21 to see if it is tripped again.



CB21LTLS20

Figure 3. Circuit Breaker CB21.

5. Position master power switch to off. (Volume 1, WP 0004)
6. Install PDP cover.

CONDITION/INDICATION

Is circuit breaker CB21 tripped?

DECISION

BREAKER TRIPPED - Notify Field Maintenance

BREAKER OK - Step 3 - Does DUMP BODY UP indicator illuminate?

STEP 3

Does DUMP BODY UP indicator illuminate?

1. Raise dump body.

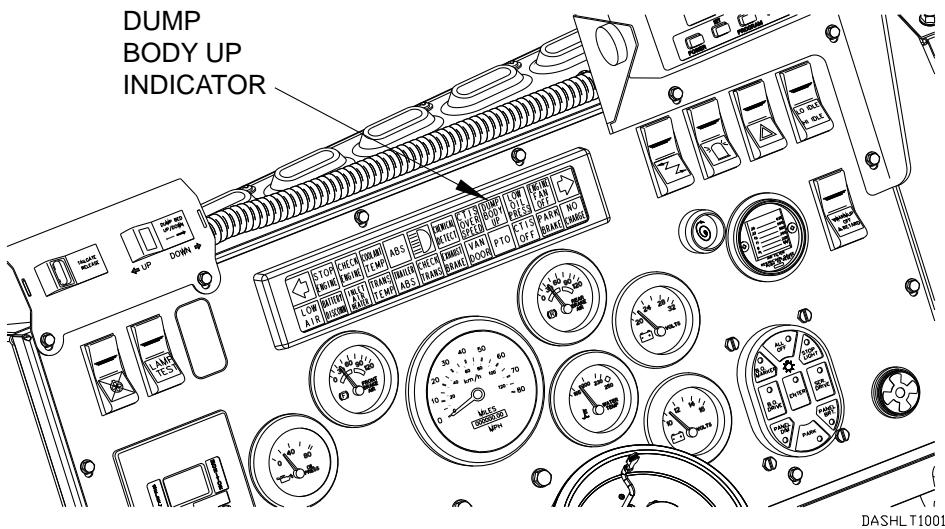


Figure 4. DUMP BODY UP Indicator.

2. Check to see if DUMP BODY UP indicator illuminates.
3. Lower dump body.

CONDITION/INDICATION

Does DUMP BODY UP indicator illuminate?

DECISION

Indicator Faulty. - Notify Field Maintenance.

Indicator OK - Fault corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE DUMP BODY DOES NOT RAISE

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

*** The following is applicable to the following UOC(s): TSR TSQ. ***

TROUBLESHOOTING PROCEDURE

DUMP BODY DOES NOT RAISE

STEP 1

Has dump body hydraulic system troubleshooting been performed?

CONDITION/INDICATION

Has dump body hydraulic system troubleshooting been performed?

DECISION

HYDRAULIC SYSTEM - Perform Dump Body Hydraulic System Troubleshooting (Dump Body Does Not Raise). (WP 0304)

HYDRAULIC PERFORMED - Step 2 - Does tailgate release operate?

STEP 2

Does tailgate release operate?

1. Attempt to release tailgate. (Volume 1, WP 0032)

CONDITION/INDICATION

Does tailgate release operate?

DECISION

TAILGATE FAULTY - Perform Electrical System Troubleshooting (Dump Bed and Tailgate Release Do Not Operate). (WP 0250, Test 1 - Are air tanks pressurized?)
TAILGATE OK - Step 3 - Does dump body raise?

STEP 3

Does dump body raise?

1. Attempt to raise dump body. (Volume 1, WP 0032)
2. Check to see if dump body raises.

CONDITION/INDICATION

Does dump body raise?

DECISION

Dump Faulty - Notify Field Maintenance.

Dump OK - Fault Corrected

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
TAILGATE RELEASE DOES NOT OPERATE (ELECTRICAL SYSTEM)**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

*** The following is applicable to the following UOC(s): TSR TSQ. ***

TROUBLESHOOTING PROCEDURE

TAILGATE RELEASE DOES NOT OPERATE (ELECTRICAL SYSTEM)

STEP 1

Has Operator level pneumatic troubleshooting been performed?

CONDITION/INDICATION

Has Operator level pneumatic troubleshooting been performed?

DECISION

PERFORM PNEUMATIC - Perform Operator level pneumatic troubleshooting (Tailgate release does not operate). (WP 0276)

PNEUMATIC PERFORMED - Step 2 - Does dump body raise and lower?

STEP 2

Does dump body raise and lower?

1. Attempt to raise and lower dump body.

CONDITION/INDICATION

Does dump body raise and lower?

DECISION

Dump Faulty - Perform Electrical System Troubleshooting (Dump Body and Tailgate Release Do Not Operate) (WP 0250, Test 1 - Are air tanks pressurized?)

Dump OK - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
DUMP BODY DOES NOT LOWER**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

*** The following is applicable to the following UOC(s): TSR TSQ. ***

**TROUBLESHOOTING PROCEDURE
DUMP BODY DOES NOT LOWER**

STEP 1

Has dump body hydraulic system troubleshooting been performed?

CONDITION/INDICATION

Has dump body hydraulic system troubleshooting been performed?

DECISION

HYDRAULIC SYSTEM - Perform Dump Body Hydraulic System Troubleshooting (Dump Body Does Not Lower). (WP 0305)

HYDRAULIC PERFORMED - Step 2 - Does tailgate release operate?

STEP 2

Does tailgate release operate?

1. Attempt to release tailgate.

CONDITION/INDICATION

Does tailgate release operate?

DECISION

TAILGATE FAULTY - Perform Electrical System Troubleshooting (Dump Bed and Tailgate Release Do Not Operate). (WP 0250, Test 1 - Are air tanks pressurized?)
TAILGATE OK - Step 3 - Does dump body lower?

STEP 3

Does dump body lower?

1. Attempt to lower dump body.
2. Check to see if dump body lowers.

CONDITION/INDICATION

Does dump body lower?

DECISION

***** The following is applicable to the following UOC(s): TSR TSQ. *****

Dump OK - Fault corrected.

Dump Faulty - Notify Field Maintenance.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
DUMP BED AND TAILGATE RELEASE DO NOT OPERATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

*** The following is applicable to the following UOC(s): TSR TSQ. ***

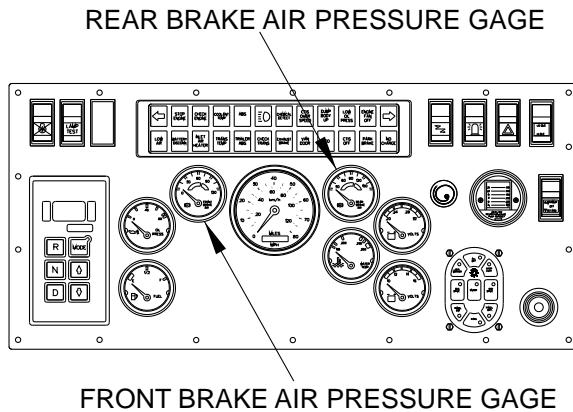
TROUBLESHOOTING PROCEDURE

DUMP BED AND TAILGATE RELEASE DO NOT OPERATE

STEP 1

Are air tanks pressurized?

1. Start engine. (Volume 1, WP 0019)
2. Allow engine to idle until 120 psi is registered on FRONT BRAKE AIR and REAR BRAKE AIR pressure gages.



RF BRAKEAPGDP1001

Figure 1. Air Tanks.

3. Shut down engine. (Volume 1, WP 0019)
4. Check FRONT BRAKE AIR and REAR BRAKE AIR pressure gages.

CONDITION/INDICATION

Are air tanks pressurized?

DECISION

COMPRESSOR FAULTY - Perform Air System Troubleshooting (Air System Loses Pressure During Operation/Slow Air Pressure Buildup). (WP 0270, Test 1 - Does air system lose pressure during operation or have slow air pressure buildup?)
COMPRESSOR OK - Step 2 - Is circuit breaker CB50 tripped?

STEP 2**Is circuit breaker CB50 tripped?**

1. Remove PDP cover. (Volume 3, WP 0351)

COVER REMOVED
FOR CLARITY

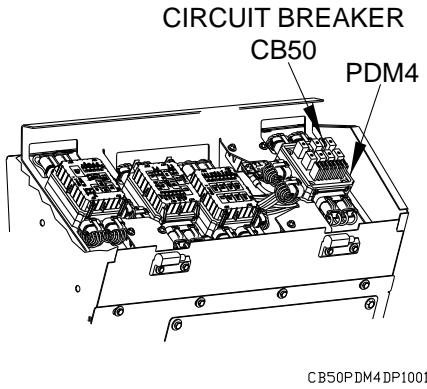


Figure 2. Circuit Breaker CB50.

2. If circuit breaker CB50 is tripped, push button to reset.
3. Position master power switch to on. (Volume 1, WP 0004)
4. Check circuit breaker CB50 to see if it is tripped again.
5. Position master power switch to off. (Volume 1, WP 0004)
6. Install PDP cover.

CONDITION/INDICATION

Is circuit breaker CB50 tripped?

DECISION

Breaker Tripped - Notify Field Maintenance.

Breaker OK - Step 3 - Do dump bed and tailgate release operate?

STEP 3

Do dump bed and tailgate release operate?

1. Attempt to raise and lower dump bed and operate tailgate release.

CONDITION/INDICATION

Do dump bed and tailgate release operate?

DECISION

Dump Faulty - Notify Field Maintenance.

Dump OK - Fault Corrected

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
DUMP BED UP/DOWN SWITCH DOES NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

*** The following is applicable to the following UOC(s): TSR TSQ. ***

TROUBLESHOOTING PROCEDURE

DUMP BED UP/DOWN SWITCH DOES NOT ILLUMINATE

STEP 1

Do the auxiliary panel switches illuminate?

1. Position master power switch to on. (Volume 1, WP 0004)
2. Press PANEL BRT key on main light switch. (Volume 1, WP 0004)
3. Press ENTER key on main light switch. (Volume 1, WP 0004)
4. Check to see if auxiliary panel switches illuminate. (Volume 1, WP 0005)

CONDITION/INDICATION

Do the auxiliary panel switches illuminate?

DECISION

SWITCHES FAULTY - Perform Electrical System Troubleshooting (Auxiliary Panel Does Not Illuminate). (WP 0114)

SWITCHES OK - Step 2 - Does DUMP BED UP/DOWN switch illuminate?

STEP 2

Does DUMP BED UP/DOWN switch illuminate?

1. Check to see if DUMP BED UP/DOWN switch illuminates. (Volume 1, WP 0004)
2. Press ALL OFF key on main light switch. (Volume 1, WP 0004)
3. Press ENTER key on main light switch. (Volume 1, WP 0004)
4. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does DUMP BED UP/DOWN switch illuminate?

DECISION

Switch Faulty - Notify Field Maintenance.
Switch OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
TAILGATE RELEASE SWITCH DOES NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

*** The following is applicable to the following UOC(s): TSR TSQ. ***

**TROUBLESHOOTING PROCEDURE
TAILGATE RELEASE SWITCH DOES NOT ILLUMINATE**

STEP 1

Do auxiliary panel switches illuminate?

1. Check to see if auxiliary panel switches illuminate. (Volume 1, WP 0004)

CONDITION/INDICATION

Do auxiliary panel switches illuminate?

DECISION

SWITCHES FAULTY - Perform Operator Electrical System Troubleshooting (Auxiliary Panel Switch Does Not Illuminate). (WP 0113, Test 1 - Does any other auxiliary panel switch illuminate?)

SWITCHES OK - Step 2 - Does TAILGATE RELEASE switch illuminate?

STEP 2

Does TAILGATE RELEASE switch illuminate?

1. Check to see if TAILGATE RELEASE switch illuminates. (Volume 1, WP 0019)
2. Press all off key on main light switch. (Volume 1, WP 0004)
3. Press ENTER key on main light switch. (Volume 1, WP 0004)
4. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does TAILGATE RELEASE switch illuminate?

DECISION

***** The following is applicable to the following UOC(s): TSR TSQ. *****

Switch OK - Fault Corrected.

Switch Faulty - Notify Field Maintenance.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
CHECK TRANS INDICATOR REMAINS ILLUMINATED**

INITIAL SETUP:

Equipment Condition

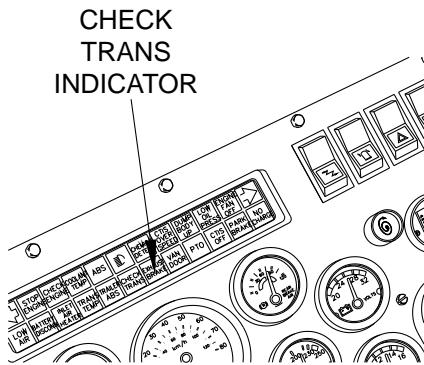
Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
CHECK TRANS INDICATOR REMAINS ILLUMINATED**

STEP 1

Does CHECK TRANS indicator remain illuminated after test drive?

1. Start engine. (Volume 1, WP 0019)
2. Test drive vehicle.
3. Check to see if CHECK TRANS indicator remains illuminated.
4. Shut down engine. (Volume 1, WP 0019)



CTRANSINDLT10

Figure 1. CHECK TRANS Indicator.

CONDITION/INDICATION

Does CHECK TRANS indicator remain illuminated after test drive?

DECISION

INDICATOR FAULTY - Notify Field Maintenance

INDICATOR OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
GEN IV TRANSMISSION PUSHBUTTON SHIFT SELECTOR (TPSS) DOES NOT
ILLUMINATE/OPERATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

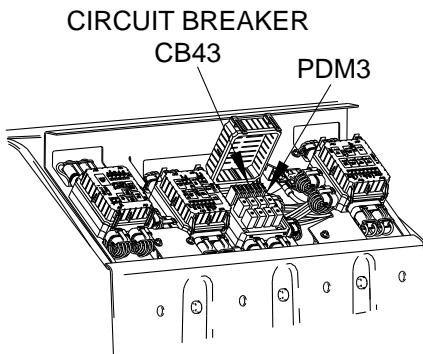
TROUBLESHOOTING PROCEDURE

**GEN IV TRANSMISSION PUSHBUTTON SHIFT SELECTOR (TPSS) DOES NOT
ILLUMINATE/OPERATE**

STEP 1

Is circuit breaker CB43 tripped?

1. Remove PDP cover. (Volume 3, WP 0351)



CB43X

Figure 1. Circuit Breaker CB43.

2. Open Power Distribution Module (PDM) 3.
3. If circuit breaker CB43 is tripped, push button to reset.
4. Position master power switch to on. (Volume 1, WP 0004)

5. Check circuit breaker CB43 to see if it is tripped again.
6. Position master power switch to off. (Volume 1, WP 0004)
7. Close PDM 3.

CONDITION/INDICATION

Is circuit breaker CB43 tripped?

DECISION

BREAKER TRIPPED - Notify Field Maintenance.
BREAKER OK - Step 2 - Is circuit breaker CB79 tripped?

STEP 2

Is circuit breaker CB79 tripped?

1. Open PDM 2.

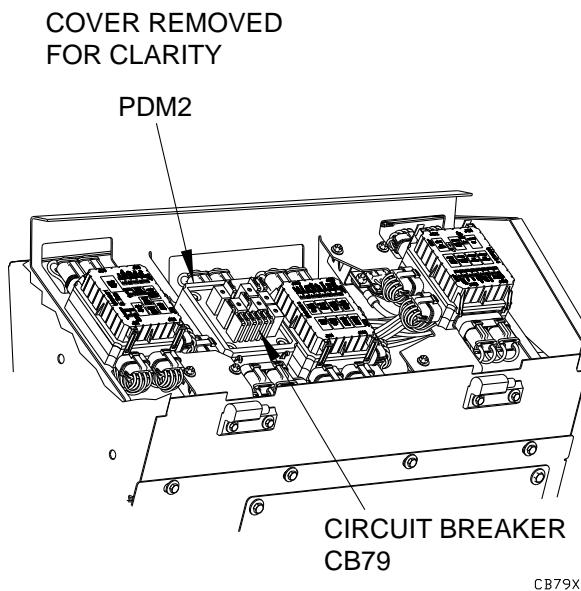


Figure 2. Circuit Breaker CB79.

2. If circuit breaker CB79 is tripped, push button to reset.
3. Position master power switch to on. (Volume 1, WP 0004)
4. Check circuit breaker CB79 to see if it is tripped again.
5. Position master power switch to off. (Volume 1, WP 0004)
6. Close PDM 2.
7. Install PDP cover. (Volume 3, WP 0351)

CONDITION/INDICATION

Is circuit breaker CB79 tripped?

DECISION

BREAKER TRIPPED - Notify Field Maintenance.

BREAKER OK - Step 3 - Does Gen IV TPSS illuminate/operate?

STEP 3**Does Gen IV TPSS illuminate/operate?**

1. Position master power switch to on. (Volume 1, WP 0004)
2. Position main light switch to SER DRIVE. (Volume 1, WP 0004)
3. Press ENTER key on main light switch. (Volume 1, WP 0004)
4. Position dimmer switch to maximum brightness. (Volume 1, WP 0004)
5. Check to see if Gen IV TPSS illuminates.
6. Position main light switch to OFF. (Volume 1, WP 0004)
7. Press ENTER key on main light switch. (Volume 1, WP 0004)
8. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does Gen IV TPSS illuminate/operate?

DECISION

TPSS Faulty - Notify Field Maintenance

TPSS OK - Fault Corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE

**GEN IV TRANSMISSION PUSHBUTTON SHIFT SELECTOR (TPSS) DISPLAY
WINDOW FLASHES SELECTED GEAR AND/OR TRANSMISSION DOES NOT SHIFT
GEARS**

INITIAL SETUP:**Materials/Parts**

Hydraulic Fluid, Automatic
Transmission (Volume 3,
WP 0359, Table 1, Item 83, 84,
85, 86)

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

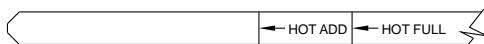
TROUBLESHOOTING PROCEDURE

**GEN IV TRANSMISSION PUSHBUTTON SHIFT SELECTOR (TPSS) DISPLAY
WINDOW FLASHES SELECTED GEAR AND/OR TRANSMISSION DOES NOT SHIFT
GEARS**

STEP 1**Is transmission oil contaminated?**

1. Start engine (Volume 1, WP 0019).
2. Check transmission oil on dipstick for signs of discoloration or presence of foam.

TRANSMISSION
OIL DIPSTICK



TRANSODIP

Figure 1. Transmission Oil.

3. Shut down engine. (Volume 1, WP 0019)

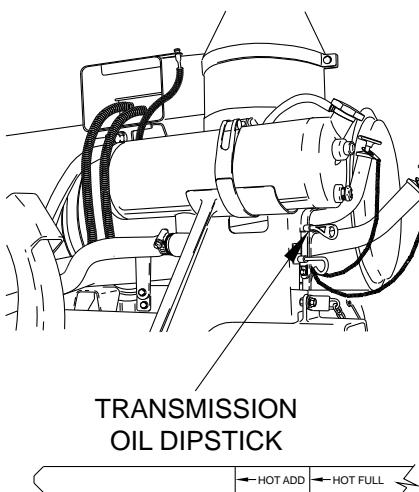
CONDITION/INDICATION

Is transmission oil contaminated?

DECISION

OIL CONTAMINATED - Notify Field Maintenance.

OIL OK - Step 2 - Is transmission oil at correct level?



TRANSODPSTK

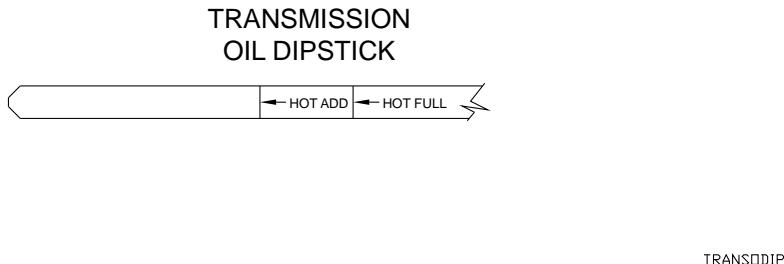
STEP 2**Is transmission oil at correct level?**

1. Start engine. (Volume 1, WP 0019)

NOTE

Perform transmission oil check when engine is at normal operating temperature (160-230° F (71-110° C)).

2. Check transmission oil dipstick for transmission oil level. Level should be between HOT ADD line and HOT FULL line.



TRANSODIP

Figure 2. Transmission Oil.

3. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Is transmission oil at correct level?

DECISION

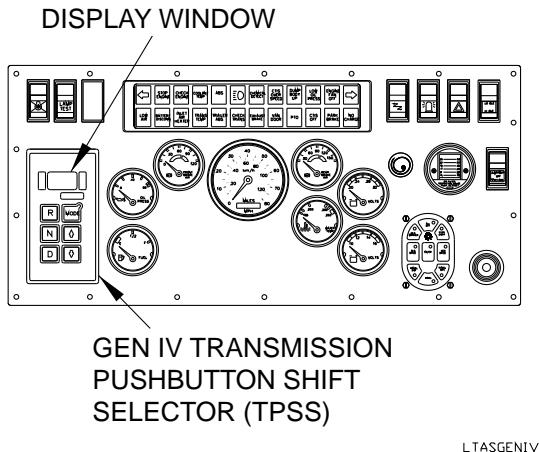
Below HOT ADD line. - Add oil as required. (Step 3 - Does Gen IV TPSS display window steadily display selected gear and/or does transmission shift gears?)

Above HOT FULL line. - Notify Field Maintenance.

Between HOT ADD and HOT FULL lines. - Perform Transmission System Troubleshooting (Transmission Unusually Noisy When Operating). (WP 0256, Test 2 - Is transmission oil at correct level?)

STEP 3**Does Gen IV TPSS display window steadily display selected gear and/or does transmission shift gears?**

1. Start engine. (Volume 1, WP 0019)
2. Perform road test.
3. Check to see that Gen IV TPSS display window steadily displays selected gear and that transmission shifts gears.



LTASGENIVX

Figure 3. Gen IV TPSS Display Window.

4. Select N (neutral) on Gen IV TPSS. (Volume 1, WP 0004)
5. Shut down engine. (Volume 1, WP 0019)
6. Select appropriate button:
 - a. If Gen IV TPSS display window flashes selected gear and/or transmission does not shift gears, click on **Transmission Faulty** button.
 - b. If Gen IV TPSS display window steadily displays selected gear and transmission shifts gears, click on **Fault Corrected** button.

CONDITION/INDICATION

Does Gen IV TPSS display window steadily display selected gear and/or does transmission shift gears?

DECISION

TRANSMISSION FAULTY - Notify Field Maintenance.
FAULT CORRECTED -

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
GEN IV TRANSMISSION UNUSUALLY NOISY WHEN OPERATING**

INITIAL SETUP:

Materials/Parts

Hydraulic Fluid, Automatic
Transmission (Volume 3,
WP 0359, Table 1, Item 83, 84,
85, 86)
Rag, Wiping (Volume 3, WP 0359,
Table 1, Item 148)

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

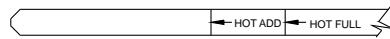
**TROUBLESHOOTING PROCEDURE
GEN IV TRANSMISSION UNUSUALLY NOISY WHEN OPERATING**

STEP 1

Is transmission oil contaminated?

1. Start engine. (Volume 1, WP 0019)
2. Check transmission oil on transmission oil dipstick for signs of discoloration or presence of foam.

TRANSMISSION
OIL DIPSTICK



Q2F0101

Figure 1. Transmission Oil.

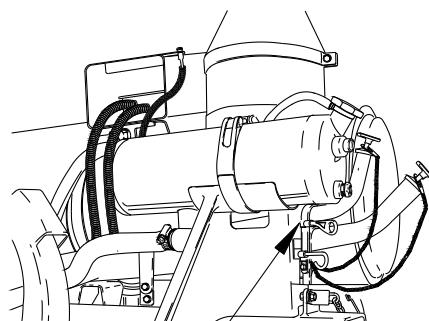
CONDITION/INDICATION

Is transmission oil contaminated?

DECISION

Oil Contaminated - Notify Field Maintenance

Oil OK - Step 2 - Is transmission oil at correct level?



TRANSMISSION
OIL DIPSTICK

Q2F0102

STEP 2**Is transmission oil at correct level?****NOTE**

Perform transmission oil check when engine is at normal operating temperature (160-230° F (71-110° C)).

1. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Is transmission oil at correct level?

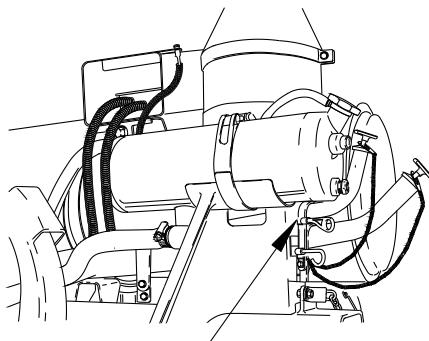
DECISION

No Oil - Notify Field Maintenance.

Below HOT ADD line - Add oil as required. (Volume 3, WP 0339)

Above HOT ADD line - Notify Field Maintenance.

Oil Level OK - Notify Field Maintenance.



Q2F0102

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
TRANS TEMP INDICATOR REMAINS ILLUMINATED**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

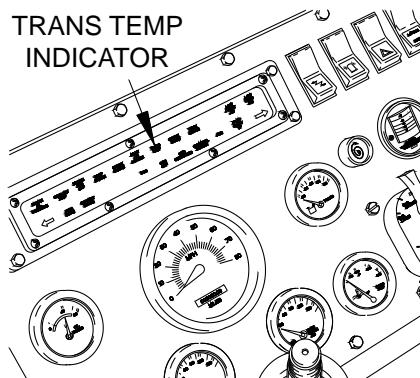
**TROUBLESHOOTING PROCEDURE
TRANS TEMP INDICATOR REMAINS ILLUMINATED**

STEP 1

Does TRANS TEMP indicator remain illuminated after test drive?

1. Start engine. (Volume 1, WP 0019)
2. Test drive vehicle.
3. Check to see if TRANS TEMP indicator remains illuminated.
4. Shut down engine. (Volume 1, WP 0019)

STEERING WHEEL
REMOVED FOR
CLARITY



Q2E3101

Figure 1. TRANS TEMP Indicator.

CONDITION/INDICATION

Does TRANS TEMP indicator remain illuminated after test drive?

DECISION

INDICATOR FAULTY - Notify Field Maintenance.
INDICATOR OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
DRIVE SHAFT OR UNIVERSAL JOINT UNUSUALLY NOISY WHEN OPERATING**

INITIAL SETUP:

Personnel Required
(2)

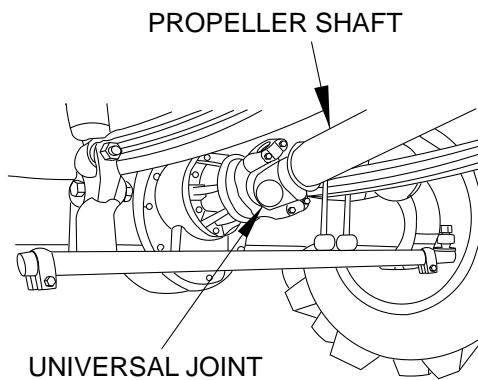
Equipment Condition
Engine running (Volume 1, WP 0019)

**TROUBLESHOOTING PROCEDURE
DRIVE SHAFT OR UNIVERSAL JOINT UNUSUALLY NOISY WHEN OPERATING**

STEP 1

Is drive shaft or universal joint unusually noisy when operating?

1. Road test vehicle.
2. Listen for unusually loud noise from drive shaft or universal joint.



UJNOISELT1001

Figure 1. Drive Shaft or Universal Joint.

3. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Is drive shaft or universal joint unusually noisy when operating?

DECISION

NOISY - Notify Field Maintenance.
NOT NOISY - Fault corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE ABS INDICATOR REMAINS ILLUMINATED

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

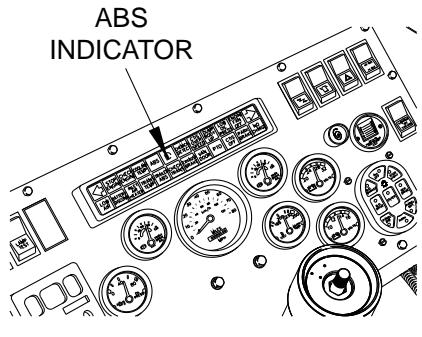
TROUBLESHOOTING PROCEDURE ABS INDICATOR REMAINS ILLUMINATED

STEP 1

Does ABS indicator remain illuminated after test drive?

1. Start engine. (Volume 1, WP 0019)
2. Test drive vehicle.
3. Check to see if ABS indicator remains illuminated.
4. Shut down engine. (Volume 1, WP 0019)

STEERING WHEEL
REMOVED FOR
CLARITY



ABSIND

Figure 1. ABS Indicator.

CONDITION/INDICATION

Does ABS indicator remain illuminated after test drive?

DECISION

INDICATOR FAULTY - Notify Field Maintenance

INDICATOR OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
BRAKE SYSTEM LOSES AIR WHEN SERVICE BRAKES ARE APPLIED**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

Air tanks charged to 75-120 psi.
(Volume 1, WP 0019)

TROUBLESHOOTING PROCEDURE

BRAKE SYSTEM LOSES AIR WHEN SERVICE BRAKES ARE APPLIED

STEP 1

Does brake system lose air when service brakes are applied?

1. Apply service brakes and check for loss of air.

CONDITION/INDICATION

Does brake system lose air when service brakes are applied?

DECISION

BRAKES FAULTY - Notify Field Maintenance.

BRAKES OK - Fault Corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE EXCESSIVE BRAKING DISTANCE

INITIAL SETUP:

Equipment Condition

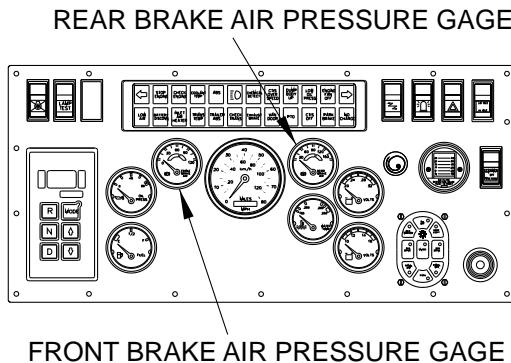
Engine running (Volume 1, WP 0019)

TROUBLESHOOTING PROCEDURE EXCESSIVE BRAKING DISTANCE

STEP 1

Are air tanks pressurized?

1. Allow engine to idle until 120 psi is registered on FRONT BRAKE AIR and REAR BRAKE AIR pressure gages.



L T A S R B A P G

Figure 1. Air Tanks.

2. Shut down engine. (Volume 1, WP 0019)
3. Check FRONT BRAKE AIR and REAR BRAKE AIR pressure gages.

CONDITION/INDICATION

Are air tanks pressurized?

DECISION

COMPRESSOR FAULTY - Perform Air System Troubleshooting (Air System Loses Pressure During Operation/Slow Air Pressure Buildup). (WP 0270, Test 1 - Does air system lose pressure during operation or have slow air pressure buildup?)

COMPRESSOR OK - Step 2 - Is hydraulic brake reservoir between LOW LEVEL and FULL LEVEL?

STEP 2

Is hydraulic brake reservoir between LOW LEVEL and FULL LEVEL?

1. Check brake reservoir fluid levels.

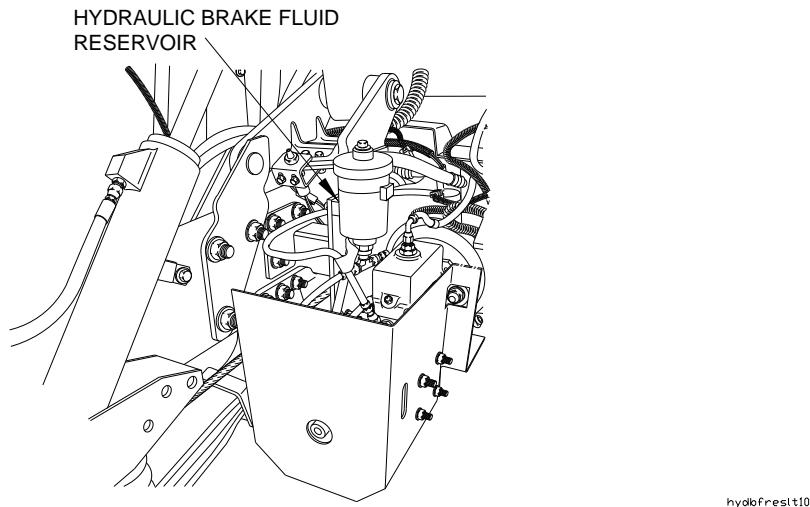


Figure 2. Hydraulic Brake Reservoir.

CONDITION/INDICATION

Is hydraulic brake reservoir between LOW LEVEL and FULL LEVEL?

DECISION

FLUID OK - Step 3 - Does vehicle have excessive braking distance?

ADD FLUID - Add brake fluid. (Volume 3, WP 0337)

STEP 3

Does vehicle have excessive braking distance?

1. Check to see if vehicle has excessive braking distance.

CONDITION/INDICATION

Does vehicle have excessive braking distance?

DECISION

PRESENT - Notify Field Maintenance.

NOT PRESENT - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
FRONT BRAKES DO NOT APPLY**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
FRONT BRAKES DO NOT APPLY**

STEP 1

Do rear brakes apply?

1. Check to see if rear brakes apply.

CONDITION/INDICATION

Do rear brakes apply?

DECISION

BRAKES FAULTY - Perform Brake System Troubleshooting (Excessive Braking Distance). (WP 0261)

BRAKES APPLY - Step 2 - Are hydraulic hoses and fittings free from Class III leaks?

STEP 2

Are hydraulic hoses and fittings free from Class III leaks?

1. Check to see if hydraulic hoses and fittings are free from Class III leaks.

CONDITION/INDICATION

Are hydraulic hoses and fittings free from Class III leaks?

DECISION

LEAKS FOUND - Notify Field maintenance to repair leaks.

NO LEAKS - Notify Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE FRONT BRAKES OVERHEAT

INITIAL SETUP:

Equipment Condition

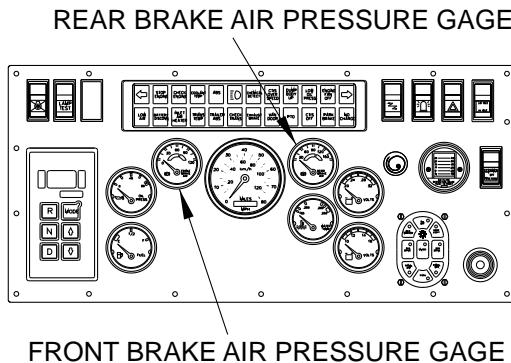
Engine running (Volume 1, WP 0019)

TROUBLESHOOTING PROCEDURE FRONT BRAKES OVERHEAT

STEP 1

Are air tanks pressurized?

1. Allow engine to idle until 120 psi is registered on FRONT BRAKE AIR and REAR BRAKE AIR pressure gages.



L T A S R B A P G

Figure 1. Air Tanks.

2. Shut down engine. (Volume 1, WP 0019)
3. Check FRONT BRAKE AIR and REAR BRAKE AIR pressure gages.

CONDITION/INDICATION

Are air tanks pressurized?

DECISION

COMPRESSOR FAULTY - Perform Air System Troubleshooting (Air System Loses Pressure During Operation/Slow Air Pressure Buildup). (WP 0270, Test 1 - Does air system lose pressure during operation or have slow air pressure buildup?)

COMPRESSOR OK - Step 2 - Is hydraulic brake reservoir between LOW LEVEL and FULL LEVEL?

STEP 2

Is hydraulic brake reservoir between LOW LEVEL and FULL LEVEL?

1. Check brake reservoir fluid levels.

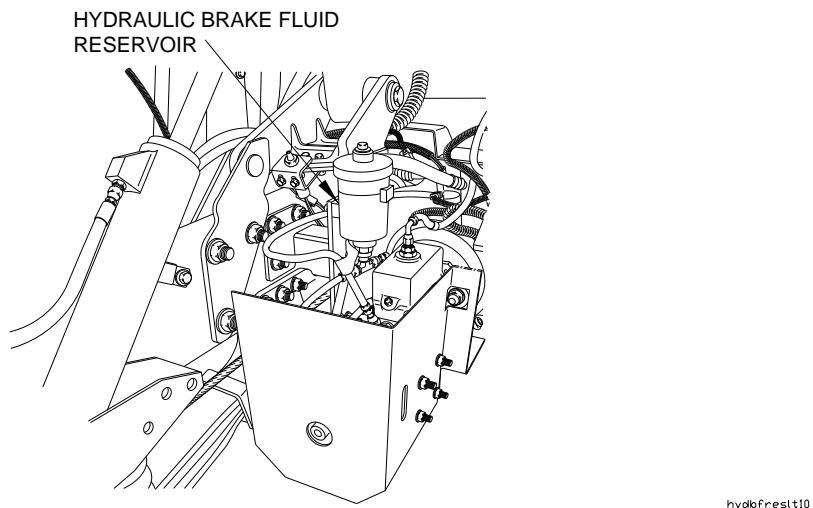


Figure 2. Hydraulic Brake Reservoir.

CONDITION/INDICATION

Is hydraulic brake reservoir between LOW LEVEL and FULL LEVEL?

DECISION

FLUID OK - Step 3 - Do front brakes overheat?

ADD FLUID - Add brake fluid. (Volume 3, WP 0337)

STEP 3

Do front brakes overheat?

1. Check to see if front brakes overheat.

CONDITION/INDICATION

Do front brakes overheat?

DECISION

BRAKES FAULTY - Notify Field Maintenance.

BRAKES APPLY - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
PARKING BRAKE DOES NOT APPLY**

INITIAL SETUP:

Equipment Condition

Engine shut down (Volume 1,
WP 0019)

Air tanks pressurized. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
PARKING BRAKE DOES NOT APPLY**

STEP 1

Do rear brakes apply?

1. Check to see if rear brakes apply.

CONDITION/INDICATION

Do rear brakes apply?

DECISION

BRAKES FAULTY - Perform Brake System Troubleshooting (Rear Brakes Do Not Apply).
(WP 0266, Test 1 - Do front brakes apply?)

BRAKES APPLY - Step 2 - Do parking brakes not apply?

STEP 2

Do parking brakes not apply?

1. Check to see if parking brakes apply.

CONDITION/INDICATION

Do parking brakes not apply?

DECISION

BRAKES FAULTY - Notify Field Maintenance.

BRAKES APPLY - Fault Corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE PARKING BRAKE DOES NOT RELEASE

INITIAL SETUP:

Equipment Condition

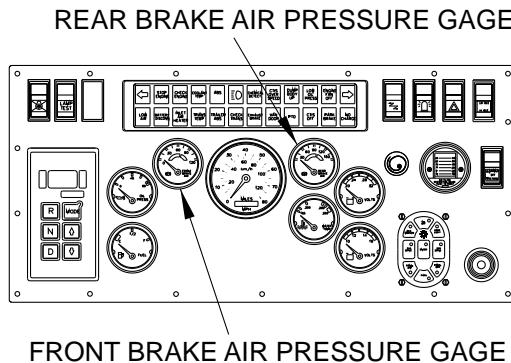
Engine running (Volume 1, WP 0019)

TROUBLESHOOTING PROCEDURE PARKING BRAKE DOES NOT RELEASE

STEP 1

Are air tanks pressurized?

1. Allow engine to idle until 120 psi is registered on FRONT BRAKE AIR and REAR BRAKE AIR pressure gages.



L T A S R B A P G

Figure 1. Air Tanks.

2. Shut down engine. (Volume 1, WP 0019)
3. Check FRONT BRAKE AIR and REAR BRAKE AIR pressure gages.

CONDITION/INDICATION

Are air tanks pressurized?

DECISION

COMPRESSOR FAULTY - Perform Air System Troubleshooting (Air System Loses Pressure During Operation/Slow Air Pressure Buildup). (WP 0270, Test 1 - Does air system lose pressure during operation or have slow air pressure buildup?)

COMPRESSOR OK - Step 2 - Are front and rear gladhands secure and free from damage?

STEP 2

Are front and rear gladhands secure and free from damage?

1. Check front and rear gladhands are properly secure and free from damage.
2. Check front gladhands do not have clogged vent ports.

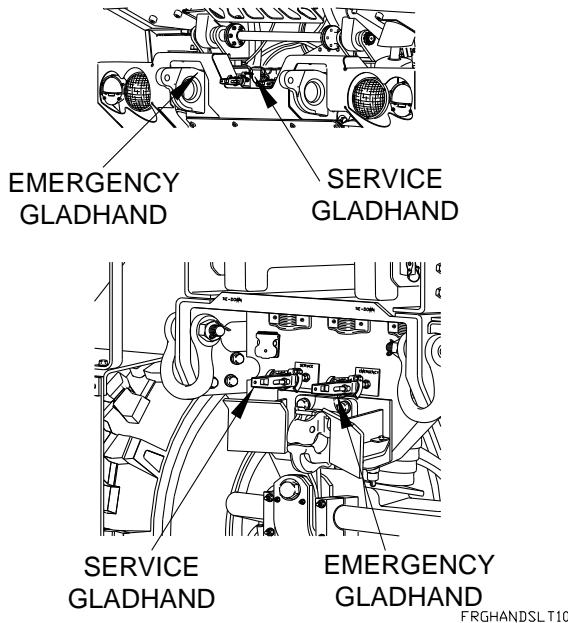


Figure 2. Front and Rear Gladhands.

CONDITION/INDICATION

Are front and rear gladhands secure and free from damage?

DECISION

GLADHAND FAULTY - Notify Field Maintenance.

CONTINUE - Step 3 - Does parking brake release?

STEP 3**Does parking brake release?**

1. Check to see if parking brake releases.

CONDITION/INDICATION

Does parking brake release?

DECISION

NO RELEASE - Notify Field Maintenance.

BRAKES RELEASE - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
REAR BRAKES DO NOT APPLY**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

Air tanks pressurized. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE

REAR BRAKES DO NOT APPLY

STEP 1

Do front brakes apply?

1. Check to see if front brakes apply.

CONDITION/INDICATION

Do front brakes apply?

DECISION

BRAKES FAULTY - Perform Brake System Troubleshooting (Excessive Braking Distance). (WP 0261, Test 1 - Are air tanks pressurized?)

BRAKES APPLY - Step 2 - Do rear brakes apply?

STEP 2

Do rear brakes apply?

1. Check to see if rear brakes apply.

CONDITION/INDICATION

Do rear brakes apply?

DECISION

Brakes Apply - Fault Corrected

Brakes Faulty - Notify Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE REAR BRAKES OVERHEAT

INITIAL SETUP:

Equipment Condition

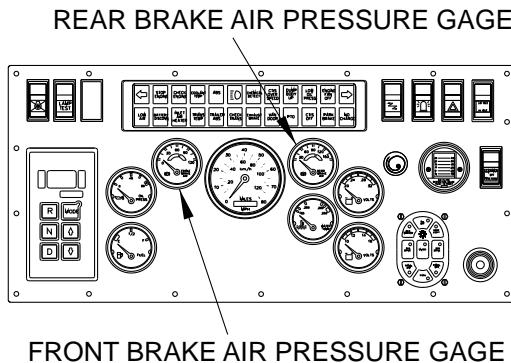
Engine running (Volume 1, WP 0019)

TROUBLESHOOTING PROCEDURE REAR BRAKES OVERHEAT

STEP 1

Are air tanks pressurized?

1. Allow engine to idle until 120 psi is registered on FRONT BRAKE AIR and REAR BRAKE AIR pressure gages.



L T A S R B A P G

Figure 1. Air Tanks.

2. Shut down engine. (Volume 1, WP 0019)
3. Check FRONT BRAKE AIR and REAR BRAKE AIR pressure gages.

CONDITION/INDICATION

Are air tanks pressurized?

DECISION

COMPRESSOR FAULTY - Perform Air System Troubleshooting (Air System Loses Pressure During Operation/Slow Air Pressure Buildup). (WP 0270, Test 1 - Does air system lose pressure during operation or have slow air pressure buildup?)

COMPRESSOR OK - Step 2 - Is hydraulic brake reservoir between LOW LEVEL and FULL LEVEL?

STEP 2

Is hydraulic brake reservoir between LOW LEVEL and FULL LEVEL?

1. Check brake reservoir fluid levels.

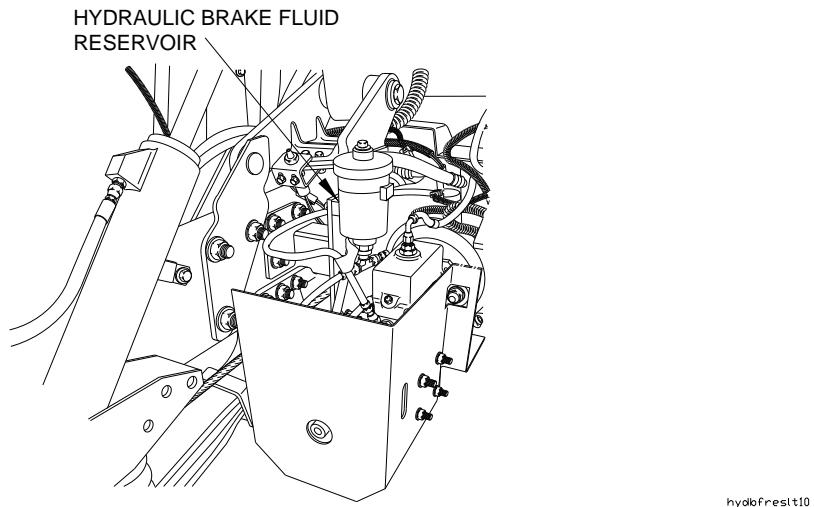


Figure 2. Hydraulic Brake Reservoir.

CONDITION/INDICATION

Is hydraulic brake reservoir between LOW LEVEL and FULL LEVEL?

DECISION

FLUID OK - Step 3 - Do rear brakes overheat?

ADD FLUID - Add brake fluid. (Volume 3, WP 0337)

STEP 3

Do rear brakes overheat?

1. Check to see if rear brakes overheat.

CONDITION/INDICATION

Do rear brakes overheat?

DECISION

BRAKES FAULTY - Notify Field Maintenance.

BRAKES APPLY - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
VEHICLE BRAKES UNEVENLY, BRAKES PULL TO ONE SIDE, OR GRAB**

INITIAL SETUP:

Equipment Condition

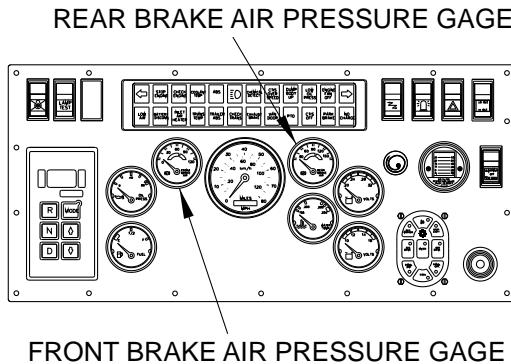
Engine running. (Volume 1, WP 0019)

**TROUBLESHOOTING PROCEDURE
VEHICLE BRAKES UNEVENLY, BRAKES PULL TO ONE SIDE, OR GRAB**

STEP 1

Are air tanks pressurized?

1. Allow engine to idle until 120 psi is registered on FRONT BRAKE AIR and REAR BRAKE AIR pressure gages.
2. Shut down engine. (Volume 1, WP 0019)
3. Check FRONT BRAKE AIR and REAR BRAKE AIR pressure gages.



LTASRBAPG

Figure 1. Air Tanks.

CONDITION/INDICATION

Are air tanks pressurized?

DECISION

LOW PRESSURE - Perform Air System troubleshooting (Air System Loses Pressure During Operation/Slow Air Pressure Buildup). (WP 0270)

PRESSURE OK - Step 2 - Is hydraulic brake reservoir between LOW LEVEL and FULL LEVEL?

STEP 2

Is hydraulic brake reservoir between LOW LEVEL and FULL LEVEL?

1. Check brake reservoir fluid levels.

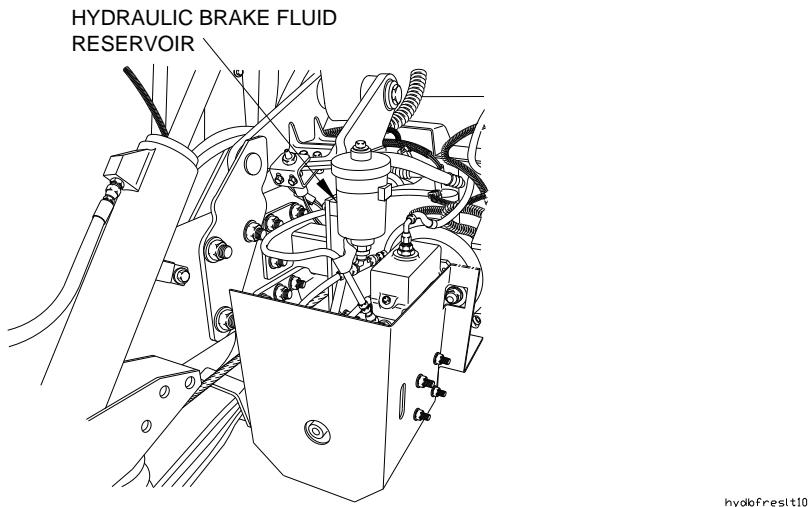


Figure 2. Hydraulic Brake Reservoir.

CONDITION/INDICATION

Is hydraulic brake reservoir between LOW LEVEL and FULL LEVEL?

DECISION

FLUID OK - Step 3 - Does vehicle brakes now operate normally?

ADD FLUID - Add brake fluid. (Volume 3, WP 0337)

STEP 3

Does vehicle brakes now operate normally?

1. Check to see if vehicle brakes still operate unevenly, pull to one side or grab.

CONDITION/INDICATION

Does vehicle brakes now operate normally?

DECISION

NO OPERATION - Perform Steering Troubleshooting (Wanders, Pulls to One Side, or Shimmies). (WP 0295, Test 2 - Are wheel studs bent or broken or are lugnuts missing or loose?)

OPERATION OK - Fault Corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE AIR DRYER CONTINUALLY PURGES

INITIAL SETUP:

Equipment Condition

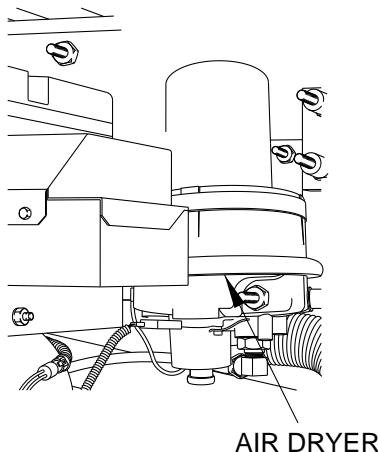
Engine running. (Volume 1, WP 0019)

TROUBLESHOOTING PROCEDURE AIR DRYER CONTINUALLY PURGES

STEP 1

Does air dryer continually purge?

1. Check to see if air dryer continually purges.



AIRPRGLT1001

Figure 1. Air Dryer.

2. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Does air dryer continually purge?

DECISION

PRESENT - Notify Field Maintenance.
NOT PRESENT - Fault corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
AIR SYSTEM LOSES PRESSURE DURING OPERATION/SLOW AIR PRESSURE
BUILDUP**

INITIAL SETUP:

Equipment Condition

Engine running. (Volume 1, WP 0019)

TROUBLESHOOTING PROCEDURE

**AIR SYSTEM LOSES PRESSURE DURING OPERATION/SLOW AIR PRESSURE
BUILDUP**

STEP 1

Does air system lose pressure during operation or have slow air pressure buildup?

1. Check to see if air system loses pressure during operation or has slow air pressure buildup.
2. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Does air system lose pressure during operation or have slow air pressure buildup?

DECISION

PRESENT - Notify Field Maintenance.

NOT PRESENT - Fault corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
AIR SYSTEM PRESSURE BUILDS TO MORE THAN 120 PSI (827 KPA)
(COMPRESSOR FAILS TO UNLOAD)**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

Air tanks drained (Volume 3,
WP 0339)

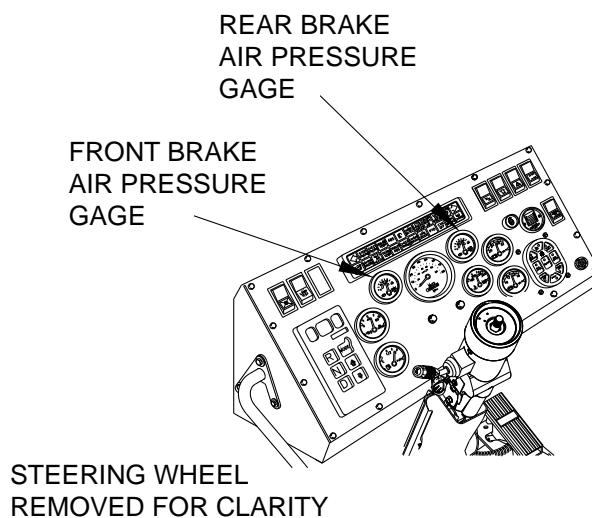
TROUBLESHOOTING PROCEDURE

**AIR SYSTEM PRESSURE BUILDS TO MORE THAN 120 PSI (827 KPA)
(COMPRESSOR FAILS TO UNLOAD)**

STEP 1

Does air compressor fail to unload?

1. Start engine. (Volume 1, WP 0019)



FRBRAKEGLT10

Figure 1. Air Compressor.

2. Allow engine to idle until 120 psi (827 kPa) or more is registered on FRONT BRAKE AIR and REAR BRAKE AIR pressure gages.
3. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Does air compressor fail to unload?

DECISION

PRESENT - Notify Field Maintenance.

NOT PRESENT - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
LARGE QUANTITY OF MOISTURE EXPELLED FROM AIR TANKS**

INITIAL SETUP:

Equipment Condition

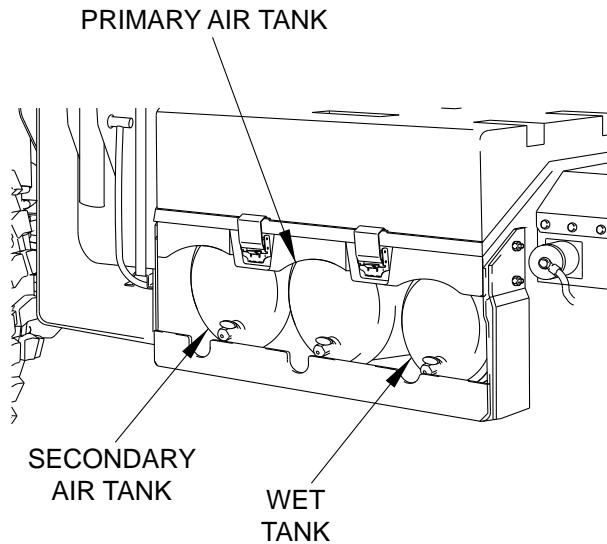
Engine running (Volume 1, WP 0019)

**TROUBLESHOOTING PROCEDURE
LARGE QUANTITY OF MOISTURE EXPELLED FROM AIR TANKS**

STEP 1

Do air tanks expel large quantity of moisture?

1. Check to see if air tanks expel large quantity of moisture.



PSWTANKLT10

Figure 1. Air Tanks.

2. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Do air tanks expel large quantity of moisture?

DECISION

PRESENT - Notify Field Maintenance.

NOT PRESENT - Fault corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE NOISY AIR COMPRESSOR OPERATION

INITIAL SETUP:

Equipment Condition

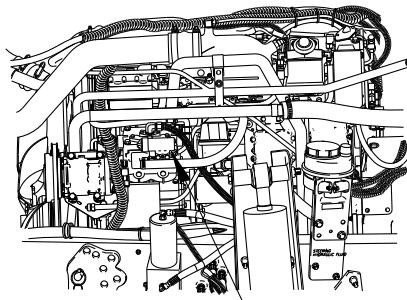
- Engine running (Volume 1, WP 0019)
 - Cab raised (Volume 1, WP 0020)
-

TROUBLESHOOTING PROCEDURE NOISY AIR COMPRESSOR OPERATION

STEP 1

Is air compressor operation noisy?

1. Listen to see if air compressor operates noisily.



AIR COMPRESSOR

AIRCOMPLT10

Figure 1. Air Compressor.

2. Lower cab (Volume 1, WP 0020).
3. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

- Is air compressor operation noisy?

DECISION

PRESENT - Notify Field Maintenance.
NOT PRESENT - Fault corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
NO AIR PRESSURE OR LOW AIR PRESSURE PRESENT AT REAR GLADHANDS

INITIAL SETUP:

Equipment Condition

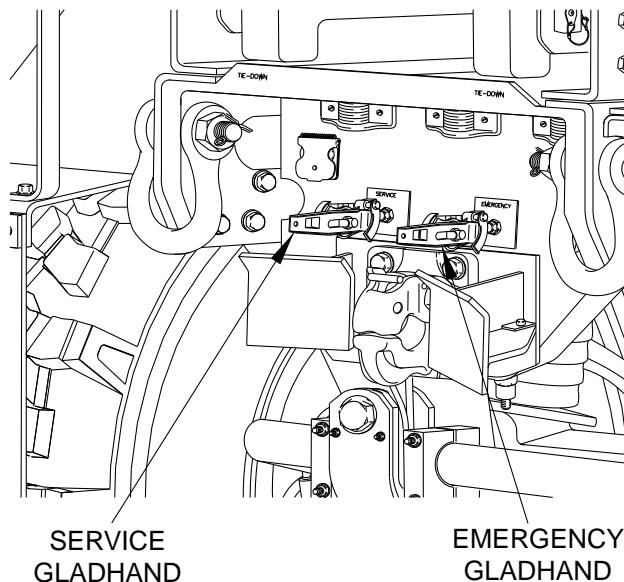
Engine running. (Volume 1, WP 0019)
Trailer uncoupled.

TROUBLESHOOTING PROCEDURE
NO AIR PRESSURE OR LOW AIR PRESSURE PRESENT AT REAR GLADHANDS

STEP 1

Is no air pressure or low air pressure present at rear gladhands?

1. Check to see if no air pressure or low air pressure is present at rear gladhands.



GHANDSLT10

Figure 1. Rear Gladhands.

2. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Is no air pressure or low air pressure present at rear gladhands?

DECISION

PRESSURE FAULTY - Notify Field Maintenance.

PRESSURE OK - Fault corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
HORN DOES NOT OPERATE (PNEUMATIC SYSTEM)**

INITIAL SETUP:

Equipment Condition

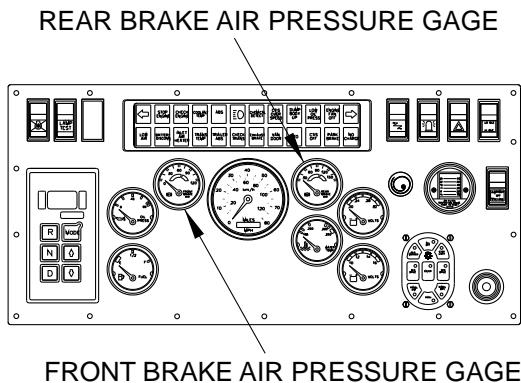
Engine running. (Volume 1, WP 0019)

**TROUBLESHOOTING PROCEDURE
HORN DOES NOT OPERATE (PNEUMATIC SYSTEM)**

STEP 1

Are air tanks pressurized?

1. Allow engine to idle until 120 psi is registered on FRONT BRAKE AIR and REAR BRAKE AIR pressure gages.



RF BRAKEAPG

Figure 1. Air Tanks.

2. Shut down engine. (Volume 1, WP 0019)
3. Check FRONT BRAKE AIR and REAR BRAKE AIR pressure gages.

CONDITION/INDICATION

Are air tanks pressurized?

DECISION

COMPRESSOR FAULTY - Perform Air System Troubleshooting (Air System Loses Pressure During Operation/Slow Air Pressure Buildup). (WP 0270, Test 1 - Does air system lose pressure during operation or have slow air pressure buildup?)

COMPRESSOR OK - Perform Electrical System Troubleshooting (Horn Does Not Operate) (Step 2 - Does horn operate?)

STEP 2**Does horn operate?**

1. Position master power switch to on. (Volume 1, WP 0004)
2. Press horn button. (Volume 1, WP 0007)
3. Check to hear if horn operates.
4. Release horn button. (Volume 1, WP 0007)
5. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does horn operate?

DECISION

HORN FAULTY - Perform Electrical System Troubleshooting (Horn Does Not Operate) (WP 0181, Test 2 - Does windshield washer operate?)

HORN OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
TAILGATE RELEASE DOES NOT OPERATE (PNEUMATIC SYSTEM)**

INITIAL SETUP:

Equipment Condition

Engine running. (Volume 1, WP 0019)

*** The following is applicable to the following UOC(s): TSR TSQ. ***

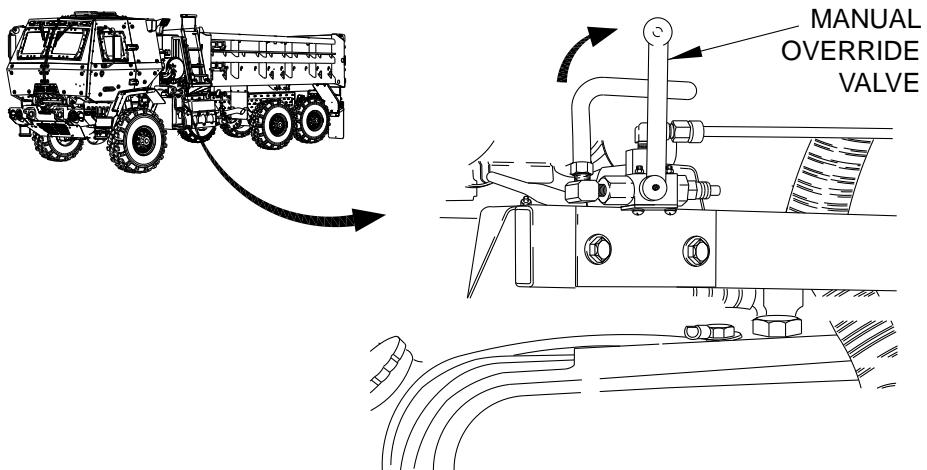
TROUBLESHOOTING PROCEDURE

TAILGATE RELEASE DOES NOT OPERATE (PNEUMATIC SYSTEM)

STEP 1

Is the manual override valve in the disengaged (upright) position?

1. Ensure the manual override valve in the disengaged (upright) position.



M0VDP10

Figure 1. Manual Override Valve.

CONDITION/INDICATION

Is the manual override valve in the disengaged (upright) position?

DECISION

Continue - Step 2 - Does tailgate cylinder operate properly?

STEP 2**Does tailgate cylinder operate properly?**

1. Check to see if tailgate operates. (Volume 1, WP 0004, Table 6)

CONDITION/INDICATION

Does tailgate cylinder operate properly?

DECISION

TAILGATE FAULTY - Step 3 - Does CTIS operate?

TAILGATE OK - Fault Corrected

STEP 3**Does CTIS operate?**

1. Check to see if CTIS operates. (Volume 1, WP 0021)

CONDITION/INDICATION

Does CTIS operate?

DECISION

CTIS FAULTY - Perform operator level troubleshooting (CTIS Fails to Inflate or Deflate Tires). (WP 0283)

CTIS OK - Step 4 - Are air hoses and fittings free from leaks?

STEP 4**Are air hoses and fittings free from leaks?**

1. Raise dump bed. (Volume 1, WP 0032)
2. Raise two maintenance legs on frame. (Volume 1, WP 0032)
3. Lower dump body onto maintenance legs. (Volume 1, WP 0032)
4. Check to see if air hoses and fittings are free from leaks.

CONDITION/INDICATION

Are air hoses and fittings free from leaks?

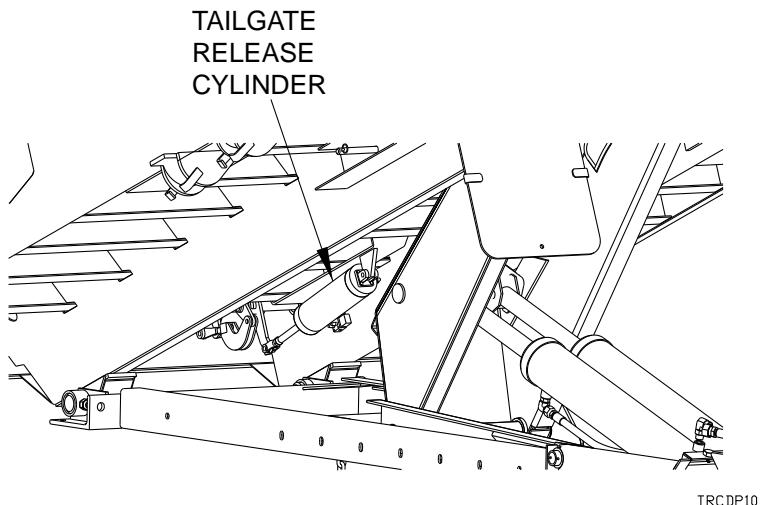
DECISION

LEAKS FOUND - Notify Field Maintenance to repair leaks.

NO LEAKS - Step 5 - Is tailgate release cylinder free from obvious damage?

STEP 5**Is tailgate release cylinder free from obvious damage?**

1. Inspect tailgate release cylinder for obvious signs of damage.



TRCDP10

Figure 2. Tailgate Release Cylinder.

CONDITION/INDICATION

Is tailgate release cylinder free from obvious damage?

DECISION

CYLINDER FAULTY - Notify Field Maintenance

CYLINDER OK - Notify Field Maintenance to perform electrical troubleshooting (Tailgate release does not operate).

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
TIRES WEAR UNEVENLY OR EXCESSIVELY**

INITIAL SETUP:

Tools and Special Tools

Inflator-Gage, Tire, W/Hose (Volume 3, WP 0357, Table 2, Item 15)

Equipment Condition

Engine running. (Volume 1, WP 0019)

**TROUBLESHOOTING PROCEDURE
TIRES WEAR UNEVENLY OR EXCESSIVELY**

STEP 1

Does steering operate properly?

1. Road test vehicle to check steering.

CONDITION/INDICATION

Does steering operate properly?

DECISION

STEERING FAULTY - Perform Steering System Troubleshooting (Hard to Steer).

(WP 0293, Test 1 - Is power steering reservoir full?)

STEERING OK - Step 2 - Is tire pressure sufficient in CTIS HWY mode?

STEP 2

Is tire pressure sufficient in CTIS HWY mode?

1. Set CTIS to HWY mode. (Volume 1, WP 0021)
2. Check pressure of each tire with tire gage.
3. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Is tire pressure sufficient in CTIS HWY mode?

DECISION

AIR LOW - Perform CTIS troubleshooting (Central Tire Inflation System (CTIS) ECU Lights Illuminate, but CTIS Does Not Inflate Or Deflate Tires). (WP 0283)

AIR OK - Step 3 - Do tires wear unevenly or excessively?

STEP 3

Do tires wear unevenly or excessively?

1. Check to see if tires wear unevenly or excessively.

CONDITION/INDICATION

Do tires wear unevenly or excessively?

DECISION

TIRES FAULTY - Notify Field Maintenance.

TIRES OK - Fault Corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE WHEEL WOBBLIES OR SHIMMIES

INITIAL SETUP:

Equipment Condition

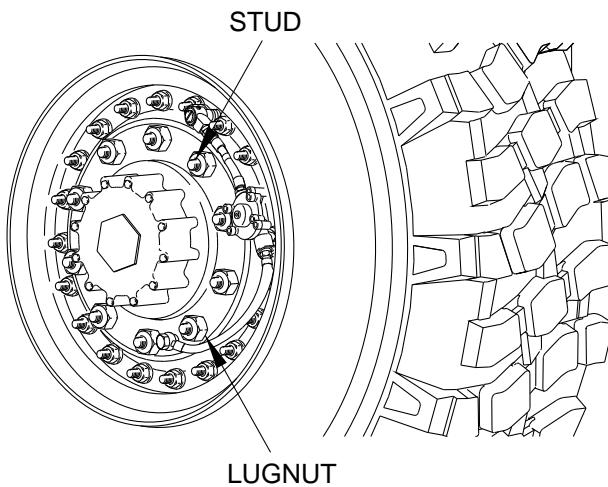
Engine shut down (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE WHEEL WOBBLIES OR SHIMMIES

STEP 1

Are wheel studs bent or broken or are lugnuts missing or loose?

1. Visually inspect tires.



WHEELLT10

Figure 1. Wheel Studs.

CONDITION/INDICATION

Are wheel studs bent or broken or are lugnuts missing or loose?

DECISION

HARDWARE FAULTY - Notify Field Maintenance.

HARDWARE OK - Step 2 - Does wheel wobble or shimmy?

STEP 2

Does wheel wobble or shimmy?

WARNING

Notify Field Maintenance that lugnuts need to be tightened to 425-475 lb-ft (566-644 N·m) as soon as possible. Wheel may come loose if lugnuts are not tightened to proper torque. Failure to comply may result in serious injury or death to personnel.

1. Check to see if wheel wobbles.

CONDITION/INDICATION

Does wheel wobble or shimmy?

DECISION

WHEEL FAULTY - Notify Field Maintenance.

WHEEL OK - Fault Corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE LOSS OF HYDRAULIC PRESSURE

INITIAL SETUP:

Equipment Condition

Engine shut down (Volume 1,
WP 0019)

***** The following is applicable to the following UOC(s): TSA TSB TSC TSD TSE TSF
TSG TSH TSL TSM TSP TSQ TSR TSU TSV TSX. *****

TROUBLESHOOTING PROCEDURE LOSS OF HYDRAULIC PRESSURE

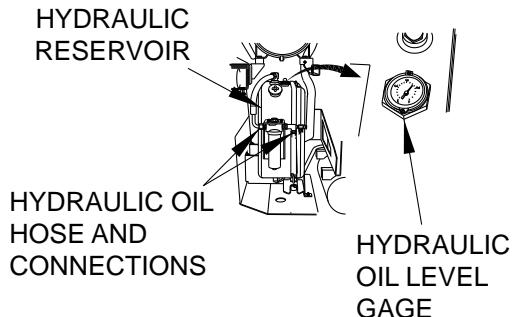
STEP 1

Is hydraulic reservoir full?

CAUTION

Hydraulic oil level gauge should read two marks past 3/4 mark during a cold check. This is a normal reading. Do not overfill reservoir. Failure to comply may cause damage to equipment.

1. Check hydraulic oil level gage to determine hydraulic oil level.



HYDHCOGLT10

Figure 1. Hydraulic Reservoir.

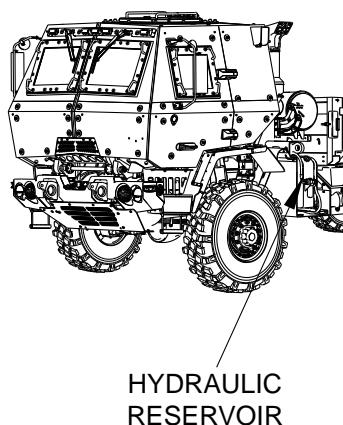
CONDITION/INDICATION

Is hydraulic reservoir full?

DECISION

RESERVOIR LOW - Add oil as required. (Volume 3, WP 0337) Step 2 - Does vehicle have a loss of hydraulic pressure?

RESERVOIR FULL - Step 2 - Does vehicle have a loss of hydraulic pressure?



HYDRESL T10

STEP 2**Does vehicle have a loss of hydraulic pressure?******* The following is applicable to the following UOC(s): TSA TSH TSL TSQ. *****

1. Check to see if vehicle has a loss of hydraulic pressure. (WP 0068)

***** The following is applicable to the following UOC(s): TSG TSV. *****

2. Check to see if vehicle has a loss of hydraulic pressure. (Volume 1, WP 0033)

CONDITION/INDICATION

Does vehicle have a loss of hydraulic pressure?

DECISION

PRESSURE LOSS - Notify Field Maintenance.

PRESSURE OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
NO HYDRAULIC FUNCTIONS OPERATE (HYDRAULIC SYSTEM)**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
NO HYDRAULIC FUNCTIONS OPERATE (HYDRAULIC SYSTEM)**

STEP 1

Has Operator level electrical system troubleshooting been performed?

CONDITION/INDICATION

Has Operator level electrical system troubleshooting been performed?

DECISION

ELECTRICAL SYSTEM - Perform Electrical System troubleshooting (No Hydraulic Functions Operate). (WP 0208)

ELECTRICAL PERFORMED - Step 2 - Are hydraulic hoses and fittings free from Class III leaks?

STEP 2

Are hydraulic hoses and fittings free from Class III leaks?

1. Check to see if hydraulic hoses and fittings are free from Class III leaks.

CONDITION/INDICATION

Are hydraulic hoses and fittings free from Class III leaks?

DECISION

LEAKS FOUND - Notify Field maintenance to repair leaks.

NO LEAKS - Step 3 - Is hydraulic fluid at proper level?

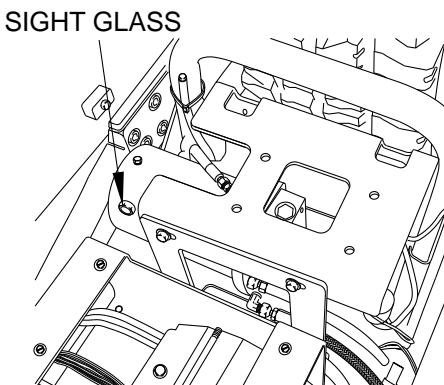
STEP 3

Is hydraulic fluid at proper level?

NOTE

Reservoir is full when fluid is visible in the sight glass. Do not overfill.

1. Check sight glass for fluid level in reservoir tank.



sight

Figure 1. Hydraulic Fluid.

CONDITION/INDICATION

Is hydraulic fluid at proper level?

DECISION

CONTINUE - Notify Field Maintenance to continue electrical system troubleshooting (No Hydraulic Functions Operate).

FILL - Notify Field Maintenance.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
CENTRAL TIRE INFLATION SYSTEM (CTIS) ECU DOES NOT ILLUMINATE**

INITIAL SETUP:

Equipment Condition

Engine shut down (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE

CENTRAL TIRE INFLATION SYSTEM (CTIS) ECU DOES NOT ILLUMINATE

STEP 1

Does CTIS ECU illuminate?

1. Check to see if CTIS ECU illuminates. (Volume 1, WP 0021)

CONDITION/INDICATION

Does CTIS ECU illuminate?

DECISION

ECU FAULTY - Perform Electrical System Troubleshooting (Central Tire Inflation System (CTIS) Does Not Operate). (WP 0185, Test 1 - Is circuit breaker CB40 tripped?)
ECU OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
CENTRAL TIRE INFLATION SYSTEM (CTIS) ECU INDICATOR LIGHTS
SEQUENTIALLY FLASHING**

INITIAL SETUP:

Equipment Condition

Engine running. (Volume 1, WP 0019)

TROUBLESHOOTING PROCEDURE

**CENTRAL TIRE INFLATION SYSTEM (CTIS) ECU INDICATOR LIGHTS
SEQUENTIALLY FLASHING**

STEP 1

Does CTIS operate?

1. Check to see if CTIS operates. (Volume 1, WP 0021)

CONDITION/INDICATION

Does CTIS operate?

DECISION

CTIS FAULTY - Perform Electrical System Troubleshooting (Central Tire Inflation System (CTIS) Does Not Operate). (WP 0185, Test 1 - Is circuit breaker CB40 tripped?)

CTIS OK - Step 2 - Does Central Tire Inflation System (CTIS) ECU fault clear when HWY and RUN FLAT modes are selected simultaneously?

STEP 2

Does Central Tire Inflation System (CTIS) ECU fault clear when HWY and RUN FLAT modes are selected simultaneously?

CAUTION

When RUN FLAT has been selected to perform troubleshooting step, RUN FLAT will have to be pressed again when step is completed to terminate CENTRAL TIRE INFLATION SYSTEM (CTIS) operation and prevent excessive air loss. Failure to comply may result in damage to equipment.

1. Select HWY and RUN FLAT modes simultaneously. (Volume 1, WP 0021)
2. Allow CTIS to cycle.
3. Check to see if CTIS ECU has sequentially flashing lights.
4. Select RUN FLAT. (Volume 1, WP 0021)
5. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Does Central Tire Inflation System (CTIS) ECU fault clear when HWY and RUN FLAT modes are selected simultaneously?

DECISION

CTIS OK - Fault Corrected.

CTIS Faulty - Notify Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
CENTRAL TIRE INFLATION SYSTEM (CTIS) ECU LIGHTS ILLUMINATE, BUT CTIS
DOES NOT INFLATE OR DEFLATE TIRES

INITIAL SETUP:

Equipment Condition

Engine running. (Volume 1, WP 0019)

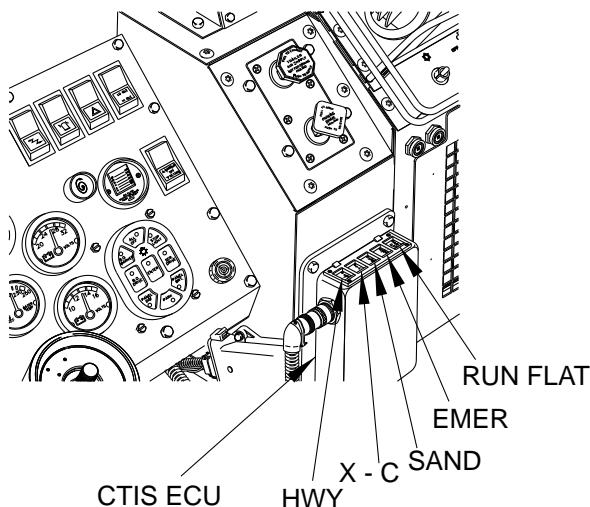
TROUBLESHOOTING PROCEDURE

CENTRAL TIRE INFLATION SYSTEM (CTIS) ECU LIGHTS ILLUMINATE, BUT CTIS
DOES NOT INFLATE OR DEFLATE TIRES

STEP 1

Do CTIS ECU lights illuminate?

1. Check to see if CTIS ECU lights illuminate.



CTISECU

Figure 1. CTIS ECU Lights.

CONDITION/INDICATION

Do CTIS ECU lights illuminate?

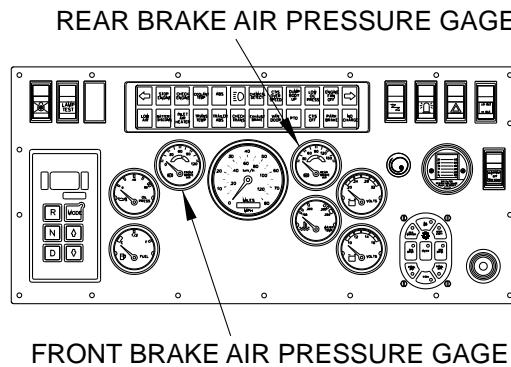
DECISION

NO LIGHTS - Perform Electrical System Troubleshooting (Central Tire Inflation System (CTIS) Does Not Operate). (WP 0185, Test 1 - Is circuit breaker CB40 tripped?)

LIGHTS ILLUMINATE - Step 2 - Are air tanks pressurized?

STEP 2**Are air tanks pressurized?**

1. Allow engine to idle until 120 psi is registered on FRONT BRAKE AIR and REAR BRAKE AIR pressure gages.



LTASRBAPG

Figure 2. Air Tanks.

2. Shut down engine. (Volume 1, WP 0019)
3. Check FRONT BRAKE AIR and REAR BRAKE AIR pressure gages.

CONDITION/INDICATION

Are air tanks pressurized?

DECISION

COMPRESSOR FAULTY - Perform Air System Troubleshooting (Air System Loses Pressure During Operation/Slow Air Pressure Buildup). (WP 0270, Test 1 - Does air system lose pressure during operation or have slow air pressure buildup?)

COMPRESSOR OK - Step 3 - Does CTIS inflate and deflate tires?

STEP 3**Does CTIS inflate and deflate tires?**

1. Start engine (Volume 1, WP 0019).
2. Select mode on CTIS ECU. (Volume 1, WP 0021)
3. Check to see if CTIS inflates or deflates tires.
4. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Does CTIS inflate and deflate tires?

DECISION

CTIS OK - Fault Corrected.

CTIS Faulty - Notify Field Maintenance.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
CENTRAL TIRE INFLATION SYSTEM (CTIS) OVERSPEED INDICATOR
ILLUMINATES SOLIDLY**

INITIAL SETUP:

Equipment Condition

Engine shut down (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
CENTRAL TIRE INFLATION SYSTEM (CTIS) OVERSPEED INDICATOR
ILLUMINATES SOLIDLY**

STEP 1

Does CTIS OVERSPEED indicator illuminate when vehicle is driven over 5 mph?

NOTE

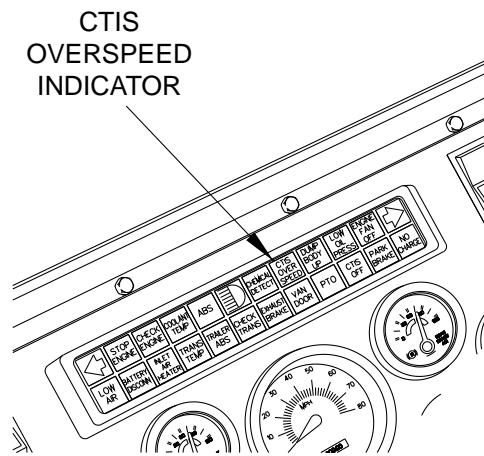
If ignition has been cycled or engine has been started 25 times or more without truck being moved, CTIS OVERSPEED indicator can be cleared by driving vehicle over 5 mph.

1. Start engine. (Volume 1, WP 0019)
2. Select any CTIS mode except EMER. (Volume 1, WP 0021)

NOTE

Do not drive vehicle over maximum speed limit allowed for mode selected. CTIS OVERSPEED indicator will flash if driven over maximum allowed speed for mode selected.

3. Drive vehicle over 5 mph. (Volume 1, WP 0019)
4. Check to see if CTIS OVERSPEED indicator illuminates.



AIRC0

Figure 1. CTIS OVERSPEED Indicator.

5. Park vehicle. (Volume 1, WP 0019)

CONDITION/INDICATION

Does CTIS OVERSPEED indicator illuminate when vehicle is driven over 5 mph?

DECISION

CTIS FAULTY - Notify Field Maintenance.

CTIS OK - Fault corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
CTIS OVERSPEED INDICATOR REMAINS ILLUMINATED**

INITIAL SETUP:

Equipment Condition

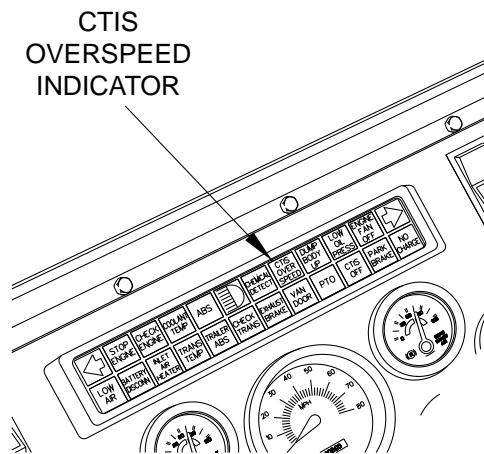
Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
CTIS OVERSPEED INDICATOR REMAINS ILLUMINATED**

STEP 1

Does CTIS OVERSPEED indicator remain illuminated after test drive?

1. Start engine. (Volume 1, WP 0019)
2. Test drive vehicle.
3. Check to see if CTIS OVERSPEED indicator remains illuminated.
4. Shut down engine. (Volume 1, WP 0019)



A1RCD

Figure 1. CTIS OVERSPEED Indicator.

CONDITION/INDICATION

Does CTIS OVERSPEED indicator remain illuminated after test drive?

DECISION

INDICATOR FAULTY - Notify Field Maintenance.
INDICATOR OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
CENTRAL TIRE INFLATION SYSTEM (CTIS) OVERSPEED PRESSURE CHANGE
DOES NOT OPERATE**

INITIAL SETUP:

Tools and Special Tools

Inflator-Gage, Tire, W/Hose (Volume 3, WP 0357, Table 2, Item 15)

Equipment Condition

Engine shut down. (Volume 1, WP 0019)

TROUBLESHOOTING PROCEDURE

**CENTRAL TIRE INFLATION SYSTEM (CTIS) OVERSPEED PRESSURE CHANGE
DOES NOT OPERATE**

STEP 1

Does CTIS OVERSPEED indicator illuminate?

1. Start engine. (Volume 1, WP 0019)
2. Select SAND mode at CTIS ECU. (Volume 1, WP 0021)
3. Perform road test.
4. Increase speed to greater than 12 mph.
5. Check to see if CTIS OVERSPEED indicator illuminates.
6. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Does CTIS OVERSPEED indicator illuminate?

DECISION

INDICATOR FAULTY - Perform Electrical System Troubleshooting (CTIS OVERSPEED Indicator Does Not Illuminate). (WP 0117, Test 1 - Does LAMP TEST switch illuminate CTIS OVERSPEED indicator?)

INDICATOR OK - Perform Electrical System Troubleshooting (Central Tire Inflation System (CTIS) Does Not Operate). (WP 0185, Test 1 - Is circuit breaker CB40 tripped?)

END OF WORK PACKAGE

OPERATOR MAINTENANCE**CENTRAL TIRE INFLATION SYSTEM (CTIS) REPEATEDLY RESUMES CYCLING 30 SECONDS AFTER INDICATOR LIGHTS STOP FLASHING****INITIAL SETUP:****Equipment Condition**

Engine running (Volume 1, WP 0019)

TROUBLESHOOTING PROCEDURE**CENTRAL TIRE INFLATION SYSTEM (CTIS) REPEATEDLY RESUMES CYCLING 30 SECONDS AFTER INDICATOR LIGHTS STOP FLASHING****STEP 1****Are air tanks pressurized?**

1. Allow engine to idle until 120 psi is registered on FRONT BRAKE AIR and REAR BRAKE AIR pressure gages.

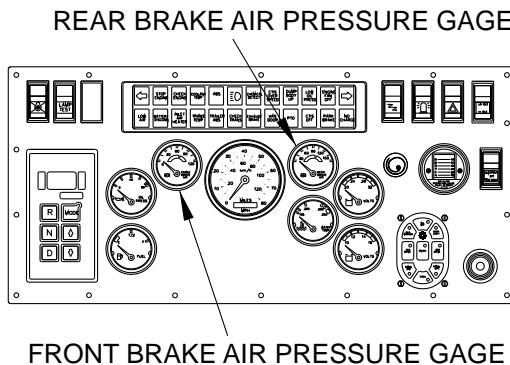


Figure 1. Air Tanks.

2. Shut down engine. (Volume 1, WP 0019)
3. Check FRONT BRAKE AIR and REAR BRAKE AIR pressure gages.

CONDITION/INDICATION

Are air tanks pressurized?

DECISION

COMPRESSOR FAULTY - Perform Air System Troubleshooting (Air System Loses Pressure During Operation/Slow Air Pressure Buildup). (WP 0270, Test 1 - Does air system lose pressure during operation or have slow air pressure buildup?)

COMPRESSOR OK - Step 2 - Does CTIS repeatedly resume cycling 30 seconds after indicator lights stop flashing?

STEP 2

Does CTIS repeatedly resume cycling 30 seconds after indicator lights stop flashing?

1. Change CTIS pressure. (Volume 1, WP 0021)

NOTE

Central Tire Inflation System (CTIS) Electronic Control Unit (ECU) checks tire pressure 30 seconds after completing a pressure change sequence. If tire pressures are the same, system reverts to checking pressure every 15 minutes. If tires are losing pressure, CTIS ECU inflates tires and checks pressure again in 30 seconds. If CTIS has to repeat this process more than 10 times, CTIS ECU will display four flashing lights.

2. Check to see if CTIS repeatedly resumes cycling 30 seconds after indicator lights stop flashing.
3. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Does CTIS repeatedly resume cycling 30 seconds after indicator lights stop flashing?

DECISION

CTIS FAULTY - Notify Field Maintenance.

CTIS OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
FIVE FLASHING LIGHTS ON CENTRAL TIRE INFLATION SYSTEM (CTIS) ECU**

INITIAL SETUP:

Equipment Condition

Engine shut down (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
FIVE FLASHING LIGHTS ON CENTRAL TIRE INFLATION SYSTEM (CTIS) ECU**

STEP 1

Are air tanks pressurized?

1. Start engine. (Volume 1, WP 0019)
2. Allow engine to idle until 120 psi is registered on FRONT BRAKE AIR and REAR BRAKE AIR pressure gages.

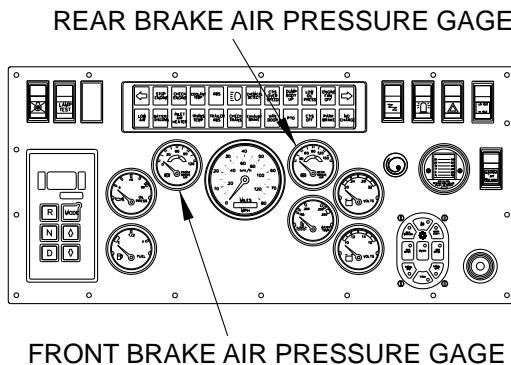


Figure 1. Air Tanks.

3. Check FRONT BRAKE AIR and REAR BRAKE AIR pressure gages.
4. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Are air tanks pressurized?

DECISION

COMPRESSOR FAULTY - Perform Air System Troubleshooting (Air System Loses Pressure During Operation/Slow Air Pressure Buildup). (WP 0270, Test 1 - Does air system lose pressure during operation or have slow air pressure buildup?)

COMPRESSOR OK - Step 2 - Does Central Tire Inflation System (CTIS) fault clear when ignition is cycled and RUN FLAT is selected?

STEP 2

Does Central Tire Inflation System (CTIS) fault clear when ignition is cycled and RUN FLAT is selected?

CAUTION

When RUN FLAT has been selected to perform troubleshooting step, RUN FLAT will have to be pressed again when step is completed to terminate CENTRAL TIRE INFLATION SYSTEM (CTIS) operation and prevent excessive air loss. Failure to comply may result in damage to equipment.

NOTE

Five mode lights flashing indicate defect in Central Tire Inflation System (CTIS) critical component(s) causing system to shut off. Override cannot be applied, but system can be activated by turning vehicle off and then on again. This causes system to reset and allow check of problem correction procedure(s).

1. Check CTIS vent for any obstructions and clean as necessary.

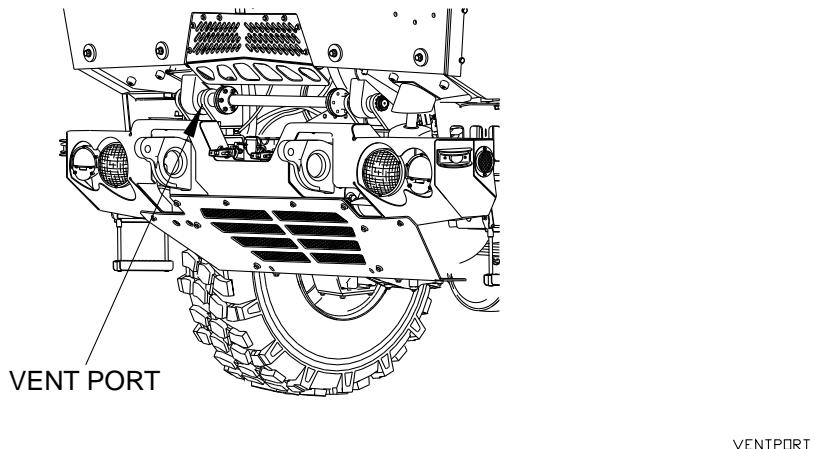


Figure 2. Central Tire Inflation System (CTIS) Fault.

2. Position master power switch to on. (Volume 1, WP 0004)
3. Select RUN FLAT with any mode. (Volume 1, WP 0021)
4. Start engine (Volume 1, WP 0019).
5. Allow CTIS to cycle.
6. Select RUN FLAT. (Volume 1, WP 0021)
7. Shut down engine. (Volume 1, WP 0019)
8. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does Central Tire Inflation System (CTIS) fault clear when ignition is cycled and RUN FLAT is selected?

DECISION

CTIS OK - Fault Corrected.

CTIS Faulty - Notify Field Maintenance.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
FOUR FLASHING LIGHTS ON CENTRAL TIRE INFLATION SYSTEM (CTIS) ECU**

INITIAL SETUP:

Tools and Special Tools

Inflator-Gage, Tire, W/Hose (Volume 3, WP 0357, Table 2, Item 15)

Equipment Condition

Engine shut down. (Volume 1, WP 0019)

**TROUBLESHOOTING PROCEDURE
FOUR FLASHING LIGHTS ON CENTRAL TIRE INFLATION SYSTEM (CTIS) ECU**

STEP 1

Are tires at correct pressures?

1. Check pressure of each tire with tire gage.

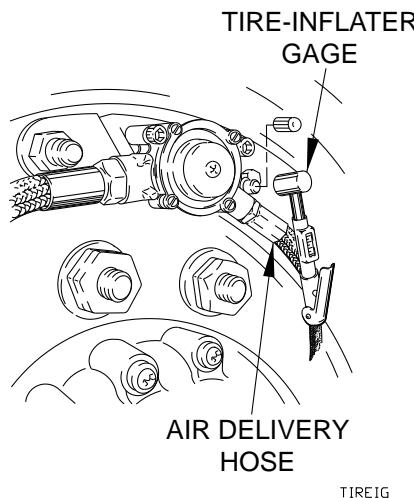


Figure 1. Tires.

CONDITION/INDICATION

Are tires at correct pressures?

DECISION

AIR LOW - Manually inflate low tire(s). (Volume 3, WP 0343) Step 3 - Does CTIS ECU have four flashing lights?

AIR OK - Step 2 - Does CTIS ECU fault clear when ignition is cycled and RUN FLAT is selected?

STEP 2

Does CTIS ECU fault clear when ignition is cycled and RUN FLAT is selected?

CAUTION

When RUN FLAT has been selected to perform troubleshooting step, RUN FLAT will have to be pressed again when step is completed to terminate CENTRAL TIRE INFLATION SYSTEM (CTIS) operation and prevent excessive air loss. Failure to comply may result in damage to equipment.

NOTE

Four mode lights flashing indicate Central Tire Inflation System (CTIS) has shut off due to uneven tire pressure (one tire 50 percent less than other pressures will do it), tire damage, or major leak. Operator can continue CTIS operation by pressing RUN FLAT on CTIS ECU. When RUN FLAT has been selected CTIS ECU checks pressures at 15 second intervals.

1. Position master power switch to on. (Volume 1, WP 0004)
2. Select RUN FLAT with any mode. (Volume 1, WP 0021)
3. Start engine (Volume 1, WP 0019).
4. Allow CTIS to cycle.
5. Select RUN FLAT. (Volume 1, WP 0021)
6. Shut down engine. (Volume 1, WP 0019)
7. Position master power switch to off. (Volume 1, WP 0004)

CONDITION/INDICATION

Does CTIS ECU fault clear when ignition is cycled and RUN FLAT is selected?

DECISION

CTIS OK - Fault corrected.

CTIS Faulty - Notify Field Maintenance.

STEP 3

Does CTIS ECU have four flashing lights?

1. Start engine (Volume 1, WP 0019).

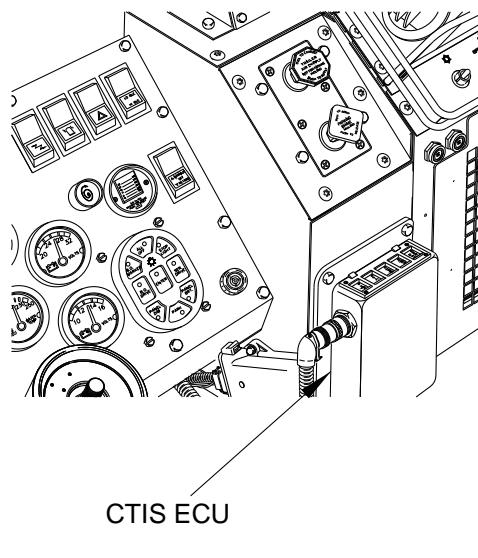


Figure 2. CTIS ECU.

2. Allow CTIS to cycle.
3. Check to see if CTIS ECU has four flashing lights.
4. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Does CTIS ECU have four flashing lights?

DECISION

CTIS OK - Fault Corrected.

CTIS Faulty - Notify Field Maintenance.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
TWO STEADY MODE LIGHTS ILLUMINATE ON CENTRAL TIRE INFLATION
SYSTEM (CTIS) ECU**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

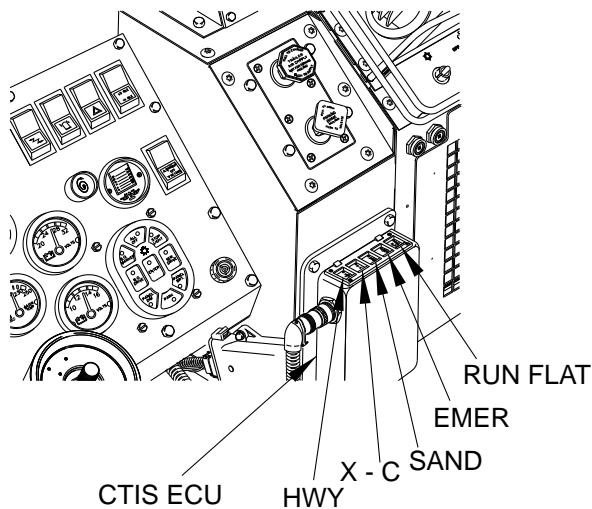
TROUBLESHOOTING PROCEDURE

**TWO STEADY MODE LIGHTS ILLUMINATE ON CENTRAL TIRE INFLATION
SYSTEM (CTIS) ECU**

STEP 1

Does Central Tire Inflation System (CTIS) ECU fault clear when ignition is cycled?

1. Start engine (Volume 1, WP 0019).
2. Allow CTIS system to cycle.



CTISECU

Figure 1. Central Tire Inflation System (CTIS) ECU Fault.

3. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Does Central Tire Inflation System (CTIS) ECU fault clear when ignition is cycled?

DECISION

Fault Corrected - Fault corrected.

Fault Present - Notify Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE AXLE DIFFERENTIAL(S) NOISY

INITIAL SETUP:

Equipment Condition

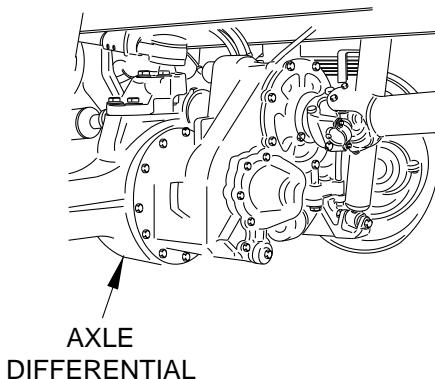
Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE AXLE DIFFERENTIAL(S) NOISY

STEP 1

Is axle differential(s) noisy?

1. Check to see if axle differential(s) is noisy.



AXLNSYL T1001

Figure 1. Axle Differential.

CONDITION/INDICATION

Is axle differential(s) noisy?

DECISION

Not Noisy - Fault Corrected.
Noisy - Notify Field Maintenance.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
EXCESSIVE PLAY WHEN TURNING STEERING WHEEL**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
EXCESSIVE PLAY WHEN TURNING STEERING WHEEL**

STEP 1

Does vehicle have excessive play when turning steering wheel?

1. Check to see if vehicle has excessive play when turning steering wheel.

CONDITION/INDICATION

Does vehicle have excessive play when turning steering wheel?

DECISION

FAULT PRESENT - Notify Field Maintenance.

FAULT ABSENT - Fault Corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE HARD TO STEER

INITIAL SETUP:

Tools and Special Tools

Inflator-Gage, Tire, W/Hose (Volume 3, WP 0357, Table 2, Item 15)

Equipment Condition

Engine shut down. (Volume 1, WP 0019)

TROUBLESHOOTING PROCEDURE HARD TO STEER

STEP 1

Is power steering reservoir full?

CAUTION

Do not overfill power steering reservoir. Failure to comply may result in damage to equipment.

1. Check oil level in steering reservoir. (Volume 3, WP 0340)

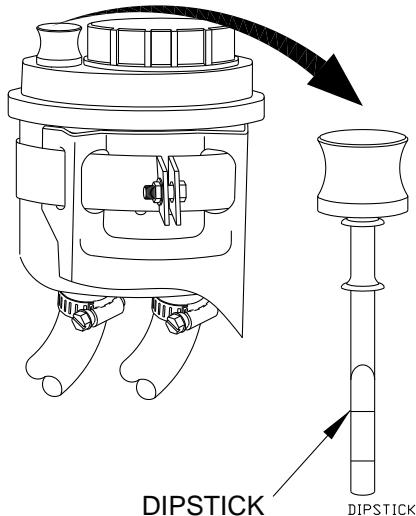


Figure 1. Power Steering Reservoir.

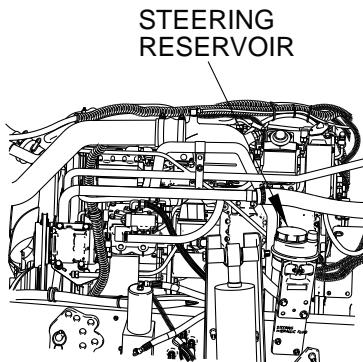
CONDITION/INDICATION

Is power steering reservoir full?

DECISION

RESERVOIR LOW - Add oil as required. (Volume 3, WP 0337) Step 3 - Is vehicle hard to steer?

RESERVOIR FULL - Step 2 - Is tire pressure sufficient in CTIS HWY mode?



STEERRES

STEP 2**Is tire pressure sufficient in CTIS HWY mode?**

1. Set CTIS to HWY mode. (Volume 1, WP 0021)
2. Check pressure of each tire with tire gage.

CONDITION/INDICATION

Is tire pressure sufficient in CTIS HWY mode?

DECISION

AIR LOW - Perform CTIS troubleshooting (Central Tire Inflation System (CTIS) ECU Lights Illuminate, But CTIS Does Not Inflate or Deflate Tires). (WP 0283)

AIR OK - Step 3 - Is vehicle hard to steer?

STEP 3**Is vehicle hard to steer?**

1. Start and operate vehicle. (Volume 1, WP 0019)

CONDITION/INDICATION

Is vehicle hard to steer?

DECISION

STEERING FAULTY - Notify Field Maintenance.
STEERING OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
NO RESPONSE WHEN TURNING STEERING WHEEL**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
NO RESPONSE WHEN TURNING STEERING WHEEL**

STEP 1

Is power steering reservoir full?

CAUTION

Do not overfill power steering reservoir. Failure to comply may result in damage to equipment.

1. Check oil level in steering reservoir. (Volume 3, WP 0340)

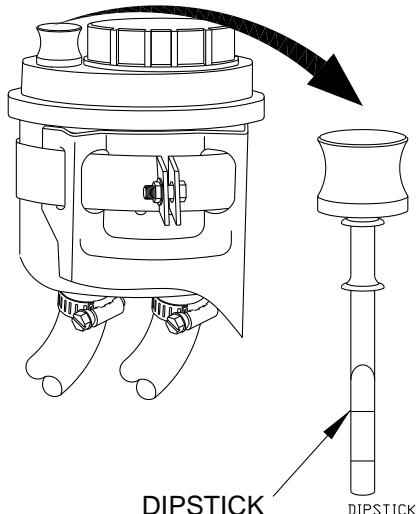


Figure 1. Power Steering Reservoir.

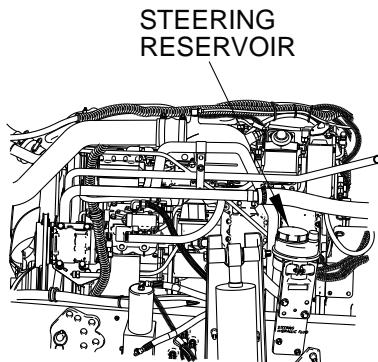
CONDITION/INDICATION

Is power steering reservoir full?

DECISION

RESERVOIR LOW - Add oil as required. (Volume 3, WP 0340) Step 3 - Does vehicle respond when turning steering wheel?

RESERVOIR FULL - Step 2 - Do power steering hoses and fittings have leaks?



STEERRES

STEP 2**Do power steering hoses and fittings have leaks?**

1. Check power steering hoses and fittings for Class III leaks. (Volume 3, WP 0336)

CONDITION/INDICATION

Do power steering hoses and fittings have leaks?

DECISION

HOSE FAULTY - Notify Field Maintenance.

HOSES OK - Step 3 - Does vehicle respond when turning steering wheel?

STEP 3**Does vehicle respond when turning steering wheel?**

1. Check to see if vehicle responds when turning steering wheel. (Volume 1, WP 0019)

CONDITION/INDICATION

Does vehicle respond when turning steering wheel?

DECISION

NO RESPONSE - Notify Field Maintenance.
RESPONDS - Fault corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
WANDERS, PULLS TO ONE SIDE, OR SHIMMIES (STEERING SYSTEM)**

INITIAL SETUP:

Tools and Special Tools

Inflator-Gage, Tire, W/Hose (Volume 3, WP 0357, Table 2, Item 15)

Equipment Condition

Engine shut down. (Volume 1, WP 0019)

TROUBLESHOOTING PROCEDURE

WANDERS, PULLS TO ONE SIDE, OR SHIMMIES (STEERING SYSTEM)

STEP 1

Has Brake System Troubleshooting been performed?

CONDITION/INDICATION

Has Brake System Troubleshooting been performed?

DECISION

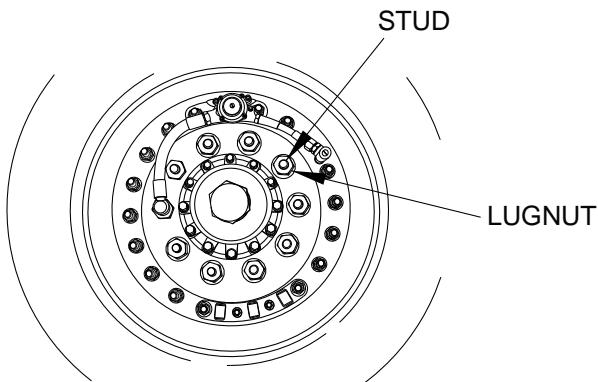
BRAKE SYSTEM - Perform Brake System Troubleshooting (Vehicle Brakes Unevenly, or Brakes Pull to One Side or Grab). (WP 0268, Test 1 - Are air tanks pressurized?)

BRAKE PERFORMED - Step 2 - Are wheel studs bent or broken or are lugnuts missing or loose?

STEP 2

Are wheel studs bent or broken or are lugnuts missing or loose?

1. Visually inspect tires.



WNDRLT2001

Figure 1. Wheel Studs.

CONDITION/INDICATION

Are wheel studs bent or broken or are lugnuts missing or loose?

DECISION

HARDWARE FAULTY - Notify Field Maintenance

HARDWARE OK - Step 3 - Is tire pressure sufficient in CTIS HWY mode?

STEP 3

Is tire pressure sufficient in CTIS HWY mode?

1. Set CTIS to HWY mode. (Volume 1, WP 0021)
2. Check pressure of each tire with tire gage.

CONDITION/INDICATION

Is tire pressure sufficient in CTIS HWY mode?

DECISION

AIR LOW - Perform CTIS troubleshooting (Central Tire Inflation System (CTIS) ECU Lights Illuminate, But CTIS Does Not Inflate or Deflate Tires). (WP 0283)

AIR OK - Step 4 - Does vehicle wander, pull to one side, or shimmy?

STEP 4

Does vehicle wander, pull to one side, or shimmy?

1. Check to see if vehicle wanders, pulls to one side, or shimmies. (Volume 1, WP 0019)

CONDITION/INDICATION

Does vehicle wander, pull to one side, or shimmy?

DECISION

STEERING FAULTY - Notify Field Maintenance.

STEERING OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
FIFTH WHEEL DOES NOT LOCK WHEN COUPLING TRAILER TO TRACTOR**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

*** The following is applicable to the following UOC(s): TSU TSH. ***

TROUBLESHOOTING PROCEDURE

FIFTH WHEEL DOES NOT LOCK WHEN COUPLING TRAILER TO TRACTOR

STEP 1

Is fifth wheel properly lubricated?

1. Check fifth wheel for proper lubrication.

CONDITION/INDICATION

Is fifth wheel properly lubricated?

DECISION

NEEDS LUBRICATION - Lubricate fifth wheel. (Volume 3, WP 0337) Step 2 - Do jaws stay open with primary lock release handle in locked position?

LUBRICATION OK - Step 2 - Do jaws stay open with primary lock release handle in locked position?

STEP 2

Do jaws stay open with primary lock release handle in locked position?

1. Pull out secondary lock release handle and latch in position.

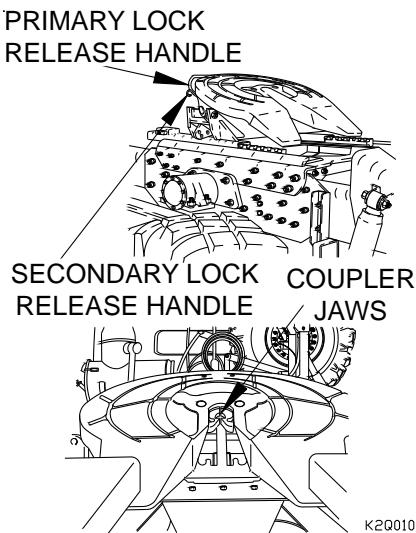


Figure 1. Primary Lock Release Handle.

2. Pull out primary lock release two times.
3. Put primary lock release handle in lock position.
4. Check that jaws stay open with primary lock release handle in locked position.

CONDITION/INDICATION

Do jaws stay open with primary lock release handle in locked position?

DECISION

JAWS FAULTY - Notify Field Maintenance.

JAWS OK - Step 3 - Does fifth wheel lock when coupling trailer to tractor?

STEP 3

Does fifth wheel lock when coupling trailer to tractor?

1. Check if fifth wheel locks when coupling trailer to tractor.

CONDITION/INDICATION

Does fifth wheel lock when coupling trailer to tractor?

DECISION

FAULT PRESENT - Notify Field Maintenance.

FAULT ABSENT - Fault corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
EXCESSIVE MOVEMENT OF TRAILER KING PIN IN FIFTH WHEEL**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

*** The following is applicable to the following UOC(s): TSU TSH. ***

**TROUBLESHOOTING PROCEDURE
EXCESSIVE MOVEMENT OF TRAILER KING PIN IN FIFTH WHEEL**

STEP 1

Is there excessive movement of trailer kingpin in fifth wheel?

1. Check to see if trailer kingpin moves excessively in fifth wheel.

CONDITION/INDICATION

Is there excessive movement of trailer kingpin in fifth wheel?

DECISION

PRESENT - Notify Field Maintenance.

NOT PRESENT - Fault corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
FIFTH WHEEL DOES NOT UNLOCK WHEN DISCONNECTING TRAILER FROM
TRACTOR

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

*** The following is applicable to the following UOC(s): TSU TSH. ***

TROUBLESHOOTING PROCEDURE

FIFTH WHEEL DOES NOT UNLOCK WHEN DISCONNECTING TRAILER FROM
TRACTOR

STEP 1

Is fifth wheel properly lubricated?

1. Check fifth wheel for proper lubrication.

CONDITION/INDICATION

Is fifth wheel properly lubricated?

DECISION

NEEDS LUBRICATION - Lubricate fifth wheel. (Volume 3, WP 0337) Step 2 - Do jaws stay open with primary lock release handle in locked position?

LUBRICATION OK - Step 2 - Do jaws stay open with primary lock release handle in locked position?

STEP 2

Do jaws stay open with primary lock release handle in locked position?

1. Pull out secondary lock release handle and latch in position.

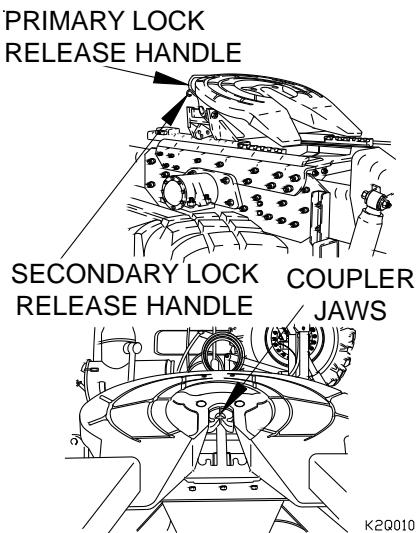


Figure 1. Primary Lock Release Handle.

2. Pull out primary lock release two times.
3. Put primary lock release handle in lock position.
4. Check that jaws stay open with primary lock release handle in locked position.

CONDITION/INDICATION

Do jaws stay open with primary lock release handle in locked position?

DECISION

JAWS FAULTY - Notify Field Maintenance.

JAWS OK - Step 3 - Does fifth wheel unlock when disconnecting trailer from tractor?

STEP 3

Does fifth wheel unlock when disconnecting trailer from tractor?

1. Check if fifth wheel unlocks when disconnecting trailer from tractor.

CONDITION/INDICATION

Does fifth wheel unlock when disconnecting trailer from tractor?

DECISION

FAULT PRESENT - Notify Field Maintenance.

FAULT ABSENT - Fault corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
FIFTH WHEEL SLIDING MECHANISM DOES NOT OPERATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

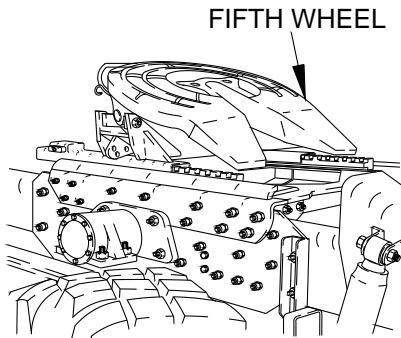
*** The following is applicable to the following UOC(s): TSU TSH. ***

**TROUBLESHOOTING PROCEDURE
FIFTH WHEEL SLIDING MECHANISM DOES NOT OPERATE**

STEP 1

Does fifth wheel sliding mechanism operate?

1. Check to see if fifth wheel sliding mechanism operates (WP 0061) properly.



K2Q0102

Figure 1. Fifth Wheel Sliding Mechanism.

CONDITION/INDICATION

Does fifth wheel sliding mechanism operate?

DECISION

PRESENT - Notify Field Maintenance.
NOT PRESENT - Fault corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
WANDERS, PULLS TO ONE SIDE, OR SHIMMIES (SUSPENSION SYSTEM)**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE

WANDERS, PULLS TO ONE SIDE, OR SHIMMIES (SUSPENSION SYSTEM)

STEP 1

Has Steering System Troubleshooting been performed?

CONDITION/INDICATION

Has Steering System Troubleshooting been performed?

DECISION

STEERING SYSTEM - Perform Steering System Troubleshooting (Wanders, Pulls to One Side, or Shimmies). (WP 0295)

STEERING PERFORMED - Notify Field Maintenance.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
SELF-RECOVERY WINCH (SRW) DOES NOT OPERATE**

INITIAL SETUP:

Materials/Parts

Oil, Lubricating, OE/HDO 10 (Volume 3, WP 0359, Table 1, Item 127, 128, 129)

Equipment Condition

Engine running. (Volume 1, WP 0019)

*** The following is applicable to the following UOC(s): TSA TSC TSE TSH TSJ WRK TSL TSQ. ***

TROUBLESHOOTING PROCEDURE

SELF-RECOVERY WINCH (SRW) DOES NOT OPERATE

STEP 1

Does PTO Operate?

1. Position PTO switch to on. (Volume 1, WP 0005)
2. Check to see if PTO engages.
3. Position PTO switch to off. (Volume 1, WP 0005)

CONDITION/INDICATION

Does PTO Operate?

DECISION

PTO Faulty - Perform Electrical System Troubleshooting (PTO Does Not Engage).
(WP 0193, Test 1 - Is circuit breaker CB49 tripped?)

PTO OK - Step 2 - Is hydraulic oil level OK?

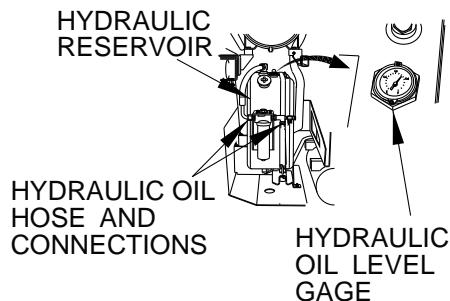
STEP 2

Is hydraulic oil level OK?

NOTE

Hydraulic oil level gage should read two marks past 3/4 mark during a cold check. This is a normal reading.

1. Check hydraulic oil level gage to determine hydraulic oil level.



HYDRHOG

Figure 1. Hydraulic Oil Level.

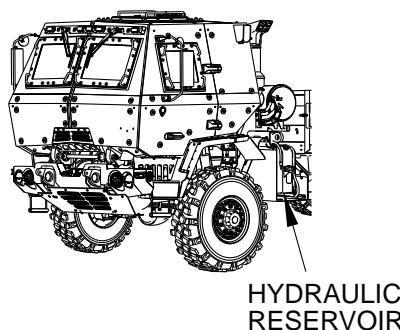
CONDITION/INDICATION

Is hydraulic oil level OK?

DECISION

LOW OIL - Fill hydraulic oil level to appropriate level. (Volume 3, WP 0339) Step 3 - Do hydraulic hoses and fittings have leaks?

OIL OK - Step 3 - Do hydraulic hoses and fittings have leaks?



HYDRES

STEP 3**Do hydraulic hoses and fittings have leaks?**

1. Check hydraulic hoses and fittings for class III leaks (Volume 3, WP 0336).

CONDITION/INDICATION

Do hydraulic hoses and fittings have leaks?

DECISION

HOSE FAULTY - Notify Field Maintenance.

HOSES OK - Step 4 - Does self-recovery winch operate?

STEP 4**Does self-recovery winch operate?**

1. Check to see if self-recovery winch operates.

CONDITION/INDICATION

Does self-recovery winch operate?

DECISION

*** The following is applicable to the following UOC(s): TSA TSL TSH TSQ. ***

Winch OK - Fault Corrected.

Winch Faulty - Notify Field Maintenance.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
STEERING HARD OR DOES NOT OPERATE**

INITIAL SETUP:

Materials/Parts

Hydraulic Fluid (Volume 3, WP 0359,
Table 1, Item 88, 89, 90, 91)

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
STEERING HARD OR DOES NOT OPERATE**

STEP 1

Is power steering reservoir full?

CAUTION

Do not overfill power steering reservoir. Failure to comply may result in damage to equipment.

1. Raise cab (Volume 1, WP 0020).
2. Check that steering reservoir is filled to proper level (Volume 3, WP 0340). Oil should be level with full mark on dipstick.

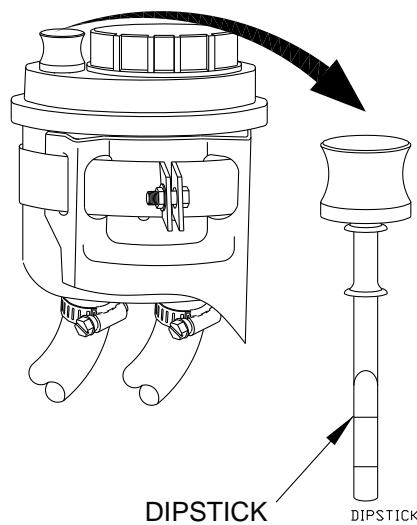


Figure 1. Power Steering Reservoir.

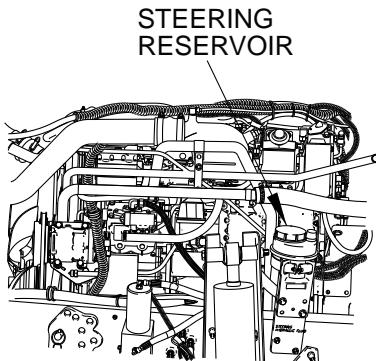
CONDITION/INDICATION

Is power steering reservoir full?

DECISION

RESERVOIR LOW - Add oil as required. (Volume 3, WP 0340) Step 3 - Is steering hard or does not operate?

RESERVOIR FULL - Step 2 - Are hydraulic hoses and/or fittings free from Class III leaks?



STEERRES

STEP 2**Are hydraulic hoses and/or fittings free from Class III leaks?**

1. Check hydraulic hoses and/or fittings for Class III leaks.

CONDITION/INDICATION

Are hydraulic hoses and/or fittings free from Class III leaks?

DECISION

LEAK FOUND - Notify Field Maintenance.

NO LEAKS - Step 3 - Is steering hard or does not operate?

STEP 3**Is steering hard or does not operate?**

1. Lower cab. (Volume 1, WP 0020)
2. Check to see if steering is hard or does not operate.

CONDITION/INDICATION

Is steering hard or does not operate?

DECISION

STEERING FAULTY - Notify Field Maintenance.

STEERING OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
SUSPENSION DOES NOT COMPRESS OR RETURN TO NORMAL PROPERLY
(HYDRAULIC)**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE

**SUSPENSION DOES NOT COMPRESS OR RETURN TO NORMAL PROPERLY
(HYDRAULIC)**

STEP 1

Has Electrical System troubleshooting been performed?

CONDITION/INDICATION

Has Electrical System troubleshooting been performed?

DECISION

ELECTRICAL SYSTEM - Perform Electrical System troubleshooting (Suspension does not compress or return to normal properly). (WP 0210)

ELECTRICAL PERFORMED - Step 2 - Is hydraulic fluid at proper level?

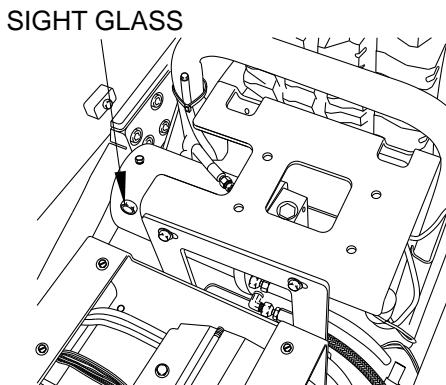
STEP 2

Is hydraulic fluid at proper level?

NOTE

Reservoir is full when fluid is visible in the sight glass. Do not overfill.

1. Check sight glass for fluid level in reservoir tank.



sgage

Figure 1. Hydraulic Fluid.

CONDITION/INDICATION

Is hydraulic fluid at proper level?

DECISION

CONTINUE - Notify Field Maintenance to perform field level electrical system troubleshooting (Suspension does not compress or return to normal properly).
FILL - Notify Field Maintenance to perform Electric Hydraulic Pump Priming.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
DUMP BODY DOES NOT RAISE**

INITIAL SETUP:

Personnel Required
(2)

Equipment Condition
Engine shut down. (Volume 1,
WP 0019)

***** The following is applicable to the following UOC(s): TSR TSQ. *****

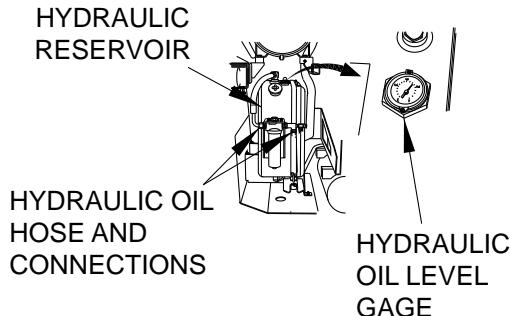
TROUBLESHOOTING PROCEDURE
DUMP BODY DOES NOT RAISE

STEP 1
Is hydraulic reservoir full?

CAUTION

Hydraulic oil level gauge should read two marks past 3/4 mark during a cold check. This is a normal reading. Do not overfill reservoir. Failure to comply may cause damage to equipment.

1. Check hydraulic oil level gage to determine hydraulic oil level.



HYDHCOGLT10

Figure 1. Hydraulic Reservoir.

CONDITION/INDICATION

Is hydraulic reservoir full?

DECISION

RESERVOIR LOW - Add oil as required. (Volume 3, WP 0339) Step 3 - Does dump body raise?

RESERVOIR FULL - Step 2 - Does PTO engage?

STEP 2**Does PTO engage?**

1. Start engine. (Volume 1, WP 0019)
2. Position PTO switch to on. (Volume 1, WP 0005)
3. Check to see if PTO engages.
4. Position PTO switch to off. (Volume 1, WP 0005)
5. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Does PTO engage?

DECISION

PTO Faulty - Perform Hydraulic System Troubleshooting (Loss of Hydraulic Pressure).
(WP 0279, Test 1 - Is hydraulic reservoir full?)

PTO OK - Step 3 - Does dump body raise?

STEP 3

Does dump body raise?

1. Check to see if dump body raises. (Volume 1, WP 0032)

CONDITION/INDICATION

Does dump body raise?

DECISION

DUMP FAULTY - Perform Electrical System Troubleshooting (Dump Body Does Not Raise). (WP 0247, Test 2 - Does tailgate release operate?)

DUMP OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
DUMP BODY DOES NOT LOWER**

INITIAL SETUP:

Personnel Required
(2)

Equipment Condition
Engine shut down. (Volume 1,
WP 0019)

***** The following is applicable to the following UOC(s): TSR TSQ. *****

TROUBLESHOOTING PROCEDURE
DUMP BODY DOES NOT LOWER

STEP 1

Is hydraulic reservoir fluid level below 1/2 full?

CAUTION

Do not fill Hydraulic reservoir to more than 1/2 capacity with bed raised at any level. Failure to comply can cause damage to equipment.

1. Check hydraulic oil level gage to determine hydraulic oil level.

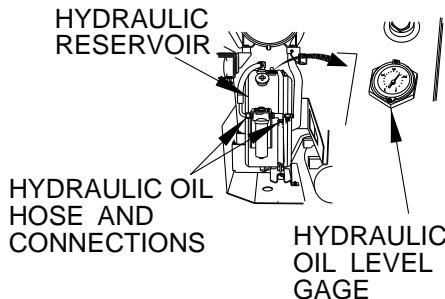


Figure 1. Hydraulic Reservoir Fluid Level.

CONDITION/INDICATION

Is hydraulic reservoir fluid level below 1/2 full?

DECISION

RESERVOIR LOW - Add oil to bring fluid level to 1/2 mark on hydraulic oil level gage.

(Volume 3, WP 0339) Step 3 - Does dump body lower?

RESERVOIR FULL - Step 2 - Does PTO engage?

STEP 2

Does PTO engage?

1. Start engine. (Volume 1, WP 0019)
2. Position PTO switch to on. (Volume 1, WP 0005)
3. Check to see if PTO engages.
4. Position PTO switch to off. (Volume 1, WP 0005)
5. Shut down engine. (Volume 1, WP 0019)

CONDITION/INDICATION

Does PTO engage?

DECISION

PTO FAULTY - Perform Hydraulic System Troubleshooting (Loss of Hydraulic Pressure).

(WP 0279, Test 1 - Is hydraulic reservoir full?)

PTO OK - Step 3 - Does dump body lower?

STEP 3

Does dump body lower?

*** The following is applicable to the following UOC(s): TSR TSQ. ***

1. Check to see if dump body lowers. (Volume 1, WP 0032)

CONDITION/INDICATION

Does dump body lower?

DECISION

DUMP FAULTY - Perform Electrical System Troubleshooting (Dump Body Does Not Lower). (WP 0249, Test 2 - Does tailgate release operate?)

DUMP OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
DUMP BODY DRIFTS DOWN FROM RAISED POSITION**

INITIAL SETUP:

Personnel Required
(2)

Equipment Condition
Engine shut down. (Volume 1,
WP 0019)

*** The following is applicable to the following UOC(s): TSR TSQ. ***

TROUBLESHOOTING PROCEDURE
DUMP BODY DRIFTS DOWN FROM RAISED POSITION

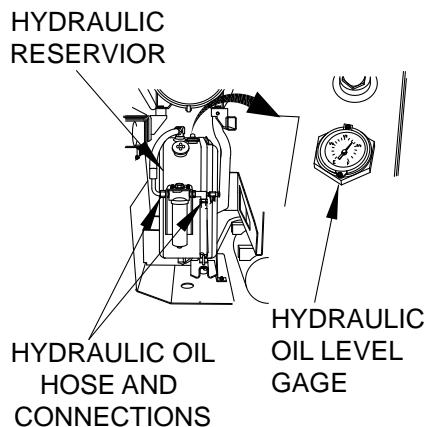
STEP 1

Is hydraulic reservoir full?

CAUTION

Hydraulic oil level gauge should read two marks past 3/4 mark during a cold check. This is a normal reading. Do not overfill reservoir. Failure to comply may cause damage to equipment.

1. Check hydraulic oil level gage to determine hydraulic oil level.



K2V3B01

Figure 1. Hydraulic Reservoir.

CONDITION/INDICATION

Is hydraulic reservoir full?

DECISION

Reservoir Low - Add oil as required (Volume 3, WP 0339) Step 3 - Does dump body drift down from raised position?

Reservoir Full - Step 2 - Is manual hydraulic bypass valve in the disengaged position?

STEP 2

Is manual hydraulic bypass valve in the disengaged position?

1. Check to see if manual hydraulic bypass valve is in the disengaged position.

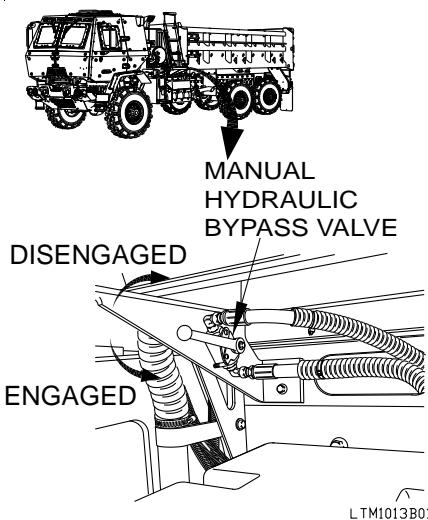


Figure 2. Manual Hydraulic Bypass Valve.

2. If manual hydraulic bypass valve is in the engaged position, move manual hydraulic bypass valve to disengaged position.

CONDITION/INDICATION

Is manual hydraulic bypass valve in the disengaged position?

DECISION

Continue - Step 3 - Does dump body drift down from raised position?

STEP 3

Does dump body drift down from raised position?

1. Raise dump body. (Volume 1, WP 0032)
2. Check to see if dump body drifts down from raised position.
3. Lower dump body. (Volume 1, WP 0032)

CONDITION/INDICATION

Does dump body drift down from raised position?

DECISION

Dump Faulty - Notify Field Maintenance.

Dump OK - Fault Corrected

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
LIGHT MATERIAL HANDLING CRANE (LMHC) DOES NOT OPERATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

***** The following is applicable to the following UOC(s): TSA TSB TSC TSD TSL
TSM. *****

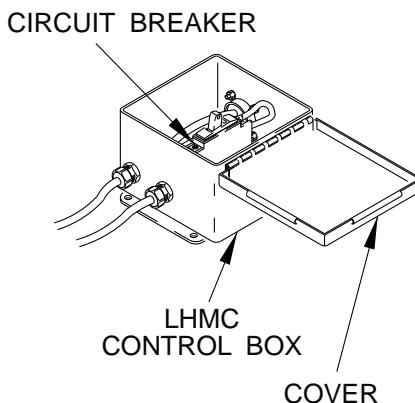
TROUBLESHOOTING PROCEDURE

LIGHT MATERIAL HANDLING CRANE (LMHC) DOES NOT OPERATE

STEP 1

Is LMHC control box circuit breaker tripped?

1. Disconnect NATO cable.



LHMCCB

Figure 1. LMHC Control Box Circuit Breaker.

2. Open cover on LMHC control box.
3. If LMHC control box circuit breaker is tripped, position LMHC control box circuit breaker to ON.

4. Connect NATO cable.
5. Check LMHC control box circuit breaker to see if it is tripped again.
6. Close cover on LMHC control box.

CONDITION/INDICATION

Is LMHC control box circuit breaker tripped?

DECISION

BREAKER TRIPPED - Notify Field Maintenance.

BREAKER OK - Step 2 - Does LMHC operate?

STEP 2**Does LMHC operate?**

1. Check to see if LMHC operates. (Volume 1, WP 0023)

CONDITION/INDICATION

Does LMHC operate?

DECISION

LMHC FAULTY - Notify Field Maintenance.

LMHC OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
LIGHT MATERIAL HANDLING CRANE (LMHC) HOIST IN DOES NOT OPERATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

***** The following is applicable to the following UOC(s): TSA TSB TSC TSD TSL
TSM. *****

TROUBLESHOOTING PROCEDURE

LIGHT MATERIAL HANDLING CRANE (LMHC) HOIST IN DOES NOT OPERATE

STEP 1

Does LMHC hoist out operate?

1. Check to see if LMHC hoist out operates. (Volume 1, WP 0023)

CONDITION/INDICATION

Does LMHC hoist out operate?

DECISION

HOIST OUT FAULTY - Perform Special Purpose Kits Troubleshooting (Light Material Handling Crane (LMHC) Does Not Operate). (WP 0307, Test 1 - Is LMHC control box circuit breaker tripped?)

HOIST OUT OK - Step 2 - Does LMHC hoist in operate?

STEP 2

Does LMHC hoist in operate?

1. Check to see if LMHC hoist in operates. (Volume 1, WP 0023)

CONDITION/INDICATION

Does LMHC hoist in operate?

DECISION

HOIST IN FAULTY - Notify Field Maintenance.

HOIST IN OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
LIGHT MATERIAL HANDLING CRANE (LMHC) HOIST OUT DOES NOT OPERATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

***** The following is applicable to the following UOC(s): TSA TSB TSC TSD TSL
TSM. *****

TROUBLESHOOTING PROCEDURE

LIGHT MATERIAL HANDLING CRANE (LMHC) HOIST OUT DOES NOT OPERATE

STEP 1

Does LMHC hoist in operate?

1. Check to see if LMHC hoist in operates.

CONDITION/INDICATION

Does LMHC hoist in operate?

DECISION

HOIST IN FAULTY - Perform Special Purpose Kits troubleshooting (Light Material Handling Crane (LMHC) Does Not Operate). (WP 0307, Test 1 - Is LMHC control box circuit breaker tripped?)

HOIST IN OK - Step 2 - Does LMHC hoist out operate?

STEP 2

Does LMHC hoist out operate?

1. Check to see if LMHC hoist out operates.

CONDITION/INDICATION

Does LMHC hoist out operate?

DECISION

HOIST OUT FAULTY - Notify Field Maintenance.

HOIST OUT OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
TWO-WAY TROOP INTERCOM DOES NOT OPERATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

***** The following is applicable to the following UOC(s): TSA TSB TSC TSD TSL
TSM. *****

TROUBLESHOOTING PROCEDURE

TWO-WAY TROOP INTERCOM DOES NOT OPERATE

STEP 1

Have Preventative Maintenance Checks and Services (PMCS) Before checks been performed?

CONDITION/INDICATION

Have Preventative Maintenance Checks and Services (PMCS) Before checks been performed?

DECISION

PERFORM PMCS - Perform PMCS-Before checks. (Volume 3, WP 0337)

PMCS PERFORMED - Step 2 - Is either cab or cargo two-way troop intercom LED illuminated red or green?

STEP 2

Is either cab or cargo two-way troop intercom LED illuminated red or green?

1. Position Manual Battery Disconnect Switch (MBDS) to connect (ON). (Volume 1, WP 0011)

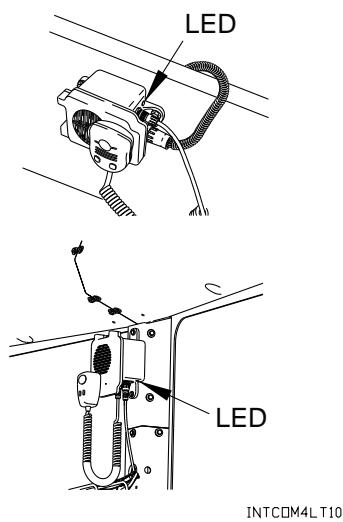


Figure 1. Cab or Cargo Two-Way Troop Intercom LED.

2. Check cab and cargo two-way intercom LED.

CONDITION/INDICATION

Is either cab or cargo two-way troop intercom LED illuminated red or green?

DECISION

Not Illuminated - Step 5 - Is circuit breaker CB42 tripped?

Illuminated - Step 3 - Are both cab and cargo two-way troop intercom LEDs illuminated red or green?

STEP 3

Are both cab and cargo two-way troop intercom LEDs illuminated red or green?

1. Check cab and cargo two-way intercom LED.

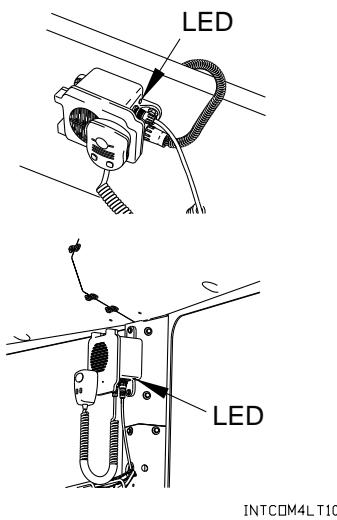


Figure 2. Cab and Cargo Two-Way Troop Intercom LEDs.

CONDITION/INDICATION

Are both cab and cargo two-way troop intercom LEDs illuminated red or green?

DECISION

Not Illuminated - Notify Field Maintenance

Illuminated - Step 4 - Is either cab or cargo two-way troop intercom LED illuminated red?

STEP 4

Is either cab or cargo two-way troop intercom LED illuminated red?

1. Check cab and cargo two-way intercom LED.

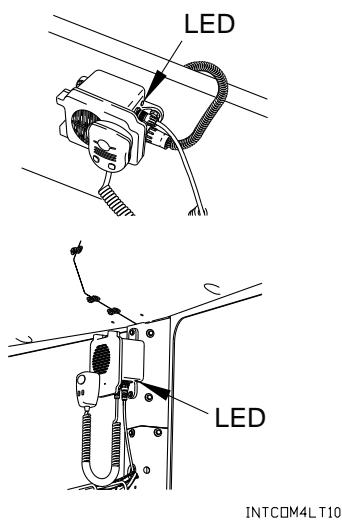


Figure 3. Cab or Cargo Two-Way Troop Intercom LED.

CONDITION/INDICATION

Is either cab or cargo two-way troop intercom LED illuminated red?

DECISION

Red LED - Notify Field Maintenance

LEDs Green - Notify Field Maintenance

STEP 5

Is circuit breaker CB42 tripped?

WARNING



Remove rings, bracelets, wristwatches, neck chains, and any other jewelry before working around vehicle. Jewelry may catch on equipment or may short across an electrical circuit or battery terminal. Failure to comply may result in serious injury or death to personnel.

1. Remove Power Distribution Panel (PDP) cover. (Volume 3, WP 0351)
2. Open Power Distribution Module (PDM) 3.
3. If circuit breaker CB42 is tripped, push button to reset.

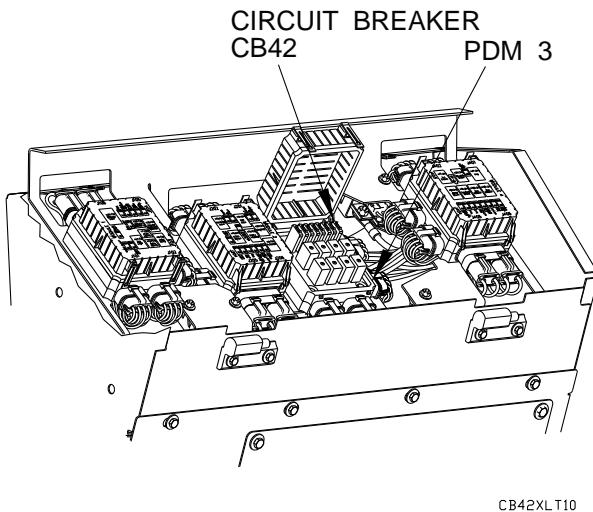


Figure 4. Circuit Breaker CB42.

4. Check circuit breaker CB42 to see if it is tripped again.
5. Close PDM 3.
6. Install PDP cover (Volume 3, WP 0351).

CONDITION/INDICATION

Is circuit breaker CB42 tripped?

DECISION

BREAKER TRIPPED - Notify Field Maintenance
BREAKER OK. - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
CARGO AREA ARCTIC HEATER DOES NOT OPERATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (WP 0053)

***** The following is applicable to the following UOC(s): TSA TSB TSC TSD TSL
TSM. *****

TROUBLESHOOTING PROCEDURE

CARGO AREA ARCTIC HEATER DOES NOT OPERATE

STEP 1

Does cargo area arctic heater operate?

CAUTION

Do not attempt to start cargo area arctic heater more than three times.
Failure to comply may result in damage to equipment.

NOTE

Checking amber warning light is a safety task that would not be performed in a tactical mission.

1. Attempt to operate cargo area arctic heater. (WP 0059)

CONDITION/INDICATION

Does cargo area arctic heater operate?

DECISION

HEATER FAULTY - Notify Field Maintenance.

HEATER OK - Fault Corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
CARGO AREA ARCTIC HEATER INDICATOR LAMP BLINKS TWICE WHILE
HEATER IS RUNNING

INITIAL SETUP:

Equipment Condition

Engine shut down. (WP 0053)

***** The following is applicable to the following UOC(s): TSA TSB TSC TSD TSL TSM. *****

TROUBLESHOOTING PROCEDURE

CARGO AREA ARCTIC HEATER INDICATOR LAMP BLINKS TWICE WHILE
HEATER IS RUNNING

STEP 1

Does cargo area arctic heater indicator lamp blink twice while heater is running?

1. Attempt to operate cargo area arctic heater. (WP 0059)

CONDITION/INDICATION

Does cargo area arctic heater indicator lamp blink twice while heater is running?

DECISION

HEATER FAULTY - Notify Field Maintenance.

HEATER OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
CARGO AREA ARCTIC HEATER SHUTS DOWN AUTOMATICALLY**

INITIAL SETUP:

Equipment Condition

Engine shut down. (WP 0053)

***** The following is applicable to the following UOC(s): TSA TSB TSC TSD TSL TSM. *****

TROUBLESHOOTING PROCEDURE

CARGO AREA ARCTIC HEATER SHUTS DOWN AUTOMATICALLY

STEP 1

Does cargo area arctic heater shut down automatically?

1. Attempt to operate cargo area arctic heater. (WP 0059)

CONDITION/INDICATION

Does cargo area arctic heater shut down automatically?

DECISION

HEATER FAULTY - Notify Field Maintenance.

HEATER OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
CARGO AREA ARCTIC HEATER OVERRIDE SWITCH DOES NOT OPERATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (WP 0053)

***** The following is applicable to the following UOC(s): TSA TSB TSC TSD TSL TSM. *****

TROUBLESHOOTING PROCEDURE

CARGO AREA ARCTIC HEATER OVERRIDE SWITCH DOES NOT OPERATE

STEP 1

Does cargo area arctic heater operate?

CAUTION

Do not attempt to start cargo area arctic heater more than three times.
Failure to comply may result in damage to equipment.

NOTE

Attempt to start cargo area arctic heater three times before proceeding to Field Maintenance Troubleshooting.

1. Attempt to operate cargo area arctic heater. (WP 0059)

CONDITION/INDICATION

Does cargo area arctic heater operate?

DECISION

SWITCH FAULTY - Notify Field Maintenance.

SWITCH OK - Notify Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
**CAB ARCTIC HEATER COMBUSTION STARTS IMMEDIATELY WHEN SWITCHED
ON**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE

**CAB ARCTIC HEATER COMBUSTION STARTS IMMEDIATELY WHEN SWITCHED
ON**

STEP 1

Does cab arctic heater combustion start immediately when switched on?

1. Start cab arctic heater.
2. Check for purge cycle delay before heater combustion starts.
3. Shut down cab arctic heater.

CONDITION/INDICATION

Does cab arctic heater combustion start immediately when switched on?

DECISION

HEATER FAULTY - Notify Field Maintenance.

HEATER OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
CAB ARCTIC HEATER DOES NOT START**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
CAB ARCTIC HEATER DOES NOT START**

STEP 1

Is vehicle fuel level OK?

1. Check vehicle fuel level. (Volume 3, WP 0337)

CONDITION/INDICATION

Is vehicle fuel level OK?

DECISION

LOW FUEL - Fill vehicle fuel tank. (Volume 1, WP 0017) Step 2 - Does cab arctic heater start?

FUEL OK - Step 2 - Does cab arctic heater start?

STEP 2

Does cab arctic heater start?

1. Check to see if cab arctic heater starts.

CONDITION/INDICATION

Does cab arctic heater start?

DECISION

HEATER FAULTY - Notify Field Maintenance.

HEATER OK - Fault Corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE

AFTER CAB ARCTIC HEATER IS SWITCHED ON, HEATER SWITCHES ON AND OFF REPEATEDLY

INITIAL SETUP:**Equipment Condition**

Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE

AFTER CAB ARCTIC HEATER IS SWITCHED ON, HEATER SWITCHES ON AND OFF REPEATEDLY

STEP 1**Can cab arctic heater be started?**

1. Attempt to start cab arctic heater.

CONDITION/INDICATION

Can cab arctic heater be started?

DECISION

DOES NOT START - Perform Special Purpose Kit Troubleshooting (Cab Arctic Heater Does Not Start). (WP 0316, Test 1 - Is vehicle fuel level OK?)

STARTS - Step 2 - Does cab arctic heater switch on and off repeatedly?

STEP 2**Does cab arctic heater switch on and off repeatedly?**

1. Start cab arctic heater.
2. Check to see if cab arctic heater switches on and off repeatedly.
3. Shut down cab arctic heater.

CONDITION/INDICATION

Does cab arctic heater switch on and off repeatedly?

DECISION

FURNACE FAULTY - Notify Field Maintenance.

FURNACE OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
CAB ARCTIC HEATER HARD TO START**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
CAB ARCTIC HEATER HARD TO START**

STEP 1

Can cab arctic heater be started?

1. Attempt to start cab arctic heater.

CONDITION/INDICATION

Can cab arctic heater be started?

DECISION

DOES NOT START - Perform Special Purpose Kit Troubleshooting (Cab Arctic Heater Does Not Start). (WP 0316, Test 1 - Is vehicle fuel level OK?)

STARTS - Step 2 - Does heater fail to start without producing white smoke?

STEP 2

Does heater fail to start without producing white smoke?

1. Attempt to start cab arctic heater.

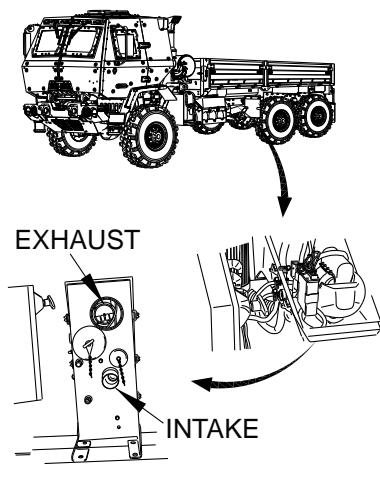


Figure 1. Heater.

2. Check for smoke at exhaust port.
3. Shut down cab arctic heater.

CONDITION/INDICATION

Does heater fail to start without producing white smoke?

DECISION

SMOKE PRESENT - Perform Special Purpose Kits troubleshooting (Cab Arctic Heater Emits White Smoke More Than 20). (WP 0321, Test 1 - Can cab arctic heater be started?)

SMOKE ABSENT - Step 3 - Is cab arctic heater hard to start?

STEP 3

Is cab arctic heater hard to start?

1. Start cab arctic heater.
2. Check to see if cab arctic heater is hard to start.
3. Shut down cab arctic heater.

CONDITION/INDICATION

Is cab arctic heater hard to start?

DECISION

FURNACE FAULTY - Notify Field Maintenance.

FURNACE OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
CAB ARCTIC HEATER TURNS ITSELF OFF**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
CAB ARCTIC HEATER TURNS ITSELF OFF**

STEP 1

Can cab arctic heater be started?

1. Attempt to start cab arctic heater.

CONDITION/INDICATION

Can cab arctic heater be started?

DECISION

DOES NOT START - Perform Special Purpose Kit Troubleshooting (Cab Arctic Heater Does Not Start). (WP 0316)

STARTS - Step 2 - Is vehicle fuel level OK?

STEP 2

Is vehicle fuel level OK?

1. Check vehicle fuel level. (Volume 3, WP 0337)

CONDITION/INDICATION

Is vehicle fuel level OK?

DECISION

LOW FUEL - Fill vehicle fuel tank. (Volume 1, WP 0017) Step 3 - Does cab arctic heater turn itself off?

FUEL OK - Step 3 - Does cab arctic heater turn itself off?

STEP 3

Does cab arctic heater turn itself off?

1. Start cab arctic heater.
2. Check to see if cab arctic heater turns itself off.
3. Shut down cab arctic heater.

CONDITION/INDICATION

Does cab arctic heater turn itself off?

DECISION

HEATER FAULTY - Notify Field Maintenance.

HEATER OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
CAB ARCTIC HEATER EMITS BLACK SMOKE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
CAB ARCTIC HEATER EMITS BLACK SMOKE**

STEP 1

Can cab arctic heater be started?

1. Attempt to start cab arctic heater.

CONDITION/INDICATION

Can cab arctic heater be started?

DECISION

DOES NOT START - Perform Special Purpose Kit Troubleshooting (Cab Arctic Heater Does Not Start). (WP 0316, Test 1 - Is vehicle fuel level OK?)

STARTS - Step 2 - Does cab arctic heater emit black smoke?

STEP 2

Does cab arctic heater emit black smoke?

1. Start cab arctic heater.
2. Check to see if cab arctic heater emits black smoke.
3. Shut down cab arctic heater.

CONDITION/INDICATION

Does cab arctic heater emit black smoke?

DECISION

FURNACE FAULTY - Notify Field Maintenance.

FURNACE OK - Fault Corrected.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
CAB ARCTIC HEATER EMITS WHITE SMOKE MORE THAN 20 SECONDS AFTER
START-UP

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE

CAB ARCTIC HEATER EMITS WHITE SMOKE MORE THAN 20 SECONDS AFTER
START-UP

STEP 1

Can cab arctic heater be started?

1. Attempt to start cab arctic heater.

CONDITION/INDICATION

Can cab arctic heater be started?

DECISION

DOES NOT START - Perform Special Purpose Kit Troubleshooting (Cab Arctic Heater Does Not Start). (WP 0316, Test 1 - Is vehicle fuel level OK?)

STARTS - Step 2 - Does cab arctic heater emit white smoke more than 20 seconds after starting?

STEP 2

Does cab arctic heater emit white smoke more than 20 seconds after starting?

1. Start cab arctic heater.
2. Check to see if cab arctic heater emits white smoke more than 20 seconds after starting.
3. Shut down cab arctic heater.

CONDITION/INDICATION

Does cab arctic heater emit white smoke more than 20 seconds after starting?

DECISION

FURNACE FAULTY - Notify Field Maintenance.

FURNACE OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
CAB ARCTIC HEATER CANNOT BE SWITCHED OFF**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
CAB ARCTIC HEATER CANNOT BE SWITCHED OFF**

STEP 1

Can cab arctic heater be started?

1. Attempt to start cab arctic heater.

CONDITION/INDICATION

Can cab arctic heater be started?

DECISION

DOES NOT START - Perform Special Purpose Kit Troubleshooting (Cab Arctic Heater Does Not Start). (WP 0316, Test 1 - Is vehicle fuel level OK?)

STARTS - Step 2 - Can cab arctic heater be switched off?

STEP 2

Can cab arctic heater be switched off?

1. Start cab arctic heater.
2. Attempt to shut down cab arctic heater.

CONDITION/INDICATION

Can cab arctic heater be switched off?

DECISION

FURNACE FAULTY - Notify Field Maintenance.

FURNACE OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
CAB ARCTIC HEATER DOES NOT IGNITE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
CAB ARCTIC HEATER DOES NOT IGNITE**

STEP 1

Has troubleshooting track (Cab Arctic Heater Does Not Start) been performed?

CONDITION/INDICATION

Has troubleshooting track (Cab Arctic Heater Does Not Start) been performed?

DECISION

PERFORM TRACK - Perform Operator level troubleshooting track (Cab Arctic Heater Does Not Start). (WP 0316, Test 1 - Is vehicle fuel level OK?)

TRACK PERFORMED - Notify Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
CARGO AREA ARCTIC HEATER EMITS HEAVY WHITE SMOKE AFTER COLD
START

INITIAL SETUP:

Equipment Condition

Engine shut down. (WP 0053)

***** The following is applicable to the following UOC(s): TSA TSB TSC TSD TSL
TSM. *****

TROUBLESHOOTING PROCEDURE

**CARGO AREA ARCTIC HEATER EMITS HEAVY WHITE SMOKE AFTER COLD
START**

STEP 1

Is heavy white smoke present after cold start?

1. Check to see if heavy white smoke is present after cold start. (WP 0059)

CONDITION/INDICATION

Is heavy white smoke present after cold start?

DECISION

WHITE SMOKE - Notify Field Maintenance.

NO SMOKE - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
ENGINE BLOCK ARCTIC HEATER DOES NOT OPERATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
ENGINE BLOCK ARCTIC HEATER DOES NOT OPERATE**

STEP 1

Do any indicator lights illuminate?

1. Check to see if engine block arctic heater PWR and HTR indicators illuminate (Volume 1, WP 0019).

CONDITION/INDICATION

Do any indicator lights illuminate?

DECISION

PWR Faulty - Notify Field Maintenance.

HTR Faulty - Notify Field Maintenance.

No Power - Notify Field Maintenance.

Heater OK - Fault Corrected.

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
MATERIAL HANDLING CRANE (MHC) BOOM EXTENSION DOES NOT EXTEND OR
RETRACT**

INITIAL SETUP:

Not Applicable

*** The following is applicable to the following UOC(s): TSG TSV. ***

TROUBLESHOOTING PROCEDURE

**MATERIAL HANDLING CRANE (MHC) BOOM EXTENSION DOES NOT EXTEND OR
RETRACT**

STEP 1

Has MHC been checked in accordance with Operator PMCS (Before Operation)?

CONDITION/INDICATION

Has MHC been checked in accordance with Operator PMCS (Before Operation)?

DECISION

NOT CHECKED - Check MHC. (Volume 3, WP 0337, Table 3) Notify Field Maintenance
CHECKED - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
MATERIAL HANDLING CRANE (MHC) DOES NOT OPERATE**

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

*** The following is applicable to the following UOC(s): TSG TSV. ***

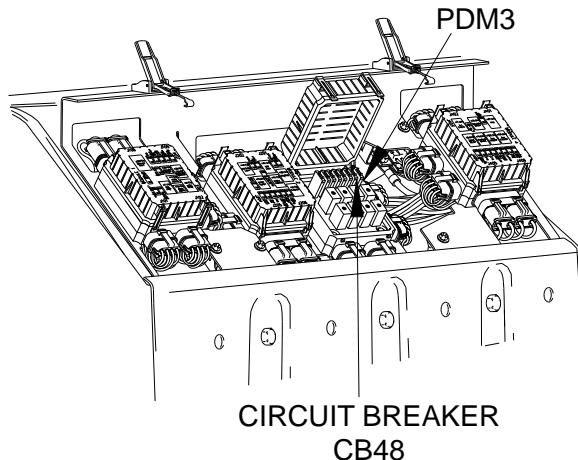
TROUBLESHOOTING PROCEDURE

MATERIAL HANDLING CRANE (MHC) DOES NOT OPERATE

STEP 1

Is circuit breaker CB48 tripped?

1. Remove PDP cover. (Volume 3, WP 0351)
2. Open PDM3 cover.
3. If circuit breaker CB48 is tripped, push button to reset.



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Figure 1. Circuit Breaker CB48.

4. Start engine. (Volume 1, WP 0019)
5. Position PTO switch (Volume 1, WP 0005) to on.
6. Press MHC main power switch (Volume 1, WP 0013) to on.
7. Check if MHC operates.
8. Press MHC main power switch (Volume 1, WP 0013) to off.
9. Position PTO switch (Volume 1, WP 0005) to off.
10. Shut down engine. (Volume 1, WP 0019)
11. Ensure all PDM covers are closed.
12. Install PDP cover. (Volume 3, WP 0351)

CONDITION/INDICATION

Is circuit breaker CB48 tripped?

DECISION

MHC INOP - Notify Field Maintenance

MHC OK -

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
MATERIAL HANDLING CRANE (MHC) DOES NOT OPERATE USING HAND PUMP**

INITIAL SETUP:

Not Applicable

*** The following is applicable to the following UOC(s): TSG TSV. ***

TROUBLESHOOTING PROCEDURE

MATERIAL HANDLING CRANE (MHC) DOES NOT OPERATE USING HAND PUMP

STEP 1

Has MHC Hydraulic Functions Operate Slowly work package been performed?

CONDITION/INDICATION

Has MHC Hydraulic Functions Operate Slowly work package been performed?

DECISION

NOT PERFORMED - Perform MHC Hydraulic System Troubleshooting (MHC Hydraulic Functions Operate Slowly or Do Not Operate).

PERFORMED - Notify Field Maintenance

END OF WORK PACKAGE

OPERATOR MAINTENANCE
**MATERIAL HANDLING CRANE (MHC) INNER BOOM DOES NOT OPERATE UP OR
DOWN OR HOLD UNDER LOAD**

INITIAL SETUP:

Not Applicable

*** The following is applicable to the following UOC(s): TSG TSV. ***

TROUBLESHOOTING PROCEDURE

**MATERIAL HANDLING CRANE (MHC) INNER BOOM DOES NOT OPERATE UP OR
DOWN OR HOLD UNDER LOAD**

STEP 1

Has MHC been checked in accordance with Operator PMCS (Before Operation)?

CONDITION/INDICATION

Has MHC been checked in accordance with Operator PMCS (Before Operation)?

DECISION

NOT CHECKED - Check MHC. (Volume 3, WP 0337, Table 3)

CHECKED - Notify Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
**MATERIAL HANDLING CRANE (MHC) OUTER BOOM DOES NOT OPERATE UP OR
DOWN OR HOLD UNDER LOAD**

INITIAL SETUP:

Not Applicable

*** The following is applicable to the following UOC(s): TSG TSV. ***

TROUBLESHOOTING PROCEDURE

**MATERIAL HANDLING CRANE (MHC) OUTER BOOM DOES NOT OPERATE UP OR
DOWN OR HOLD UNDER LOAD**

STEP 1

Has MHC been checked in accordance with Operator PMCS (Before Operation)?

CONDITION/INDICATION

Has MHC been checked in accordance with Operator PMCS (Before Operation)?

DECISION

NOT CHECKED - Check MHC. (Volume 3, WP 0337, Table 3) Notify Field Maintenance
CHECKED - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
MATERIAL HANDLING CRANE (MHC) SLEW DOES NOT OPERATE**

INITIAL SETUP:

Not Applicable

*** The following is applicable to the following UOC(s): TSG TSV. ***

TROUBLESHOOTING PROCEDURE

MATERIAL HANDLING CRANE (MHC) SLEW DOES NOT OPERATE

STEP 1

Has MHC been checked in accordance with Operator PMCS (Before Operation)?

CONDITION/INDICATION

Has MHC been checked in accordance with Operator PMCS (Before Operation)?

DECISION

NOT CHECKED - Check MHC. (Volume 3, WP 0337, Table 3) Notify Field Maintenance

CHECKED - Notify Field Maintenance

END OF WORK PACKAGE

OPERATOR MAINTENANCE
MATERIAL HANDLING CRANE (MHC) ONE OR BOTH OUTRIGGER (JACK) DRIFTS
OR DOES NOT OPERATE

INITIAL SETUP:

Not Applicable

*** The following is applicable to the following UOC(s): TSG TSV. ***

TROUBLESHOOTING PROCEDURE

MATERIAL HANDLING CRANE (MHC) ONE OR BOTH OUTRIGGER (JACK) DRIFTS
OR DOES NOT OPERATE

STEP 1

Has MHC been checked in accordance with Operator PMCS (Before Operation)?

CONDITION/INDICATION

Has MHC been checked in accordance with Operator PMCS (Before Operation)?

DECISION

NOT CHECKED - Check MHC. (Volume 3, WP 0337, Table 3) Notify Field Maintenance
CHECKED - Notify Field Maintenance

END OF WORK PACKAGE

**OPERATOR MAINTENANCE
CAB DOES NOT RAISE OR LOWER PROPERLY**

INITIAL SETUP:

Materials/Parts

Gloves, Rubber (Volume 3, WP 0359,
Table 1, Item 68)

Goggles, Industrial (Volume 3,
WP 0359, Table 1, Item 69)

Rag, Wiping (Volume 3, WP 0359,
Table 1, Item 148)

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

**TROUBLESHOOTING PROCEDURE
CAB DOES NOT RAISE OR LOWER PROPERLY**

STEP 1

Is hydraulic pump solenoid circuit breaker CBF10 tripped?

1. Loosen four screws in access cover on overhead panel.

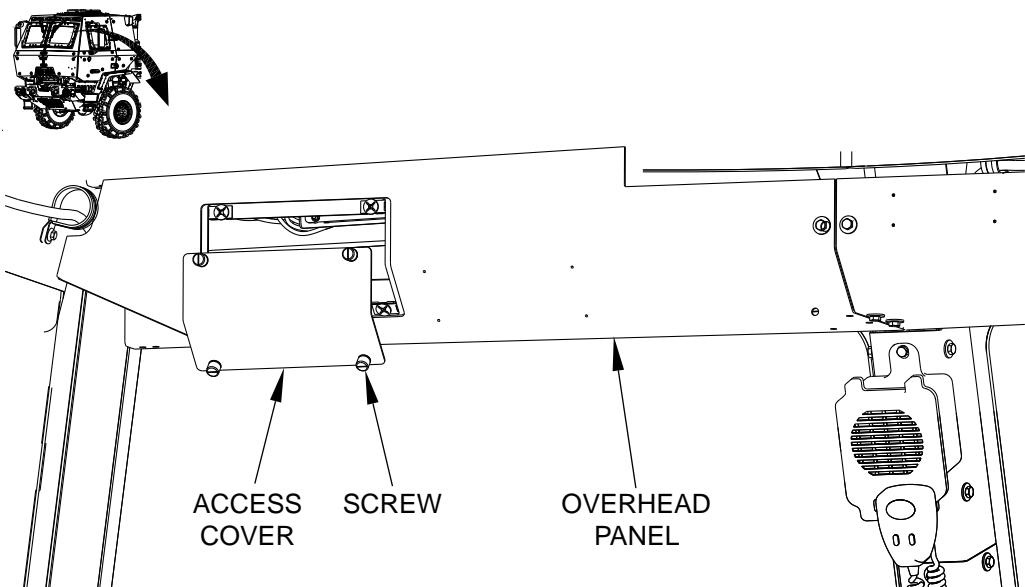


Figure 1. Overhead Access Cover

2. Remove access cover from overhead panel.
3. If circuit breaker CBF10 is tripped, push button to reset.

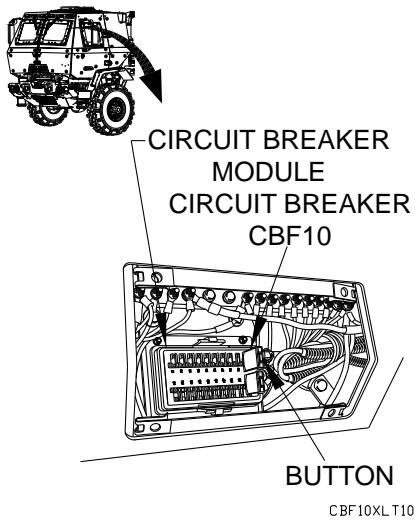


Figure 2. Circuit Breaker CBF10.

4. Position master power switch to ON. (Volume 1, WP 0004, Table 1)
5. Attempt to raise and lower cab (Volume 1, WP 0020) using switch.
6. Check to see if circuit breaker CBF10 is tripped again.
7. Install access cover to overhead panel.
8. Tighten four screws in access cover on overhead panel.

CONDITION/INDICATION

Is hydraulic pump solenoid circuit breaker CBF10 tripped?

DECISION

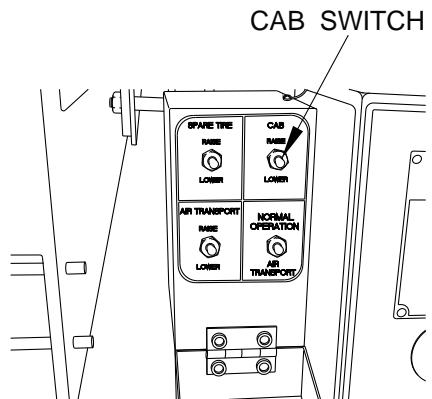
Breaker OK - Step 2 - Does electric pump operate when switch is moved to raise or lower position?

Breaker Tripped - Notify Field Maintenance for electrical system troubleshooting.

STEP 2

Does electric pump operate when switch is moved to raise or lower position?

1. Attempt to raise and lower cab (Volume 1, WP 0020) using switch.



CABRAISE

Figure 3. Cab Switch.

2. Note if electric pump operates when switch is moved to raise or lower position.

CONDITION/INDICATION

Does electric pump operate when switch is moved to raise or lower position?

DECISION

Yes - Step 3 - Does cab raise and lower using manual hand pump?

No - Notify Field Maintenance for electrical system troubleshooting.

STEP 3**Does cab raise and lower using manual hand pump?**

1. Attempt to raise and lower cab using manual hand pump (WP 0070).

CONDITION/INDICATION

Does cab raise and lower using manual hand pump?

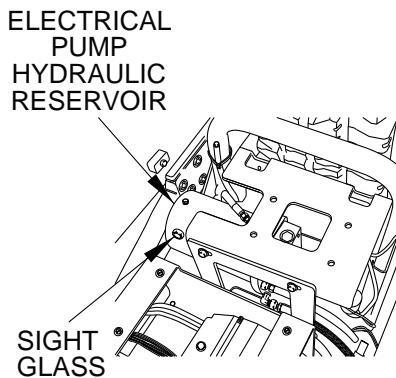
DECISION

Yes - Notify Field Maintenance for electrical system troubleshooting.

No - Step 4 - Are Class III leaks present in hydraulic system?

STEP 4**Are Class III leaks present in hydraulic system?**

1. Examine electric pump hydraulic system for evidence of Class III leak.



EPHRSGLT20

Figure 4. Electric Pump and Reservoir.

CONDITION/INDICATION

Are Class III leaks present in hydraulic system?

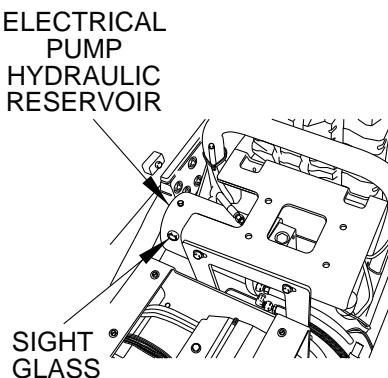
DECISION

Yes - Notify Field Maintenance for hydraulic system troubleshooting.

No - Step 5 - Is electric pump hydraulic reservoir at proper fluid level?

STEP 5**Is electric pump hydraulic reservoir at proper fluid level?**

1. Check electric pump hydraulic reservoir fluid level (Volume 3, WP 0337).



EPHRSGLT20

Figure 5. Electric Pump and Reservoir.

2. Add hydraulic fluid (Volume 3, WP 0355, Table 3) if necessary.

CONDITION/INDICATION

Is electric pump hydraulic reservoir at proper fluid level?

DECISION

Yes - Notify Field Maintenance for hydraulic system troubleshooting.

No - Step 6 - Does cab raise and lower properly?

STEP 6

Does cab raise and lower properly?

1. Attempt to raise and lower cab (Volume 1, WP 0020) using switch.

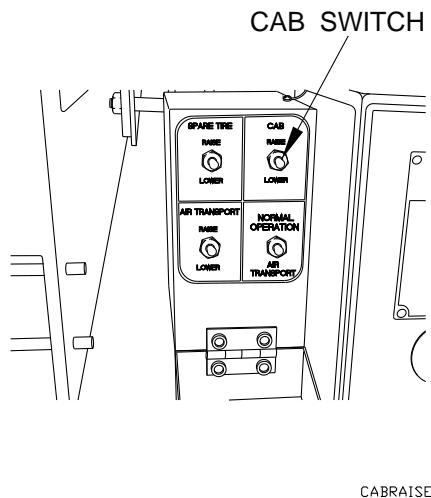


Figure 6. Cab Switch.

CONDITION/INDICATION

Does cab raise and lower properly?

DECISION

Yes - Fault Corrected.

No - Notify Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE
SPARE TIRE DOES NOT RAISE OR LOWER PROPERLY (HYDRAULIC SYSTEM)

INITIAL SETUP:

Equipment Condition

Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE

SPARE TIRE DOES NOT RAISE OR LOWER PROPERLY (HYDRAULIC SYSTEM)

STEP 1

Has Operator level Electrical System Troubleshooting been performed?

CONDITION/INDICATION

Has Operator level Electrical System Troubleshooting been performed?

DECISION

PERFORM ELECTRICAL - Perform Electrical system troubleshooting (Spare tire does not raise or lower properly) (WP 0209)

ELECTRICAL PERFORMED - Step 2 - Are hydraulic hoses and fittings free from Class III leaks?

STEP 2

Are hydraulic hoses and fittings free from Class III leaks?

1. Check to see if hydraulic hoses and fittings are free from Class III leaks.

CONDITION/INDICATION

Are hydraulic hoses and fittings free from Class III leaks?

DECISION

LEAKS FOUND - Notify Field Maintenance to repair leaks.

NO LEAKS - Notify Field Maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE

**TIRES CONTINUE TO WEAR AFTER FRONT END ALIGNMENT AND/OR VEHICLE
DRIVES SIDEWAYS DOWN ROAD**

INITIAL SETUP:**Equipment Condition**

Engine shut down. (Volume 1,
WP 0019)

TROUBLESHOOTING PROCEDURE

**TIRES CONTINUE TO WEAR AFTER FRONT END ALIGNMENT AND/OR VEHICLE
DRIVES SIDEWAYS DOWN ROAD**

STEP 1

**Do tires continue to wear after front end alignment and/or does vehicle drive
sideways down road?**

1. Check to see if tires continue to wear after front end alignment and/or vehicle drives sideways down road.

CONDITION/INDICATION

Do tires continue to wear after front end alignment and/or does vehicle drive sideways down road?

DECISION

PRESENT - Notify Field Maintenance
NOT PRESENT - Fault corrected.

END OF WORK PACKAGE

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RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS For use of this form, see AR 310-1; the proponent agency is the US Army Adjutant General Center.						Use Part II (reverse)for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).	DATE Date of submission
TO: (Forward to proponent of publication or form) (Include ZIP Code) U.S. Army TACOM Life Cycle Management Command, ATTN: AMSTA-LCL-IM/TECH PUBS, MS 727, 6501 E. 11 Mile Road, Warren, MI 48397-5000						FROM: (Activity and location) (Include ZIP Code) Your mailing address	
PART I - ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS							
BASIC INFORMATION PUBLICATION/FORM NUMBER TM 9-2320-333-10-2					DATE 10 January 2014	TITLE Operator Manual for M1083A1P2 Series 5 Ton, 6x6 Medium Tactical Vehicles (MTV)	
ITEM NO.	PAGE NO.	PARA-GRAF	LINE NO.*	FIGURE NO.	TABLE NO.	RECOMMENDED CHANGES AND REASON (Exact wording of recommended change must be given)	
	0019-1	3	1	1		Step No. 2 says to secure doors open with locking bar or hooks from where to what? The bars or hooks are not identified.	
	0019-4	4	1	1		Step No. 19 says to remove locking bar, pins, or hooks from where to what? The bars, pins or hooks are not identified. Where are they stored.	
SAMPLE							
* Reference to line numbers within the paragraph or subparagraph.							
TYPED NAME, GRADE OR TITLE Your name			TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION Your telephone number		SIGNATURE Your signature		

TO: (Forward to proponent of publication or form) (Include ZIP Code) U.S. Army TACOM Life Cycle Management Command, ATTN: AMSTA-LCL-IM/TECH PUBS, MS 727, 6501 E. 11 Mile Road, Warren, MI 48397-5000				FROM: (Activity and location) (Include ZIP Code) Your mailing address			DATE	
							Date of submission	
PART II- REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS								
PUBLICATION/FORM NUMBER			DATE		TITLE			
TM 9-2320-333-10-2			10 January 2014		Operator Manual for M1083A1P2 Series 5 Ton, 6x6 Medium Tactical Vehicles (MTV)			
PAGE NO.	COLM NO.	LINE NO.	FEDERAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION
SAMPLE								
PART III - REMARKS (Any general remarks or recommendations, or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed.)								
TYPED NAME, GRADE OR TITLE Your name			TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION Your telephone number			SIGNATURE Your signature		

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By Order of the Secretary of the Army:

Official:



GERALD B. O'KEEFE
*Administrative Assistant to the
Secretary of the Army*
1333612

RAYMOND T. ODIERNO
General, United States Army
Chief of Staff

By Order of the Secretary of the Air Force:

JANET C. WOLFENBARGER
General, United States Air Force
Commander, AFMC

MARK A. WELSH, III
General, United States Air Force
Chief of Staff

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THE METRIC SYSTEM AND EQUIVALENTS

LINEAR MEASURE

1 Centimeter = 10 Millimeters = 0.01 Meter = 0.3937 Inch
 1 Decimeter = 10 Centimeters = 3.94 Inches
 1 Meter = 10 Decimeters = 100 Centimeters
 = 1000 Millimeters = 39.37 Inches
 1 Dekameter = 10 Meters = 32.8 Feet
 1 Hectometer = 10 Dekameters = 328.08 Feet
 1 Kilometer = 10 Hectometers = 1000 Meters
 = 0.621 Mile = 3,280.8 Feet
 Millimeters = Inches times 25.4
 Inches = Millimeters divided by 25.4

WEIGHTS

1 Centigram = 10 Milligrams = 0.154 Grain
 1 Decigram = 10 Centigrams = 1.543 Grains
 1 Gram = 0.001 Kilogram = 10 Decigrams
 = 1000 Milligrams = 0.035 Ounce
 1 Dekagram = 10 Grams = 0.353 Ounce
 1 Hectogram = 10 Dekagrams = 3.527 Ounces
 1 Kilogram = 10 Hectograms = 1000 Grams
 = 2.205 Pounds
 1 Quintal = 100 Kilograms = 220.46 Pounds
 1 Metric Ton = 10 Quintals = 1000 Kilograms
 = 1.1 Short Tons

LIQUID MEASURE

1 Milliliter = 0.001 Liter = 0.034 Fluid Ounce
 1 Centiliter = 10 Milliliters = 0.34 Fluid Ounce
 1 Deciliter = 10 Centiliters = 3.38 Fluid Ounces
 1 Liter = 10 Deciliters = 1000 Milliliters
 = 33.82 Fluid Ounces
 1 Dekaliter = 10 Liters = 2.64 Gallons
 1 Hectoliter = 10 Dekaliters = 26.42 Gallons
 1 Kiloliter = 10 Hectoliters = 264.18 Gallons

APPROXIMATE CONVERSION FACTORS

TO CHANGE	TO	MULTIPLY BY	TO CHANGE	TO	MULTIPLY BY
Inches	Centimeters.....	2.540	Centimeters	Inches.....	0.394
Feet.....	Meters.....	0.305	Meters.....	Feet.....	3.280
Yards	Meters.....	0.914	Meters.....	Yards.....	1.094
Miles	Kilometers.....	1.609	Kilometers	Miles	0.621
Square Inches	Square Centimeters	6.451	Square Centimeters	Square Inches.....	0.155
Square Feet	Square Meters.....	0.093	Square Meters	Square Feet	10.764
Square Yards.....	Square Meters.....	0.836	Square Meters	Square Yards.....	1.196
Square Miles	Square Kilometers	2.590	Square Kilometers	Square Miles.....	0.386
Acres.....	Square Hectometers	0.405	Square Hectometers	Acres.....	2.471
Cubic Feet	Cubic Meters	0.028	Cubic Meters	Cubic Feet.....	35.315
Cubic Yards	Cubic Meters	0.765	Cubic Meters	Cubic Yards	1.308
Fluid Ounces	Milliliters.....	29.573	Milliliters.....	Fluid Ounces	0.034
Pints	Liters	0.473	Liters	Pints	2.113
Quarts	Liters	0.946	Liters	Quarts	1.057
Gallons	Liters	3.785	Liters	Gallons	0.264
Ounces	Grams	28.349	Grams	Ounces	0.035
Pounds	Kilograms	0.454	Kilograms	Pounds	2.205
Short Tons	Metric Tons	0.907	Metric Tons	Short Tons	1.102
Pound-Feet	Newton-Meters.....	1.356	Newton-Meters.....	Pound-Feet	0.738
Pounds-Inches	Newton-Meters	0.11375	Kilopascals	Pounds per Square Inch....	0.145
Pounds per Square Inch..	Kilopascals	6.895	Kilometers per Liter ..	Miles per Gallon	2.354
Ounce-Inches.....	Newton-Meters	0.007062	Kilometers per Hour ..	Miles per Hour	0.621
Miles per Gallon.....	Kilometers per Liter ..	0.425	°Fahrenheit	°Celsius	0.5625
Miles per Hour	Kilometers per Hour ..	1.609	°Celsius	°Fahrenheit	1.8

PIN: 086009-000